BOUSSOLE PROJECT

C-OPS Data catalogue for 2019
Cruise 204 to cruise 215

Institut de la Mer de Villefranche (IMEV), 06230 Villefranche sur mer, France



Retrieving of the *Biospherical* C-OPS (Compact-Optical Profiling System) after its deployment at the BOUSSOLE site.

ESA/ESRIN contract N° 4000119096/17/I-BG

Foreword

This report is part of the technical report series that is being established by the BOUSSOLE project.

BOUSSOLE is funded and supported by the following Agencies and Institutions

European Space Agency

Centre National d'Etudes Spatiales, France

Centre National de la Recherche Scientifique, France

Sorbonne Université, France

Institut de la Mer de Villefranche, France

C-OPS parameters

Two C-OPS are used during the BOUSSOLE cruises:

- The C-OPS #1 is equipped with Es, Ed and Eu sensors and is the most commonly used during the BOUSSOLE cruises (cruise #205 to cruise #214).

- The C-OPS #2 is equipped with Es, Ed and Lu sensors, and is used when the first C-OPS is not available for calibration purposes (cruise #215).

There are two types of data processing according to the C-OPS used during the cruises.

C-OPS #1:
This C-OPS system measures downward and upward irradiance at 18 wavelengths + PAR:
320, 340, 380, 395, 412, 443, 465, 490, 510, 532, 555, 565, 589, 625, 665, 683, 710, 780 nm and PAR.

For each acquired radiometric cast, the first document presents the file name and depth offset used for the data processing. Then a few plots are generated showing the absolute tilt records (in air and in water), the radiometric profiles and spectra of apparent optical properties in linear or log scale.

Es: downward surface irradiance (raw and fitted data)
Eu: upward irradiance (raw and fitted data). Four methods of extrapolation are compared (spline, loess, deg2 and Ku)
Ed: downward irradiance
Kd: diffuse attenuation coefficient for downward irradiance
Ku: diffuse attenuation coefficient for upward irradiance
R: reflectance
Lw: water leaving radiance.
[Lw]N: normalized water leaving radiance
[Lw]N Gordon&Clark: Normalized water leaving radiance according to Gordon and Clark Method.

C-OPS #2:
This C-OPS system measures downward irradiance and upward radiance at 19 wavelengths:
340, 412, 443, 465, 490, 510, 532, 555, 560, 589, 625, 665, 670, 683, 694, 710, 765, 780 and 875 nm.

For each radiometric cast, the first document presents the file name and depth offset used for the data processing. Then a few plots are generated showing the time, absolute tilt records (in air and in water), the radiometric profiles and spectra of apparent optical properties in linear or log scale.

Ed0: downward surface irradiance (fitted data)
LuZ: upward radiance (raw and fitted data)
EdZ: downward irradiance (raw and fitted data)
KZ.LuZ: diffuse attenuation coefficient for upward radiance
K0.LuZ: diffuse attenuation coefficient for upward radiance calculated with Ed0
KZ.EdZ: diffuse attenuation coefficient for downward irradiance
K0.EdZ: diffuse attenuation coefficient for downward irradiance calculated with Ed0
L_W: water leaving radiance
nL_W: normalized water leaving radiance
R_{0-}: reflectance
Rrs_{0+}: remote sensing reflectance

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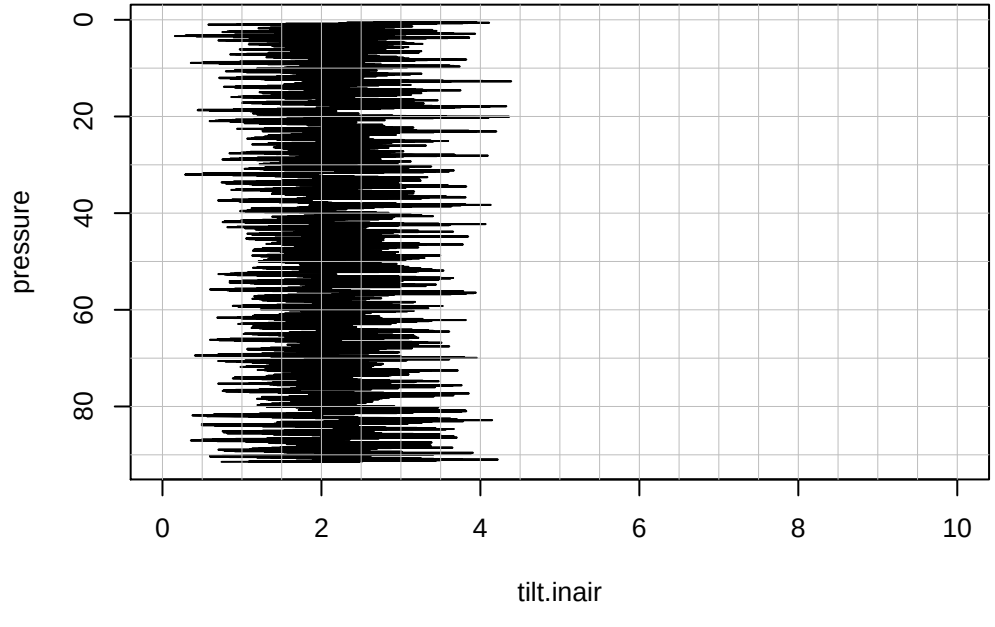
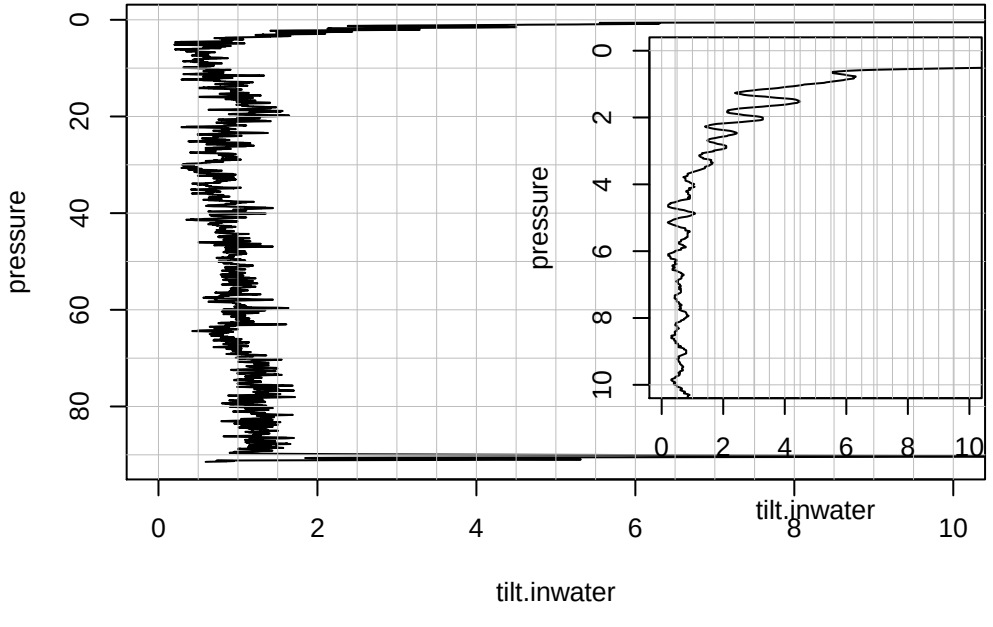
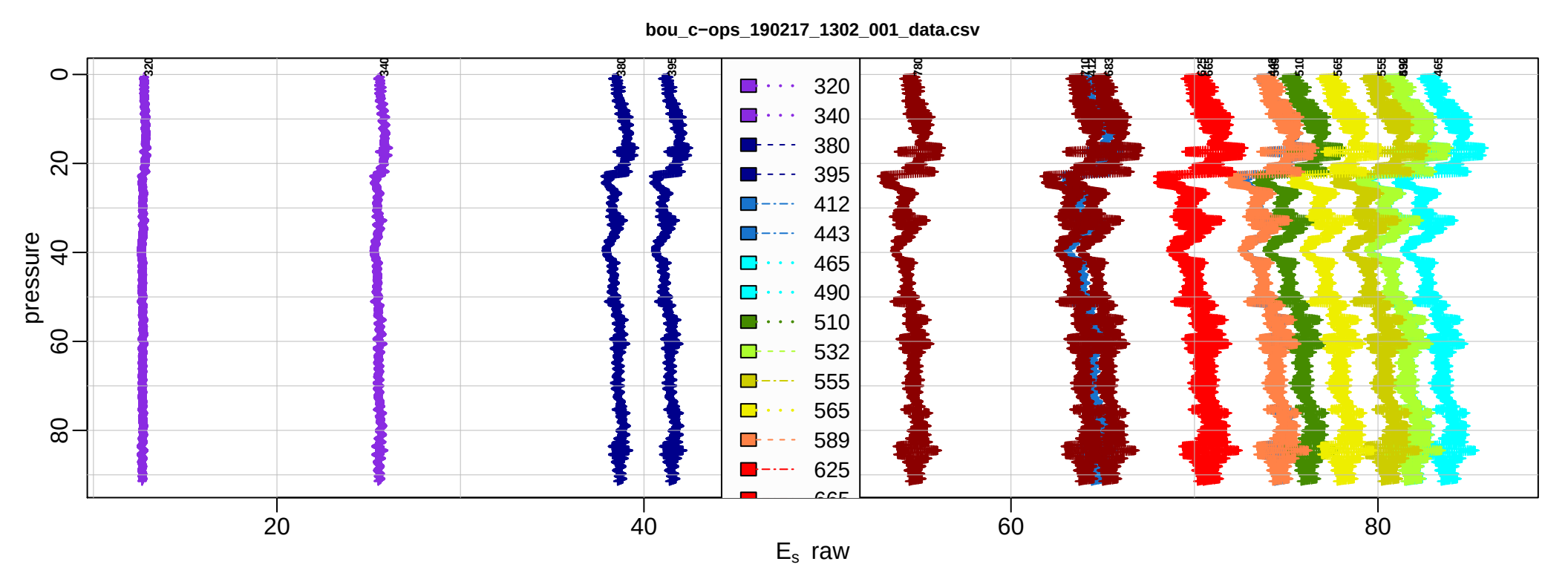
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole205/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole205/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.90513203938802
latitude 43.3718180338542
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

bou_c−ops_190217_1302_001_data.csv



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40
60
80
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443
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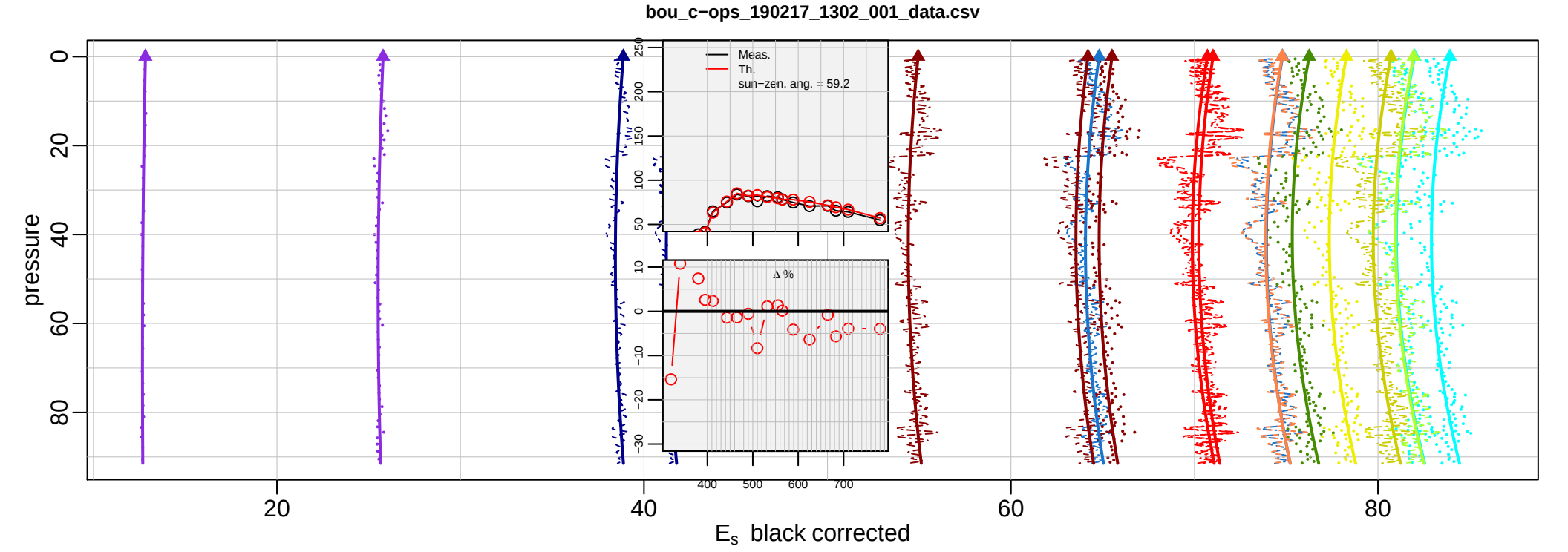
625
20
40
60
80
Es raw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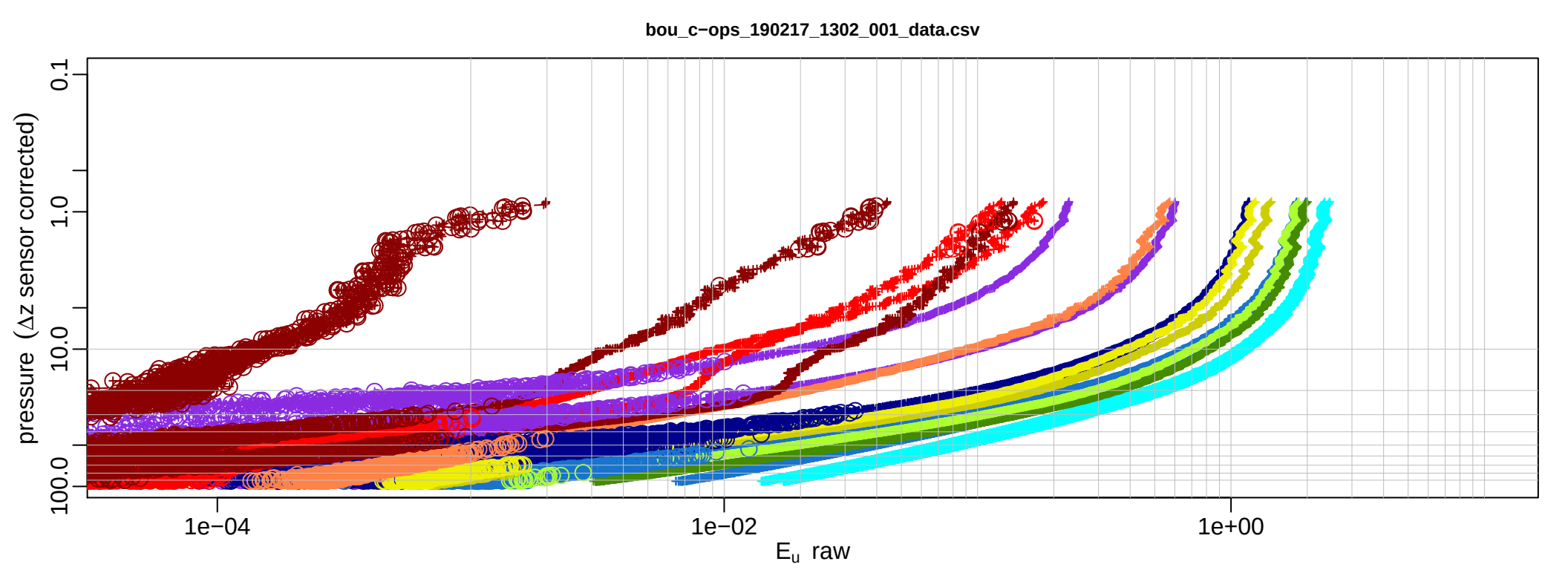
20
40
60
80
Meas.
Th.
sun−zen. ang. = 59.2
Δ %
250
200
150
100
50
10
0
−10
−20
−30
400
500
600
700
20
40
60
80
Es black corrected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1e−02
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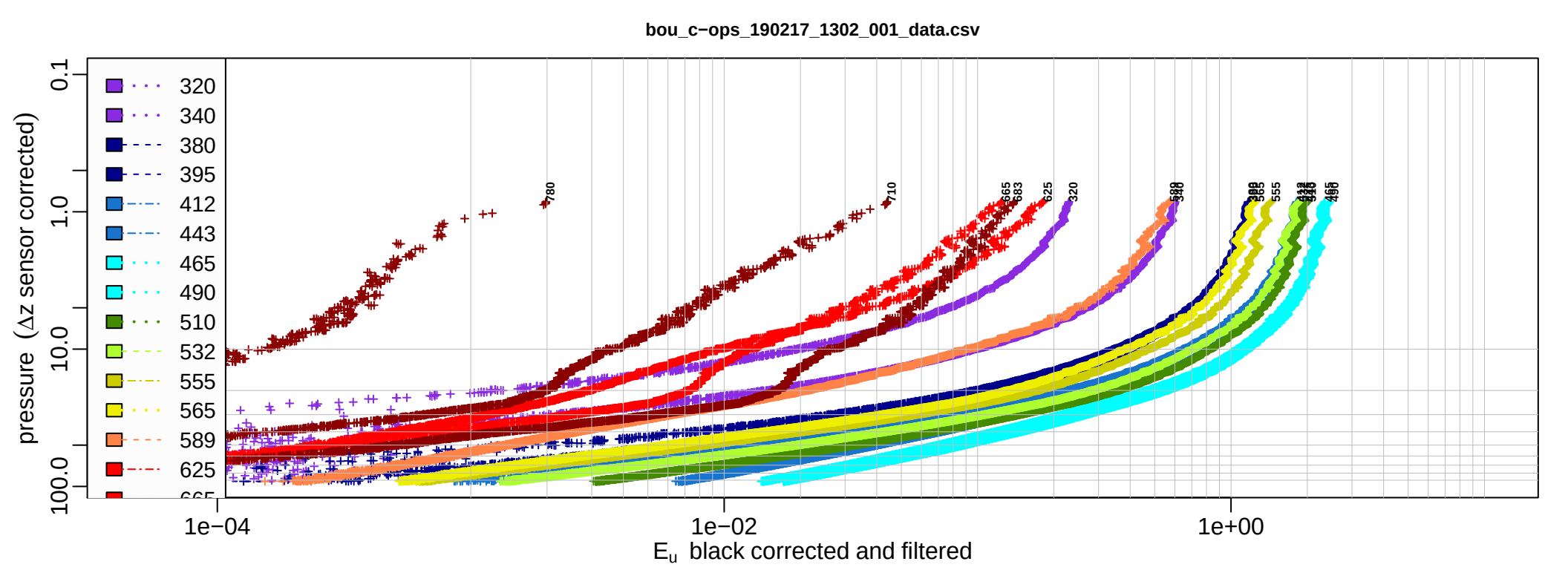
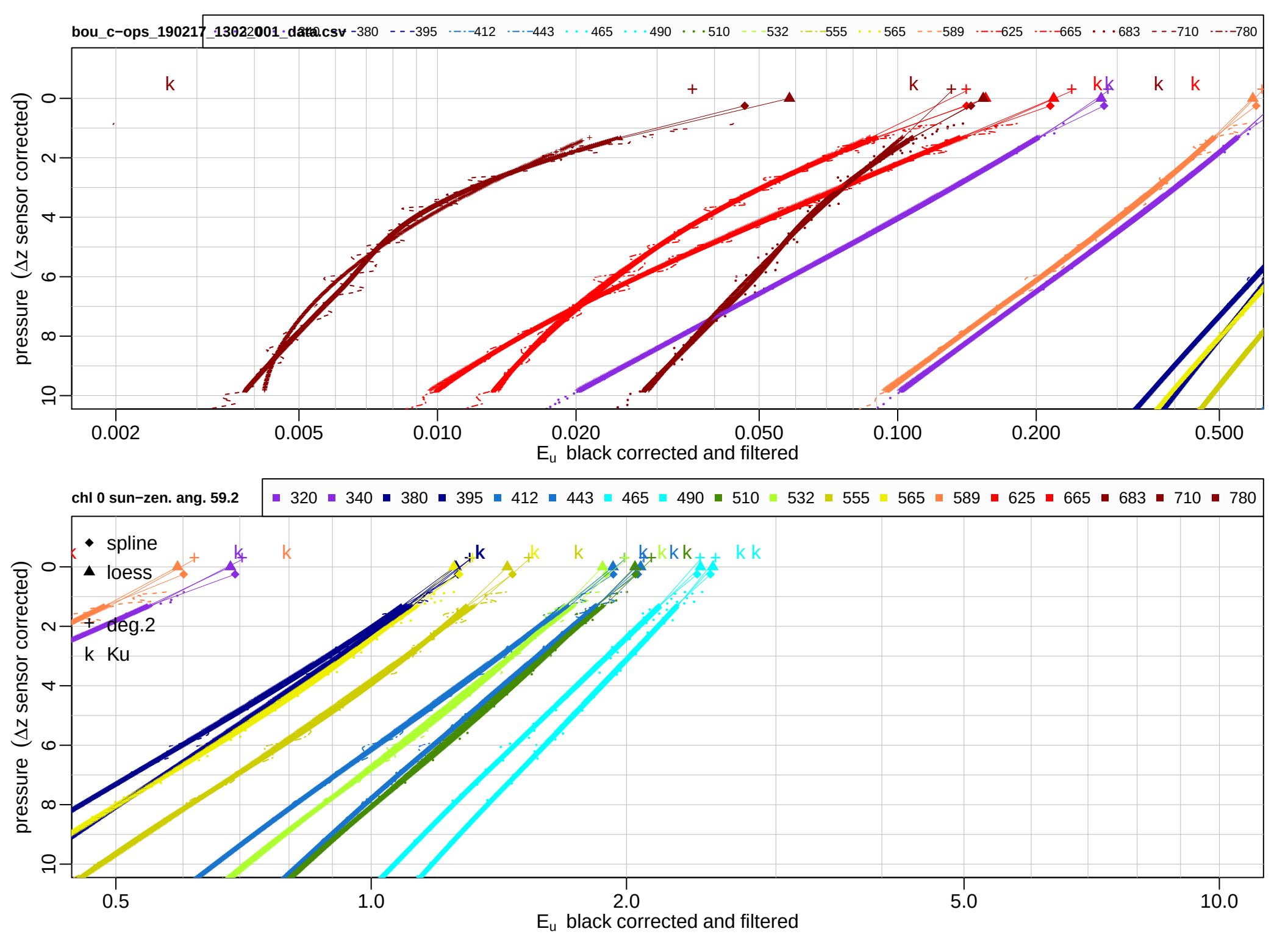
Eu raw


bou_c−ops_190217_1302_001_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
665
683
625
320
555
1e−04
1e−02
1e+00
Eu black corrected and filtered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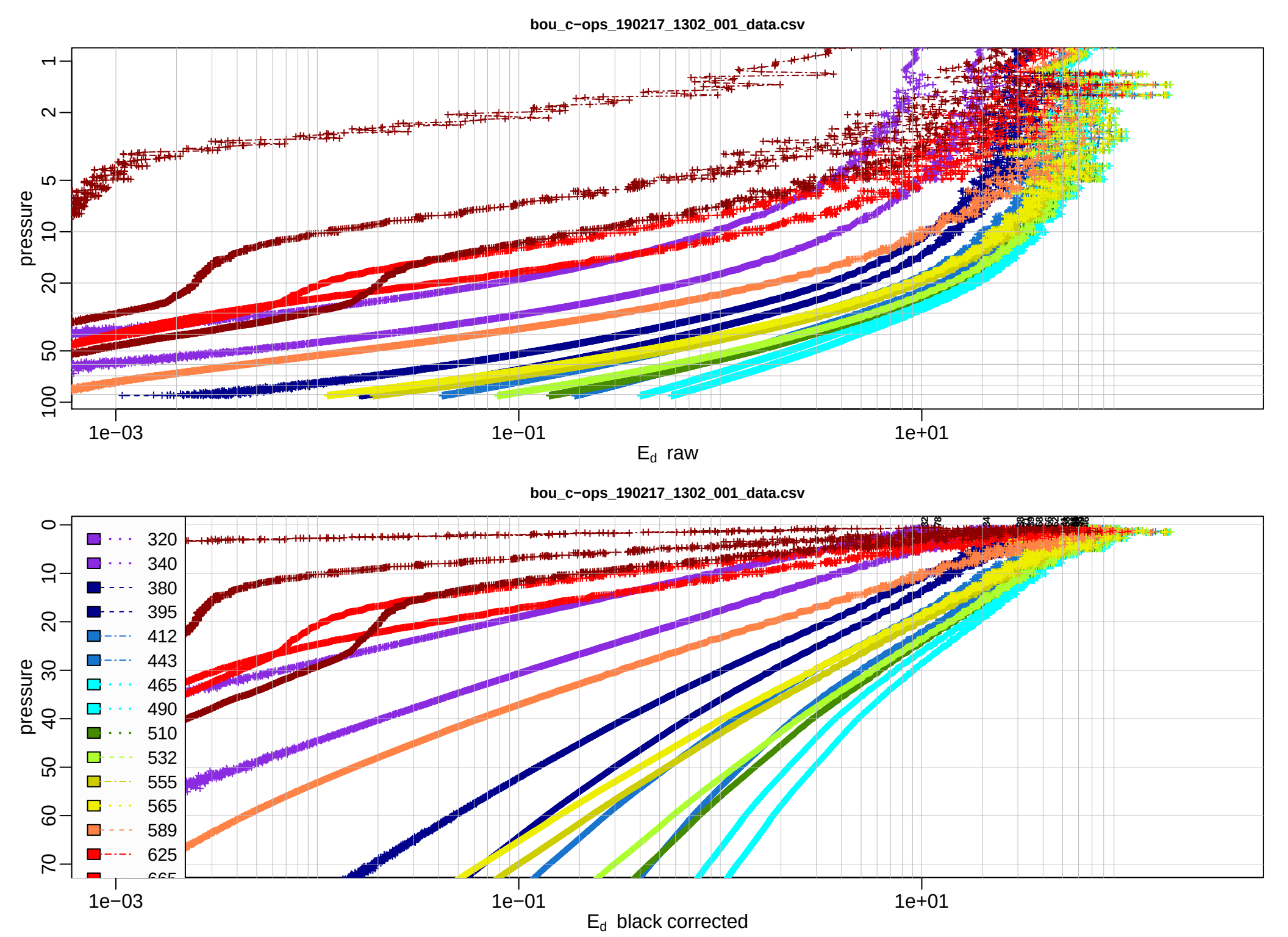
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 59.2
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190217_1302_001_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw
bou_c−ops_190217_1302_001_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
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490
510
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555
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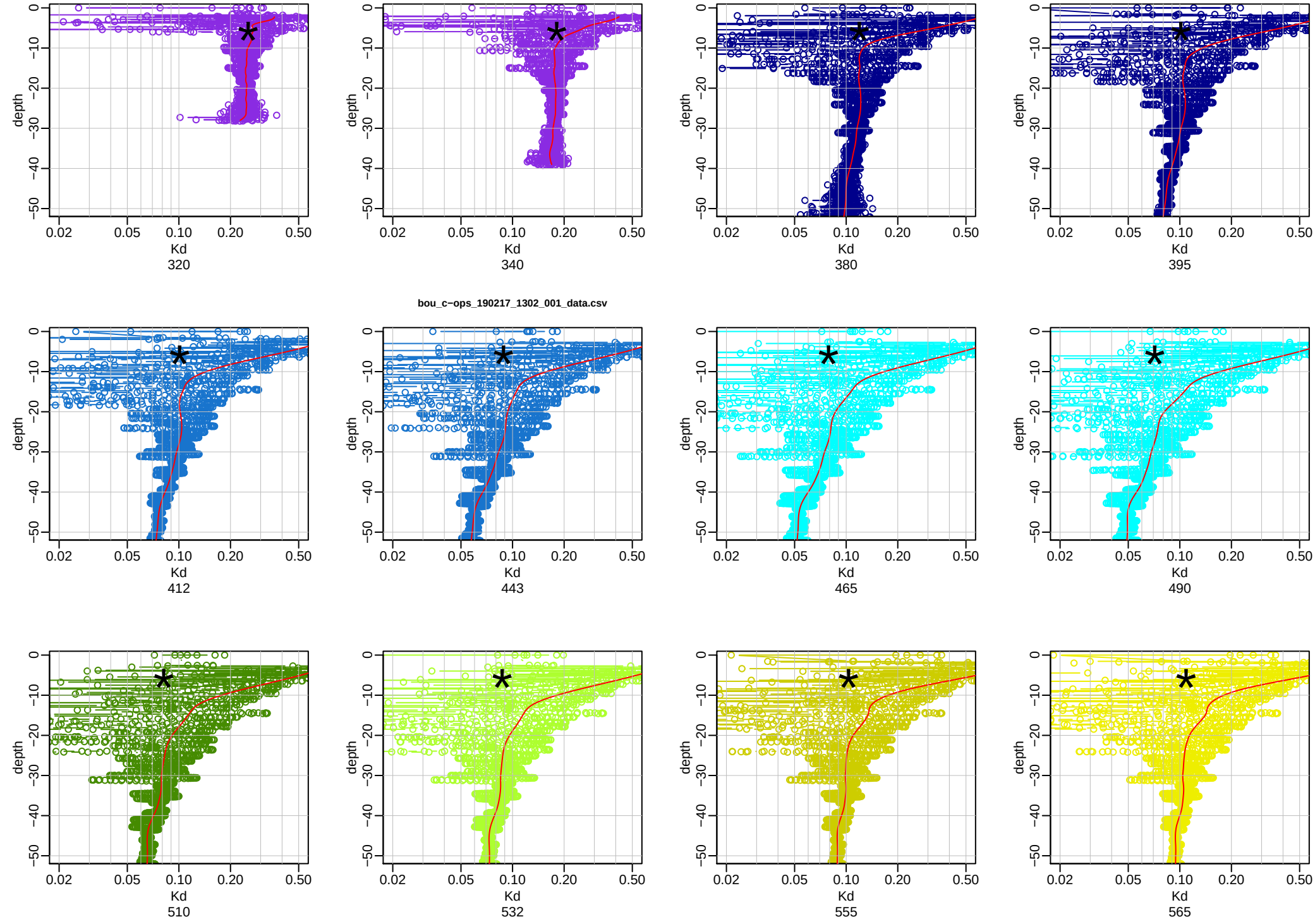
625
1e−03
1e−01
1e+01
E_d black corrected


bou_c~ops_190217_1302_001_data.csv
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Kd
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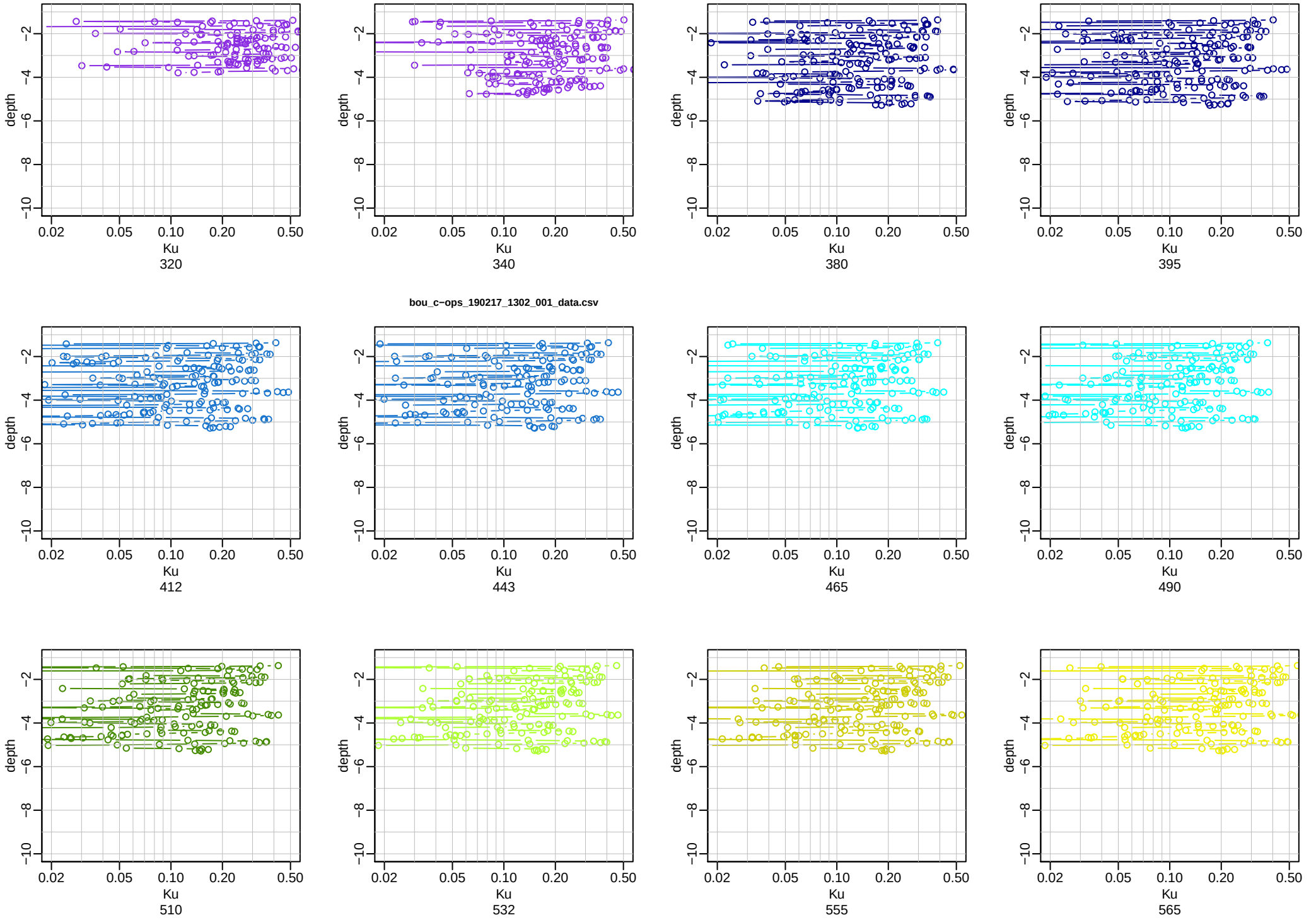
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−2
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−8
−10
0.02
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0.10
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0.50
Ku
320
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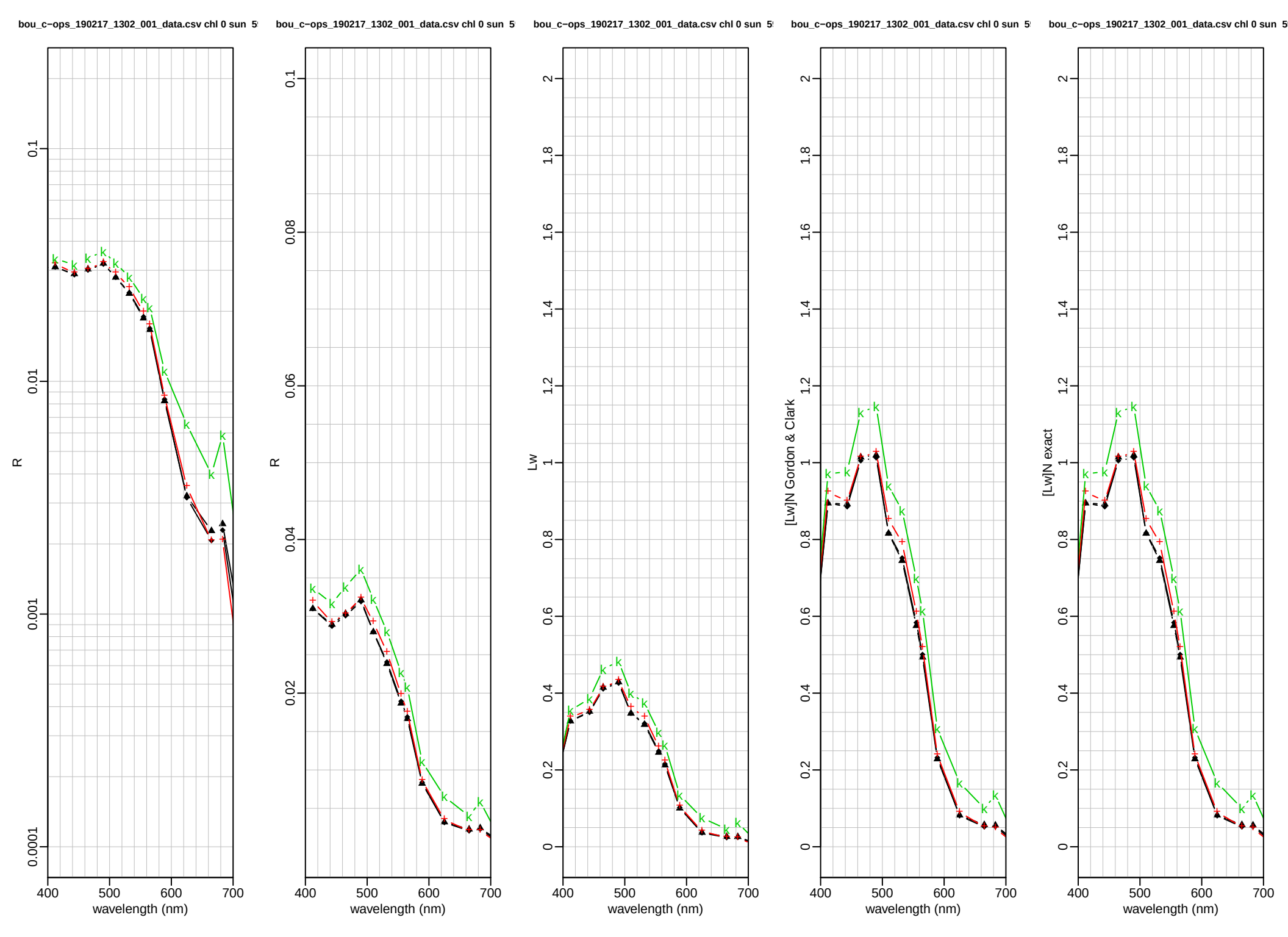
395
412
443
465
490
510
532
555
565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R
wavelength (nm)
bou_c−ops_190217_1302_001_data.csv chl 0 sun 5
R
wavelength (nm)
bou_c−ops_190217_1302_001_data.csv chl 0 sun 5
Lw
wavelength (nm)
bou_c−ops_190217_1302_001_data.csv chl 0 sun 5
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190217_1302_001_data.csv chl 0 sun 5
[Lw]N exact
wavelength (nm)

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rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole205/cops
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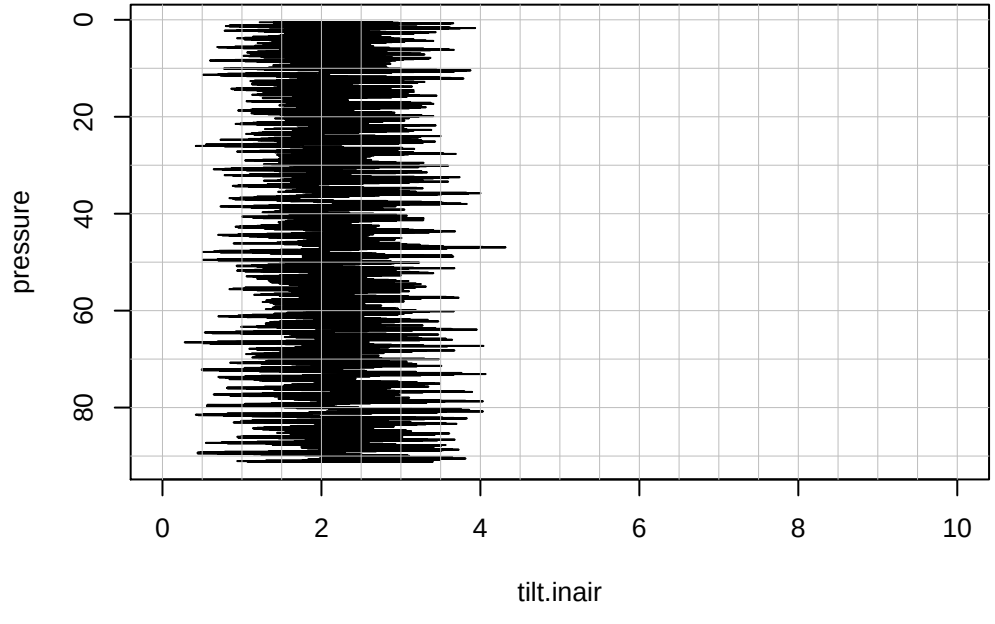
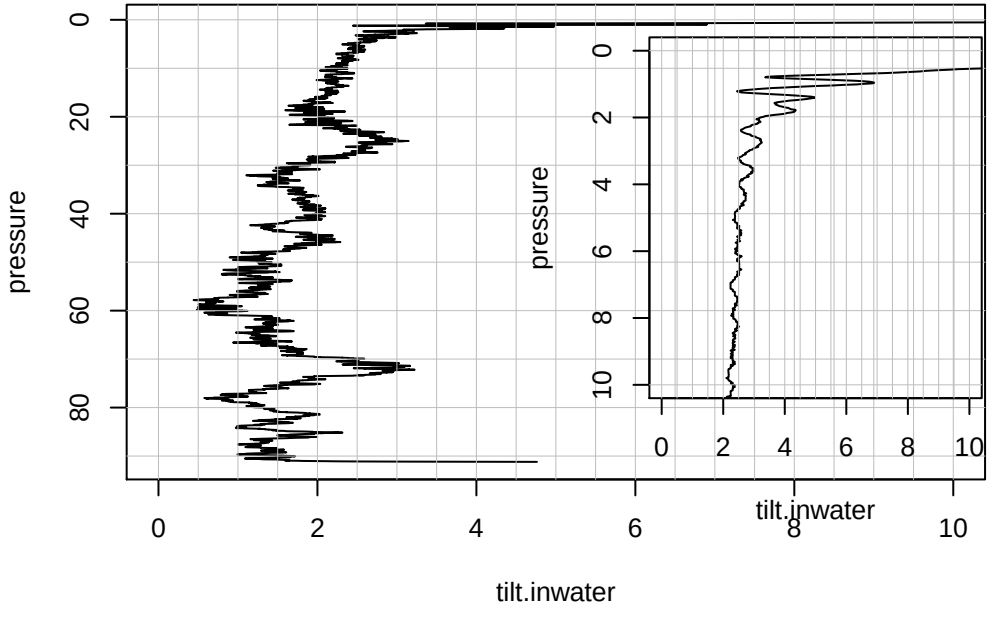
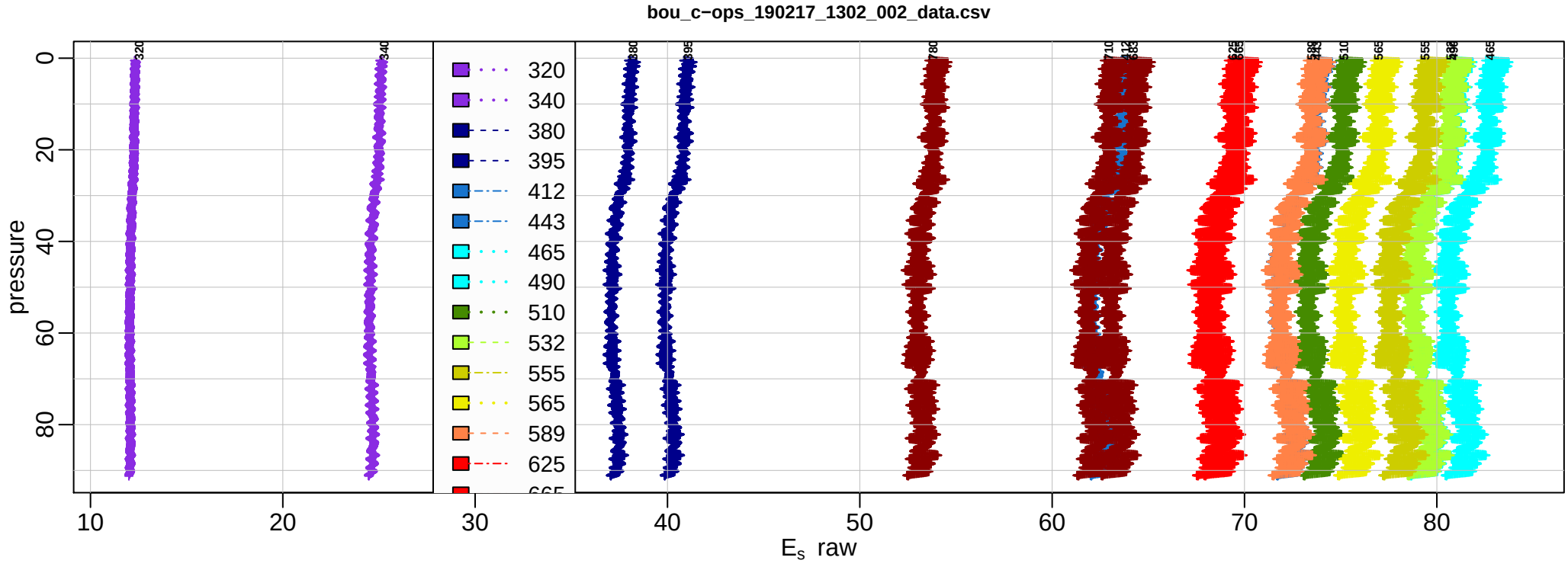
liste.remove /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.90714721679688
latitude 43.3764322916667
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

bou_c−ops_190217_1302_002_data.csv



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E_s raw
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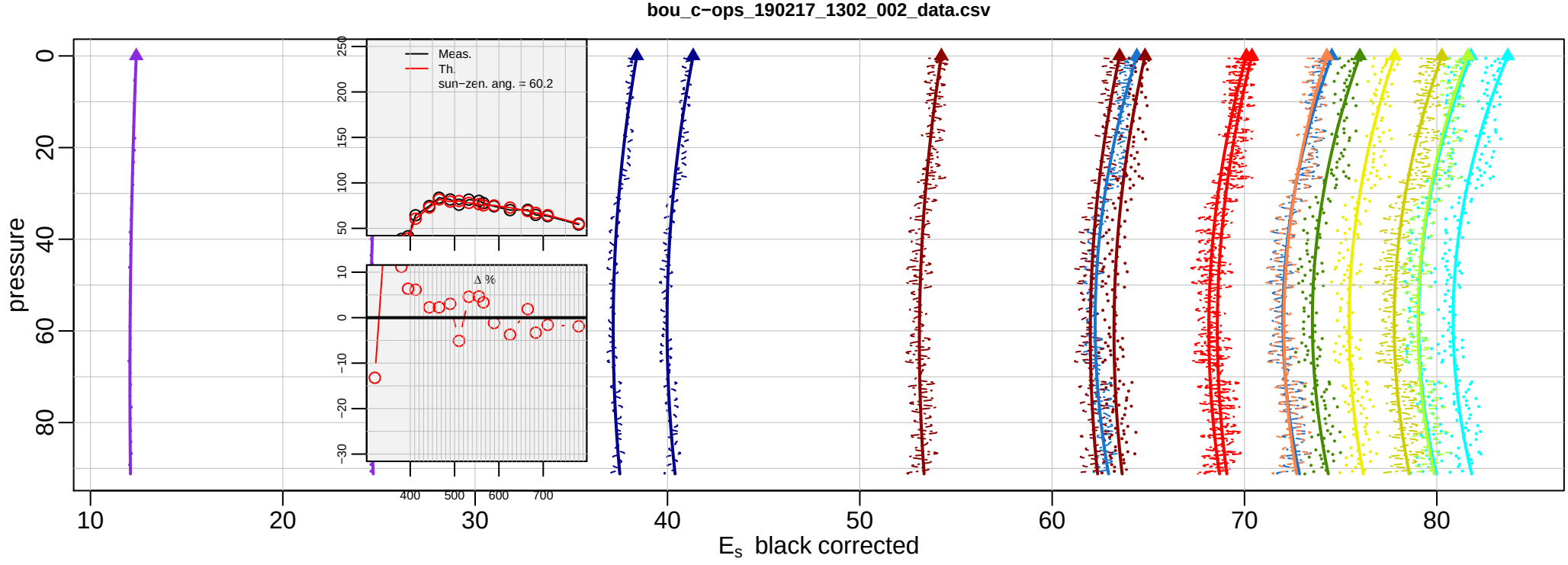
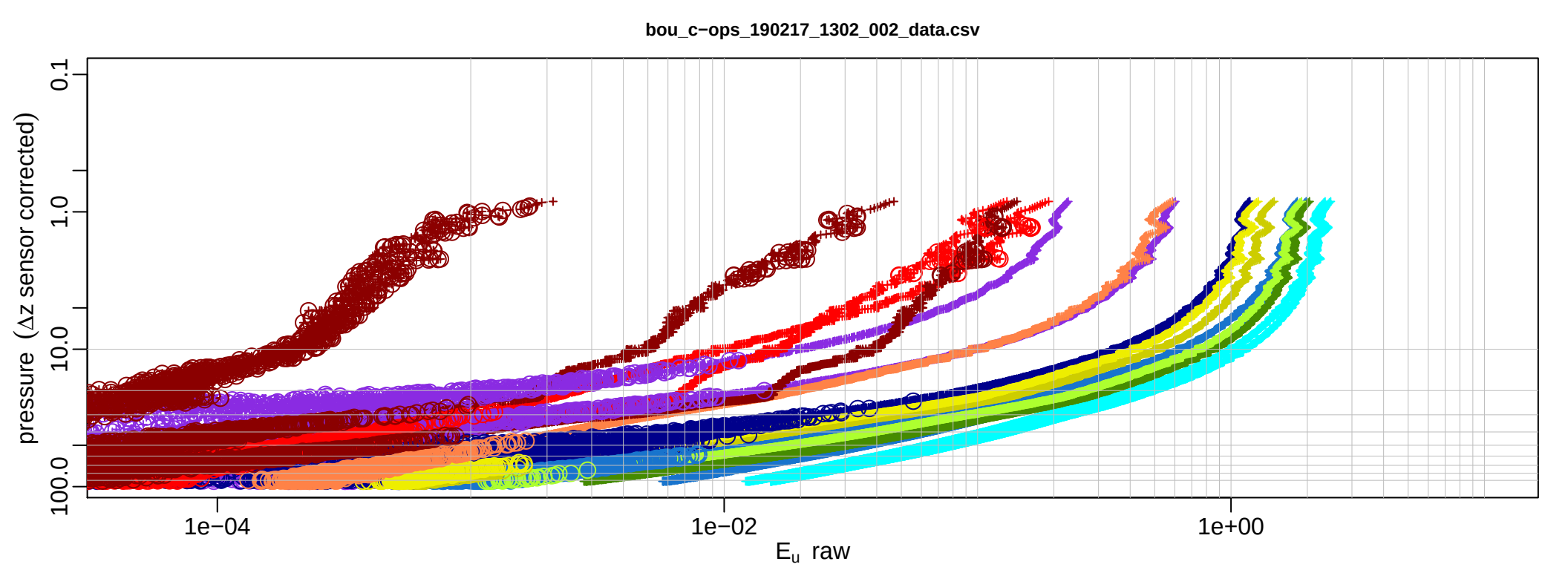
380
395
412
443
465
490
510
532
555
565
589
625


bou_c−ops_190217_1302_002_data.csv
pressure
E_s black corrected
Meas.
Th.
sun−zen. ang. = 60.2
Δ %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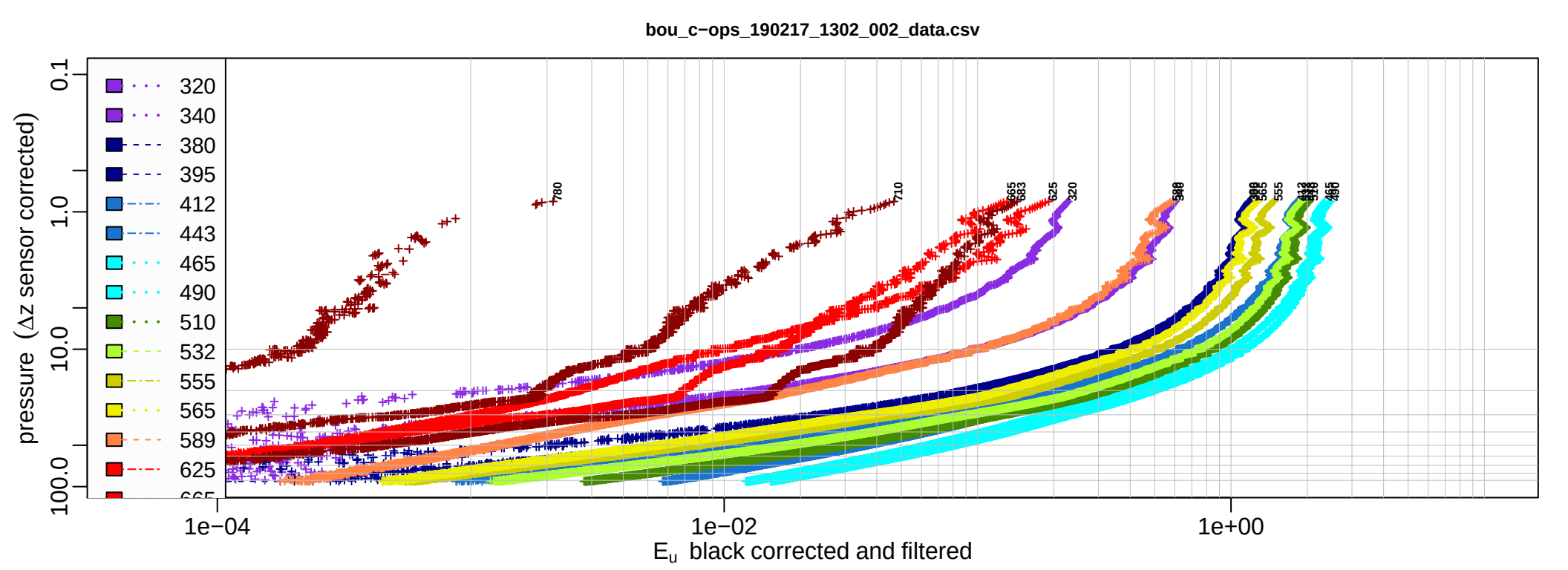
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw


bou_c−ops_190217_1302_002_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
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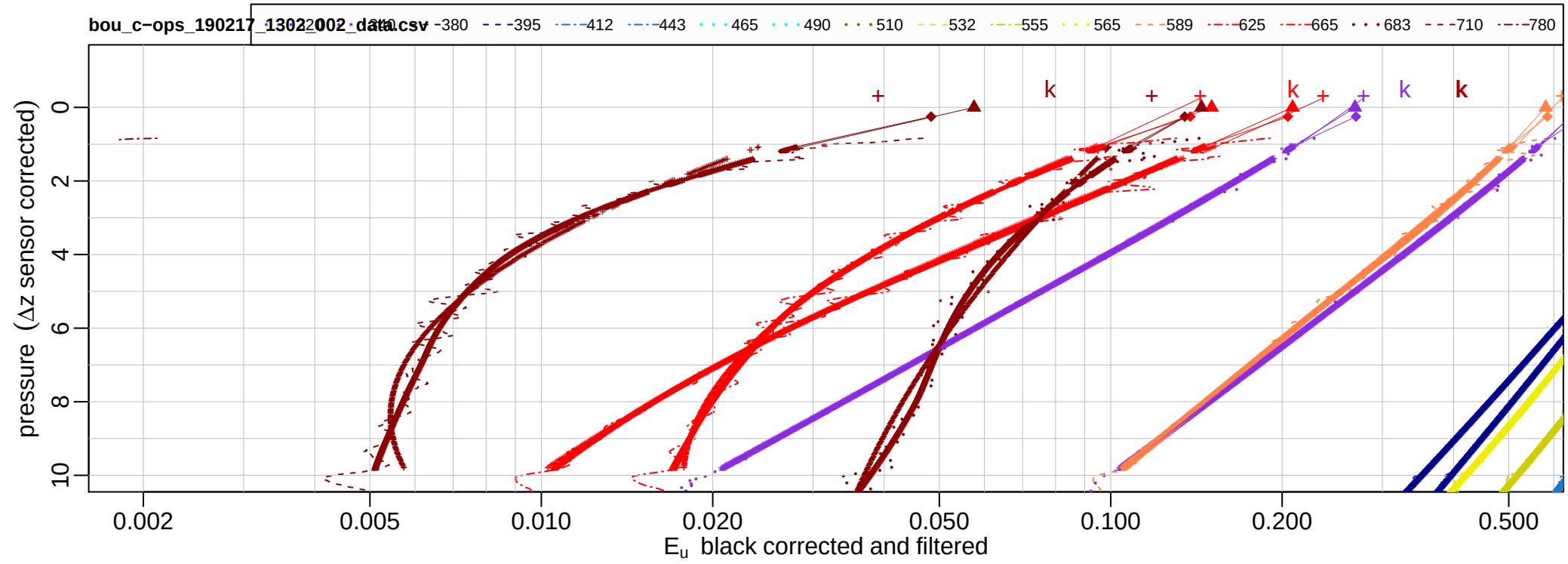
555
565
589
625
780
710
665
683
625
320
1e−04
1e−02
1e+00
E_u black corrected and filtered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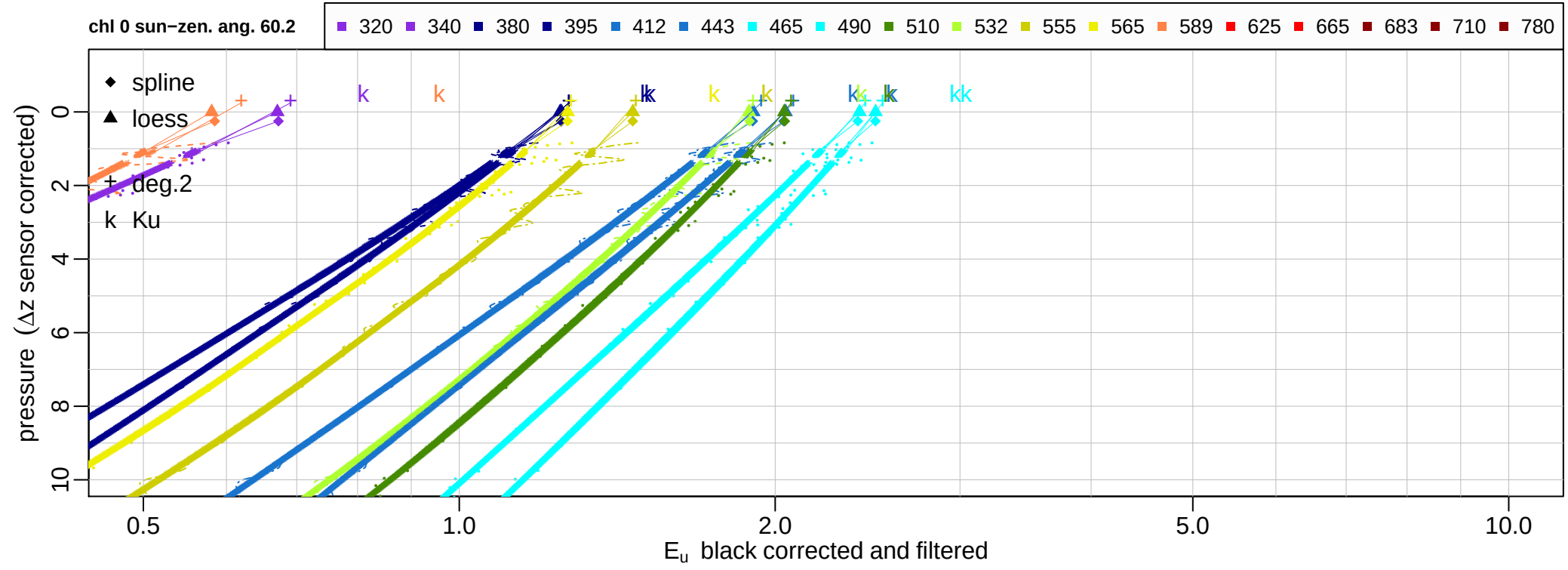
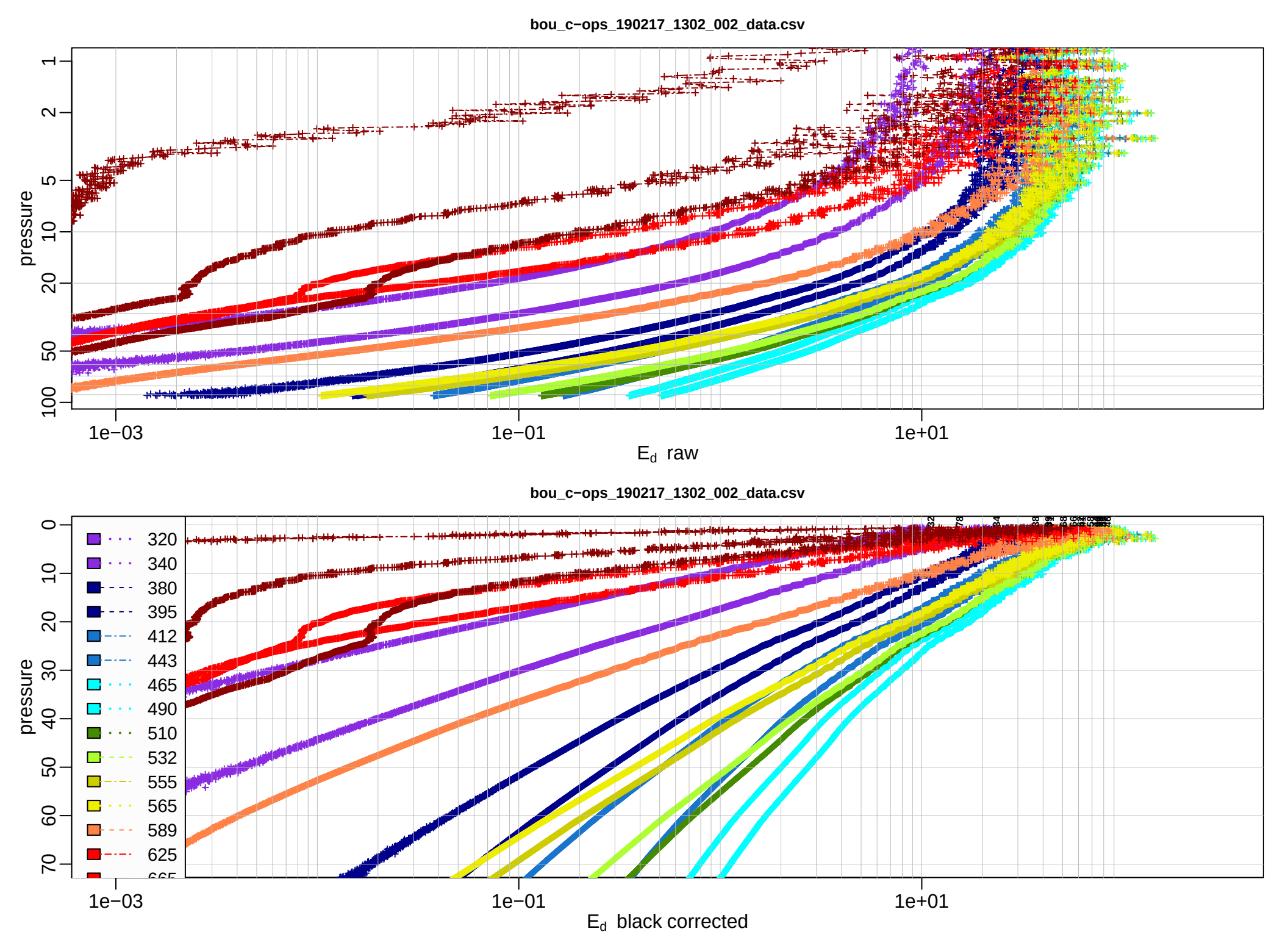
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered


chl 0 sun-zen. ang. 60.2
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered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2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw
bou_c−ops_190217_1302_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
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443
465
490
510
532
555
565
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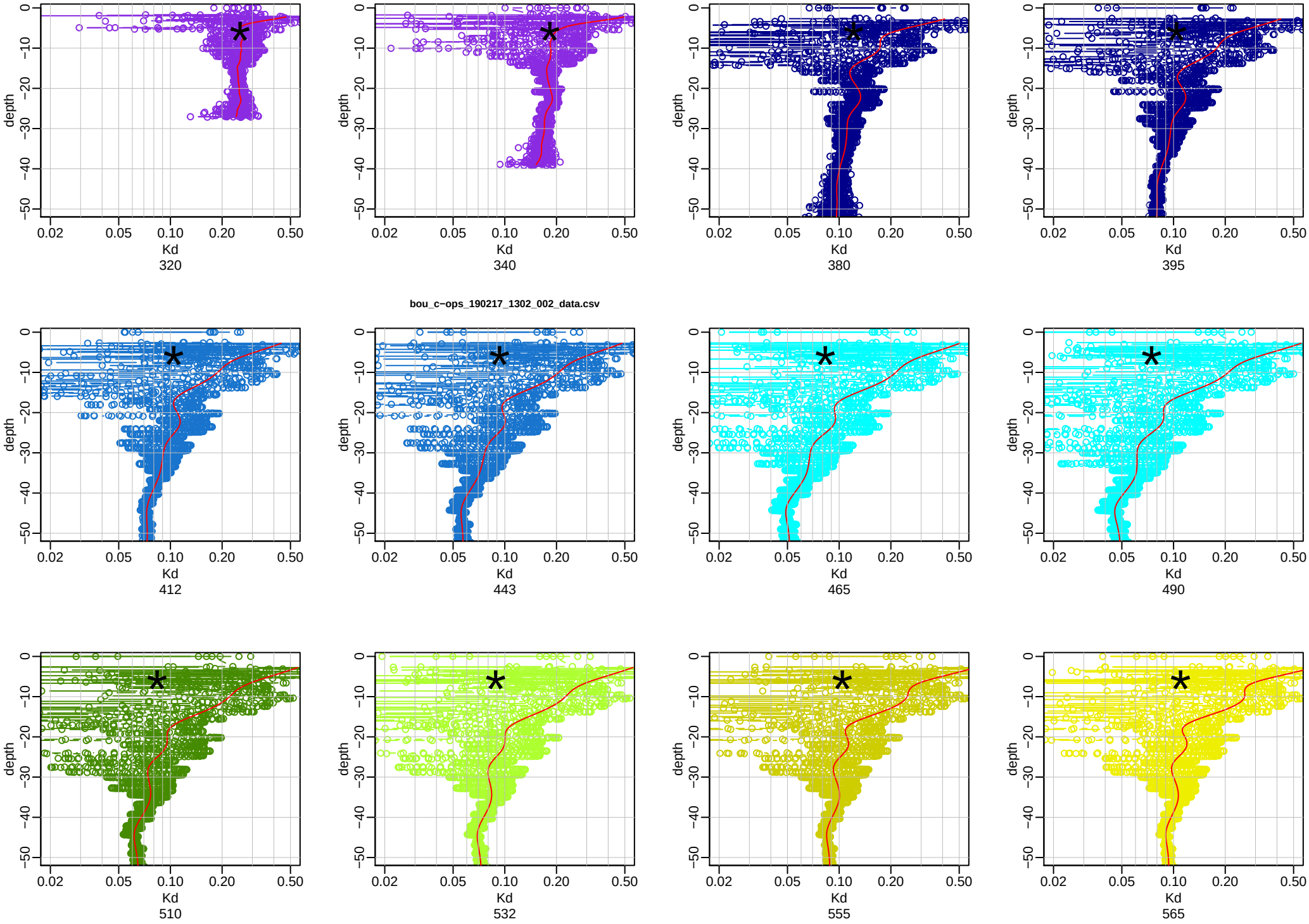
1e−01
1e+01
E_d black corrected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depth
Kd
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395
412
443
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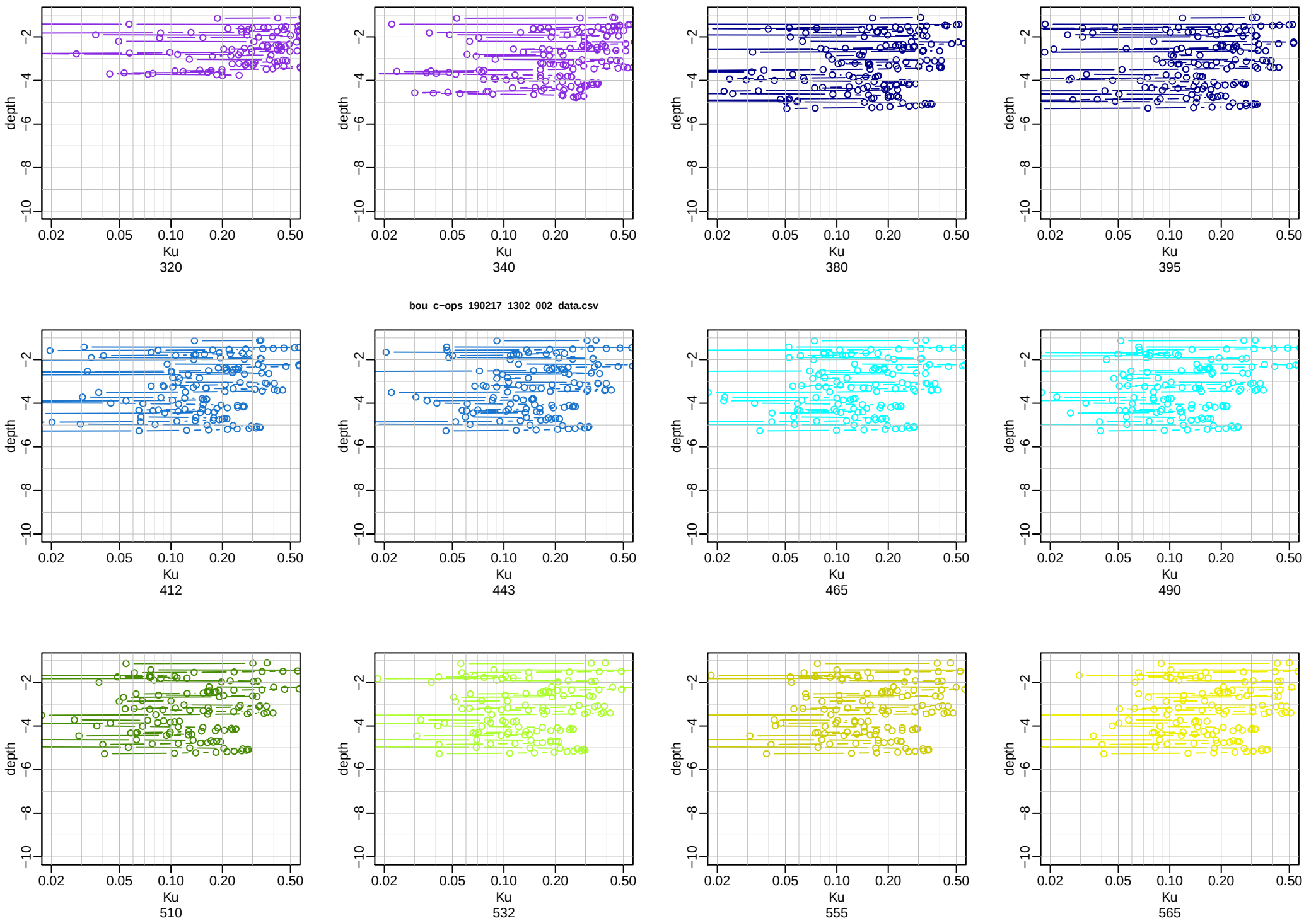
490
510
532
555
565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−2
−4
−6
−8
−10
0.02
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0.10
0.20
0.50
Ku
320
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395
412
443
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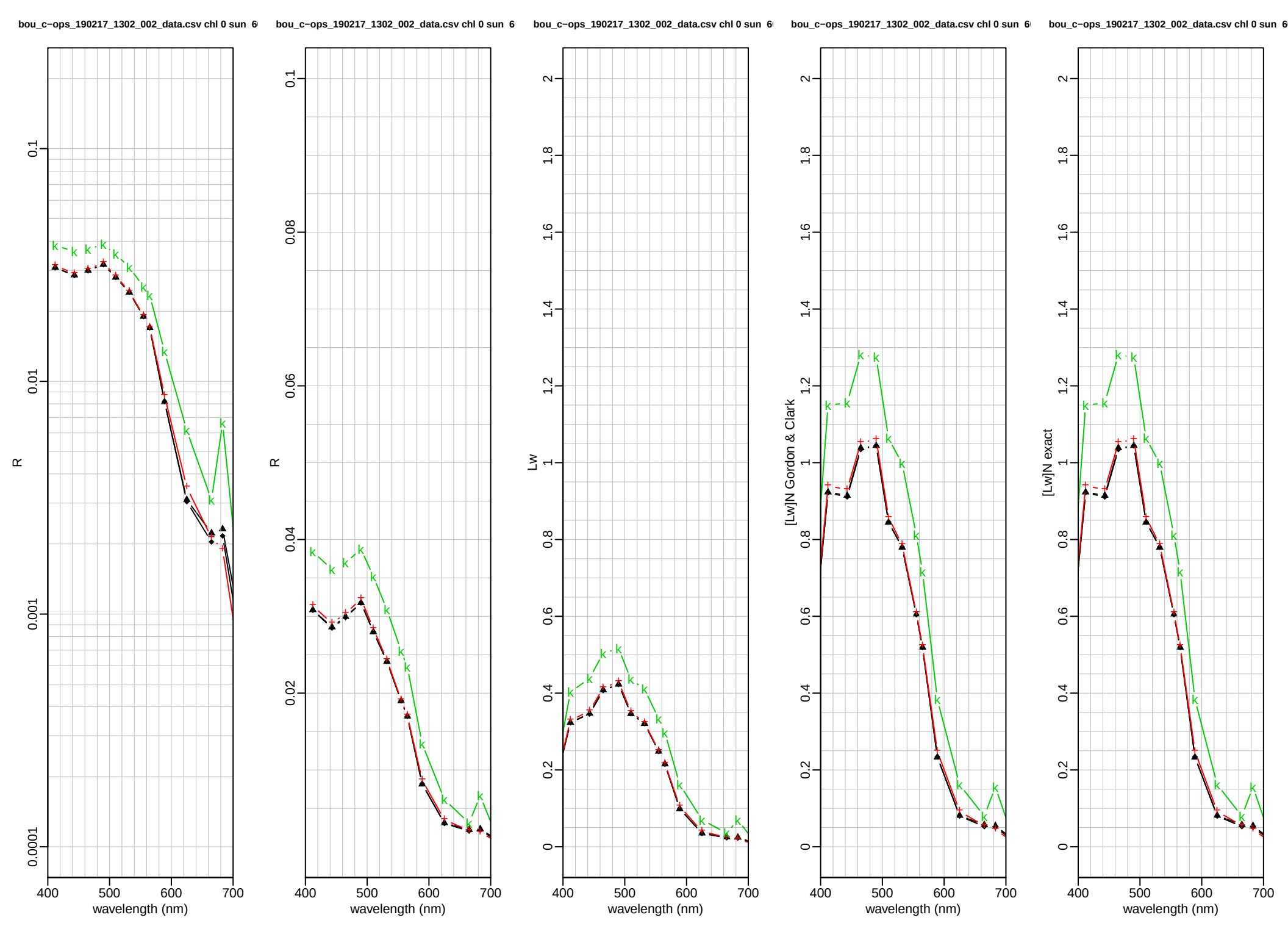
510
532
555
565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R
wavelength (nm)
bou_c−ops_190217_1302_002_data.csv chl 0 sun 6
R
wavelength (nm)
bou_c−ops_190217_1302_002_data.csv chl 0 sun 6
Lw
wavelength (nm)
bou_c−ops_190217_1302_002_data.csv chl 0 sun 6
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190217_1302_002_data.csv chl 0 sun 6
[Lw]N exact
wavelength (nm)

rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole205/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole205/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.90938822428385
latitude 43.3828694661458
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
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delta.capteur.ed 0
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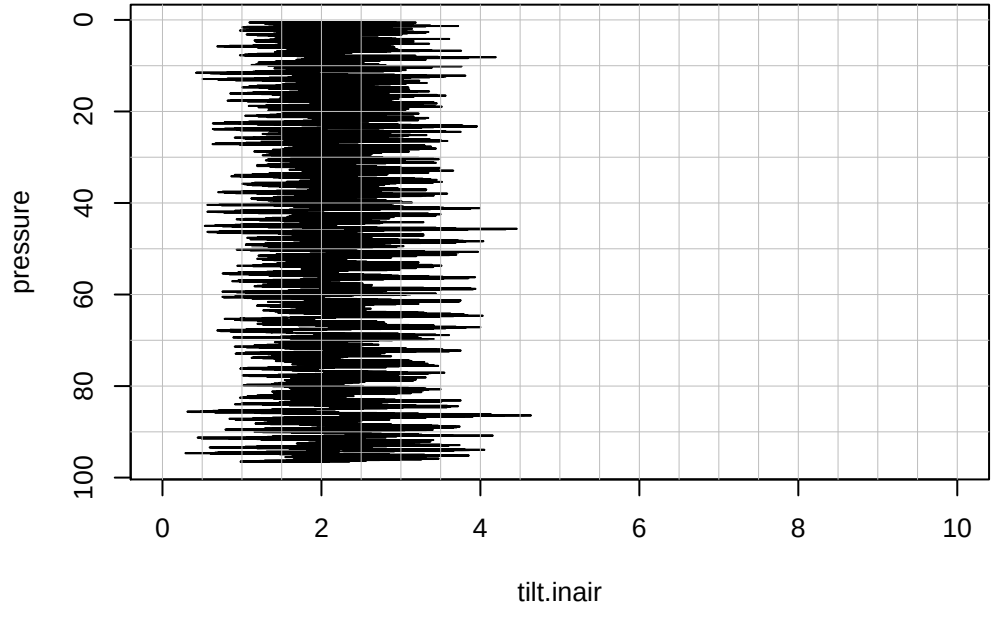

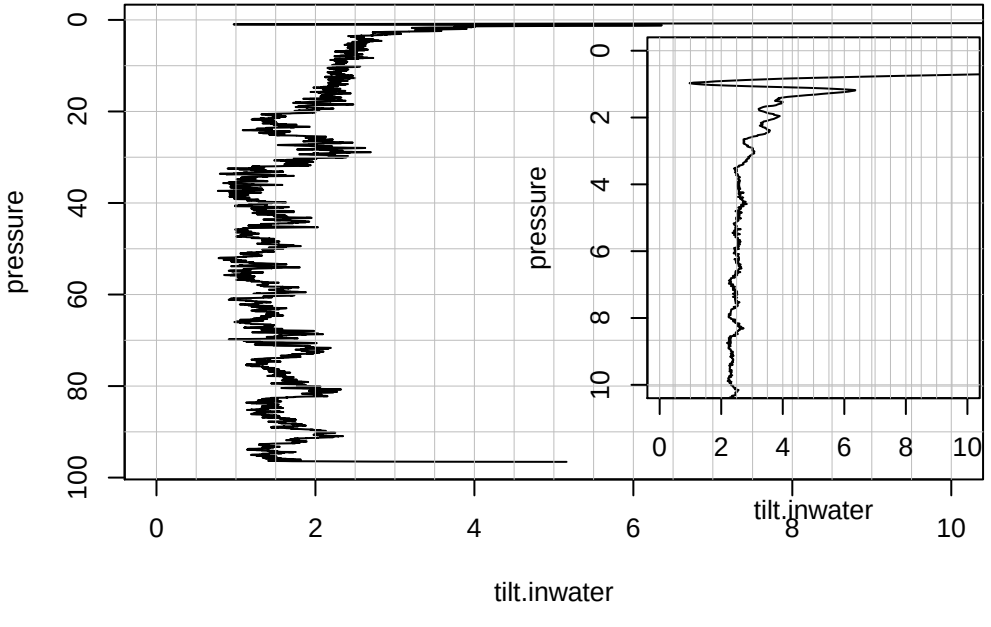

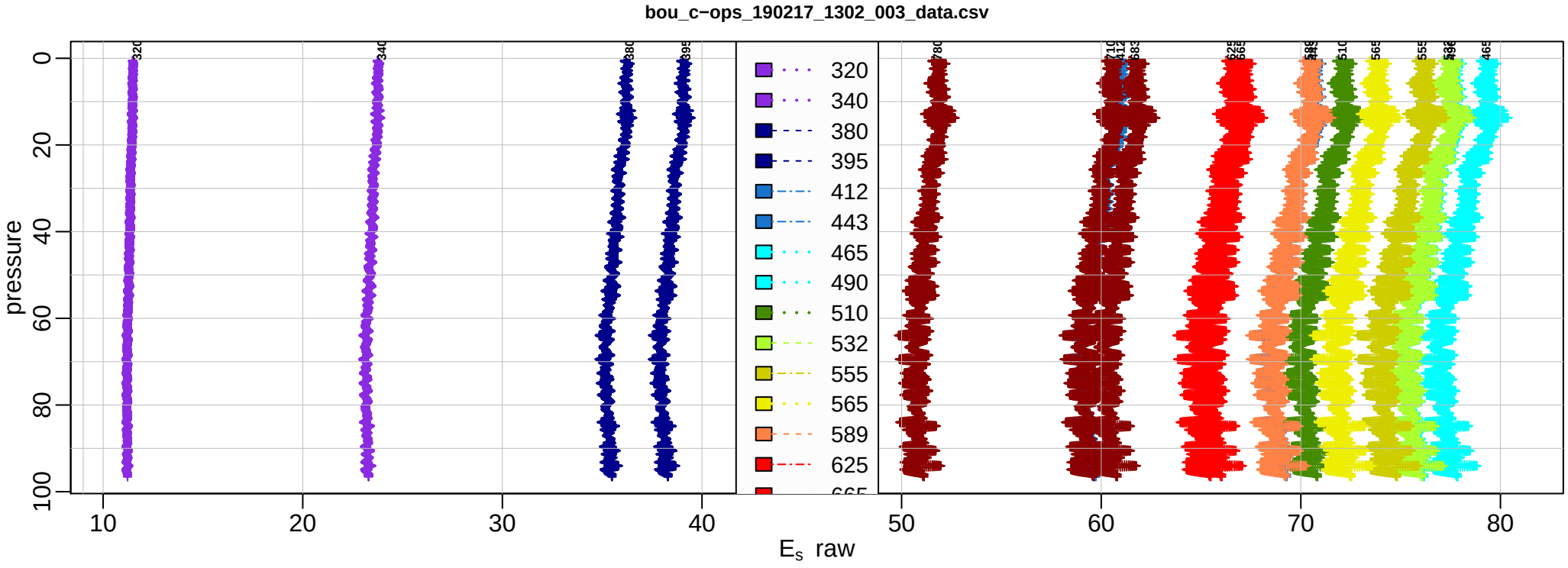
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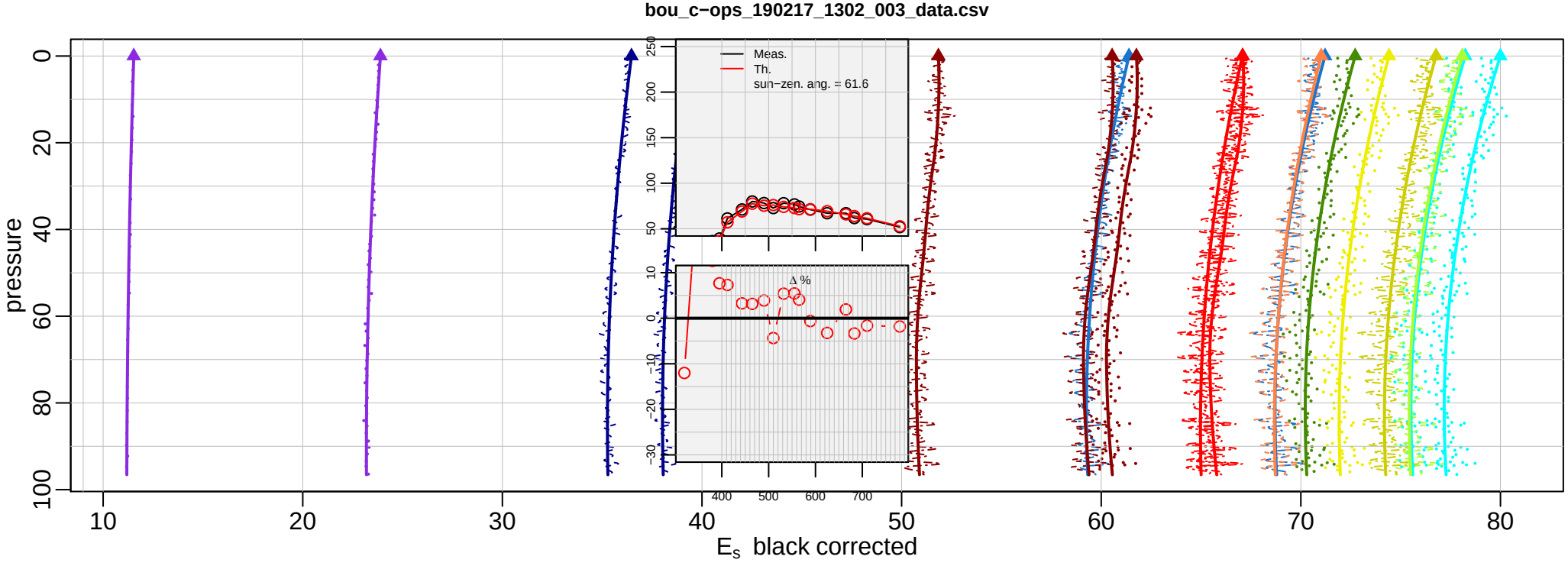
40
60
80
100
10
20
30
40
50
60
70
80
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625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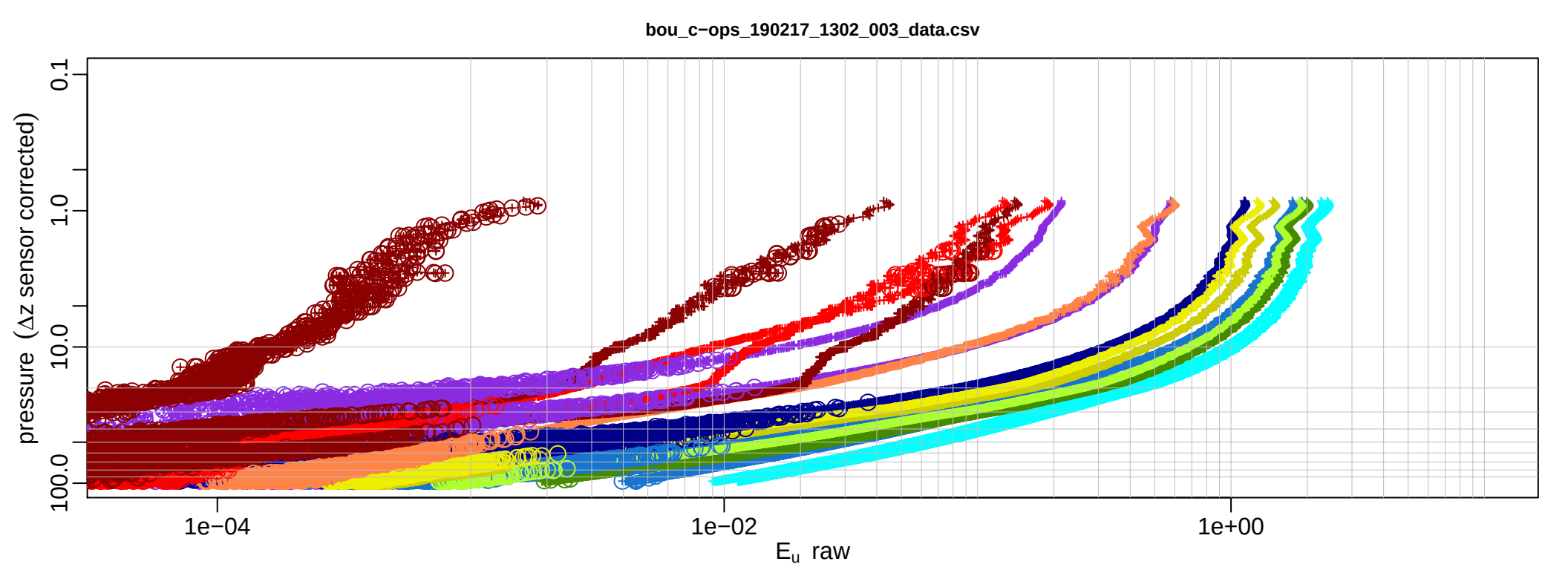
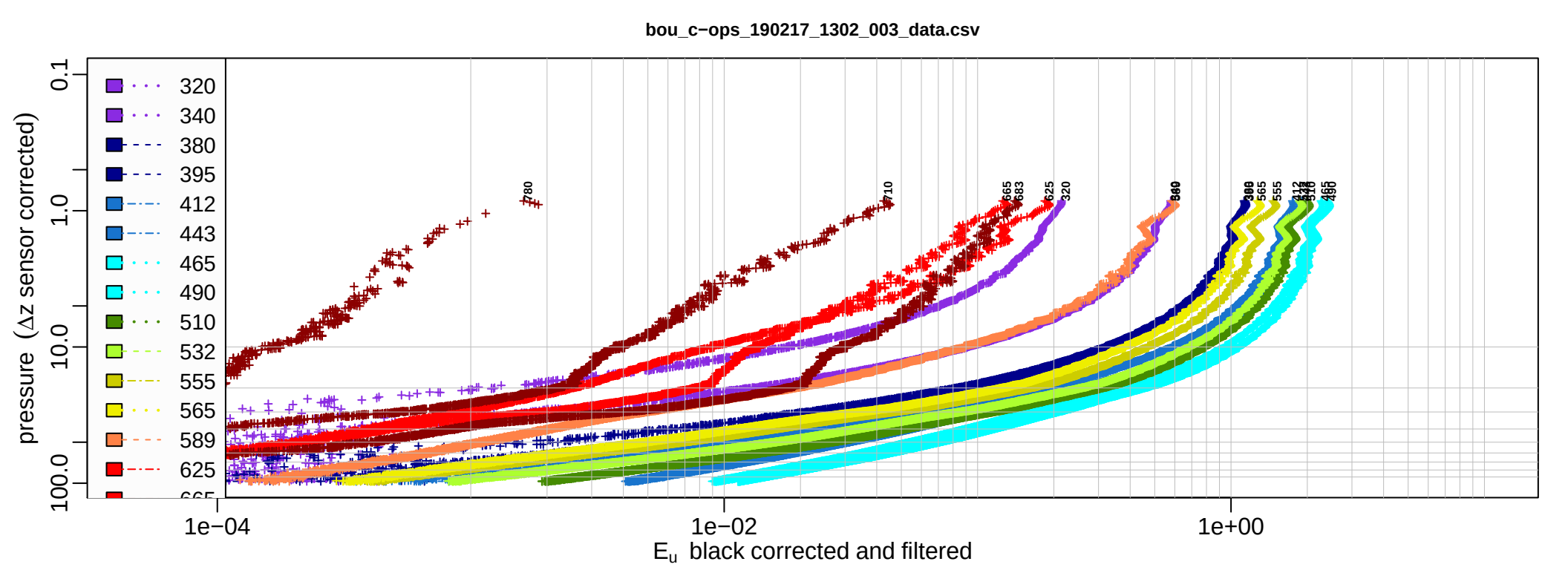
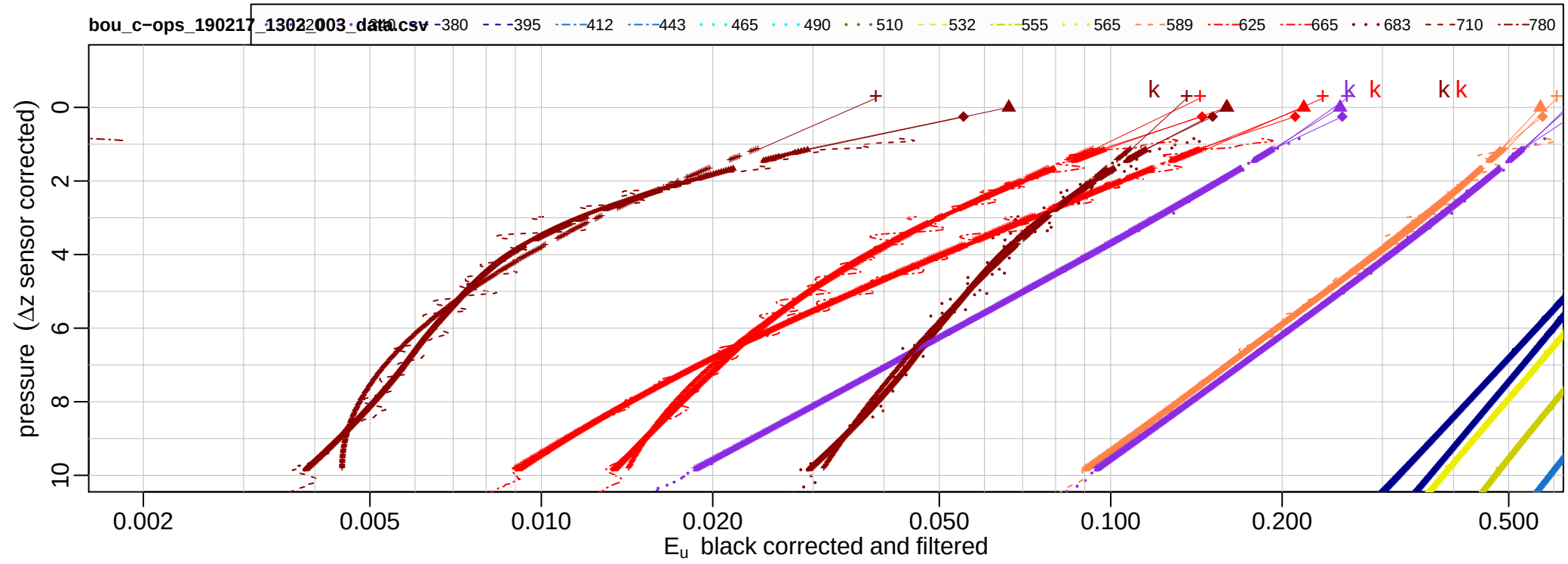
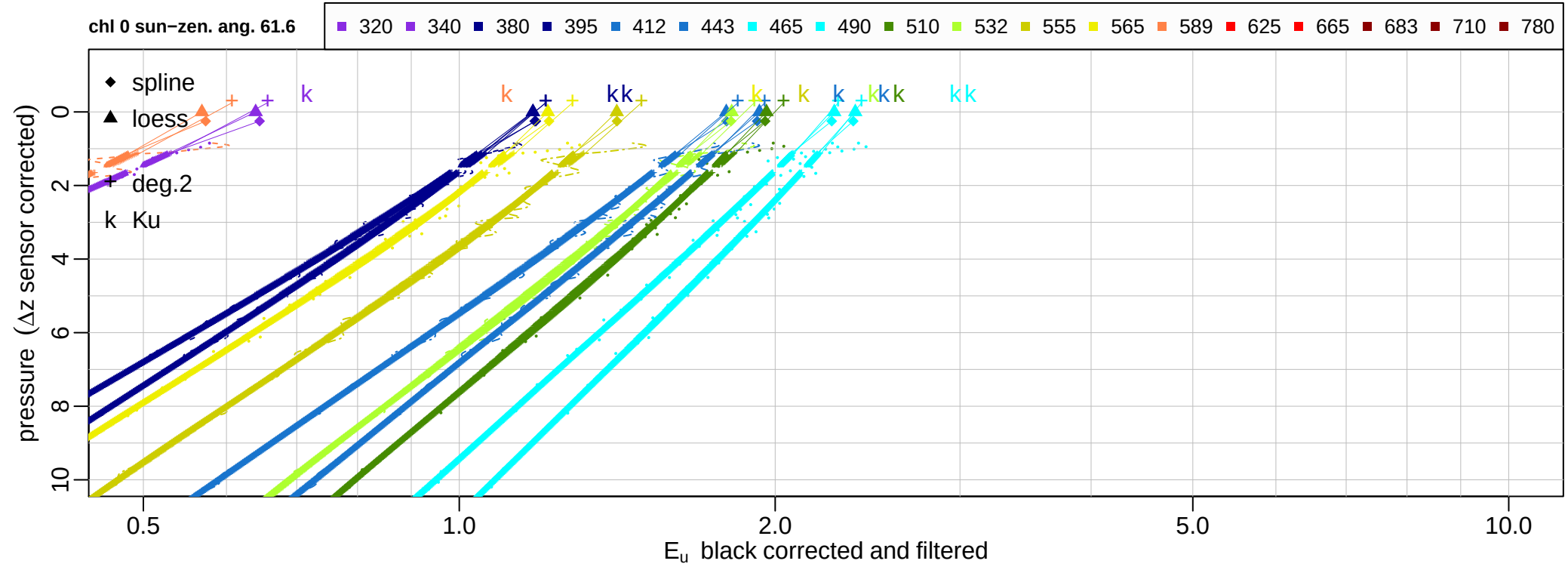
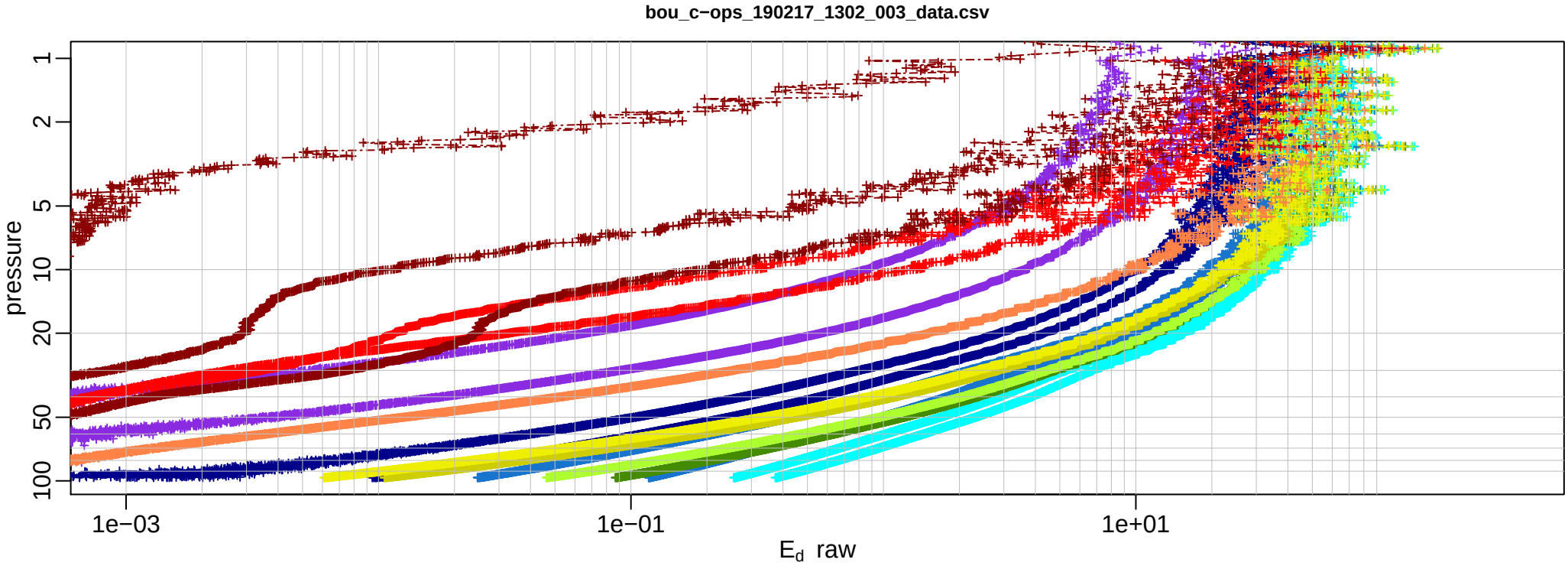
0
20
40
60
80
100
10
20
30
40
50
60
70
80
E_s black corrected
Meas.
Th.
sun−zen. ang. = 61.6
Δ %
250
200
150
100
50
10
0
−10
−20
−30
400
500
600
700

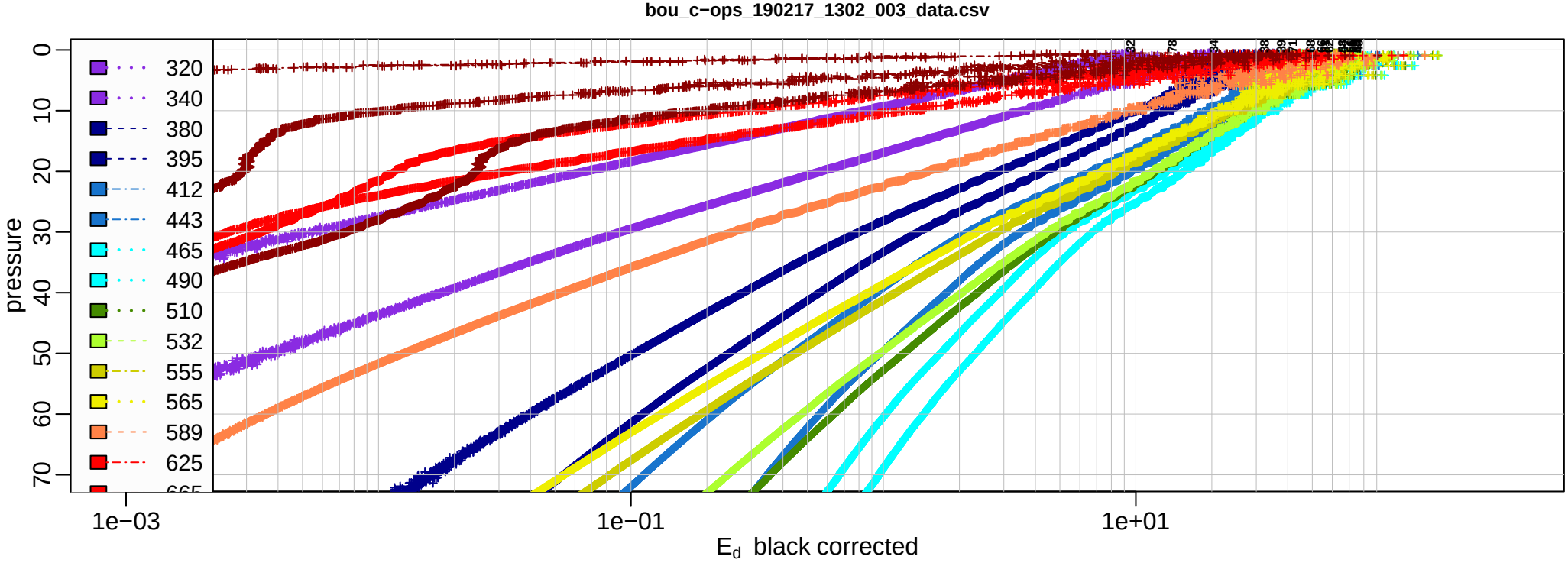

bou_c−ops_190217_1302_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

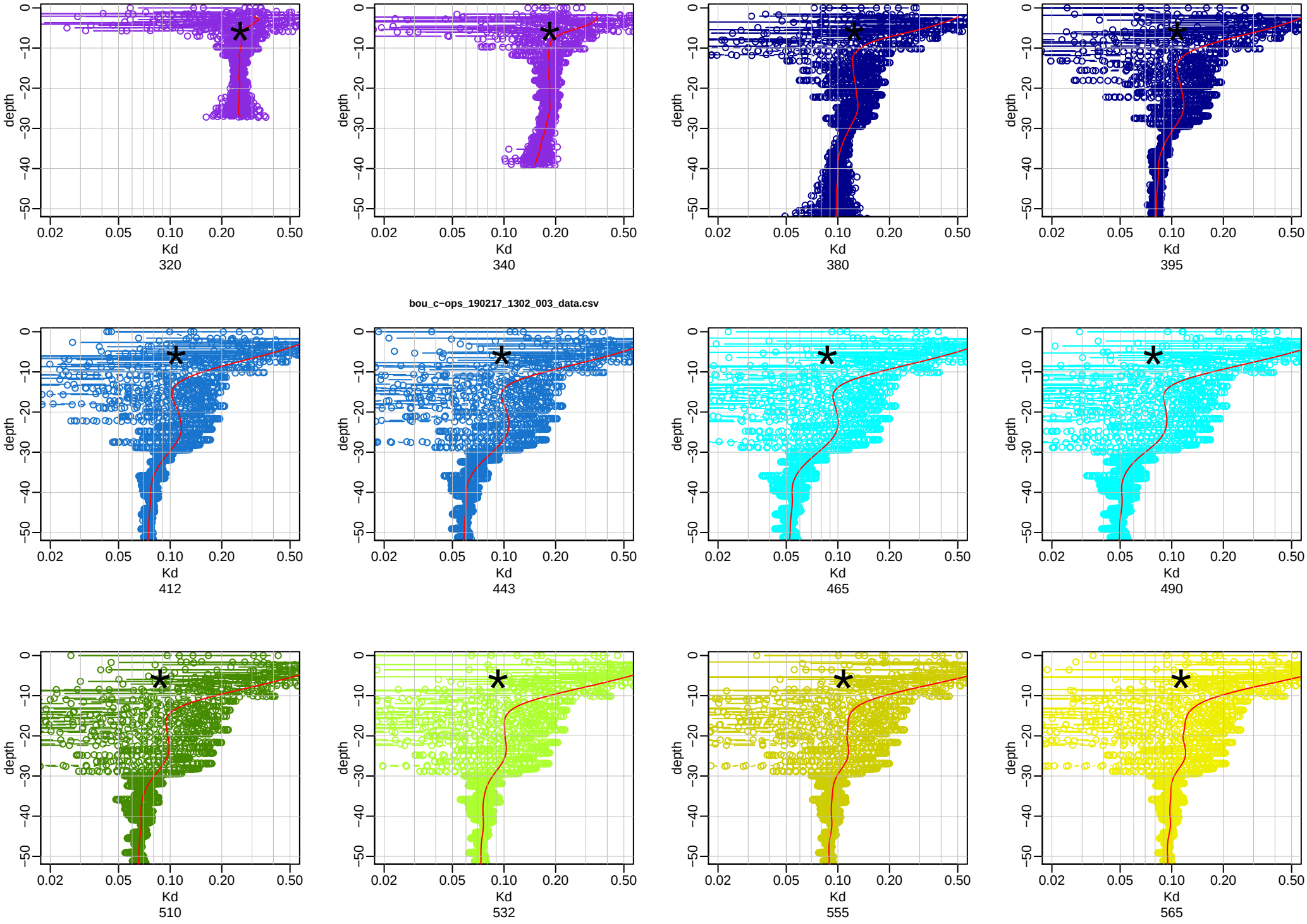

bou_c−ops_190217_1302_003_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
665
683
625
320
1e−04
1e−02
1e+00
E_u black corrected and filtered

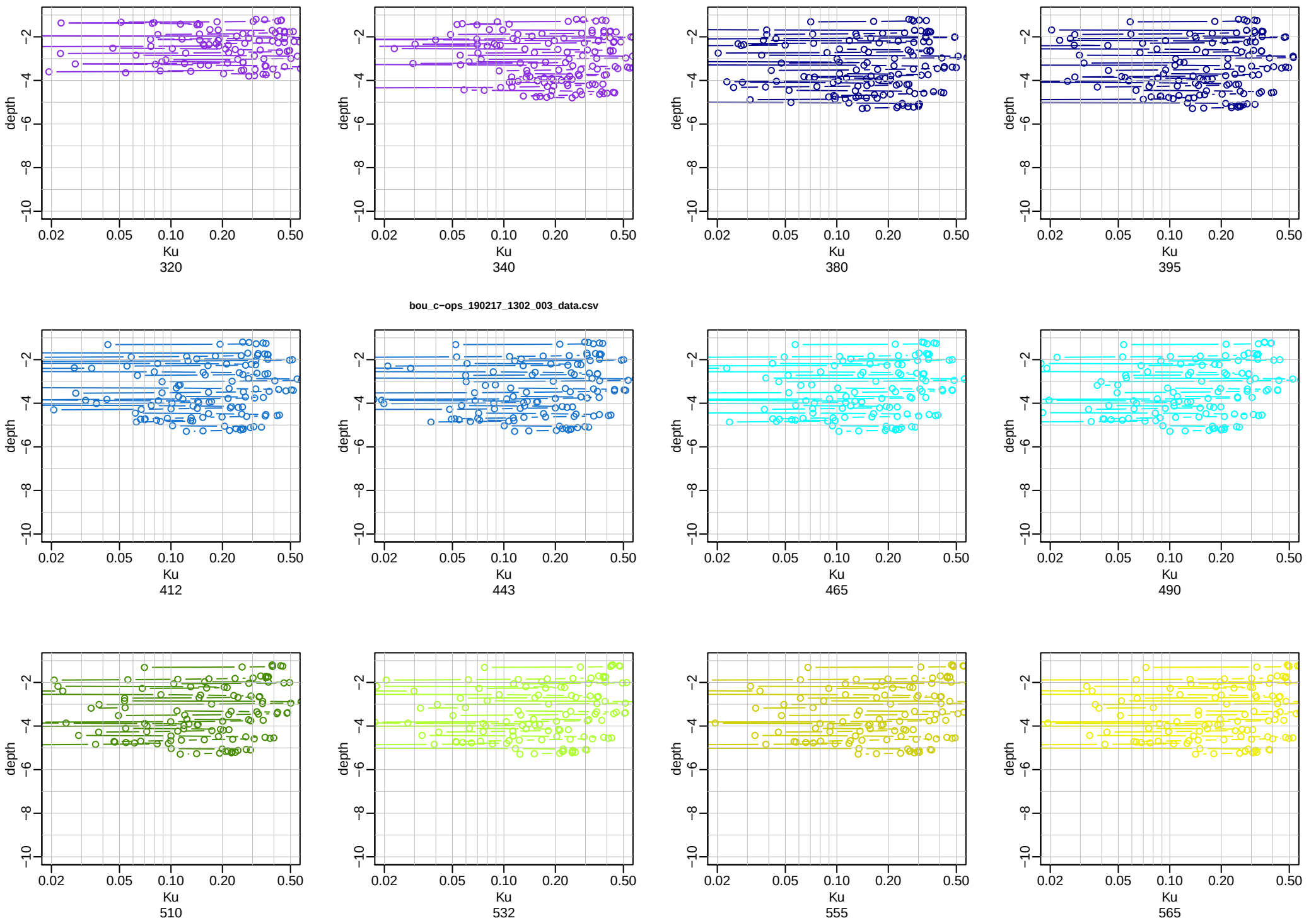

bou_c−ops_190217_1302_003_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered

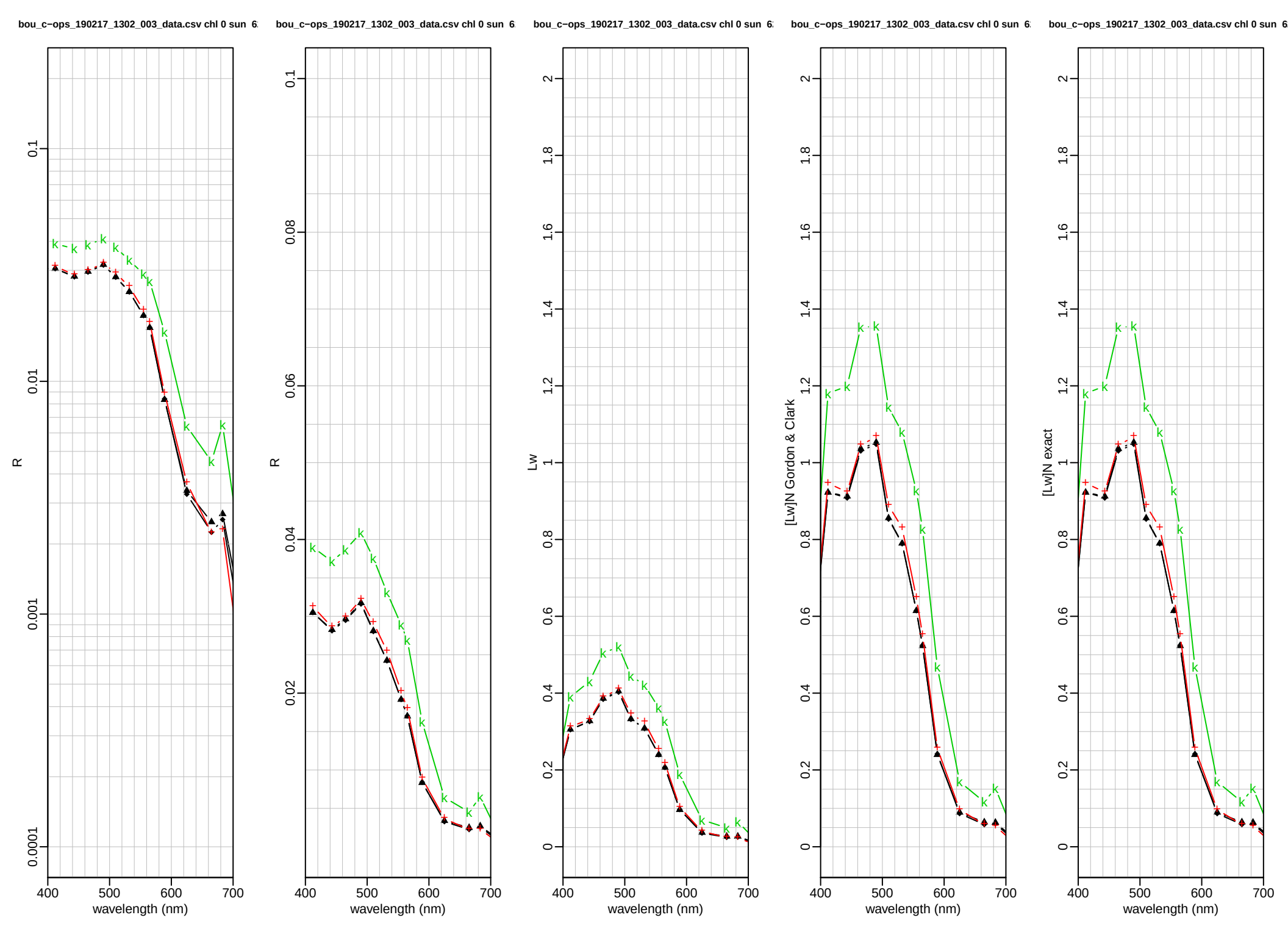

chl 0 sun−zen. ang. 61.6
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190217_1302_003_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E$_d$ raw


bou_c−ops_190217_1302_003_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E$_d$ black corrected

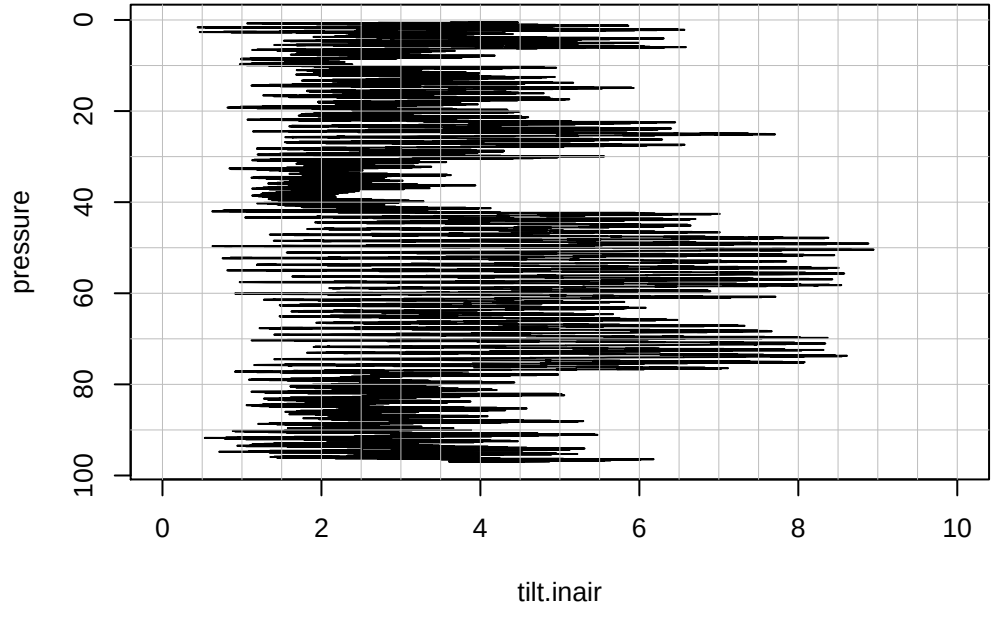

bou_c~ops_190217_1302_003_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

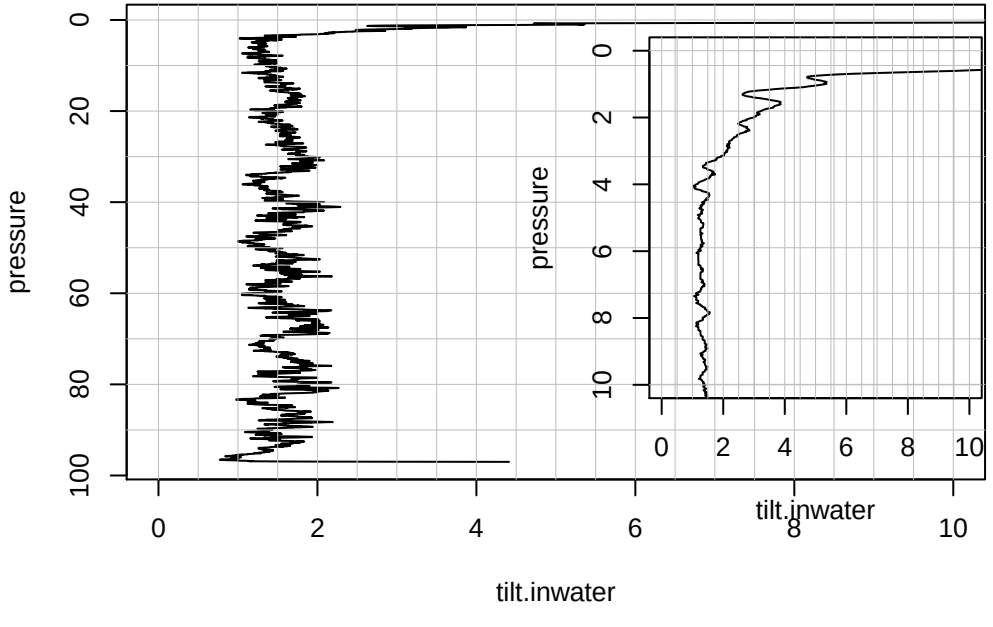

bou_c−ops_190217_1302_003_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

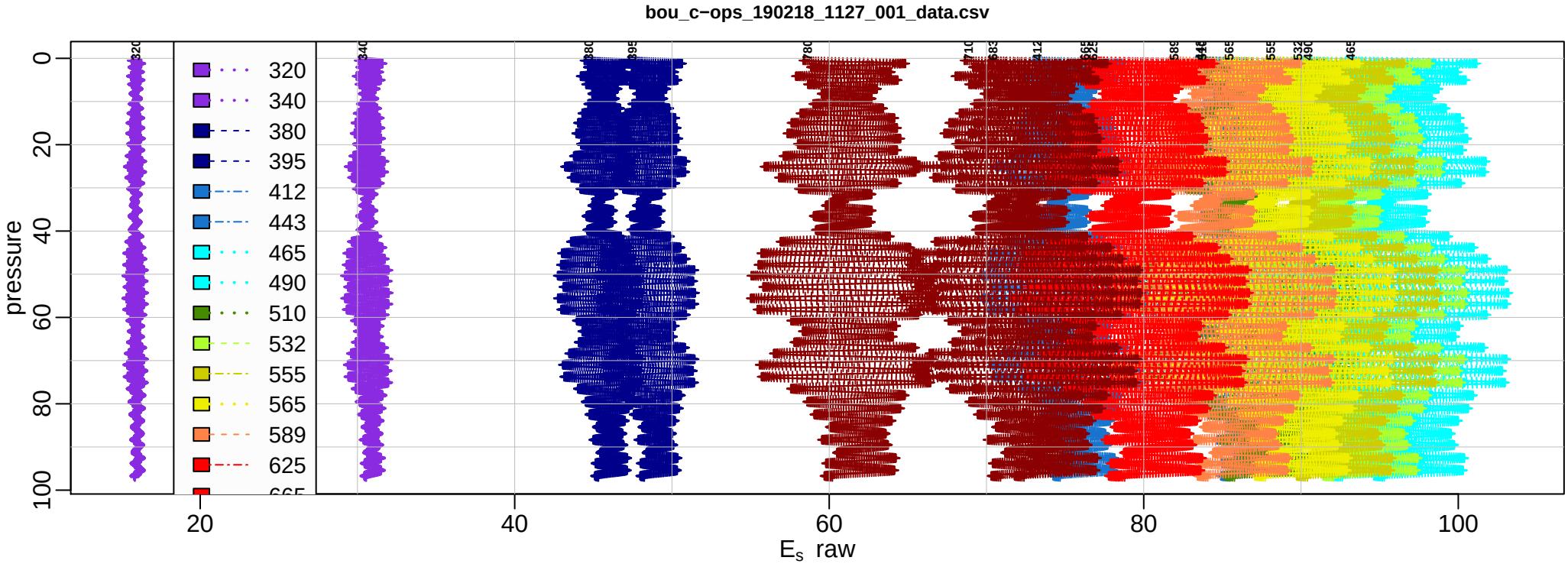

bou_c−ops_190217_1302_003_data.csv chl 0 sun 6
R
wavelength (nm)
bou_c−ops_190217_1302_003_data.csv chl 0 sun 6
R
wavelength (nm)
bou_c−ops_190217_1302_003_data.csv chl 0 sun 6
Lw
wavelength (nm)
bou_c−ops_190217_1302_003_data.csv chl 0 sun 6
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190217_1302_003_data.csv chl 0 sun 6
[Lw]N exact
wavelength (nm)

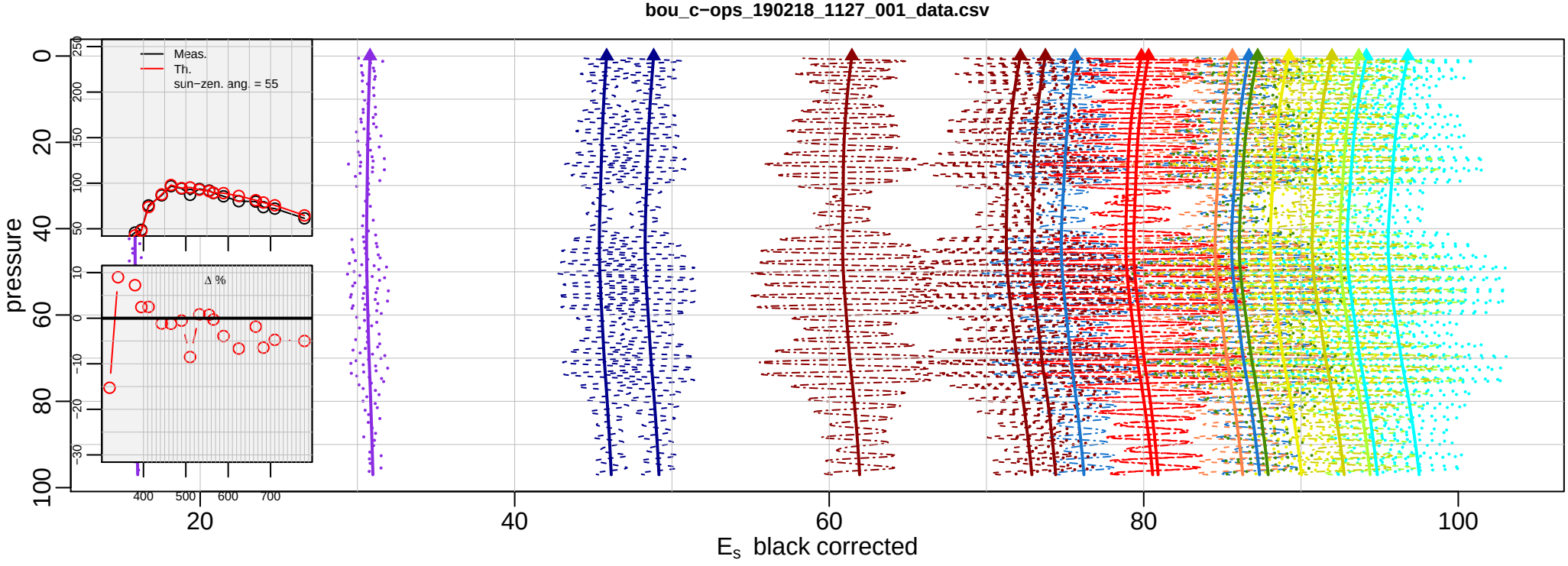
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole205/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole205/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.90064188639323
latitude 43.3718180338542
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

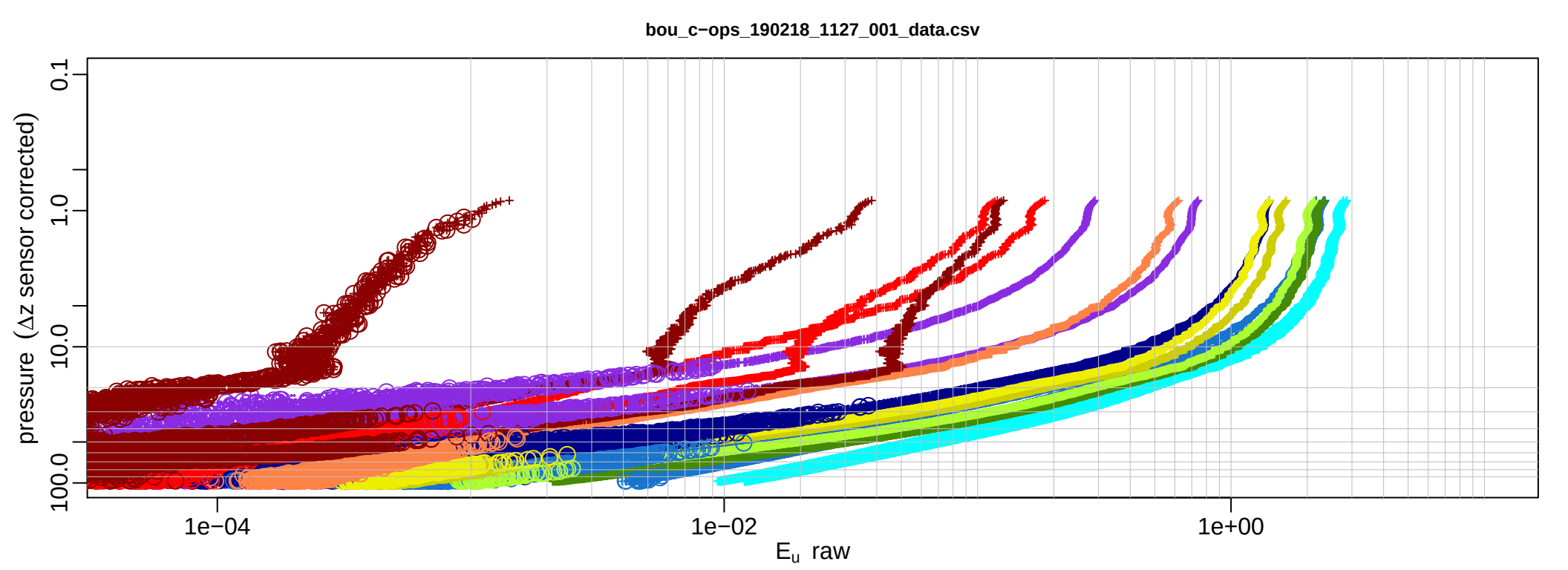
bou_c−ops_190218_1127_001_data.csv

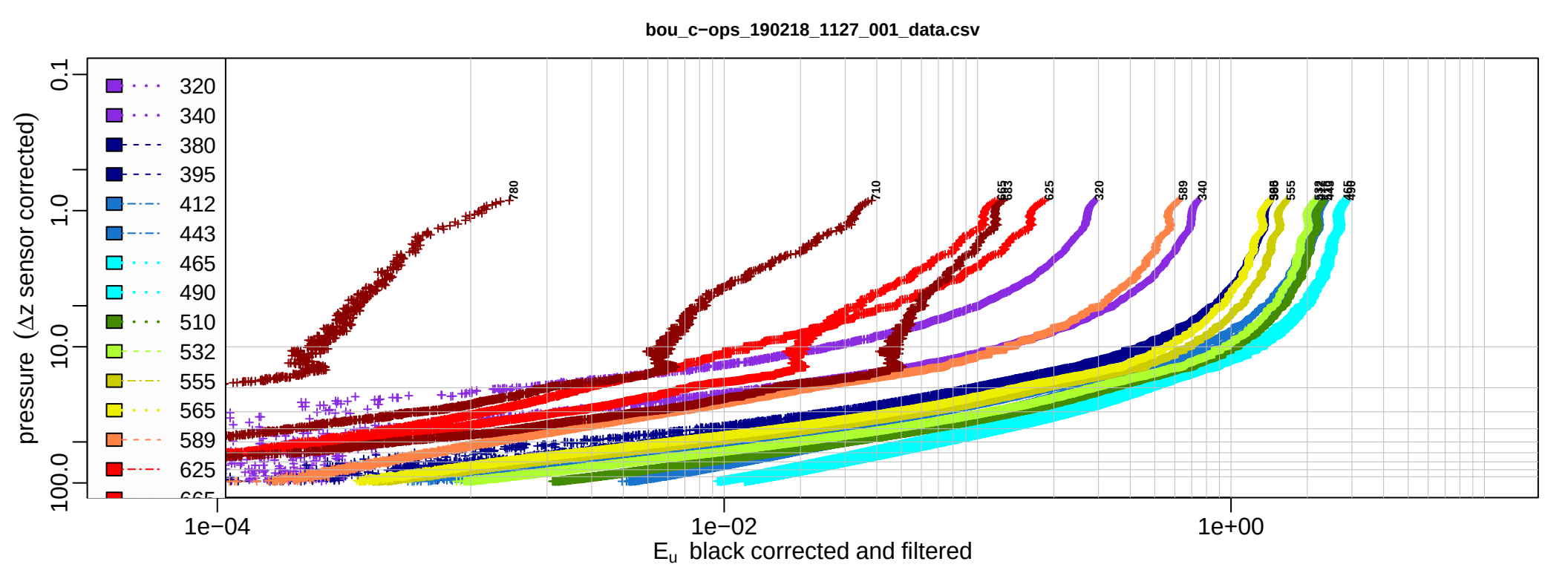


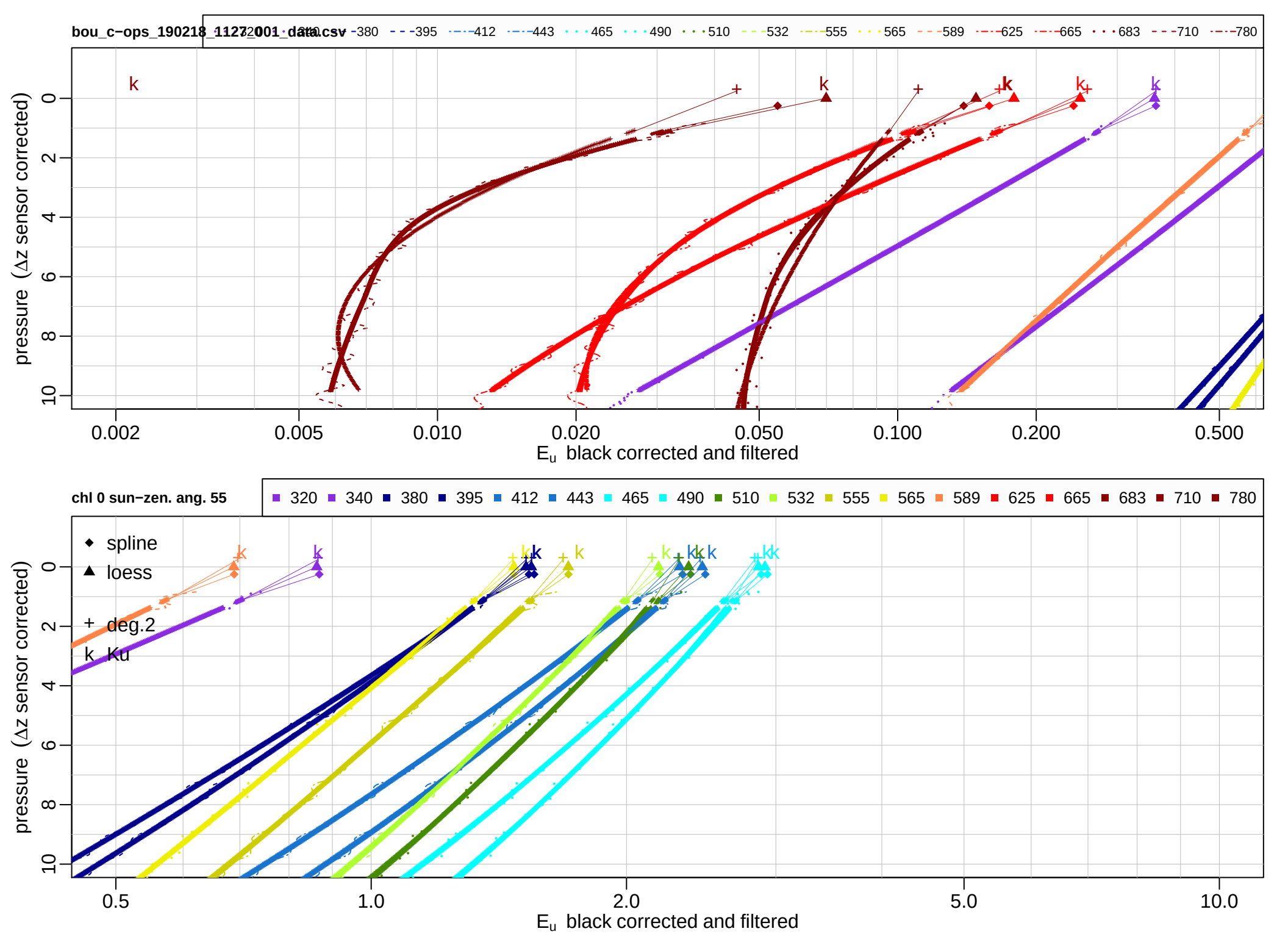


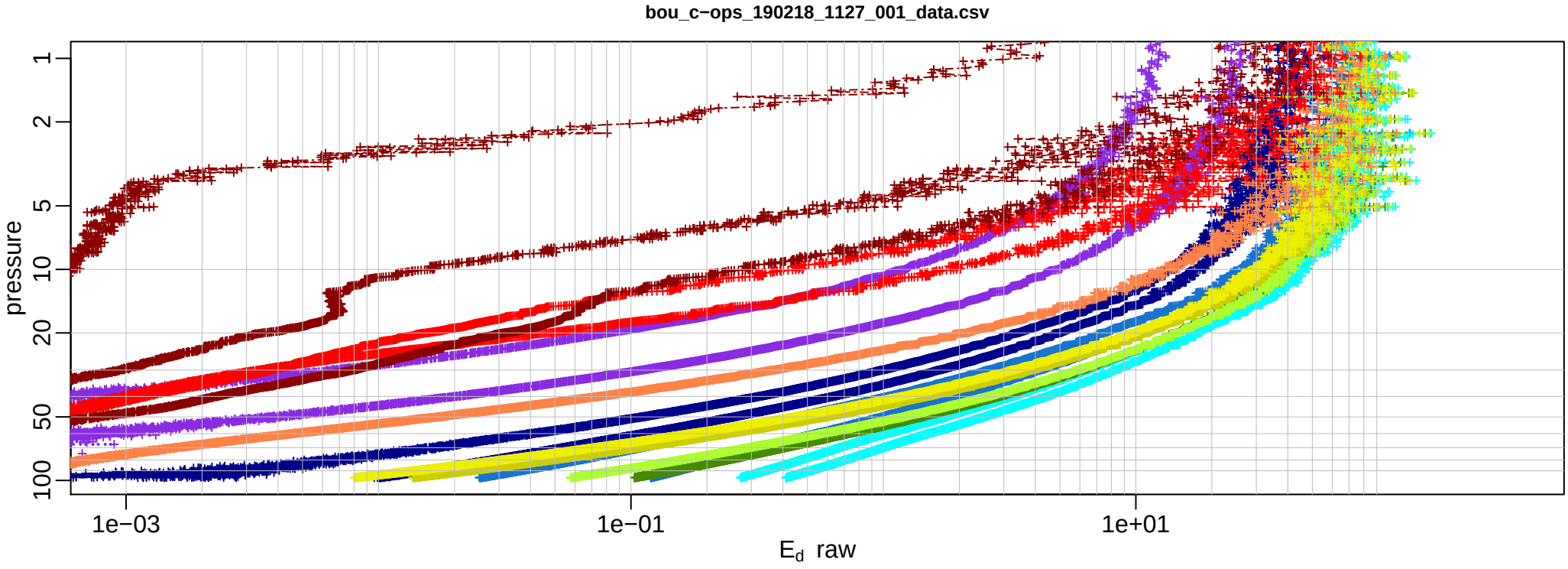

bou_c−ops_190218_1127_001_data.csv
pressure
0
20
40
60
80
100
320
340
380
395
412
443
465
490
510
532
555
565
589
625
20
40
60
80
100
E_s raw

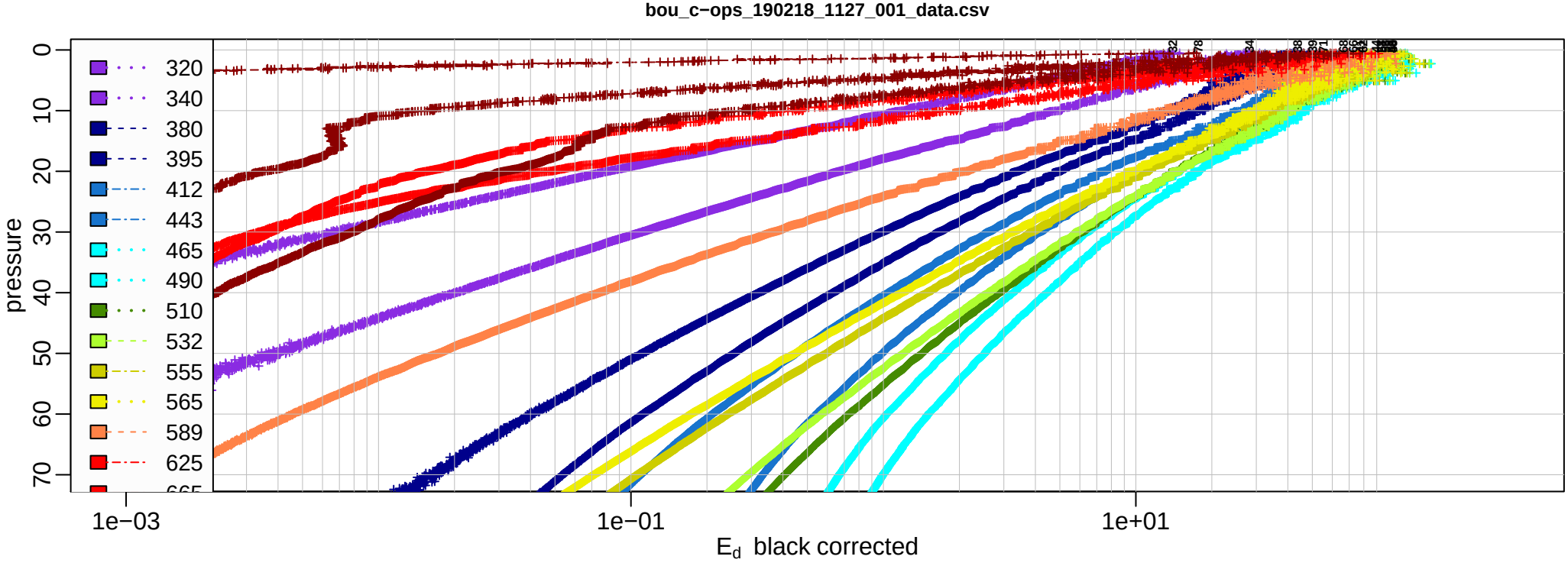

bou_c−ops_190218_1127_001_data.csv
pressure
0
20
40
60
80
100
Meas.
Th.
sun−zen. ang. = 55
Δ %
400
500
600
700
20
40
60
80
100
E_s black corrected

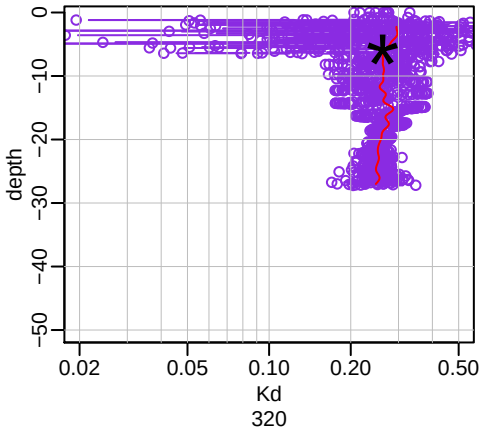

bou_c−ops_190218_1127_001_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

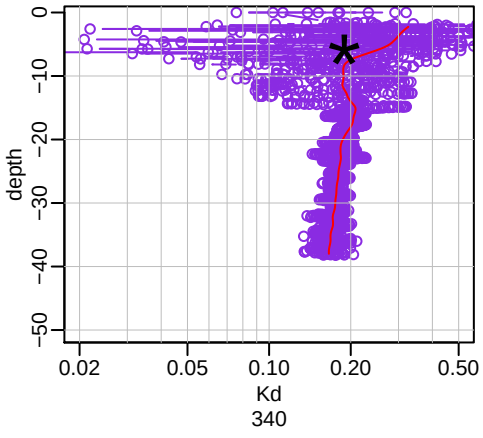

bou_c−ops_190218_1127_001_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
625
320
589
340
555
1e−04
1e−02
1e+00
E_u black corrected and filtered

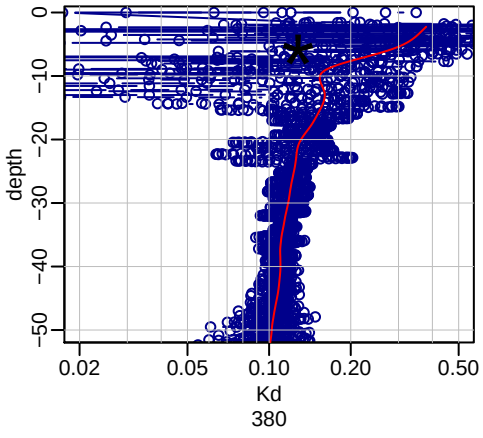

bou_c−ops_190218_1127001_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 55
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered

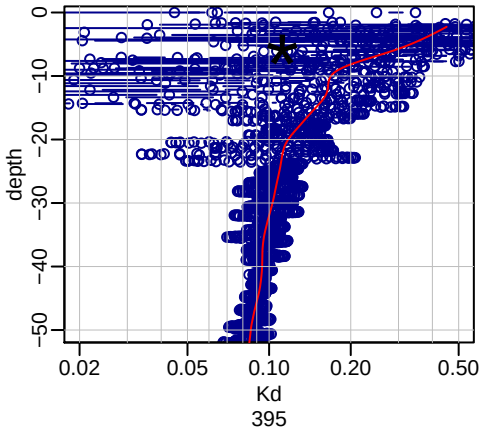

bou_c−ops_190218_1127_001_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190218_1127_001_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

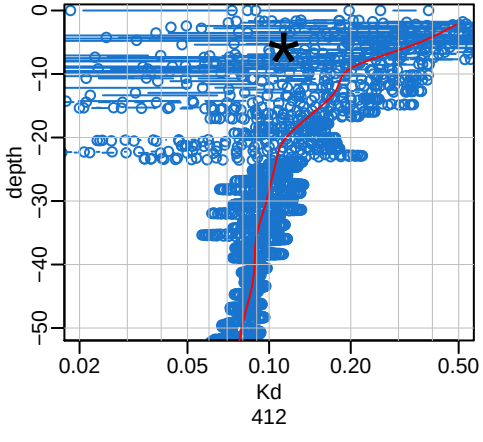


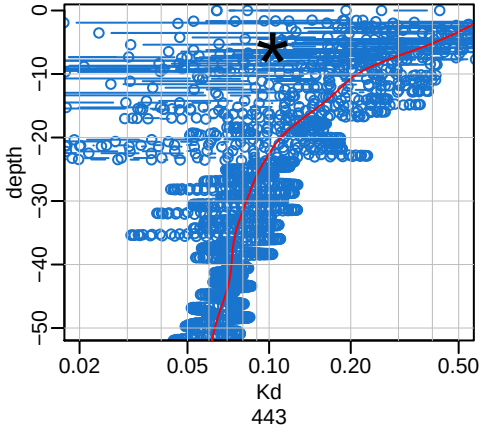


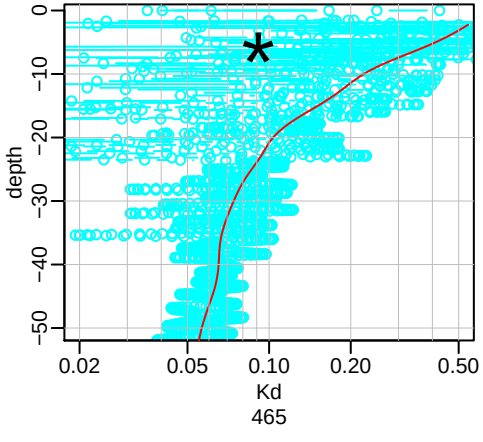


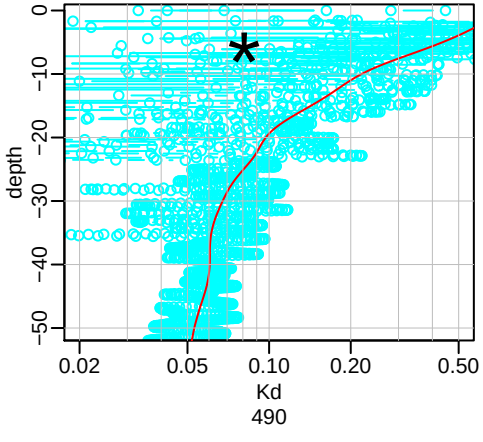


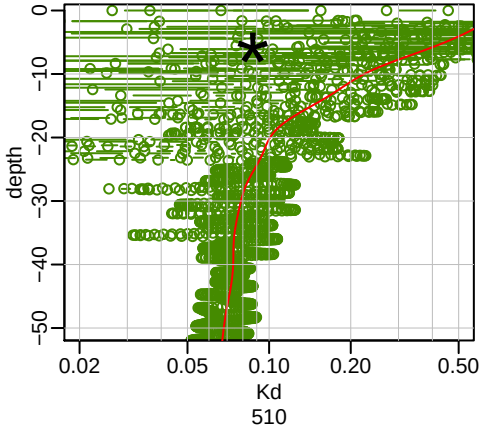
bou_c~ops_190218_1127_001_data.csv

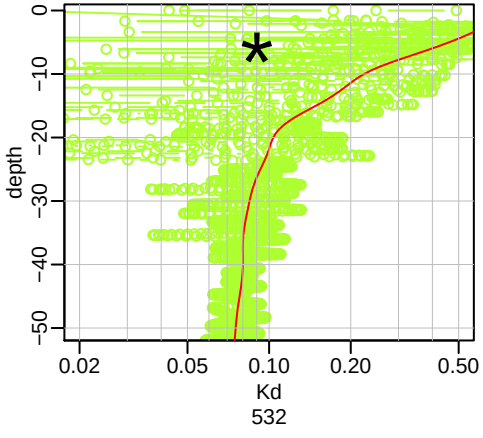


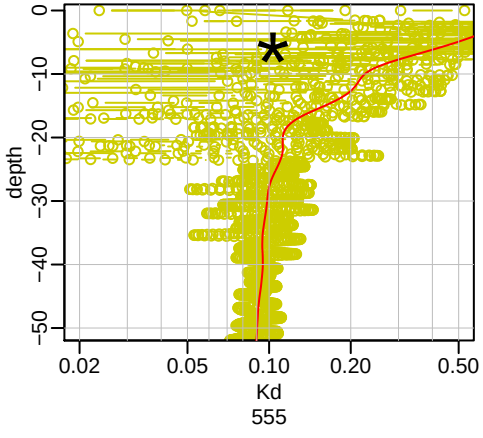


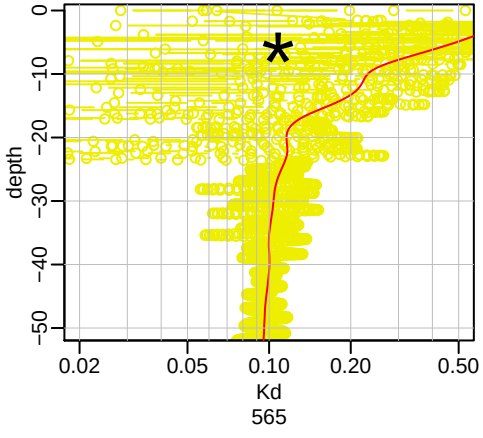


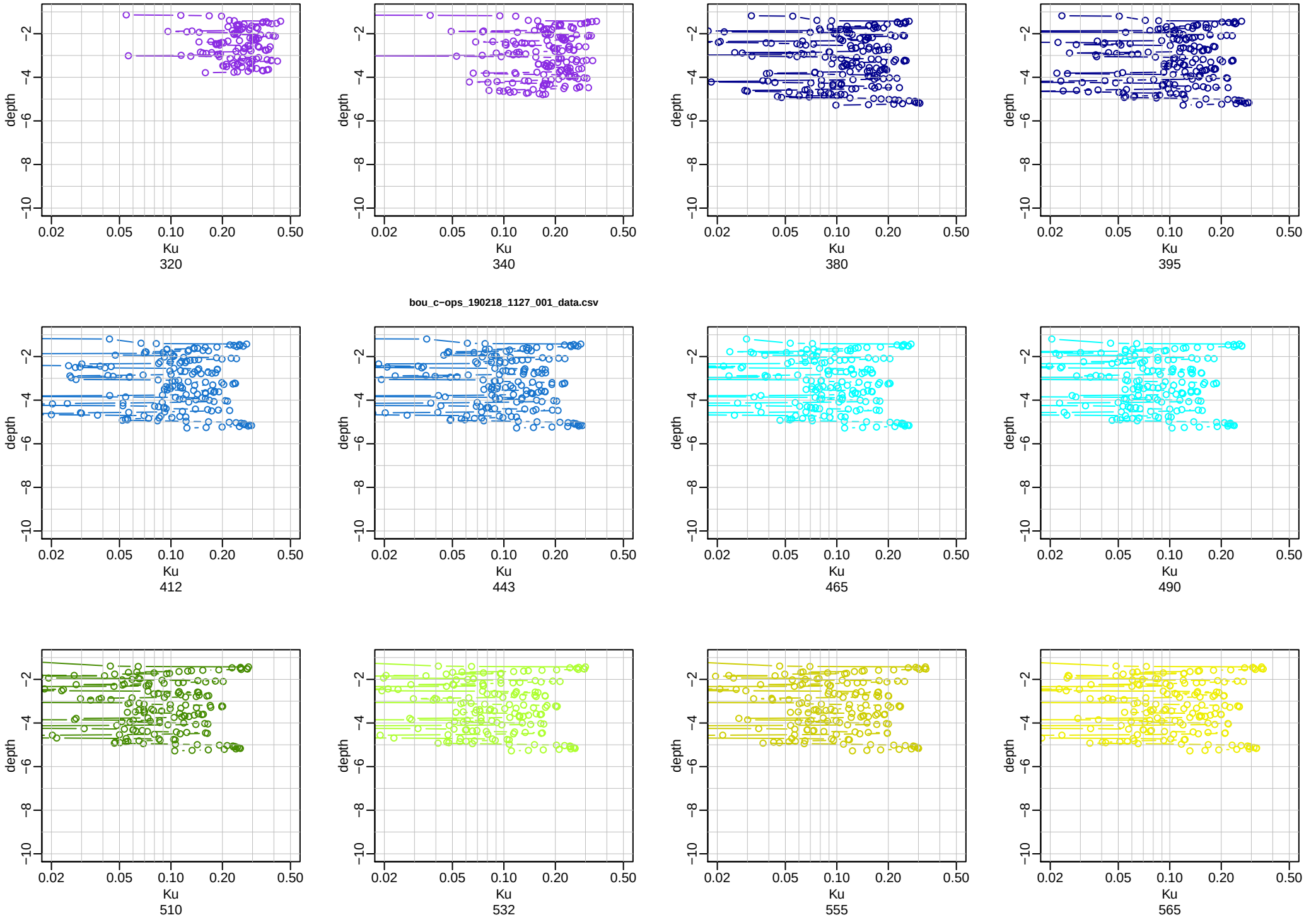


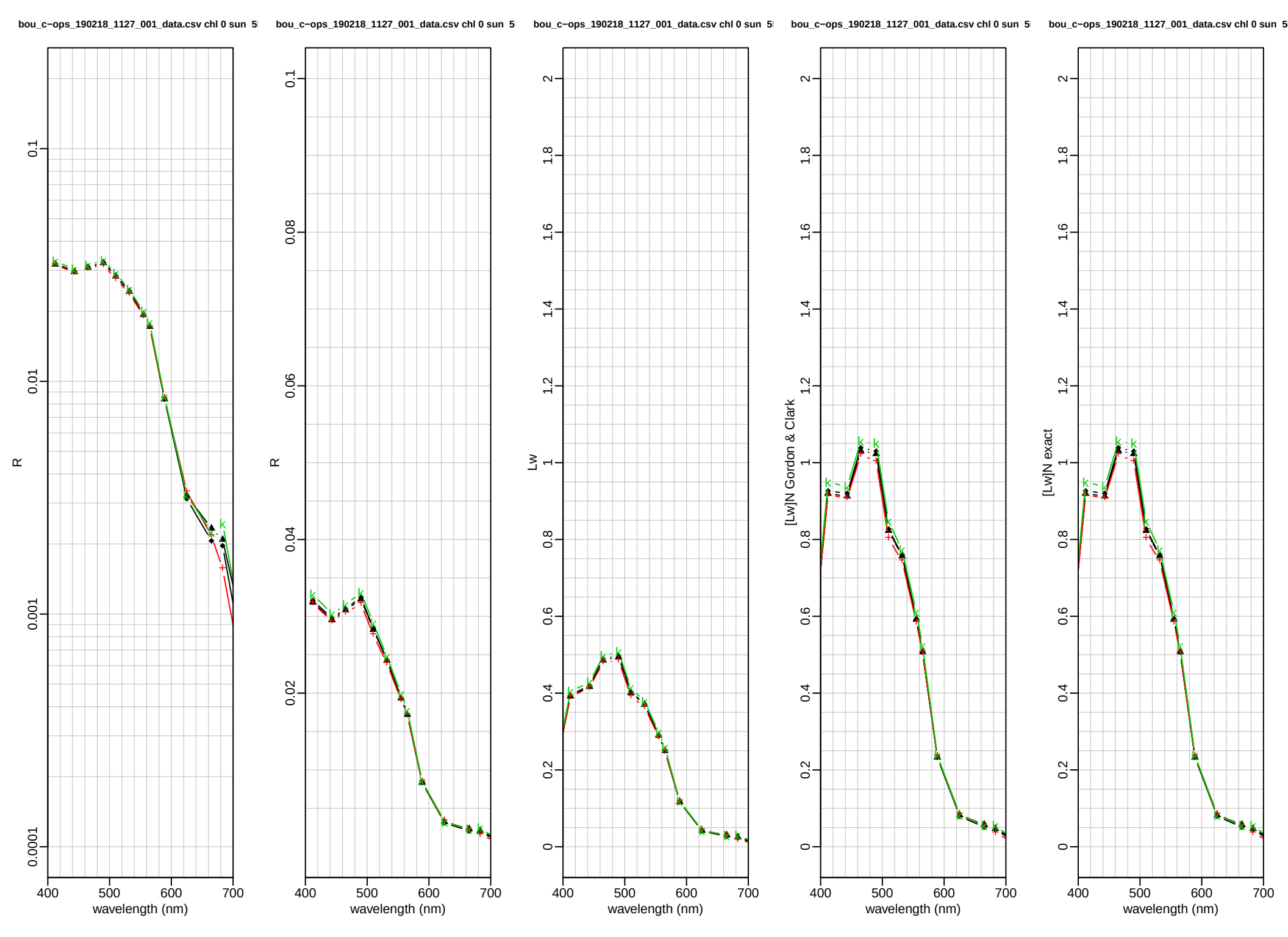






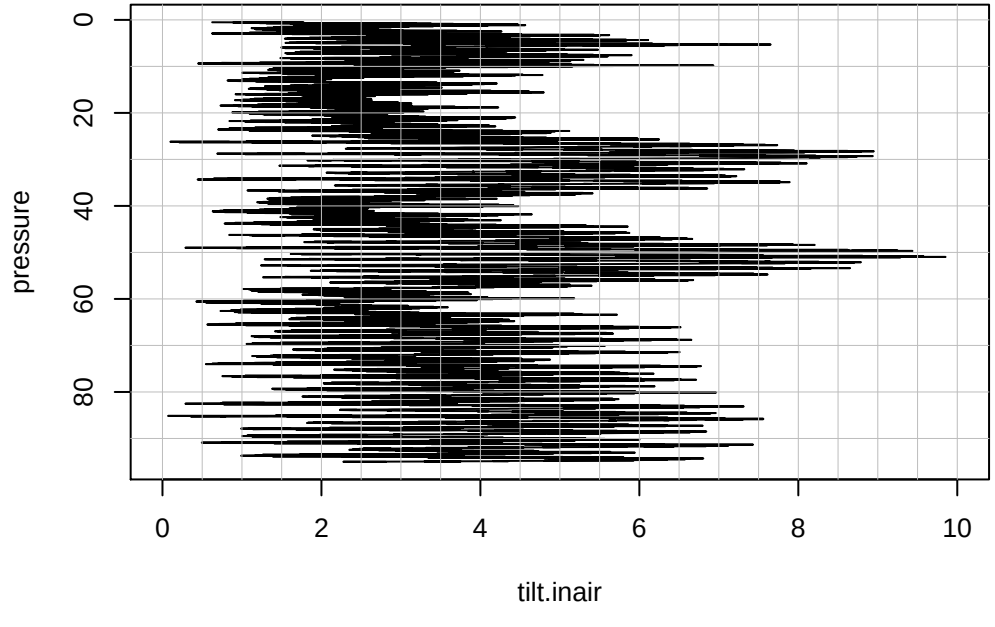


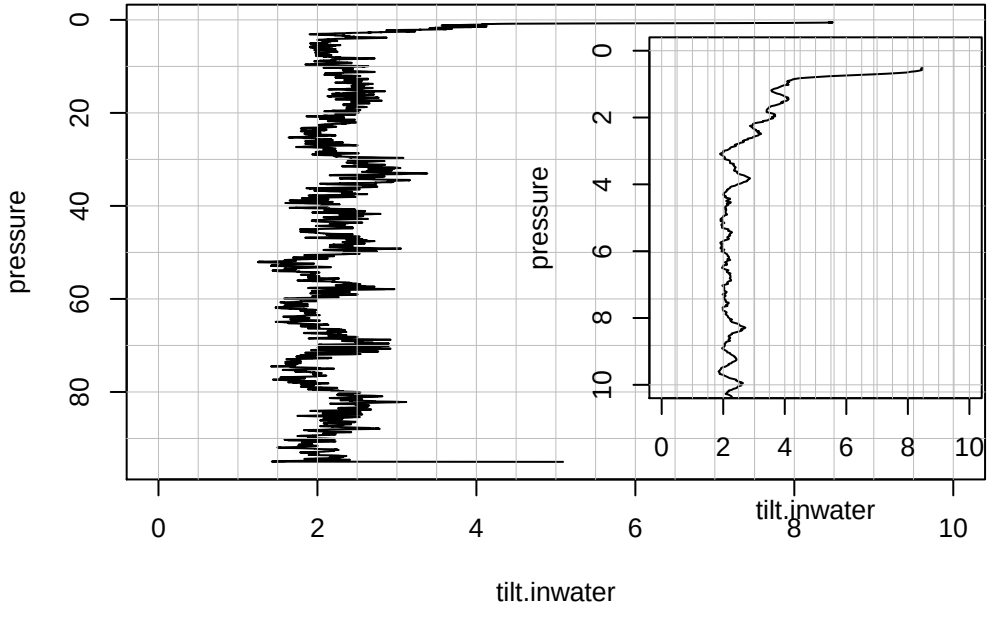

bou_c~ops_190218_1127_001_data.csv
depth
Ku
320
340
380
395
412
443
465
490
510
532
555
565

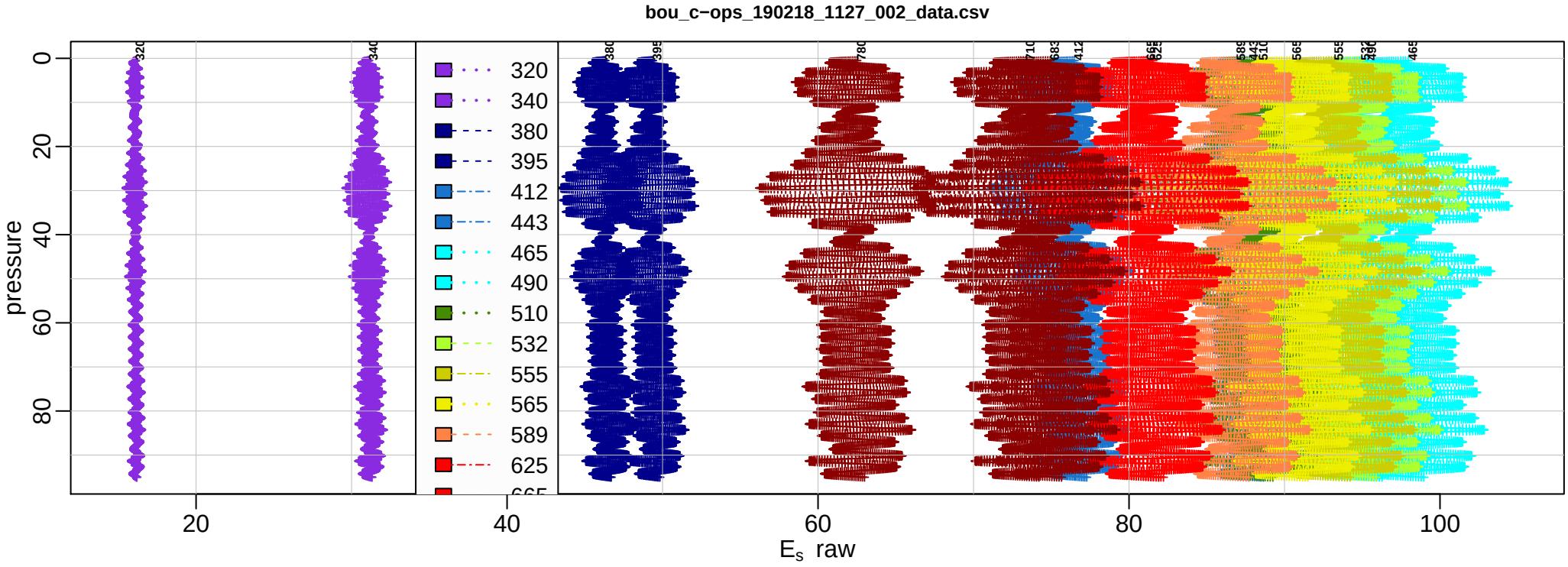

bou_c−ops_190218_1127_001_data.csv chl 0 sun 5
R
wavelength (nm)
bou_c−ops_190218_1127_001_data.csv chl 0 sun 5
R
wavelength (nm)
bou_c−ops_190218_1127_001_data.csv chl 0 sun 5
Lw
wavelength (nm)
bou_c−ops_190218_1127_001_data.csv chl 0 sun 5
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190218_1127_001_data.csv chl 0 sun 5
[Lw]N exact
wavelength (nm)

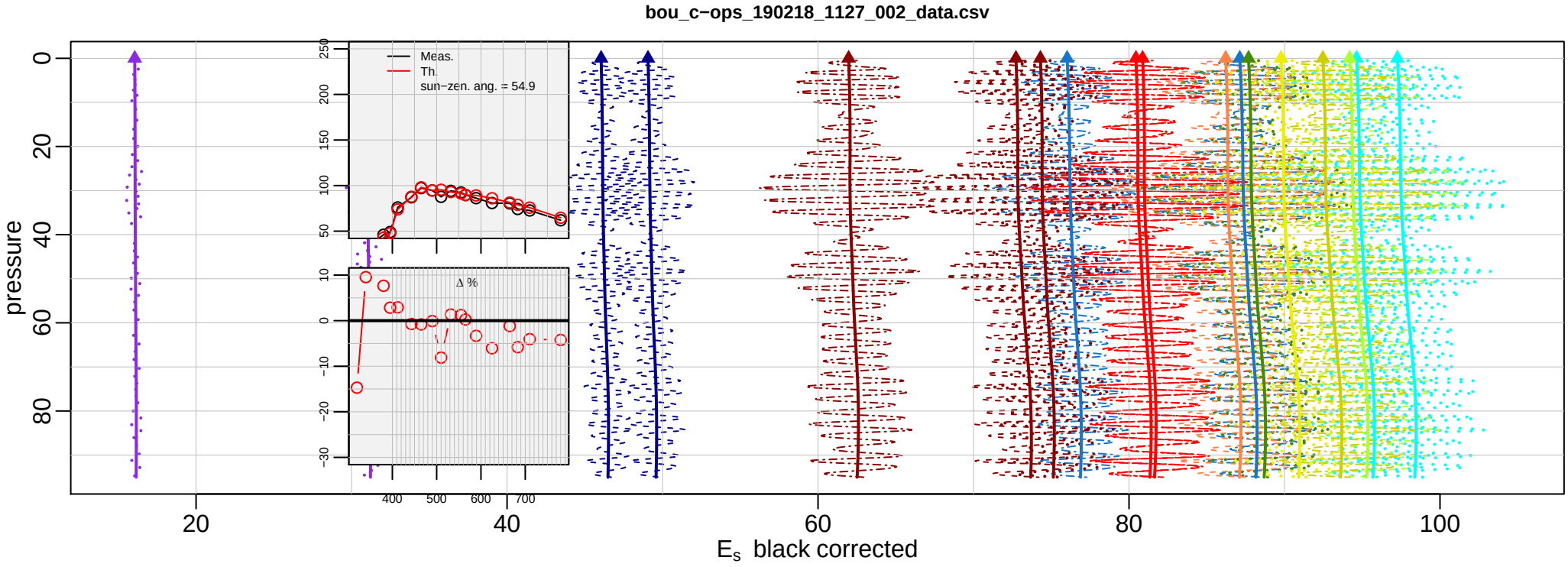
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole205/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole205/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89764099121093
latitude 43.3745524088542
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

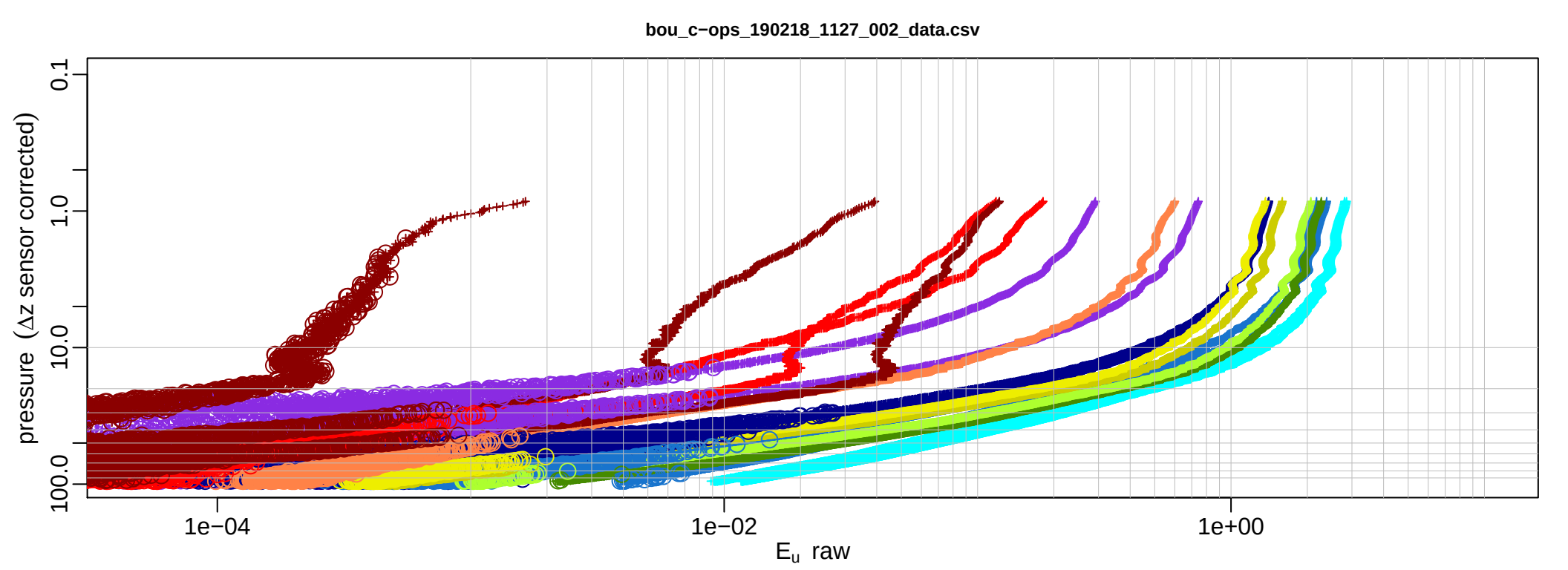
bou_c−ops_190218_1127_002_data.csv

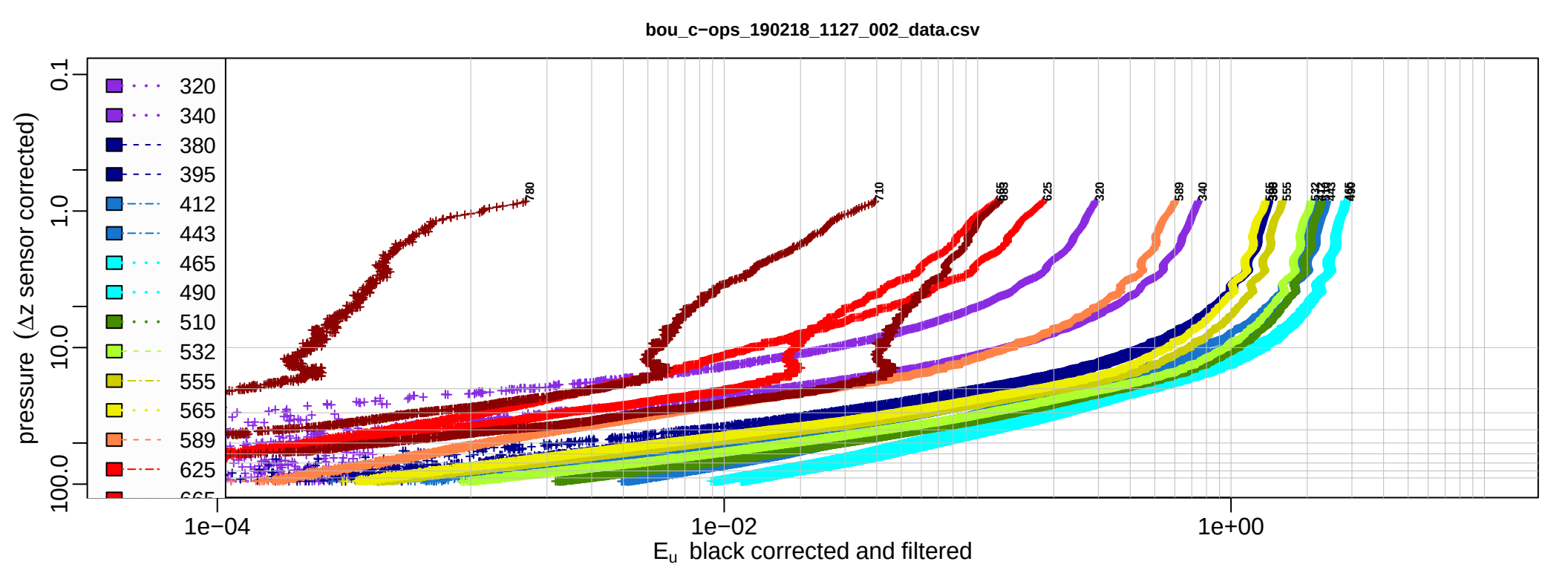


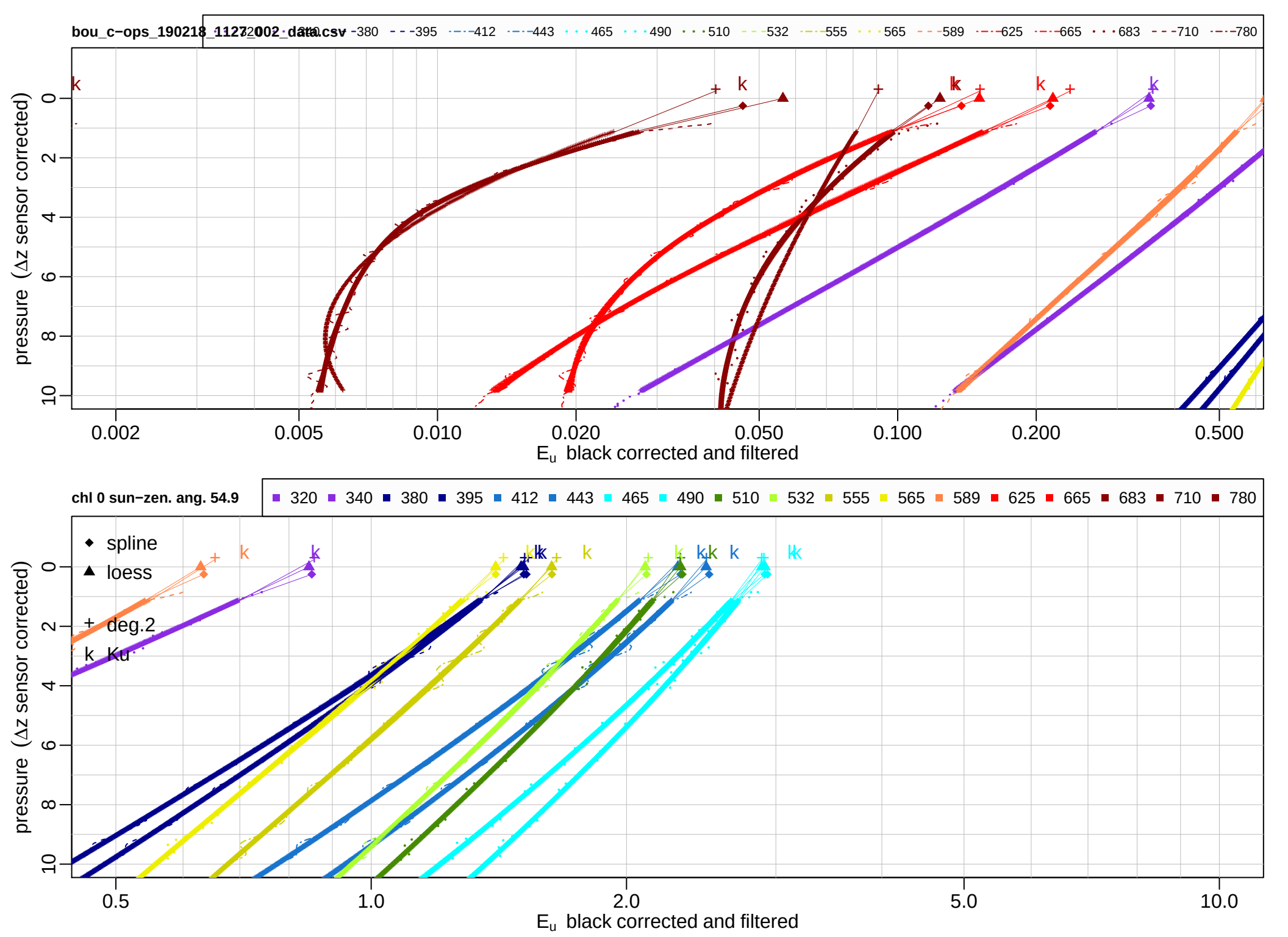


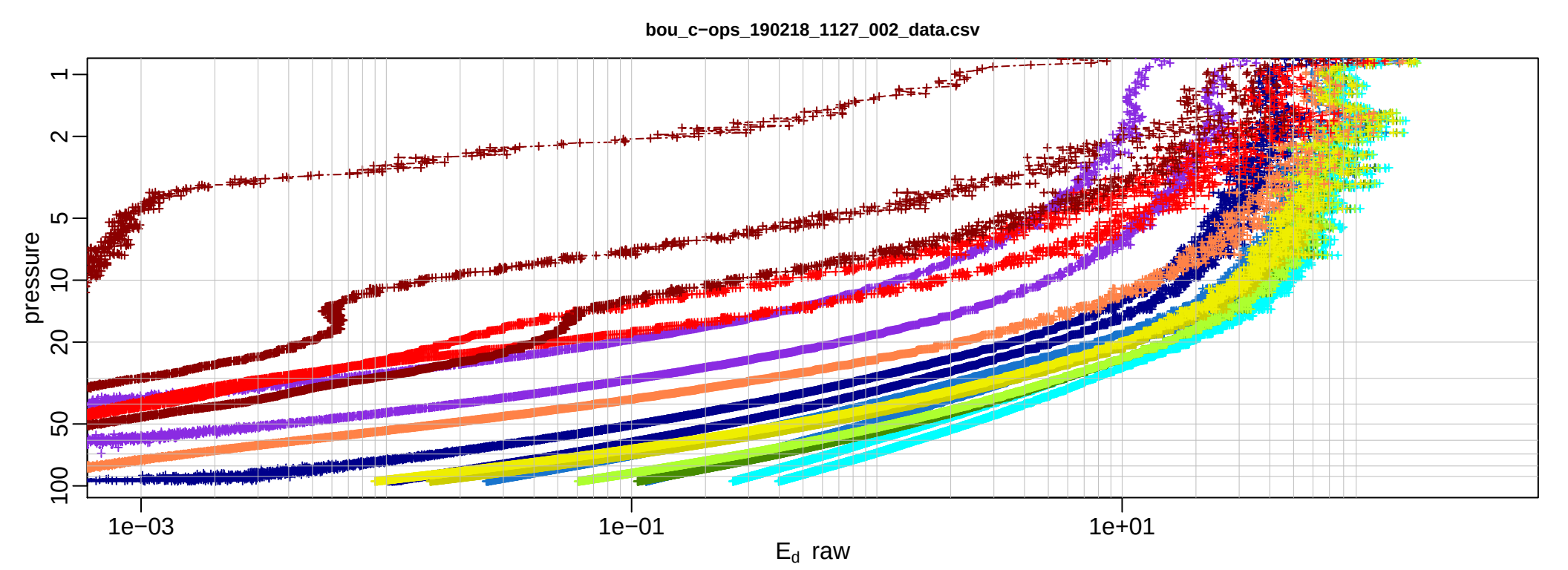

bou_c−ops_190218_1127_002_data.csv
pressure
0
20
40
60
80
320
340
380
395
412
443
465
490
510
532
555
565
589
625
20
40
60
80
100
E_s raw

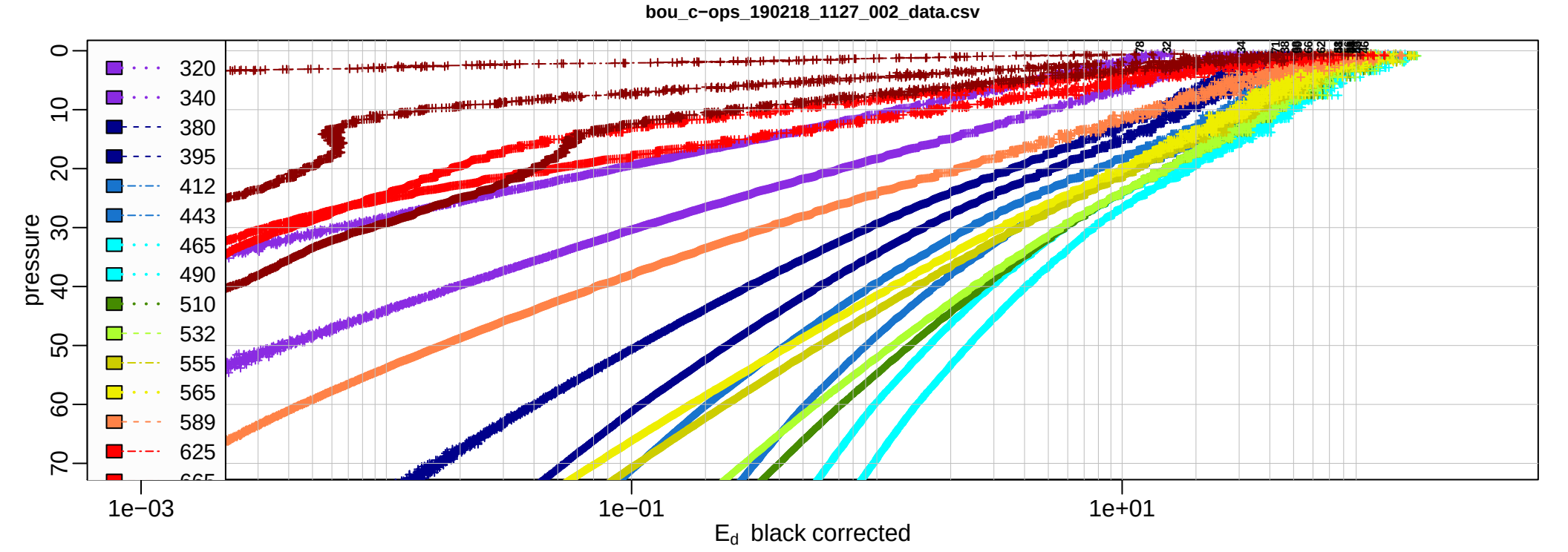

bou_c−ops_190218_1127_002_data.csv
pressure
0
20
40
60
80
Meas.
Th
sun−zen. ang. = 54.9
250
200
150
100
50
Δ %
10
0
−10
−20
−30
400
500
600
700
20
40
60
80
100
E_s black corrected

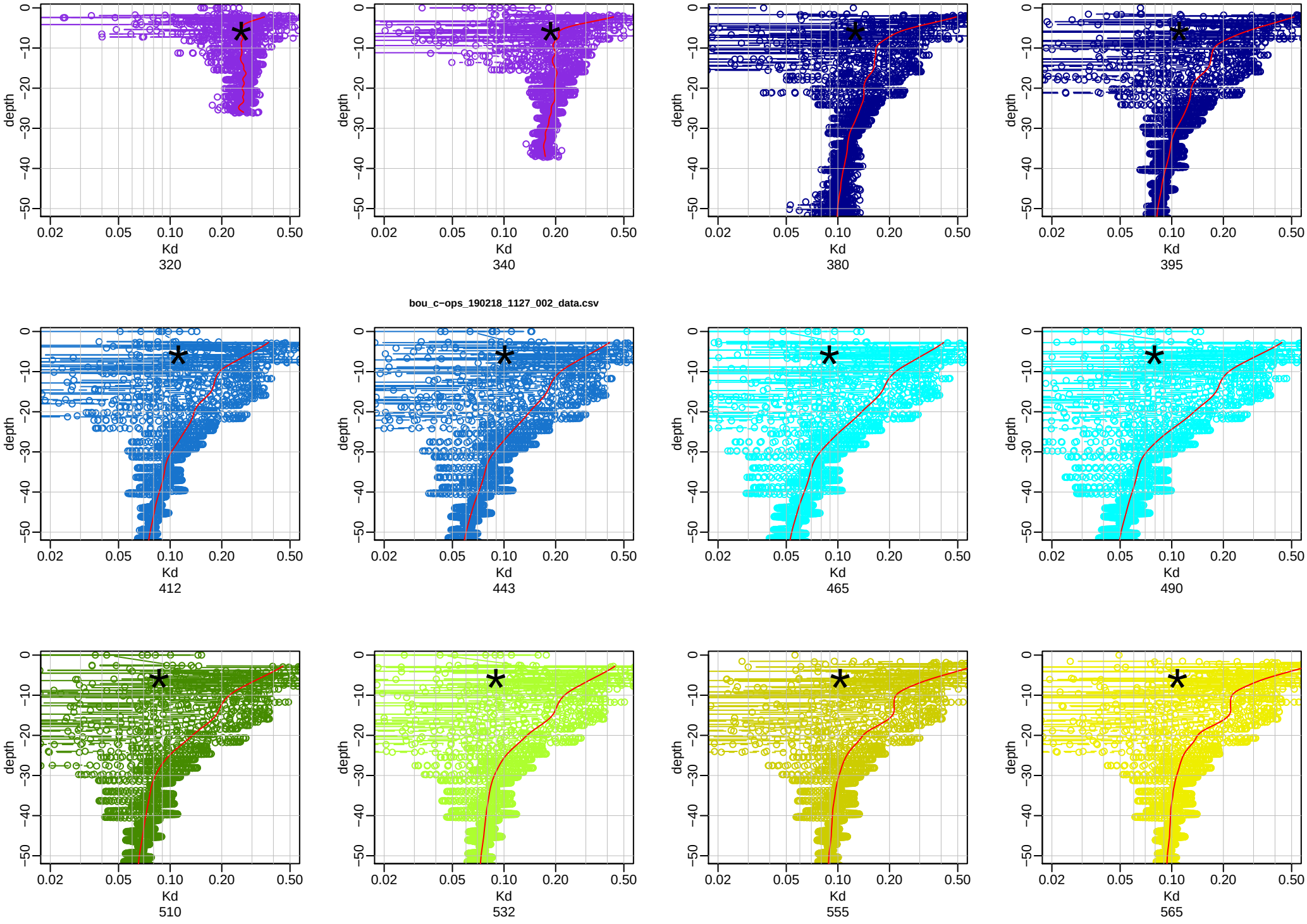

bou_c−ops_190218_1127_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

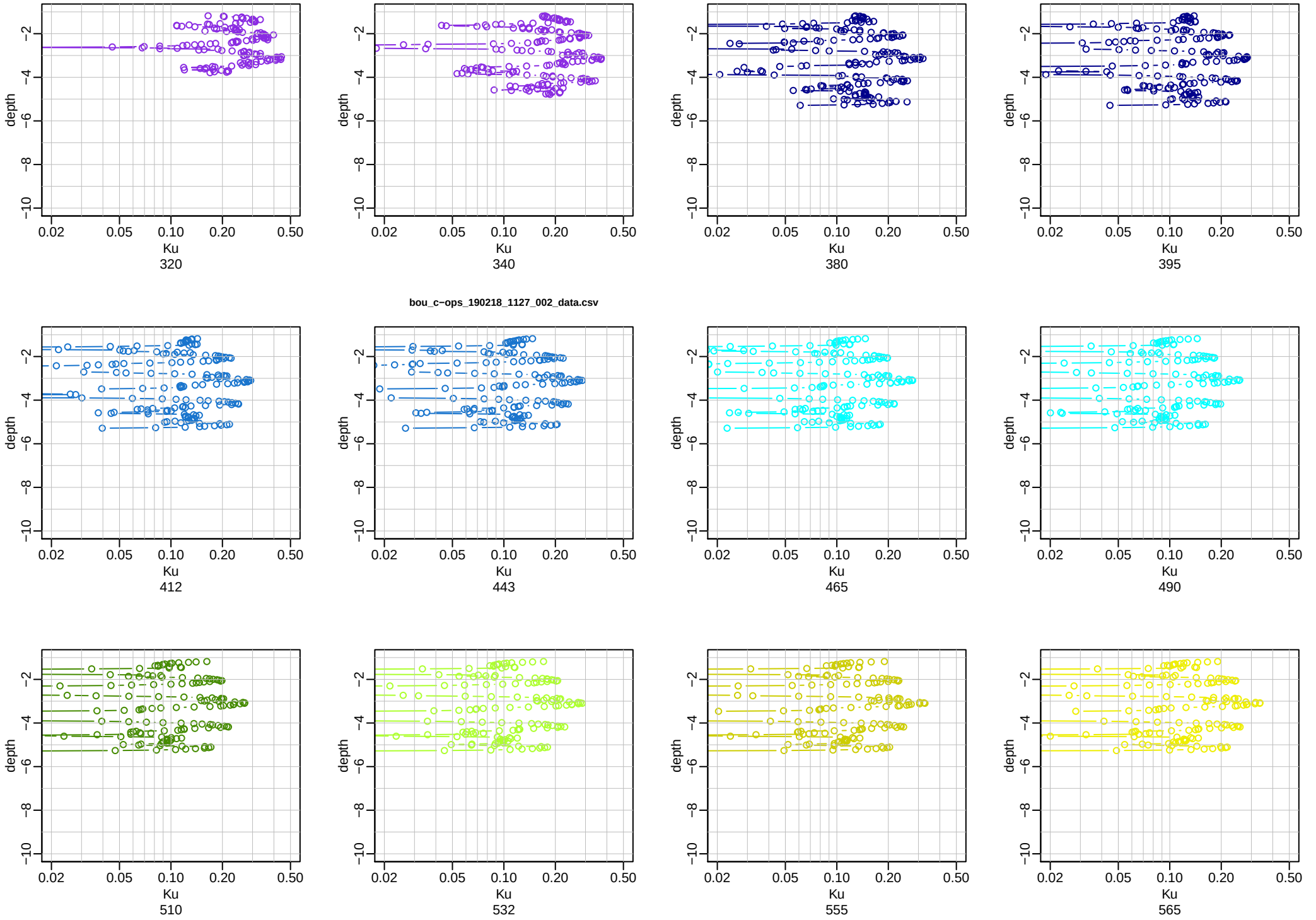

bou_c−ops_190218_1127_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
625
320
589
340
555
1e−04
1e−02
1e+00
E_u black corrected and filtered

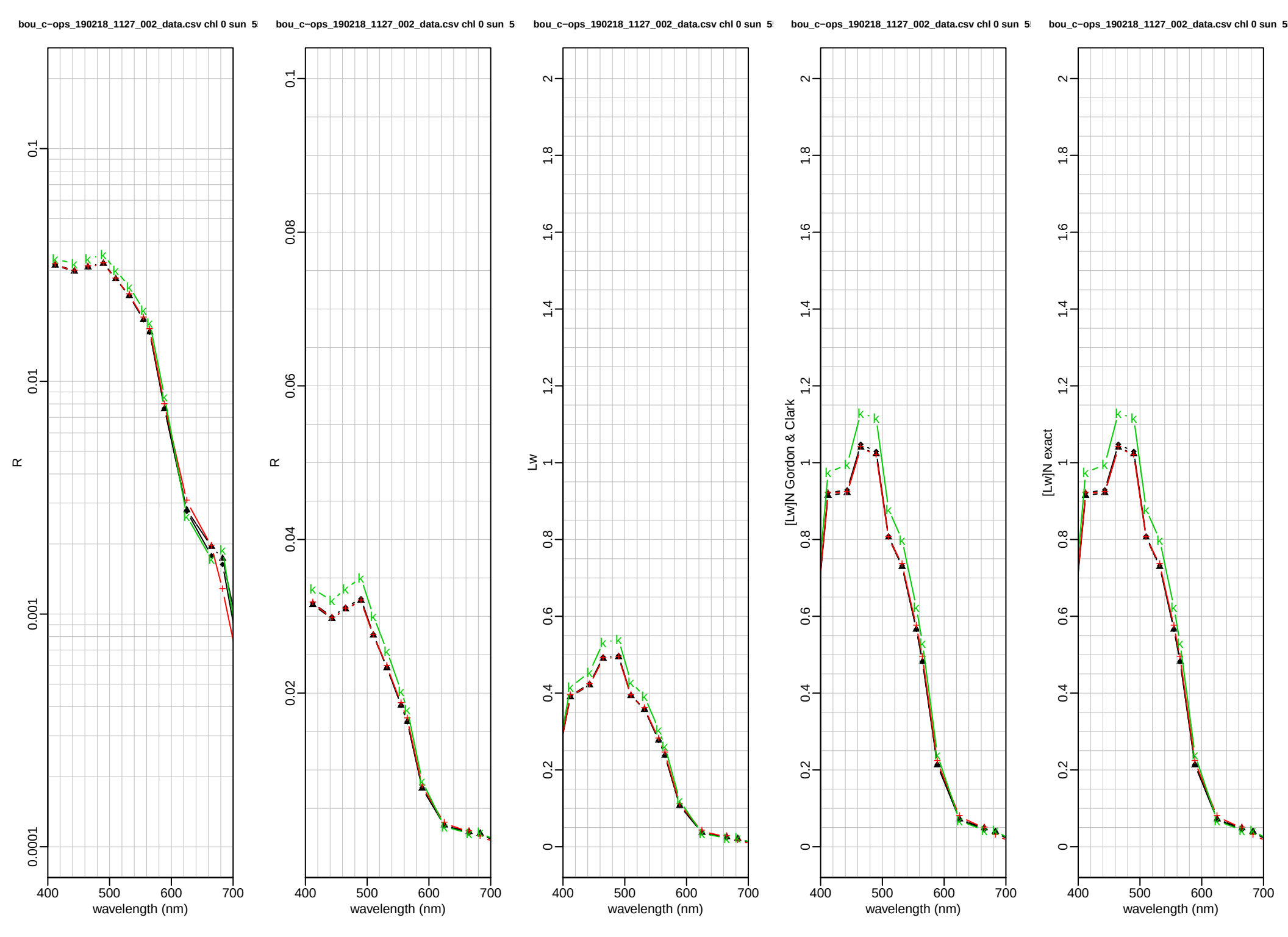

bou_c−ops_190218_1127002_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 54.9
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190218_1127_002_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190218_1127_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

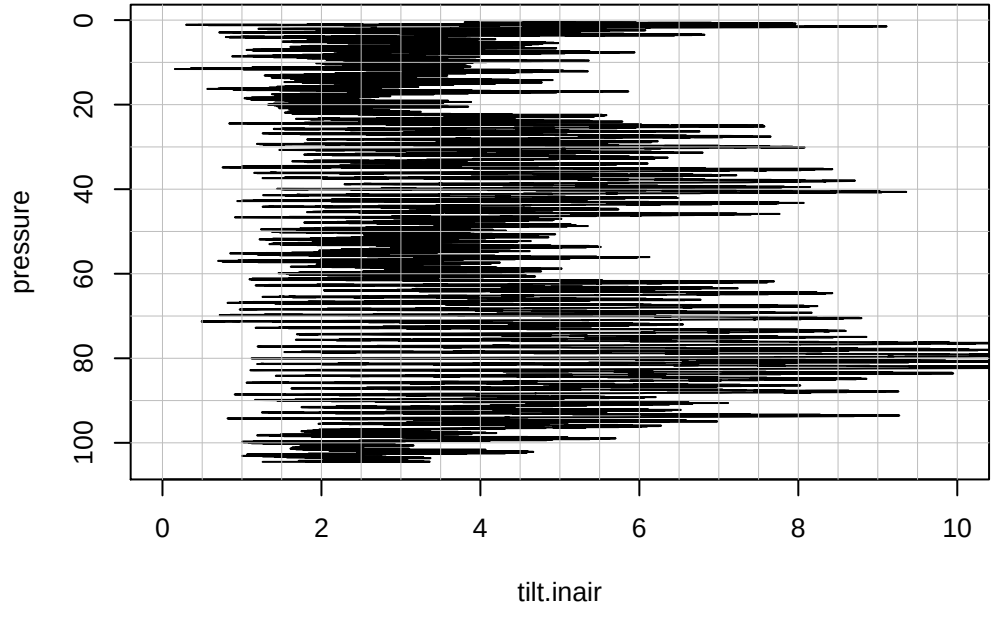

bou_c~ops_190218_1127_002_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

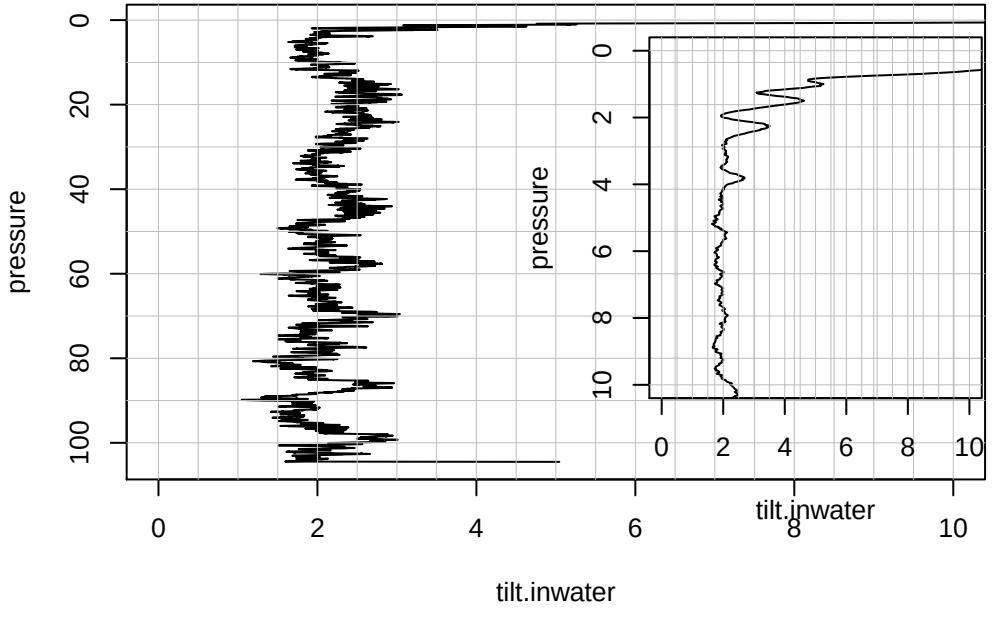

bou_c~ops_190218_1127_002_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

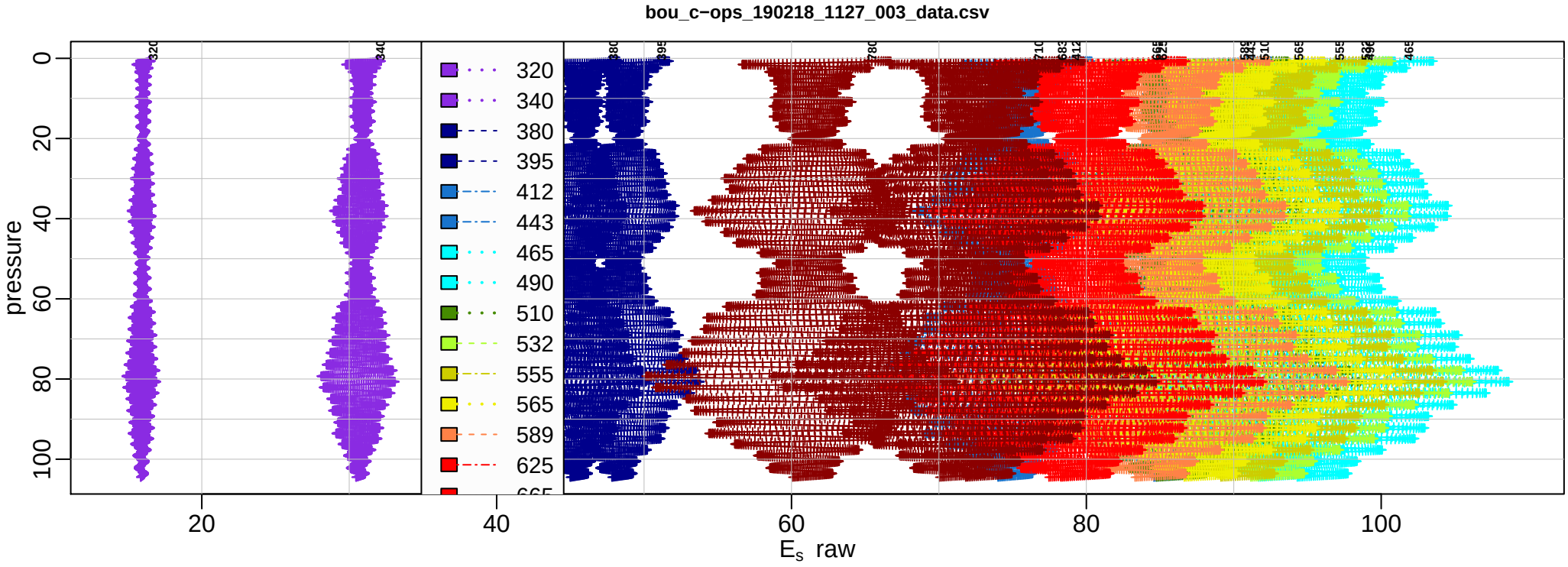

bou_c−ops_190218_1127_002_data.csv chl 0 sun 5
R
wavelength (nm)
bou_c−ops_190218_1127_002_data.csv chl 0 sun 5
R
wavelength (nm)
bou_c−ops_190218_1127_002_data.csv chl 0 sun 5
Lw
wavelength (nm)
bou_c−ops_190218_1127_002_data.csv chl 0 sun 5
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190218_1127_002_data.csv chl 0 sun 5
[Lw]N exact
wavelength (nm)

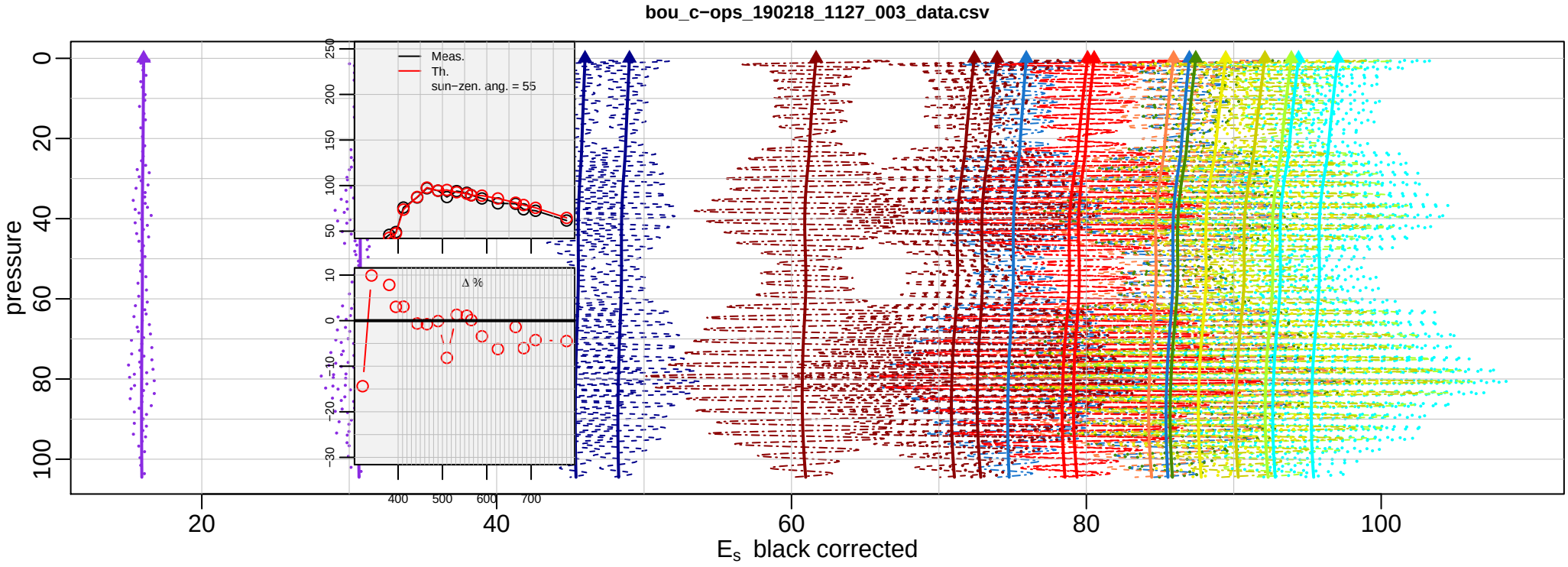
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole205/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole205/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89535013834635
latitude 43.3772216796875
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

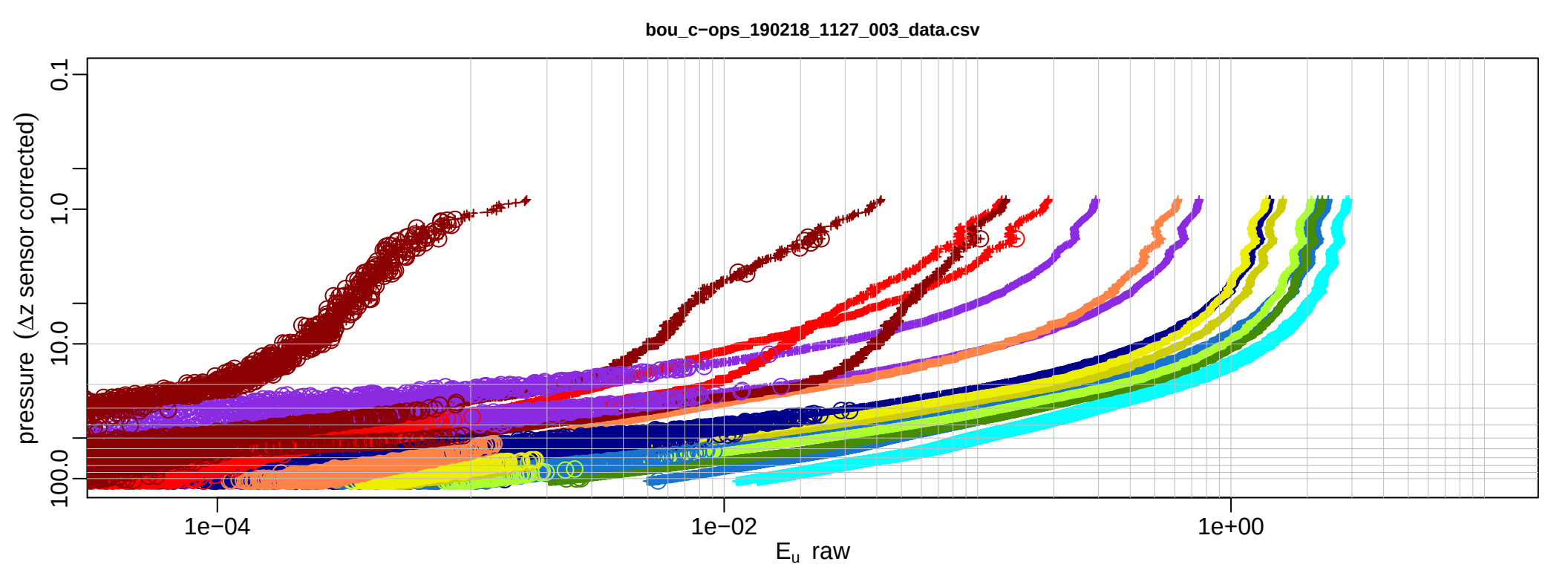
bou_c−ops_190218_1127_003_data.csv

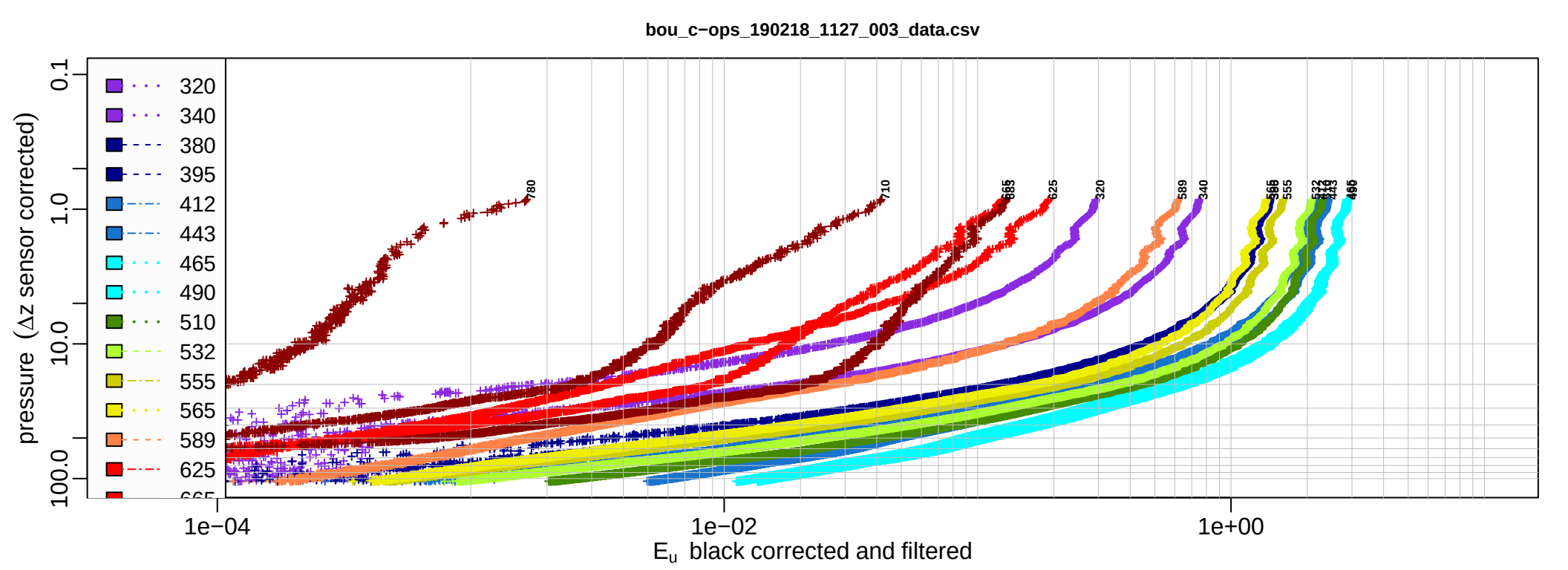


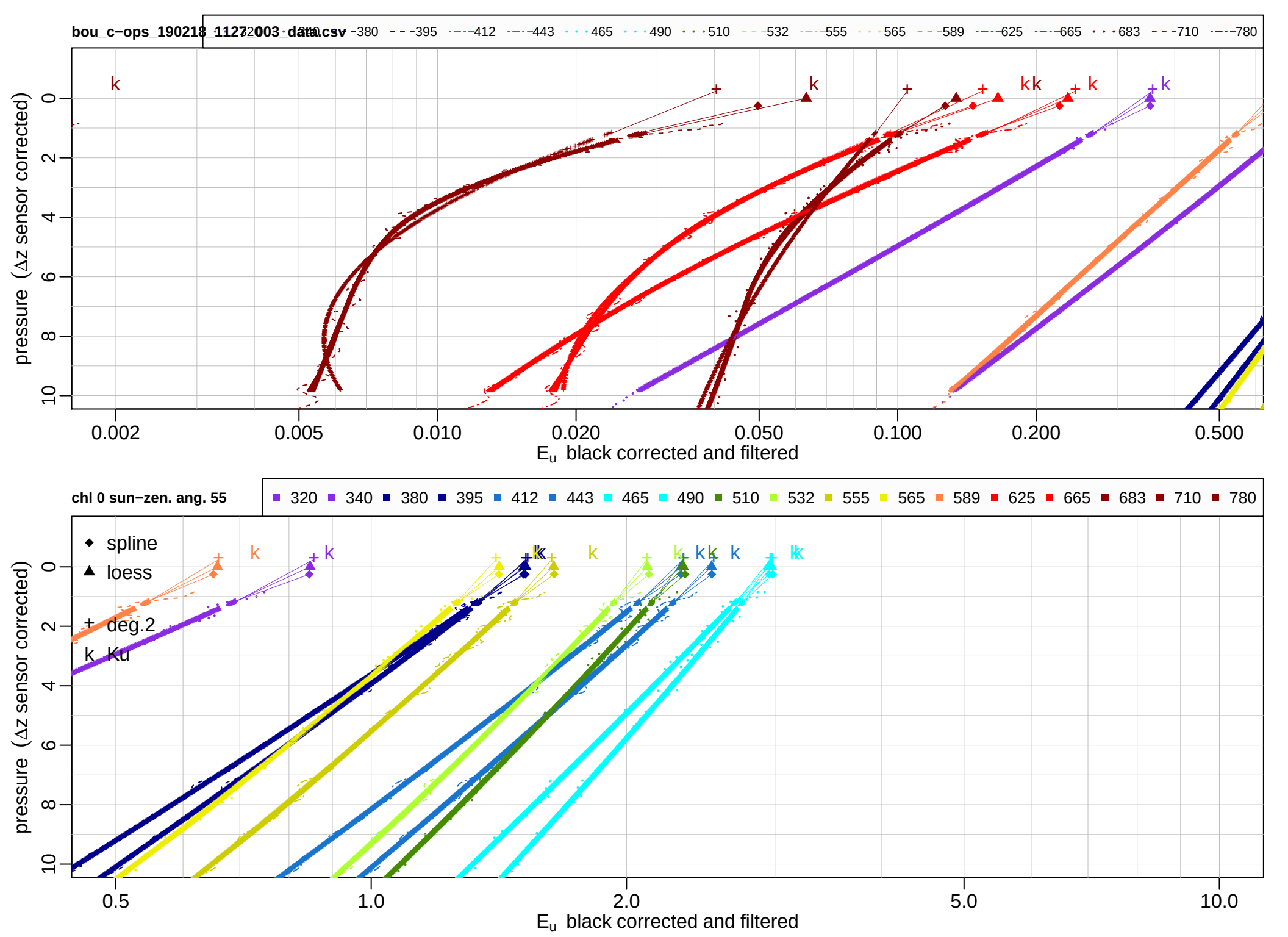


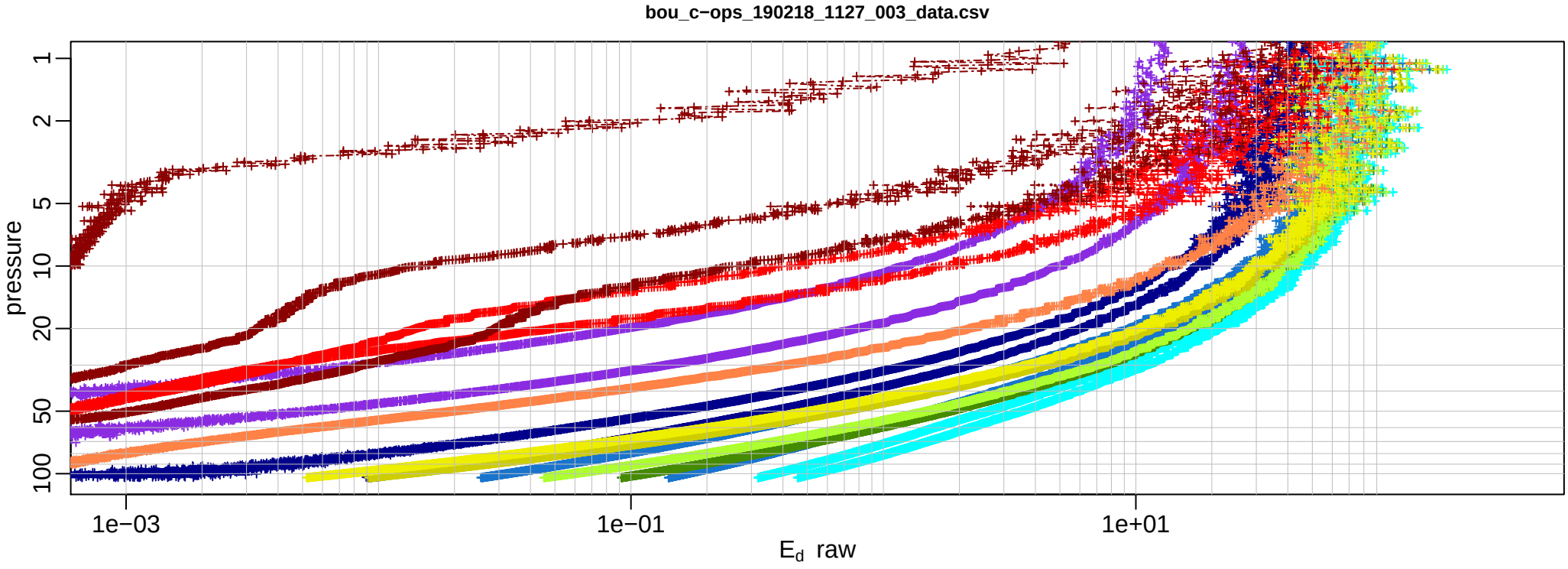

bou_c−ops_190218_1127_003_data.csv
pressure
0
20
40
60
80
100
320
340
380
395
412
443
465
490
510
532
555
565
589
625
20
40
60
80
100
E_s raw

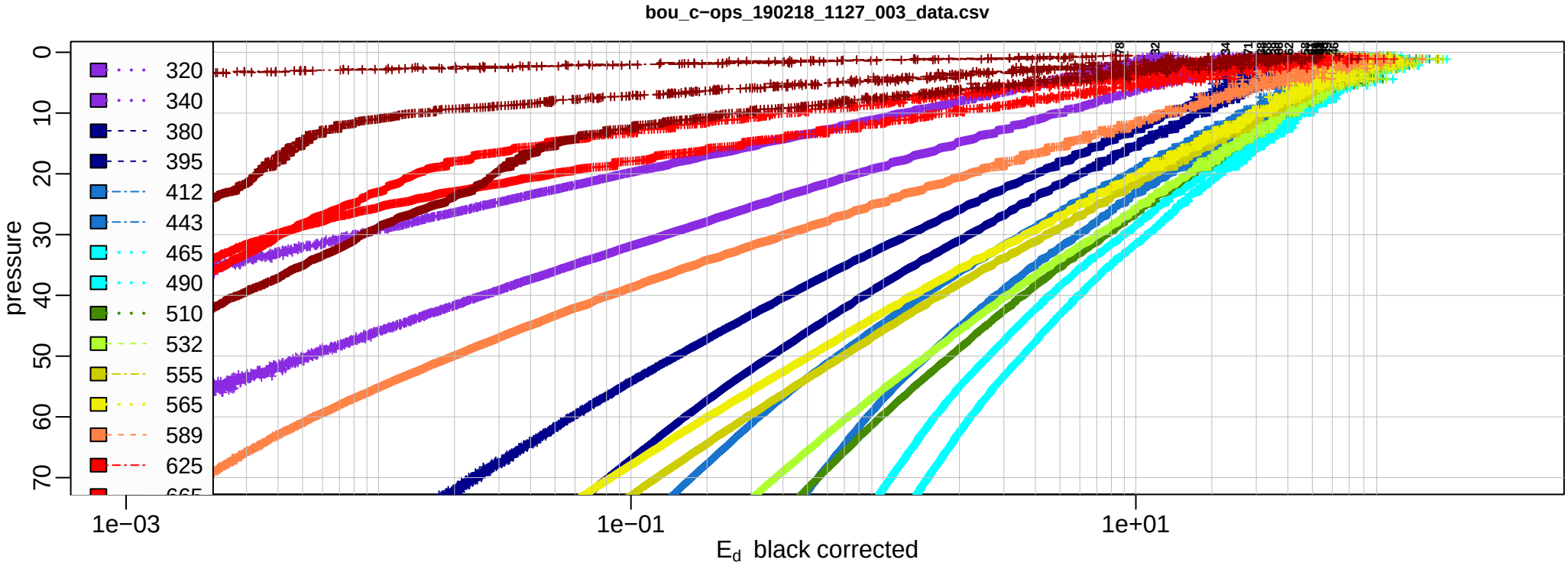

bou_c−ops_190218_1127_003_data.csv
pressure
0
20
40
60
80
100
Meas.
Th.
sun−zen. ang. = 55
Δ %
250
200
150
100
50
10
0
−10
−20
−30
400
500
600
700
20
40
60
80
100
E_s black corrected

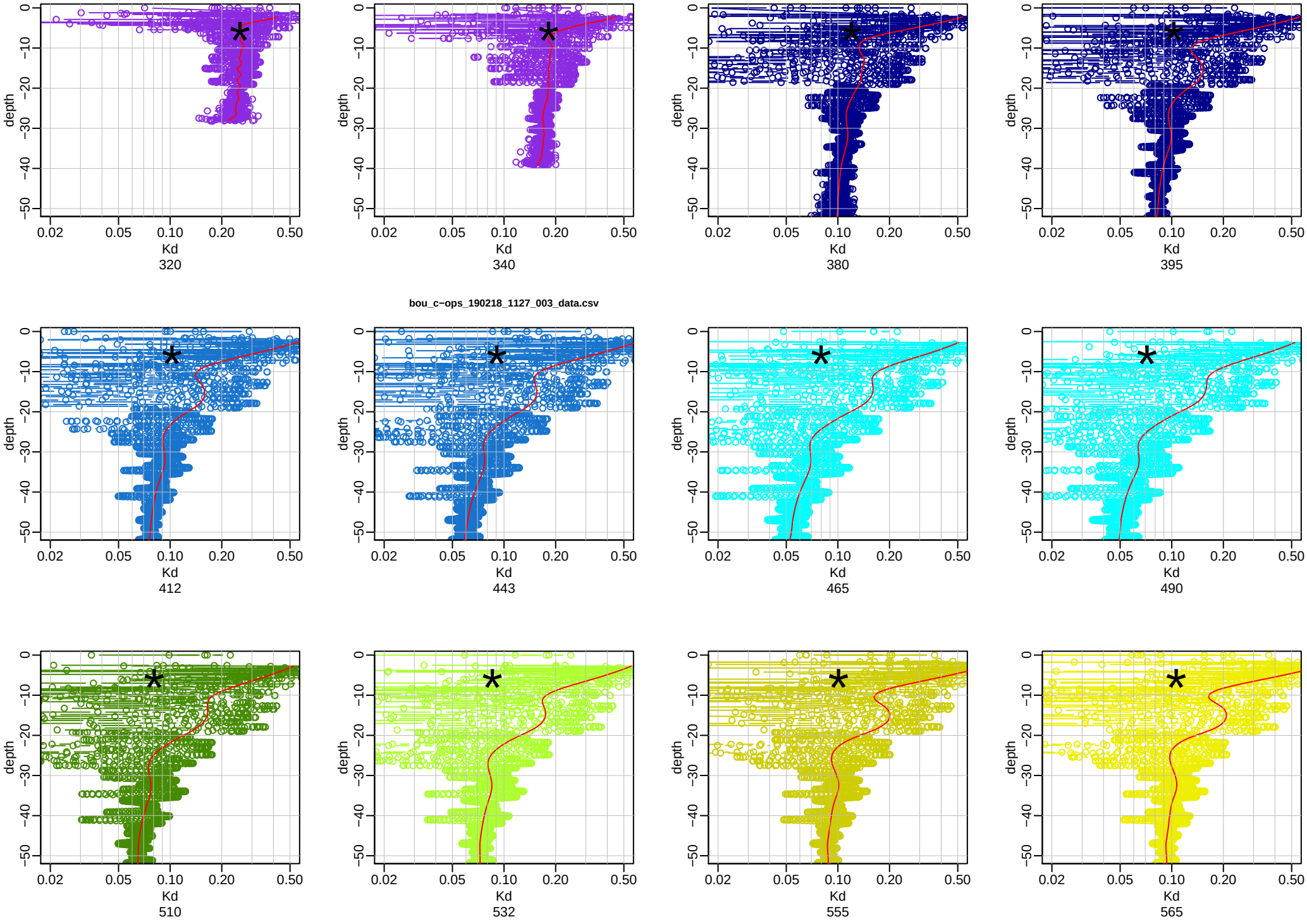

bou_c−ops_190218_1127_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

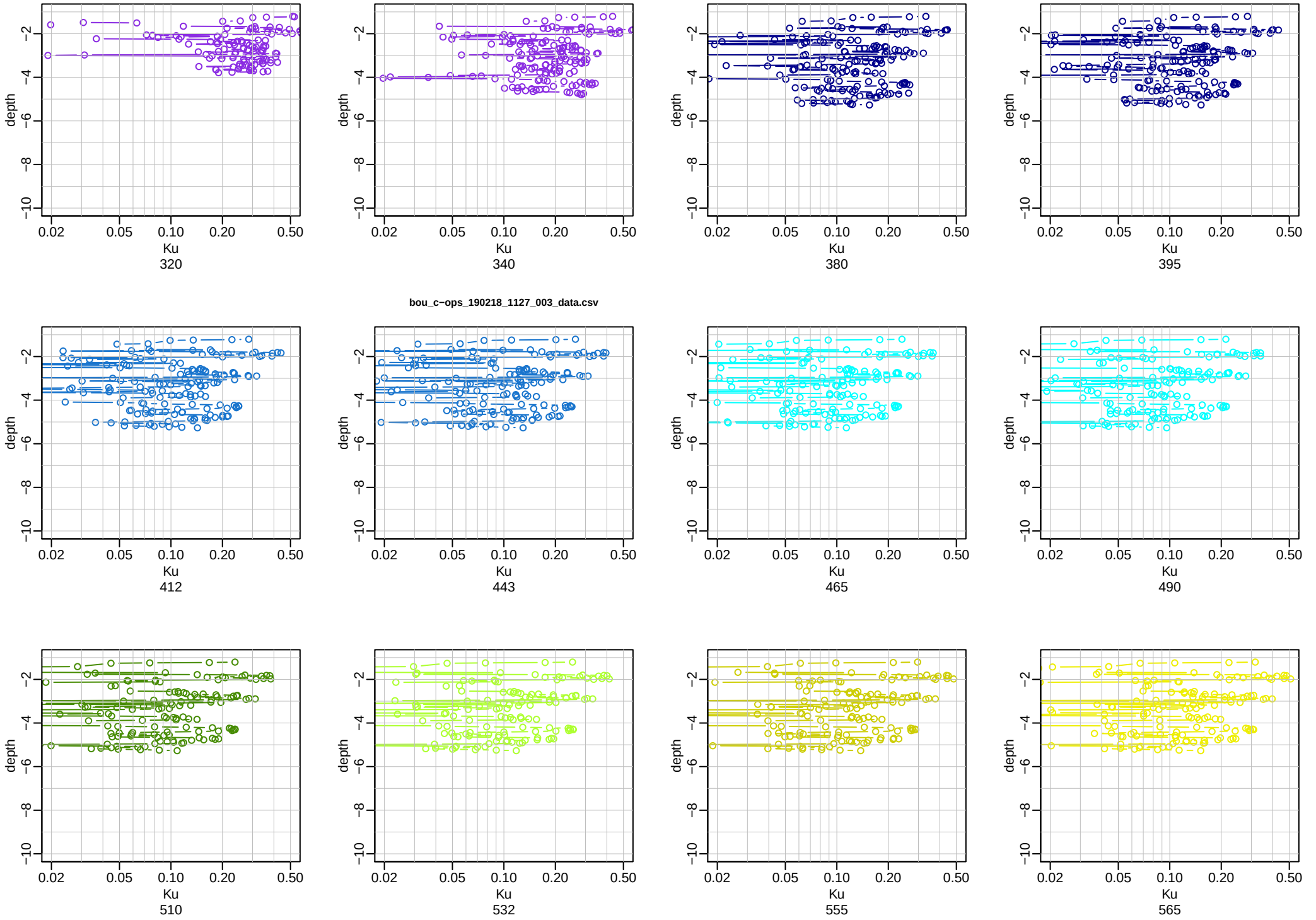

bou_c−ops_190218_1127_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
625
320
589
340
555
1e−04
1e−02
1e+00
E_u black corrected and filtered

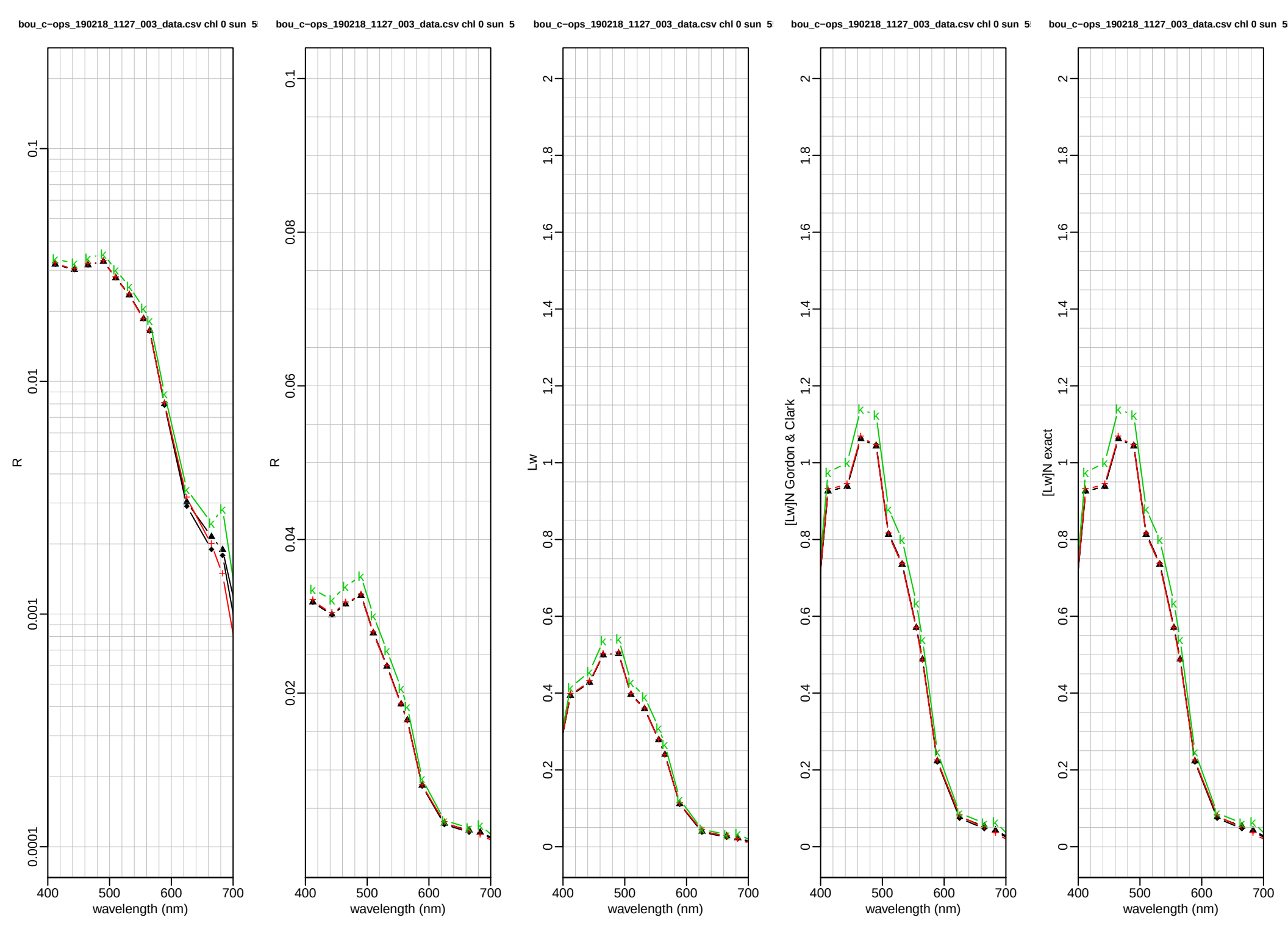

bou_c−ops_190218_1127_003_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 55
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
k Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190218_1127_003_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190218_1127_003_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

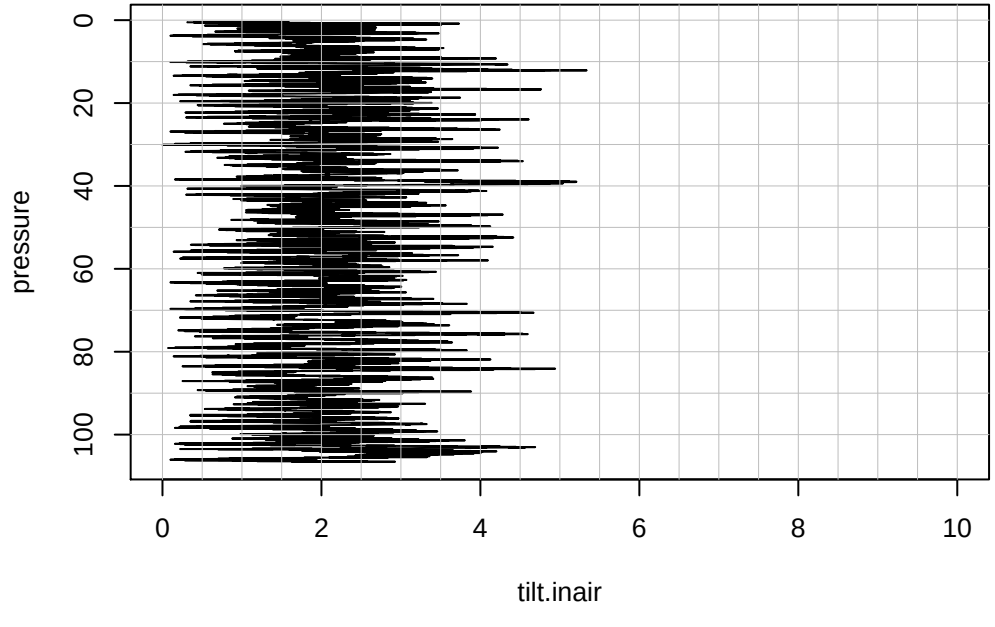

bou_c~ops_190218_1127_003_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

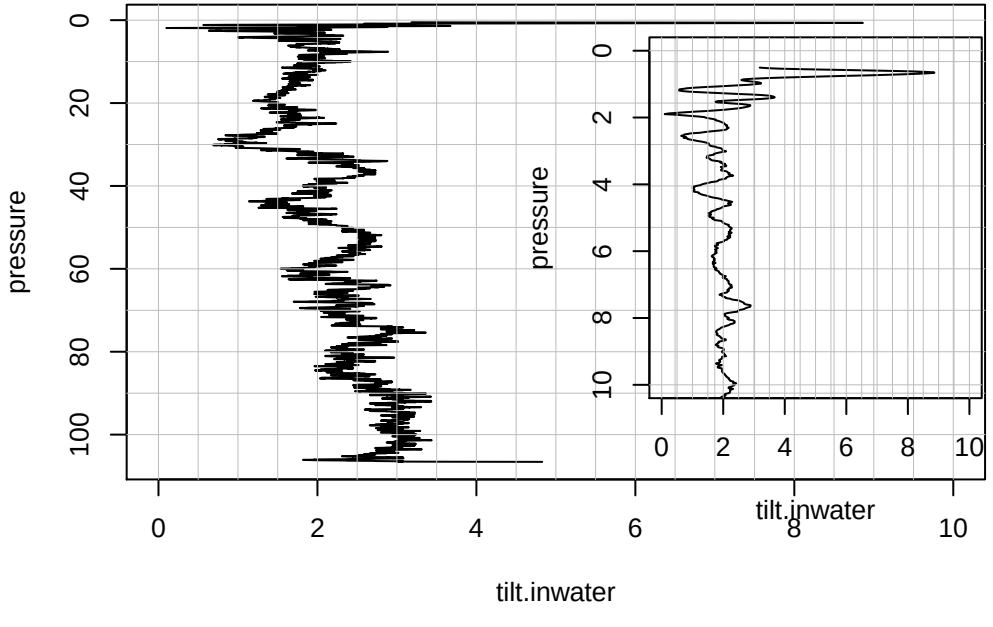

bou_c~ops_190218_1127_003_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

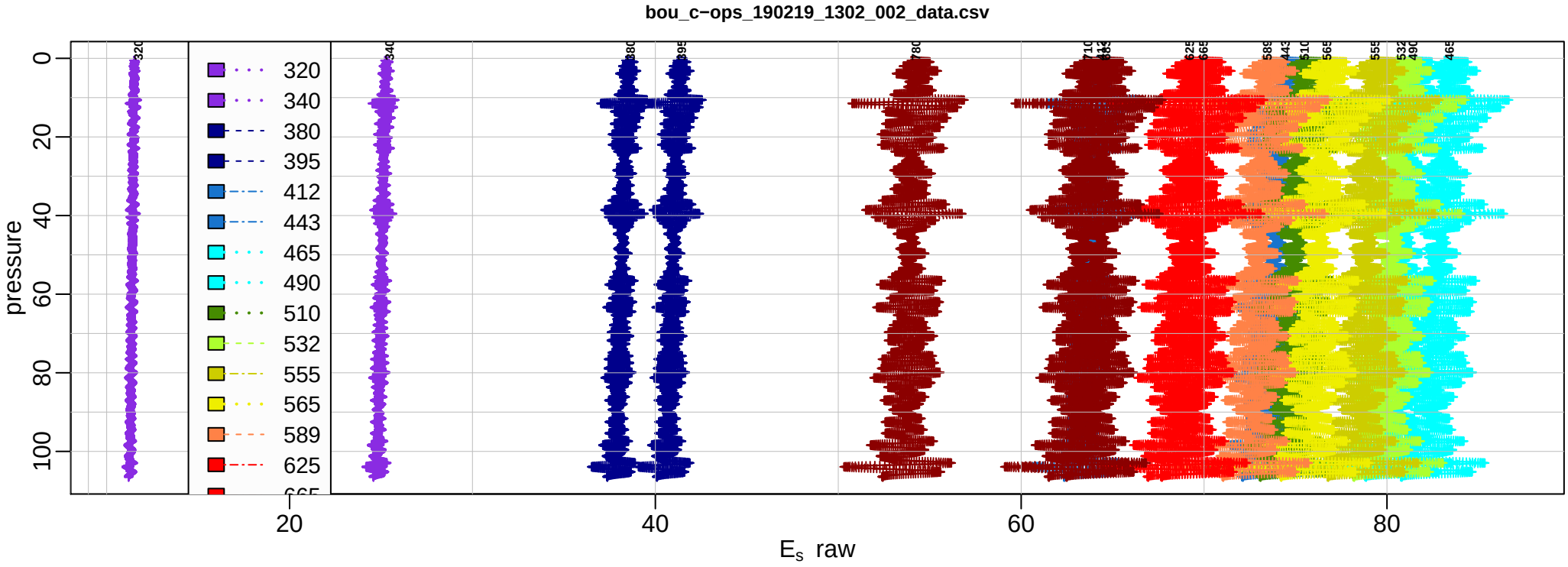

bou_c−ops_190218_1127_003_data.csv chl 0 sun 5
R
0.1
0.01
0.001
0.0001
400
500
600
700
wavelength (nm)
bou_c−ops_190218_1127_003_data.csv chl 0 sun 5
R
0.1
0.08
0.06
0.04
0.02
400
500
600
700
wavelength (nm)
bou_c−ops_190218_1127_003_data.csv chl 0 sun 5
Lw
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)
bou_c−ops_190218_1127_003_data.csv chl 0 sun 5
[Lw]N Gordon & Clark
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)
bou_c−ops_190218_1127_003_data.csv chl 0 sun 5
[Lw]N exact
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)

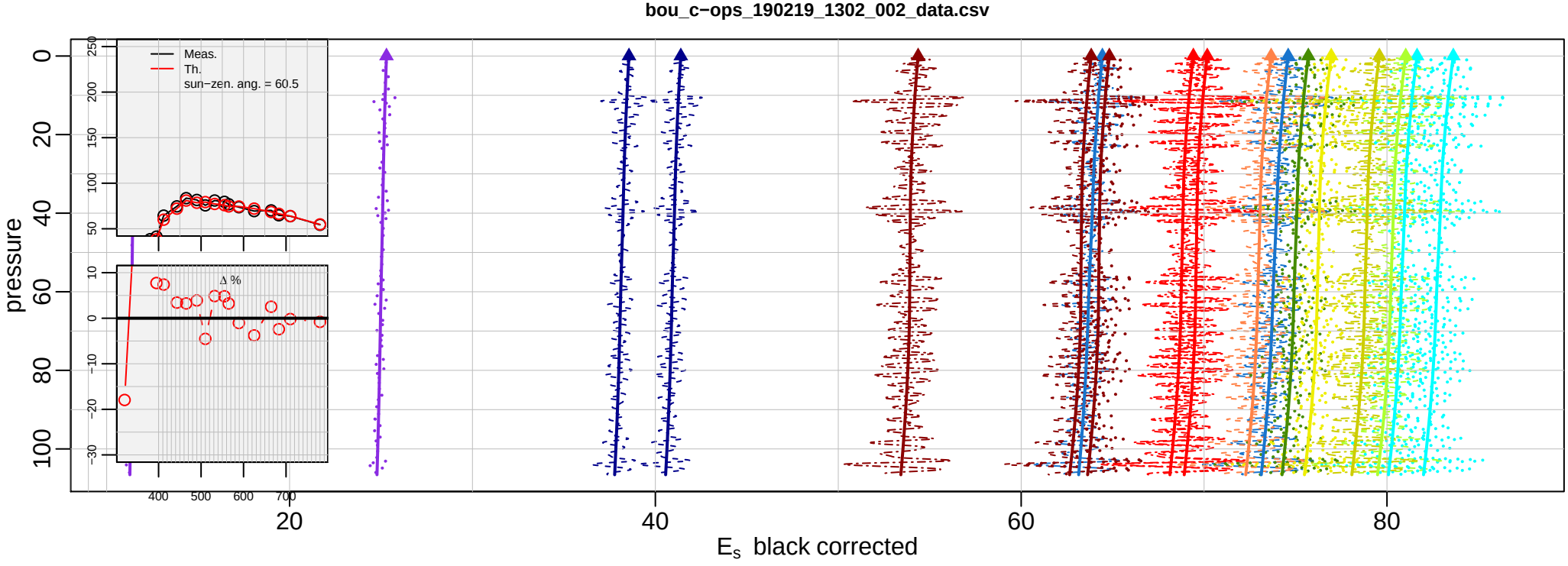
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole205/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole205/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.90281728108724
latitude 43.3714518229167
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

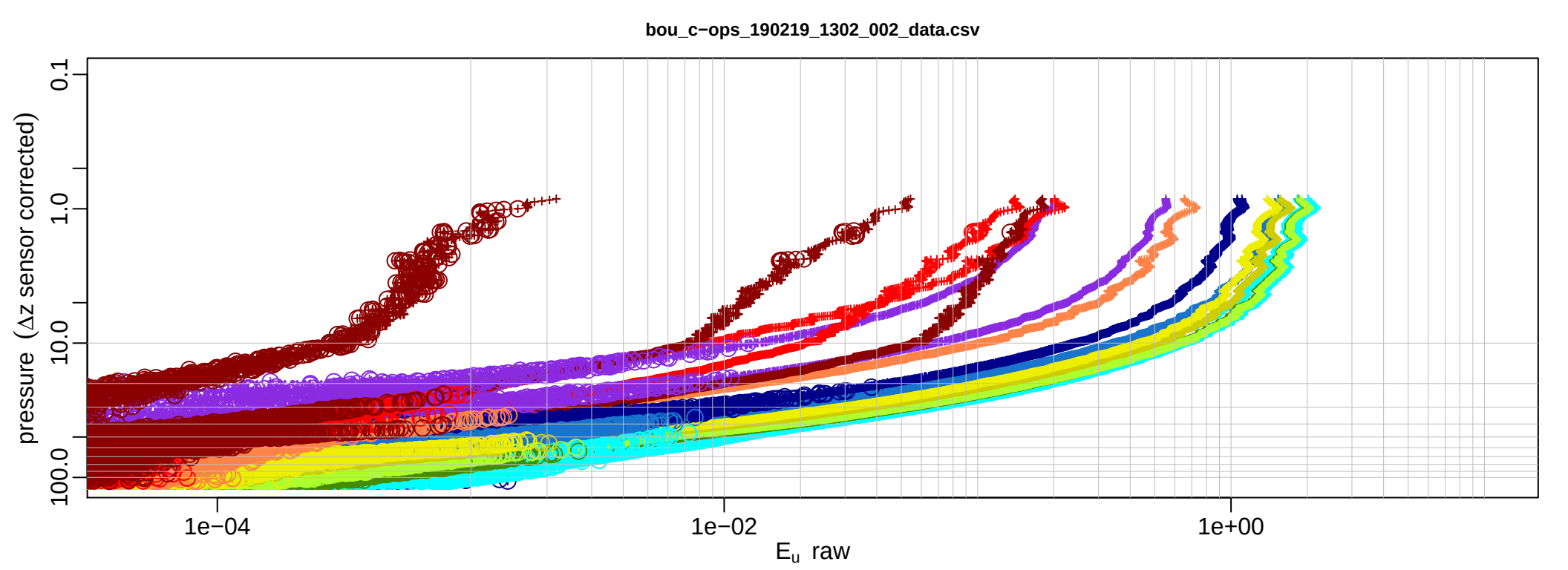
bou_c−ops_190219_1302_002_data.csv

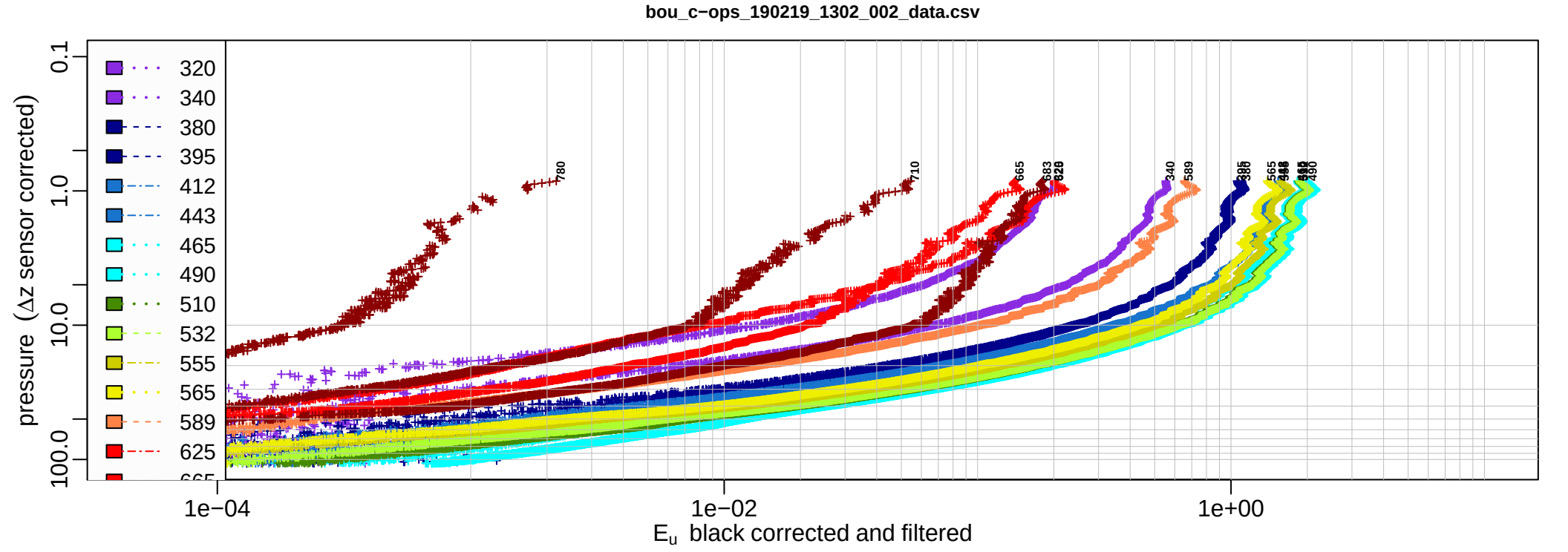


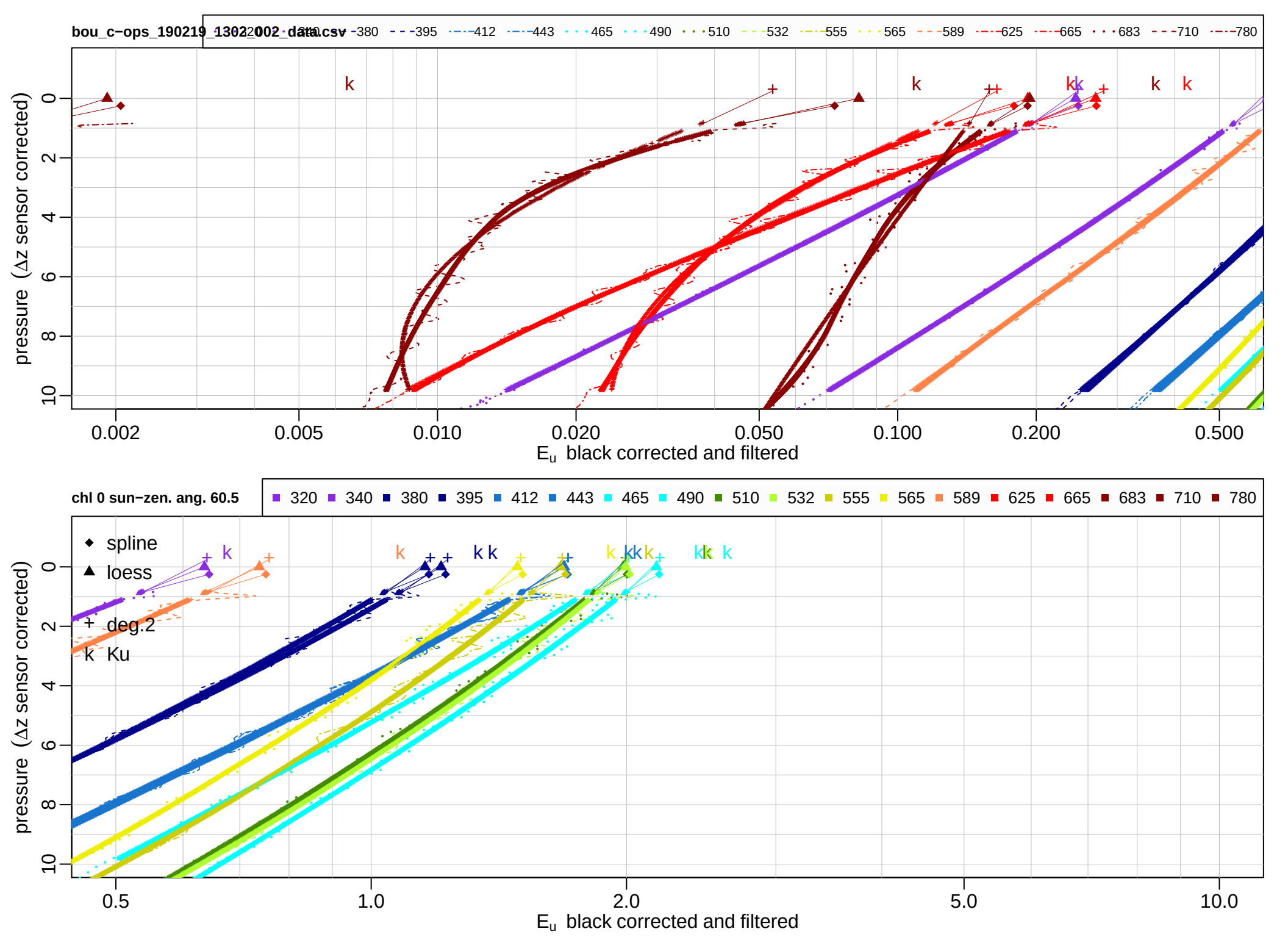


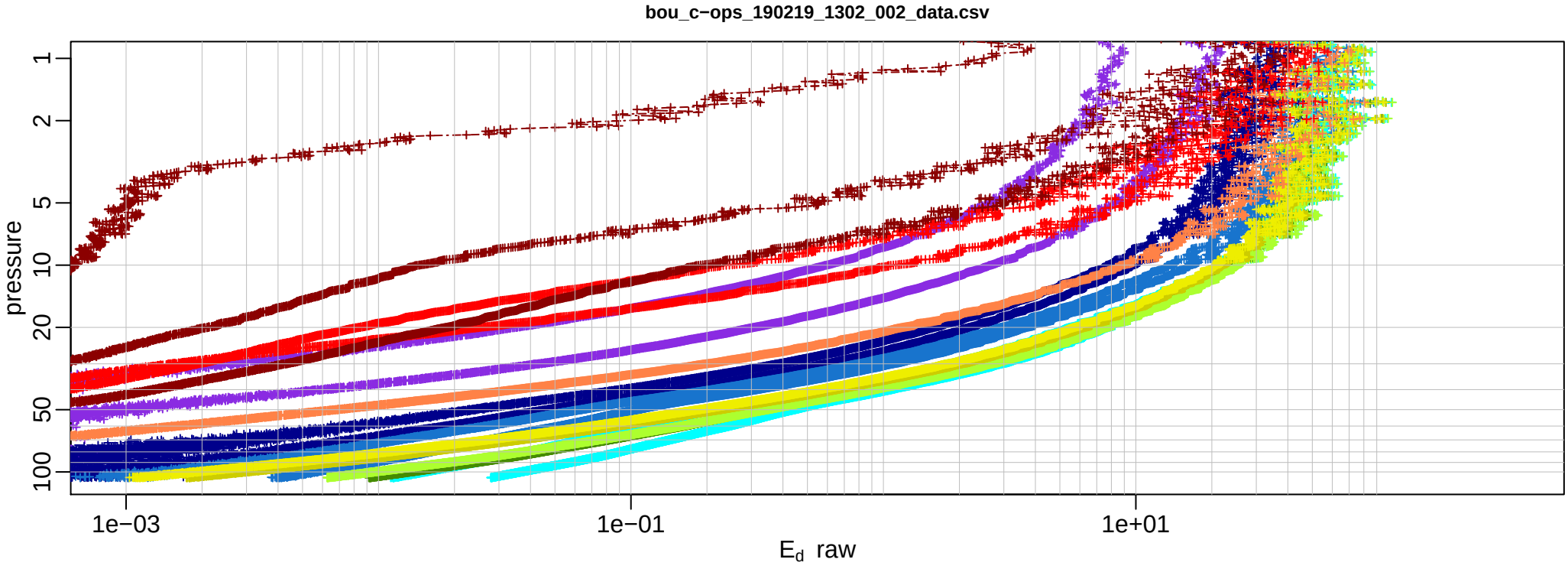

bou_c−ops_190219_1302_002_data.csv
pressure
0
20
40
60
80
100
320
340
380
395
412
443
465
490
510
532
555
565
589
625
20
40
60
80
E_s raw

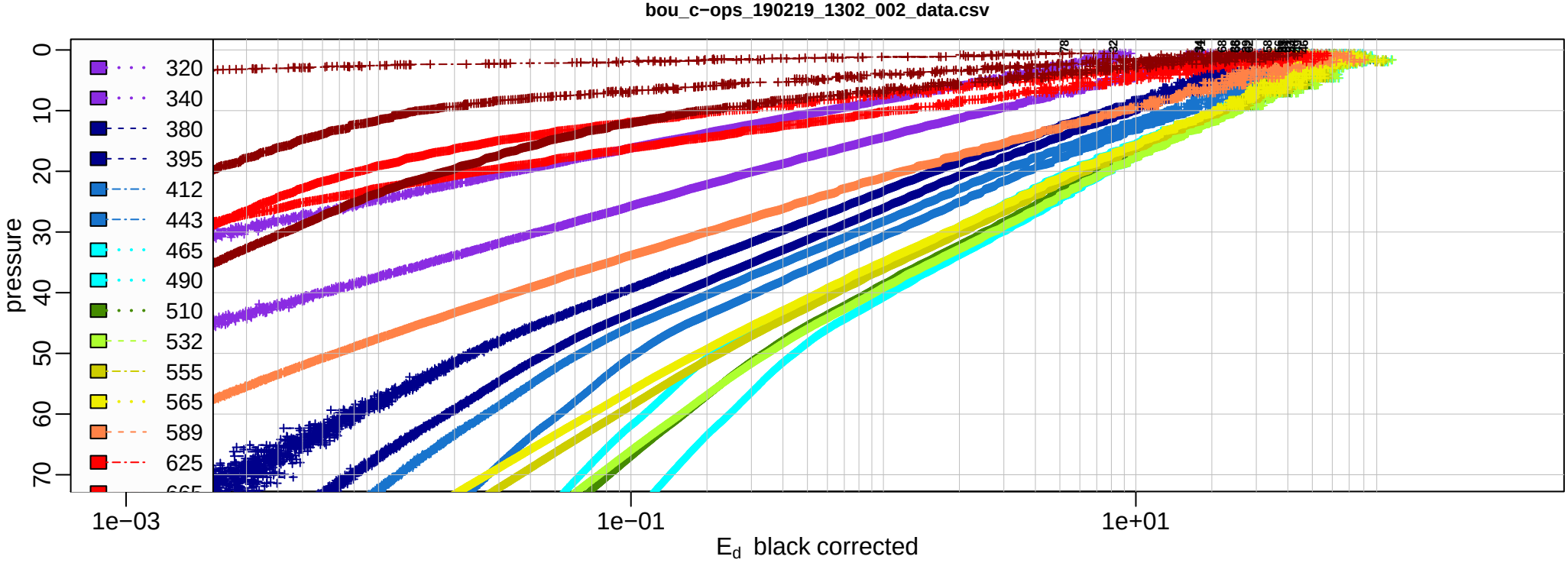

bou_c−ops_190219_1302_002_data.csv
pressure
0
20
40
60
80
100
Meas.
Th.
sun−zen. ang. = 60.5
Δ %
20
40
60
80
E_s black corrected

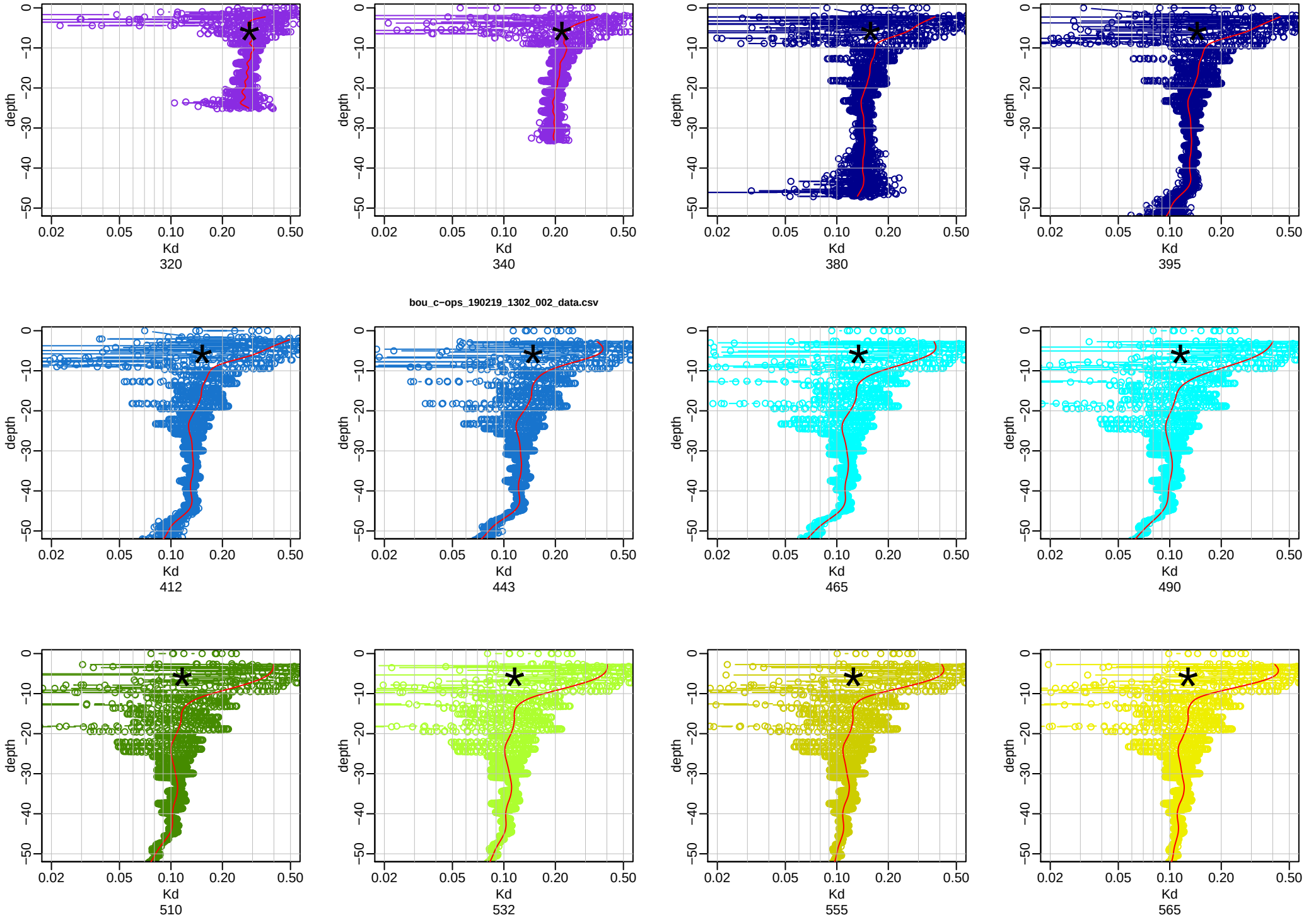

bou_c−ops_190219_1302_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E$_u$ raw

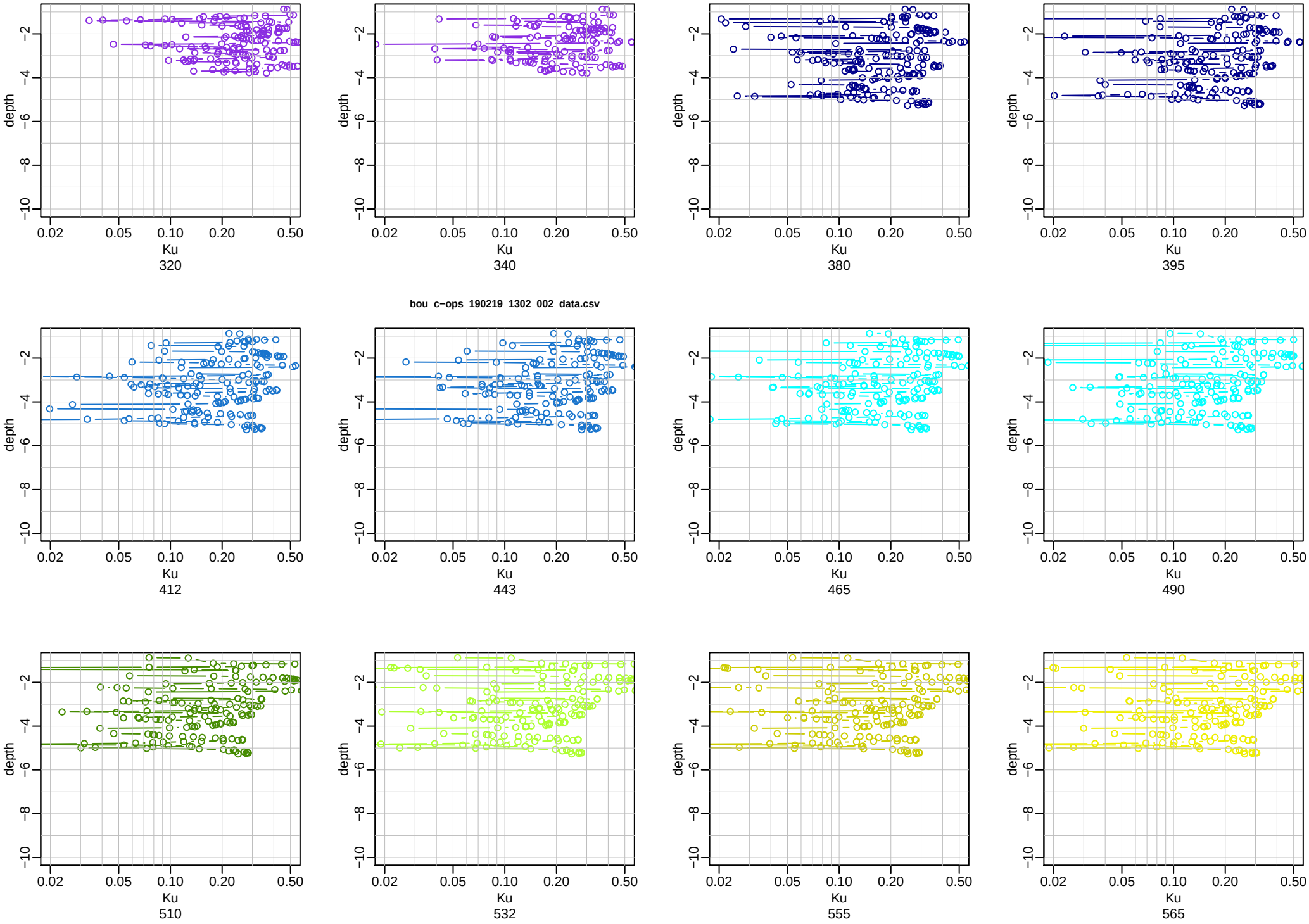

bou_c−ops_190219_1302_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
665
683
340
589
1e−04
1e−02
1e+00
E$_u$ black corrected and filtered

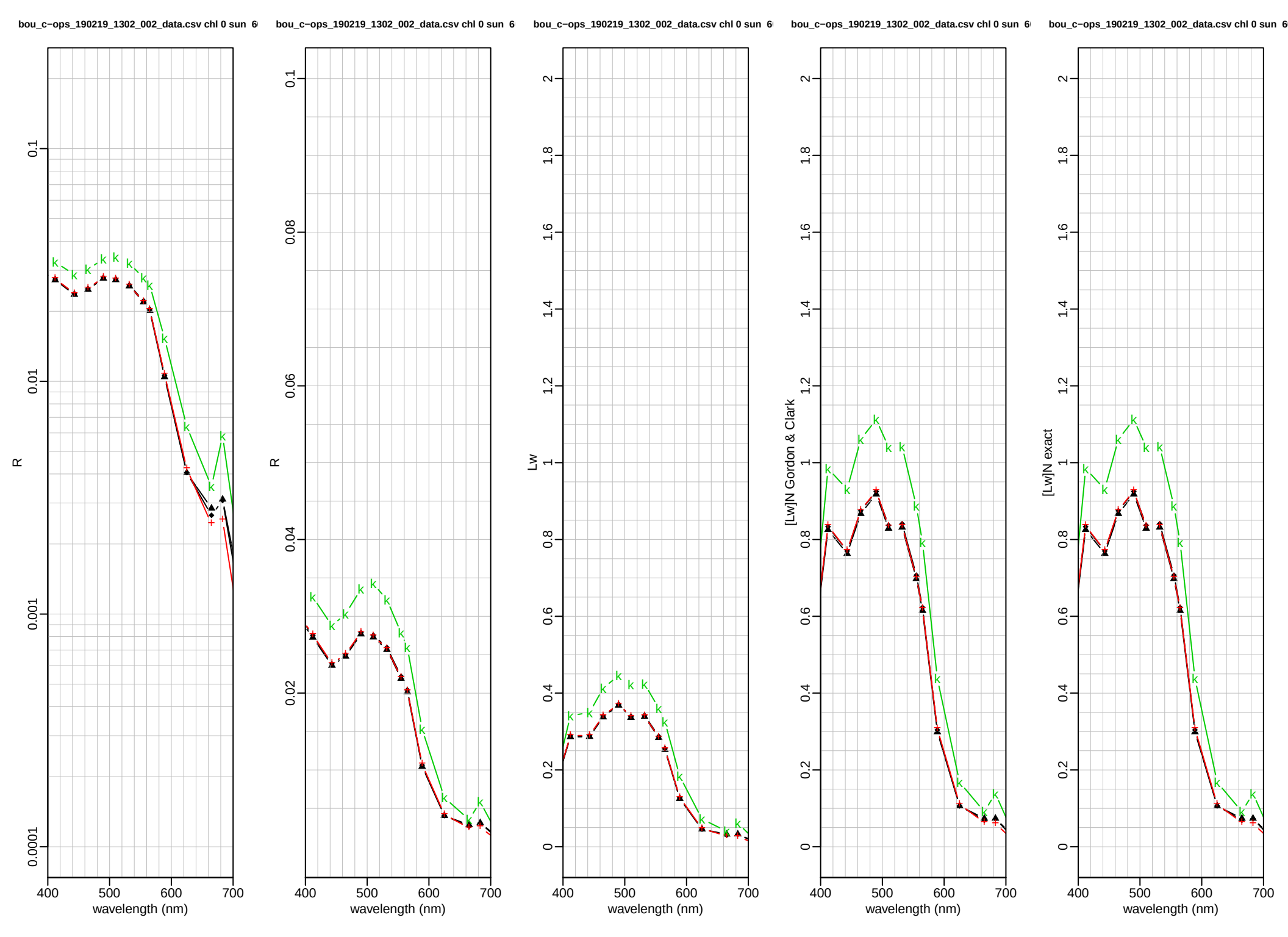

bou_c−ops_190219_1302002_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 60.5
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190219_1302_002_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190219_1302_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

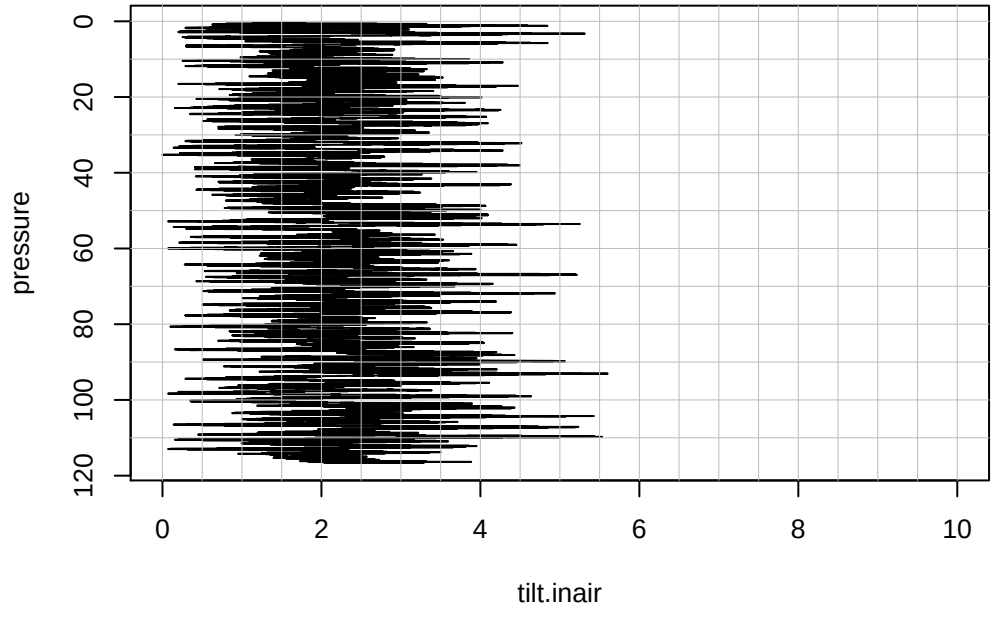

bou_c~ops_190219_1302_002_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

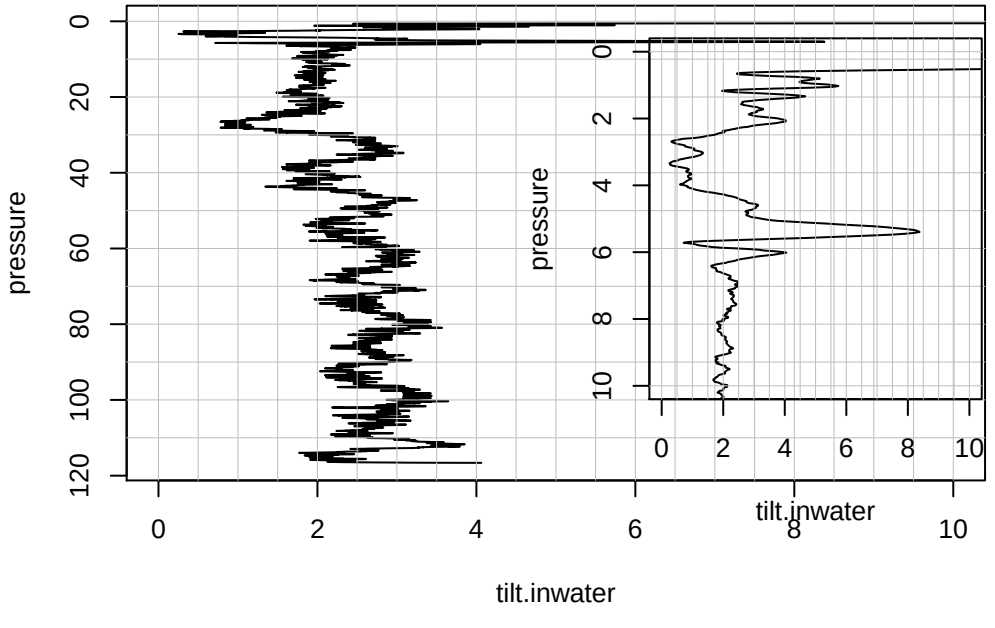

bou_c−ops_190219_1302_002_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

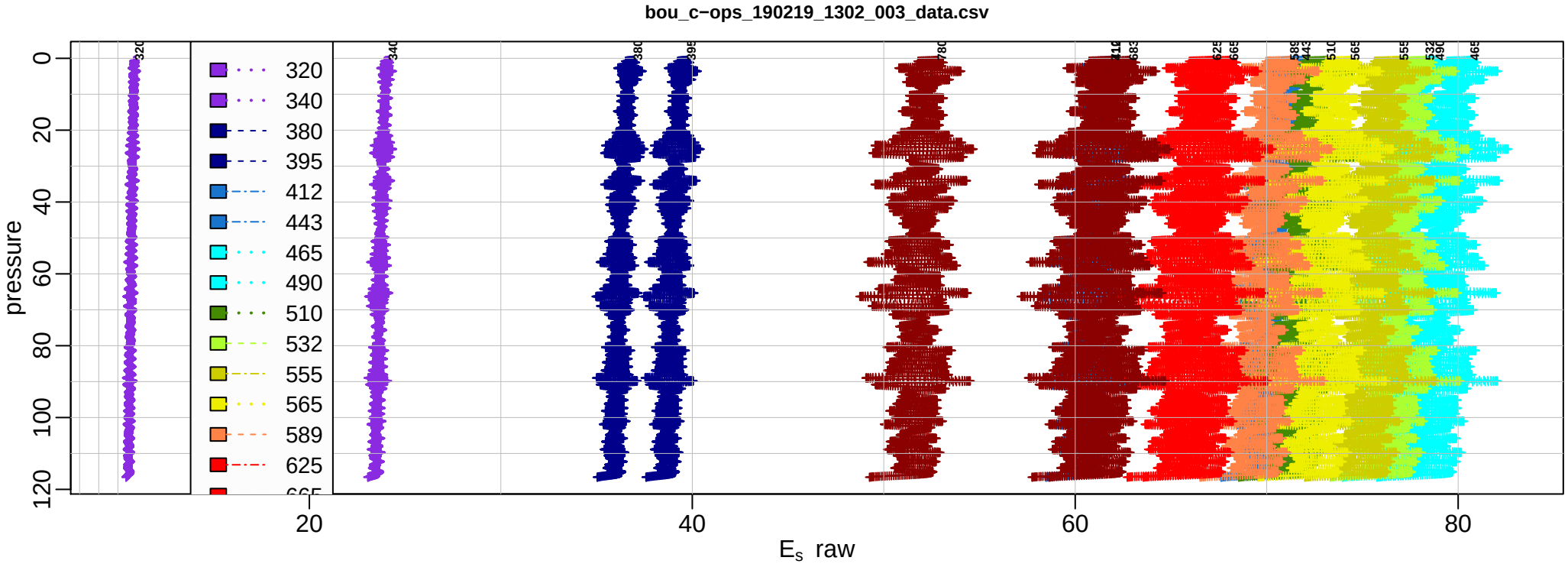

bou_c−ops_190219_1302_002_data.csv chl 0 sun 6
R
wavelength (nm)
bou_c−ops_190219_1302_002_data.csv chl 0 sun 6
R
wavelength (nm)
bou_c−ops_190219_1302_002_data.csv chl 0 sun 6
Lw
wavelength (nm)
bou_c−ops_190219_1302_002_data.csv chl 0 sun 6
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190219_1302_002_data.csv chl 0 sun 6
[Lw]N exact
wavelength (nm)

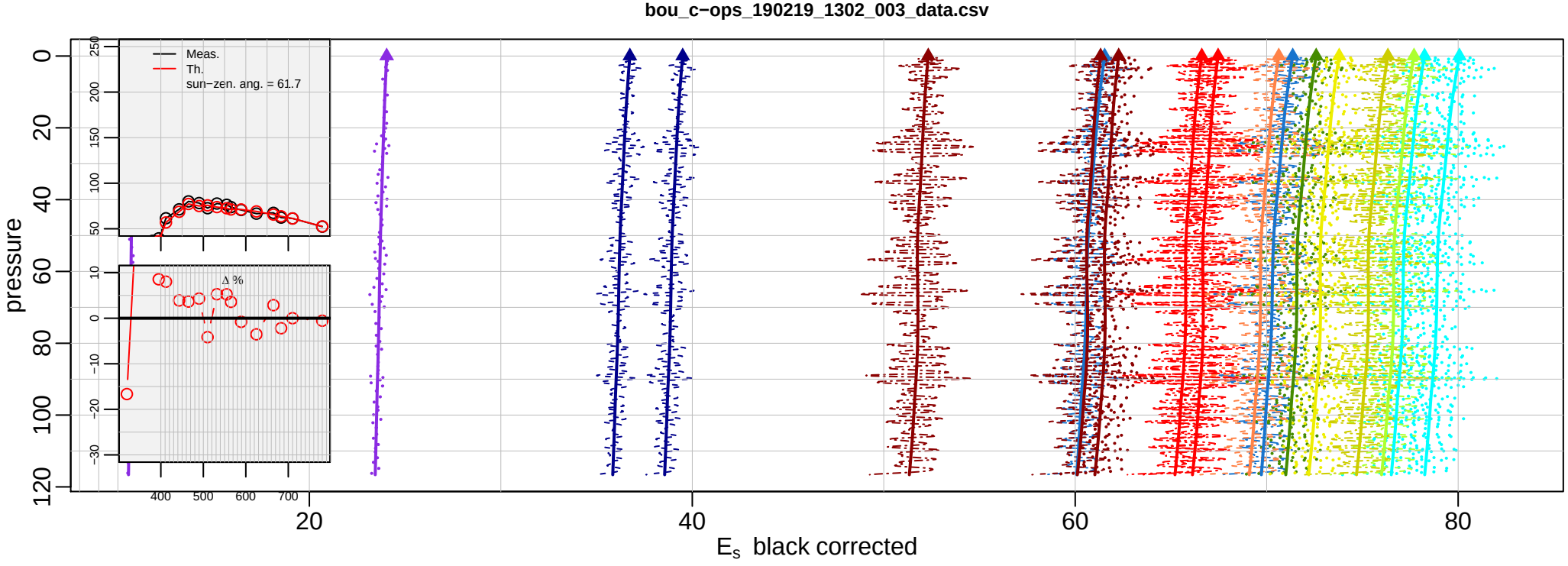
```
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole205/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole205/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.905078125
latitude 43.3741617838542
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100
```

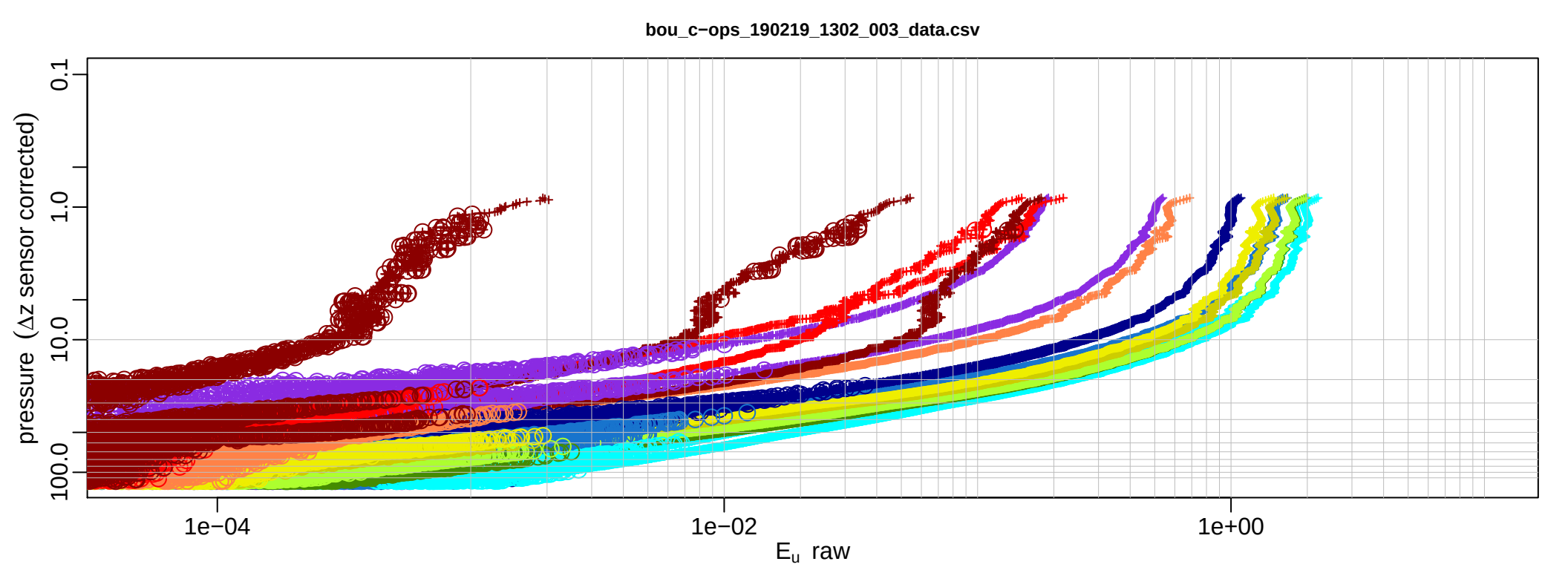
bou_c−ops_190219_1302_003_data.csv

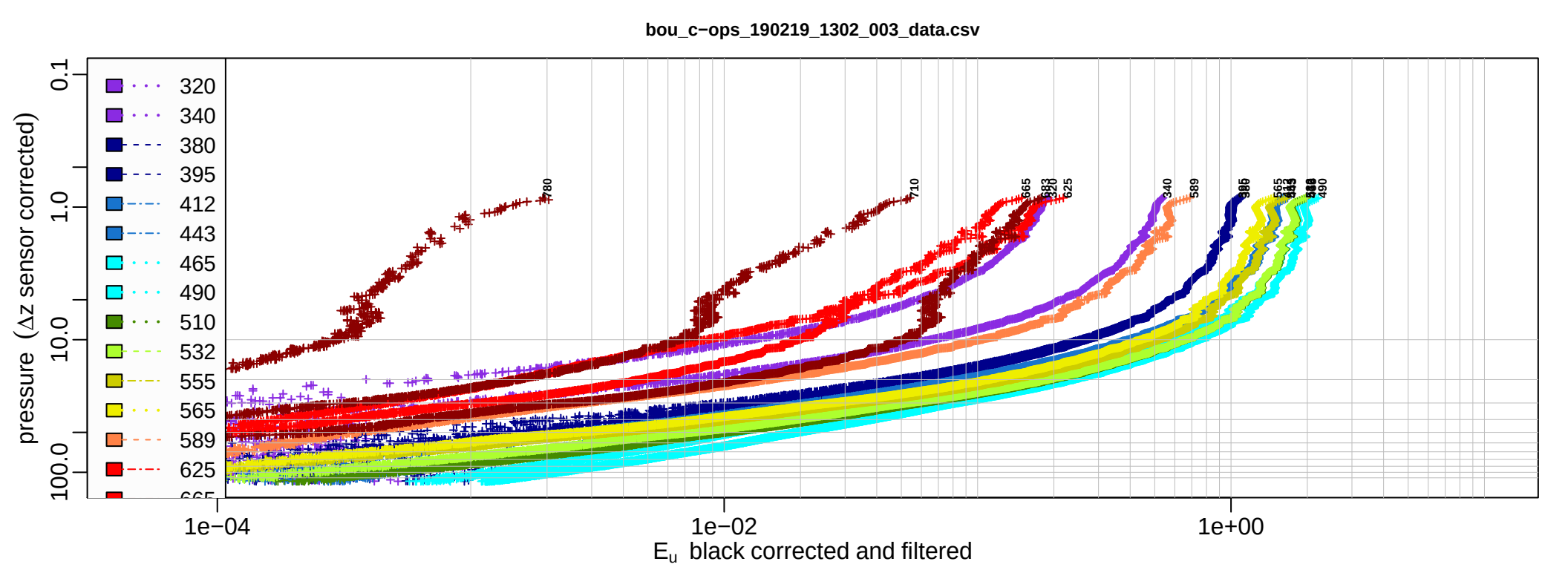


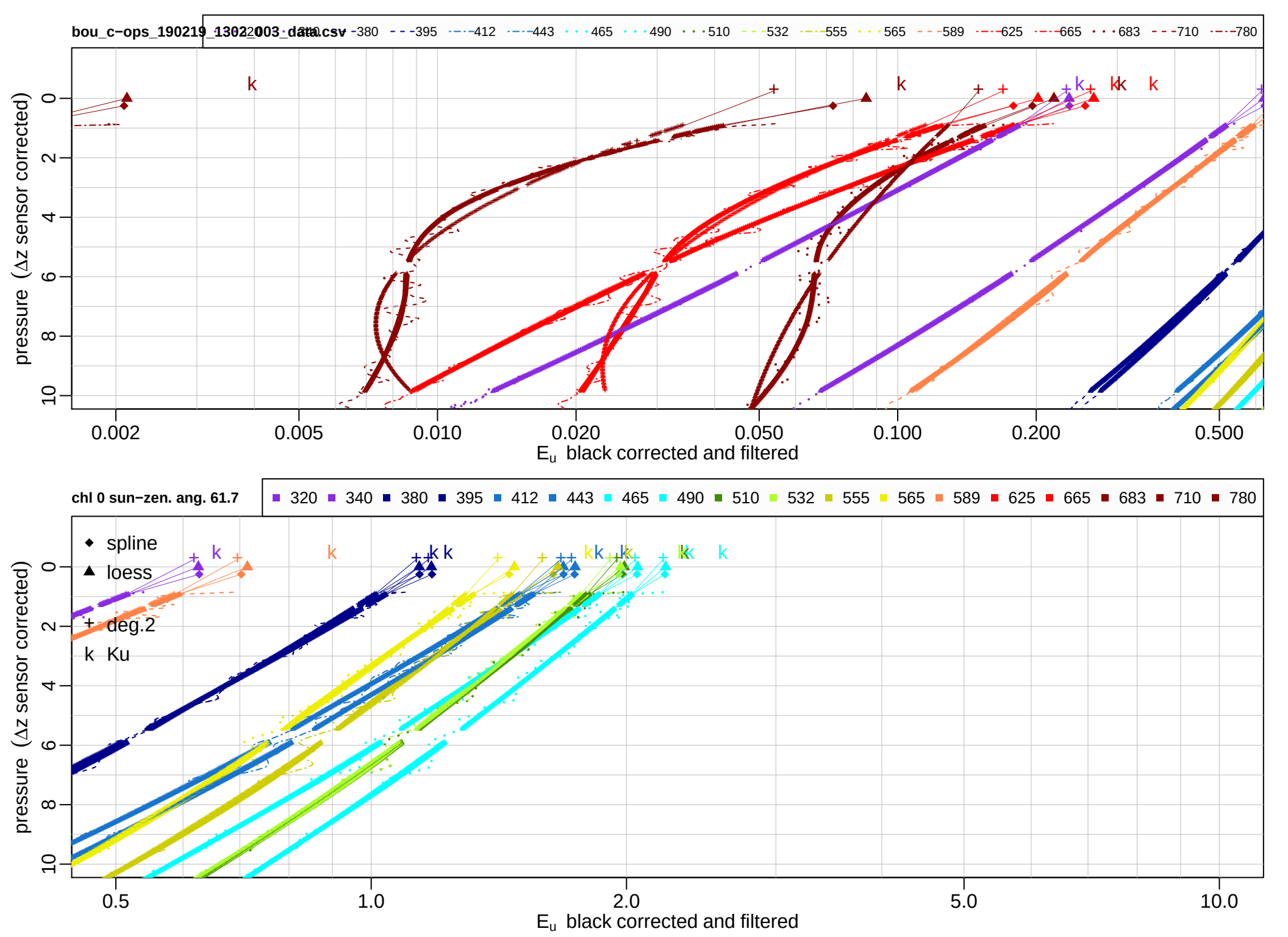


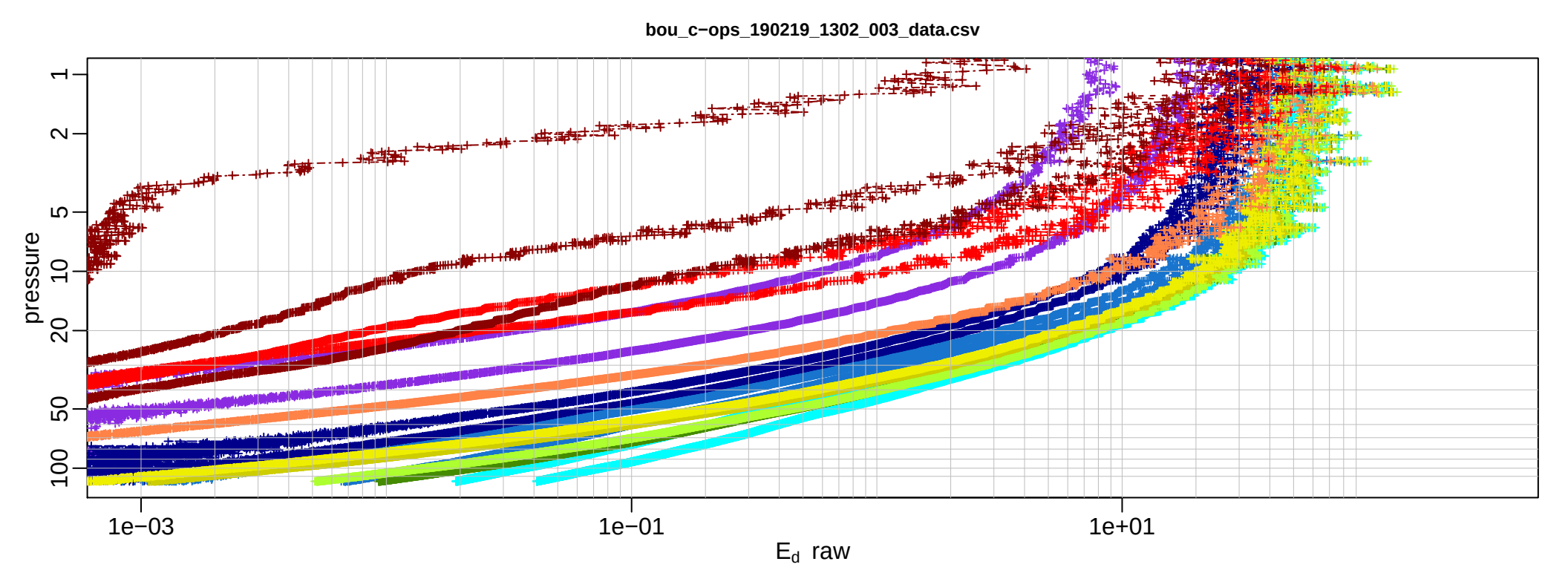

bou_c−ops_190219_1302_003_data.csv
pressure
0
20
40
60
80
100
120
320
340
380
395
412
443
465
490
510
532
555
565
589
625
20
40
60
80
E_s raw

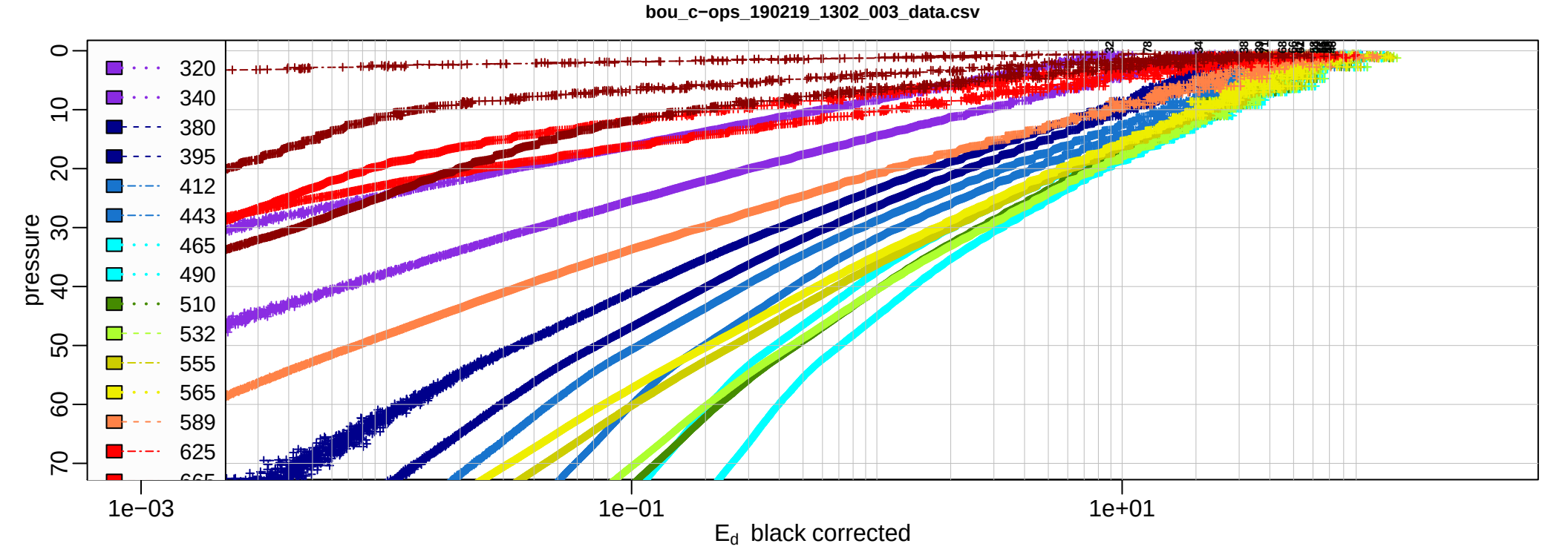

bou_c−ops_190219_1302_003_data.csv
pressure
0
20
40
60
80
100
120
Meas.
Th.
sun−zen. ang. = 61.7
Δ %
400
500
600
700
20
40
60
80
E_s black corrected

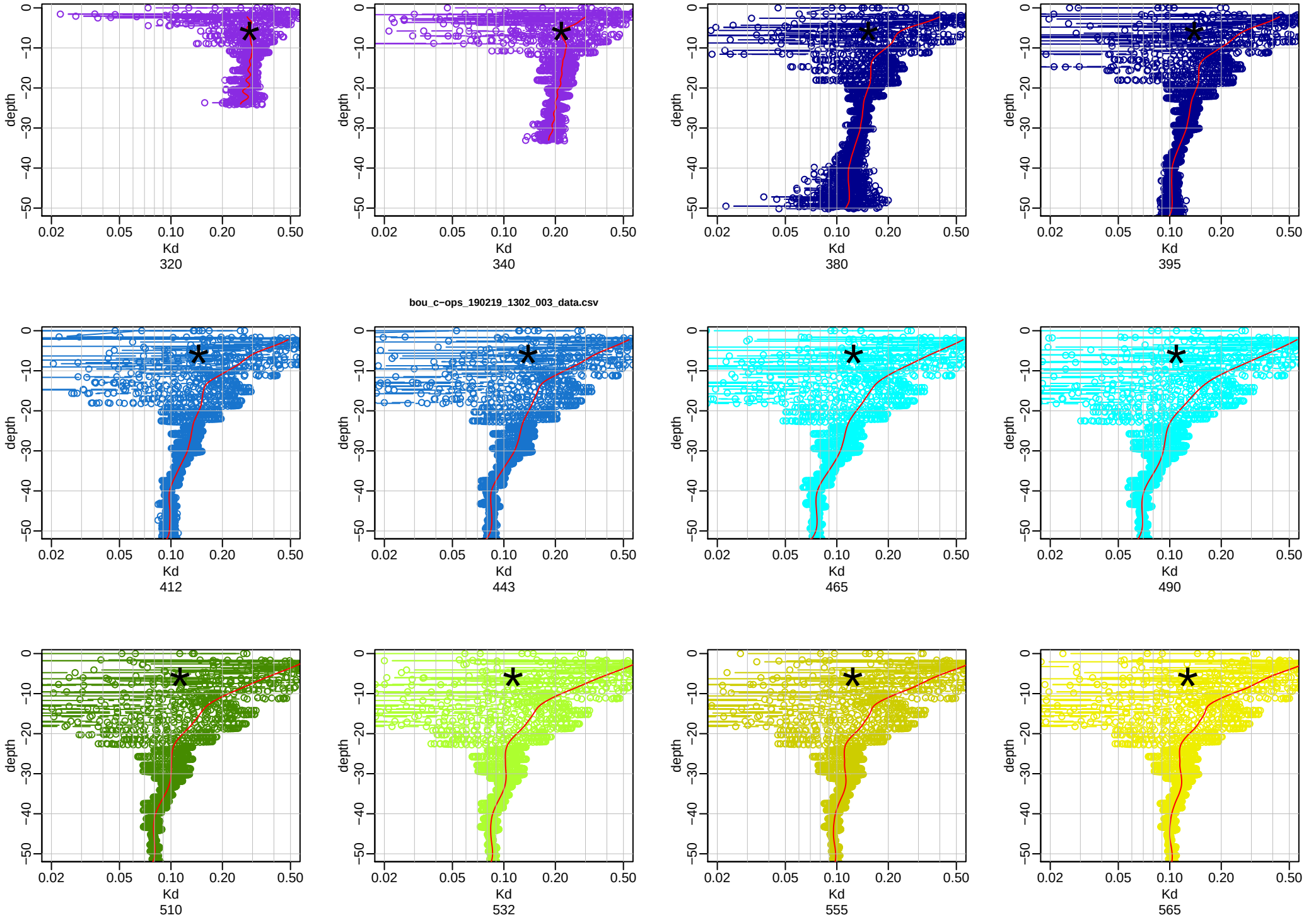

bou_c−ops_190219_1302_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

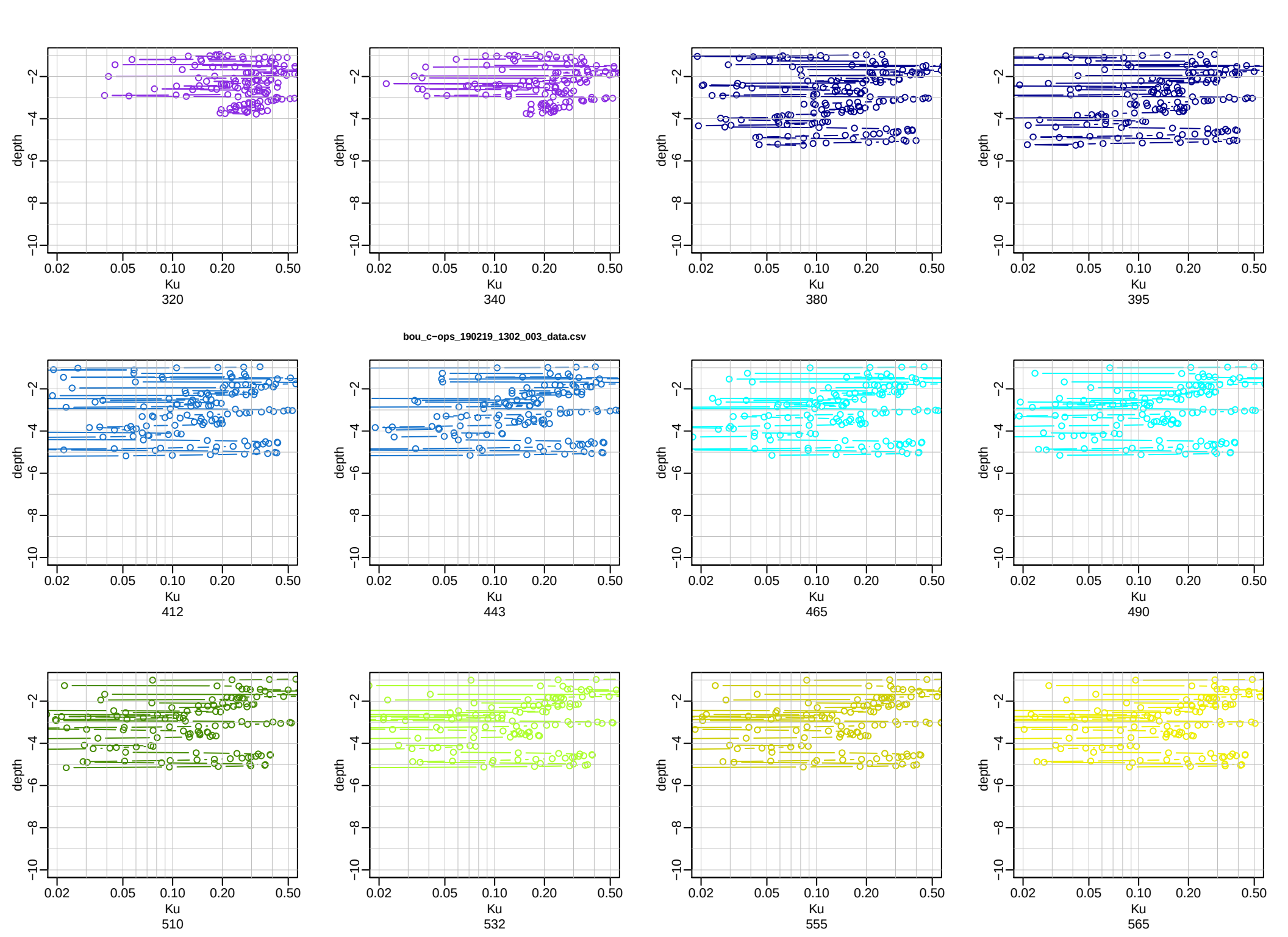

bou_c−ops_190219_1302_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
665
340
589
490
1e−04
1e−02
1e+00
E_u black corrected and filtered

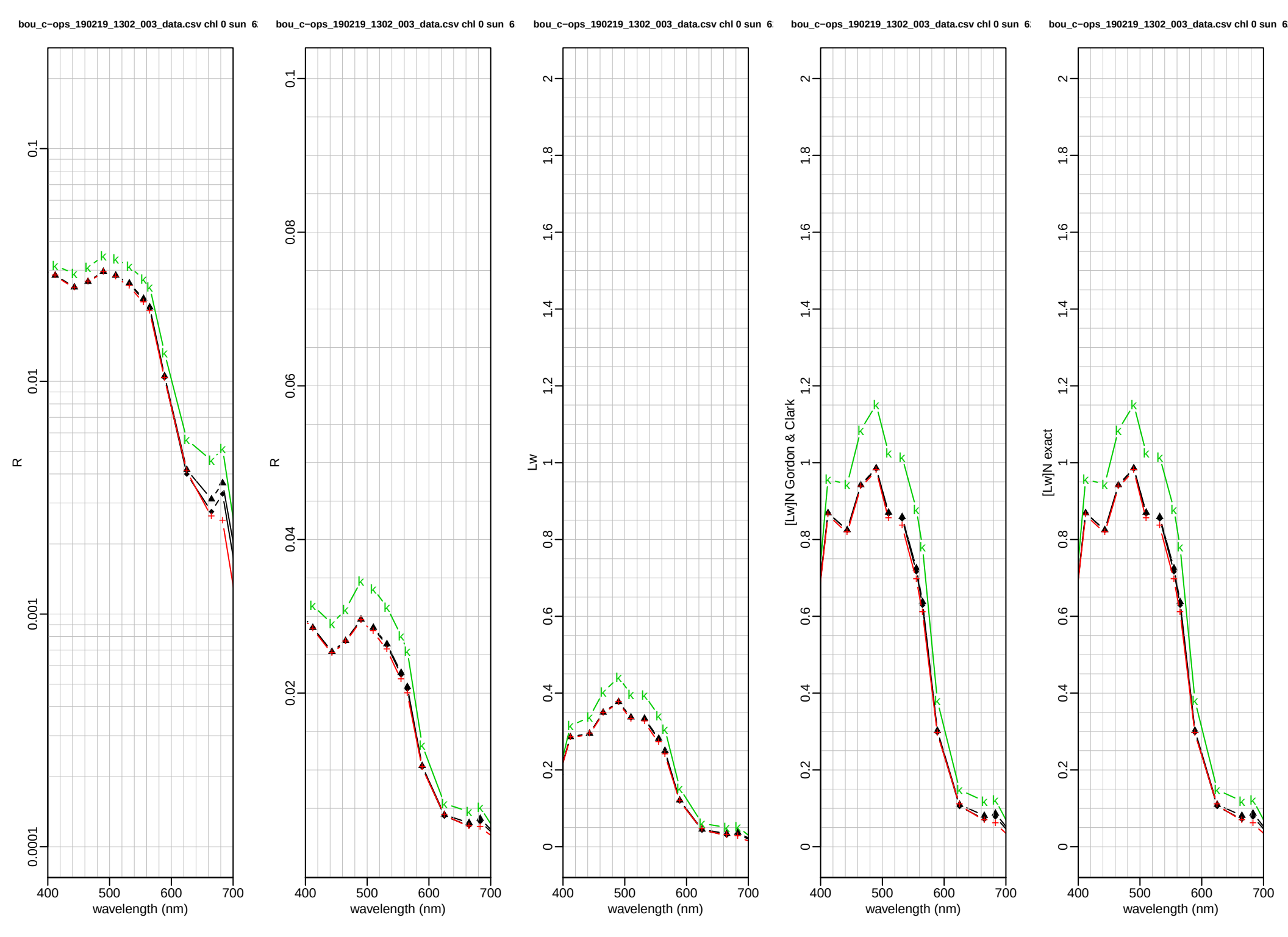

bou_c−ops_190219_1302_003_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
Eu black corrected and filtered
chl 0 sun−zen. ang. 61.7
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
Eu black corrected and filtered


bou_c−ops_190219_1302_003_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190219_1302_003_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

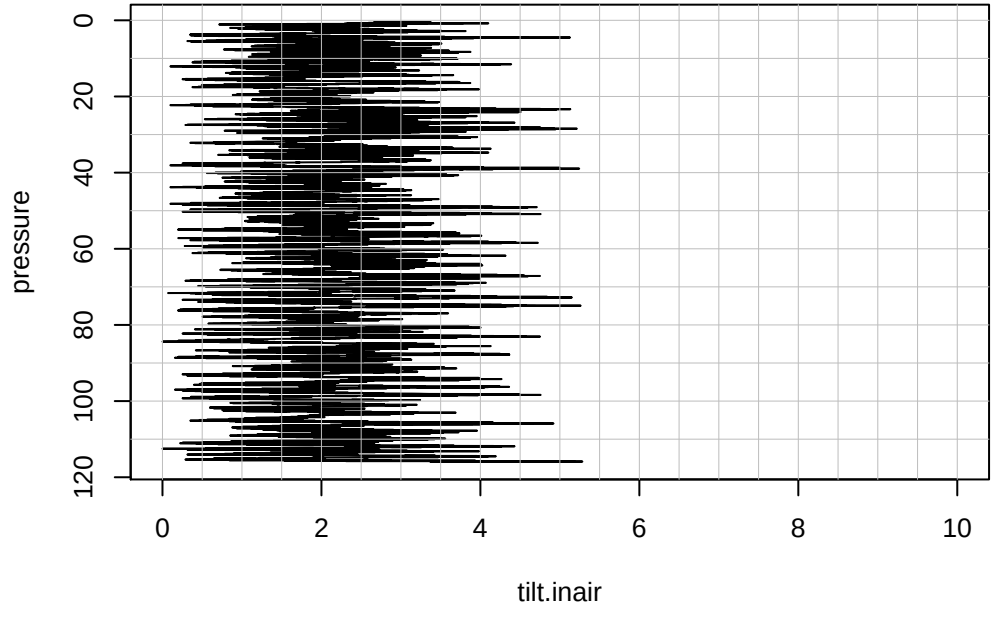

bou_c~ops_190219_1302_003_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

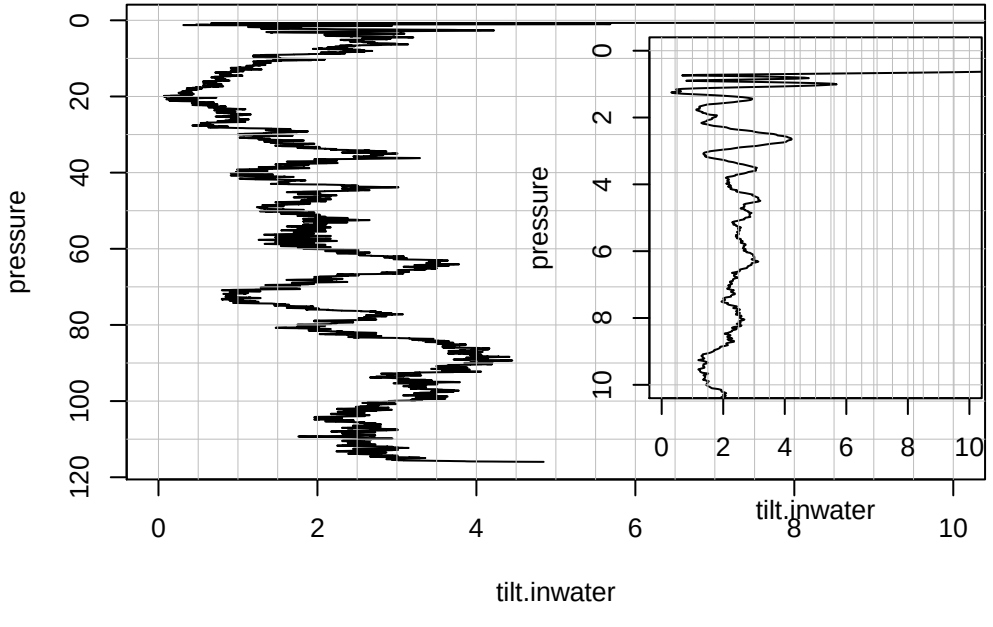

bou_c−ops_190219_1302_003_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

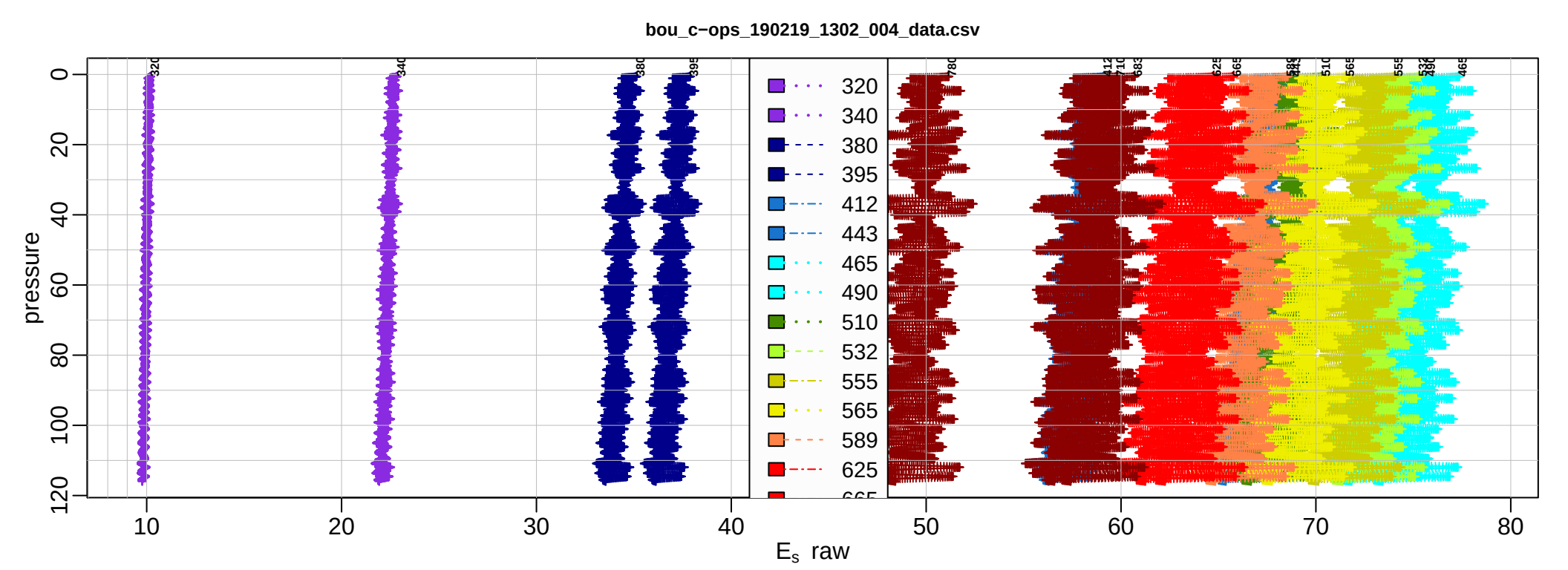

bou_c−ops_190219_1302_003_data.csv chl 0 sun 6
R
wavelength (nm)
bou_c−ops_190219_1302_003_data.csv chl 0 sun 6
R
wavelength (nm)
bou_c−ops_190219_1302_003_data.csv chl 0 sun 6
Lw
wavelength (nm)
bou_c−ops_190219_1302_003_data.csv chl 0 sun 6
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190219_1302_003_data.csv chl 0 sun 6
[Lw]N exact
wavelength (nm)

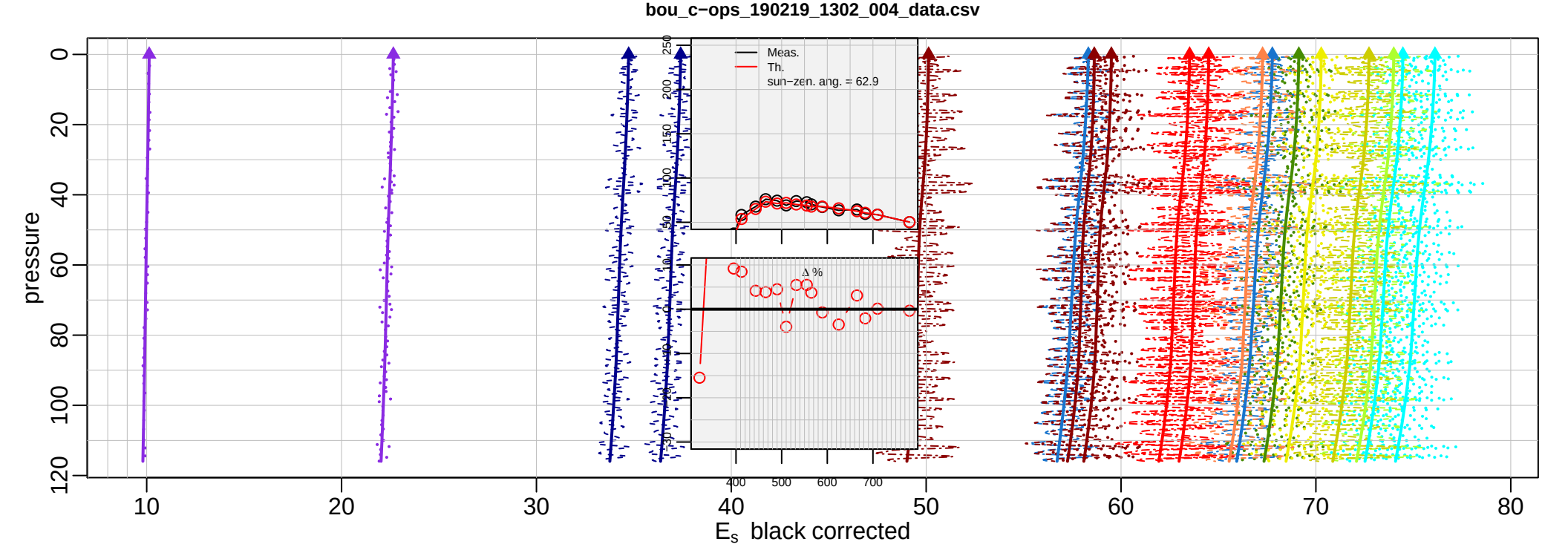
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole205/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole205/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole205/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.90717264811198
latitude 43.3772054036458
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

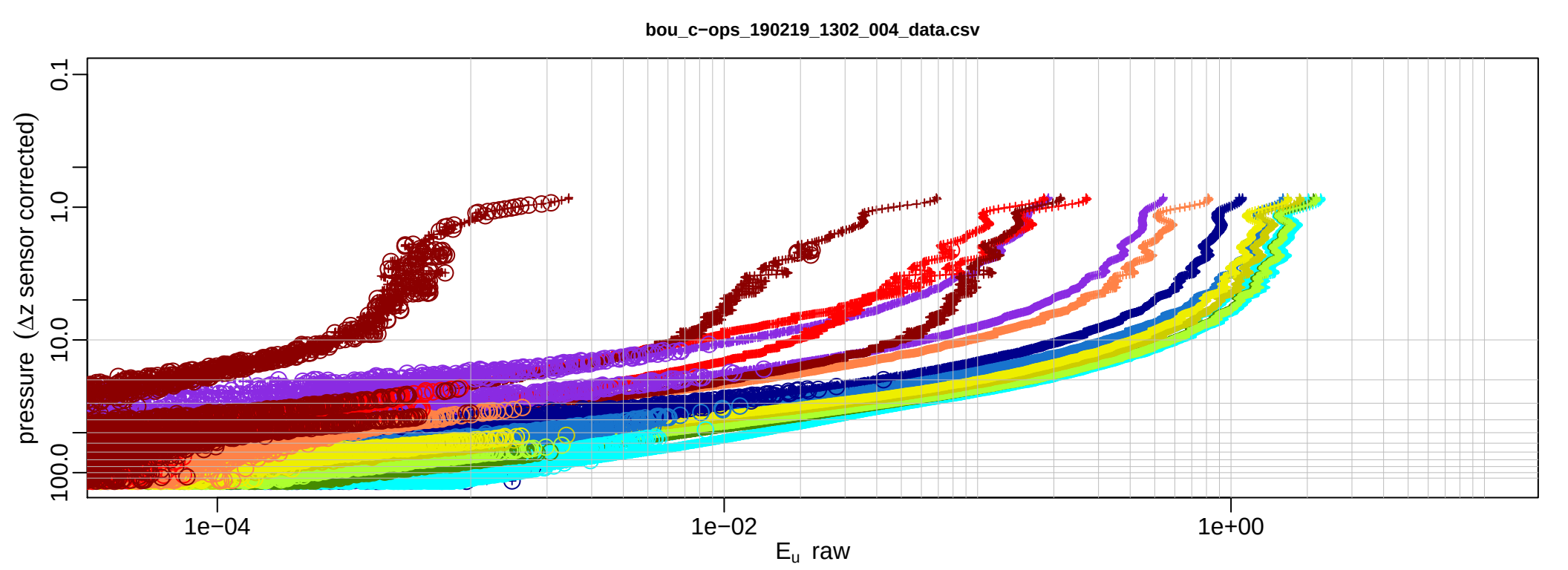
bou_c−ops_190219_1302_004_data.csv

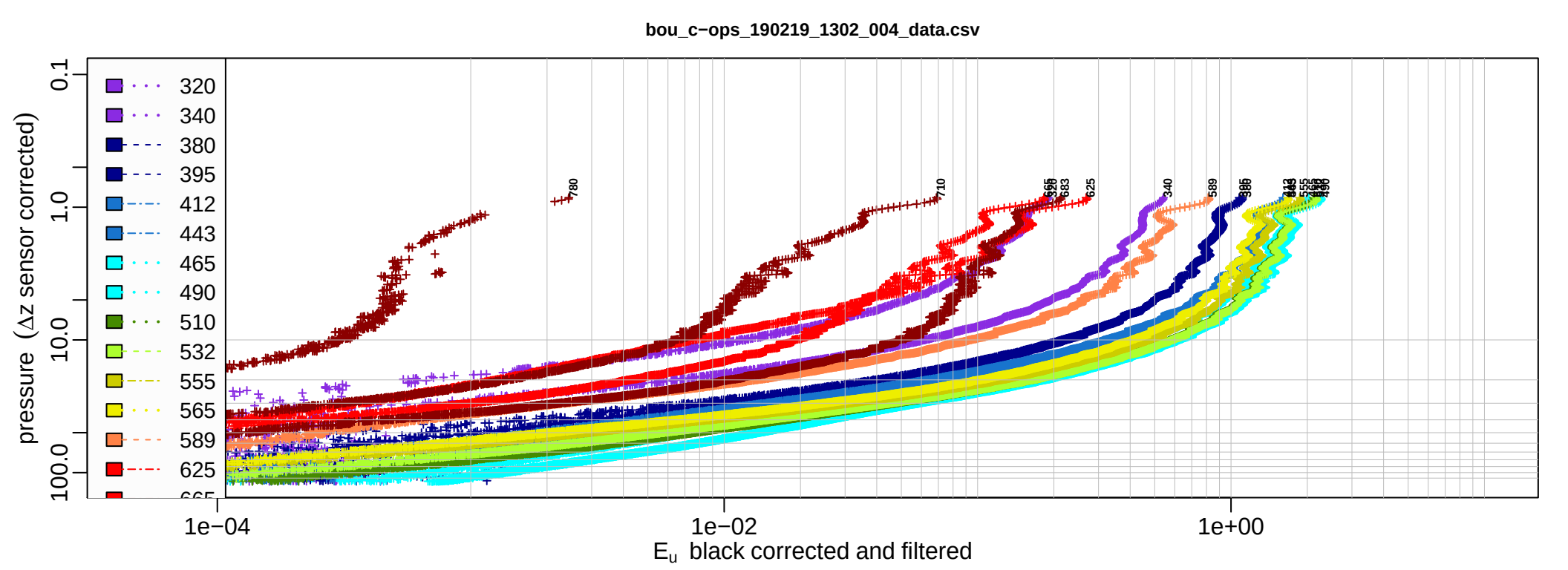


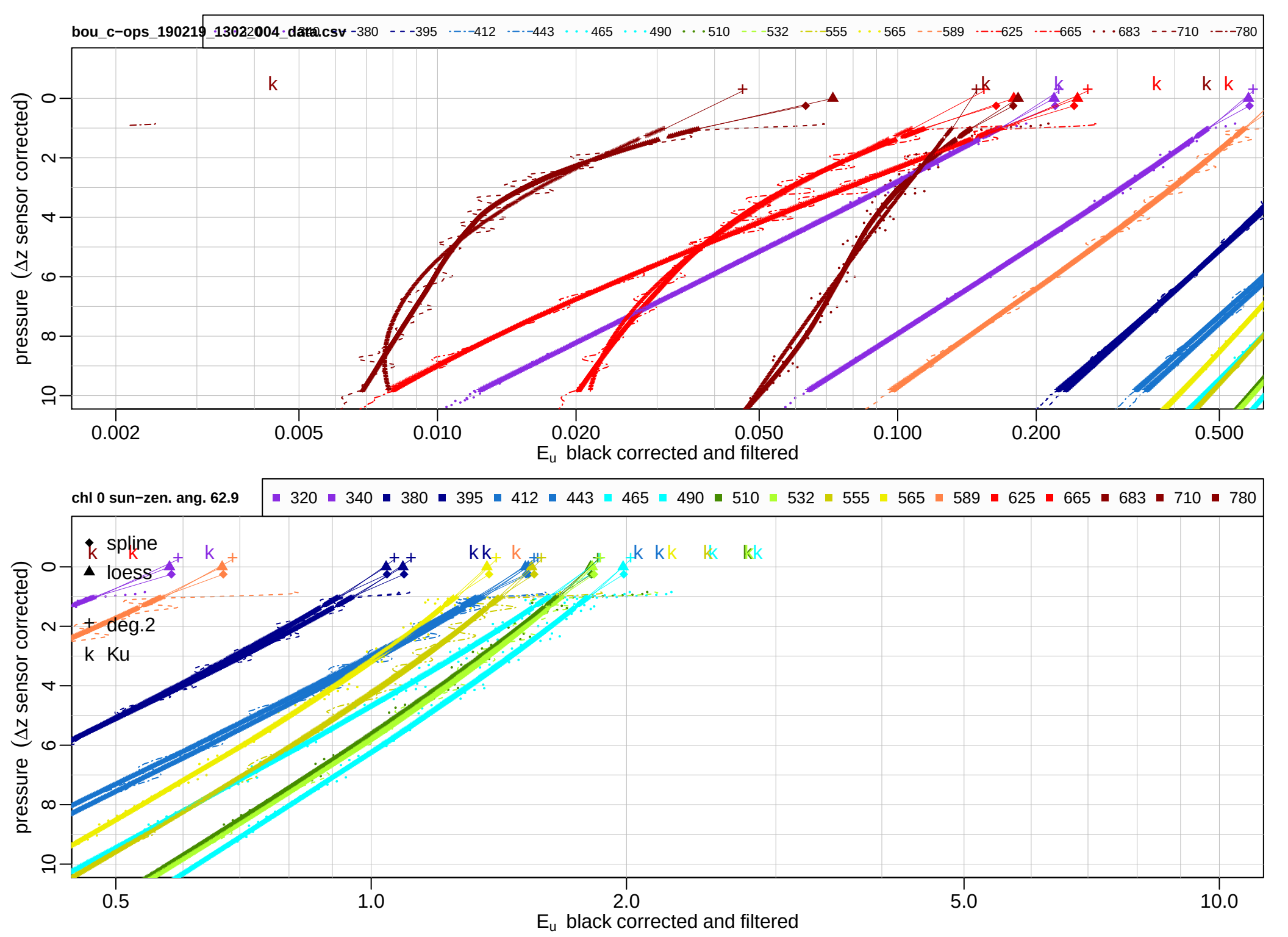


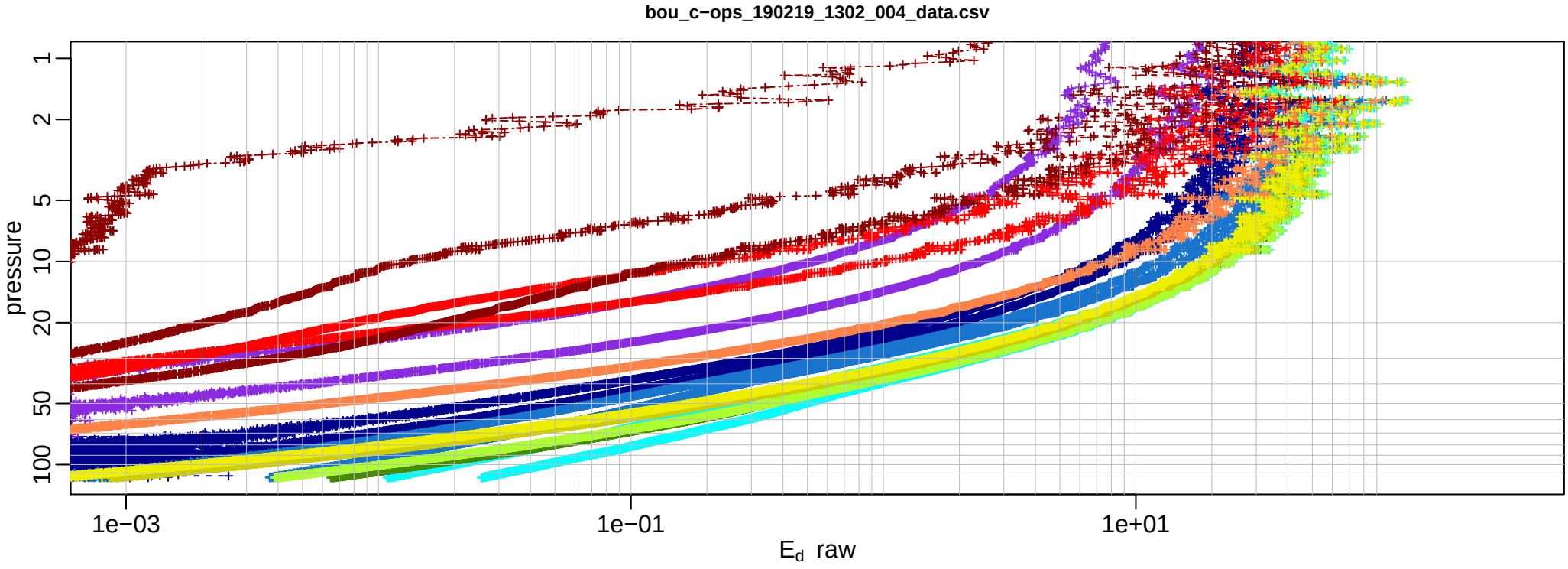

bou_c−ops_190219_1302_004_data.csv
pressure
0
20
40
60
80
100
120
10
20
30
40
50
60
70
80
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

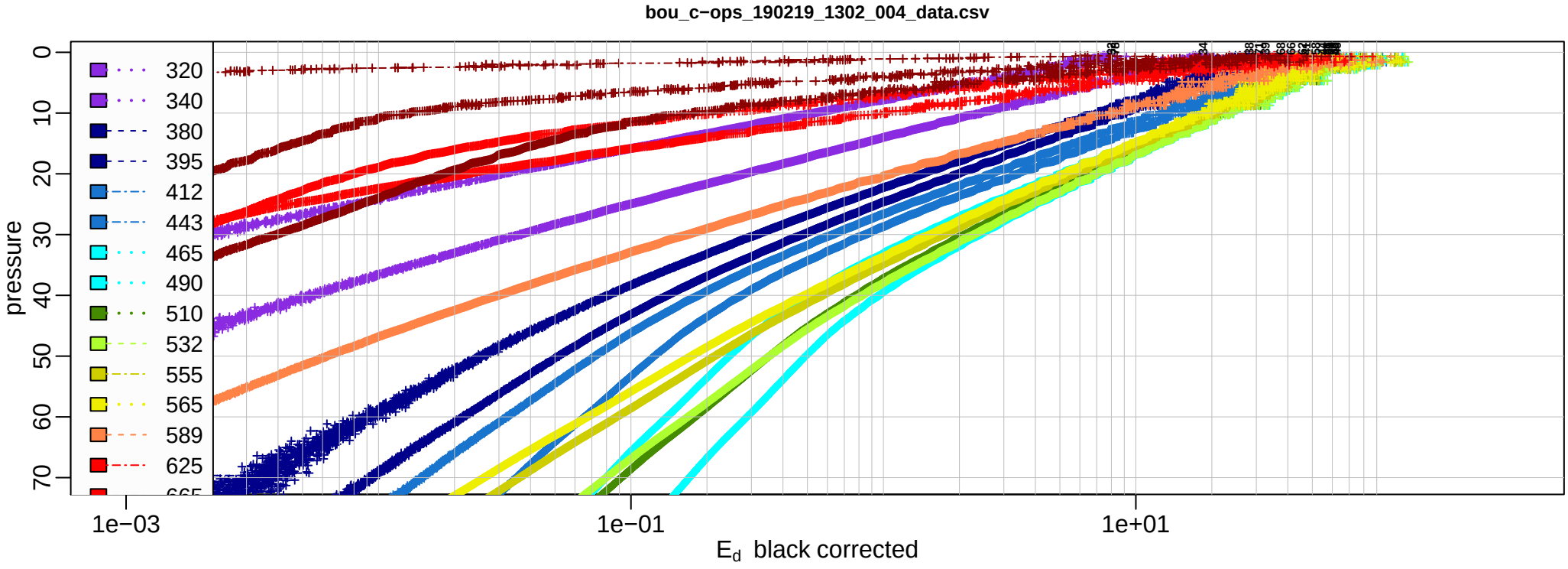

bou_c−ops_190219_1302_004_data.csv
pressure
0
20
40
60
80
100
120
10
20
30
40
50
60
70
80
E_s black corrected
Meas.
Th.
sun−zen. ang. = 62.9
Δ %
400
500
600
700

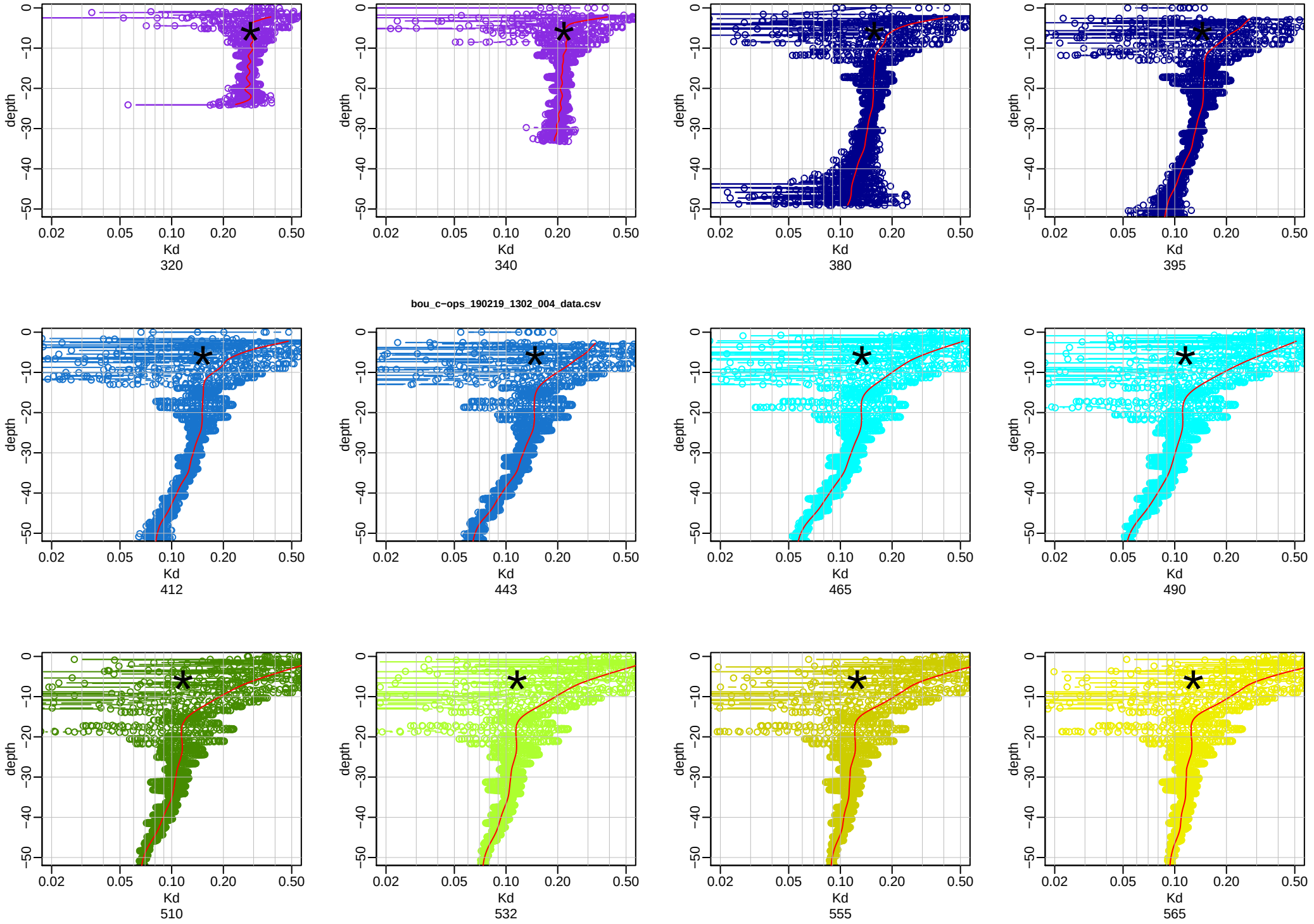

bou_c−ops_190219_1302_004_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

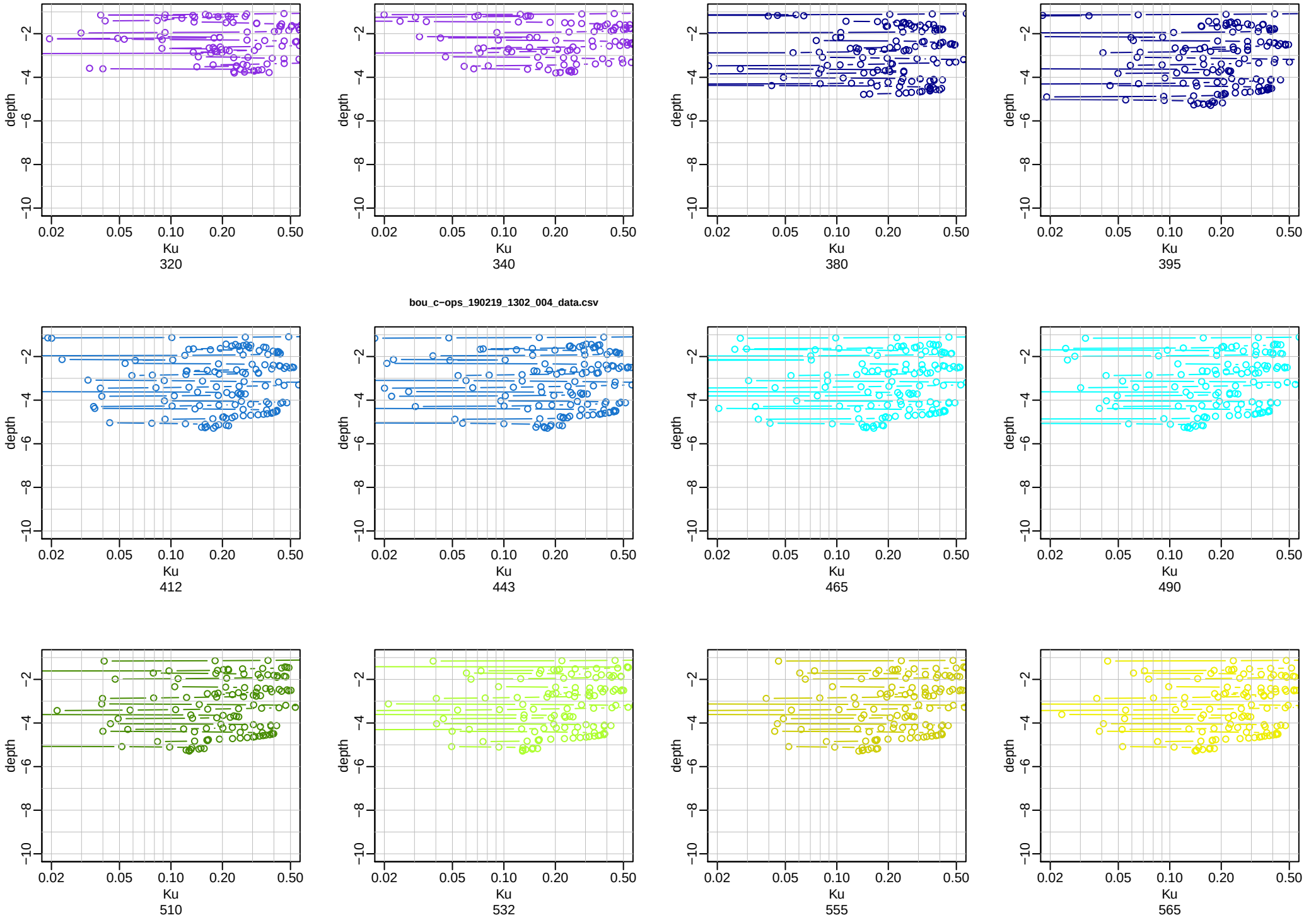

bou_c−ops_190219_1302_004_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
340
589
1e−04
1e−02
1e+00
E_u black corrected and filtered

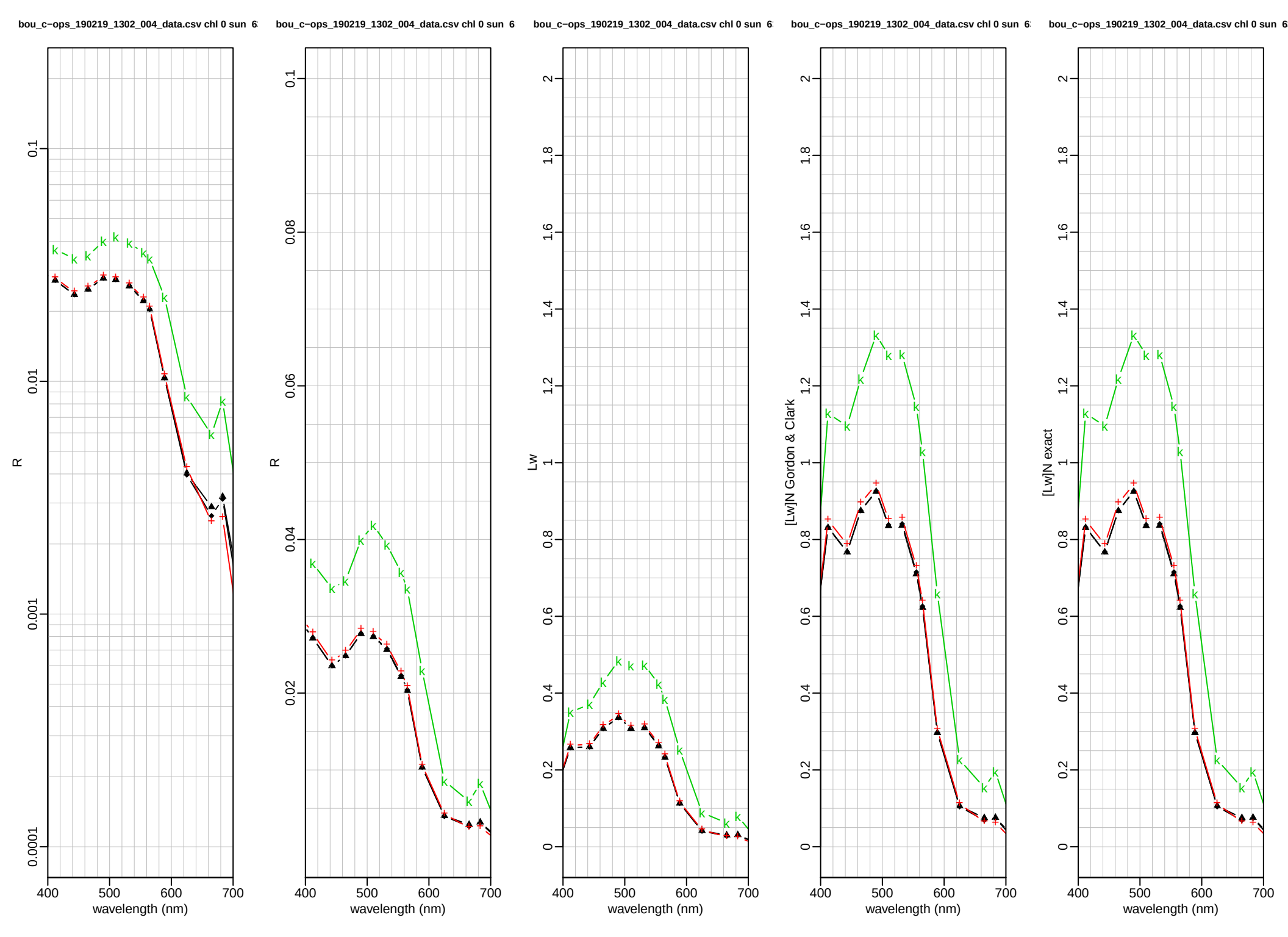

bou_c−ops_190219_1302004_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
Eu black corrected and filtered
chl 0 sun−zen. ang. 62.9
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
Eu black corrected and filtered


bou_c−ops_190219_1302_004_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190219_1302_004_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

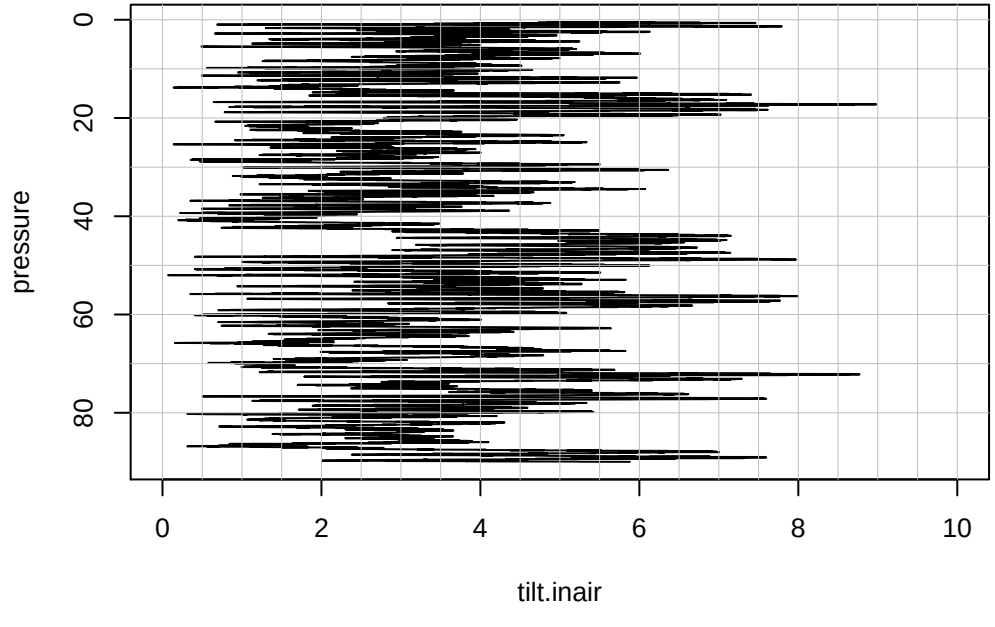

bou_c~ops_190219_1302_004_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

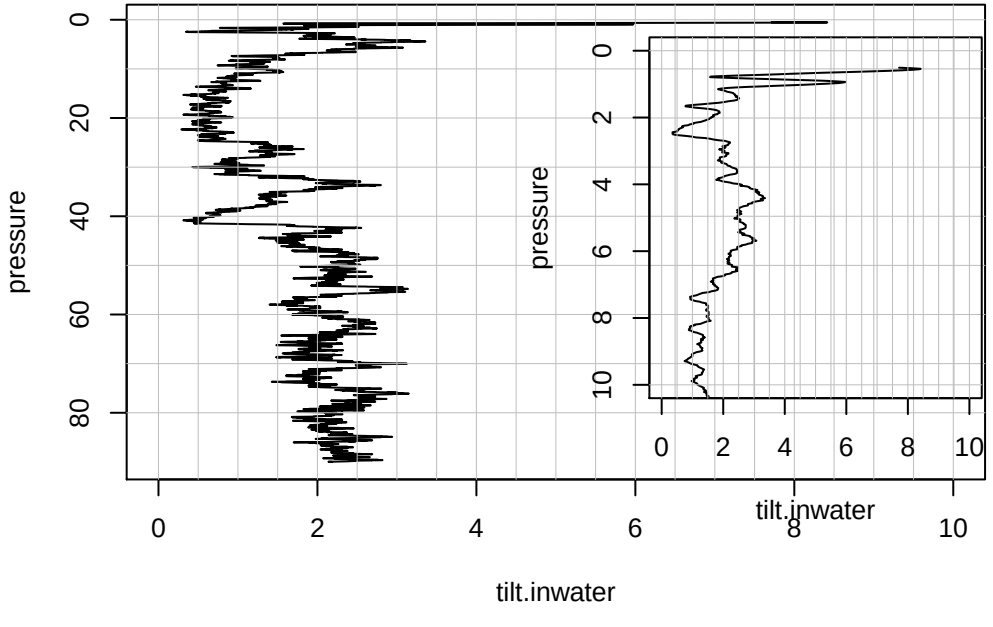

bou_c~ops_190219_1302_004_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

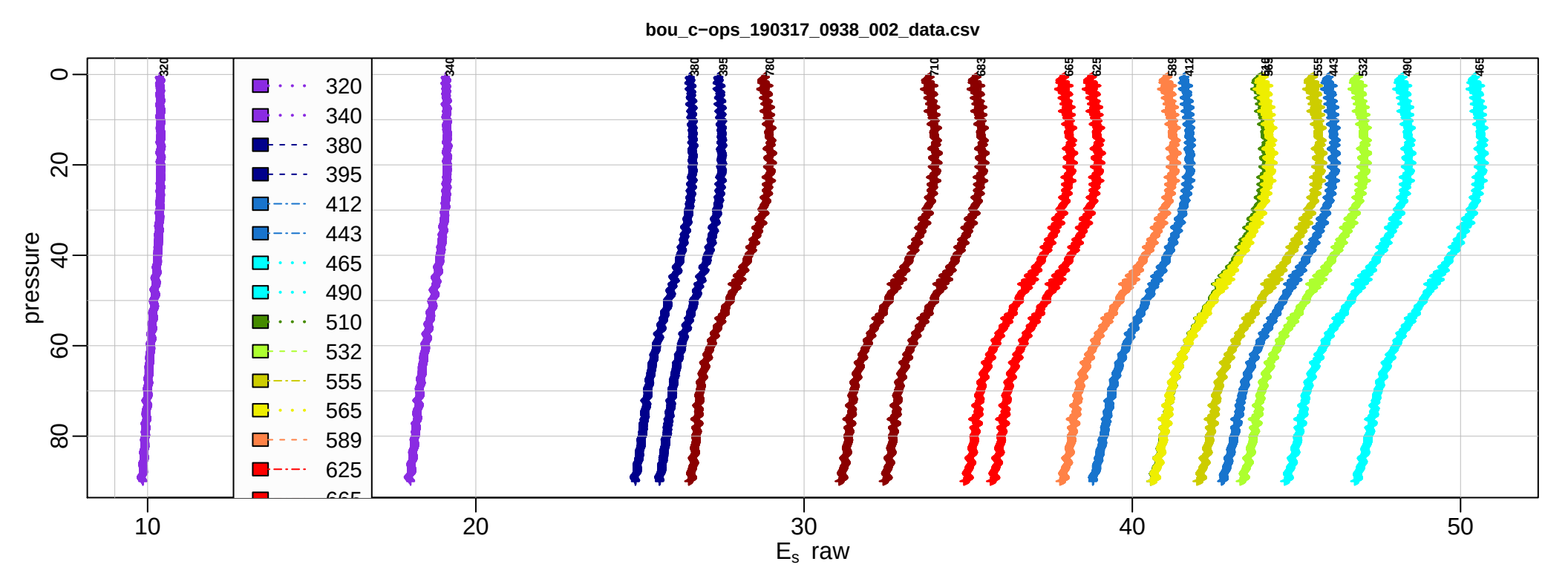

bou_c−ops_190219_1302_004_data.csv chl 0 sun 6
R
wavelength (nm)
bou_c−ops_190219_1302_004_data.csv chl 0 sun 6
R
wavelength (nm)
bou_c−ops_190219_1302_004_data.csv chl 0 sun 6
Lw
wavelength (nm)
bou_c−ops_190219_1302_004_data.csv chl 0 sun 6
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190219_1302_004_data.csv chl 0 sun 6
[Lw]N exact
wavelength (nm)

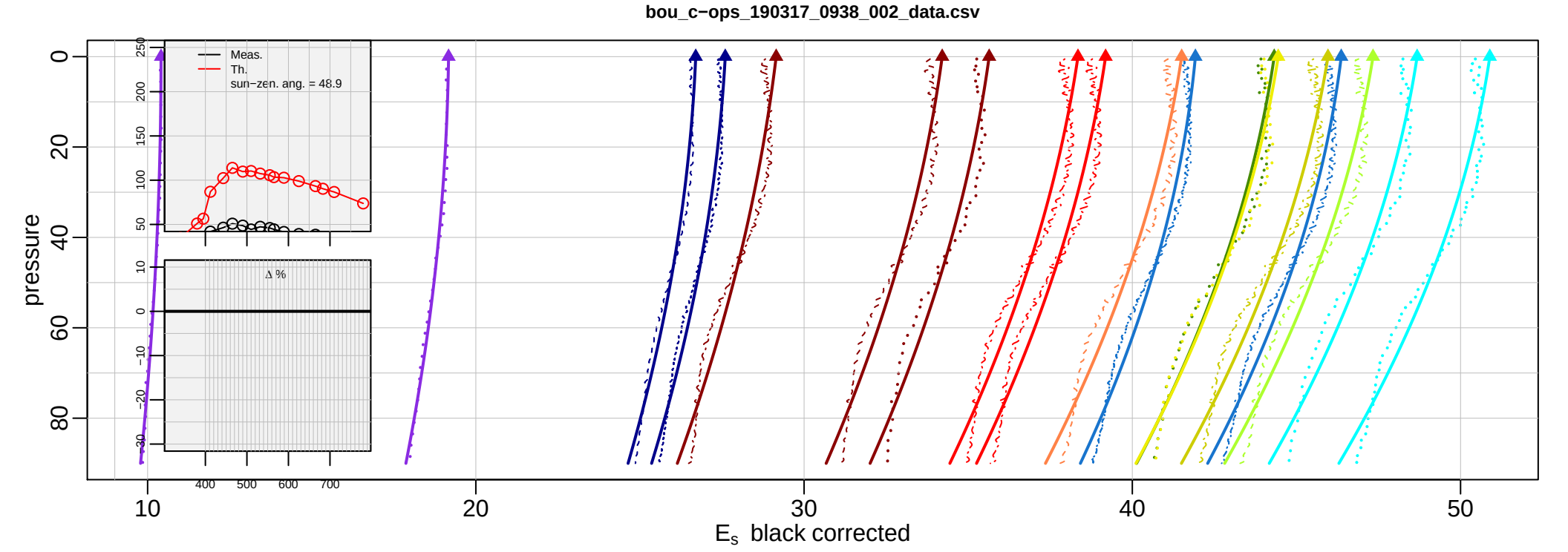
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole206/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole206/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole206/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole206/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89571329752605
latitude 43.3702311197917
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

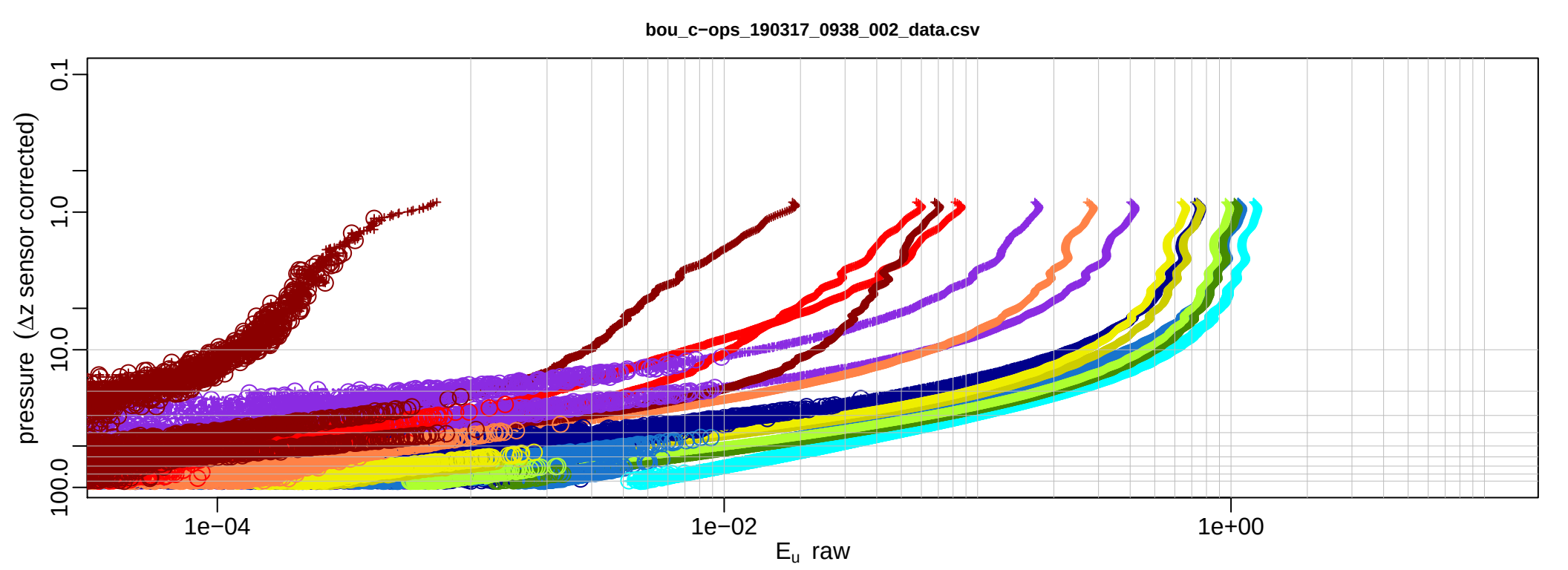
bou_c−ops_190317_0938_002_data.csv

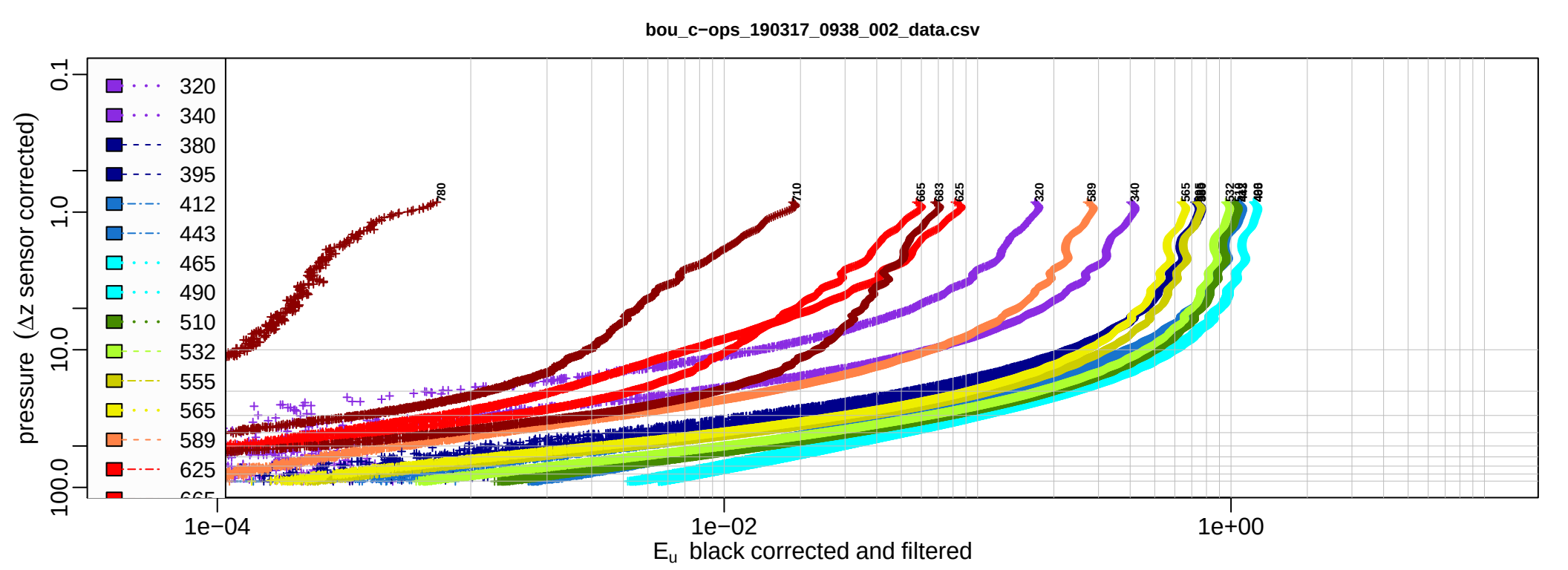


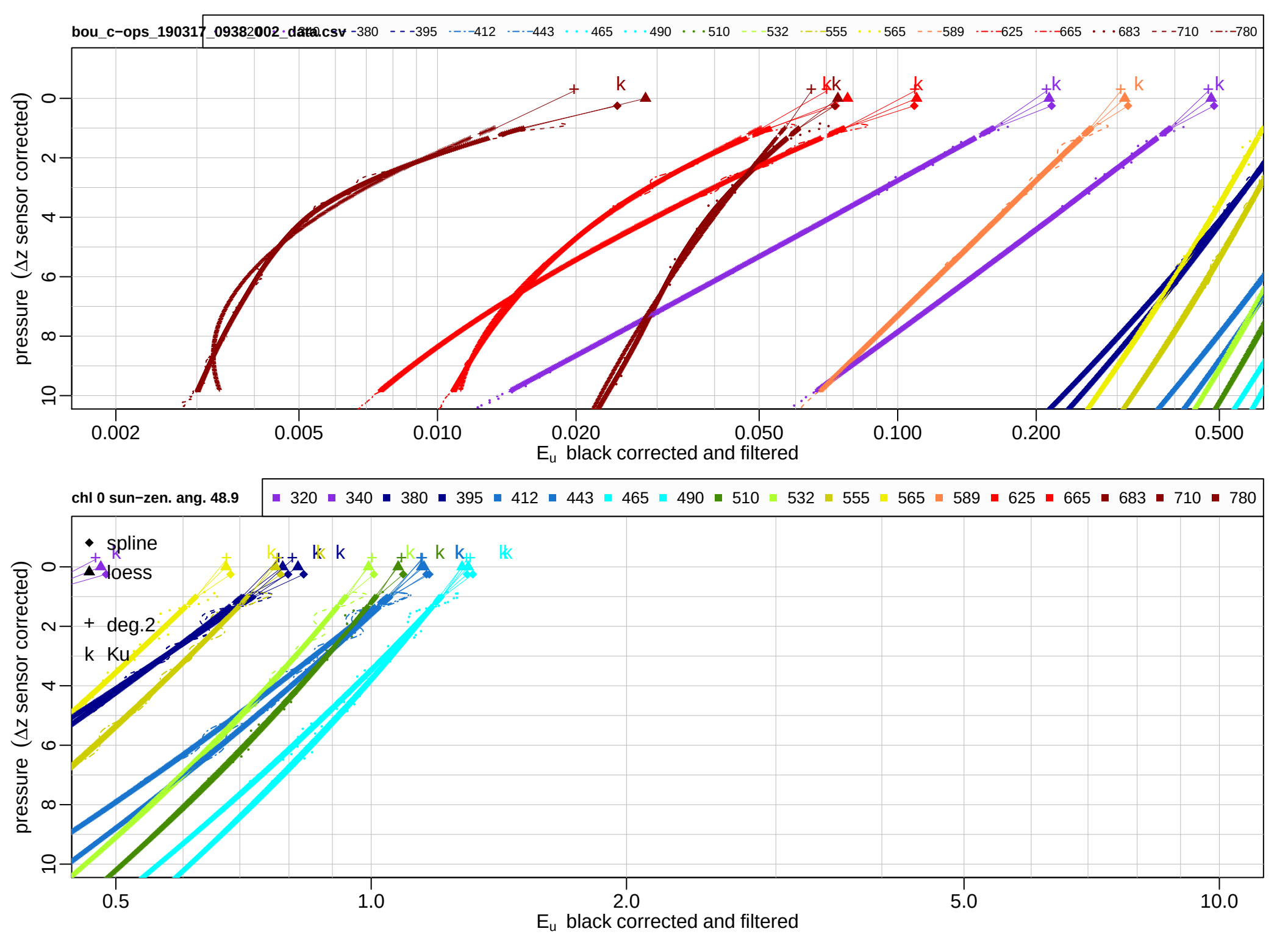


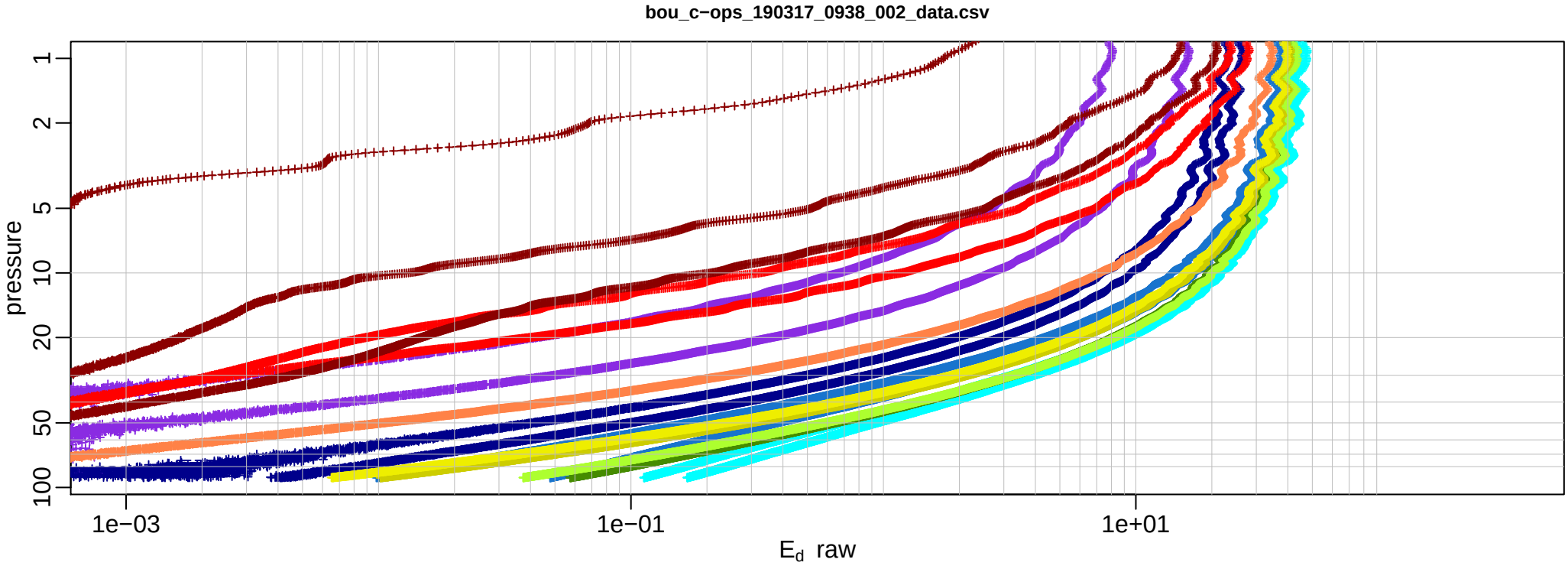

bou_c−ops_190317_0938_002_data.csv
pressure
0
20
40
60
80
10
20
30
40
50
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

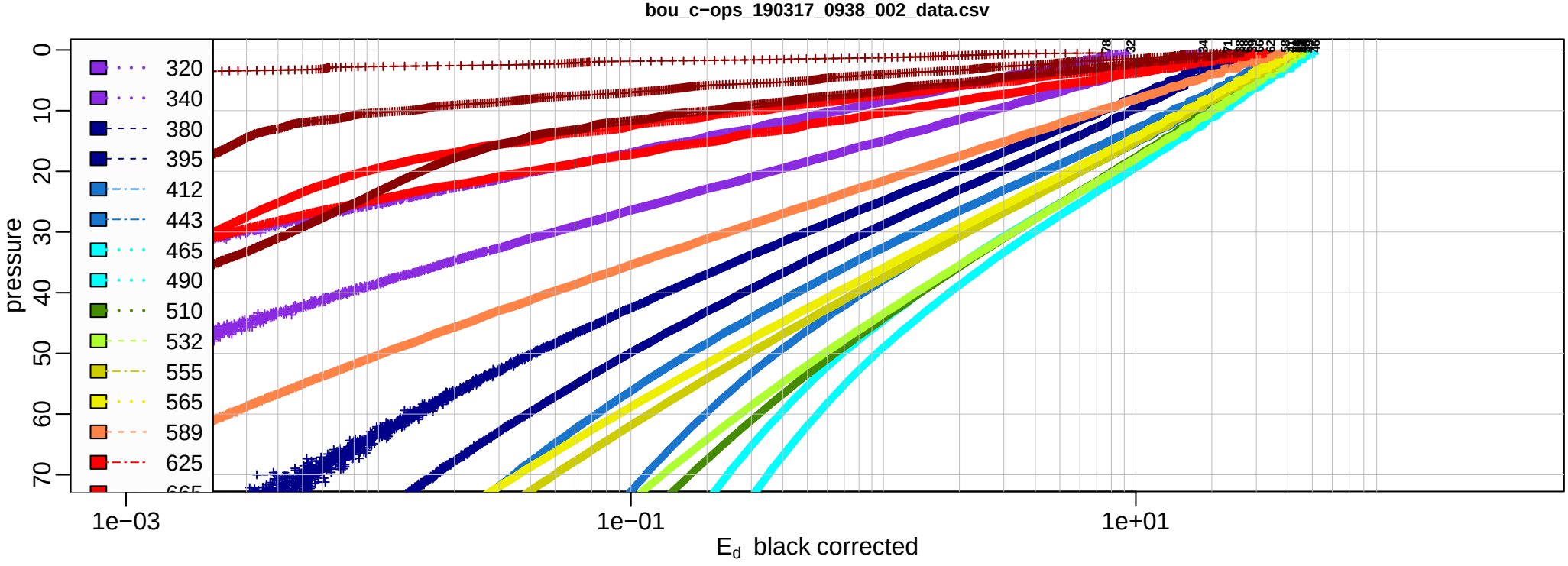

bou_c−ops_190317_0938_002_data.csv
pressure
0
20
40
60
80
10
20
30
40
50
E_s black corrected
Meas.
Th.
sun−zen. ang. = 48.9
Δ %
400
500
600
700

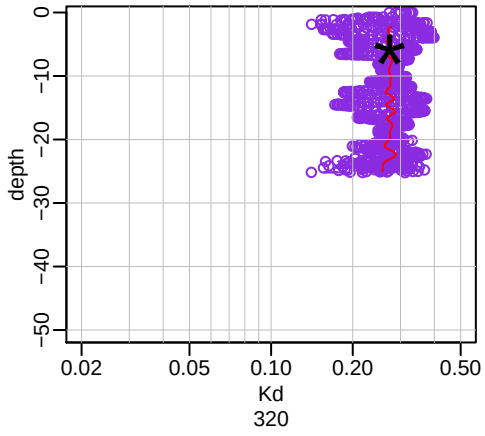

bou_c−ops_190317_0938_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

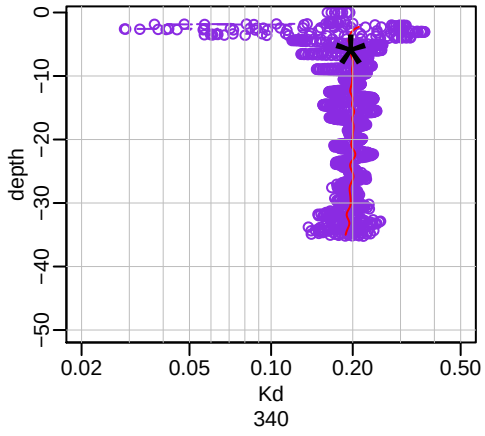

bou_c−ops_190317_0938_002_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
665
683
625
320
589
340
565
532
1e−04
1e−02
1e+00
E_u black corrected and filtered

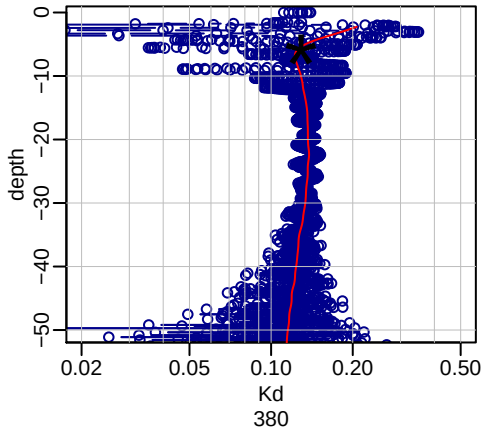

bou_c−ops_190317_0938002_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
Eu black corrected and filtered
chl 0 sun−zen. ang. 48.9
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
Eu black corrected and filtered

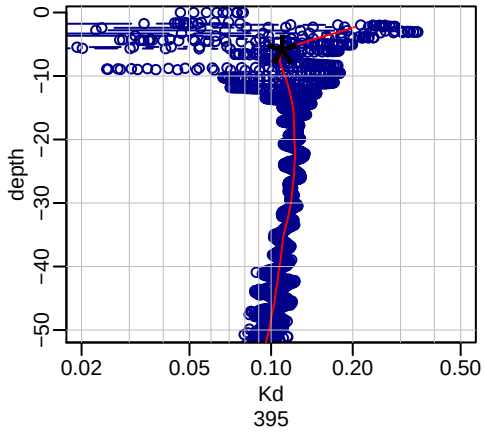

bou_c−ops_190317_0938_002_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190317_0938_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

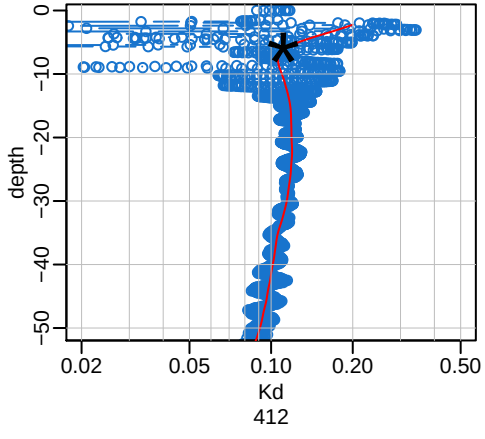


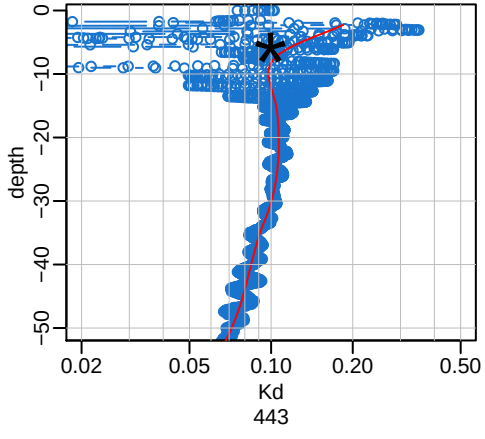


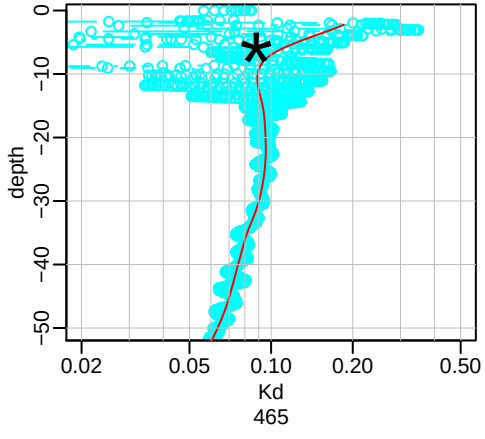


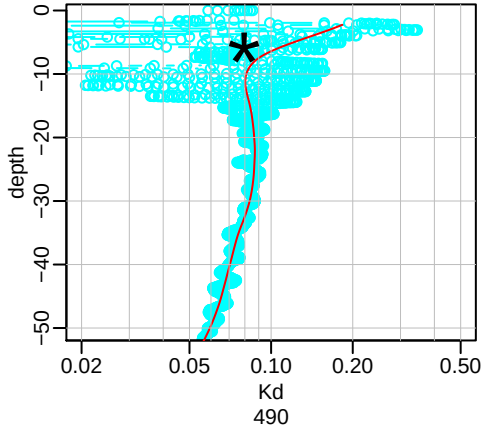


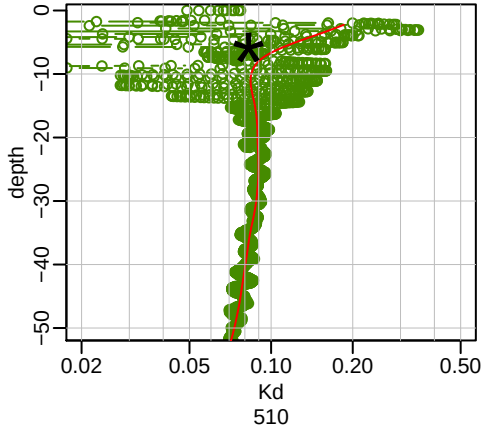
bou_c−ops_190317_0938_002_data.csv

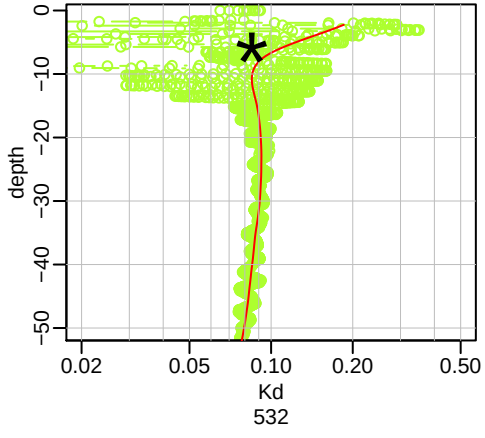


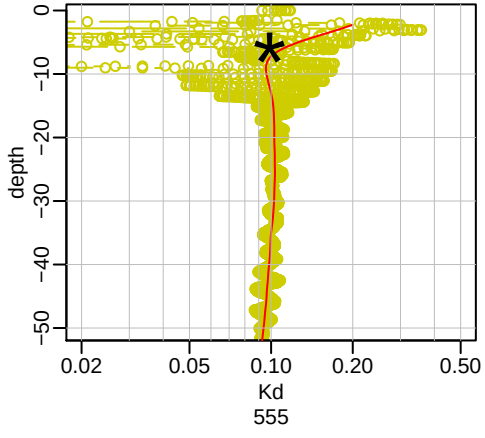


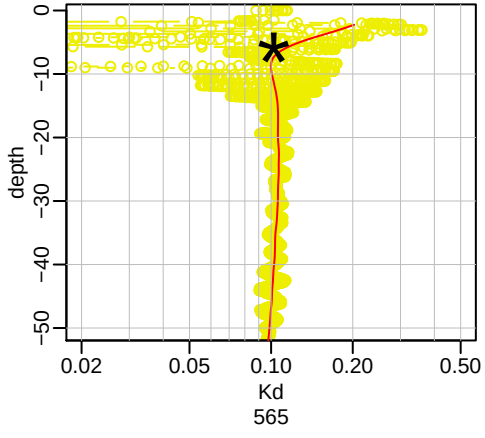


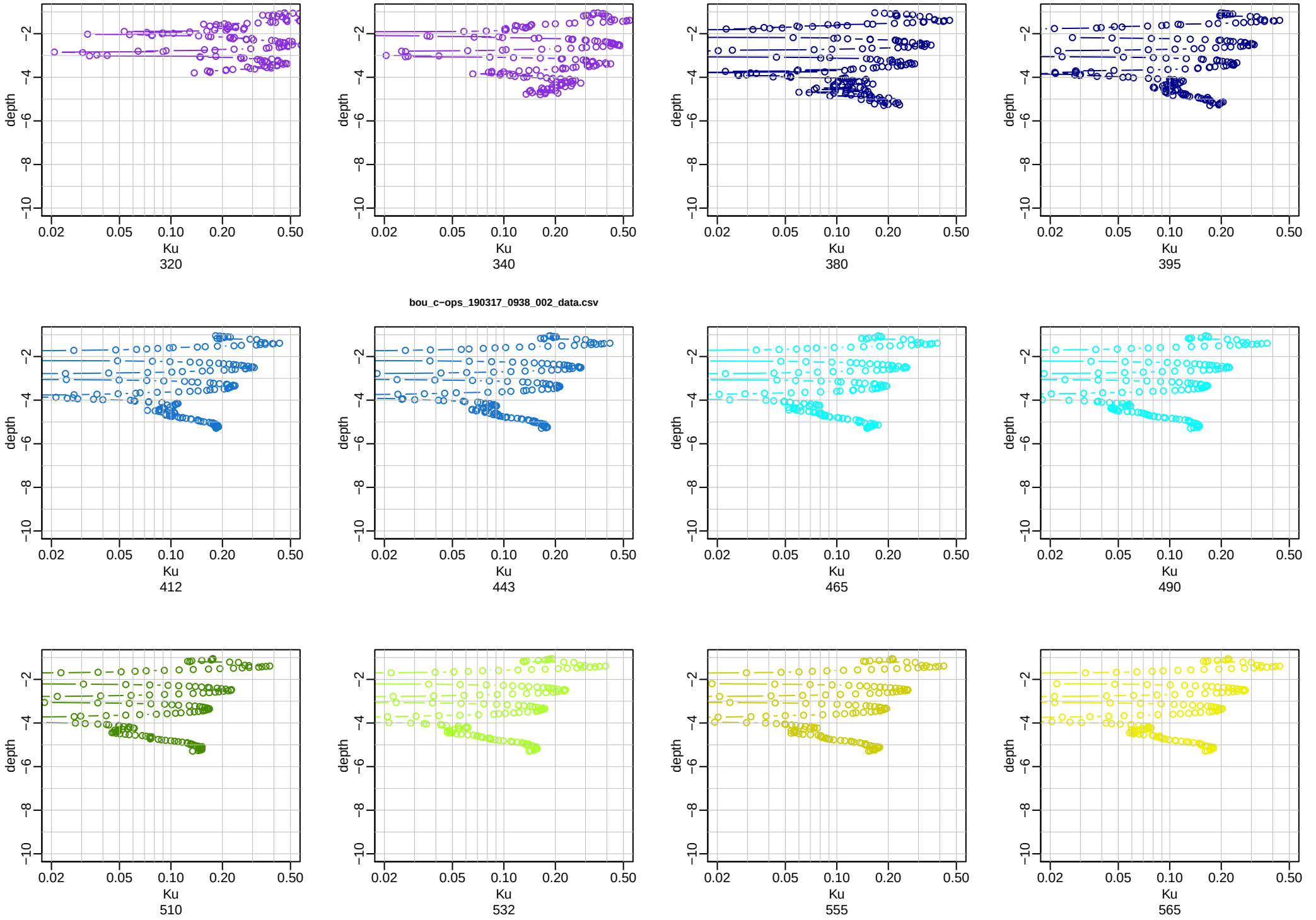


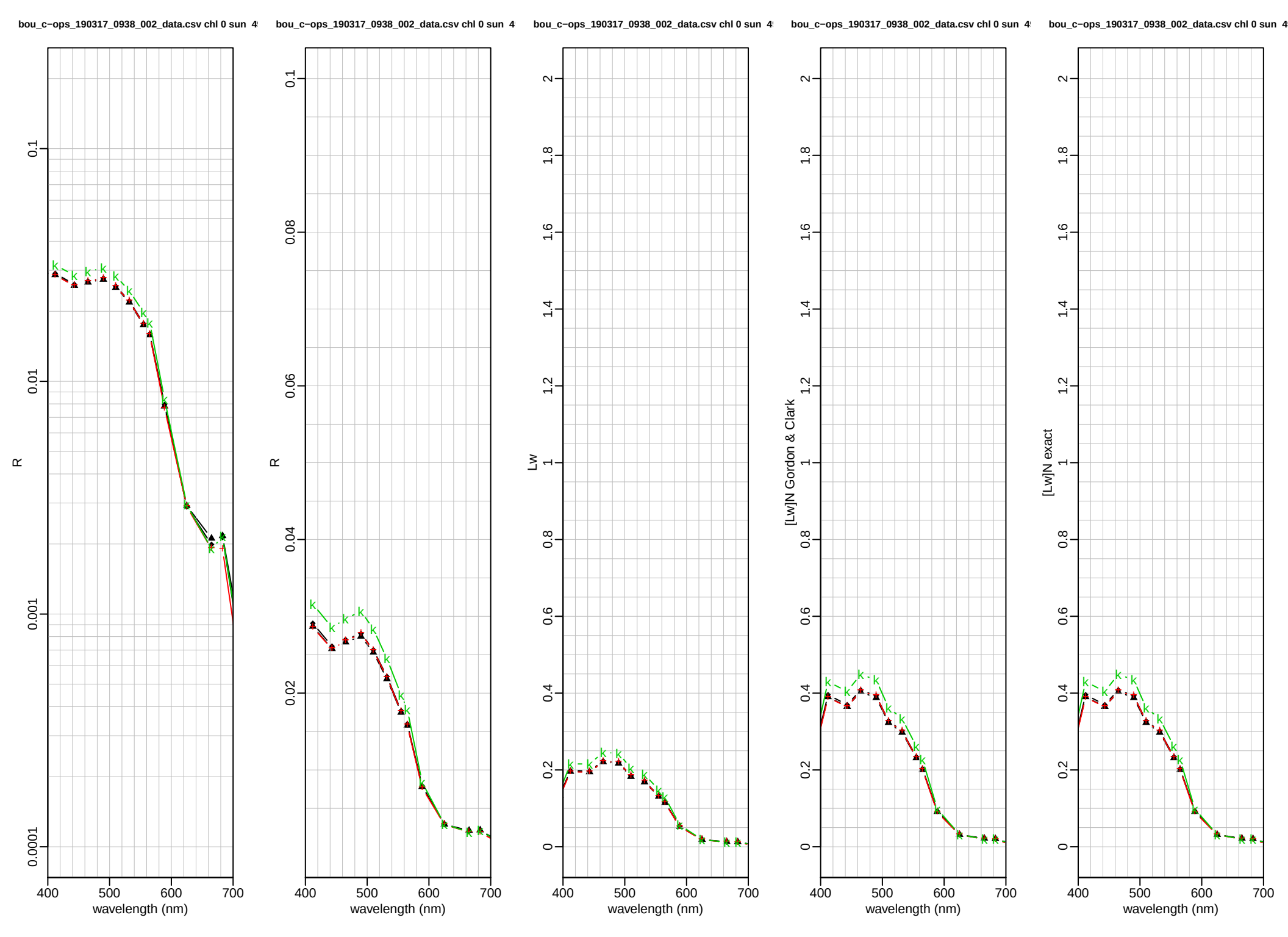






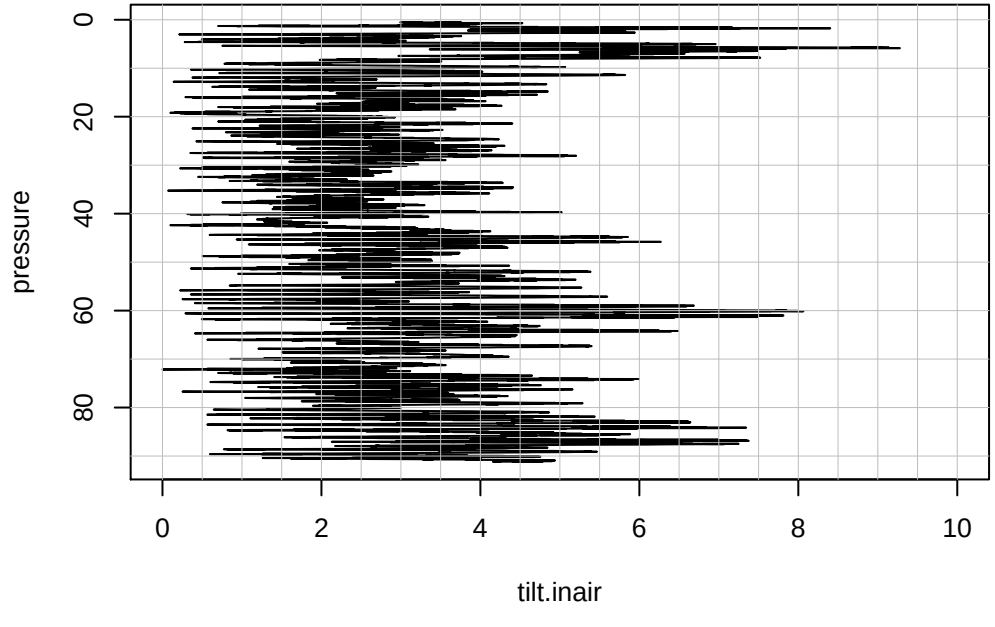


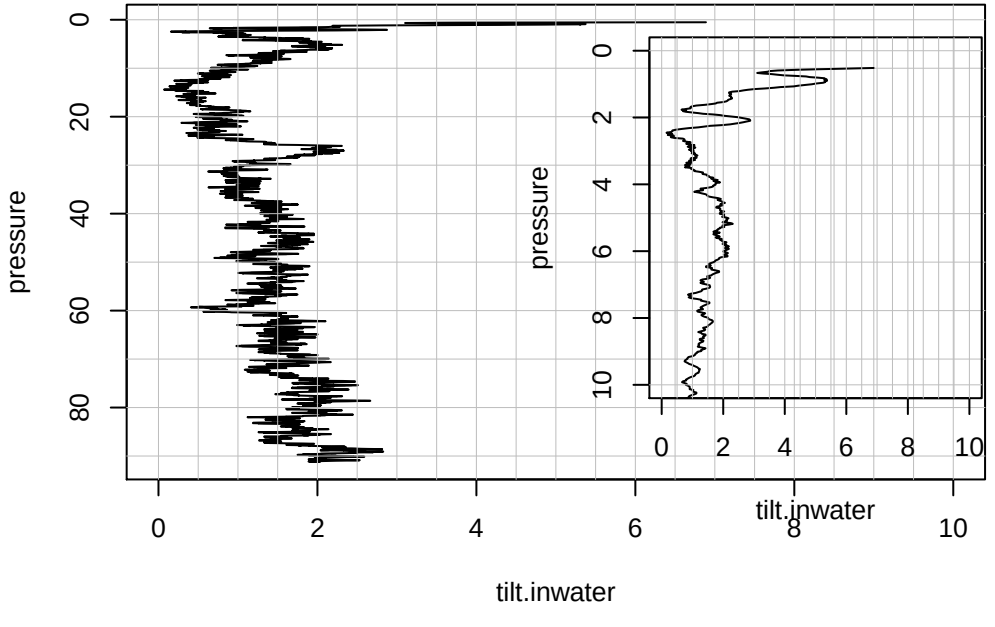

bou_c~ops_190317_0938_002_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

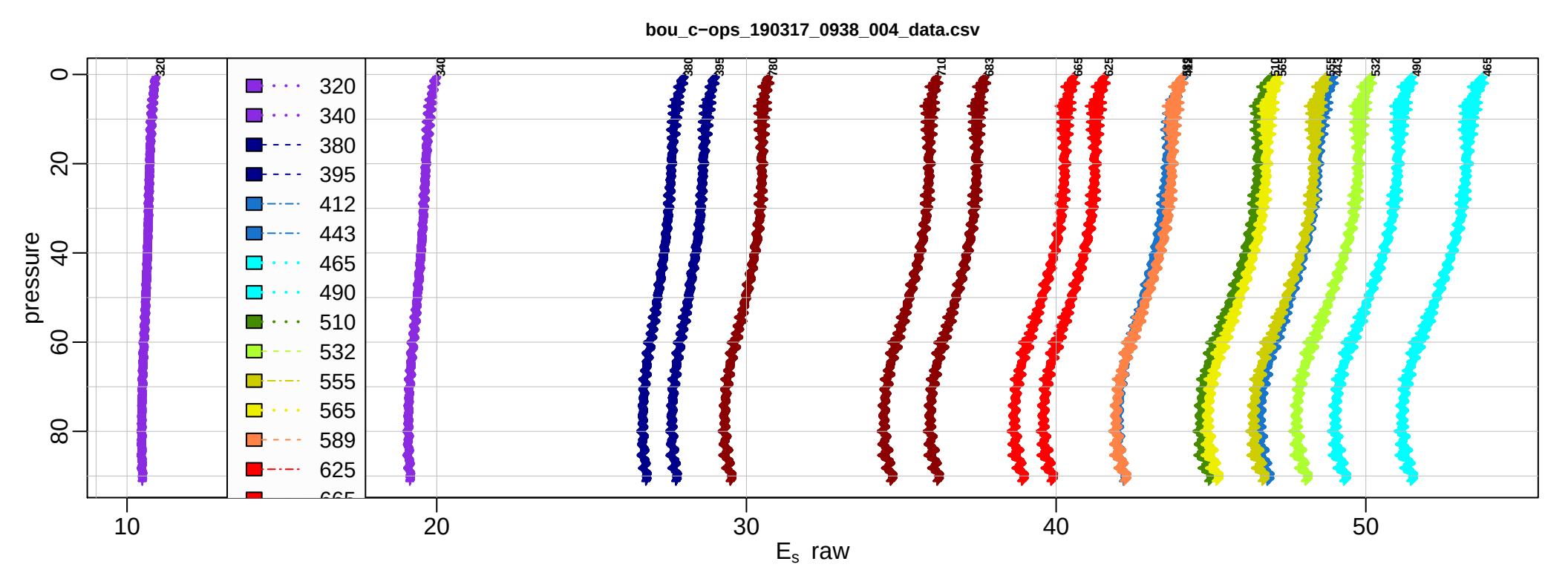

bou_c−ops_190317_0938_002_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190317_0938_002_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190317_0938_002_data.csv chl 0 sun 4
Lw
wavelength (nm)
bou_c−ops_190317_0938_002_data.csv chl 0 sun 4
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190317_0938_002_data.csv chl 0 sun 4
[Lw]N exact
wavelength (nm)

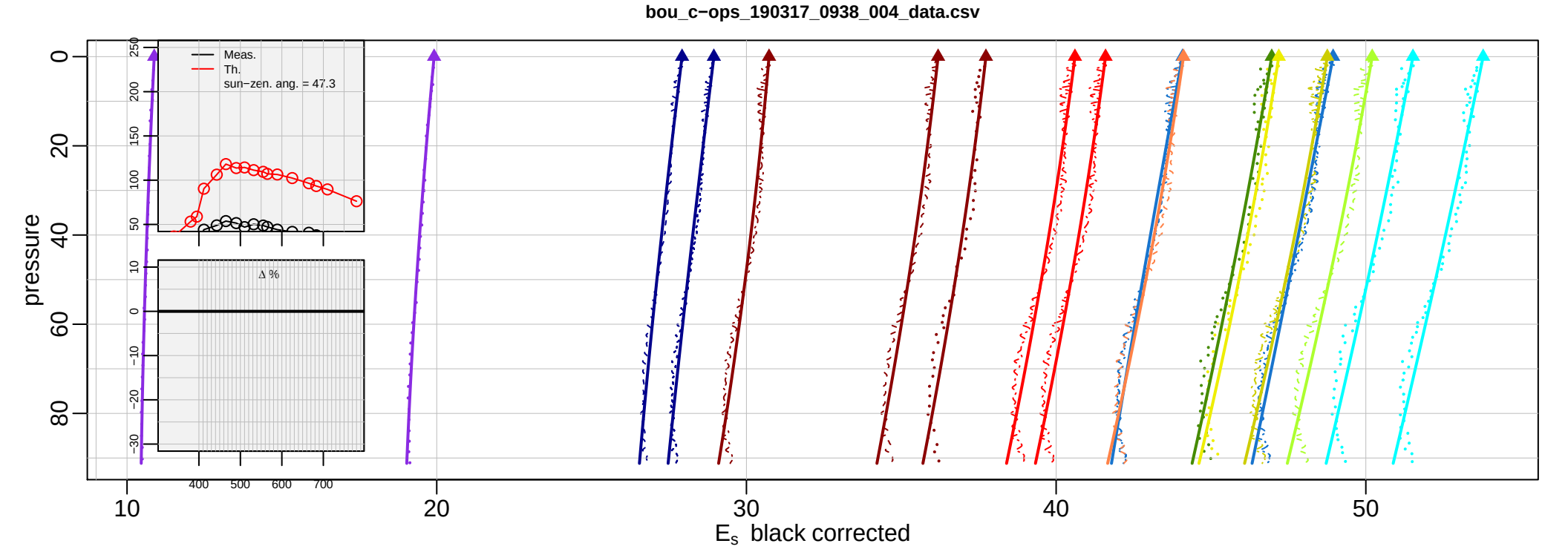
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole206/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole206/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole206/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole206/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.88667704264323
latitude 43.3725911458333
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

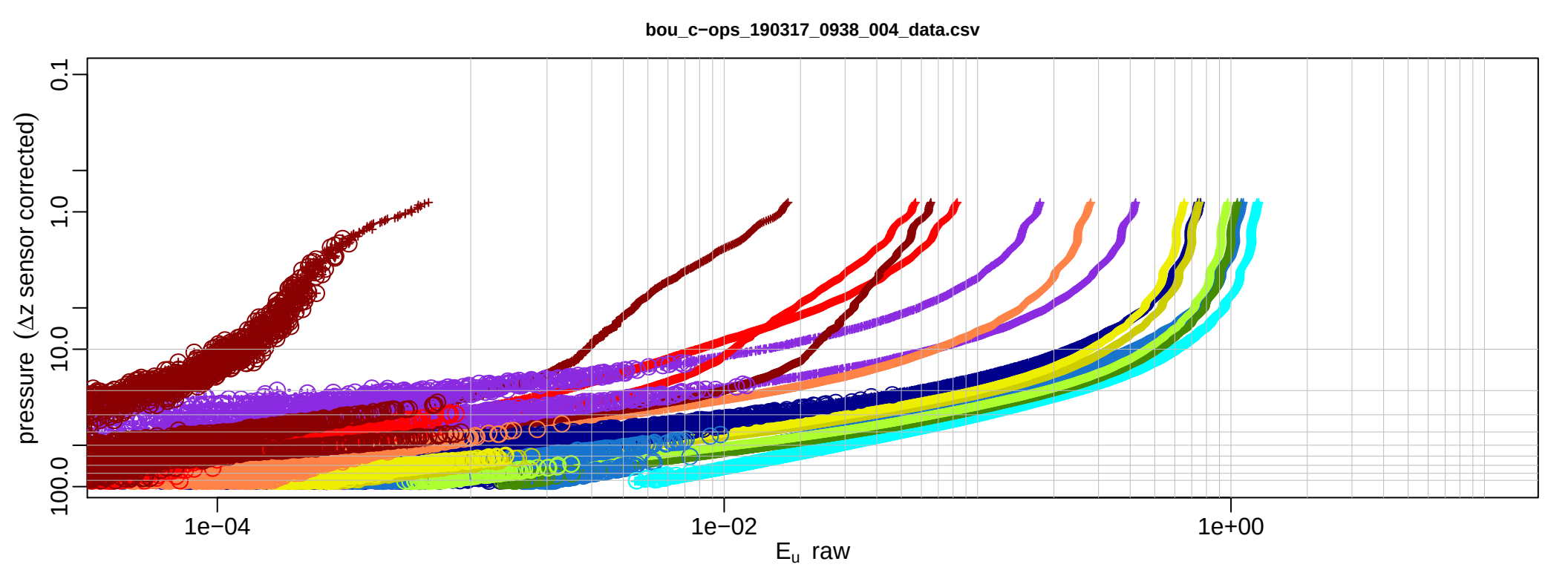
bou_c−ops_190317_0938_004_data.csv

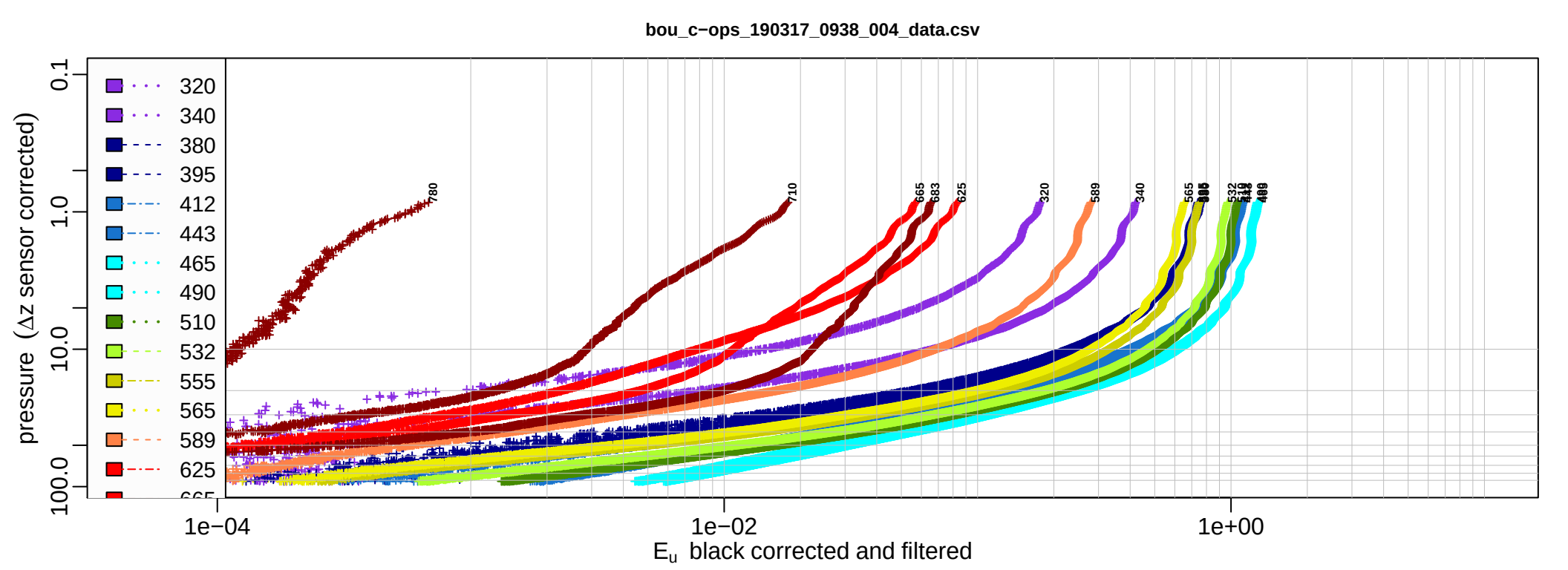


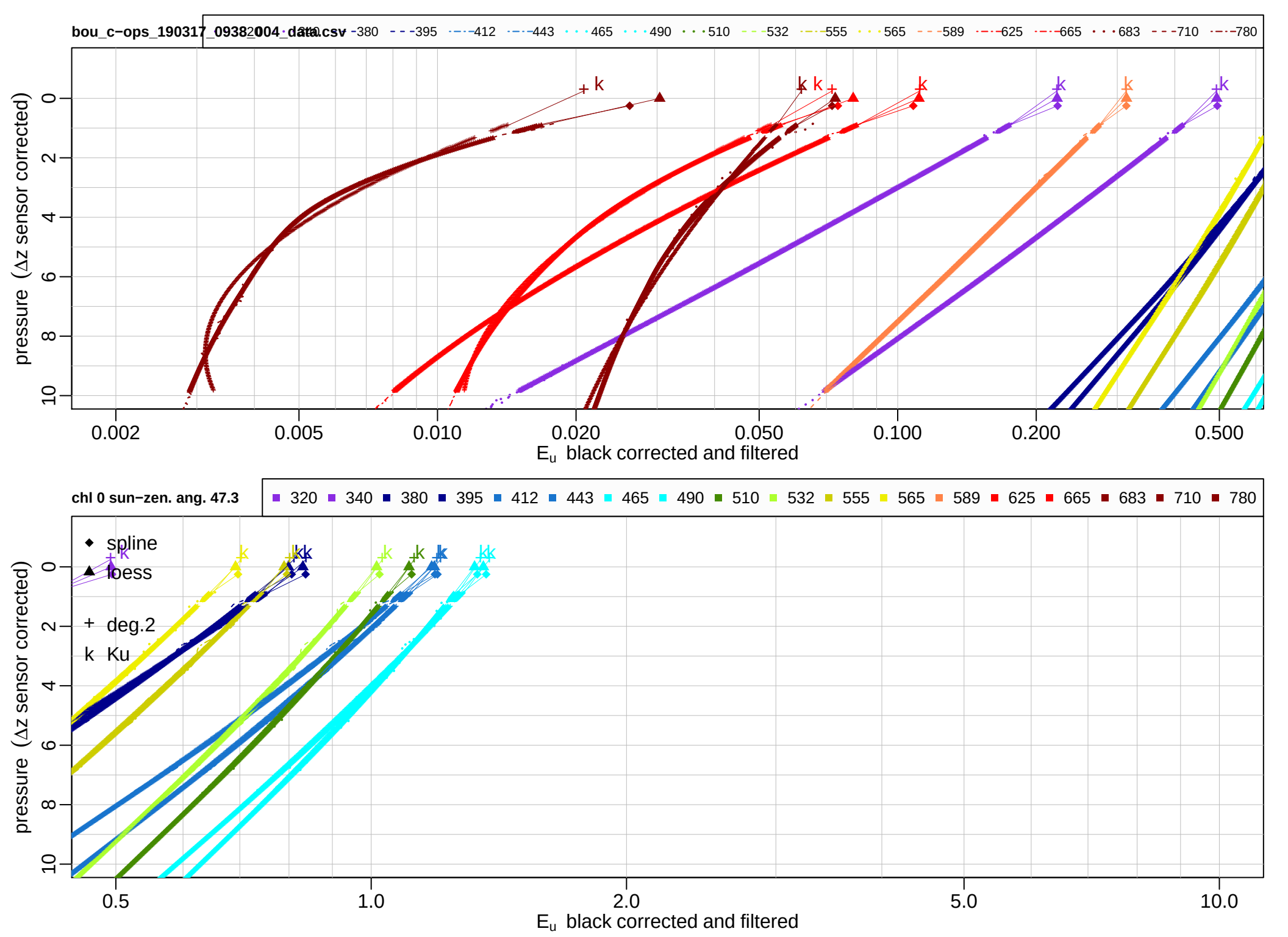


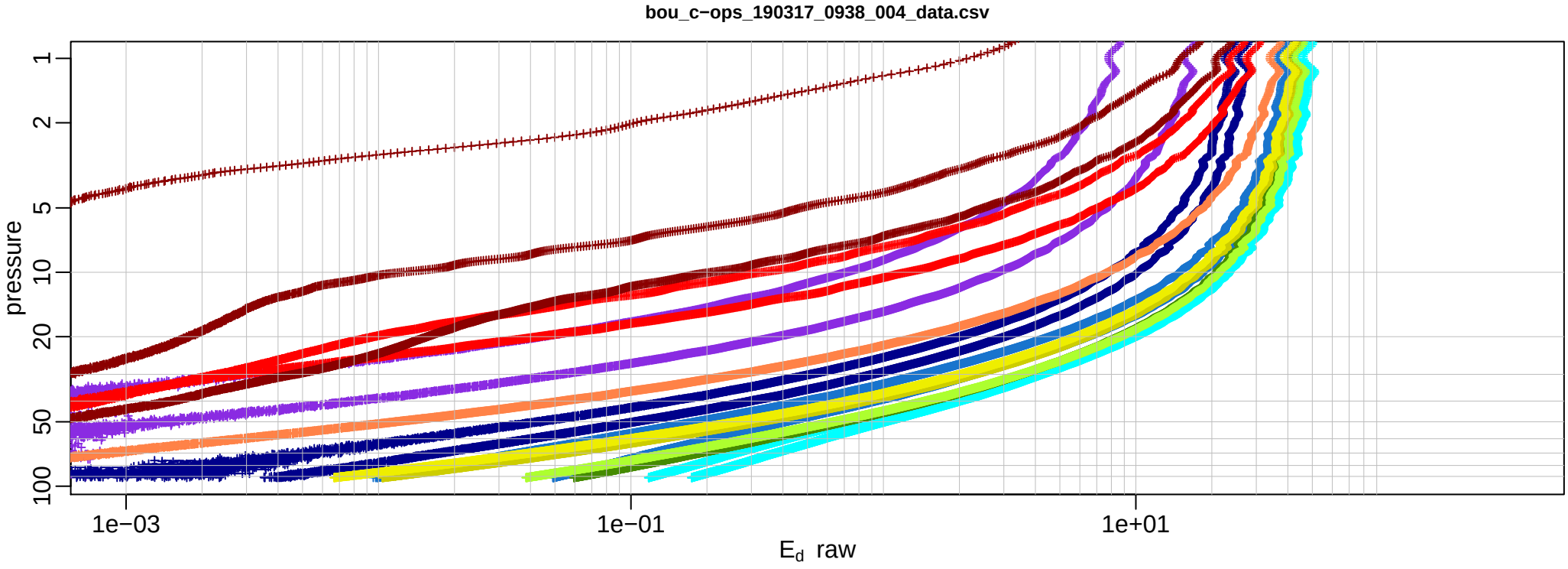

bou_c−ops_190317_0938_004_data.csv
pressure
0
20
40
60
80
10
20
30
40
50
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

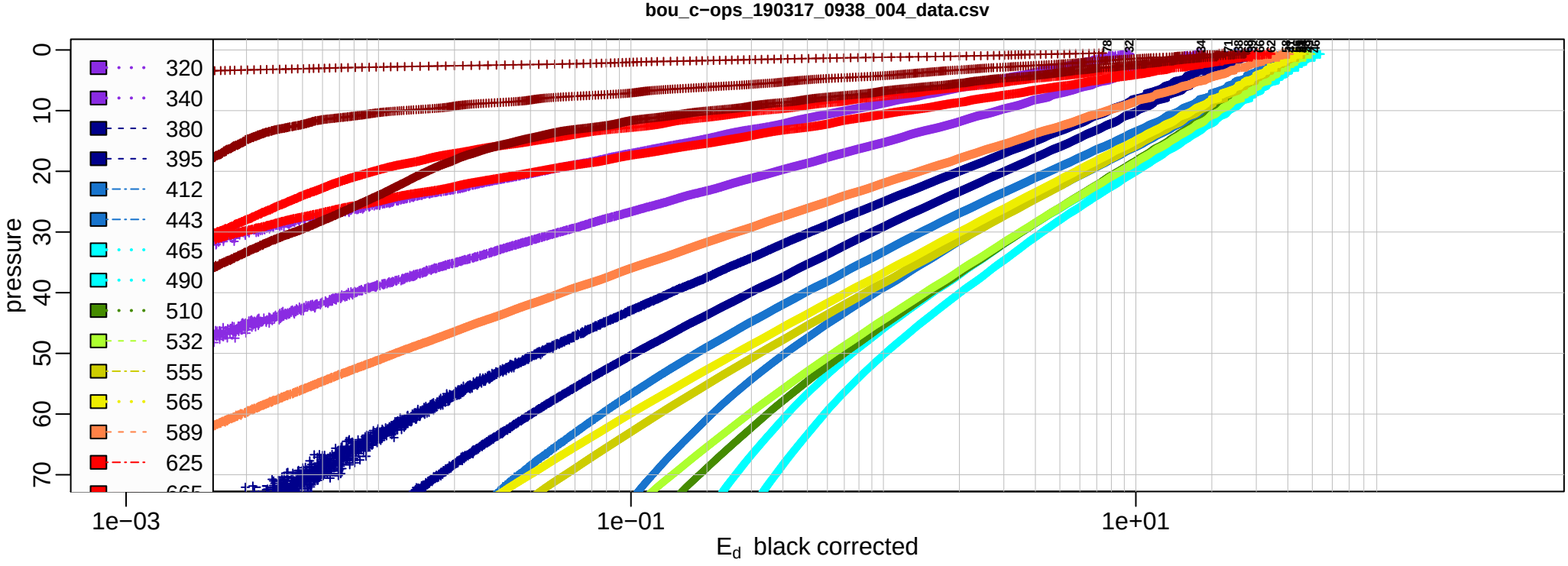

bou_c−ops_190317_0938_004_data.csv
pressure
0
20
40
60
80
10
20
30
40
50
E_s black corrected
Meas.
Th.
sun−zen. ang. = 47.3
Δ %
400
500
600
700

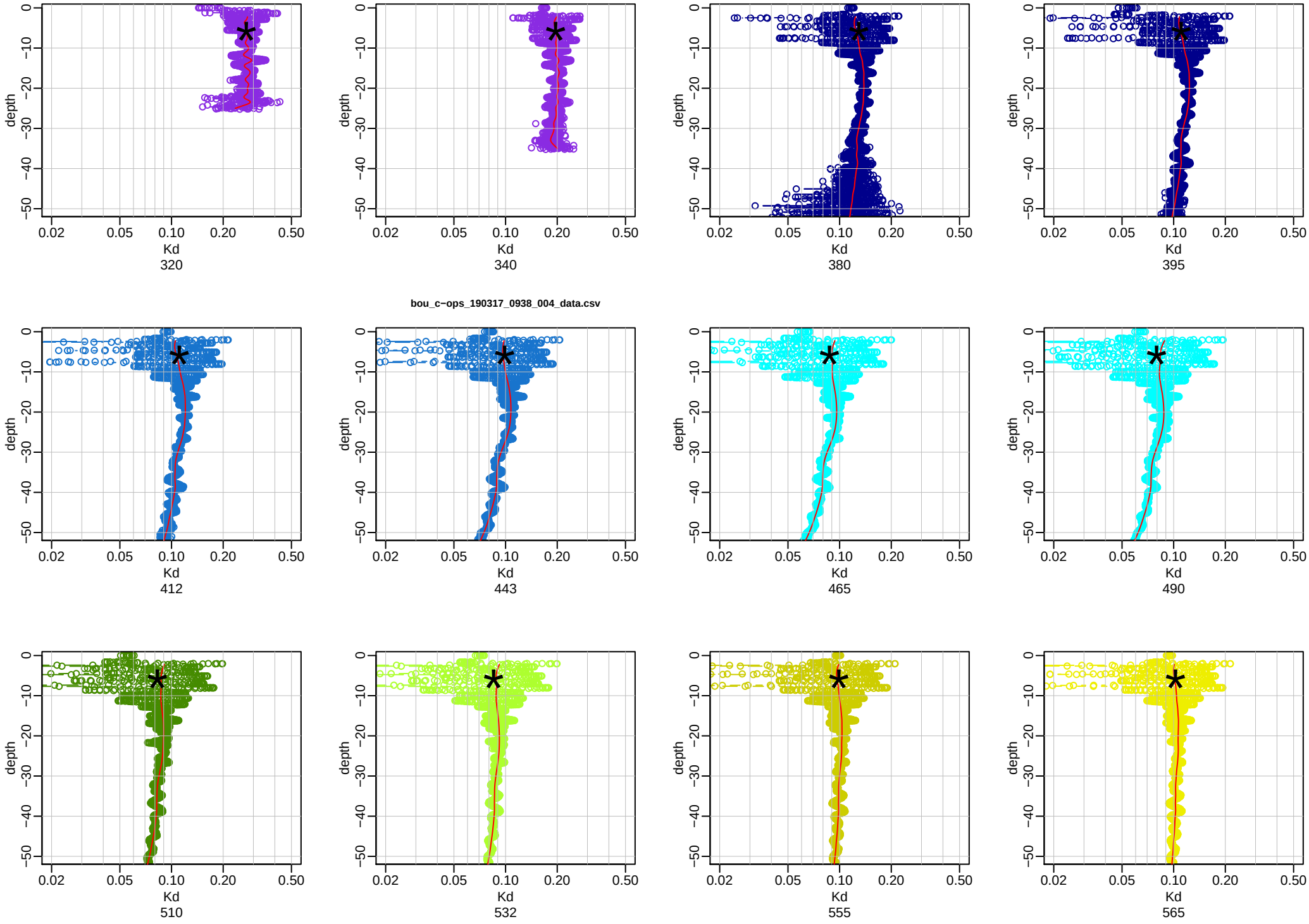

bou_c−ops_190317_0938_004_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

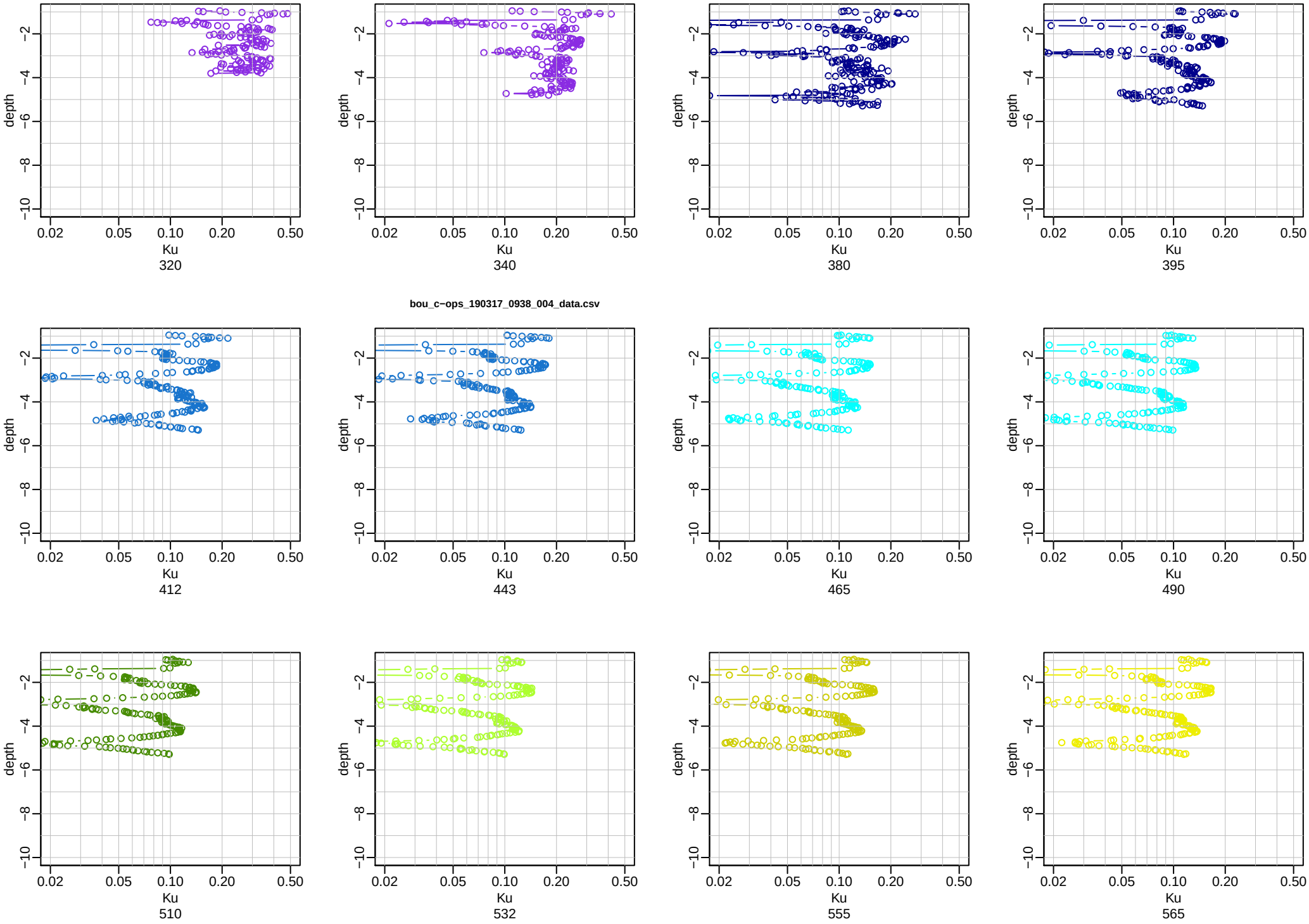

bou_c−ops_190317_0938_004_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
665
683
625
320
589
340
1e−04
1e−02
1e+00
E_u black corrected and filtered

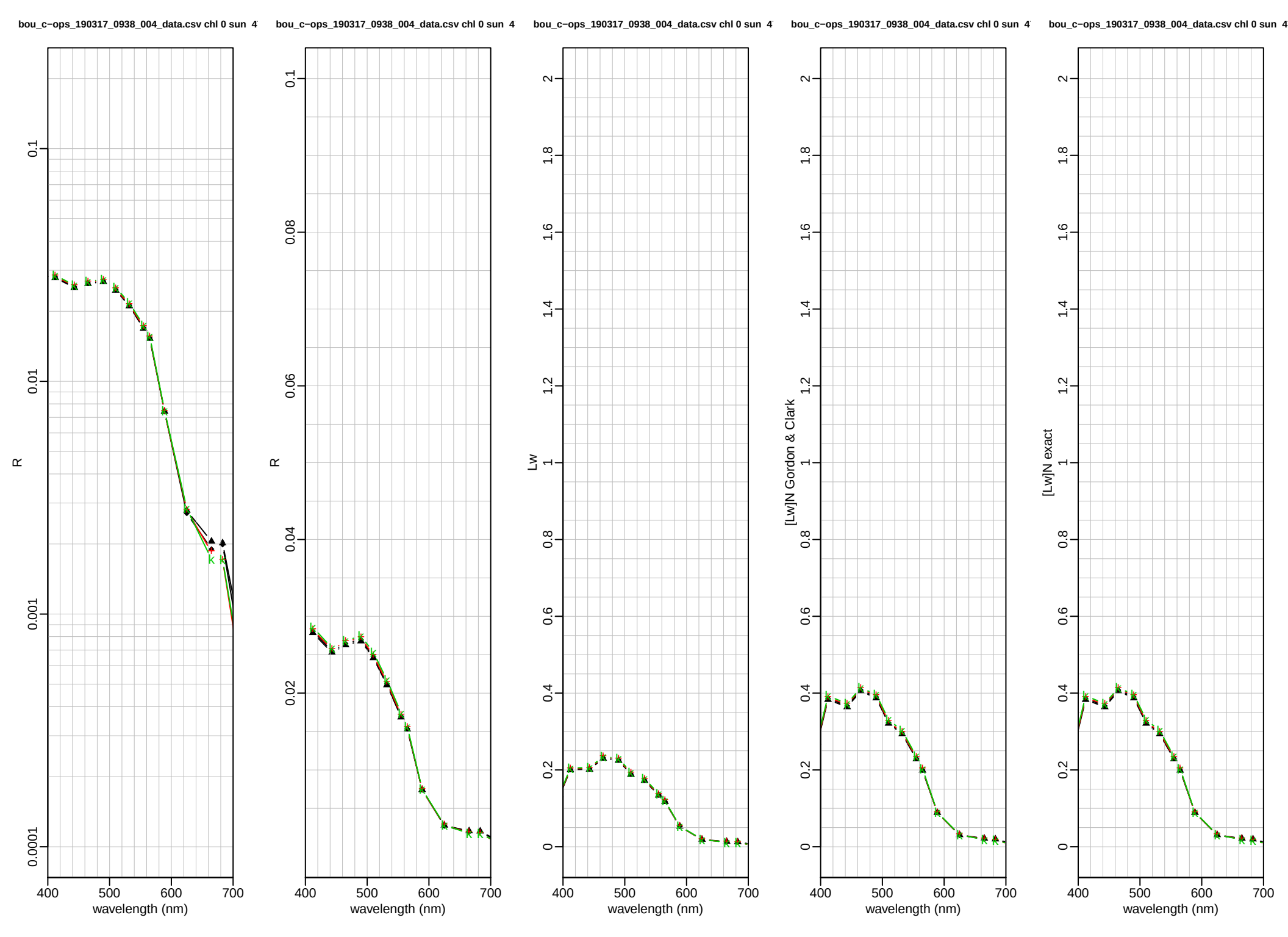

bou_c−ops_190317_0938004_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 47.3
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190317_0938_004_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190317_0938_004_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

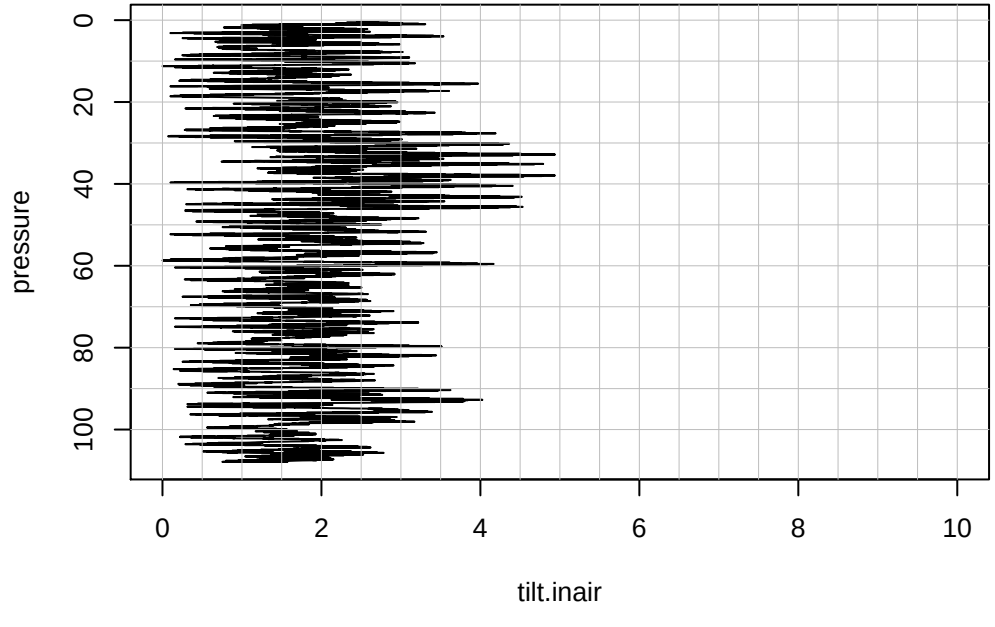

bou_c−ops_190317_0938_004_data.csv
depth
0
−10
−20
−30
−40
−50
0.02
0.05
0.10
0.20
0.50
Kd
320
340
380
395
412
443
465
490
510
532
555
565

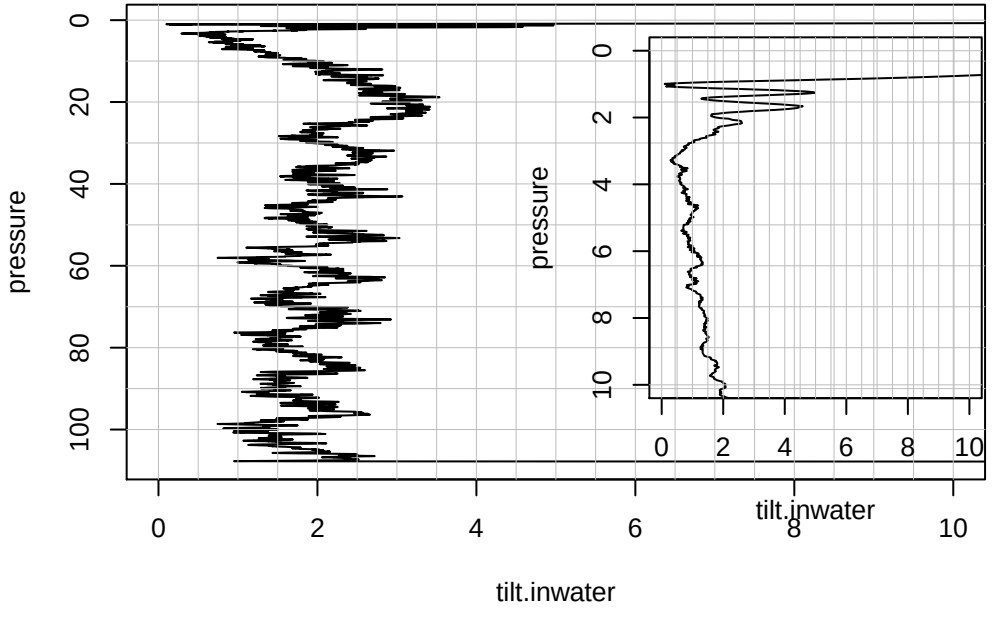

bou_c~ops_190317_0938_004_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

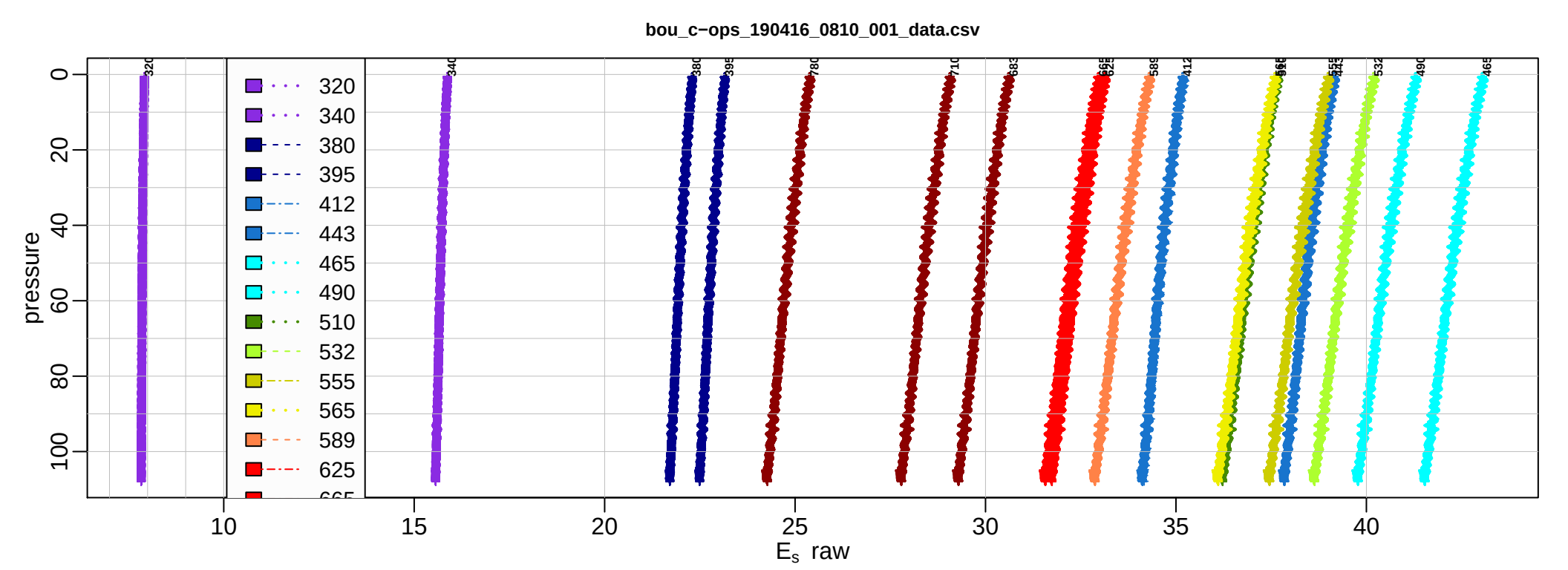

bou_c−ops_190317_0938_004_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190317_0938_004_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190317_0938_004_data.csv chl 0 sun 4
Lw
wavelength (nm)
bou_c−ops_190317_0938_004_data.csv chl 0 sun 4
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190317_0938_004_data.csv chl 0 sun 4
[Lw]N exact
wavelength (nm)

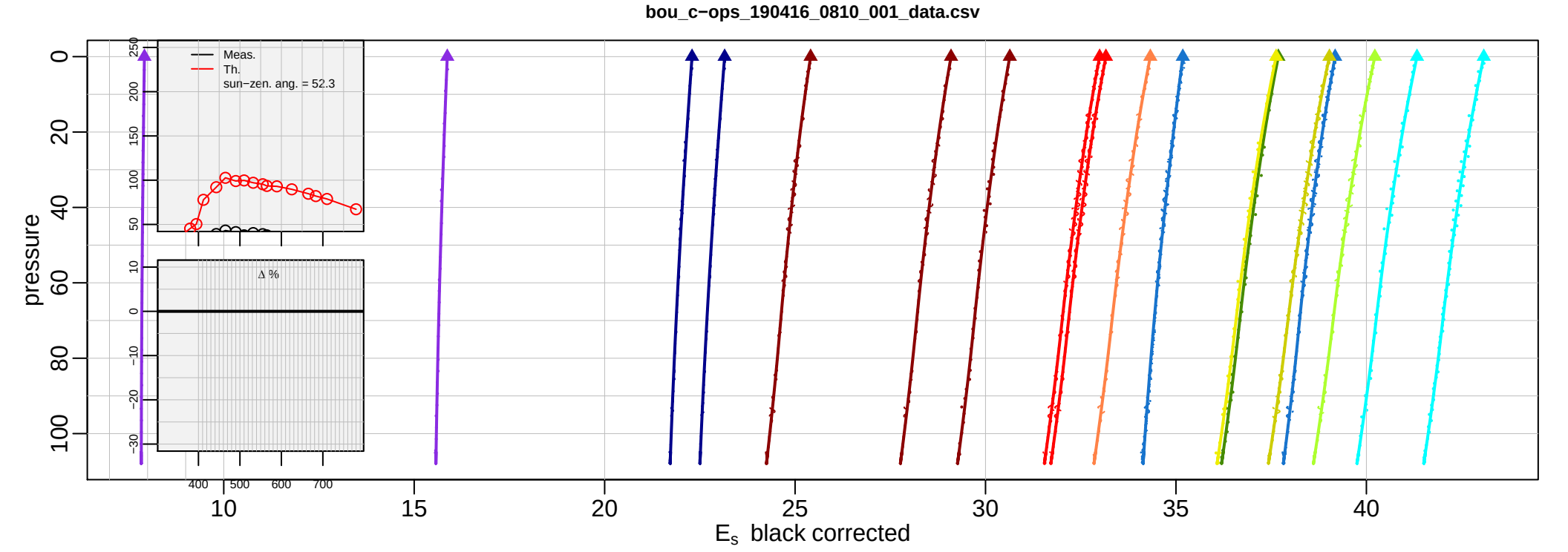
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole207/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole207/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole207/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole207/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.90092
latitude 43.36357
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

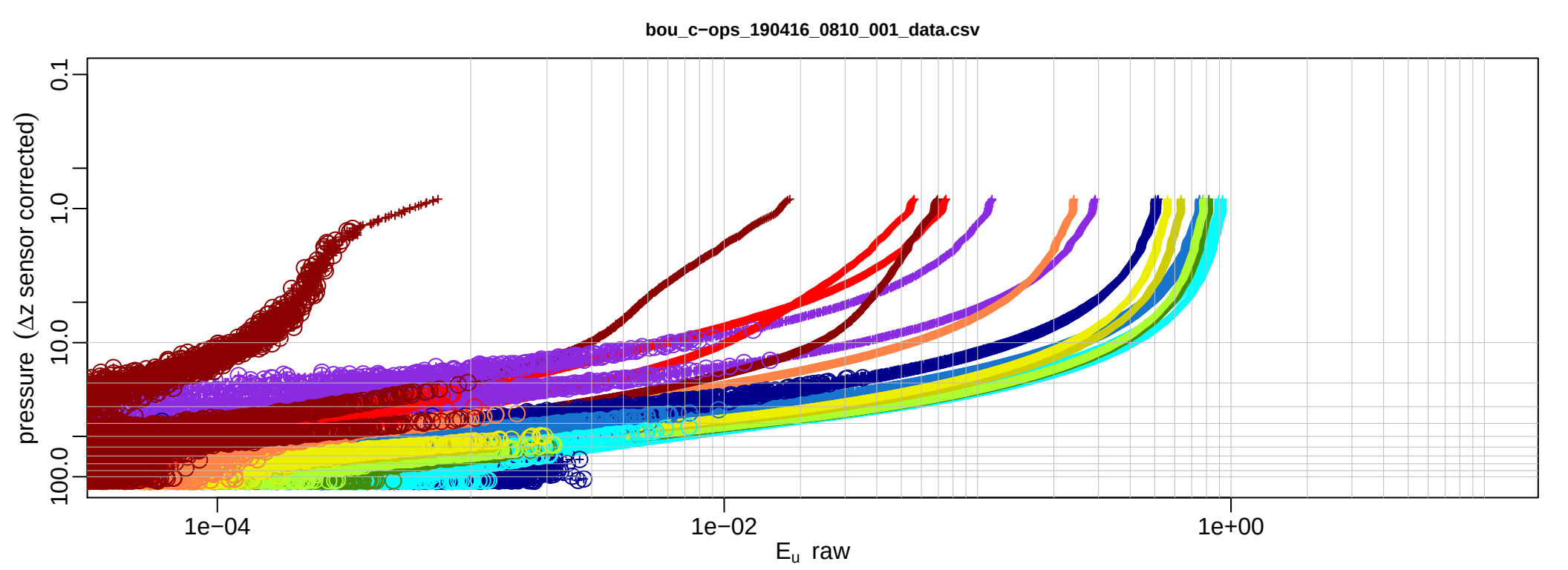
bou_c−ops_190416_0810_001_data.csv

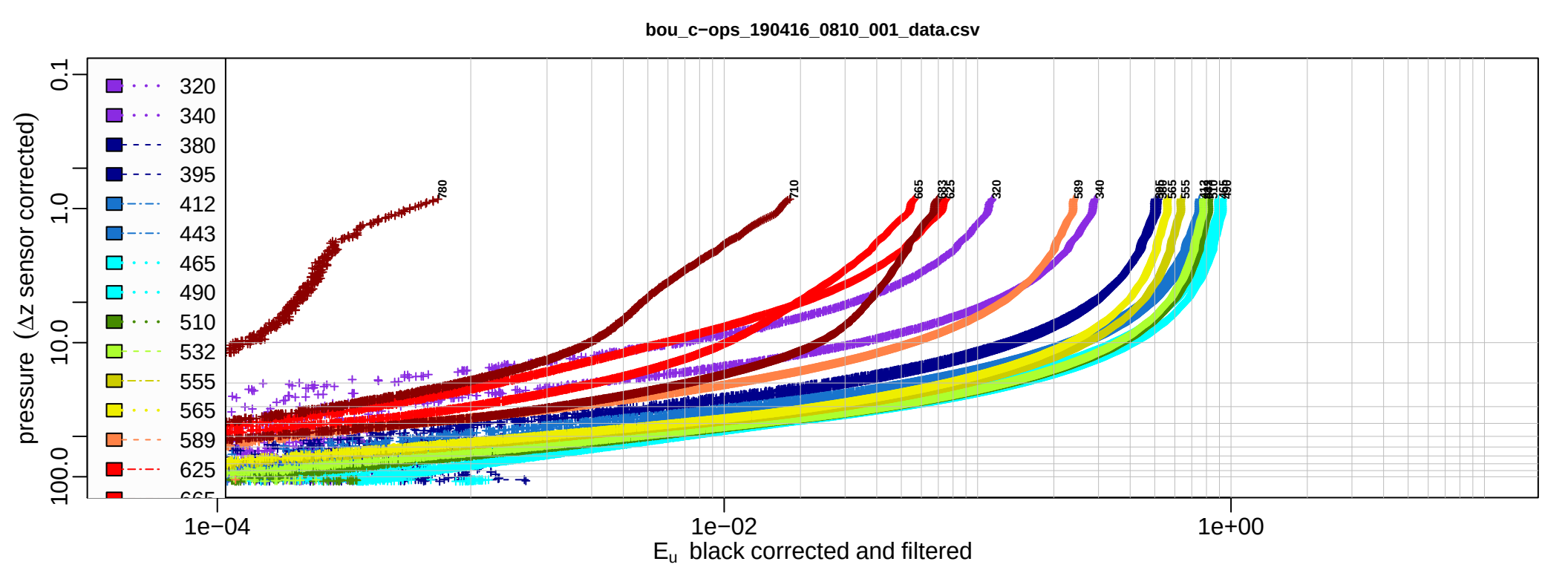


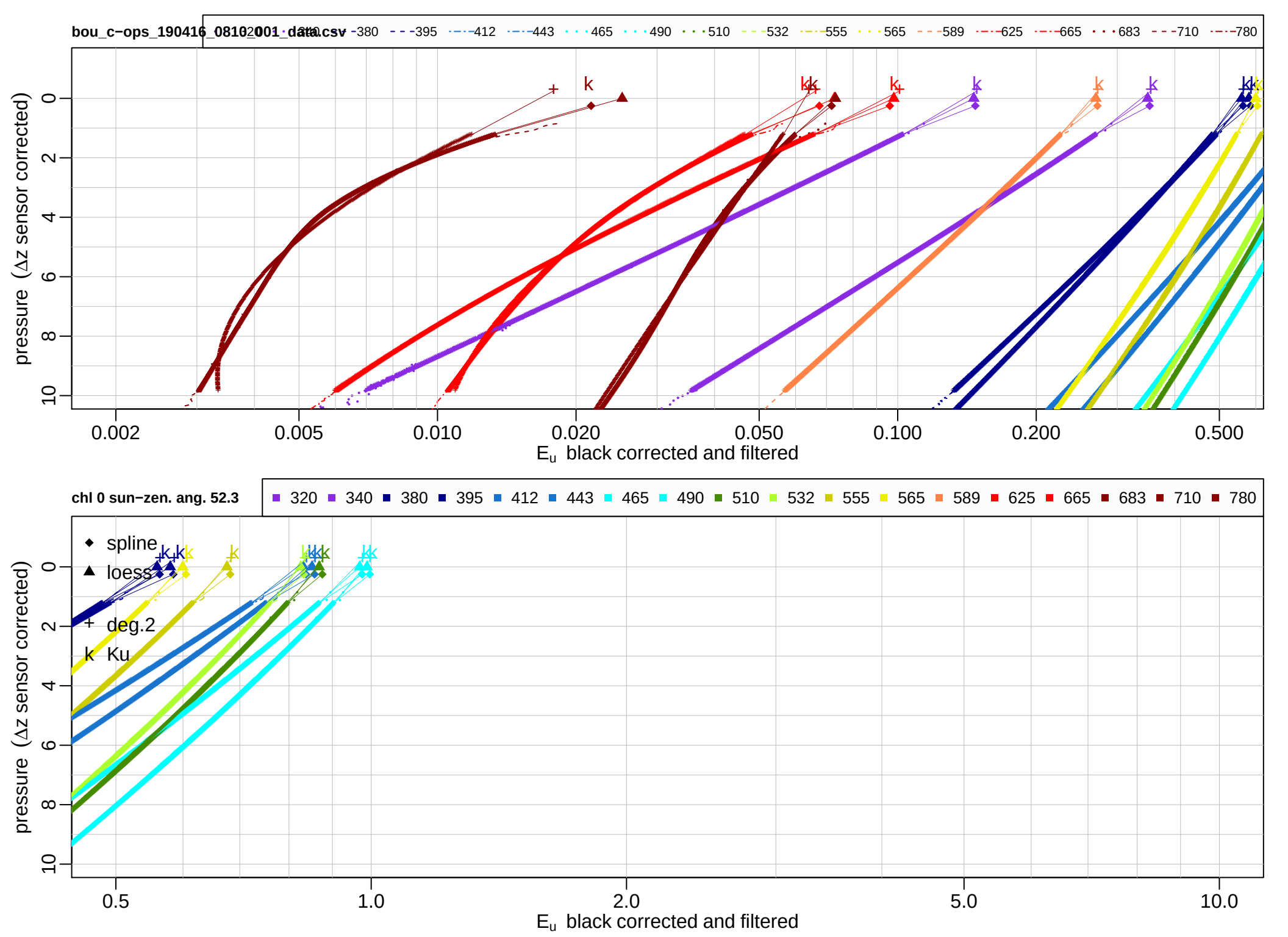


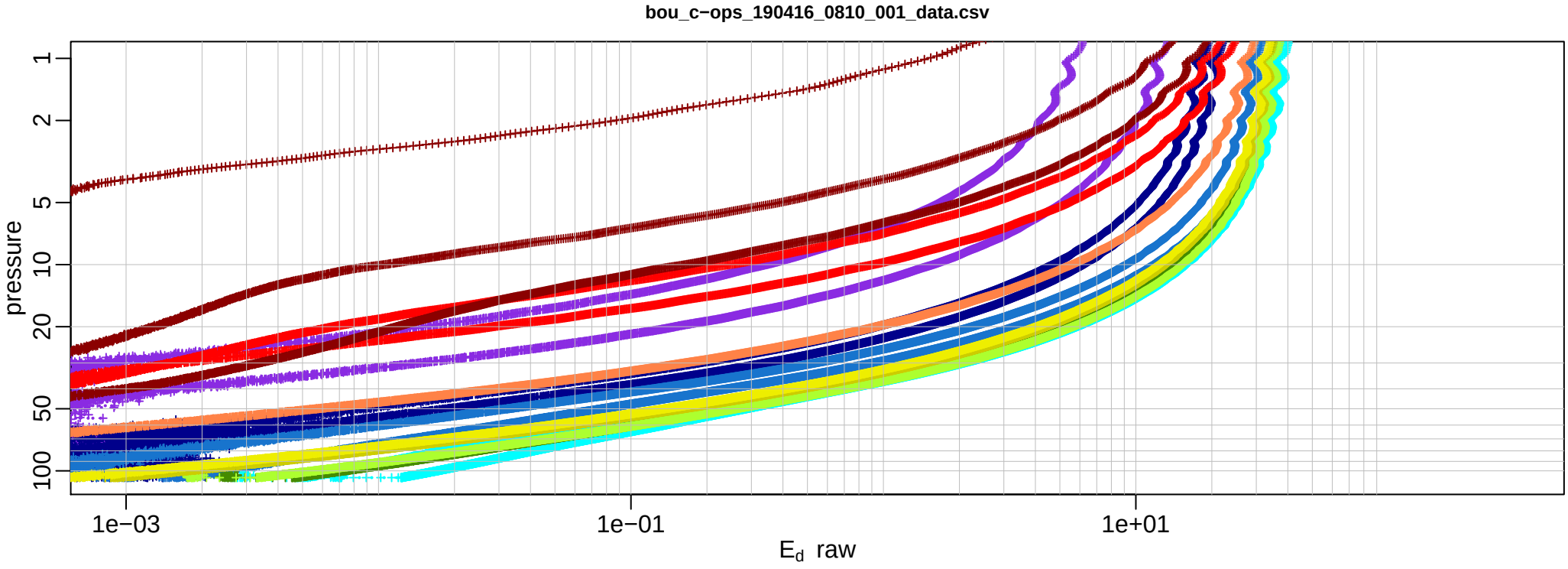

bou_c−ops_190416_0810_001_data.csv
pressure
0
20
40
60
80
100
10
15
20
25
30
35
40
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

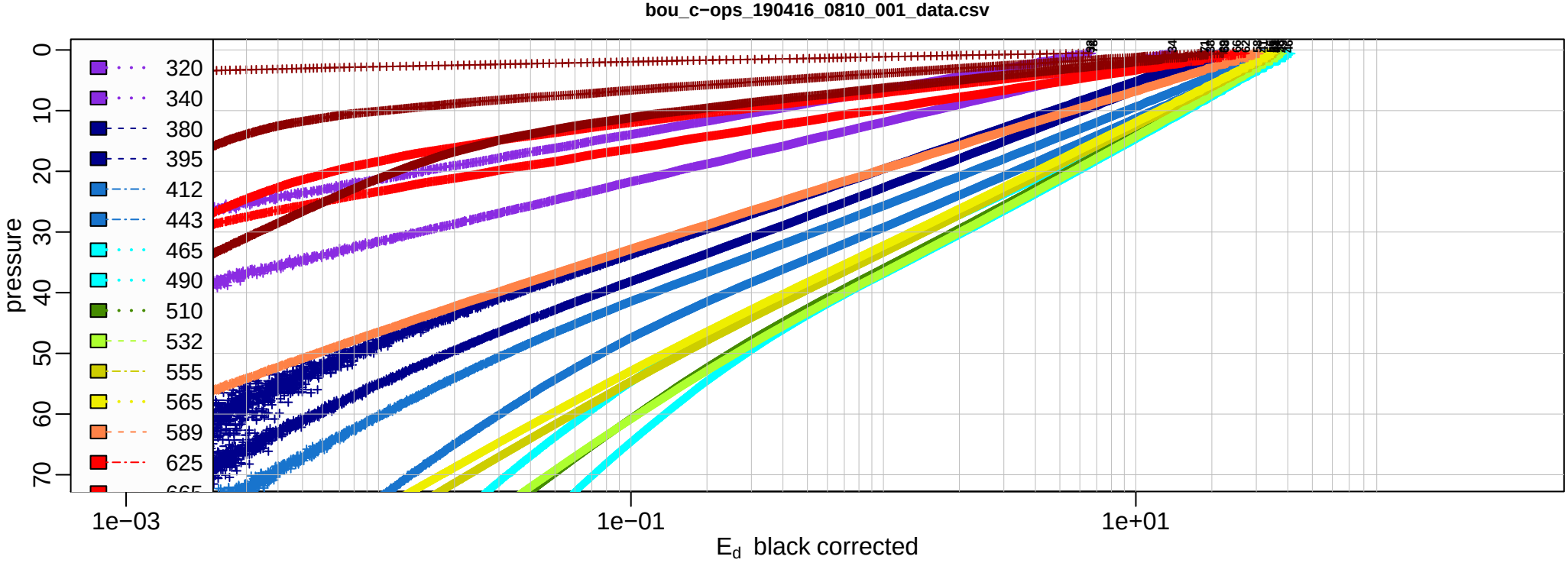

bou_c−ops_190416_0810_001_data.csv
pressure
0
20
40
60
80
100
10
15
20
25
30
35
40
E_s black corrected
Meas.
Th.
sun−zen. ang. = 52.3
Δ %
250
200
150
100
50
10
0
−10
−20
−30
400
500
600
700

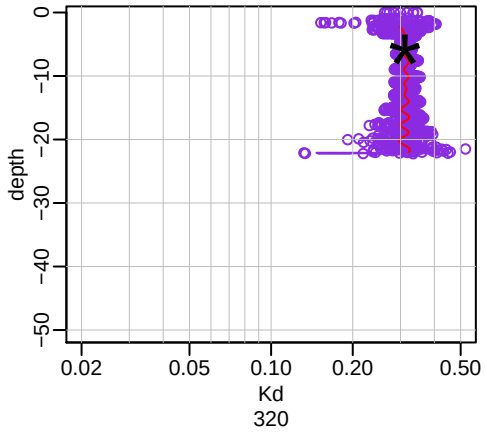

bou_c−ops_190416_0810_001_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

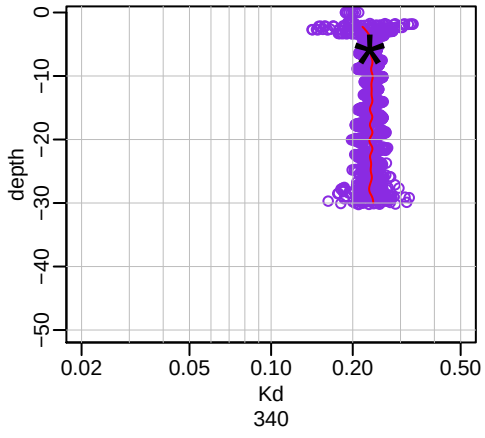

bou_c−ops_190416_0810_001_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
665
683
625
320
589
340
1e−04
1e−02
1e+00
E_u black corrected and filtered

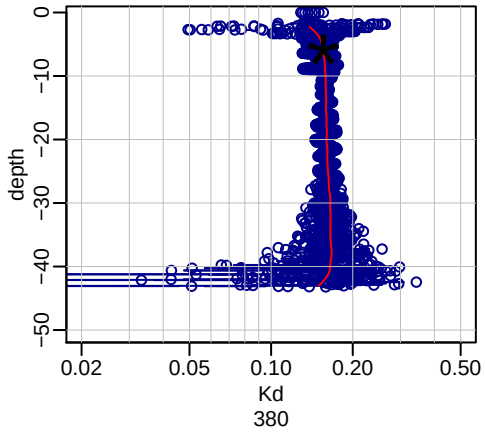

bou_c−ops_190416_0810001_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 52.3
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered

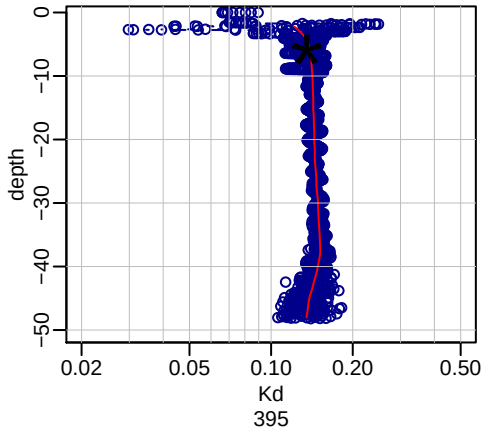

bou_c−ops_190416_0810_001_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190416_0810_001_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

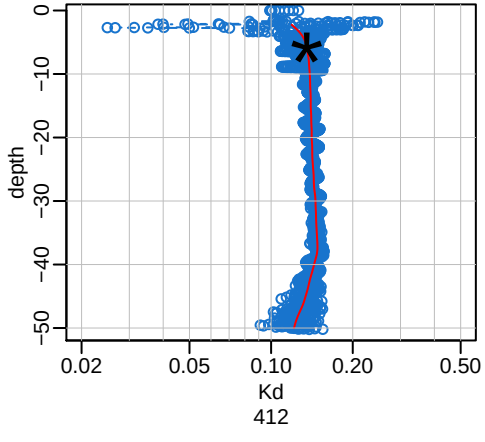


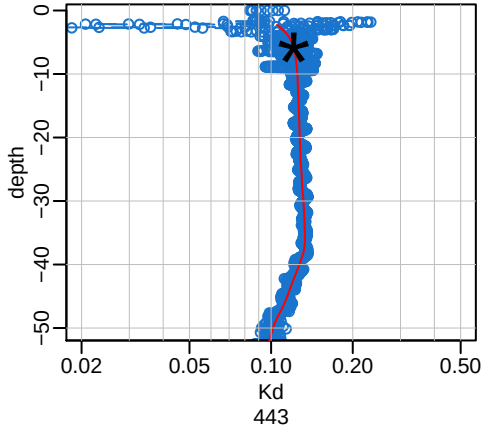


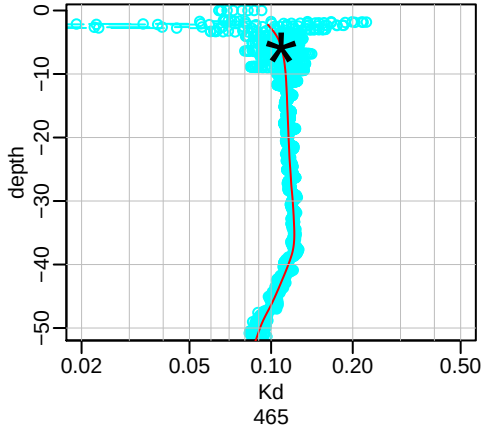


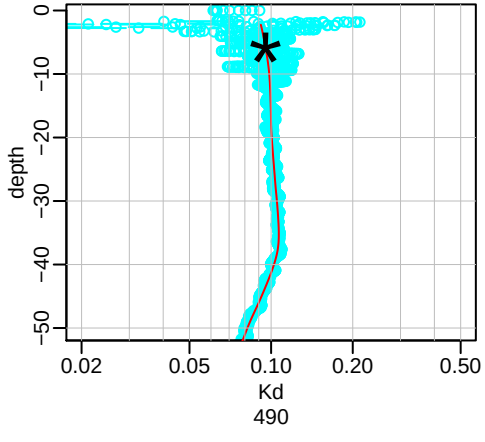


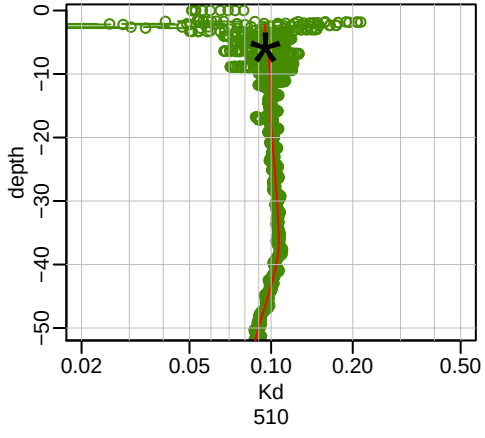
bou_c−ops_190416_0810_001_data.csv

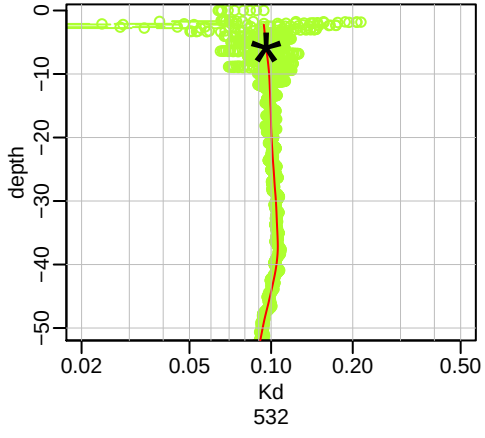


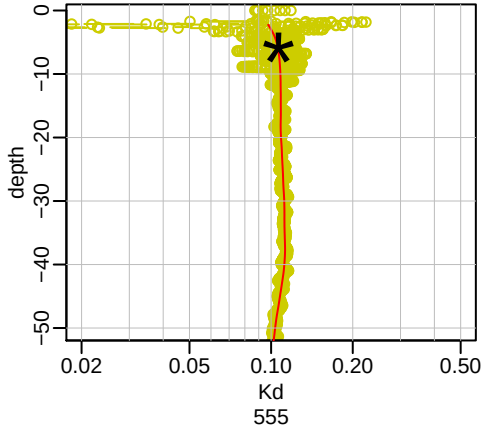


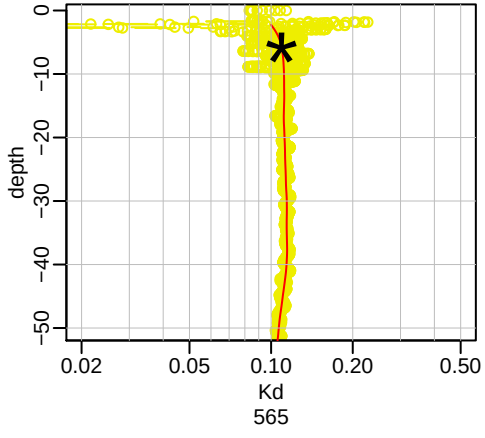


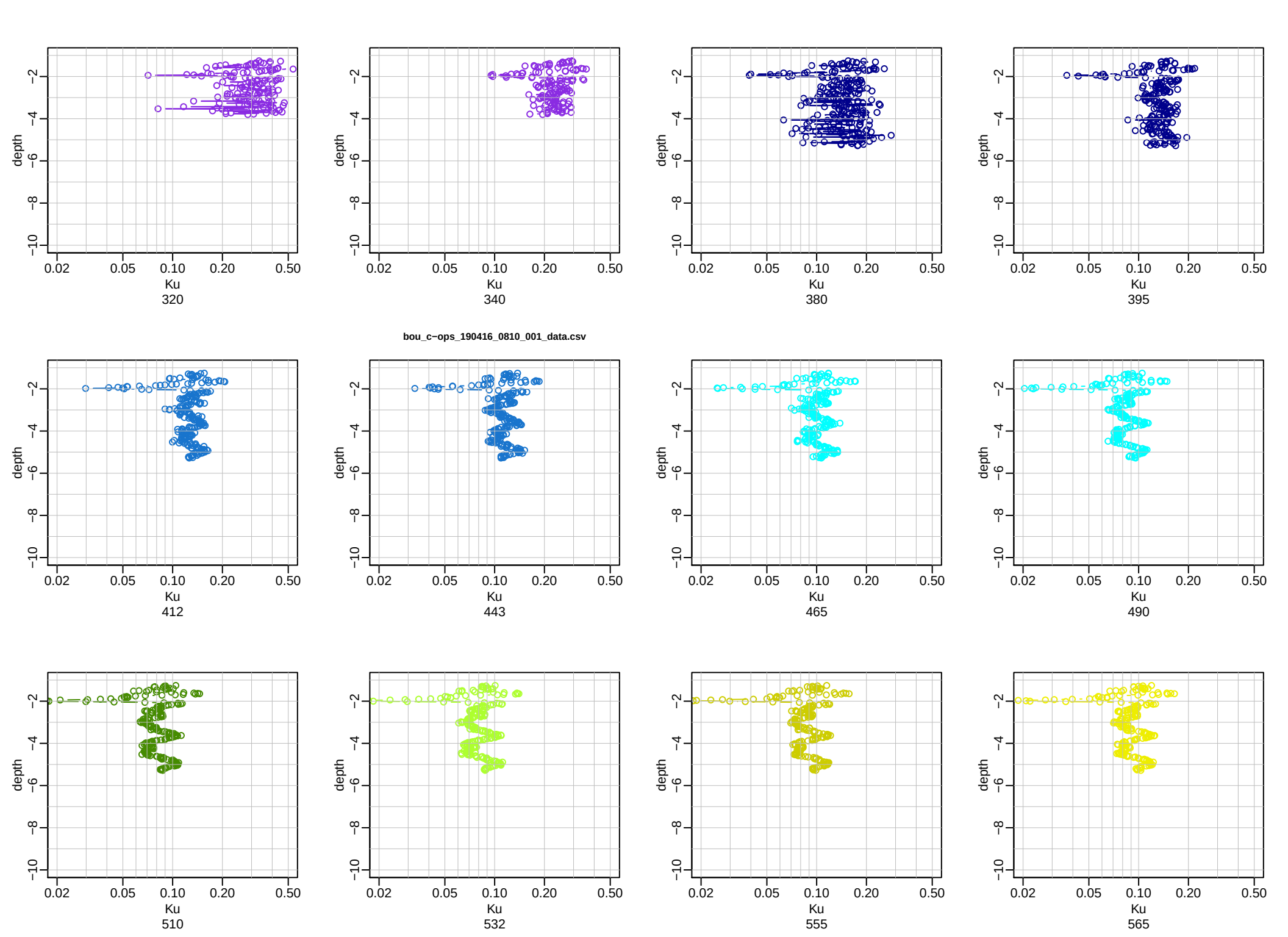


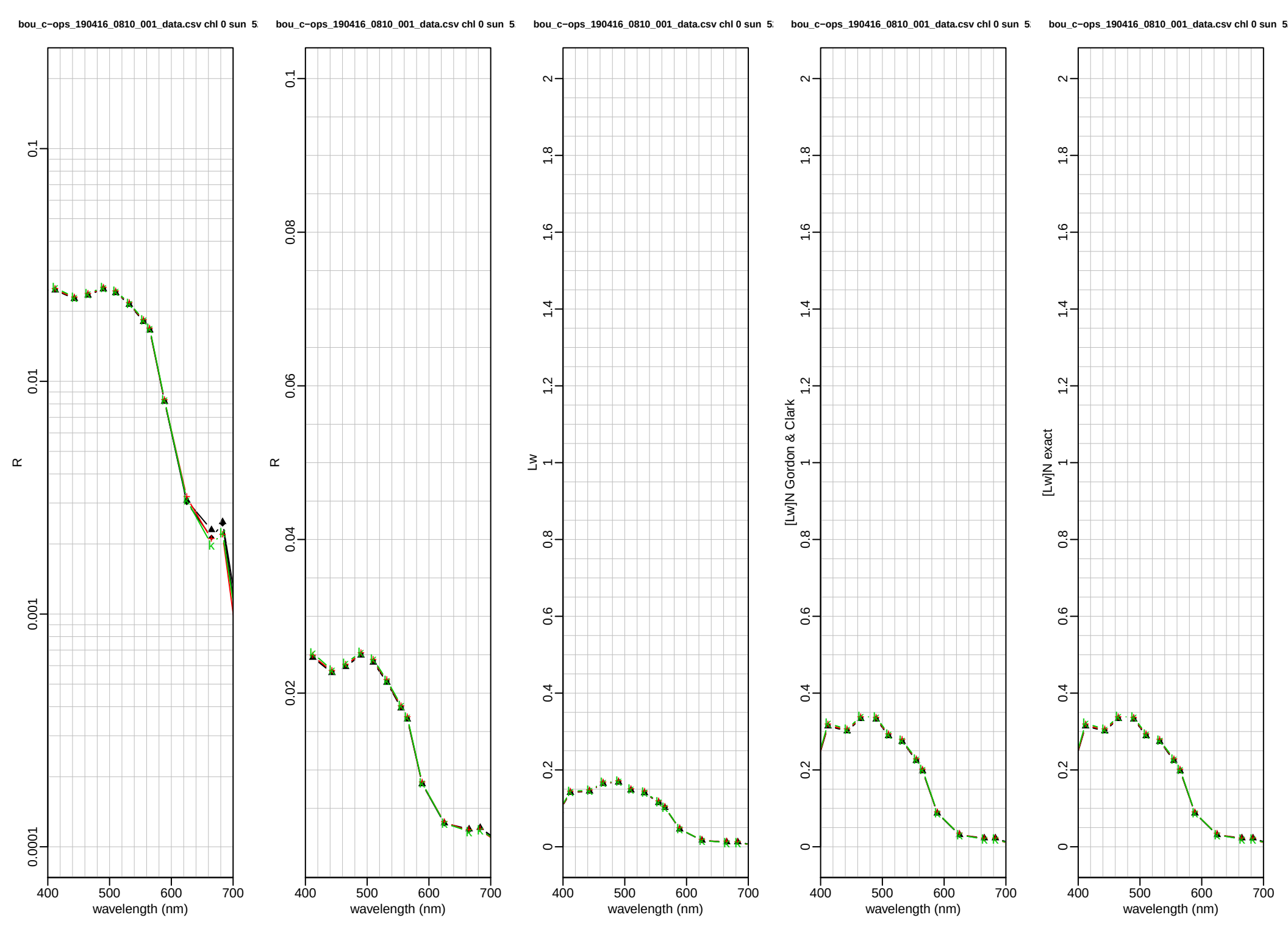






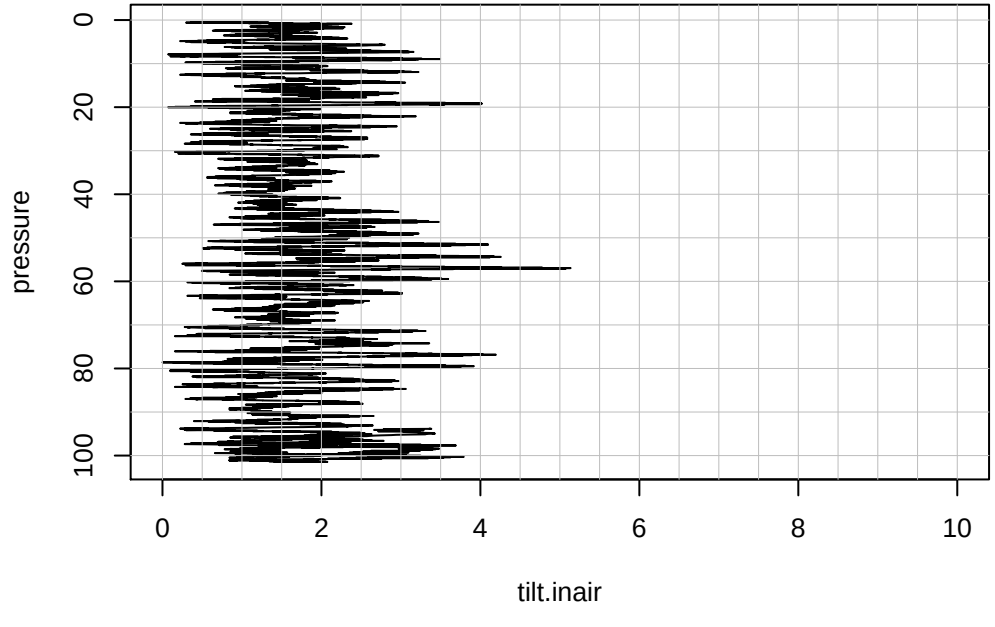


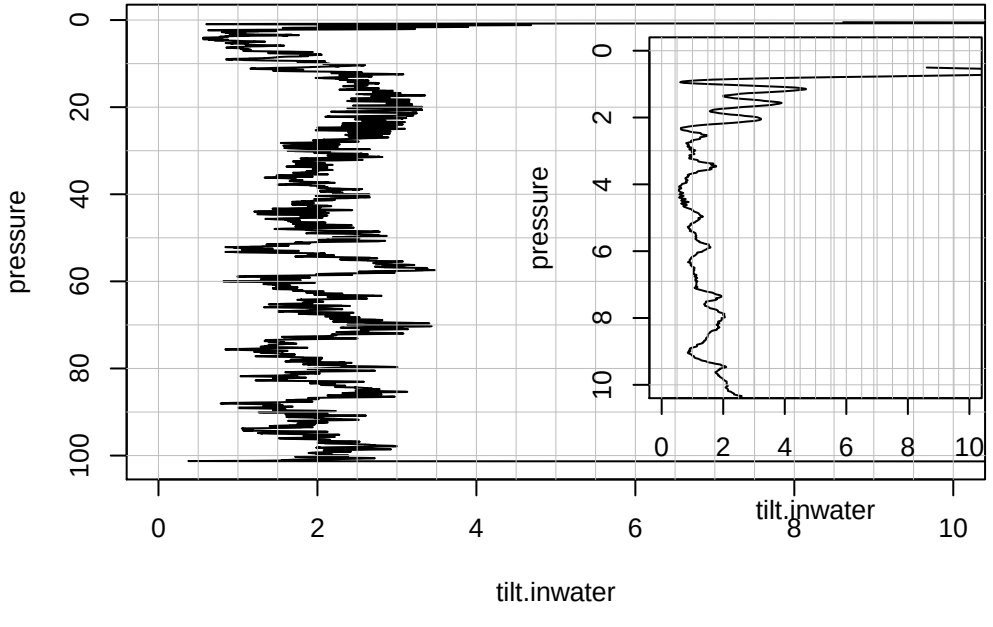

bou_c~ops_190416_0810_001_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

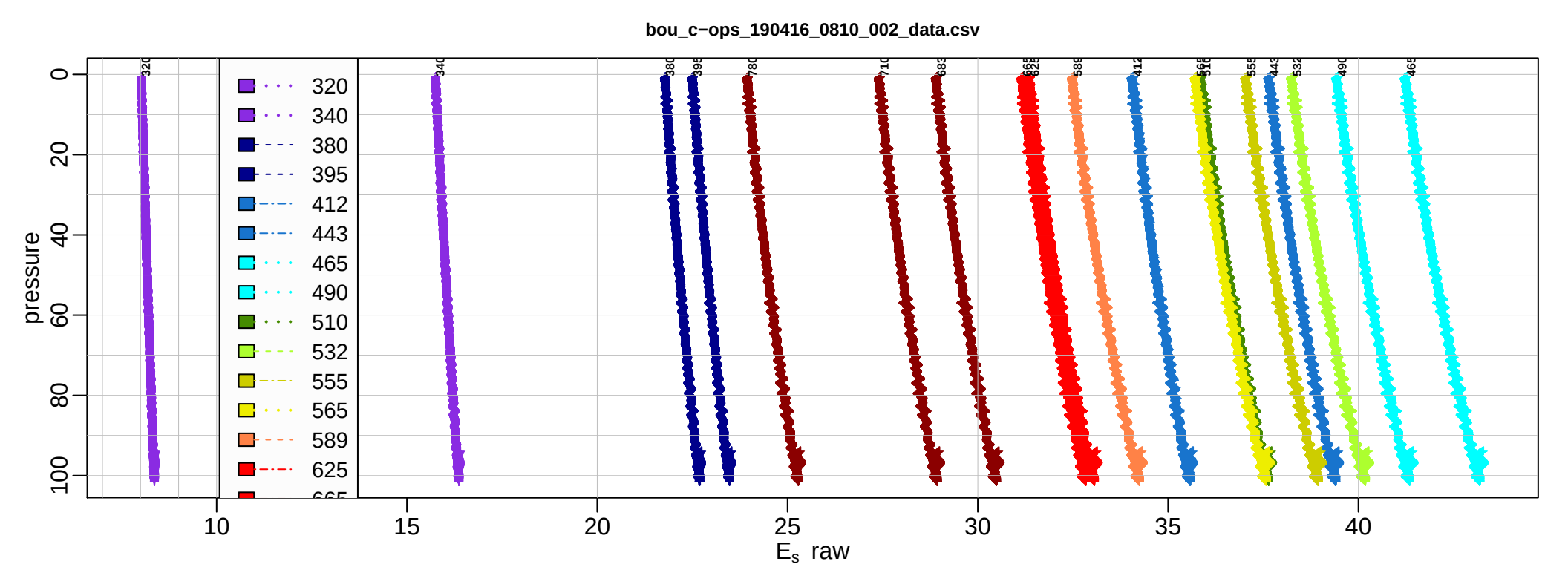

bou_c−ops_190416_0810_001_data.csv chl 0 sun 5
R
0.1
0.01
0.001
0.0001
400
500
600
700
wavelength (nm)
bou_c−ops_190416_0810_001_data.csv chl 0 sun 5
R
0.1
0.08
0.06
0.04
0.02
400
500
600
700
wavelength (nm)
bou_c−ops_190416_0810_001_data.csv chl 0 sun 5
Lw
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)
bou_c−ops_190416_0810_001_data.csv chl 0 sun 5
[Lw]N Gordon & Clark
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)
bou_c−ops_190416_0810_001_data.csv chl 0 sun 5
[Lw]N exact
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)

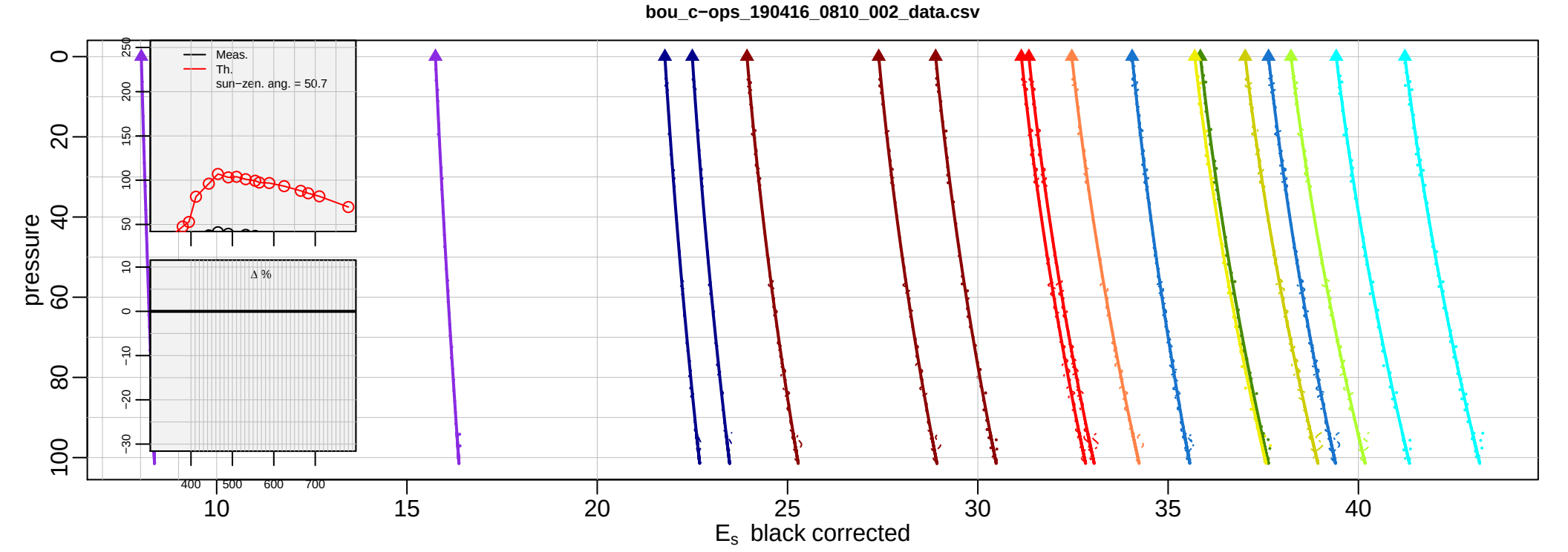
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole207/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole207/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole207/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole207/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.90205
latitude 43.35898
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

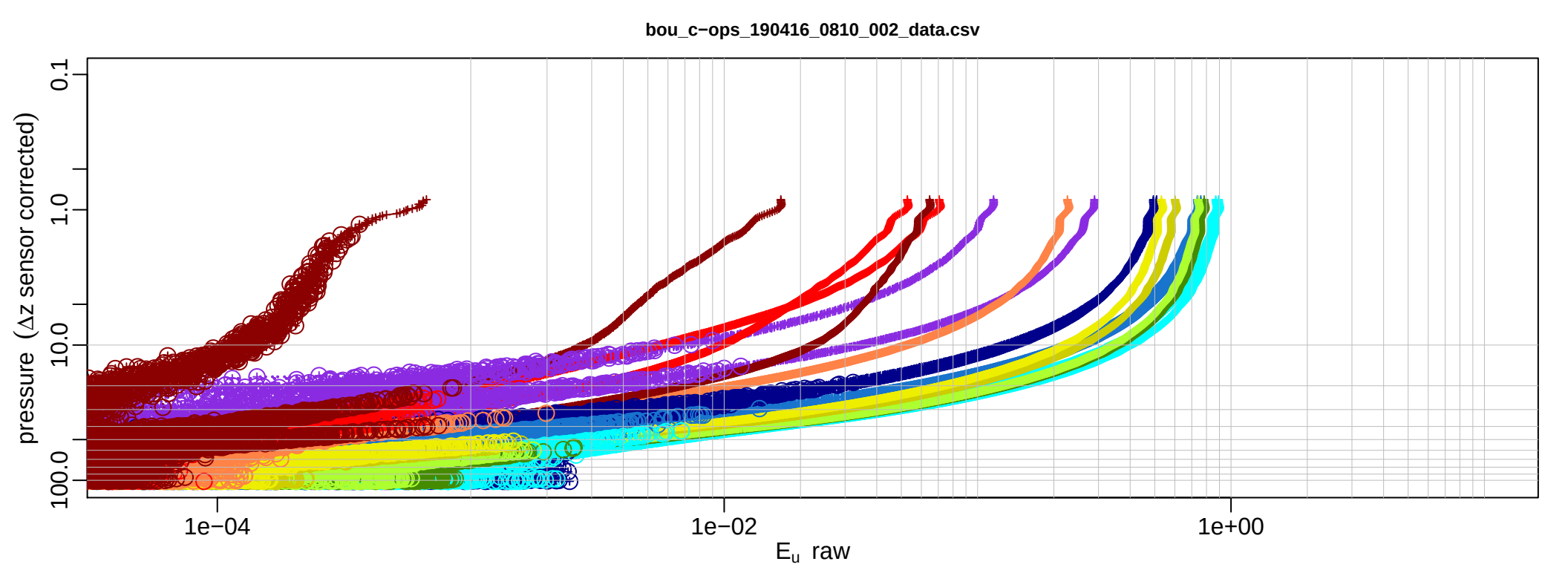
bou_c−ops_190416_0810_002_data.csv

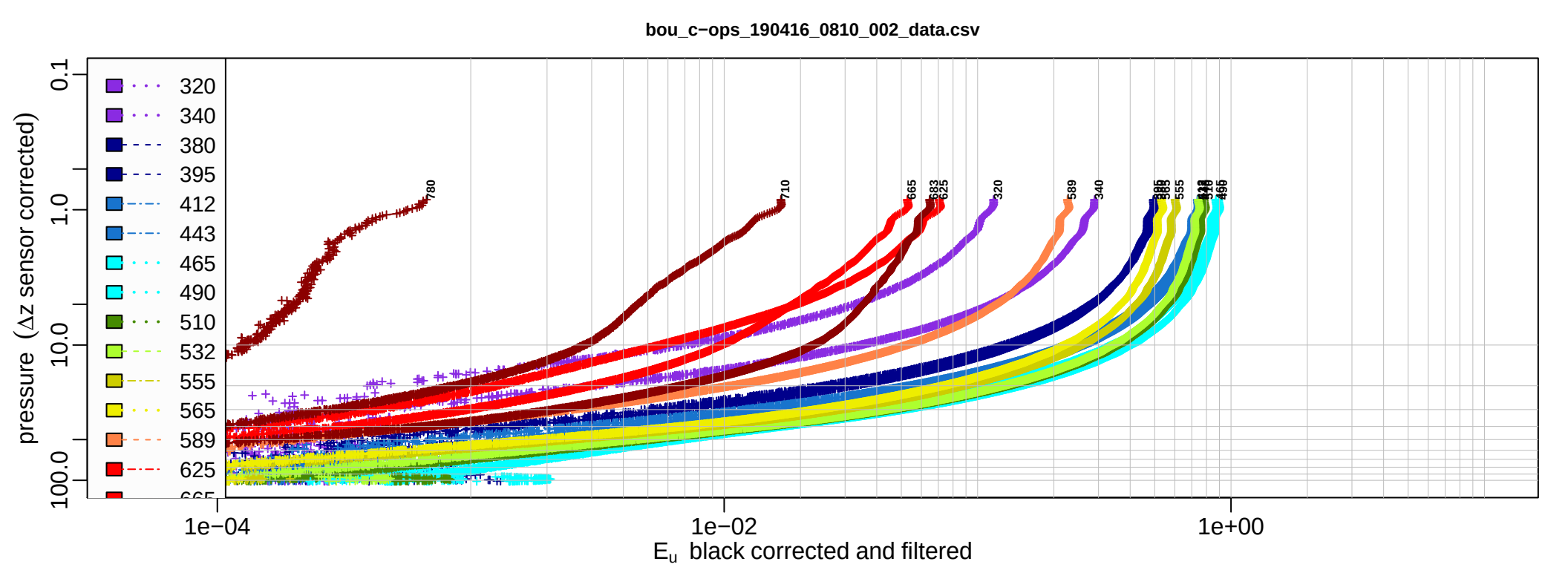


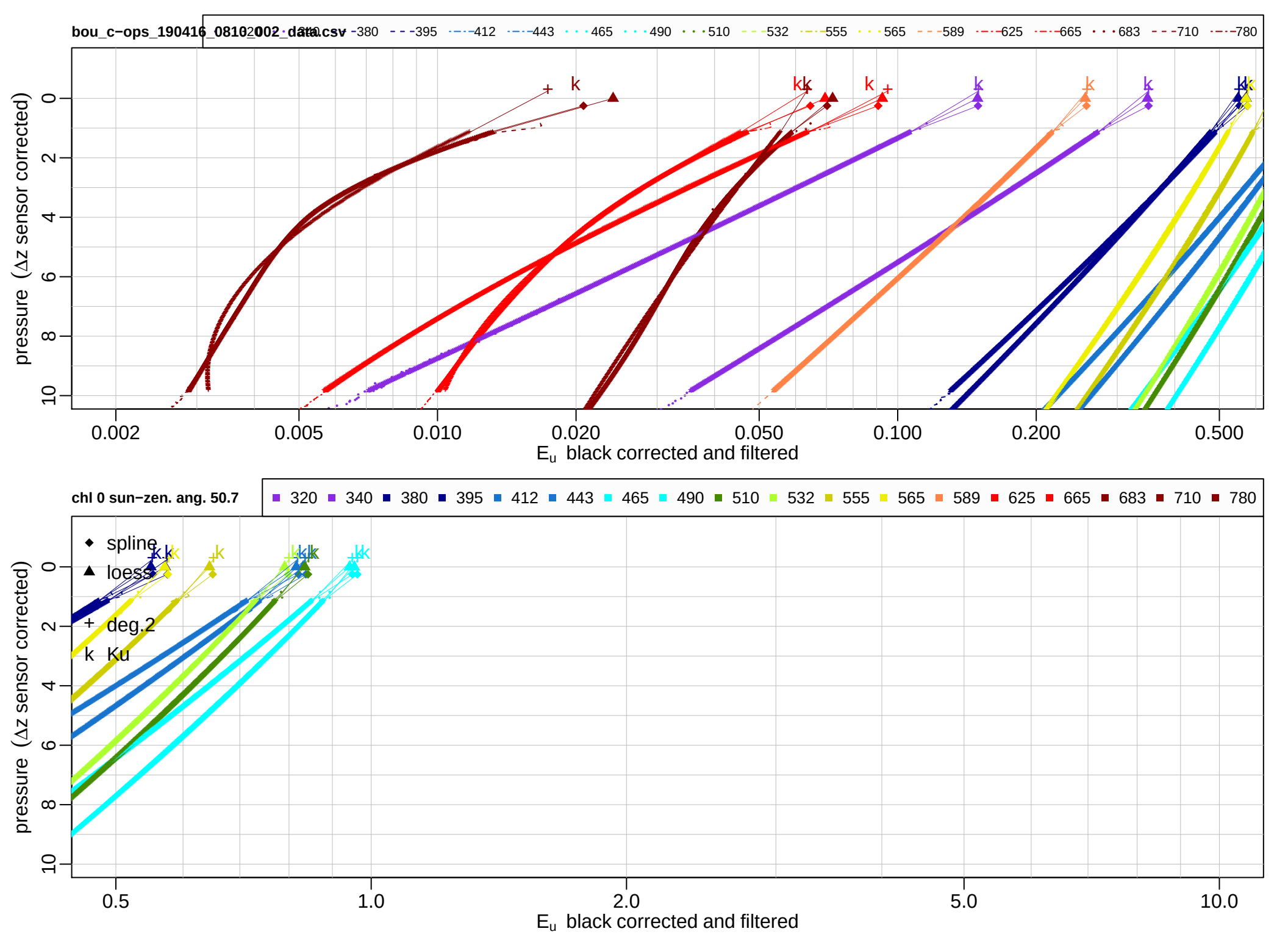


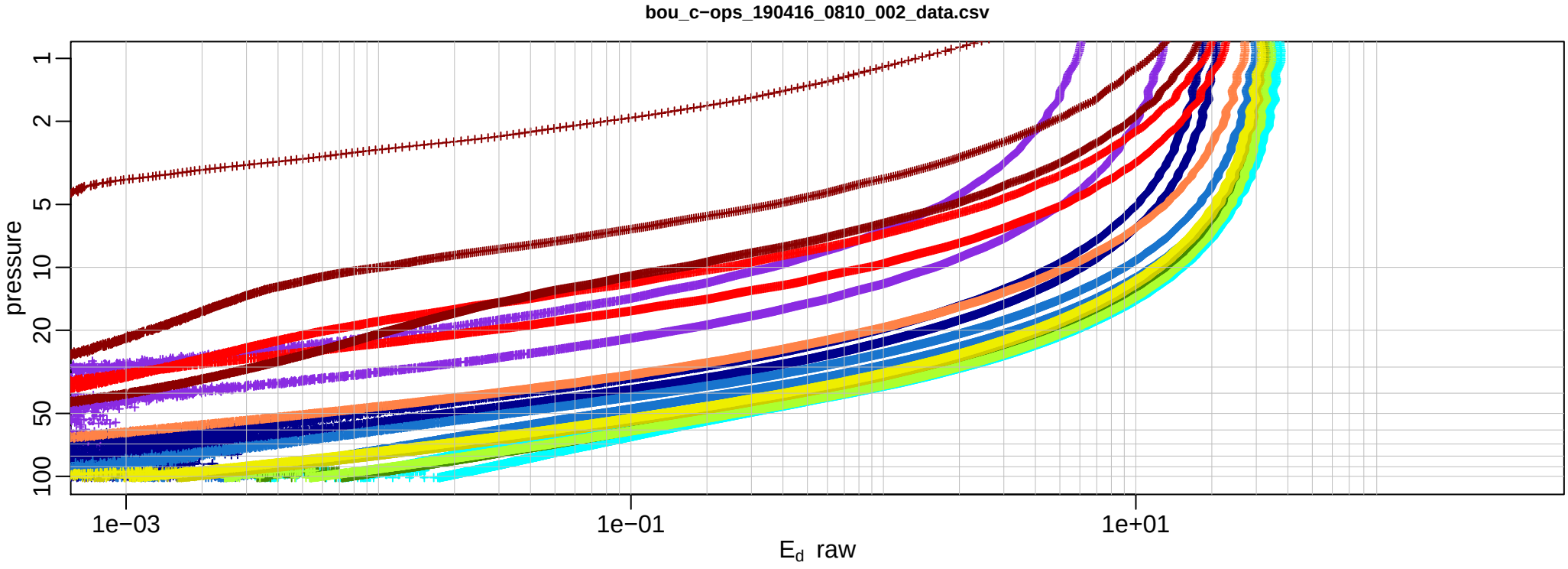

bou_c−ops_190416_0810_002_data.csv
pressure
0
20
40
60
80
100
10
15
20
25
30
35
40
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

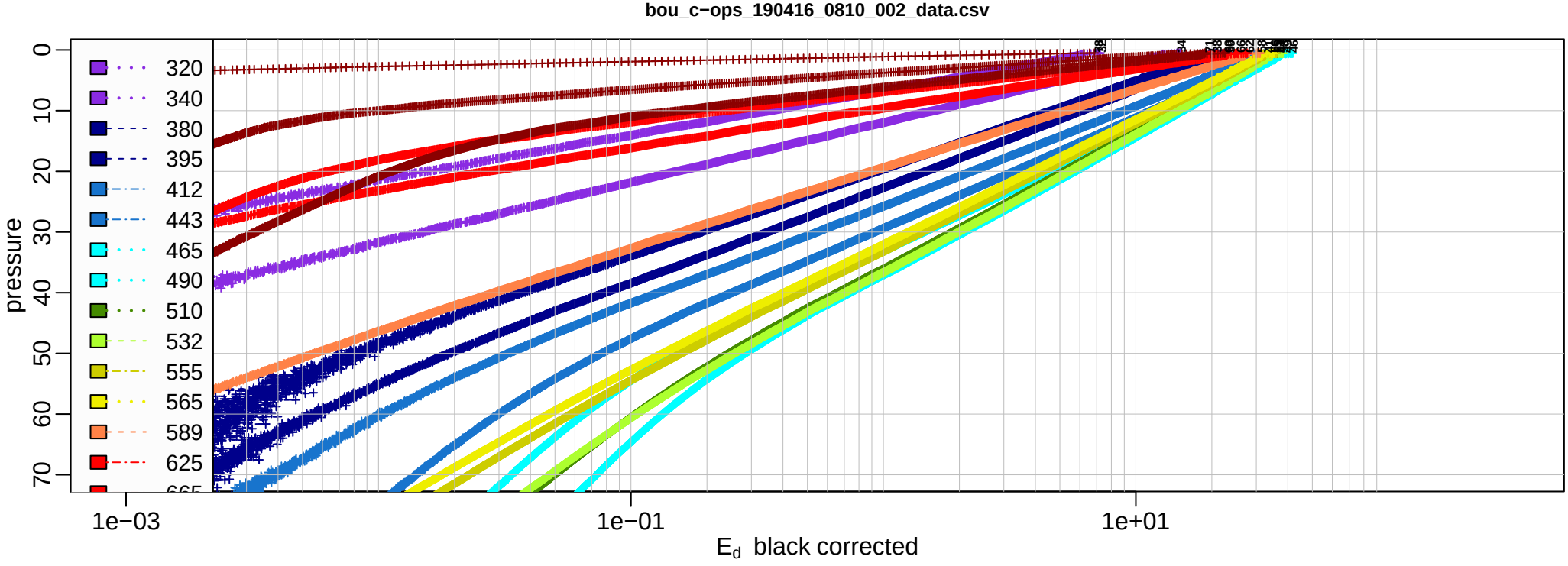

bou_c−ops_190416_0810_002_data.csv
pressure
0
20
40
60
80
100
10
15
20
25
30
35
40
E_s black corrected
Meas.
Th.
sun−zen. ang. = 50.7
Δ %
250
200
150
100
50
10
0
−10
−20
−30
400
500
600
700

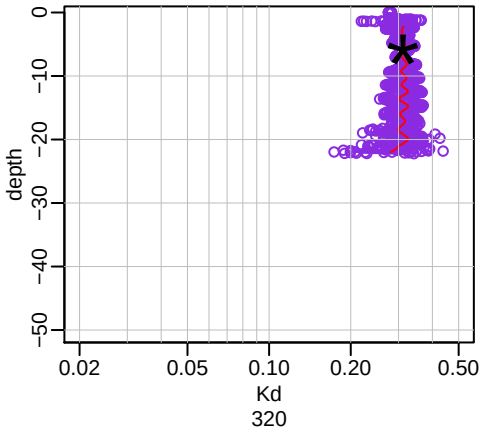

bou_c−ops_190416_0810_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

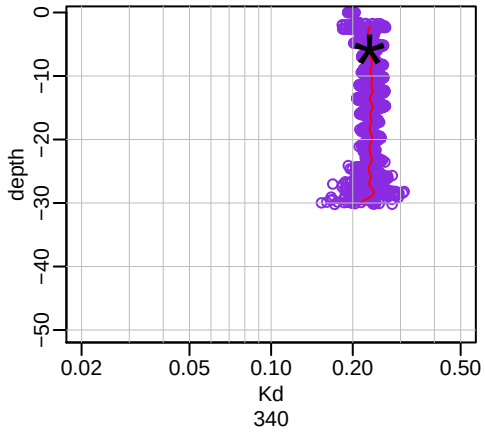

bou_c−ops_190416_0810_002_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
665
683
625
320
589
340
555
1e−04
1e−02
1e+00
E_u black corrected and filtered

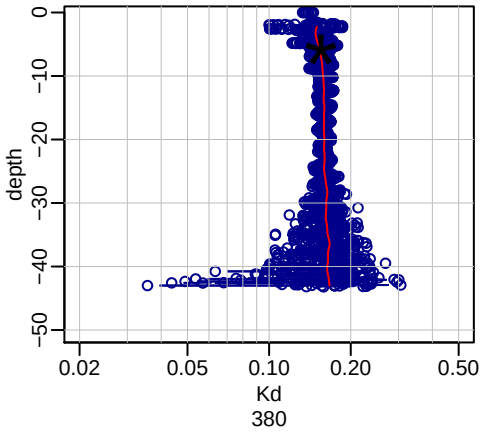

bou_c−ops_190416_0810002_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 50.7
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered

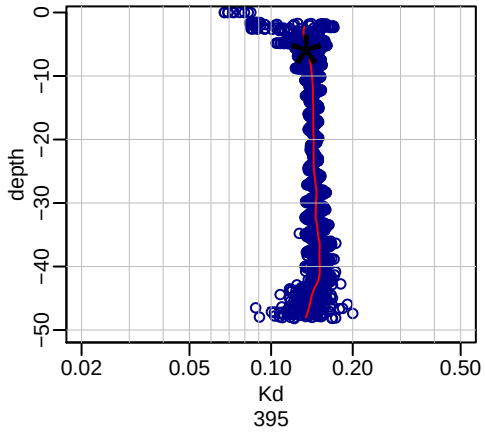

bou_c−ops_190416_0810_002_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190416_0810_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

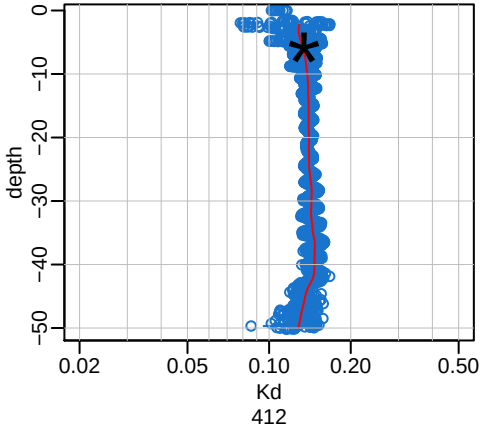


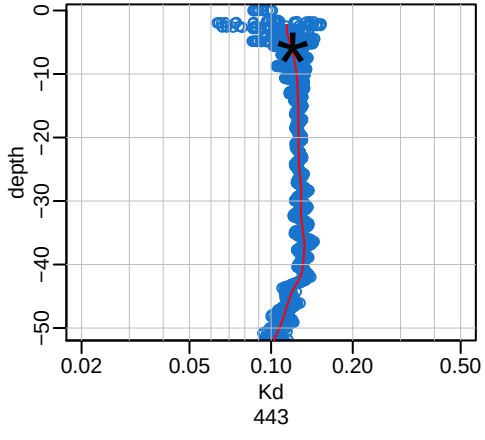


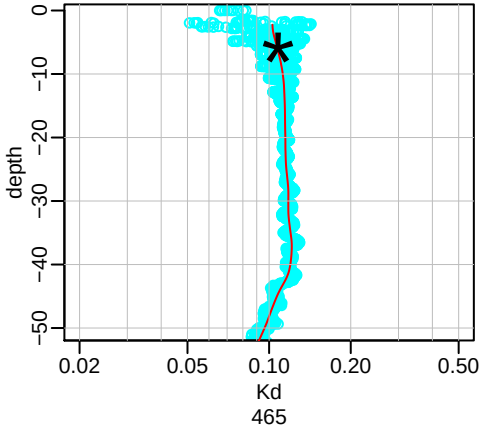


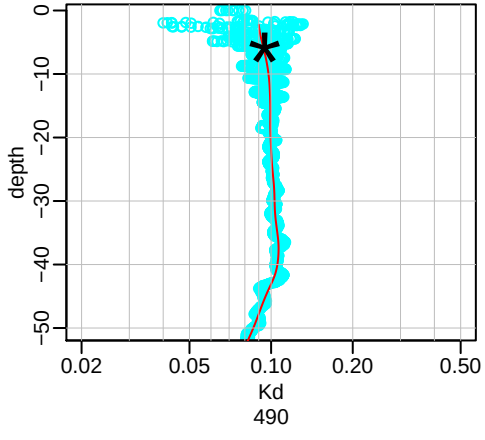


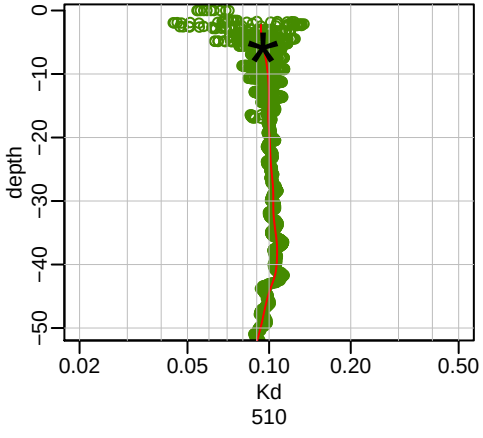
bou_c−ops_190416_0810_002_data.csv

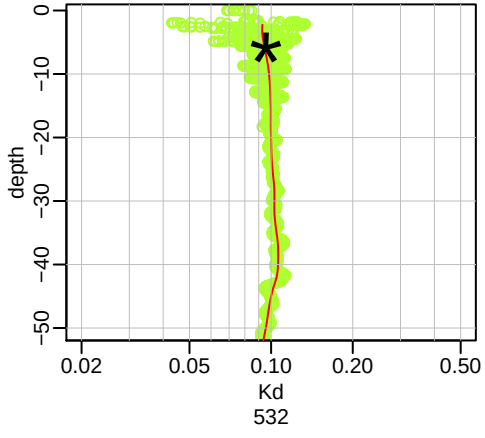


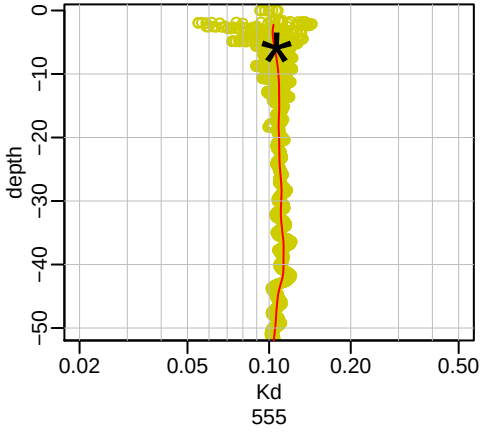


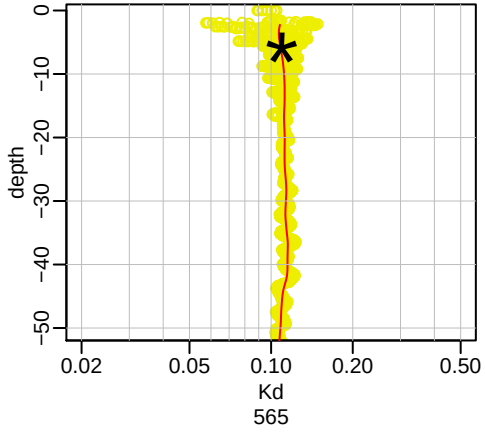


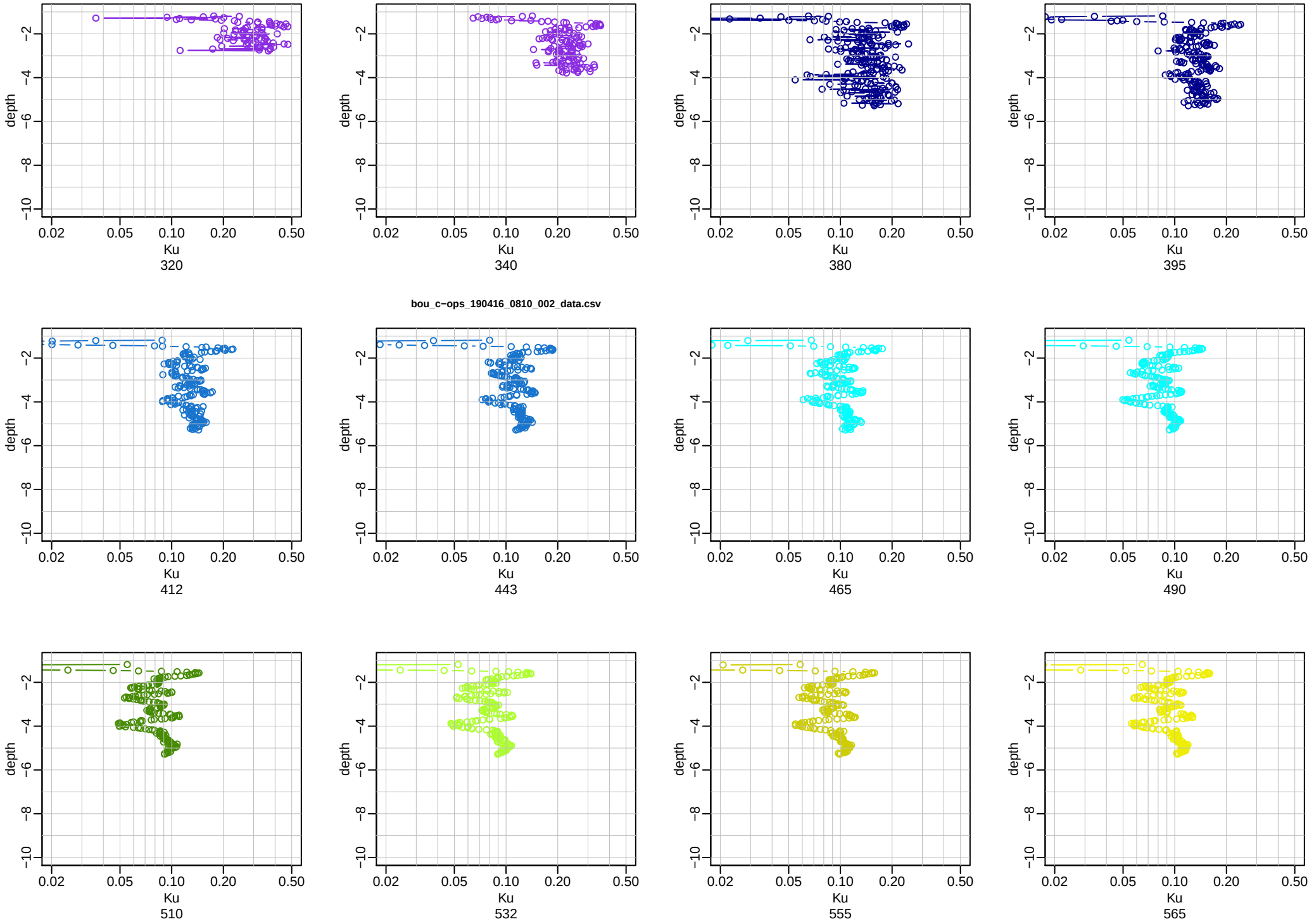


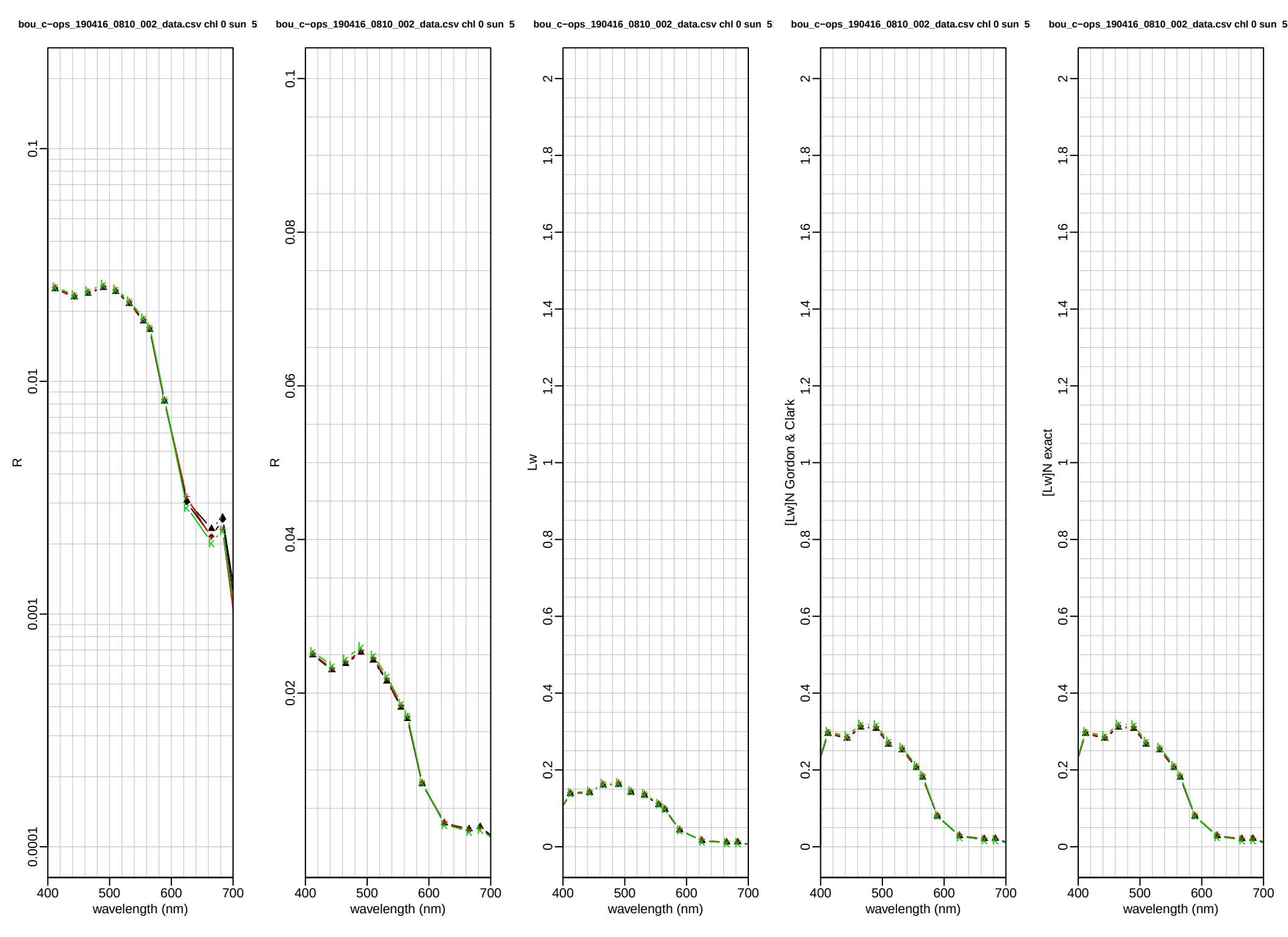






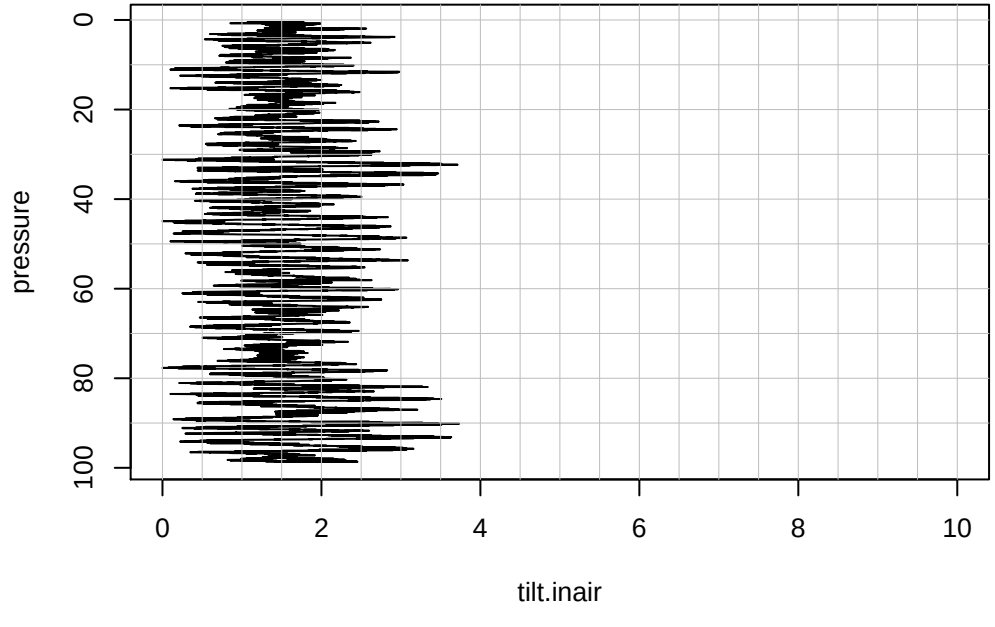


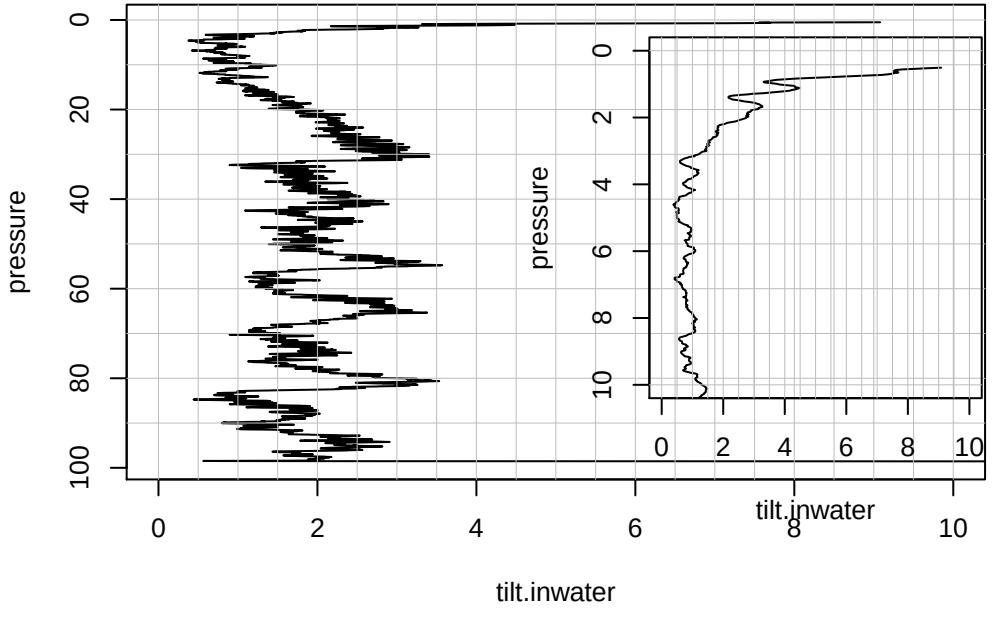

bou_c~ops_190416_0810_002_data.csv
depth
Ku
320
340
380
395
412
443
465
490
510
532
555
565

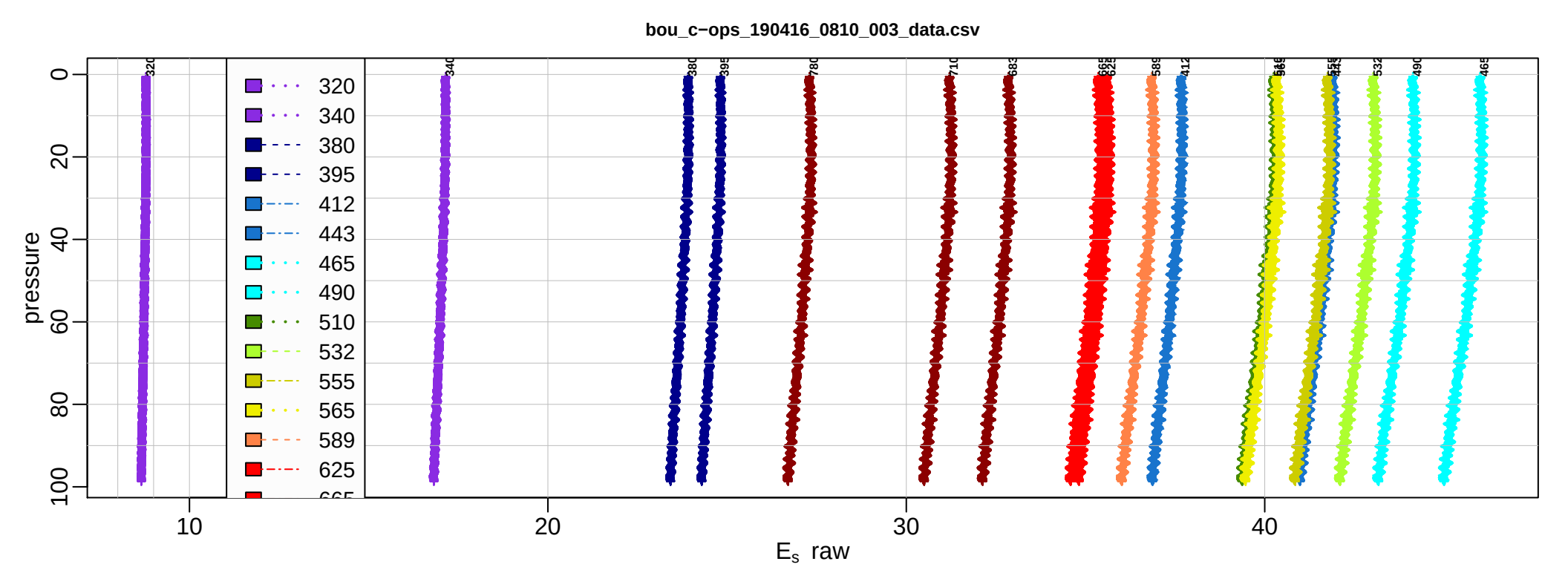

bou_c−ops_190416_0810_002_data.csv chl 0 sun 5
R
wavelength (nm)
bou_c−ops_190416_0810_002_data.csv chl 0 sun 5
R
wavelength (nm)
bou_c−ops_190416_0810_002_data.csv chl 0 sun 5
Lw
wavelength (nm)
bou_c−ops_190416_0810_002_data.csv chl 0 sun 5
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190416_0810_002_data.csv chl 0 sun 5
[Lw]N exact
wavelength (nm)

rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole207/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole207/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole207/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole207/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.90178
latitude 43.3562
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

bou_c−ops_190416_0810_003_data.csv






bou_c−ops_190416_0810_003_data.csv
pressure
0
20
40
60
80
100
10
20
30
40
E_s raw
320
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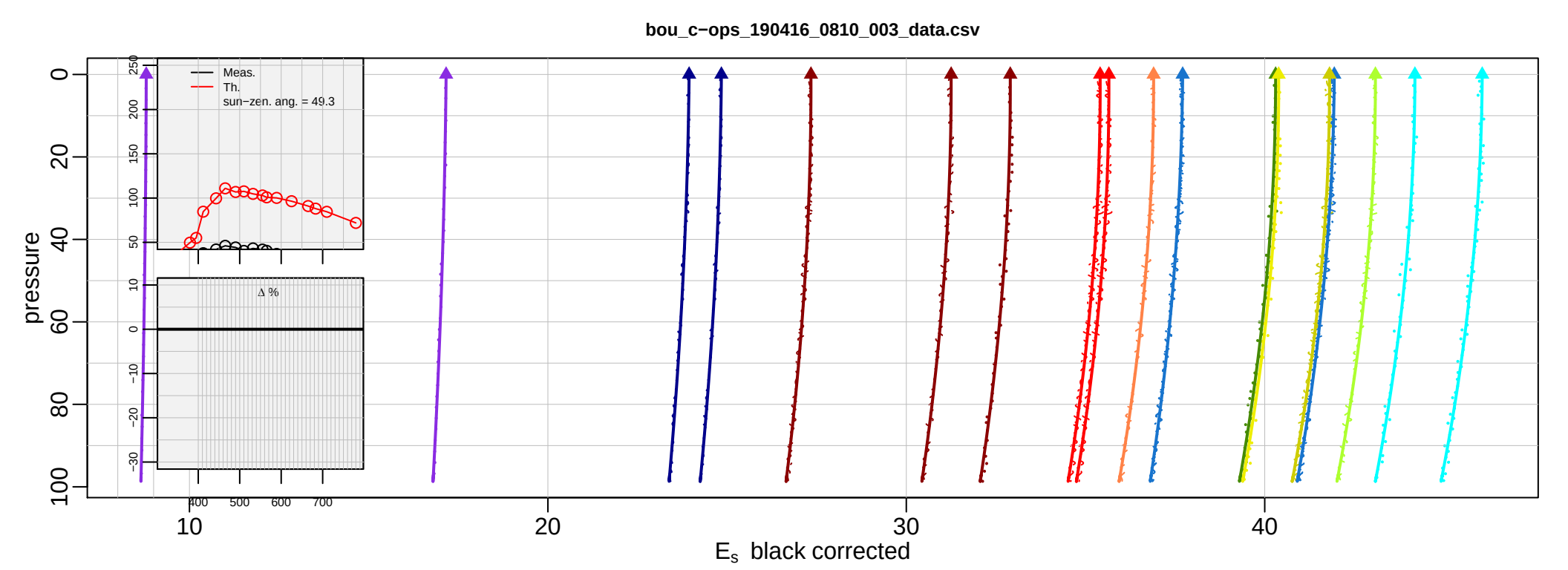
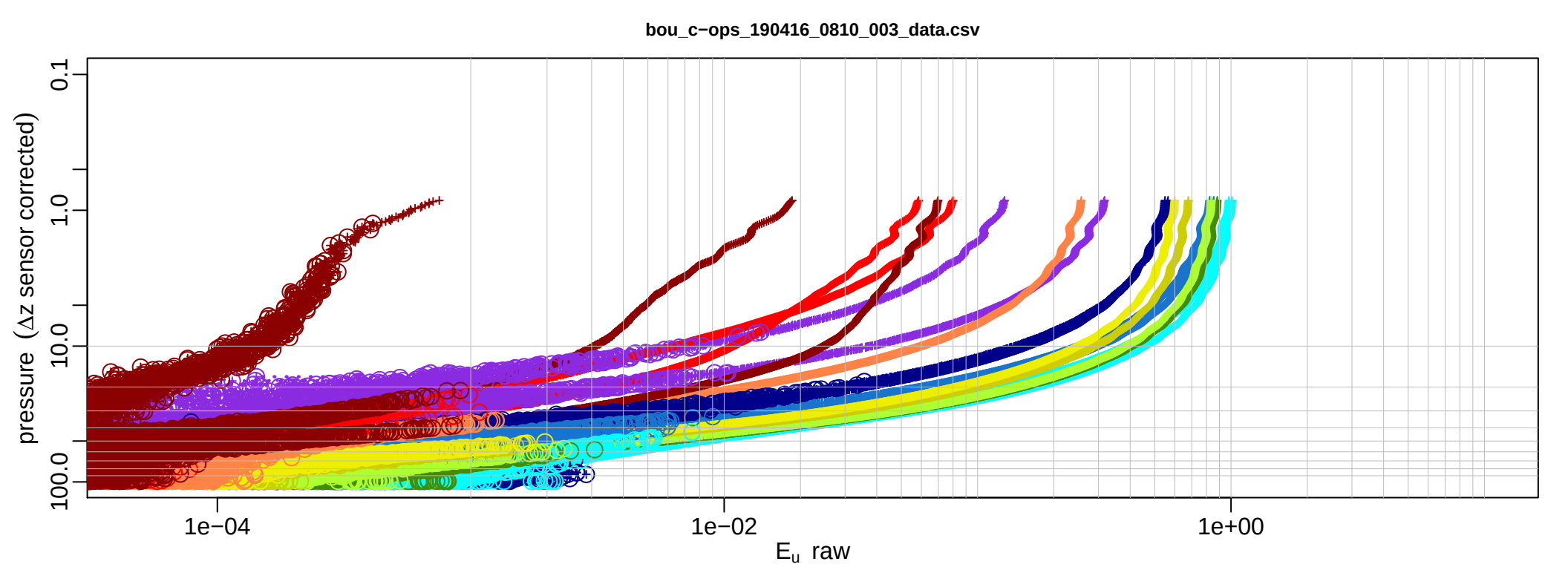
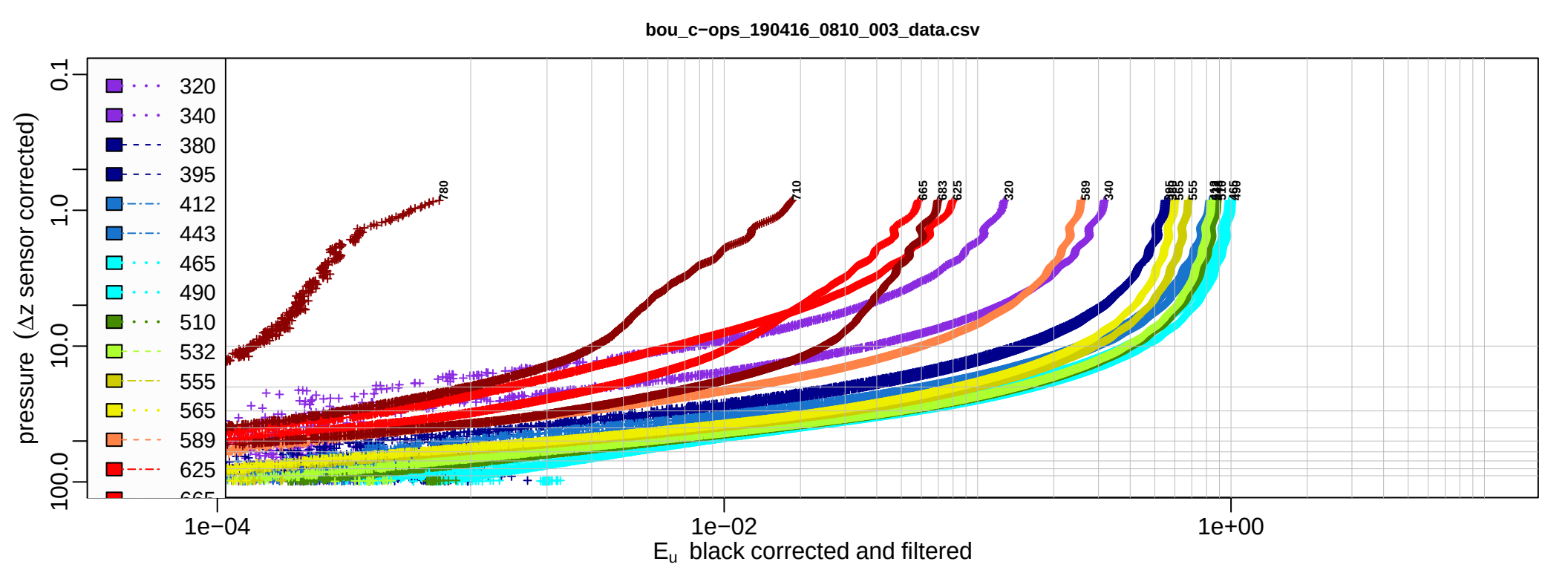
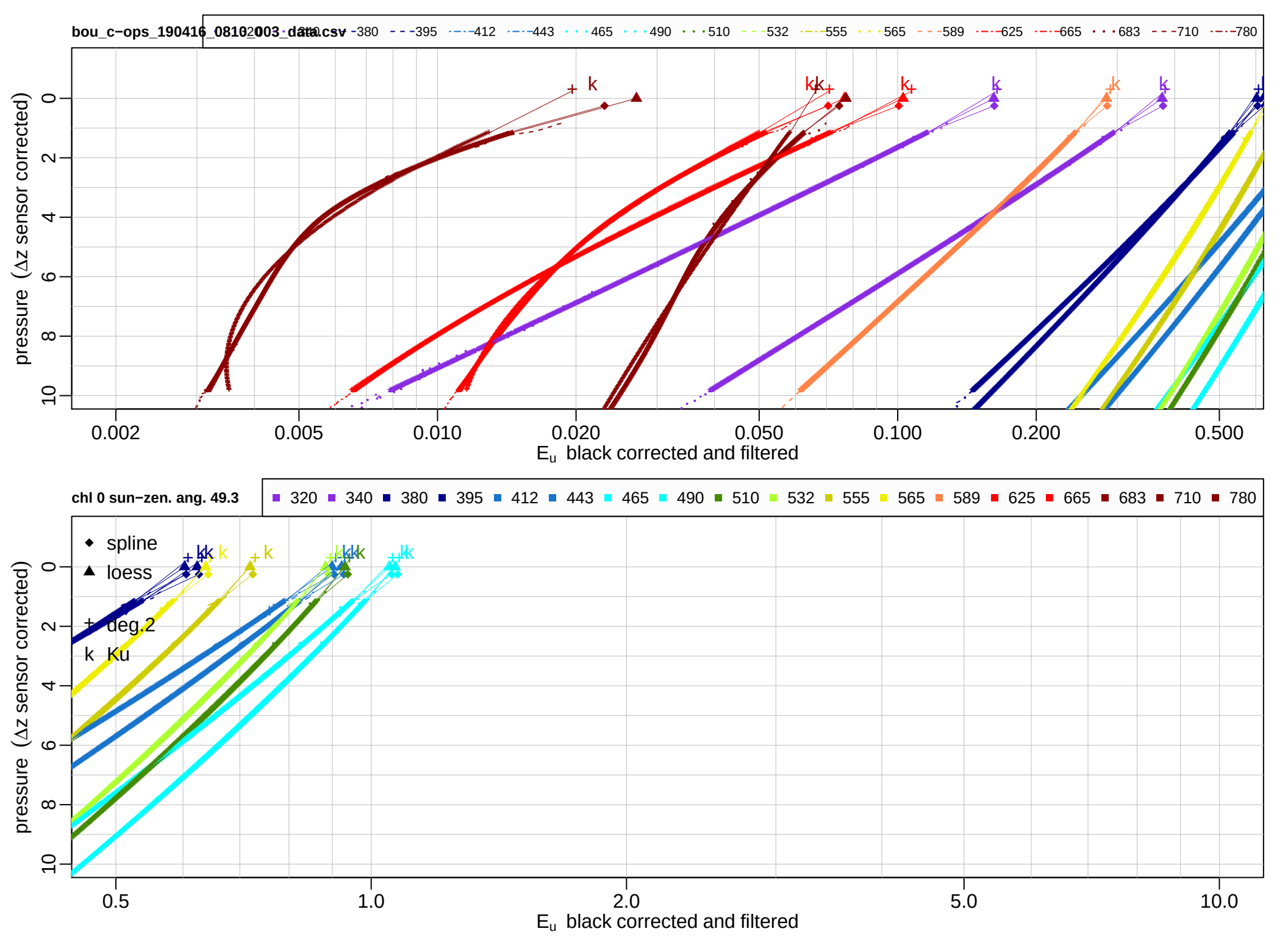
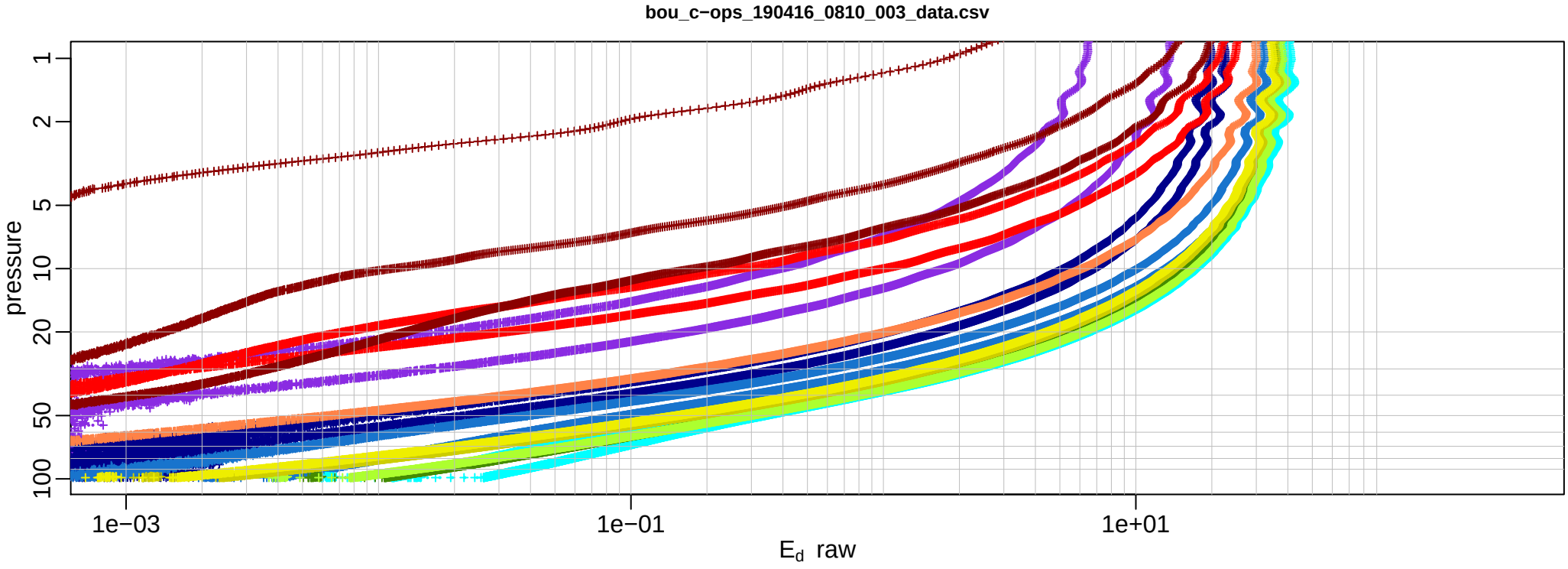
380
395
412
443
465
490
510
532
555
565
589
625

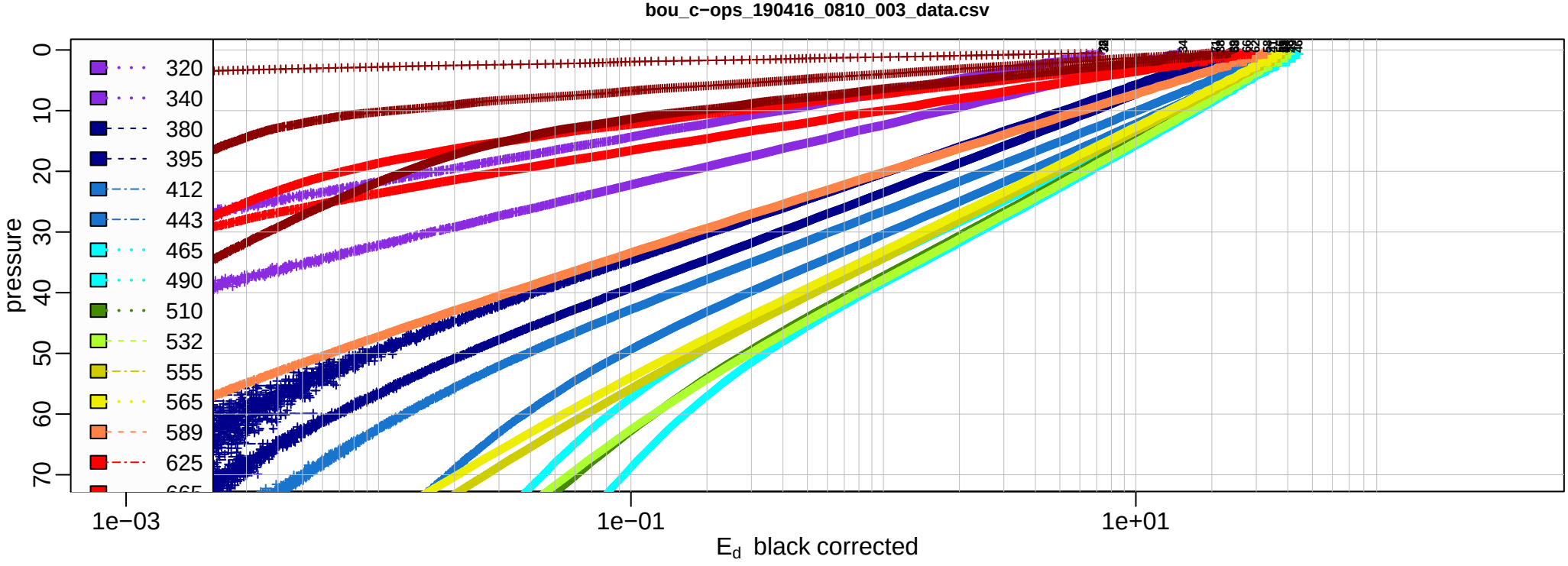

bou_c−ops_190416_0810_003_data.csv
pressure
0
20
40
60
80
100
10
20
30
40
E_s black corrected
Meas.
Th.
sun−zen. ang. = 49.3
Δ %
250
200
150
100
50
10
0
−10
−20
−30
400
500
600
700


bou_c−ops_190416_0810_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw


bou_c−ops_190416_0810_003_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
665
683
625
320
589
340
1e−04
1e−02
1e+00
E_u black corrected and filtered


bou_c−ops_190416_0810003_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 49.3
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190416_0810_003_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190416_0810_003_data.csv
pressure
0
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20
30
40
50
60
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320
340
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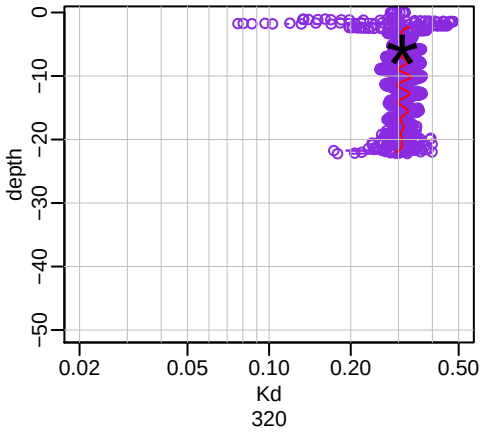
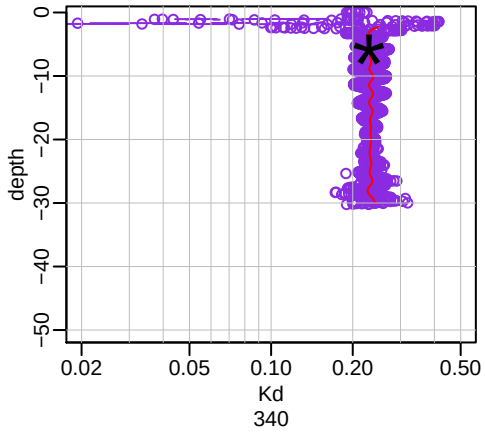
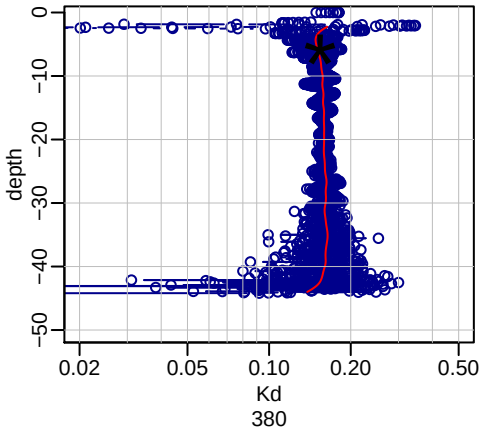
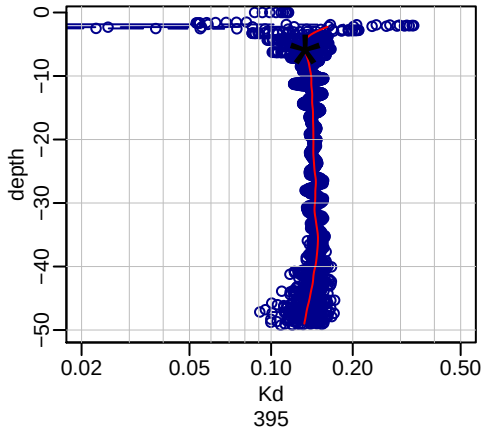
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

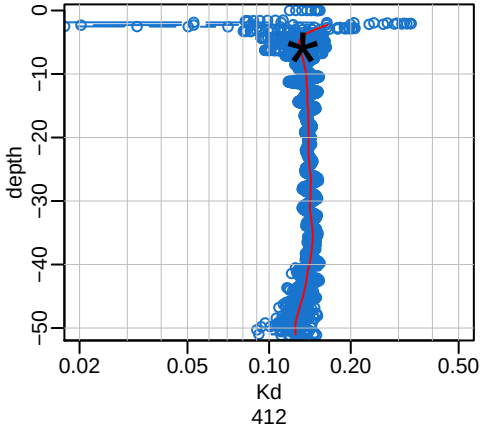


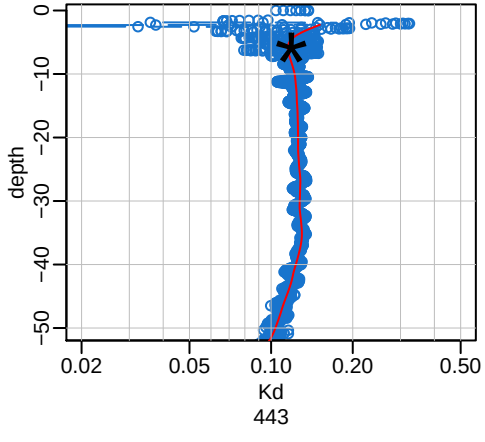


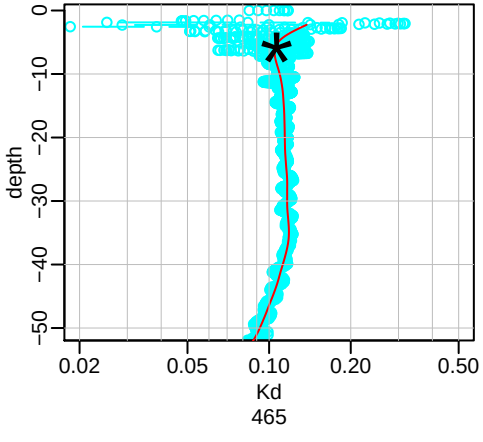


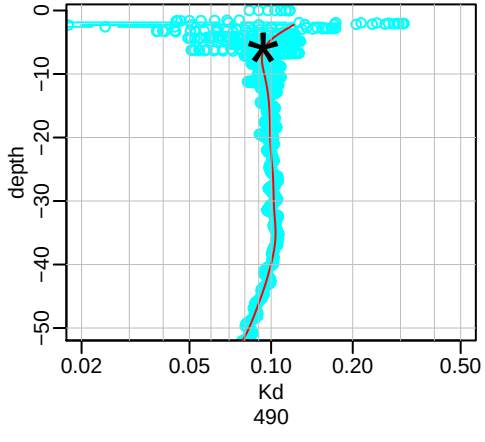


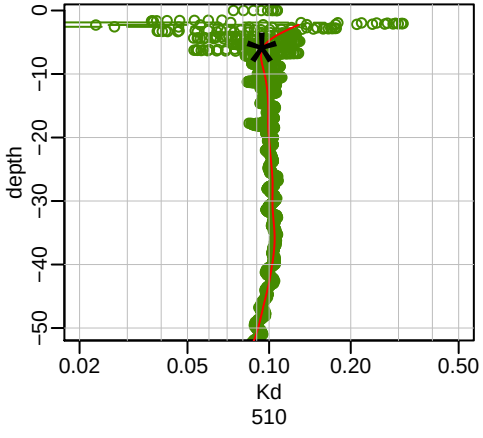
bou_c−ops_190416_0810_003_data.csv

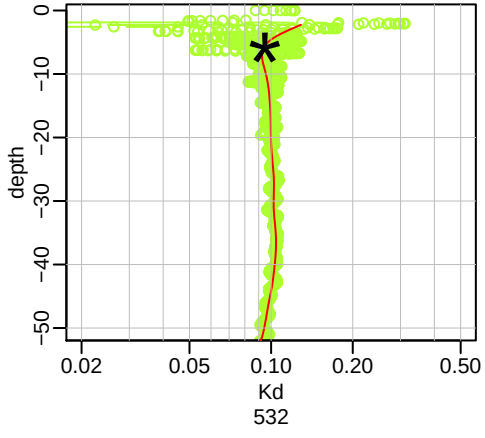


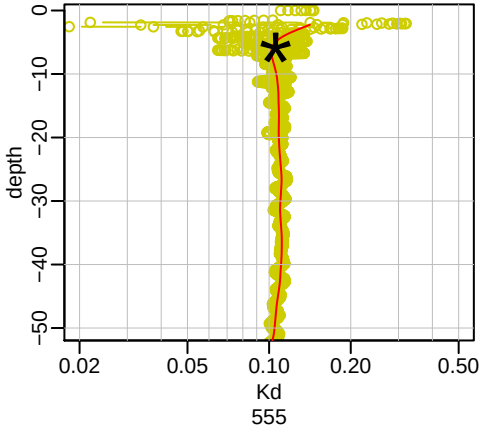


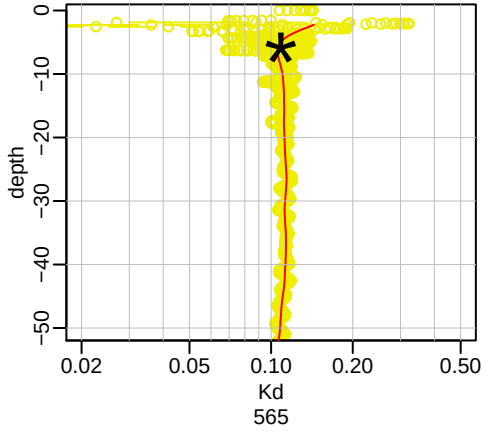












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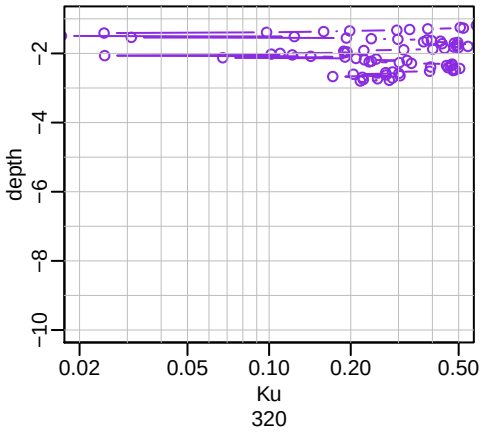

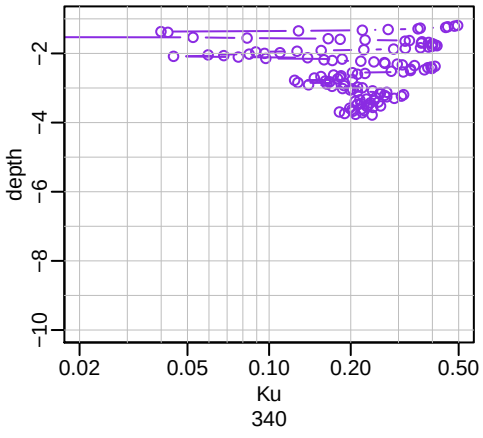

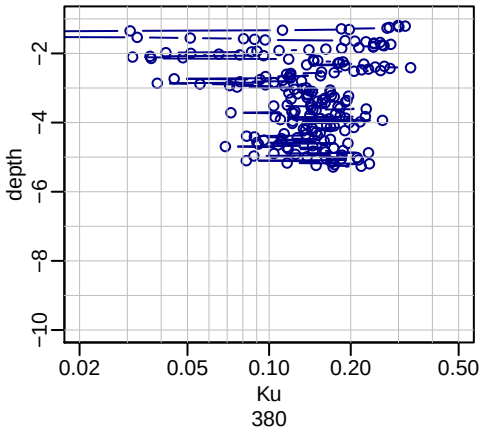

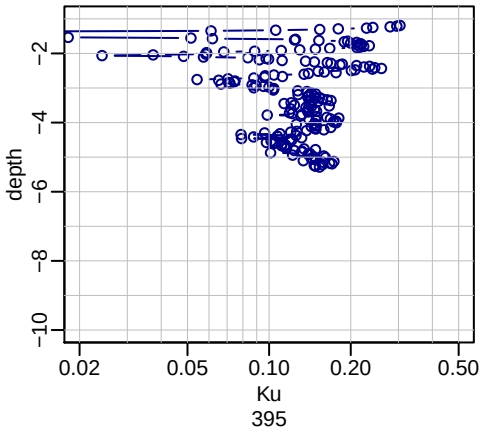

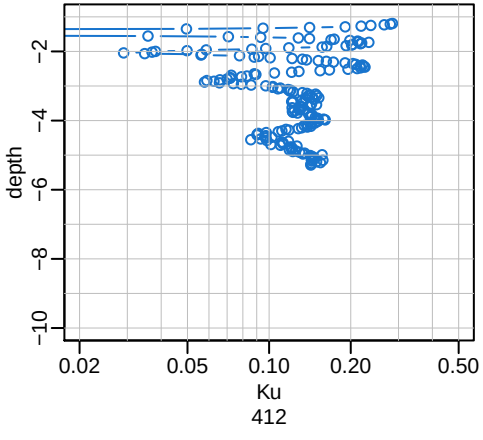

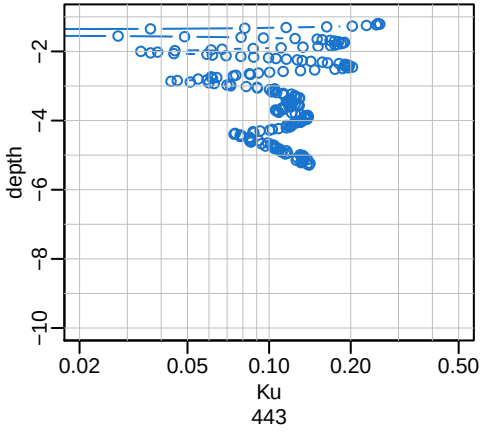

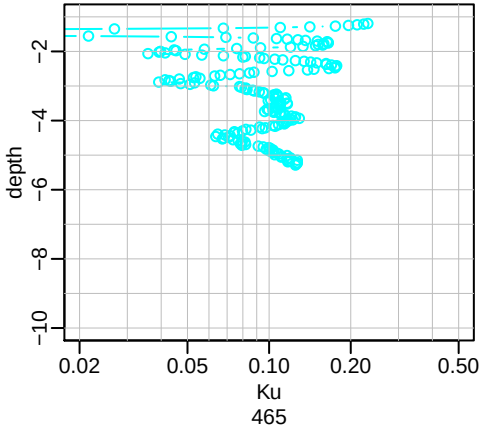

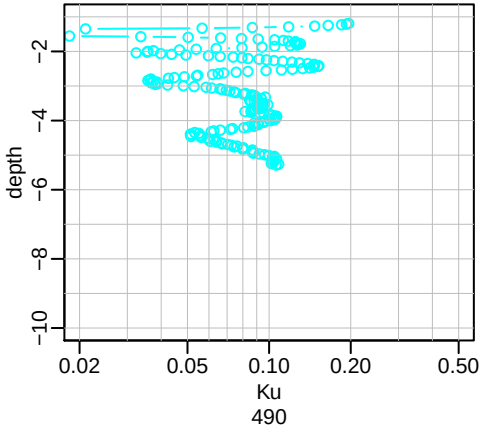

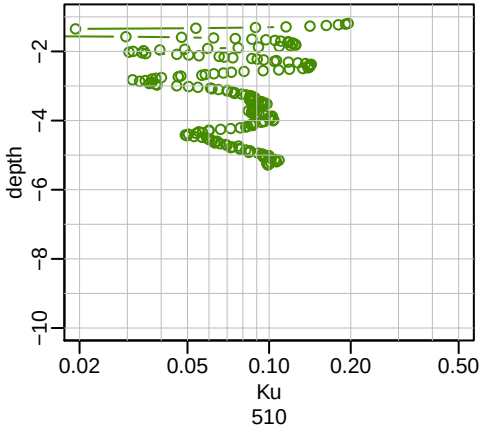

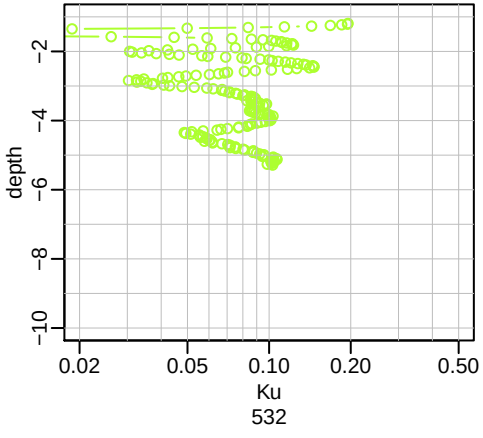

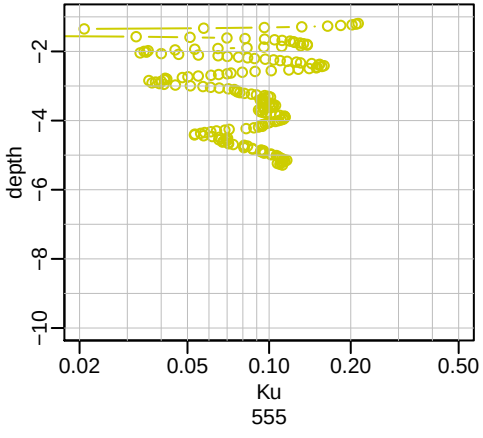

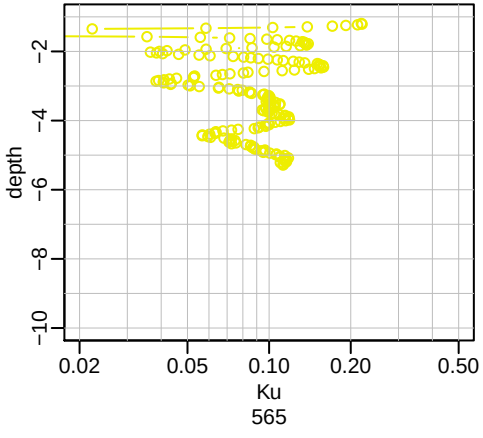

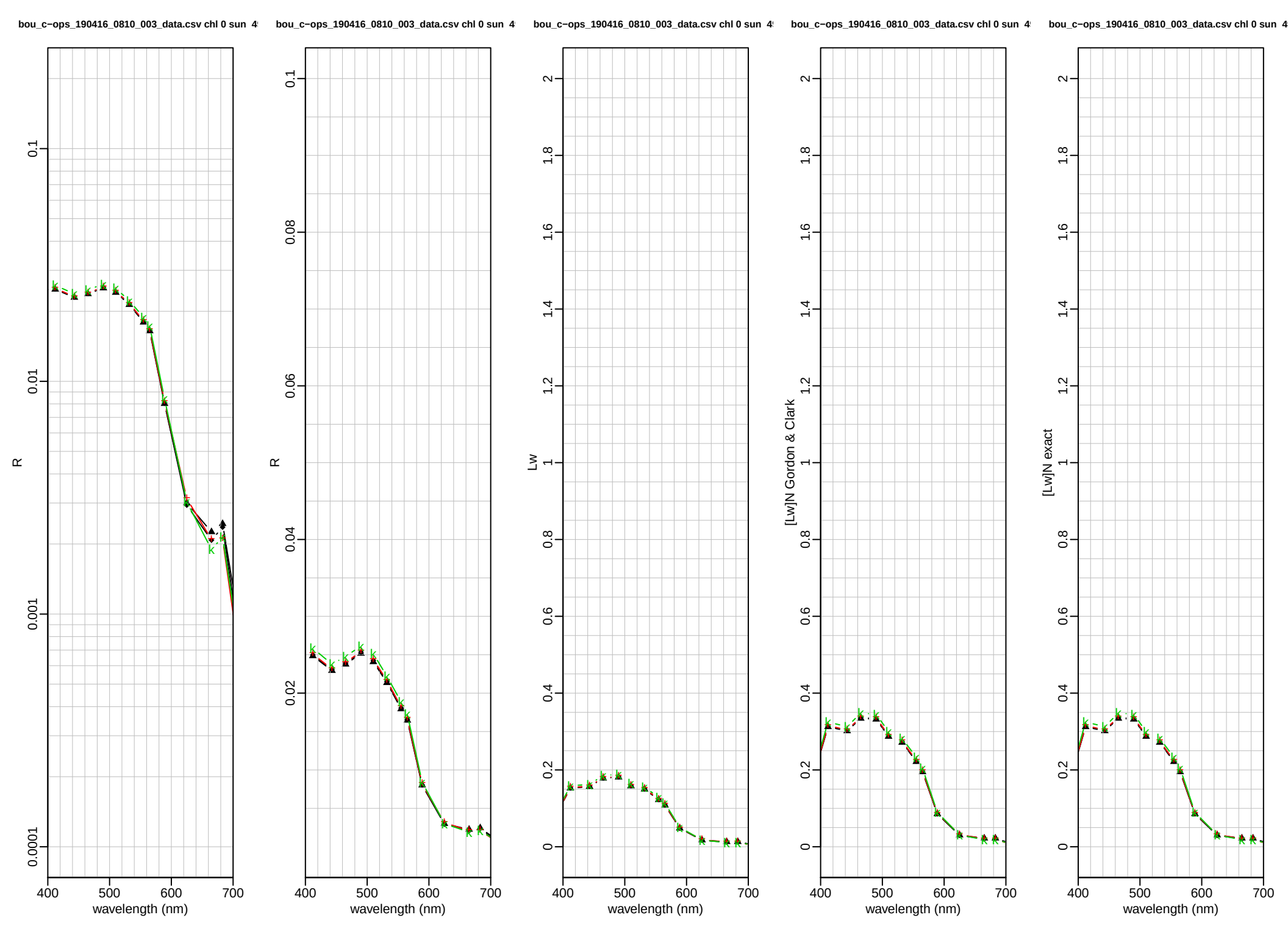
bou_c−ops_190416_0810_003_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190416_0810_003_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190416_0810_003_data.csv chl 0 sun 4
Lw
wavelength (nm)
bou_c−ops_190416_0810_003_data.csv chl 0 sun 4
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190416_0810_003_data.csv chl 0 sun 4
[Lw]N exact
wavelength (nm)

rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole207/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole207/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole207/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole207/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89603881835938
latitude 43.3725260416667
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
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delta.capteur.ed 0
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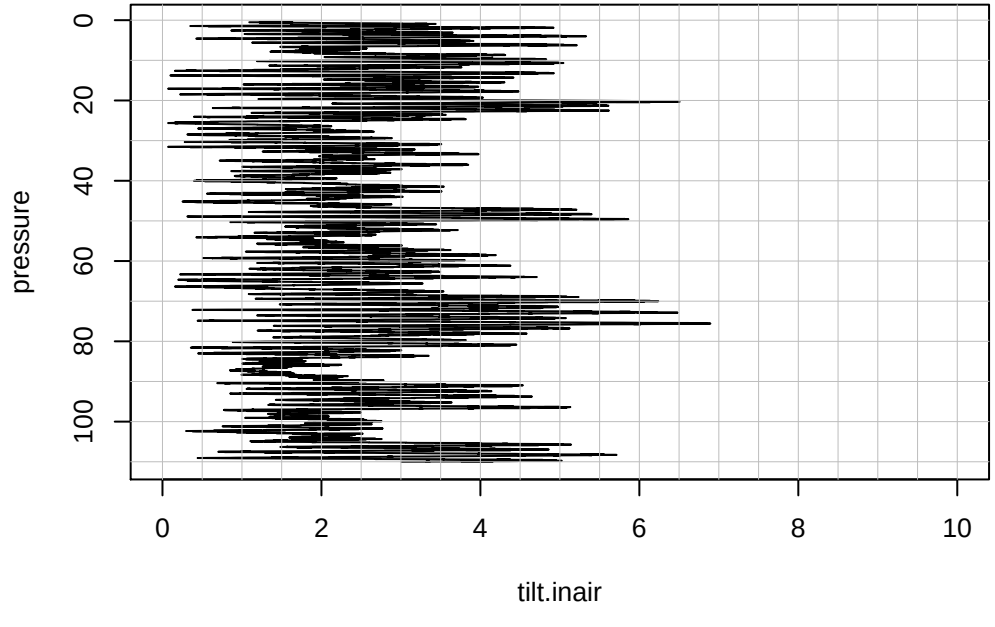
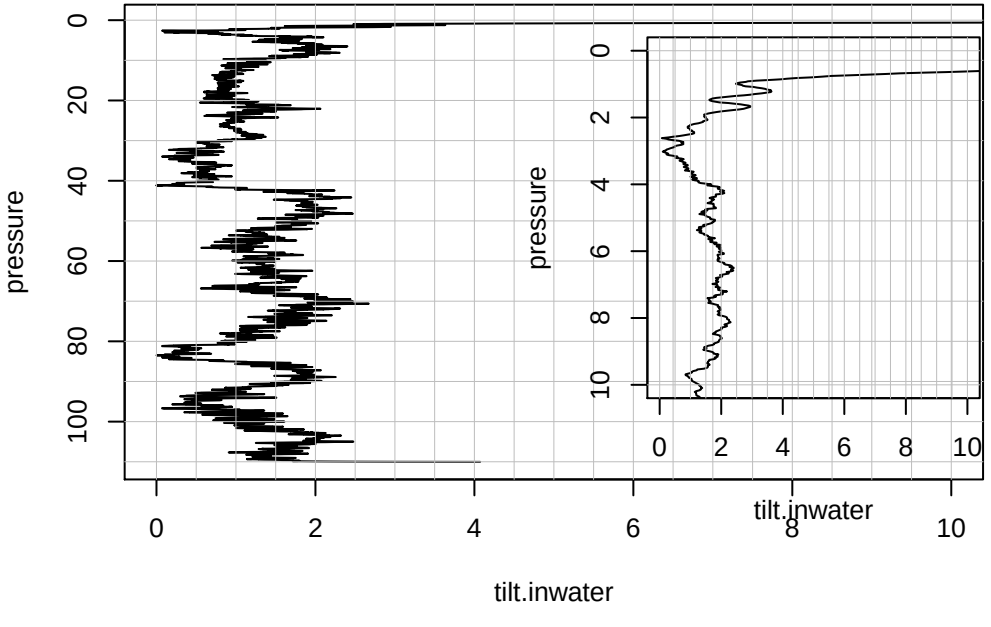
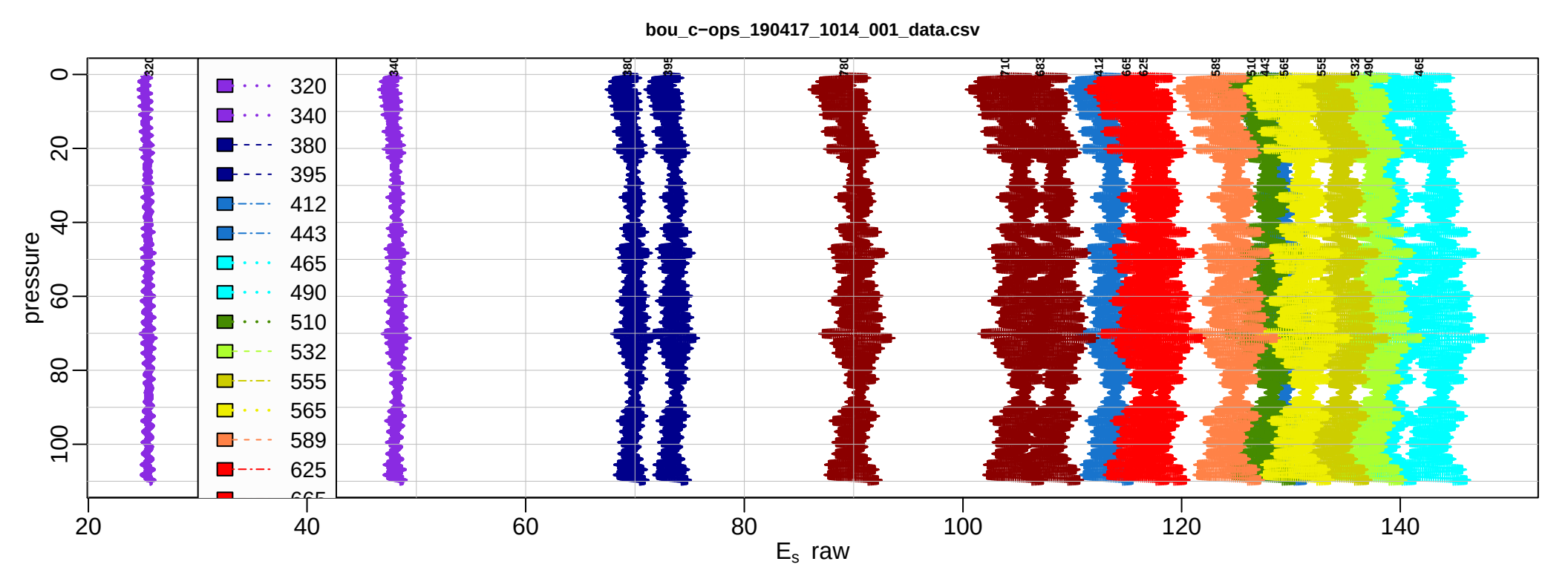
presmax.plot.ed 100

bou_c−ops_190417_1014_001_data.csv






bou_c−ops_190417_1014_001_data.csv
pressure
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80
100
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340
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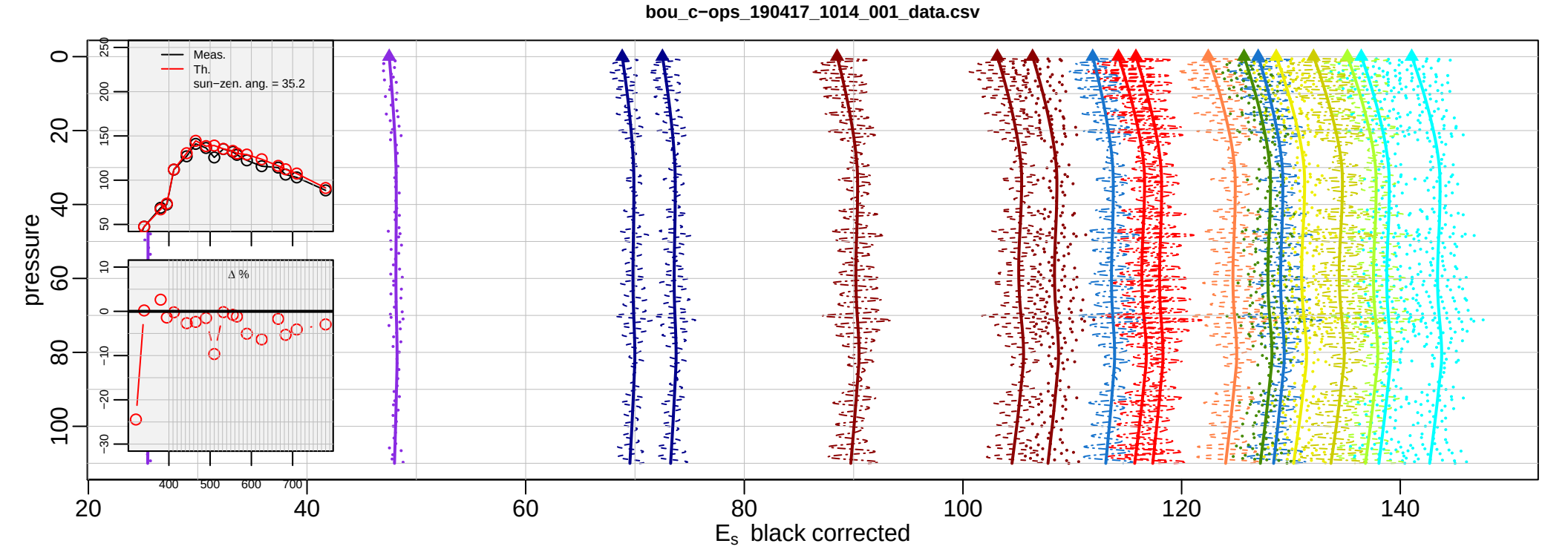
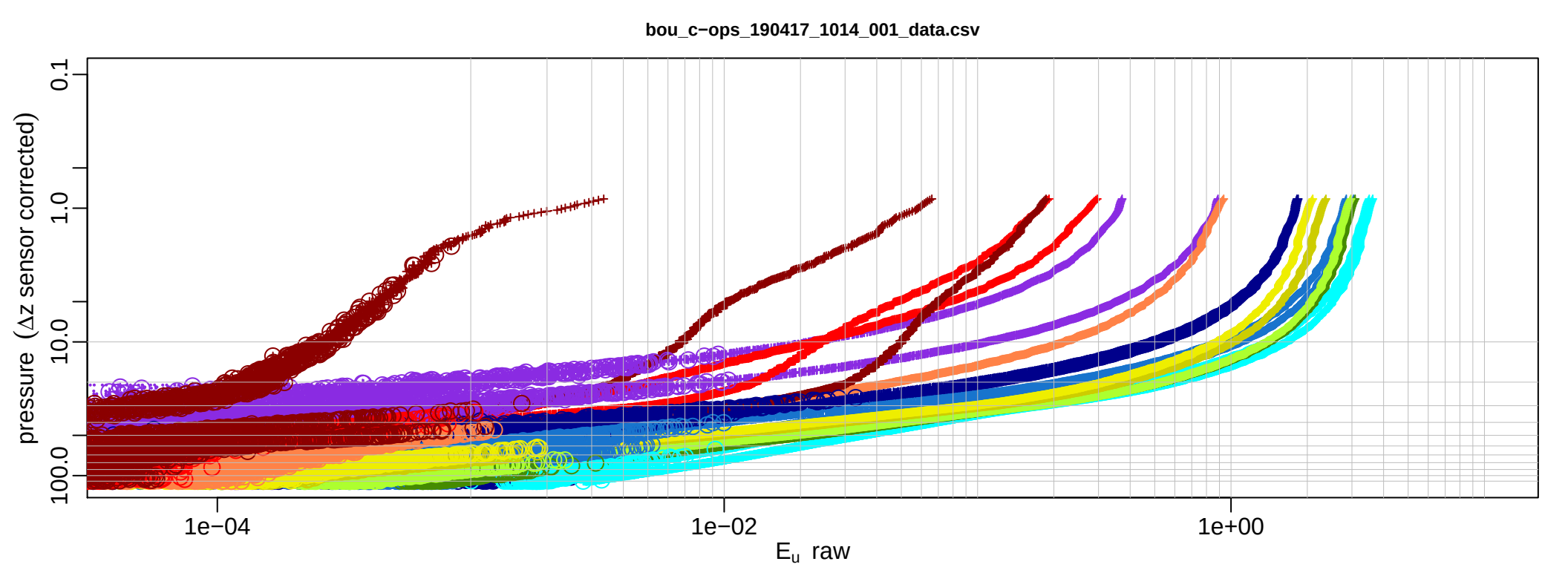
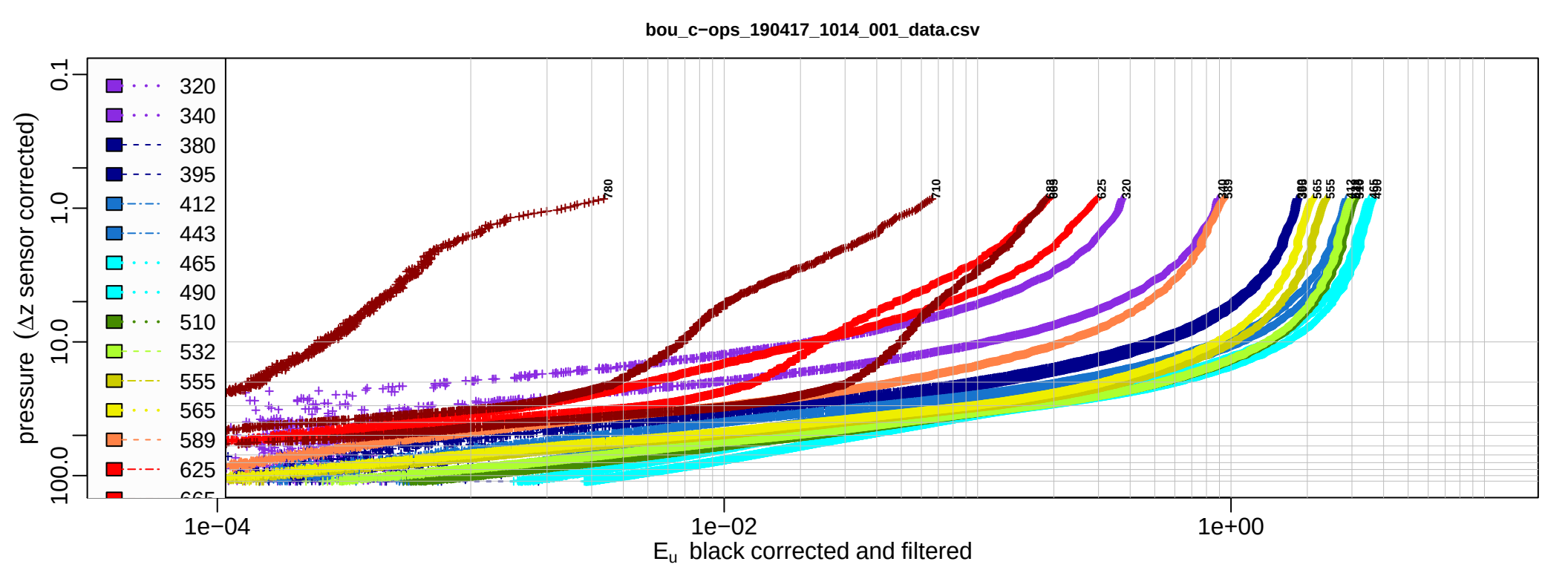
490
510
532
555
565
589
625
20
40
60
80
100
120
140
E_s raw


bou_c−ops_190417_1014_001_data.csv
Meas.
Th.
sun−zen. ang. = 35.2
Δ %
pressure
0
20
40
60
80
100
20
40
60
80
100
120
140
E_s black corrected


bou_c−ops_190417_1014_001_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
Eu raw


bou_c−ops_190417_1014_001_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
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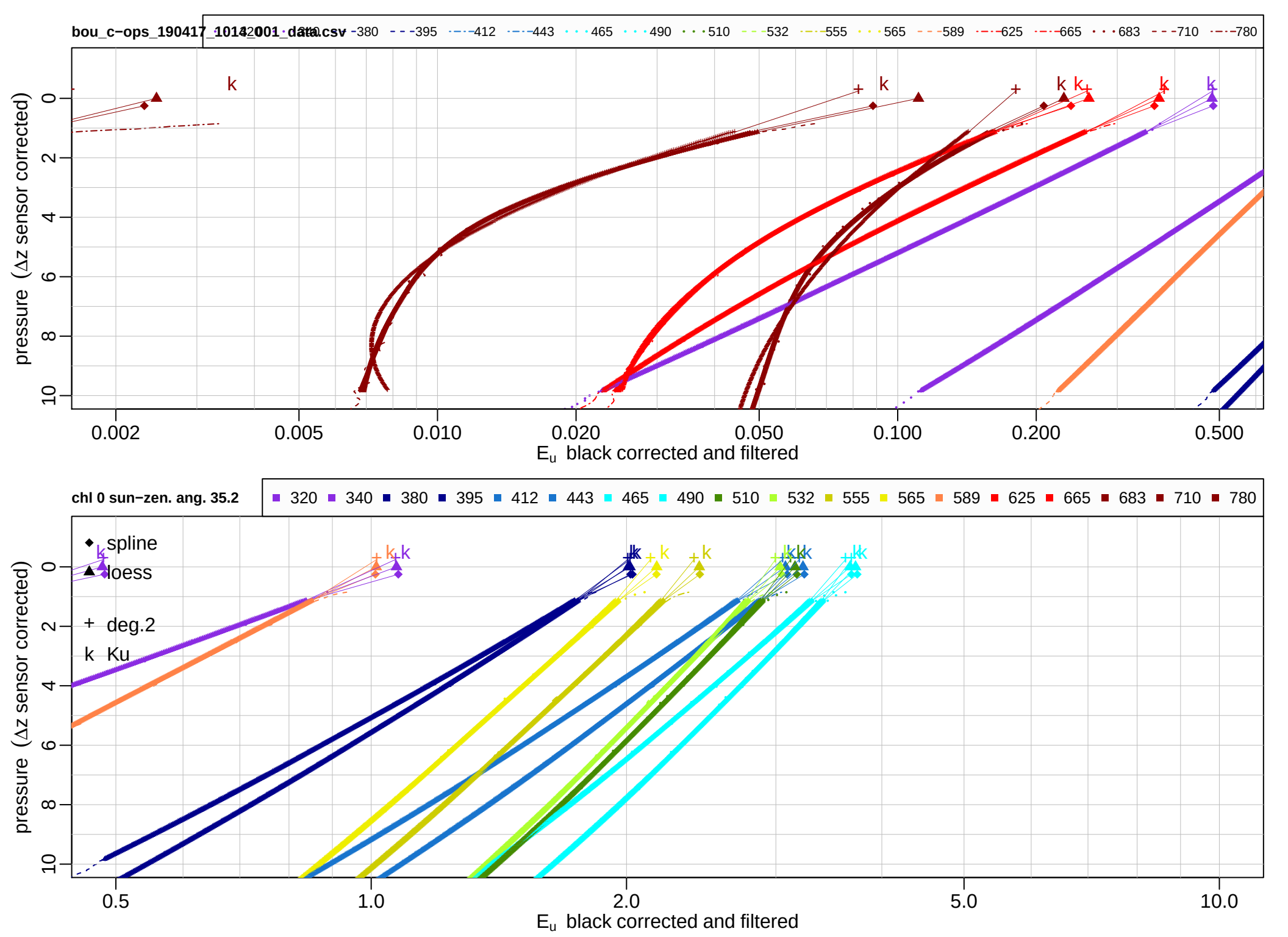
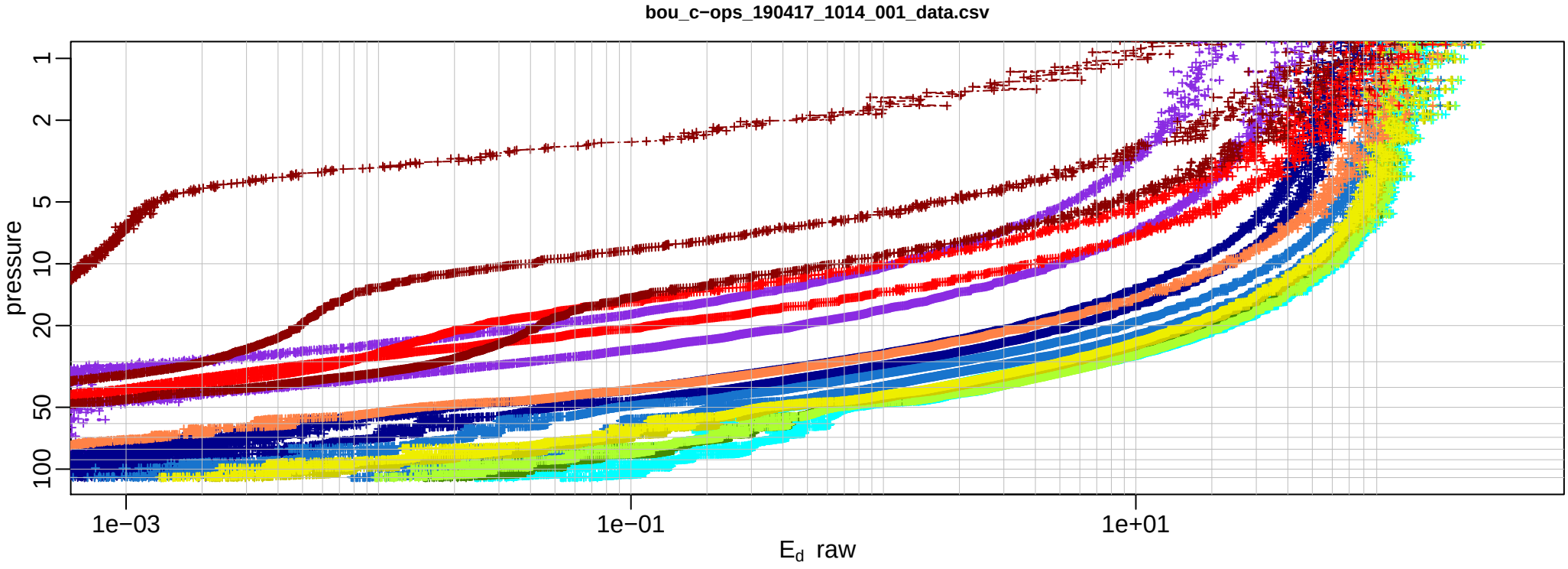
490
510
532
555
565
589
625
780
710
320
1e−04
1e−02
1e+00
Eu black corrected and filtered


bou_c−ops_190417_1014_001_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 35.2
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
+ deg.2
k Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190417_1014_001_data.csv
pressure
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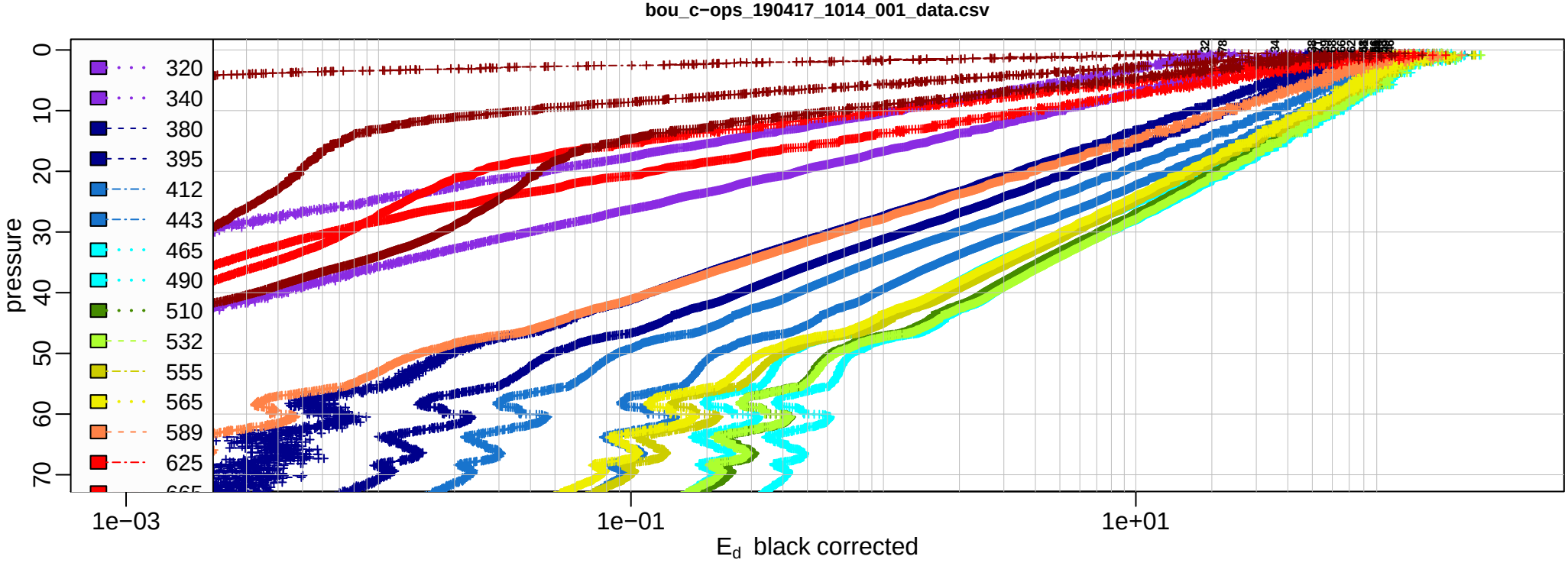
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190417_1014_001_data.csv
pressure
0
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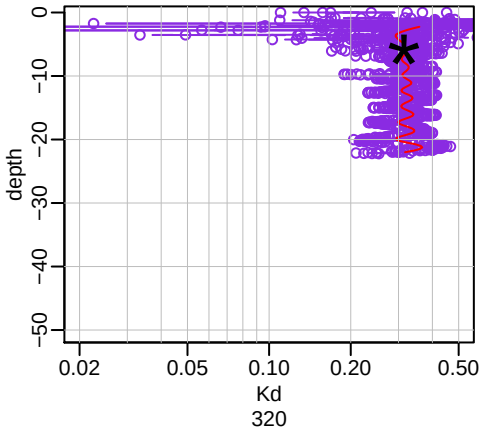
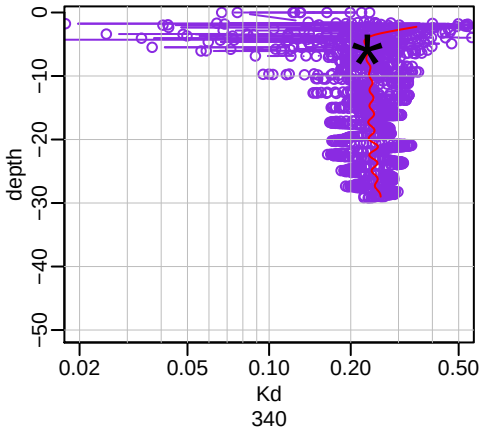
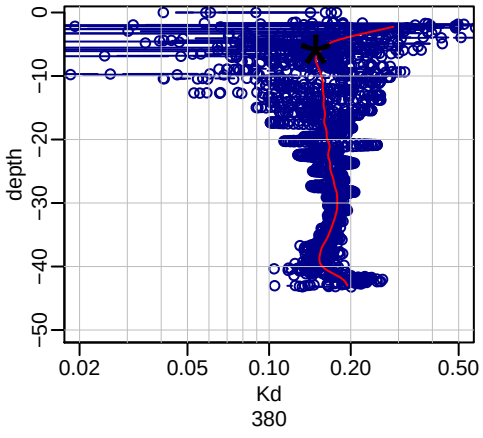
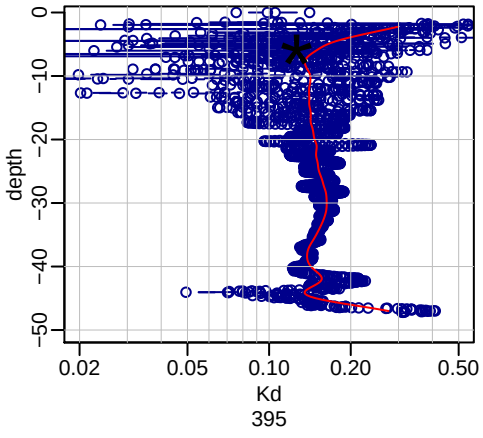
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

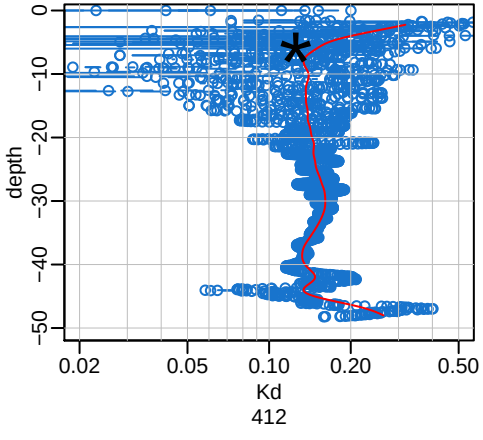


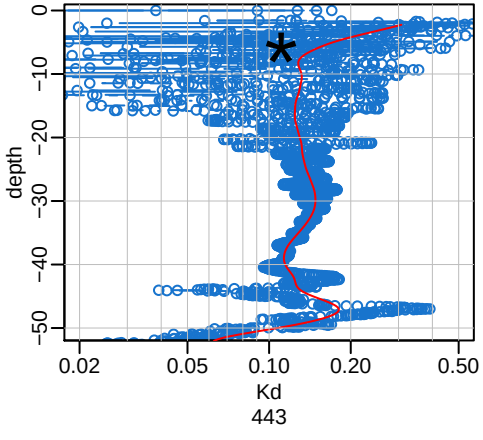


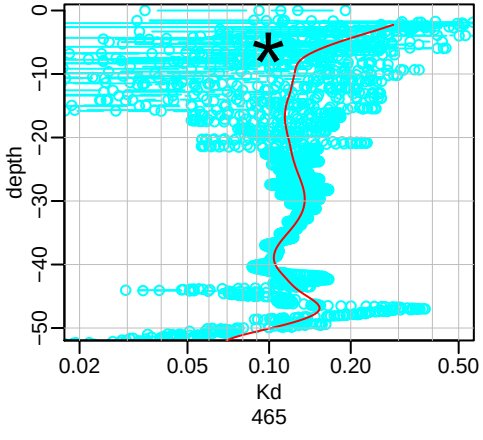


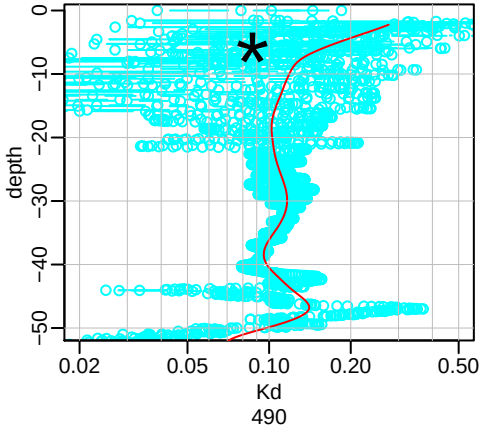


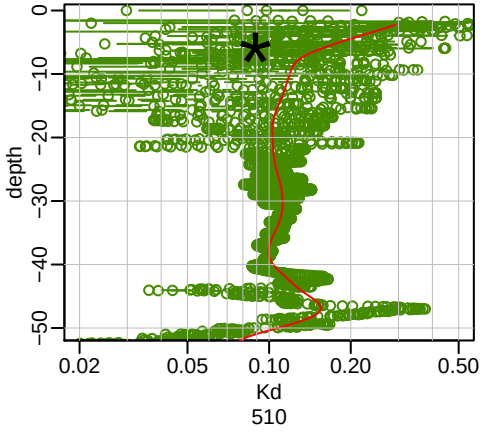
bou_c−ops_190417_1014_001_data.csv

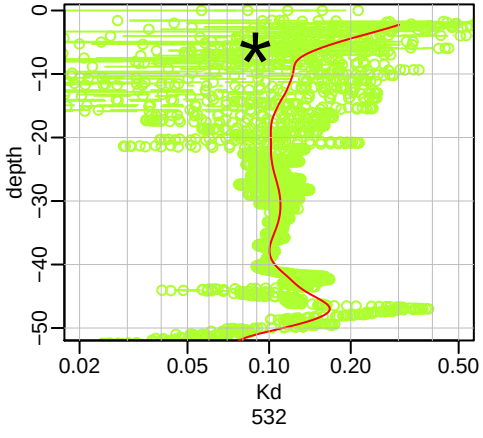


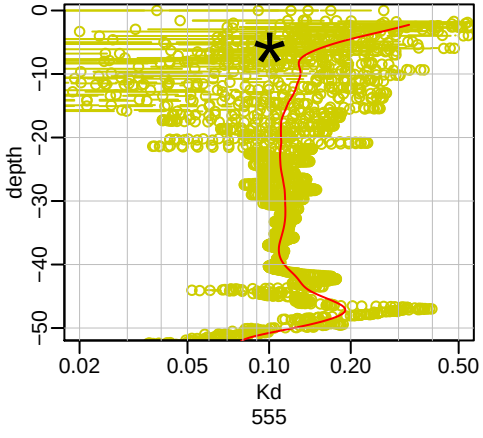


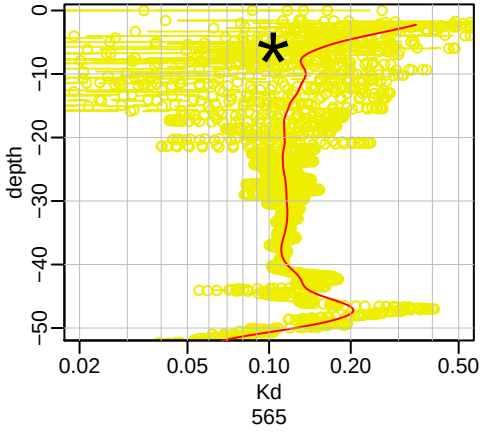


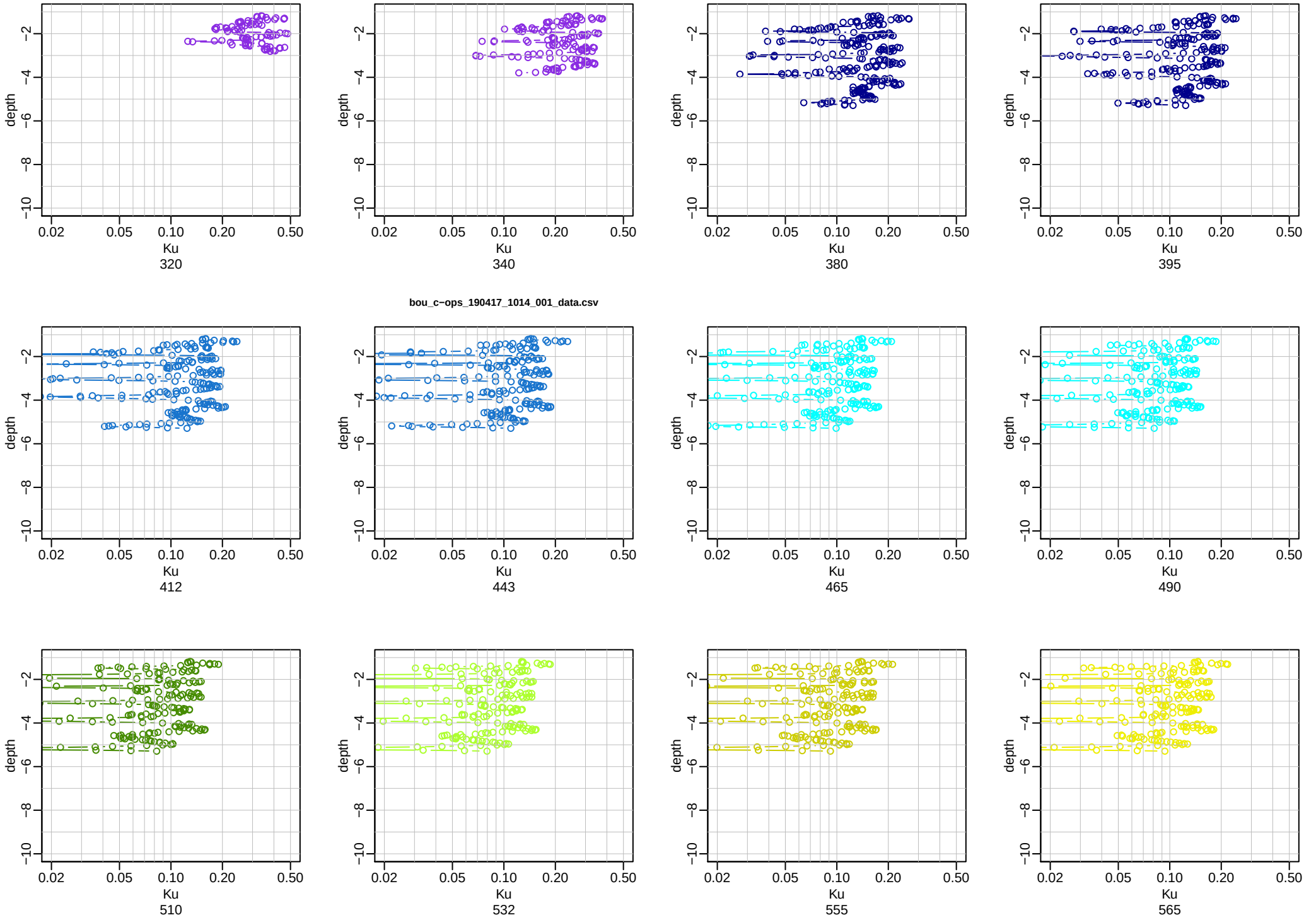


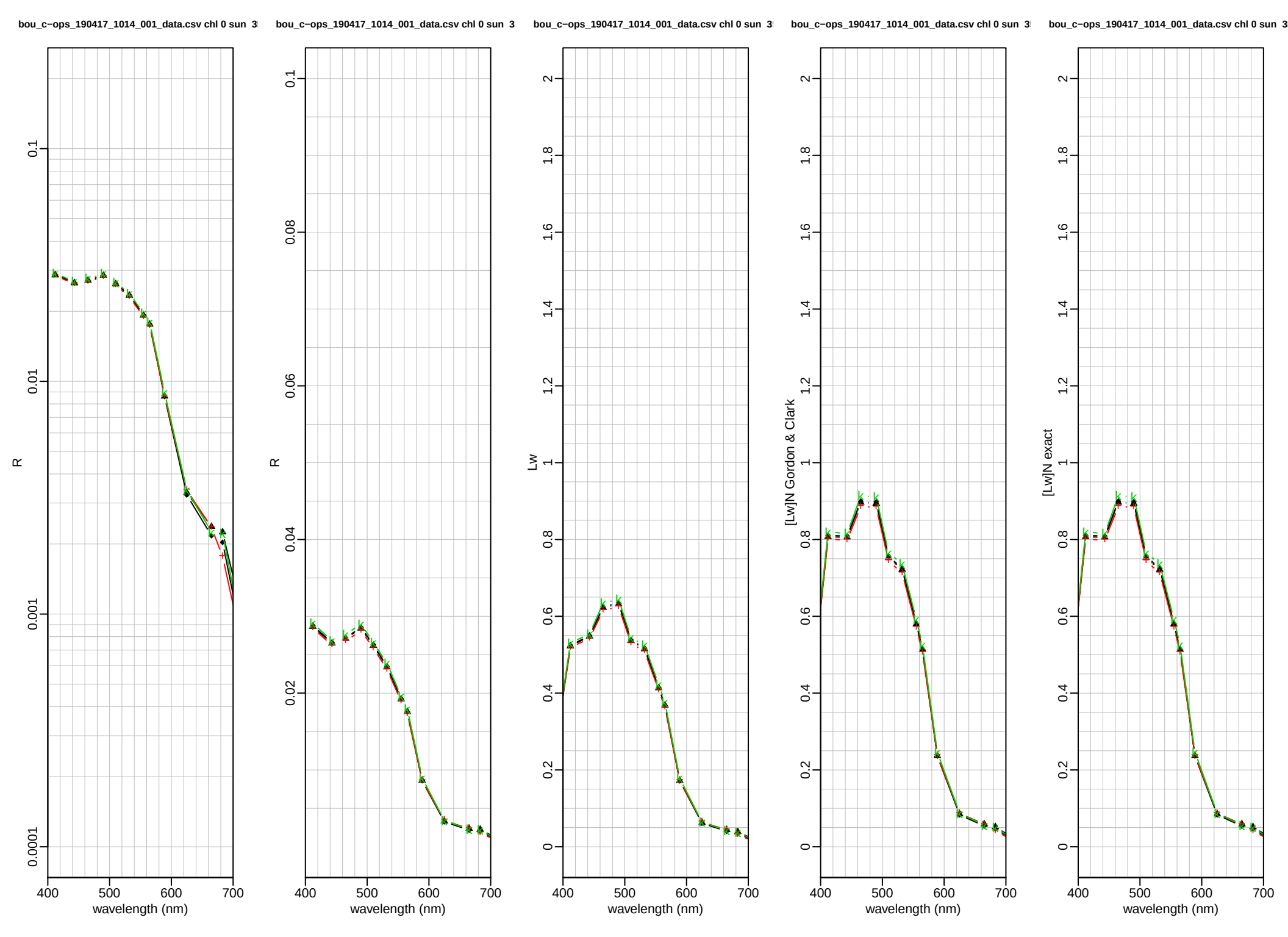






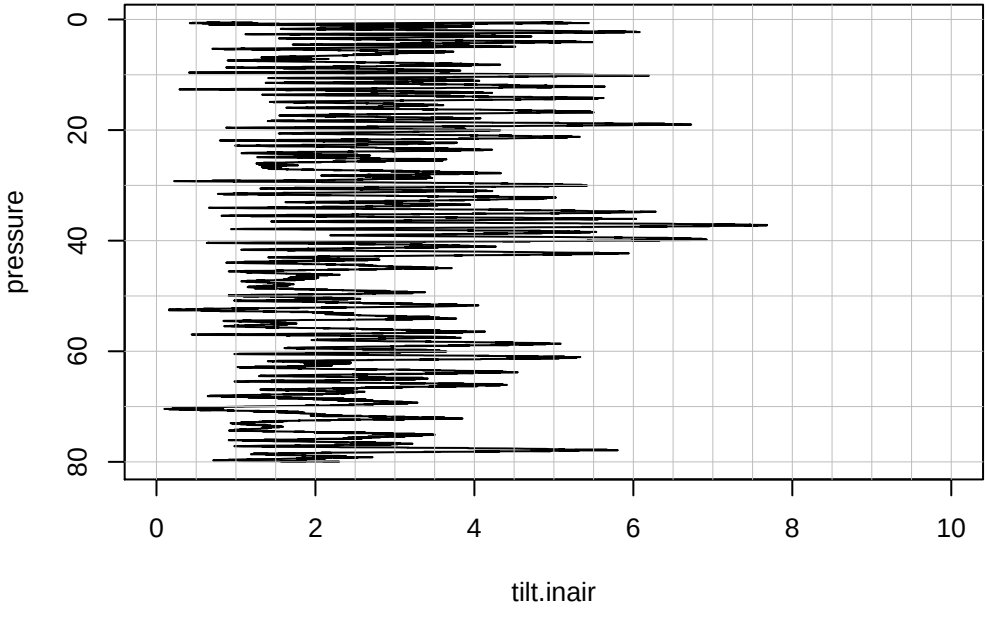


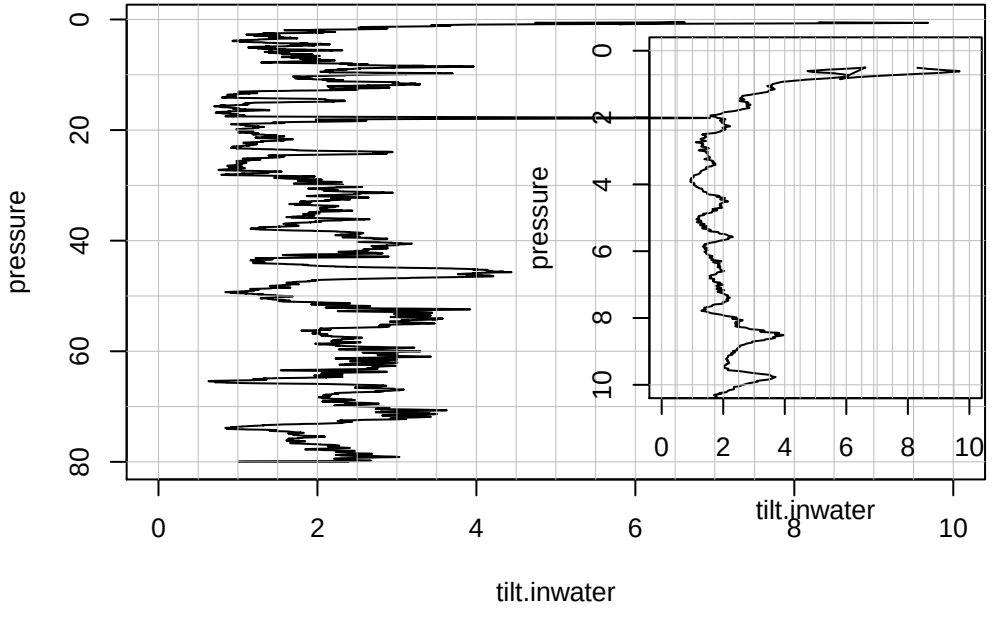

bou_c~ops_190417_1014_001_data.csv
depth
Ku
320
340
380
395
412
443
465
490
510
532
555
565

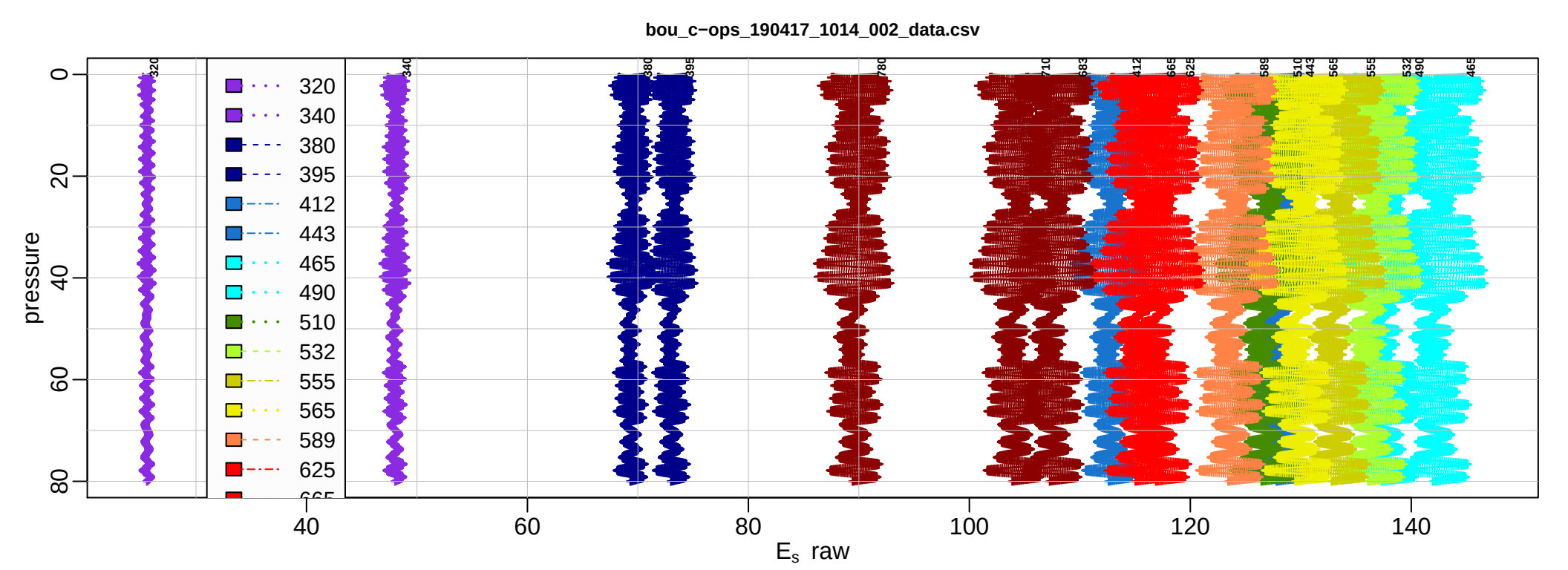

bou_c−ops_190417_1014_001_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190417_1014_001_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190417_1014_001_data.csv chl 0 sun 3
Lw
wavelength (nm)
bou_c−ops_190417_1014_001_data.csv chl 0 sun 3
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190417_1014_001_data.csv chl 0 sun 3
[Lw]N exact
wavelength (nm)

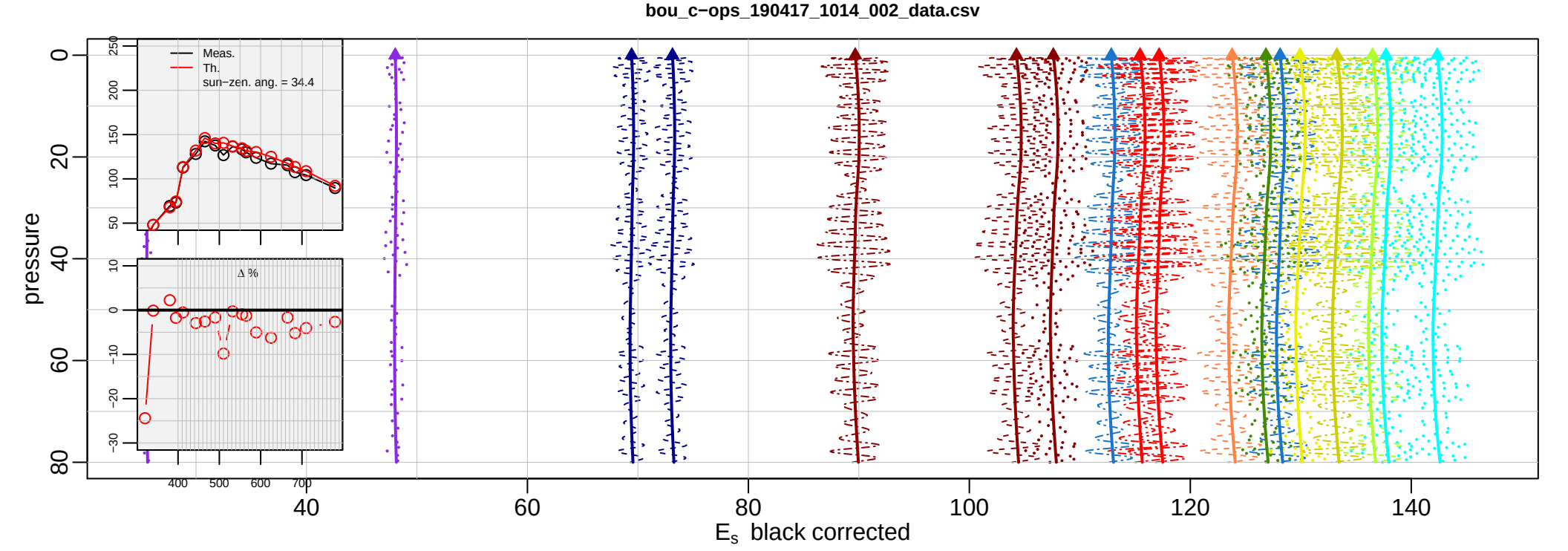
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole207/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole207/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole207/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole207/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89068196614583
latitude 43.3743815104167
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

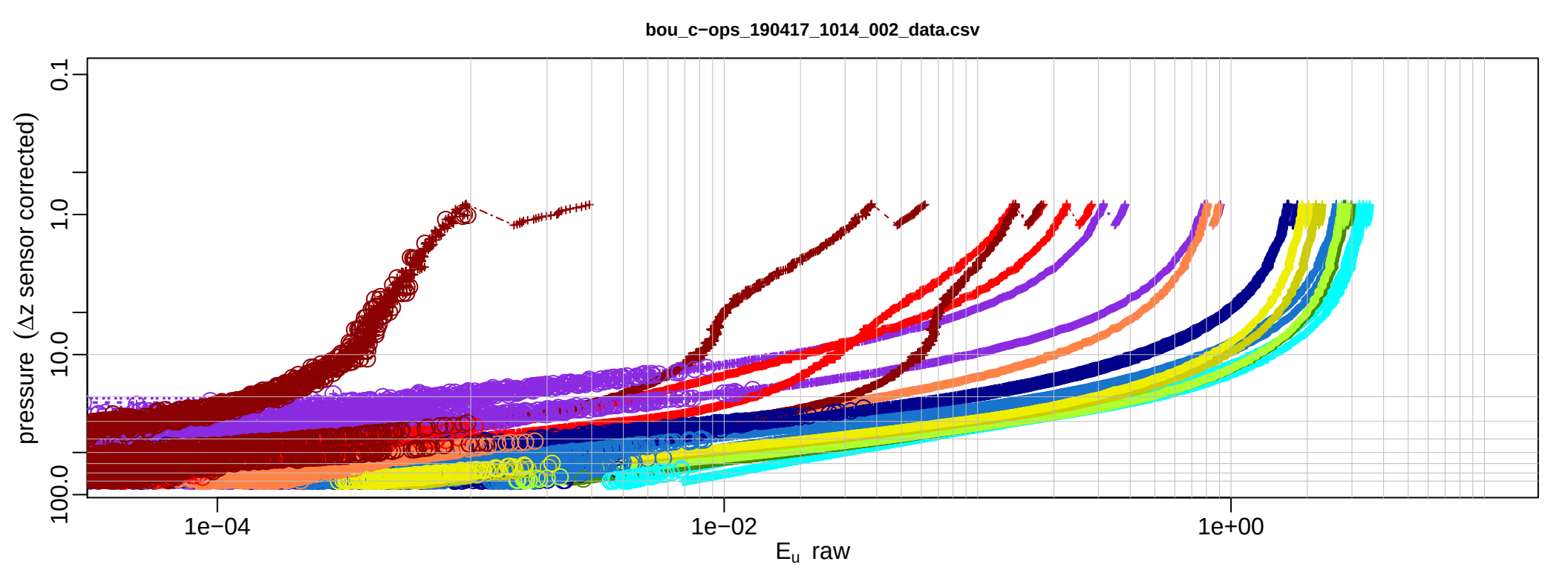
bou_c−ops_190417_1014_002_data.csv

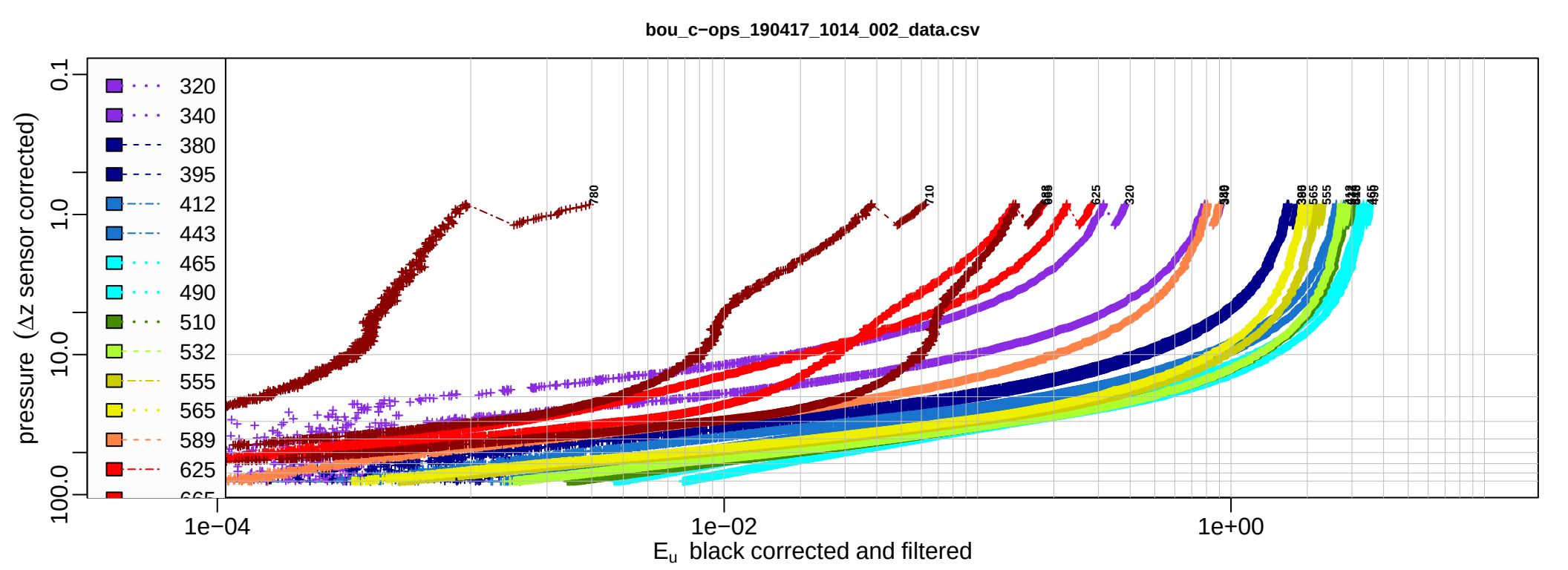


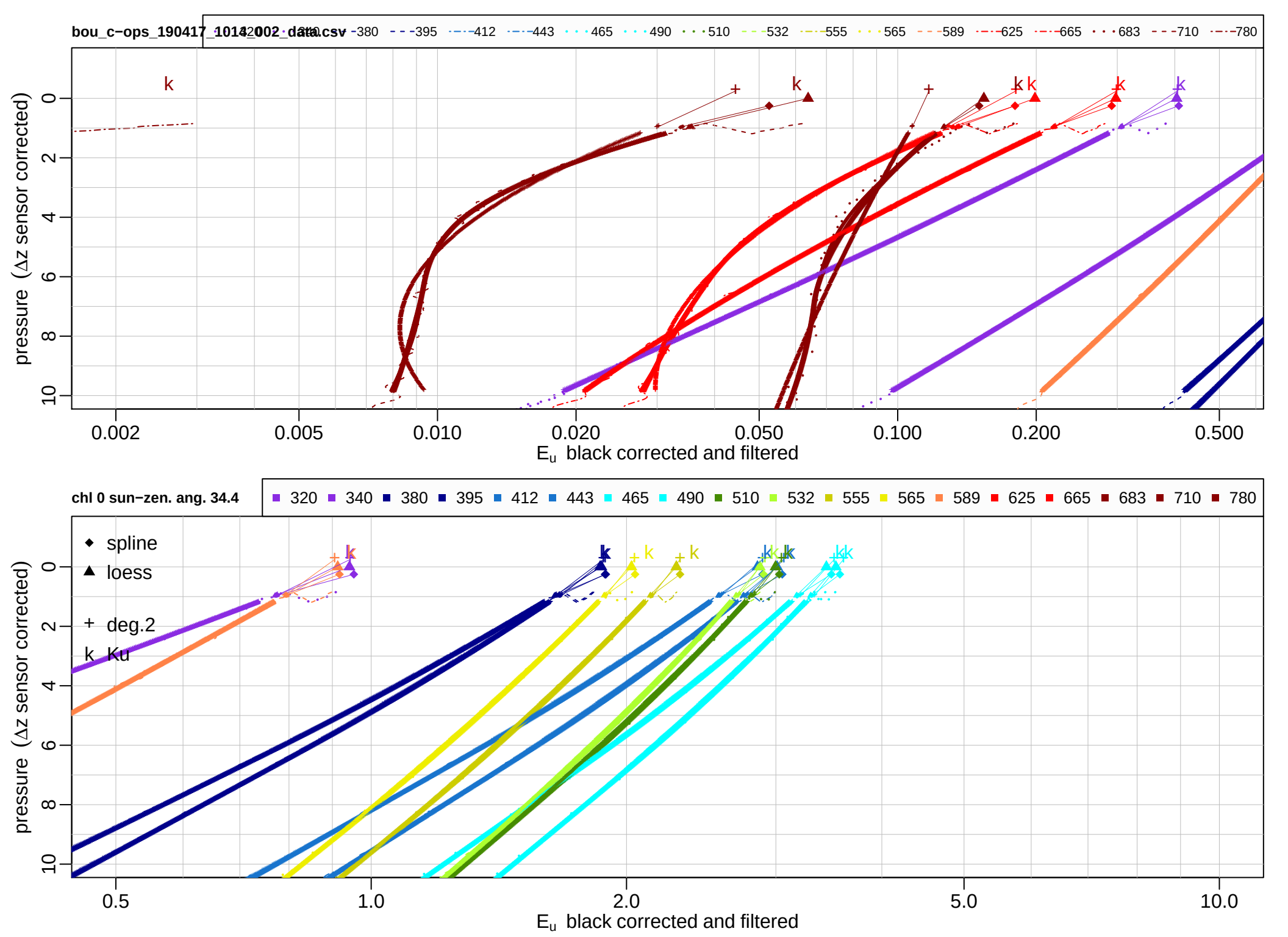


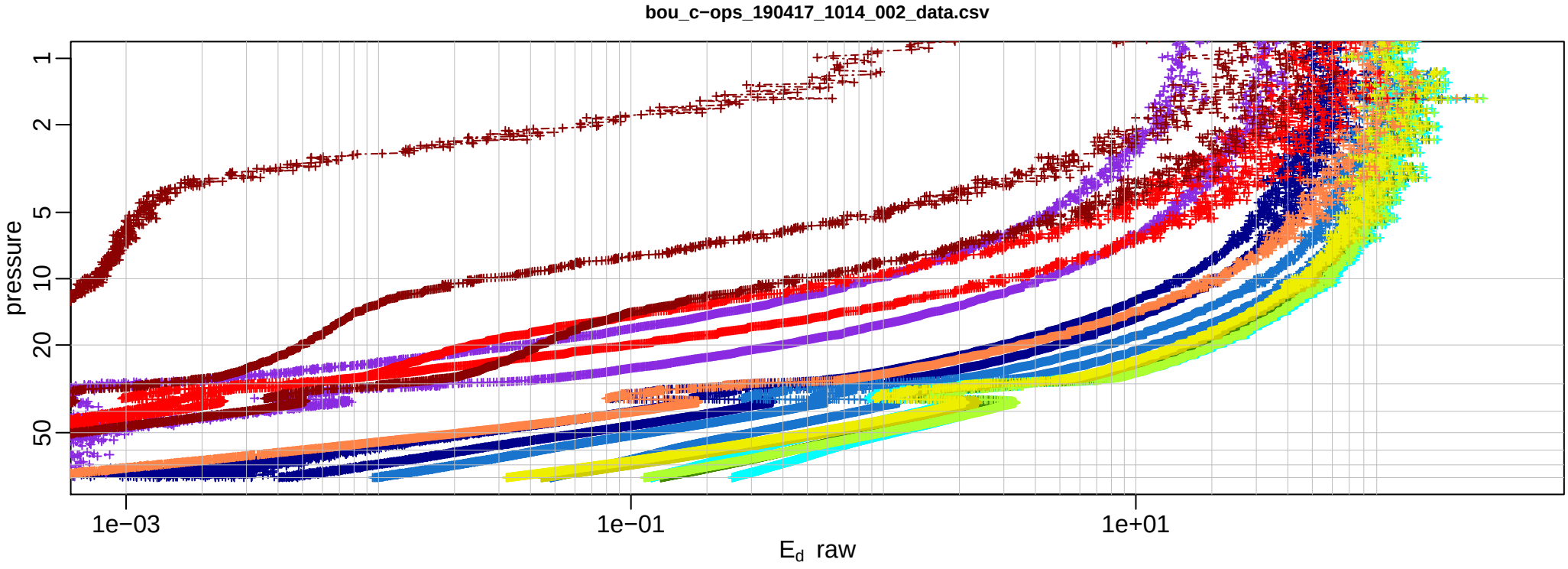

bou_c−ops_190417_1014_002_data.csv
pressure
0
20
40
60
80
320
340
380
395
412
443
465
490
510
532
555
565
589
625
40
60
80
100
120
140
E_s raw

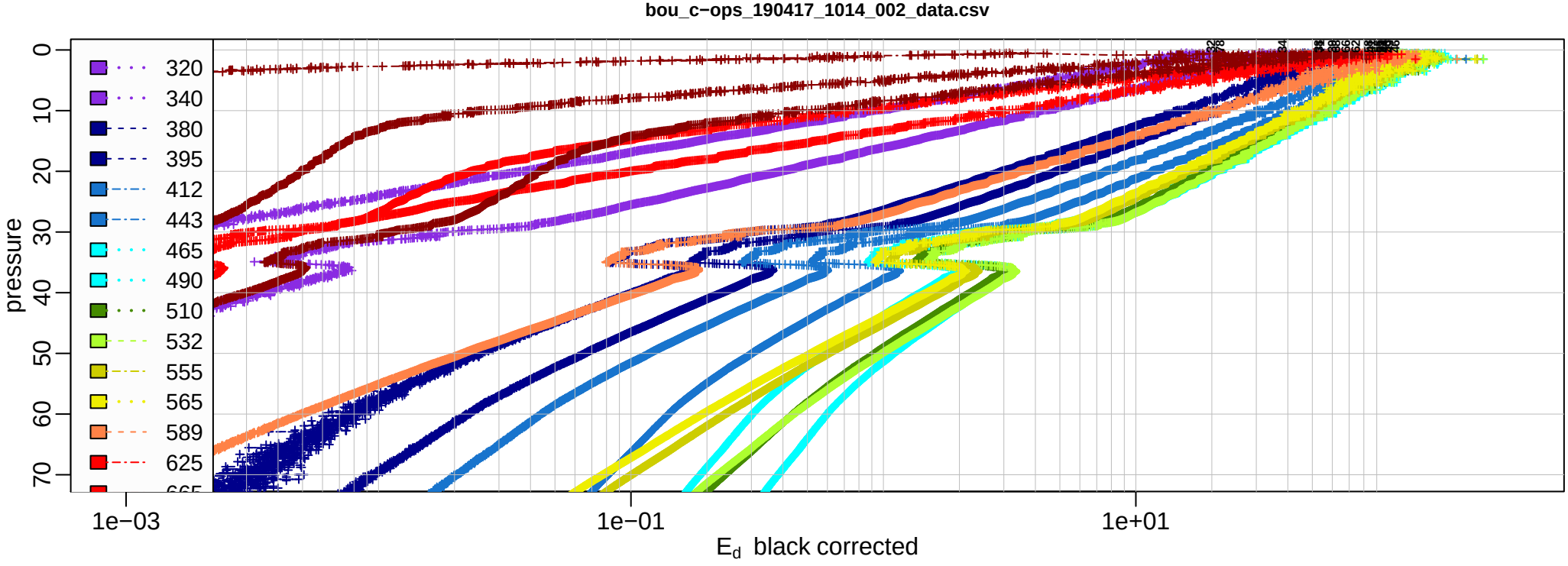

bou_c−ops_190417_1014_002_data.csv
pressure
0
20
40
60
80
Meas.
Th.
sun−zen. ang. = 34.4
Δ %
40
60
80
100
120
140
E_s black corrected

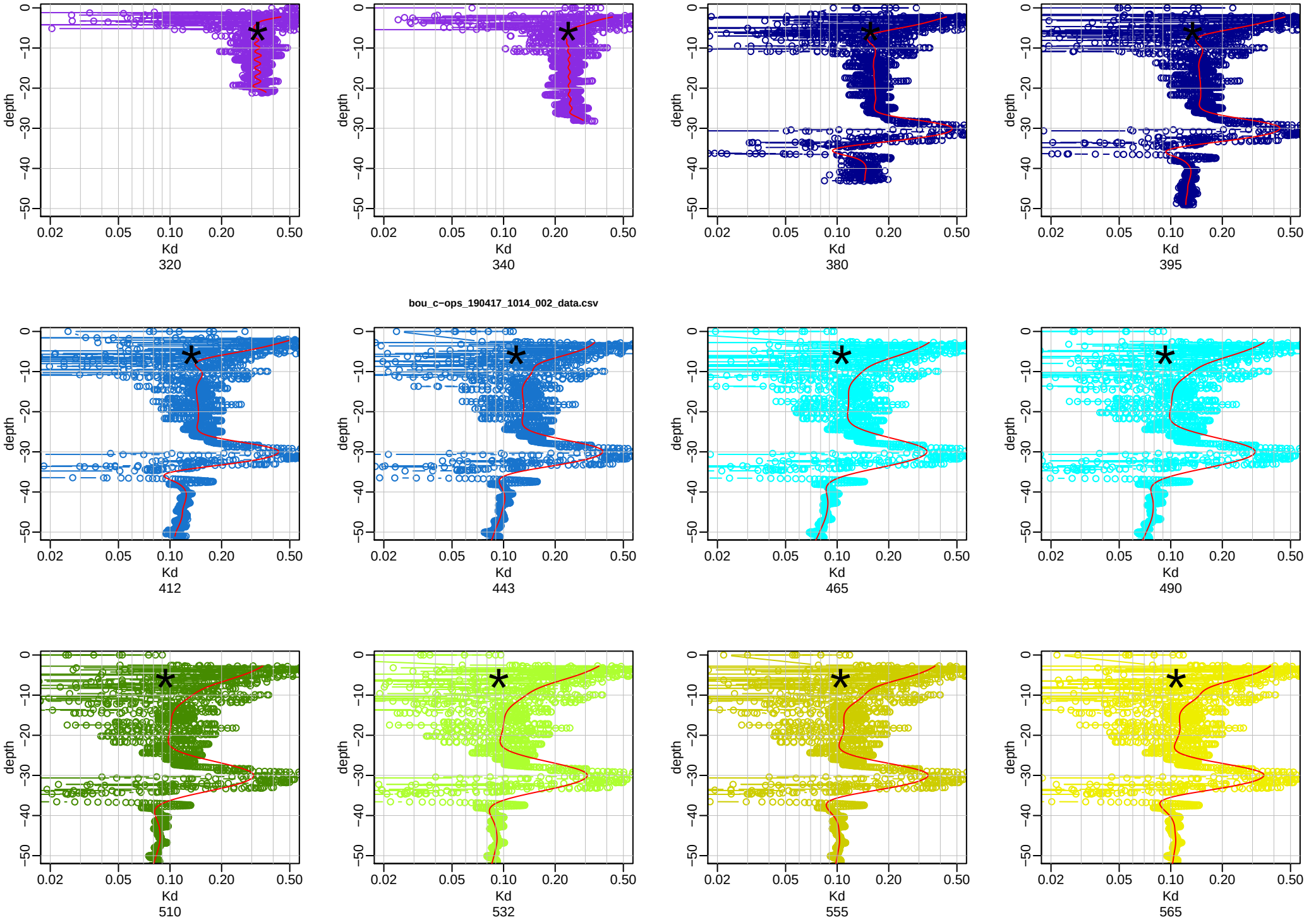

bou_c−ops_190417_1014_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

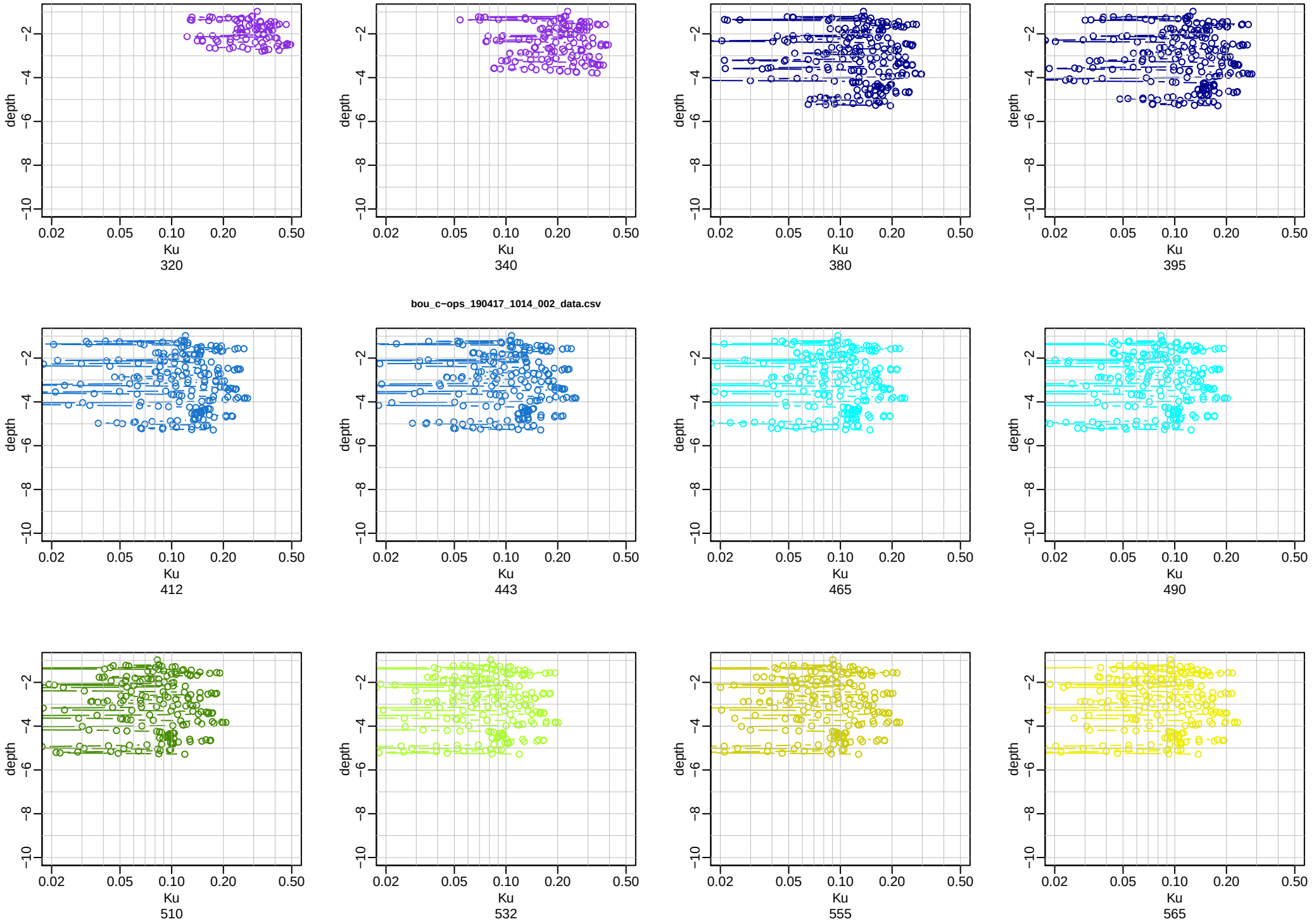

bou_c−ops_190417_1014_002_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
320
1e−04
1e−02
1e+00
E_u black corrected and filtered

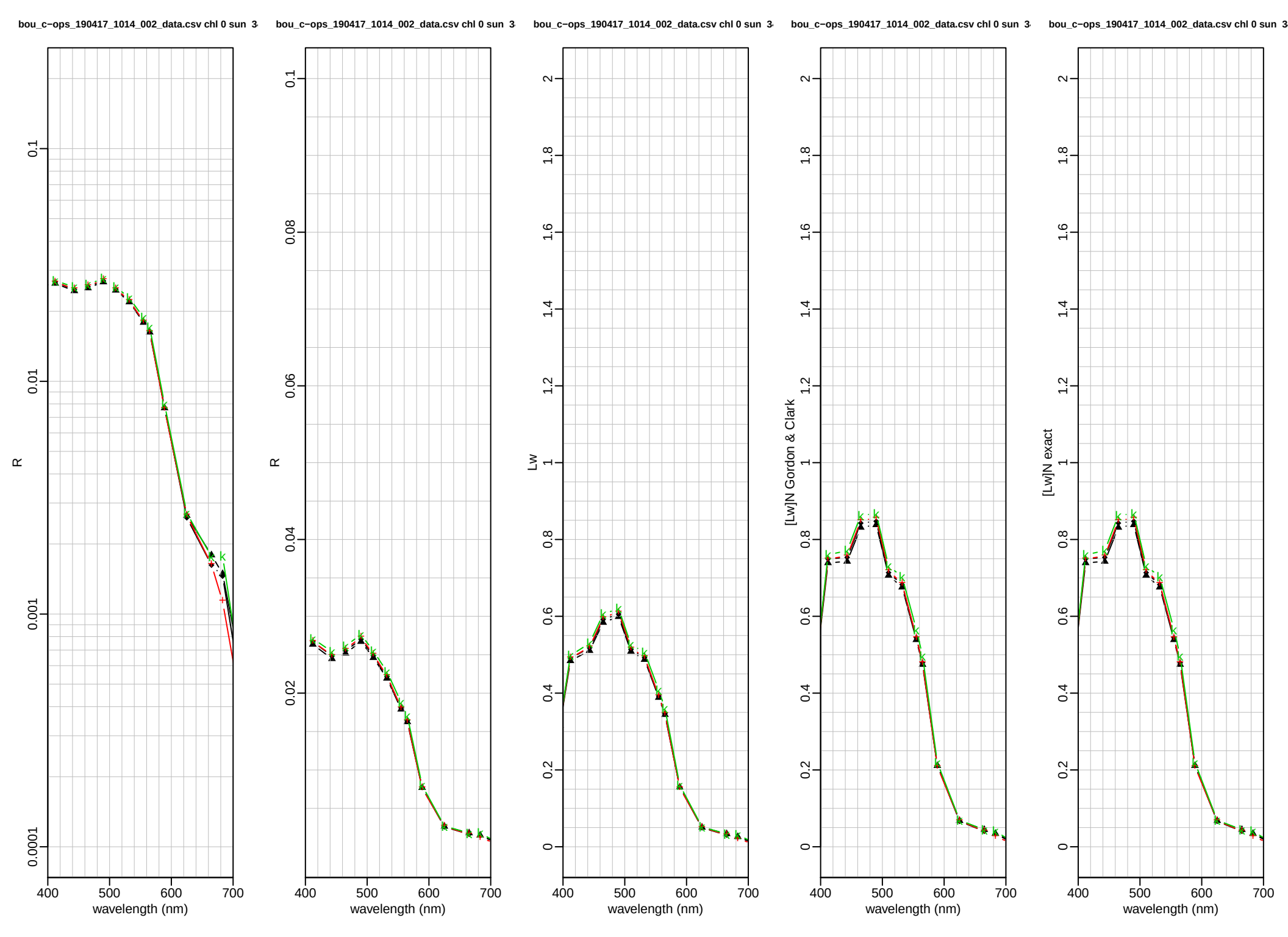

bou_c−ops_190417_1014_002_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 34.4
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190417_1014_002_data.csv
pressure
1
2
5
10
20
50
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190417_1014_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

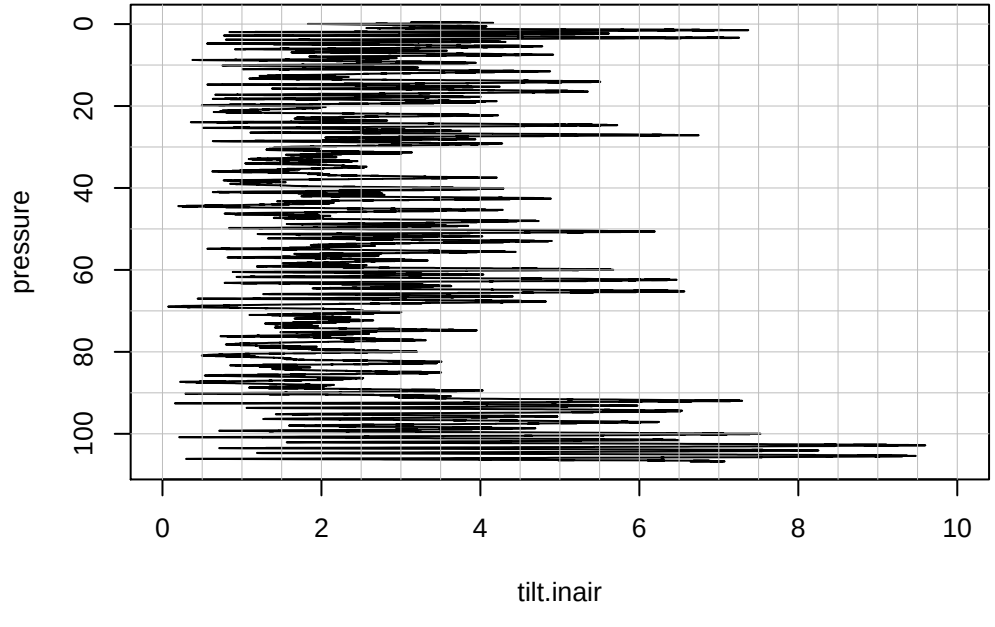

bou_c~ops_190417_1014_002_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

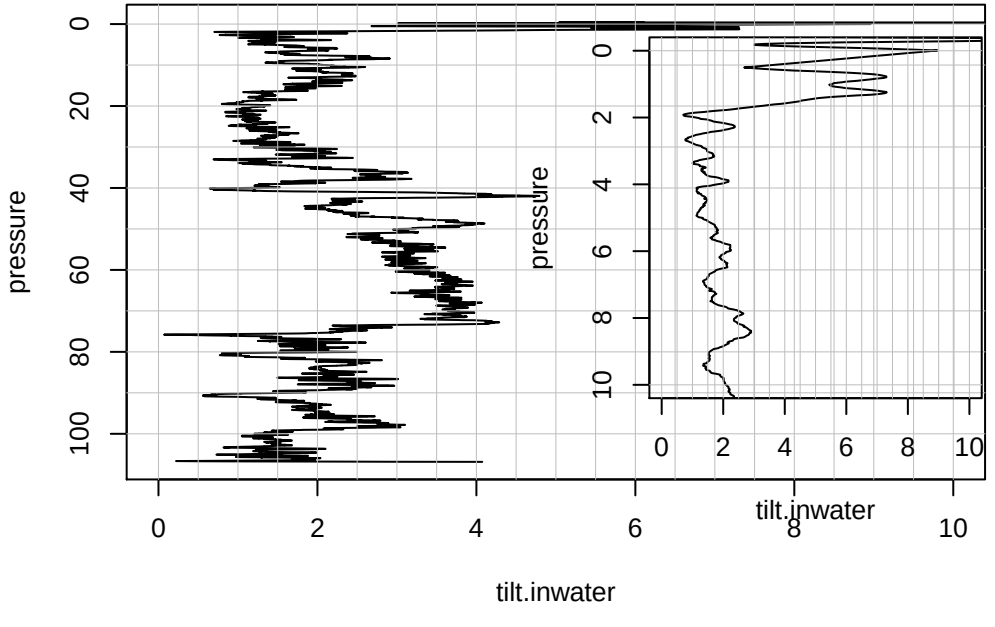

bou_c−ops_190417_1014_002_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

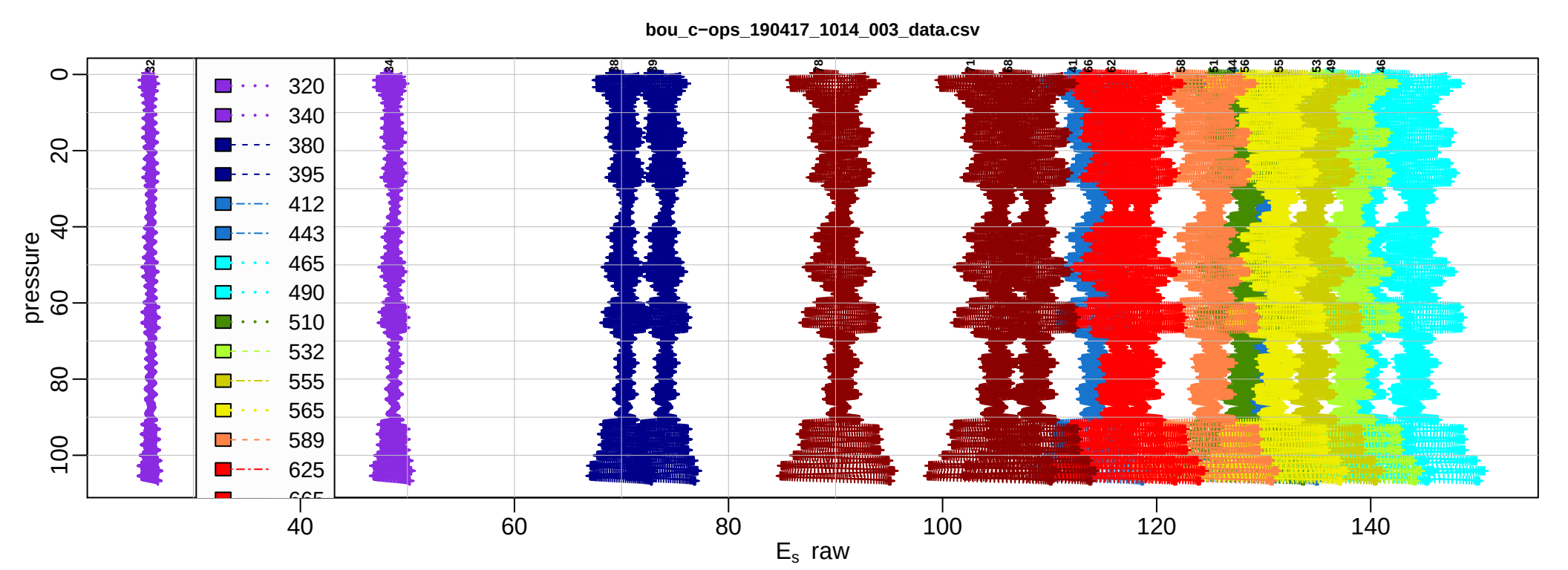

bou_c−ops_190417_1014_002_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190417_1014_002_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190417_1014_002_data.csv chl 0 sun 3
Lw
wavelength (nm)
bou_c−ops_190417_1014_002_data.csv chl 0 sun 3
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190417_1014_002_data.csv chl 0 sun 3
[Lw]N exact
wavelength (nm)

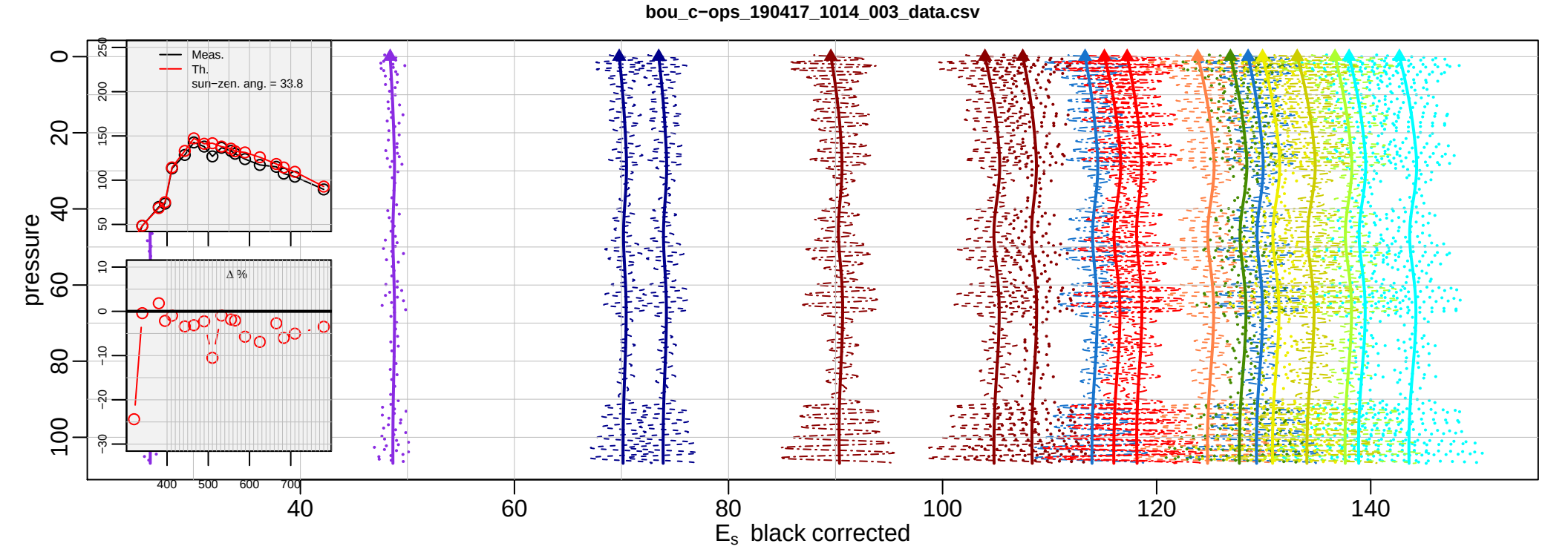
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole207/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole207/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole207/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole207/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.88502400716147
latitude 43.3750651041667
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

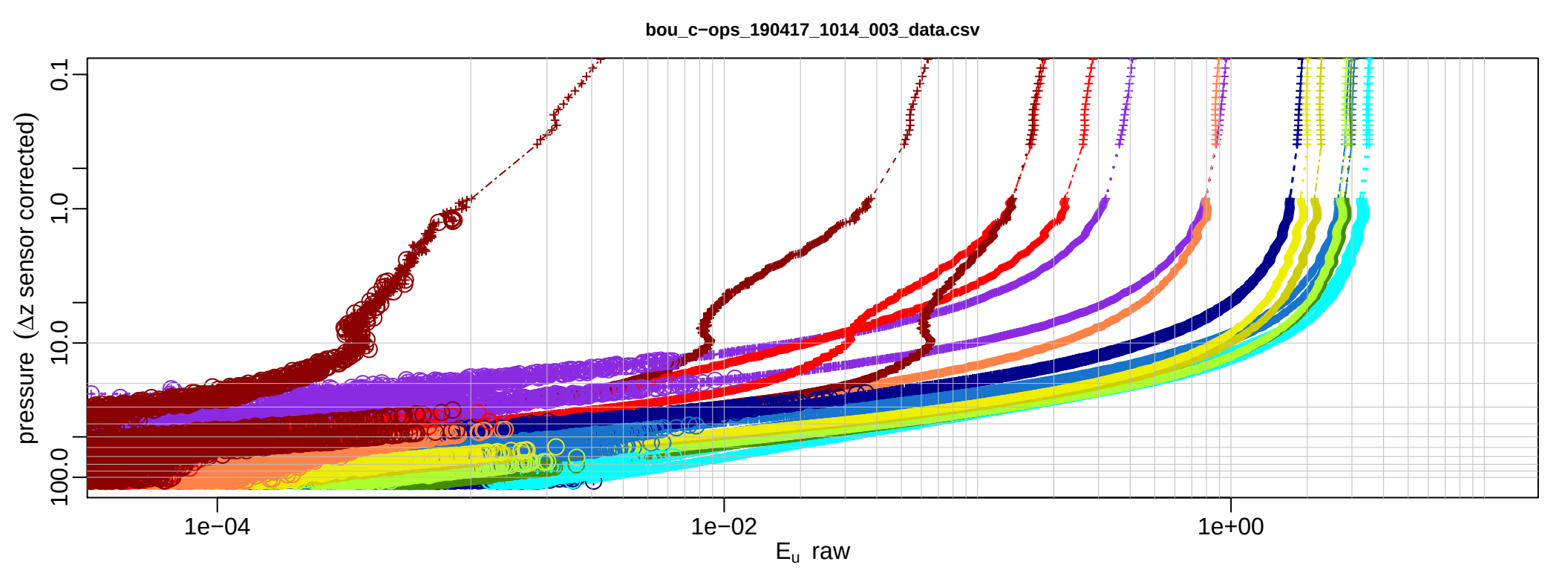
bou_c−ops_190417_1014_003_data.csv

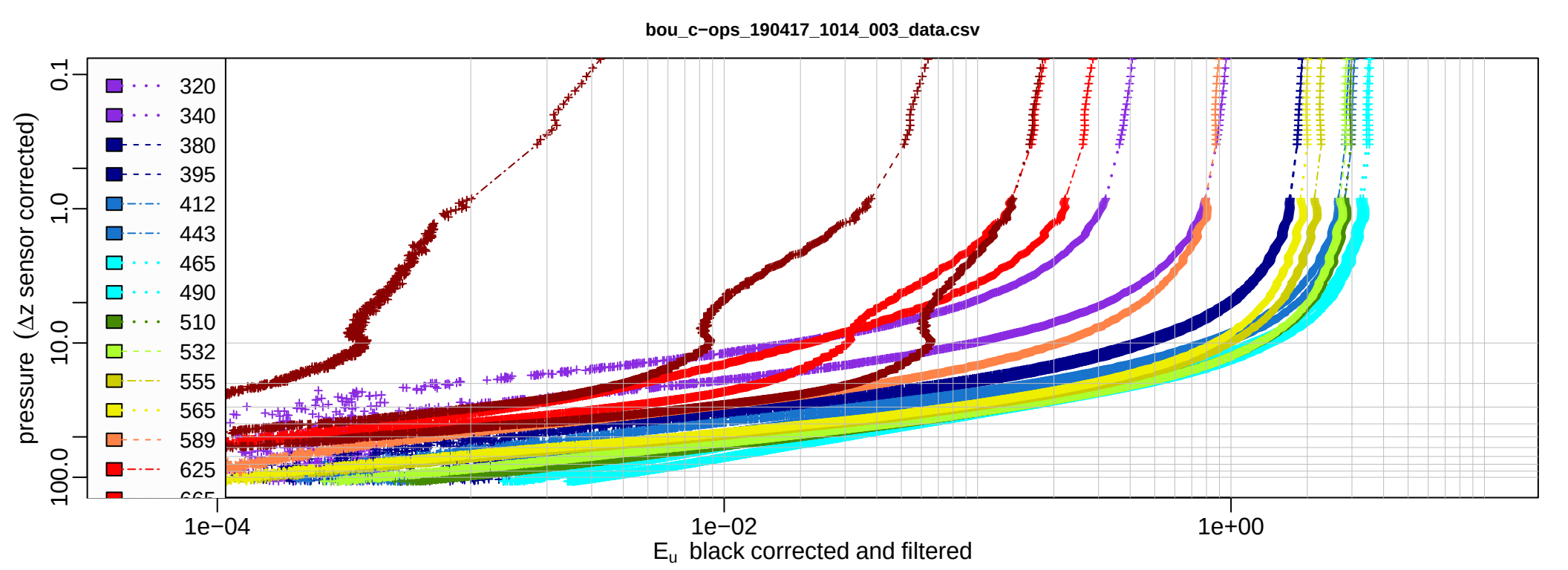


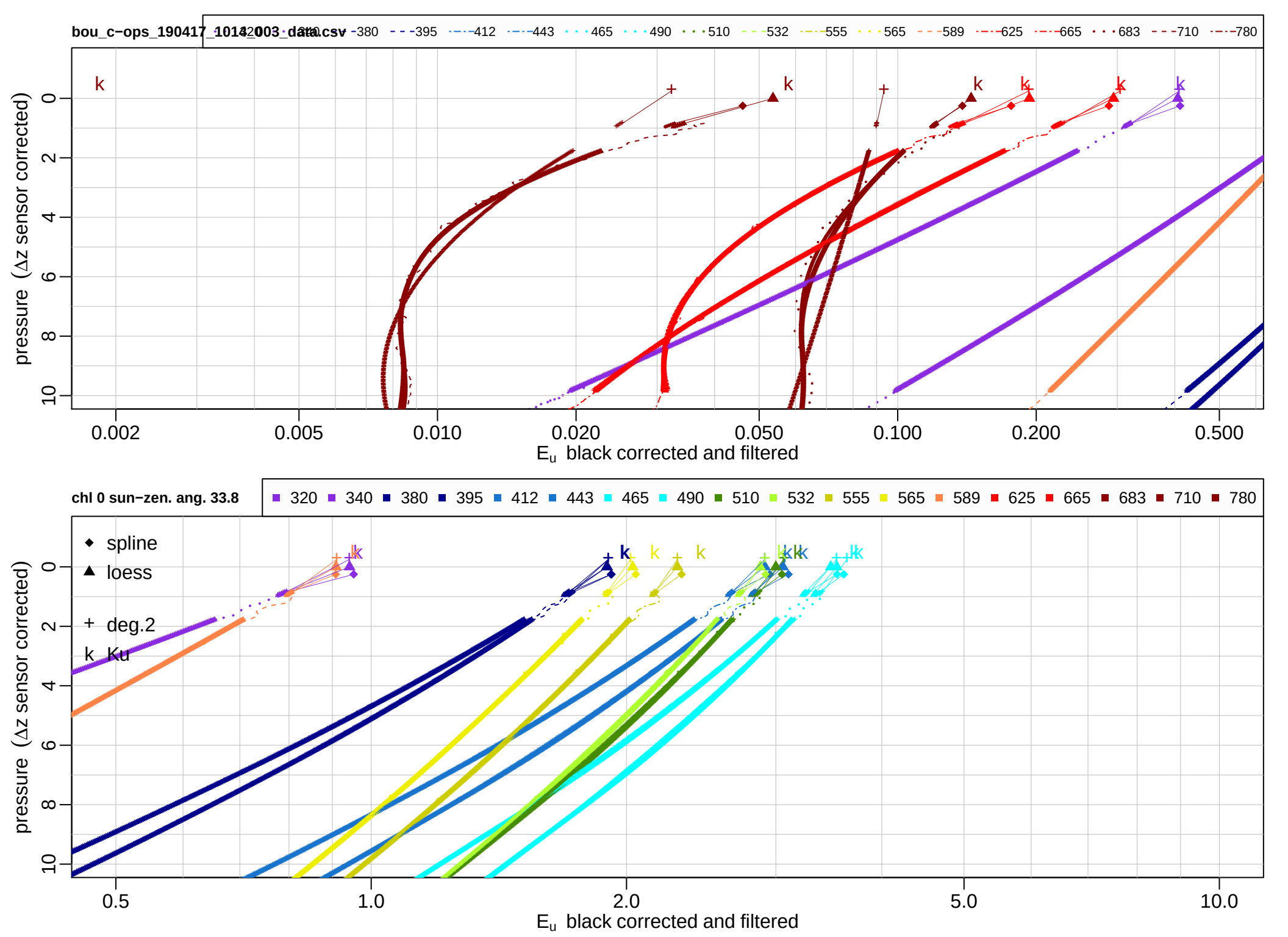


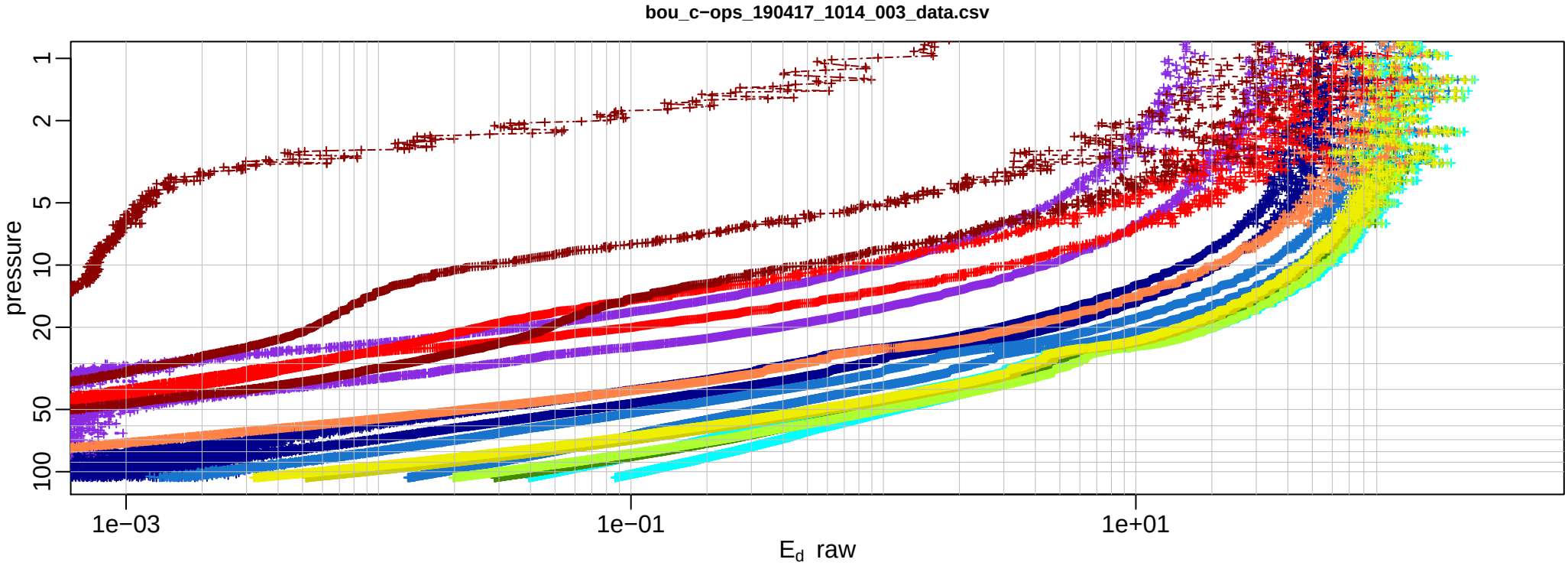

bou_c−ops_190417_1014_003_data.csv
pressure
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

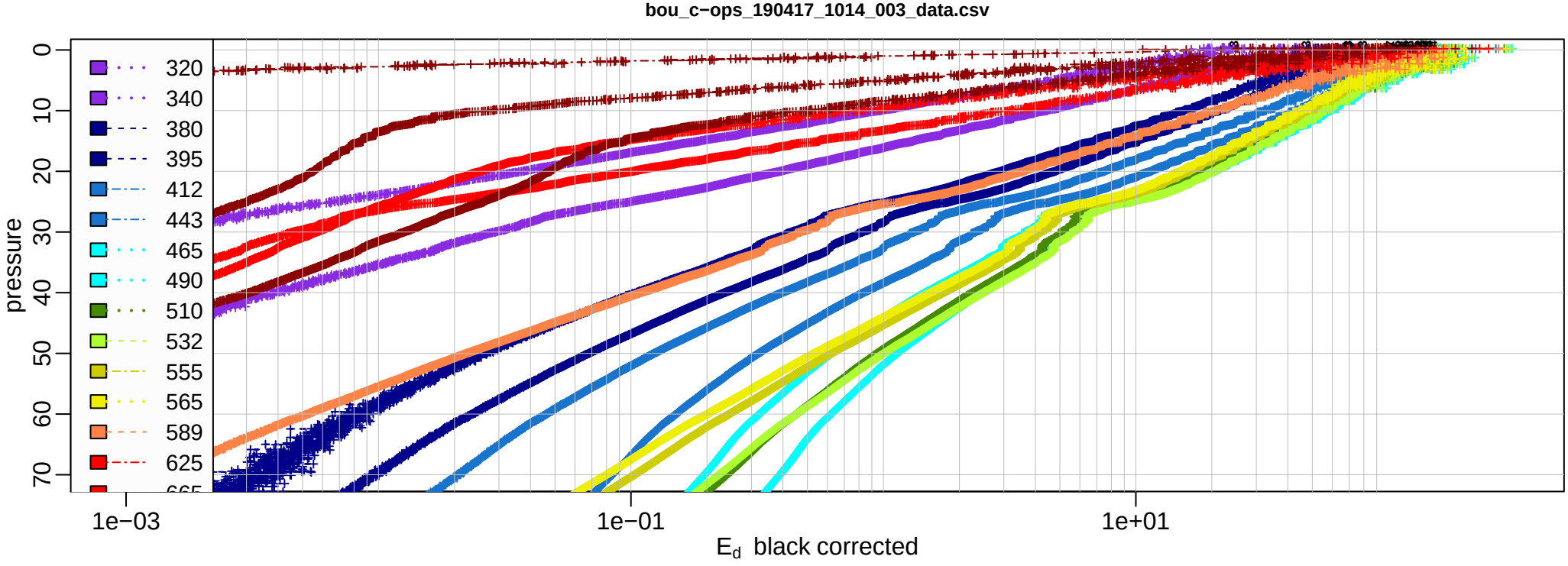

bou_c−ops_190417_1014_003_data.csv
pressure
E_s black corrected
Meas.
Th.
sun−zen. ang. = 33.8
Δ %

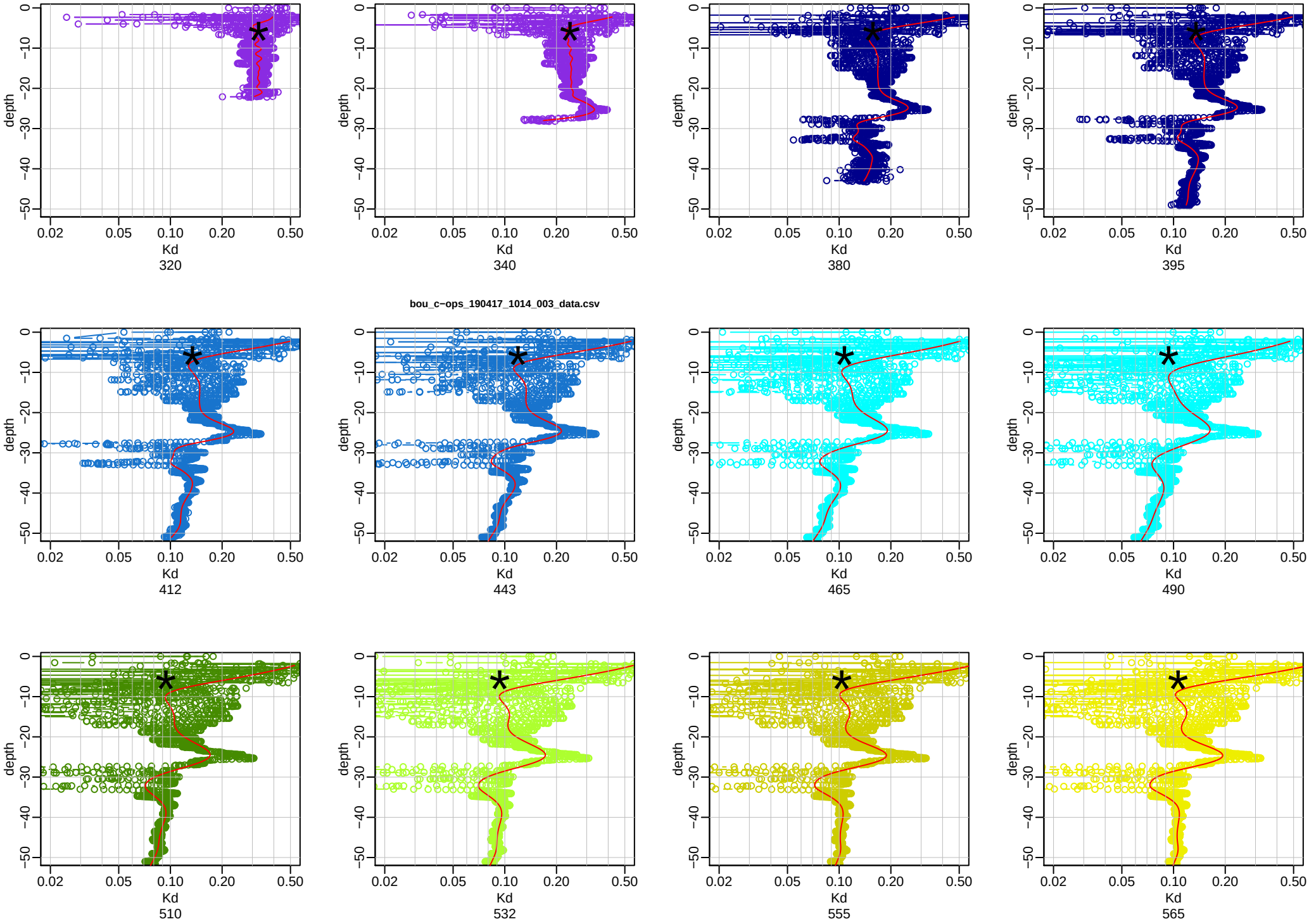

bou_c−ops_190417_1014_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

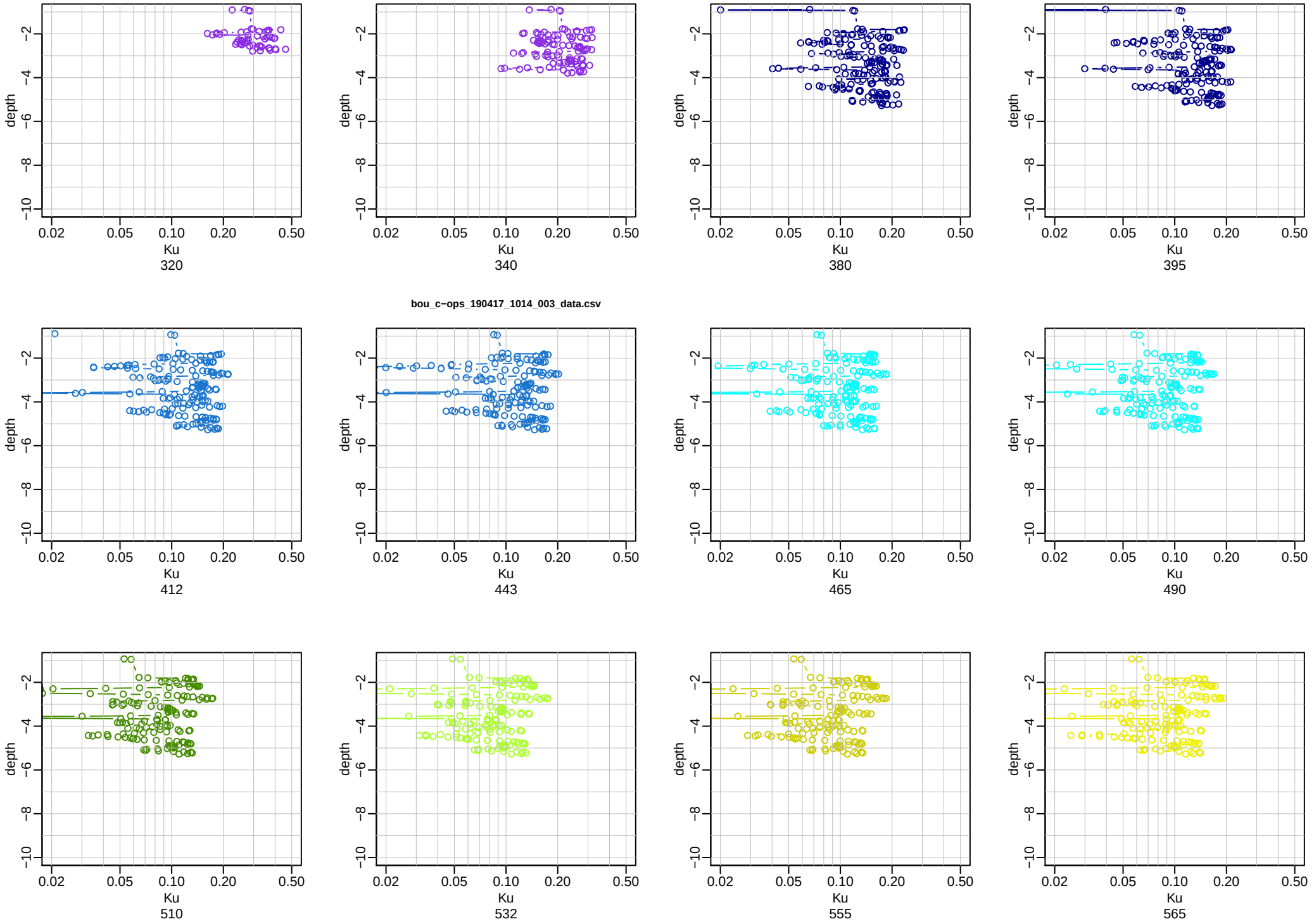

bou_c−ops_190417_1014_003_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u black corrected and filtered

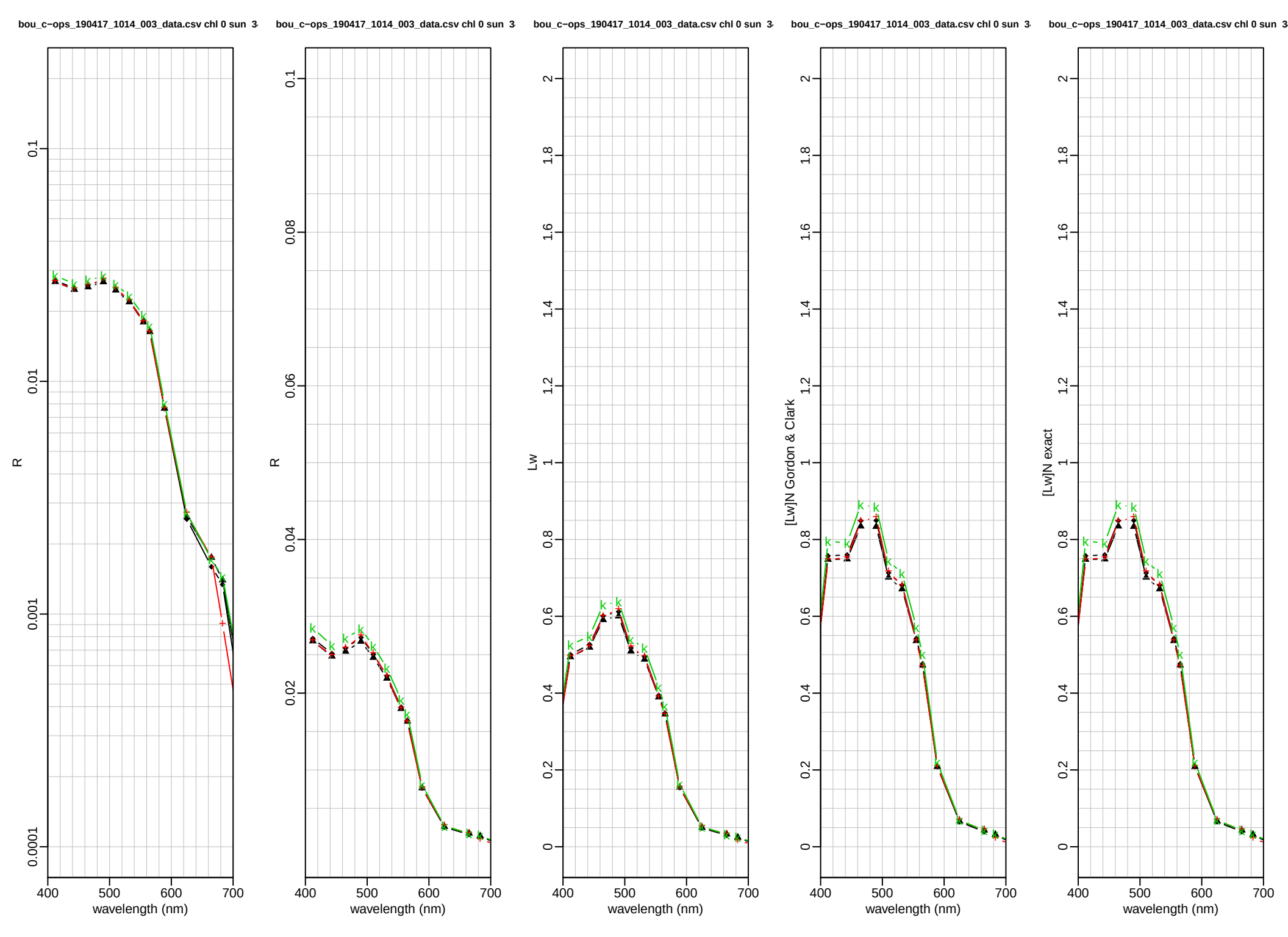

bou_c−ops_190417_1014_003_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
Eu black corrected and filtered
chl 0 sun−zen. ang. 33.8
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
Eu black corrected and filtered


bou_c−ops_190417_1014_003_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190417_1014_003_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

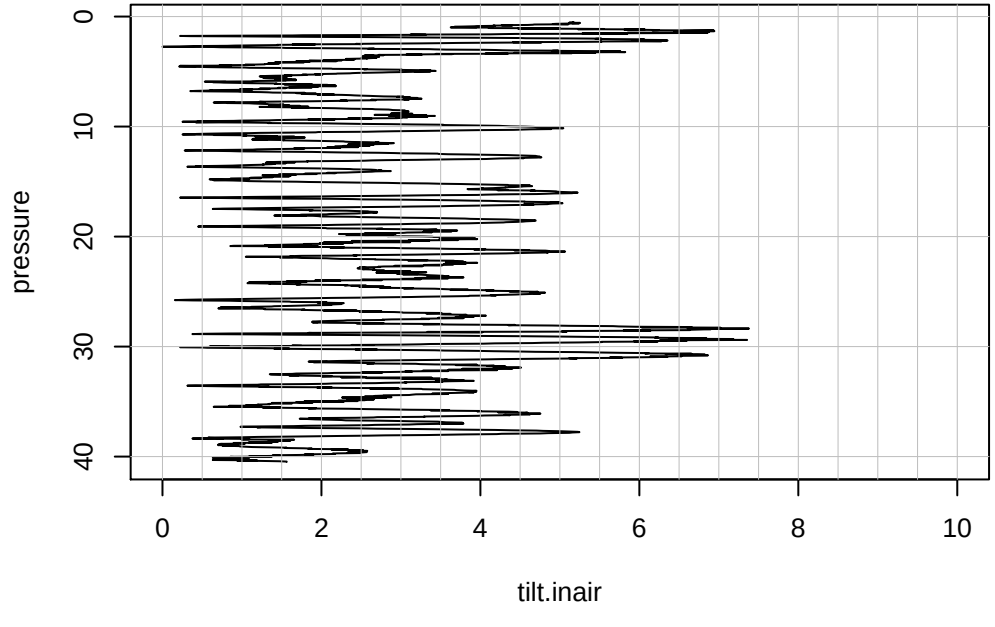

bou_c~ops_190417_1014_003_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

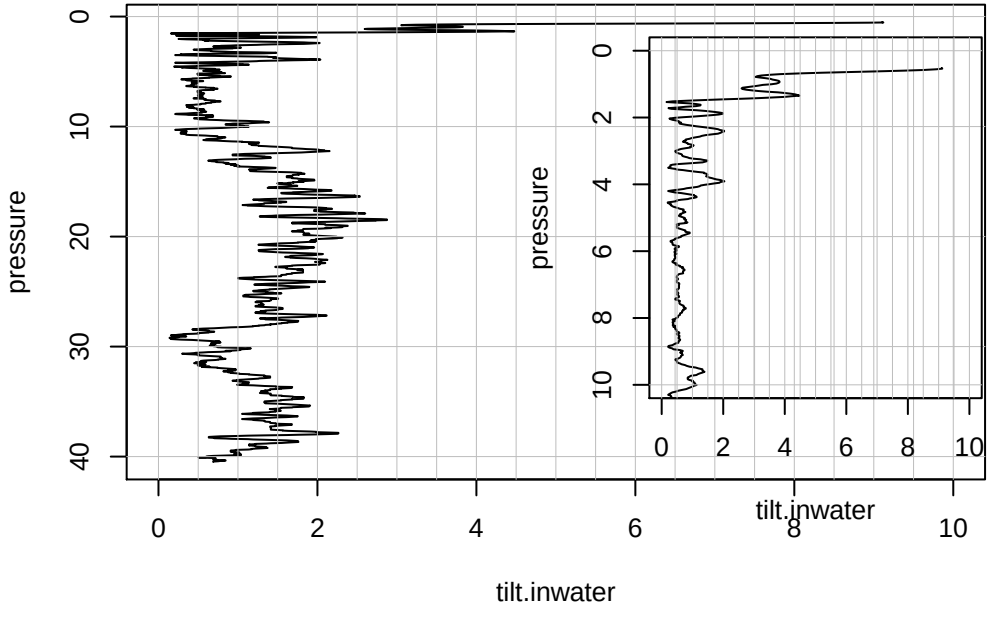

bou_c−ops_190417_1014_003_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

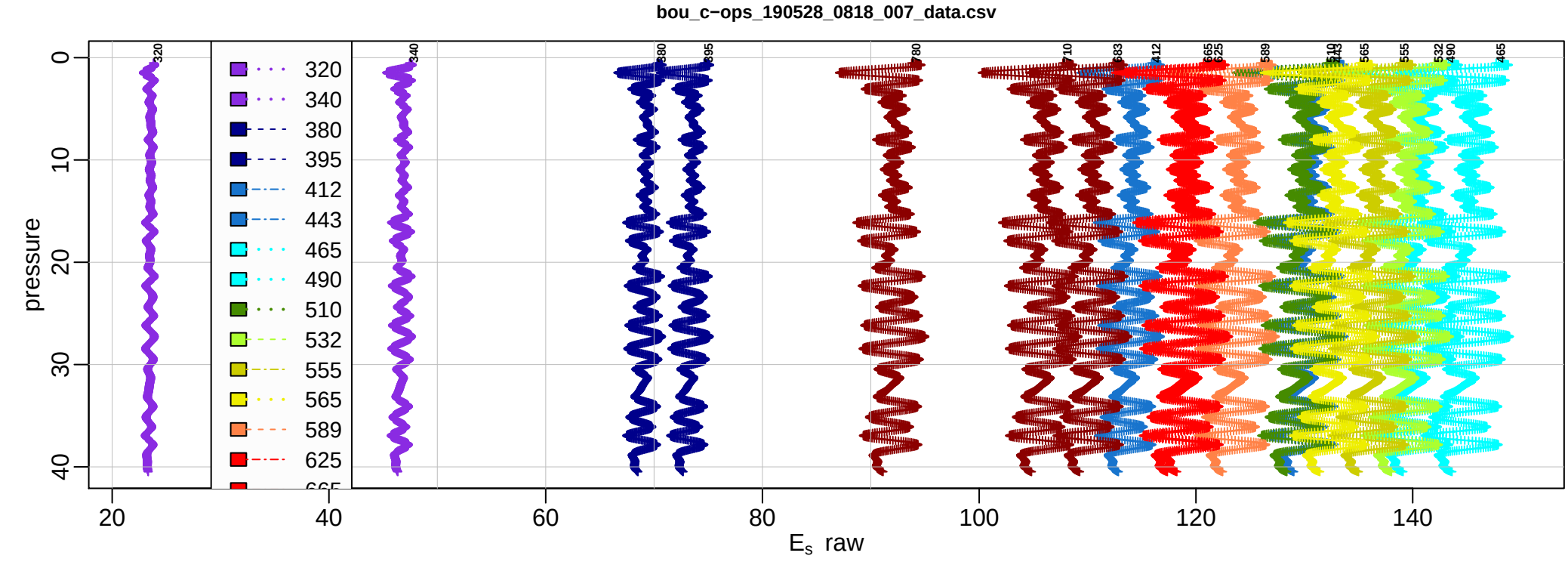

bou_c−ops_190417_1014_003_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190417_1014_003_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190417_1014_003_data.csv chl 0 sun 3
Lw
wavelength (nm)
bou_c−ops_190417_1014_003_data.csv chl 0 sun 3
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190417_1014_003_data.csv chl 0 sun 3
[Lw]N exact
wavelength (nm)

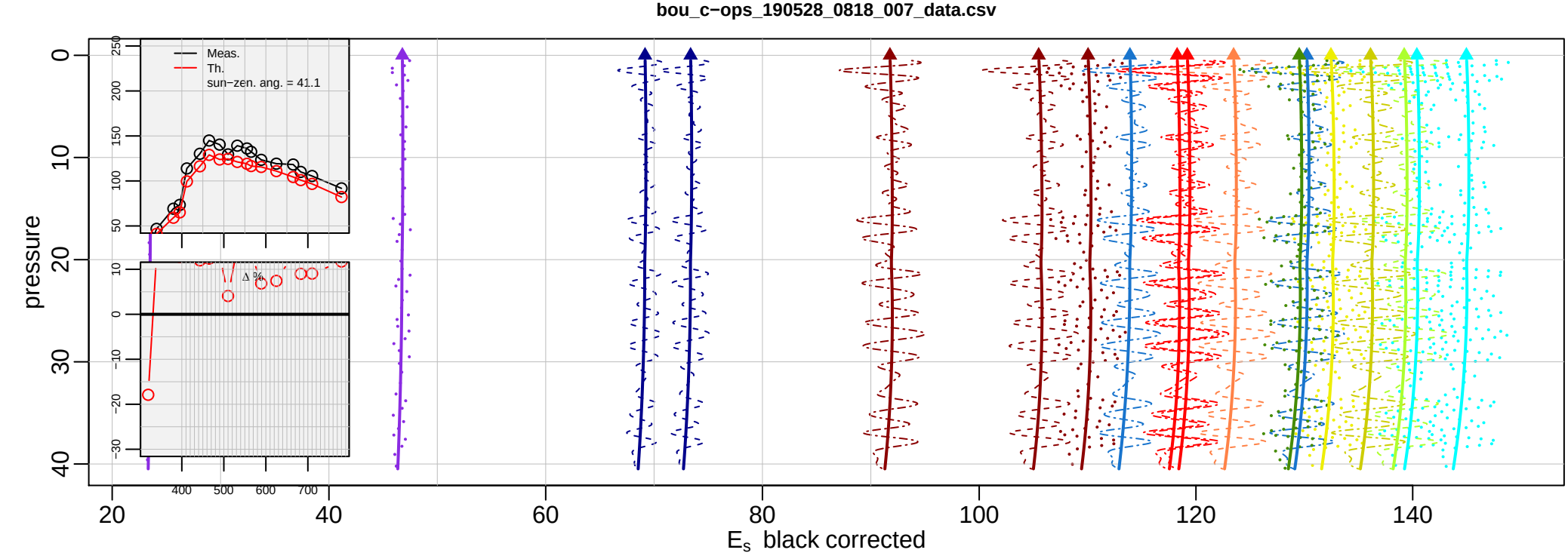
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole208/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole208/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole208/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole208/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89971923828125
latitude 43.3655110677083
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

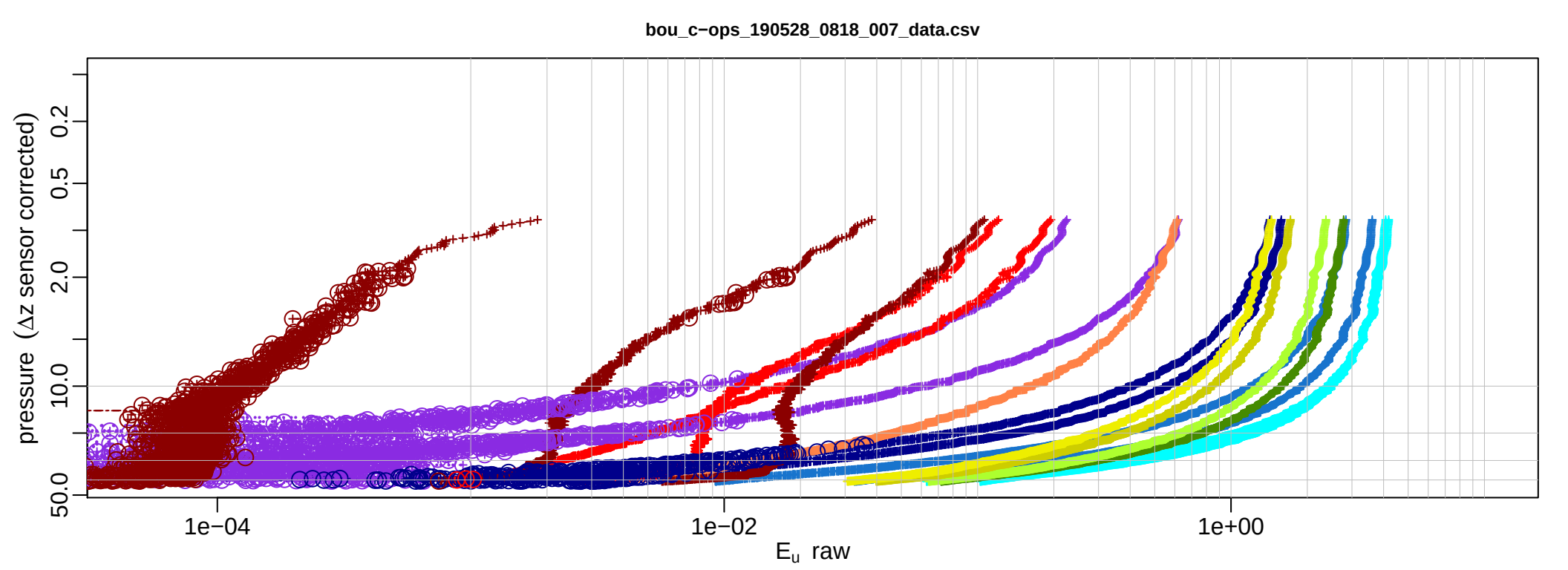
bou_c−ops_190528_0818_007_data.csv

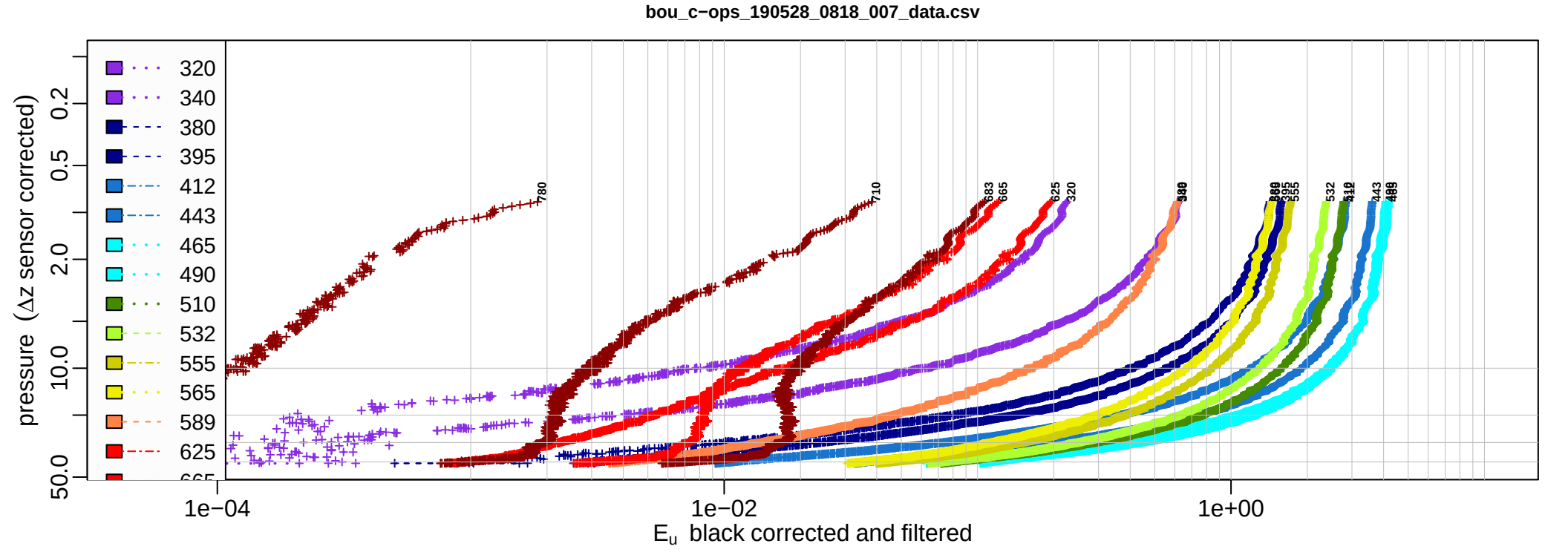


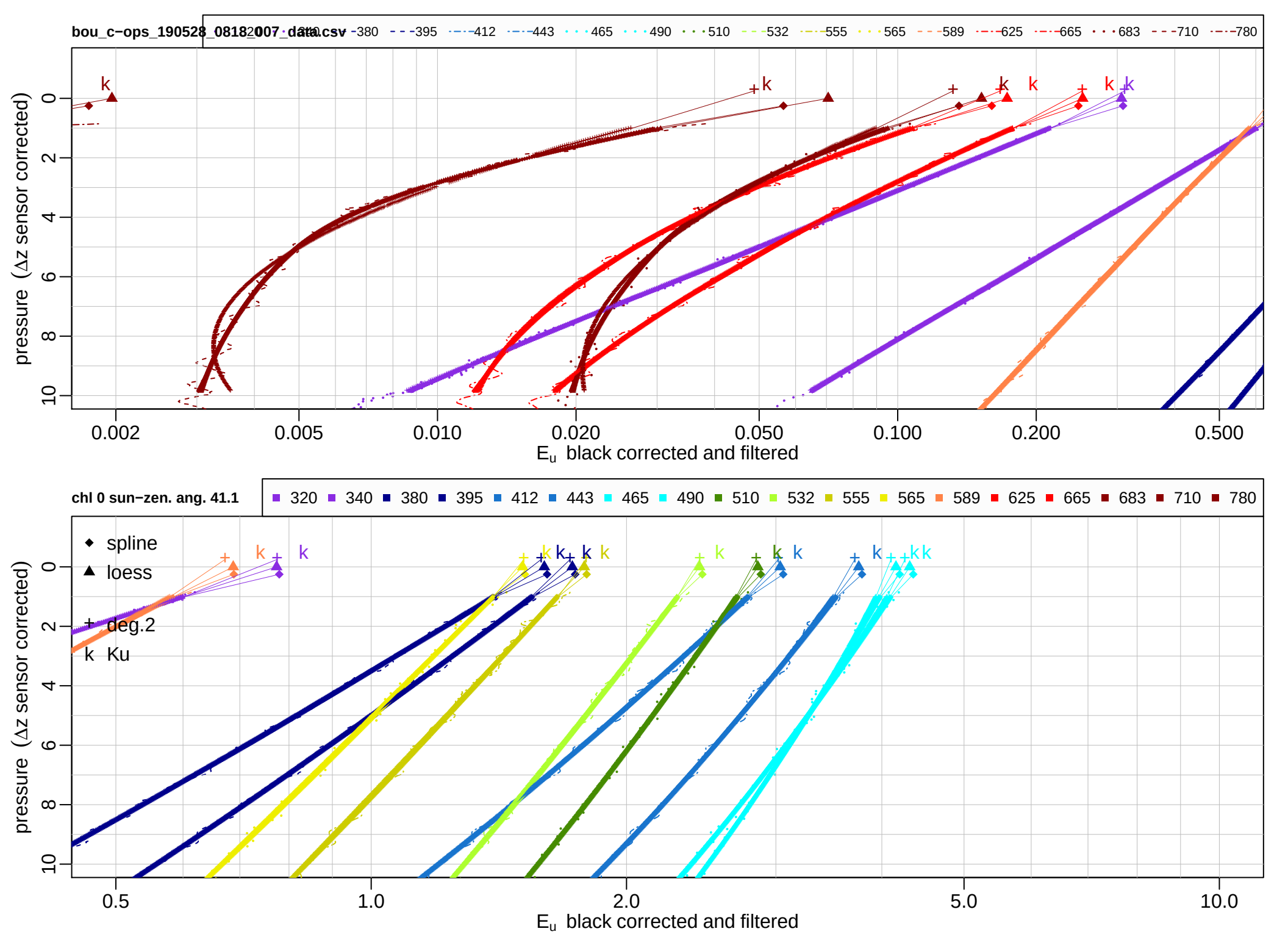


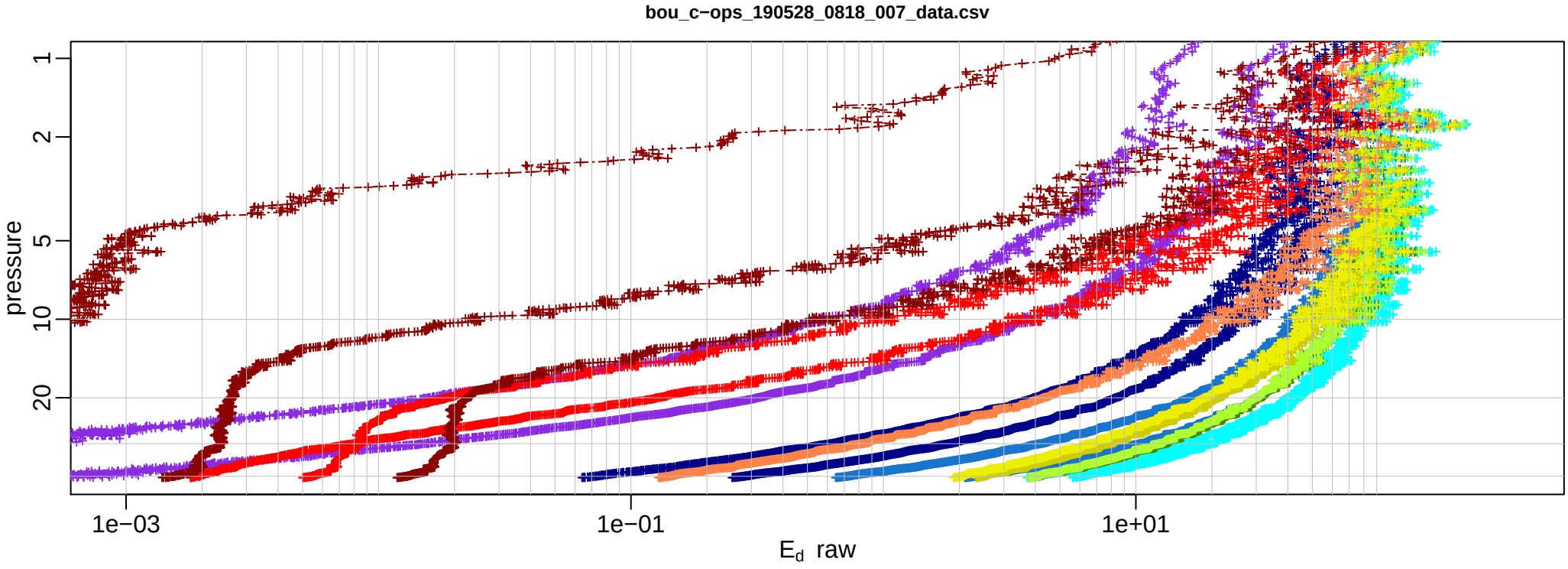

bou_c−ops_190528_0818_007_data.csv
pressure
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

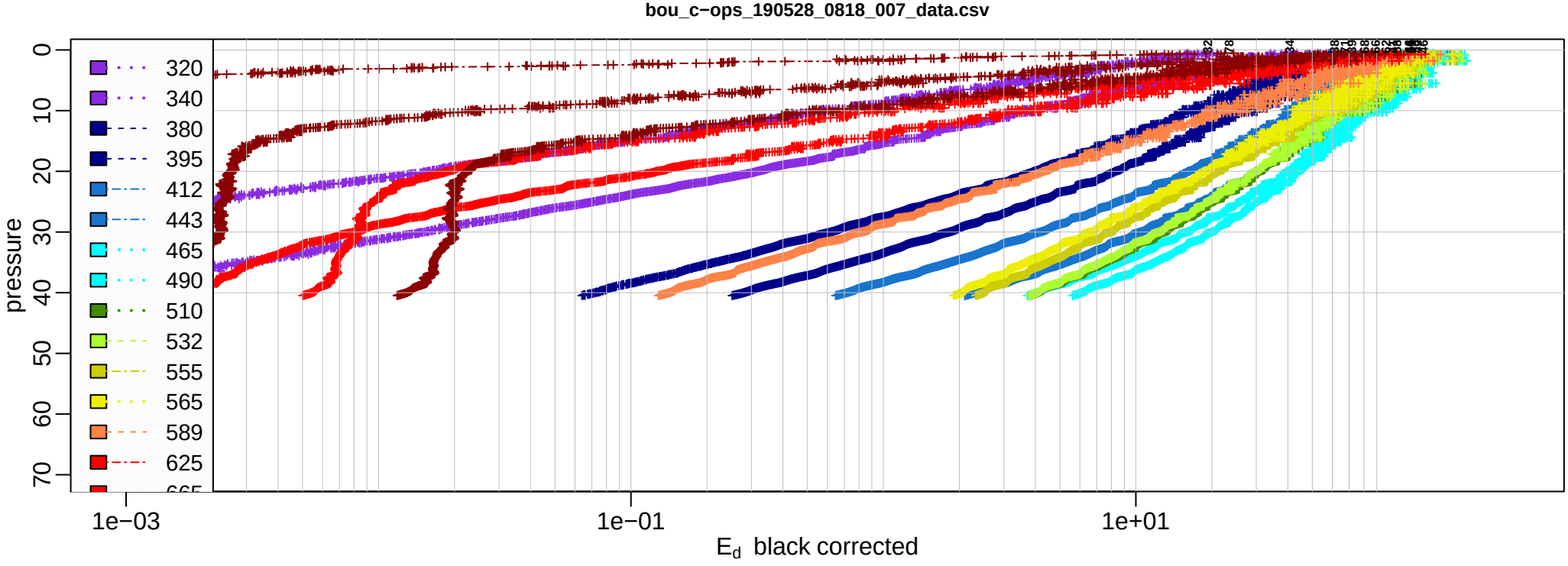

bou_c−ops_190528_0818_007_data.csv
pressure
E_s black corrected
Meas.
Th.
sun−zen. ang. = 41.1
Δ %

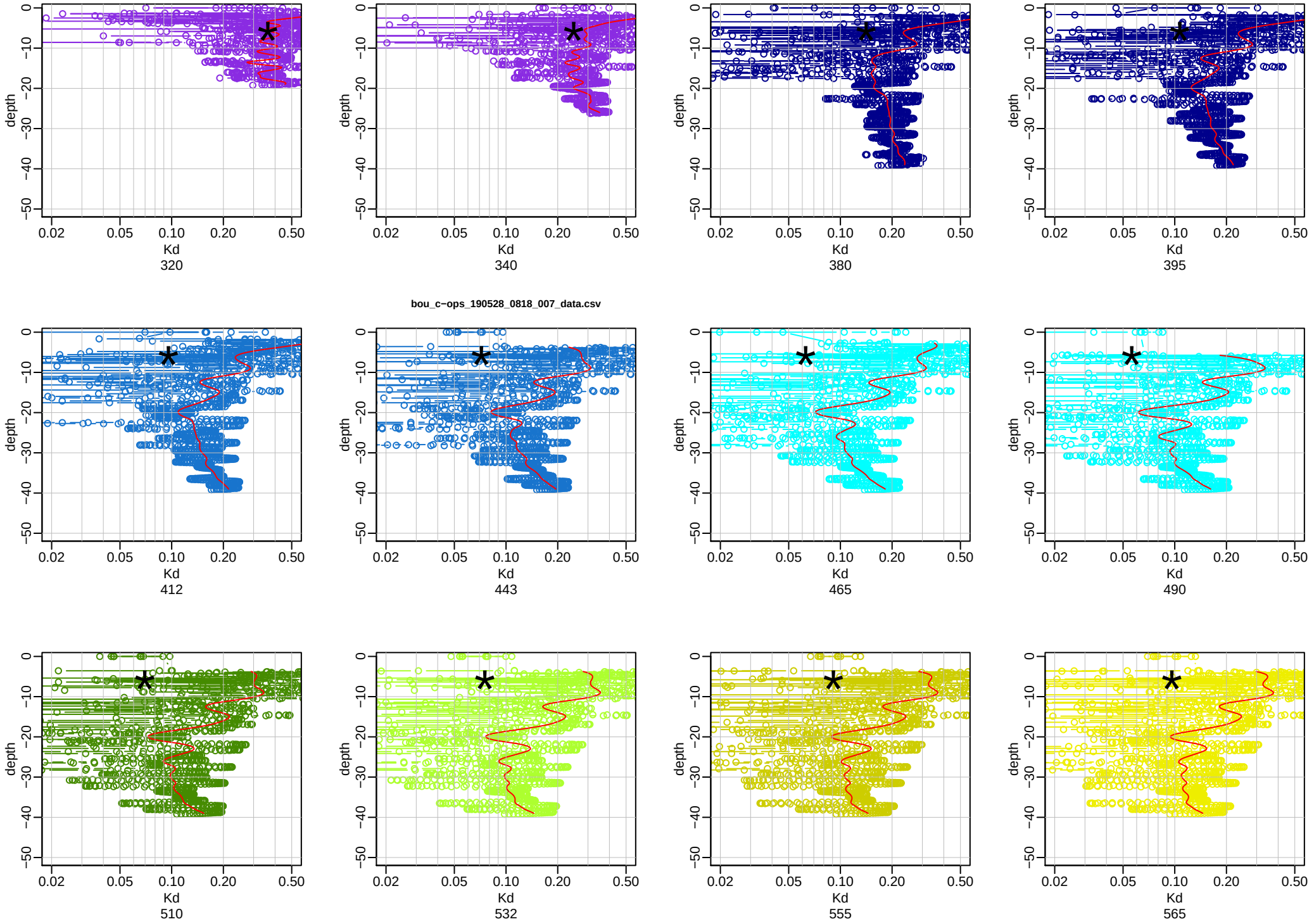

bou_c−ops_190528_0818_007_data.csv
pressure (Δz sensor corrected)
50.0
10.0
2.0
0.5
0.2
1e−04
1e−02
1e+00
E_u raw

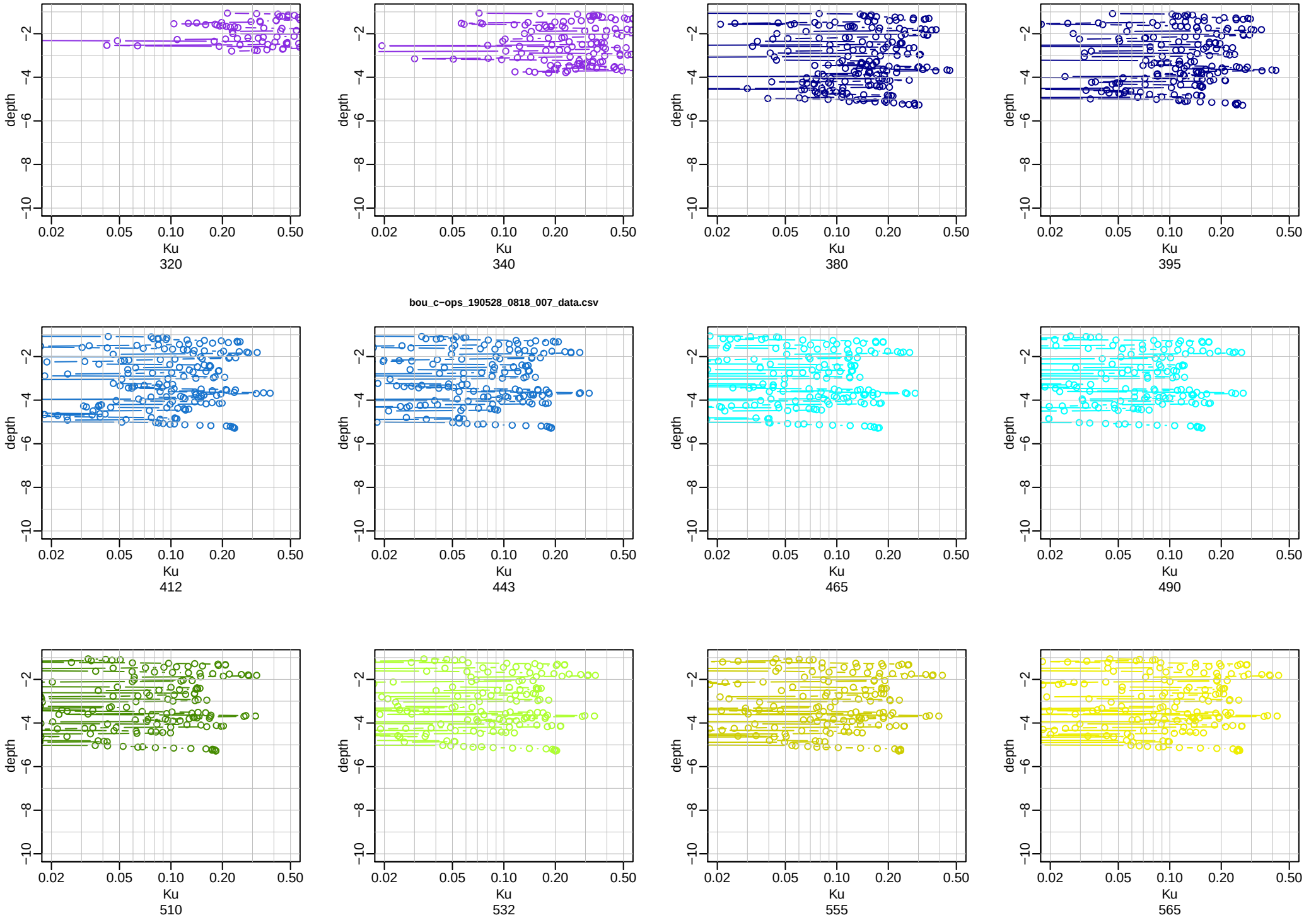

bou_c−ops_190528_0818_007_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
320
1e−04
1e−02
1e+00
E_u black corrected and filtered

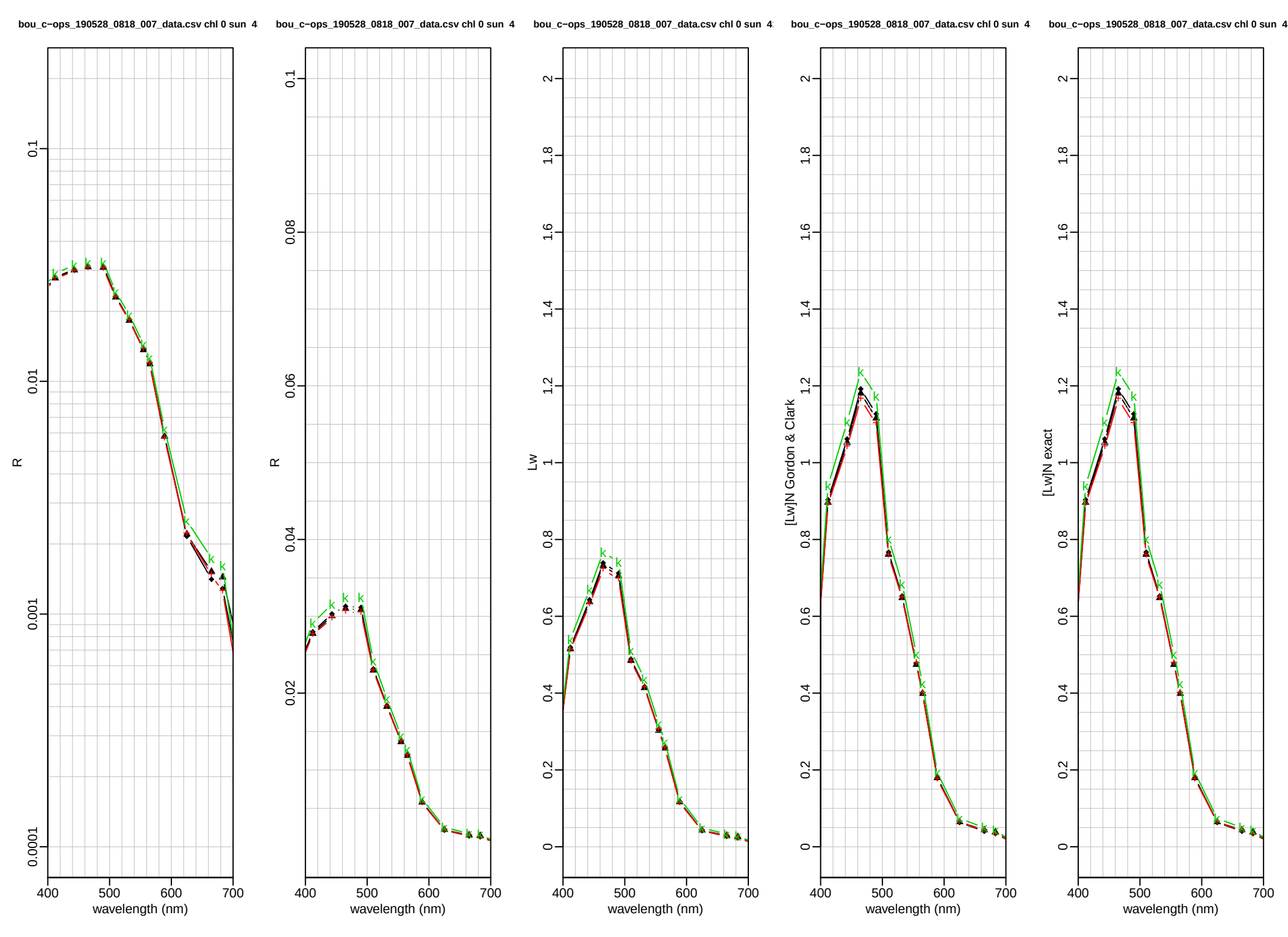

bou_c−ops_190528_0818007_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 41.1
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190528_0818_007_data.csv
pressure
1
2
5
10
20
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190528_0818_007_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

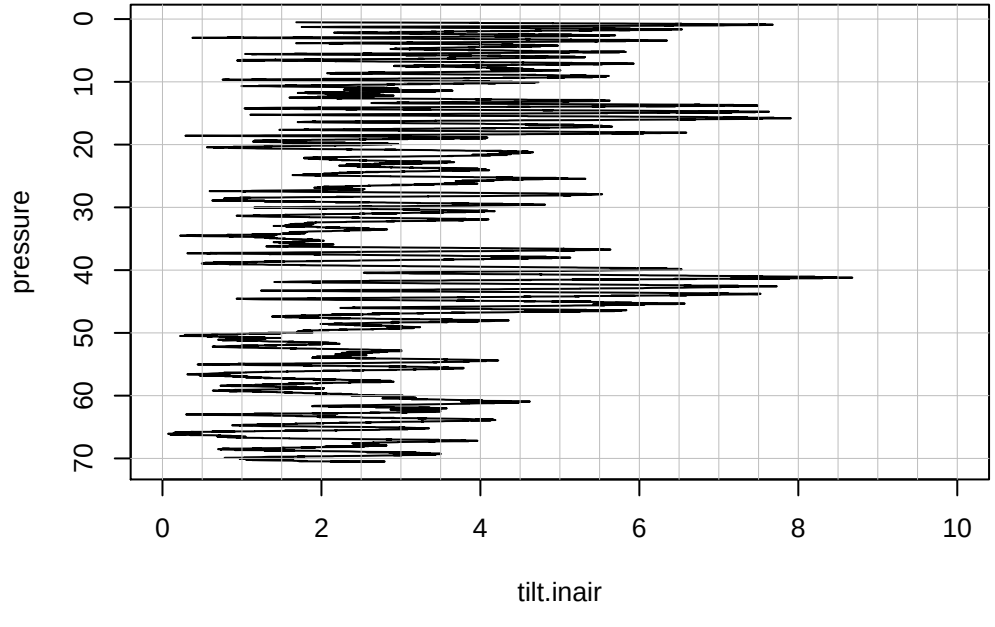

bou_c~ops_190528_0818_007_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

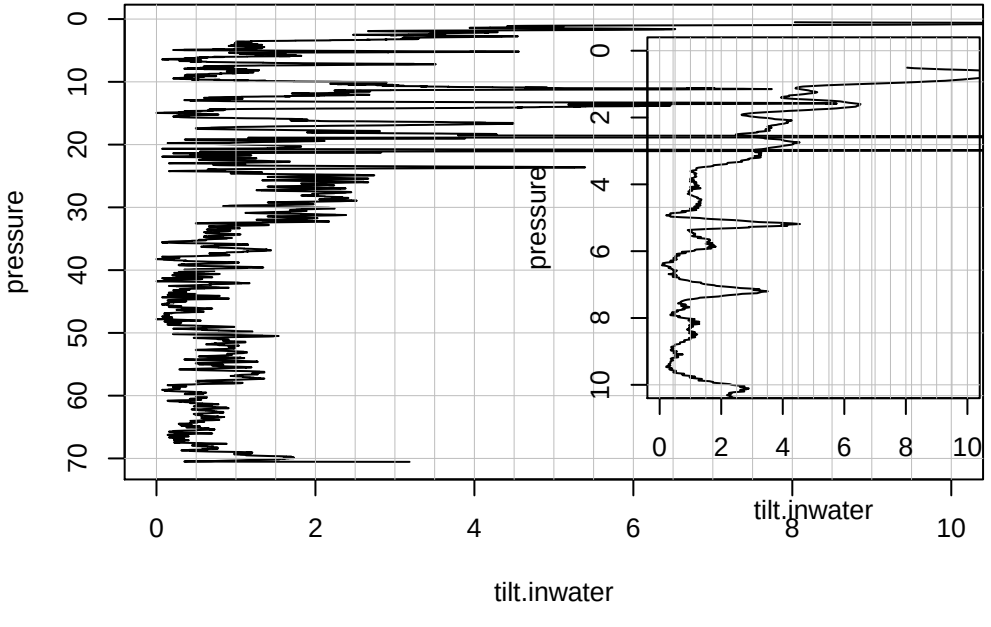

bou_c~ops_190528_0818_007_data.csv
depth
Ku
320
340
380
395
412
443
465
490
510
532
555
565

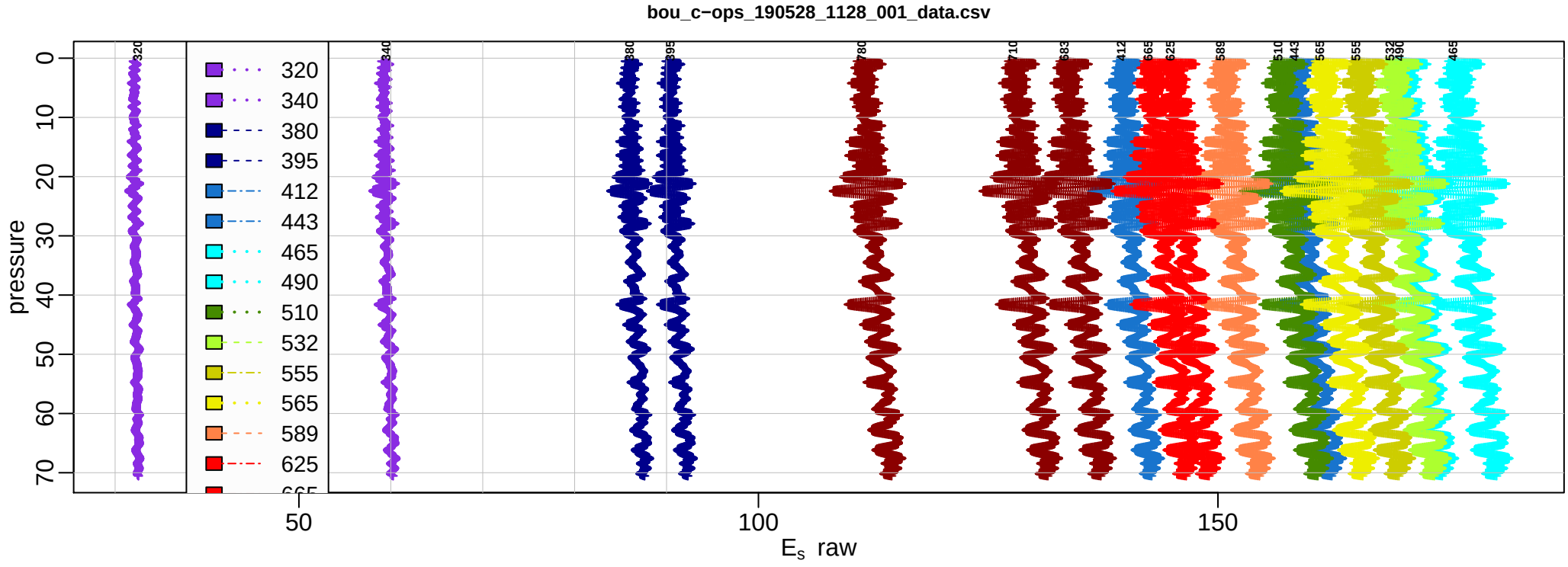

bou_c−ops_190528_0818_007_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190528_0818_007_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190528_0818_007_data.csv chl 0 sun 4
Lw
wavelength (nm)
bou_c−ops_190528_0818_007_data.csv chl 0 sun 4
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190528_0818_007_data.csv chl 0 sun 4
[Lw]N exact
wavelength (nm)

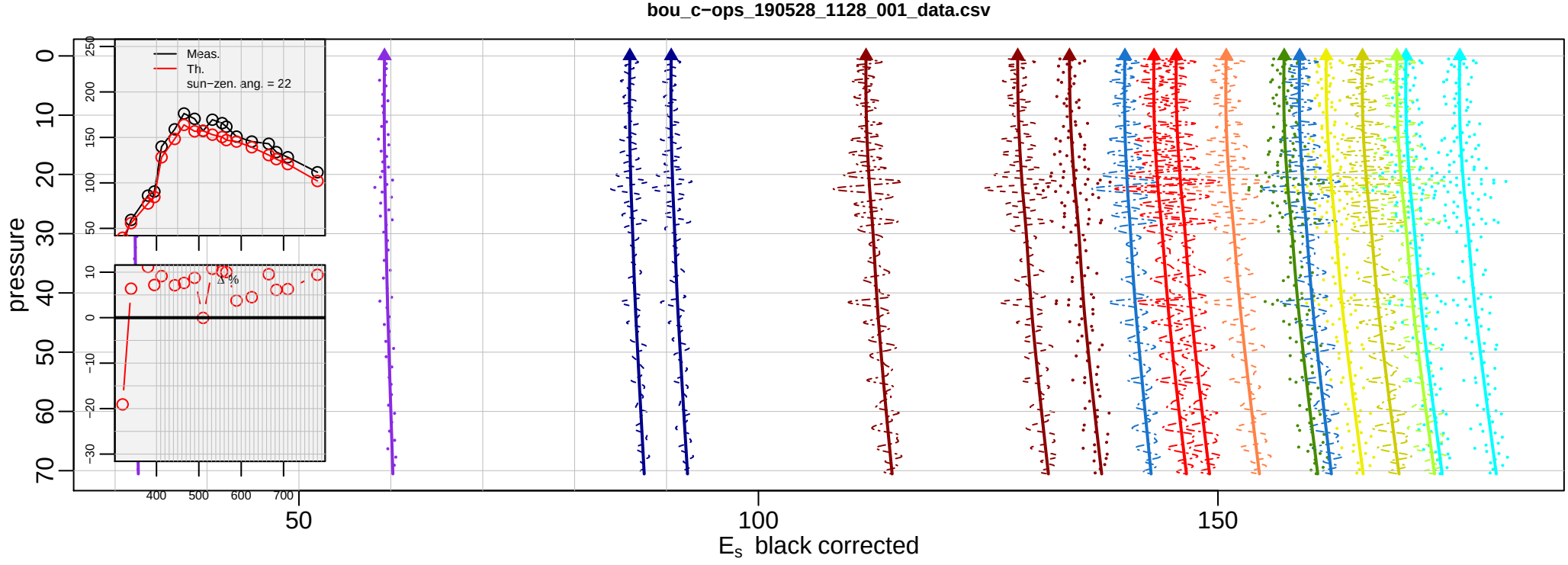
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole208/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole208/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole208/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole208/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.90223
latitude 43.37268
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

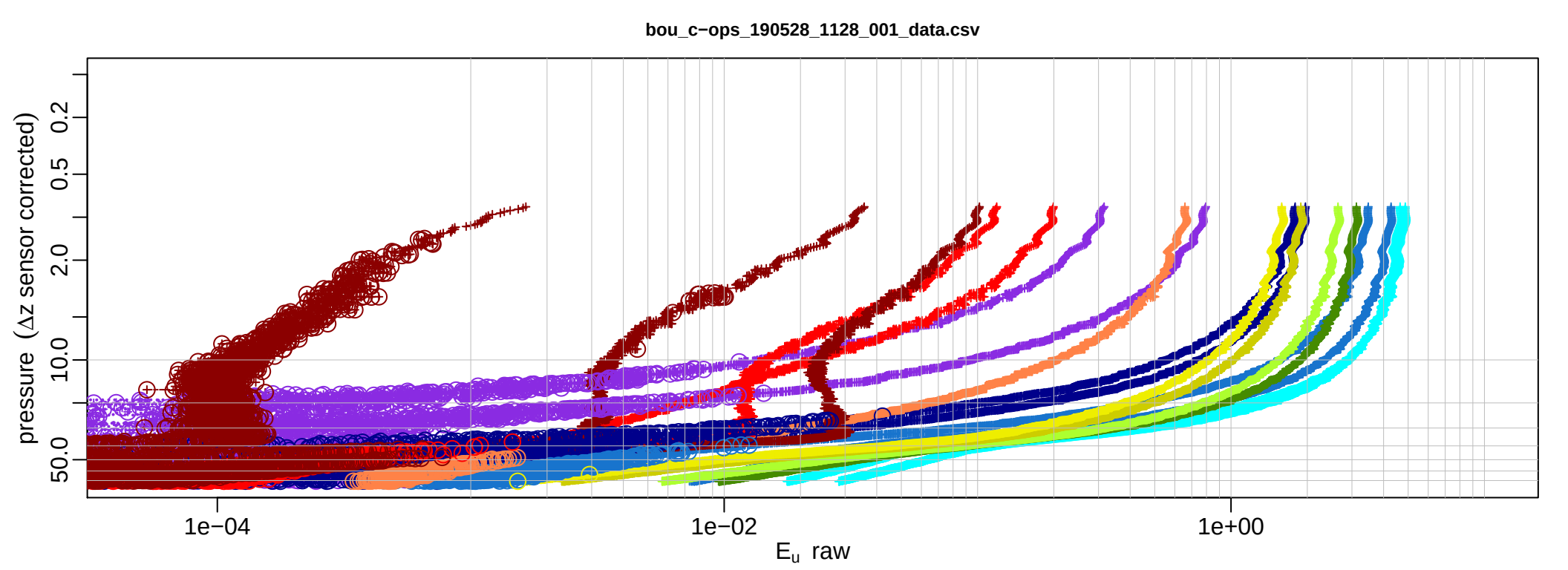
bou_c−ops_190528_1128_001_data.csv

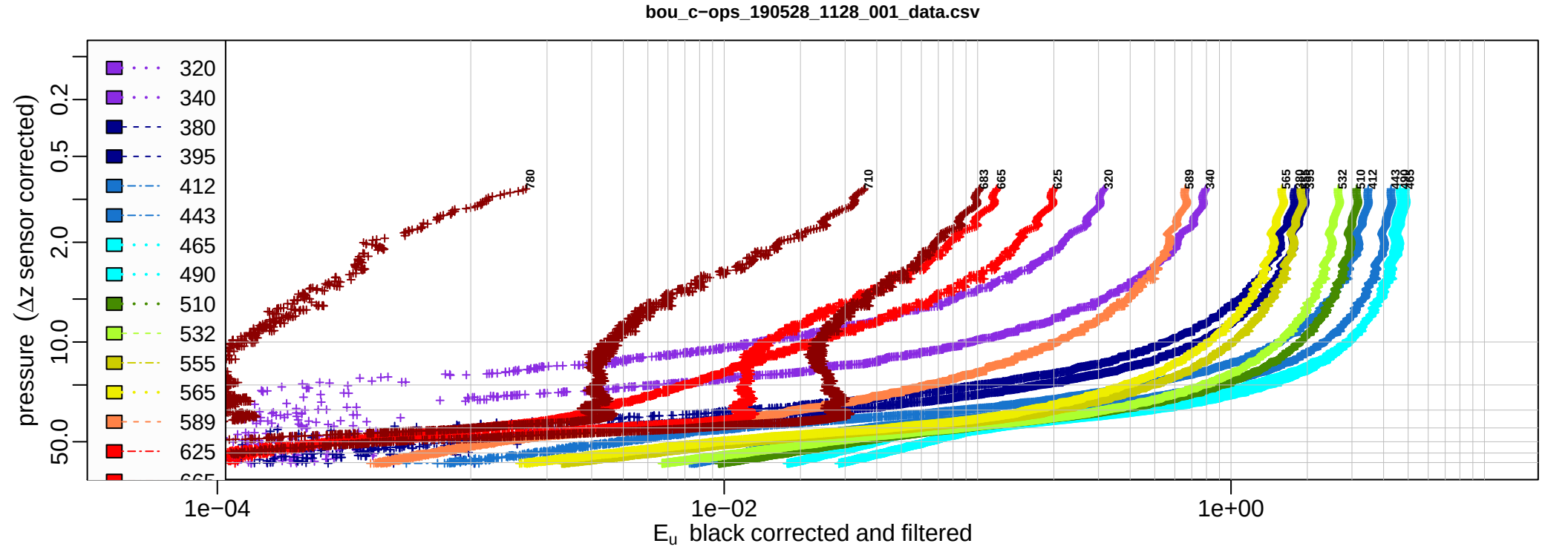


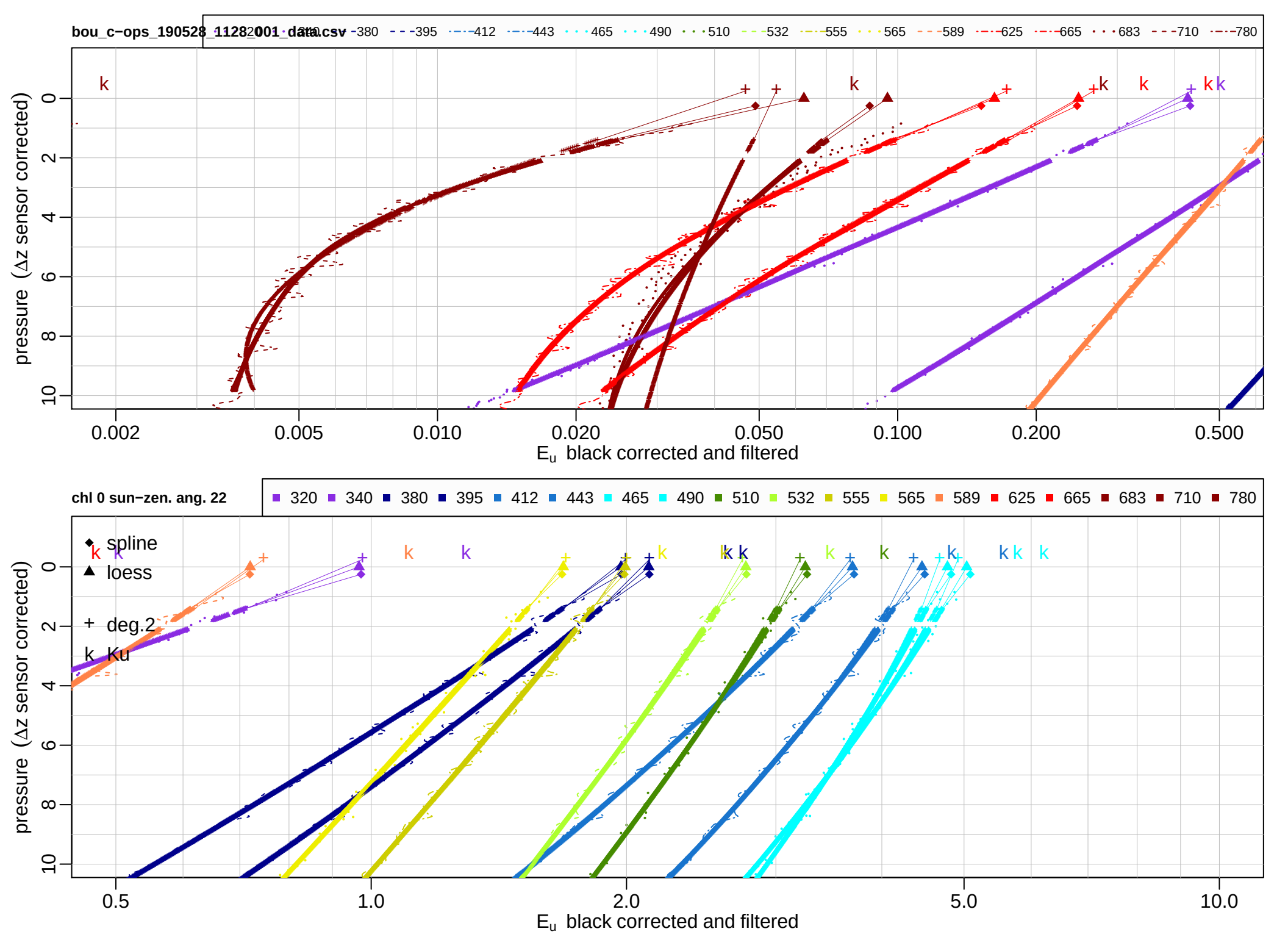


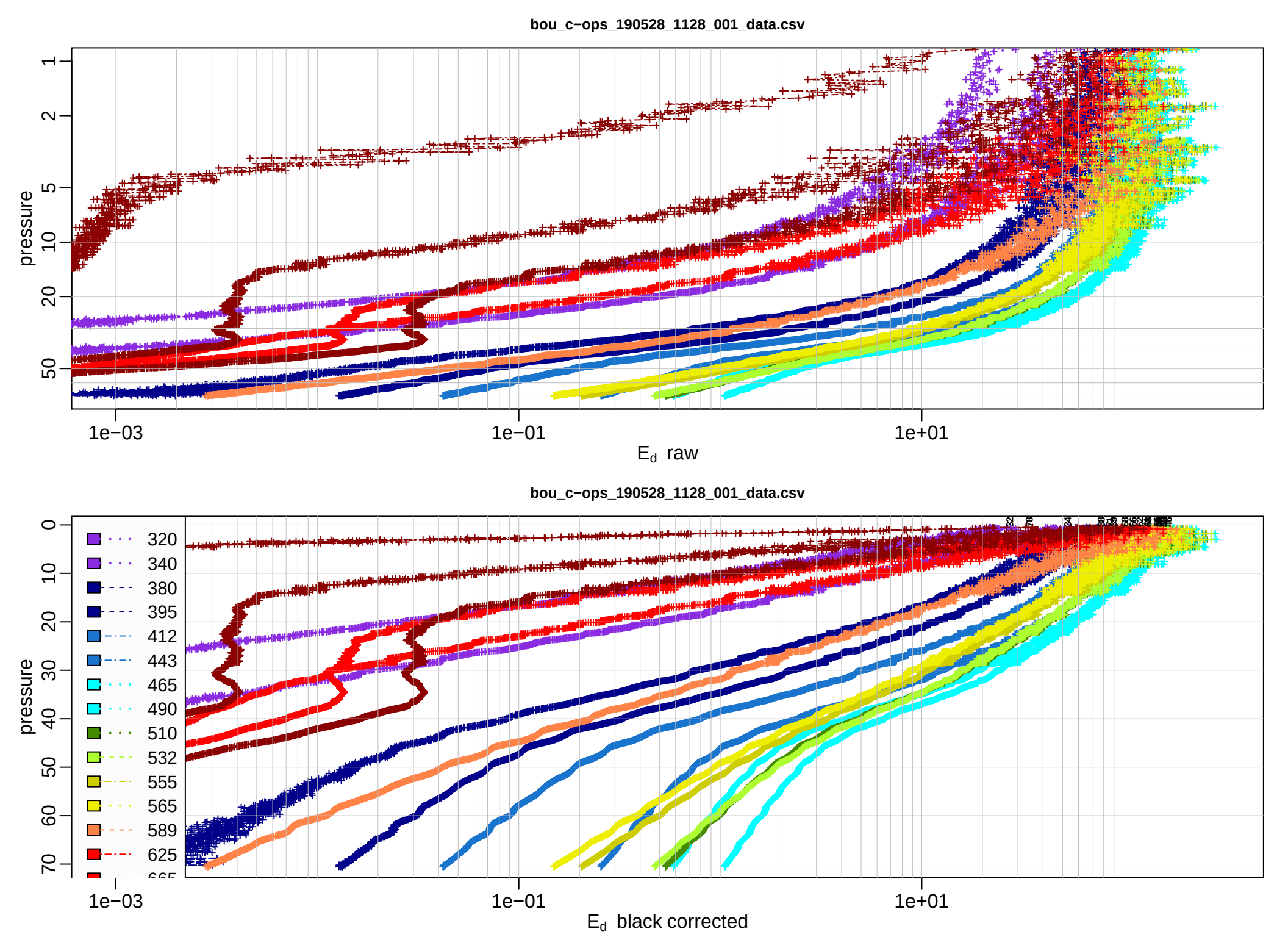

bou_c−ops_190528_1128_001_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
50
100
150
E_s raw

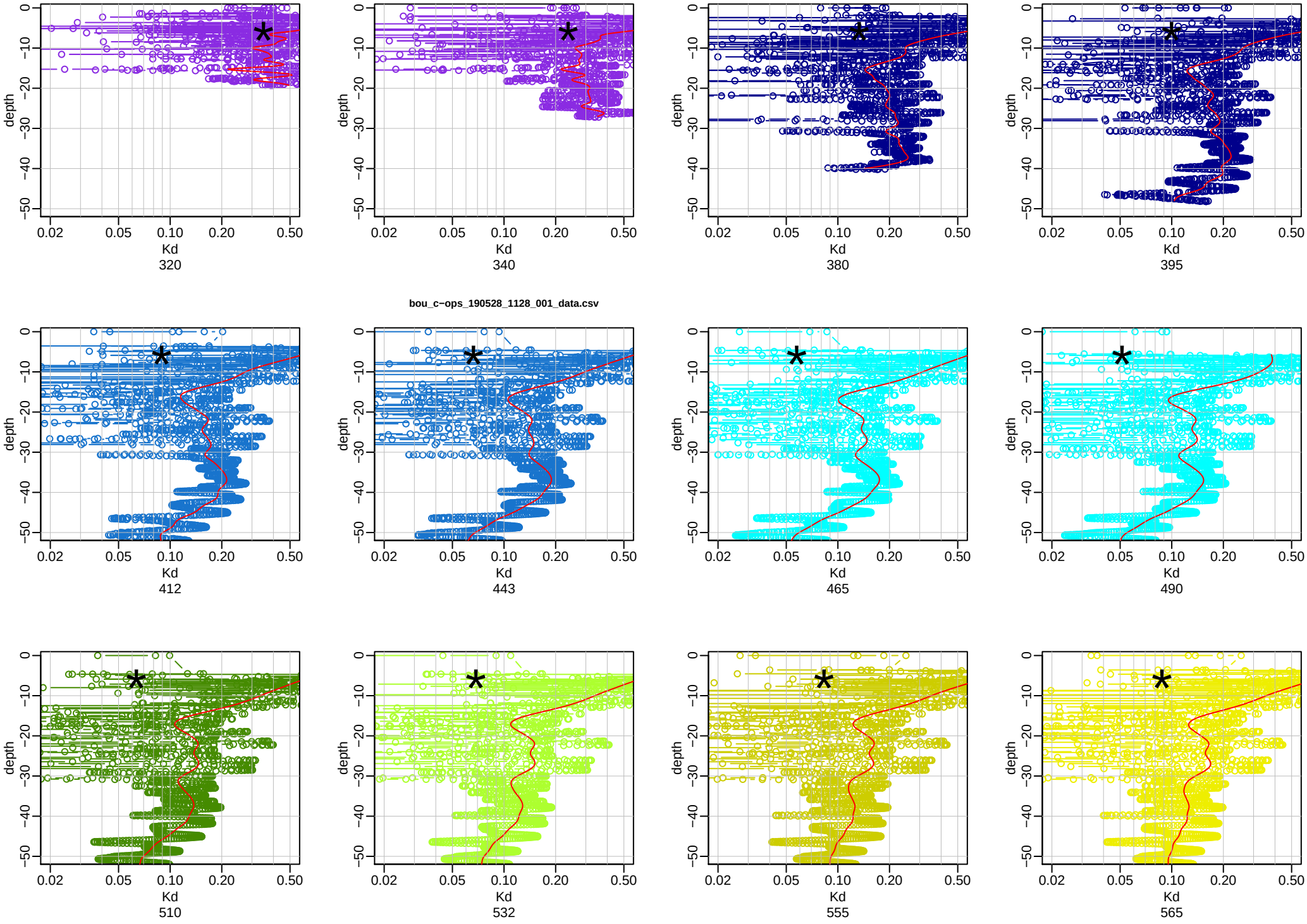

bou_c−ops_190528_1128_001_data.csv
pressure
0
10
20
30
40
50
60
70
Meas.
Th.
sun−zen. ang. = 22
Δ %
50
100
150
E_s black corrected

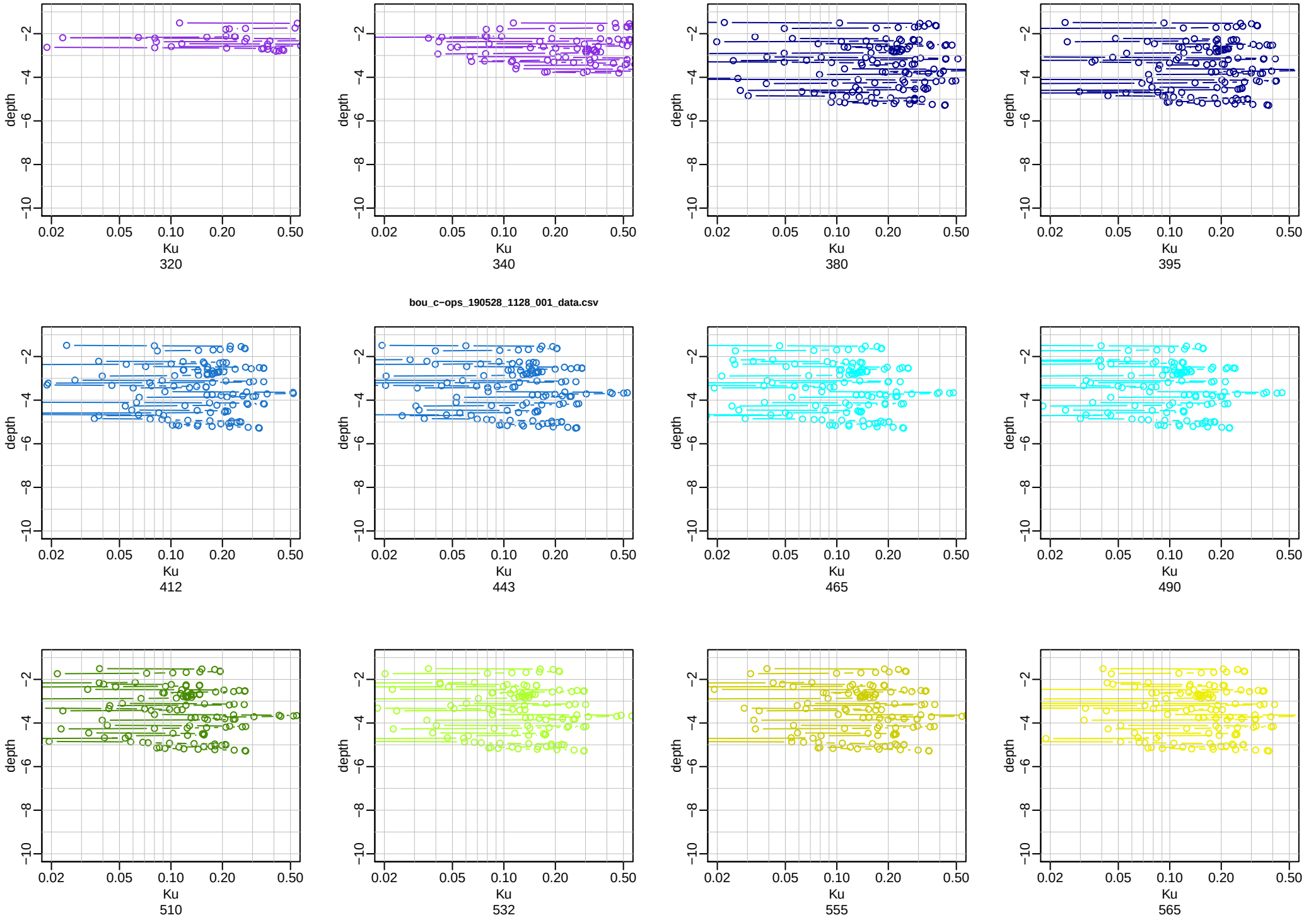

bou_c−ops_190528_1128_001_data.csv
pressure (Δz sensor corrected)
0.2
0.5
2.0
10.0
50.0
1e−04
1e−02
1e+00
E_u raw

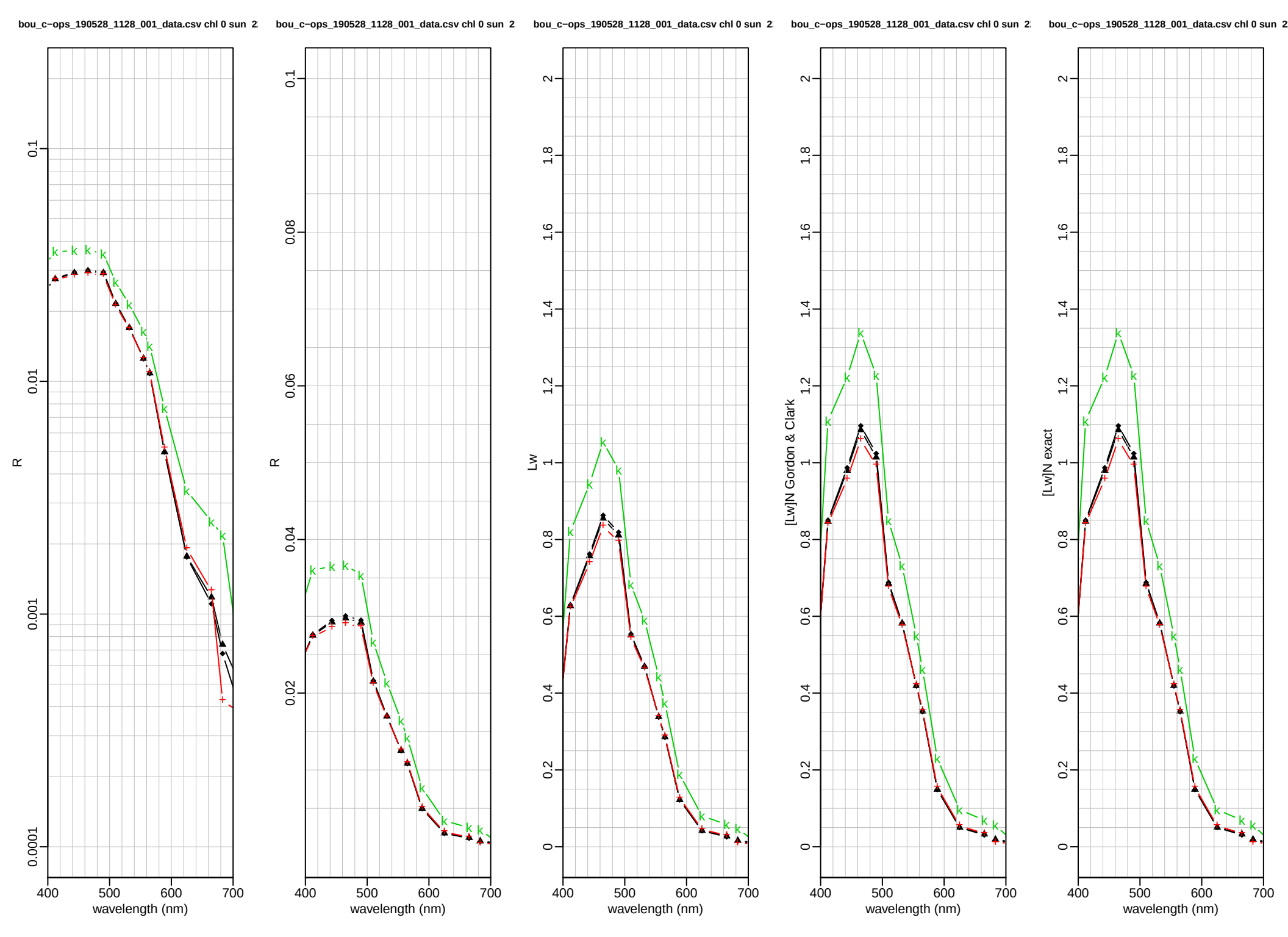

bou_c−ops_190528_1128_001_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
320
589
340
565
532
510
412
443
1e−04
1e−02
1e+00
E_u black corrected and filtered


bou_c−ops_190528_1128001_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 22
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190528_1128_001_data.csv
pressure
1
2
5
10
20
50
1e−03
1e−01
1e+01
E_d raw
bou_c−ops_190528_1128_001_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

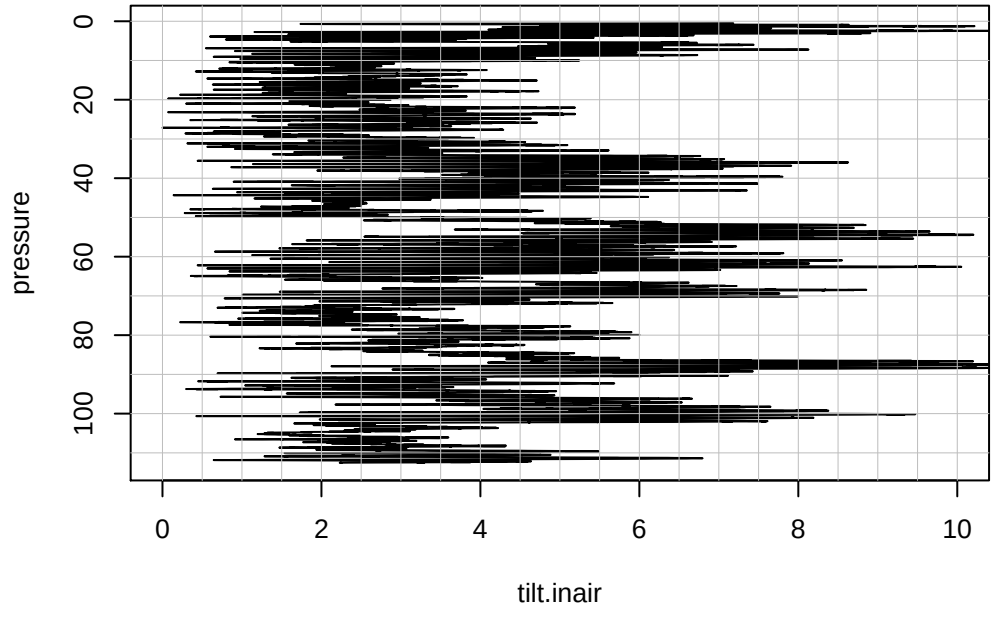

bou_c~ops_190528_1128_001_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

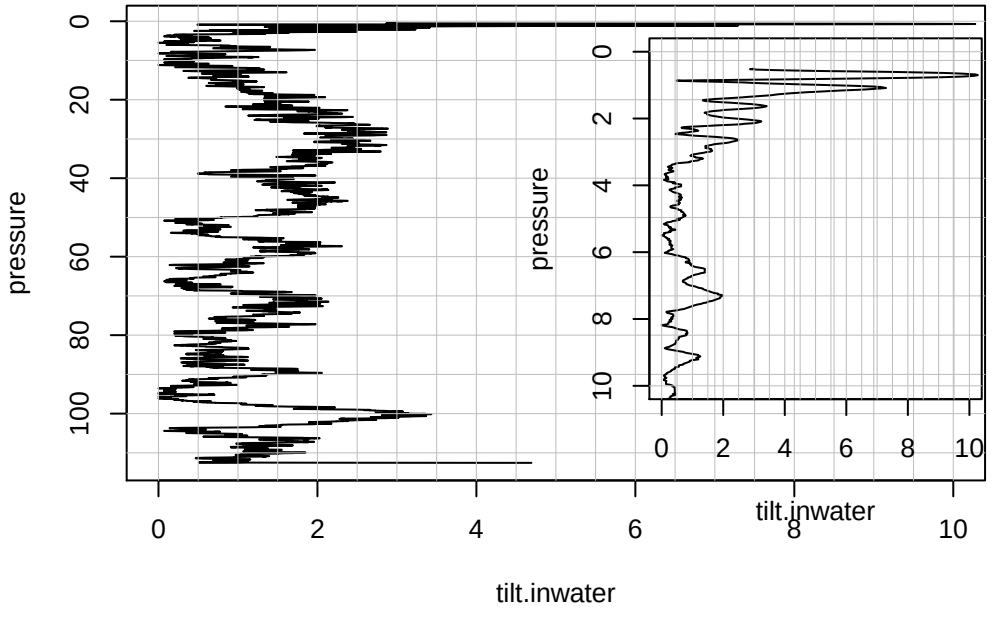

bou_c~ops_190528_1128_001_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

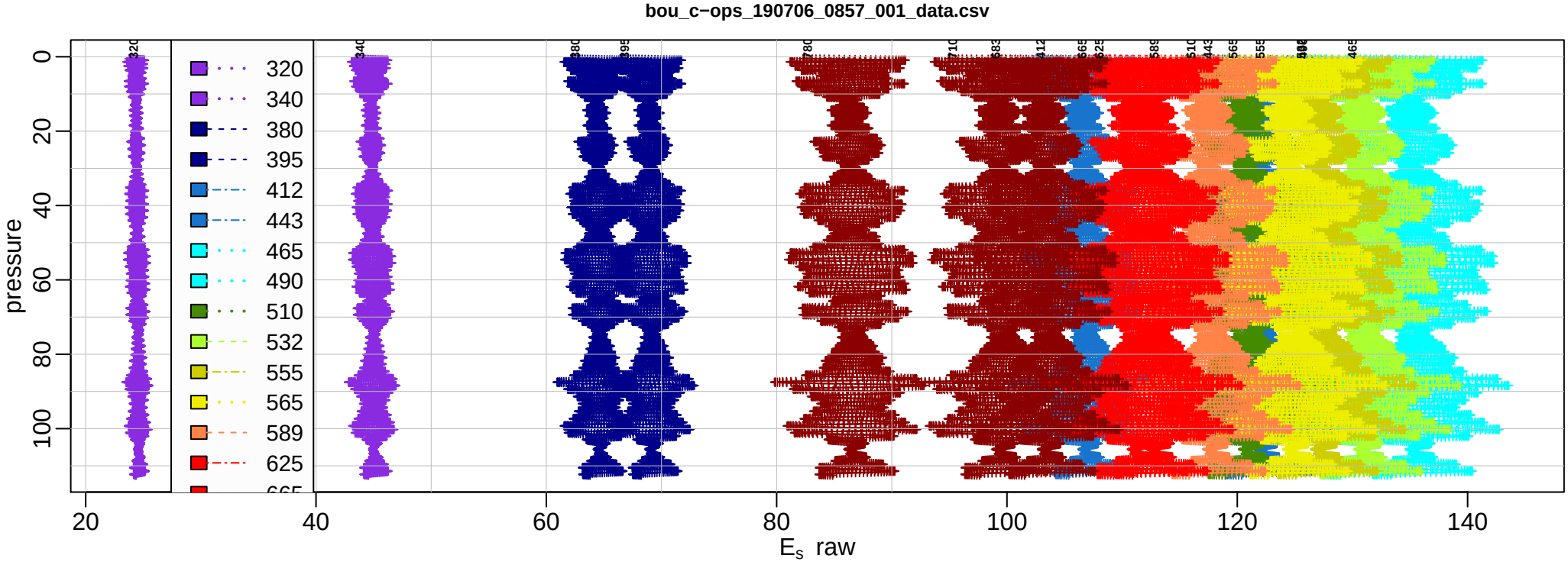

bou_c−ops_190528_1128_001_data.csv chl 0 sun 2
R
wavelength (nm)
bou_c−ops_190528_1128_001_data.csv chl 0 sun 2
R
wavelength (nm)
bou_c−ops_190528_1128_001_data.csv chl 0 sun 2
Lw
wavelength (nm)
bou_c−ops_190528_1128_001_data.csv chl 0 sun 2
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190528_1128_001_data.csv chl 0 sun 2
[Lw]N exact
wavelength (nm)

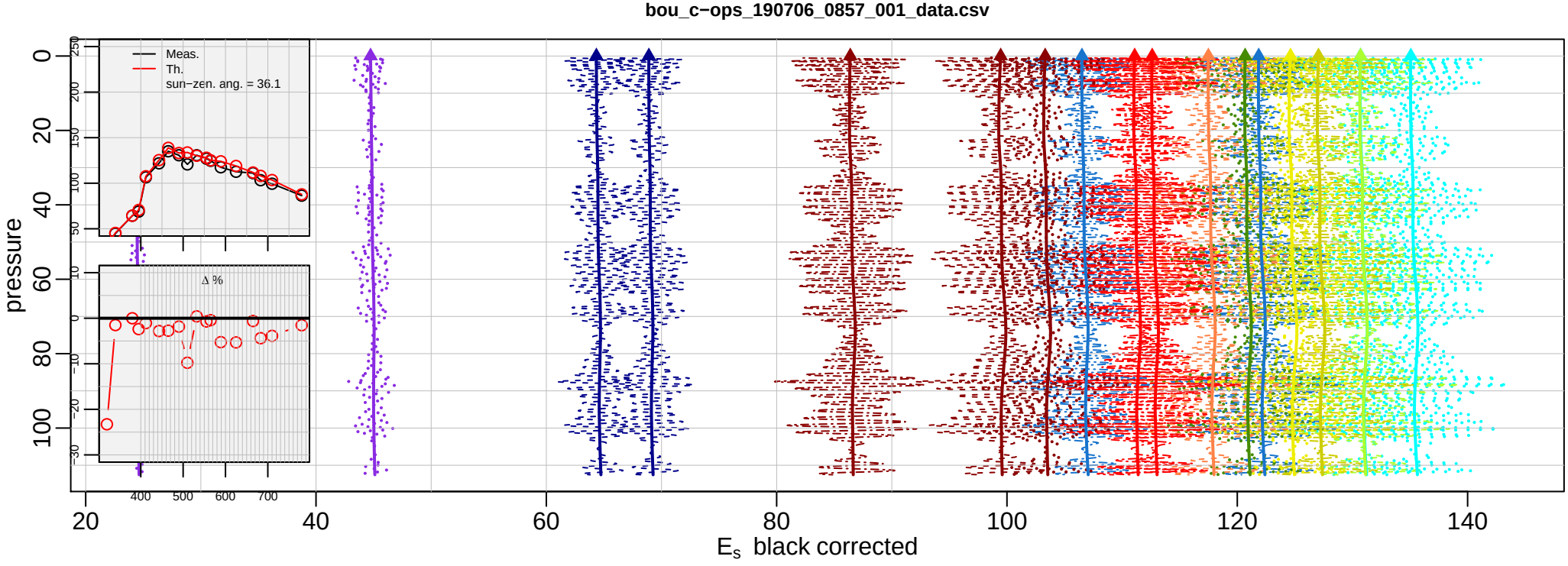
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole209/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole209/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole209/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole209/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89407
latitude 43.36812
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

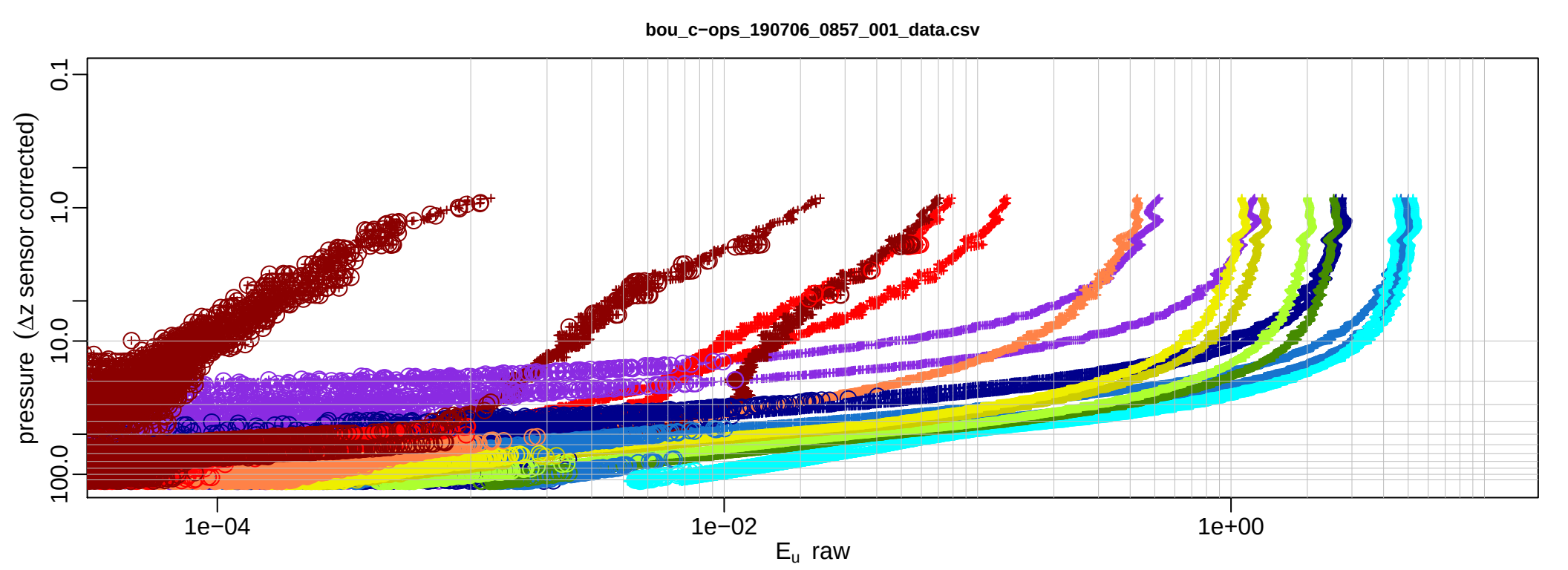
bou_c−ops_190706_0857_001_data.csv

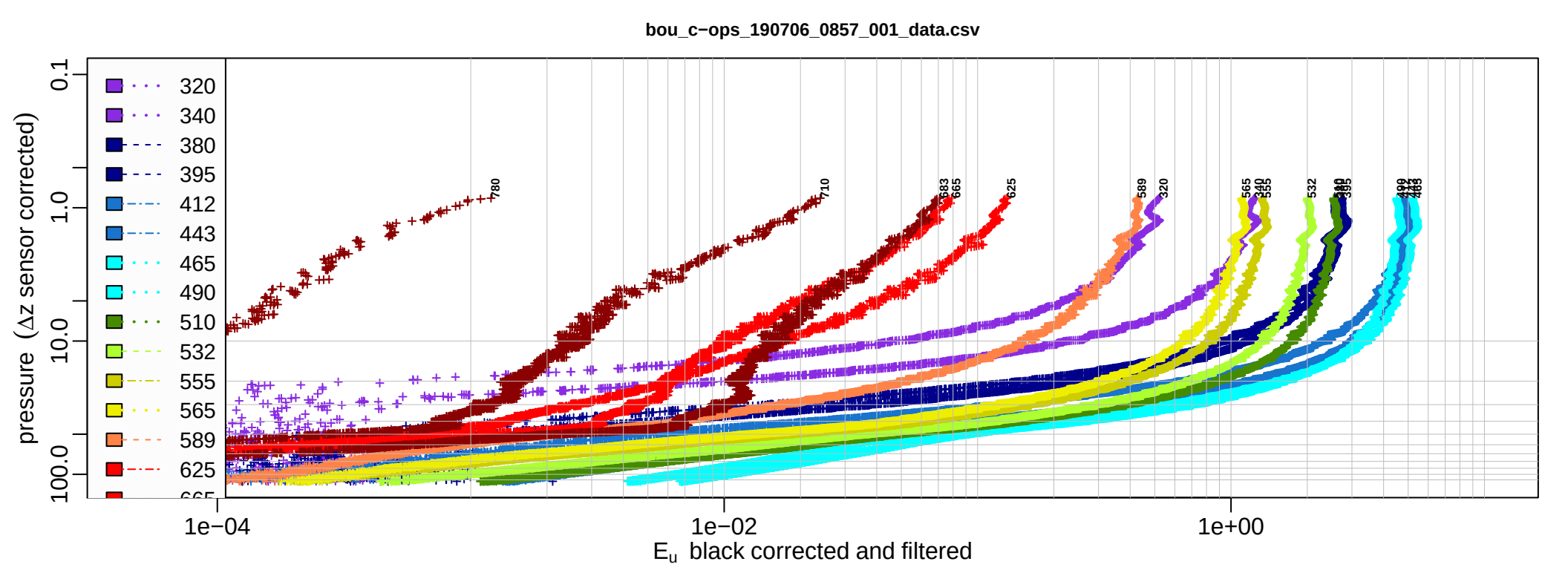


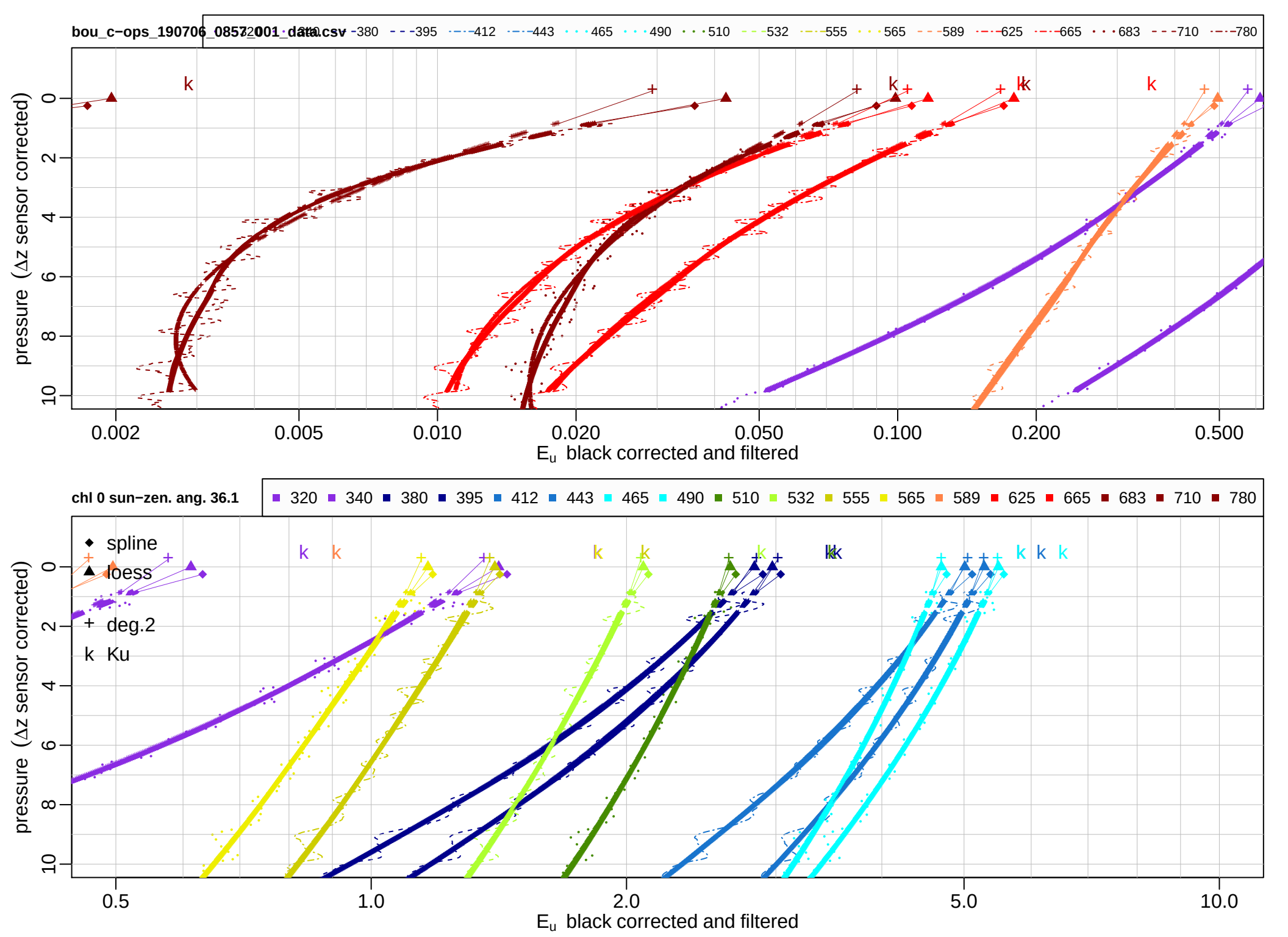


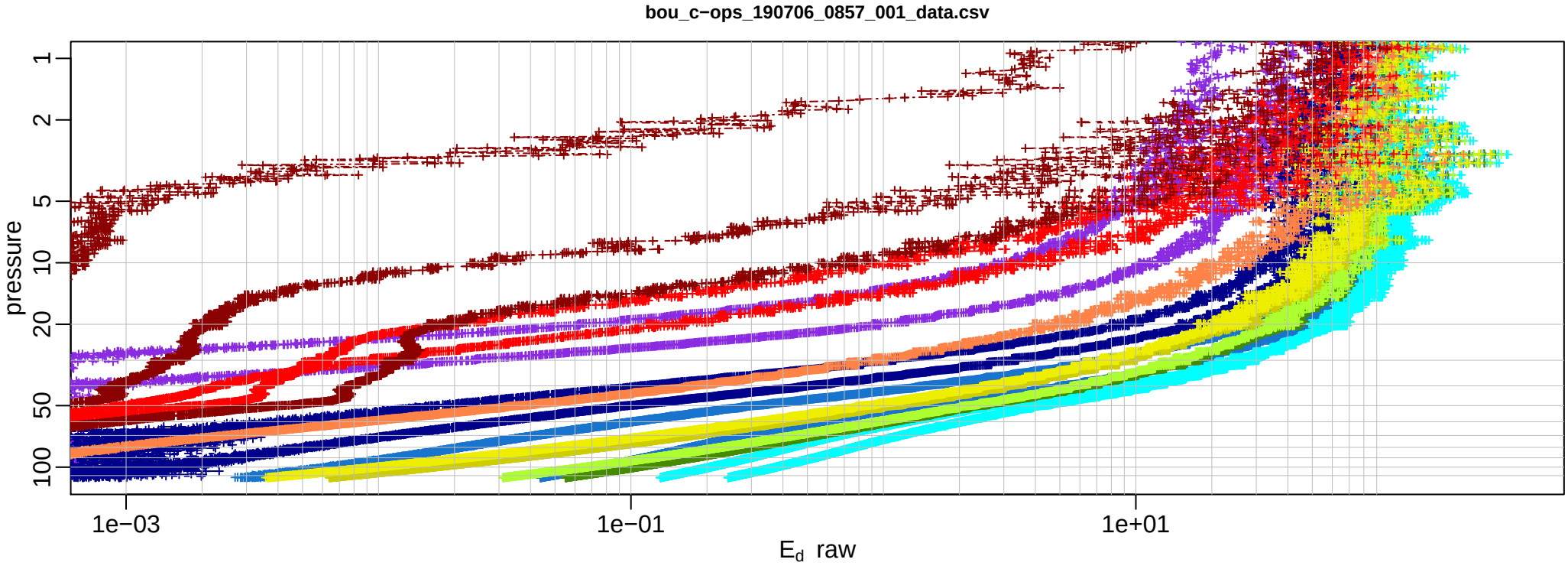

bou_c−ops_190706_0857_001_data.csv
pressure
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

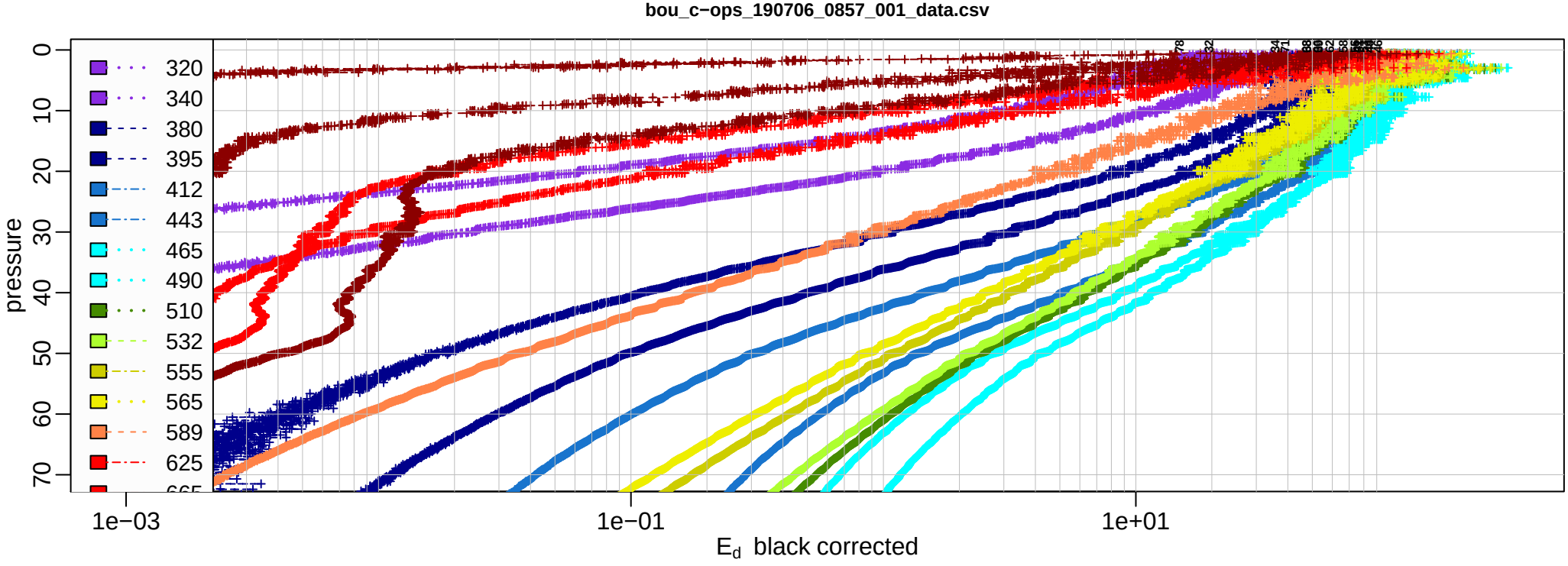

bou_c−ops_190706_0857_001_data.csv
pressure
E_s black corrected
Meas.
Th.
sun−zen. ang. = 36.1
Δ %

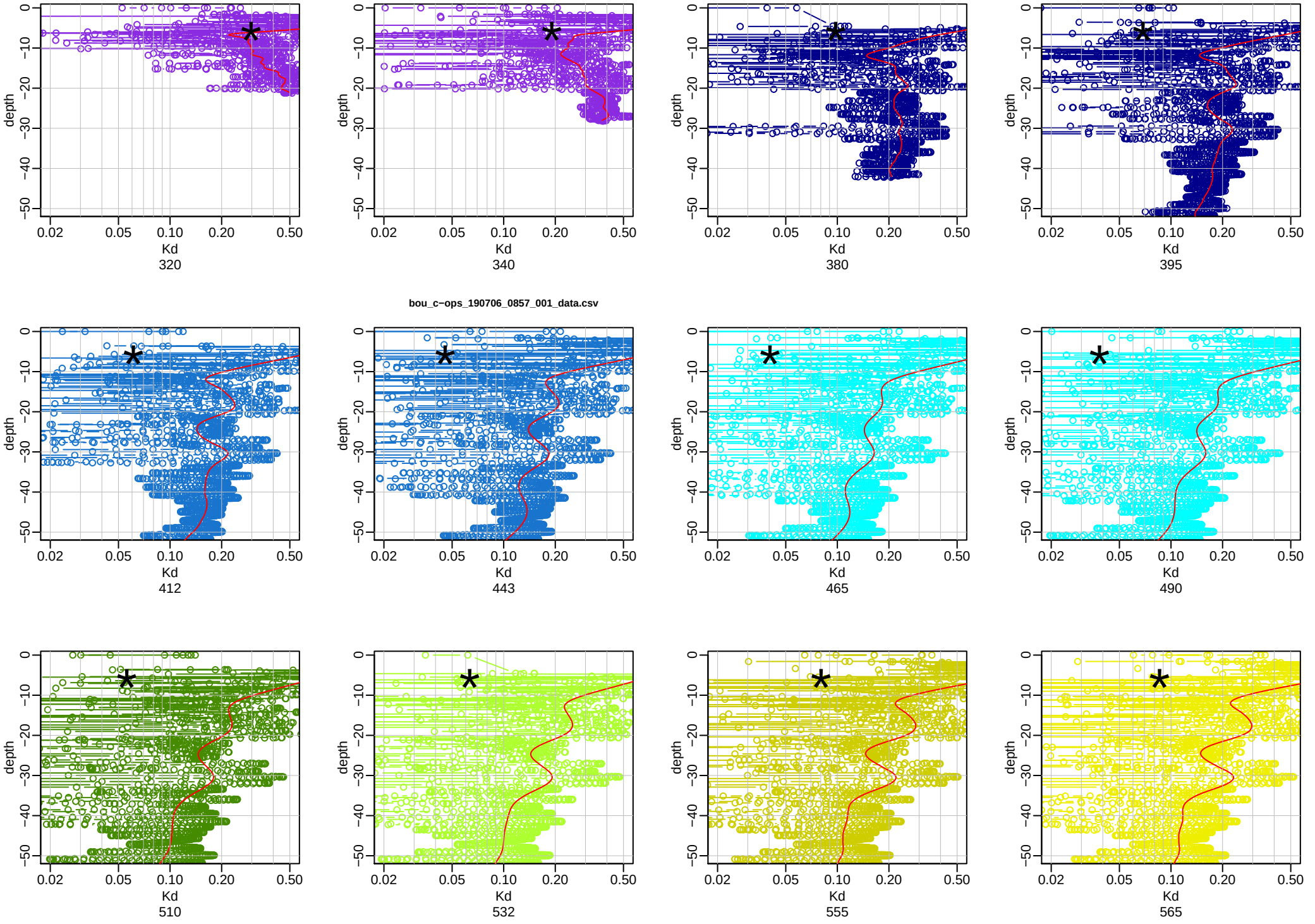

bou_c−ops_190706_0857_001_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

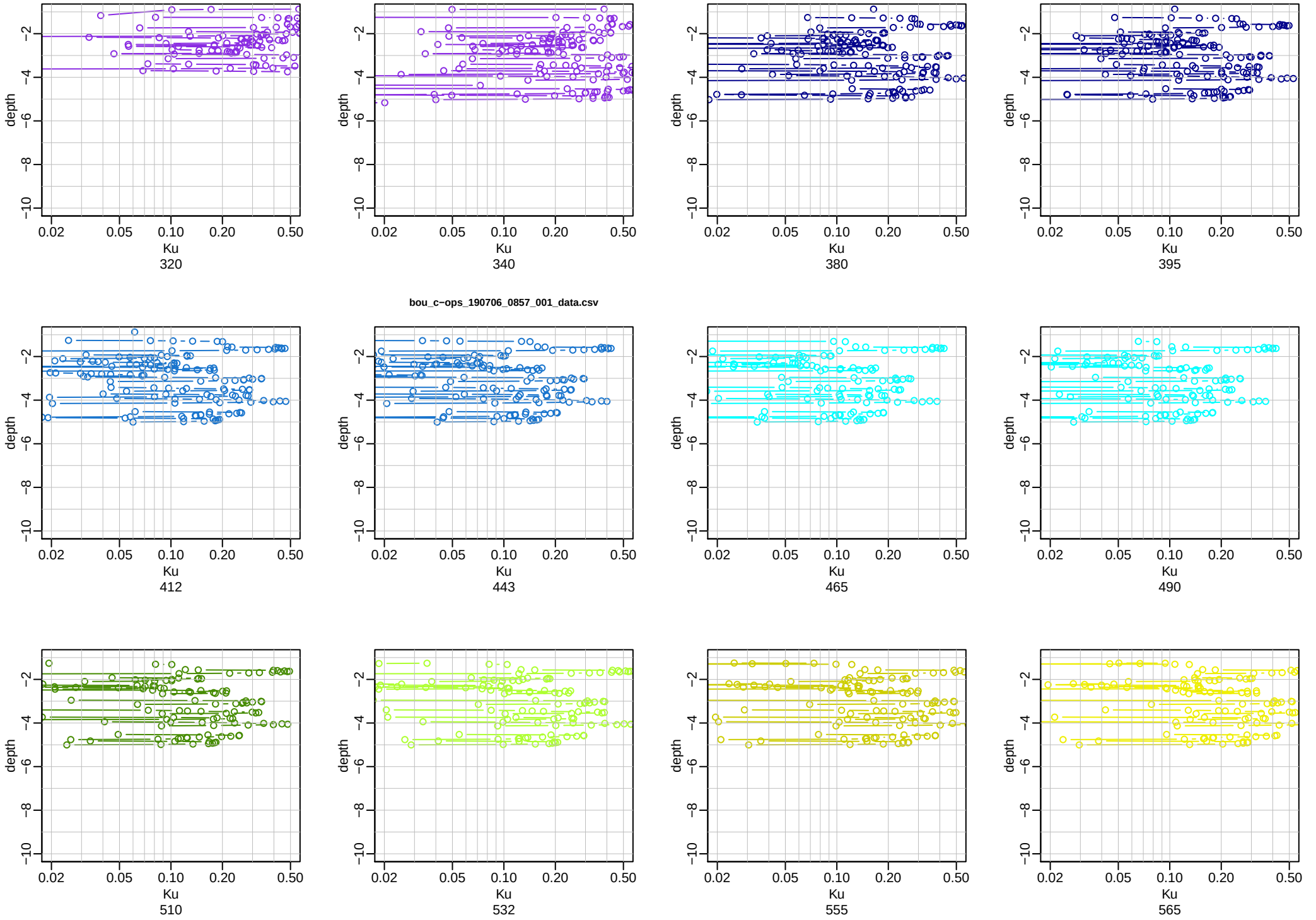

bou_c−ops_190706_0857_001_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
555
532
1e−04
1e−02
1e+00
E_u black corrected and filtered

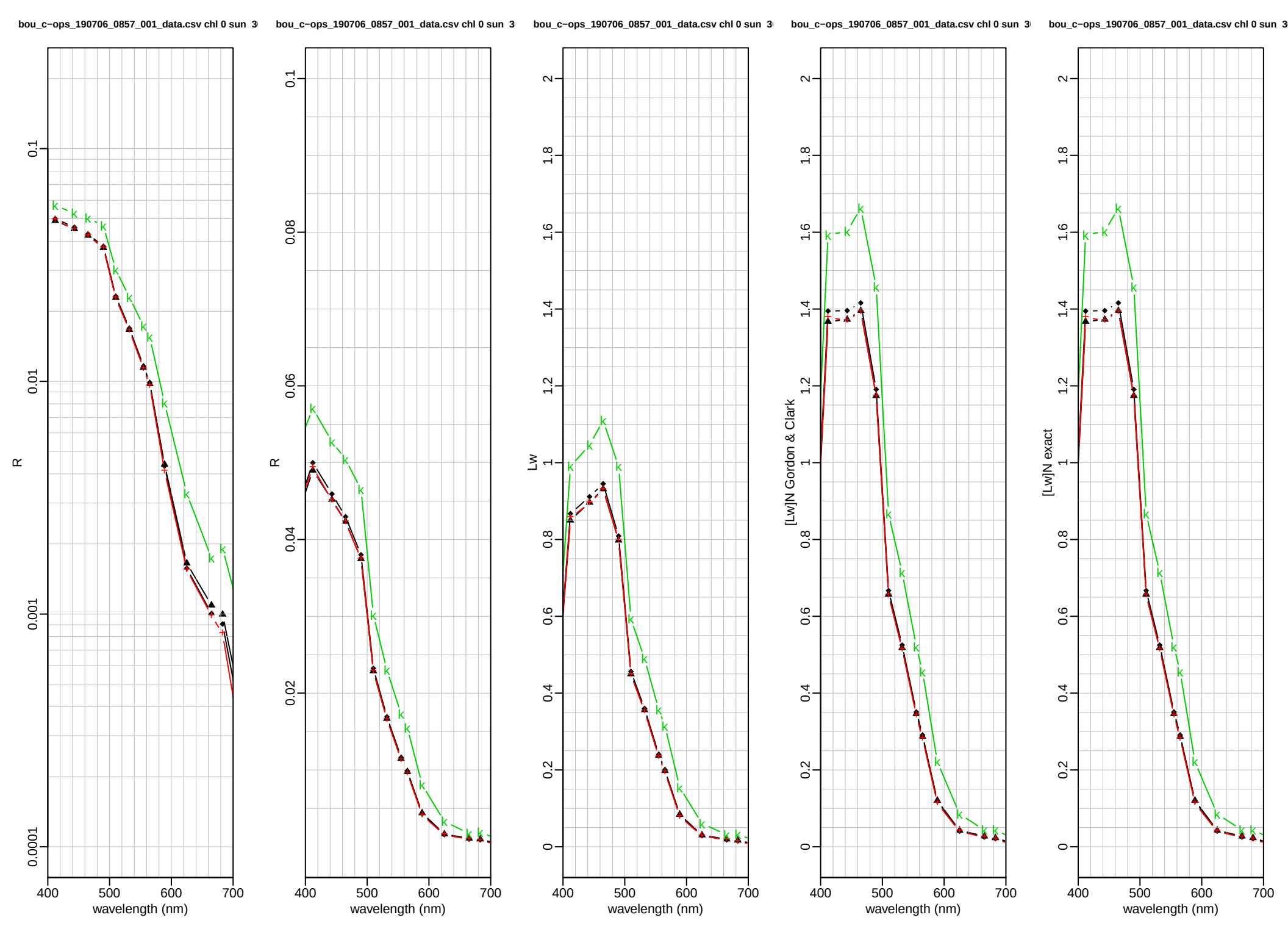

bou_c−ops_190706_0857_001_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 36.1
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190706_0857_001_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190706_0857_001_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

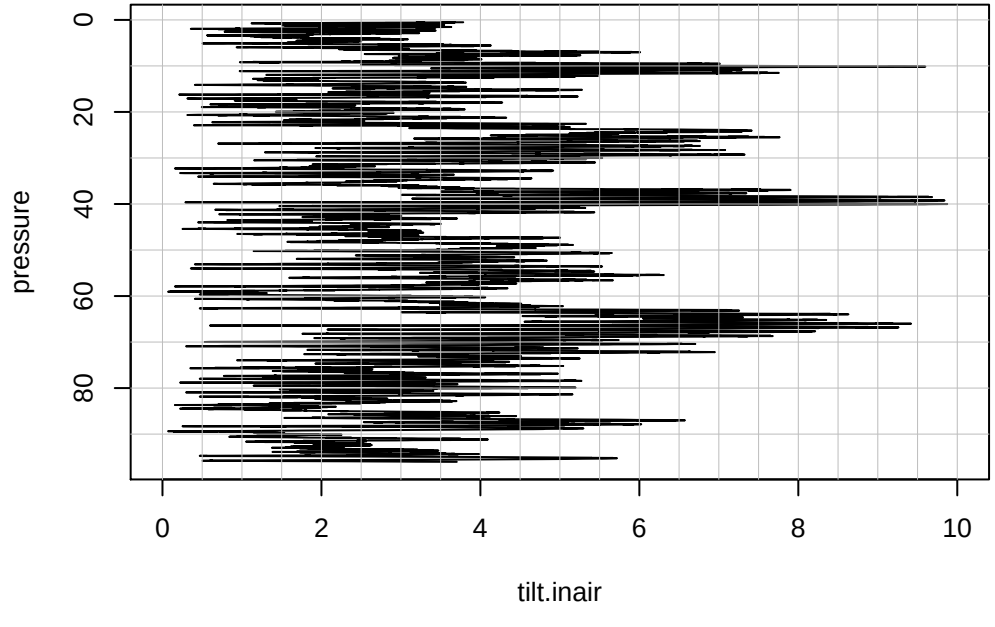

bou_c~ops_190706_0857_001_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

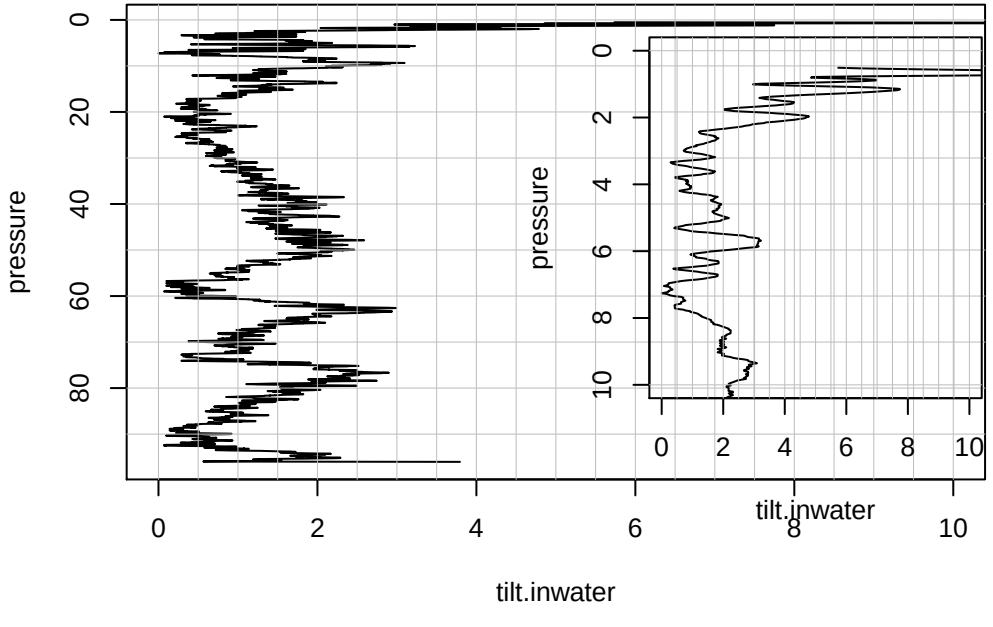

bou_c~ops_190706_0857_001_data.csv
depth
Ku
320
340
380
395
412
443
465
490
510
532
555
565

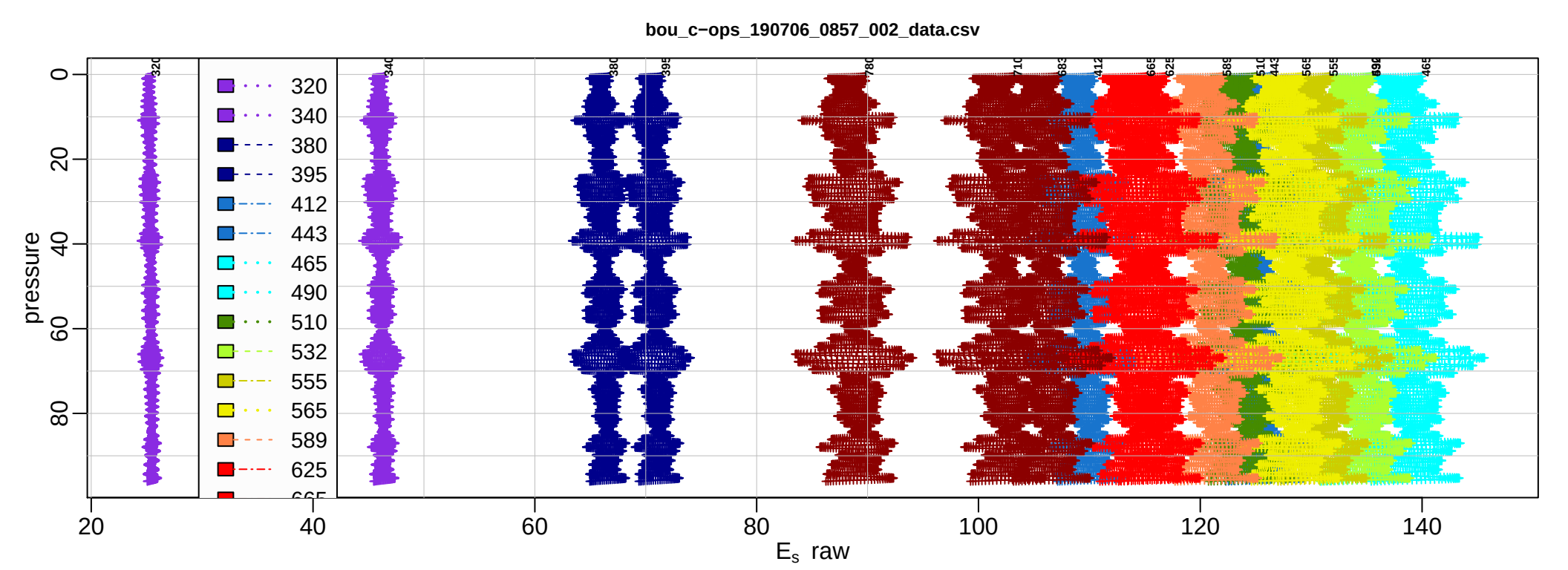

bou_c−ops_190706_0857_001_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190706_0857_001_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190706_0857_001_data.csv chl 0 sun 3
Lw
wavelength (nm)
bou_c−ops_190706_0857_001_data.csv chl 0 sun 3
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190706_0857_001_data.csv chl 0 sun 3
[Lw]N exact
wavelength (nm)

rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole209/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole209/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole209/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole209/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.88983
latitude 43.37028
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

bou_c−ops_190706_0857_002_data.csv






bou_c−ops_190706_0857_002_data.csv
pressure
0
20
40
60
80
320
340
380
395
412
443
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490
510
532
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565
589
625
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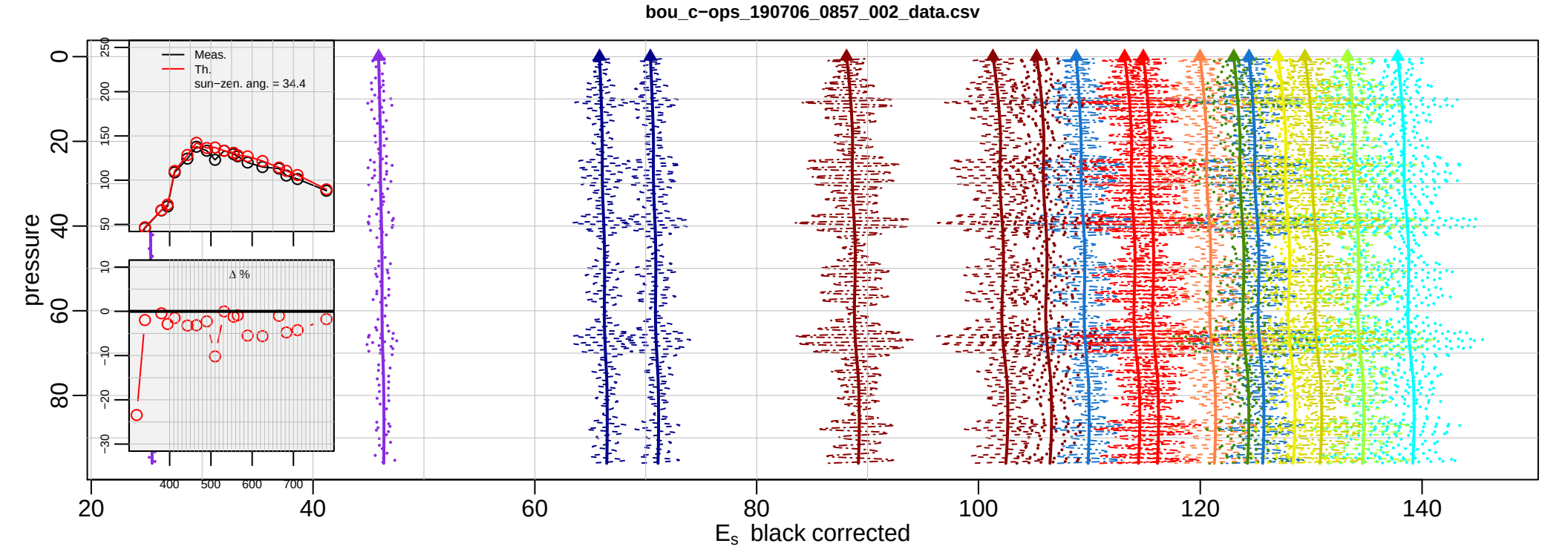
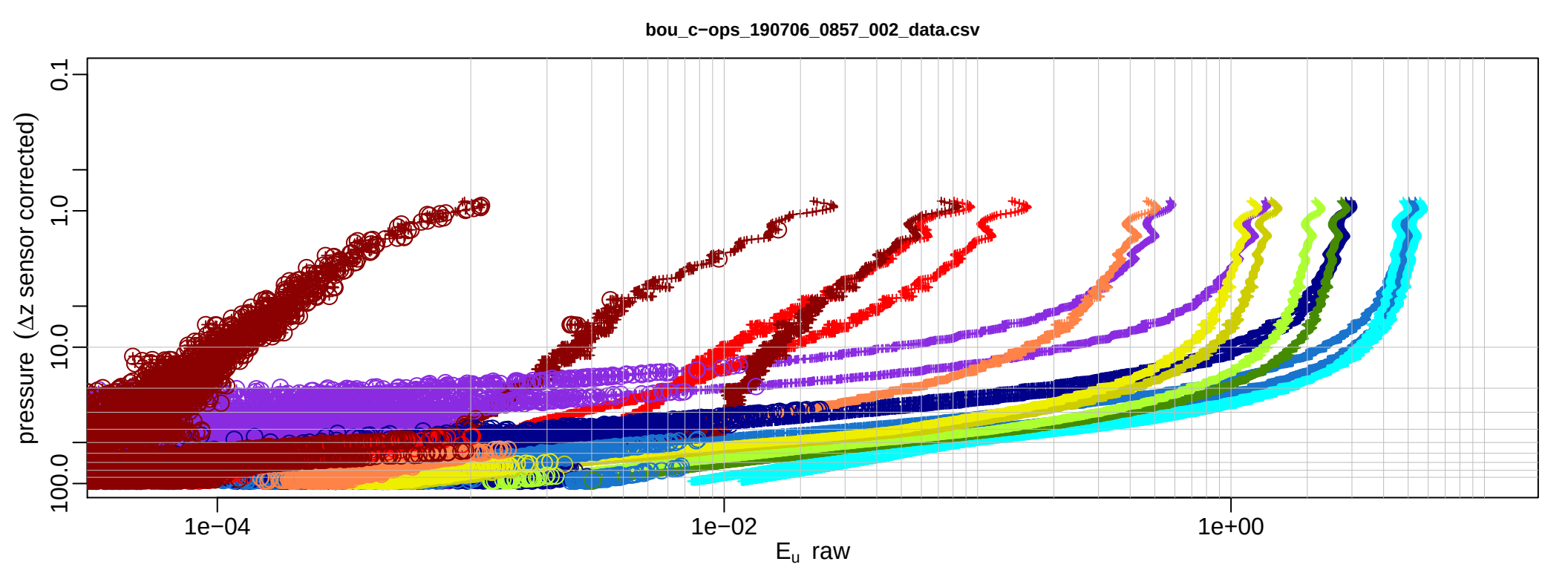
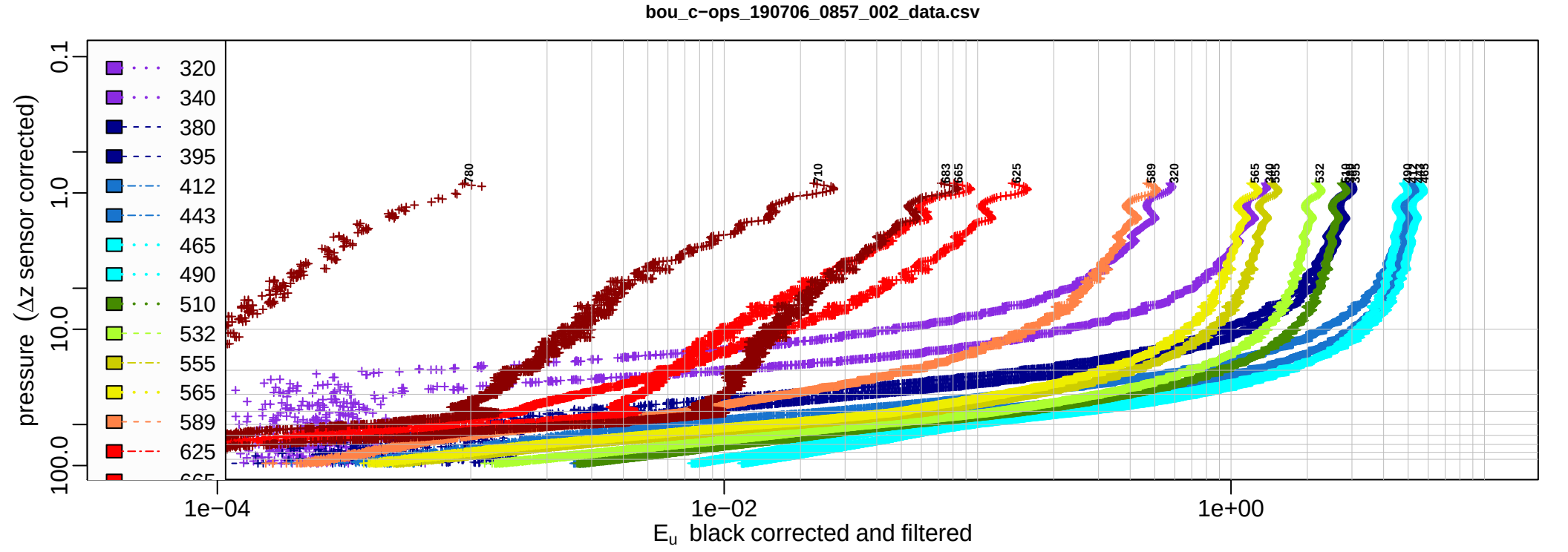
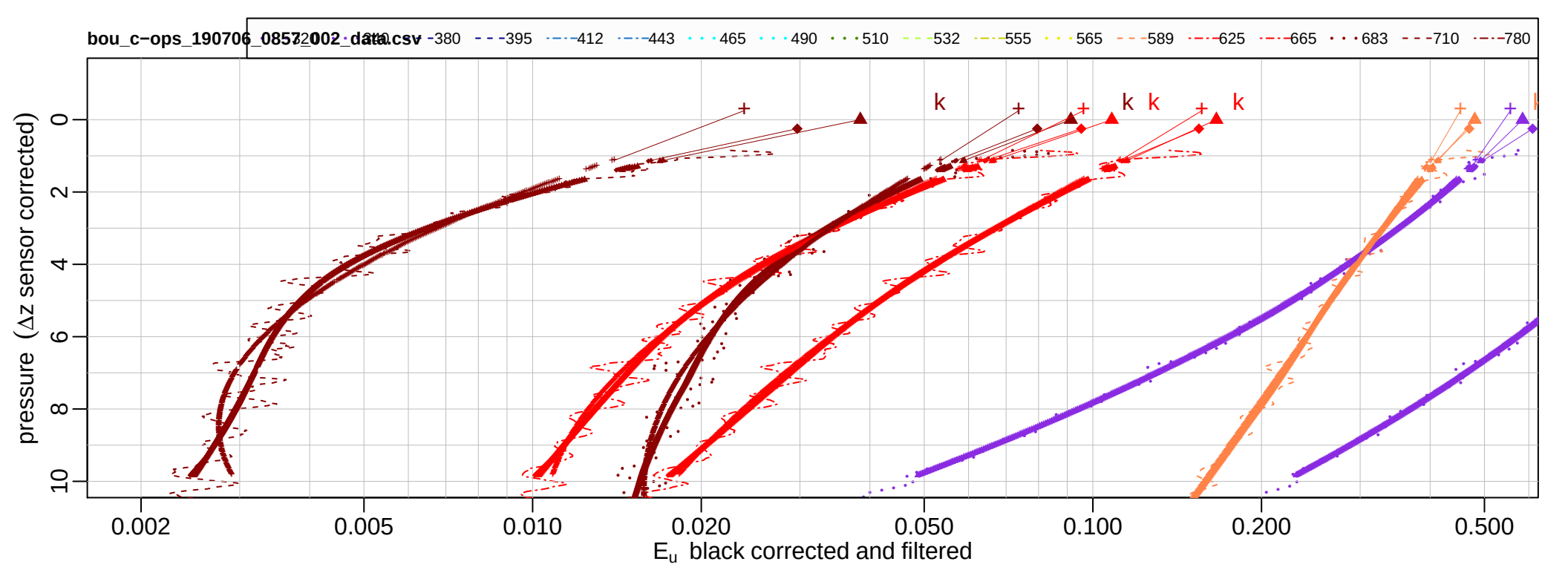
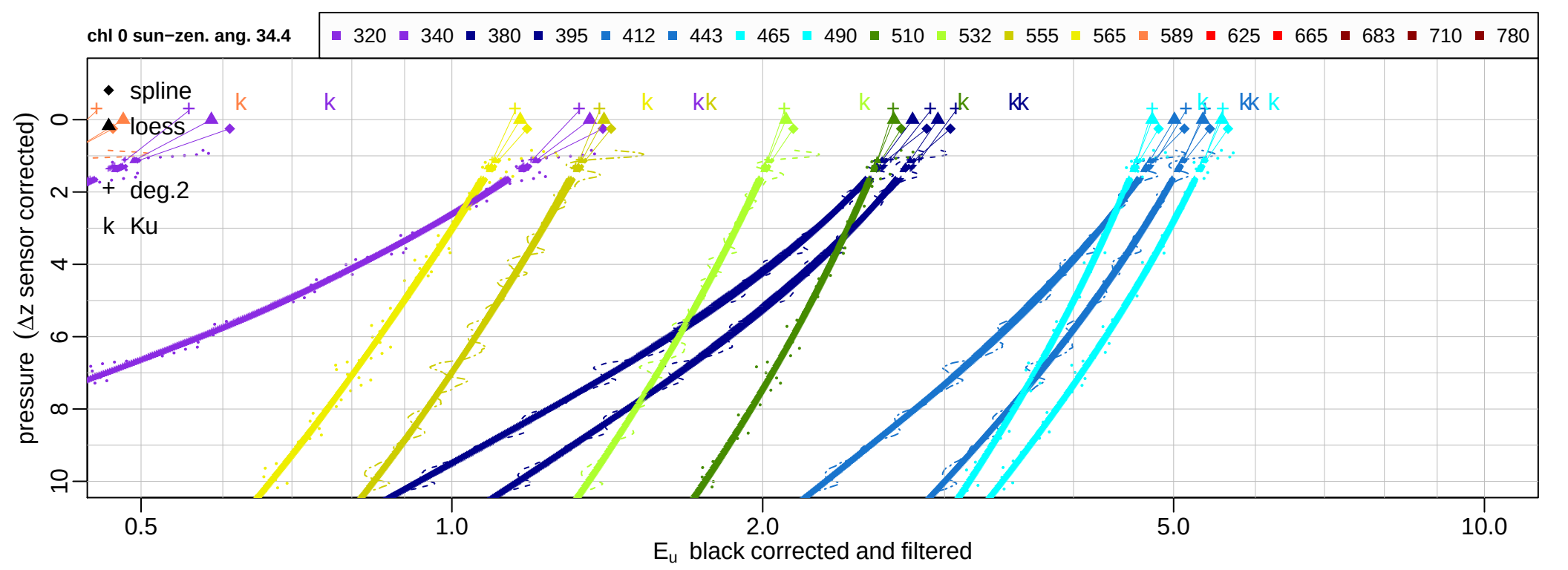
40
60
80
100
120
140
E_s raw

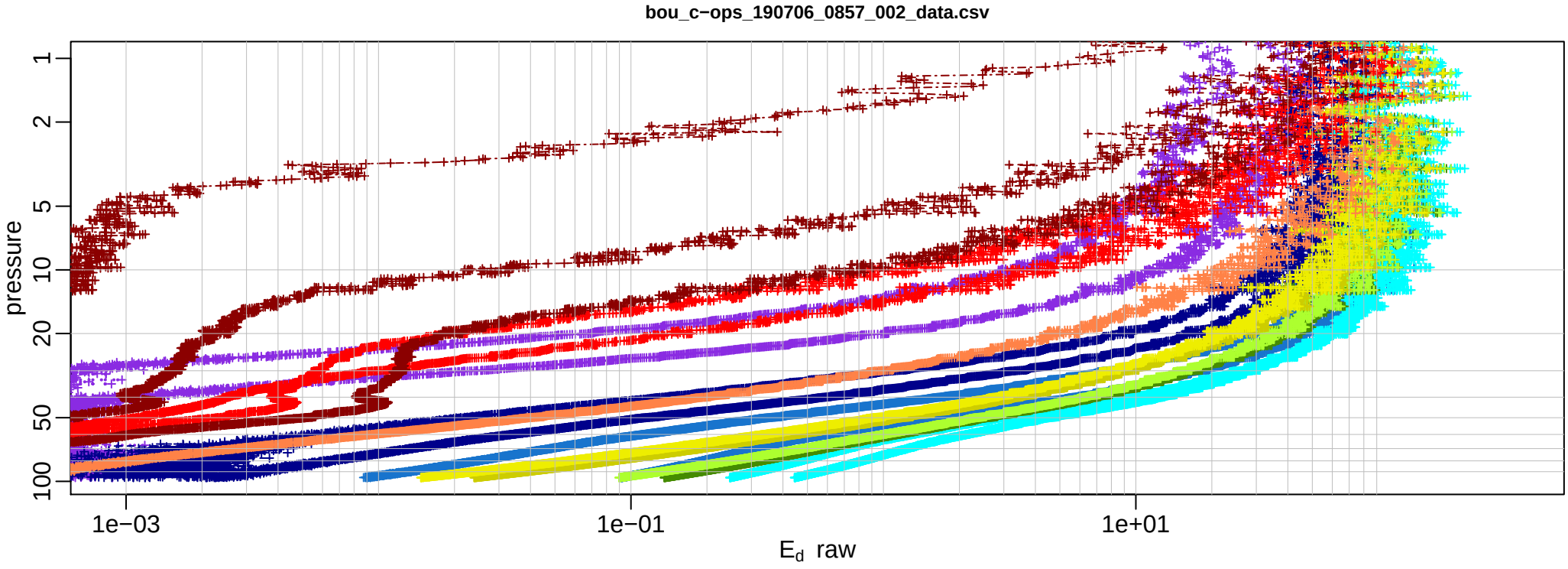

bou_c−ops_190706_0857_002_data.csv
pressure
0
20
40
60
80
Meas.
Th.
sun−zen. ang. = 34.4
Δ %
20
40
60
80
100
120
140
E_s black corrected

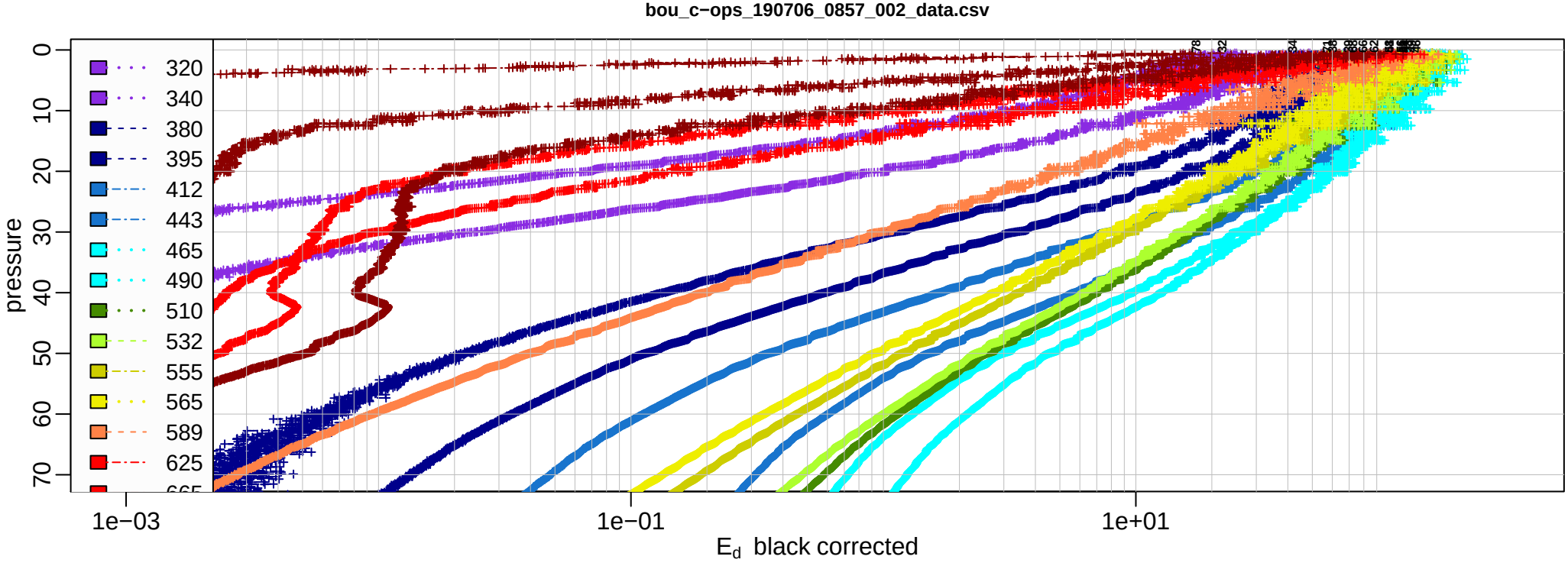

bou_c−ops_190706_0857_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E$_u$ raw

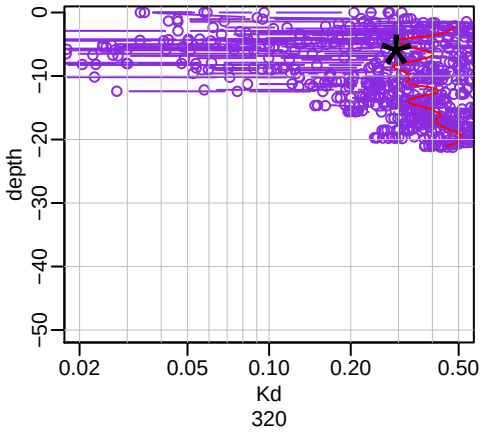

bou_c−ops_190706_0857_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
532
1e−04
1e−02
1e+00
E$_u$ black corrected and filtered

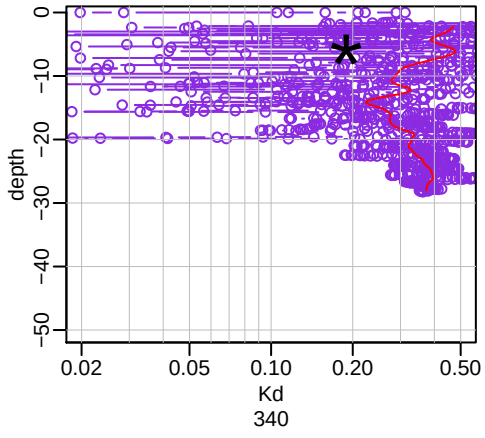

bou_c−ops_190706_0857002_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered

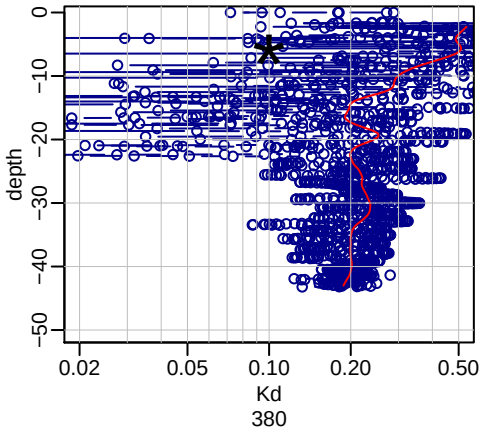

chl 0 sun−zen. ang. 34.4
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered

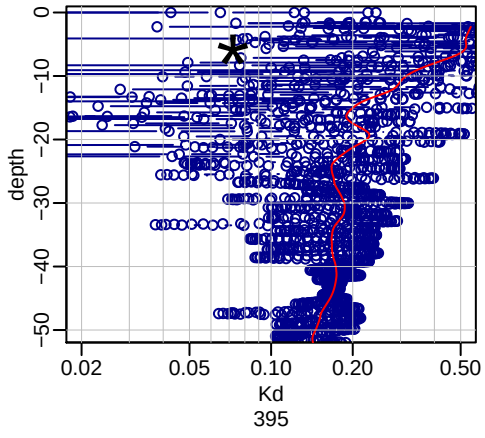

bou_c−ops_190706_0857_002_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190706_0857_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

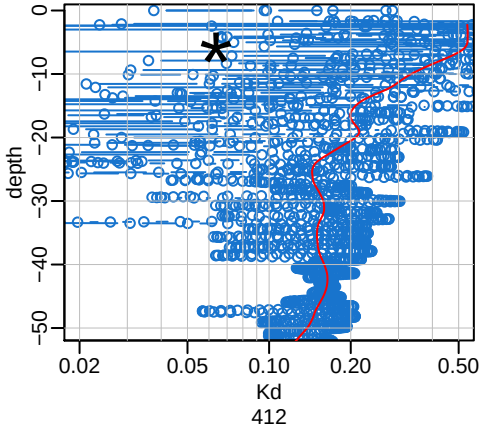


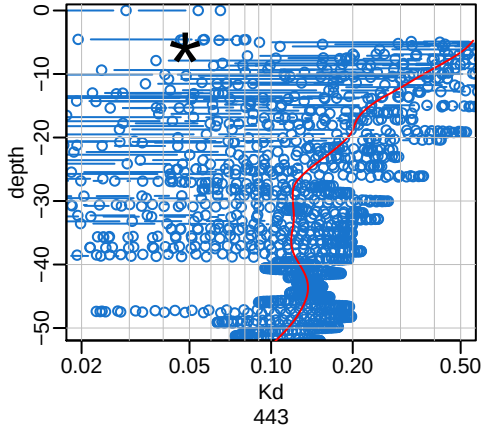


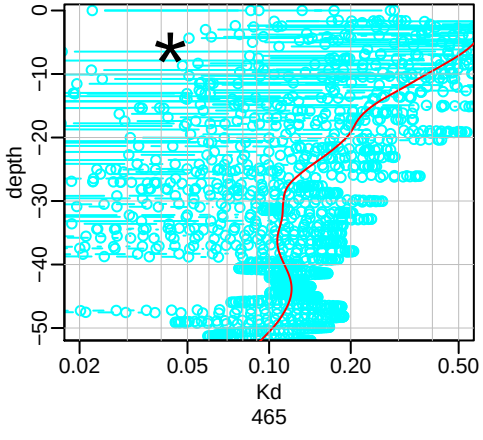


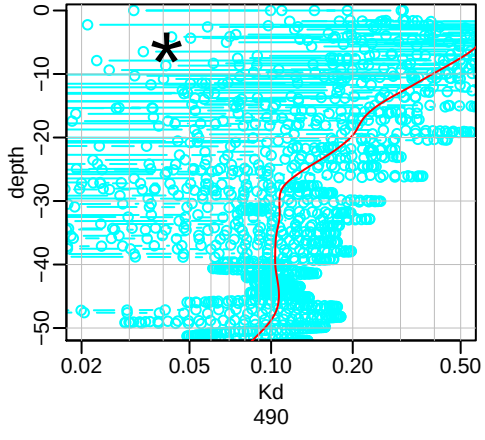


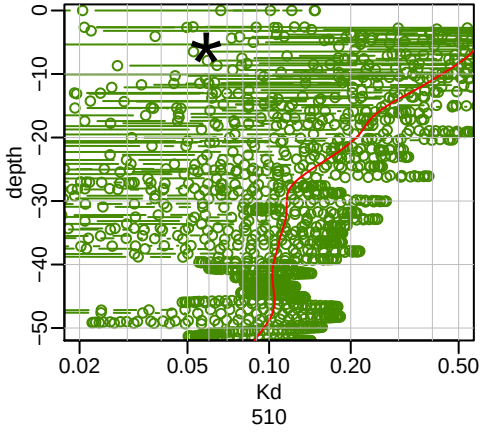
bou_c−ops_190706_0857_002_data.csv

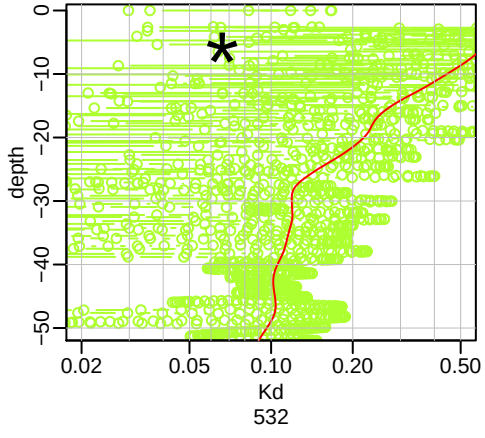


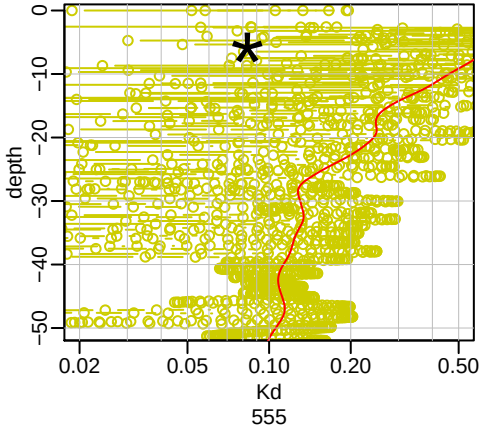


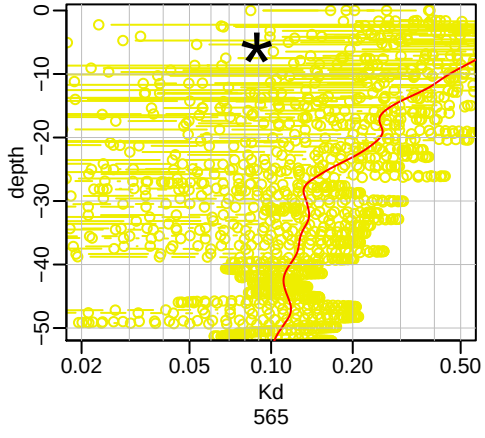


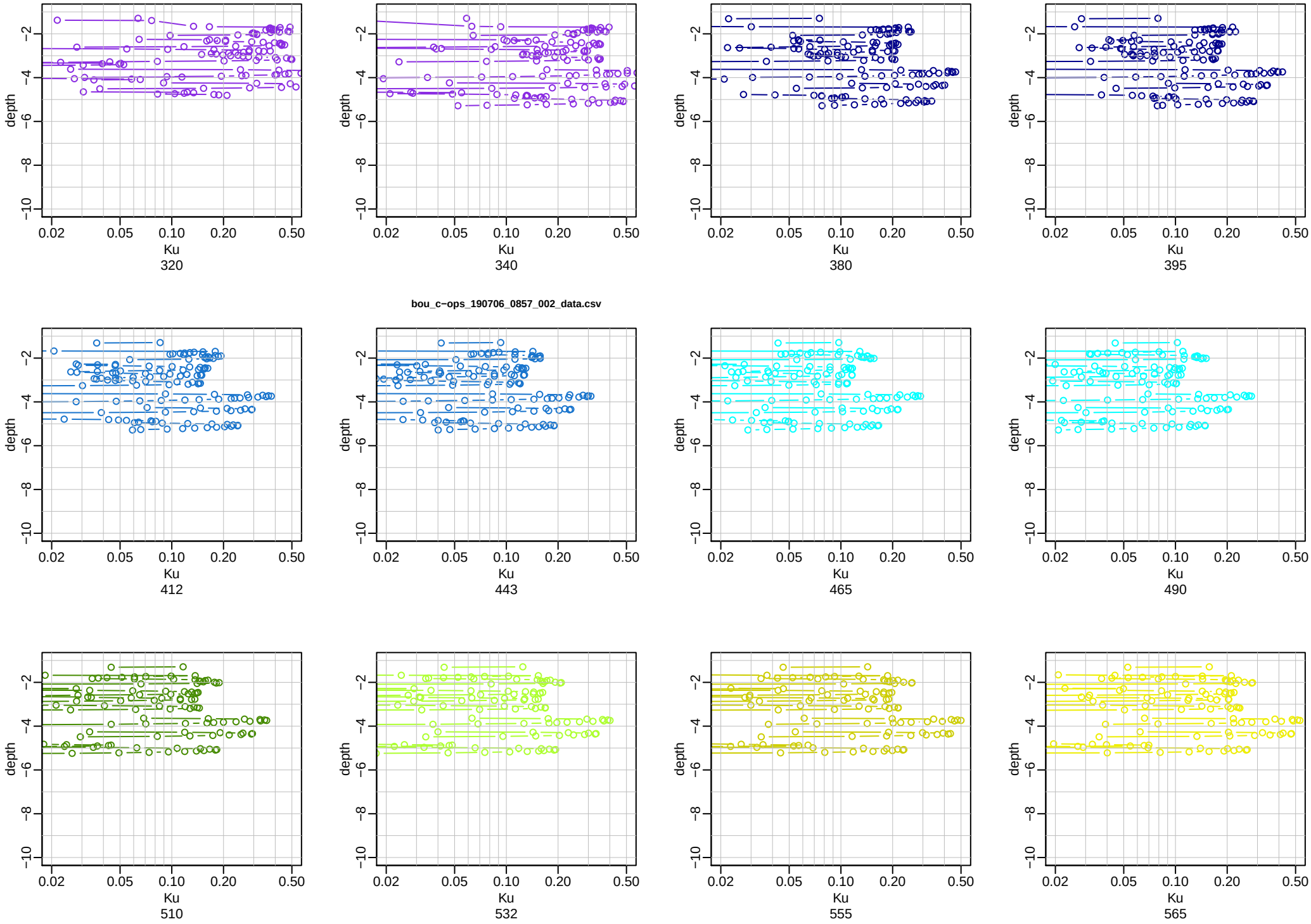


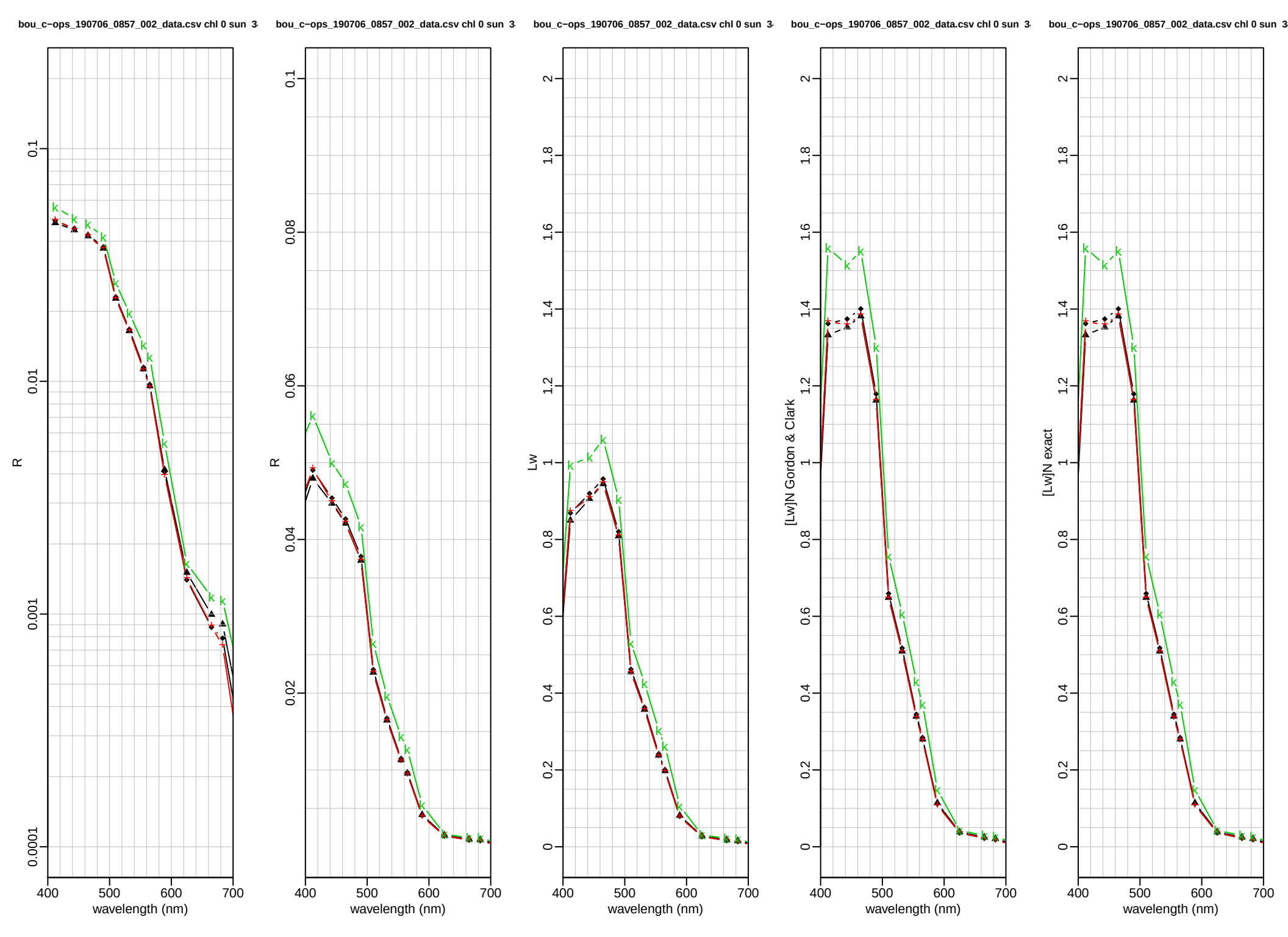






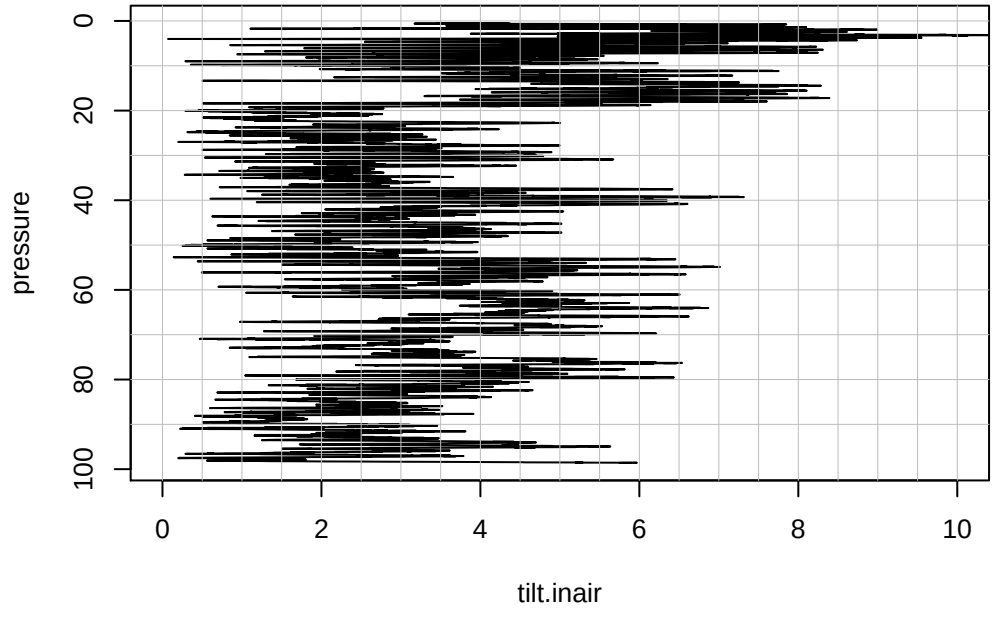


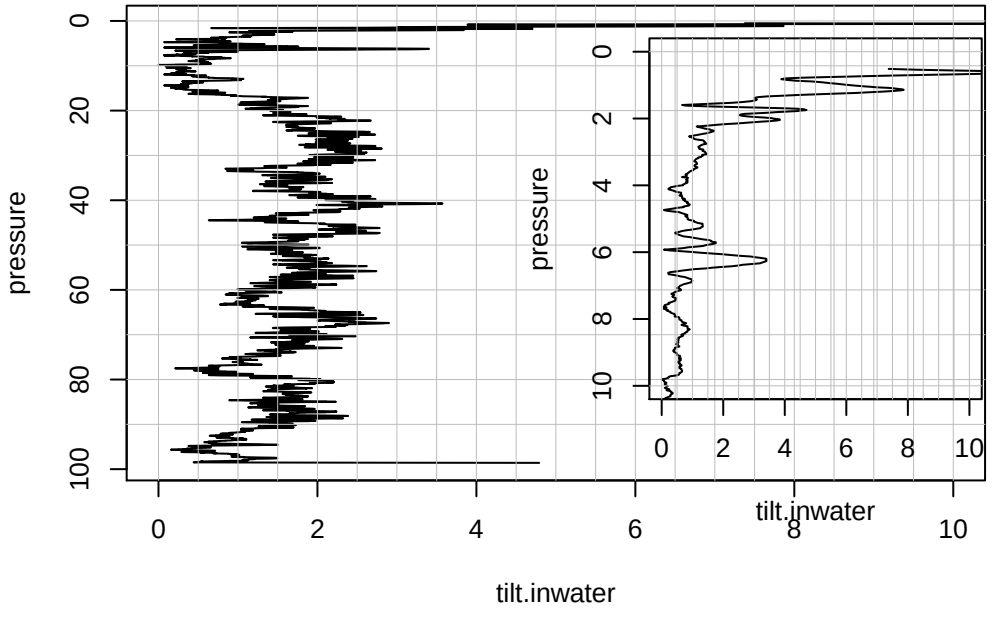

bou_c~ops_190706_0857_002_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

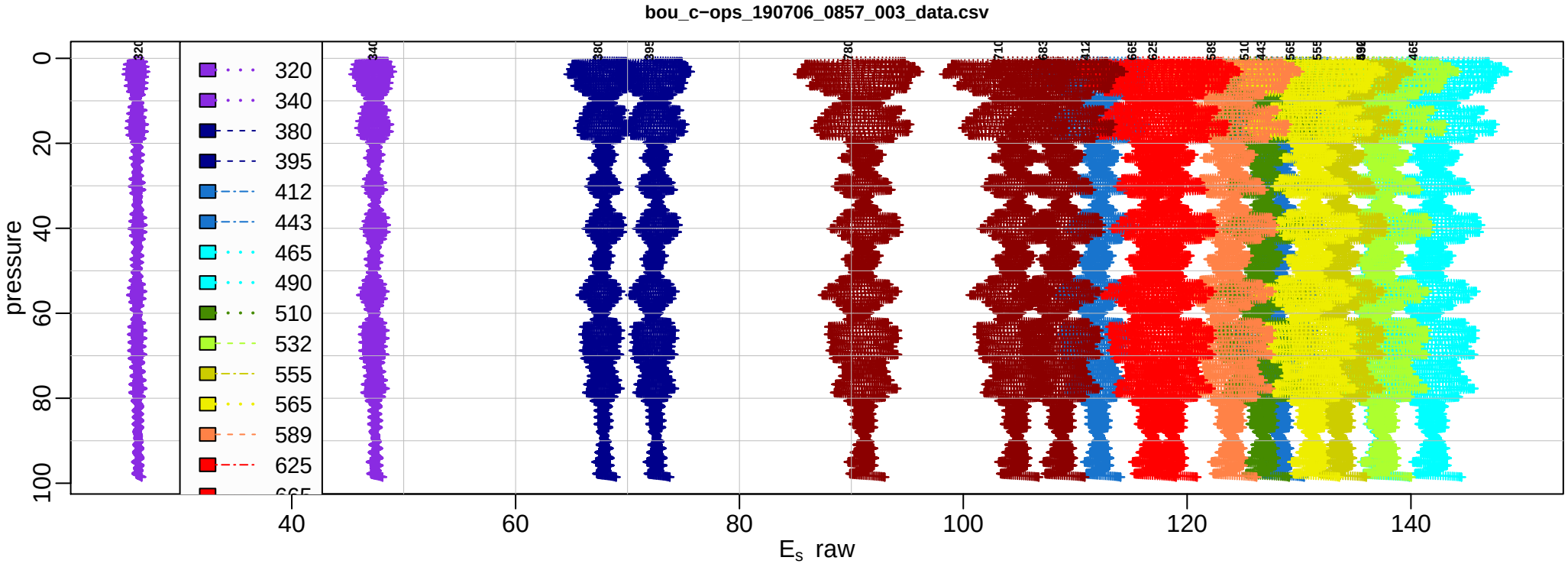

bou_c−ops_190706_0857_002_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190706_0857_002_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190706_0857_002_data.csv chl 0 sun 3
Lw
wavelength (nm)
bou_c−ops_190706_0857_002_data.csv chl 0 sun 3
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190706_0857_002_data.csv chl 0 sun 3
[Lw]N exact
wavelength (nm)

rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole209/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole209/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole209/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole209/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.88622
latitude 43.37332
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

bou_c−ops_190706_0857_003_data.csv






bou_c−ops_190706_0857_003_data.csv
pressure
0
20
40
60
80
100
320
340
380
395
412
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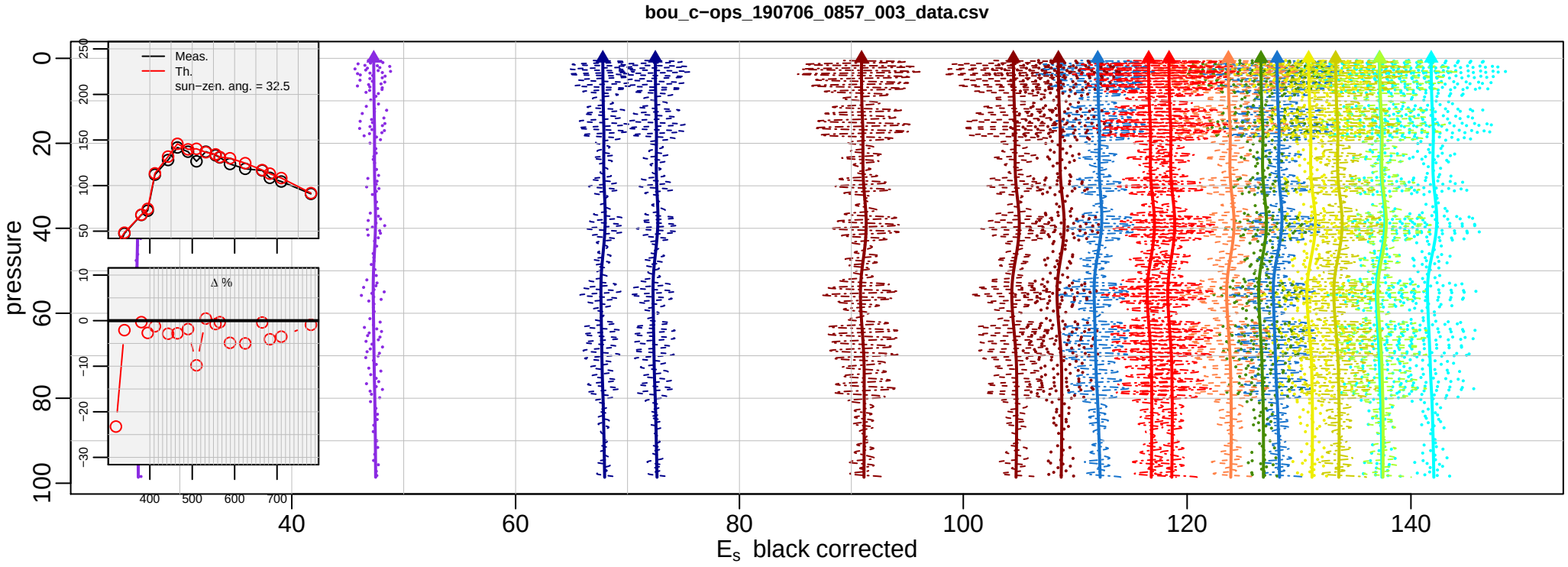
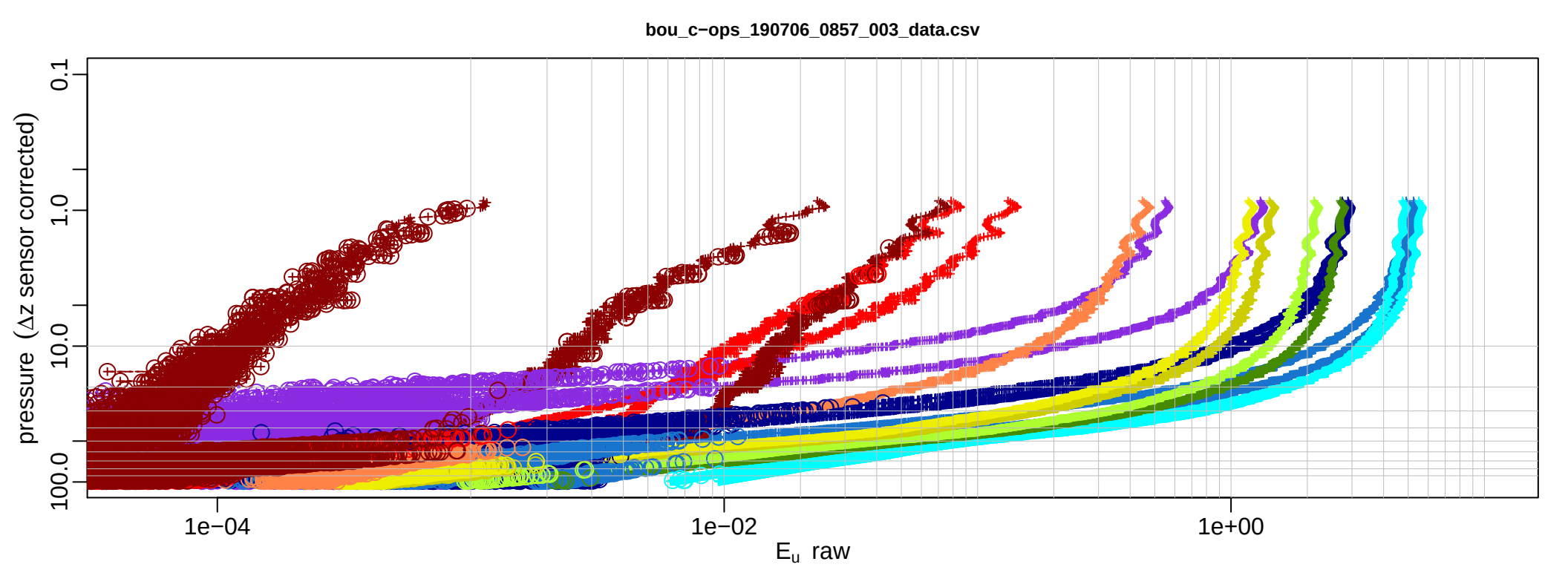
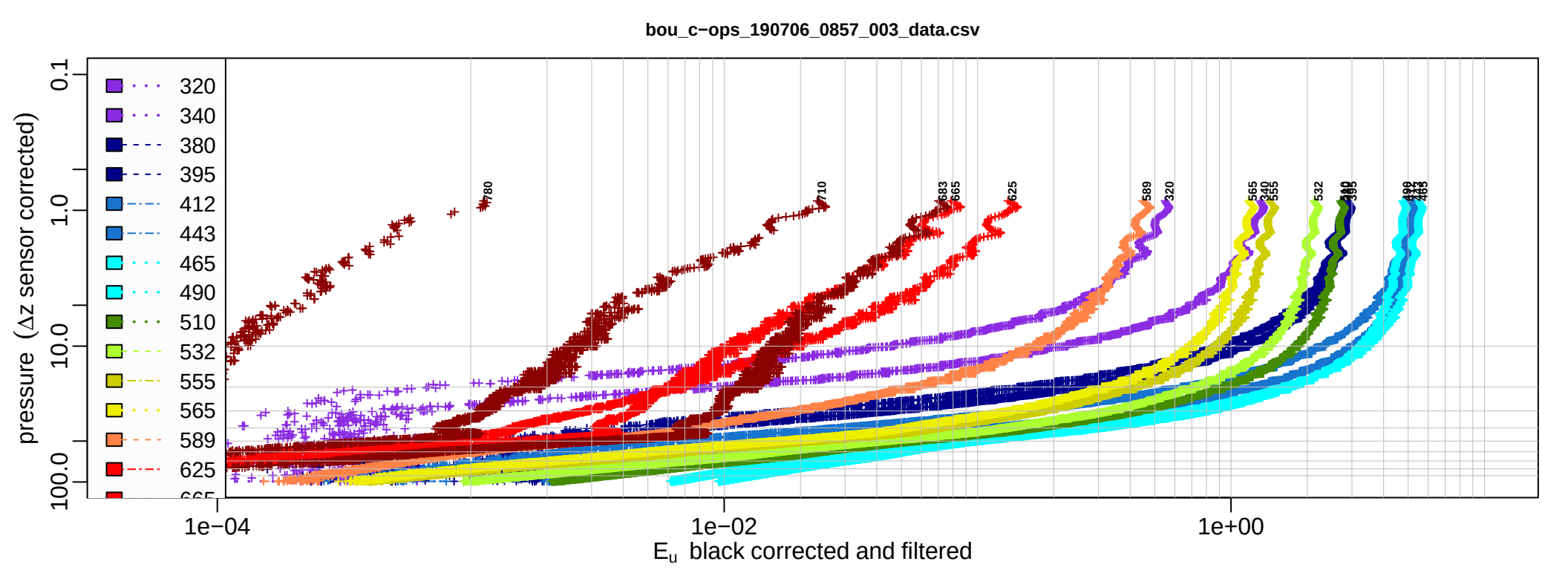
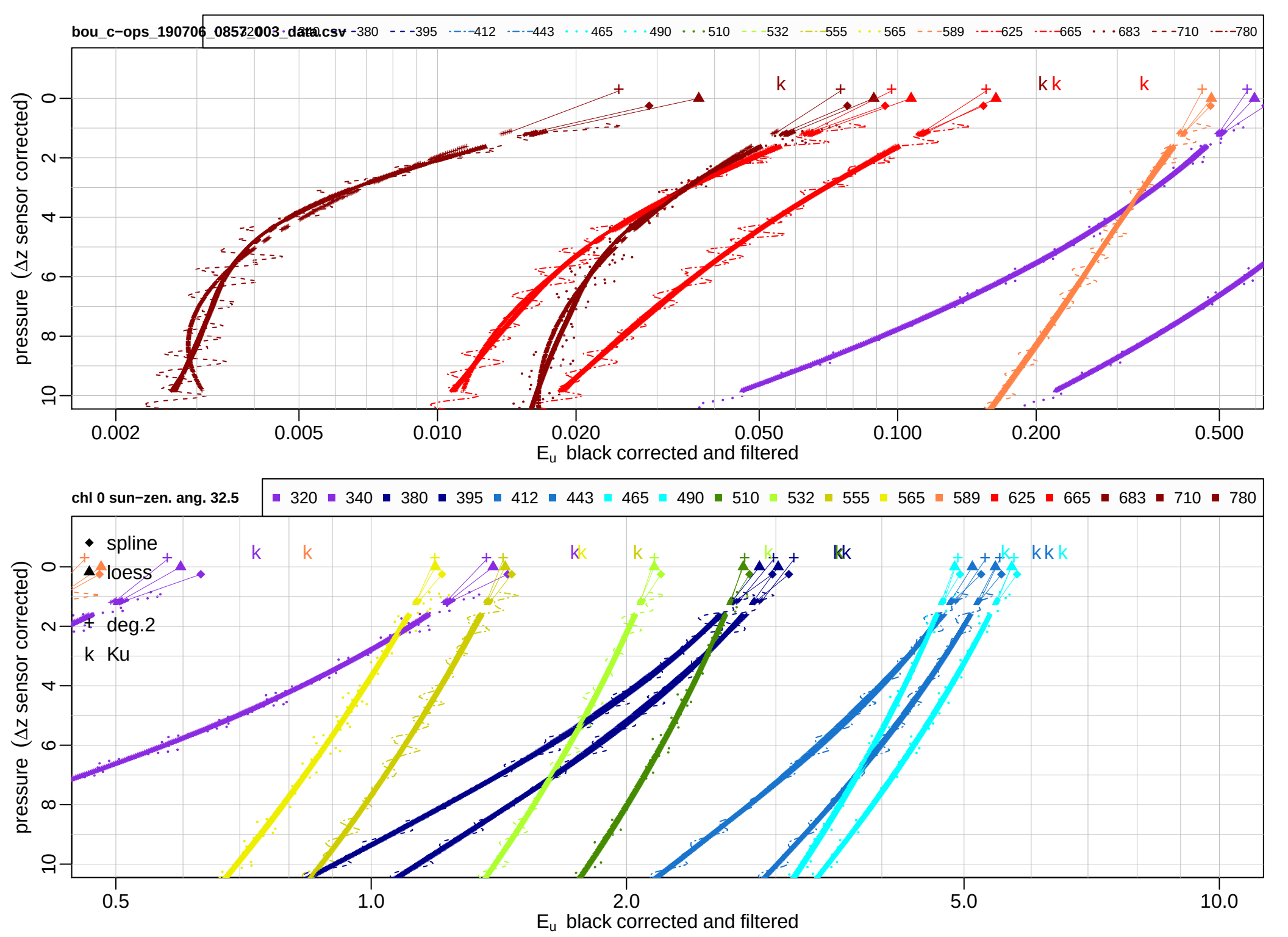
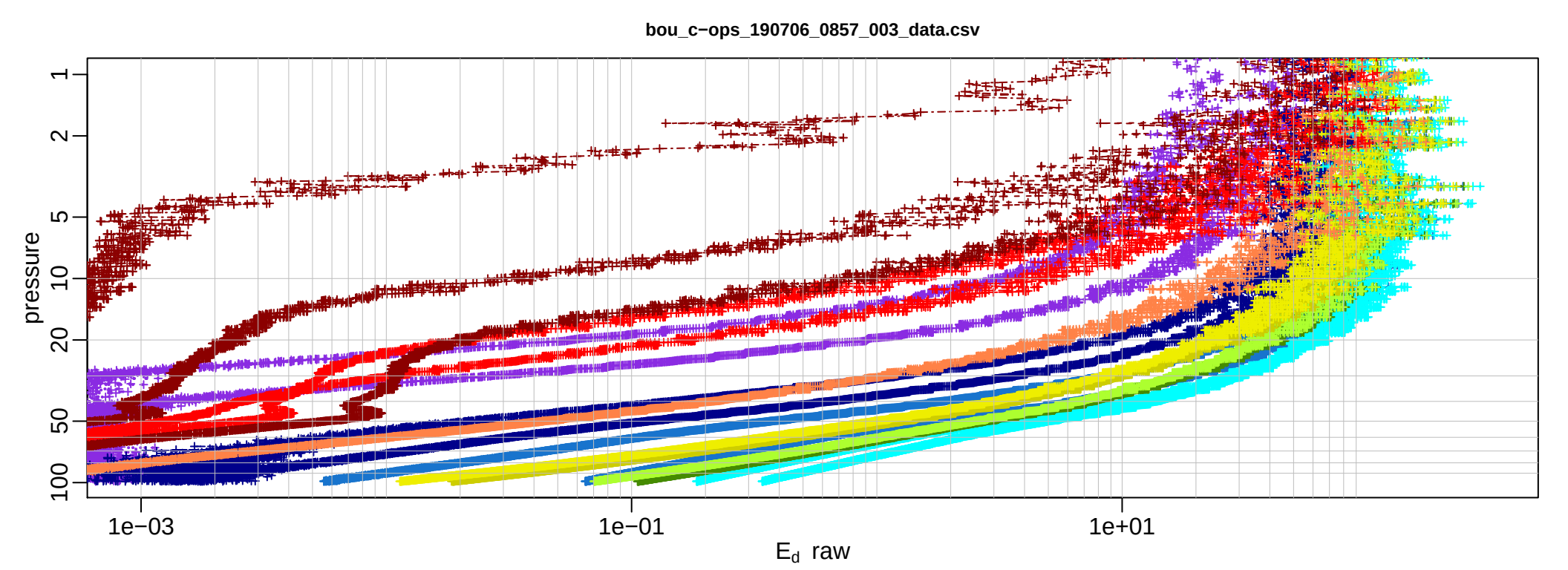
465
490
510
532
555
565
589
625
40
60
80
100
120
140
E_s raw

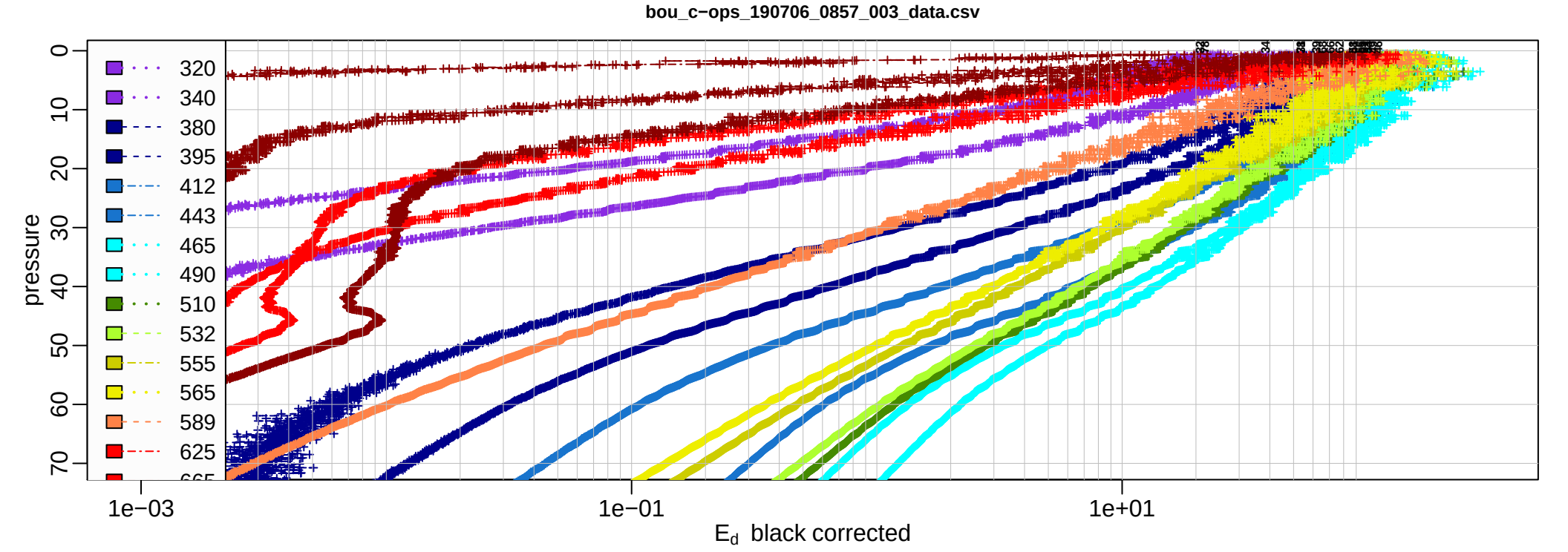

bou_c−ops_190706_0857_003_data.csv
pressure
0
20
40
60
80
100
Meas.
Th.
sun−zen. ang. = 32.5
Δ %
40
60
80
100
120
140
E_s black corrected

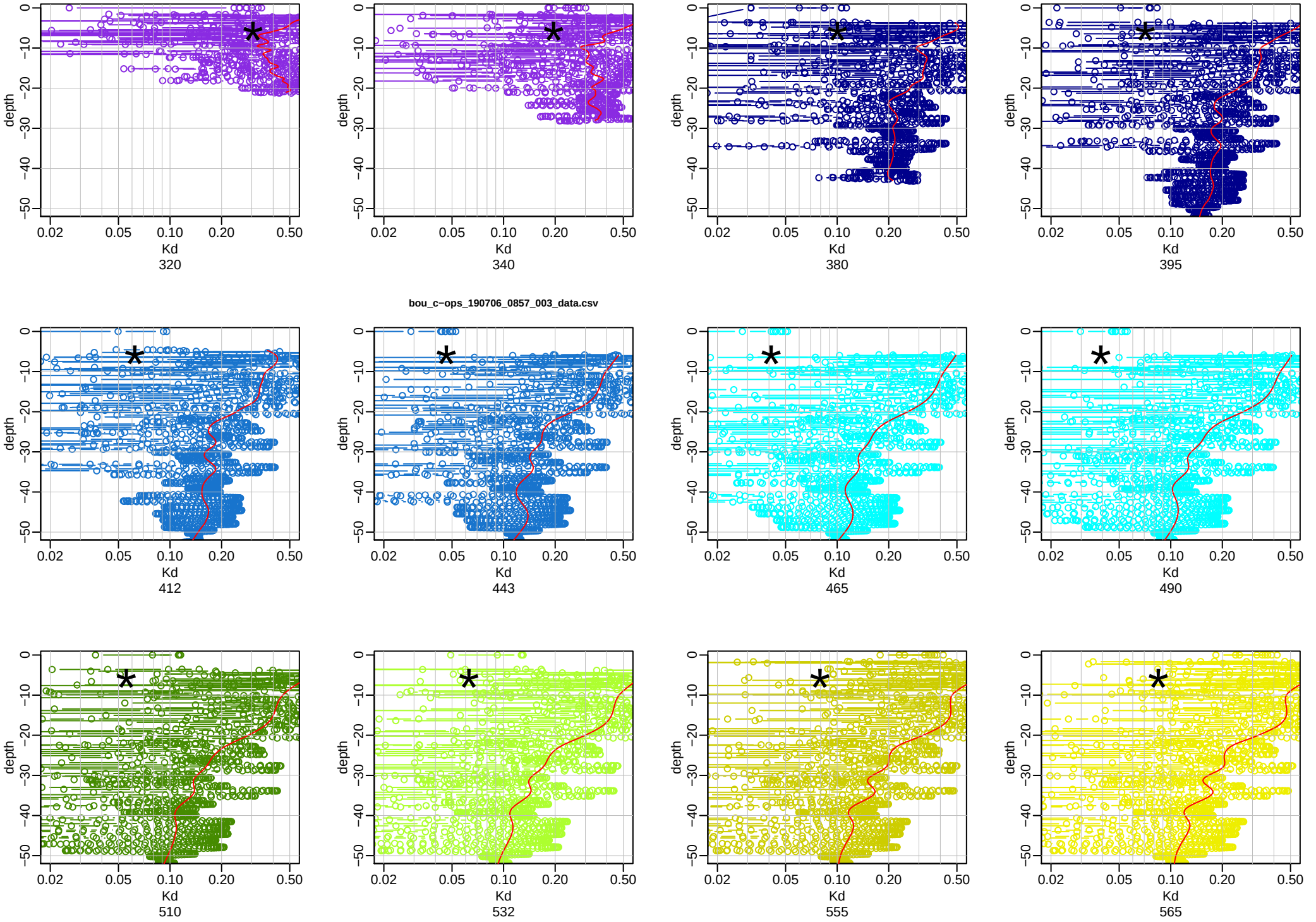

bou_c−ops_190706_0857_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
Eu raw

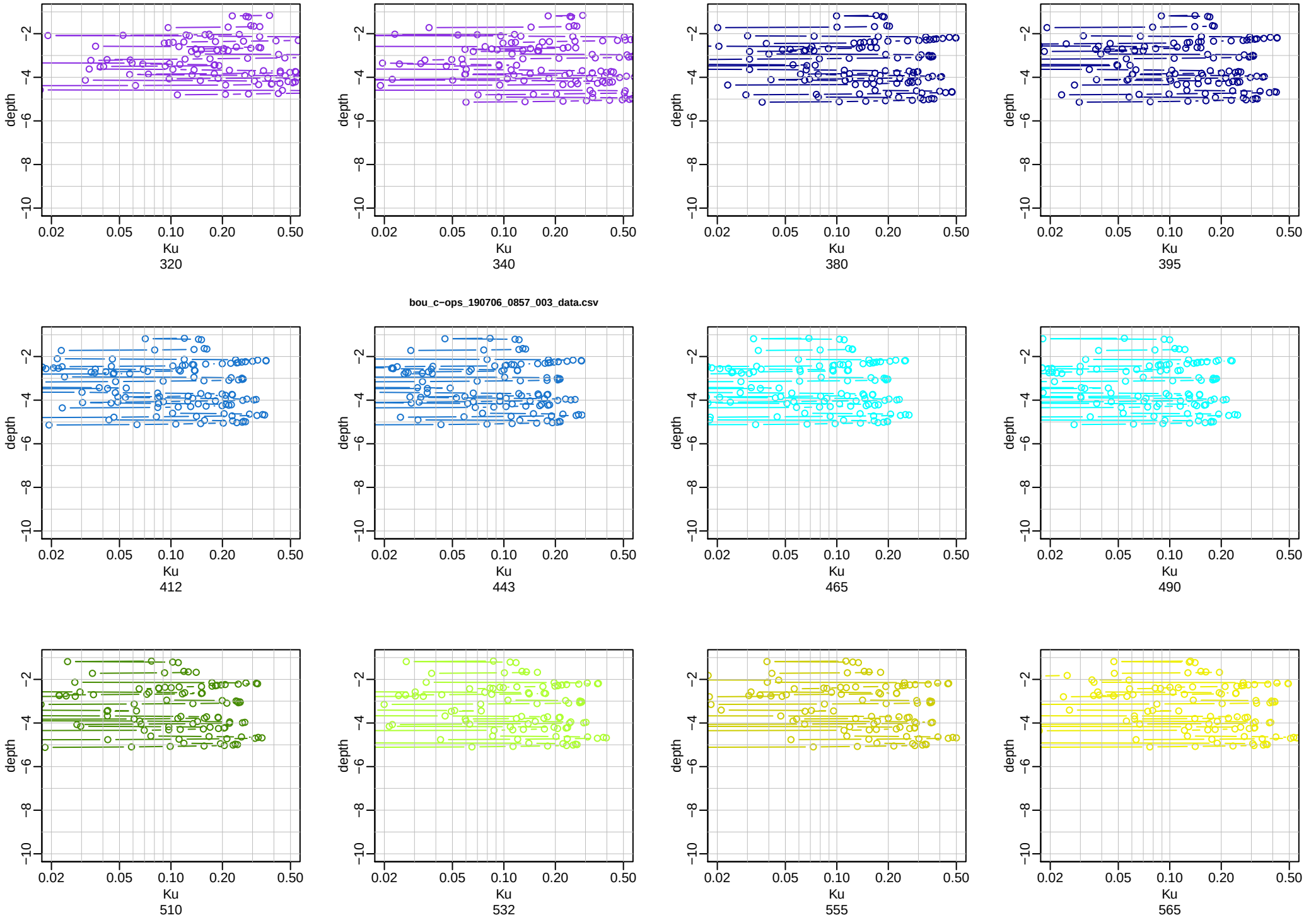

bou_c−ops_190706_0857_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
340
555
532
1e−04
1e−02
1e+00
Eu black corrected and filtered

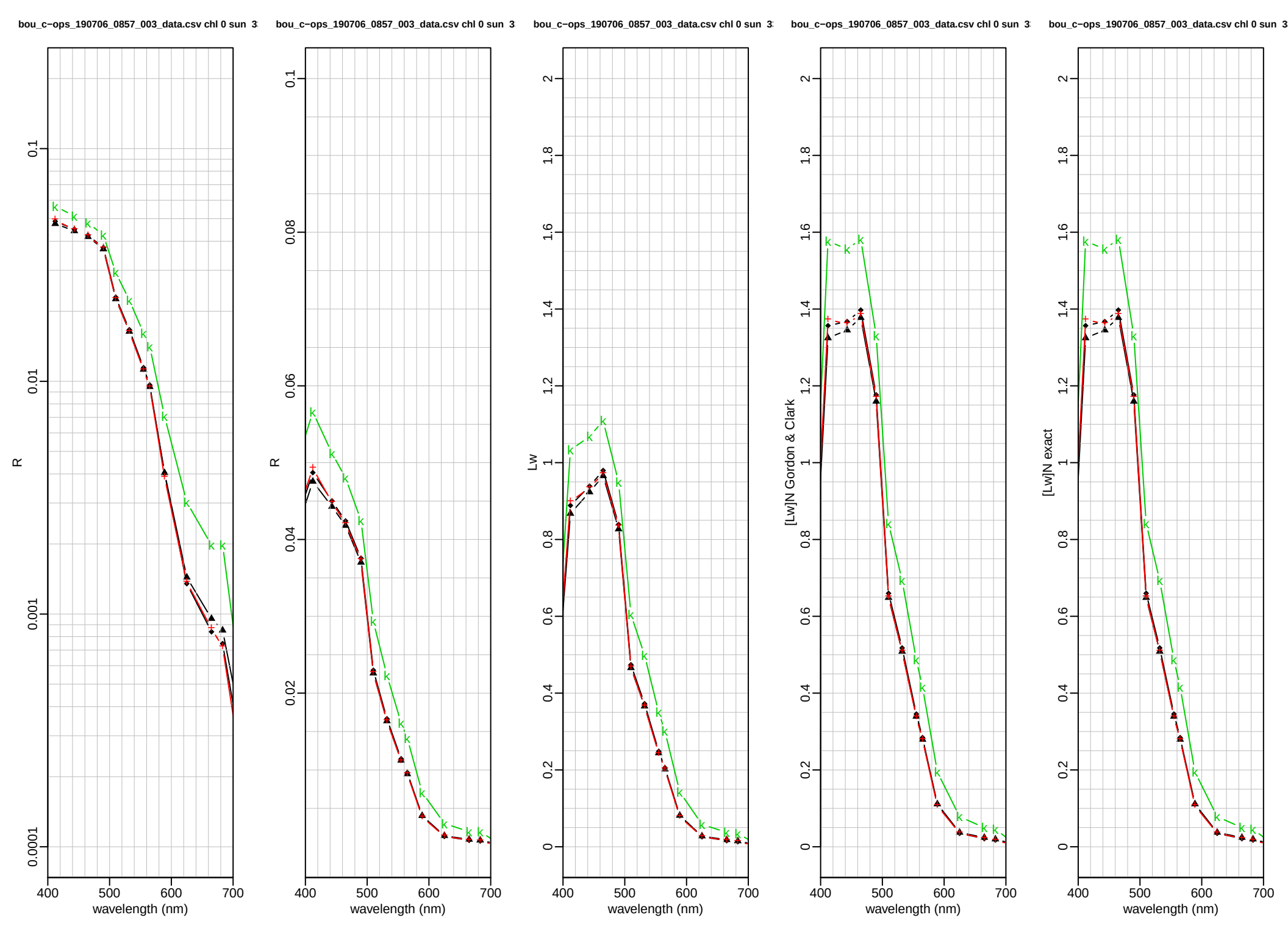

bou_c−ops_190706_0857003_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 32.5
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
k Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190706_0857_003_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190706_0857_003_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

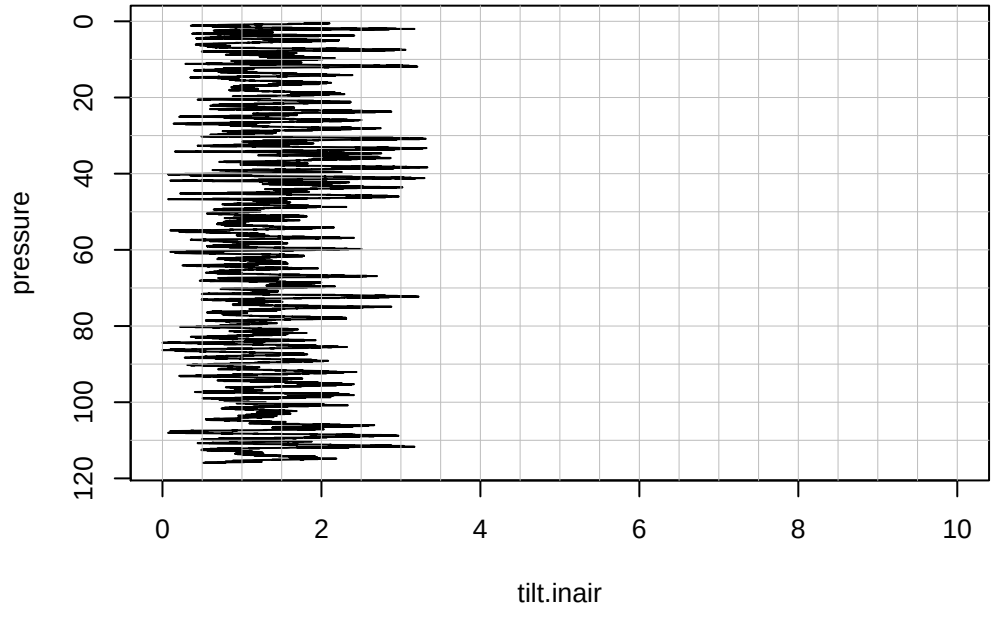

bou_c~ops_190706_0857_003_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

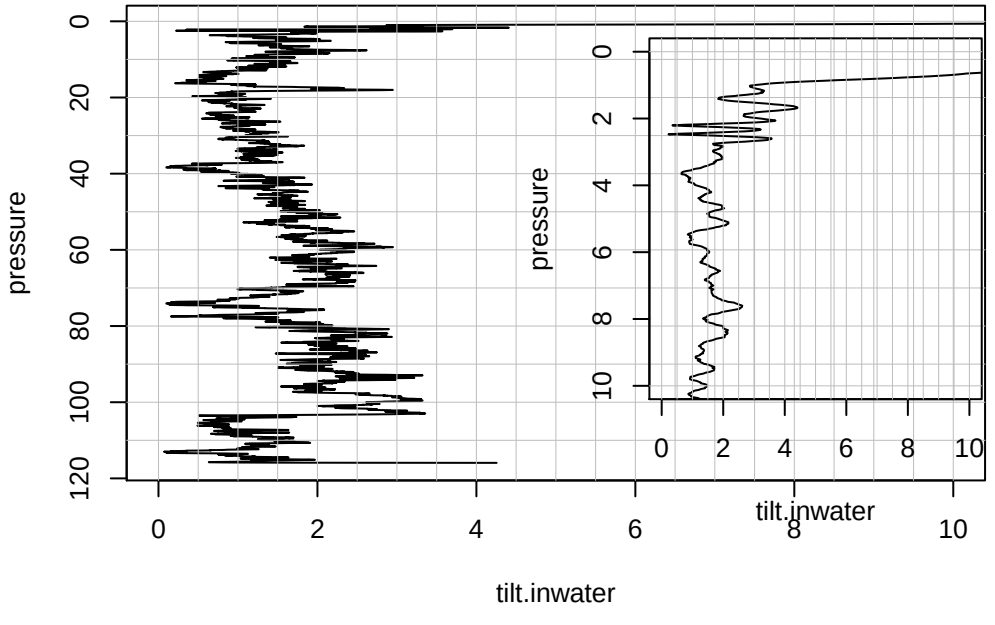

bou_c~ops_190706_0857_003_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

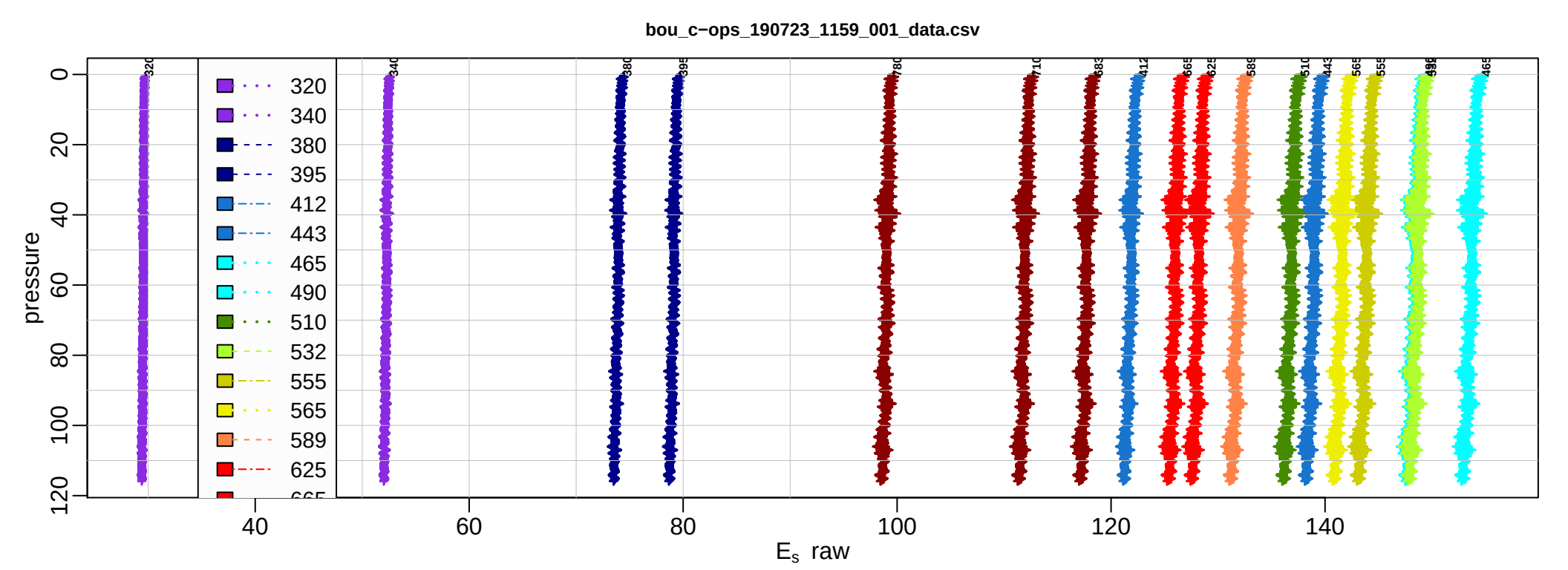

bou_c~ops_190706_0857_003_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c~ops_190706_0857_003_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c~ops_190706_0857_003_data.csv chl 0 sun 3
Lw
wavelength (nm)
bou_c~ops_190706_0857_003_data.csv chl 0 sun 3
[Lw]N Gordon & Clark
wavelength (nm)
bou_c~ops_190706_0857_003_data.csv chl 0 sun 3
[Lw]N exact
wavelength (nm)

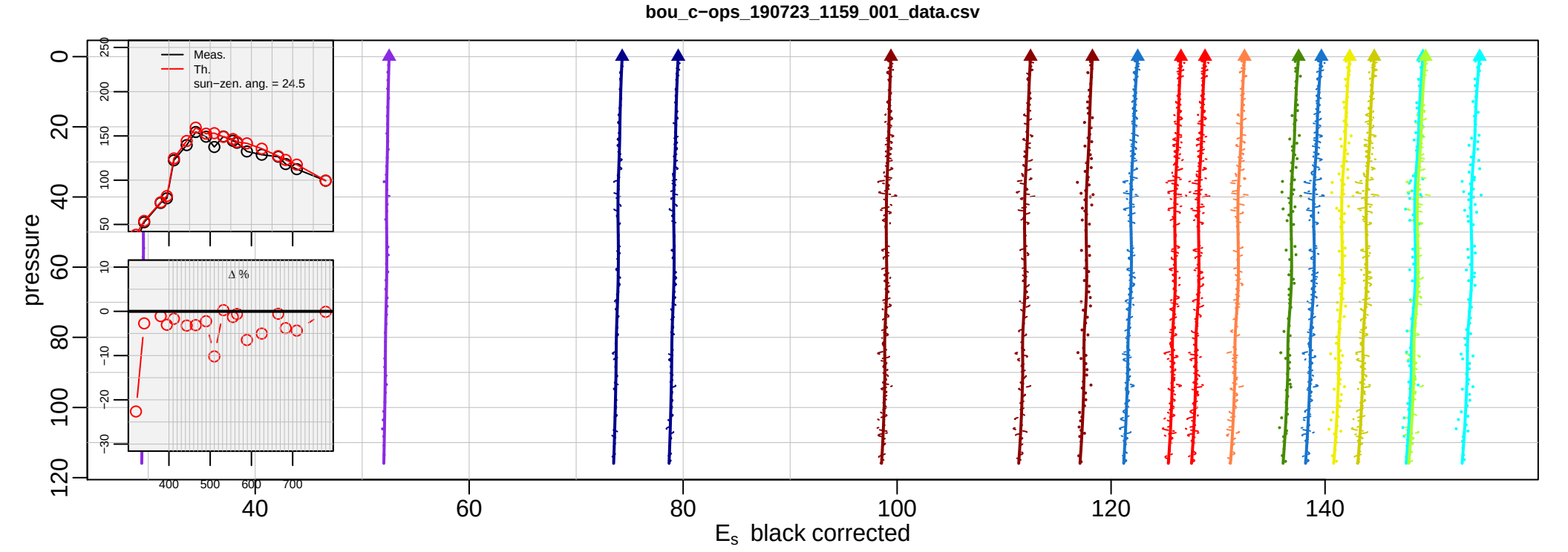
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole210/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole210/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole210/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole210/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.9016
latitude 43.3549
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

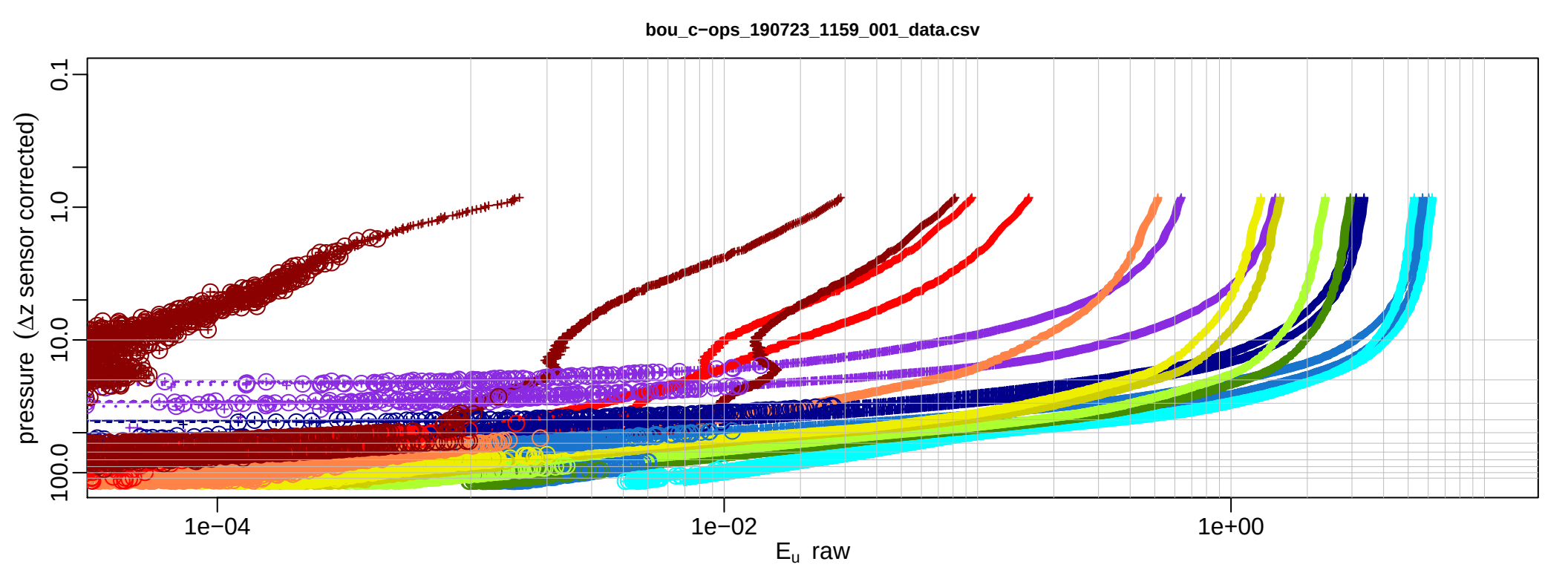
bou_c−ops_190723_1159_001_data.csv

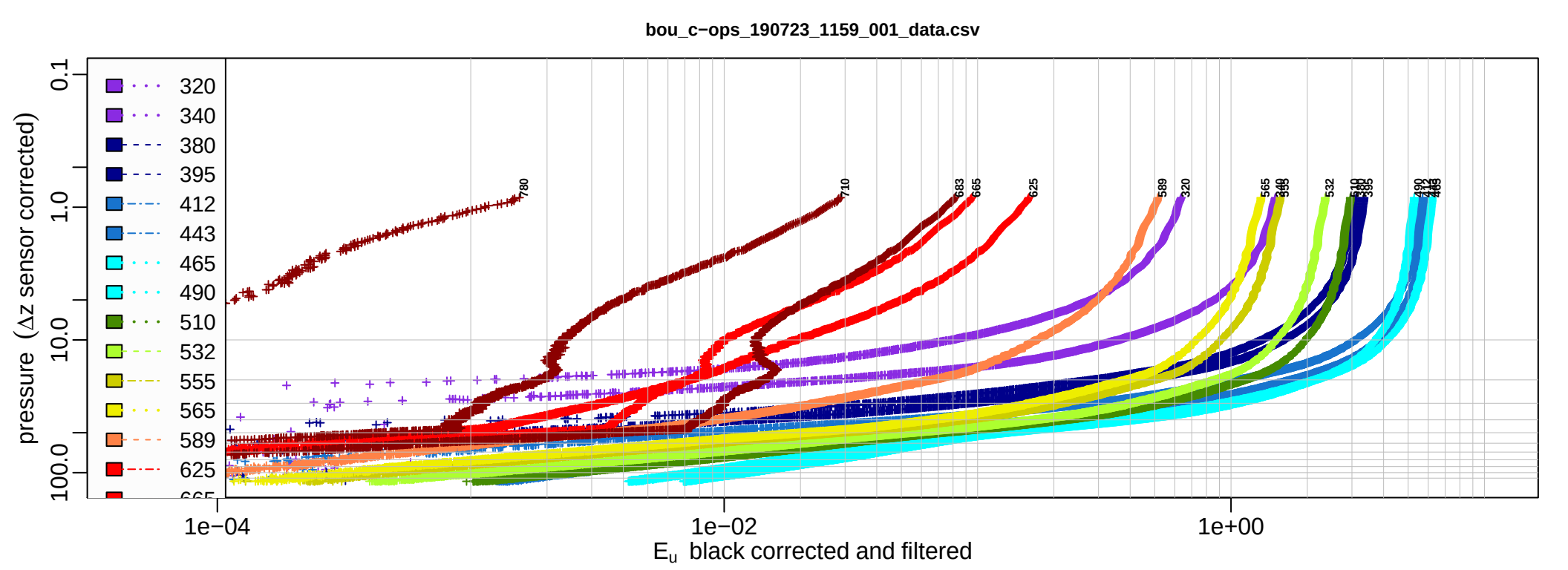


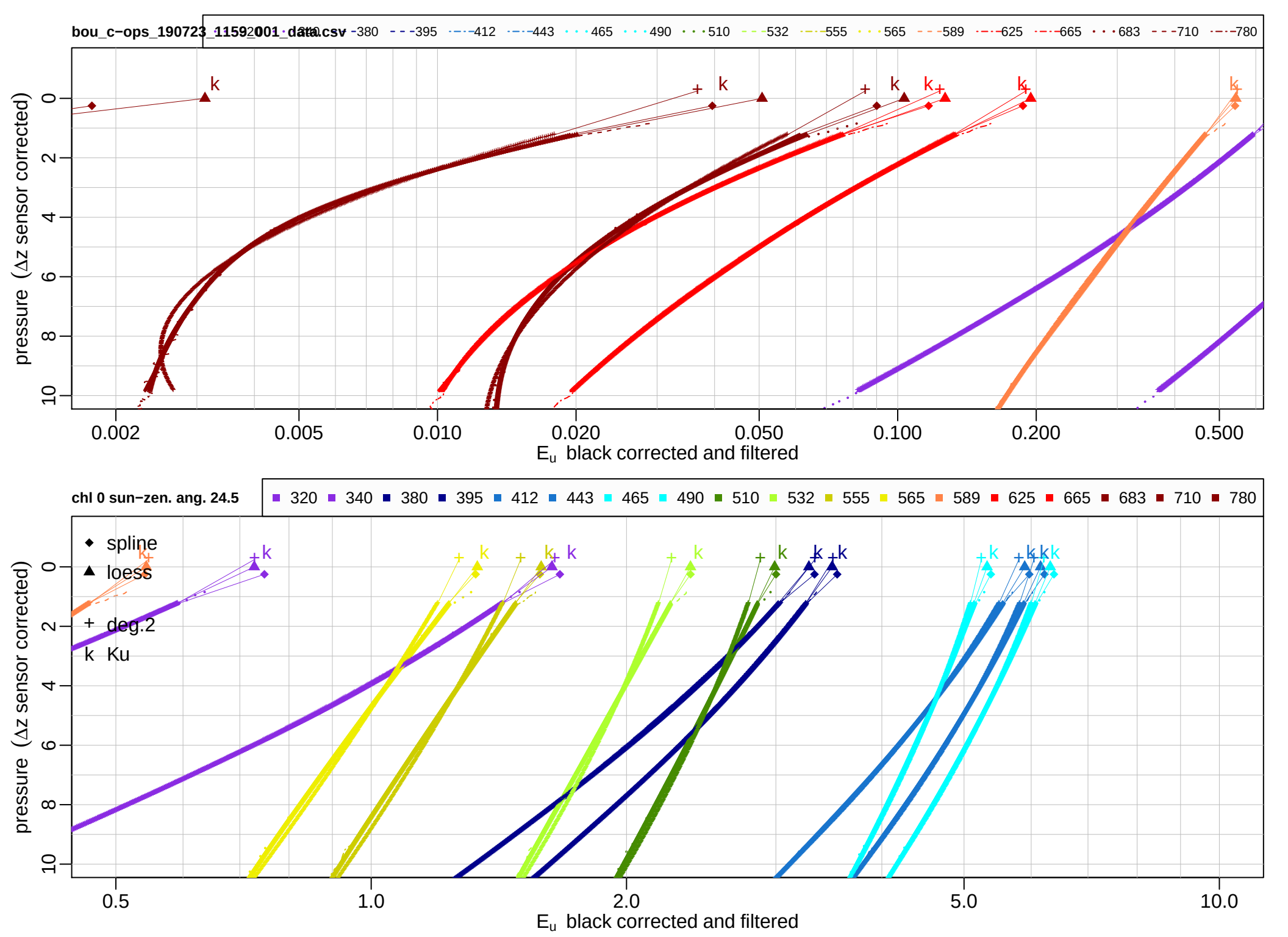


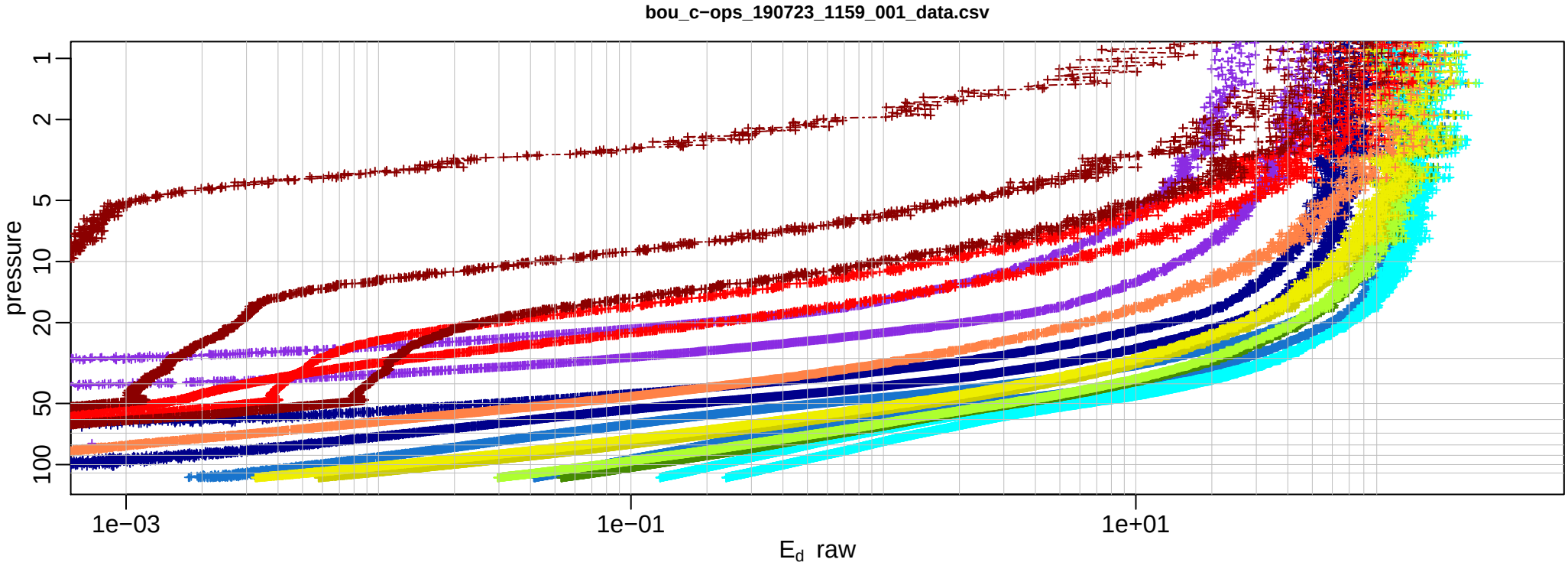

bou_c−ops_190723_1159_001_data.csv
pressure
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

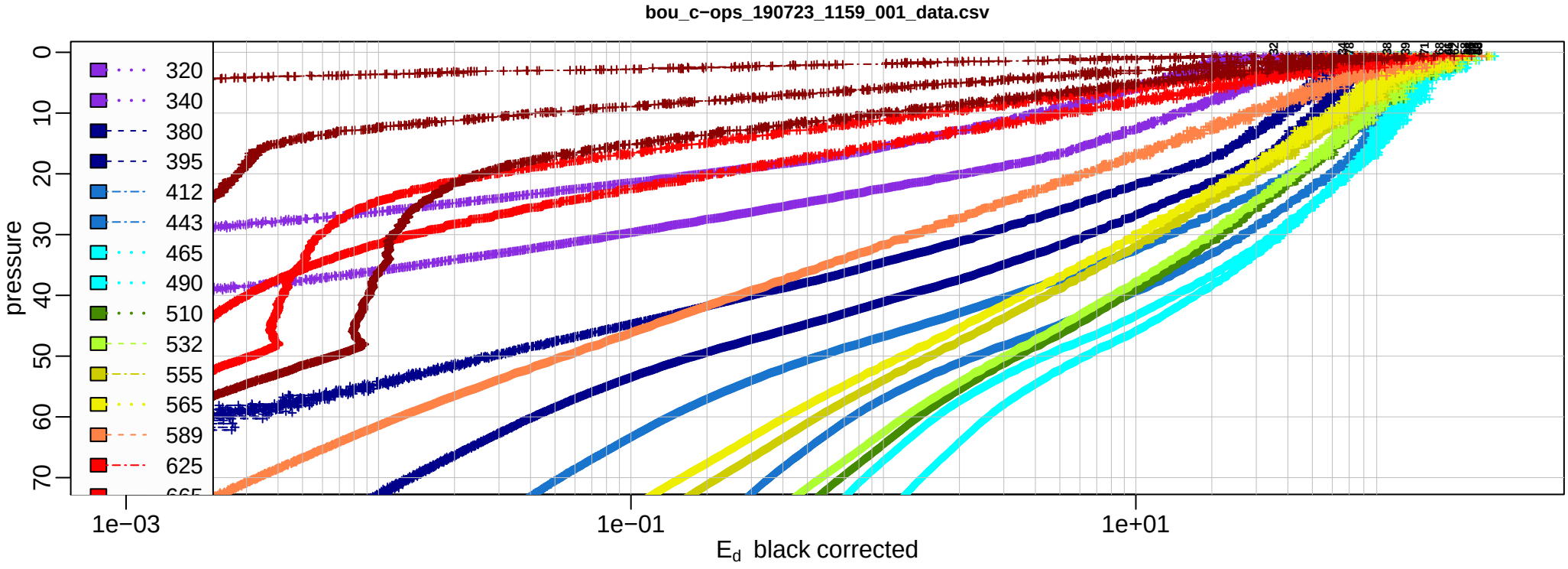

bou_c−ops_190723_1159_001_data.csv
pressure
E_s black corrected
Meas.
Th.
sun−zen. ang. = 24.5
Δ %

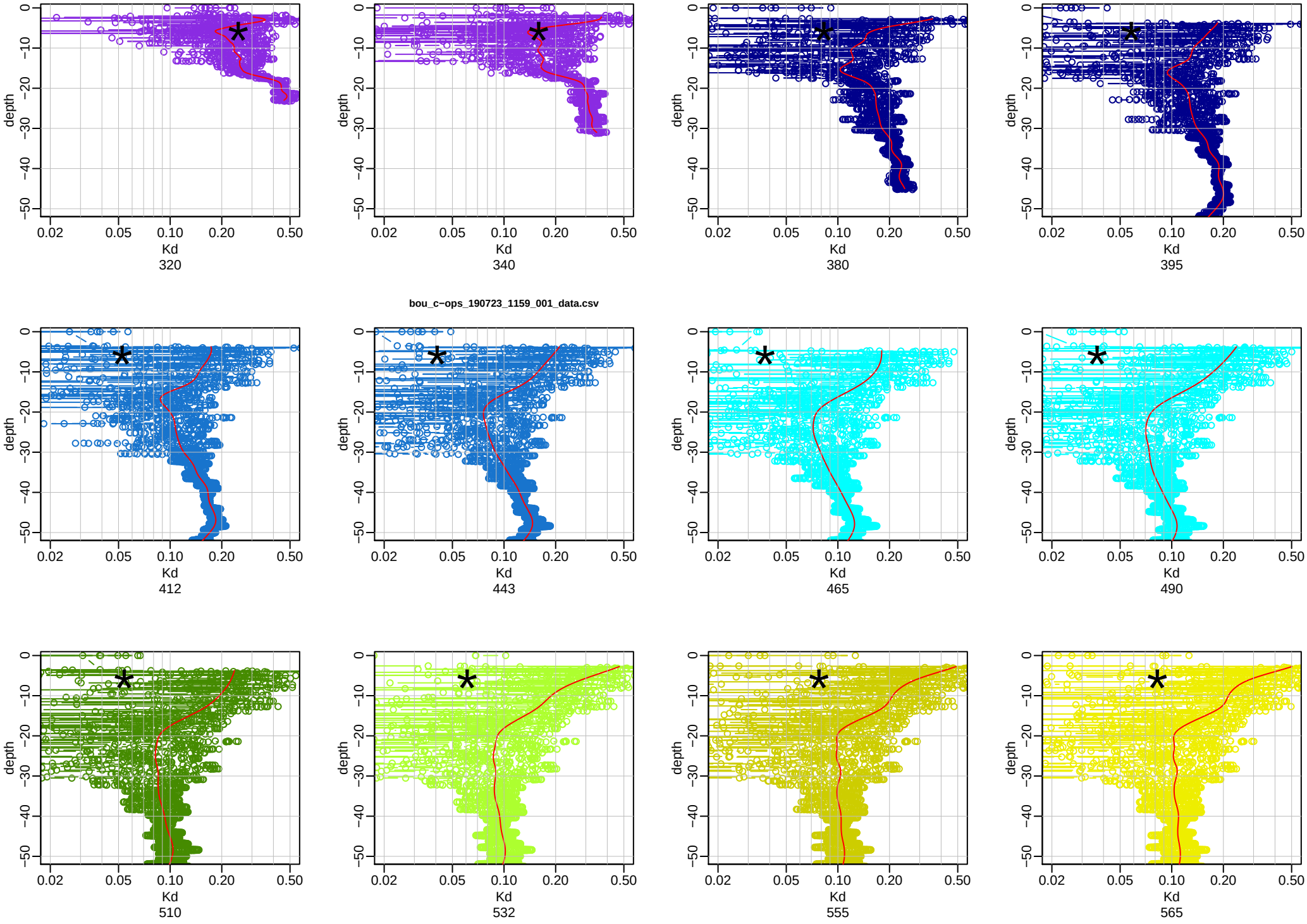

bou_c−ops_190723_1159_001_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

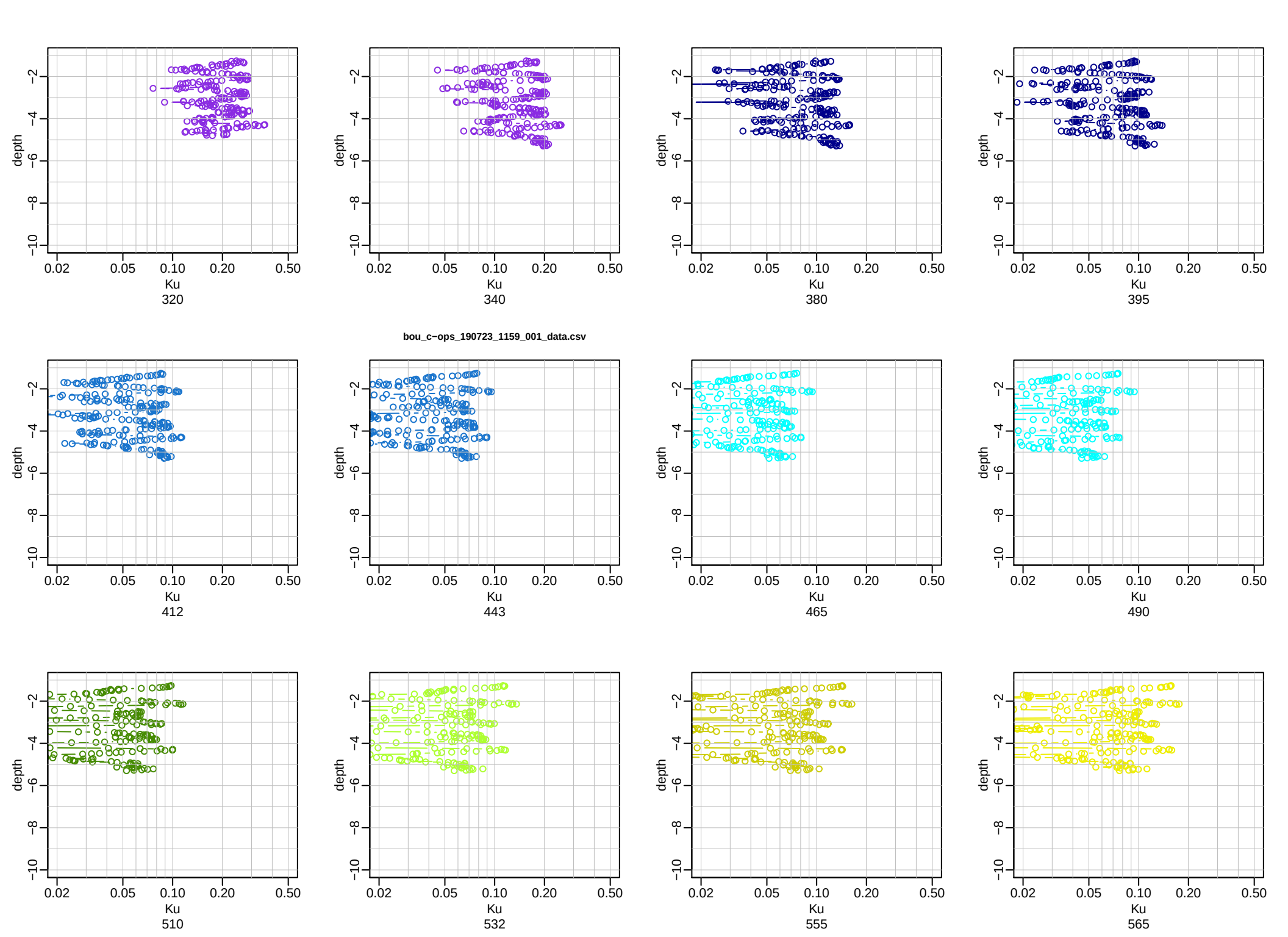

bou_c−ops_190723_1159_001_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
1e−04
1e−02
1e+00
E_u black corrected and filtered

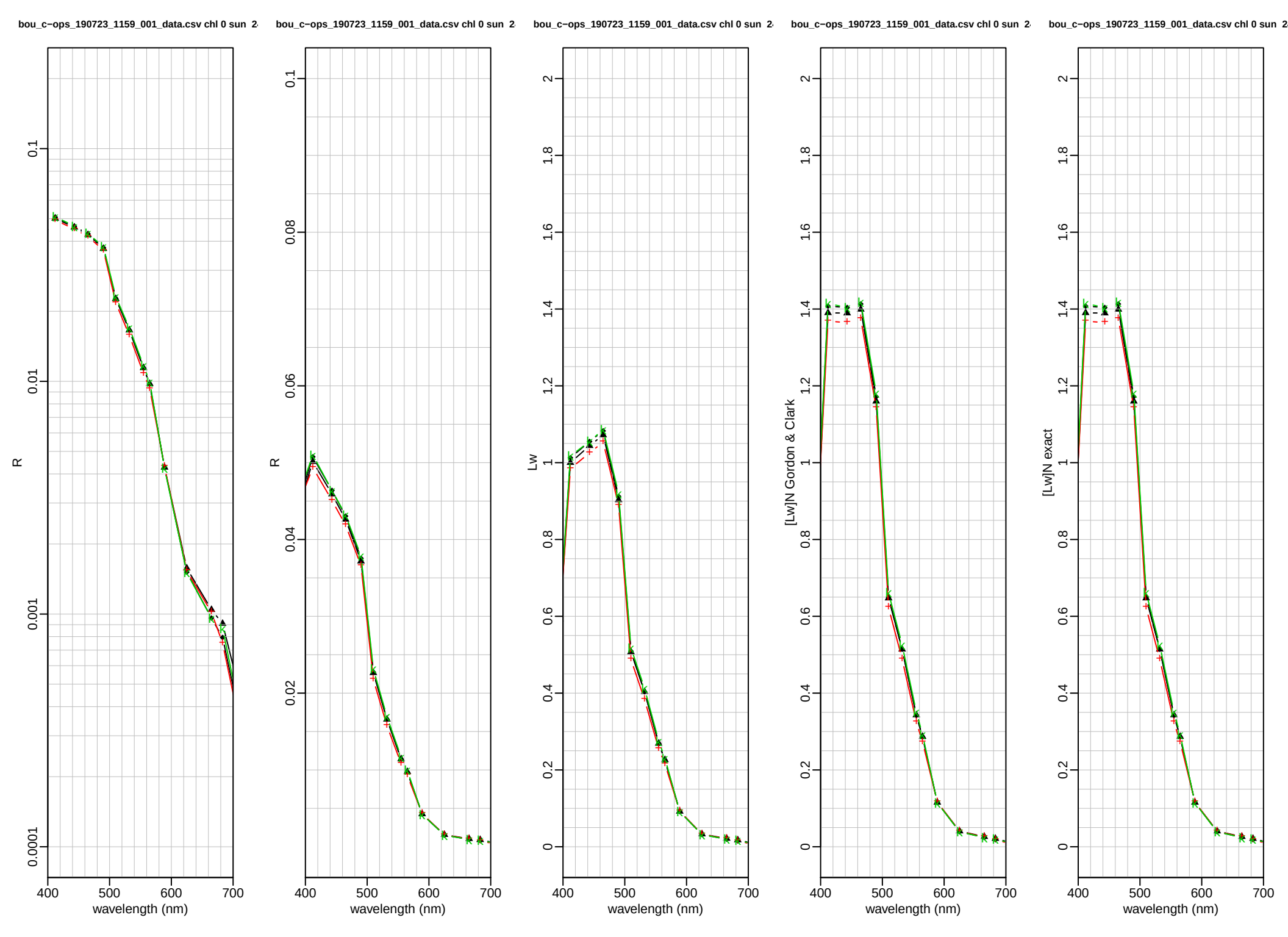

bou_c−ops_190723_1159001_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 24.5
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190723_1159_001_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190723_1159_001_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

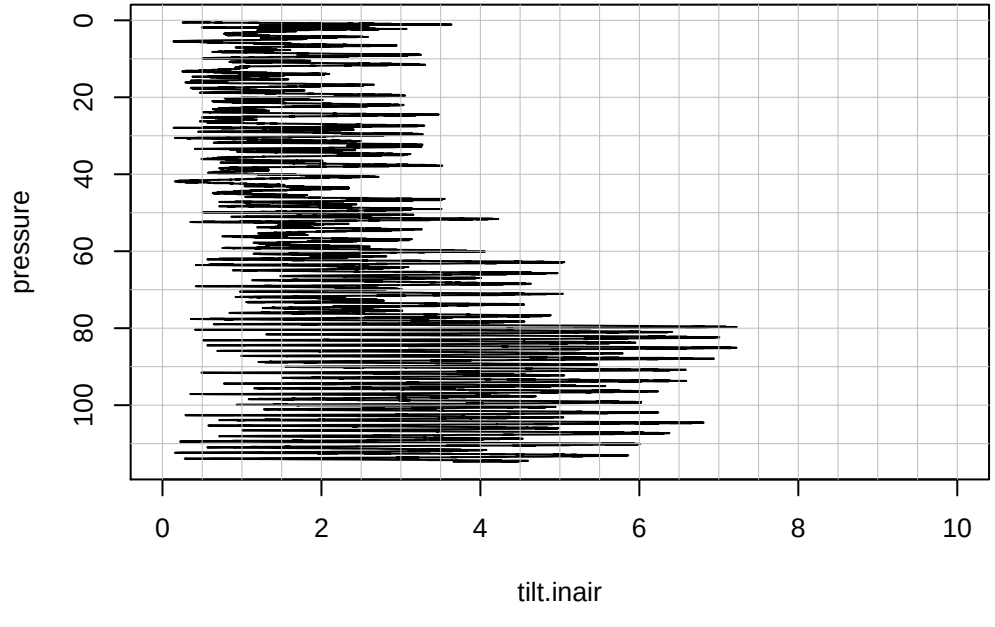

bou_c~ops_190723_1159_001_data.csv
depth
0
−10
−20
−30
−40
−50
0.02
0.05
0.10
0.20
0.50
Kd
320
340
380
395
412
443
465
490
510
532
555
565

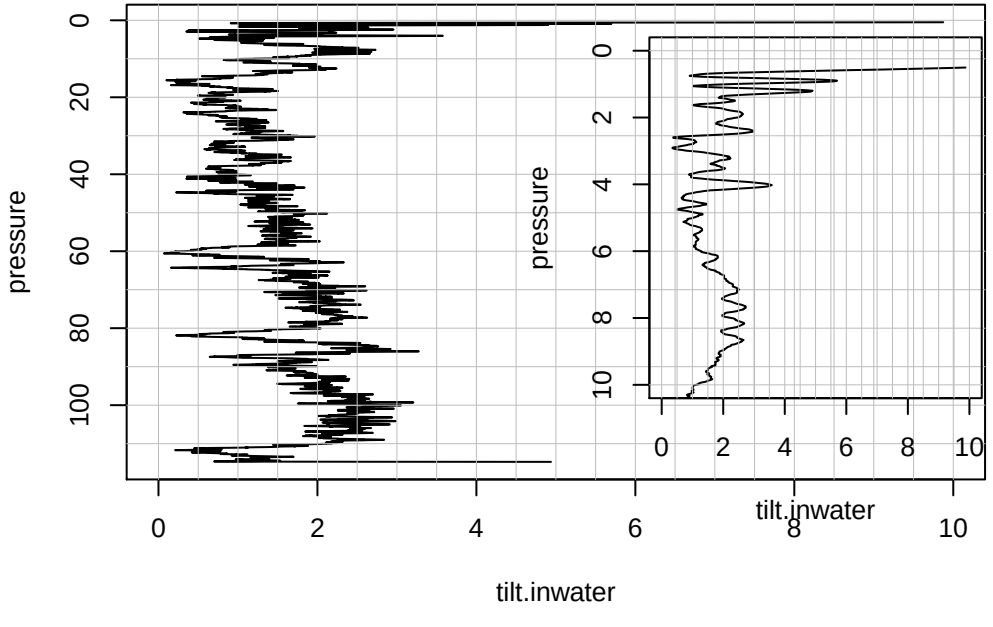

bou_c~ops_190723_1159_001_data.csv
depth
Ku
320
340
380
395
412
443
465
490
510
532
555
565

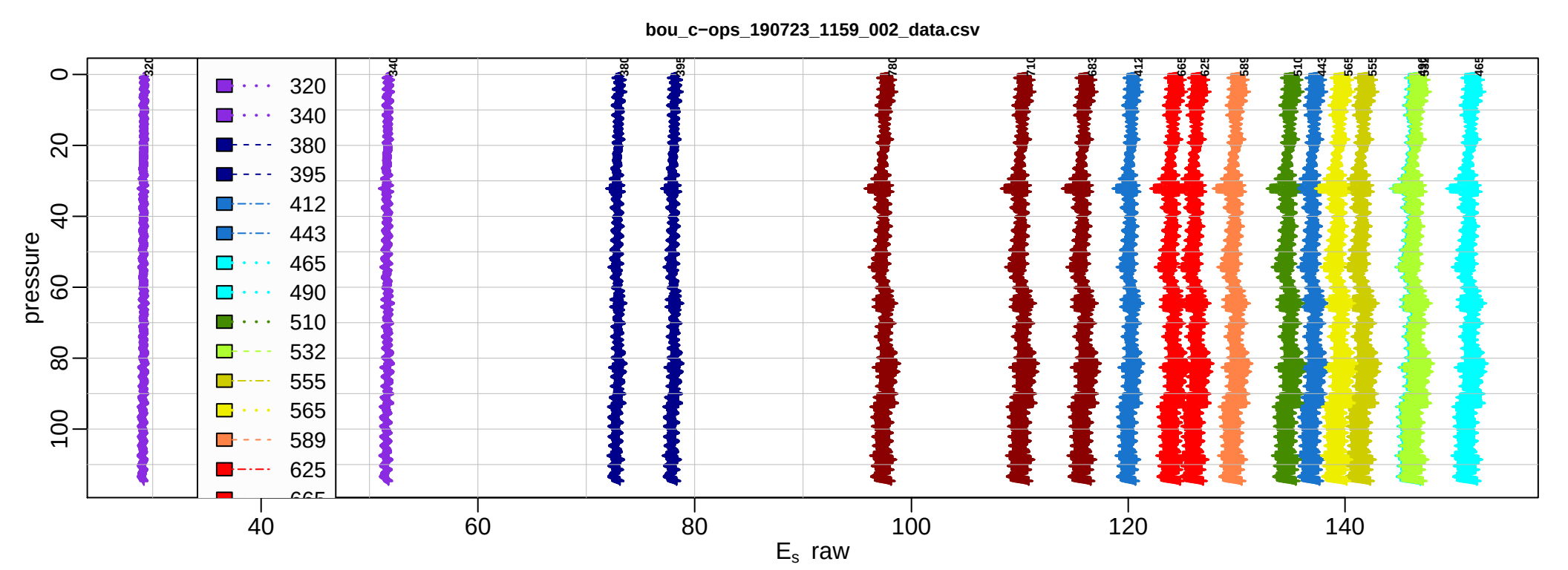

bou_c−ops_190723_1159_001_data.csv chl 0 sun 2
R
wavelength (nm)
bou_c−ops_190723_1159_001_data.csv chl 0 sun 2
R
wavelength (nm)
bou_c−ops_190723_1159_001_data.csv chl 0 sun 2
Lw
wavelength (nm)
bou_c−ops_190723_1159_001_data.csv chl 0 sun 2
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190723_1159_001_data.csv chl 0 sun 2
[Lw]N exact
wavelength (nm)

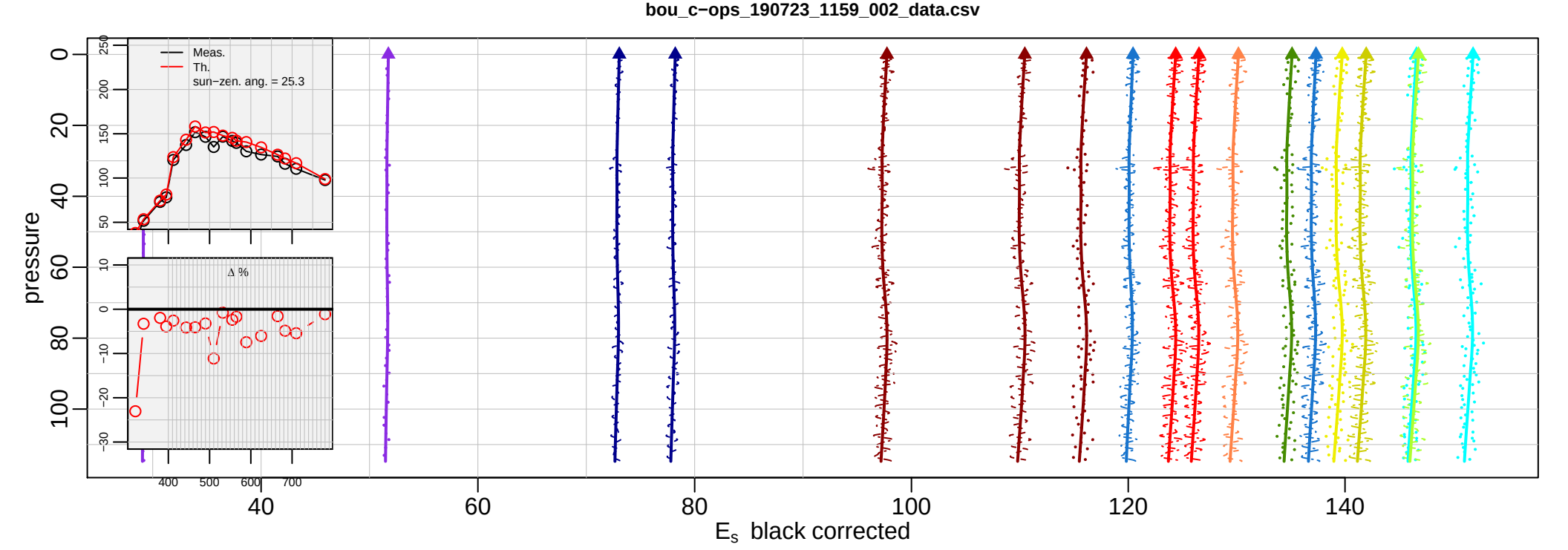
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole210/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole210/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole210/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole210/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.9018
latitude 43.37495
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

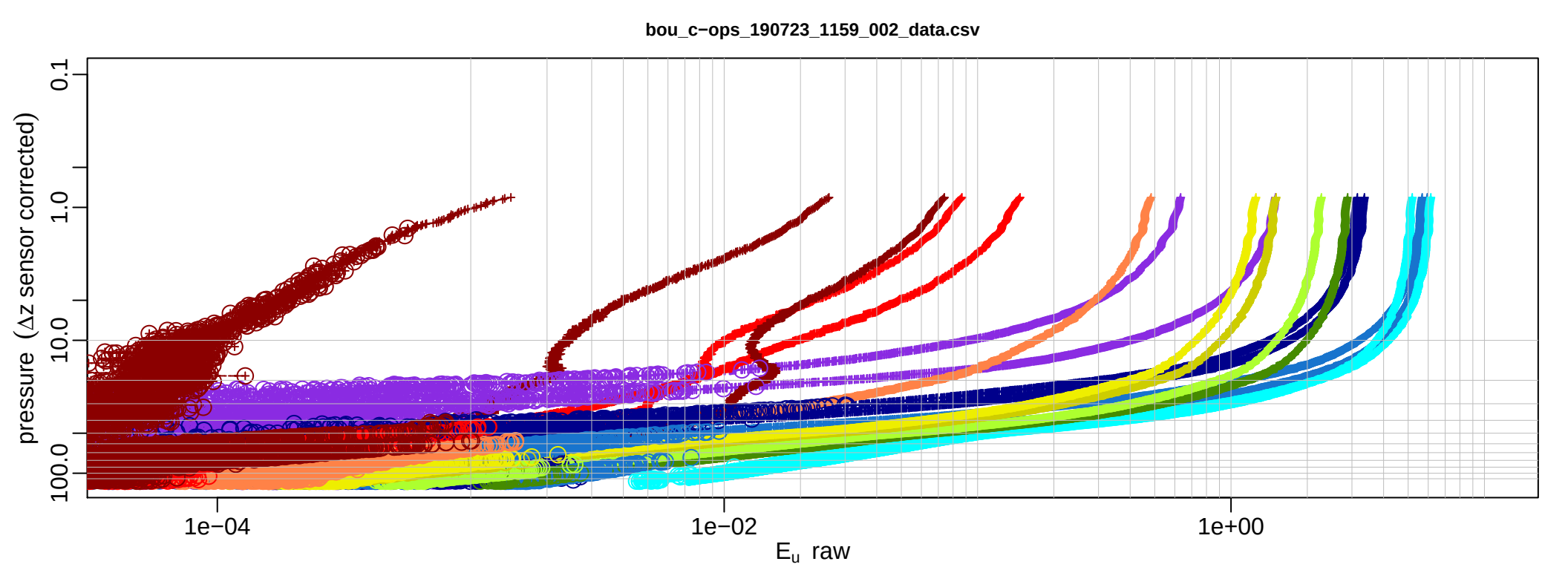
bou_c−ops_190723_1159_002_data.csv

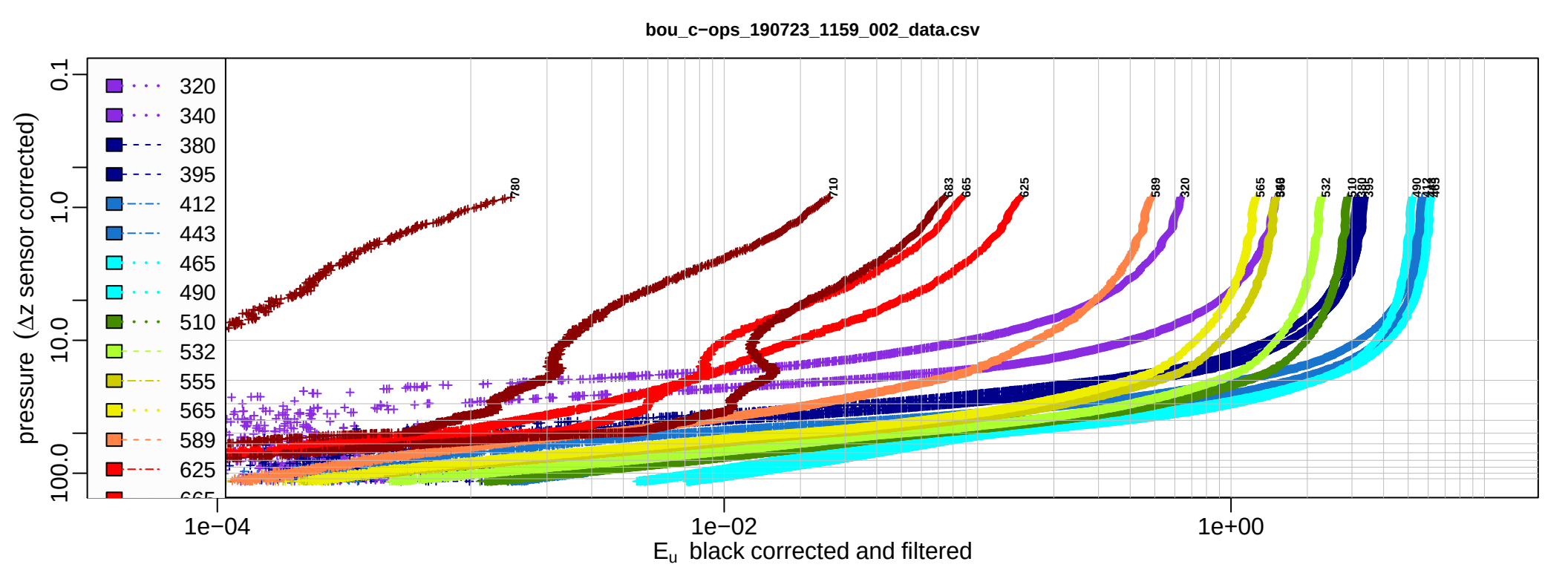


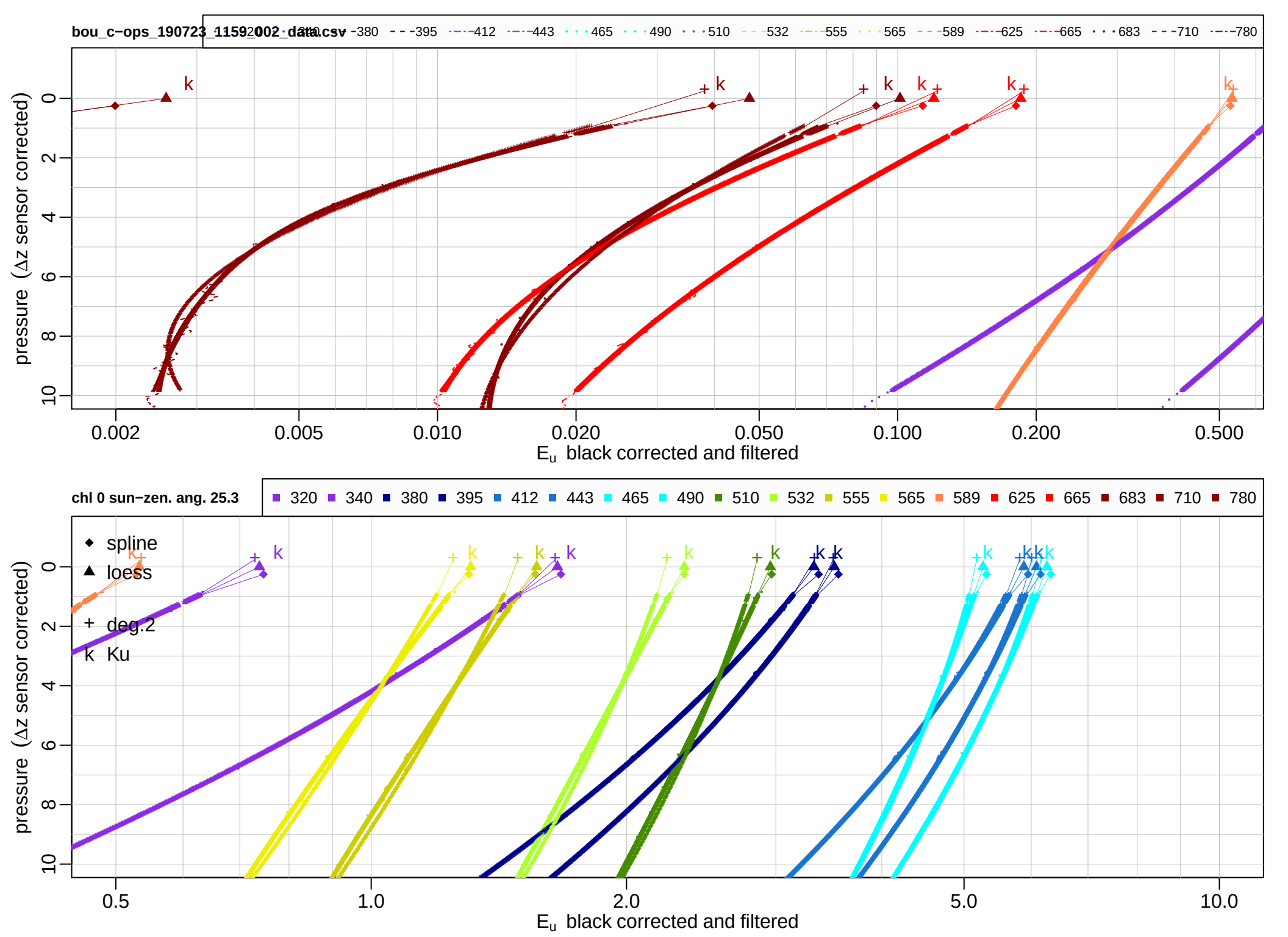


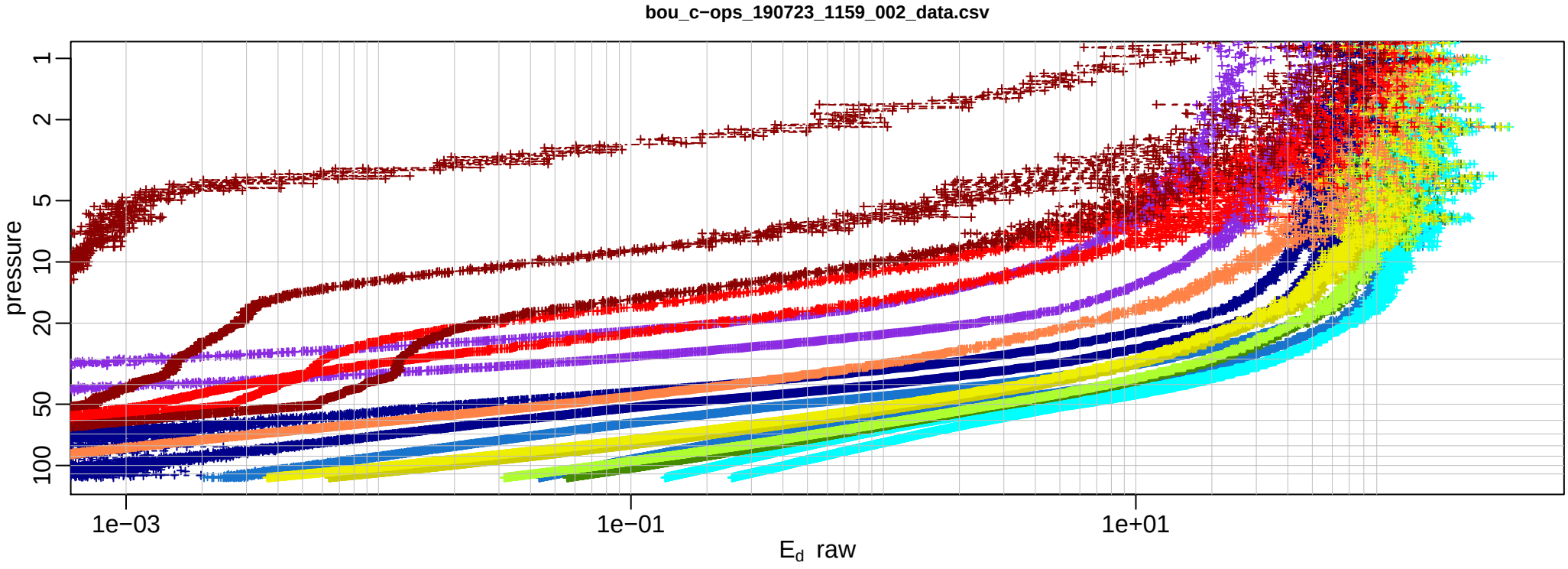

bou_c−ops_190723_1159_002_data.csv
pressure
0
20
40
60
80
100
320
340
380
395
412
443
465
490
510
532
555
565
589
625
40
60
80
100
120
140
E_s raw

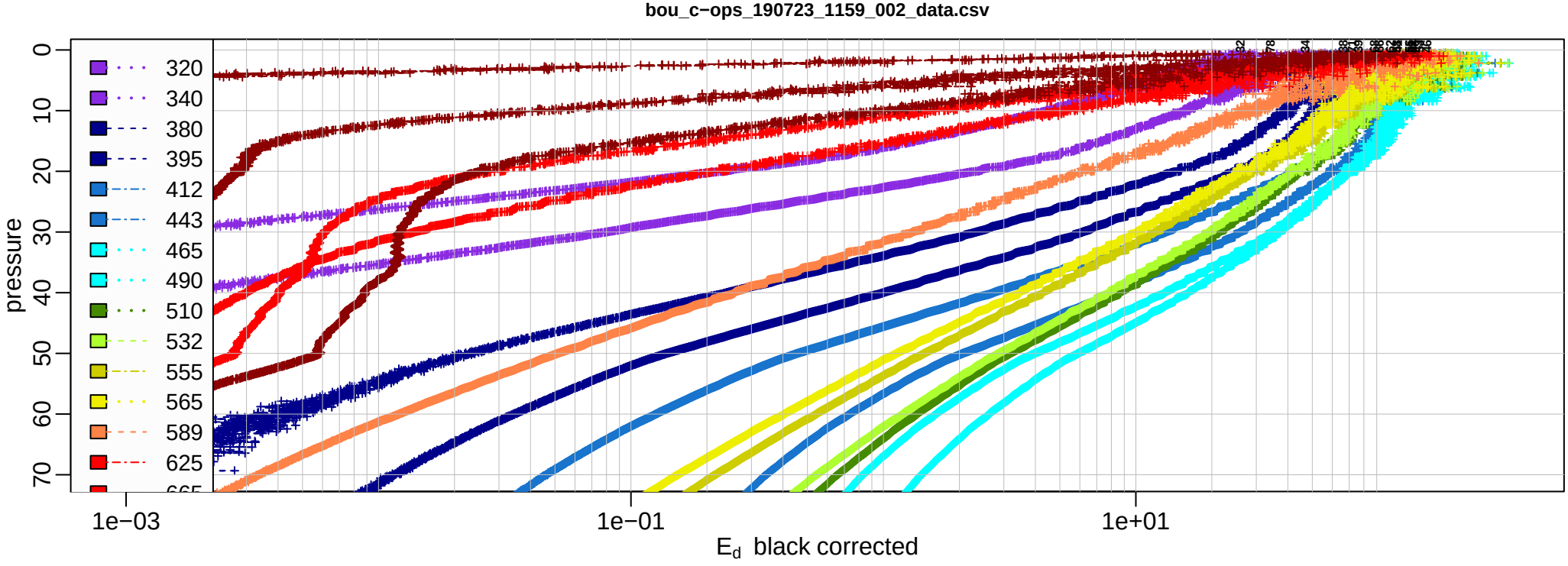

bou_c−ops_190723_1159_002_data.csv
Meas.
Th.
sun−zen. ang. = 25.3
Δ %
pressure
0
20
40
60
80
100
40
60
80
100
120
140
E_s black corrected

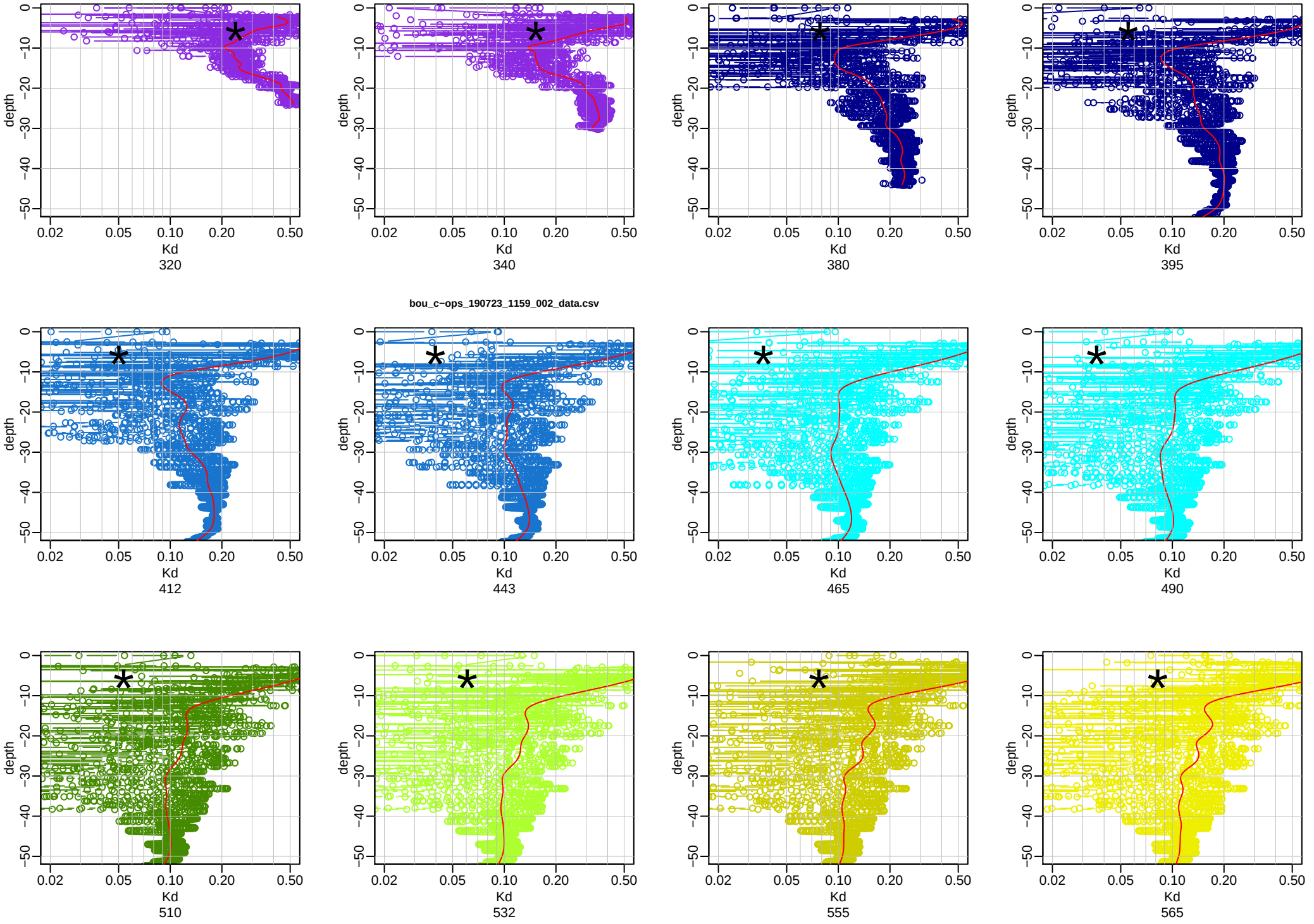

bou_c−ops_190723_1159_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

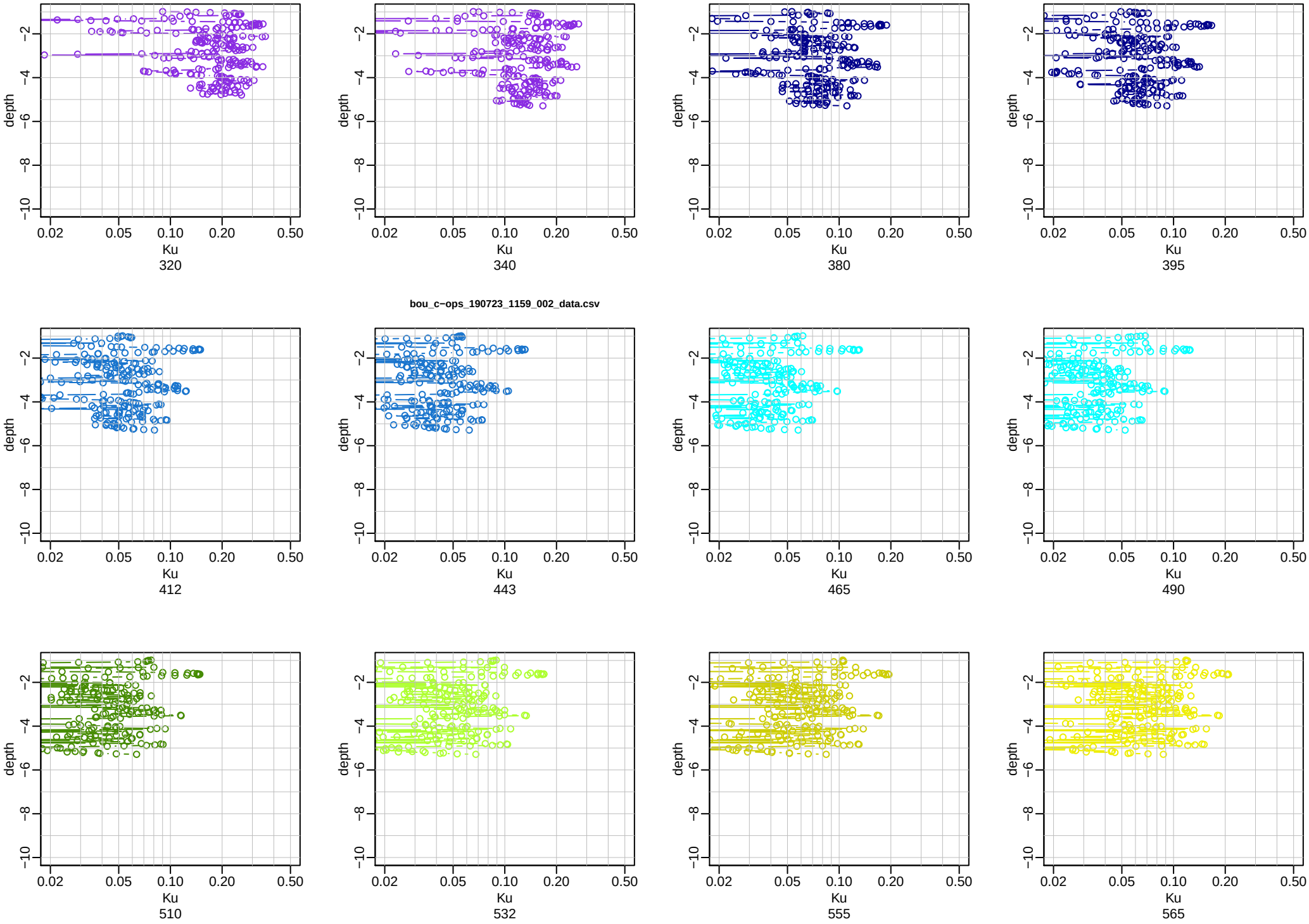

bou_c−ops_190723_1159_002_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
532
510
490
1e−04
1e−02
1e+00
E_u black corrected and filtered

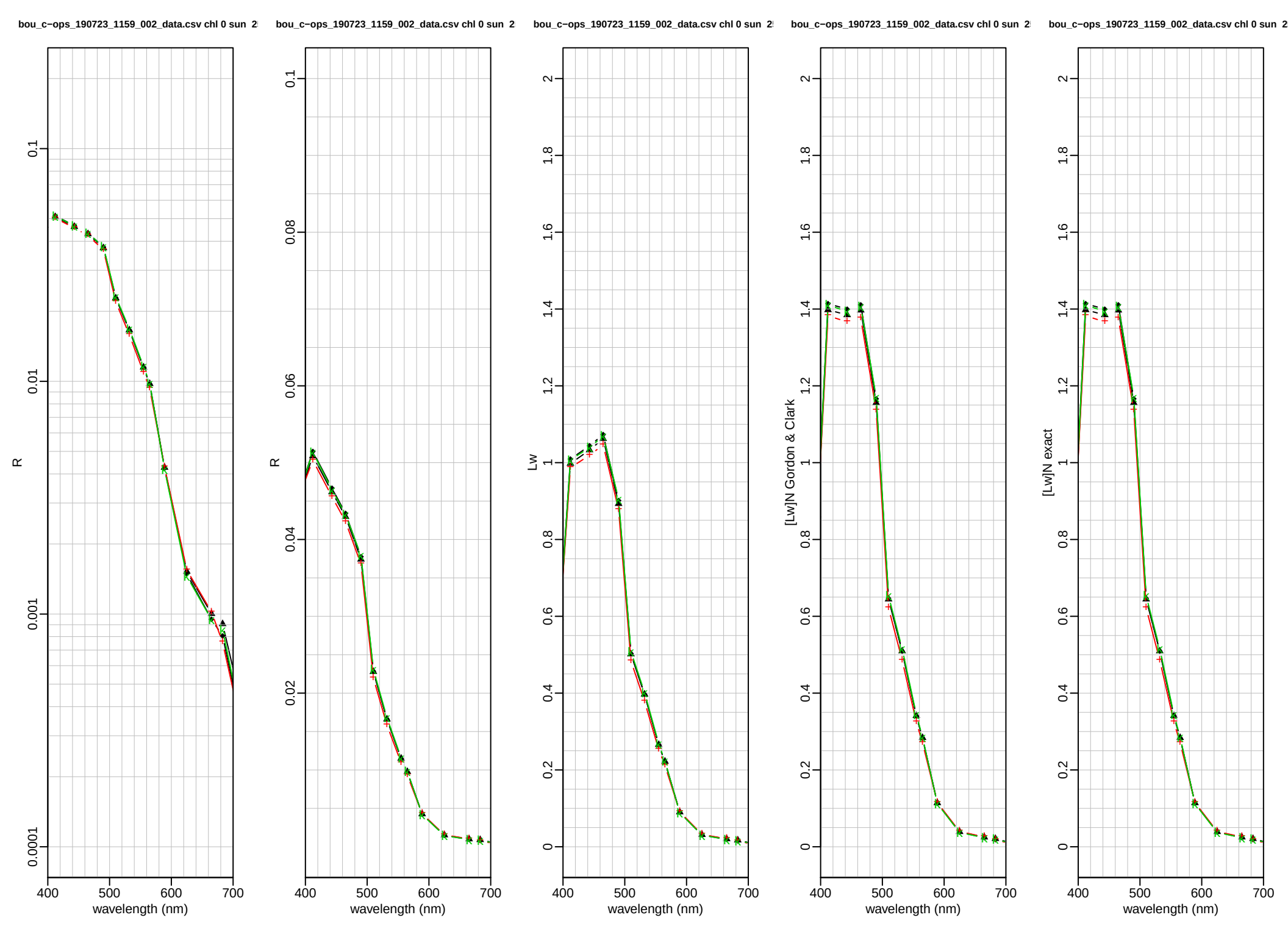

bou_c−ops_190723_1159002_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 25.3
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190723_1159_002_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190723_1159_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

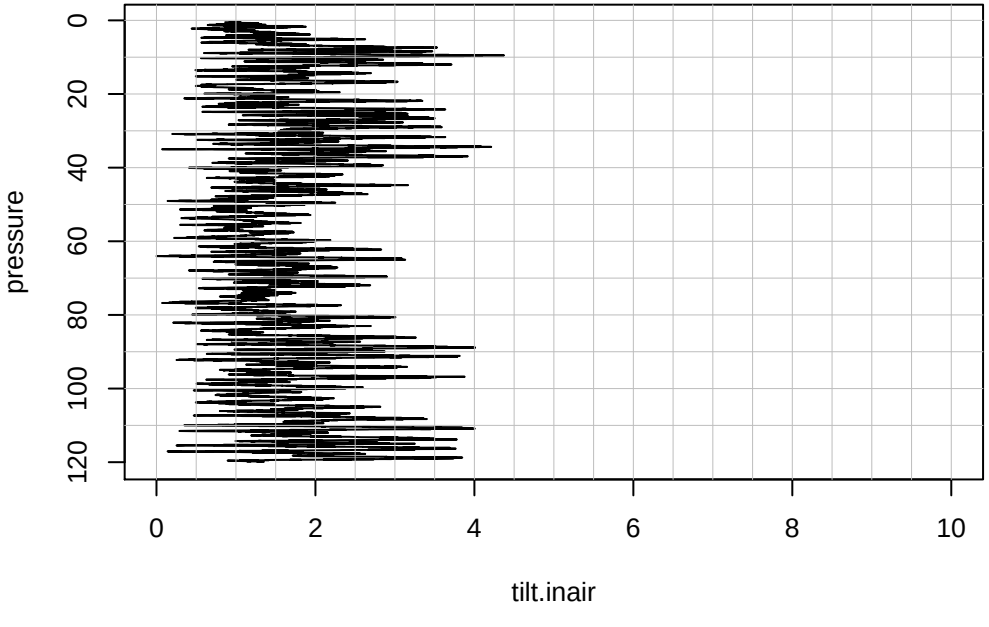

bou_c~ops_190723_1159_002_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

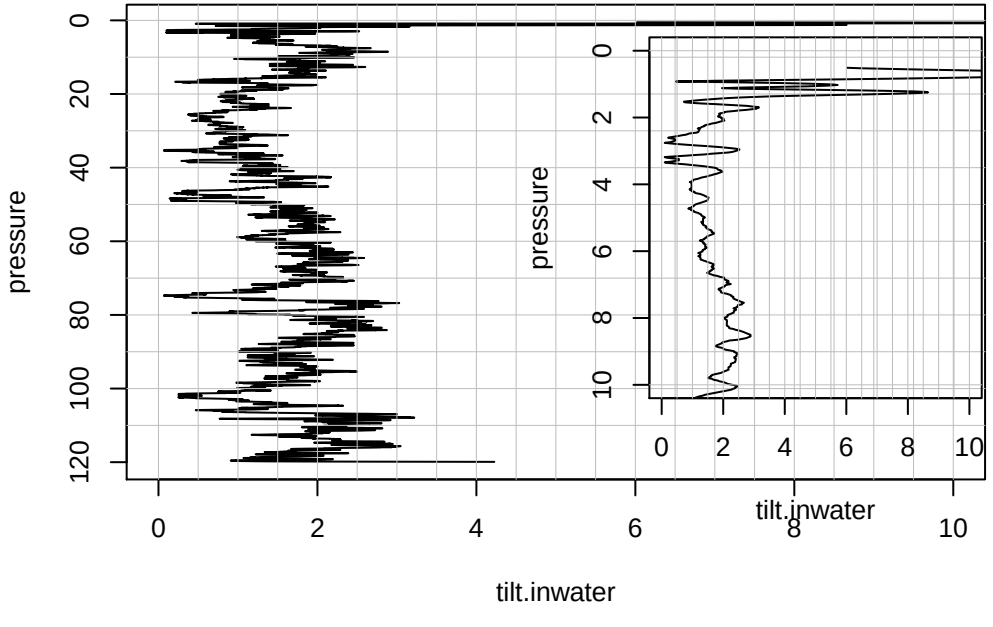

bou_c~ops_190723_1159_002_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

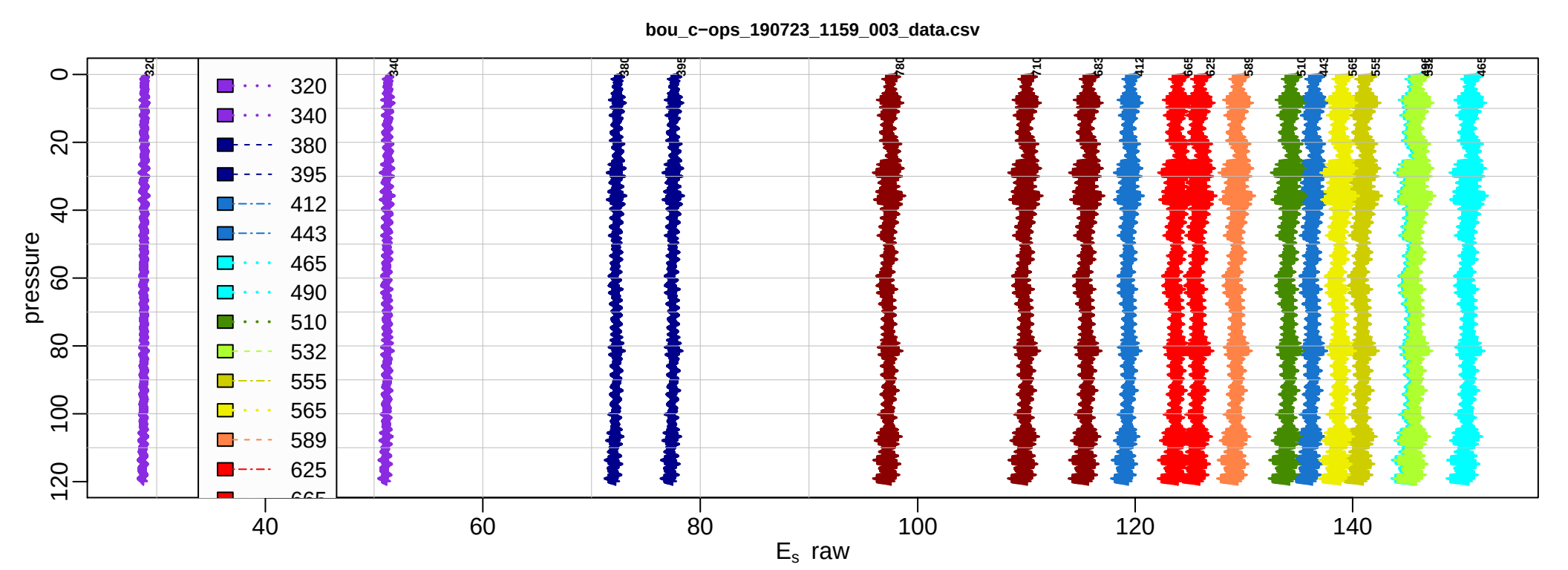

bou_c−ops_190723_1159_002_data.csv chl 0 sun 2
R
wavelength (nm)
bou_c−ops_190723_1159_002_data.csv chl 0 sun 2
R
wavelength (nm)
bou_c−ops_190723_1159_002_data.csv chl 0 sun 2
Lw
wavelength (nm)
bou_c−ops_190723_1159_002_data.csv chl 0 sun 2
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190723_1159_002_data.csv chl 0 sun 2
[Lw]N exact
wavelength (nm)

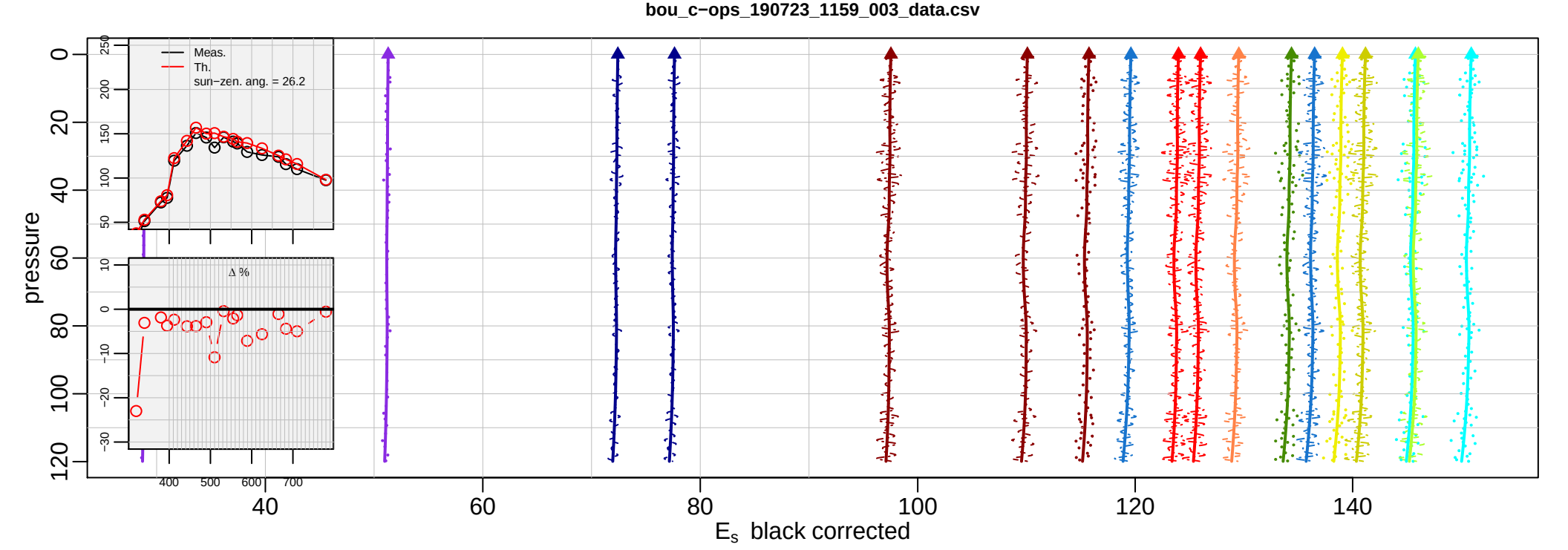
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole210/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole210/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole210/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole210/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.9021
latitude 43.3784
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

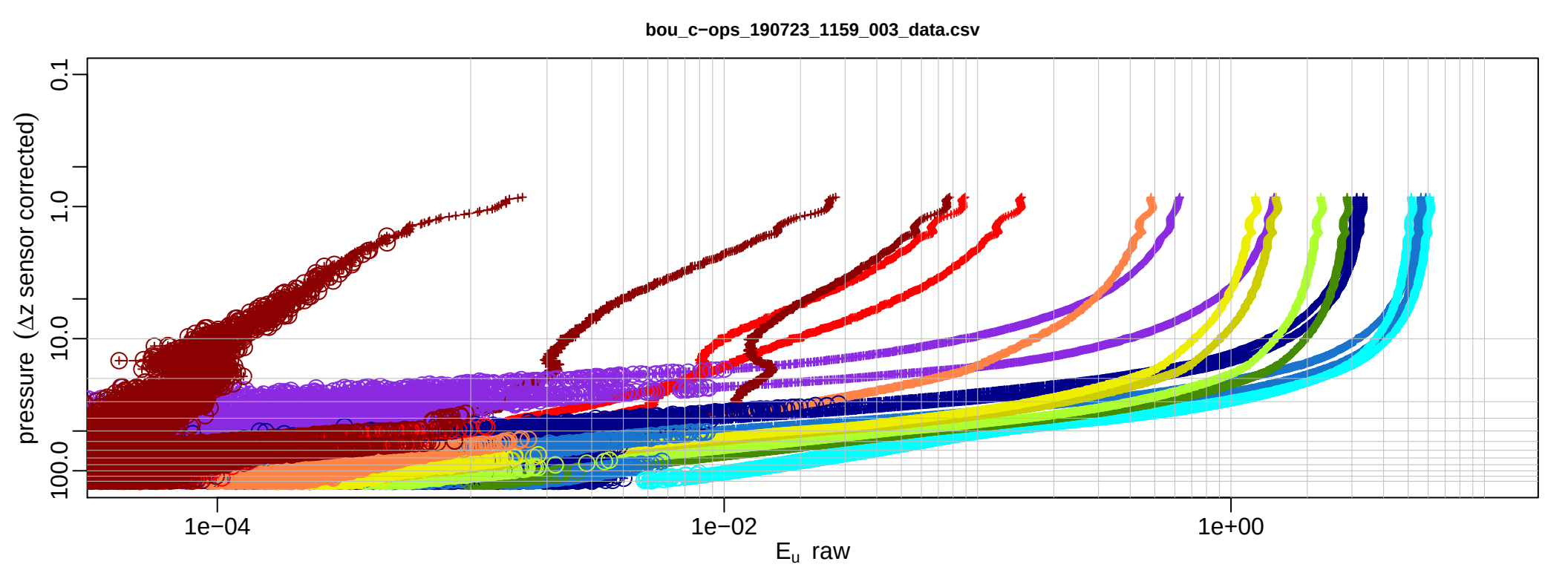
bou_c−ops_190723_1159_003_data.csv

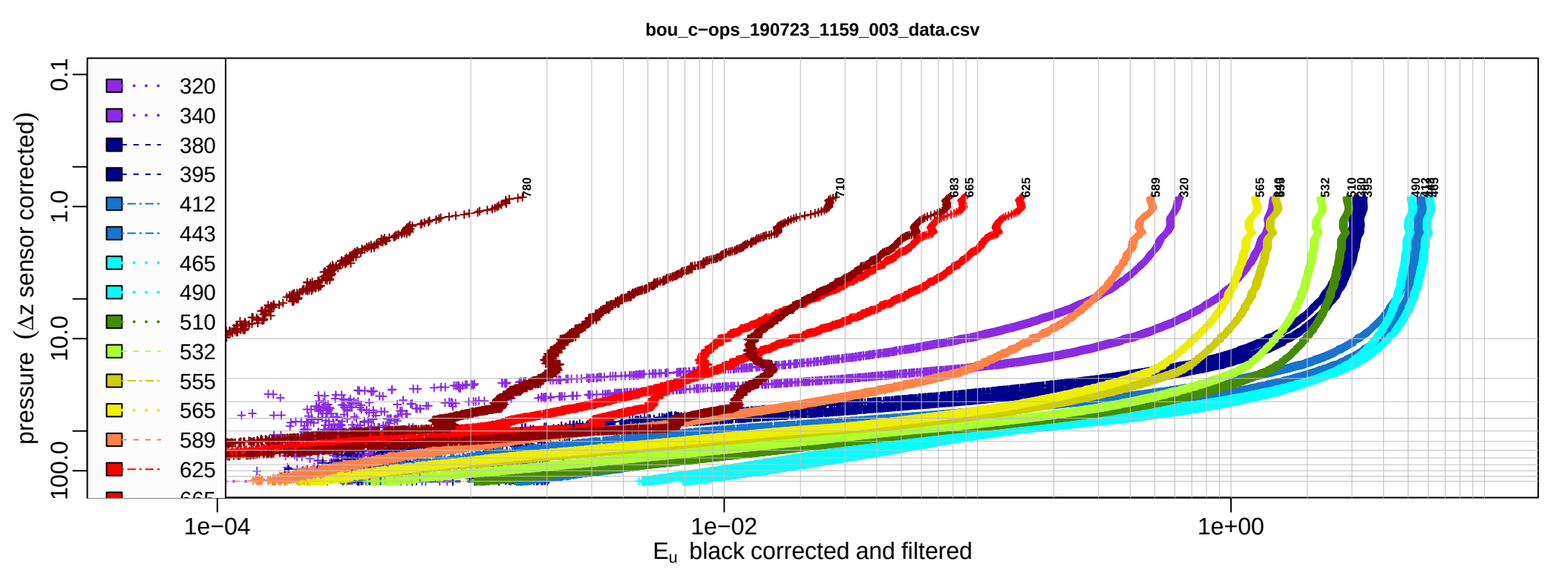


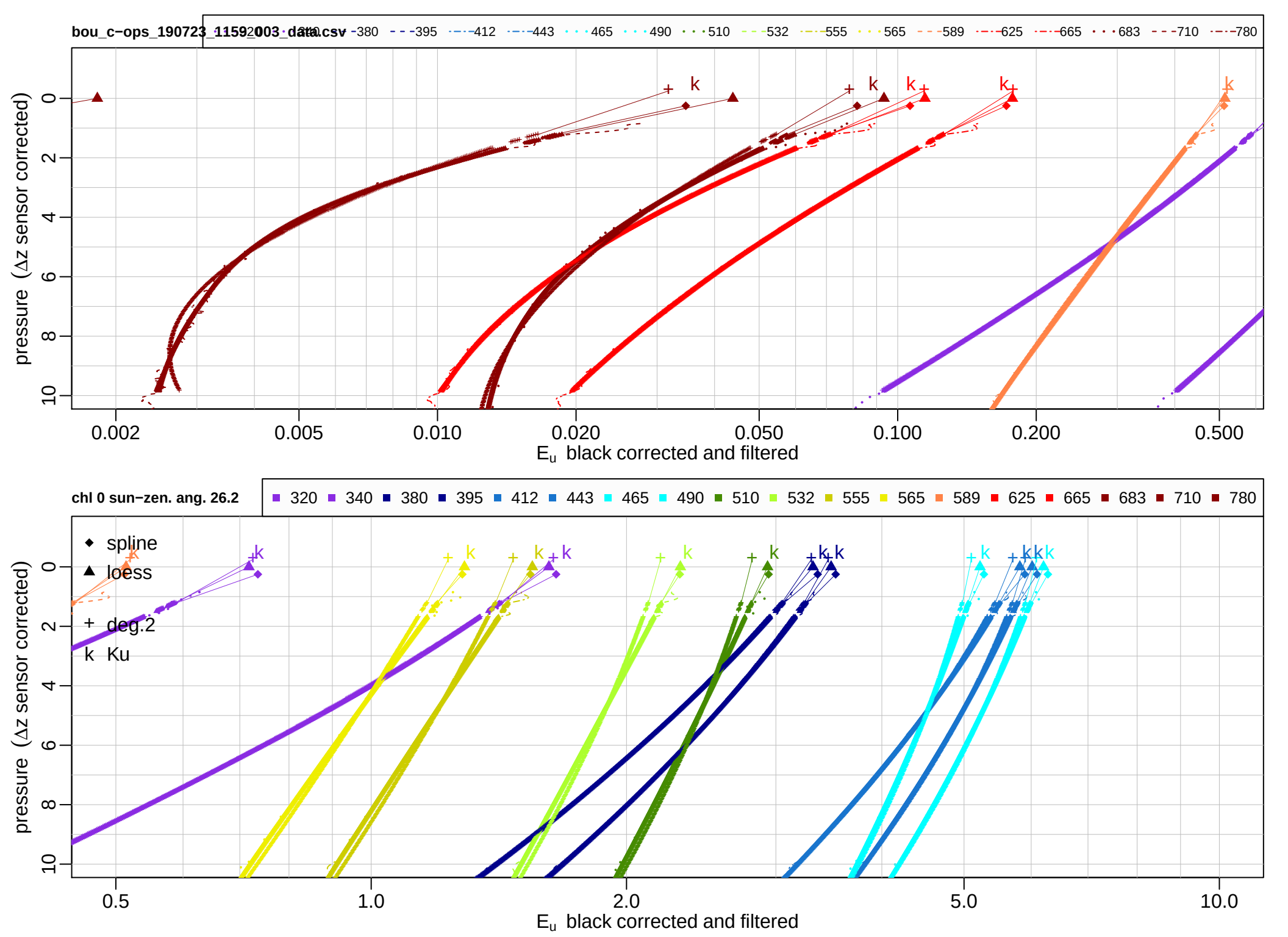


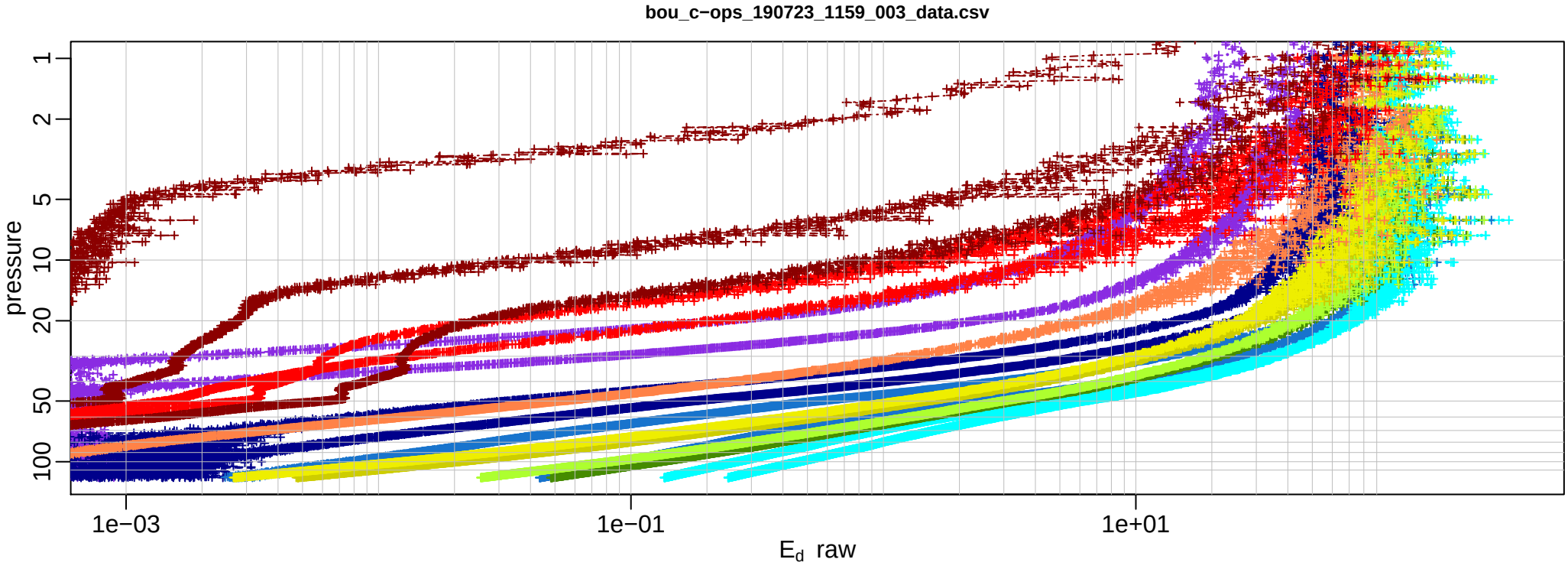

bou_c−ops_190723_1159_003_data.csv
pressure
0
20
40
60
80
100
120
320
340
380
395
412
443
465
490
510
532
555
565
589
625
40
60
80
100
120
140
E_s raw

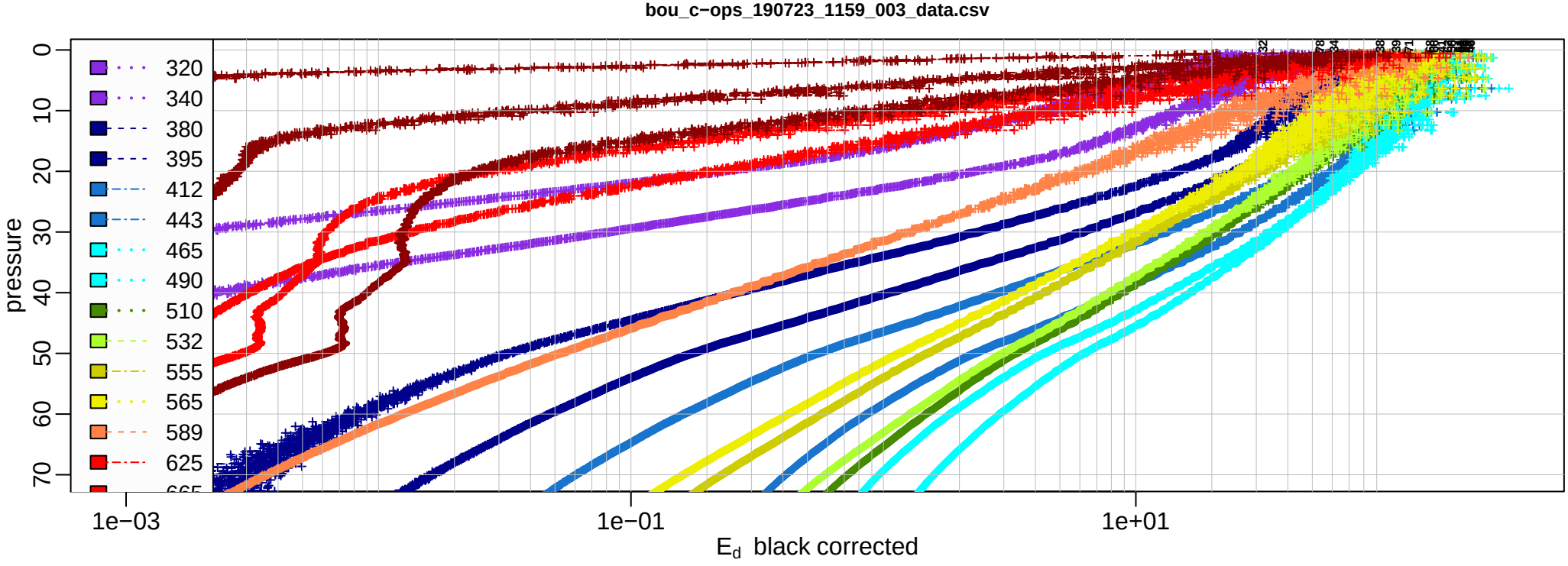

bou_c−ops_190723_1159_003_data.csv
Meas.
Th.
sun−zen. ang. = 26.2
Δ %
pressure
0
20
40
60
80
100
120
40
60
80
100
120
140
E_s black corrected


bou_c−ops_190723_1159_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw


bou_c−ops_190723_1159_003_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
532
490
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u black corrected and filtered


bou_c−ops_190723_1159003_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 26.2
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190723_1159_003_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190723_1159_003_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
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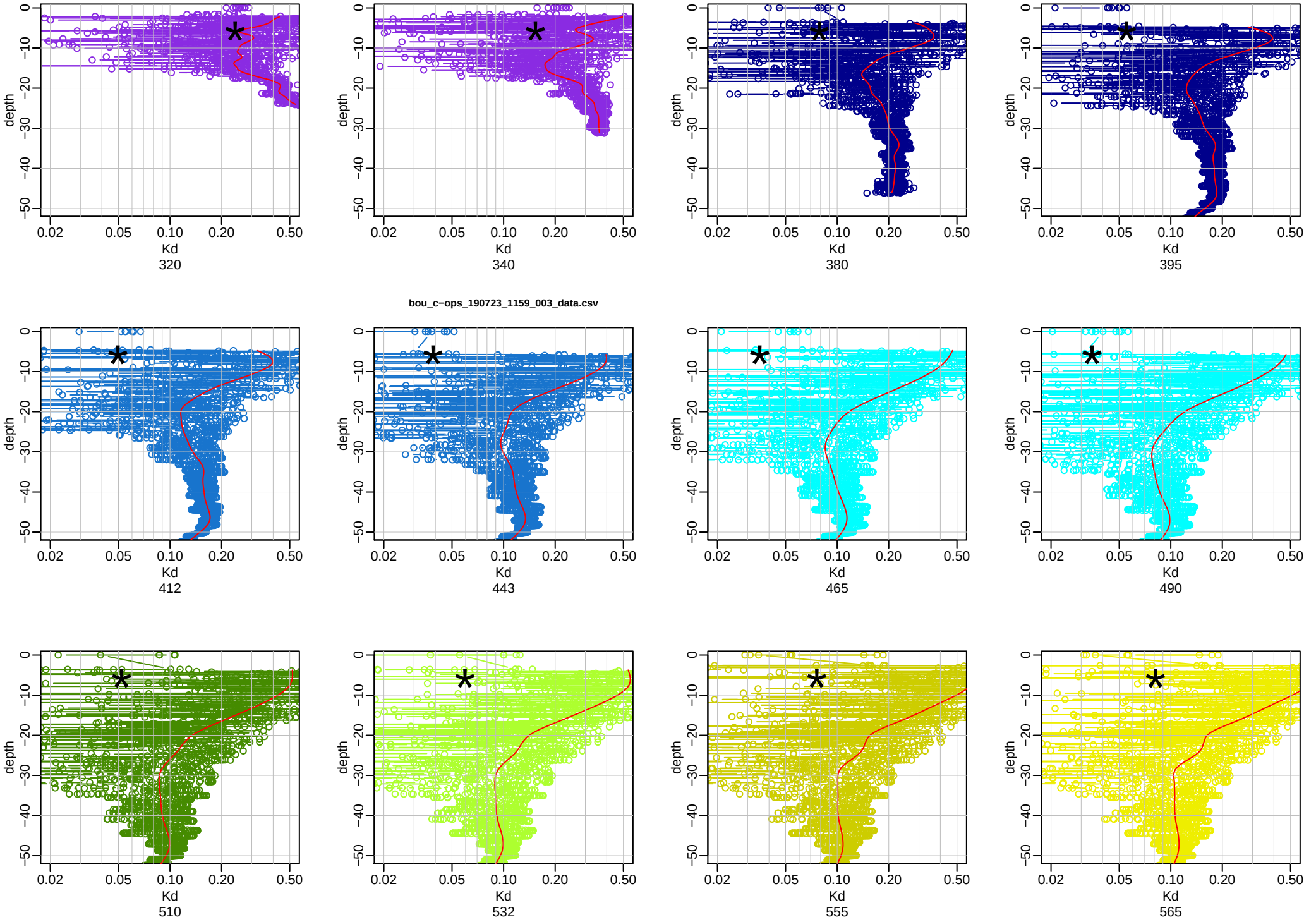
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected


bou_c~ops_190723_1159_003_data.csv
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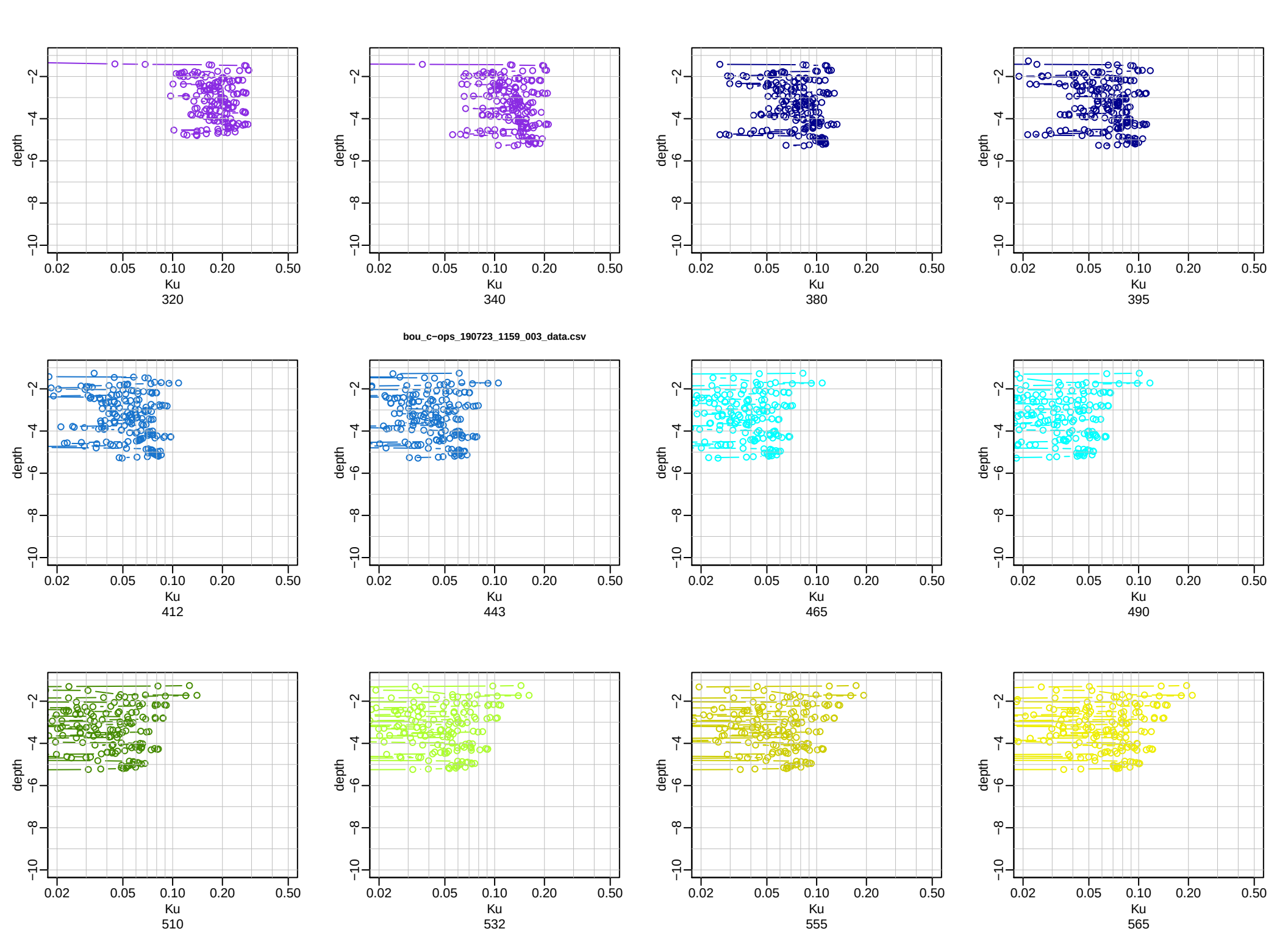
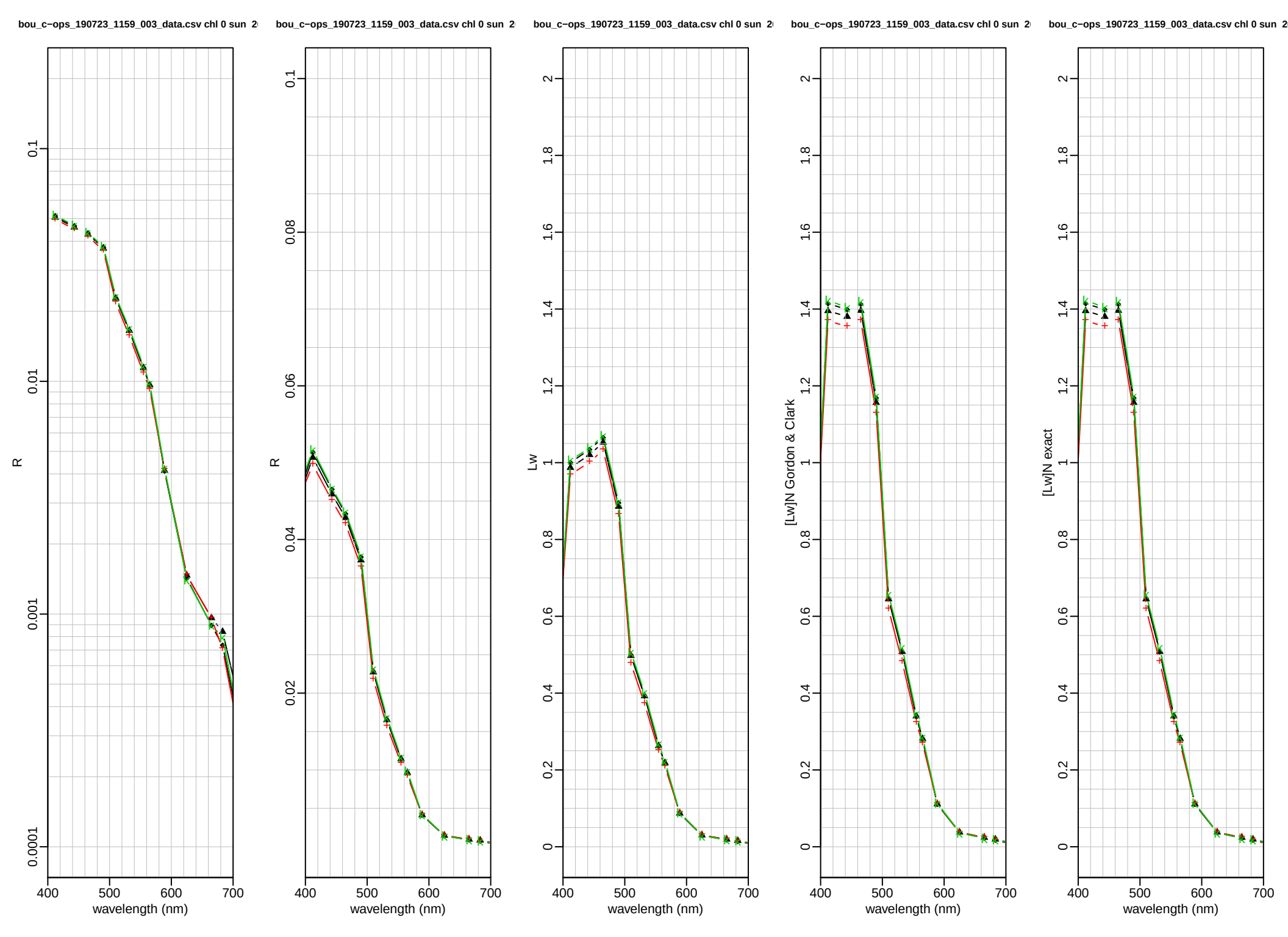
0
−10
−20
−30
−40
−50
0.02
0.05
0.10
0.20
0.50
Kd
320
340
380
395
412
443
465
490
510
532
555
565


bou_c~ops_190723_1159_003_data.csv
depth
Ku
320
340
380
395
412
443
465
490
510
532
555
565
0.02
0.05
0.10
0.20
0.50
−2
−4
−6
−8
−10


bou_c−ops_190723_1159_003_data.csv chl 0 sun 2
R
wavelength (nm)
bou_c−ops_190723_1159_003_data.csv chl 0 sun 2
R
wavelength (nm)
bou_c−ops_190723_1159_003_data.csv chl 0 sun 2
Lw
wavelength (nm)
bou_c−ops_190723_1159_003_data.csv chl 0 sun 2
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190723_1159_003_data.csv chl 0 sun 2
[Lw]N exact
wavelength (nm)

rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole210/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole210/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole210/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole210/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.9144
latitude 43.3684
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
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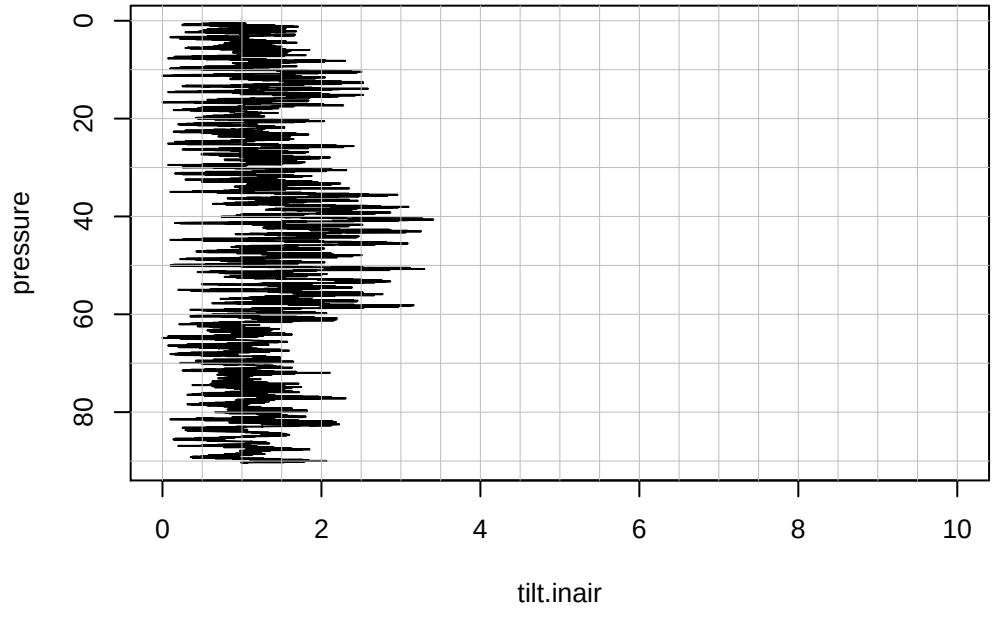
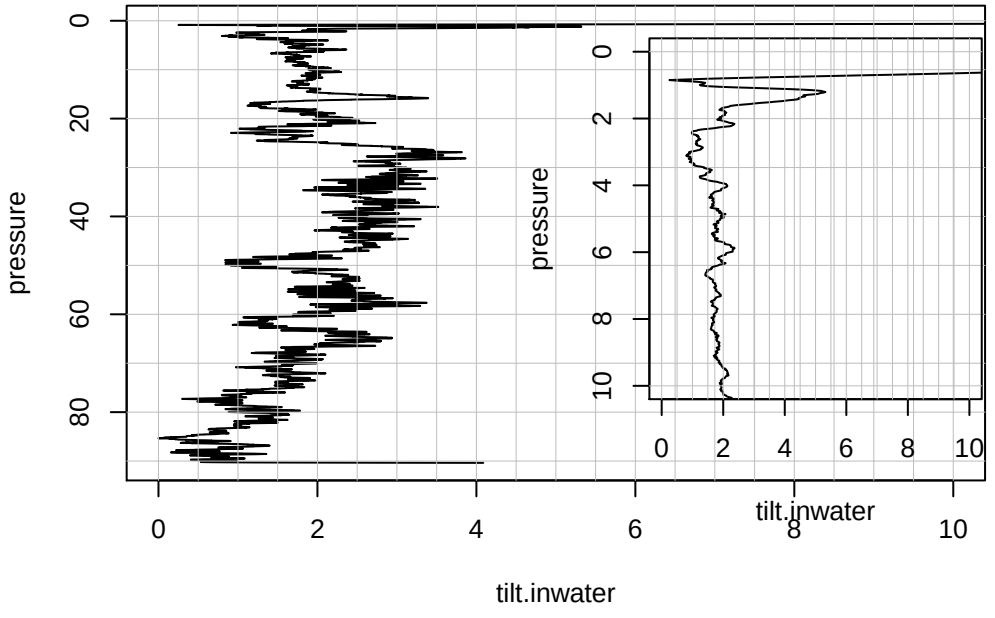
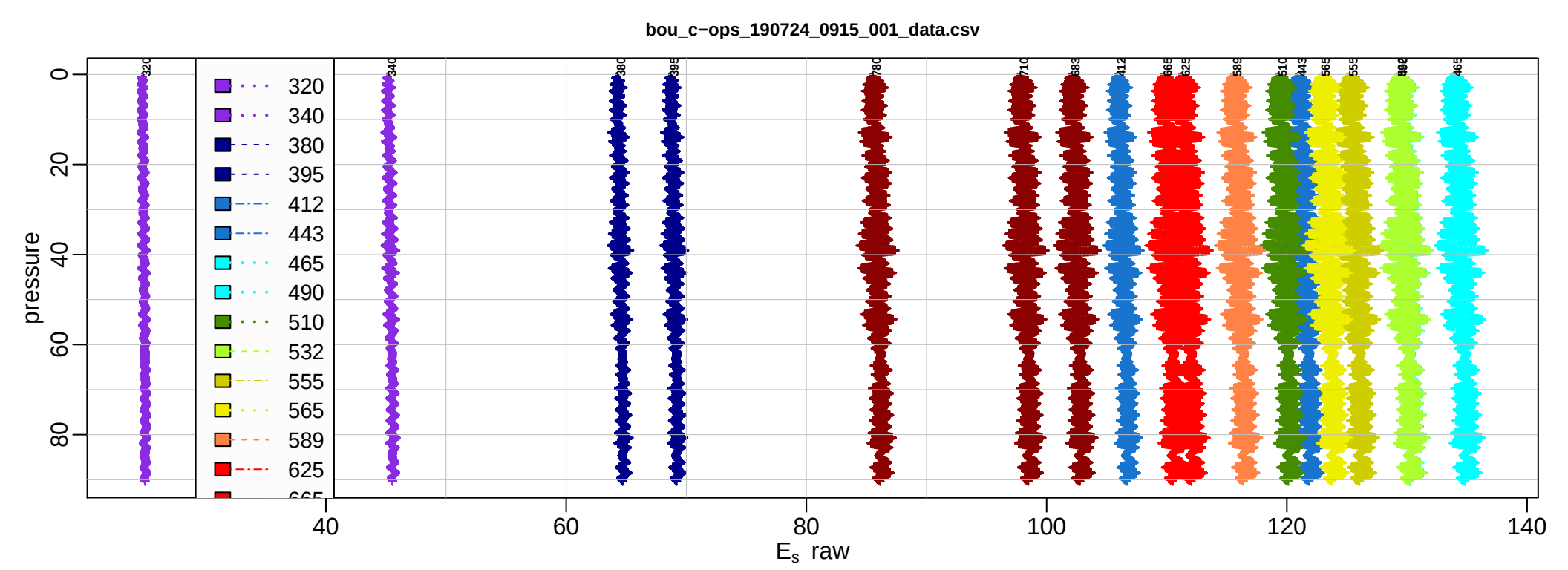
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

bou_c−ops_190724_0915_001_data.csv






bou_c−ops_190724_0915_001_data.csv
pressure
0
20
40
60
80
320
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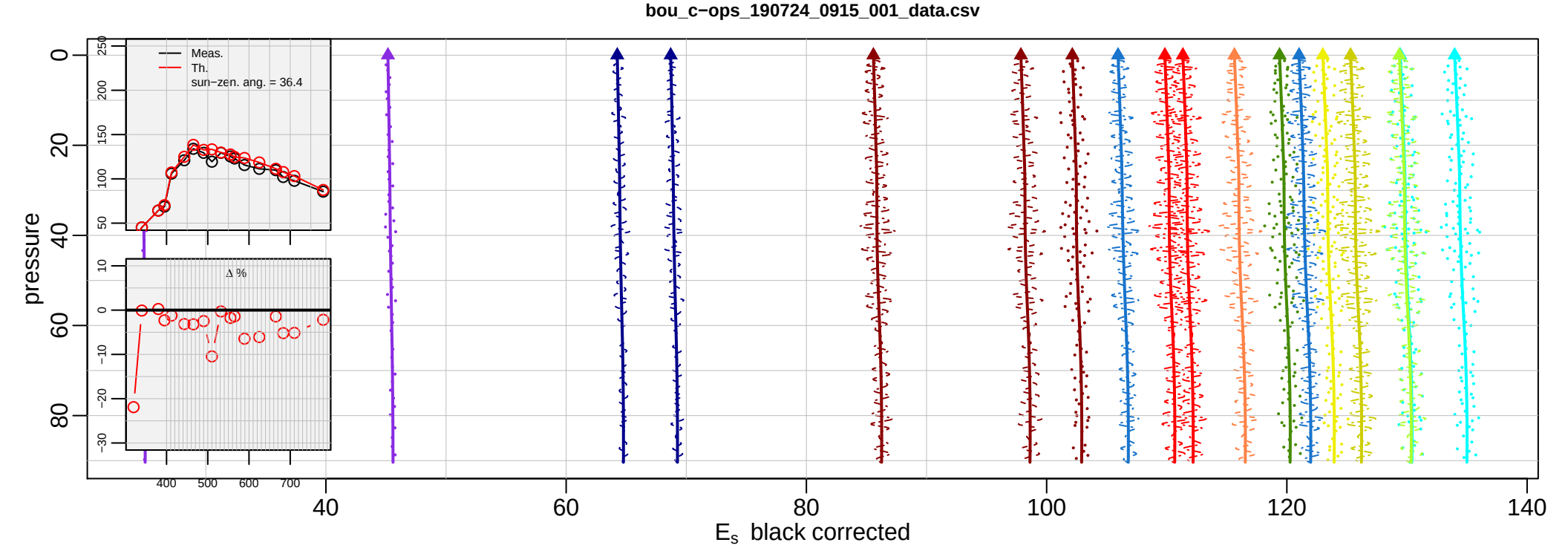
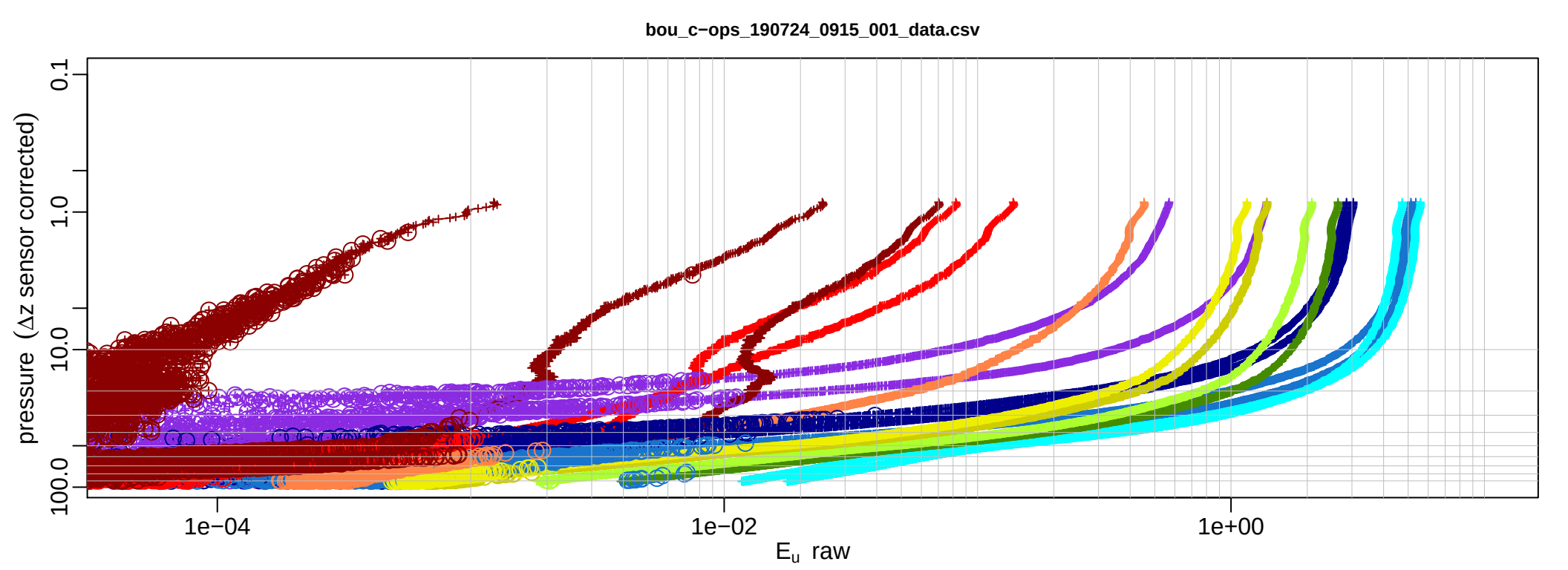
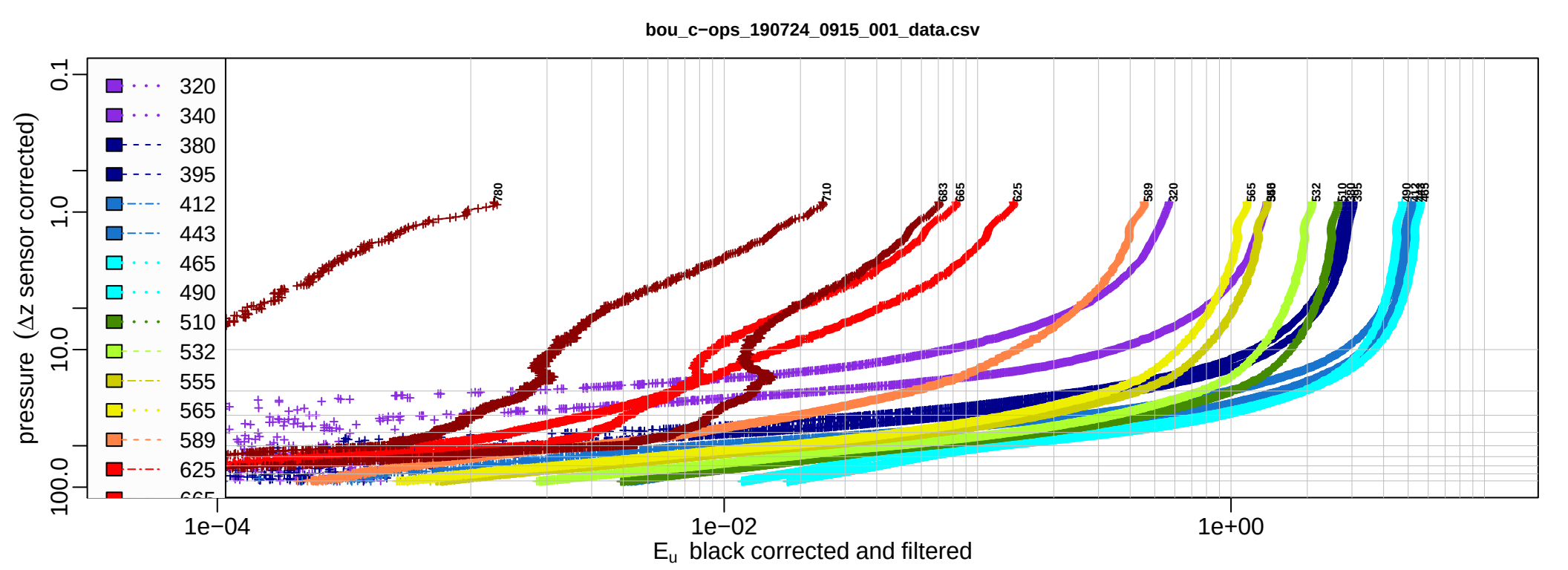
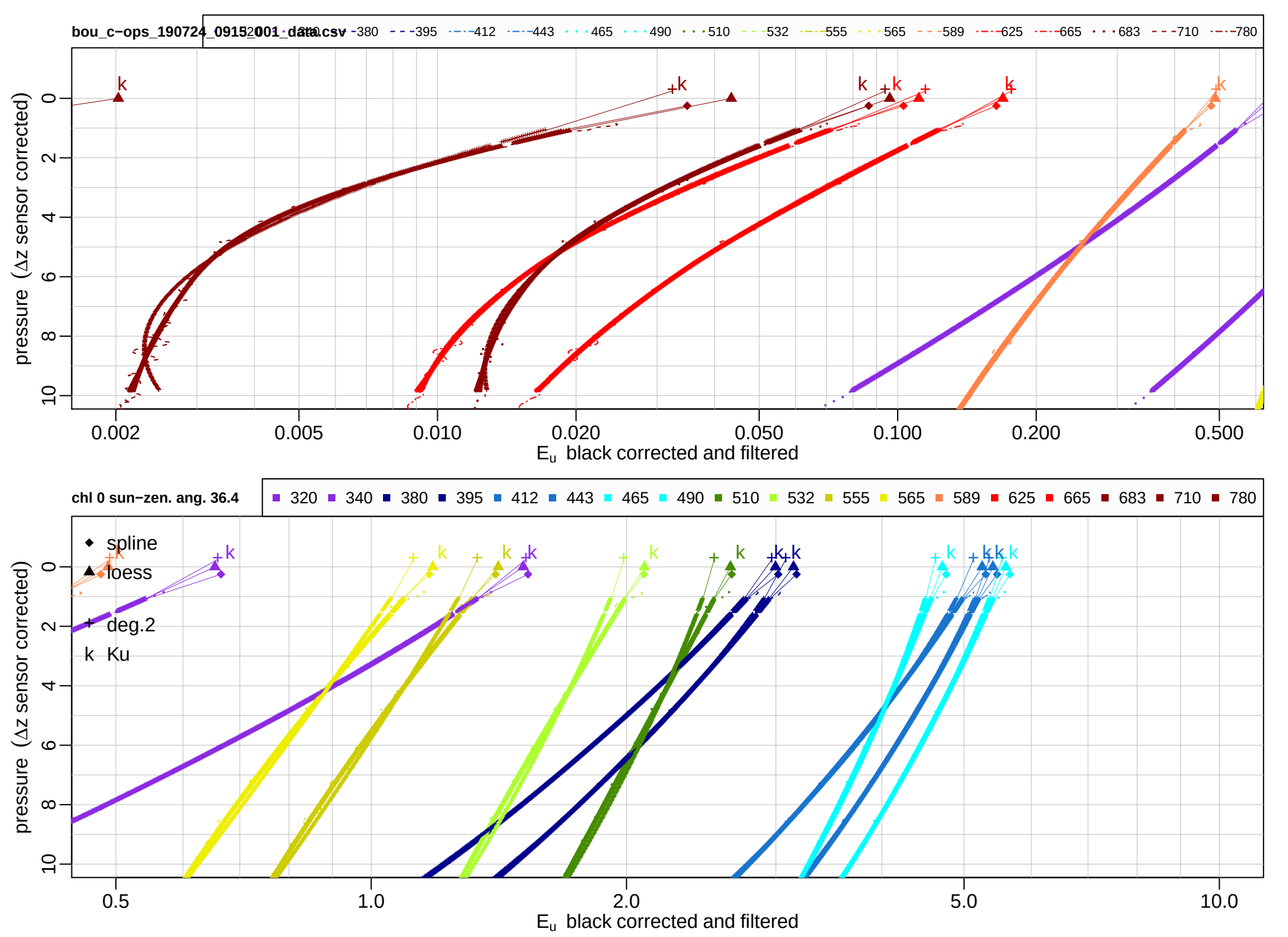
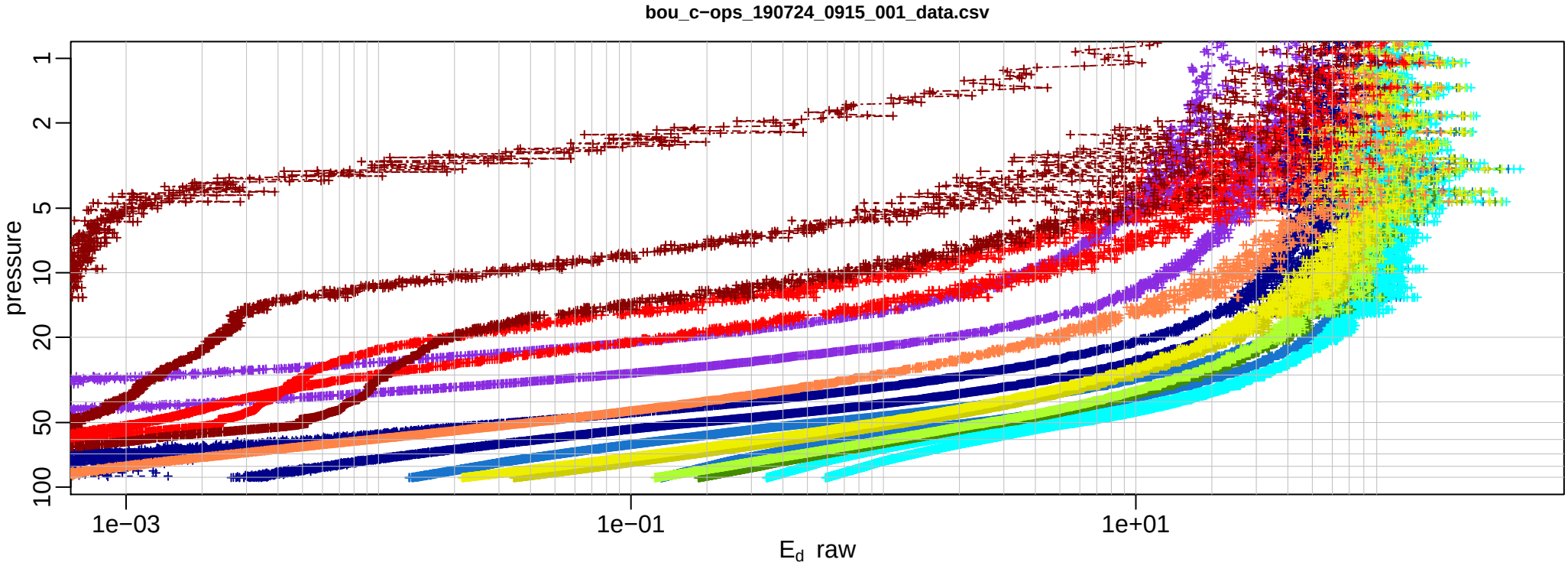
465
490
510
532
555
565
589
625
40
60
80
100
120
140
E_s raw


bou_c−ops_190724_0915_001_data.csv
pressure
0
20
40
60
80
Meas.
Th.
sun−zen. ang. = 36.4
Δ %
40
60
80
100
120
140
E_s black corrected


bou_c−ops_190724_0915_001_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw


bou_c−ops_190724_0915_001_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
532
1e−04
1e−02
1e+00
E_u black corrected and filtered


bou_c−ops_190724_0915_001_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 36.4
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190724_0915_001_data.csv
pressure
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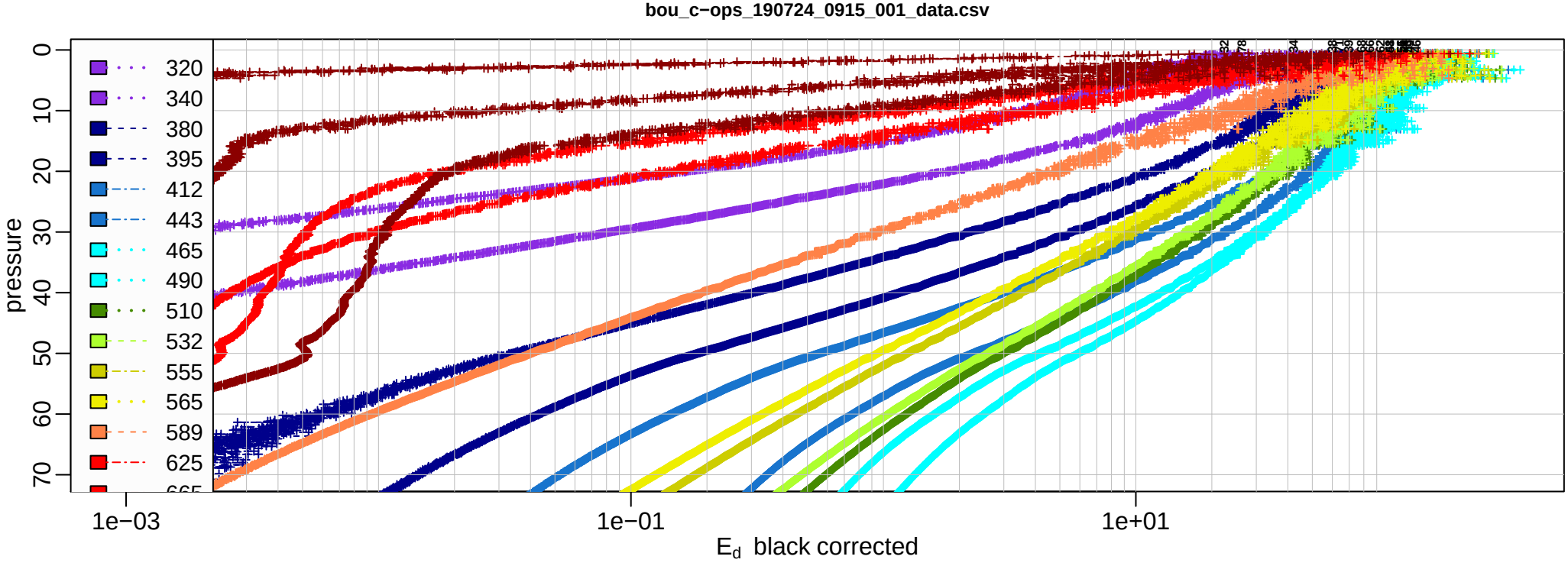
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190724_0915_001_data.csv
pressure
0
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50
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320
340
380
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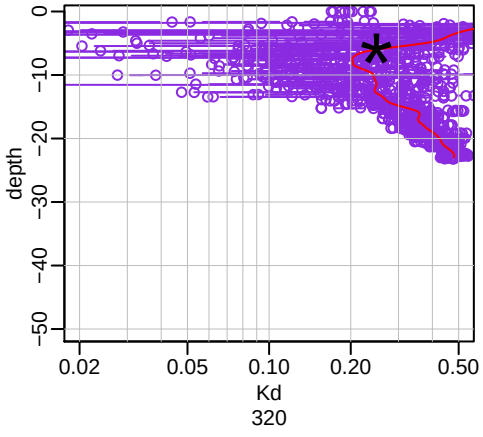
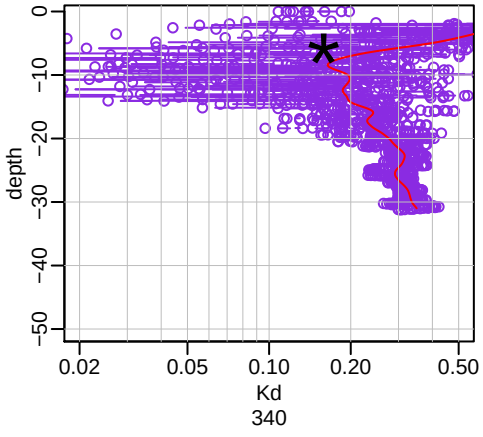
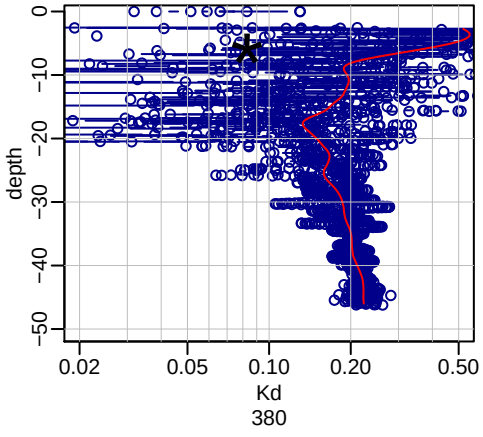
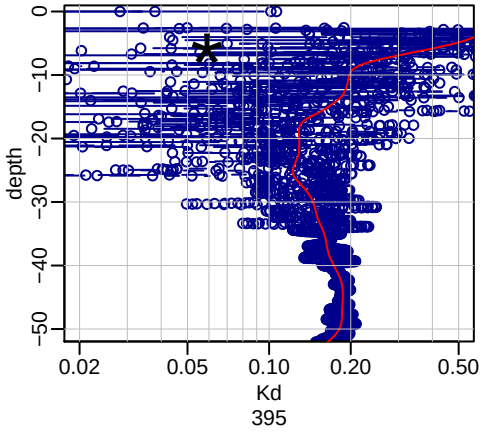
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

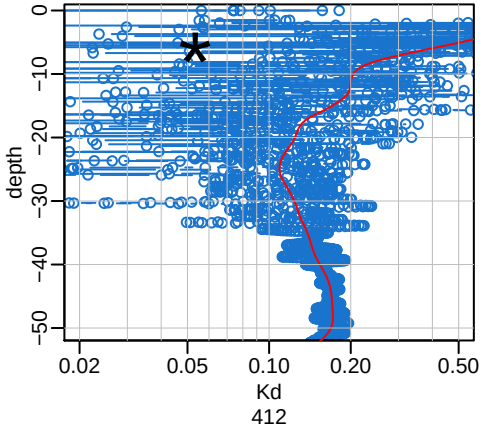
bou_c-ops_190724_0915_001_data.csv

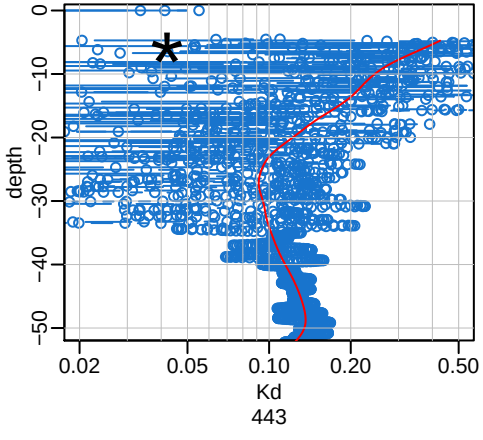


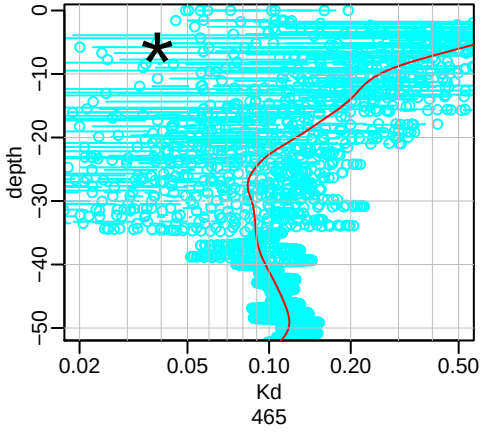


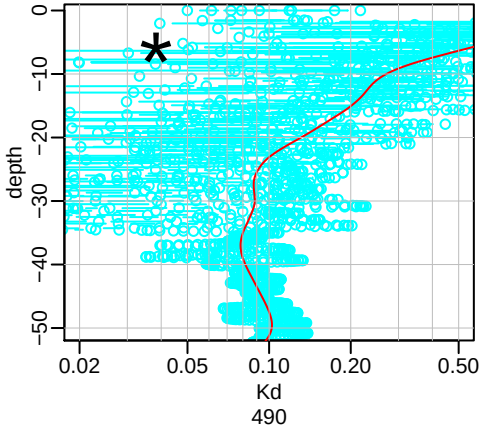


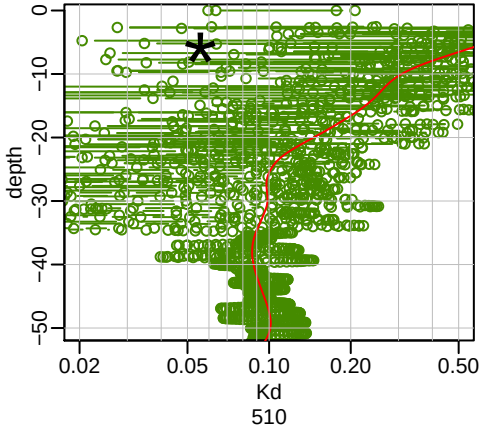


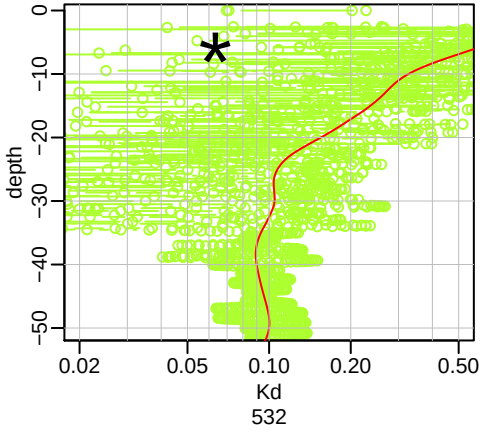


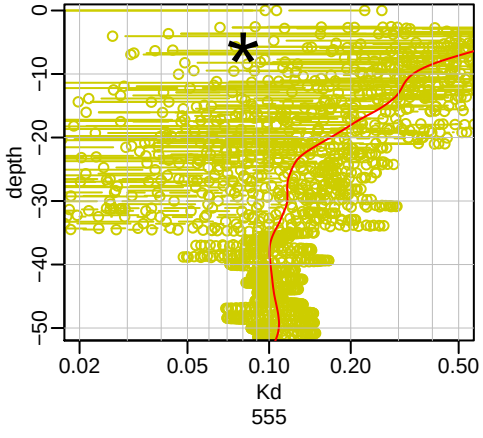


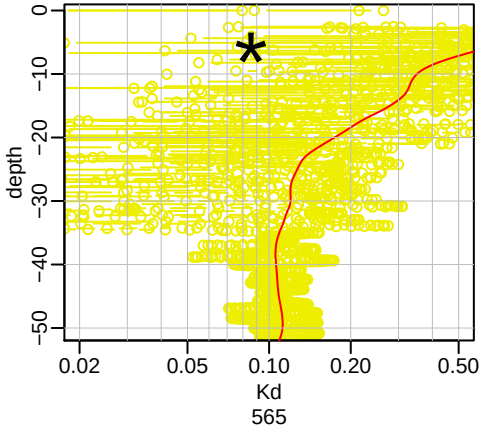


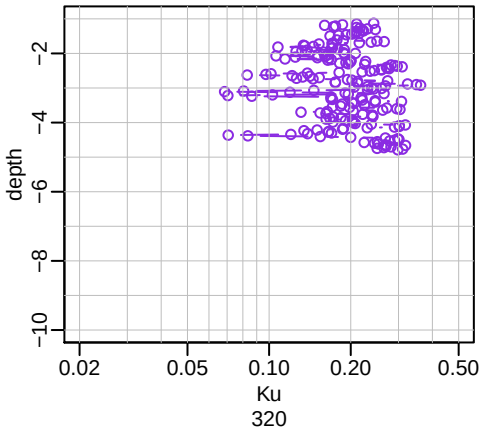


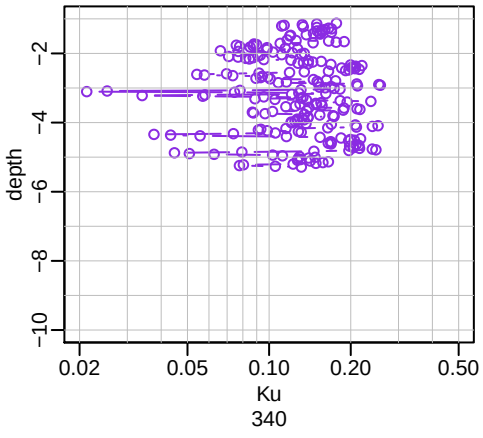


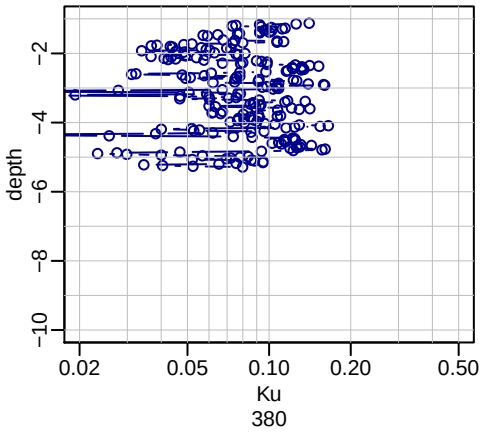


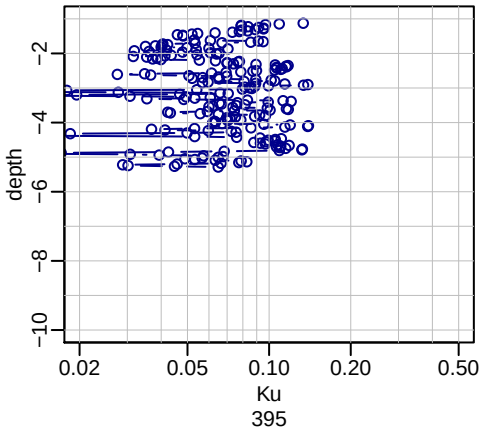




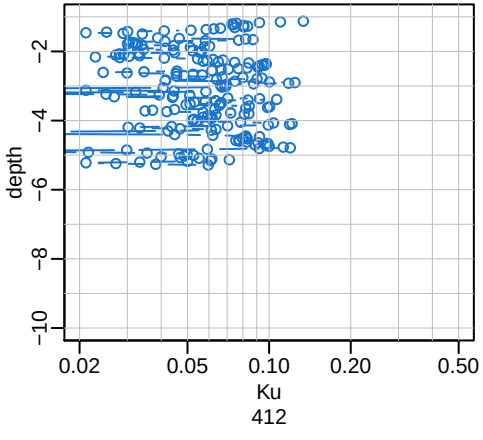


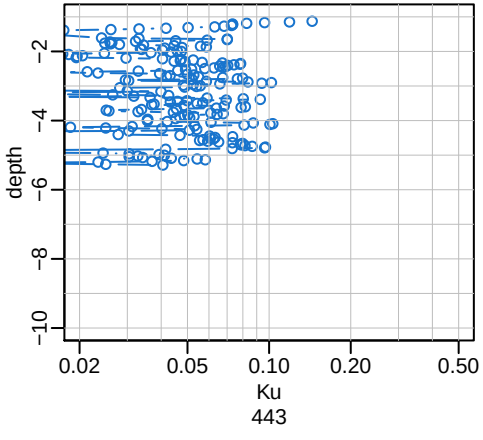


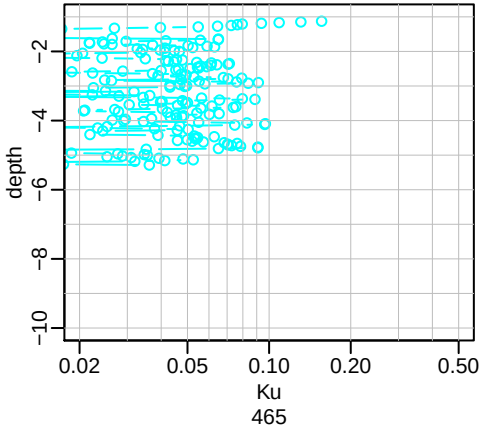


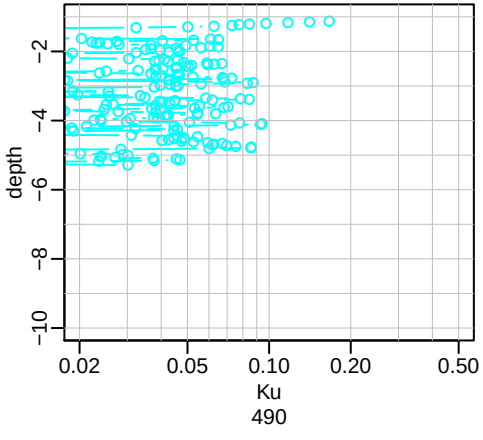


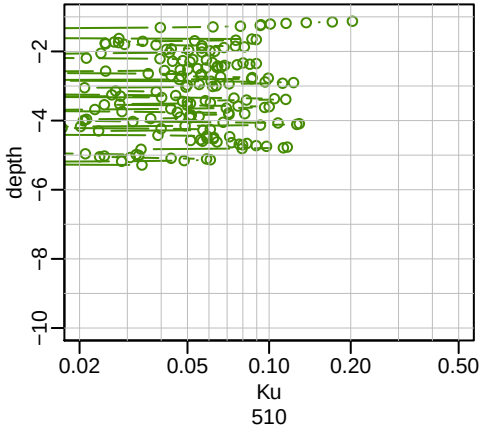
bou_c−ops_190724_0915_001_data.csv

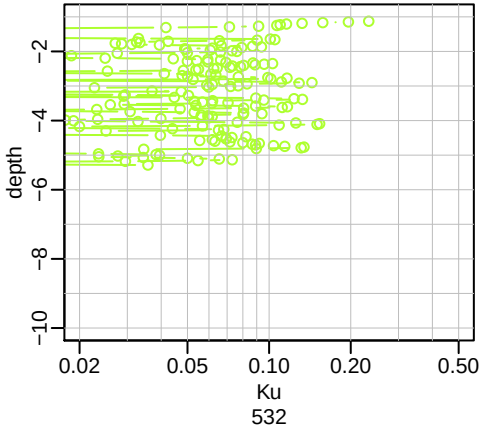


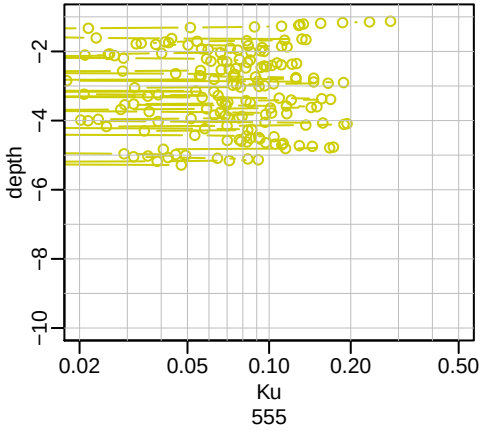


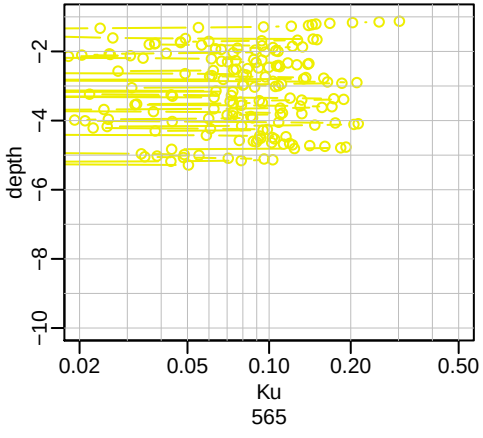


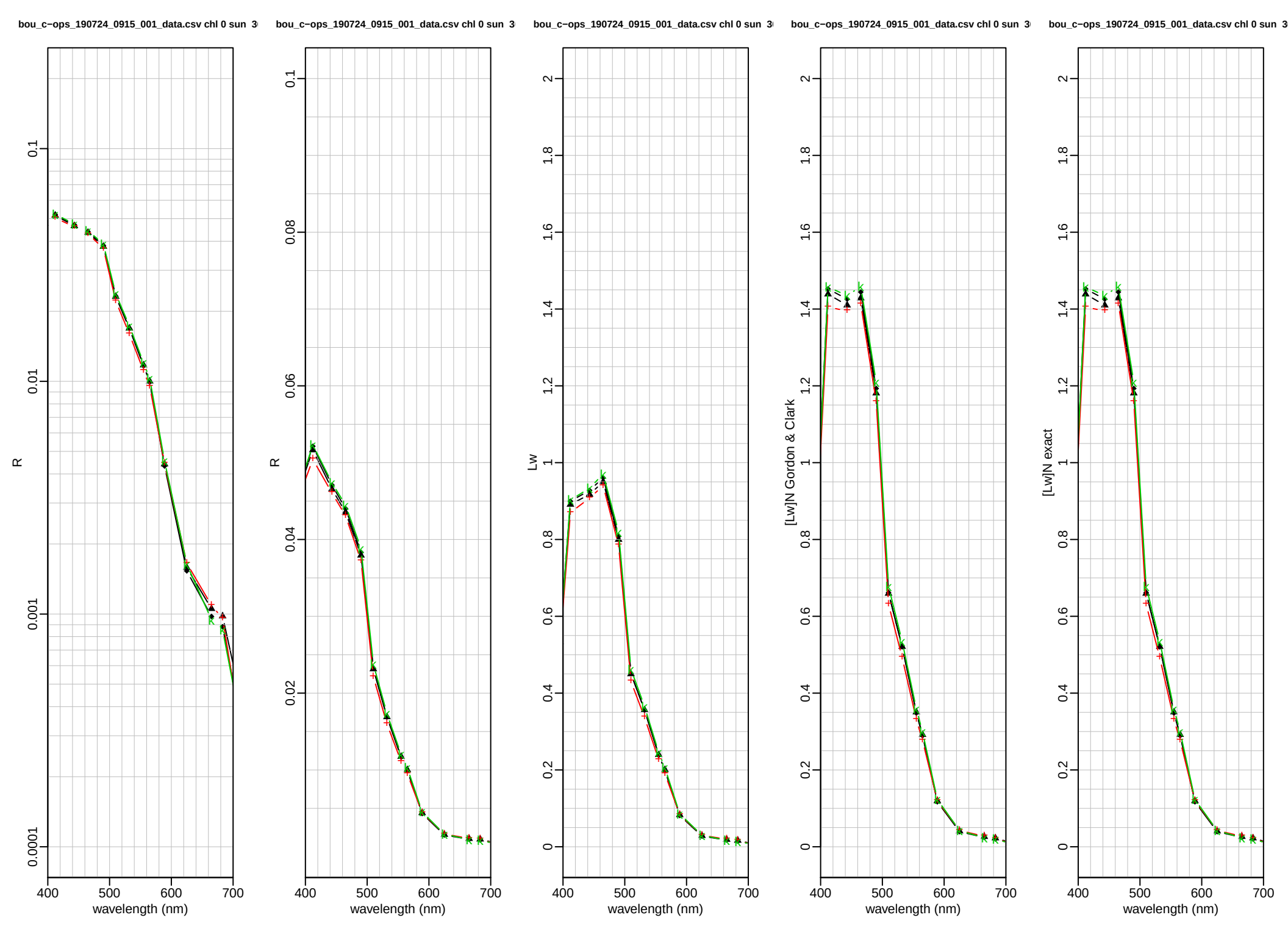






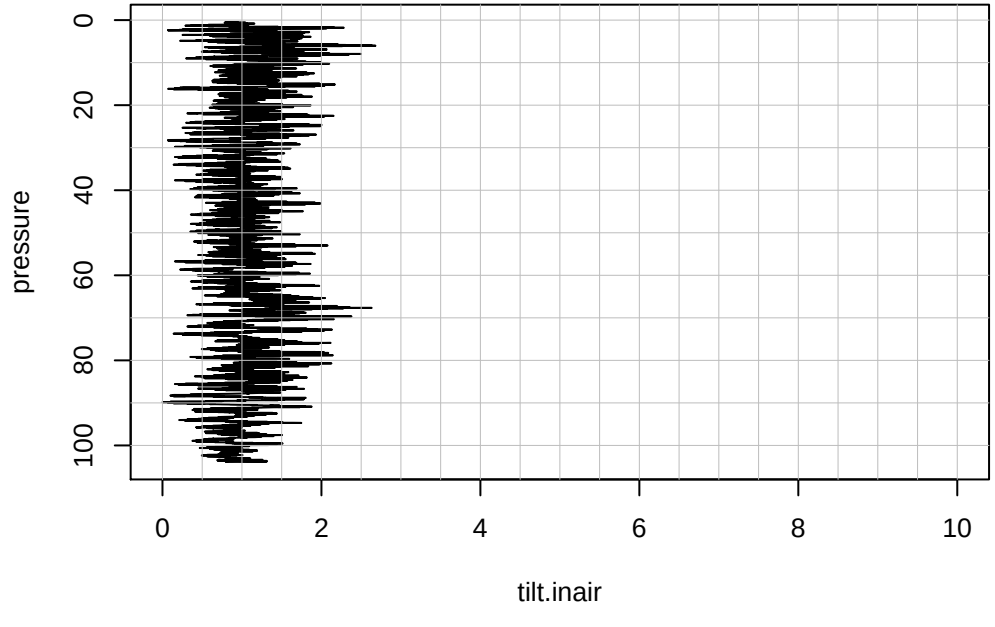


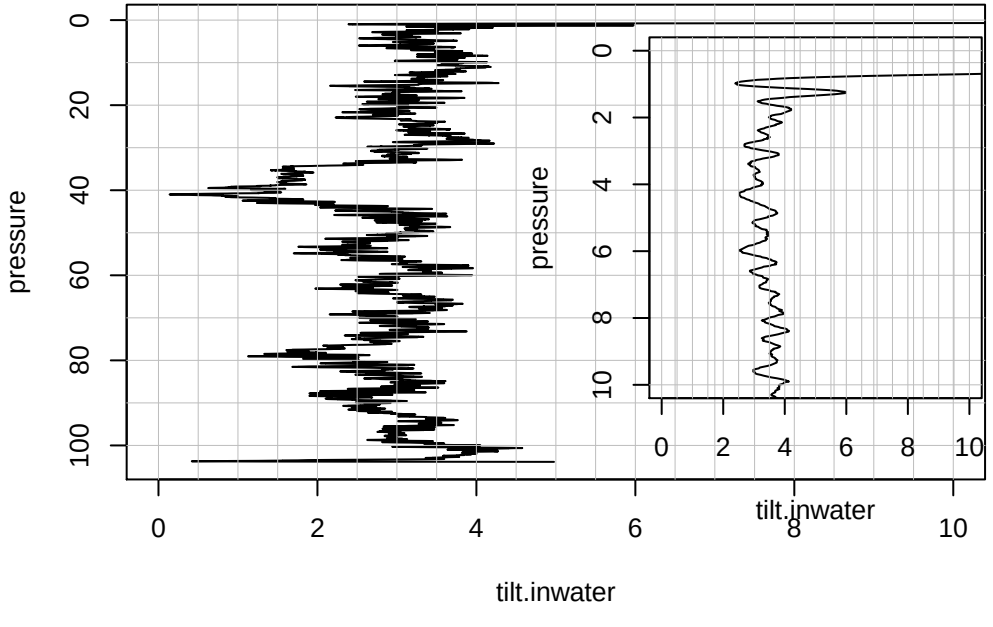


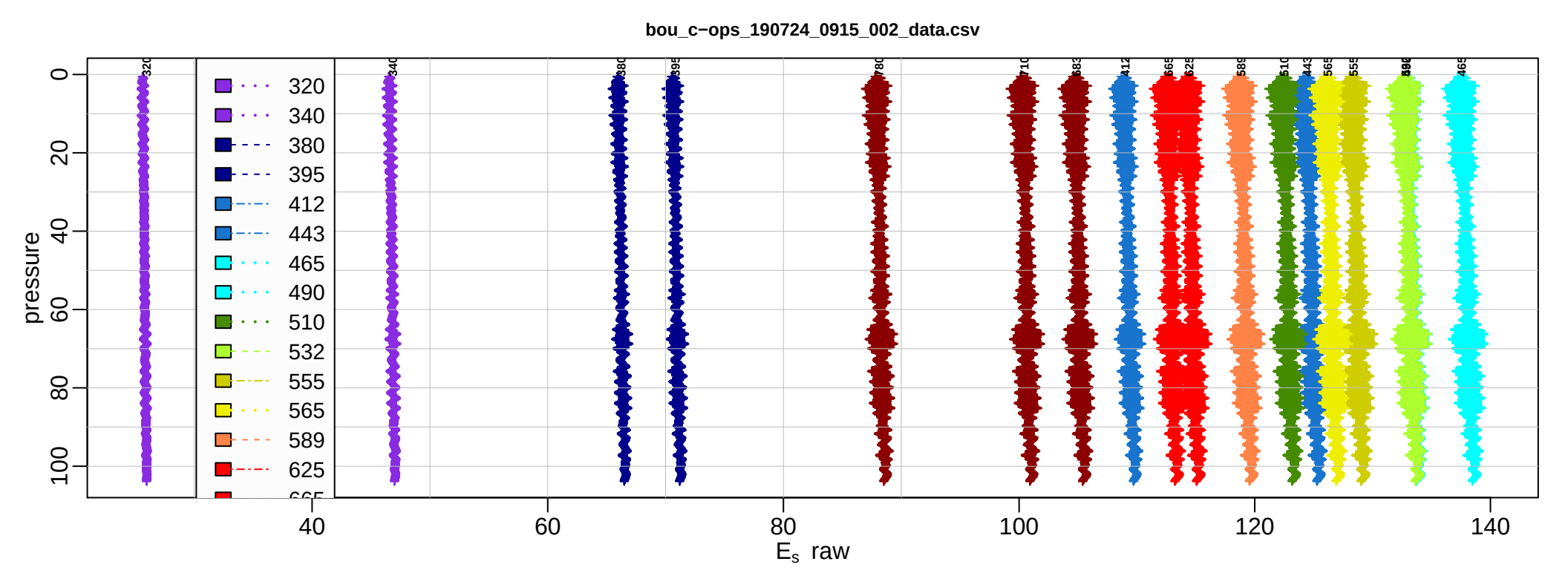

bou_c−ops_190724_0915_001_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190724_0915_001_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190724_0915_001_data.csv chl 0 sun 3
Lw
wavelength (nm)
bou_c−ops_190724_0915_001_data.csv chl 0 sun 3
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190724_0915_001_data.csv chl 0 sun 3
[Lw]N exact
wavelength (nm)

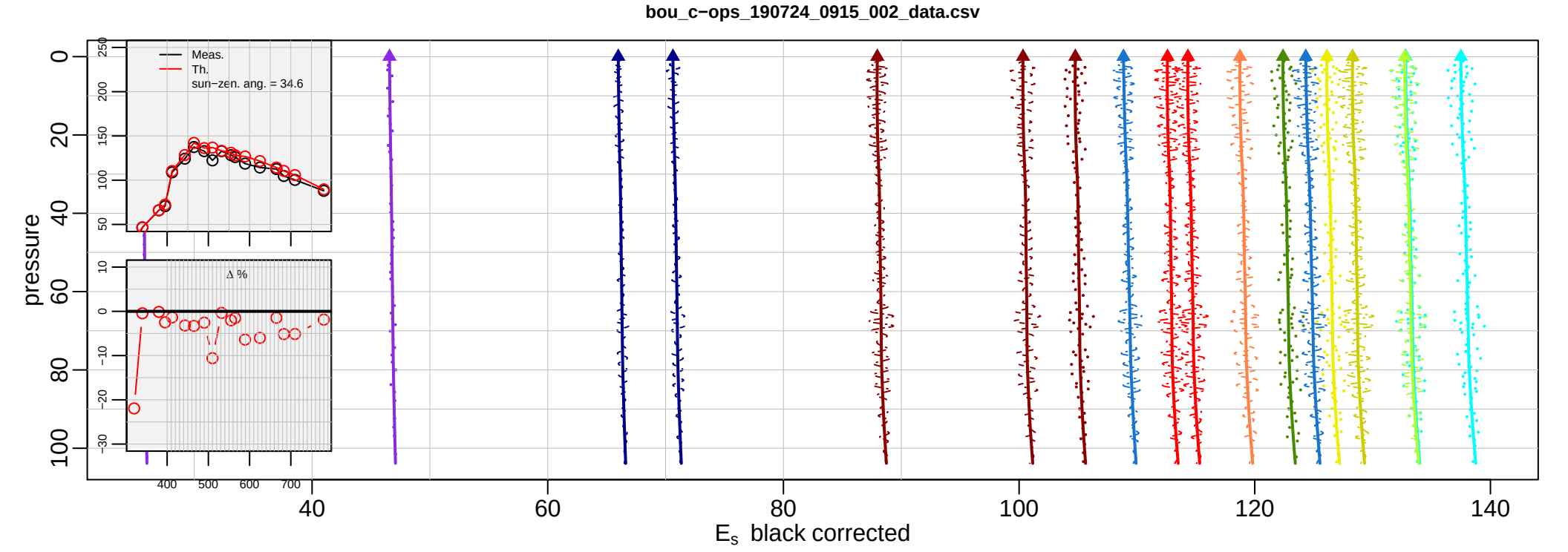
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole210/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole210/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole210/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole210/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.8899
latitude 43.3677
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

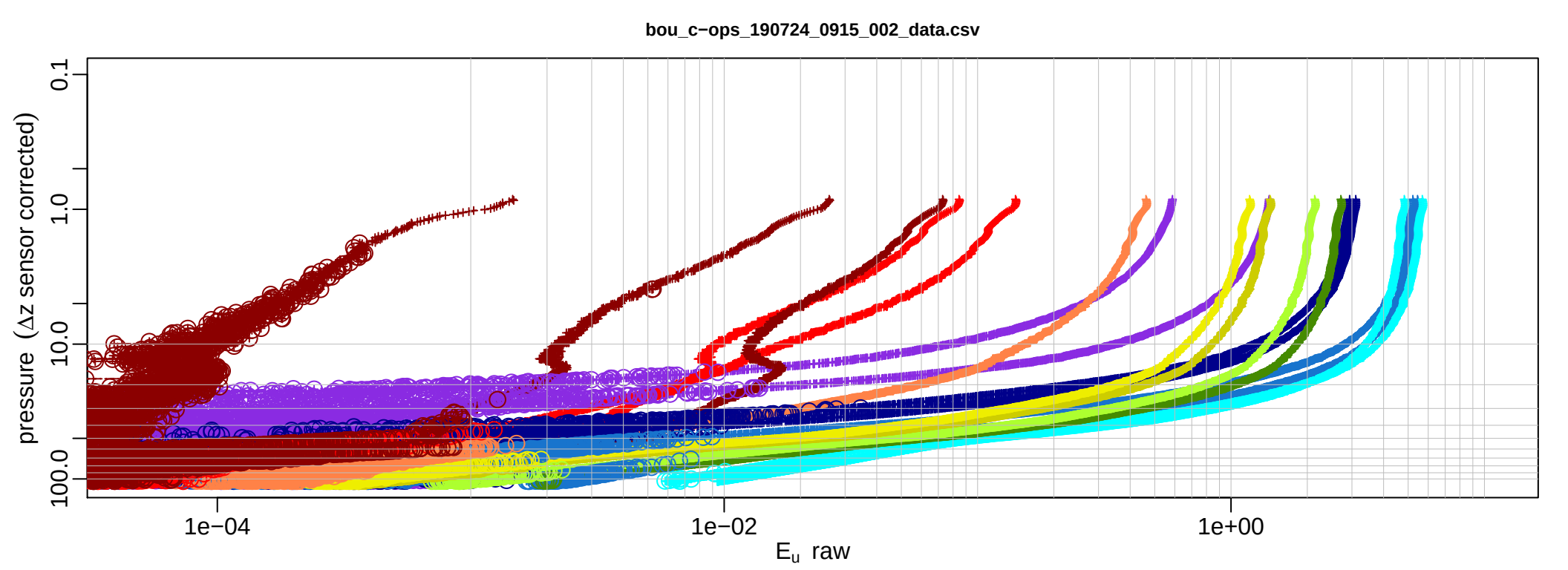
bou_c−ops_190724_0915_002_data.csv

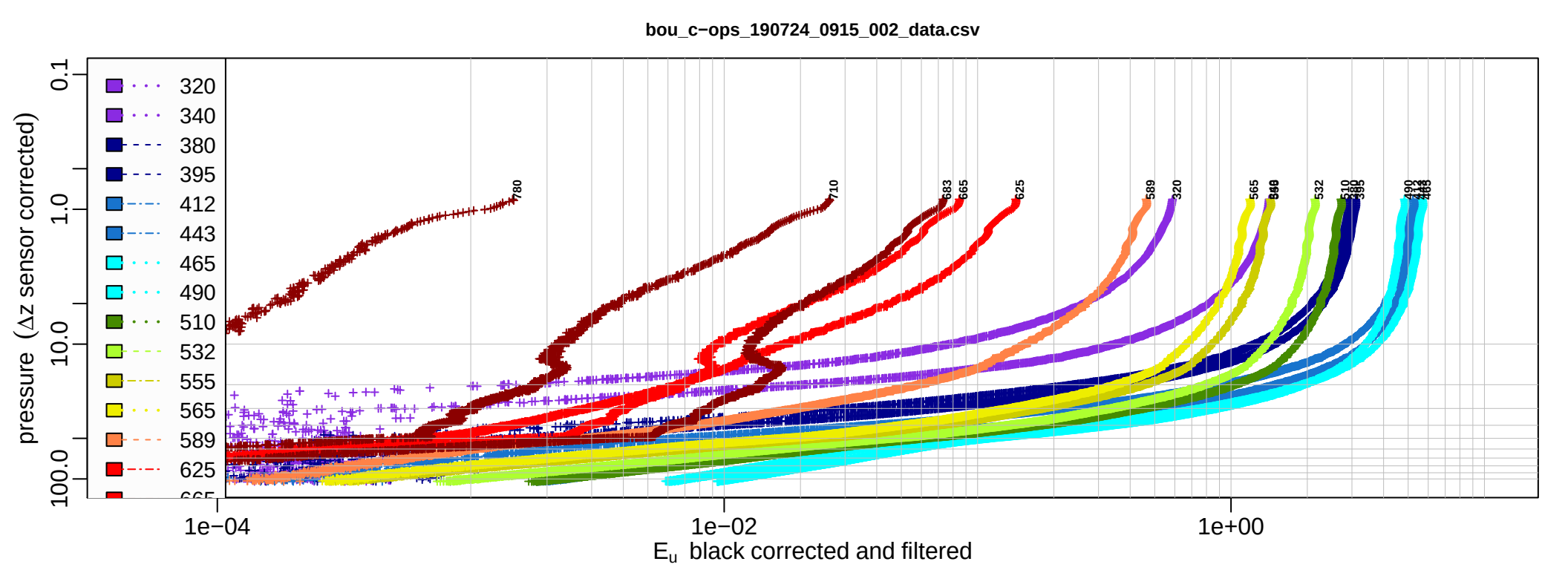


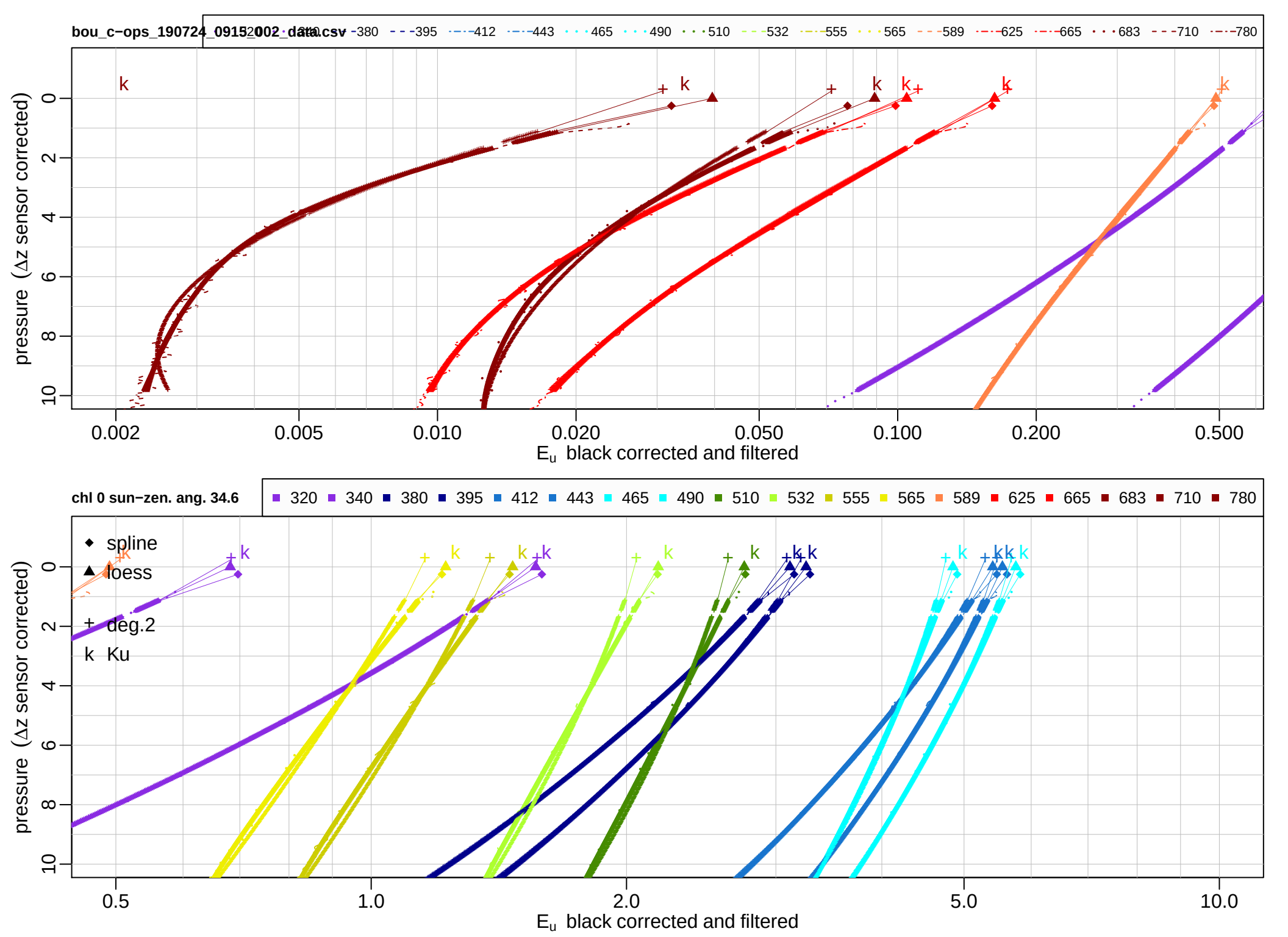


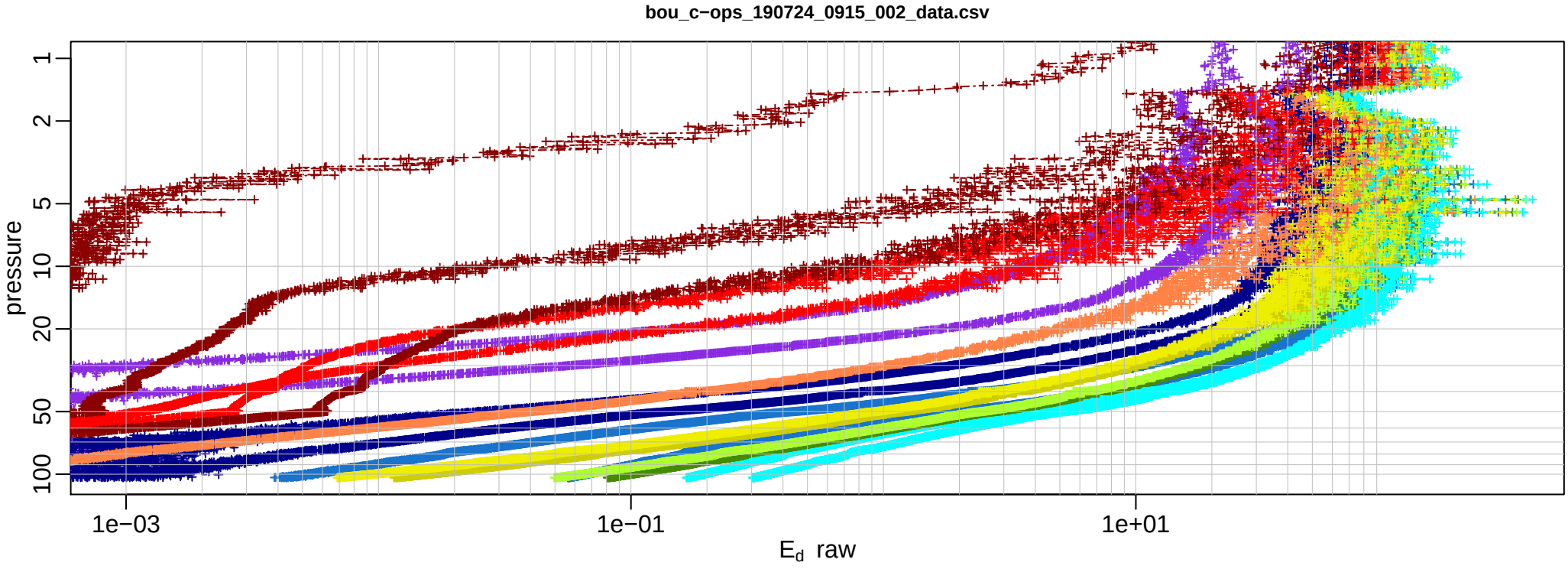

bou_c−ops_190724_0915_002_data.csv
pressure
0
20
40
60
80
100
320
340
380
395
412
443
465
490
510
532
555
565
589
625
40
60
80
100
120
140
E_s raw

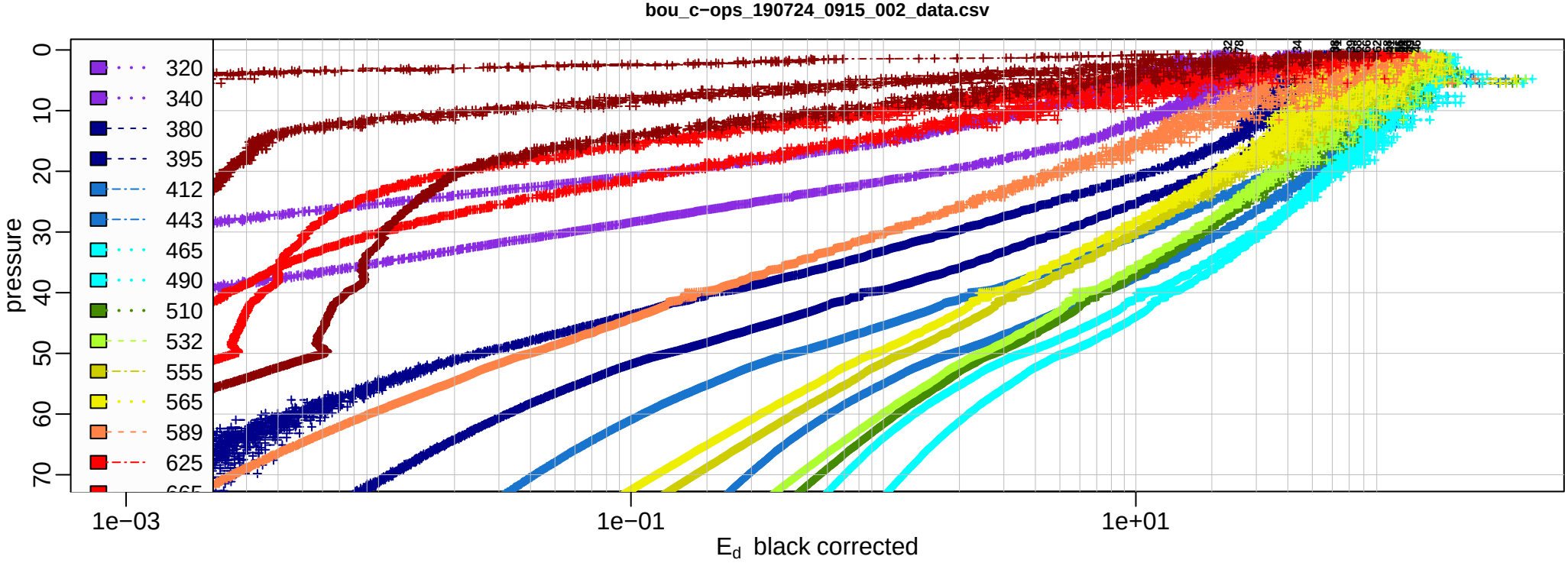

bou_c−ops_190724_0915_002_data.csv
Meas.
Th.
sun−zen. ang. = 34.6
Δ %
pressure
0
20
40
60
80
100
40
60
80
100
120
140
E_s black corrected

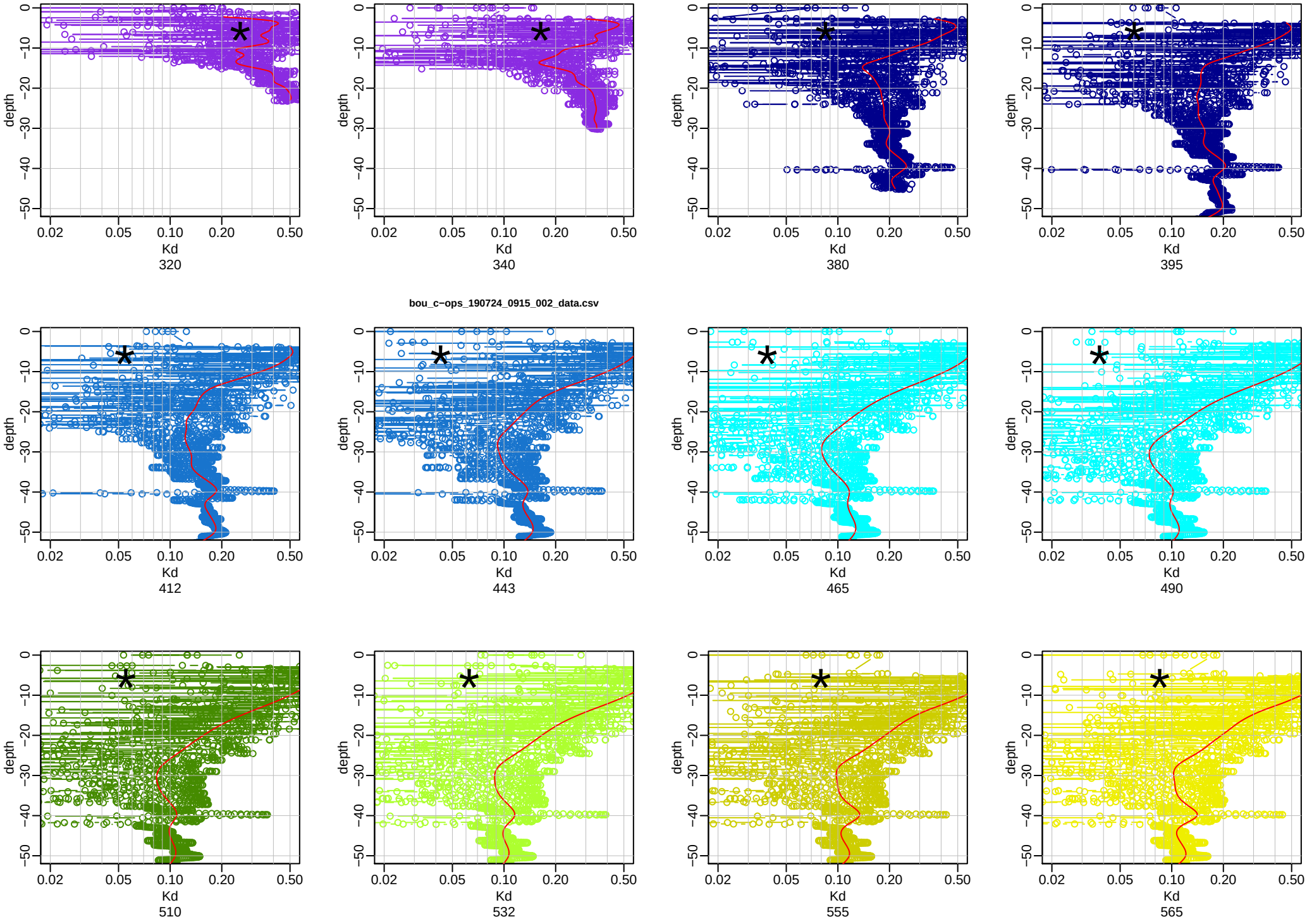

bou_c−ops_190724_0915_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

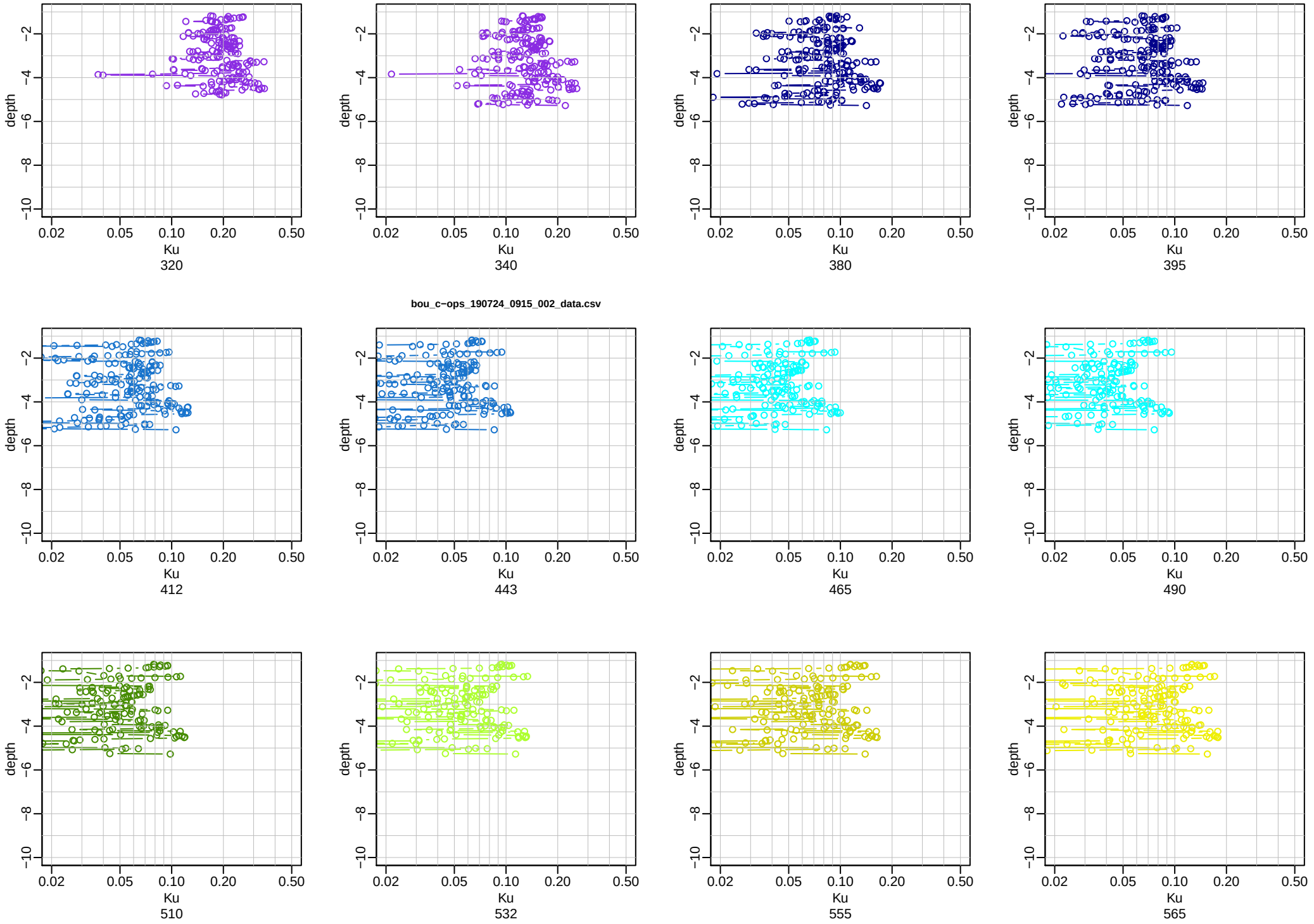

bou_c−ops_190724_0915_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
532
510
490
1e−04
1e−02
1e+00
E_u black corrected and filtered

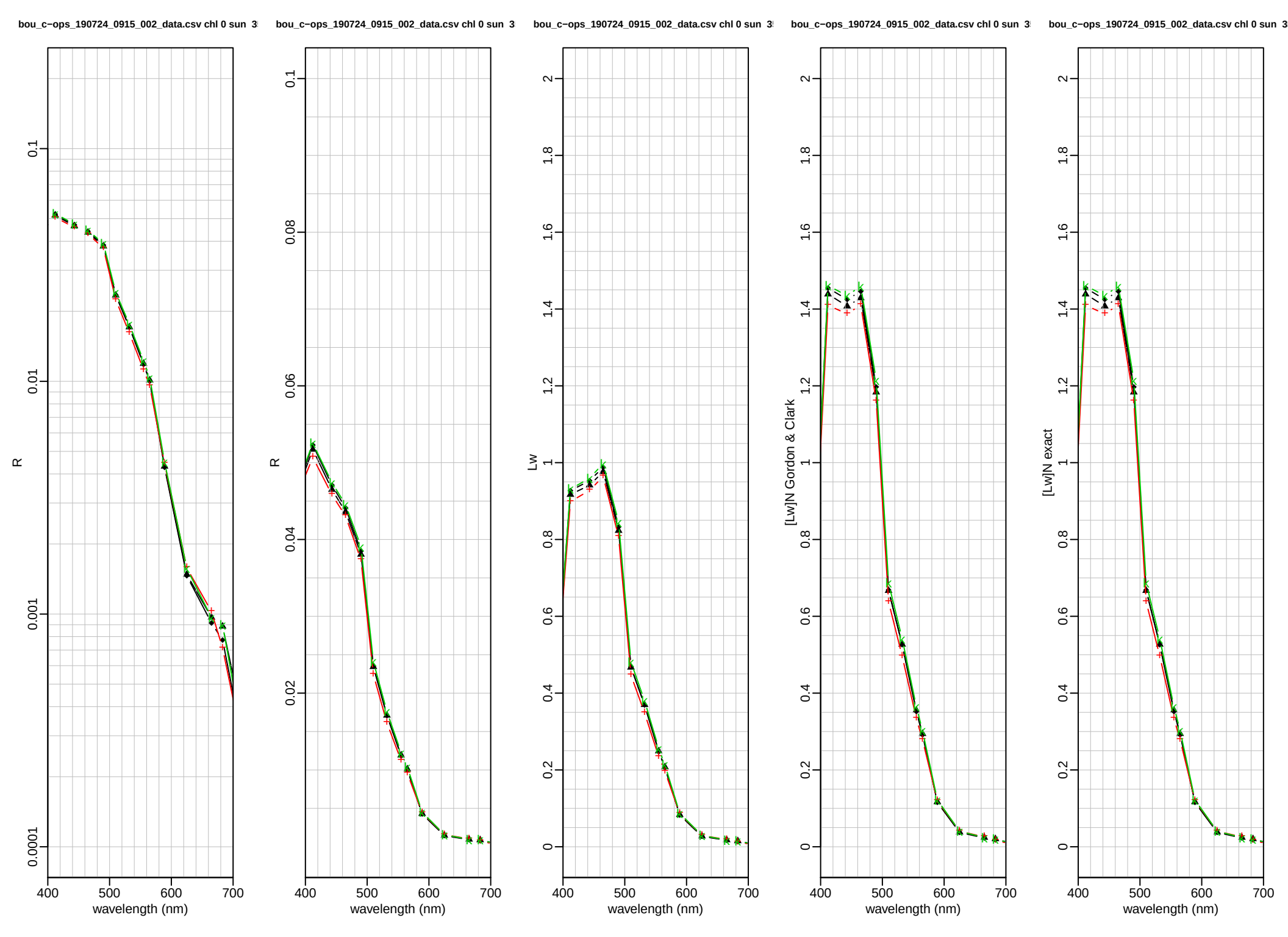

bou_c−ops_190724_0915_002_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 34.6
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190724_0915_002_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190724_0915_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

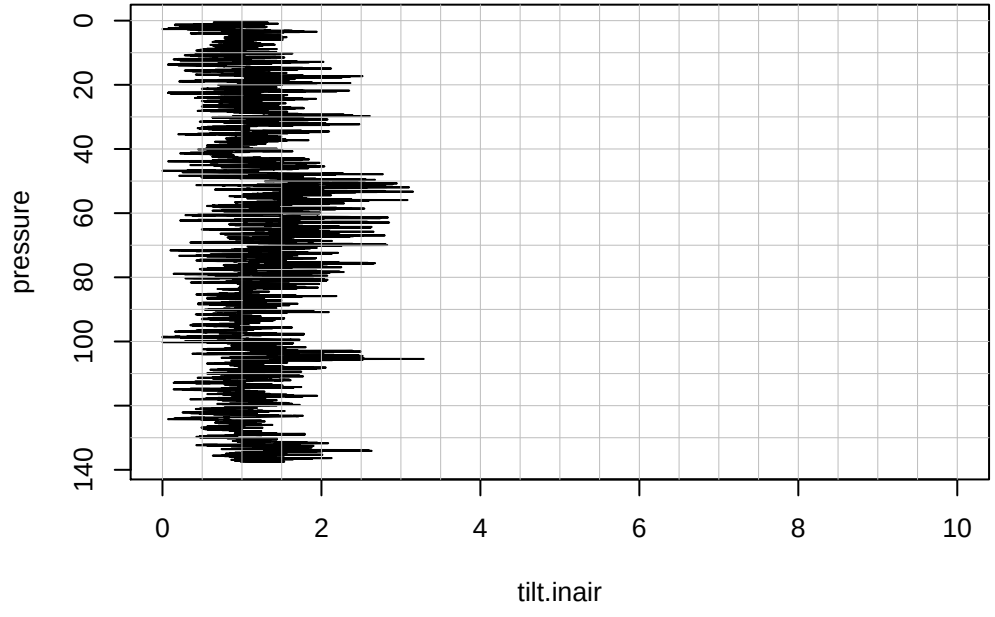

bou_c~ops_190724_0915_002_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

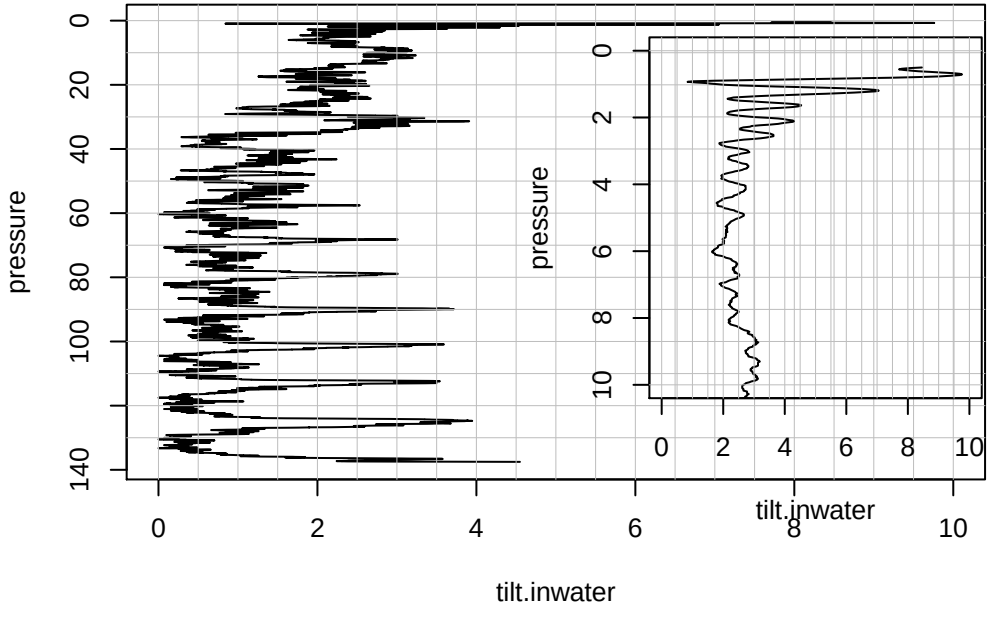

bou_c~ops_190724_0915_002_data.csv
depth
Ku
320
340
380
395
412
443
465
490
510
532
555
565

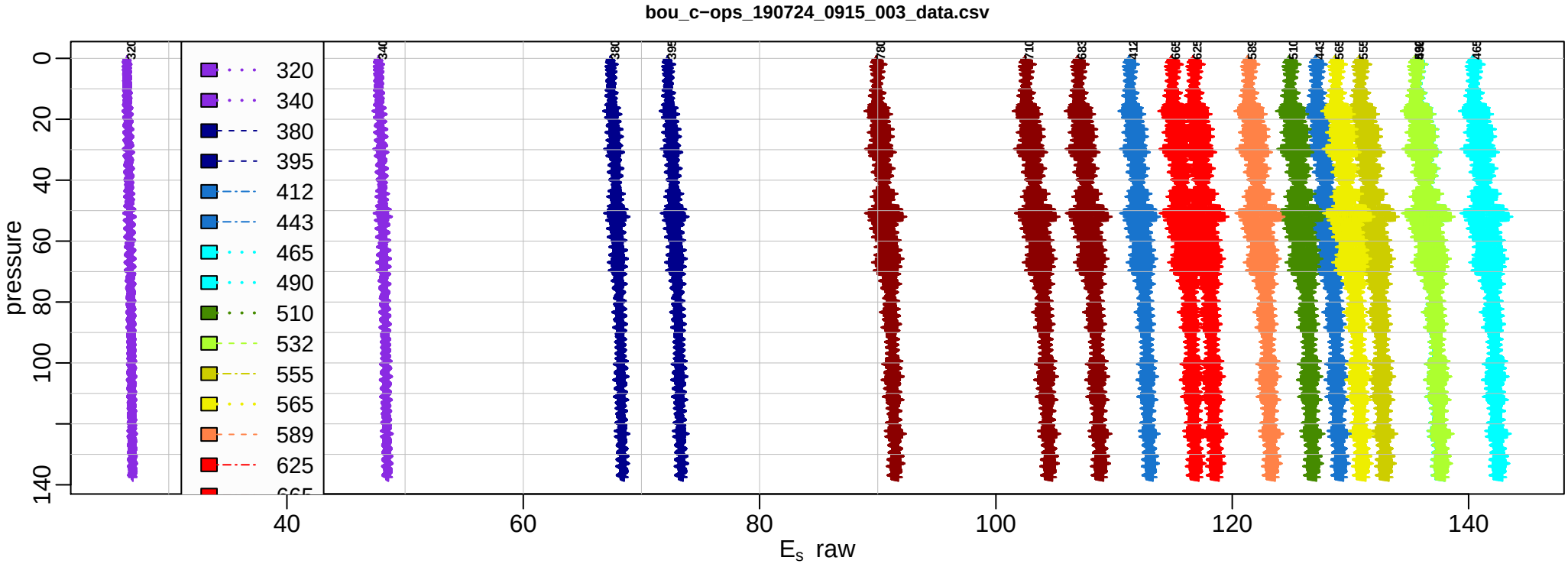

bou_c−ops_190724_0915_002_data.csv chl 0 sun 3
R
0.1
0.01
0.001
0.0001
400
500
600
700
wavelength (nm)
bou_c−ops_190724_0915_002_data.csv chl 0 sun 3
R
0.1
0.08
0.06
0.04
0.02
400
500
600
700
wavelength (nm)
bou_c−ops_190724_0915_002_data.csv chl 0 sun 3
Lw
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)
bou_c−ops_190724_0915_002_data.csv chl 0 sun 3
[Lw]N Gordon & Clark
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)
bou_c−ops_190724_0915_002_data.csv chl 0 sun 3
[Lw]N exact
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)

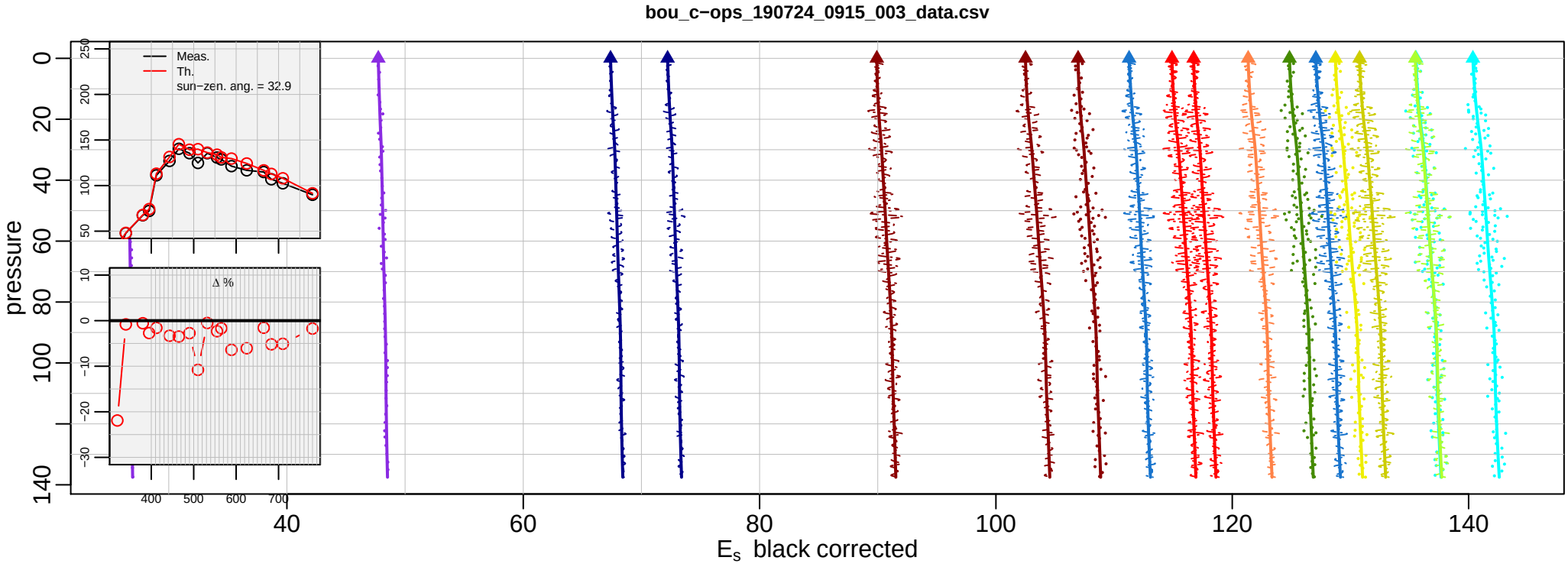
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole210/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole210/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole210/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole210/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.8853
latitude 43.3668
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

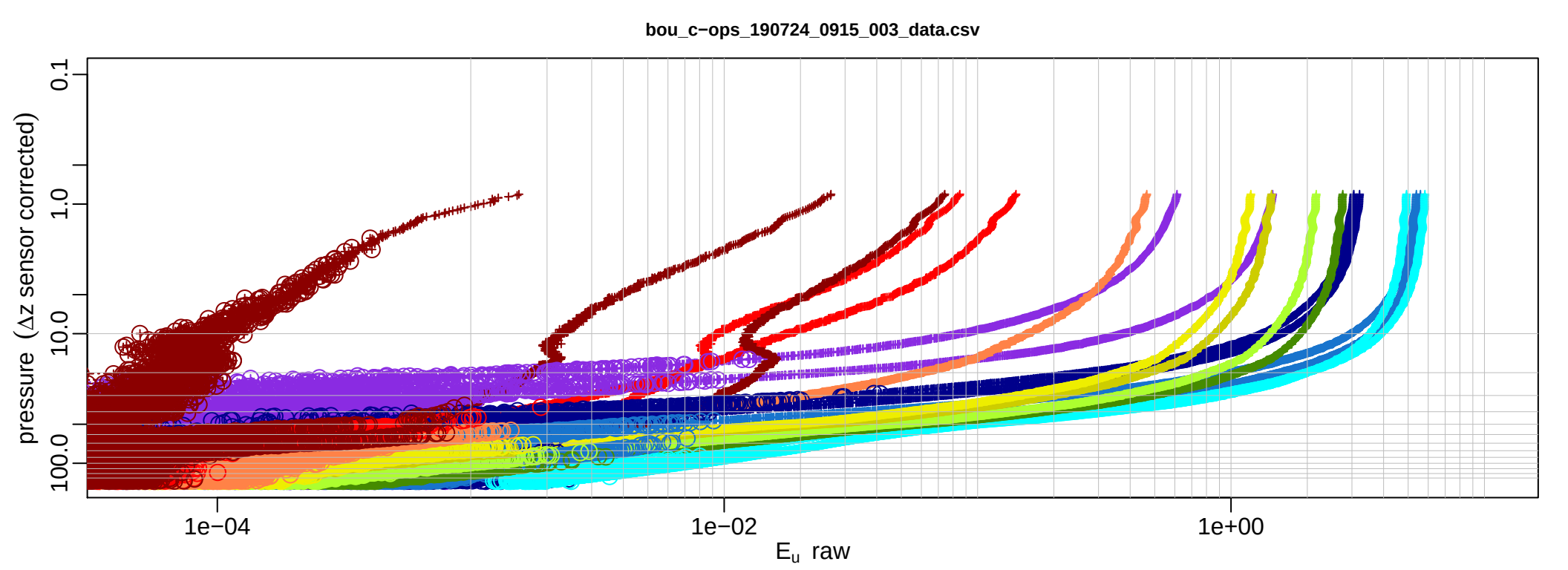
bou_c−ops_190724_0915_003_data.csv

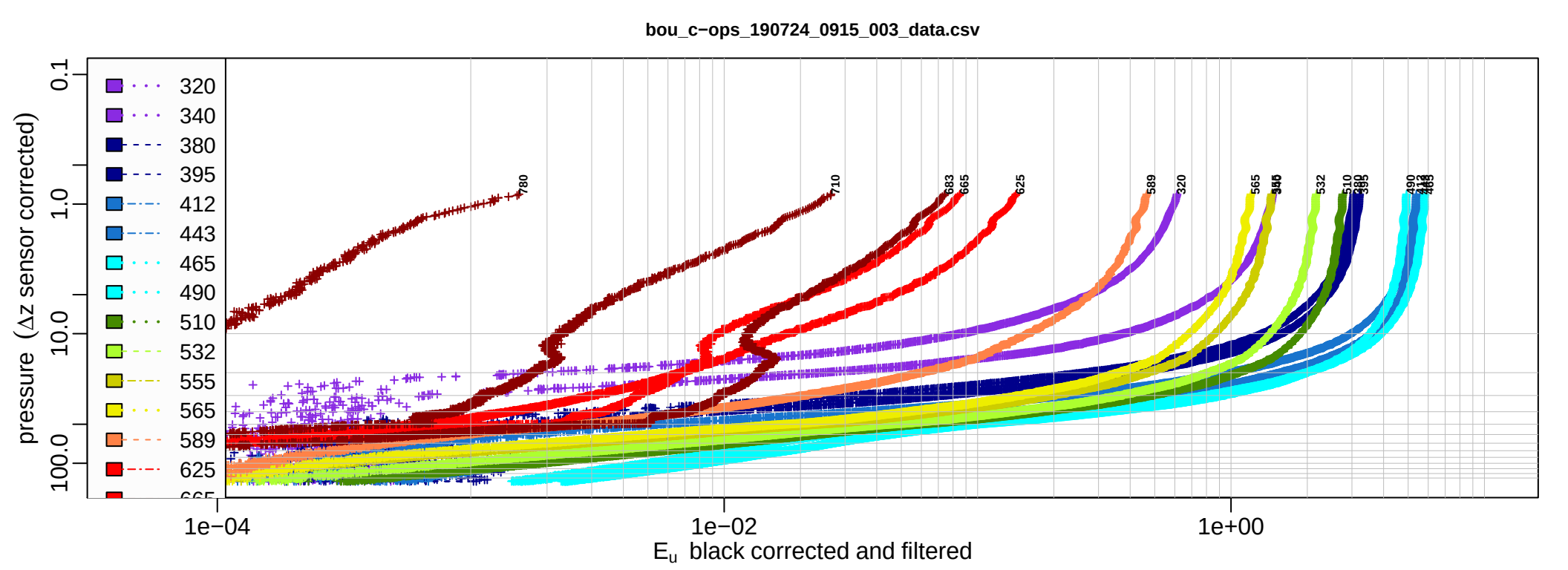


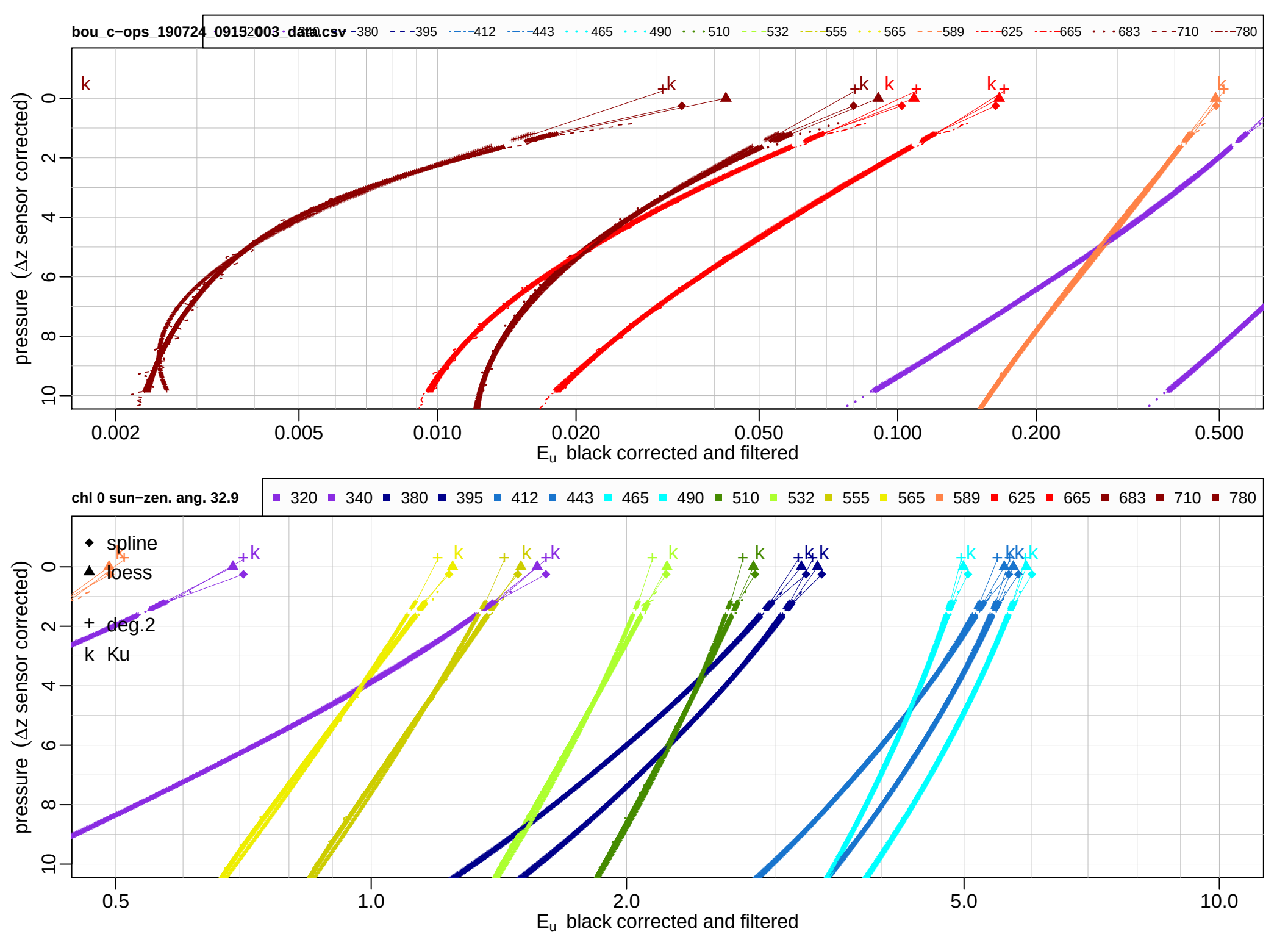


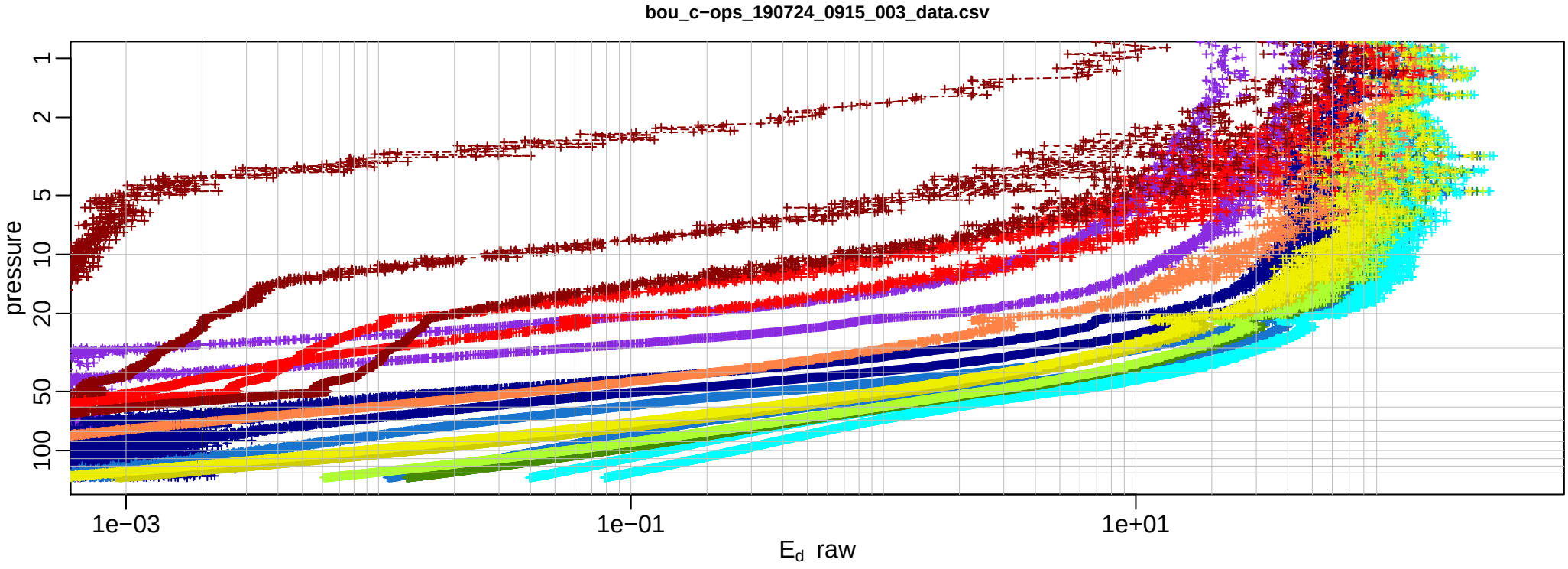

bou_c−ops_190724_0915_003_data.csv
pressure
0
20
40
60
80
100
140
320
340
380
395
412
443
465
490
510
532
555
565
589
625
40
60
80
100
120
140
Es raw

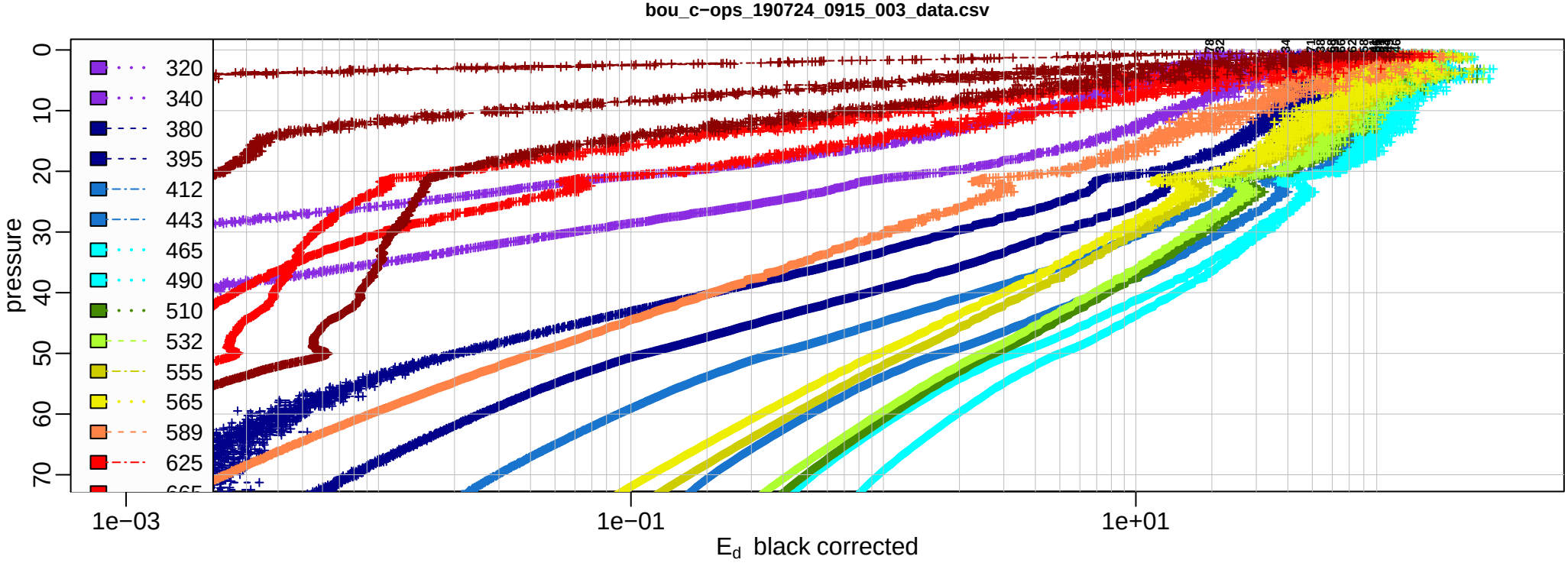

bou_c−ops_190724_0915_003_data.csv
Meas.
Th.
sun−zen. ang. = 32.9
Δ %
pressure
0
20
40
60
80
100
140
40
60
80
100
120
140
Es black corrected

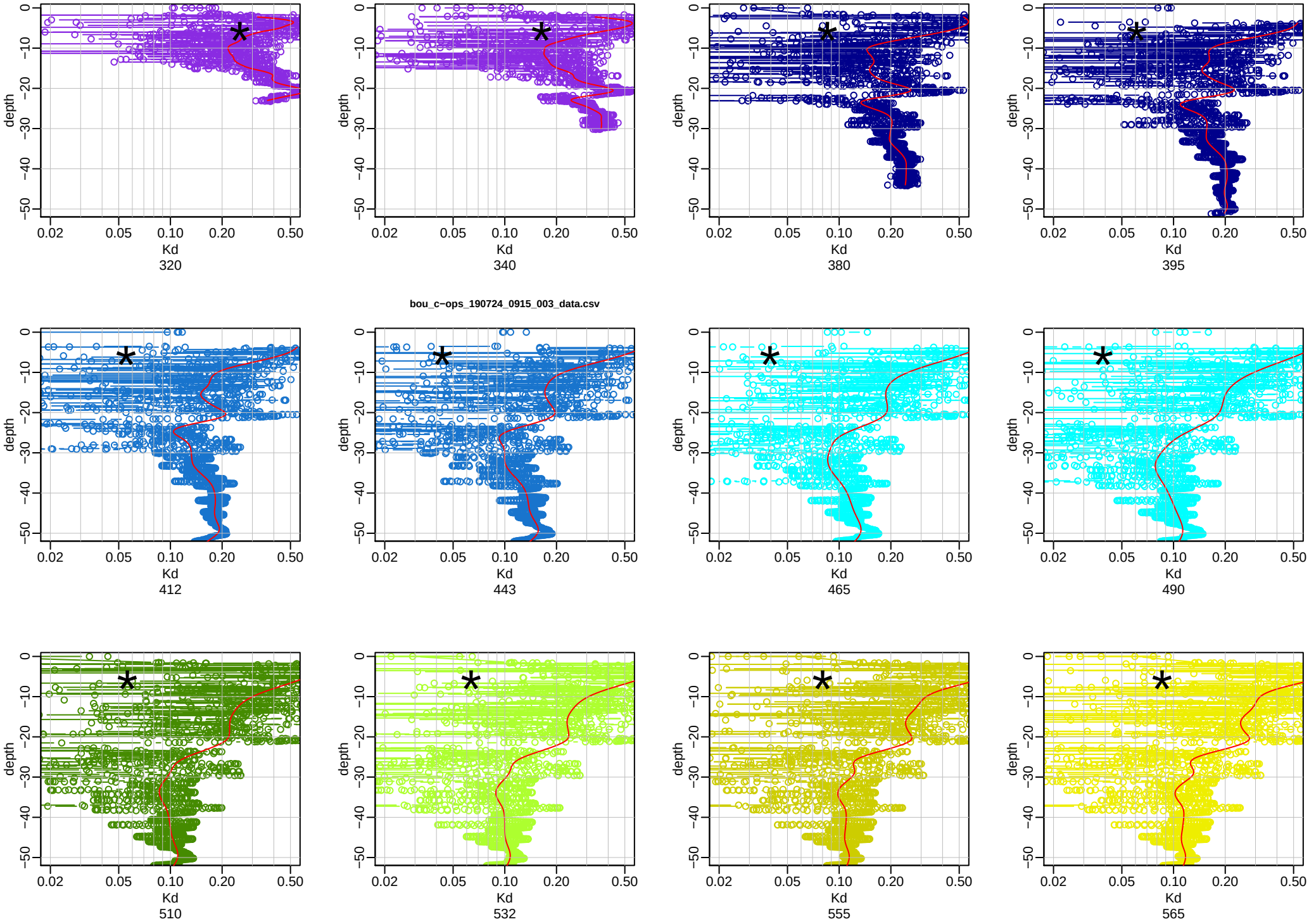

bou_c−ops_190724_0915_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

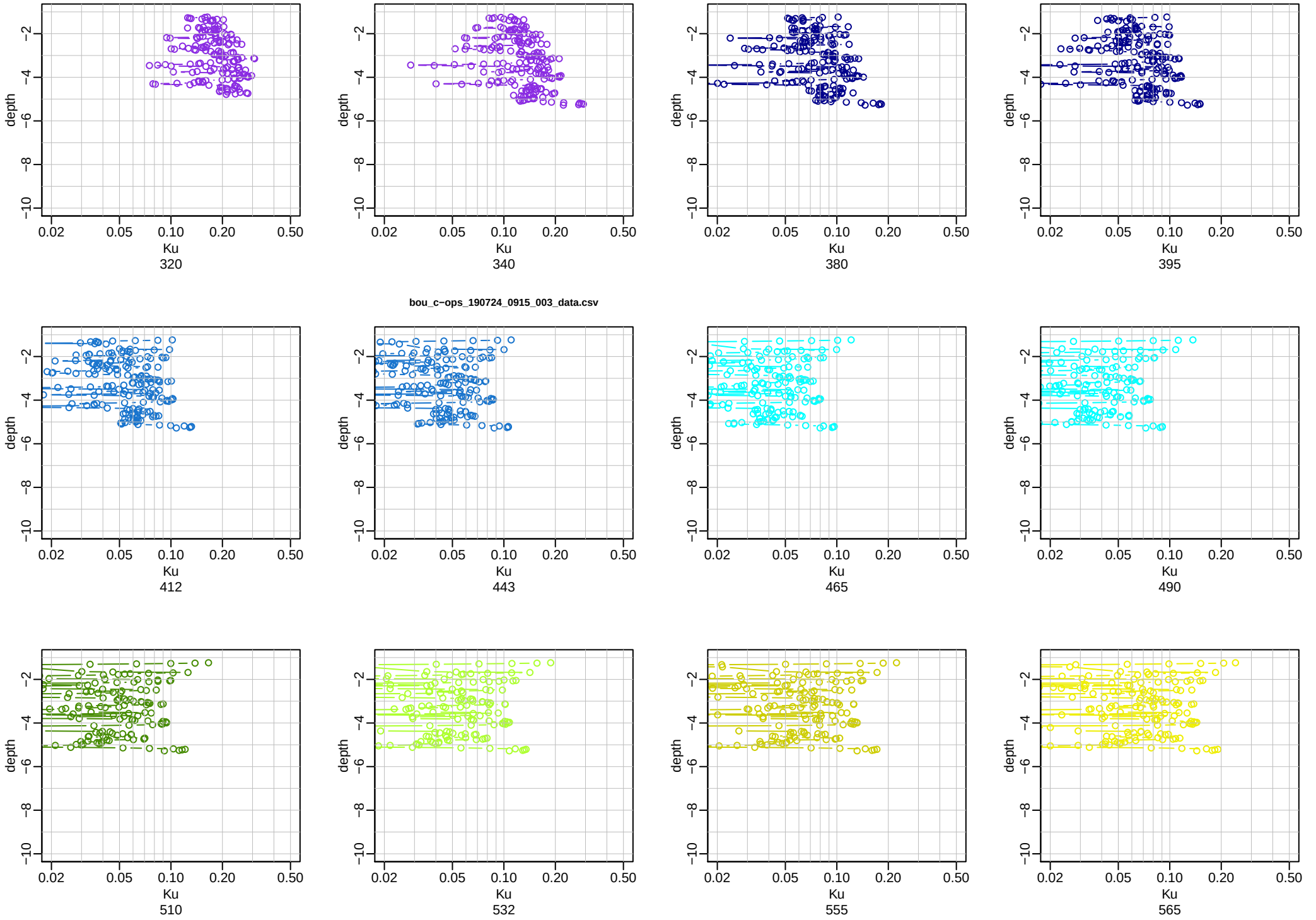

bou_c−ops_190724_0915_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
532
510
490
1e−04
1e−02
1e+00
E_u black corrected and filtered

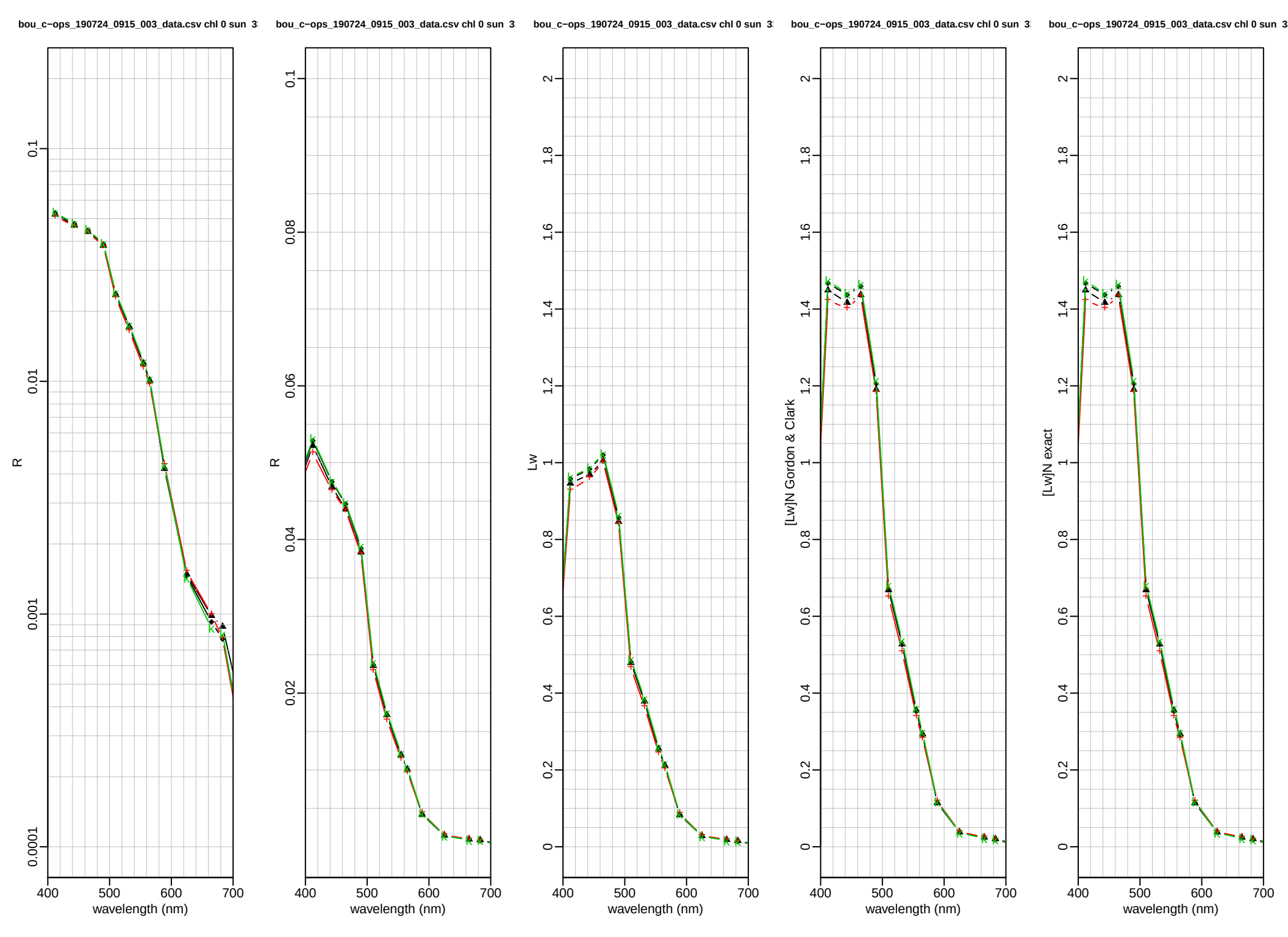

bou_c−ops_190724_0915_003_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 32.9
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190724_0915_003_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E$_d$ raw

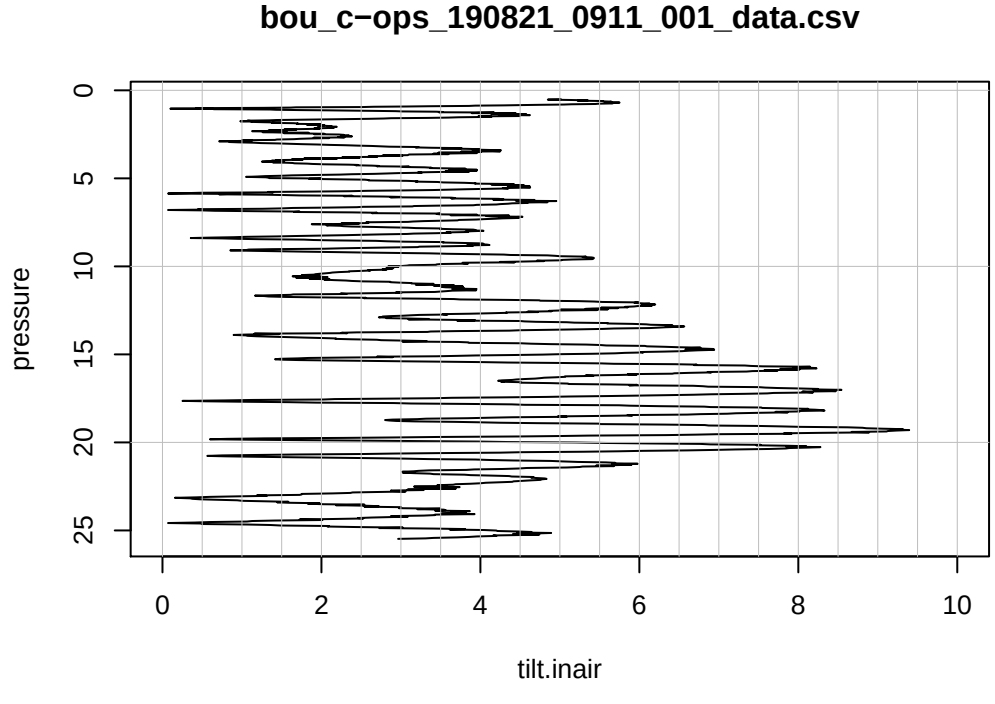

bou_c−ops_190724_0915_003_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E$_d$ black corrected

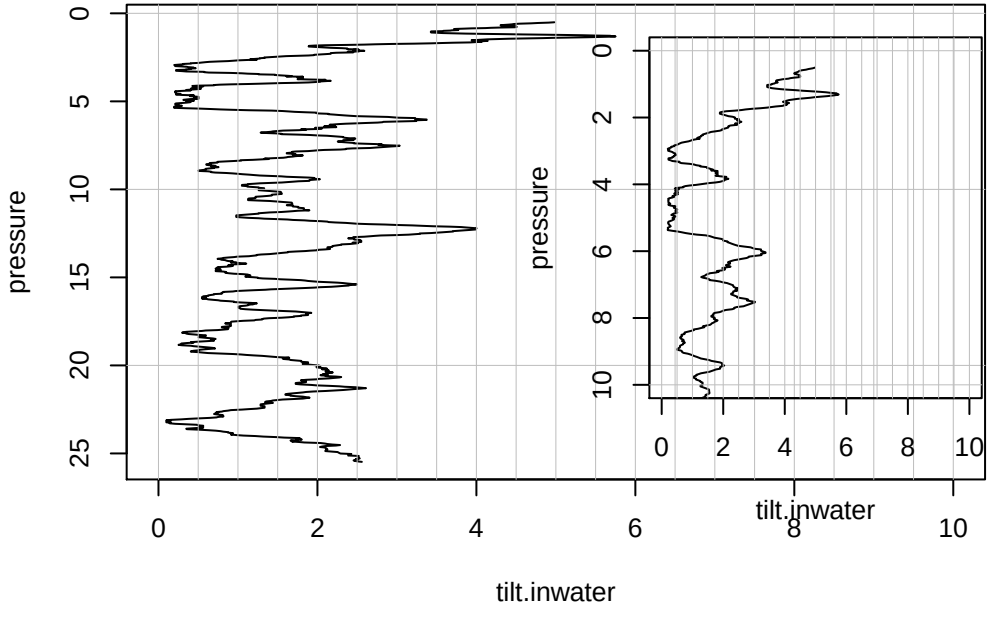

bou_c~ops_190724_0915_003_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

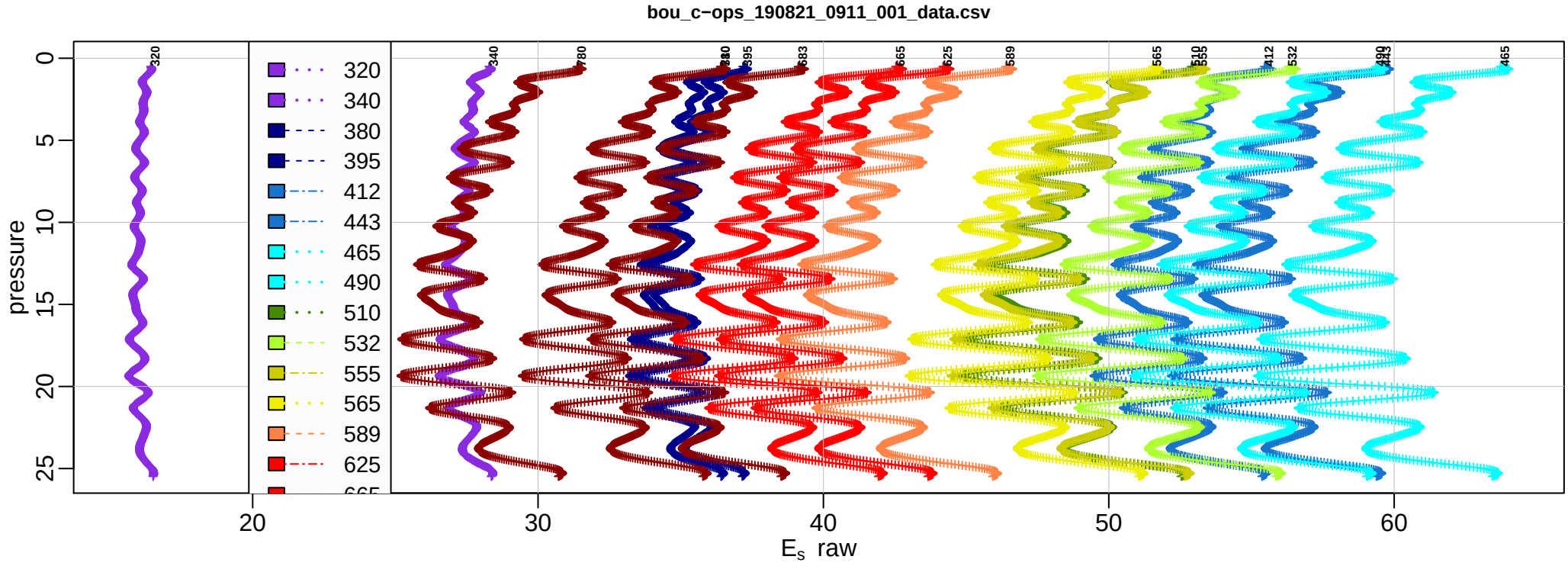

bou_c~ops_190724_0915_003_data.csv
depth
Ku
320
340
380
395
412
443
465
490
510
532
555
565

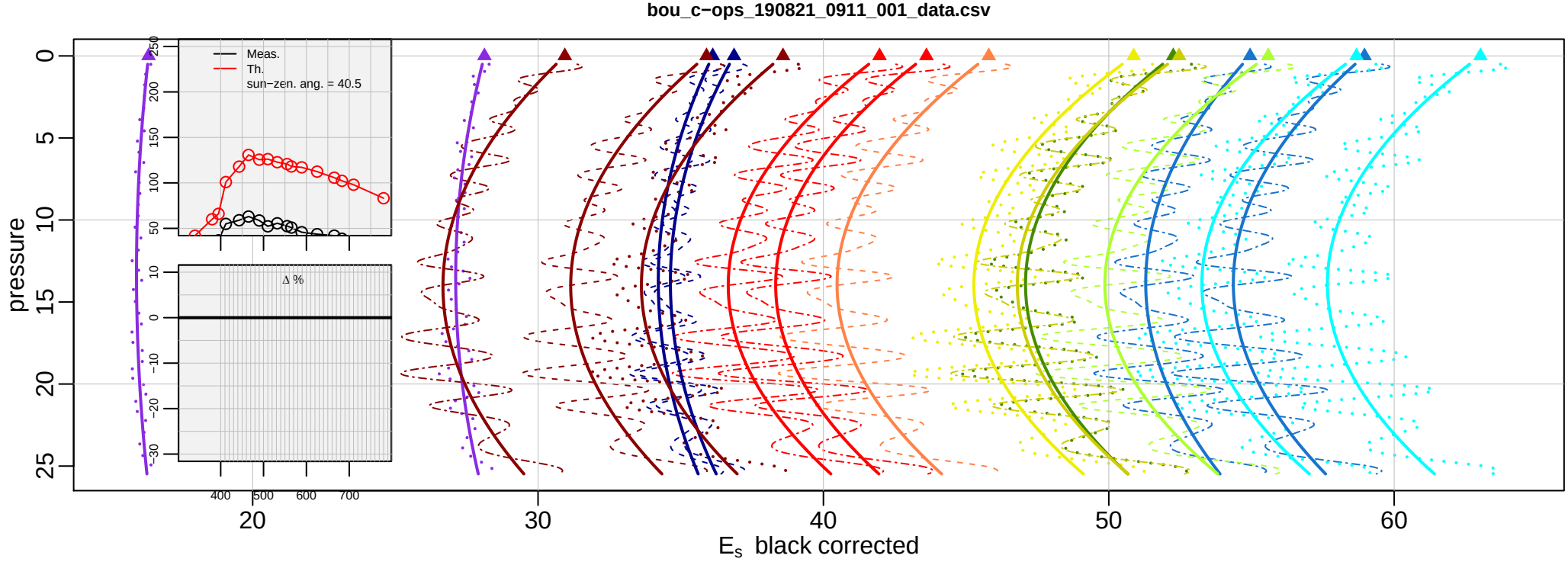

bou_c−ops_190724_0915_003_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190724_0915_003_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190724_0915_003_data.csv chl 0 sun 3
Lw
wavelength (nm)
bou_c−ops_190724_0915_003_data.csv chl 0 sun 3
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190724_0915_003_data.csv chl 0 sun 3
[Lw]N exact
wavelength (nm)

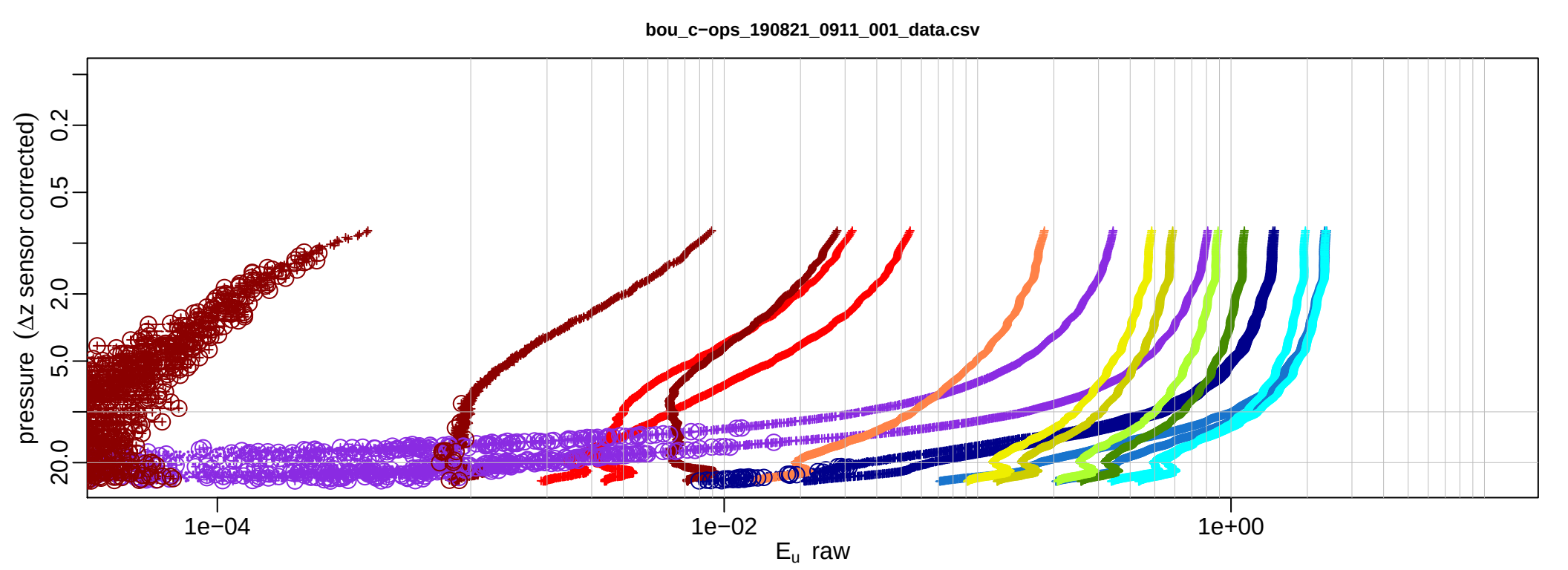
localcruise boussole211 bou_c−ops_190821_0911_001_data.csv 7.89335 43.3698 0 NA 7.89335 43.3698 1
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole211/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole211/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole211/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole211/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89335
latitude 43.3698
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

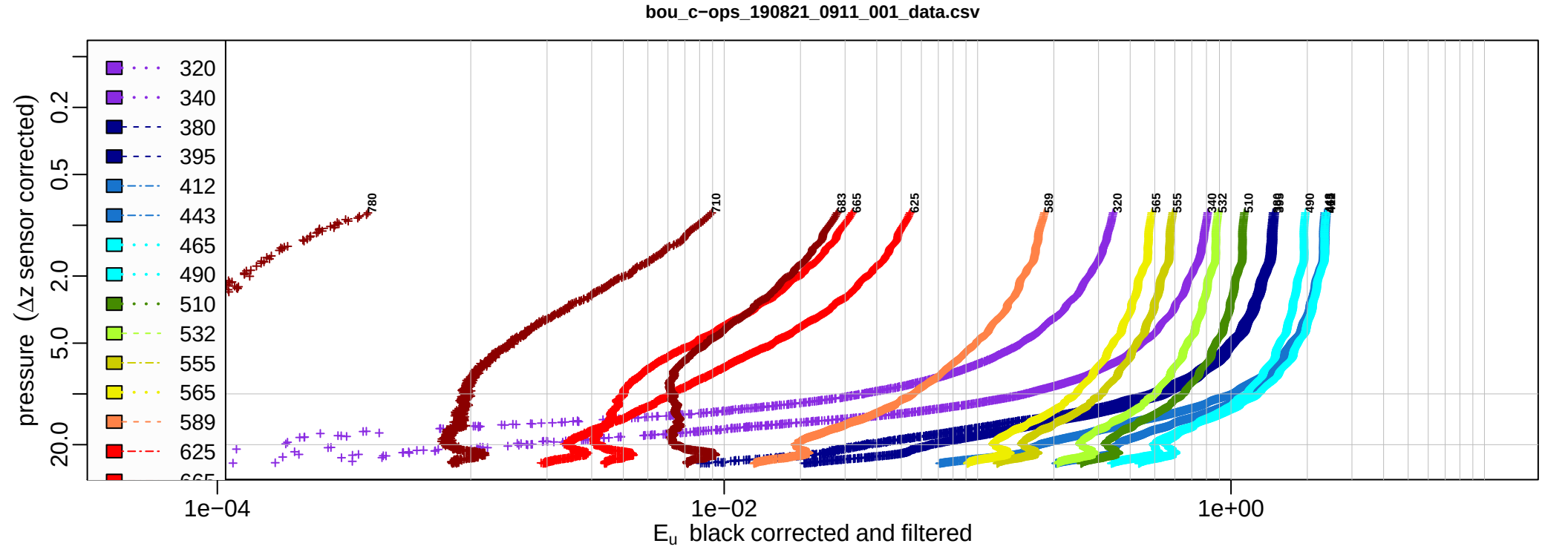


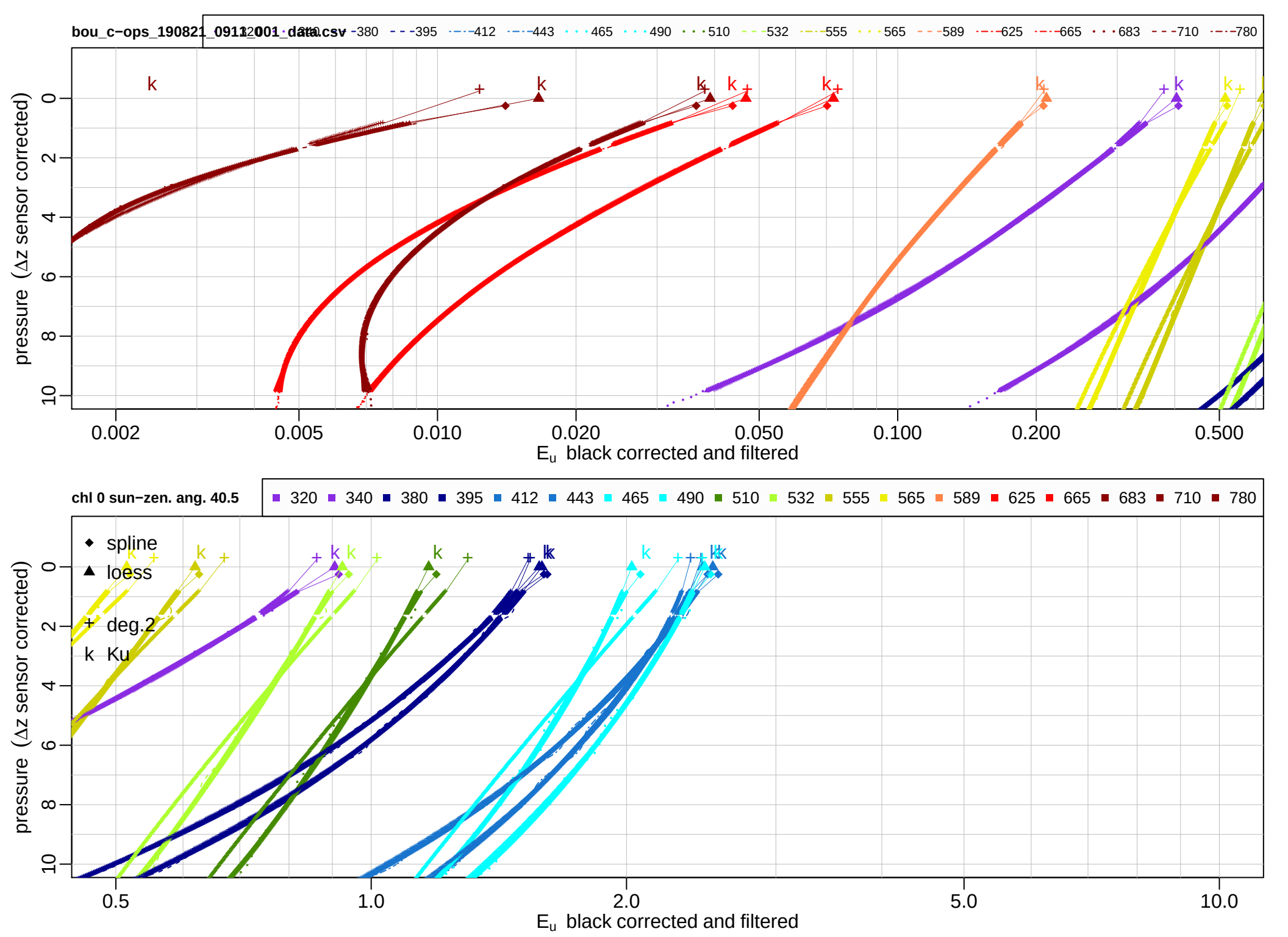


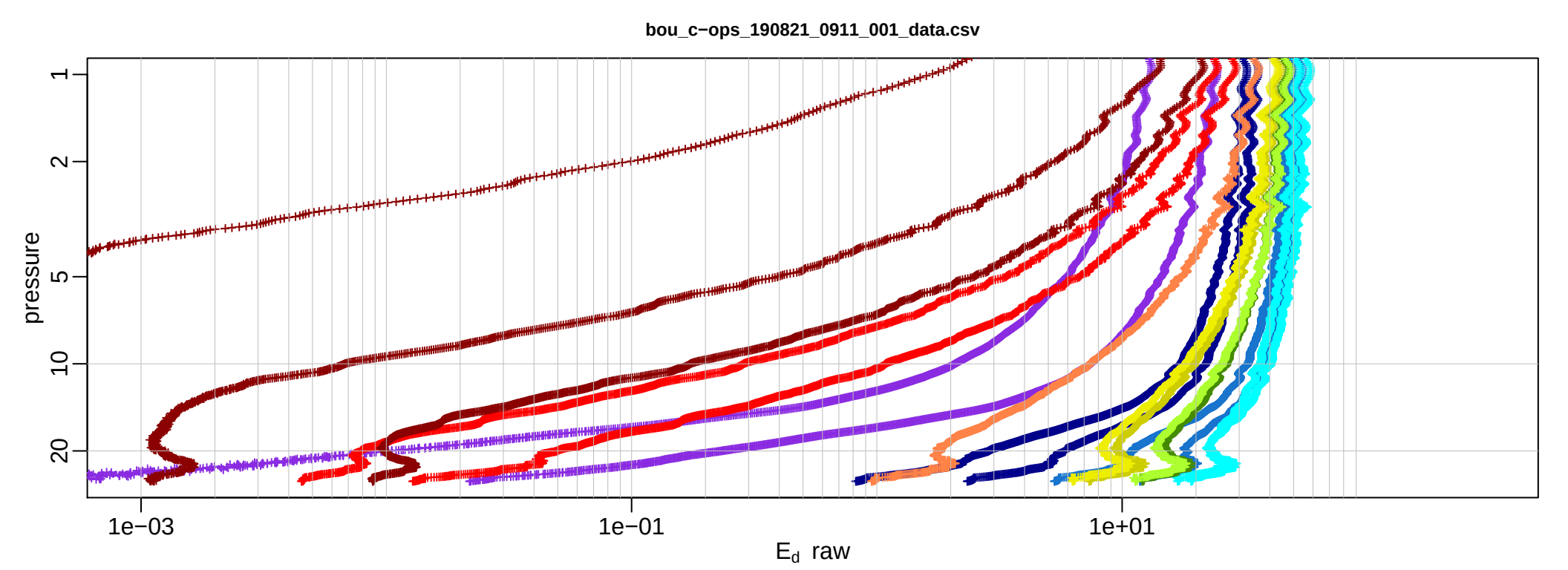

bou_c−ops_190821_0911_001_data.csv
pressure
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

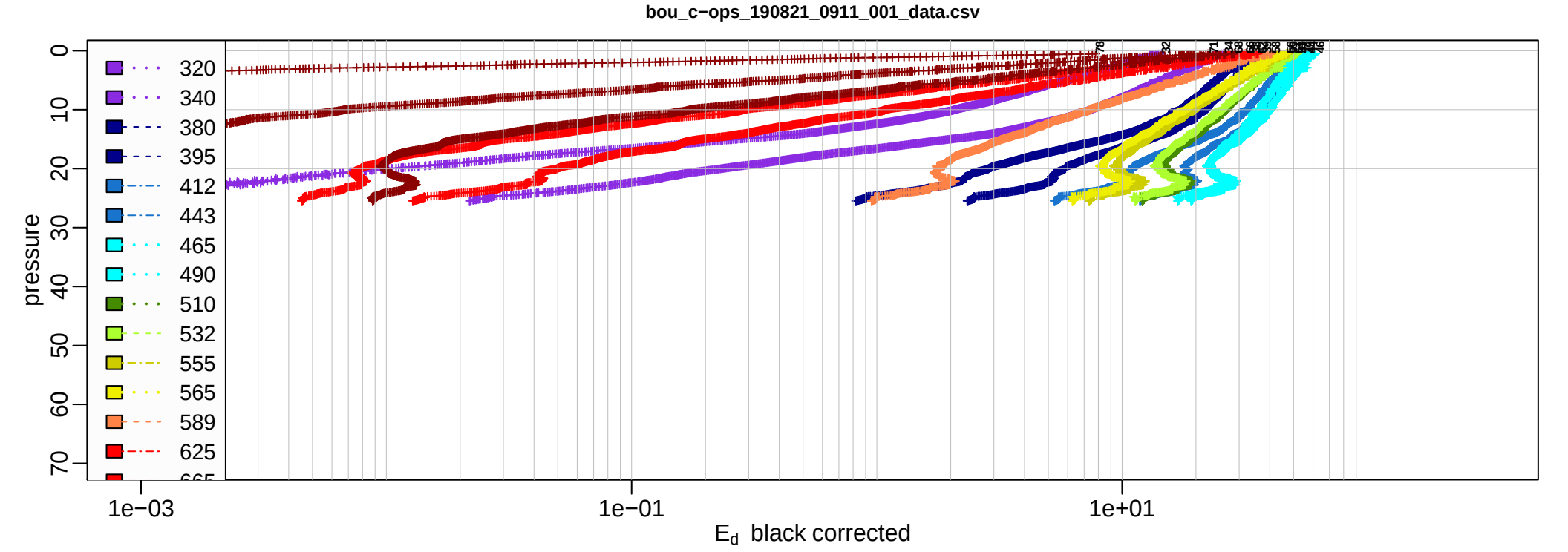

bou_c−ops_190821_0911_001_data.csv
pressure
E_s black corrected
Meas.
Th.
sun−zen. ang. = 40.5
Δ %

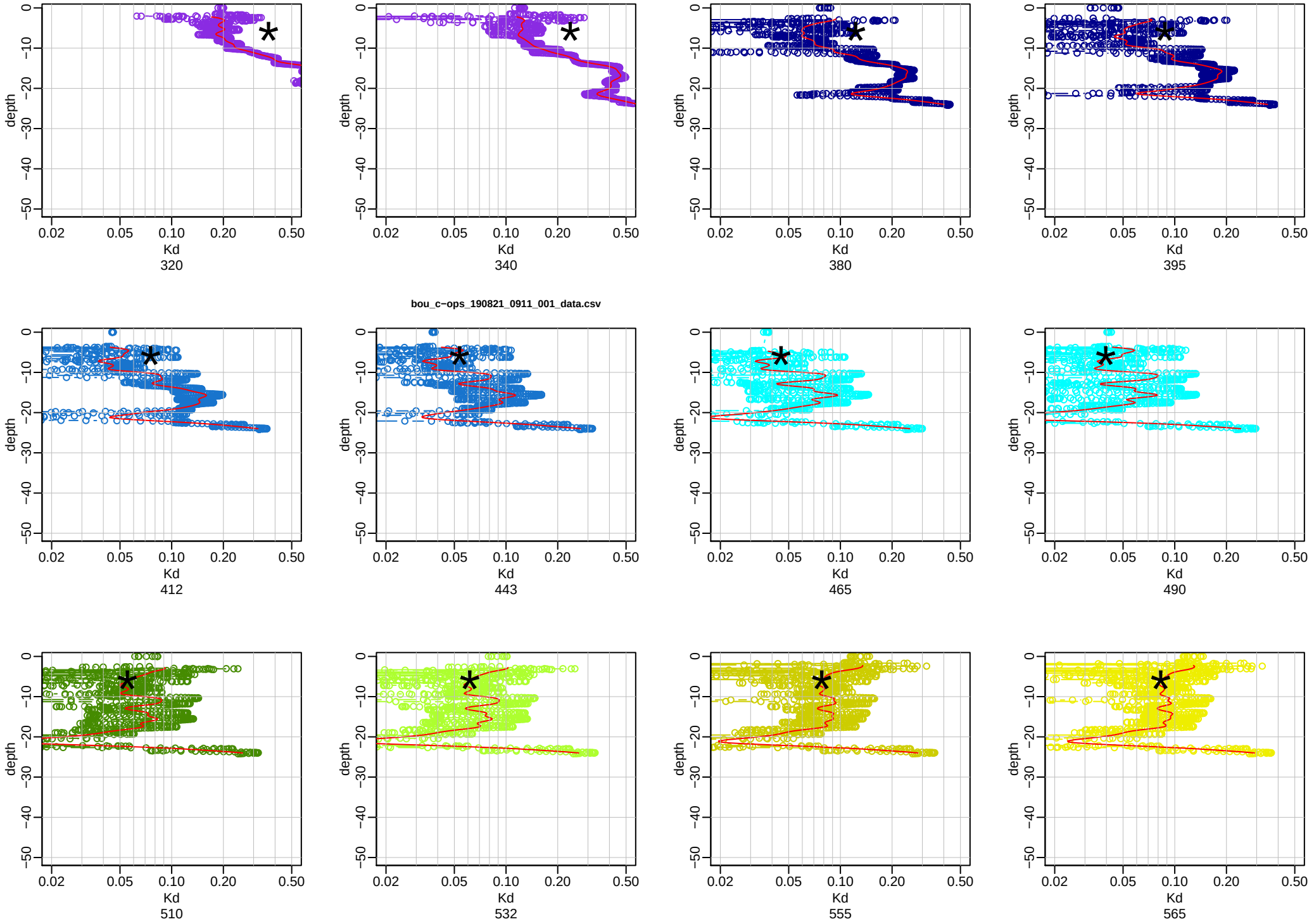

bou_c−ops_190821_0911_001_data.csv
pressure (Δz sensor corrected)
0.2
0.5
2.0
5.0
20.0
1e−04
1e−02
1e+00
E_u raw

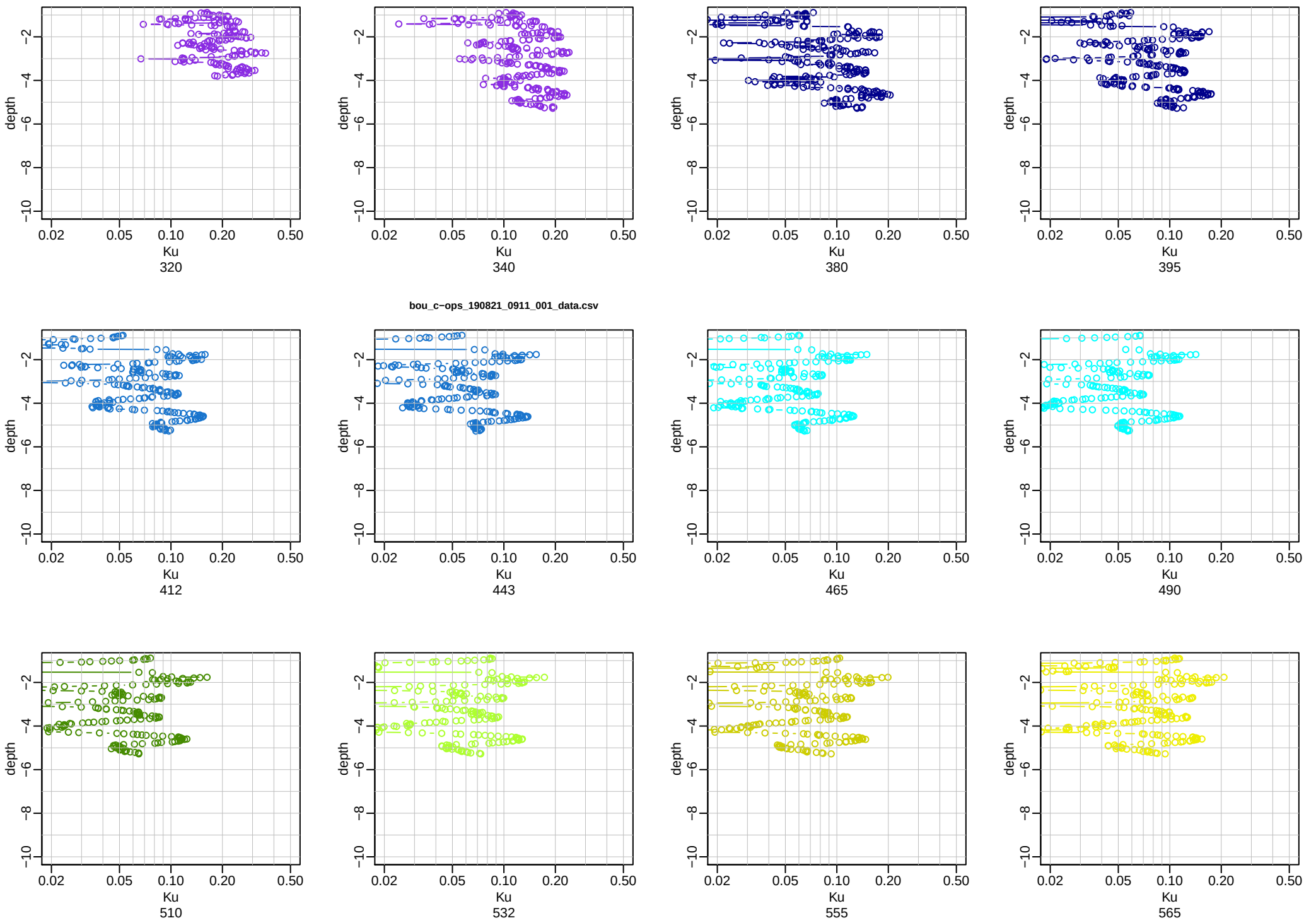

bou_c−ops_190821_0911_001_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
555
340
532
510
490
1e−04
1e−02
1e+00
E_u black corrected and filtered

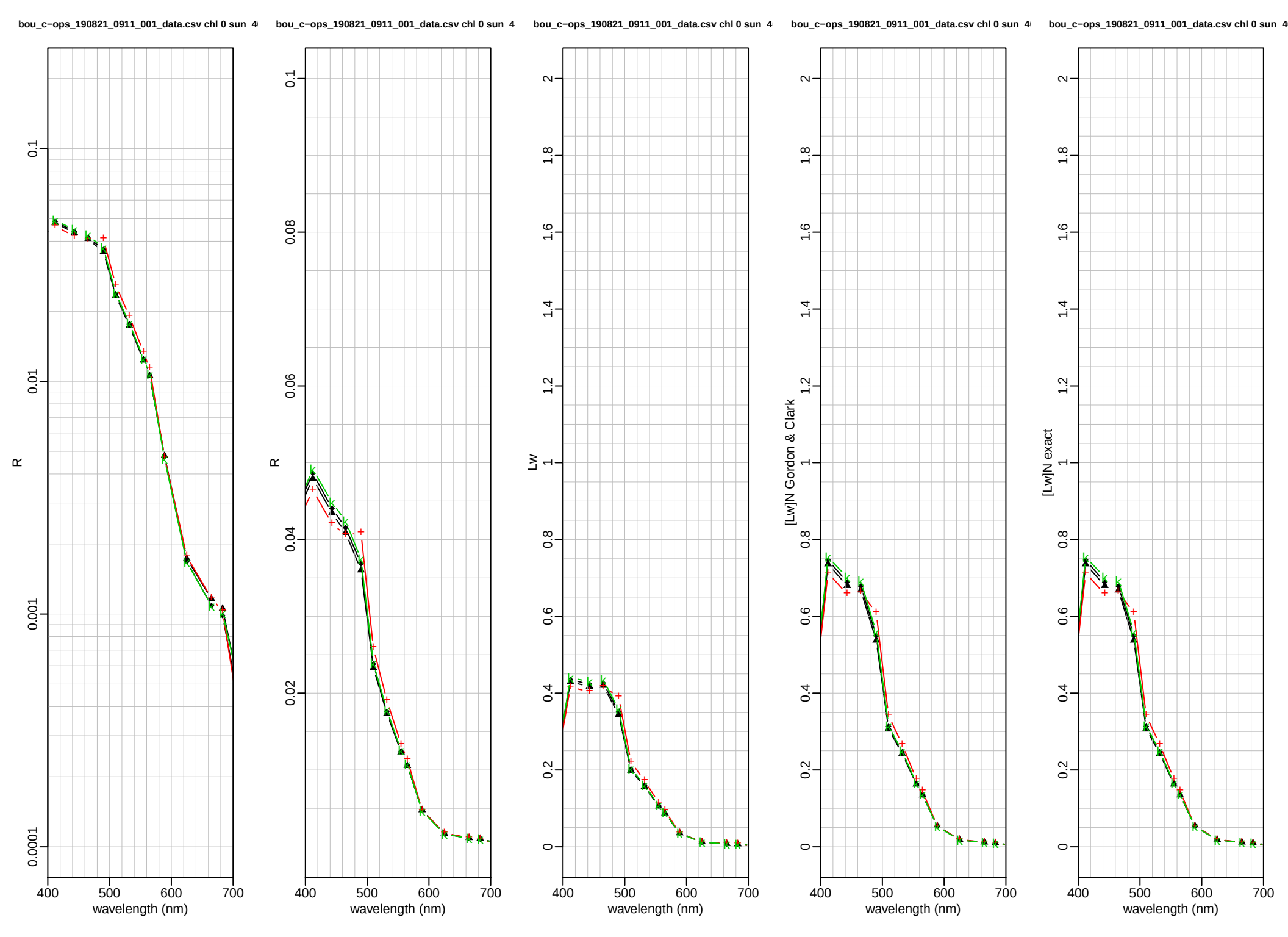

bou_c-ops_190821_0911001_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun-zen. ang. 40.5
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190821_0911_001_data.csv
pressure
1
2
5
10
20
1e−03
1e−01
1e+01
E_d raw

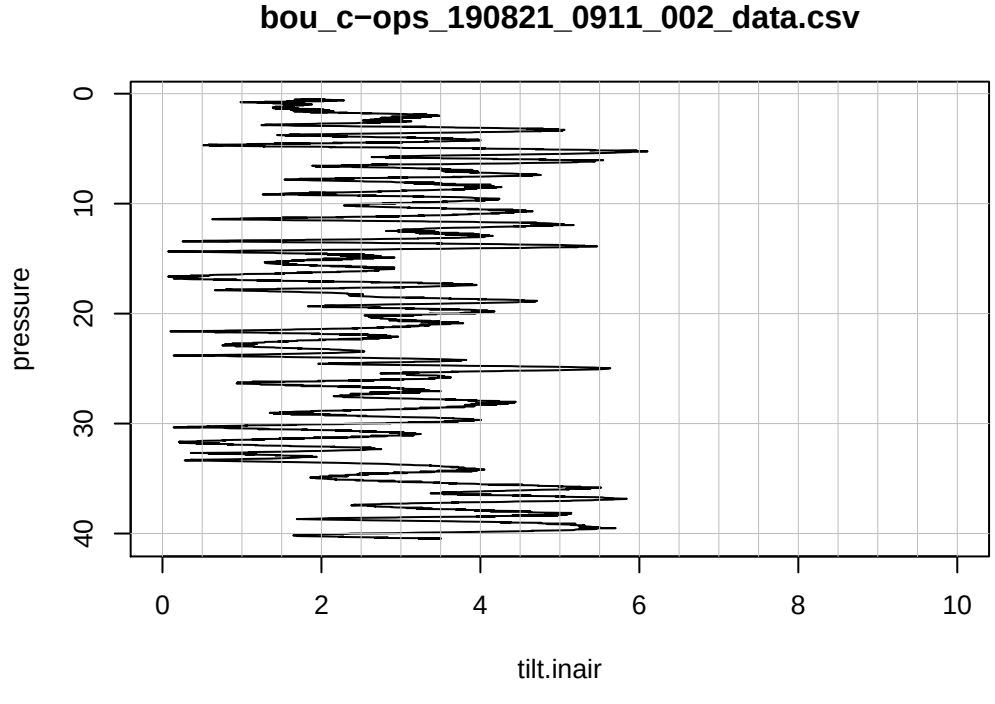

bou_c−ops_190821_0911_001_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

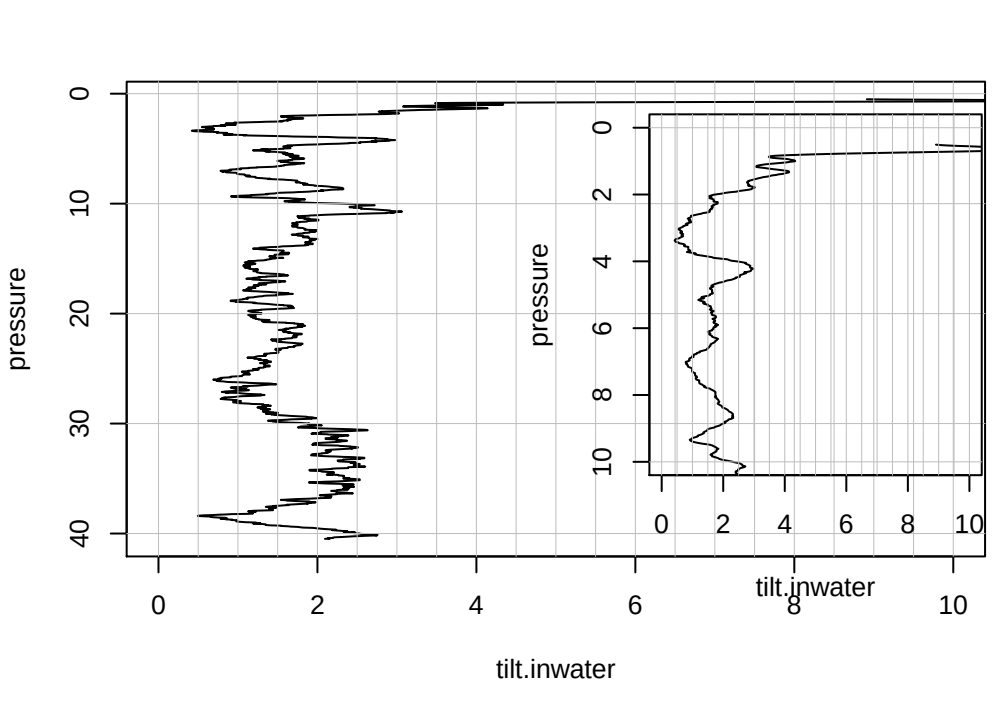

bou_c~ops_190821_0911_001_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

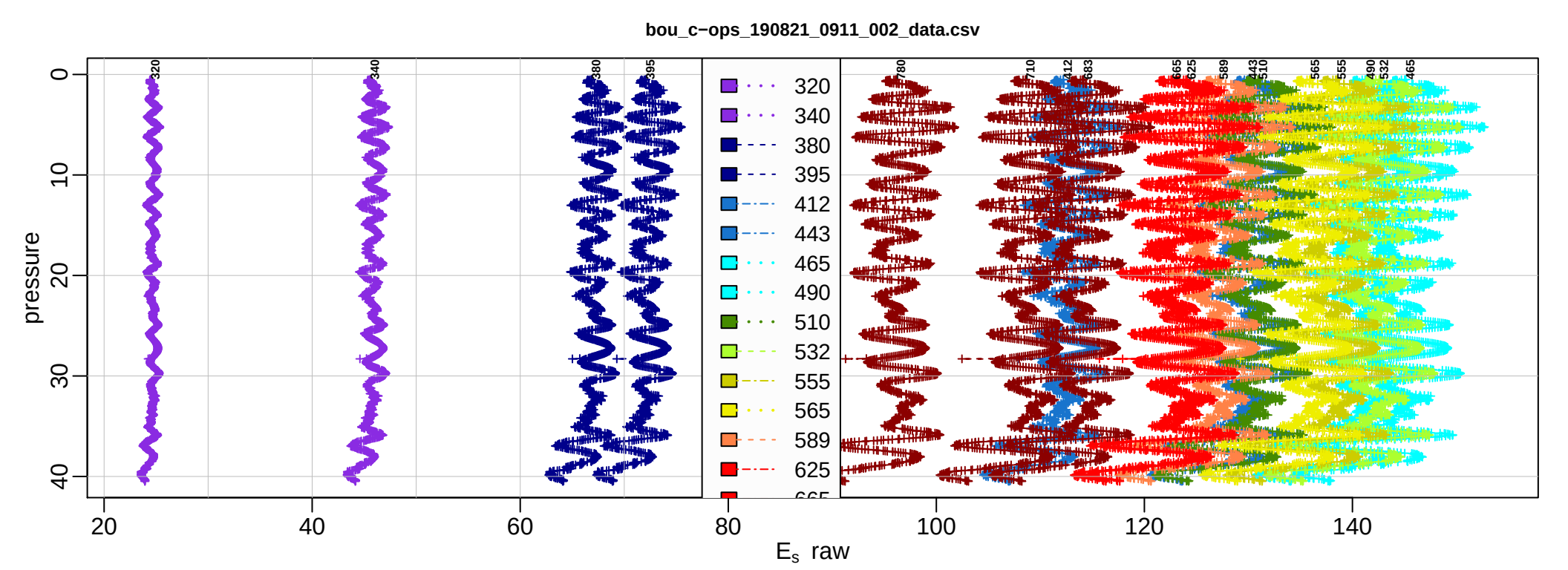

bou_c−ops_190821_0911_001_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

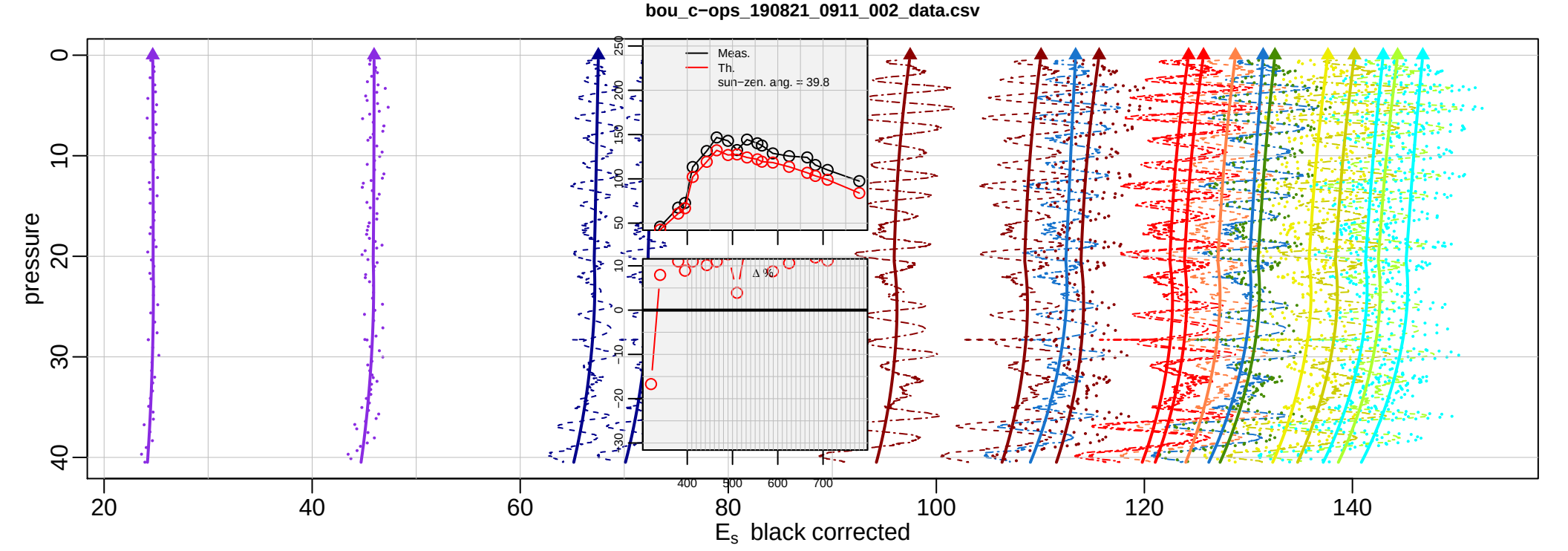

bou_c−ops_190821_0911_001_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190821_0911_001_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190821_0911_001_data.csv chl 0 sun 4
Lw
wavelength (nm)
bou_c−ops_190821_0911_001_data.csv chl 0 sun 4
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190821_0911_001_data.csv chl 0 sun 4
[Lw]N exact
wavelength (nm)

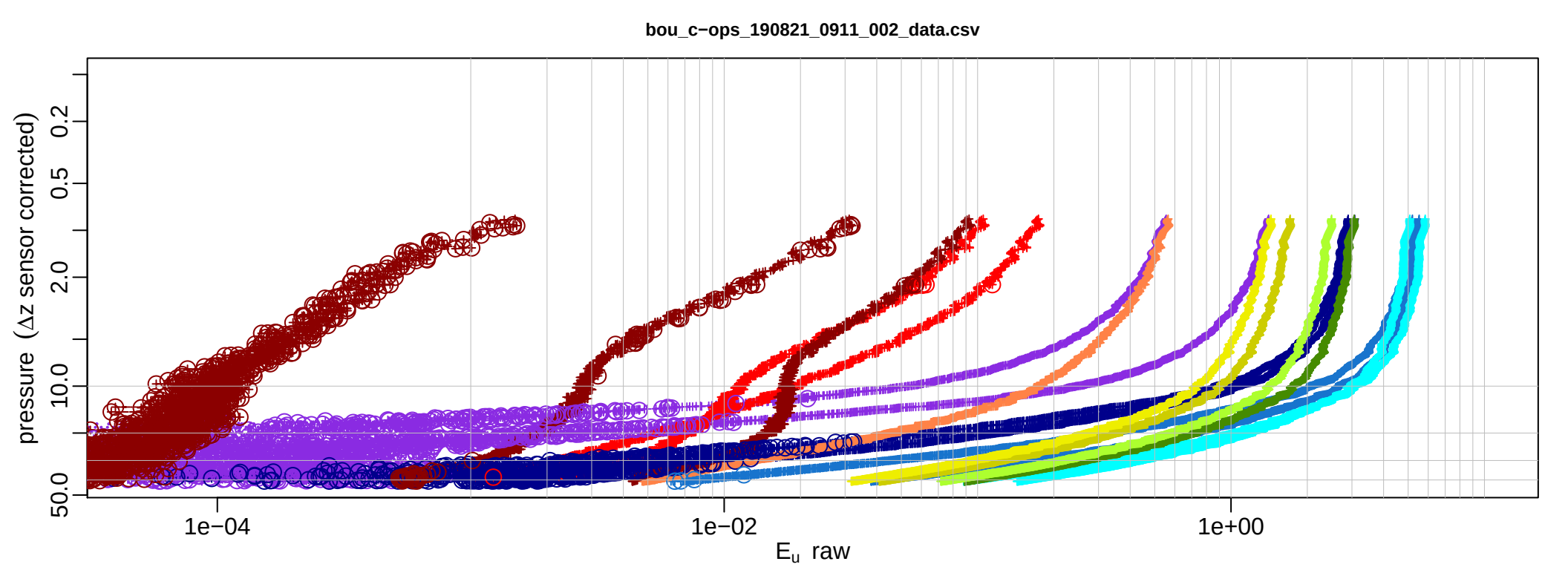
localcruise boussole211 bou_c−ops_190821_0911_002_data.csv 7.8912 43.37005 0 NA 7.8912 43.37005 1
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole211/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole211/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole211/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole211/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.8912
latitude 43.37005
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

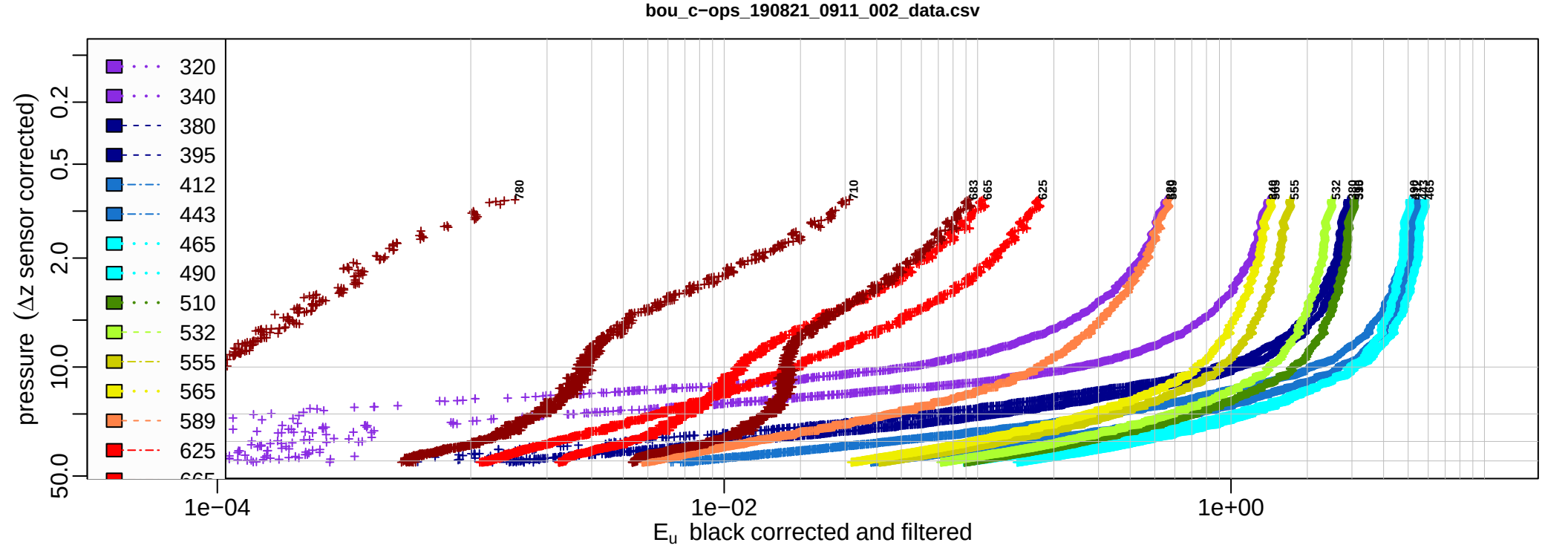


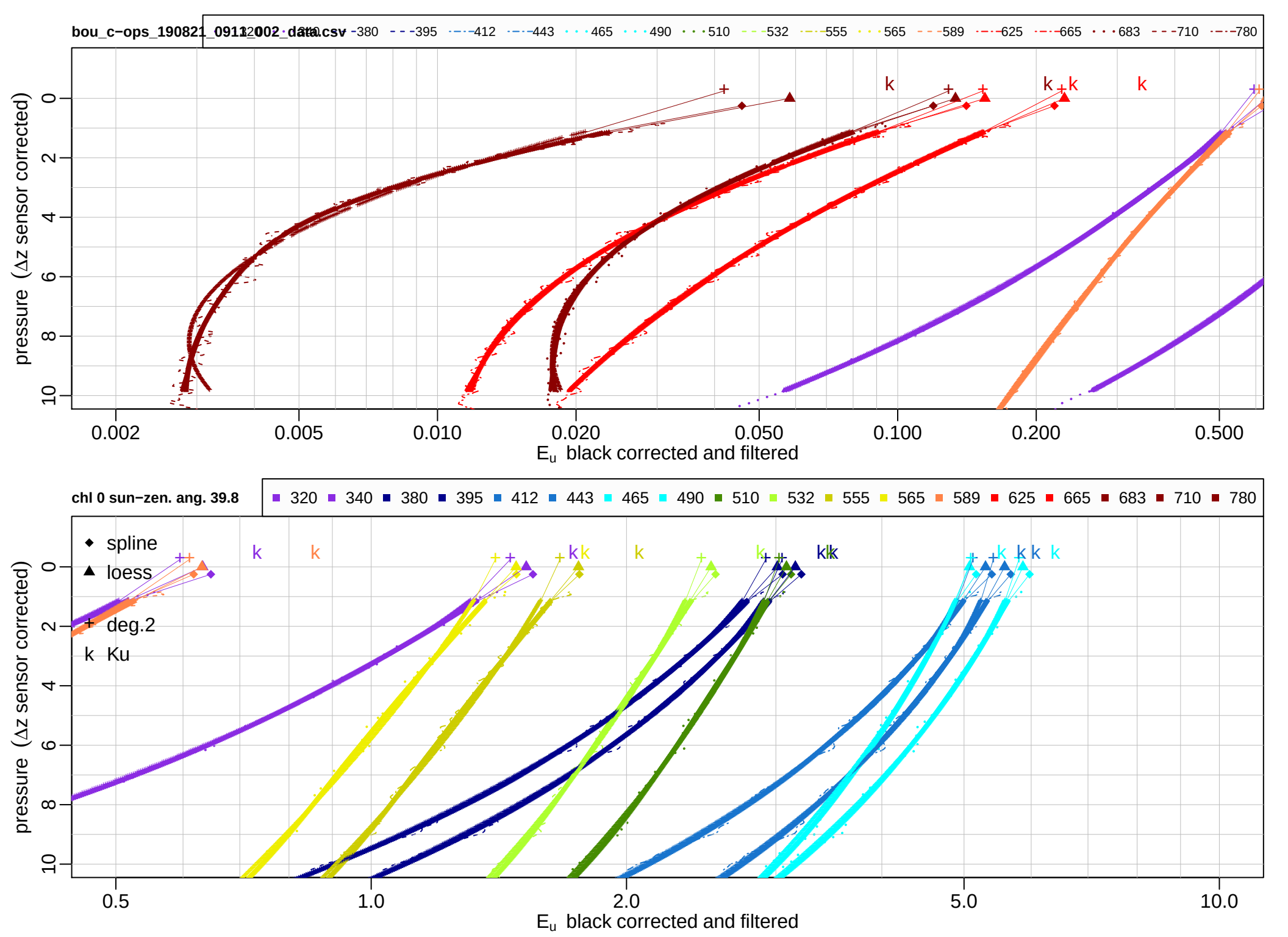


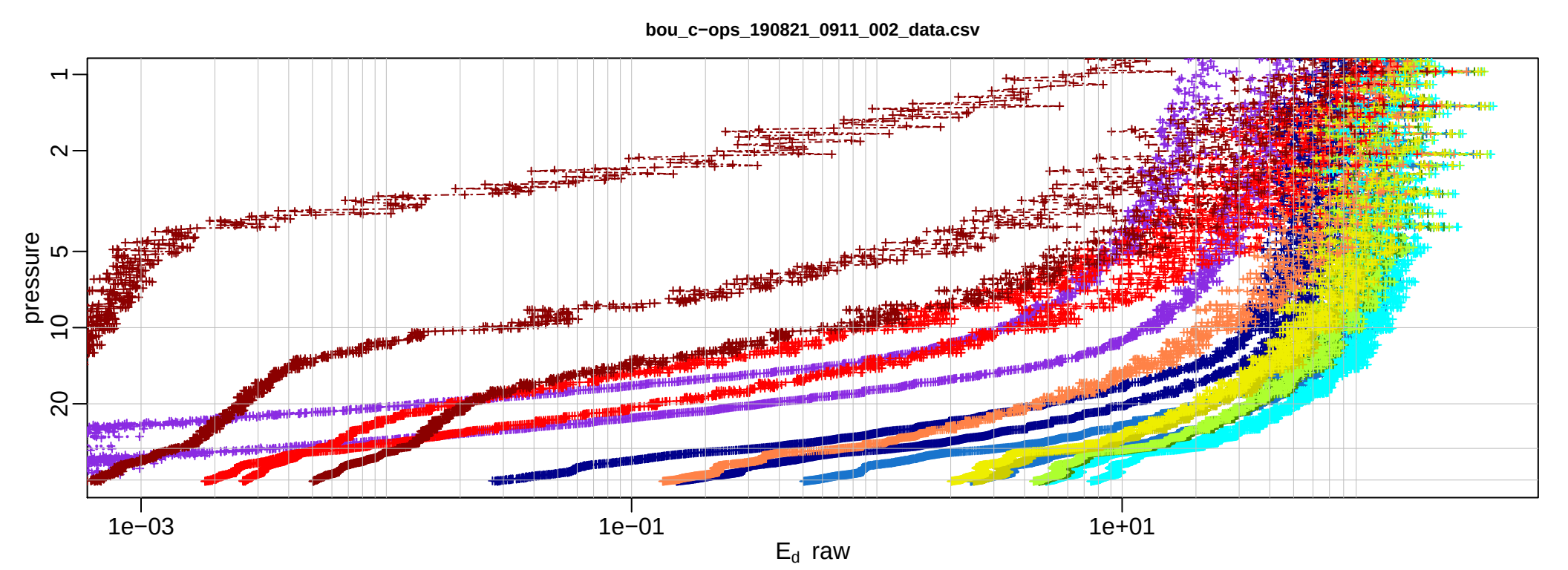

bou_c−ops_190821_0911_002_data.csv
pressure
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

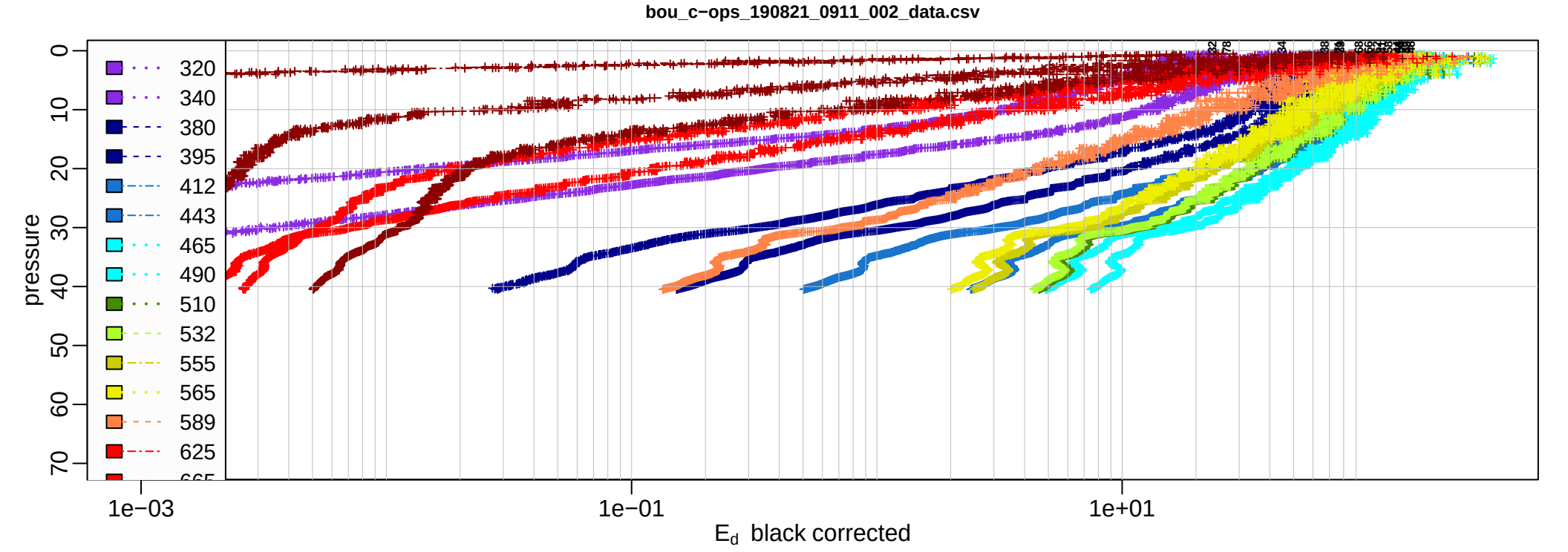

bou_c−ops_190821_0911_002_data.csv
pressure
E_s black corrected
Meas.
Th.
sun−zen. ang. = 39.8
Δ %

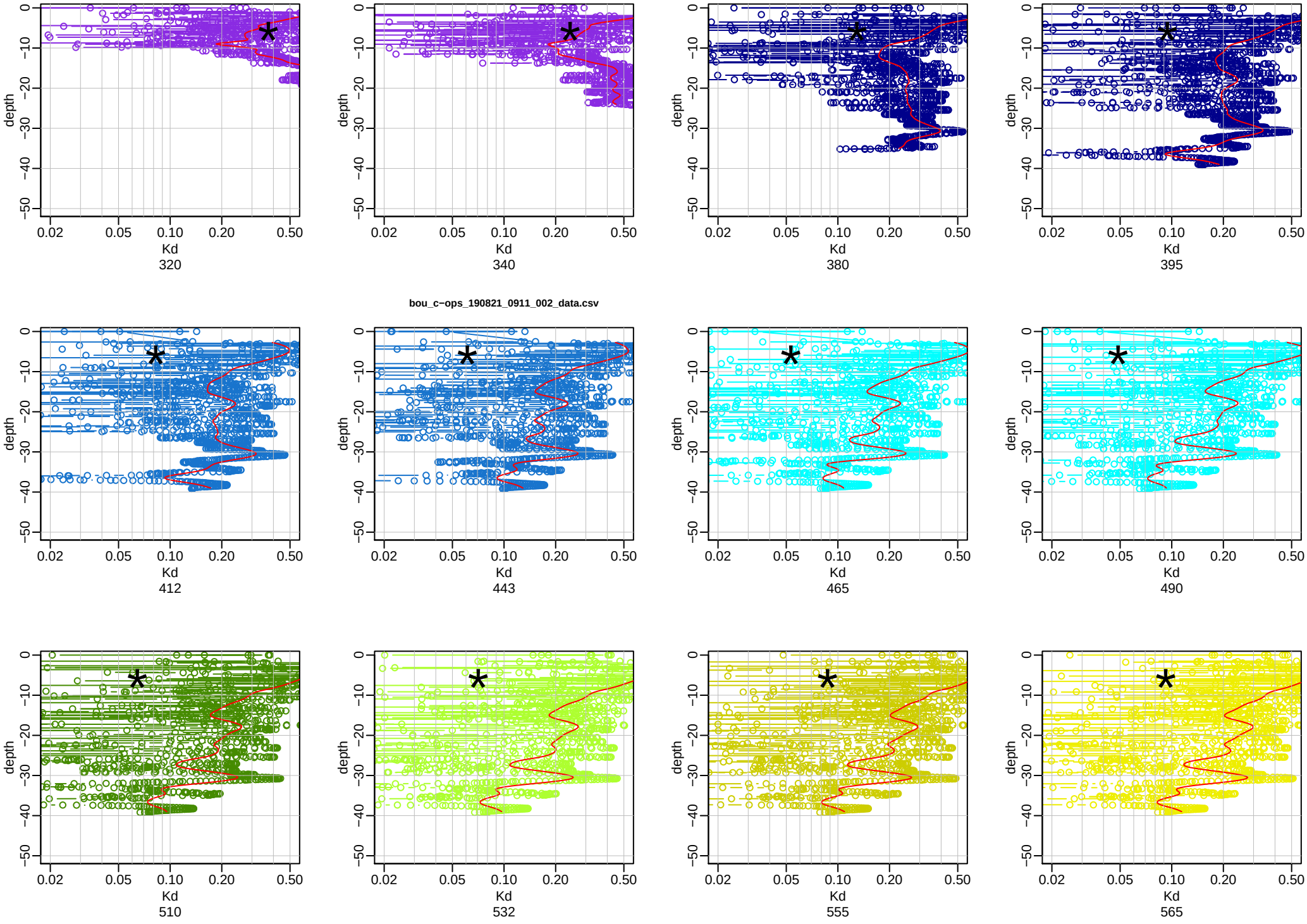

bou_c−ops_190821_0911_002_data.csv
pressure (Δz sensor corrected)
50.0
10.0
2.0
0.5
0.2
1e−04
1e−02
1e+00
E_u raw

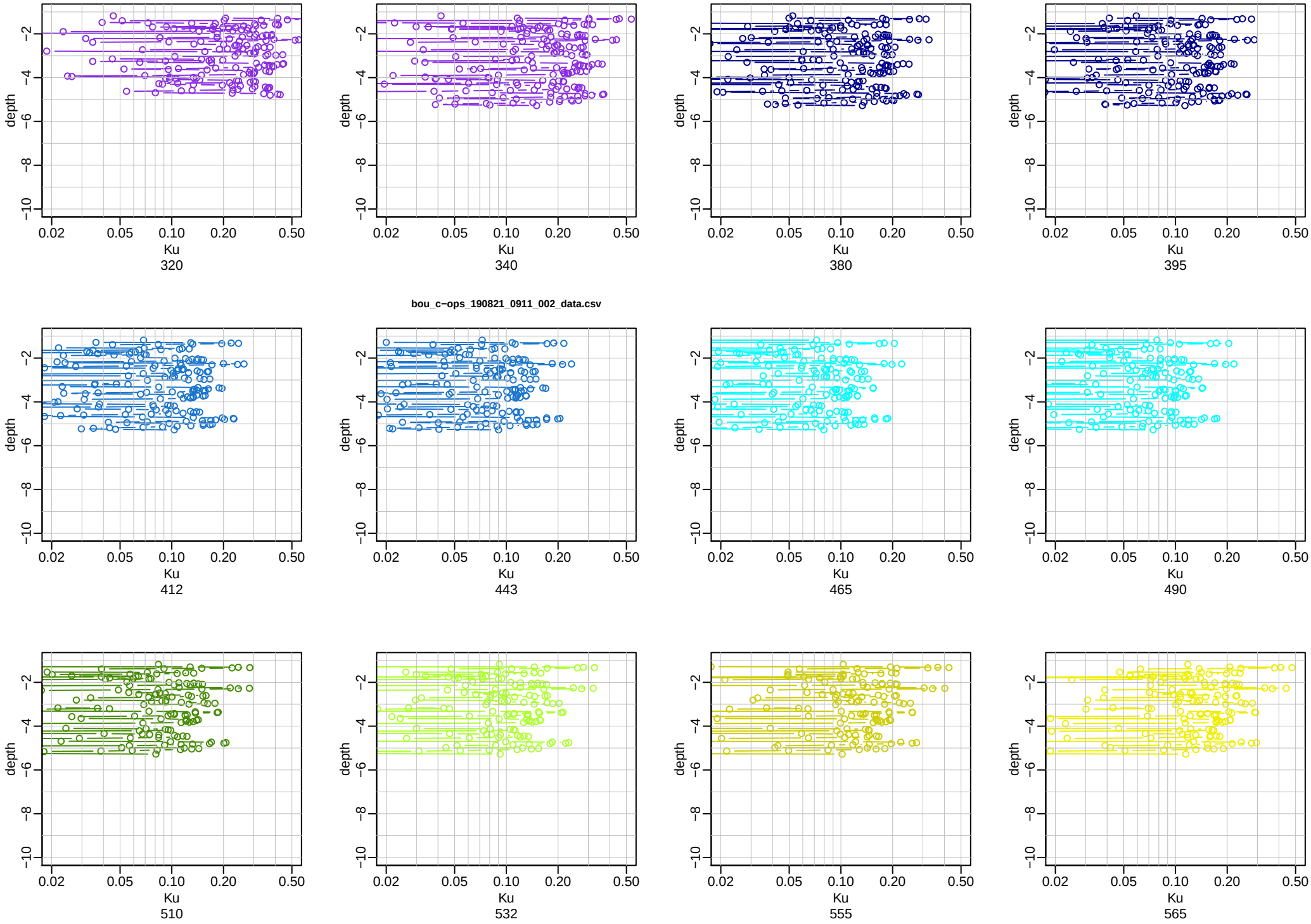

bou_c−ops_190821_0911_002_data.csv
pressure (Δz sensor corrected)
50.0
10.0
2.0
0.5
0.2
320
340
380
395
412
443
465
490
510
532
555
565
589
625
665
780
710
683
665
625
555
532
1e−04
1e−02
1e+00
E_u black corrected and filtered

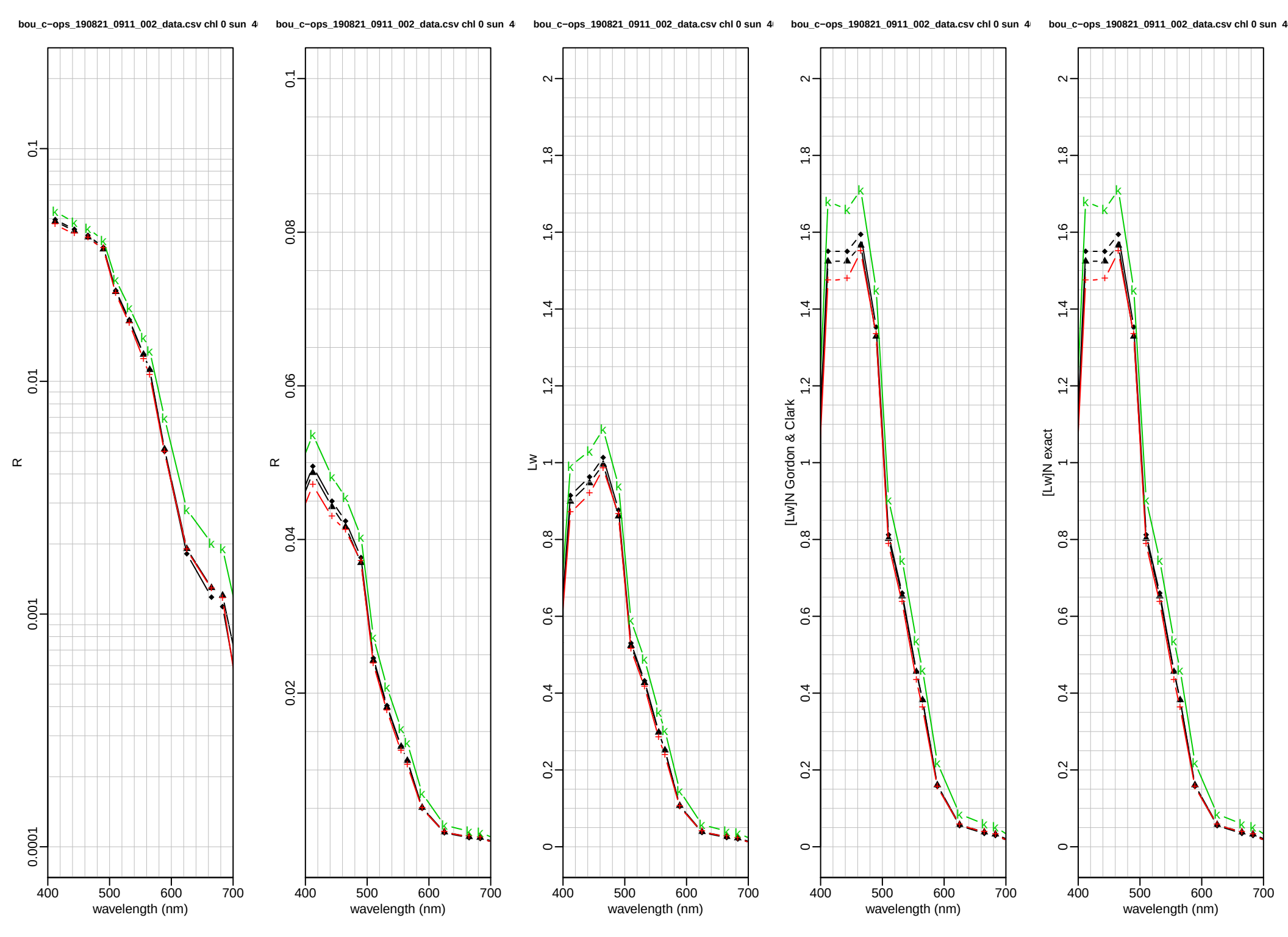

bou_c-ops_190821_091002_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun-zen. ang. 39.8
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
k Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190821_0911_002_data.csv
pressure
1
2
5
10
20
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190821_0911_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

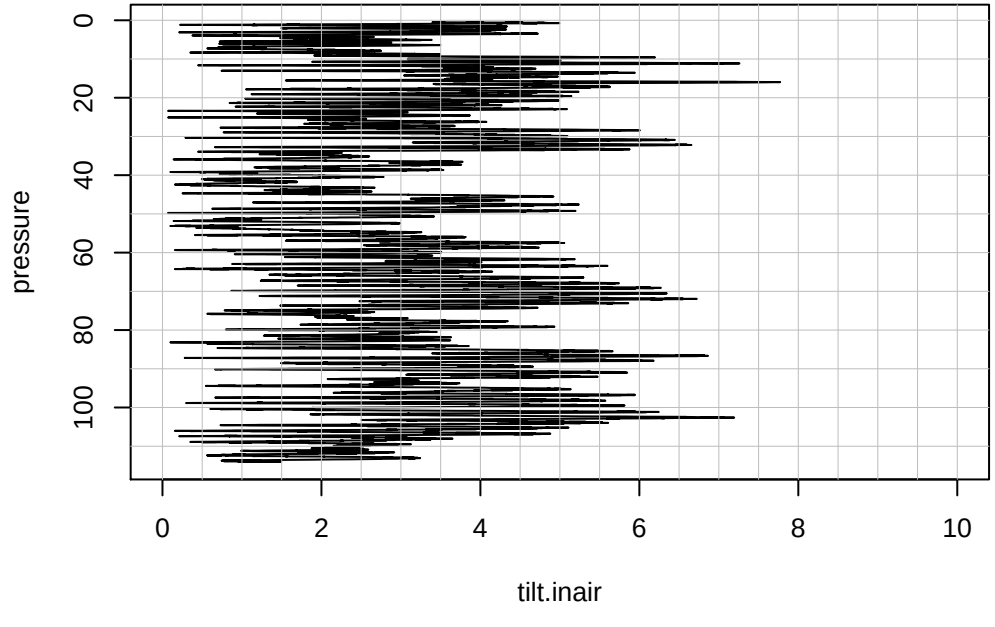

bou_c~ops_190821_0911_002_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

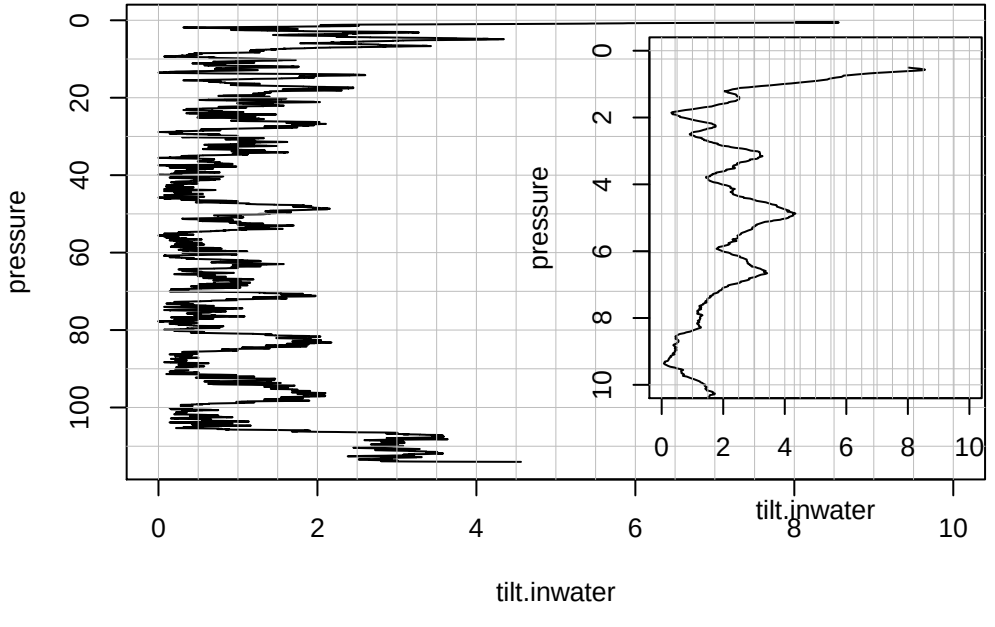

bou_c~ops_190821_0911_002_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

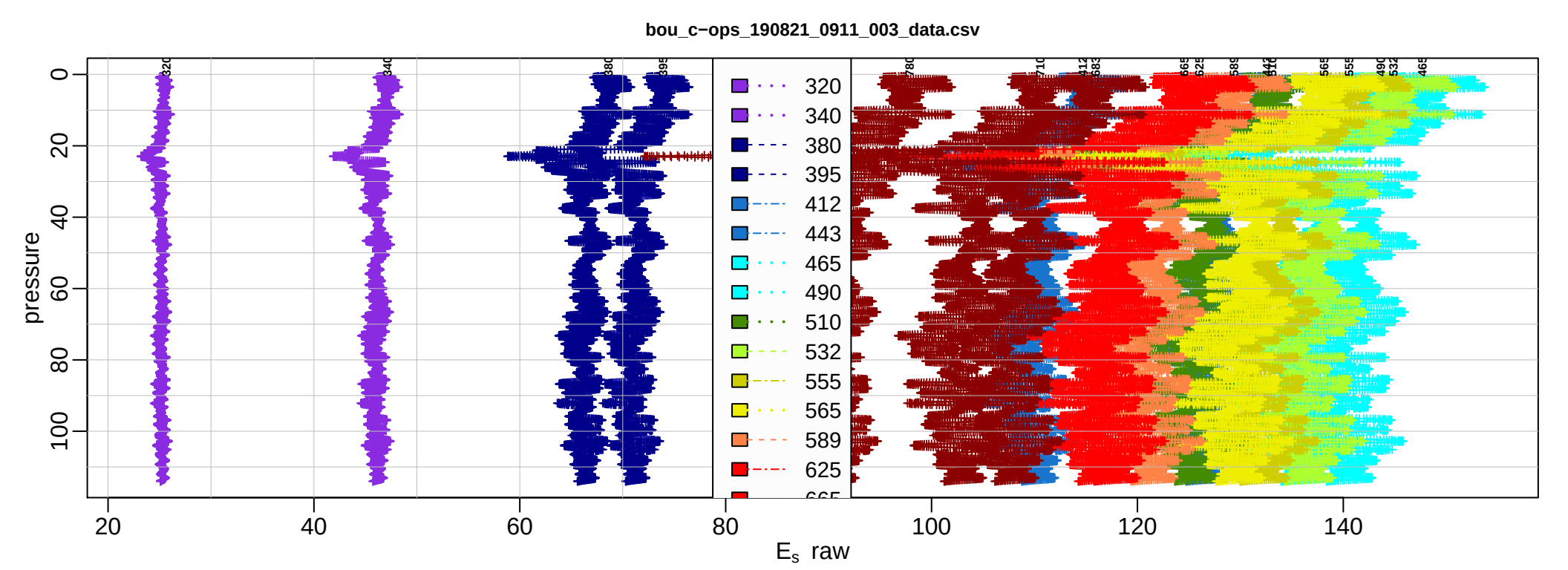

bou_c−ops_190821_0911_002_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190821_0911_002_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190821_0911_002_data.csv chl 0 sun 4
Lw
wavelength (nm)
bou_c−ops_190821_0911_002_data.csv chl 0 sun 4
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190821_0911_002_data.csv chl 0 sun 4
[Lw]N exact
wavelength (nm)

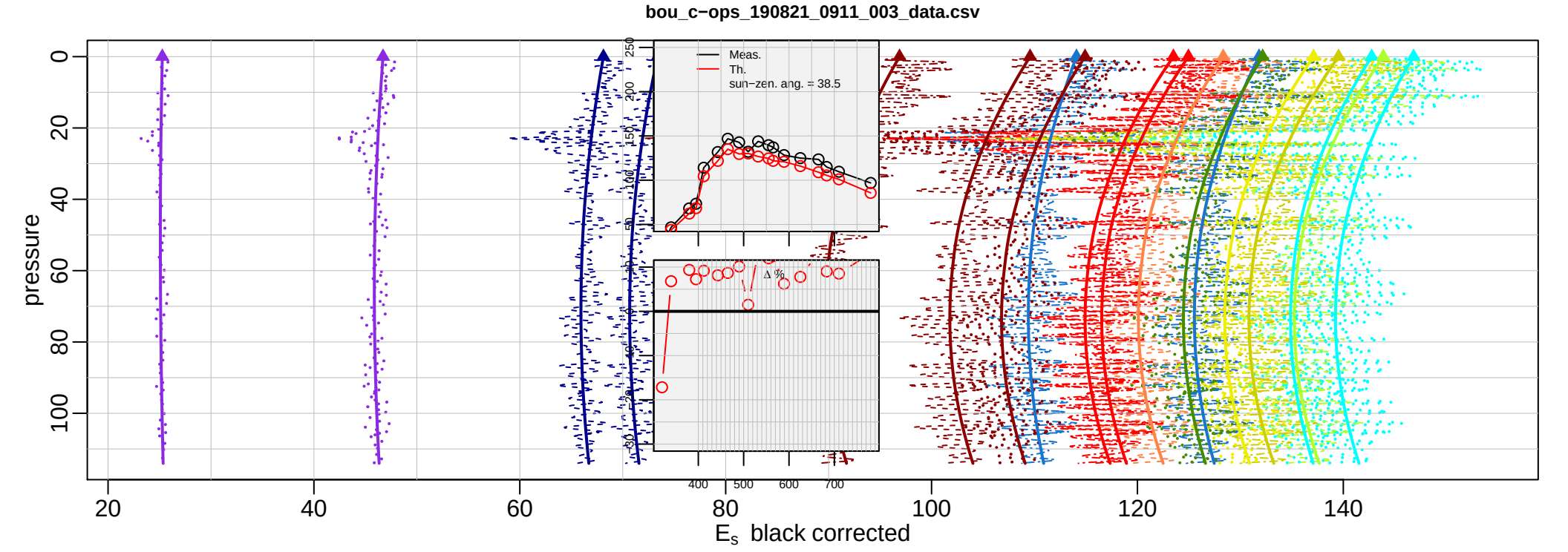
localcruise boussole211 bou_c−ops_190821_0911_003_data.csv 7.8867 43.3709 0 NA 7.8867 43.3709 1
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole211/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole211/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole211/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole211/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.8867
latitude 43.3709
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

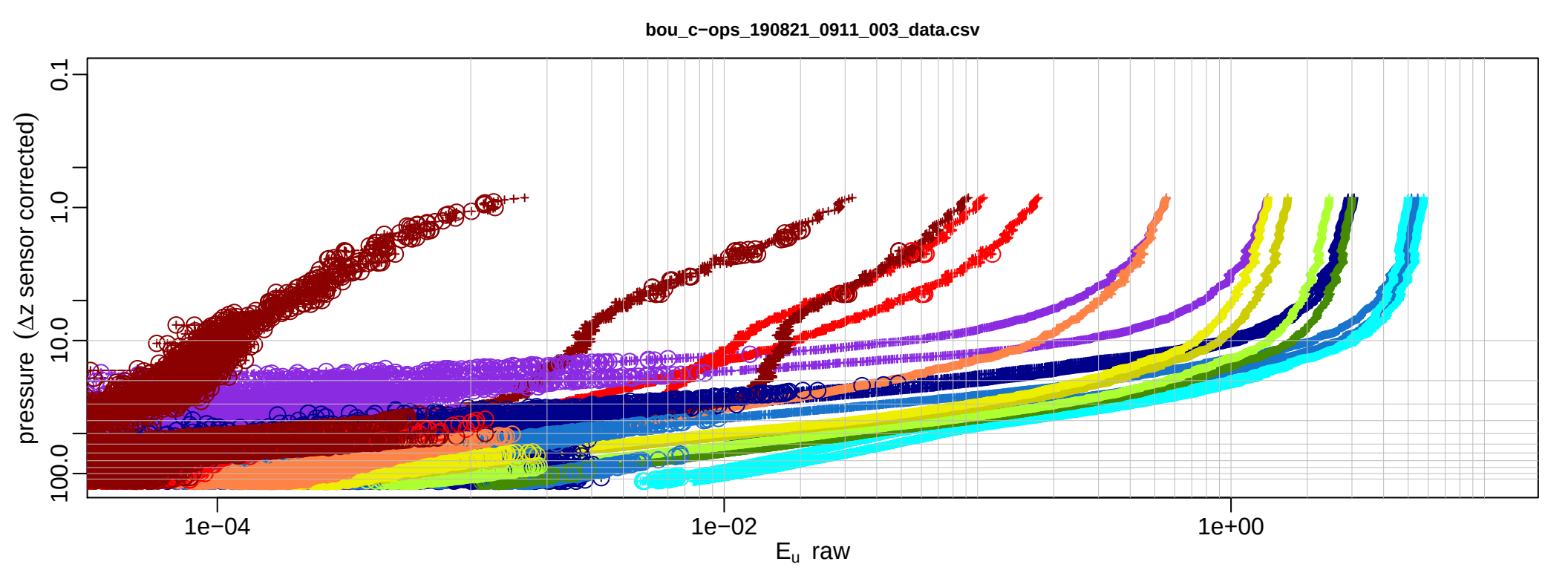
bou_c−ops_190821_0911_003_data.csv

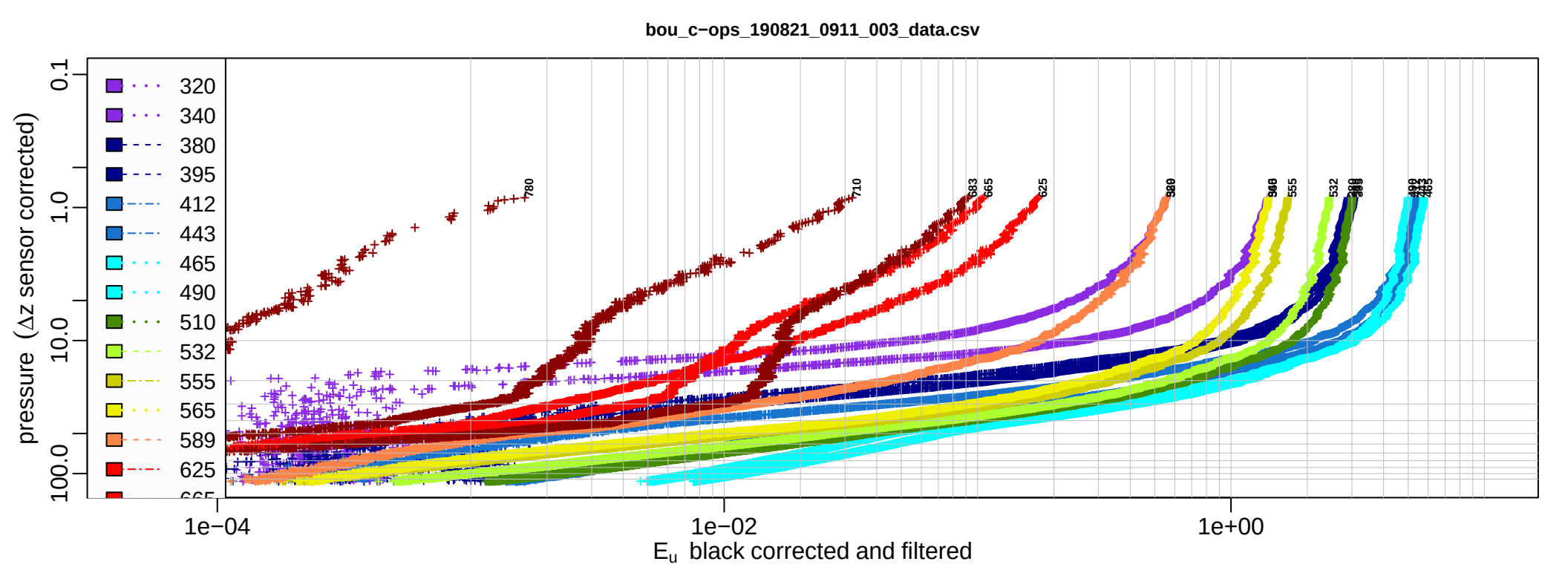


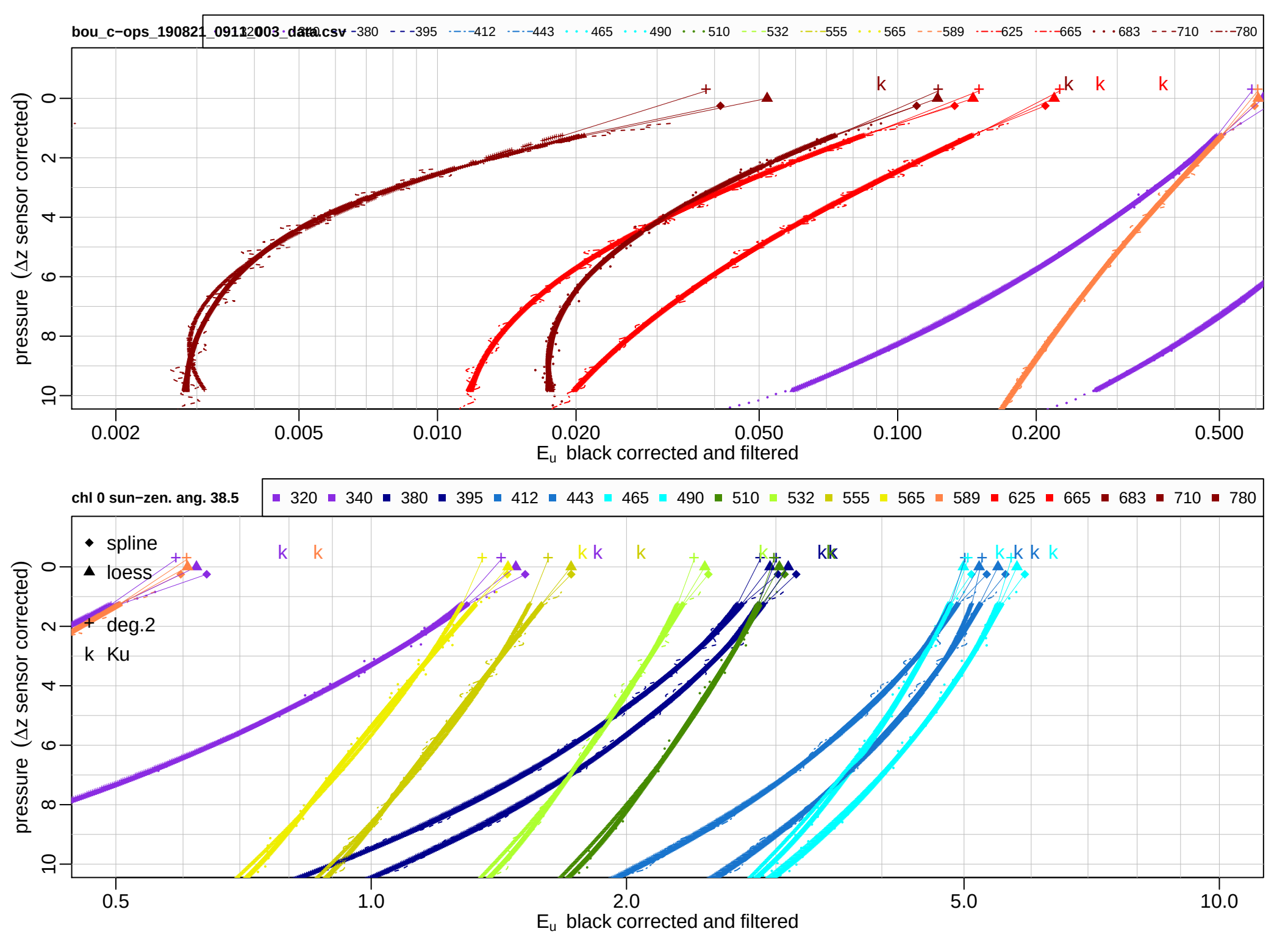


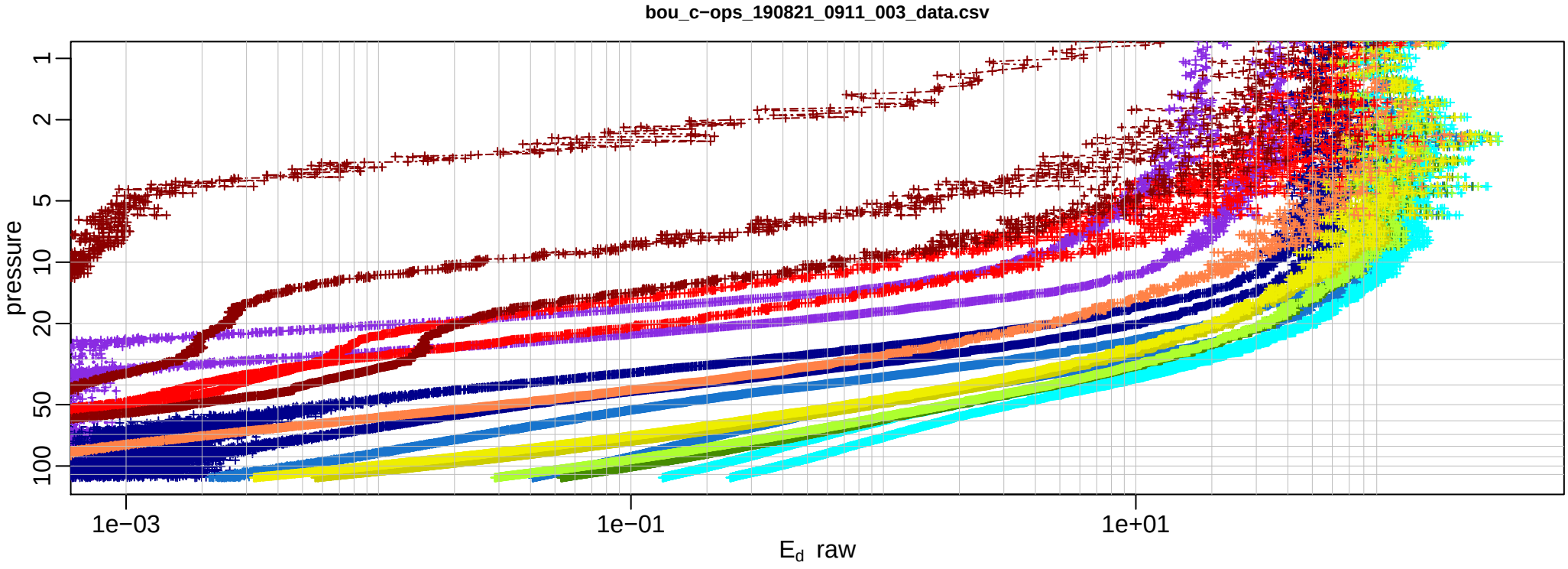

bou_c−ops_190821_0911_003_data.csv
pressure
0
20
40
60
80
100
20
40
60
80
100
120
140
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

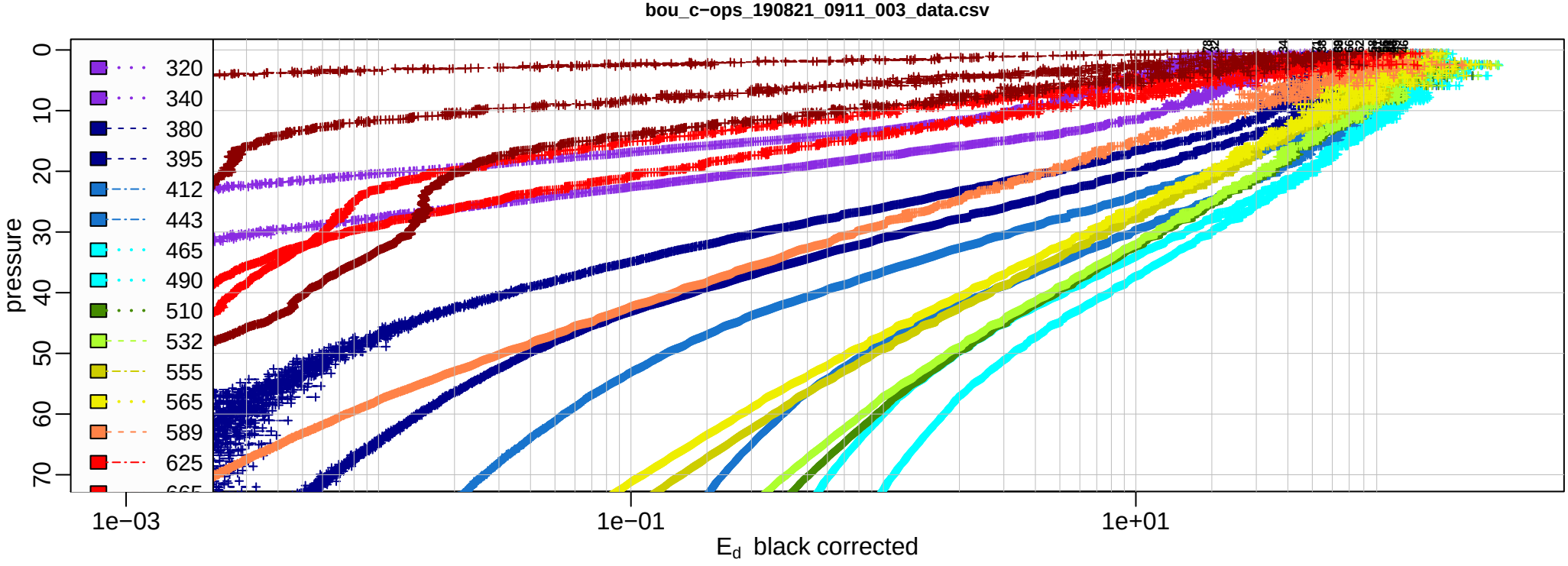

bou_c−ops_190821_0911_003_data.csv
pressure
0
20
40
60
80
100
20
40
60
80
100
120
140
E_s black corrected
Meas.
Th.
sun−zen. ang. = 38.5
Δ %
250
200
150
100
50
30
400
500
600
700

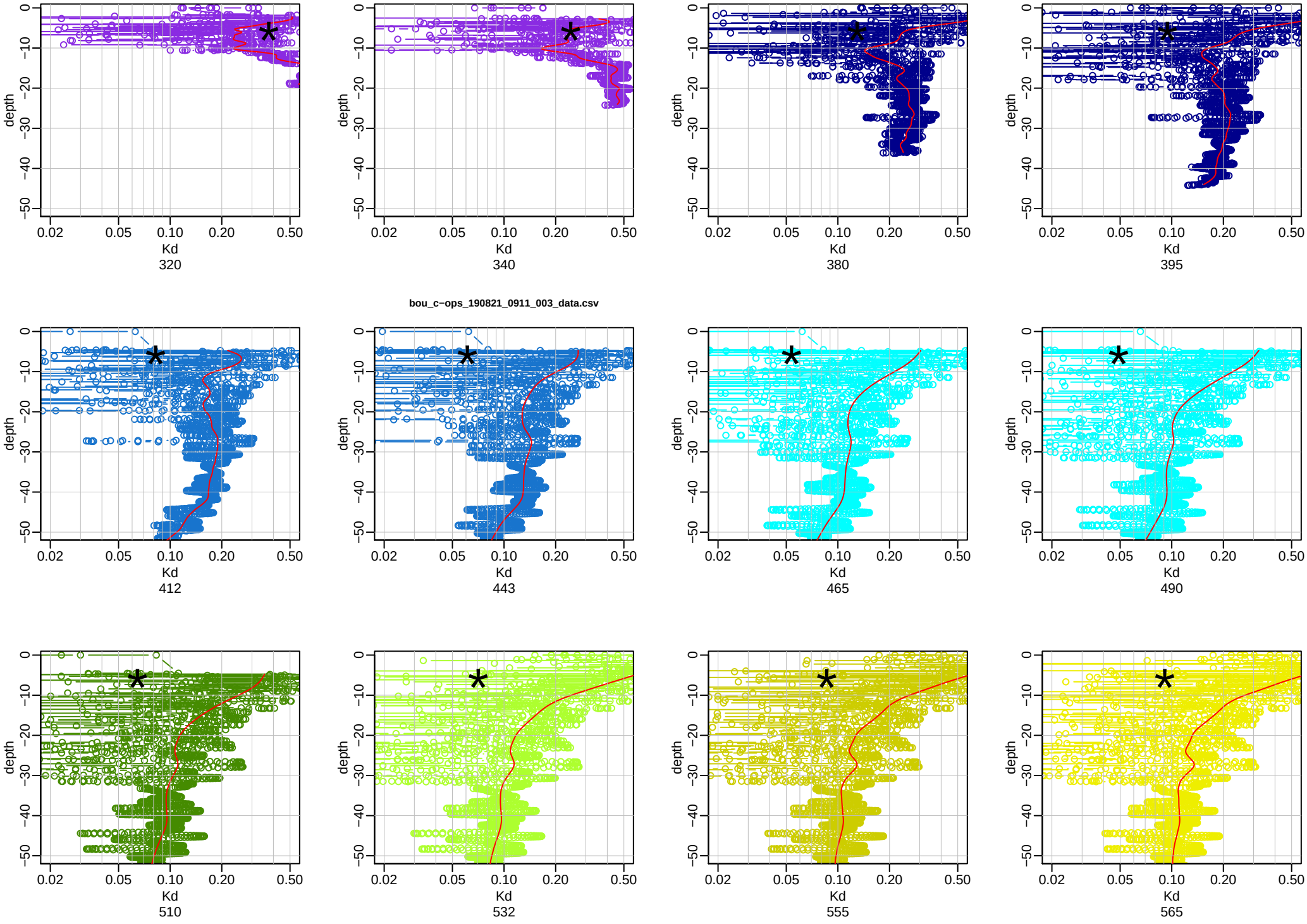

bou_c−ops_190821_0911_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

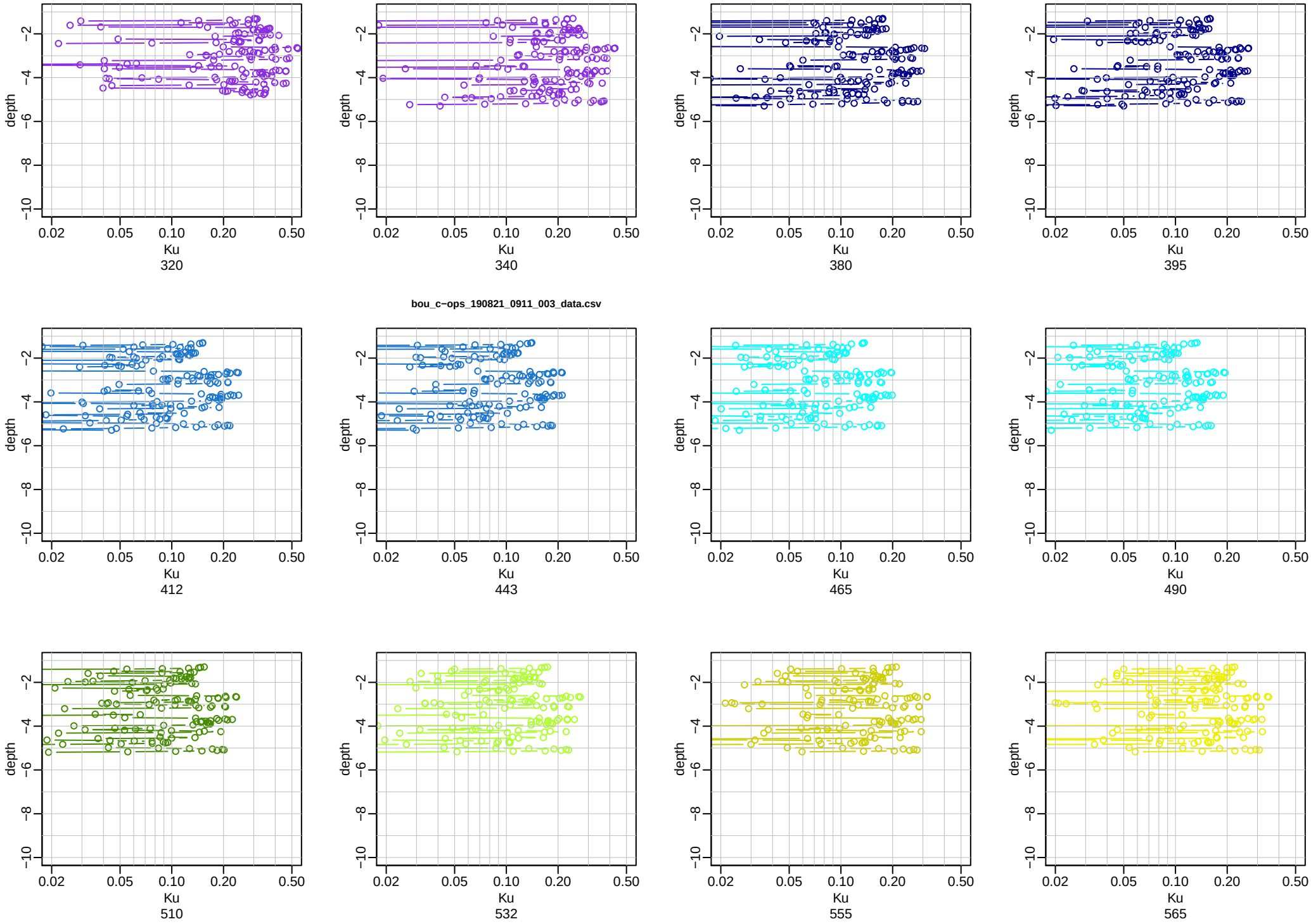

bou_c−ops_190821_0911_003_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
555
532
1e−04
1e−02
1e+00
E_u black corrected and filtered

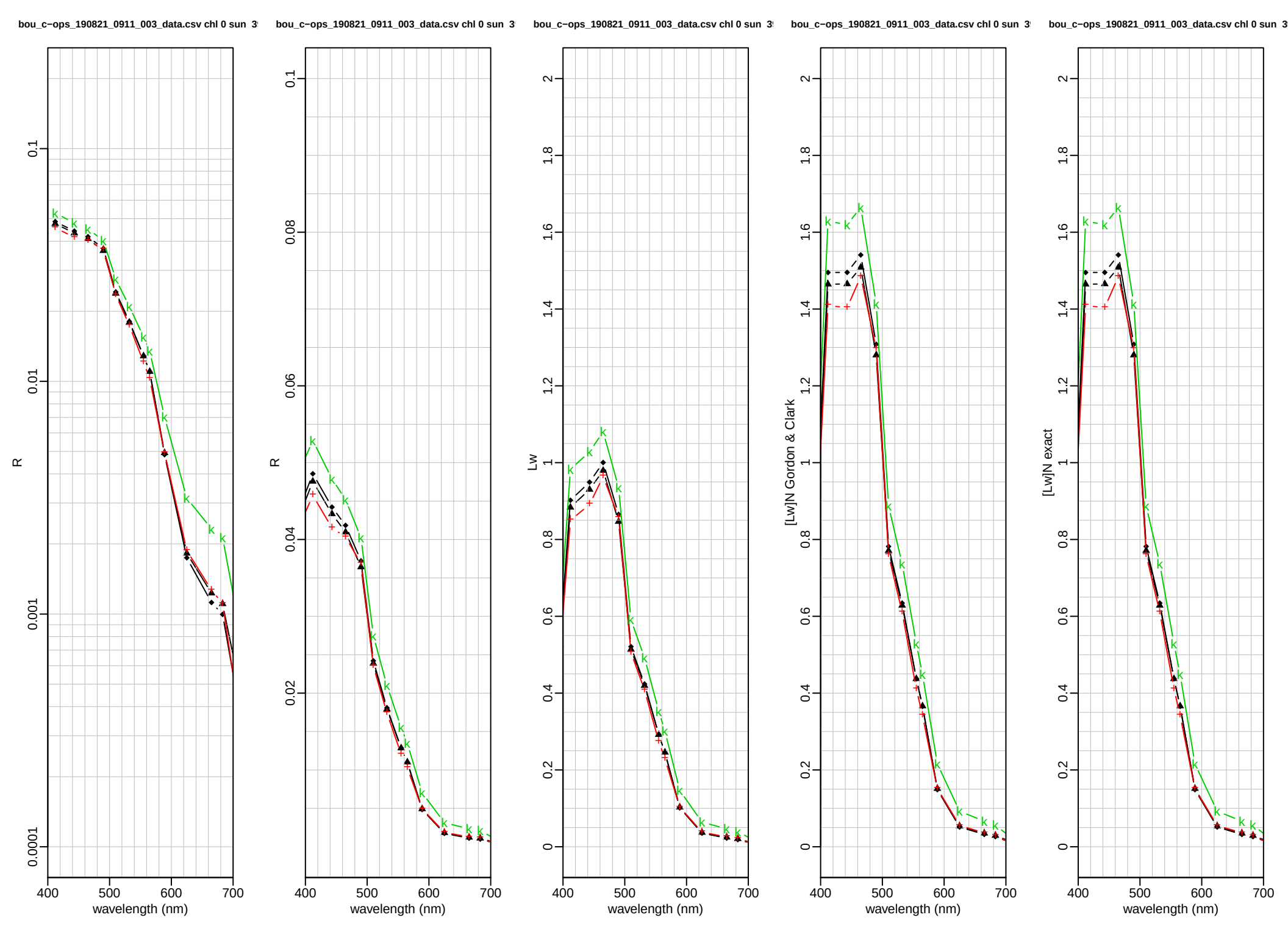

bou_c-ops_190821_091003_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun-zen. ang. 38.5
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190821_0911_003_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190821_0911_003_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

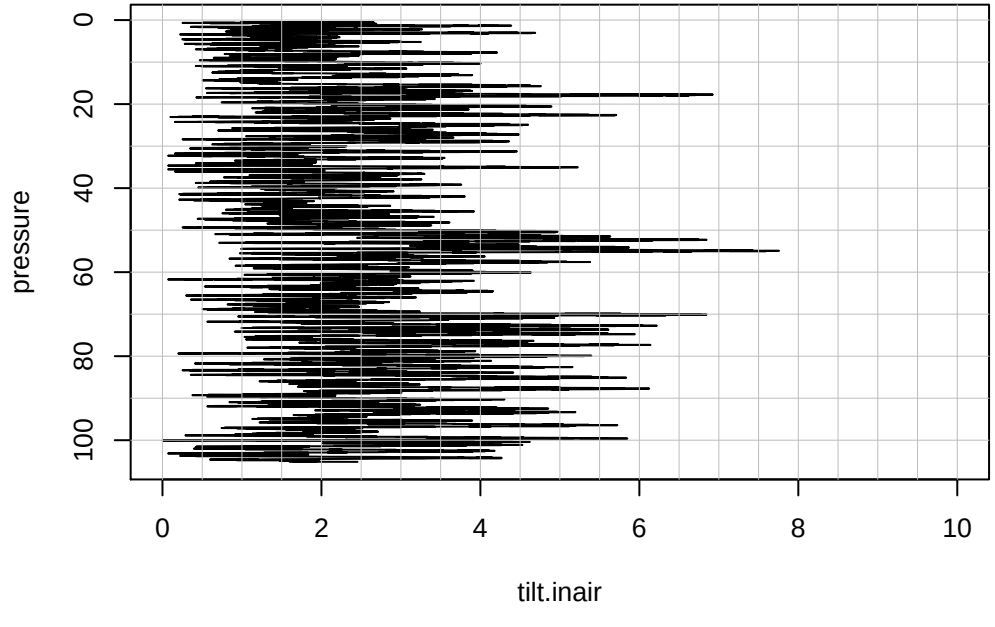

bou_c~ops_190821_0911_003_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

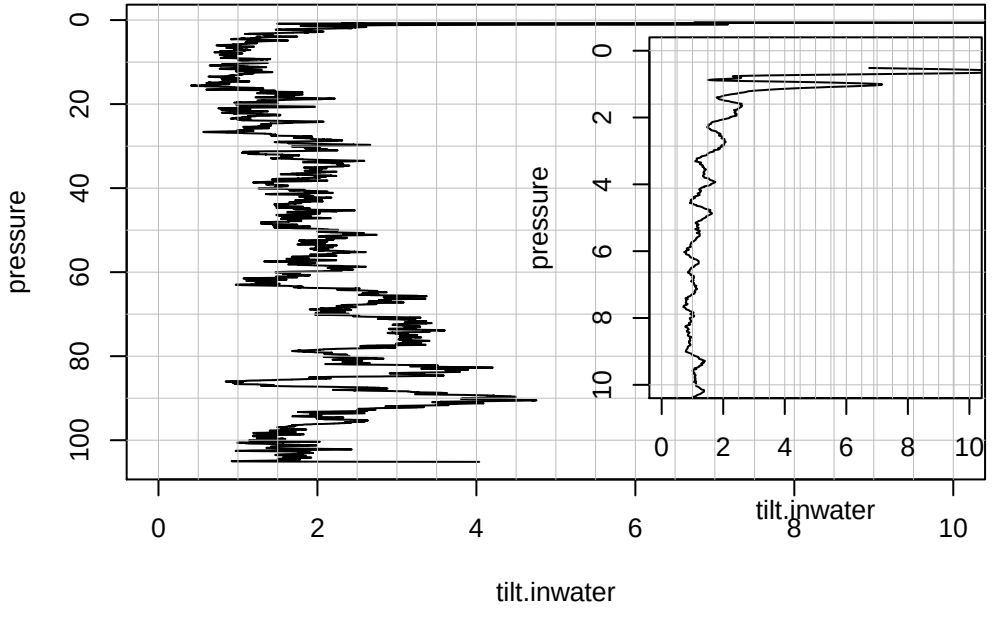

bou_c~ops_190821_0911_003_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

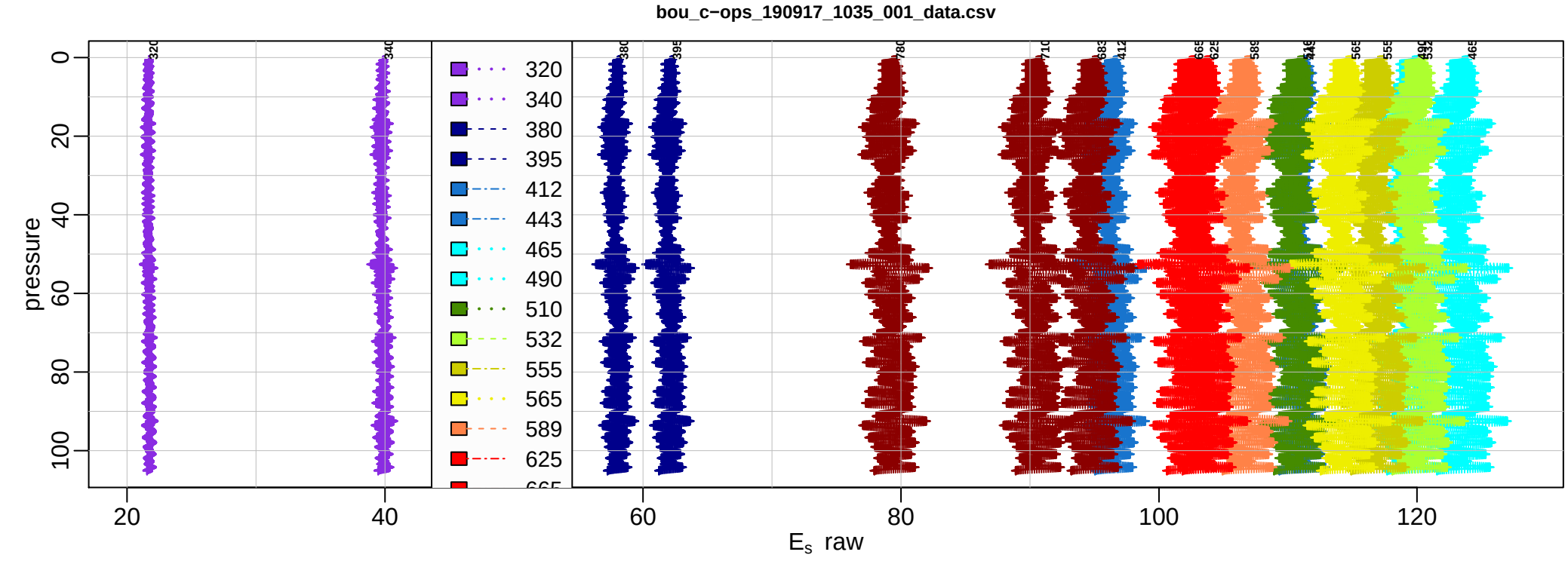

bou_c−ops_190821_0911_003_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190821_0911_003_data.csv chl 0 sun 3
R
wavelength (nm)
bou_c−ops_190821_0911_003_data.csv chl 0 sun 3
Lw
wavelength (nm)
bou_c−ops_190821_0911_003_data.csv chl 0 sun 3
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190821_0911_003_data.csv chl 0 sun 3
[Lw]N exact
wavelength (nm)

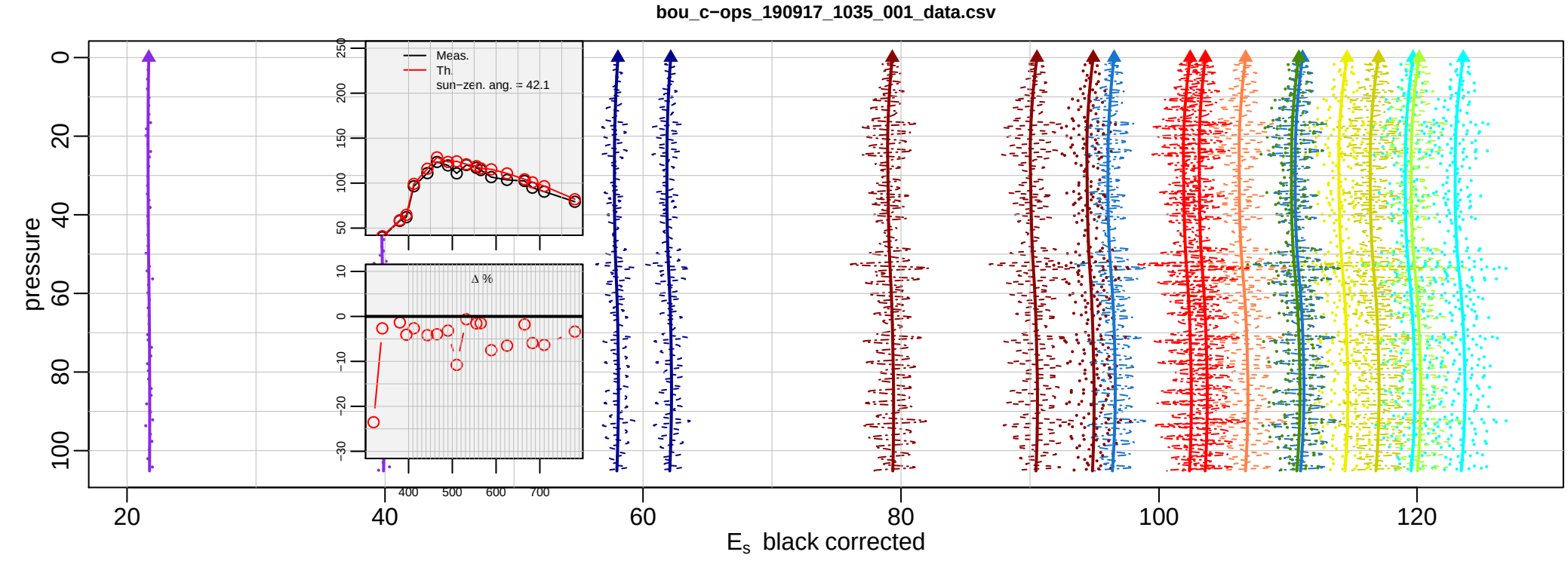
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole212/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole212/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89908
latitude 43.37145
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

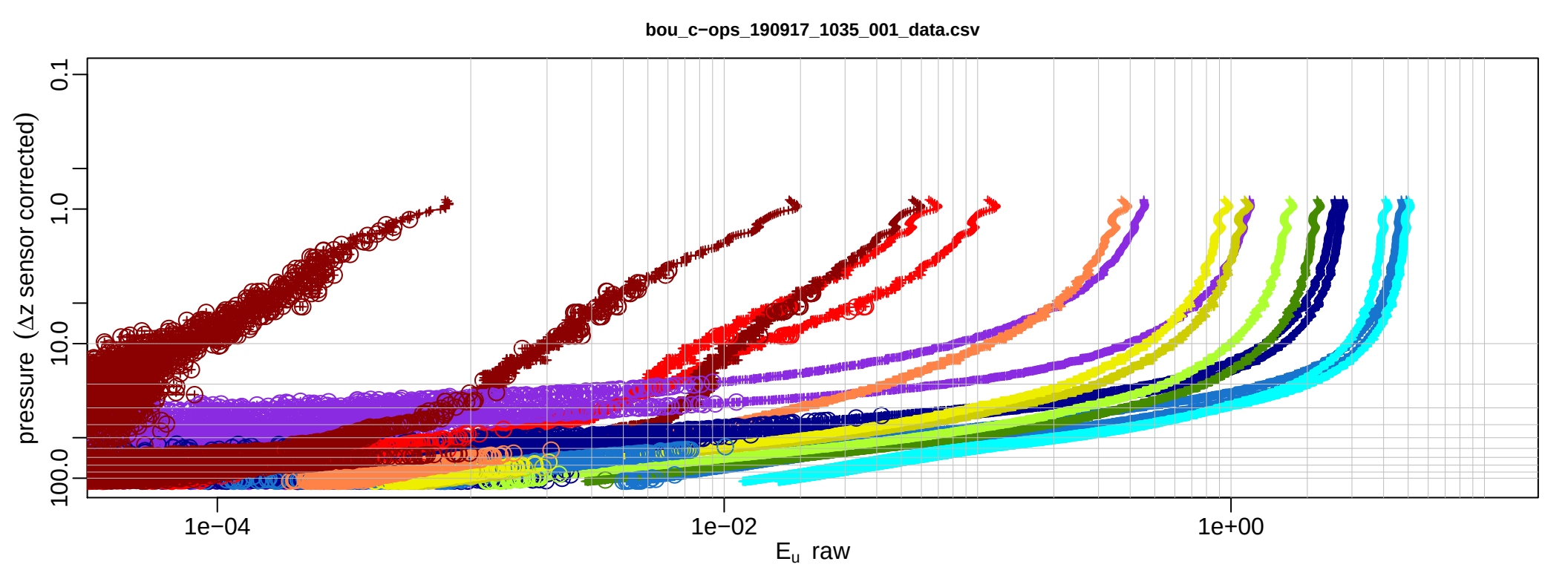
bou_c−ops_190917_1035_001_data.csv

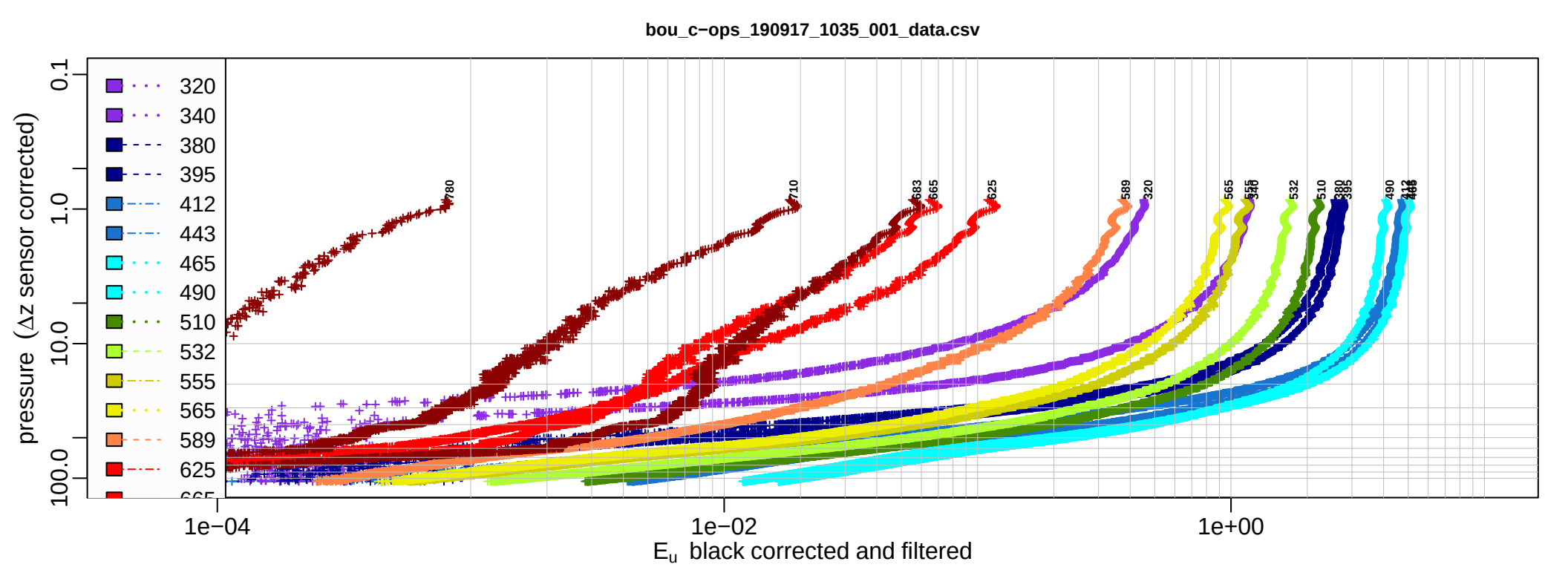


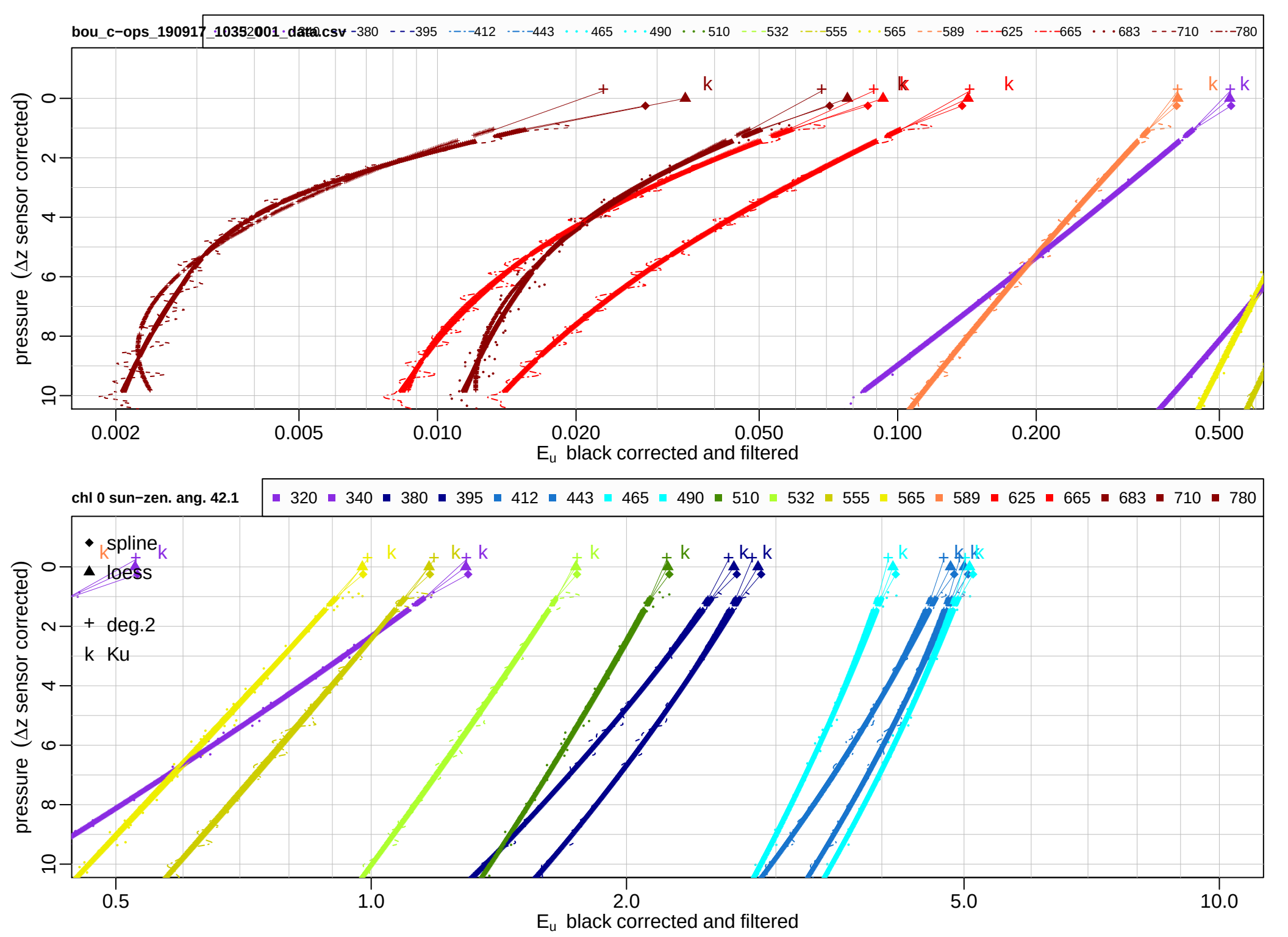


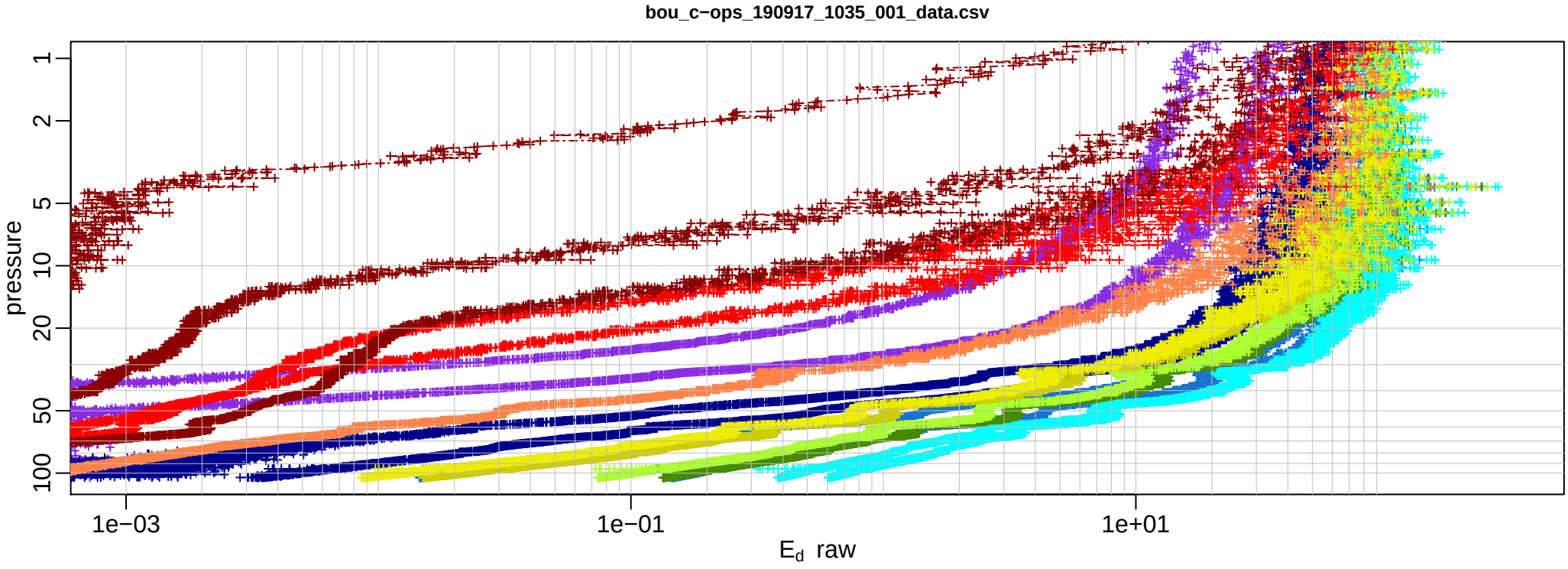

bou_c−ops_190917_1035_001_data.csv
pressure
0
20
40
60
80
100
320
340
380
395
412
443
465
490
510
532
555
565
589
625
20
40
60
80
100
120
E_s raw

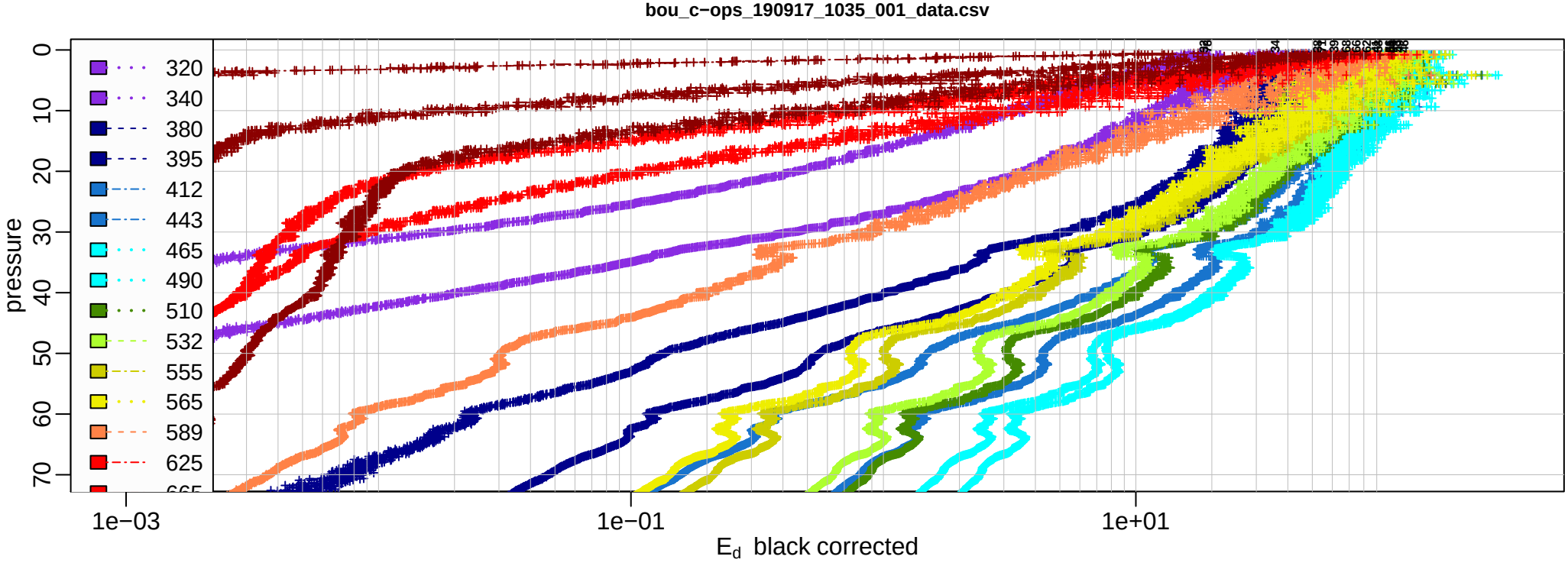

bou_c−ops_190917_1035_001_data.csv
pressure
0
20
40
60
80
100
Meas.
Th
sun−zen. ang. = 42.1
Δ %
250
200
150
100
50
10
0
−10
−20
−30
400
500
600
700
20
40
60
80
100
120
E_s black corrected

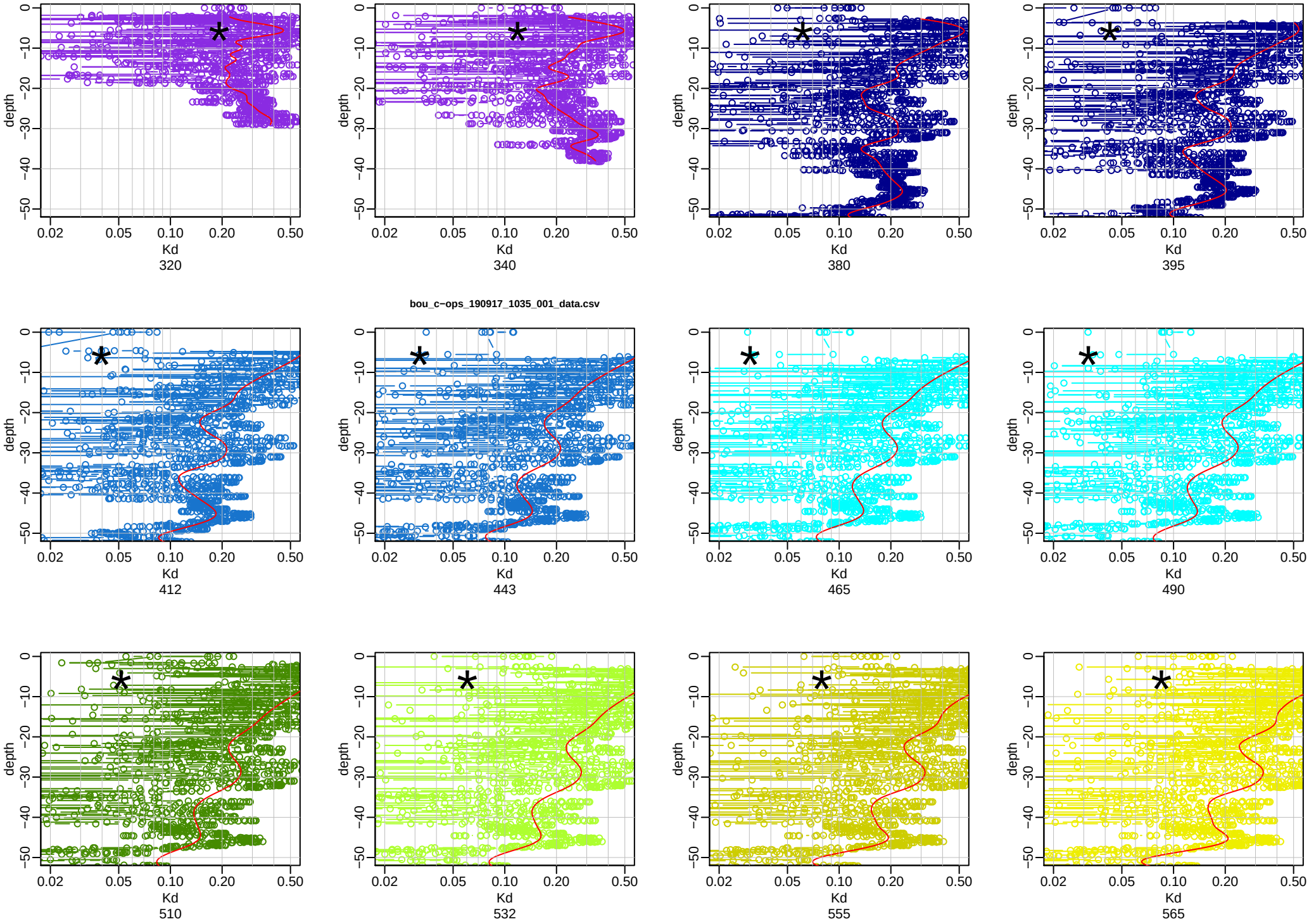

bou_c−ops_190917_1035_001_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E$_u$ raw

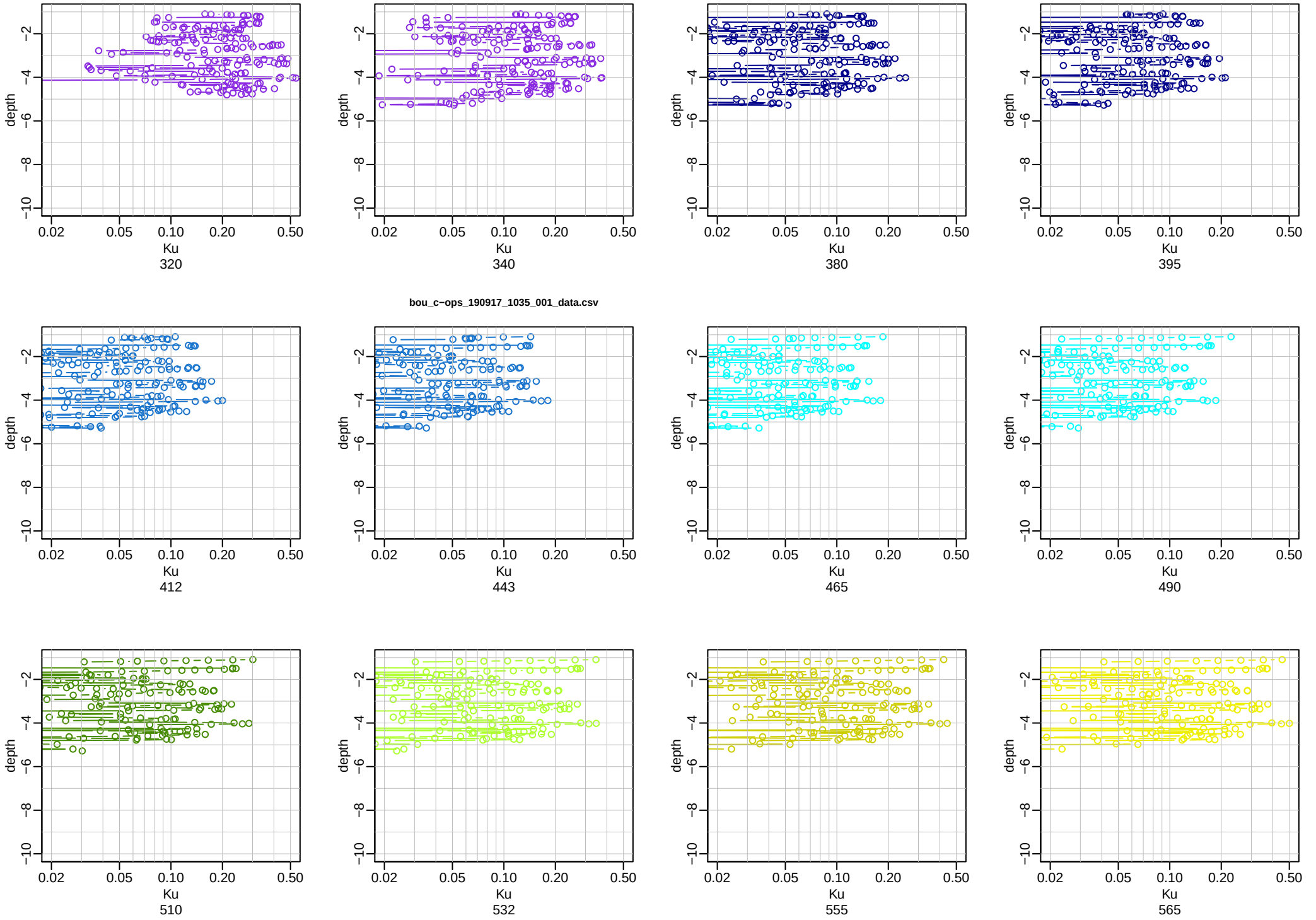

bou_c−ops_190917_1035_001_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
555
532
510
490
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E$_u$ black corrected and filtered

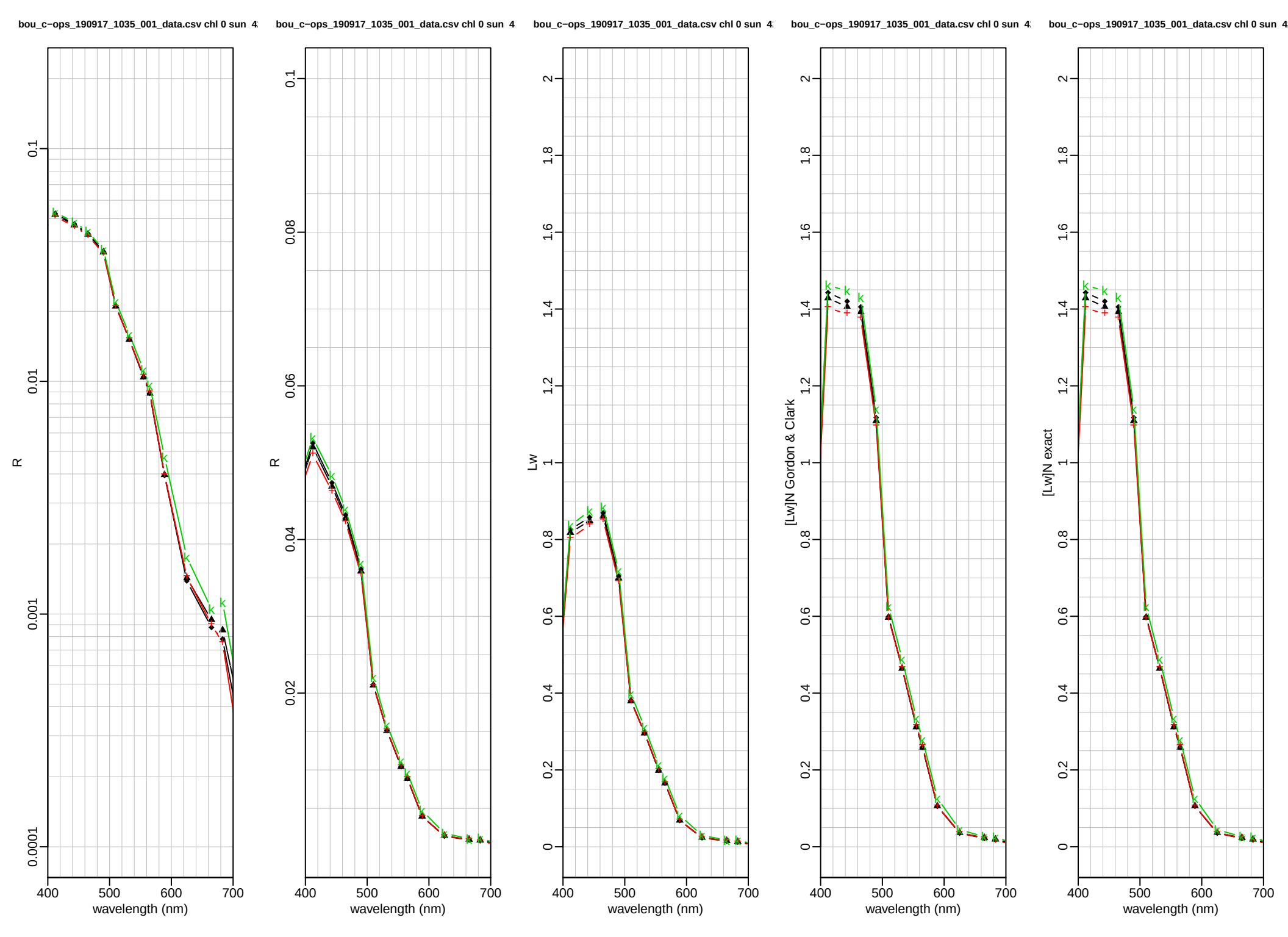

bou_c−ops_190917_1035_001_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 42.1
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190917_1035_001_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190917_1035_001_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

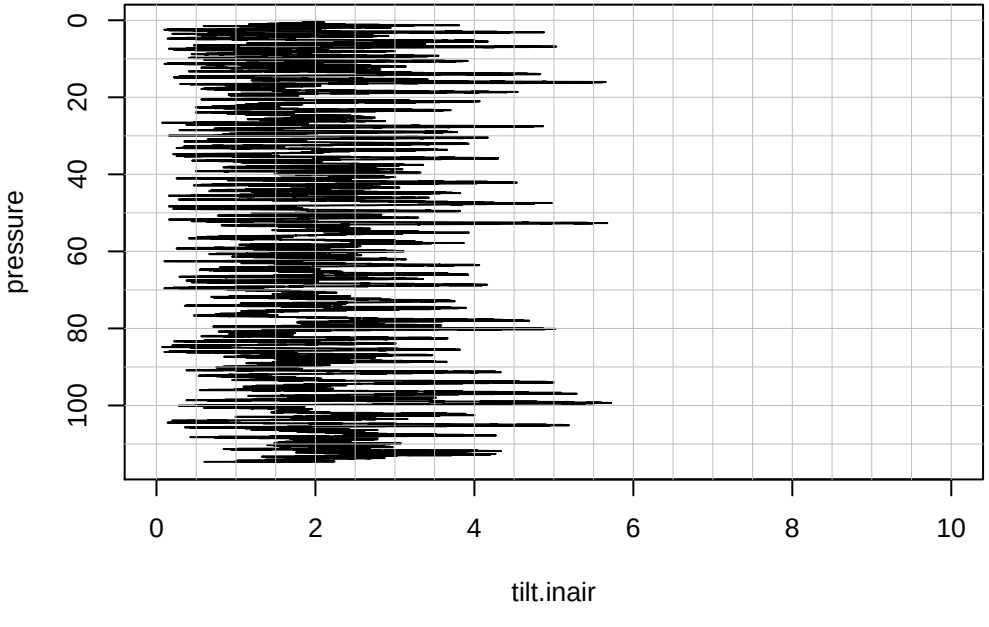

bou_c~ops_190917_1035_001_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

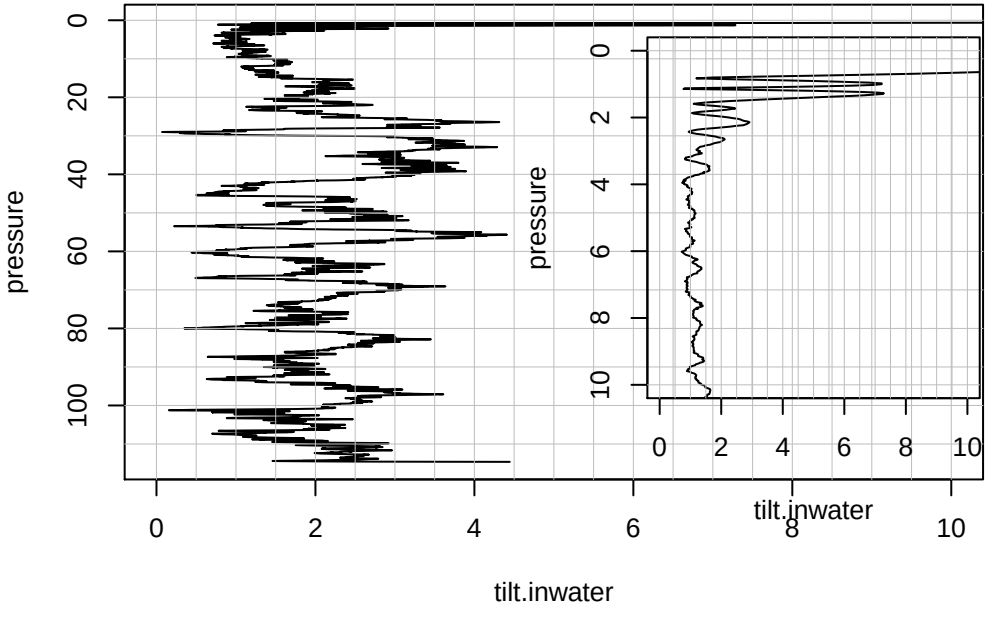

bou_c~ops_190917_1035_001_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

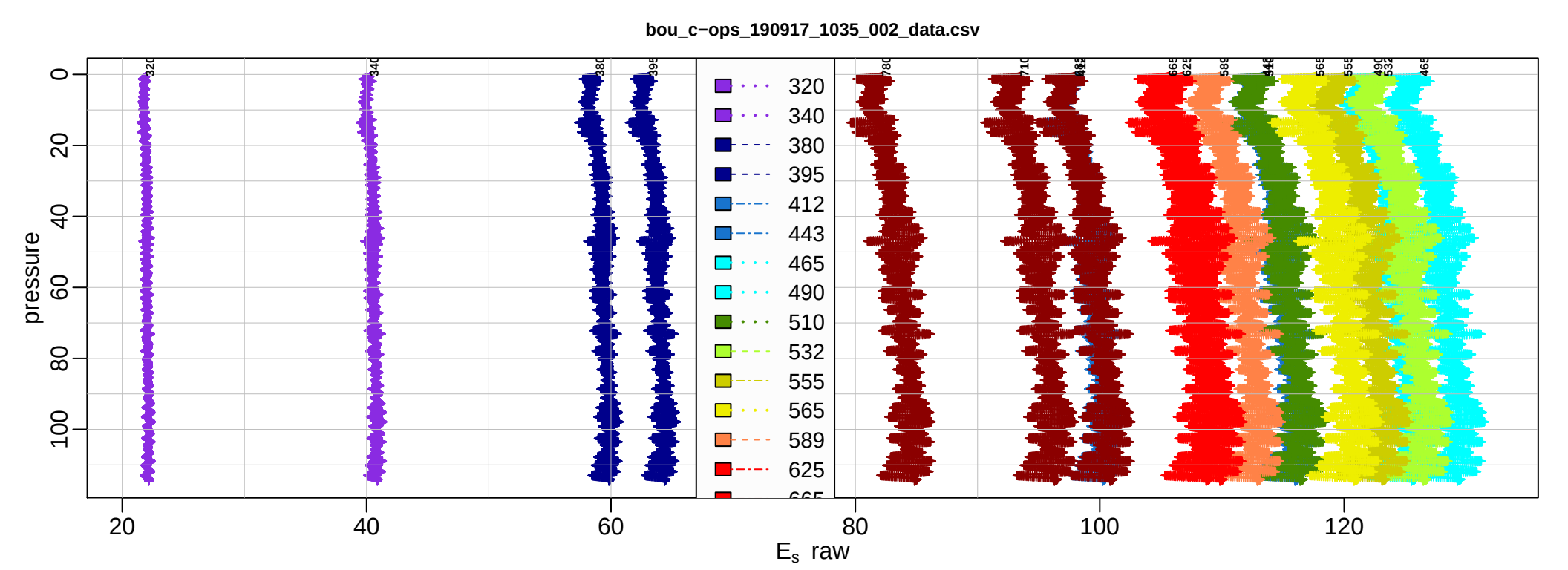

bou_c−ops_190917_1035_001_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190917_1035_001_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190917_1035_001_data.csv chl 0 sun 4
Lw
wavelength (nm)
bou_c−ops_190917_1035_001_data.csv chl 0 sun 4
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190917_1035_001_data.csv chl 0 sun 4
[Lw]N exact
wavelength (nm)

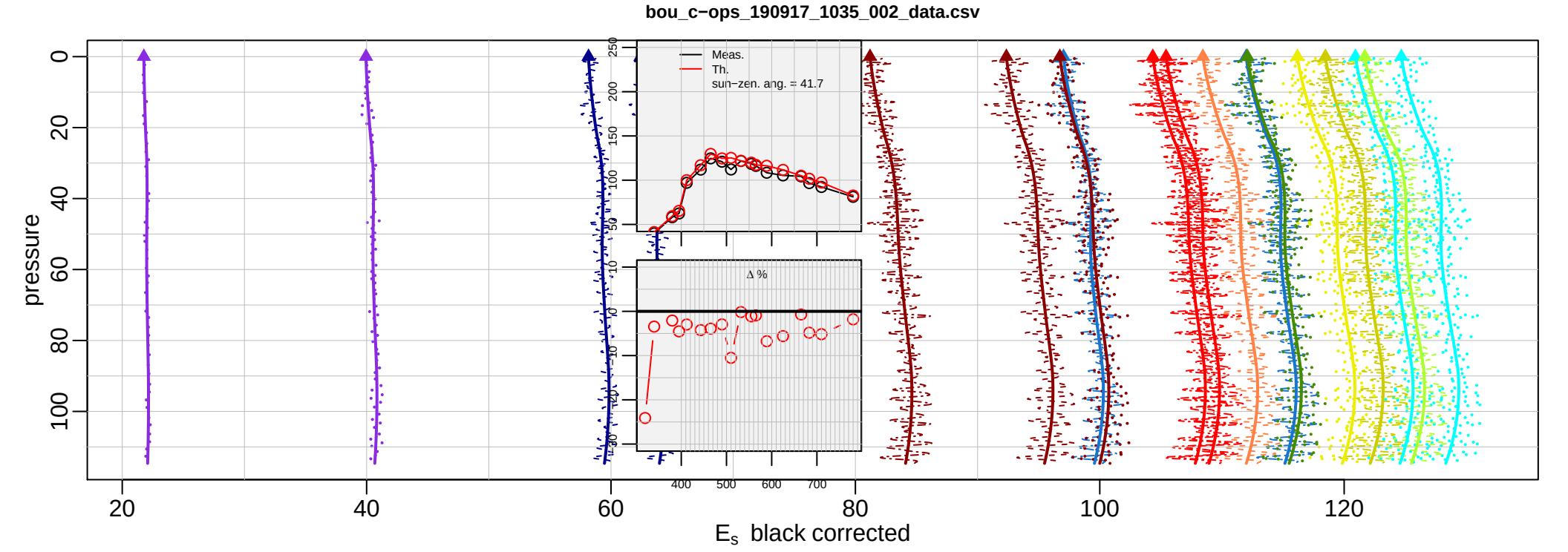
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole212/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole212/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89523
latitude 43.37418
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

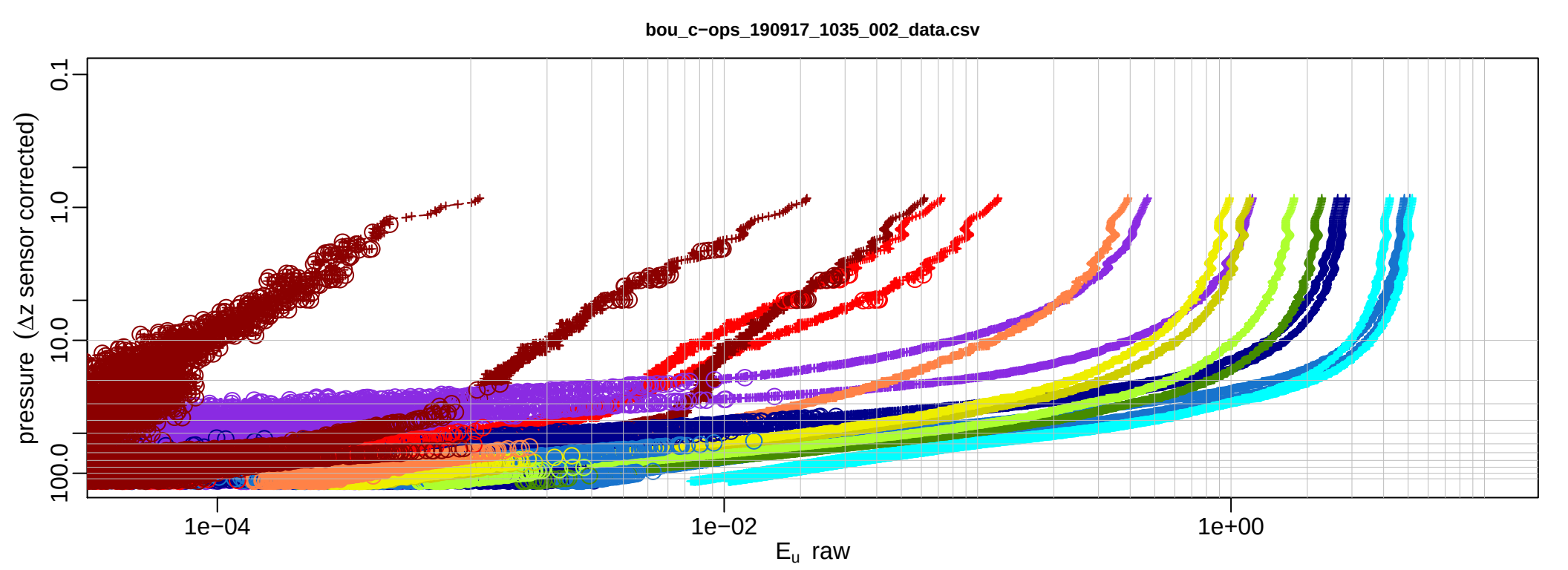
bou_c−ops_190917_1035_002_data.csv

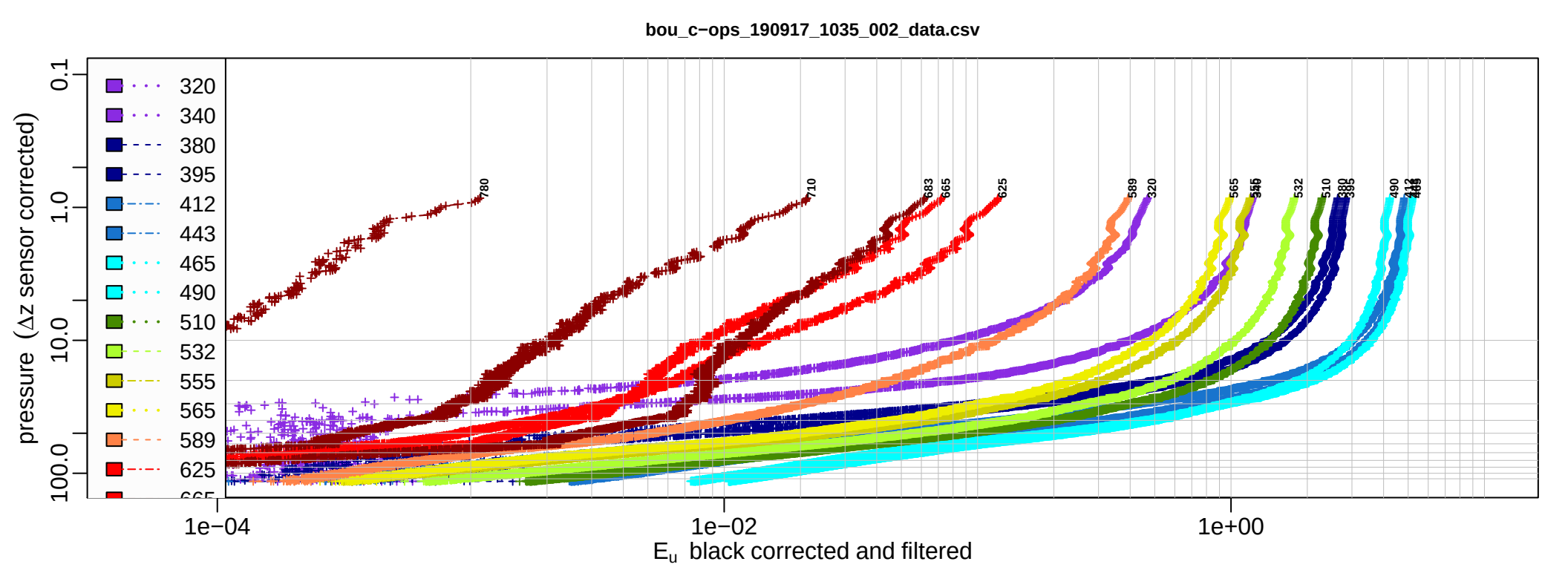


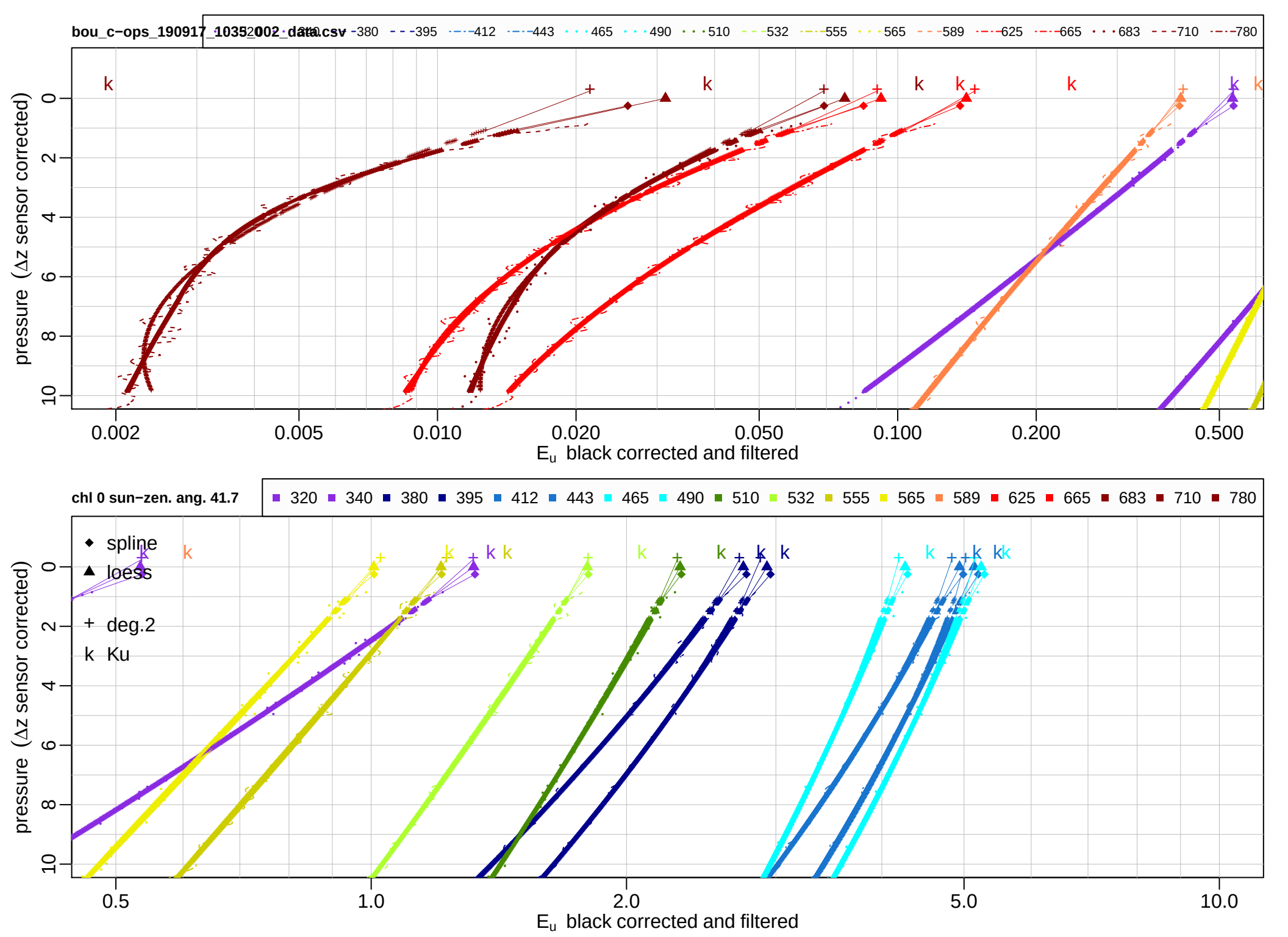


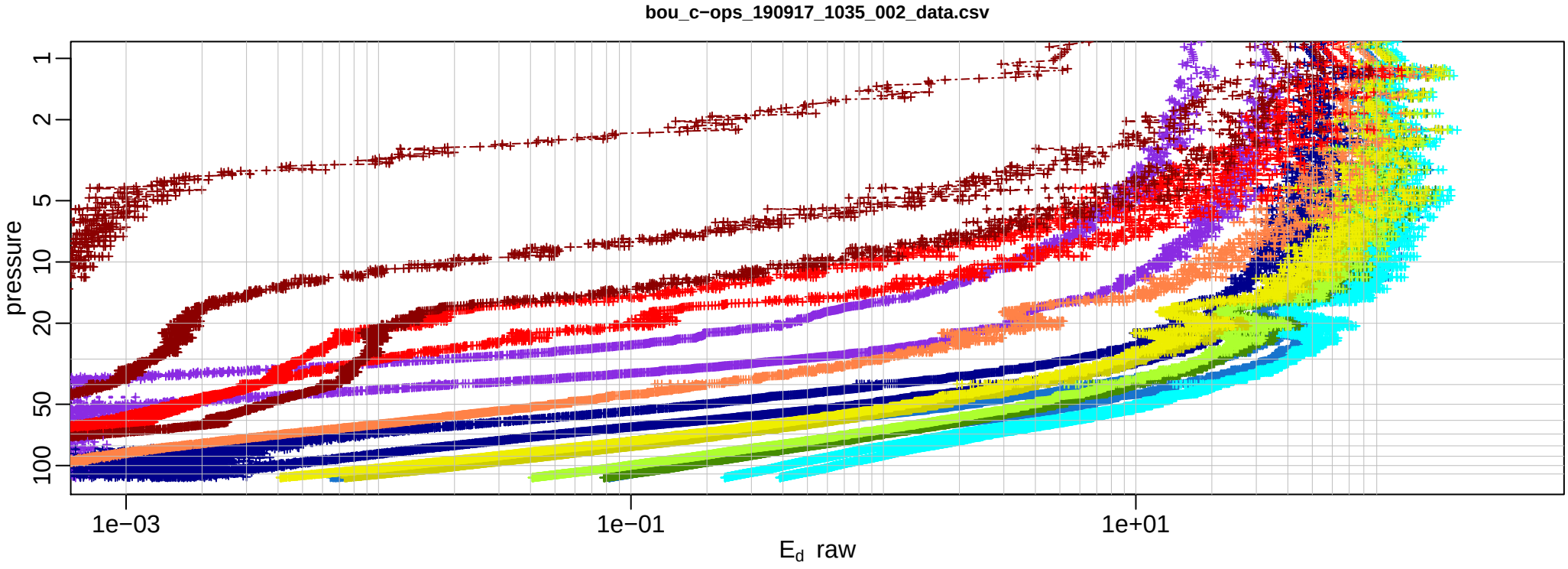

bou_c−ops_190917_1035_002_data.csv
pressure
0
20
40
60
80
100
20
40
60
80
100
120
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

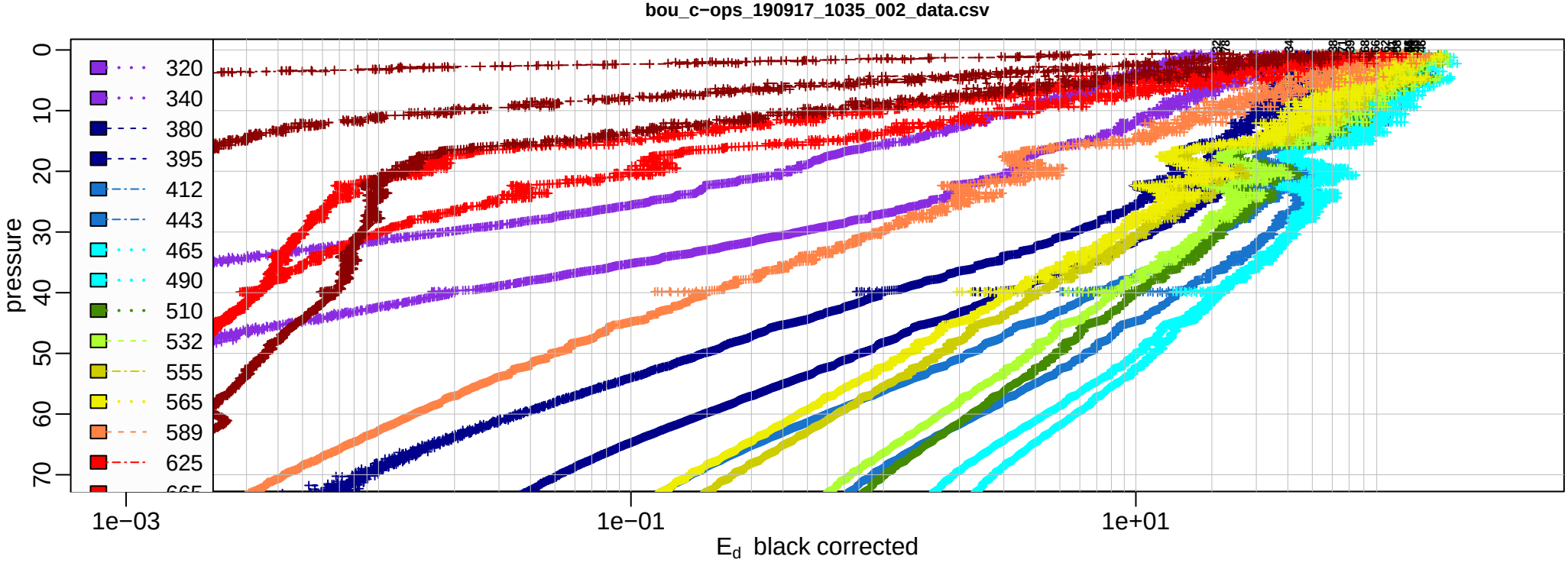

bou_c−ops_190917_1035_002_data.csv
pressure
0
20
40
60
80
100
20
40
60
80
100
120
E_s black corrected
Meas.
Th.
sun−zen. ang. = 41.7
Δ %
250
200
150
100
50
10
0
−10
−30
400
500
600
700

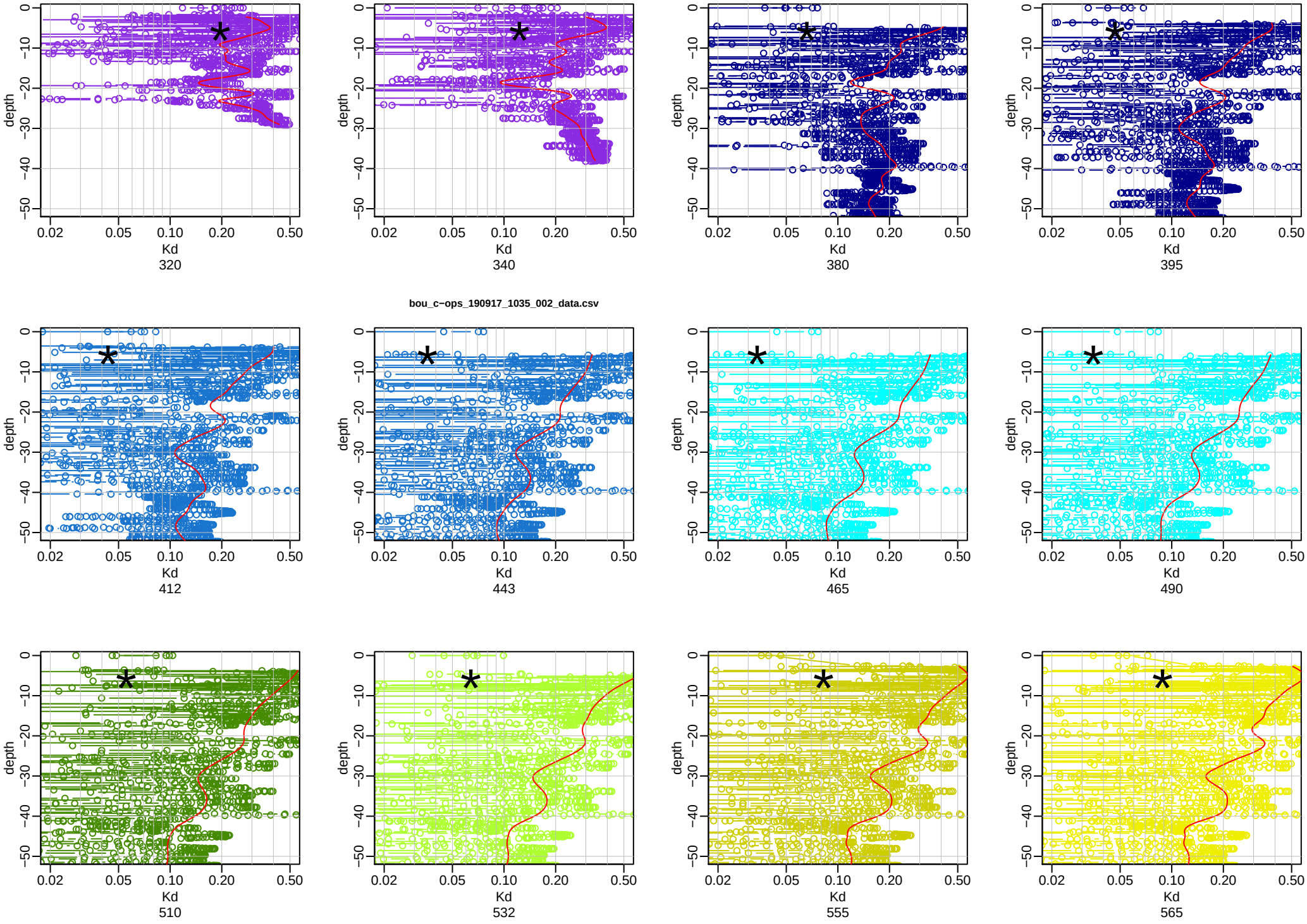

bou_c−ops_190917_1035_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
Eu raw

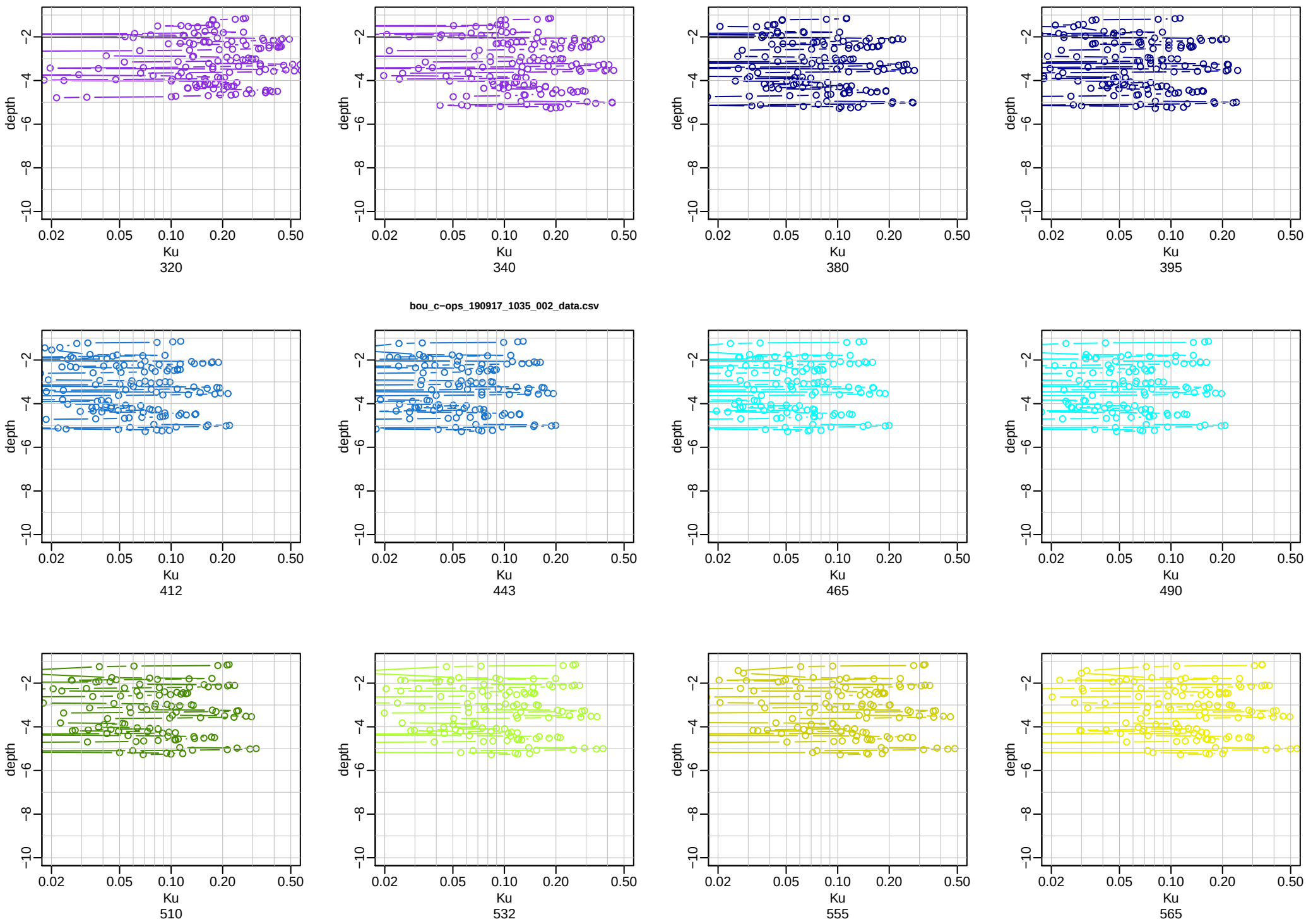

bou_c−ops_190917_1035_002_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
532
510
490
1e−04
1e−02
1e+00
Eu black corrected and filtered

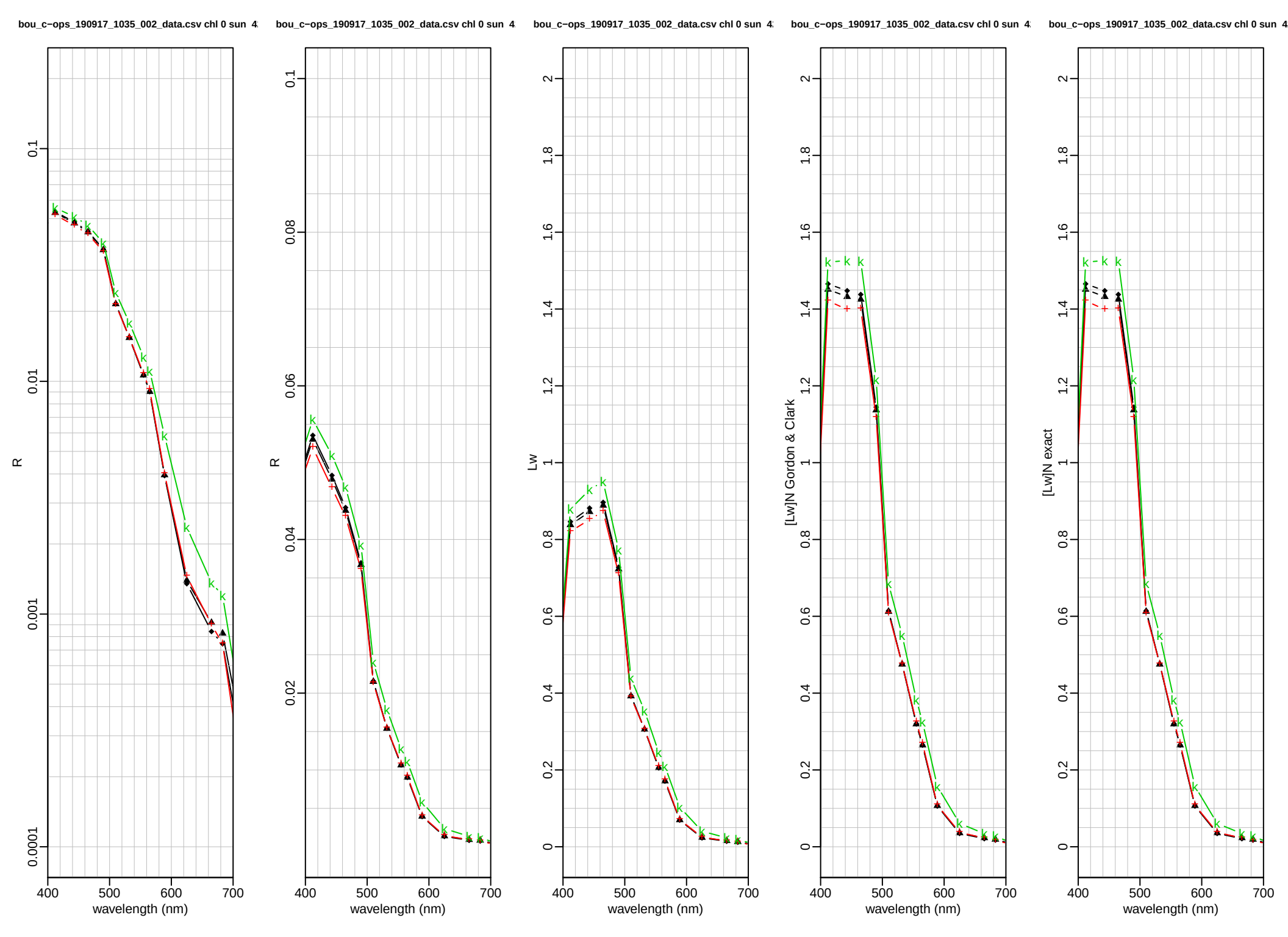

bou_c-ops_190917_1035_002_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
Eu black corrected and filtered
chl 0 sun-zen. ang. 41.7
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
Eu black corrected and filtered


bou_c−ops_190917_1035_002_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190917_1035_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

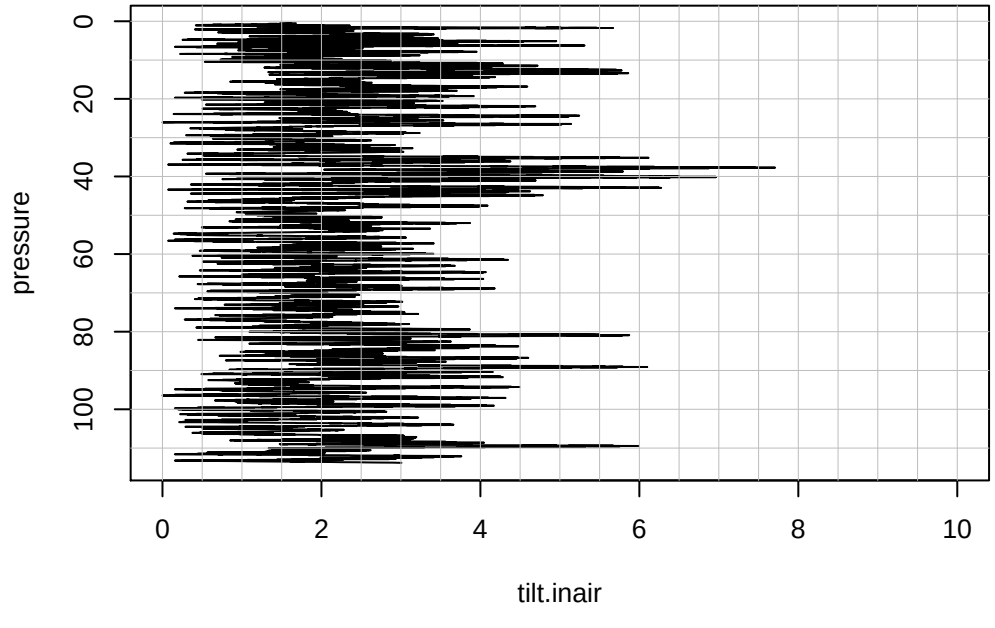

bou_c~ops_190917_1035_002_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

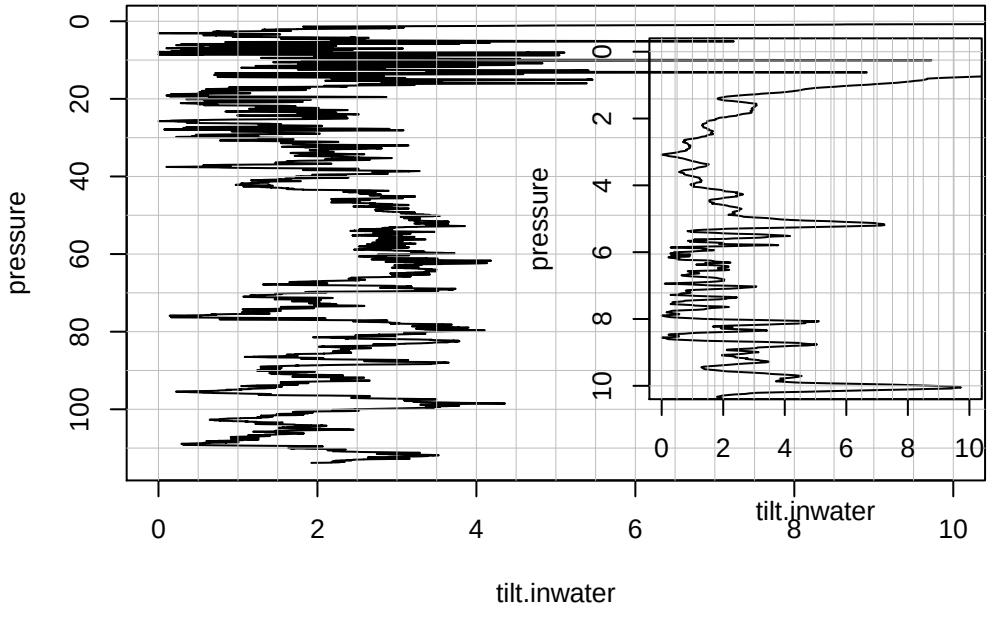

bou_c~ops_190917_1035_002_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

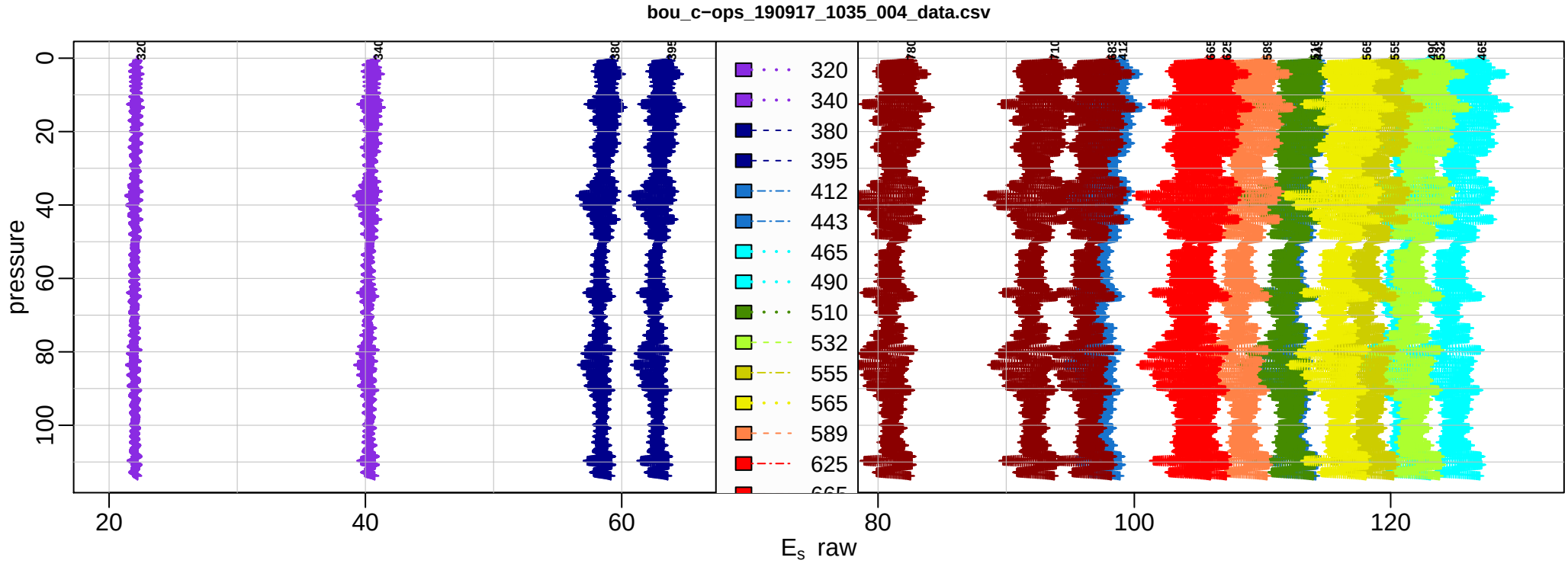

bou_c−ops_190917_1035_002_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190917_1035_002_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190917_1035_002_data.csv chl 0 sun 4
Lw
wavelength (nm)
bou_c−ops_190917_1035_002_data.csv chl 0 sun 4
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190917_1035_002_data.csv chl 0 sun 4
[Lw]N exact
wavelength (nm)

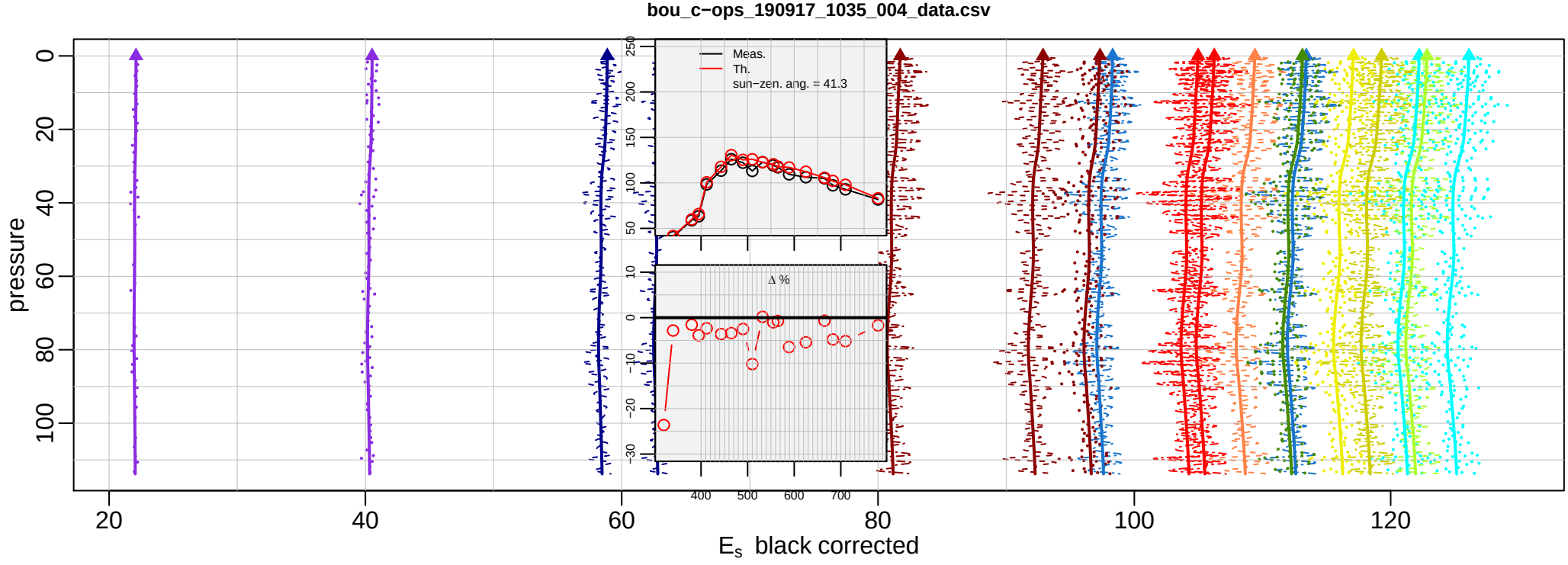
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole212/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole212/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89323
latitude 43.37555
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

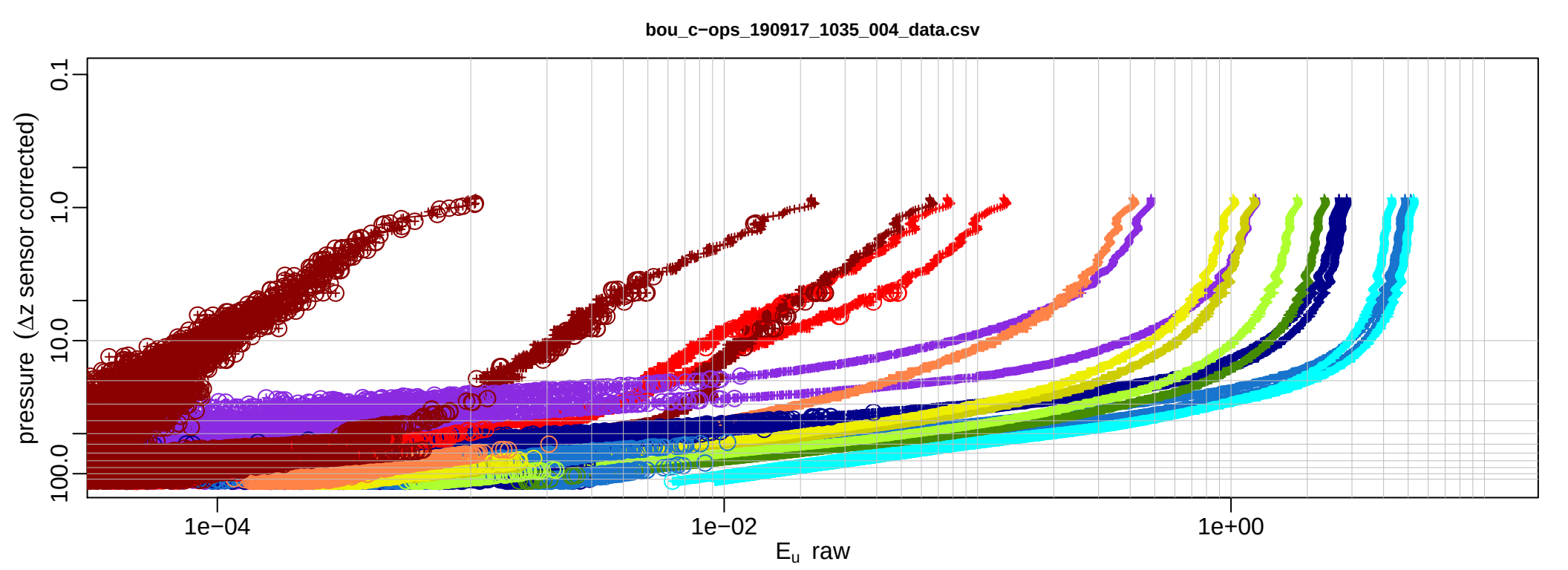
bou_c−ops_190917_1035_004_data.csv

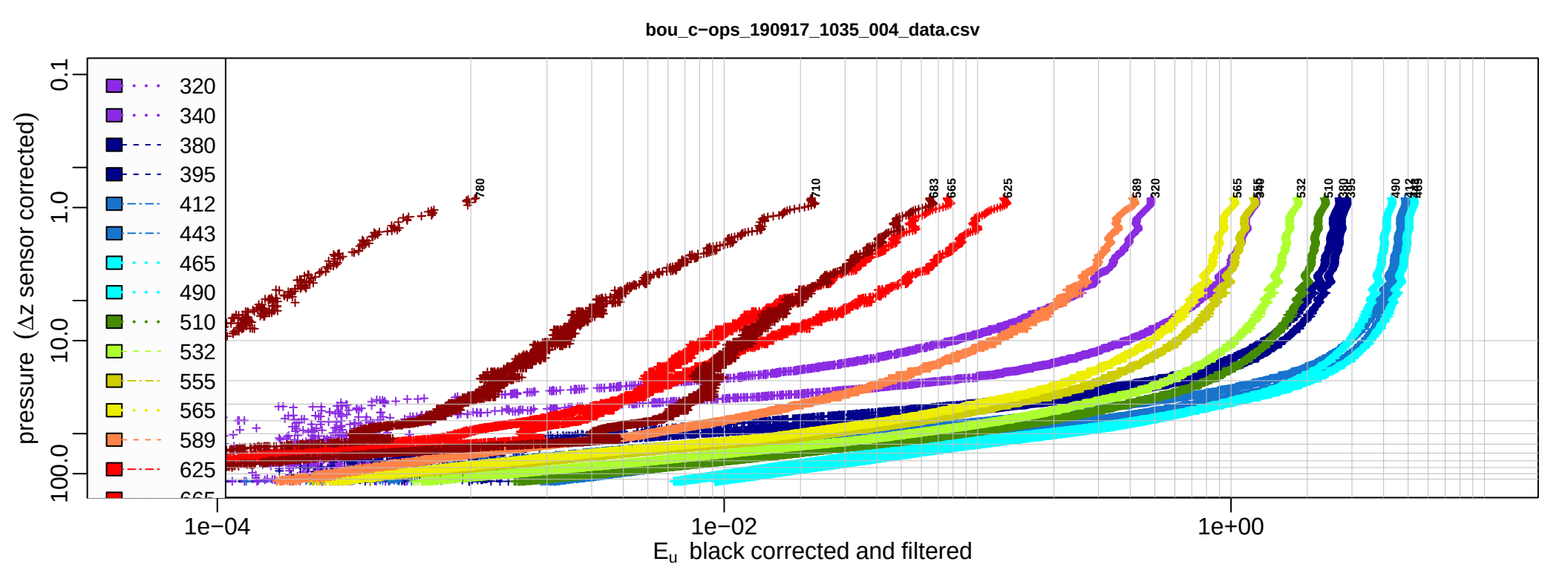


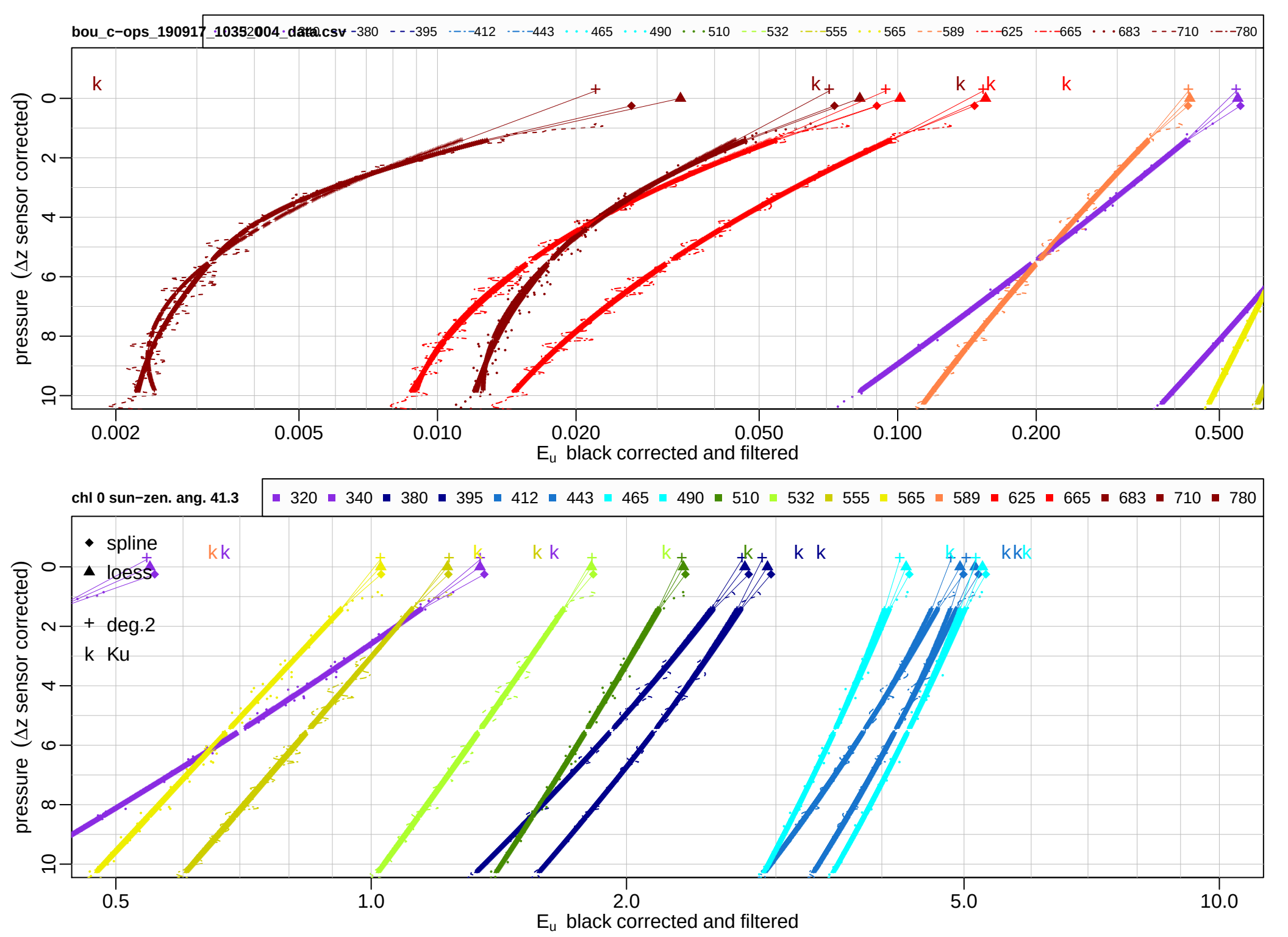


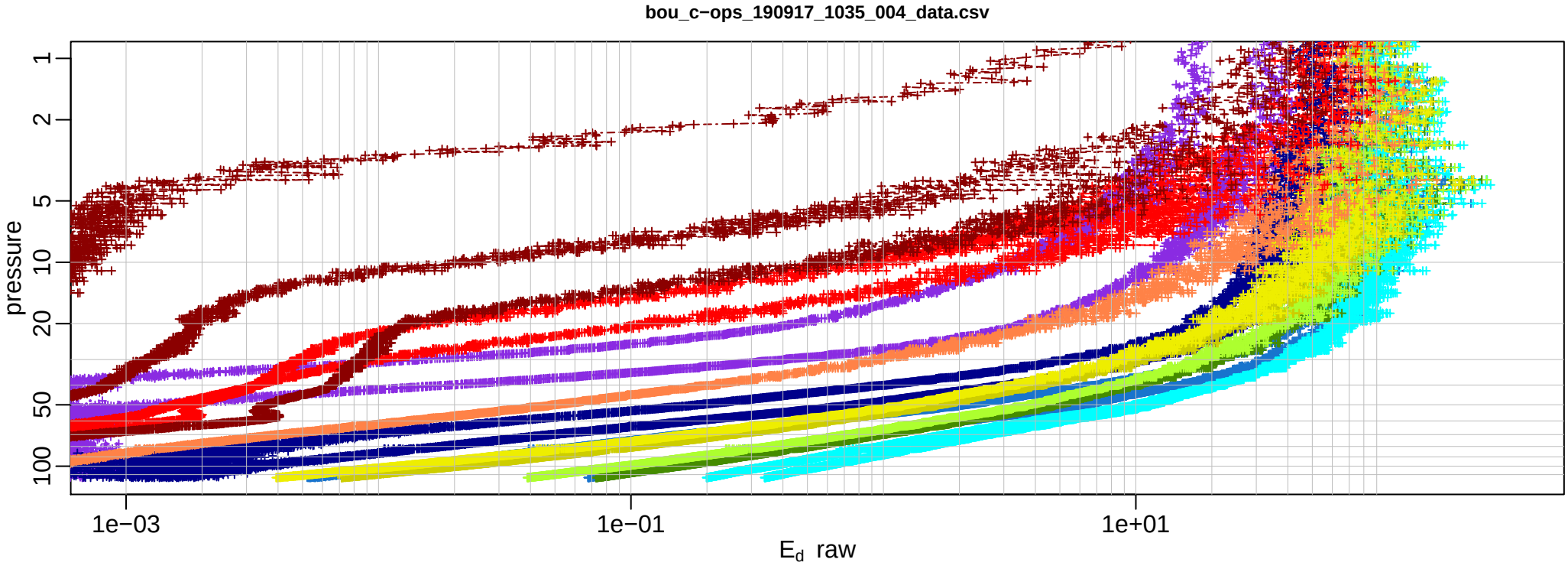

bou_c−ops_190917_1035_004_data.csv
pressure
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

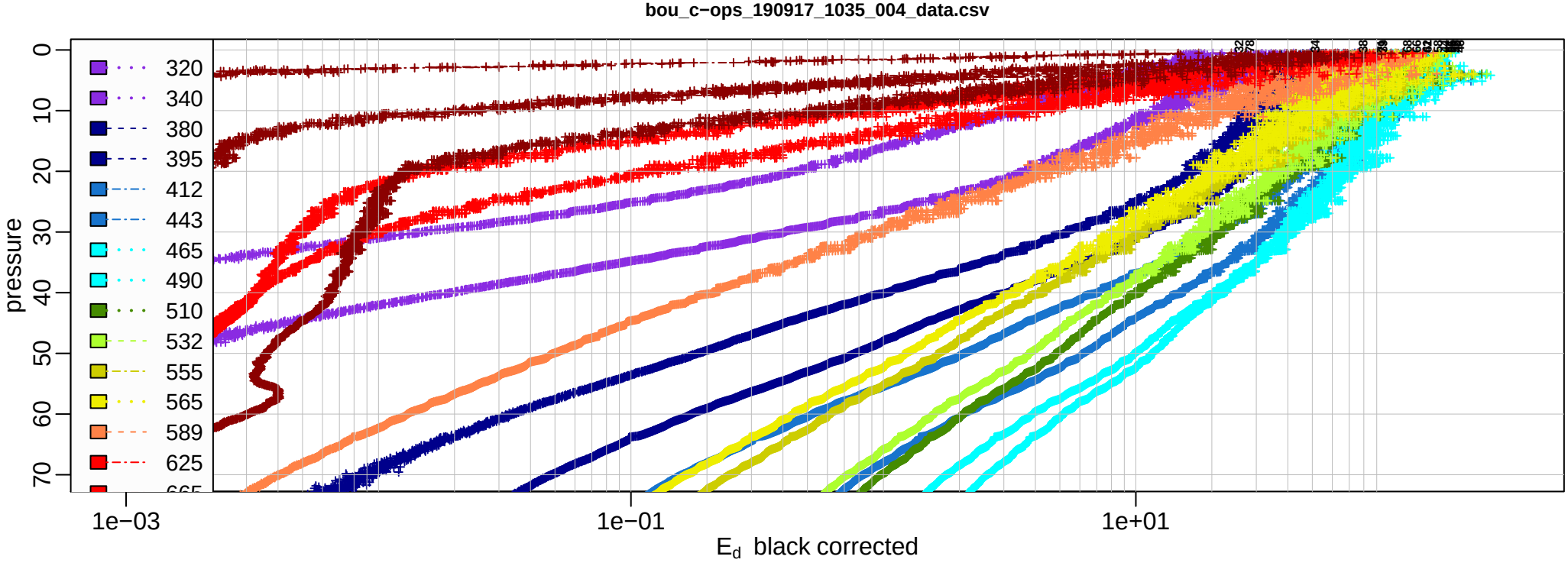

bou_c−ops_190917_1035_004_data.csv
pressure
E_s black corrected
Meas.
Th.
sun−zen. ang. = 41.3
Δ %


bou_c−ops_190917_1035_004_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
Eu raw


bou_c−ops_190917_1035_004_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
555
532
510
490
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
Eu black corrected and filtered


bou_c-ops_190917_1035_004_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun-zen. ang. 41.3
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190917_1035_004_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190917_1035_004_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
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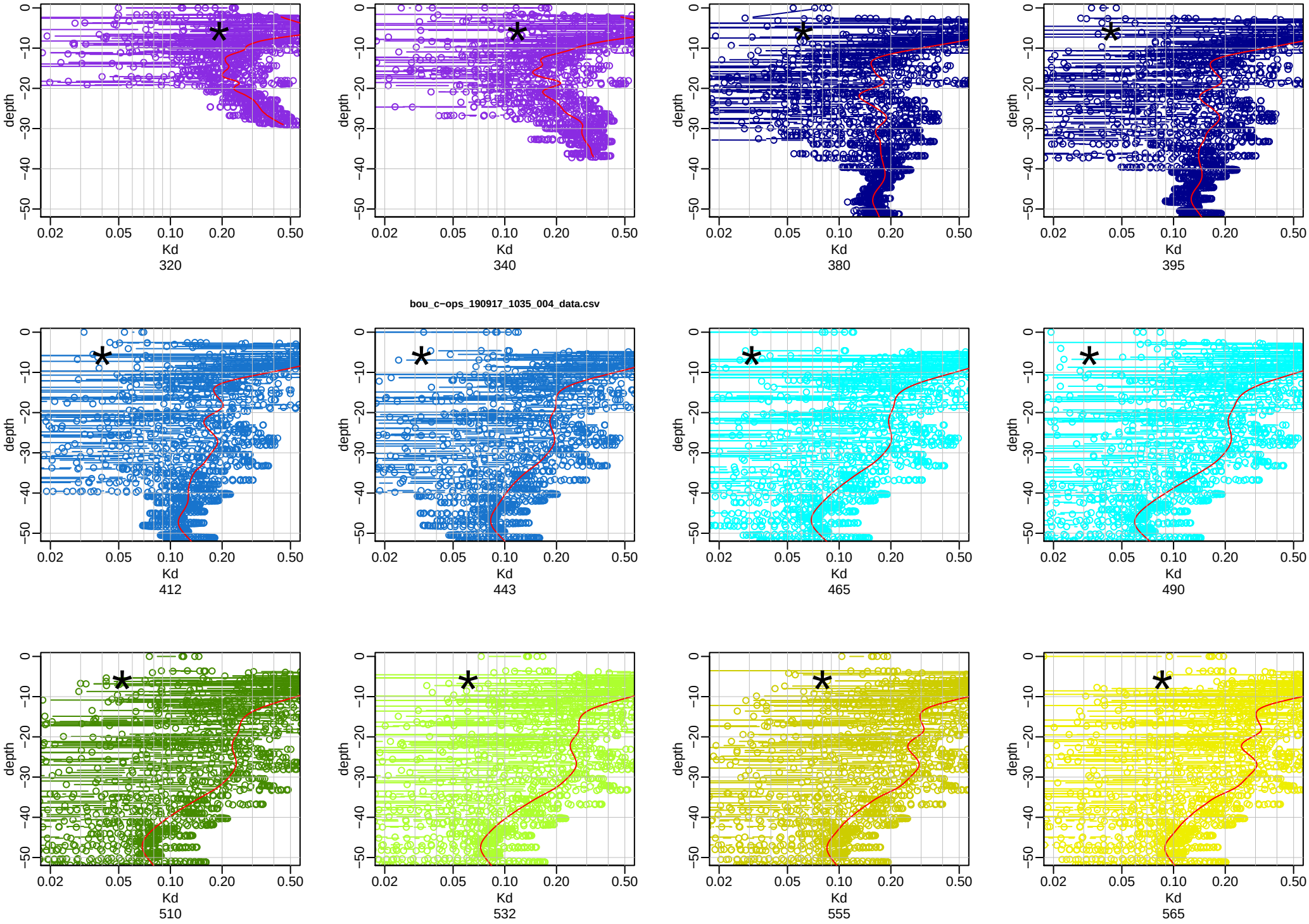
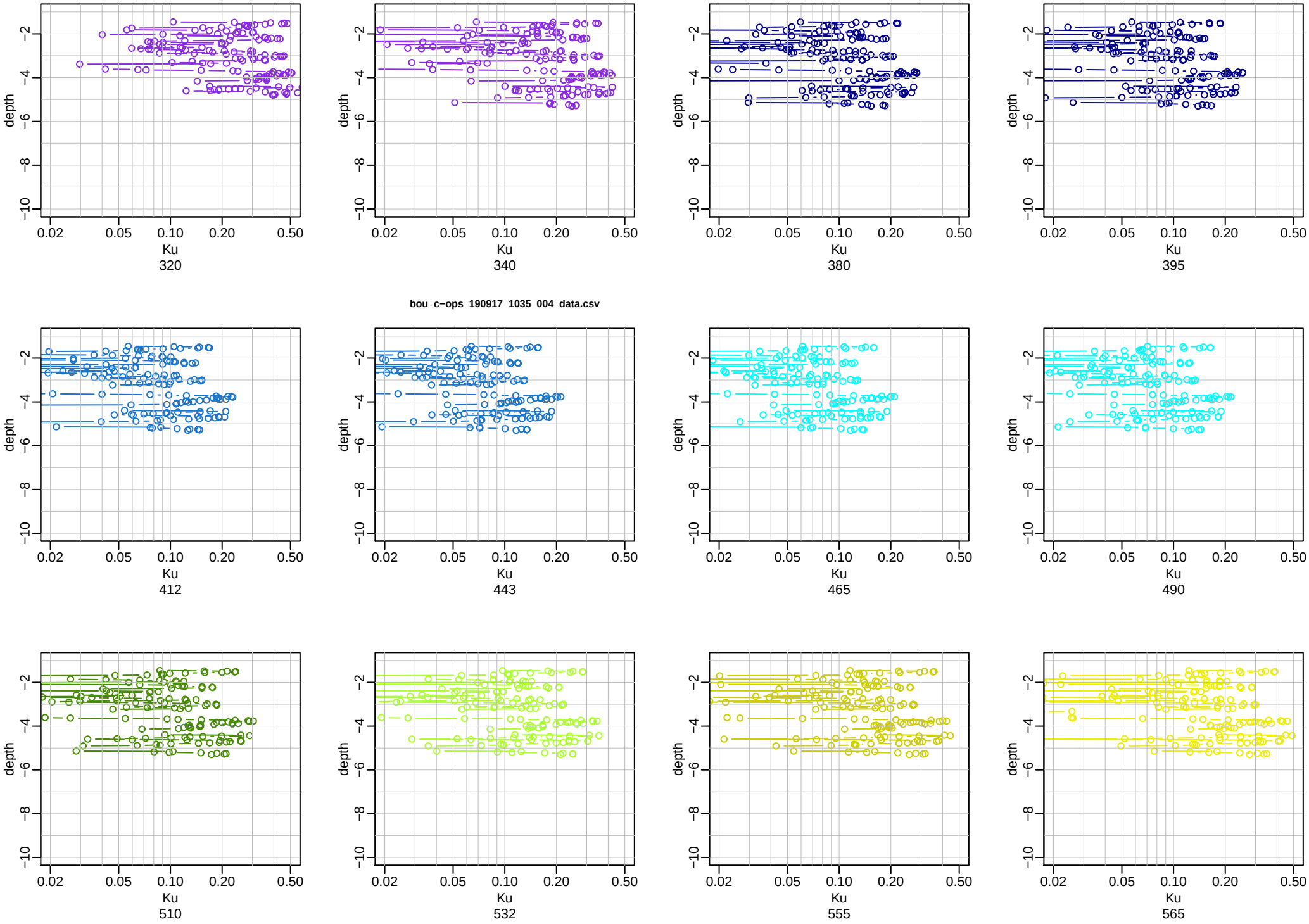
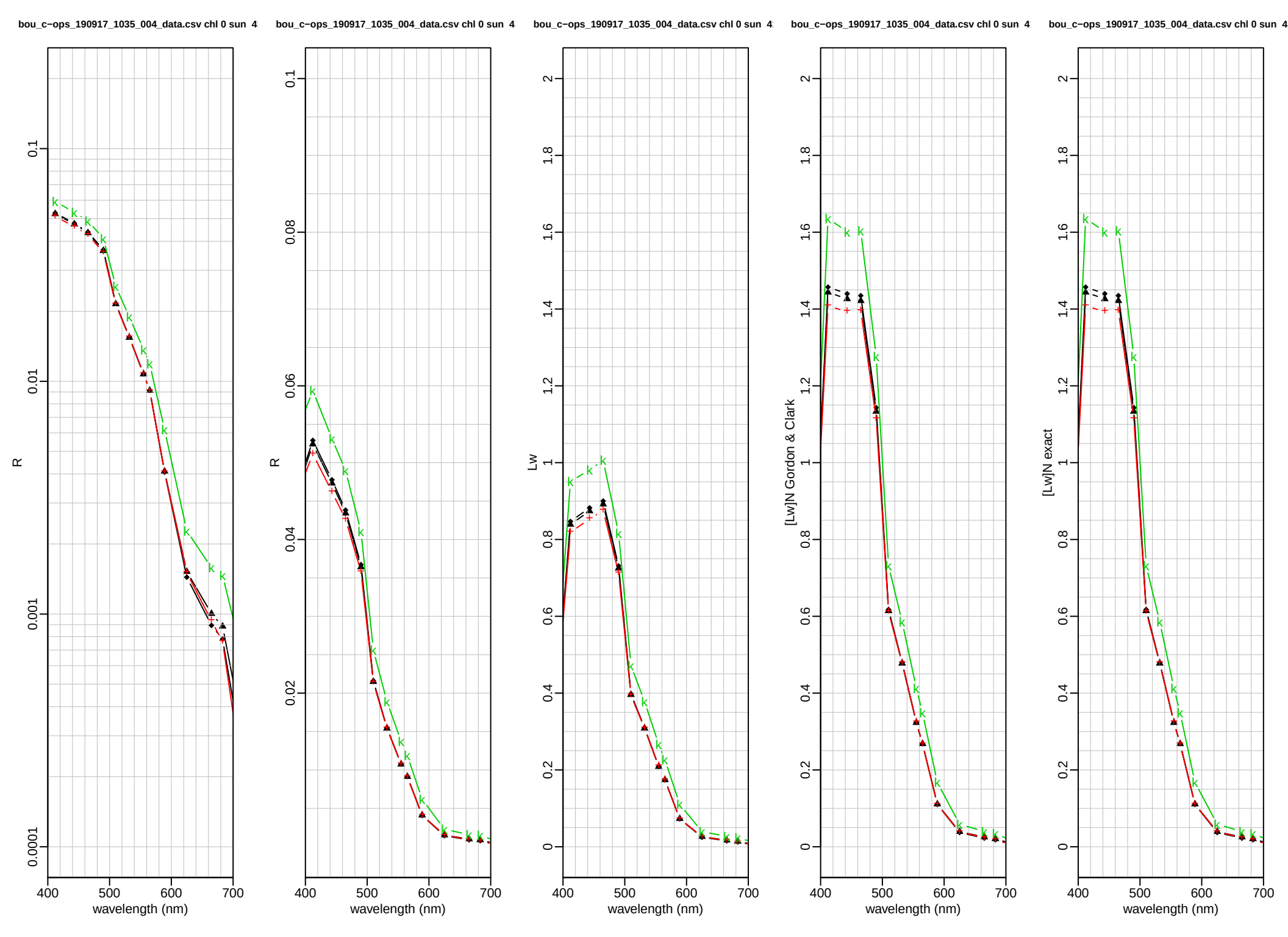
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

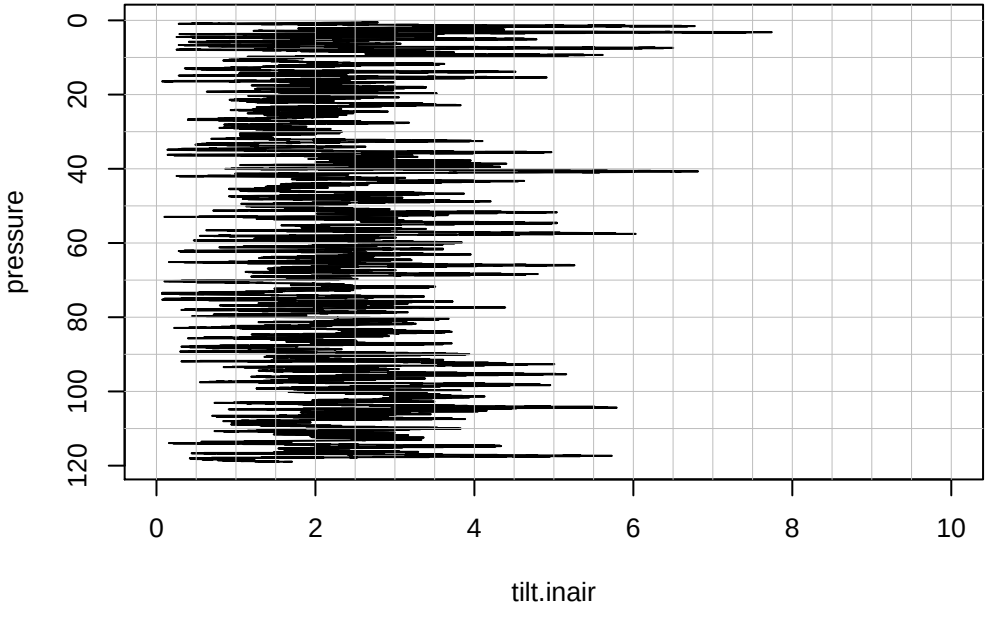

bou_c~ops_190917_1035_004_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

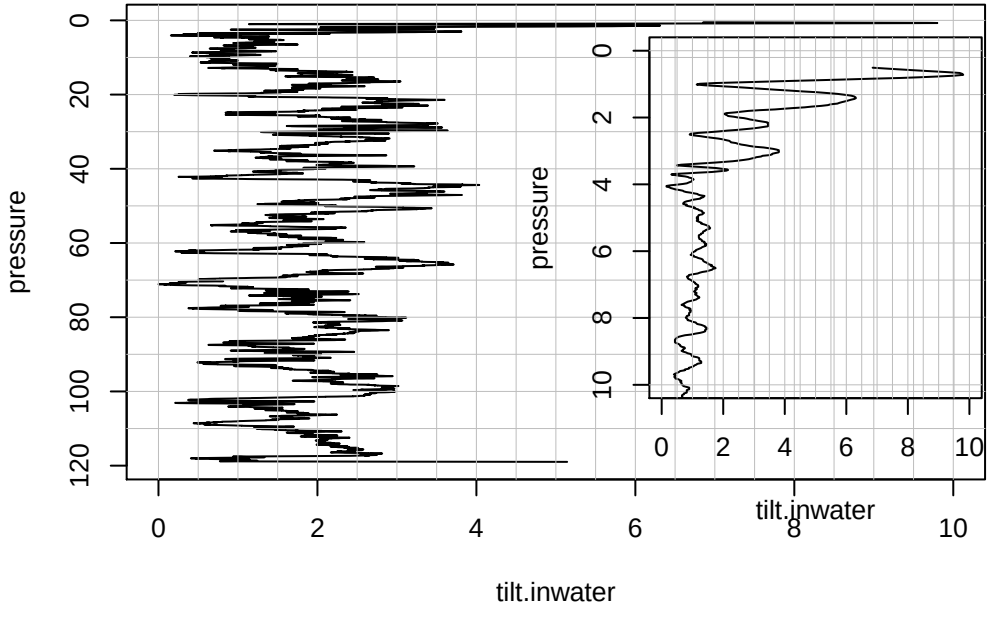

bou_c~ops_190917_1035_004_data.csv
depth
Ku
320
340
380
395
412
443
465
490
510
532
555
565

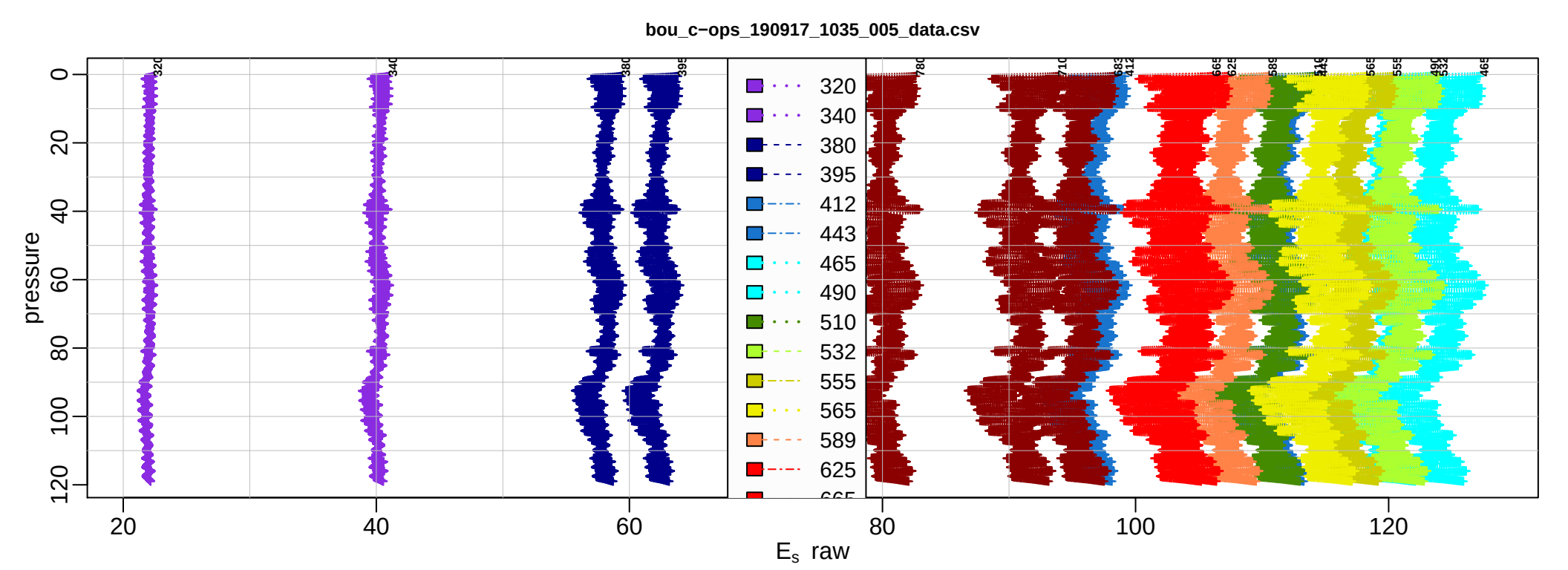

bou_c−ops_190917_1035_004_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190917_1035_004_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190917_1035_004_data.csv chl 0 sun 4
Lw
wavelength (nm)
bou_c−ops_190917_1035_004_data.csv chl 0 sun 4
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190917_1035_004_data.csv chl 0 sun 4
[Lw]N exact
wavelength (nm)

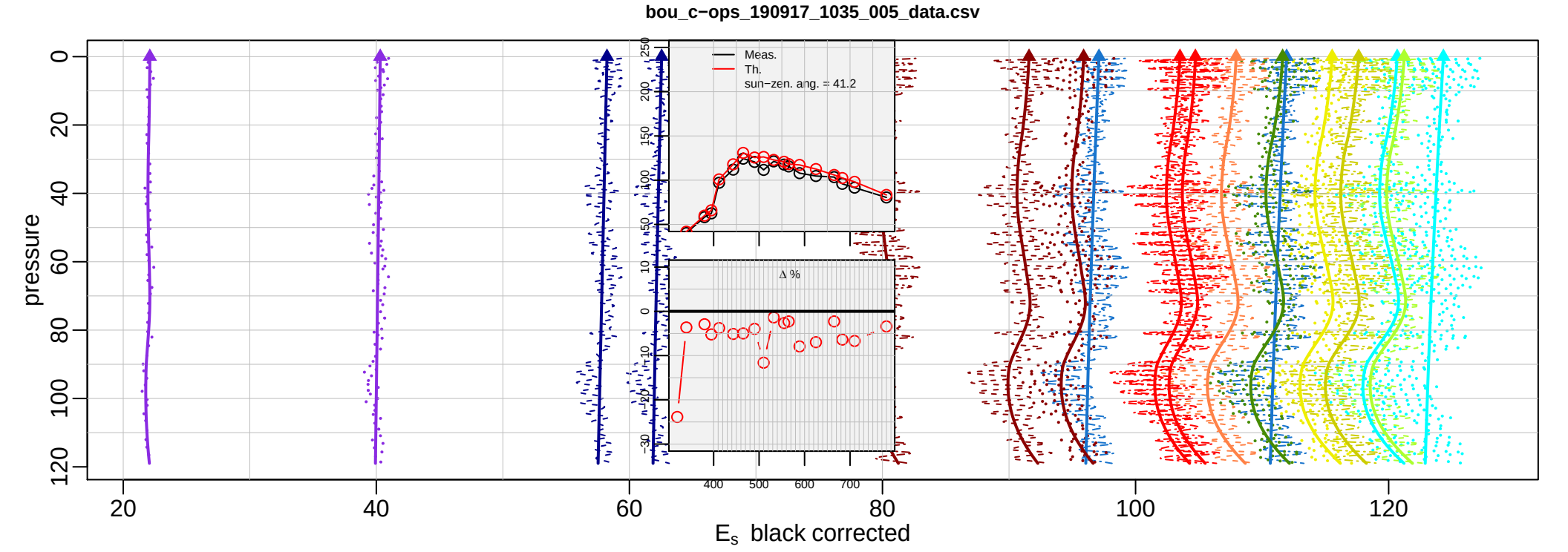
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole212/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole212/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89101
latitude 43.37715
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

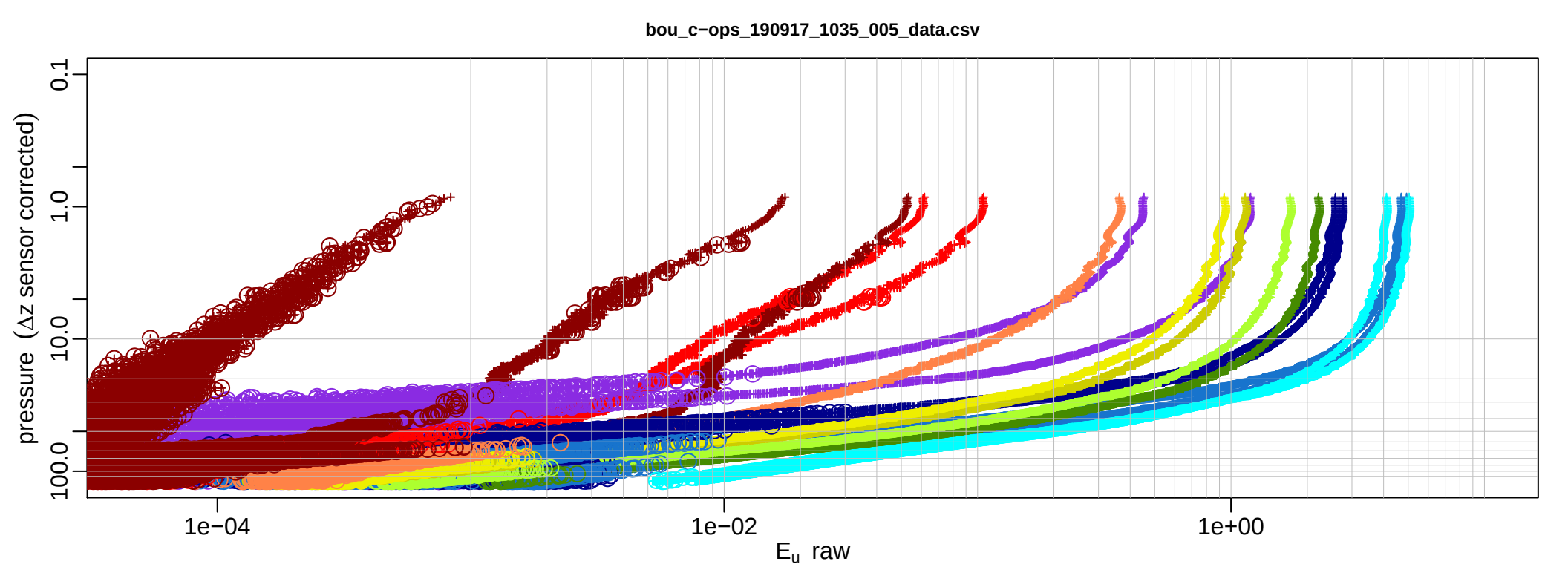
bou_c−ops_190917_1035_005_data.csv

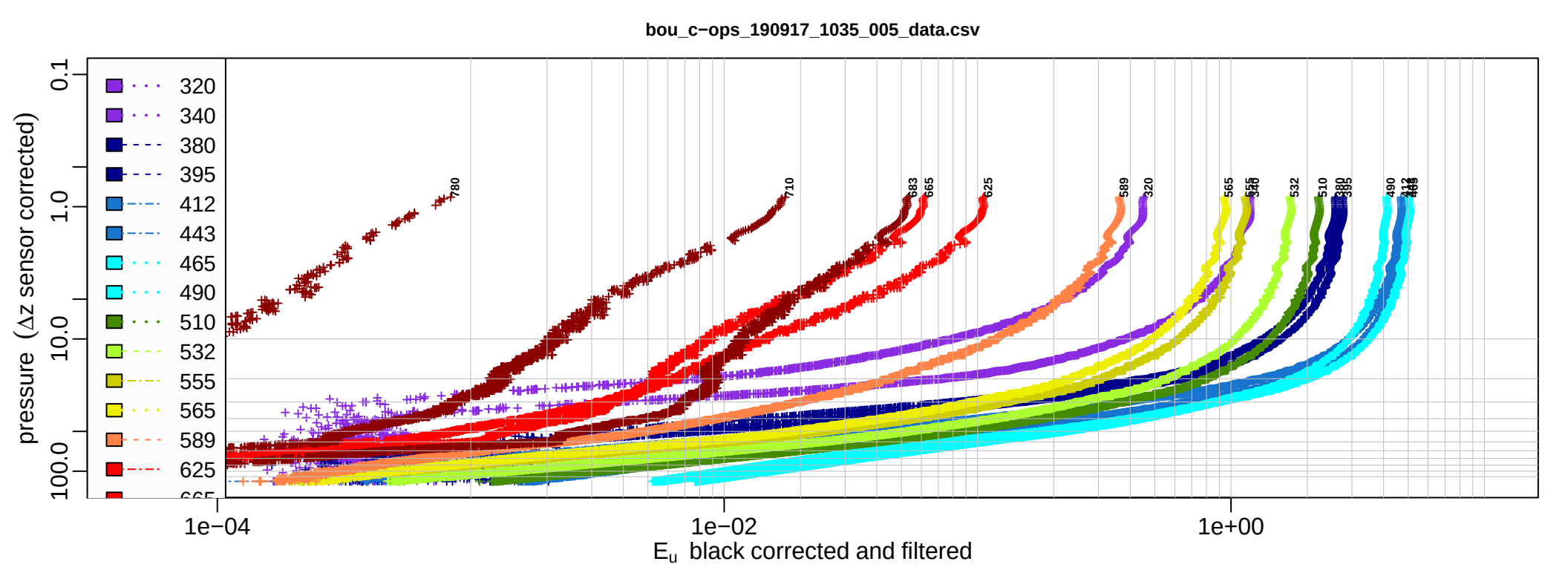


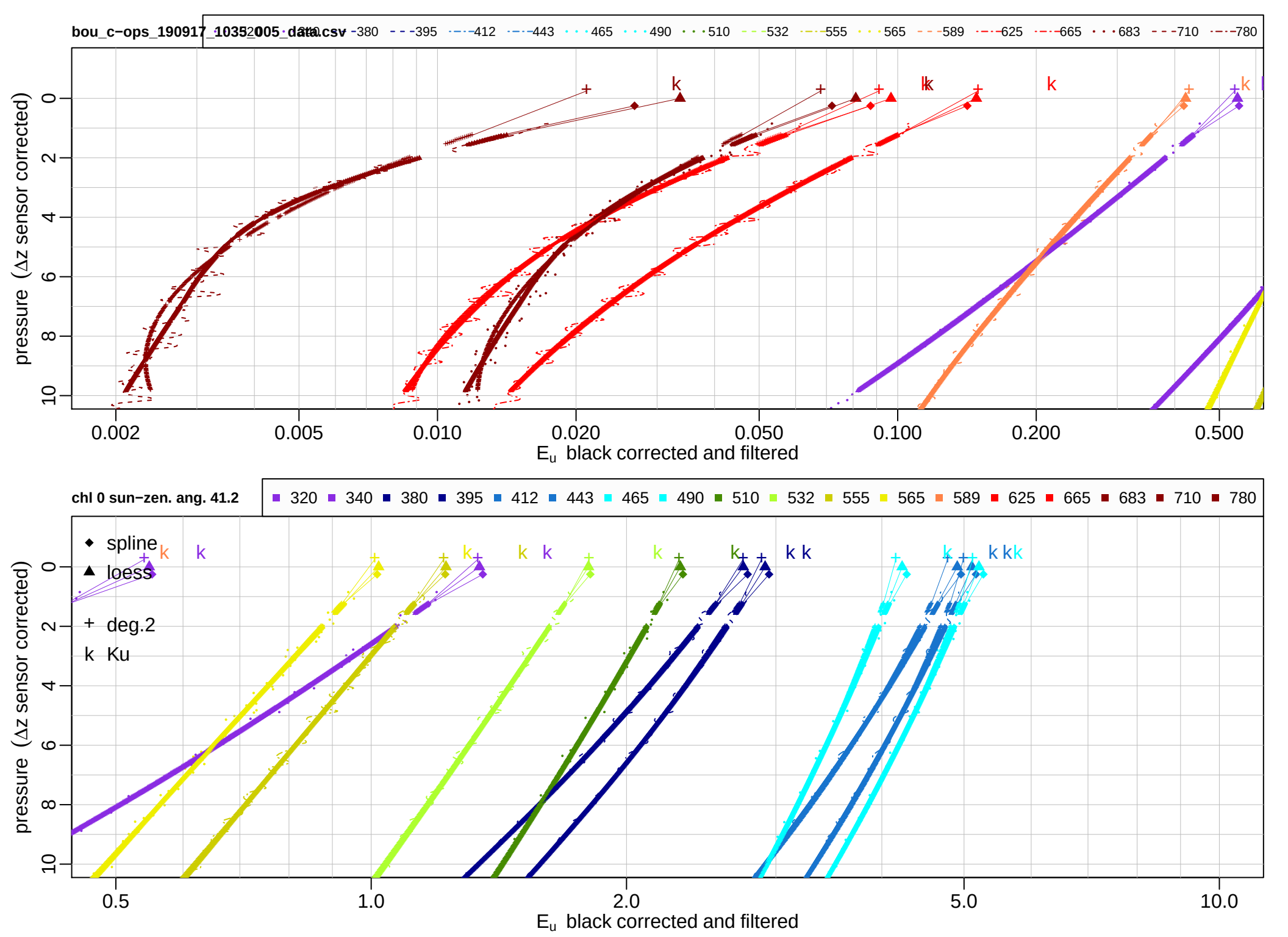


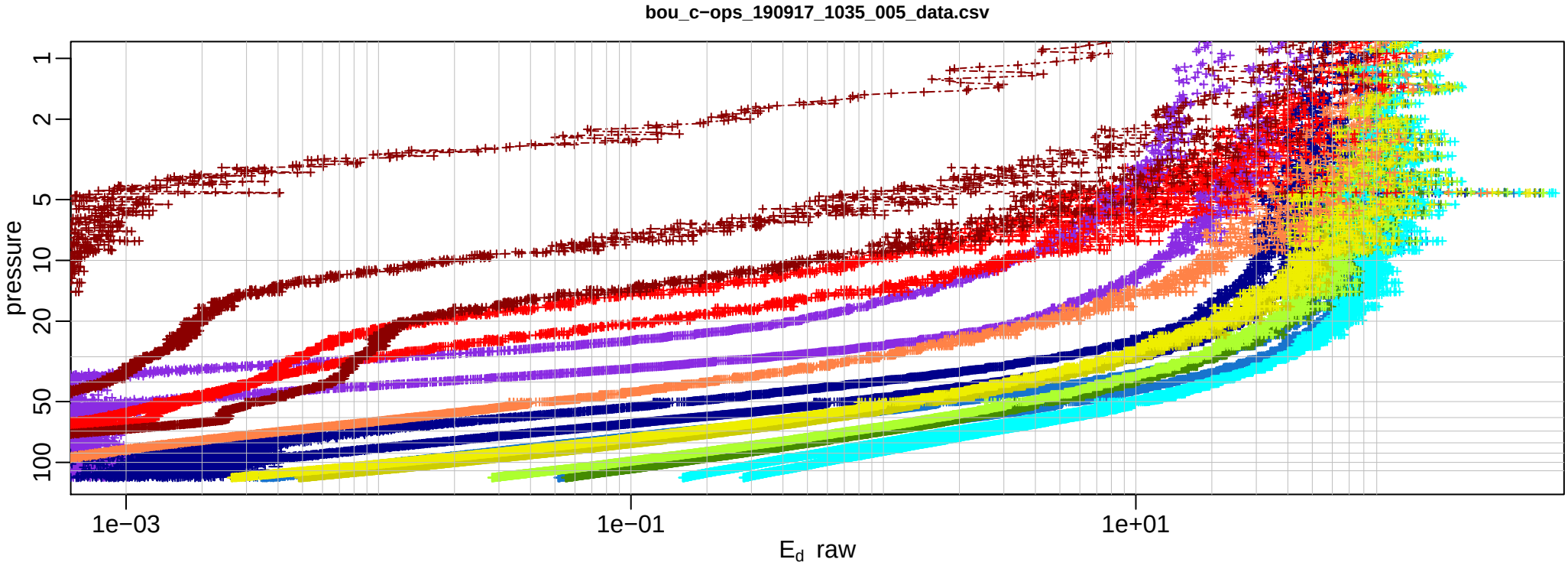

bou_c−ops_190917_1035_005_data.csv
pressure
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

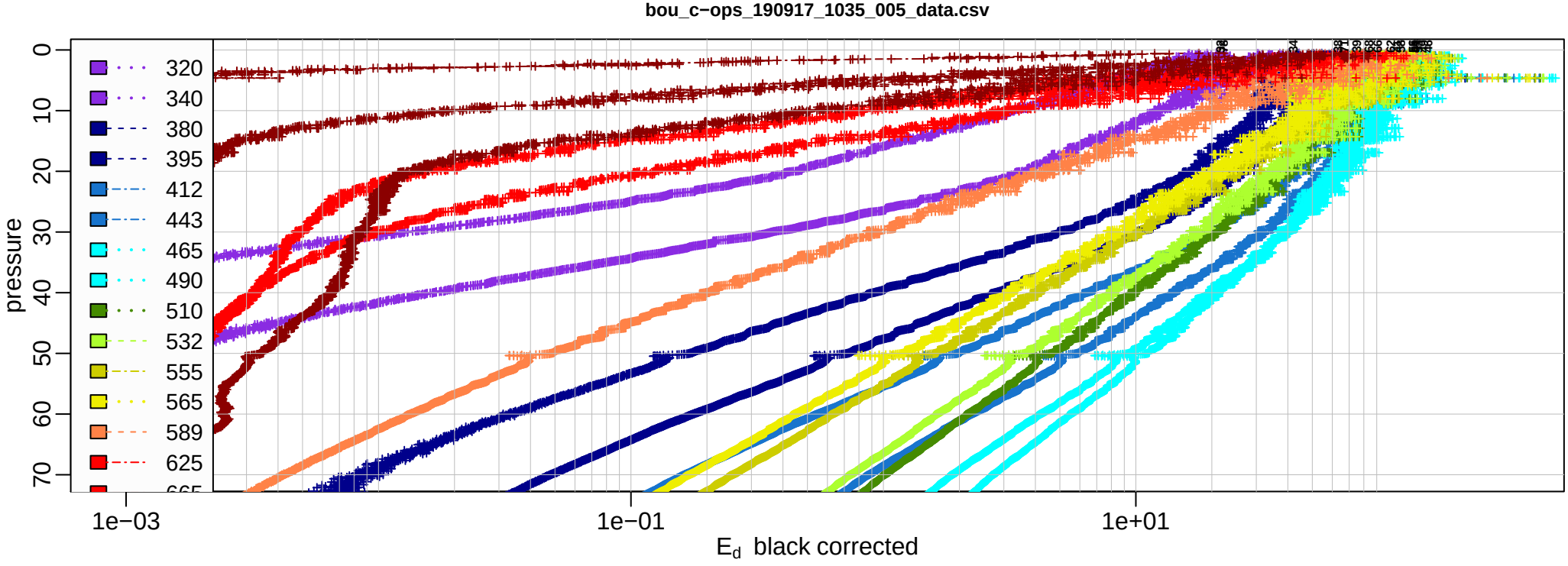

bou_c−ops_190917_1035_005_data.csv
pressure
E_s black corrected
Meas.
Th.
sun−zen. ang. = 41.2
Δ %

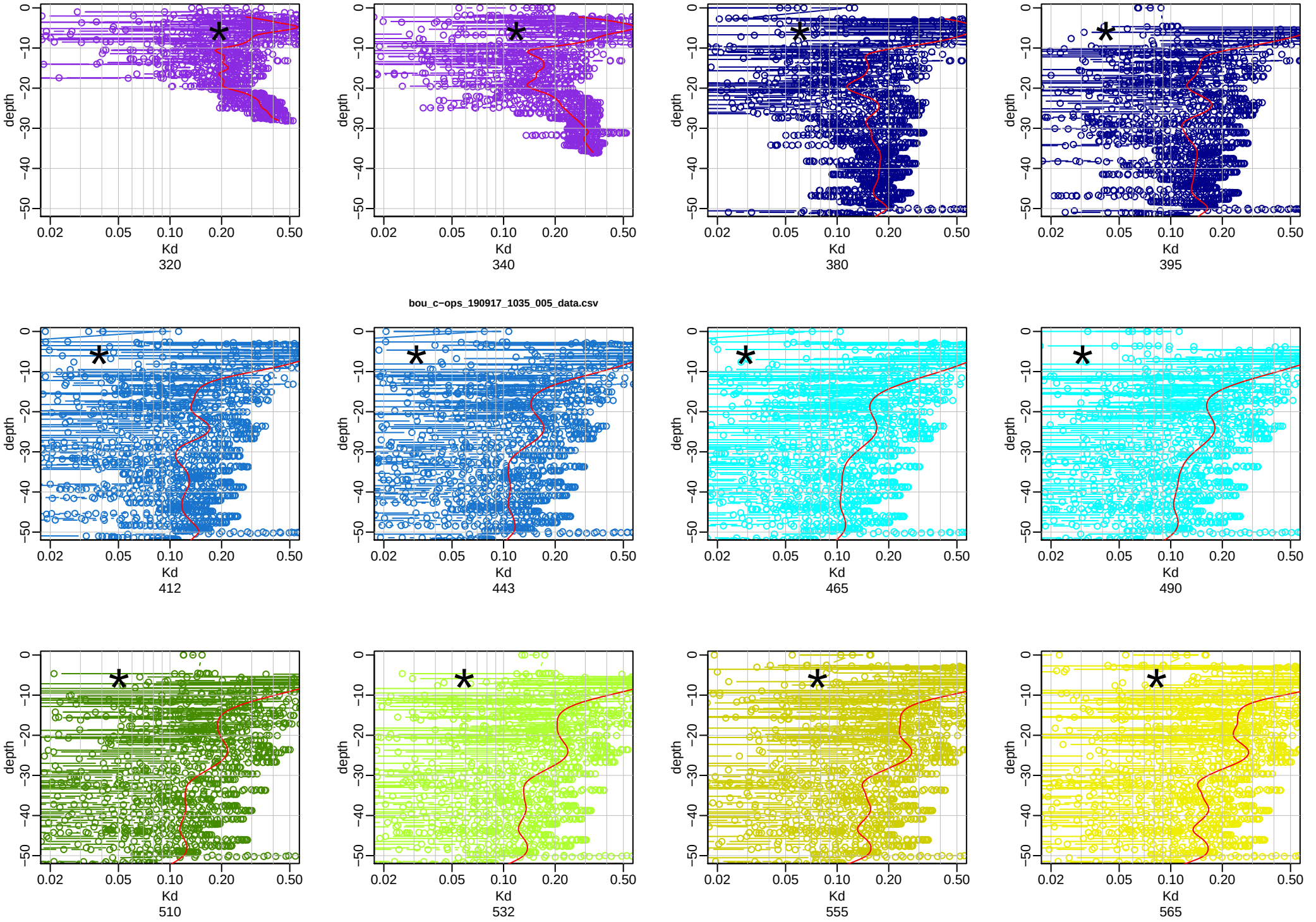

bou_c−ops_190917_1035_005_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

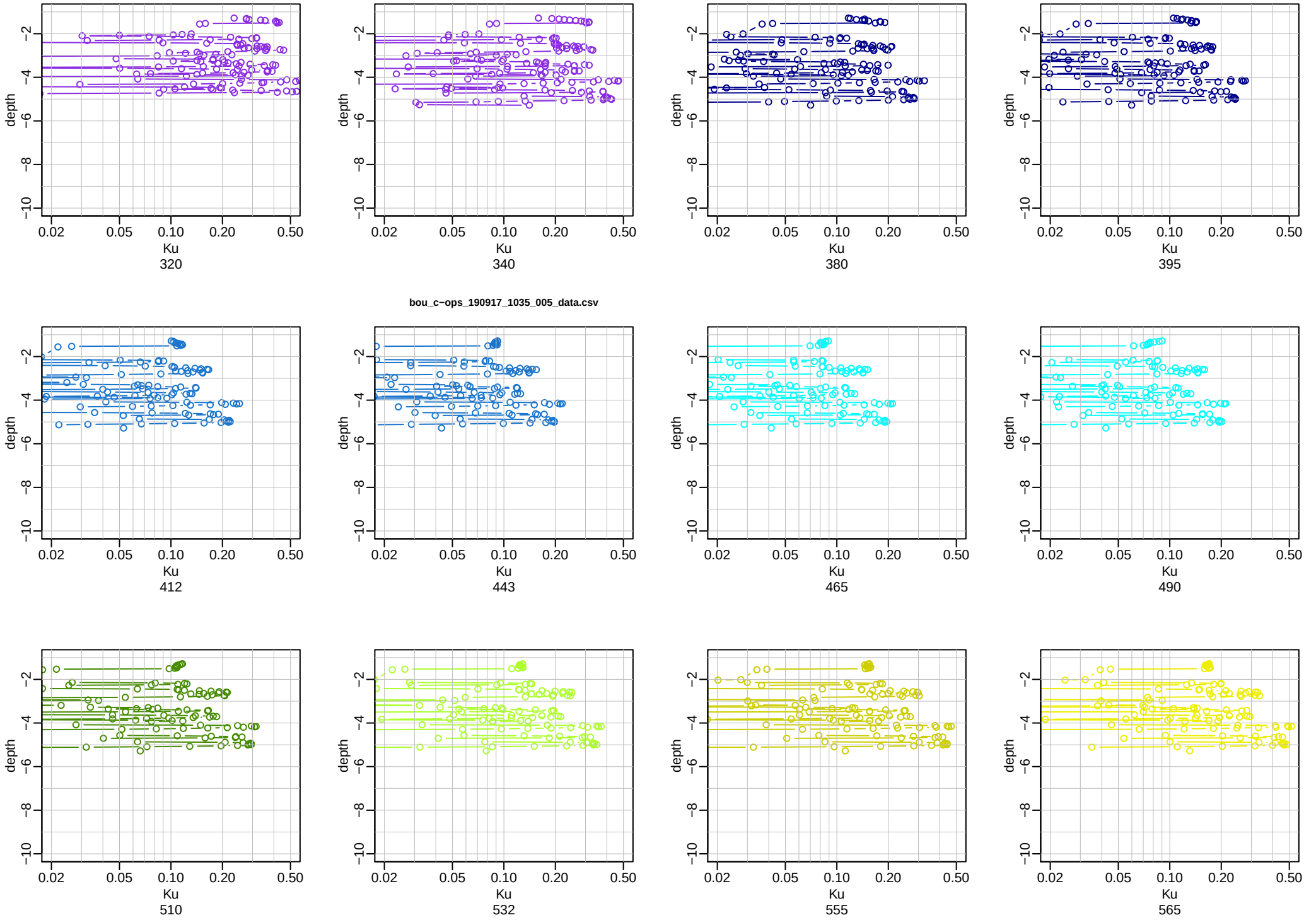

bou_c−ops_190917_1035_005_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
555
532
510
490
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u black corrected and filtered

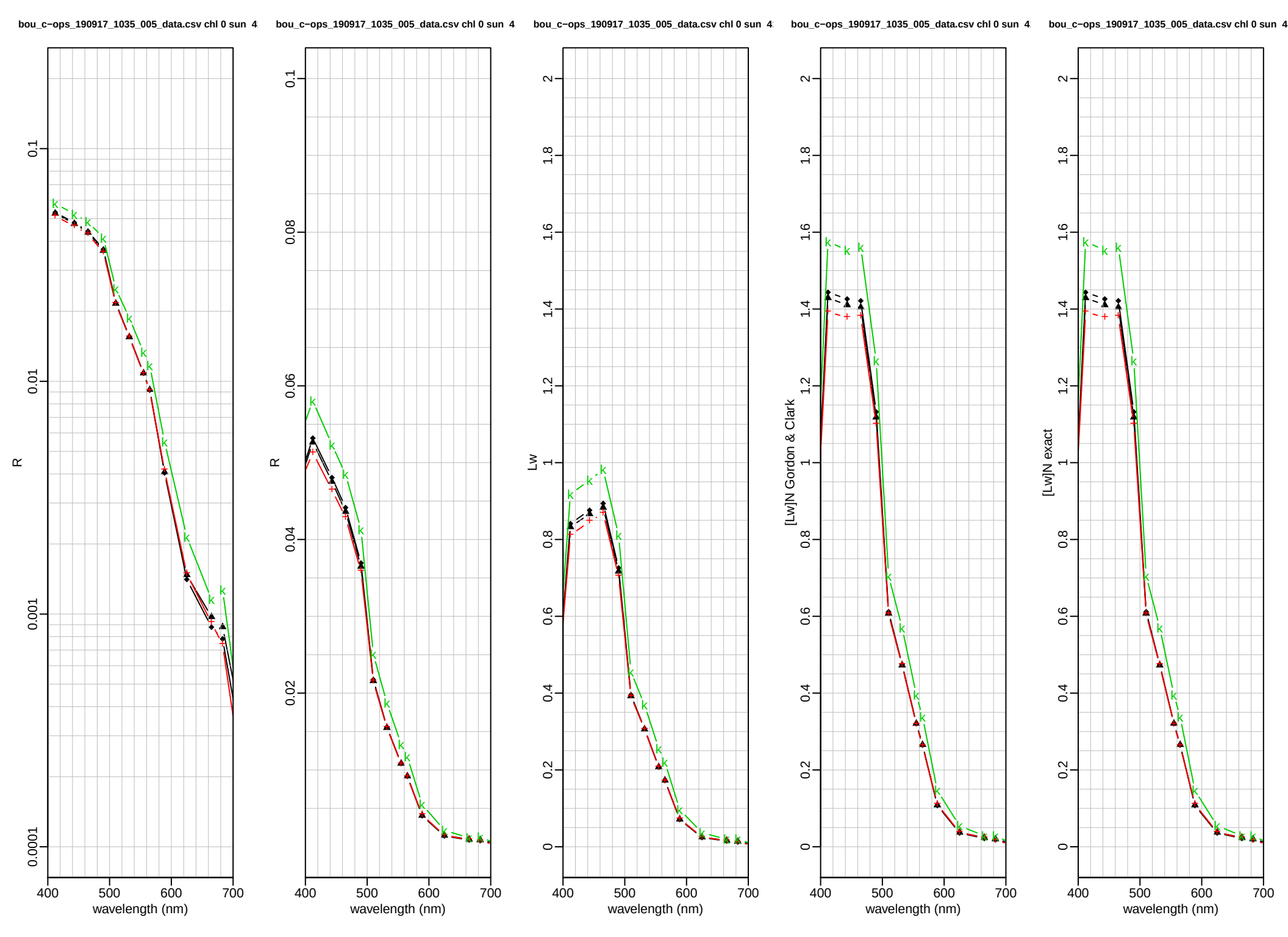

bou_c−ops_190917_1035005_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 41.2
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190917_1035_005_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190917_1035_005_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

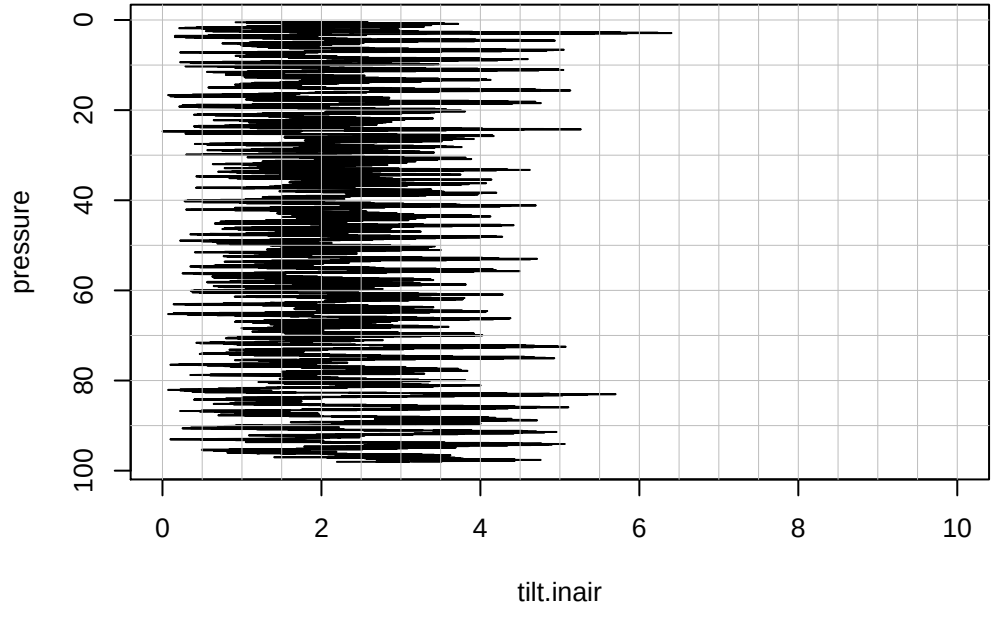

bou_c~ops_190917_1035_005_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

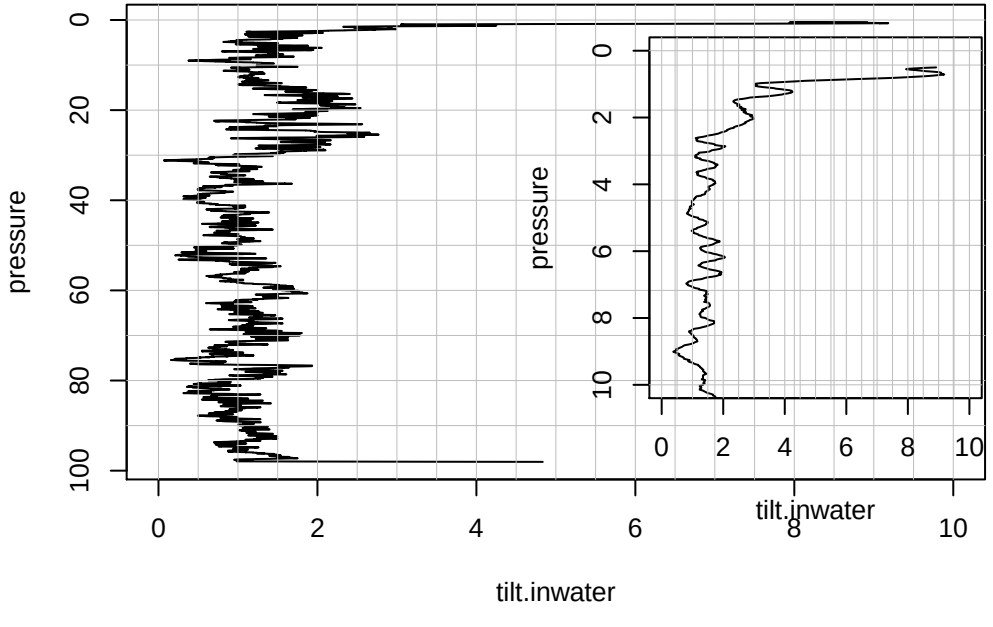

bou_c~ops_190917_1035_005_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

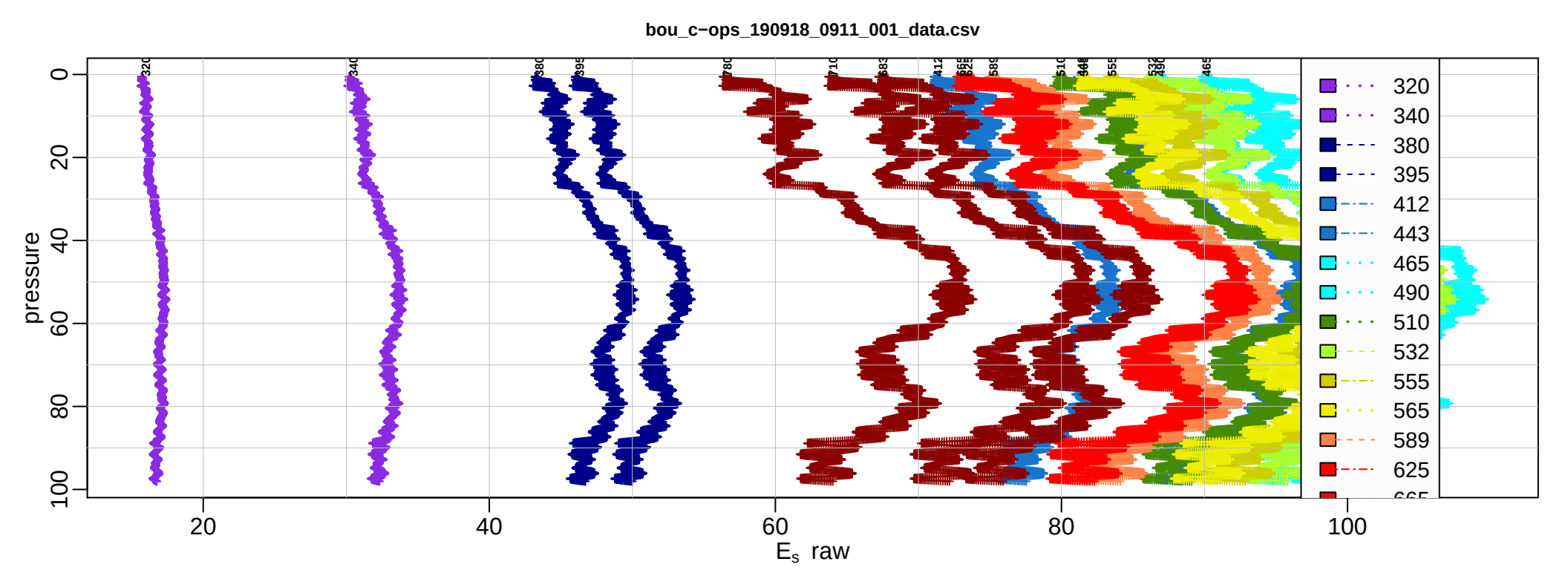

bou_c−ops_190917_1035_005_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190917_1035_005_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190917_1035_005_data.csv chl 0 sun 4
Lw
wavelength (nm)
bou_c−ops_190917_1035_005_data.csv chl 0 sun 4
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190917_1035_005_data.csv chl 0 sun 4
[Lw]N exact
wavelength (nm)

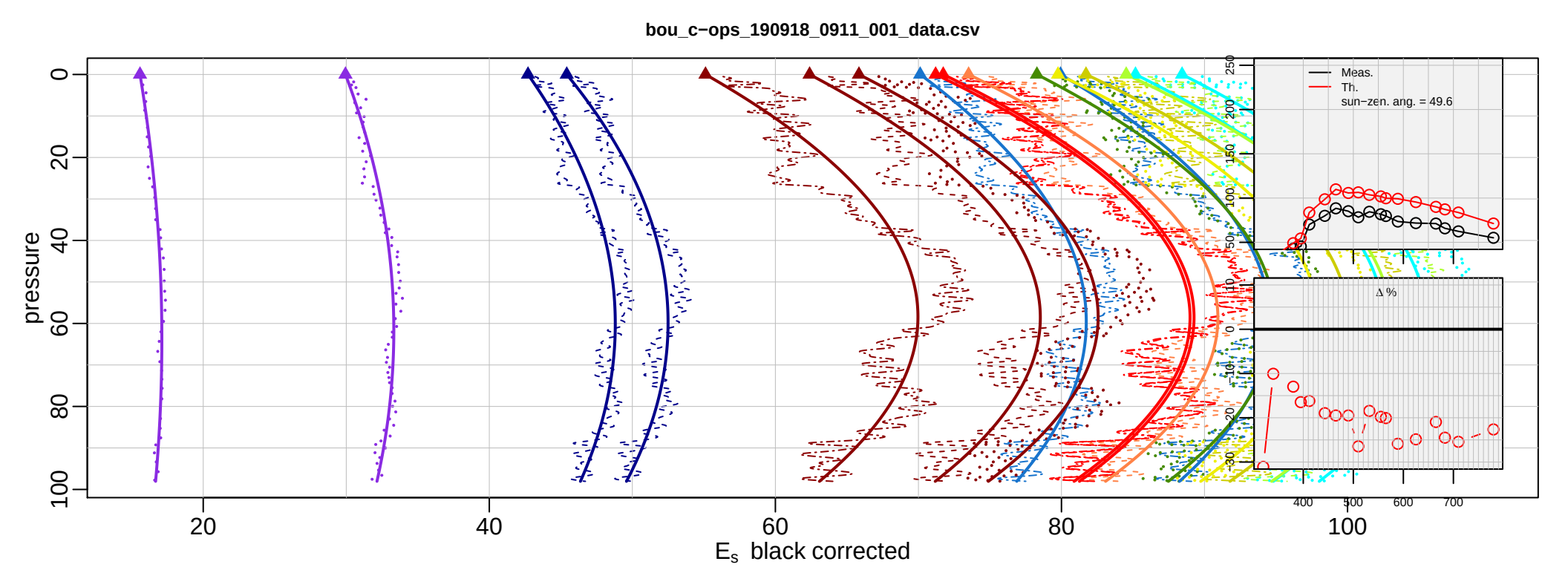
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole212/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole212/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89183
latitude 43.3657
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

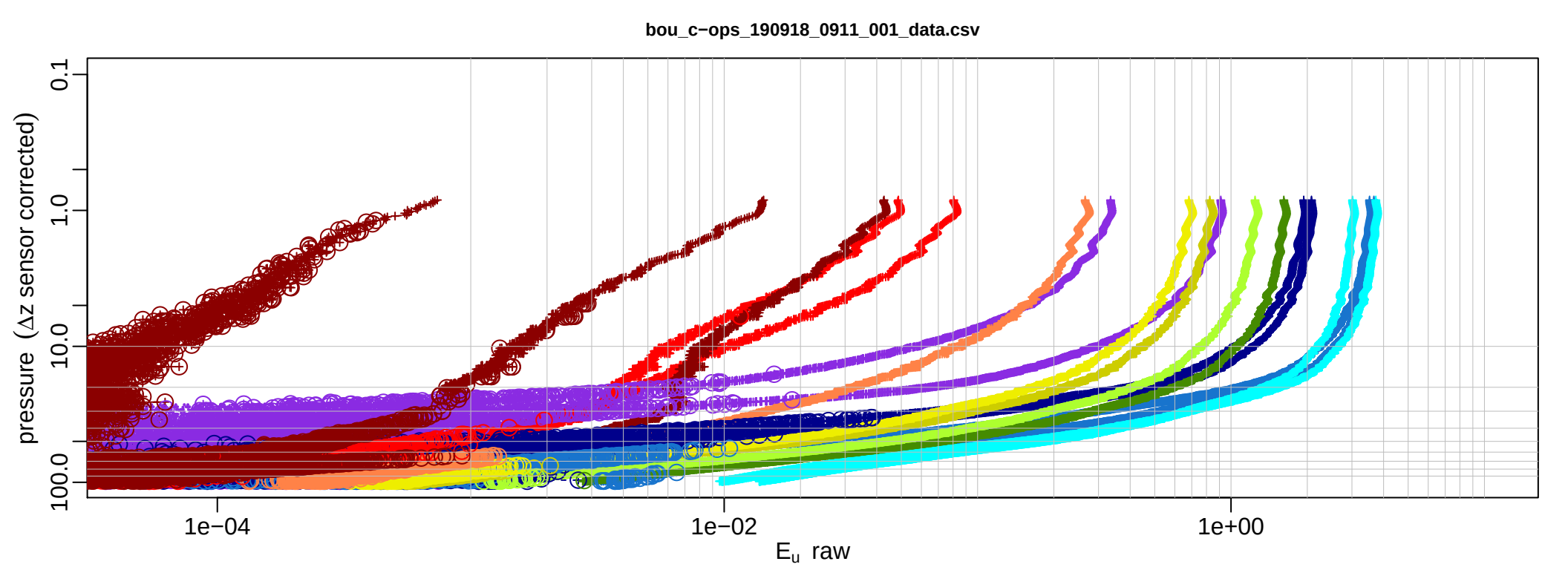
bou_c−ops_190918_0911_001_data.csv

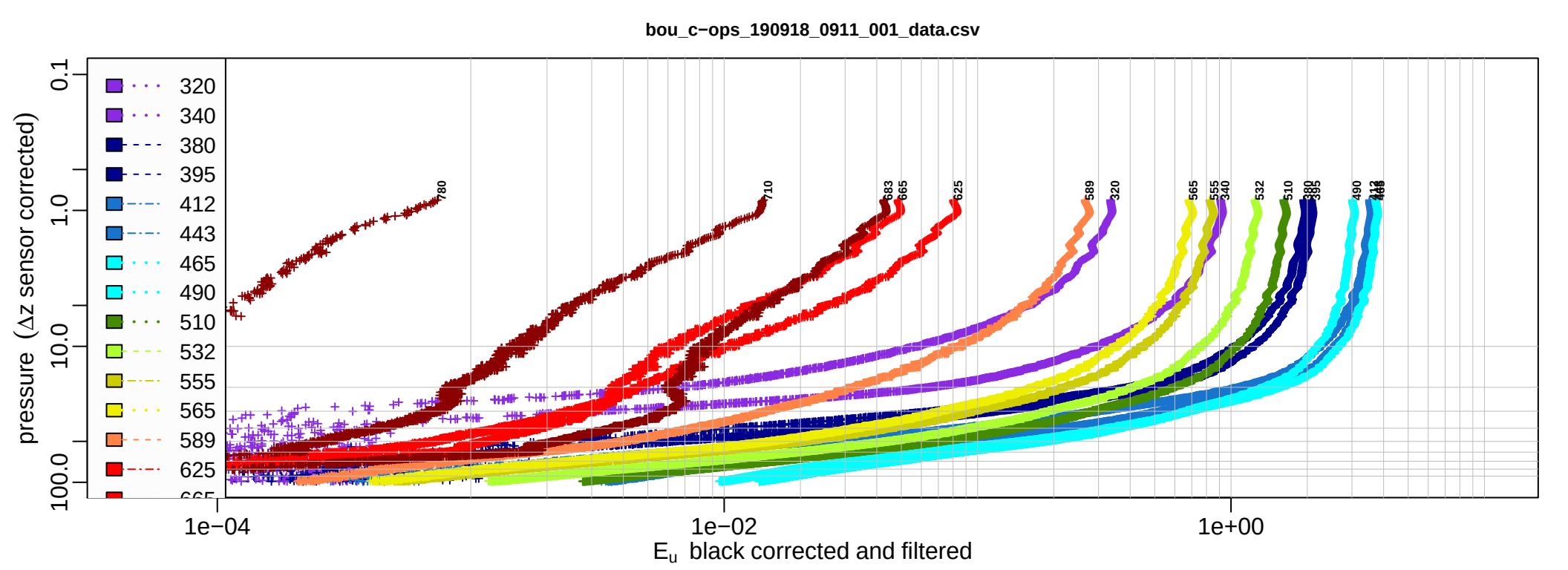


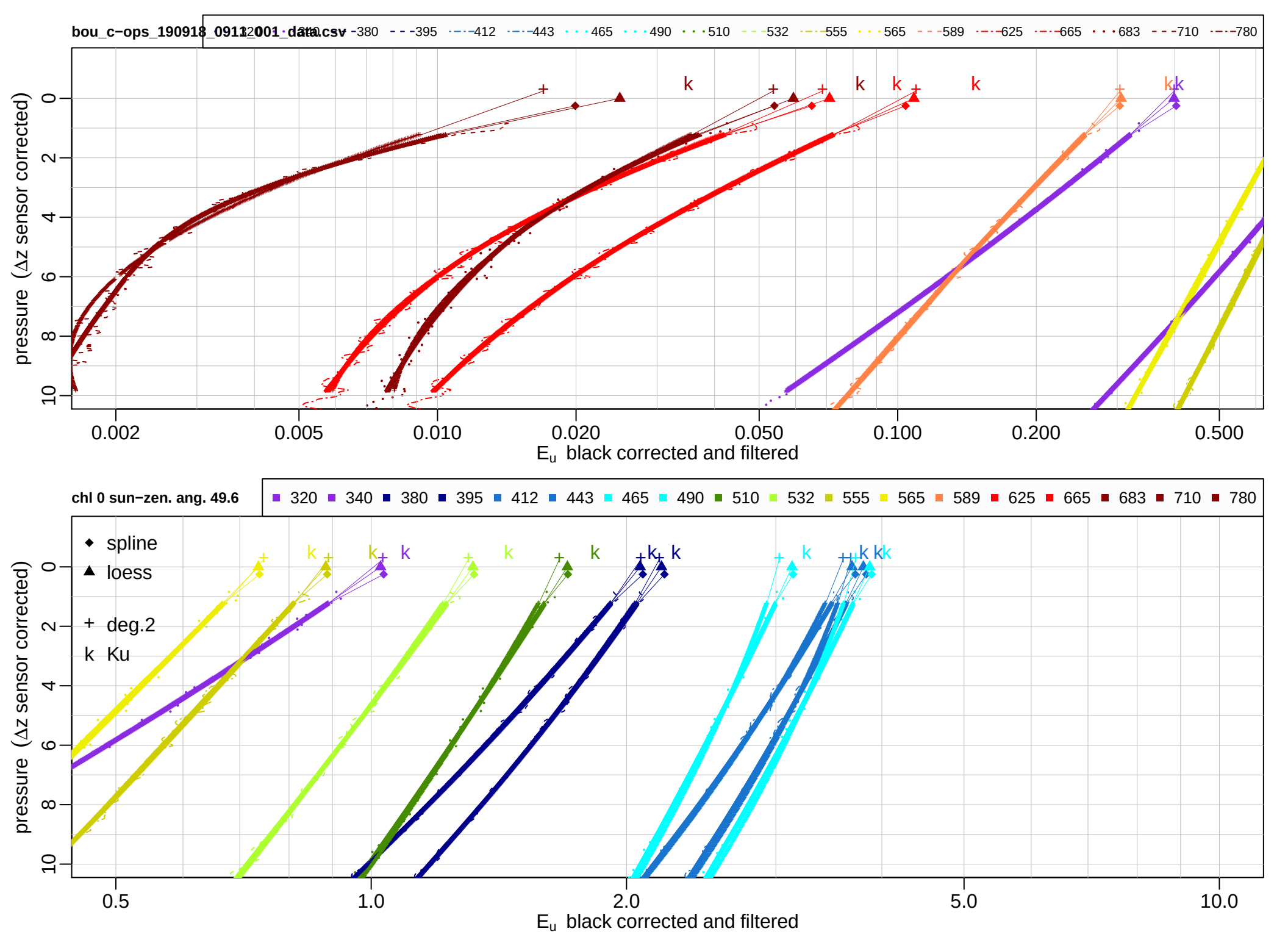


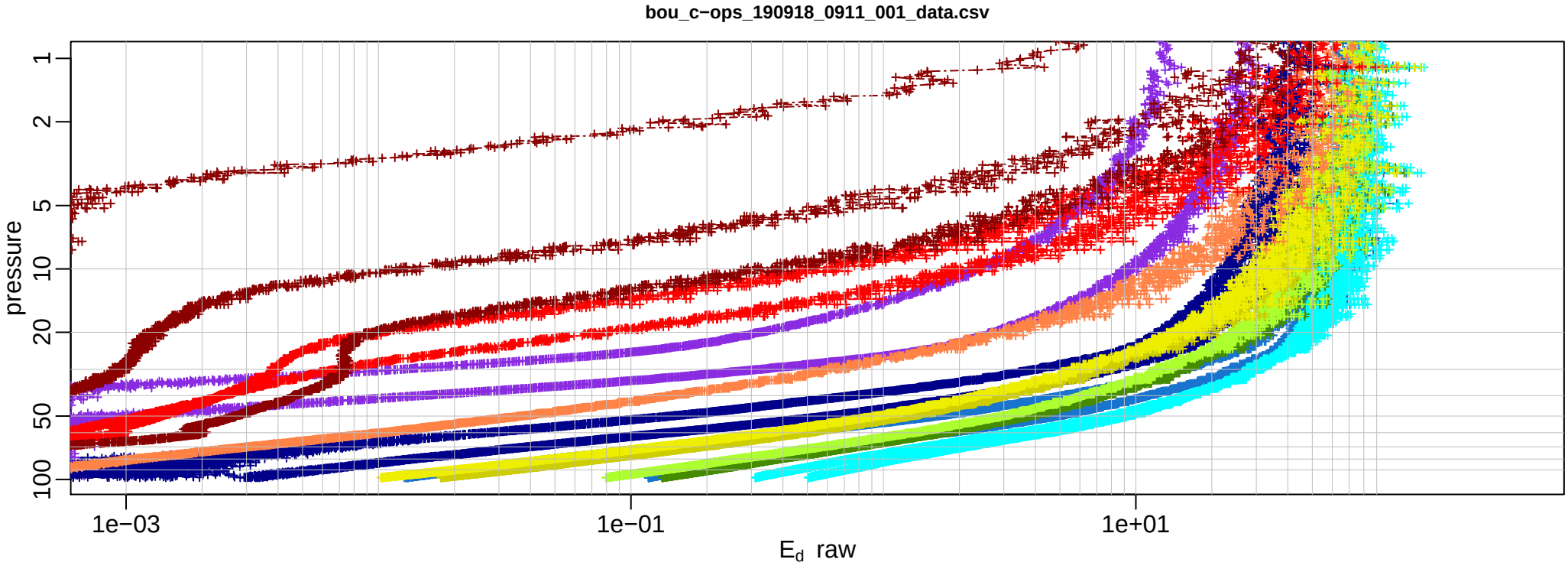

bou_c−ops_190918_0911_001_data.csv
pressure
0
20
40
60
80
100
20
40
60
80
100
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

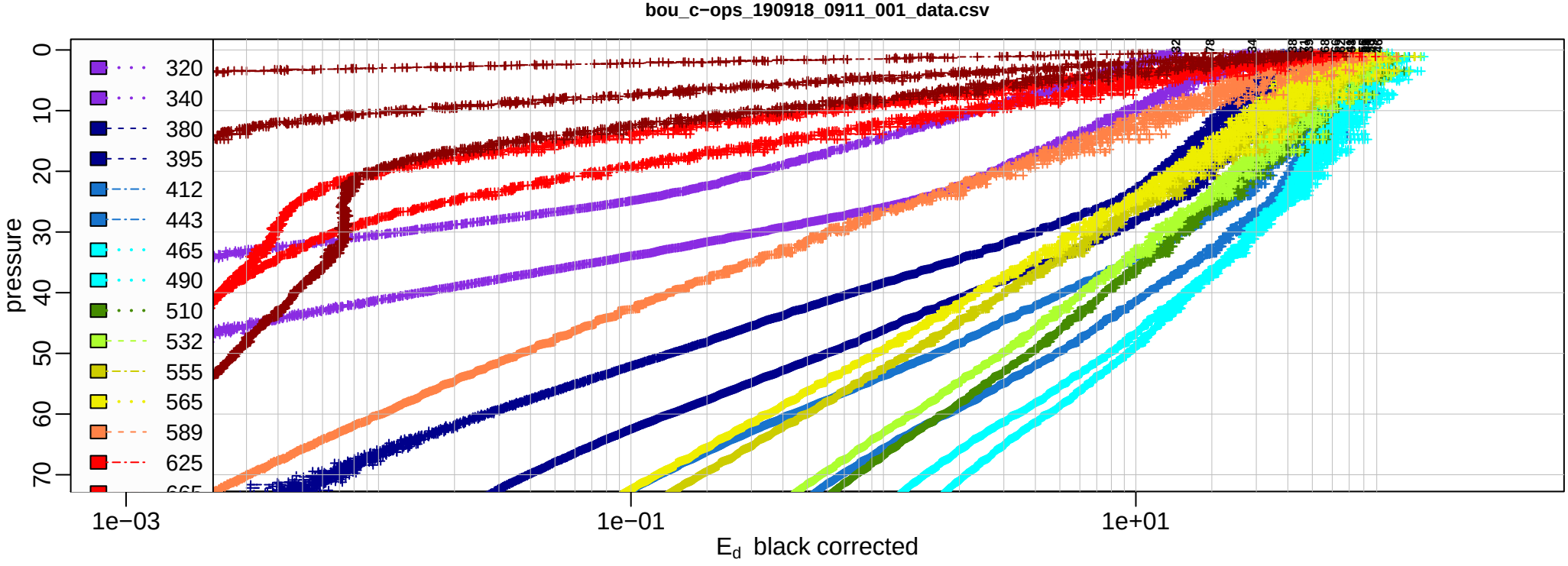

bou_c−ops_190918_0911_001_data.csv
pressure
0
20
40
60
80
100
20
40
60
80
100
E_s black corrected
Meas.
Th.
sun−zen. ang. = 49.6
Δ %
250
200
150
100
50
0
−10
−20
−30
400
500
600
700


bou_c−ops_190918_0911_001_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw


bou_c−ops_190918_0911_001_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
555
340
532
510
380
395
490
1e−04
1e−02
1e+00
E_u black corrected and filtered


bou_c−ops_190918_091001_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 49.6
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190918_0911_001_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190918_0911_001_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
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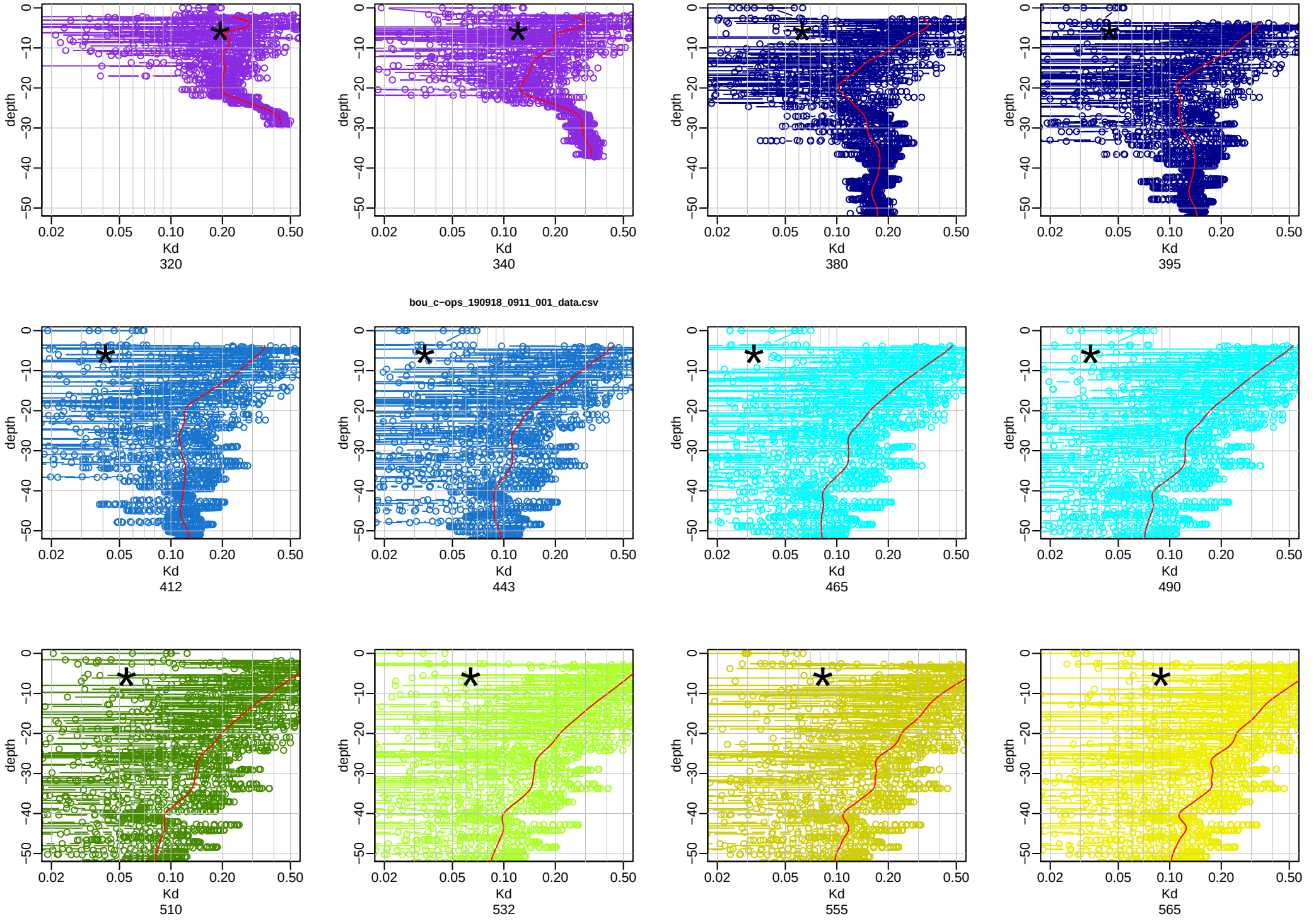
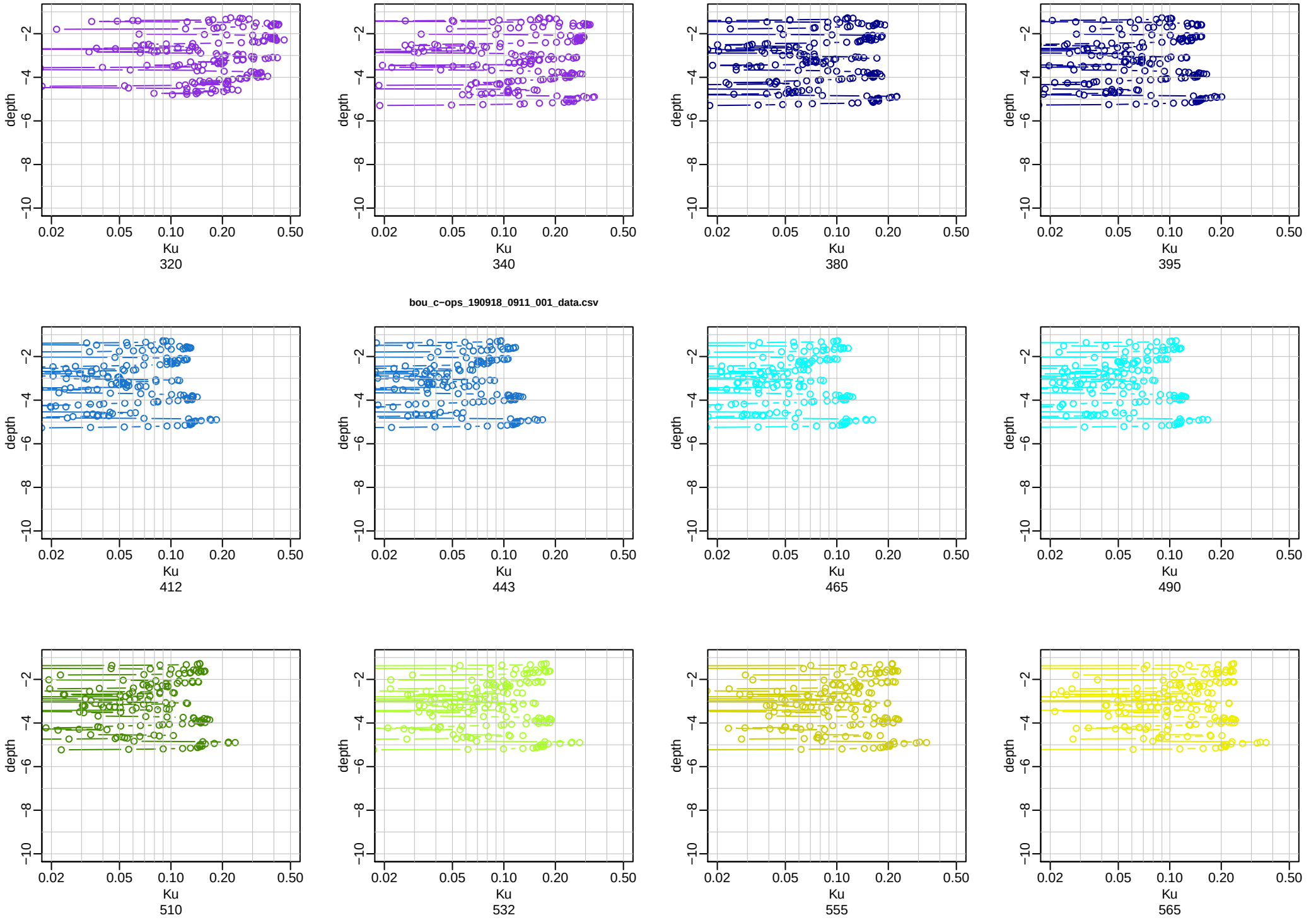
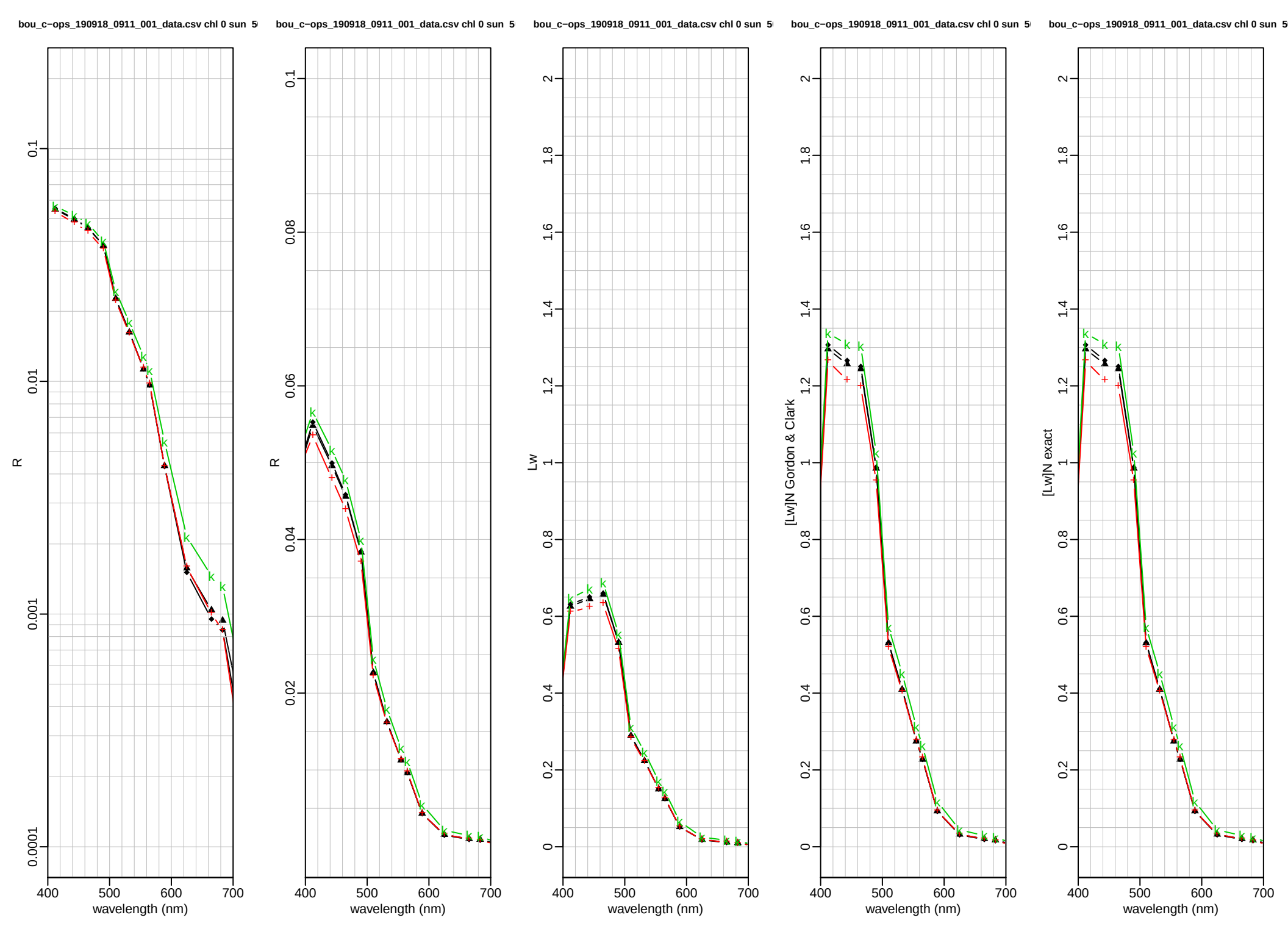
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

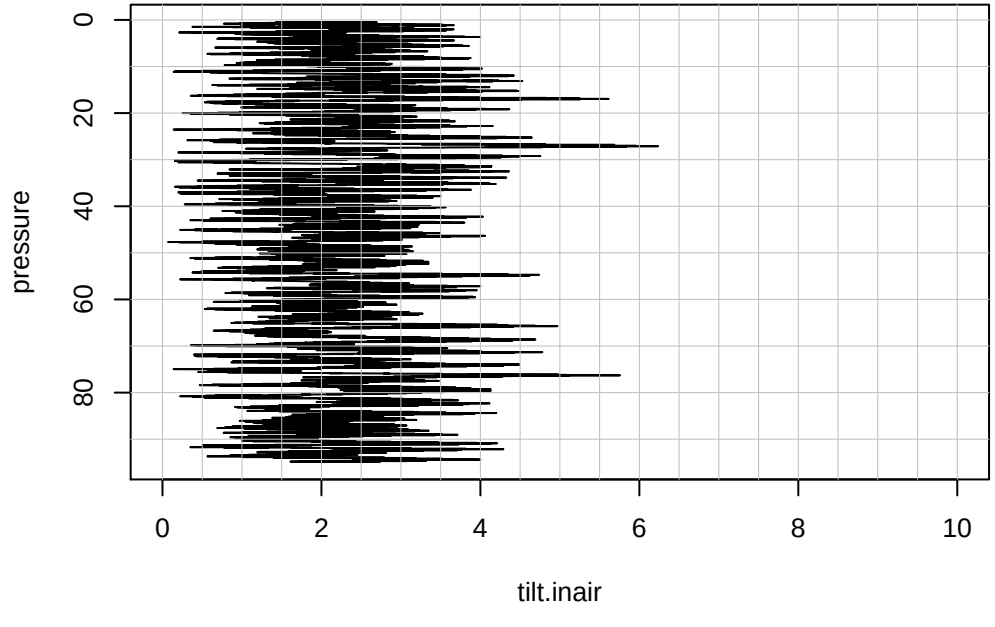

bou_c~ops_190918_0911_001_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

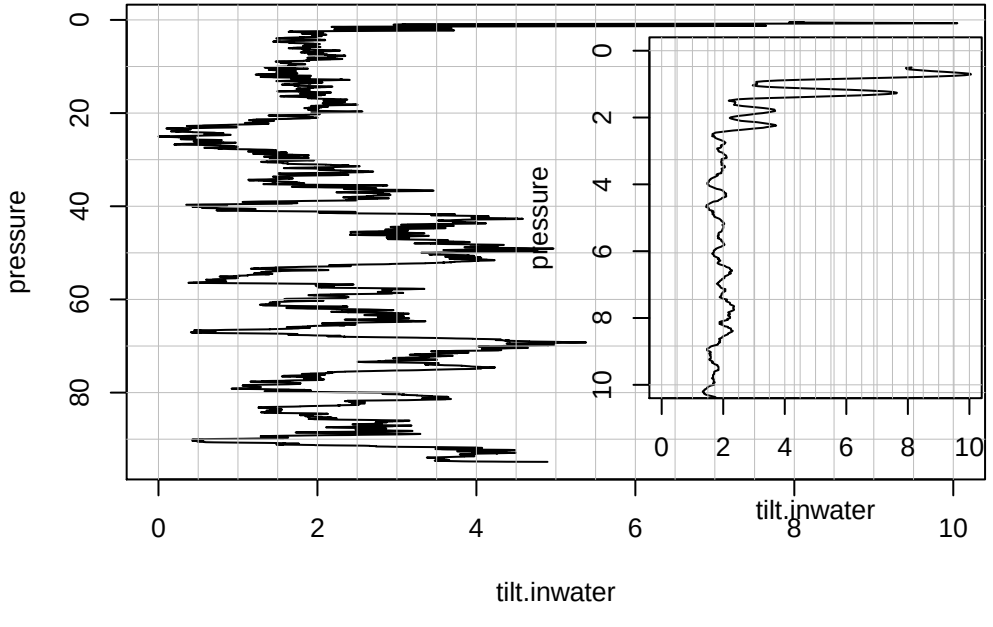

bou_c~ops_190918_0911_001_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

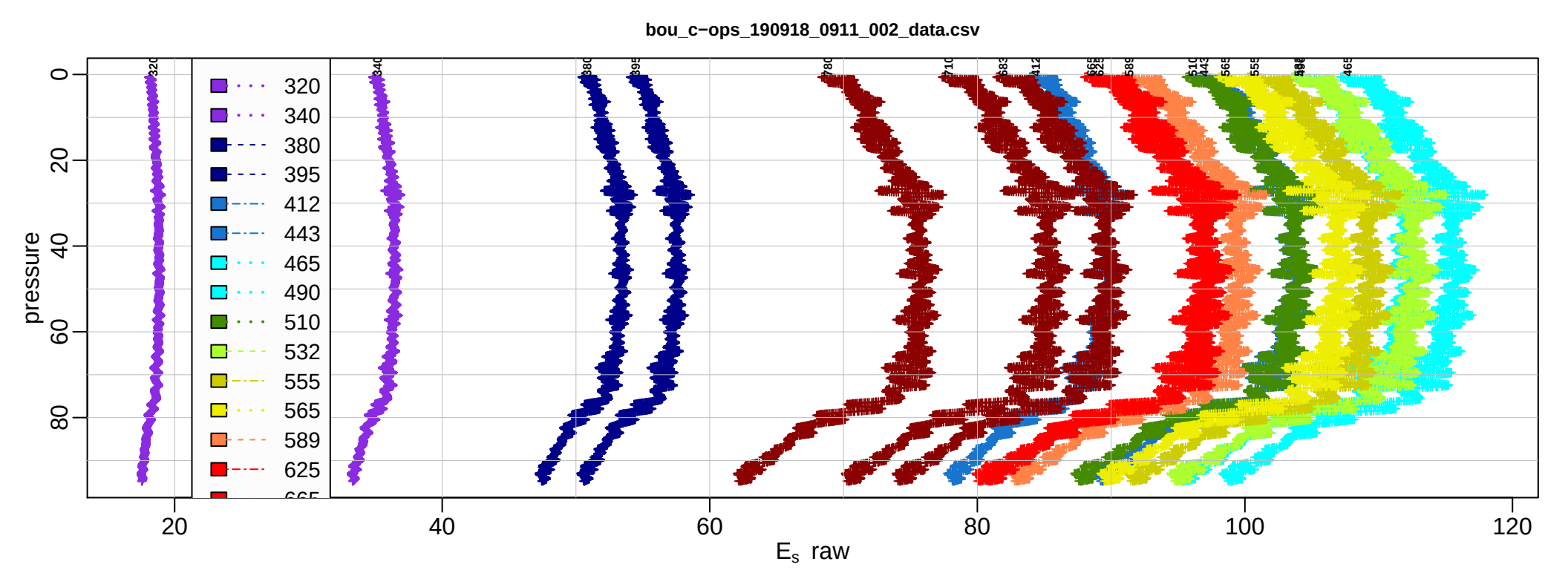

bou_c−ops_190918_0911_001_data.csv chl 0 sun 5
R
wavelength (nm)
bou_c−ops_190918_0911_001_data.csv chl 0 sun 5
R
wavelength (nm)
bou_c−ops_190918_0911_001_data.csv chl 0 sun 5
Lw
wavelength (nm)
bou_c−ops_190918_0911_001_data.csv chl 0 sun 5
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190918_0911_001_data.csv chl 0 sun 5
[Lw]N exact
wavelength (nm)

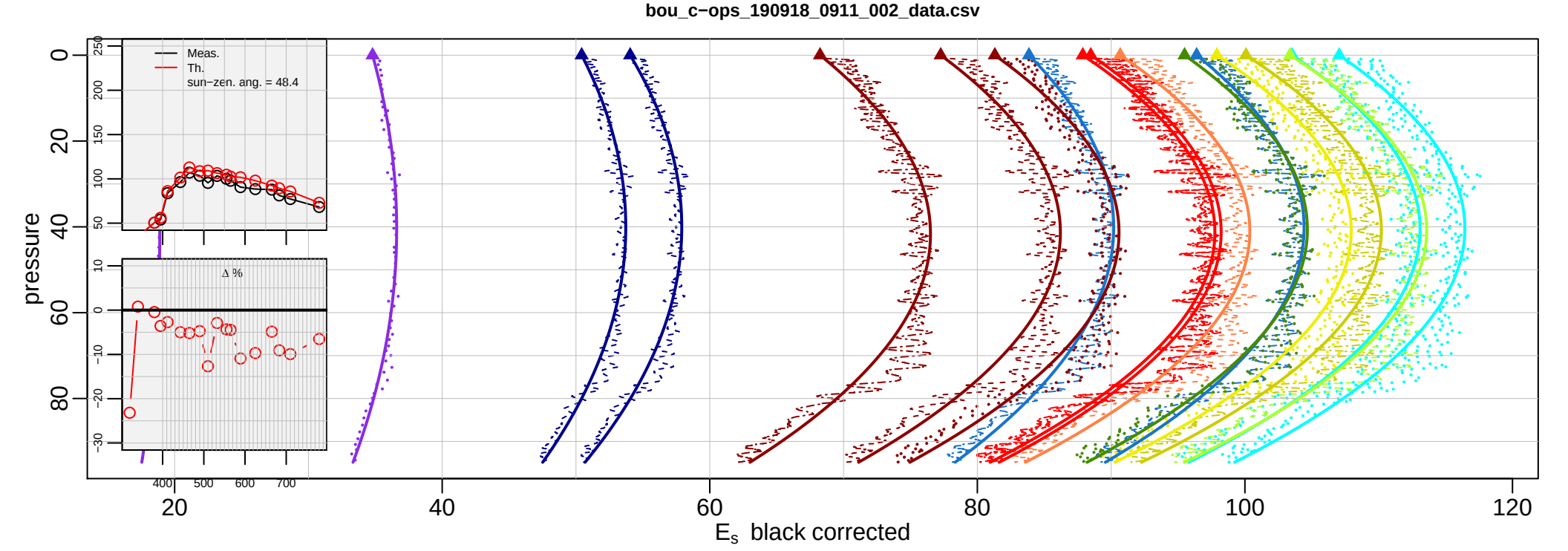
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole212/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole212/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.88595
latitude 43.36516
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

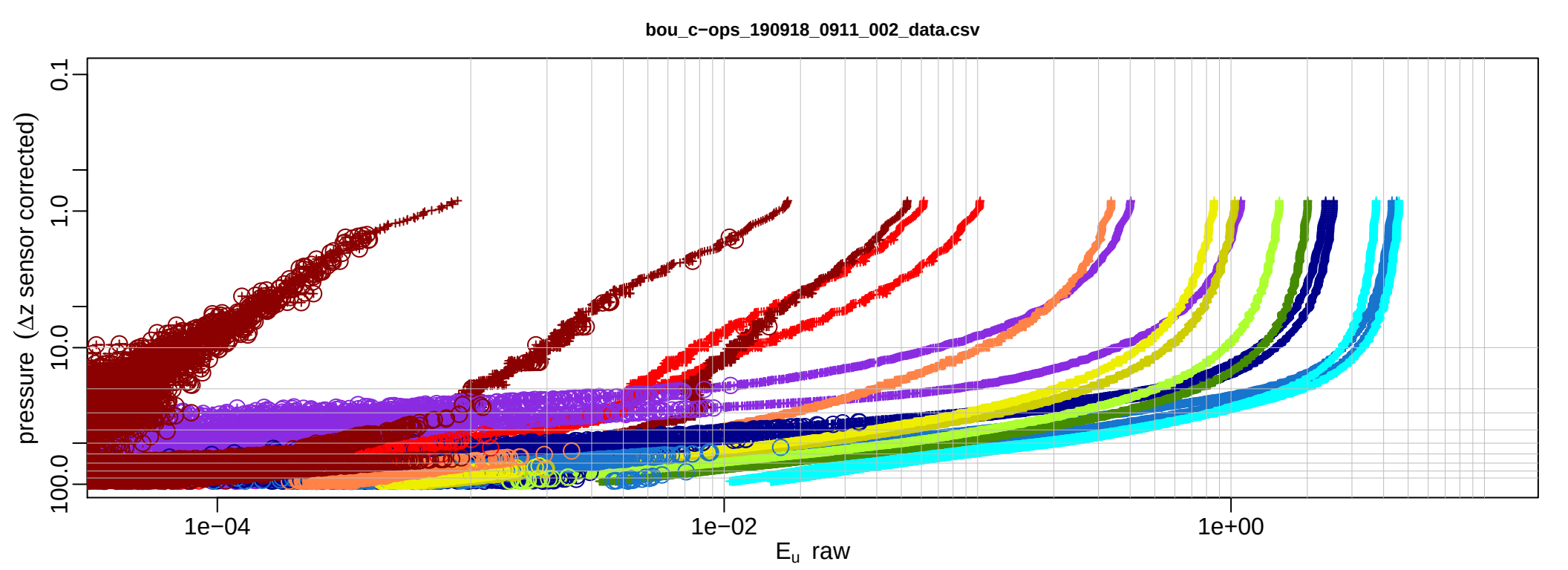
bou_c−ops_190918_0911_002_data.csv

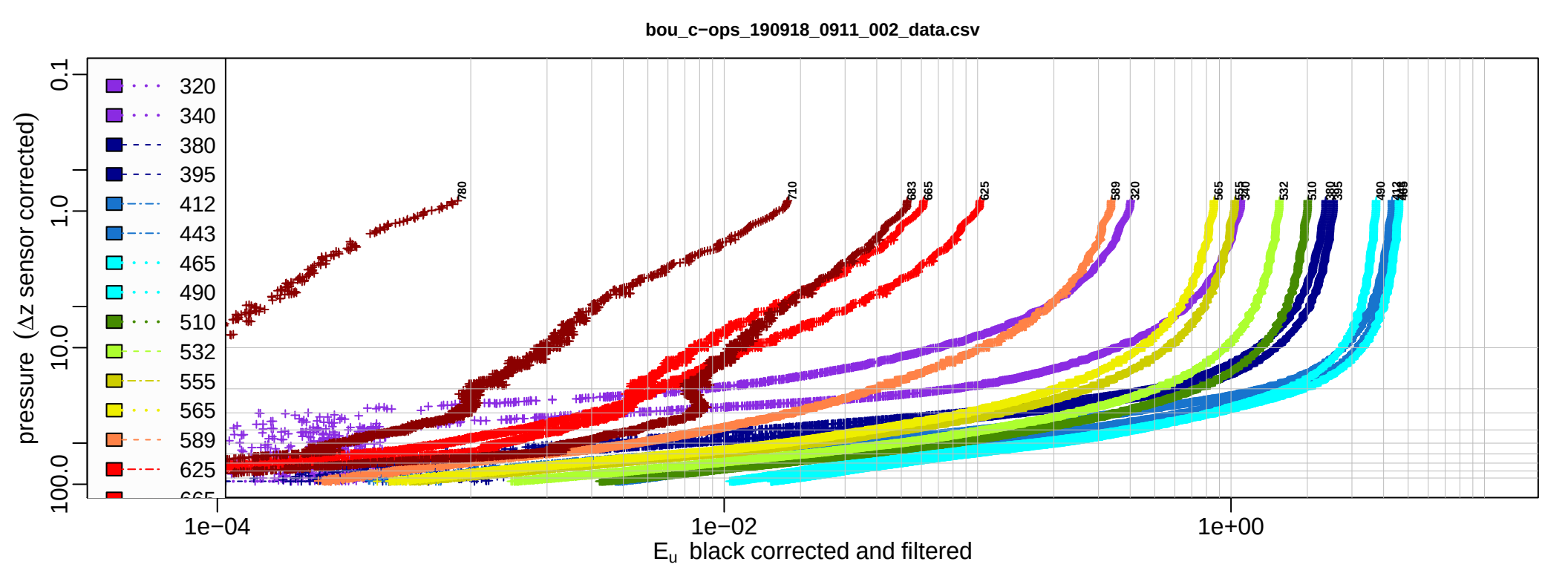


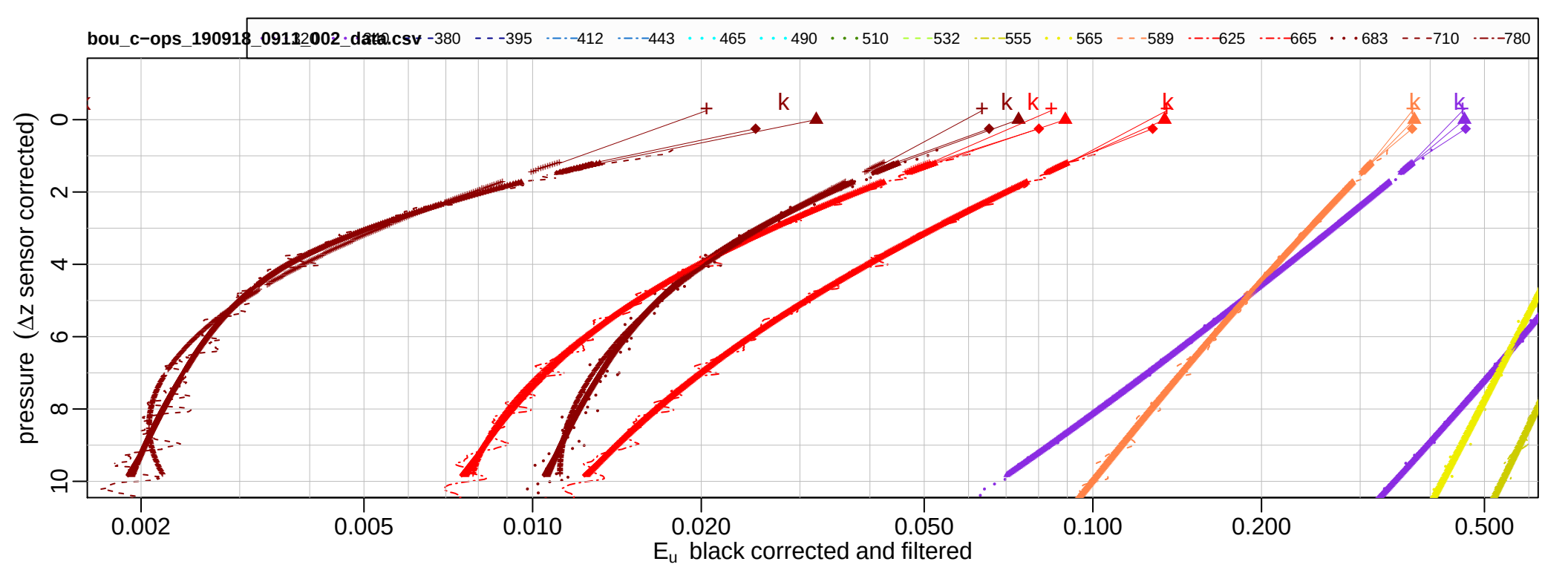


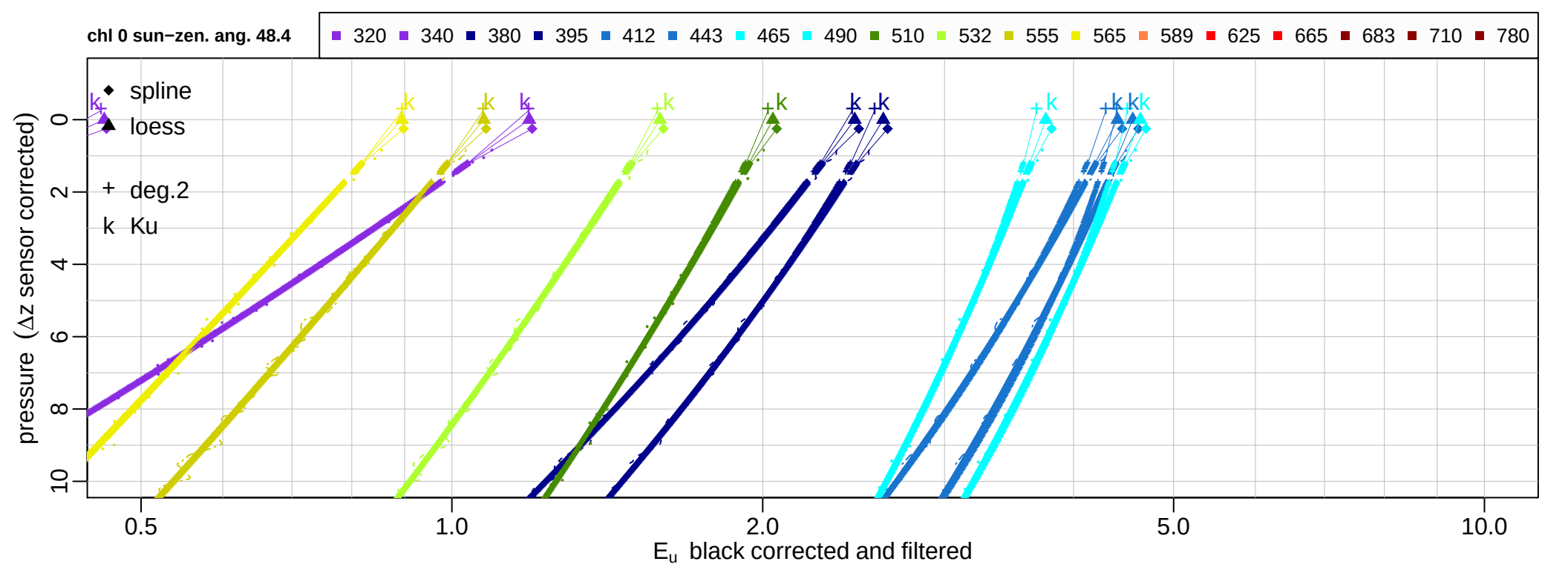

bou_c−ops_190918_0911_002_data.csv
pressure
0
20
40
60
80
320
340
380
395
412
443
465
490
510
532
555
565
589
625
20
40
60
80
100
120
E_s raw

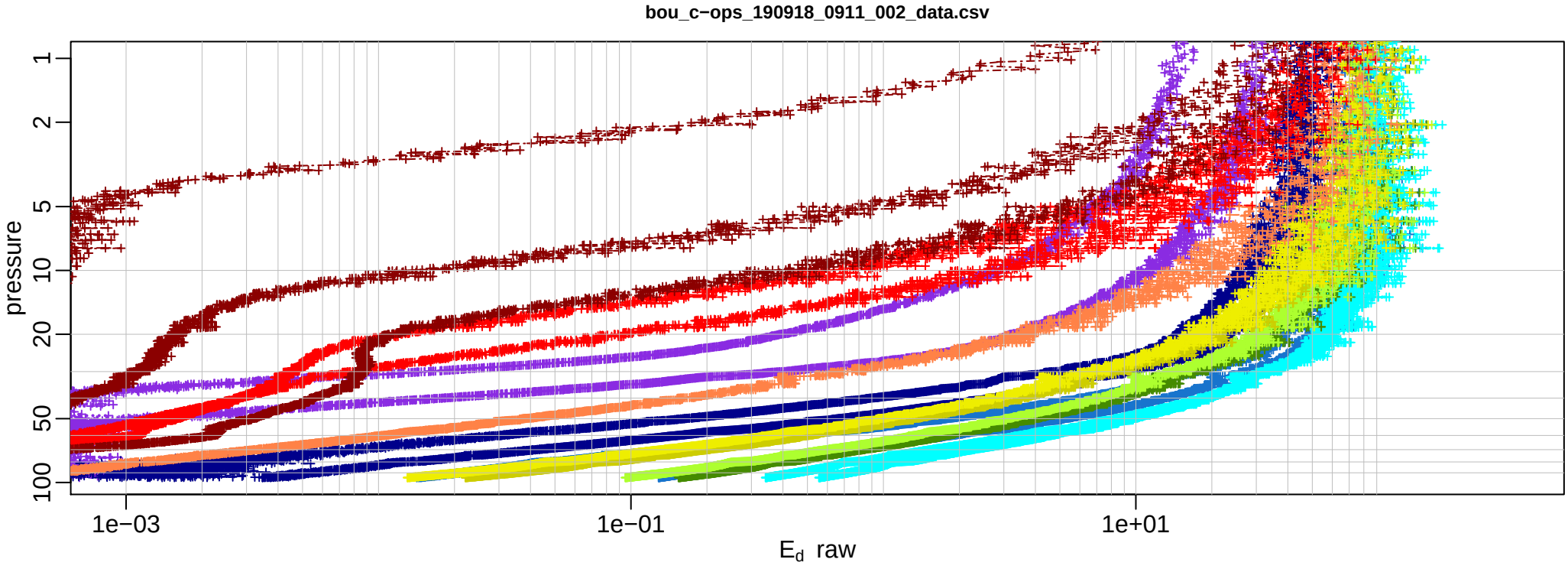

bou_c−ops_190918_0911_002_data.csv
pressure
0
20
40
60
80
Meas.
Th.
sun−zen. ang. = 48.4
Δ %
250
200
150
100
50
10
0
−10
−20
−30
400
500
600
700
20
40
60
80
100
120
E_s black corrected

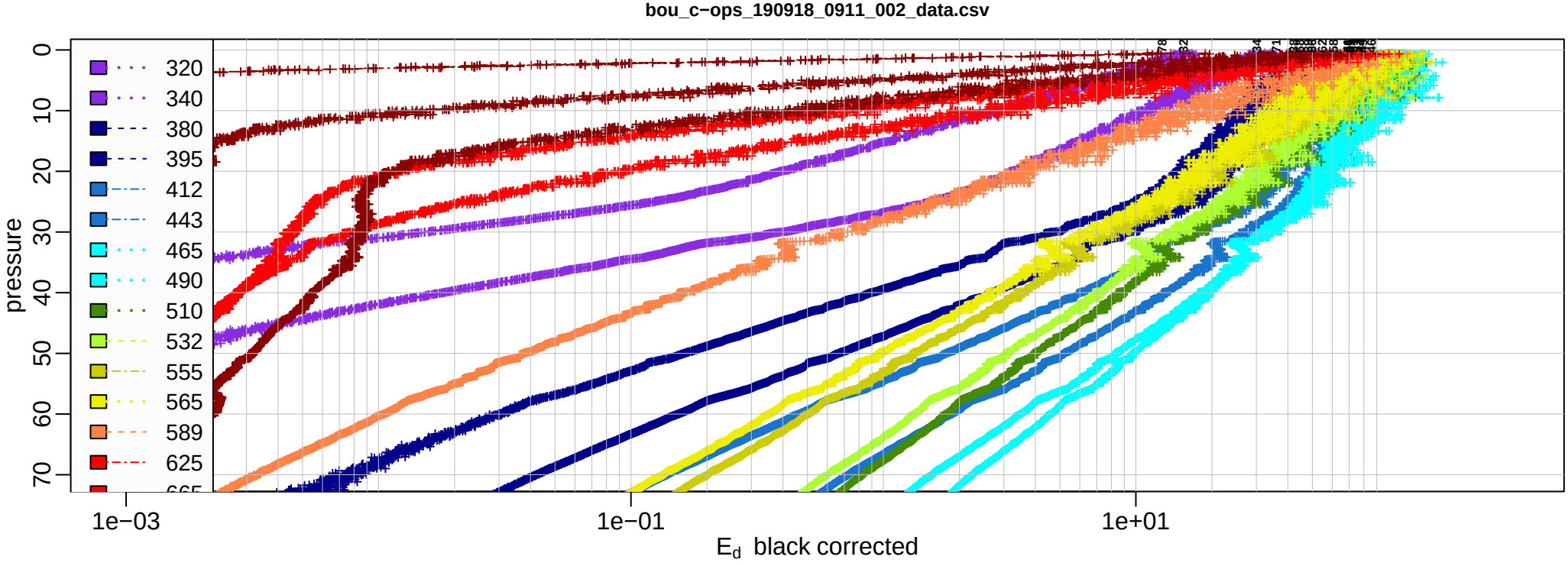

bou_c−ops_190918_0911_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

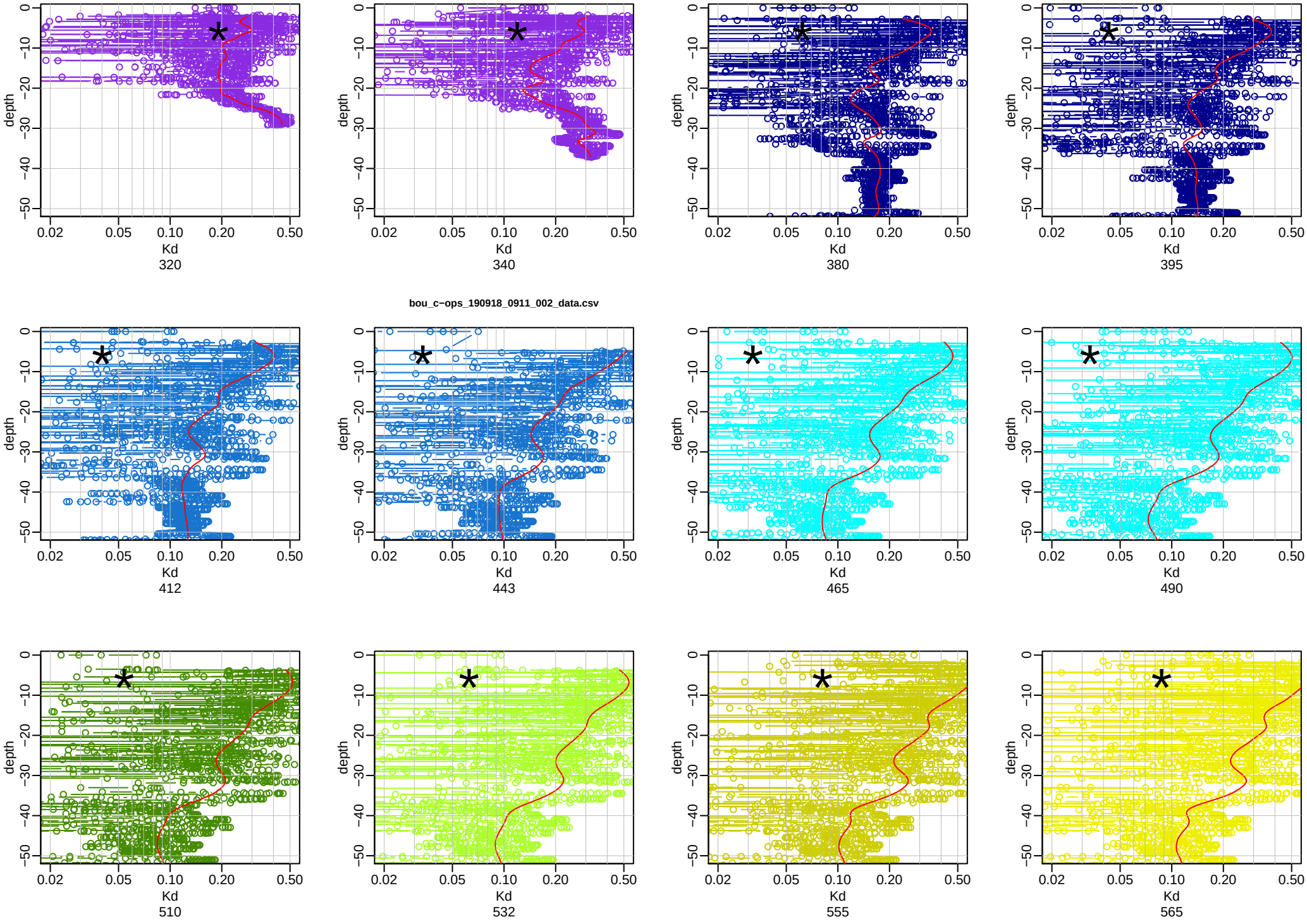

bou_c−ops_190918_0911_002_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
555
540
532
510
490
1e−04
1e−02
1e+00
E_u black corrected and filtered

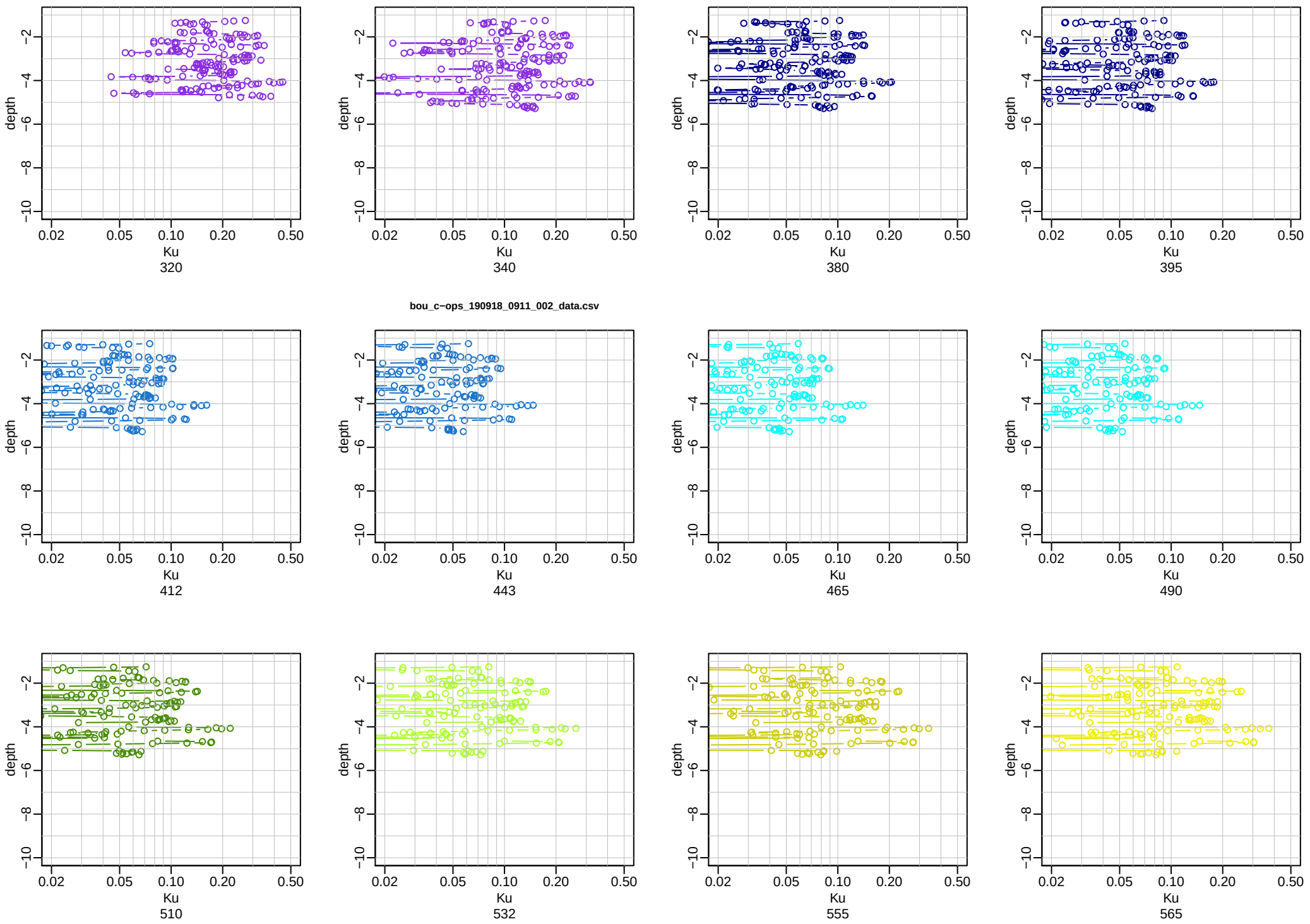

bou_c−ops_190918_091002_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered

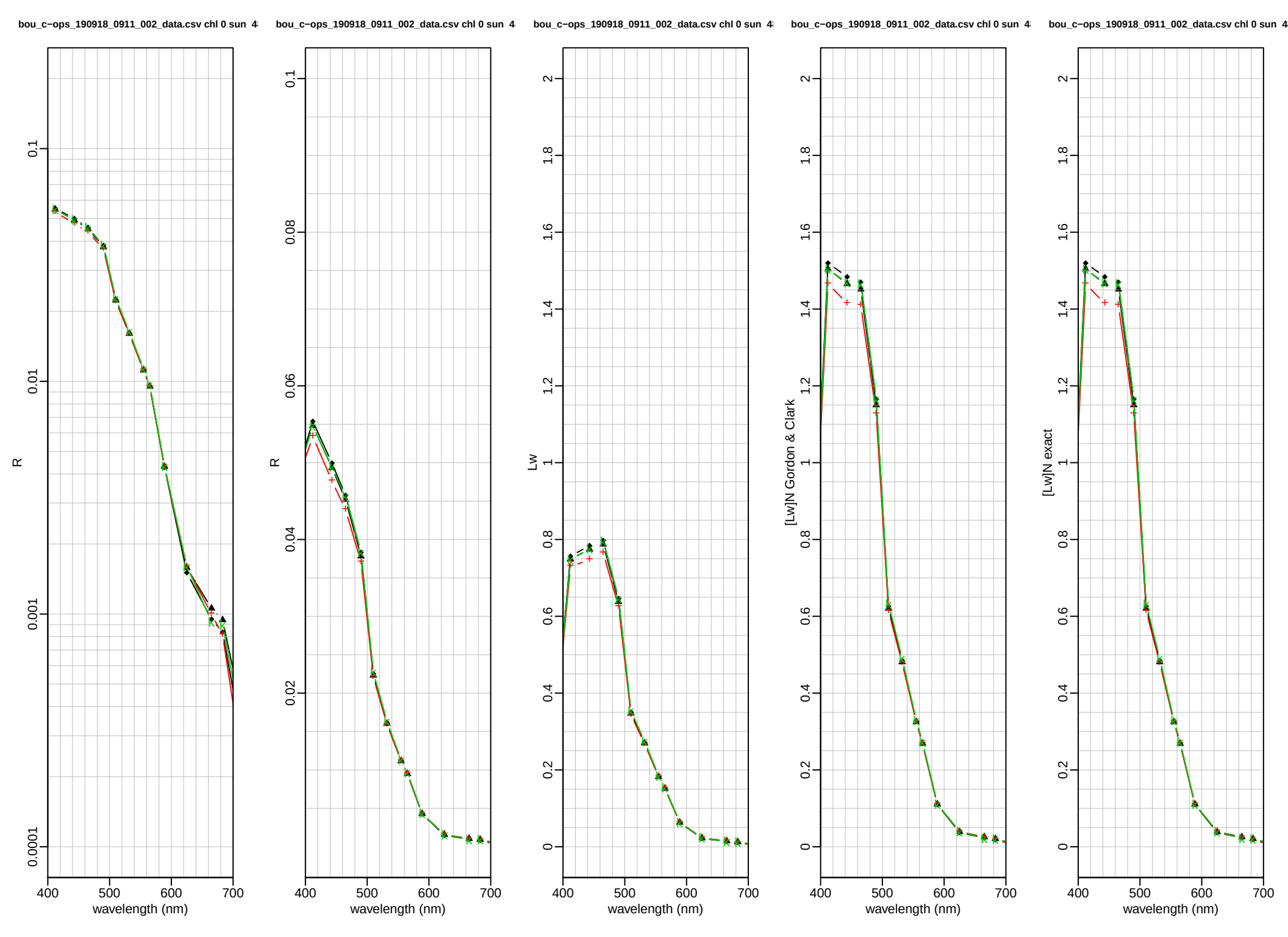

chl 0 sun−zen. ang. 48.4
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
+ deg.2
k Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_190918_0911_002_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_190918_0911_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

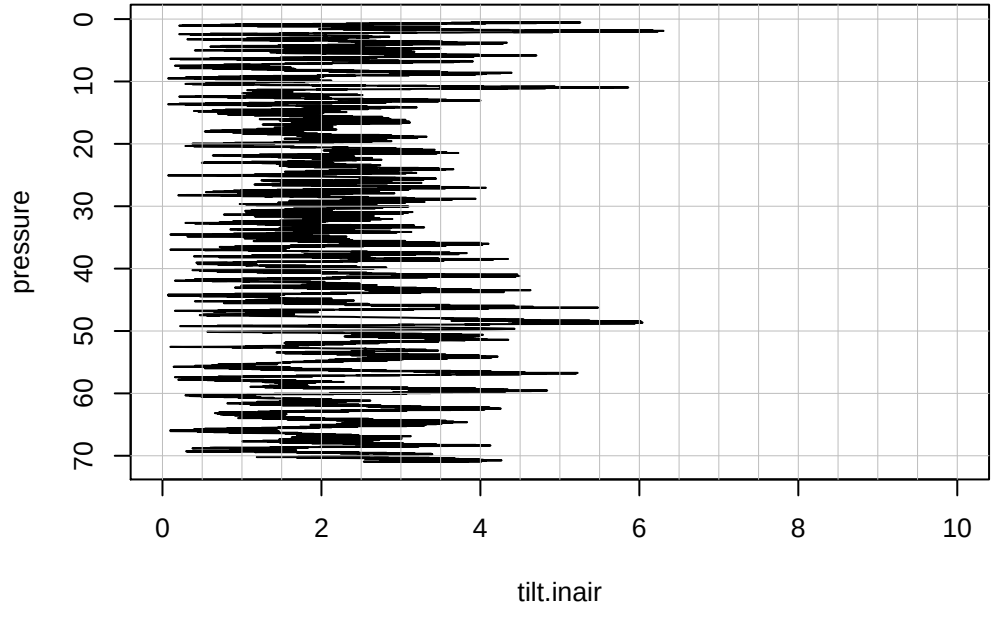

bou_c~ops_190918_0911_002_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

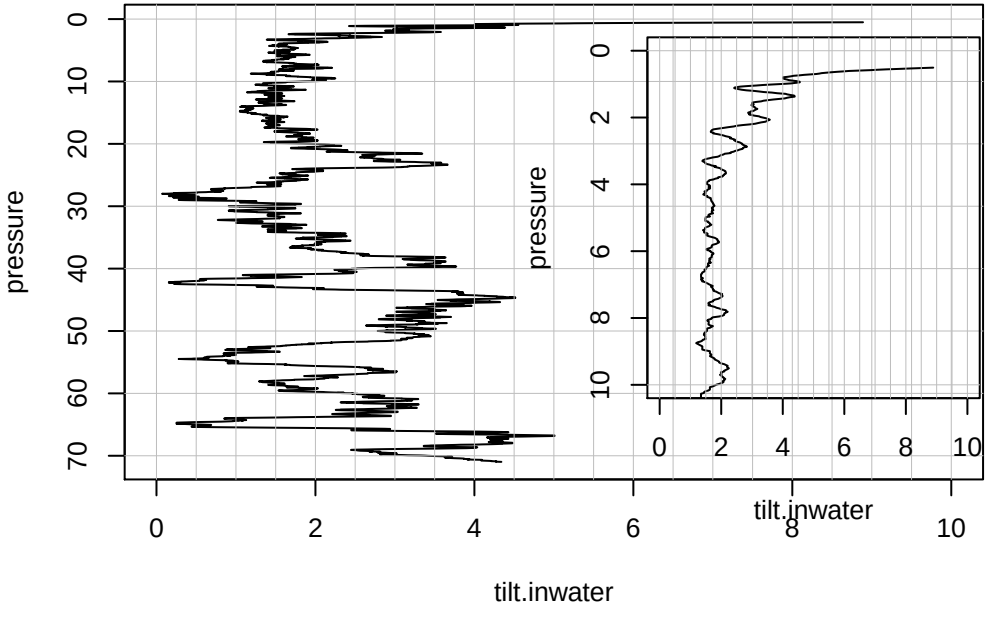

bou_c~ops_190918_0911_002_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

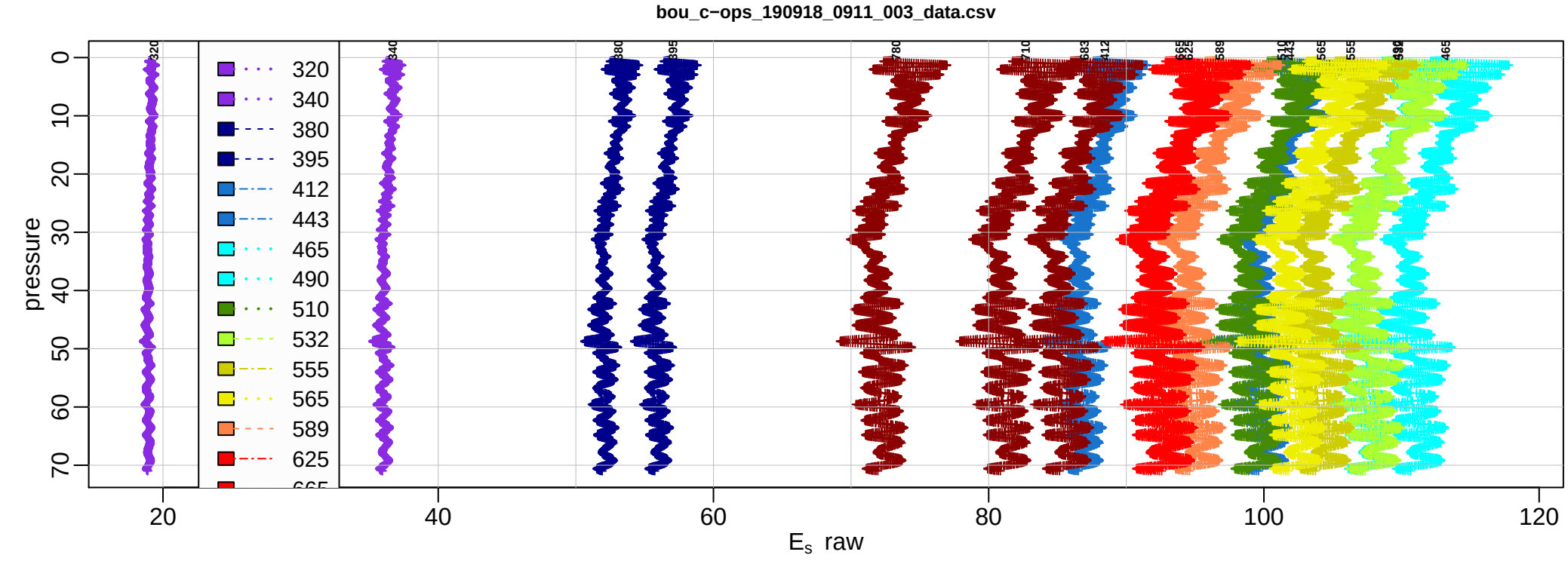

bou_c−ops_190918_0911_002_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190918_0911_002_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190918_0911_002_data.csv chl 0 sun 4
Lw
wavelength (nm)
bou_c−ops_190918_0911_002_data.csv chl 0 sun 4
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190918_0911_002_data.csv chl 0 sun 4
[Lw]N exact
wavelength (nm)

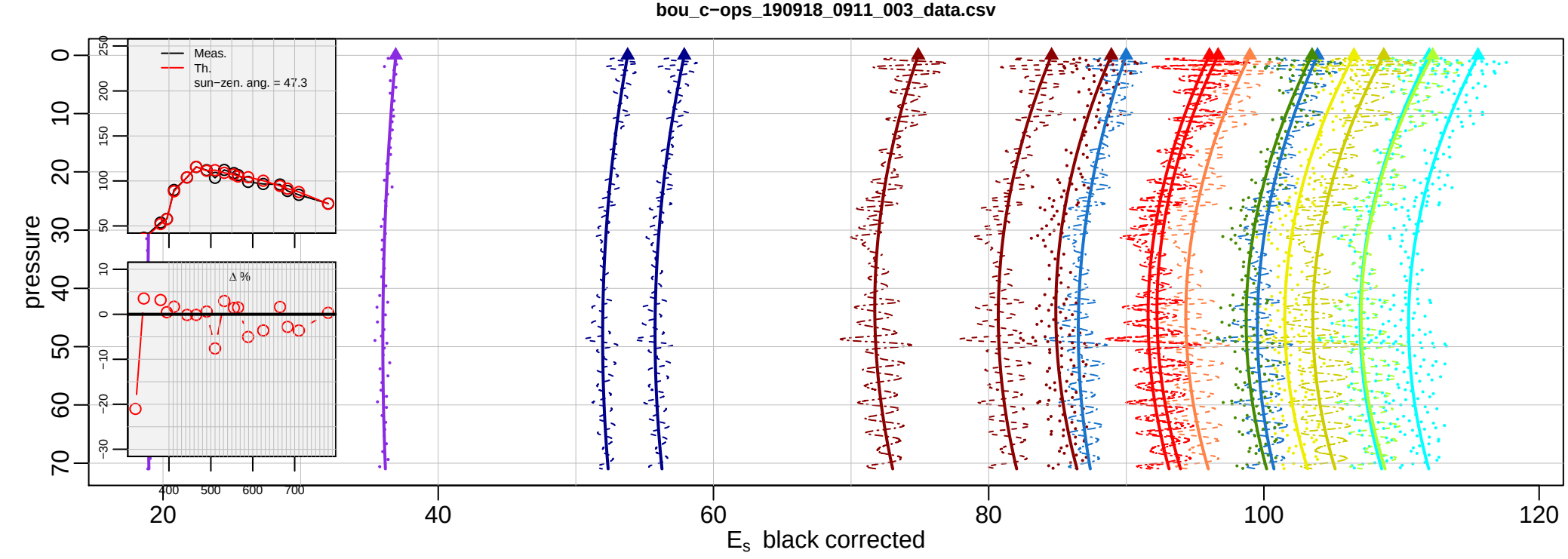
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole212/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole212/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole212/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.88066
latitude 43.36465
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

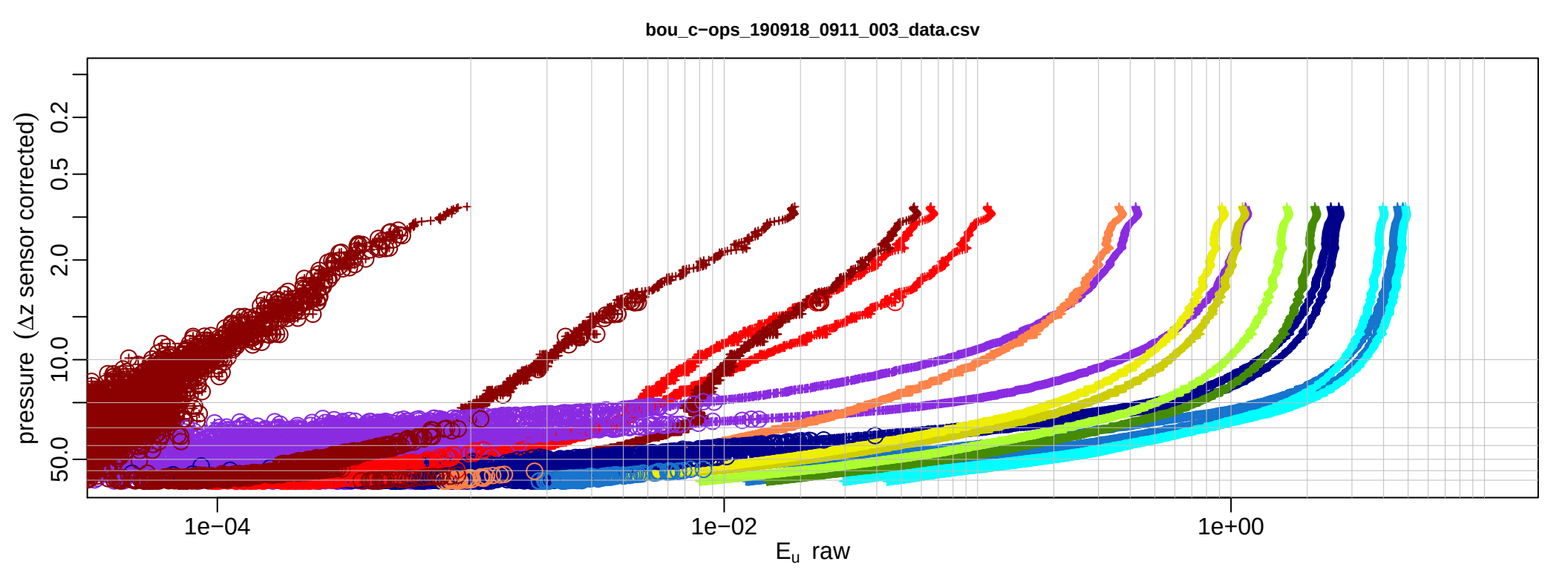
bou_c−ops_190918_0911_003_data.csv

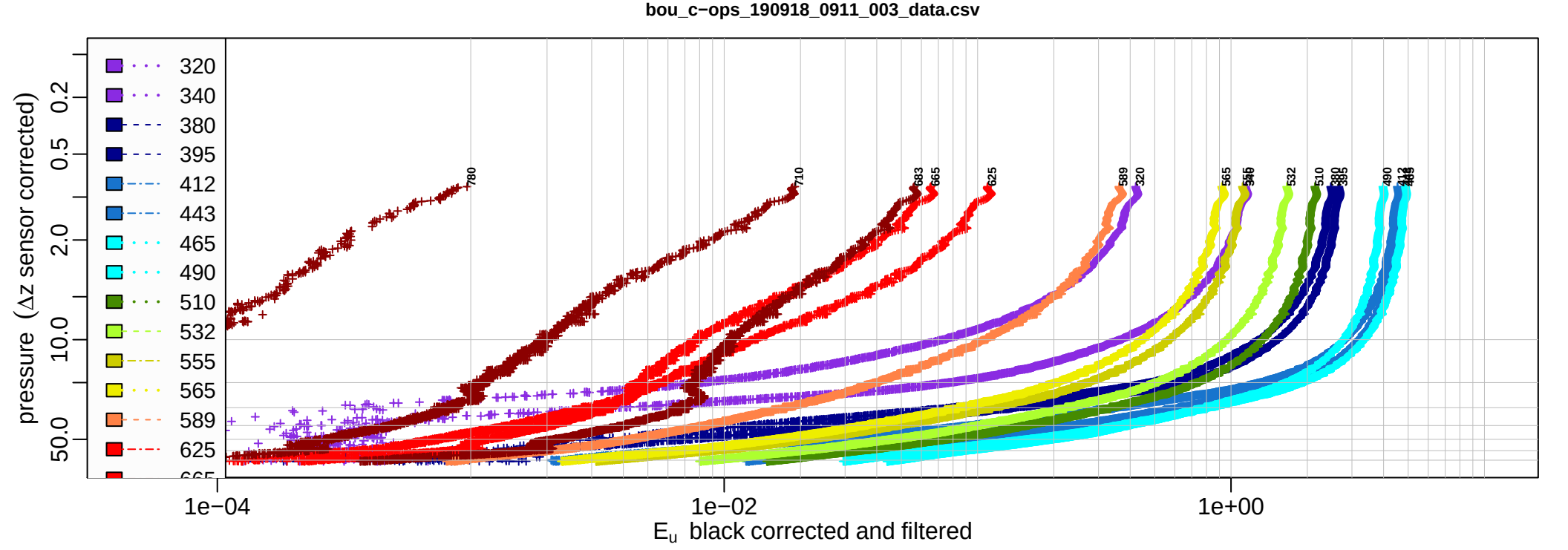


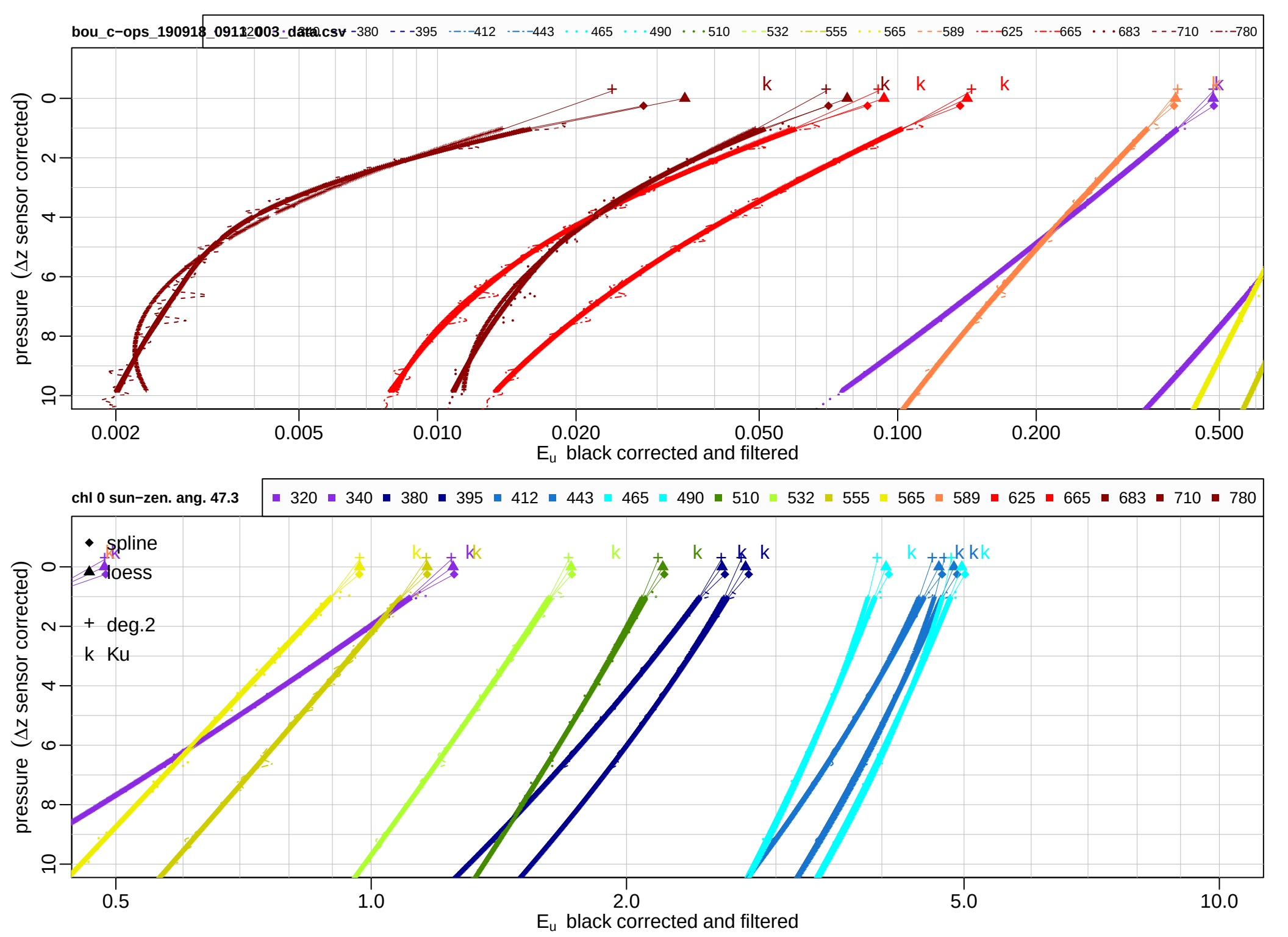


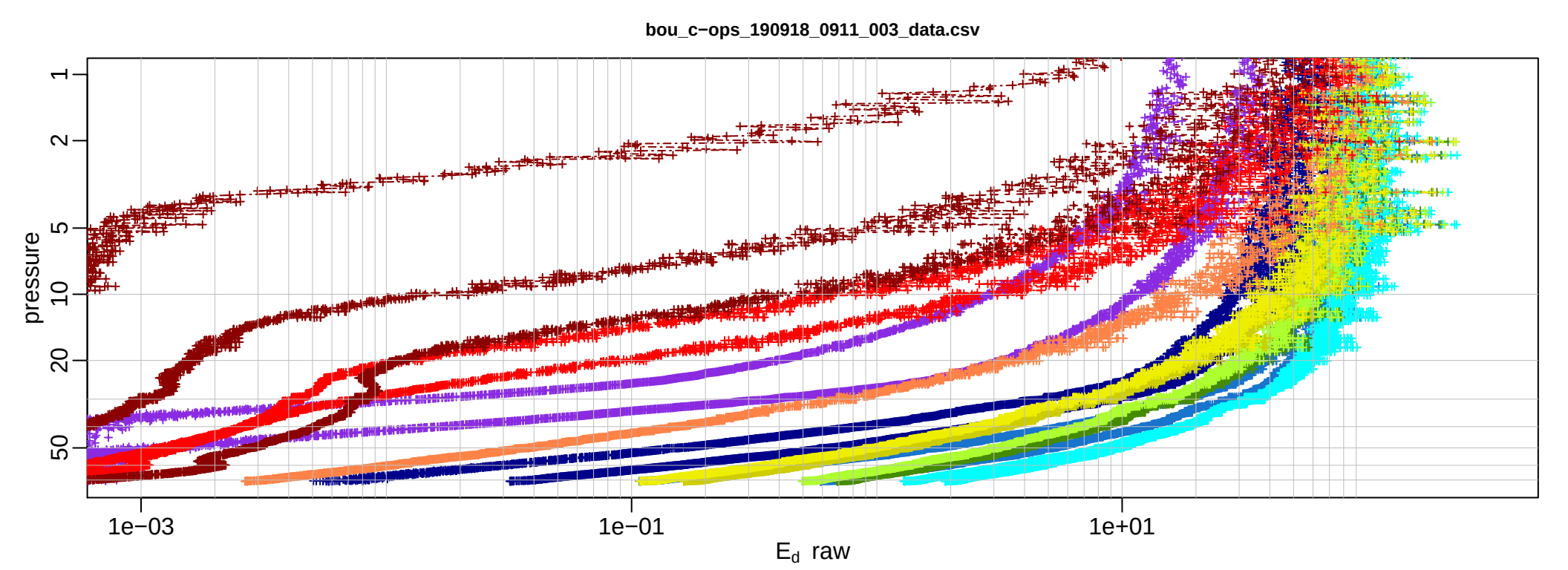

bou_c−ops_190918_0911_003_data.csv
pressure
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

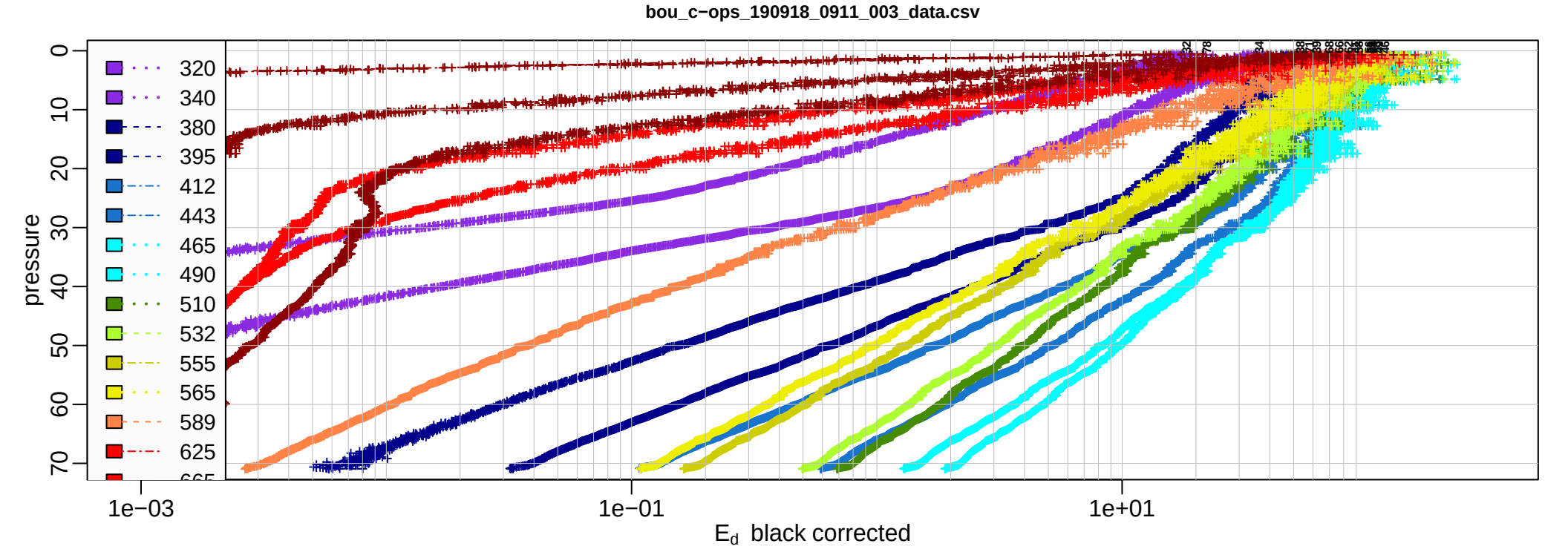

bou_c−ops_190918_0911_003_data.csv
pressure
E_s black corrected
Meas.
Th.
sun−zen. ang. = 47.3
Δ %

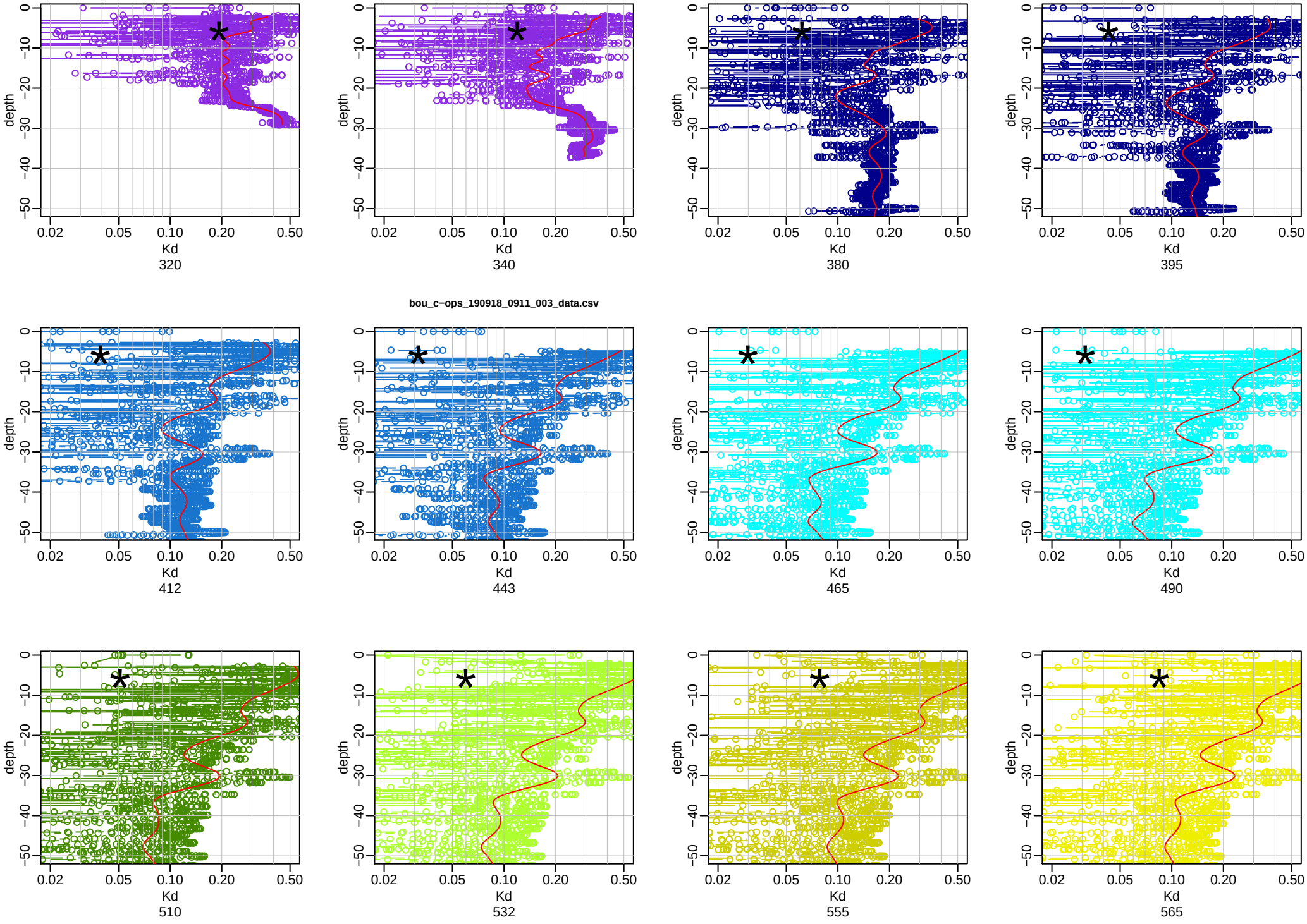

bou_c−ops_190918_0911_003_data.csv
pressure (Δz sensor corrected)
0.2
0.5
2.0
10.0
50.0
1e−04
1e−02
1e+00
E_u raw

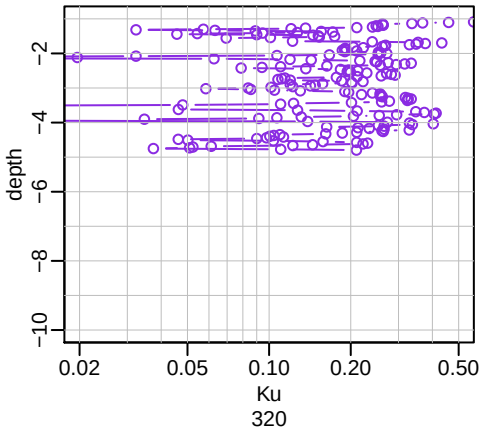

bou_c−ops_190918_0911_003_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
683
665
625
589
320
565
555
532
510
490
1e−04
1e−02
1e+00
E_u black corrected and filtered

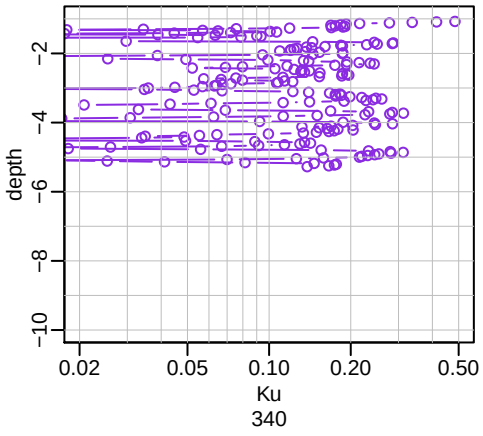

bou_c−ops_190918_091003_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0
2
4
6
8
10
0.002
0.005
0.010
0.020
0.050
0.100
0.200
0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 47.3
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
+ deg.2
k Ku
pressure (Δz sensor corrected)
0
2
4
6
8
10
0.5
1.0
2.0
5.0
10.0
E_u black corrected and filtered

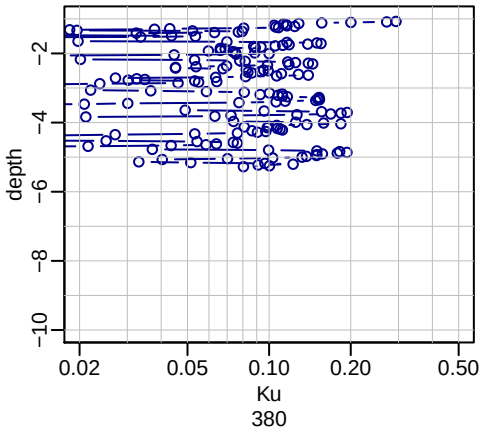

bou_c−ops_190918_0911_003_data.csv
pressure
1
2
5
10
20
50
1e−03
1e−01
1e+01
E_d raw

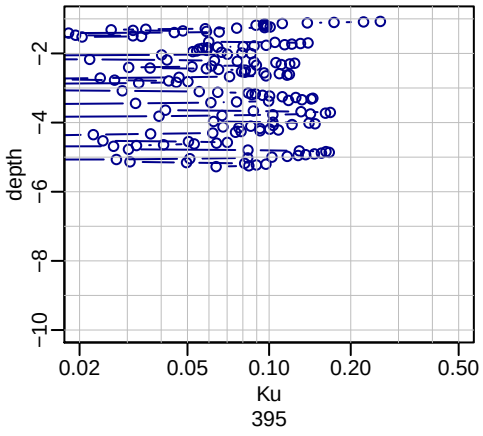

bou_c−ops_190918_0911_003_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected


bou_c~ops_190918_0911_003_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

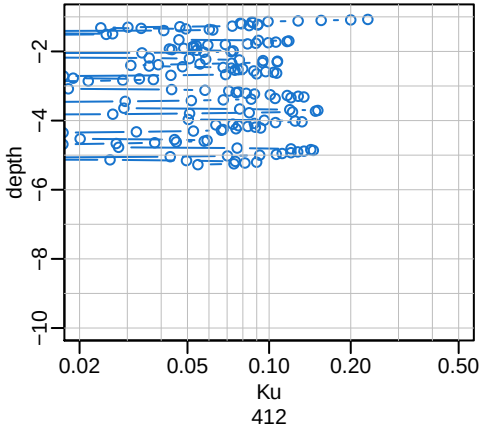


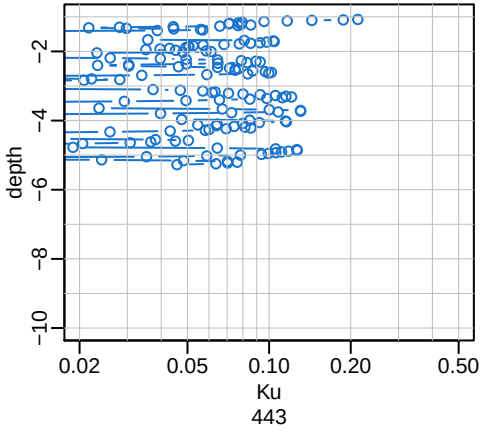


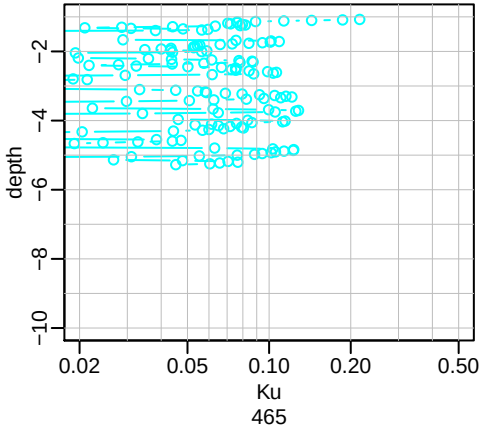


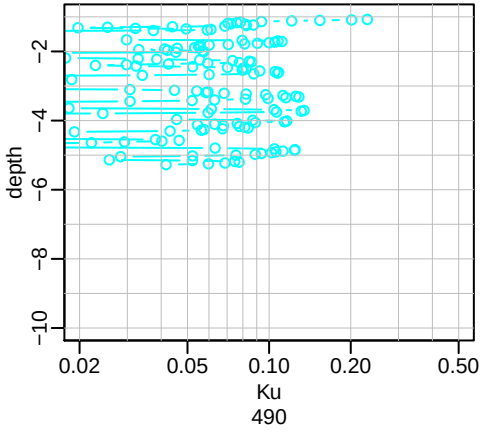


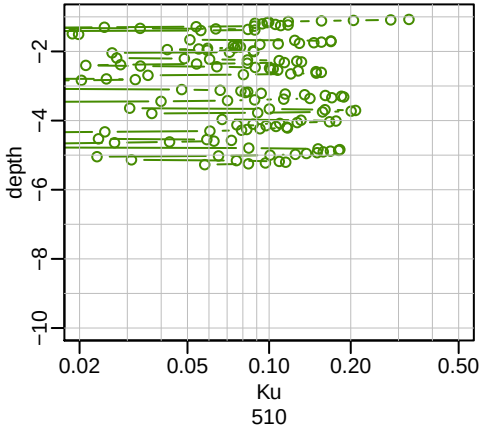
bou_c−ops_190918_0911_003_data.csv

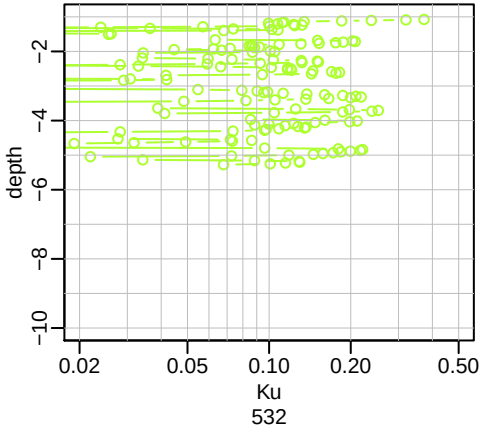


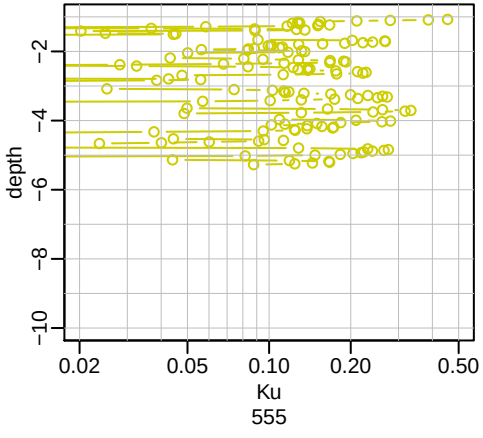


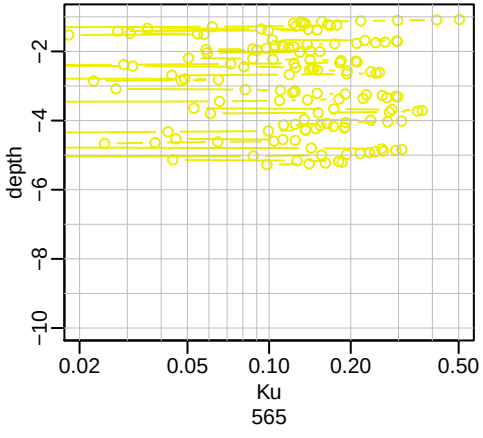


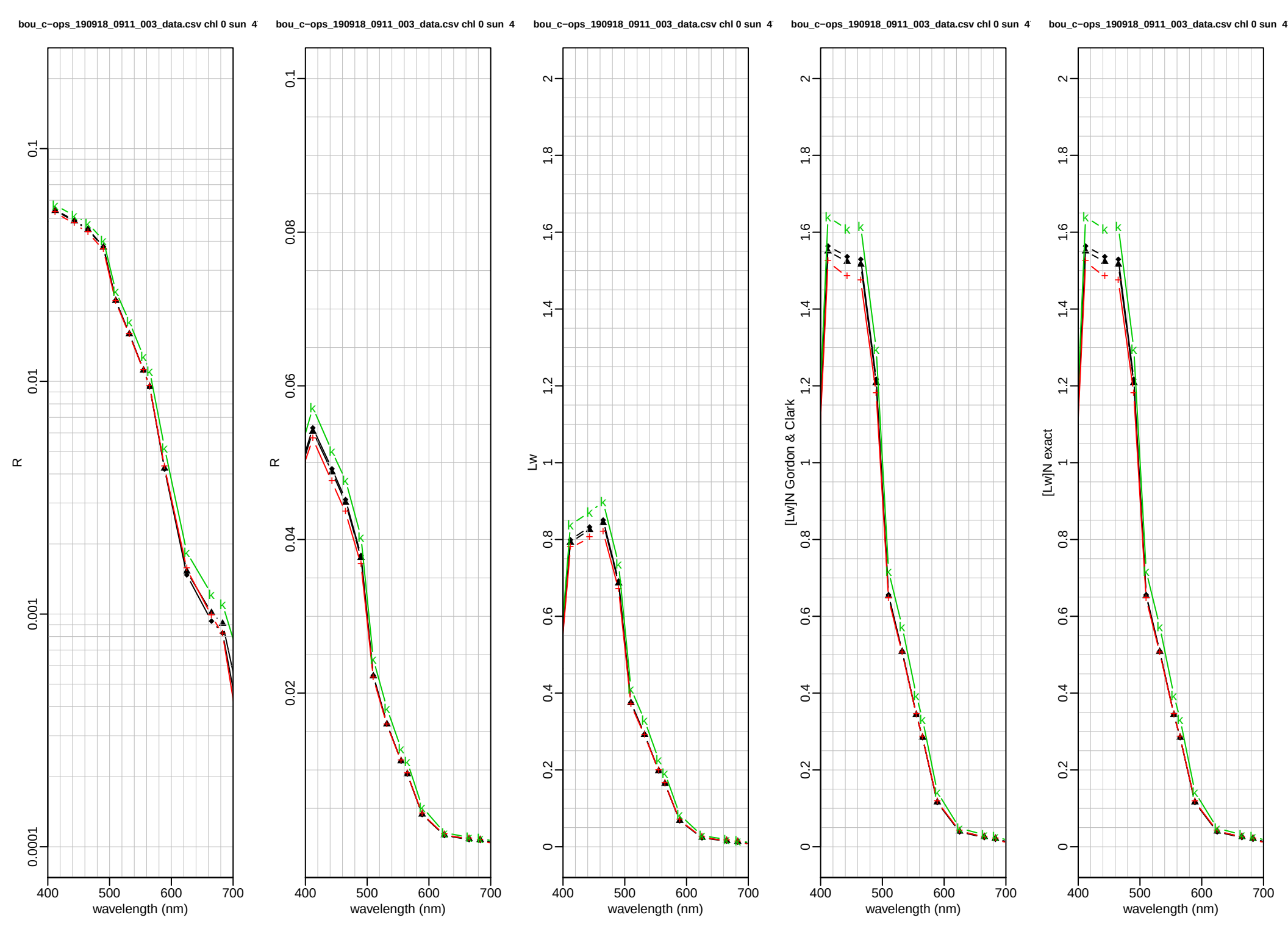






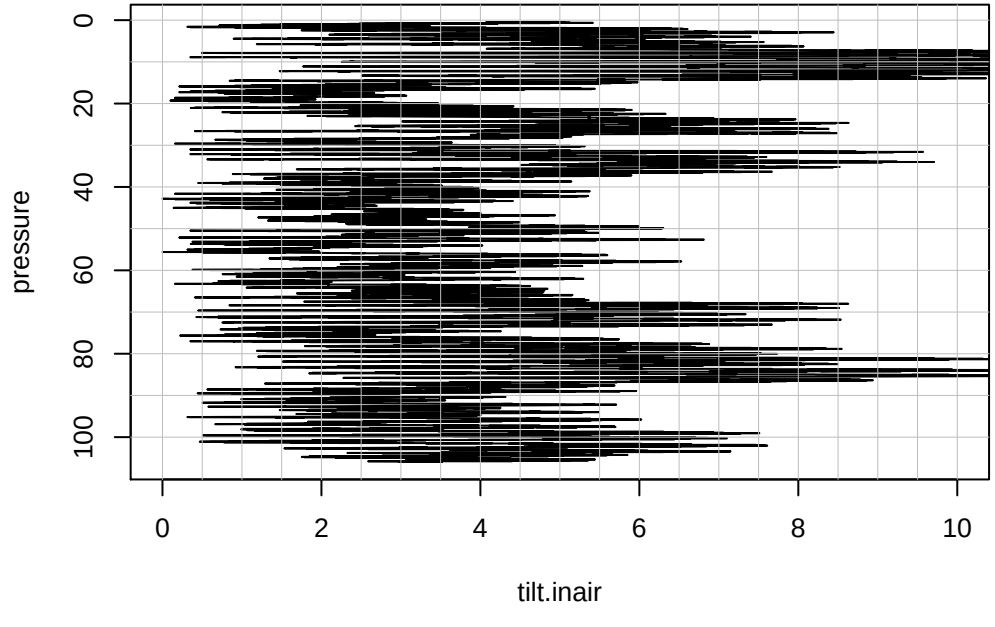


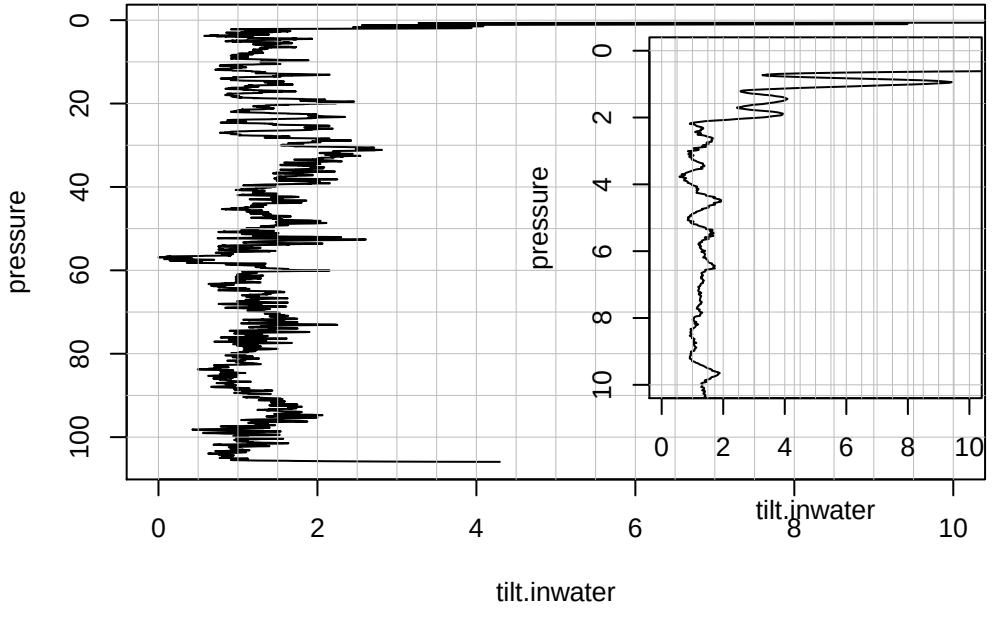


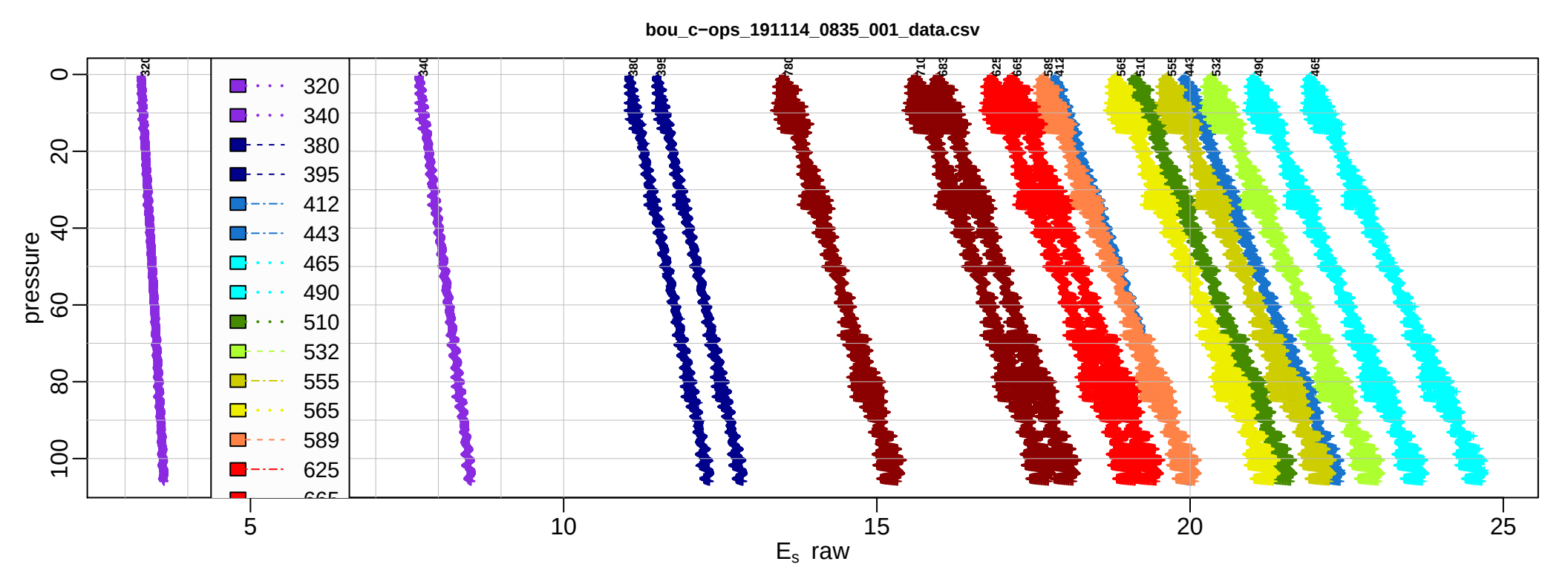

bou_c−ops_190918_0911_003_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190918_0911_003_data.csv chl 0 sun 4
R
wavelength (nm)
bou_c−ops_190918_0911_003_data.csv chl 0 sun 4
Lw
wavelength (nm)
bou_c−ops_190918_0911_003_data.csv chl 0 sun 4
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_190918_0911_003_data.csv chl 0 sun 4
[Lw]N exact
wavelength (nm)

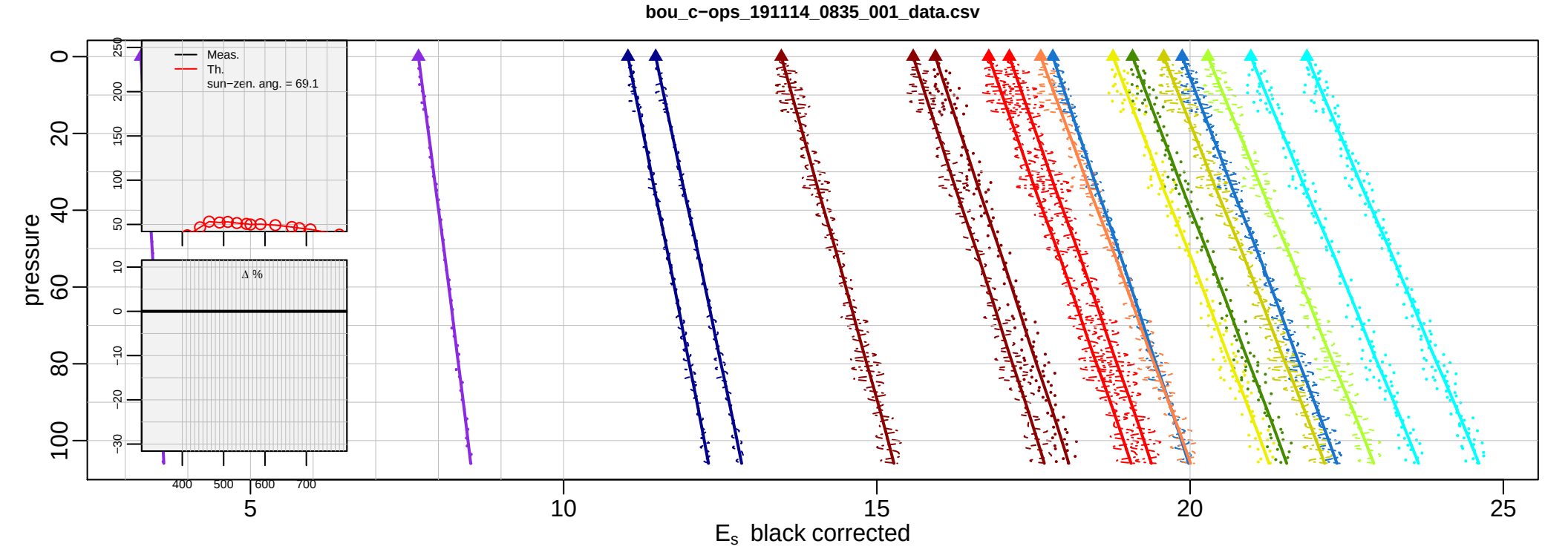
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole214/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole214/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole214/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole214/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.89085
latitude 43.36938
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

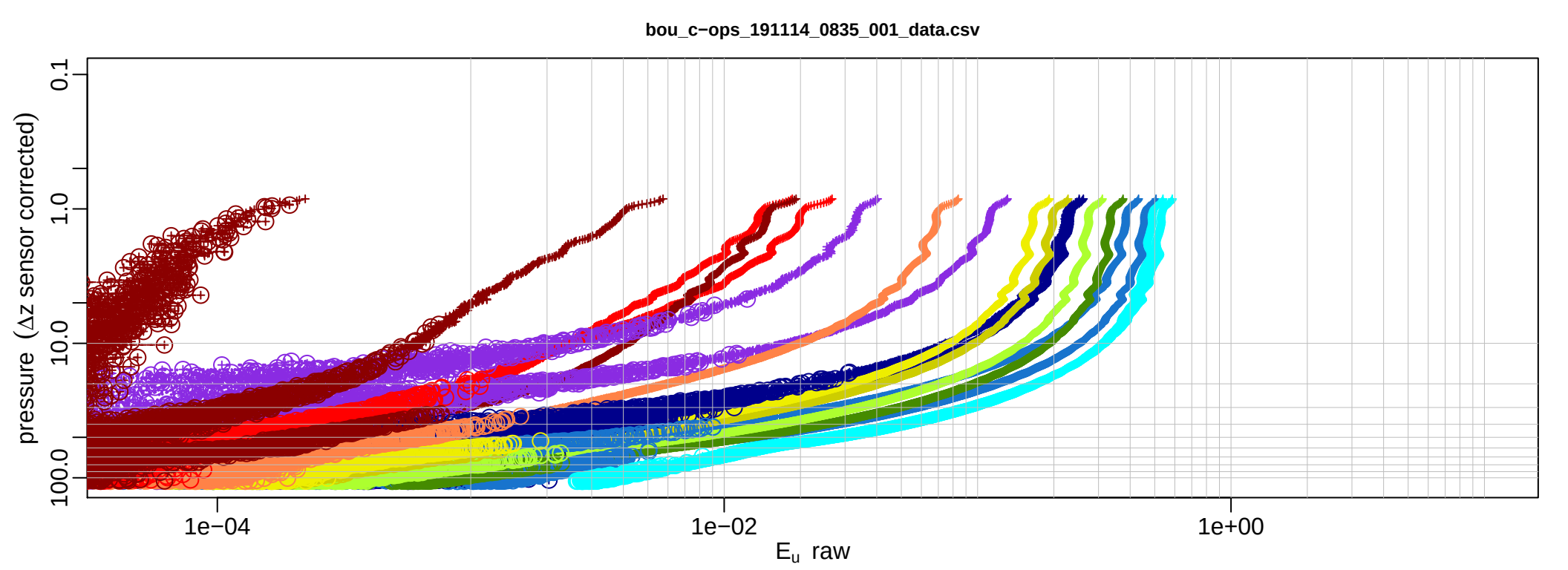
bou_c−ops_191114_0835_001_data.csv

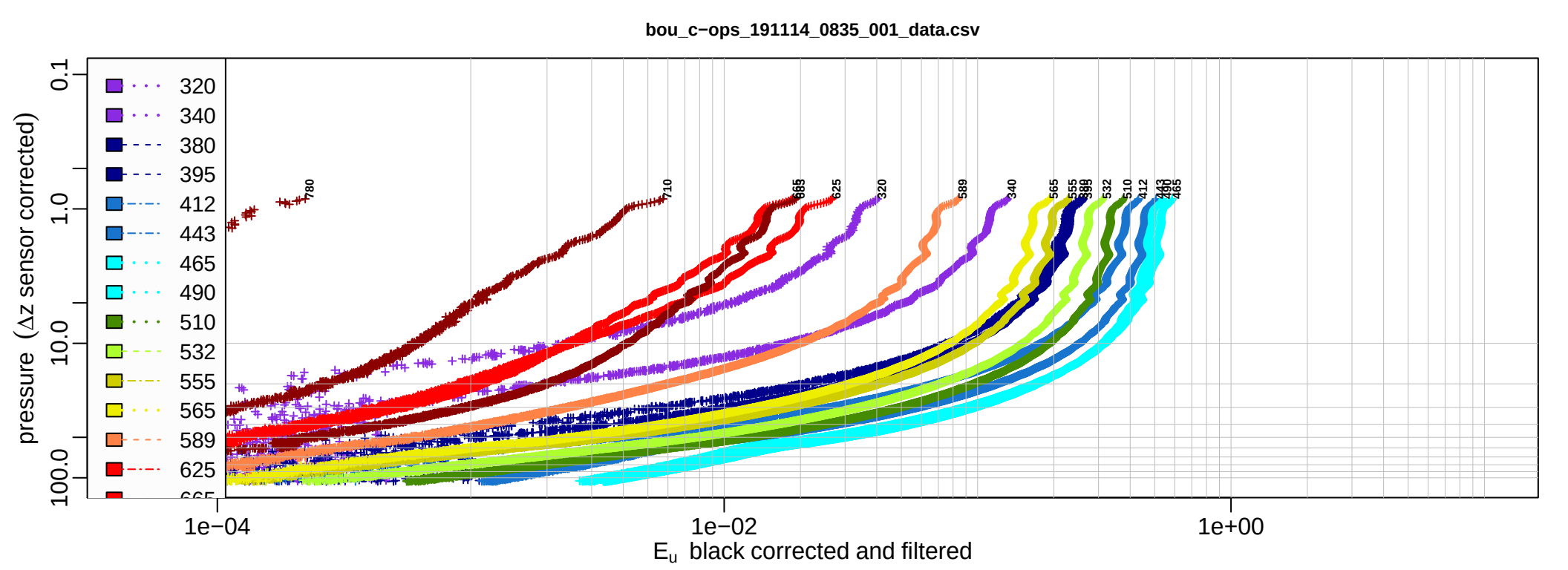


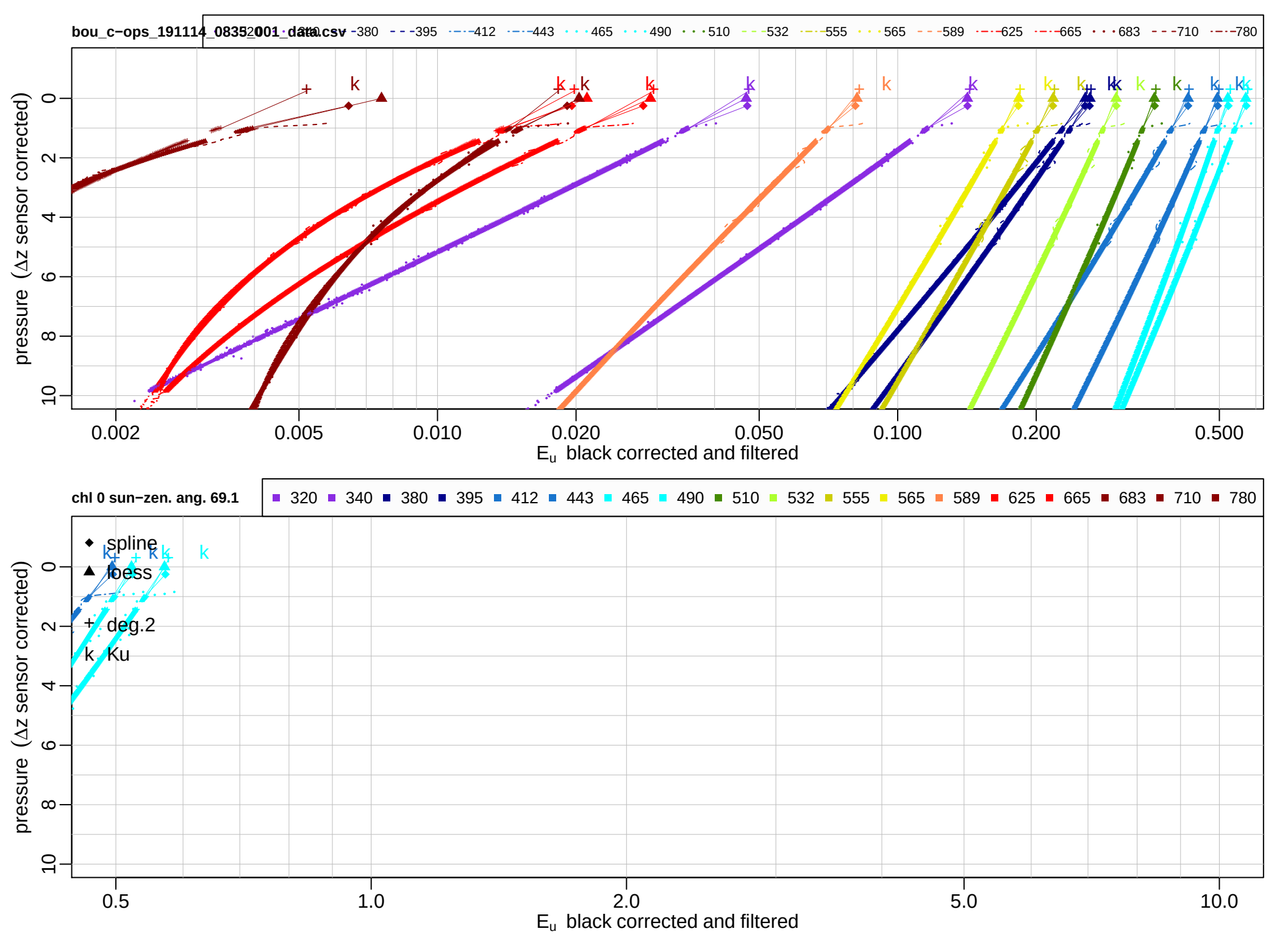


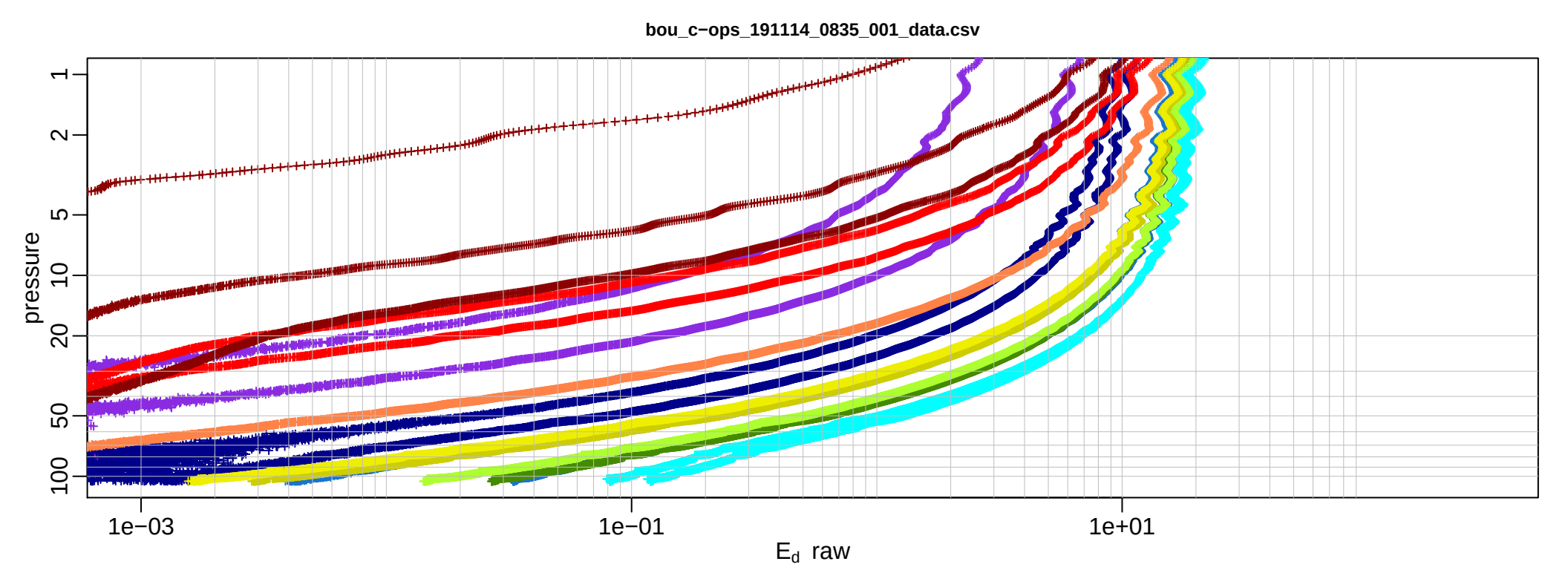

bou_c−ops_191114_0835_001_data.csv
pressure
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

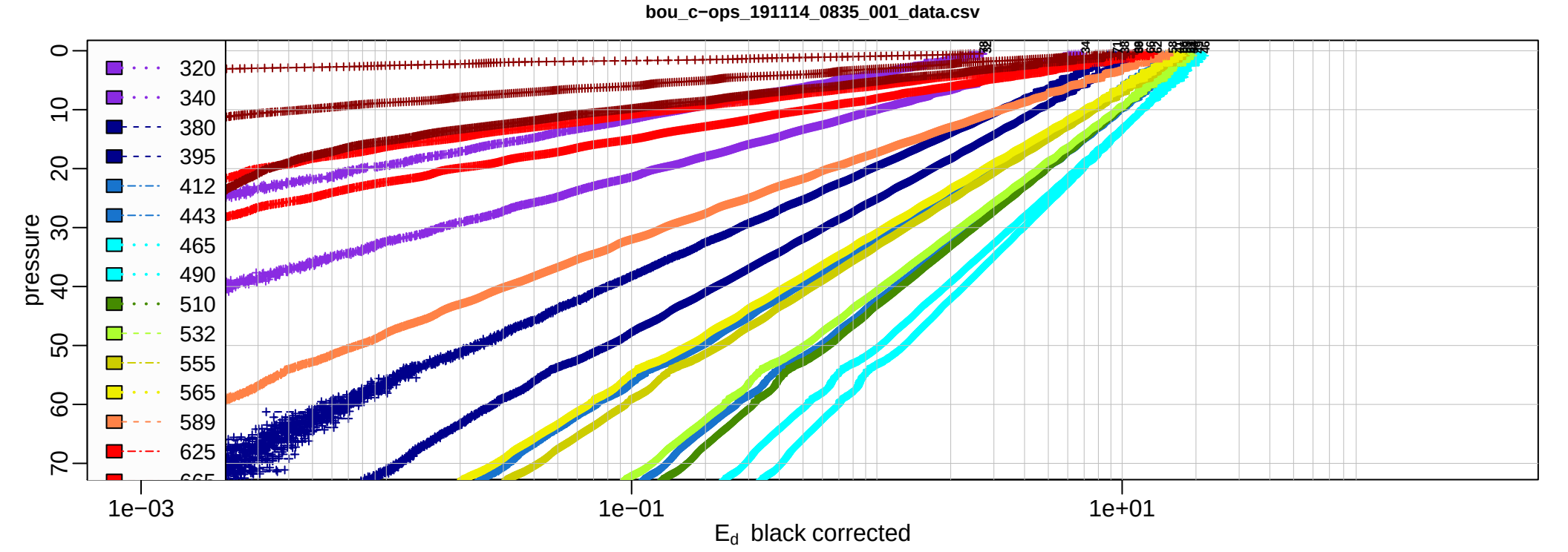

bou_c−ops_191114_0835_001_data.csv
pressure
E_s black corrected
Meas.
Th.
sun−zen. ang. = 69.1
Δ %

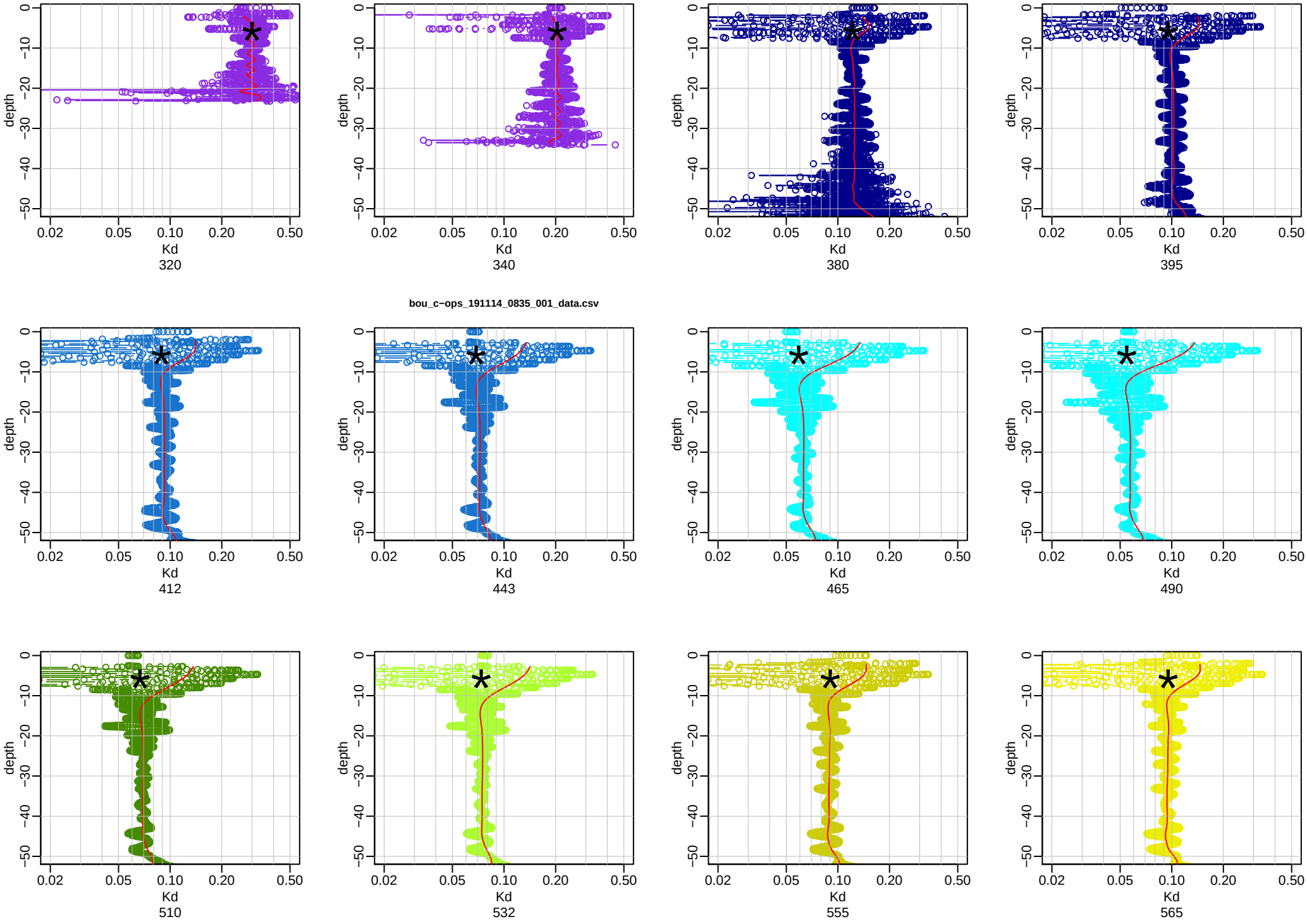

bou_c−ops_191114_0835_001_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
Eu raw

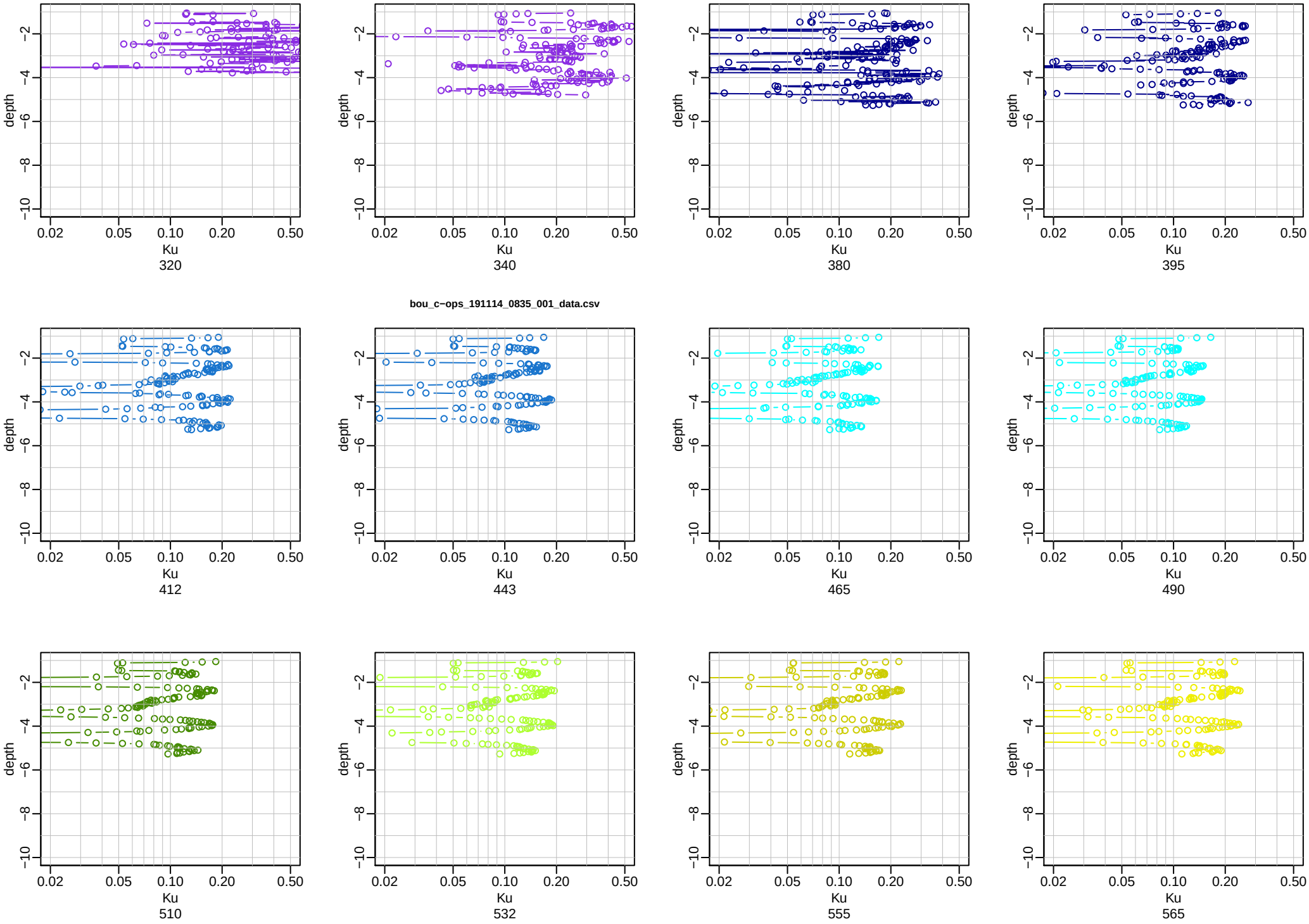

bou_c−ops_191114_0835_001_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
665
625
320
589
340
565
555
532
510
412
443
490
465
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
Eu black corrected and filtered

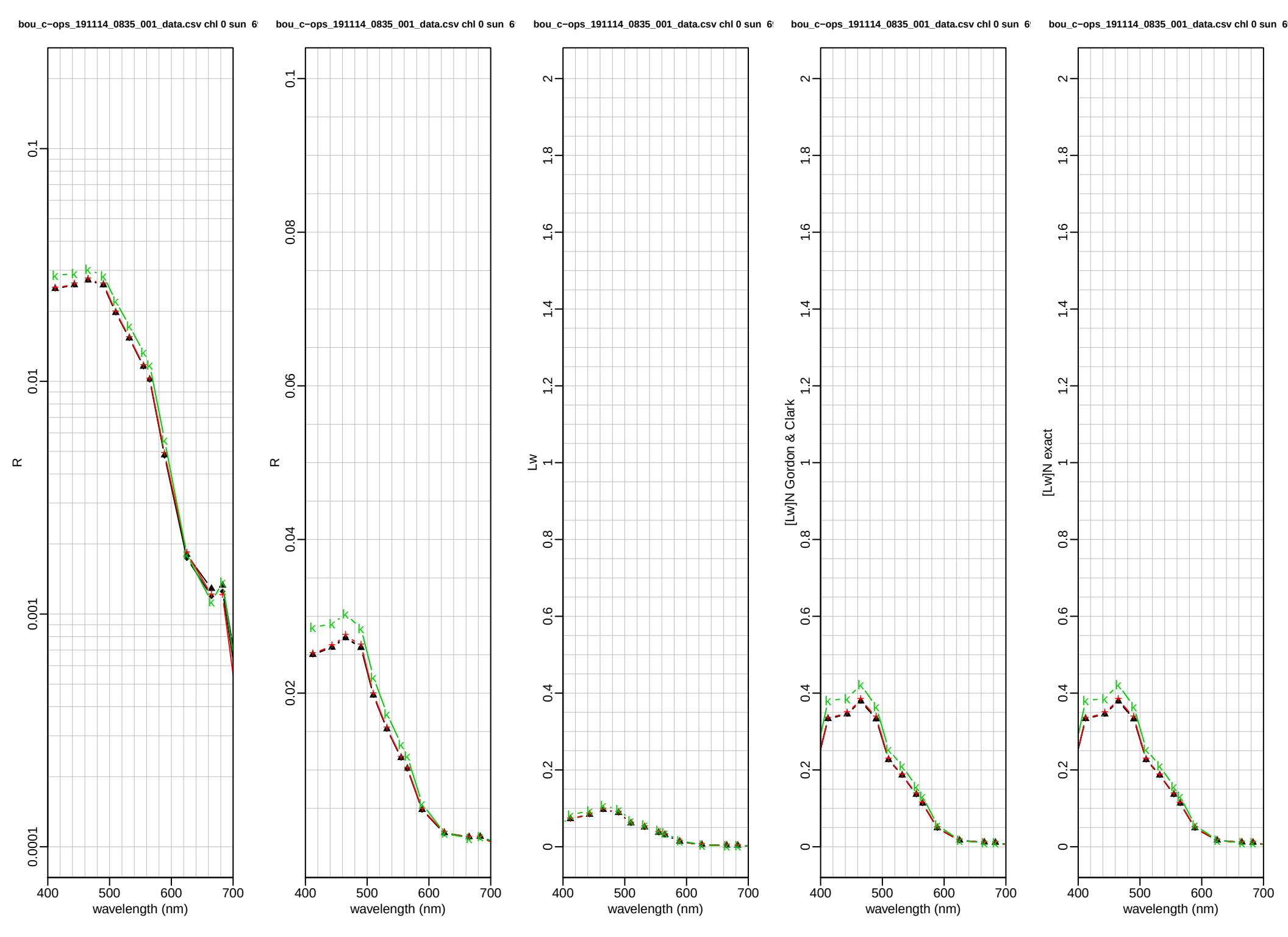

bou_c−ops_191114_0835_001_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 69.1
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_191114_0835_001_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_191114_0835_001_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

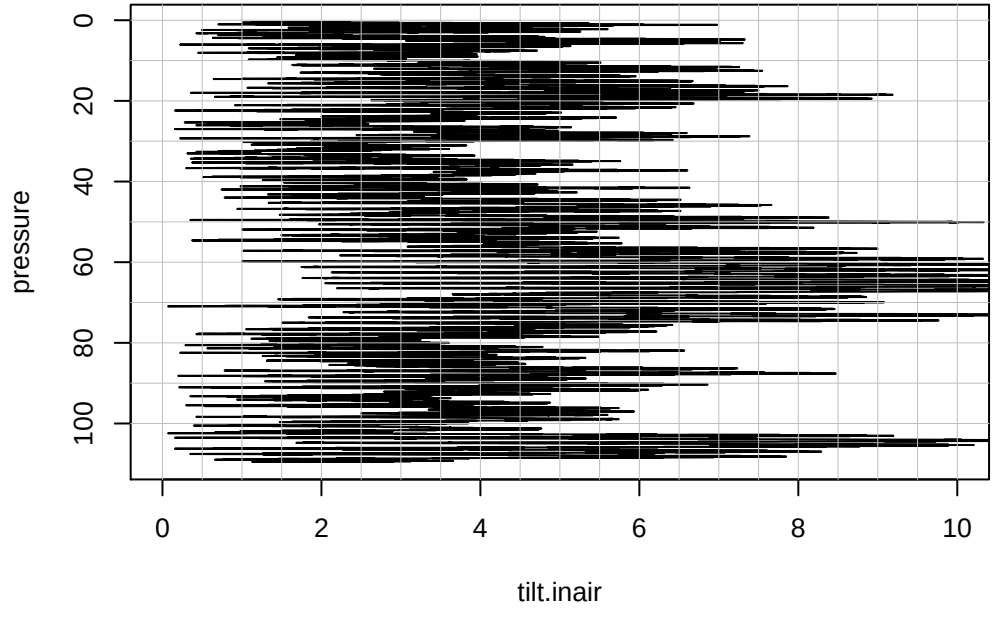

bou_c~ops_191114_0835_001_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565

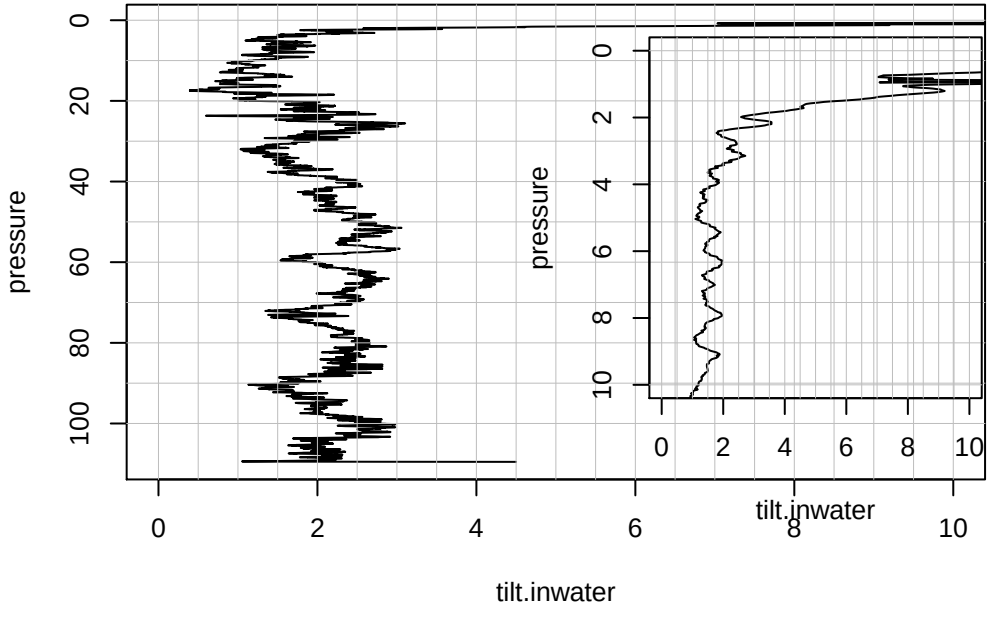

bou_c−ops_191114_0835_001_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

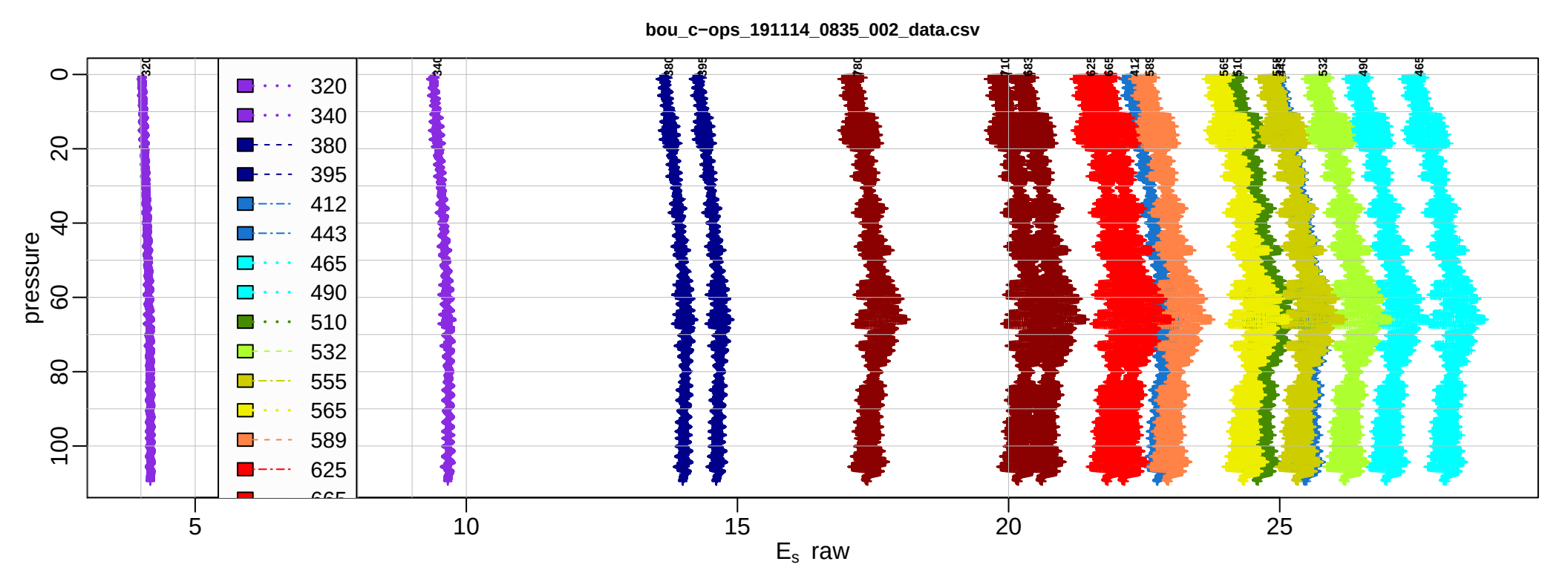

bou_c−ops_191114_0835_001_data.csv chl 0 sun 6
R
wavelength (nm)
bou_c−ops_191114_0835_001_data.csv chl 0 sun 6
R
wavelength (nm)
bou_c−ops_191114_0835_001_data.csv chl 0 sun 6
Lw
wavelength (nm)
bou_c−ops_191114_0835_001_data.csv chl 0 sun 6
[Lw]N Gordon & Clark
wavelength (nm)
bou_c−ops_191114_0835_001_data.csv chl 0 sun 6
[Lw]N exact
wavelength (nm)

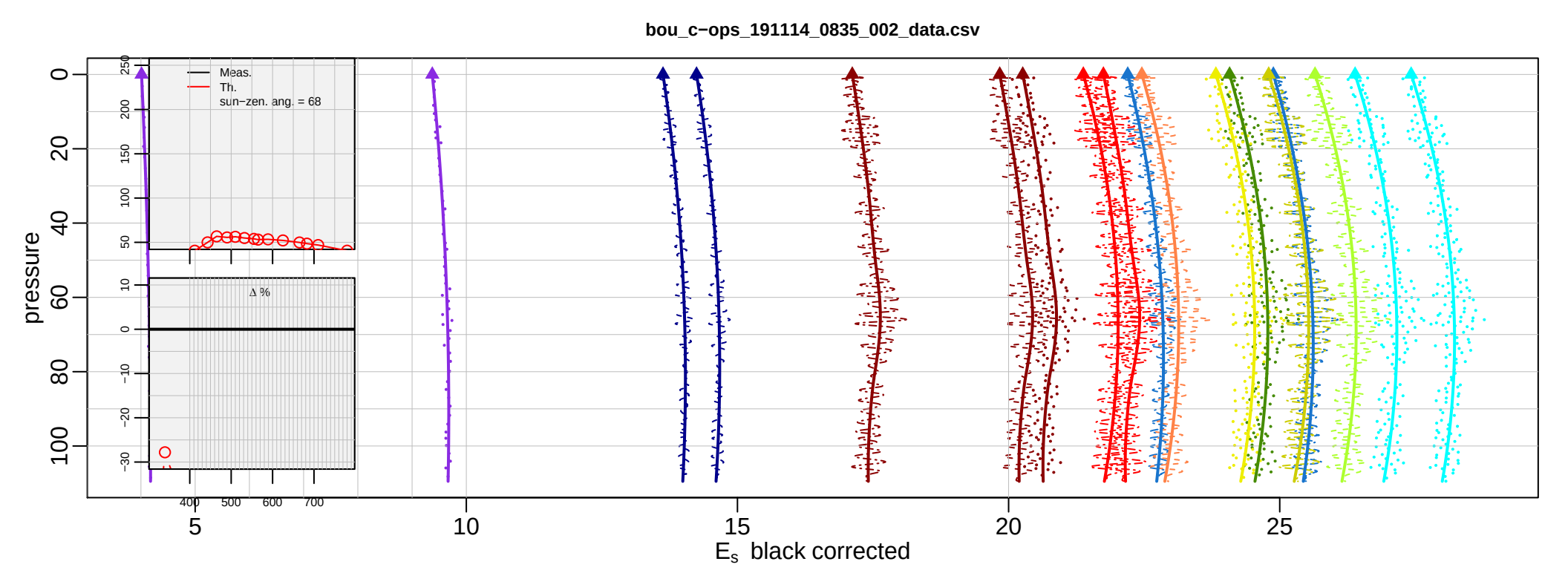
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole214/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole214/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole214/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole214/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.8847
latitude 43.37067
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

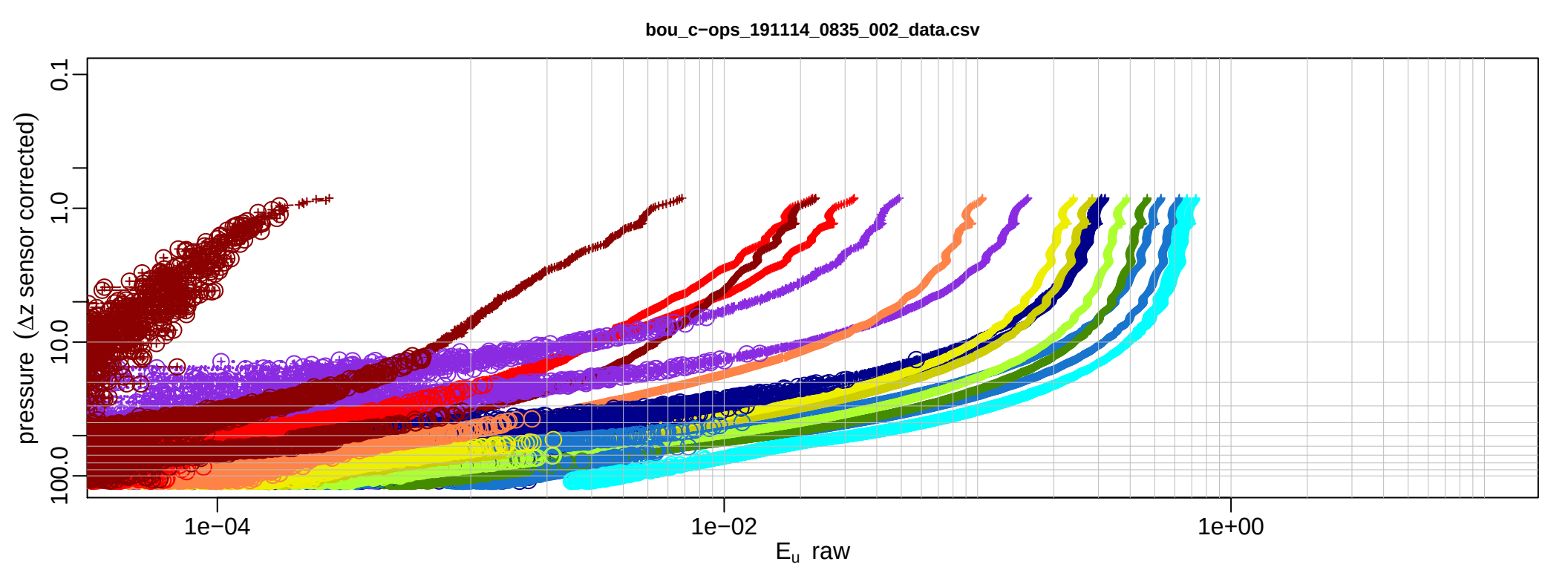
bou_c−ops_191114_0835_002_data.csv

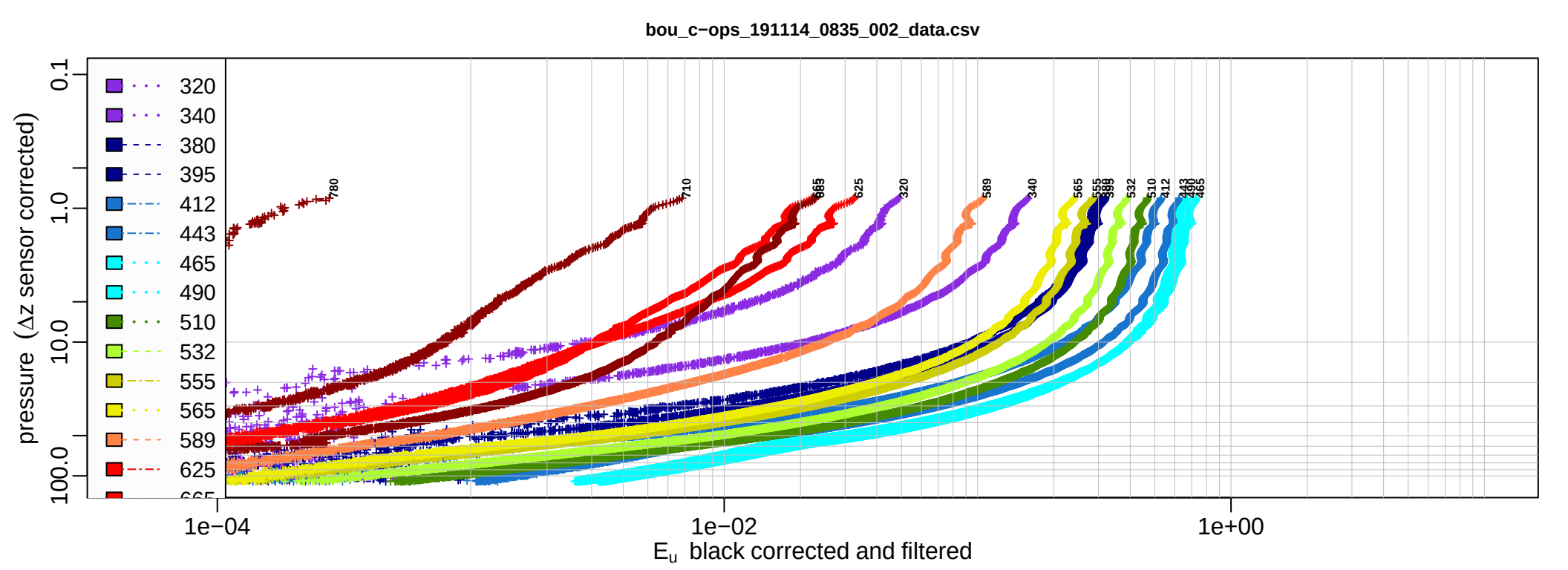


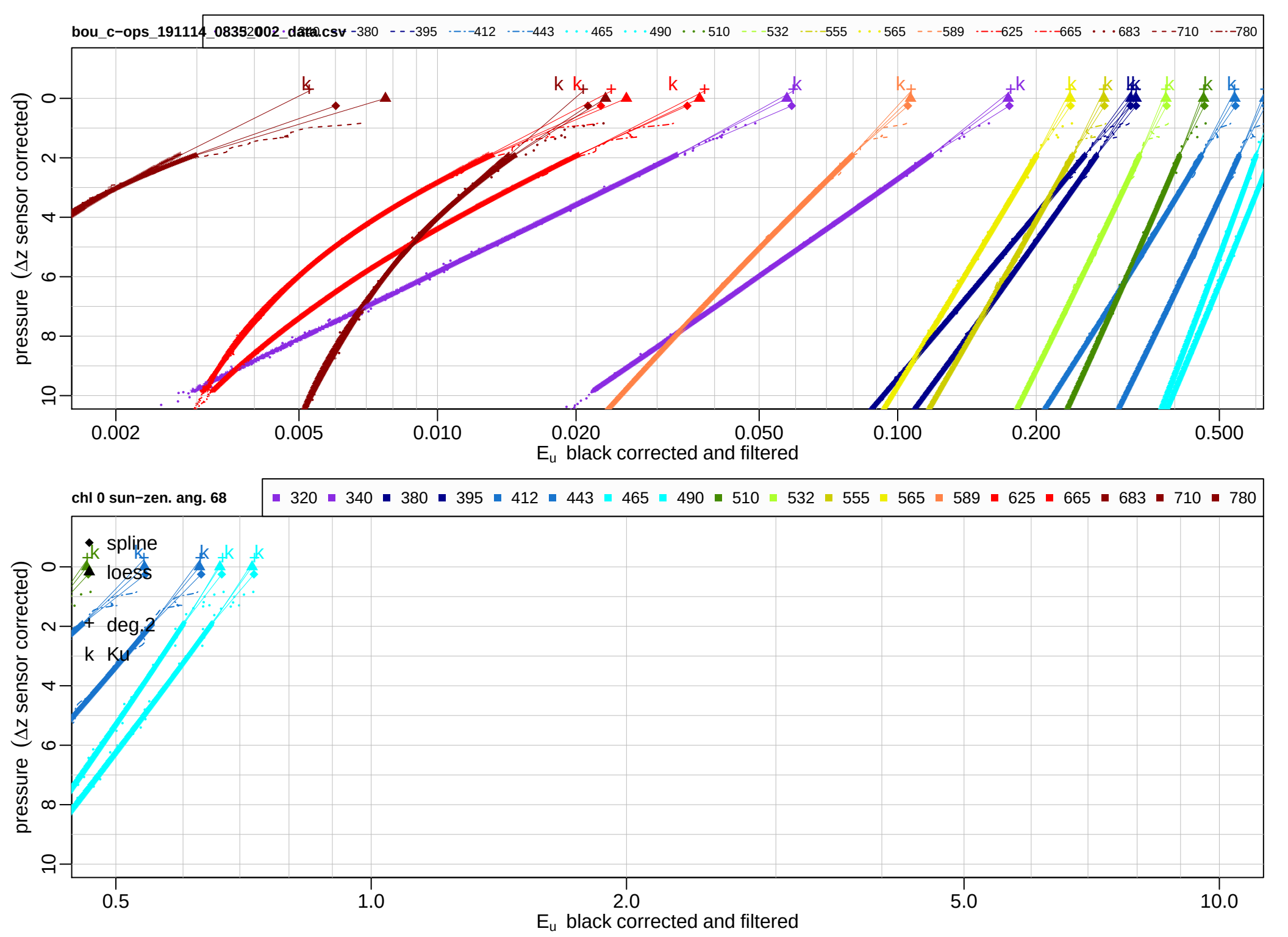


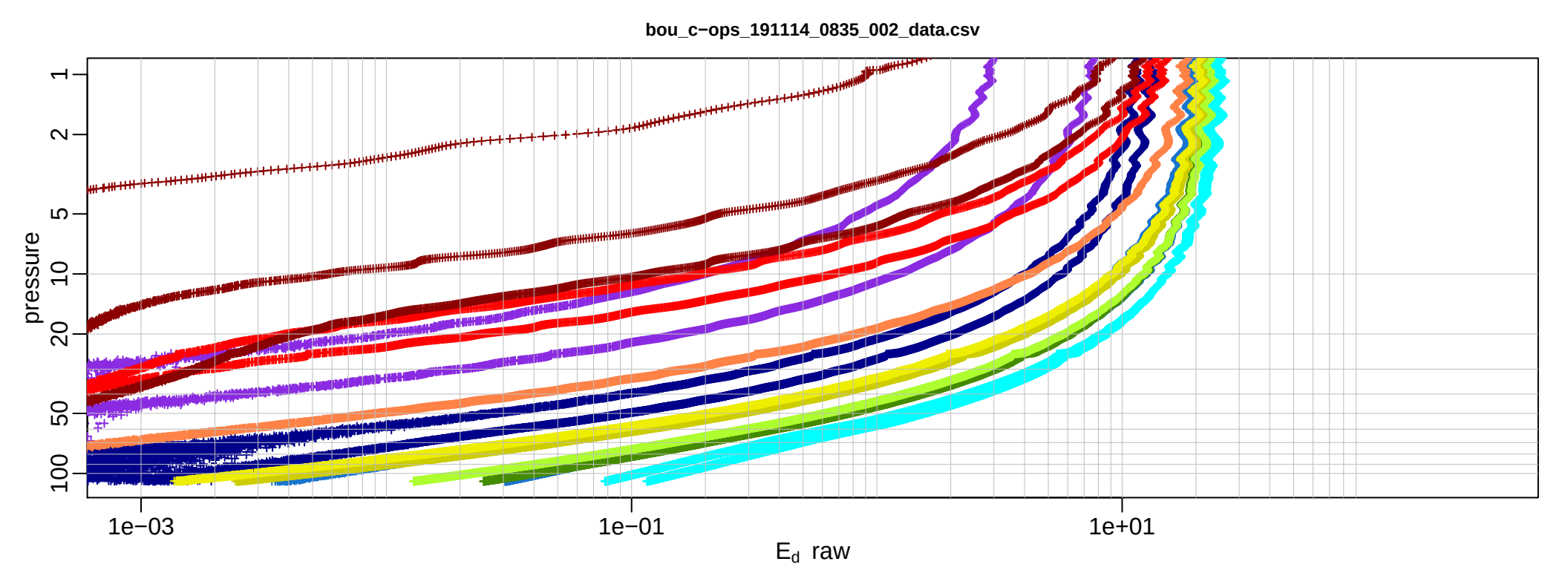

bou_c−ops_191114_0835_002_data.csv
pressure
0
20
40
60
80
100
5
10
15
20
25
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

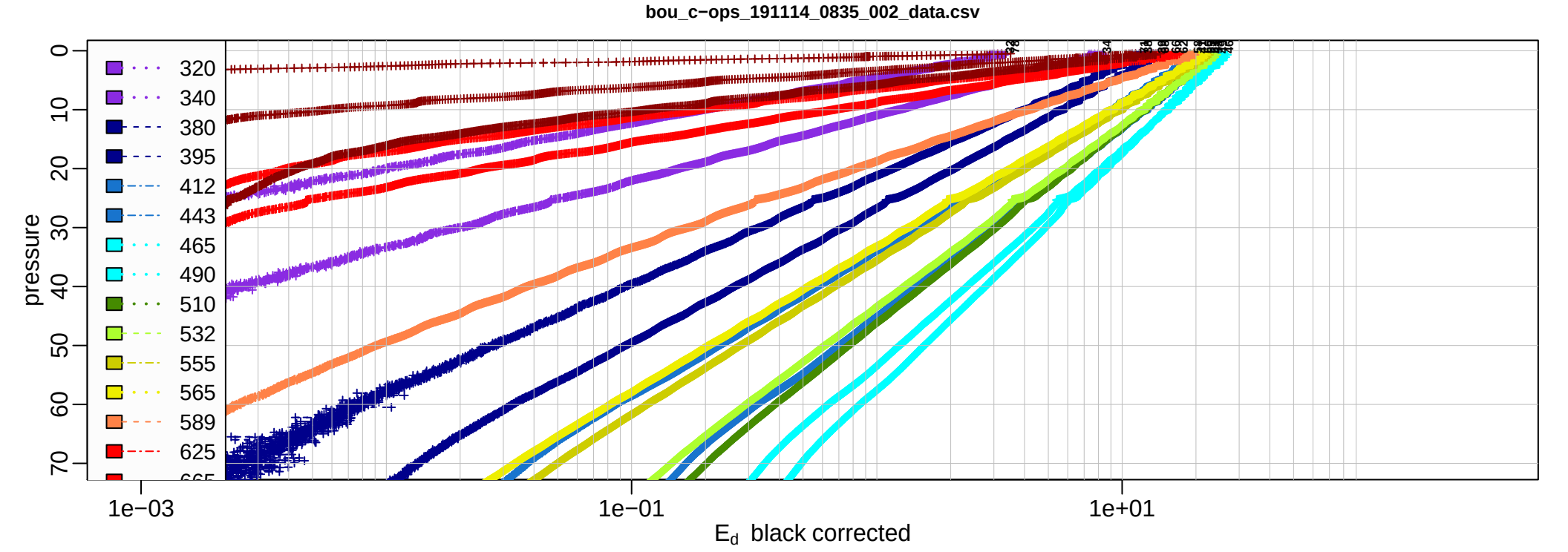

bou_c−ops_191114_0835_002_data.csv
pressure
0
20
40
60
80
100
5
10
15
20
25
E_s black corrected
Meas.
Th.
sun−zen. ang. = 68
Δ %
250
200
150
100
50
10
0
−10
−20
−30
400
500
600
700

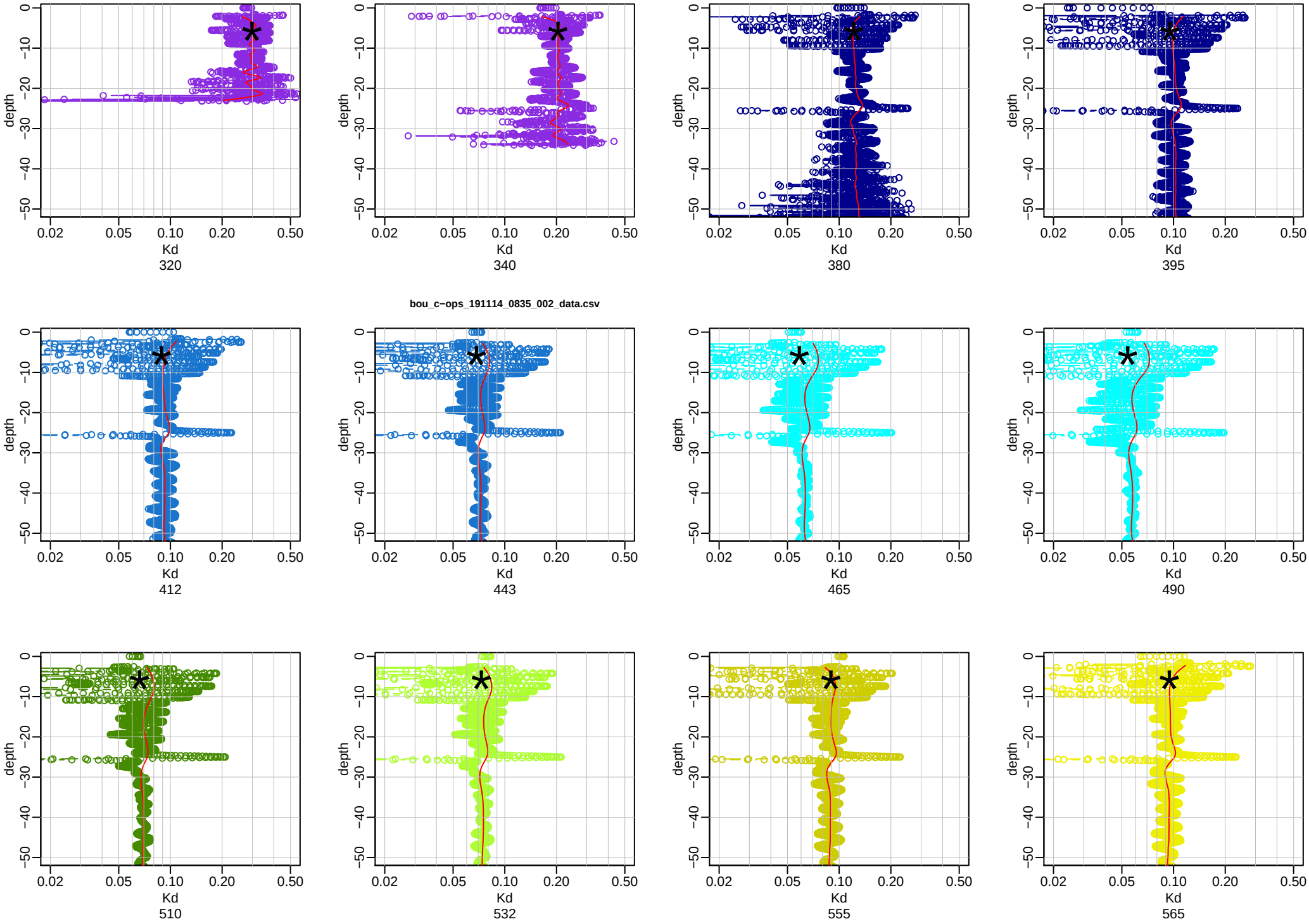

bou_c−ops_191114_0835_002_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
Eu raw

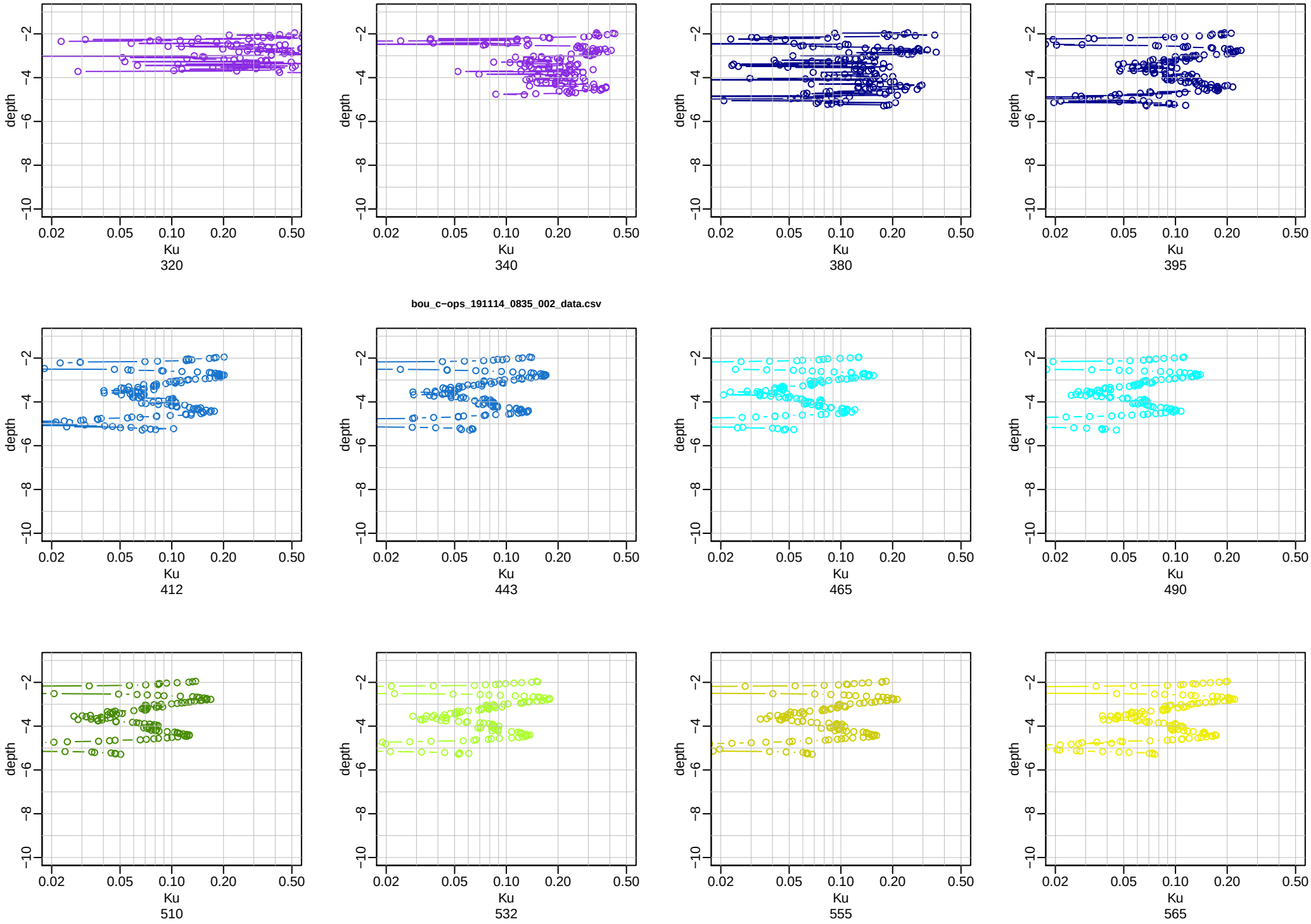

bou_c−ops_191114_0835_002_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
625
320
589
340
532
510
412
1e−04
1e−02
1e+00
Eu black corrected and filtered

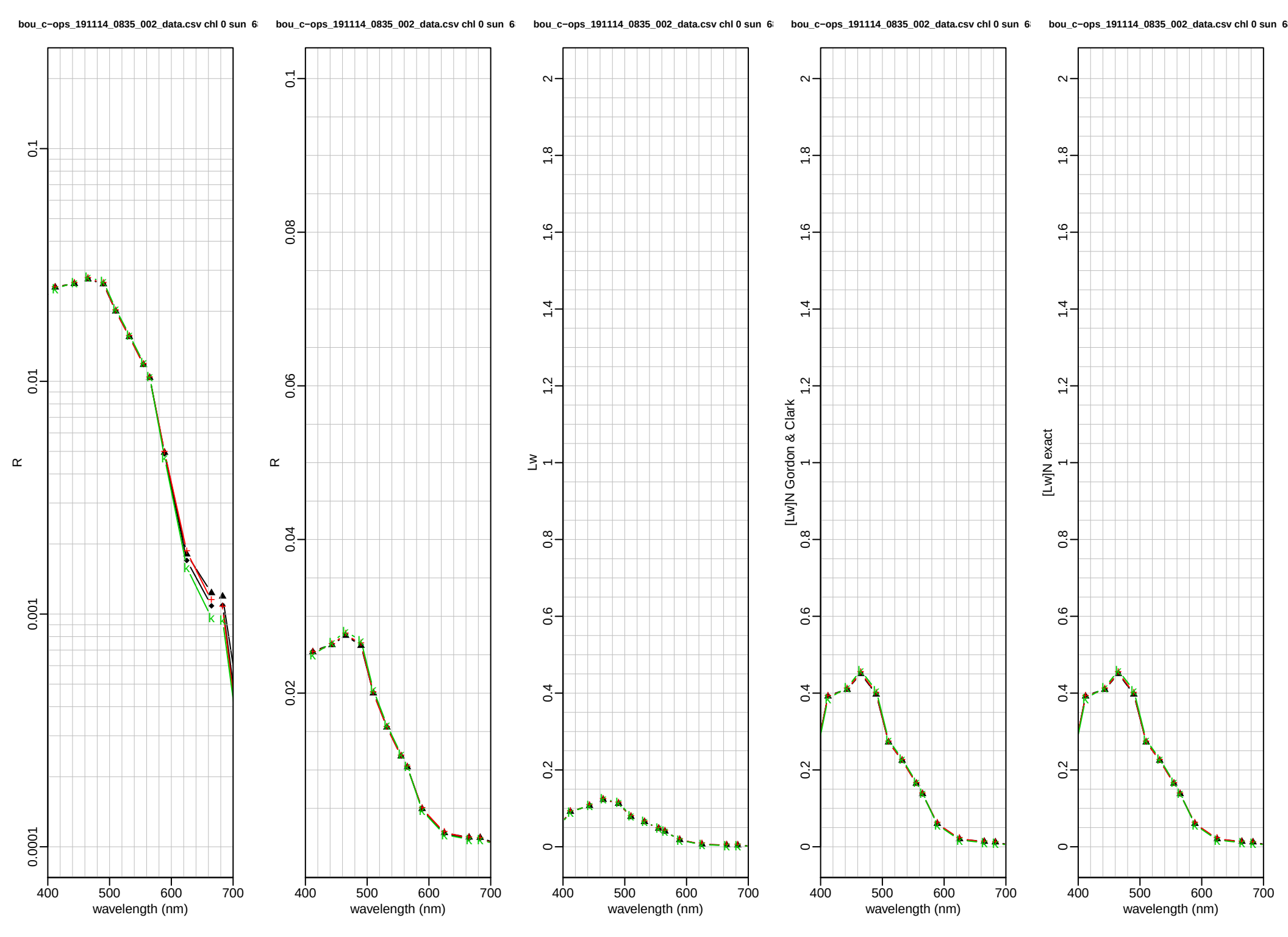

bou_c−ops_191114_0835_002_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 68
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
Ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_191114_0835_002_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_191114_0835_002_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected

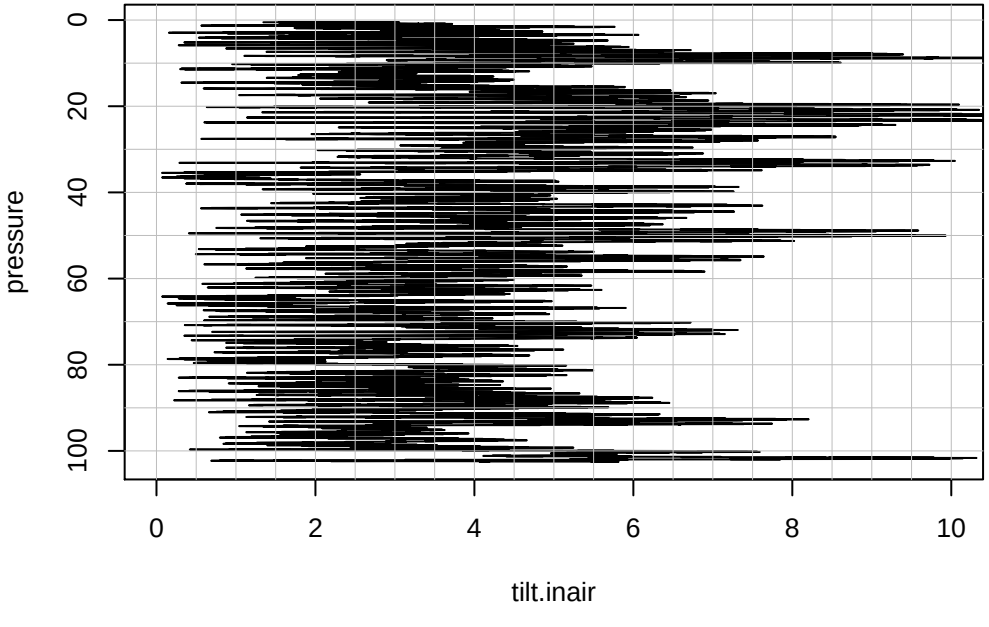

bou_c~ops_191114_0835_002_data.csv
depth
0
-10
-20
-30
-40
-50
0.02
0.05
0.10
0.20
0.50
Kd
320
340
380
395
412
443
465
490
510
532
555
565

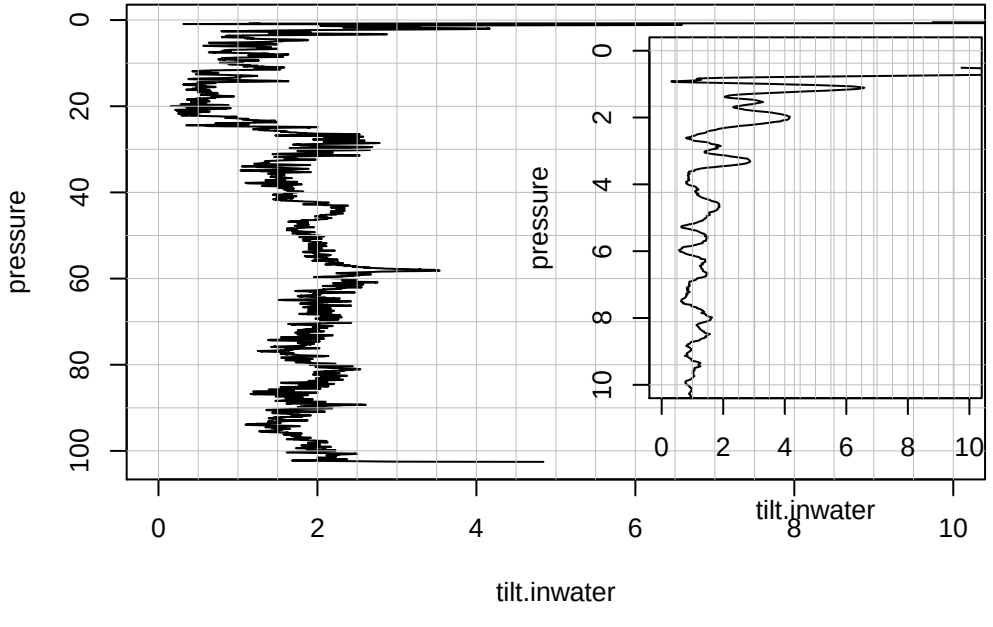

bou_c−ops_191114_0835_002_data.csv
depth
−2
−4
−6
−8
−10
0.02
0.05
0.10
0.20
0.50
Ku
320
340
380
395
412
443
465
490
510
532
555
565

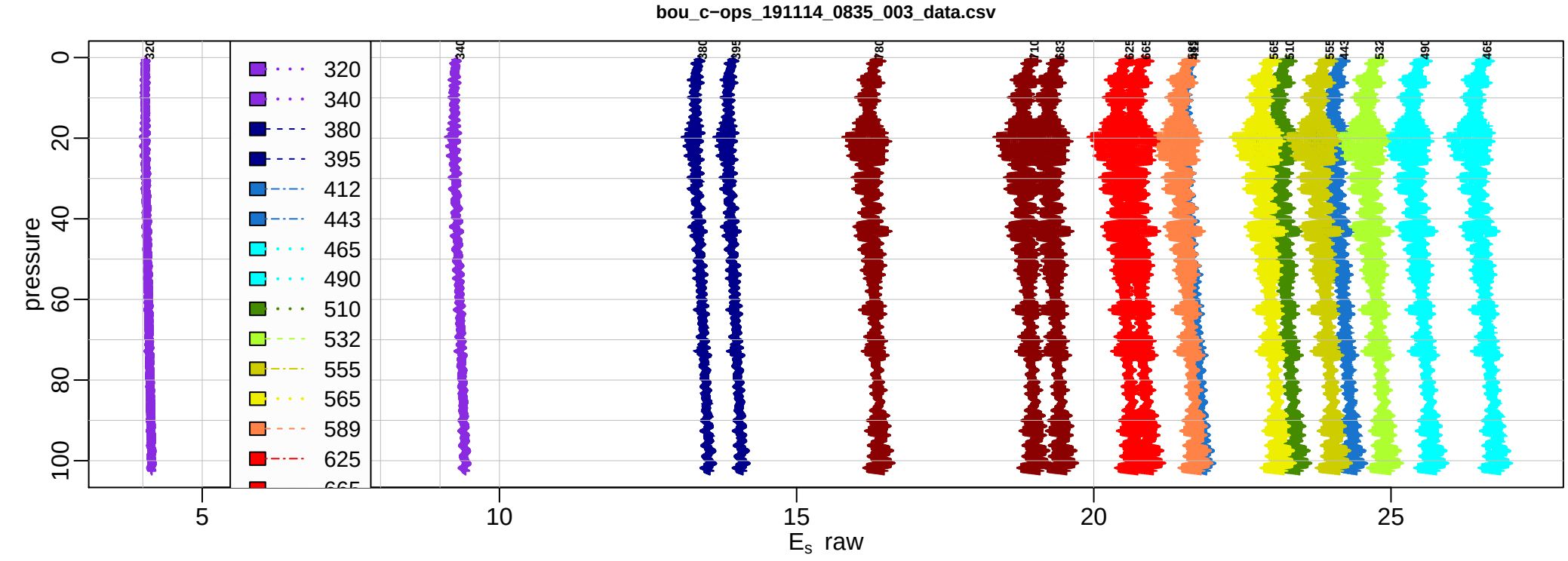

bou_c−ops_191114_0835_002_data.csv chl 0 sun 6
R
0.1
0.01
0.001
0.0001
400
500
600
700
wavelength (nm)
bou_c−ops_191114_0835_002_data.csv chl 0 sun 6
R
0.1
0.08
0.06
0.04
0.02
400
500
600
700
wavelength (nm)
bou_c−ops_191114_0835_002_data.csv chl 0 sun 6
Lw
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)
bou_c−ops_191114_0835_002_data.csv chl 0 sun 6
[Lw]N Gordon & Clark
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)
bou_c−ops_191114_0835_002_data.csv chl 0 sun 6
[Lw]N exact
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)

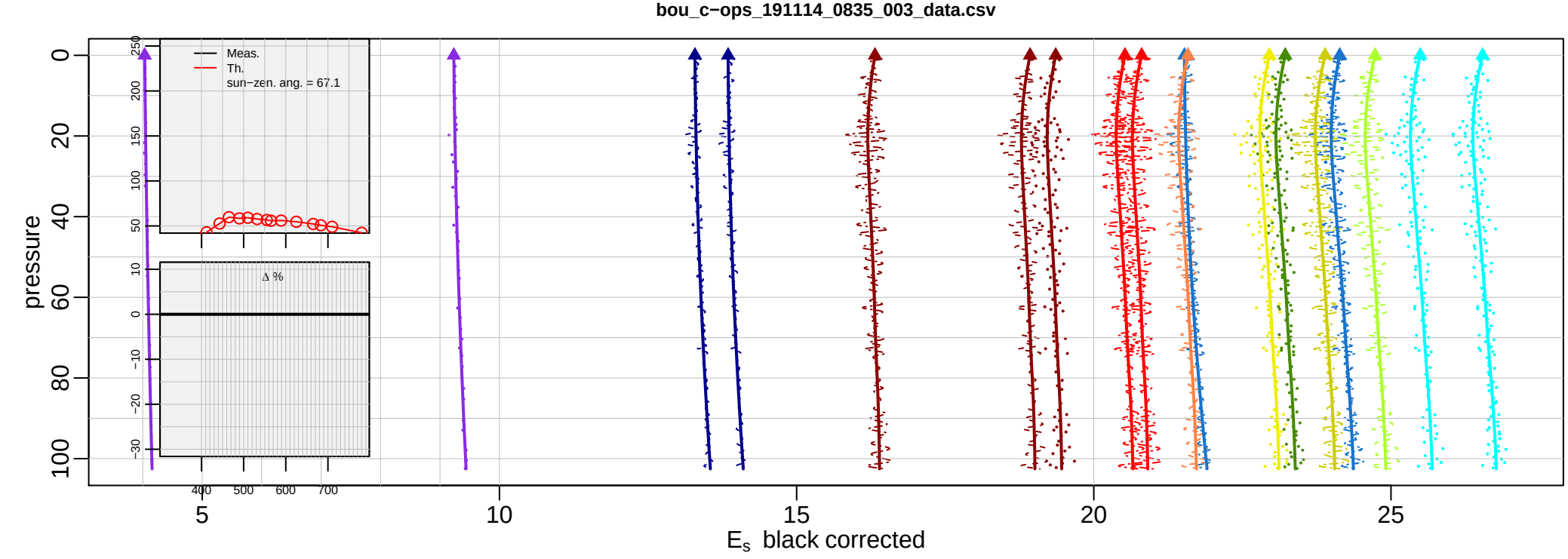
rootdir.approved /d/bdp/MISSIONS/boussole/a
rootdir.calibrated /d/bdp/MISSIONS/boussole/c
le.repertoire /d/bdp/MISSIONS/boussole/c/boussole214/cops
dir.save /d/bdp/MISSIONS/boussole/a/boussole214/cops
la.liste /d/bdp/MISSIONS/boussole/c/boussole214/cops/listeR
liste.remove /d/bdp/MISSIONS/boussole/c/boussole214/cops/listeR.elimination
indice.water 1.34
rau.Fresnel 0.043
nominal.LAT 43.3667
nominal.LON 7.9
longitude 7.88055
latitude 43.37142
tiltmax.inair 90
tiltmax.inwater 5
span 0.75
df 6
width.surface 5
width.surface.ed 10
delta.capteur.eu 0.338
delta.capteur.ed 0
presmax.plot.eu 10
presmax.plot.ed 100

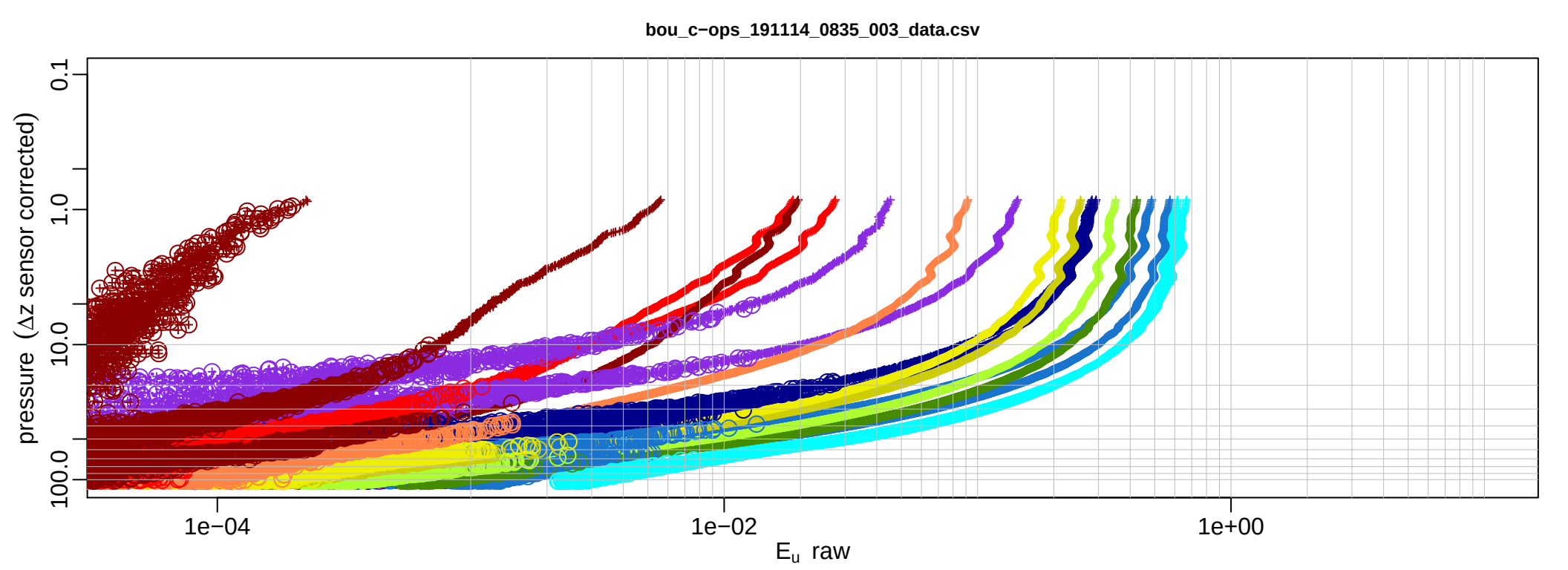
bou_c−ops_191114_0835_003_data.csv

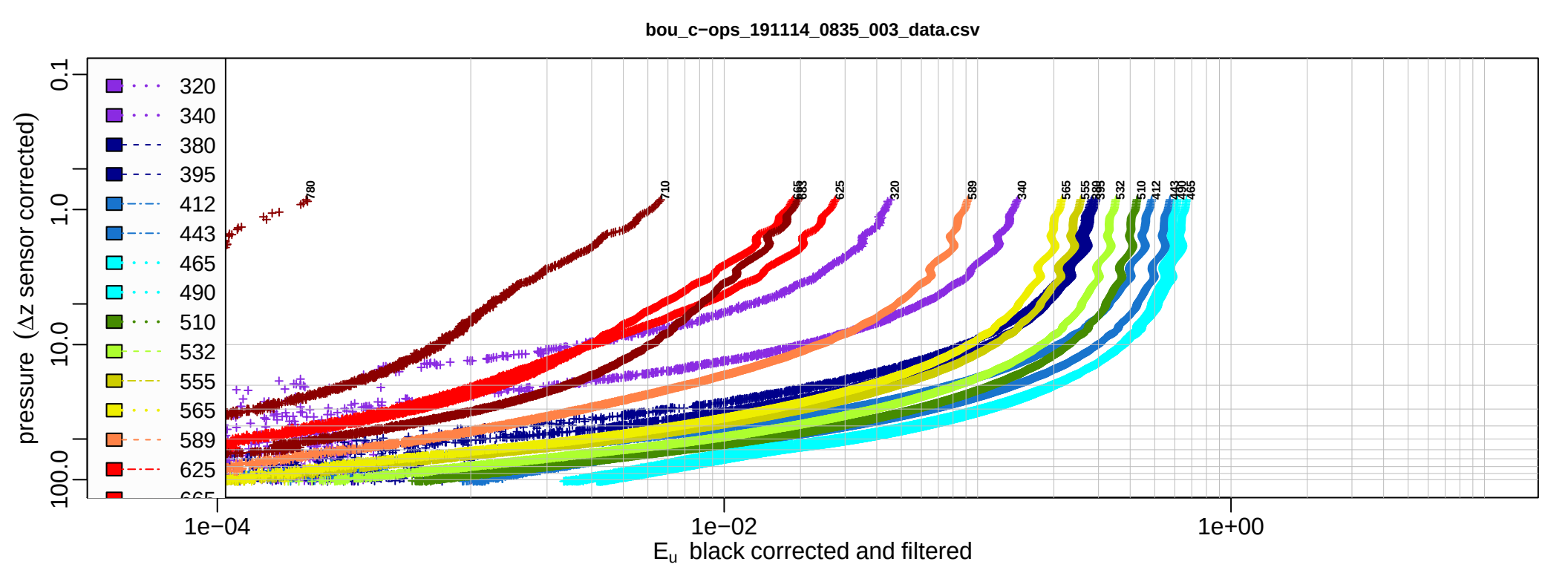


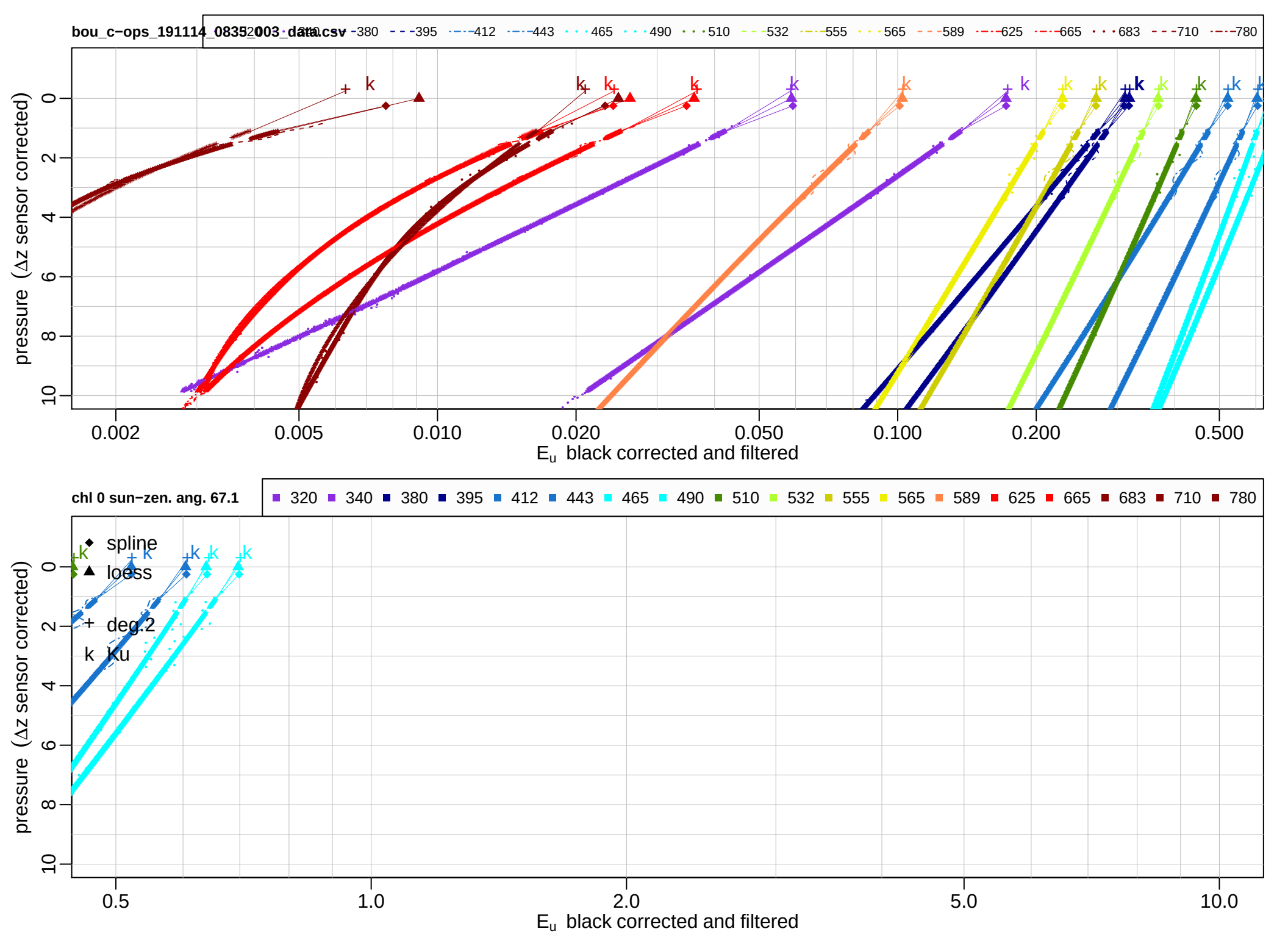


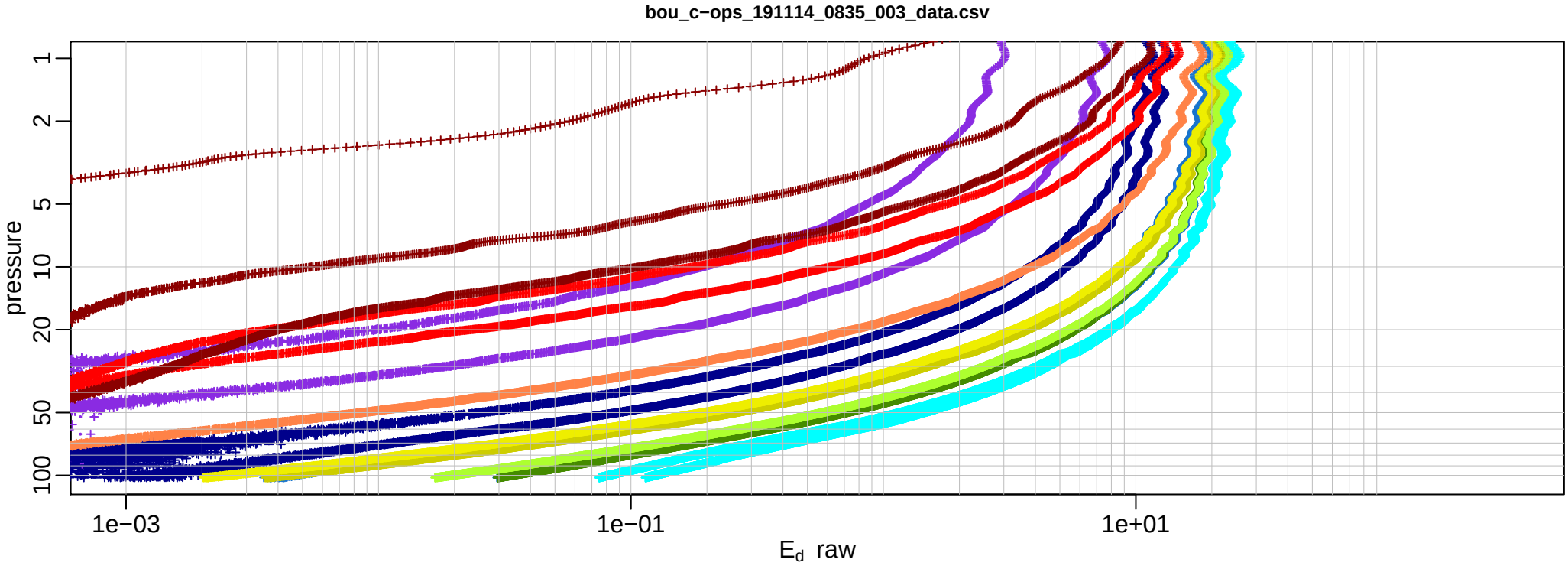

bou_c−ops_191114_0835_003_data.csv
pressure
0
20
40
60
80
100
5
10
15
20
25
E_s raw
320
340
380
395
412
443
465
490
510
532
555
565
589
625

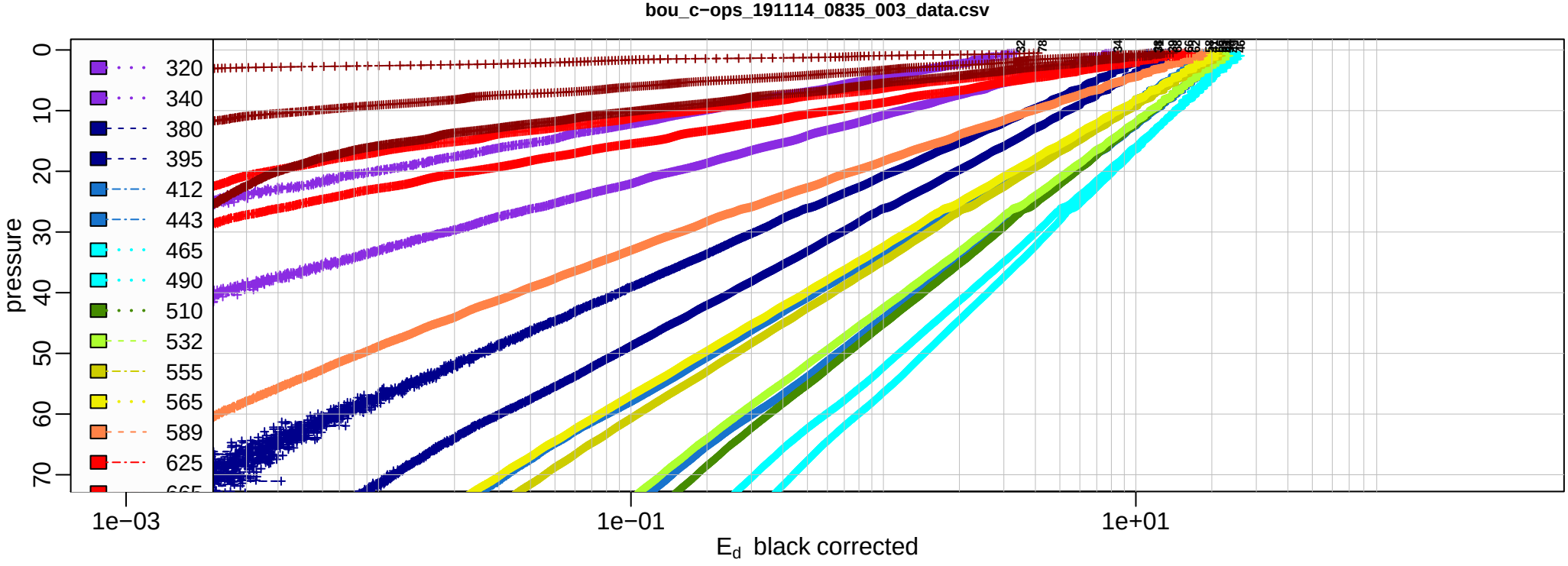

bou_c−ops_191114_0835_003_data.csv
pressure
0
20
40
60
80
100
5
10
15
20
25
E_s black corrected
Meas.
Th.
sun−zen. ang. = 67.1
Δ %
250
200
150
100
50
10
0
−10
−20
−30
400
500
600
700

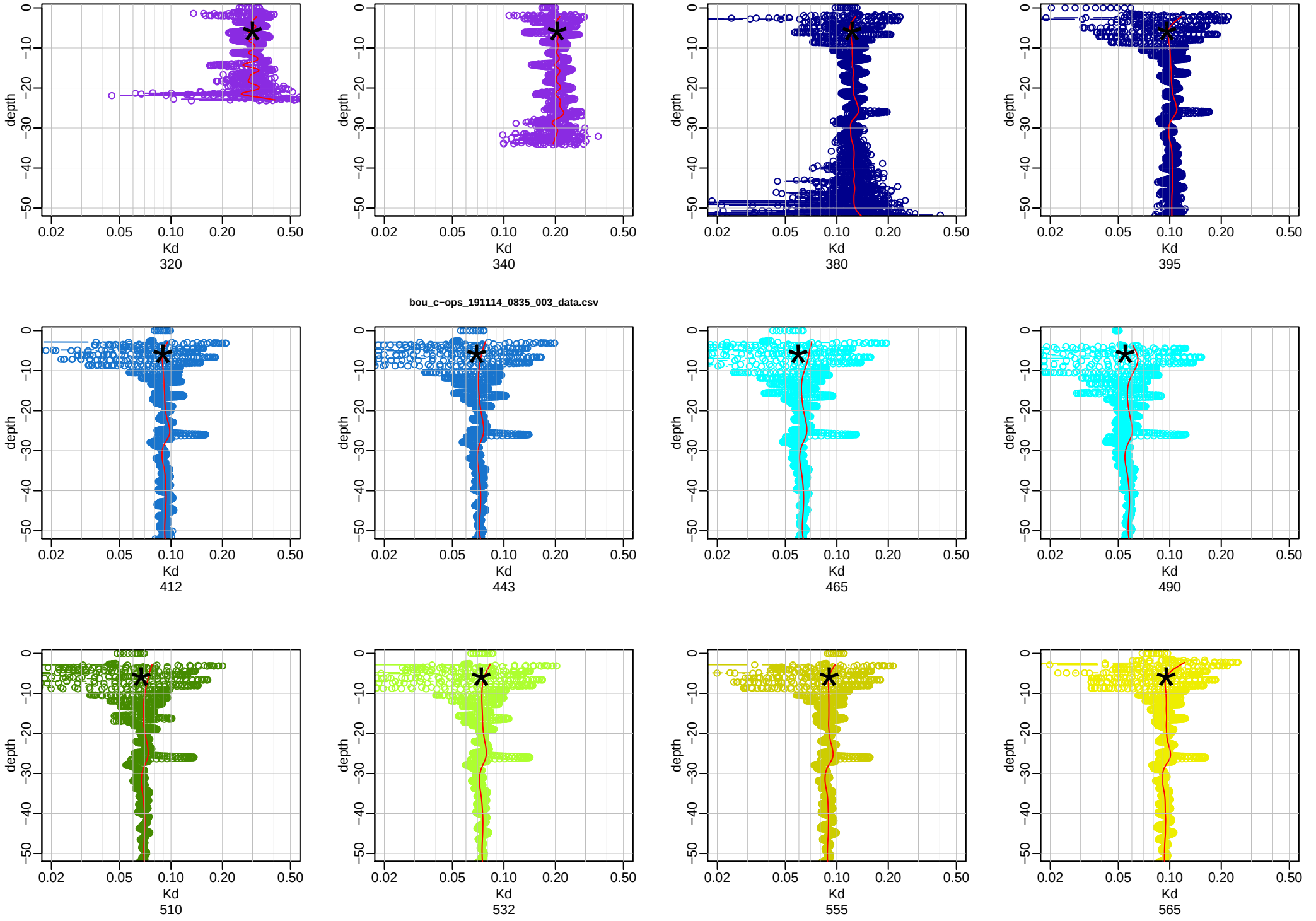

bou_c−ops_191114_0835_003_data.csv
pressure (Δz sensor corrected)
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u raw

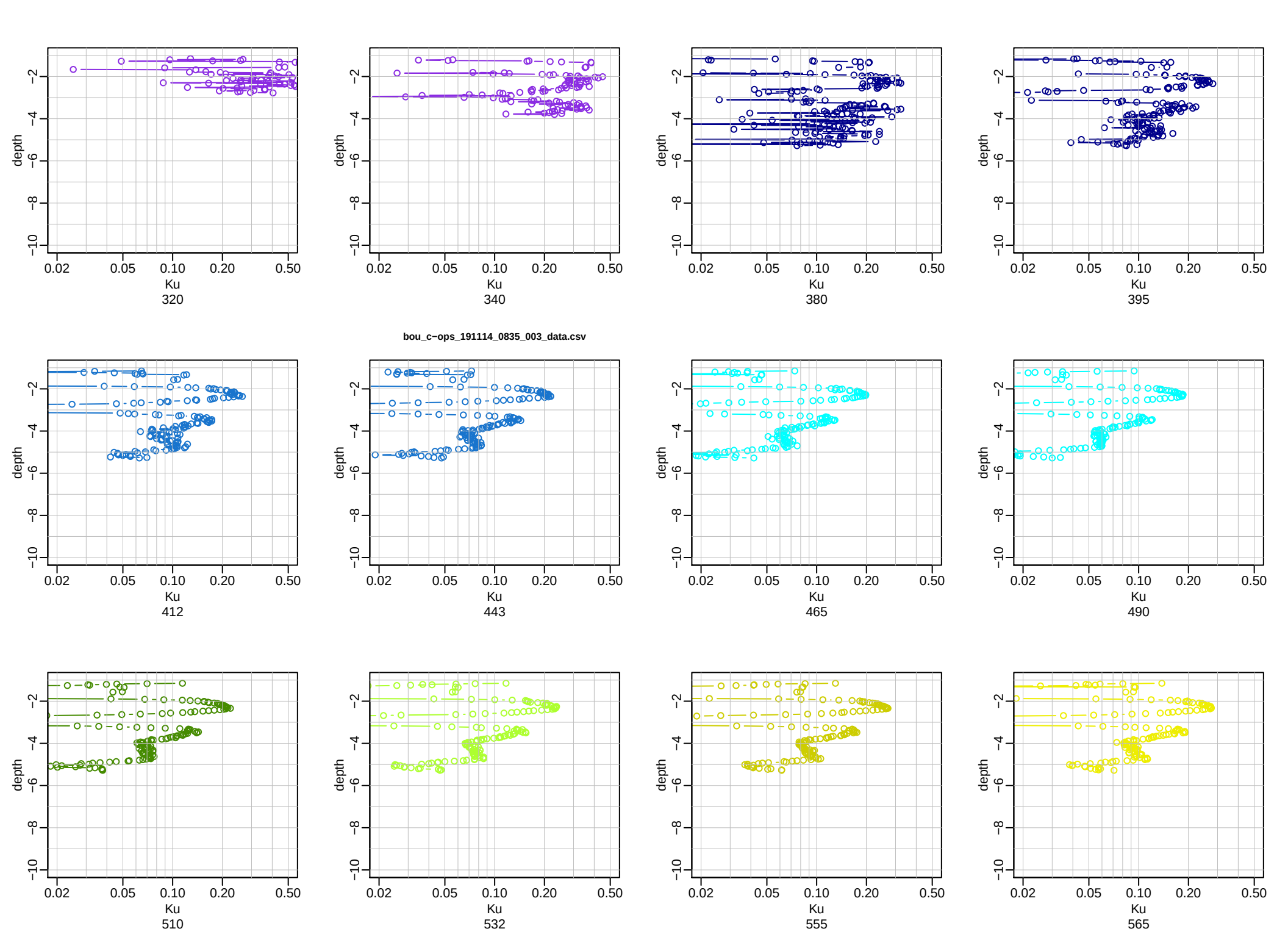

bou_c−ops_191114_0835_003_data.csv
pressure (Δz sensor corrected)
320
340
380
395
412
443
465
490
510
532
555
565
589
625
780
710
665
683
625
320
589
340
565
555
532
510
412
443
490
465
0.1
1.0
10.0
100.0
1e−04
1e−02
1e+00
E_u black corrected and filtered

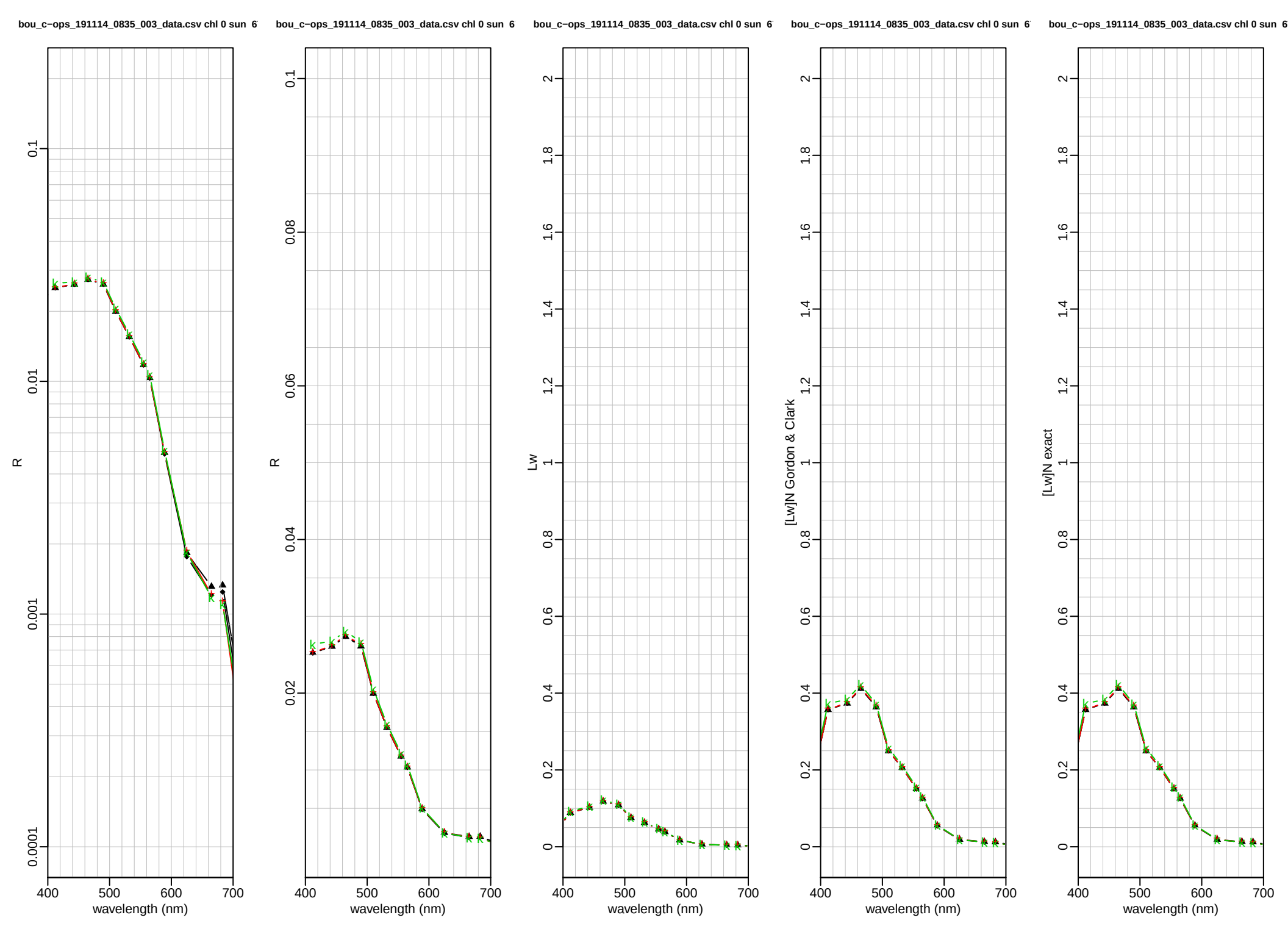

bou_c−ops_191114_0835_003_data.csv
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.002 0.005 0.010 0.020 0.050 0.100 0.200 0.500
E_u black corrected and filtered
chl 0 sun−zen. ang. 67.1
320 340 380 395 412 443 465 490 510 532 555 565 589 625 665 683 710 780
spline
loess
deg.2
ku
pressure (Δz sensor corrected)
0 2 4 6 8 10
0.5 1.0 2.0 5.0 10.0
E_u black corrected and filtered


bou_c−ops_191114_0835_003_data.csv
pressure
1
2
5
10
20
50
100
1e−03
1e−01
1e+01
E_d raw


bou_c−ops_191114_0835_003_data.csv
pressure
0
10
20
30
40
50
60
70
320
340
380
395
412
443
465
490
510
532
555
565
589
625
1e−03
1e−01
1e+01
E_d black corrected


bou_c−ops_191114_0835_003_data.csv
depth
Kd
320
340
380
395
412
443
465
490
510
532
555
565


bou_c~ops_191114_0835_003_data.csv
depth
Ku
320
340
380
395
412
443
465
490
510
532
555
565


bou_c−ops_191114_0835_003_data.csv chl 0 sun 6
R
0.1
0.01
0.001
0.0001
400
500
600
700
wavelength (nm)
bou_c−ops_191114_0835_003_data.csv chl 0 sun 6
R
0.1
0.08
0.06
0.04
0.02
400
500
600
700
wavelength (nm)
bou_c−ops_191114_0835_003_data.csv chl 0 sun 6
Lw
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)
bou_c−ops_191114_0835_003_data.csv chl 0 sun 6
[Lw]N Gordon & Clark
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)
bou_c−ops_191114_0835_003_data.csv chl 0 sun 6
[Lw]N exact
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
400
500
600
700
wavelength (nm)

verbose TRUE

indice.water 1.34

rau.Fresnel 0.043

win.width 9

win.height 7

instruments.optics Ed0 EdZ LuZ

tiltmax.optics 20 20 20

time.interval.for.smoothing.optics 40 80 80

sub.surface.removed.layer.optics 0 0 0

delta.capteur.optics 0 −0.05 0.338

radius.instrument.optics 0.035 0.035 0.035

format.date %Y−%m−%d %H:%M:%S

instruments.others Master

depth.is.on LuZ

number.of.fields.before.date 2

time.window 0 10000

depth.discretization 0 0.01 1 0.02 2 0.05 5 0.1 10 0.2 20 0.5 50 1 100 2 200 5 500

file bou_c−ops_191211_1037_001_data.csv

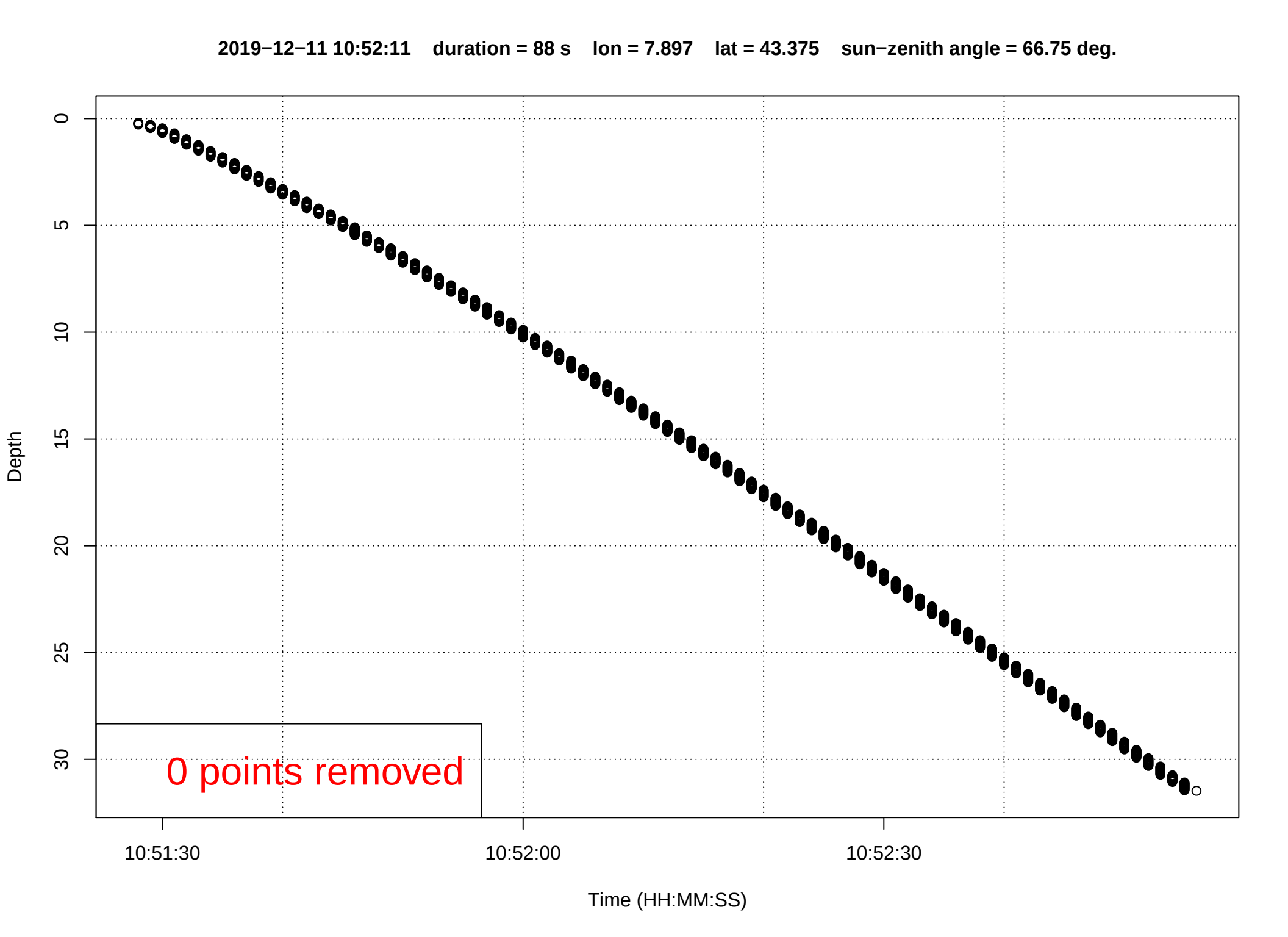
chl NA

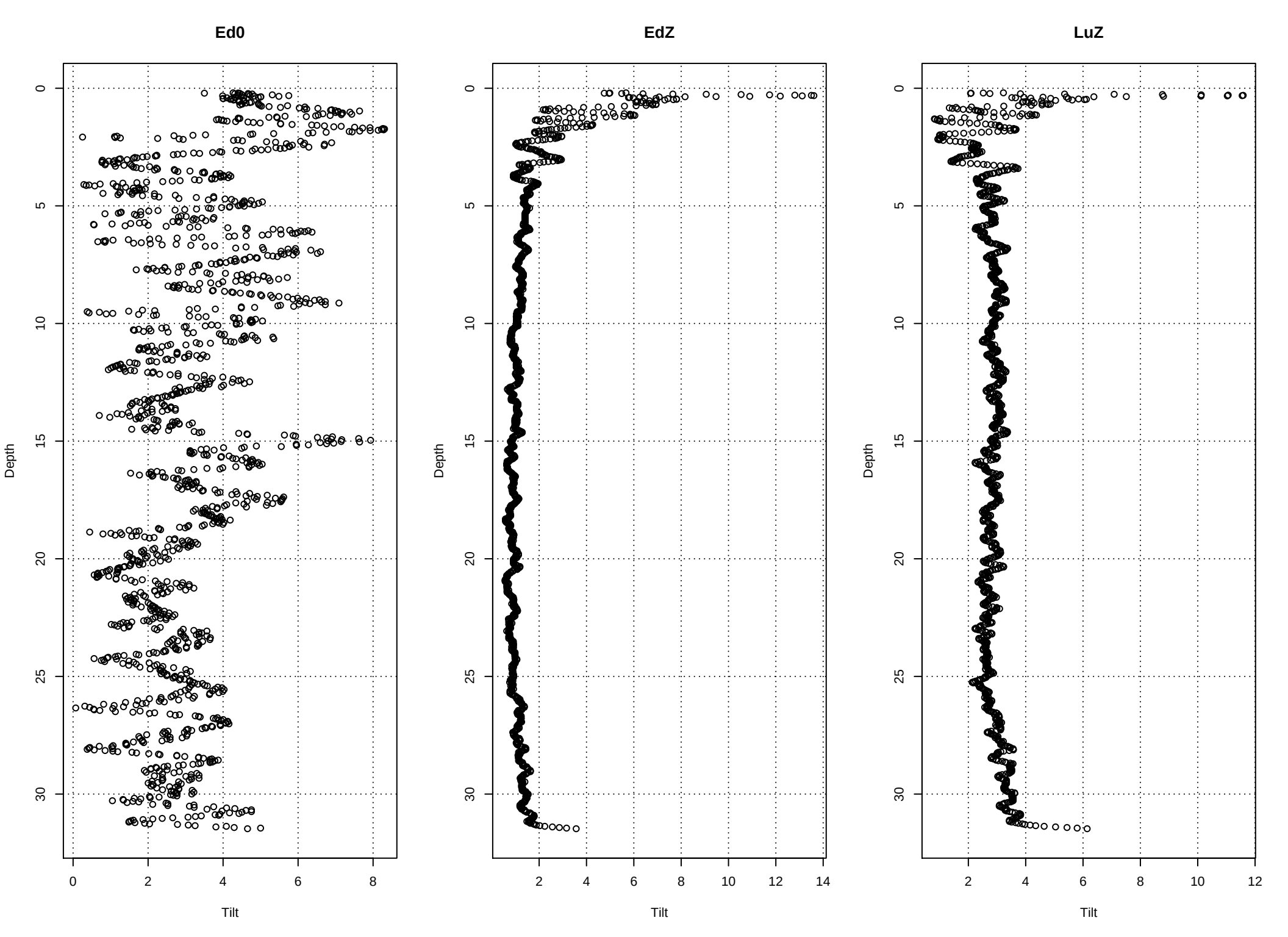
SHADOW.CORRECTION FALSE

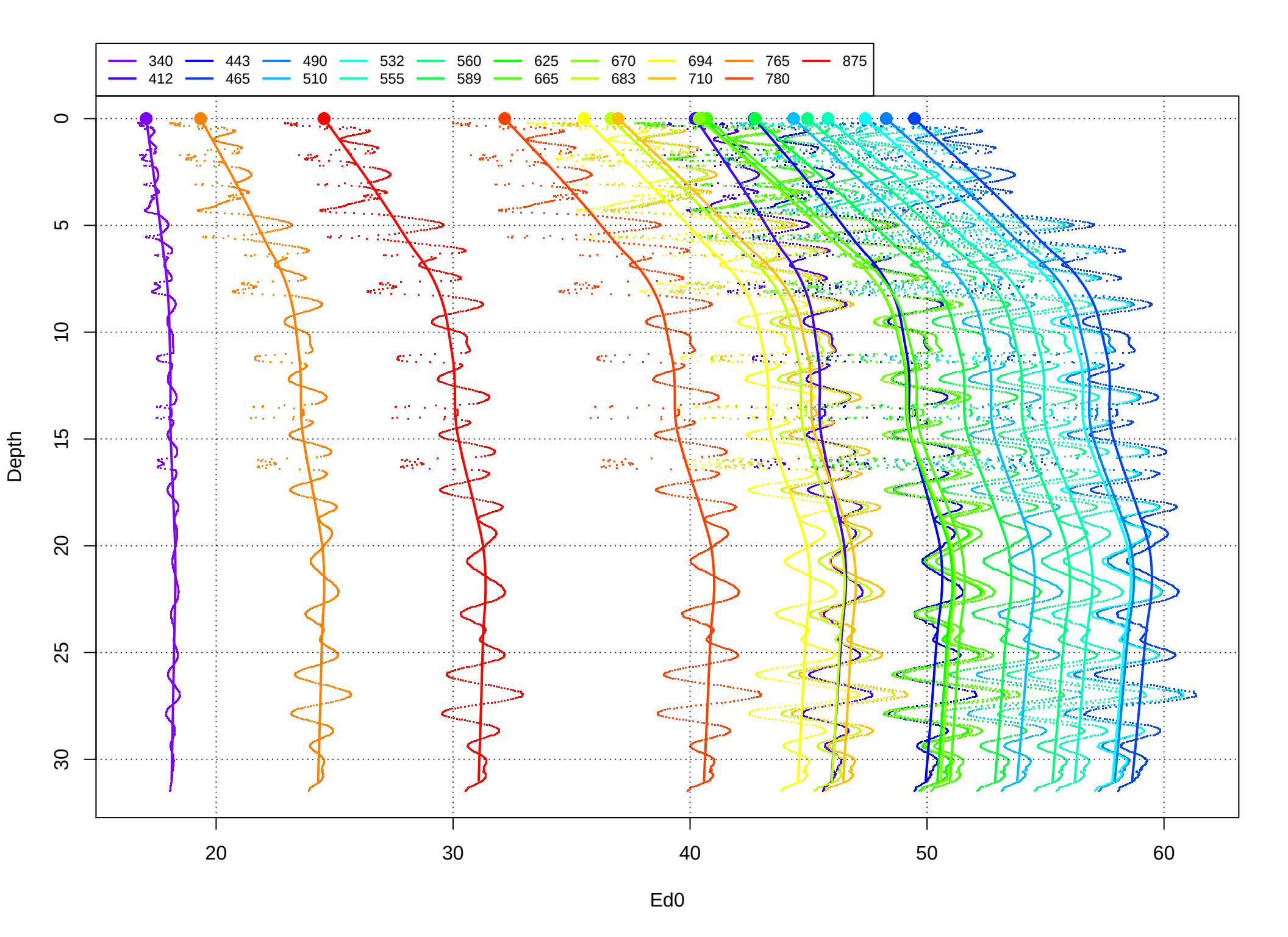
absorption.waves NA

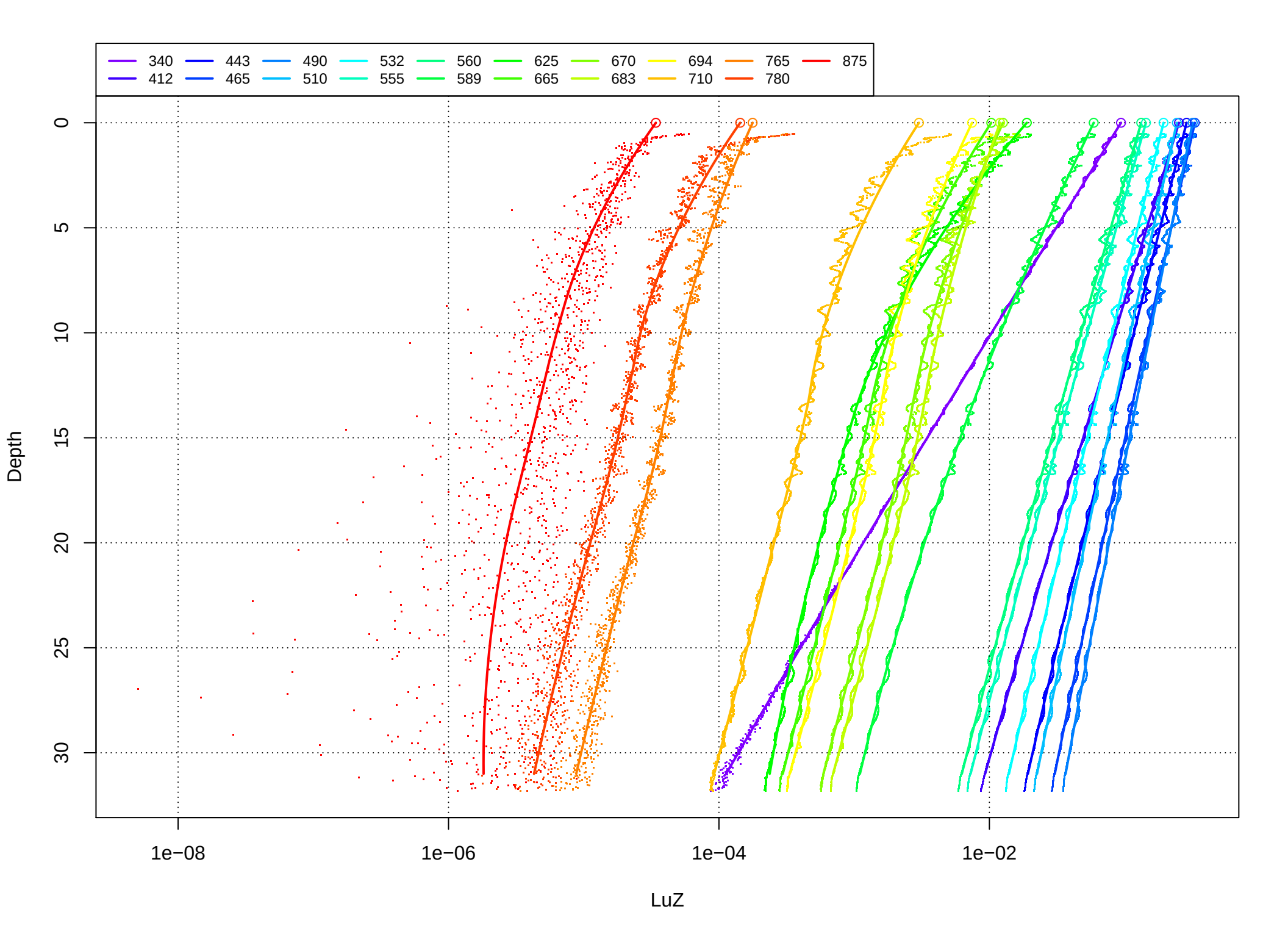
absorption.values NA

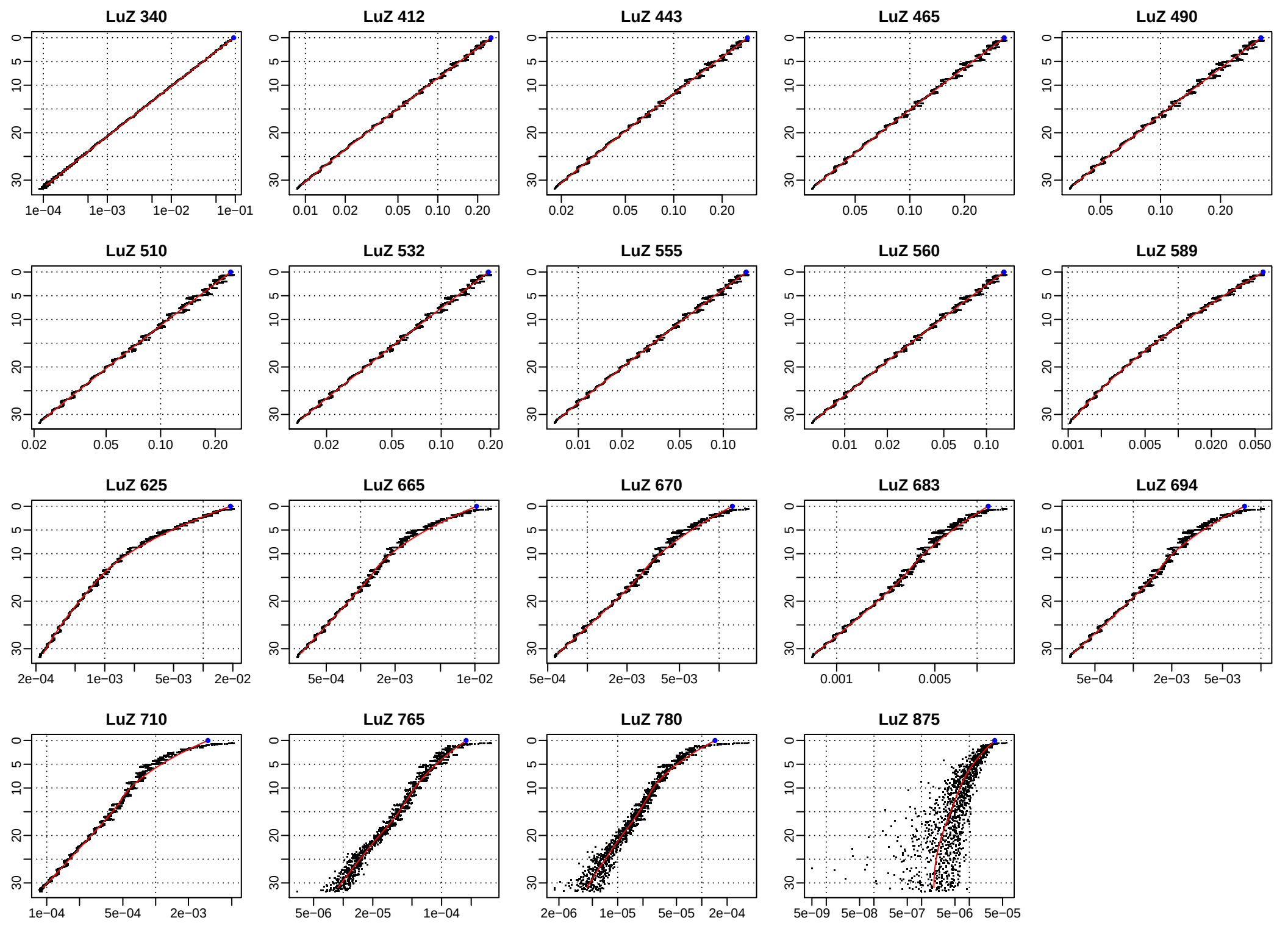
blacks

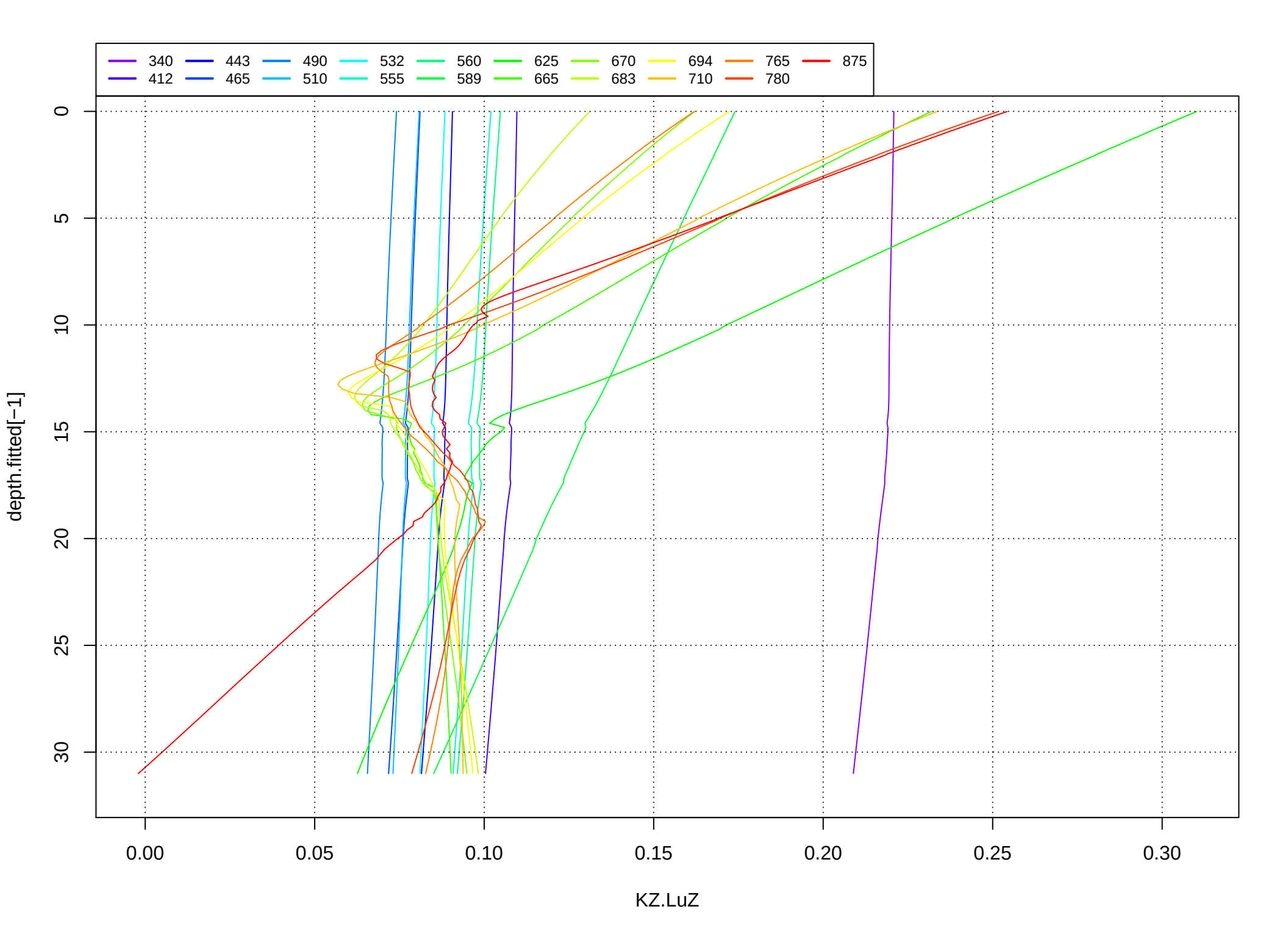

2019−12−11 10:52:11 duration = 88 s lon = 7.897 lat = 43.375 sun−zenith angle = 66.75 deg.
Depth
0
5
10
15
20
25
30
0 points removed
10:51:30
10:52:00
10:52:30
Time (HH:MM:SS)

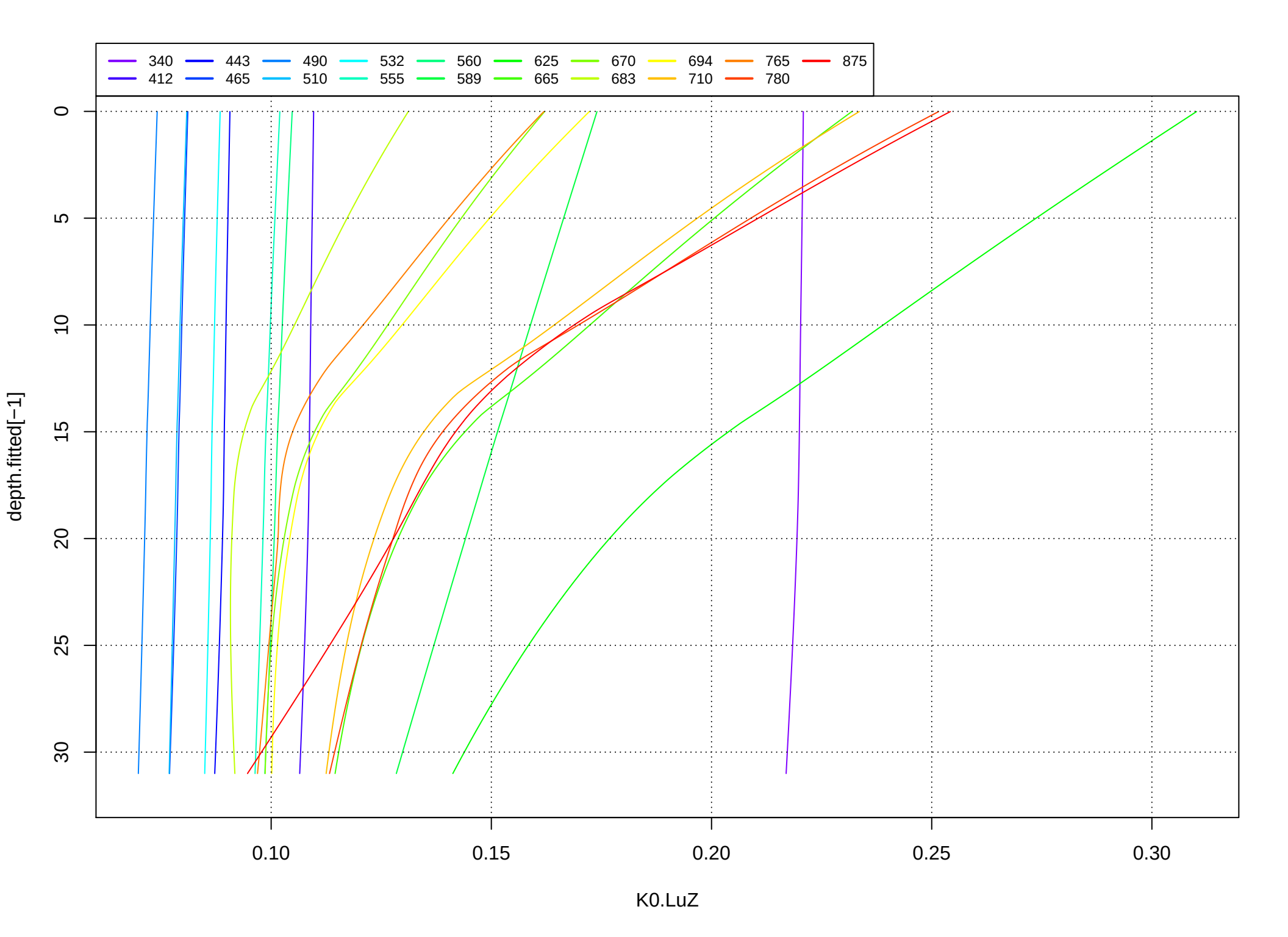

Ed0
EdZ
LuZ
Depth
Tilt
0
5
10
15
20
25
30
2
4
6
8
10
12
14

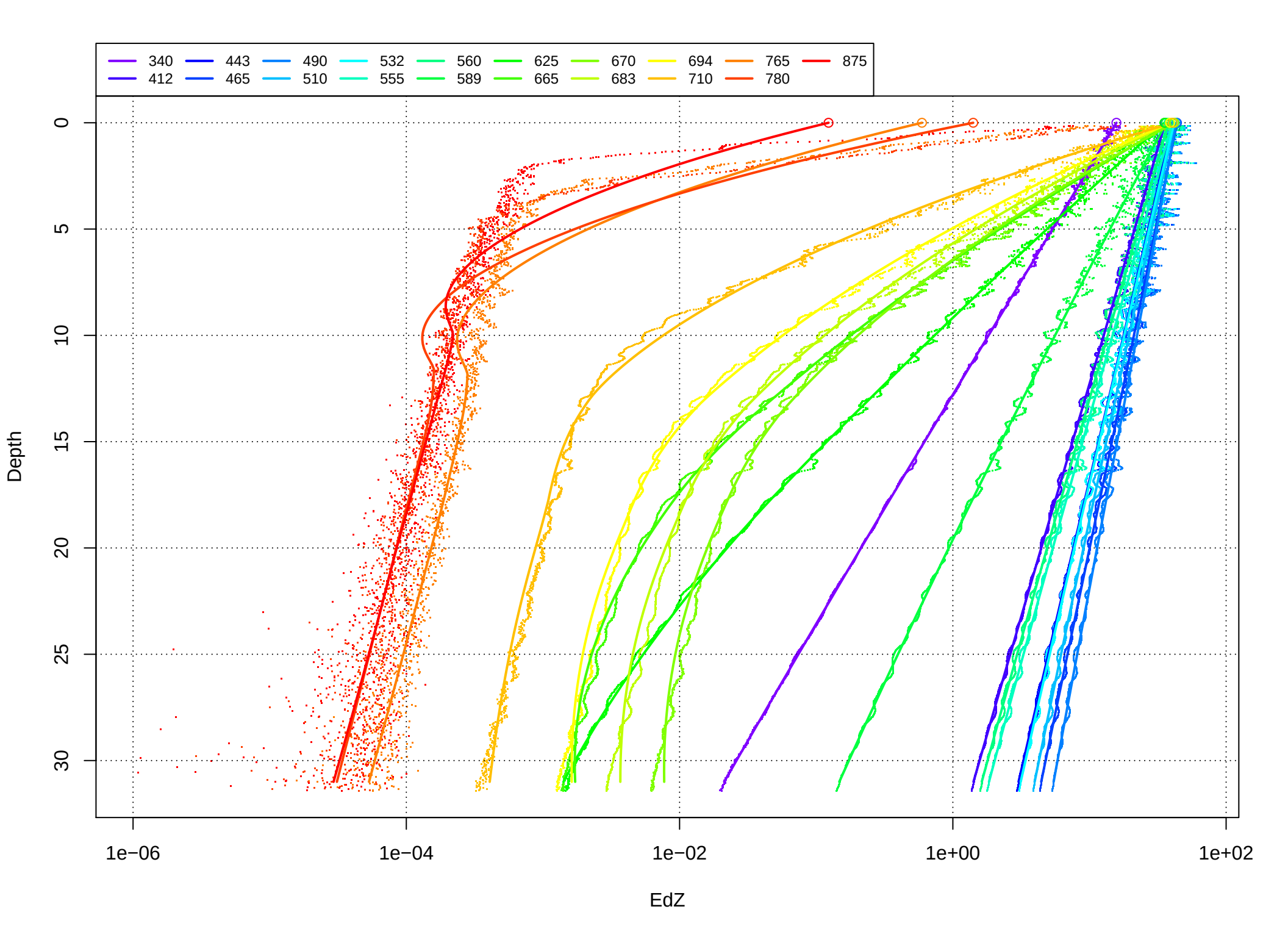

340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
Depth
0
5
10
15
20
25
30
20
30
40
50
60
Ed0

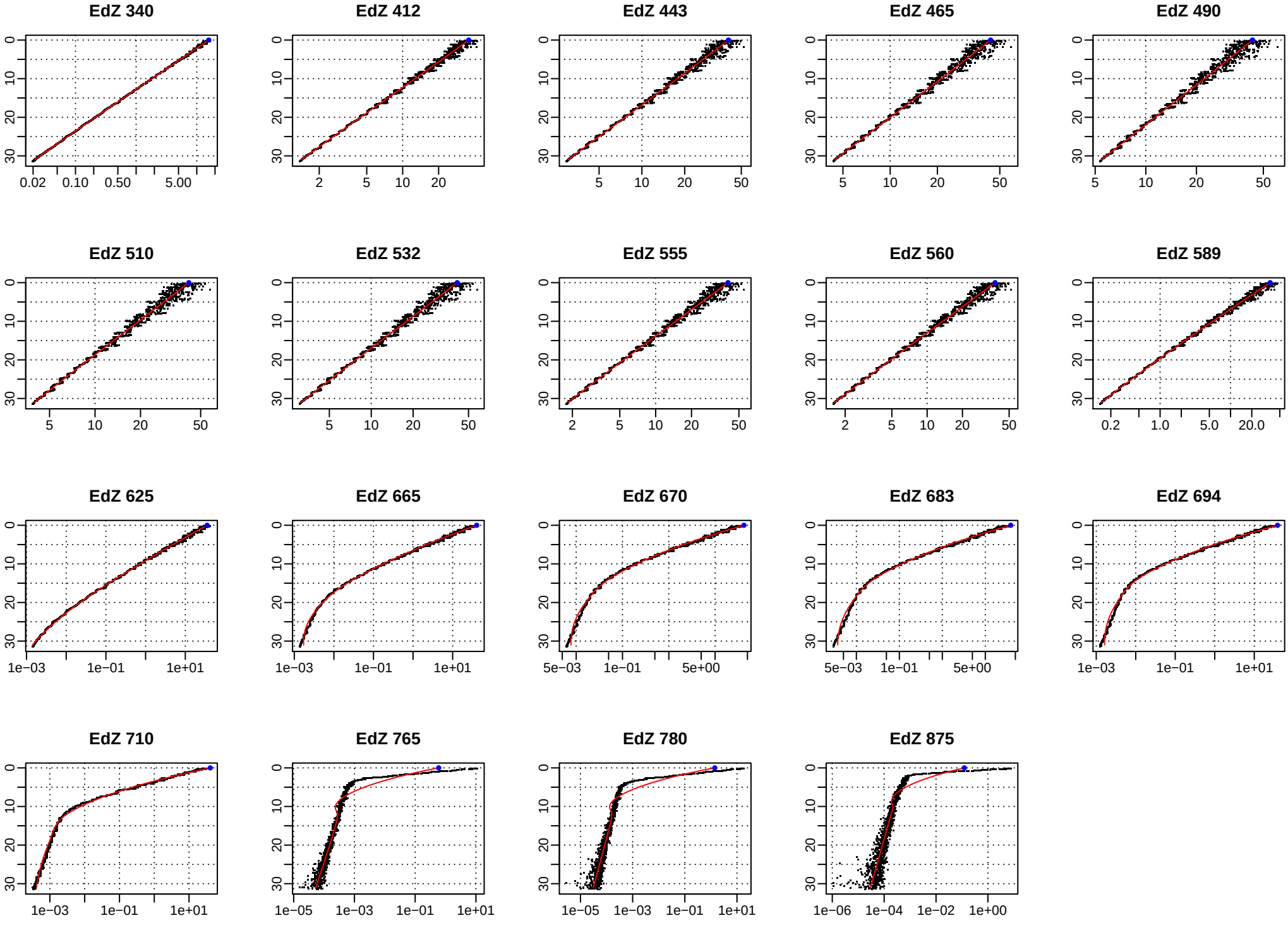

340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
Depth
0
5
10
15
20
25
30
1e−08
1e−06
1e−04
1e−02
LuZ

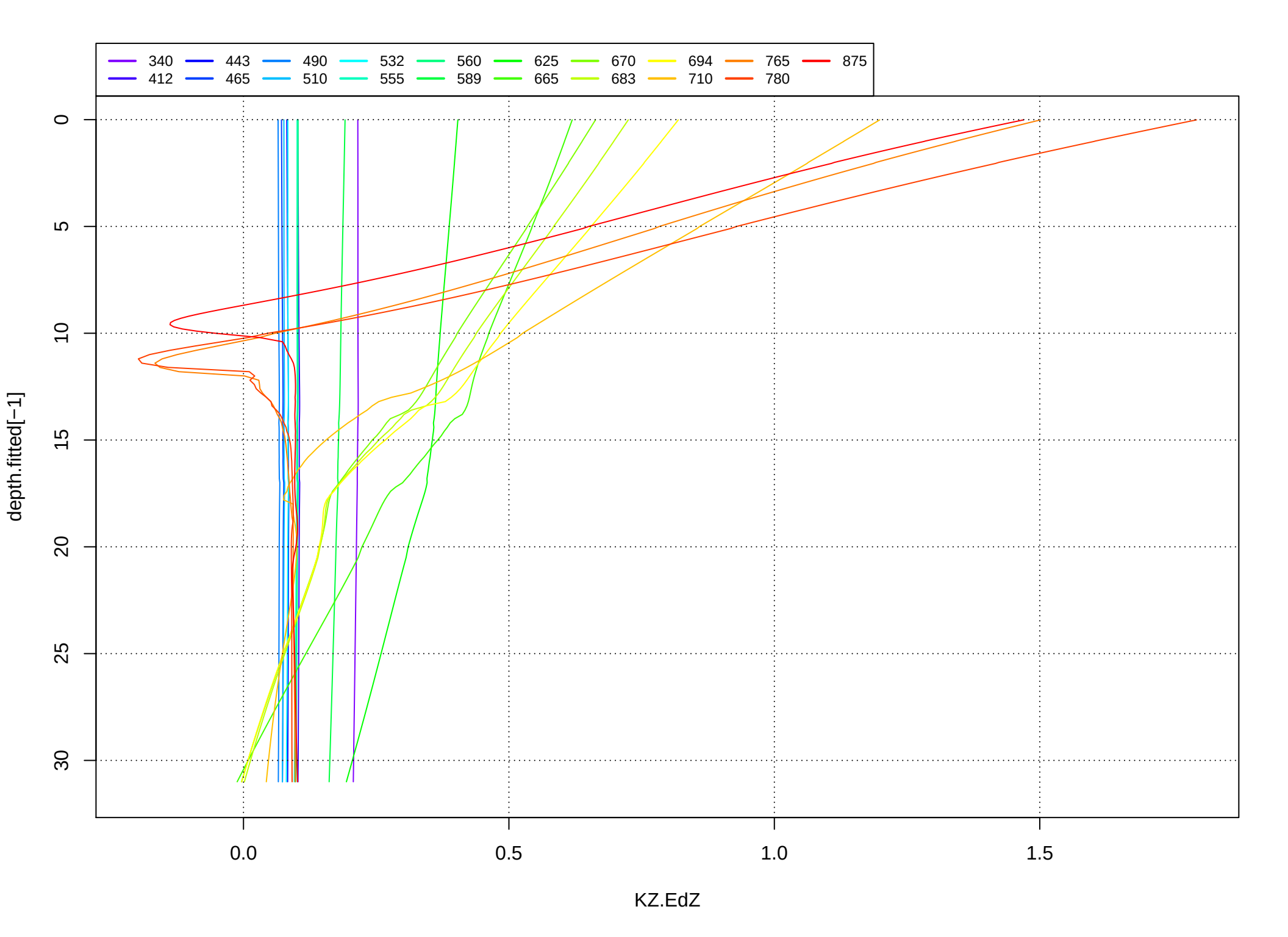

LuZ 340
LuZ 412
LuZ 443
LuZ 465
LuZ 490
LuZ 510
LuZ 532
LuZ 555
LuZ 560
LuZ 589
LuZ 625
LuZ 665
LuZ 670
LuZ 683
LuZ 694
LuZ 710
LuZ 765
LuZ 780
LuZ 875

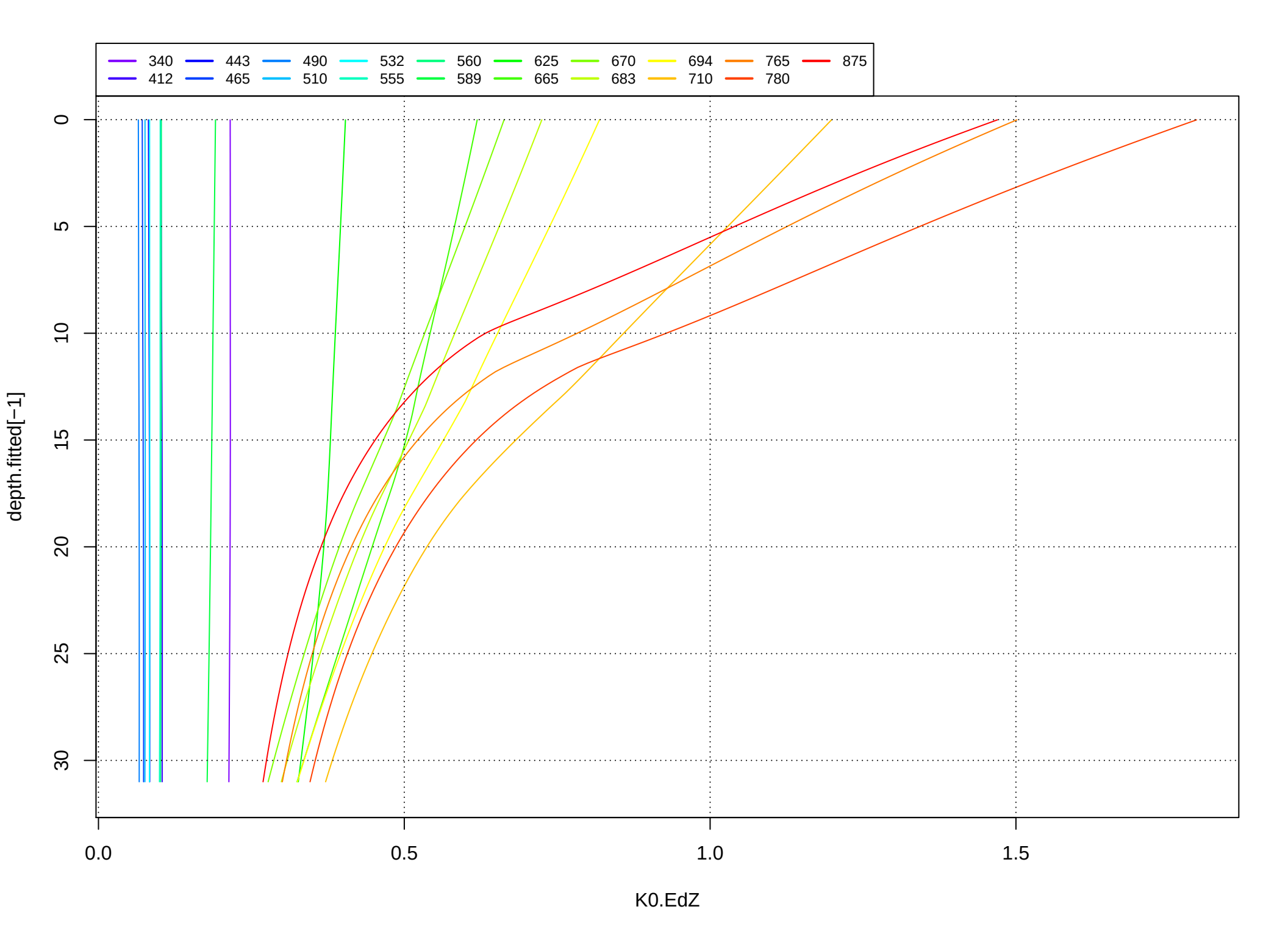

340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
depth.fitted[−1]
0
5
10
15
20
25
30
0.00
0.05
0.10
0.15
0.20
0.25
0.30
KZ.LuZ

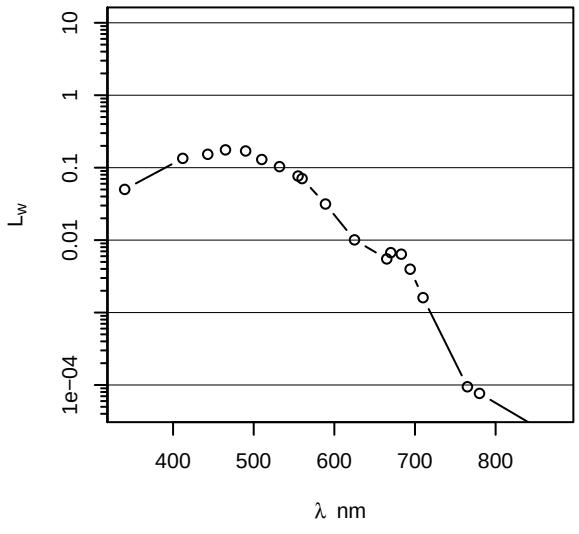

340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
0
5
10
15
20
25
30
depth.fitted[−1]
0.10
0.15
0.20
0.25
0.30
K0.LuZ

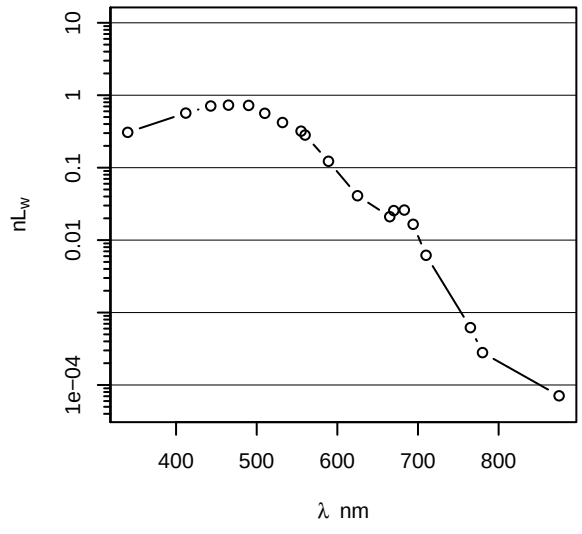

340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
Depth
0
5
10
15
20
25
30
1e−06
1e−04
1e−02
1e+00
1e+02
EdZ

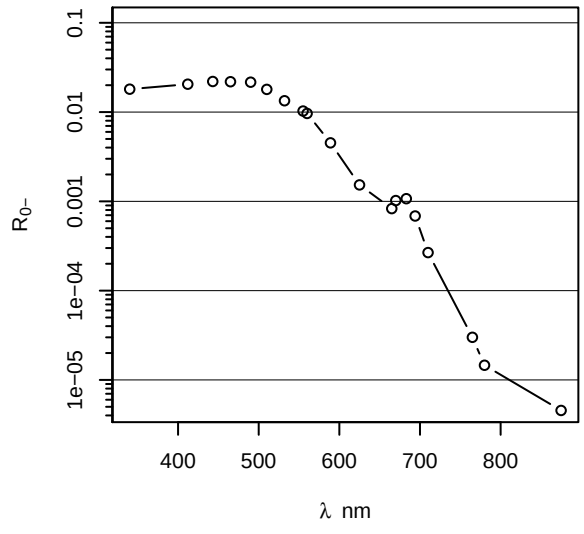

EdZ 340
EdZ 412
EdZ 443
EdZ 465
EdZ 490
EdZ 510
EdZ 532
EdZ 555
EdZ 560
EdZ 589
EdZ 625
EdZ 665
EdZ 670
EdZ 683
EdZ 694
EdZ 710
EdZ 765
EdZ 780
EdZ 875

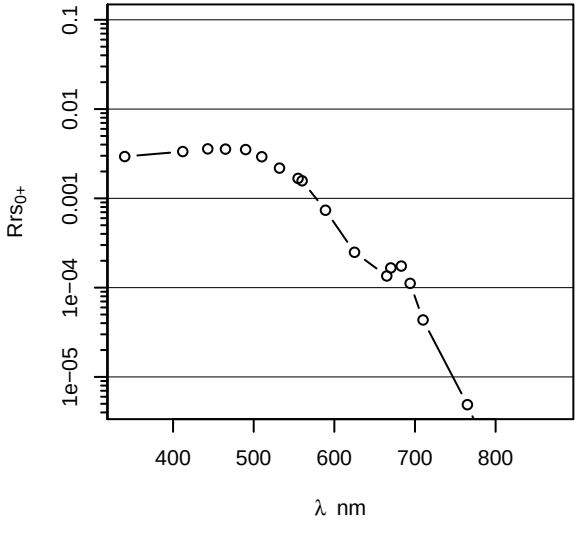

340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
depth.fitted[−1]
0
5
10
15
20
25
30
0.0
0.5
1.0
1.5
KZ.EdZ


340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
depth.fitted[−1]
0
5
10
15
20
25
30
0.0
0.5
1.0
1.5
K0.EdZ









NO SHADOW CORRECTION FOR LuZ

verbose TRUE

indice.water 1.34

rau.Fresnel 0.043

win.width 9

win.height 7

instruments.optics Ed0 EdZ LuZ

tiltmax.optics 20 20 20

time.interval.for.smoothing.optics 40 80 80

sub.surface.removed.layer.optics 0 0 0

delta.capteur.optics 0 −0.05 0.338

radius.instrument.optics 0.035 0.035 0.035

format.date %Y−%m−%d %H:%M:%S

instruments.others Master

depth.is.on LuZ

number.of.fields.before.date 2

time.window 0 10000

depth.discretization 0 0.01 1 0.02 2 0.05 5 0.1 10 0.2 20 0.5 50 1 100 2 200 5 500

file bou_c−ops_191211_1037_002_data.csv

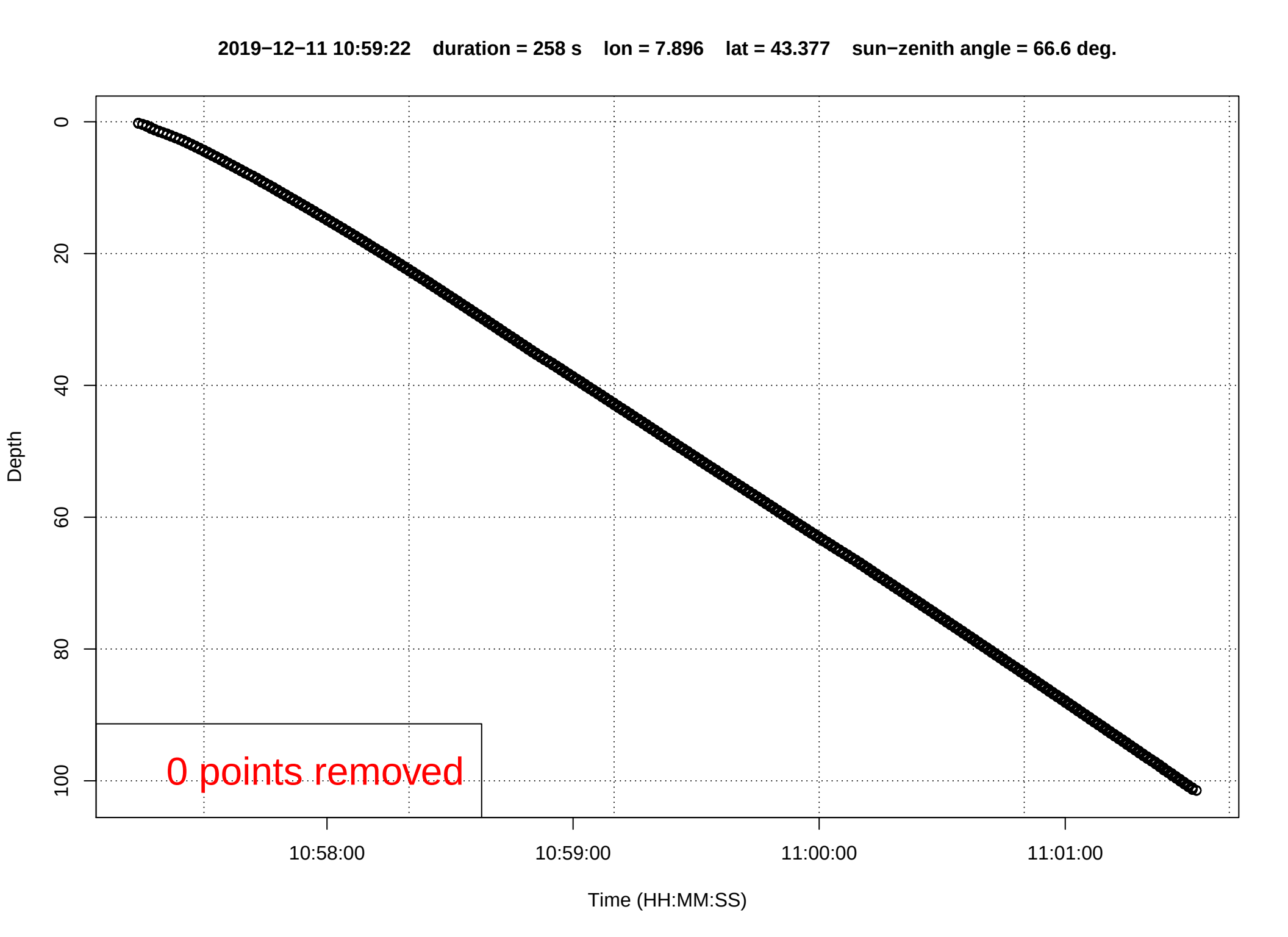
chl NA

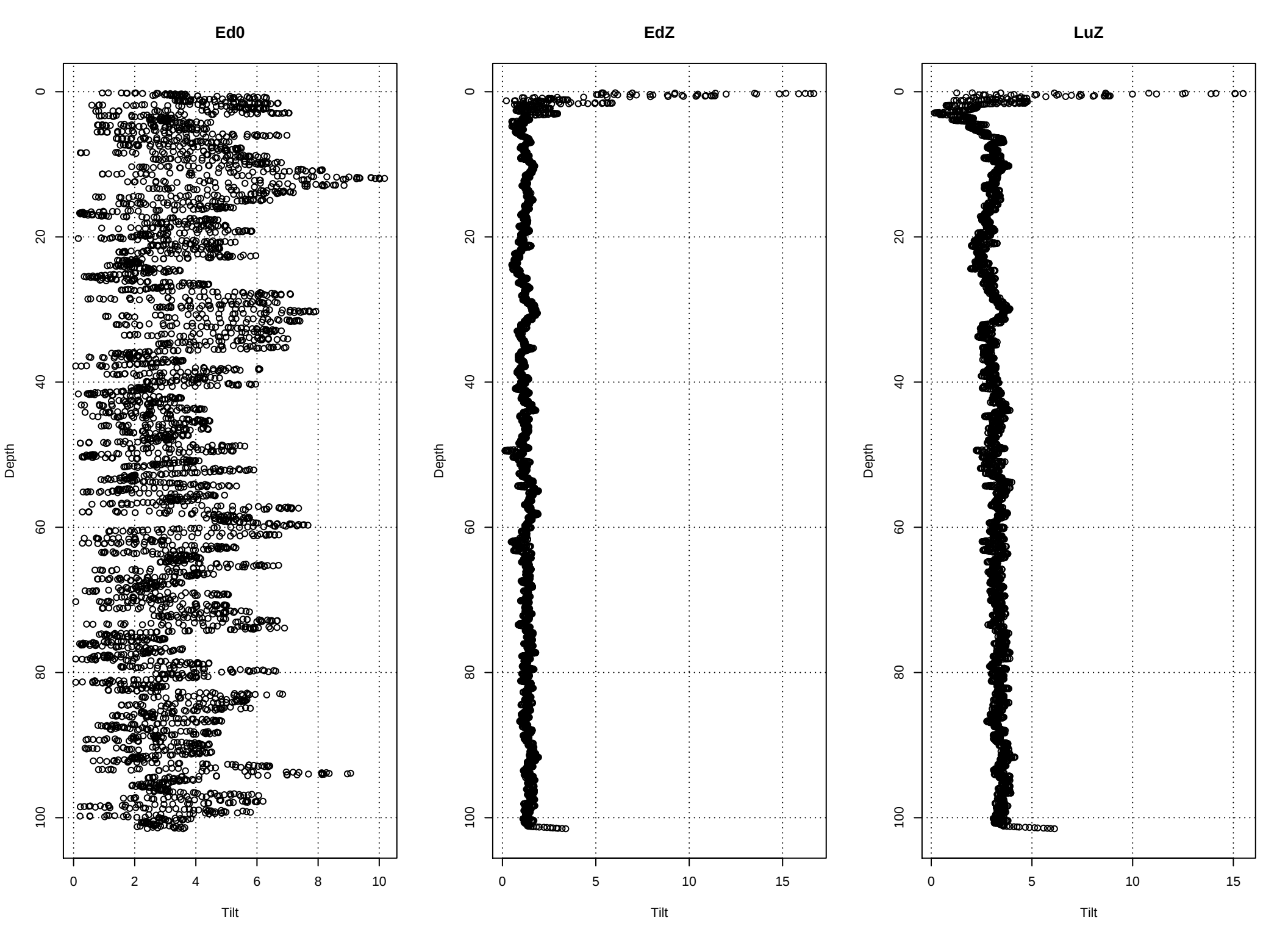
SHADOW.CORRECTION FALSE

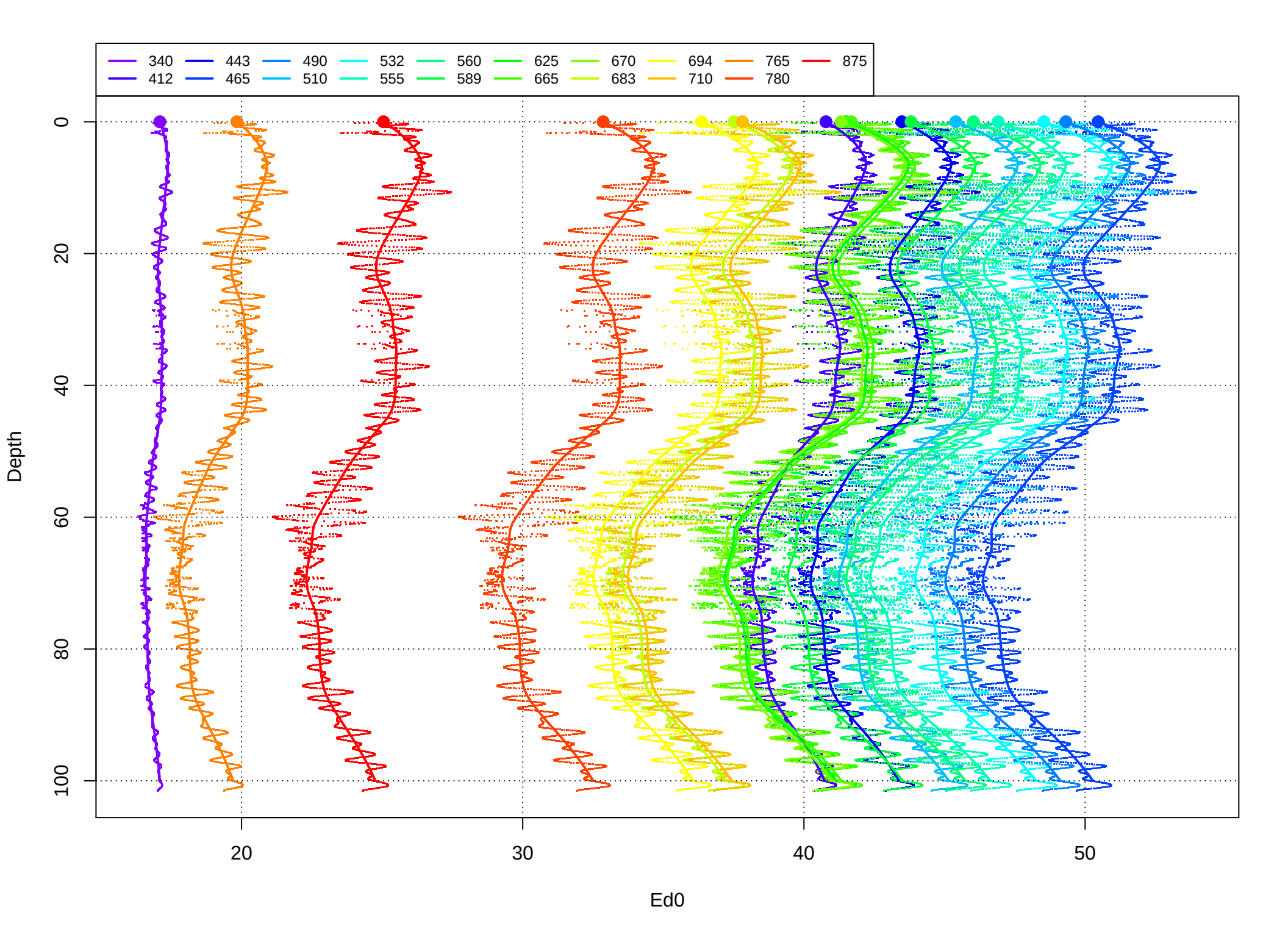
absorption.waves NA

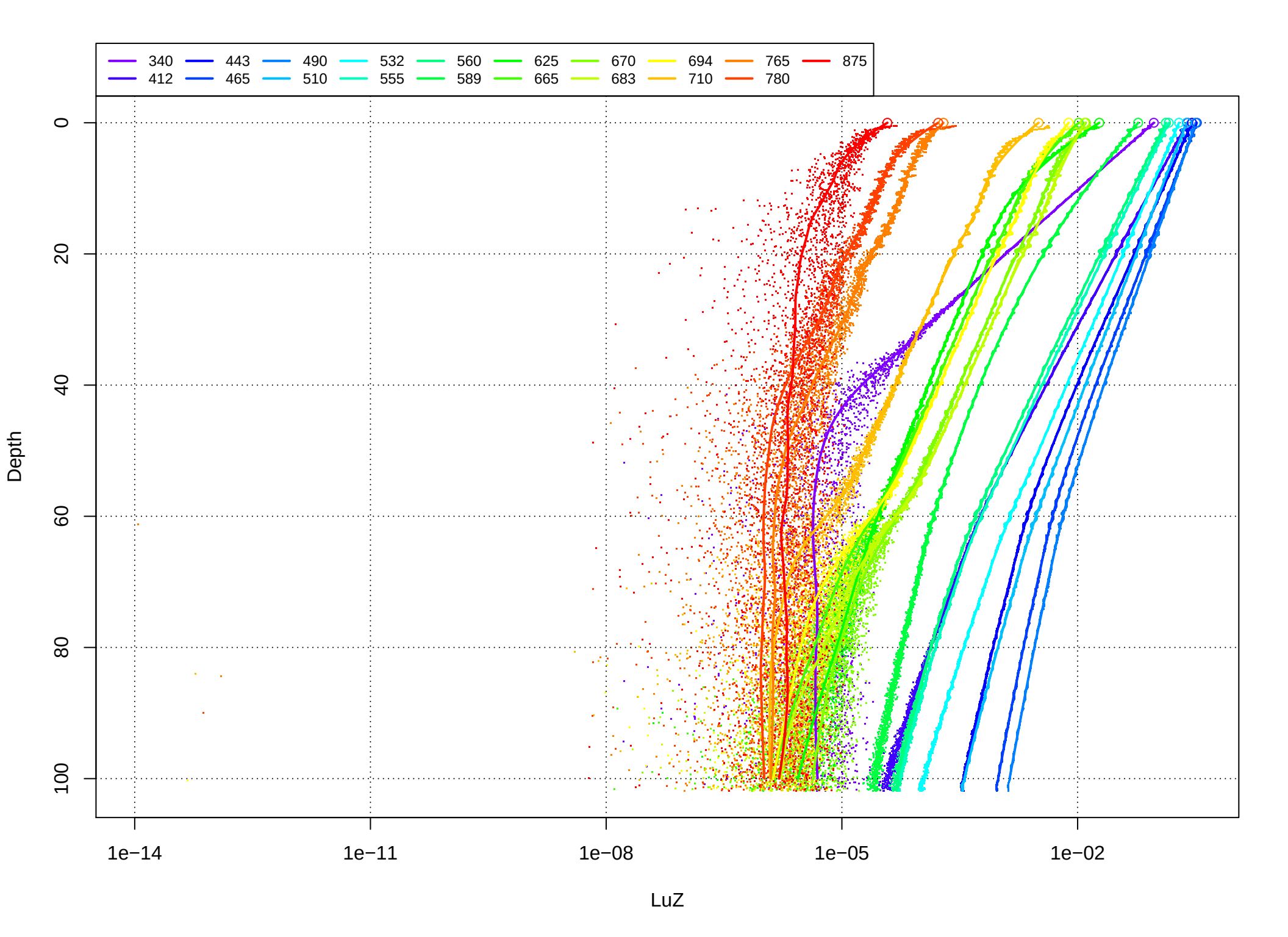
absorption.values NA

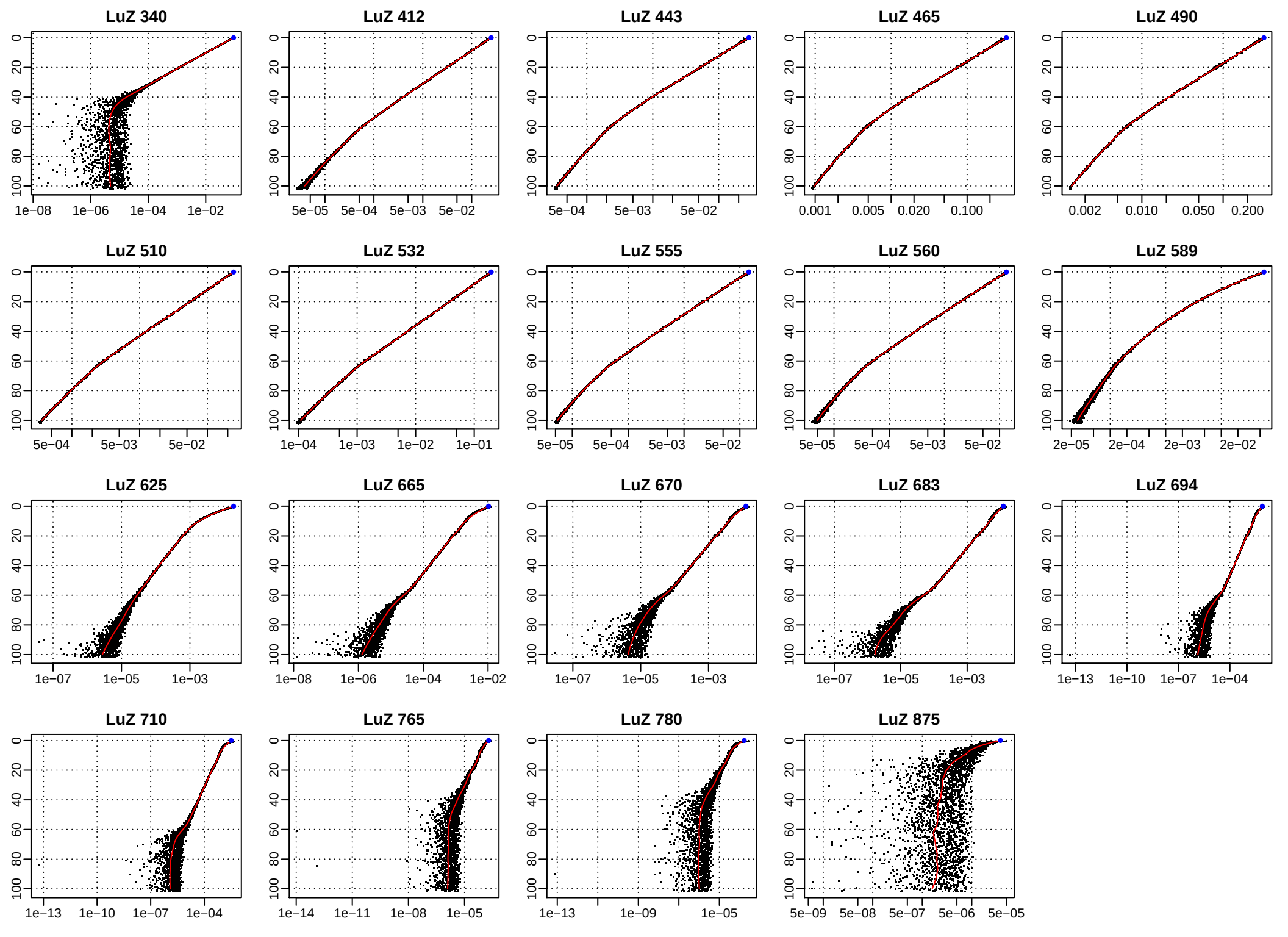
blacks

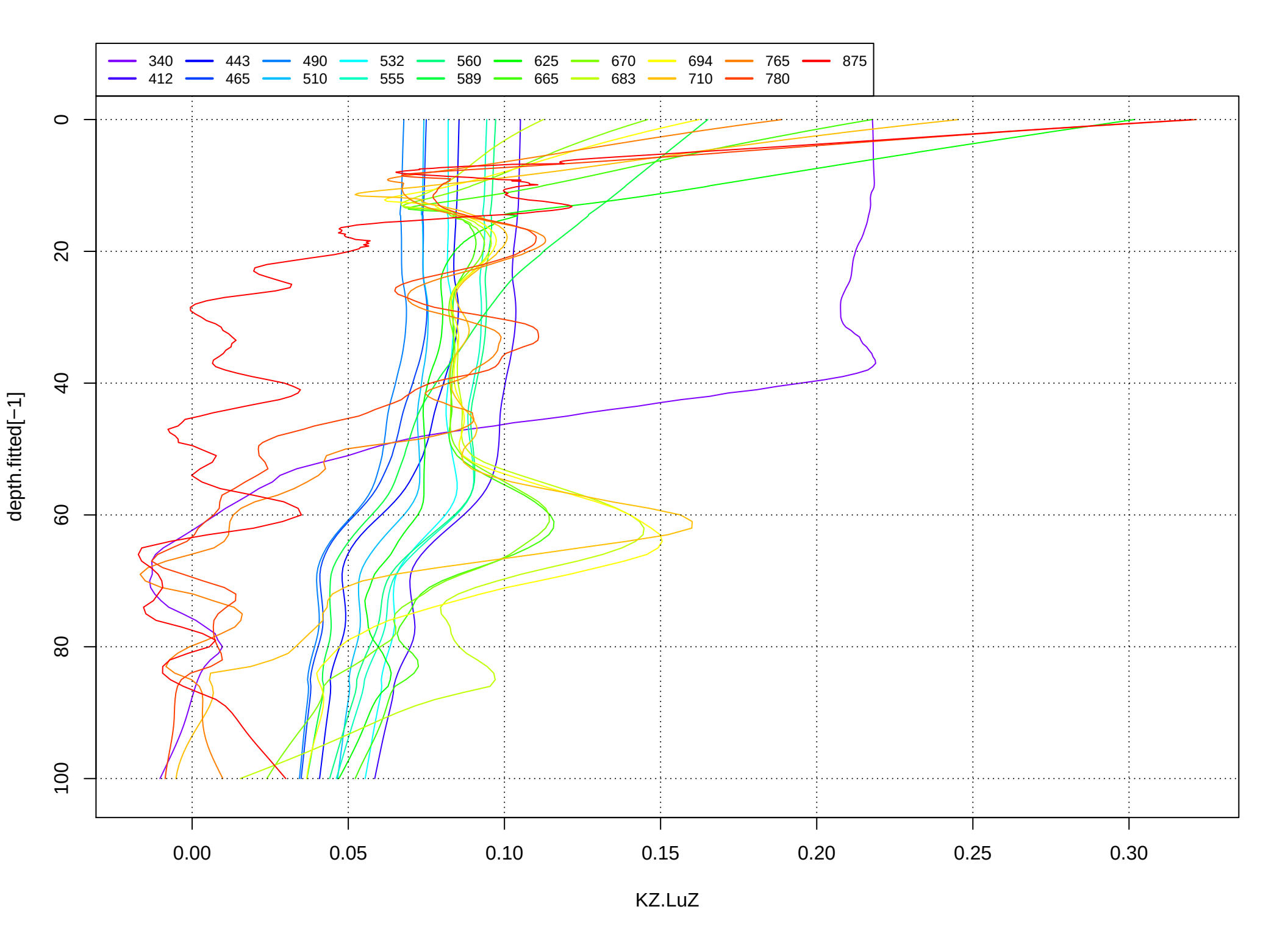

2019−12−11 10:59:22 duration = 258 s lon = 7.896 lat = 43.377 sun−zenith angle = 66.6 deg.
Depth
0
20
40
60
80
100
10:58:00
10:59:00
11:00:00
11:01:00
Time (HH:MM:SS)
0 points removed

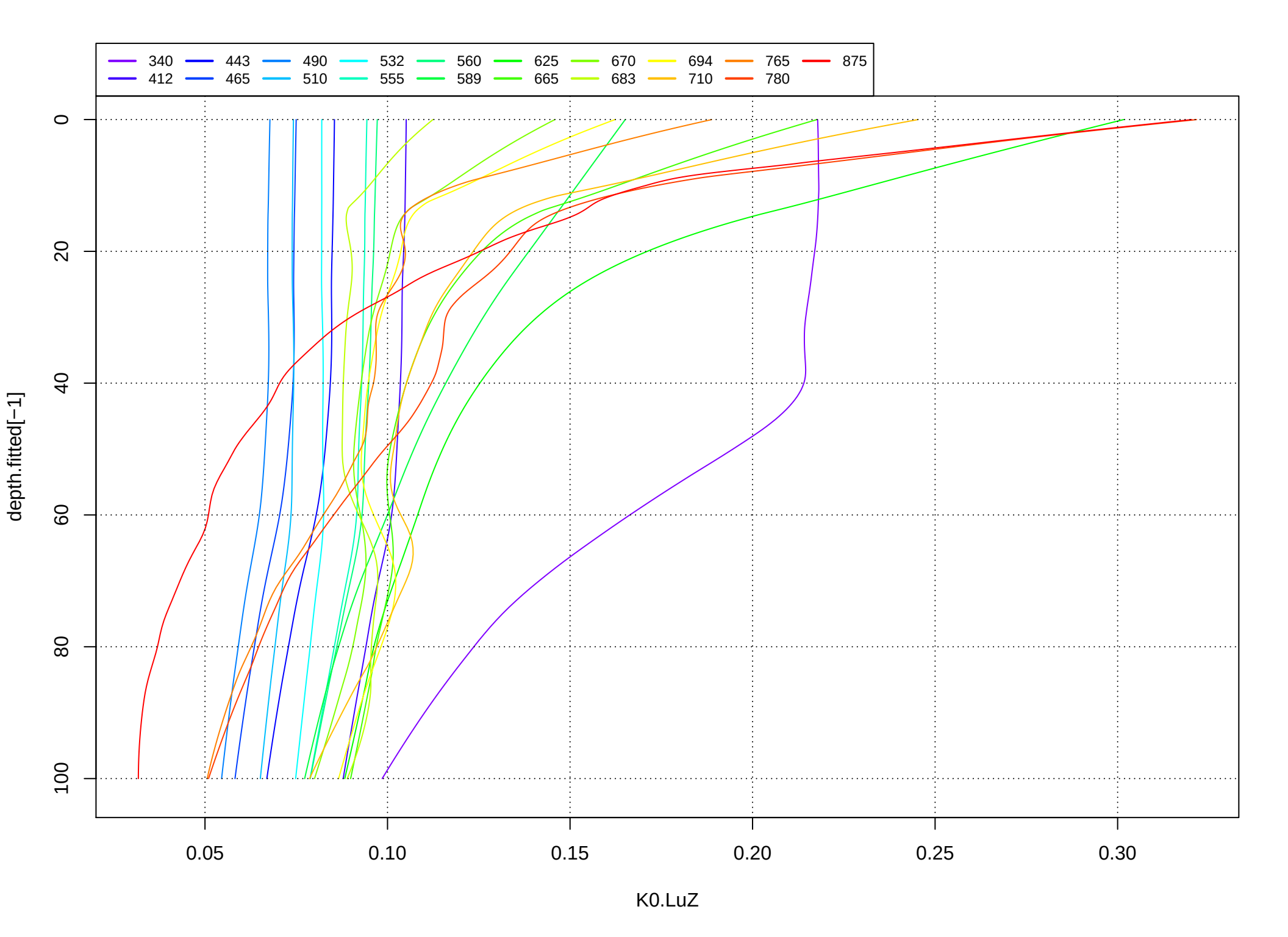

Ed0
EdZ
LuZ
Depth
Tilt
0
20
40
60
80
100
0
2
4
6
8
10
0
5
10
15

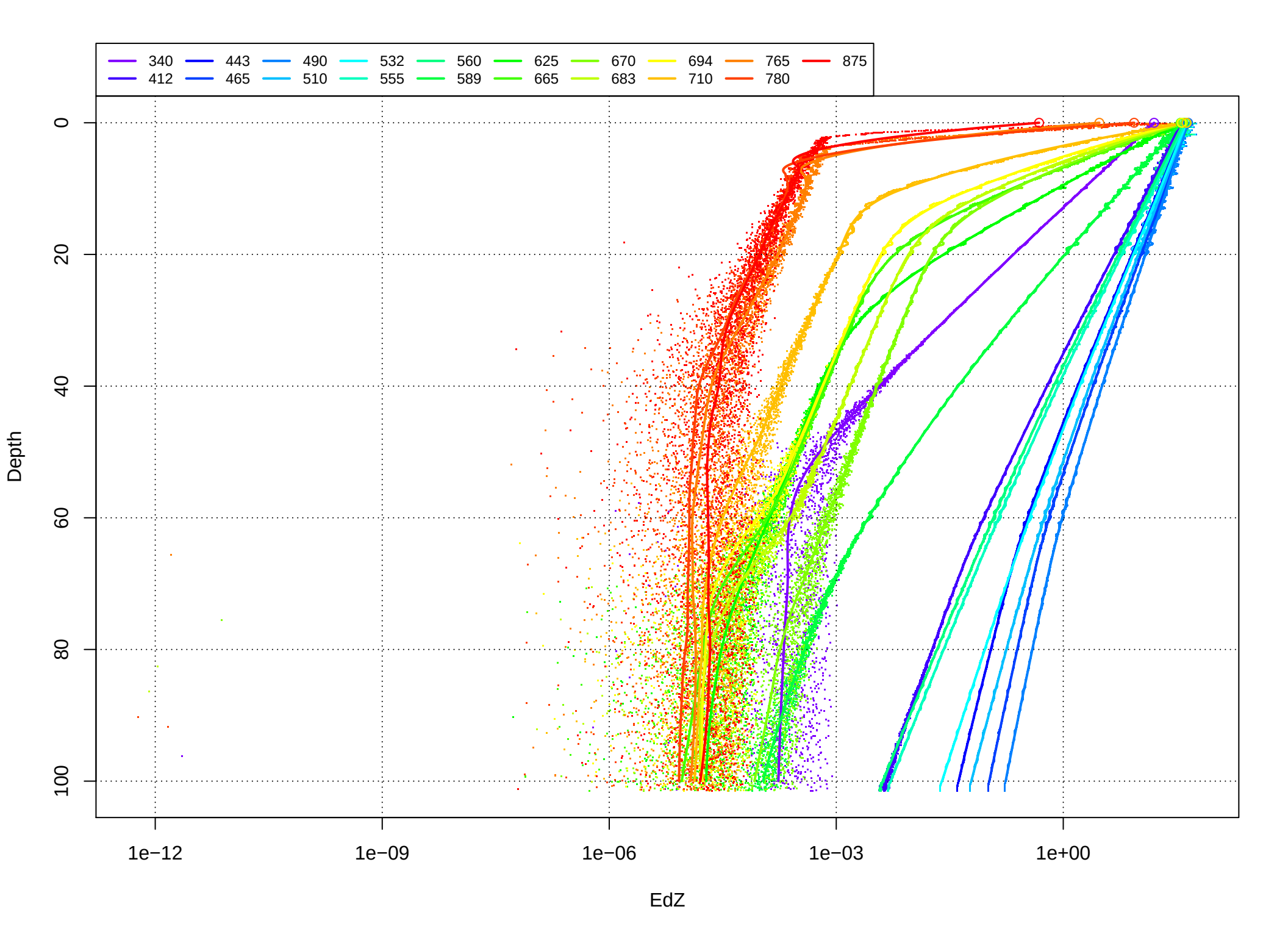

340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
Depth
0
20
40
60
80
100
20
30
40
50
Ed0

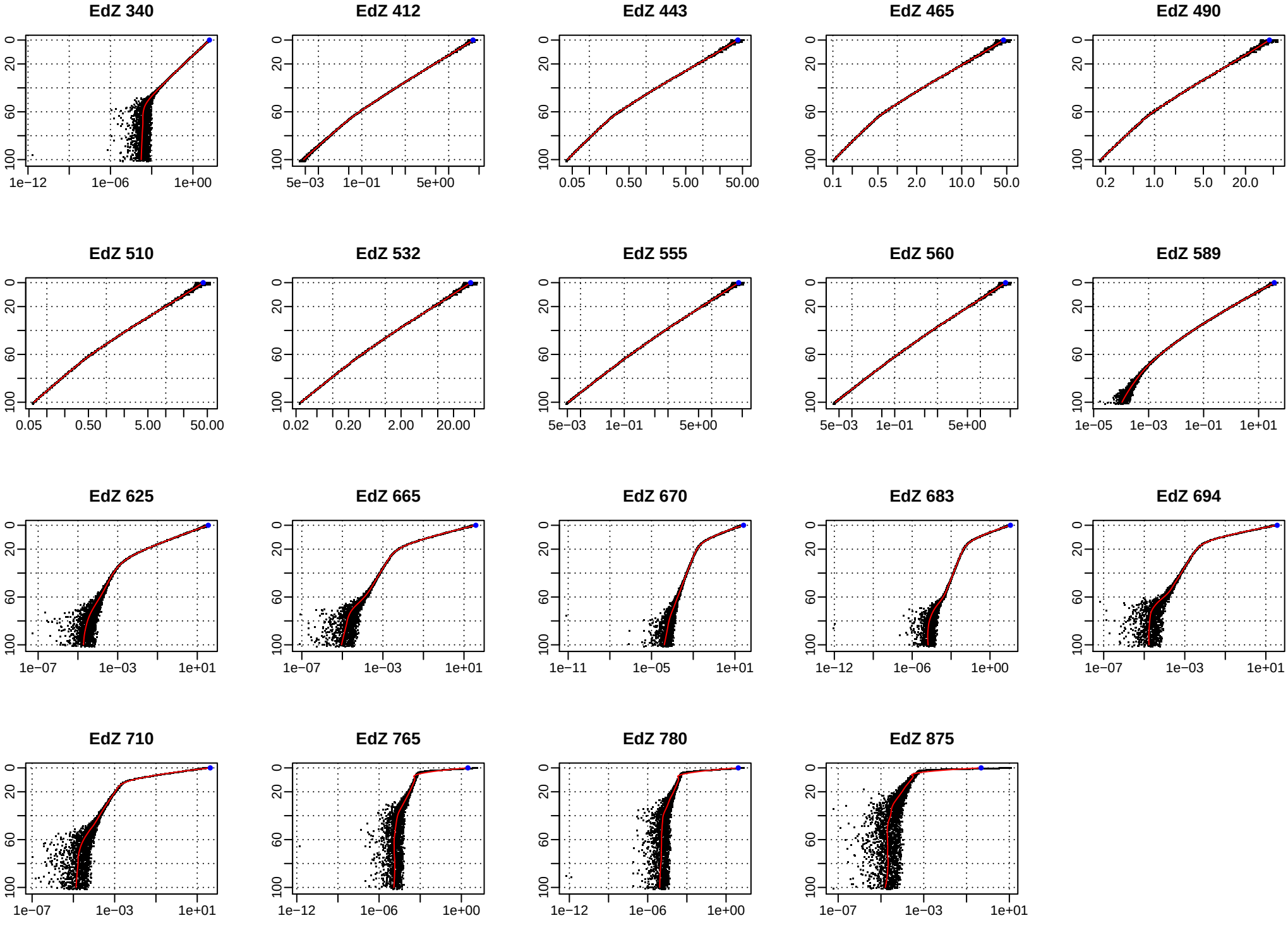

340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
Depth
0
20
40
60
80
100
1e−14
1e−11
1e−08
1e−05
1e−02
LuZ

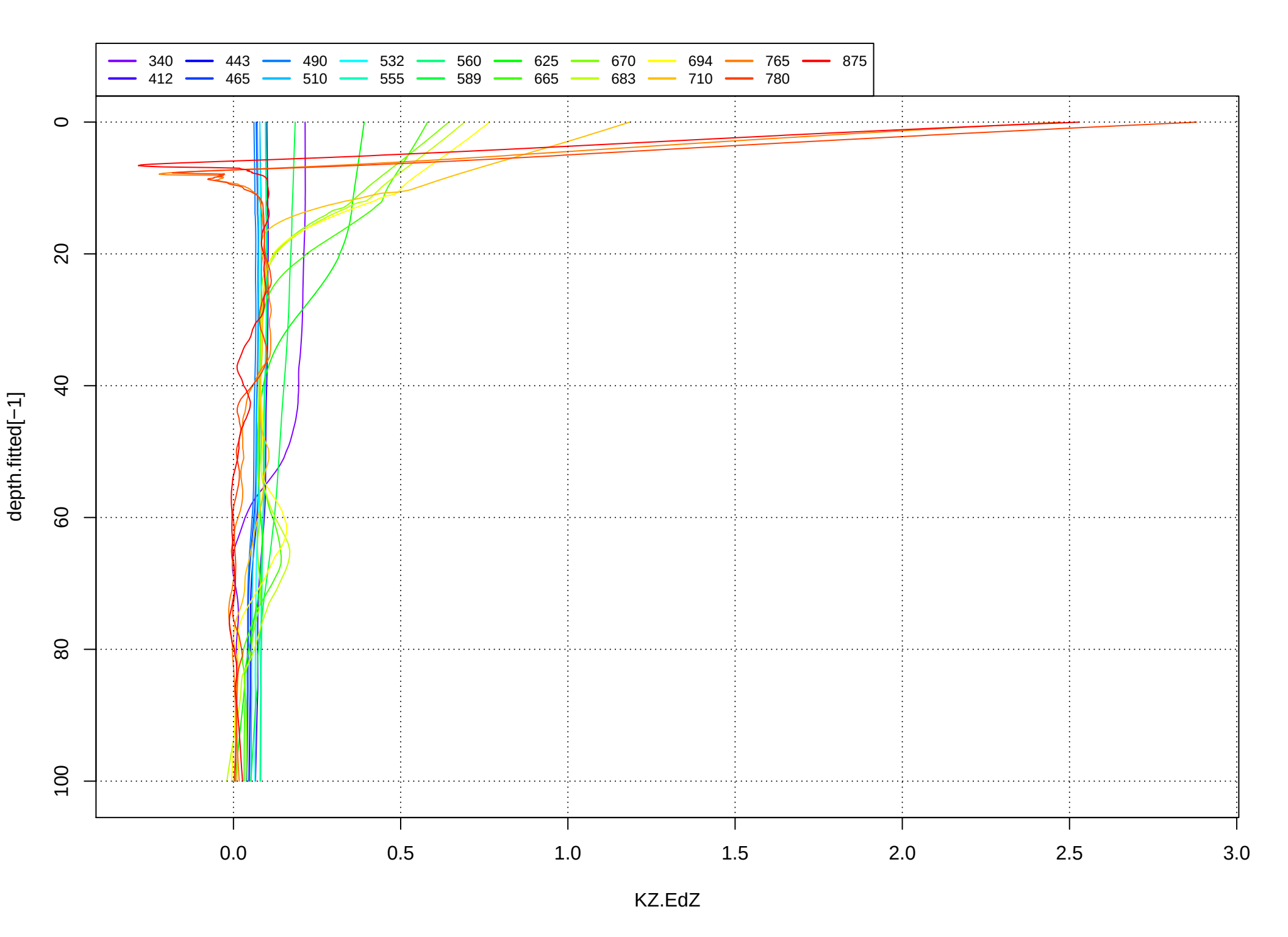

LuZ 340
LuZ 412
LuZ 443
LuZ 465
LuZ 490
LuZ 510
LuZ 532
LuZ 555
LuZ 560
LuZ 589
LuZ 625
LuZ 665
LuZ 670
LuZ 683
LuZ 694
LuZ 710
LuZ 765
LuZ 780
LuZ 875

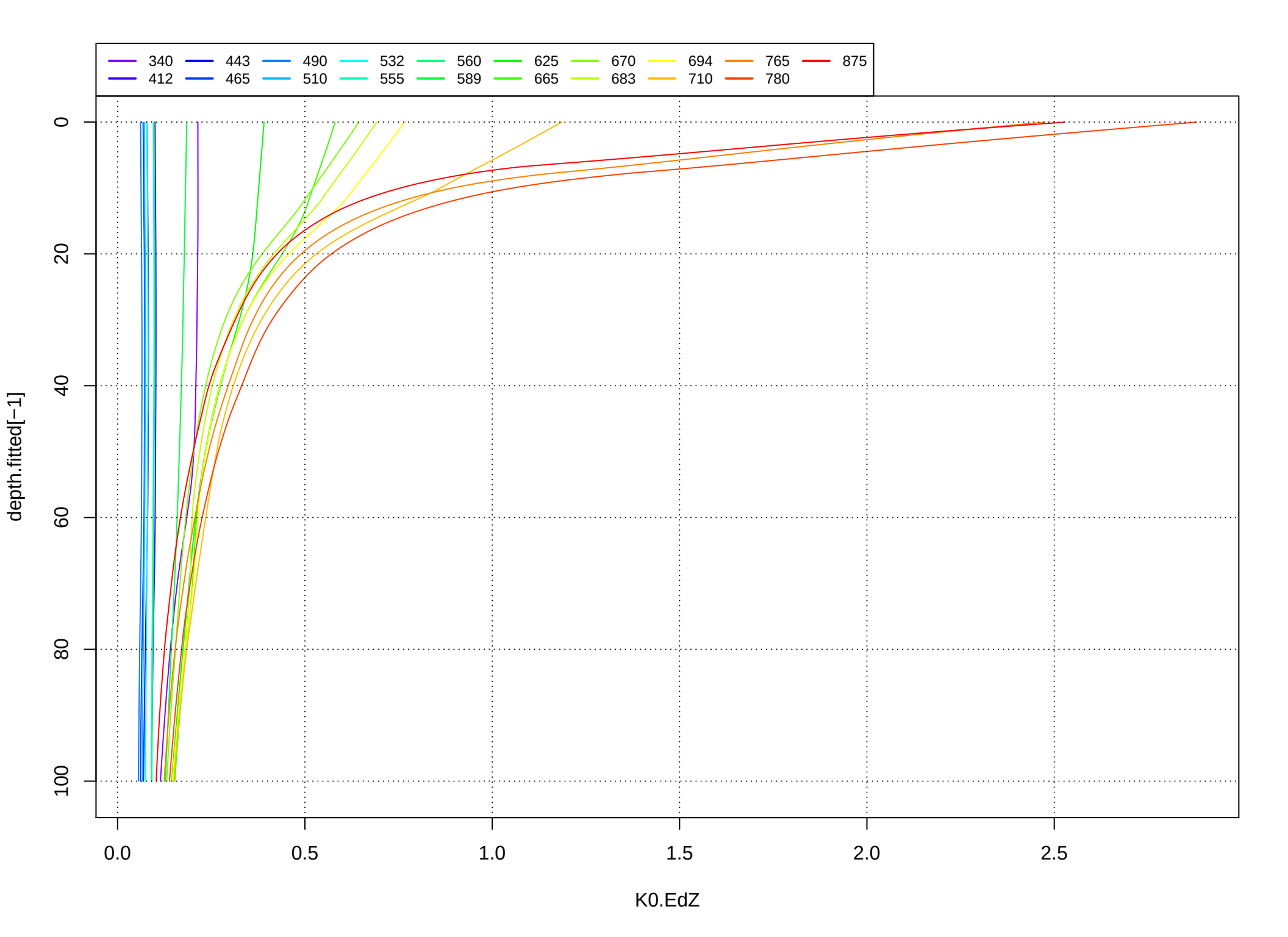

340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
depth.fitted[−1]
0
20
40
60
80
100
0.00
0.05
0.10
0.15
0.20
0.25
0.30
KZ.LuZ

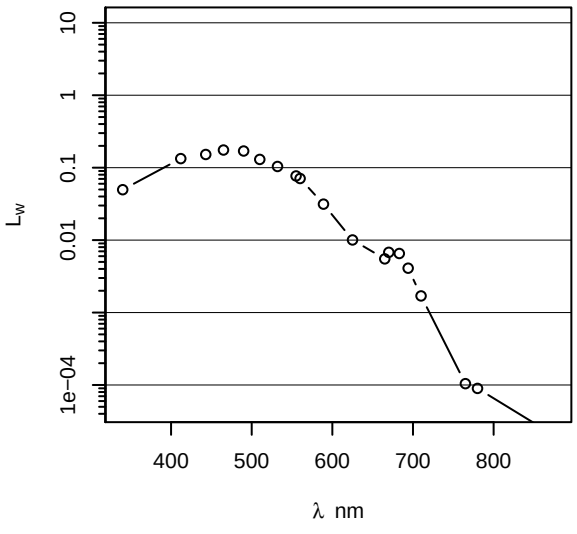

340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
depth.fitted[−1]
0
20
40
60
80
100
0.05
0.10
0.15
0.20
0.25
0.30
K0.LuZ

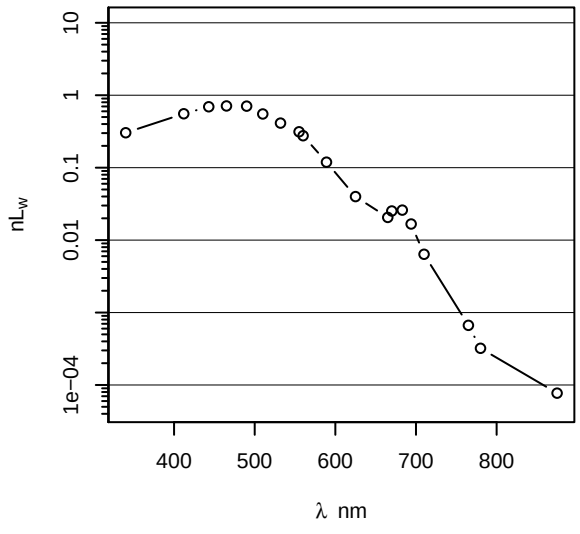

340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
0
20
40
60
80
100
Depth
1e−12
1e−09
1e−06
1e−03
1e+00
EdZ

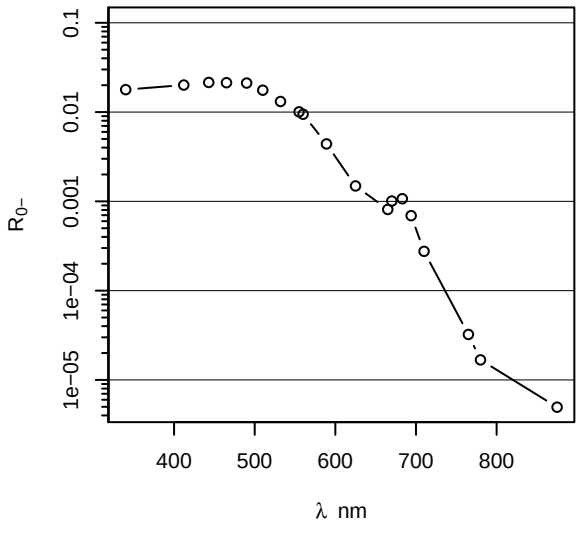

EdZ 340
EdZ 412
EdZ 443
EdZ 465
EdZ 490
EdZ 510
EdZ 532
EdZ 555
EdZ 560
EdZ 589
EdZ 625
EdZ 665
EdZ 670
EdZ 683
EdZ 694
EdZ 710
EdZ 765
EdZ 780
EdZ 875

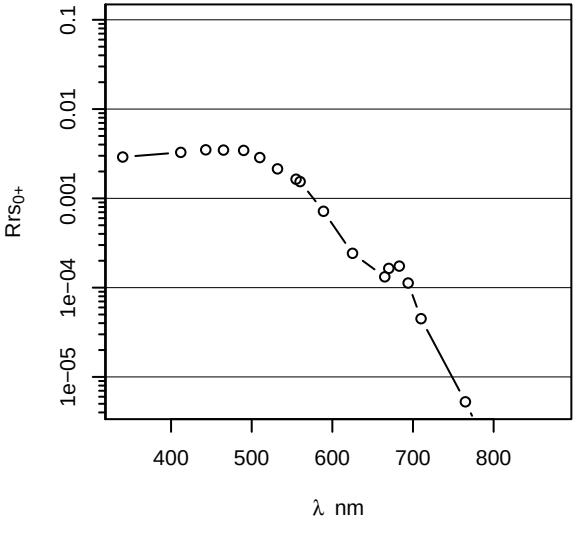

340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
depth.fitted[−1]
0
20
40
60
80
100
0.0
0.5
1.0
1.5
2.0
2.5
3.0
KZ.EdZ


340
412
443
465
490
510
532
555
560
589
625
665
670
683
694
710
765
780
875
depth.fitted[−1]
0
20
40
60
80
100
0.0
0.5
1.0
1.5
2.0
2.5
K0.EdZ









NO SHADOW CORRECTION FOR LuZ

verbose TRUE

indice.water 1.34

rau.Fresnel 0.043

win.width 9

win.height 7

instruments.optics Ed0 EdZ LuZ

tiltmax.optics 20 20 20

time.interval.for.smoothing.optics 40 80 80

sub.surface.removed.layer.optics 0 0 0

delta.capteur.optics 0 −0.05 0.338

radius.instrument.optics 0.035 0.035 0.035

format.date %Y−%m−%d %H:%M:%S

instruments.others Master

depth.is.on LuZ

number.of.fields.before.date 2

time.window 0 10000

depth.discretization 0 0.01 1 0.02 2 0.05 5 0.1 10 0.2 20 0.5 50 1 100 2 200 5 500

file bou_c−ops_191211_1037_003_data.csv

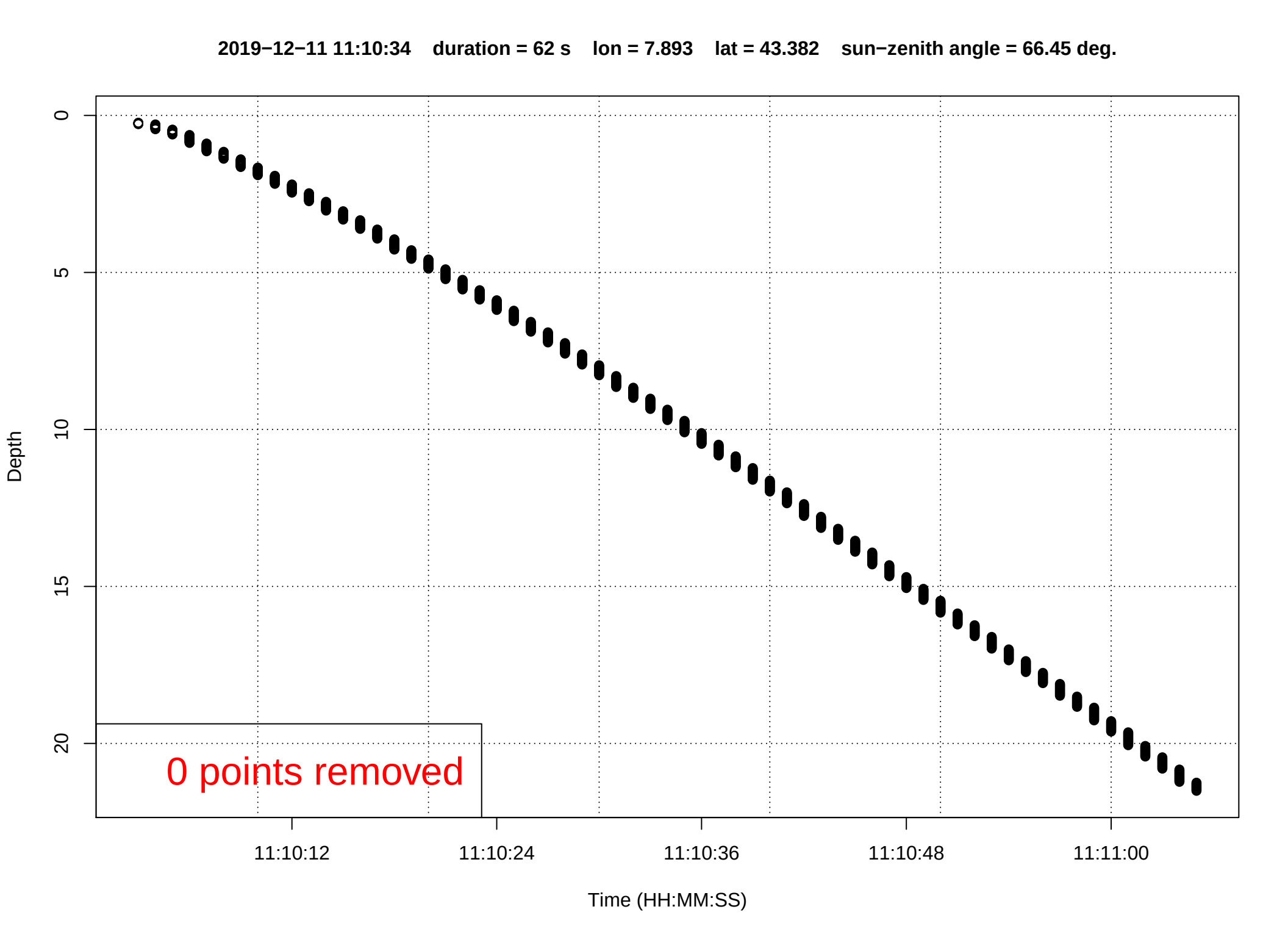
chl NA

SHADOW.CORRECTION FALSE

absorption.waves NA

absorption.values NA

blacks


2019−12−11 11:10:34 duration = 62 s lon = 7.893 lat = 43.382 sun−zenith angle = 66.45 deg.
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15
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0 points removed
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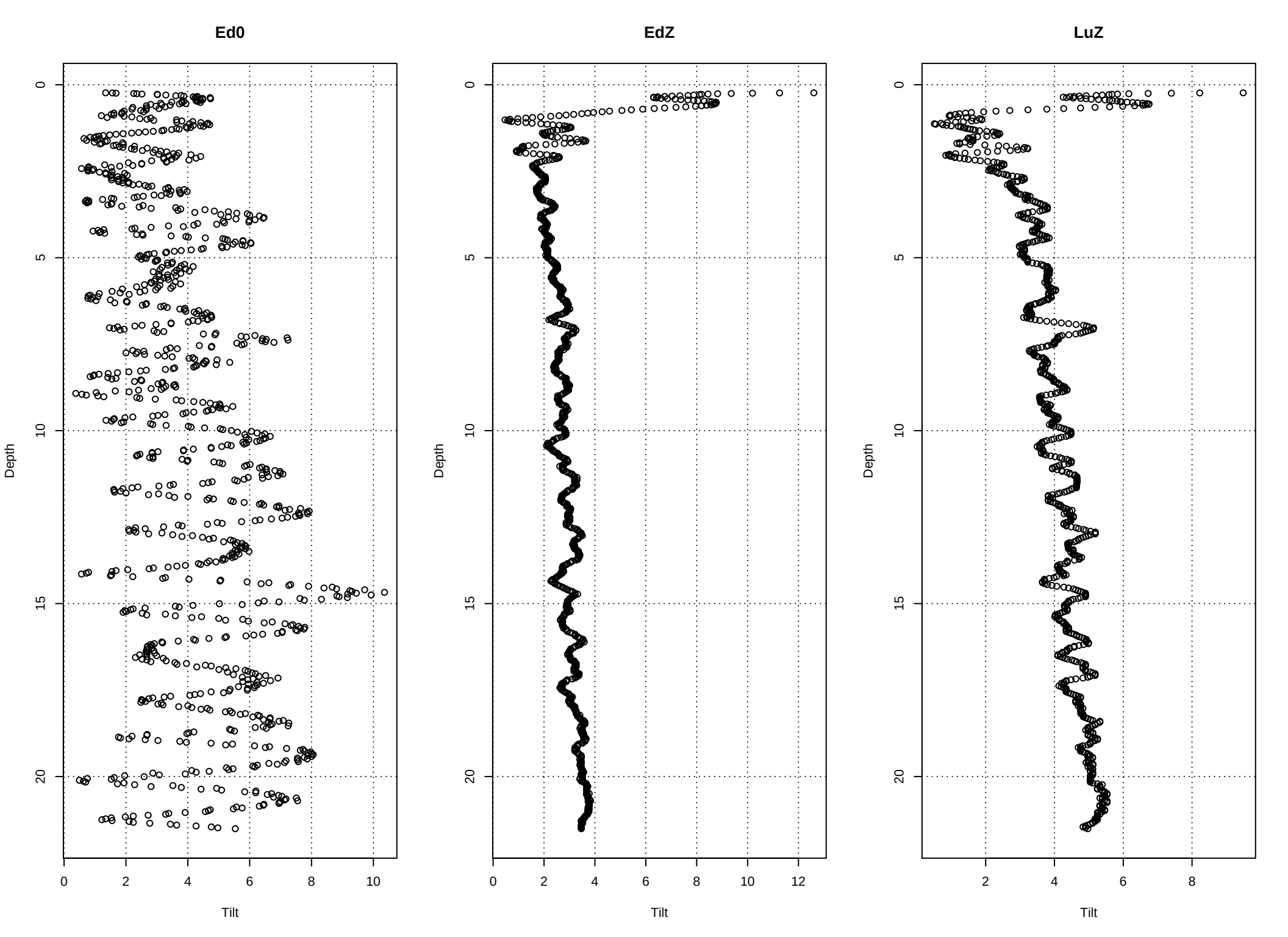
11:10:36
11:10:48
11:11:00
Time (HH:MM:SS)


Ed0
EdZ
LuZ
Depth
Tilt
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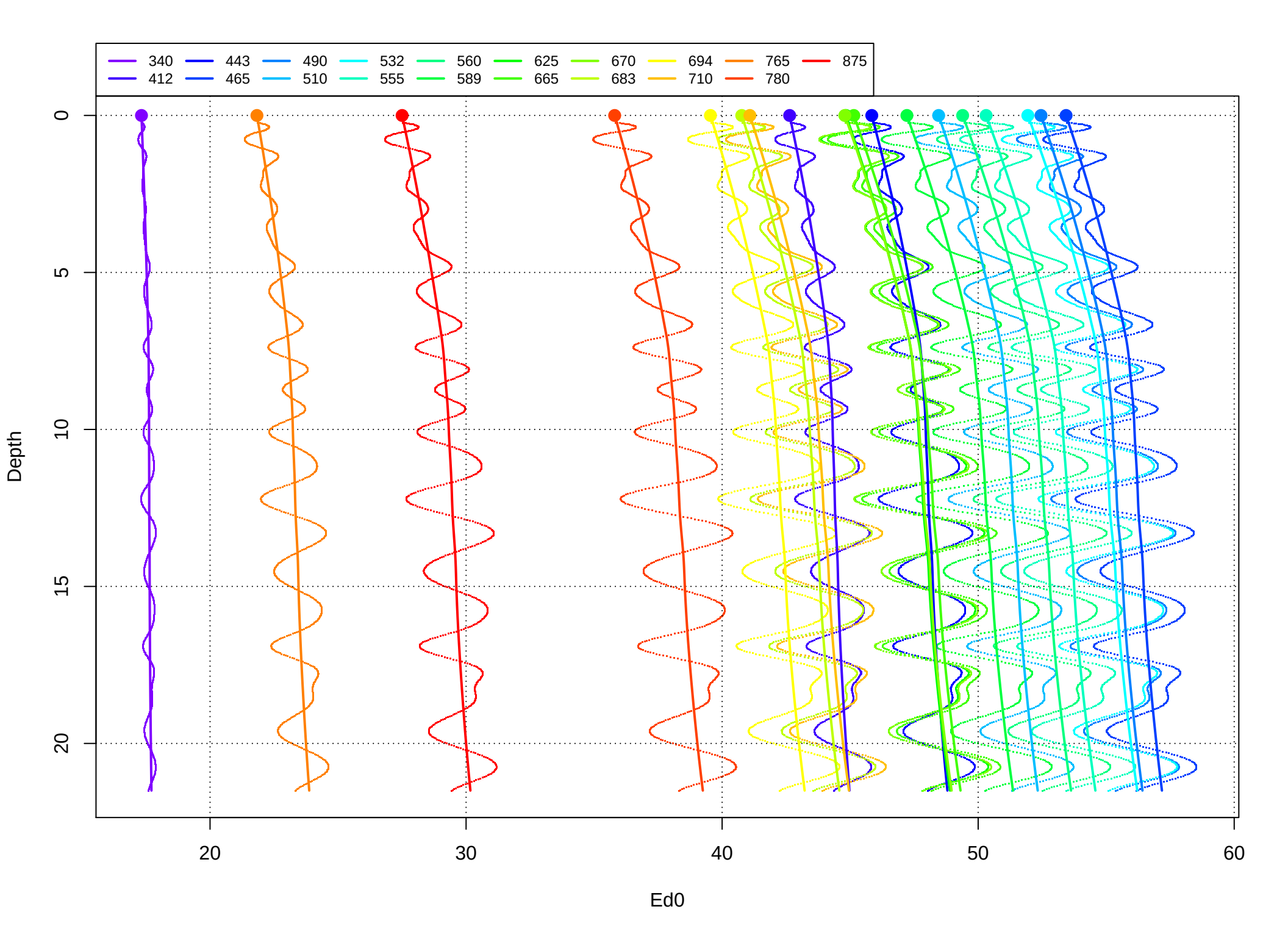
8
10
12


340
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465
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532
555
560
589
625
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670
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765
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Depth
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15
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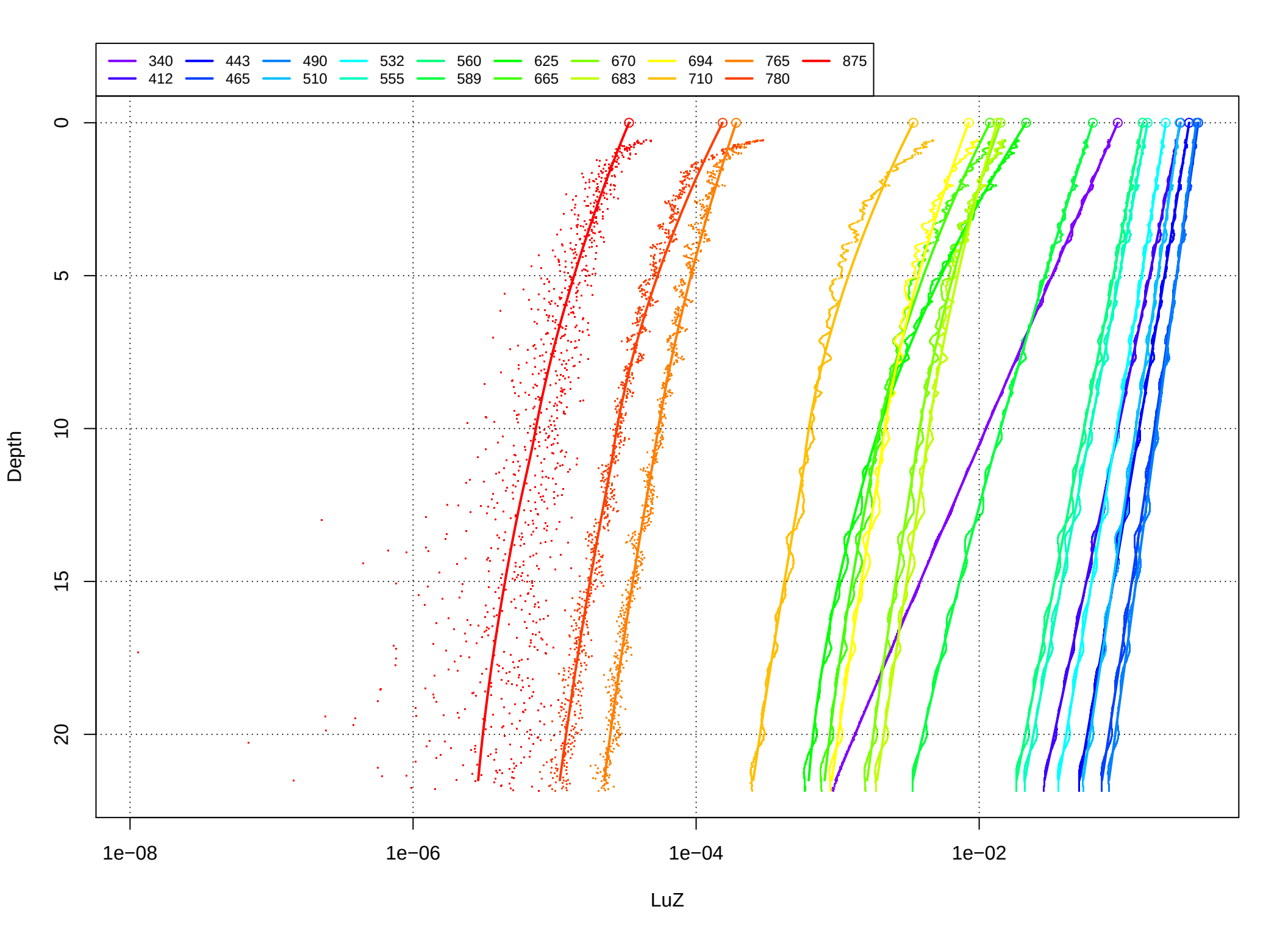
40
50
60
Ed0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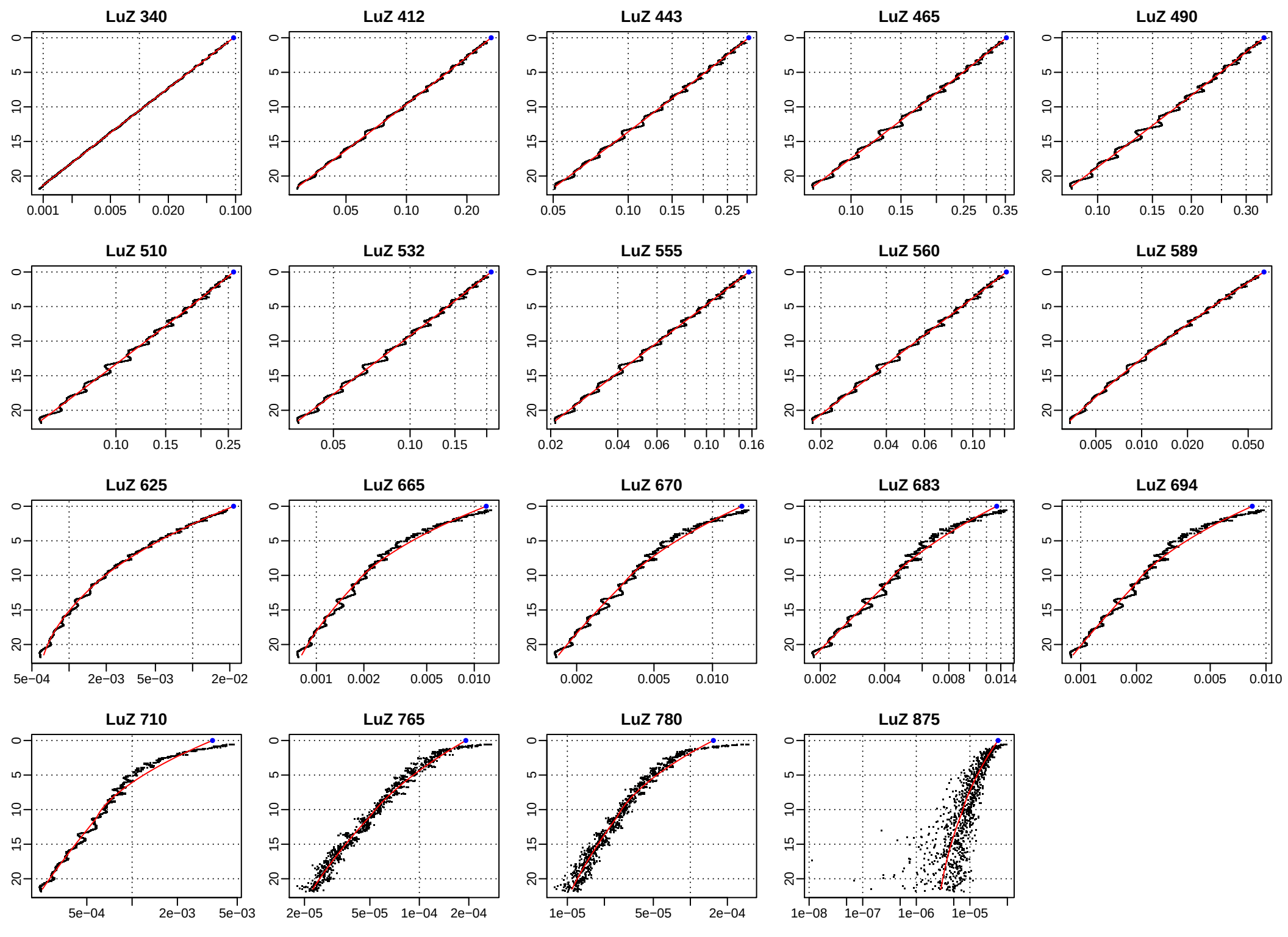
1e−06
1e−04
1e−02
LuZ


LuZ 340
LuZ 412
LuZ 443
LuZ 465
LuZ 490
LuZ 510
LuZ 532
LuZ 555
LuZ 560
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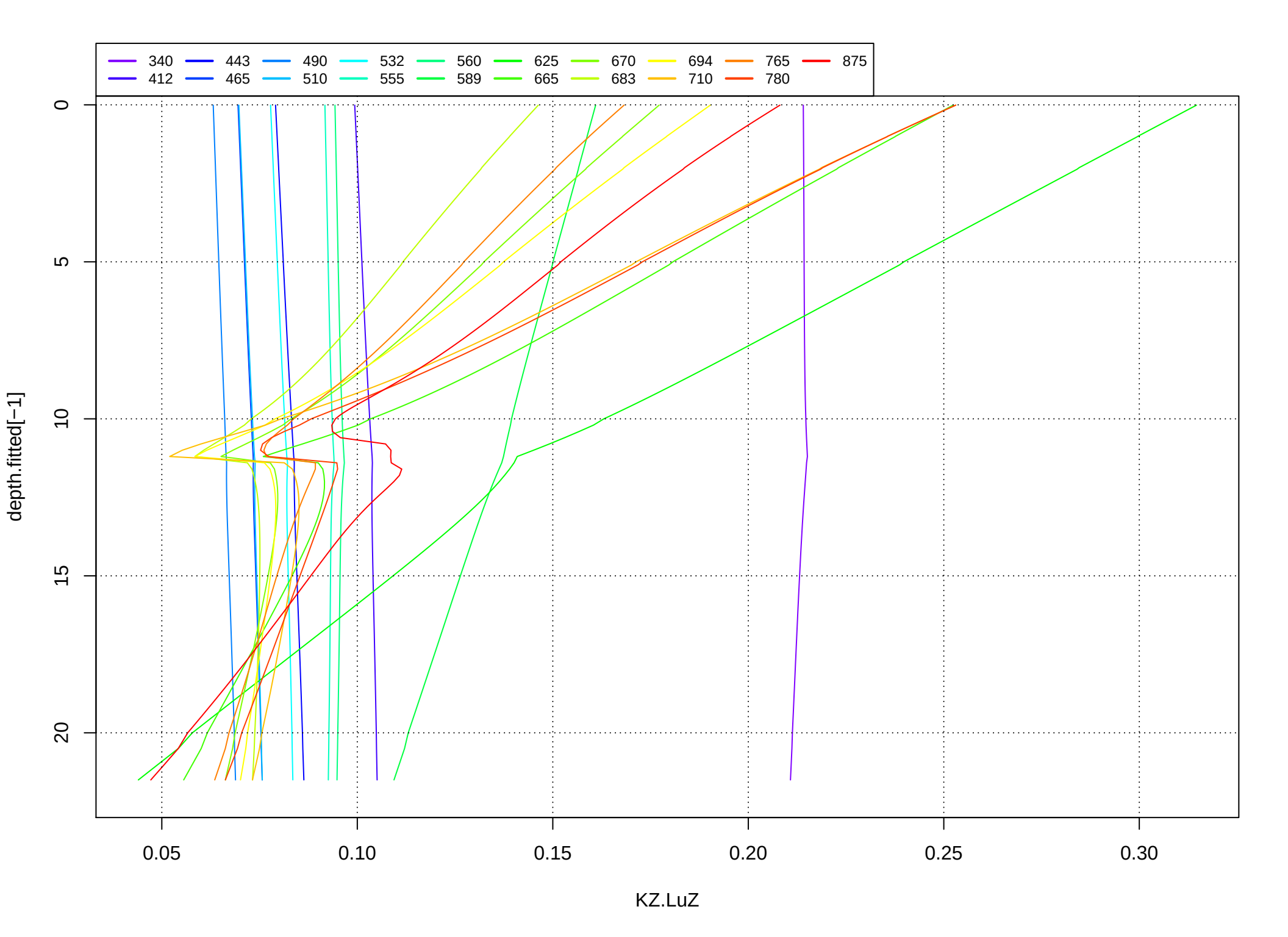
LuZ 765
LuZ 780
LuZ 875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875
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10
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20
depth.fitted[−1]
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0.20
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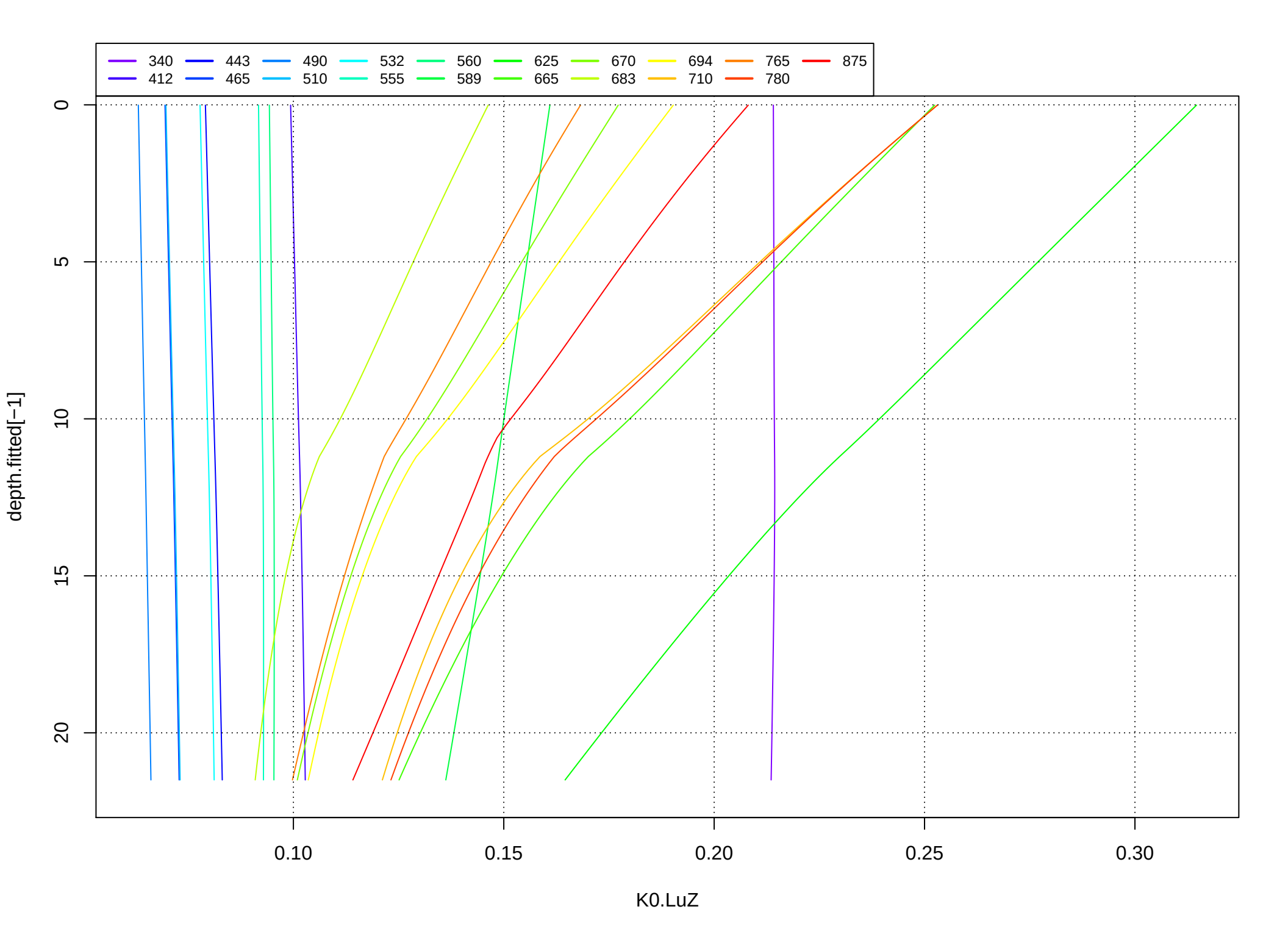
0.30
KZ.LuZ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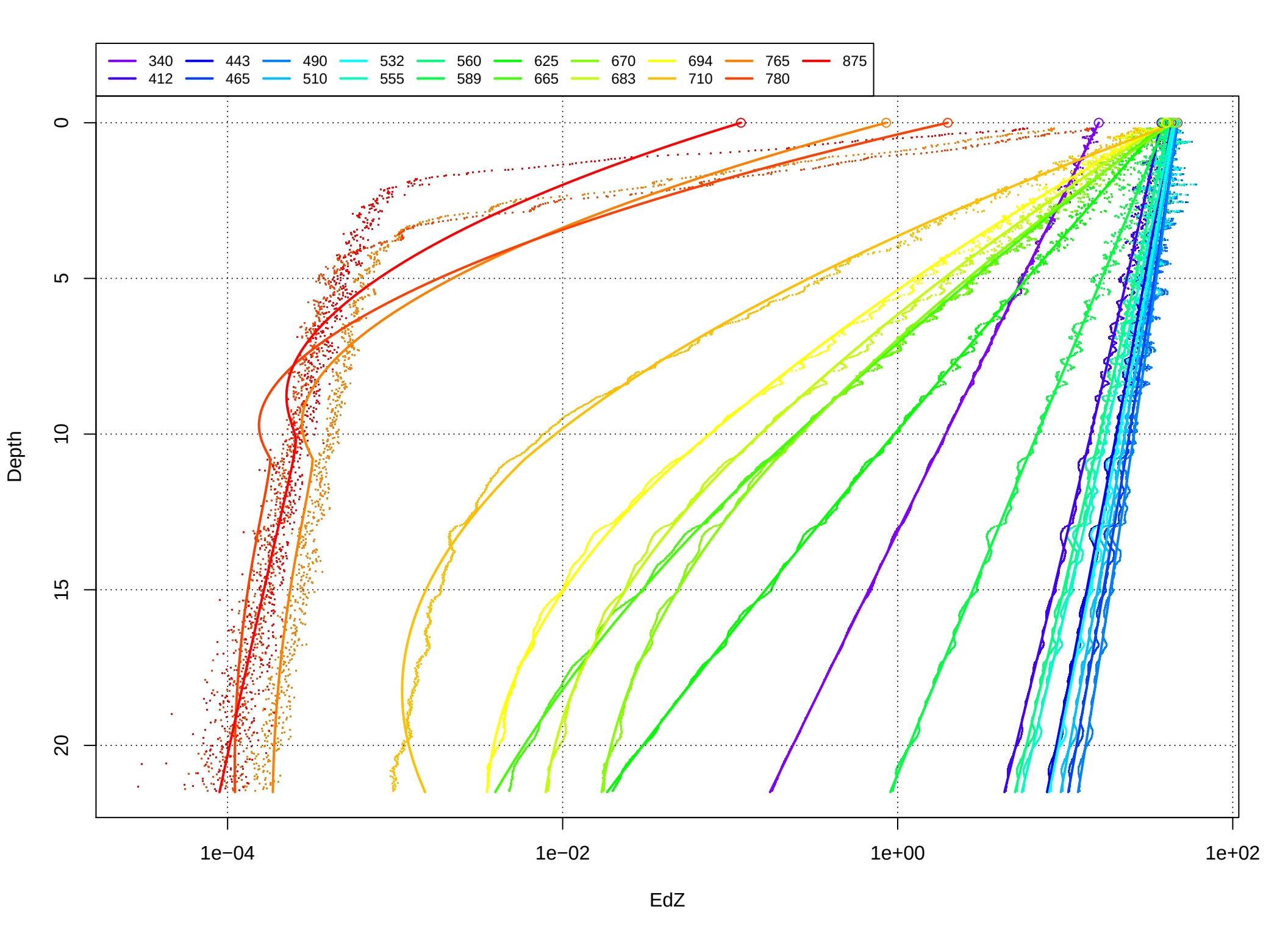
0.30
K0.LuZ


340
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Depth
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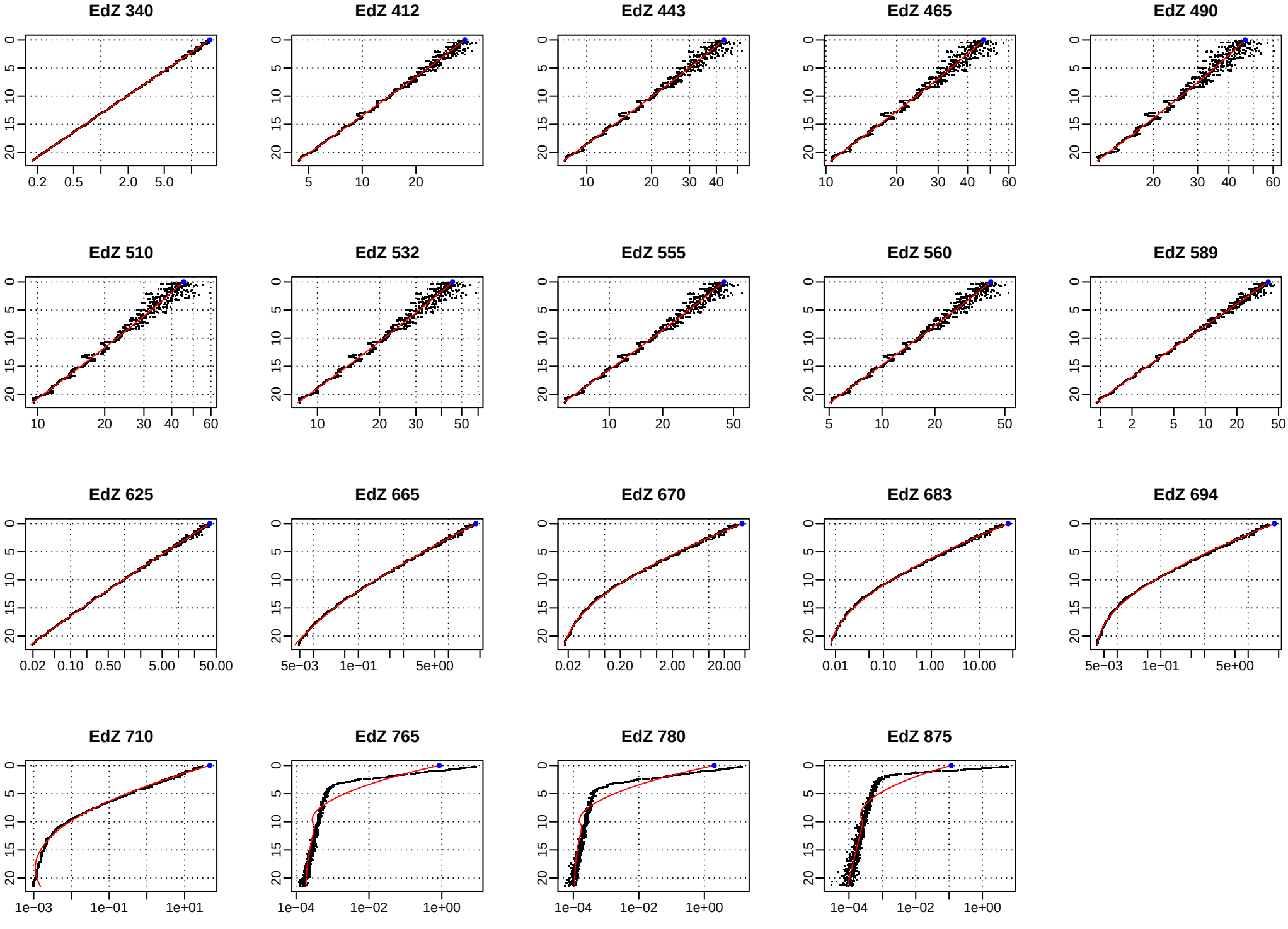
1e+00
1e+02
EdZ


EdZ 340
EdZ 412
EdZ 443
EdZ 465
EdZ 490
EdZ 510
EdZ 532
EdZ 555
EdZ 560
EdZ 589
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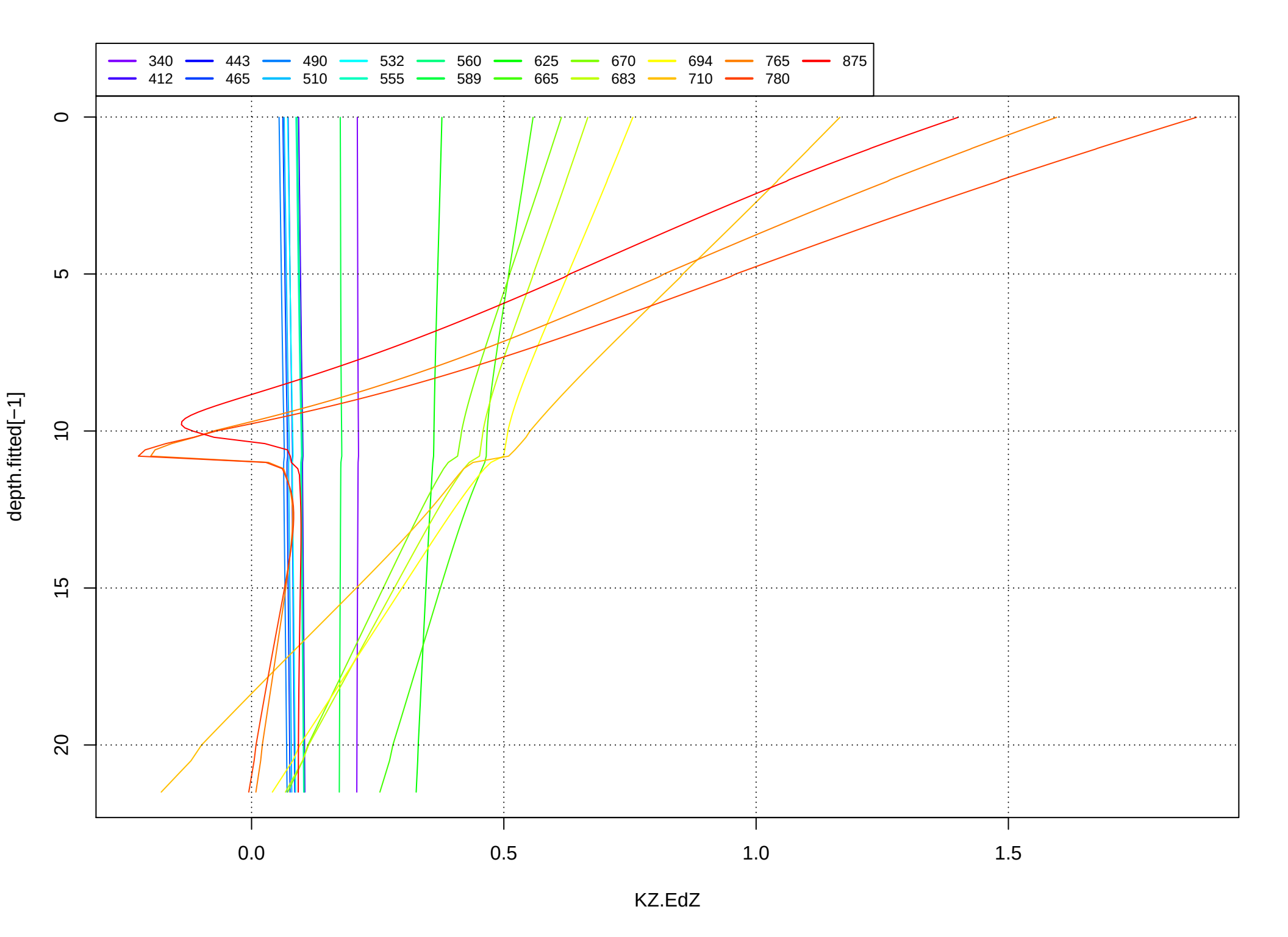
EdZ 765
EdZ 780
EdZ 875


340
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532
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589
625
665
670
683
694
710
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5
10
15
20
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0.5
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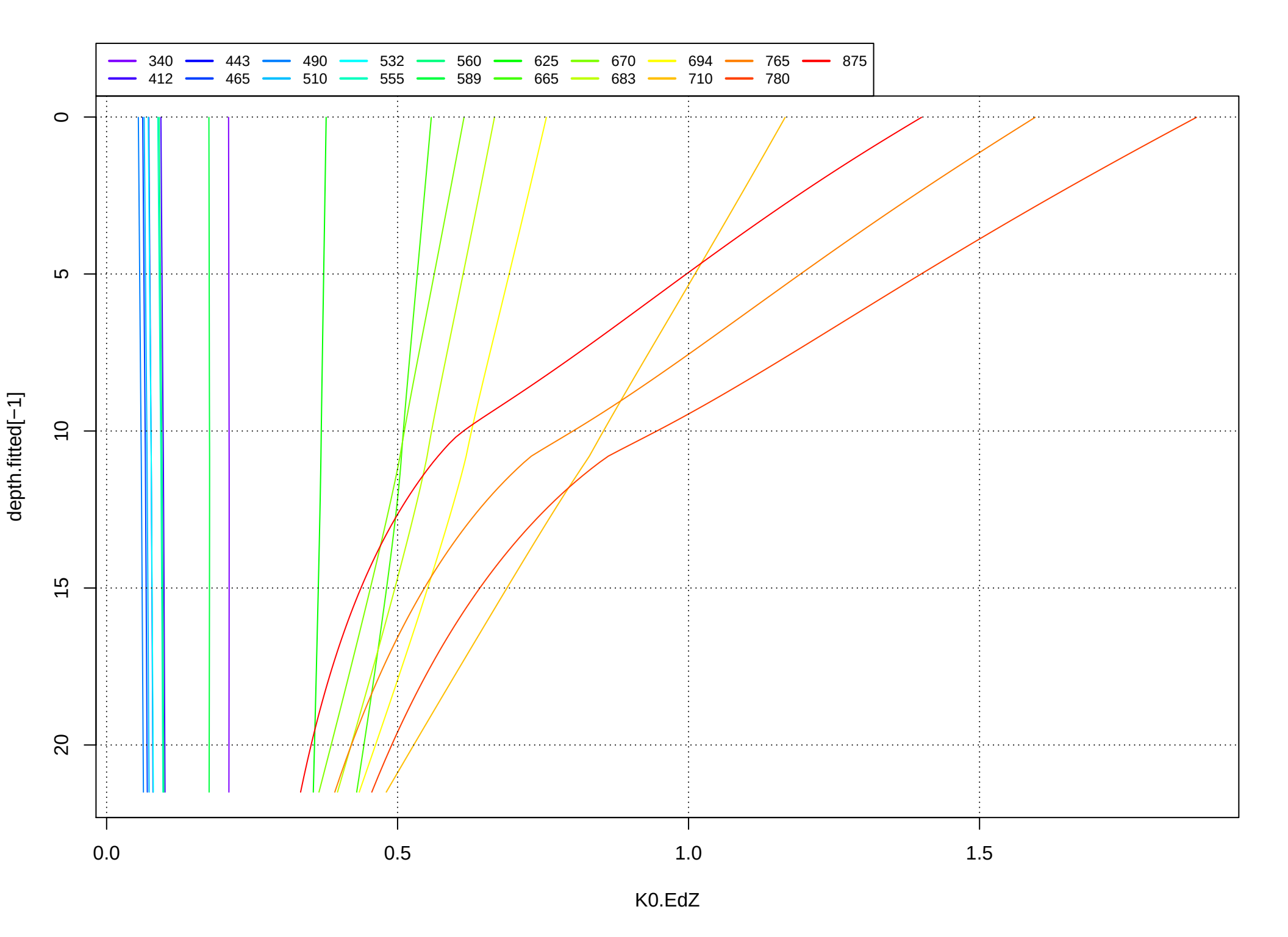
1.5
KZ.EdZ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0
5
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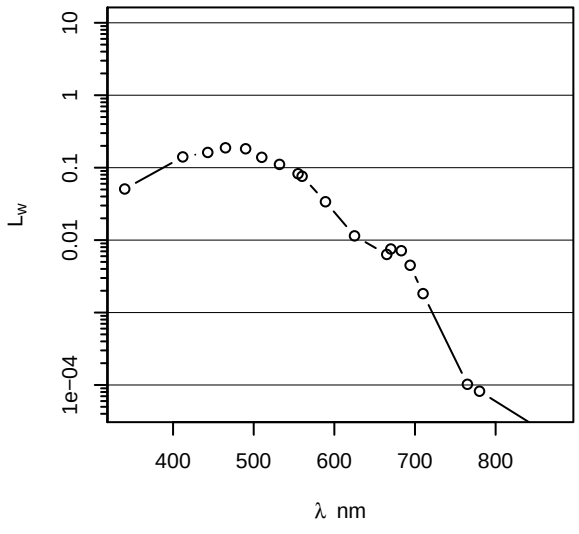
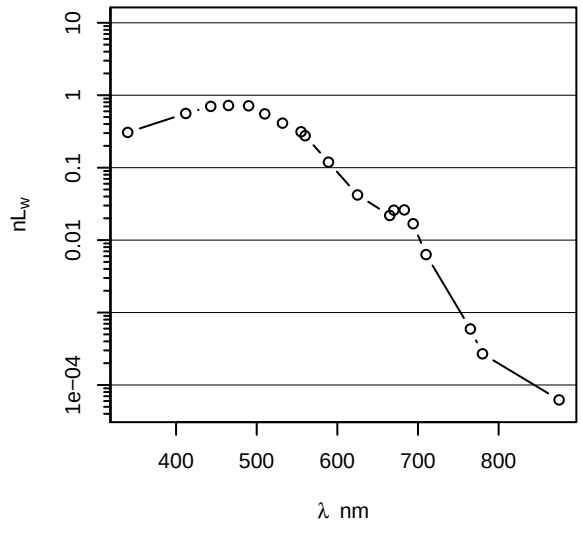
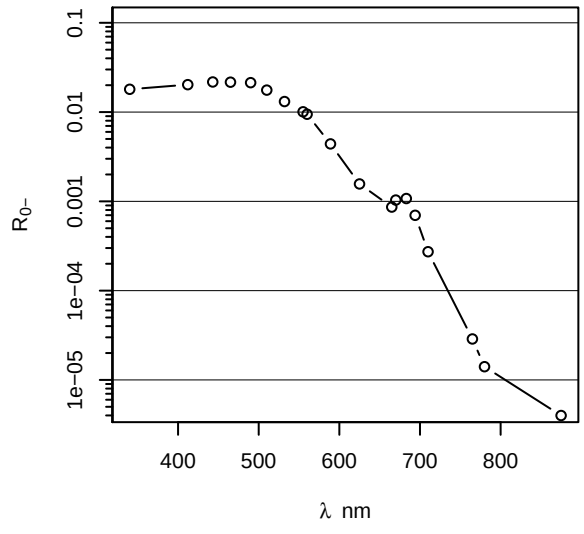
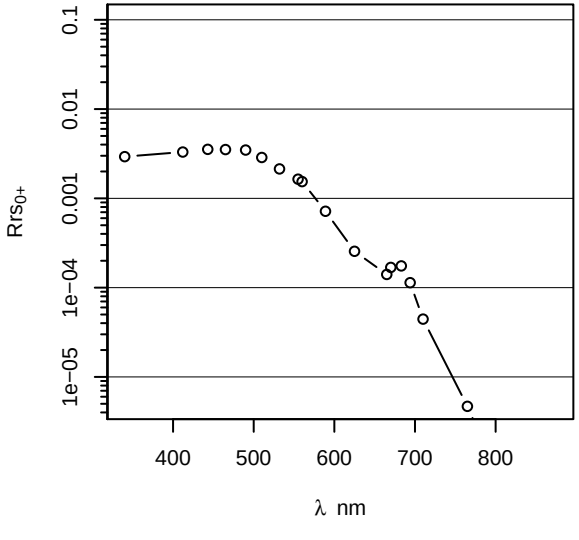
0.0
0.5
1.0
1.5
K0.EdZ









NO SHADOW CORRECTION FOR LuZ

verbose TRUE

indice.water 1.34

rau.Fresnel 0.043

win.width 9

win.height 7

instruments.optics Ed0 EdZ LuZ

tiltmax.optics 20 20 20

time.interval.for.smoothing.optics 40 80 80

sub.surface.removed.layer.optics 0 0 0

delta.capteur.optics 0 −0.05 0.338

radius.instrument.optics 0.035 0.035 0.035

format.date %Y−%m−%d %H:%M:%S

instruments.others Master

depth.is.on LuZ

number.of.fields.before.date 2

time.window 0 10000

depth.discretization 0 0.01 1 0.02 2 0.05 5 0.1 10 0.2 20 0.5 50 1 100 2 200 5 500

file bou_c−ops_191211_1129_001_data.csv

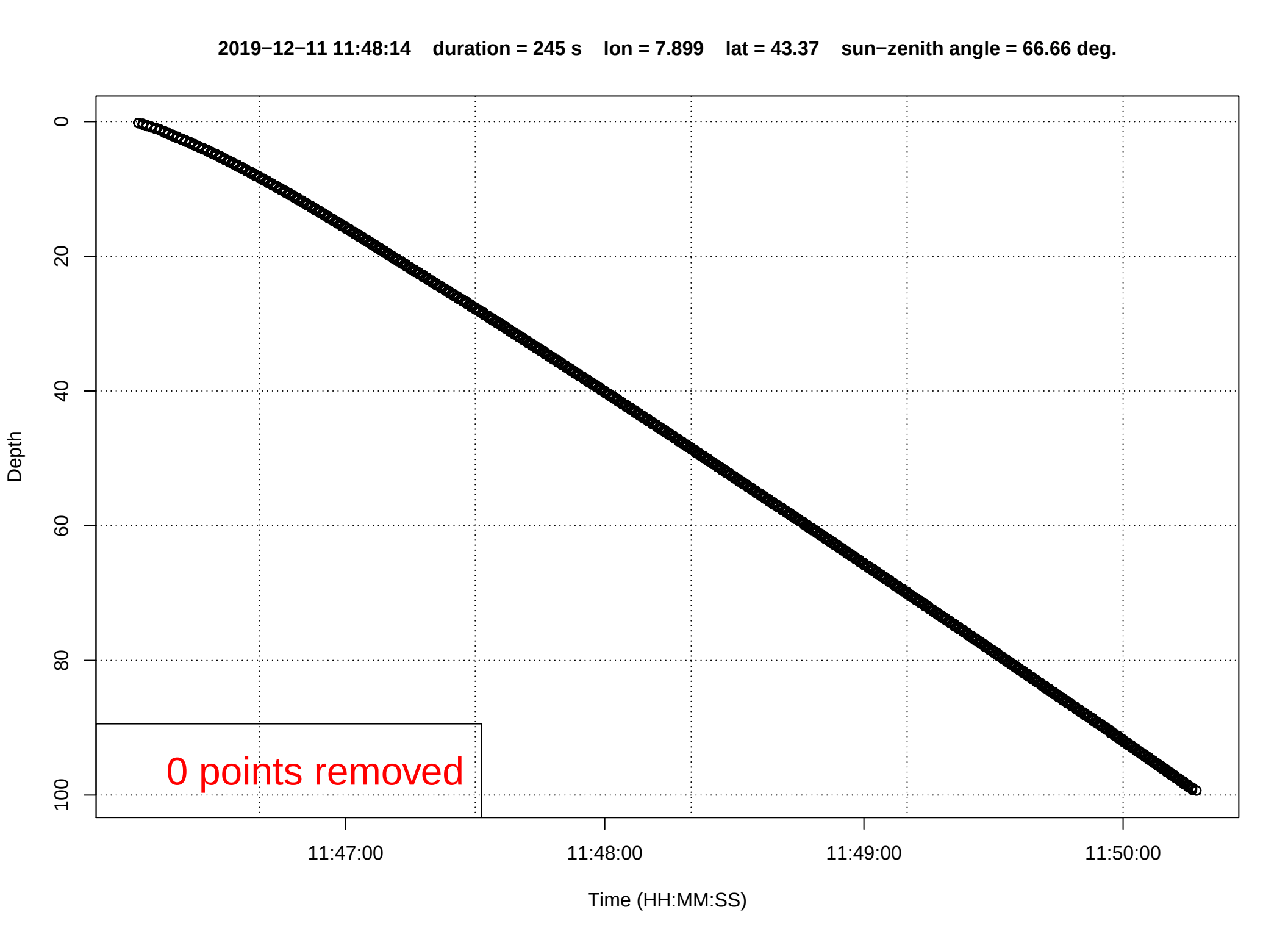
chl NA

SHADOW.CORRECTION FALSE

absorption.waves NA

absorption.values NA

blacks


2019−12−11 11:48:14 duration = 245 s lon = 7.899 lat = 43.37 sun−zenith angle = 66.66 deg.
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0 points removed
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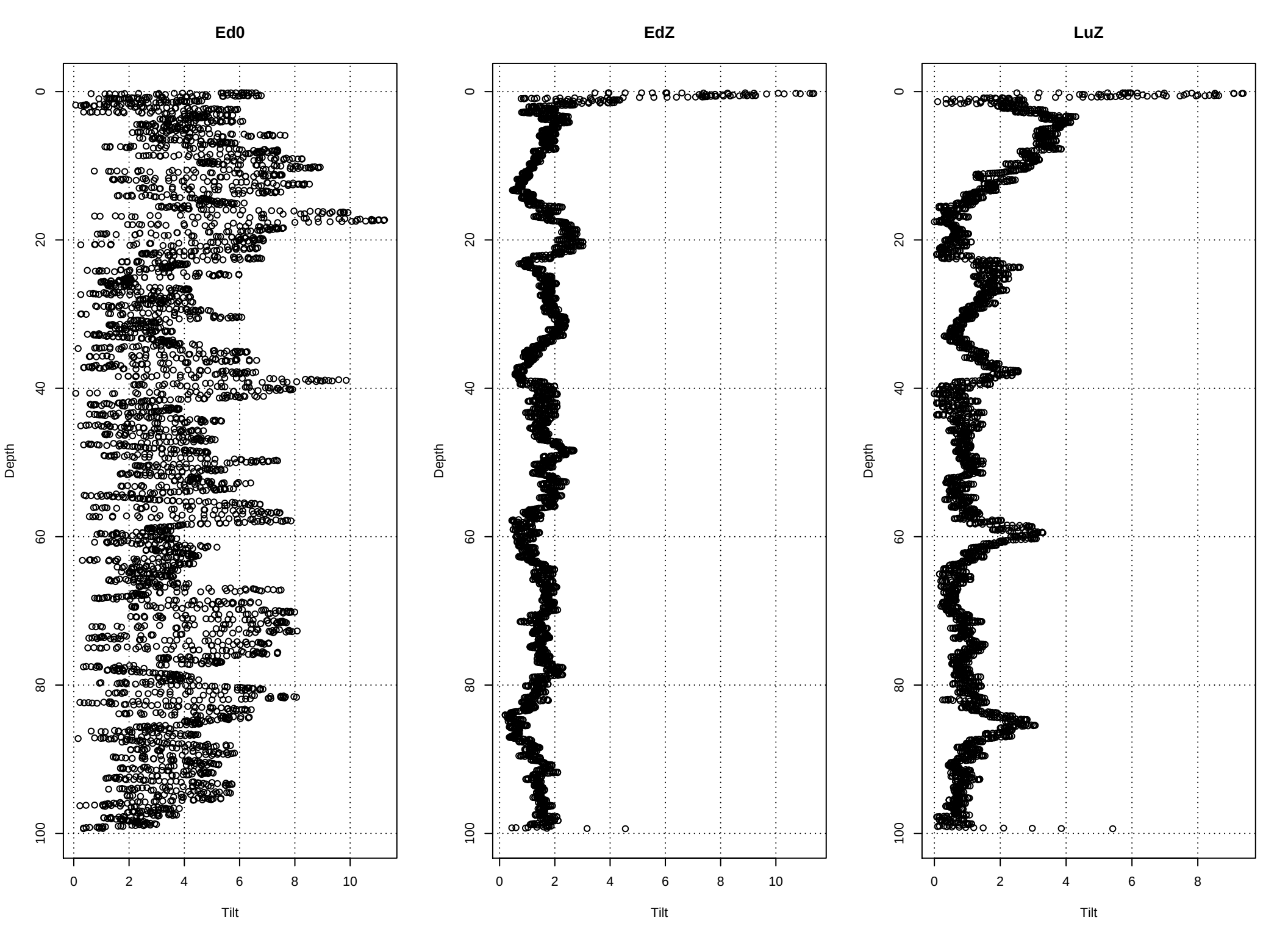
11:49:00
11:50:00
Time (HH:MM:SS)


Ed0
EdZ
LuZ
Depth
Tilt
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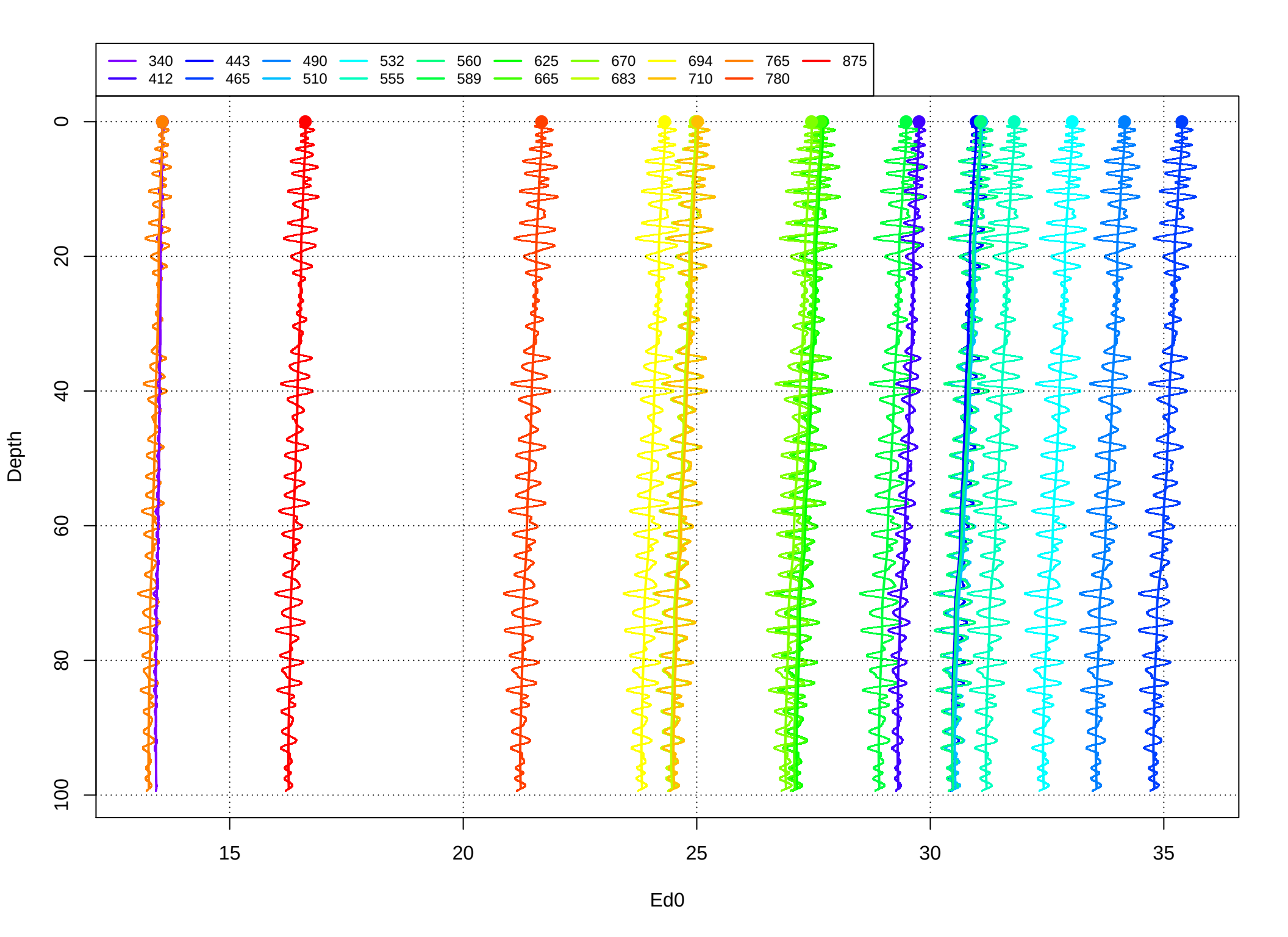
4
6
8
10


340
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Depth
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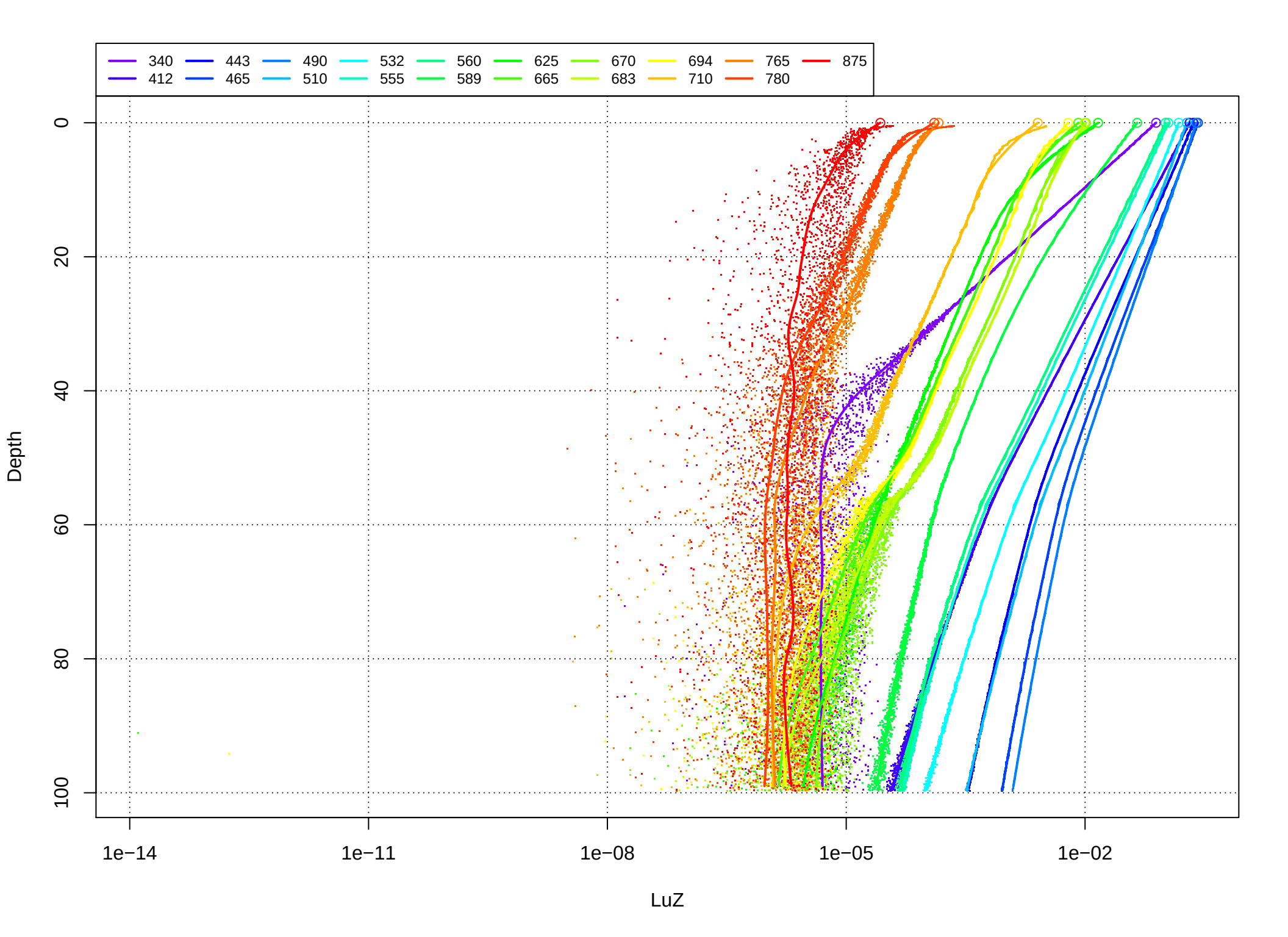
Ed0


340
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1e−08
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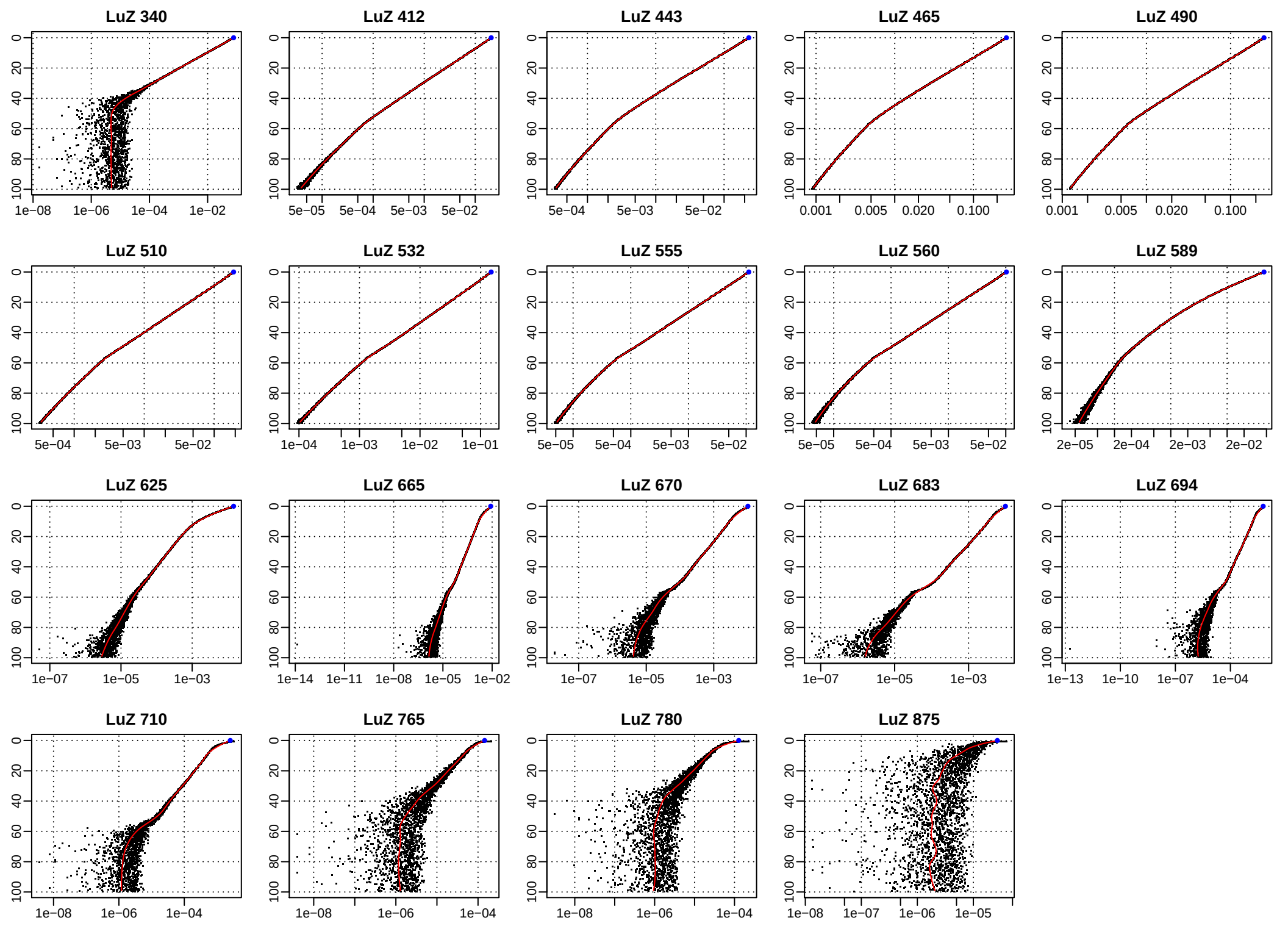
1e−02
LuZ


LuZ 340
LuZ 412
LuZ 443
LuZ 465
LuZ 490
LuZ 510
LuZ 532
LuZ 555
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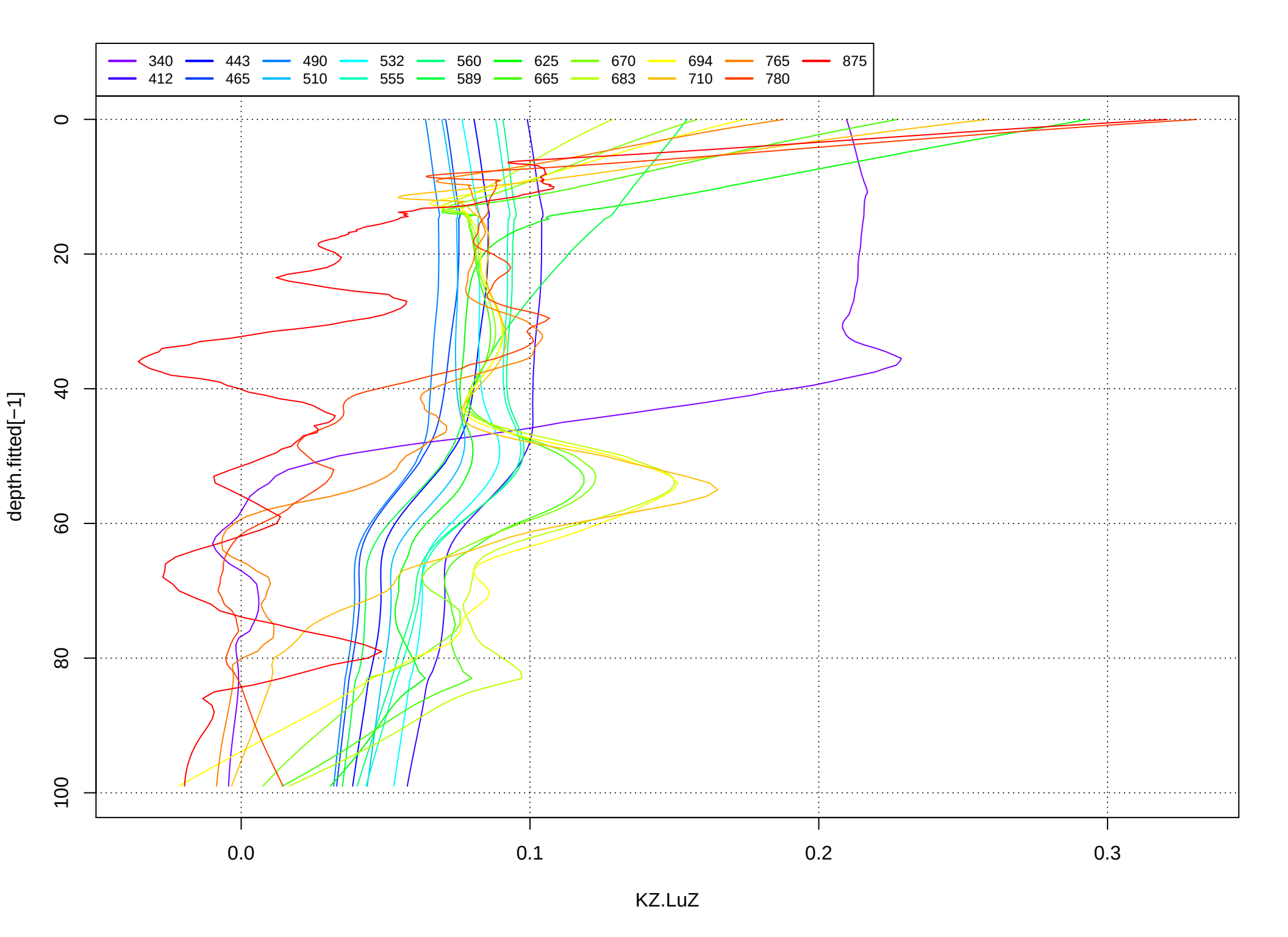
LuZ 875


340
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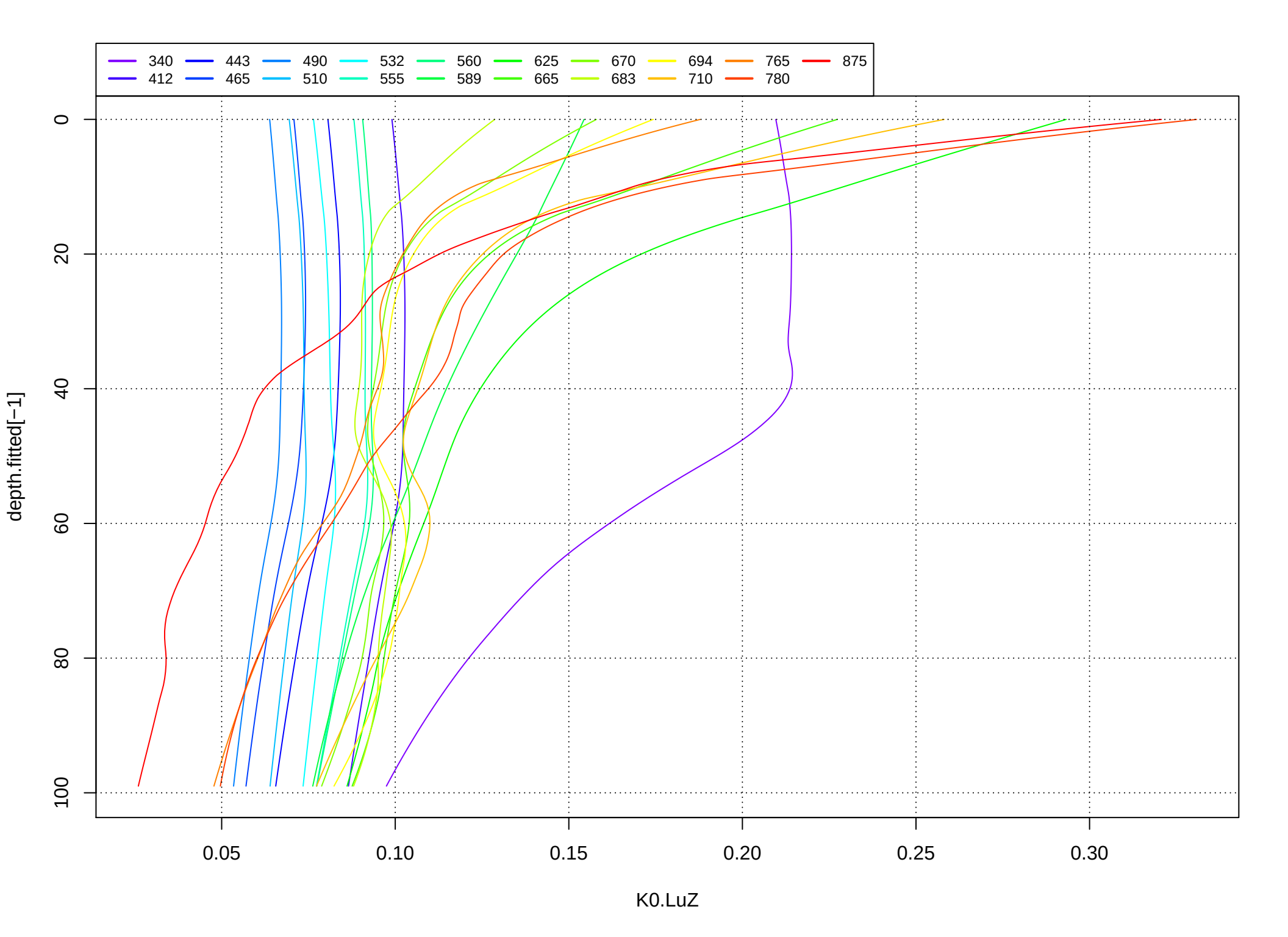
0.3
KZ.LuZ


340
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0.05
0.10
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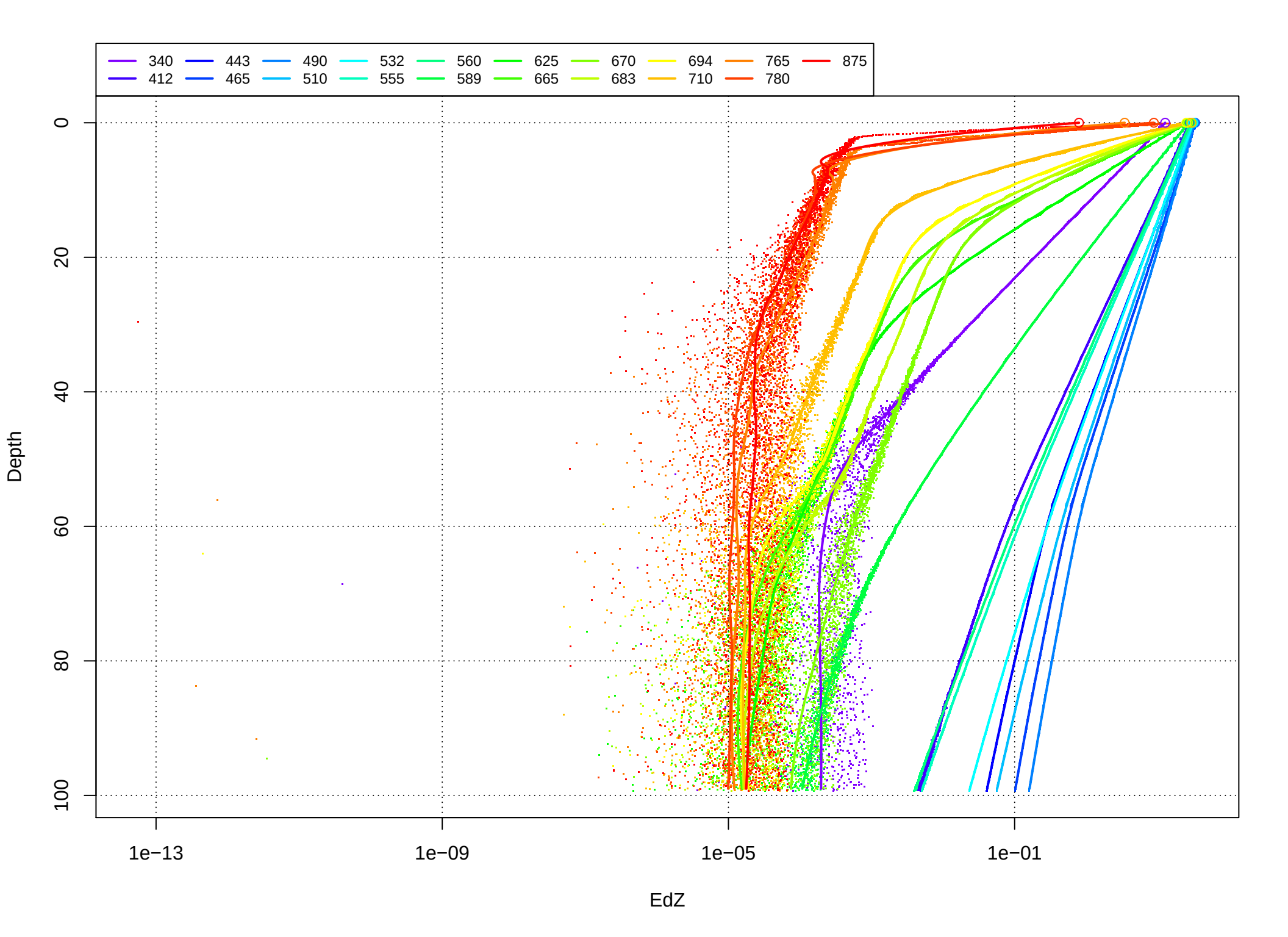
0.20
0.25
0.30
K0.LuZ


340
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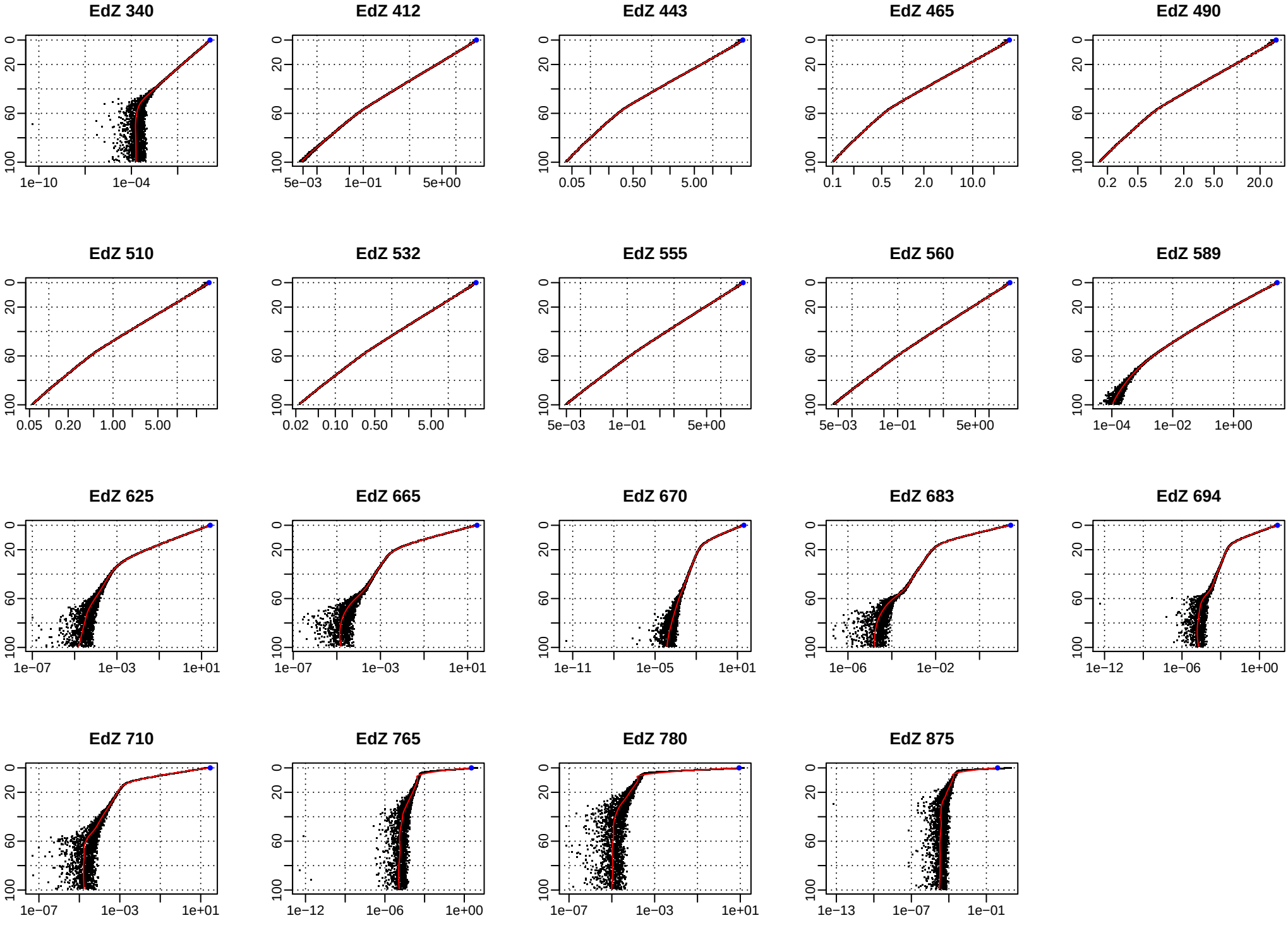
1e−01
EdZ


EdZ 340
EdZ 412
EdZ 443
EdZ 465
EdZ 490
EdZ 510
EdZ 532
EdZ 555
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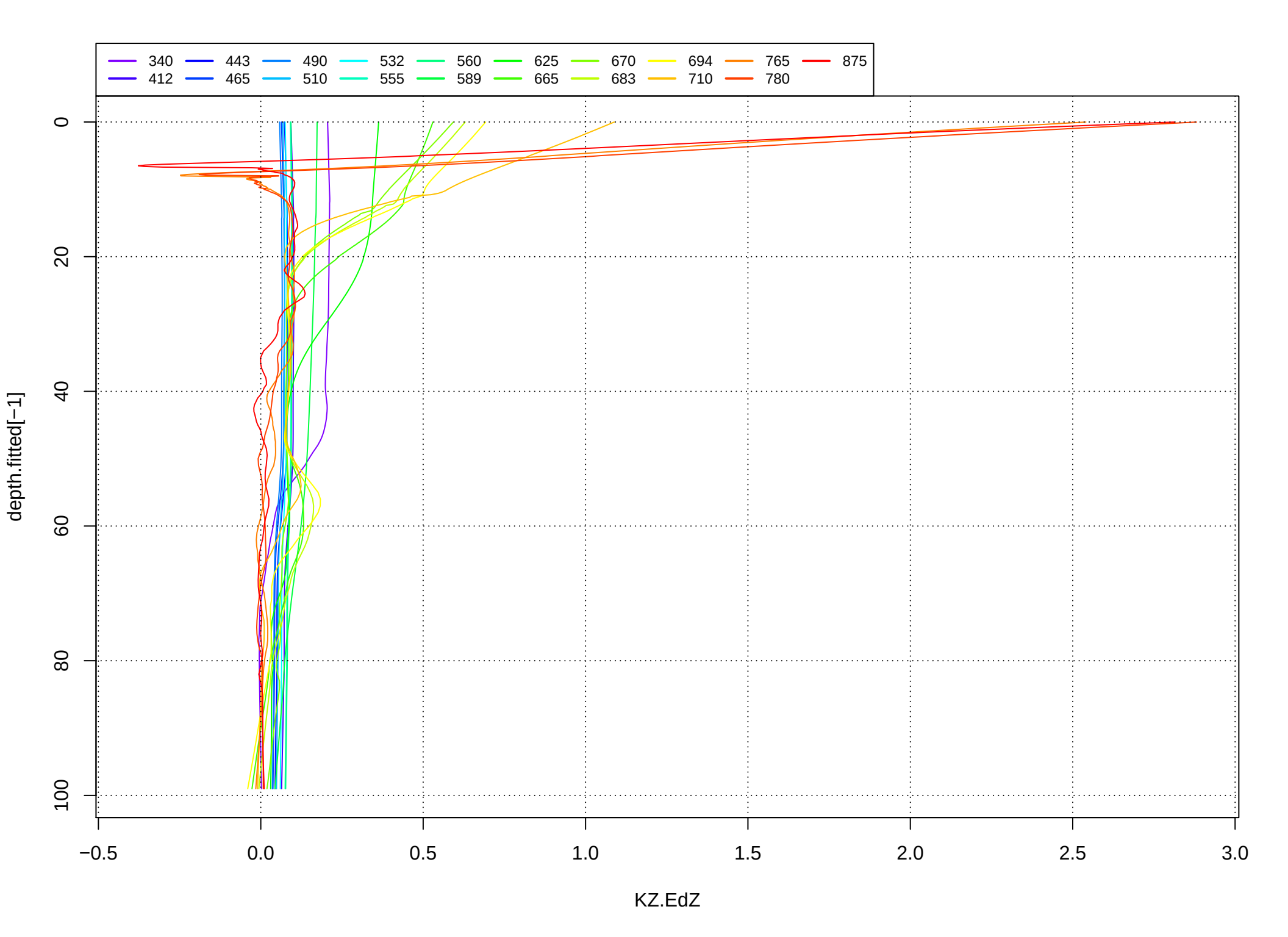
EdZ 780
EdZ 875


340
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depth.fitted[−1]
0
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1.0
1.5
2.0
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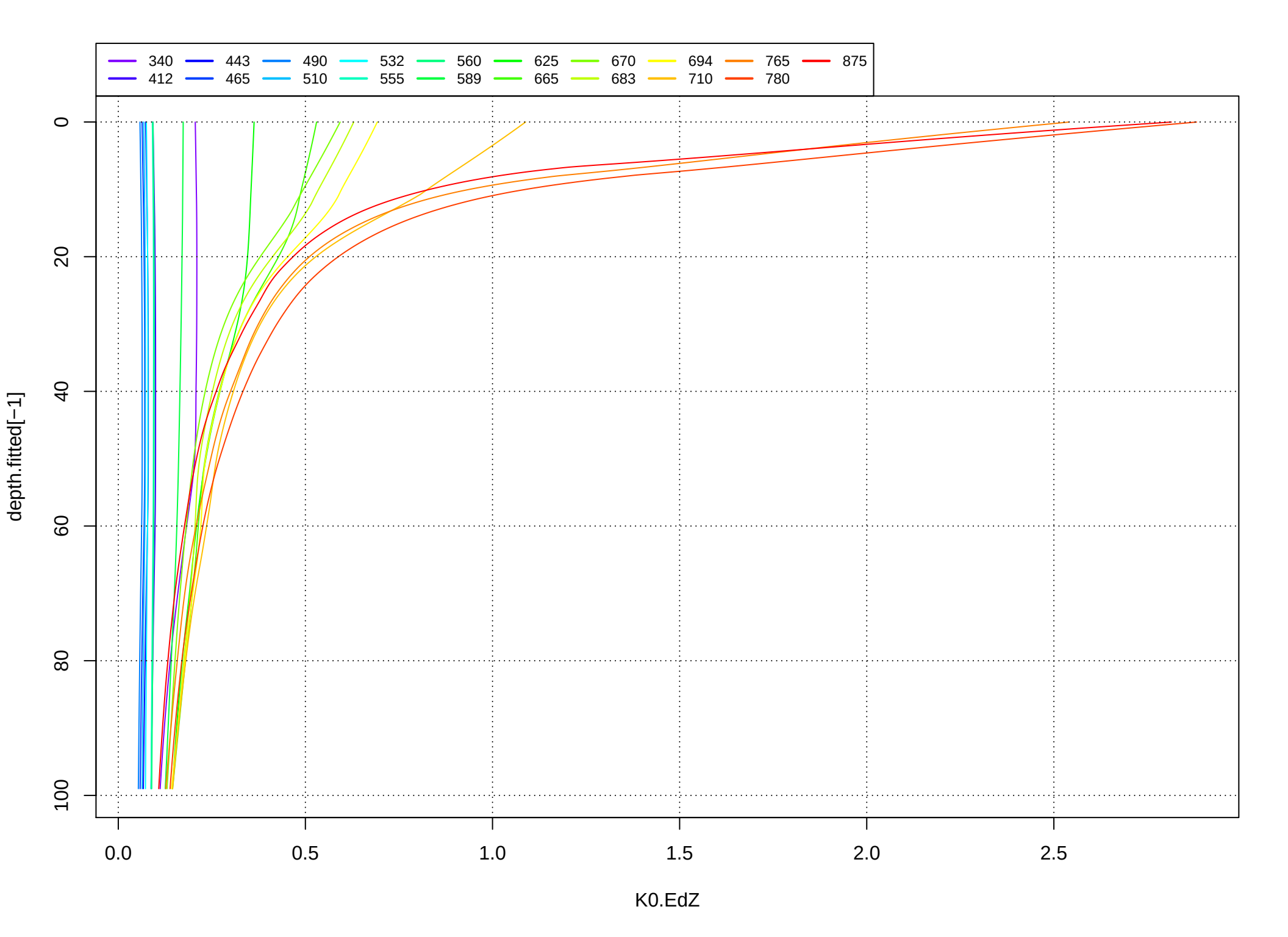
3.0
KZ.EdZ


340
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depth.fitted[−1]
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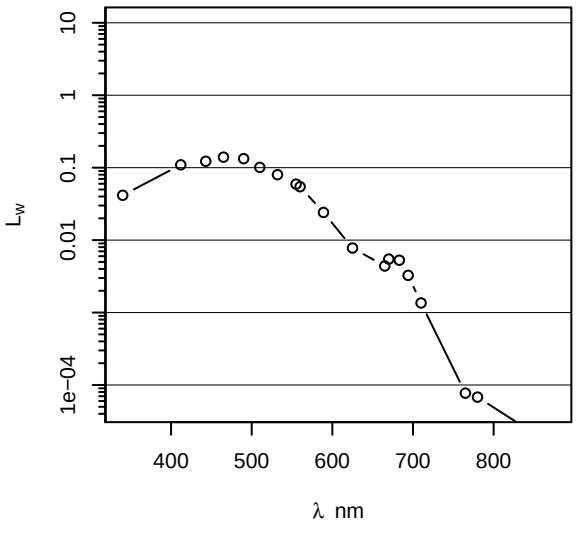
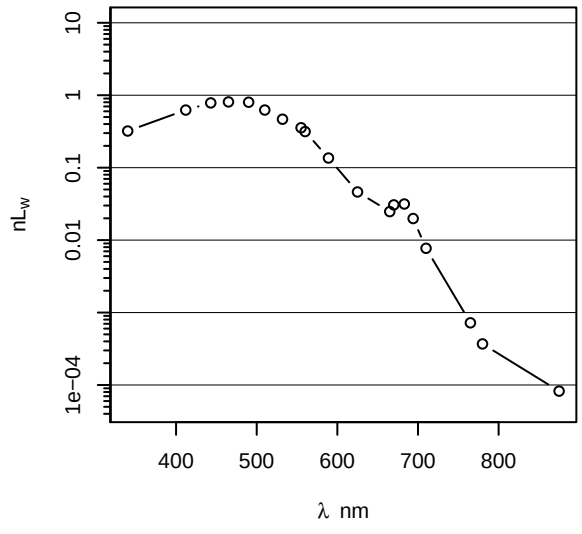
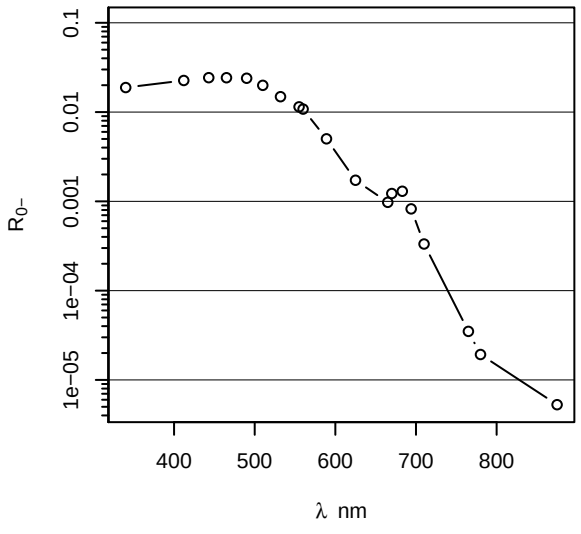
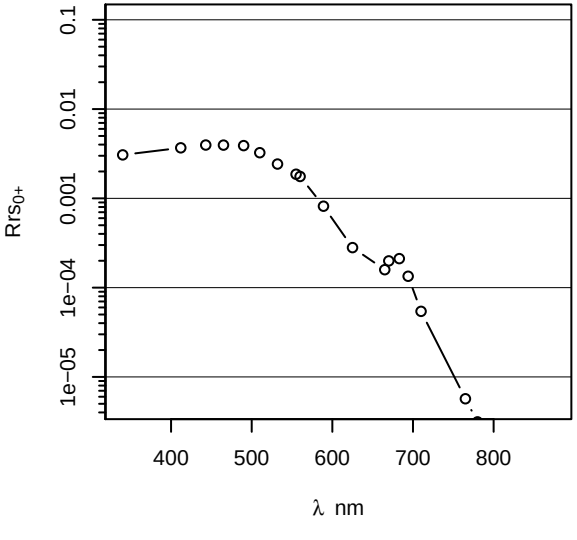
2.0
2.5
K0.EdZ









NO SHADOW CORRECTION FOR LuZ

Problems identified during the cruises

BOUSSOLE #204
The cruise was cancelled because of a mechanical failure on the R/V *Téthys II*. Repairs could not be completed in time for our cruise to be carried out. Therefore, the cruise was postponed to February 2nd and 3rd. At that time, the *Téthys II* was eventually back on duty. The cruise was unfortunately cancelled again because of bad weather.

BOUSSOLE #205
No problems.

BOUSSOLE #206
C-OPS measurements were not optimal for this cruise because of the bad sky conditions during the acquisition: the sky was overcast with unstable irradiance. Some C-OPS profiles had to be stopped during the acquisition and the third profile was eliminated because of the instability of irradiance.

BOUSSOLE #207
No problems.

BOUSSOLE #208
C-OPS measurements were not optimal for this cruise because of the bad sky conditions during the acquisition: the sky was cloudy with unstable irradiance. The first C-OPS profiles had to be stopped early during the acquisition.

The GPS of the C-OPS system was not functioning after the first cast. It was decided to remove it before the second cast. Then, it will be tested in the lab. Latitudes and longitudes were taken from the GPS of the ship before each profile.

BOUSSOLE#209
The GPS of the C-OPS system did not work. It was subsequently sent to Biospherical for repair.

BOUSSOLE#210
The GPS of the C-OPS system did not work. It was sent to Biospherical for repair.

BOUSSOLE#211
The GPS of the C-OPS system did not work. It was sent to Biospherical for repair.

The weather conditions during this cruise were not optimal to perform C-OPS profiles (sky overcast with unstable irradiance). The first day, no profiles could be performed, the second day, two of the three profiles had to be stopped early during the descent because of the unstable irradiance.

BOUSSOLE #212
No problems.

BOUSSOLE #213
The BOUSSOLE cruise was cancelled due to the passing of Didier Le Meur, member of the ship crew. Didier had joined the DT INSU - CNRS in 2014 as a ship's cook. We have a special thought for him and his family and for all the colleagues who have worked with him during oceanographic cruises.

BOUSSOLE #214
The GPS of the C-OPS system did not work. It was sent to Biospherical for repair.

The weather station of the Téthys II did not function correctly. There were missing parameters (air temperature and hygrometry).

BOUSSOLE #215

The C-OPS commonly used on the BOUSSOLE missions was still under calibration at Biospherical. The C-OPS used for this cruise was the one shared among the marine optics and remote sensing group at LOV. The instrument is similar to the BOUSSOLE one, yet has a Lu sensor instead of a Eu one.

The GPS of the C-OPS system did not work. It was sent to Biospherical for repair.

The connection between the deckbox (deck unit of the C-OPS) and radiometers was lost during the recovery of the C-OPS. It appeared that the connections between the C-OPS radiometers Y-cable and the sea cable was flooded. The sea cable was a new one and it had never been used with this C-OPS system. The connector of the sea cable was not compatible with the connector of the Y-cable of this C-OPS system.

The weather station of the Téthys II did not function correctly. There were missing parameters (air temperature and hygrometry).