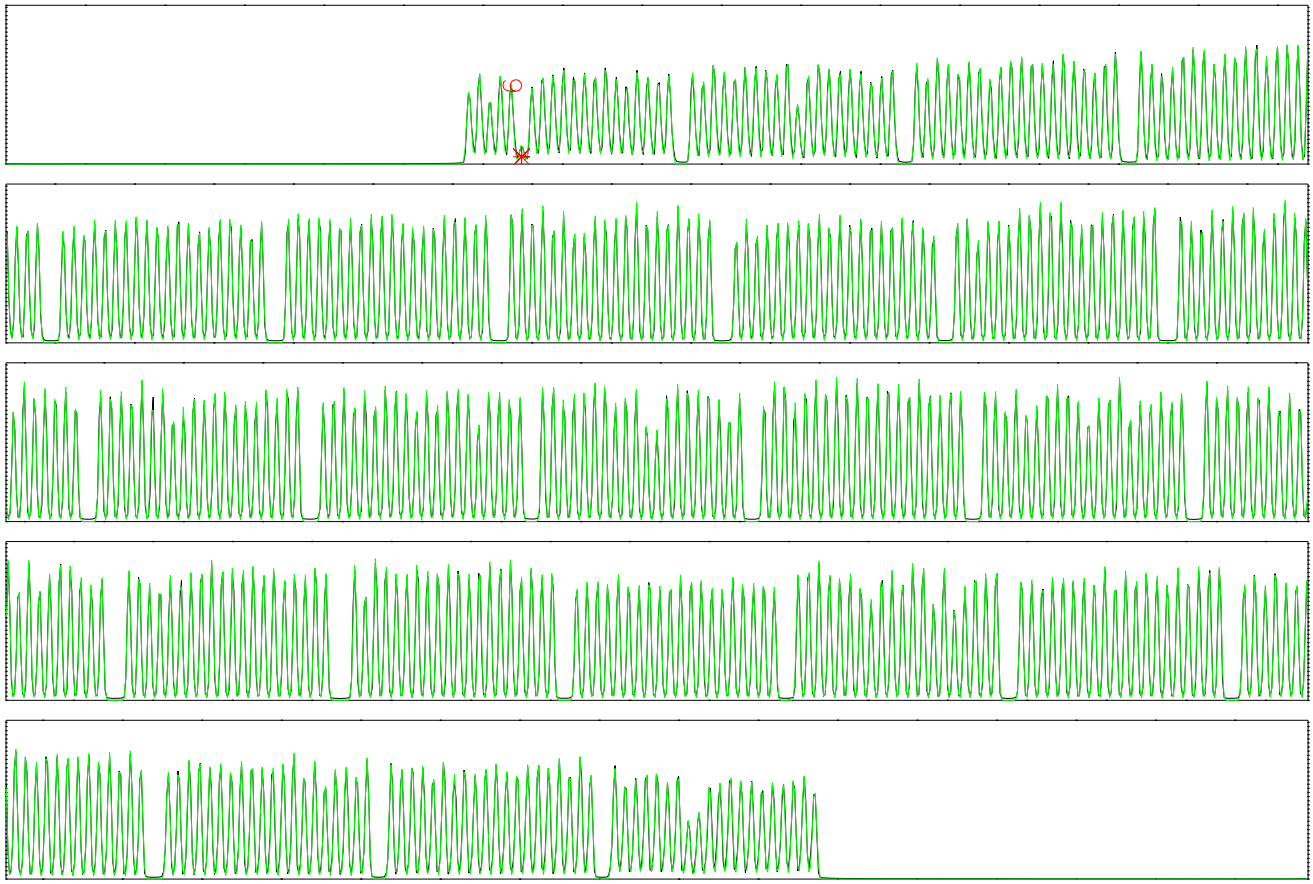
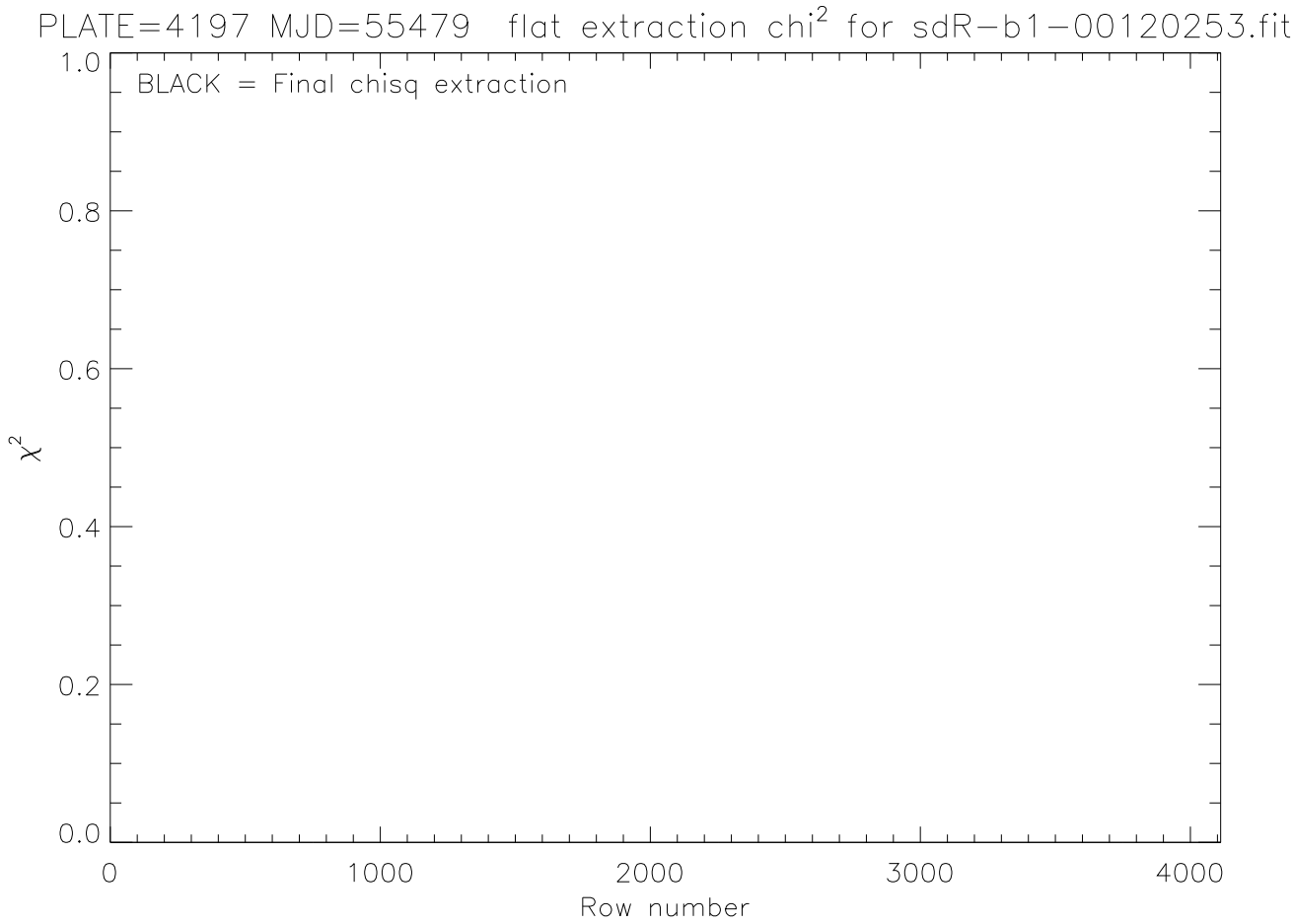
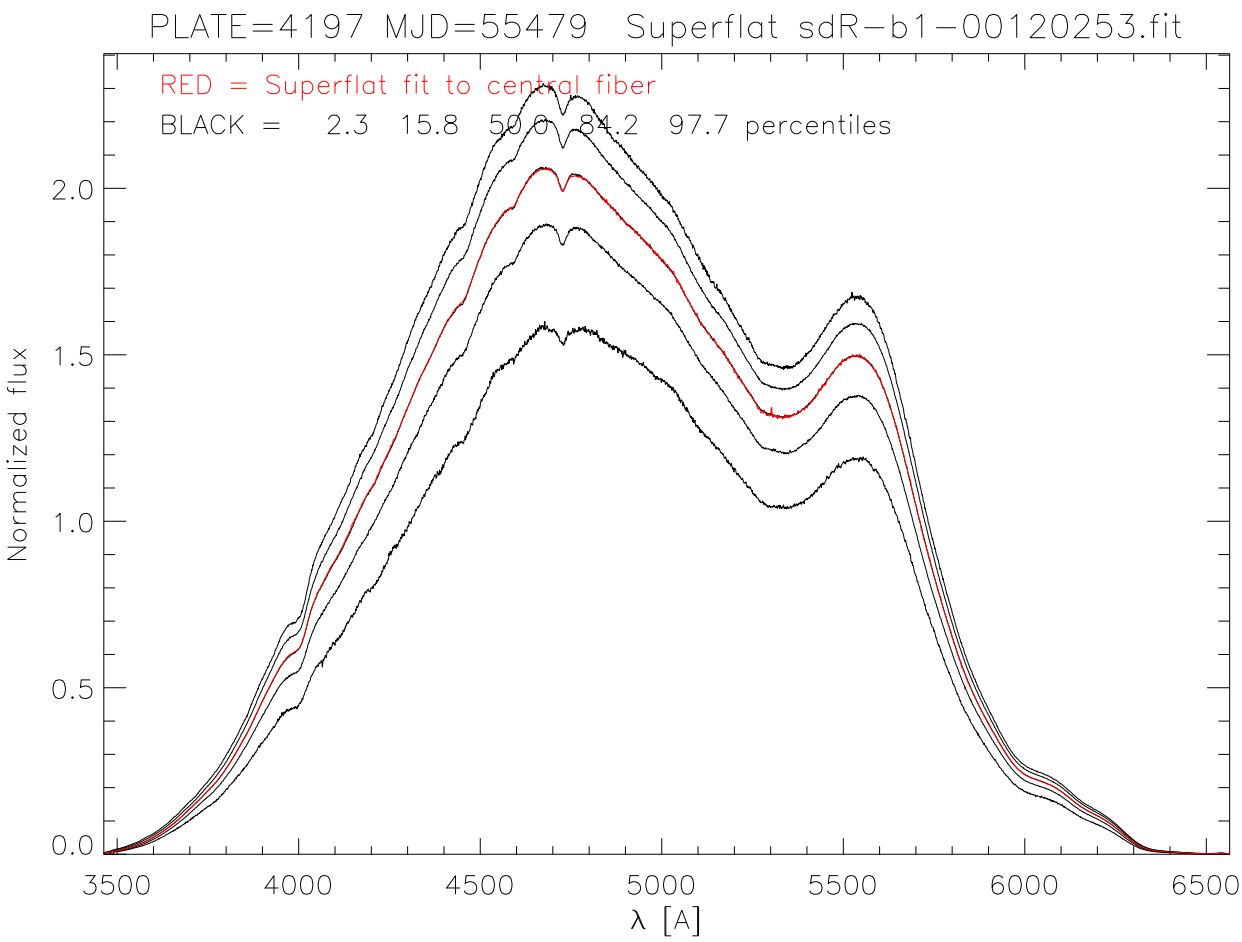
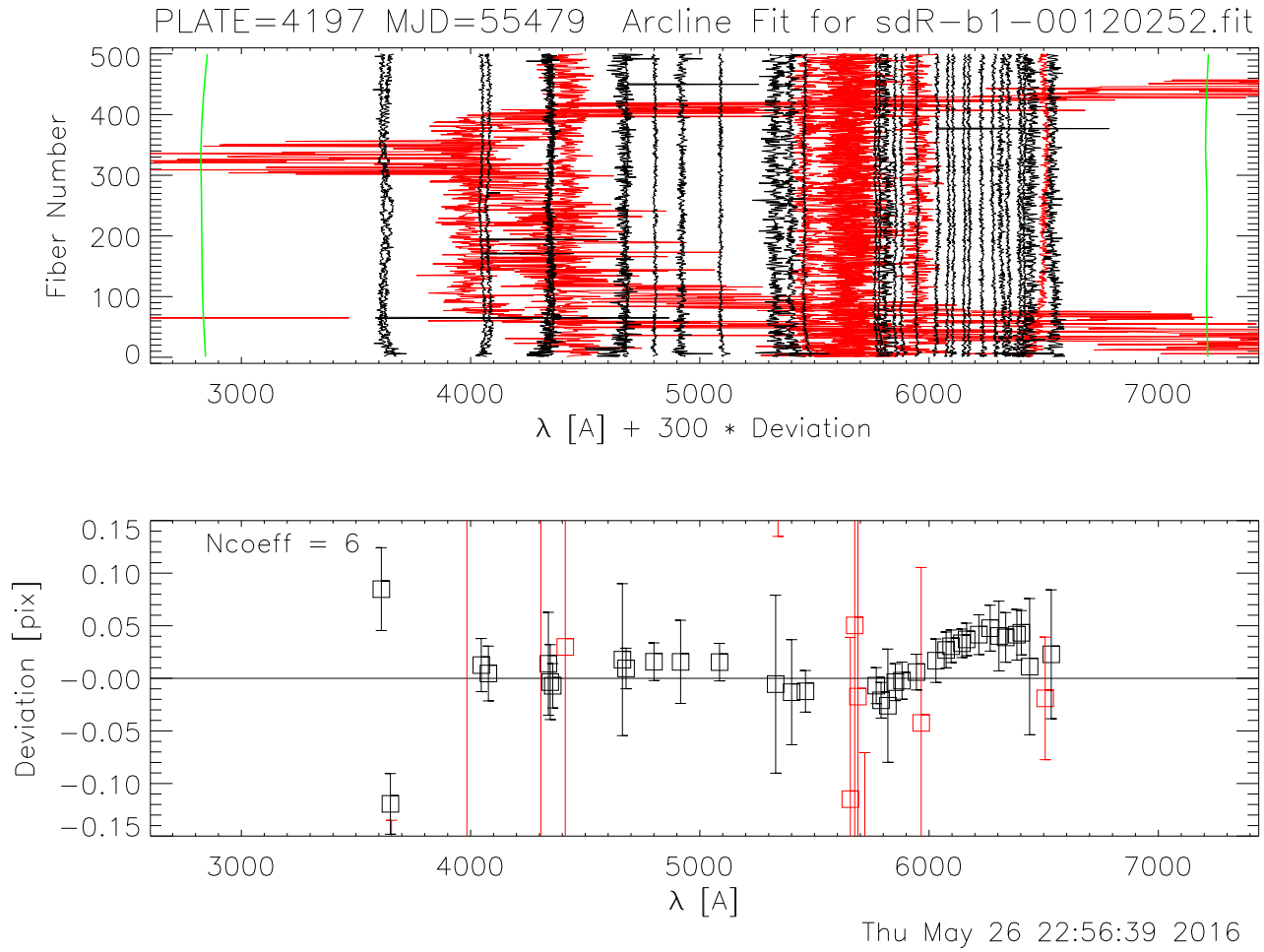
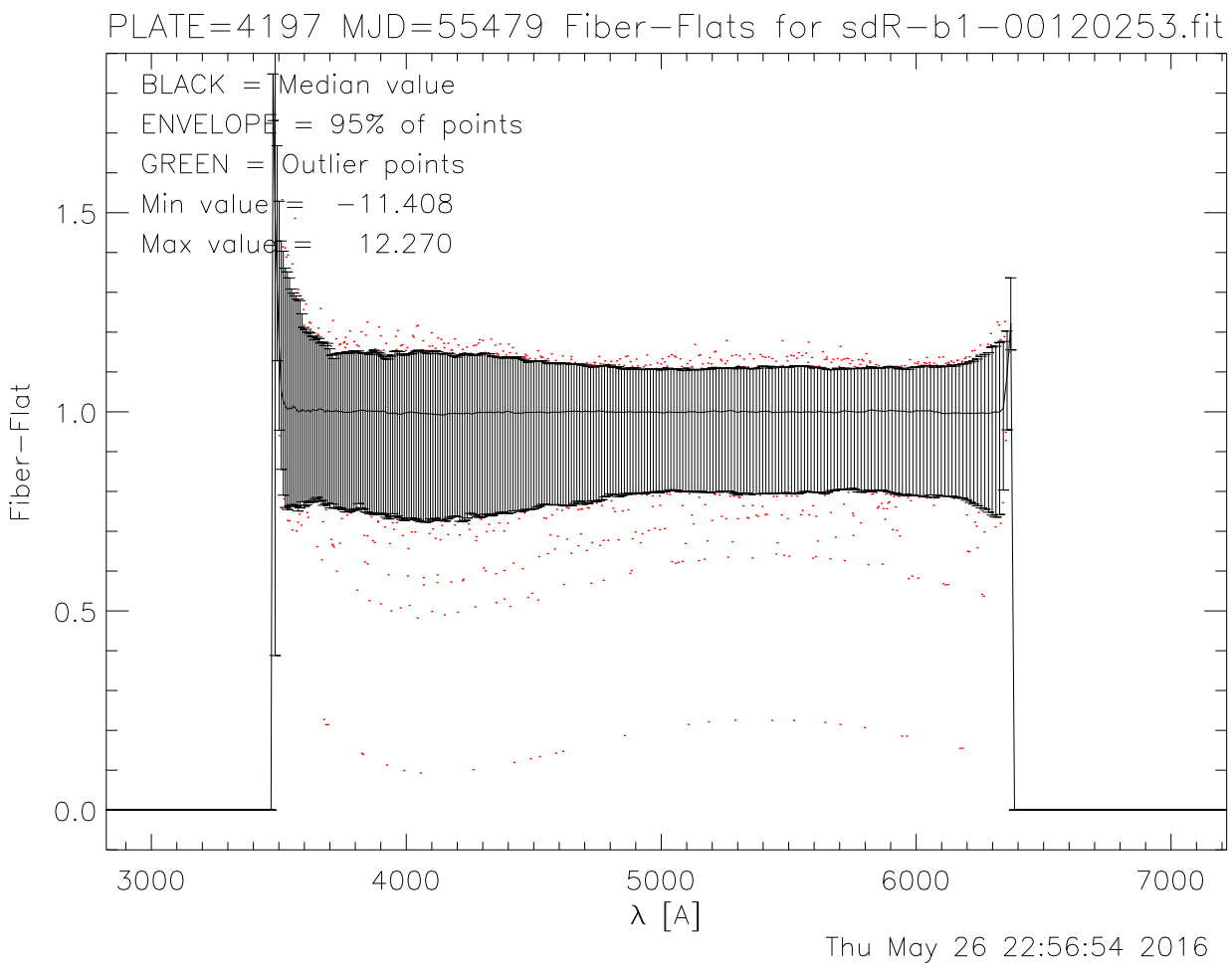
PLATE=4197 MJD=55479 Traces sdR-b1-00120253.fit

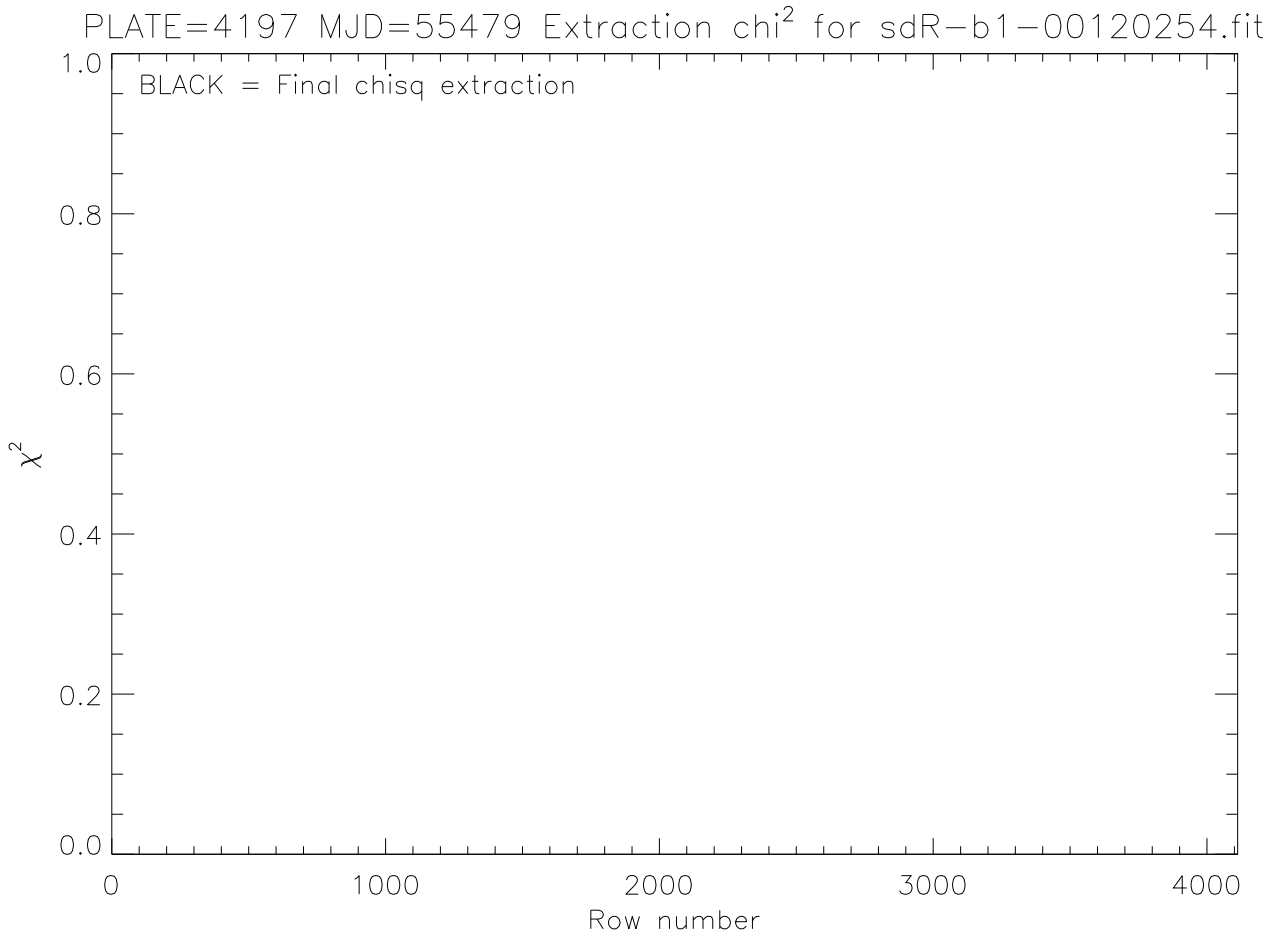


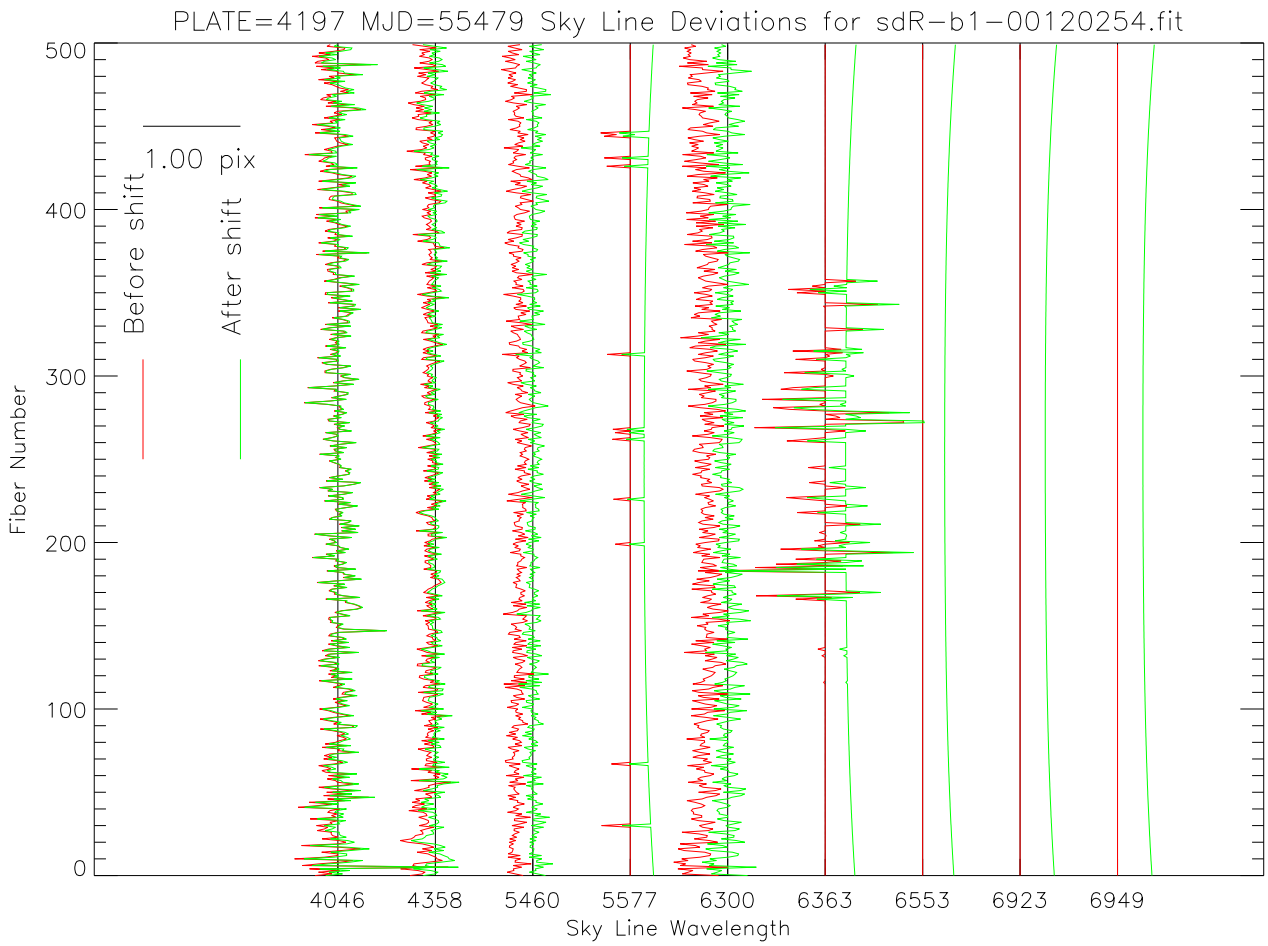

PLATE=4197 MJD=55479 flat extraction chi^2 for sdR−b1−00120253.fit
BLACK = Final chisq extraction
1.0
0.8
0.6
0.4
0.2
0.0
χ^2
0
1000
2000
3000
4000
Row number

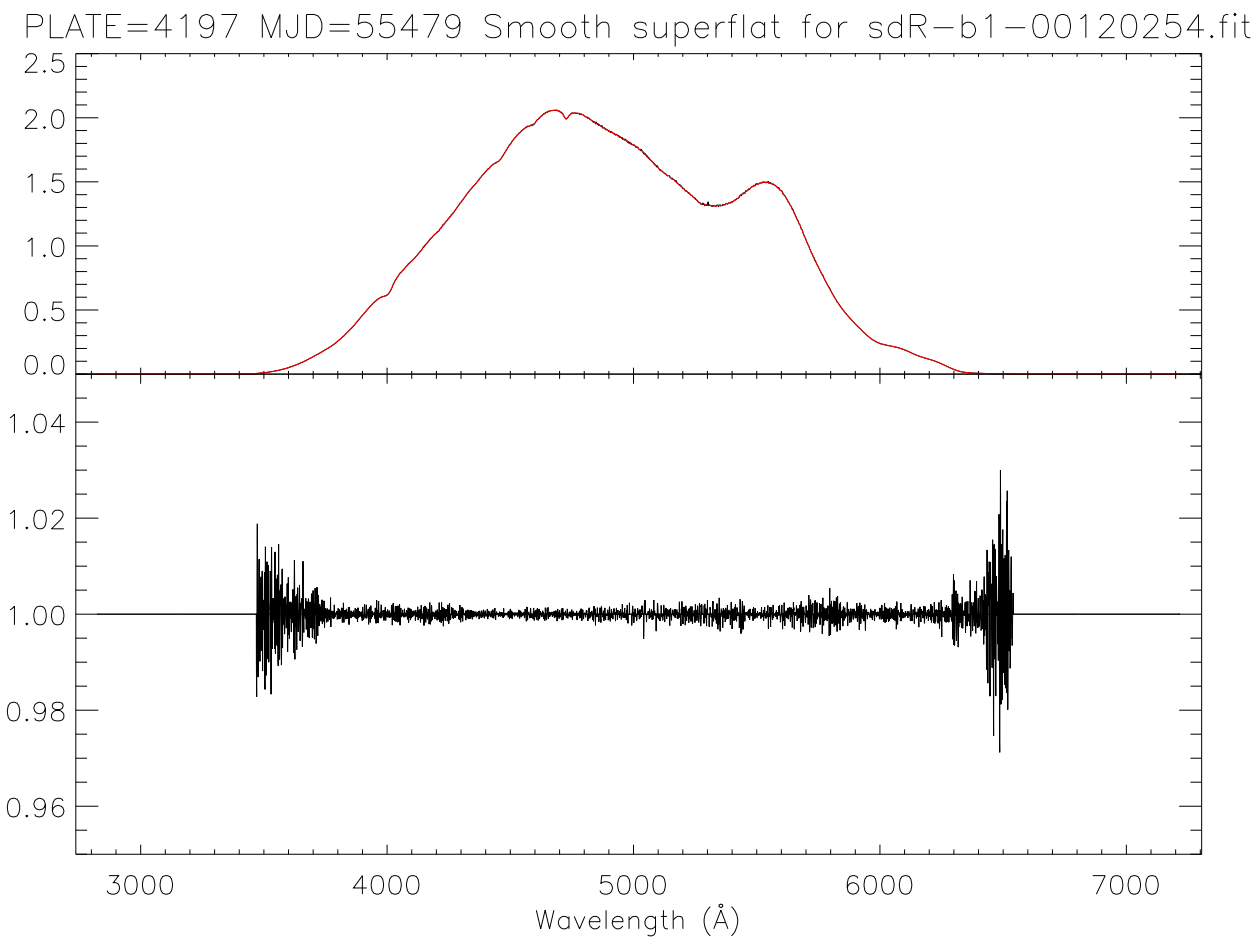

PLATE=4197 MJD=55479 Superflat sdR-b1-00120253.fit
RED = Superflat fit to central fiber
BLACK = 2.3 15.8 50.0 84.2 97.7 percentiles
Normalized flux
0.0
0.5
1.0
1.5
2.0
3500
4000
4500
5000
5500
6000
6500
λ [A]

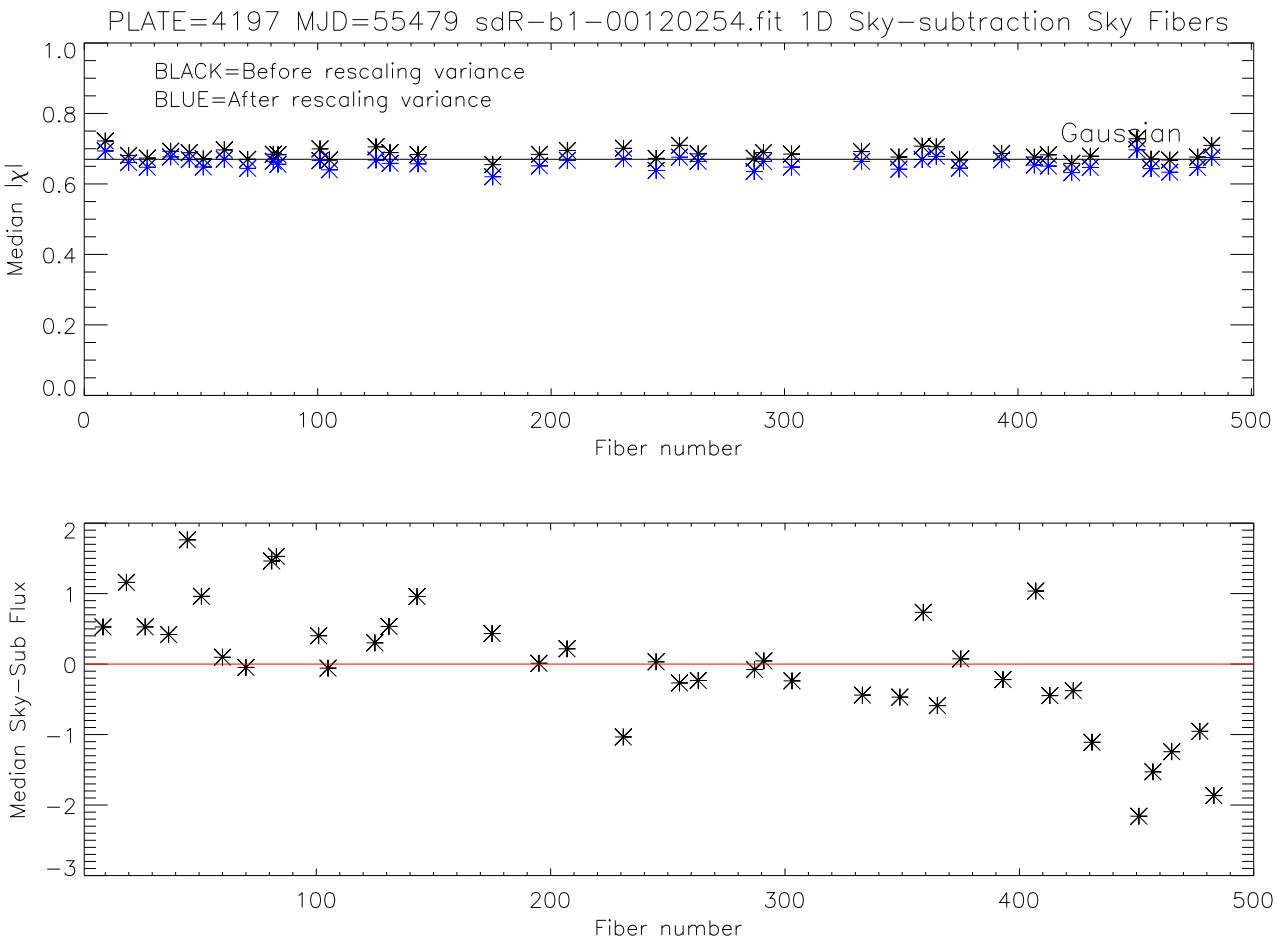

PLATE=4197 MJD=55479 Arcline Fit for sdR-b1-00120252.fit
Fiber Number
500
400
300
200
100
0
3000
4000
5000
6000
7000
λ [A] + 300 * Deviation
Ncoeff = 6
Deviation [pix]
0.15
0.10
0.05
−0.00
−0.05
−0.10
−0.15
λ [A]
Thu May 26 22:56:39 2016

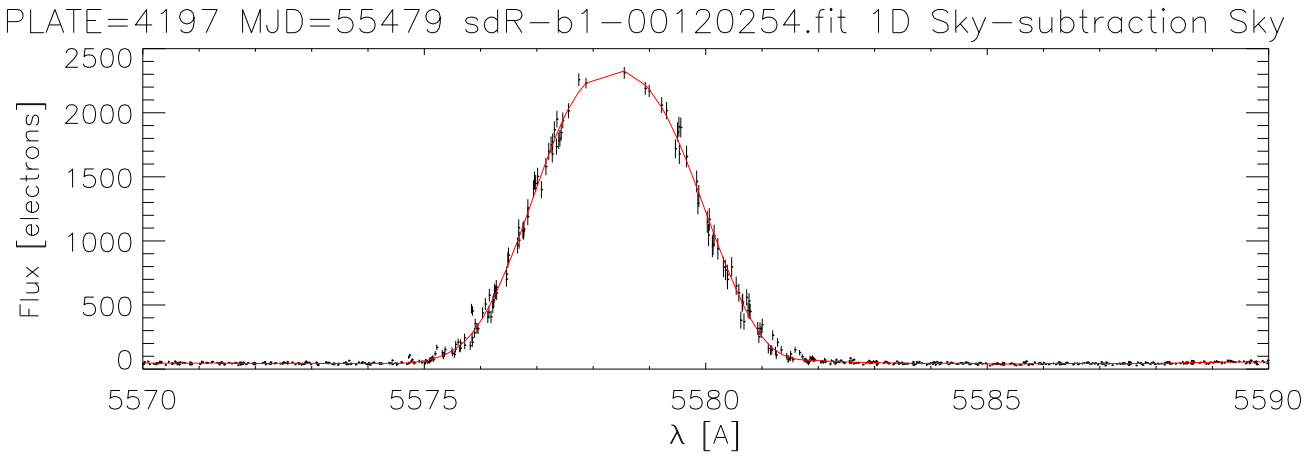

PLATE=4197 MJD=55479 Fiber-Flats for sdR-b1-00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = -11.408
Max value = 12.270
Fiber-Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Thu May 26 22:56:54 2016

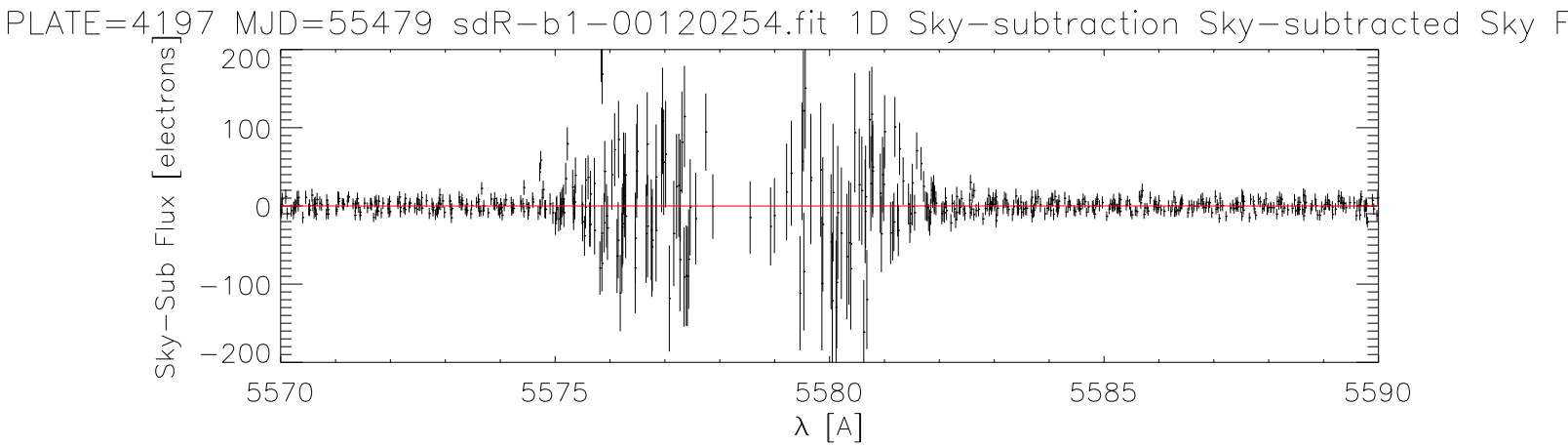

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−b1−00120254.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b1-00120254.fit
1.00 pix
Before shift
After shift
Fiber Number
0
100
200
300
400
500
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

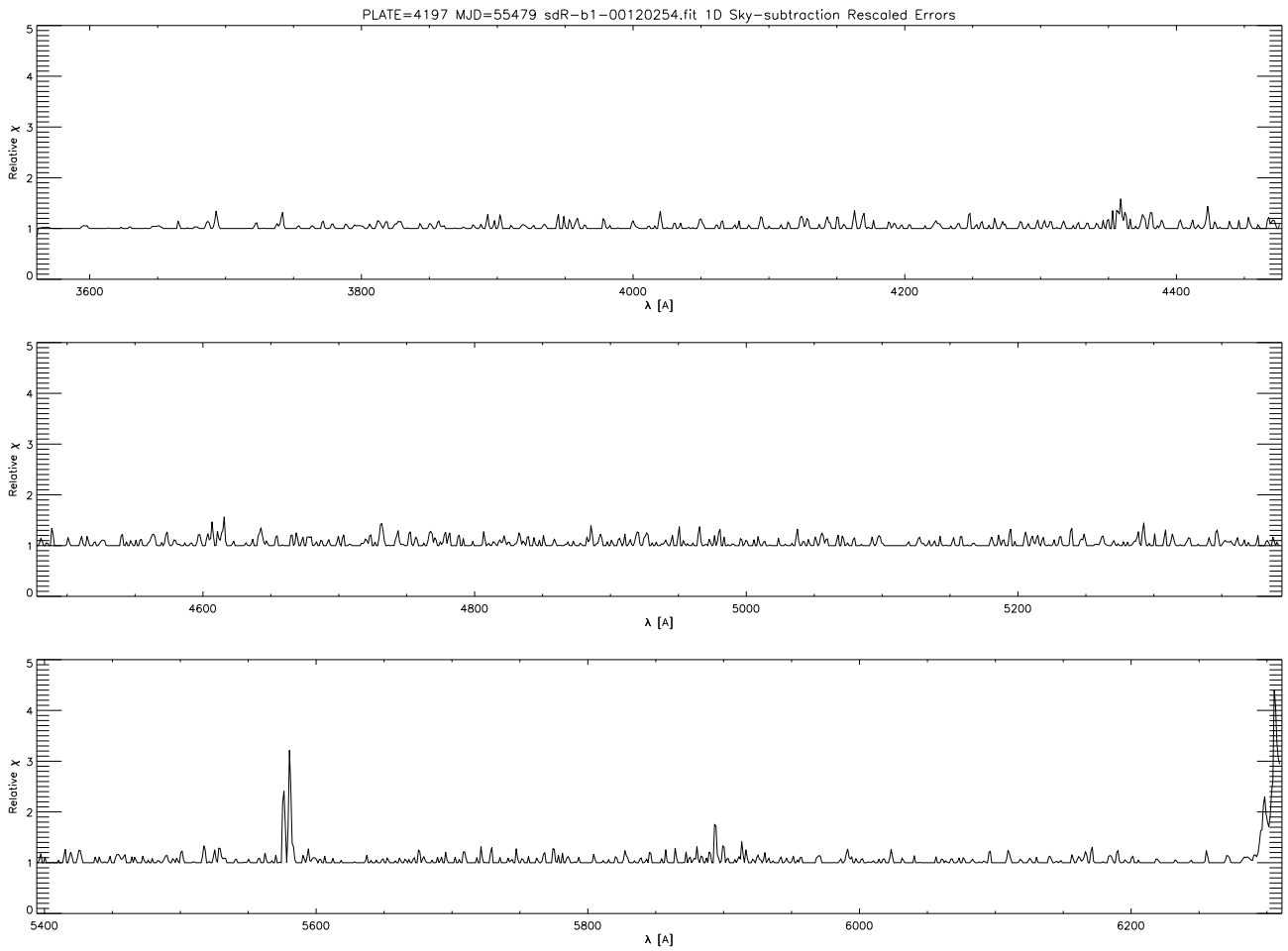

PLATE=4197 MJD=55479 Smooth superflat for sdR-b1-00120254.fit
2.5
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

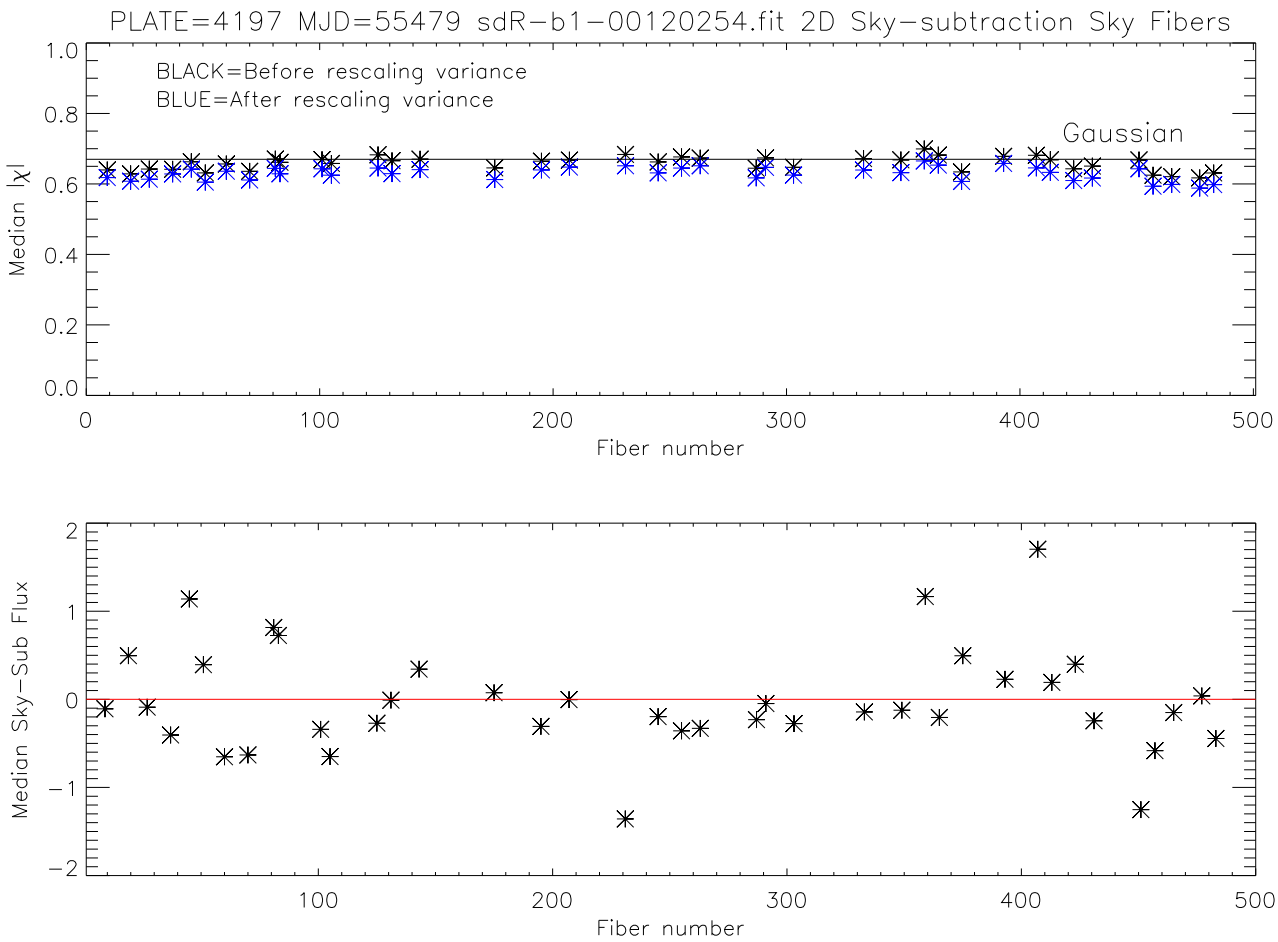

PLATE=4197 MJD=55479 sdR-b1-00120254.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

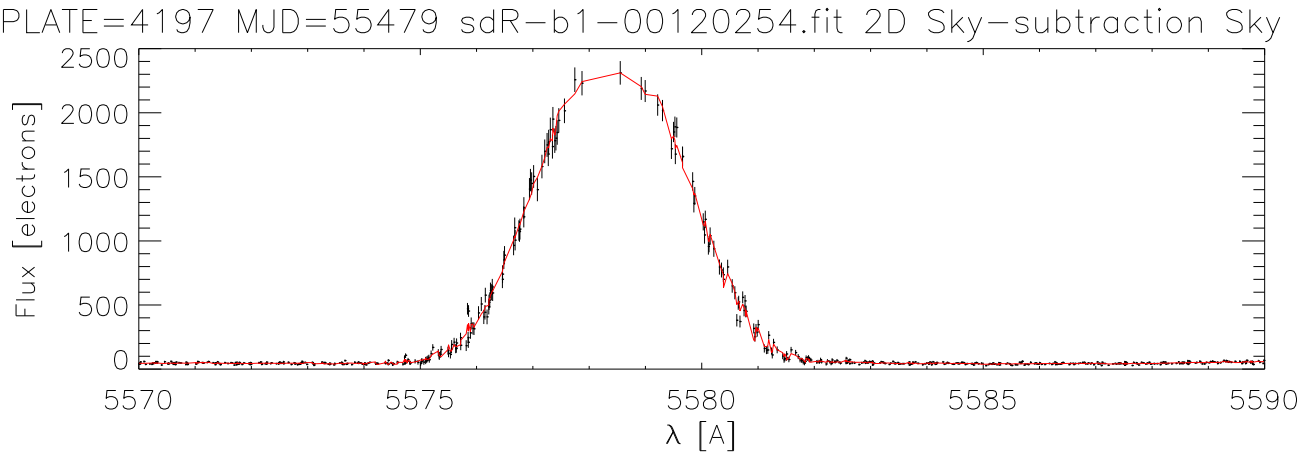

PLATE=4197 MJD=55479 sdR-b1-00120254.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

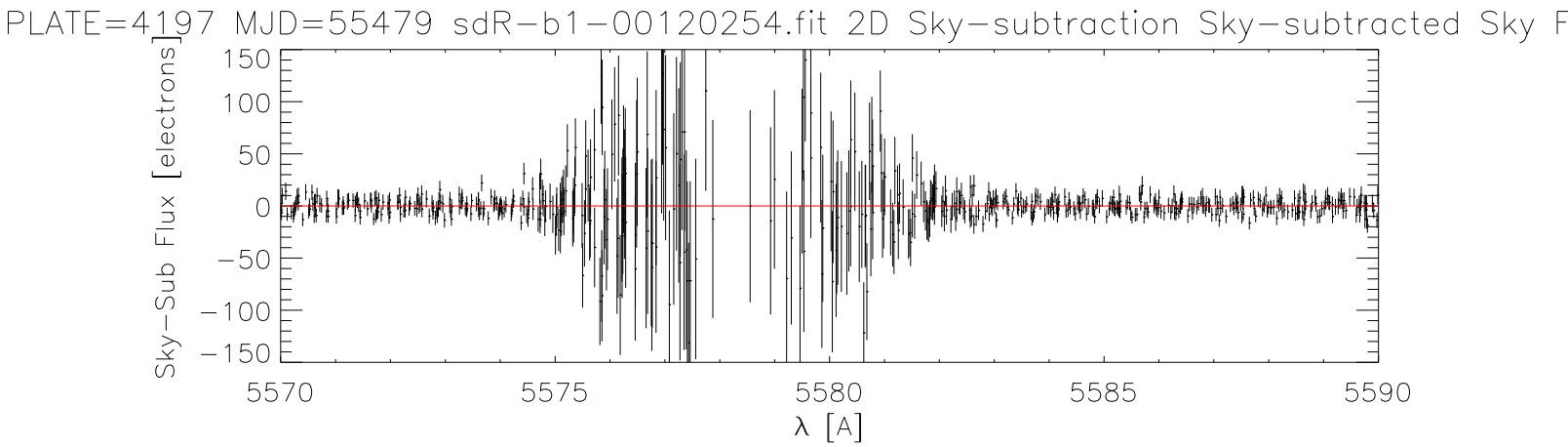

PLATE=4197 MJD=55479 sdR-b1-00120254.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
200
100
0
-100
-200
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 40

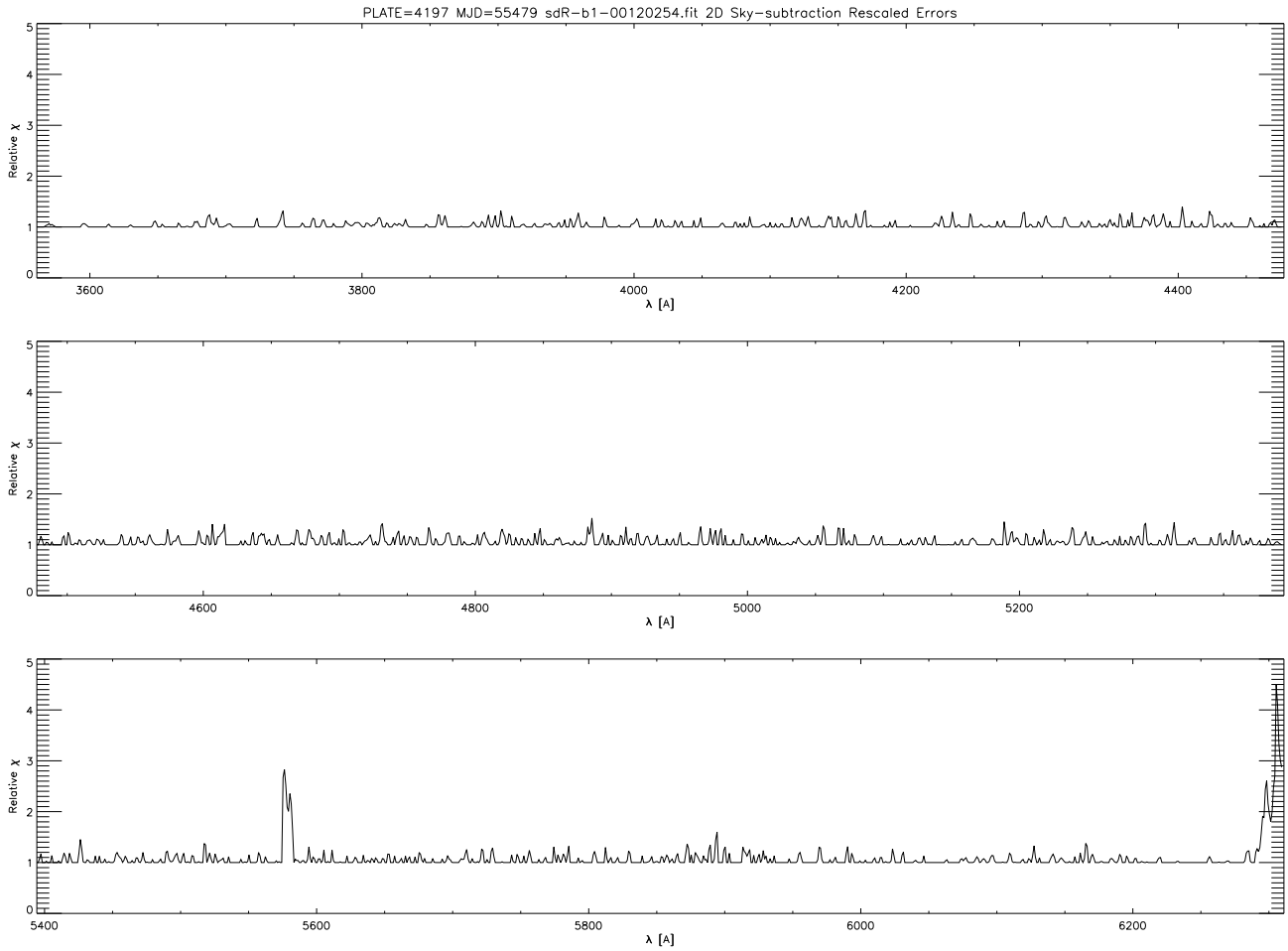


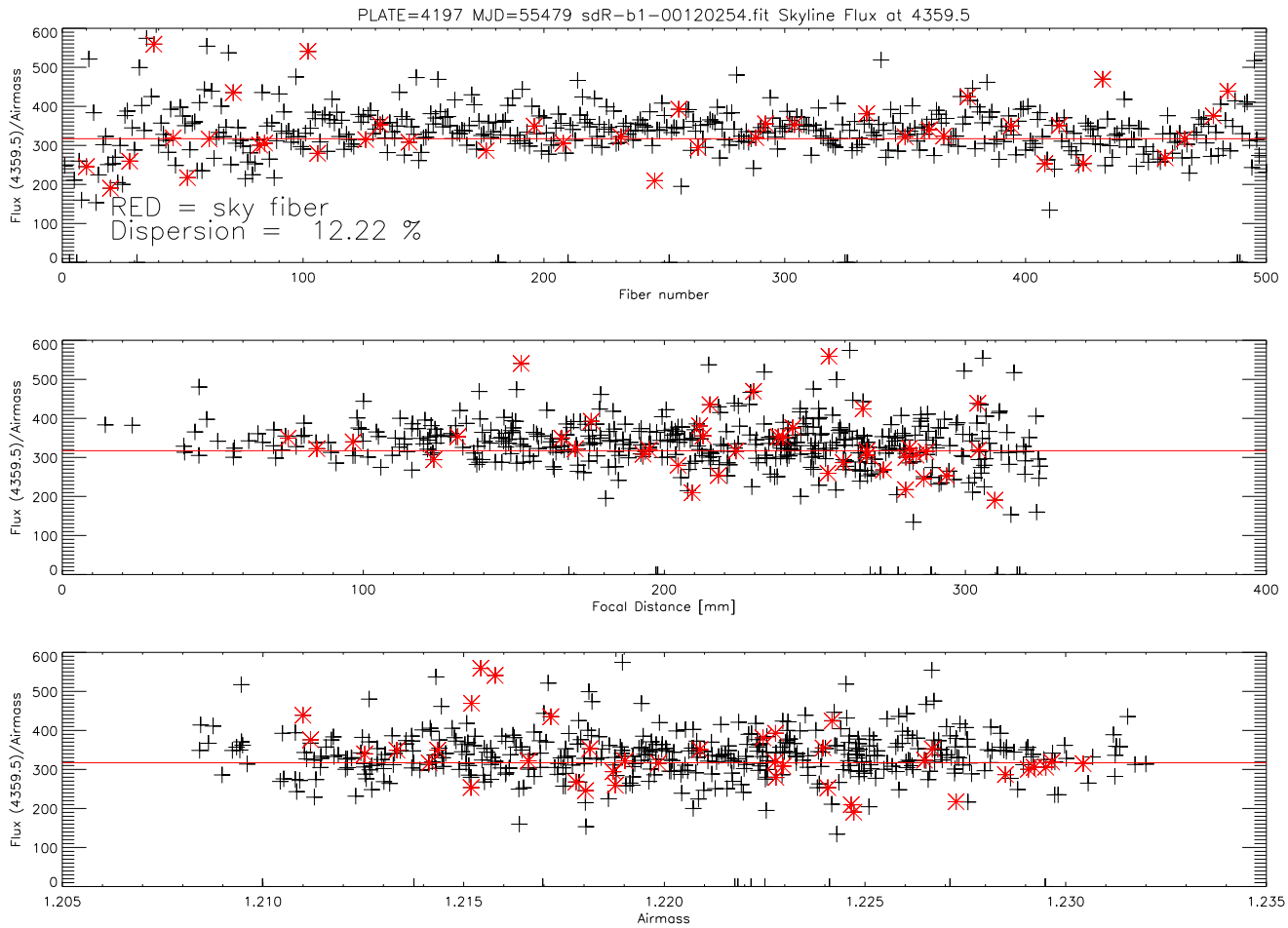

PLATE=4197 MJD=55479 sdR-b1-00120254.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

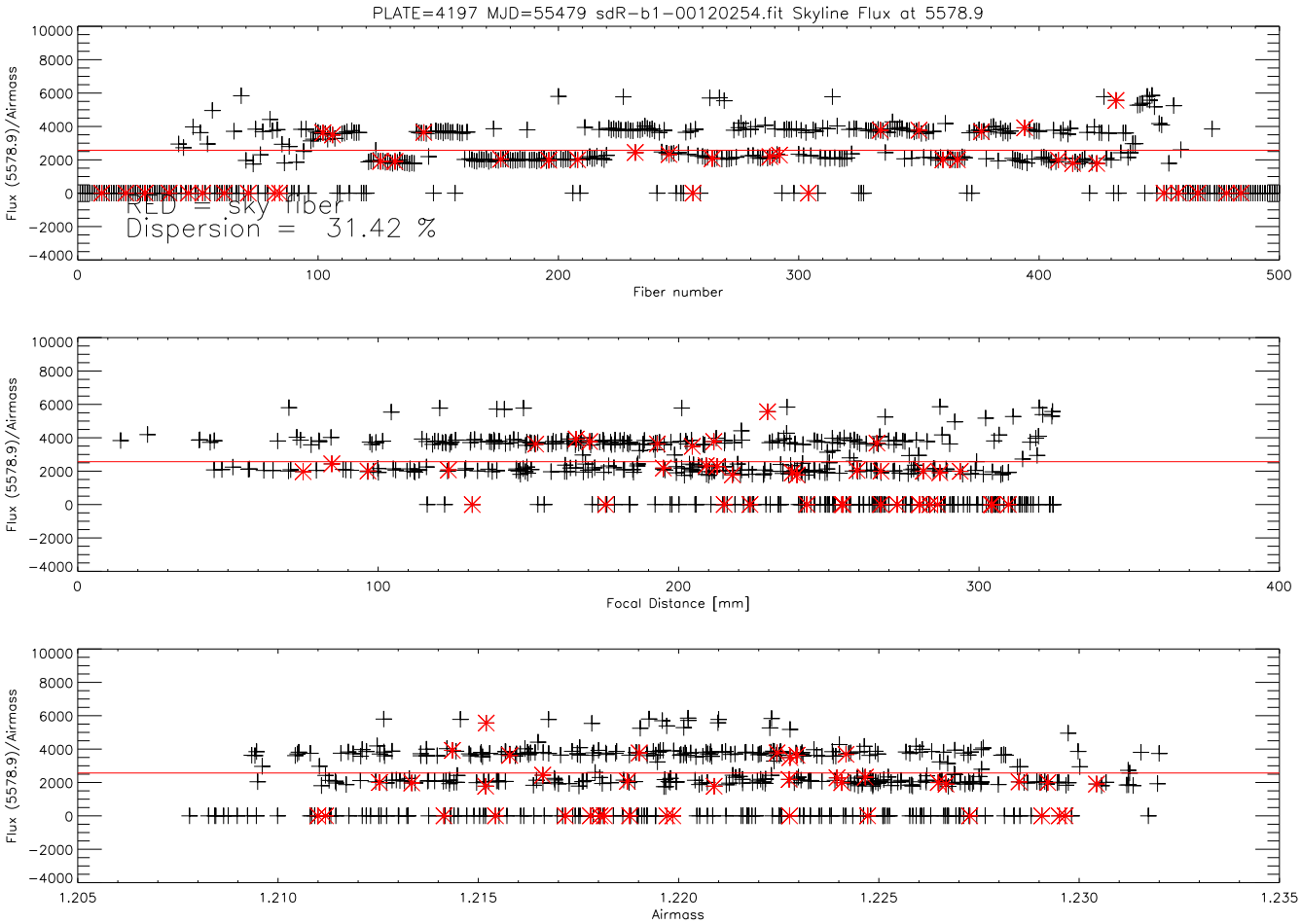

PLATE=4197 MJD=55479 sdR-b1-00120254.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

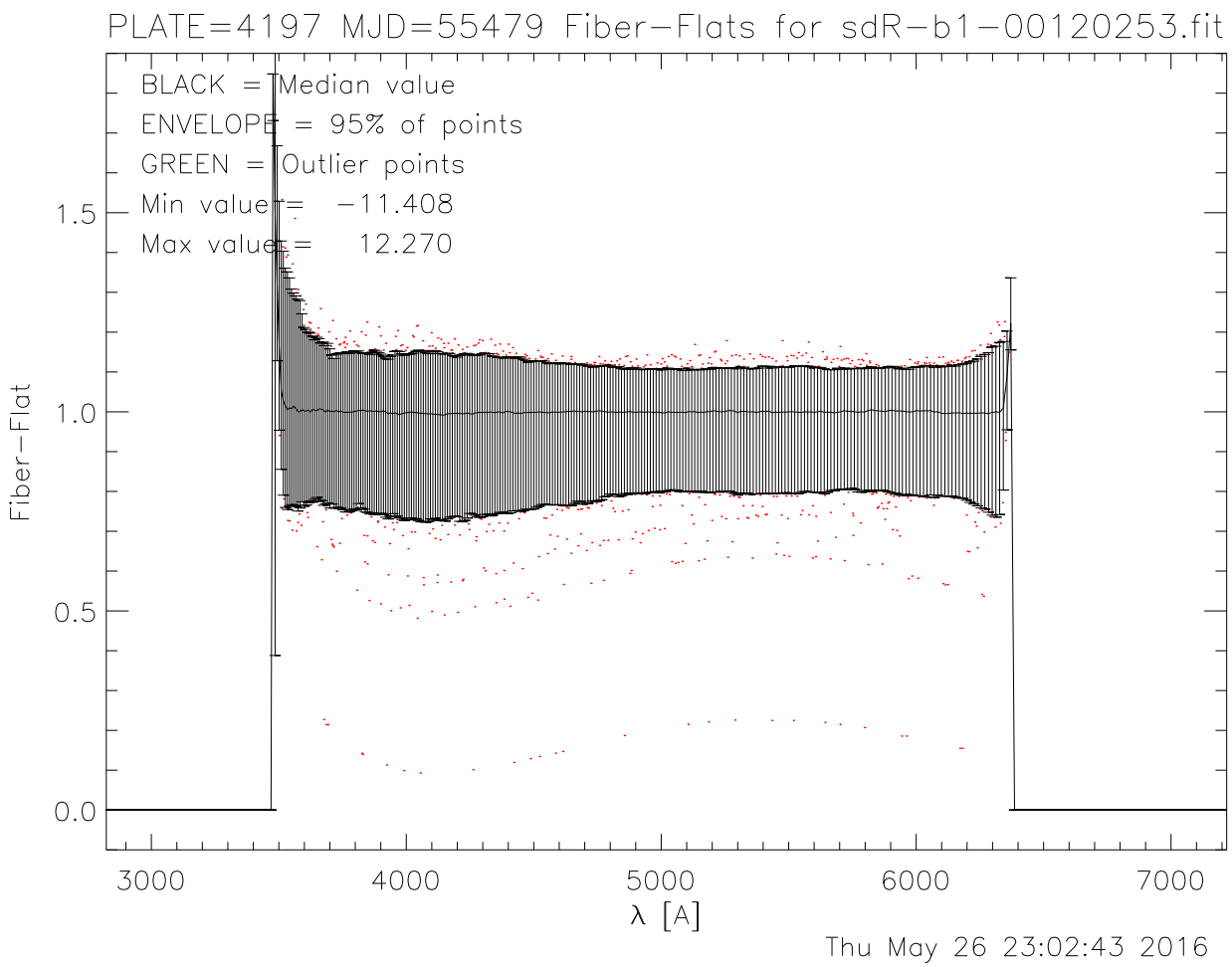

PLATE=4197 MJD=55479 sdR-b1-00120254.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
150
100
50
0
-50
-100
-150
5570
5575
5580
5585
5590
λ [A]

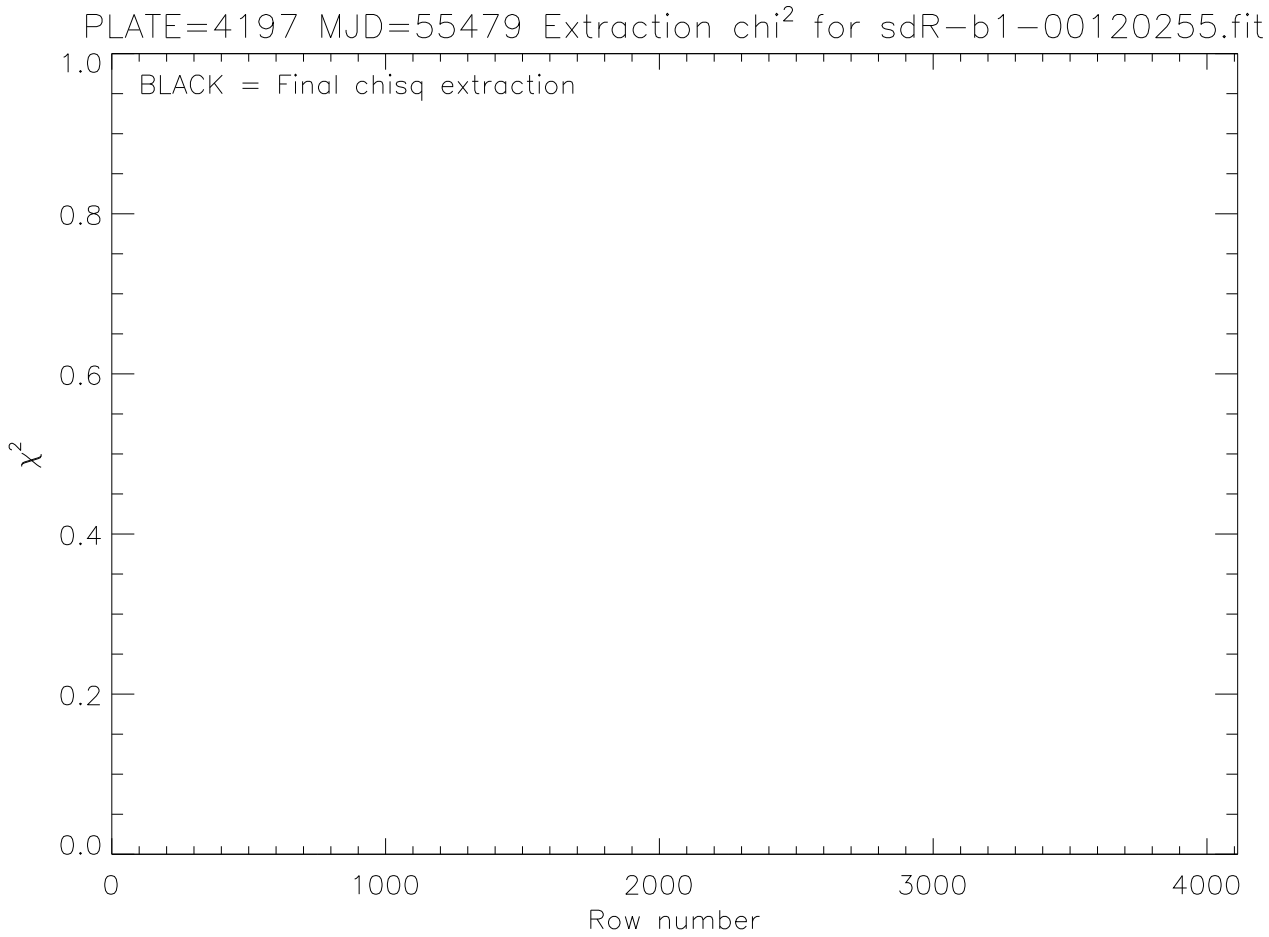
Number of sky fibers = 40

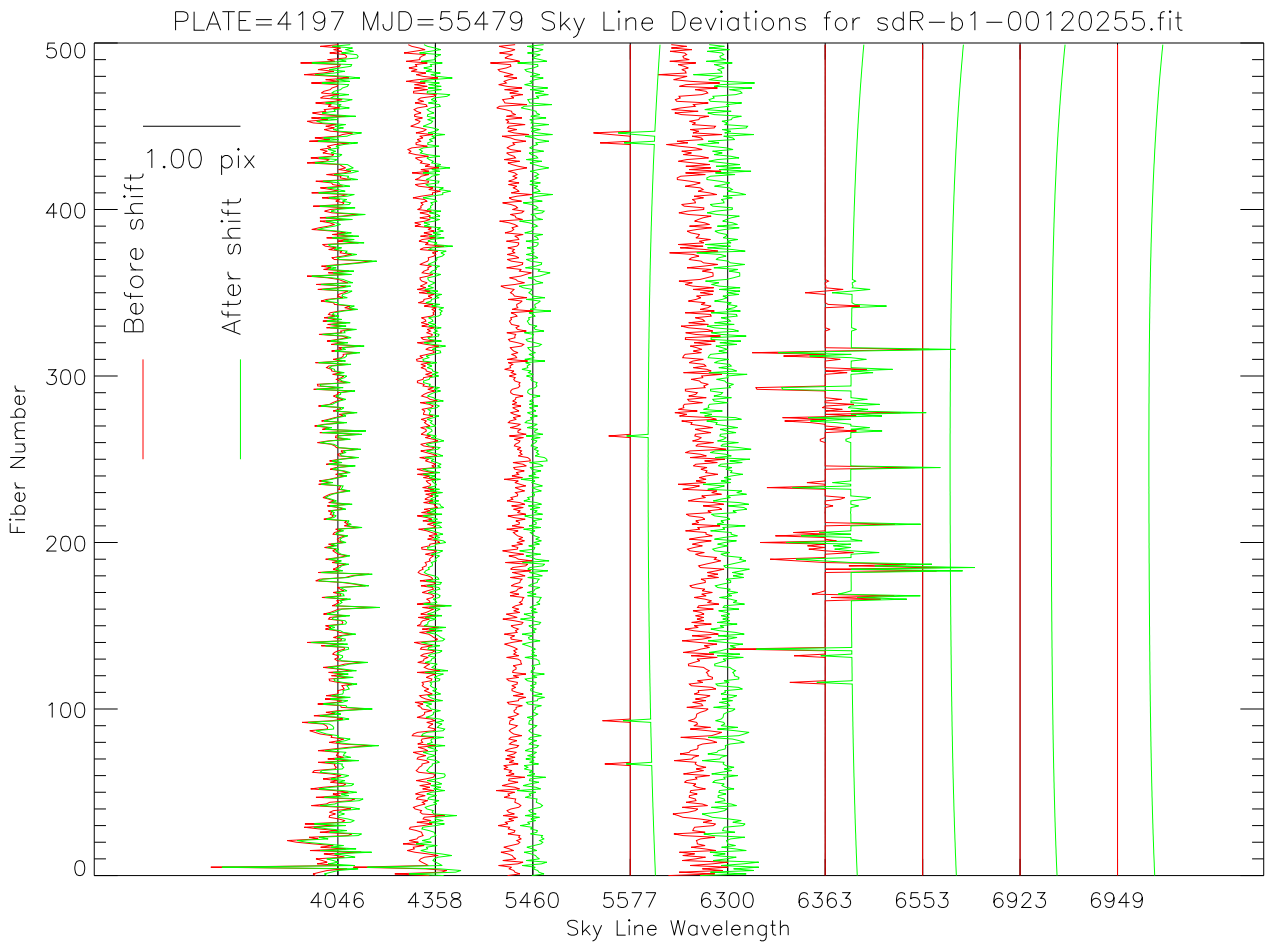


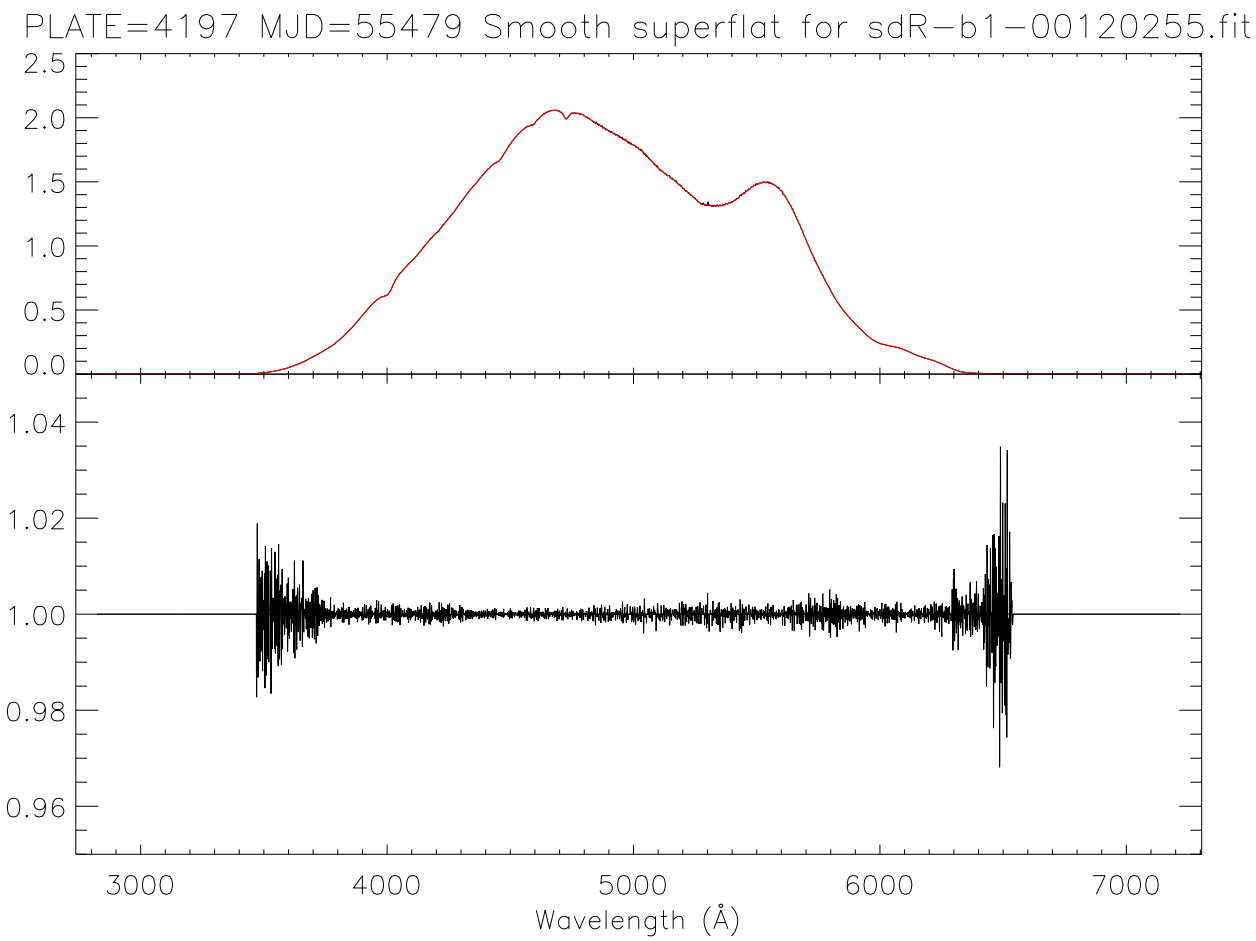

PLATE=4197 MJD=55479 sdR-b1-00120254.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
RED = sky fiber
Dispersion = 12.22 %
Fiber number
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

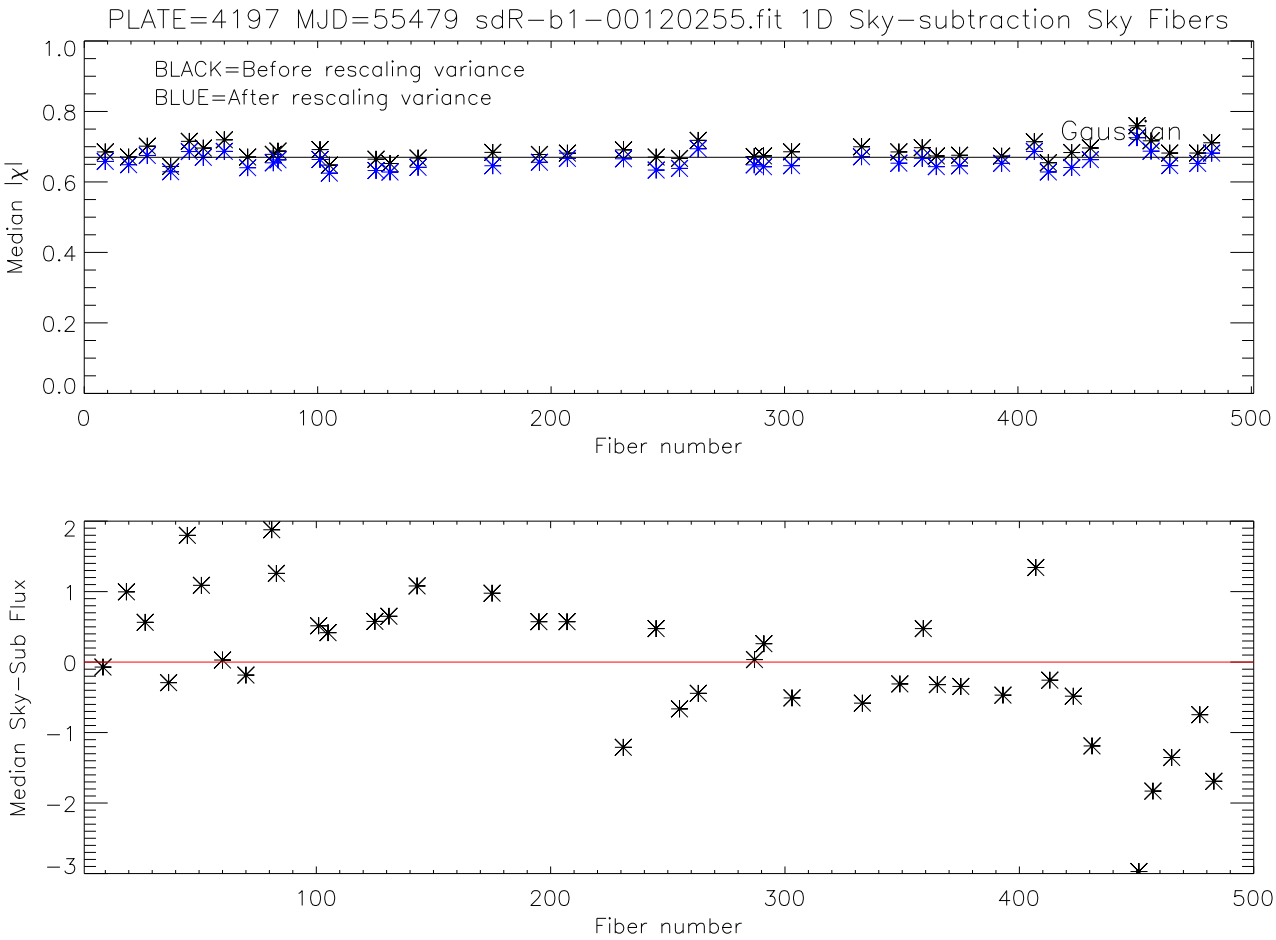

PLATE=4197 MJD=55479 sdR-b1-00120254.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
Fiber number
RED = sky fiber
Dispersion = 31.42 %
Flux (5578.9)/Airmass
Focal Distance [mm]
Flux (5578.9)/Airmass
Airmass

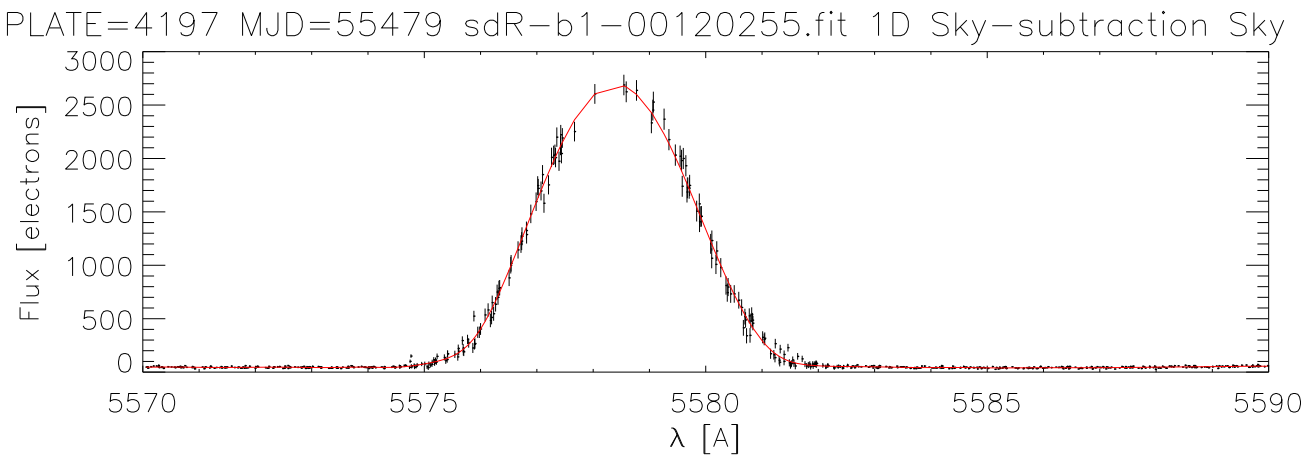

PLATE=4197 MJD=55479 Fiber-Flats for sdR-b1-00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = -11.408
Max value = 12.270
Fiber-Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Thu May 26 23:02:43 2016

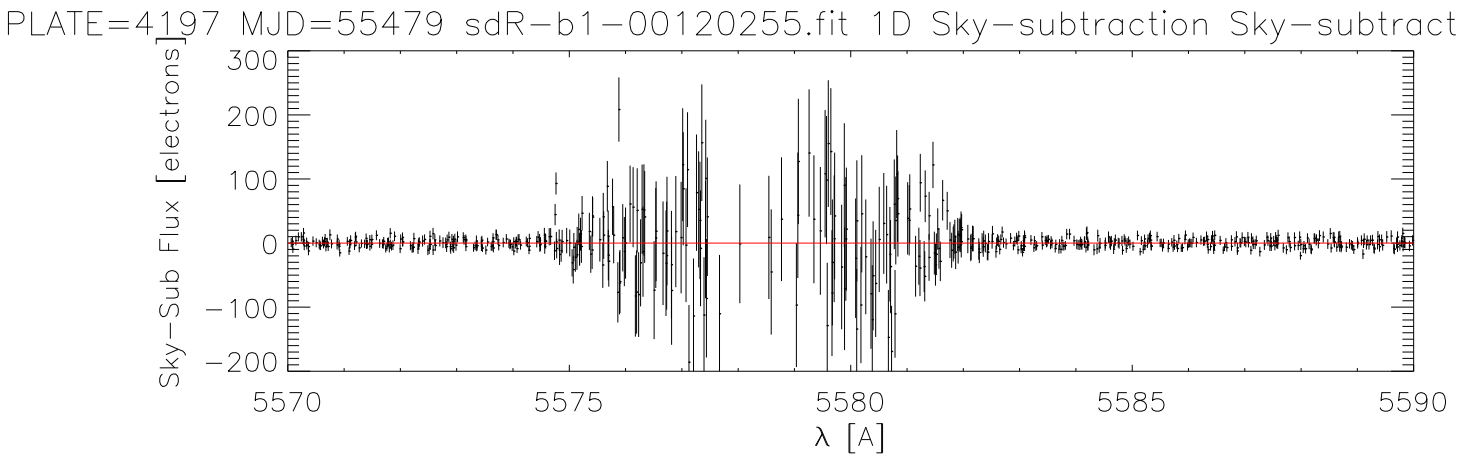

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−b1−00120255.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b1-00120255.fit
1.00 pix
Before shift
After shift
Fiber Number
0
100
200
300
400
500
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

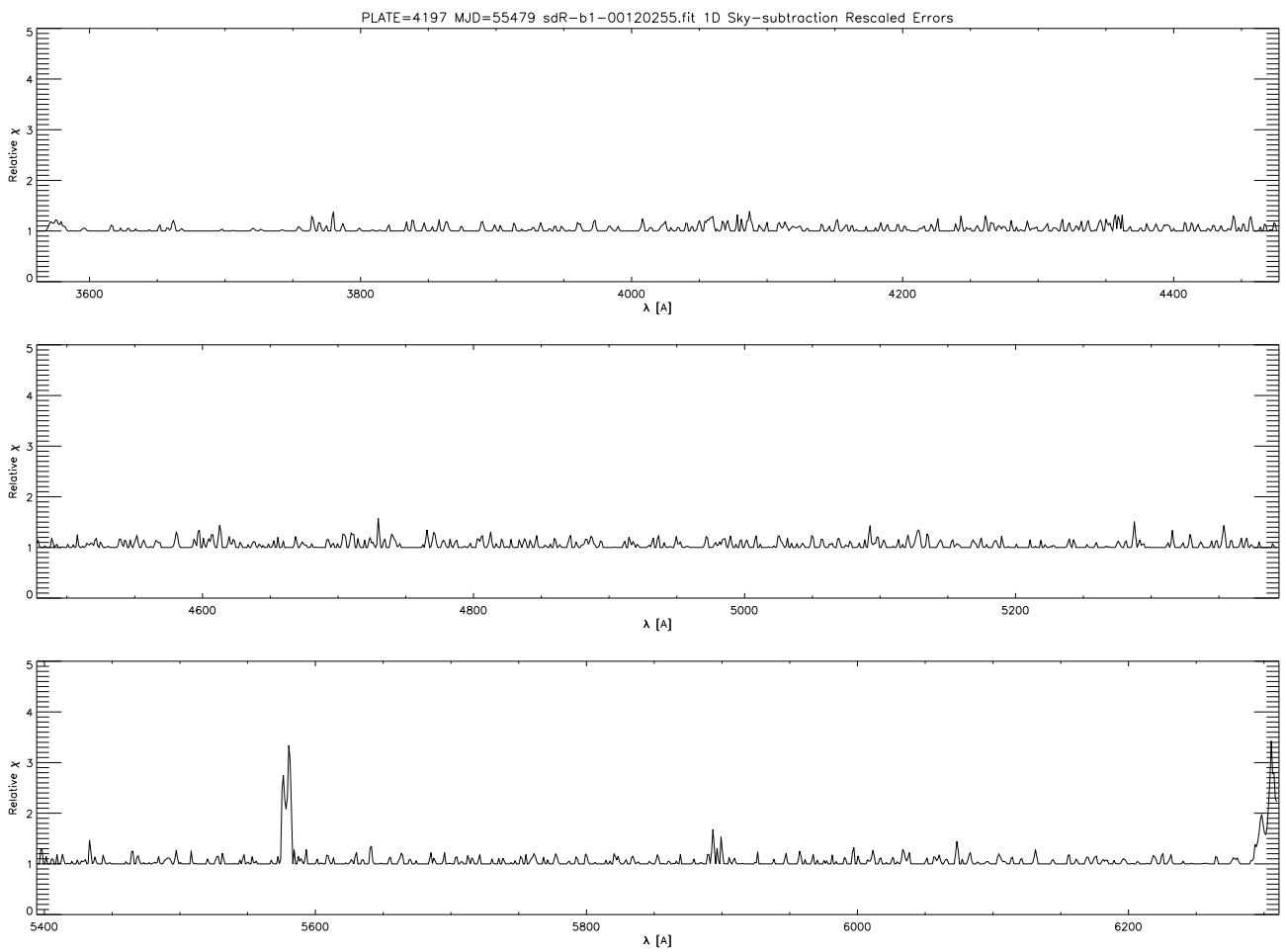

PLATE=4197 MJD=55479 Smooth superflat for sdR-b1-00120255.fit
2.5
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

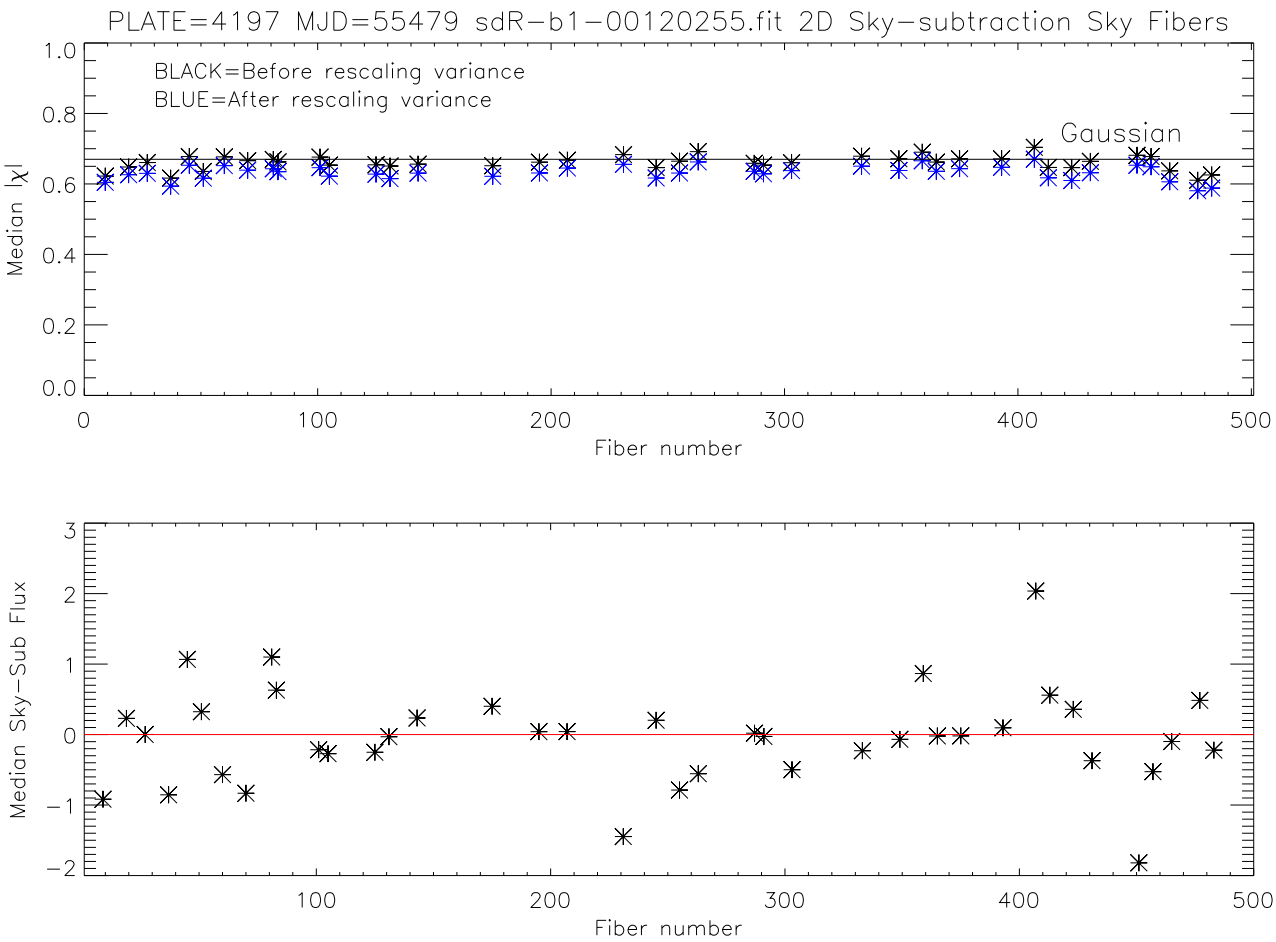

PLATE=4197 MJD=55479 sdR-b1-00120255.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

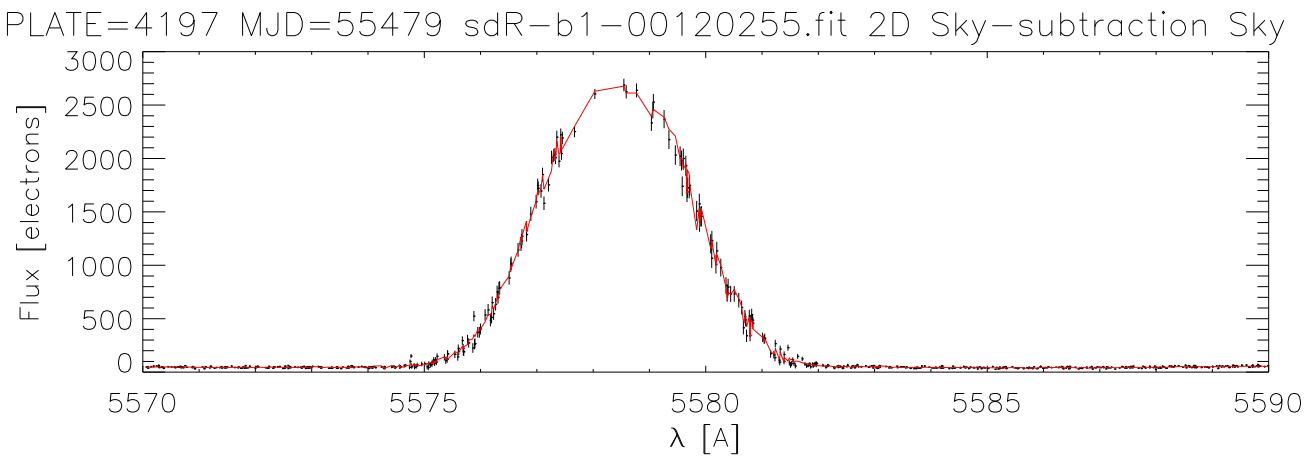

PLATE=4197 MJD=55479 sdR-b1-00120255.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

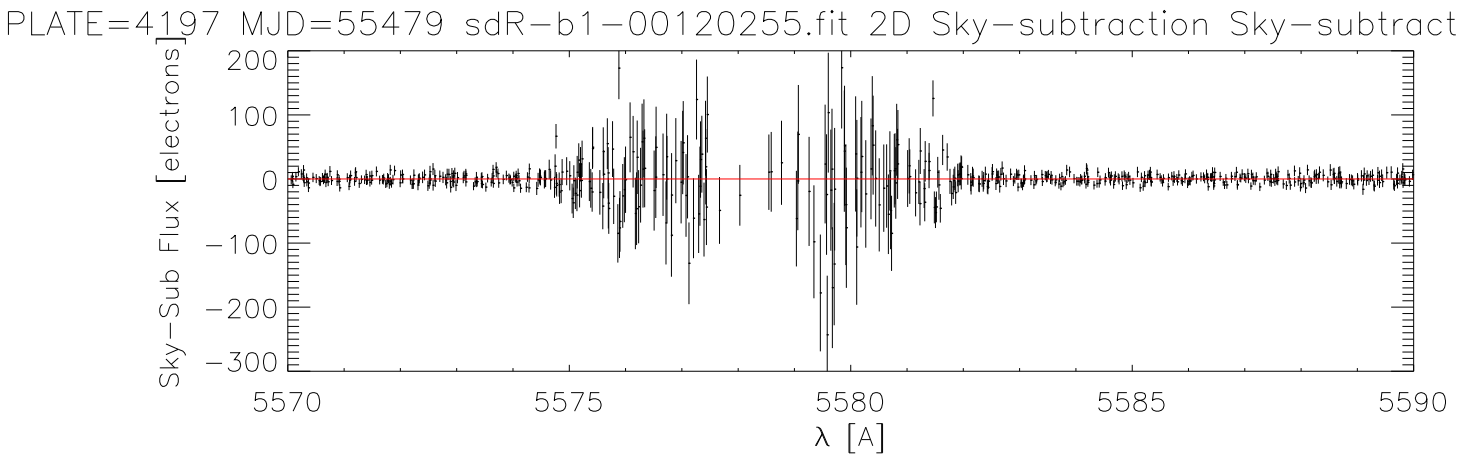

PLATE=4197 MJD=55479 sdR-b1-00120255.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
-100
-200
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 40

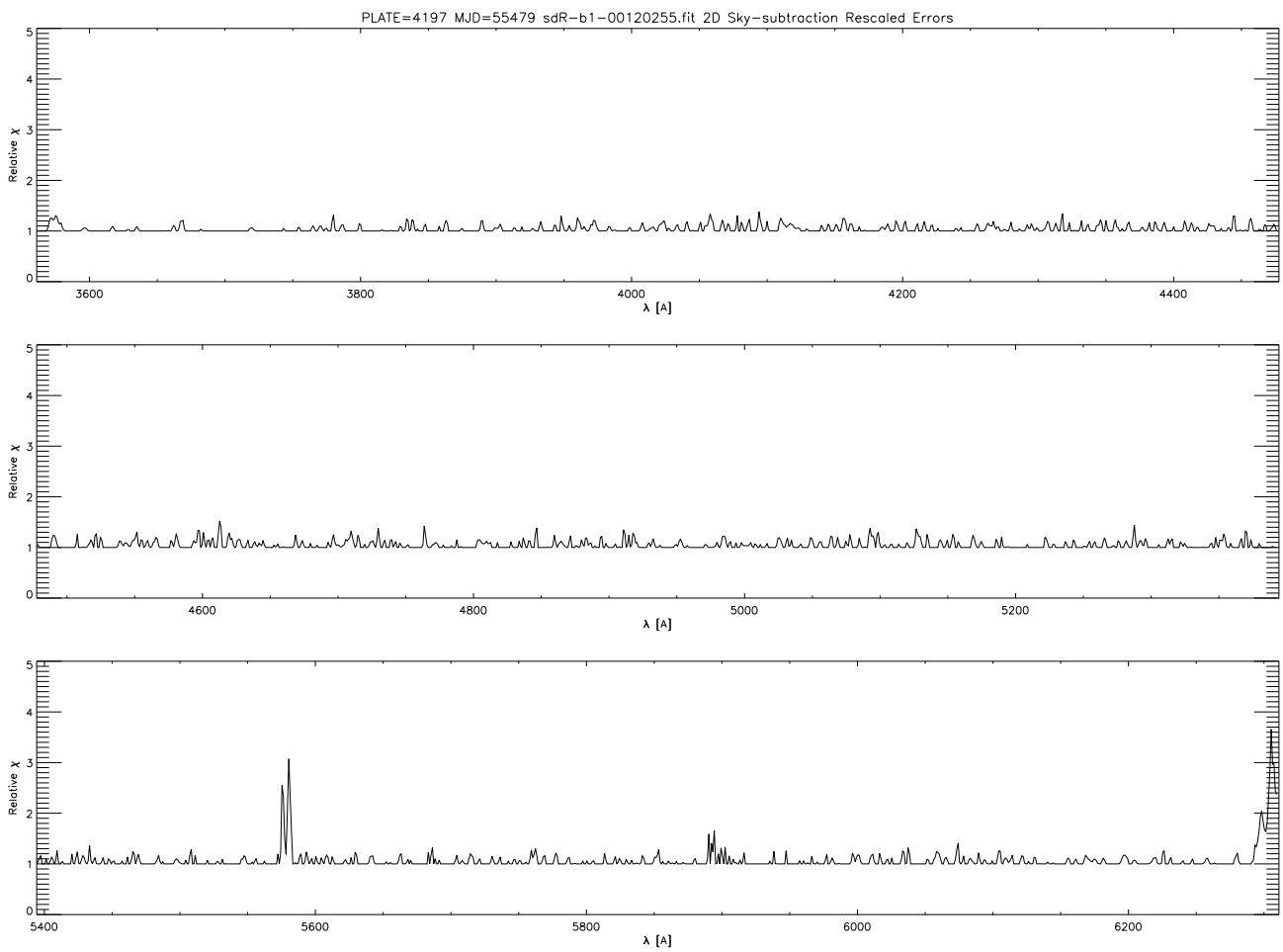


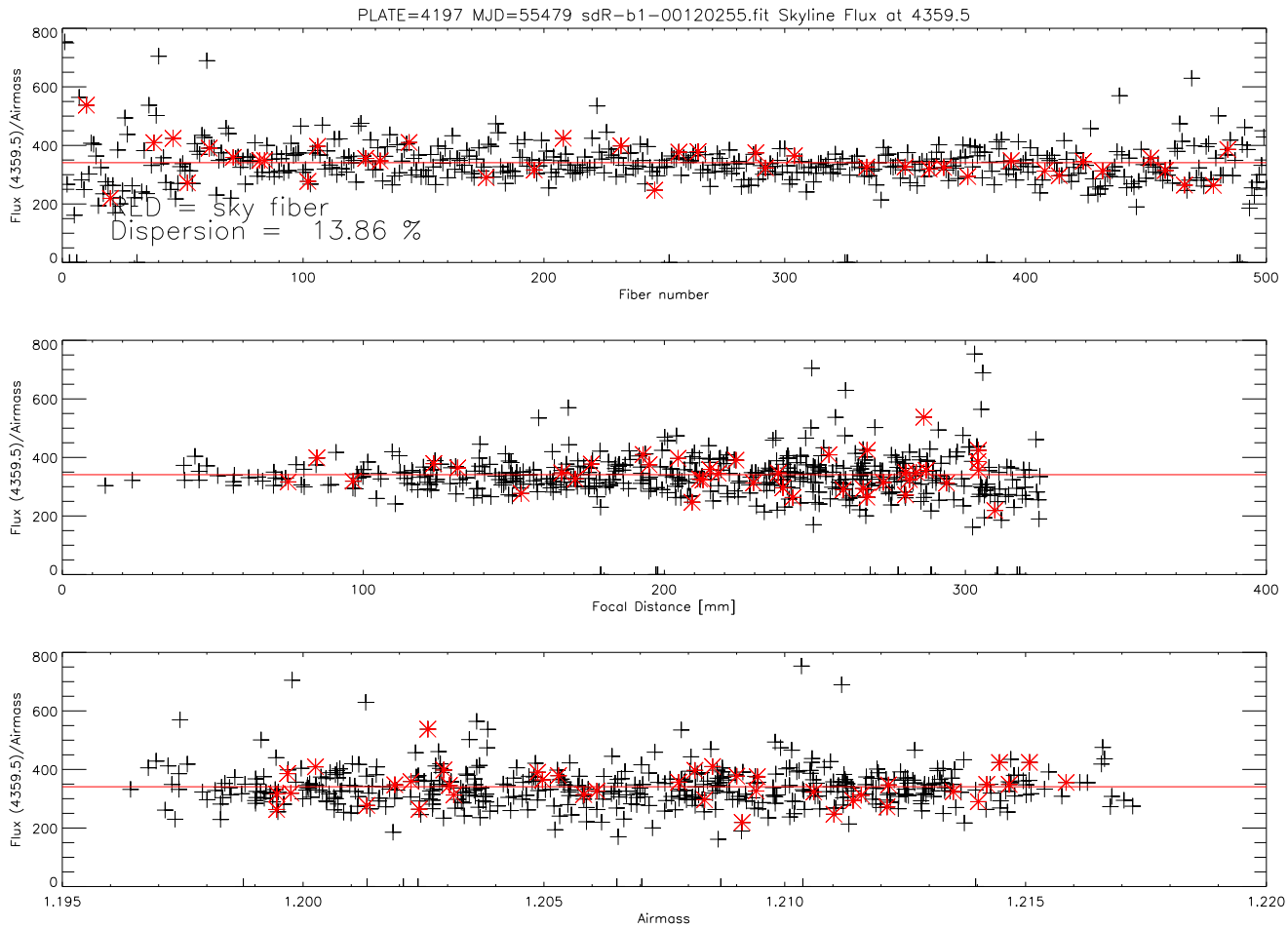

PLATE=4197 MJD=55479 sdR-b1-00120255.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

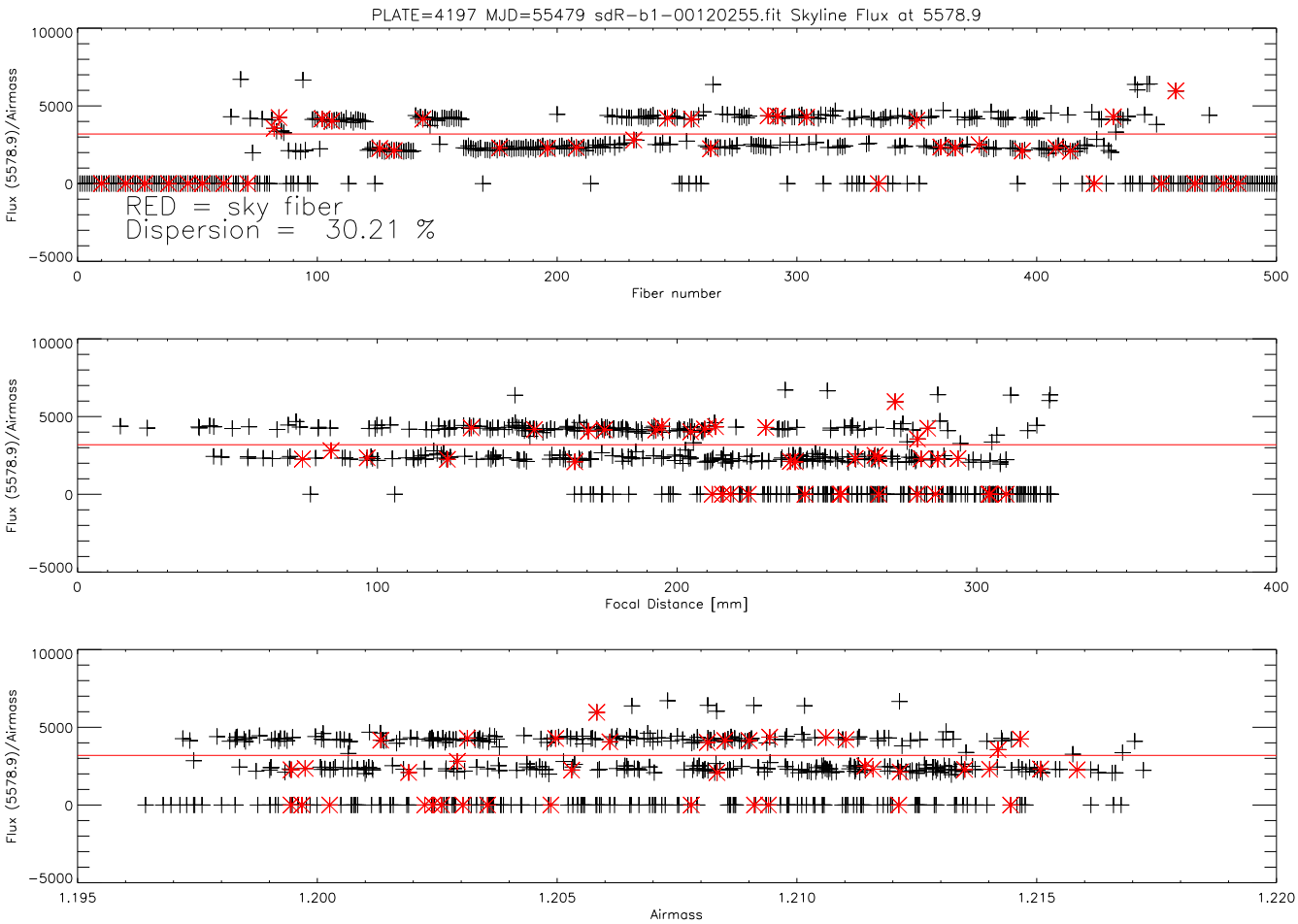

PLATE=4197 MJD=55479 sdR-b1-00120255.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

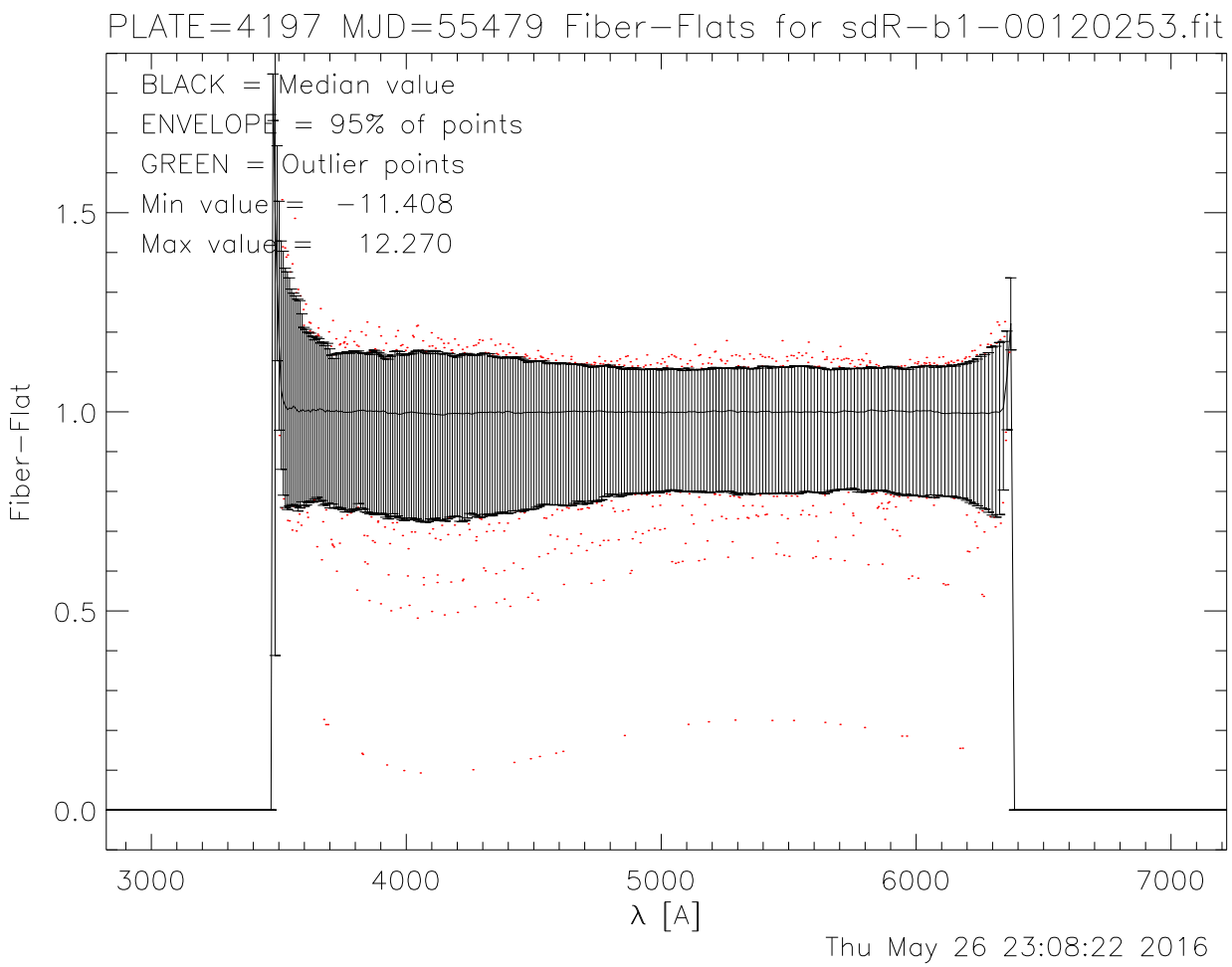

PLATE=4197 MJD=55479 sdR-b1-00120255.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
200
100
0
−100
−200
−300
5570
5575
5580
5585
5590
λ [A]

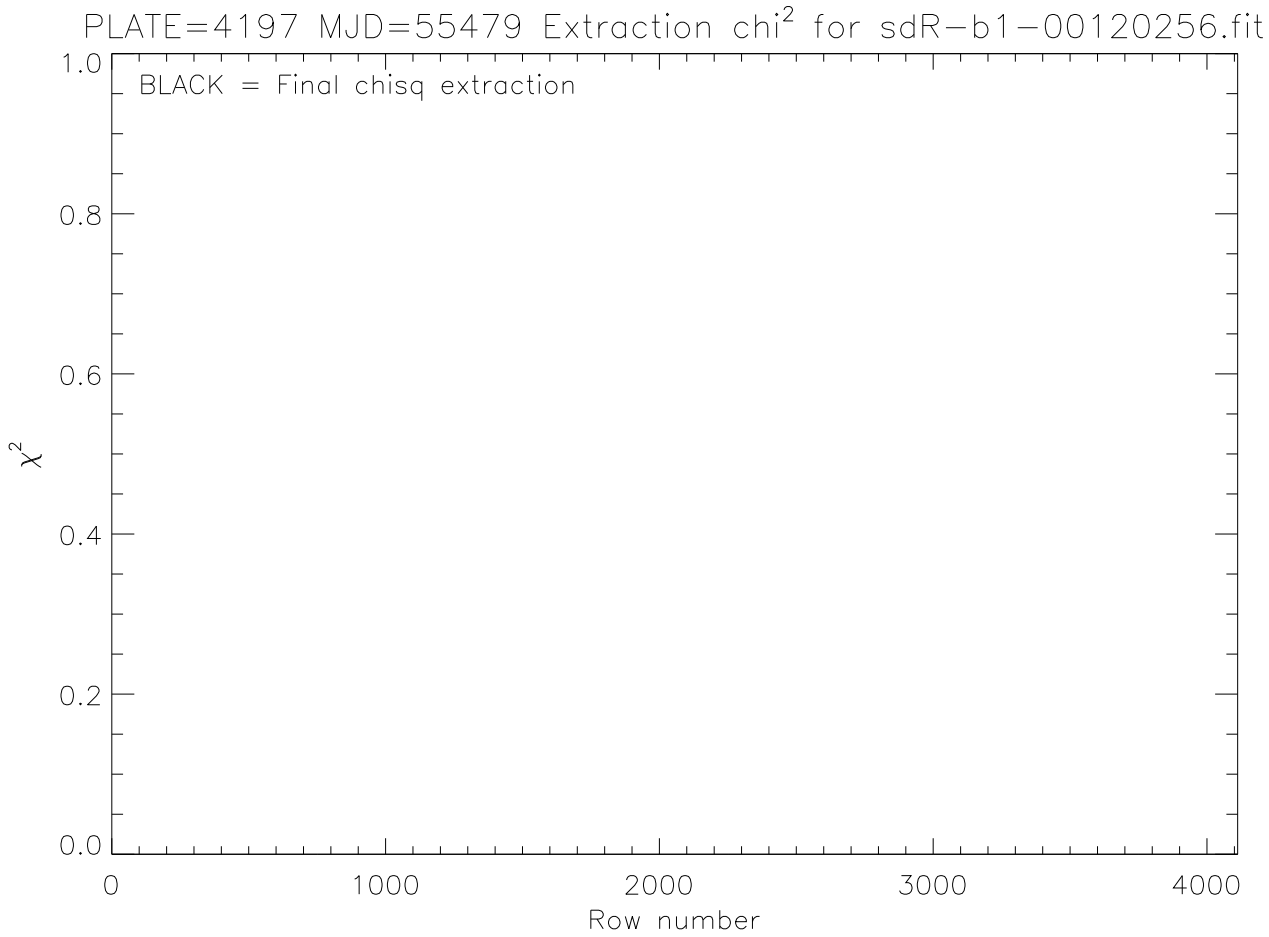
Number of sky fibers = 40

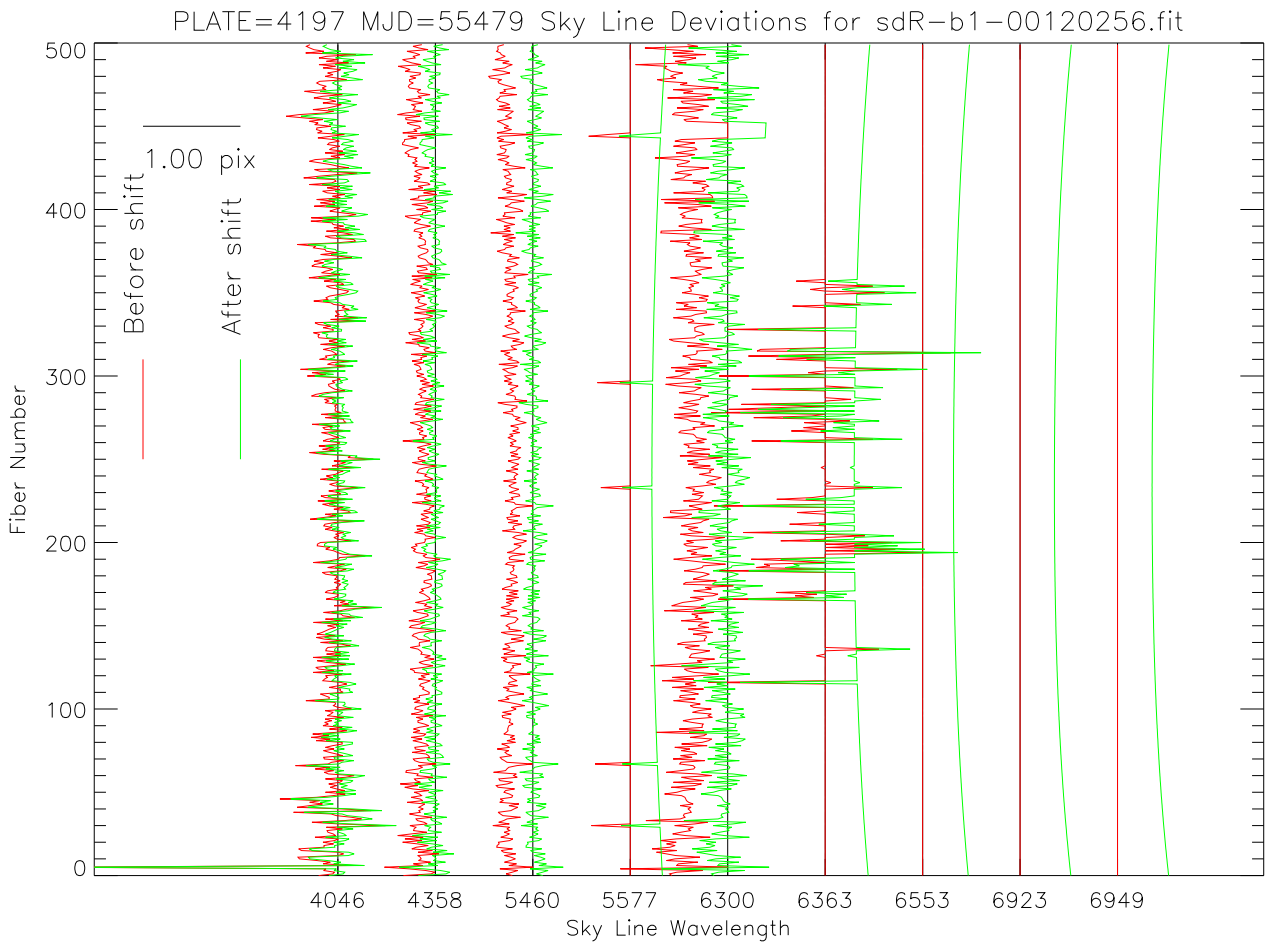


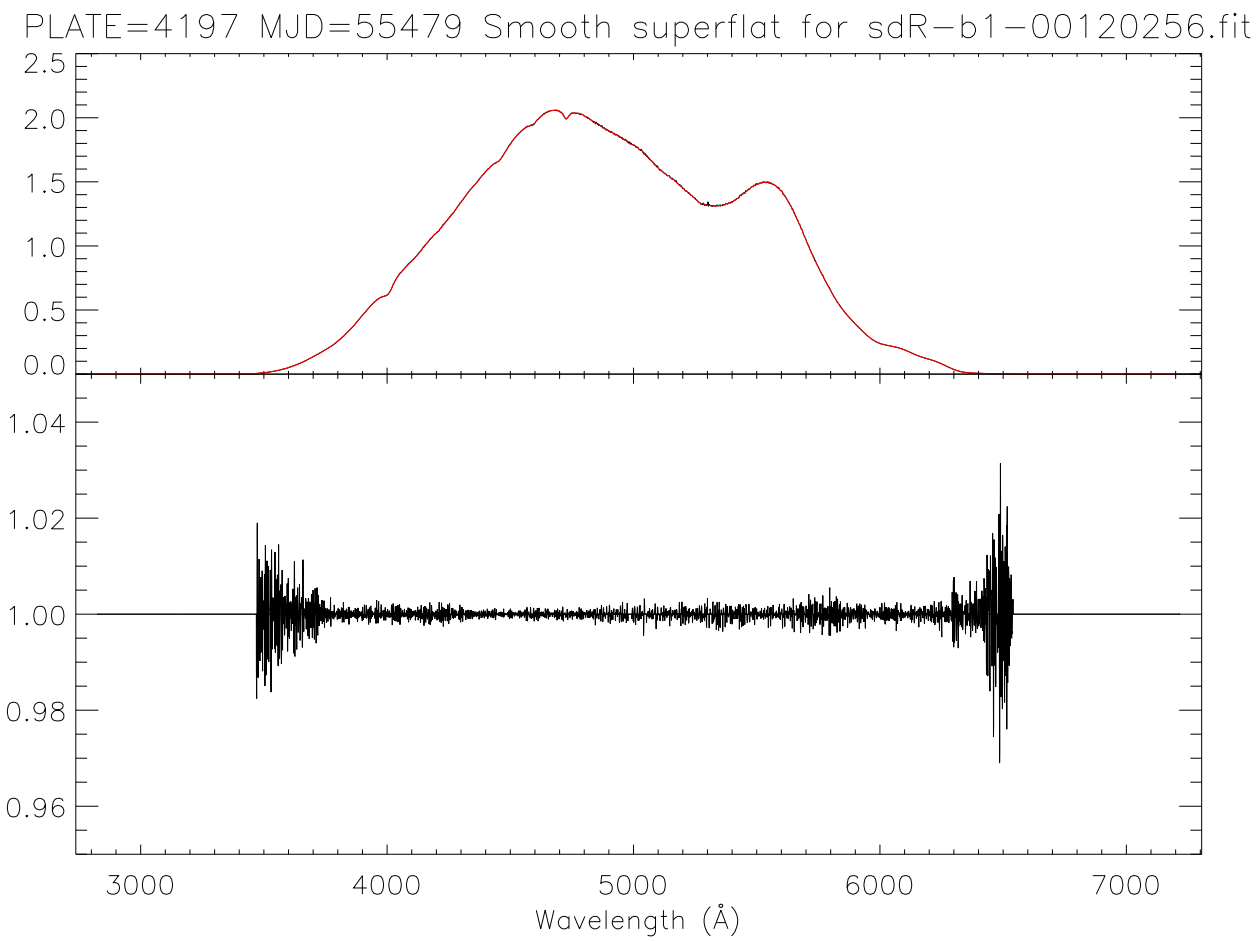

PLATE=4197 MJD=55479 sdR-b1-00120255.fit Skyline Flux at 4359.5
RED = sky fiber
Dispersion = 13.86 %
Flux (4359.5)/Airmass
Fiber number
Focal Distance [mm]
Airmass

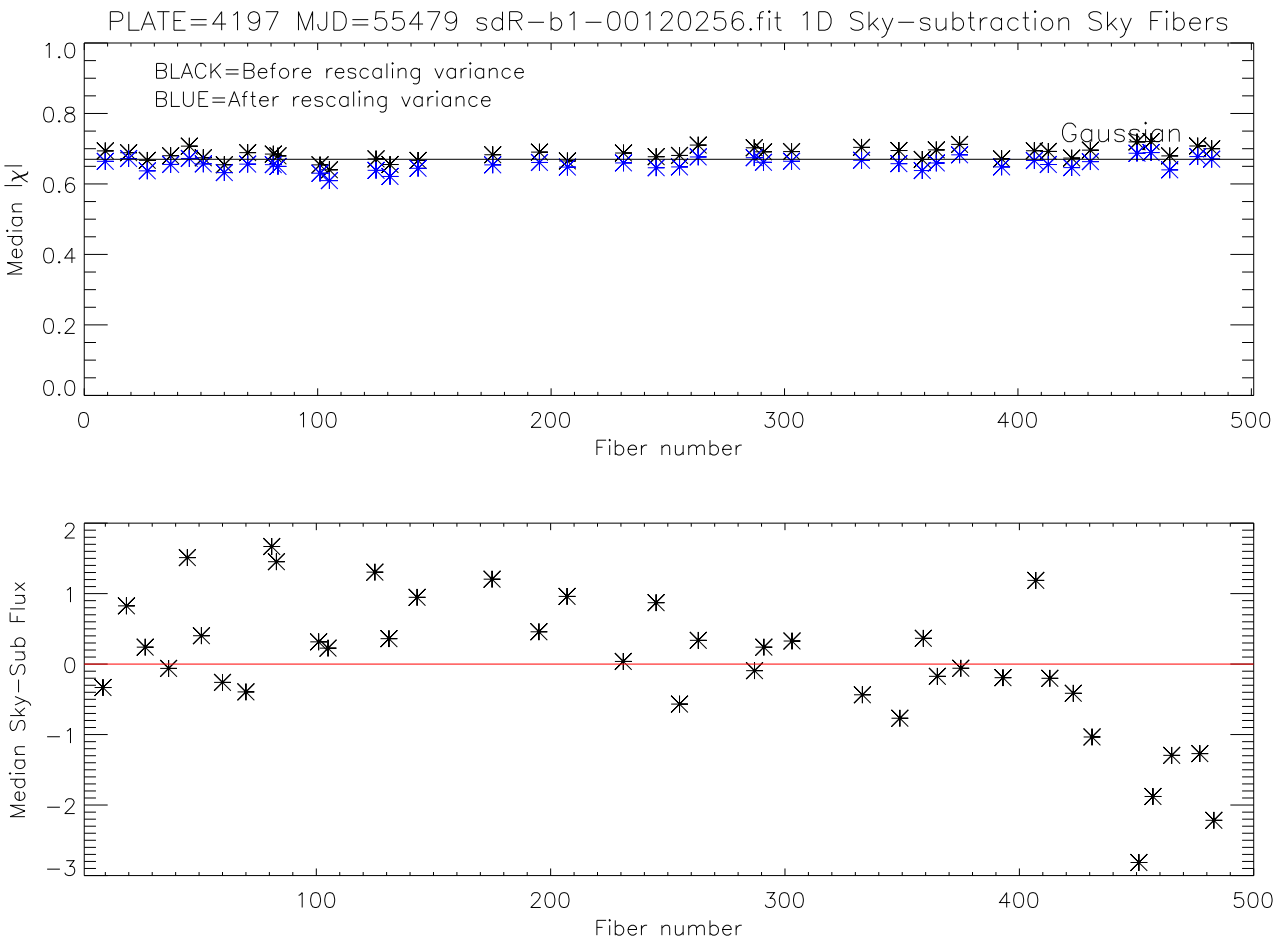

PLATE=4197 MJD=55479 sdR-b1-00120255.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 30.21 %
Fiber number
Focal Distance [mm]
Airmass

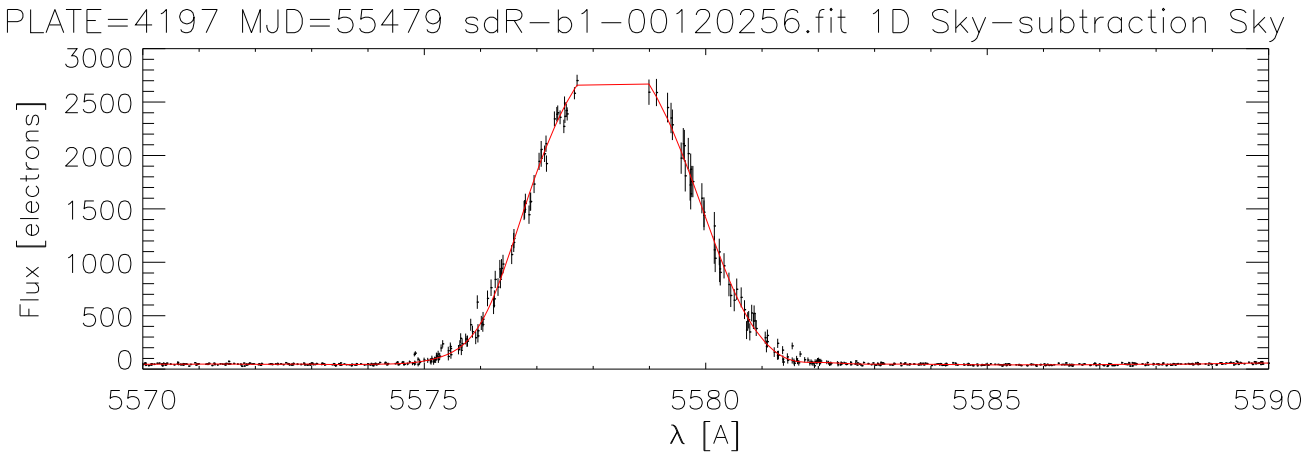

PLATE=4197 MJD=55479 Fiber-Flats for sdR-b1-00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = -11.408
Max value = 12.270
Fiber-Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Thu May 26 23:08:22 2016

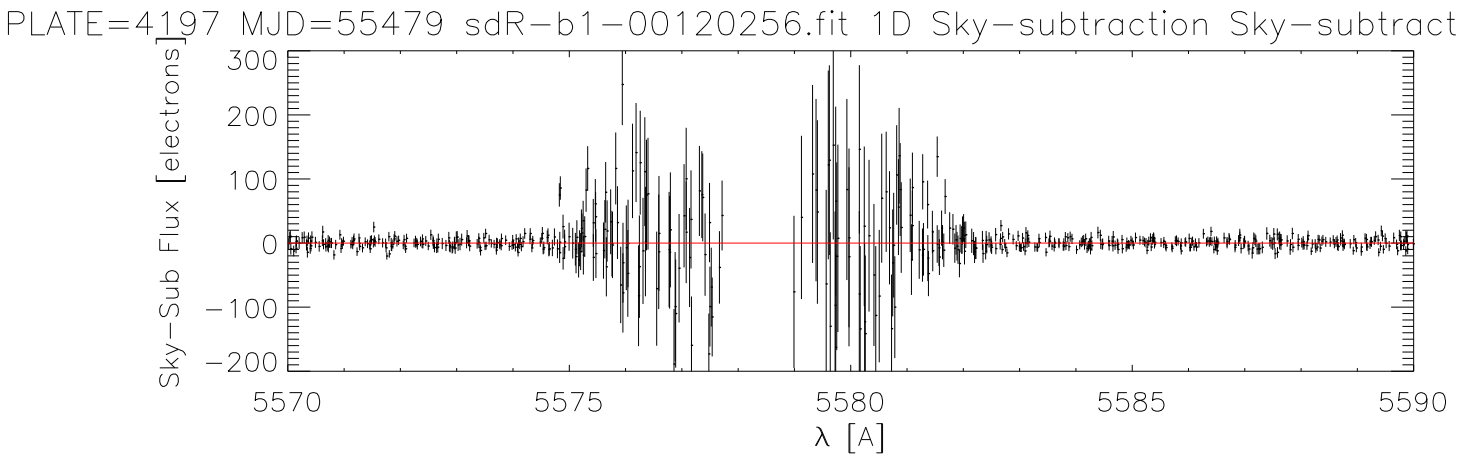

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−b1−00120256.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b1-00120256.fit
1.00 pix
Before shift
After shift
Fiber Number
0
100
200
300
400
500
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

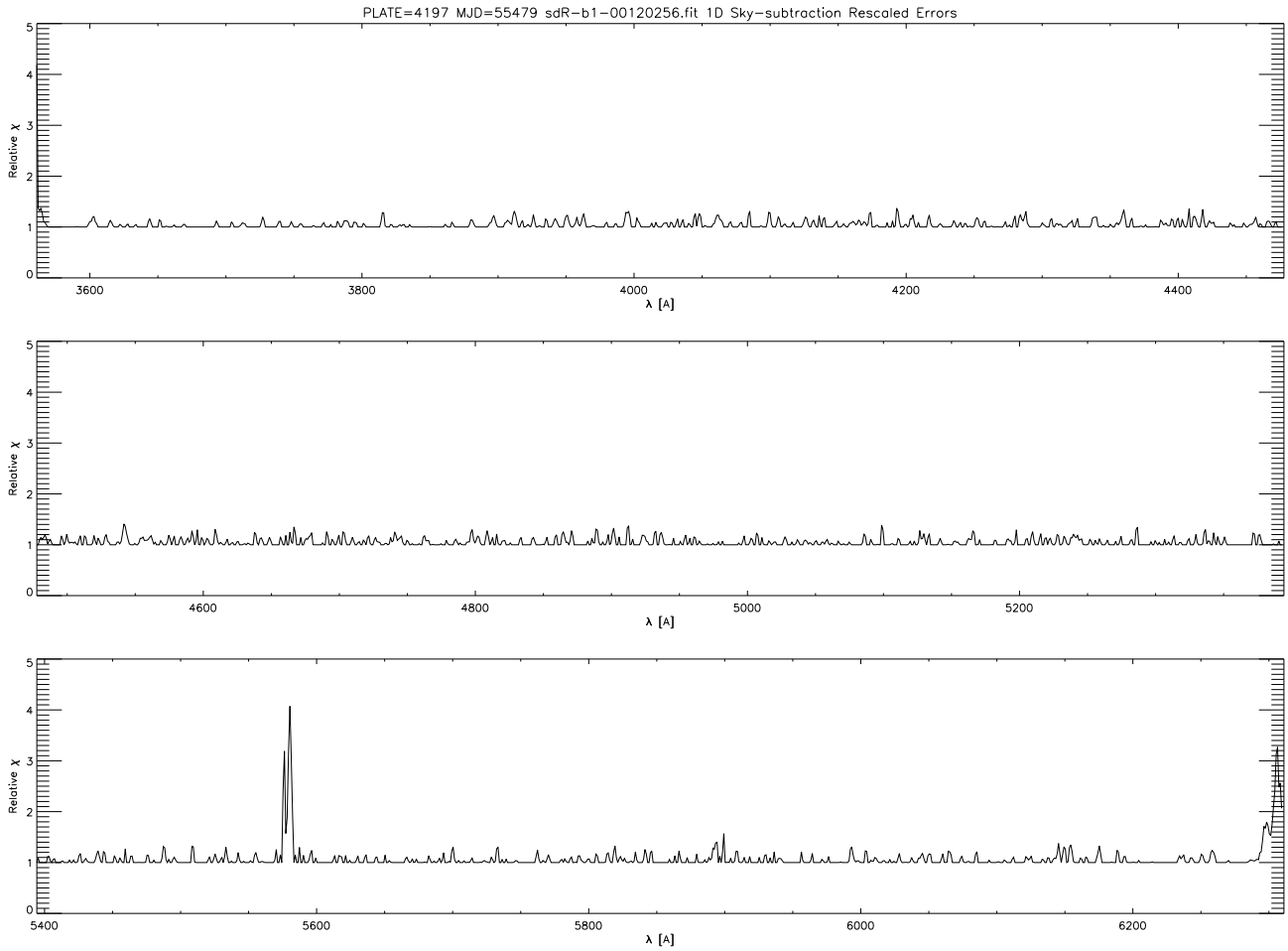

PLATE=4197 MJD=55479 Smooth superflat for sdR-b1-00120256.fit
2.5
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

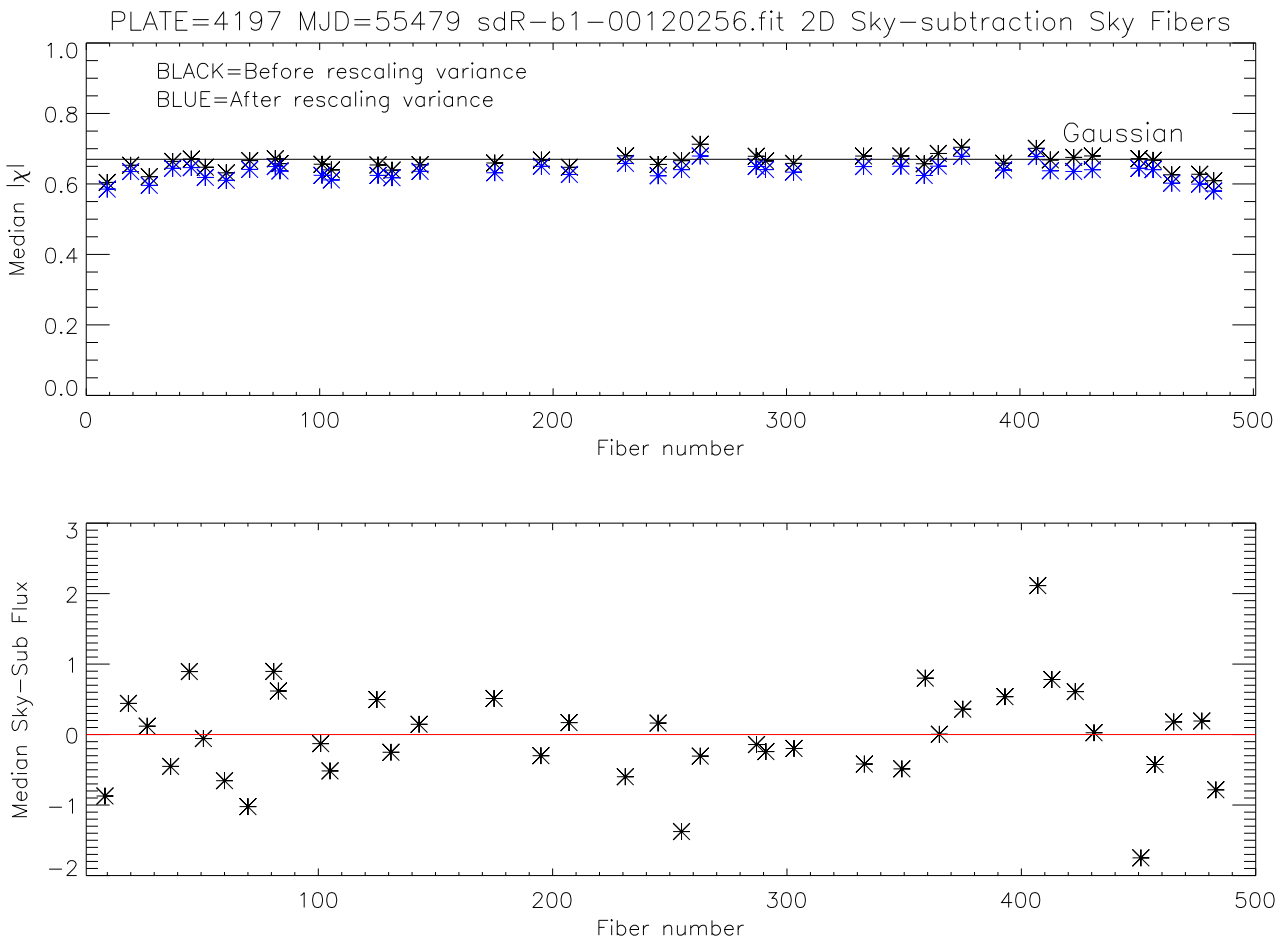

PLATE=4197 MJD=55479 sdR-b1-00120256.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

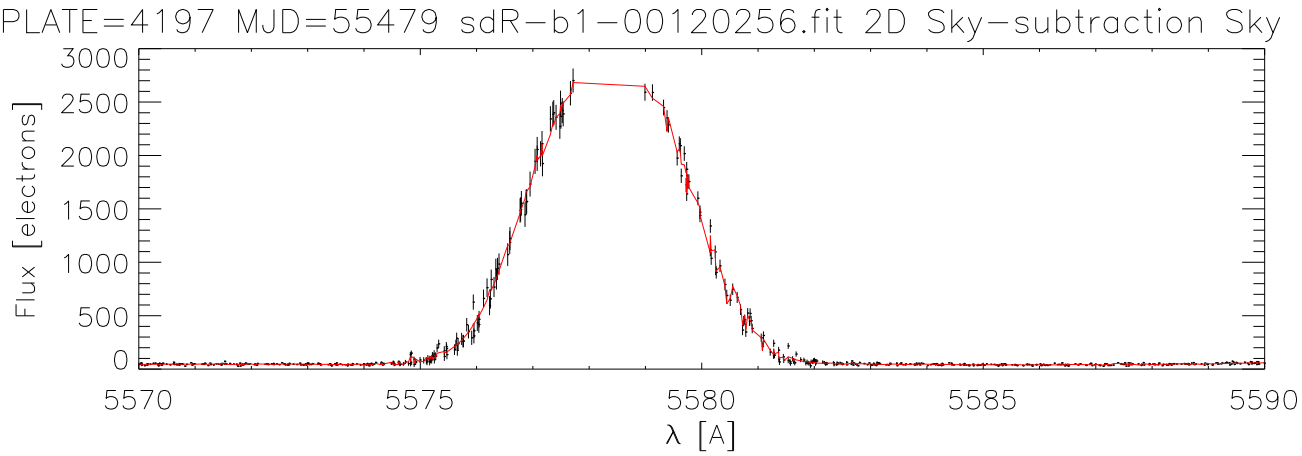

PLATE=4197 MJD=55479 sdR-b1-00120256.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

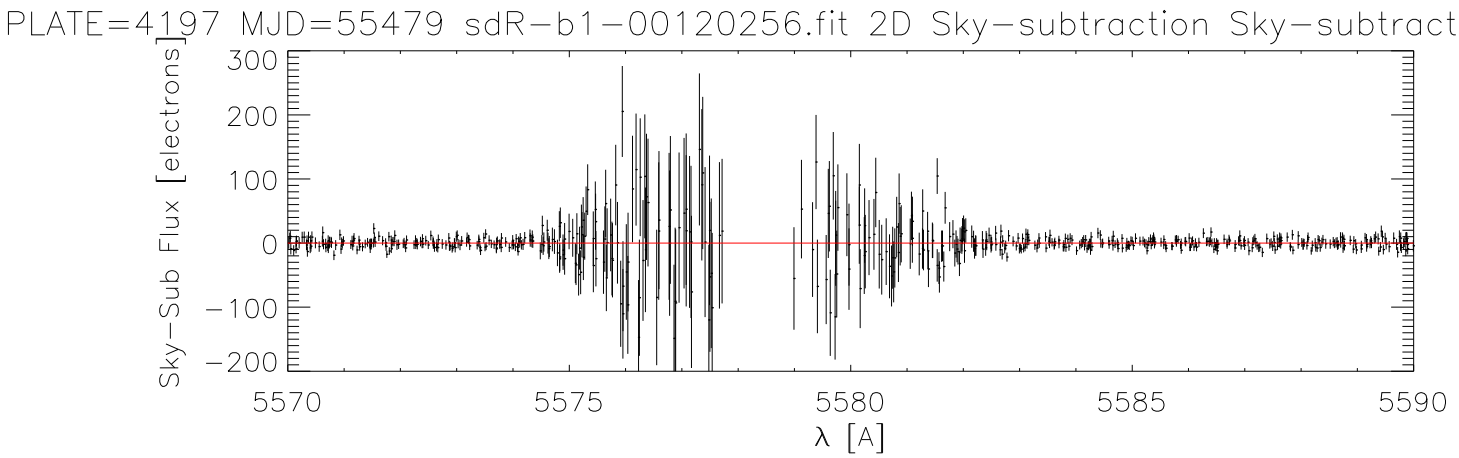

PLATE=4197 MJD=55479 sdR-b1-00120256.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
-100
-200
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 40

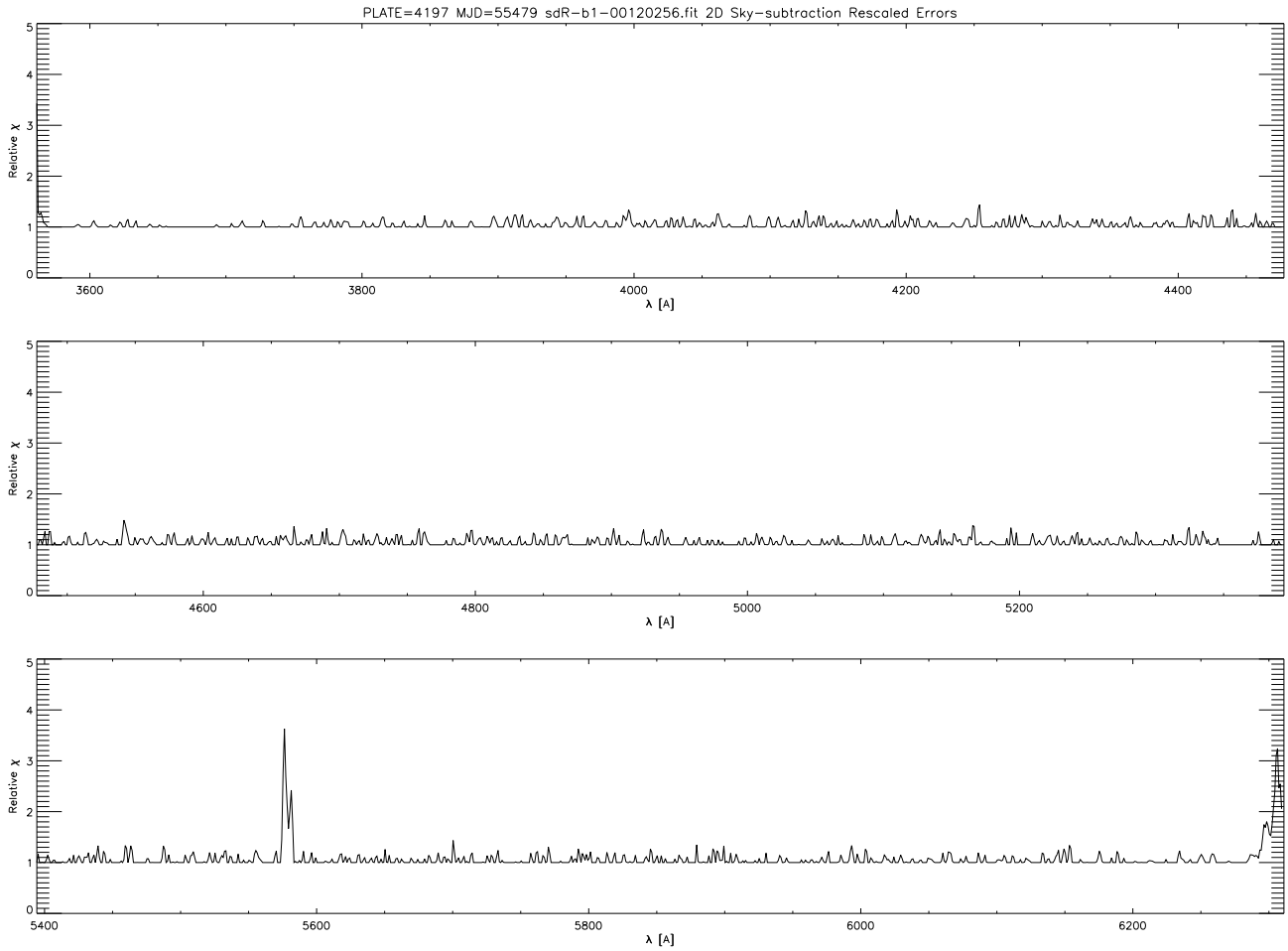


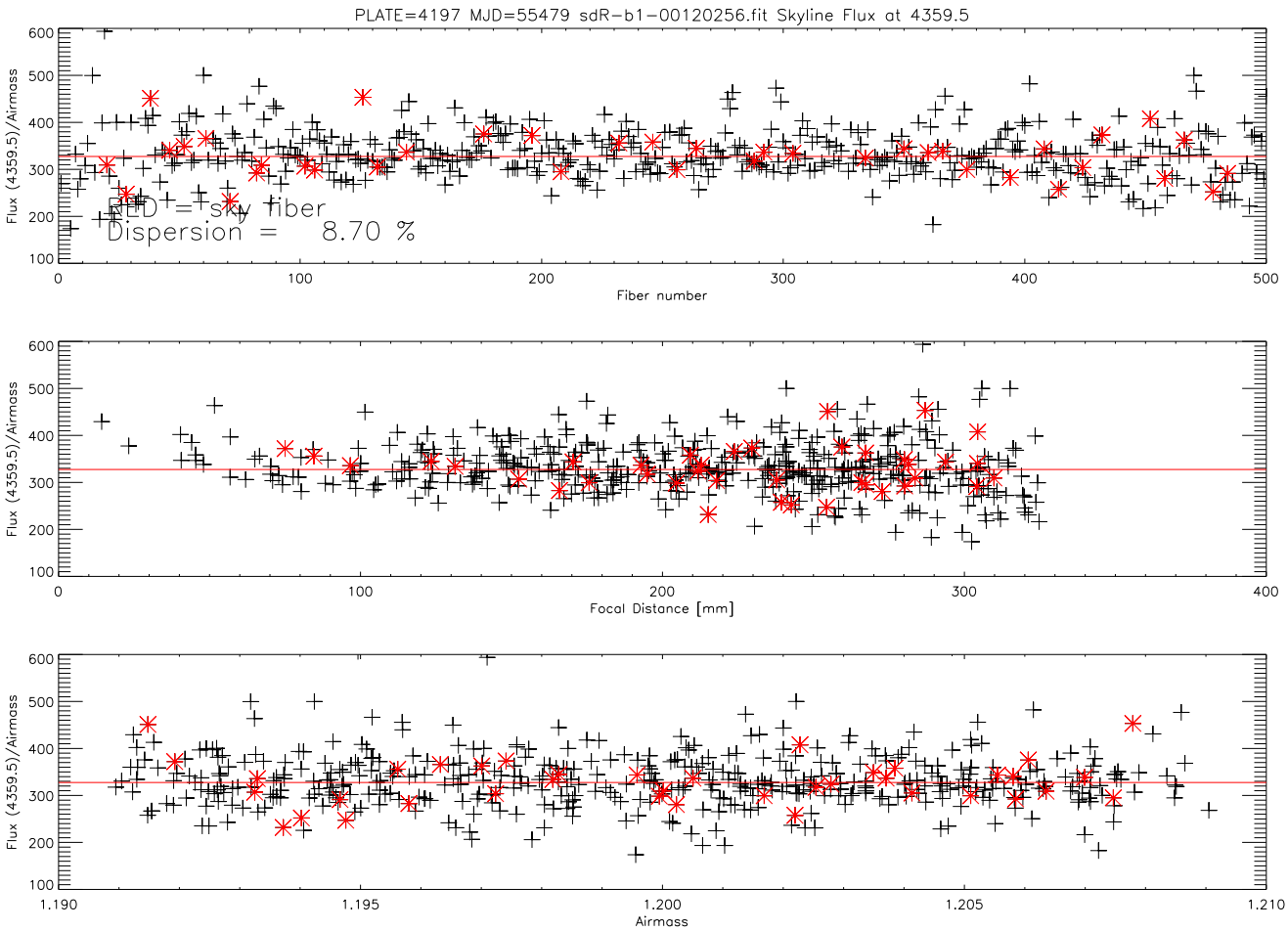

PLATE=4197 MJD=55479 sdR-b1-00120256.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

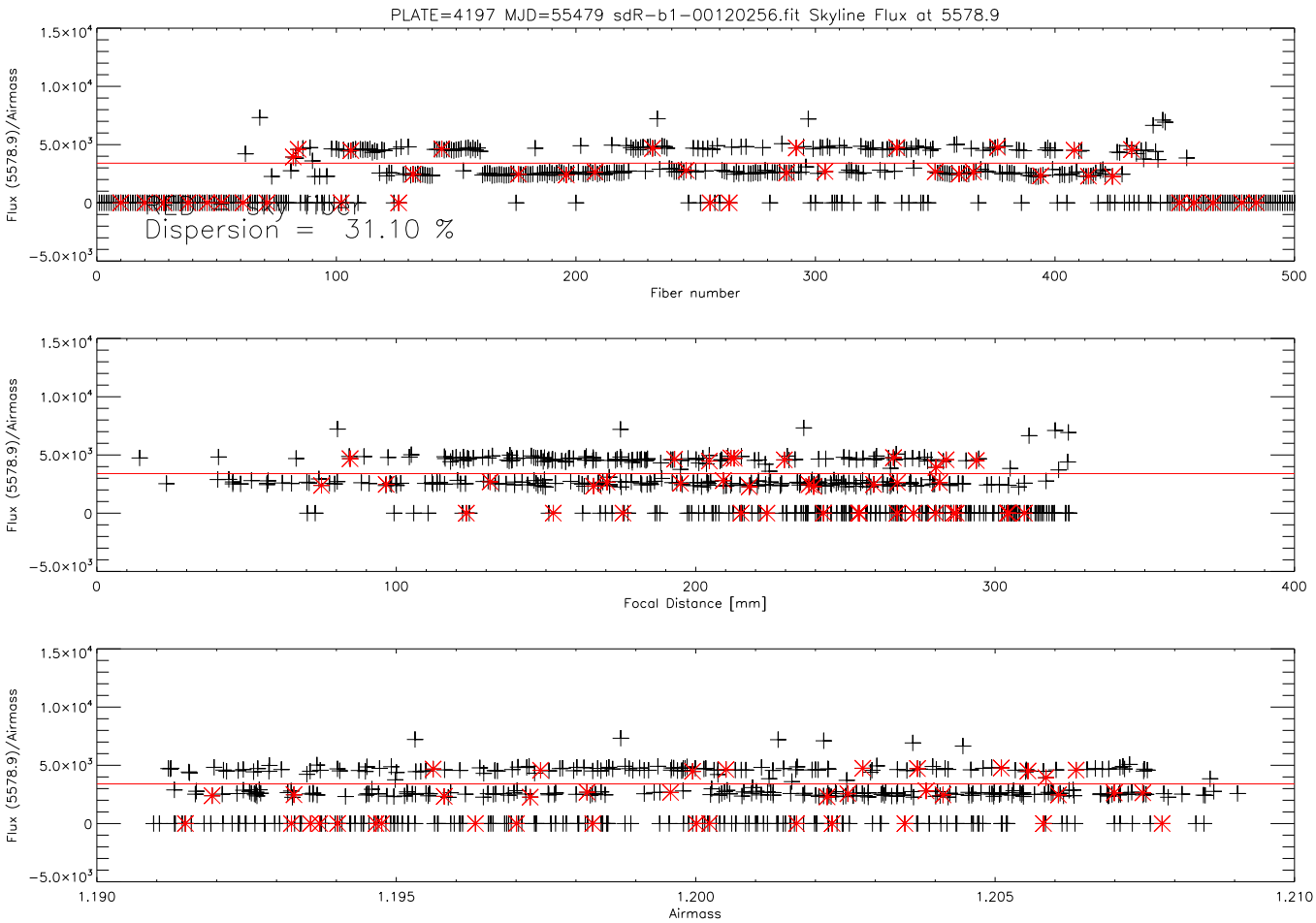

PLATE=4197 MJD=55479 sdR-b1-00120256.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

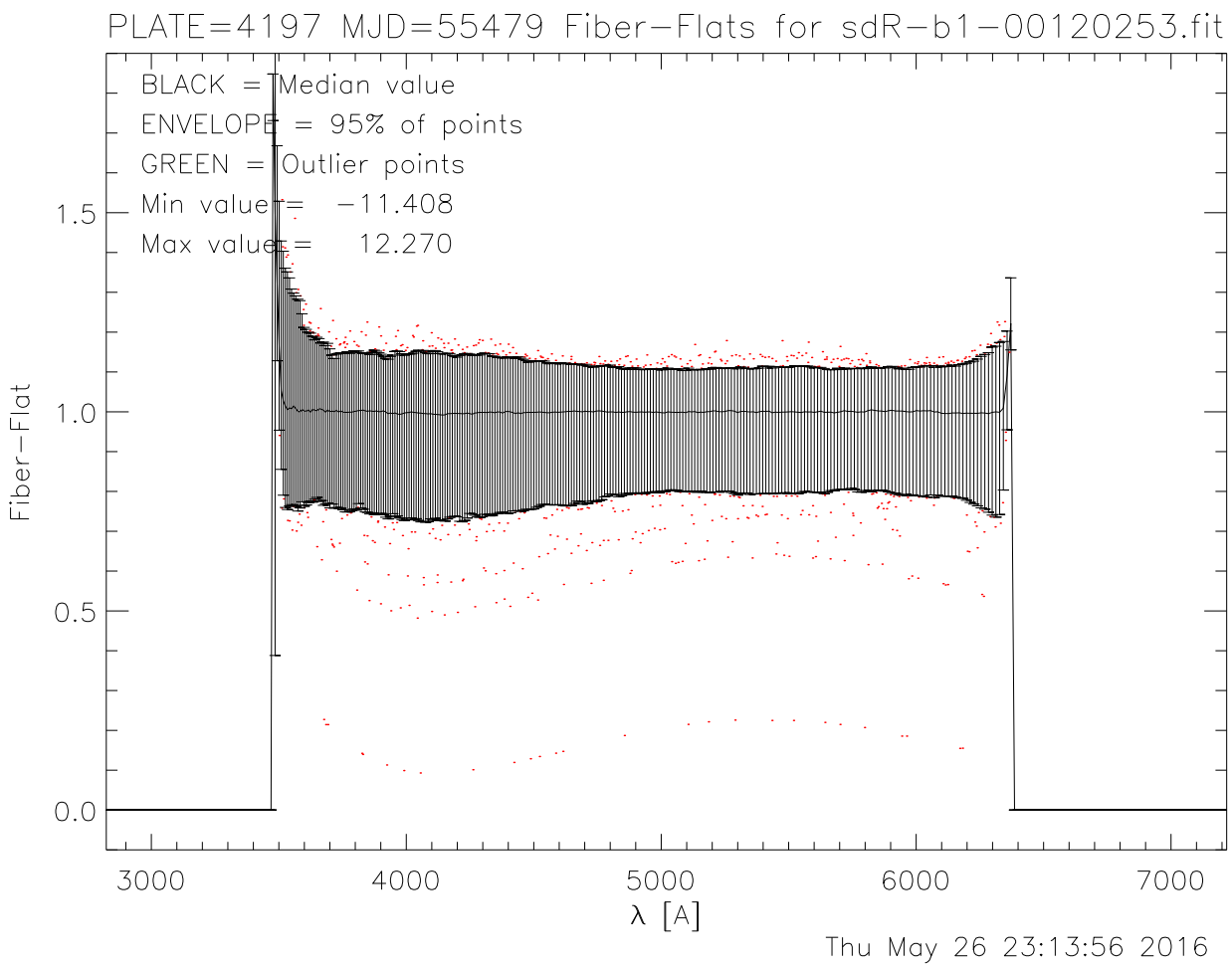

PLATE=4197 MJD=55479 sdR-b1-00120256.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
−100
−200
5570
5575
5580
5585
5590
λ [A]

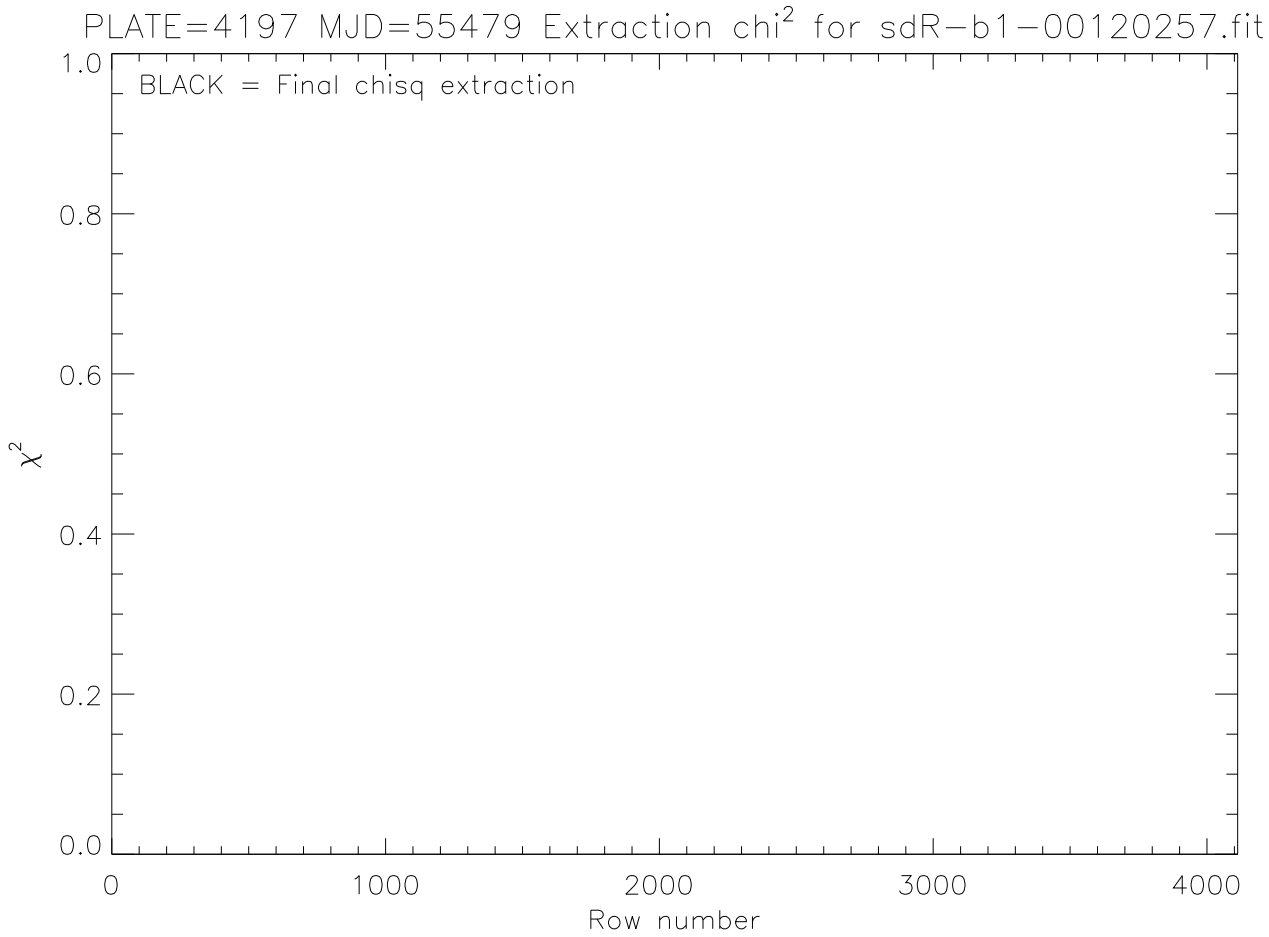
Number of sky fibers = 40

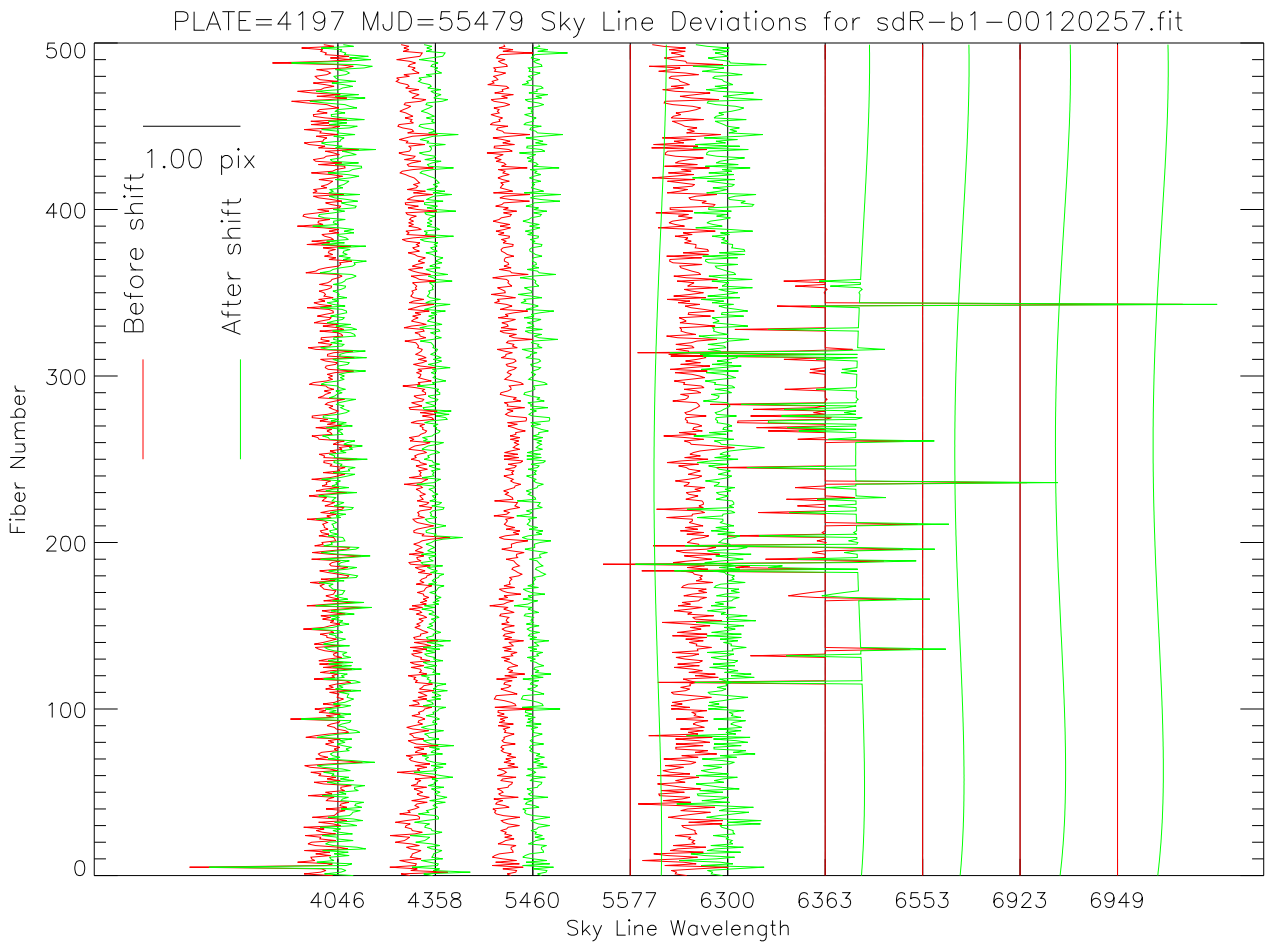


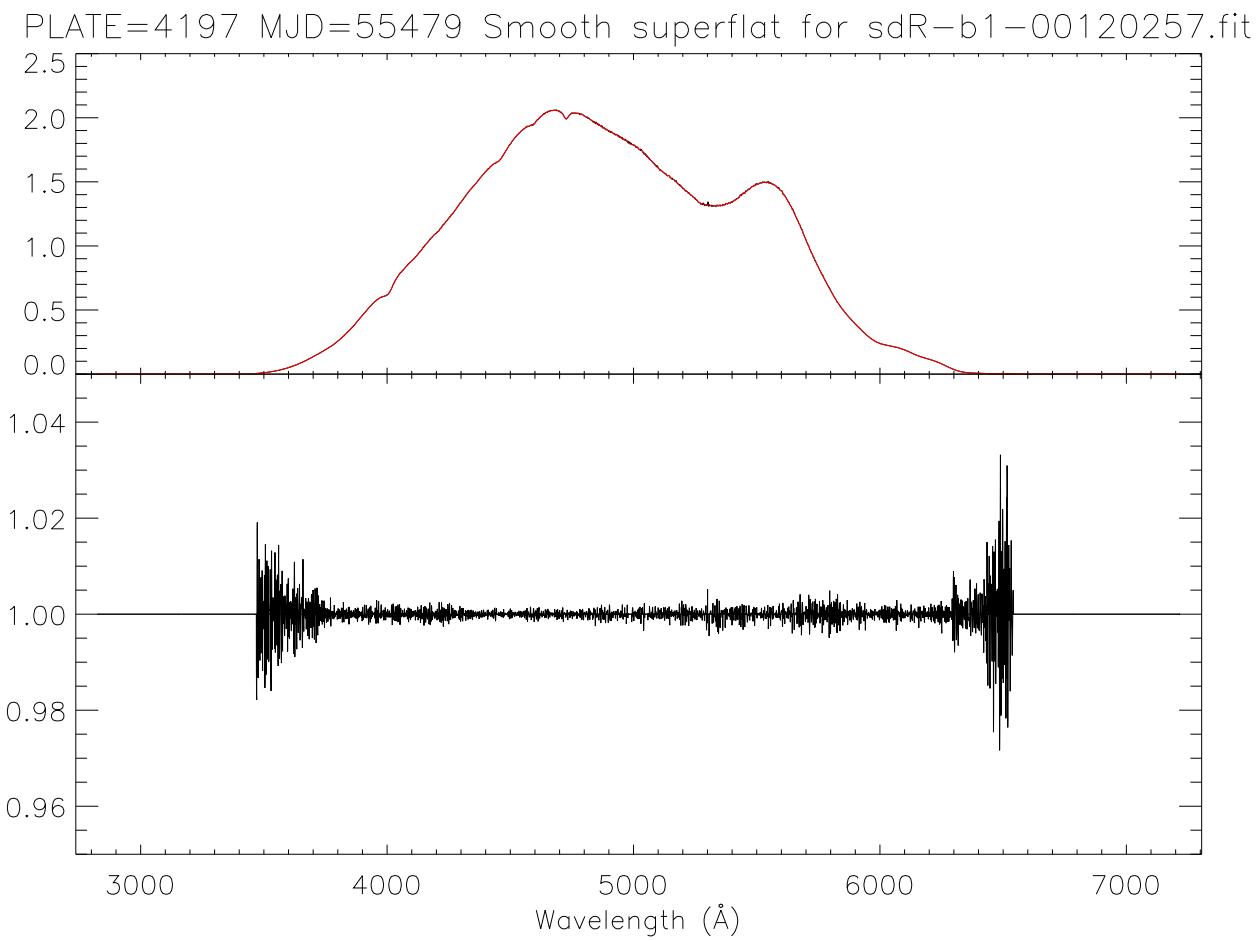

PLATE=4197 MJD=55479 sdR-b1-00120256.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
Fiber number
Red = sky fiber
Dispersion = 8.70 %
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

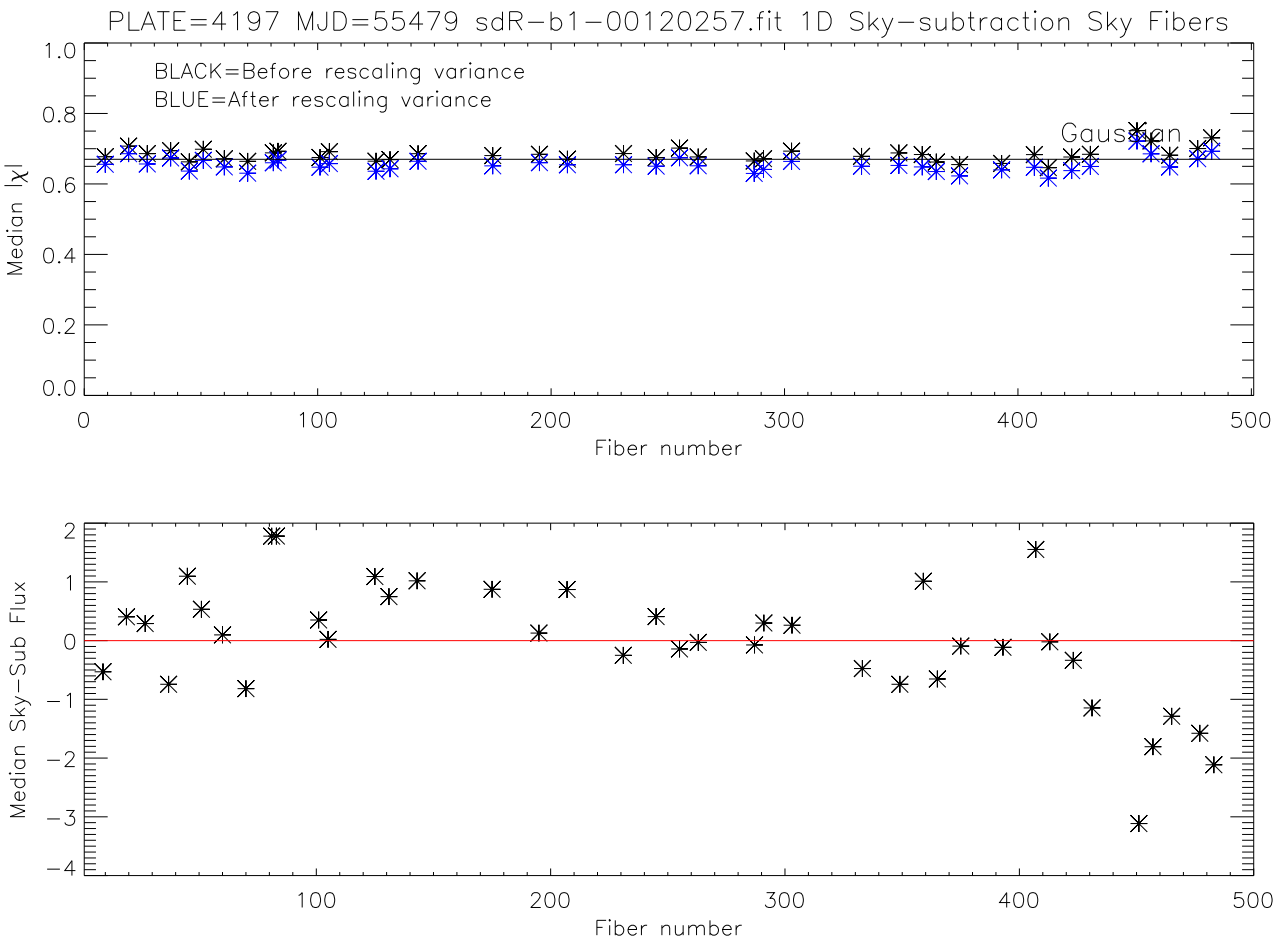

PLATE=4197 MJD=55479 sdR-b1-00120256.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
Fiber number
Red Sky fiber
Dispersion = 31.10 %
Focal Distance [mm]
Airmass

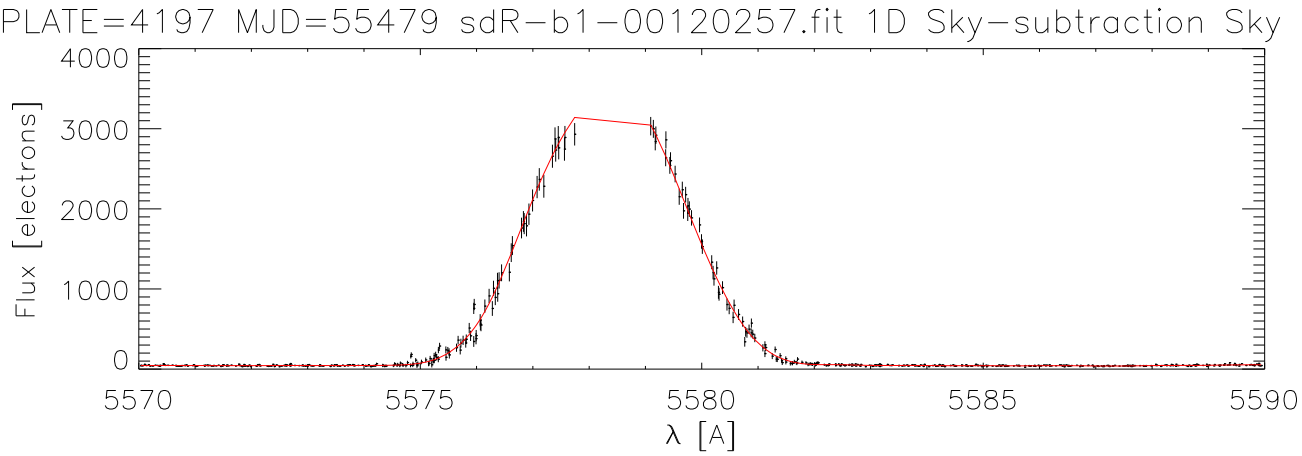

PLATE=4197 MJD=55479 Fiber-Flats for sdR-b1-00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = -11.408
Max value = 12.270
Fiber-Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Thu May 26 23:13:56 2016

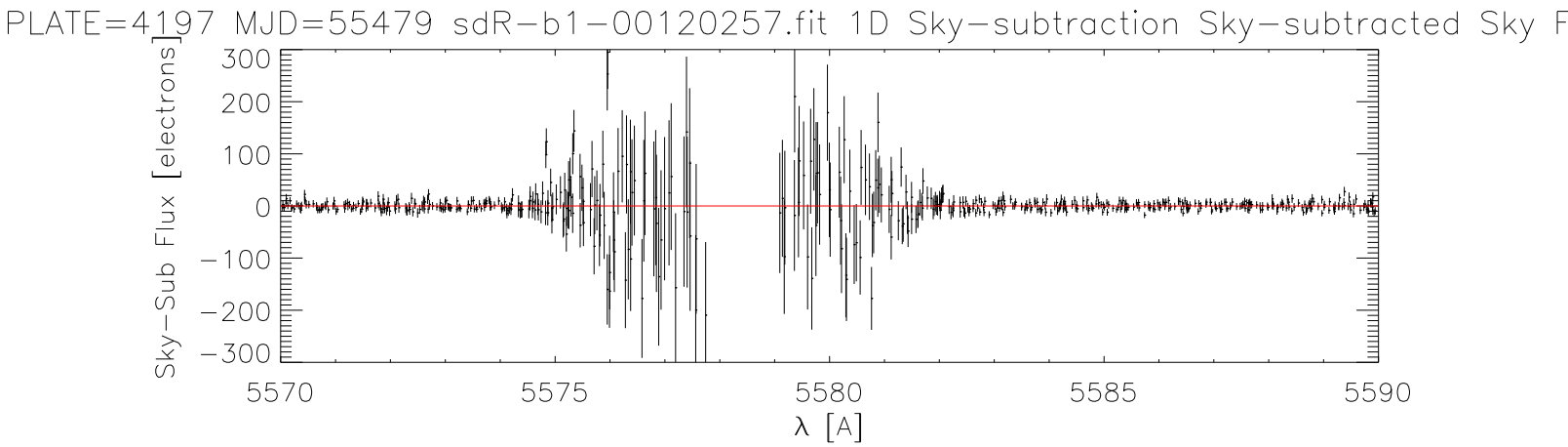

PLATE=4197 MJD=55479 Extraction chi^2 for sdR-b1-00120257.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b1-00120257.fit
1.00 pix
Before shift
After shift
Fiber Number
0
100
200
300
400
500
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

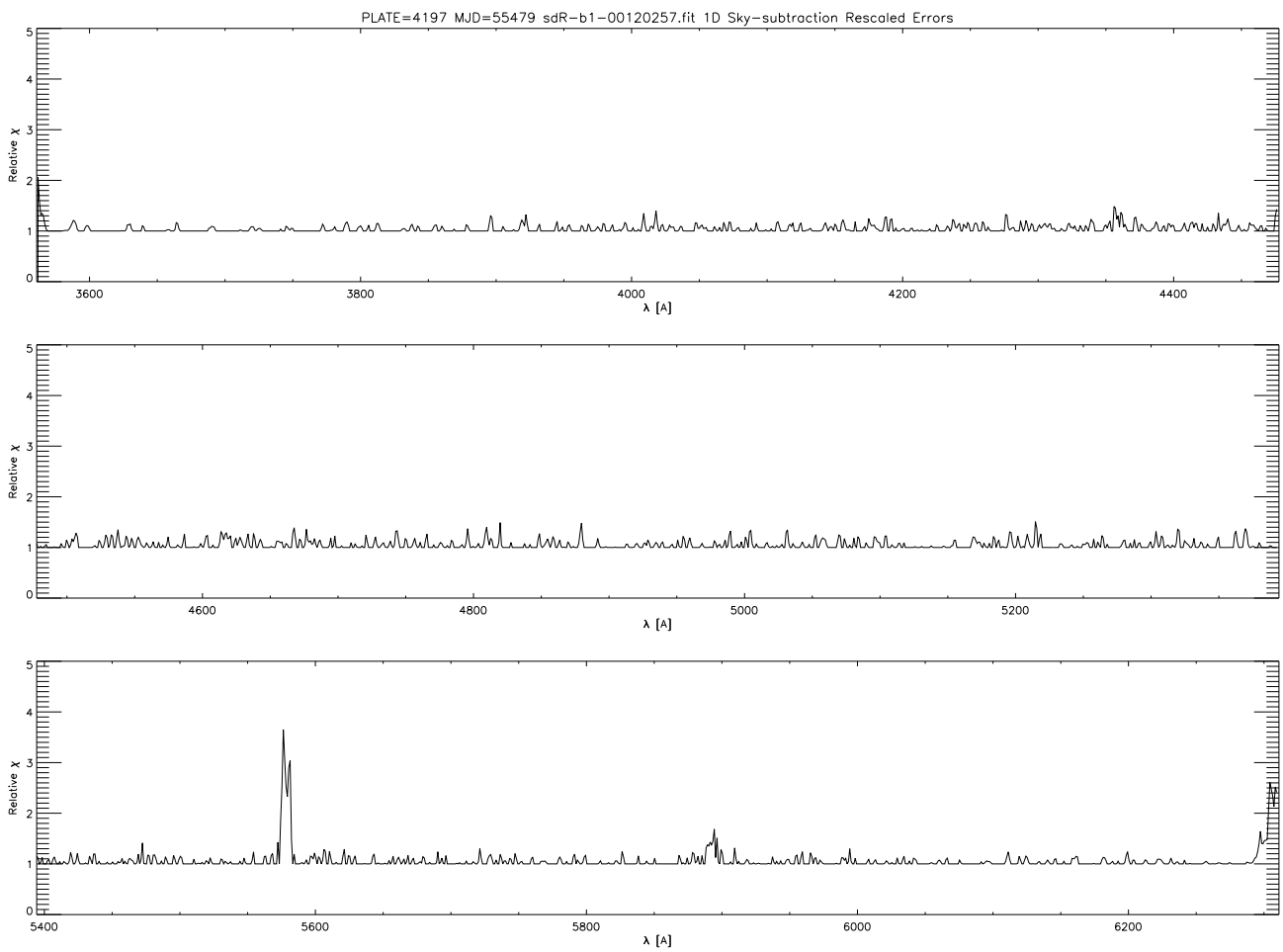

PLATE=4197 MJD=55479 Smooth superflat for sdR-b1-00120257.fit
2.5
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

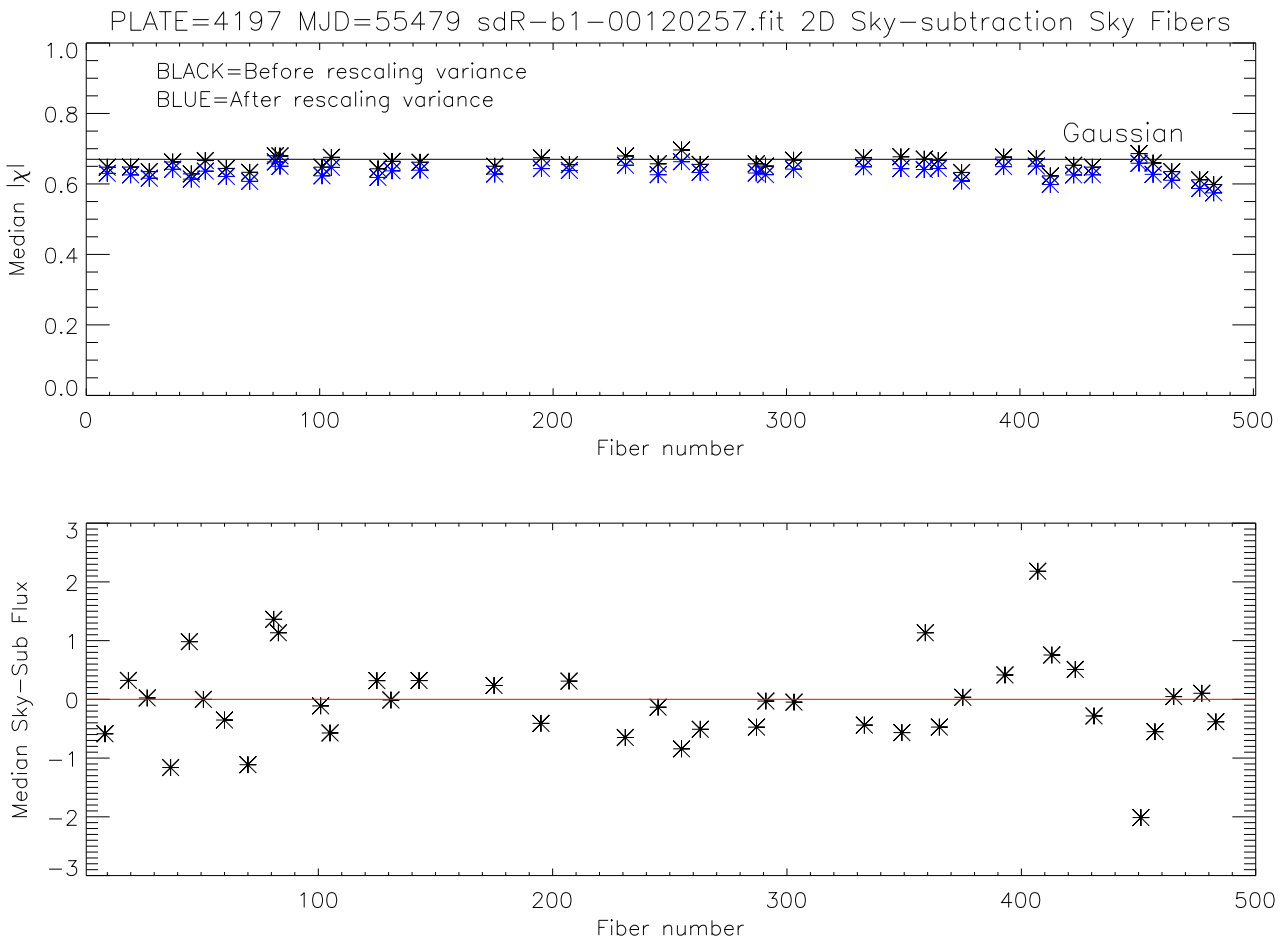

PLATE=4197 MJD=55479 sdR-b1-00120257.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

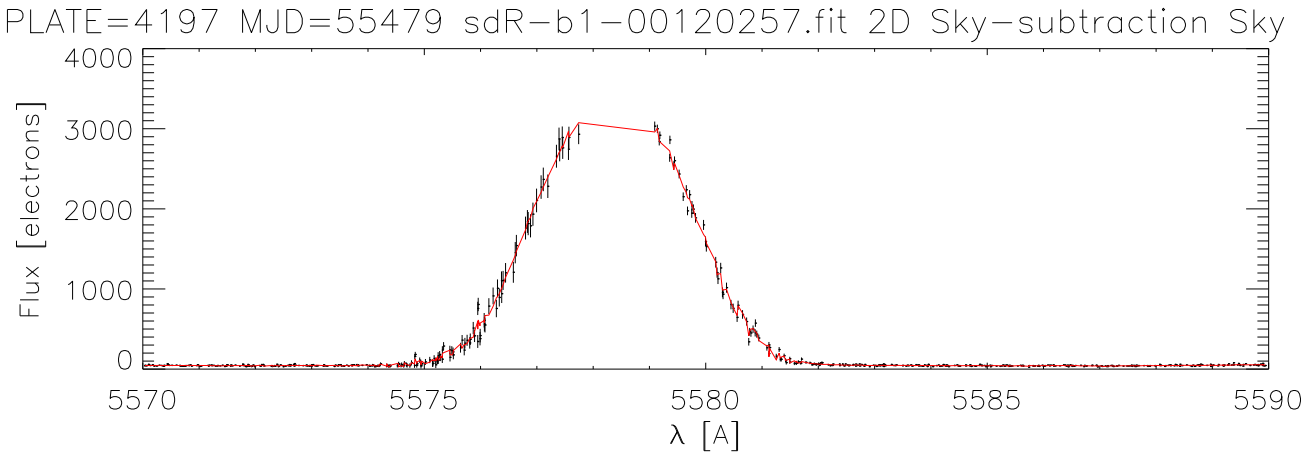

PLATE=4197 MJD=55479 sdR-b1-00120257.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
4000
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]

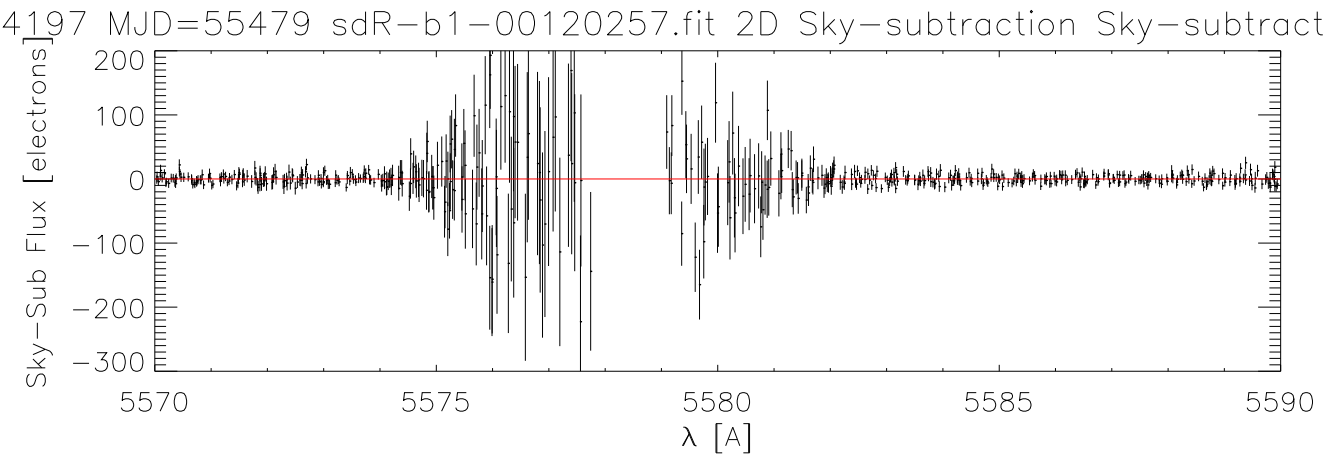

PLATE=4197 MJD=55479 sdR-b1-00120257.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
-100
-200
-300
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 40

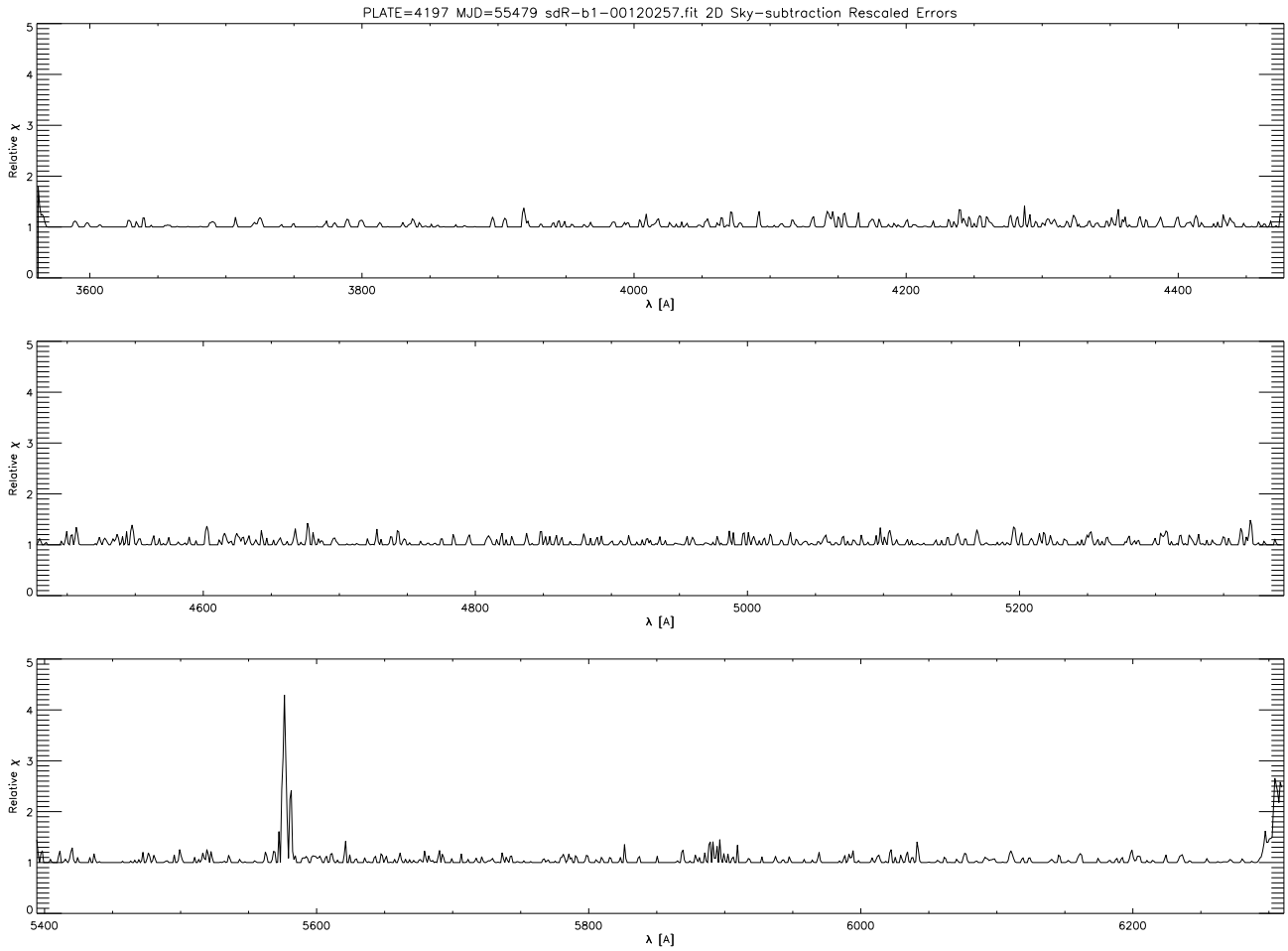


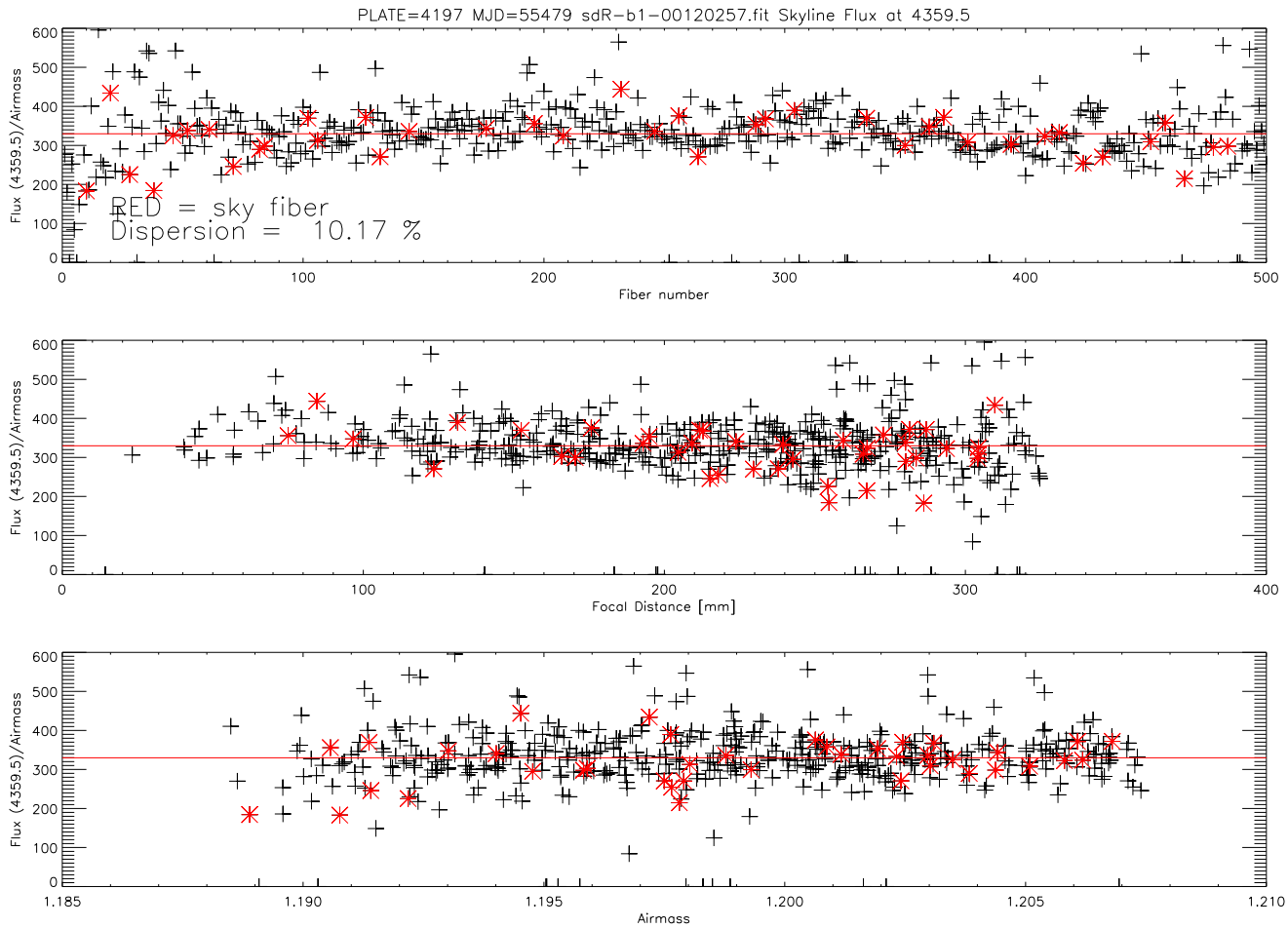

PLATE=4197 MJD=55479 sdR-b1-00120257.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

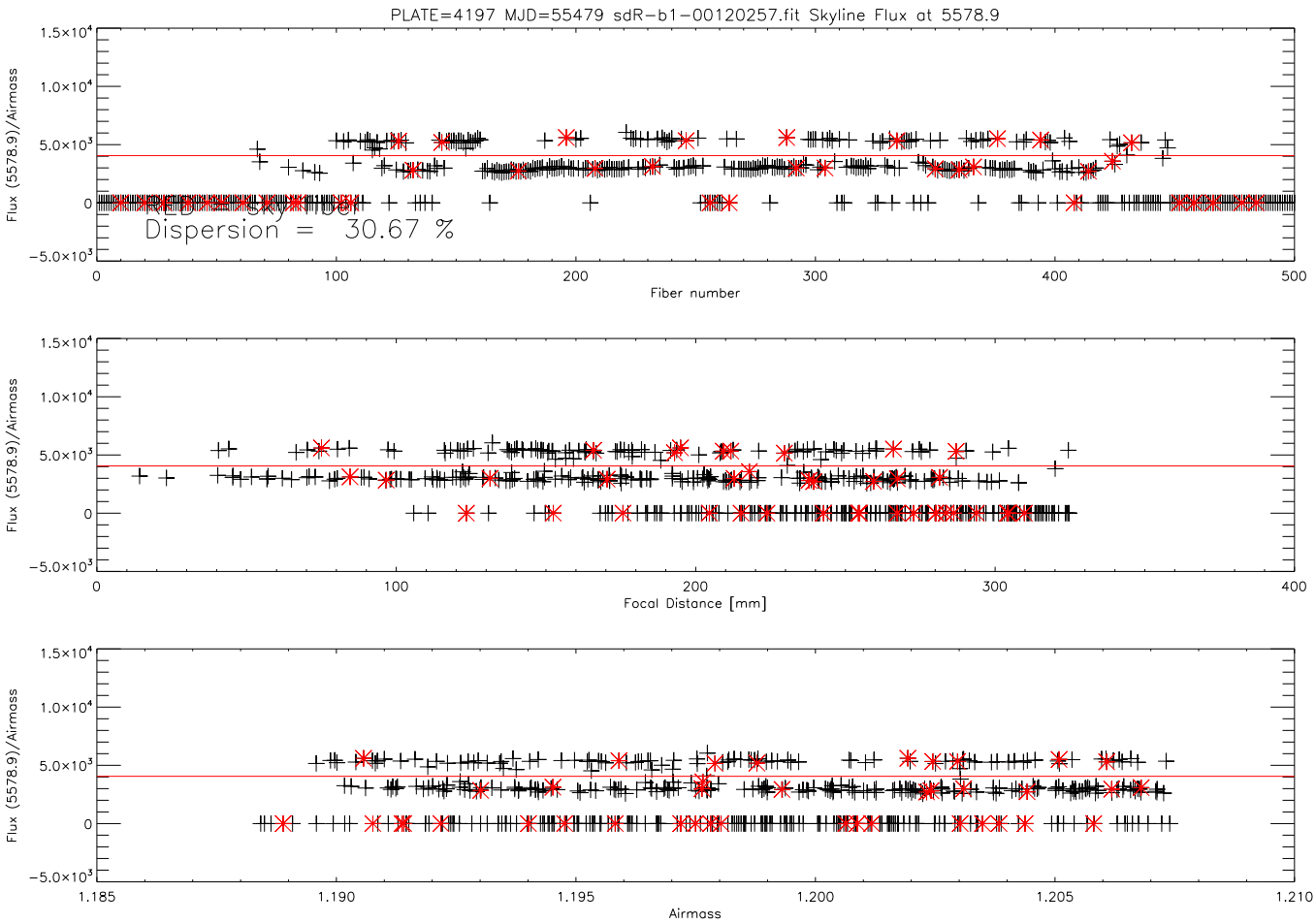

PLATE=4197 MJD=55479 sdR-b1-00120257.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
4000
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]

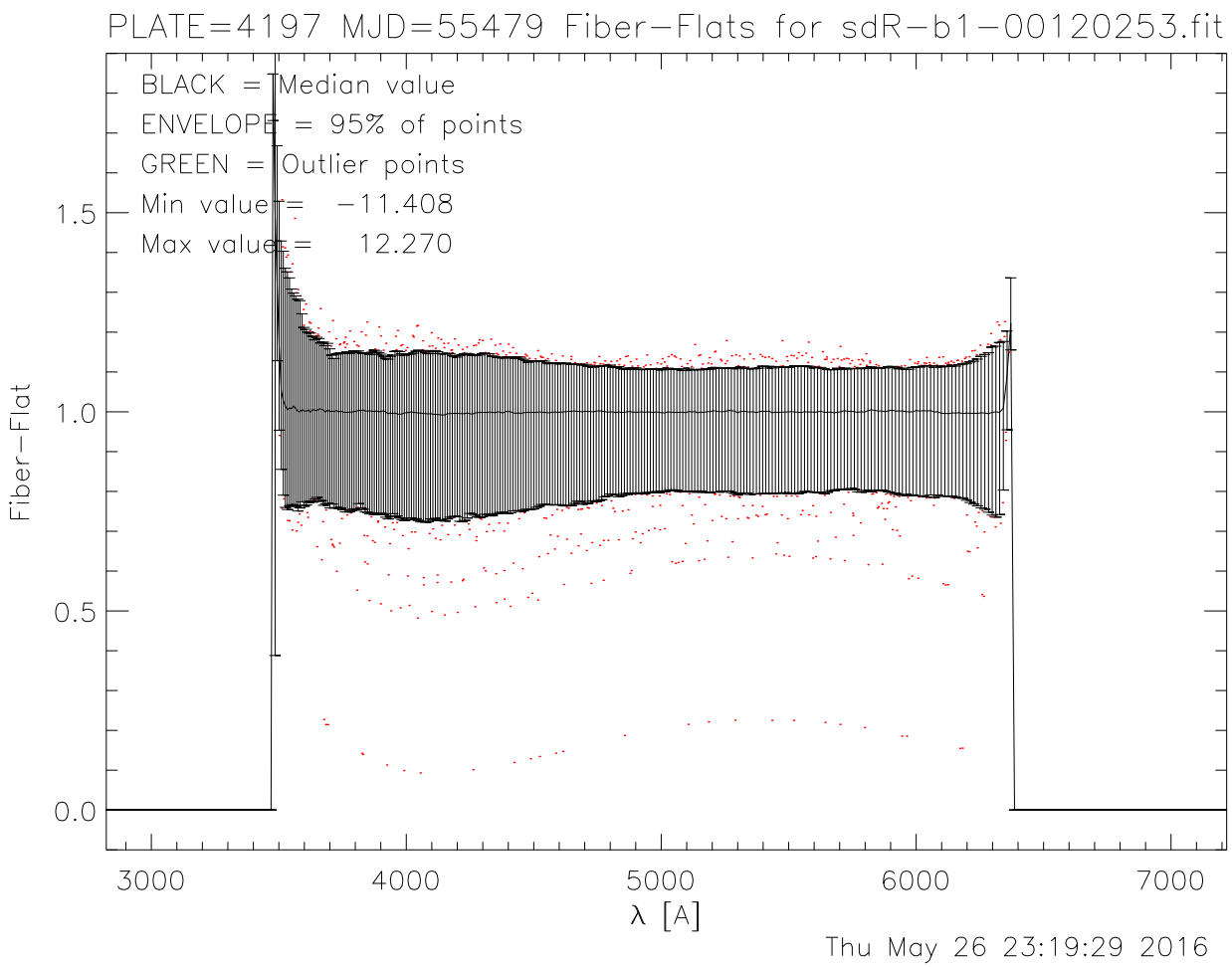

PLATE=4197 MJD=55479 sdR-b1-00120257.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
200
100
0
-100
-200
-300
5570
5575
5580
5585
5590
λ [A]

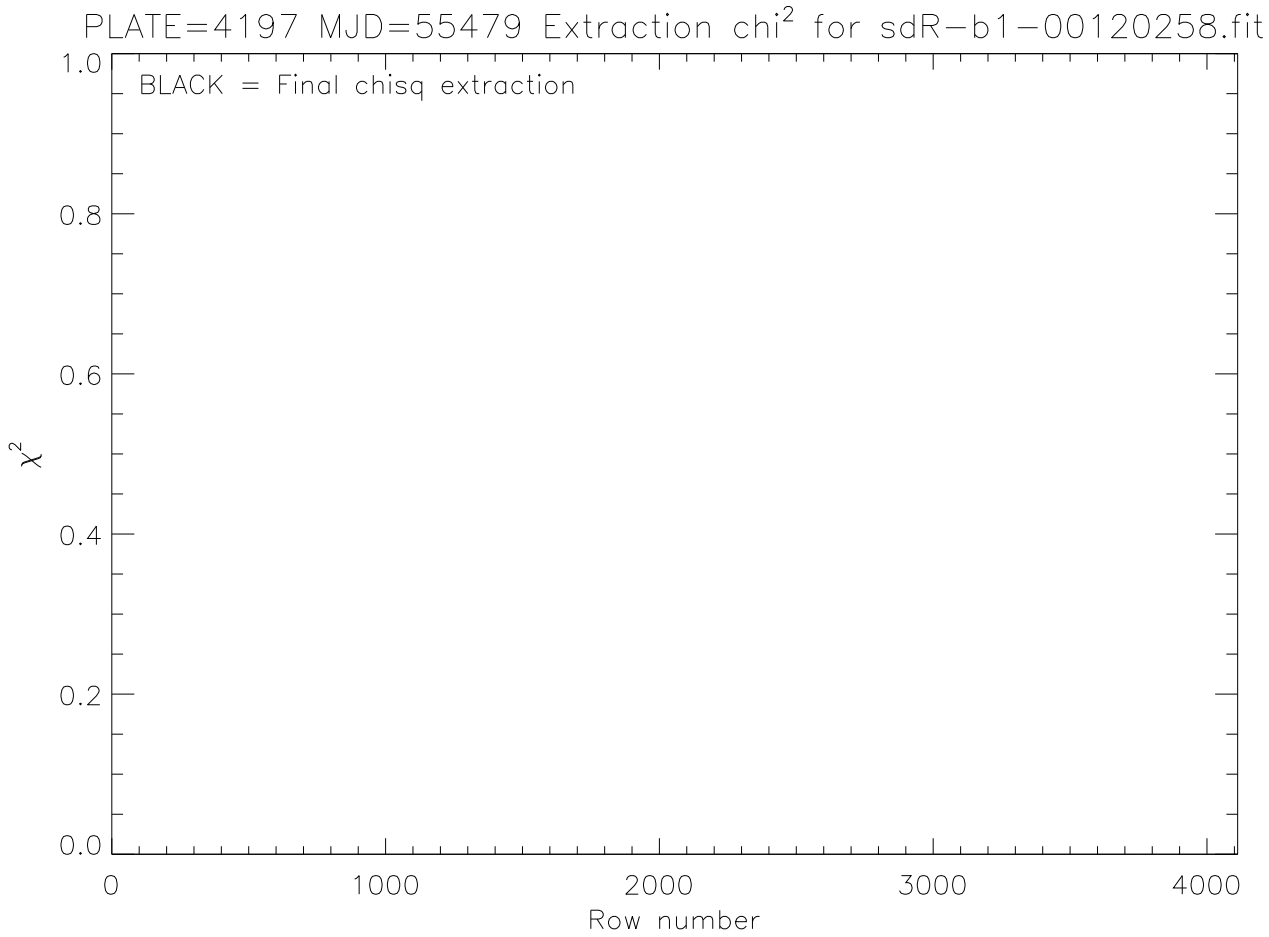
Number of sky fibers = 40

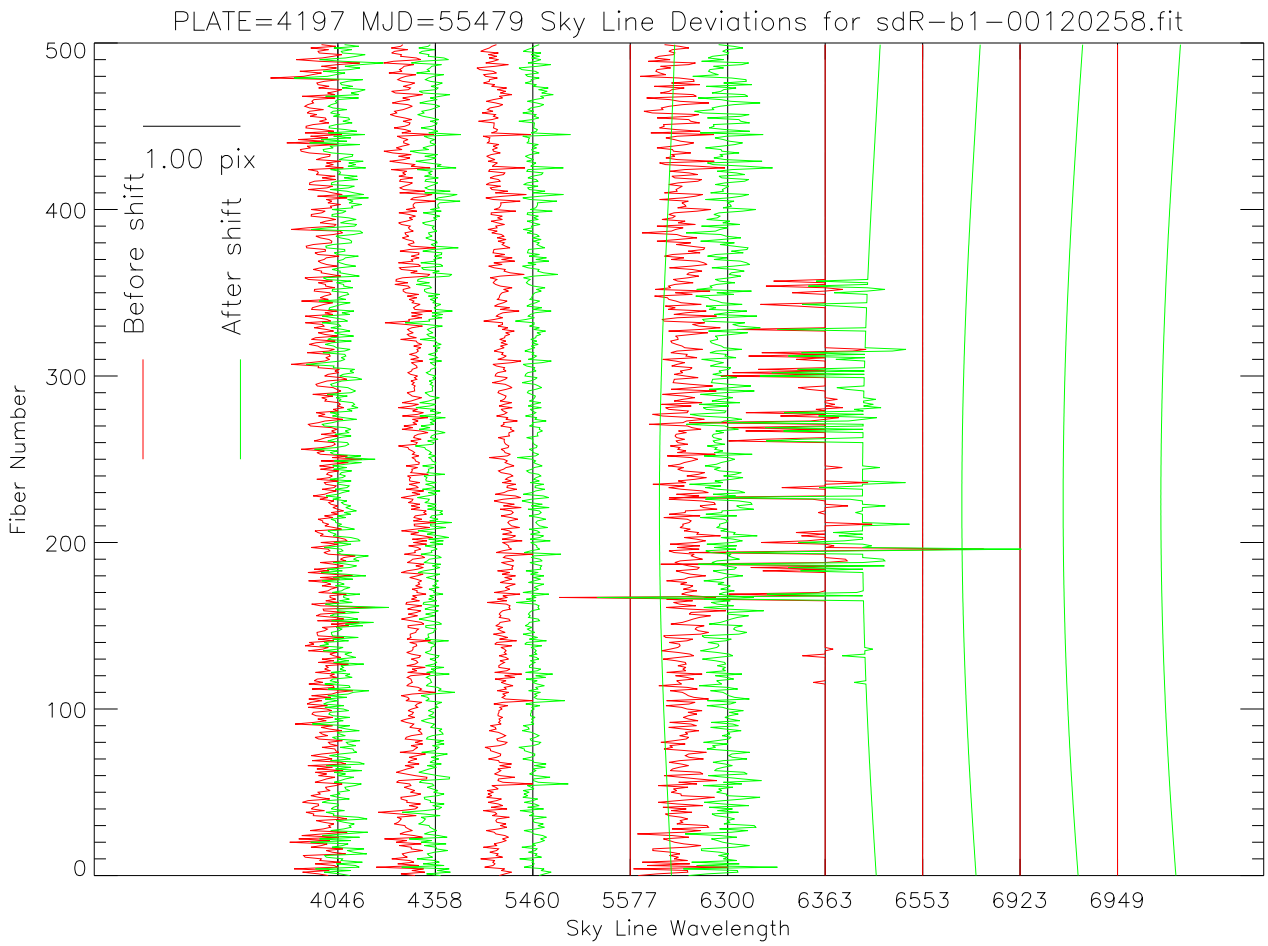


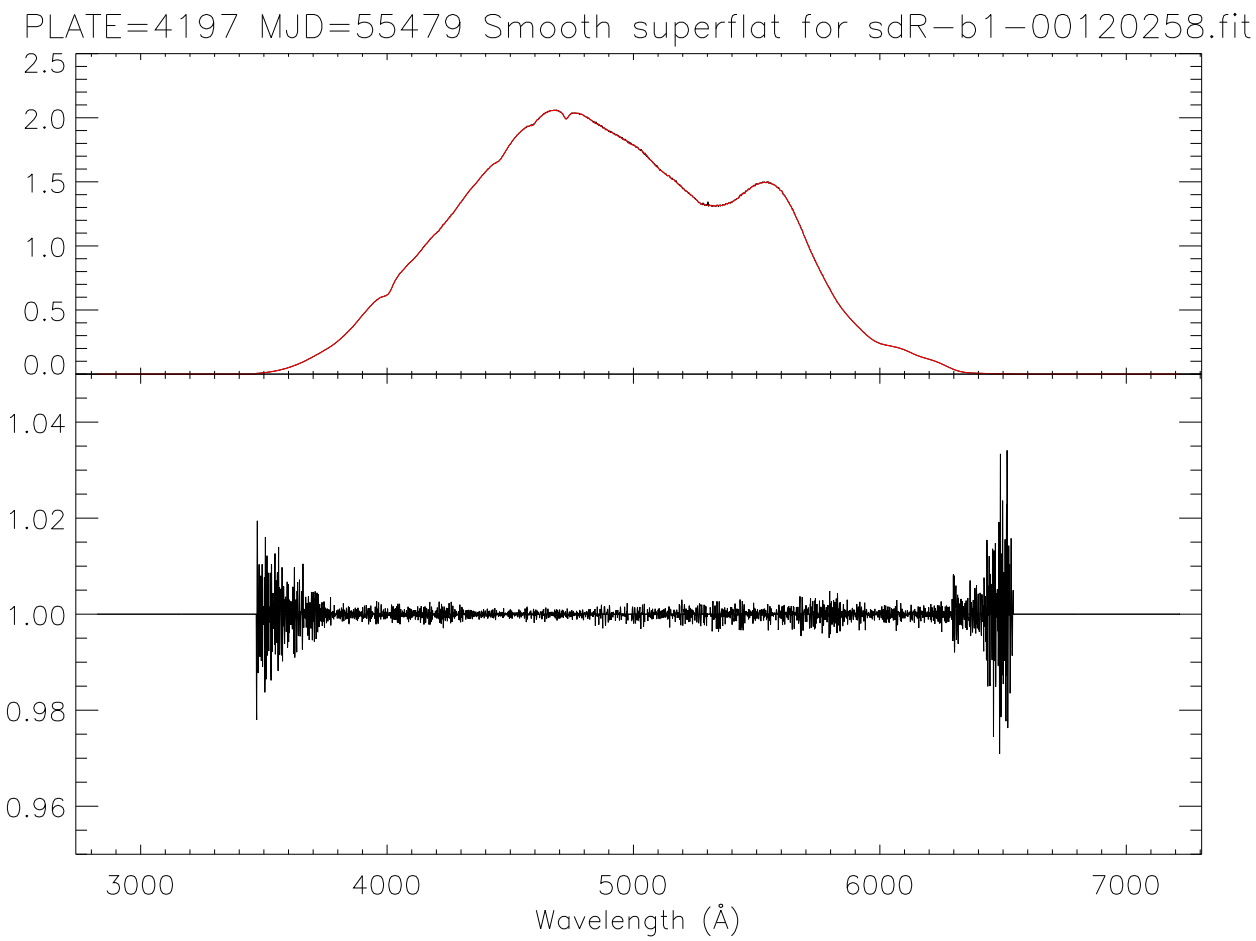

PLATE=4197 MJD=55479 sdR-b1-00120257.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
RED = sky fiber
Dispersion = 10.17 %
Fiber number
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

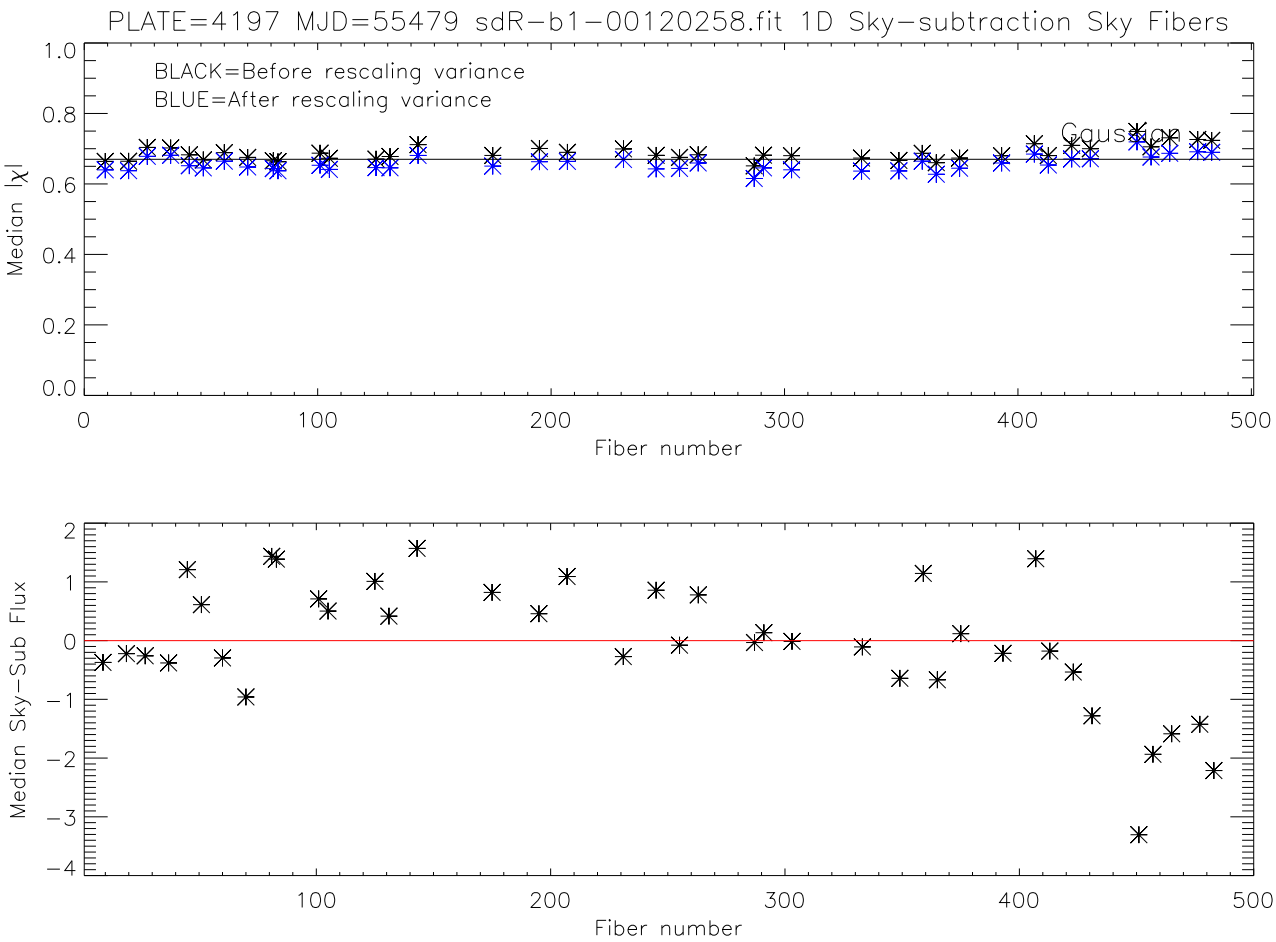

PLATE=4197 MJD=55479 sdR-b1-00120257.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
Fiber number
Dispersion = 30.67 %
Focal Distance [mm]
Airmass

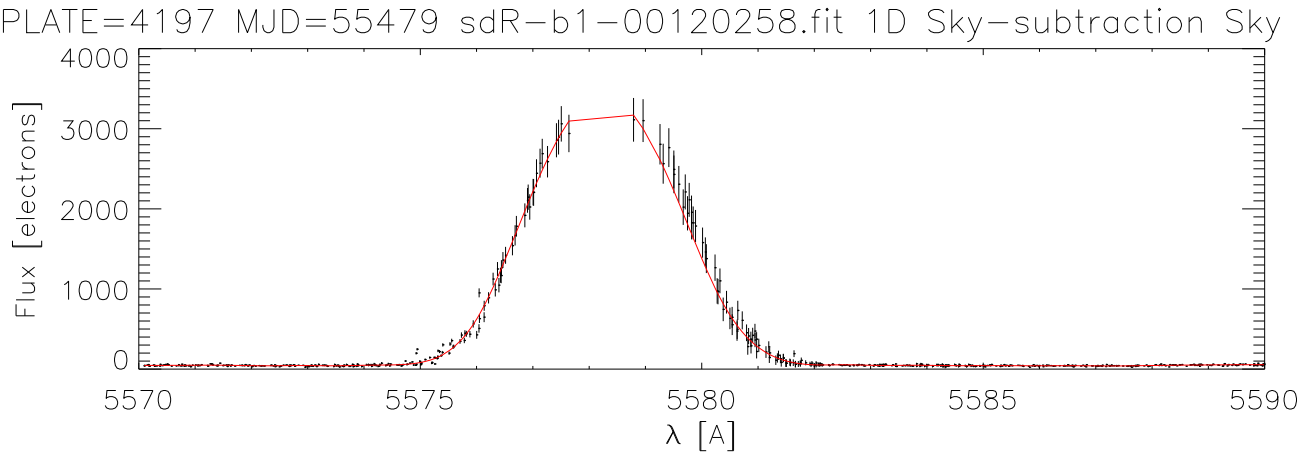

PLATE=4197 MJD=55479 Fiber-Flats for sdR-b1-00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = -11.408
Max value = 12.270
Fiber-Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Thu May 26 23:19:29 2016

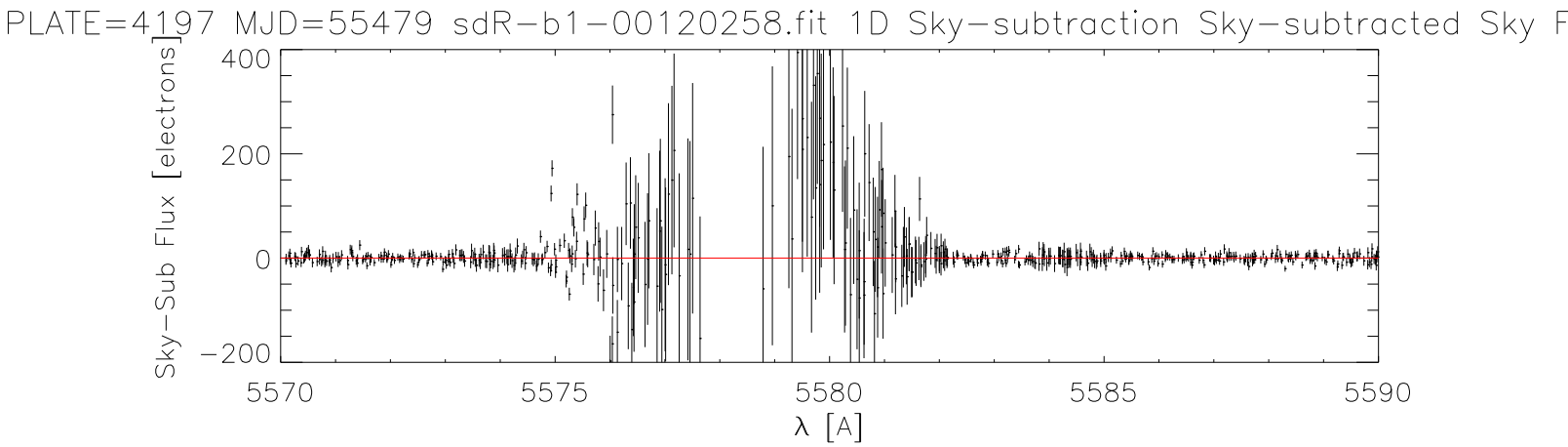

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−b1−00120258.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b1-00120258.fit
1.00 pix
Before shift
After shift
Fiber Number
500
400
300
200
100
0
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

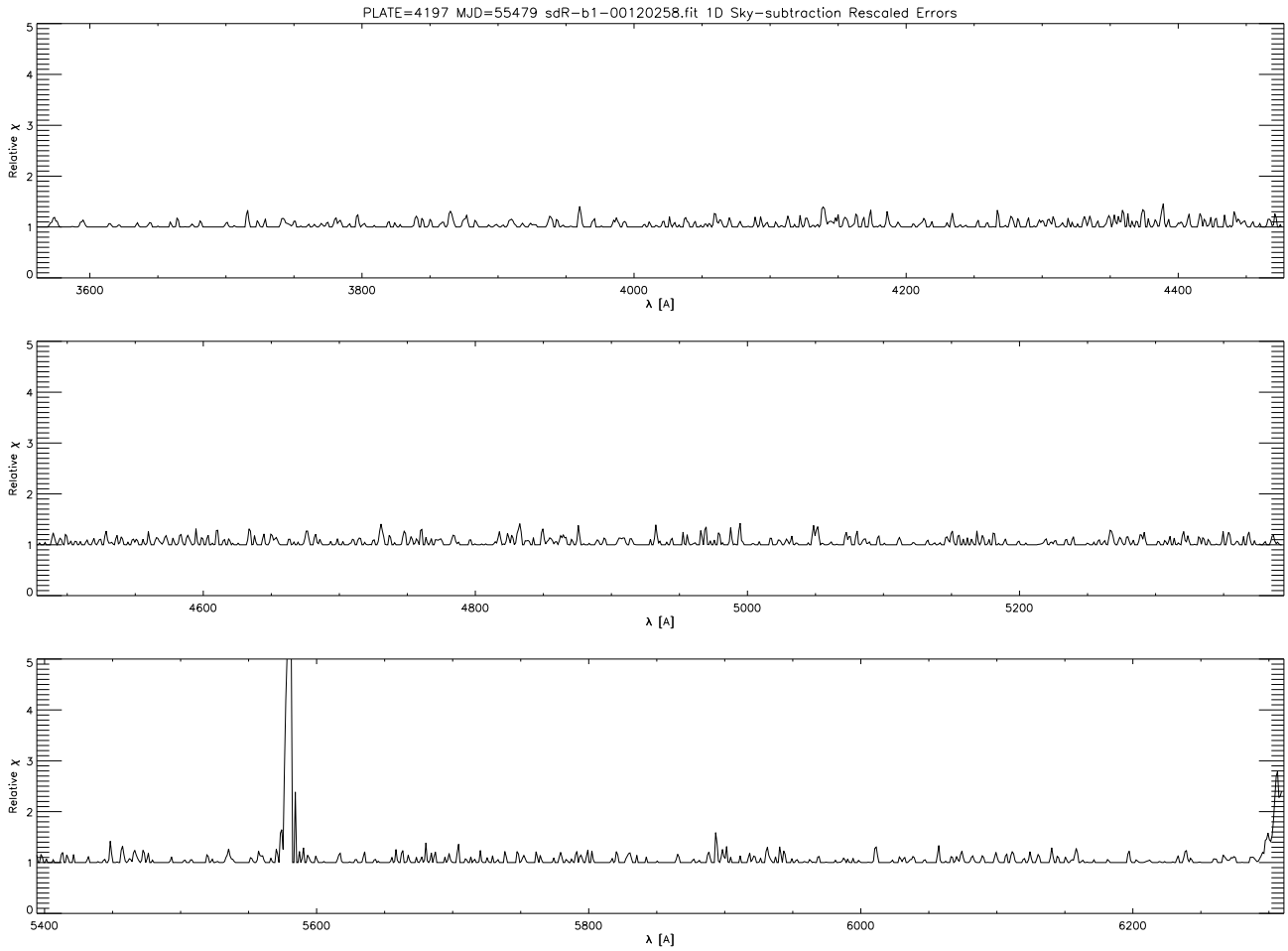

PLATE=4197 MJD=55479 Smooth superflat for sdR-b1-00120258.fit
2.5
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

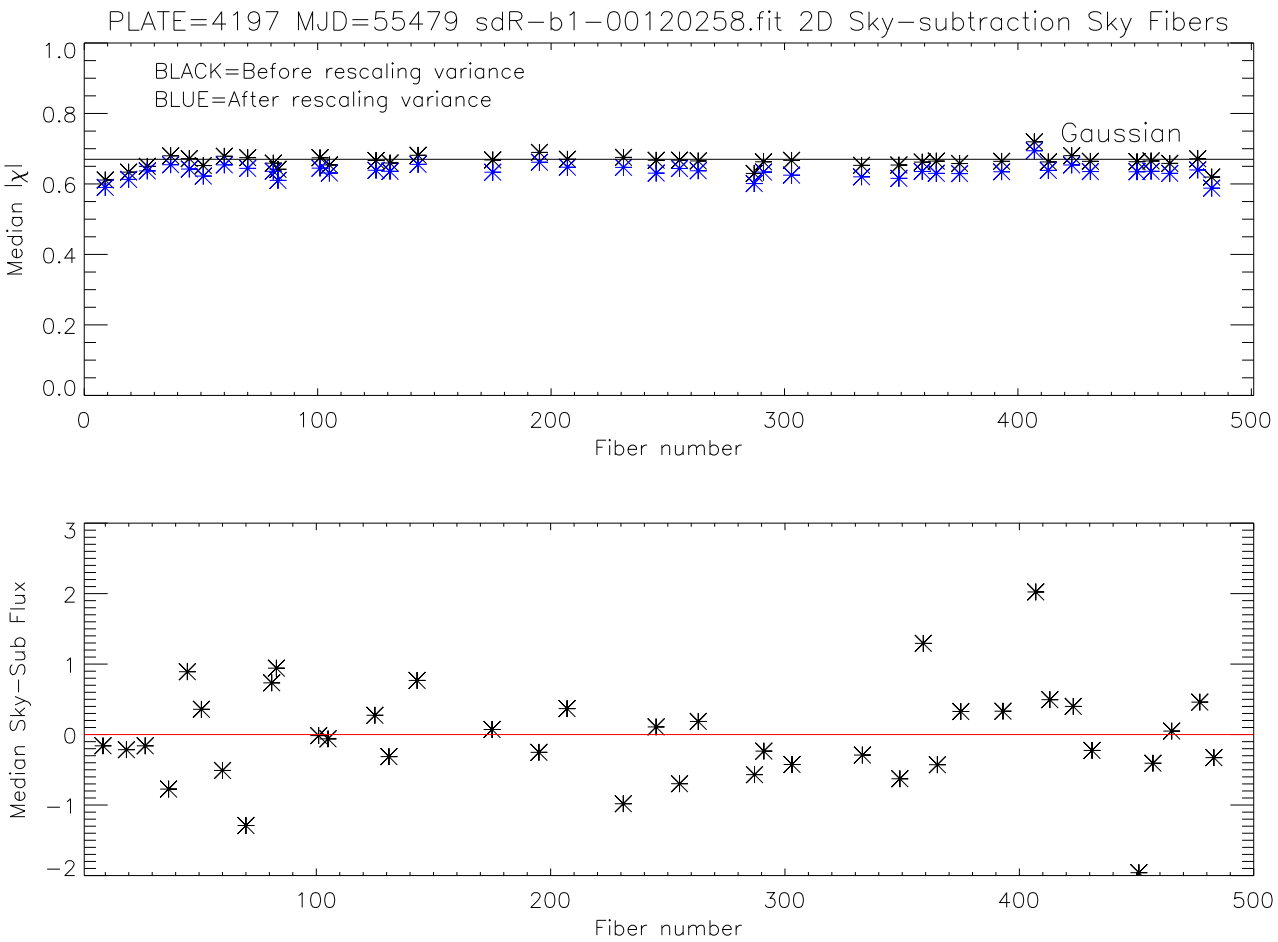

PLATE=4197 MJD=55479 sdR-b1-00120258.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

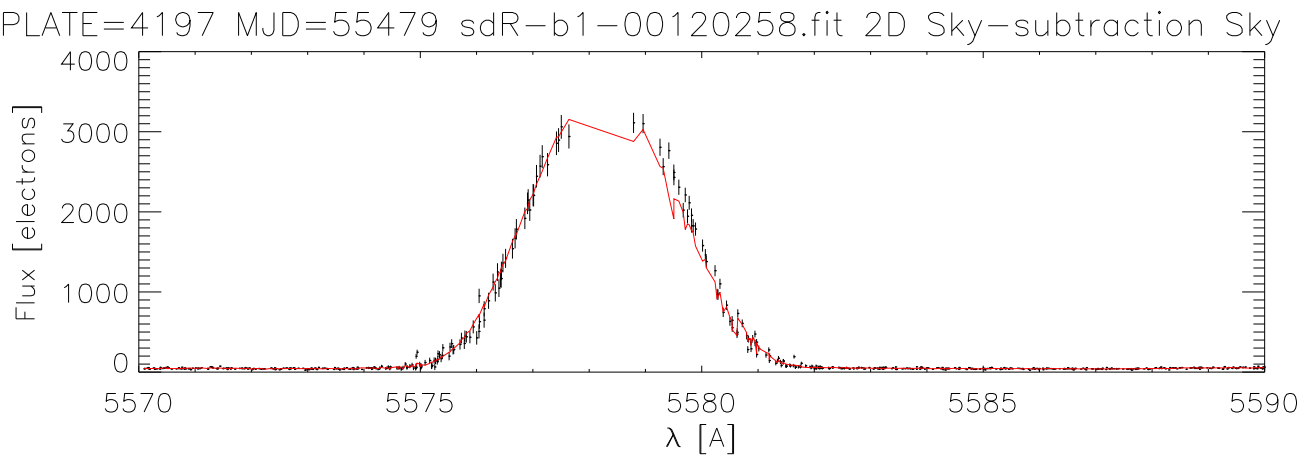

PLATE=4197 MJD=55479 sdR-b1-00120258.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
4000
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]

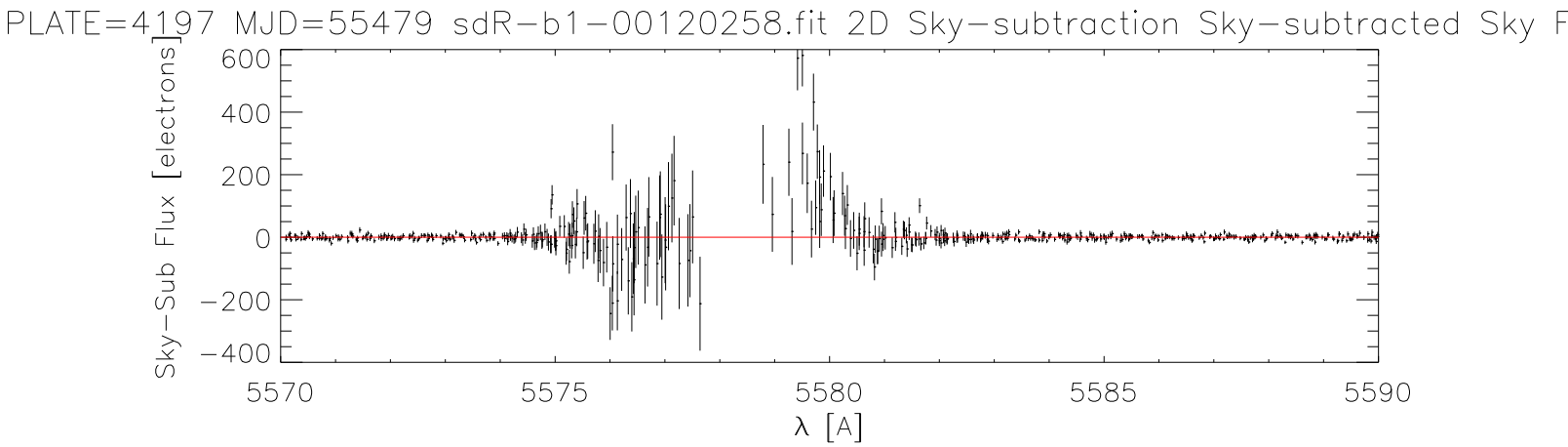

PLATE=4197 MJD=55479 sdR-b1-00120258.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
200
0
-200
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 40

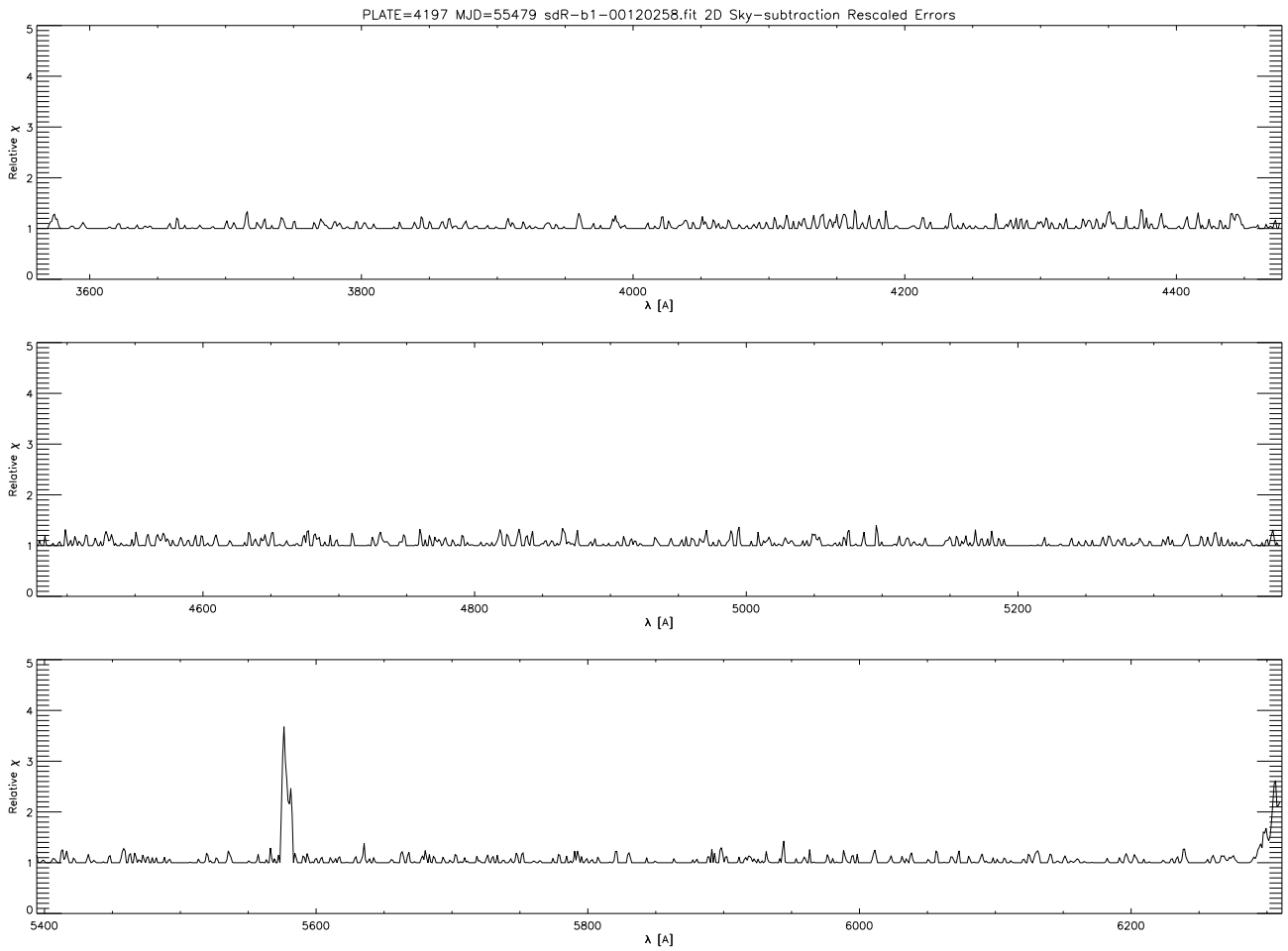


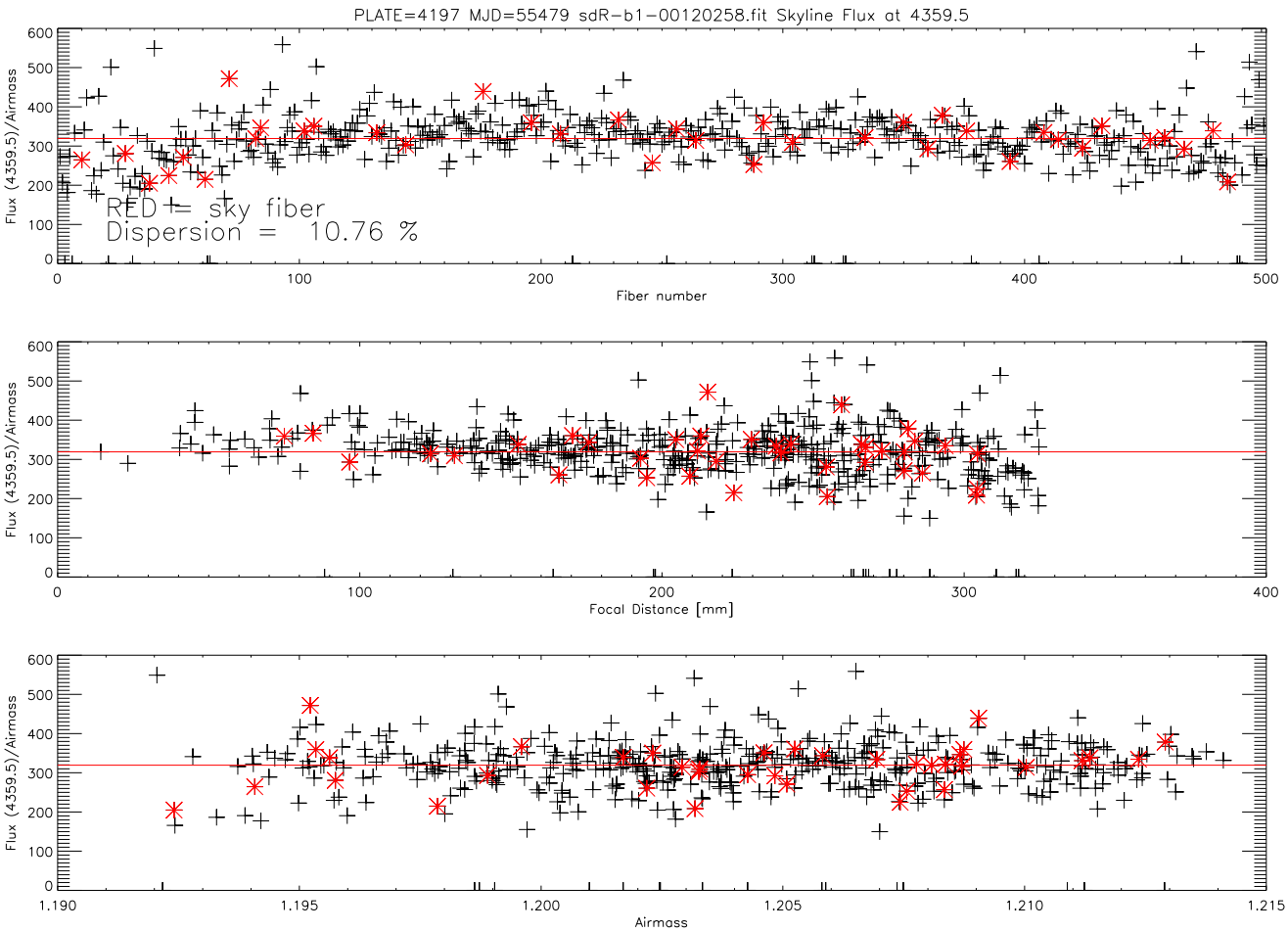

PLATE=4197 MJD=55479 sdR-b1-00120258.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

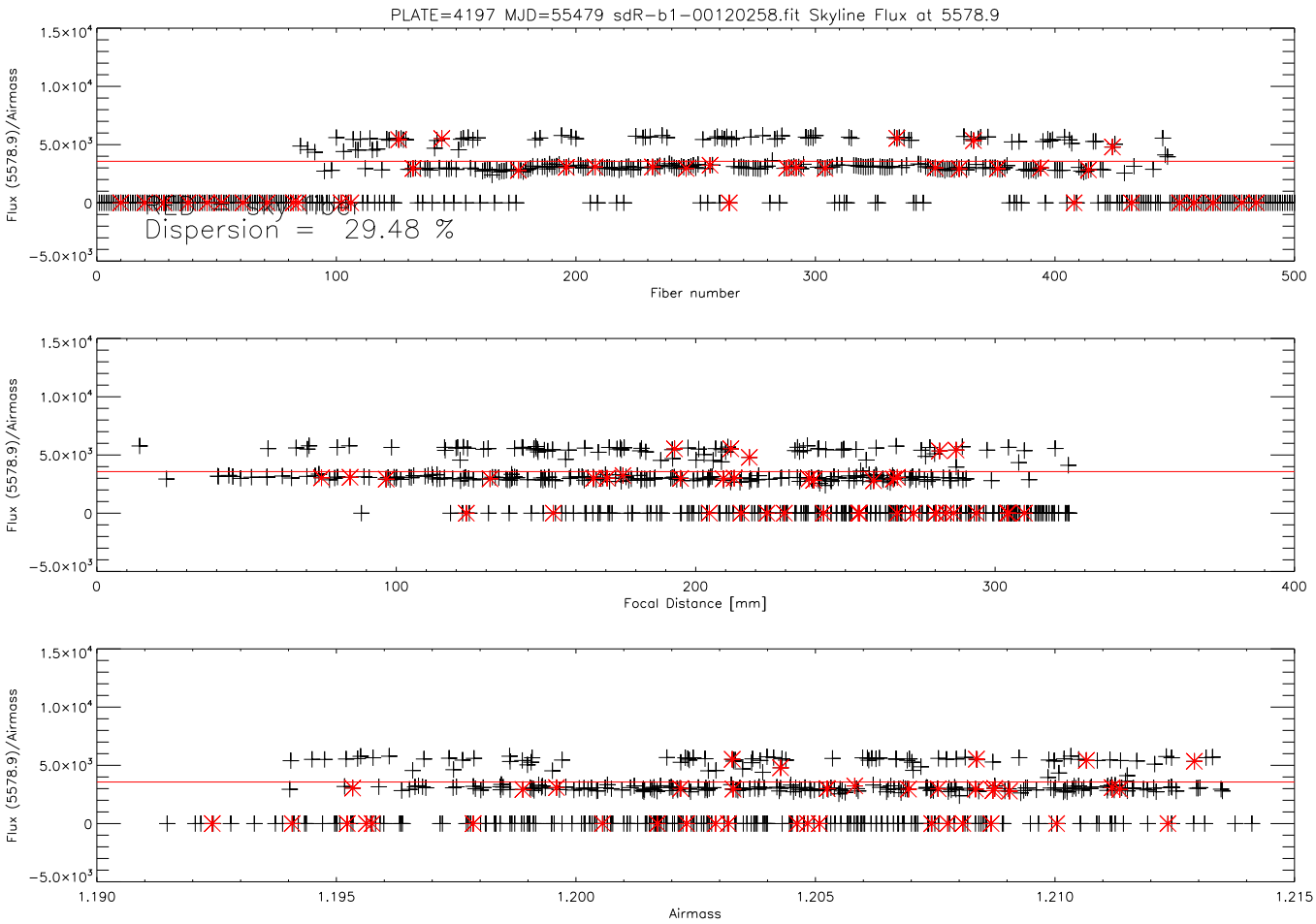

PLATE=4197 MJD=55479 sdR-b1-00120258.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
4000
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]

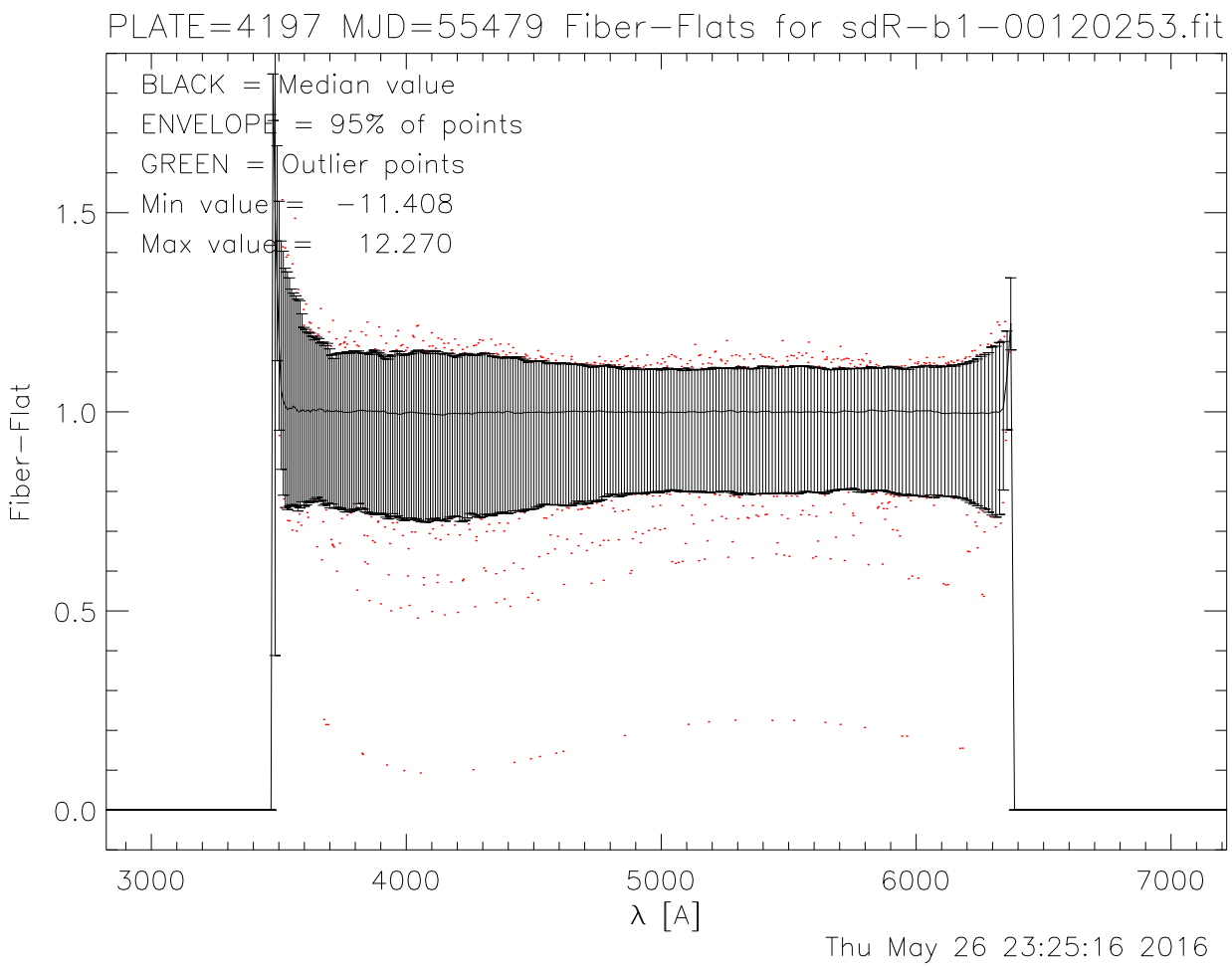

PLATE=4197 MJD=55479 sdR-b1-00120258.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
600
400
200
0
-200
-400
5570
5575
5580
5585
5590
λ [A]

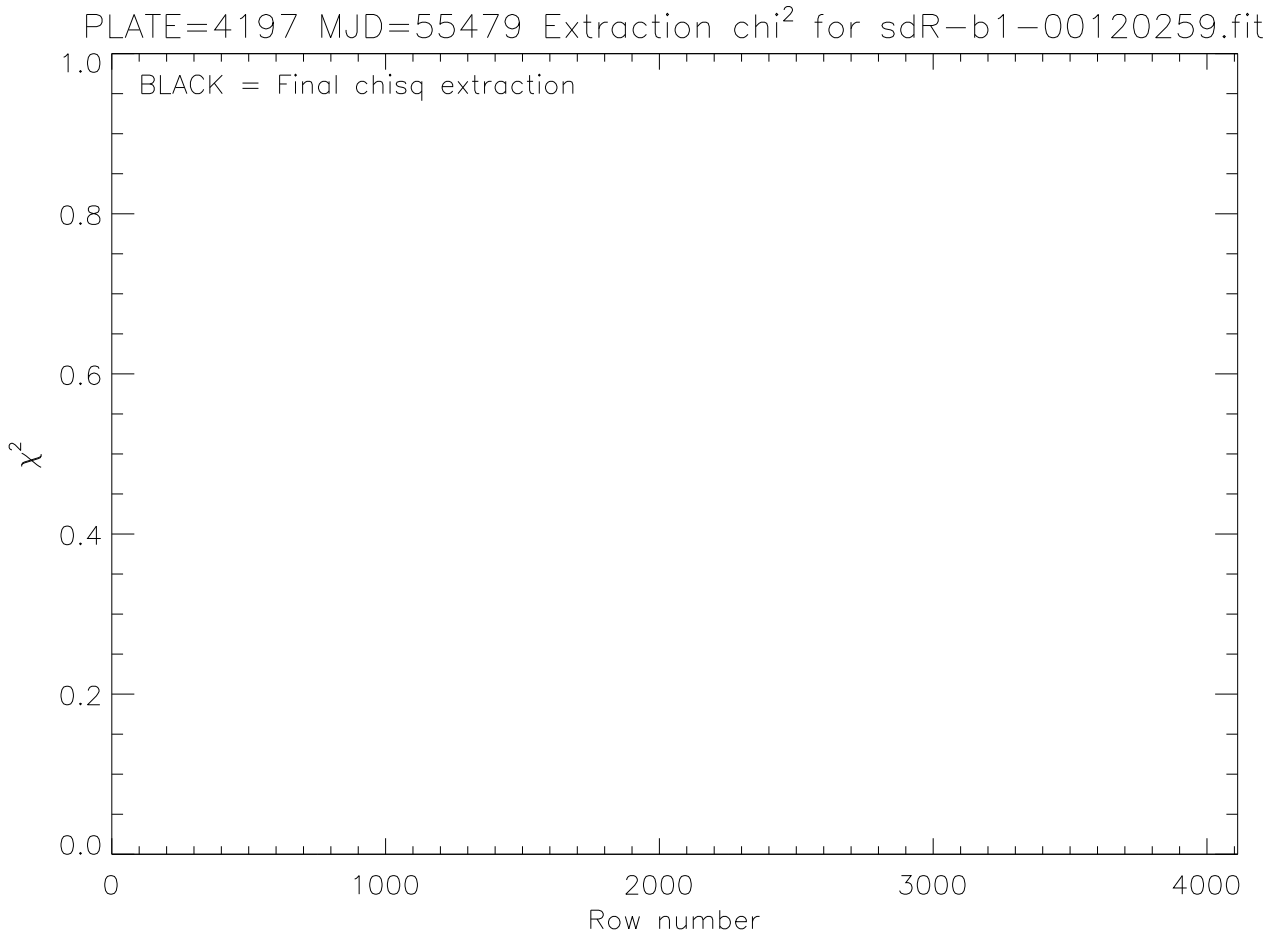
Number of sky fibers = 40

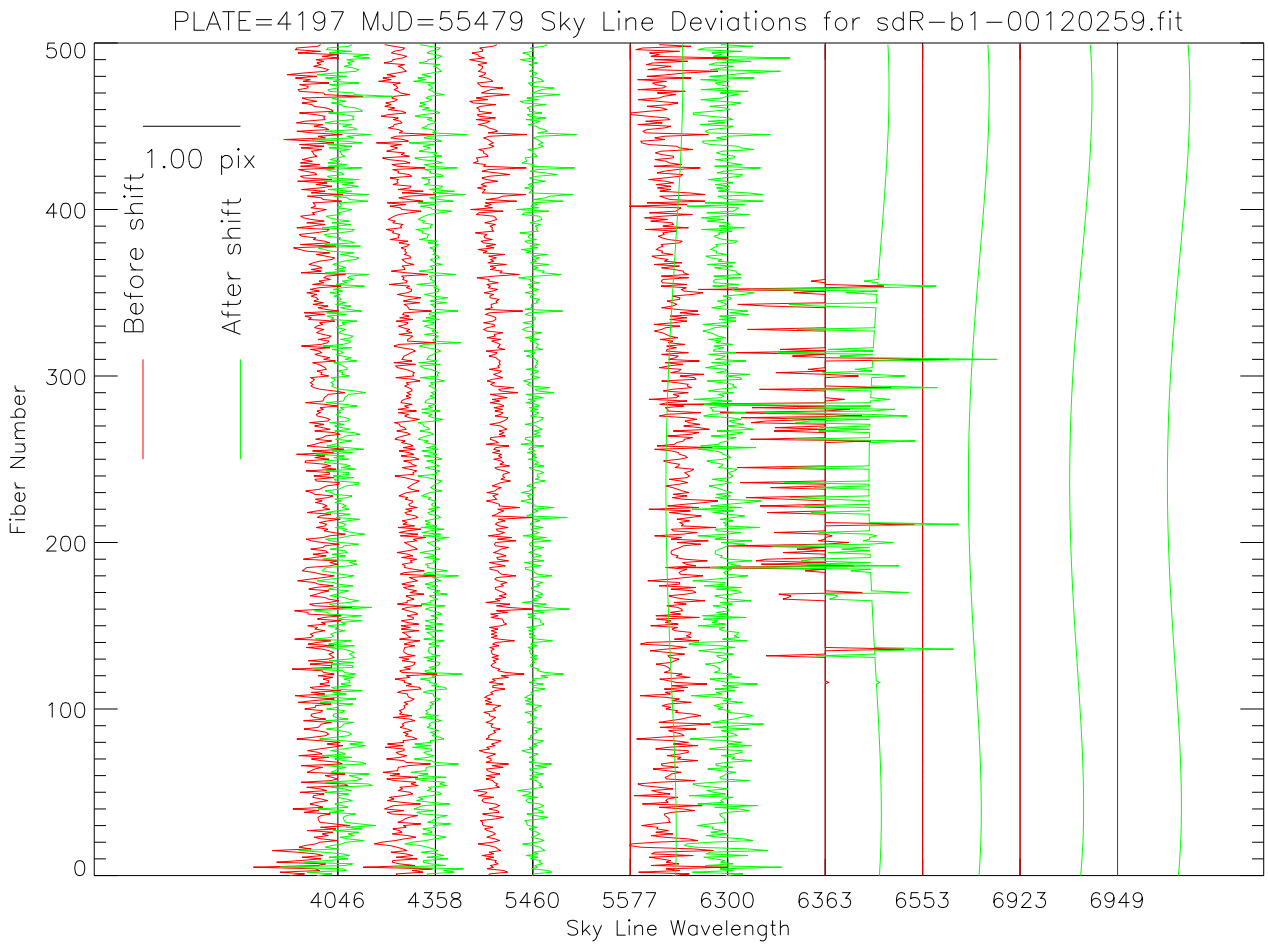


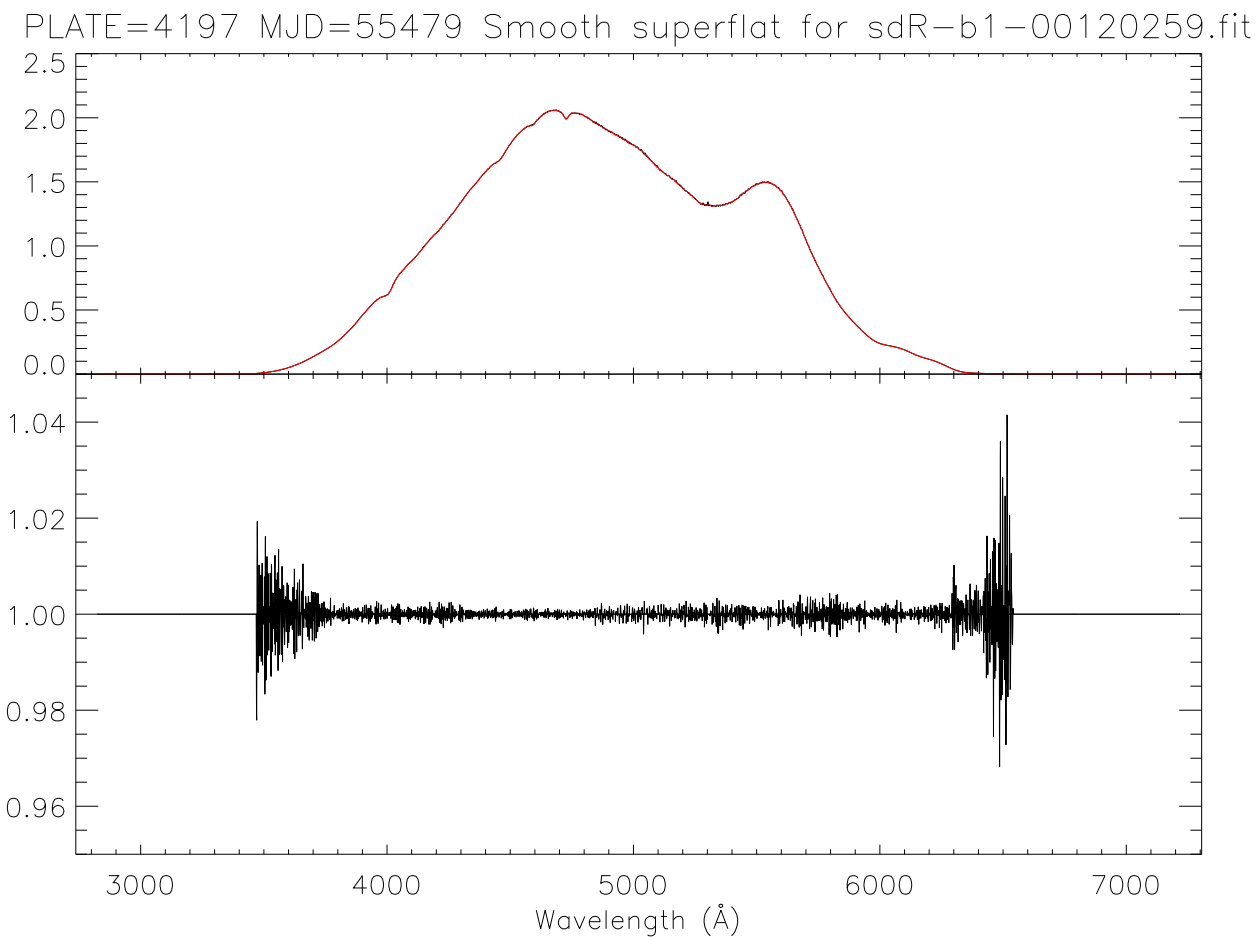

PLATE=4197 MJD=55479 sdR-b1-00120258.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
RED = sky fiber
Dispersion = 10.76 %
Fiber number
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

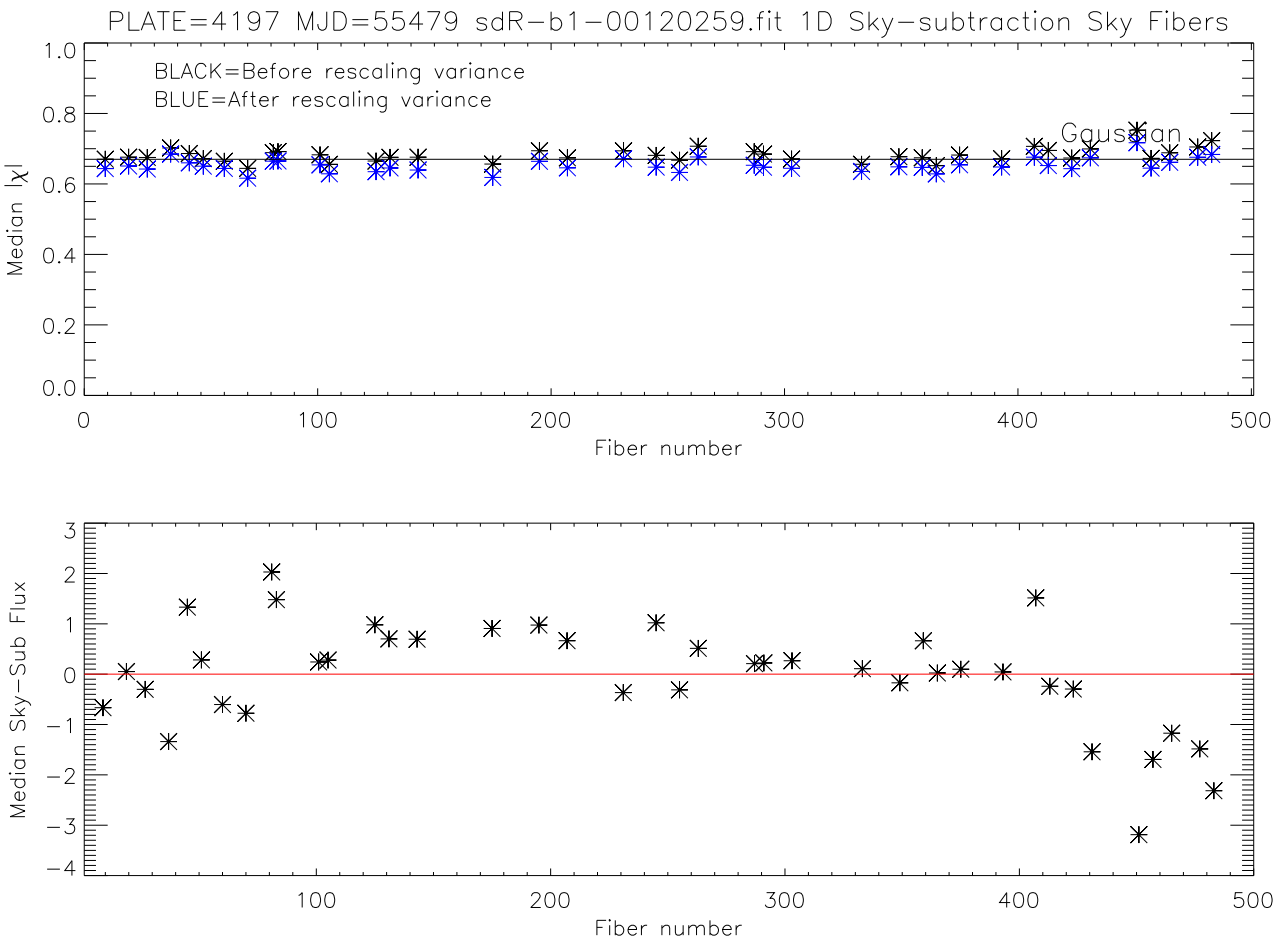

PLATE=4197 MJD=55479 sdR-b1-00120258.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
Fiber number
Dispersion = 29.48 %
Focal Distance [mm]
Airmass

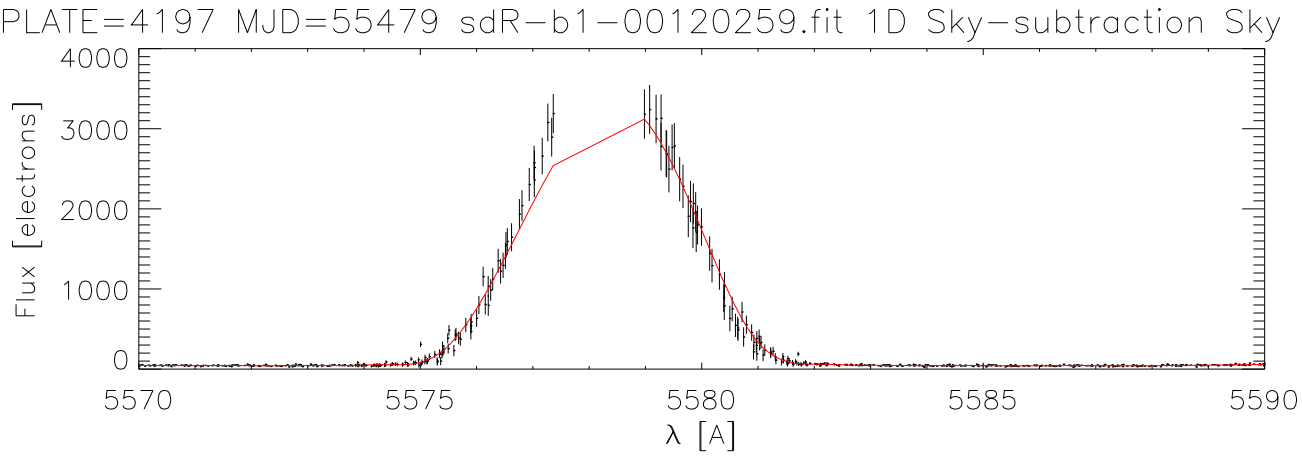

PLATE=4197 MJD=55479 Fiber-Flats for sdR-b1-00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = -11.408
Max value = 12.270
Fiber-Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Thu May 26 23:25:16 2016

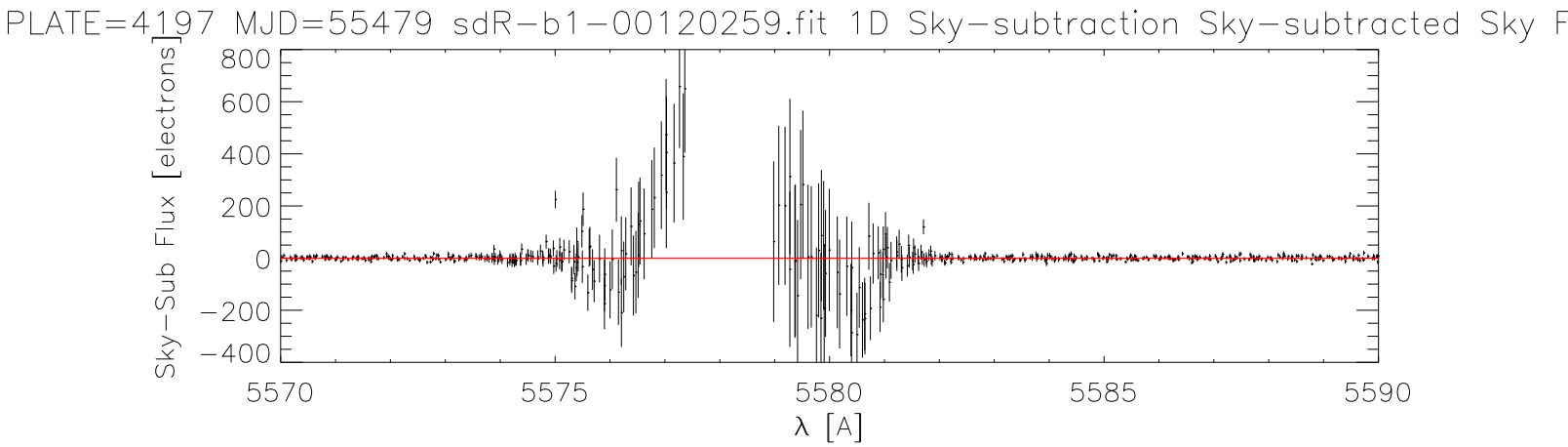

PLATE=4197 MJD=55479 Extraction chi^2 for sdR-b1-00120259.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b1-00120259.fit
1.00 pix
Before shift
After shift
Fiber Number
500
400
300
200
100
0
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

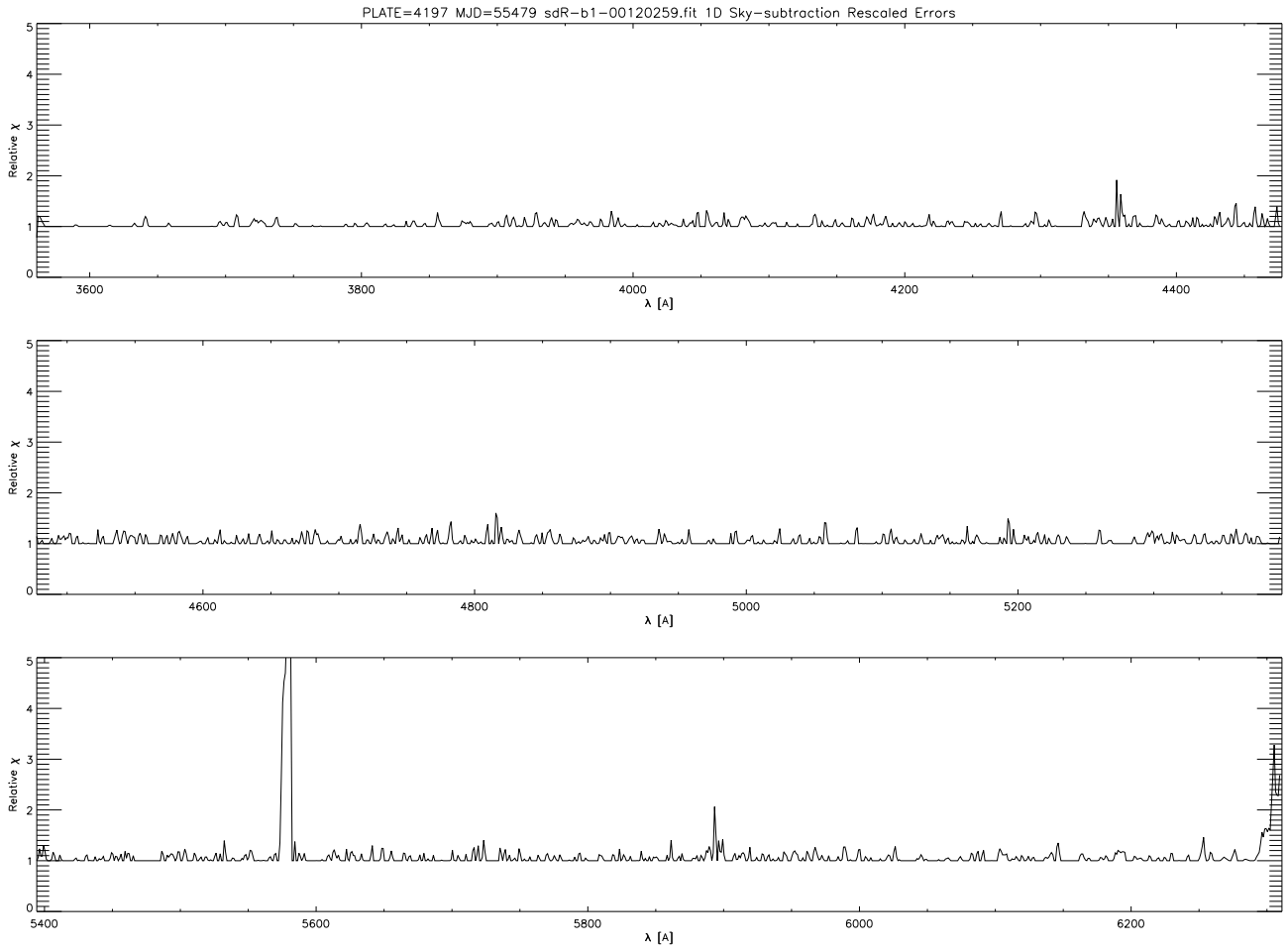

PLATE=4197 MJD=55479 Smooth superflat for sdR-b1-00120259.fit
2.5
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

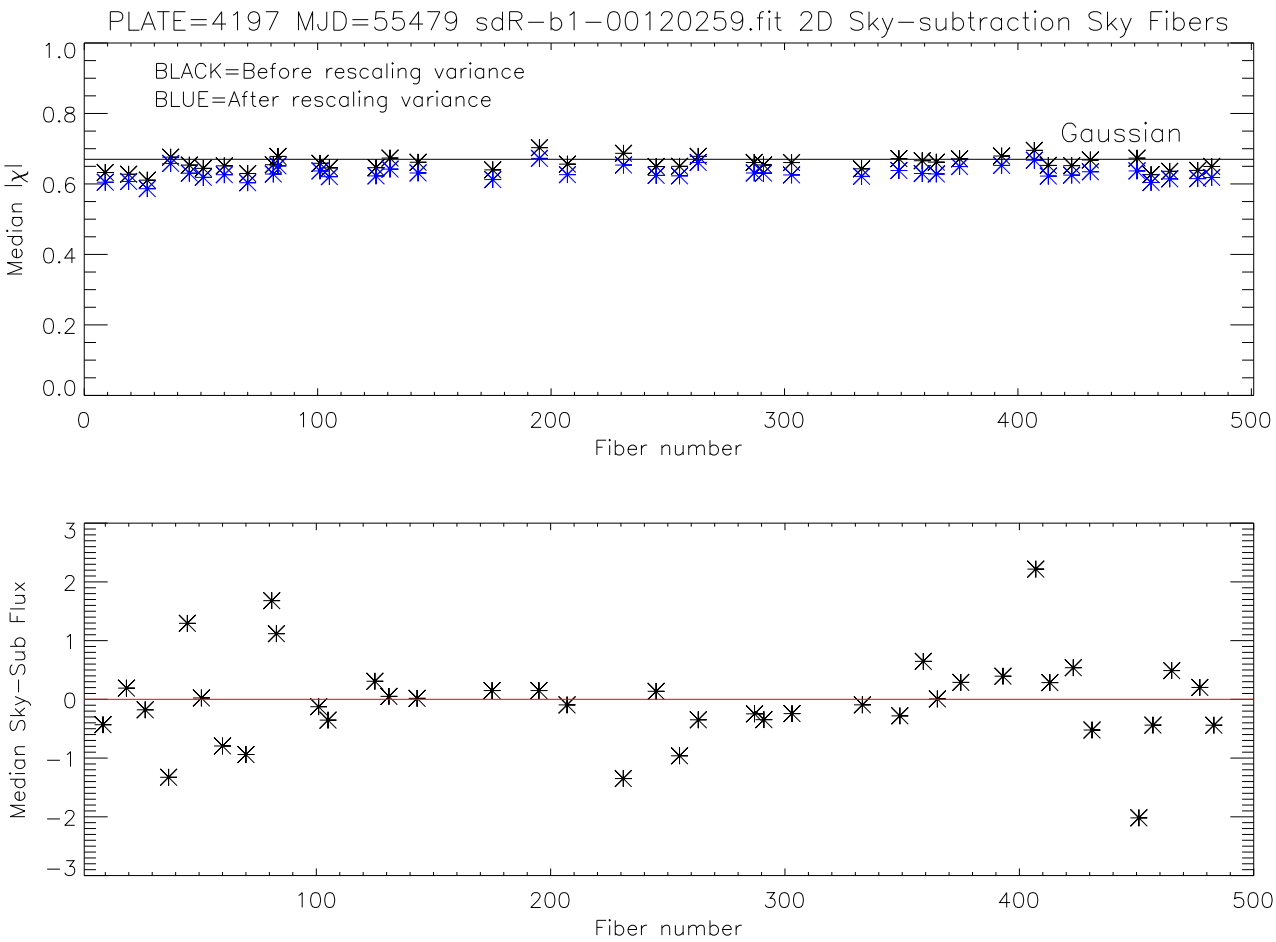

PLATE=4197 MJD=55479 sdR-b1-00120259.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

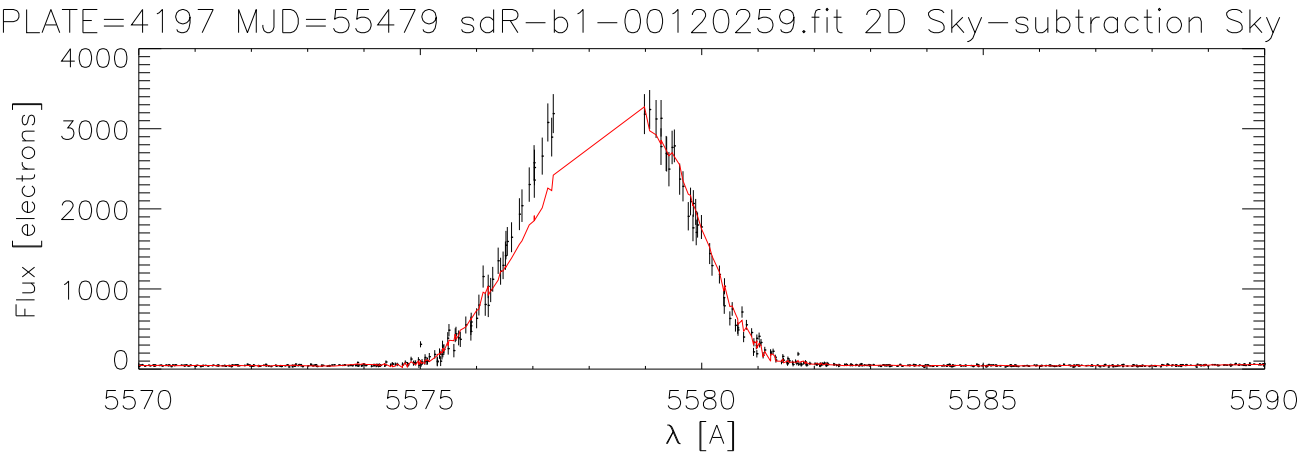

PLATE=4197 MJD=55479 sdR-b1-00120259.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
4000
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]

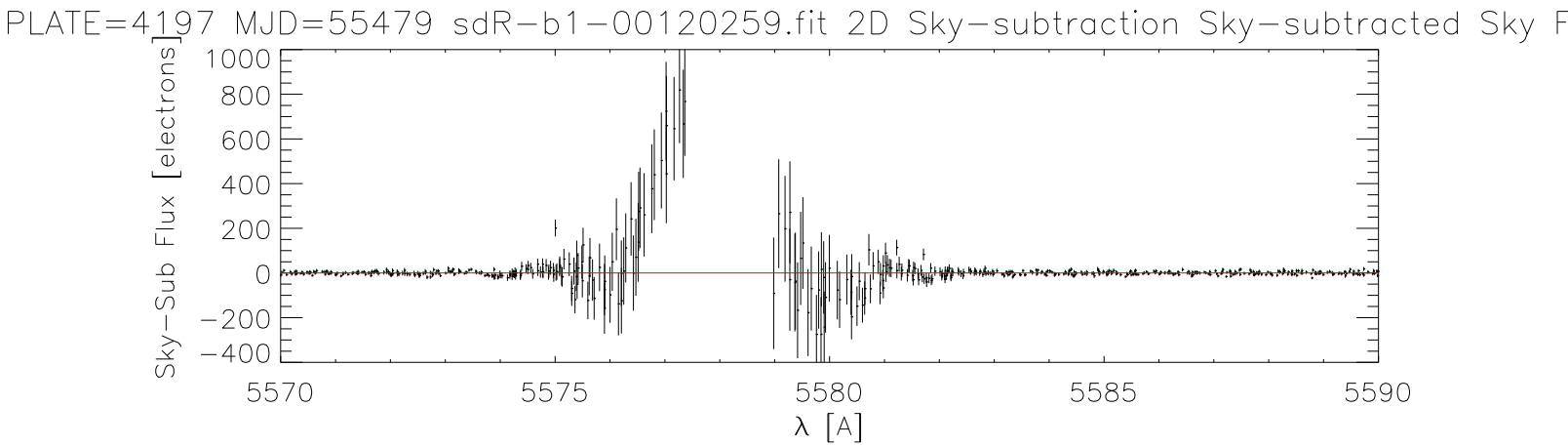

PLATE=4197 MJD=55479 sdR-b1-00120259.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
800
600
400
200
0
-200
-400
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 40

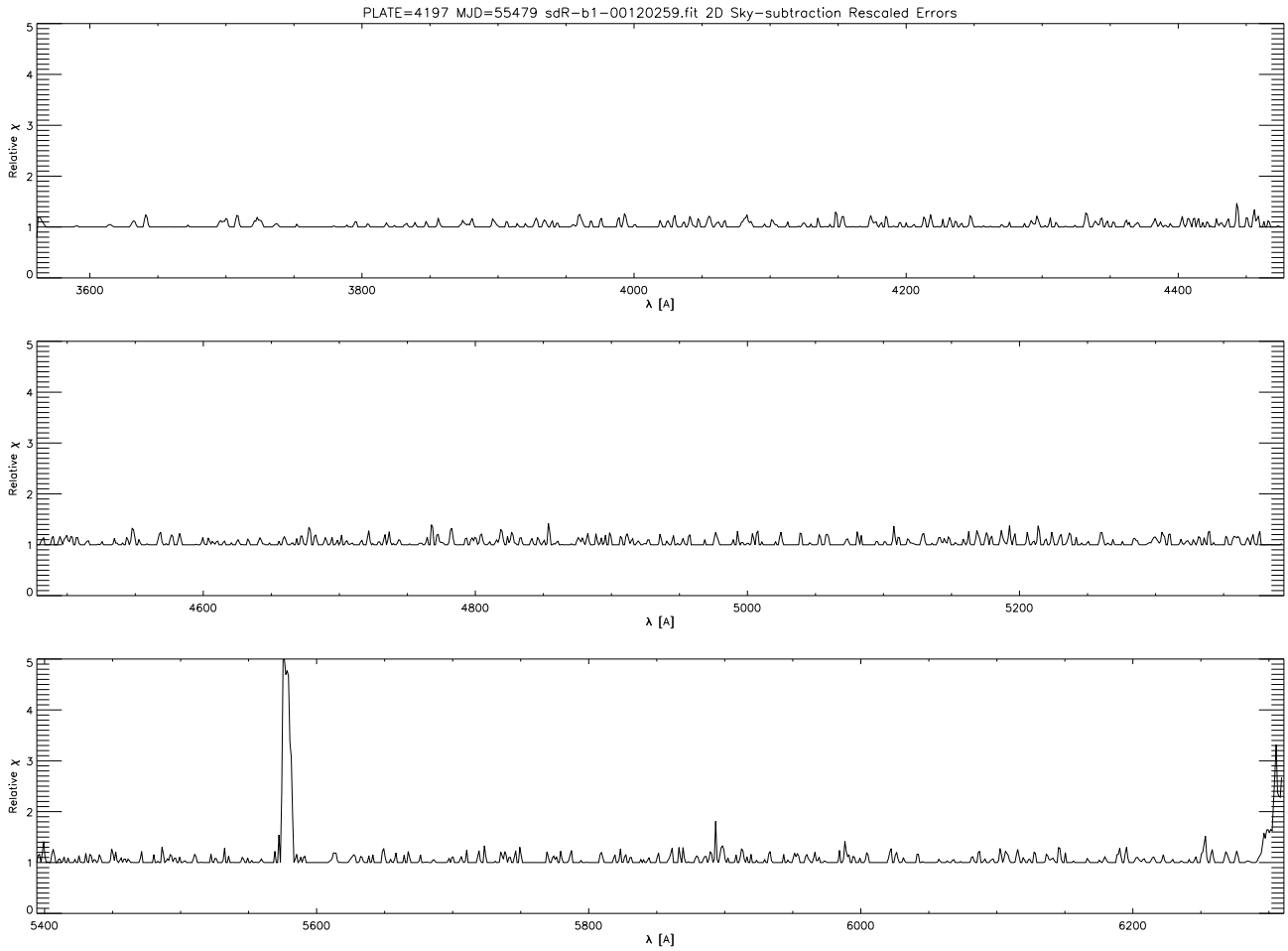


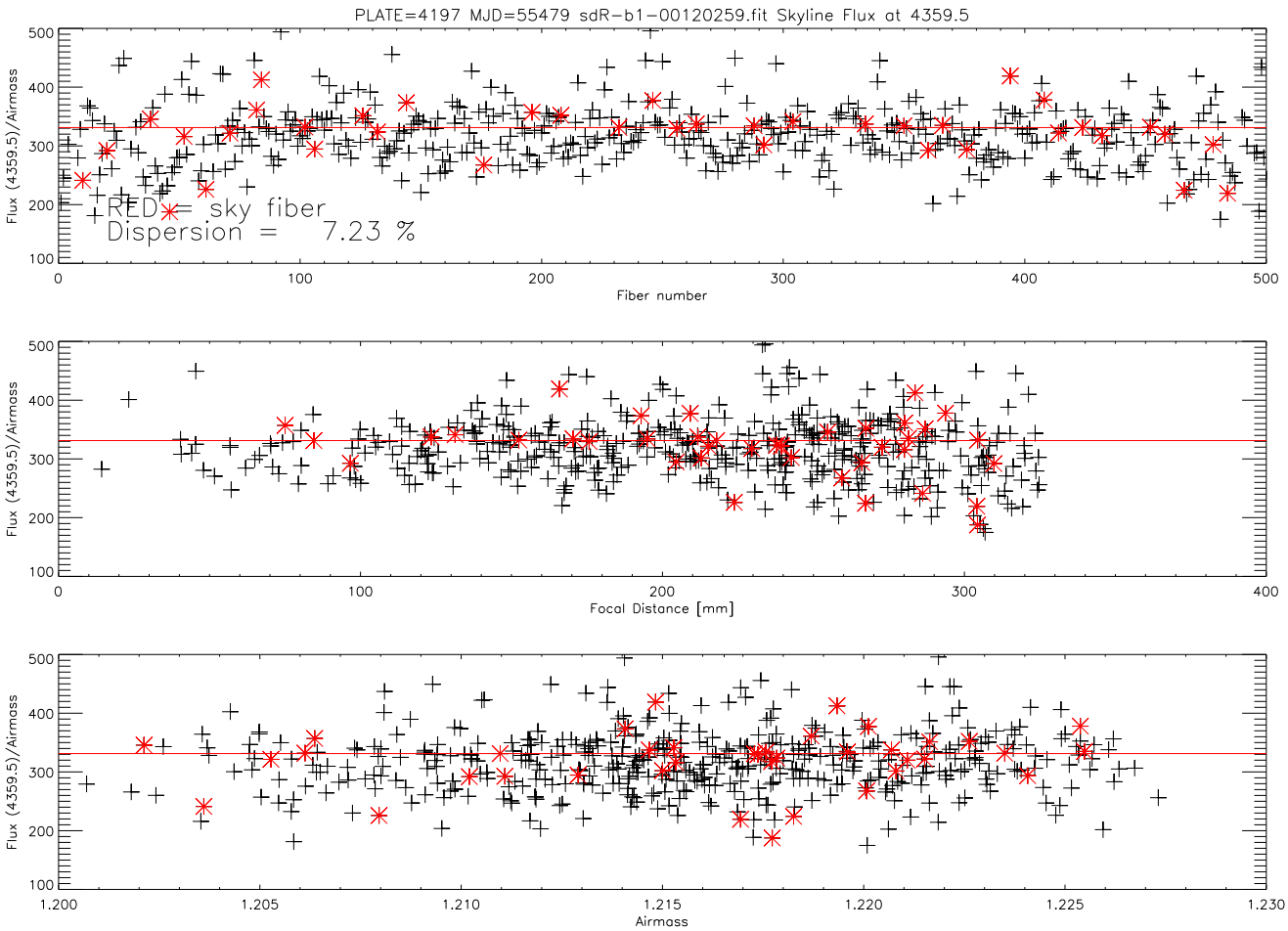

PLATE=4197 MJD=55479 sdR-b1-00120259.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

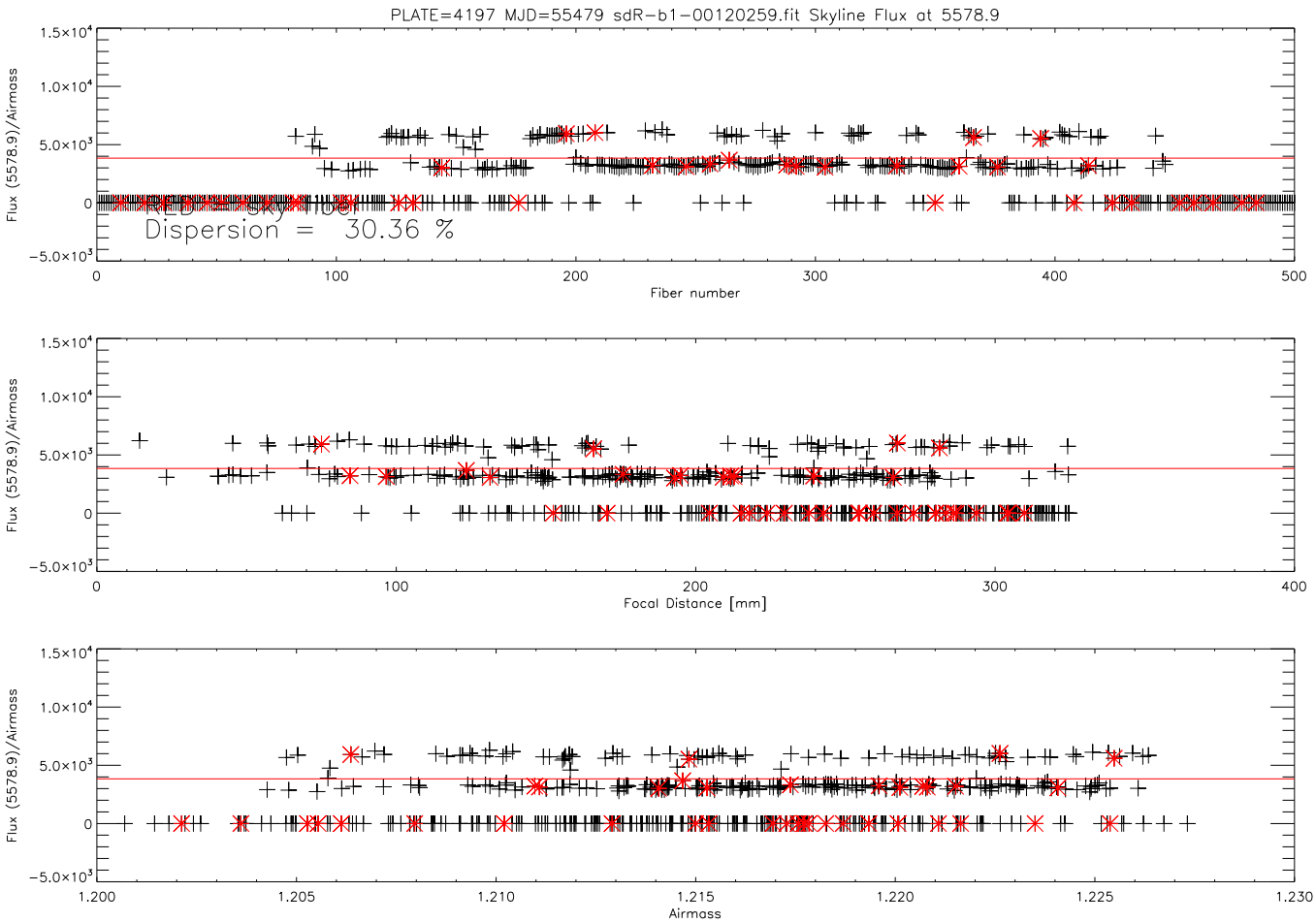

PLATE=4197 MJD=55479 sdR-b1-00120259.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
4000
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]

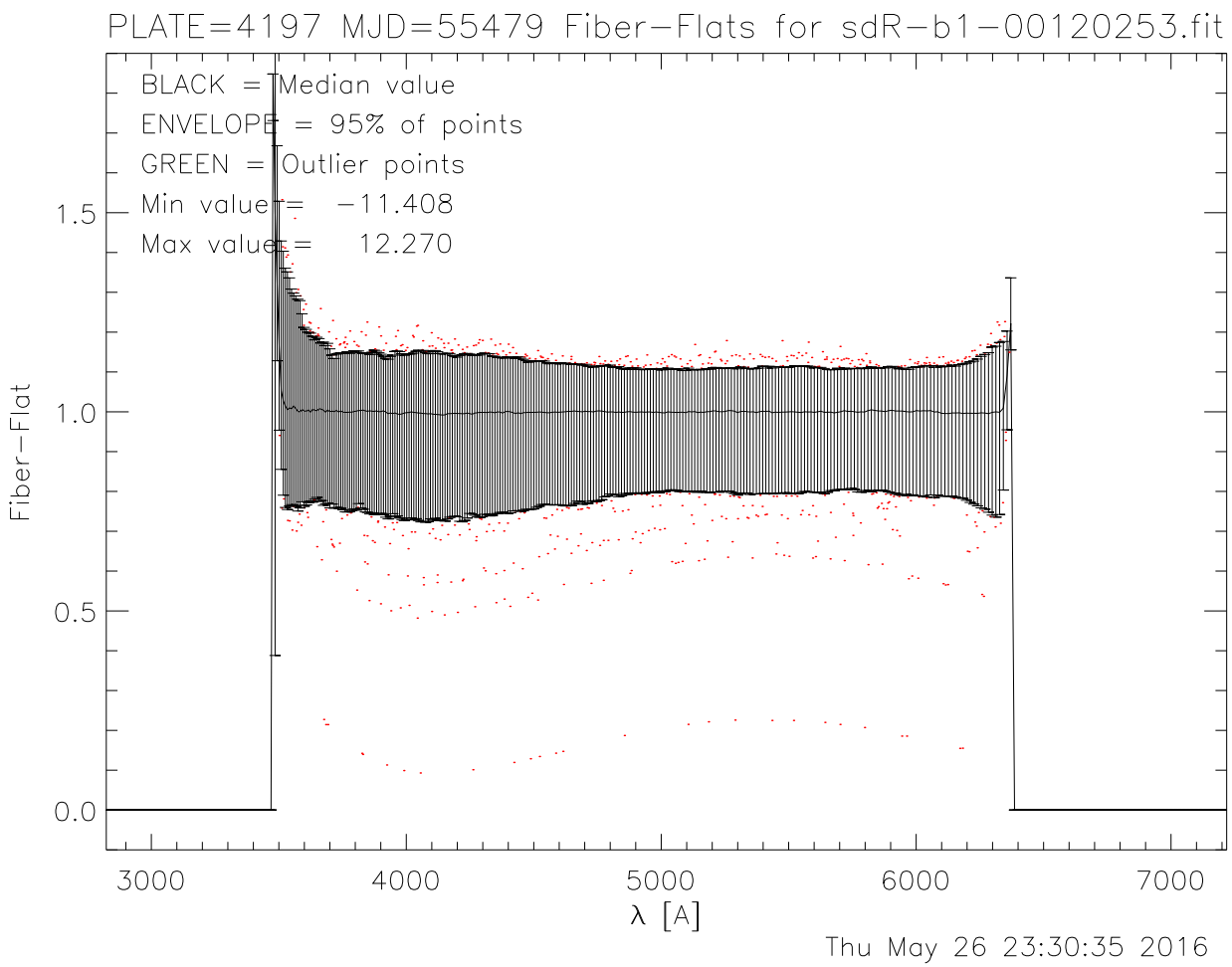

PLATE=4197 MJD=55479 sdR-b1-00120259.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1000
800
600
400
200
0
-200
-400
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 40




PLATE=4197 MJD=55479 sdR-b1-00120259.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
Fiber number
RED= sky fiber
Dispersion = 7.23 %
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass


PLATE=4197 MJD=55479 sdR-b1-00120259.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
1.5×10⁴
1.0×10⁴
5.0×10³
0
−5.0×10³
Dispersion = 30.36 %
0
100
200
300
400
500
Fiber number
Flux (5578.9)/Airmass
Focal Distance [mm]
Flux (5578.9)/Airmass
1.200
1.205
1.210
1.215
1.220
1.225
1.230
Airmass


PLATE=4197 MJD=55479 Fiber-Flats for sdR-b1-00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = -11.408
Max value = 12.270
Fiber-Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
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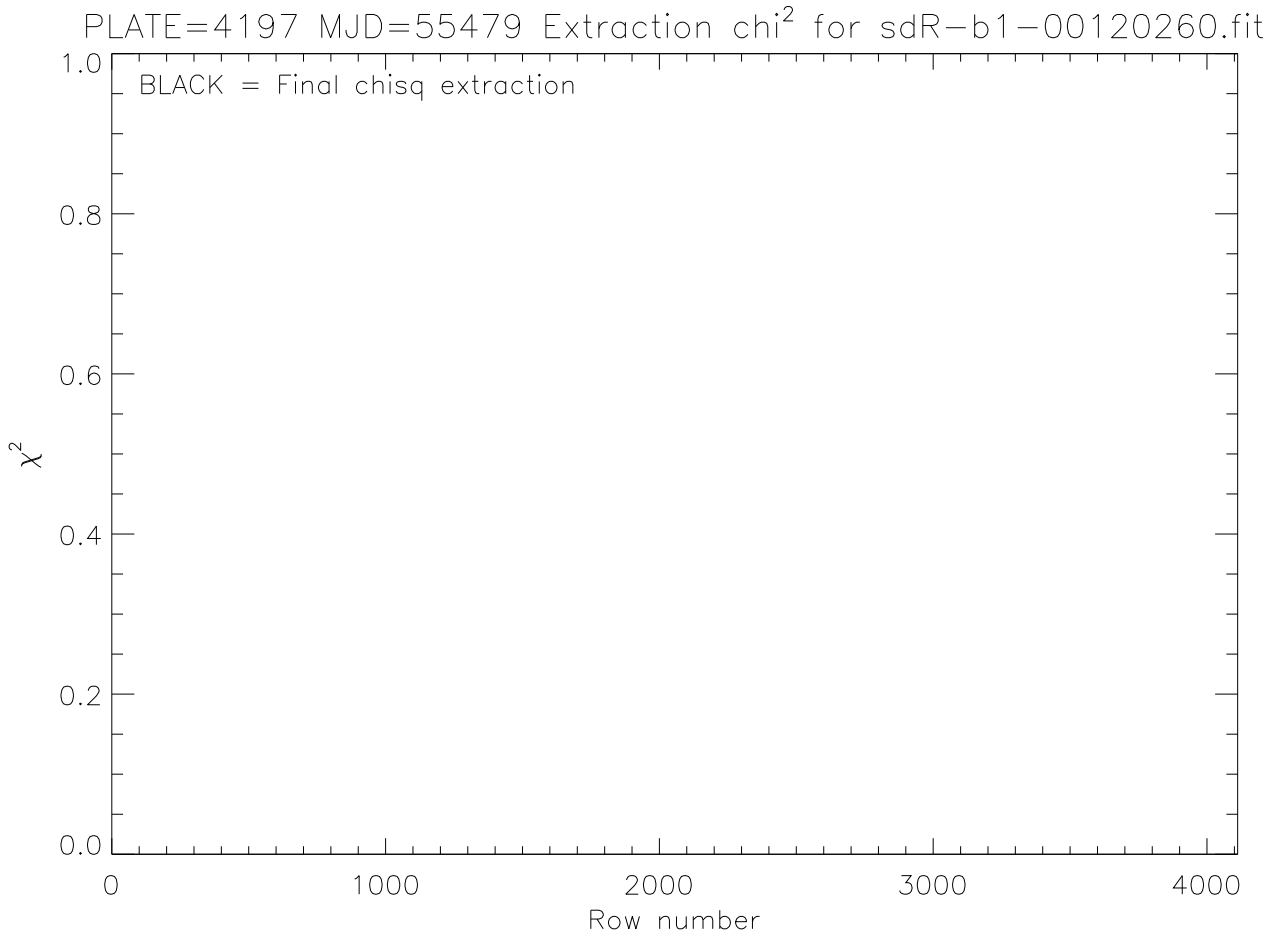
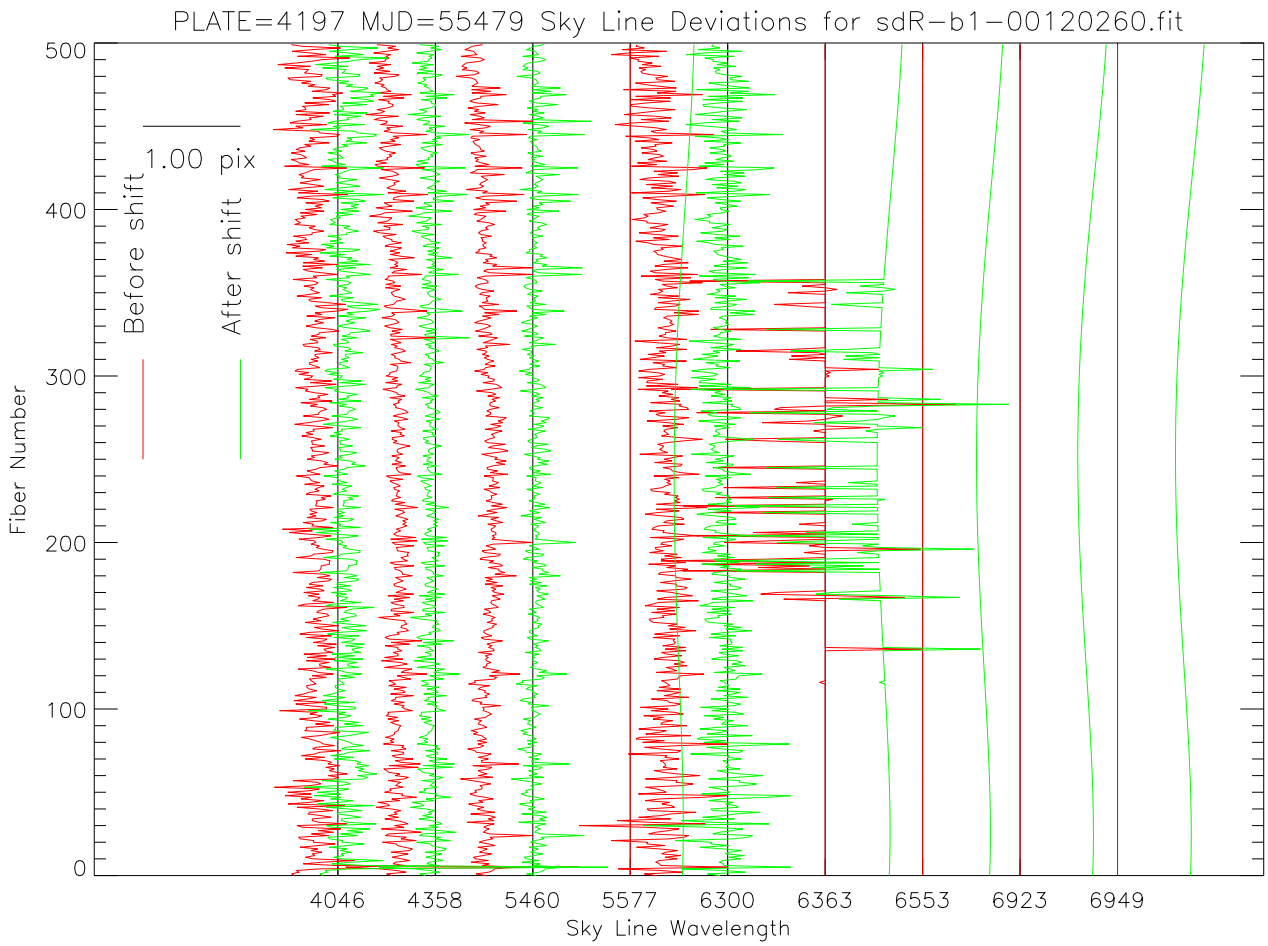
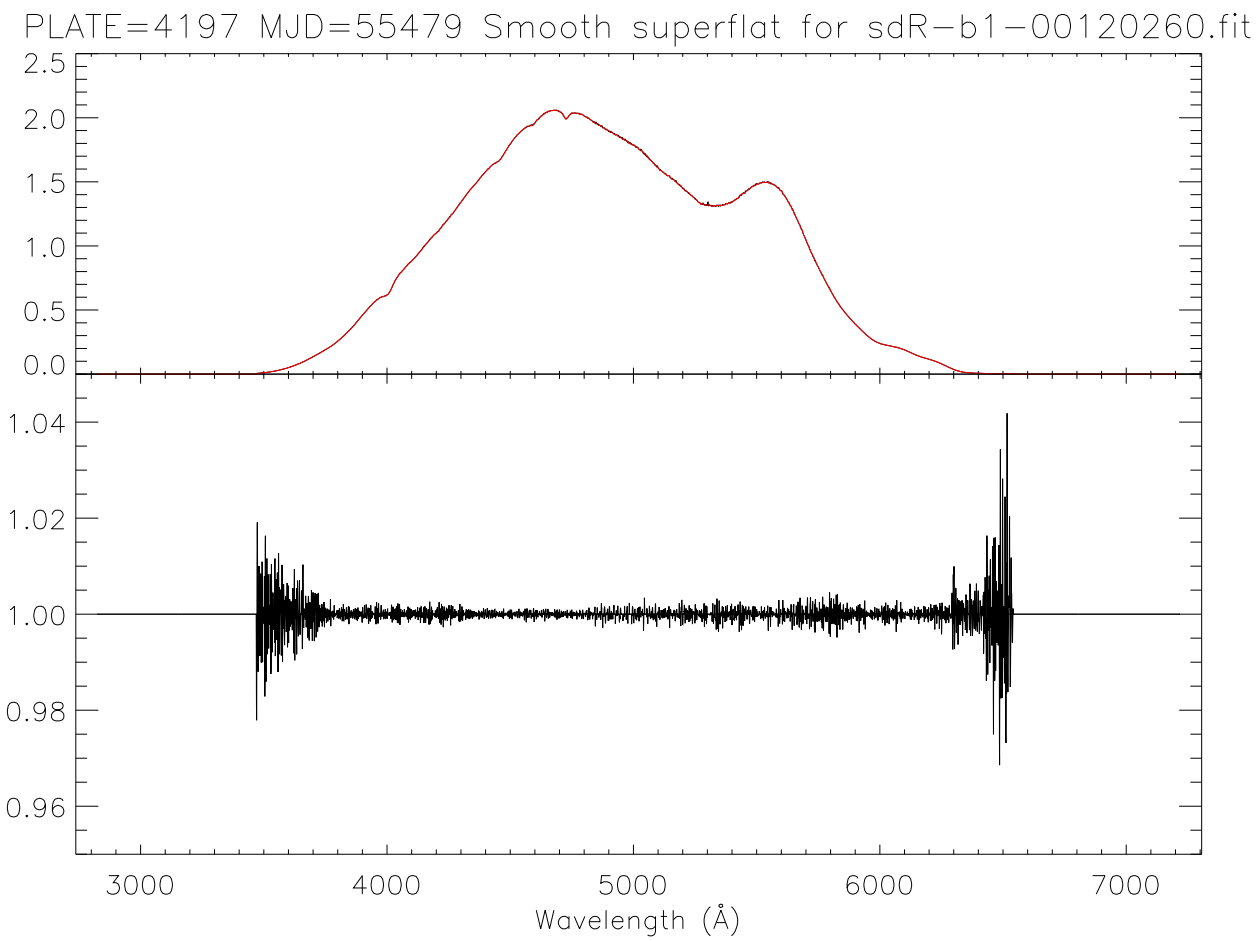
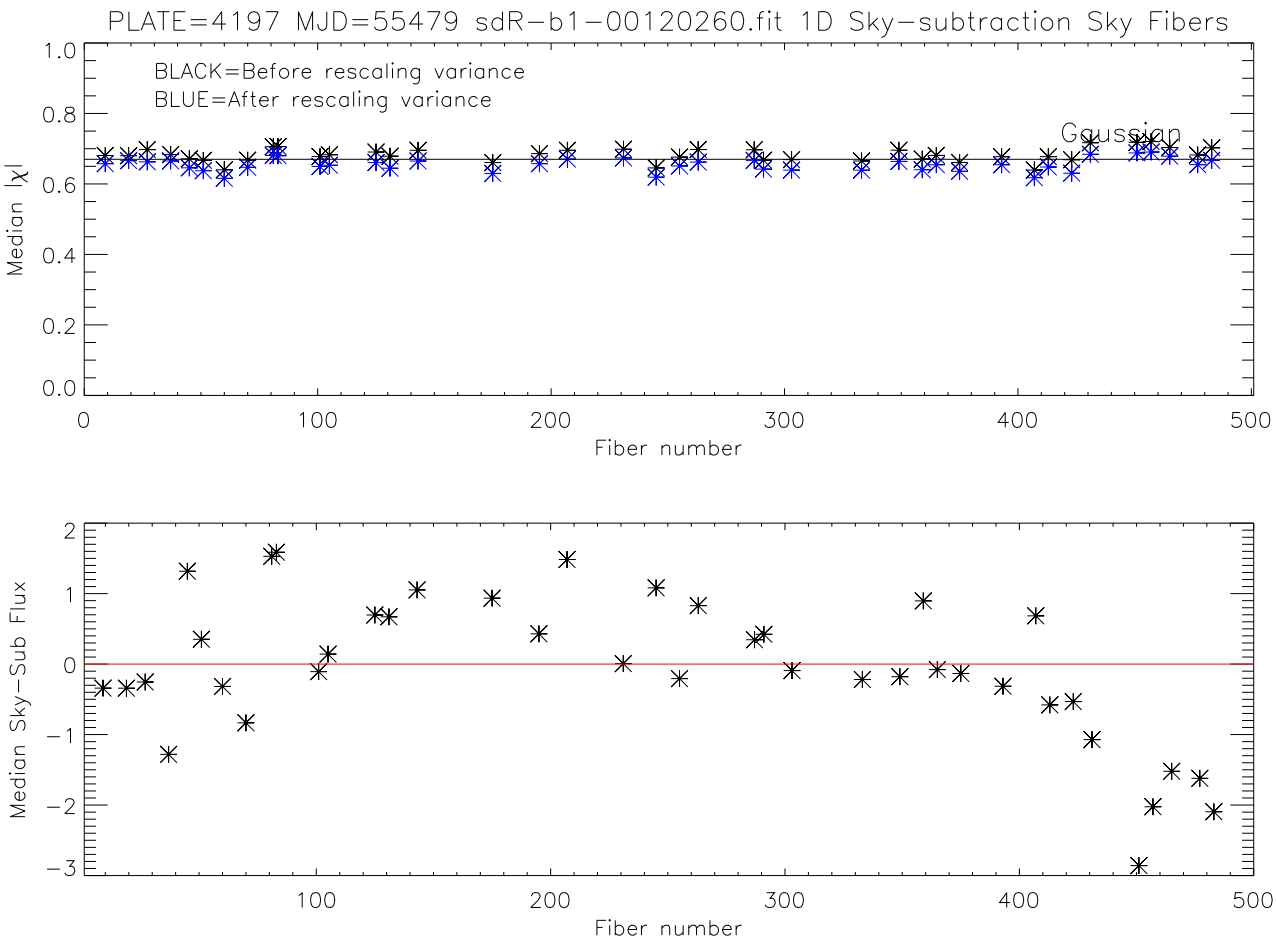
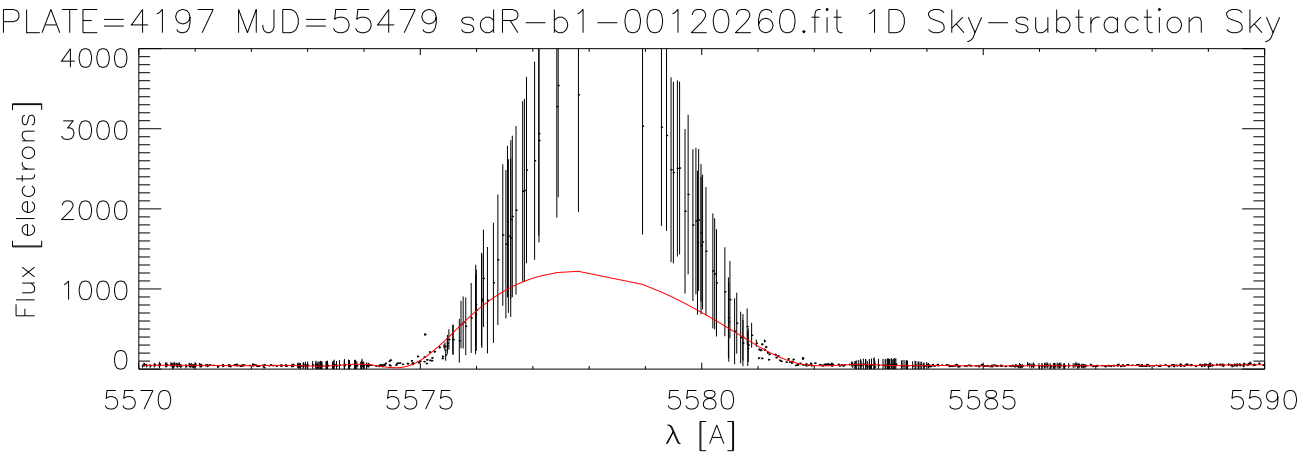
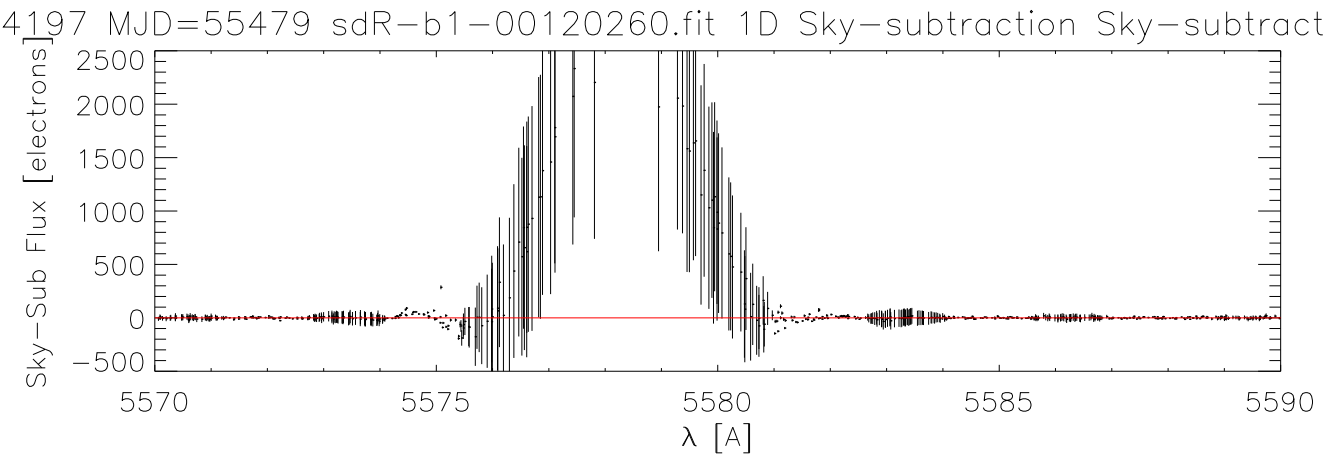

PLATE=4197 MJD=55479 Extraction chi^2 for sdR-b1-00120260.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b1-00120260.fit
1.00 pix
Before shift
After shift
Fiber Number
0
100
200
300
400
500
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

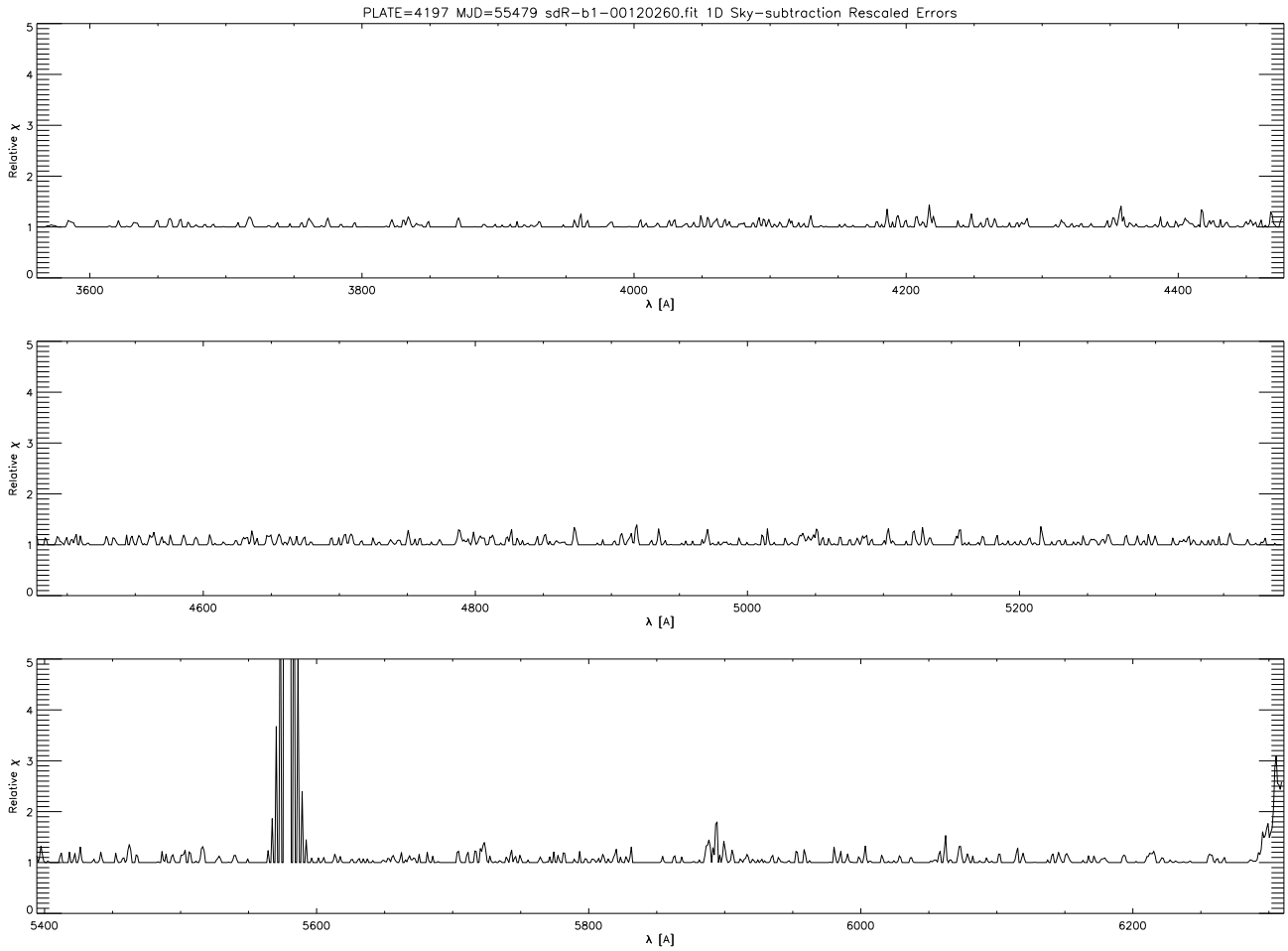

PLATE=4197 MJD=55479 Smooth superflat for sdR-b1-00120260.fit
2.5
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

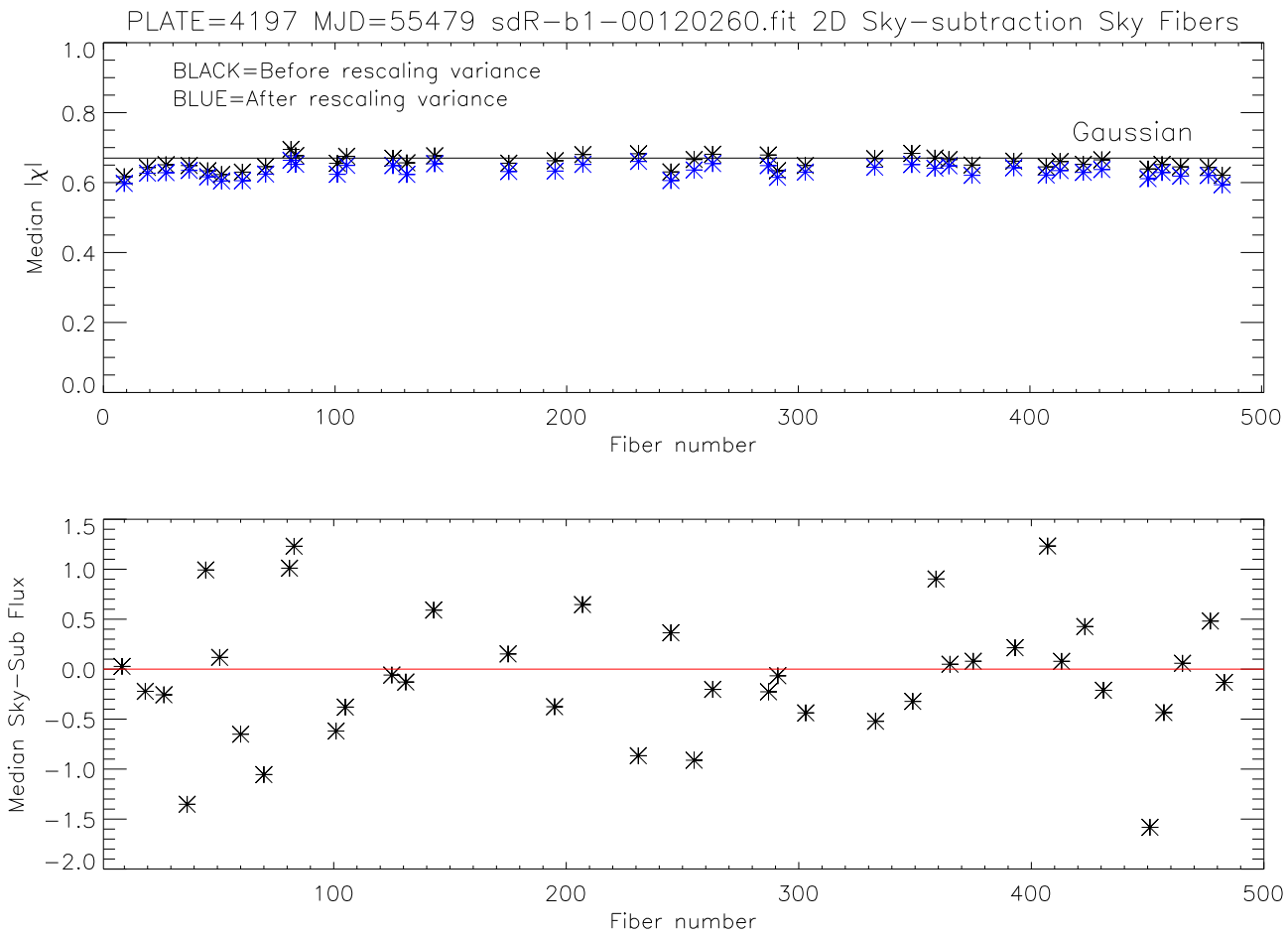

PLATE=4197 MJD=55479 sdR-b1-00120260.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

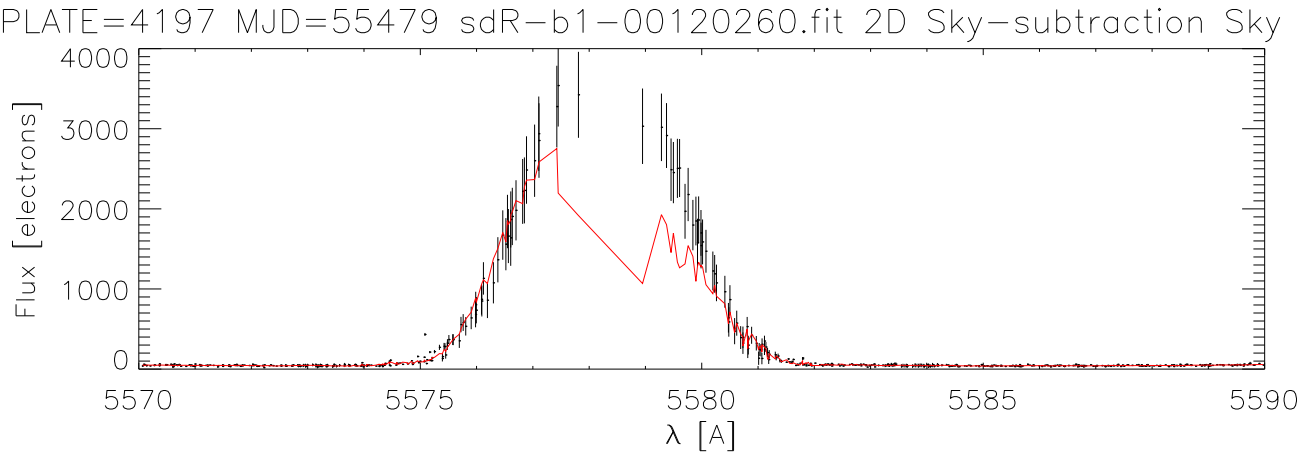

PLATE=4197 MJD=55479 sdR-b1-00120260.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
4000
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]

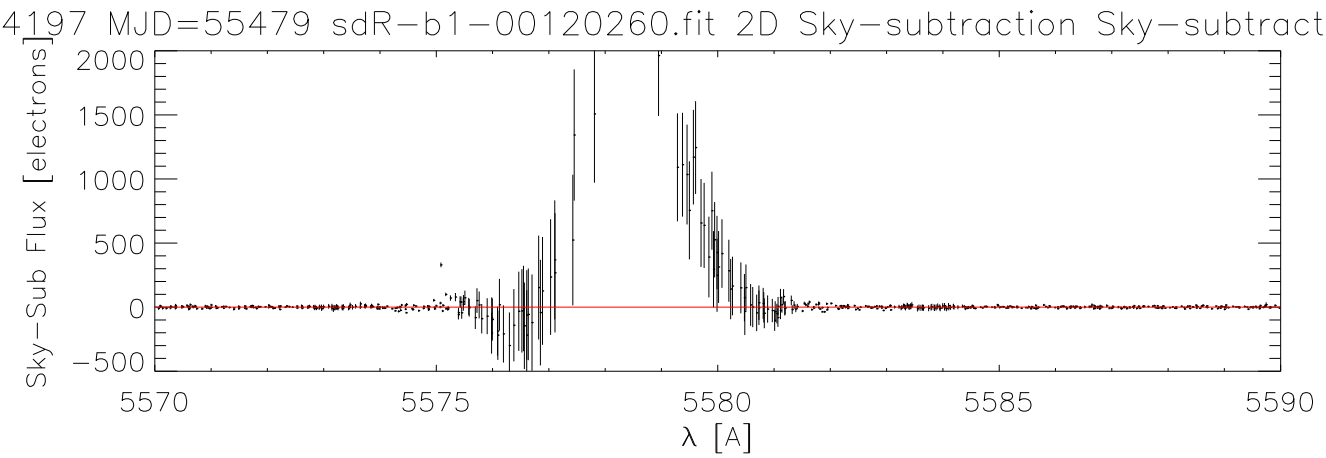

PLATE=4197 MJD=55479 sdR-b1-00120260.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
2500
2000
1500
1000
500
0
-500
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 40

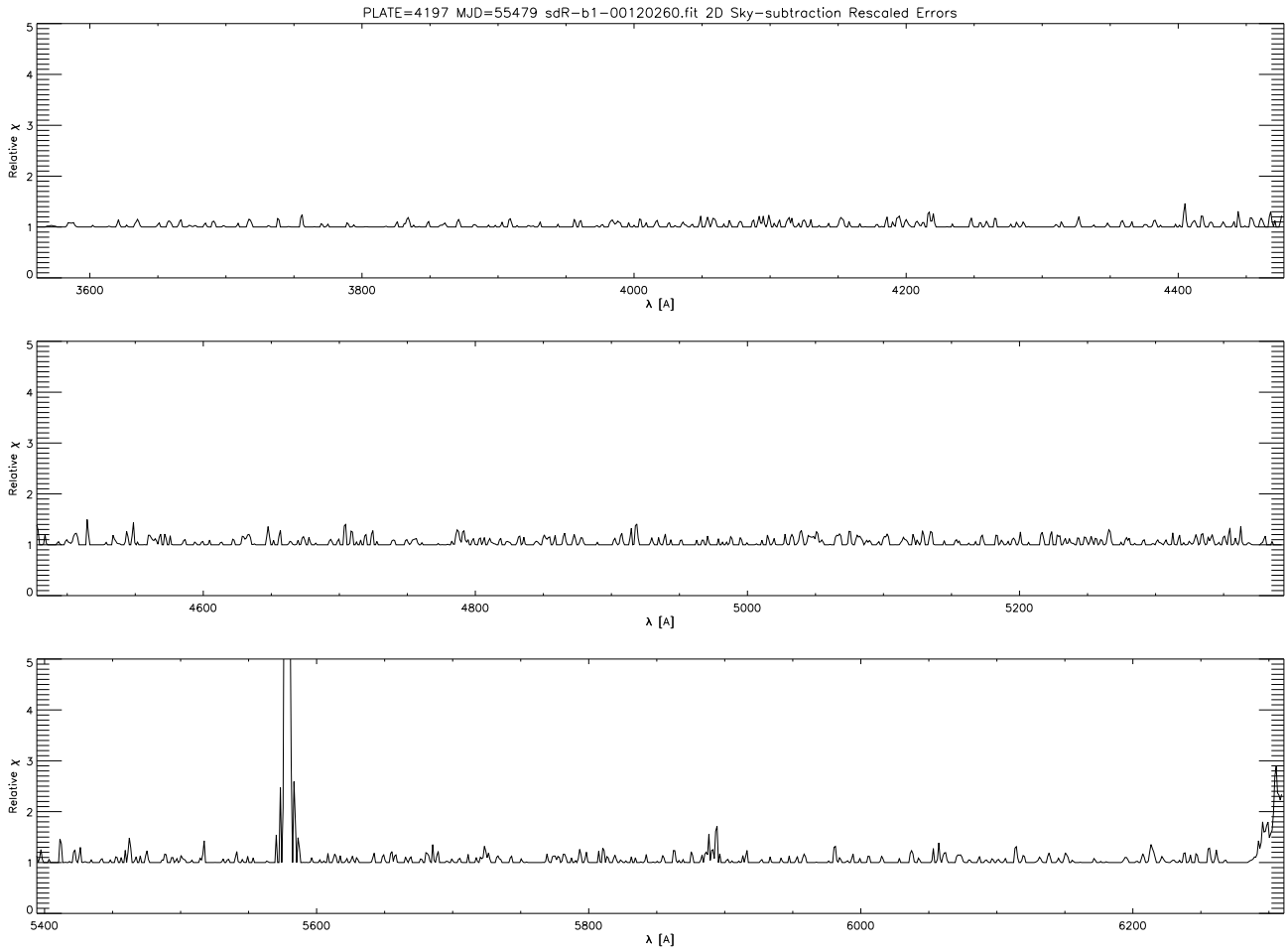


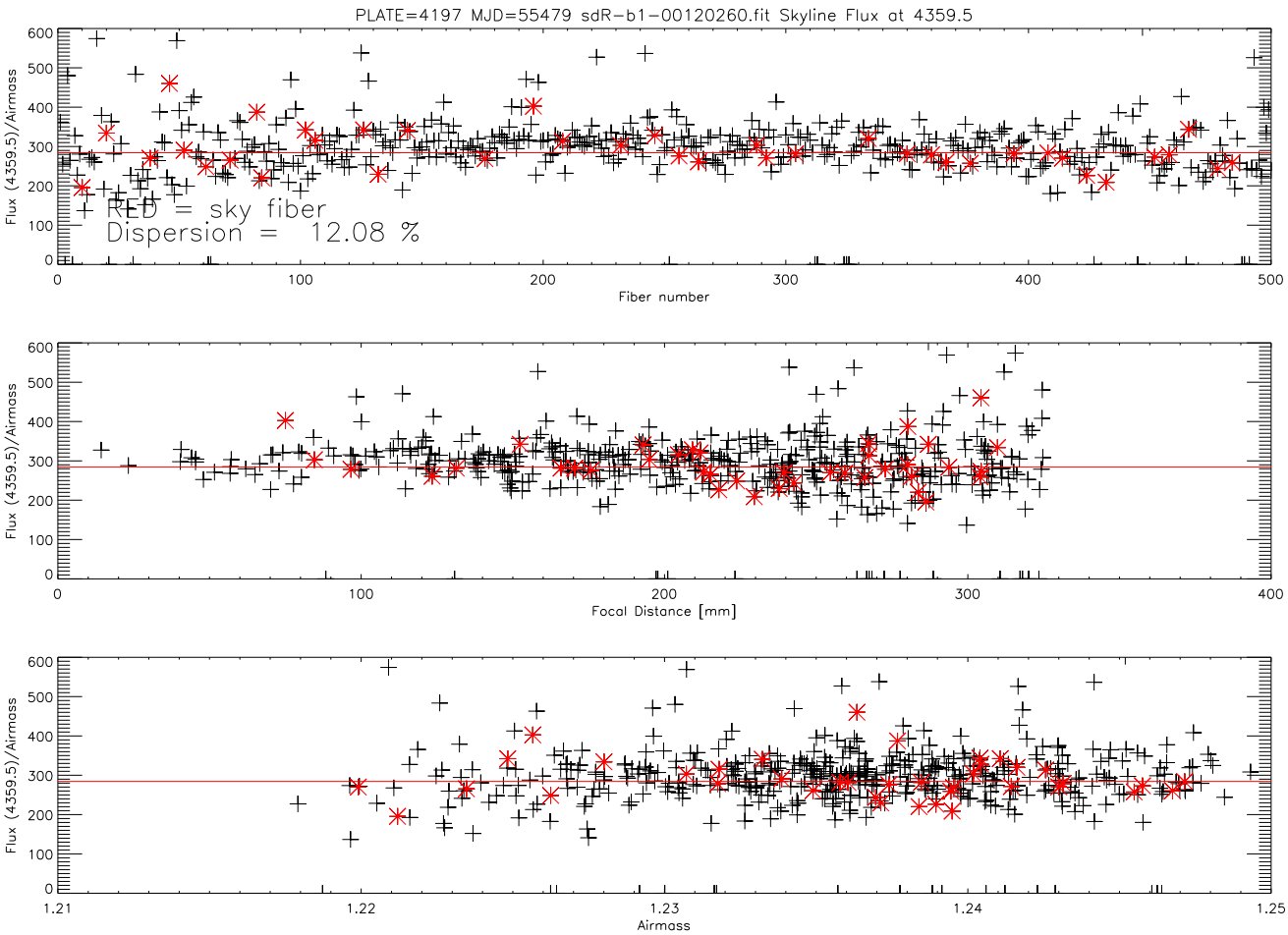

PLATE=4197 MJD=55479 sdR-b1-00120260.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

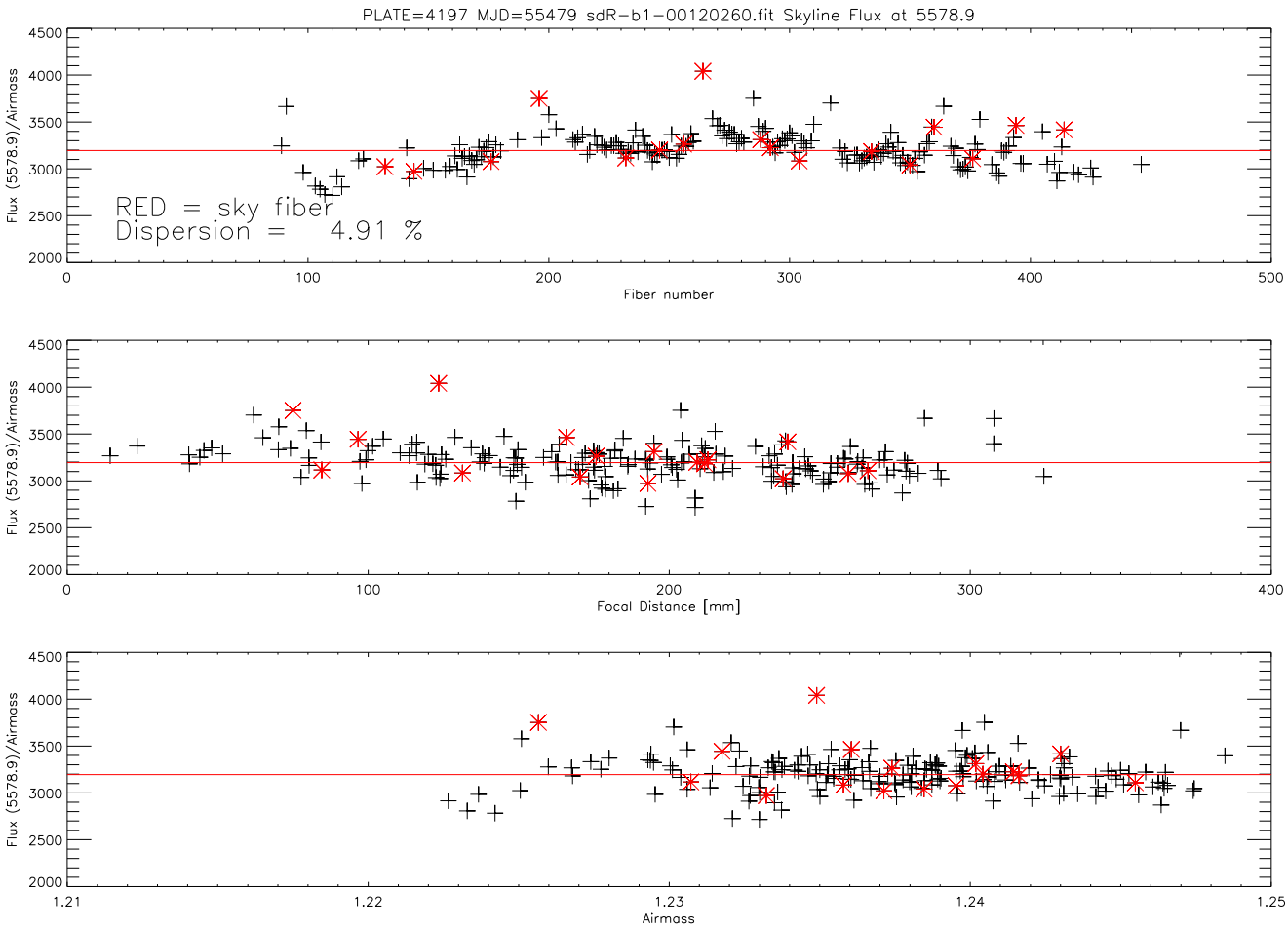

PLATE=4197 MJD=55479 sdR-b1-00120260.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
4000
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]


PLATE=4197 MJD=55479 sdR-b1-00120260.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
2000
1500
1000
500
0
-500
5570
5575
5580
5585
5590
λ [A]

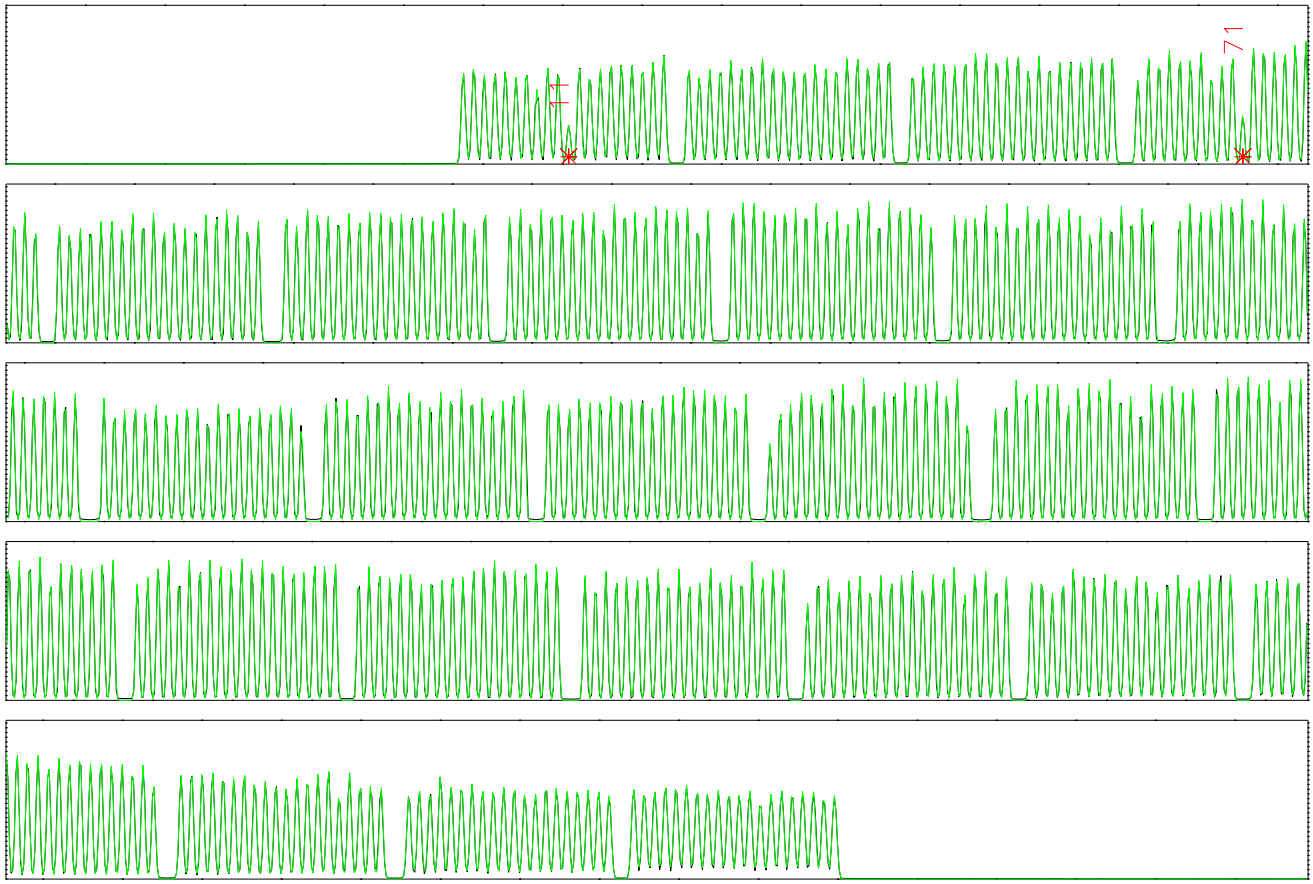
Number of sky fibers = 40

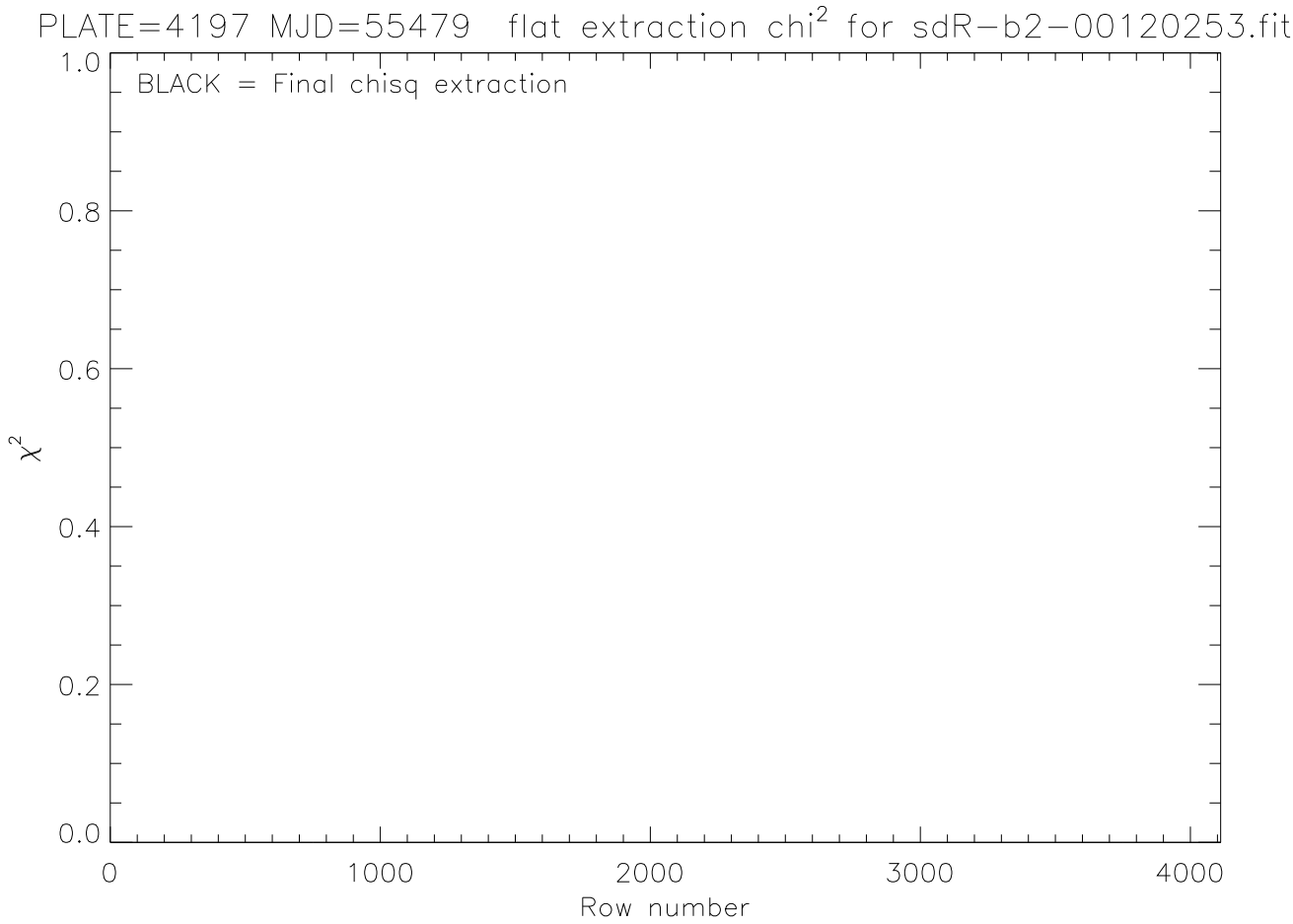


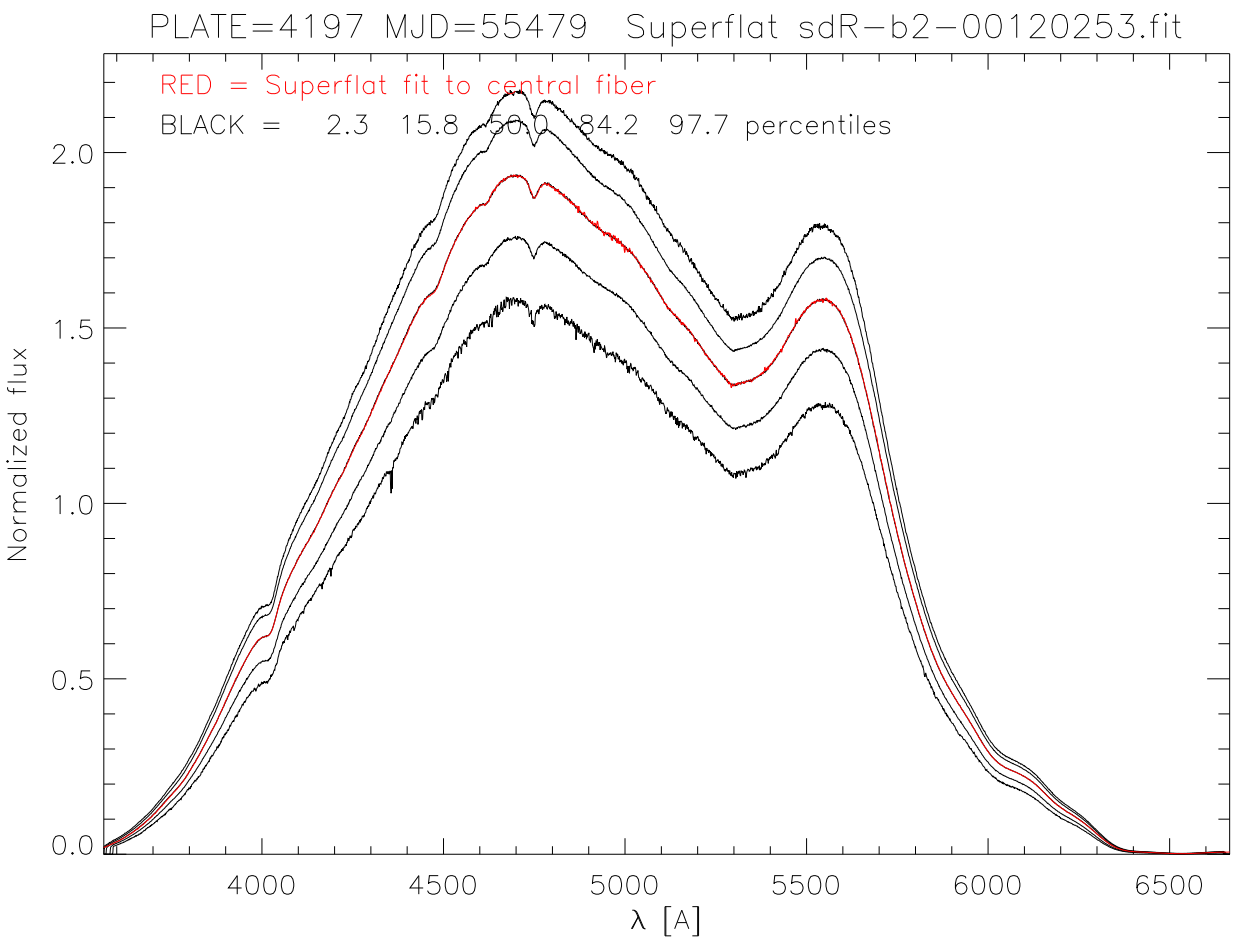

PLATE=4197 MJD=55479 sdR-b1-00120260.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
RED = sky fiber
Dispersion = 12.08 %
Fiber number
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

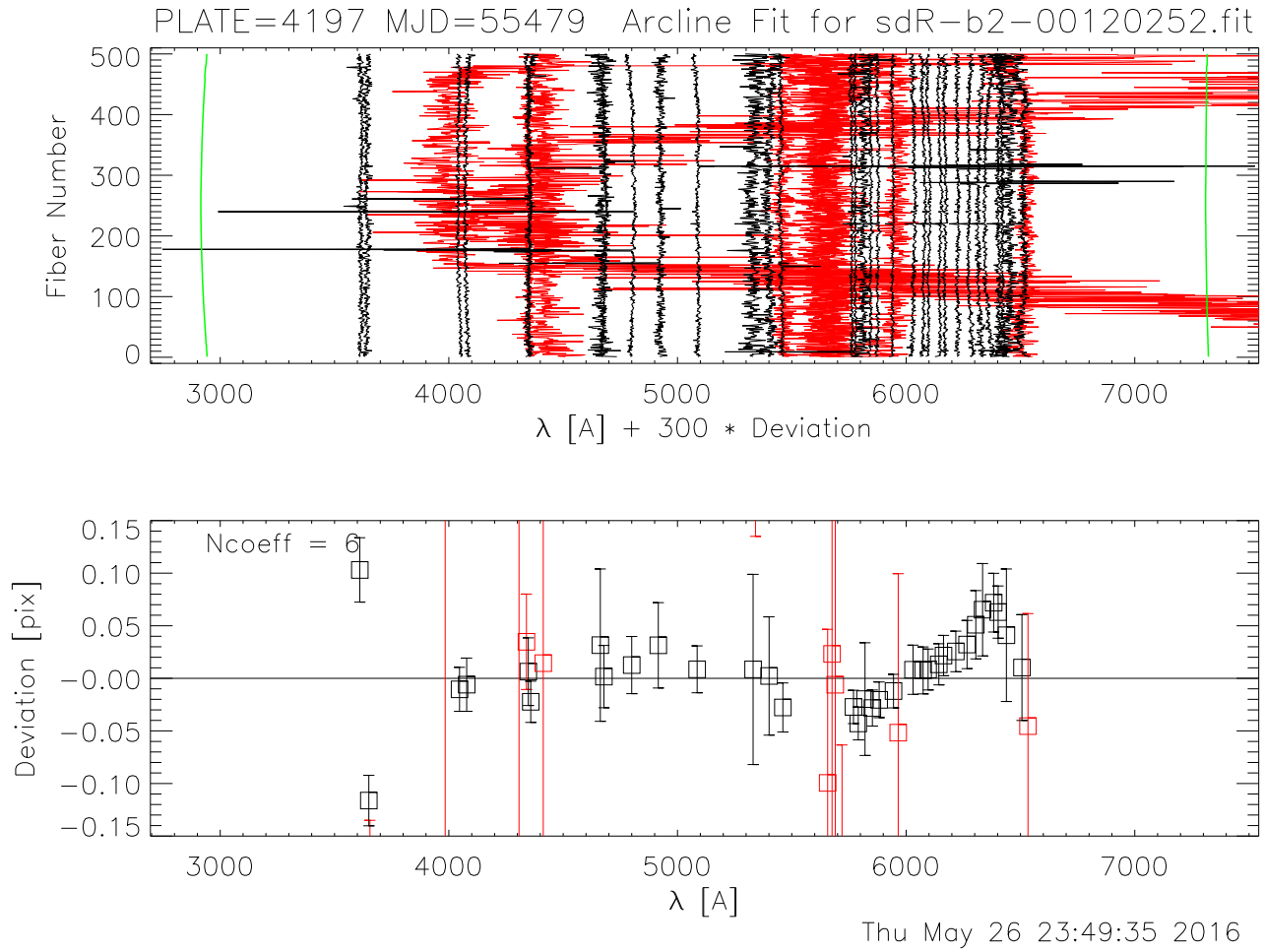

PLATE=4197 MJD=55479 sdR-b1-00120260.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 4.91 %
Fiber number
Focal Distance [mm]
Airmass

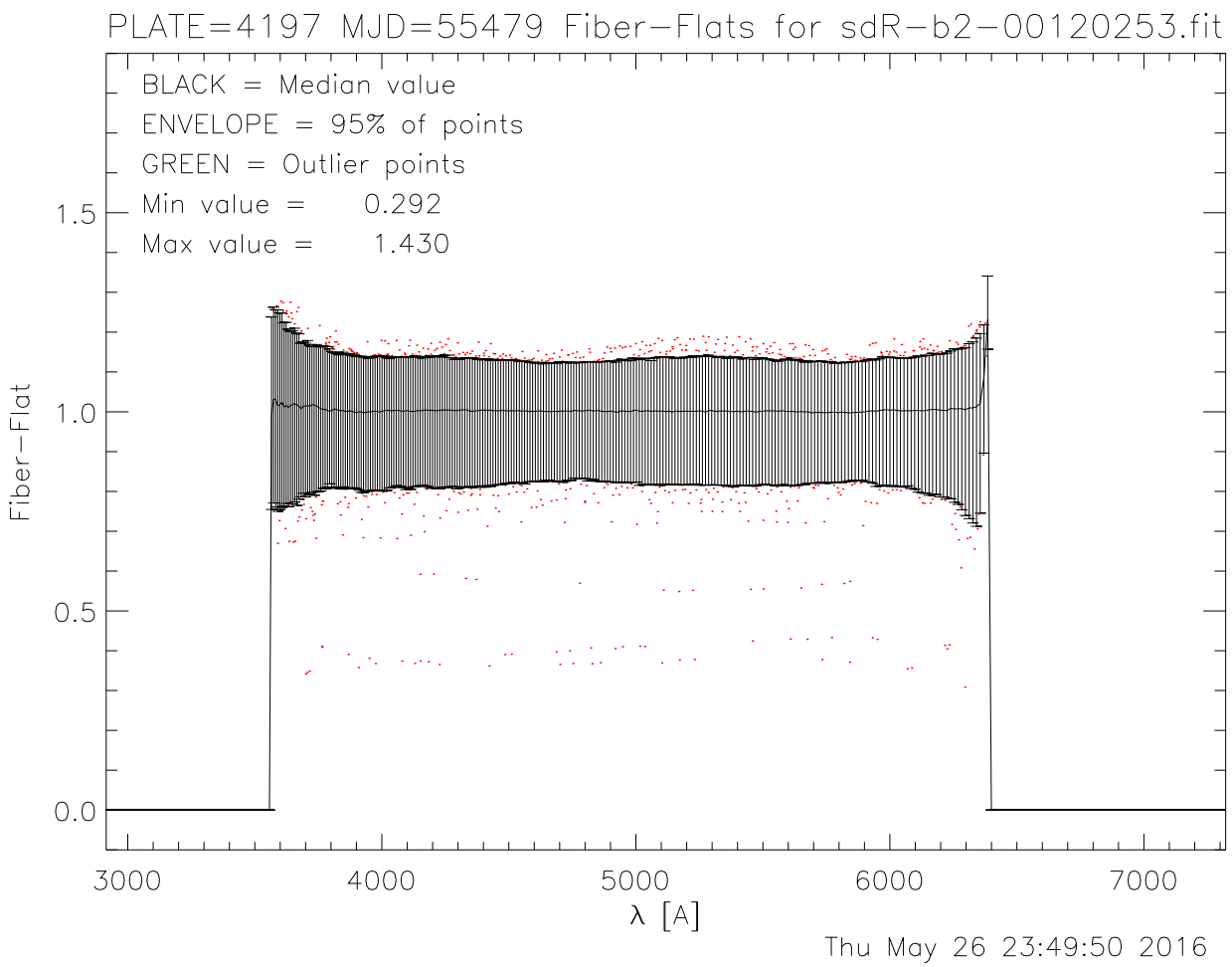
PLATE=4197 MJD=55479 Traces sdR-b2-00120253.fit

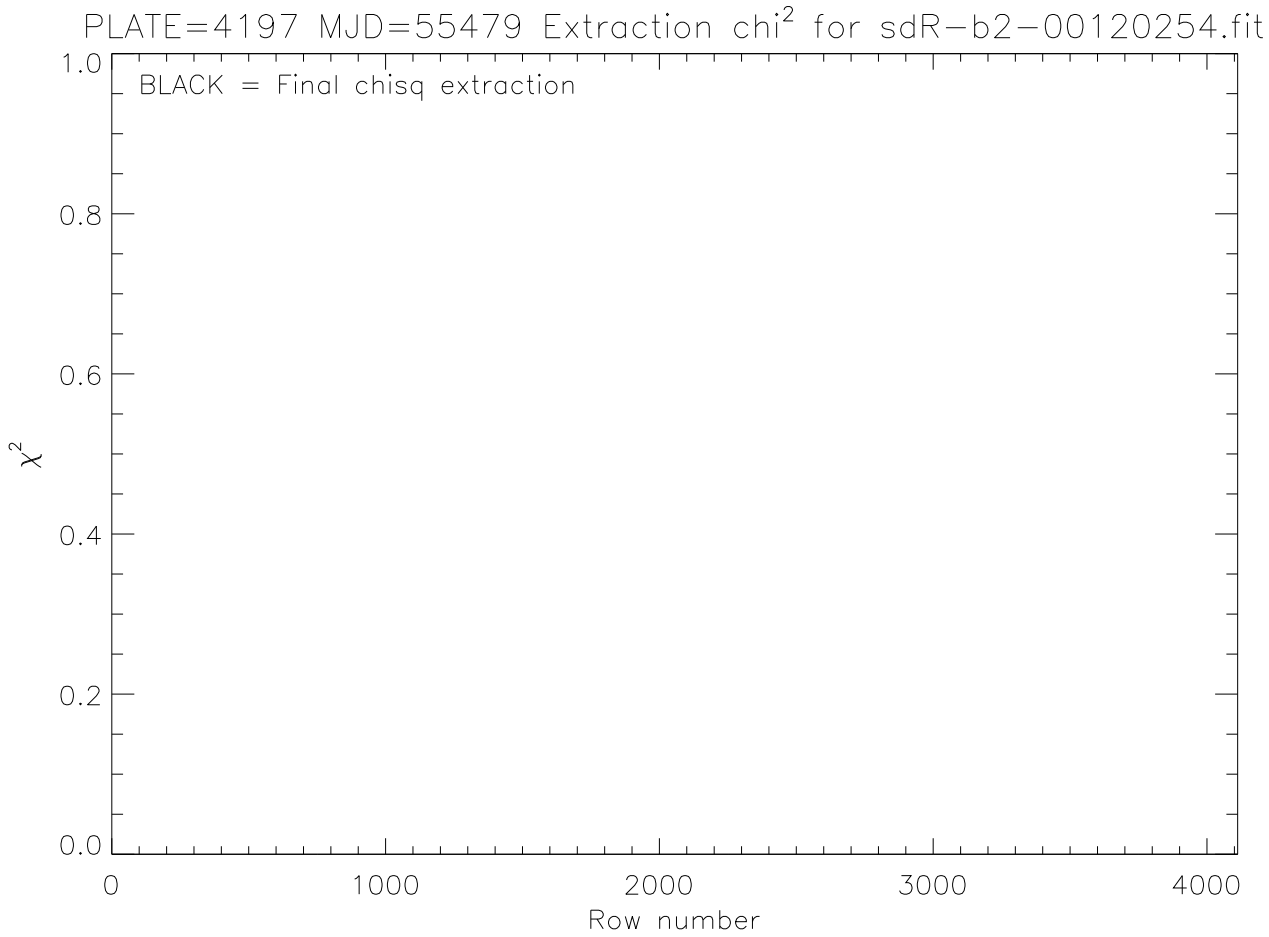


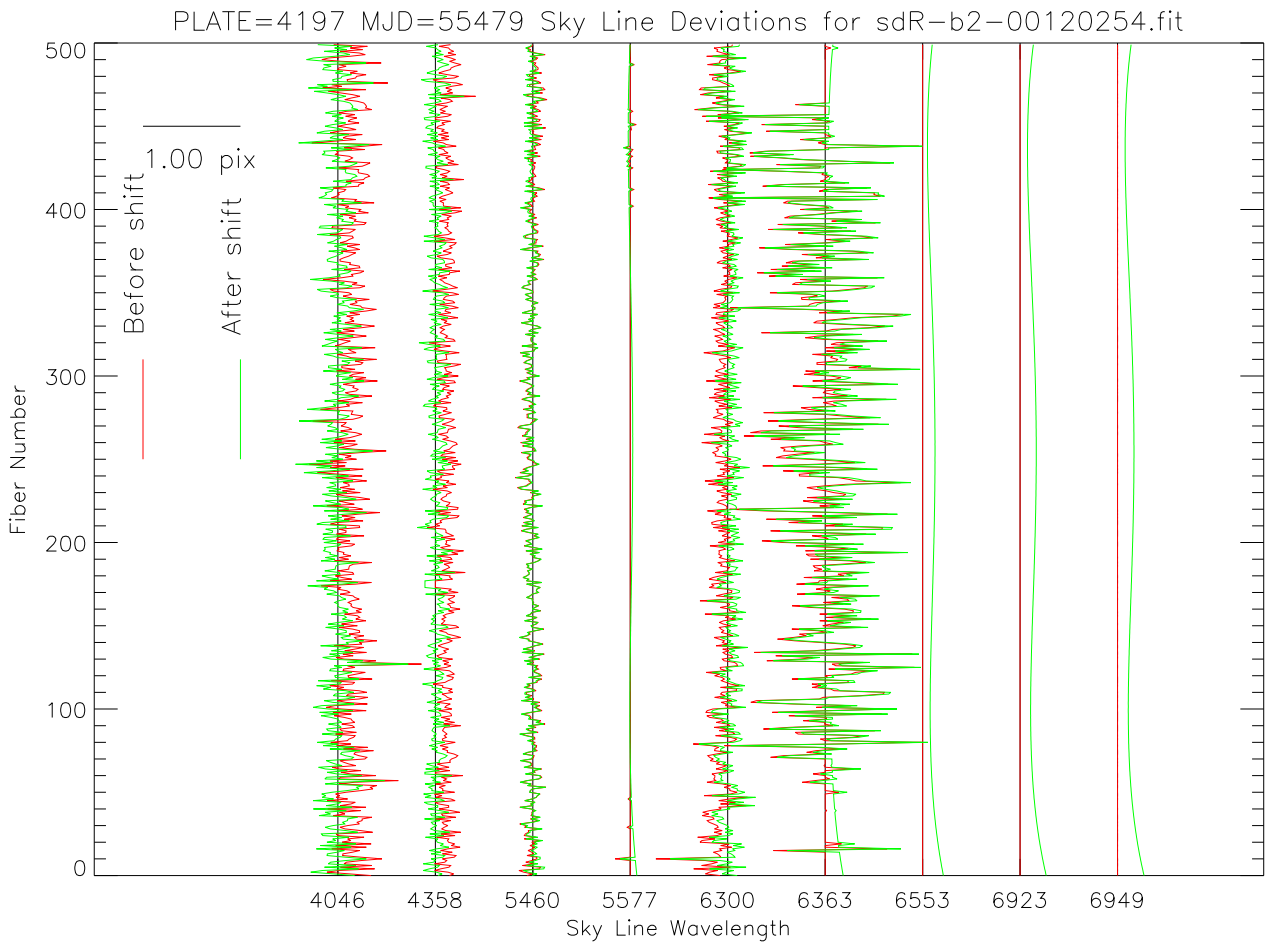

PLATE=4197 MJD=55479 flat extraction chi^2 for sdR−b2−00120253.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number

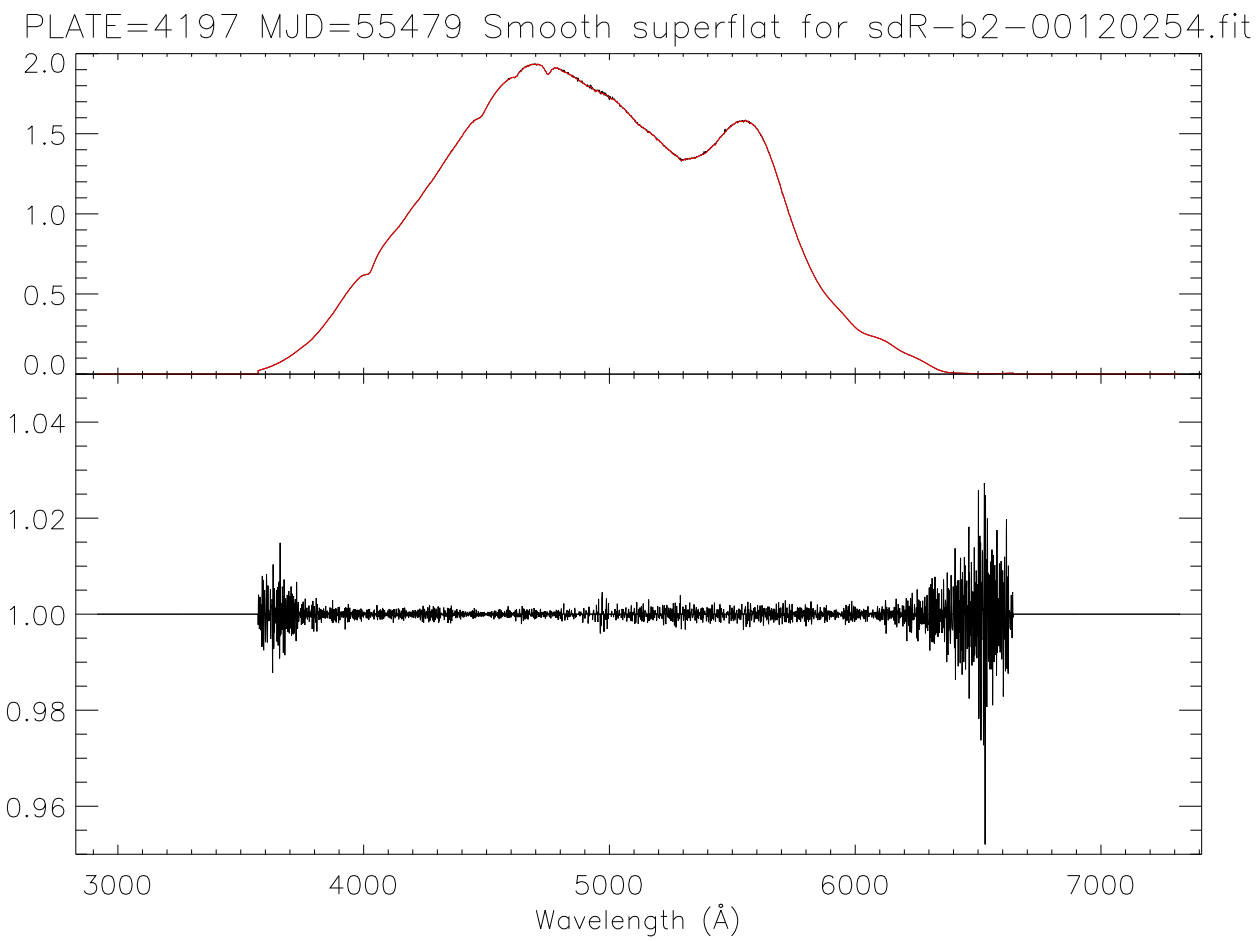

PLATE=4197 MJD=55479 Superflat sdR-b2-00120253.fit
RED = Superflat fit to central fiber
BLACK = 2.3 15.8 50.0 84.2 97.7 percentiles
Normalized flux
0.0
0.5
1.0
1.5
2.0
4000
4500
5000
5500
6000
6500
λ [A]

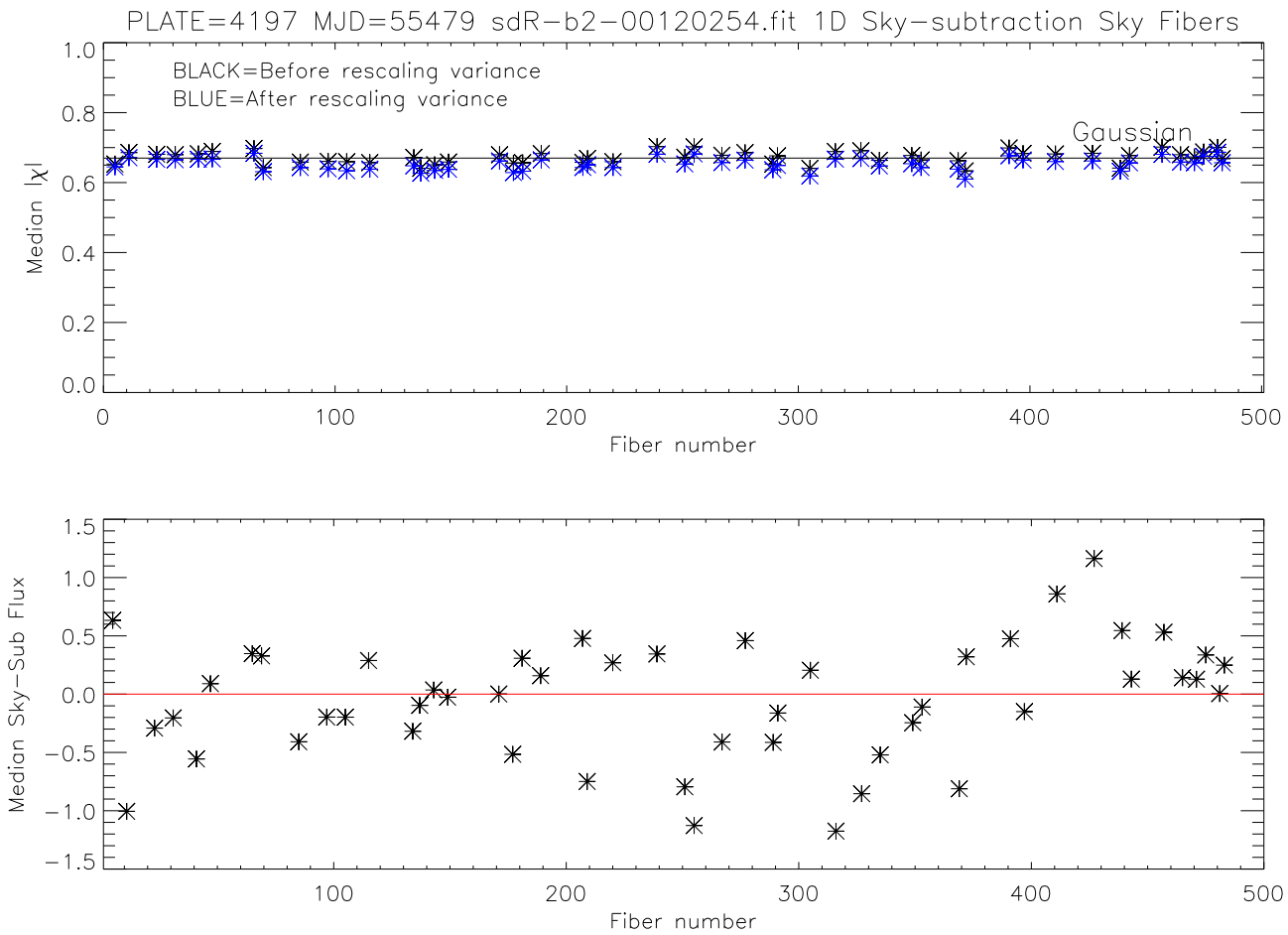

PLATE=4197 MJD=55479 Arcline Fit for sdR-b2-00120252.fit
Fiber Number
500
400
300
200
100
0
3000
4000
5000
6000
7000
λ [A] + 300 * Deviation
Ncoeff = 6
Deviation [pix]
0.15
0.10
0.05
−0.00
−0.05
−0.10
−0.15
3000
4000
5000
6000
7000
λ [A]
Thu May 26 23:49:35 2016

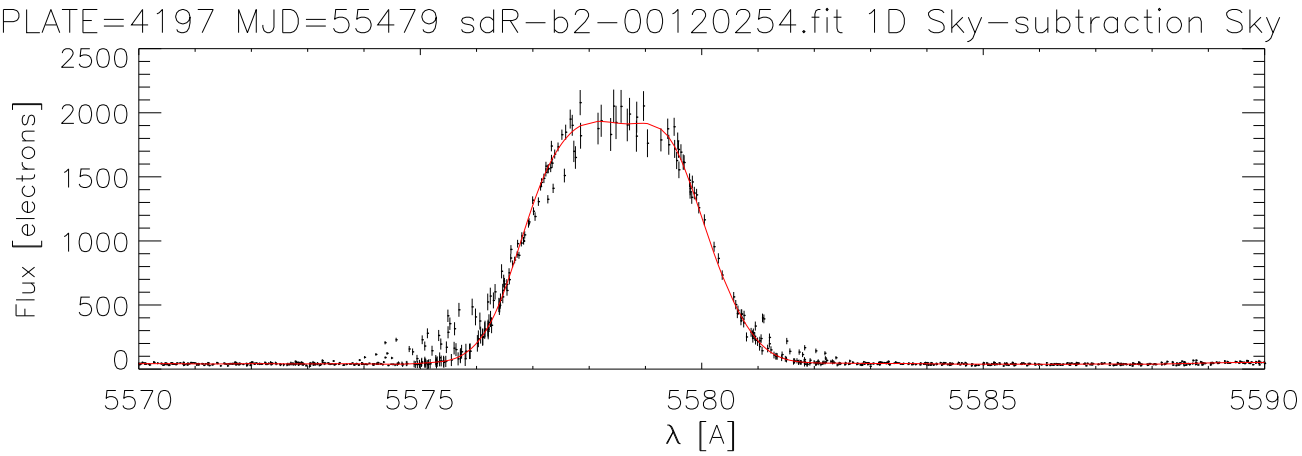

PLATE=4197 MJD=55479 Fiber−Flats for sdR−b2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = 0.292
Max value = 1.430
Fiber−Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Thu May 26 23:49:50 2016

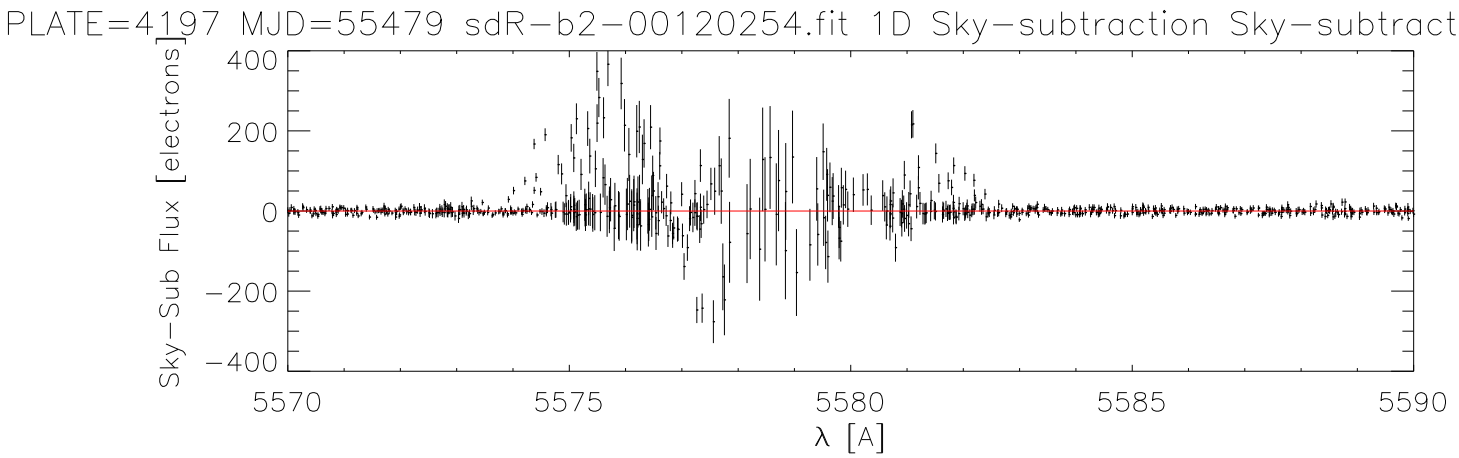

PLATE=4197 MJD=55479 Extraction chi^2 for sdR-b2-00120254.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b2-00120254.fit
1.00 pix
Before shift
After shift
Fiber Number
0
100
200
300
400
500
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

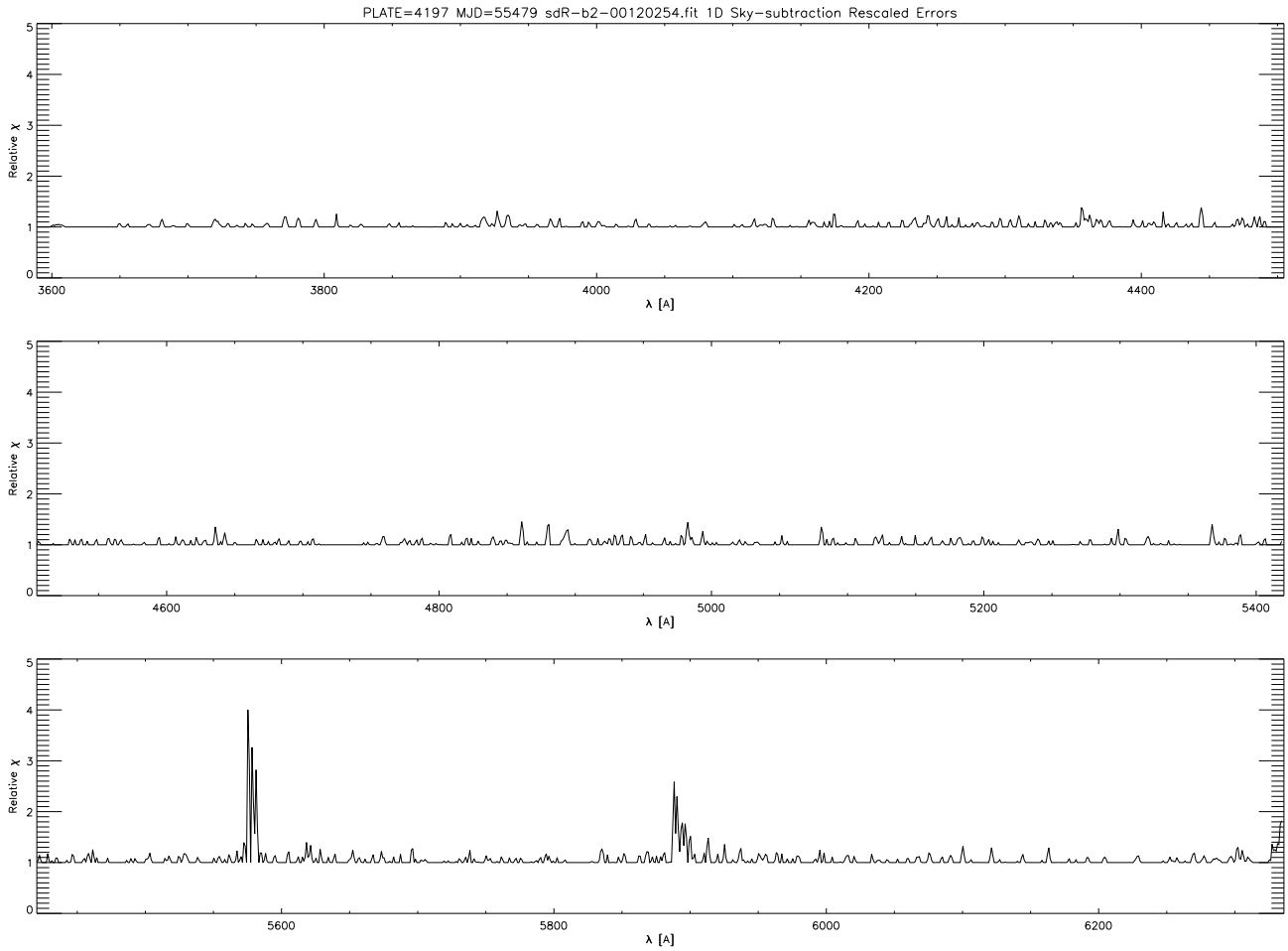

PLATE=4197 MJD=55479 Smooth superflat for sdR-b2-00120254.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

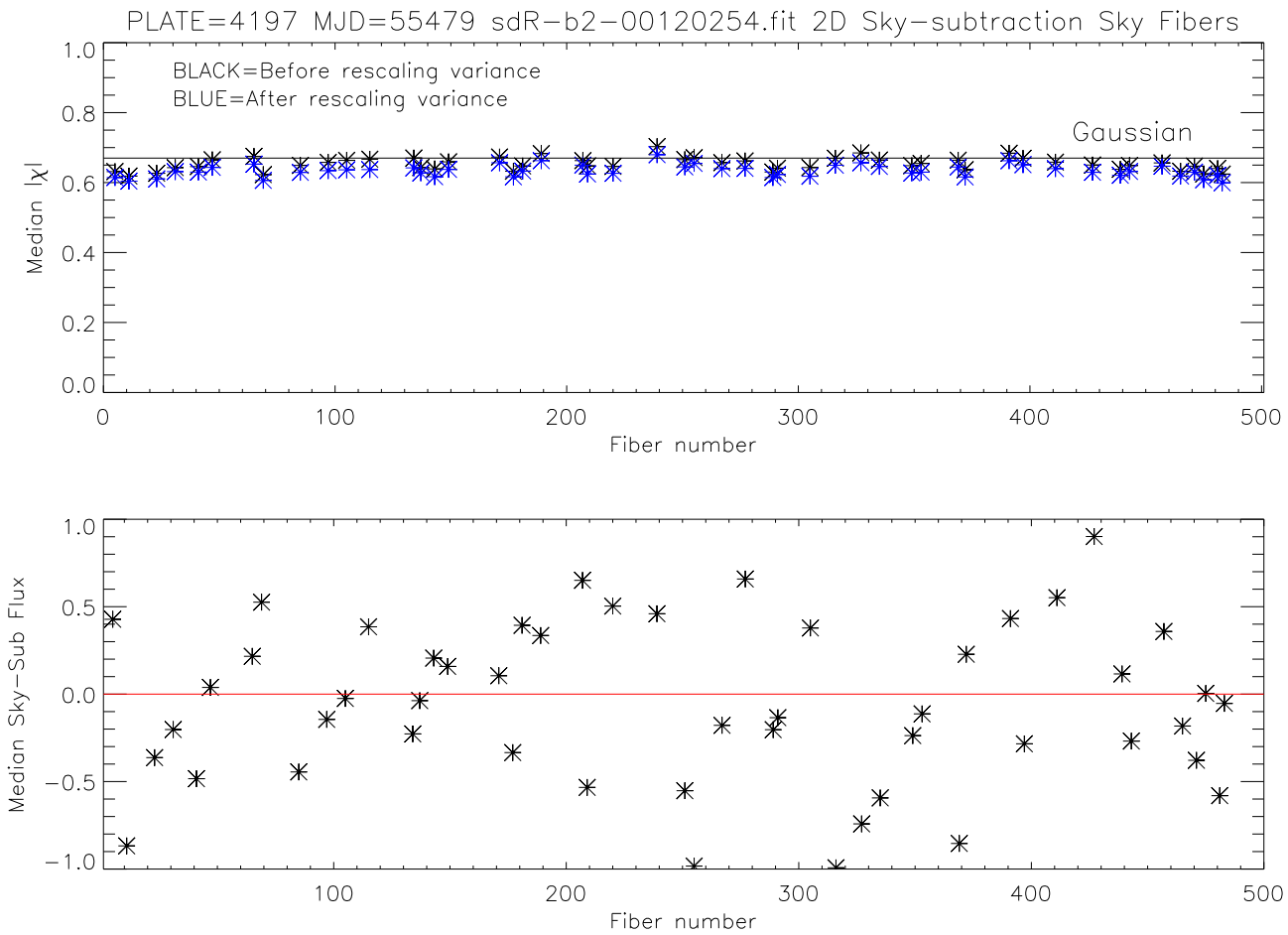

PLATE=4197 MJD=55479 sdR-b2-00120254.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

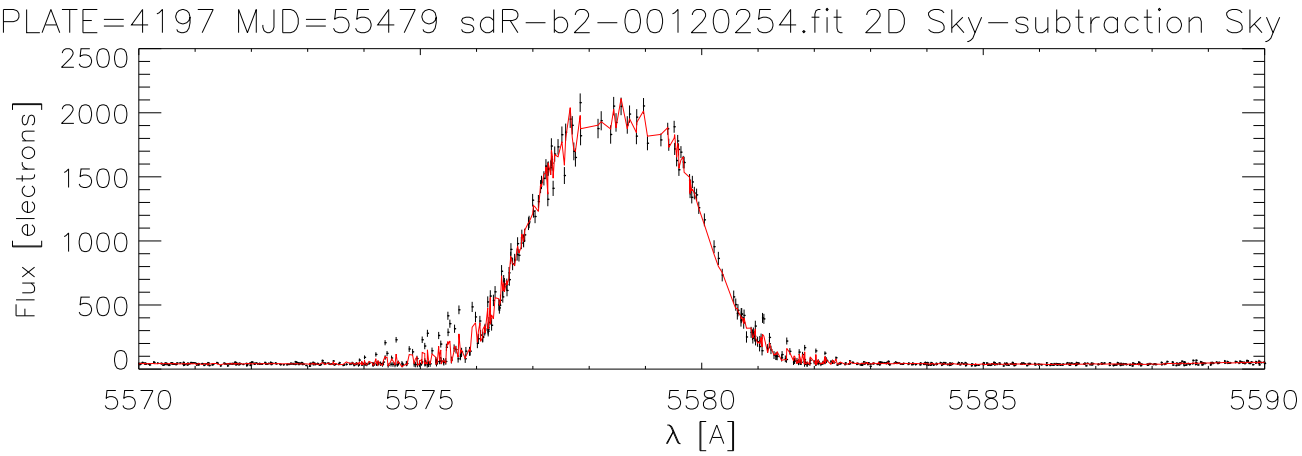

PLATE=4197 MJD=55479 sdR-b2-00120254.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

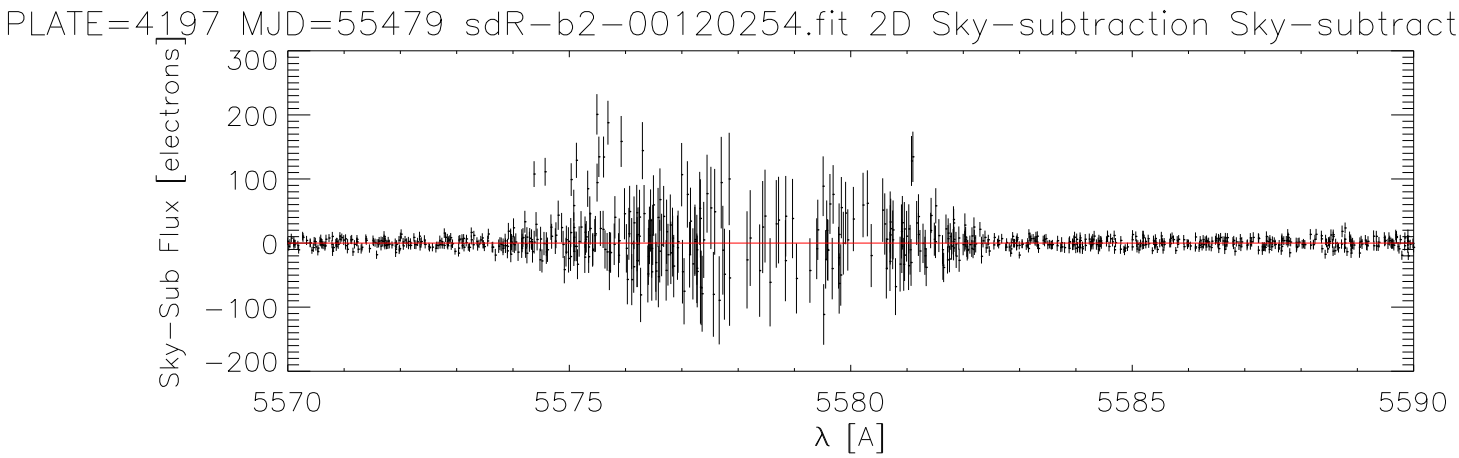

PLATE=4197 MJD=55479 sdR-b2-00120254.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
200
0
-200
-400
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 50

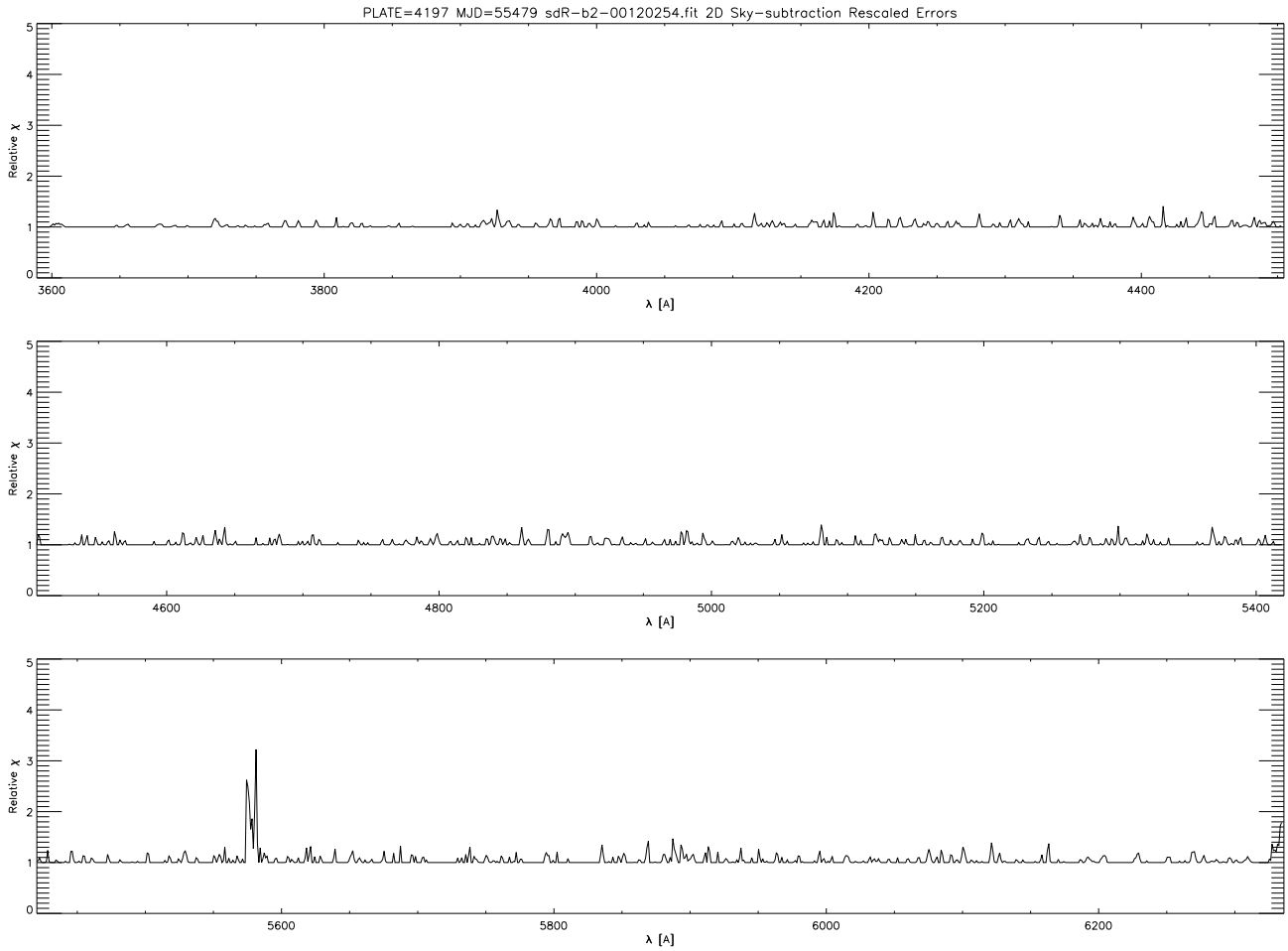


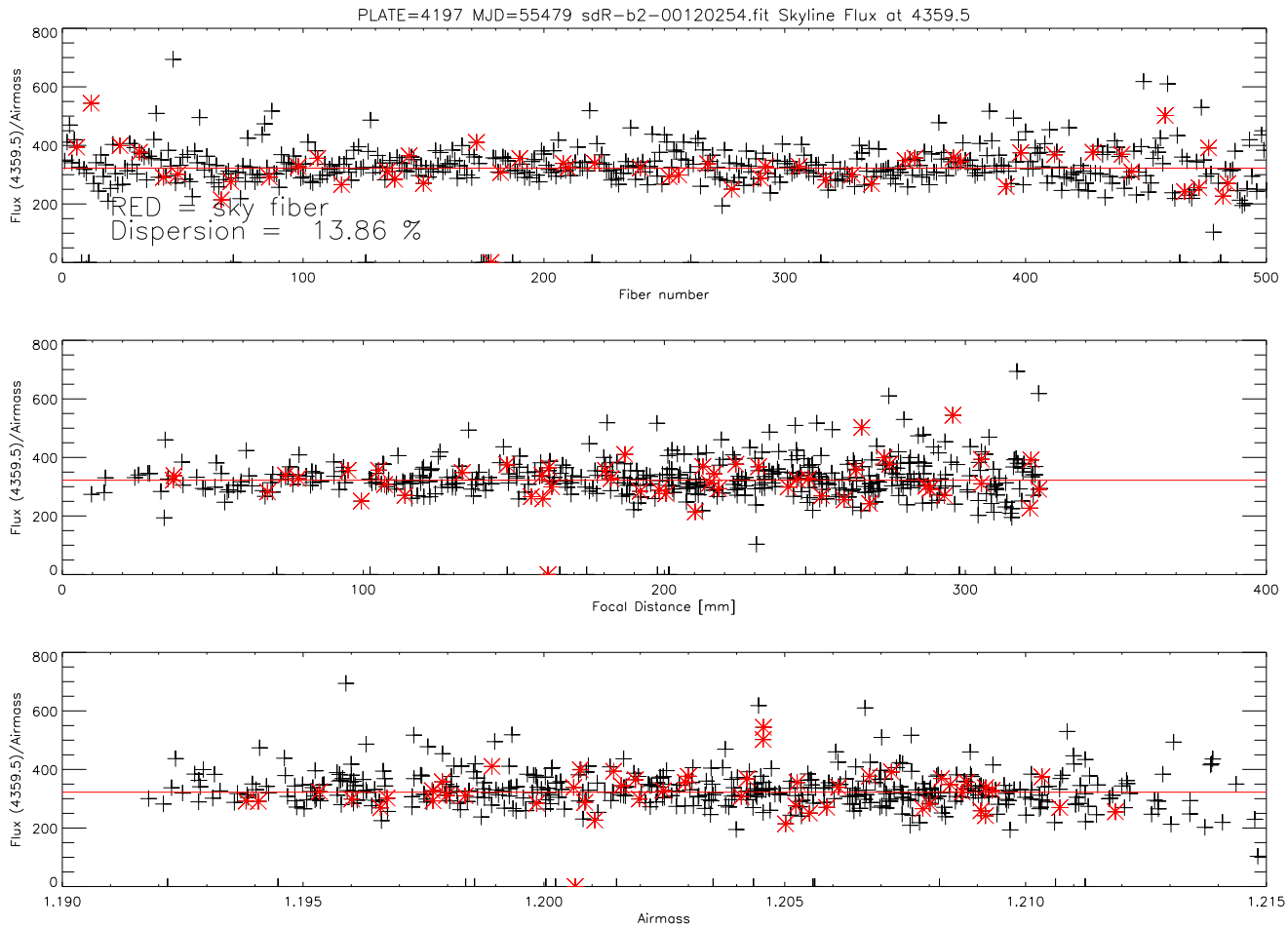

PLATE=4197 MJD=55479 sdR-b2-00120254.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

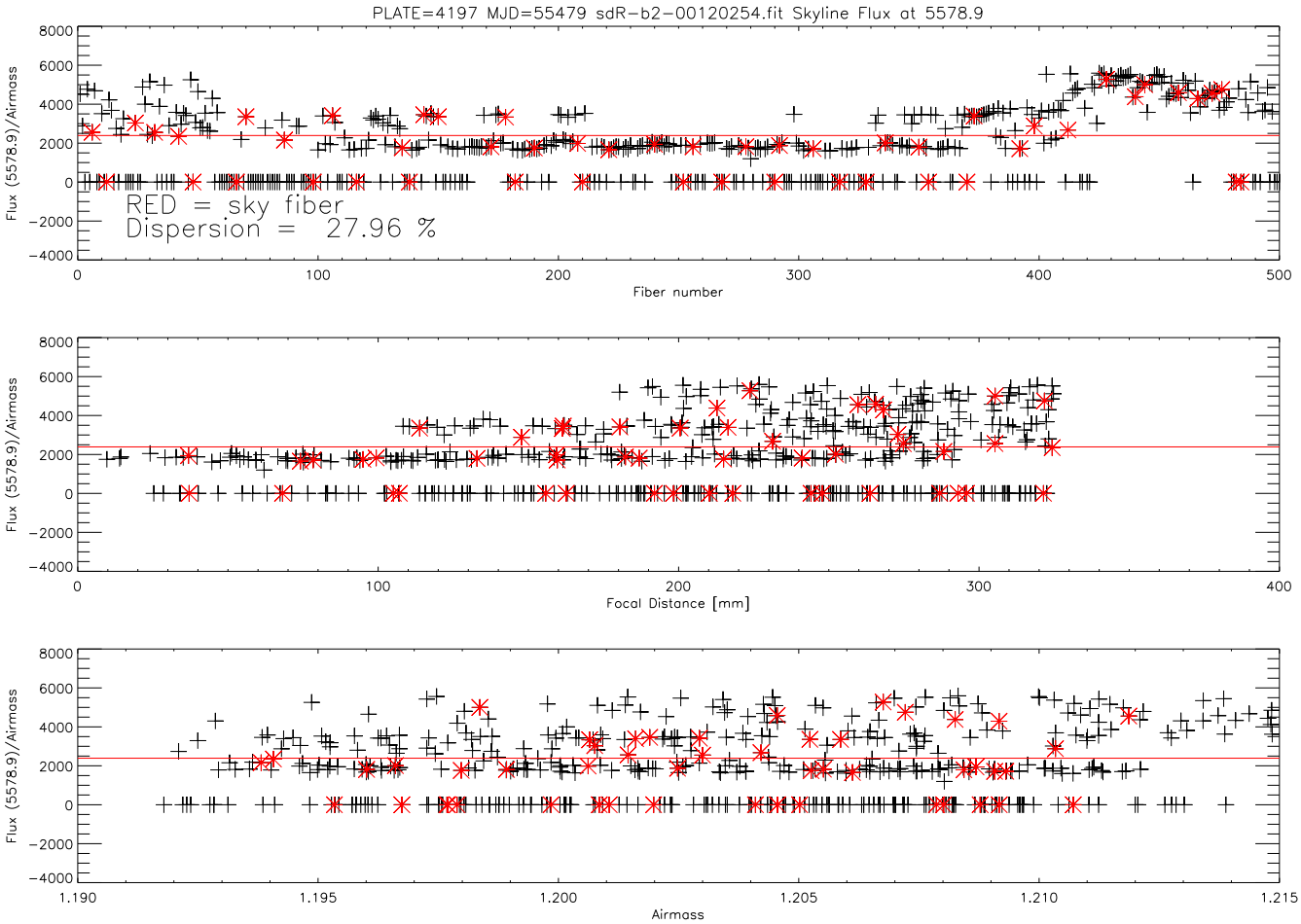

PLATE=4197 MJD=55479 sdR-b2-00120254.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

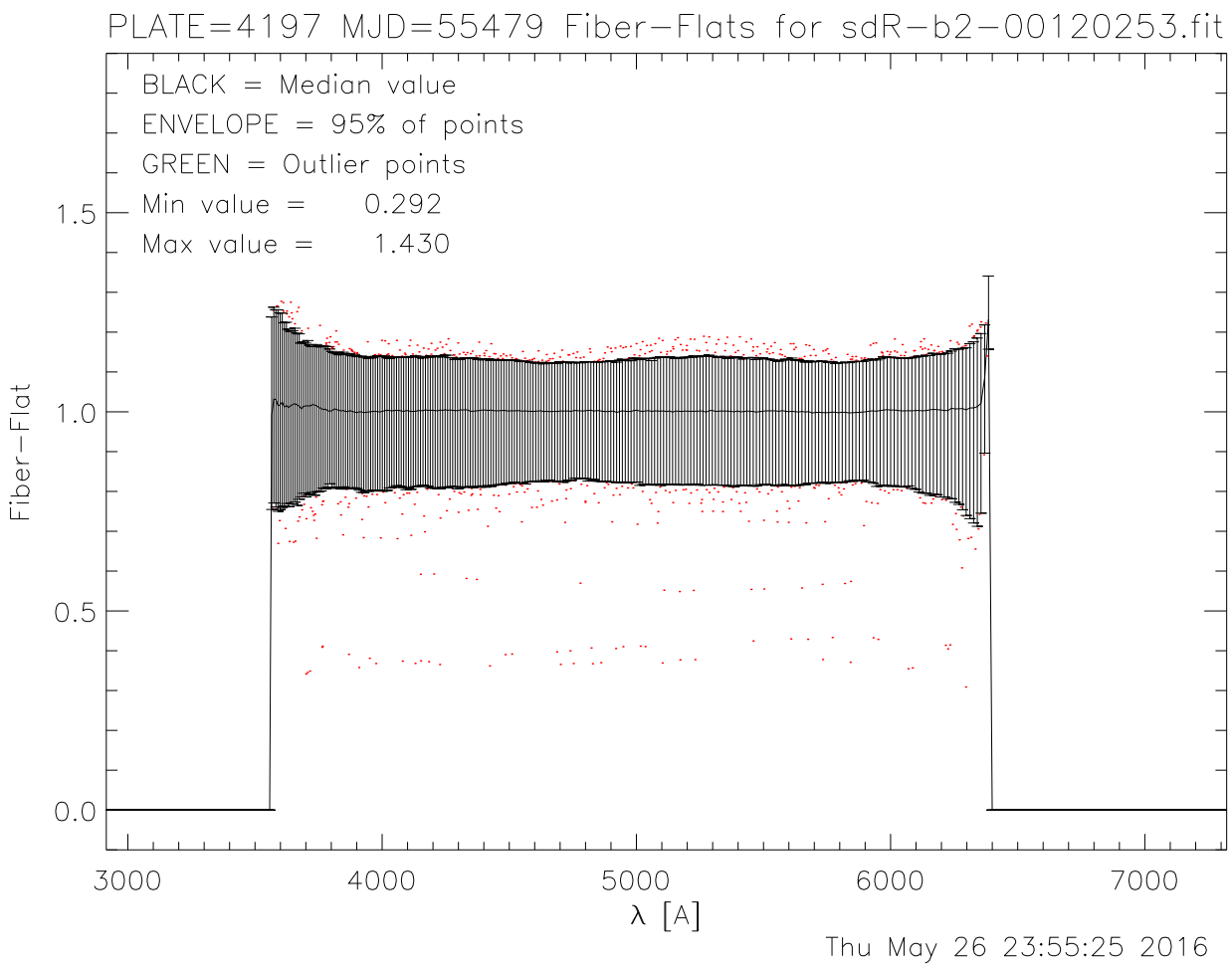

PLATE=4197 MJD=55479 sdR-b2-00120254.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
-100
-200
5570
5575
5580
5585
5590
λ [A]

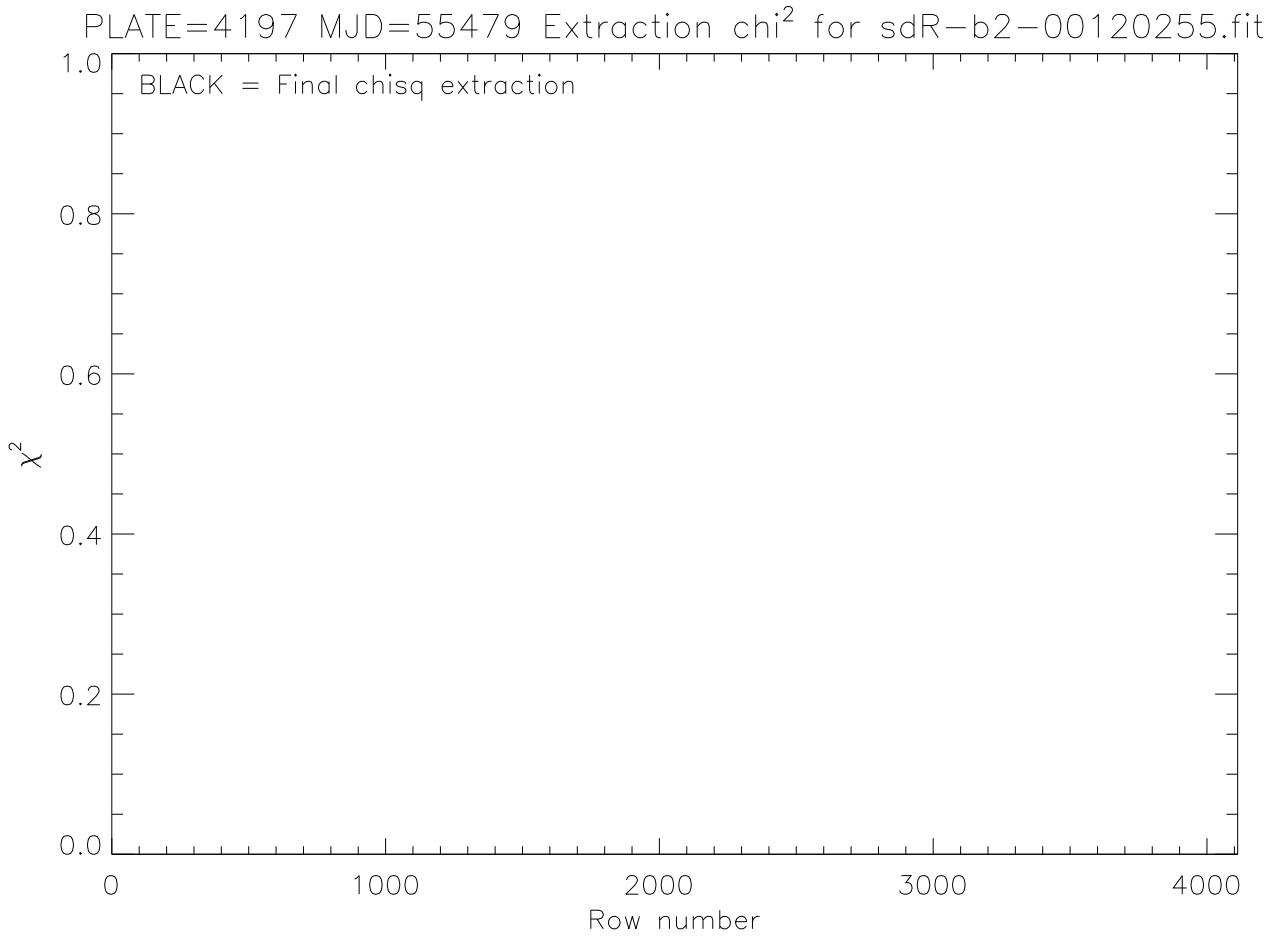
Number of sky fibers = 50

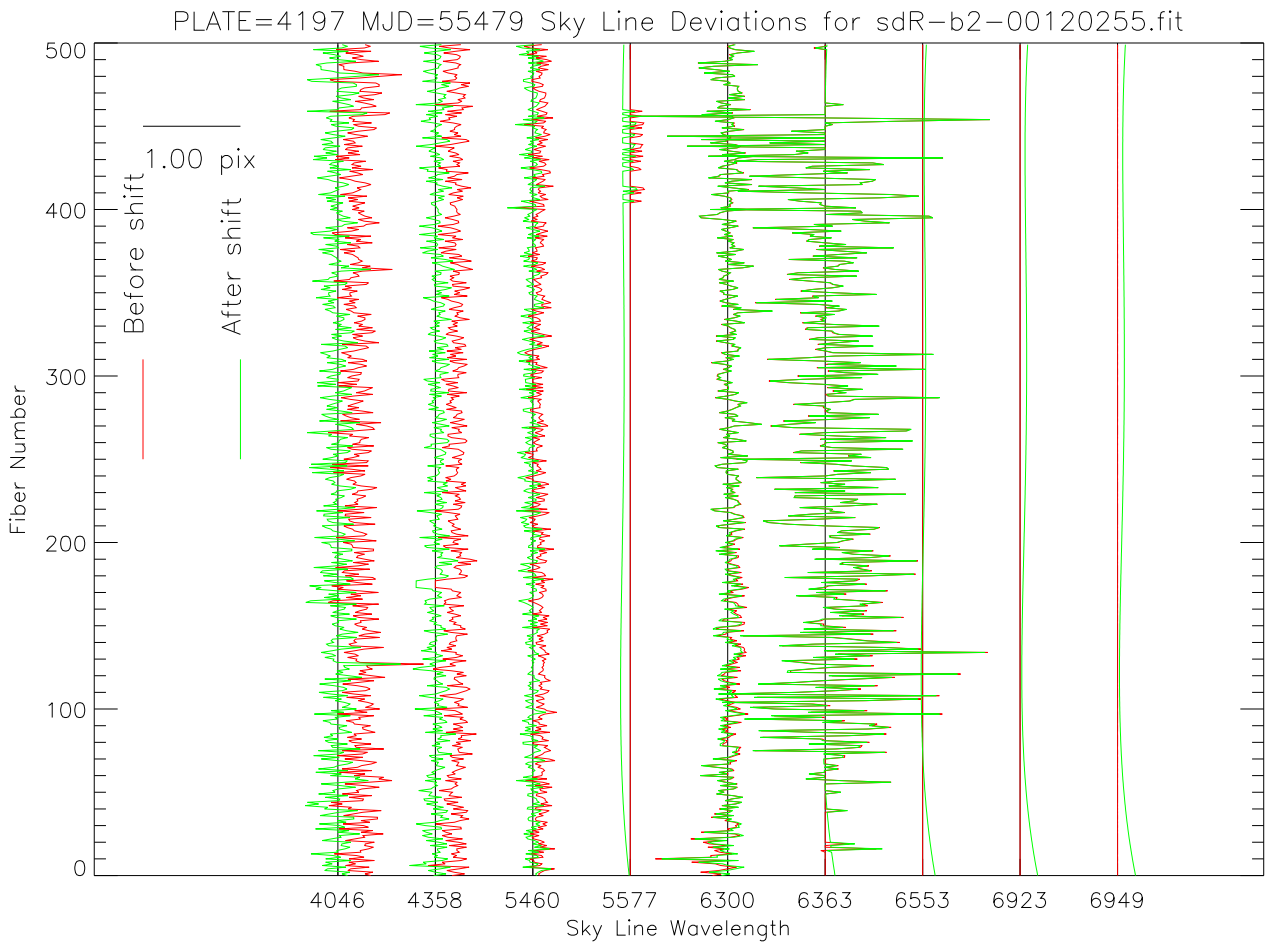


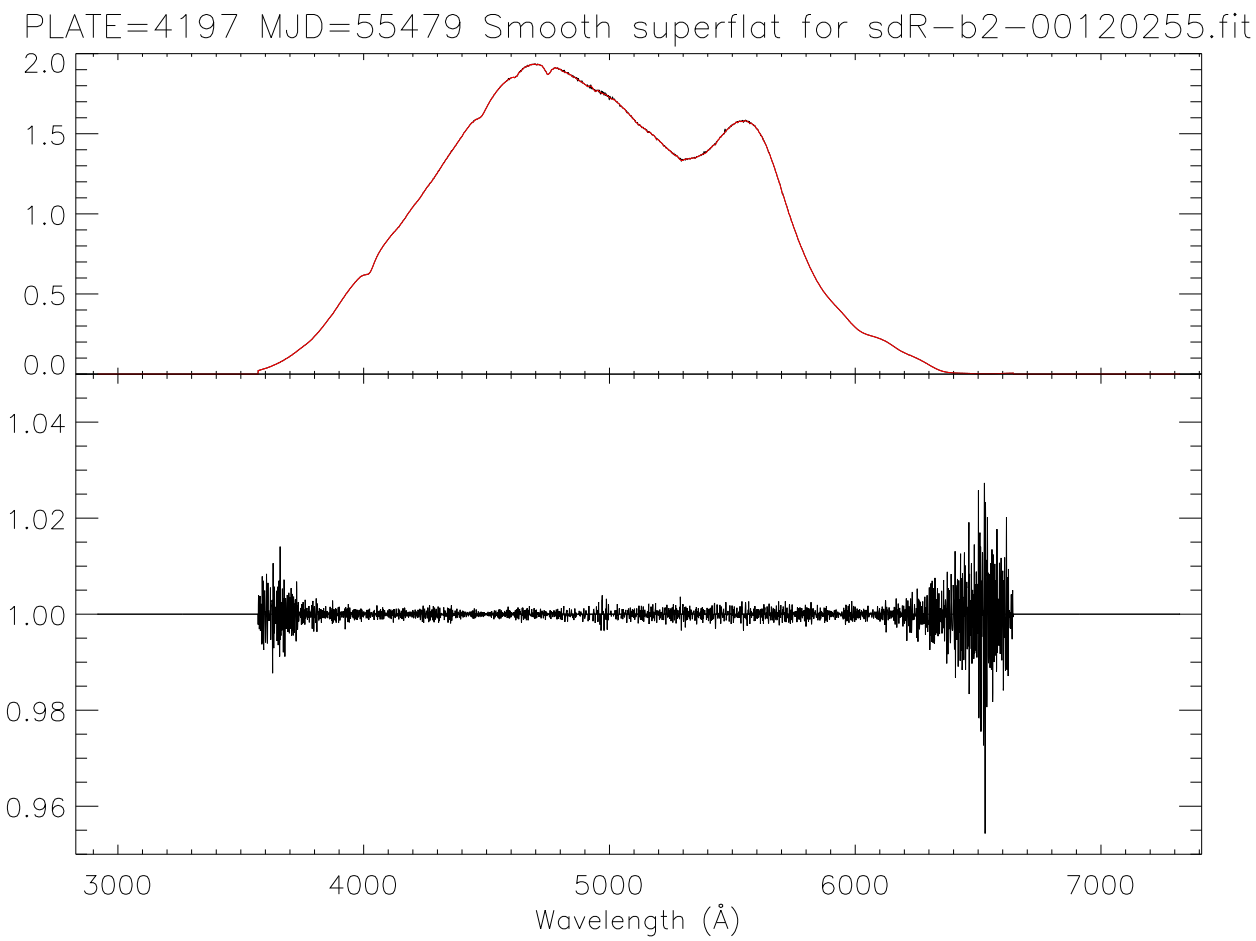

PLATE=4197 MJD=55479 sdR-b2-00120254.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
Fiber number
RED = sky fiber
Dispersion = 13.86 %
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

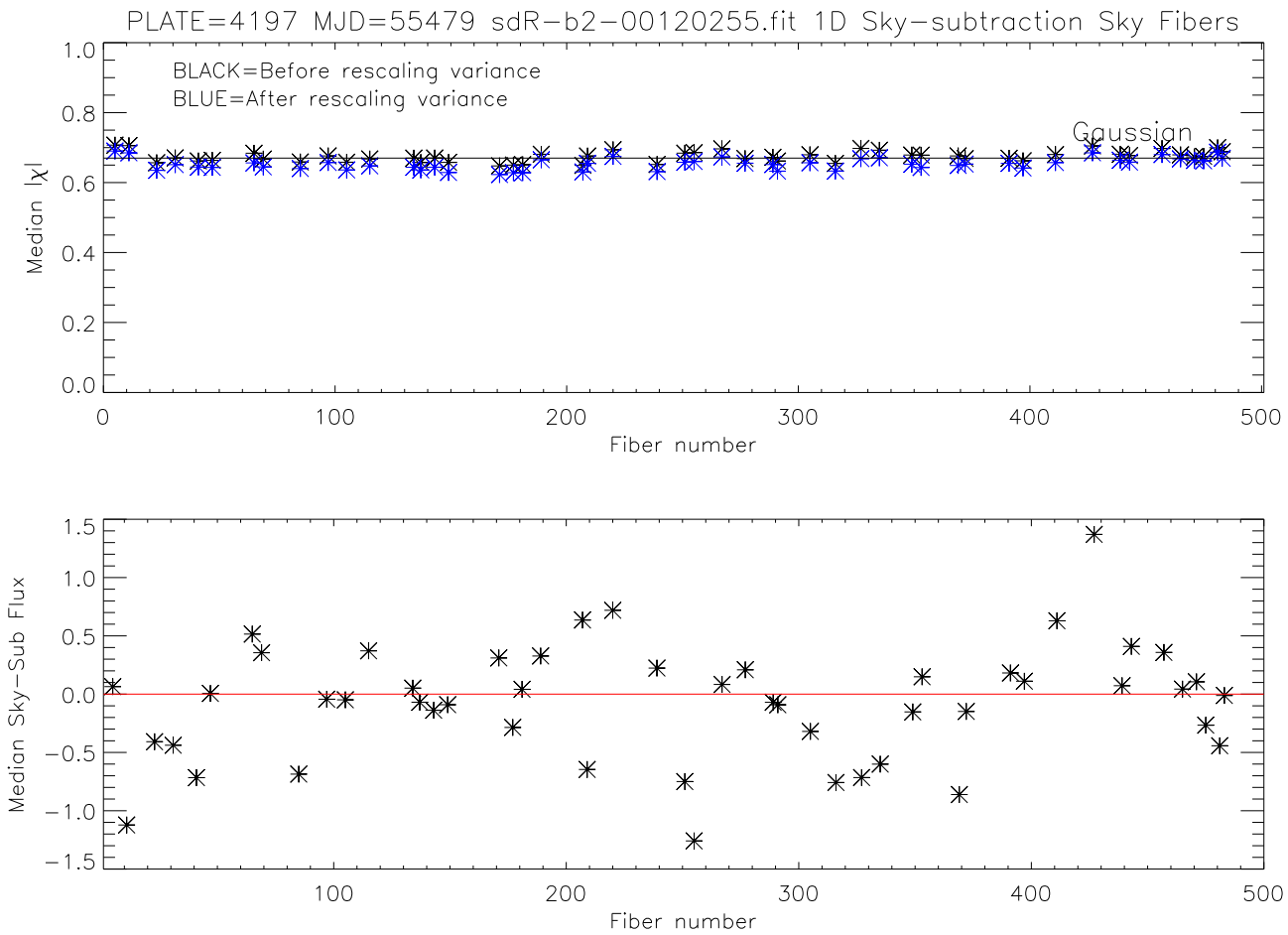

PLATE=4197 MJD=55479 sdR-b2-00120254.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 27.96 %
Fiber number
Flux (5578.9)/Airmass
Focal Distance [mm]
Flux (5578.9)/Airmass
Airmass

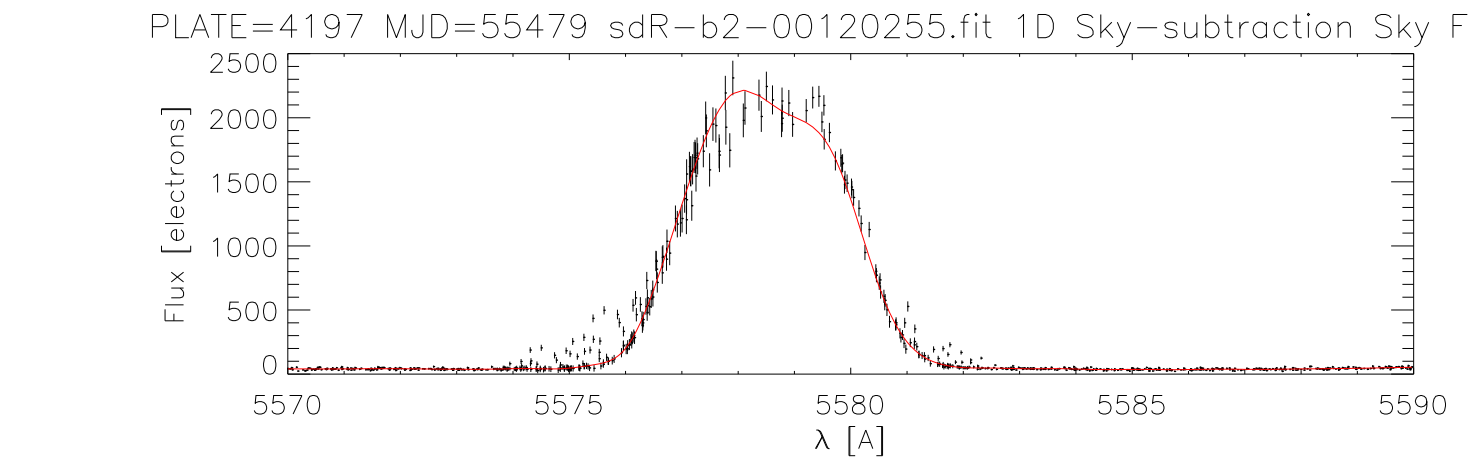

PLATE=4197 MJD=55479 Fiber−Flats for sdR−b2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = 0.292
Max value = 1.430
Fiber−Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Thu May 26 23:55:25 2016

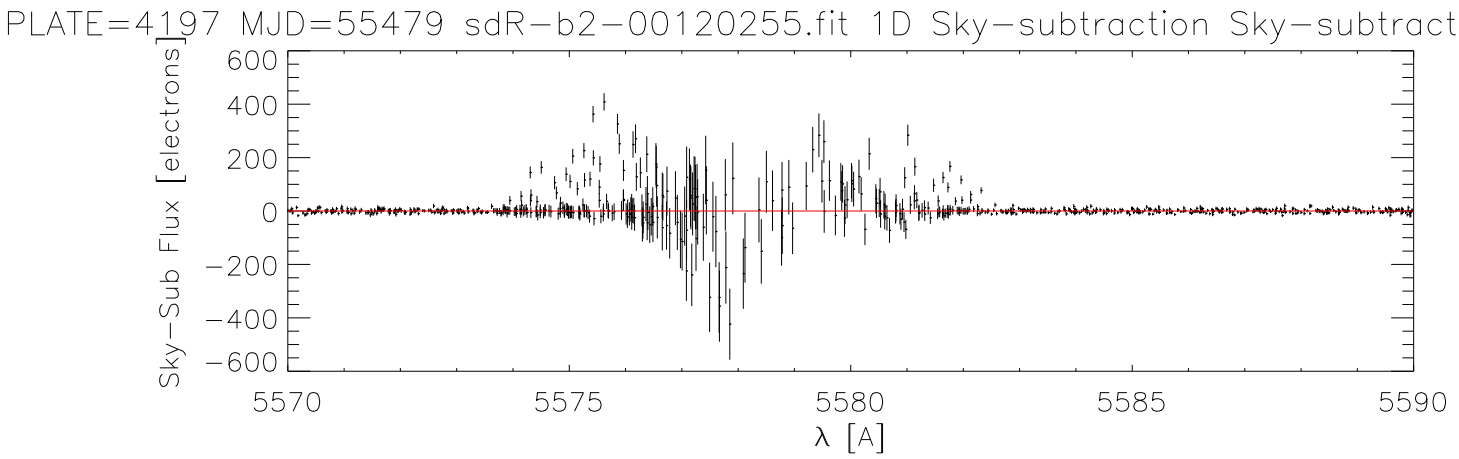

PLATE=4197 MJD=55479 Extraction chi^2 for sdR-b2-00120255.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b2-00120255.fit
1.00 pix
Before shift
After shift
Fiber Number
0
100
200
300
400
500
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

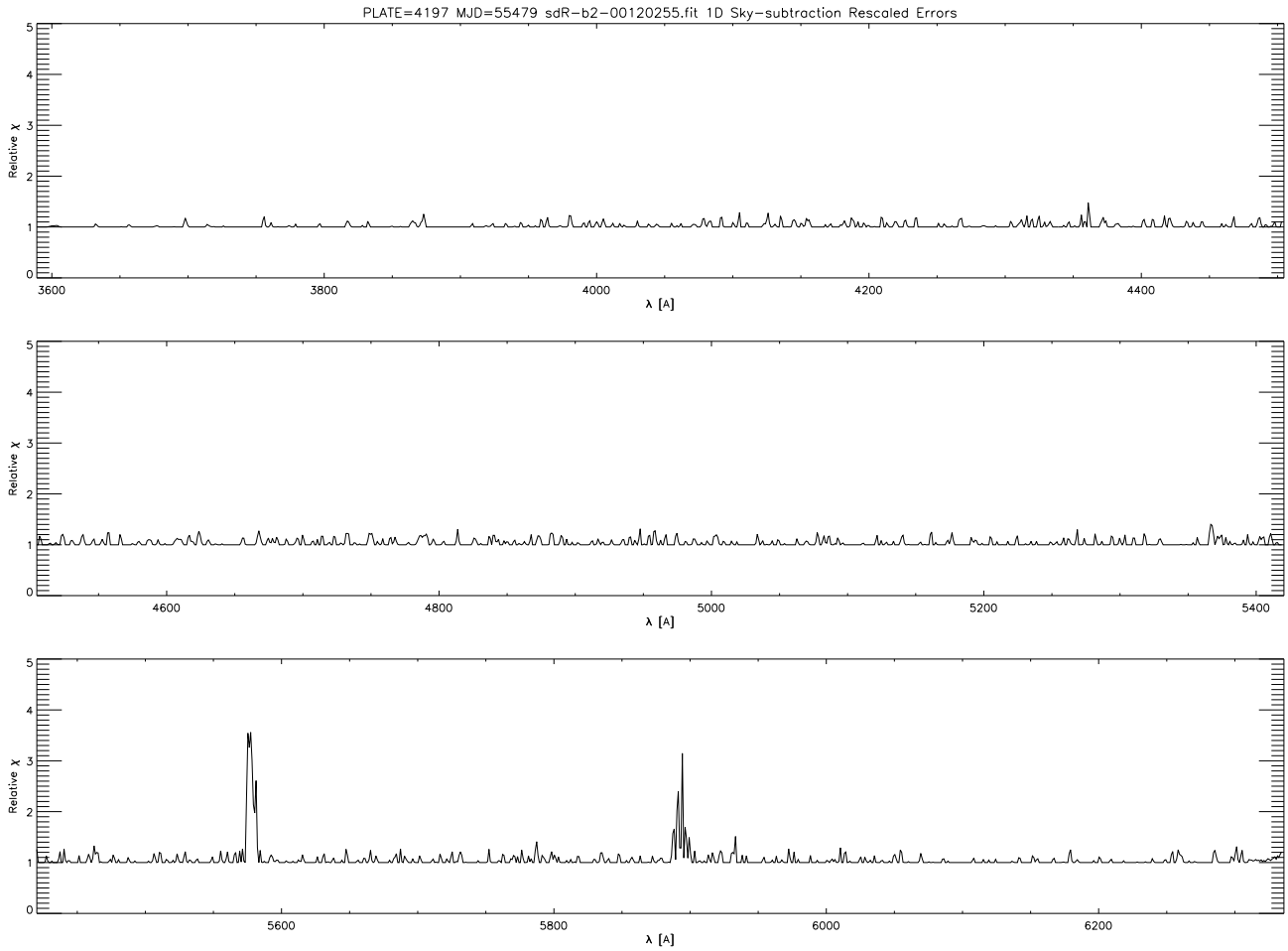

PLATE=4197 MJD=55479 Smooth superflat for sdR-b2-00120255.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

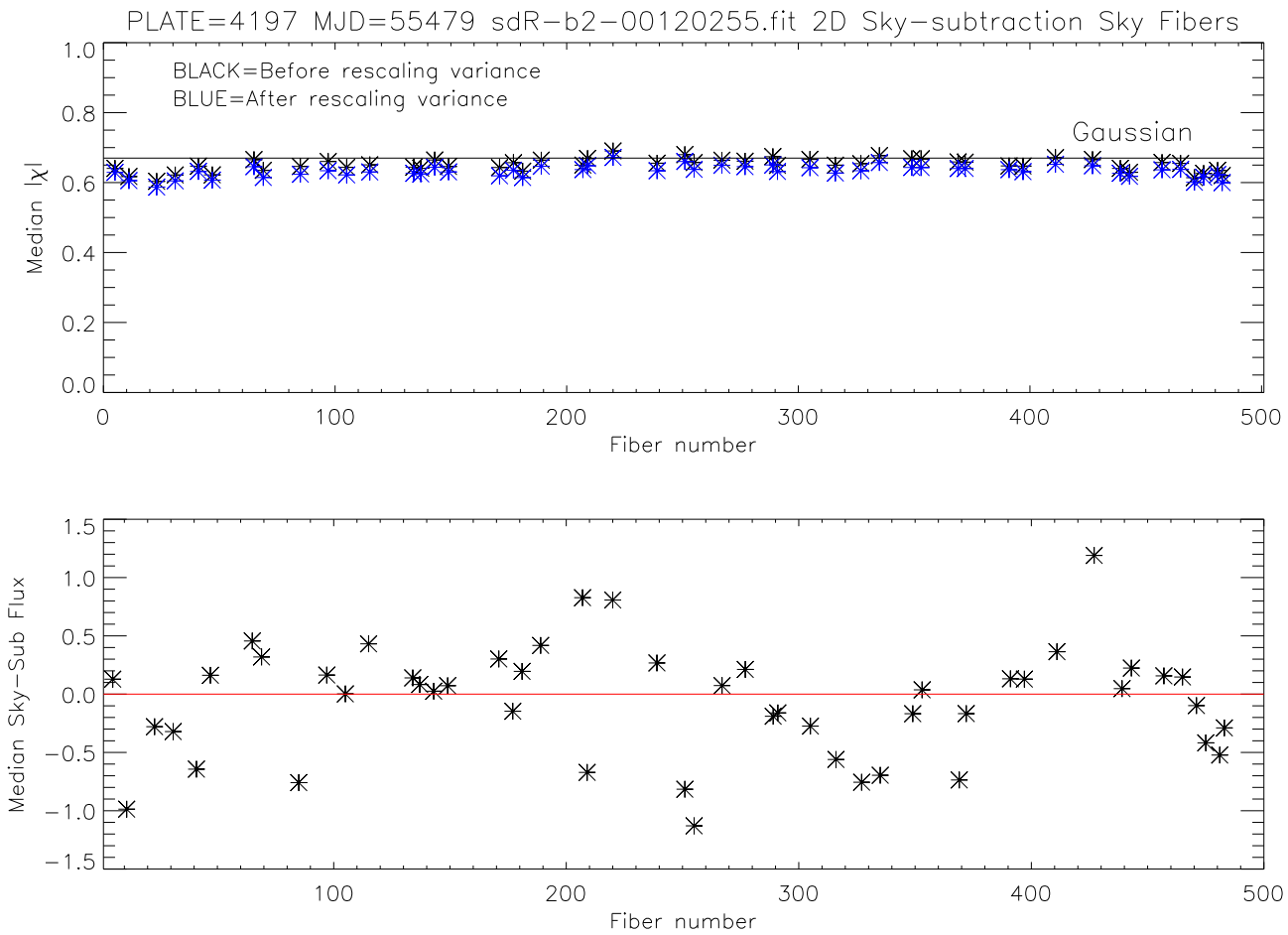

PLATE=4197 MJD=55479 sdR-b2-00120255.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

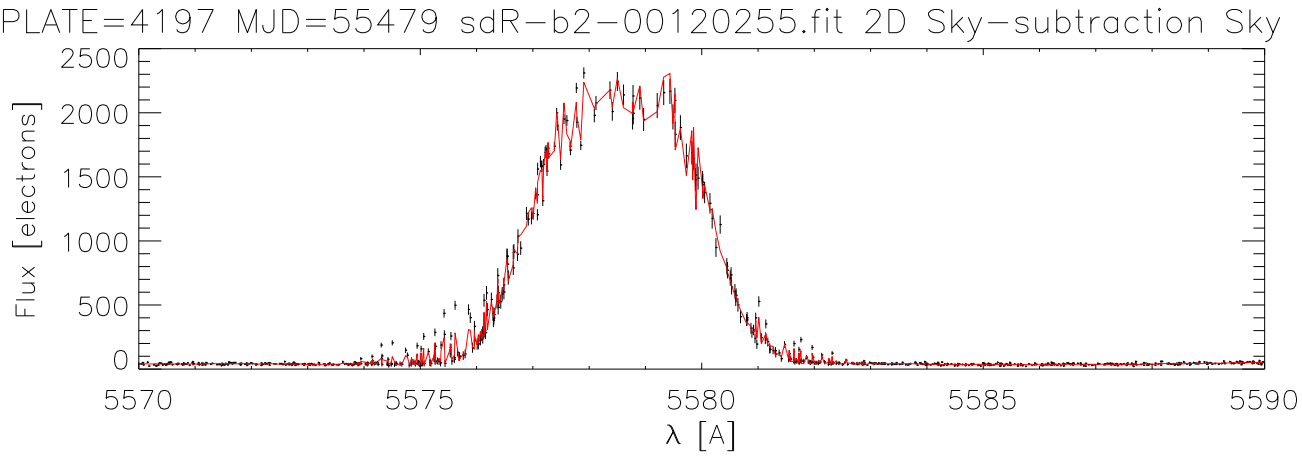

PLATE=4197 MJD=55479 sdR-b2-00120255.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

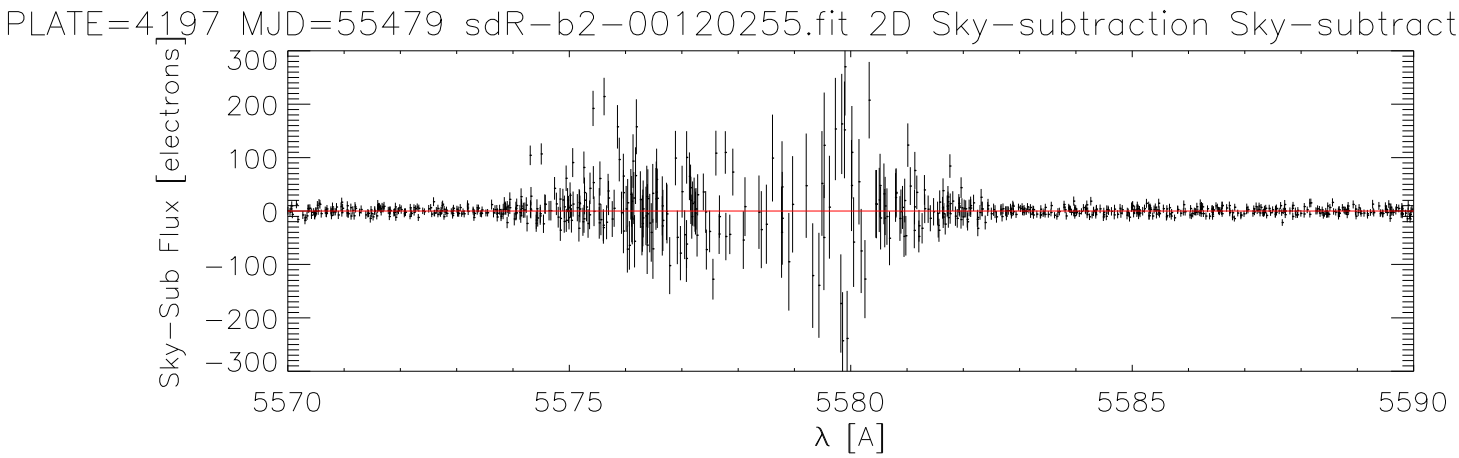

PLATE=4197 MJD=55479 sdR-b2-00120255.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
600
400
200
0
-200
-400
-600
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 50

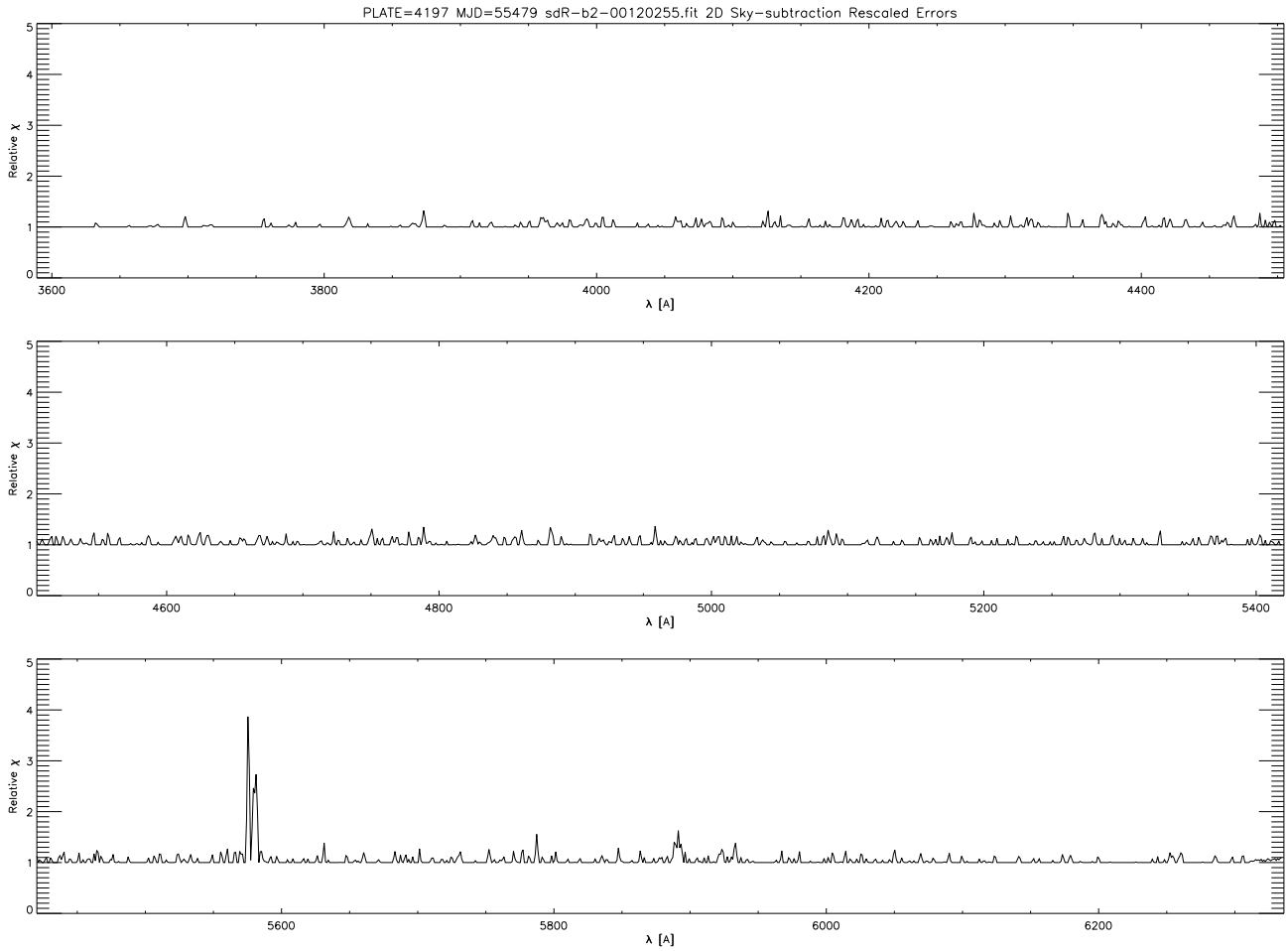


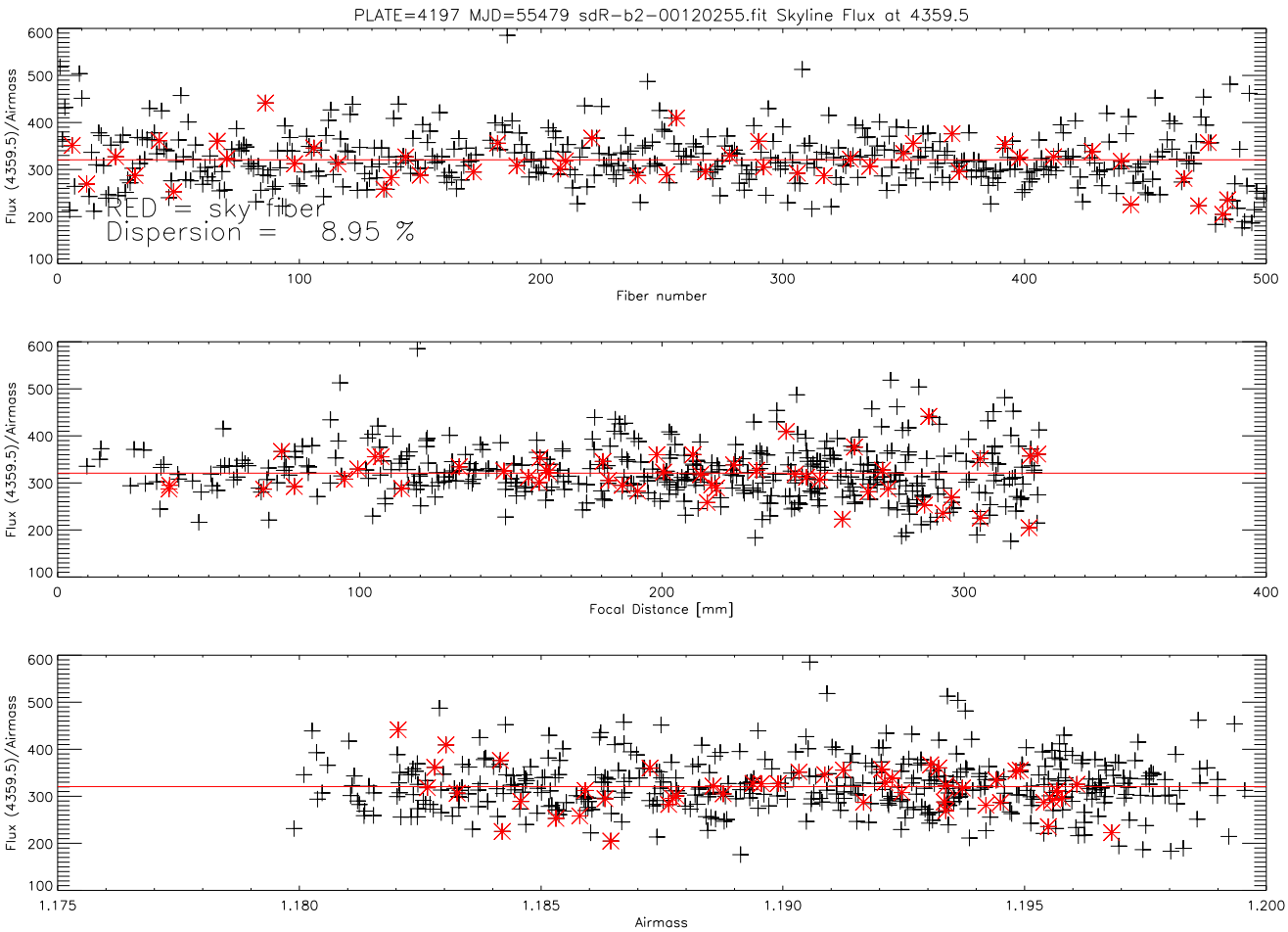

PLATE=4197 MJD=55479 sdR-b2-00120255.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

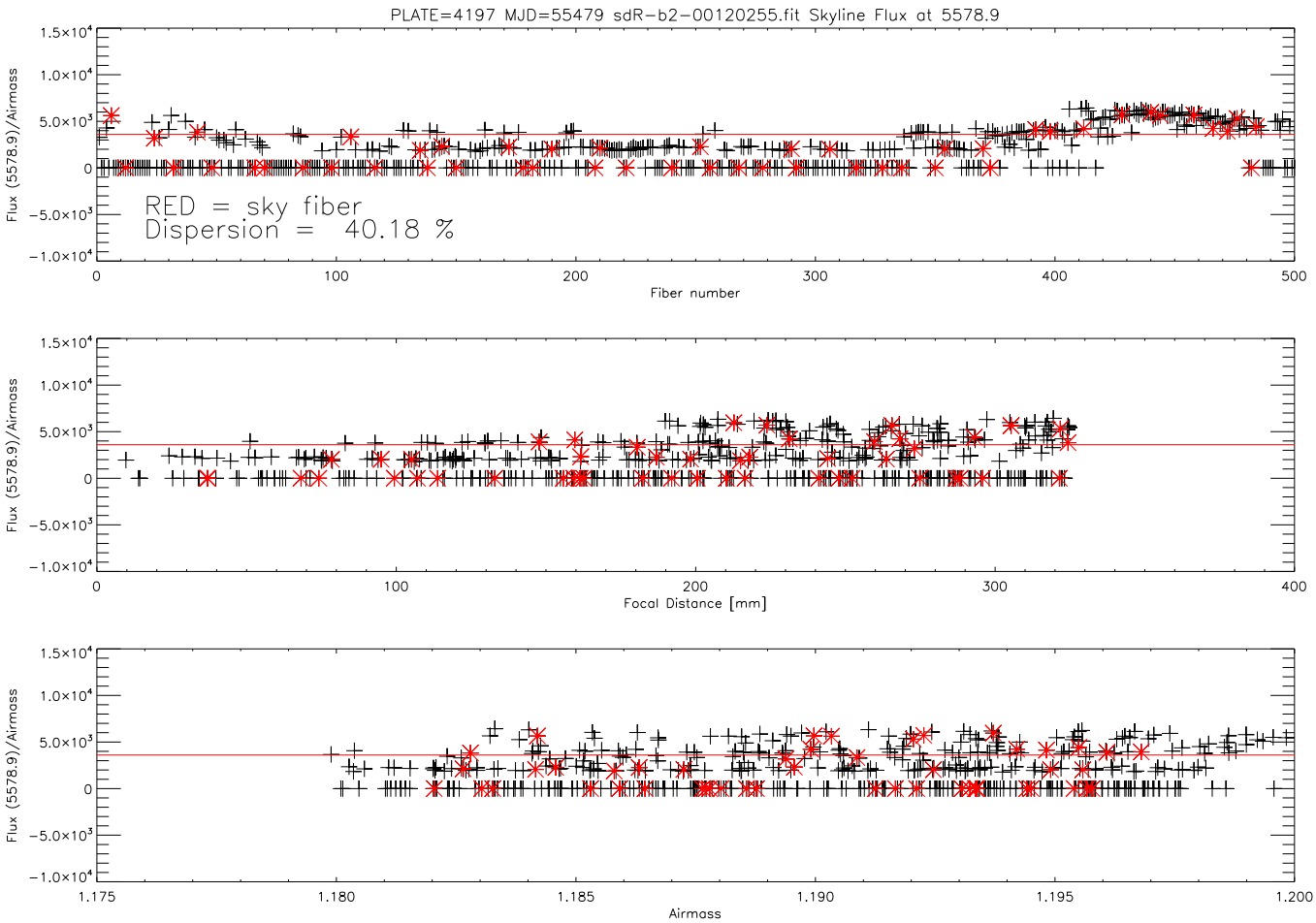

PLATE=4197 MJD=55479 sdR-b2-00120255.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

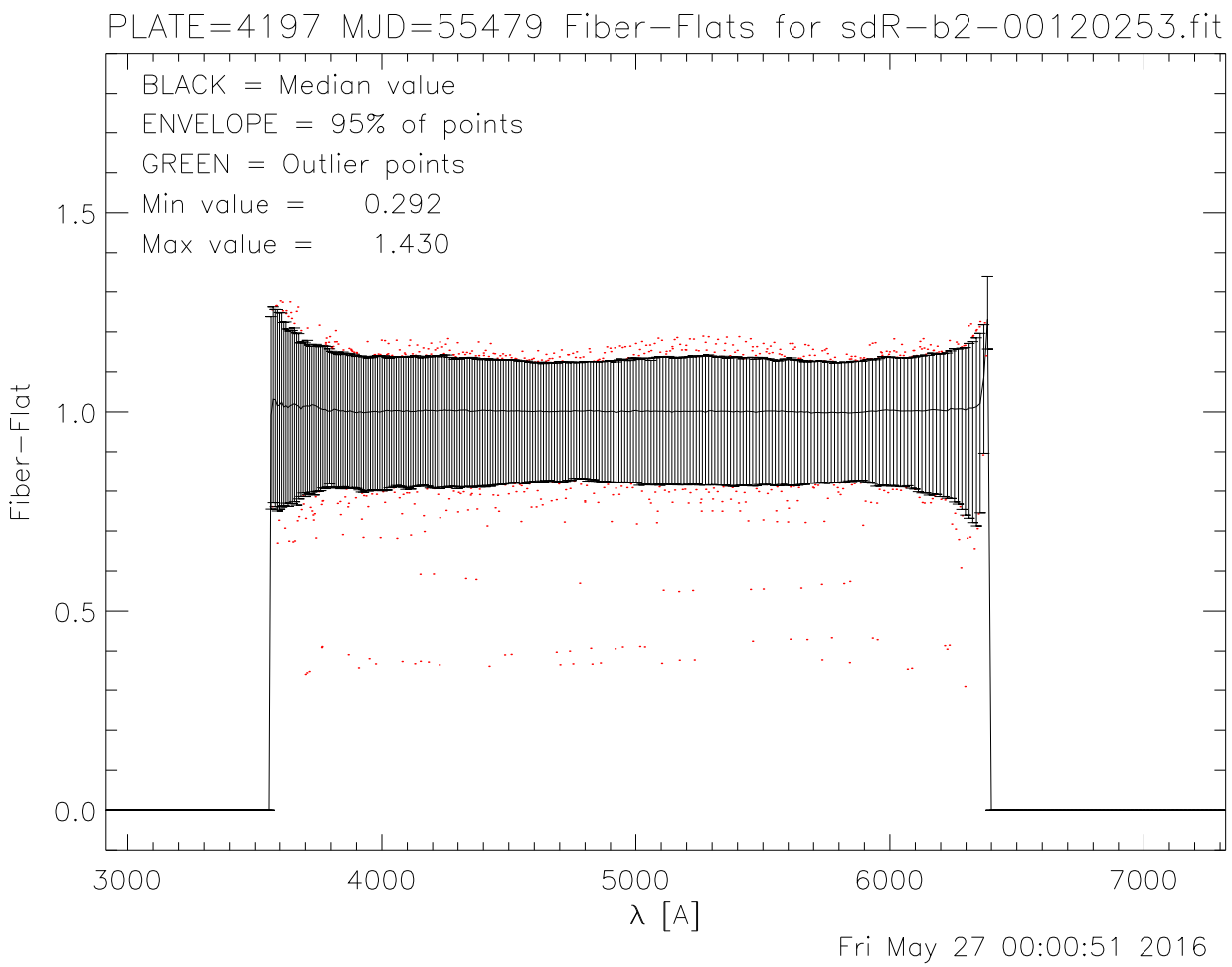

PLATE=4197 MJD=55479 sdR-b2-00120255.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
-100
-200
-300
5570
5575
5580
5585
5590
λ [A]

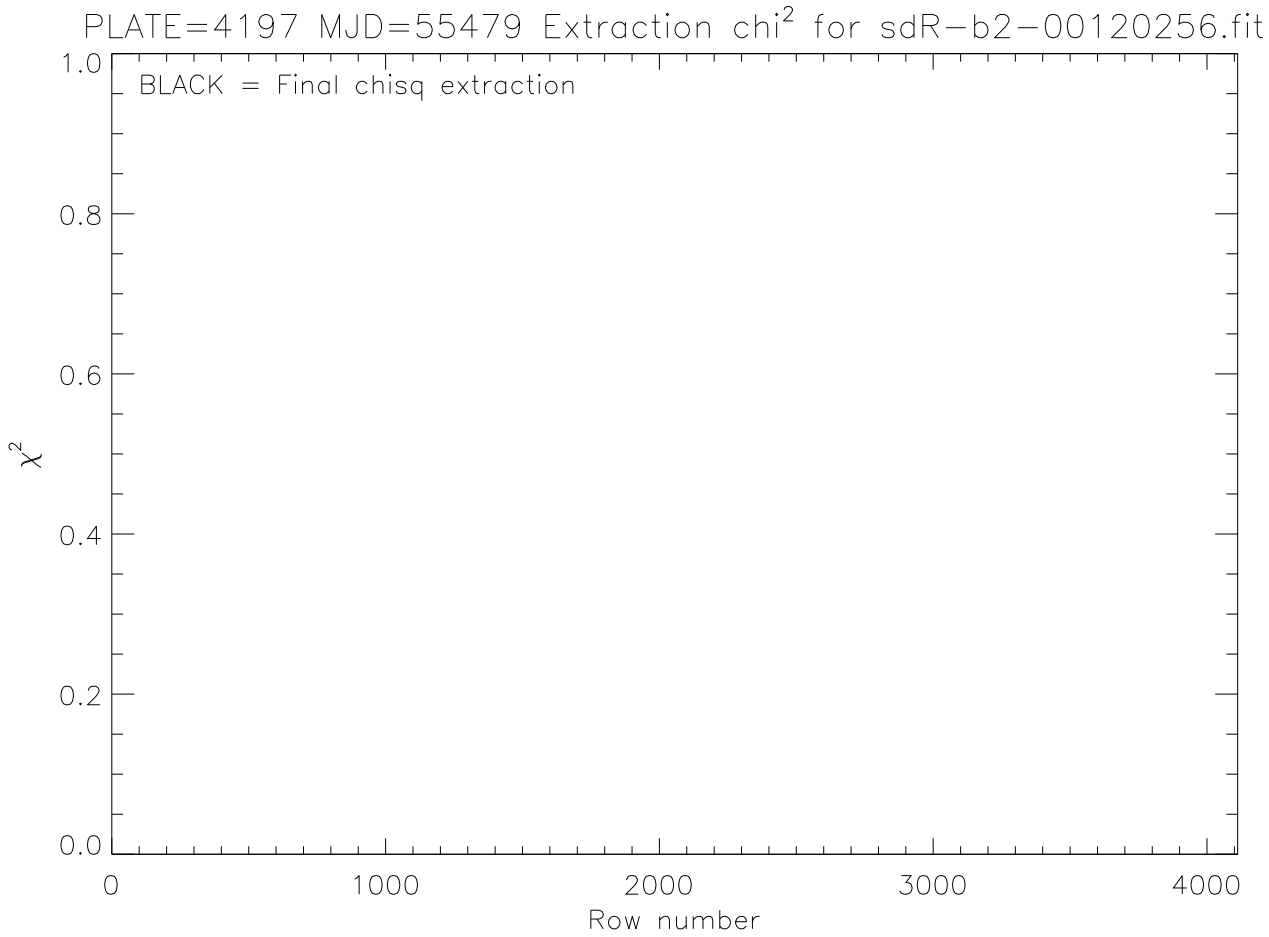
Number of sky fibers = 50

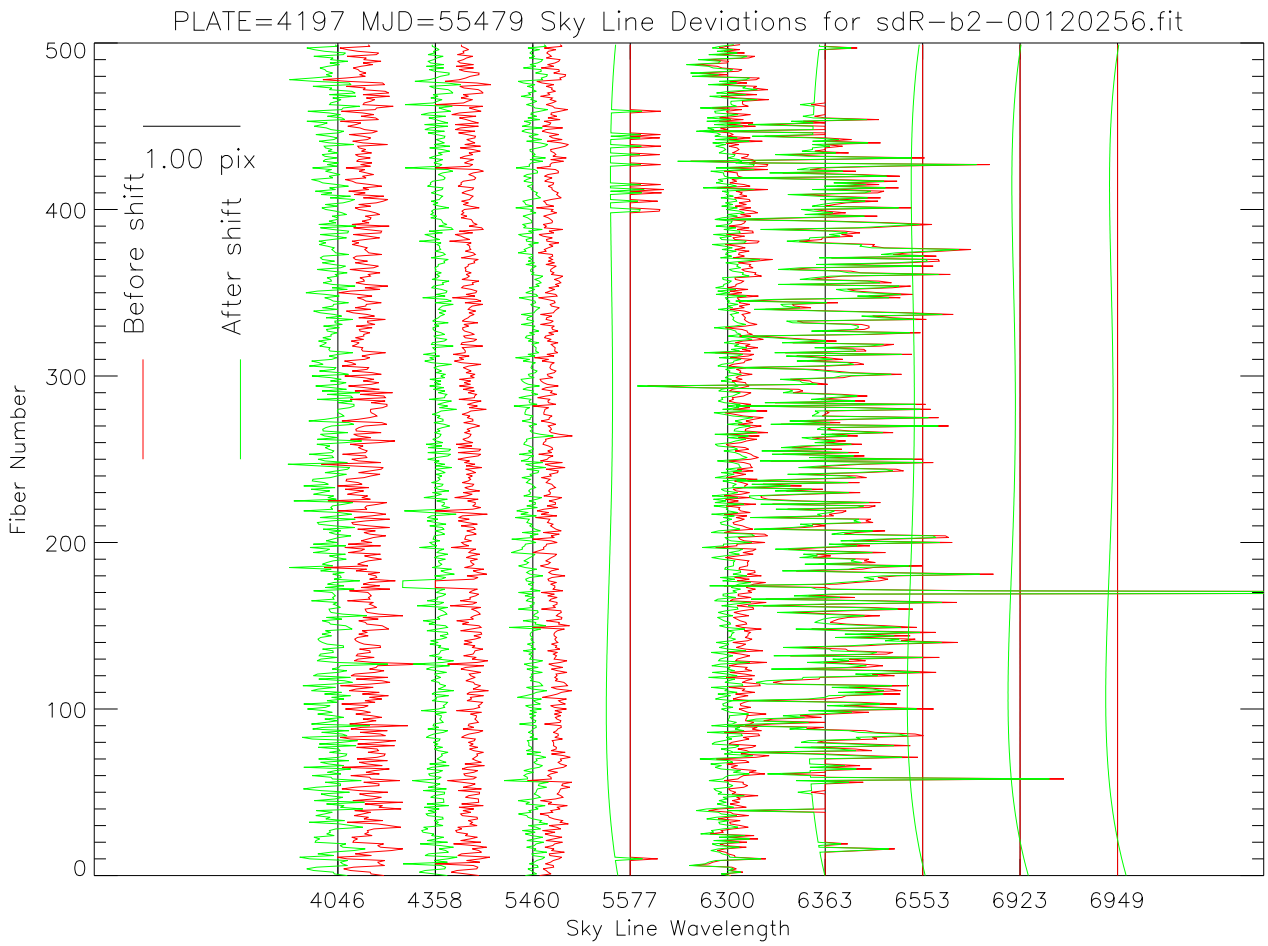


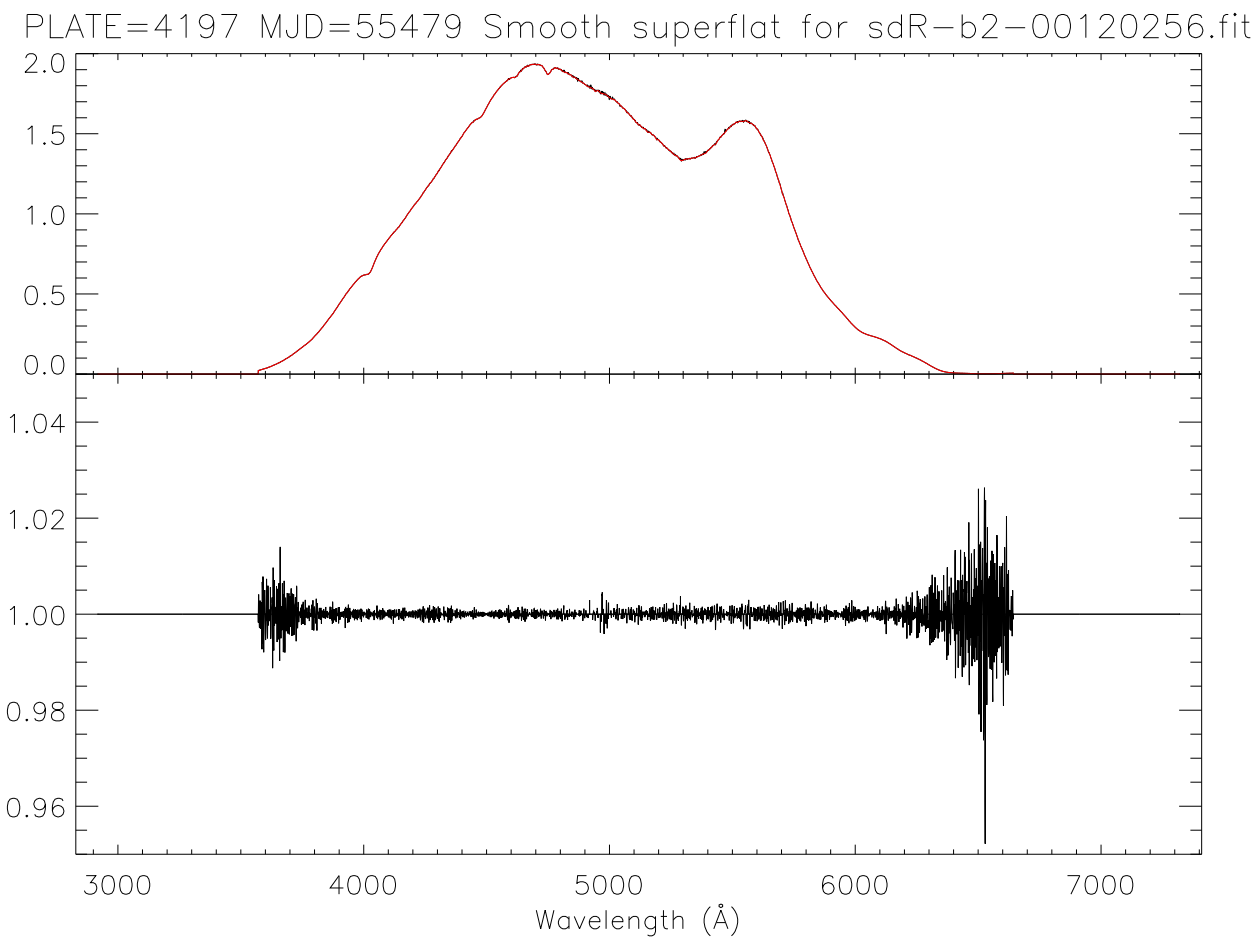

PLATE=4197 MJD=55479 sdR-b2-00120255.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
Fiber number
+RED = sky fiber
Dispersion = 8.95 %
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

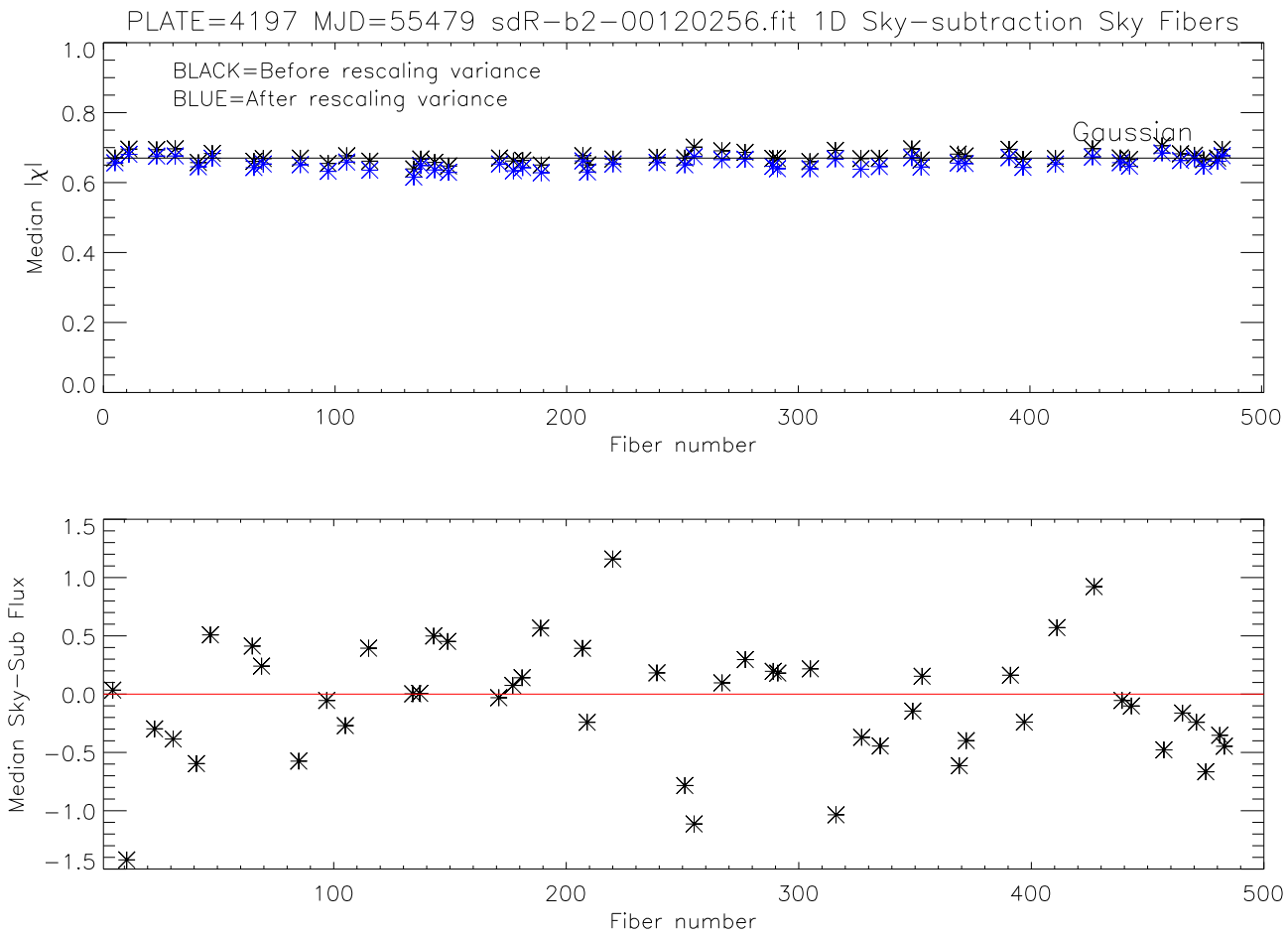

PLATE=4197 MJD=55479 sdR-b2-00120255.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
1.5×10^4
1.0×10^4
5.0×10^3
0
−5.0×10^3
−1.0×10^4
RED = sky fiber
Dispersion = 40.18 %
0
100
200
300
400
500
Fiber number
Flux (5578.9)/Airmass
Focal Distance [mm]
Flux (5578.9)/Airmass
1.175
1.180
1.185
1.190
1.195
1.200
Airmass

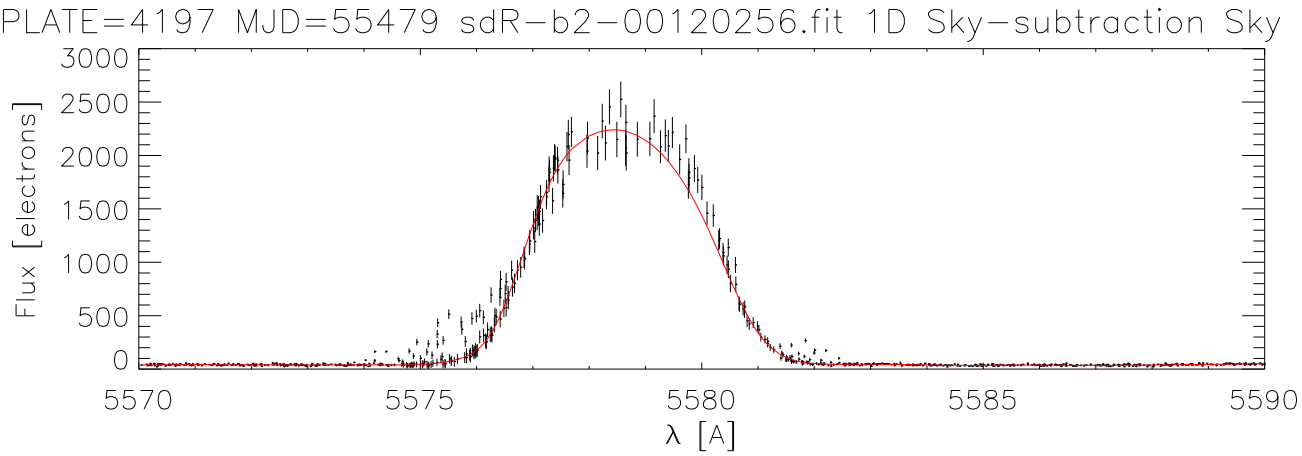

PLATE=4197 MJD=55479 Fiber−Flats for sdR−b2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = 0.292
Max value = 1.430
Fiber−Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Fri May 27 00:00:51 2016

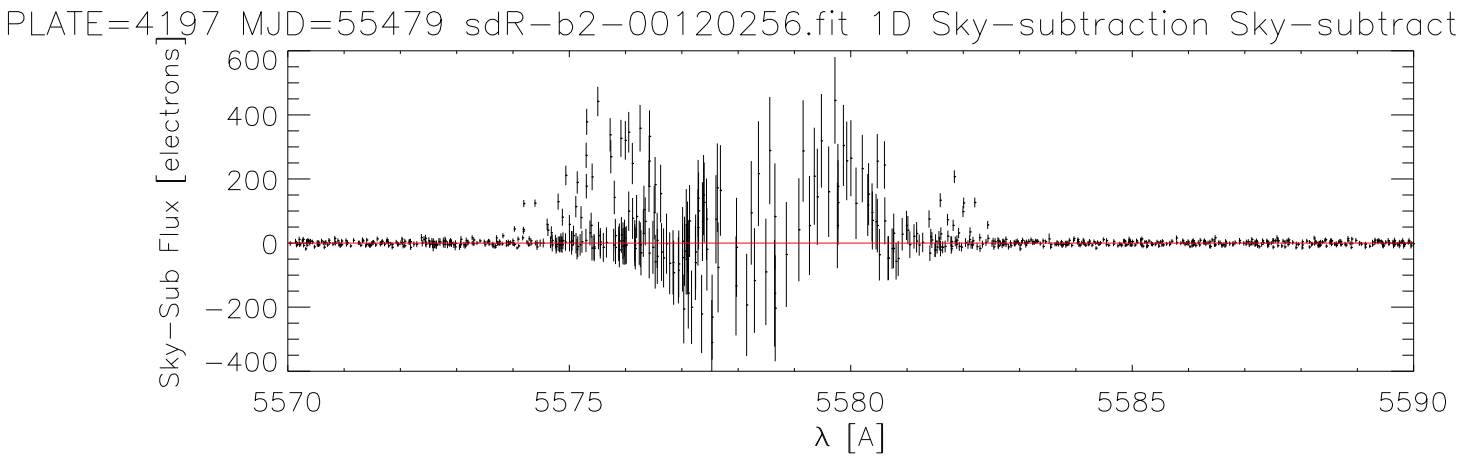

PLATE=4197 MJD=55479 Extraction chi^2 for sdR-b2-00120256.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b2-00120256.fit
1.00 pix
Before shift
After shift
Fiber Number
500
400
300
200
100
0
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

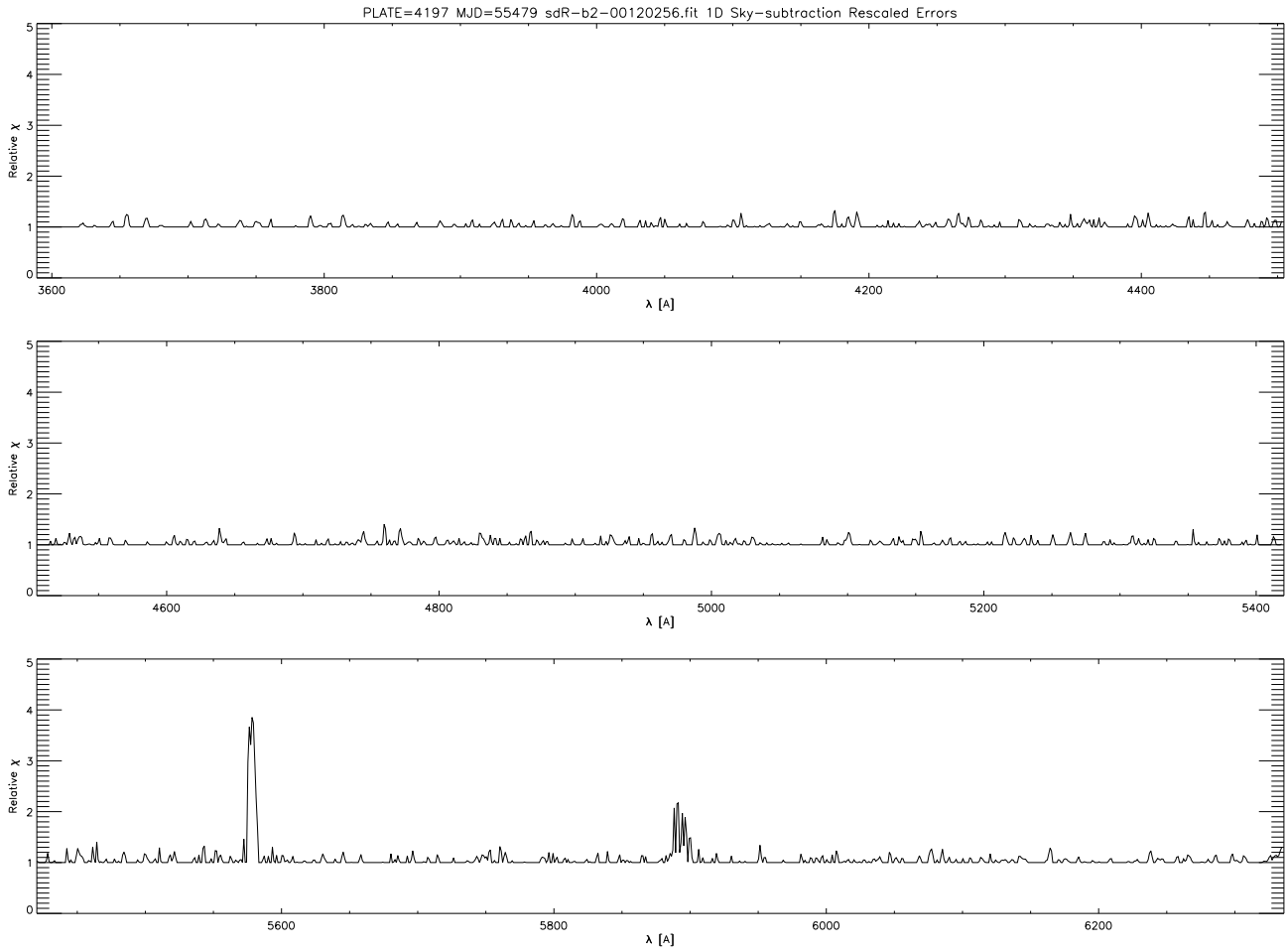

PLATE=4197 MJD=55479 Smooth superflat for sdR-b2-00120256.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

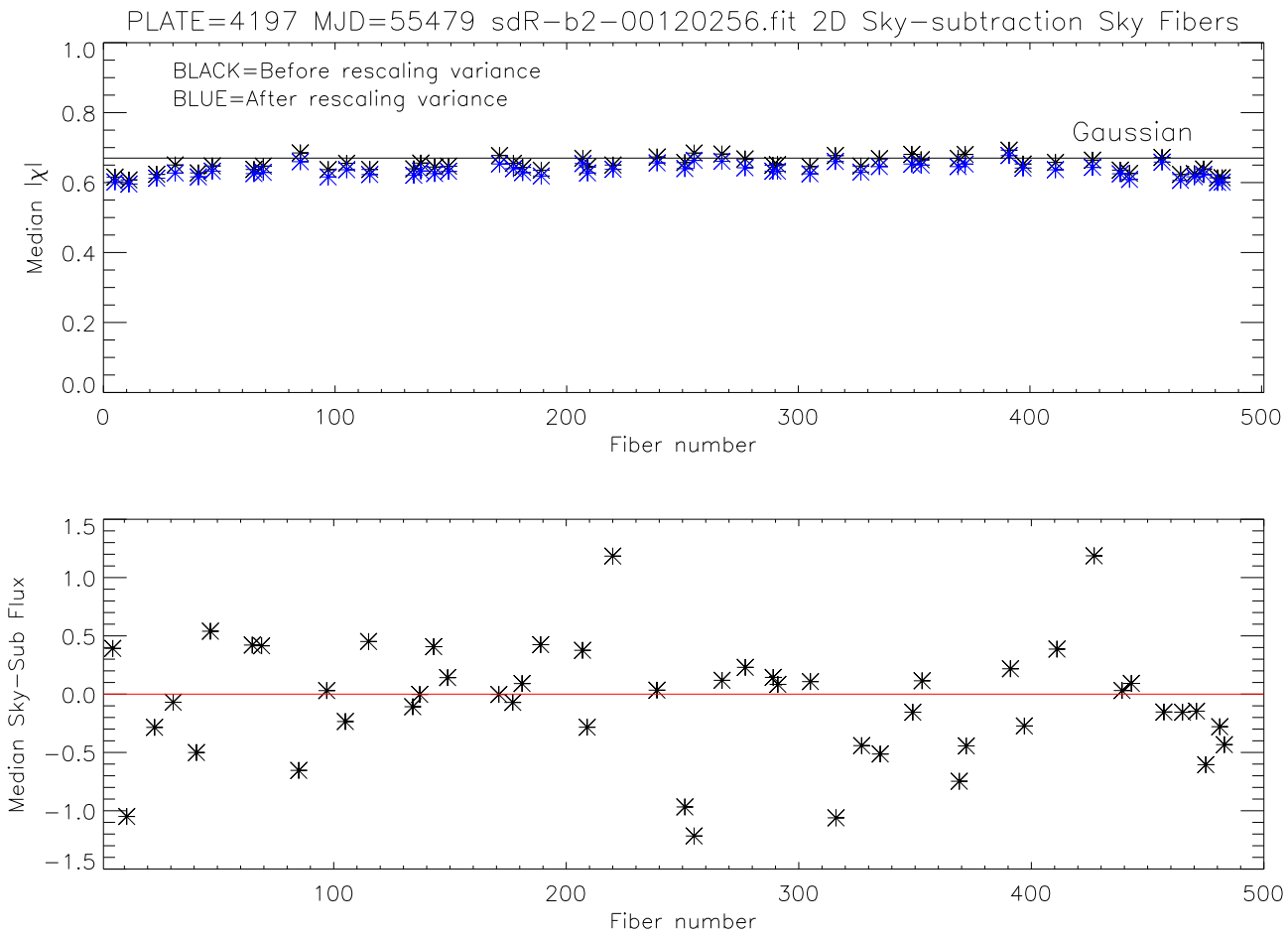

PLATE=4197 MJD=55479 sdR-b2-00120256.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

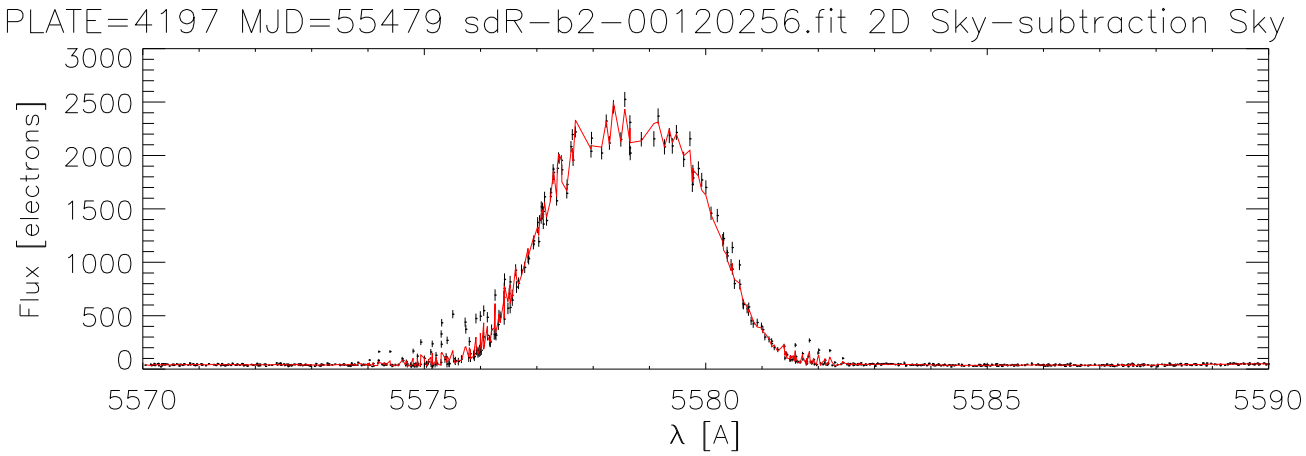

PLATE=4197 MJD=55479 sdR-b2-00120256.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

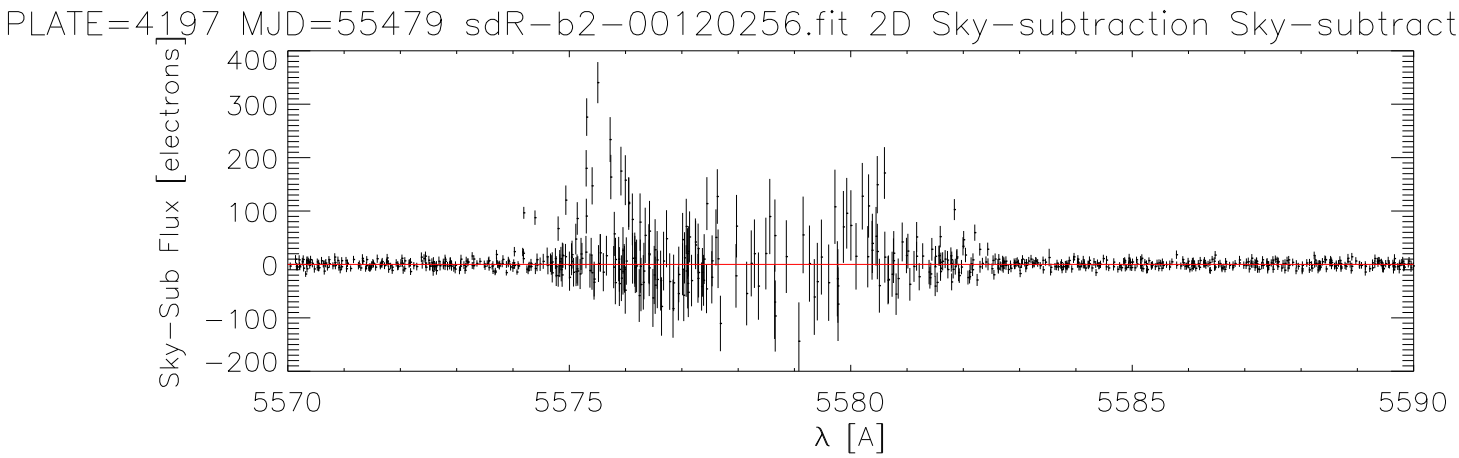

PLATE=4197 MJD=55479 sdR-b2-00120256.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
600
400
200
0
−200
−400
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 50

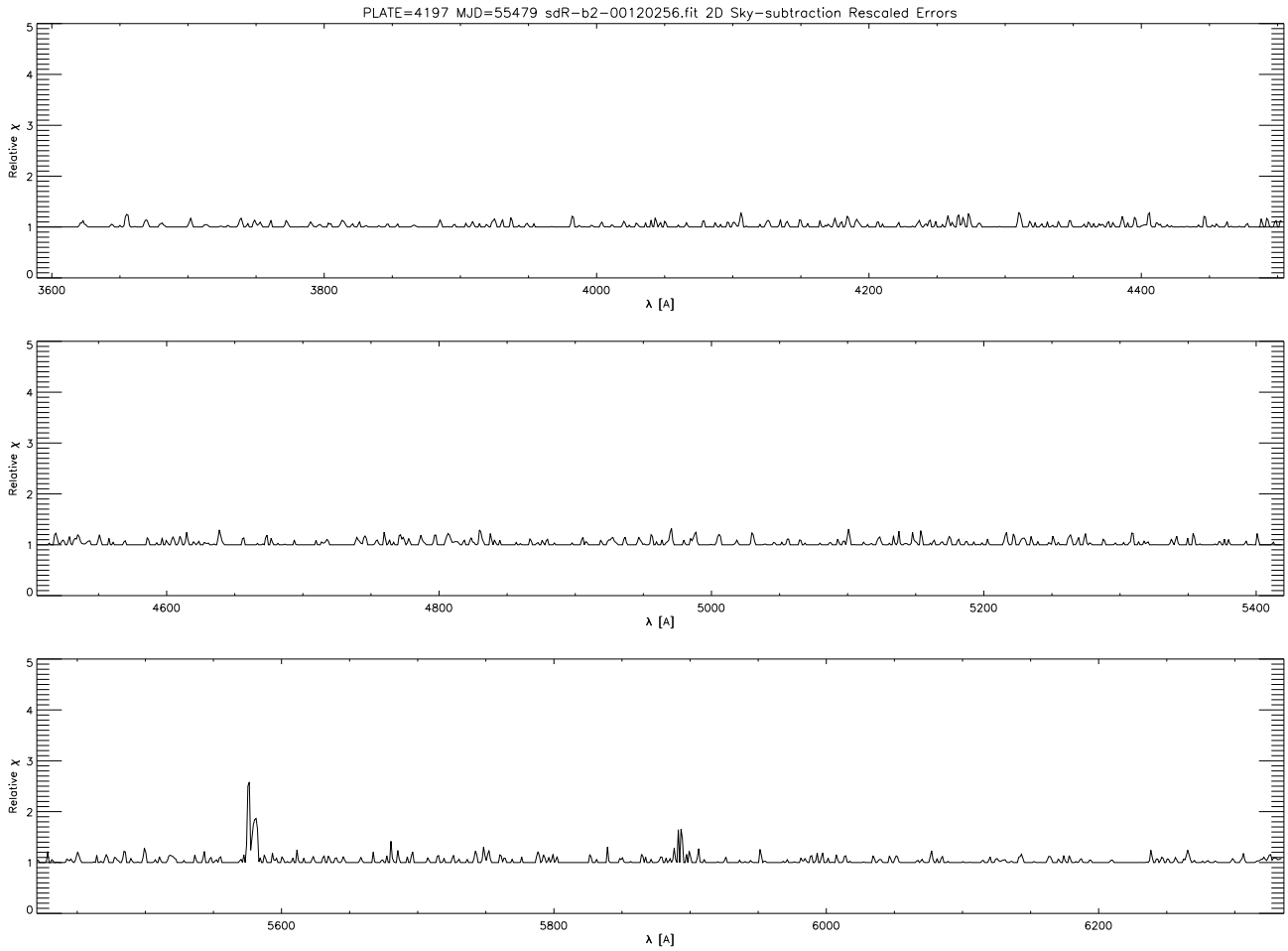


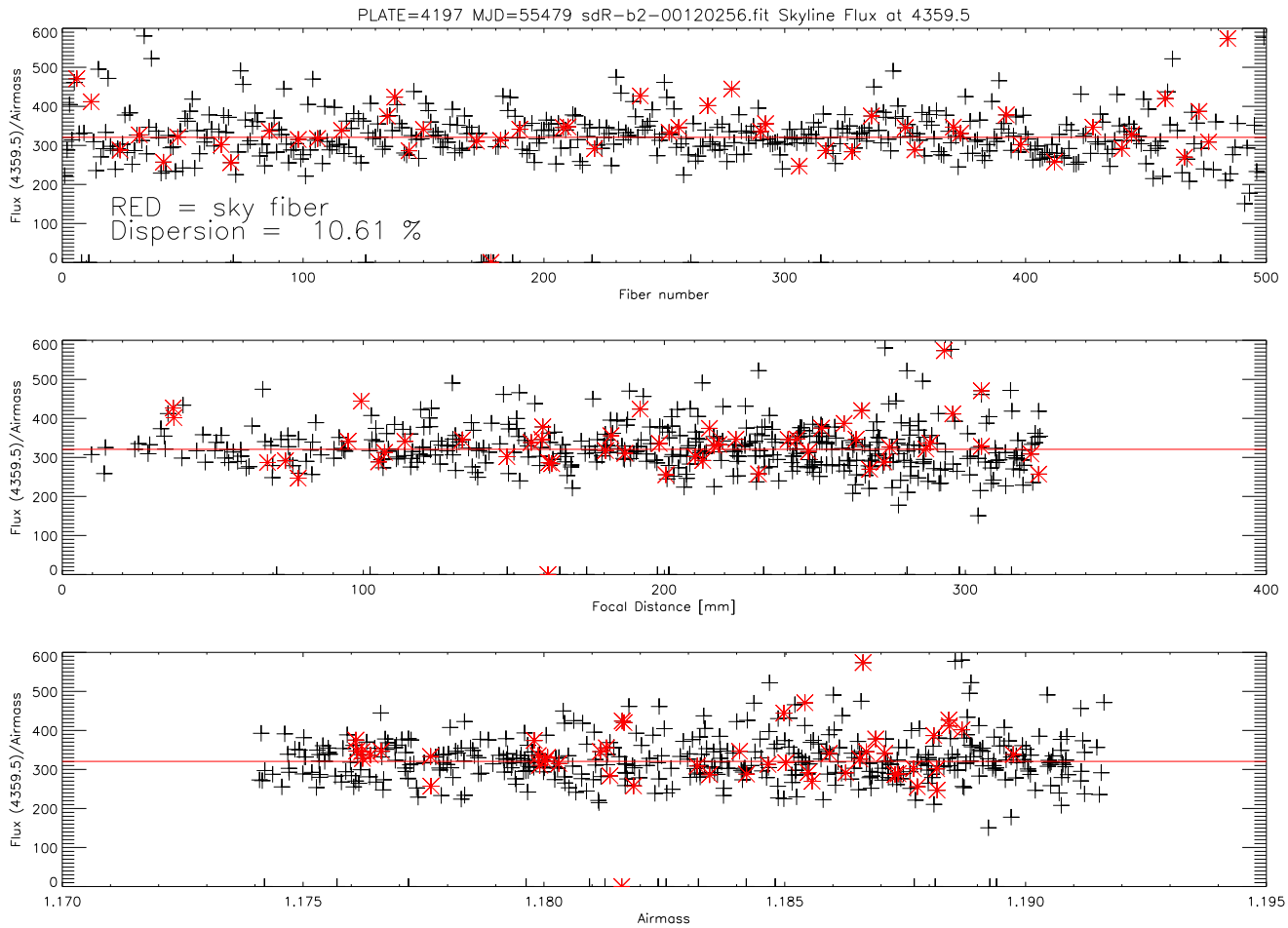

PLATE=4197 MJD=55479 sdR-b2-00120256.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

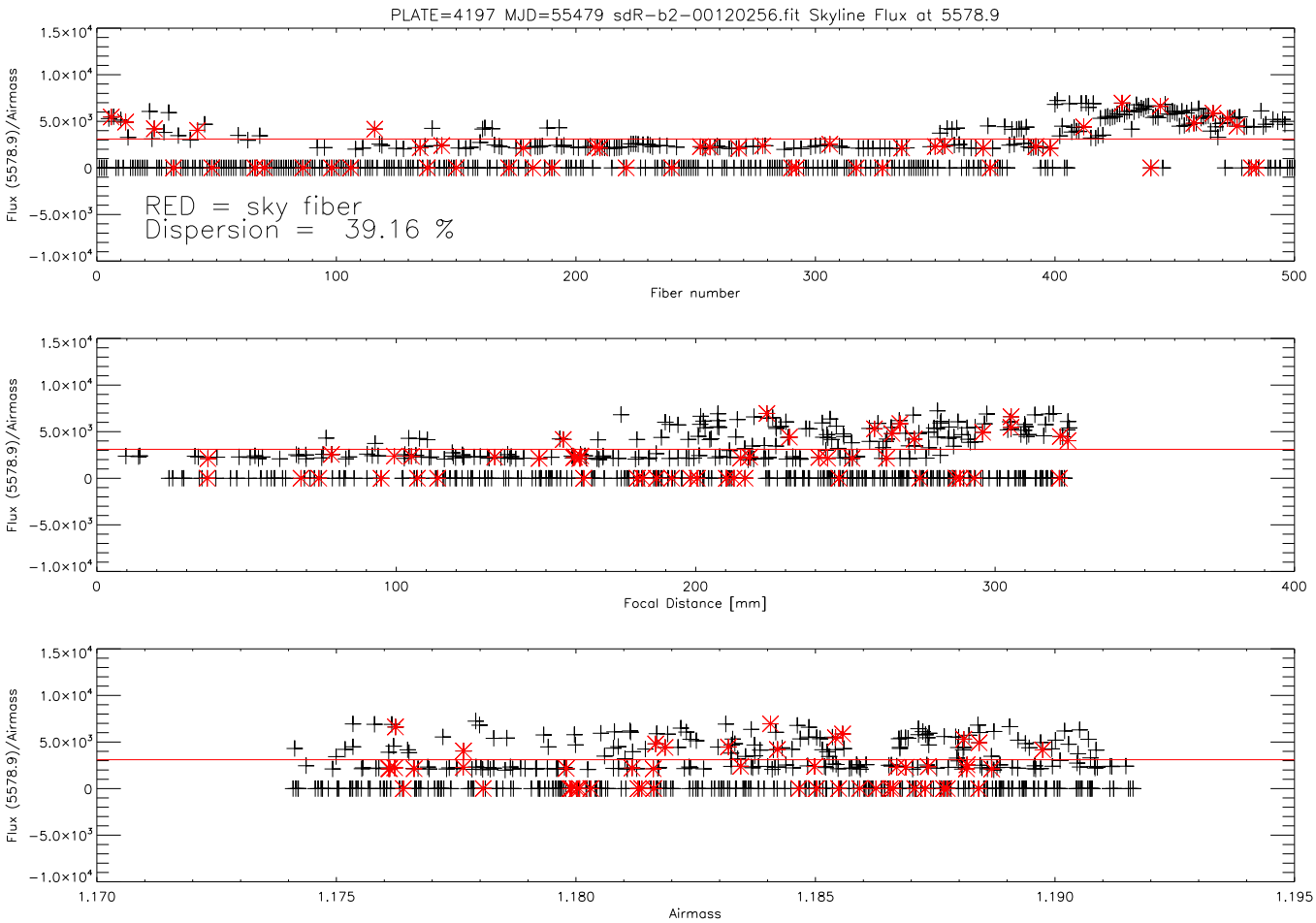

PLATE=4197 MJD=55479 sdR-b2-00120256.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

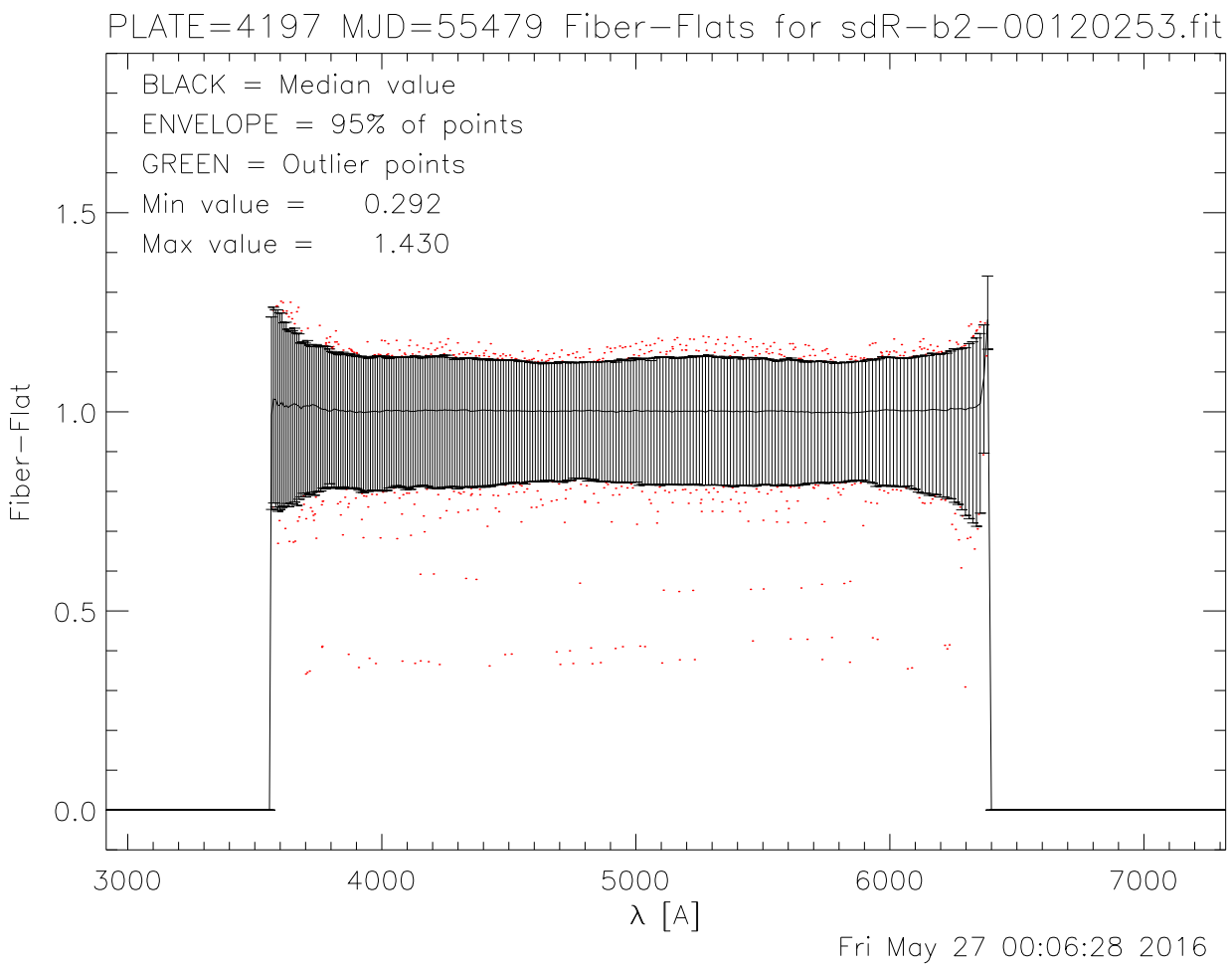

PLATE=4197 MJD=55479 sdR-b2-00120256.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
300
200
100
0
-100
-200
5570
5575
5580
5585
5590
λ [A]

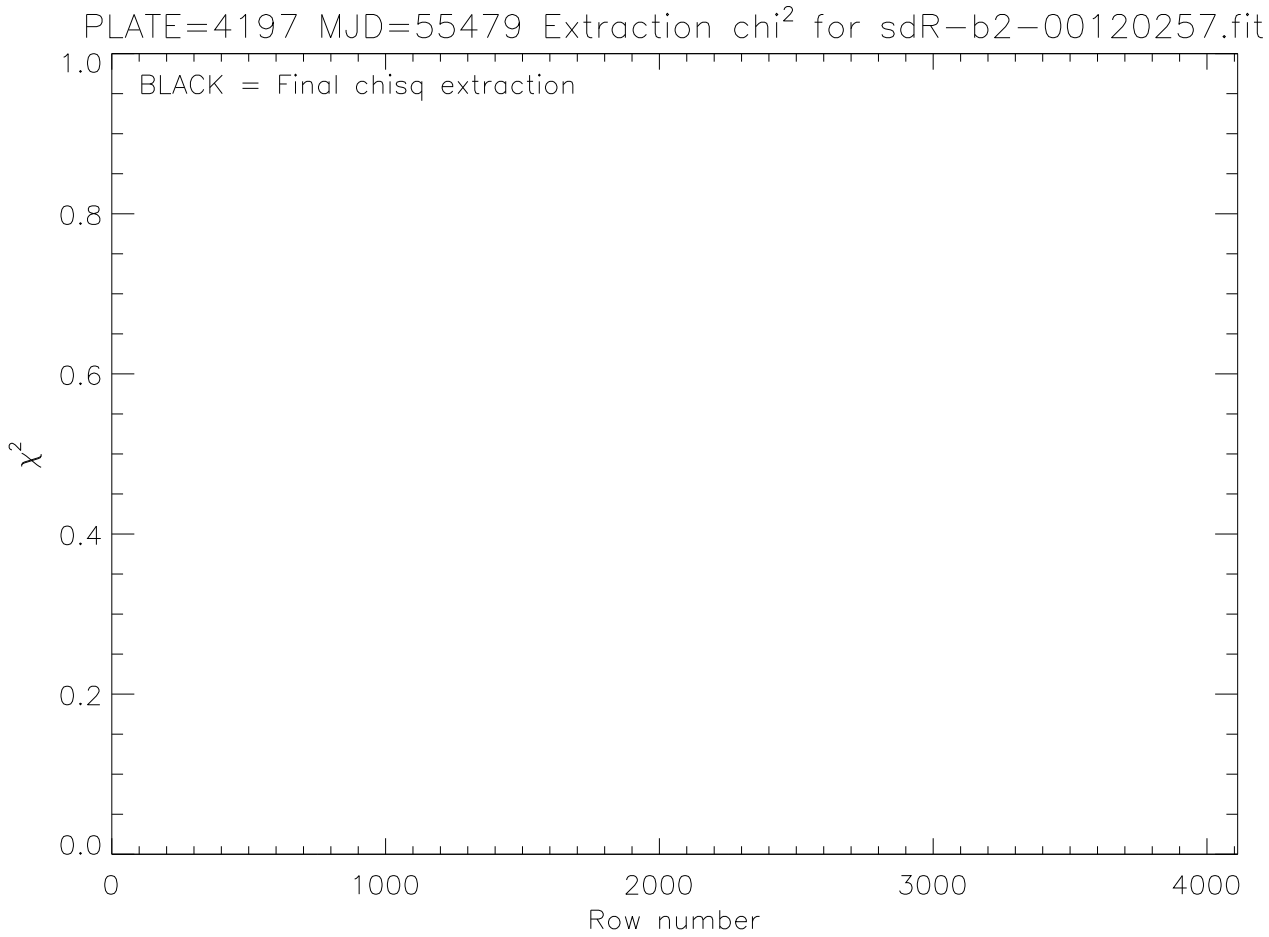
Number of sky fibers = 50

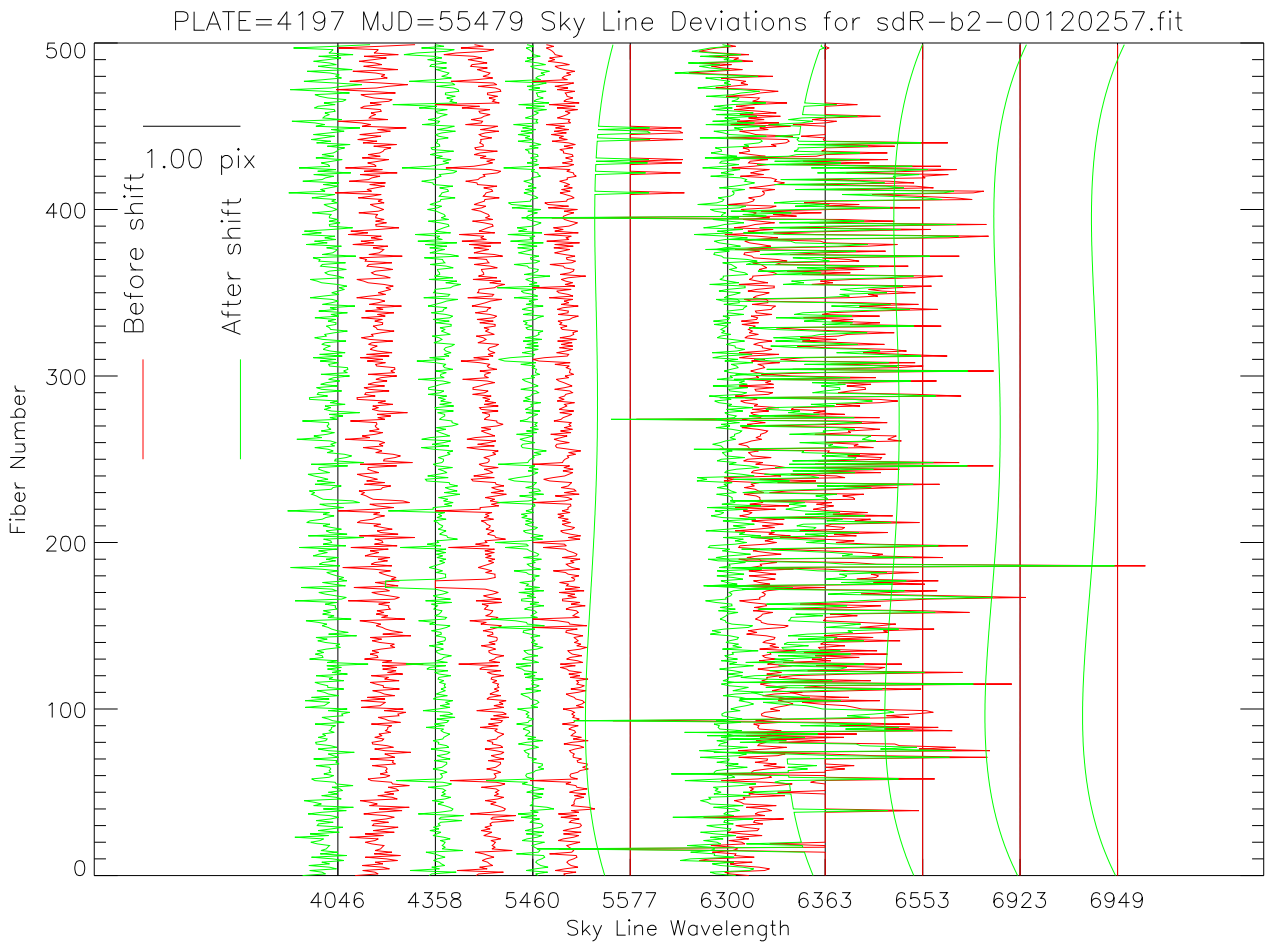


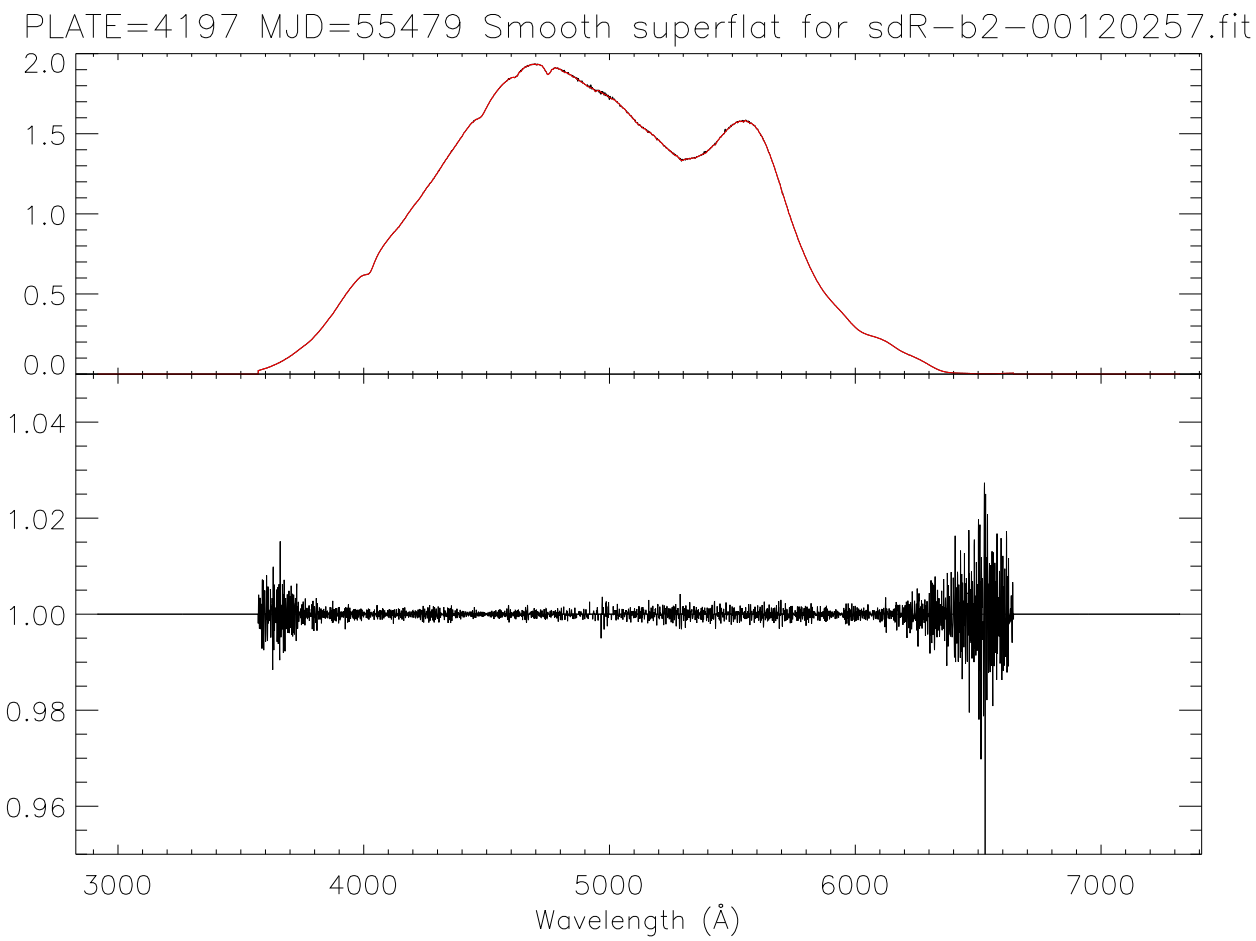

PLATE=4197 MJD=55479 sdR-b2-00120256.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
RED = sky fiber
Dispersion = 10.61 %
Fiber number
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

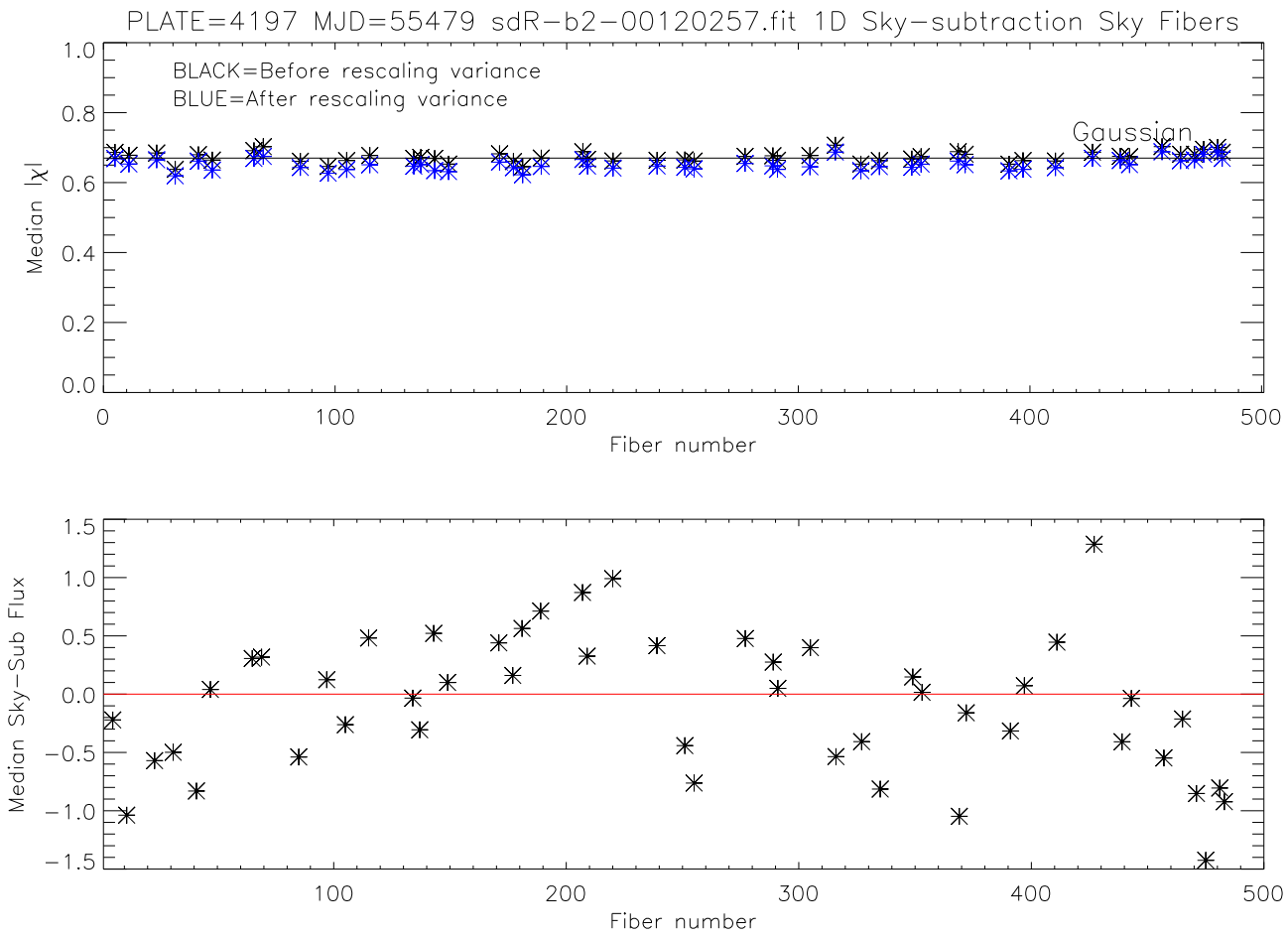

PLATE=4197 MJD=55479 sdR-b2-00120256.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 39.16 %
Fiber number
Focal Distance [mm]
Airmass

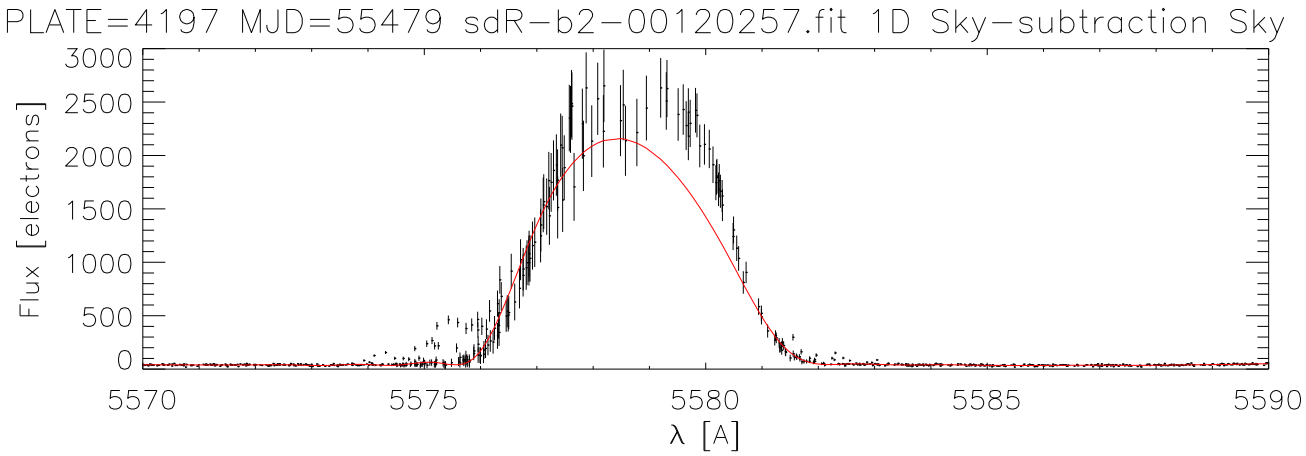

PLATE=4197 MJD=55479 Fiber−Flats for sdR−b2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = 0.292
Max value = 1.430
Fiber−Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Fri May 27 00:06:28 2016

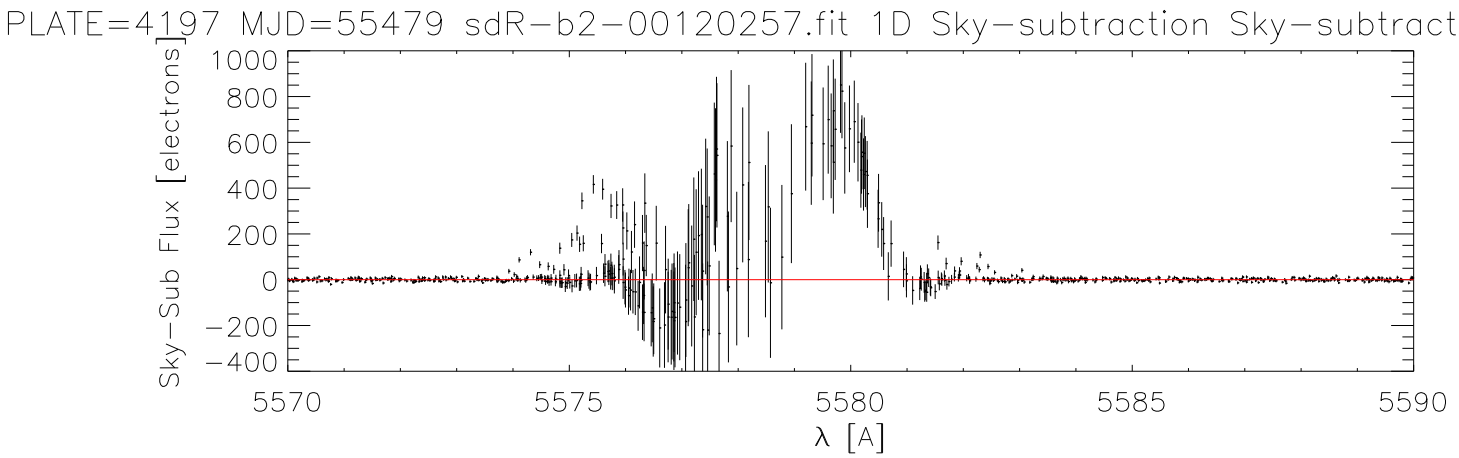

PLATE=4197 MJD=55479 Extraction chi^2 for sdR-b2-00120257.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b2-00120257.fit
1.00 pix
Before shift
After shift
Fiber Number
500
400
300
200
100
0
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

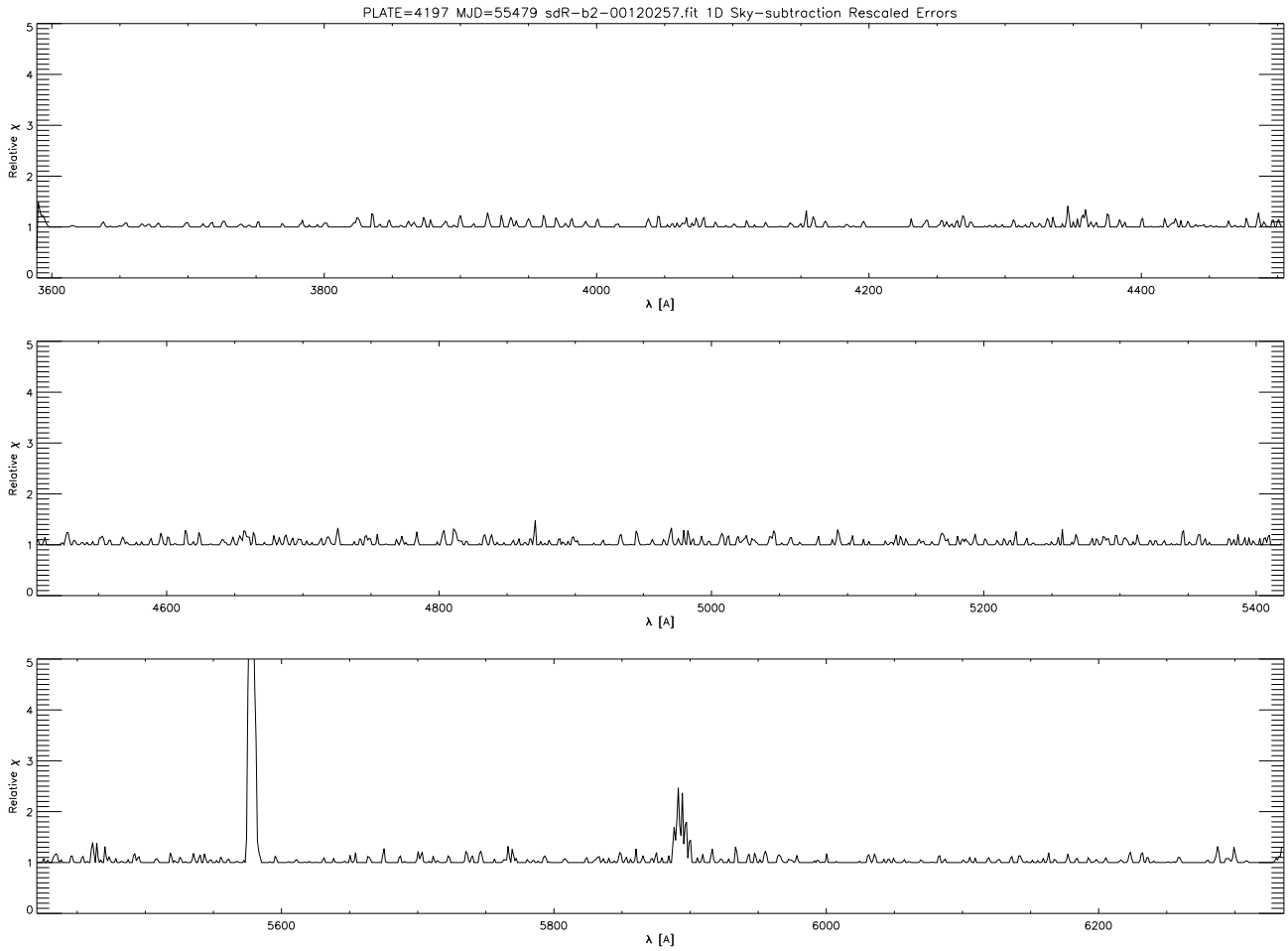

PLATE=4197 MJD=55479 Smooth superflat for sdR-b2-00120257.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

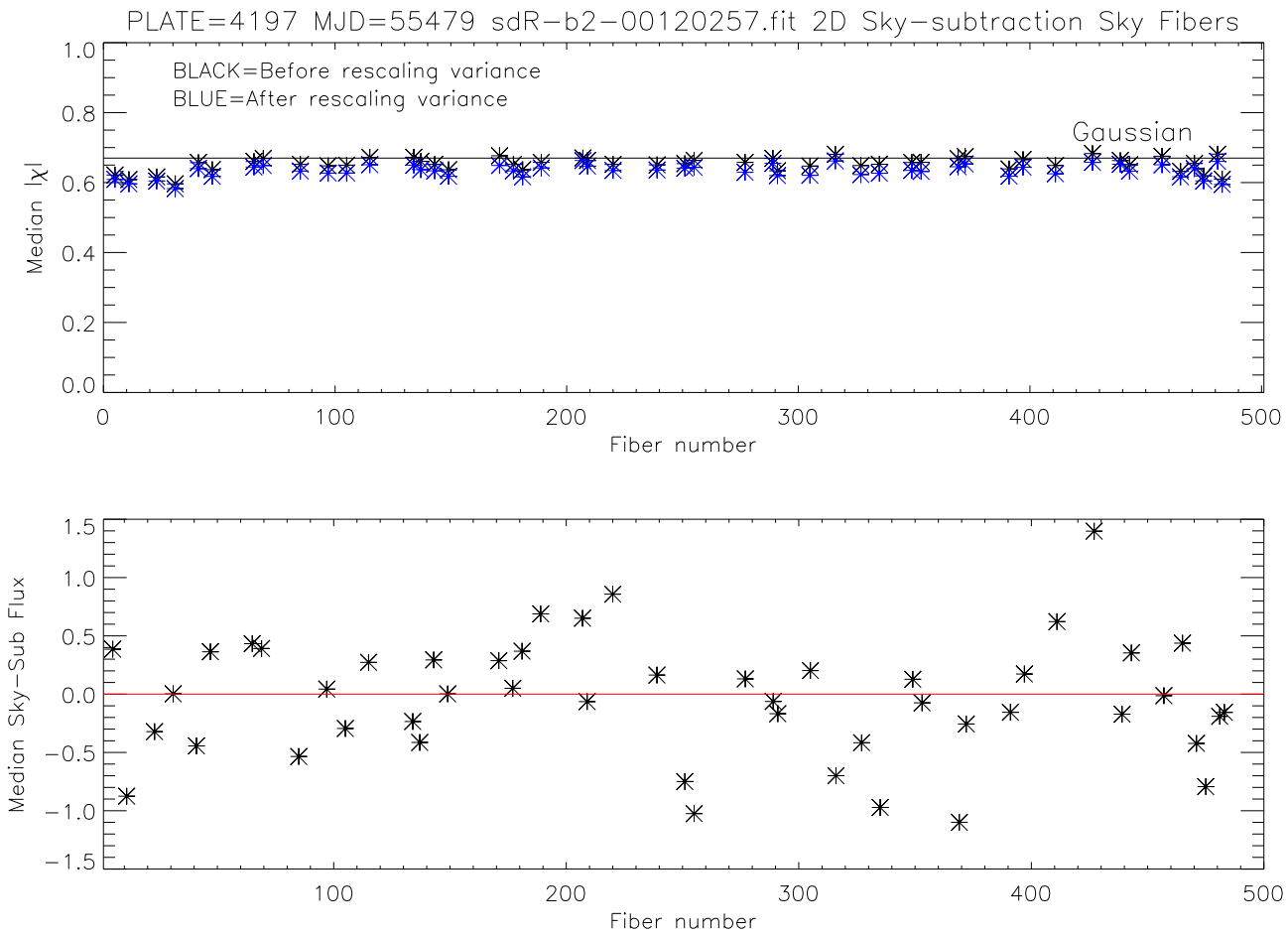

PLATE=4197 MJD=55479 sdR-b2-00120257.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number


PLATE=4197 MJD=55479 sdR-b2-00120257.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

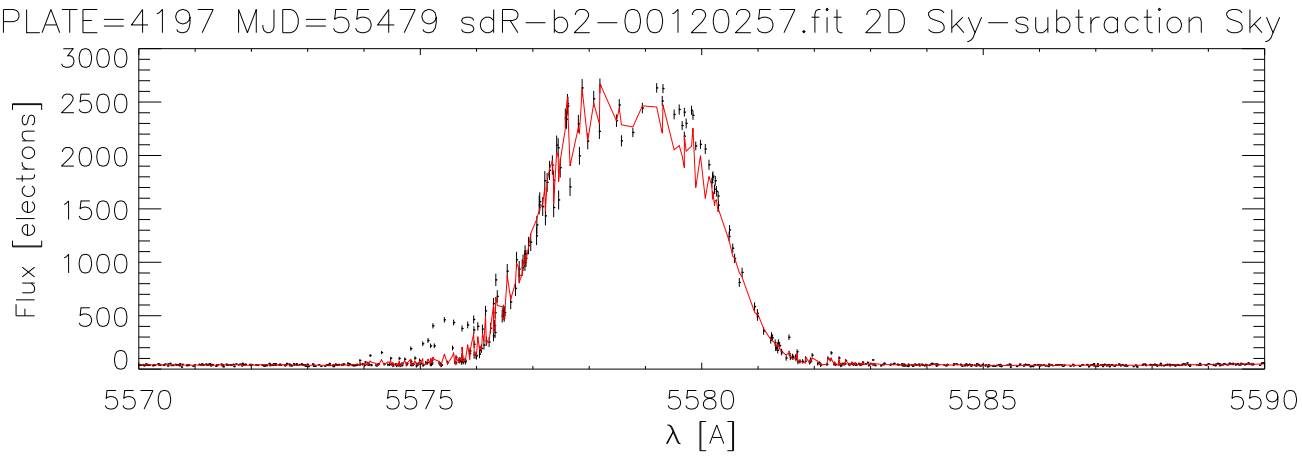

PLATE=4197 MJD=55479 sdR-b2-00120257.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1000
800
600
400
200
0
-200
-400
5570
5575
5580
5585
5590
λ [A]

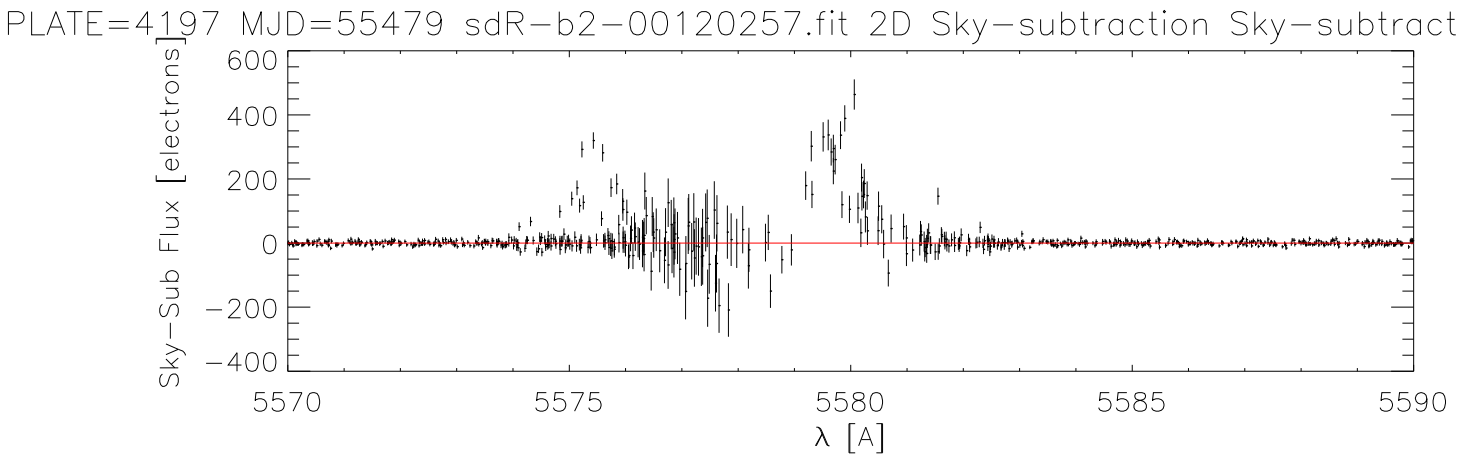
Number of sky fibers = 49



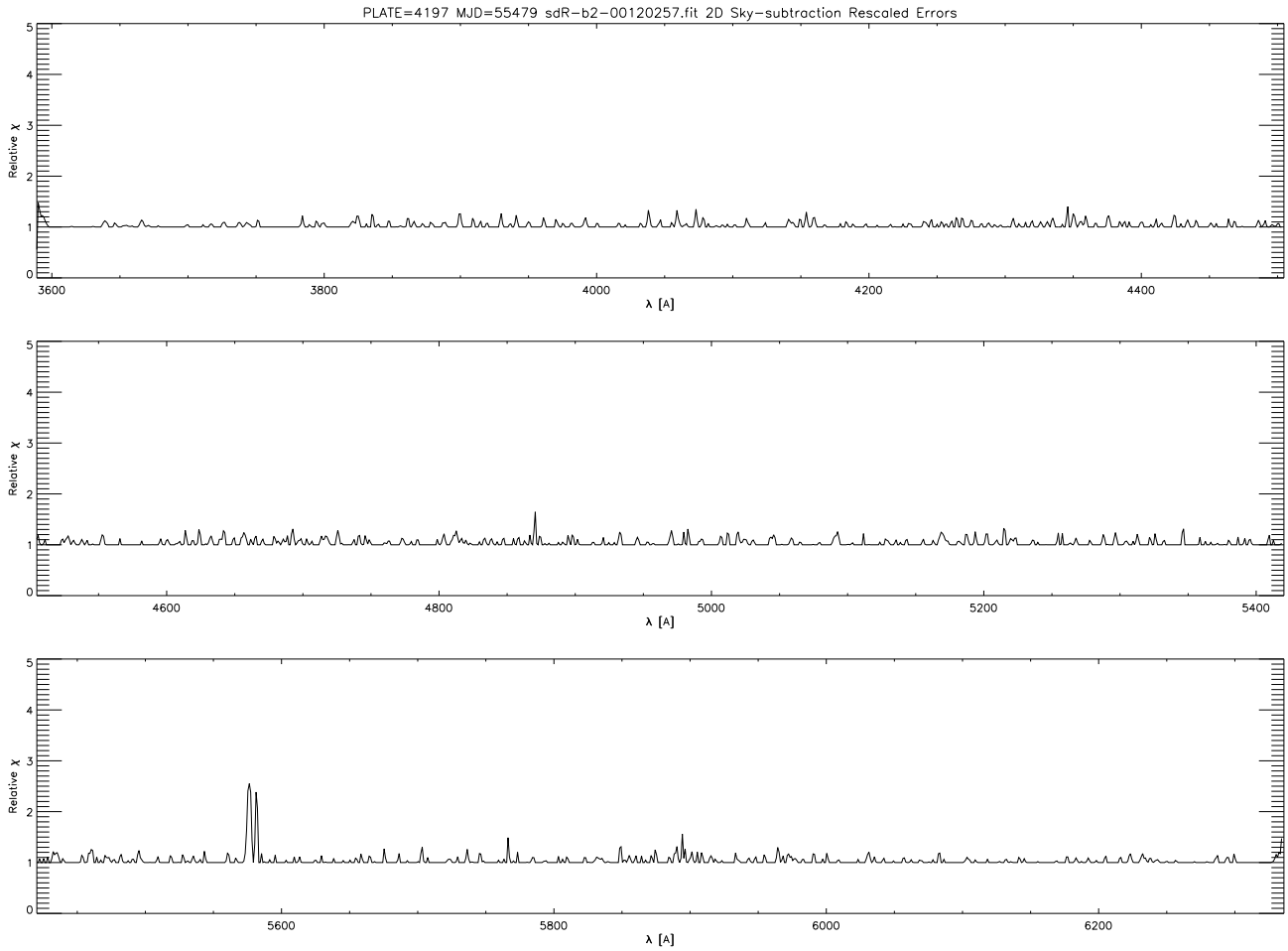

PLATE=4197 MJD=55479 sdR-b2-00120257.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number

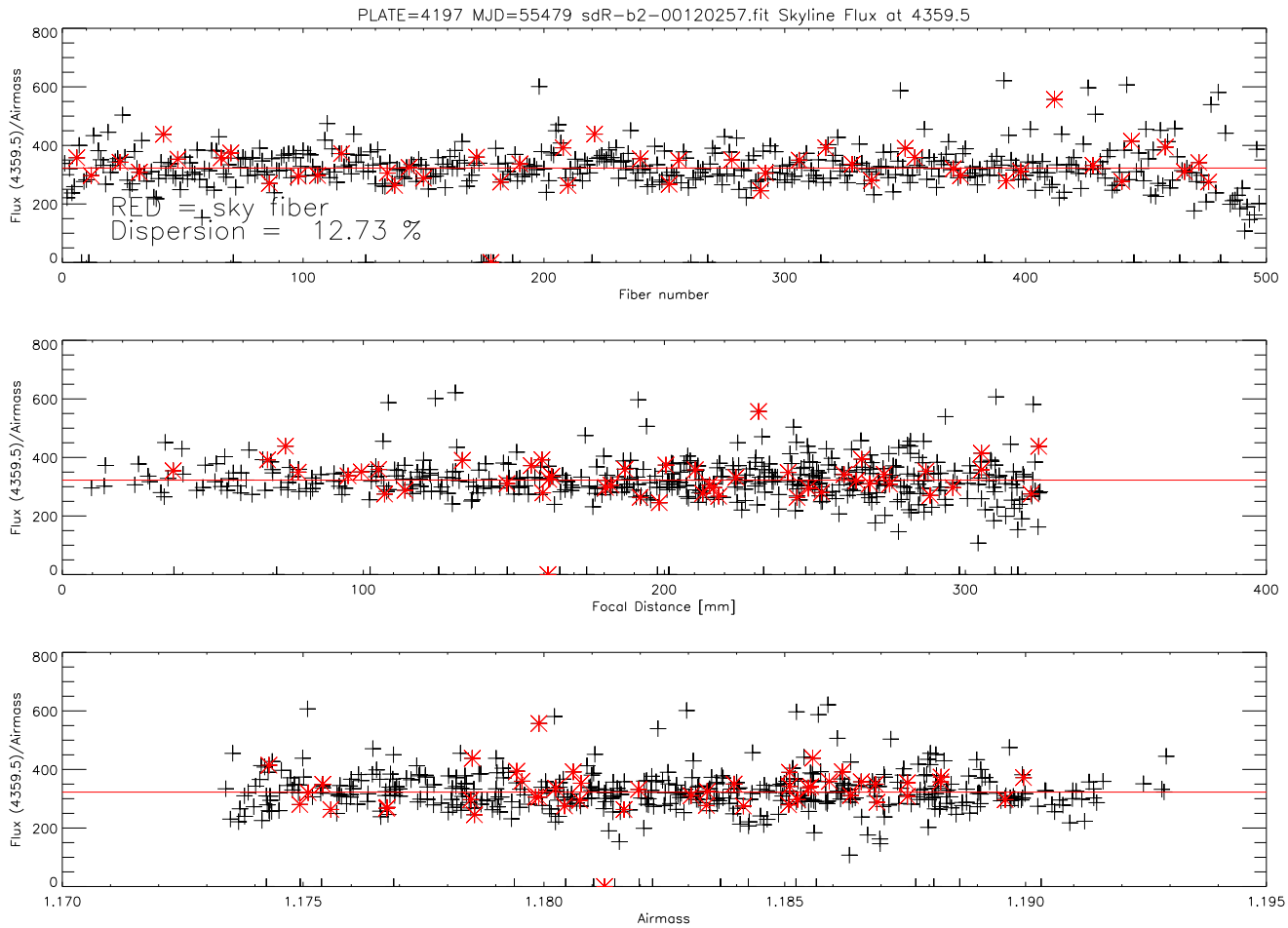
Median Sky-Sub Flux
Fiber number

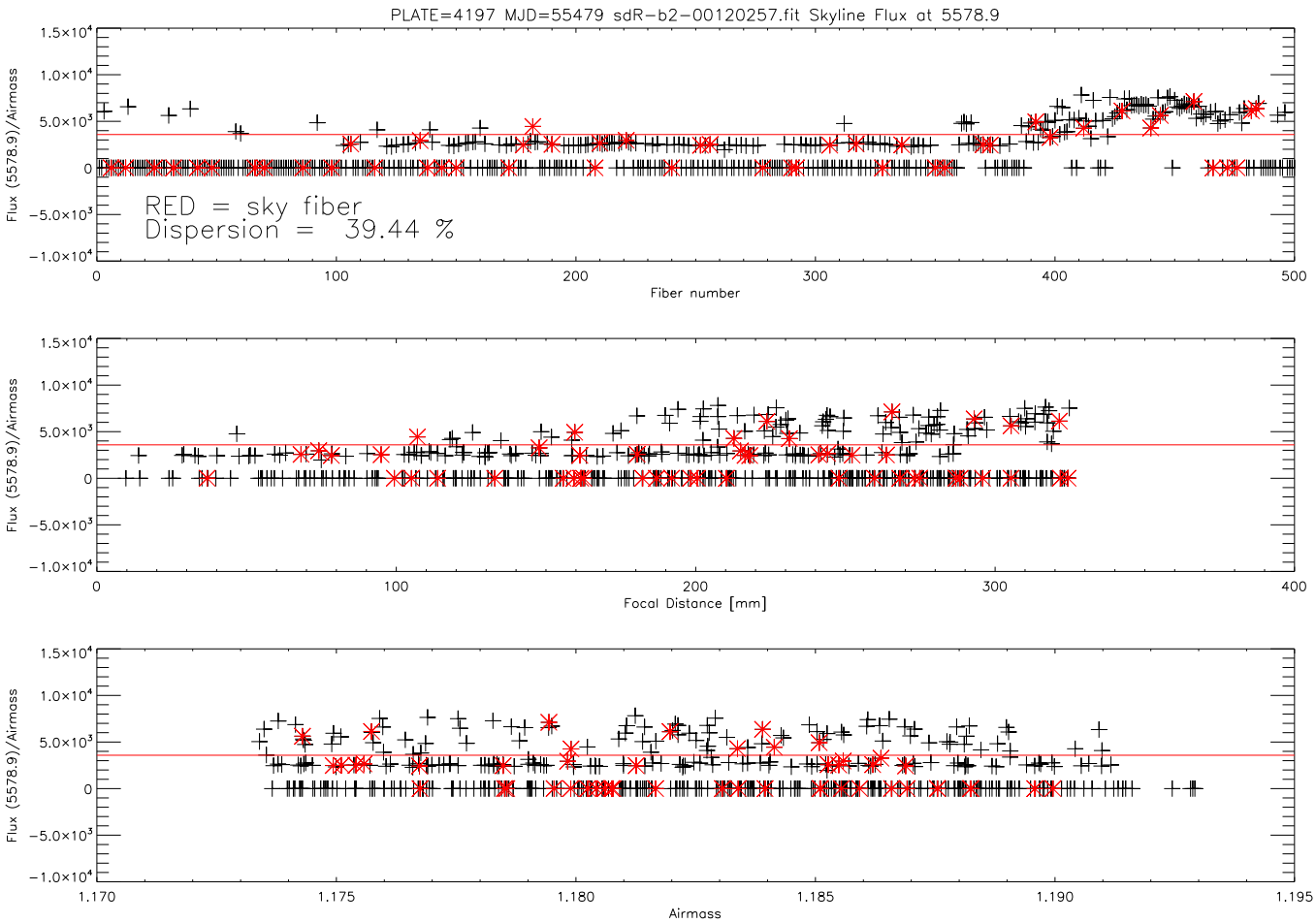

PLATE=4197 MJD=55479 sdR-b2-00120257.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

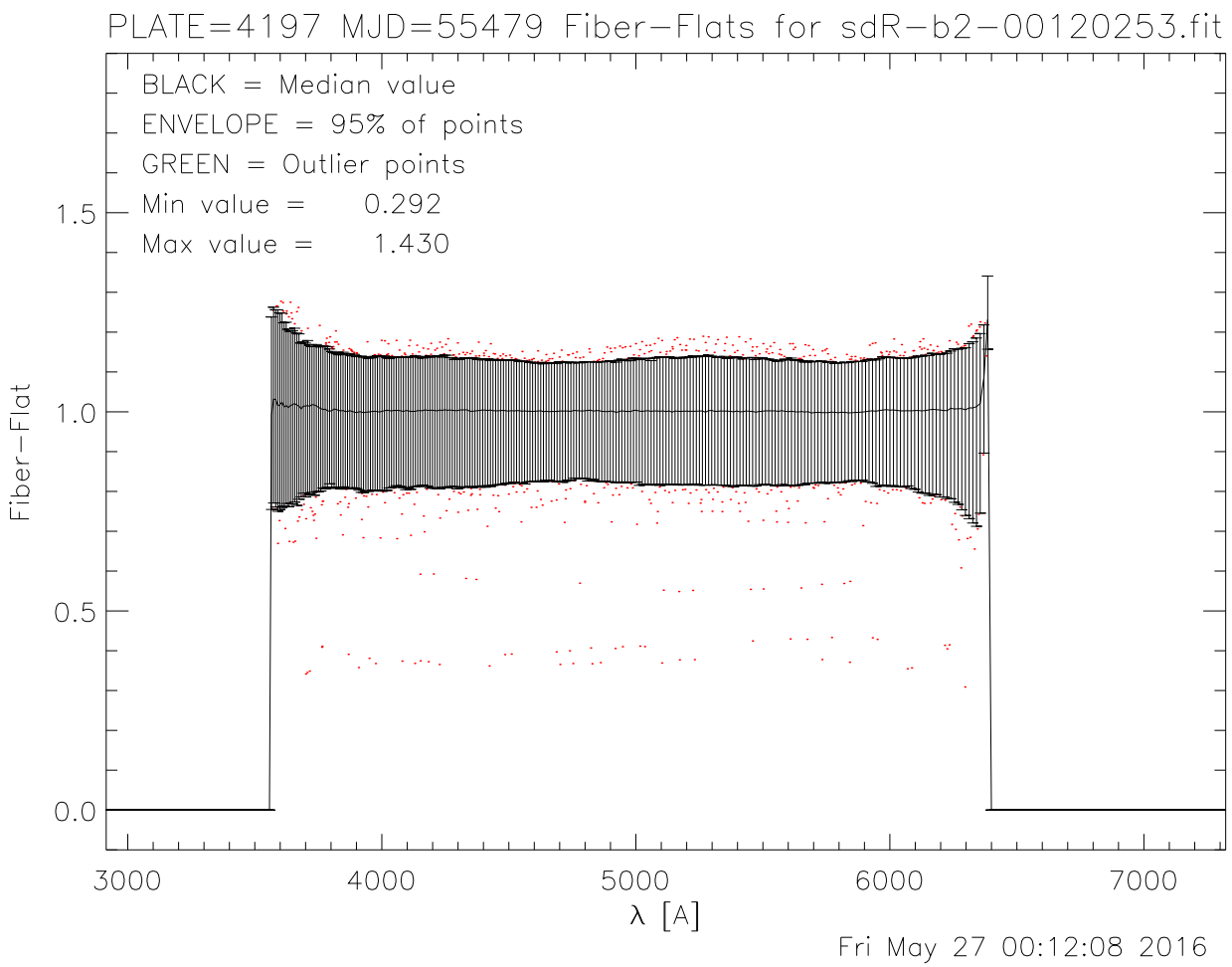

PLATE=4197 MJD=55479 sdR-b2-00120257.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
600
400
200
0
−200
−400
5570
5575
5580
5585
5590
λ [A]

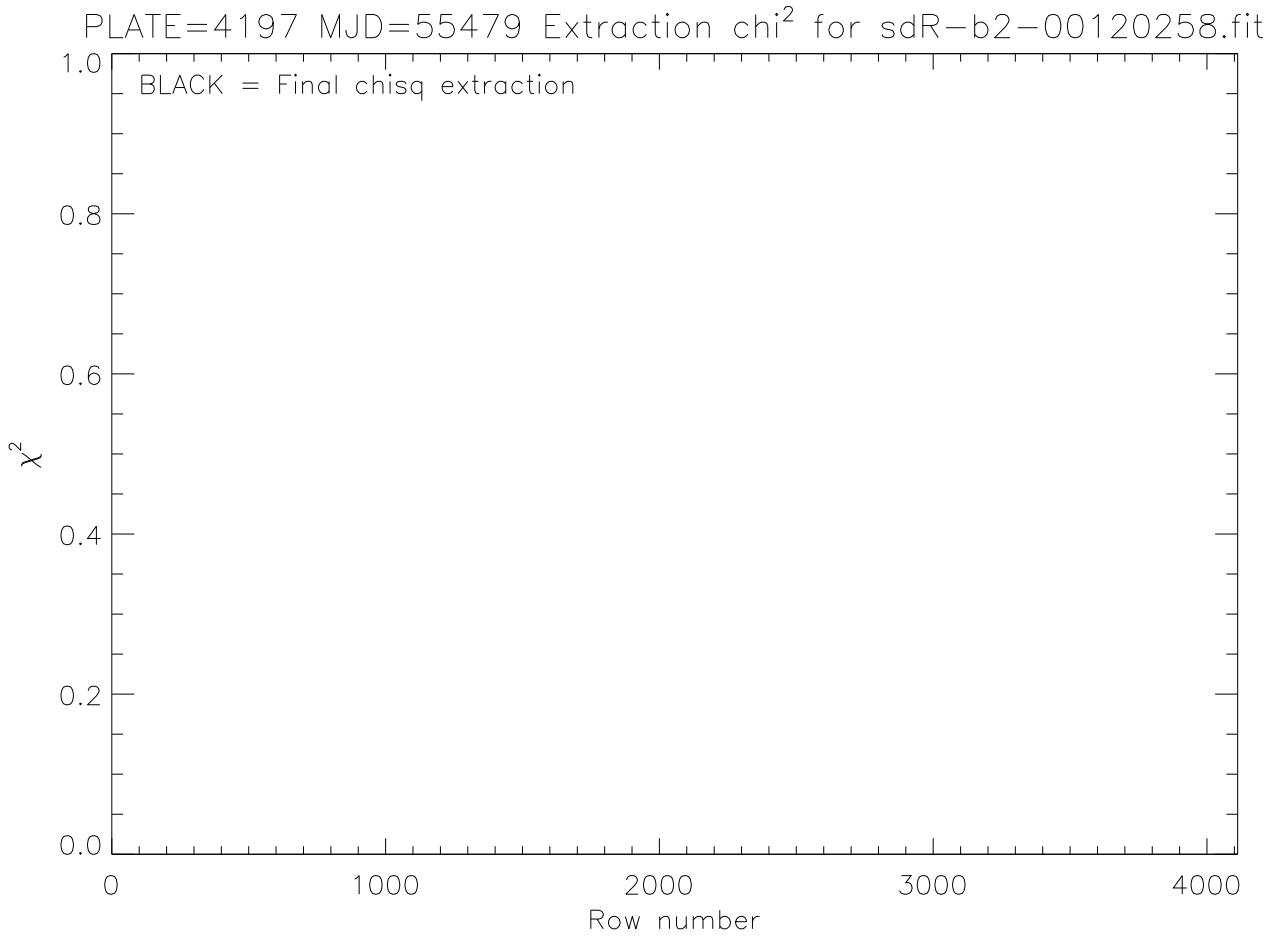
Number of sky fibers = 49

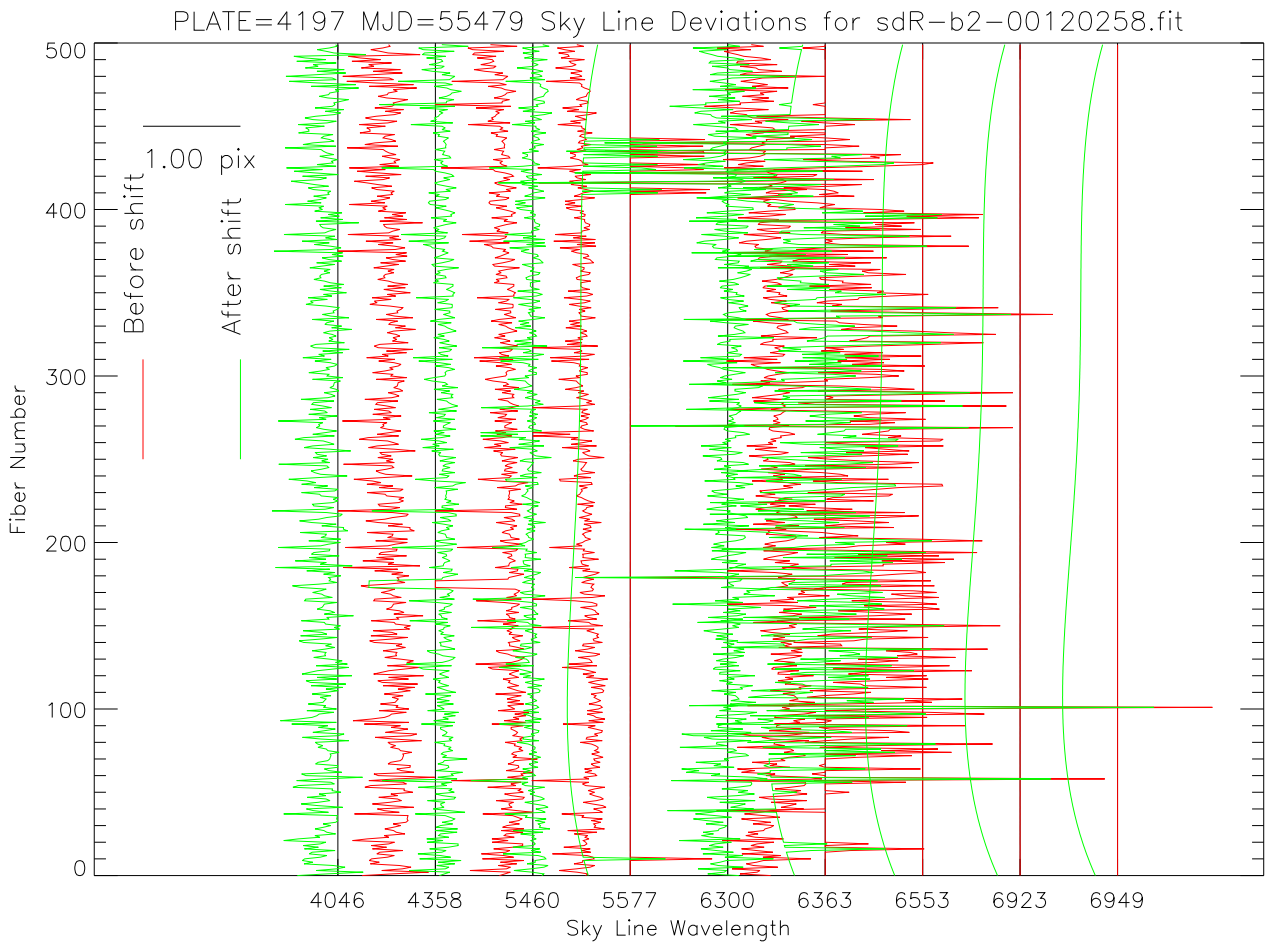


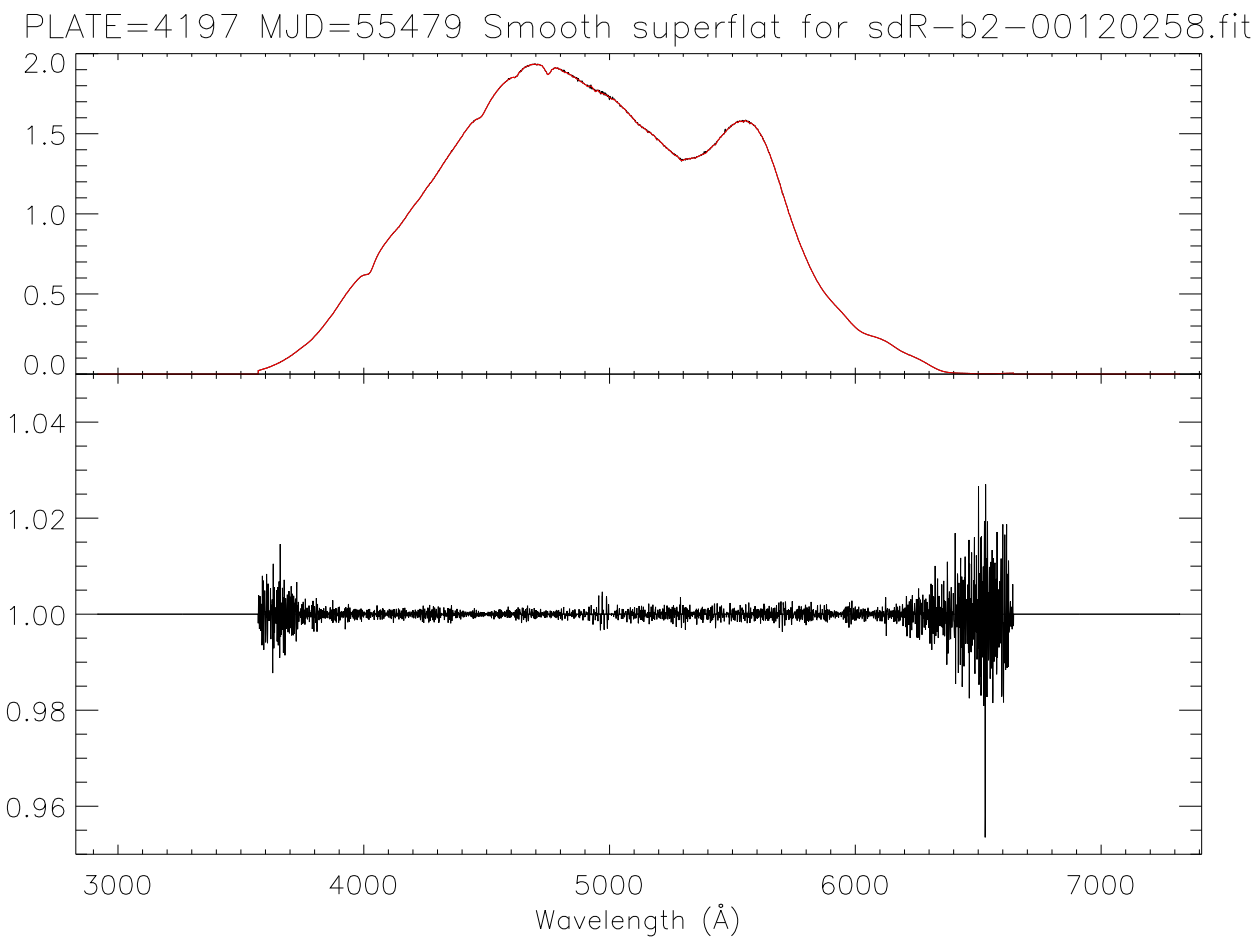

PLATE=4197 MJD=55479 sdR-b2-00120257.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
Fiber number
RED = sky fiber
Dispersion = 12.73 %
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

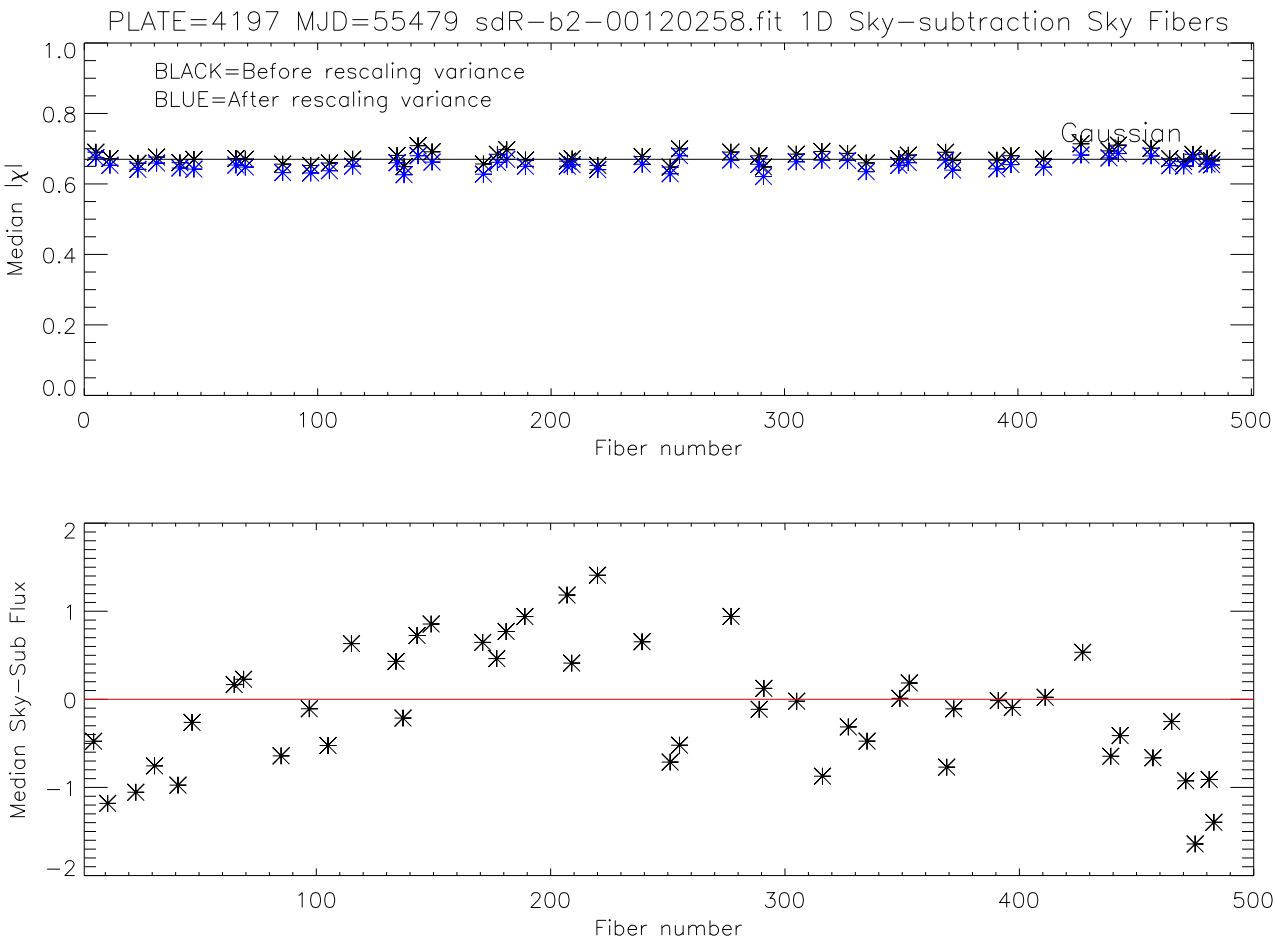

PLATE=4197 MJD=55479 sdR-b2-00120257.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 39.44 %
Fiber number
Focal Distance [mm]
Airmass

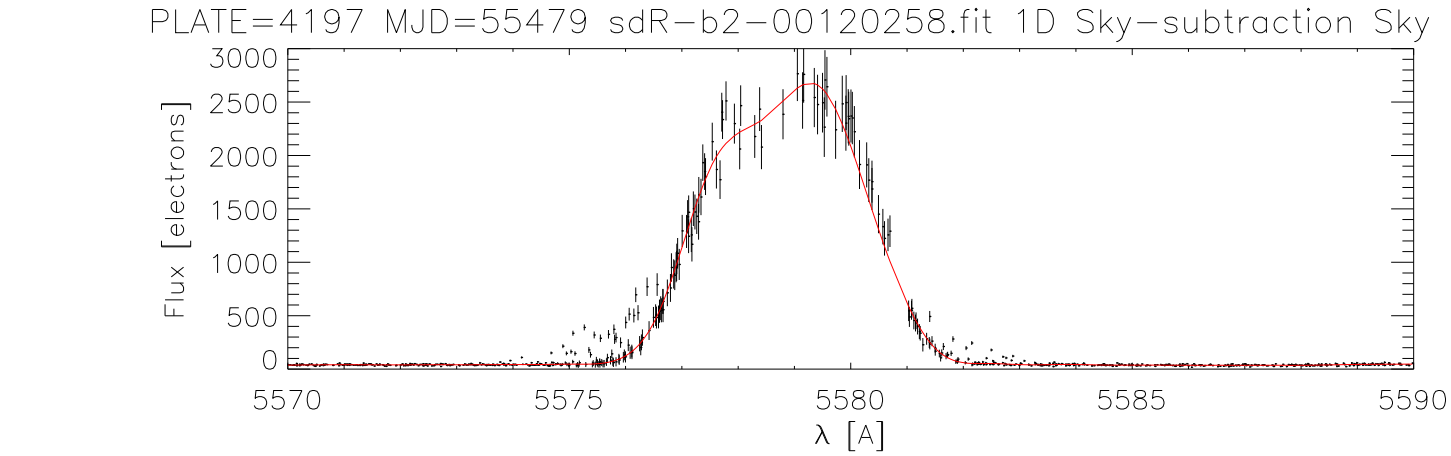

PLATE=4197 MJD=55479 Fiber−Flats for sdR−b2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = 0.292
Max value = 1.430
Fiber−Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Fri May 27 00:12:08 2016

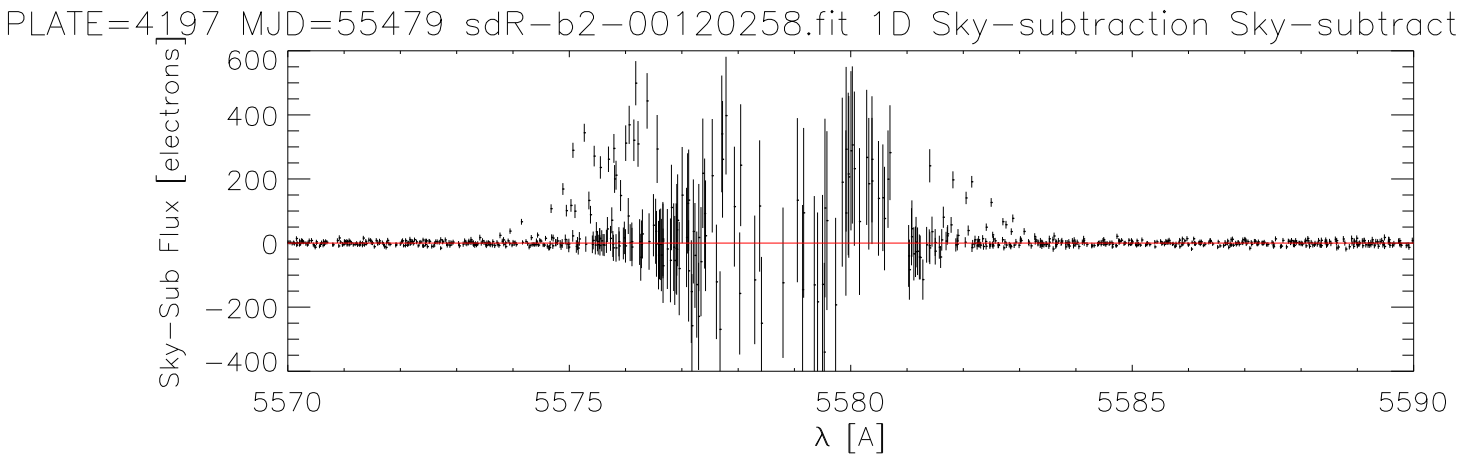

PLATE=4197 MJD=55479 Extraction chi^2 for sdR-b2-00120258.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b2-00120258.fit
1.00 pix
Before shift
After shift
Fiber Number
500
400
300
200
100
0
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

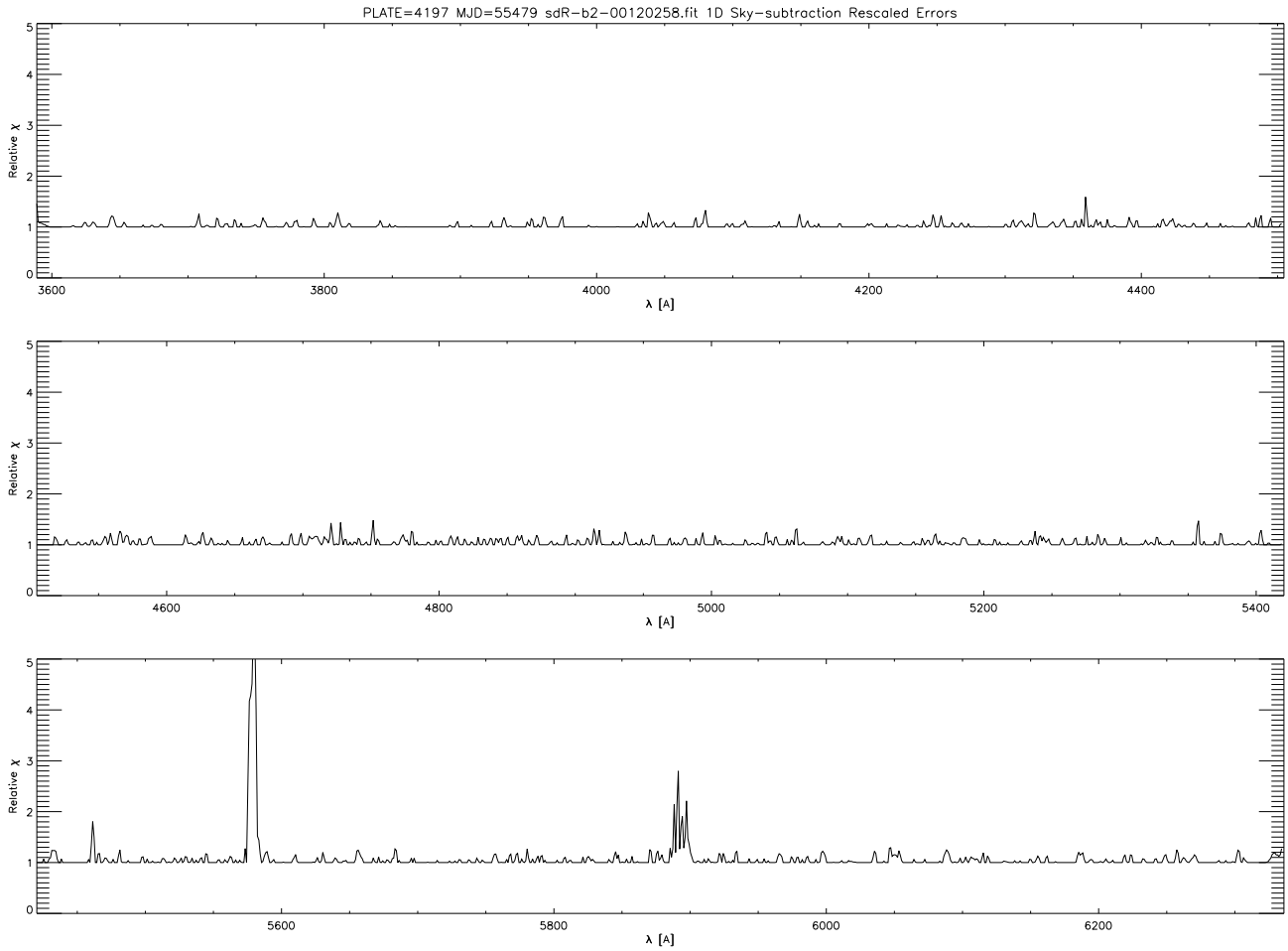

PLATE=4197 MJD=55479 Smooth superflat for sdR-b2-00120258.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

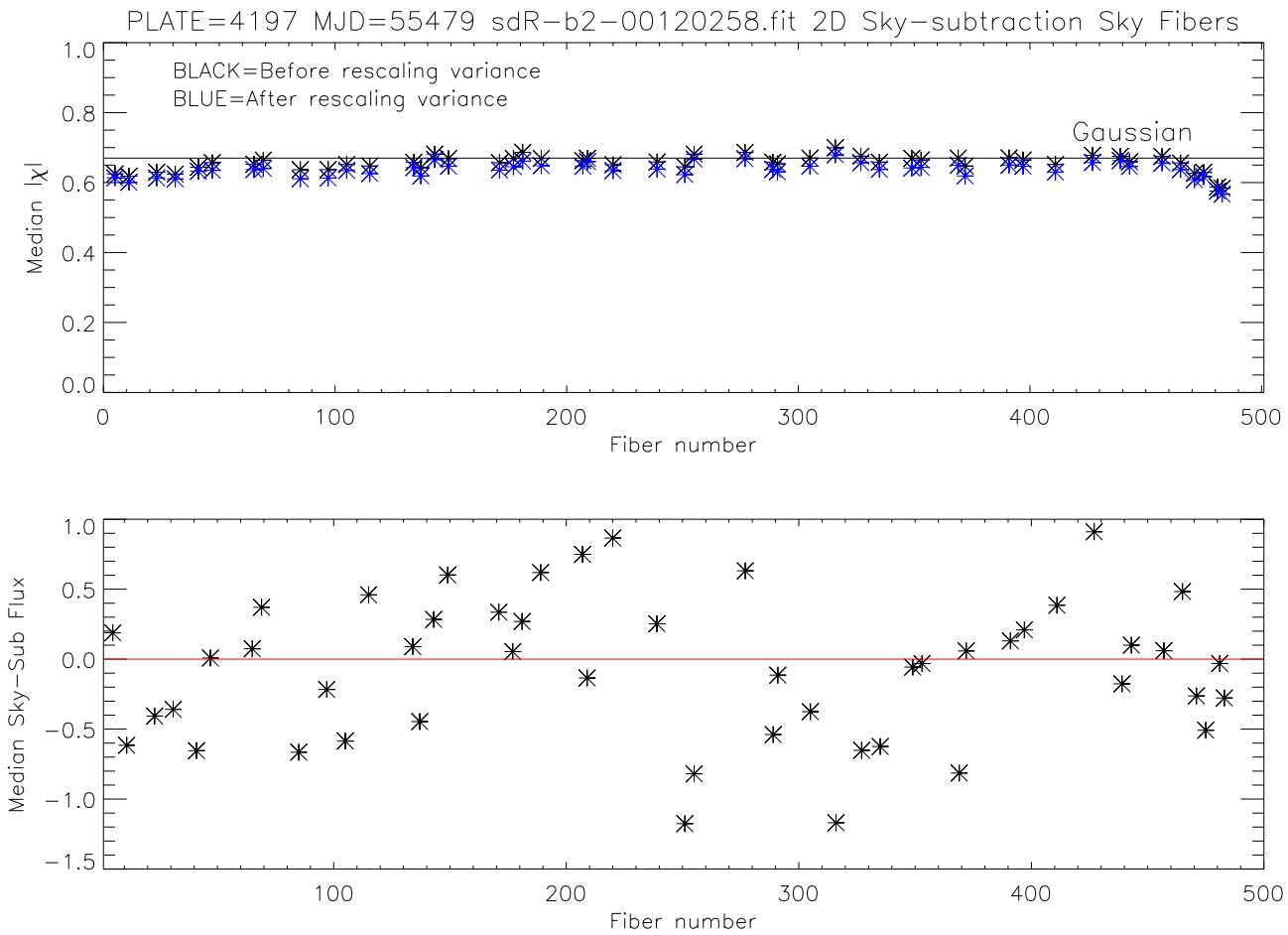

PLATE=4197 MJD=55479 sdR-b2-00120258.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

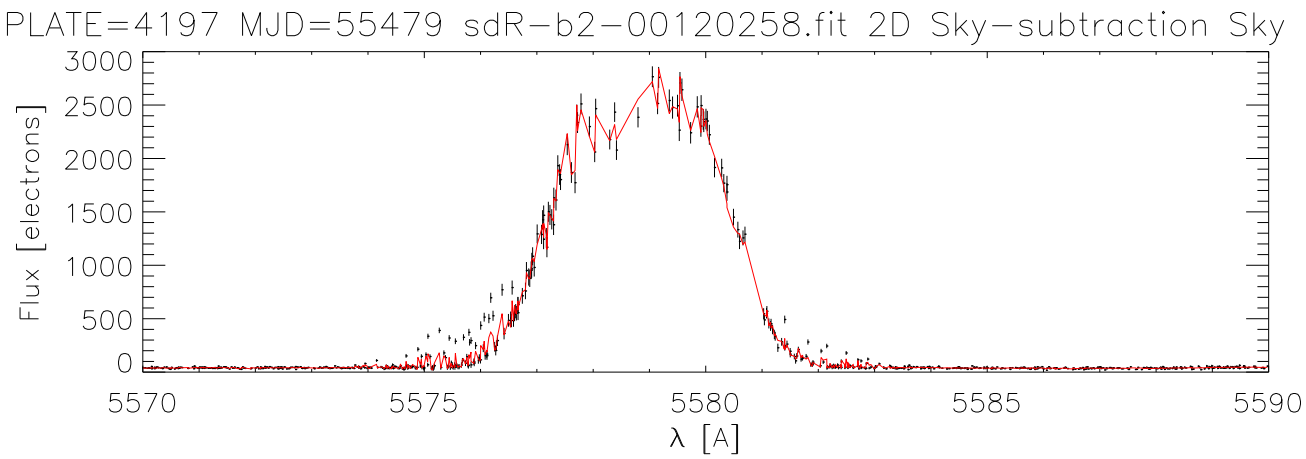

PLATE=4197 MJD=55479 sdR-b2-00120258.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

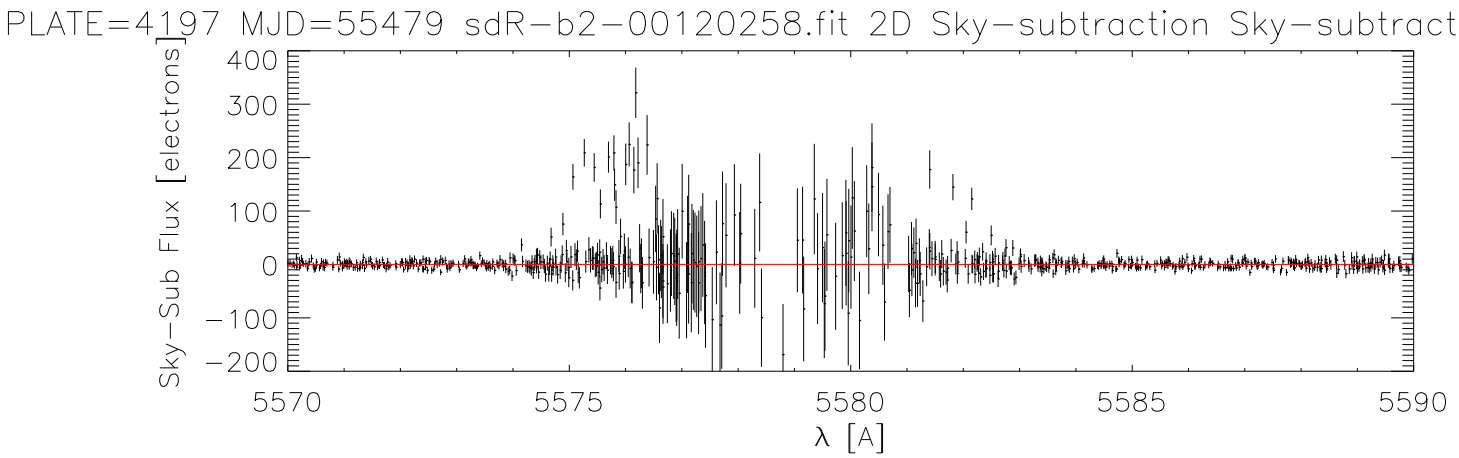

PLATE=4197 MJD=55479 sdR-b2-00120258.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
600
400
200
0
−200
−400
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 49

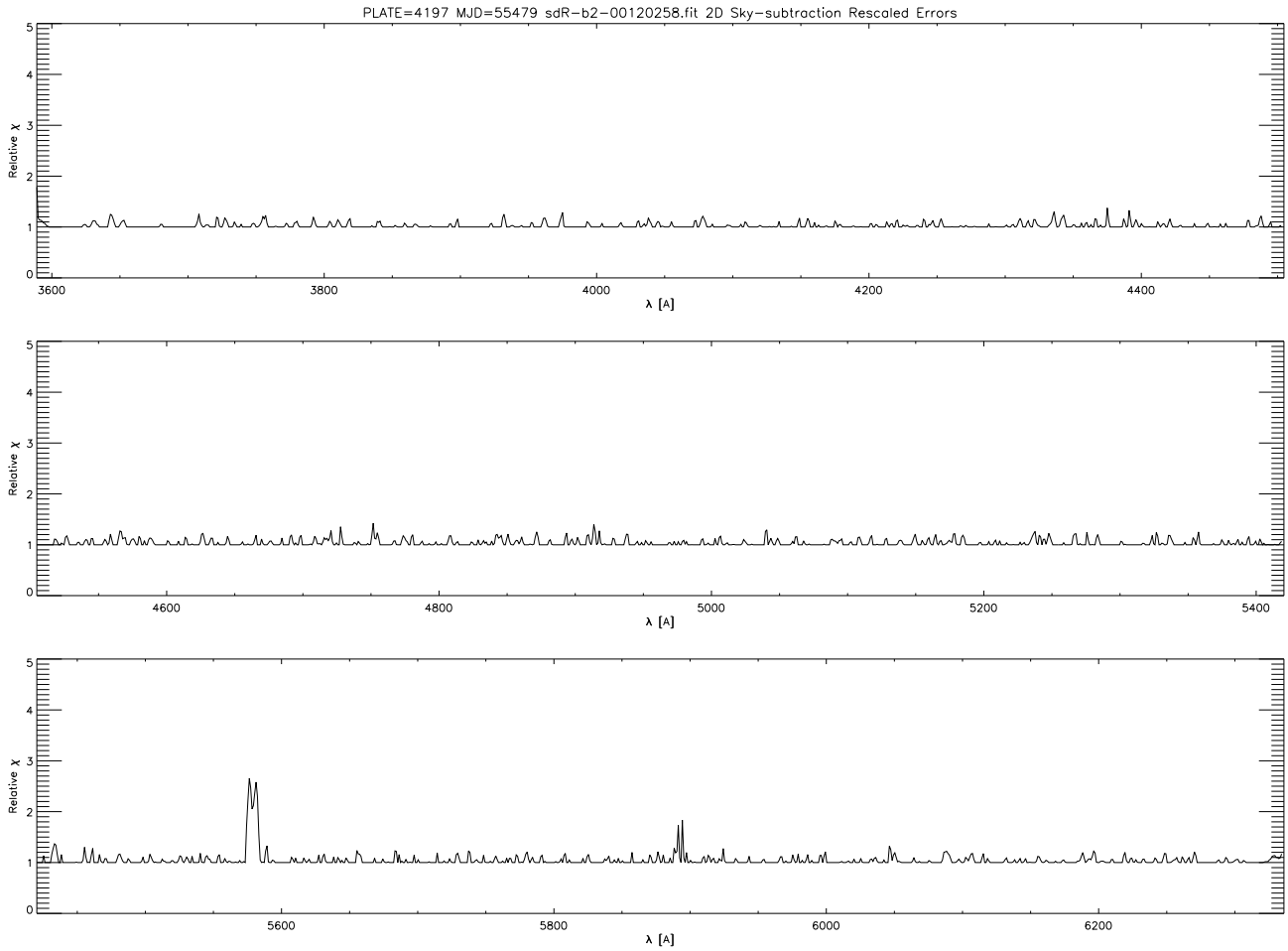


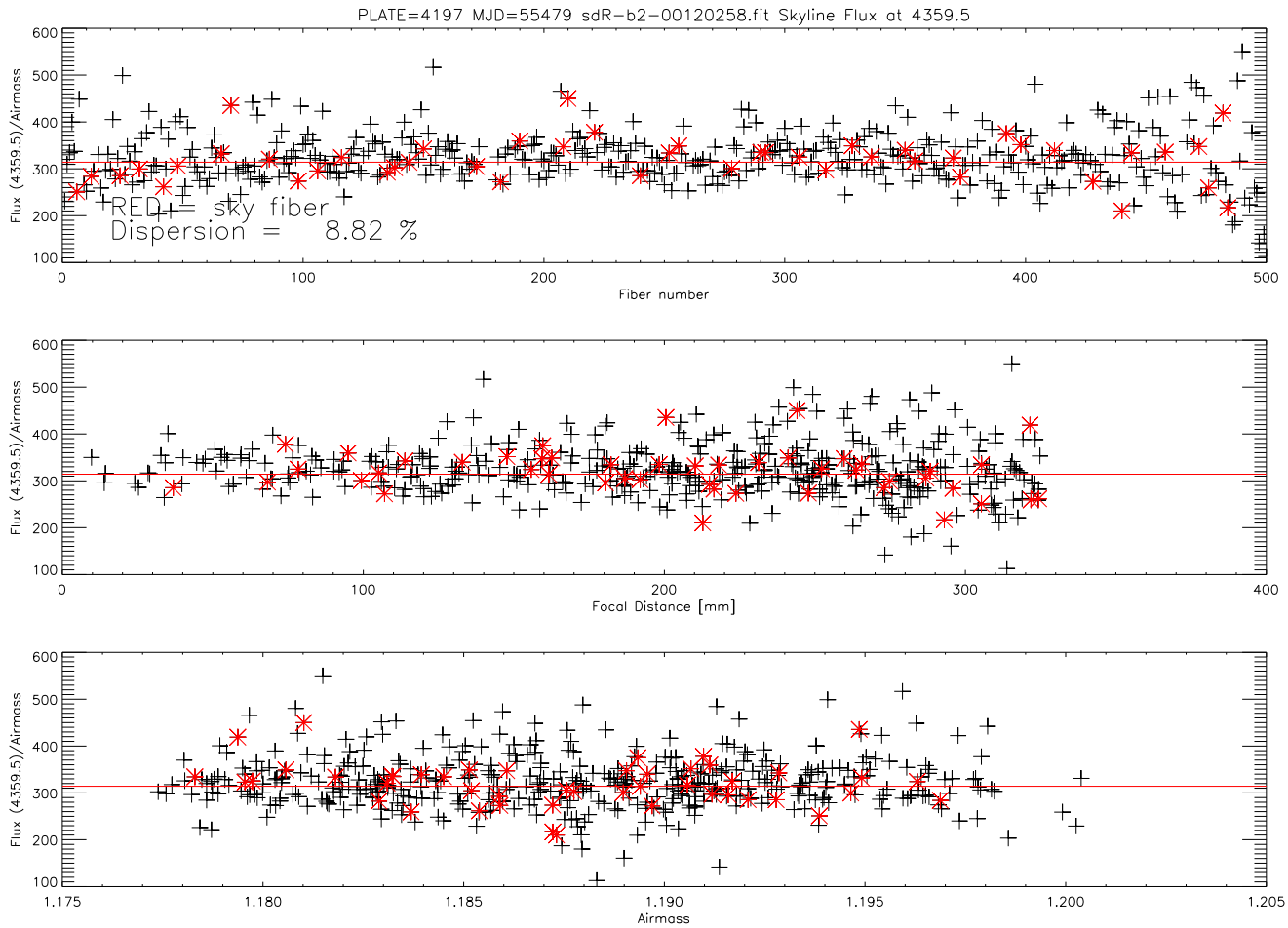

PLATE=4197 MJD=55479 sdR-b2-00120258.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

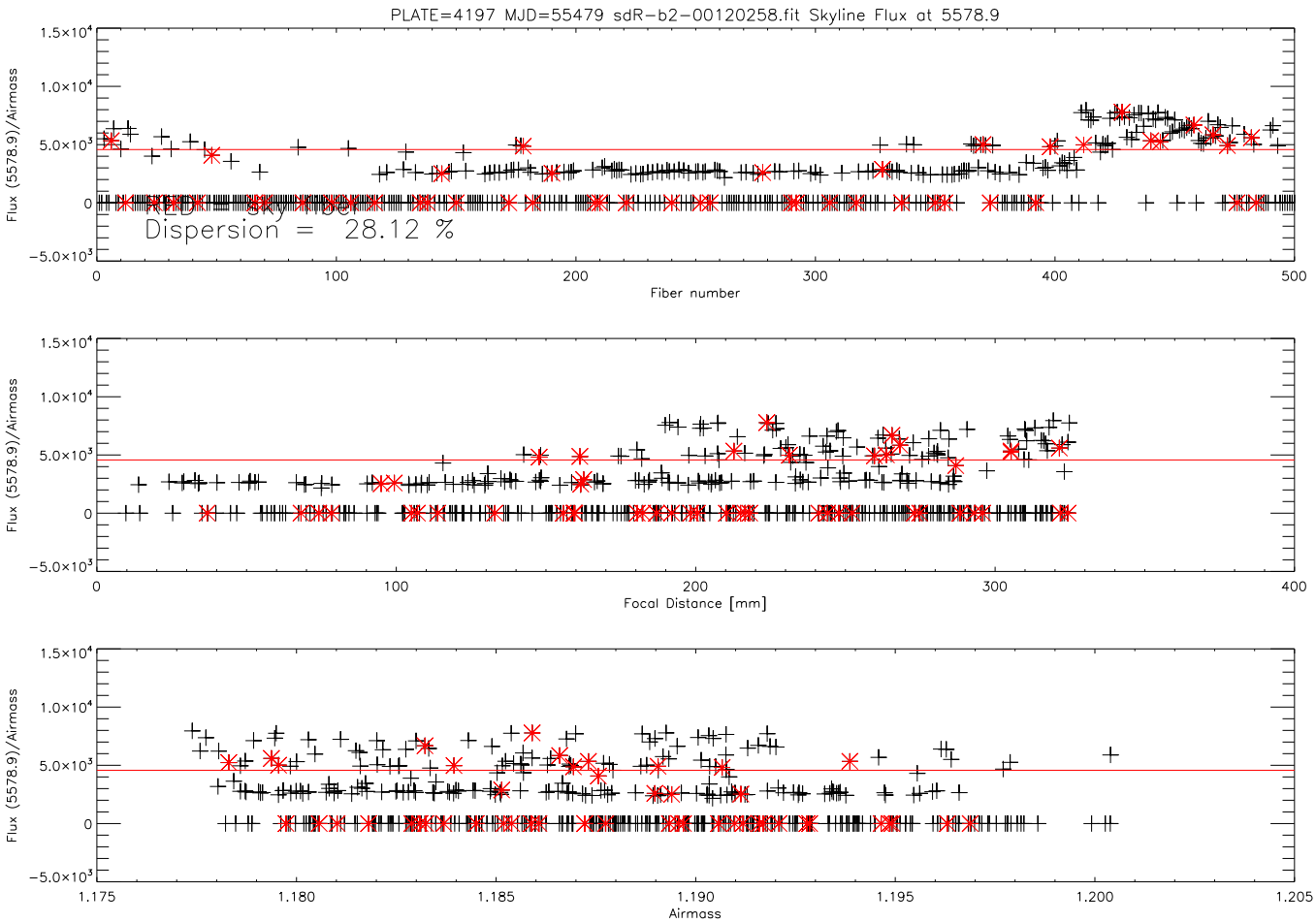

PLATE=4197 MJD=55479 sdR-b2-00120258.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

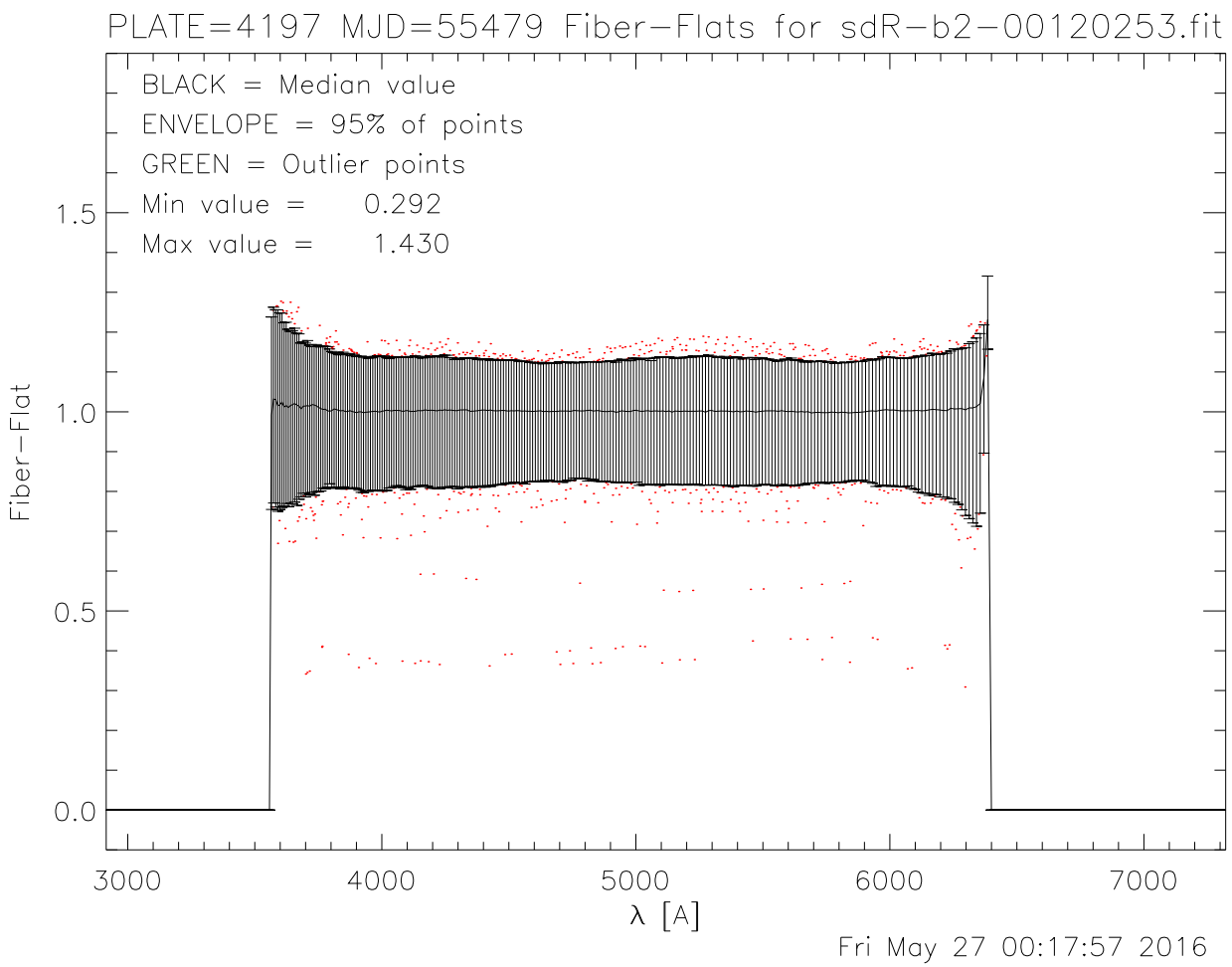

PLATE=4197 MJD=55479 sdR-b2-00120258.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
300
200
100
0
-100
-200
5570
5575
5580
5585
5590
λ [A]

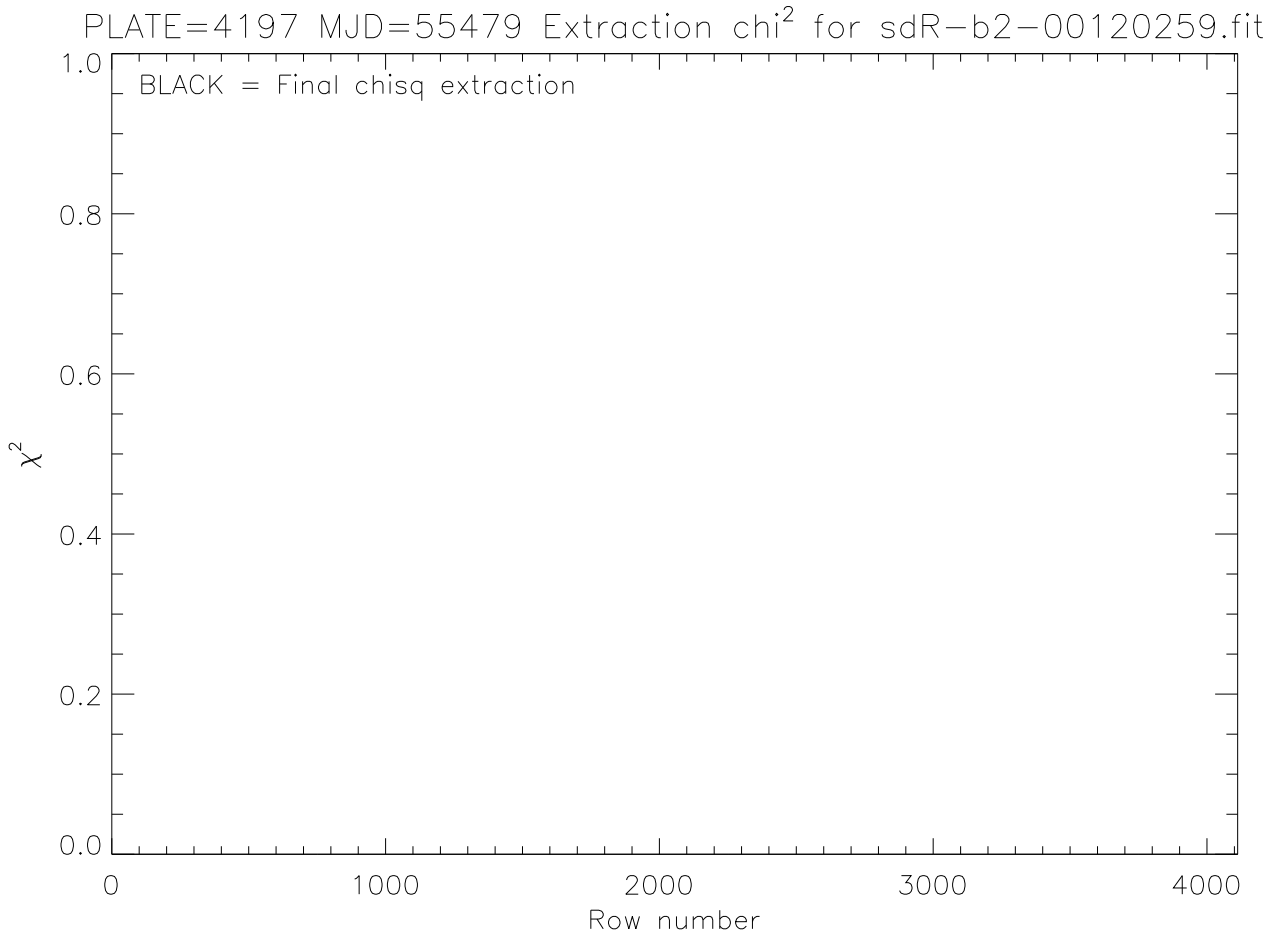
Number of sky fibers = 49

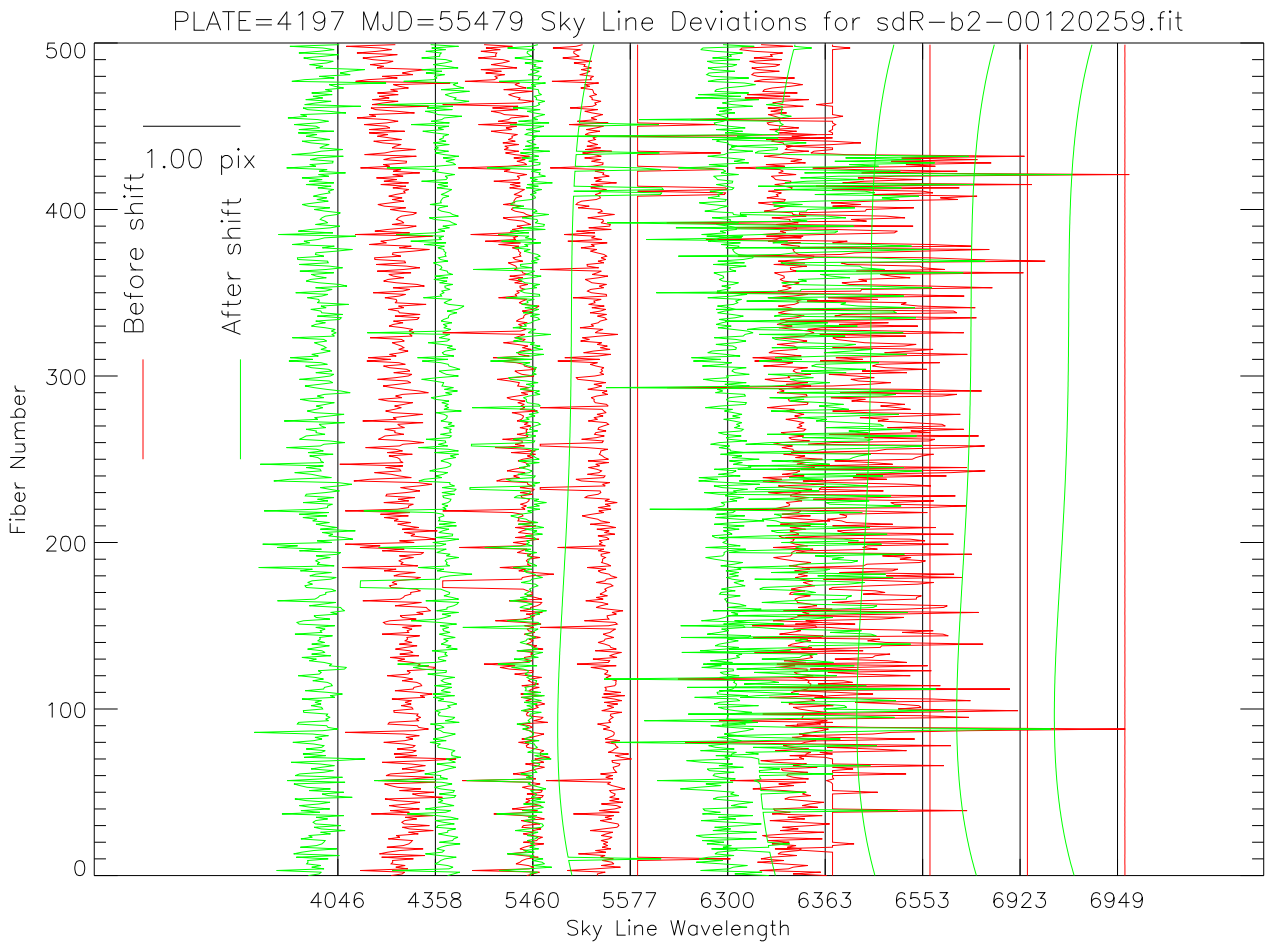


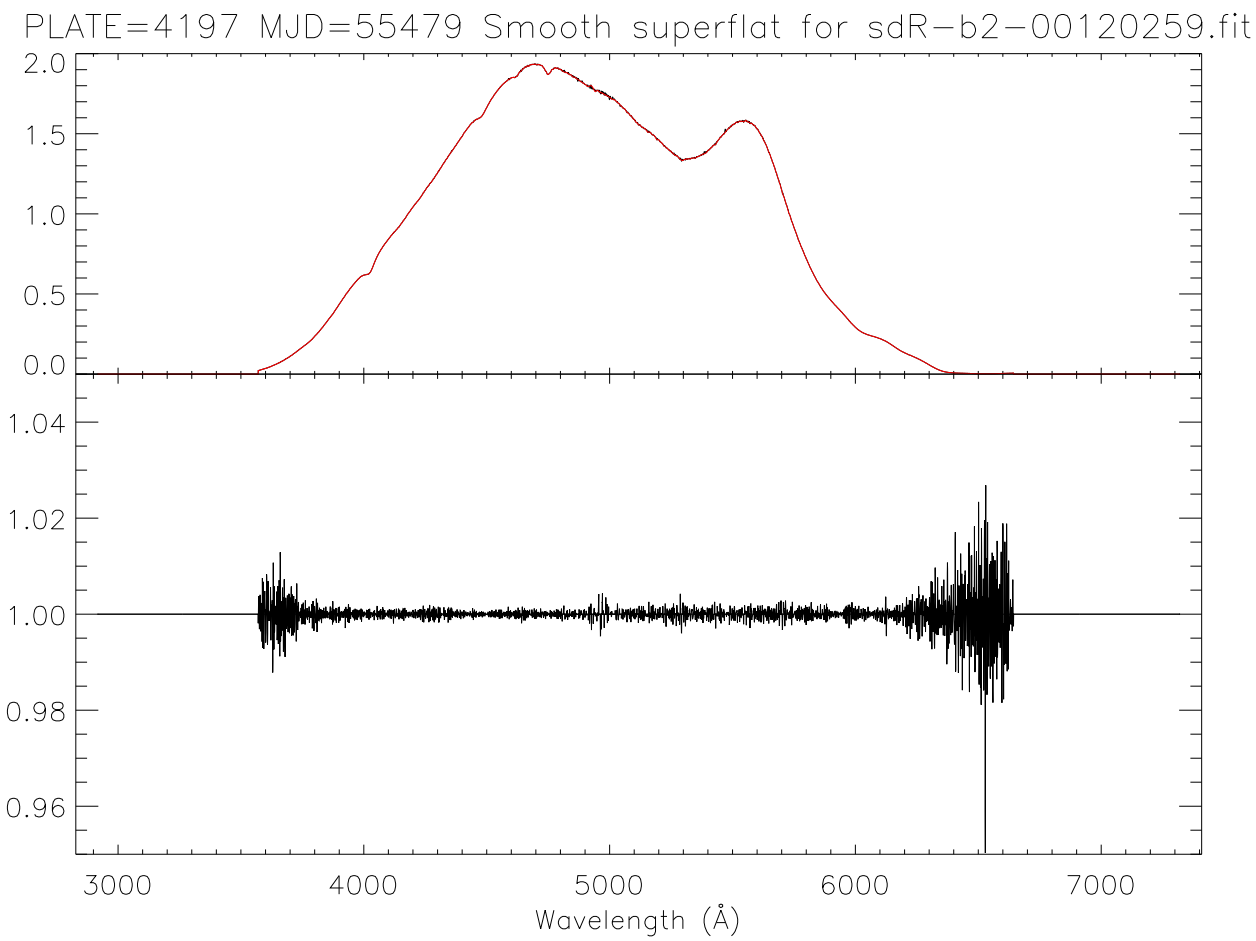

PLATE=4197 MJD=55479 sdR-b2-00120258.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
Fiber number
RED = sky fiber
Dispersion = 8.82 %
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

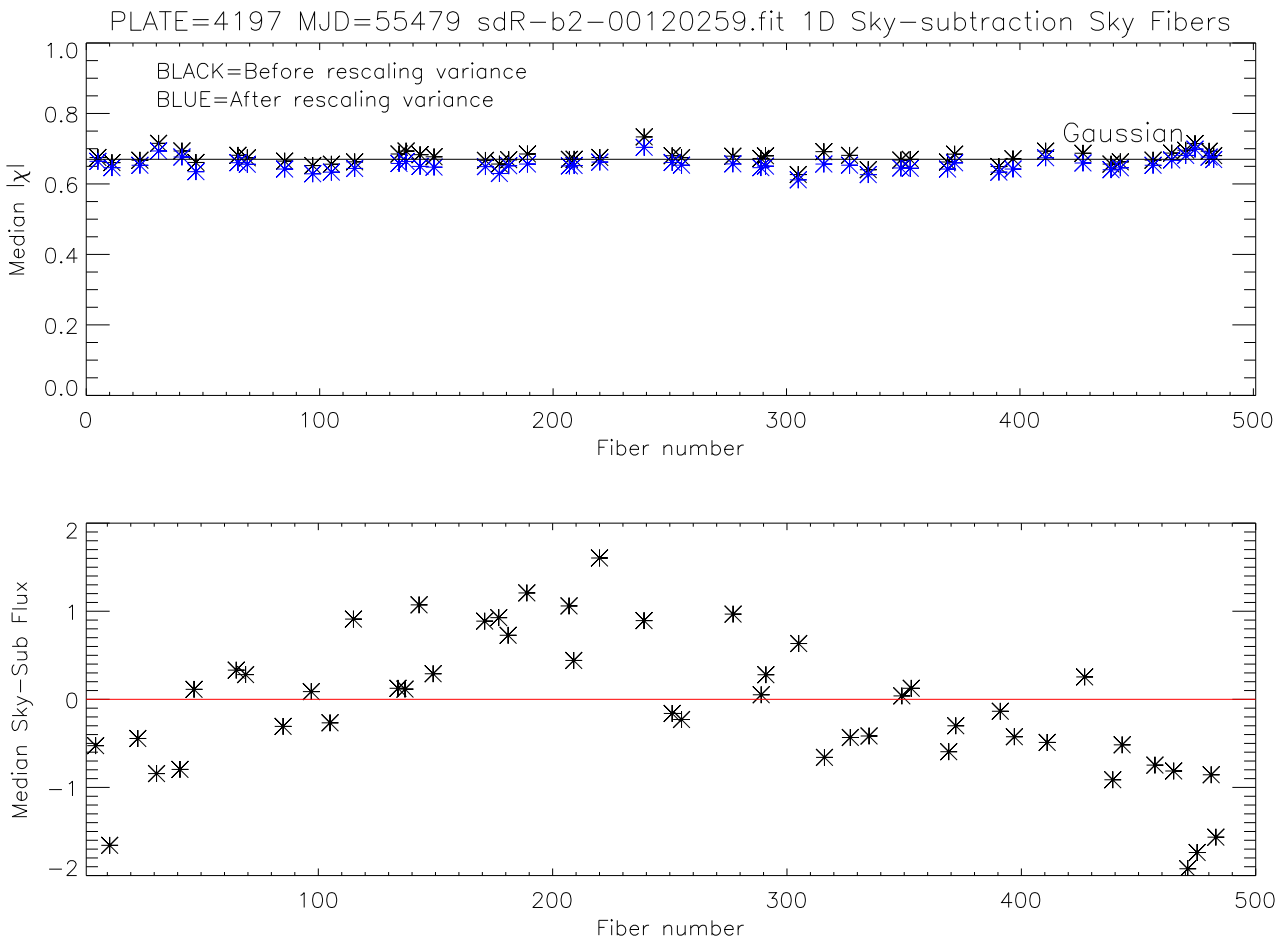

PLATE=4197 MJD=55479 sdR-b2-00120258.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
Fiber number
Dispersion = 28.12 %
Focal Distance [mm]
Airmass

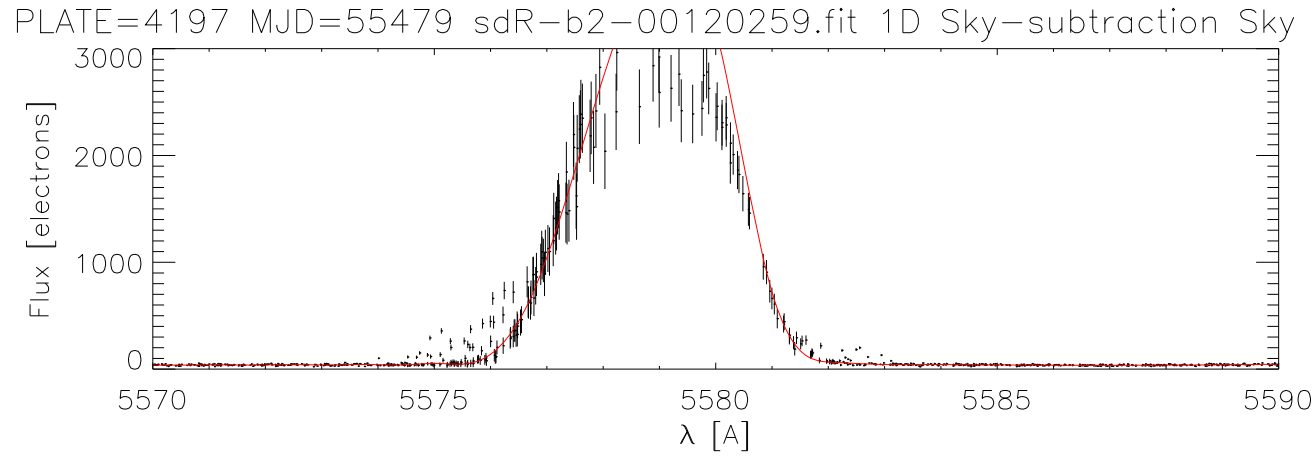

PLATE=4197 MJD=55479 Fiber−Flats for sdR−b2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = 0.292
Max value = 1.430
Fiber−Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Fri May 27 00:17:57 2016

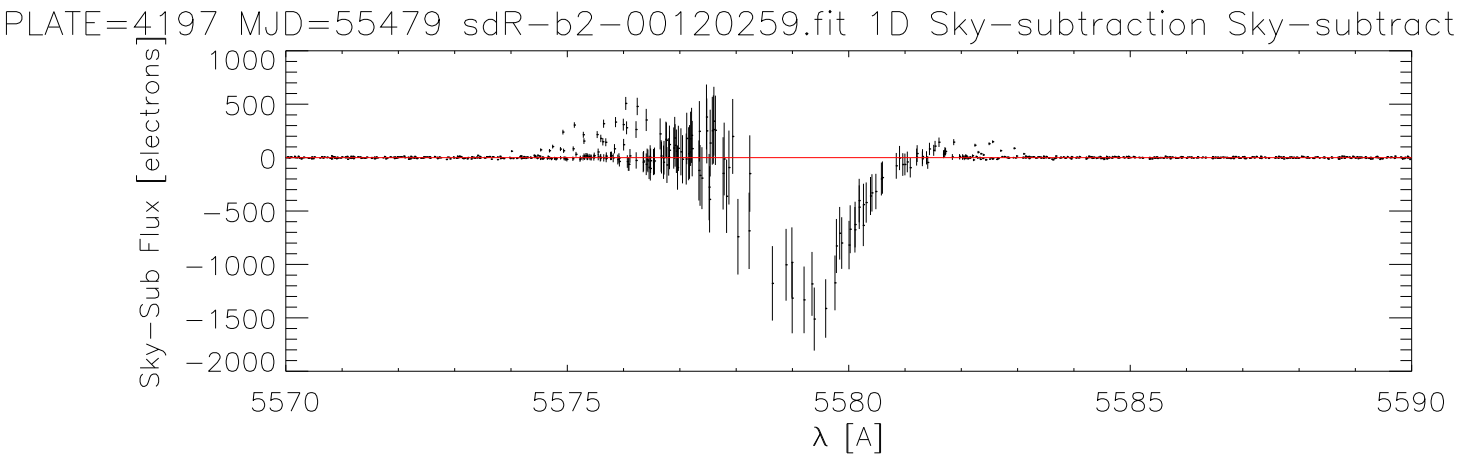

PLATE=4197 MJD=55479 Extraction chi^2 for sdR-b2-00120259.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b2-00120259.fit
1.00 pix
Before shift
After shift
Fiber Number
500
400
300
200
100
0
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

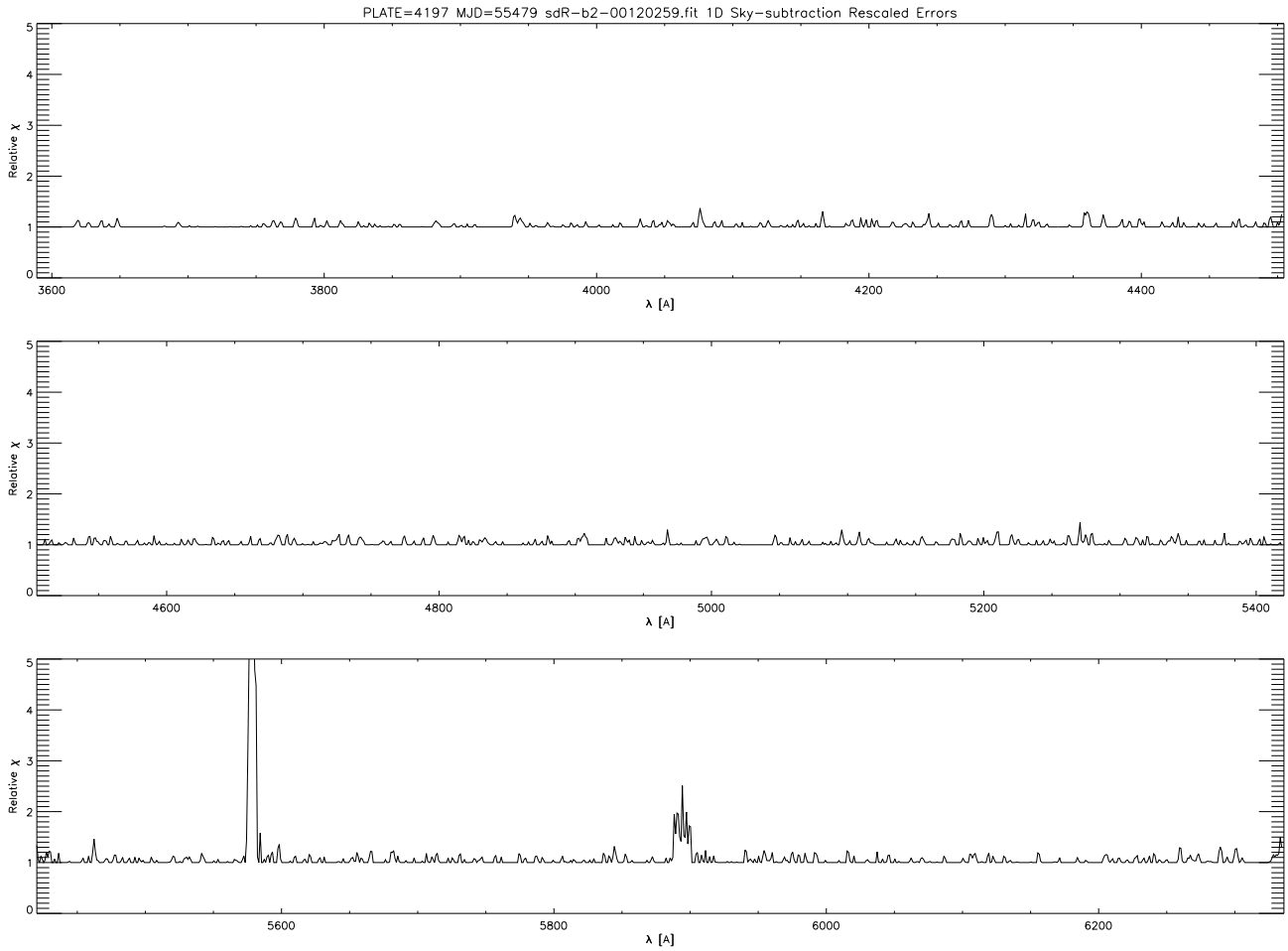

PLATE=4197 MJD=55479 Smooth superflat for sdR-b2-00120259.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

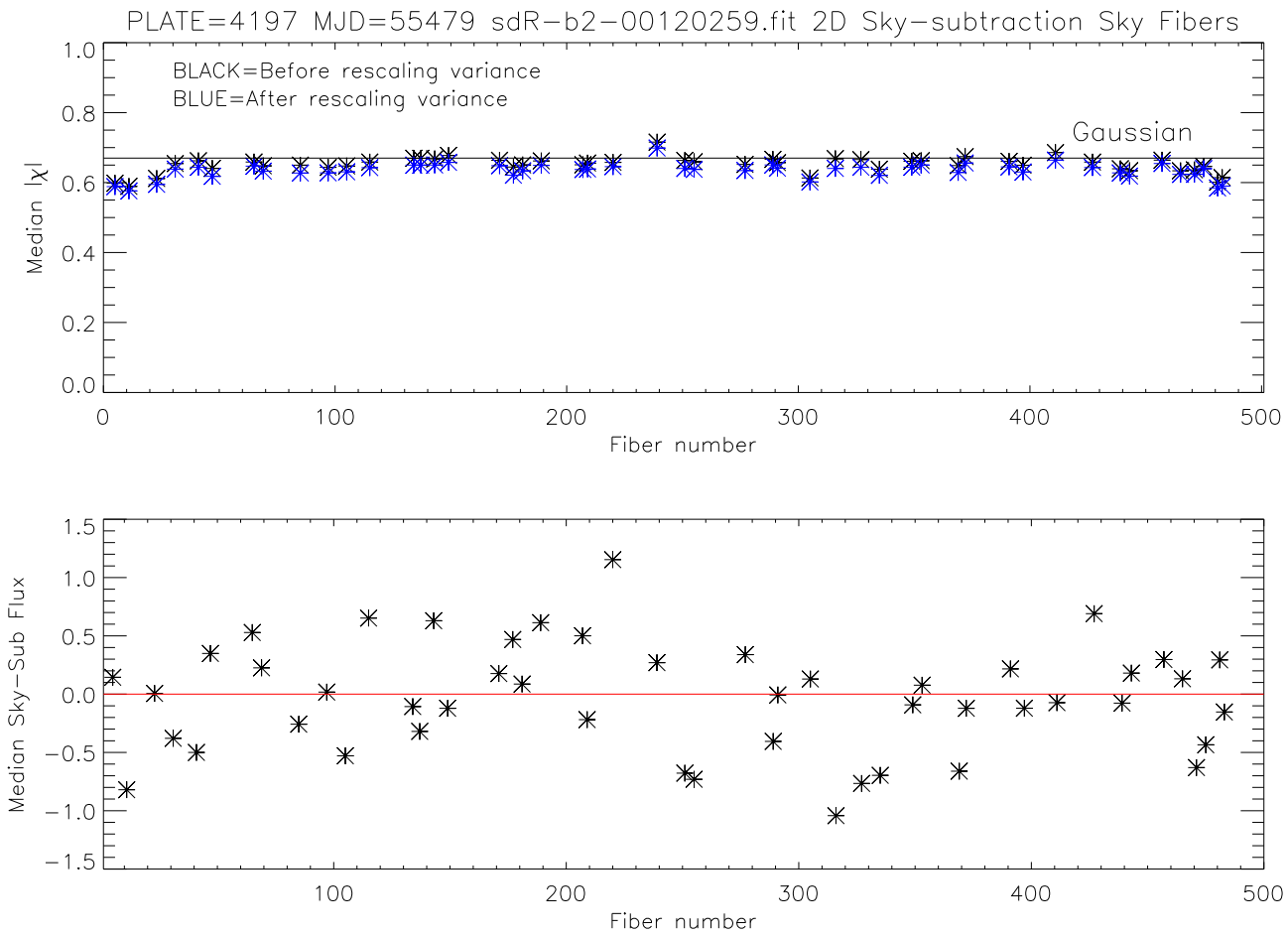

PLATE=4197 MJD=55479 sdR-b2-00120259.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

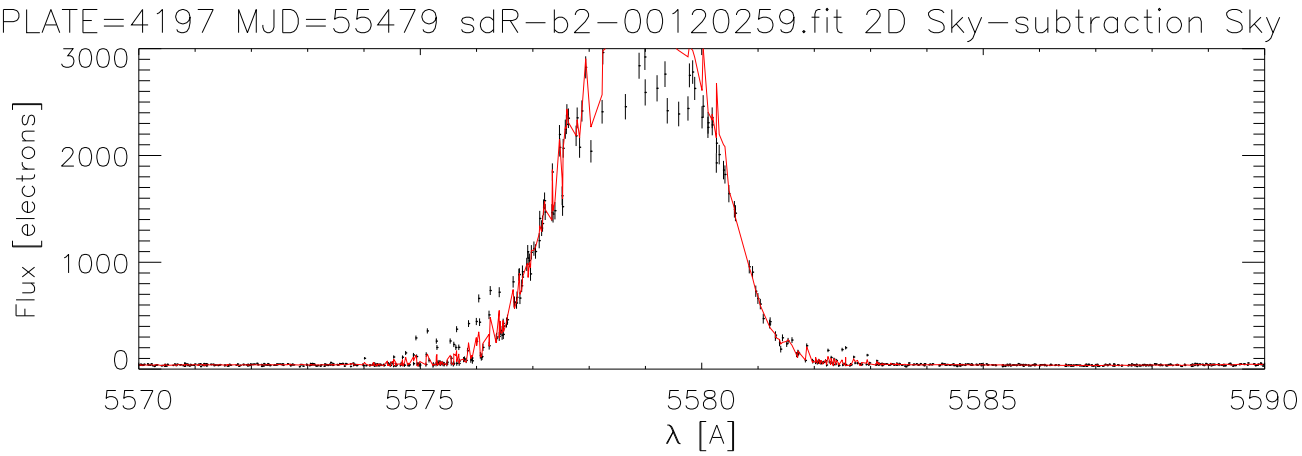

PLATE=4197 MJD=55479 sdR-b2-00120259.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]

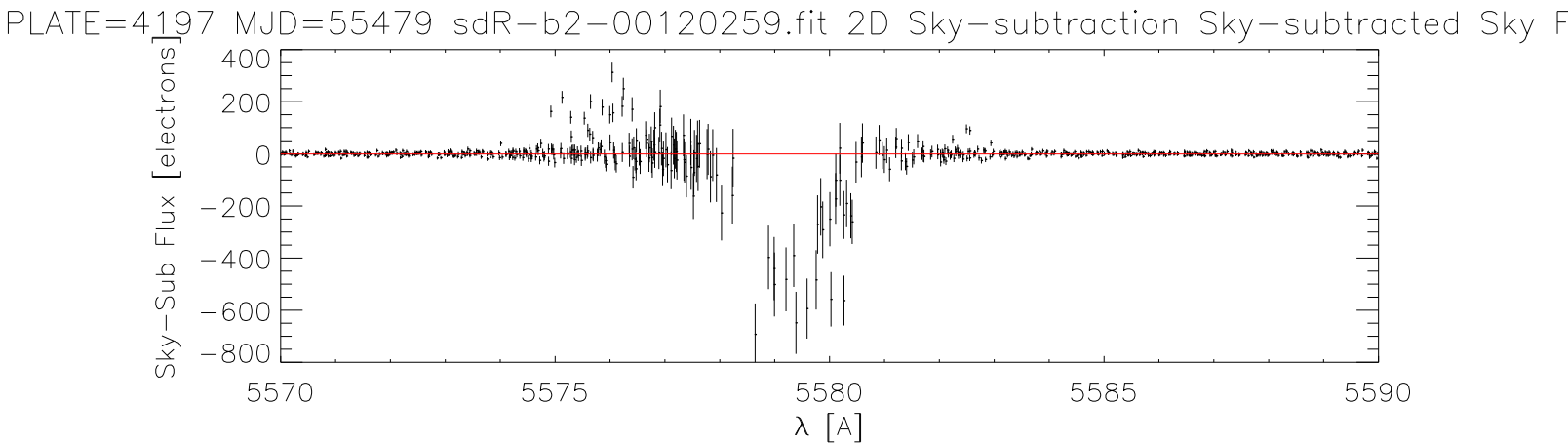

PLATE=4197 MJD=55479 sdR-b2-00120259.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1000
500
0
-500
-1000
-1500
-2000
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 49

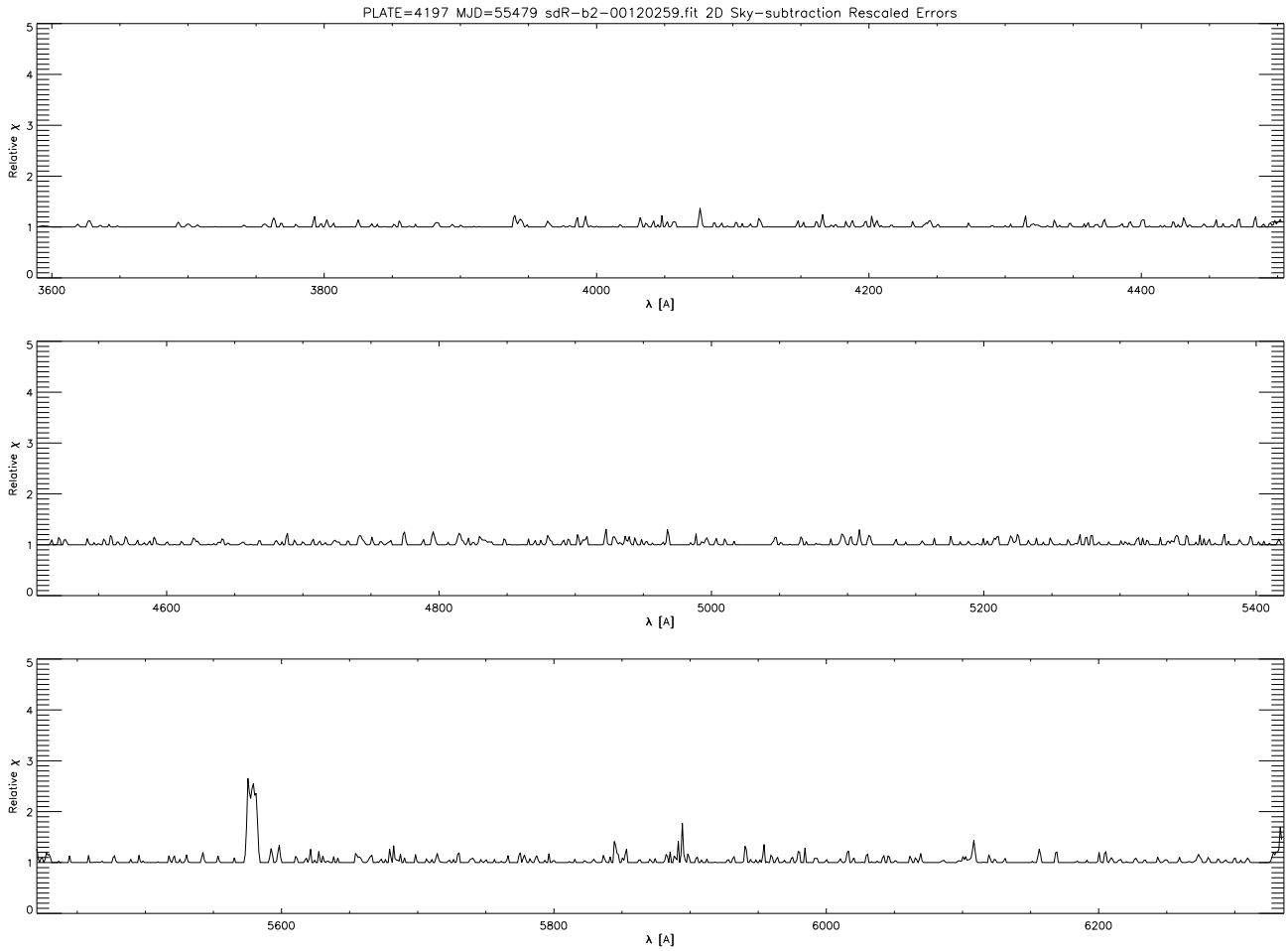


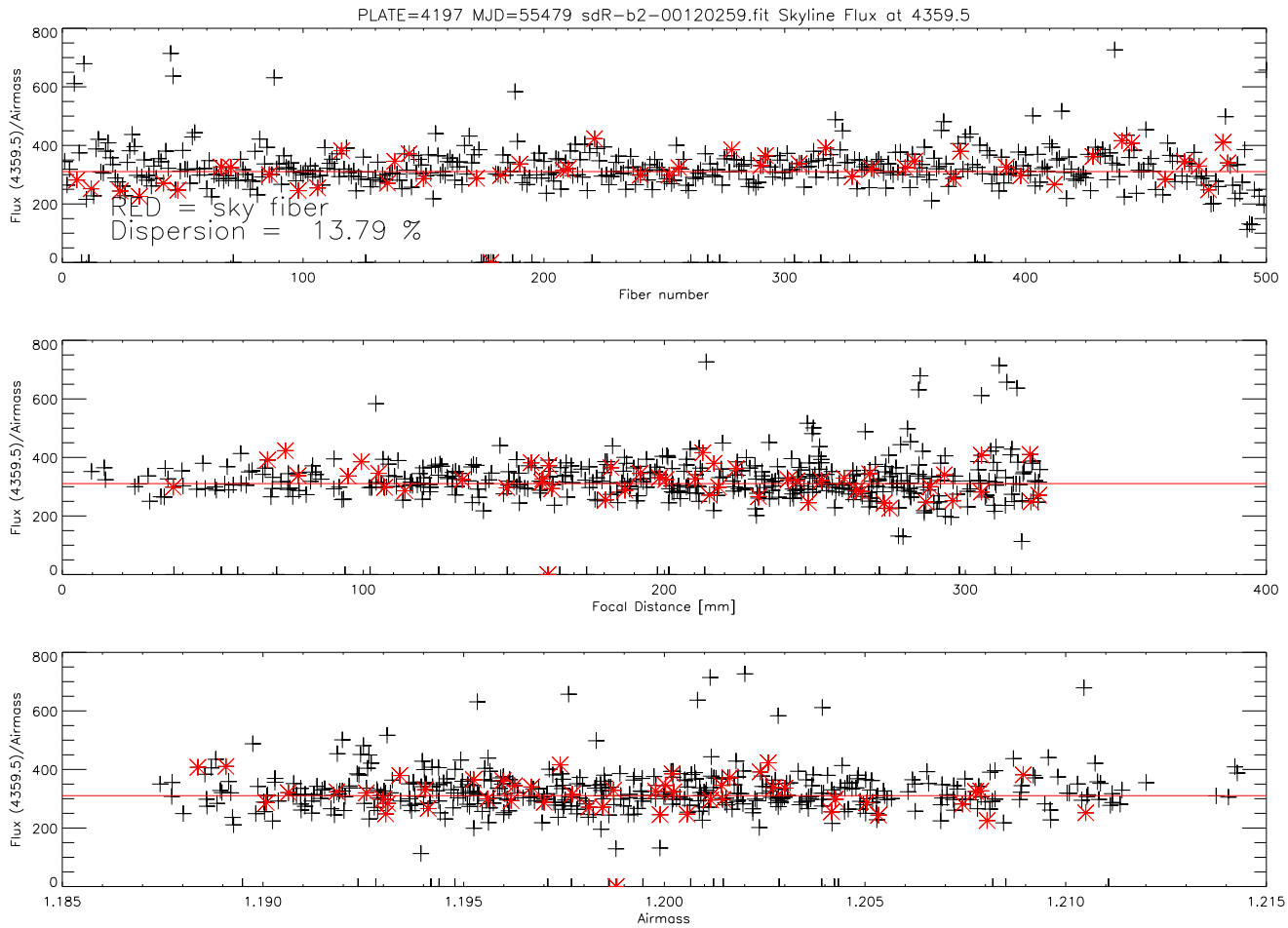

PLATE=4197 MJD=55479 sdR-b2-00120259.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

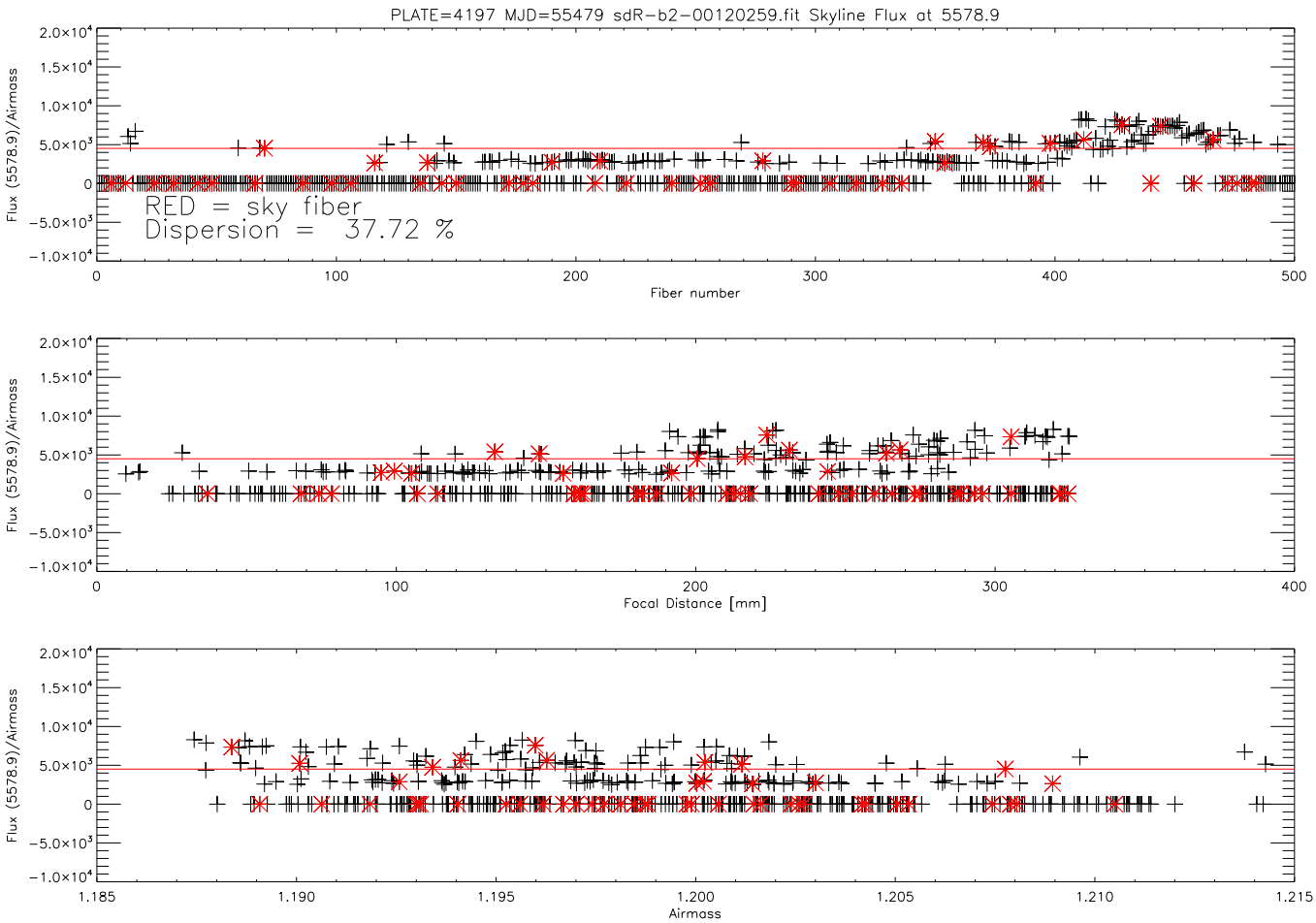

PLATE=4197 MJD=55479 sdR-b2-00120259.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]

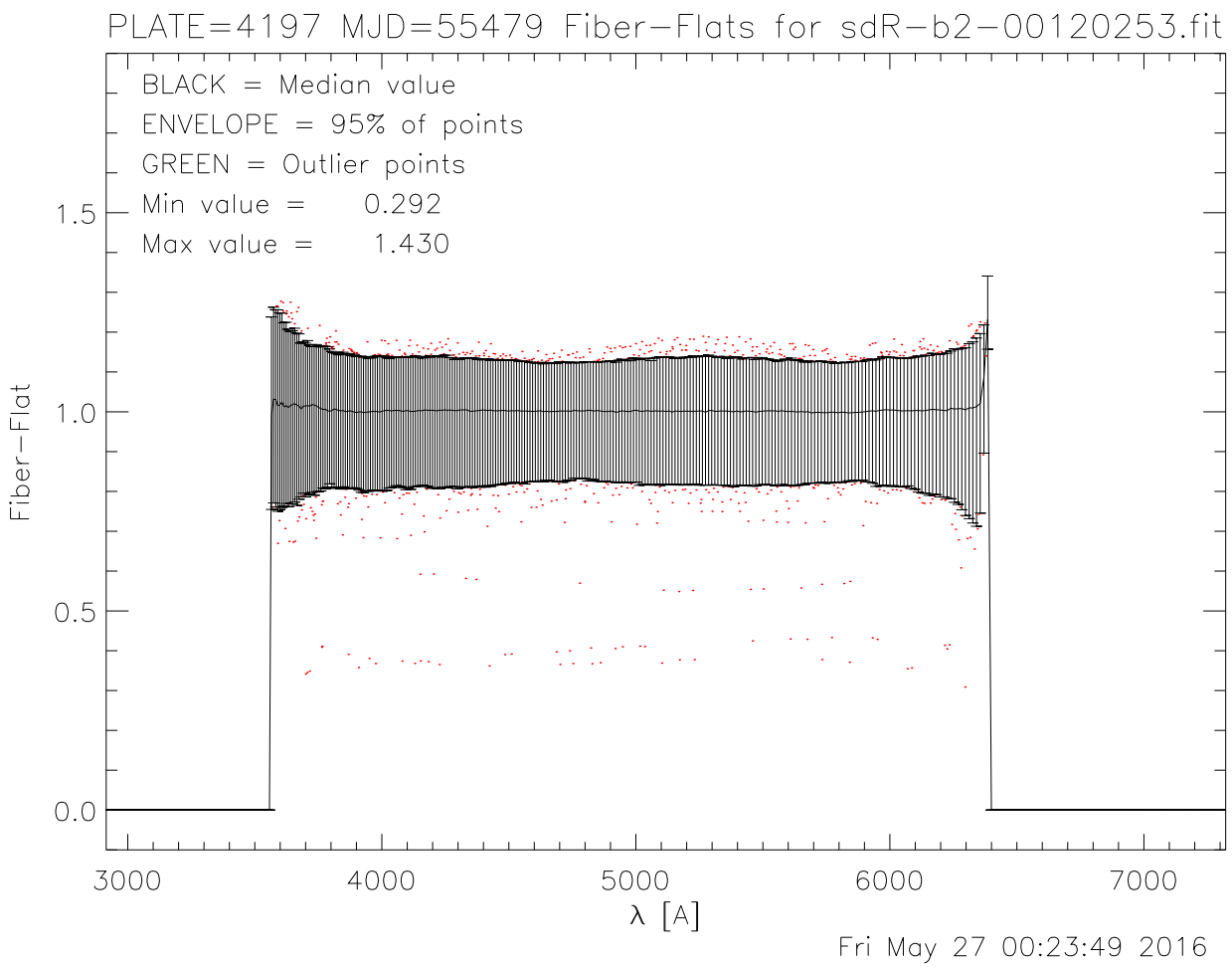

PLATE=4197 MJD=55479 sdR-b2-00120259.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
200
0
-200
-400
-600
-800
5570
5575
5580
5585
5590
λ [A]

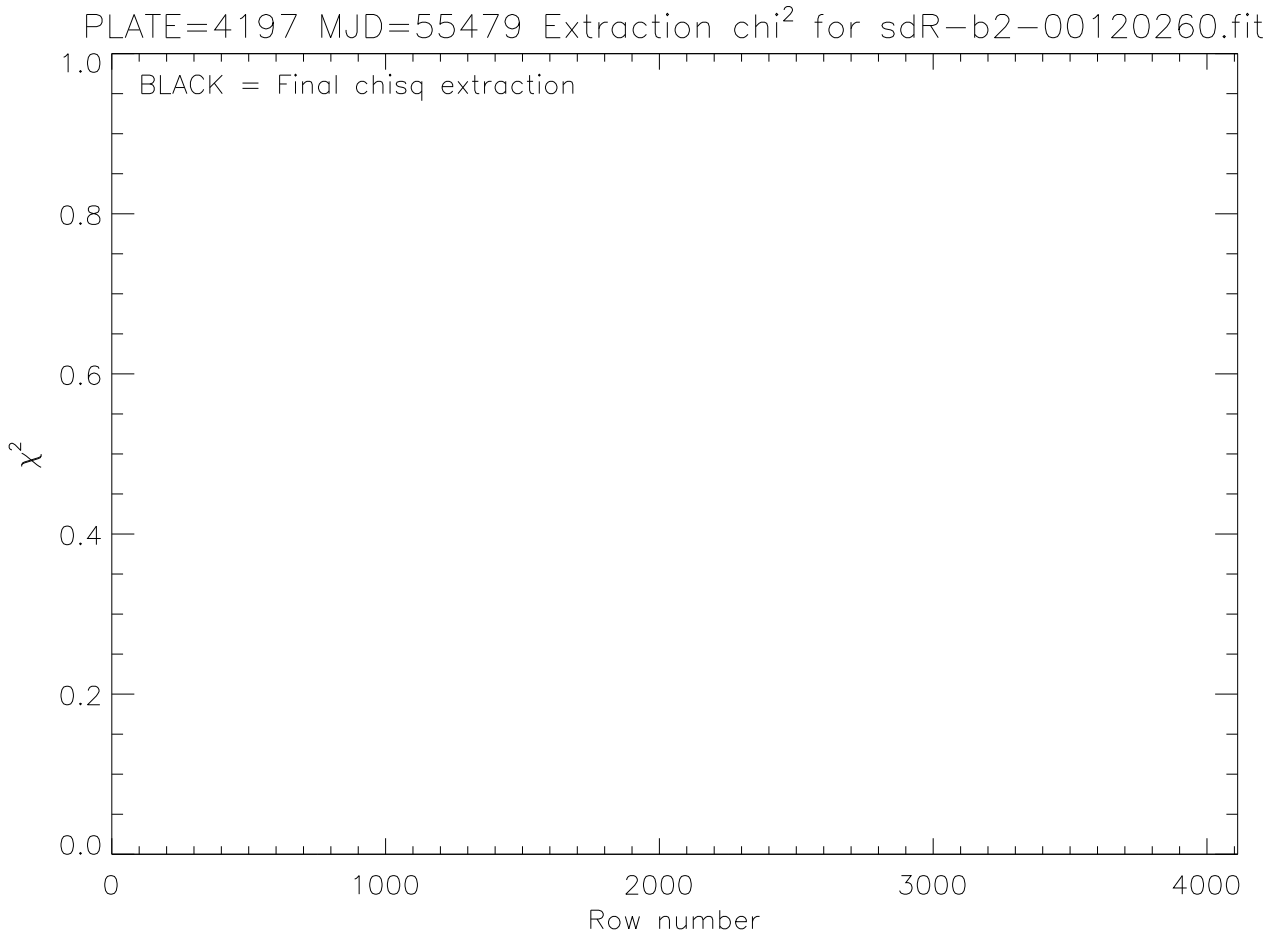
Number of sky fibers = 49

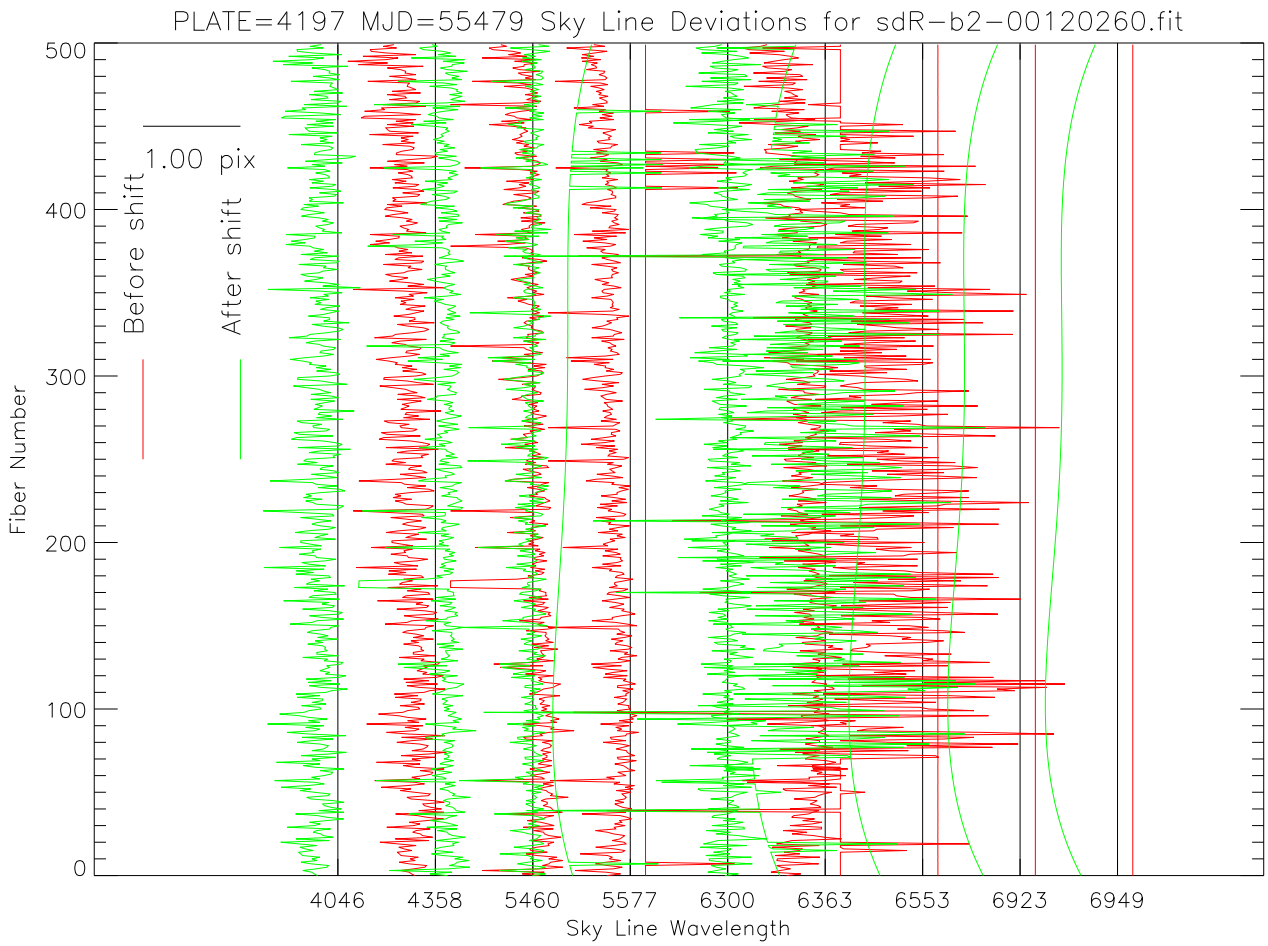


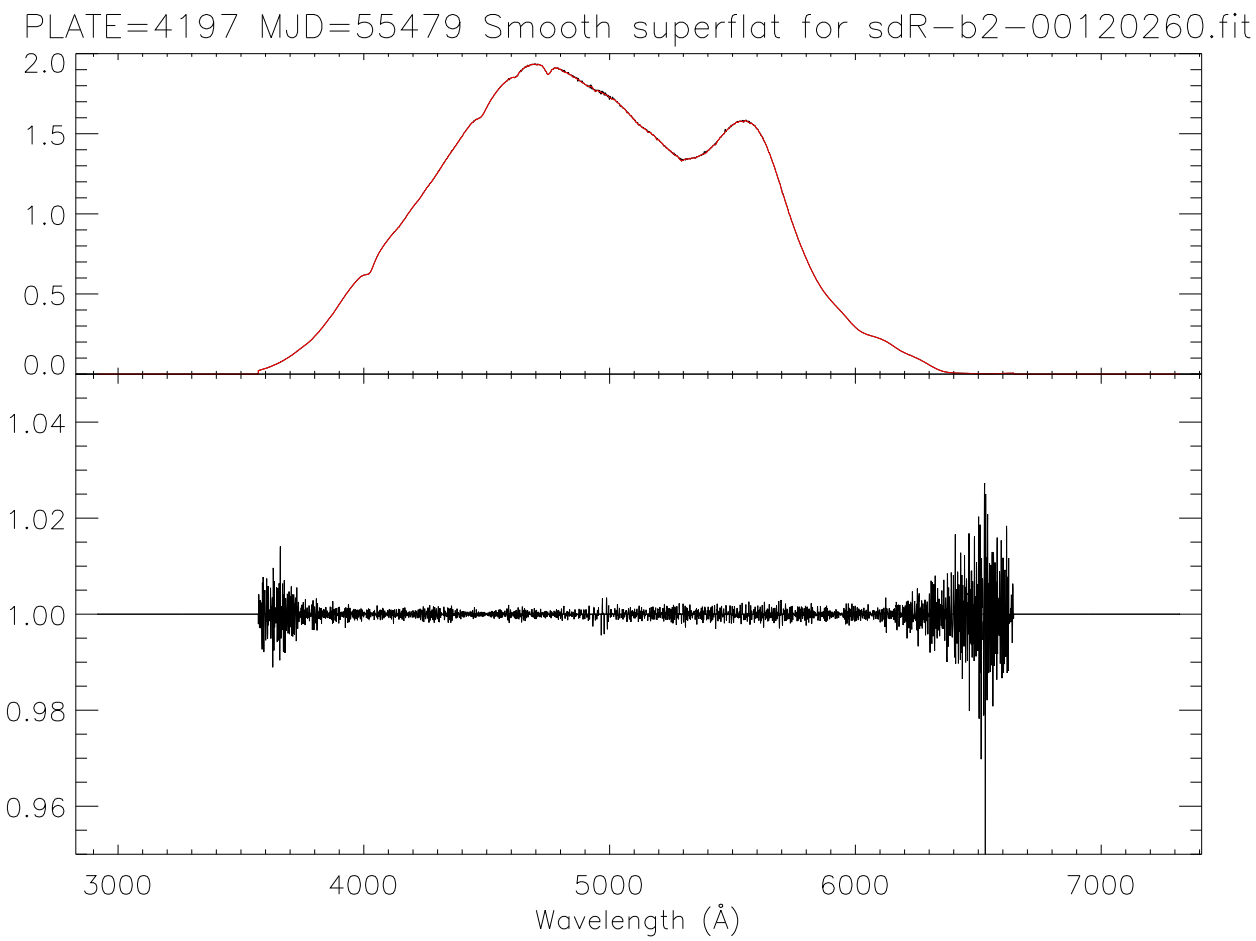

PLATE=4197 MJD=55479 sdR-b2-00120259.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
Fiber number
RED = sky fiber
Dispersion = 13.79 %
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

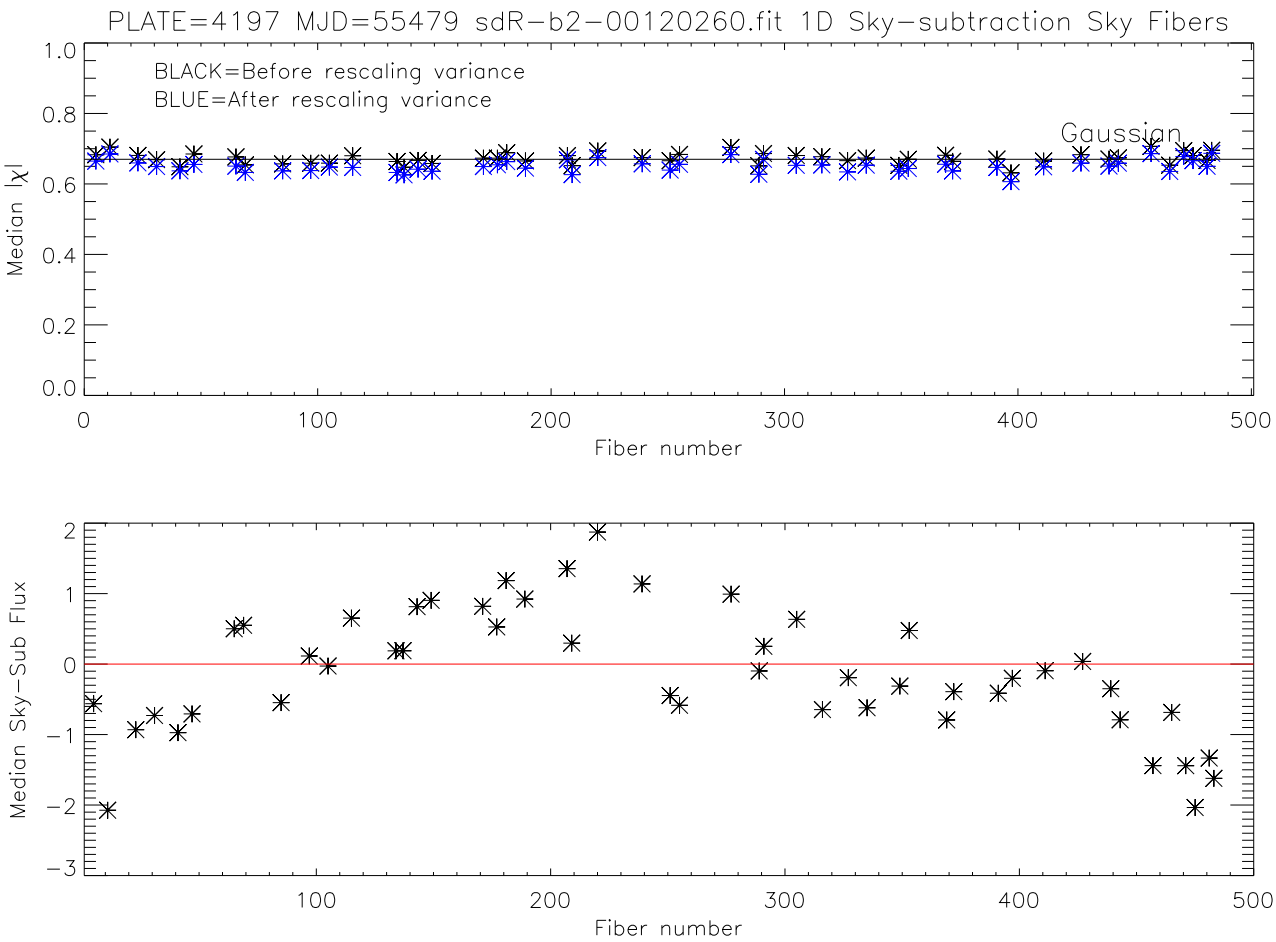

PLATE=4197 MJD=55479 sdR-b2-00120259.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 37.72 %
Fiber number
Flux (5578.9)/Airmass
Focal Distance [mm]
Flux (5578.9)/Airmass
Airmass

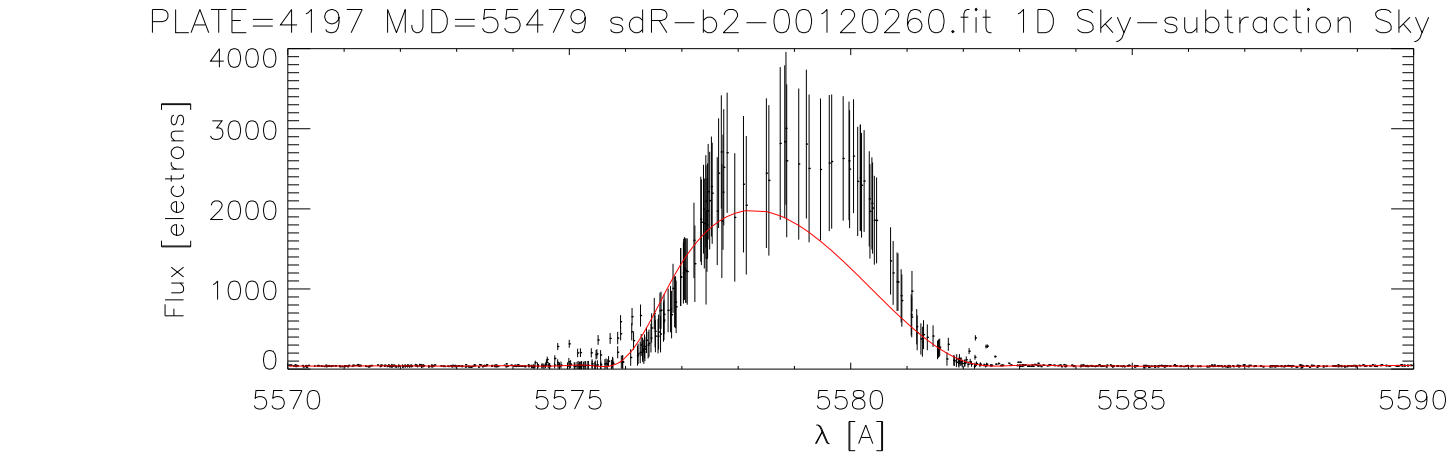

PLATE=4197 MJD=55479 Fiber−Flats for sdR−b2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = 0.292
Max value = 1.430
Fiber−Flat
1.5
1.0
0.5
0.0
3000
4000
5000
6000
7000
λ [A]
Fri May 27 00:23:49 2016

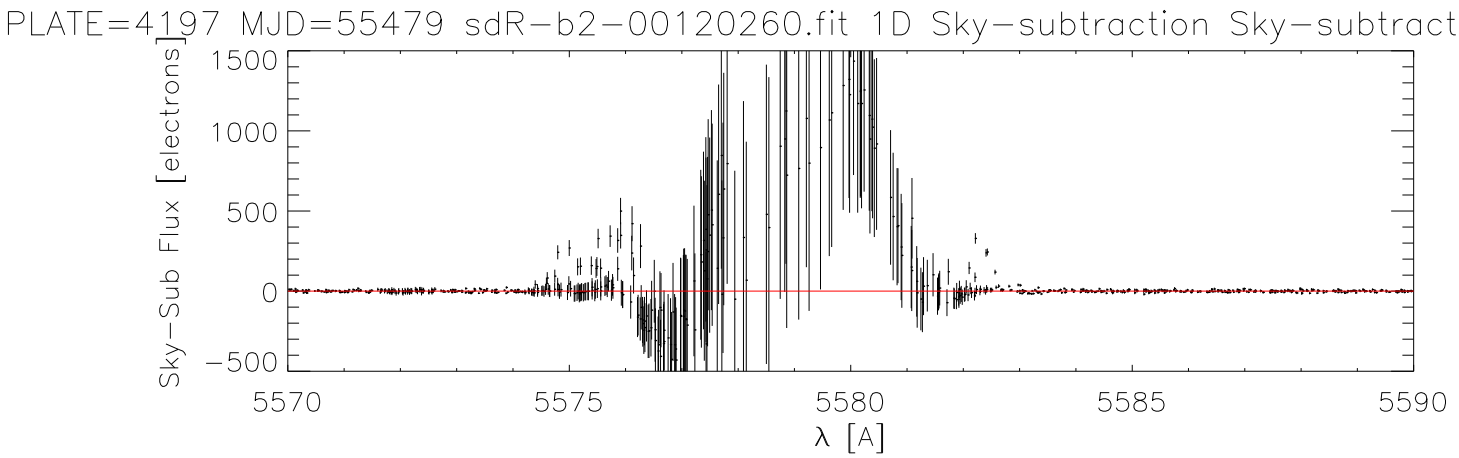

PLATE=4197 MJD=55479 Extraction chi^2 for sdR-b2-00120260.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-b2-00120260.fit
1.00 pix
Before shift
After shift
Fiber Number
0
100
200
300
400
500
4046
4358
5460
5577
6300
6363
6553
6923
6949
Sky Line Wavelength

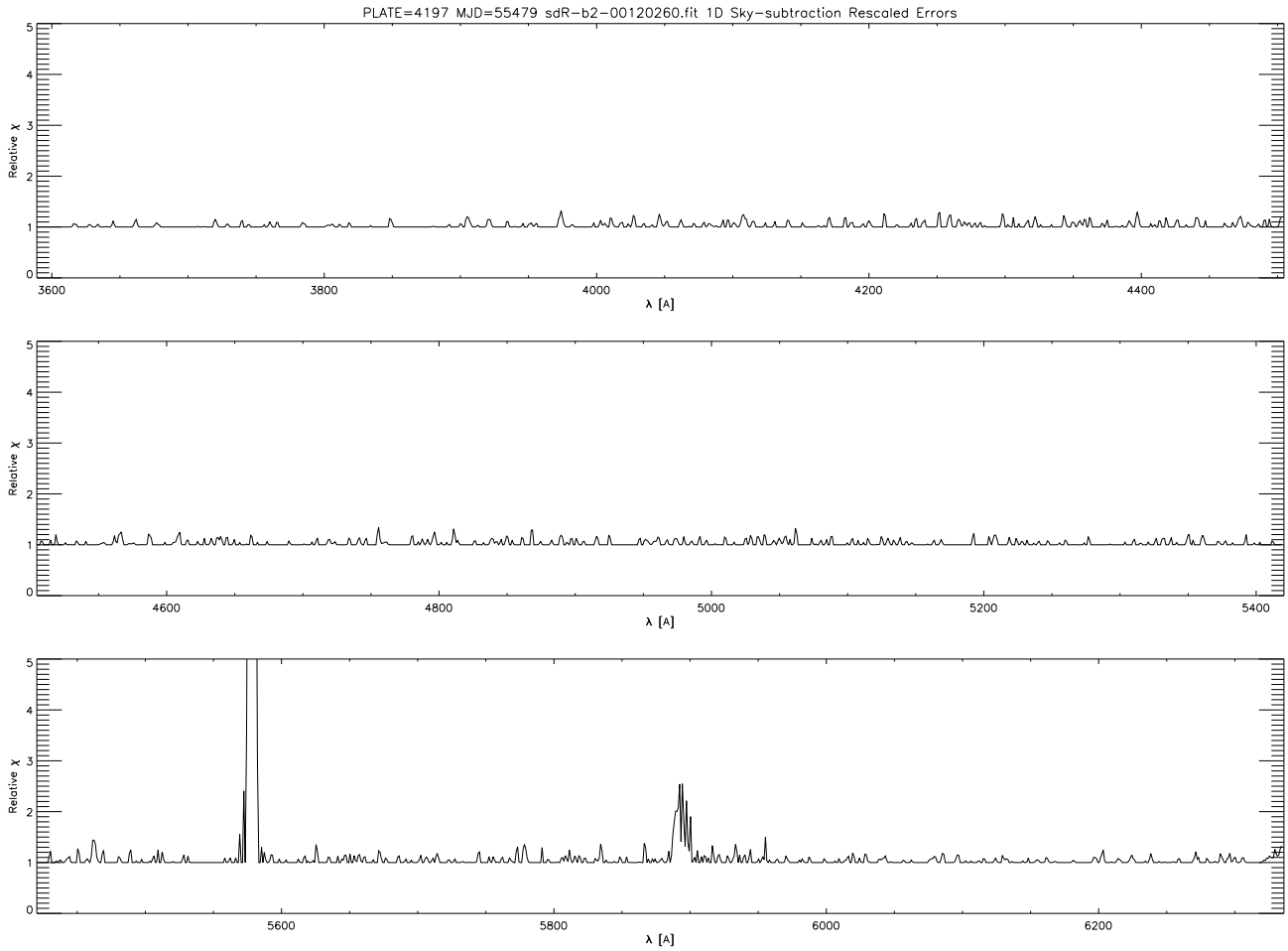

PLATE=4197 MJD=55479 Smooth superflat for sdR-b2-00120260.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
3000
4000
5000
6000
7000
Wavelength (Å)

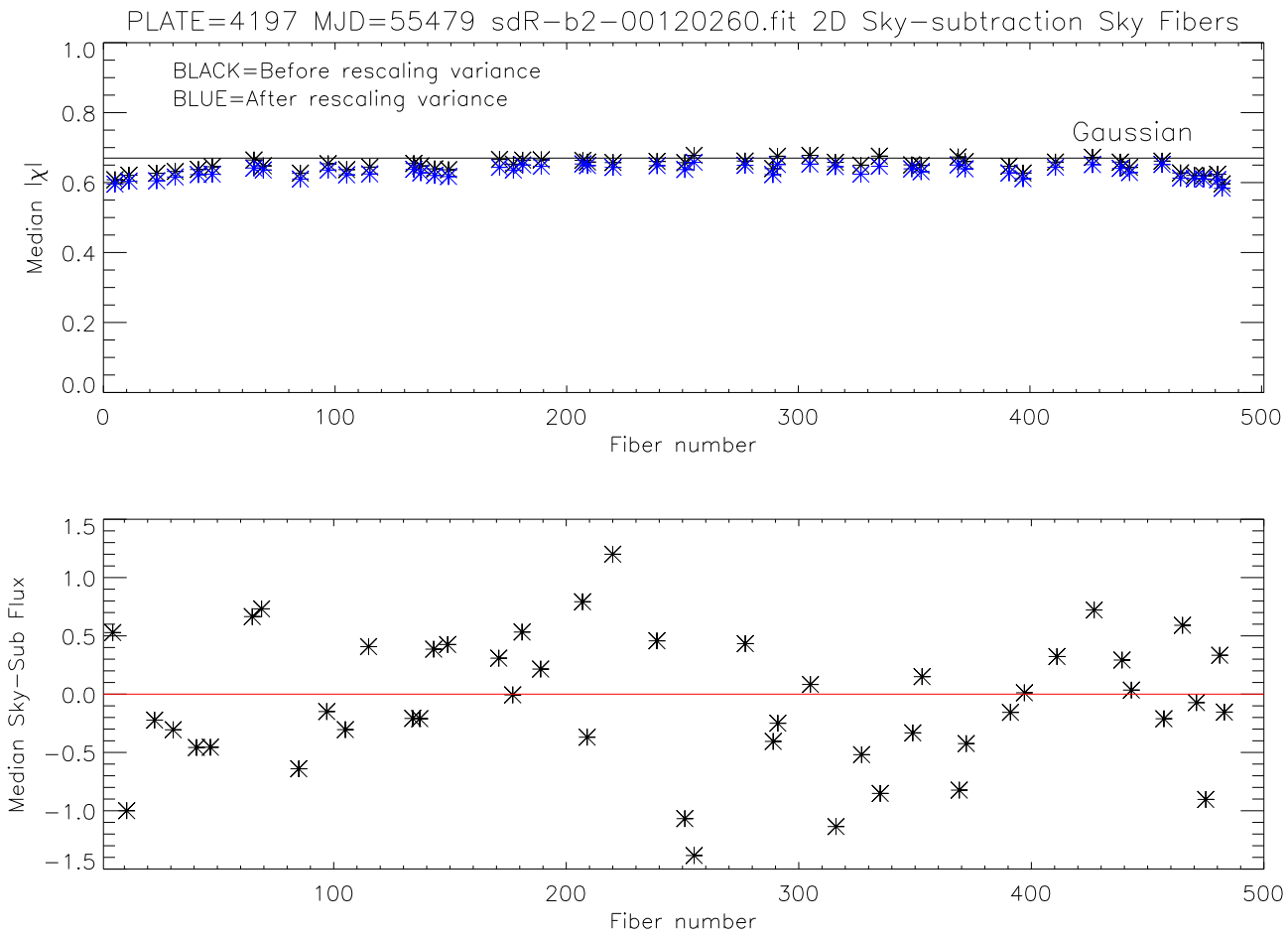

PLATE=4197 MJD=55479 sdR-b2-00120260.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

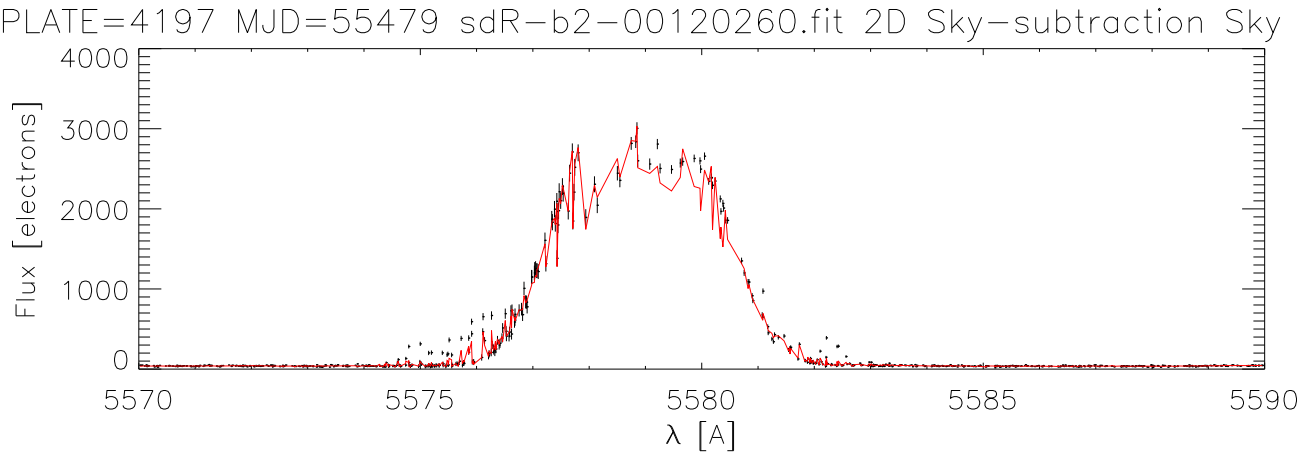

PLATE=4197 MJD=55479 sdR-b2-00120260.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
4000
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]

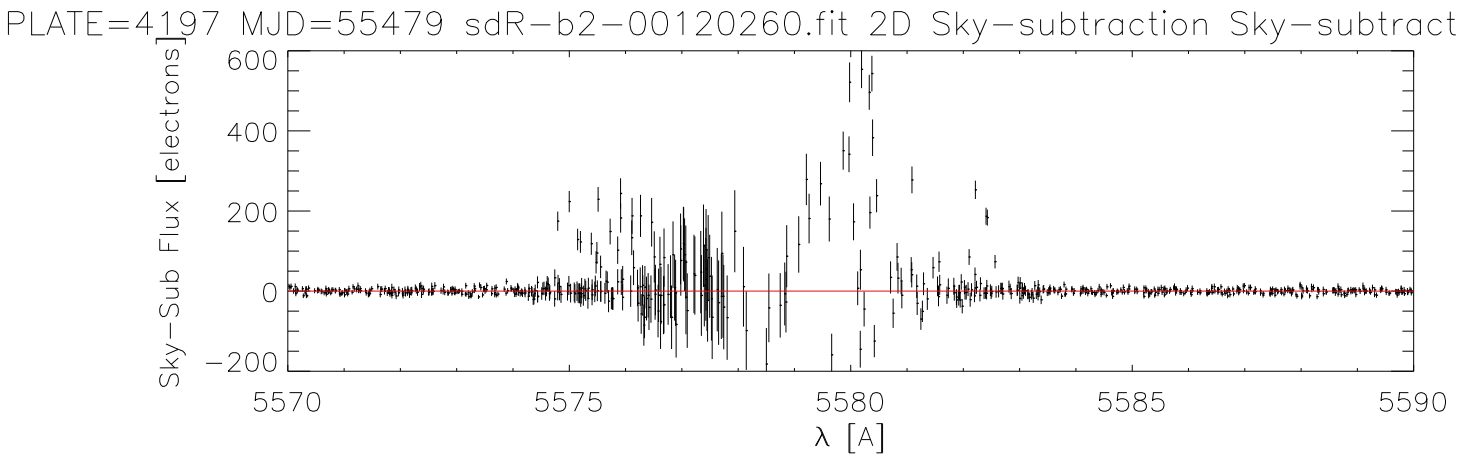

PLATE=4197 MJD=55479 sdR-b2-00120260.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1500
1000
500
0
-500
5570
5575
5580
5585
5590
λ [A]

Number of sky fibers = 49

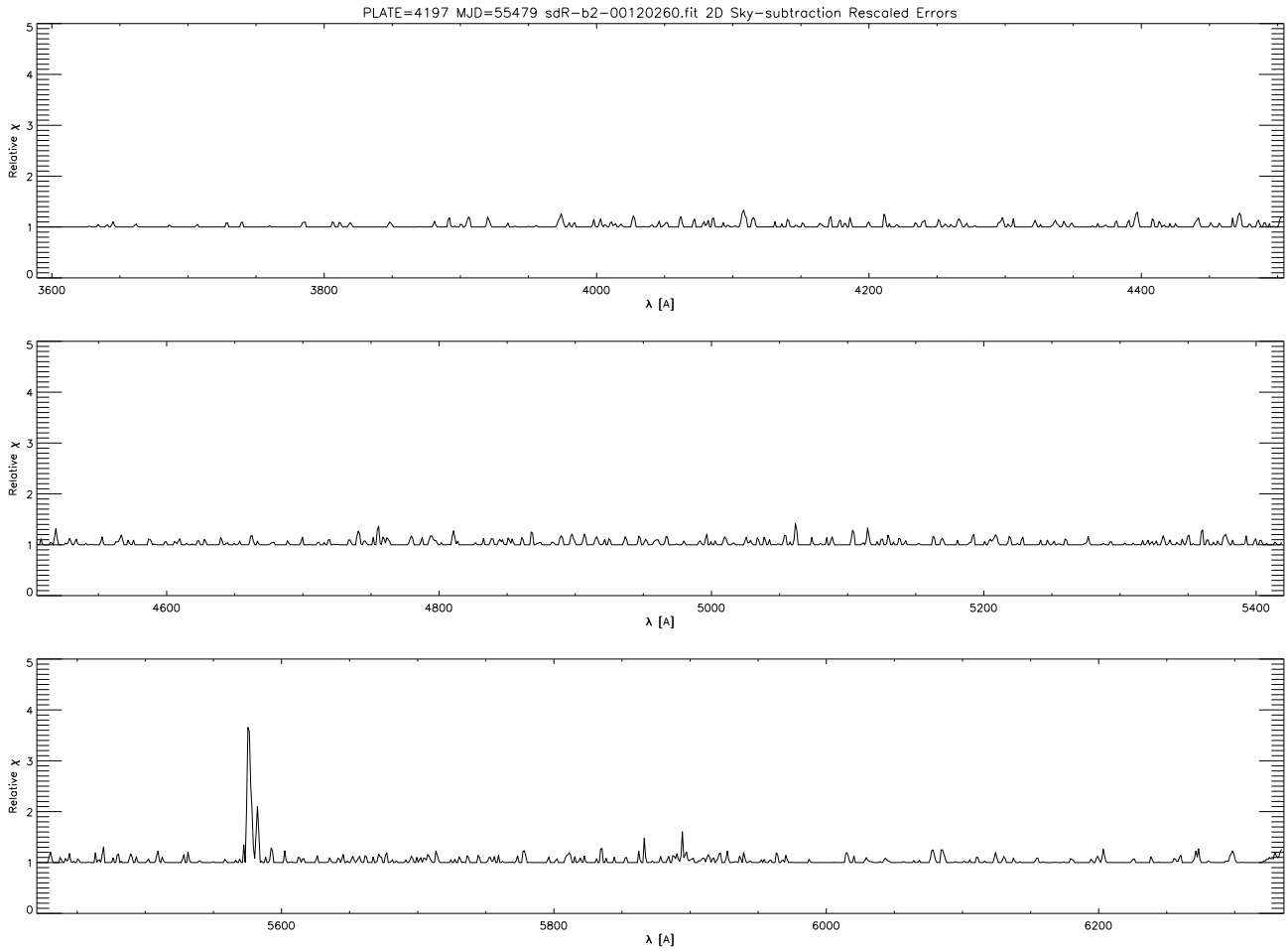


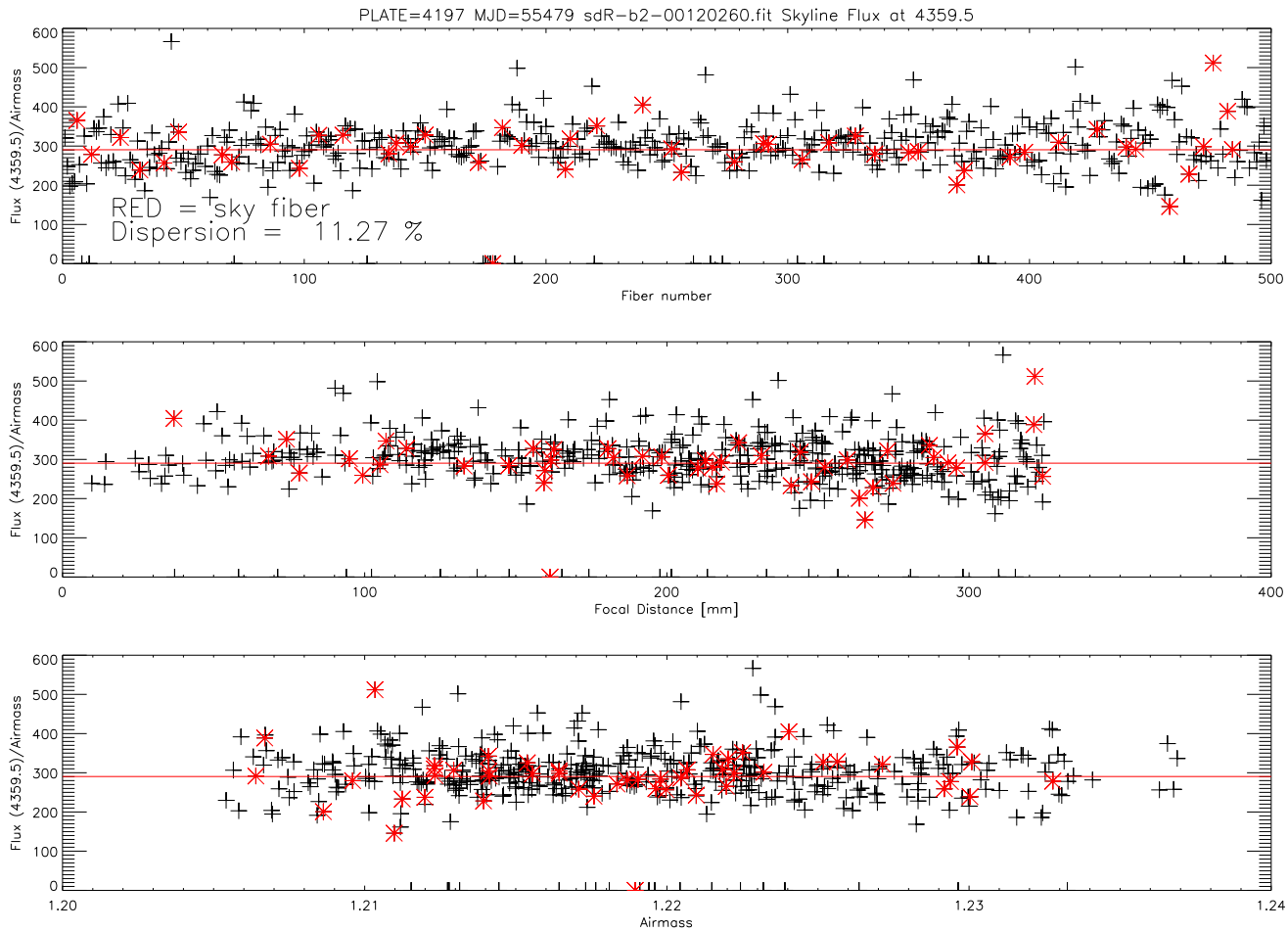

PLATE=4197 MJD=55479 sdR-b2-00120260.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

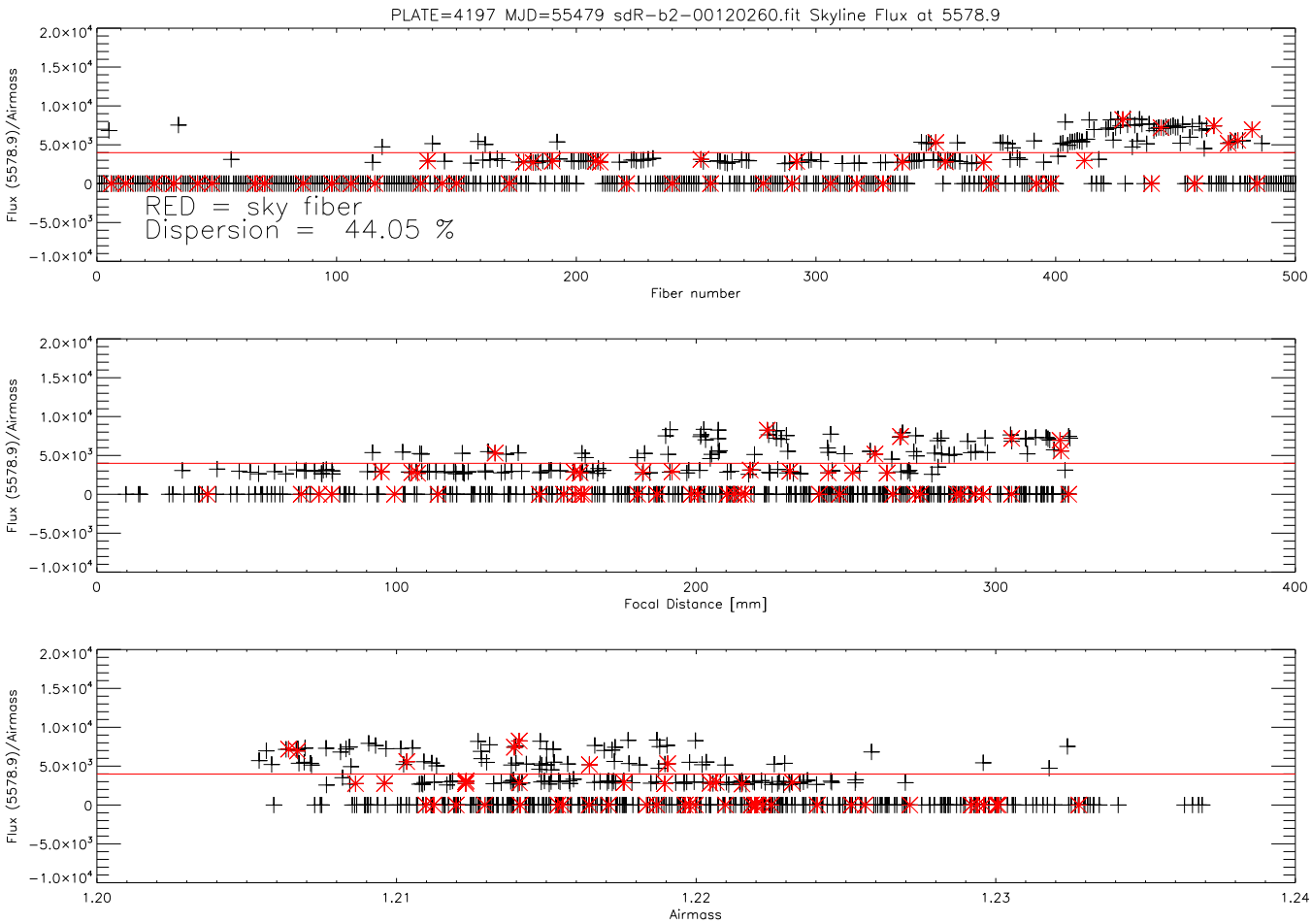

PLATE=4197 MJD=55479 sdR-b2-00120260.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
4000
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]


PLATE=4197 MJD=55479 sdR-b2-00120260.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
600
400
200
0
-200
5570
5575
5580
5585
5590
λ [A]

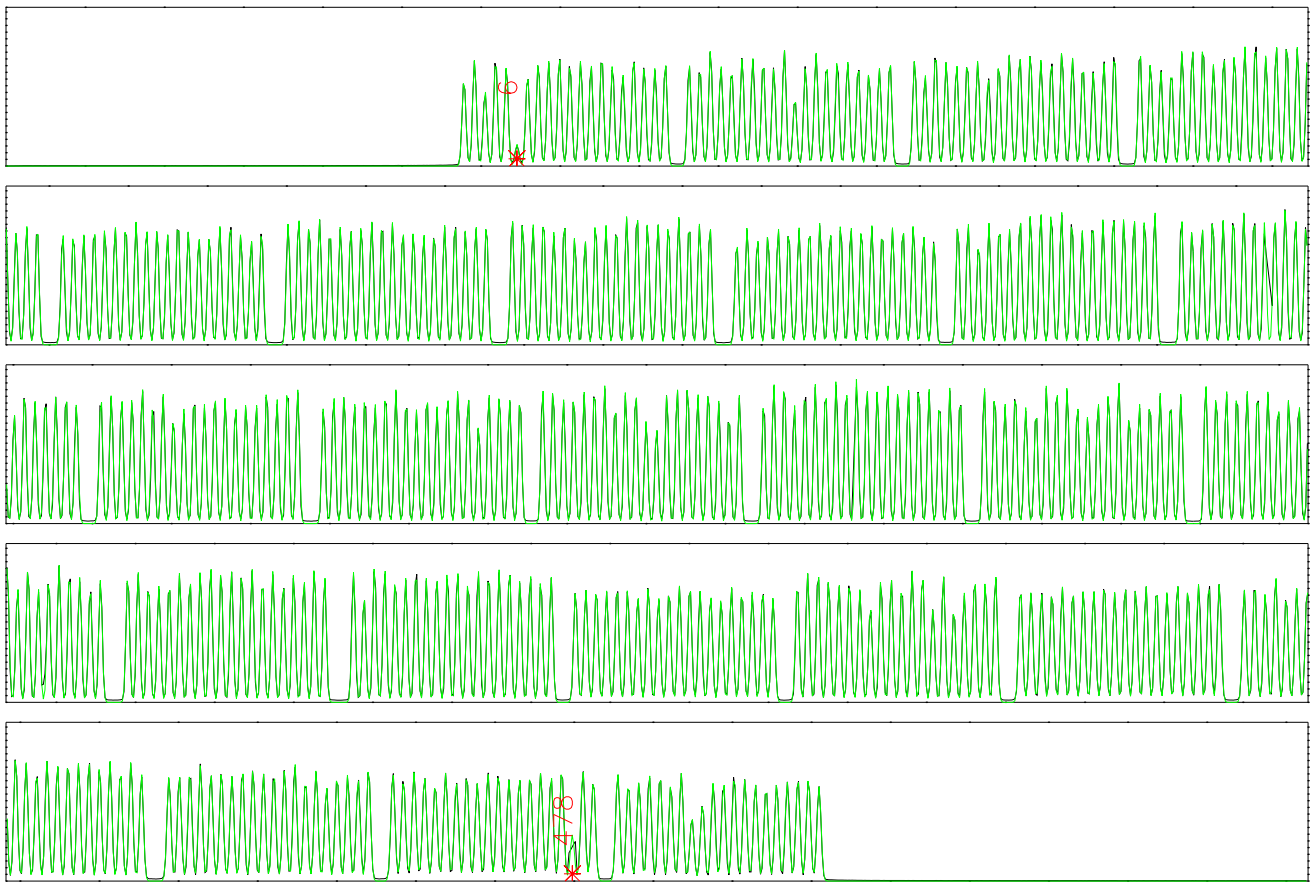
Number of sky fibers = 49

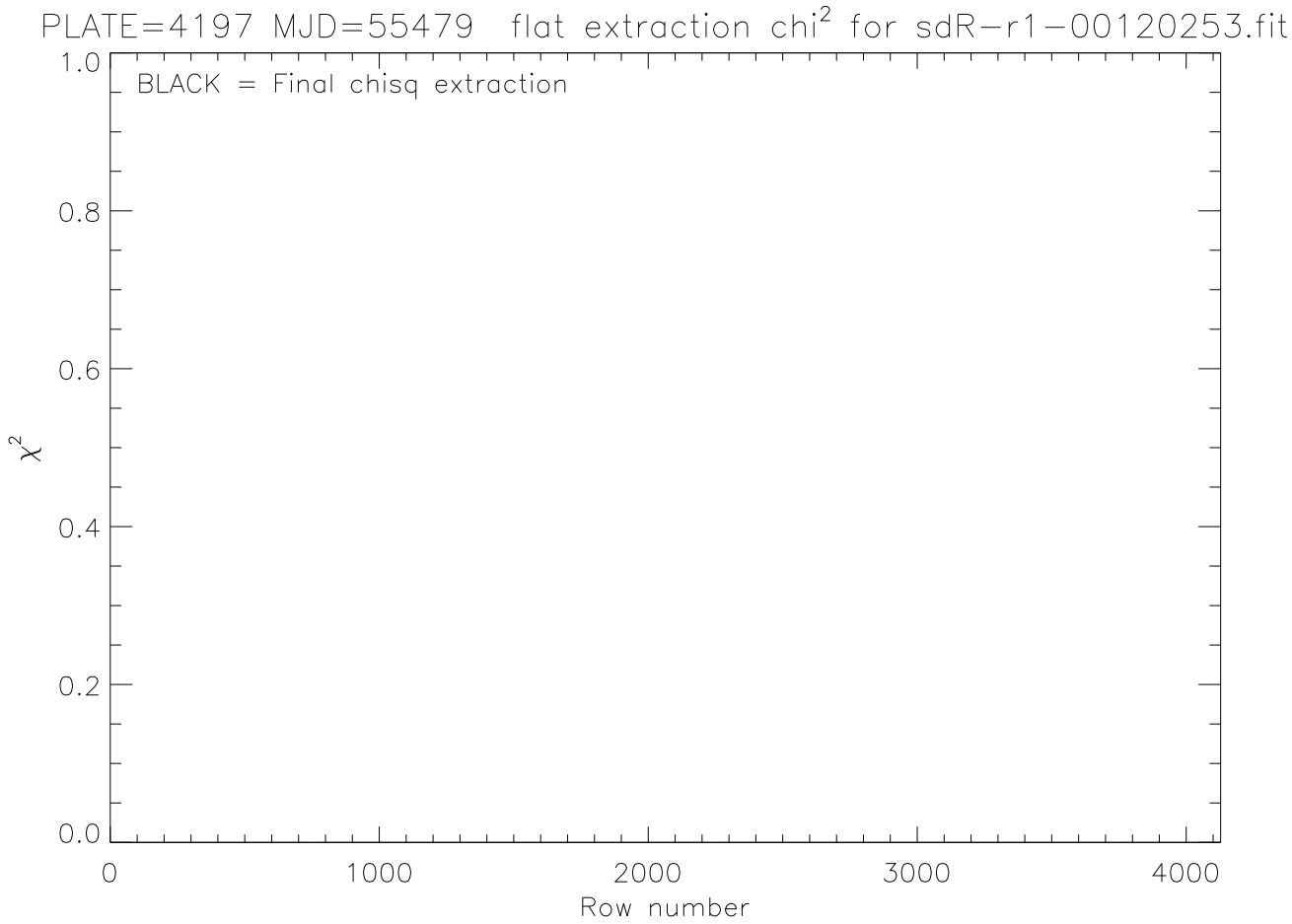


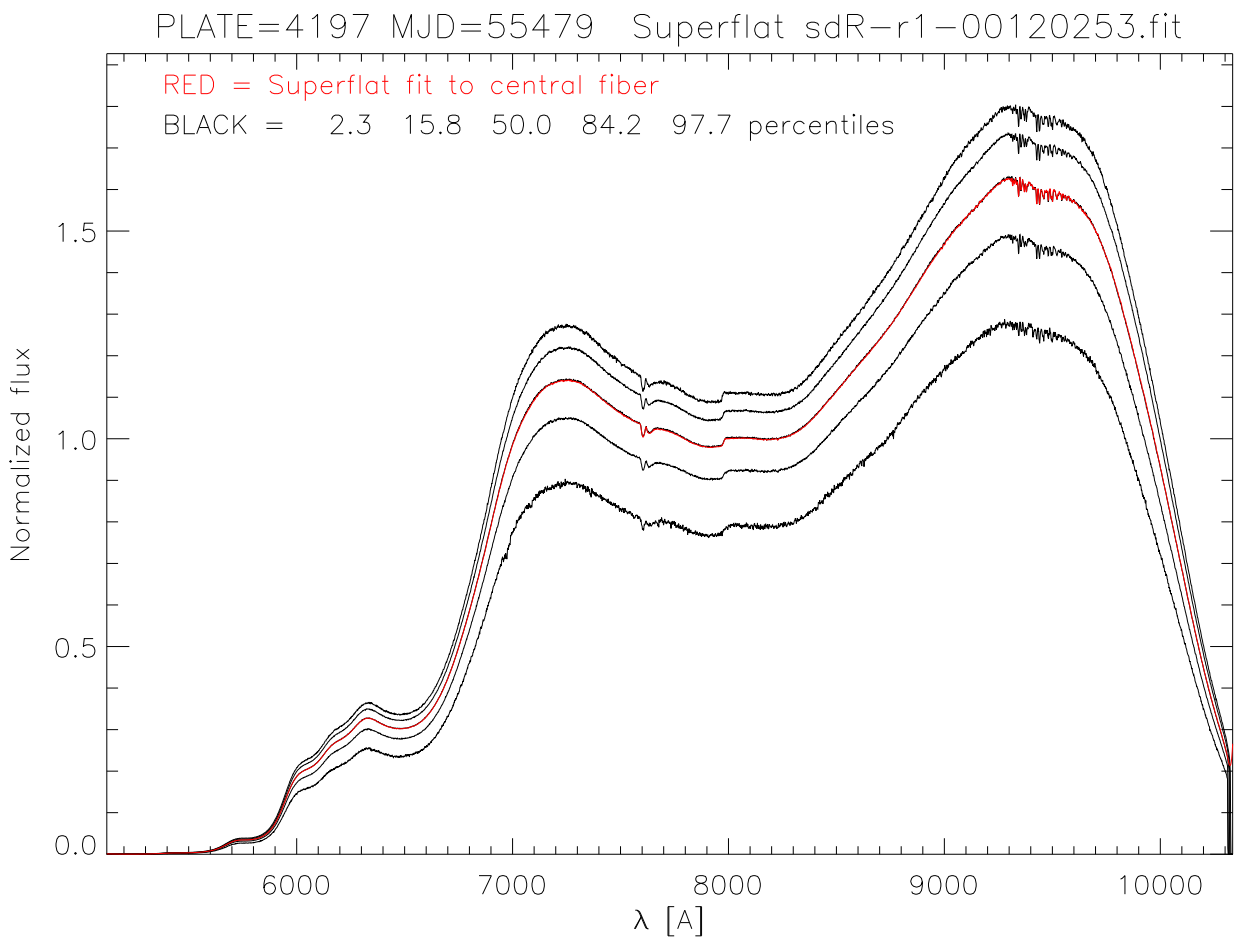

PLATE=4197 MJD=55479 sdR-b2-00120260.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
RED = sky fiber
Dispersion = 11.27 %
Fiber number
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

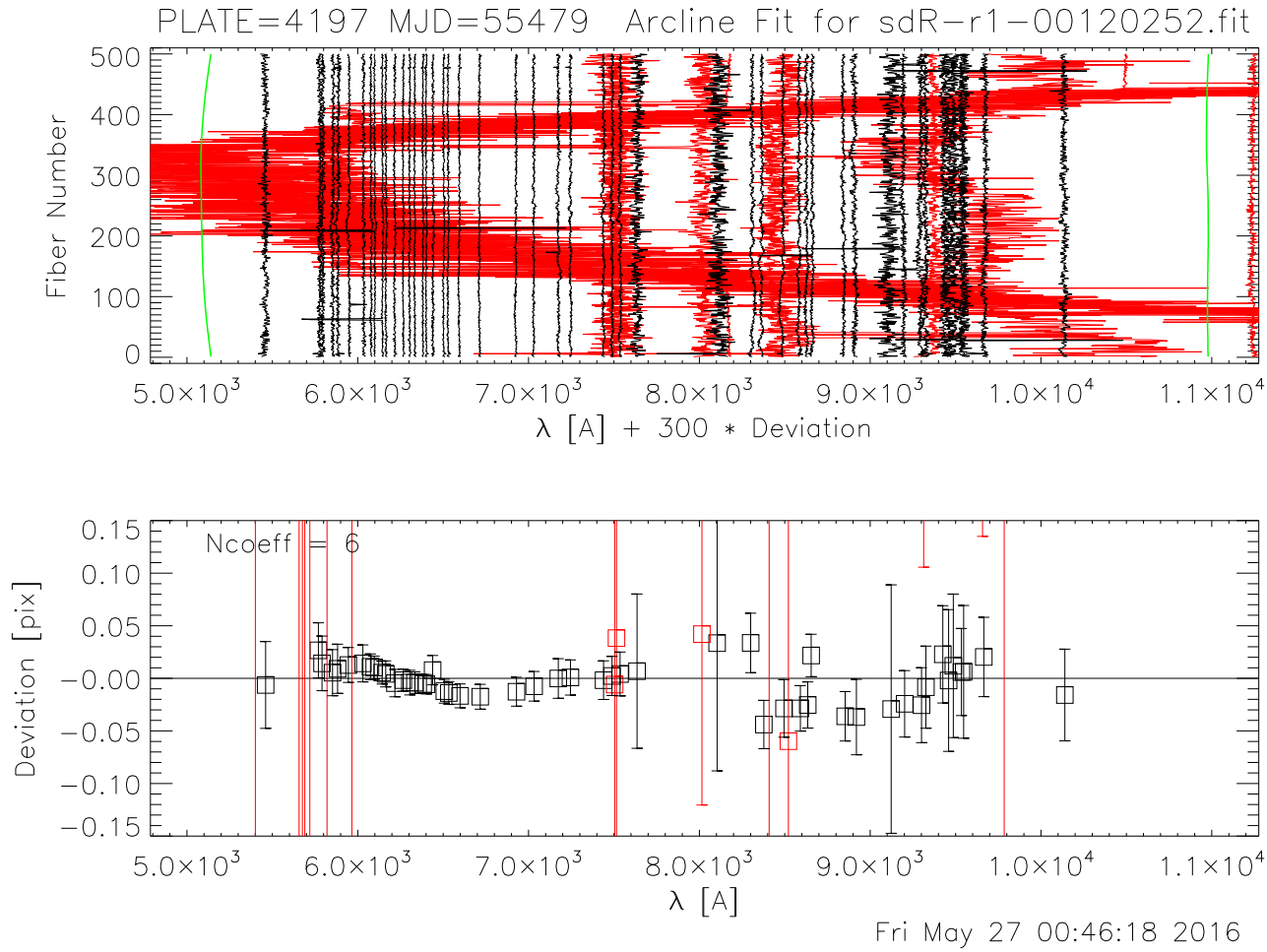

PLATE=4197 MJD=55479 sdR-b2-00120260.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 44.05 %
Fiber number
Focal Distance [mm]
Airmass

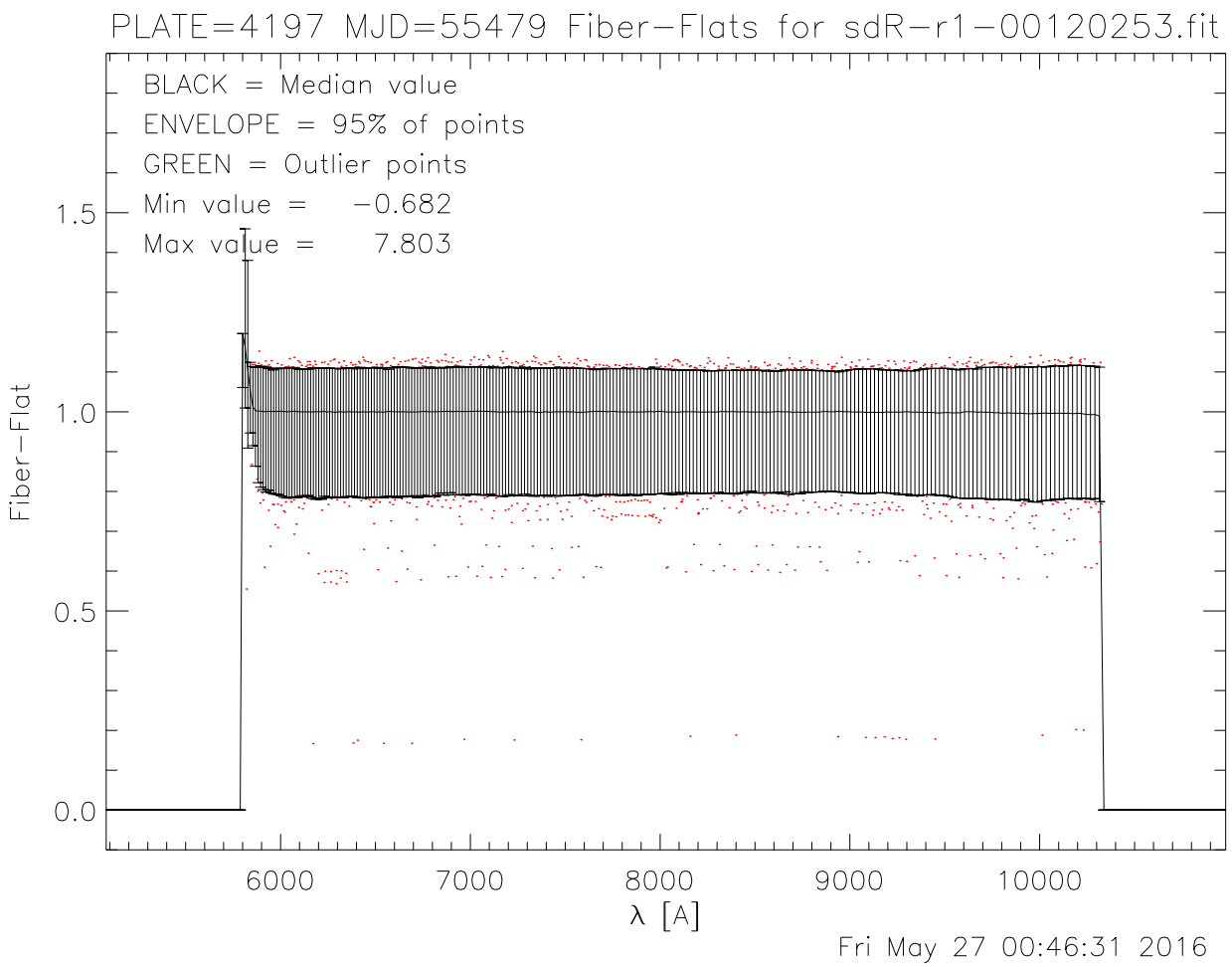
PLATE=4197 MJD=55479 Traces sdR-r1-00120253.fit

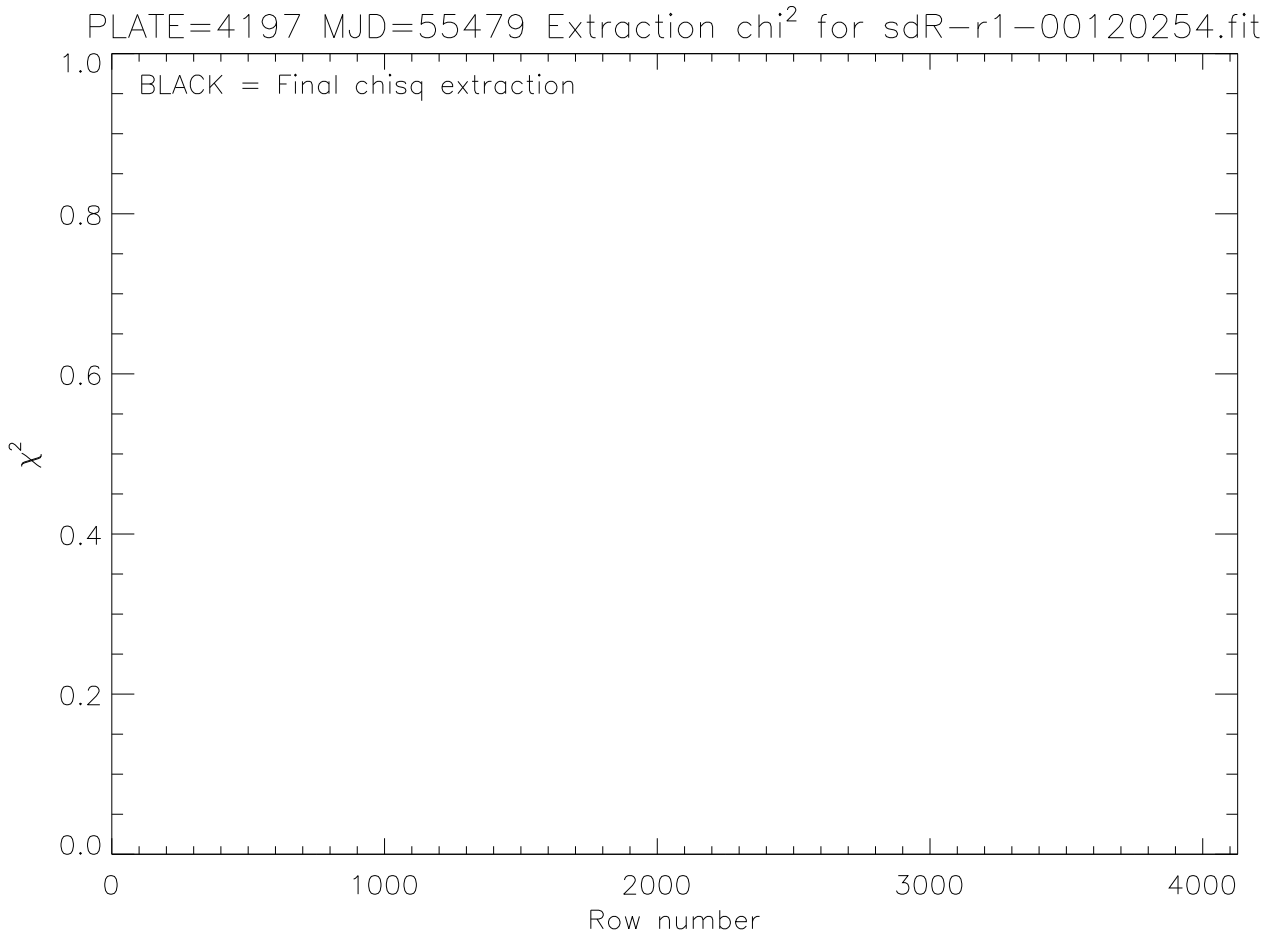


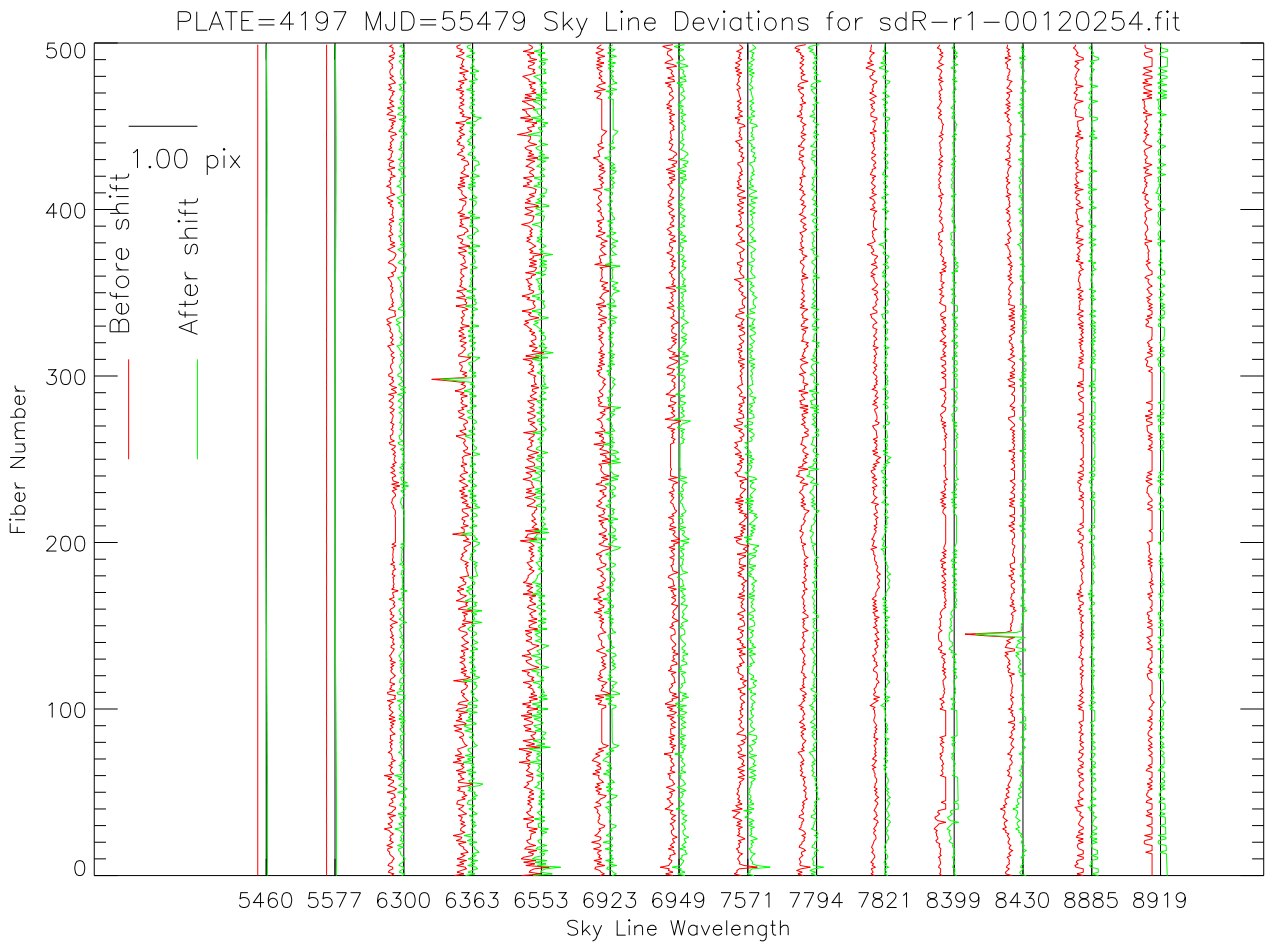

PLATE=4197 MJD=55479 flat extraction chi^2 for sdR−r1−00120253.fit
BLACK = Final chisq extraction
1.0
0.8
0.6
0.4
0.2
0.0
χ^2
0
1000
2000
3000
4000
Row number

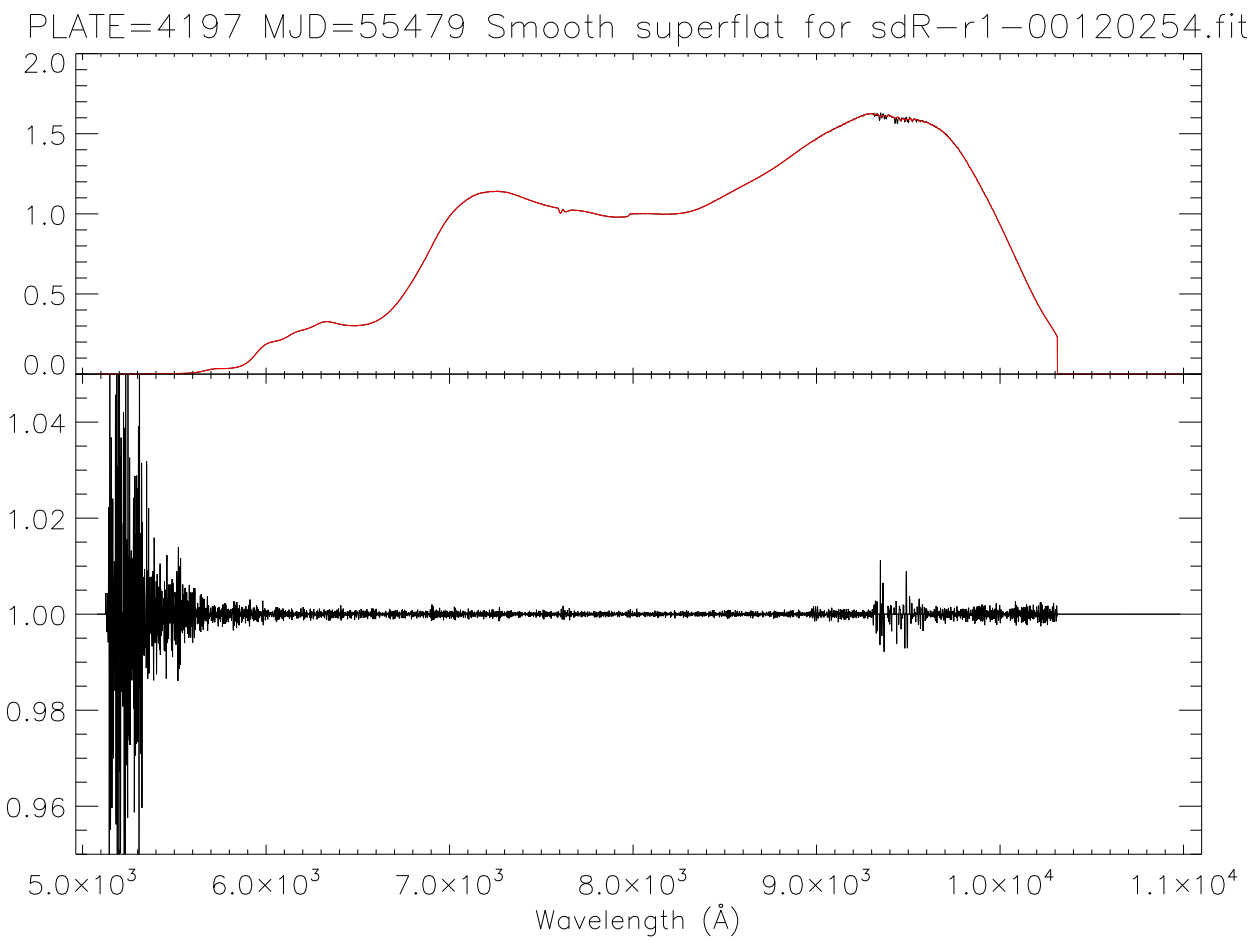

PLATE=4197 MJD=55479 Superflat sdR-r1-00120253.fit
RED = Superflat fit to central fiber
BLACK = 2.3 15.8 50.0 84.2 97.7 percentiles
Normalized flux
0.0
0.5
1.0
1.5
6000
7000
8000
9000
10000
λ [A]

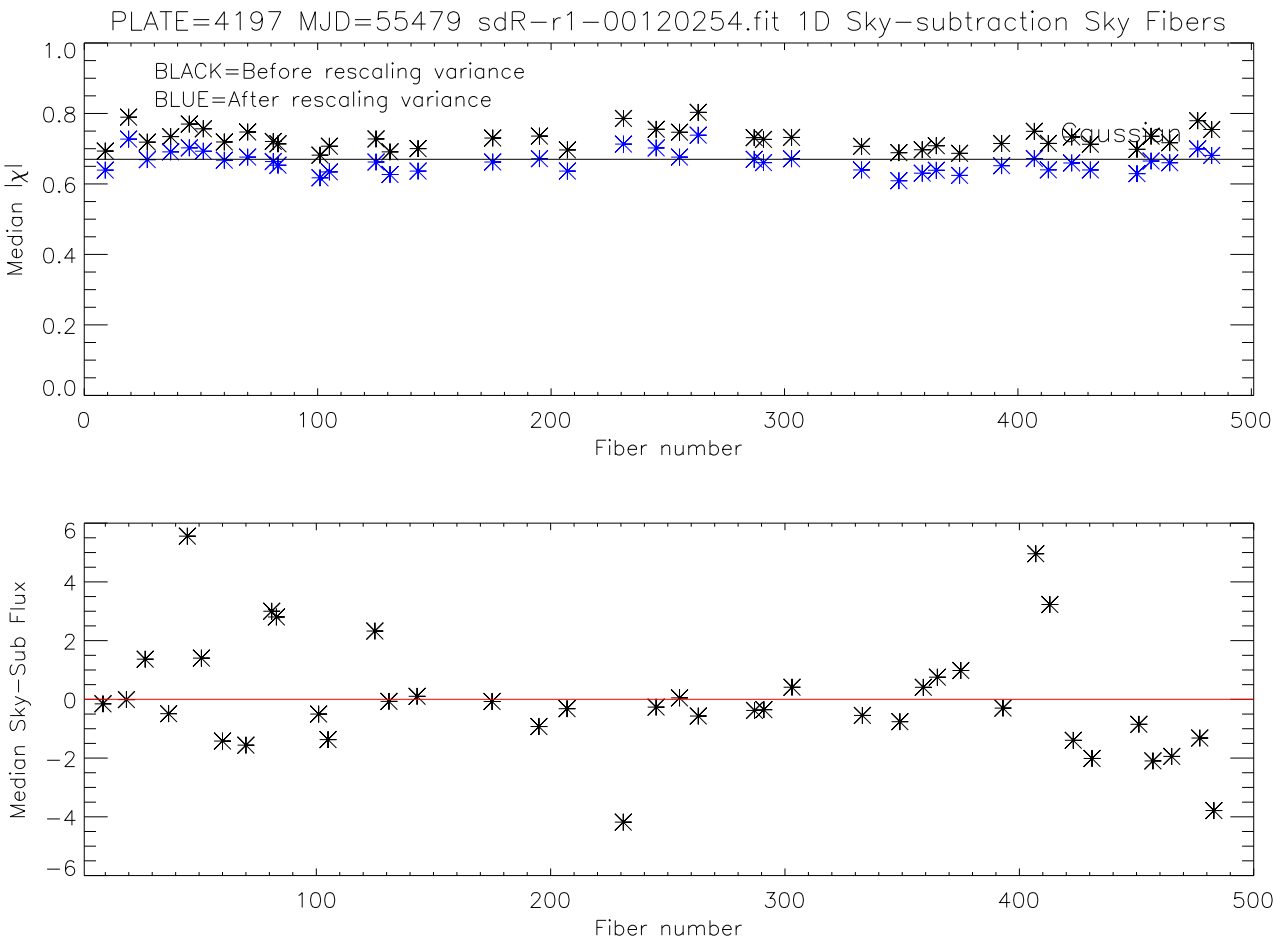

PLATE=4197 MJD=55479 Arcline Fit for sdR-r1-00120252.fit
Fiber Number
500
400
300
200
100
0
5.0×10^3
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
λ [A] + 300 * Deviation
Ncoeff = 6
Deviation [pix]
0.15
0.10
0.05
−0.00
−0.05
−0.10
−0.15
λ [A]
Fri May 27 00:46:18 2016

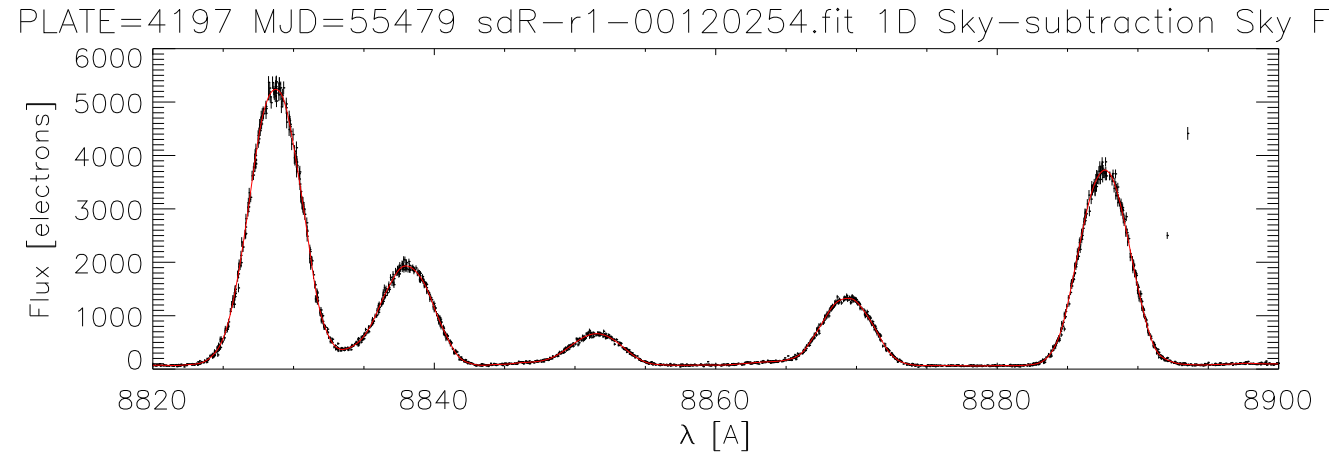

PLATE=4197 MJD=55479 Fiber−Flats for sdR−r1−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −0.682
Max value = 7.803
Fiber−Flat
1.5
1.0
0.5
0.0
6000
7000
8000
9000
10000
λ [A]
Fri May 27 00:46:31 2016

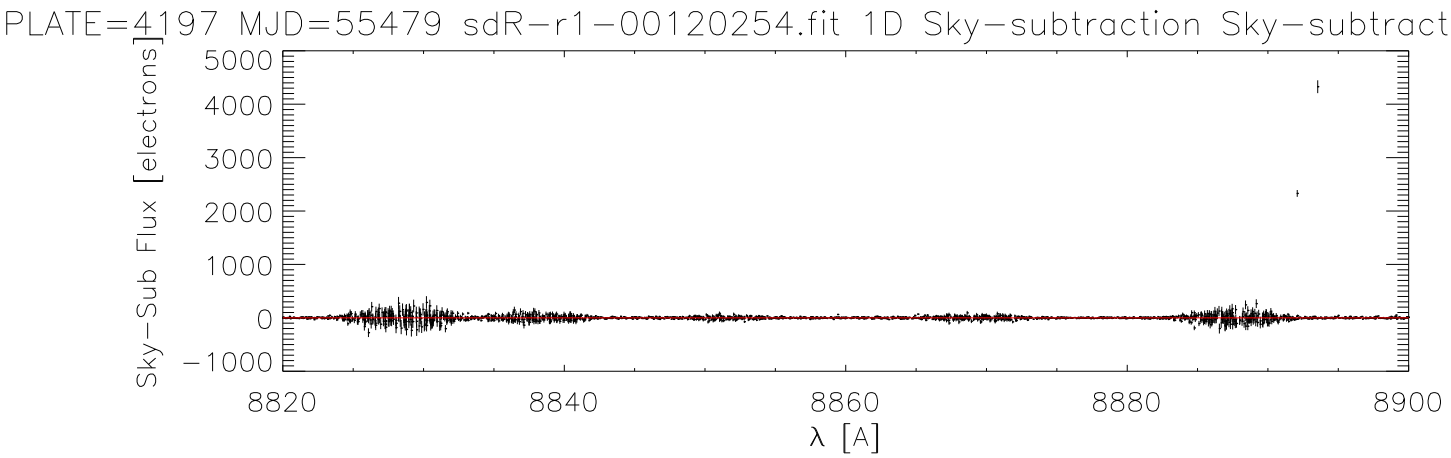

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r1−00120254.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r1-00120254.fit
Before shift
After shift
1.00 pix
Fiber Number
0
100
200
300
400
500
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength

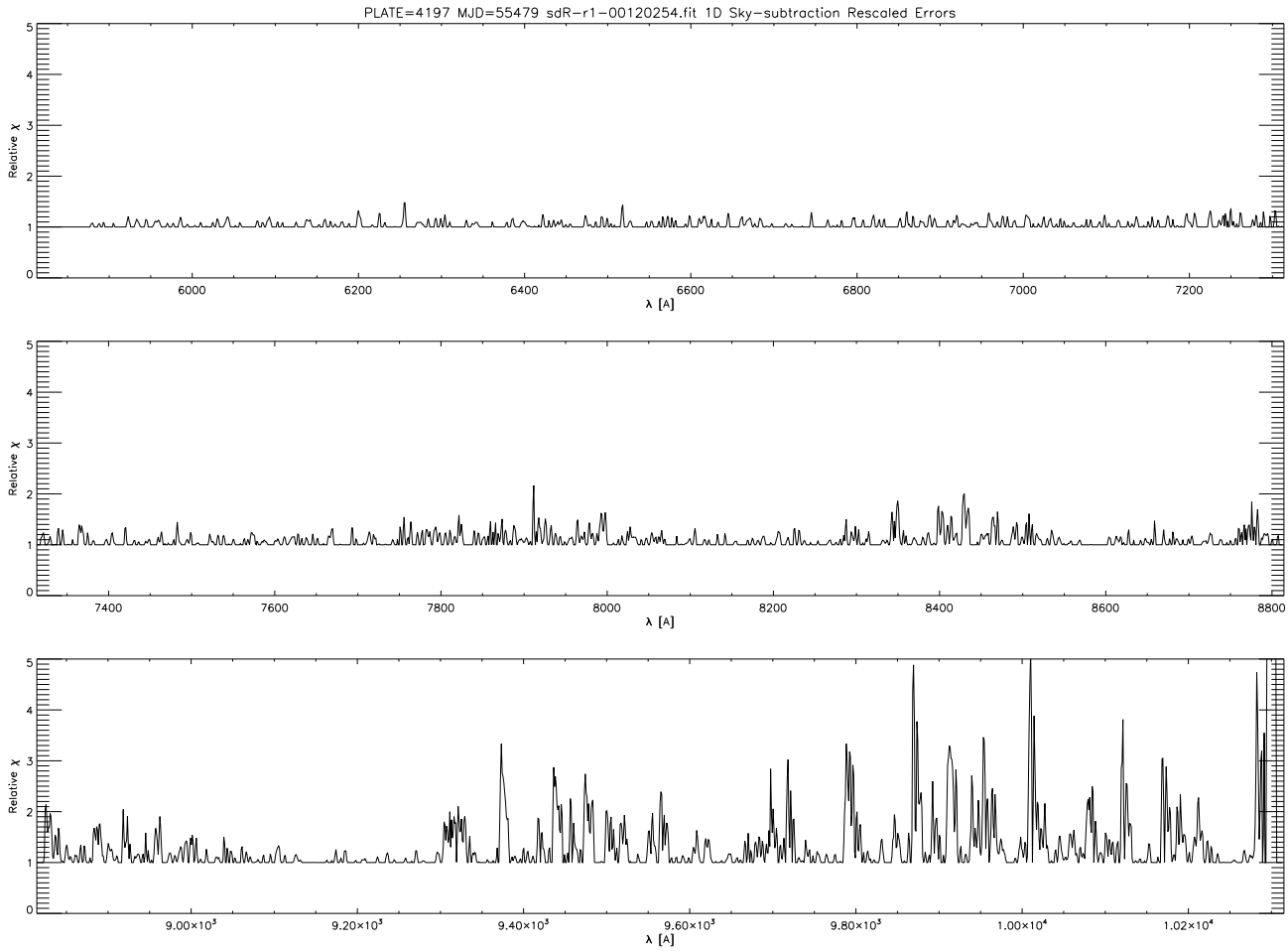

PLATE=4197 MJD=55479 Smooth superflat for sdR-r1-00120254.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
5.0×10^3
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

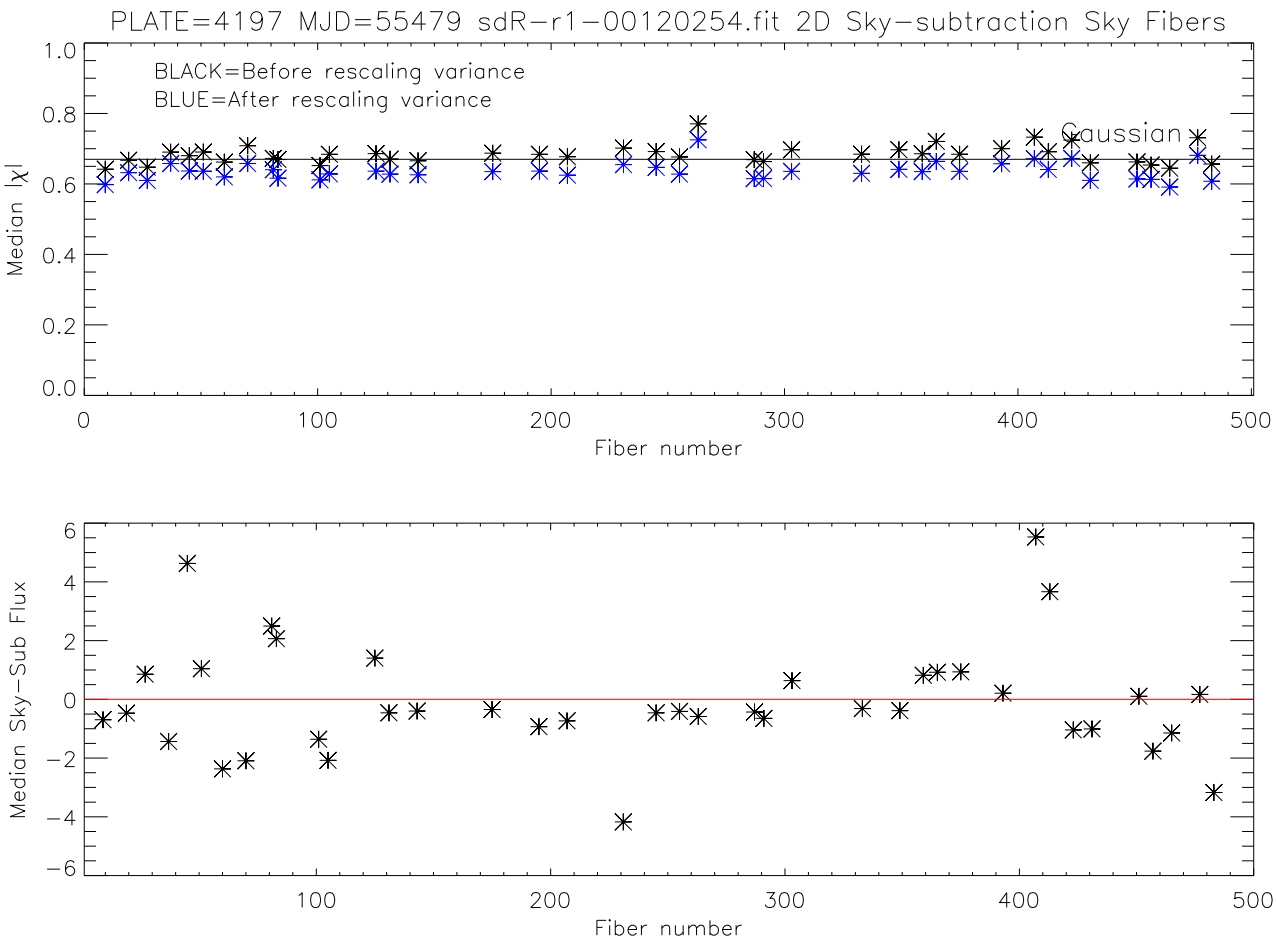

PLATE=4197 MJD=55479 sdR-r1-00120254.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

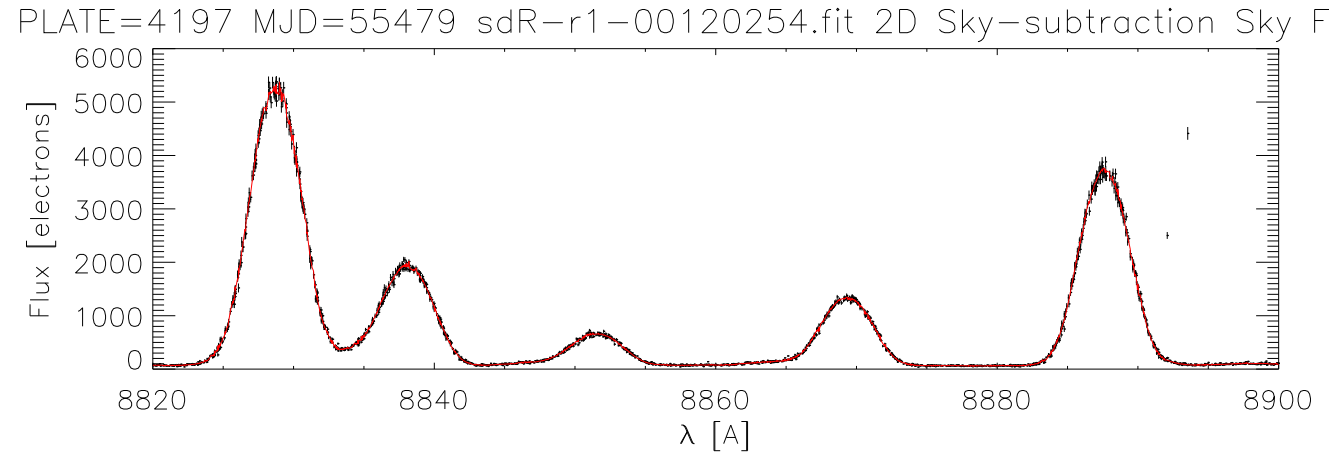

PLATE=4197 MJD=55479 sdR-r1-00120254.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
6000
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

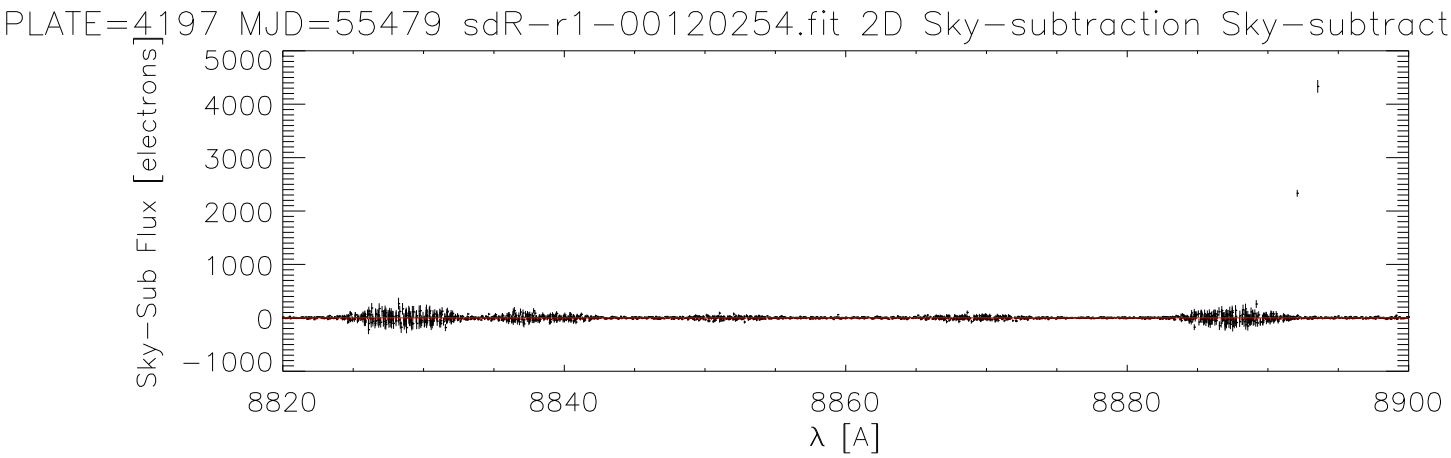

PLATE=4197 MJD=55479 sdR-r1-00120254.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
5000
4000
3000
2000
1000
0
-1000
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 40

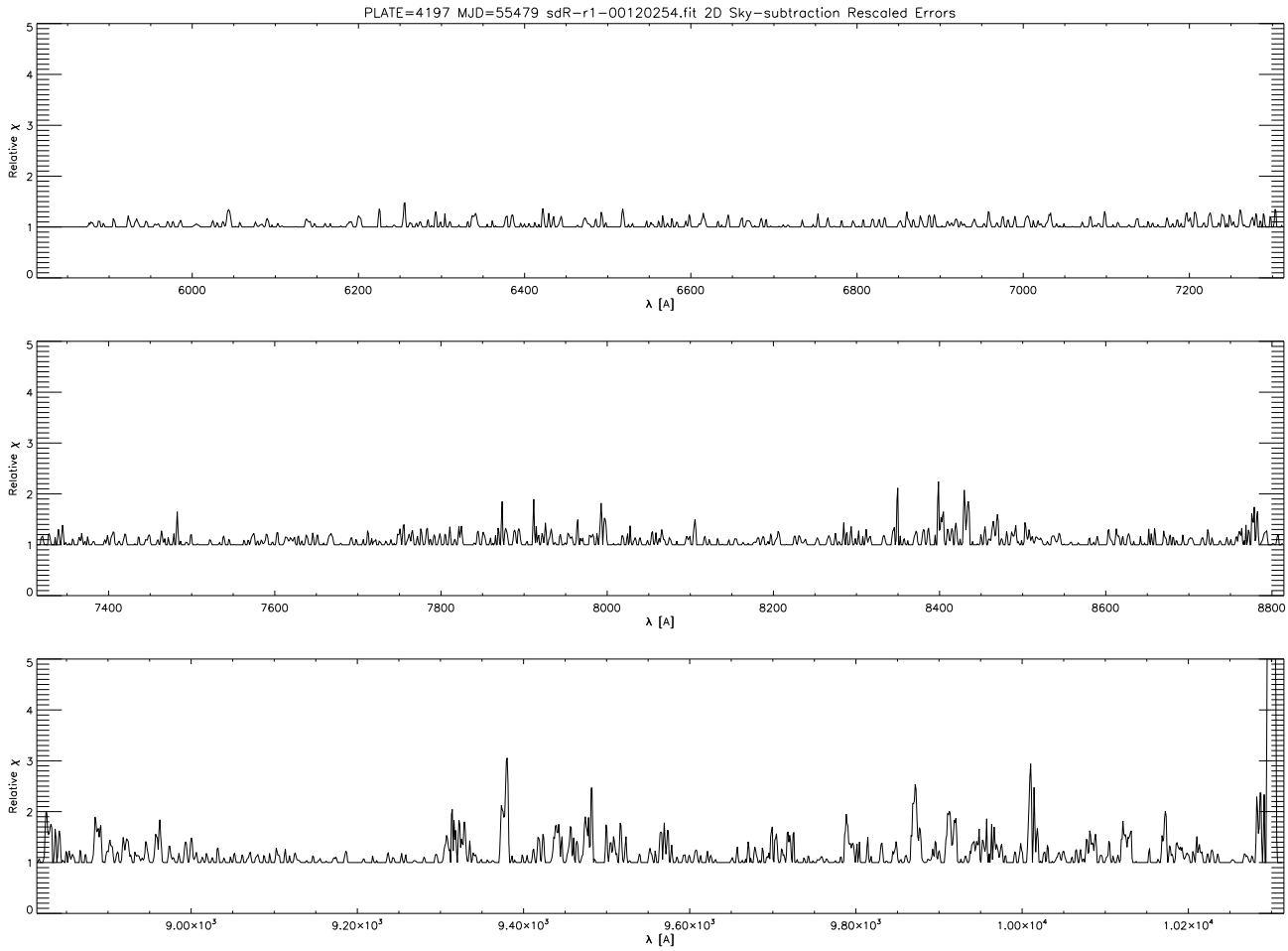


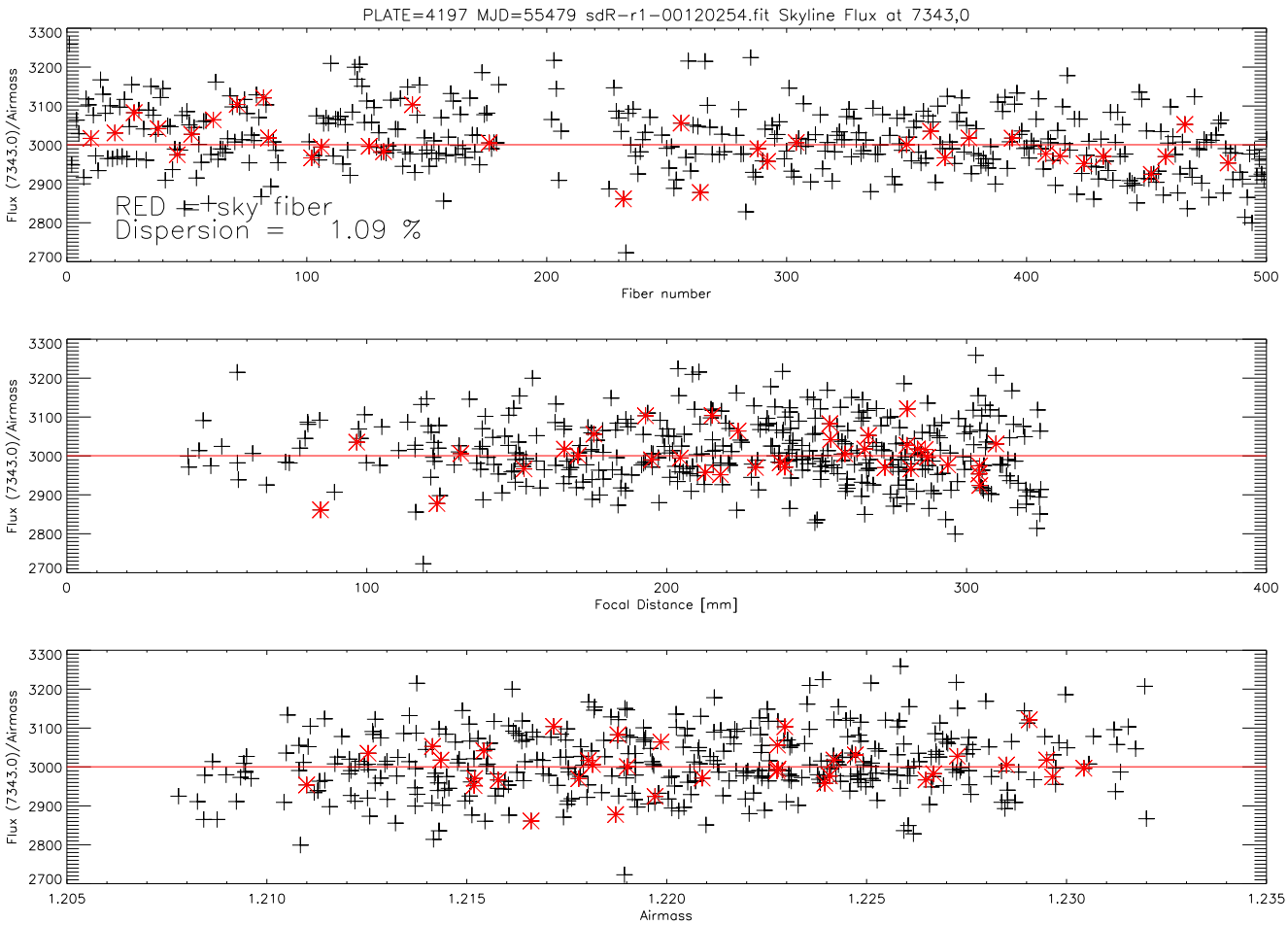

PLATE=4197 MJD=55479 sdR-r1-00120254.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

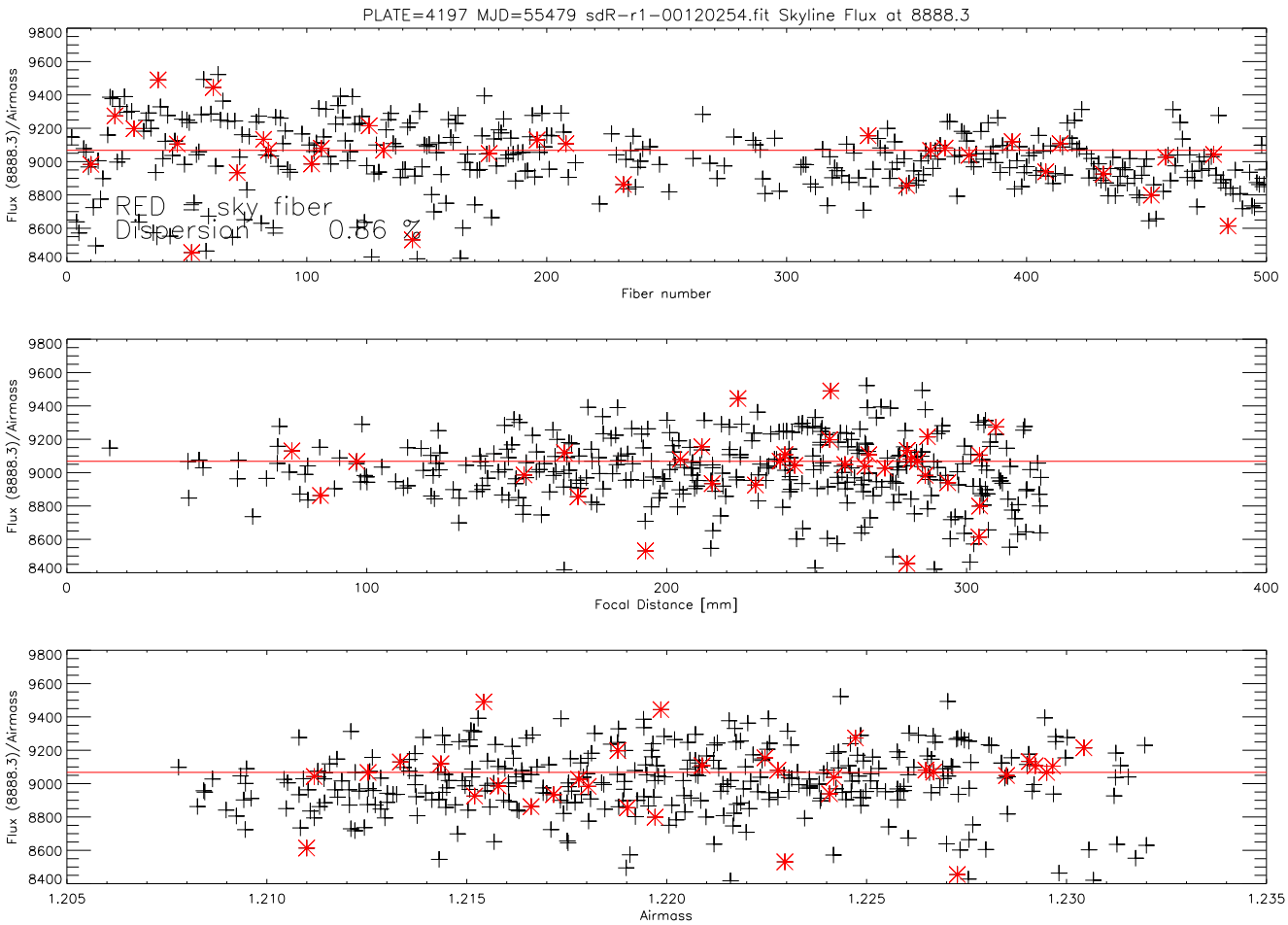

PLATE=4197 MJD=55479 sdR-r1-00120254.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
6000
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

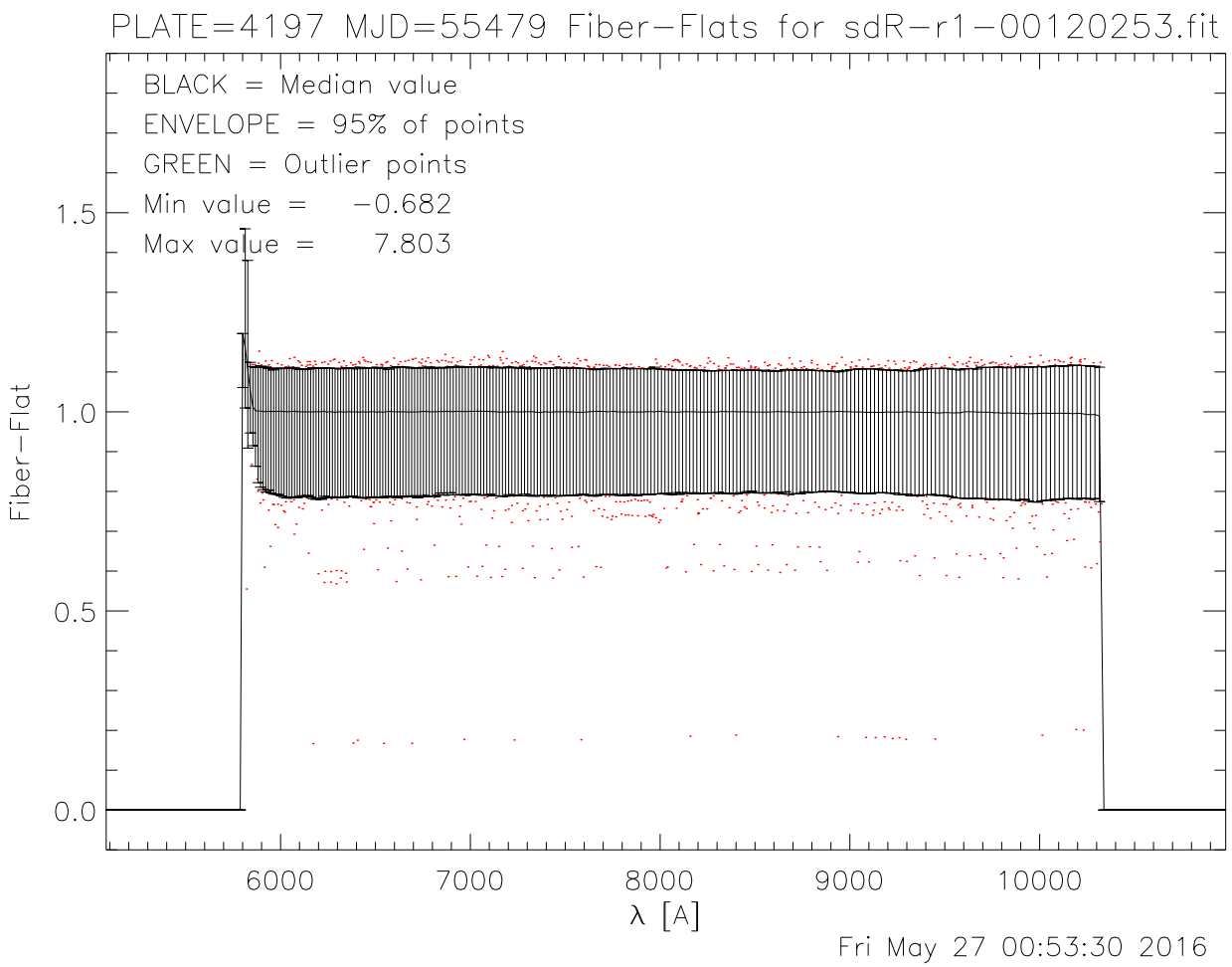

PLATE=4197 MJD=55479 sdR-r1-00120254.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
5000
4000
3000
2000
1000
0
-1000
8820
8840
8860
8880
8900
λ [A]

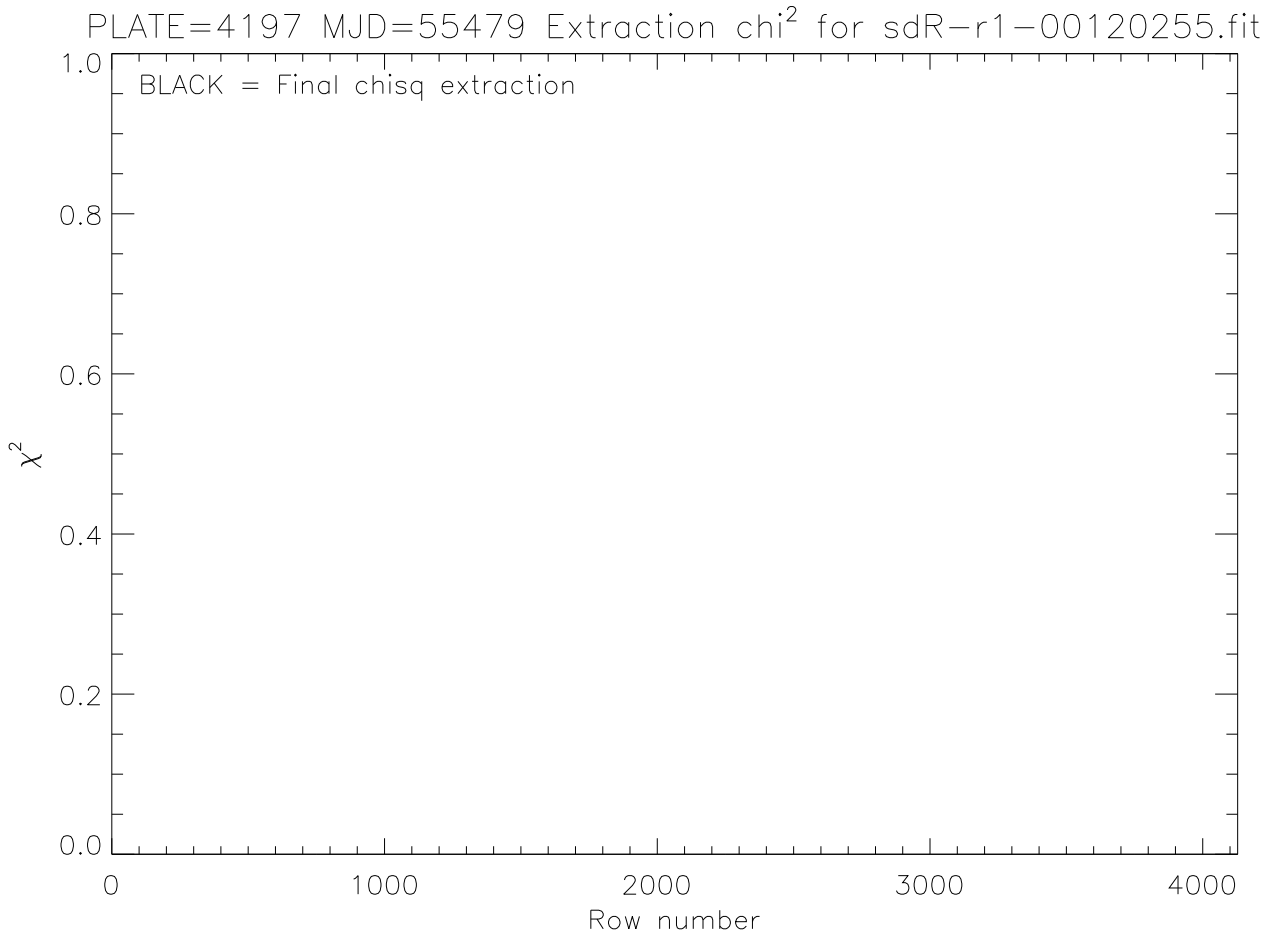
Number of sky fibers = 40

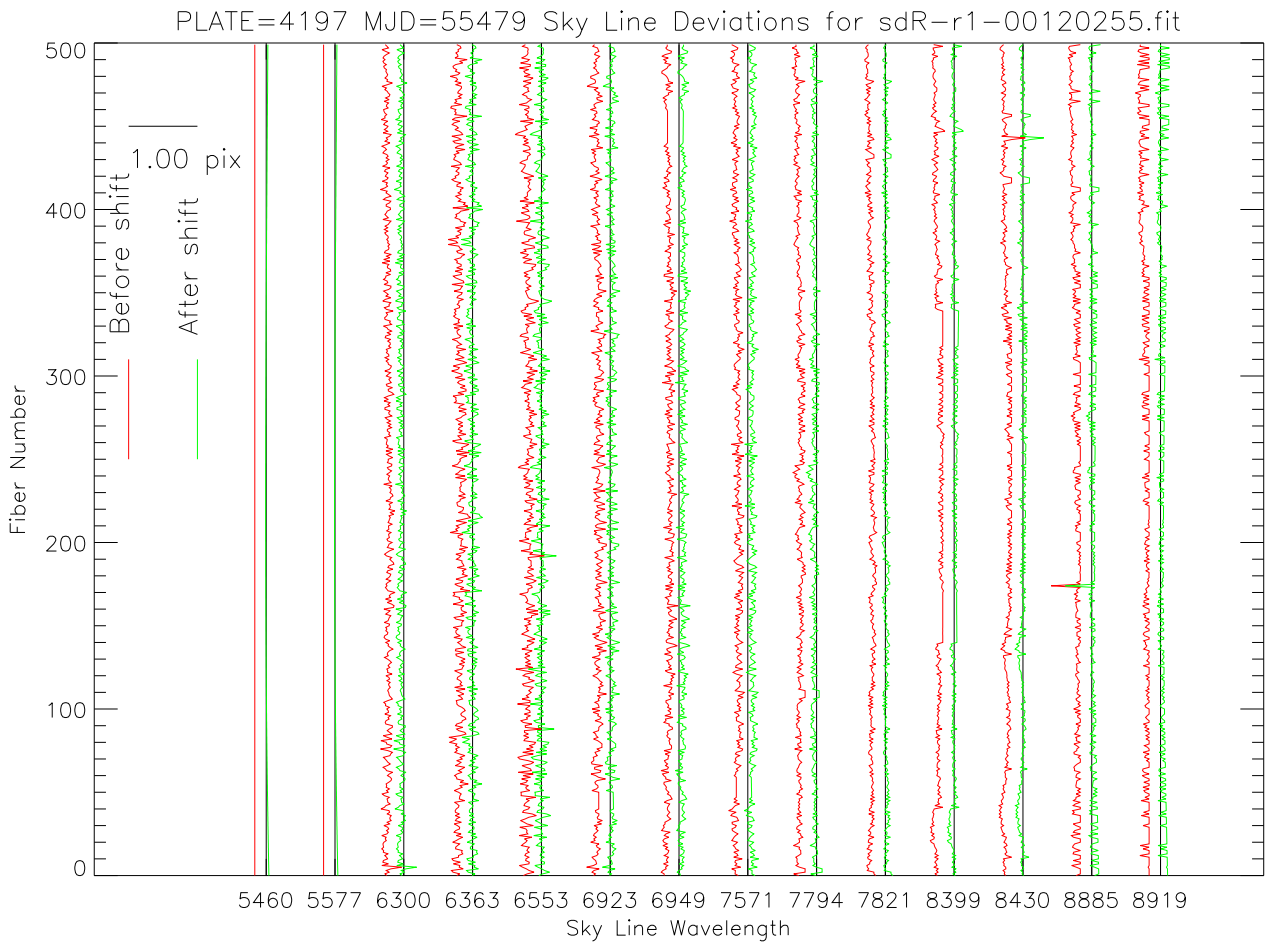


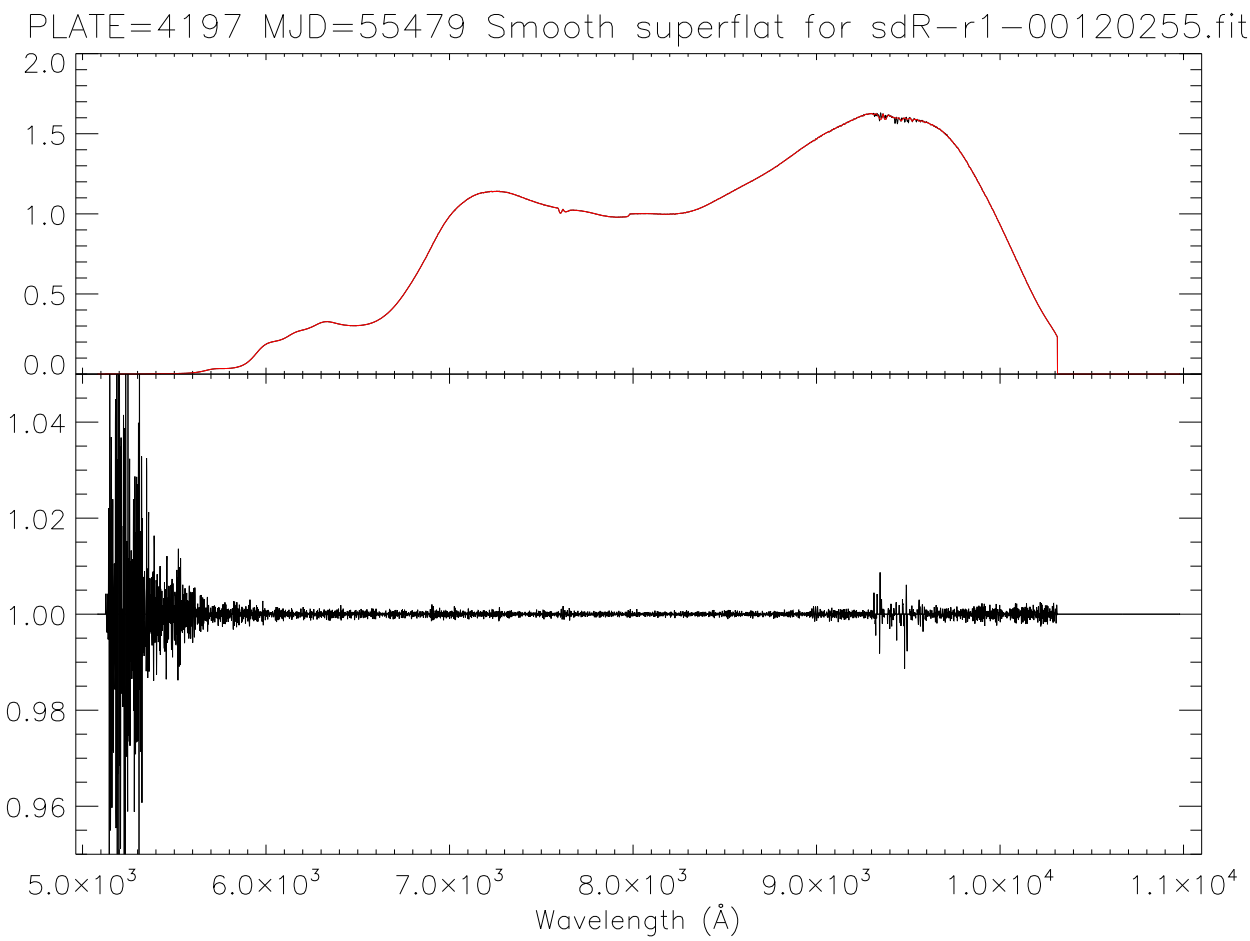

PLATE=4197 MJD=55479 sdR-r1-00120254.fit Skyline Flux at 7343.0
Flux (7343.0)/Airmass
RED =+sky fiber
Dispersion = 1.09 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

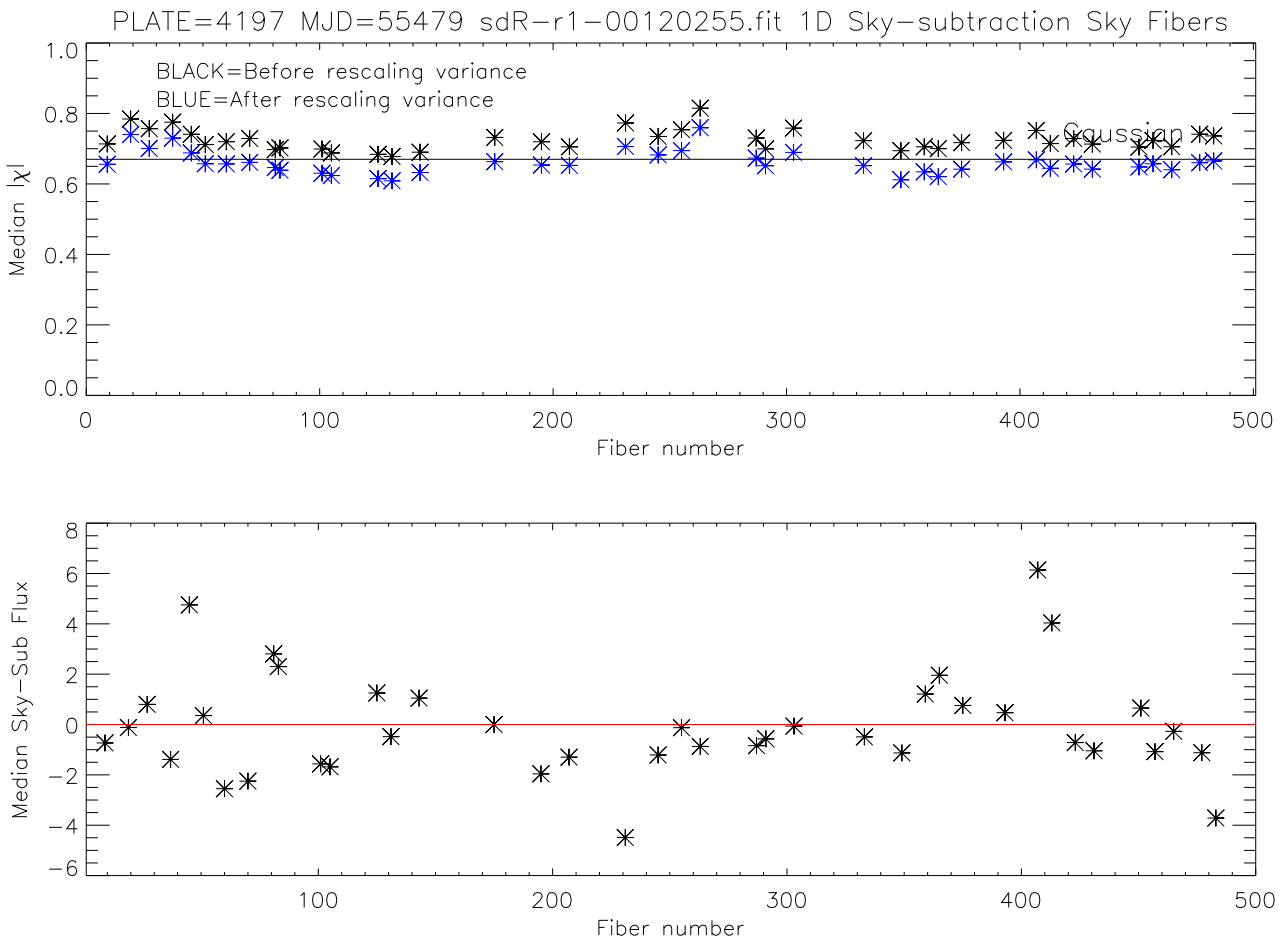

PLATE=4197 MJD=55479 sdR-r1-00120254.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
Fiber number
RED = sky fiber
Dispersion = 0.86 %
Flux (8888.3)/Airmass
Focal Distance [mm]
Flux (8888.3)/Airmass
Airmass

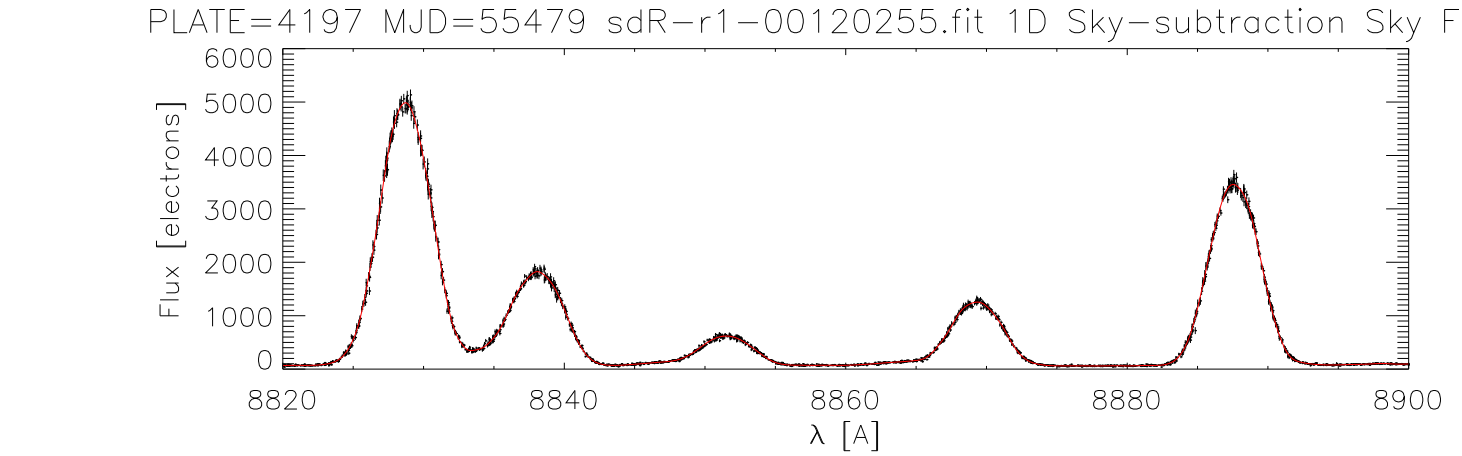

PLATE=4197 MJD=55479 Fiber−Flats for sdR−r1−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −0.682
Max value = 7.803
Fiber−Flat
1.5
1.0
0.5
0.0
6000
7000
8000
9000
10000
λ [A]
Fri May 27 00:53:30 2016

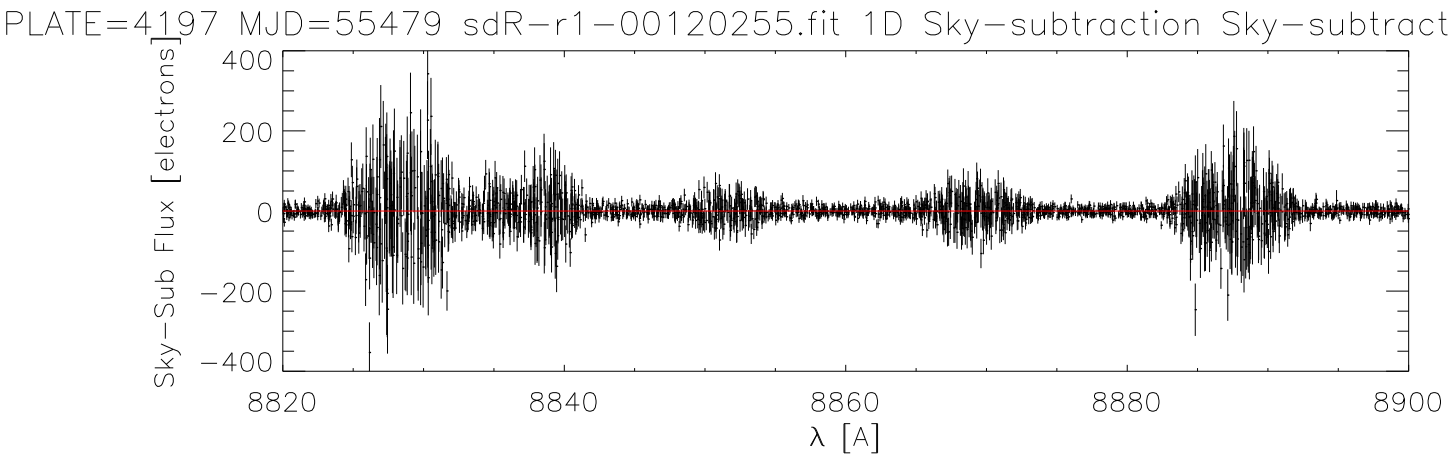

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r1−00120255.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r1-00120255.fit
Before shift
After shift
1.00 pix
Fiber Number
0
100
200
300
400
500
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength

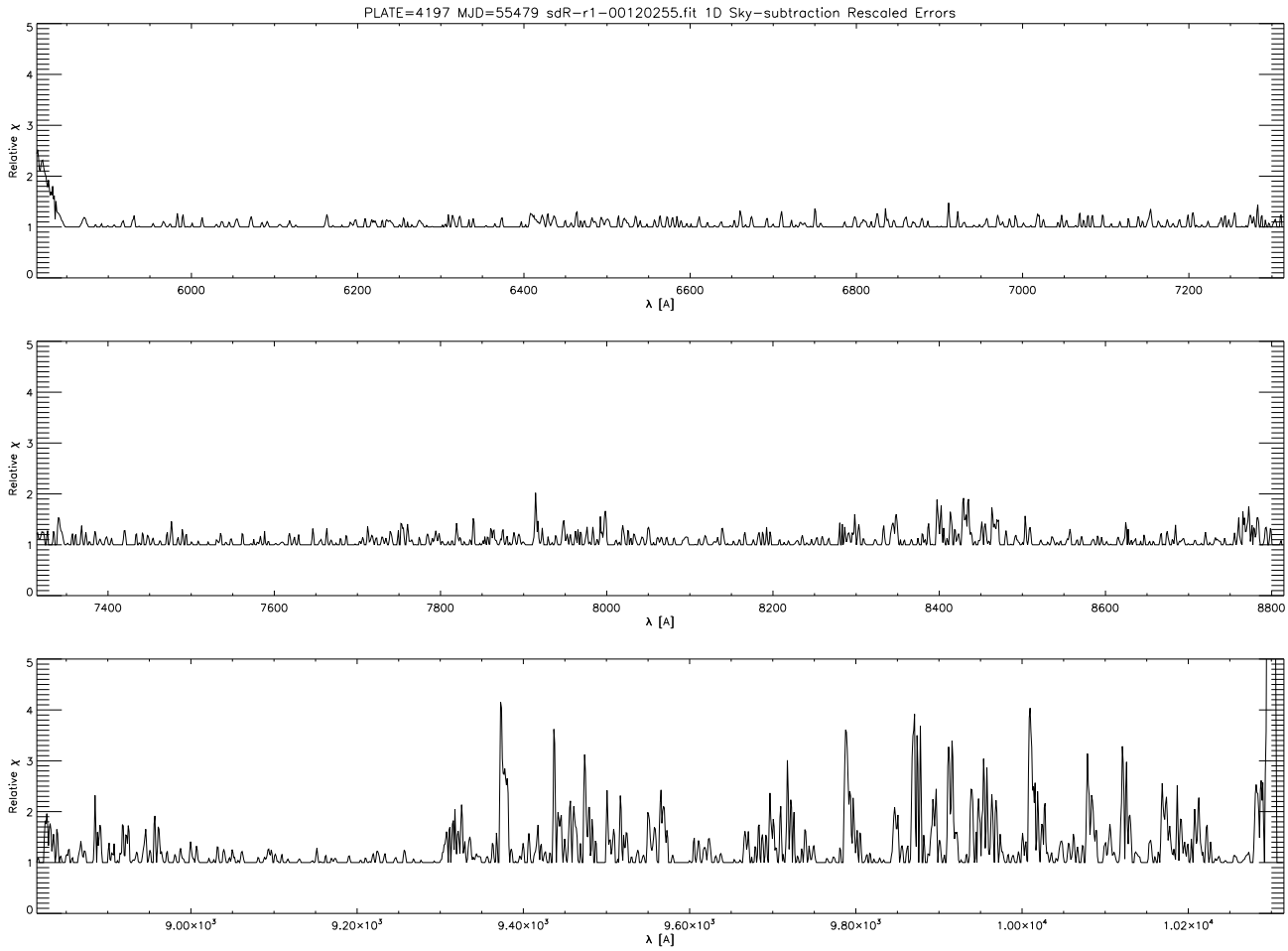

PLATE=4197 MJD=55479 Smooth superflat for sdR-r1-00120255.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
5.0×10^3
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

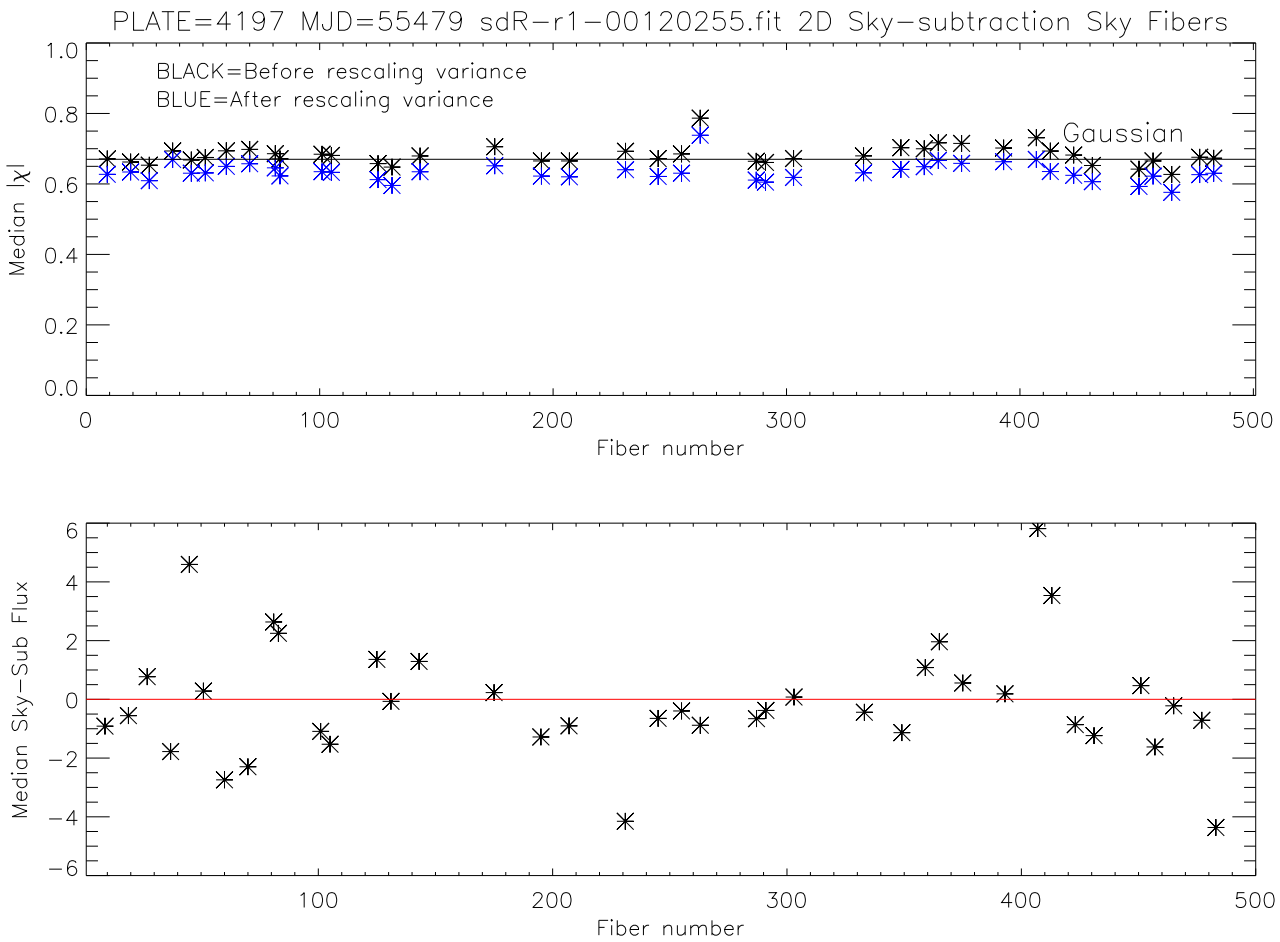

PLATE=4197 MJD=55479 sdR-r1-00120255.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

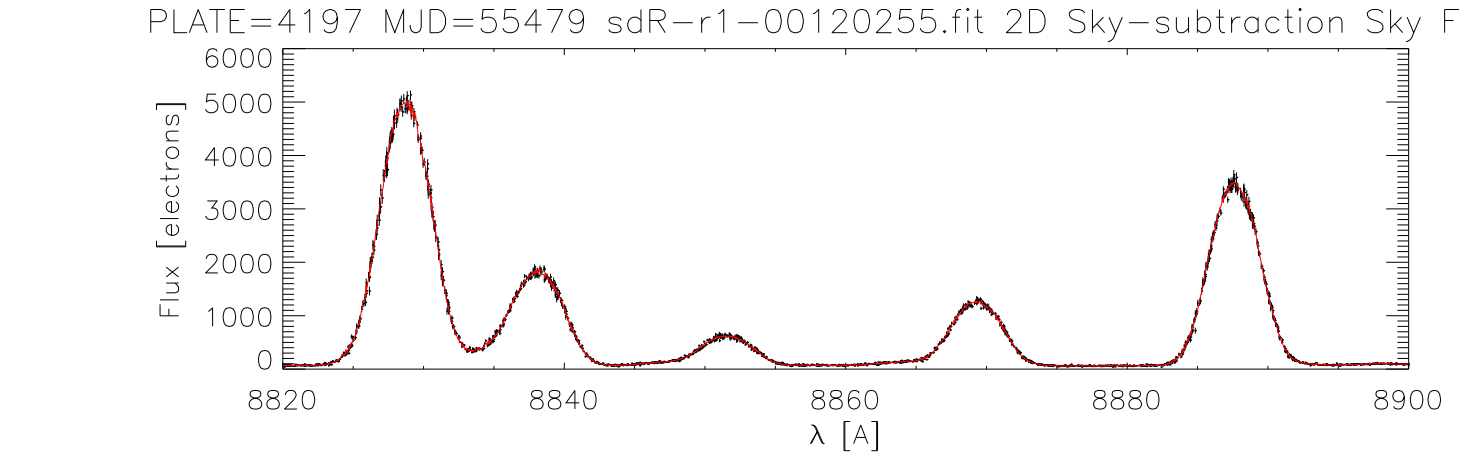

PLATE=4197 MJD=55479 sdR-r1-00120255.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
6000
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

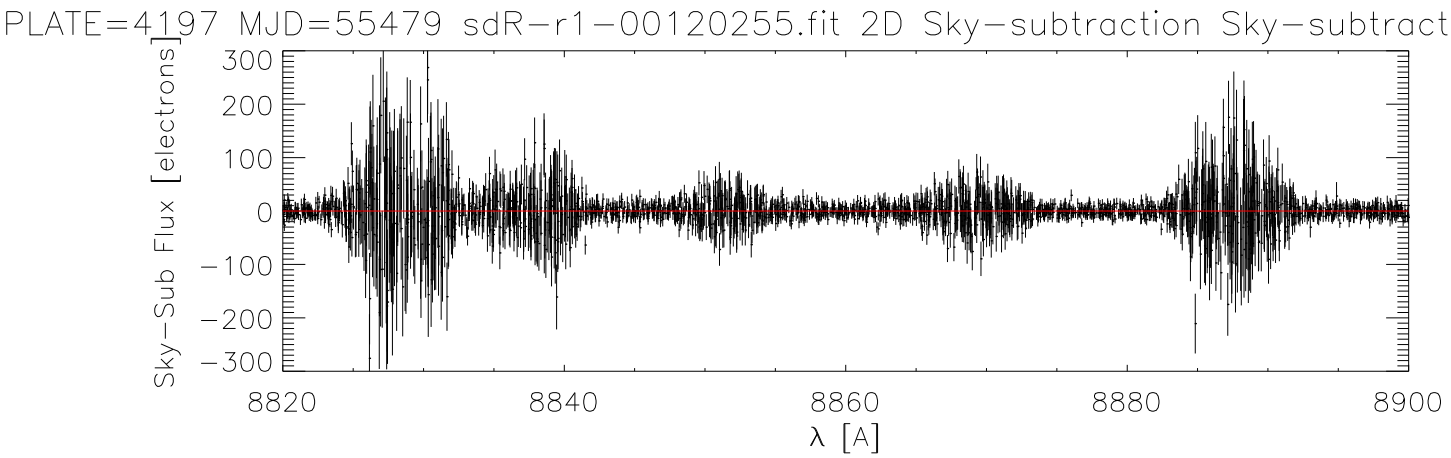

PLATE=4197 MJD=55479 sdR-r1-00120255.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
200
0
-200
-400
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 40

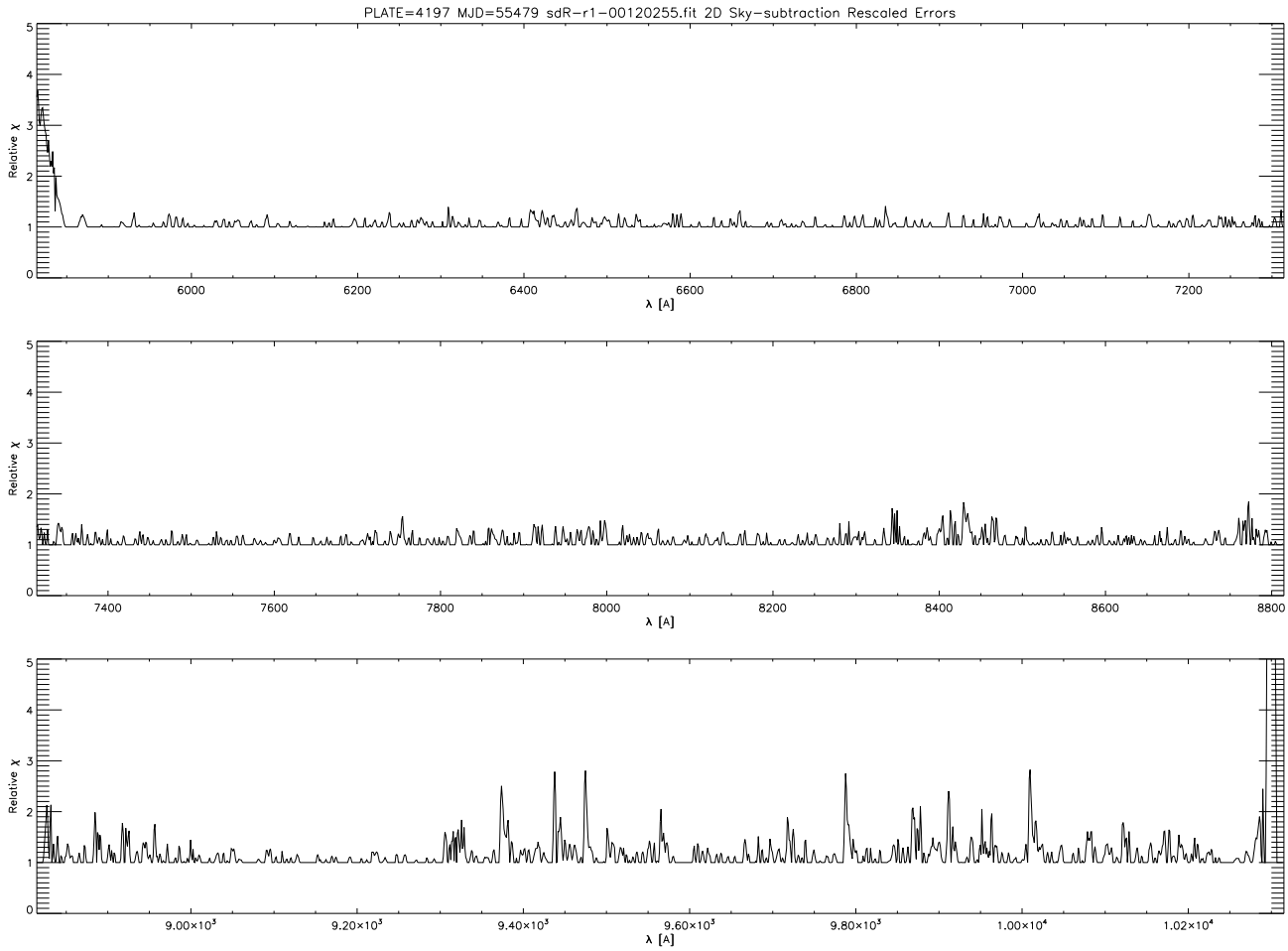


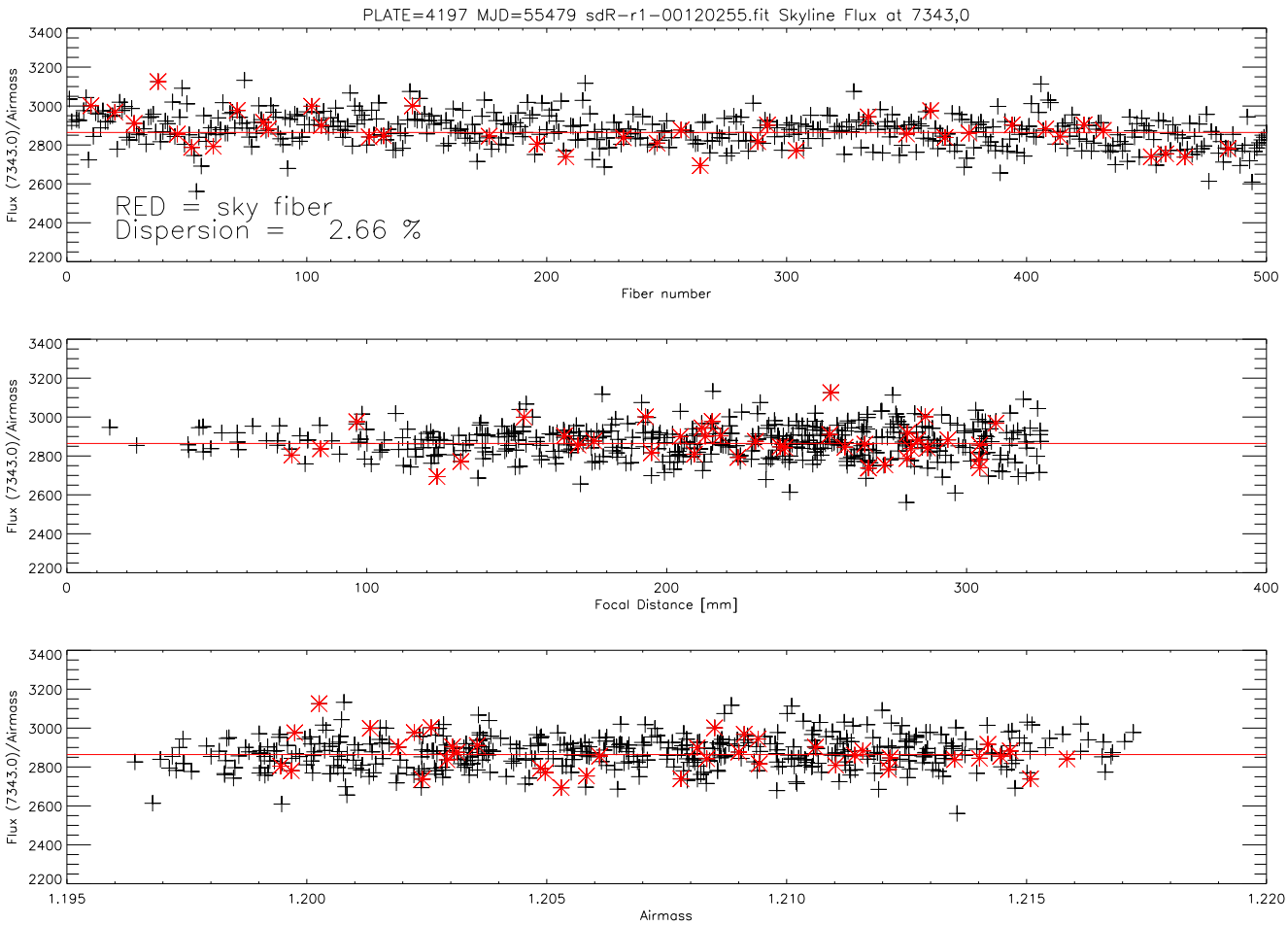

PLATE=4197 MJD=55479 sdR-r1-00120255.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

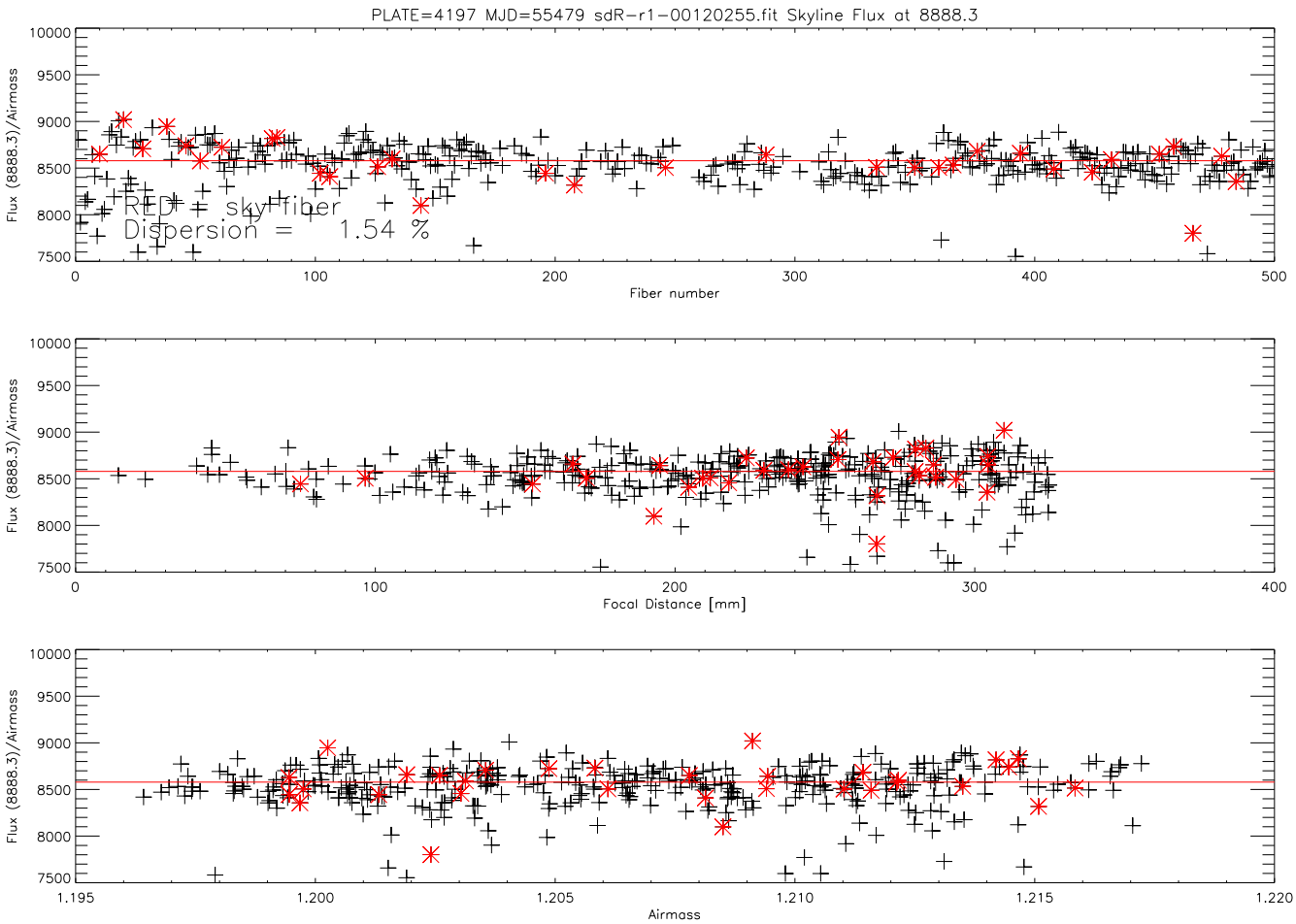

PLATE=4197 MJD=55479 sdR-r1-00120255.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
6000
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

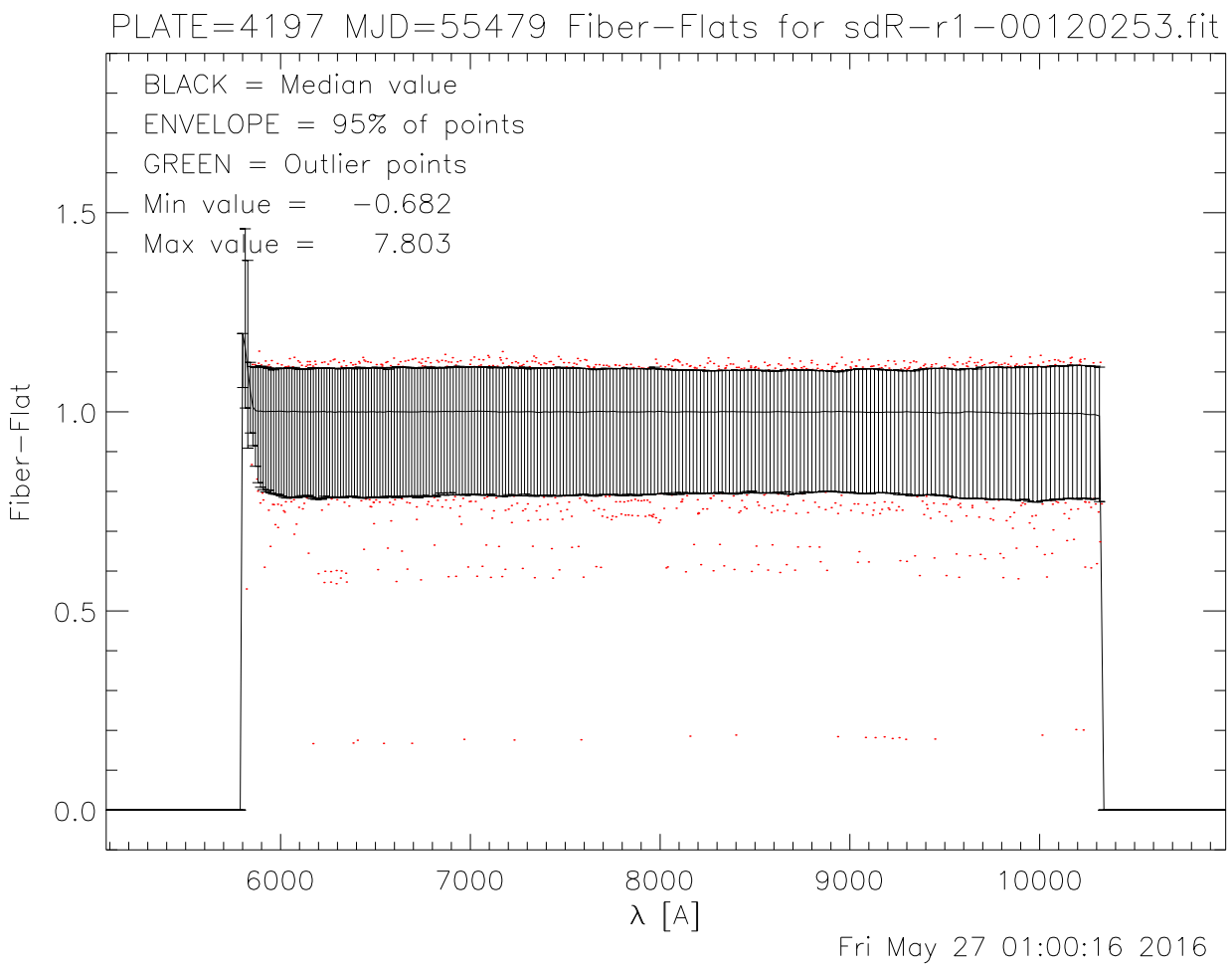

PLATE=4197 MJD=55479 sdR-r1-00120255.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
-100
-200
-300
8820
8840
8860
8880
8900
λ [A]

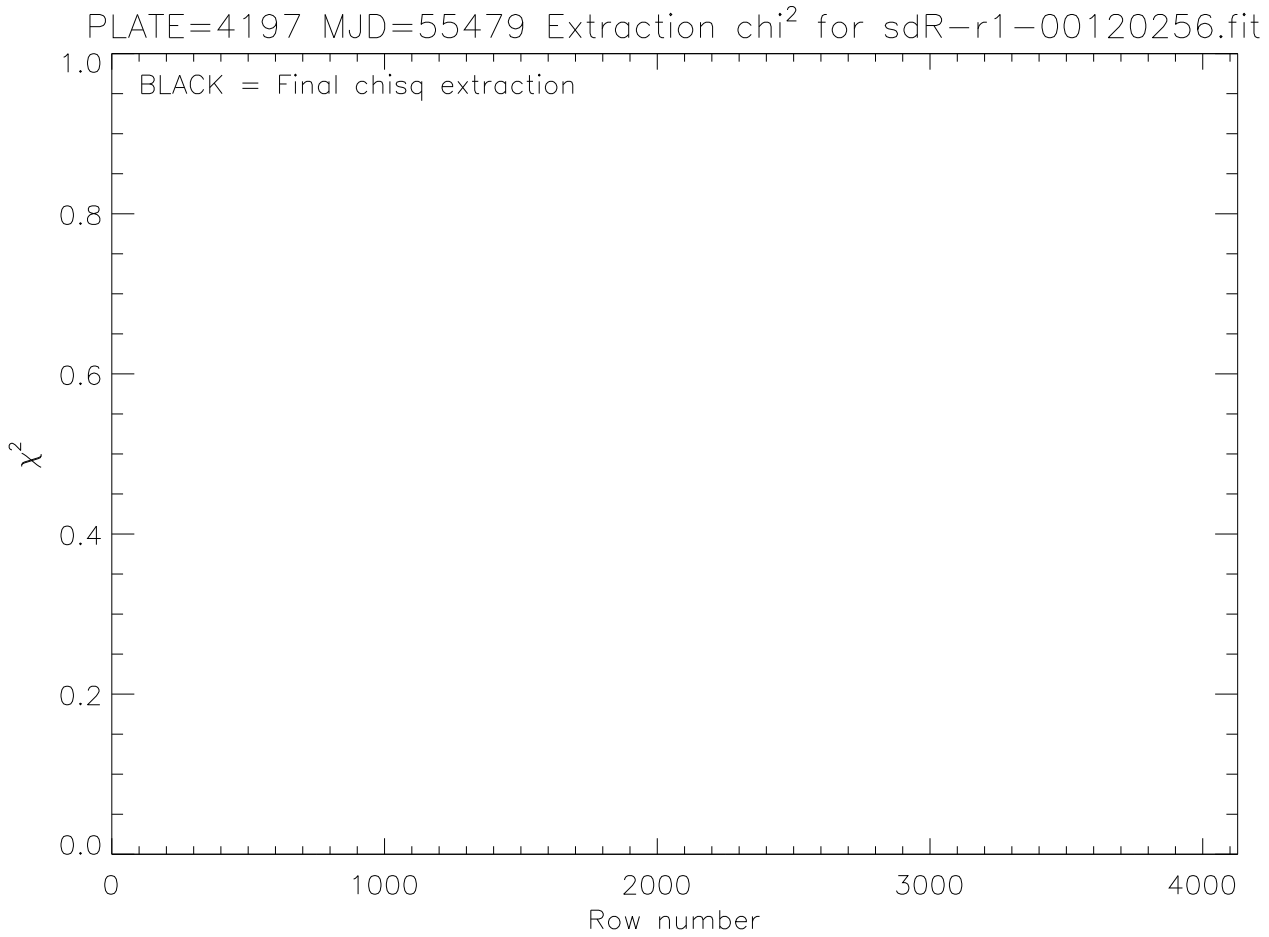
Number of sky fibers = 40

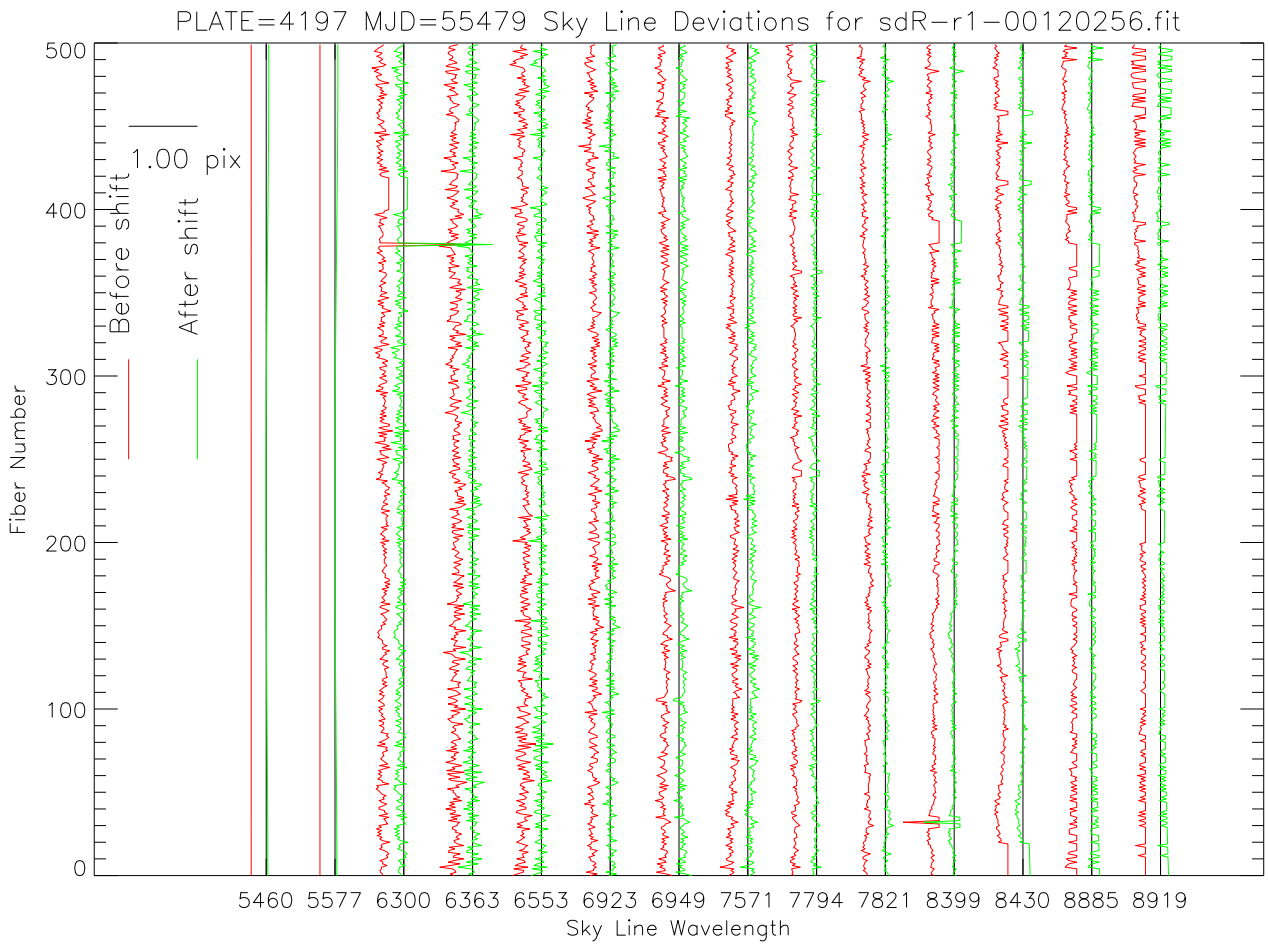


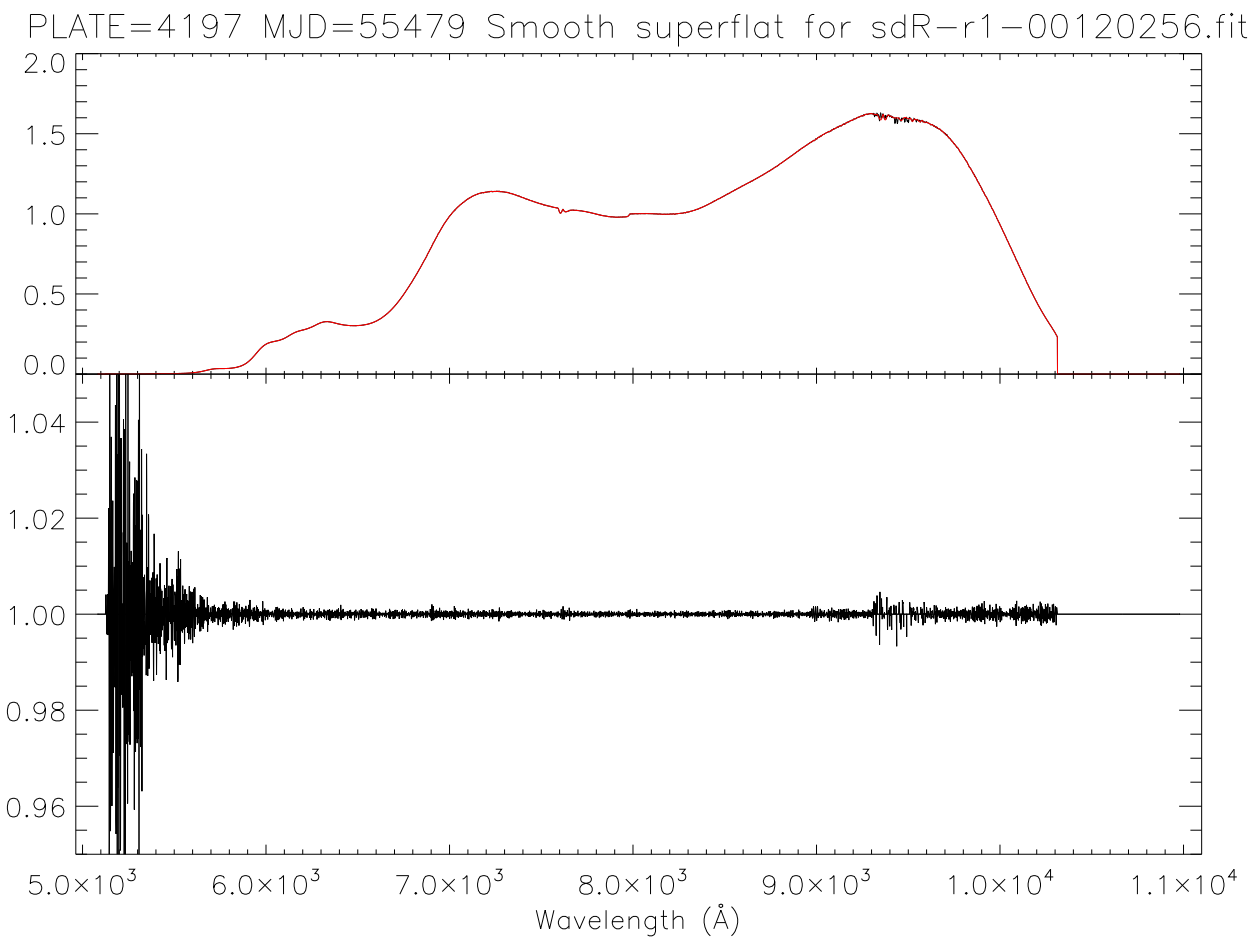

PLATE=4197 MJD=55479 sdR-r1-00120255.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 2.66 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

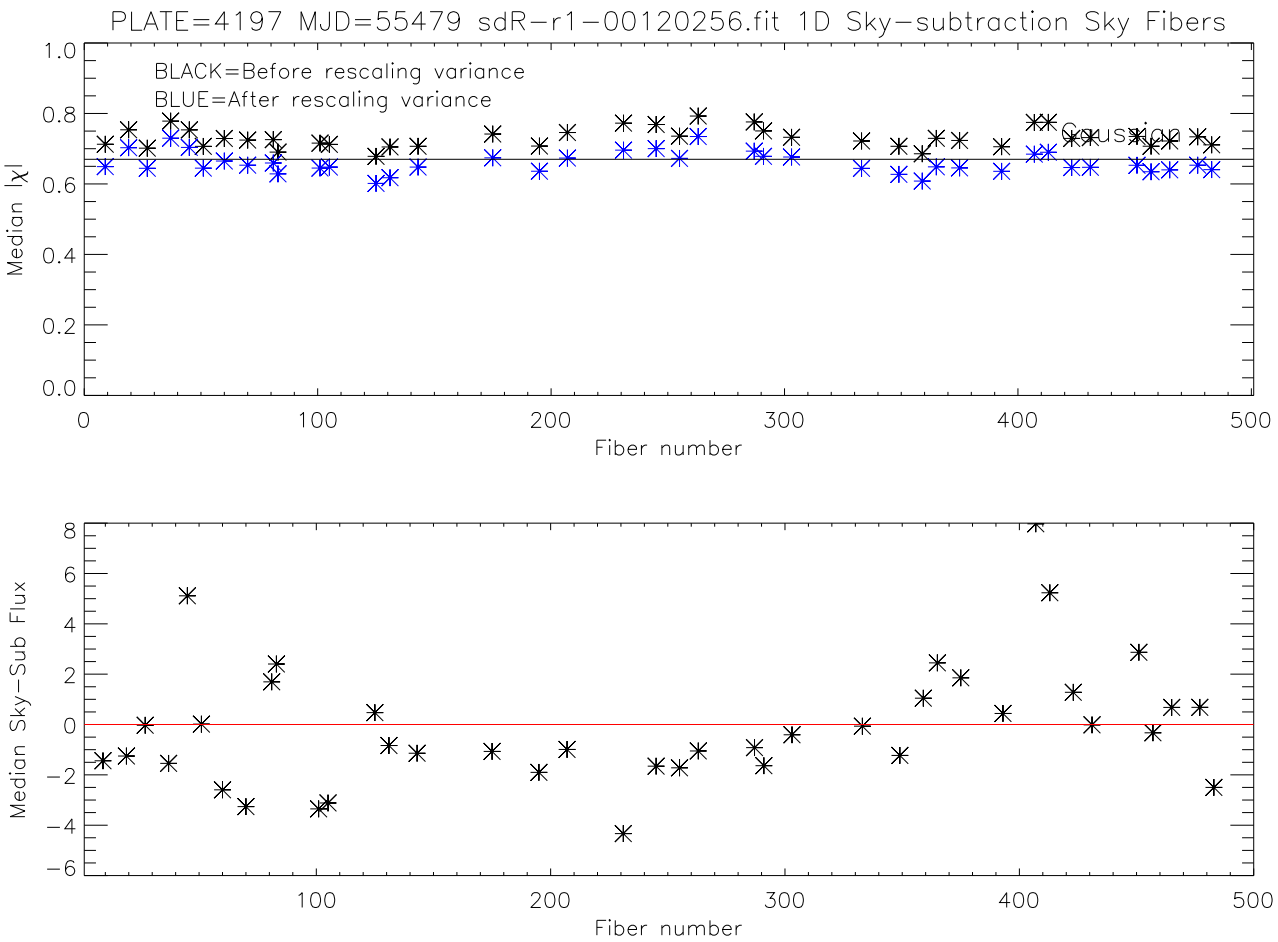

PLATE=4197 MJD=55479 sdR-r1-00120255.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
Fiber number
RED = sky fiber
Dispersion = 1.54 %
Flux (8888.3)/Airmass
Focal Distance [mm]
Flux (8888.3)/Airmass
Airmass


PLATE=4197 MJD=55479 Fiber−Flats for sdR−r1−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −0.682
Max value = 7.803
Fiber−Flat
1.5
1.0
0.5
0.0
6000
7000
8000
9000
10000
λ [A]
Fri May 27 01:00:16 2016

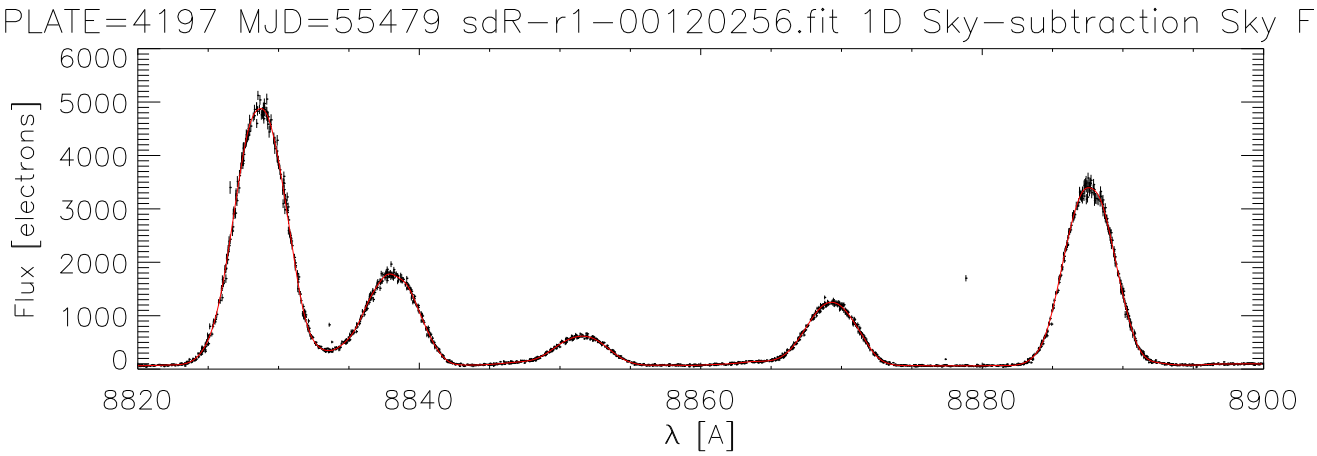

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r1−00120256.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number

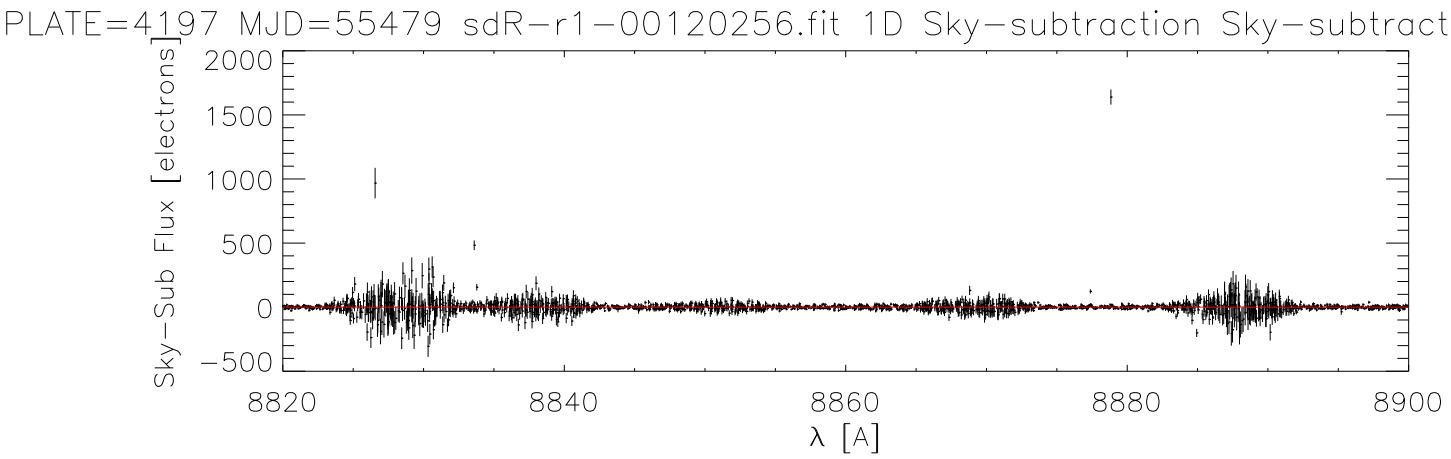

PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r1-00120256.fit
Before shift
After shift
1.00 pix
Fiber Number
0
100
200
300
400
500
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength


PLATE=4197 MJD=55479 Smooth superflat for sdR-r1-00120256.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
5.0×10^3
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

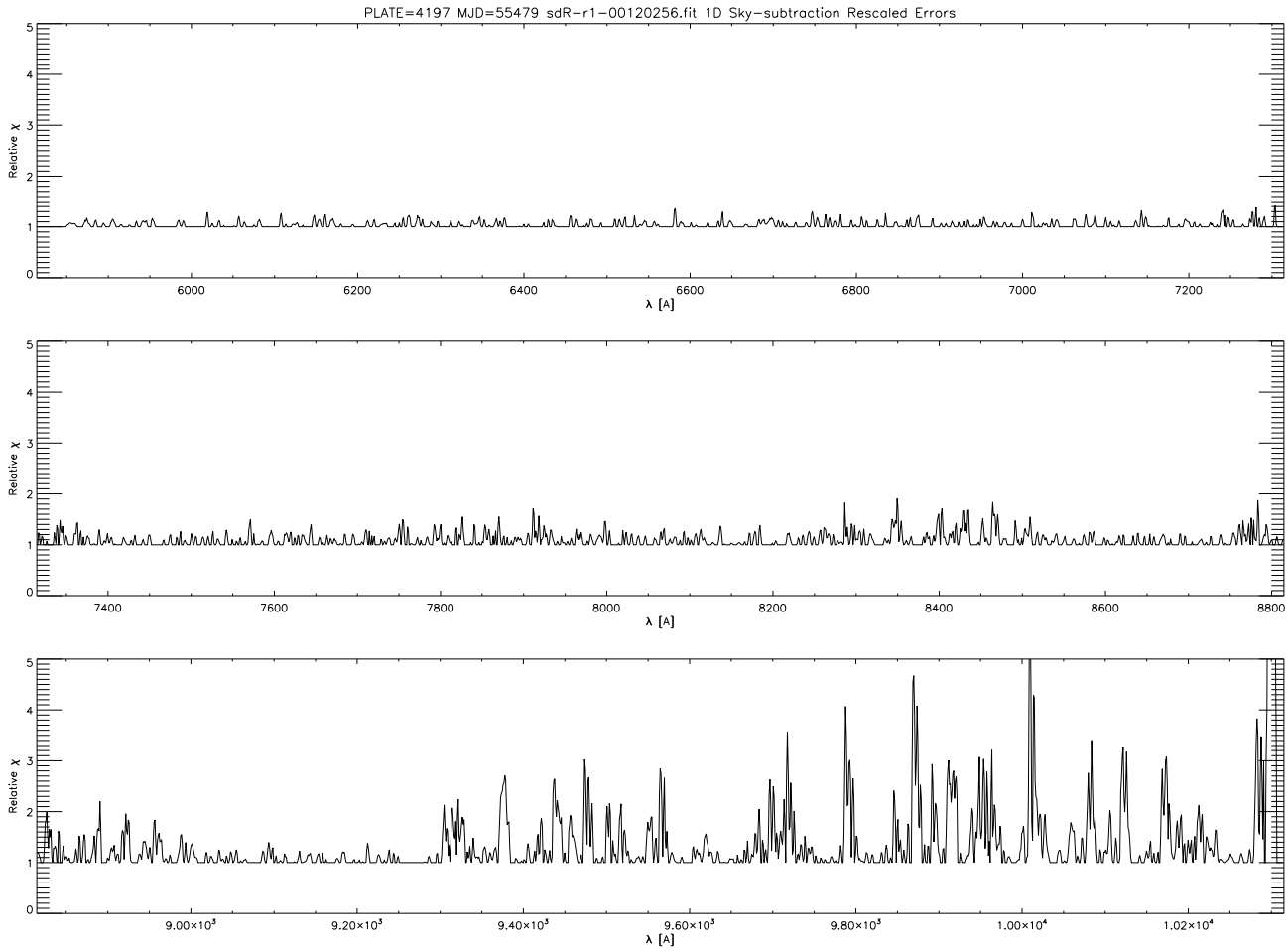

PLATE=4197 MJD=55479 sdR-r1-00120256.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Median |χ|
Fiber number

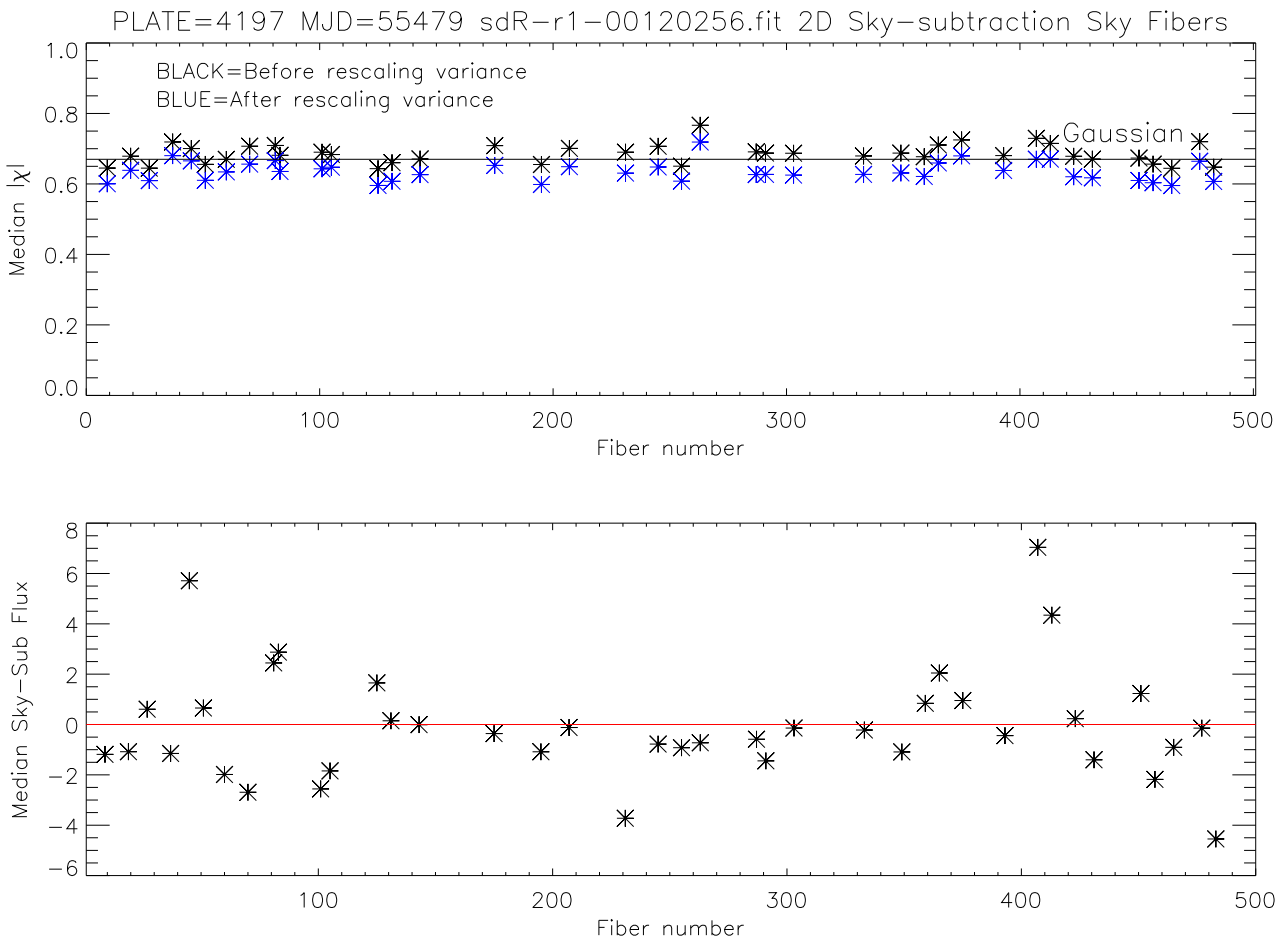
Median Sky-Sub Flux
Fiber number

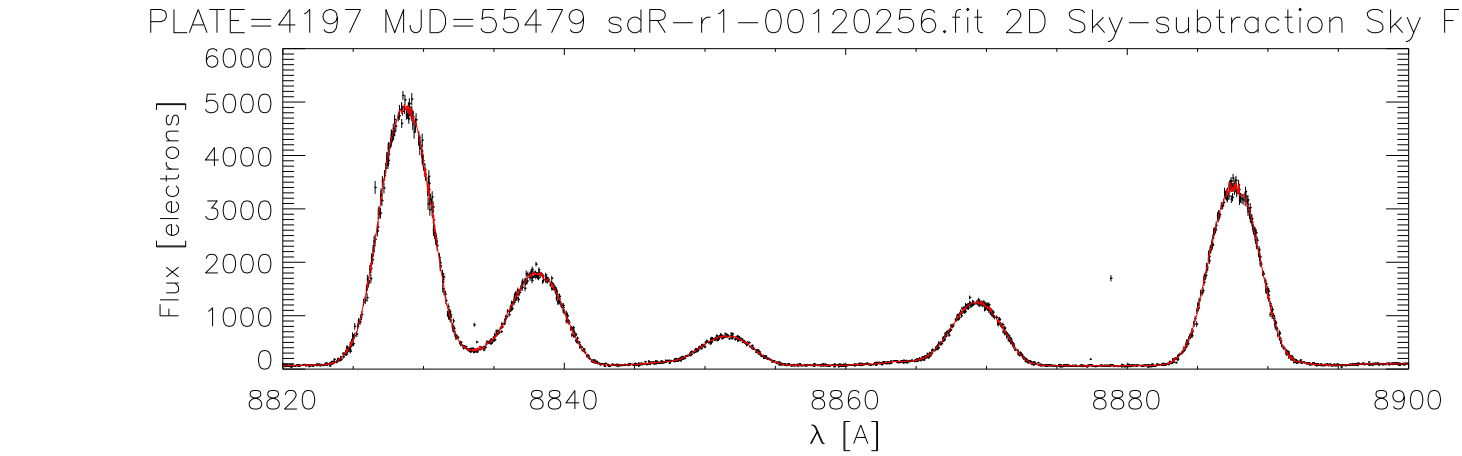

PLATE=4197 MJD=55479 sdR-r1-00120256.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
6000
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

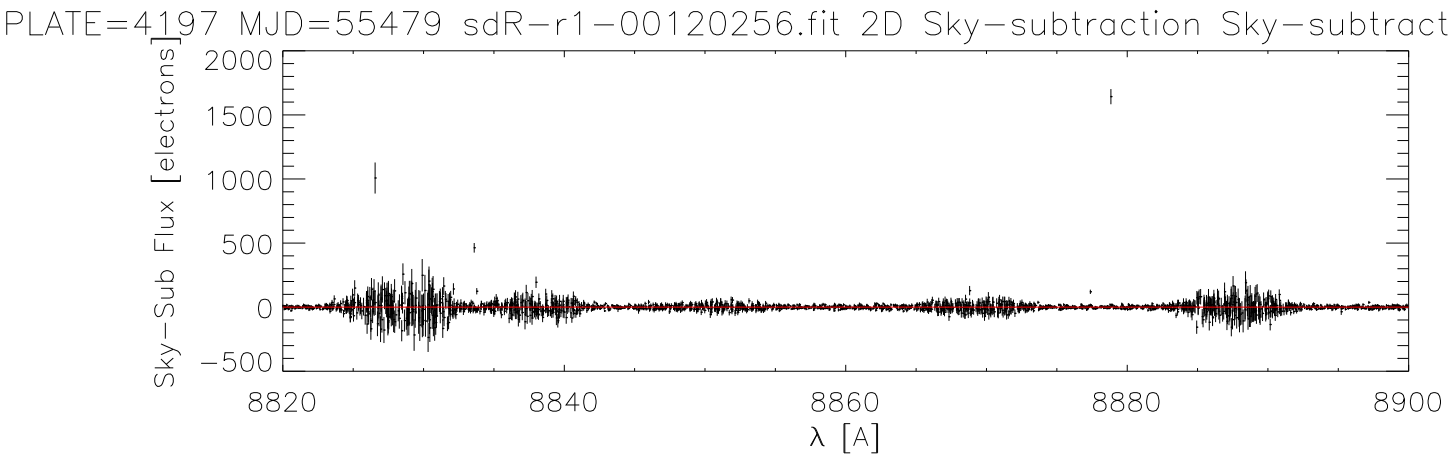

PLATE=4197 MJD=55479 sdR-r1-00120256.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
2000
1500
1000
500
0
-500
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 40

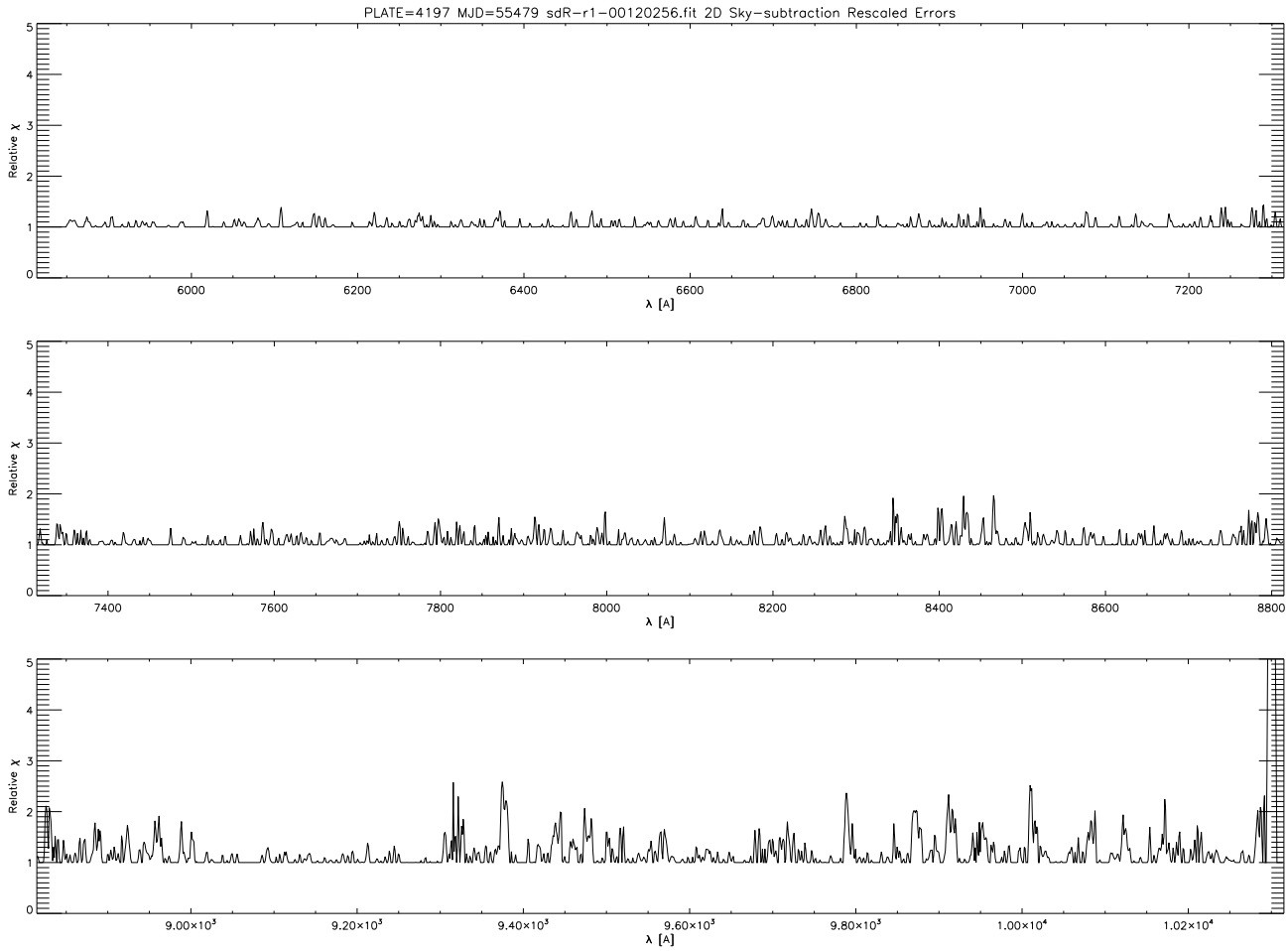


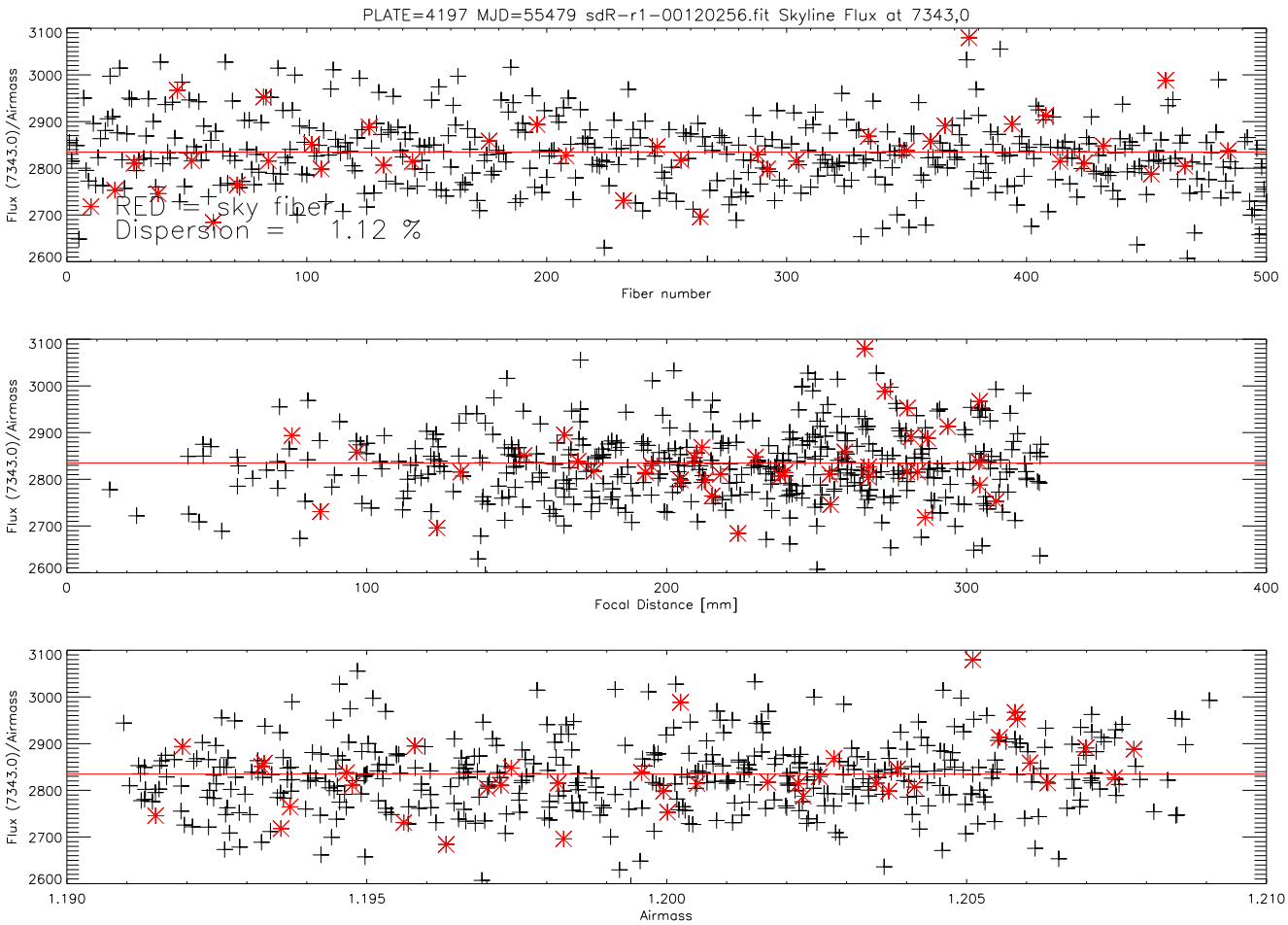

PLATE=4197 MJD=55479 sdR-r1-00120256.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

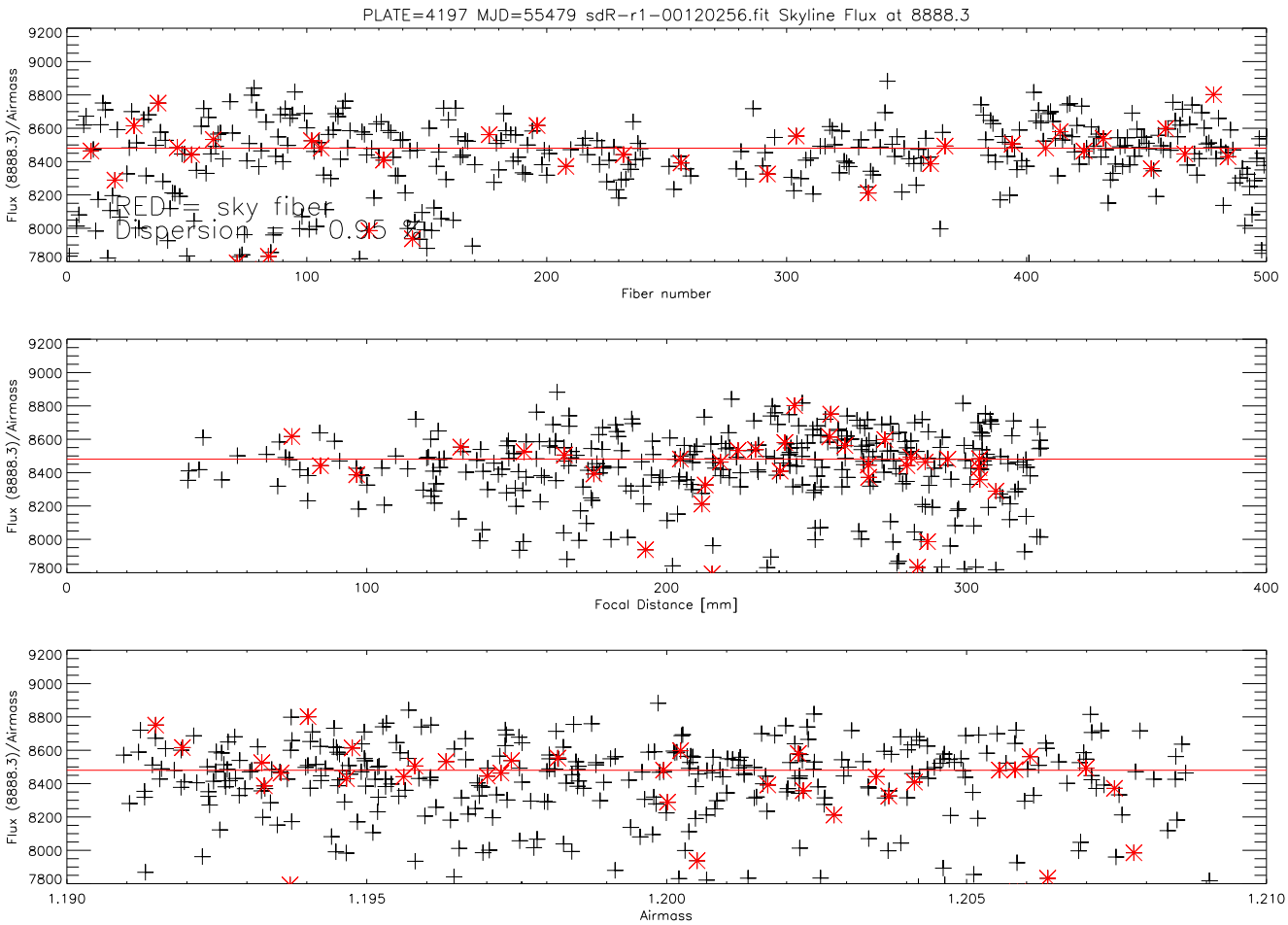

PLATE=4197 MJD=55479 sdR-r1-00120256.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
6000
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

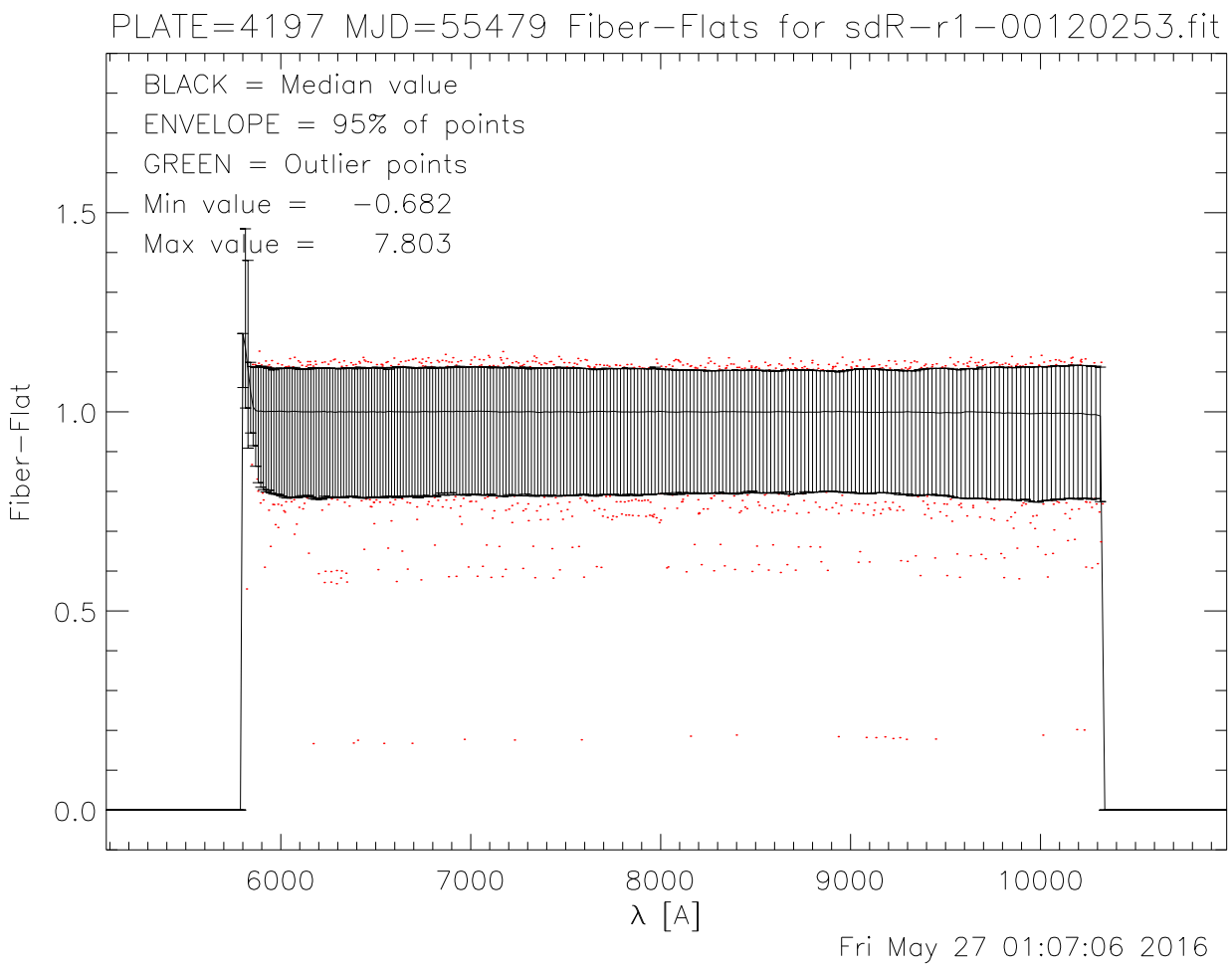

PLATE=4197 MJD=55479 sdR-r1-00120256.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
2000
1500
1000
500
0
-500
8820
8840
8860
8880
8900
λ [A]

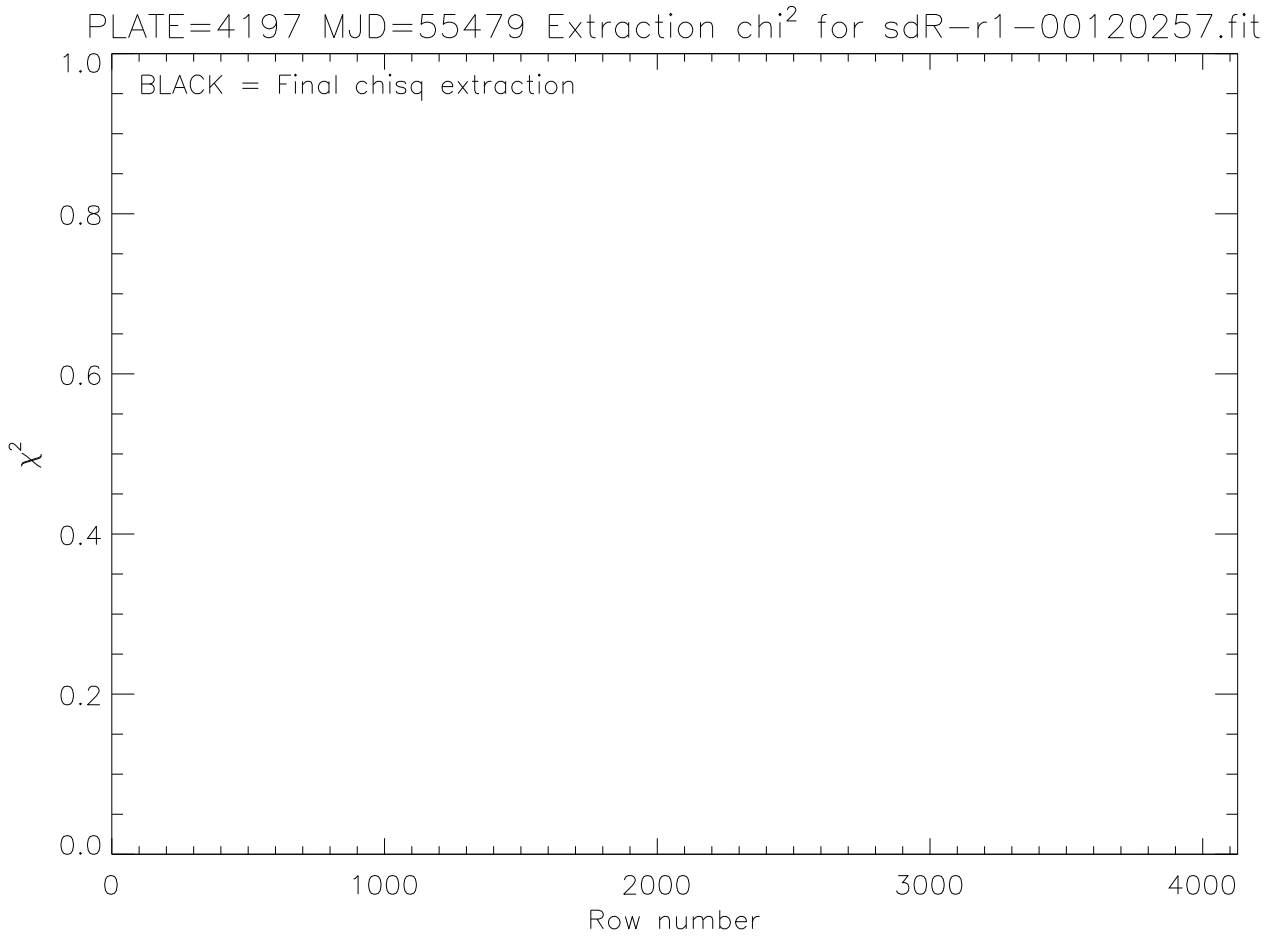
Number of sky fibers = 40

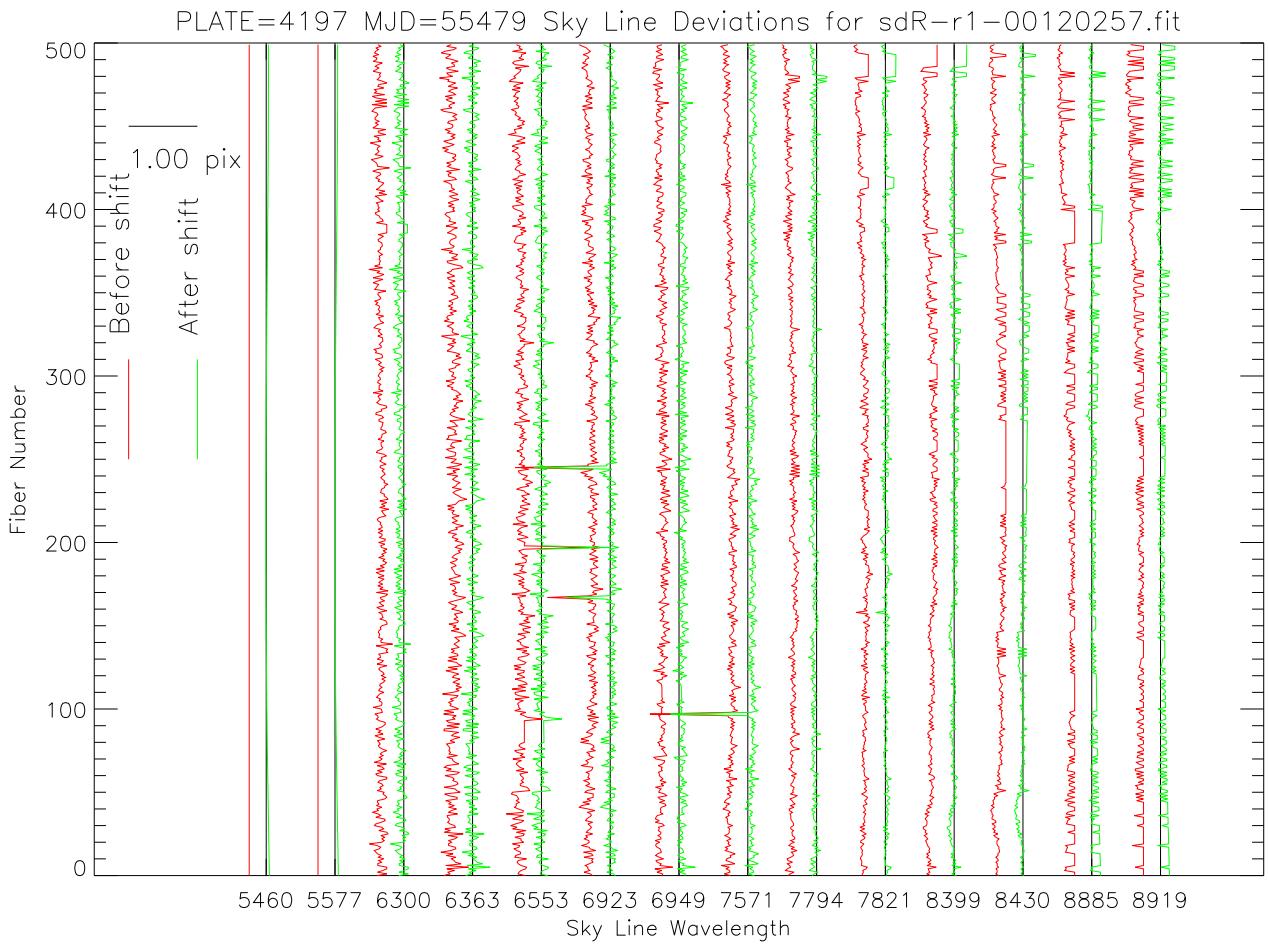


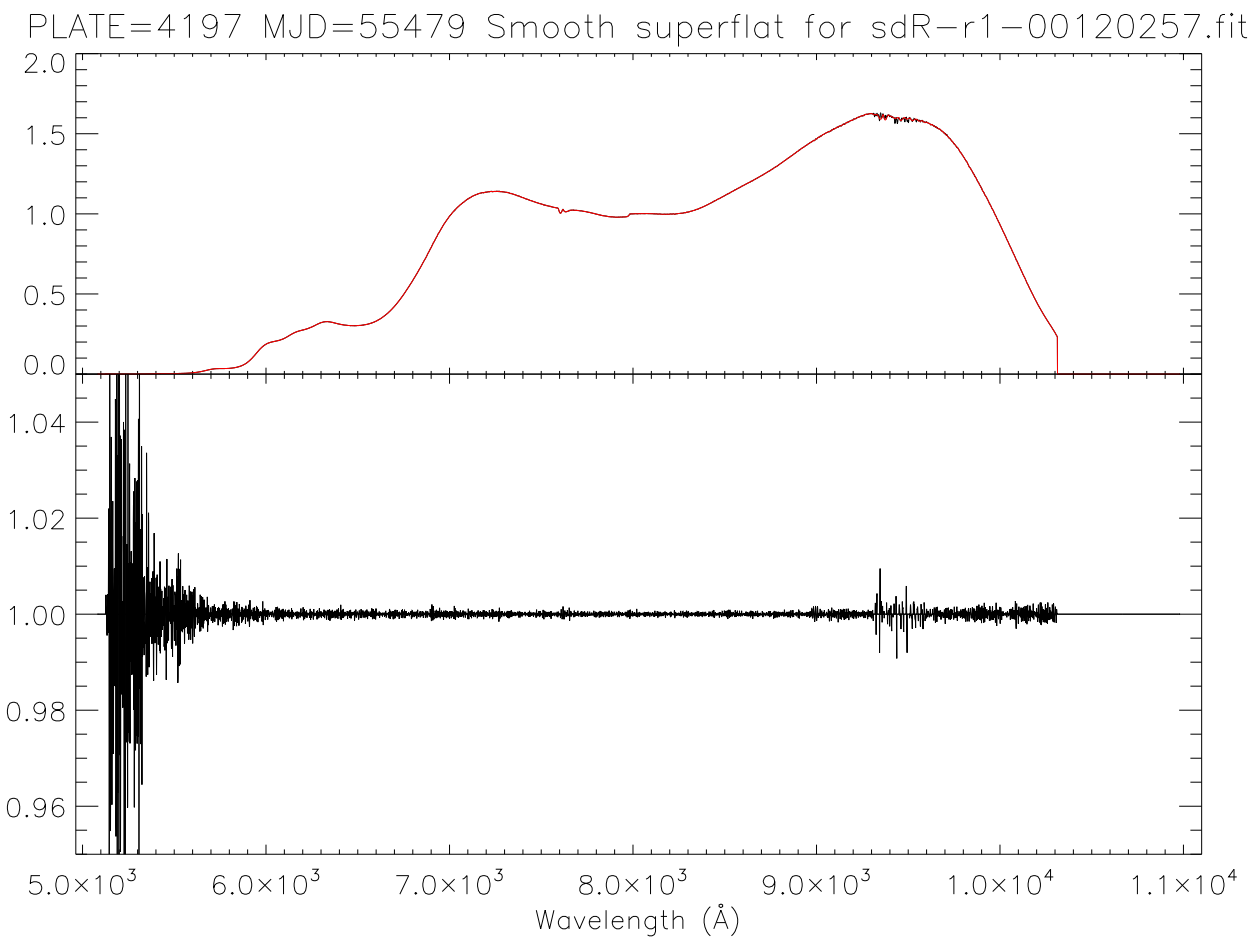

PLATE=4197 MJD=55479 sdR-r1-00120256.fit Skyline Flux at 7343,0
RED = sky fiber
Dispersion = 1.12 %
Flux (7343.0)/Airmass
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

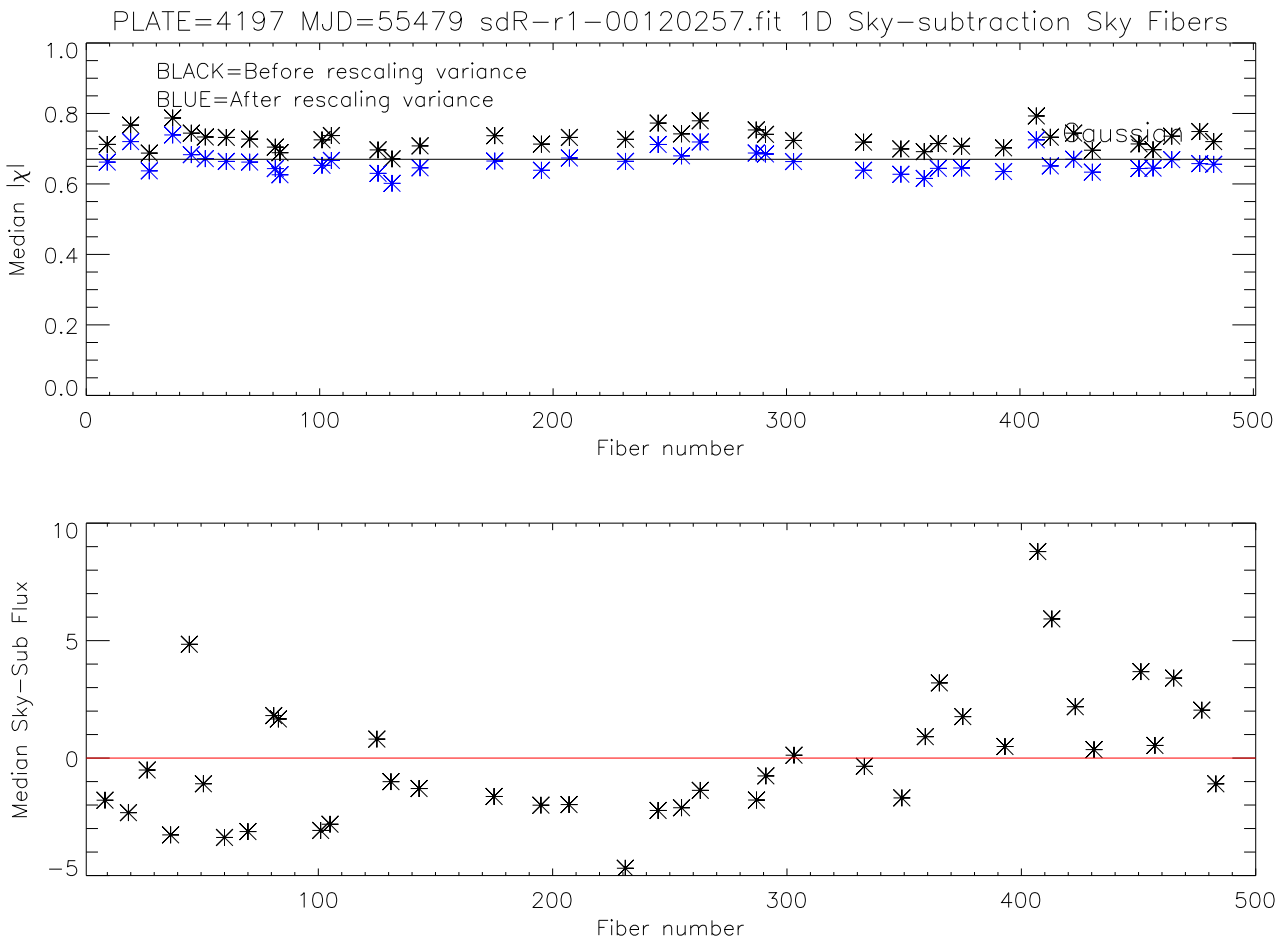

PLATE=4197 MJD=55479 sdR-r1-00120256.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
Fiber number
RED= sky fiber
Dispersion = +0.95 Å
Flux (8888.3)/Airmass
Focal Distance [mm]
Flux (8888.3)/Airmass
Airmass

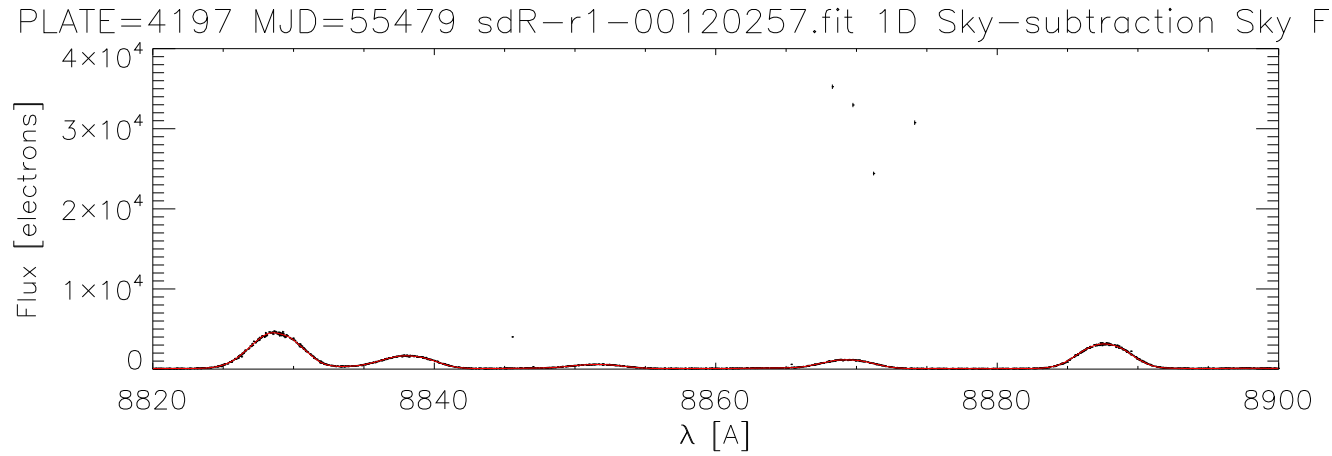

PLATE=4197 MJD=55479 Fiber−Flats for sdR−r1−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −0.682
Max value = 7.803
Fiber−Flat
1.5
1.0
0.5
0.0
6000
7000
8000
9000
10000
λ [A]
Fri May 27 01:07:06 2016

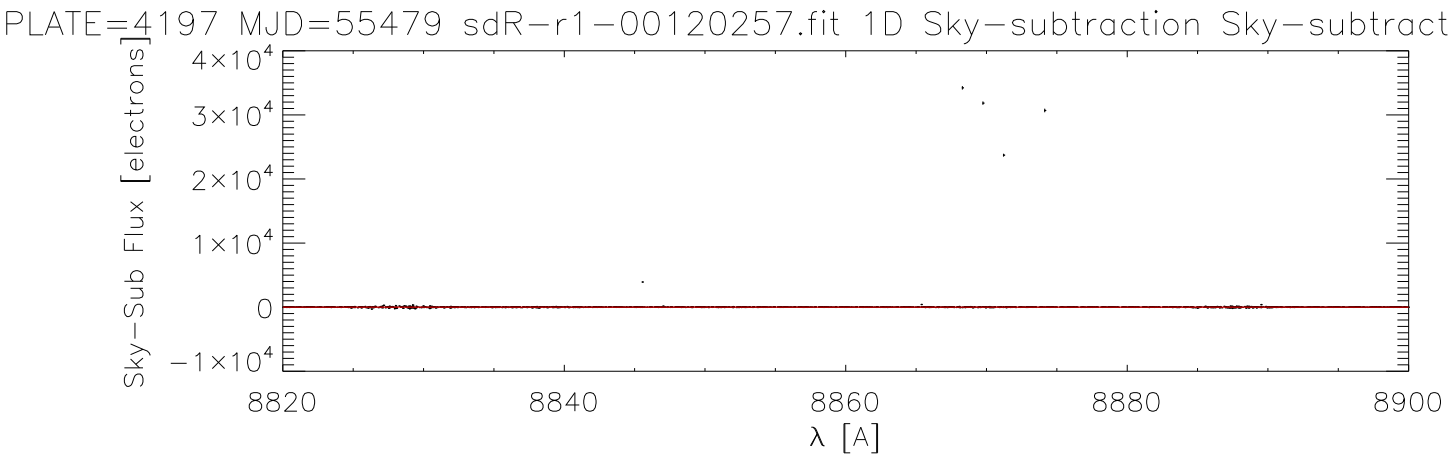

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r1−00120257.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r1-00120257.fit
Before shift
After shift
1.00 pix
Fiber Number
0
100
200
300
400
500
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength

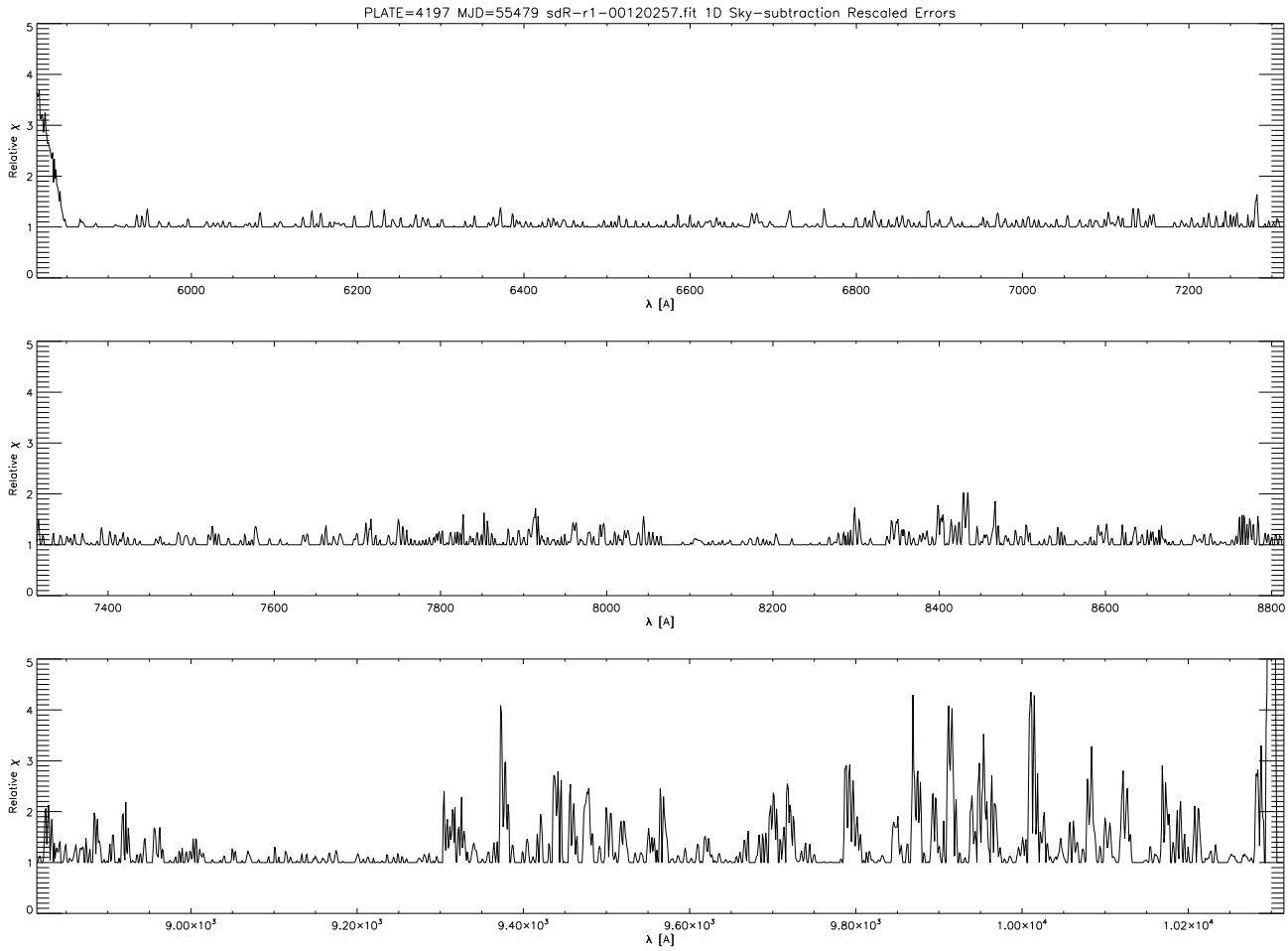

PLATE=4197 MJD=55479 Smooth superflat for sdR-r1-00120257.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
5.0×10^3
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

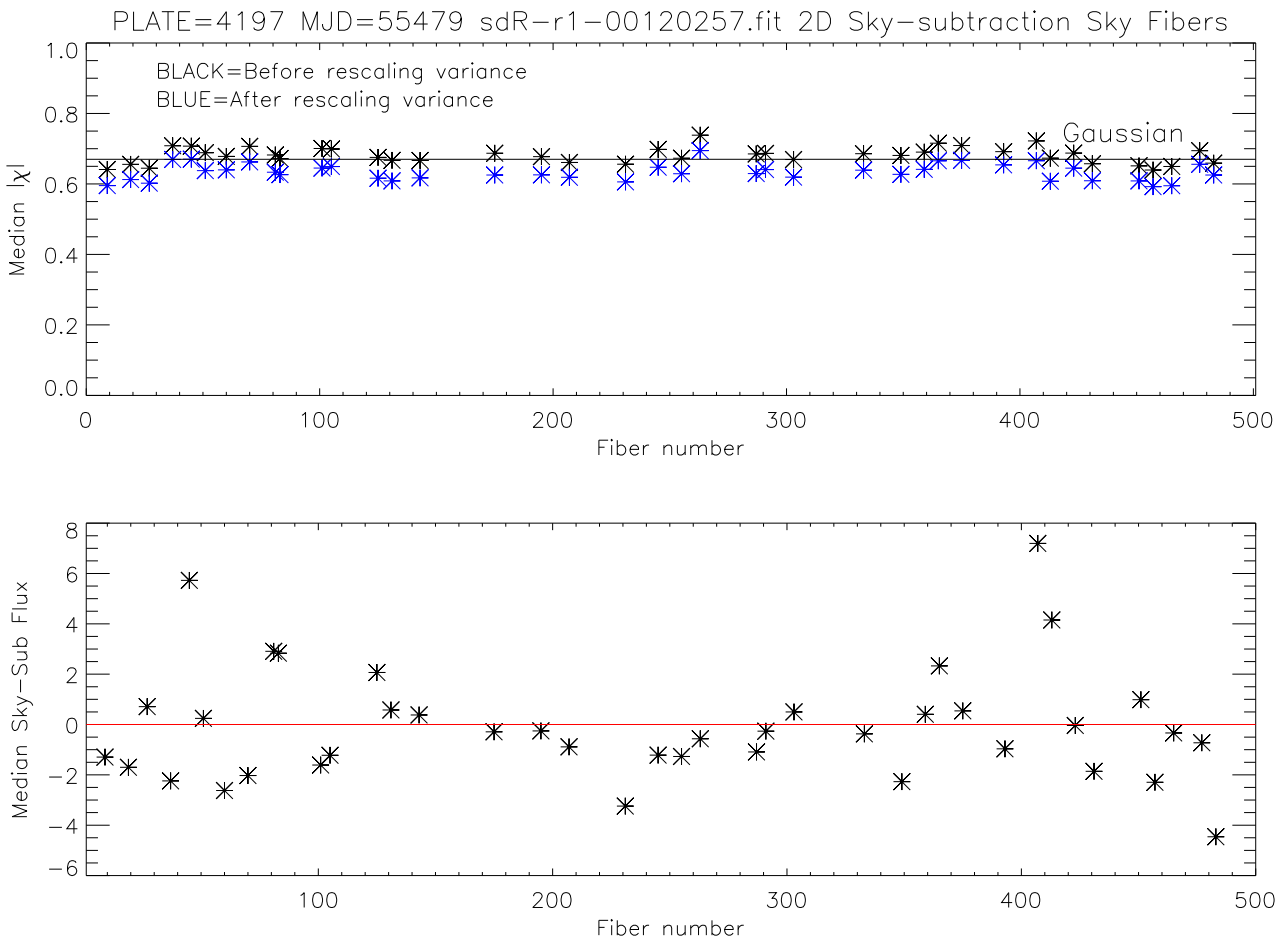

PLATE=4197 MJD=55479 sdR-r1-00120257.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

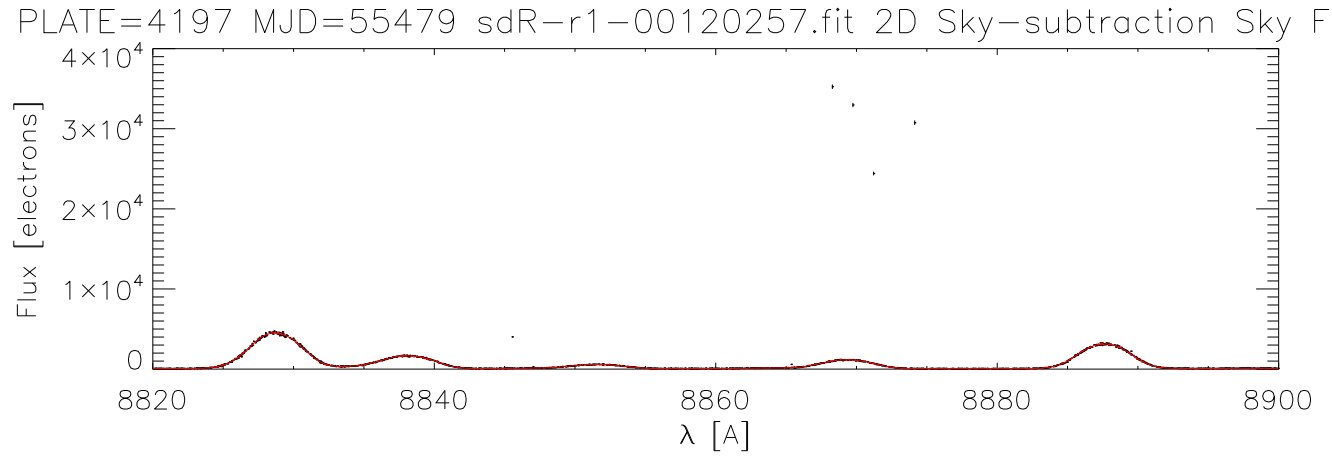

PLATE=4197 MJD=55479 sdR-r1-00120257.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
4×10^4
3×10^4
2×10^4
1×10^4
0
8820
8840
8860
8880
8900
λ [A]

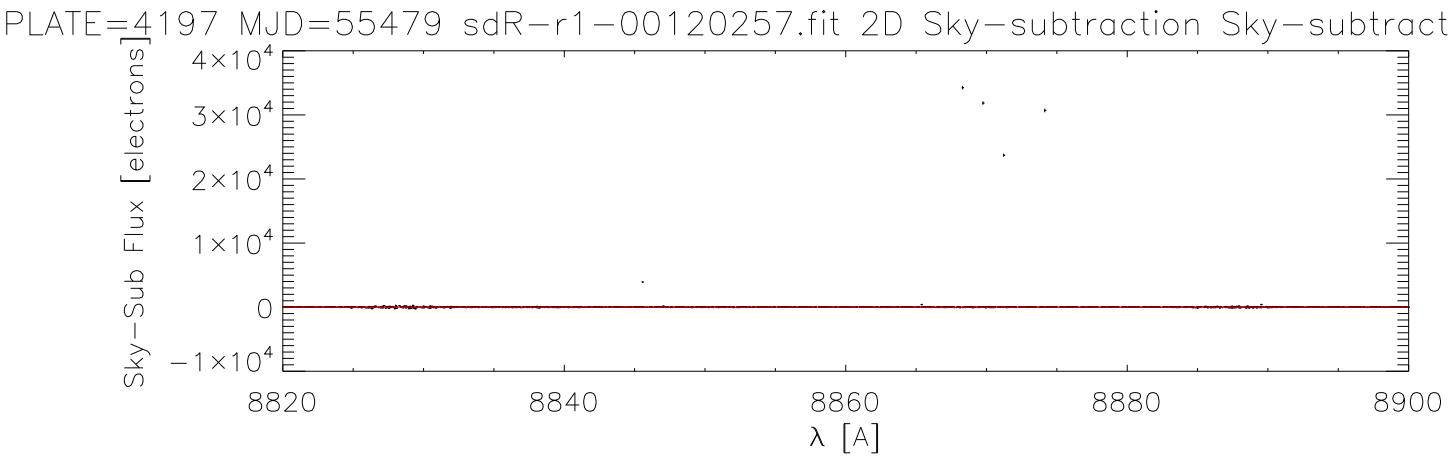

PLATE=4197 MJD=55479 sdR-r1-00120257.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
4×10^4
3×10^4
2×10^4
1×10^4
0
-1×10^4
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 40

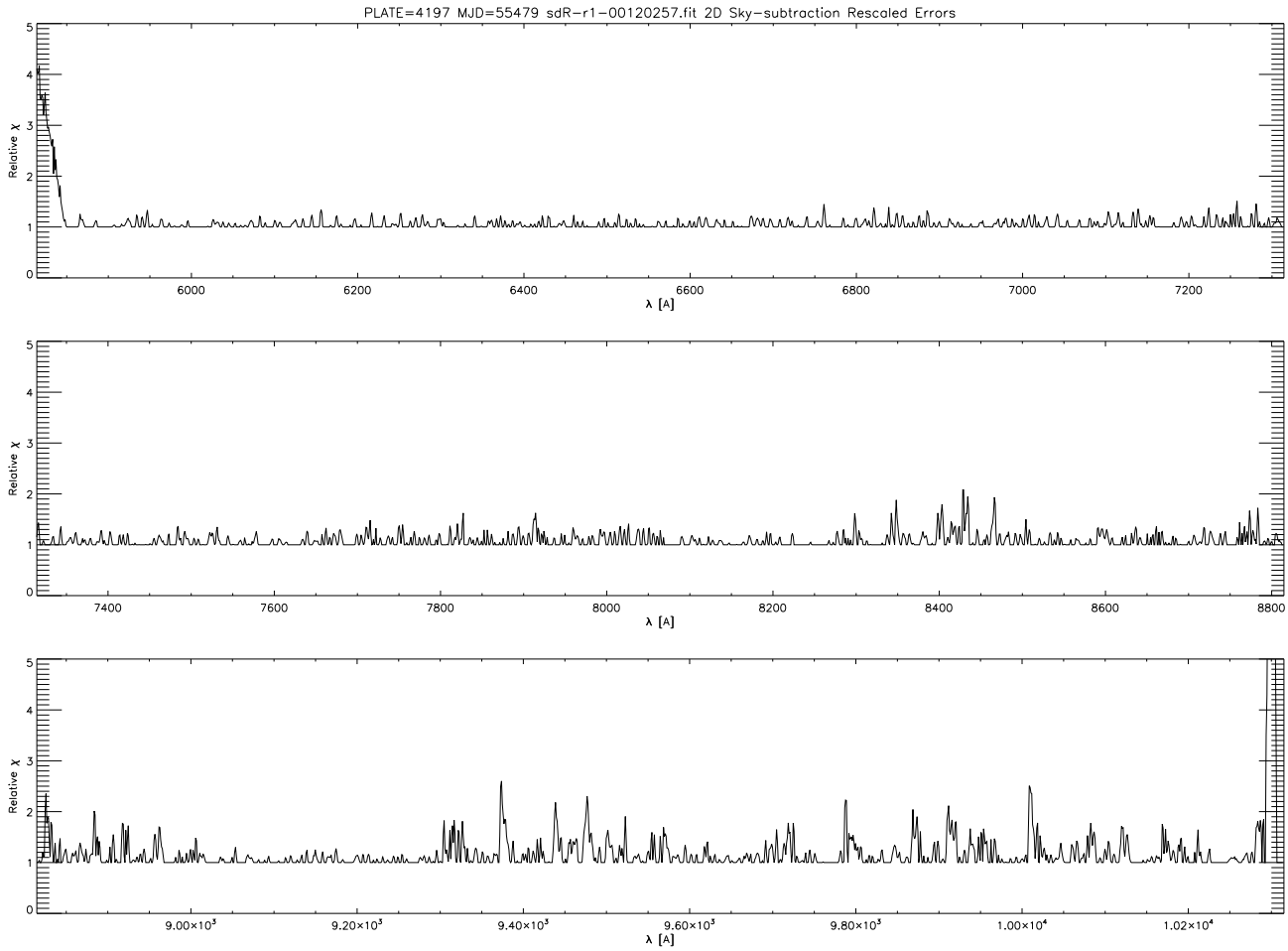


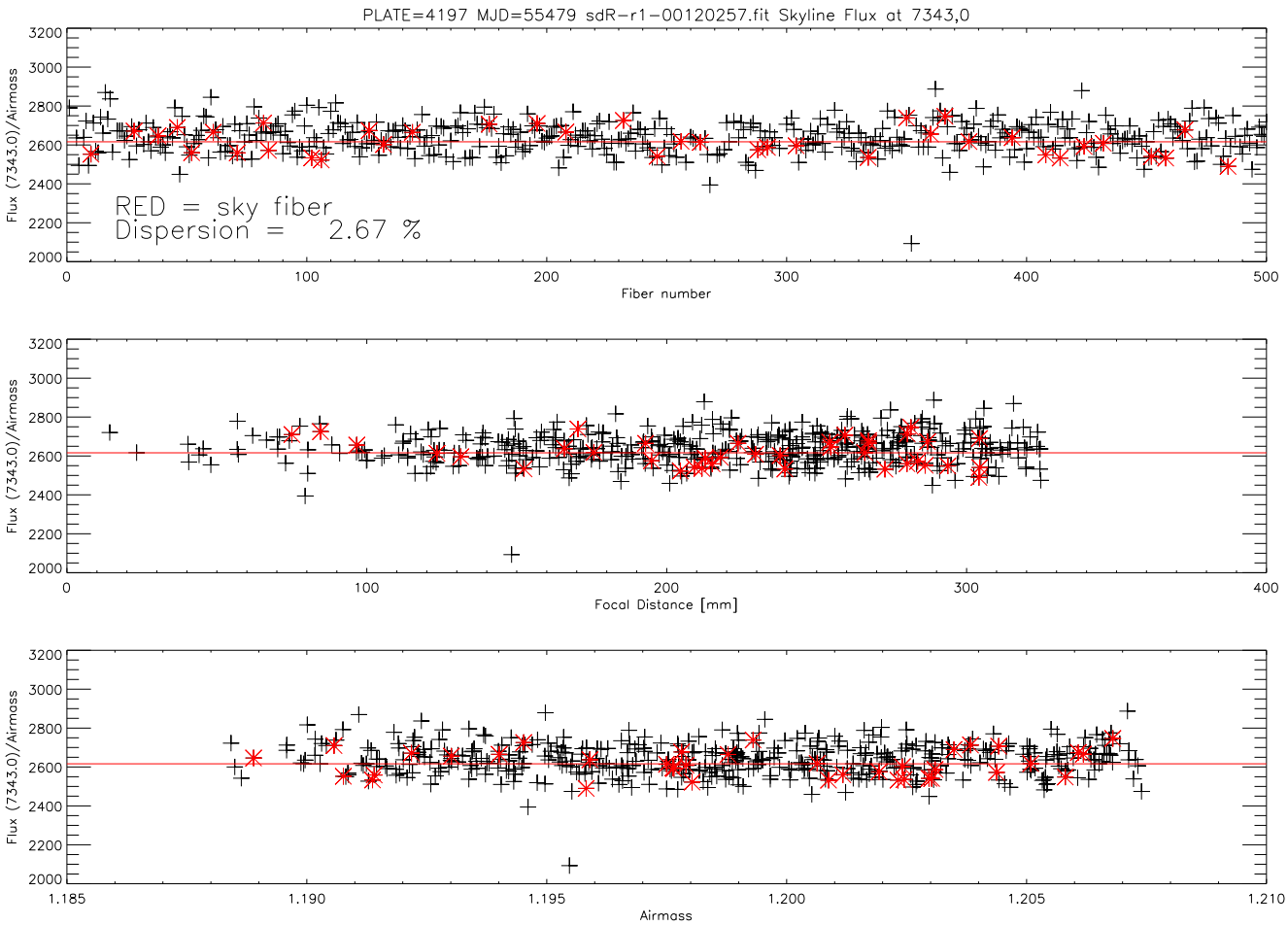

PLATE=4197 MJD=55479 sdR-r1-00120257.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

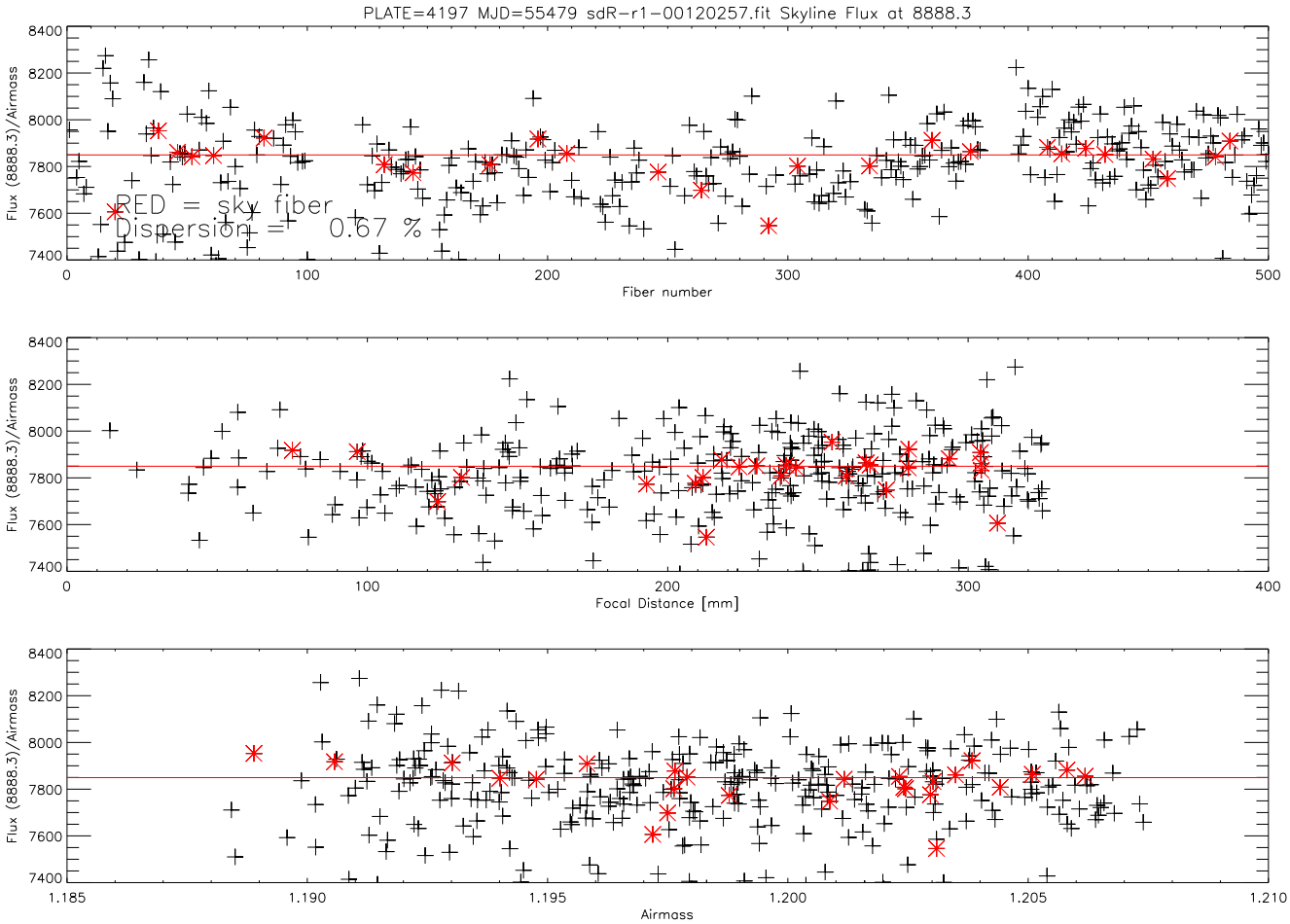

PLATE=4197 MJD=55479 sdR-r1-00120257.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
4×10^4
3×10^4
2×10^4
1×10^4
0
8820
8840
8860
8880
8900
λ [A]

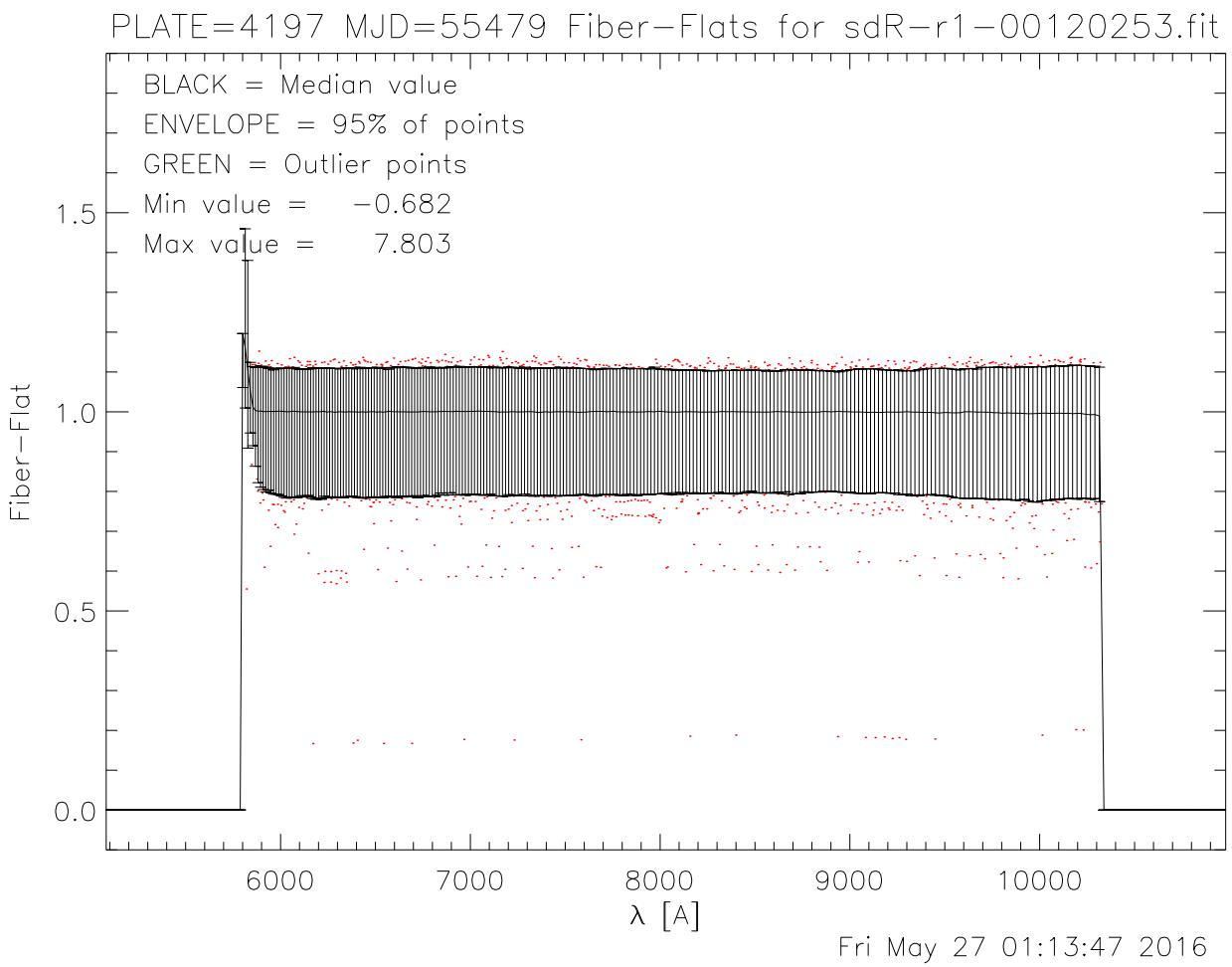

PLATE=4197 MJD=55479 sdR-r1-00120257.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
4×10^4
3×10^4
2×10^4
1×10^4
0
-1×10^4
8820
8840
8860
8880
8900
λ [A]

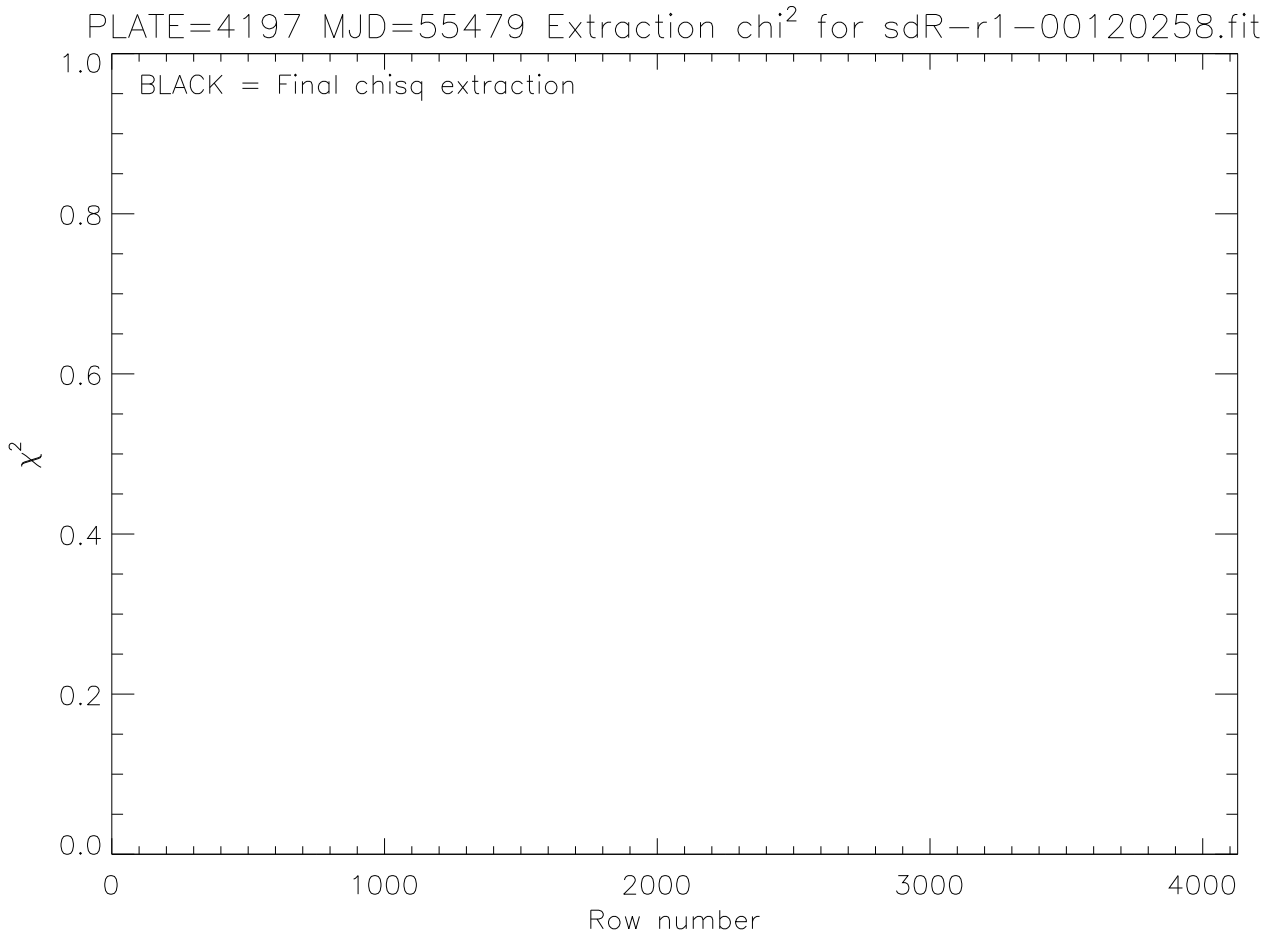
Number of sky fibers = 40

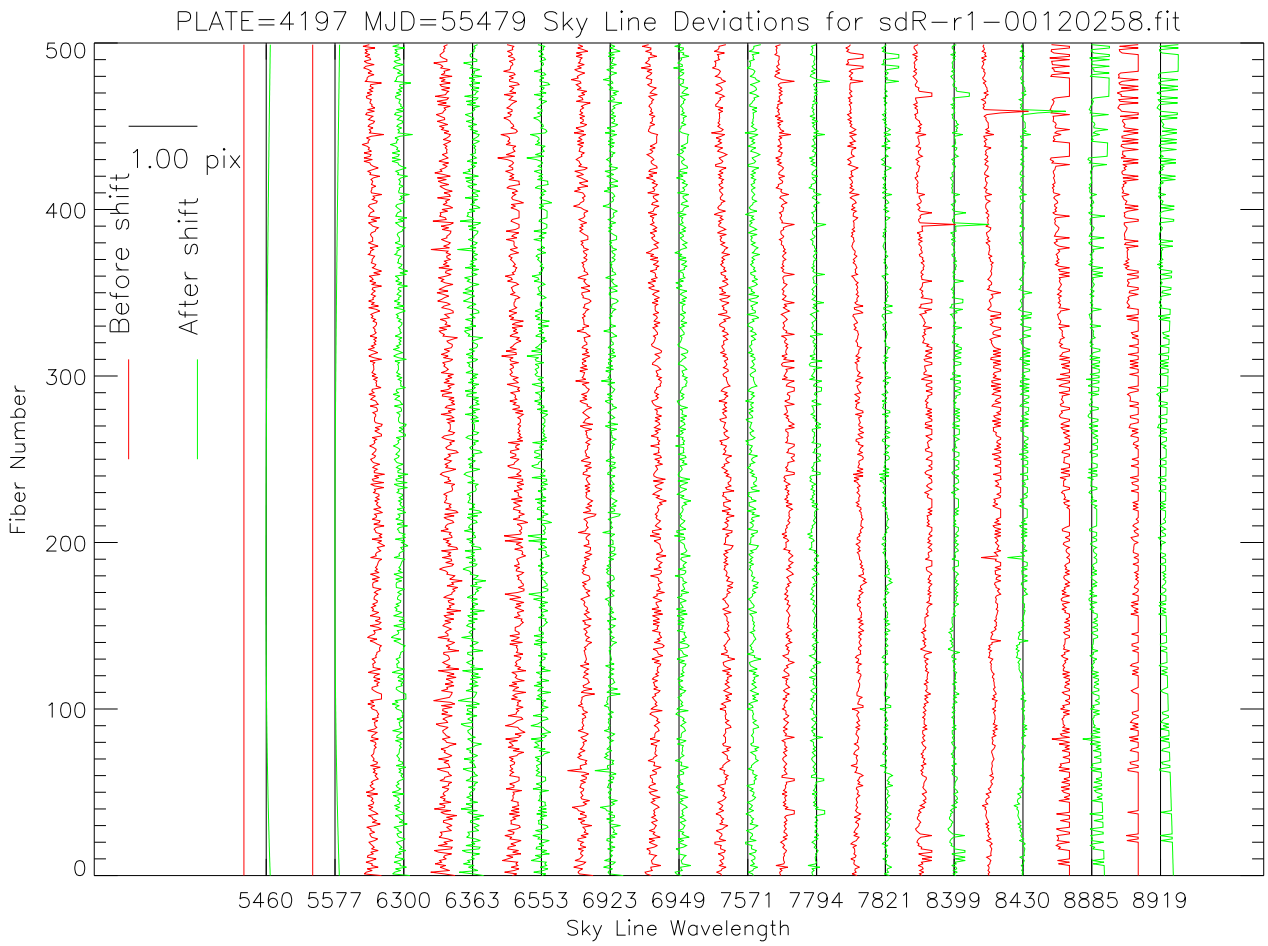


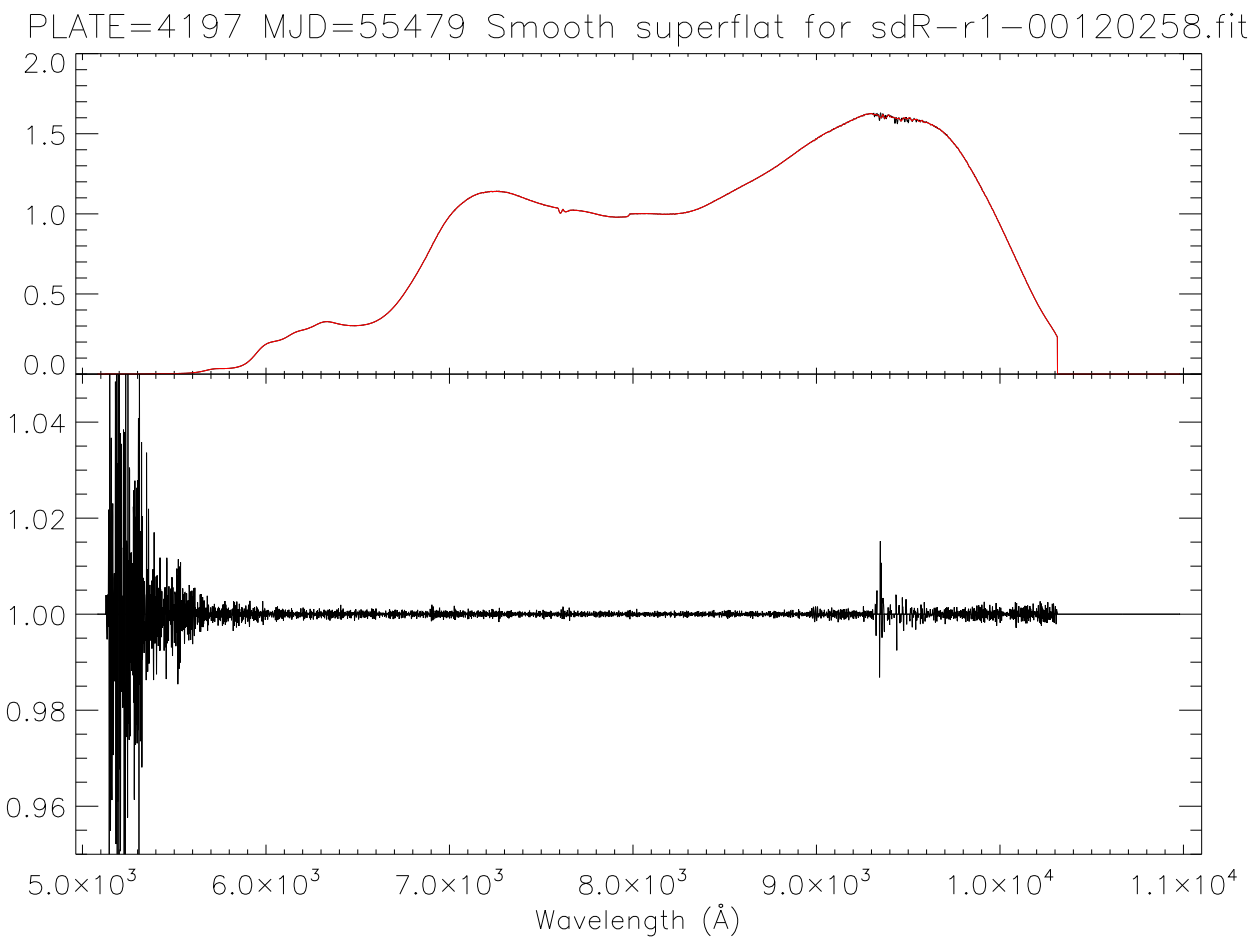

PLATE=4197 MJD=55479 sdR-r1-00120257.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 2.67 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

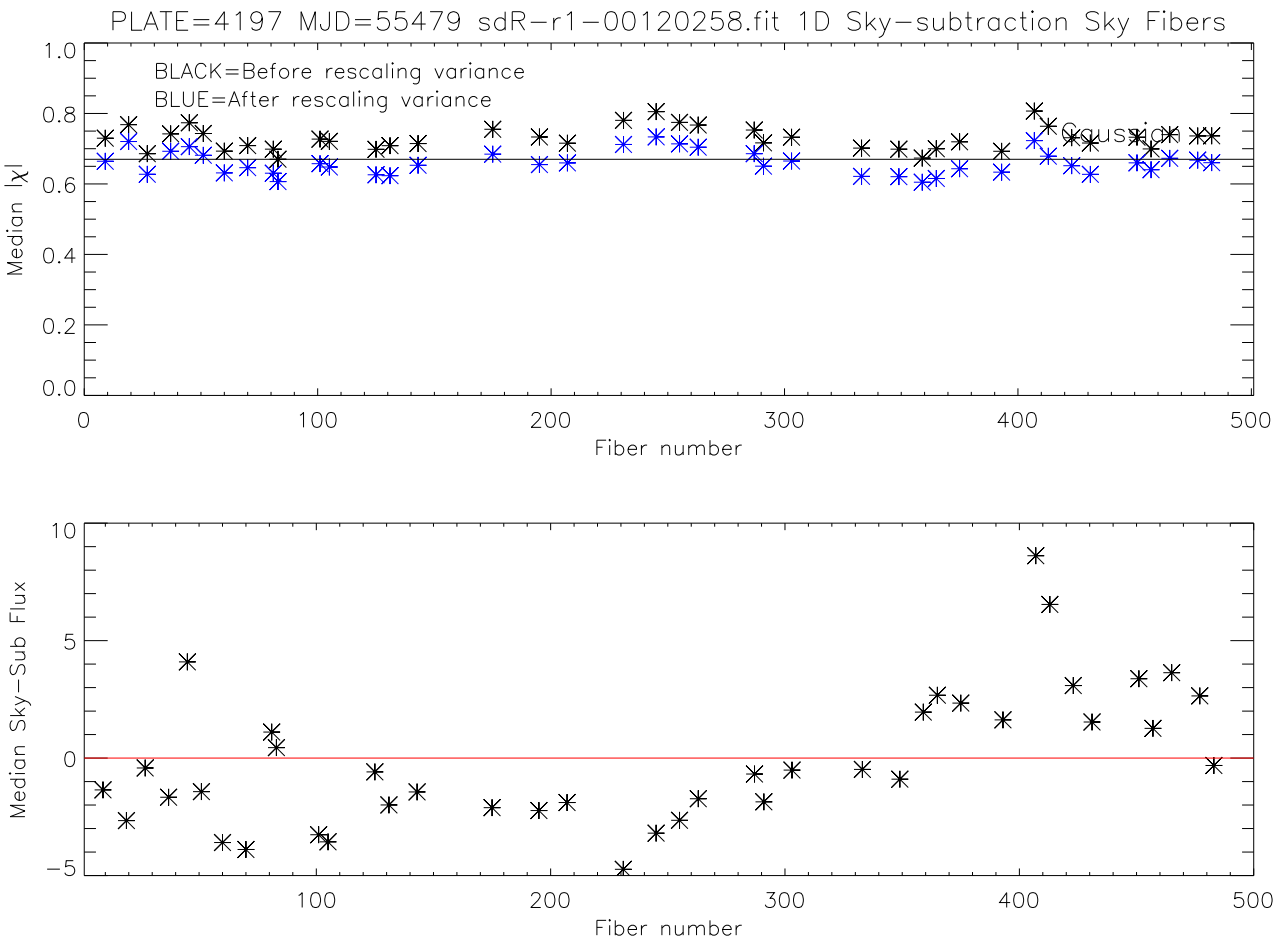

PLATE=4197 MJD=55479 sdR-r1-00120257.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
Fiber number
RED = sky fiber
Dispersion = 0.67 %
Flux (8888.3)/Airmass
Focal Distance [mm]
Flux (8888.3)/Airmass
Airmass

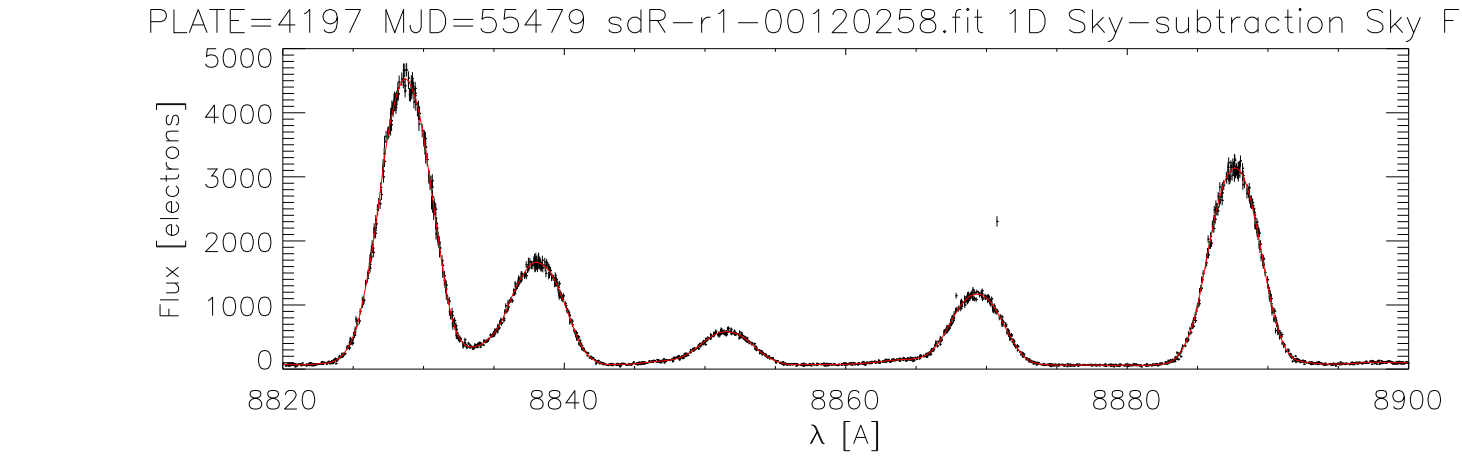

PLATE=4197 MJD=55479 Fiber−Flats for sdR−r1−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −0.682
Max value = 7.803
Fiber−Flat
1.5
1.0
0.5
0.0
6000
7000
8000
9000
10000
λ [A]
Fri May 27 01:13:47 2016

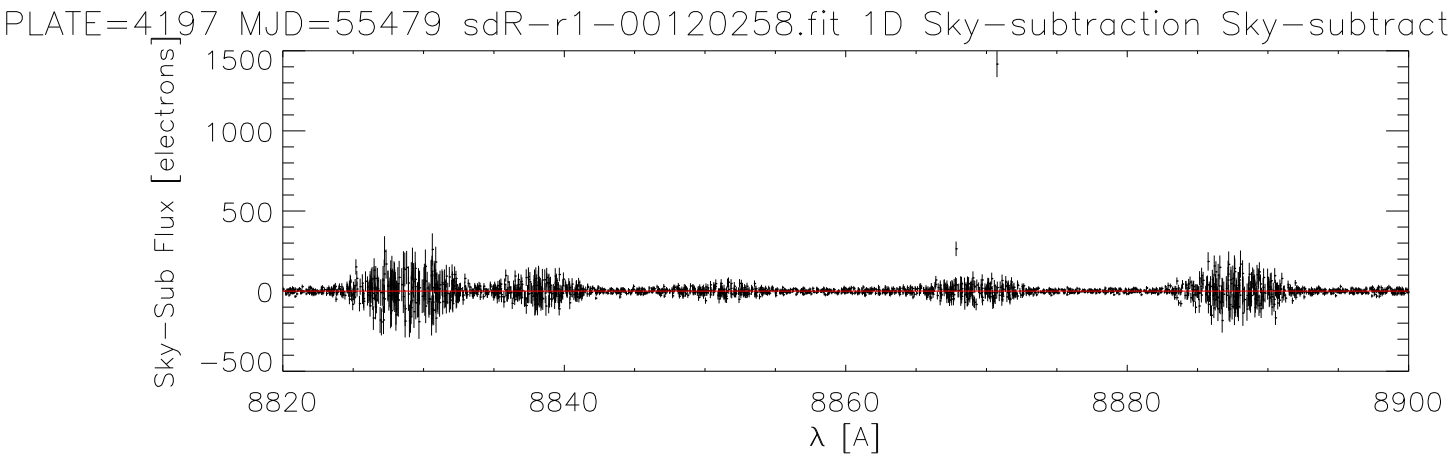

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r1−00120258.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r1-00120258.fit
Before shift
After shift
1.00 pix
Fiber Number
0
100
200
300
400
500
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength

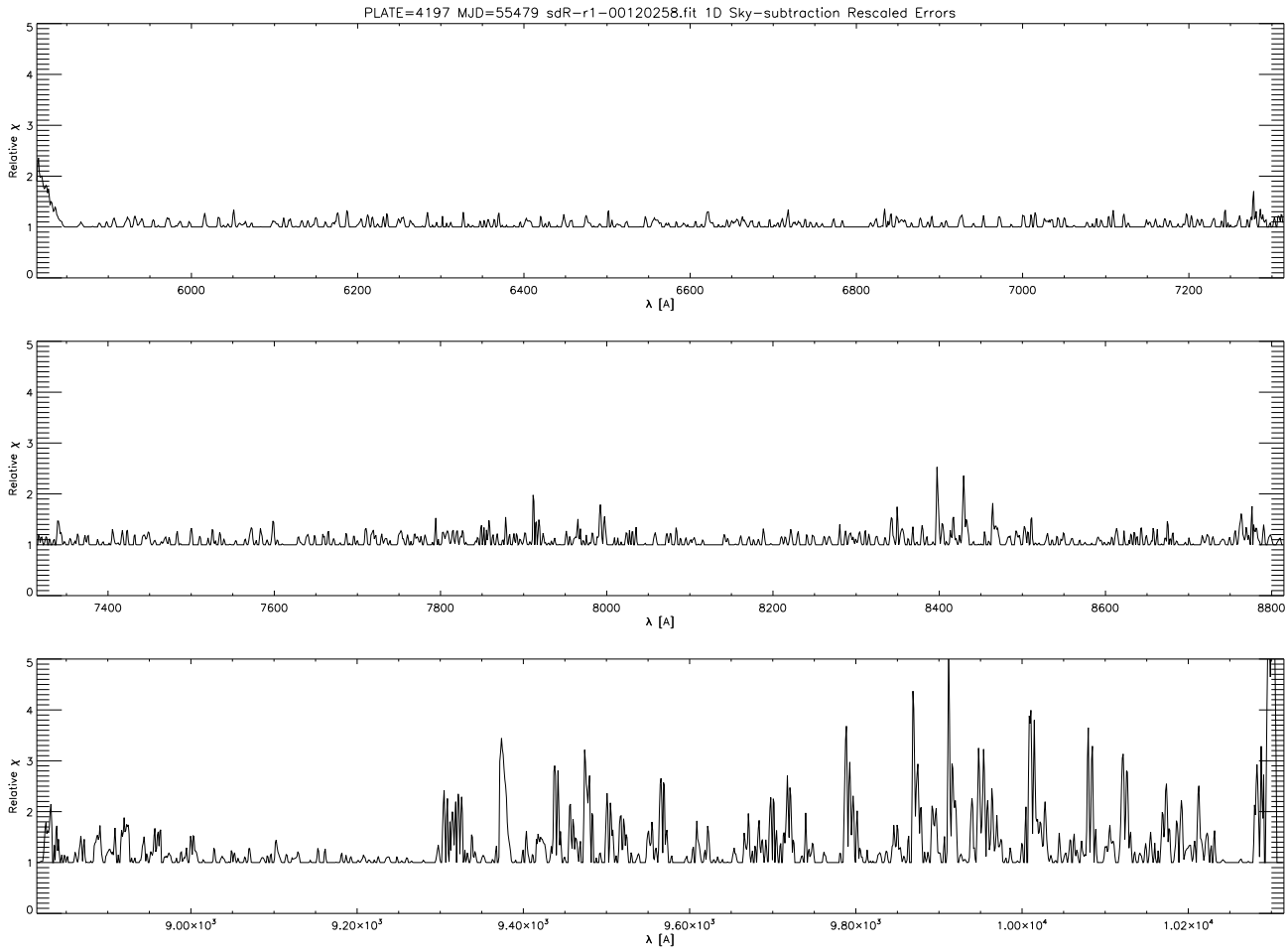

PLATE=4197 MJD=55479 Smooth superflat for sdR-r1-00120258.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
5.0×10^3
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

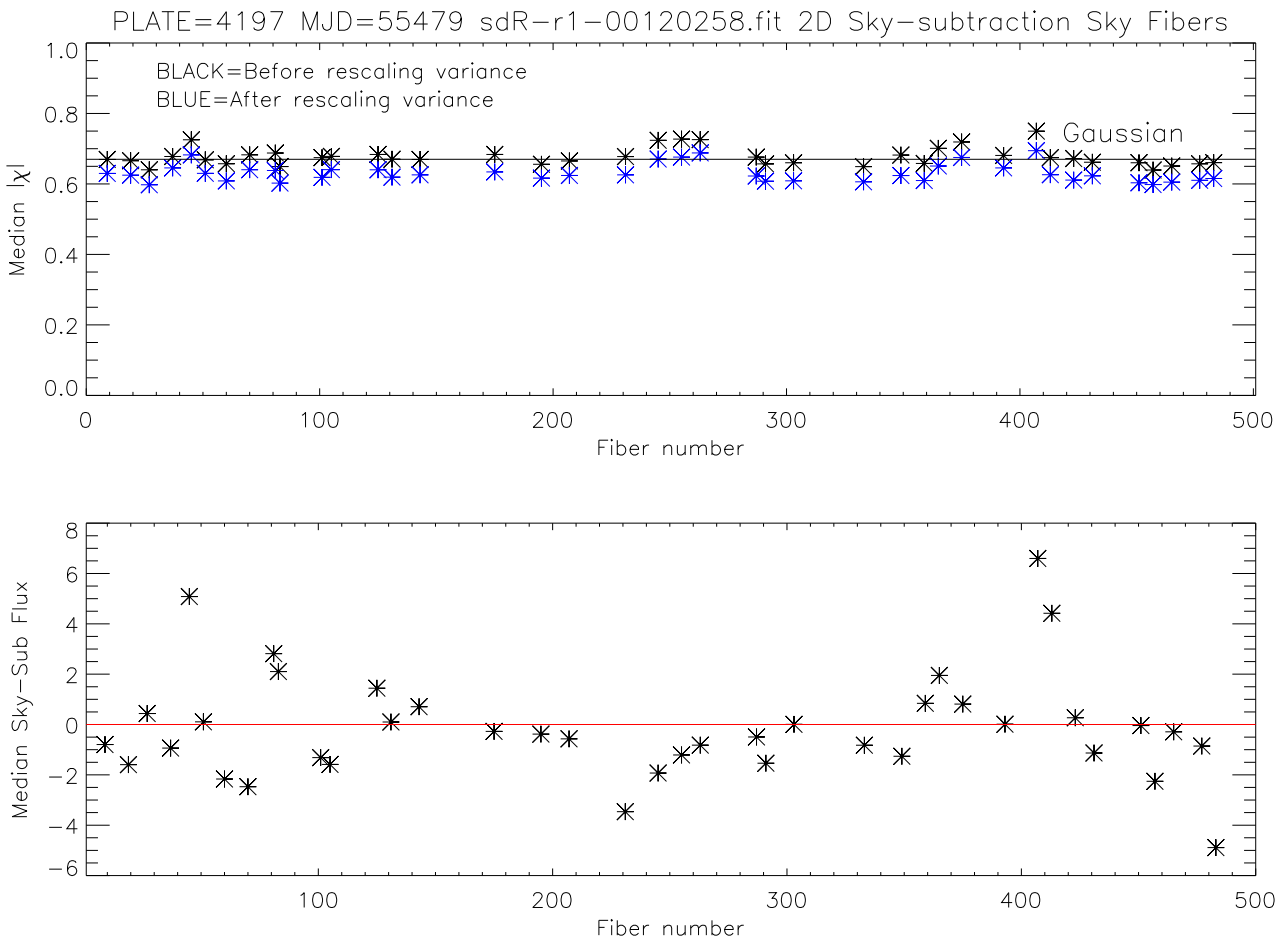

PLATE=4197 MJD=55479 sdR-r1-00120258.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

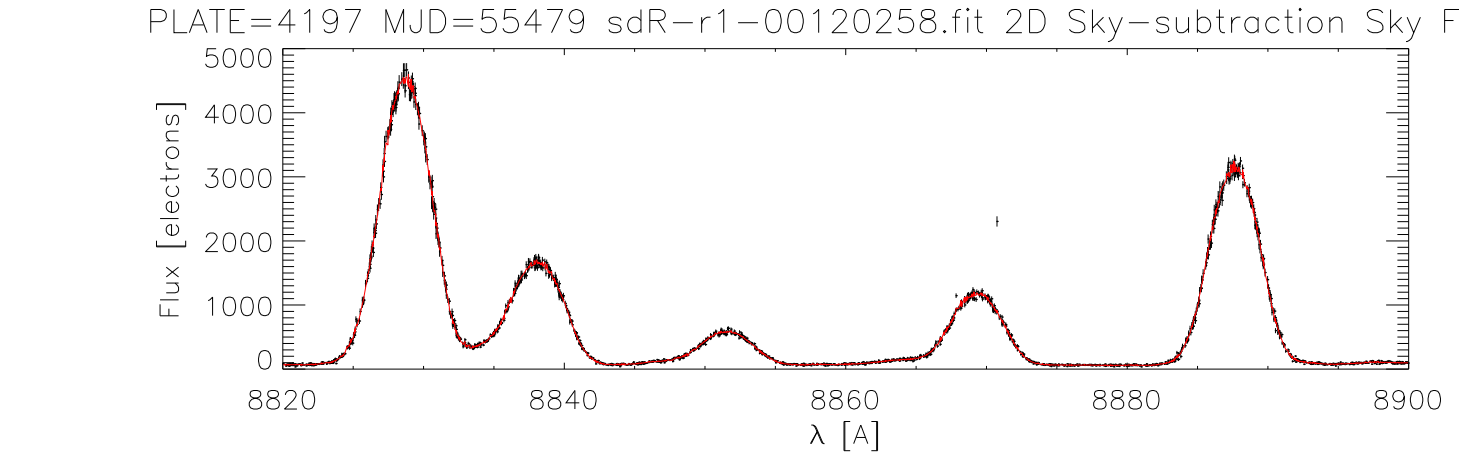

PLATE=4197 MJD=55479 sdR-r1-00120258.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

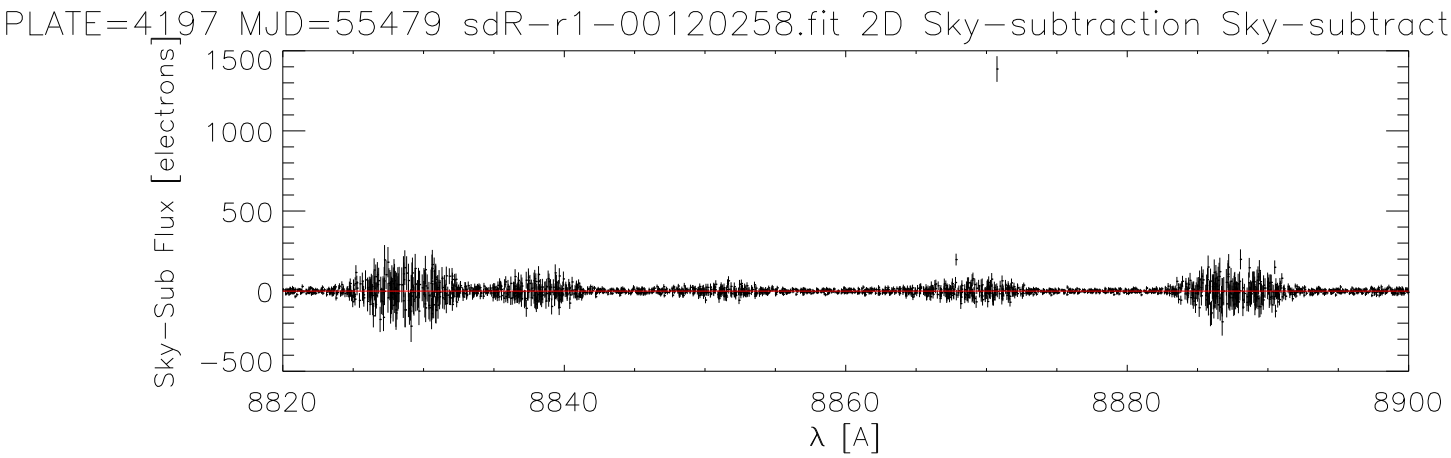

PLATE=4197 MJD=55479 sdR-r1-00120258.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1500
1000
500
0
-500
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 40

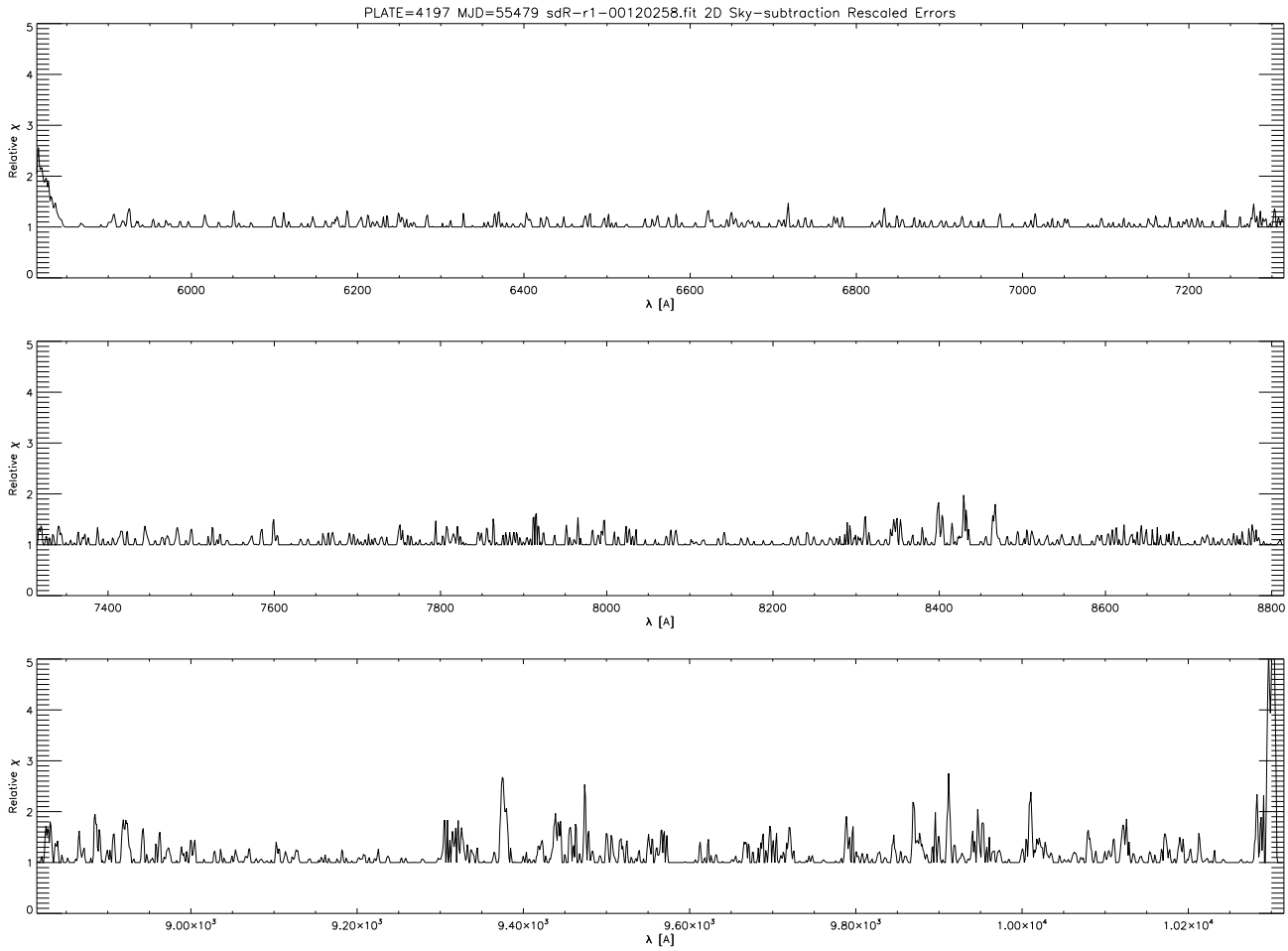


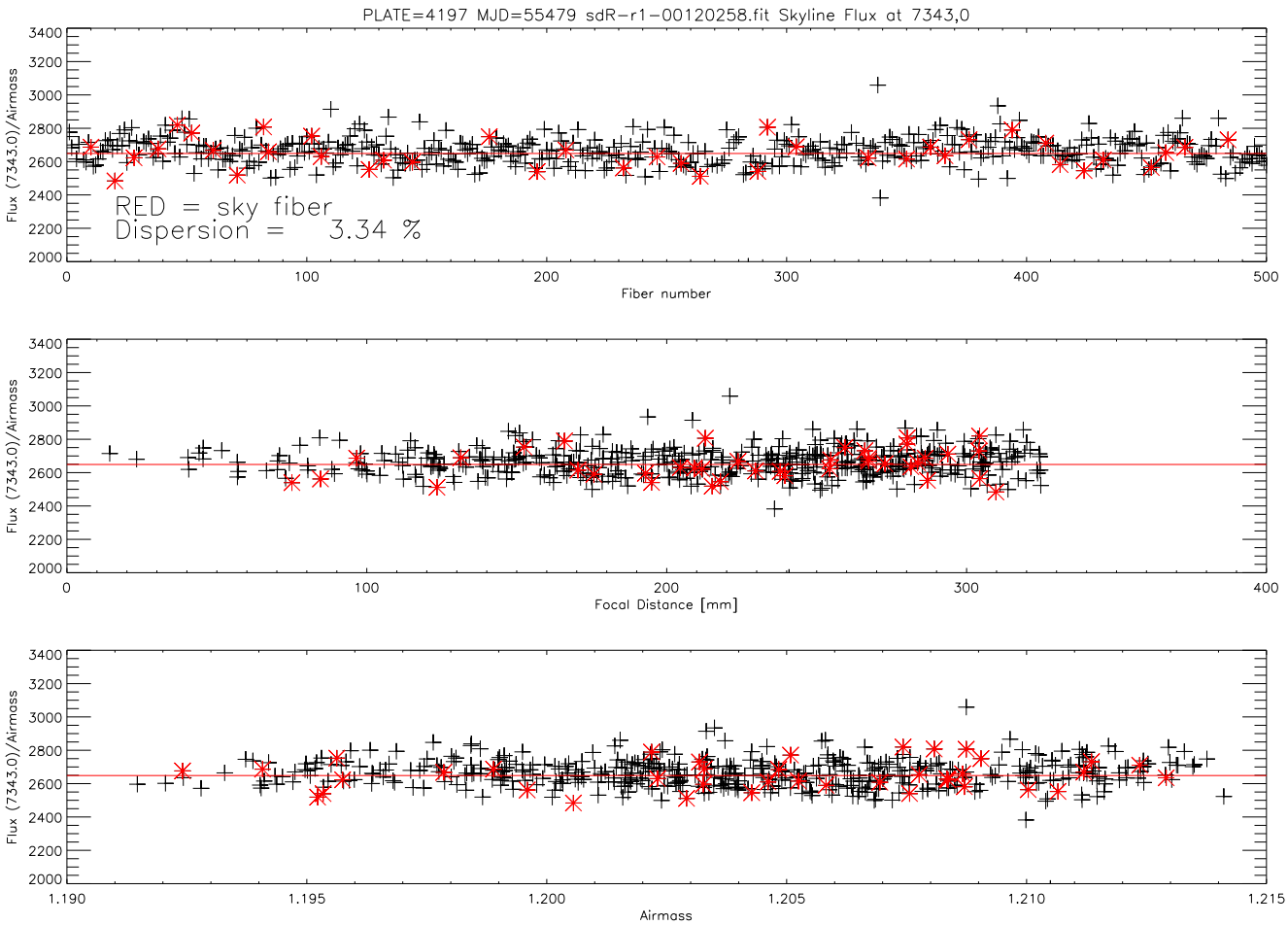

PLATE=4197 MJD=55479 sdR-r1-00120258.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

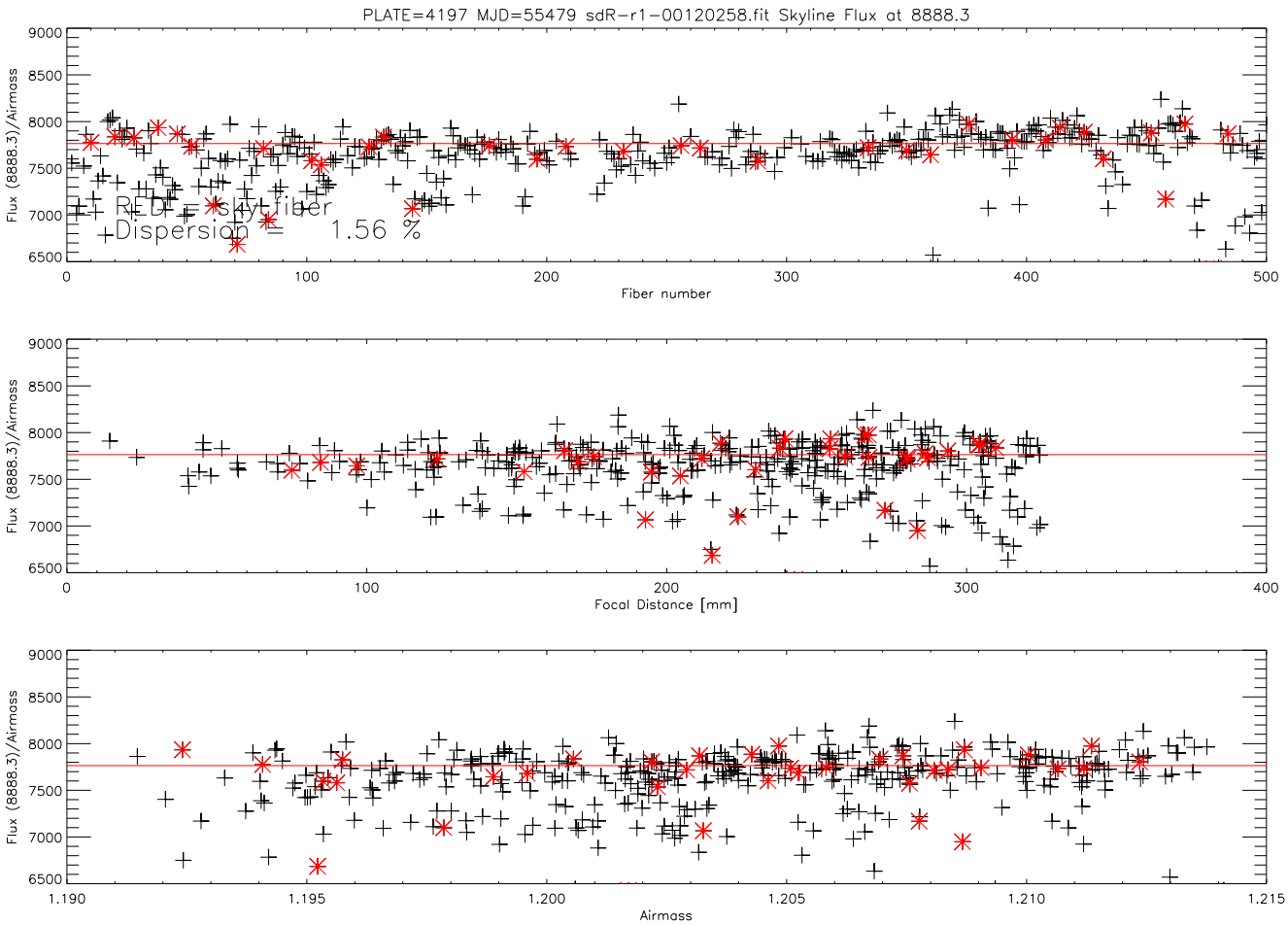

PLATE=4197 MJD=55479 sdR-r1-00120258.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

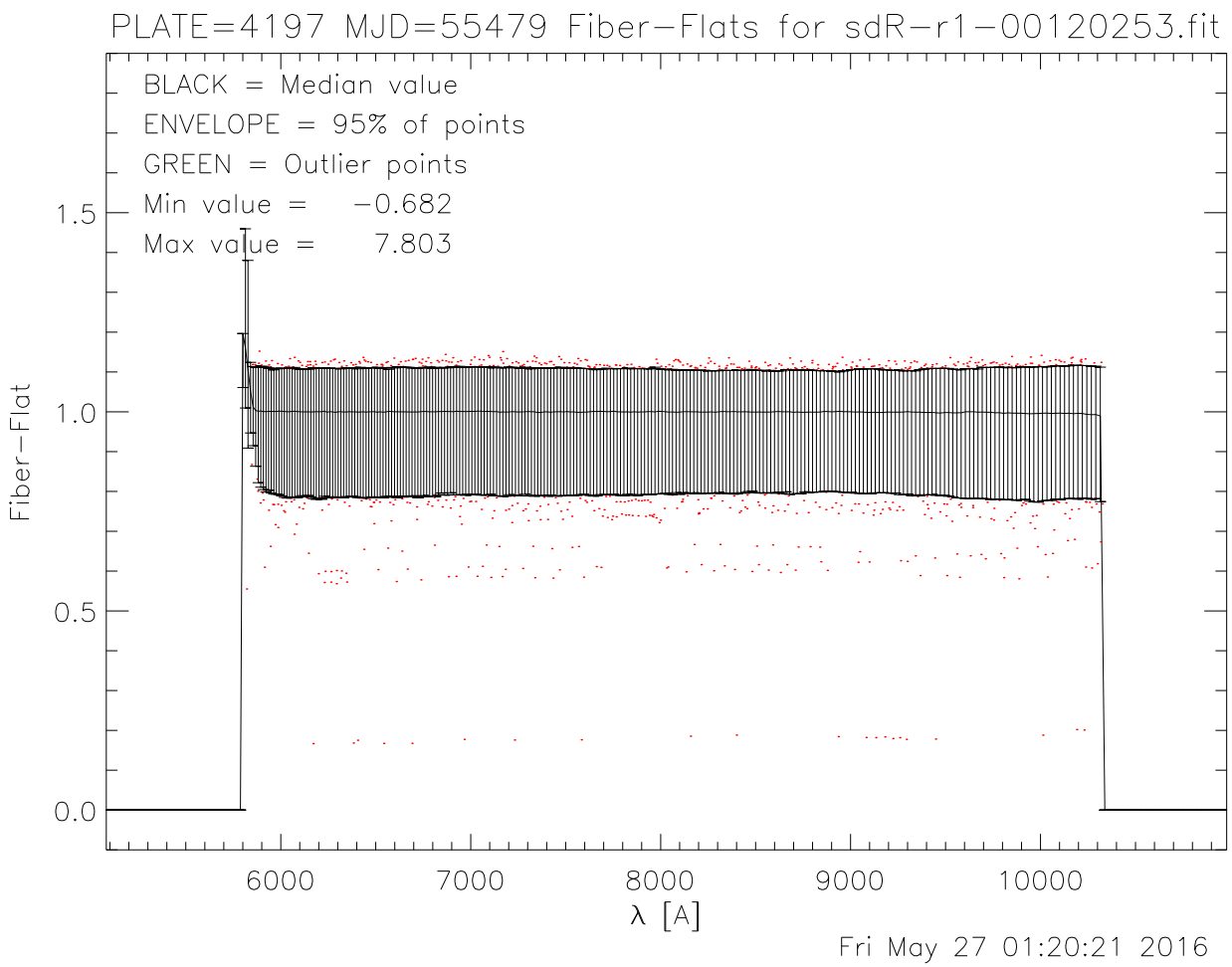

PLATE=4197 MJD=55479 sdR-r1-00120258.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1500
1000
500
0
-500
8820
8840
8860
8880
8900
λ [A]

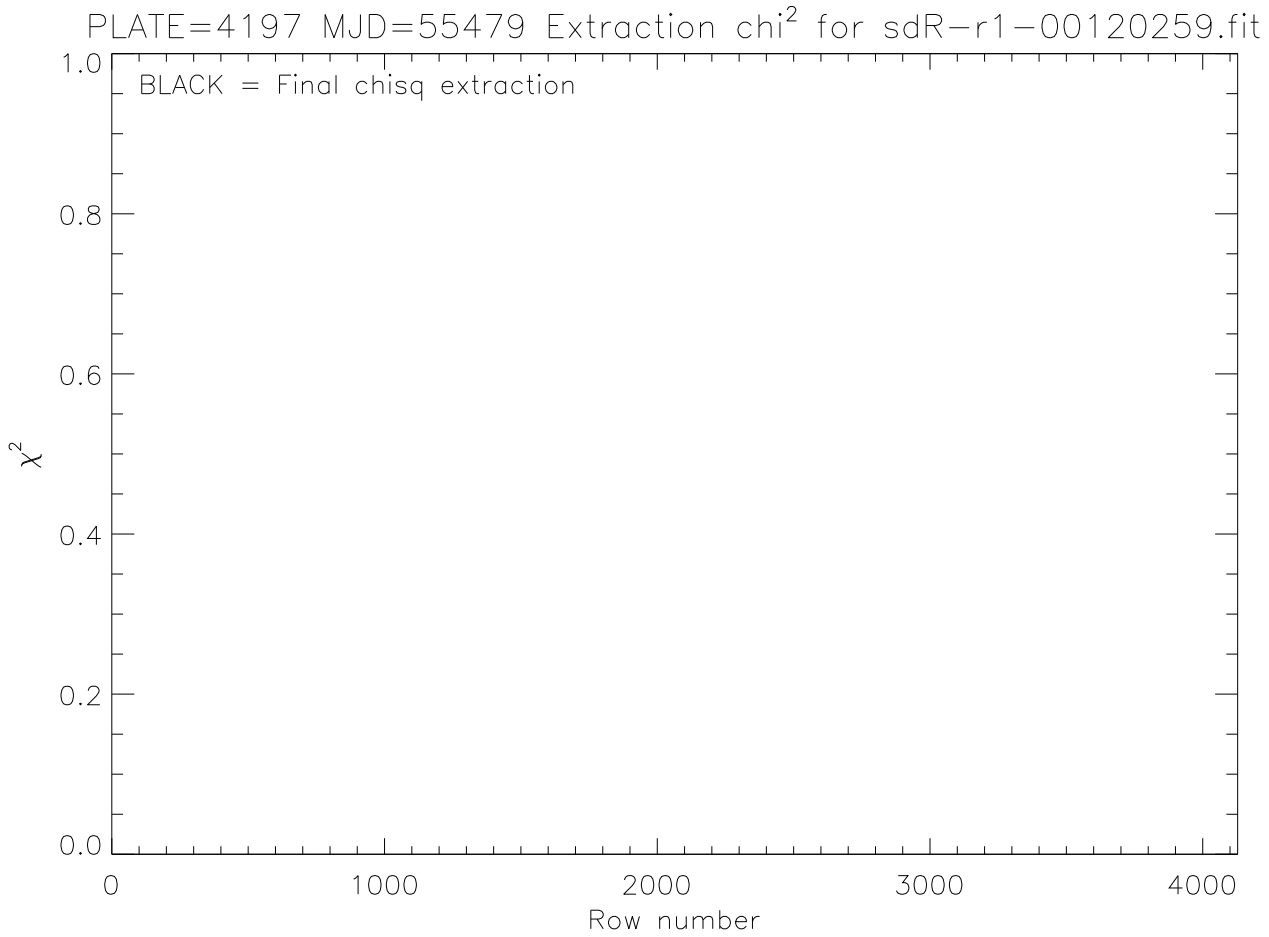
Number of sky fibers = 40

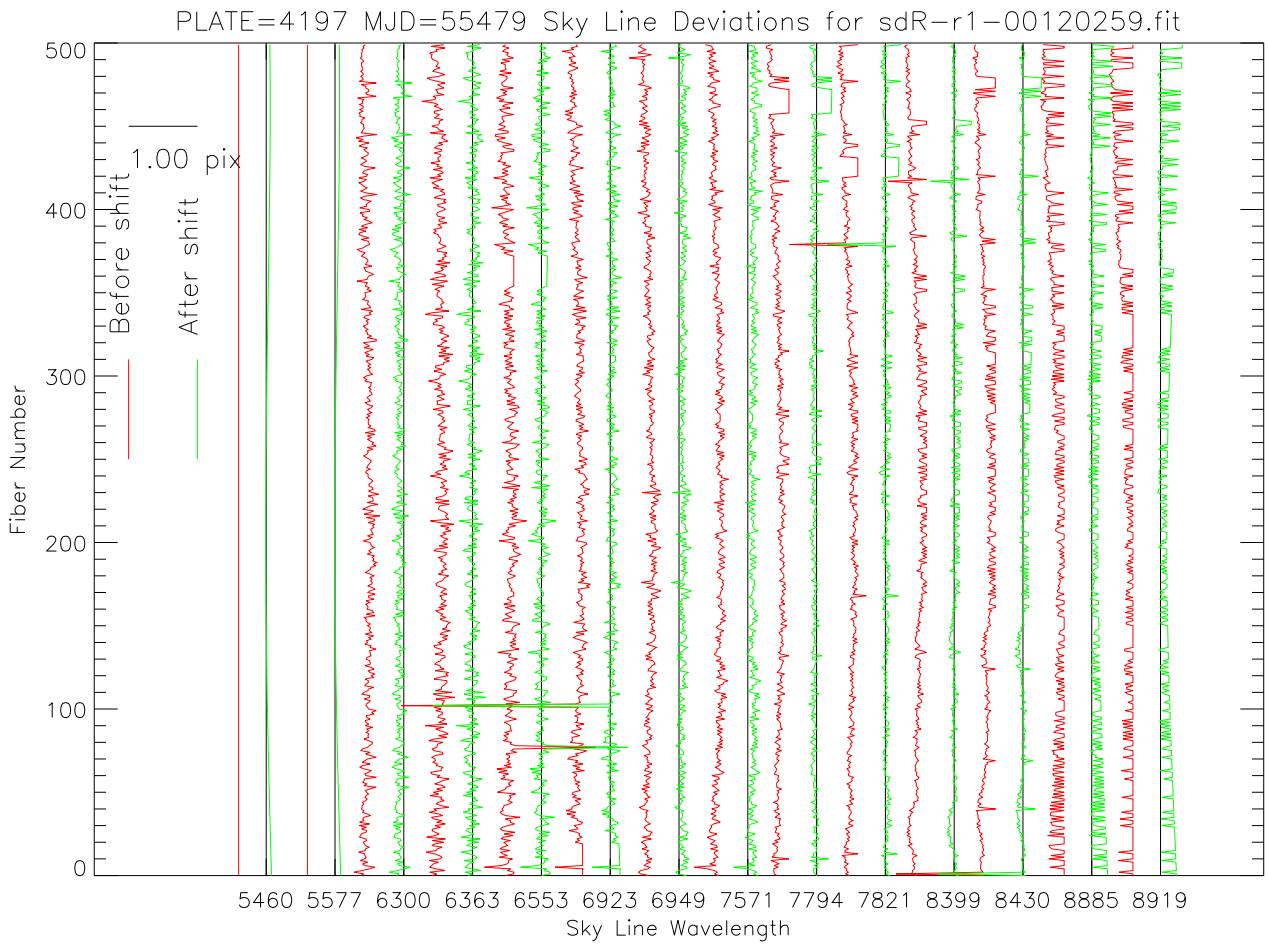


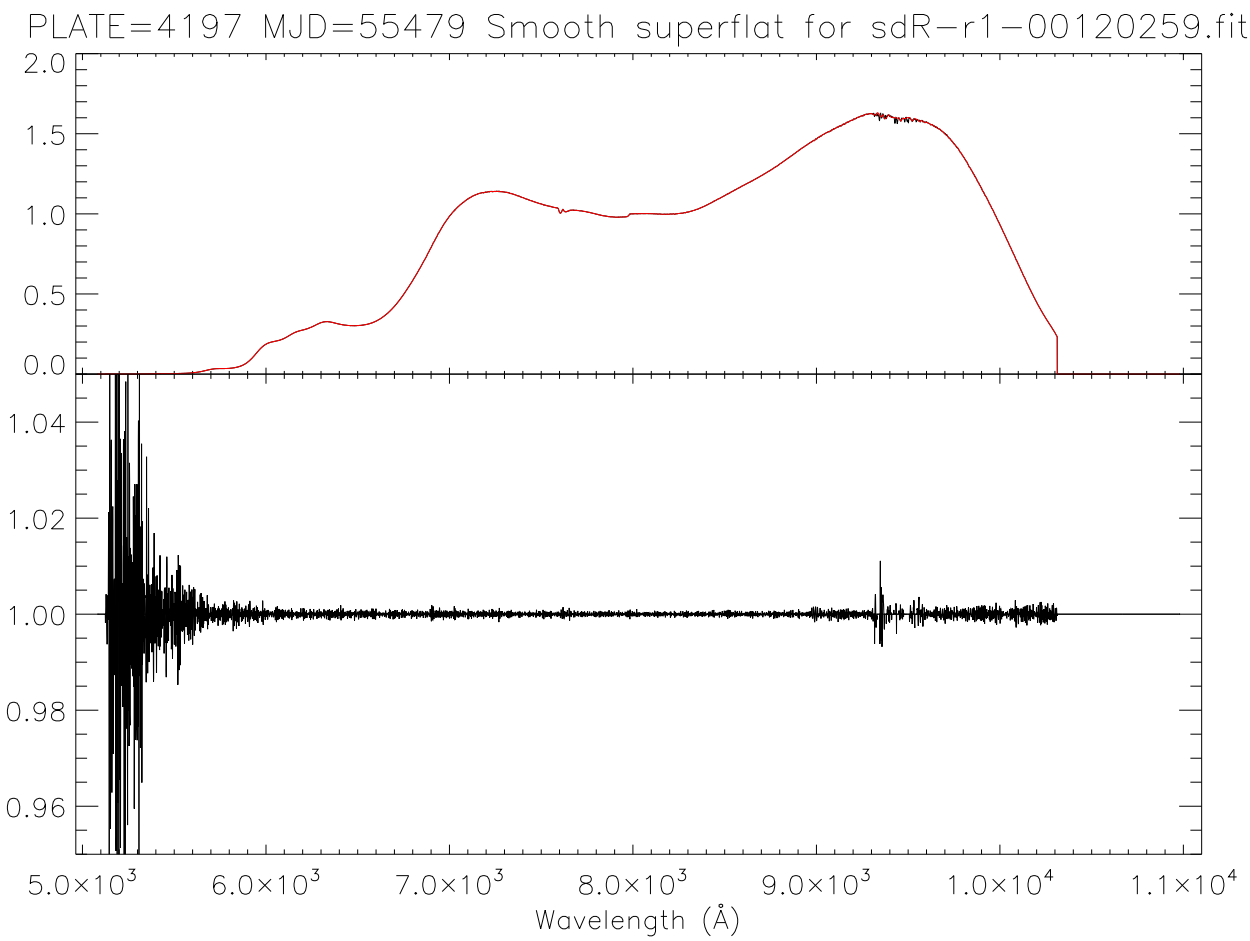

PLATE=4197 MJD=55479 sdR-r1-00120258.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 3.34 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

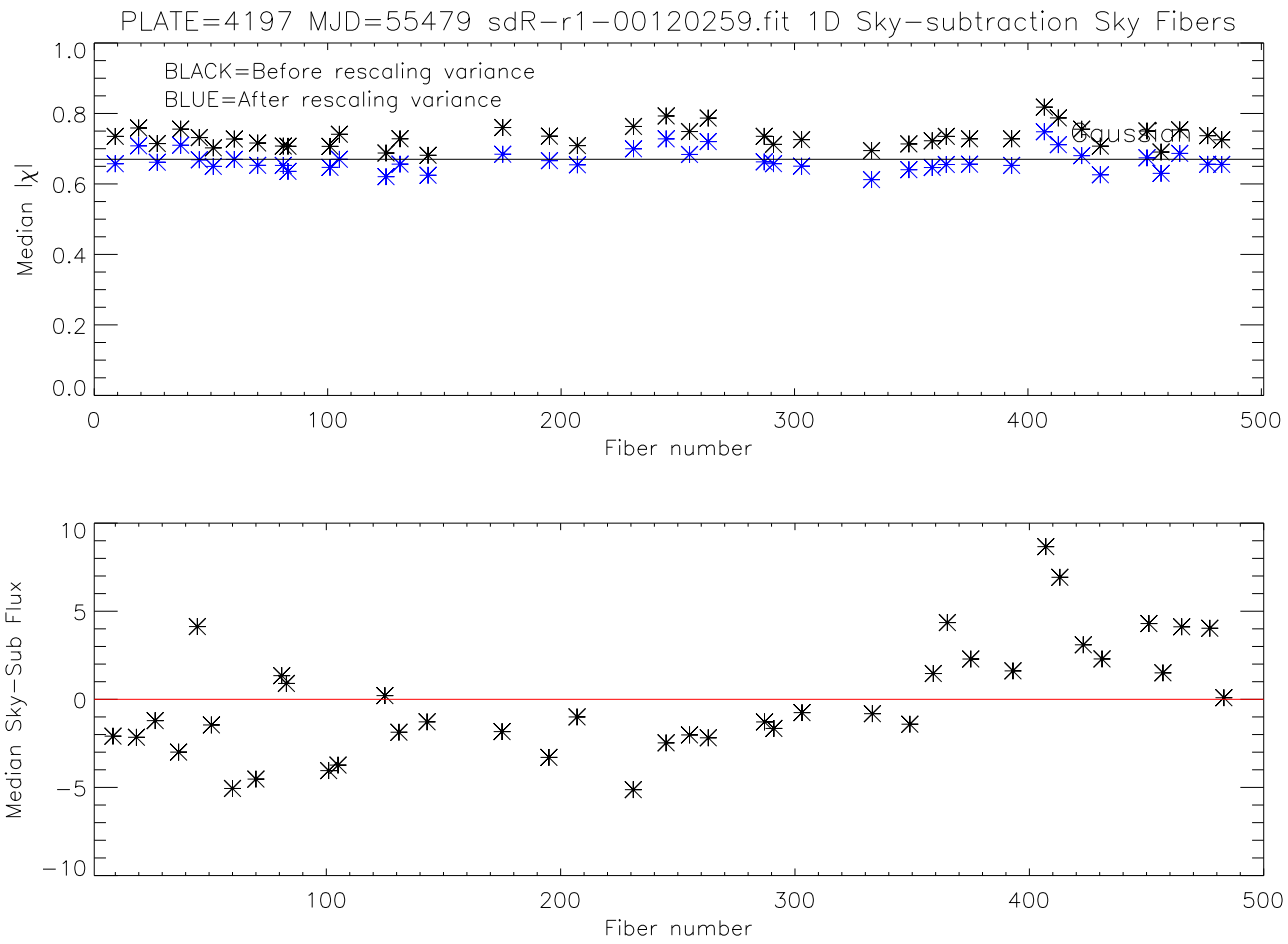

PLATE=4197 MJD=55479 sdR-r1-00120258.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
Fiber number
Red Skyfiber
Dispersion = 1.56 %
Focal Distance [mm]
Airmass

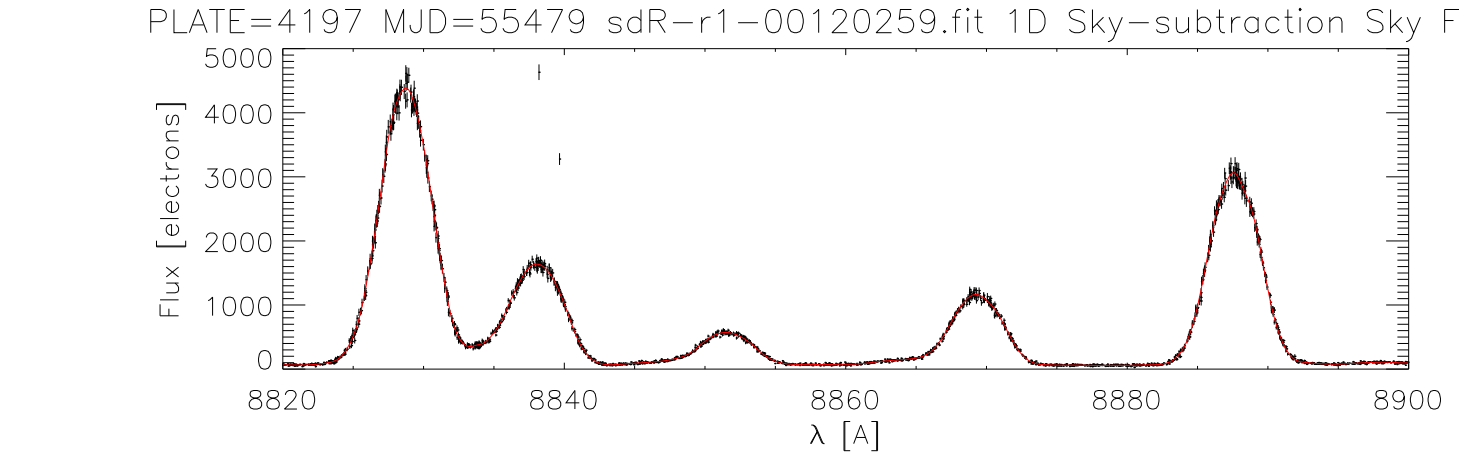

PLATE=4197 MJD=55479 Fiber−Flats for sdR−r1−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −0.682
Max value = 7.803
Fiber−Flat
1.5
1.0
0.5
0.0
6000
7000
8000
9000
10000
λ [A]
Fri May 27 01:20:21 2016

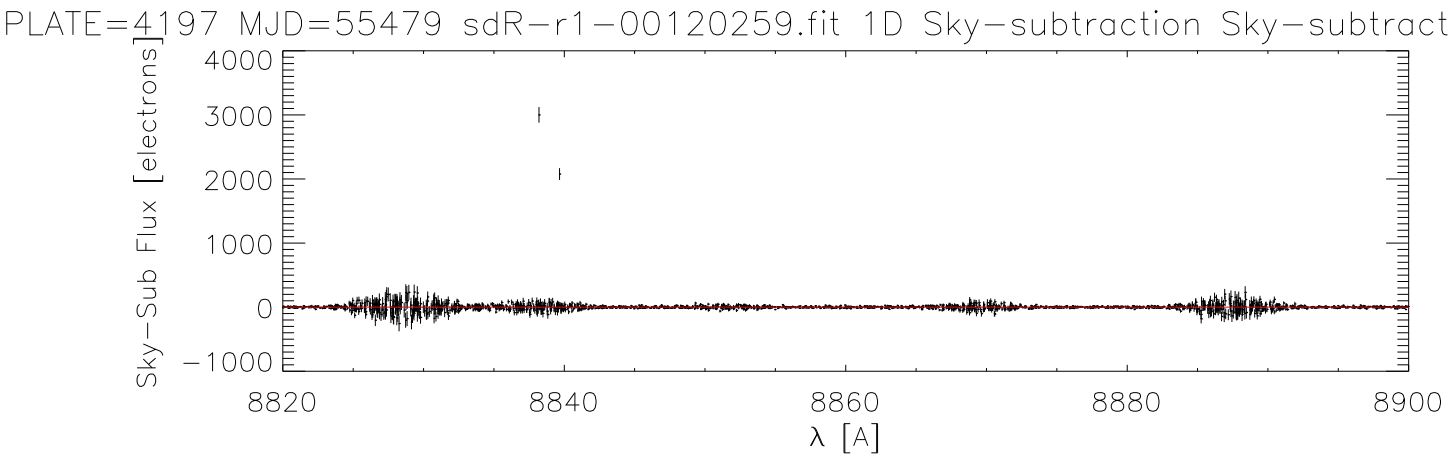

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r1−00120259.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r1-00120259.fit
Before shift
After shift
1.00 pix
Fiber Number
0
100
200
300
400
500
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength

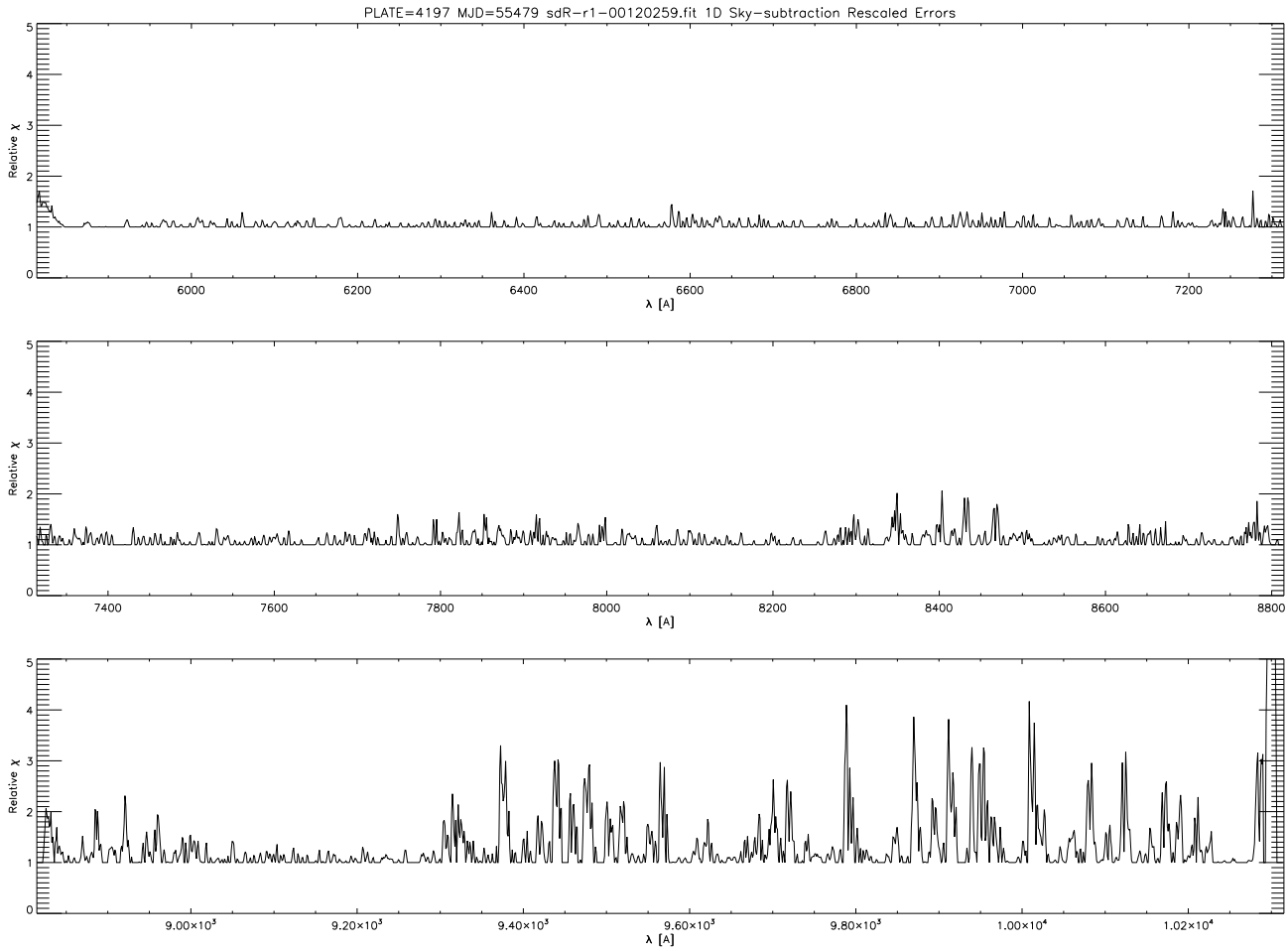

PLATE=4197 MJD=55479 Smooth superflat for sdR-r1-00120259.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
5.0×10^3
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

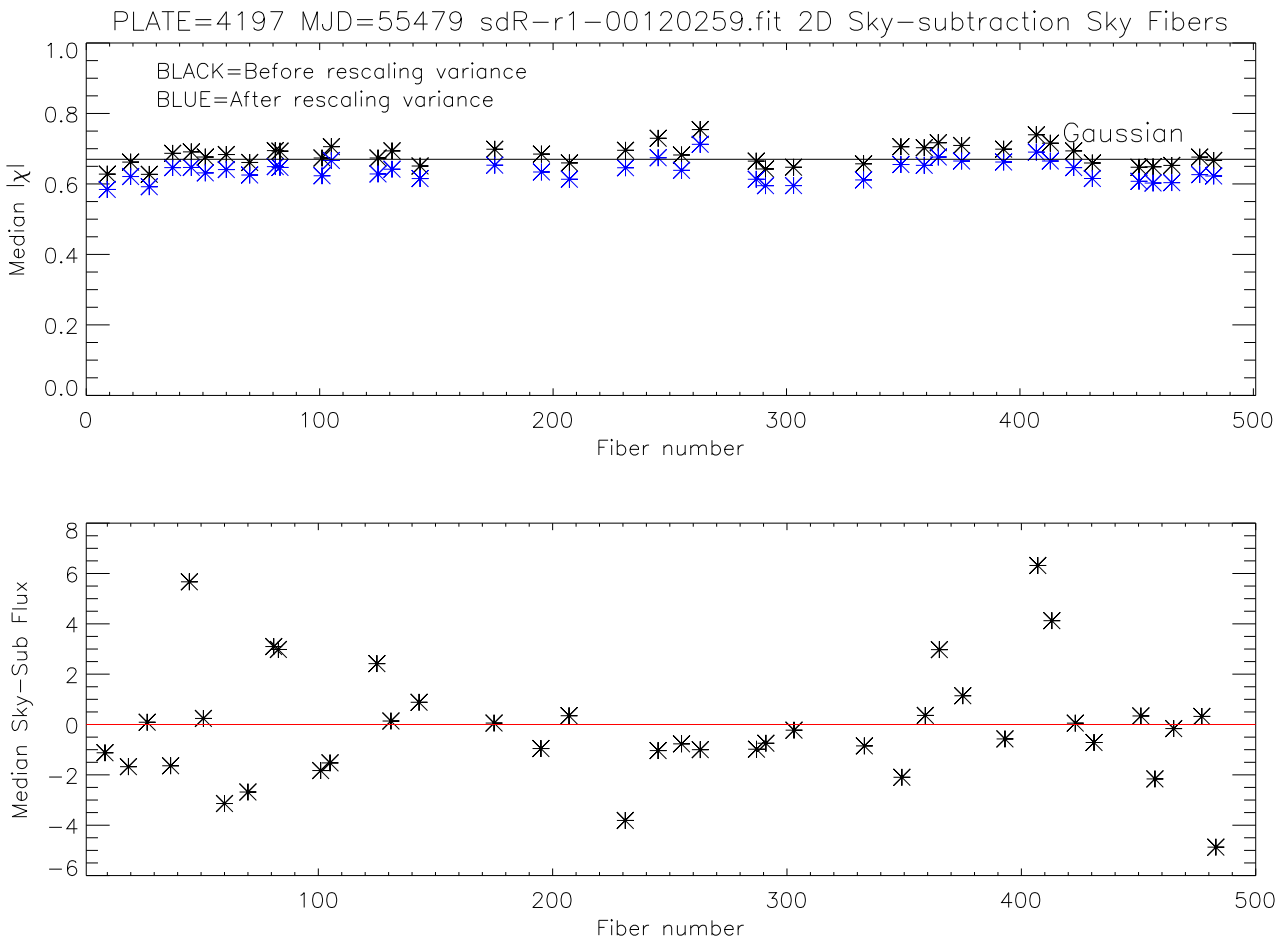

PLATE=4197 MJD=55479 sdR-r1-00120259.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

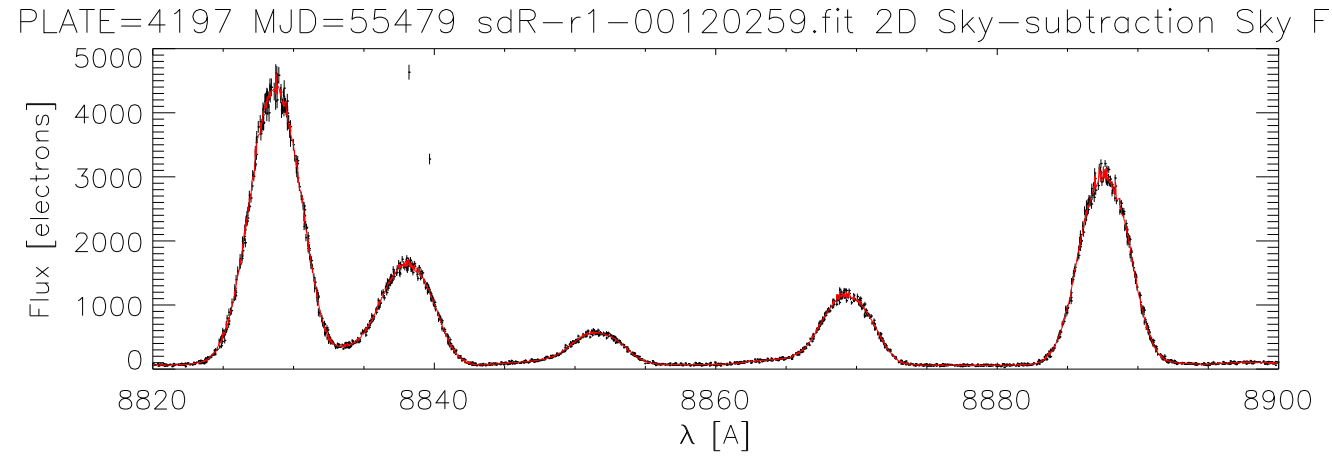

PLATE=4197 MJD=55479 sdR-r1-00120259.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

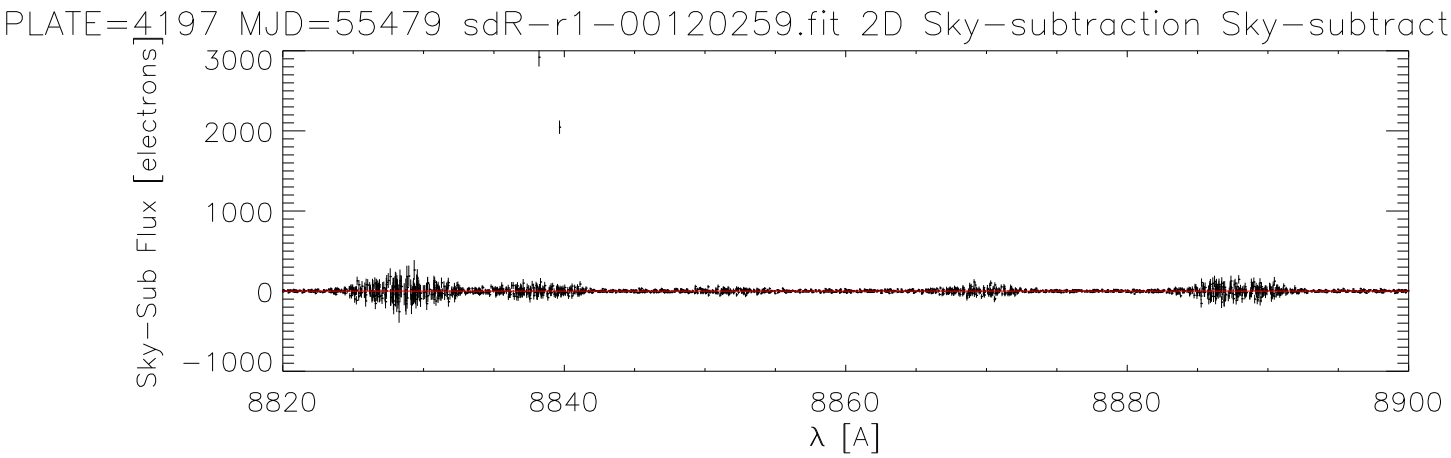

PLATE=4197 MJD=55479 sdR-r1-00120259.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
4000
3000
2000
1000
0
-1000
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 40

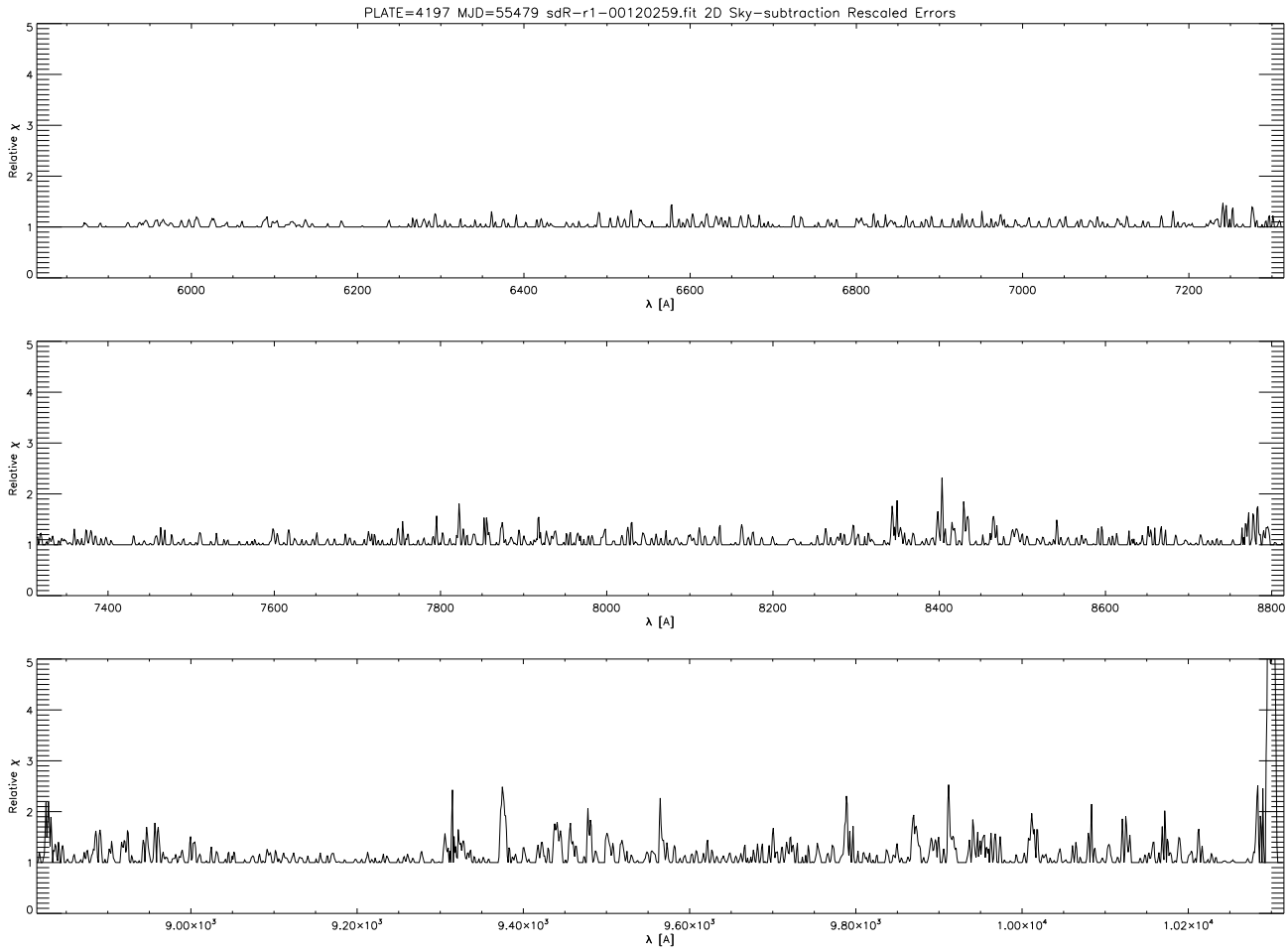


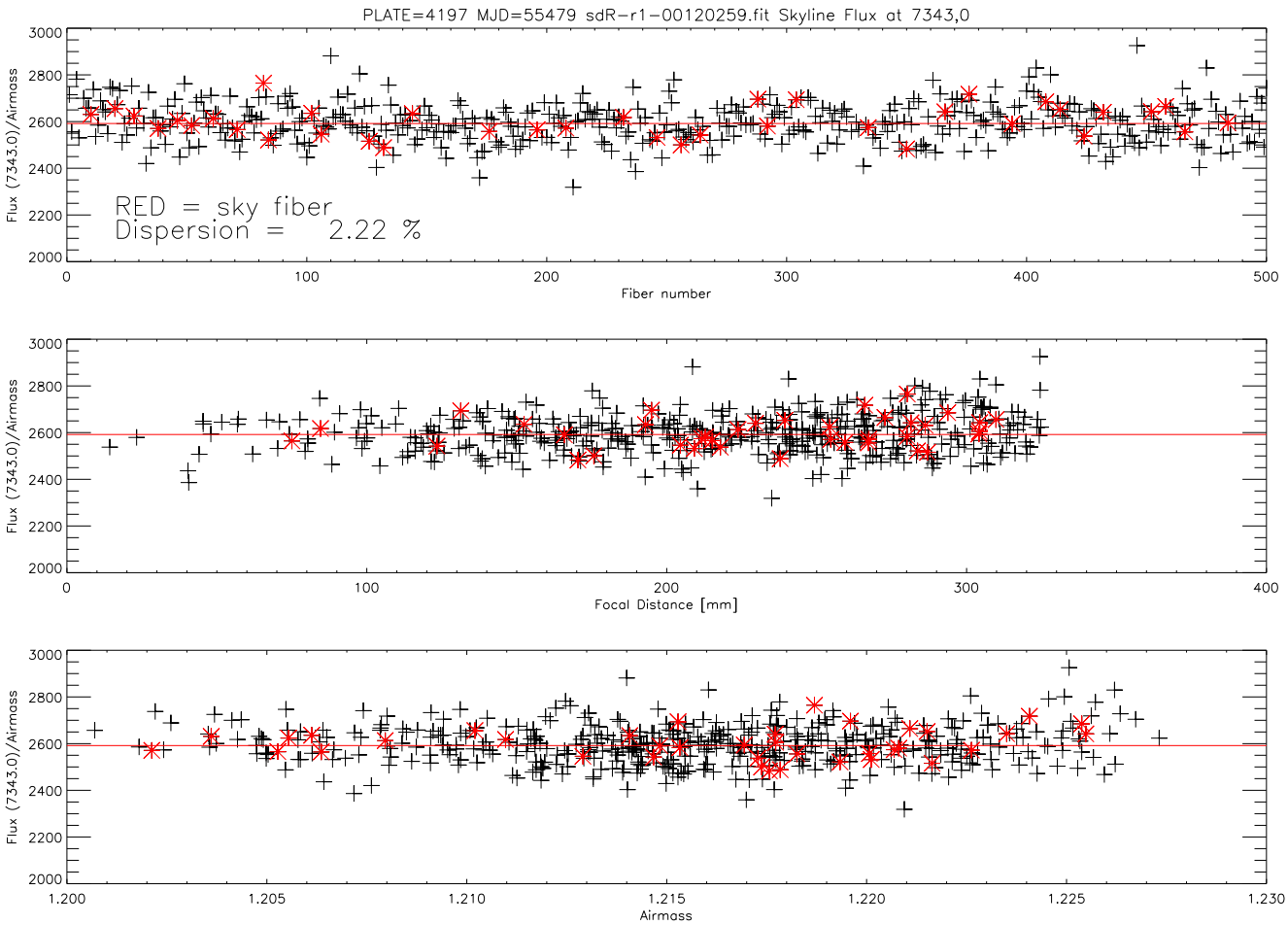

PLATE=4197 MJD=55479 sdR-r1-00120259.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

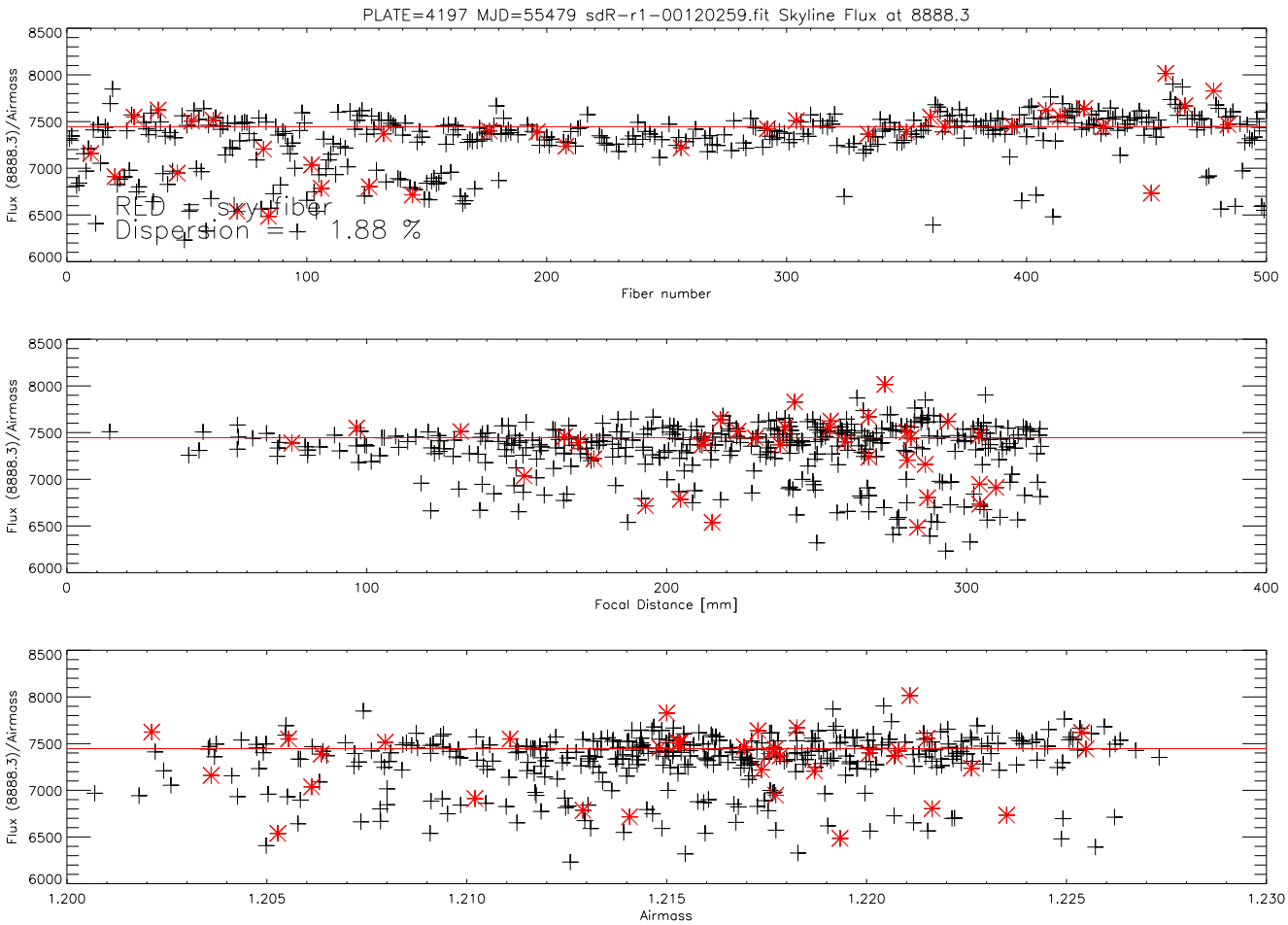

PLATE=4197 MJD=55479 sdR-r1-00120259.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

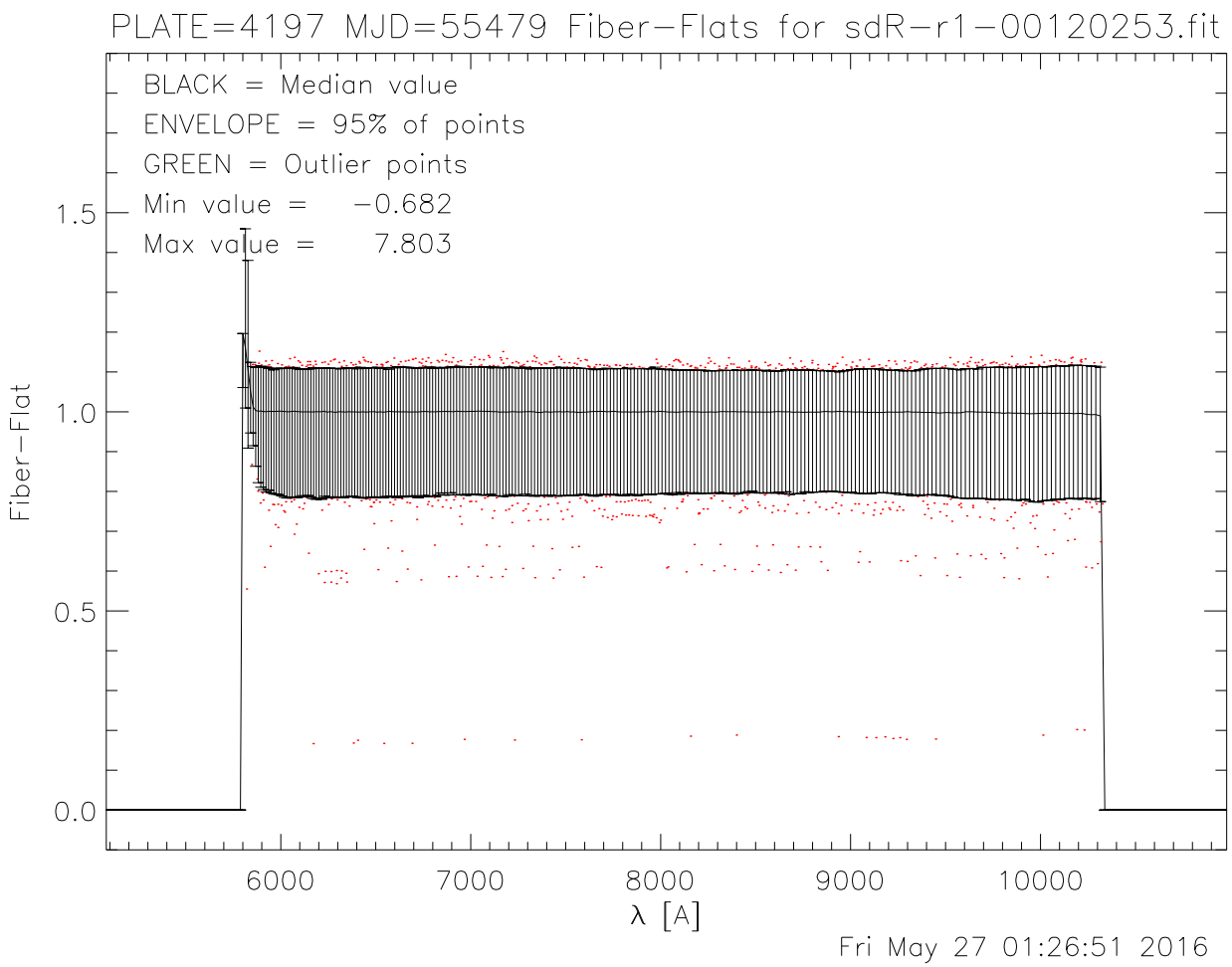

PLATE=4197 MJD=55479 sdR-r1-00120259.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
3000
2000
1000
0
-1000
8820
8840
8860
8880
8900
λ [A]

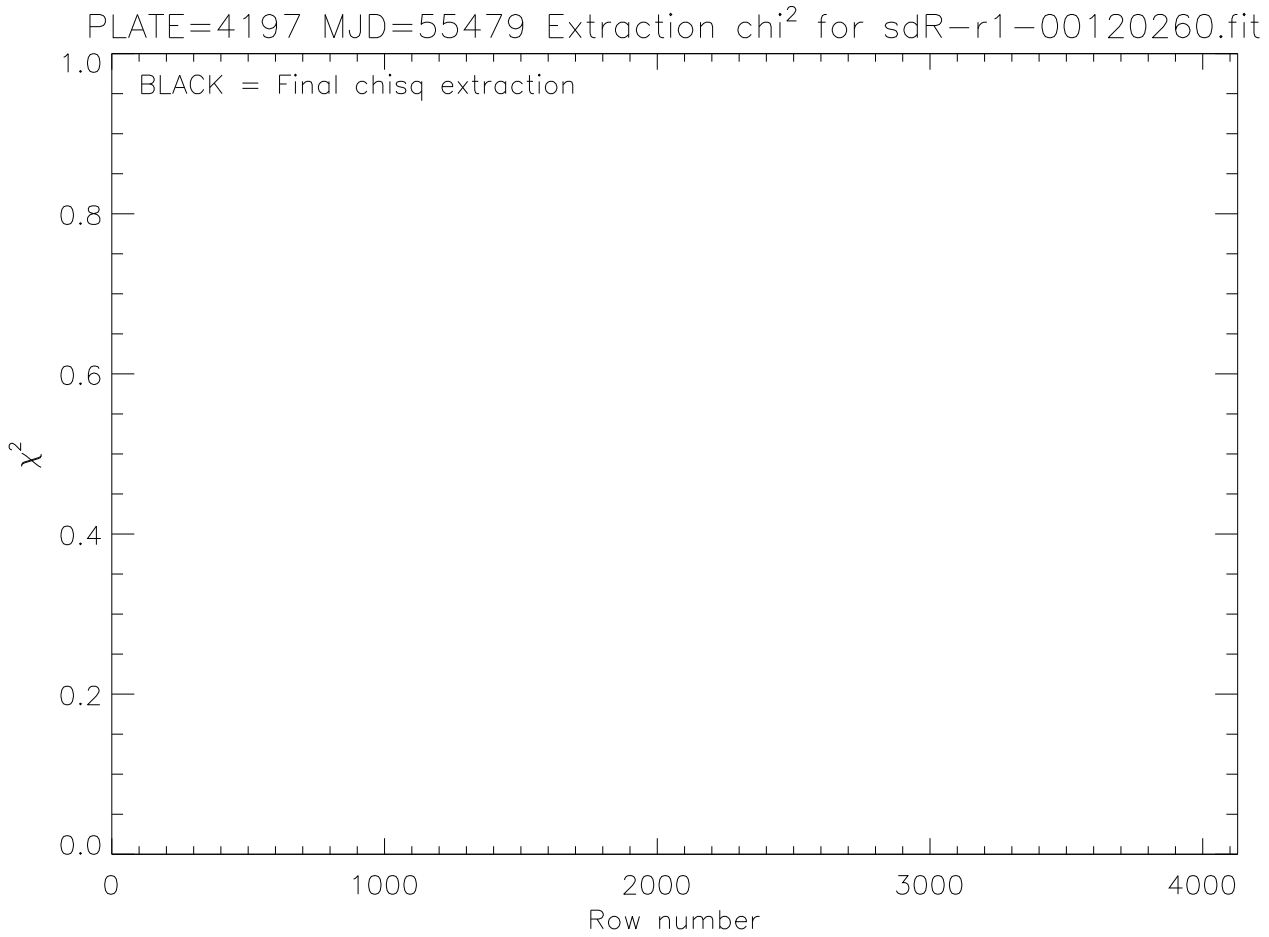
Number of sky fibers = 40

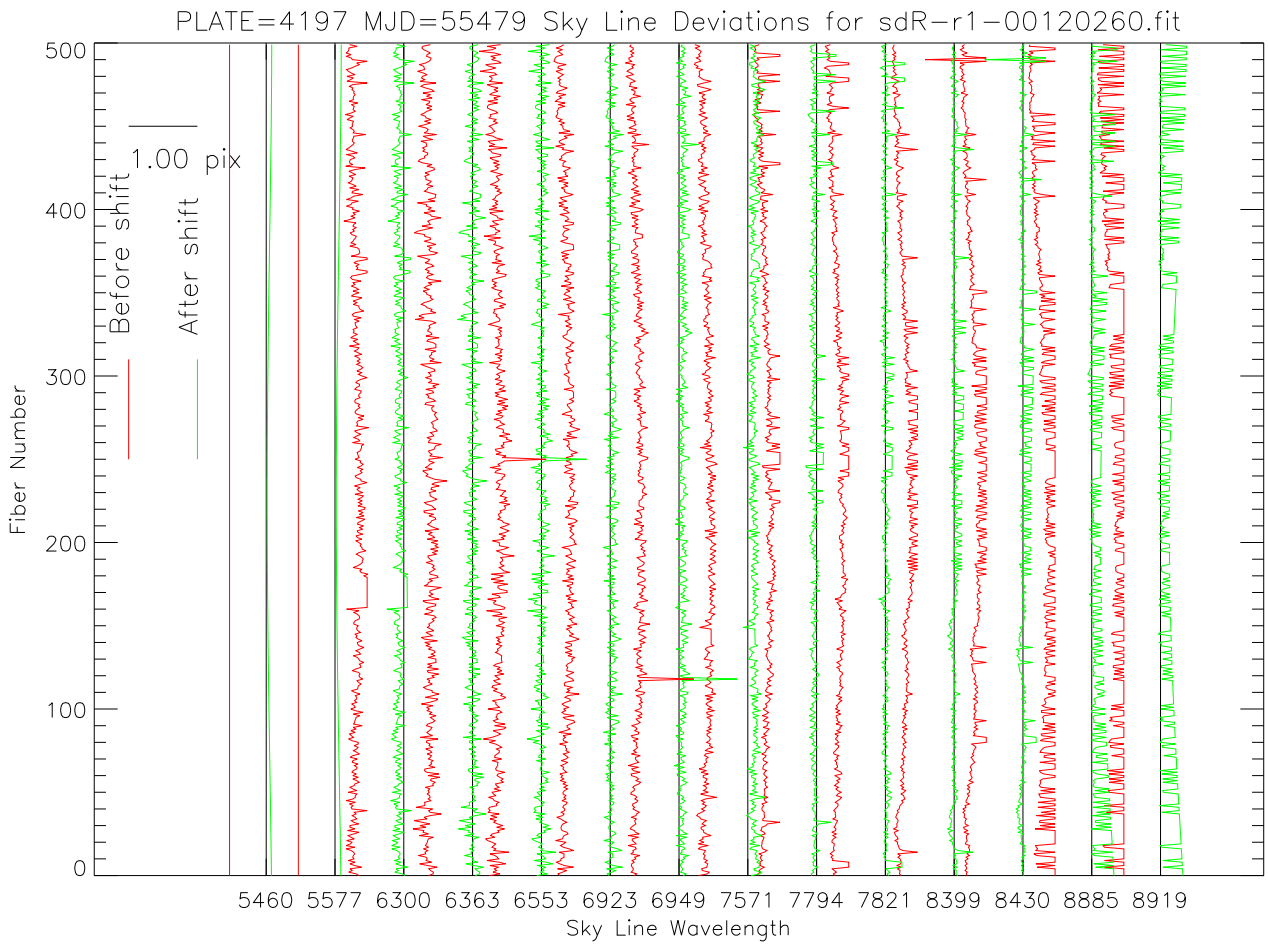


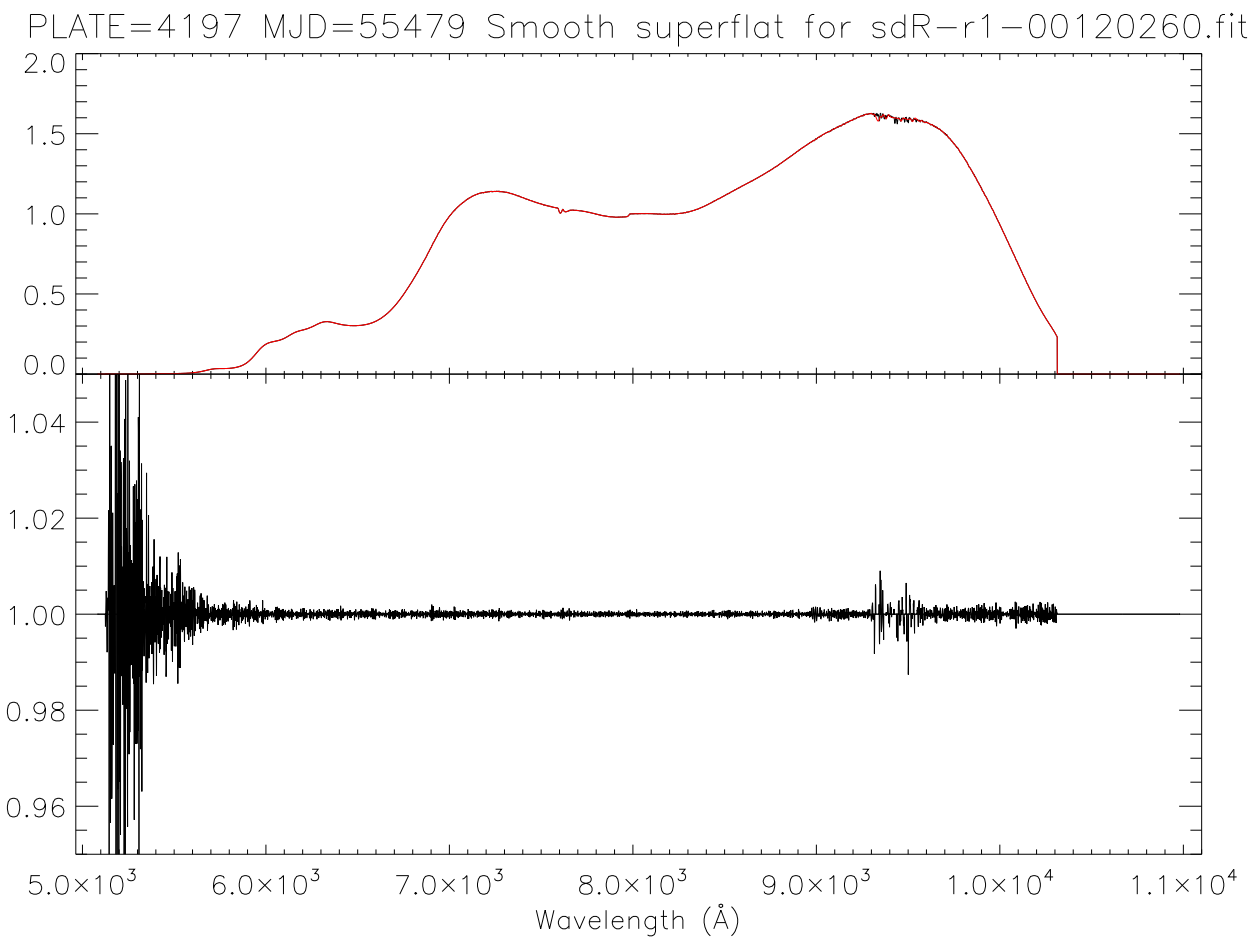

PLATE=4197 MJD=55479 sdR-r1-00120259.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 2.22 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

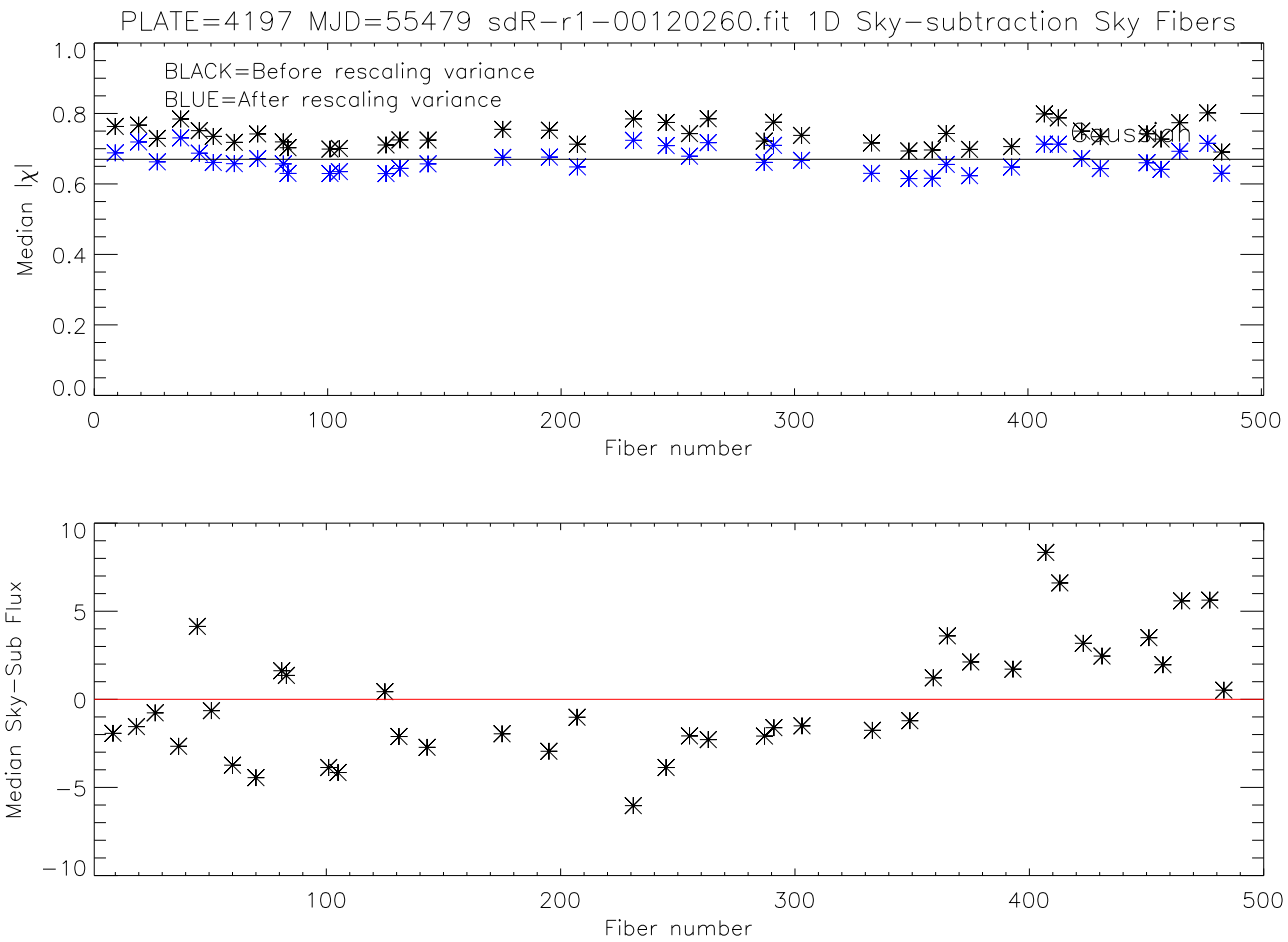

PLATE=4197 MJD=55479 sdR-r1-00120259.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
Fiber number
RED + sky fiber
Dispersion = + 1.88 %
Flux (8888.3)/Airmass
Focal Distance [mm]
Flux (8888.3)/Airmass
Airmass

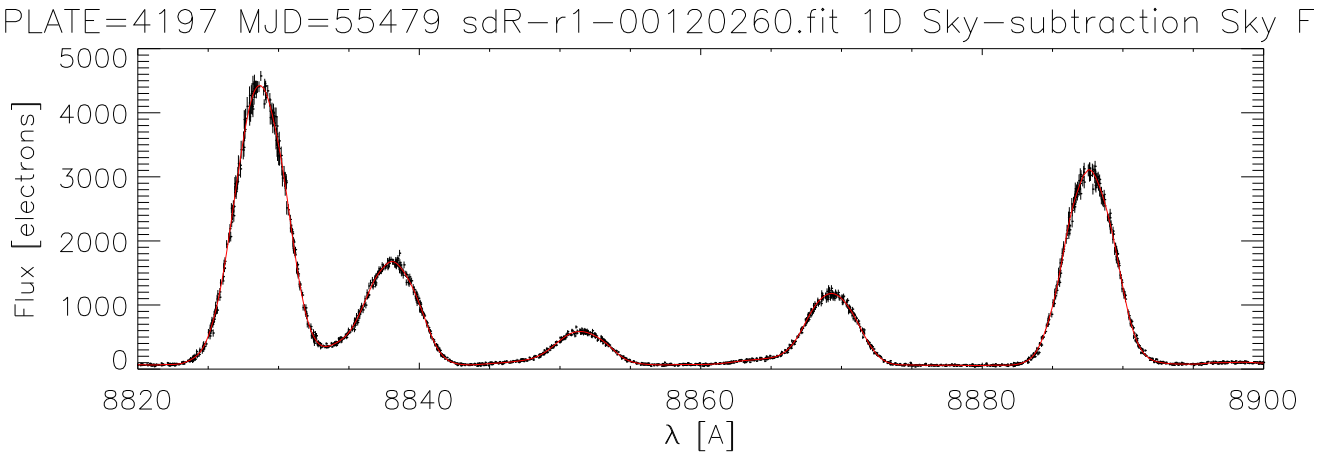

PLATE=4197 MJD=55479 Fiber−Flats for sdR−r1−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −0.682
Max value = 7.803
Fiber−Flat
1.5
1.0
0.5
0.0
6000
7000
8000
9000
10000
λ [A]
Fri May 27 01:26:51 2016

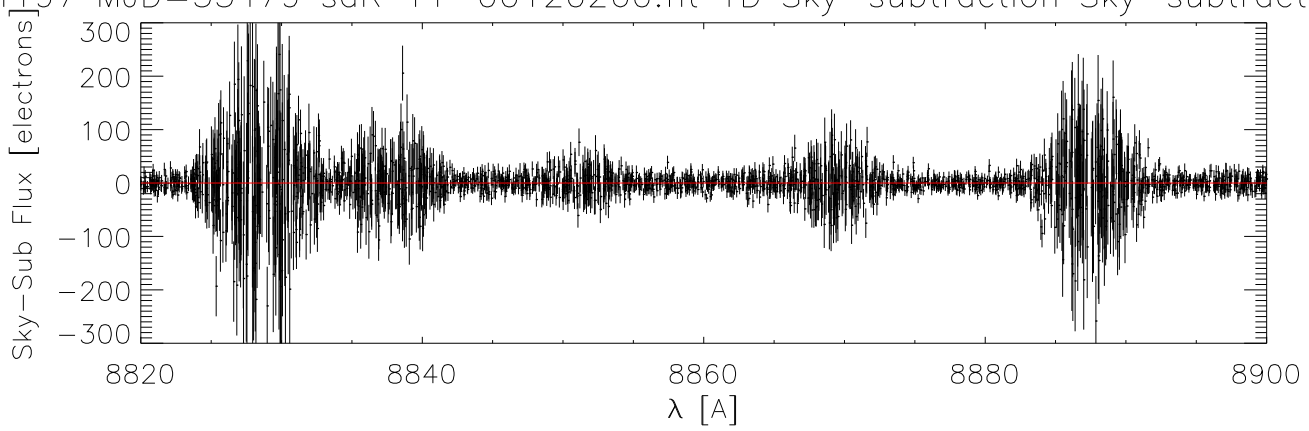

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r1−00120260.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r1-00120260.fit
Before shift
After shift
1.00 pix
Fiber Number
0
100
200
300
400
500
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength

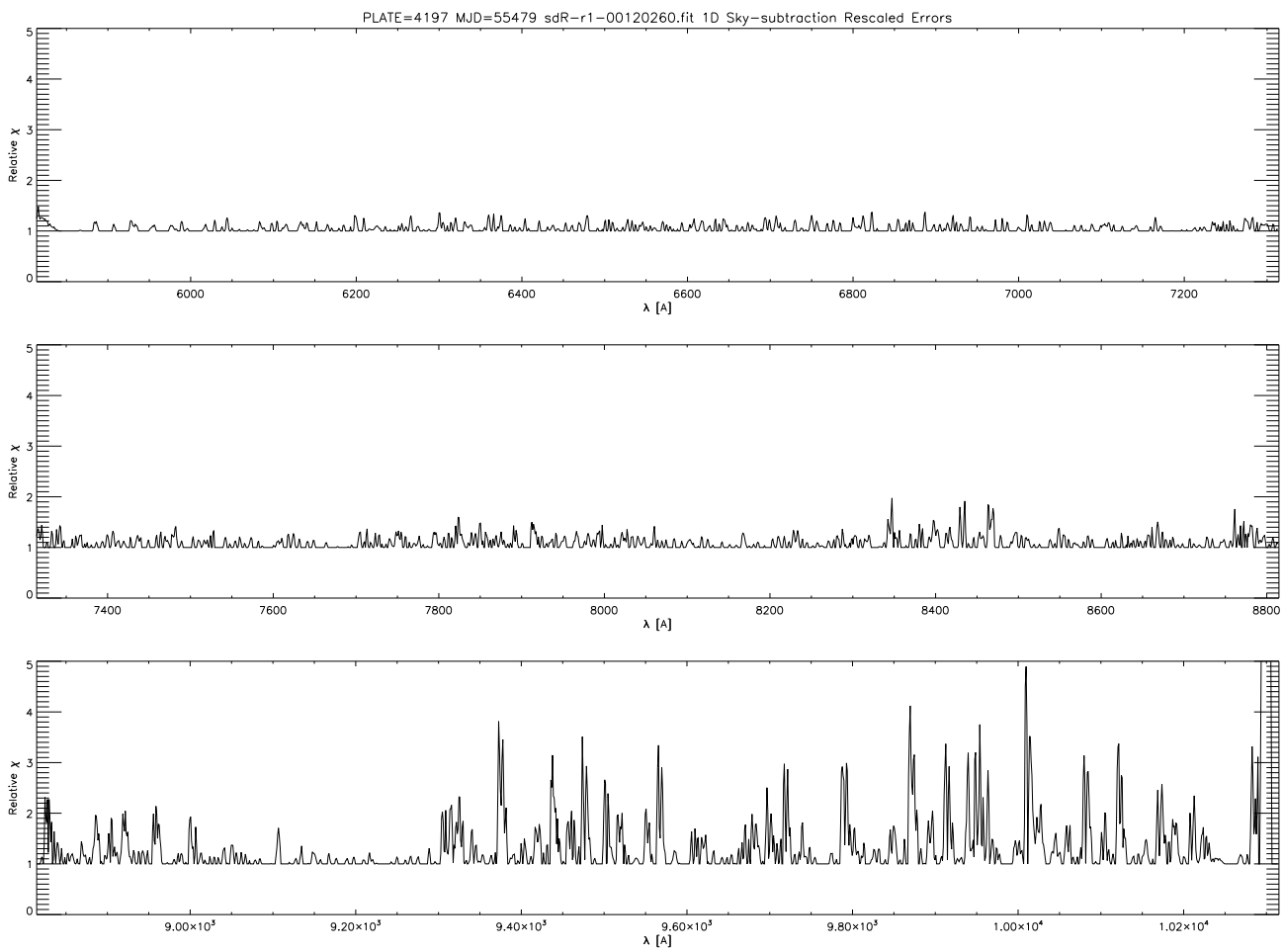

PLATE=4197 MJD=55479 Smooth superflat for sdR-r1-00120260.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
5.0×10^3
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

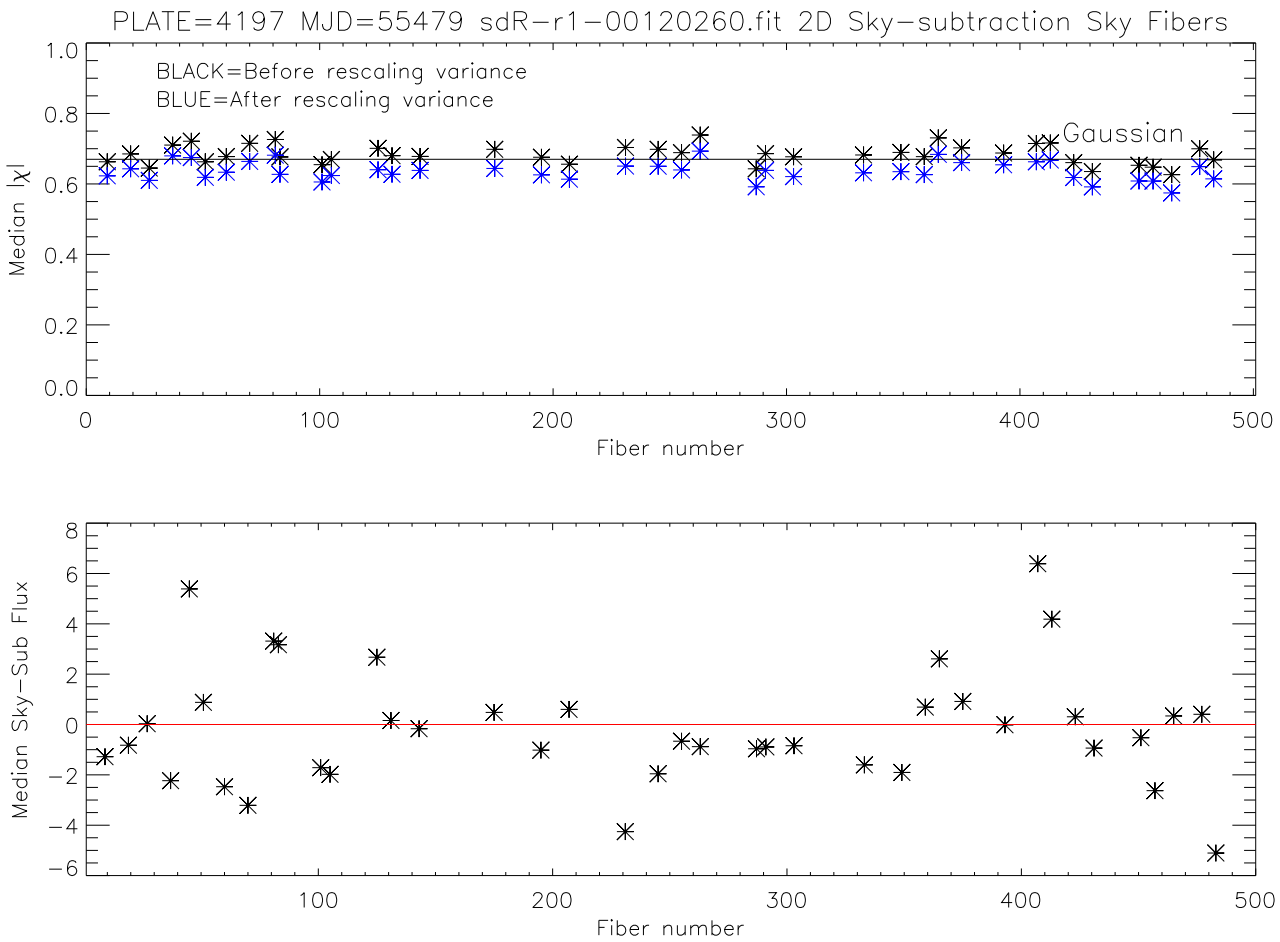

PLATE=4197 MJD=55479 sdR-r1-00120260.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

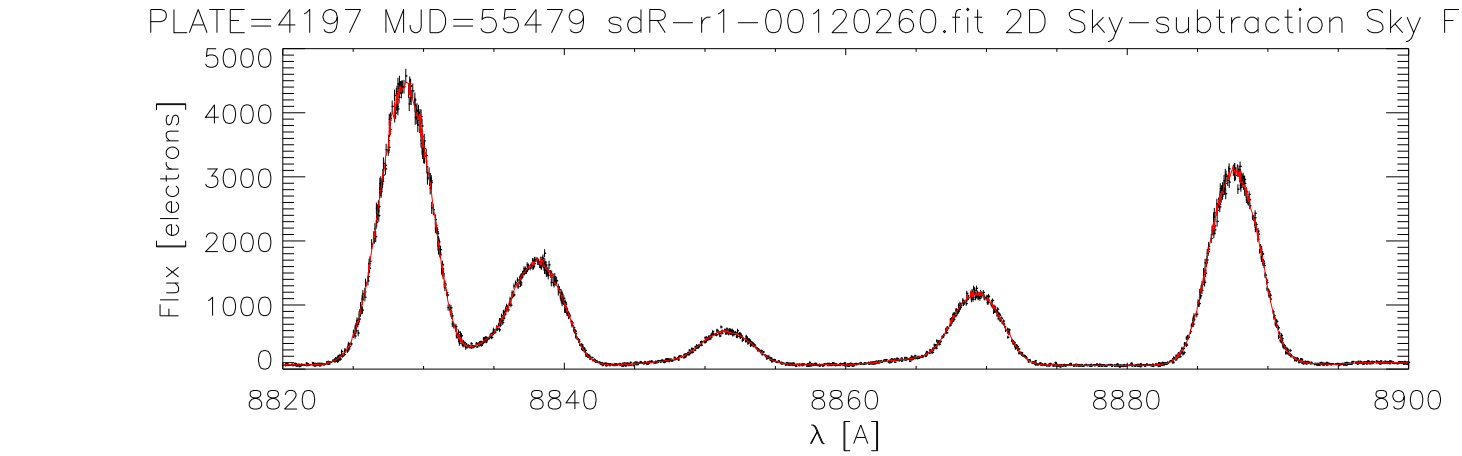

PLATE=4197 MJD=55479 sdR-r1-00120260.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

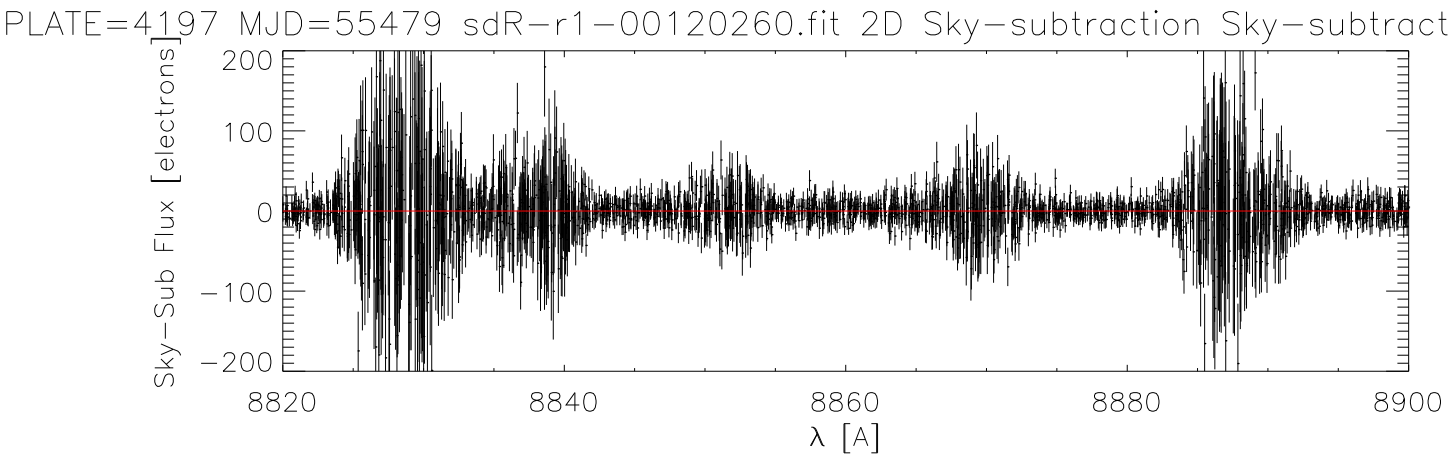

PLATE=4197 MJD=55479 sdR-r1-00120260.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
-100
-200
-300
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 40

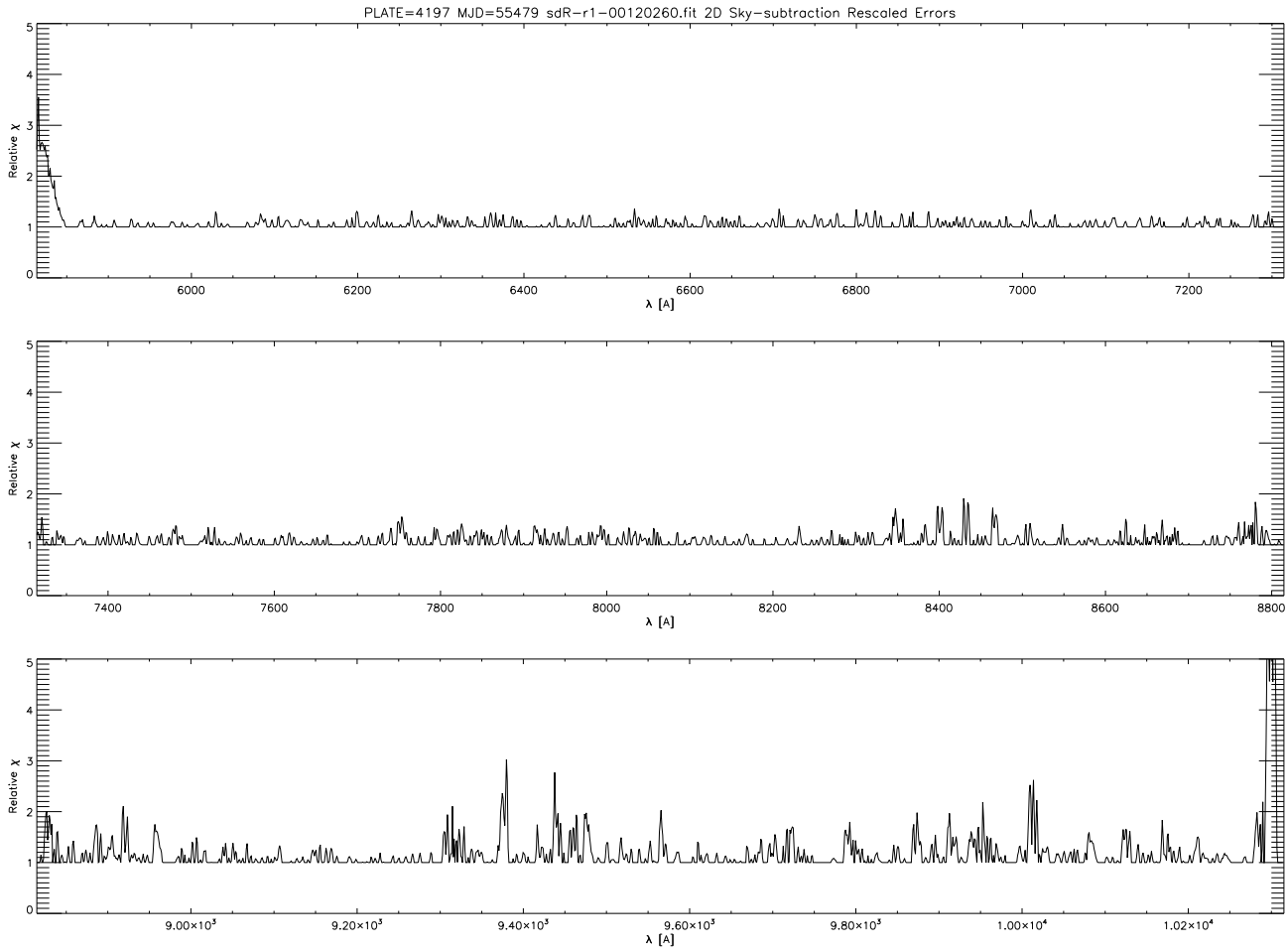


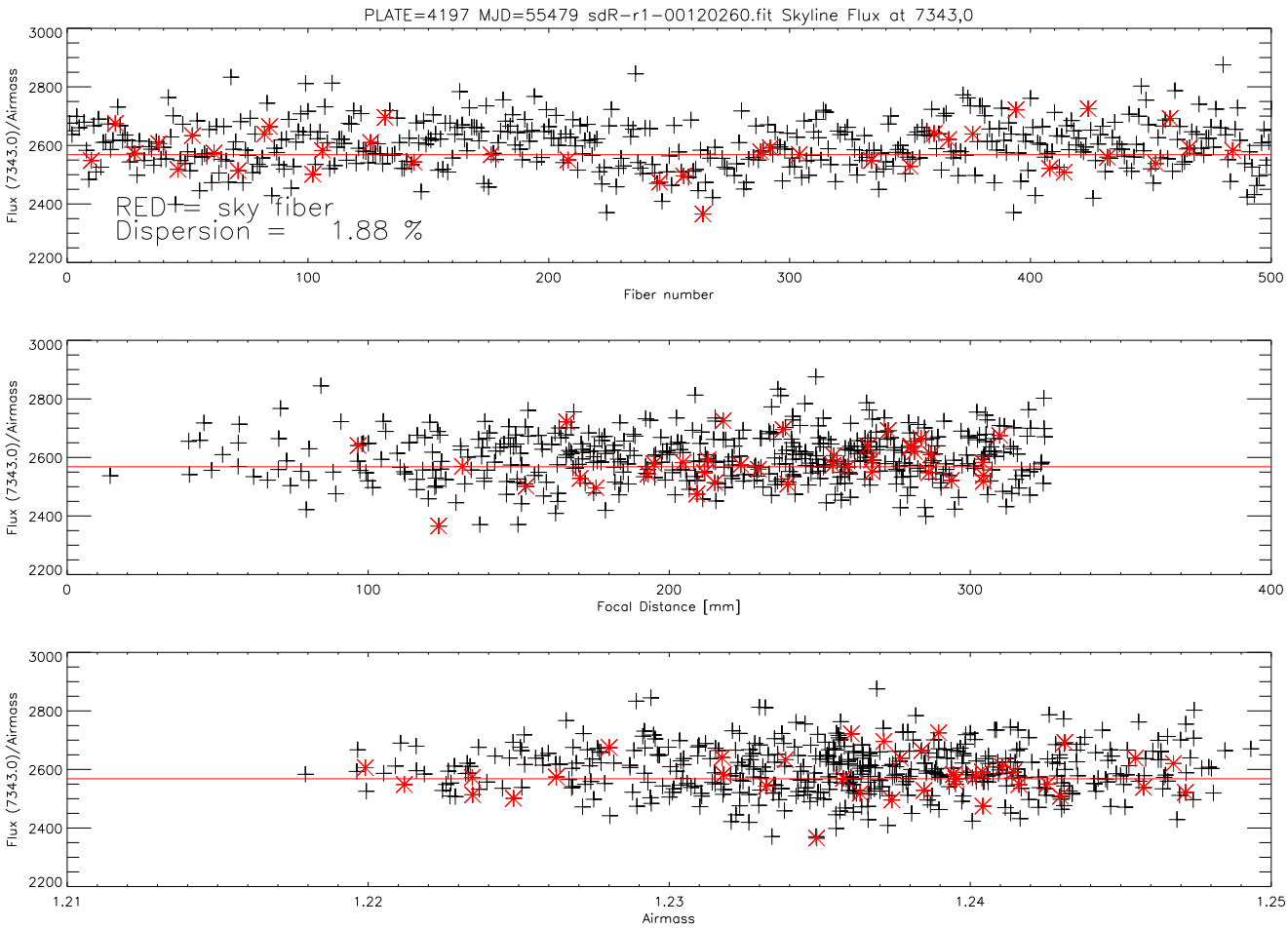

PLATE=4197 MJD=55479 sdR-r1-00120260.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

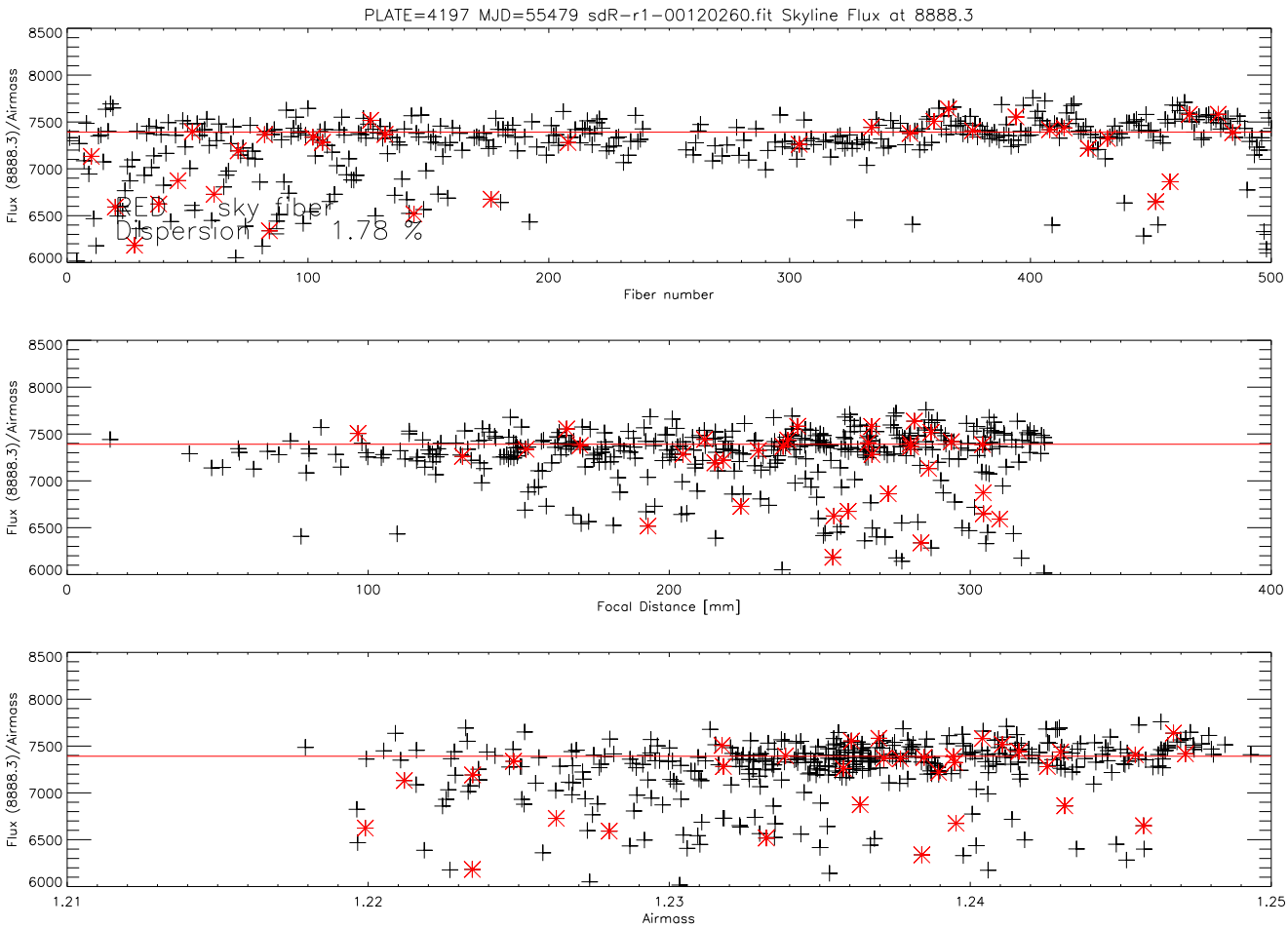

PLATE=4197 MJD=55479 sdR-r1-00120260.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]


PLATE=4197 MJD=55479 sdR-r1-00120260.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
200
100
0
-100
-200
8820
8840
8860
8880
8900
λ [A]

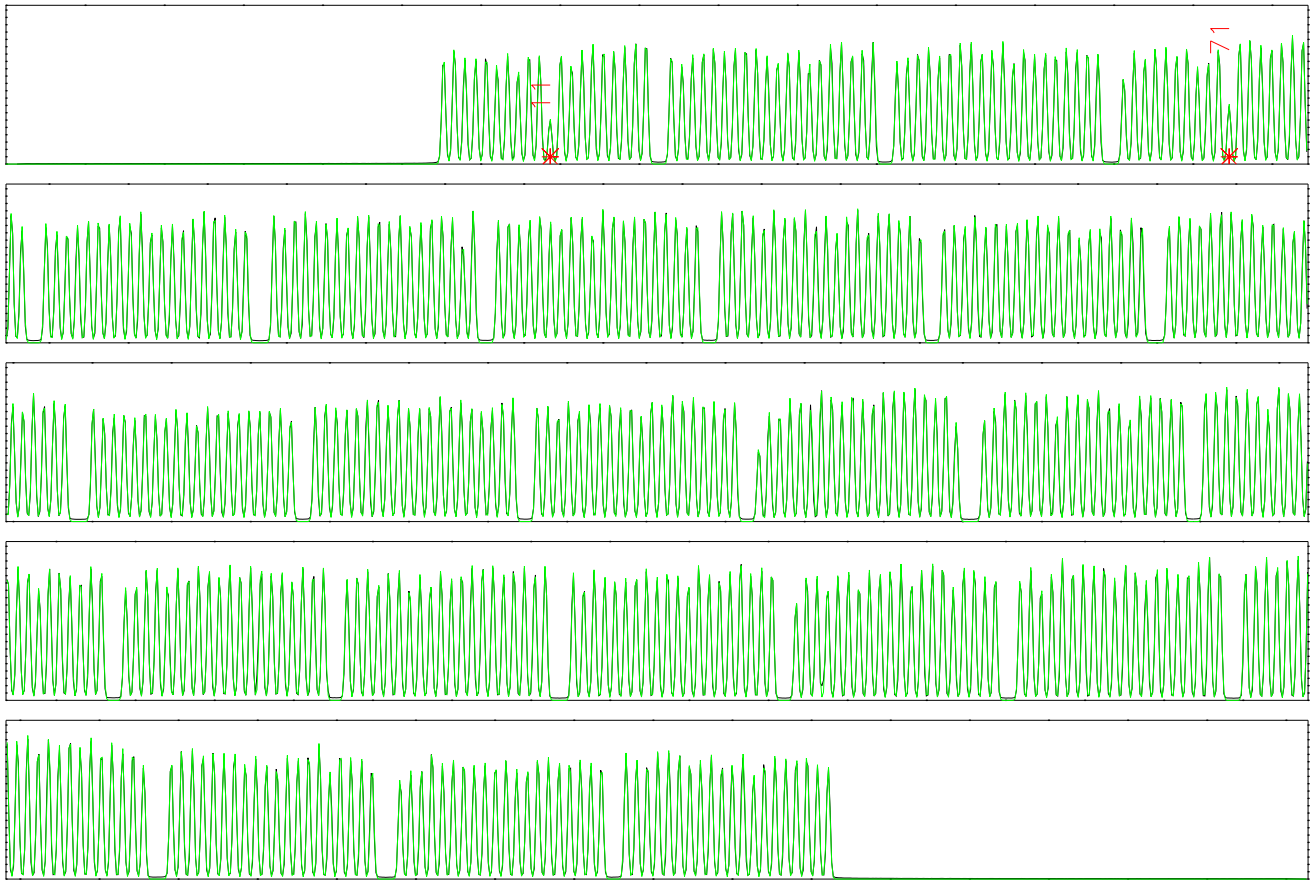
Number of sky fibers = 40

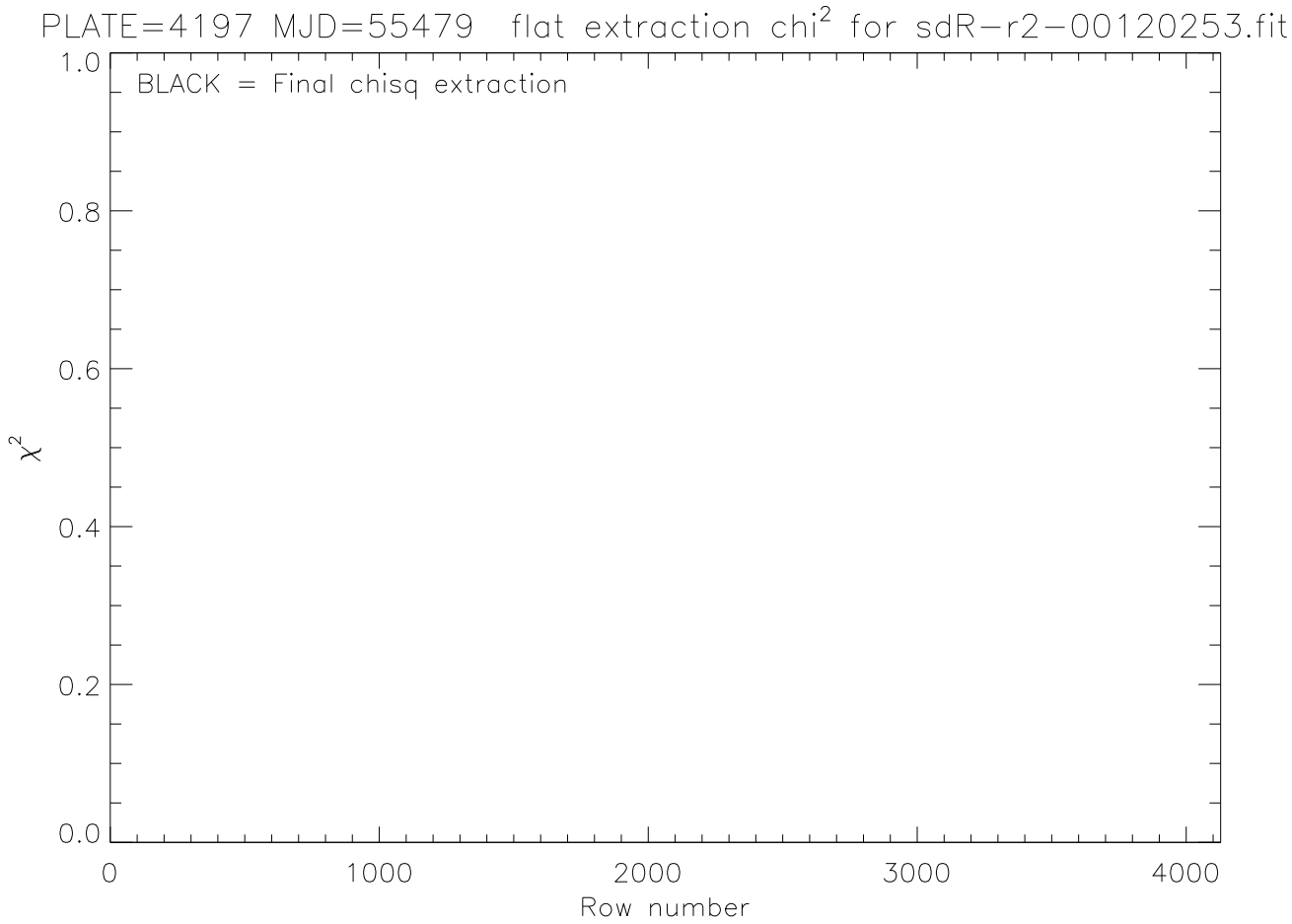


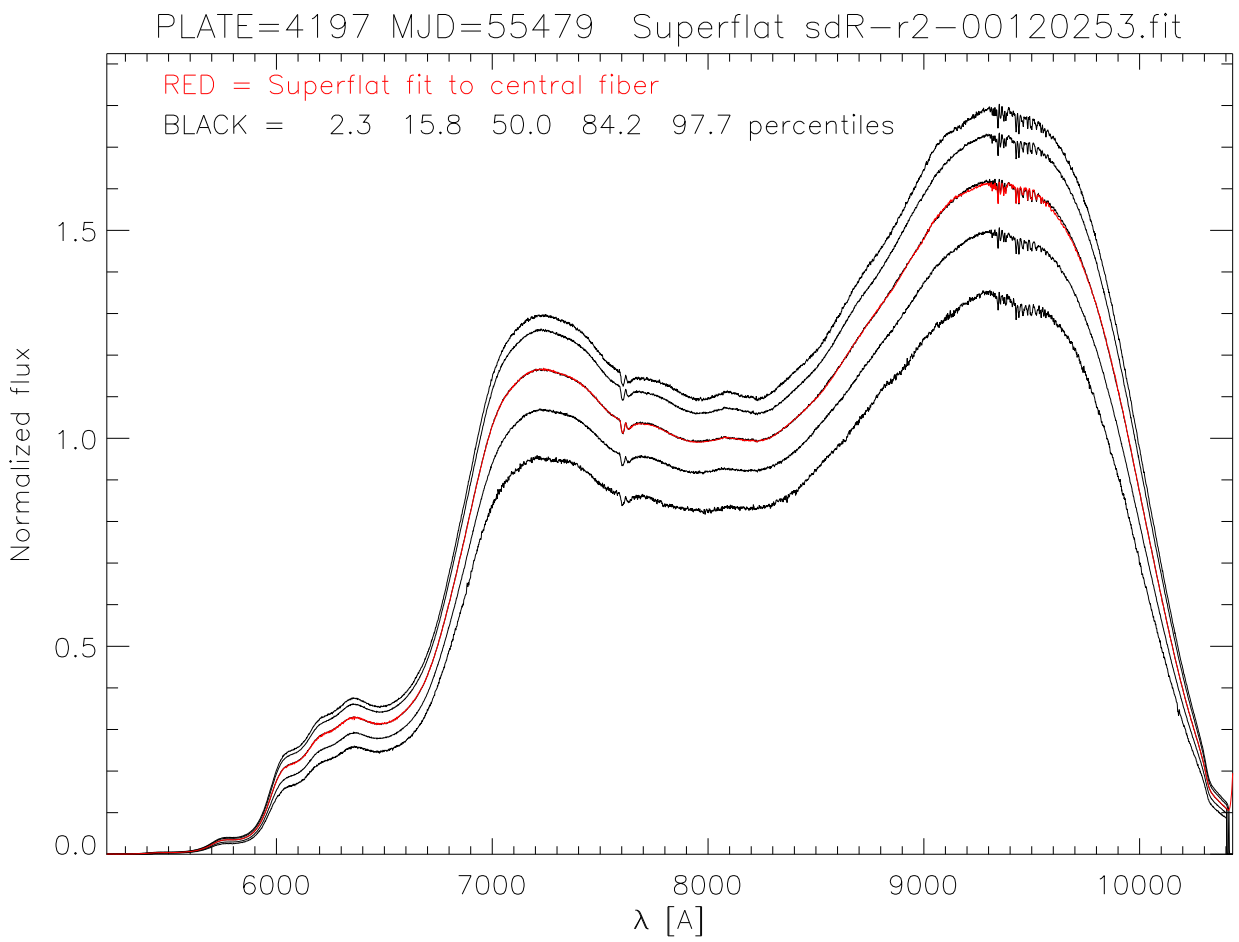

PLATE=4197 MJD=55479 sdR-r1-00120260.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
Fiber number
RED+= sky fiber
Dispersion = 1.88 %
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

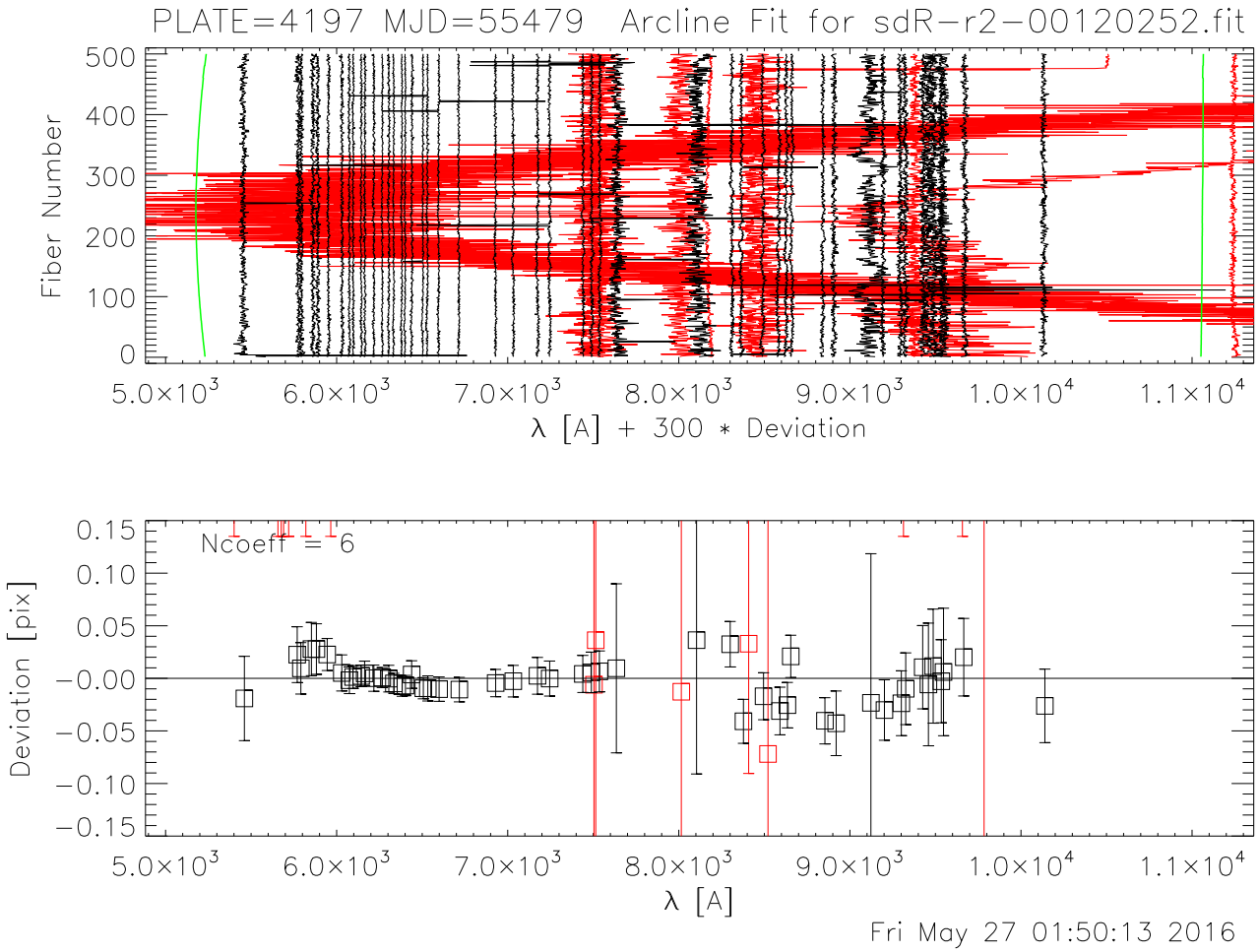

PLATE=4197 MJD=55479 sdR-r1-00120260.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
Fiber number
RED sky fiber
Dispersion = 1.78 %
Flux (8888.3)/Airmass
Focal Distance [mm]
Flux (8888.3)/Airmass
Airmass

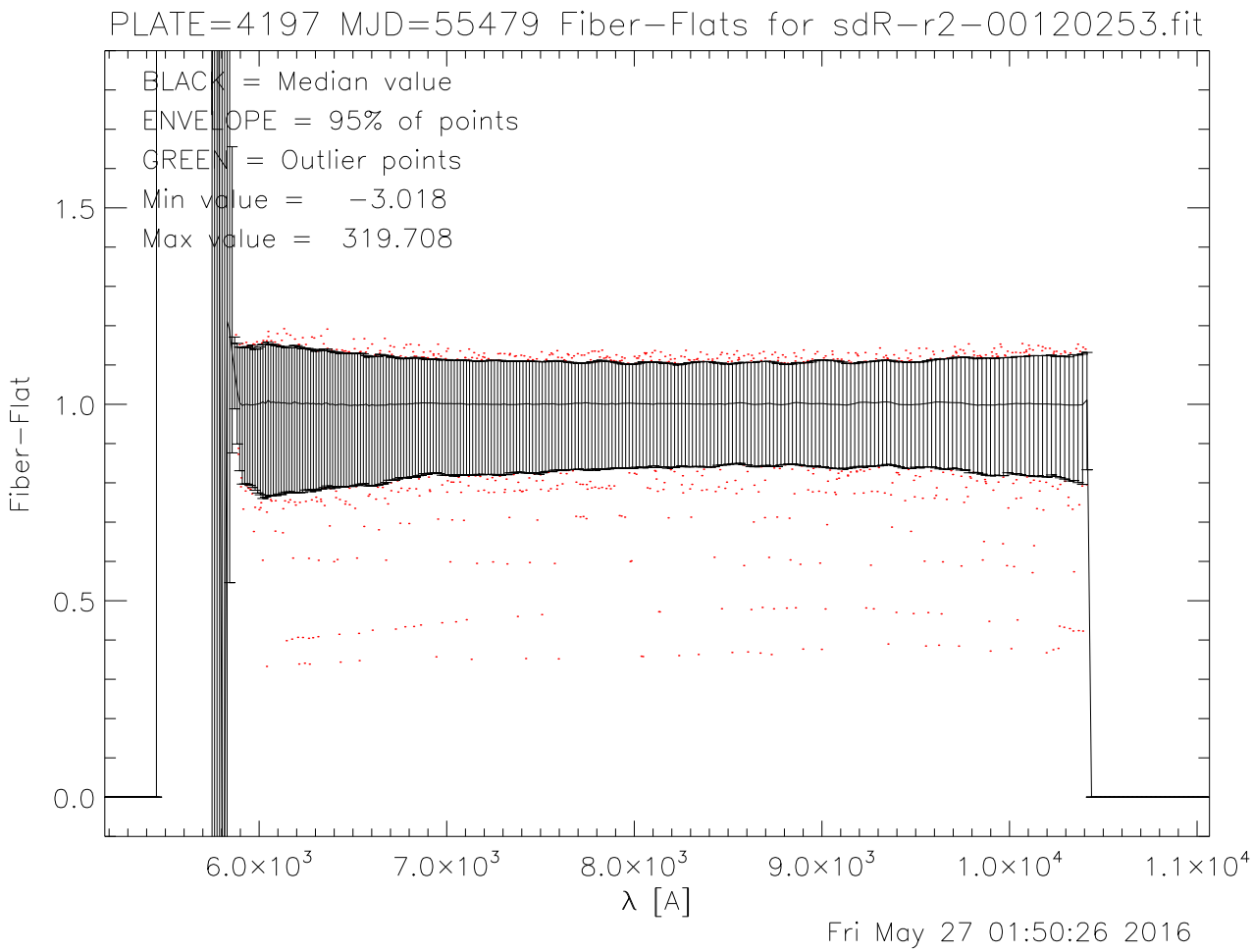
PLATE=4197 MJD=55479 Traces sdR-r2-00120253.fit

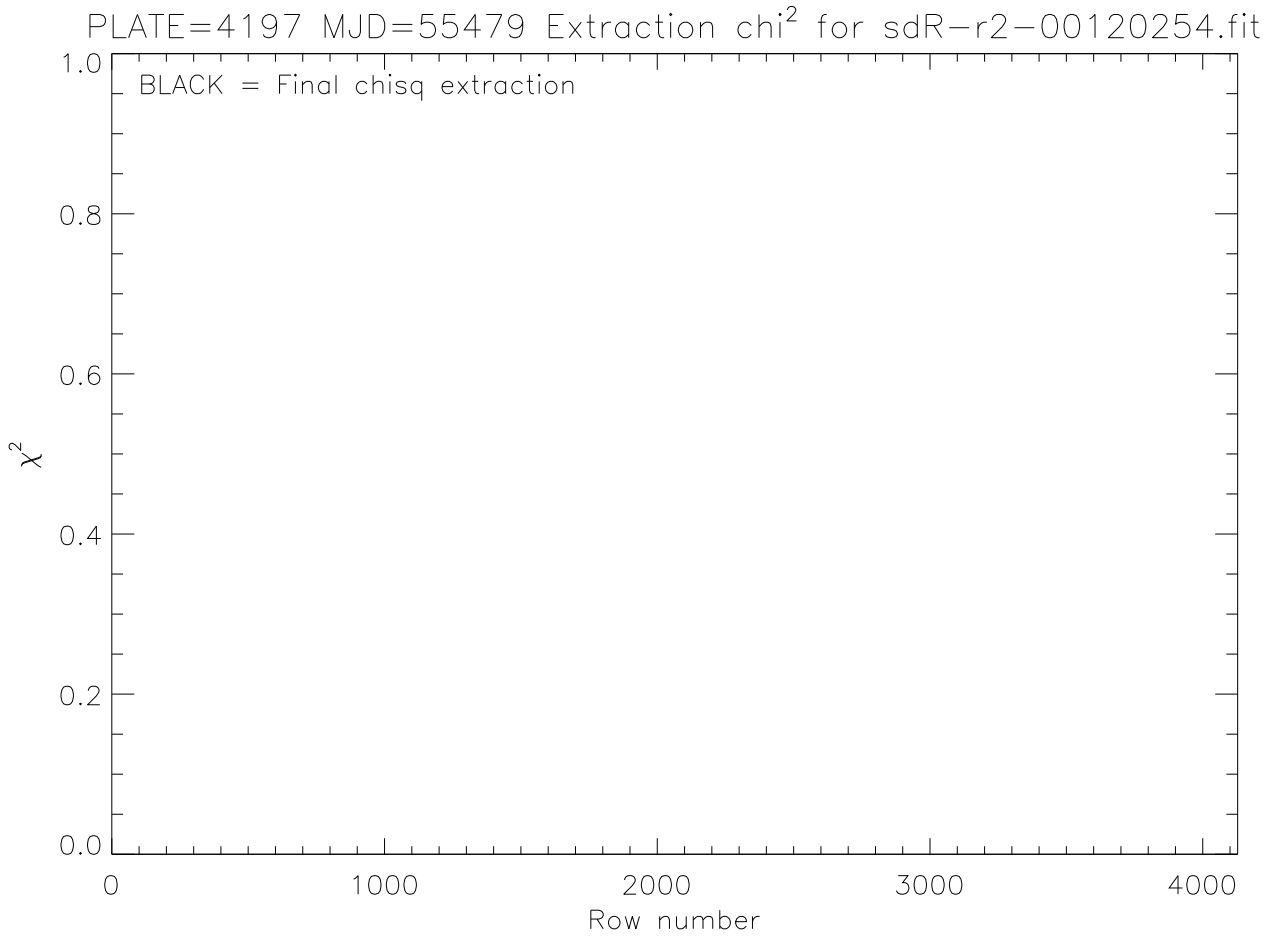


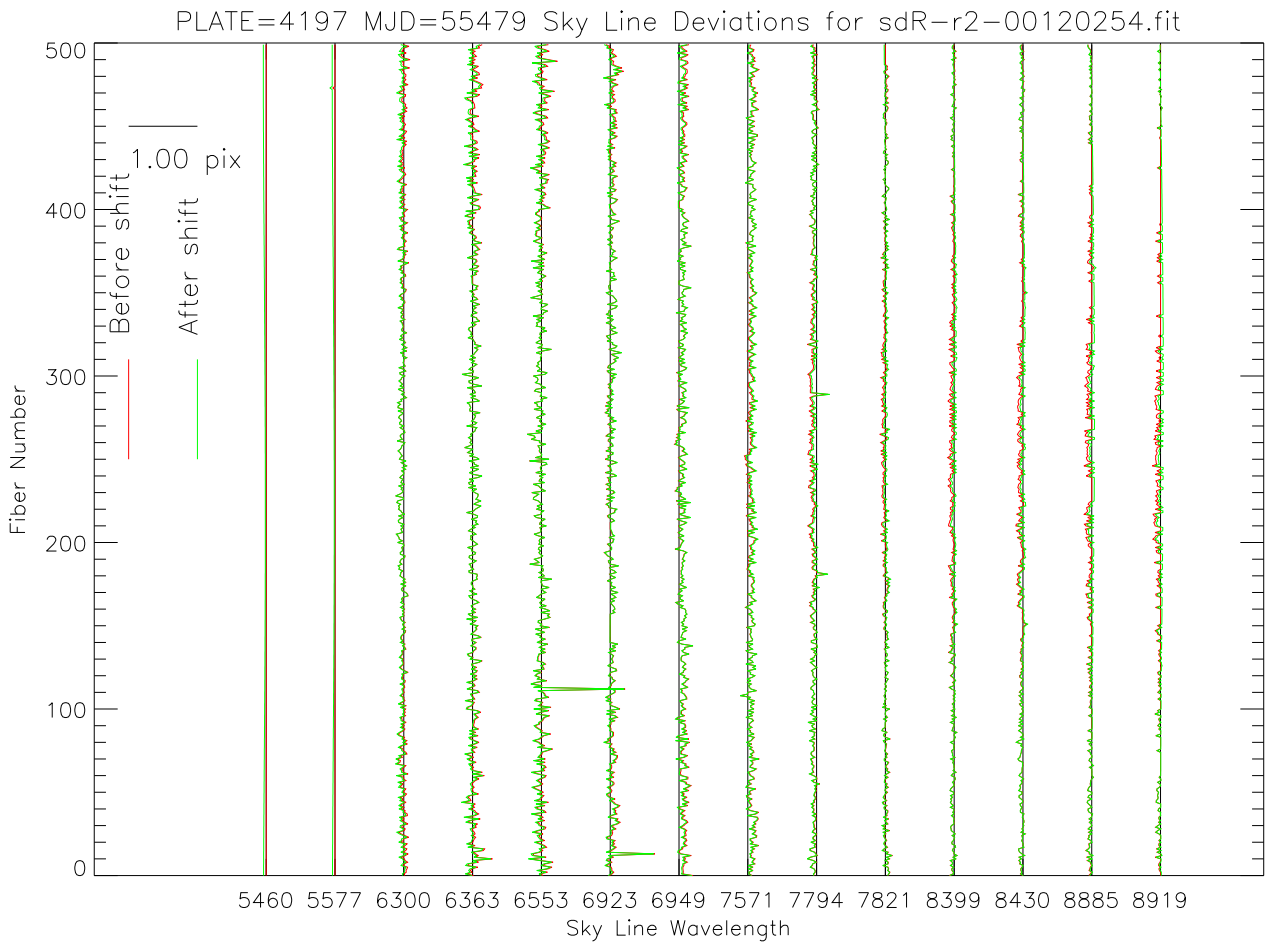

PLATE=4197 MJD=55479 flat extraction chi^2 for sdR-r2-00120253.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number

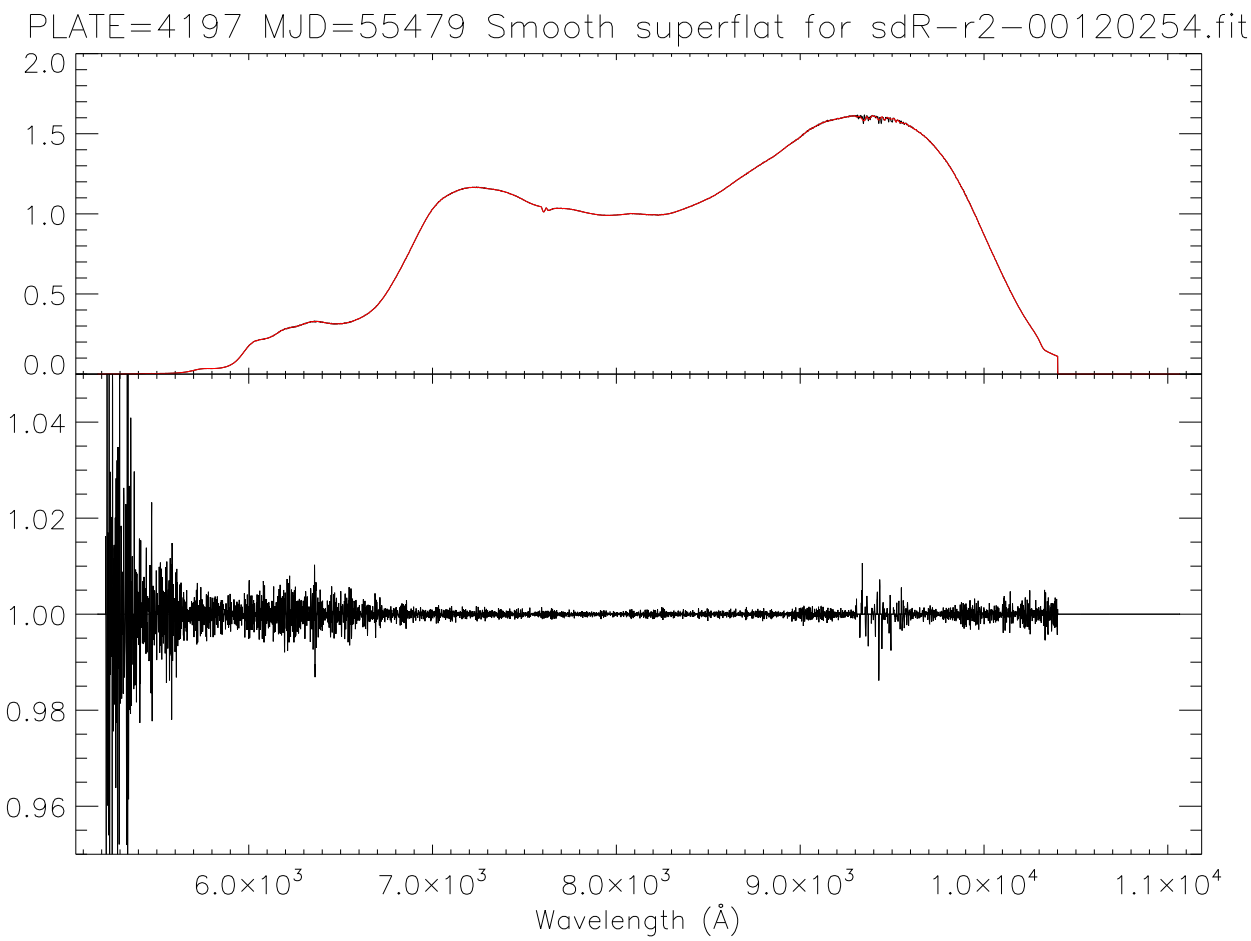

PLATE=4197 MJD=55479 Superflat sdR-r2-00120253.fit
RED = Superflat fit to central fiber
BLACK = 2.3 15.8 50.0 84.2 97.7 percentiles
Normalized flux
0.0
0.5
1.0
1.5
6000
7000
8000
9000
10000
λ [A]

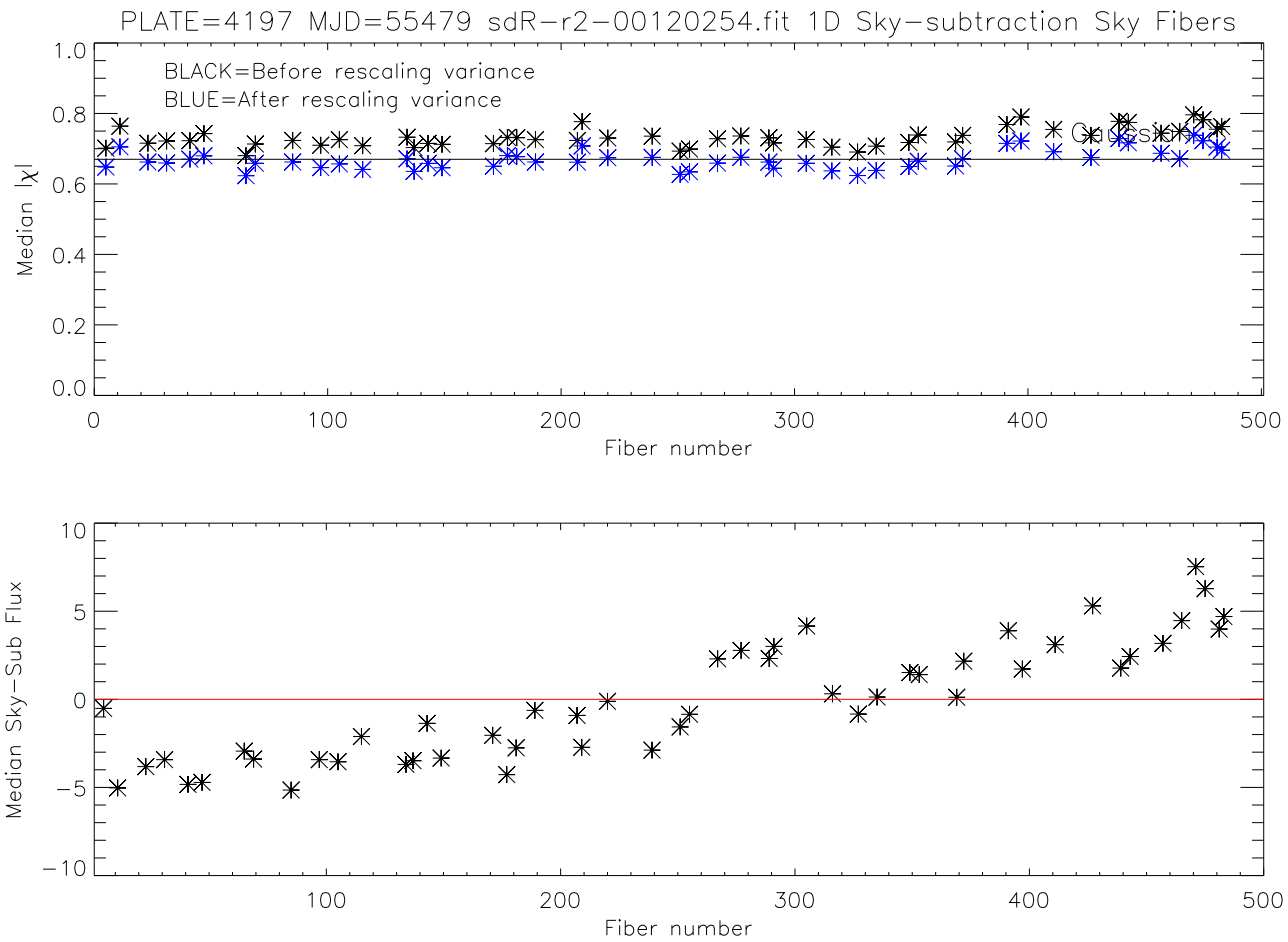

PLATE=4197 MJD=55479 Arcline Fit for sdR-r2-00120252.fit
Fiber Number
500
400
300
200
100
0
5.0×10^3
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
λ [A] + 300 * Deviation
Ncoeff = 6
Deviation [pix]
0.15
0.10
0.05
−0.00
−0.05
−0.10
−0.15
λ [A]
Fri May 27 01:50:13 2016

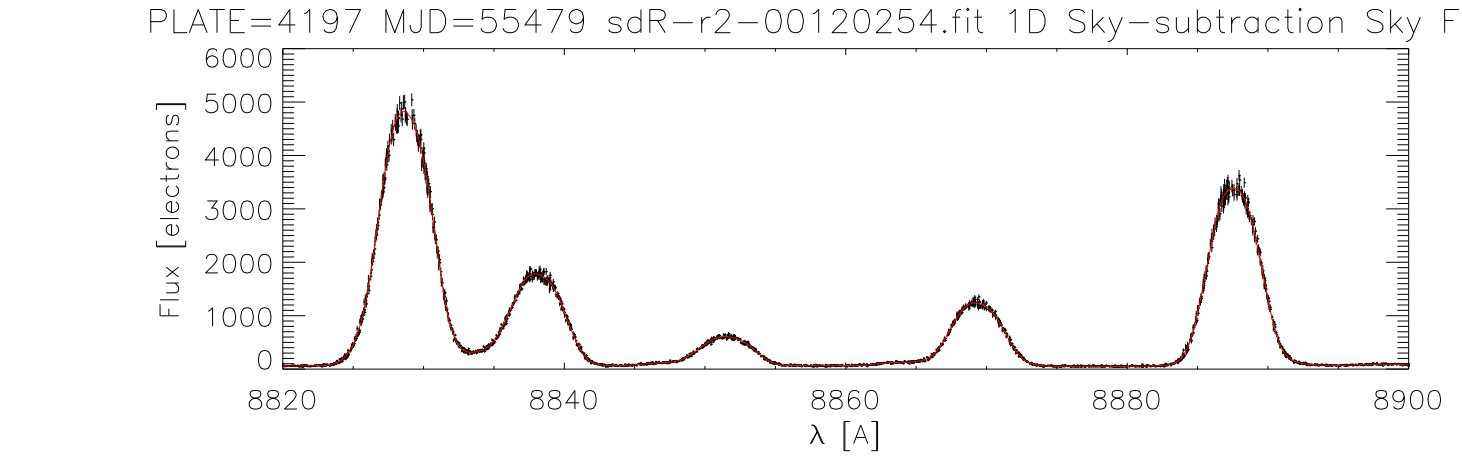

PLATE=4197 MJD=55479 Fiber−Flats for sdR−r2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −3.018
Max value = 319.708
Fiber−Flat
1.5
1.0
0.5
0.0
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
λ [A]
Fri May 27 01:50:26 2016

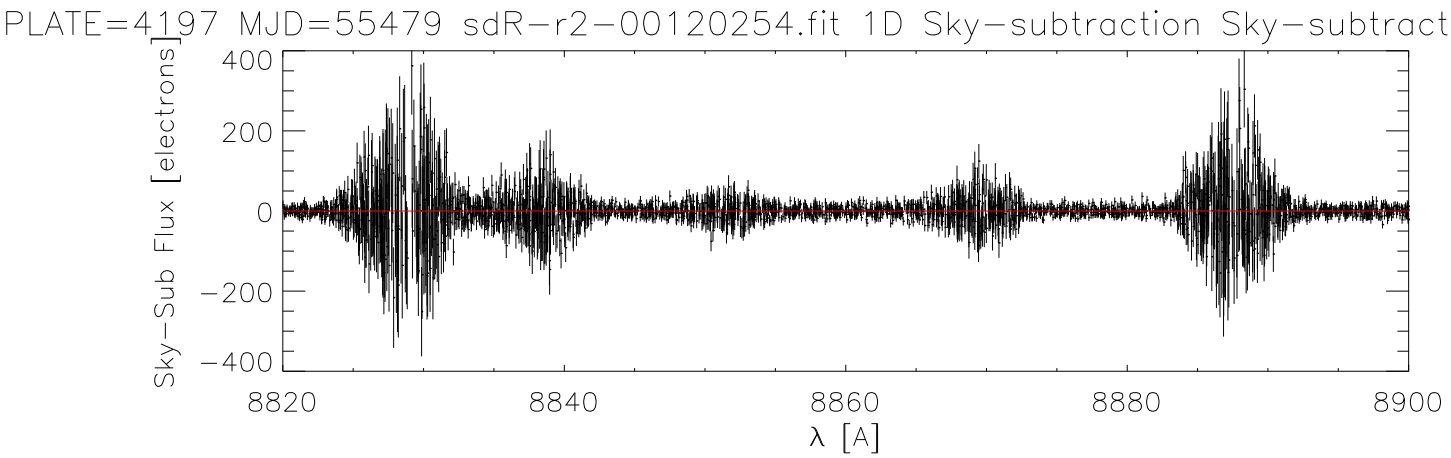

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r2−00120254.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r2-00120254.fit
Before shift
After shift
1.00 pix
Fiber Number
0
100
200
300
400
500
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength

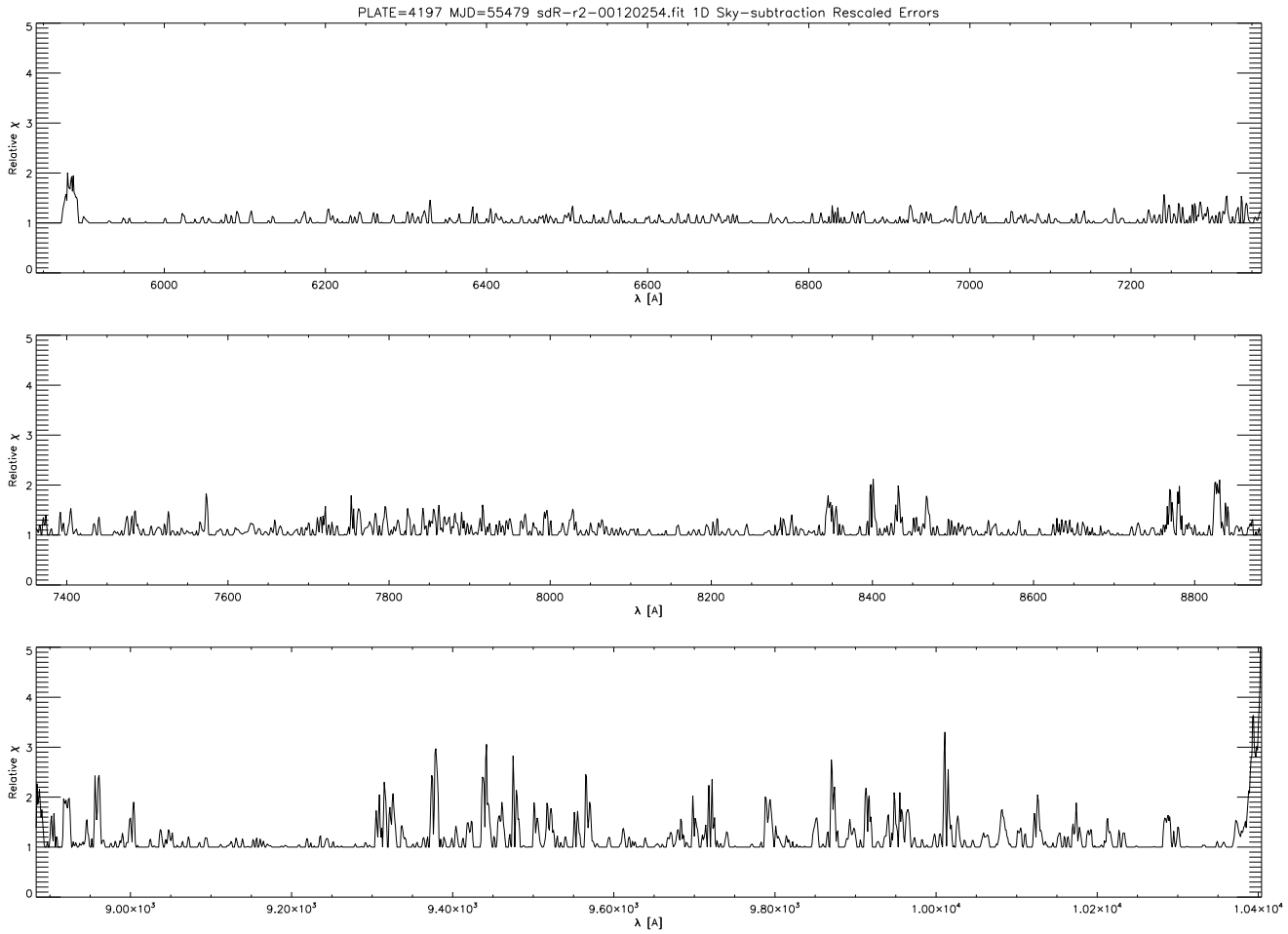

PLATE=4197 MJD=55479 Smooth superflat for sdR-r2-00120254.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

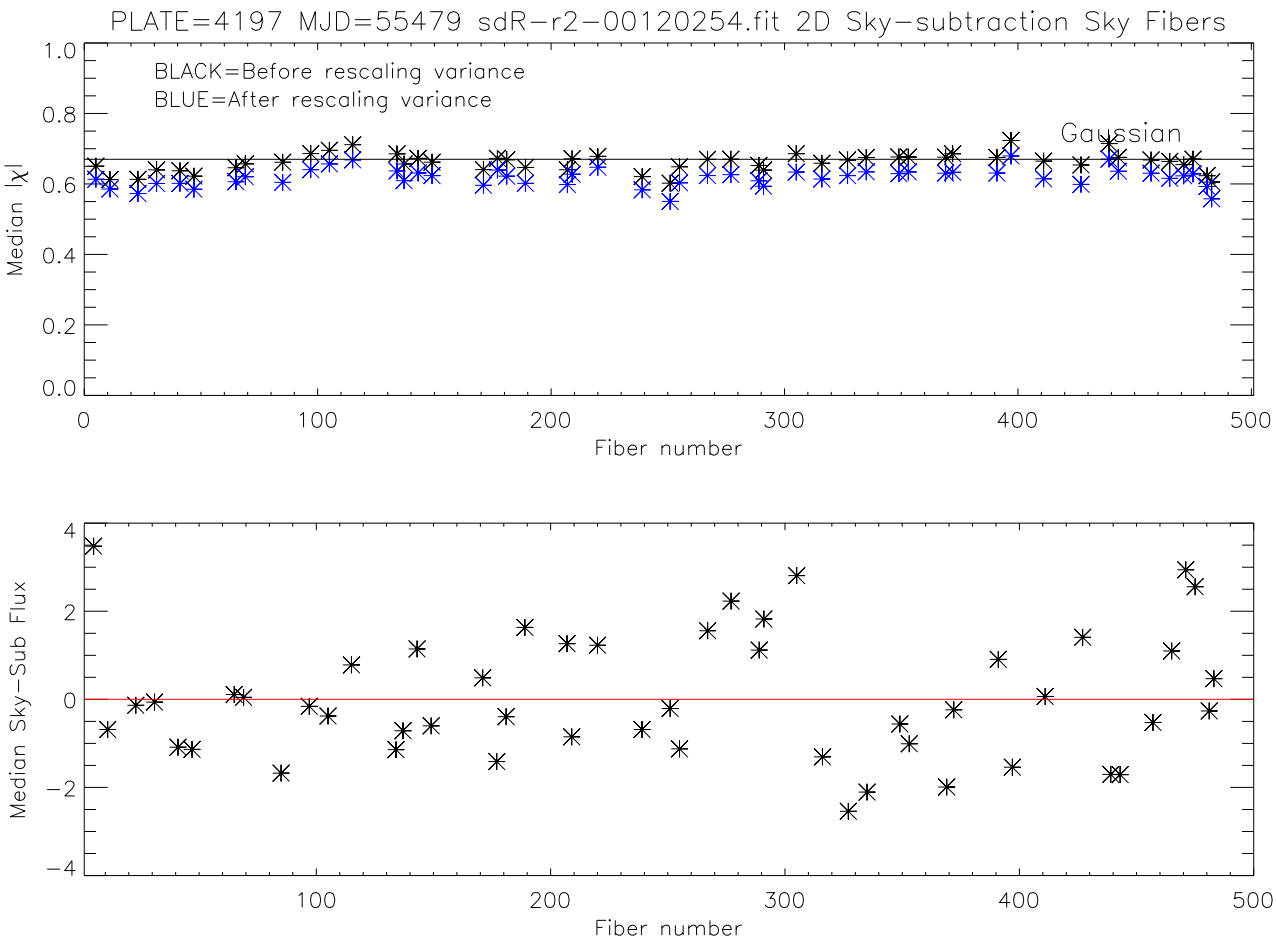

PLATE=4197 MJD=55479 sdR-r2-00120254.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number


PLATE=4197 MJD=55479 sdR-r2-00120254.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
6000
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

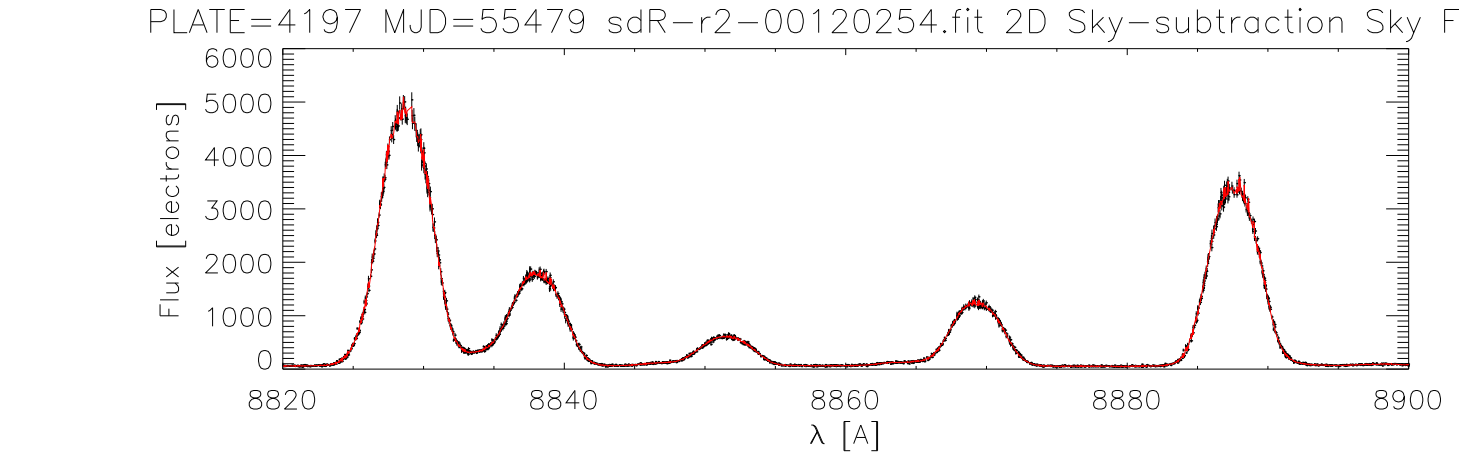

PLATE=4197 MJD=55479 sdR-r2-00120254.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
200
0
-200
-400
8820
8840
8860
8880
8900
λ [A]

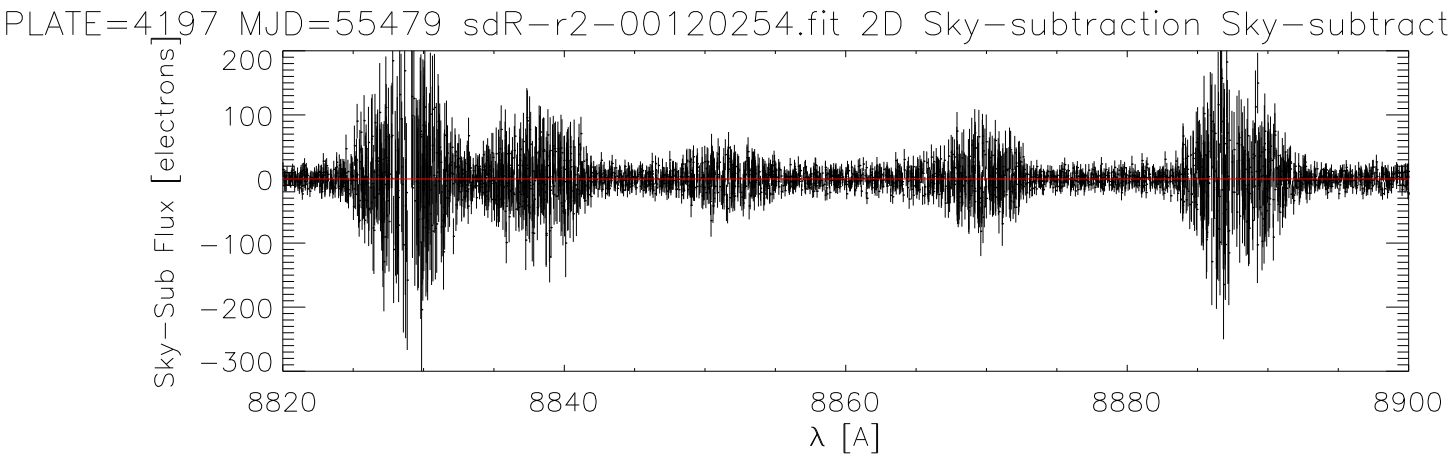
Number of sky fibers = 50



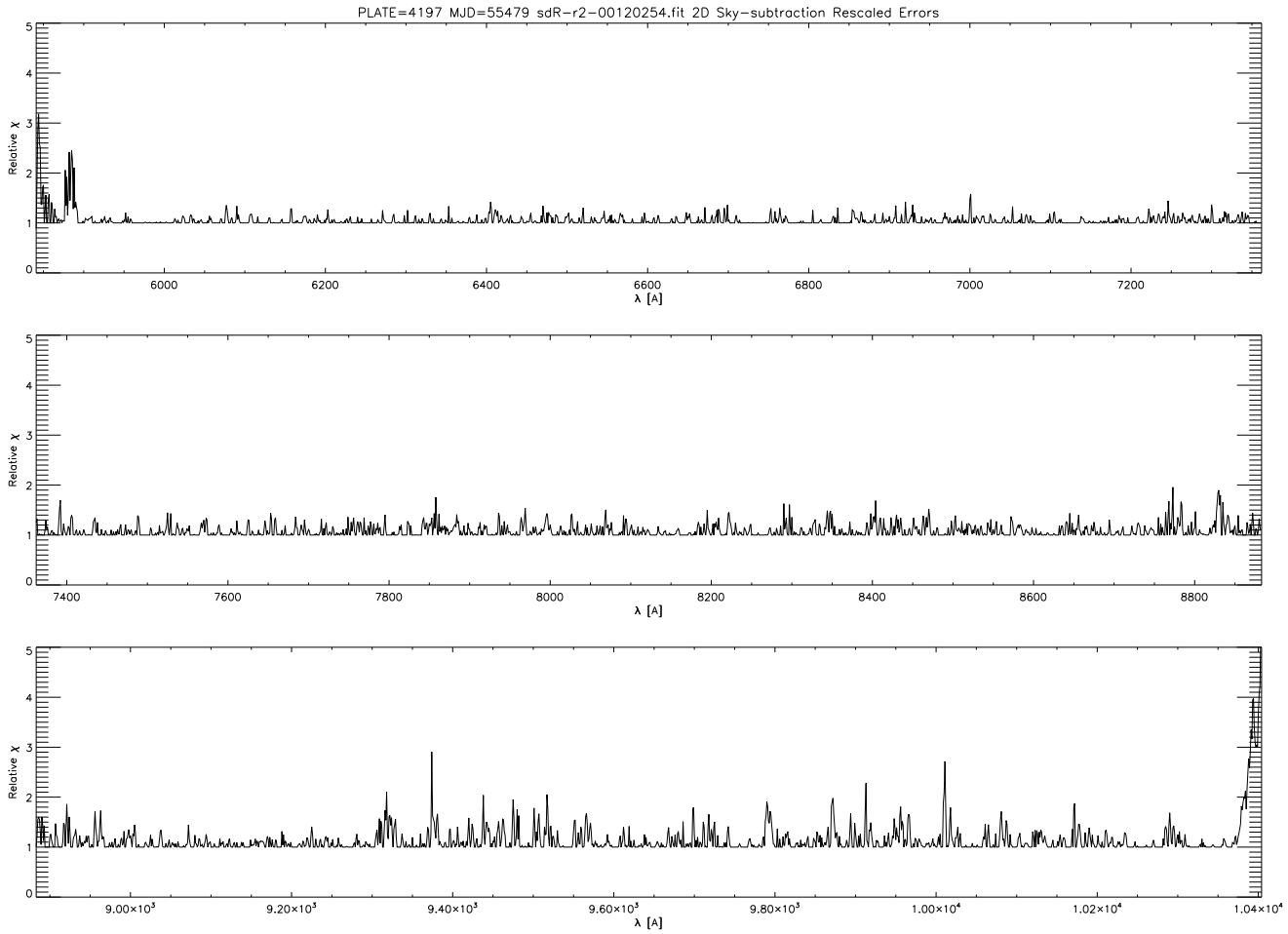

PLATE=4197 MJD=55479 sdR-r2-00120254.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
1.0
0.8
0.6
0.4
0.2
0.0
0
100
200
300
400
500

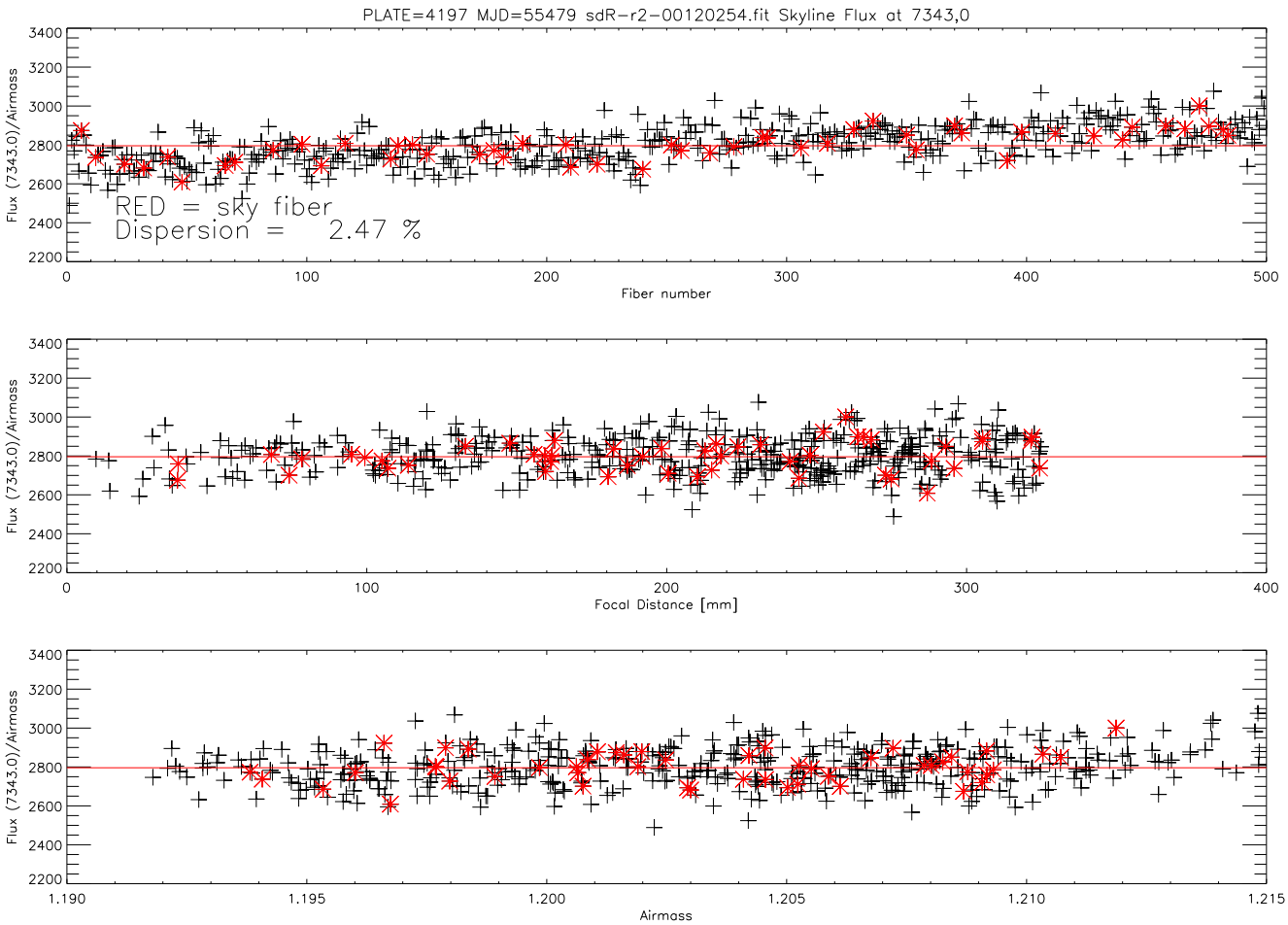
Median Sky-Sub Flux
Fiber number
4
2
0
−2
−4
100
200
300
400
500

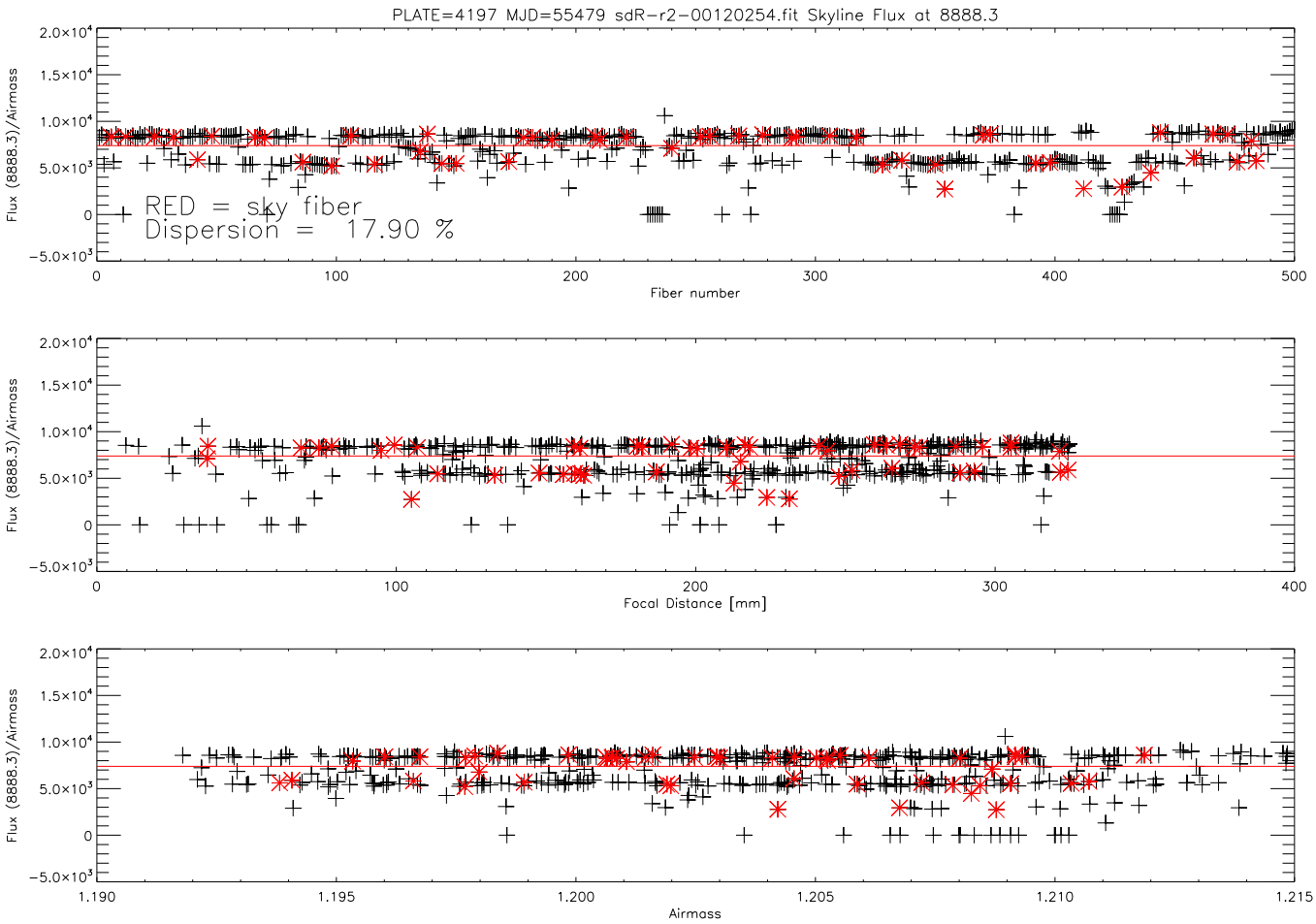

PLATE=4197 MJD=55479 sdR-r2-00120254.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
6000
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

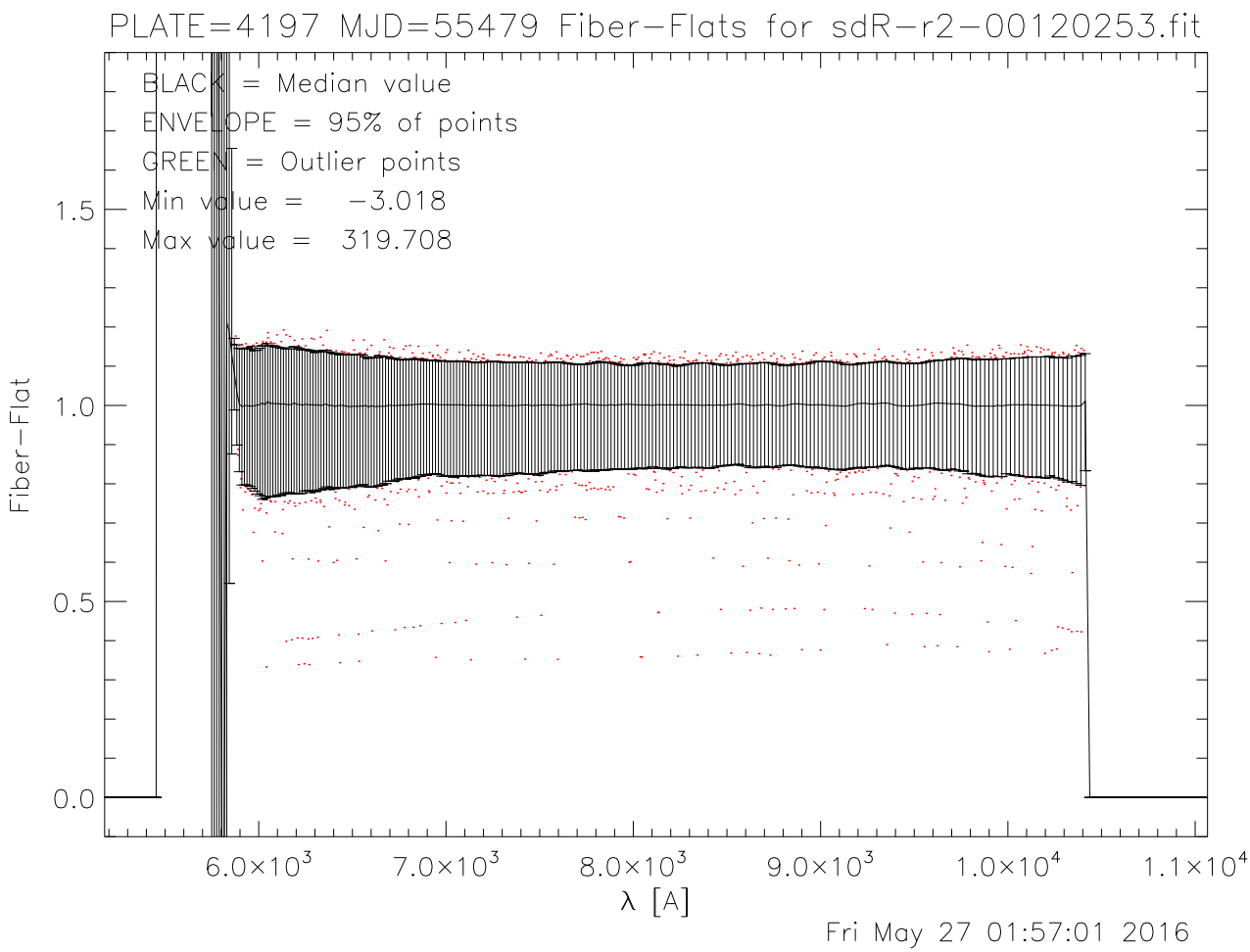

PLATE=4197 MJD=55479 sdR-r2-00120254.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
200
100
0
-100
-200
-300
8820
8840
8860
8880
8900
λ [A]

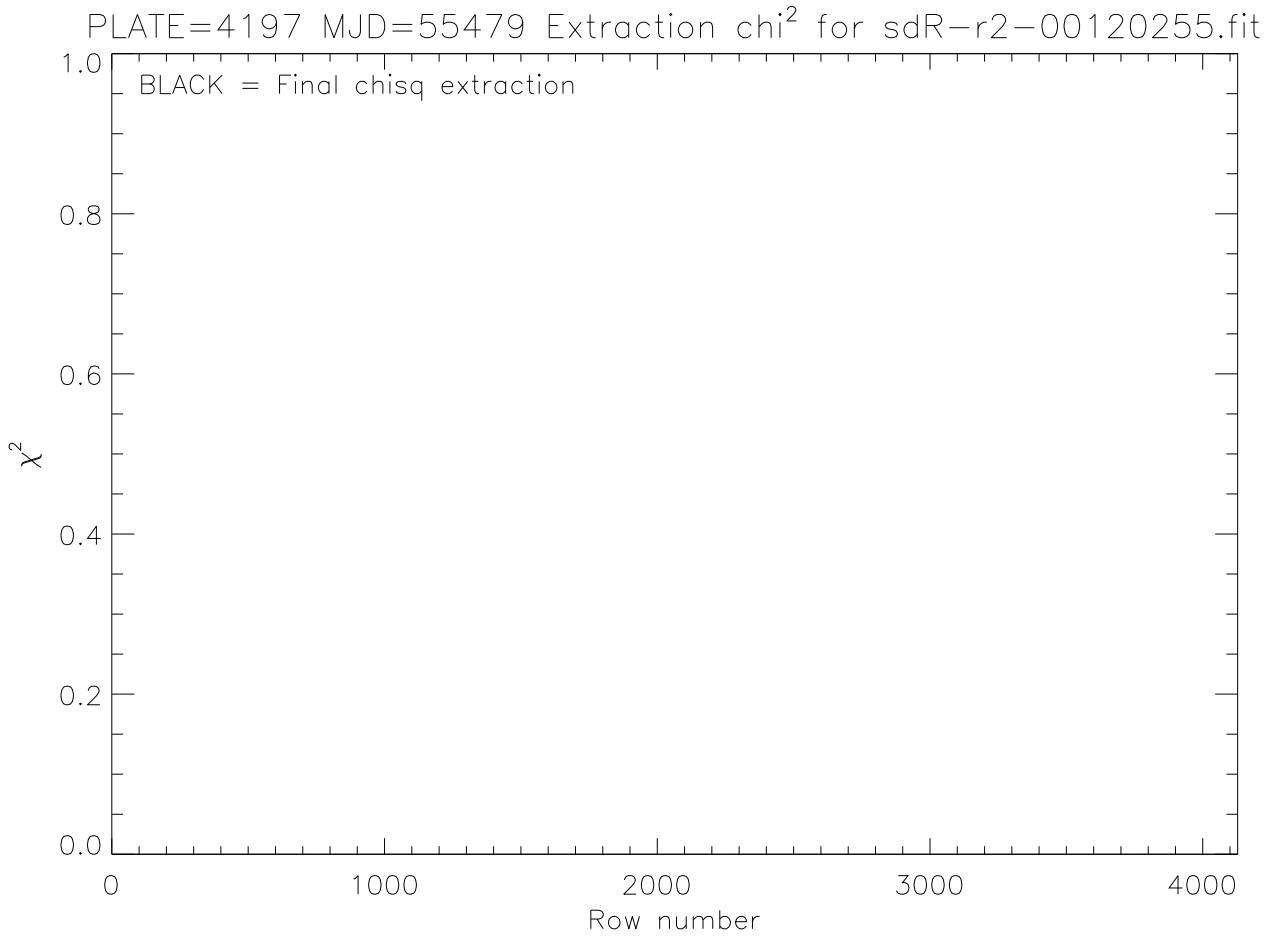
Number of sky fibers = 50

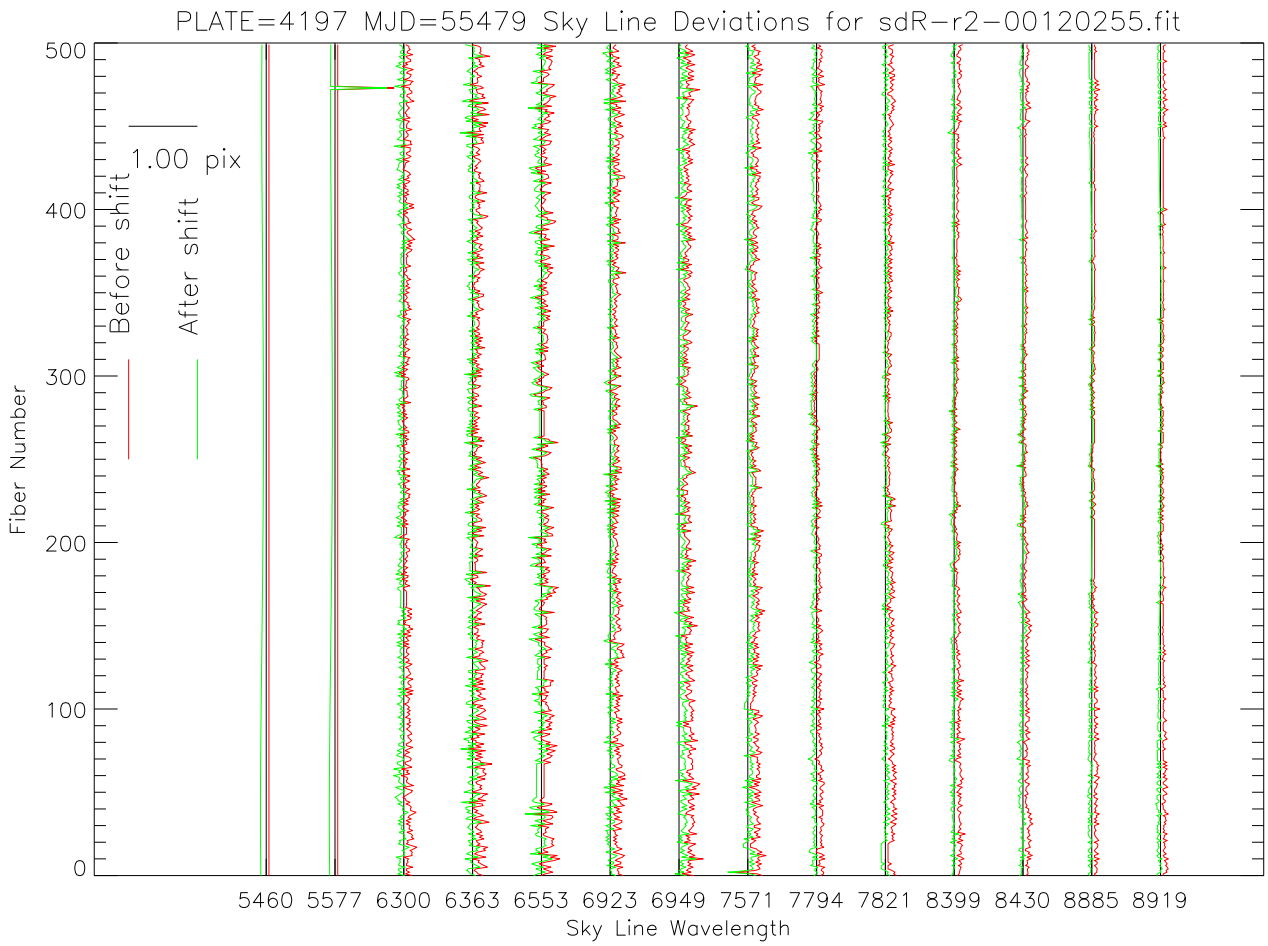


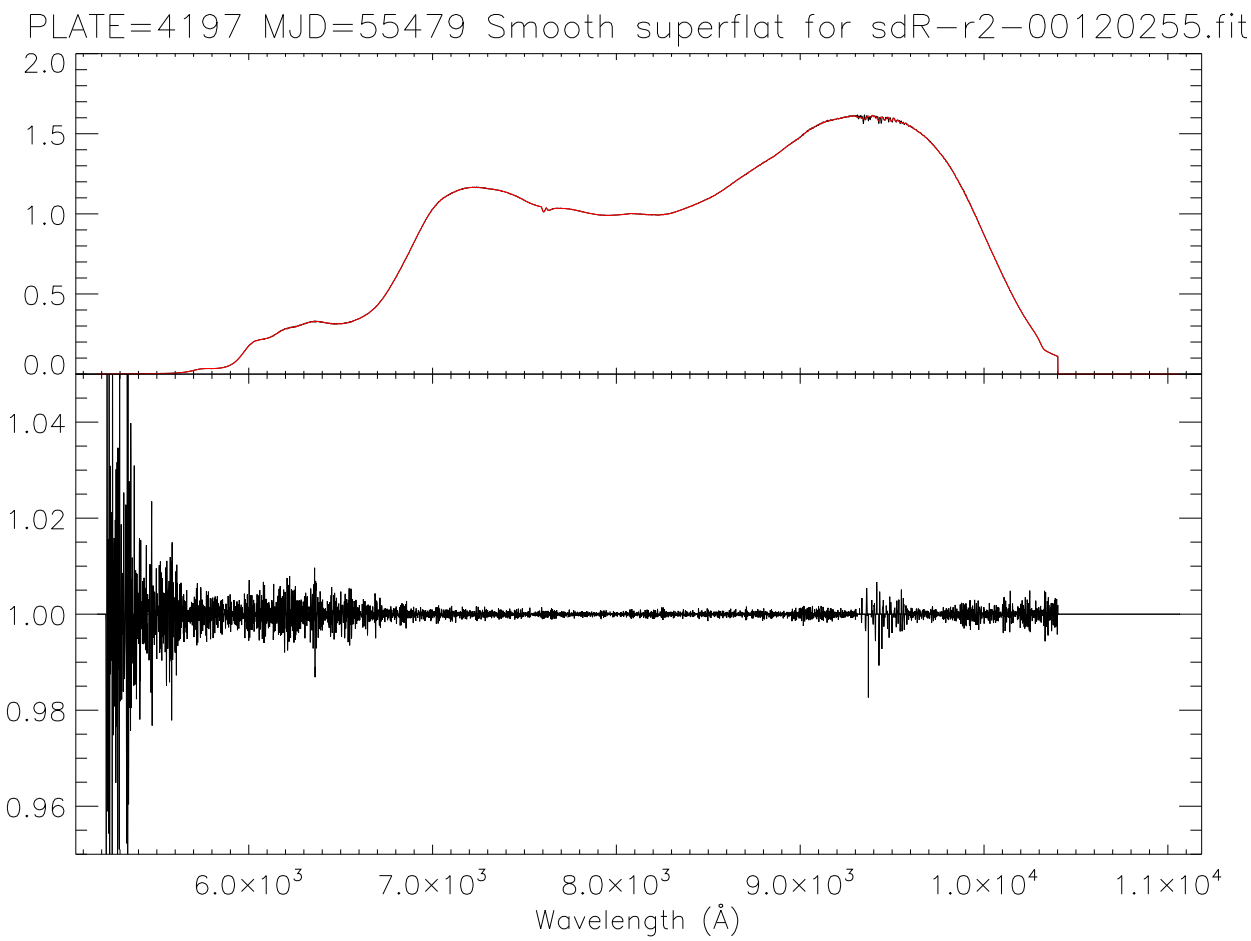

PLATE=4197 MJD=55479 sdR-r2-00120254.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 2.47 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

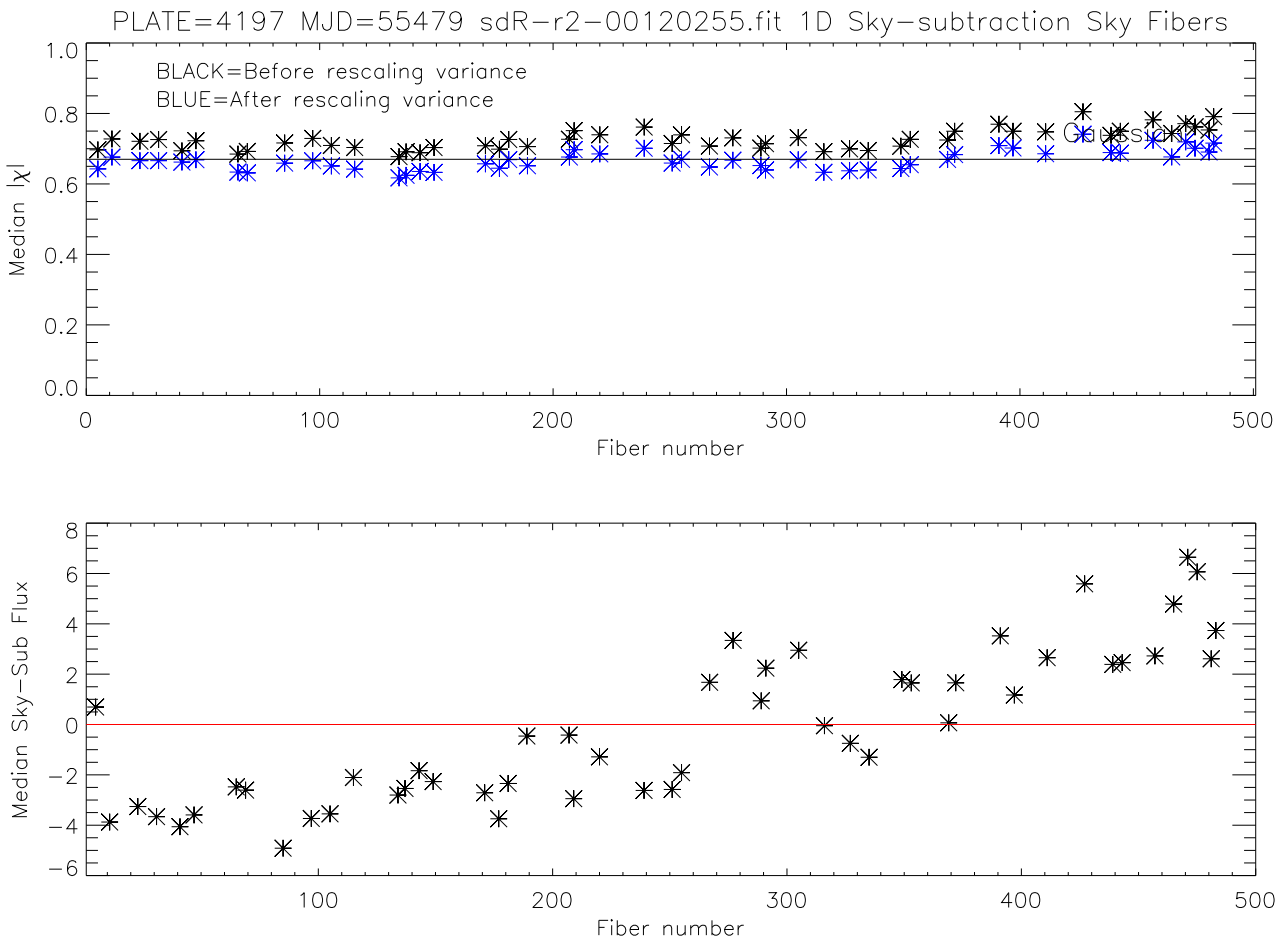

PLATE=4197 MJD=55479 sdR-r2-00120254.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
RED = sky fiber
Dispersion = 17.90 %
Fiber number
Flux (8888.3)/Airmass
Focal Distance [mm]
Flux (8888.3)/Airmass
Airmass

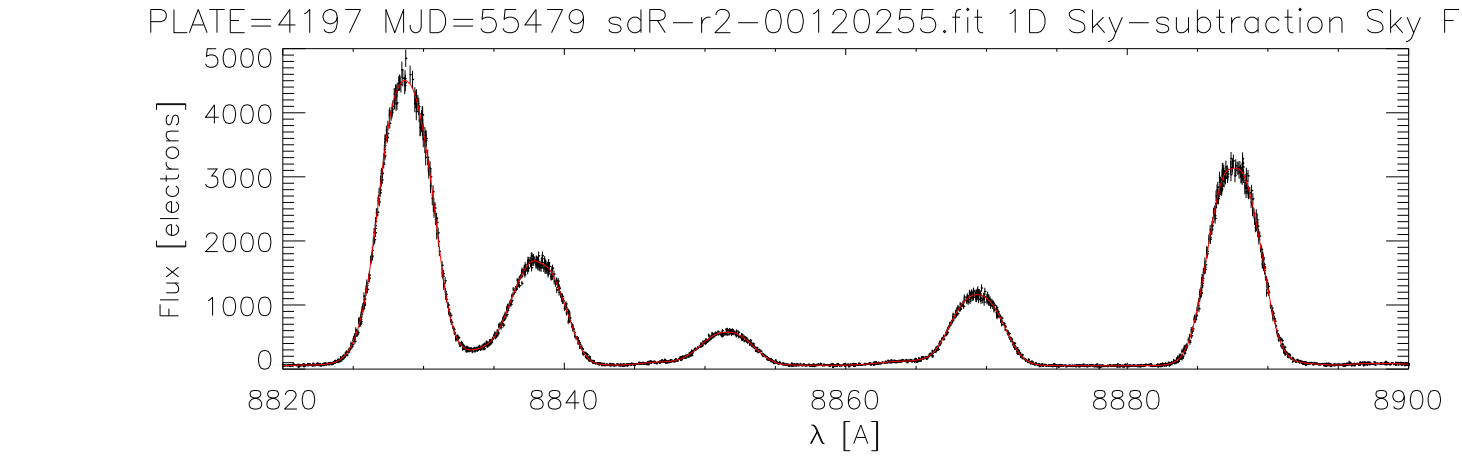

PLATE=4197 MJD=55479 Fiber−Flats for sdR−r2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −3.018
Max value = 319.708
Fiber−Flat
1.5
1.0
0.5
0.0
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
λ [A]
Fri May 27 01:57:01 2016

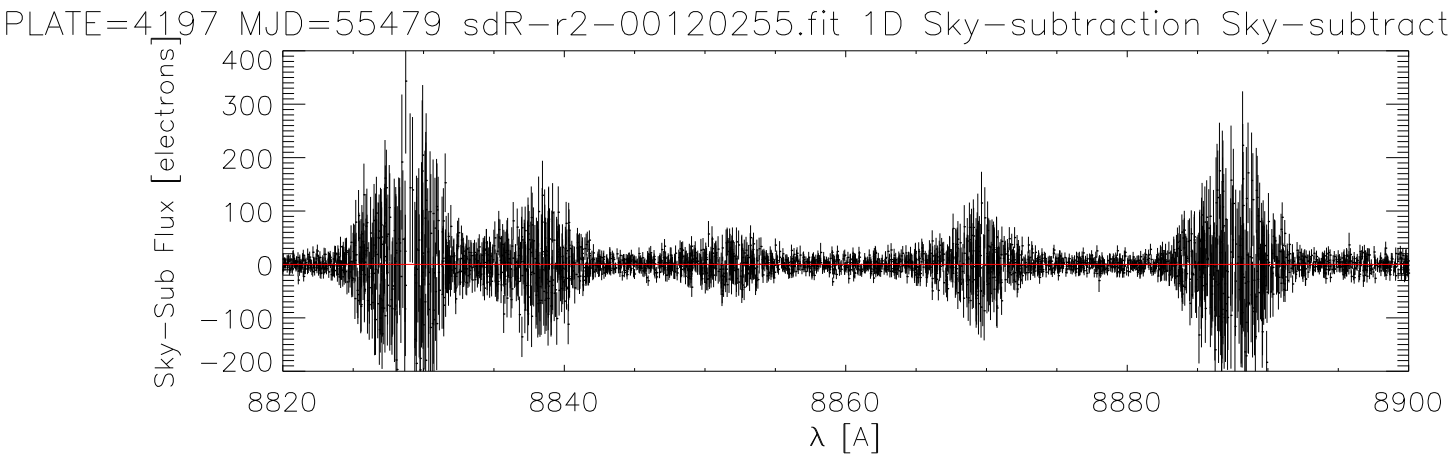

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r2−00120255.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r2-00120255.fit
Fiber Number
500
400
300
200
100
0
1.00 pix
Before shift
After shift
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength

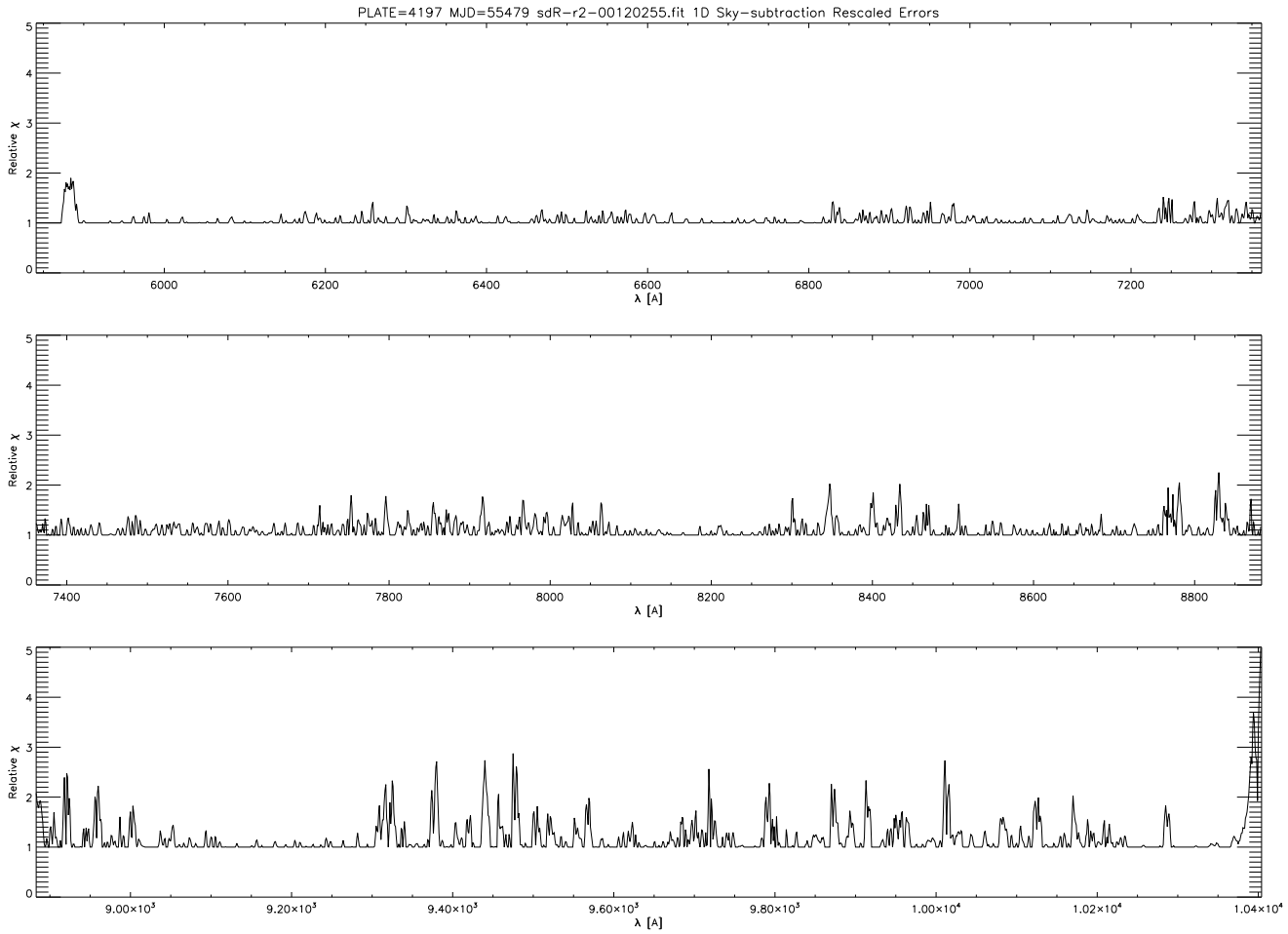

PLATE=4197 MJD=55479 Smooth superflat for sdR-r2-00120255.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

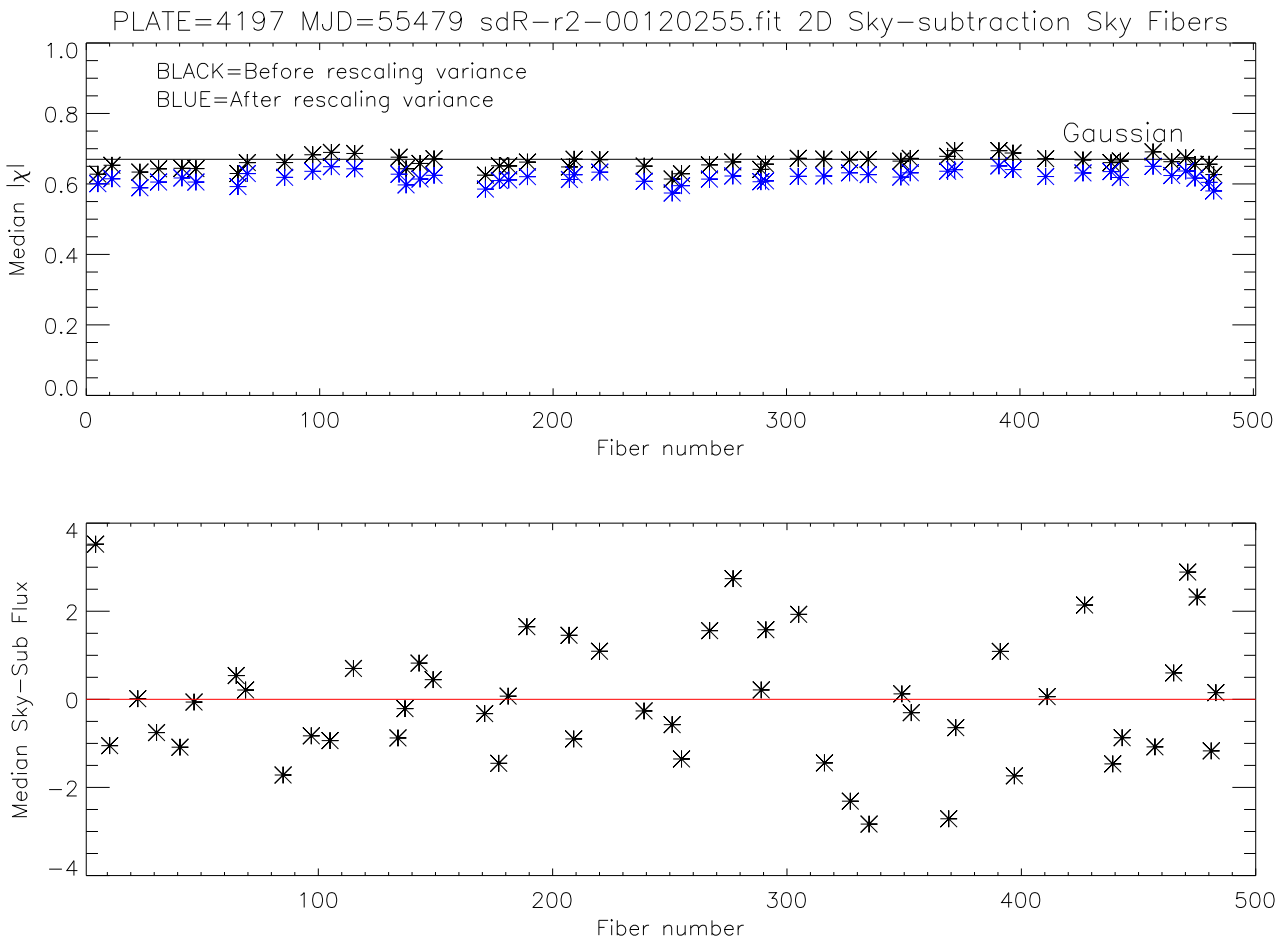

PLATE=4197 MJD=55479 sdR-r2-00120255.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

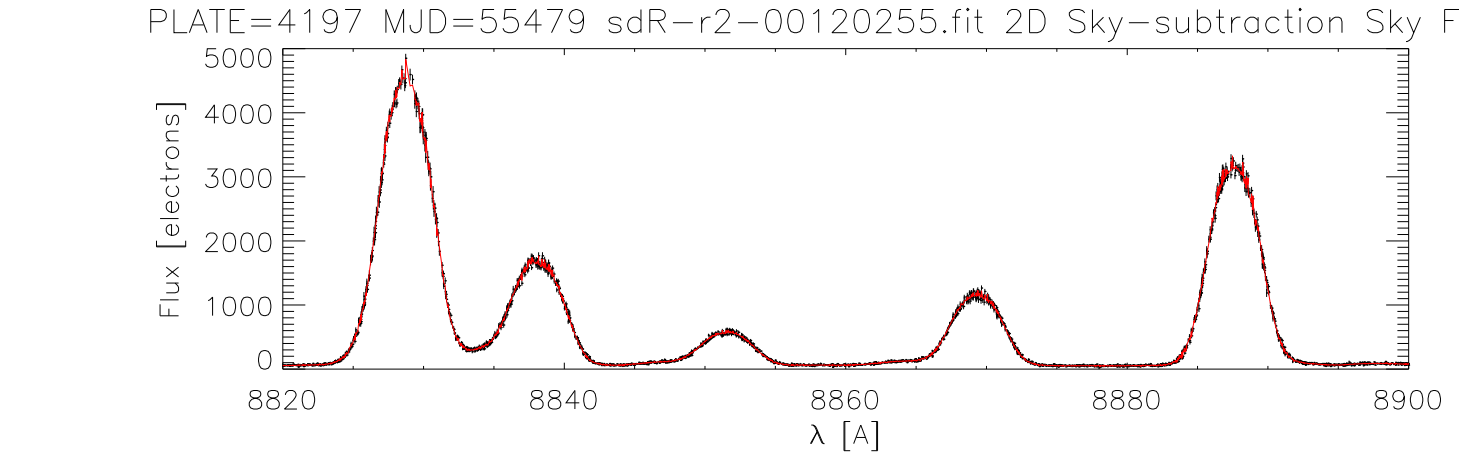

PLATE=4197 MJD=55479 sdR-r2-00120255.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

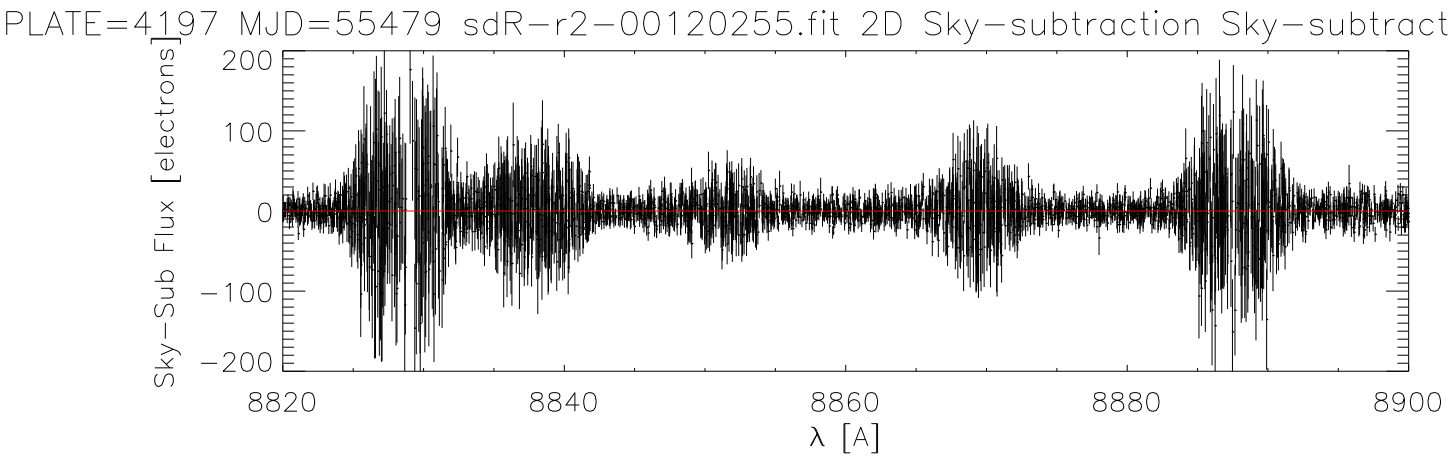

PLATE=4197 MJD=55479 sdR-r2-00120255.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
300
200
100
0
-100
-200
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 50

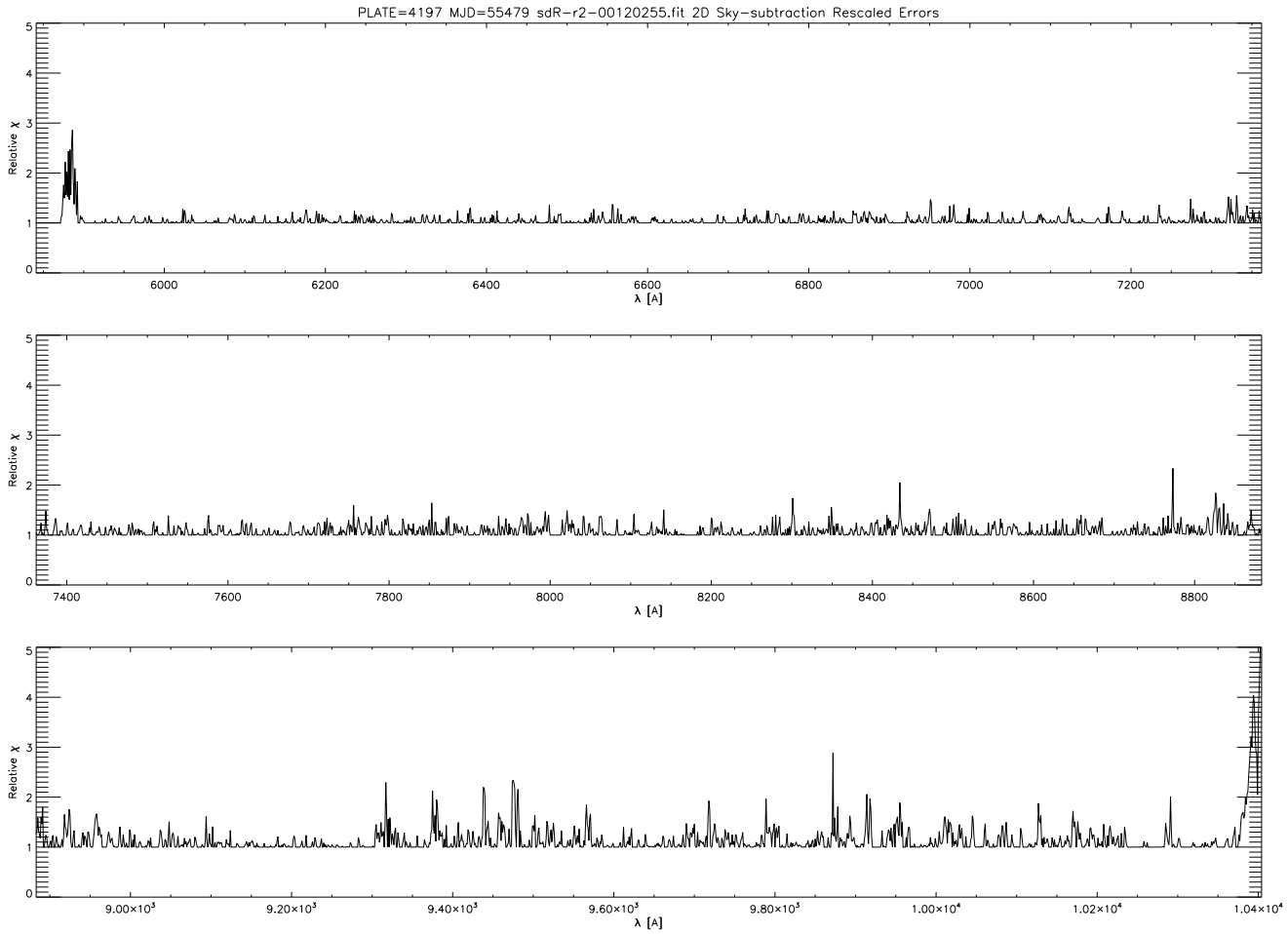


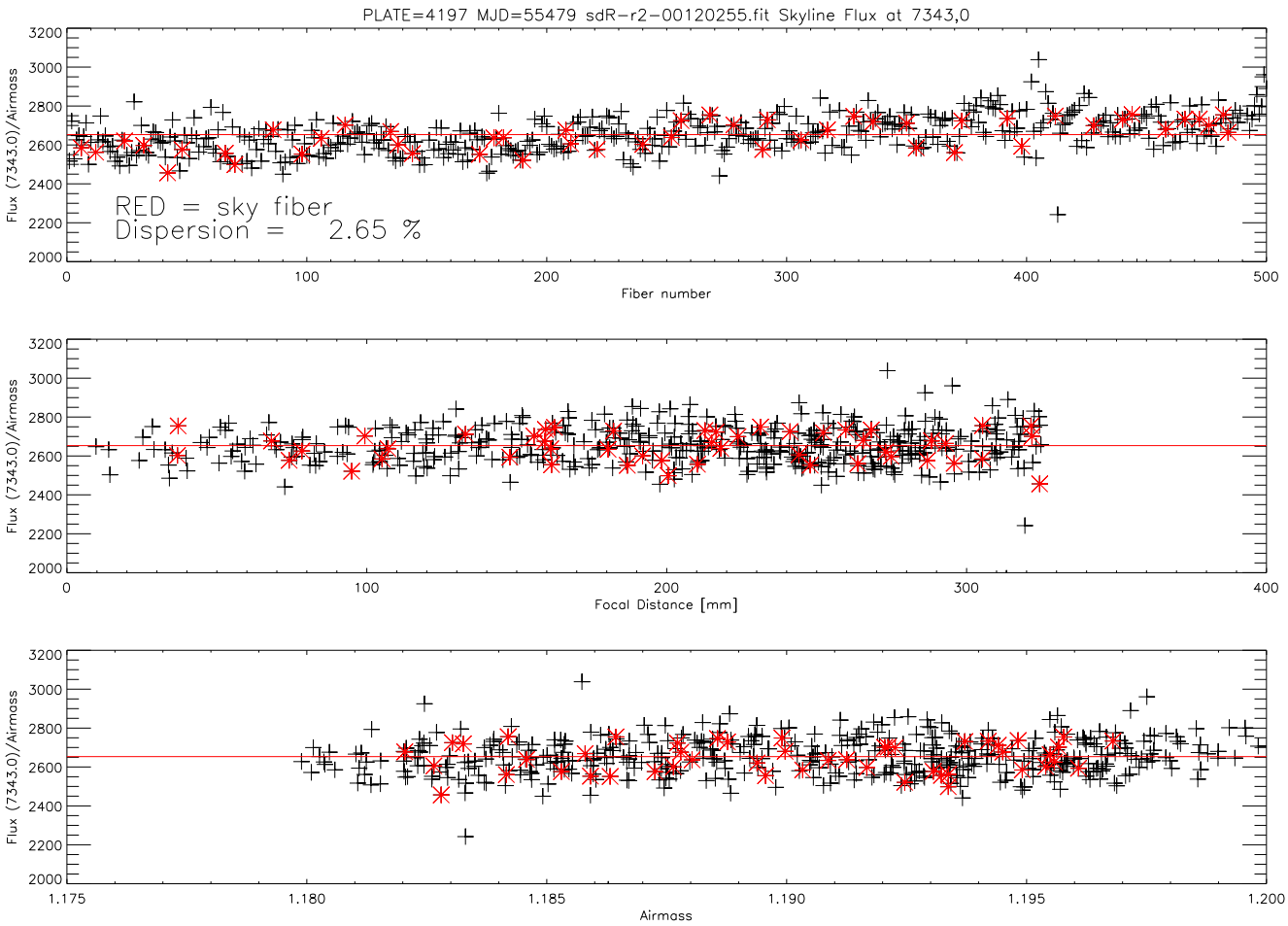

PLATE=4197 MJD=55479 sdR-r2-00120255.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussign
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

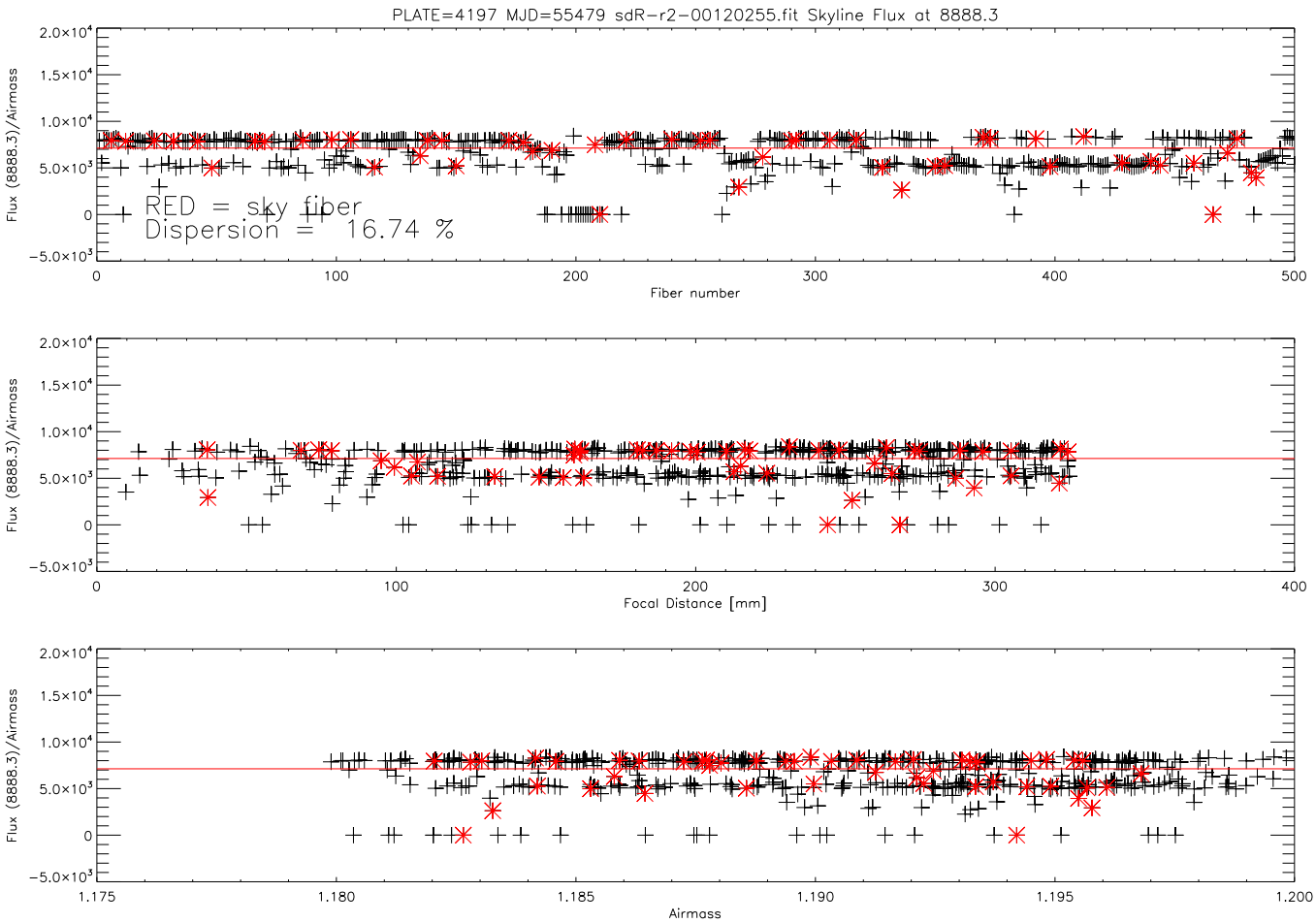

PLATE=4197 MJD=55479 sdR-r2-00120255.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

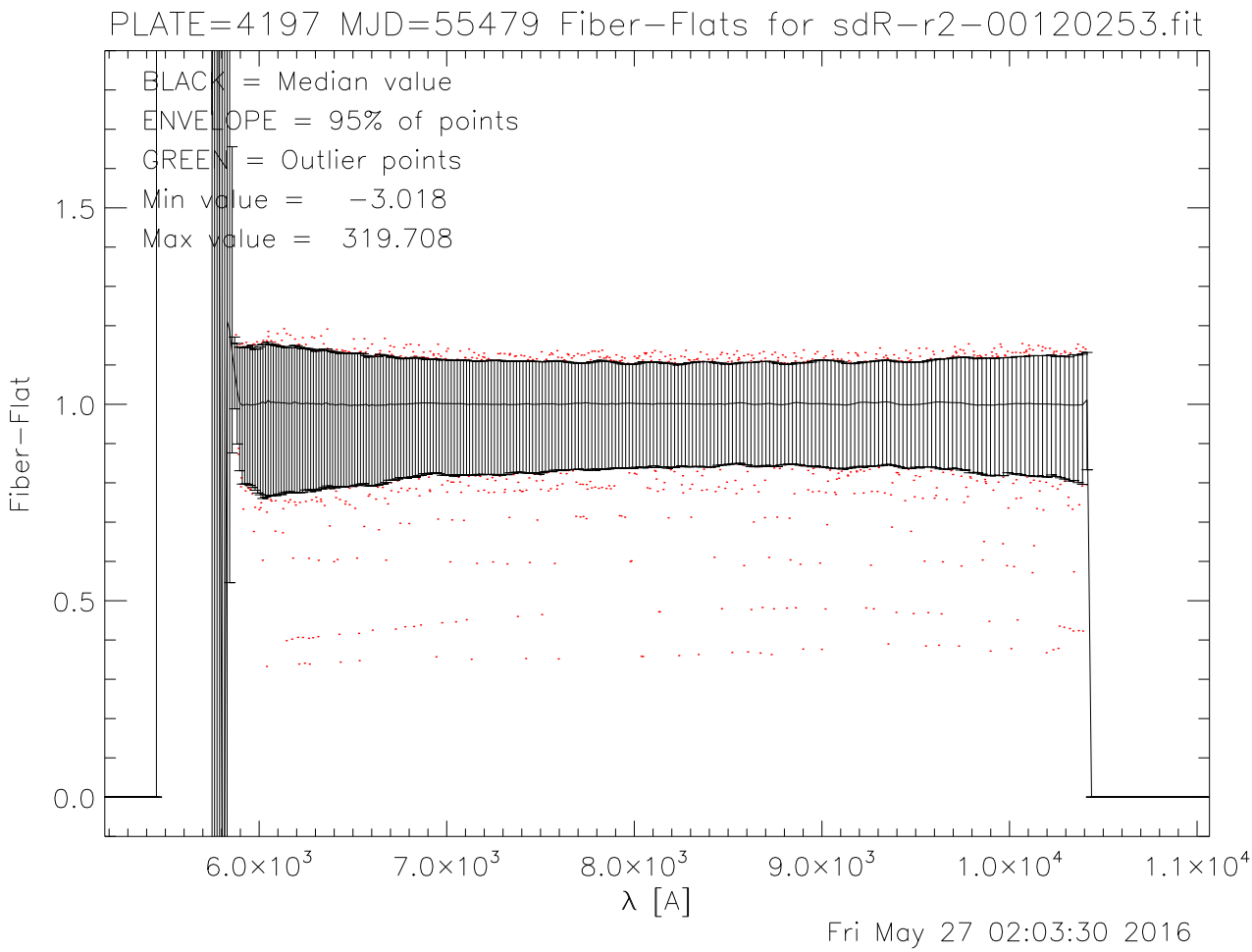

PLATE=4197 MJD=55479 sdR-r2-00120255.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
200
100
0
-100
-200
8820
8840
8860
8880
8900
λ [A]

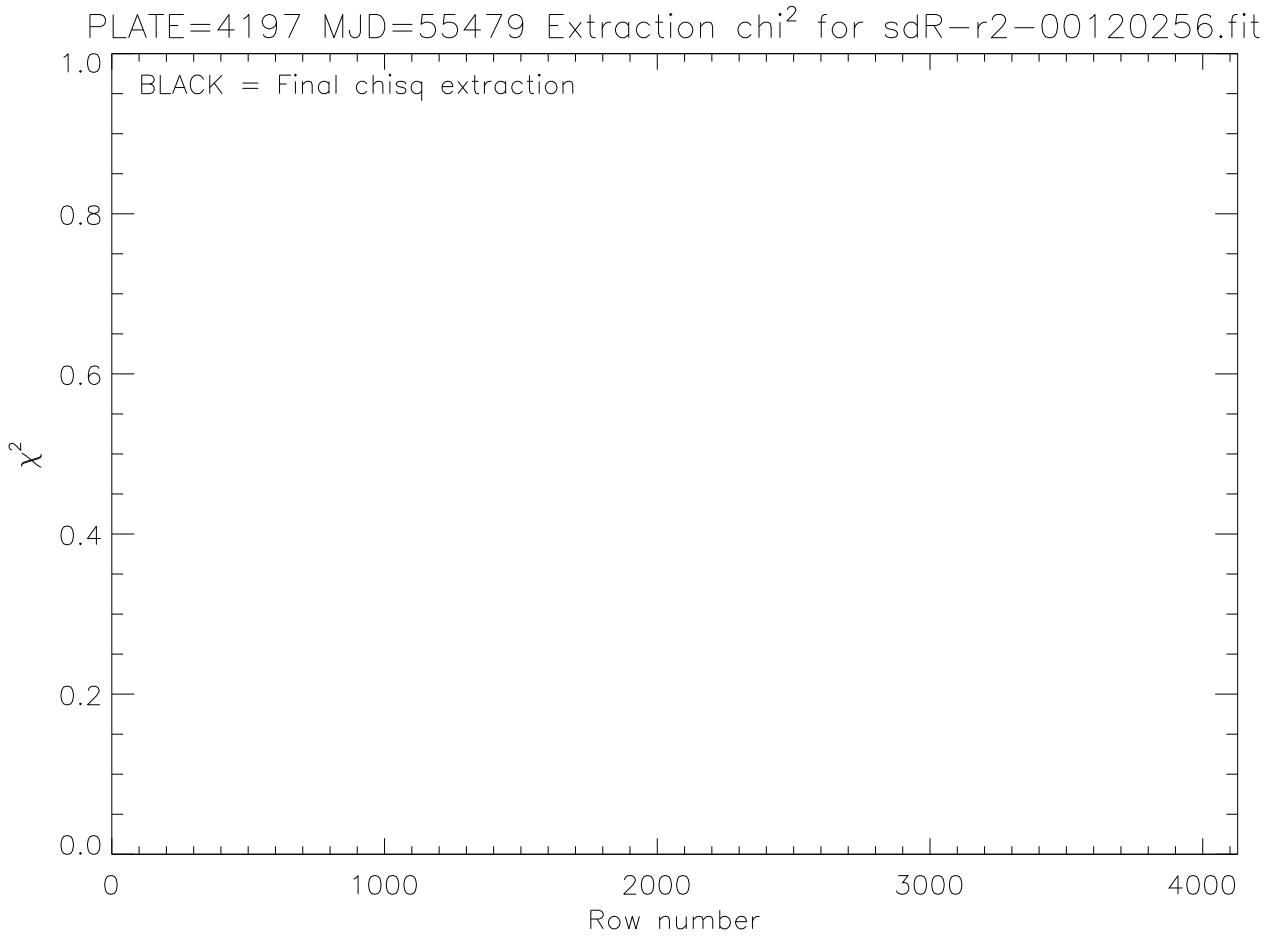
Number of sky fibers = 50

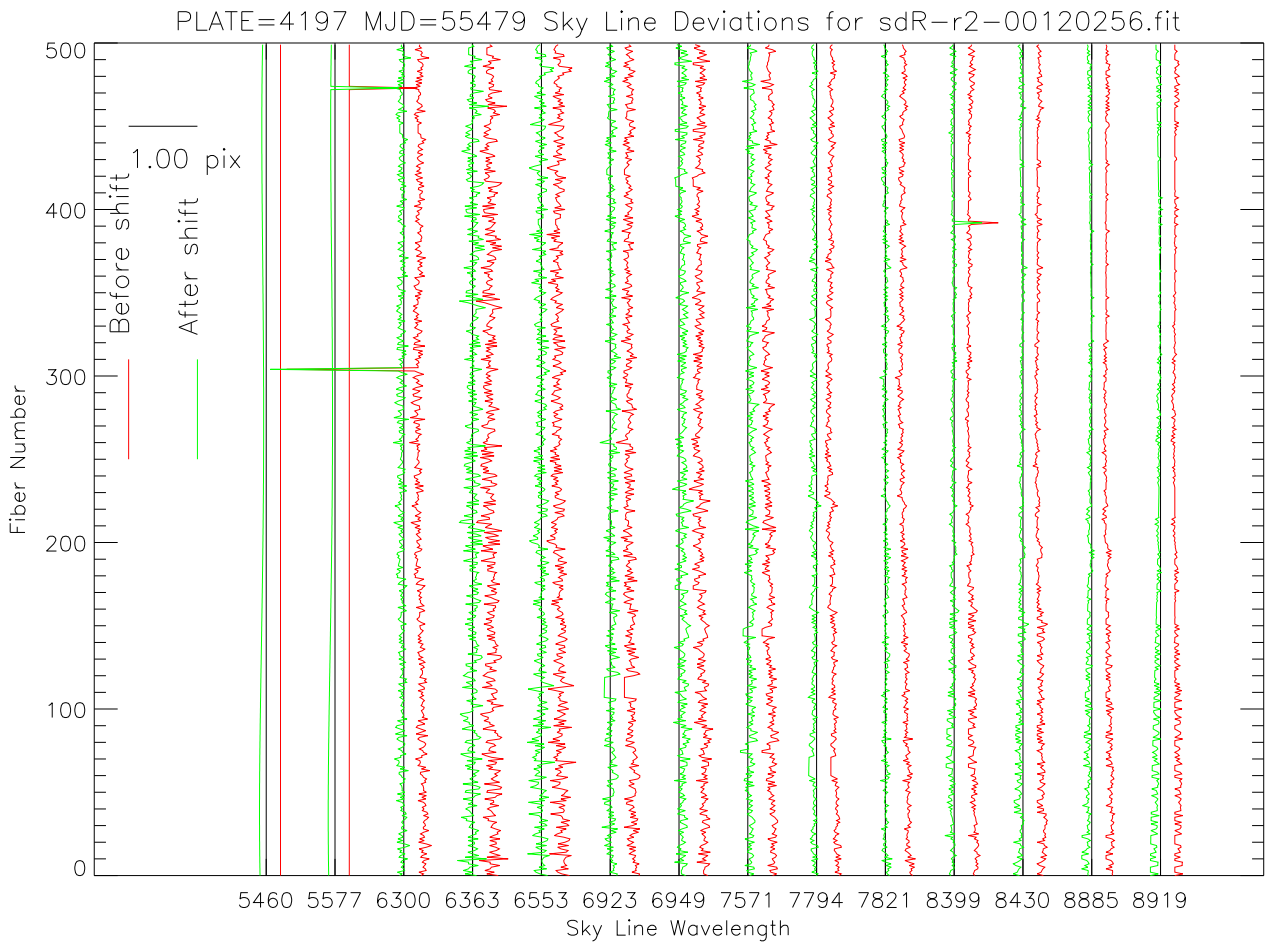


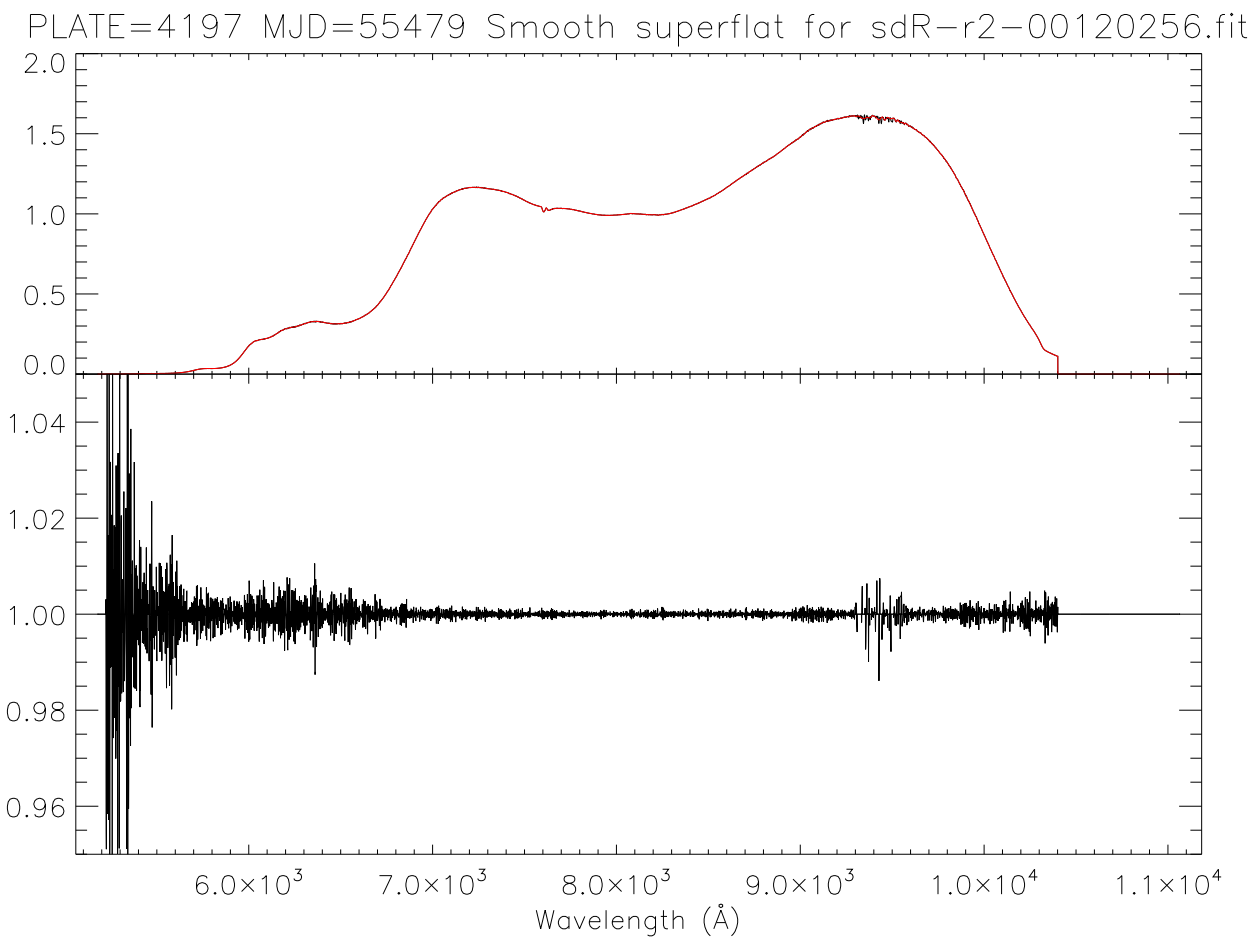

PLATE=4197 MJD=55479 sdR-r2-00120255.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 2.65 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

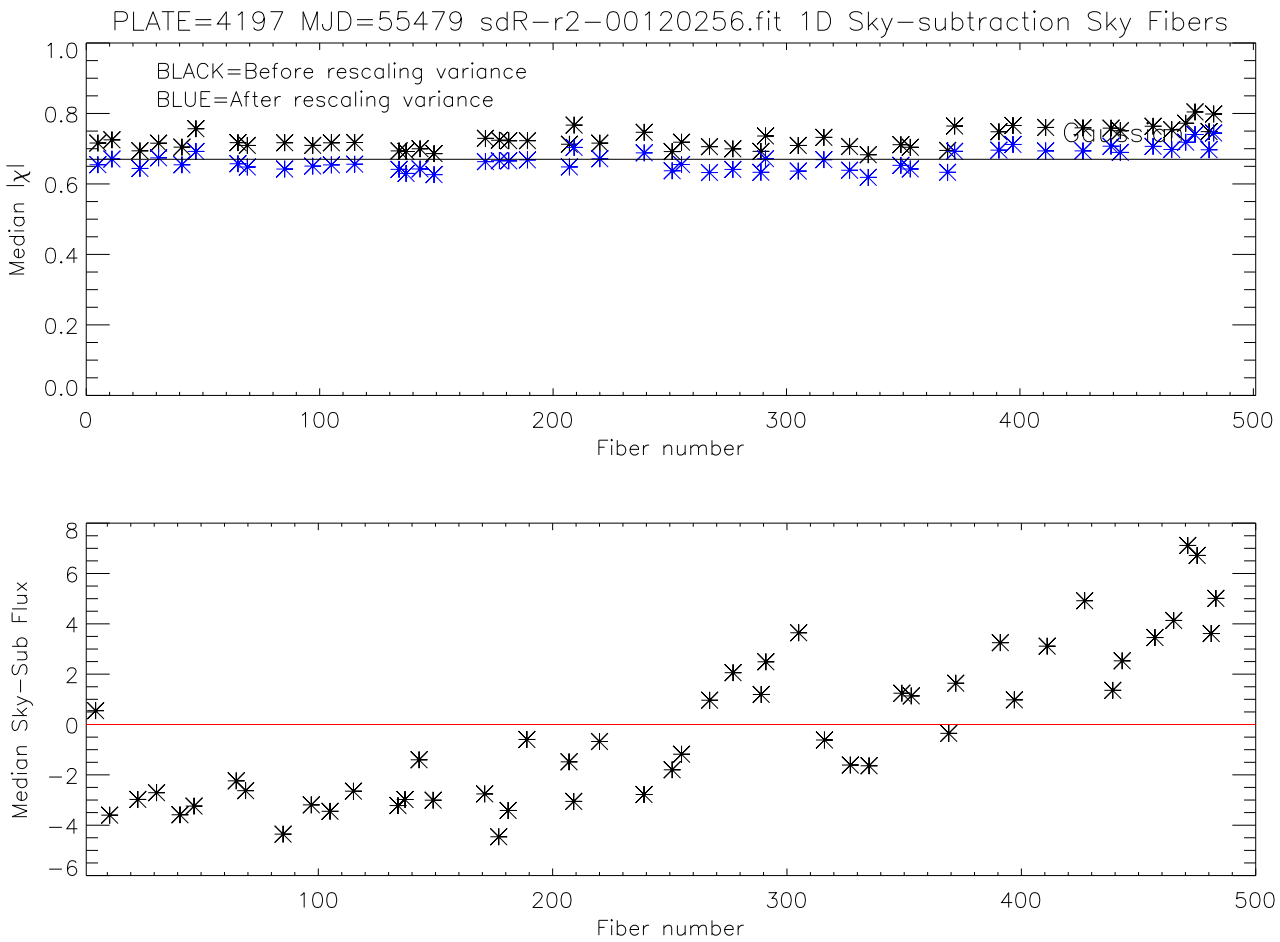

PLATE=4197 MJD=55479 sdR-r2-00120255.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
RED = sky fiber
Dispersion = 16.74 %
Fiber number
Focal Distance [mm]
Airmass


PLATE=4197 MJD=55479 Fiber−Flats for sdR−r2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −3.018
Max value = 319.708
Fiber−Flat
1.5
1.0
0.5
0.0
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
λ [A]
Fri May 27 02:03:30 2016

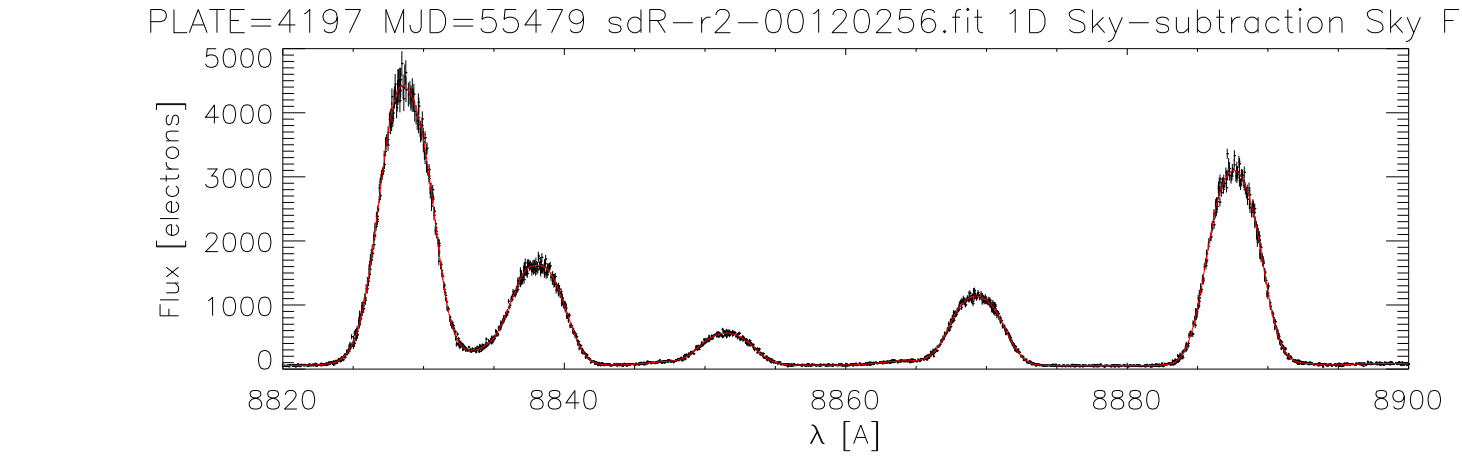

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r2−00120256.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number

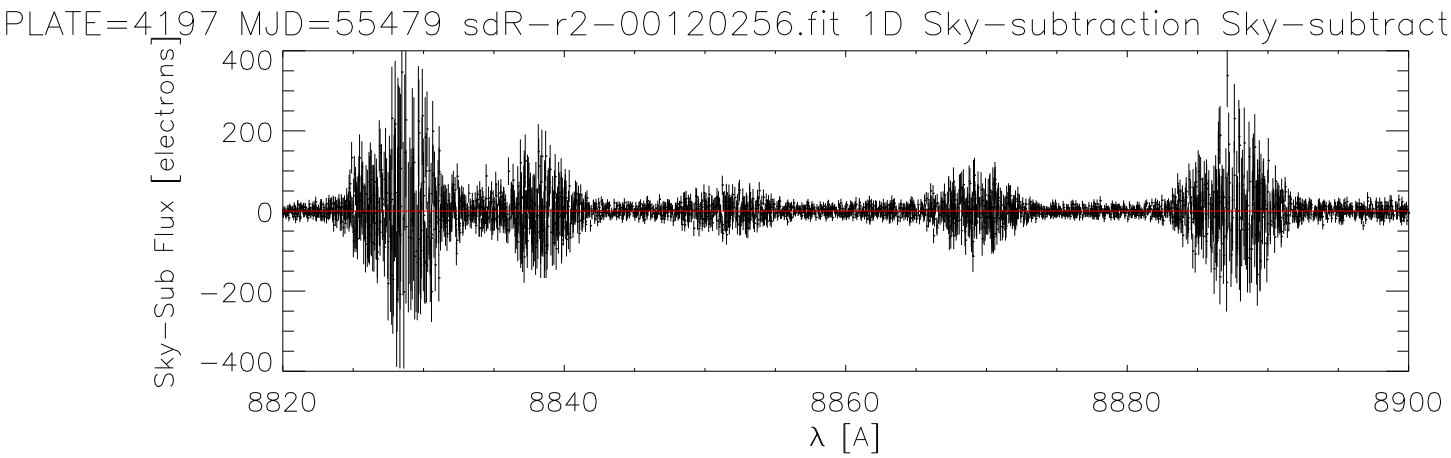

PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r2-00120256.fit
Before shift
After shift
1.00 pix
Fiber Number
0
100
200
300
400
500
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength


PLATE=4197 MJD=55479 Smooth superflat for sdR-r2-00120256.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

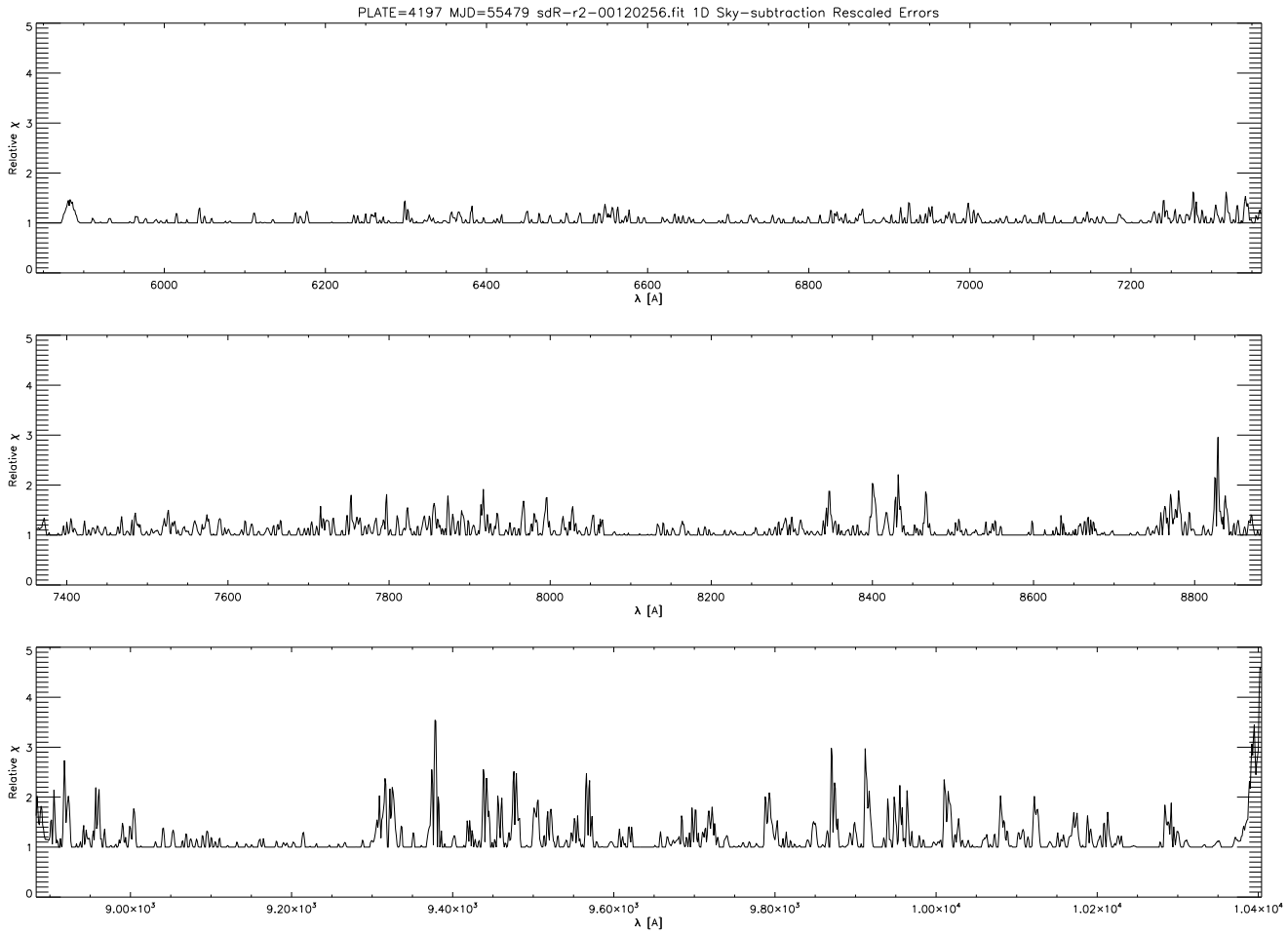

PLATE=4197 MJD=55479 sdR-r2-00120256.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Median |χ|
Fiber number

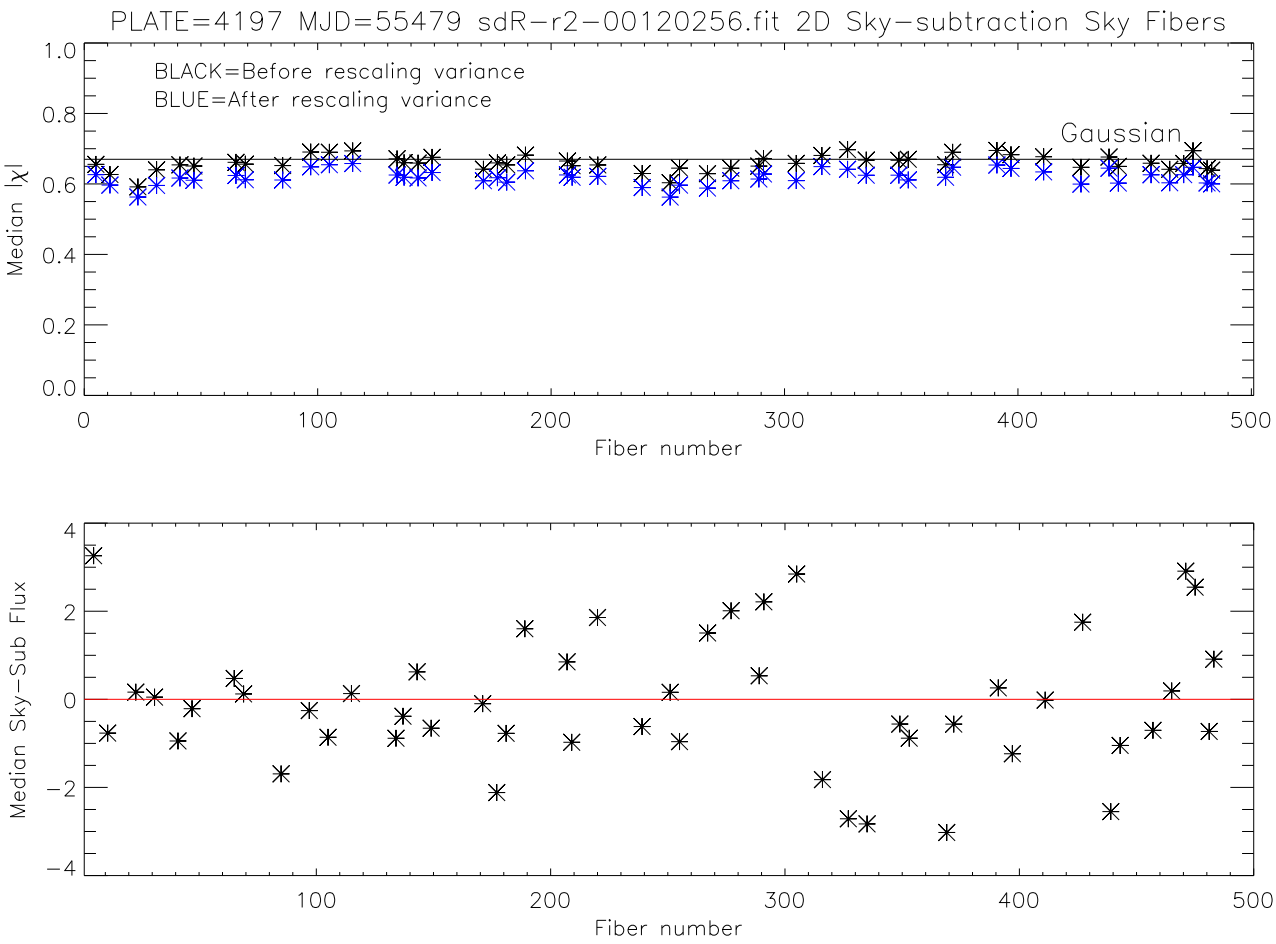
Median Sky-Sub Flux
Fiber number

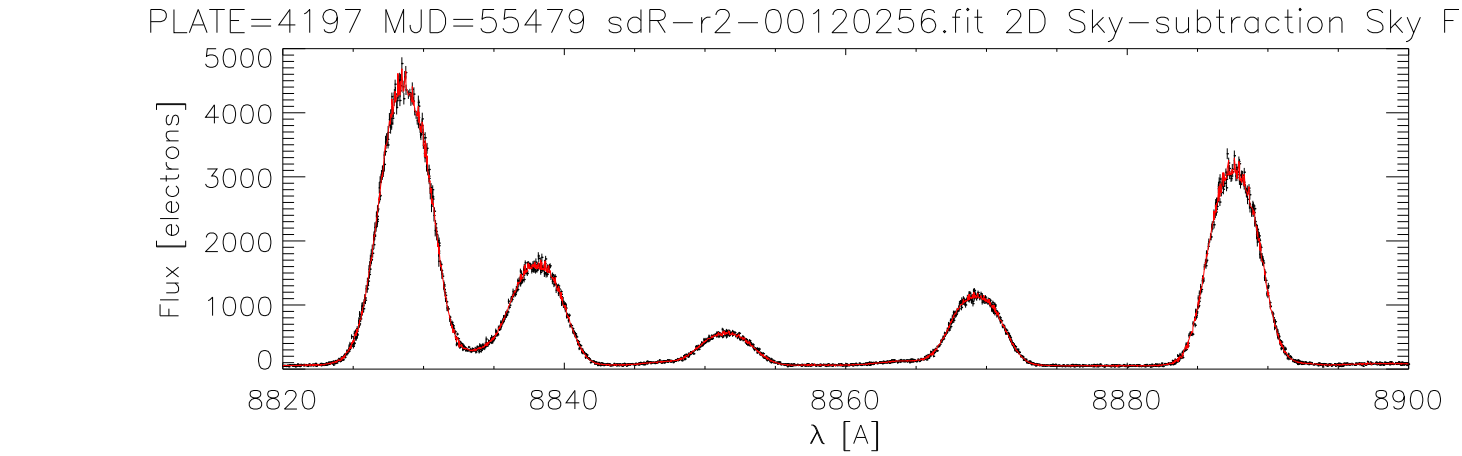

PLATE=4197 MJD=55479 sdR-r2-00120256.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

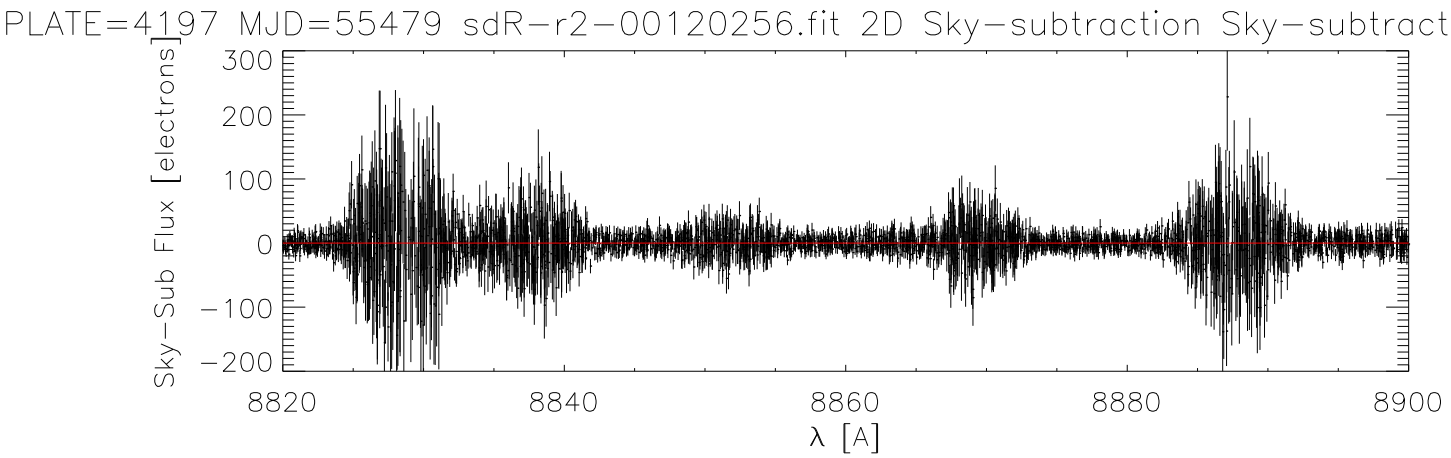

PLATE=4197 MJD=55479 sdR-r2-00120256.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
200
0
-200
-400
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 50

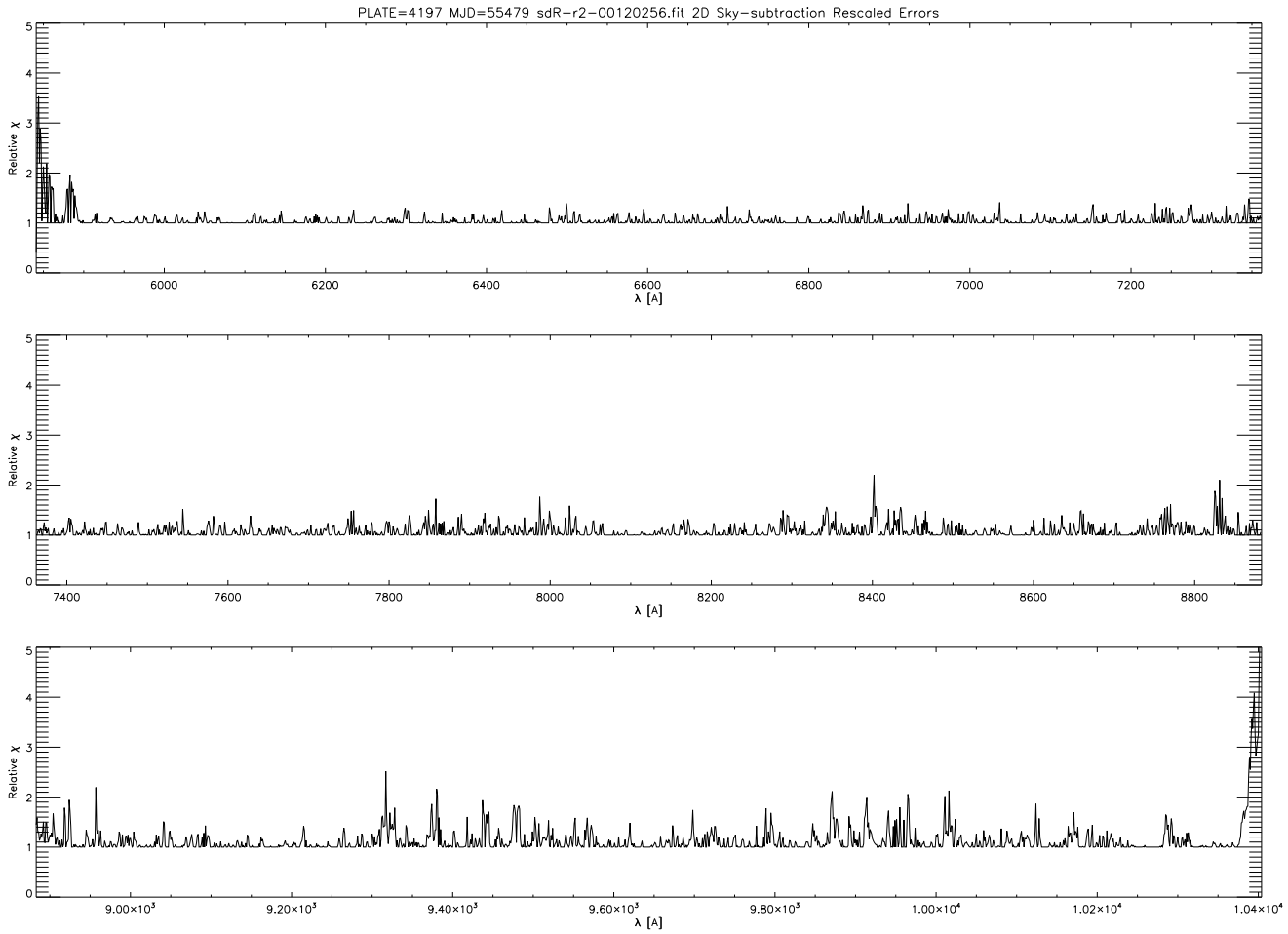


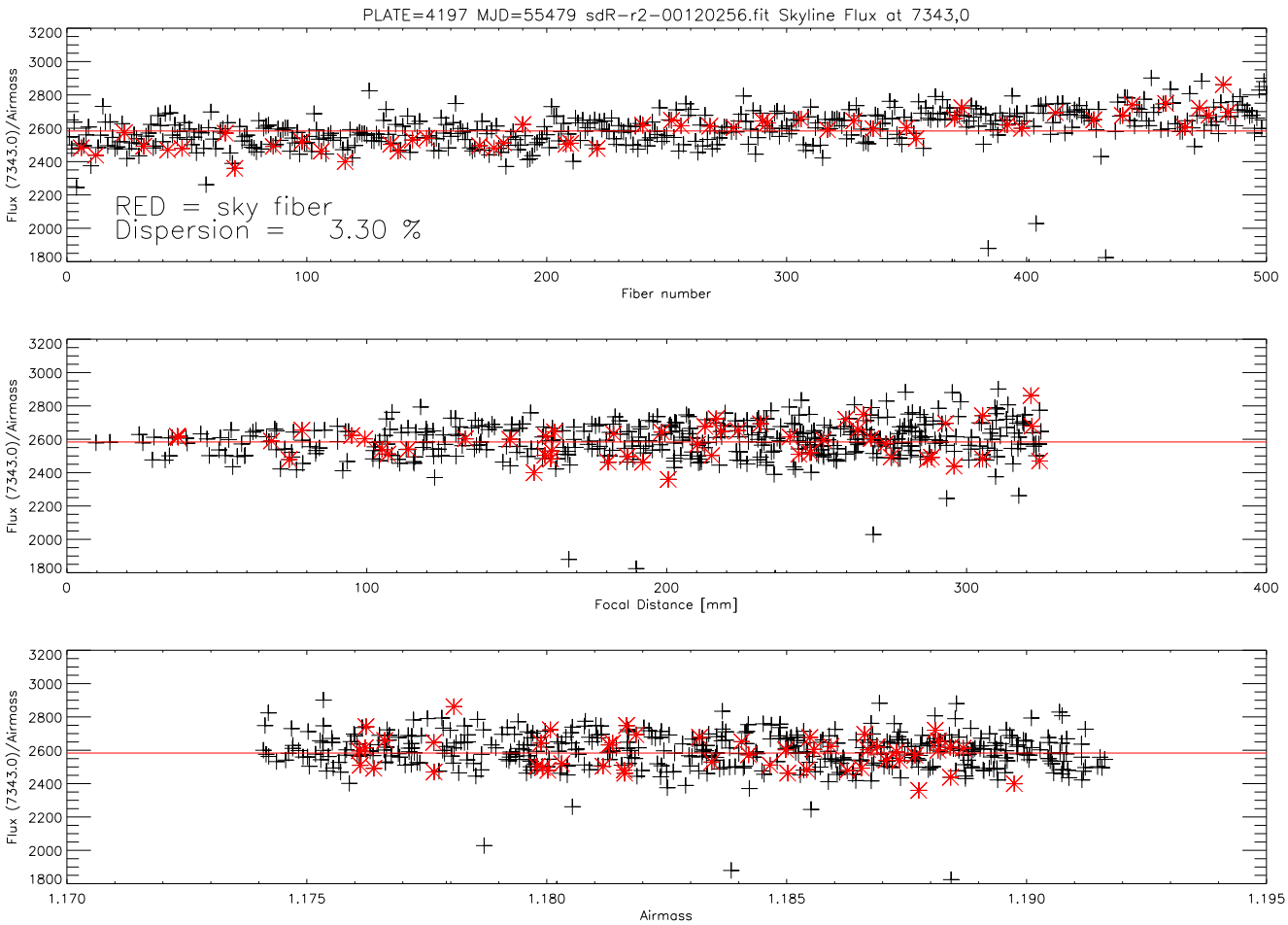

PLATE=4197 MJD=55479 sdR-r2-00120256.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

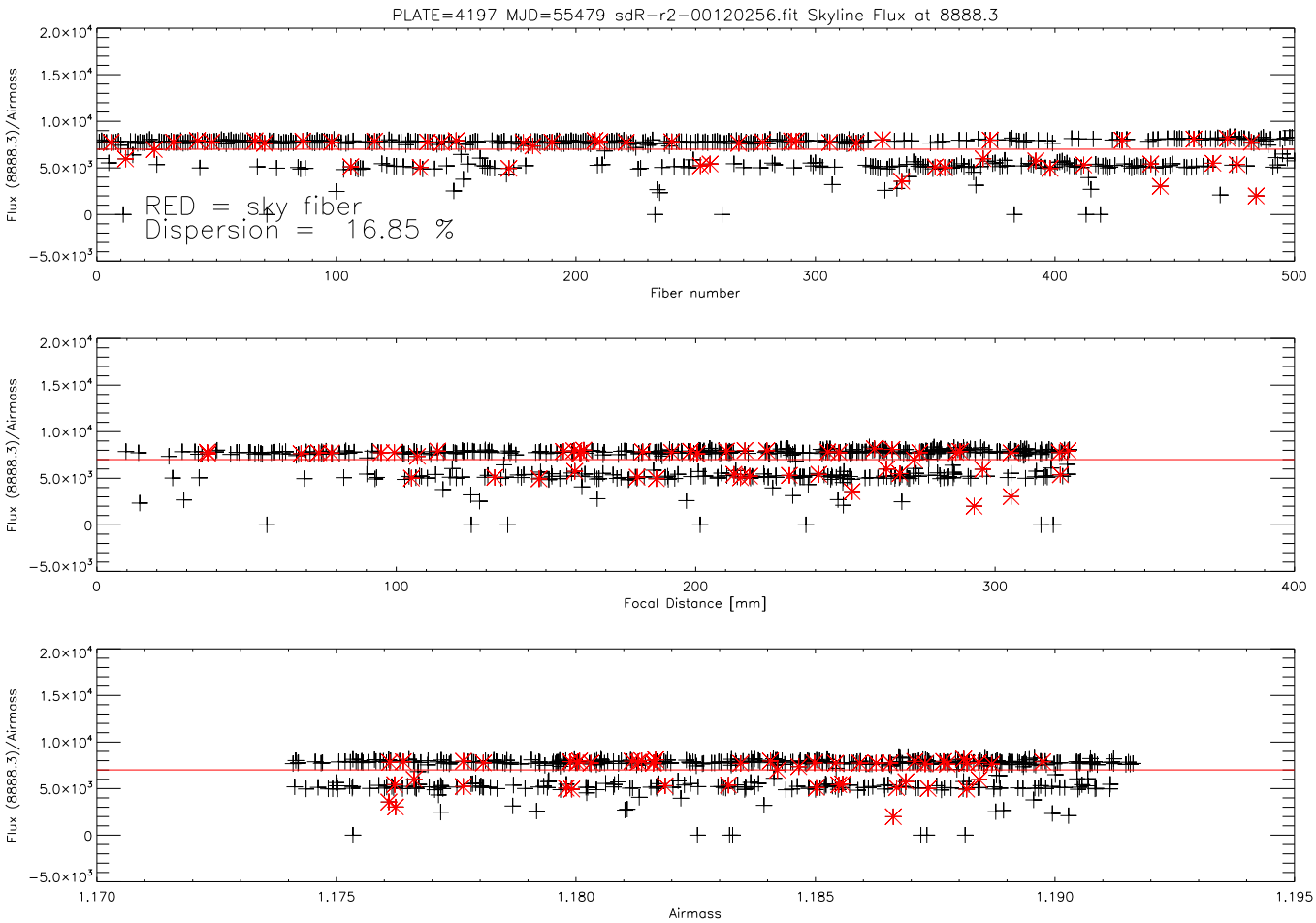

PLATE=4197 MJD=55479 sdR-r2-00120256.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

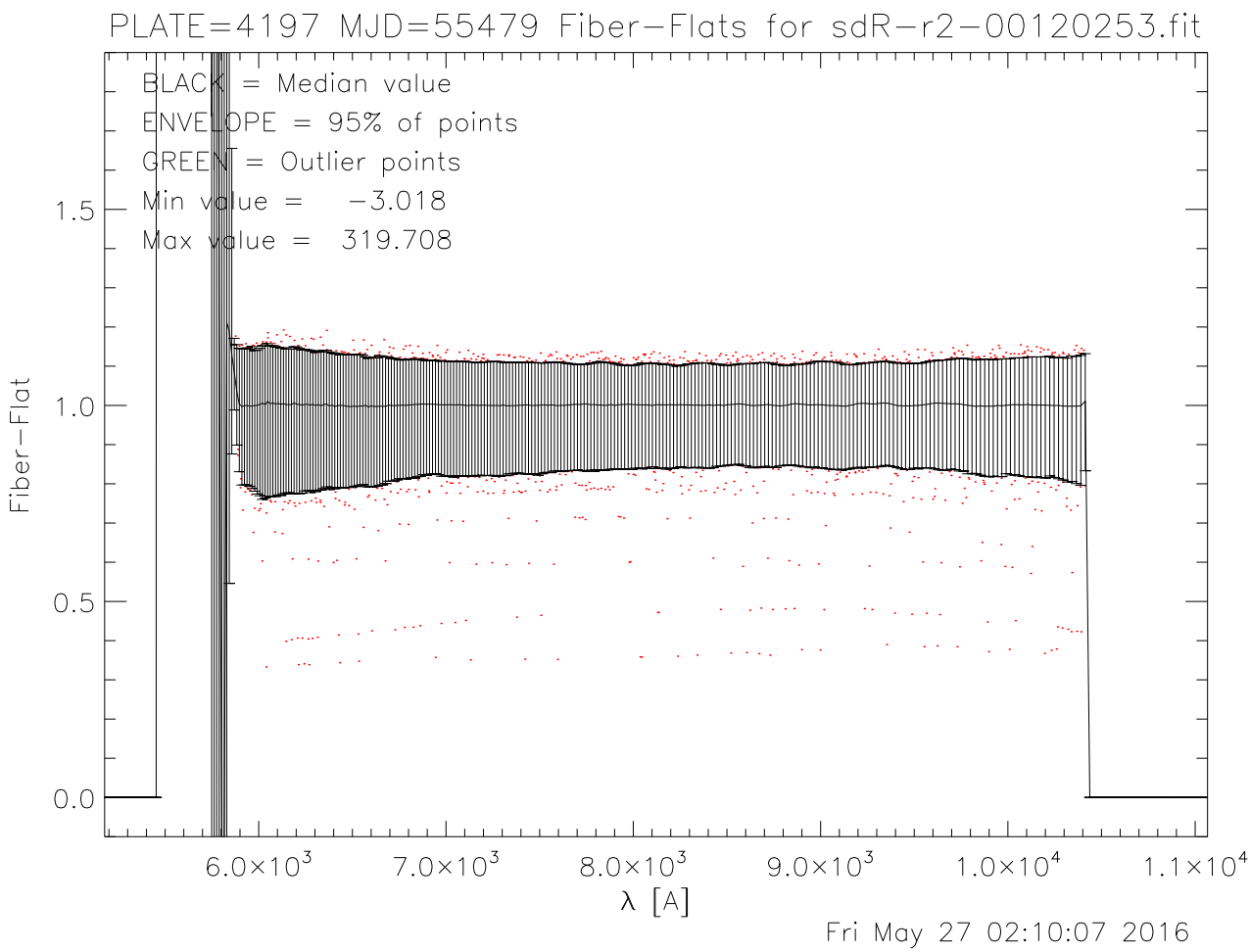

PLATE=4197 MJD=55479 sdR-r2-00120256.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
-100
-200
8820
8840
8860
8880
8900
λ [A]

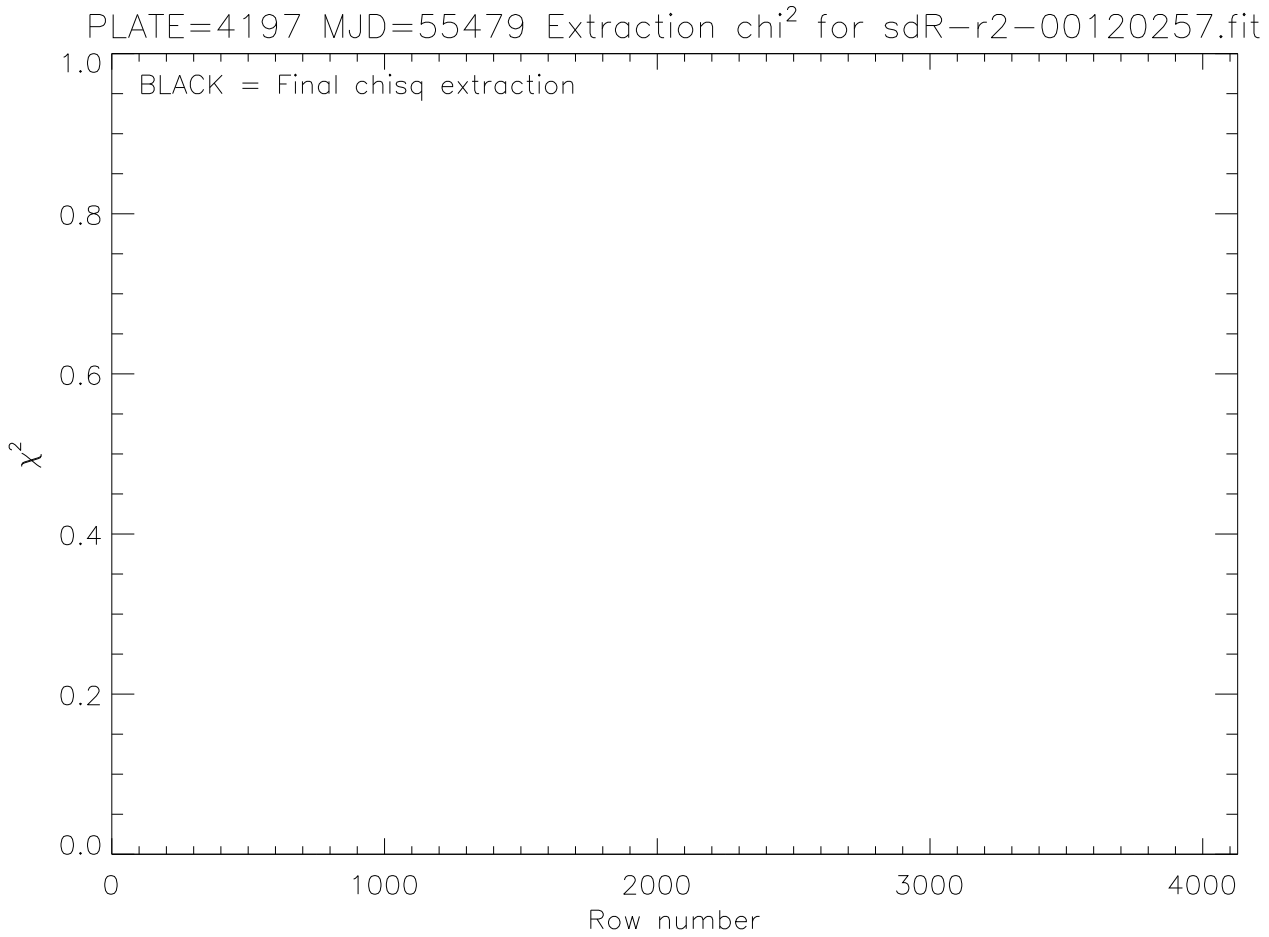
Number of sky fibers = 50

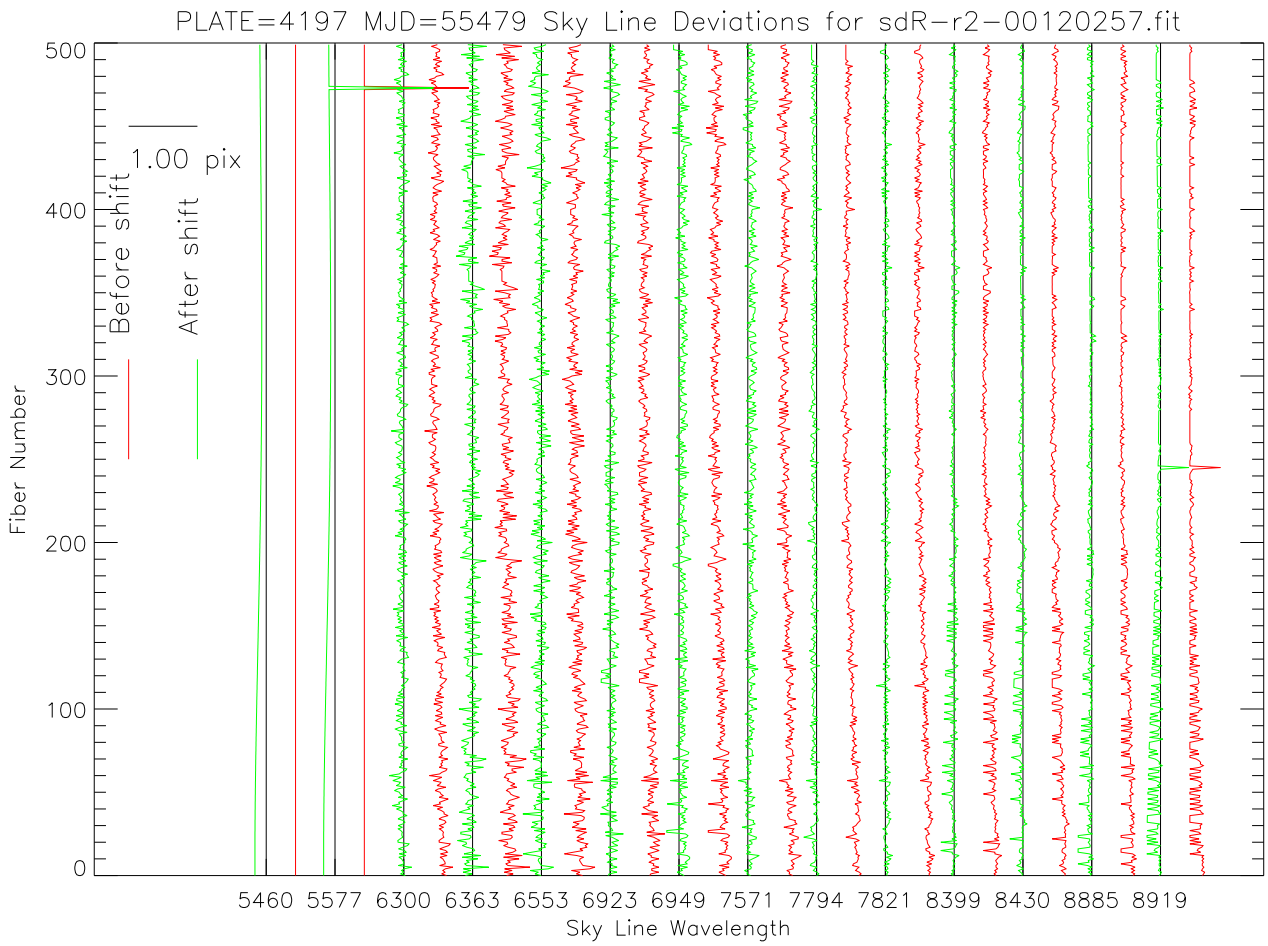


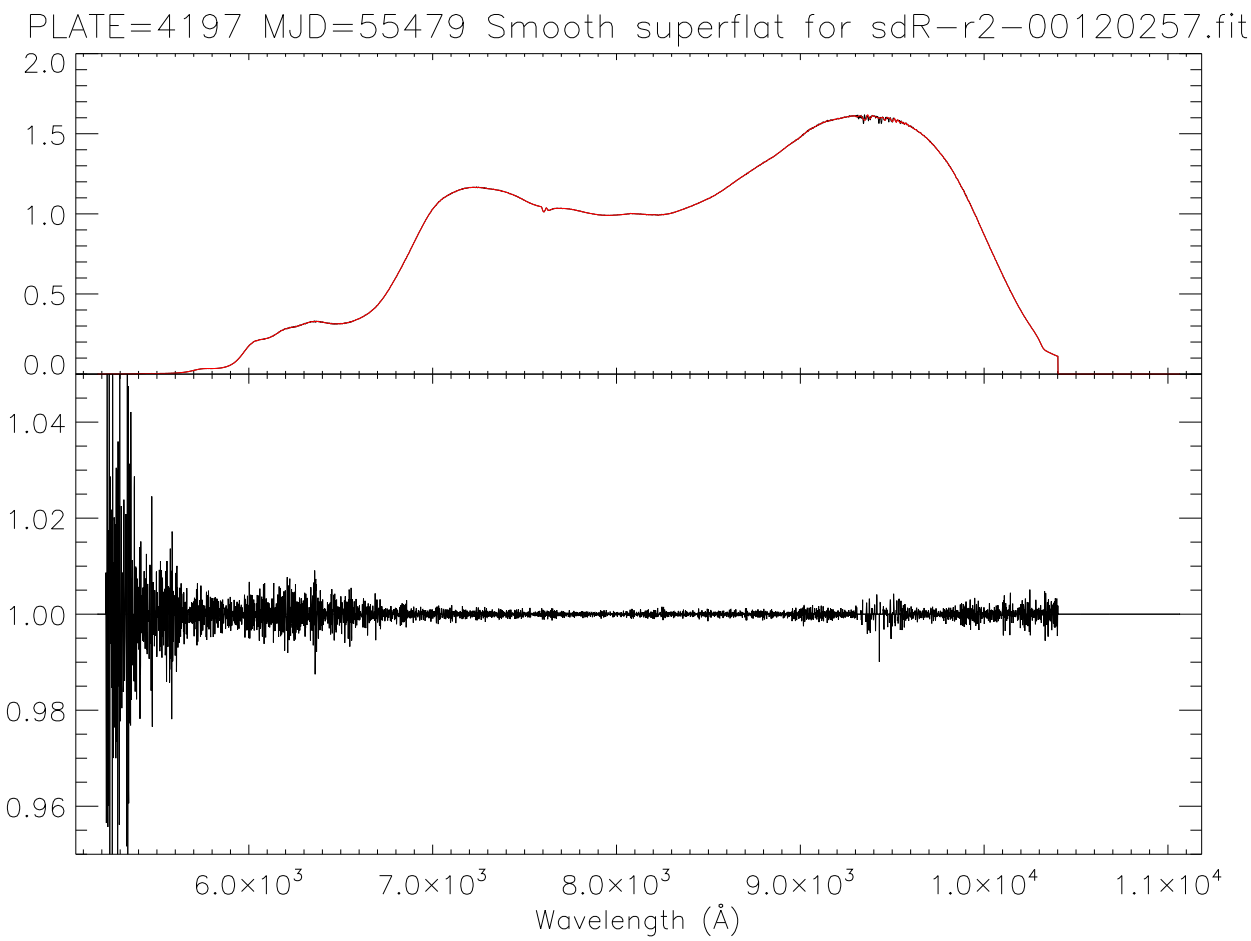

PLATE=4197 MJD=55479 sdR-r2-00120256.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 3.30 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

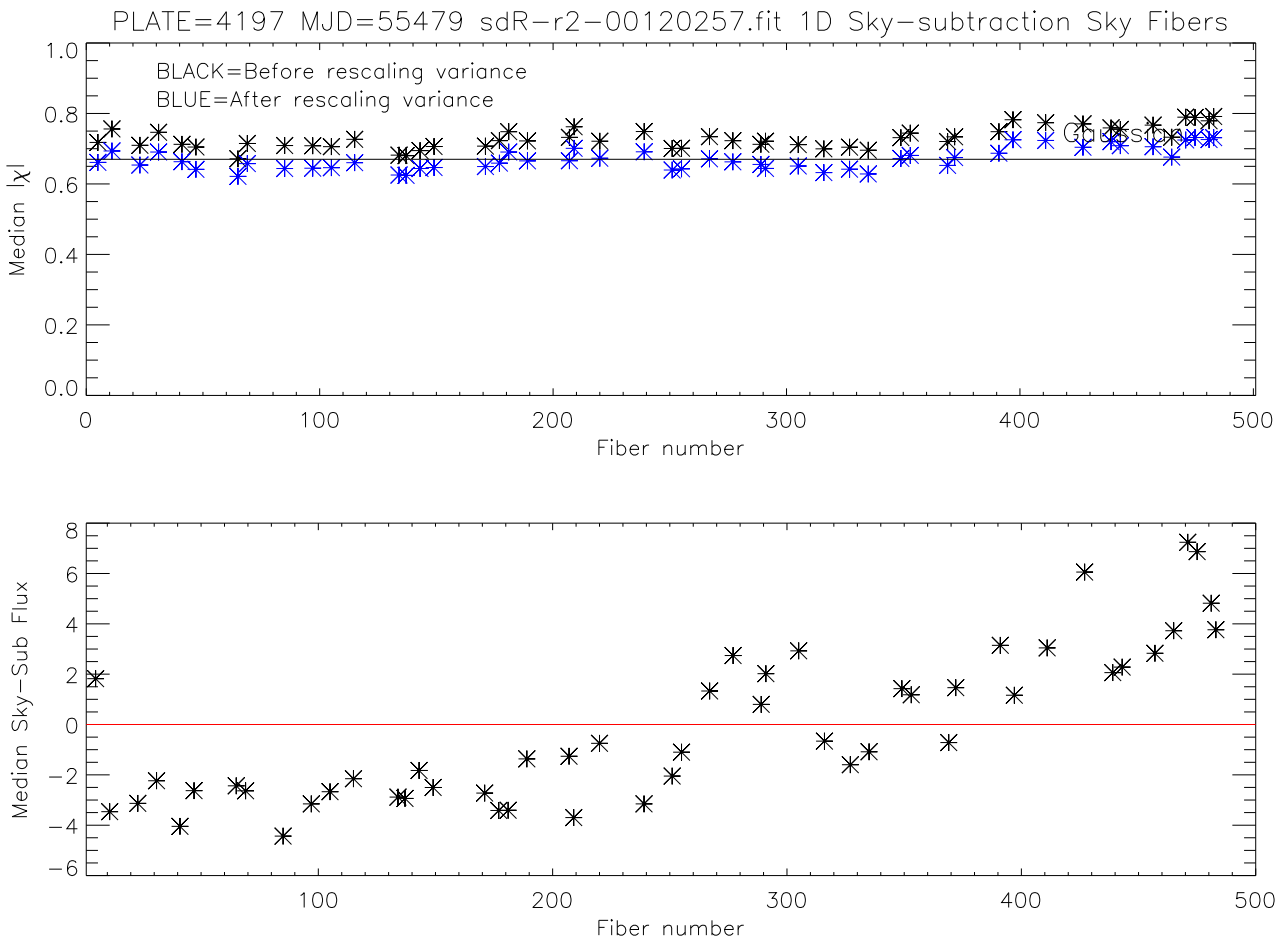

PLATE=4197 MJD=55479 sdR-r2-00120256.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
Fiber number
RED = sky fiber
Dispersion = 16.85 %
Flux (8888.3)/Airmass
Focal Distance [mm]
Flux (8888.3)/Airmass
Airmass

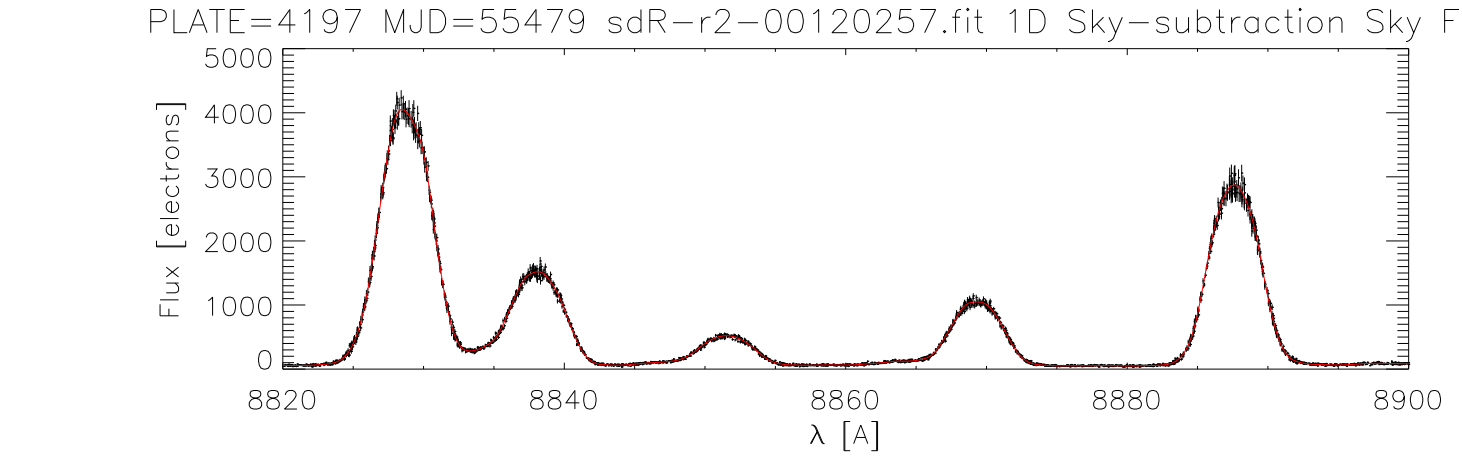

PLATE=4197 MJD=55479 Fiber−Flats for sdR−r2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −3.018
Max value = 319.708
Fiber−Flat
1.5
1.0
0.5
0.0
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
λ [A]
Fri May 27 02:10:07 2016

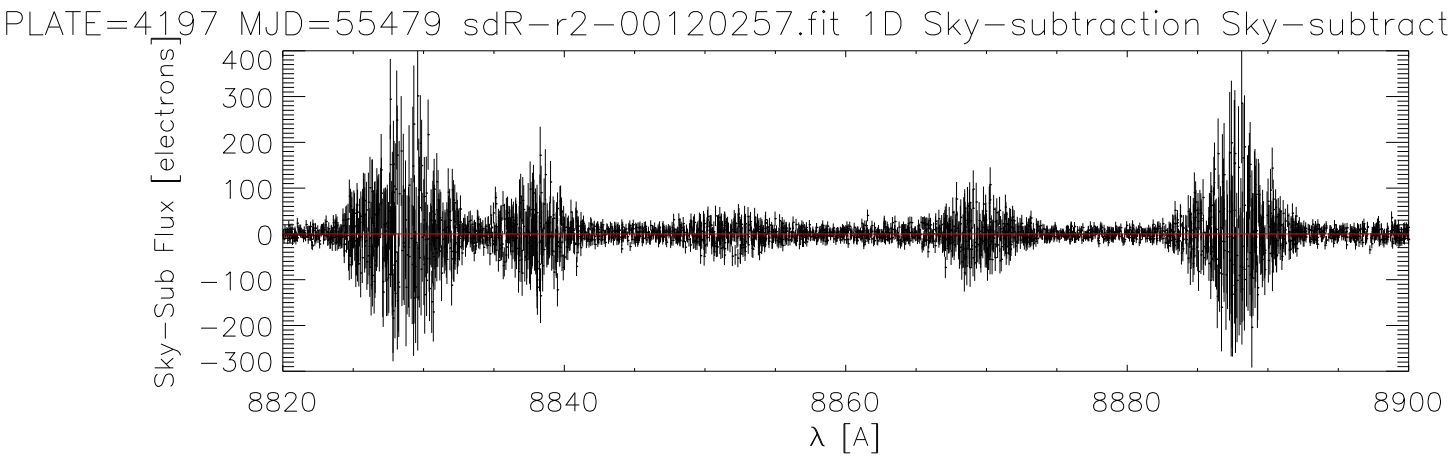

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r2−00120257.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r2-00120257.fit
Before shift
After shift
1.00 pix
Fiber Number
0
100
200
300
400
500
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength

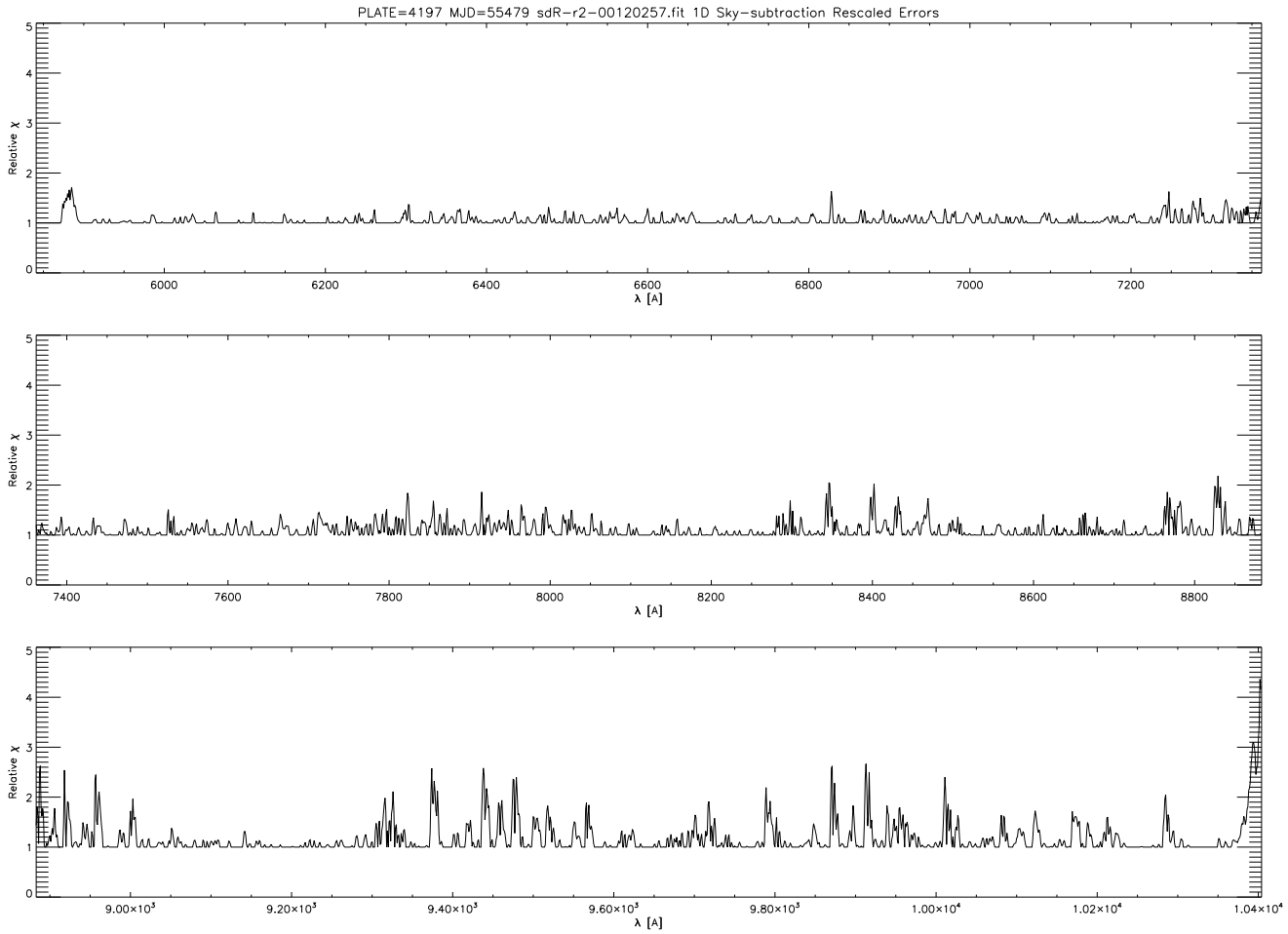

PLATE=4197 MJD=55479 Smooth superflat for sdR-r2-00120257.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

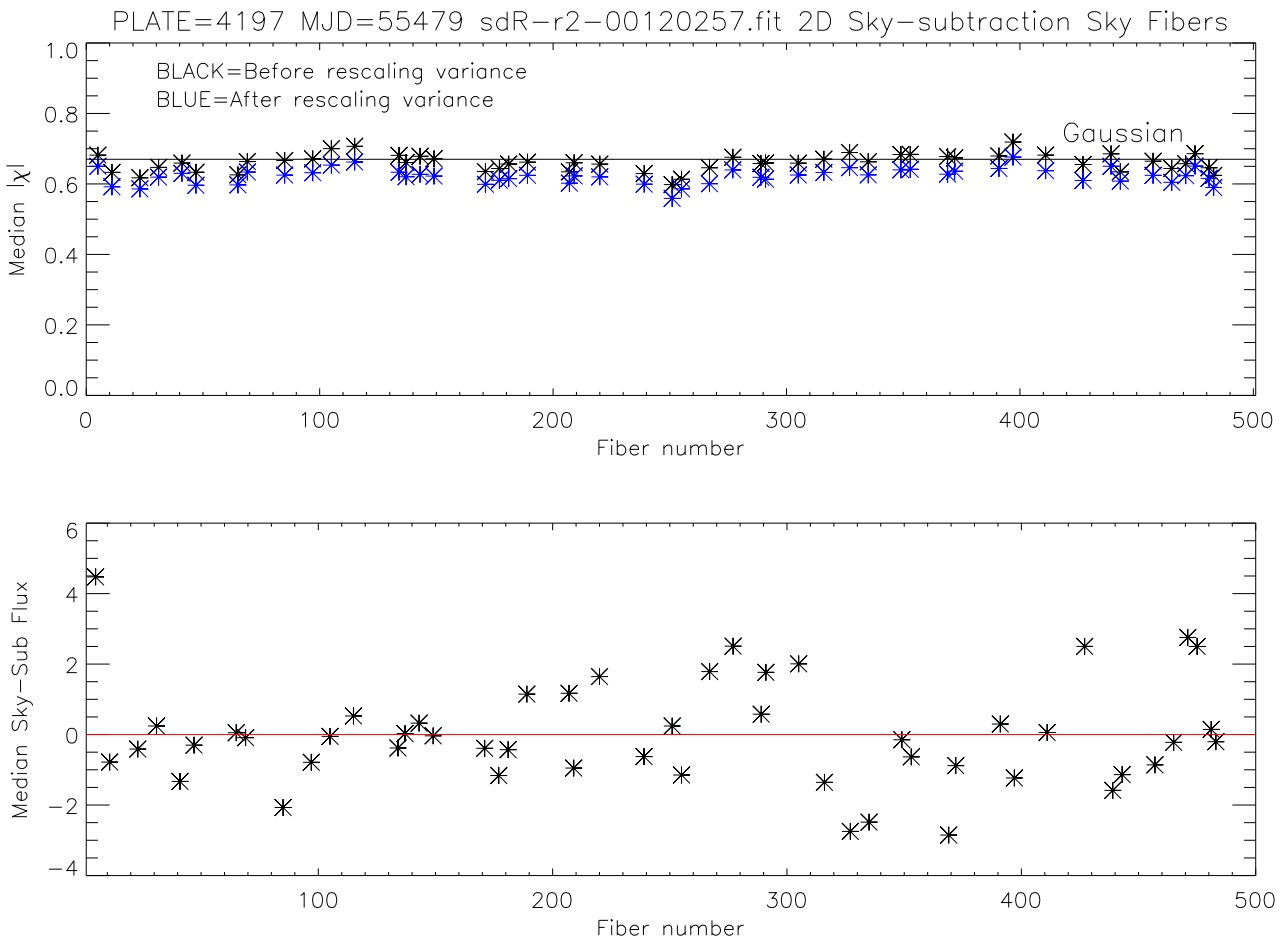

PLATE=4197 MJD=55479 sdR-r2-00120257.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

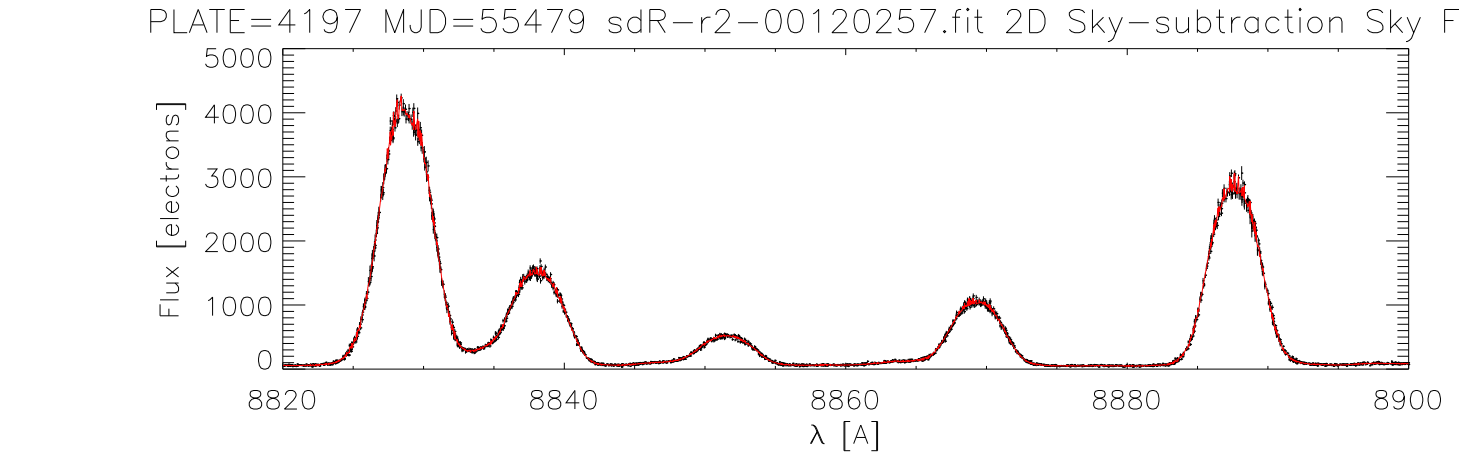

PLATE=4197 MJD=55479 sdR-r2-00120257.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

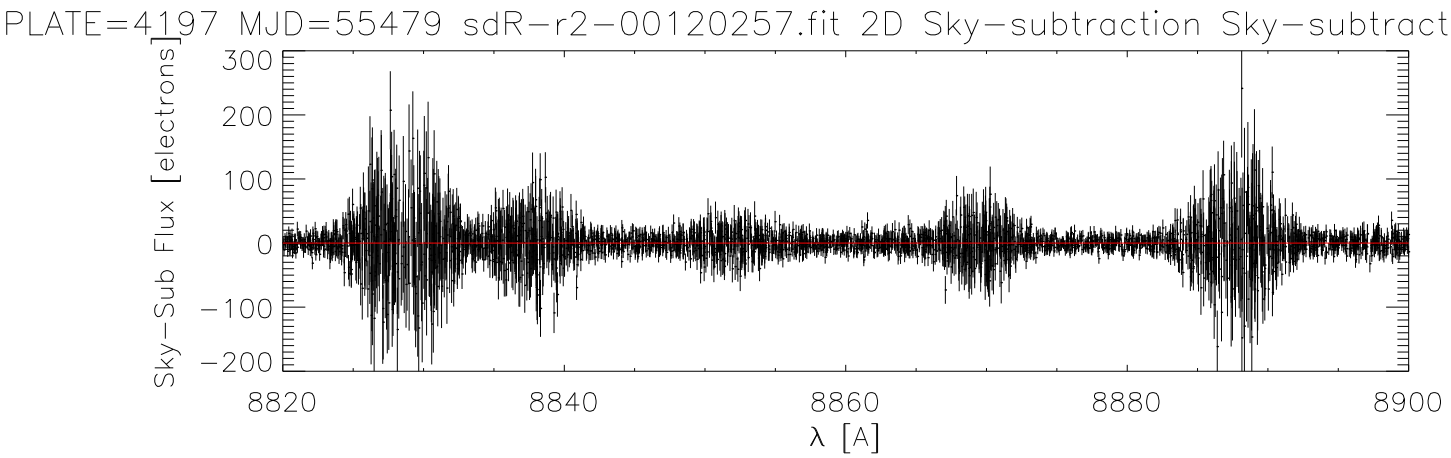

PLATE=4197 MJD=55479 sdR-r2-00120257.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
300
200
100
0
-100
-200
-300
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 50

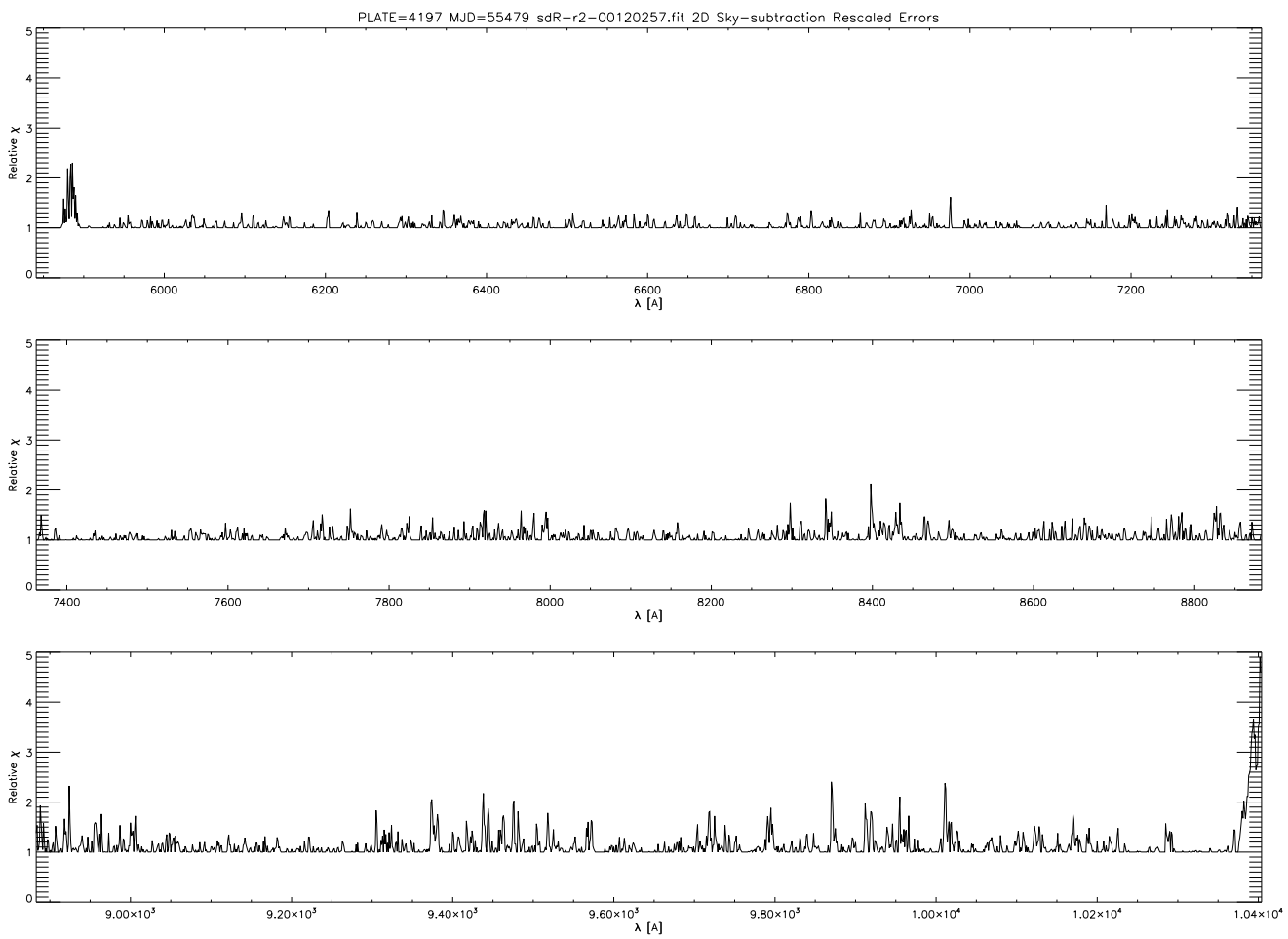


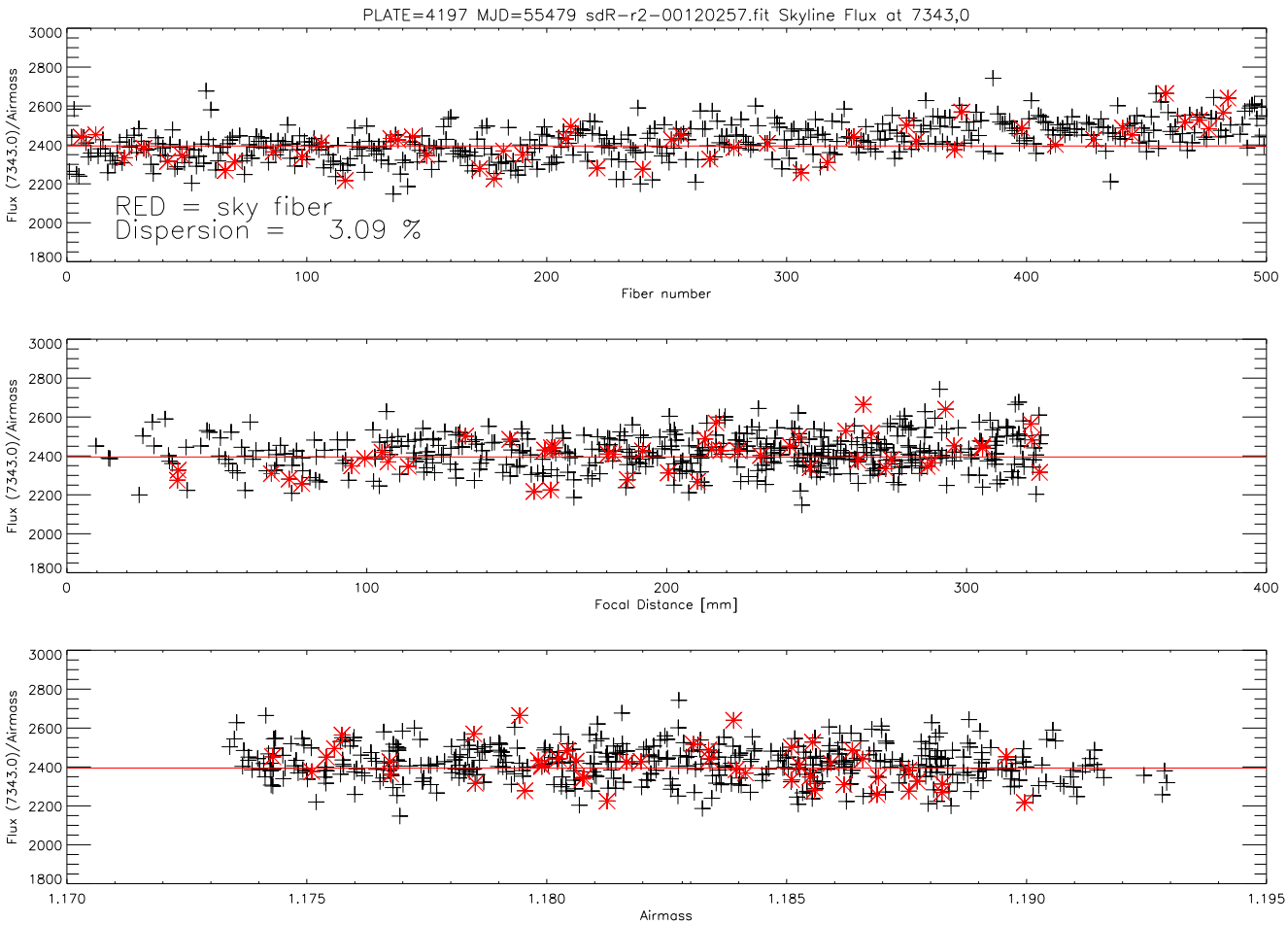

PLATE=4197 MJD=55479 sdR-r2-00120257.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

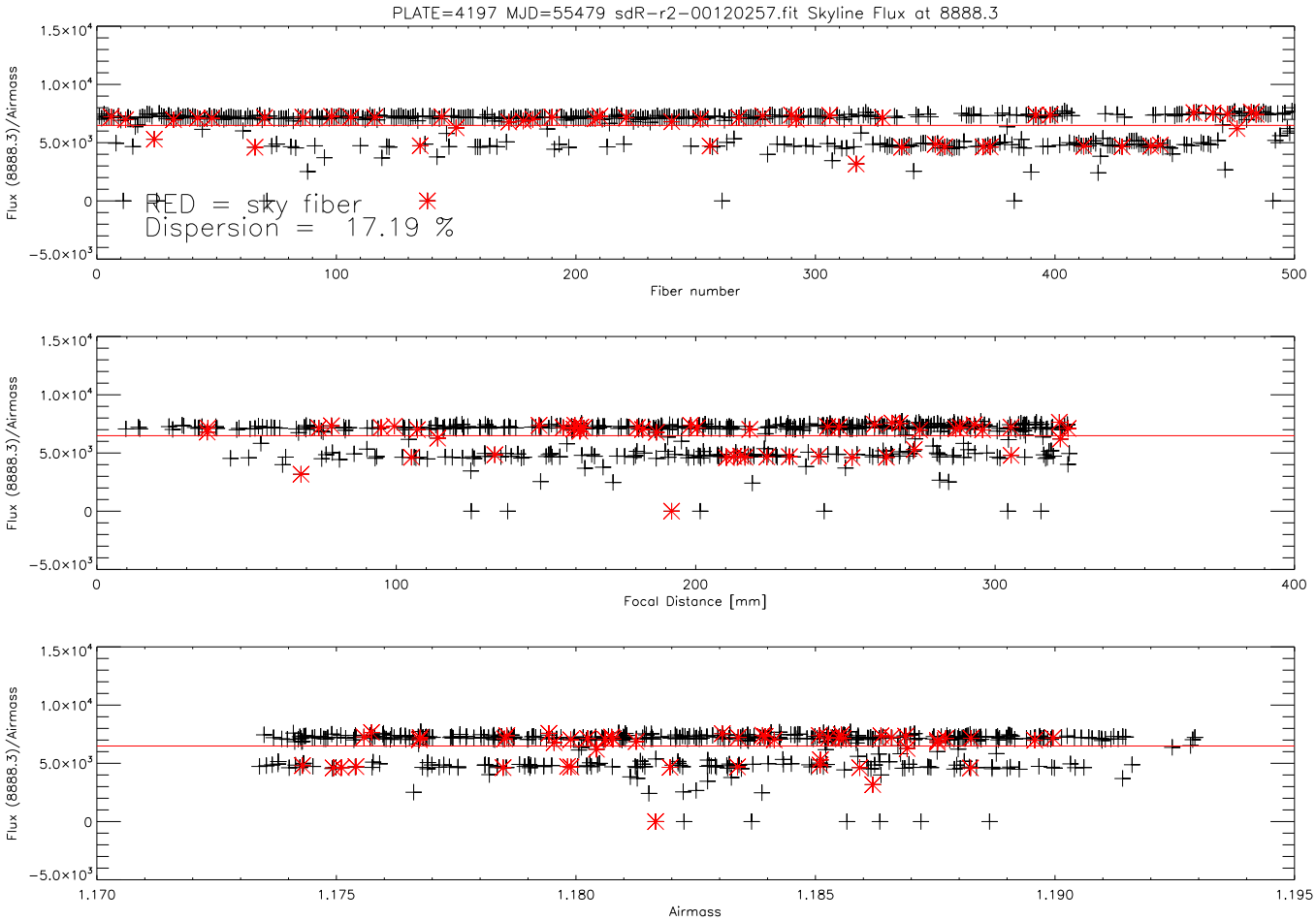

PLATE=4197 MJD=55479 sdR-r2-00120257.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

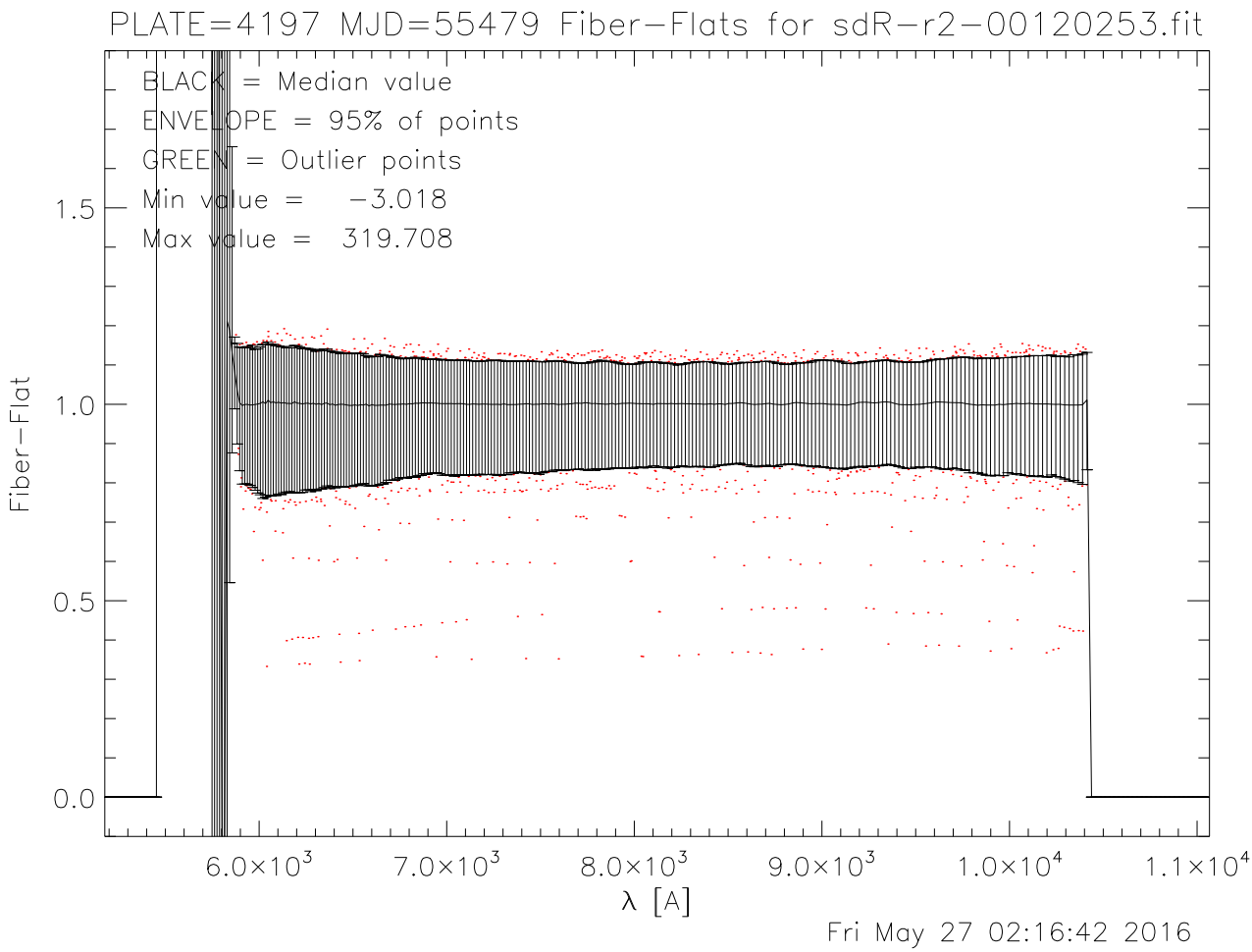

PLATE=4197 MJD=55479 sdR-r2-00120257.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
-100
-200
8820
8840
8860
8880
8900
λ [A]

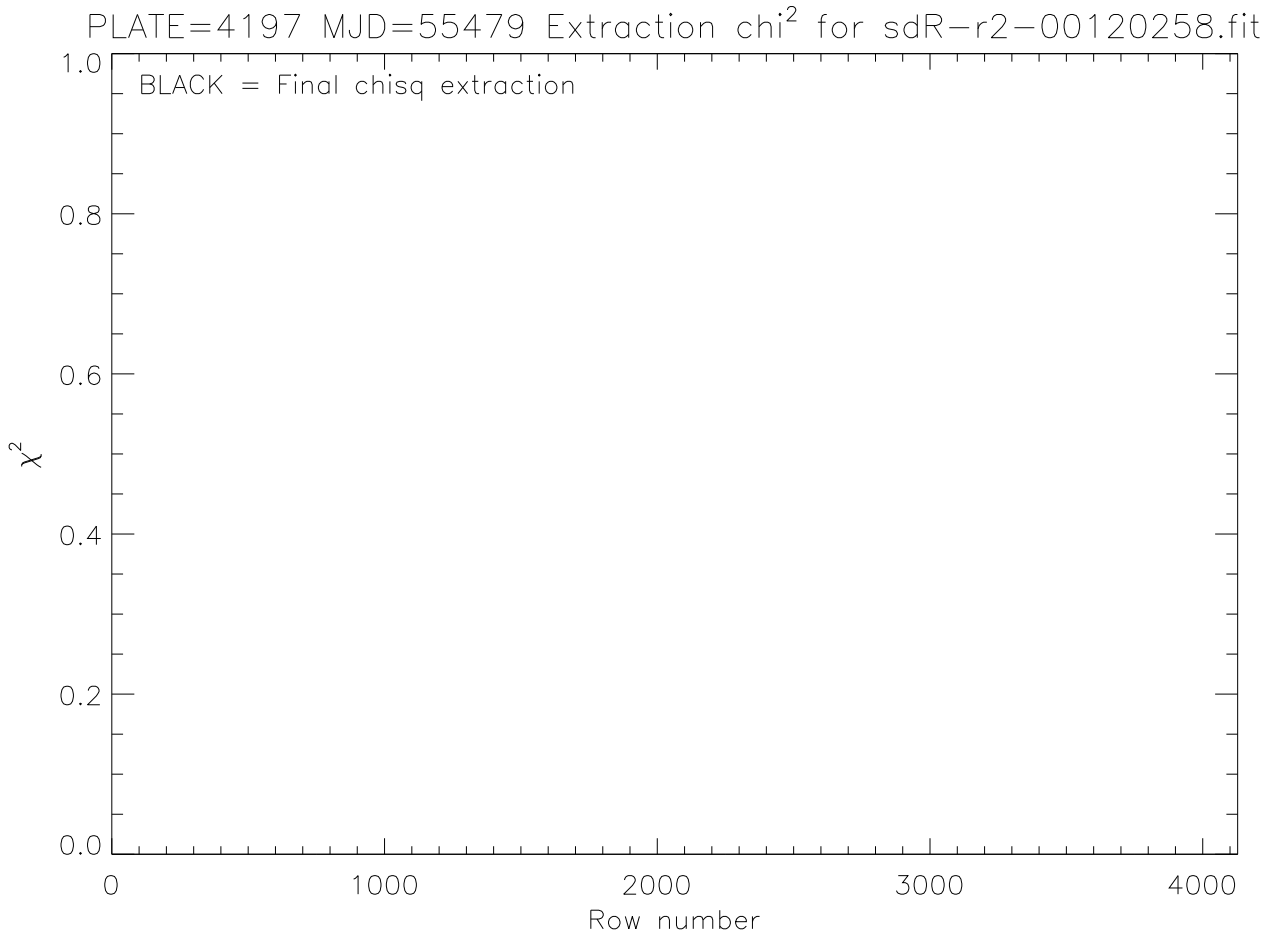
Number of sky fibers = 50

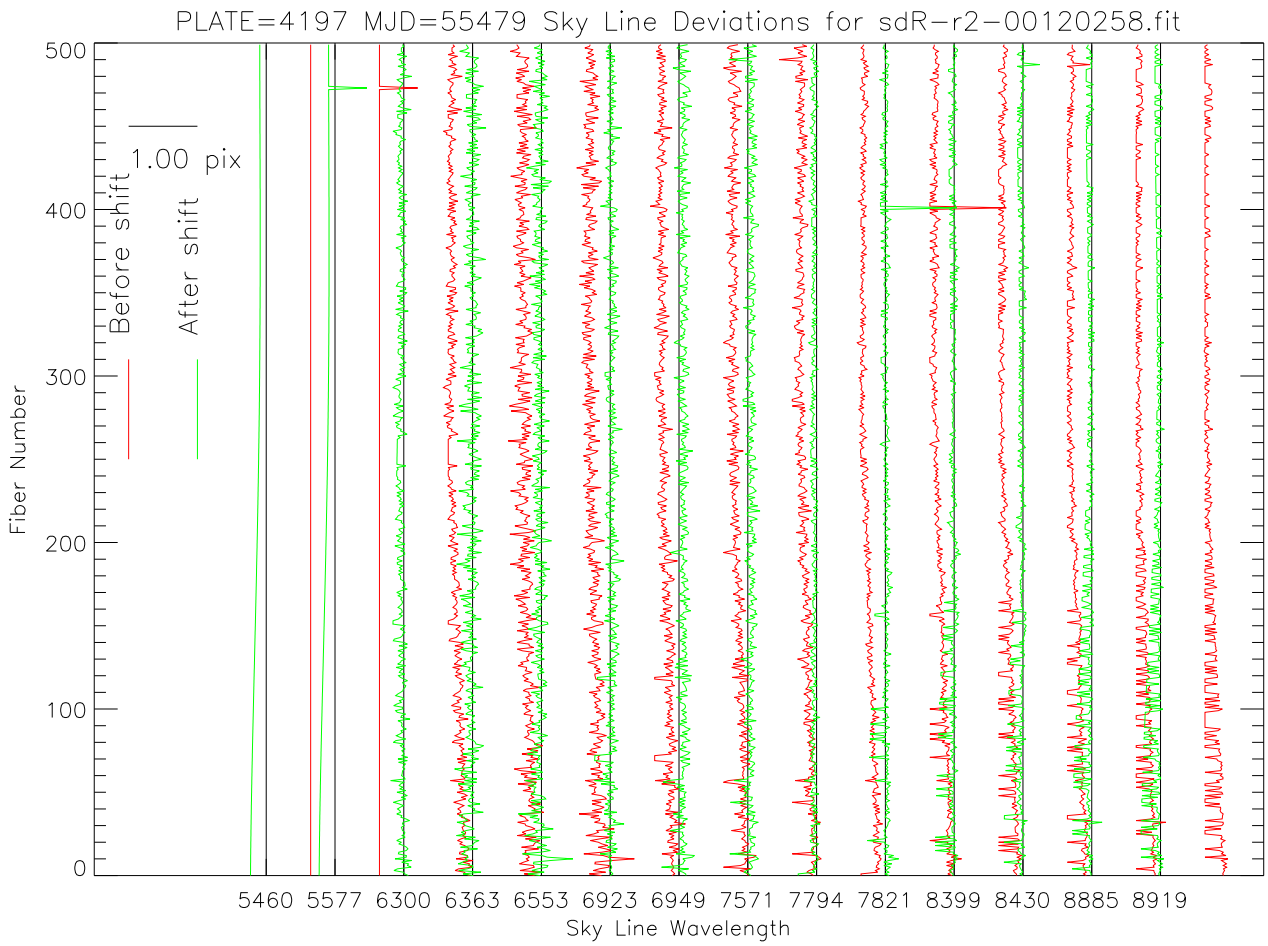


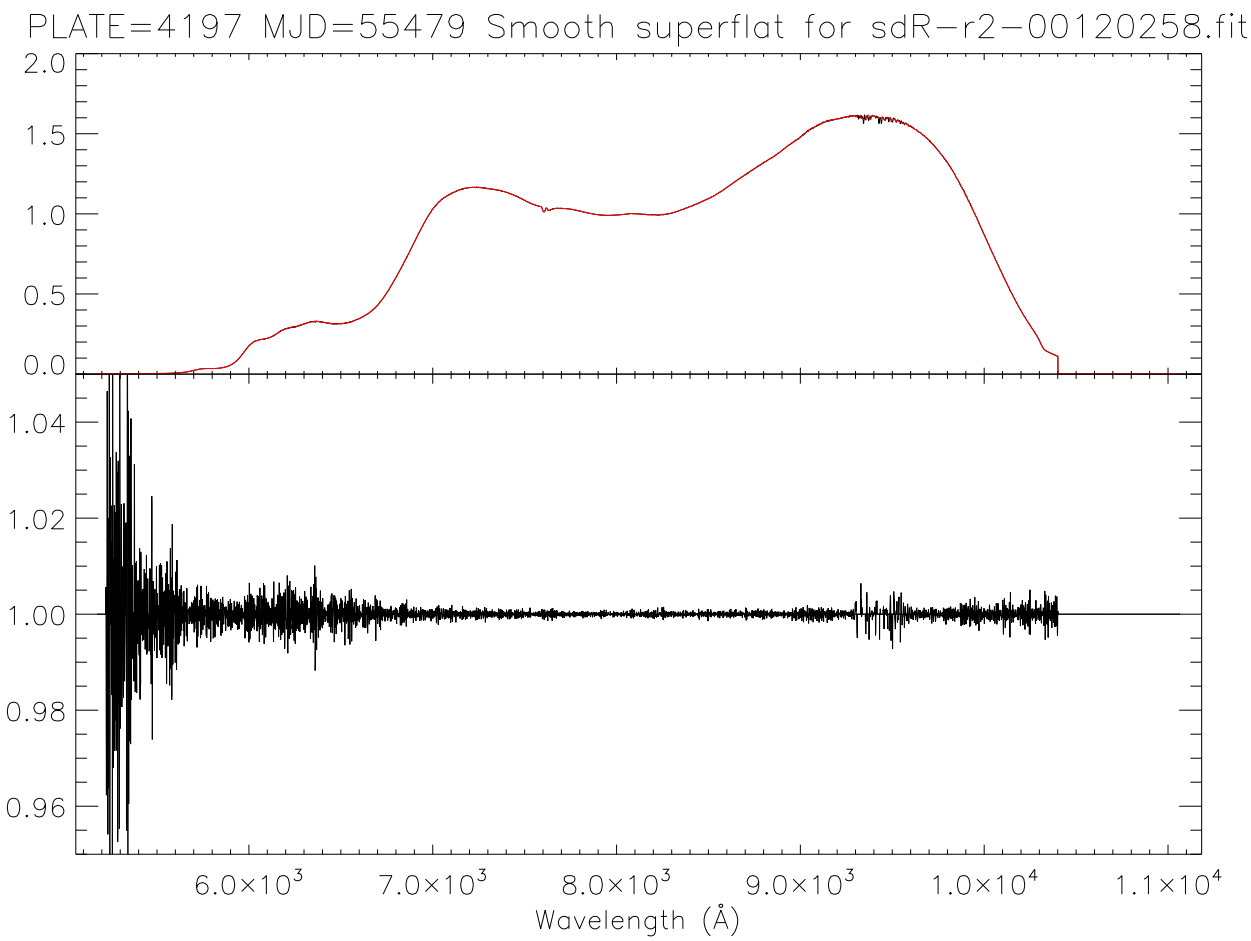

PLATE=4197 MJD=55479 sdR-r2-00120257.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 3.09 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

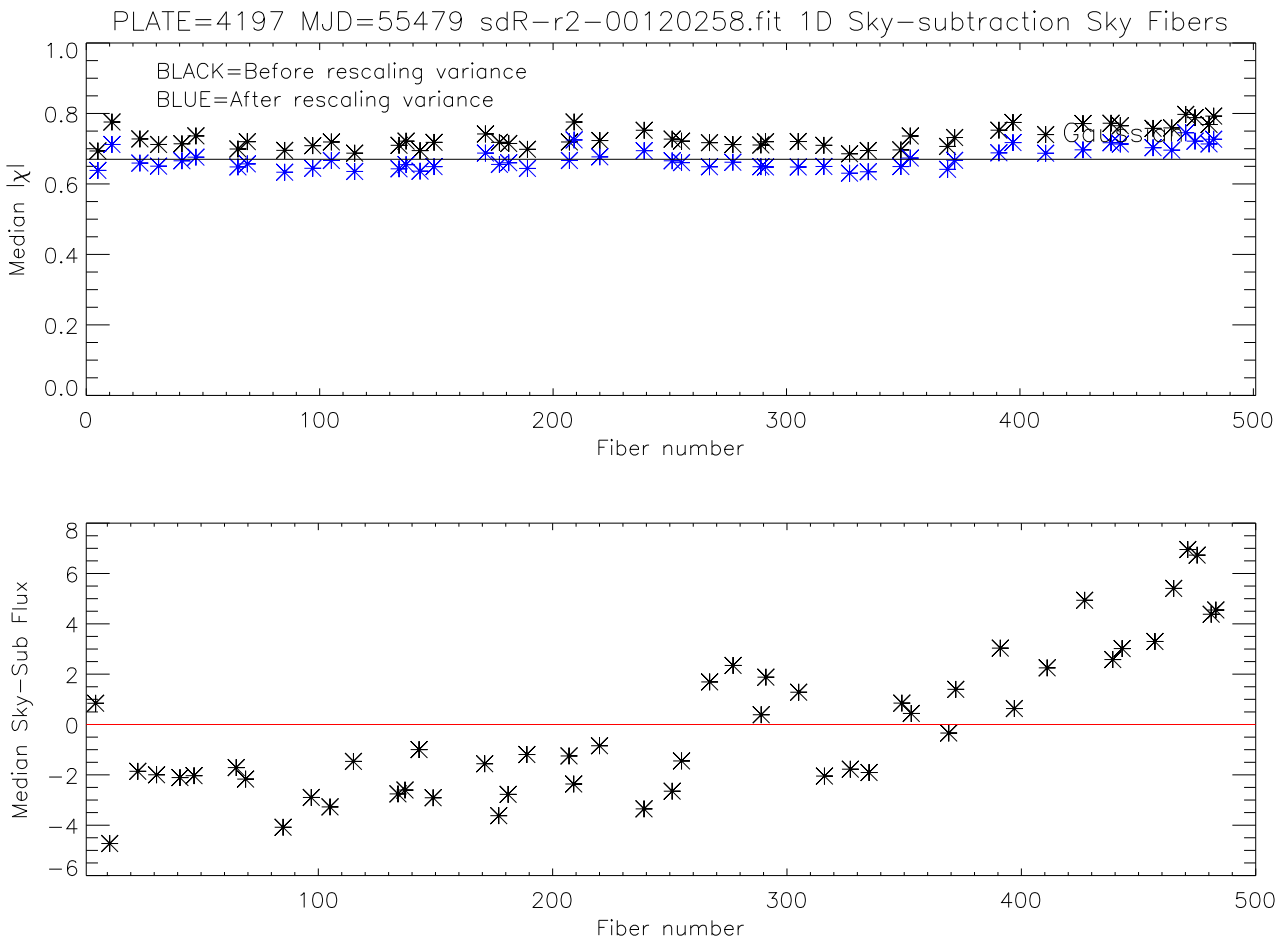

PLATE=4197 MJD=55479 sdR-r2-00120257.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
Fiber number
RED = sky fiber
Dispersion = 17.19 %
Flux (8888.3)/Airmass
Focal Distance [mm]
Flux (8888.3)/Airmass
Airmass

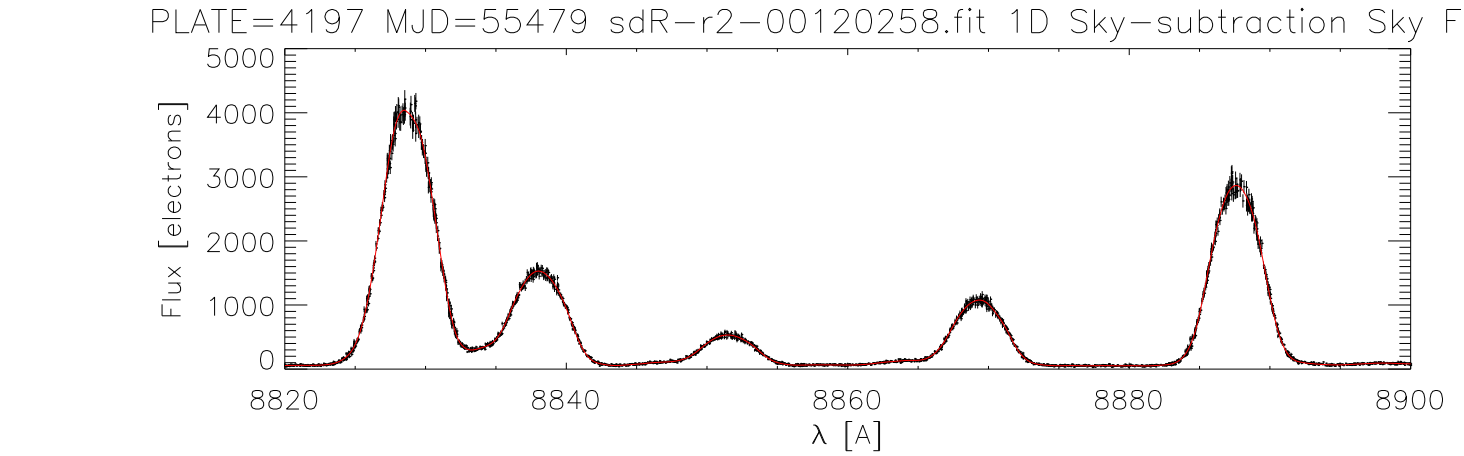

PLATE=4197 MJD=55479 Fiber−Flats for sdR−r2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −3.018
Max value = 319.708
Fiber−Flat
1.5
1.0
0.5
0.0
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
λ [A]
Fri May 27 02:16:42 2016

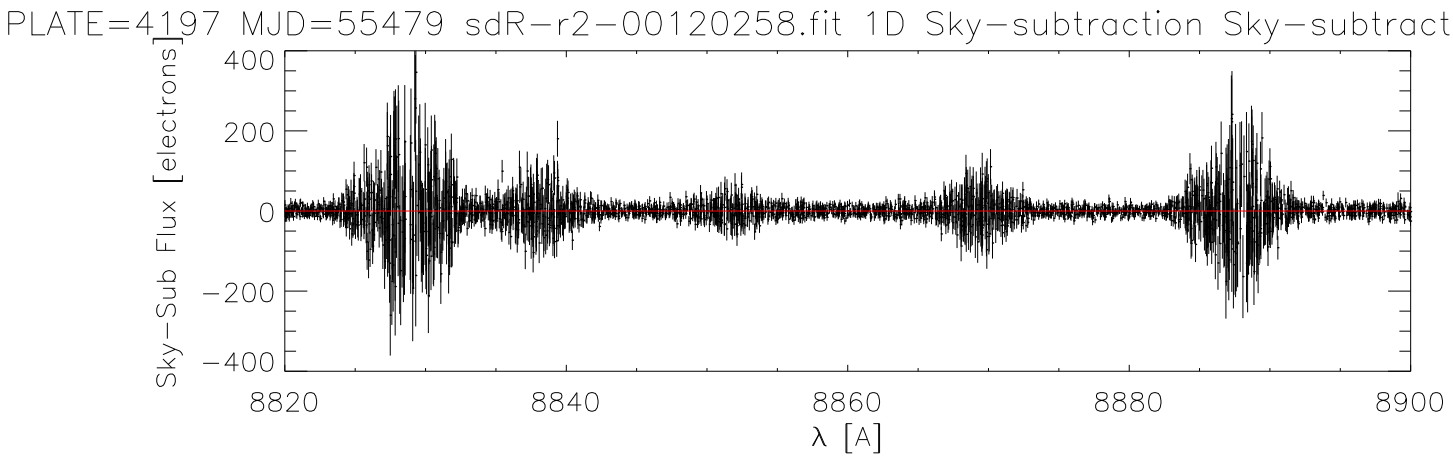

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r2−00120258.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r2-00120258.fit
Before shift
After shift
1.00 pix
Fiber Number
0
100
200
300
400
500
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength

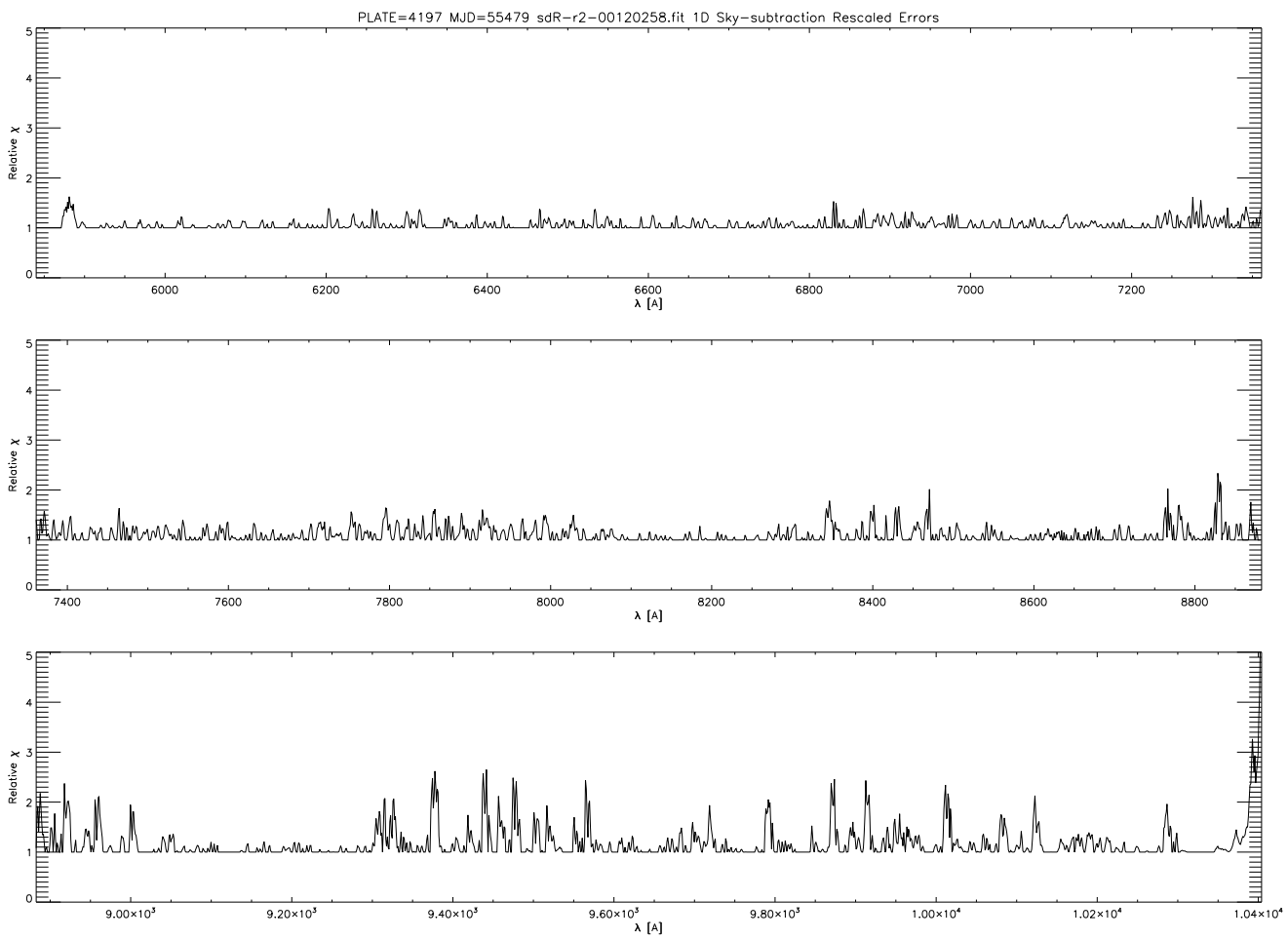

PLATE=4197 MJD=55479 Smooth superflat for sdR-r2-00120258.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

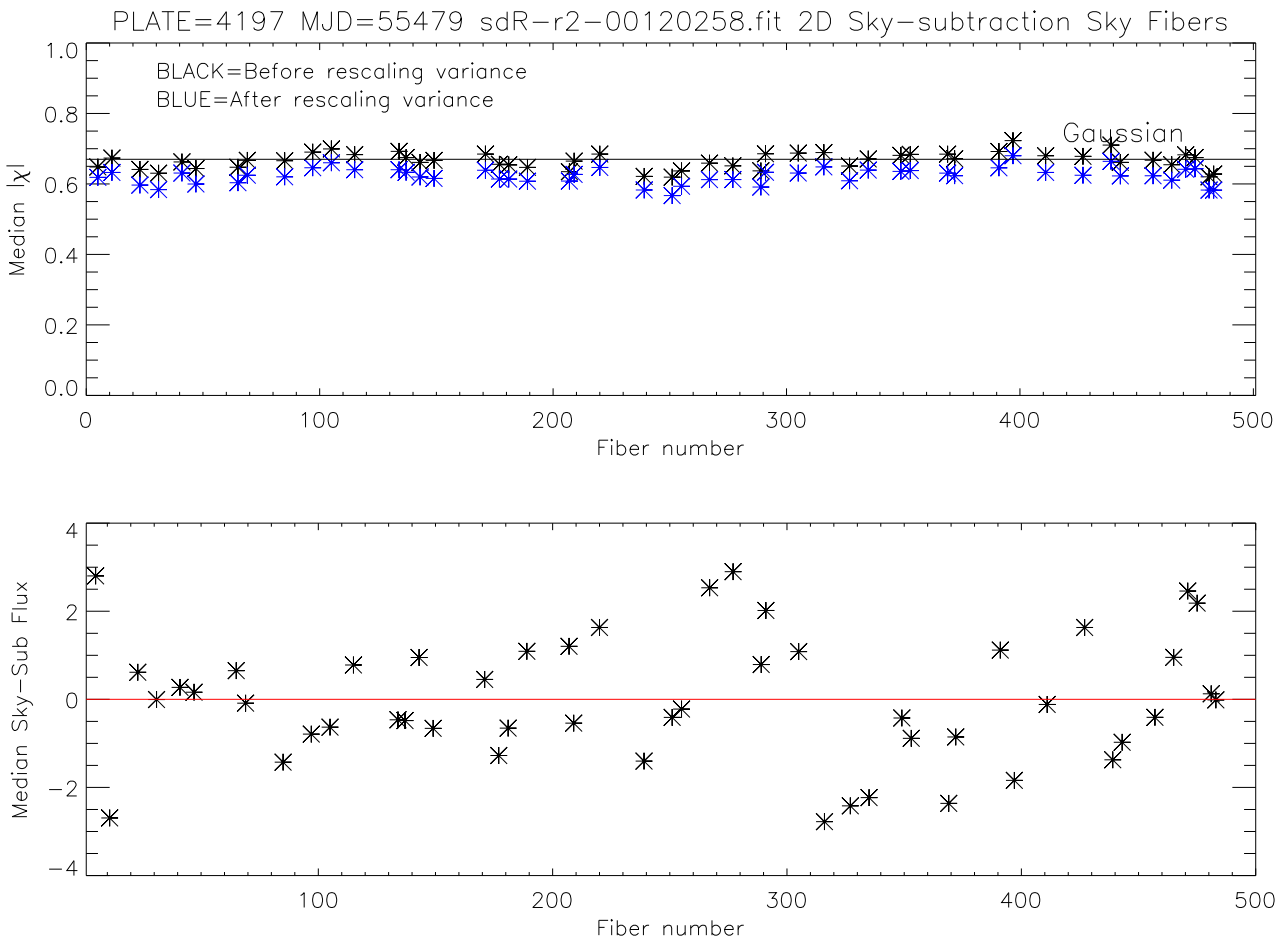

PLATE=4197 MJD=55479 sdR-r2-00120258.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

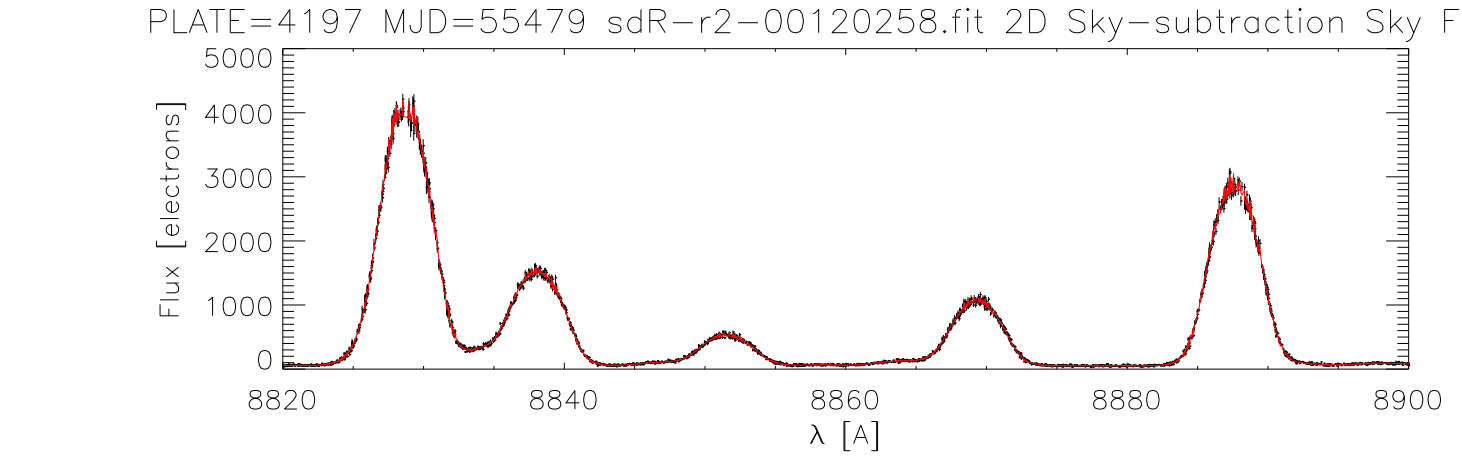

PLATE=4197 MJD=55479 sdR-r2-00120258.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

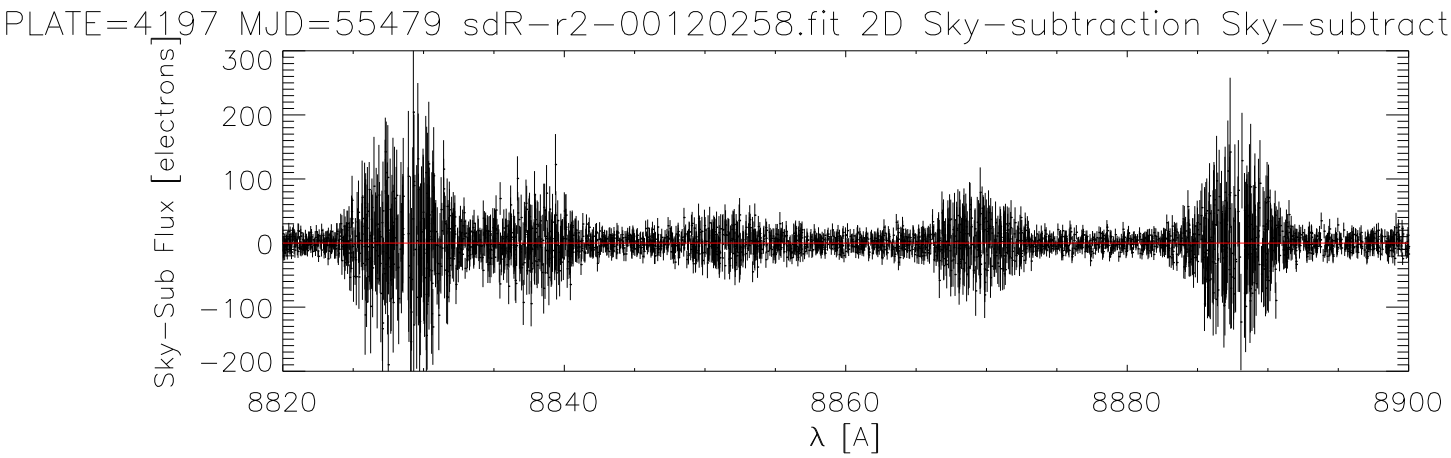

PLATE=4197 MJD=55479 sdR-r2-00120258.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
200
0
-200
-400
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 50

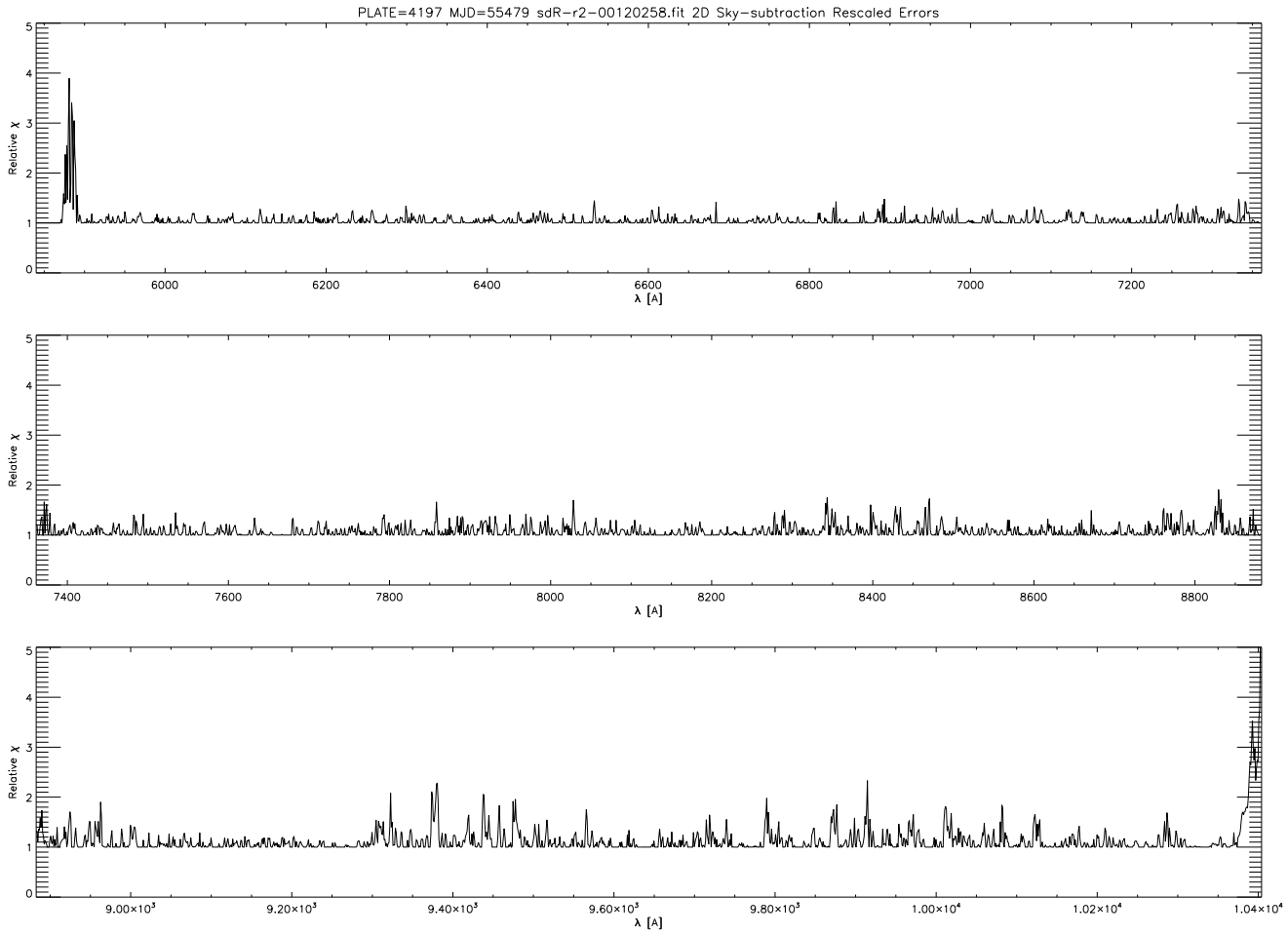


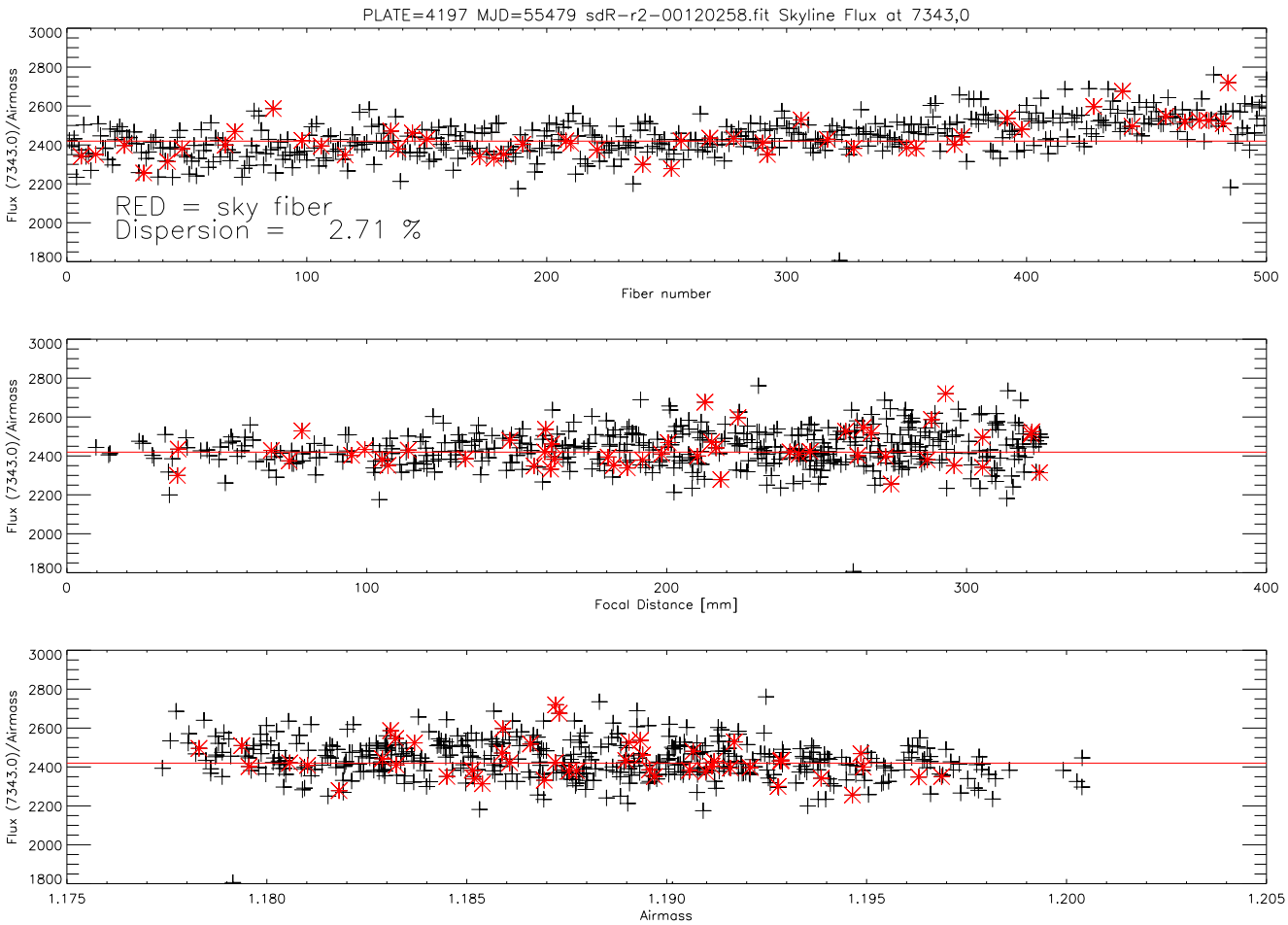

PLATE=4197 MJD=55479 sdR-r2-00120258.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

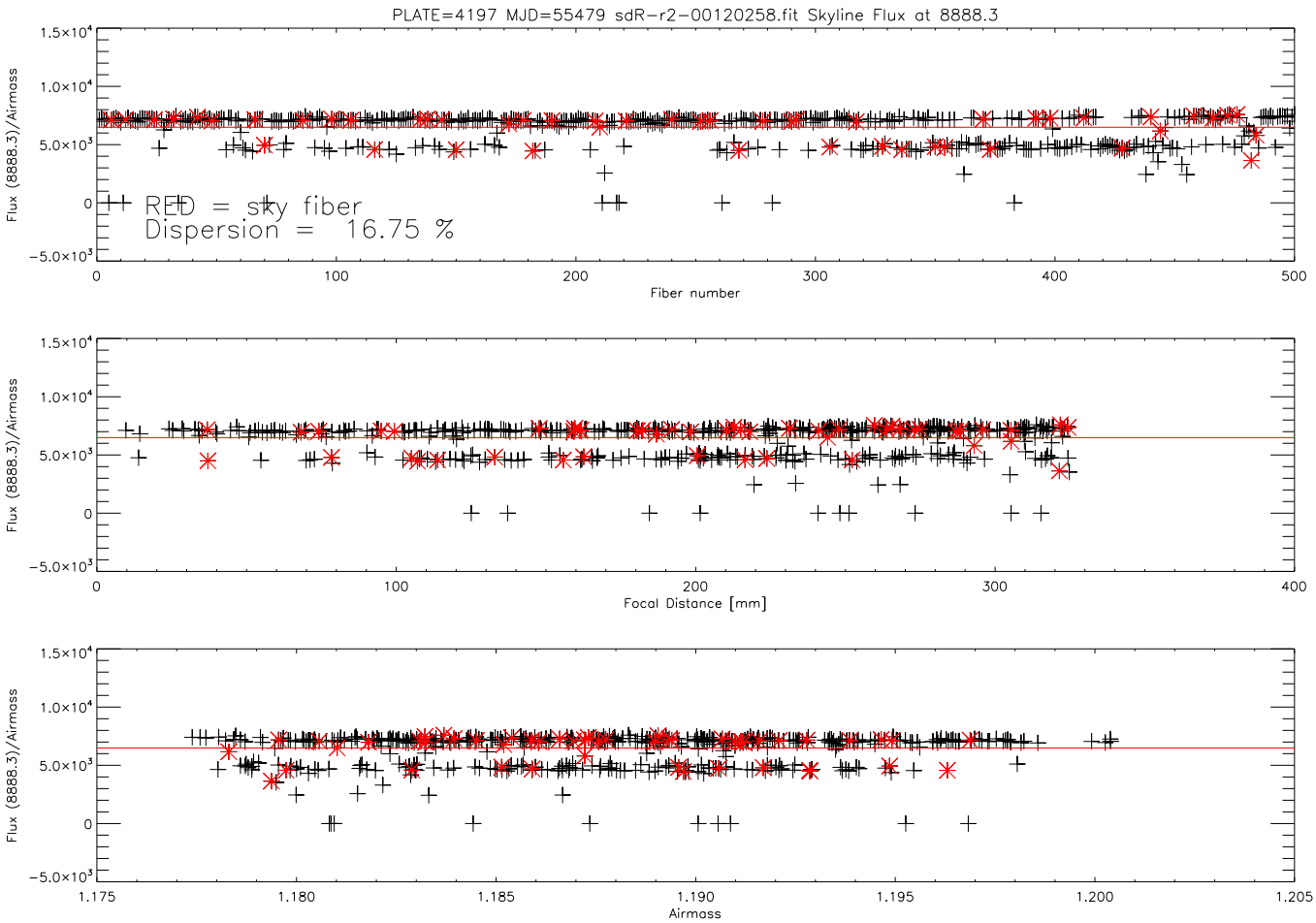

PLATE=4197 MJD=55479 sdR-r2-00120258.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

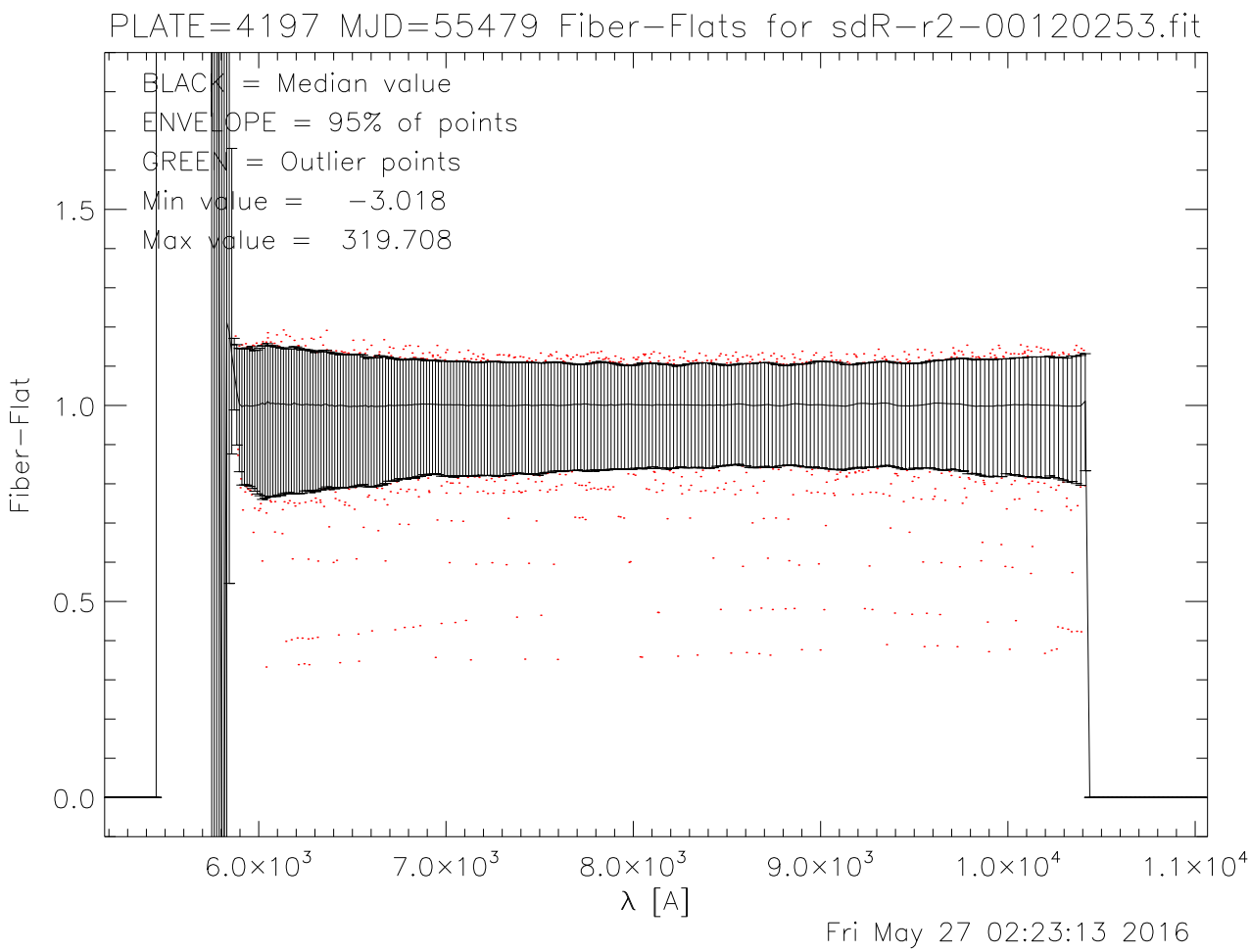

PLATE=4197 MJD=55479 sdR-r2-00120258.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
-100
-200
8820
8840
8860
8880
8900
λ [A]

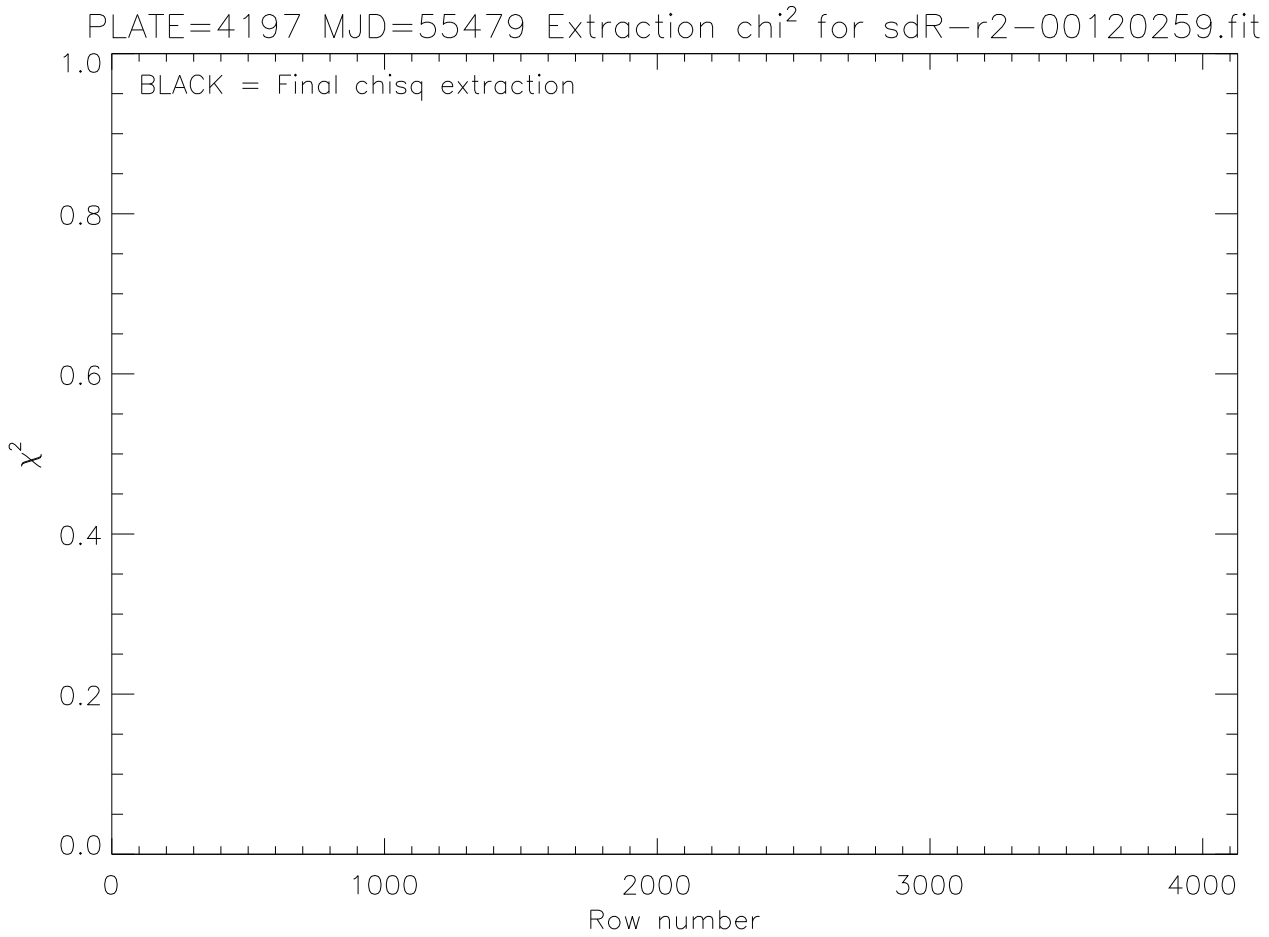
Number of sky fibers = 50

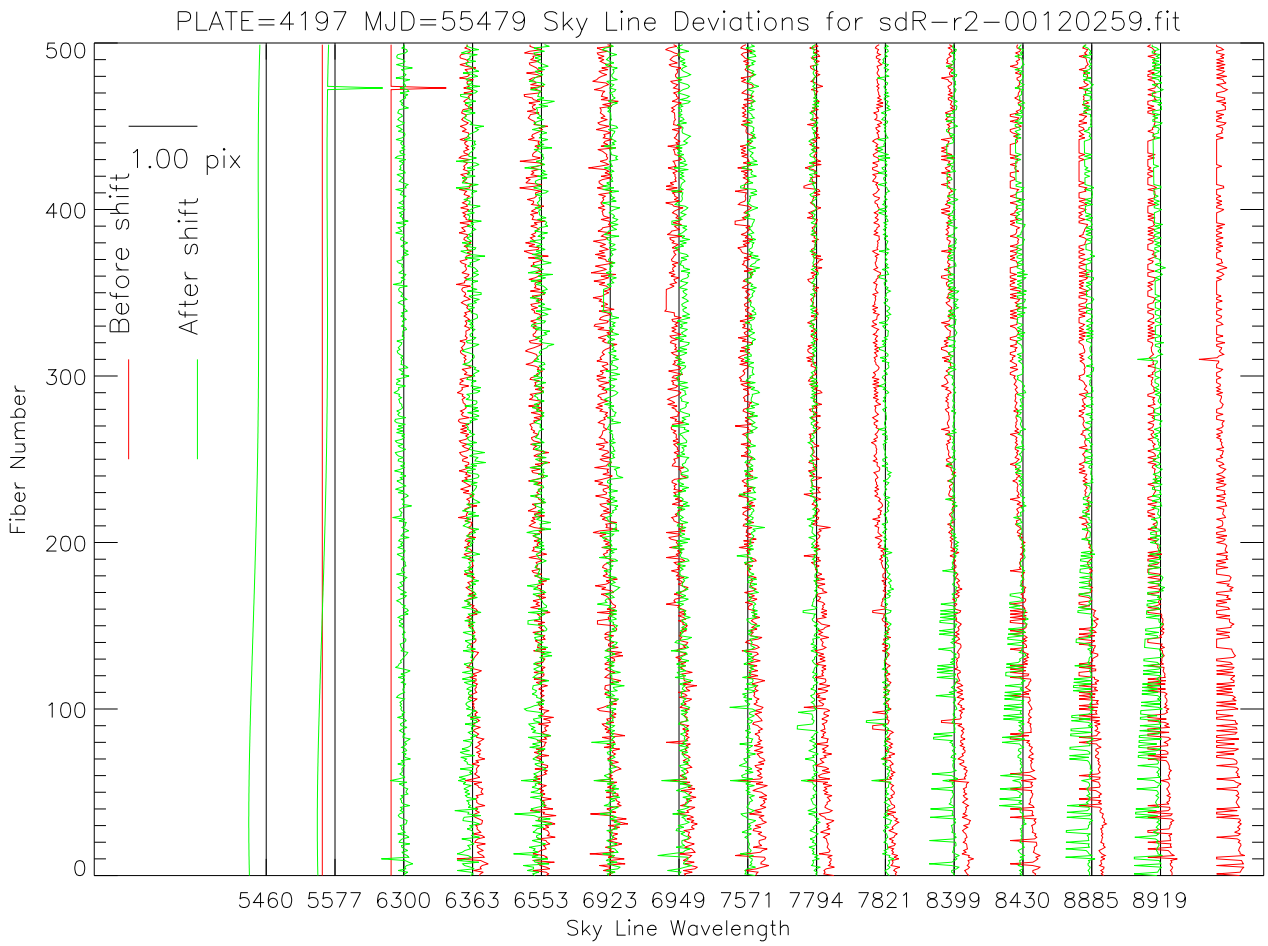


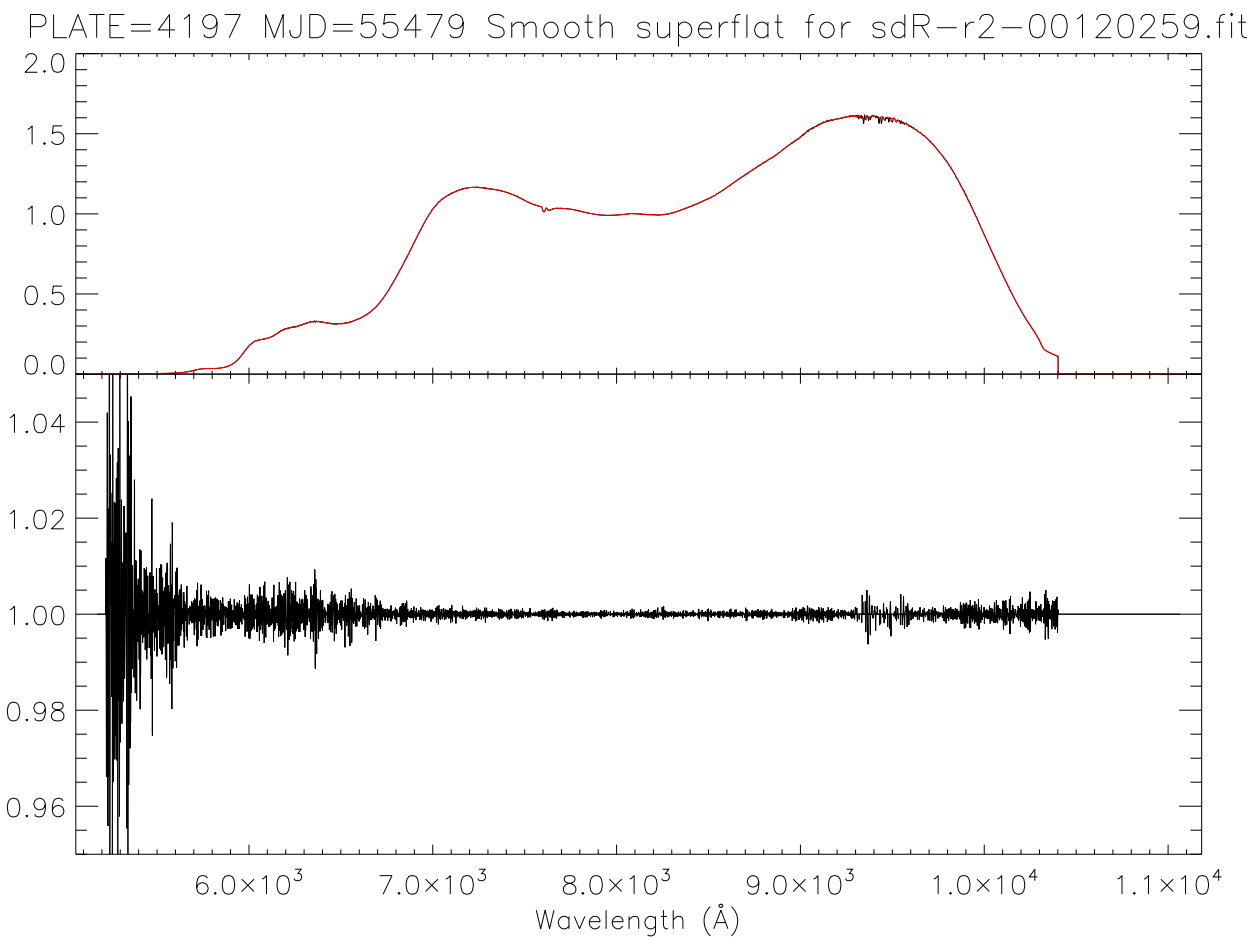

PLATE=4197 MJD=55479 sdR-r2-00120258.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 2.71 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

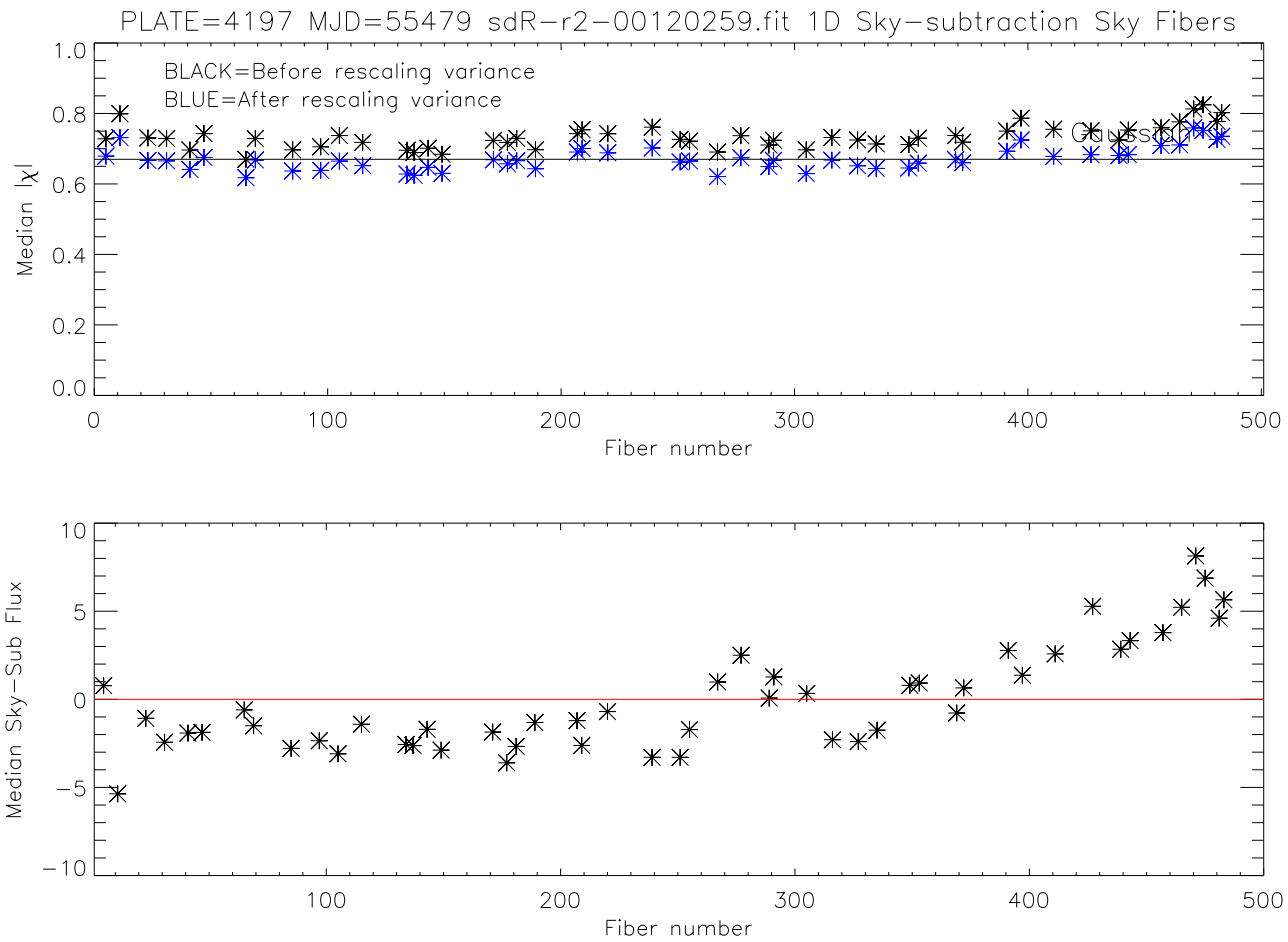

PLATE=4197 MJD=55479 sdR-r2-00120258.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
RED = sky fiber
Dispersion = 16.75 %
Fiber number
Focal Distance [mm]
Airmass

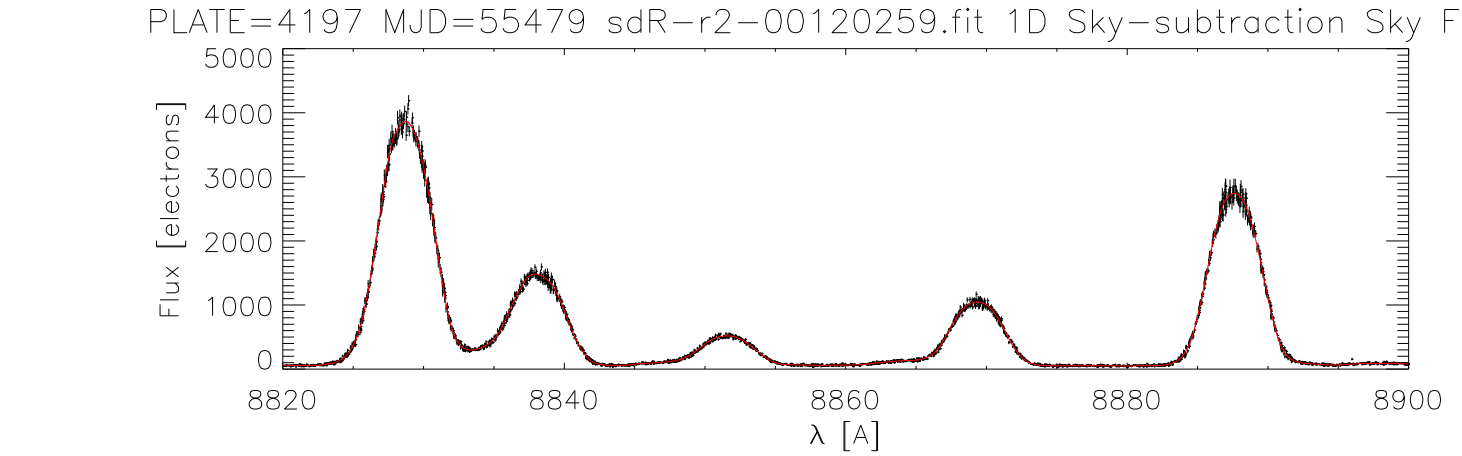

PLATE=4197 MJD=55479 Fiber−Flats for sdR−r2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −3.018
Max value = 319.708
Fiber−Flat
1.5
1.0
0.5
0.0
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
λ [A]
Fri May 27 02:23:13 2016

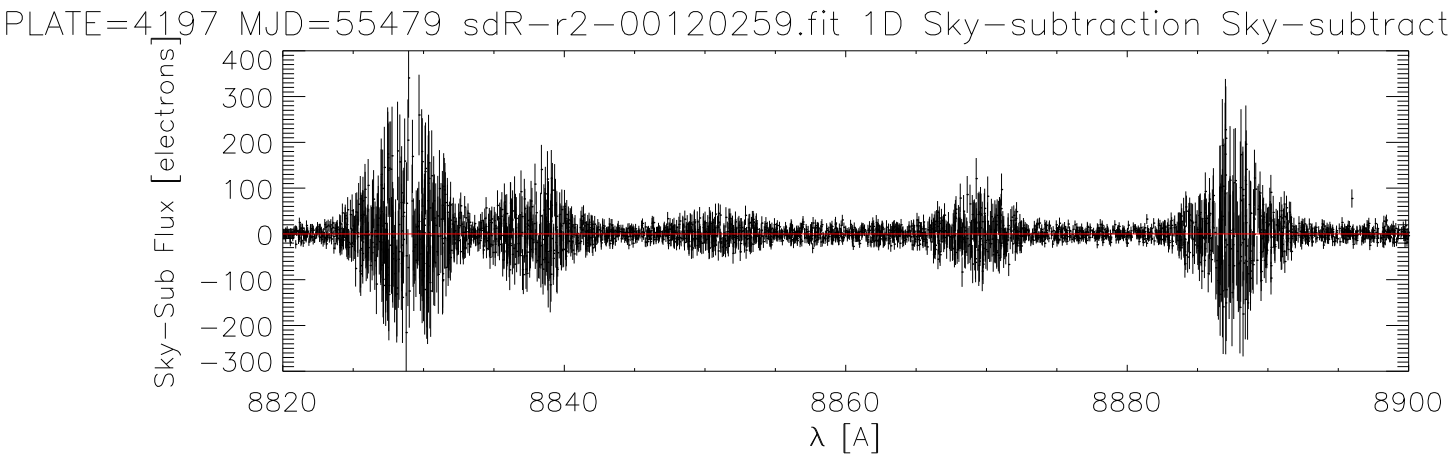

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r2−00120259.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number


PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r2-00120259.fit
Before shift
After shift
1.00 pix
Fiber Number
0
100
200
300
400
500
5460 5577 6300 6363 6553 6923 6949 7571 7794 7821 8399 8430 8885 8919
Sky Line Wavelength

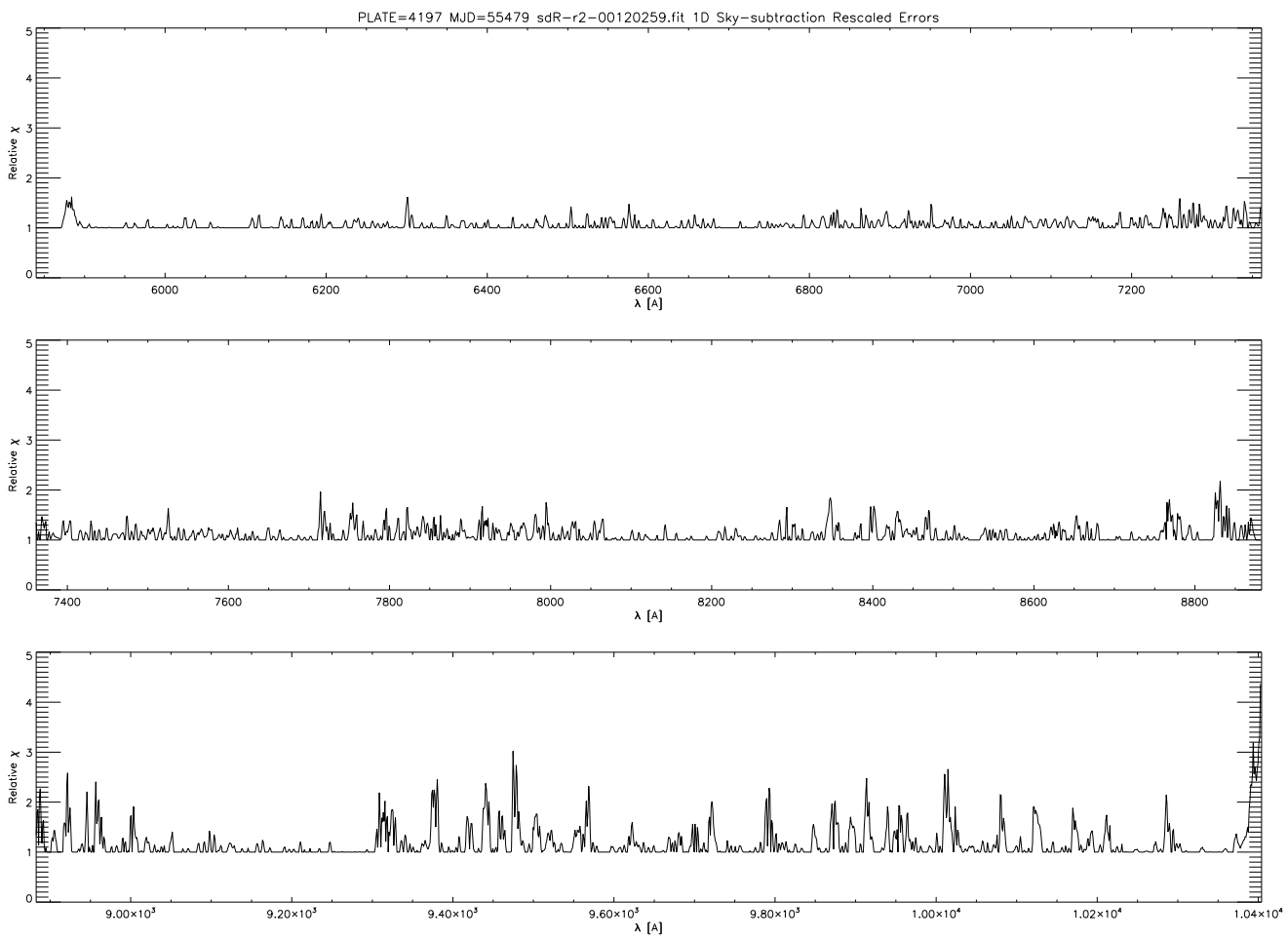

PLATE=4197 MJD=55479 Smooth superflat for sdR-r2-00120259.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

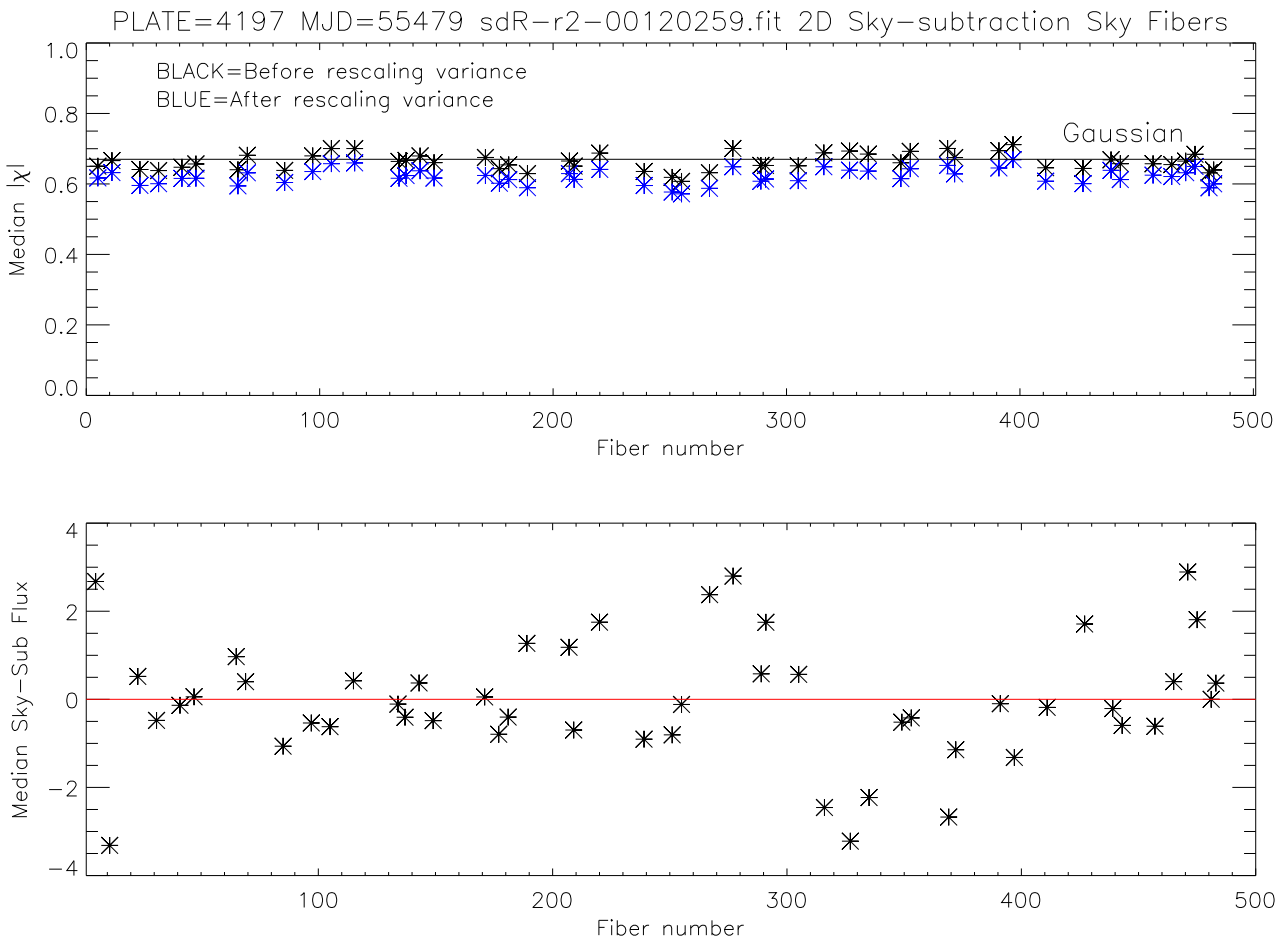

PLATE=4197 MJD=55479 sdR-r2-00120259.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

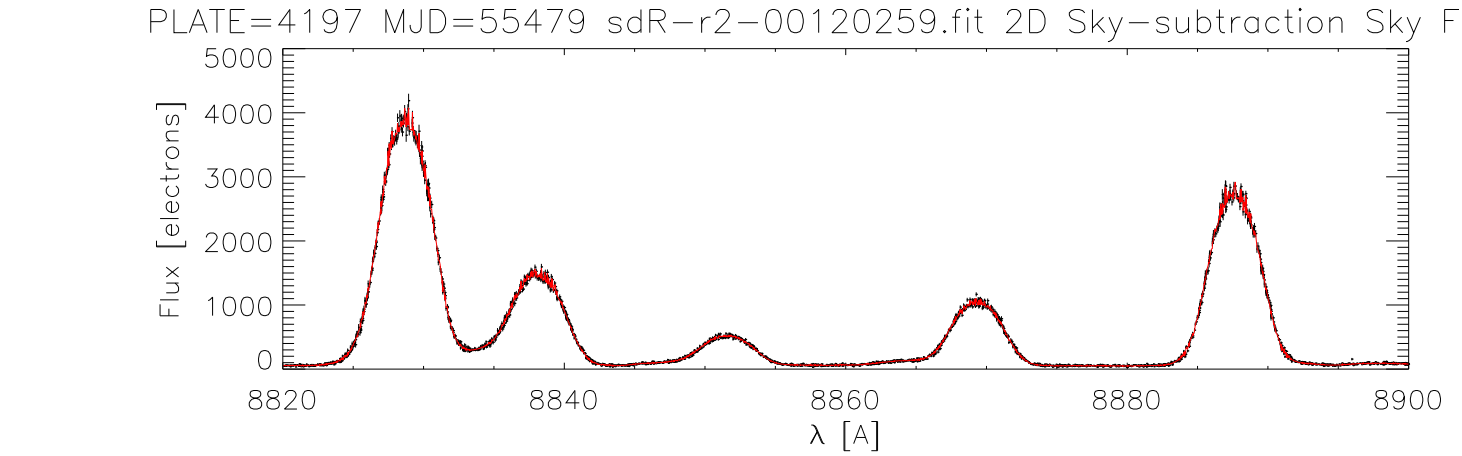

PLATE=4197 MJD=55479 sdR-r2-00120259.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

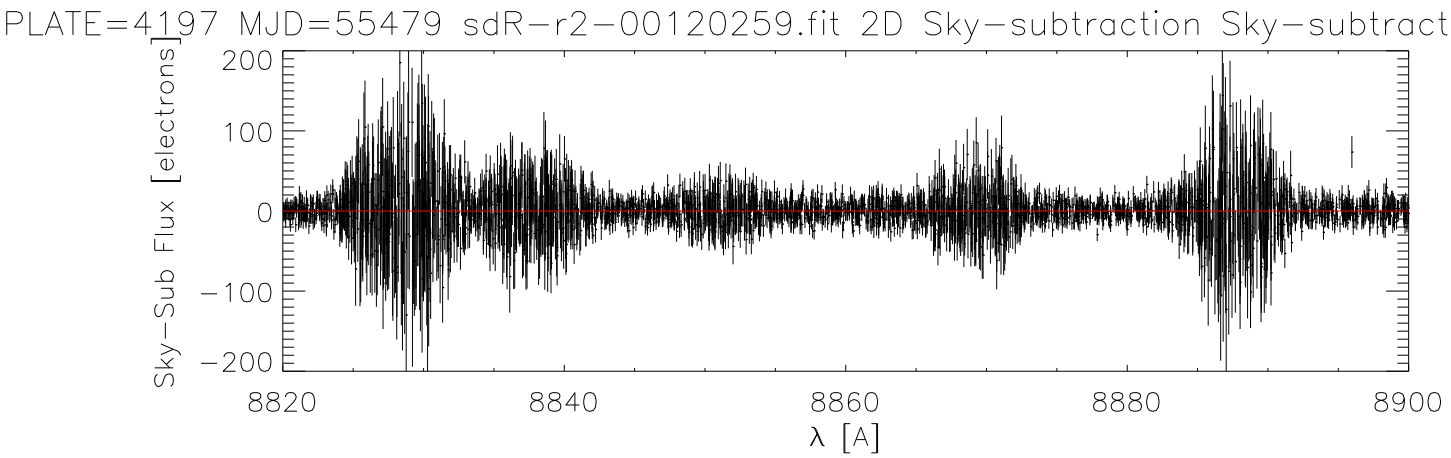

PLATE=4197 MJD=55479 sdR-r2-00120259.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
300
200
100
0
-100
-200
-300
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 50

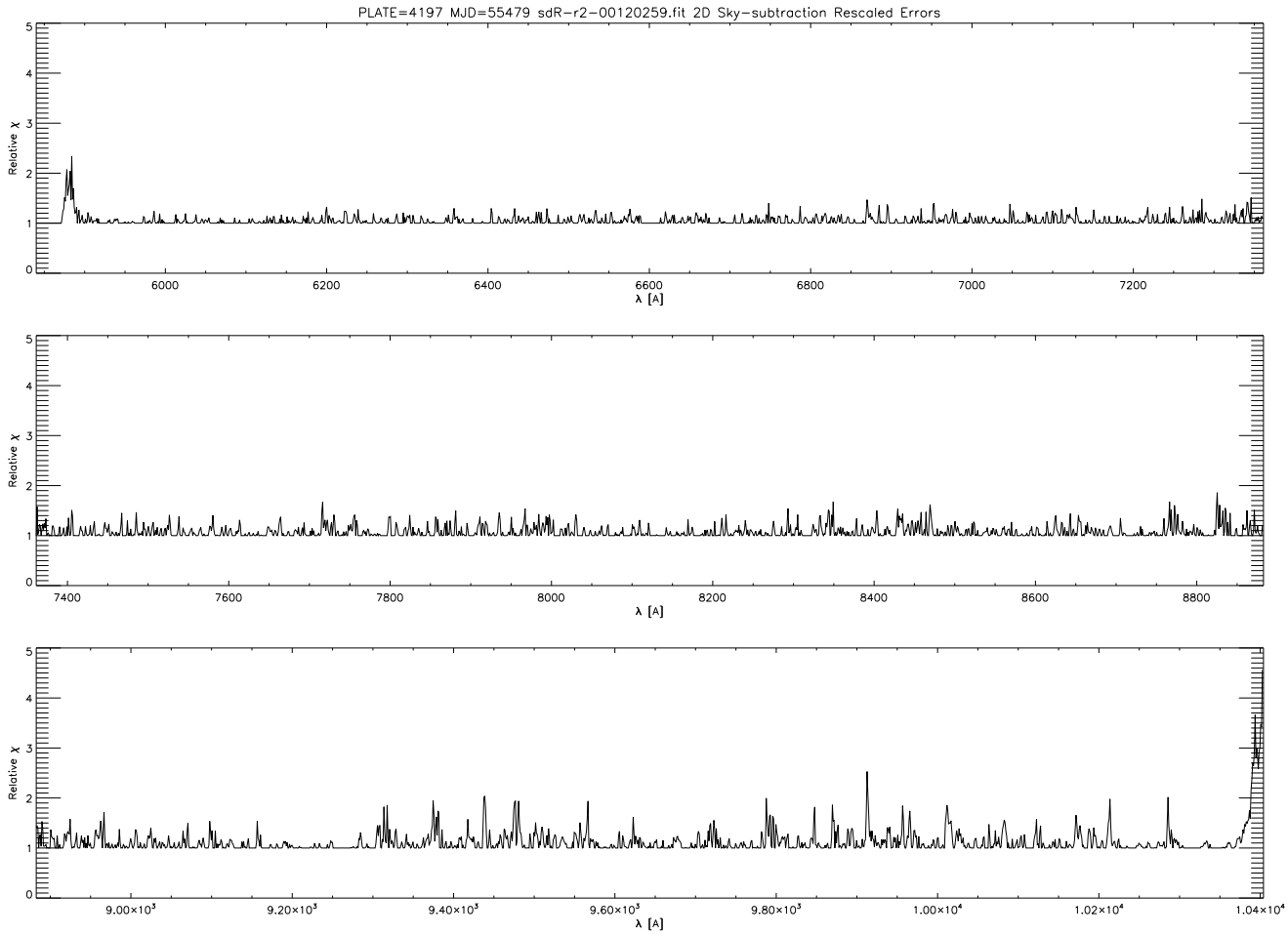


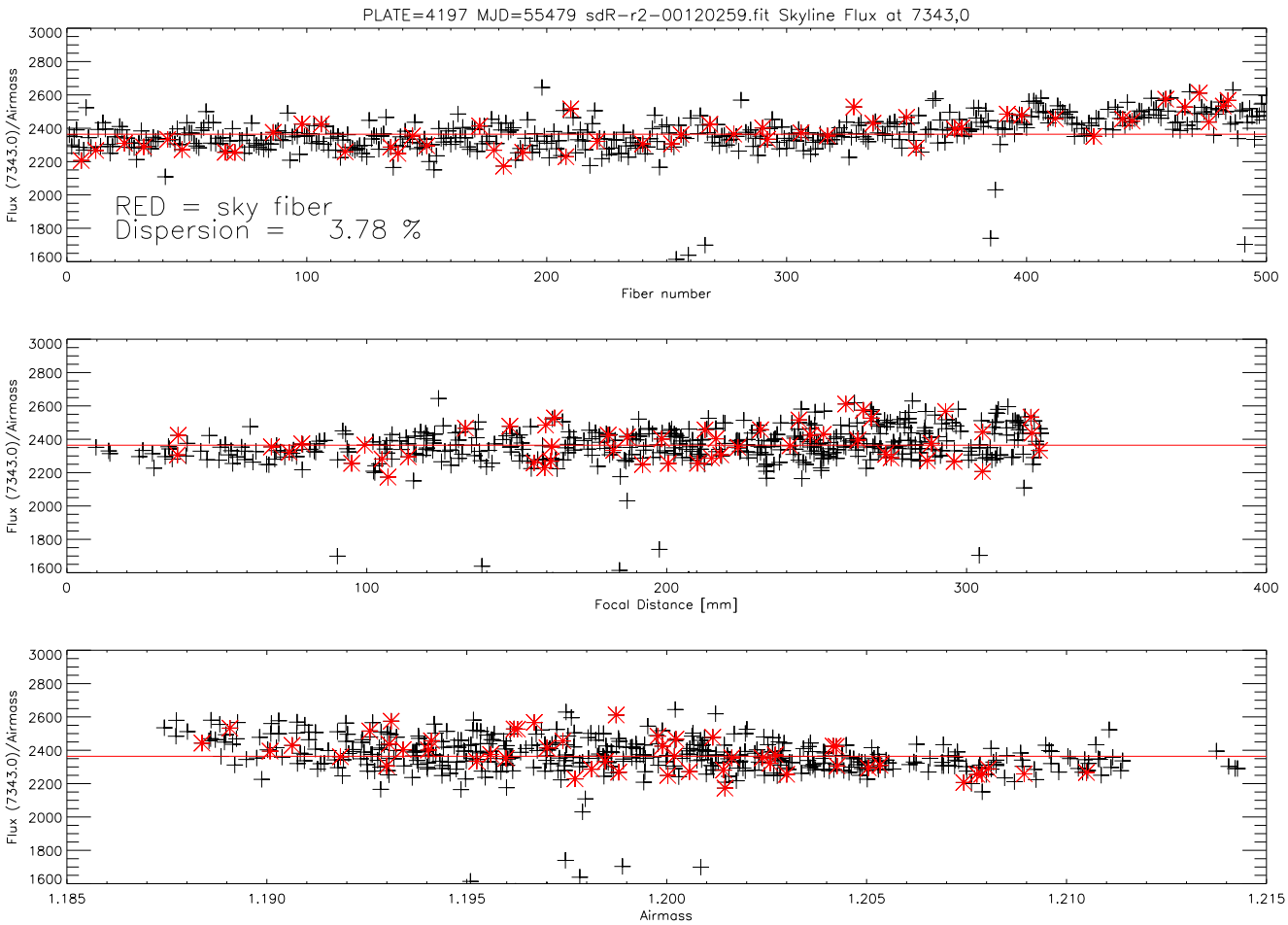

PLATE=4197 MJD=55479 sdR-r2-00120259.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

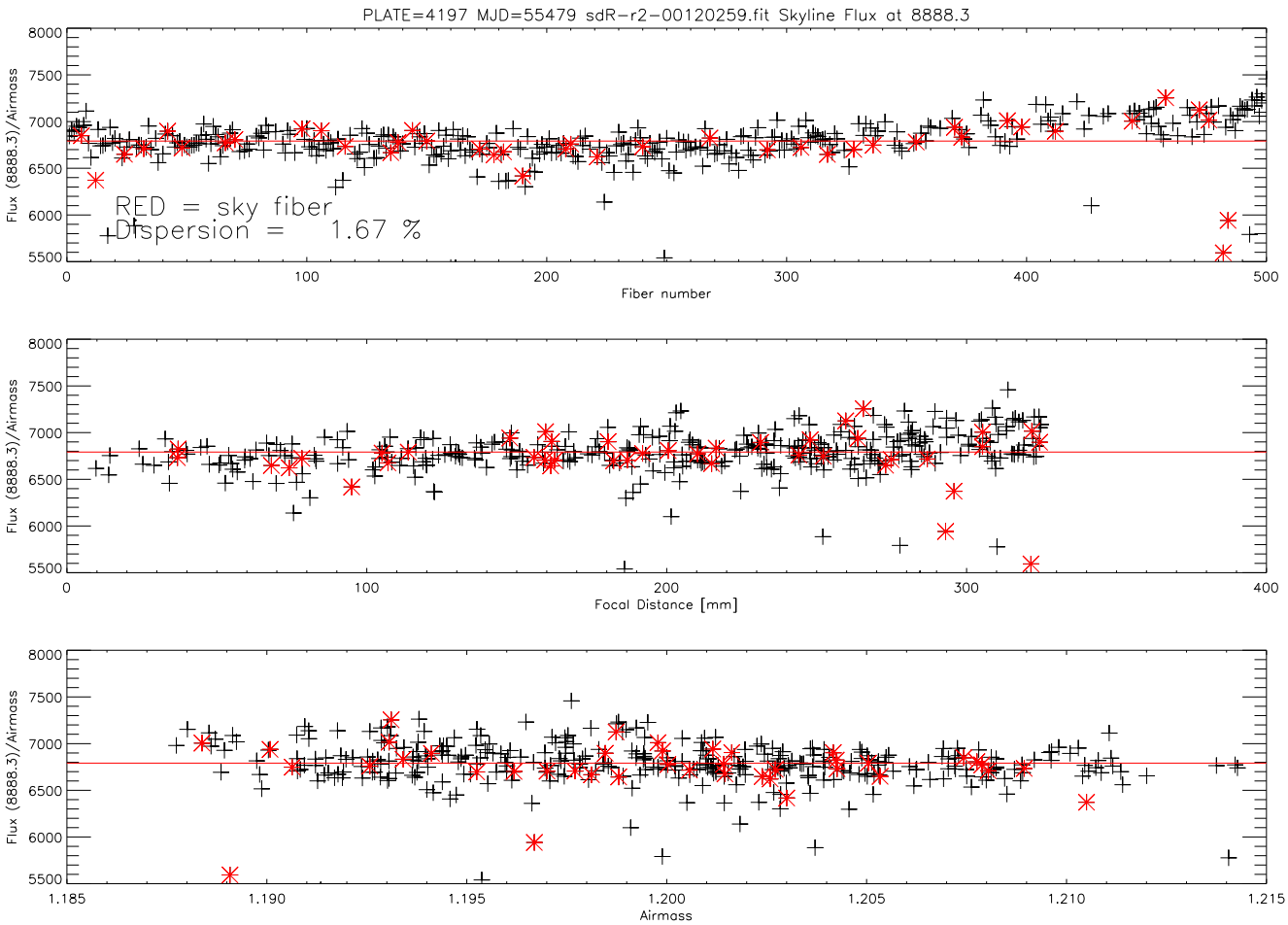

PLATE=4197 MJD=55479 sdR-r2-00120259.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

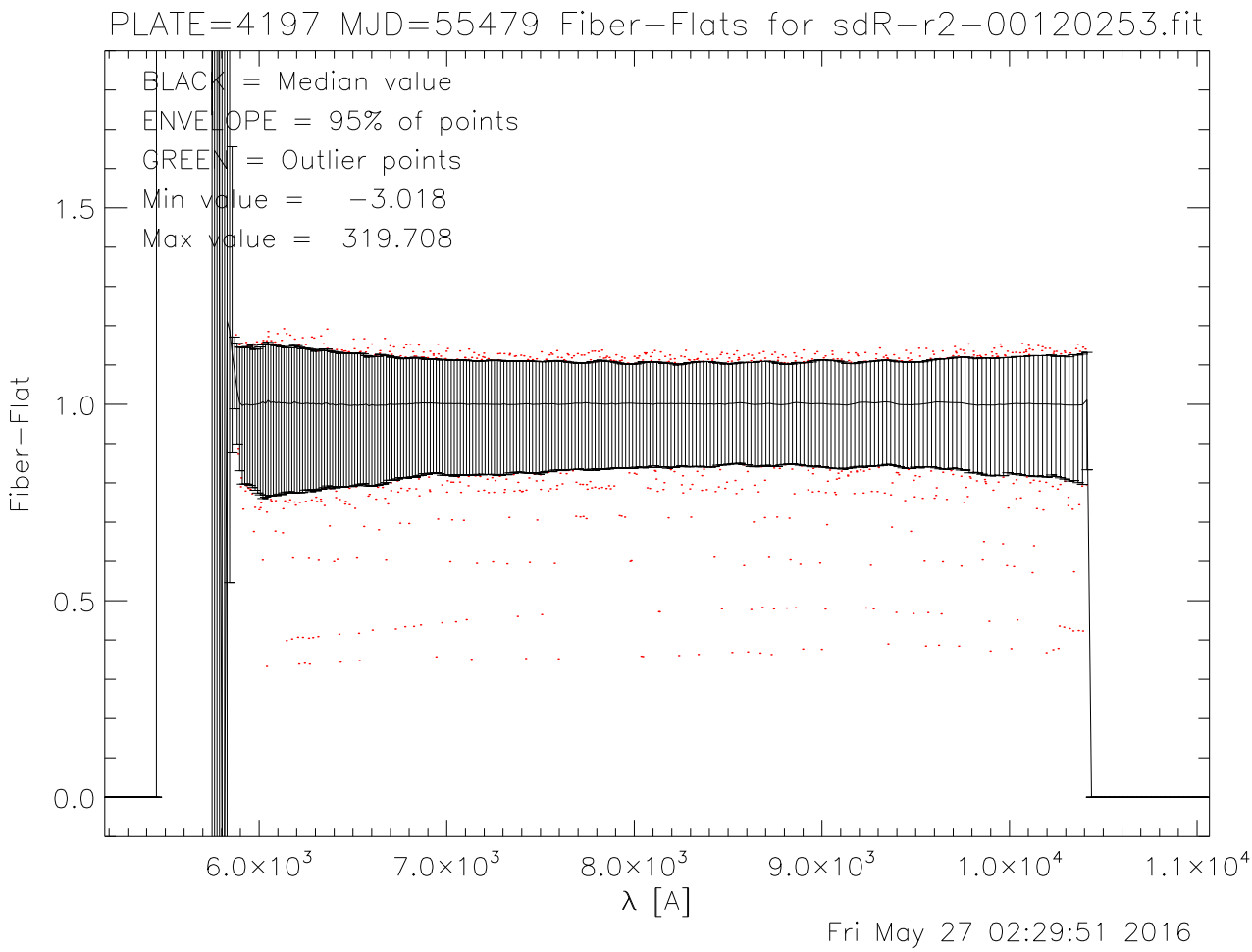

PLATE=4197 MJD=55479 sdR-r2-00120259.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
200
100
0
-100
-200
8820
8840
8860
8880
8900
λ [A]

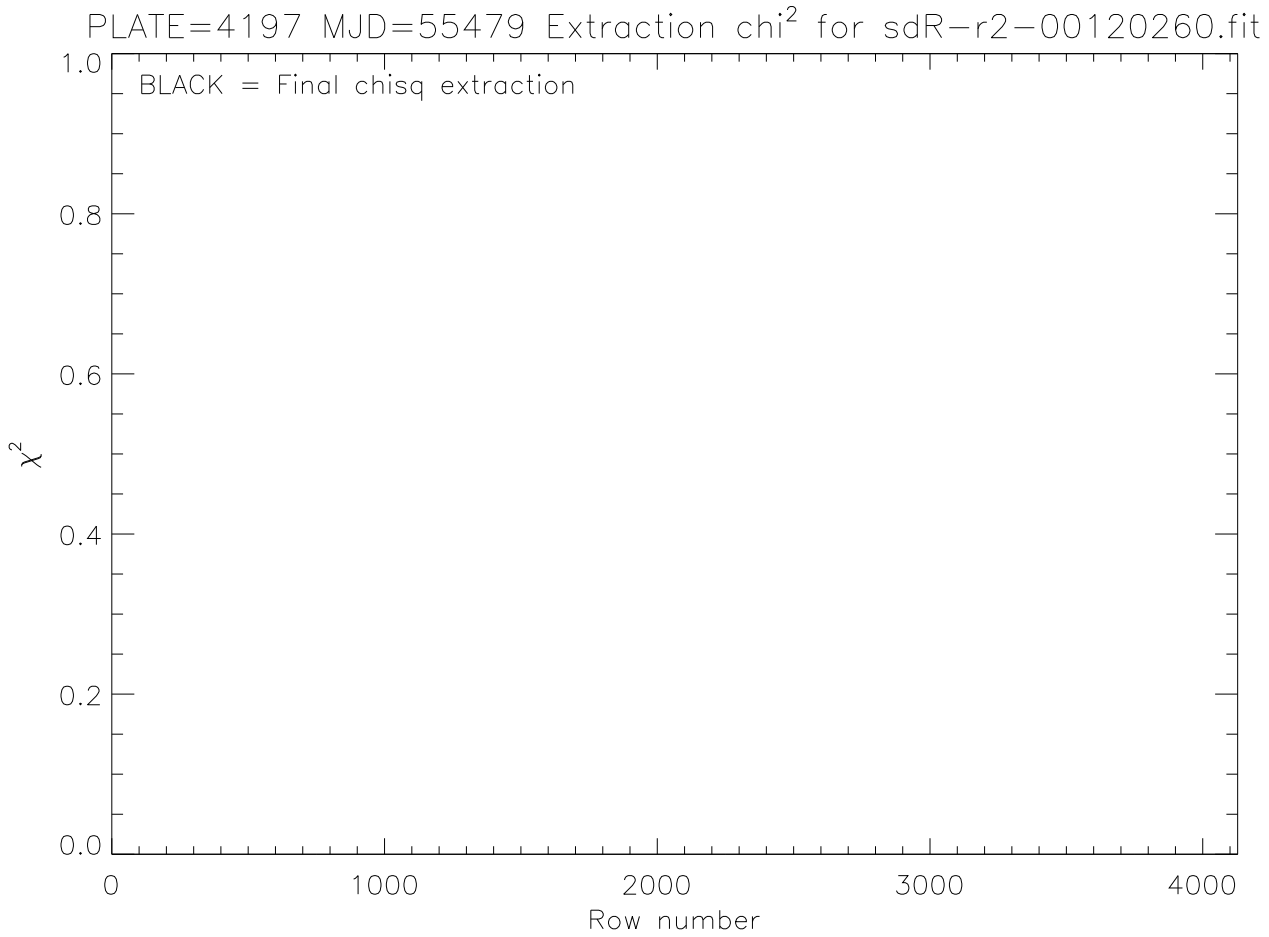
Number of sky fibers = 50

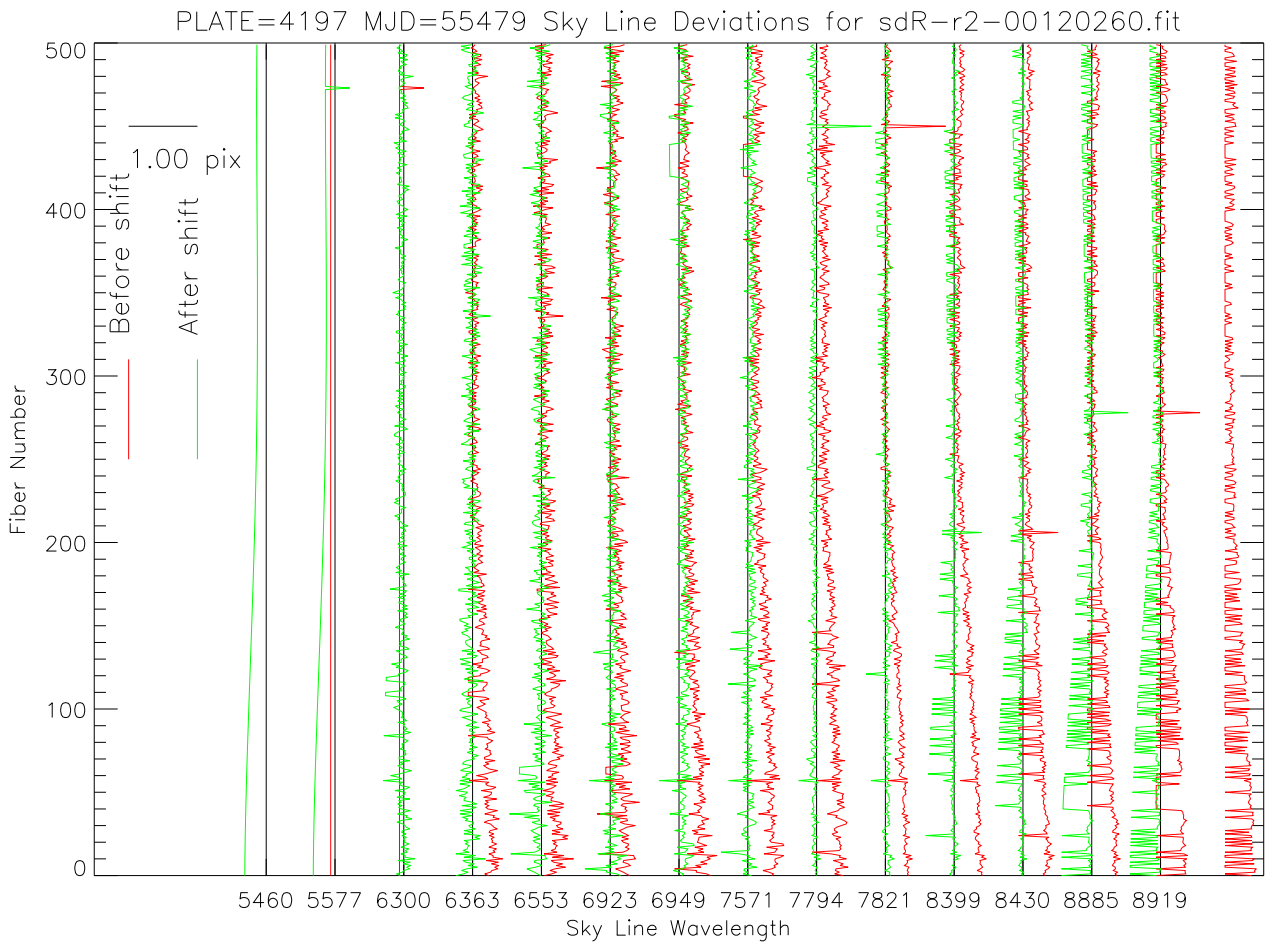


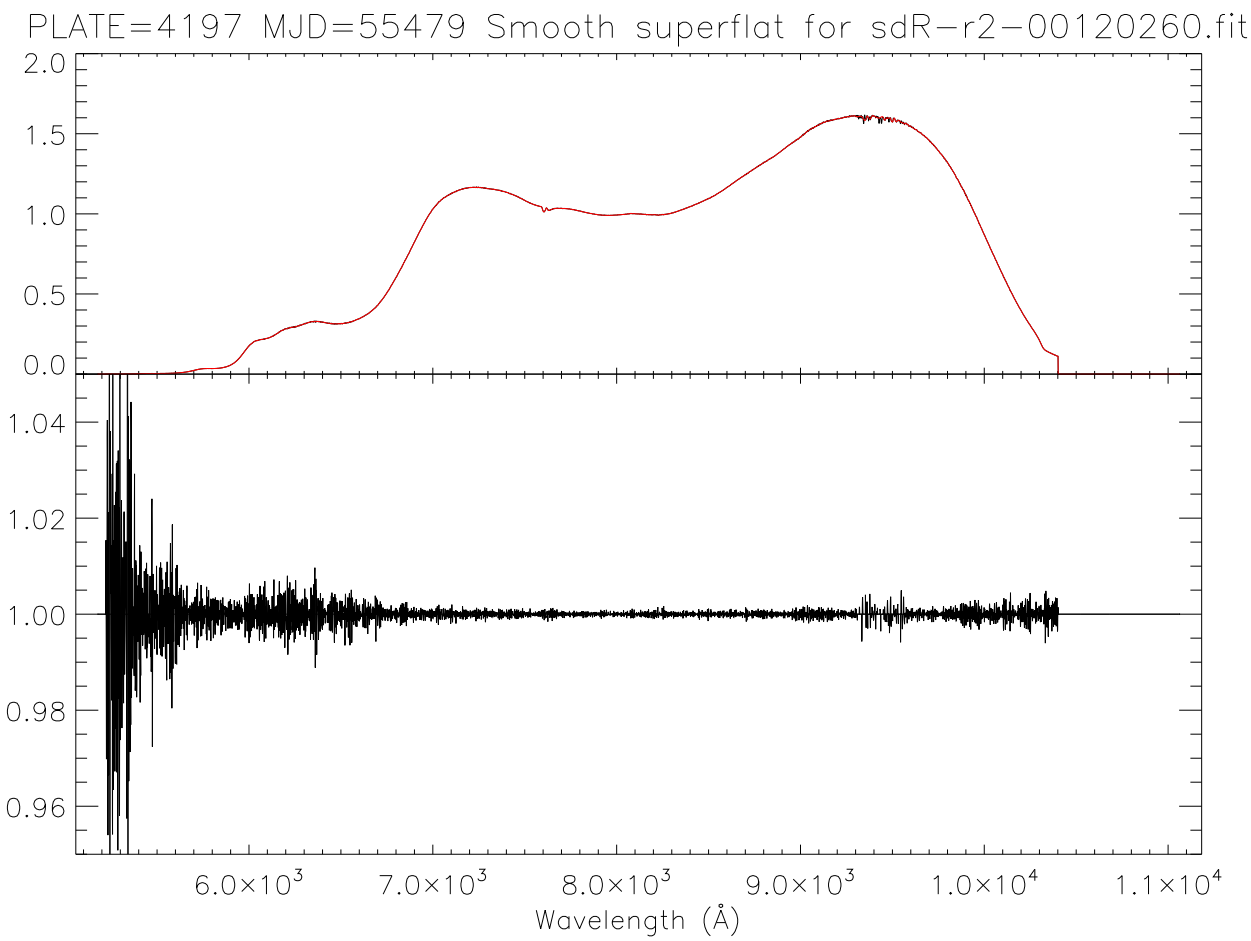

PLATE=4197 MJD=55479 sdR-r2-00120259.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 3.78 %
Fiber number
Focal Distance [mm]
Airmass

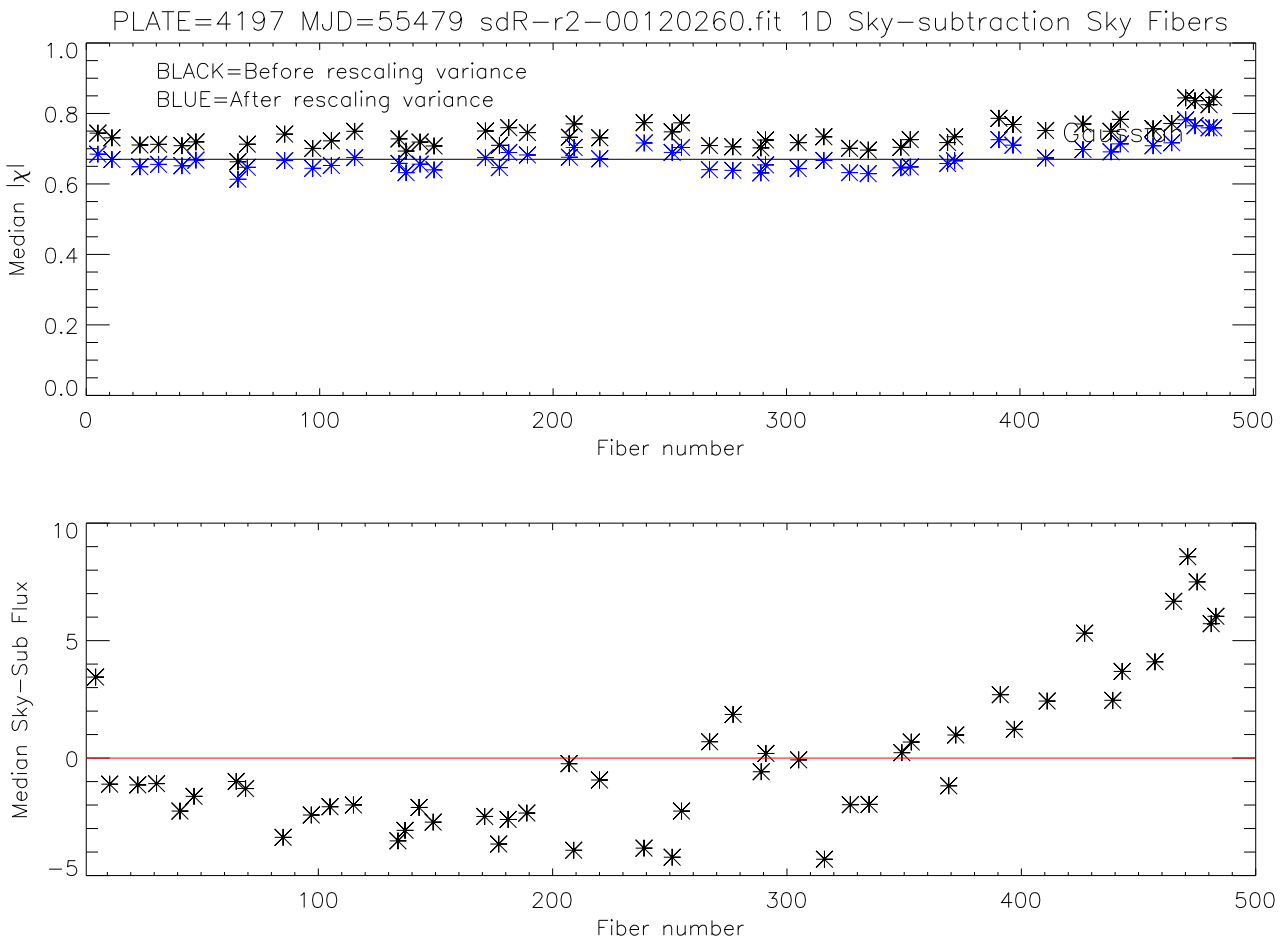

PLATE=4197 MJD=55479 sdR-r2-00120259.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
RED = sky fiber
Dispersion = 1.67 %
Fiber number
Flux (8888.3)/Airmass
Focal Distance [mm]
Flux (8888.3)/Airmass
Airmass


PLATE=4197 MJD=55479 Fiber−Flats for sdR−r2−00120253.fit
BLACK = Median value
ENVELOPE = 95% of points
GREEN = Outlier points
Min value = −3.018
Max value = 319.708
Fiber−Flat
1.5
1.0
0.5
0.0
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
λ [A]
Fri May 27 02:29:51 2016

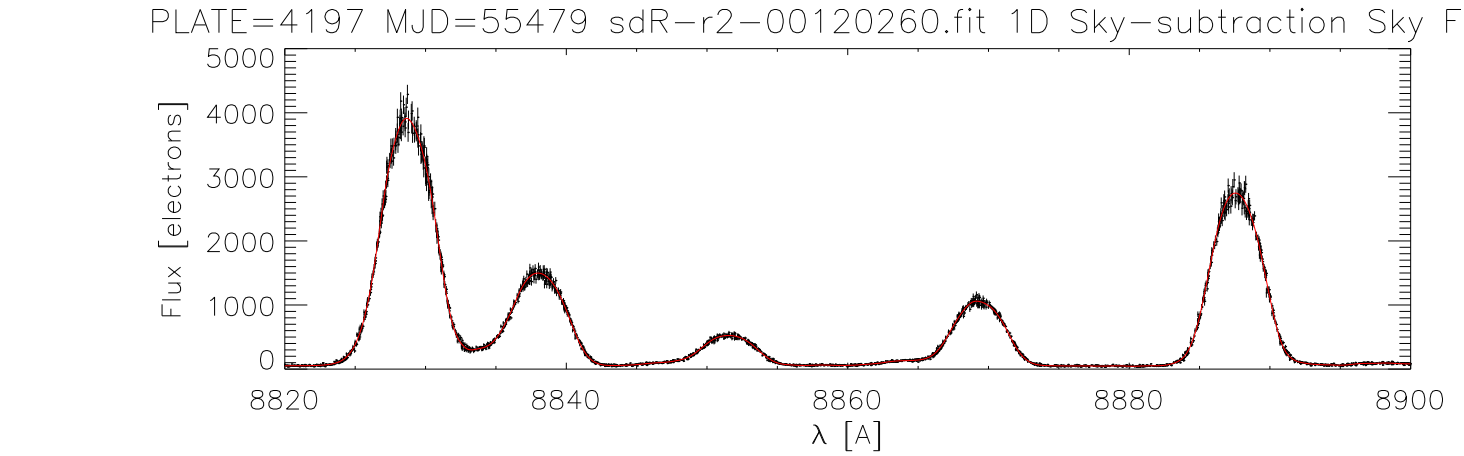

PLATE=4197 MJD=55479 Extraction chi^2 for sdR−r2−00120260.fit
BLACK = Final chisq extraction
χ^2
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Row number

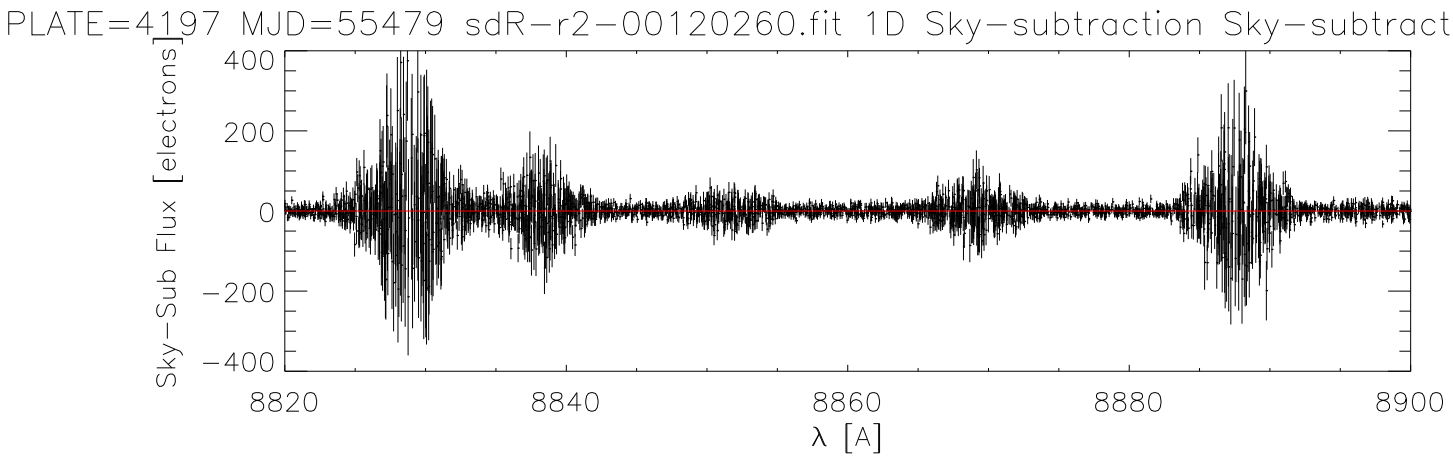

PLATE=4197 MJD=55479 Sky Line Deviations for sdR-r2-00120260.fit
Fiber Number
Sky Line Wavelength
Before shift
After shift
1.00 pix
0
100
200
300
400
500
5460
5577
6300
6363
6553
6923
6949
7571
7794
7821
8399
8430
8885
8919


PLATE=4197 MJD=55479 Smooth superflat for sdR-r2-00120260.fit
2.0
1.5
1.0
0.5
0.0
1.04
1.02
1.00
0.98
0.96
6.0×10^3
7.0×10^3
8.0×10^3
9.0×10^3
1.0×10^4
1.1×10^4
Wavelength (Å)

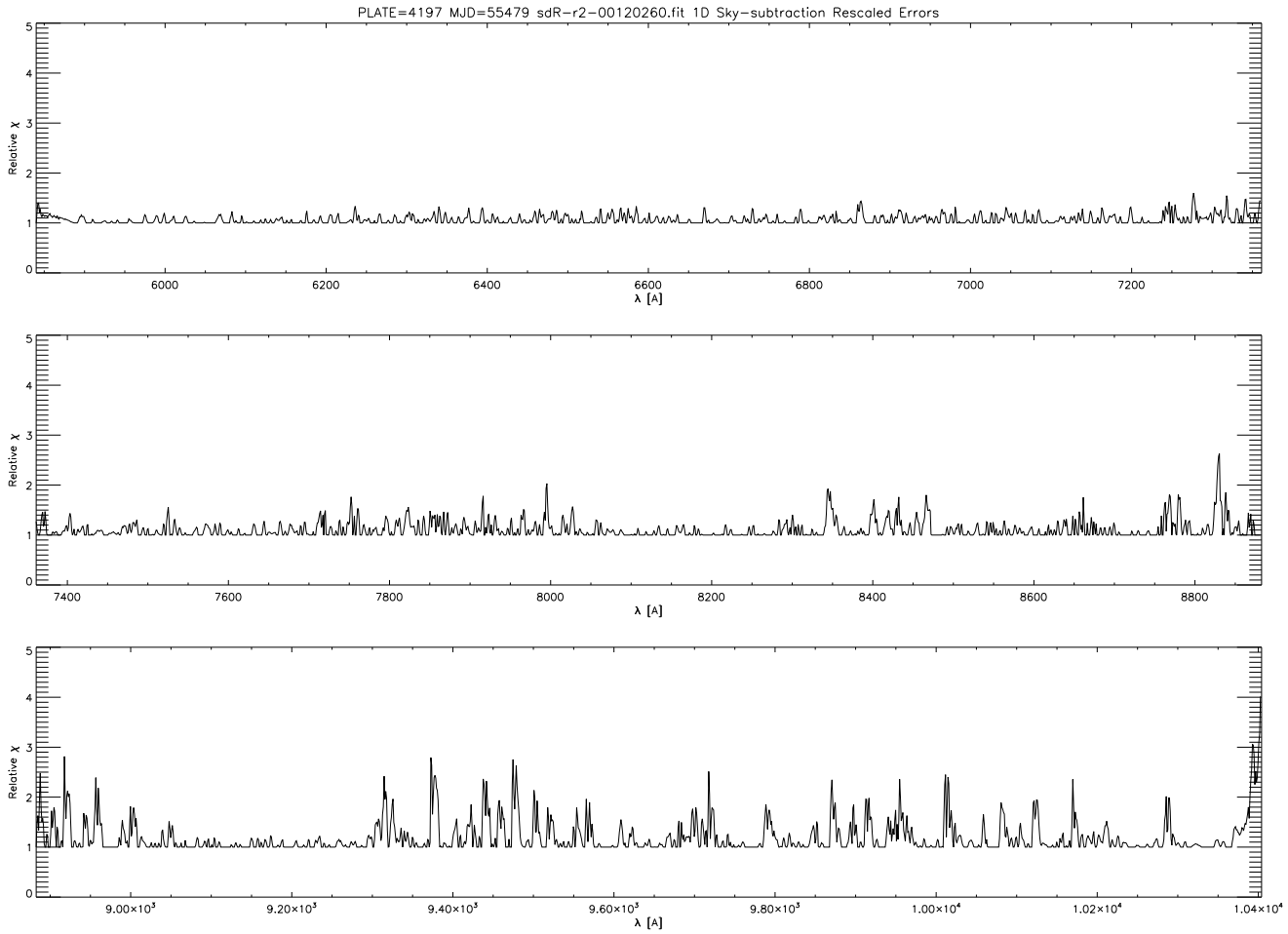

PLATE=4197 MJD=55479 sdR-r2-00120260.fit 1D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Median |χ|
Fiber number

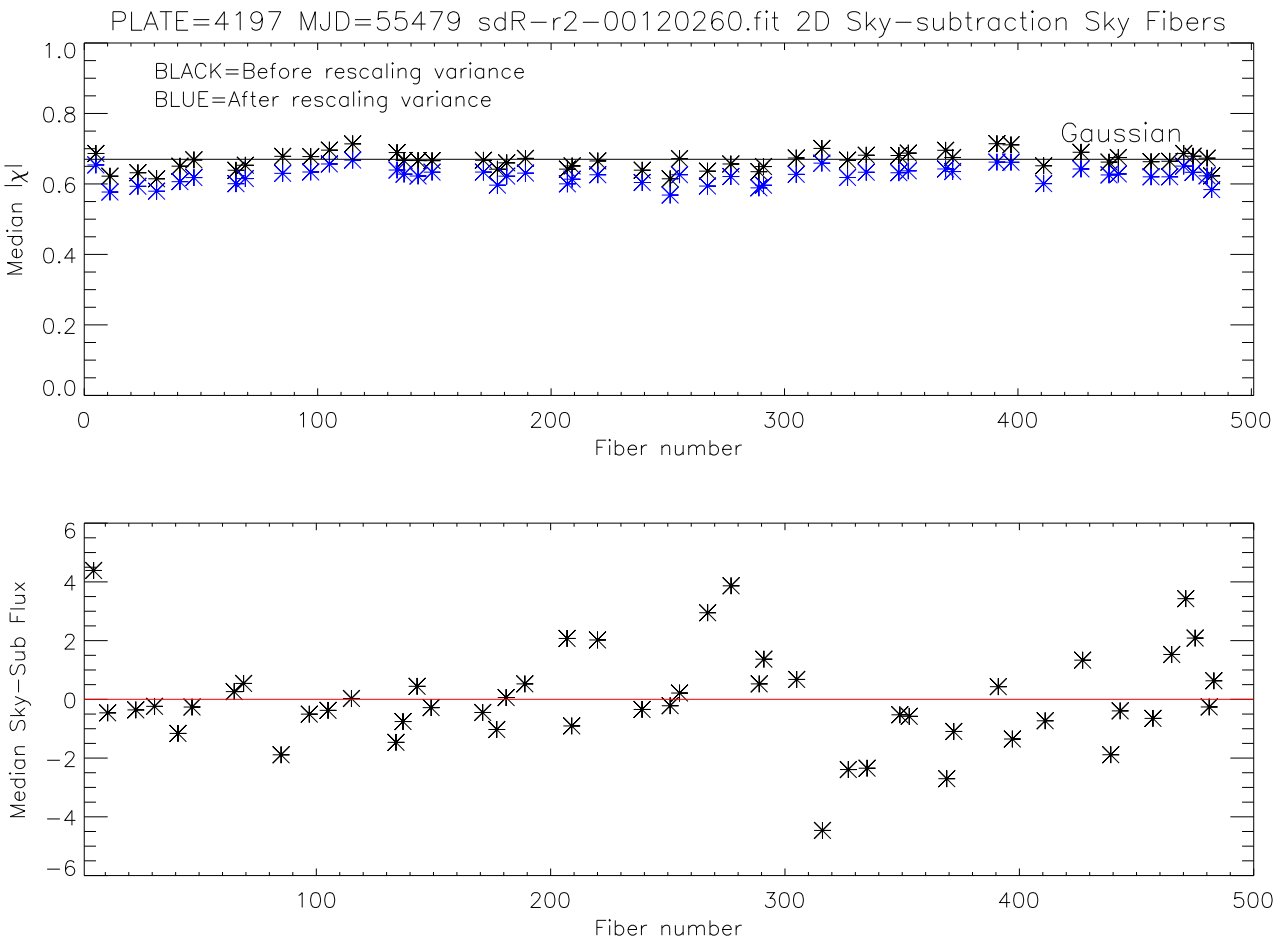
Median Sky-Sub Flux
Fiber number

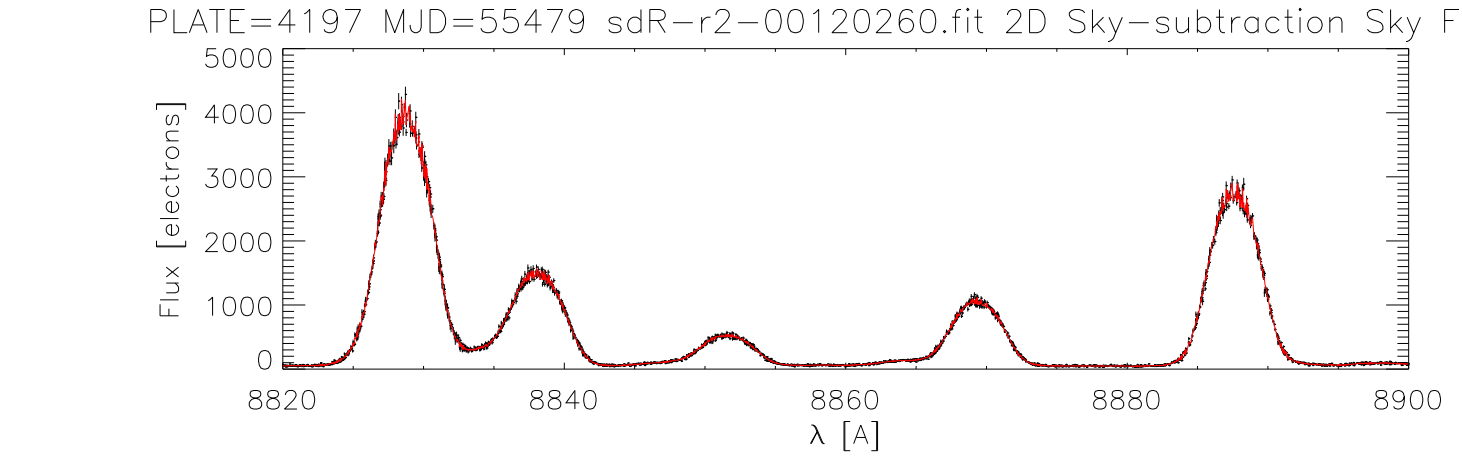

PLATE=4197 MJD=55479 sdR-r2-00120260.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]

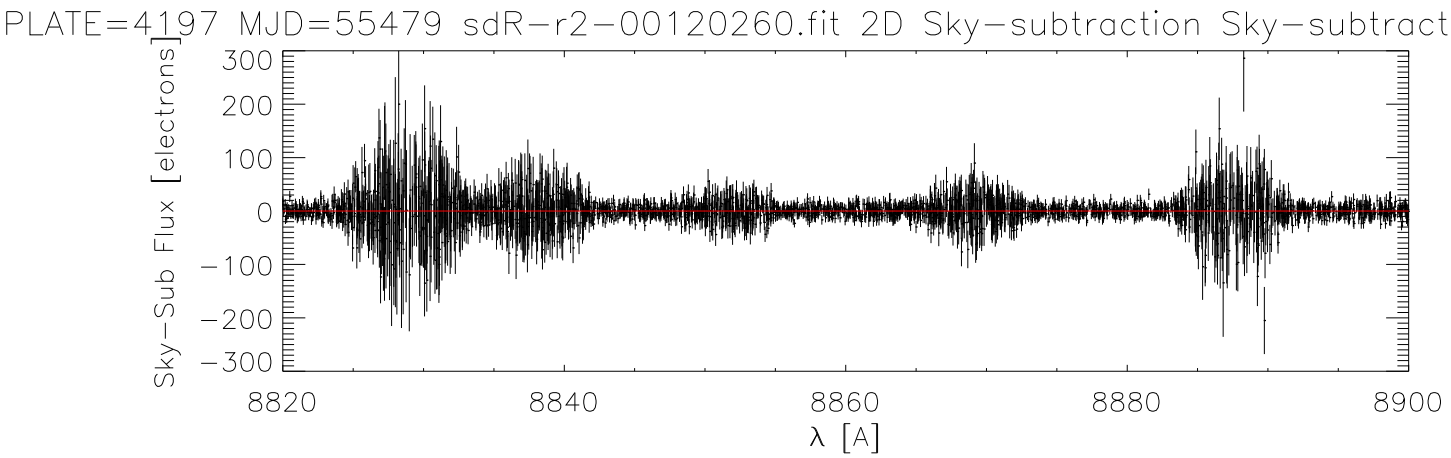

PLATE=4197 MJD=55479 sdR-r2-00120260.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
200
0
-200
-400
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 50

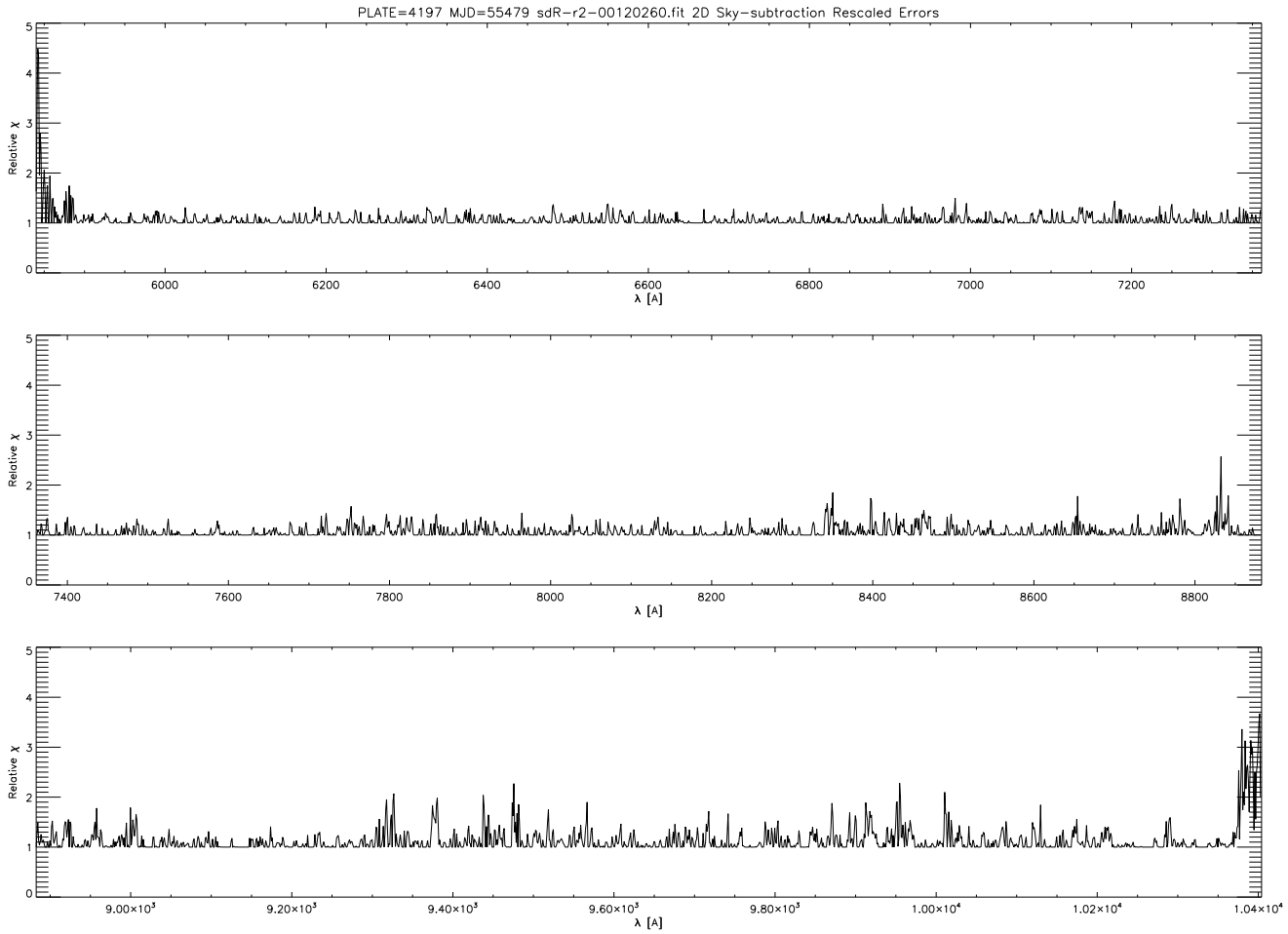


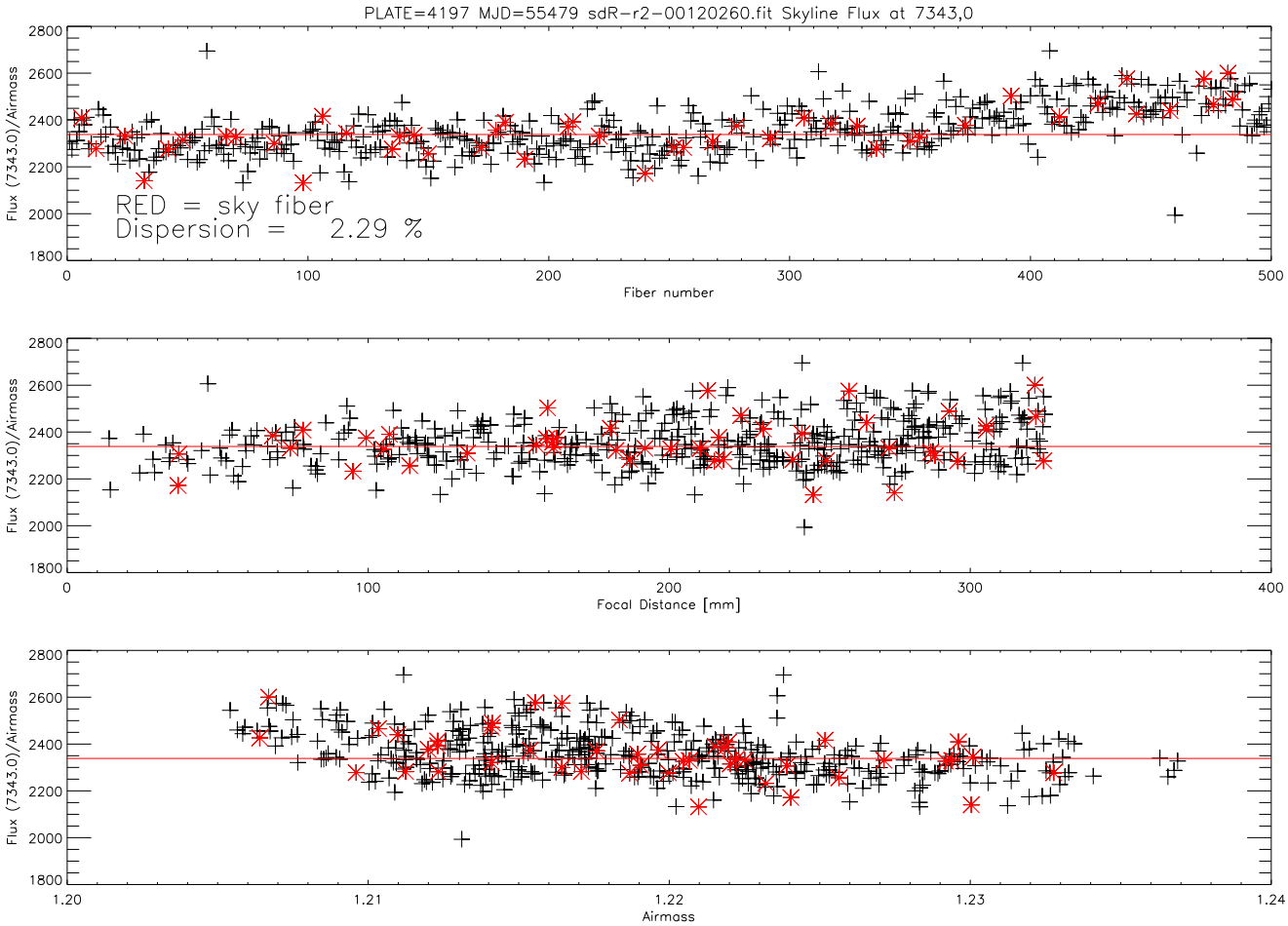

PLATE=4197 MJD=55479 sdR-r2-00120260.fit 2D Sky-subtraction Sky Fibers
BLACK=Before rescaling variance
BLUE=After rescaling variance
Gaussian
Median |χ|
Fiber number
Median Sky-Sub Flux
Fiber number

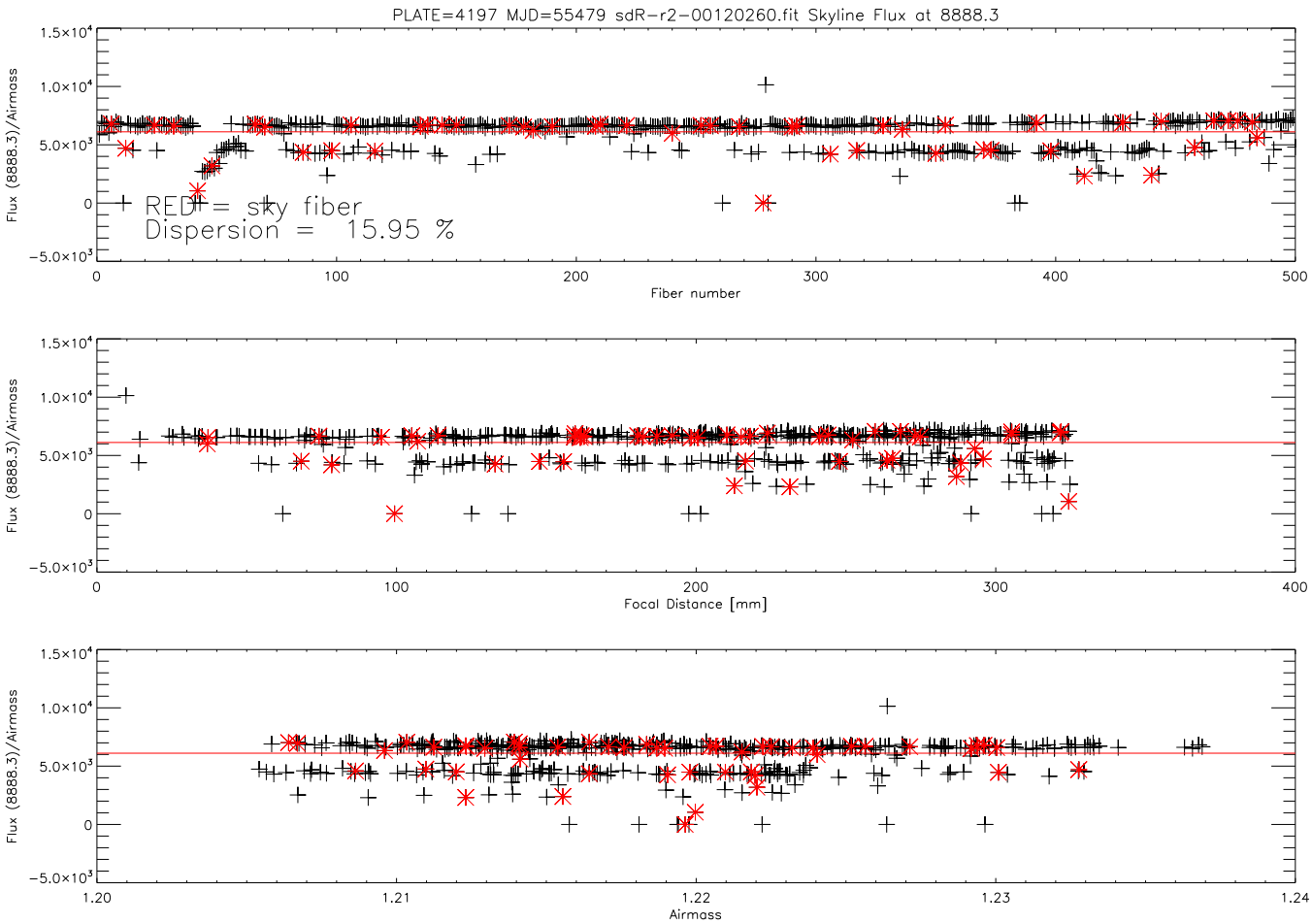

PLATE=4197 MJD=55479 sdR-r2-00120260.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
5000
4000
3000
2000
1000
0
8820
8840
8860
8880
8900
λ [A]


PLATE=4197 MJD=55479 sdR-r2-00120260.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
-100
-200
-300
8820
8840
8860
8880
8900
λ [A]

Number of sky fibers = 50




PLATE=4197 MJD=55479 sdR-r2-00120260.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 2.29 %
Fiber number
Focal Distance [mm]
Airmass


PLATE=4197 MJD=55479 sdR-r2-00120260.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
1.5×10⁴
1.0×10⁴
5.0×10³
0
−5.0×10³
RED= sky fiber
Dispersion = 15.95 %
0
100
200
300
400
500
Fiber number
Flux (8888.3)/Airmass
Focal Distance [mm]
Flux (8888.3)/Airmass
1.20
1.21
1.22
1.23
1.24
Airmass