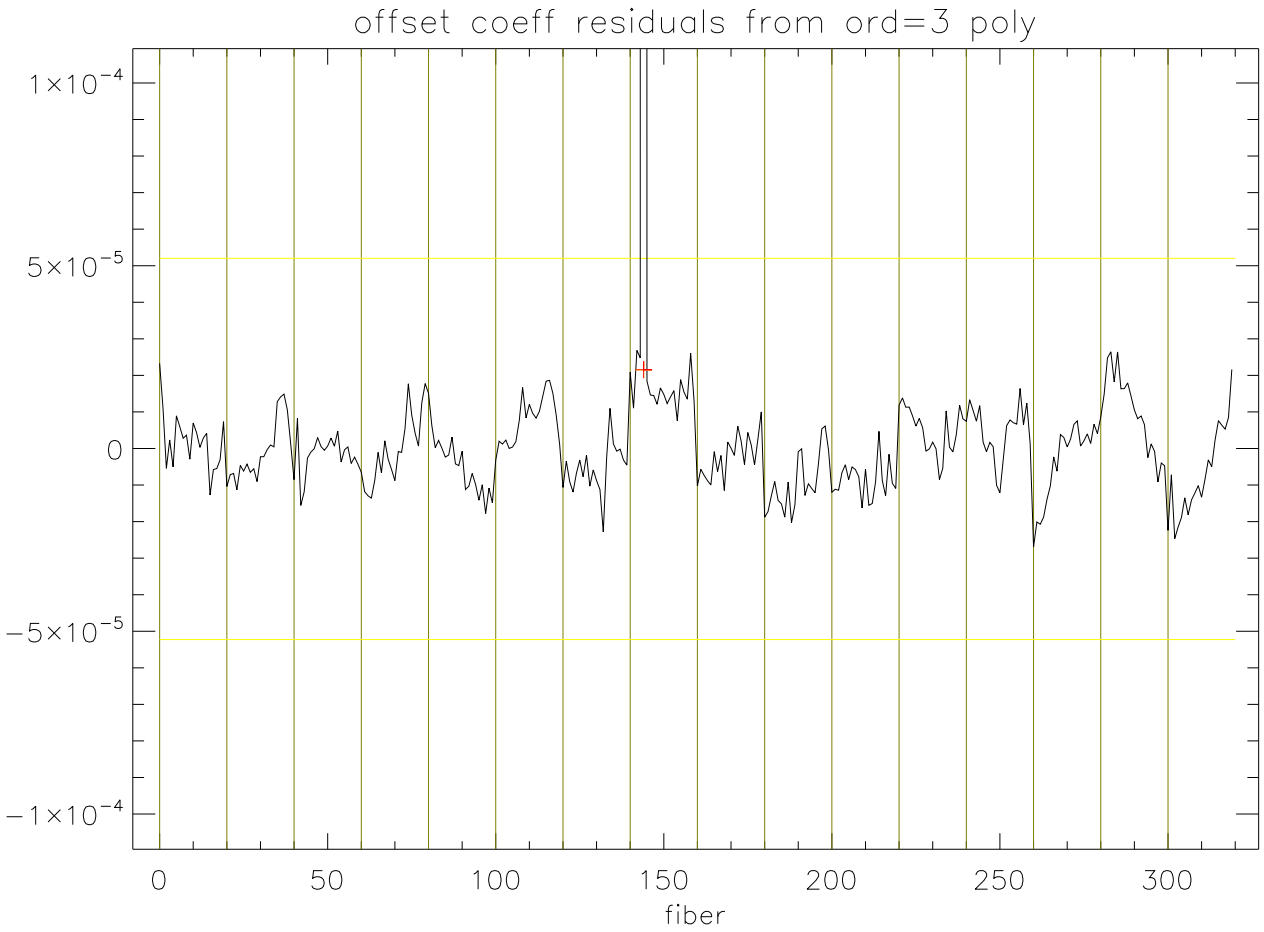
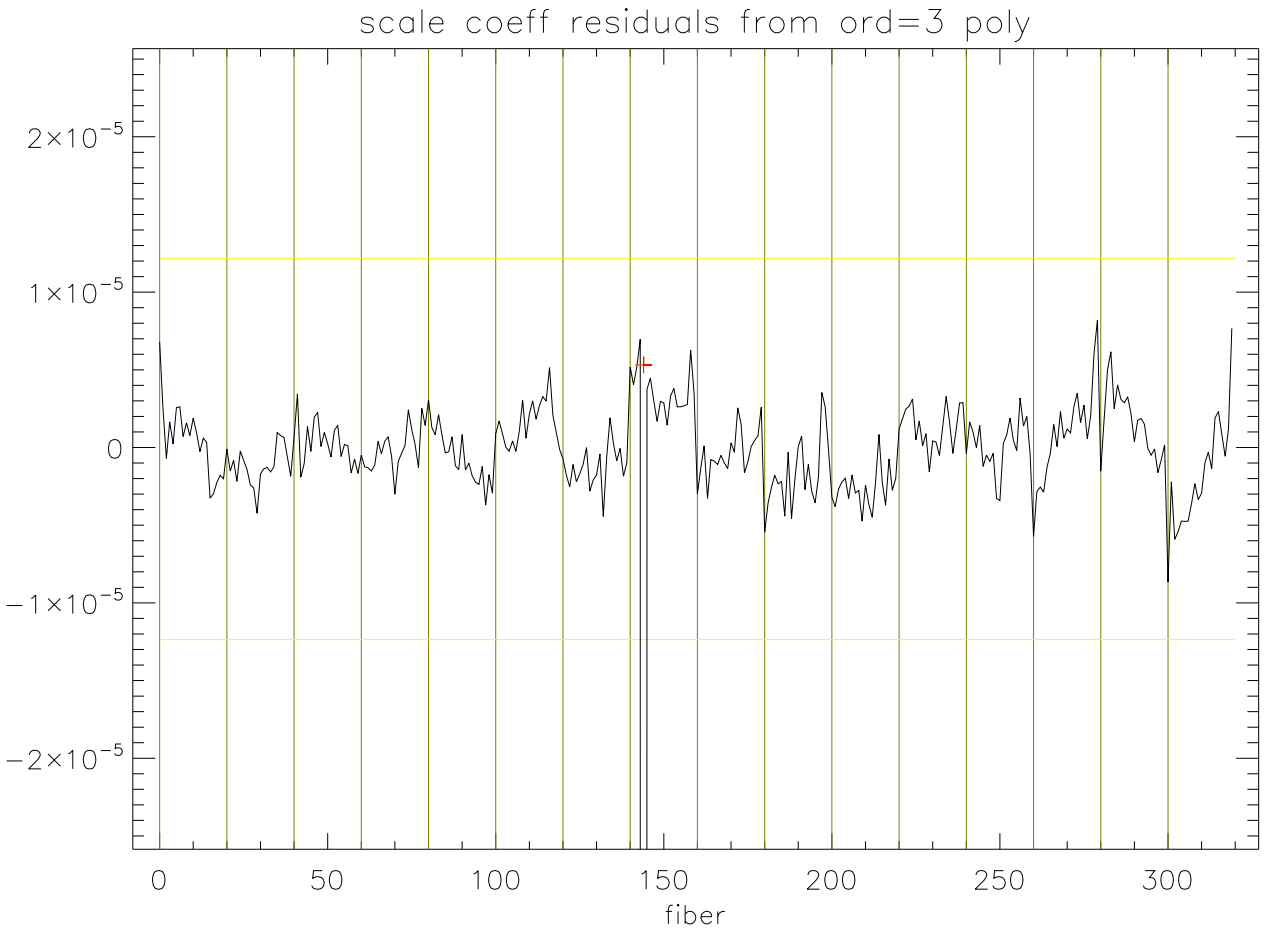
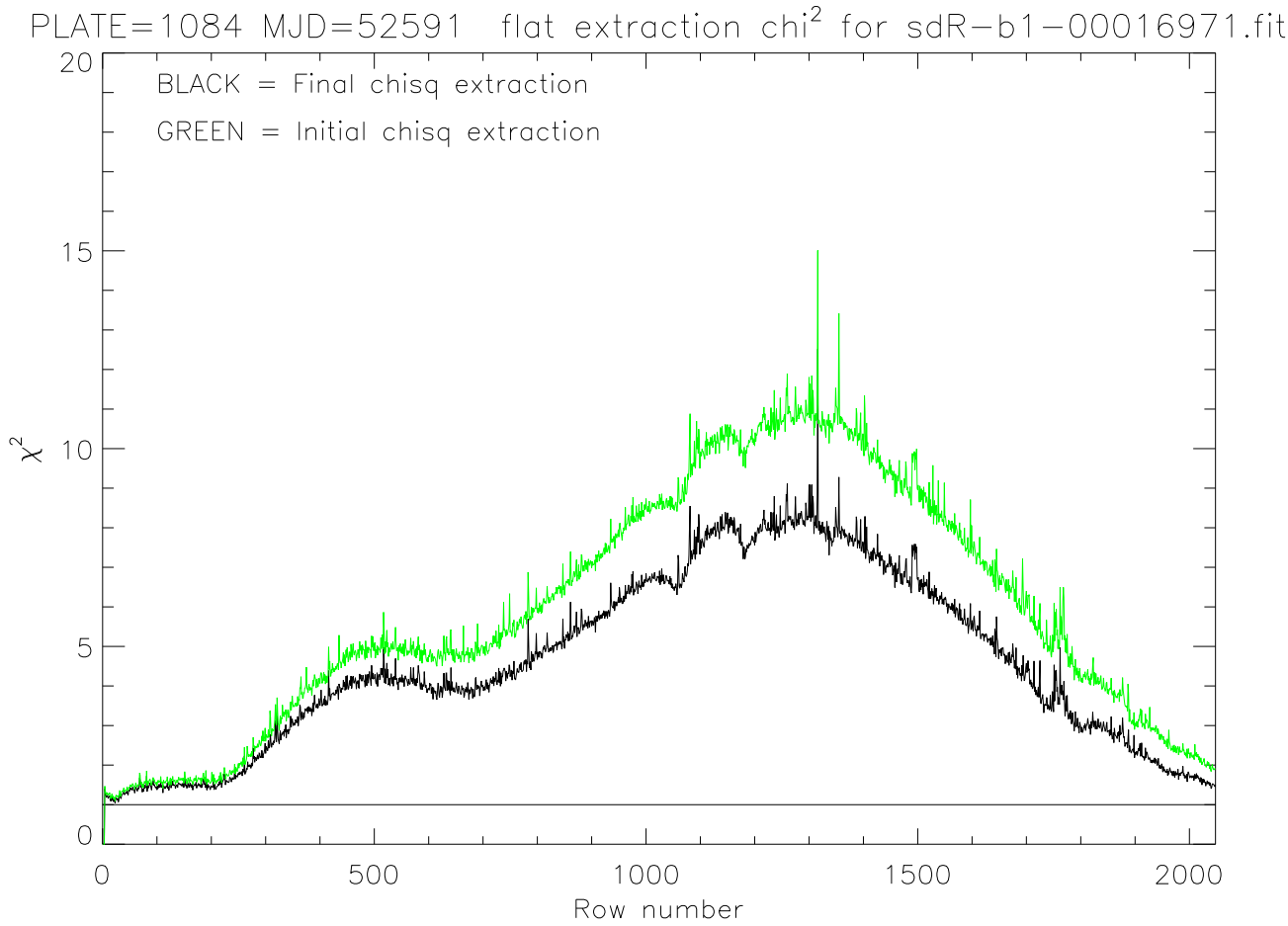
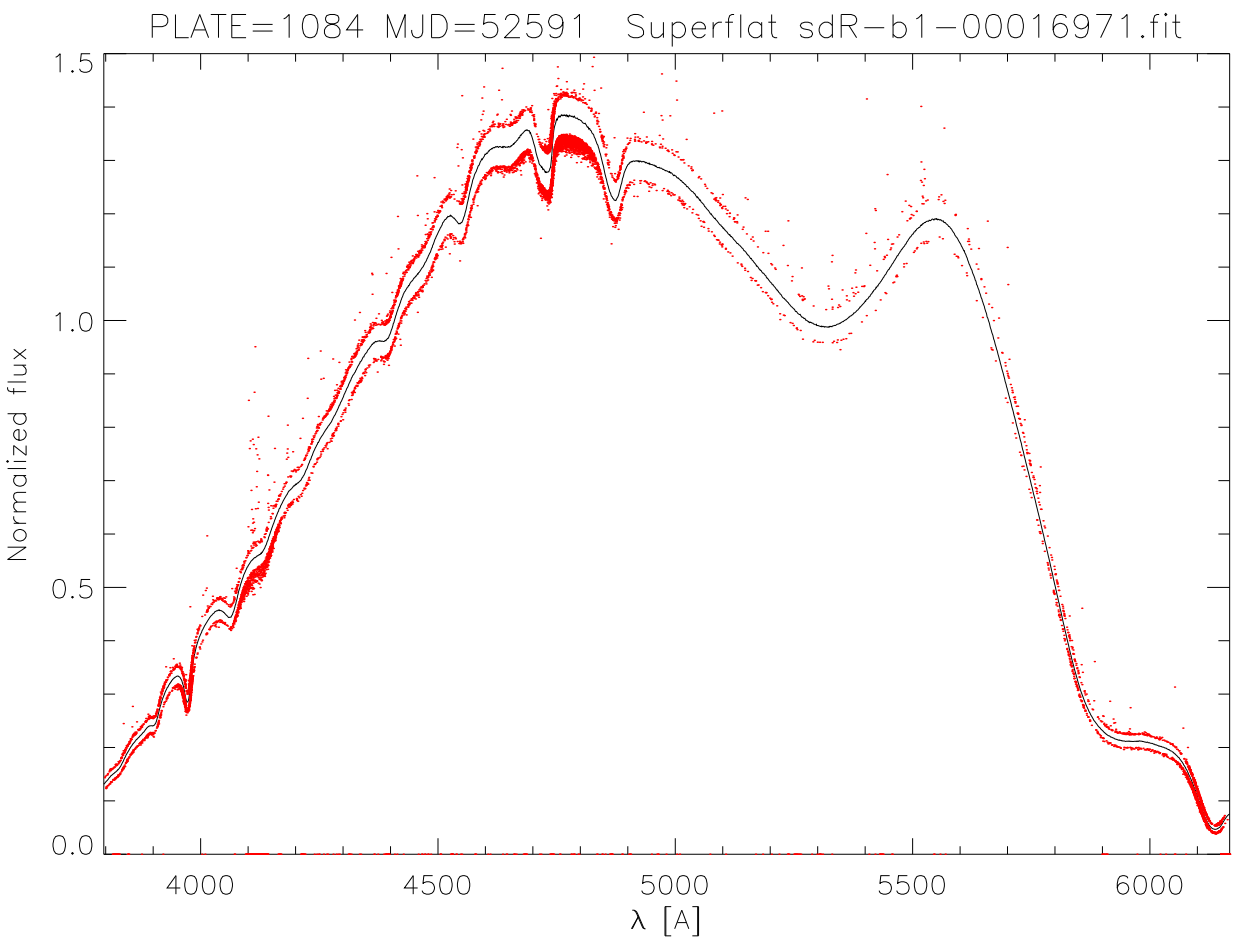
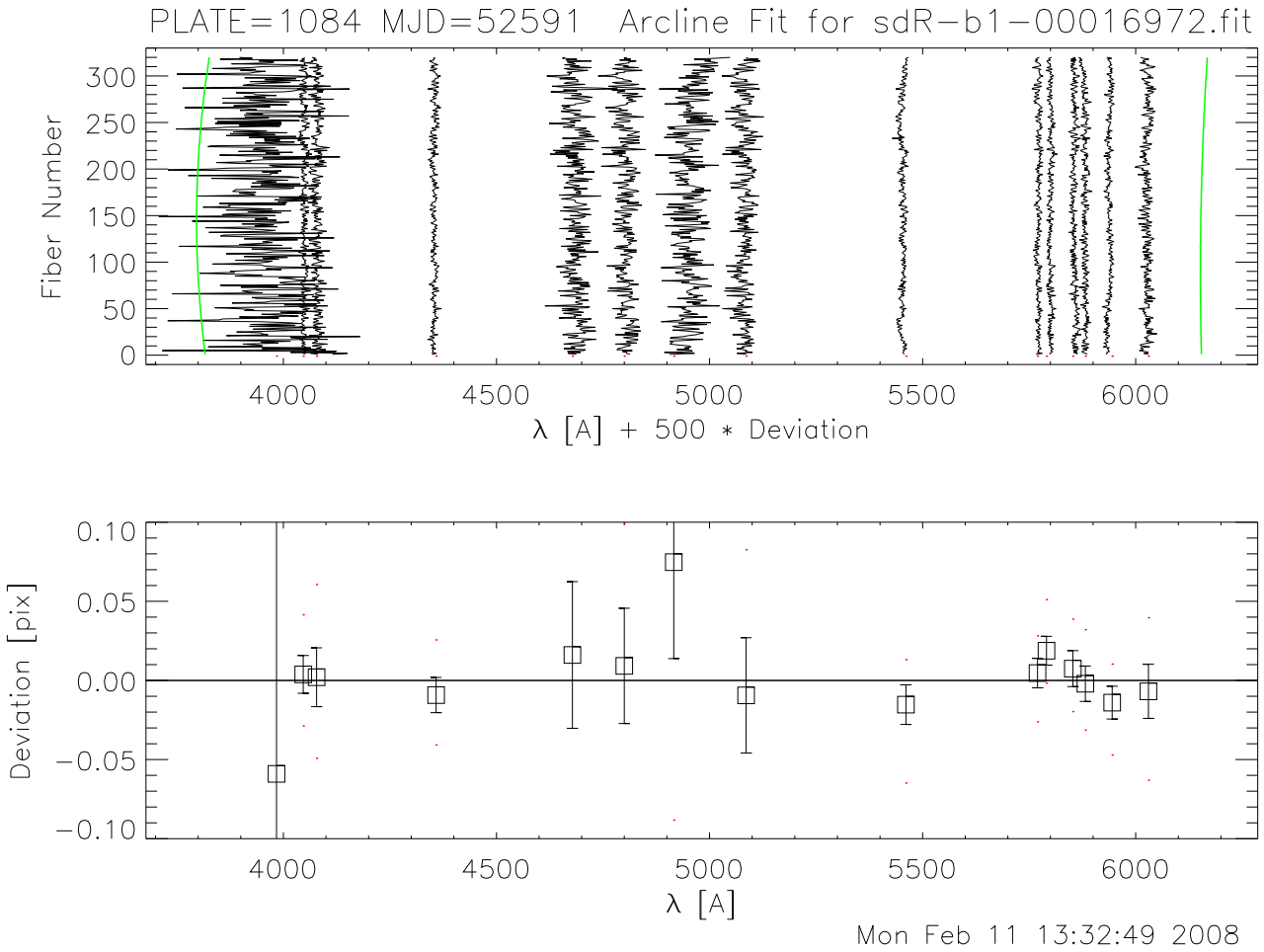
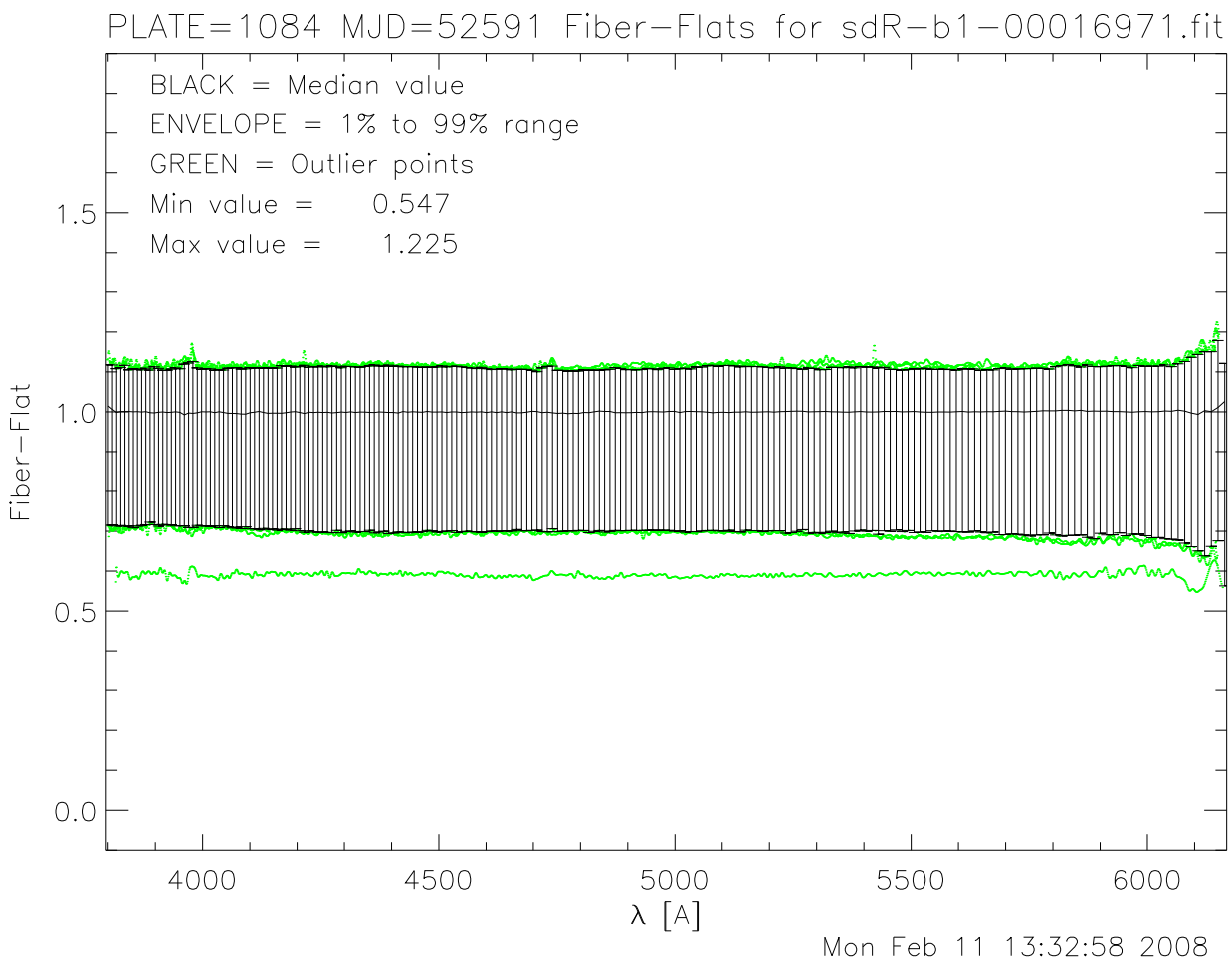

offset coeff residuals from ord=3 poly
1×10⁻⁴
5×10⁻⁵
0
−5×10⁻⁵
−1×10⁻⁴
0
50
100
150
200
250
300
fiber

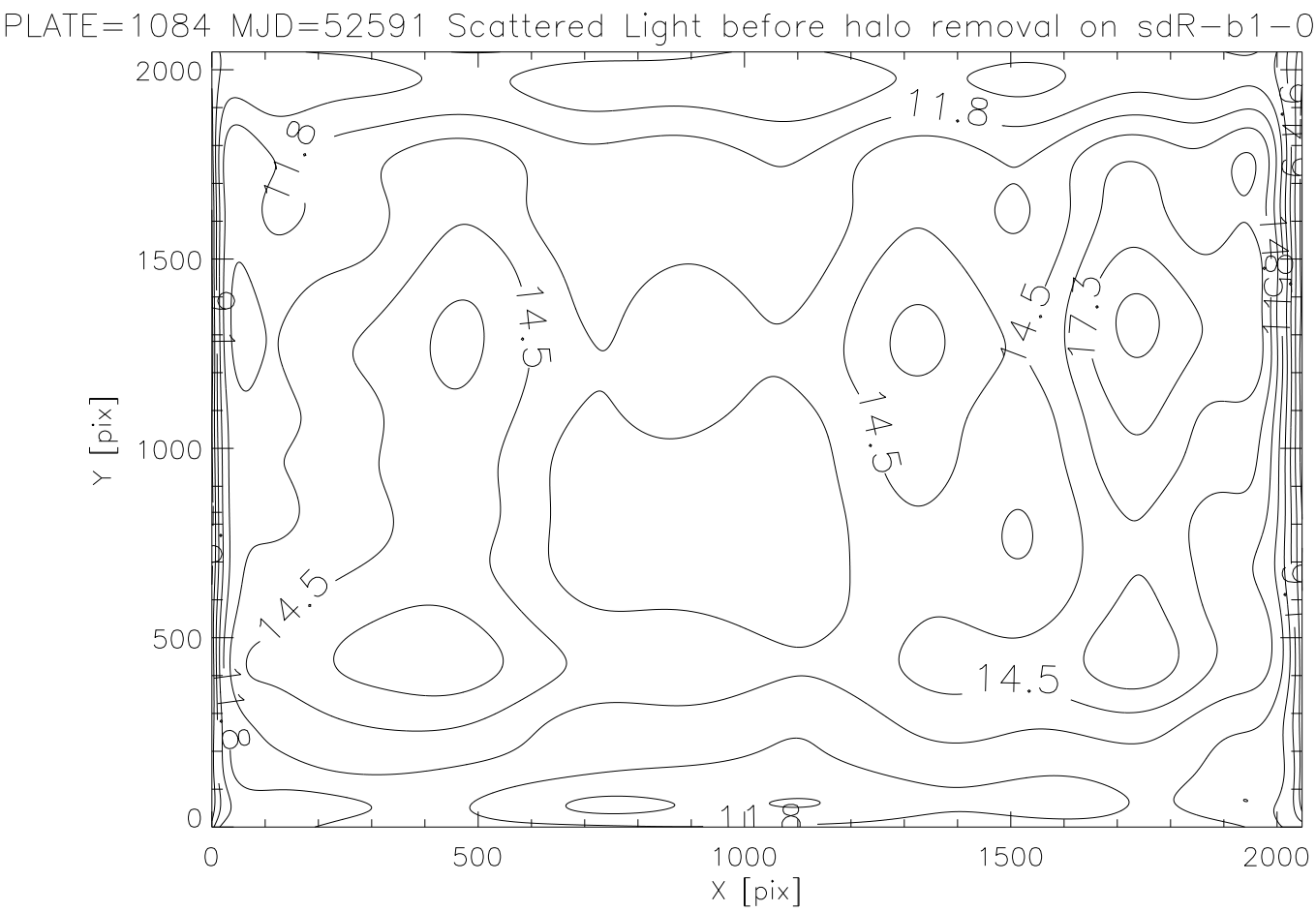

scale coeff residuals from ord=3 poly
2×10⁻⁵
1×10⁻⁵
0
−1×10⁻⁵
−2×10⁻⁵
0
50
100
150
200
250
300
fiber

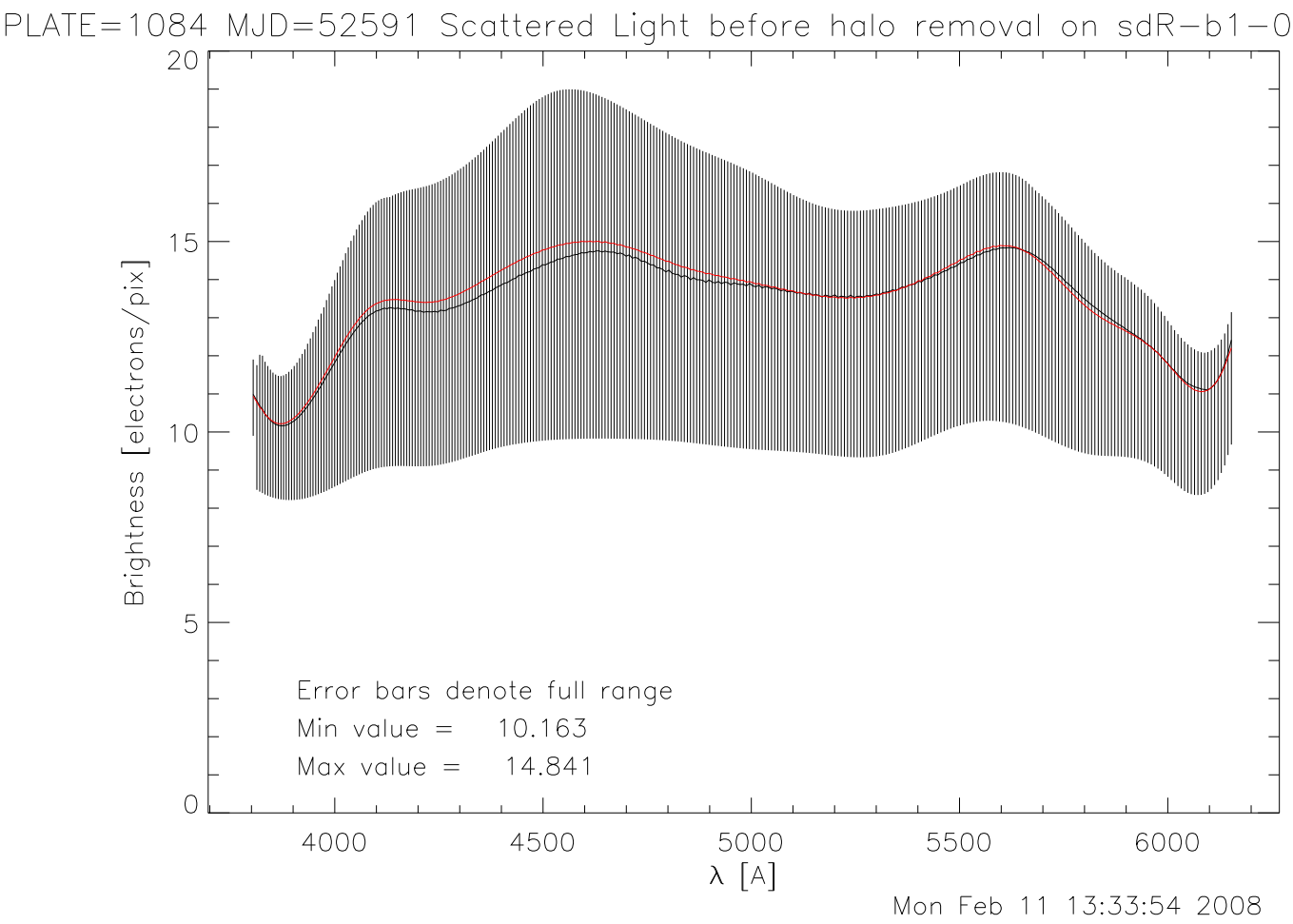

PLATE=1084 MJD=52591 flat extraction chi^2 for sdR−b1−00016971.fit
BLACK = Final chisq extraction
GREEN = Initial chisq extraction
χ^2
0
5
10
15
20
0
500
1000
1500
2000
Row number

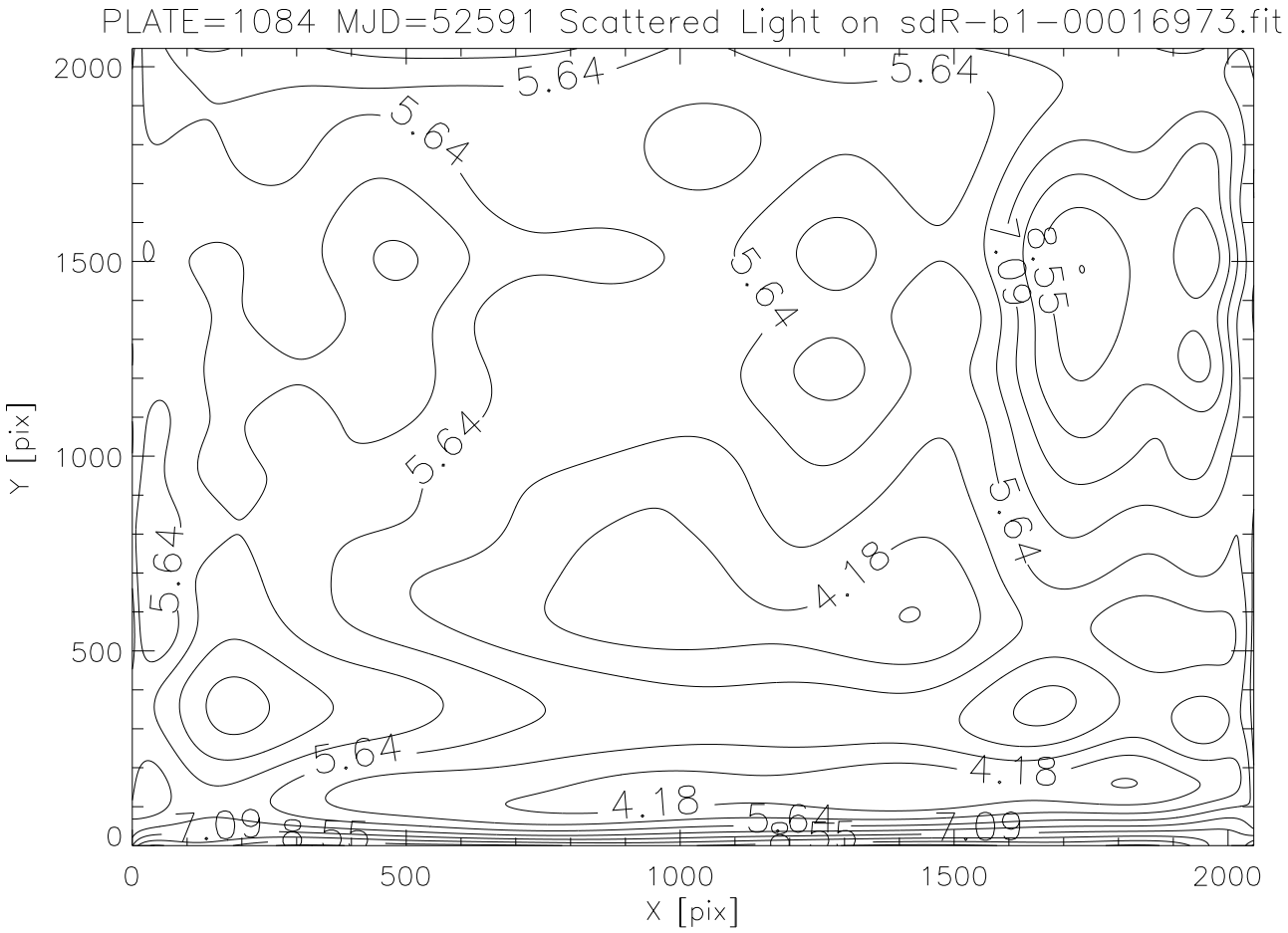

PLATE=1084 MJD=52591 Superflat sdR-b1-00016971.fit
Normalized flux
1.5
1.0
0.5
0.0
4000
4500
5000
5500
6000
λ [A]

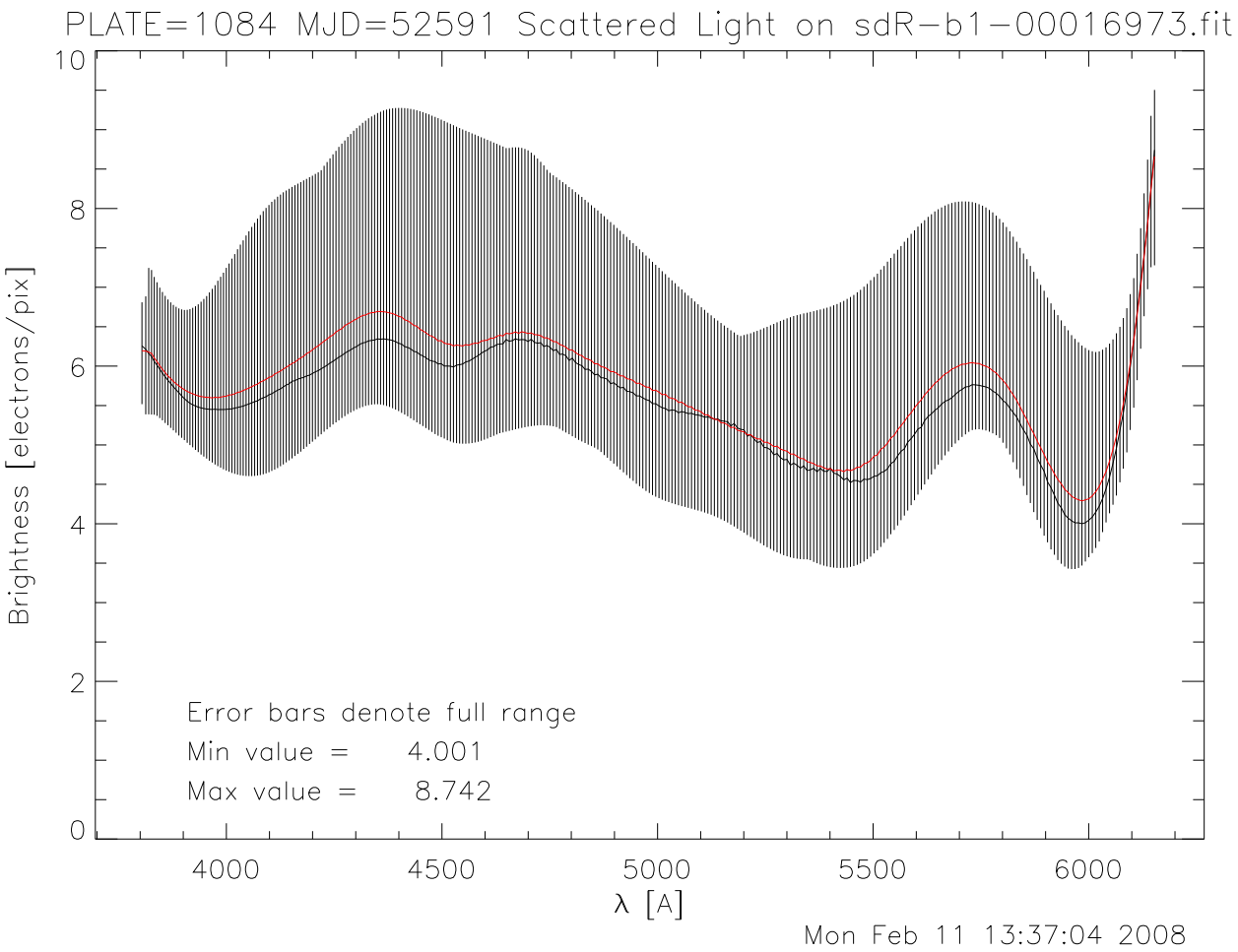

PLATE=1084 MJD=52591 Arcline Fit for sdR-b1-00016972.fit
Fiber Number
300
250
200
150
100
50
0
4000
4500
5000
5500
6000
λ [A] + 500 * Deviation
Deviation [pix]
0.10
0.05
0.00
−0.05
−0.10
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:32:49 2008

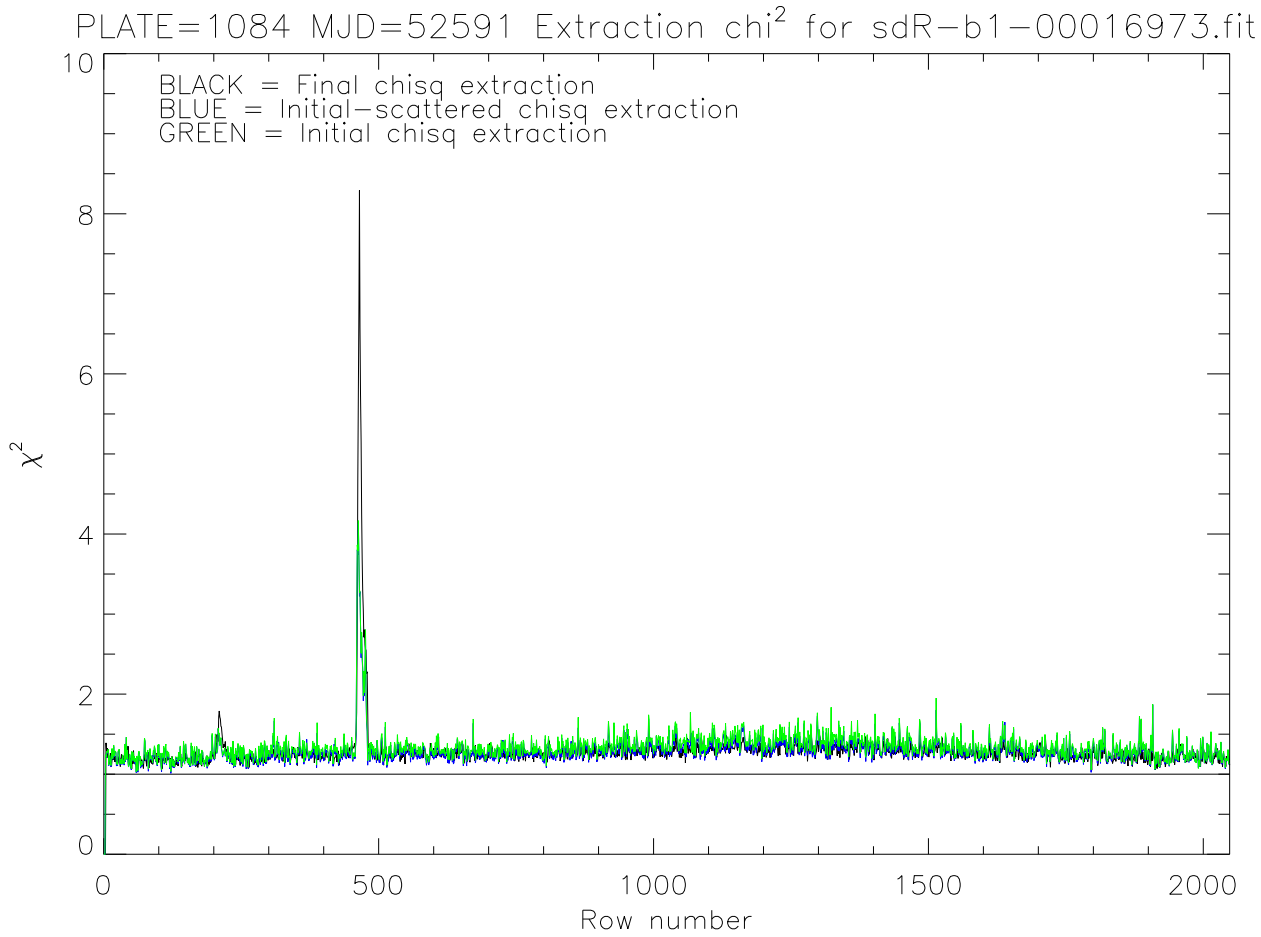

PLATE=1084 MJD=52591 Fiber-Flats for sdR-b1-00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.547
Max value = 1.225
Fiber-Flat
1.5
1.0
0.5
0.0
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:32:58 2008

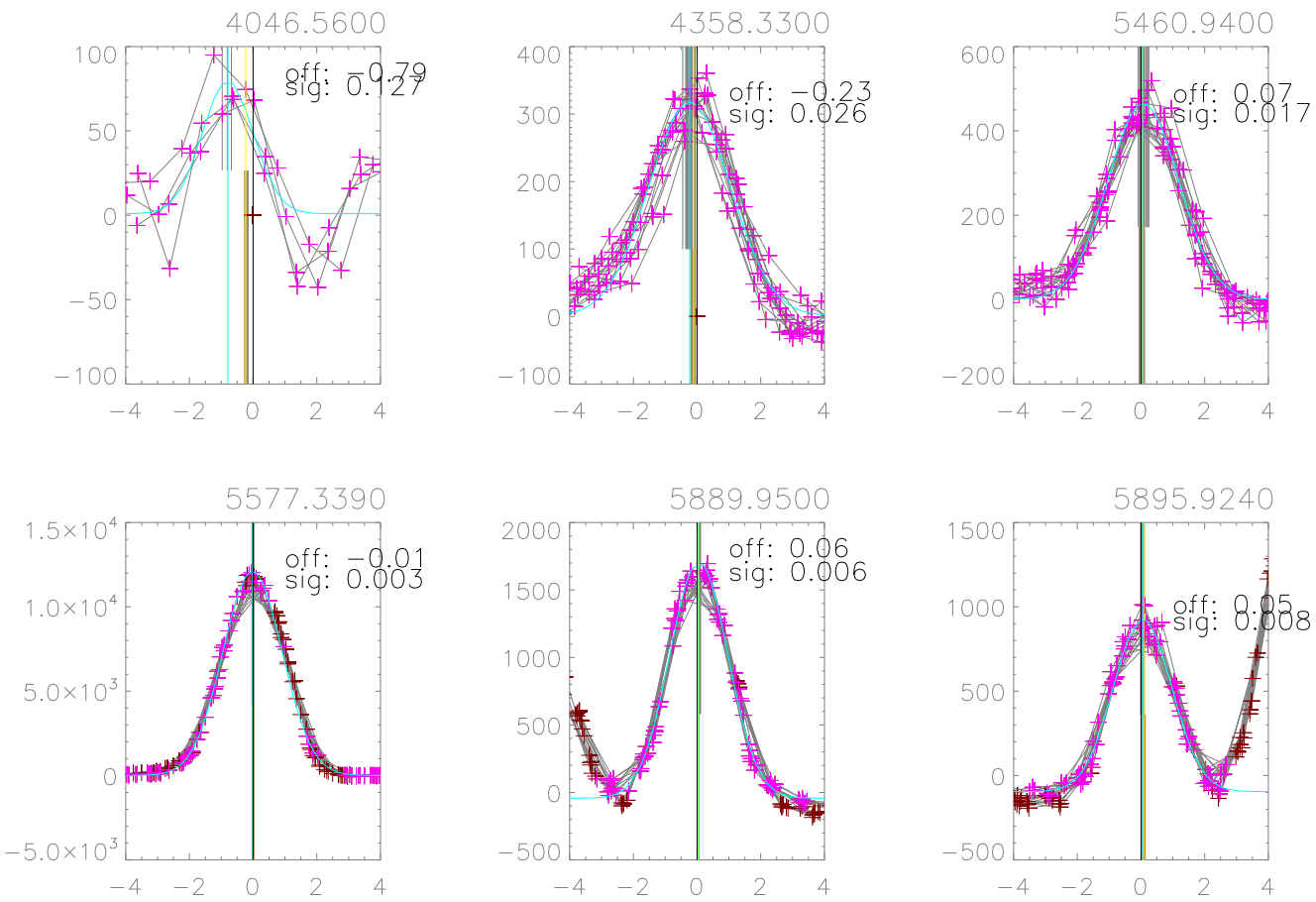

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b1-00016973.f
11.8
14.5
17.3
Y [pix]
X [pix]
0
500
1000
1500
2000

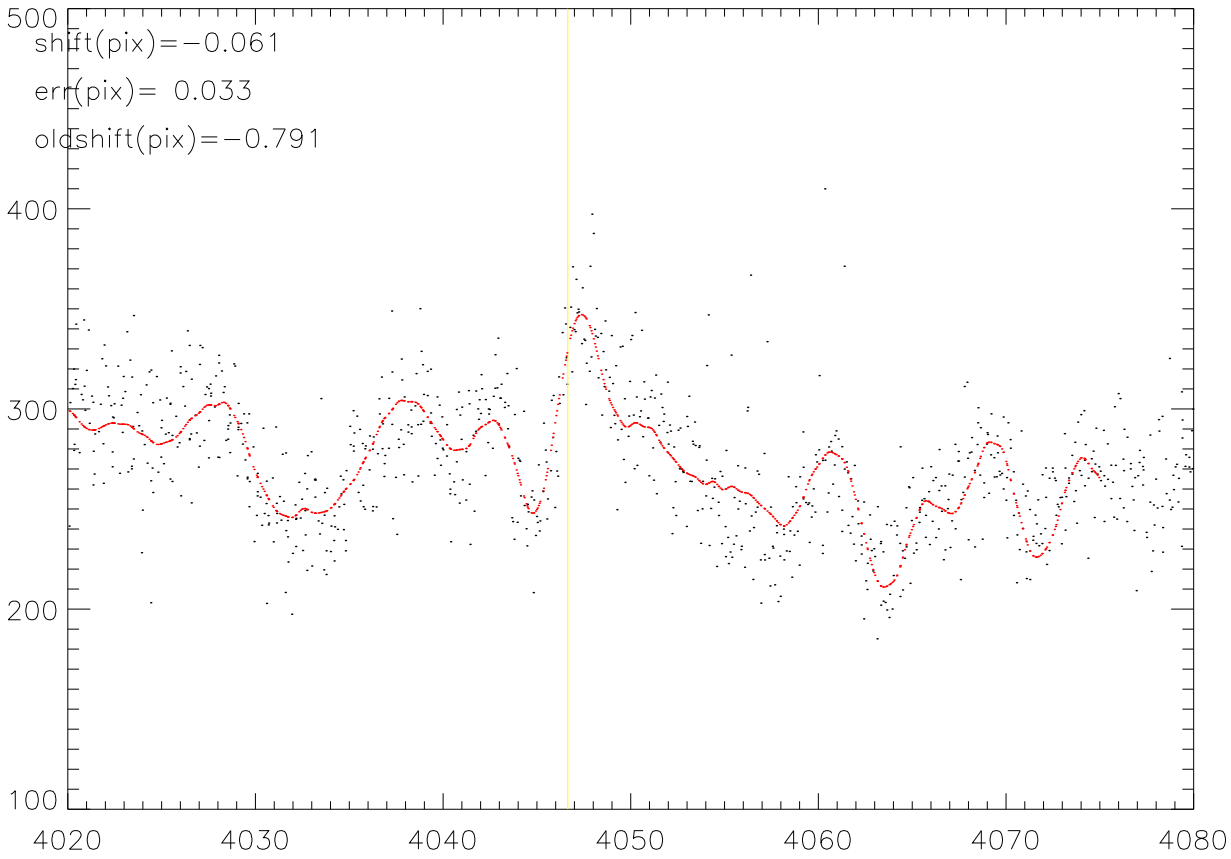

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b1-00016973.f
Brightness [electrons/pix]
20
15
10
5
0
Error bars denote full range
Min value = 10.163
Max value = 14.841
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:33:54 2008

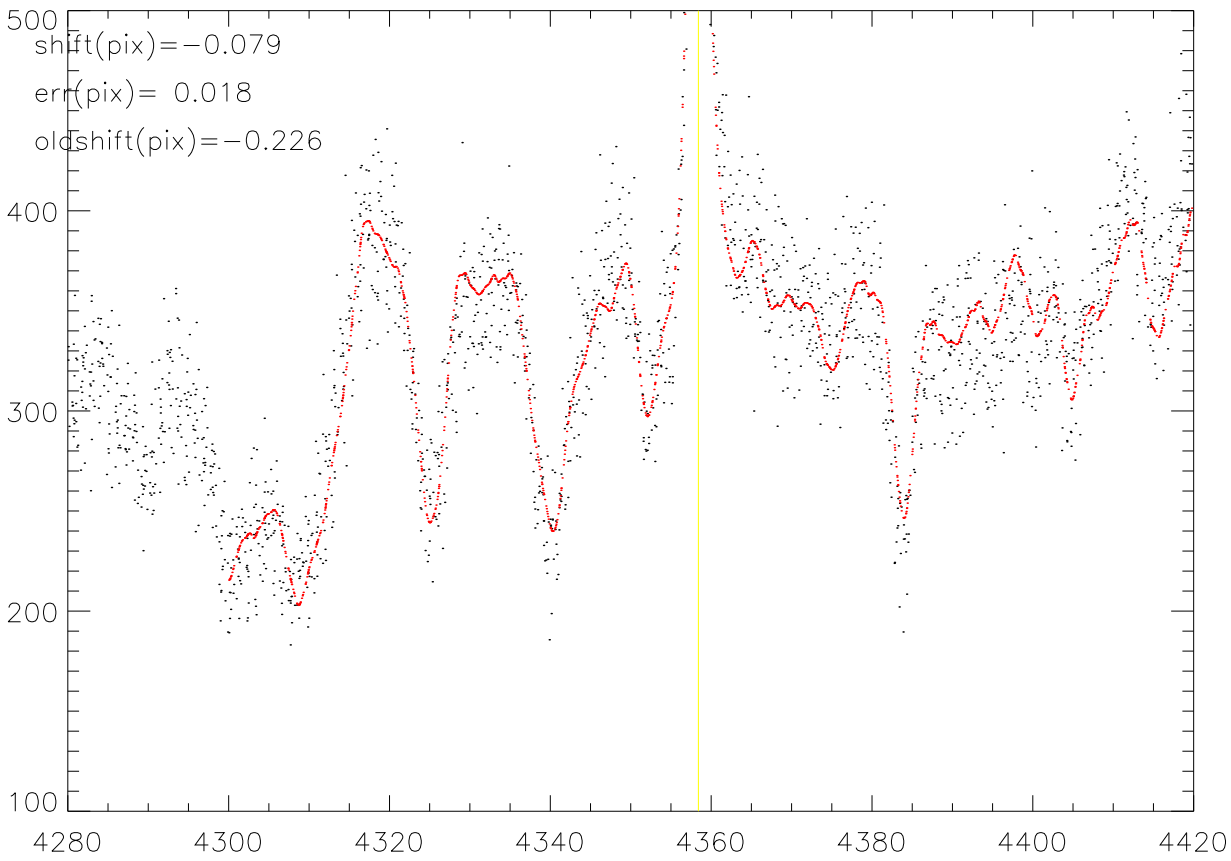

PLATE=1084 MJD=52591 Scattered Light on sdR-b1-00016973.fit
Y [pix]
X [pix]
0
500
1000
1500
2000
5.64
4.18
7.09
8.55

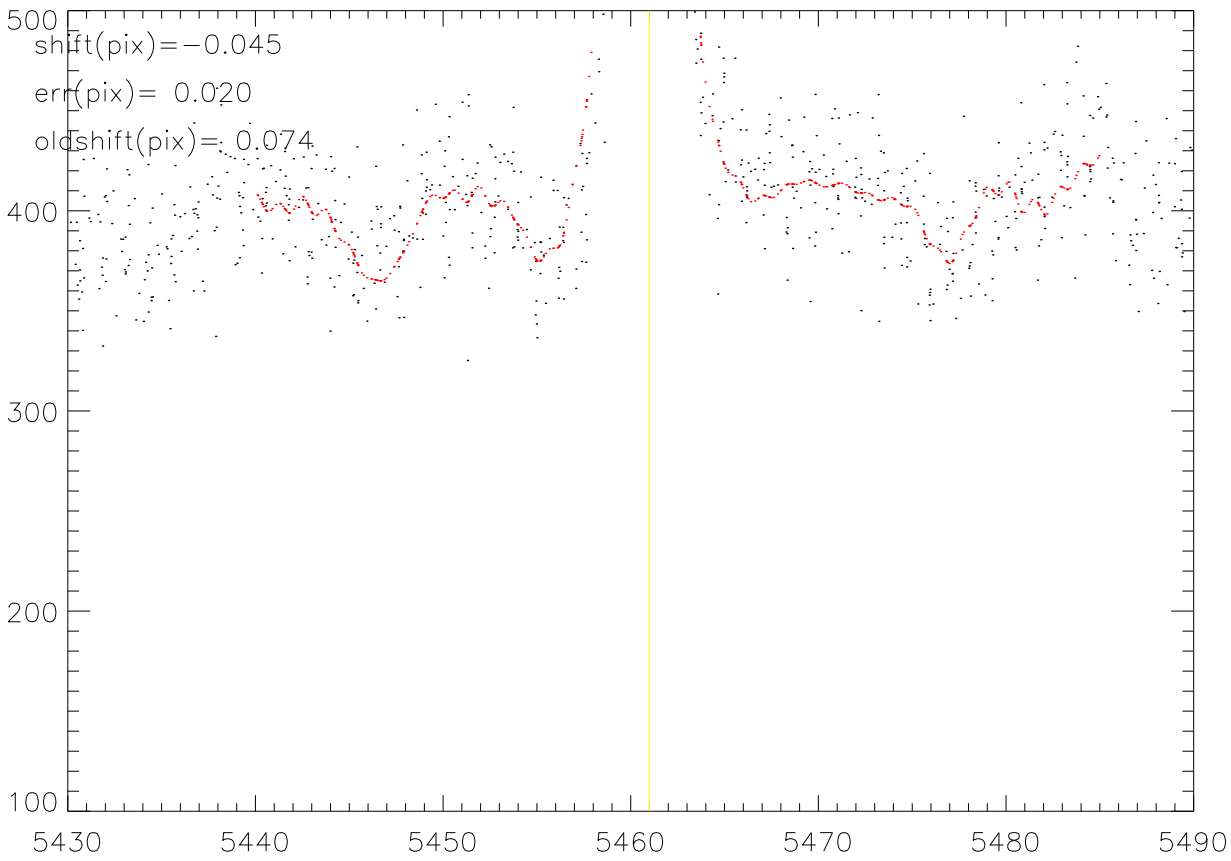

PLATE=1084 MJD=52591 Scattered Light on sdR-b1-00016973.fit
Brightness [electrons/pix]
10
8
6
4
2
0
4000
4500
5000
5500
6000
λ [A]
Error bars denote full range
Min value = 4.001
Max value = 8.742
Mon Feb 11 13:37:04 2008

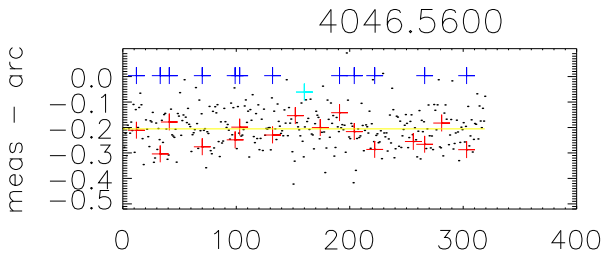

PLATE=1084 MJD=52591 Extraction chi^2 for sdR-b1-00016973.fit
BLACK = Final chisq extraction
BLUE = Initial-scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
Row number
0
2
4
6
8
10
0
500
1000
1500
2000

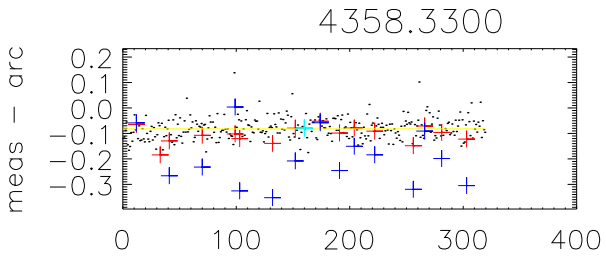

4046.5600
off: −0.79
sig: 0.127
4358.3300
off: −0.23
sig: 0.026
5460.9400
off: 0.07
sig: 0.017
5577.3390
off: −0.01
sig: 0.003
5889.9500
off: 0.06
sig: 0.006
5895.9240
off: 0.05
sig: 0.008

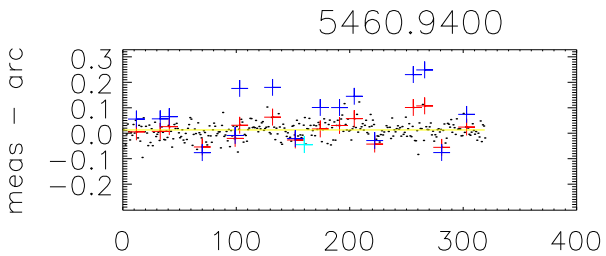

shift(pix)=−0.061
err(pix)= 0.033
oldshift(pix)=−0.791
500
400
300
200
100
4020
4030
4040
4050
4060
4070
4080

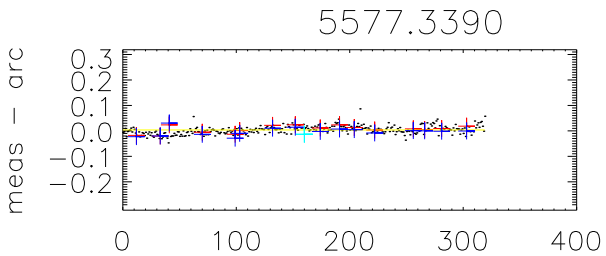

shift(pix)=−0.079
err(pix)= 0.018
oldshift(pix)=−0.226
500
400
300
200
100
4280
4300
4320
4340
4360
4380
4400
4420

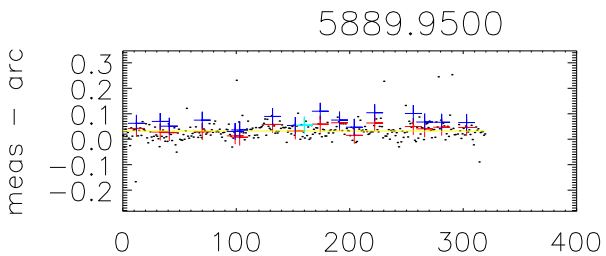

shift(pix)=−0.045
err(pix)= 0.020
oldshift(pix)= 0.074
500
400
300
200
100
5430
5440
5450
5460
5470
5480
5490

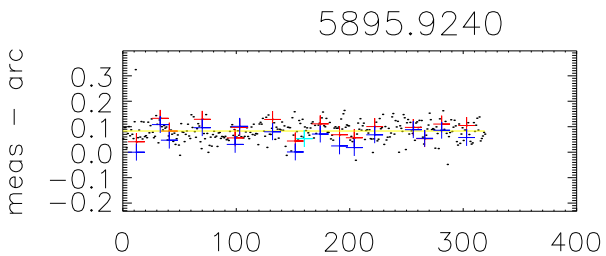

4046.5600
meas − arc
0.0
−0.1
−0.2
−0.3
−0.4
−0.5
0
100
200
300
400

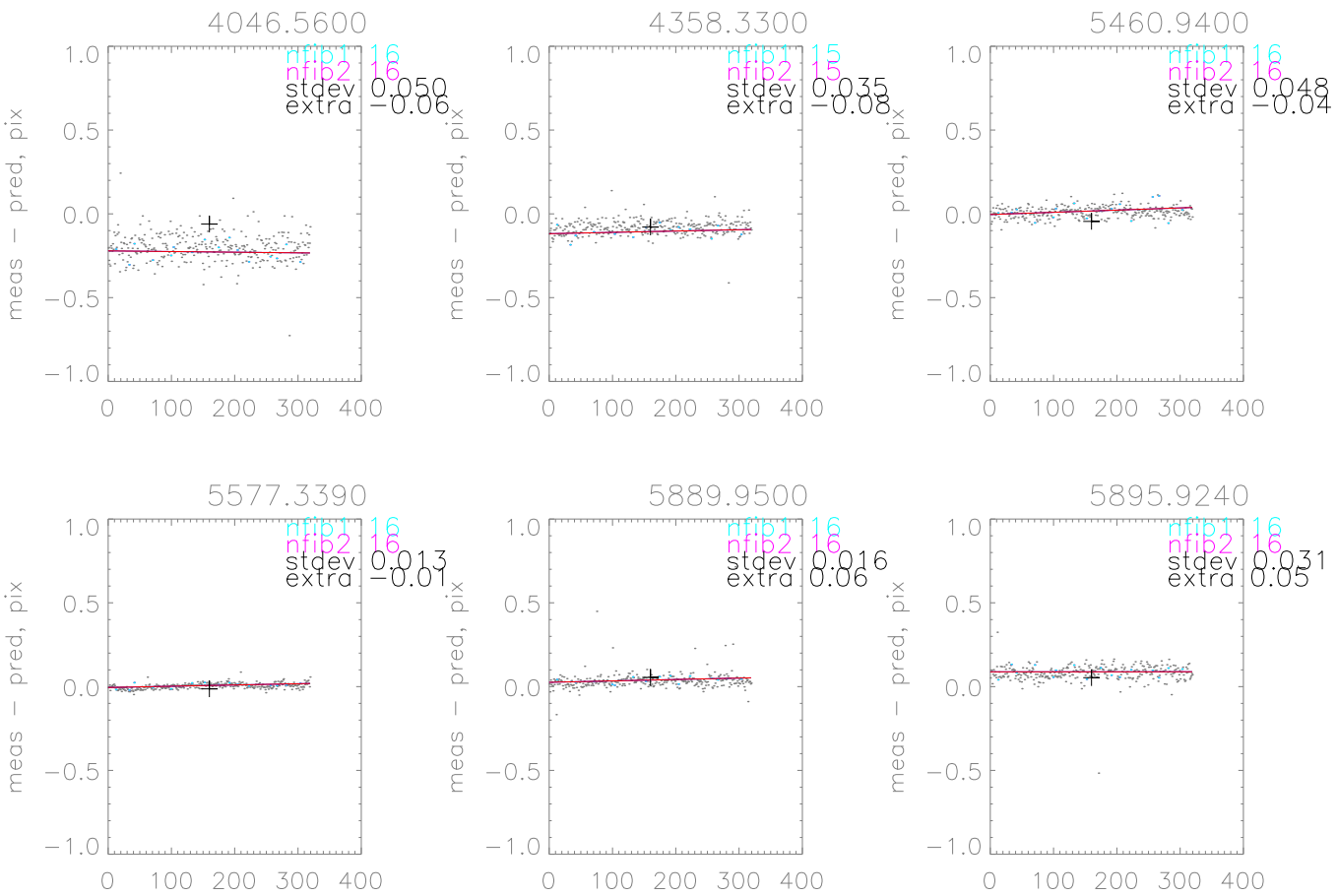

4358.3300
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

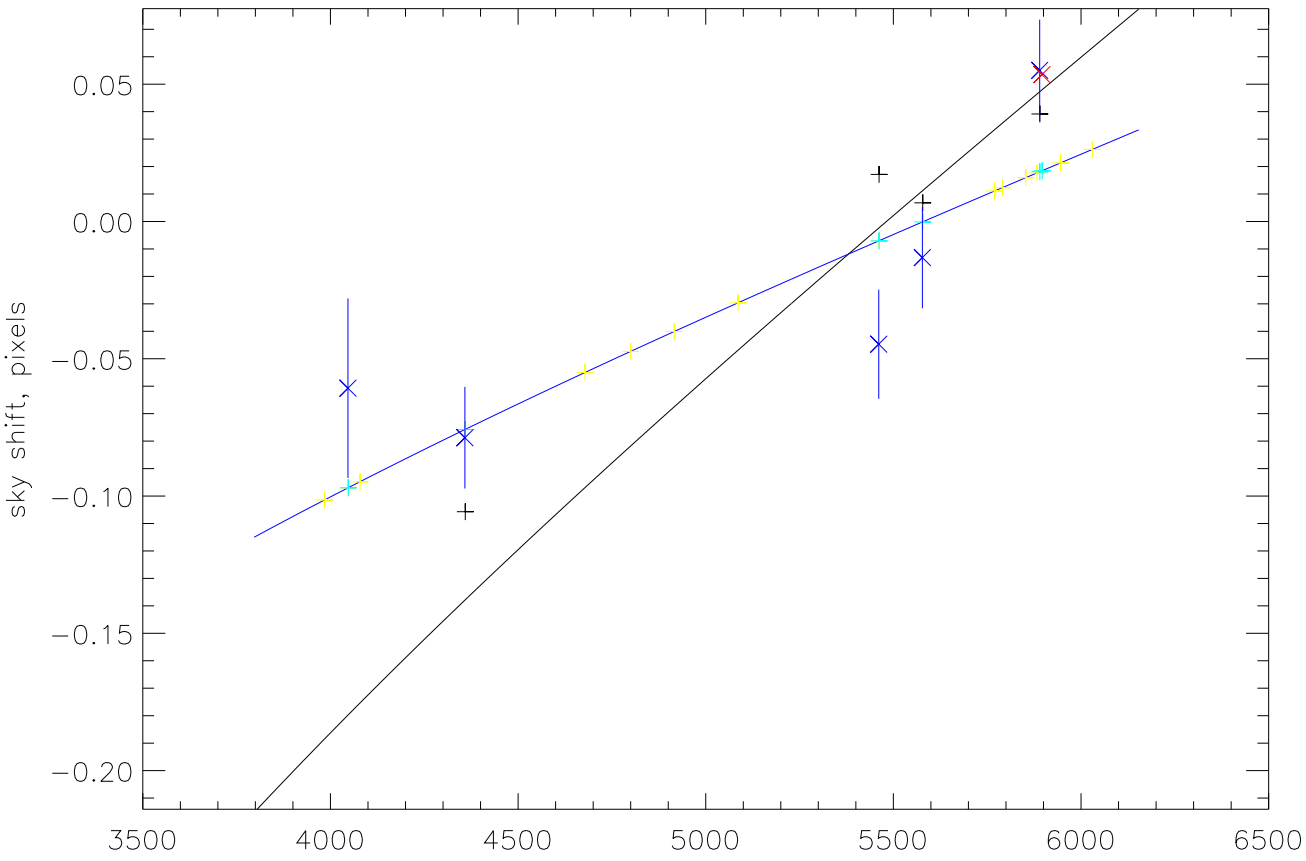

5460.9400
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400


5577.3390
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

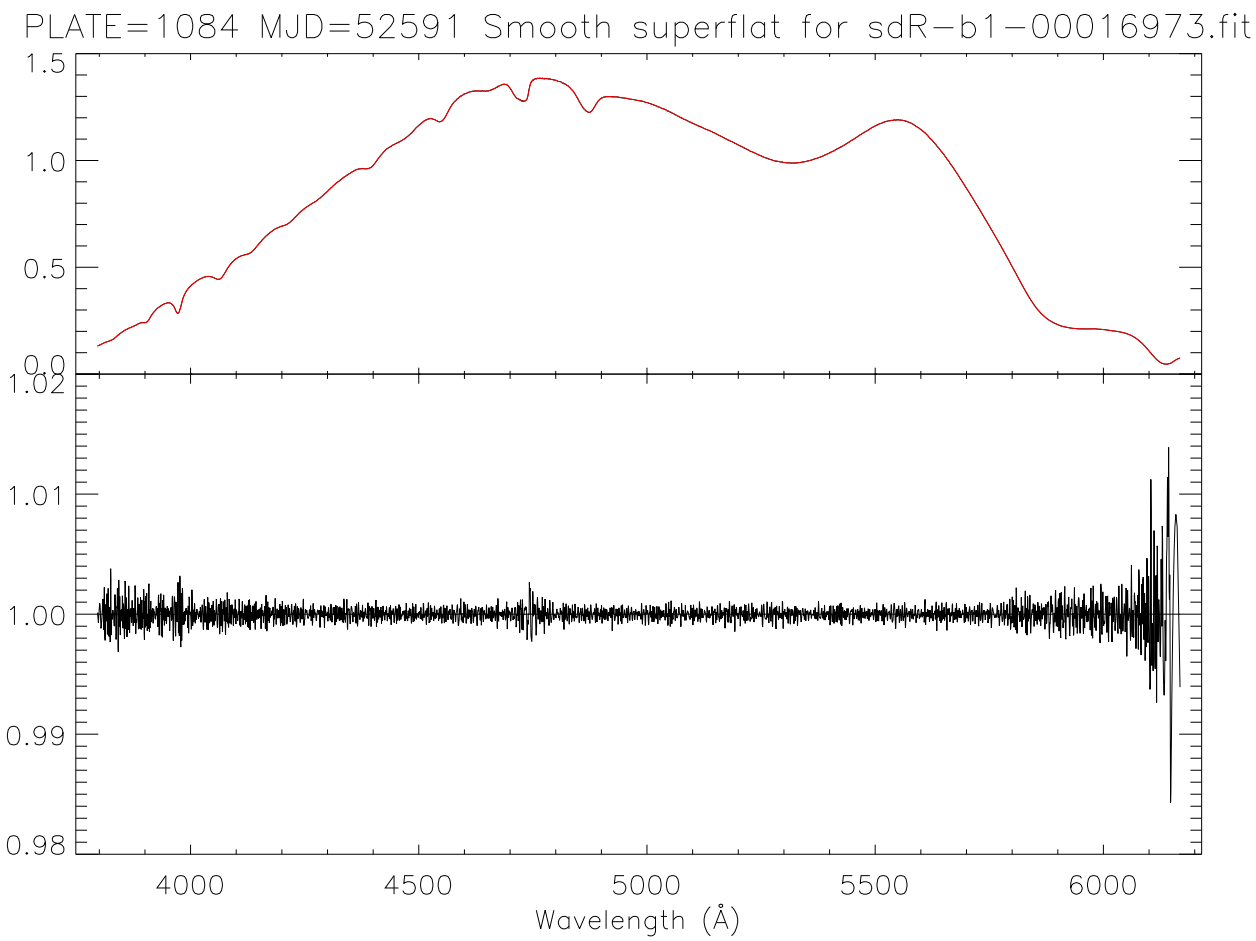

5889.9500
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

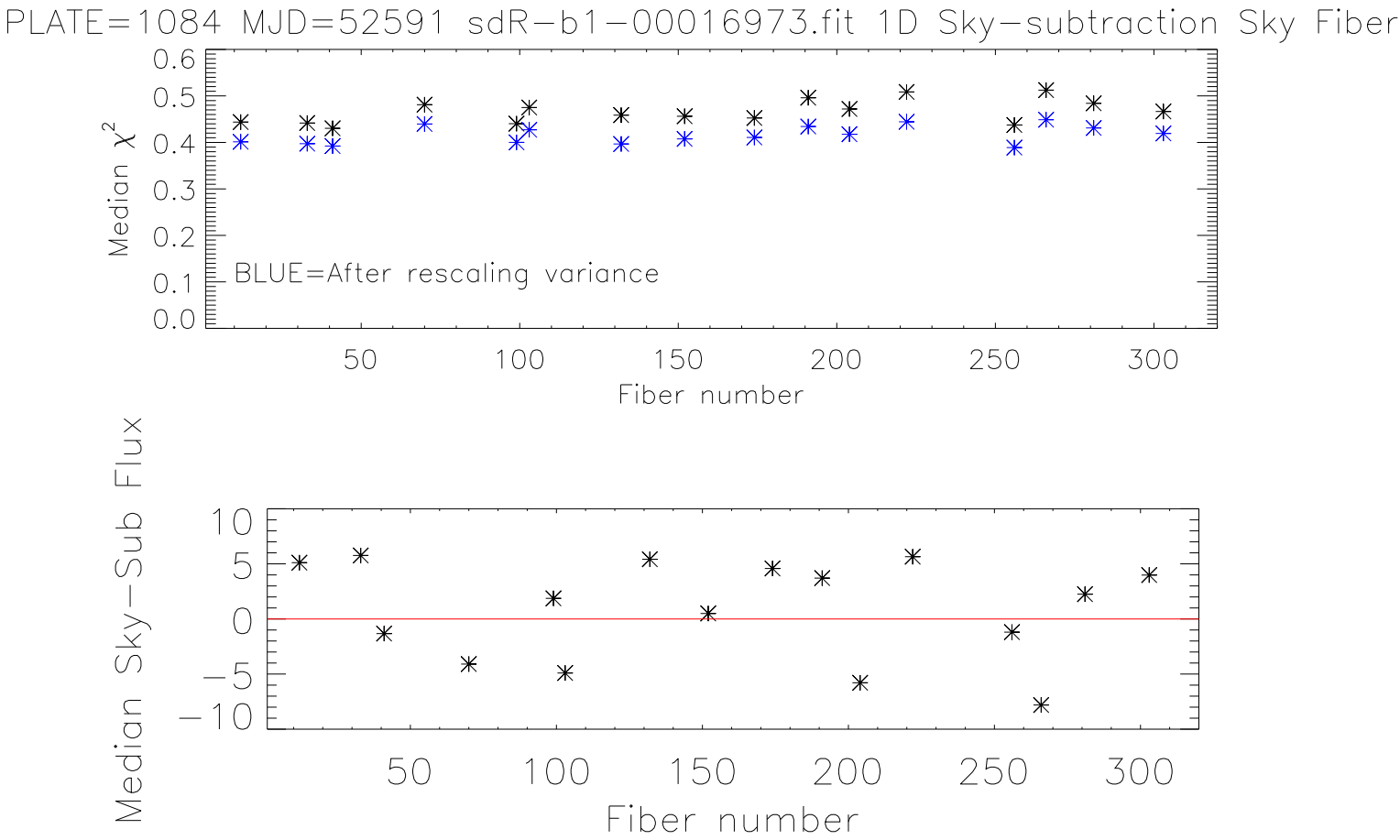

5895.9240
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

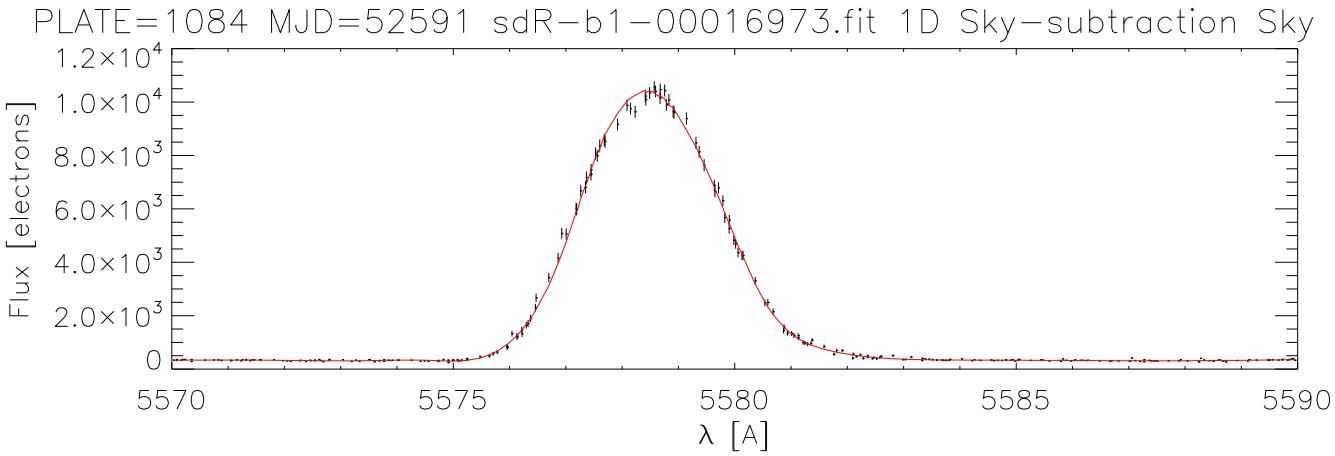

4046.5600
nfib1 16
nfib2 16
stdev 0.050
extra −0.06
4358.3300
nfib1 15
nfib2 15
stdev 0.035
extra −0.08
5460.9400
nfib1 16
nfib2 16
stdev 0.048
extra −0.04
5577.3390
nfib1 16
nfib2 16
stdev 0.013
extra −0.01
5889.9500
nfib1 16
nfib2 16
stdev 0.016
extra 0.06
5895.9240
nfib1 16
nfib2 16
stdev 0.031
extra 0.05
meas − pred, pix
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400

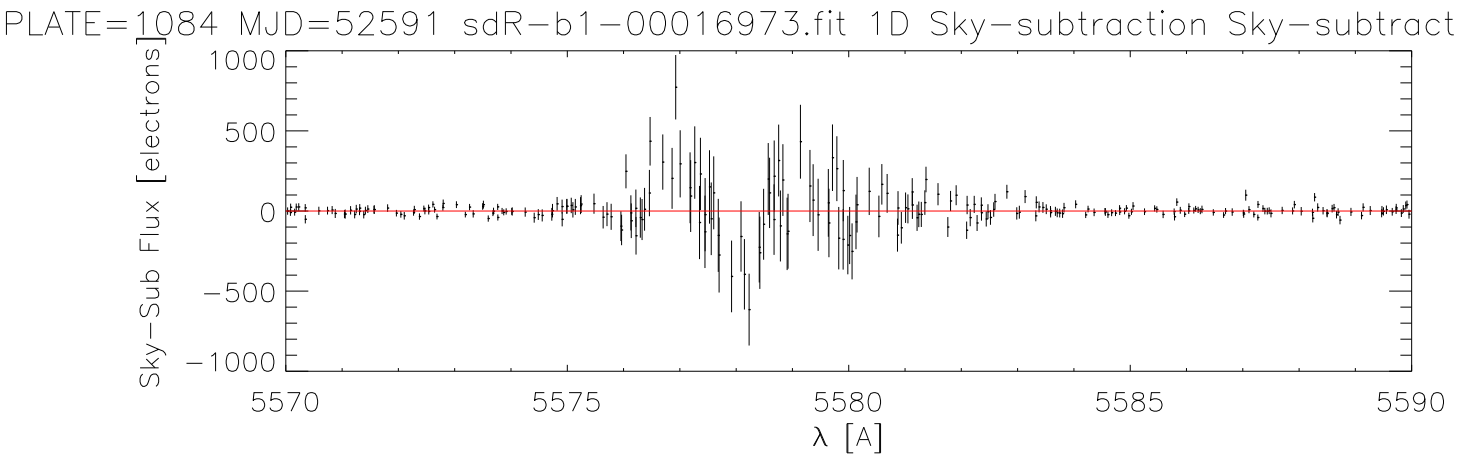

0.05
0.00
−0.05
−0.10
−0.15
−0.20
sky shift, pixels
3500
4000
4500
5000
5500
6000
6500

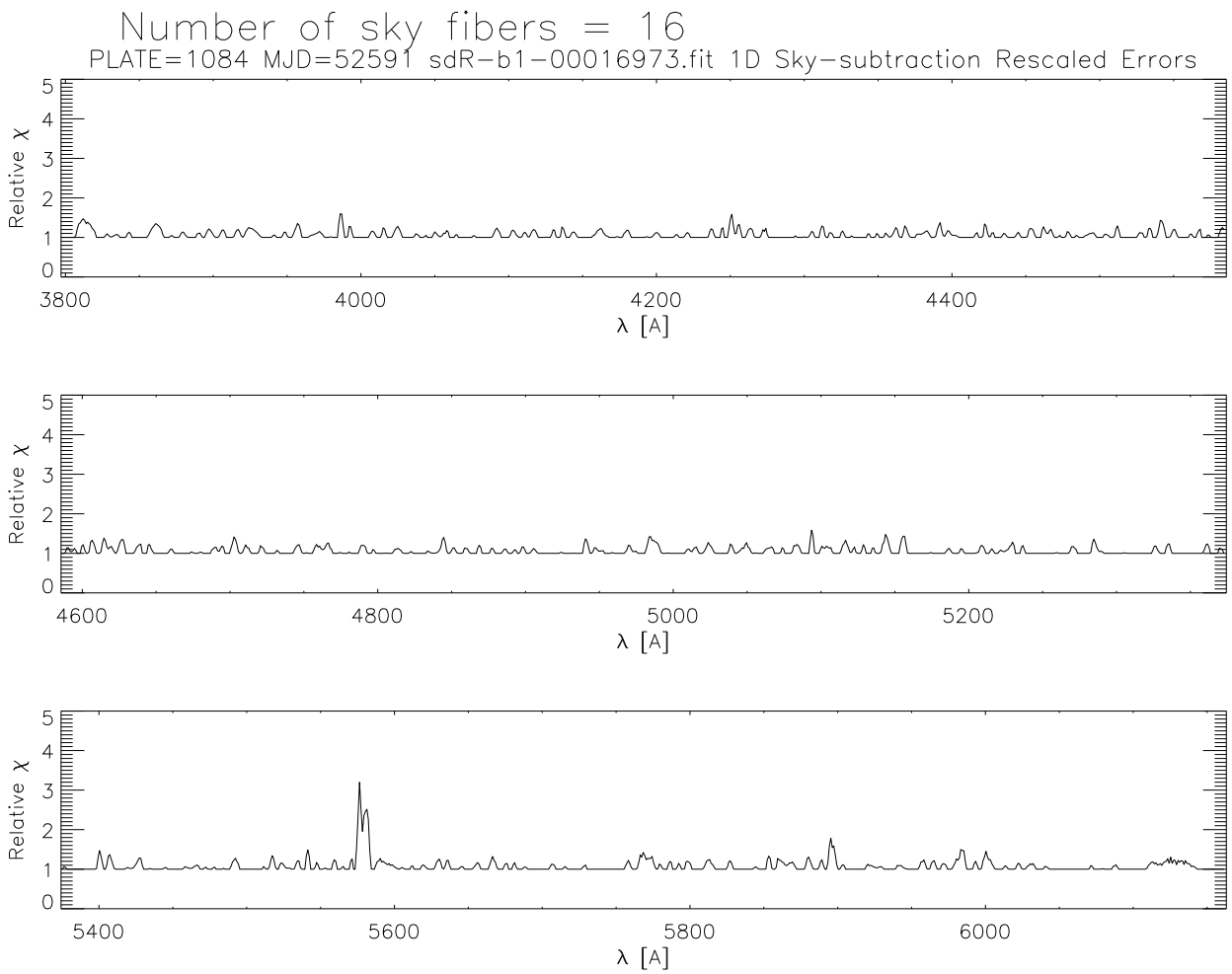
es= 0.0000

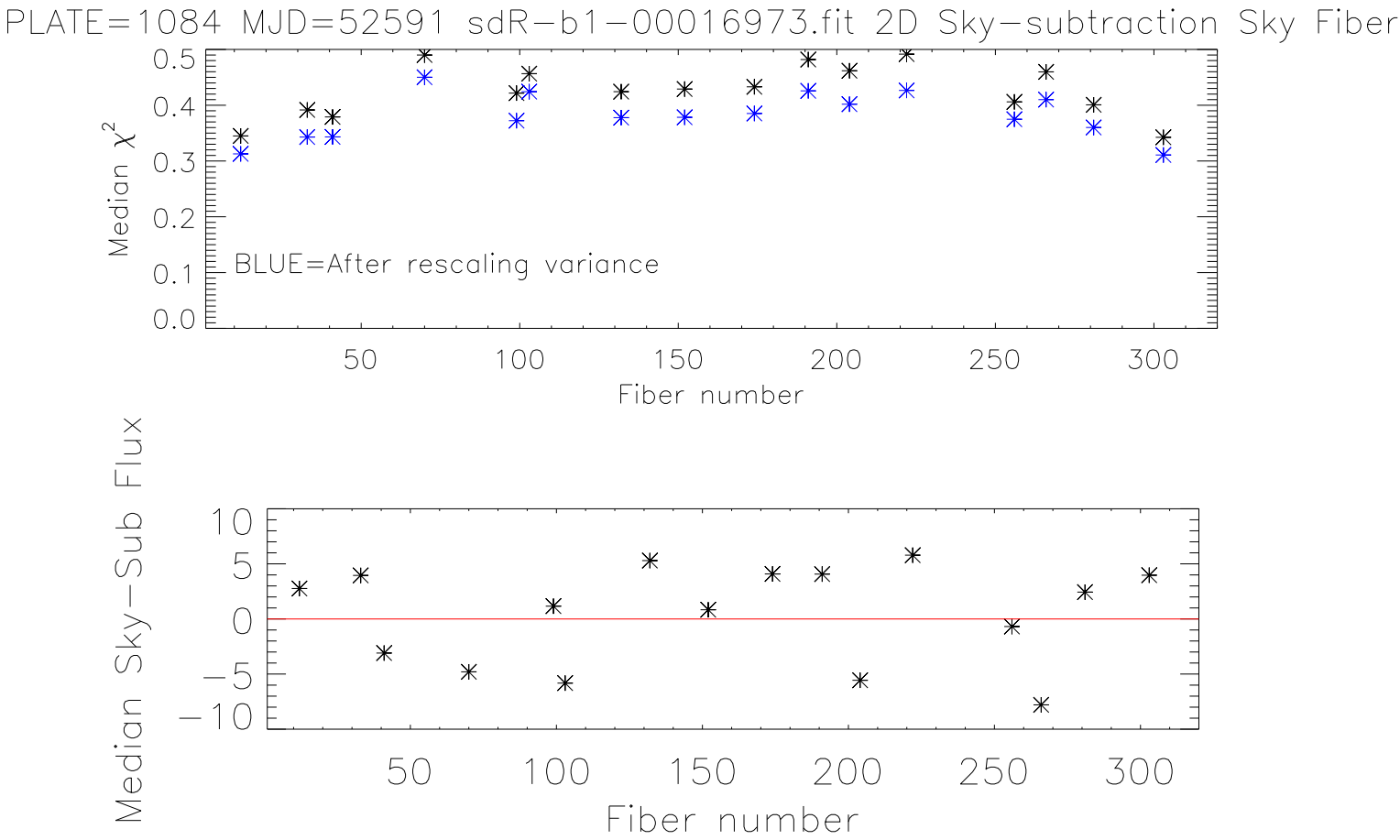

PLATE=1084 MJD=52591 Smooth superflat for sdR-b1-00016973.fit
1.5
1.0
0.5
0.0
1.02
1.01
1.00
0.99
0.98
4000
4500
5000
5500
6000
Wavelength (Å)

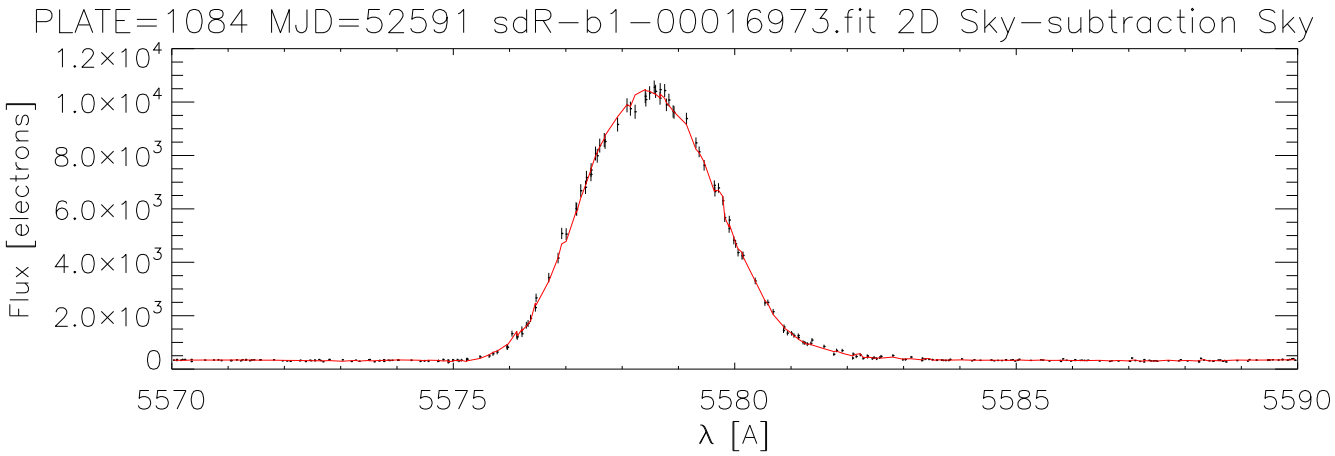

PLATE=1084 MJD=52591 sdR-b1-00016973.fit 1D Sky-subtraction Sky Fiber
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
0.6
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
10
5
0
−5
−10
50
100
150
200
250
300
Fiber number

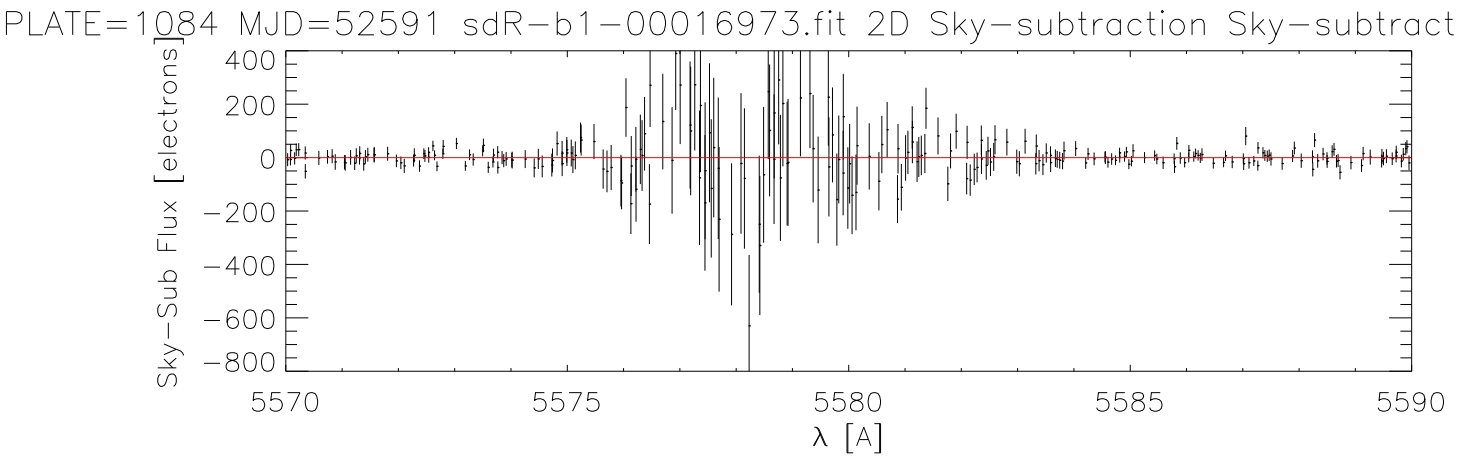

PLATE=1084 MJD=52591 sdR-b1-00016973.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
0
5570
5575
5580
5585
5590
λ [A]

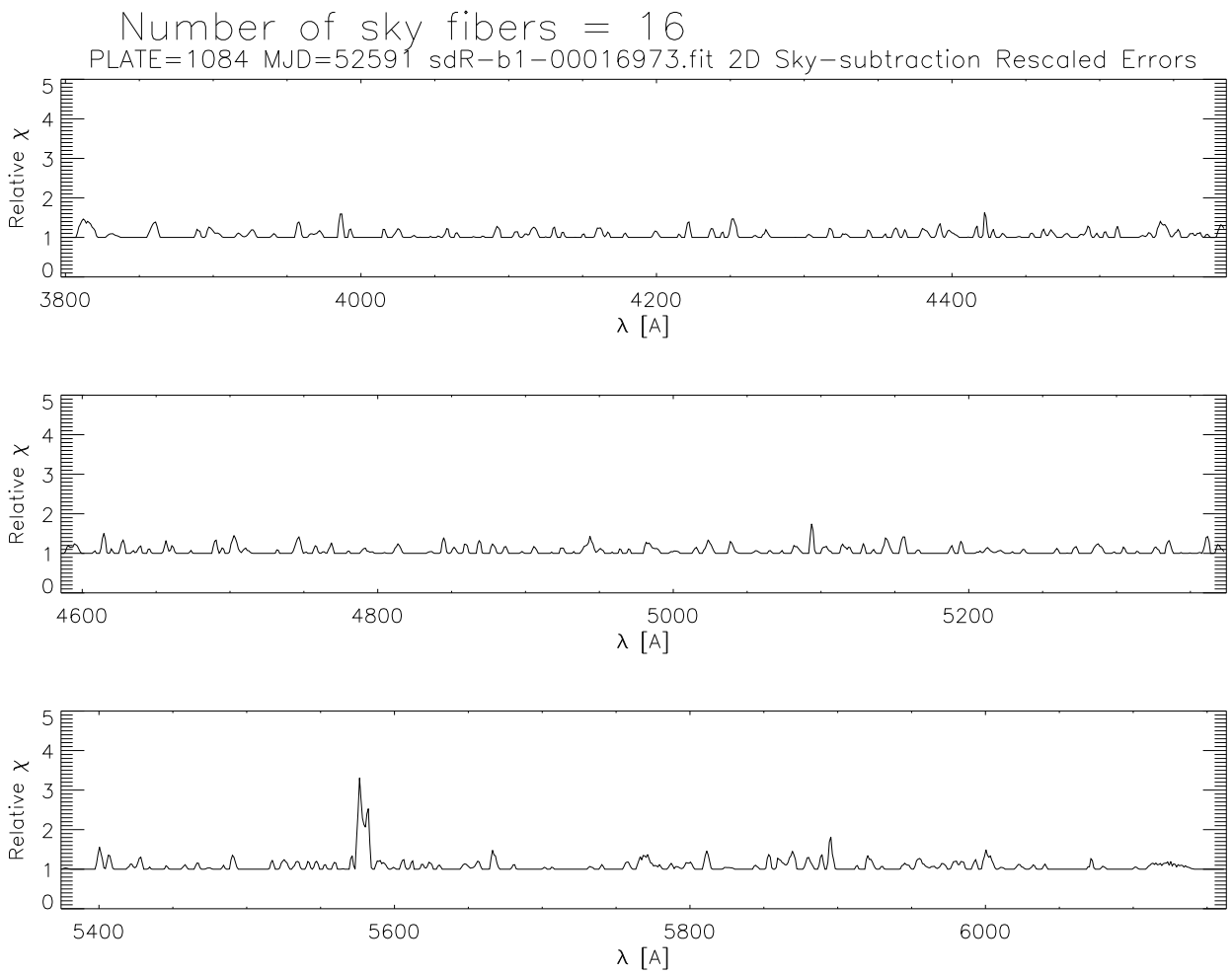

PLATE=1084 MJD=52591 sdR-b1-00016973.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1000
500
0
−500
−1000
5570
5575
5580
5585
5590
λ [A]

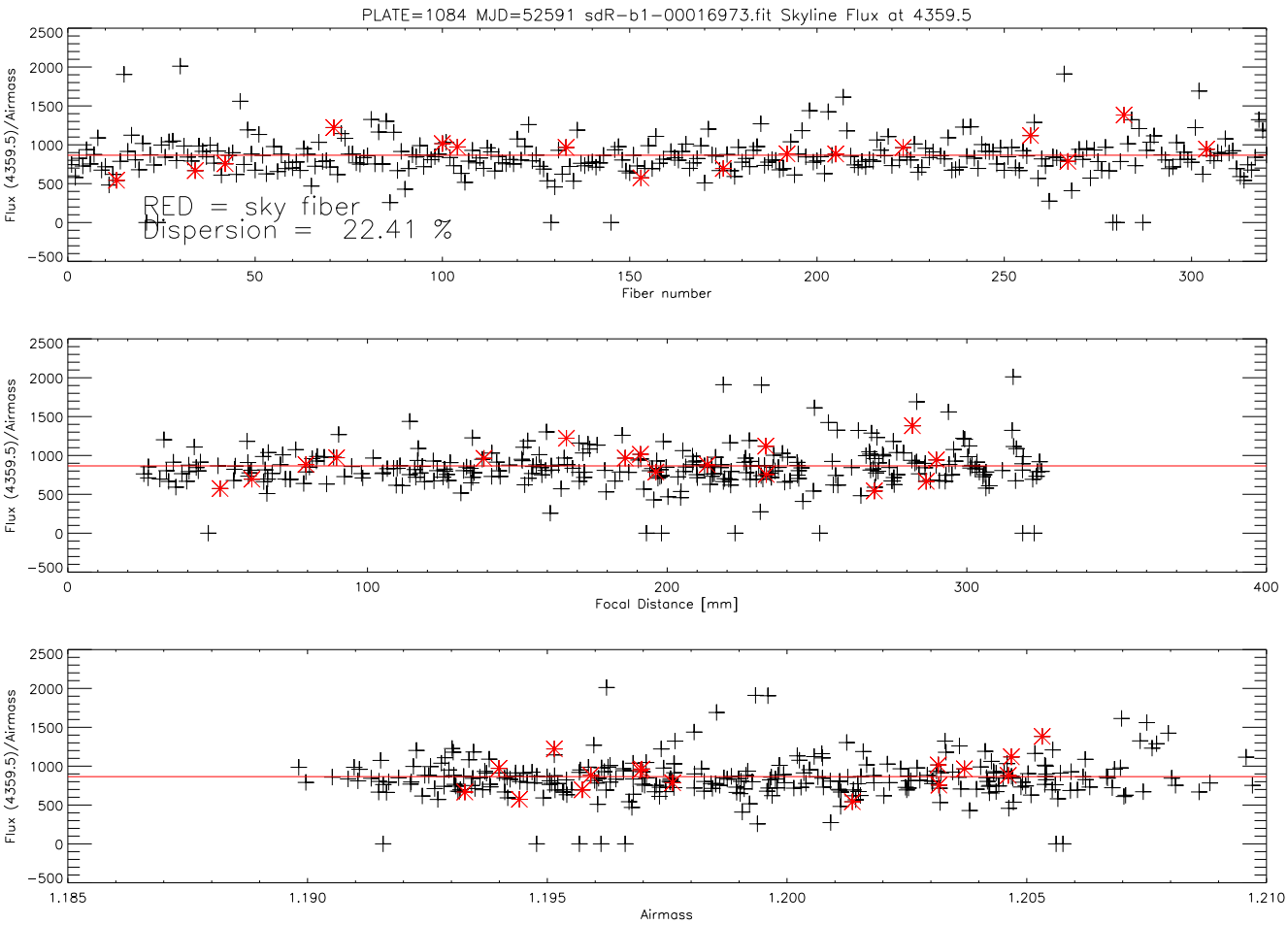

Number of sky fibers = 16
PLATE=1084 MJD=52591 sdR-b1-00016973.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

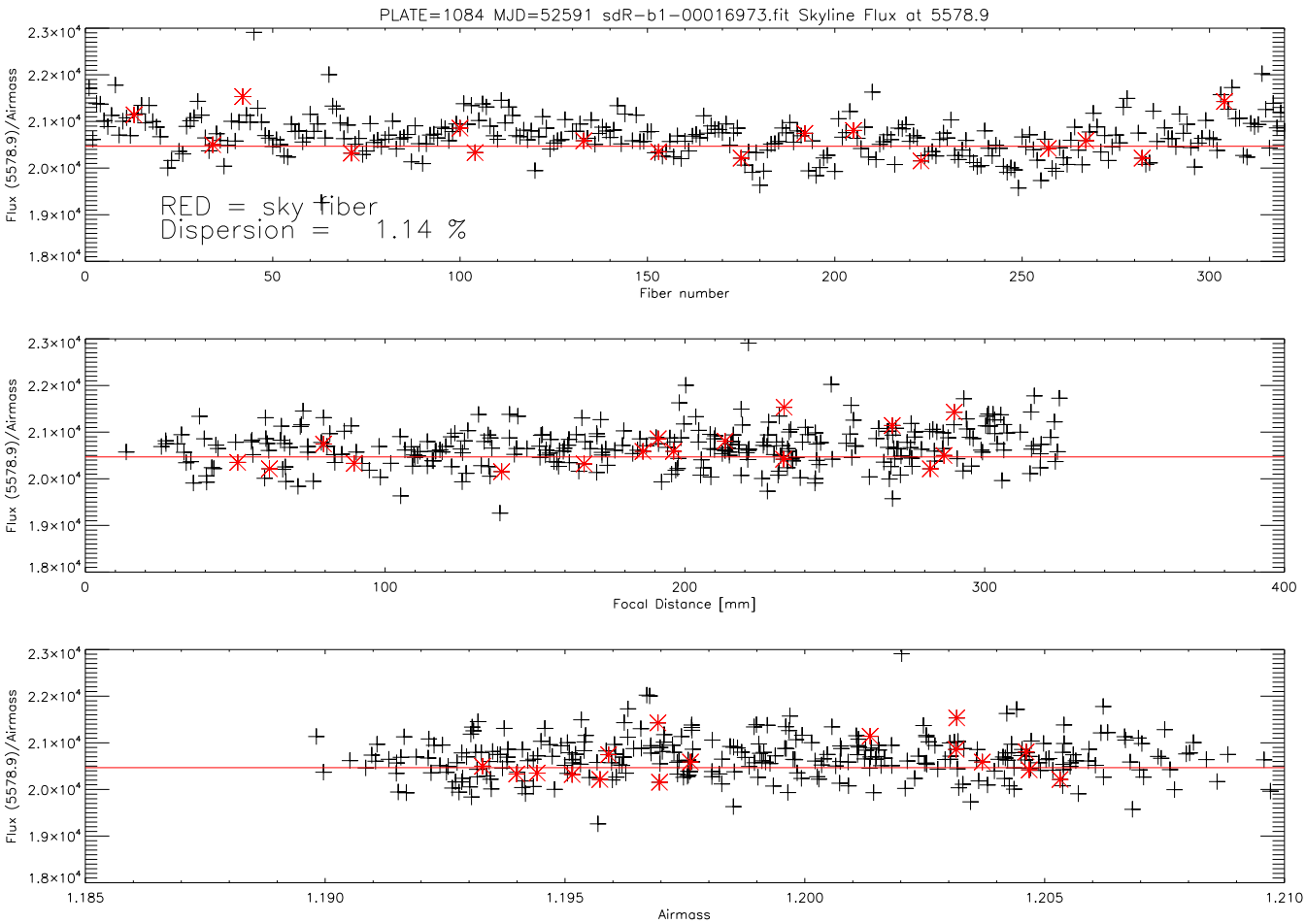

PLATE=1084 MJD=52591 sdR-b1-00016973.fit 2D Sky-subtraction Sky Fiber
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
10
5
0
−5
−10
50
100
150
200
250
300
Fiber number

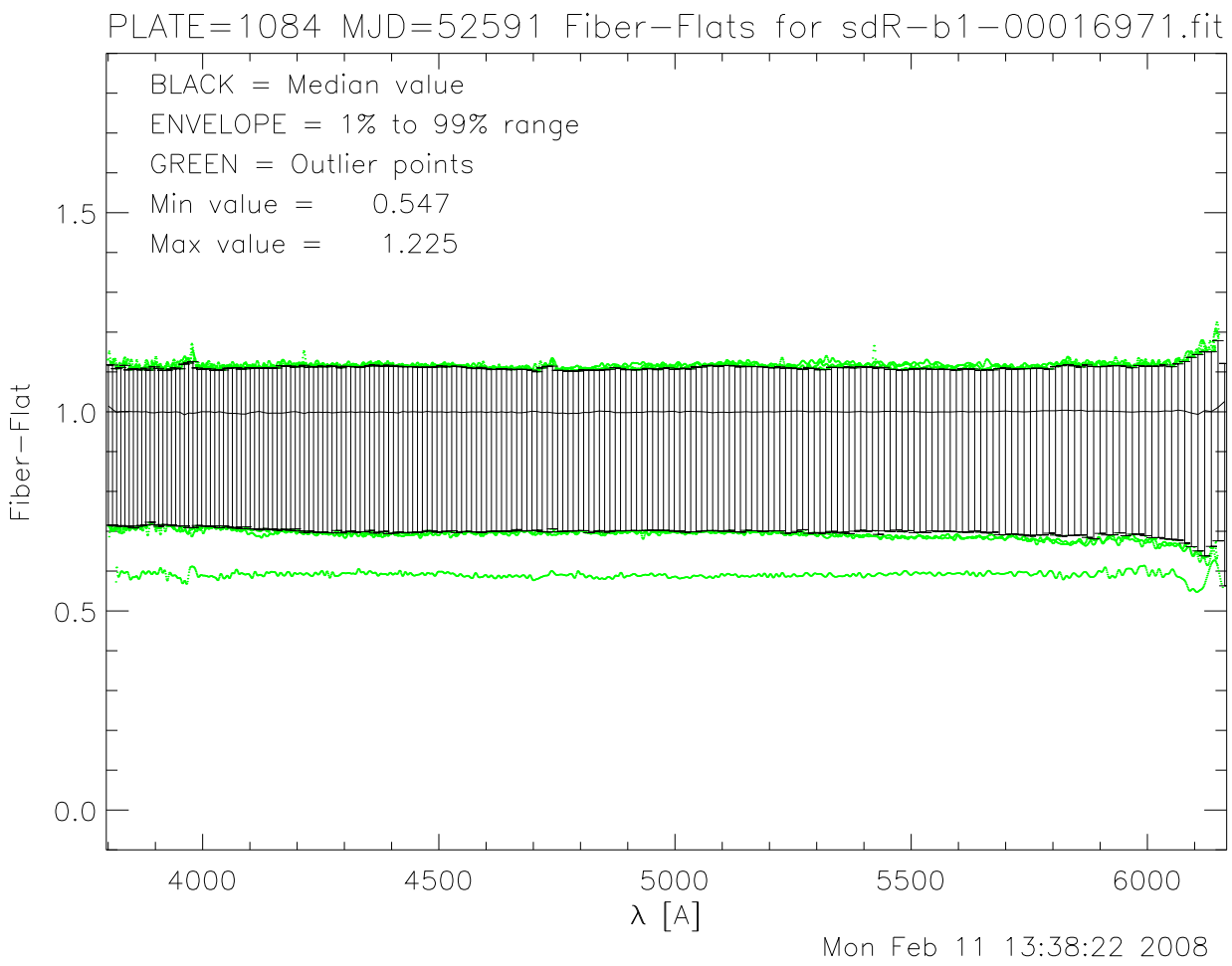

PLATE=1084 MJD=52591 sdR-b1-00016973.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
0
5570
5575
5580
5585
5590
λ [A]

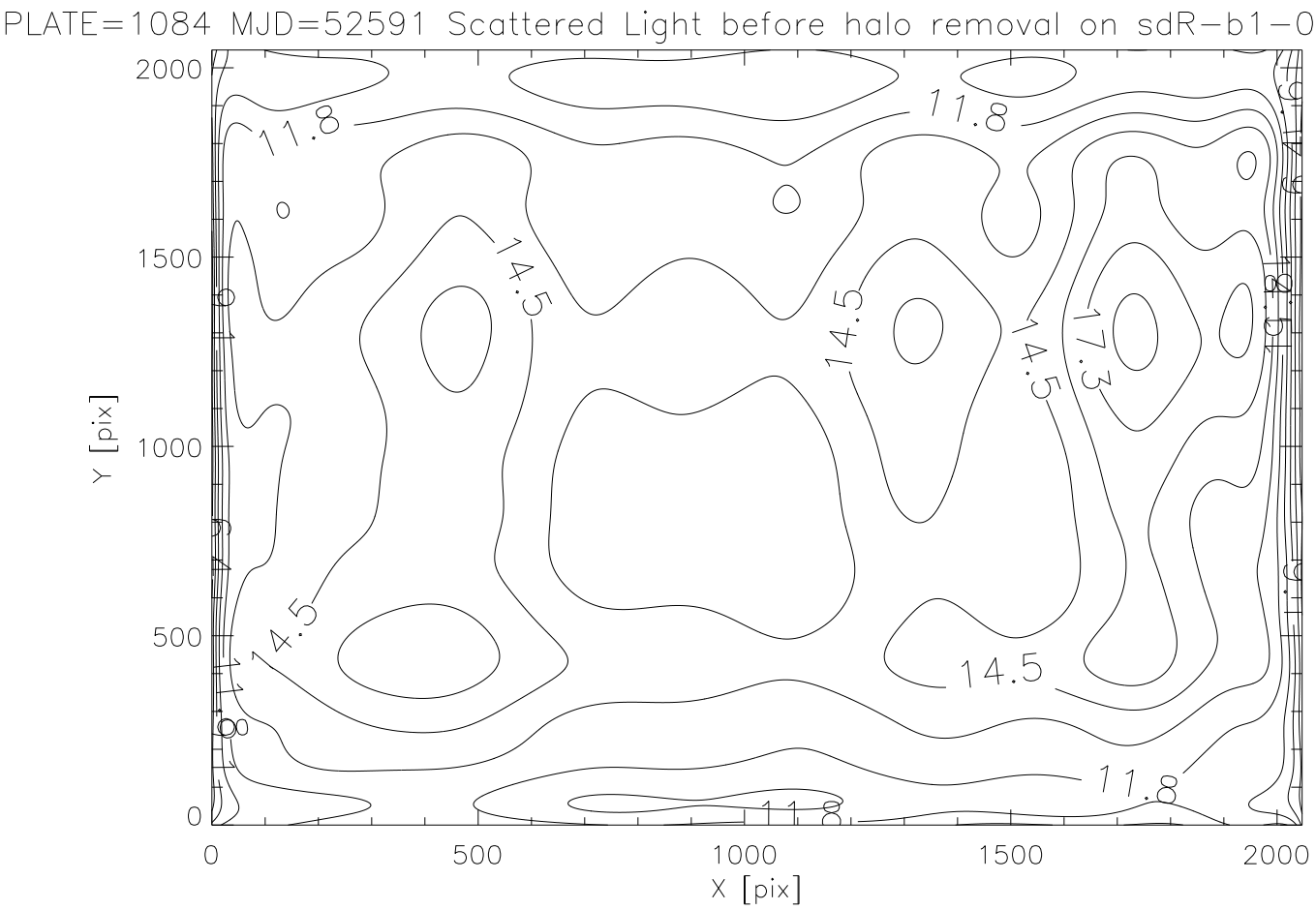

PLATE=1084 MJD=52591 sdR-b1-00016973.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
200
0
-200
-400
-600
-800
5570
5575
5580
5585
5590
λ [A]

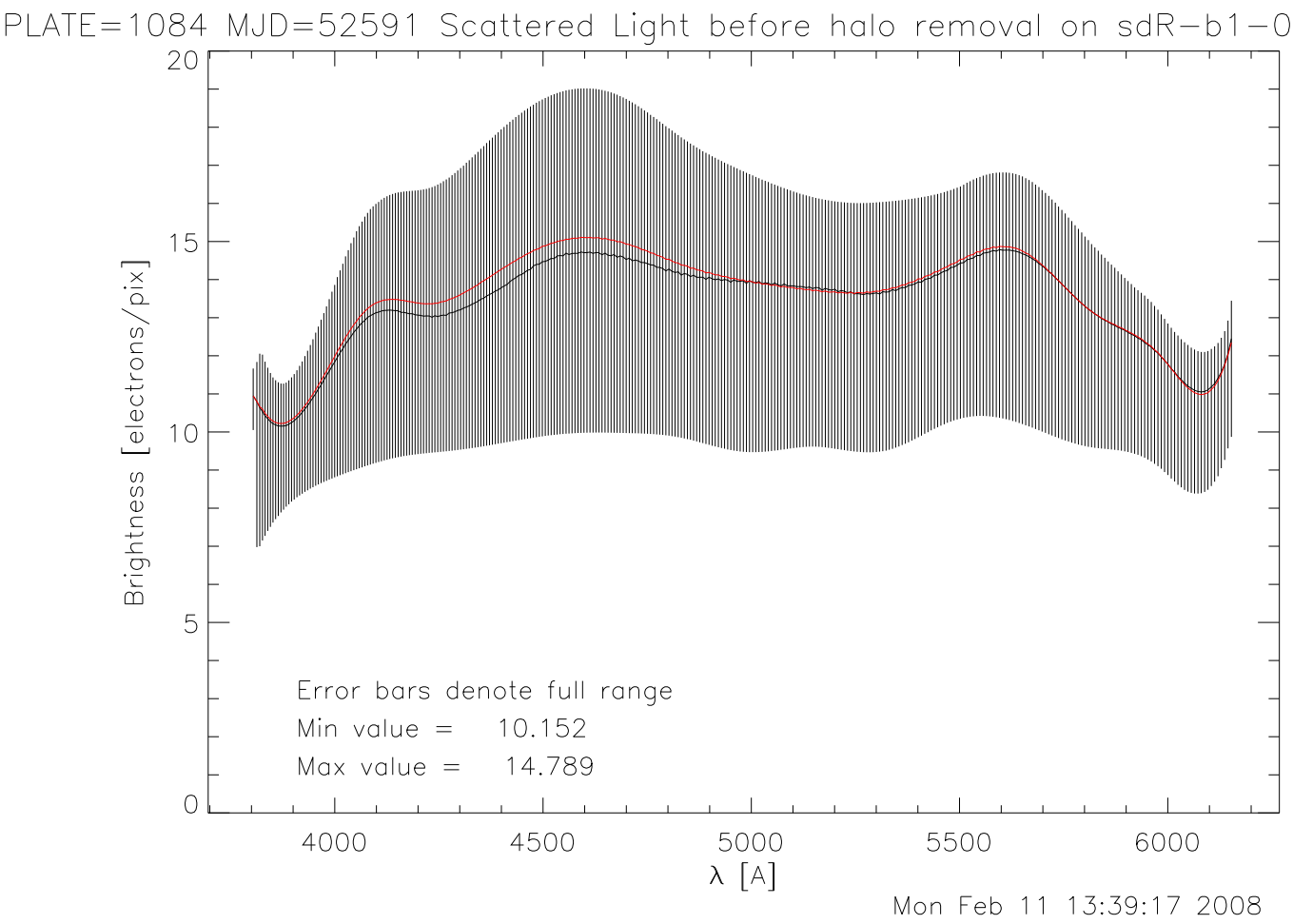

Number of sky fibers = 16
PLATE=1084 MJD=52591 sdR-b1-00016973.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

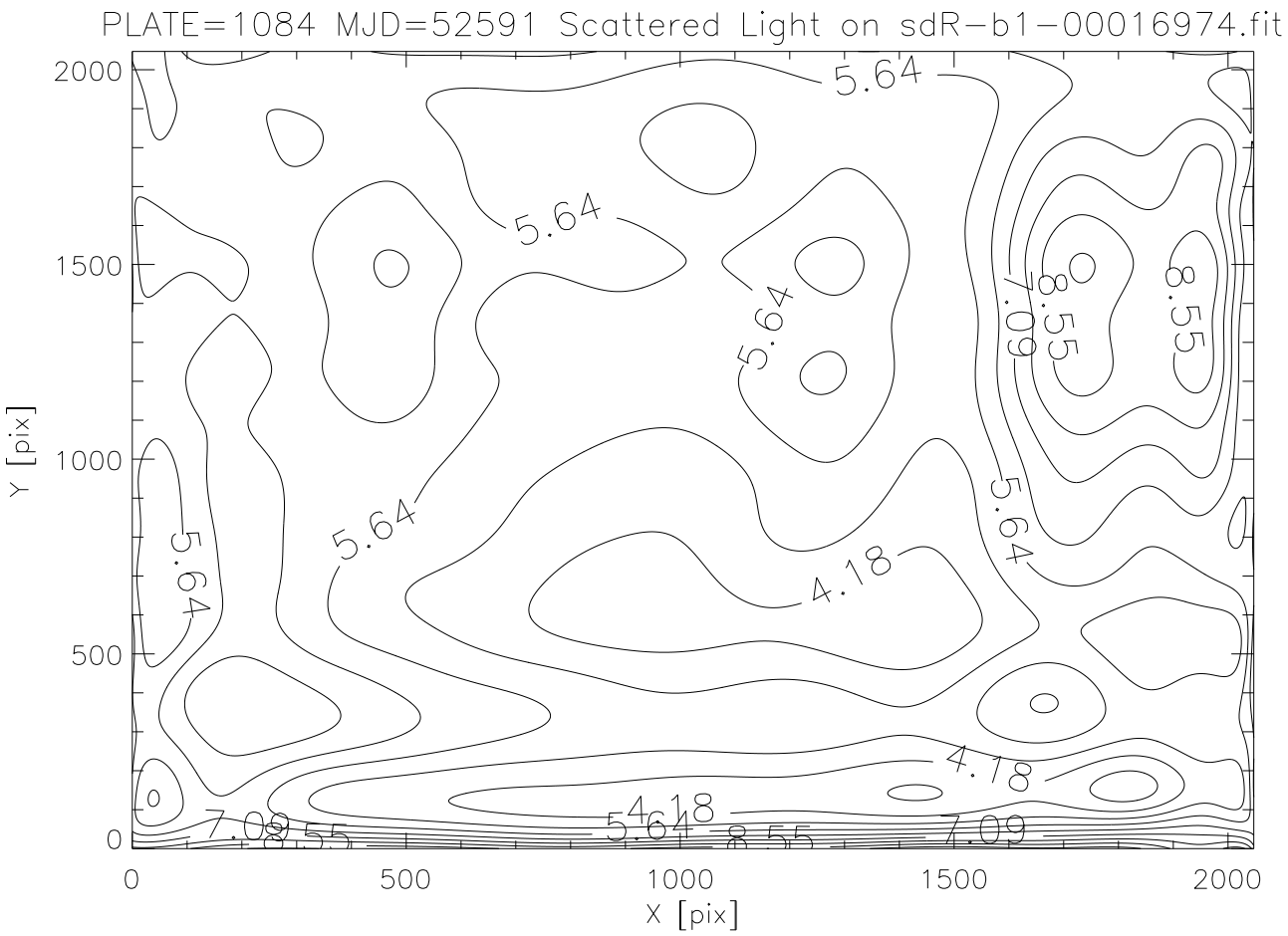

PLATE=1084 MJD=52591 sdR-b1-00016973.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
Fiber number
RED = sky fiber
Dispersion = 22.41 %
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

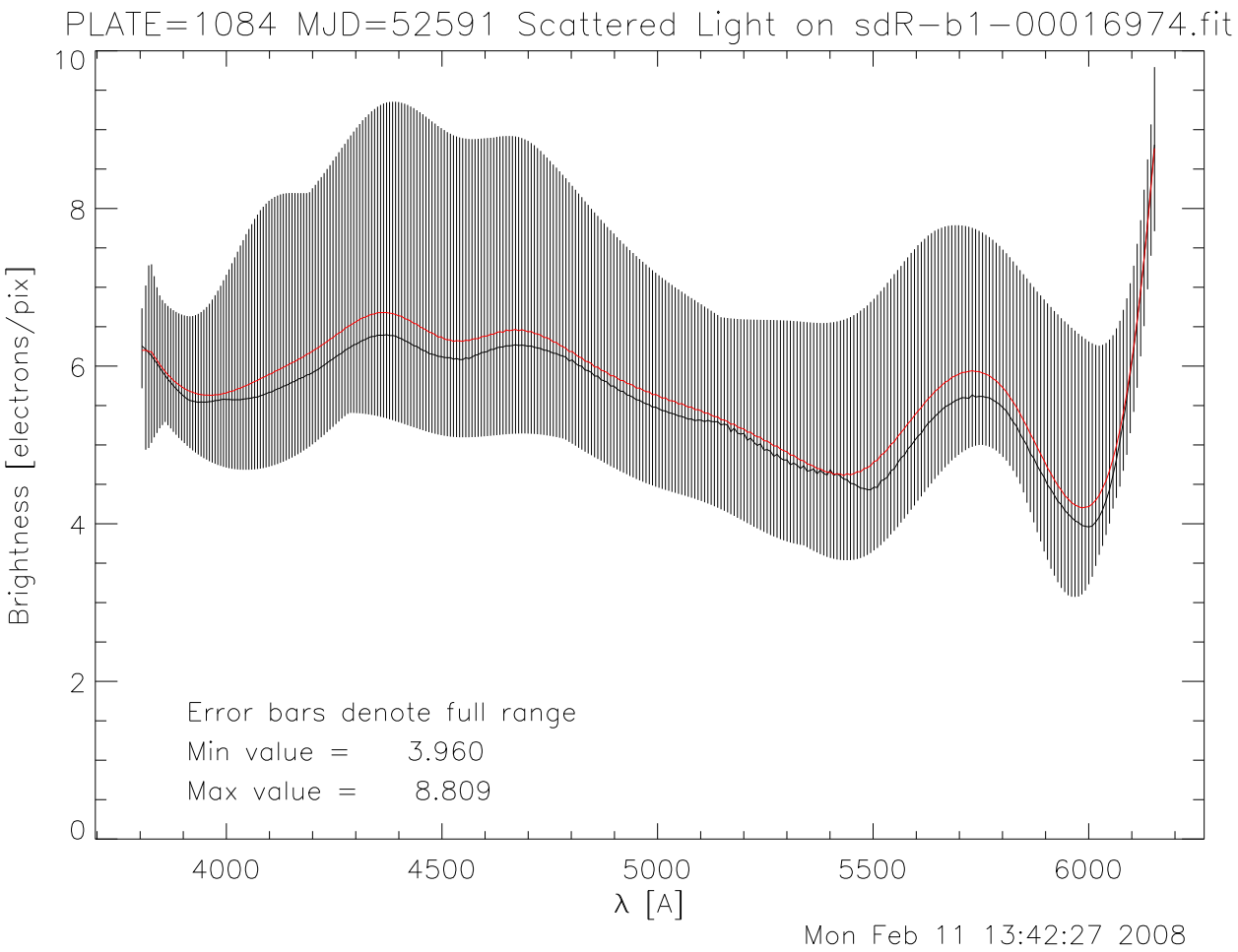

PLATE=1084 MJD=52591 sdR-b1-00016973.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 1.14 %
Fiber number
Focal Distance [mm]
Airmass

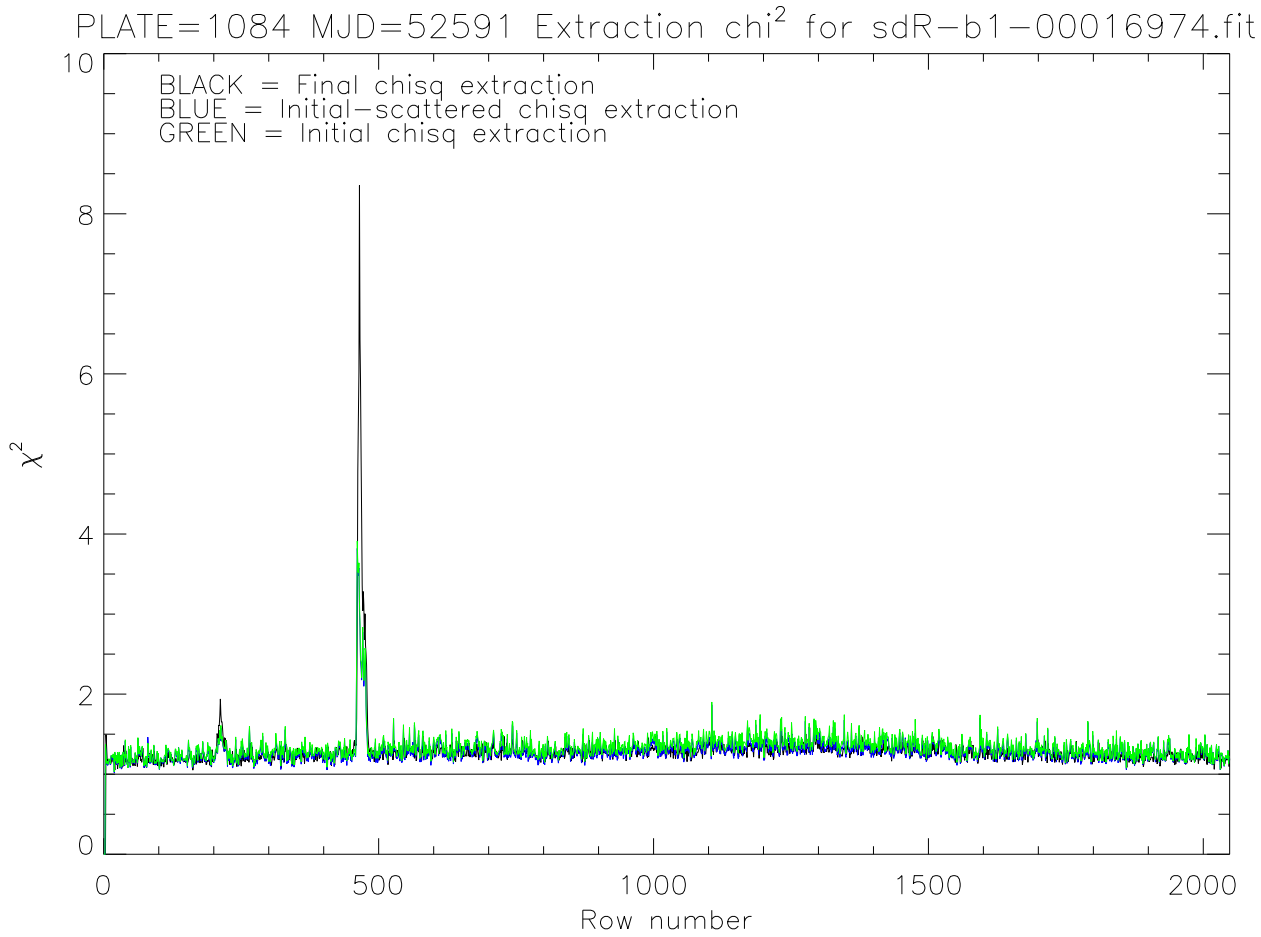

PLATE=1084 MJD=52591 Fiber-Flats for sdR-b1-00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.547
Max value = 1.225
Fiber-Flat
1.5
1.0
0.5
0.0
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:38:22 2008

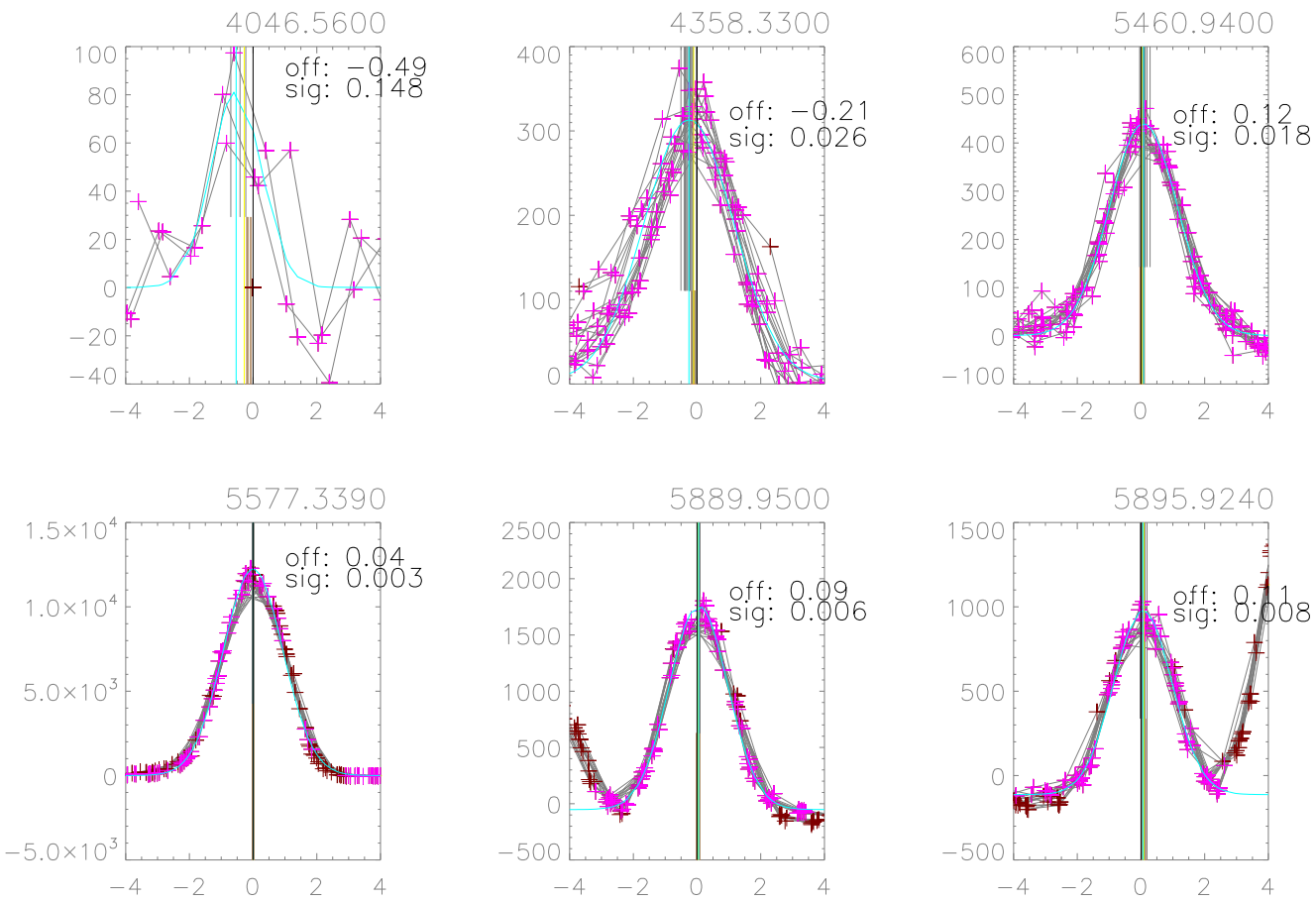

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR−b1−00016974.f
Y [pix]
X [pix]
0
500
1000
1500
2000
11.8
14.5
17.3

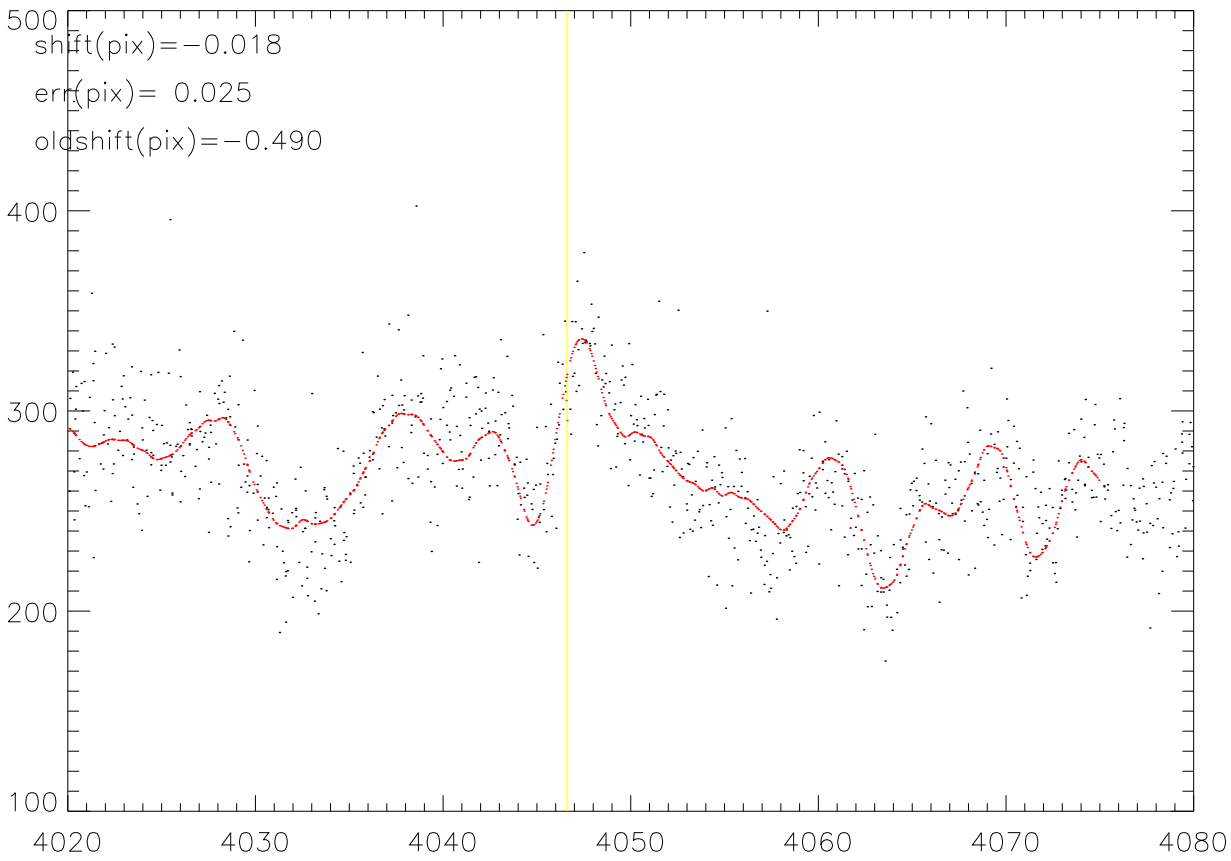

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b1-00016974.f
Brightness [electrons/pix]
20
15
10
5
0
Error bars denote full range
Min value = 10.152
Max value = 14.789
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:39:17 2008

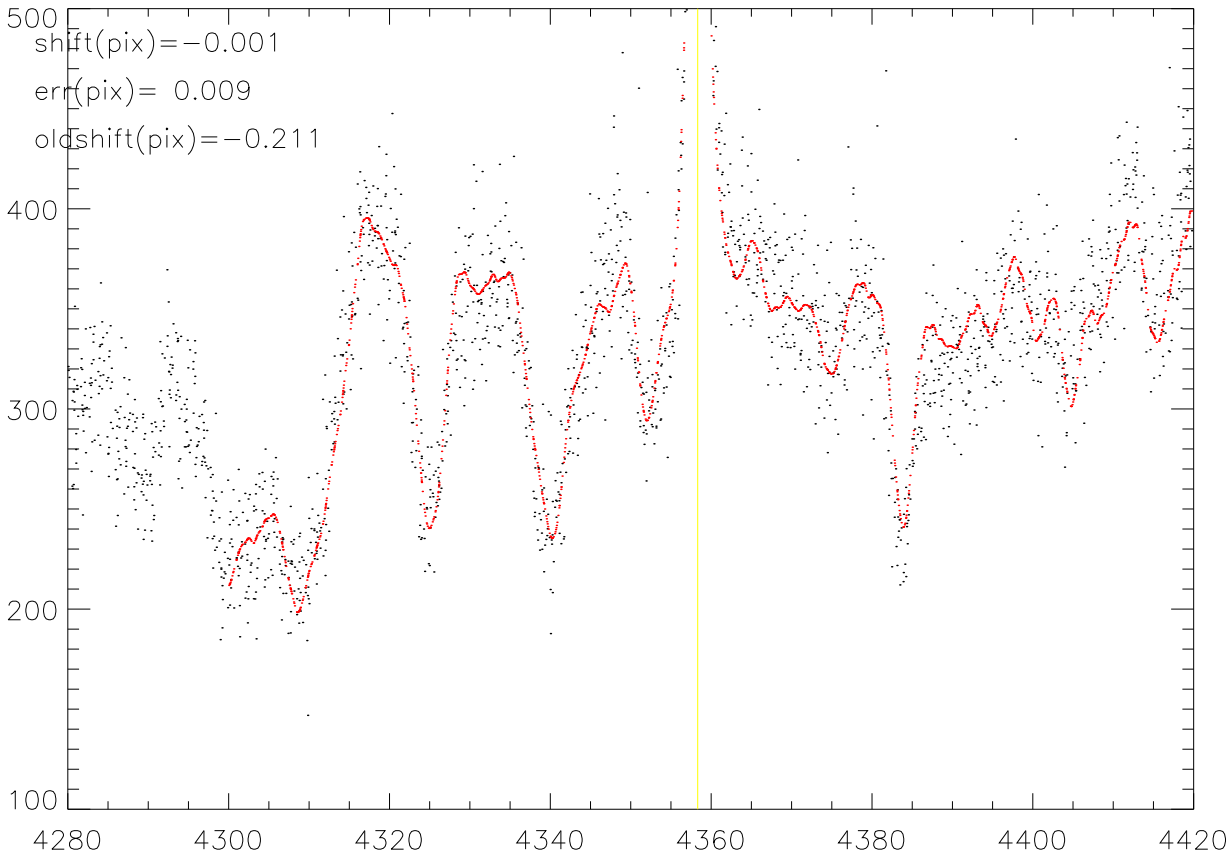

PLATE=1084 MJD=52591 Scattered Light on sdR-b1-00016974.fit
Y [pix]
X [pix]
0
500
1000
1500
2000
5.64
4.18
8.55
7.09

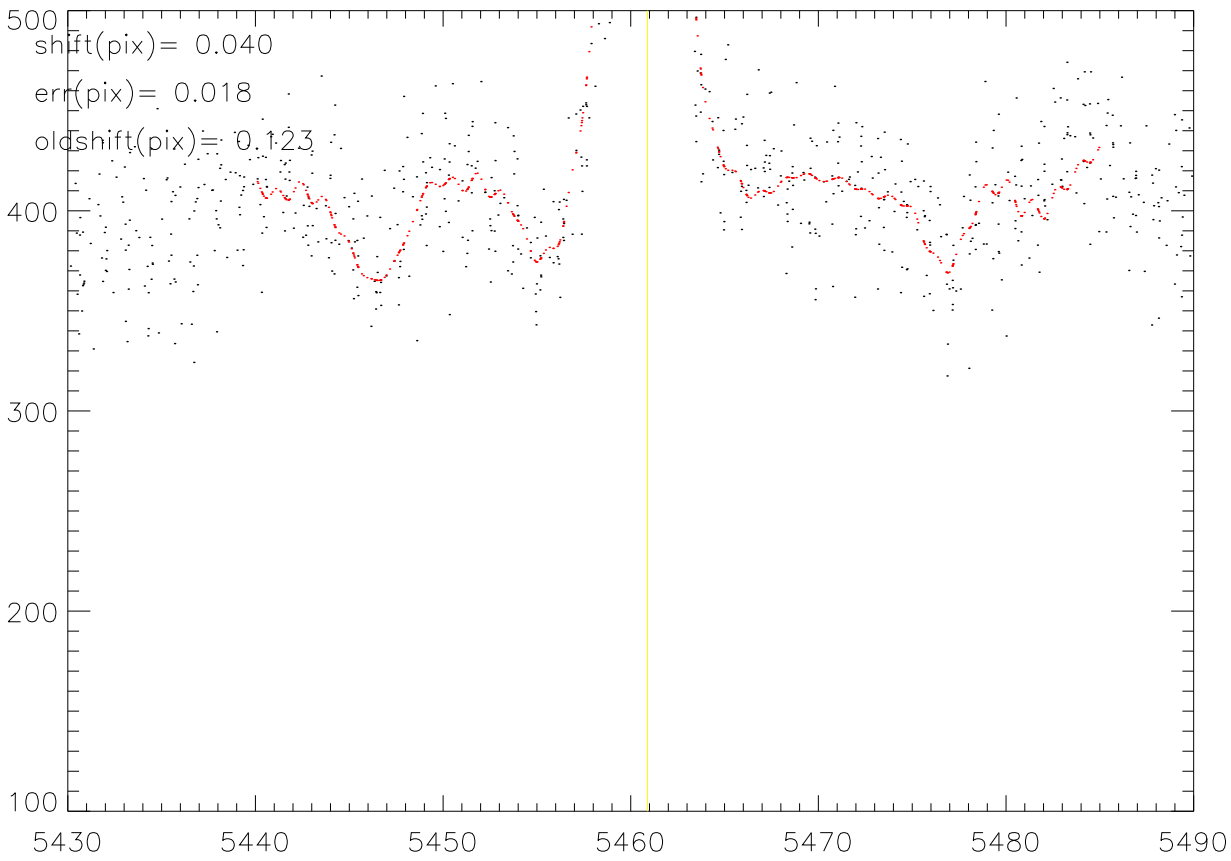

PLATE=1084 MJD=52591 Scattered Light on sdR-b1-00016974.fit
Brightness [electrons/pix]
10
8
6
4
2
0
Error bars denote full range
Min value = 3.960
Max value = 8.809
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:42:27 2008

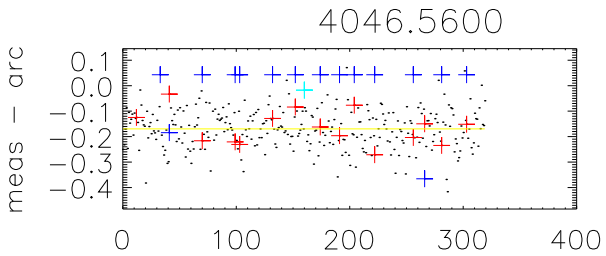

PLATE=1084 MJD=52591 Extraction chi^2 for sdR-b1-00016974.fit
BLACK = Final chisq extraction
BLUE = Initial-scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
Row number
0
2
4
6
8
10
0
500
1000
1500
2000

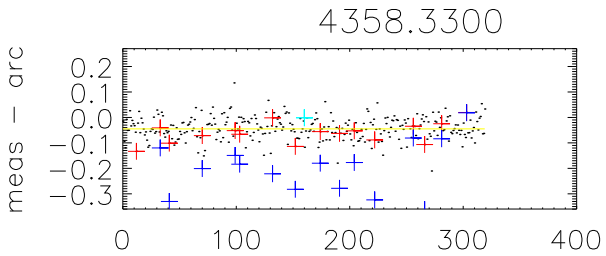

4046.5600
off: −0.49
sig: 0.148
4358.3300
off: −0.21
sig: 0.026
5460.9400
off: 0.12
sig: 0.018
5577.3390
off: 0.04
sig: 0.003
5889.9500
off: 0.09
sig: 0.006
5895.9240
off: 0.11
sig: 0.008

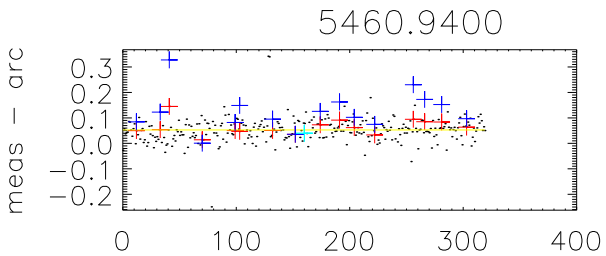

shift(pix)=−0.018
err(pix)= 0.025
oldshift(pix)=−0.490
500
400
300
200
100
4020
4030
4040
4050
4060
4070
4080

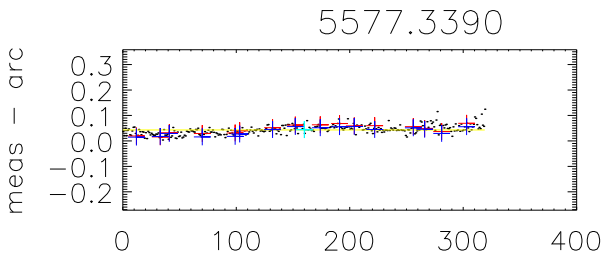

shift(pix)=−0.001
err(pix)= 0.009
oldshift(pix)=−0.211
500
400
300
200
100
4280
4300
4320
4340
4360
4380
4400
4420

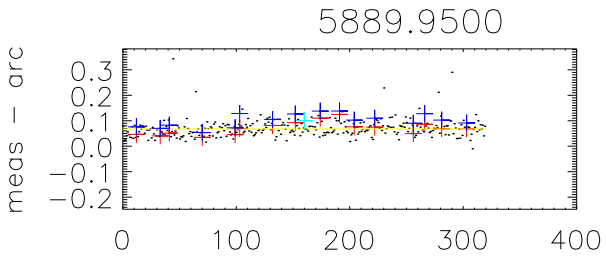

shift(pix)= 0.040
err(pix)= 0.018
oldshift(pix)= 0.123
500
400
300
200
100
5430
5440
5450
5460
5470
5480
5490

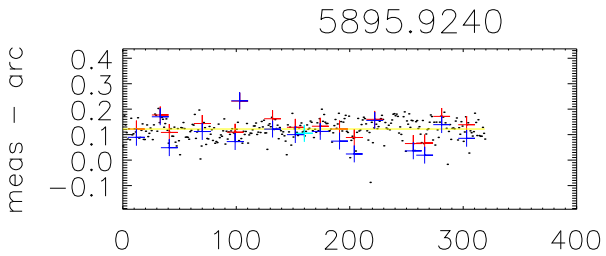

4046.5600
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

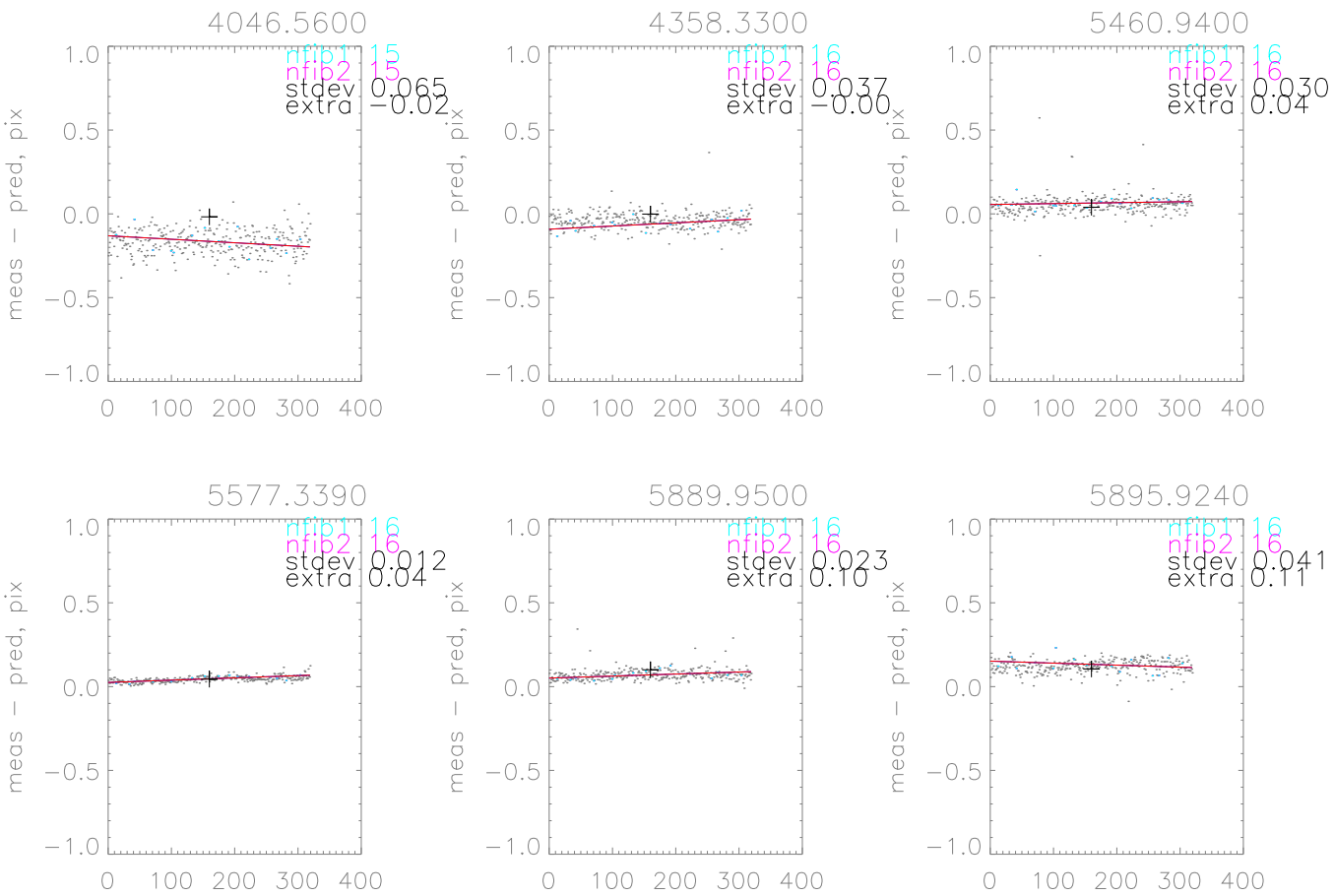

4358.3300
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

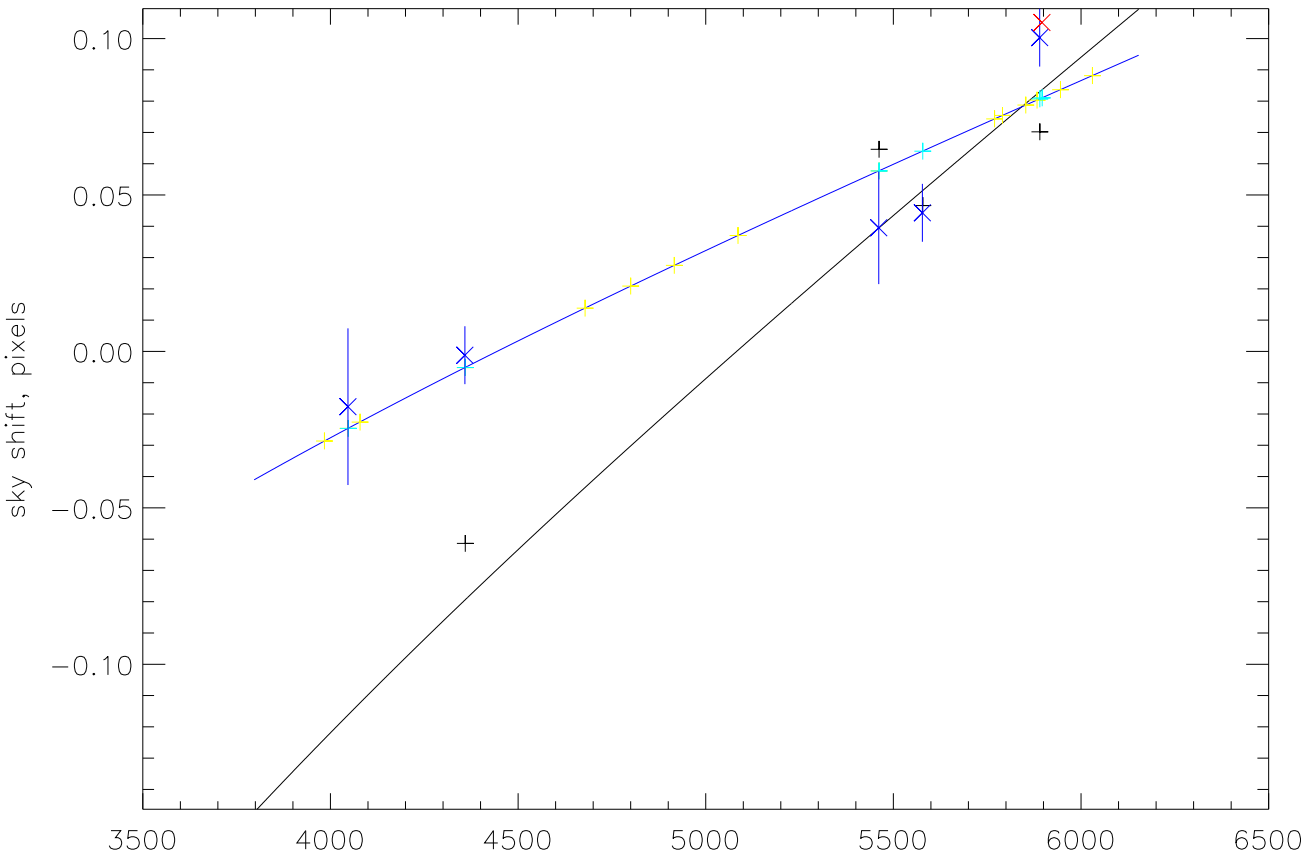

5460.9400
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400


5577.3390
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

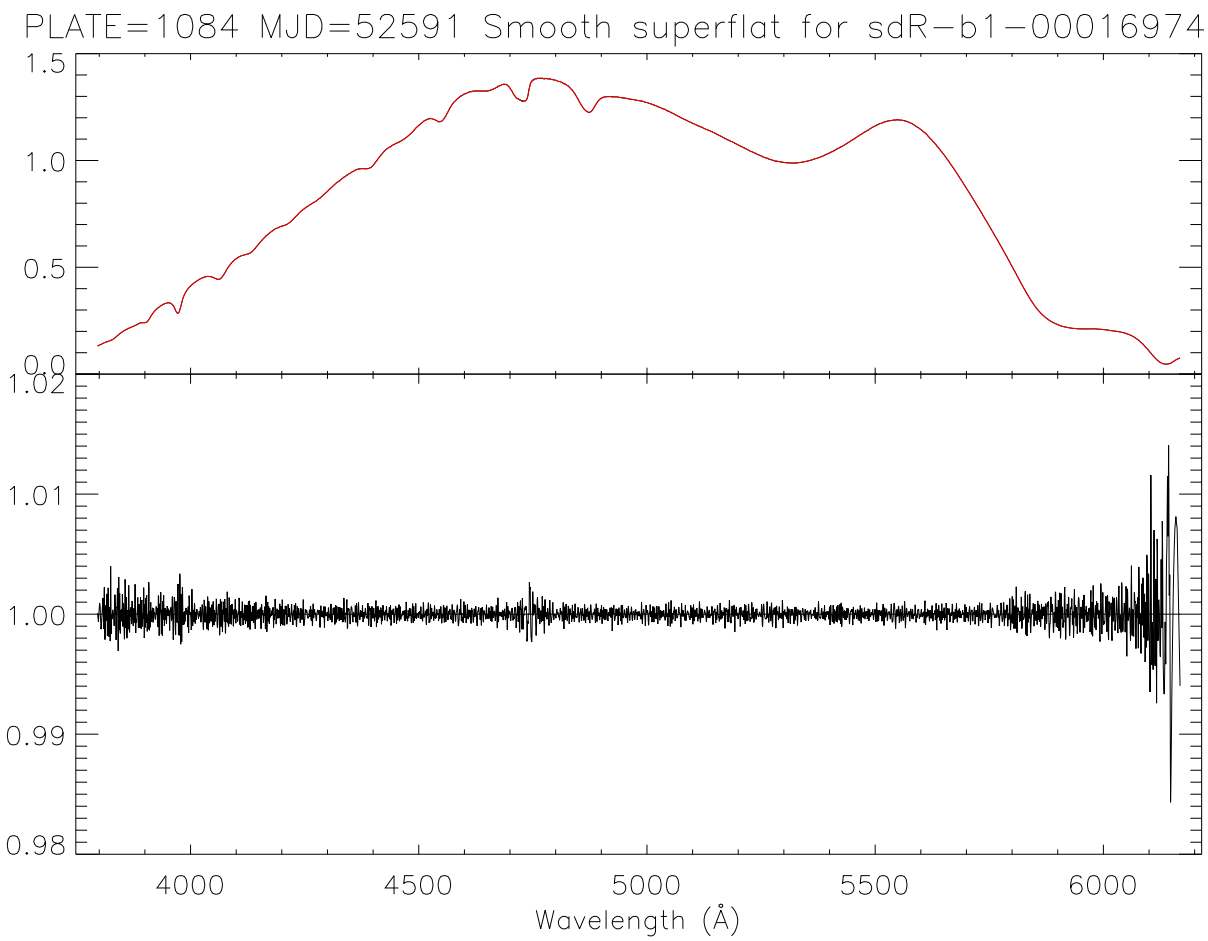

5889.9500
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

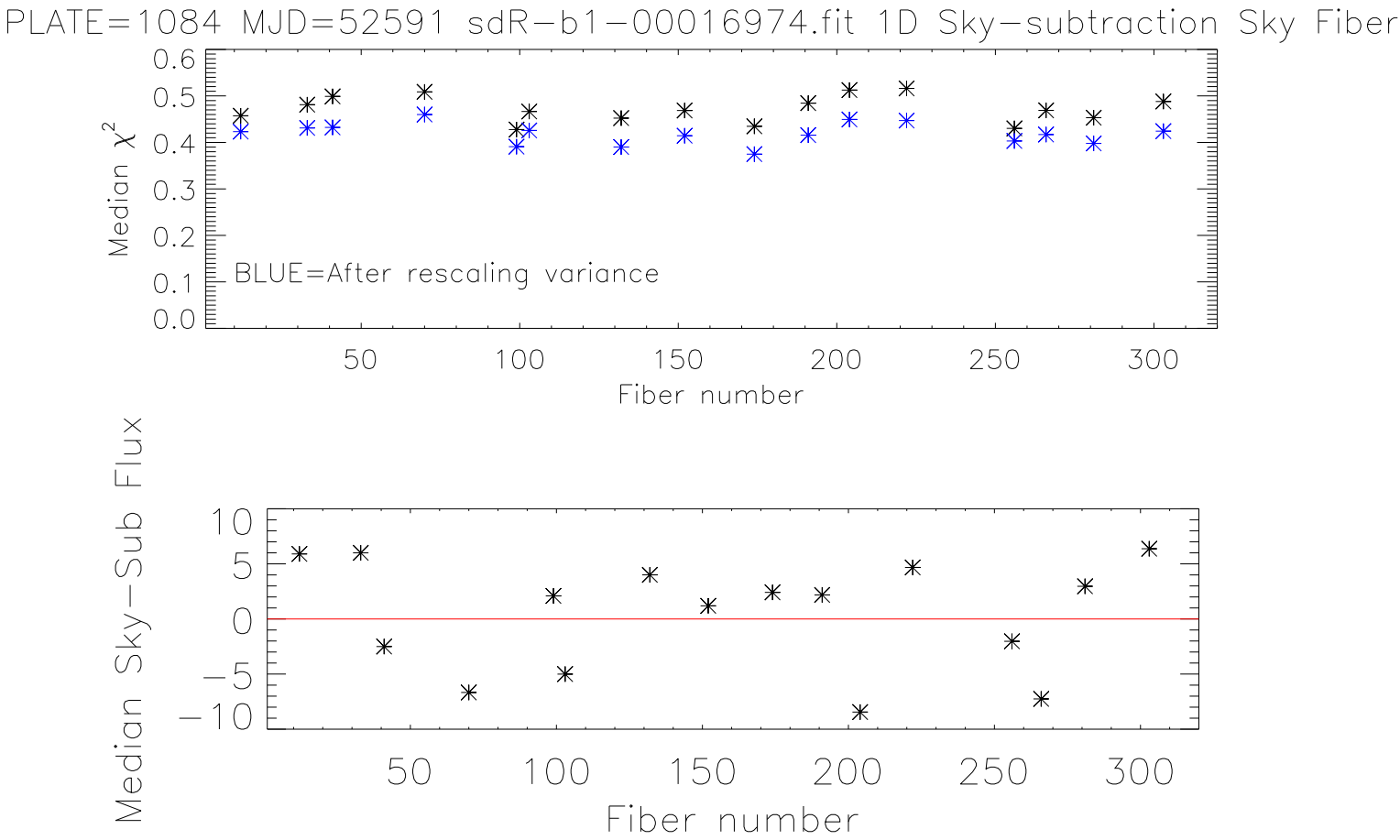

5895.9240
meas − arc
0.4
0.3
0.2
0.1
0.0
−0.1
0
100
200
300
400

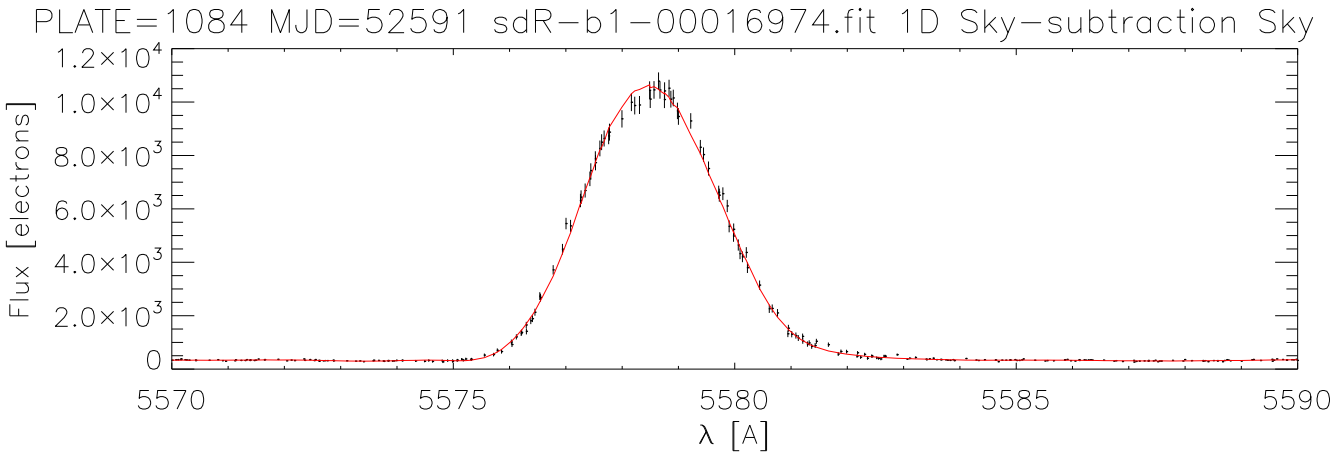

4046.5600
nfib1 15
nfib2 15
stdev 0.065
extra −0.02
4358.3300
nfib1 16
nfib2 16
stdev 0.037
extra −0.00
5460.9400
nfib1 16
nfib2 16
stdev 0.030
extra 0.04
5577.3390
nfib1 16
nfib2 16
stdev 0.012
extra 0.04
5889.9500
nfib1 16
nfib2 16
stdev 0.023
extra 0.10
5895.9240
nfib1 16
nfib2 16
stdev 0.041
extra 0.11
meas − pred, pix
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400

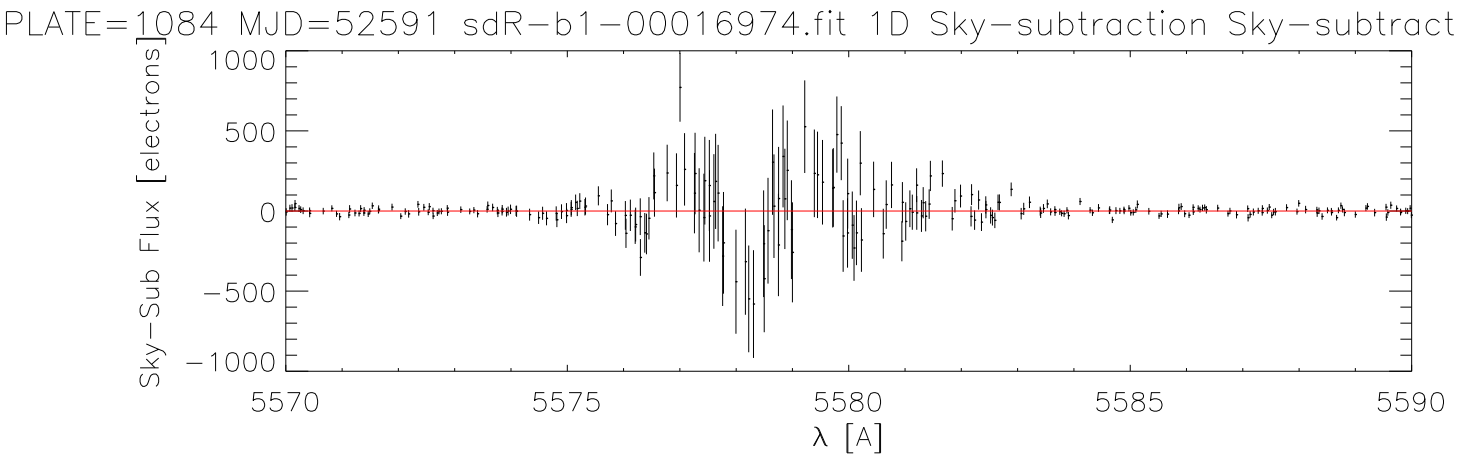

0.10
0.05
0.00
−0.05
−0.10
sky shift, pixels
3500
4000
4500
5000
5500
6000
6500

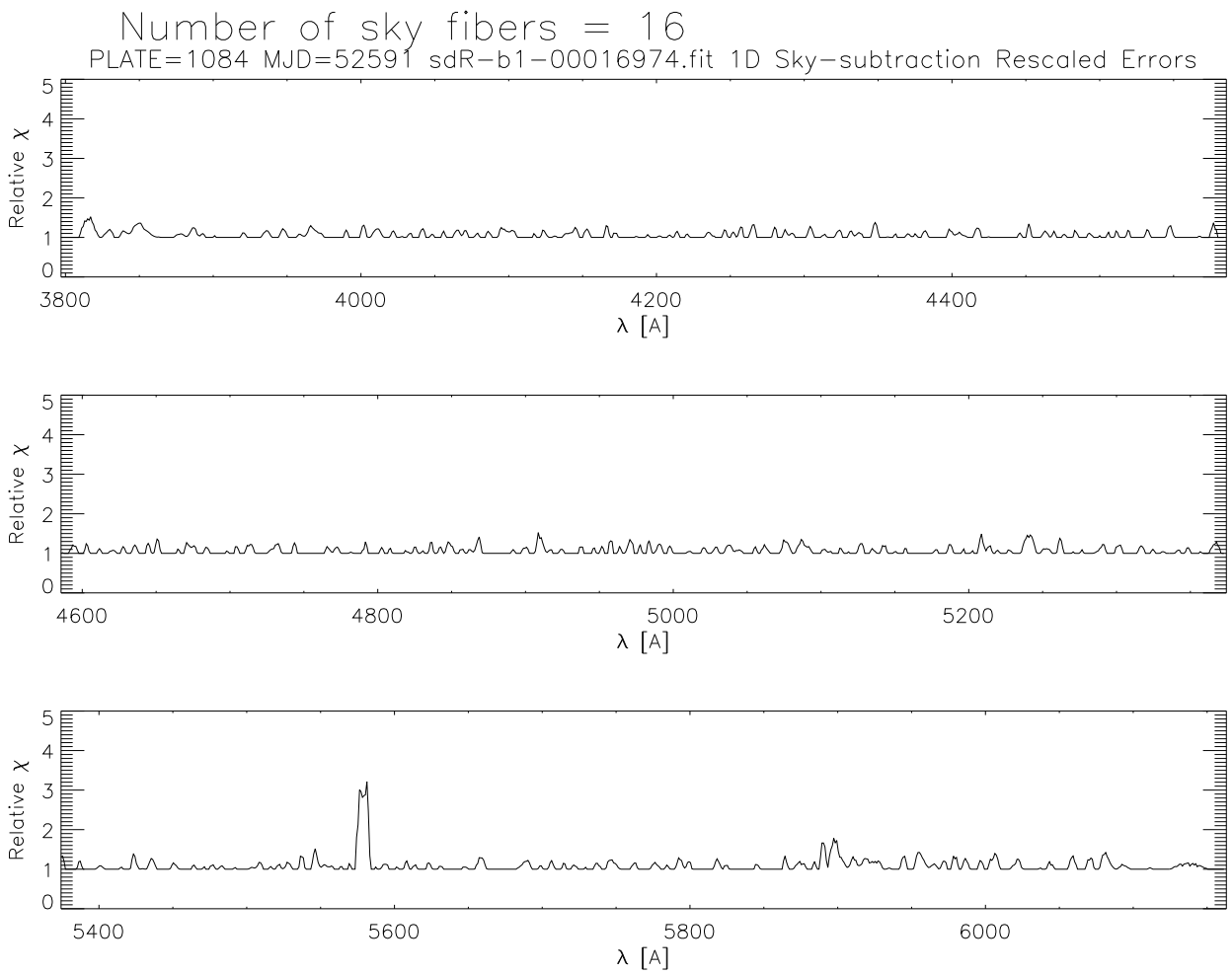
es= 0.0000

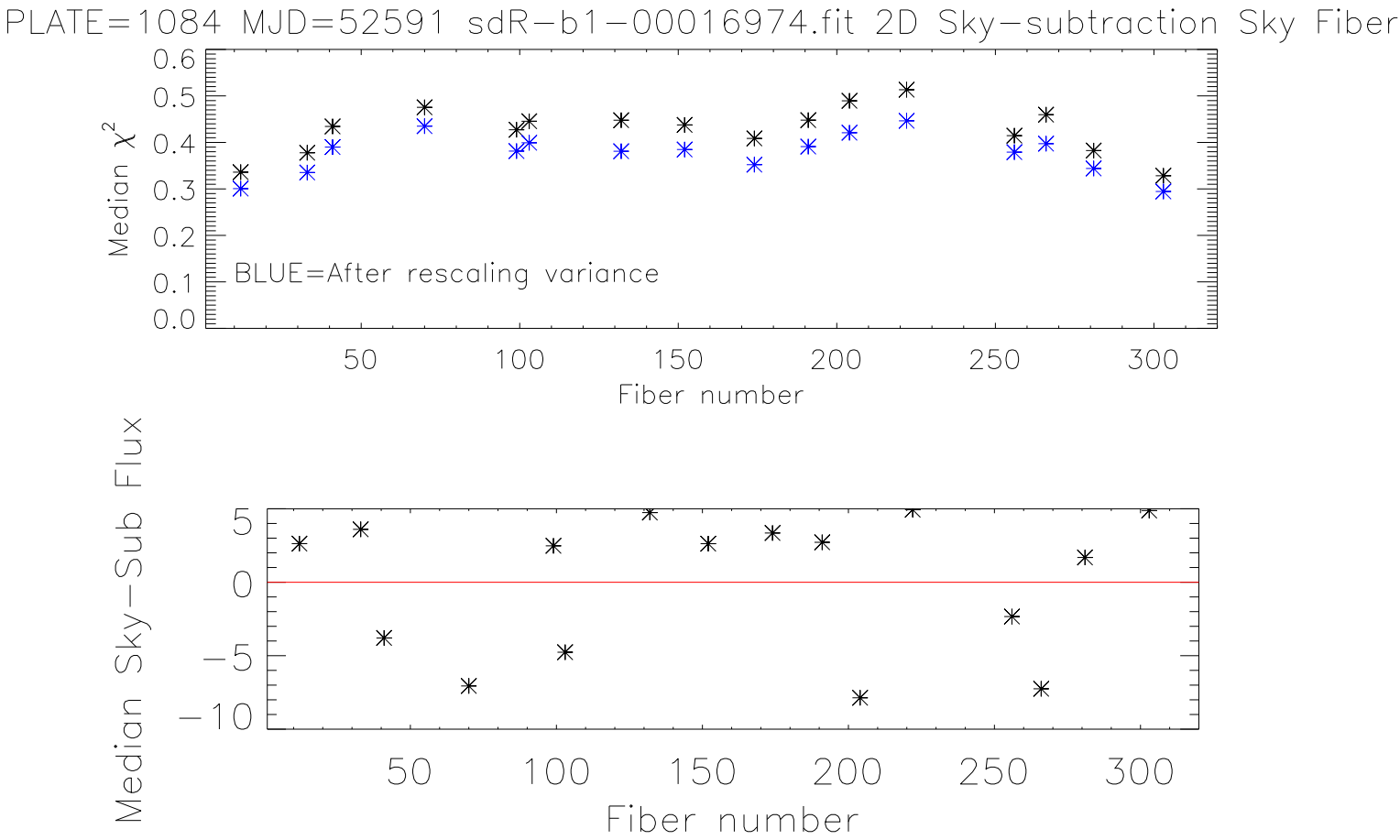

PLATE=1084 MJD=52591 Smooth superflat for sdR-b1-00016974.fit
1.5
1.0
0.5
0.0
1.02
1.01
1.00
0.99
0.98
4000
4500
5000
5500
6000
Wavelength (Å)

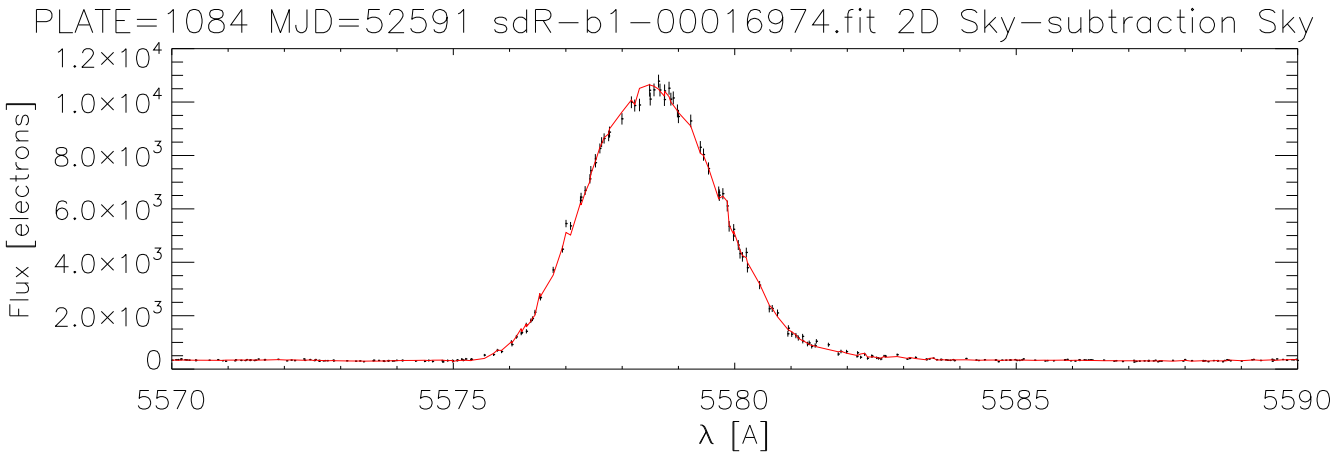

PLATE=1084 MJD=52591 sdR-b1-00016974.fit 1D Sky-subtraction Sky Fiber
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
0.6
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
10
5
0
−5
−10
50
100
150
200
250
300
Fiber number

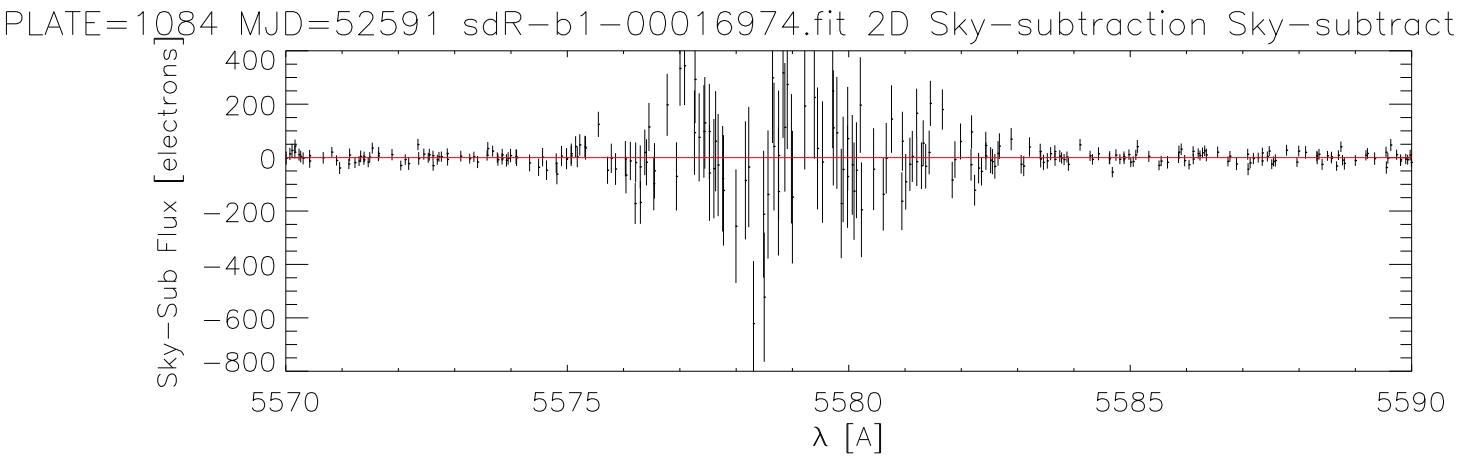

PLATE=1084 MJD=52591 sdR-b1-00016974.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
0
5570
5575
5580
5585
5590
λ [A]

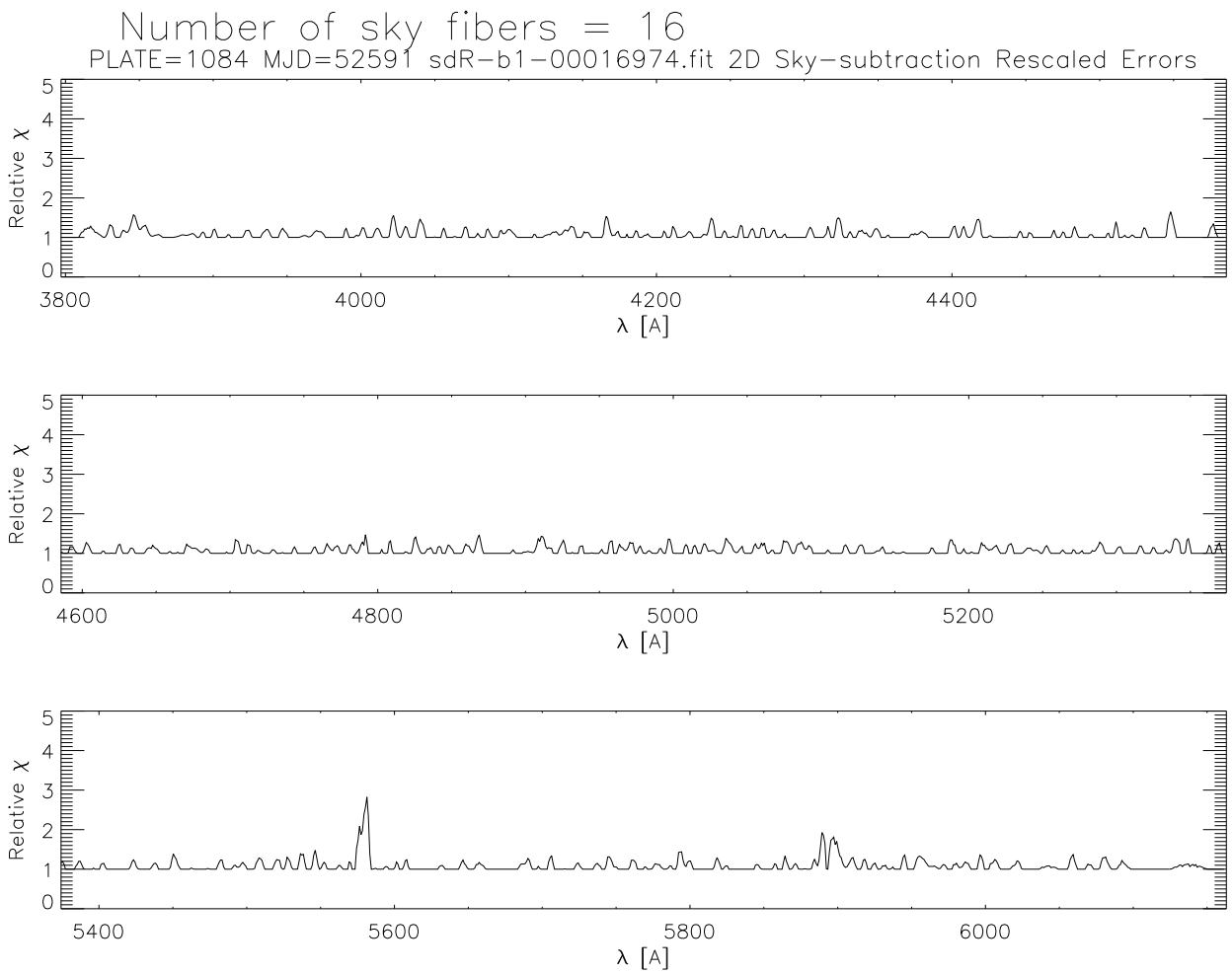

PLATE=1084 MJD=52591 sdR-b1-00016974.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1000
500
0
−500
−1000
5570
5575
5580
5585
5590
λ [A]

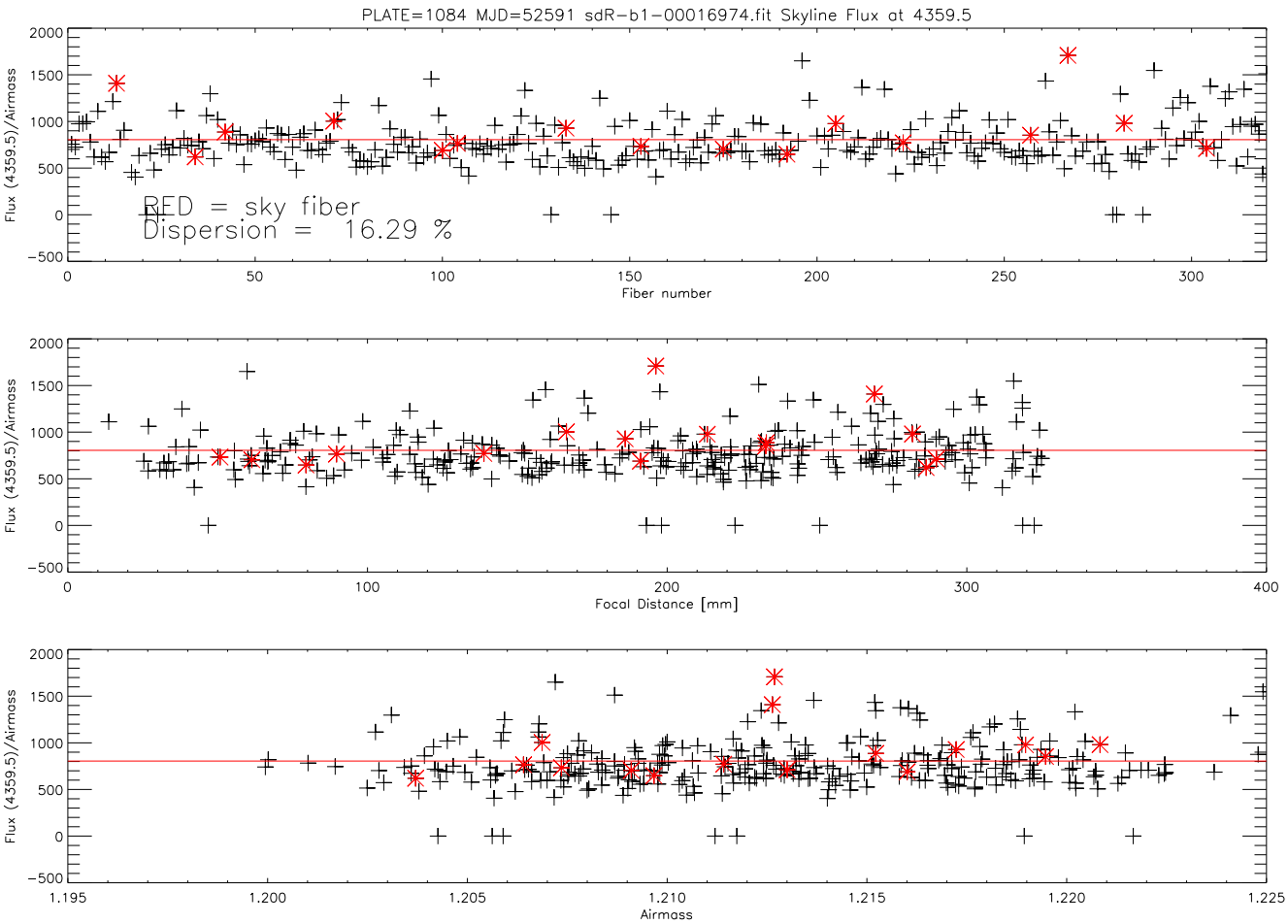

Number of sky fibers = 16
PLATE=1084 MJD=52591 sdR-b1-00016974.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

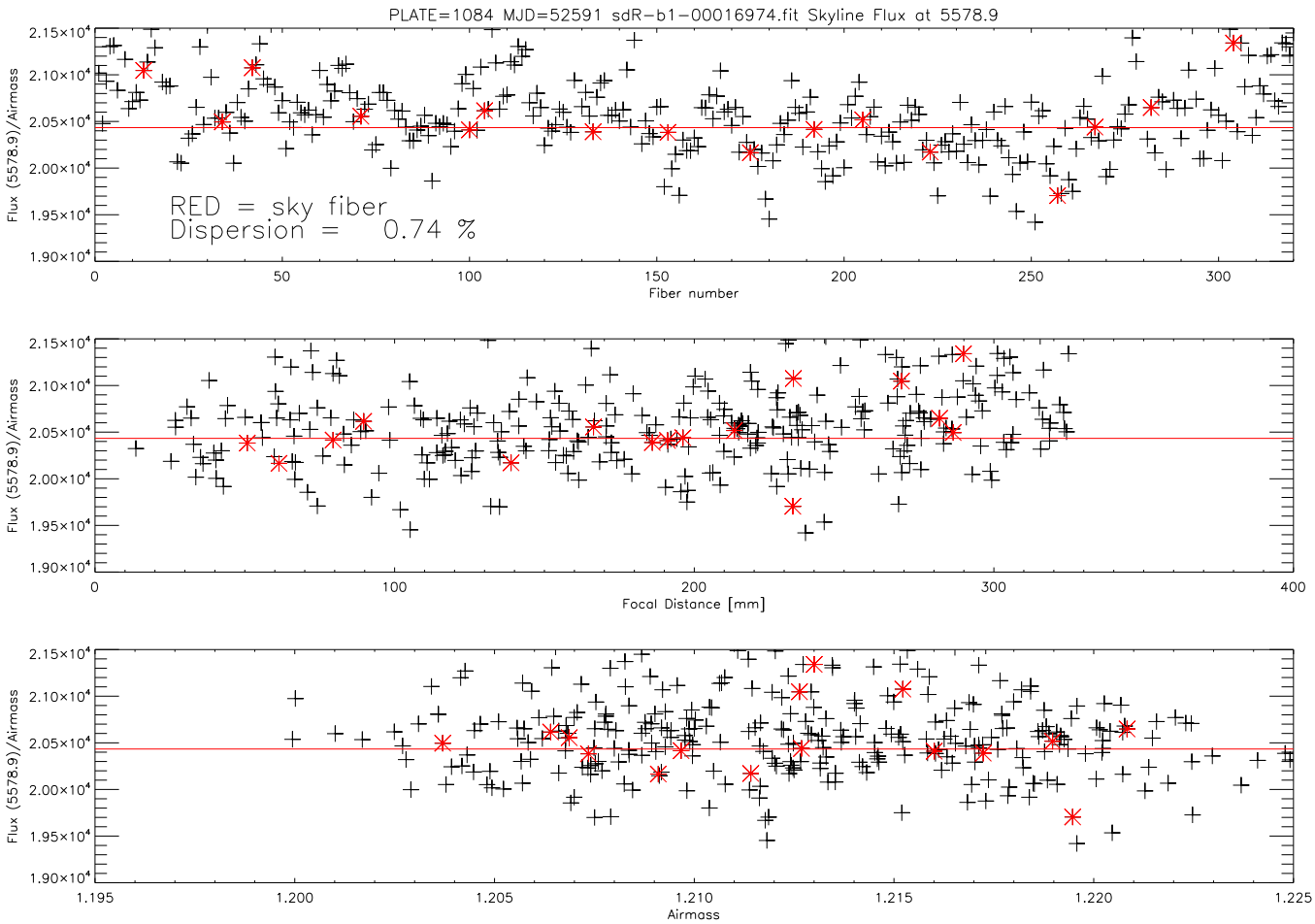

PLATE=1084 MJD=52591 sdR-b1-00016974.fit 2D Sky-subtraction Sky Fiber
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
0.6
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
5
0
-5
-10
50
100
150
200
250
300
Fiber number

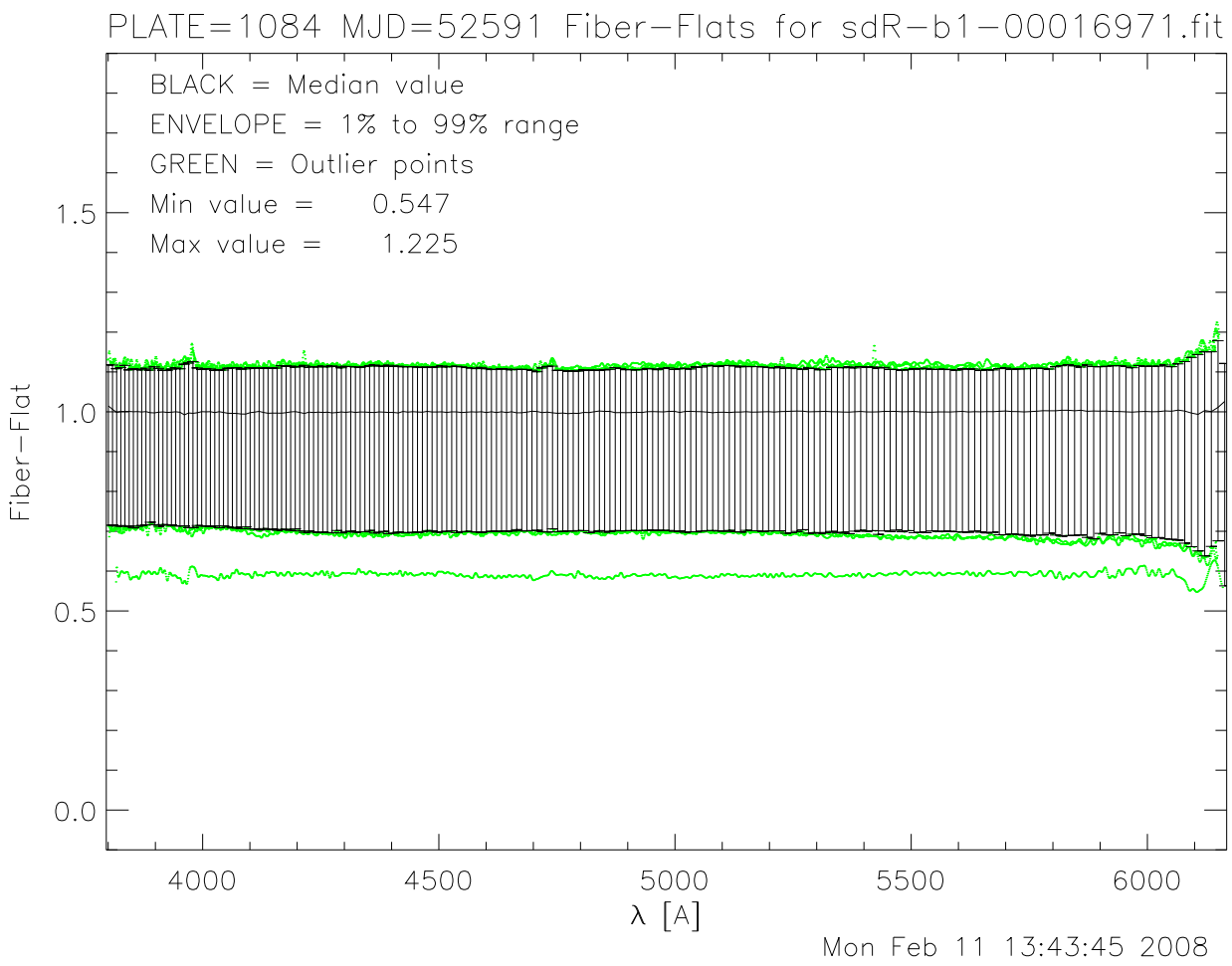

PLATE=1084 MJD=52591 sdR-b1-00016974.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
0
5570
5575
5580
5585
5590
λ [A]

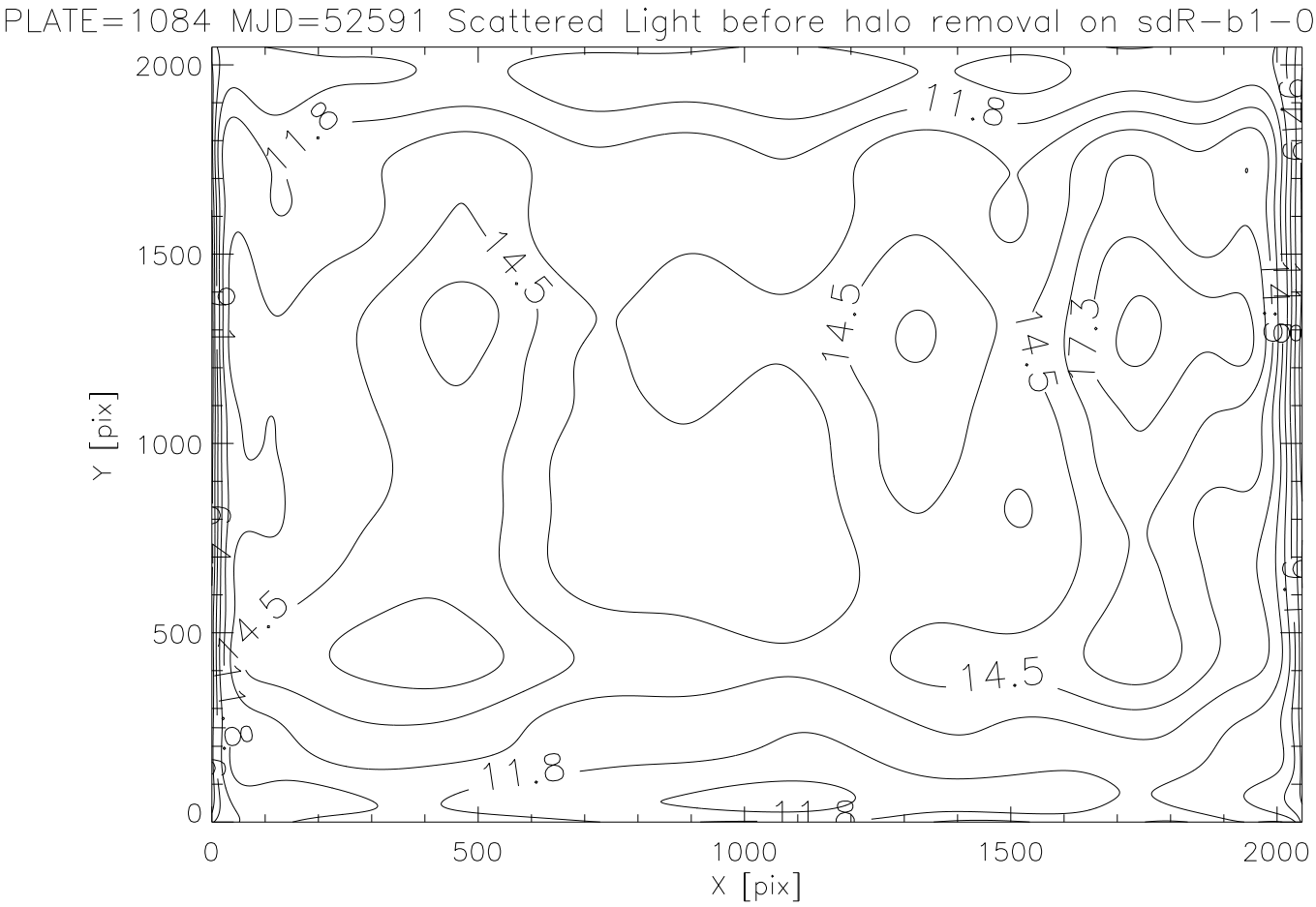

PLATE=1084 MJD=52591 sdR-b1-00016974.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
200
0
−200
−400
−600
−800
5570
5575
5580
5585
5590
λ [A]

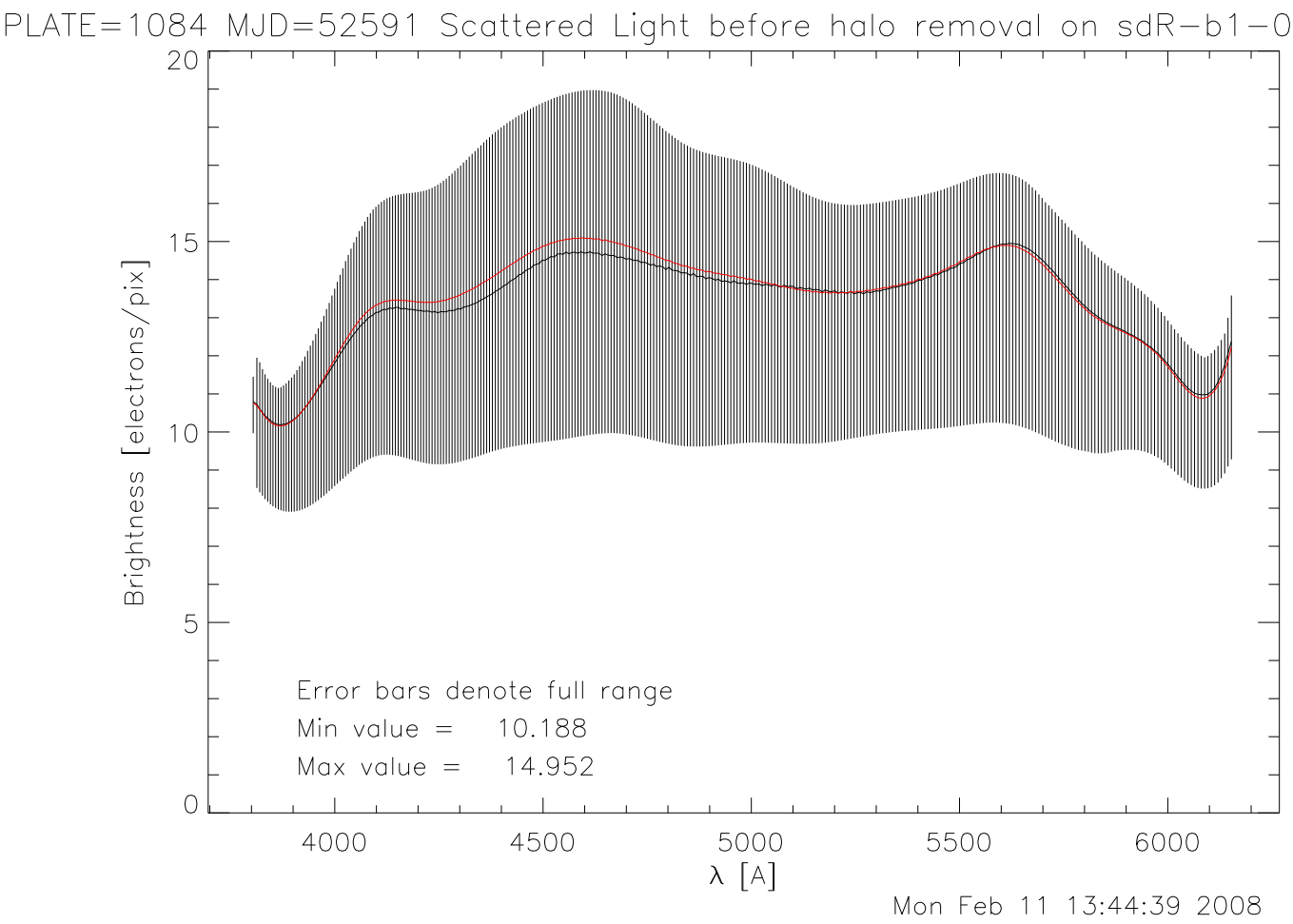

Number of sky fibers = 16
PLATE=1084 MJD=52591 sdR-b1-00016974.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

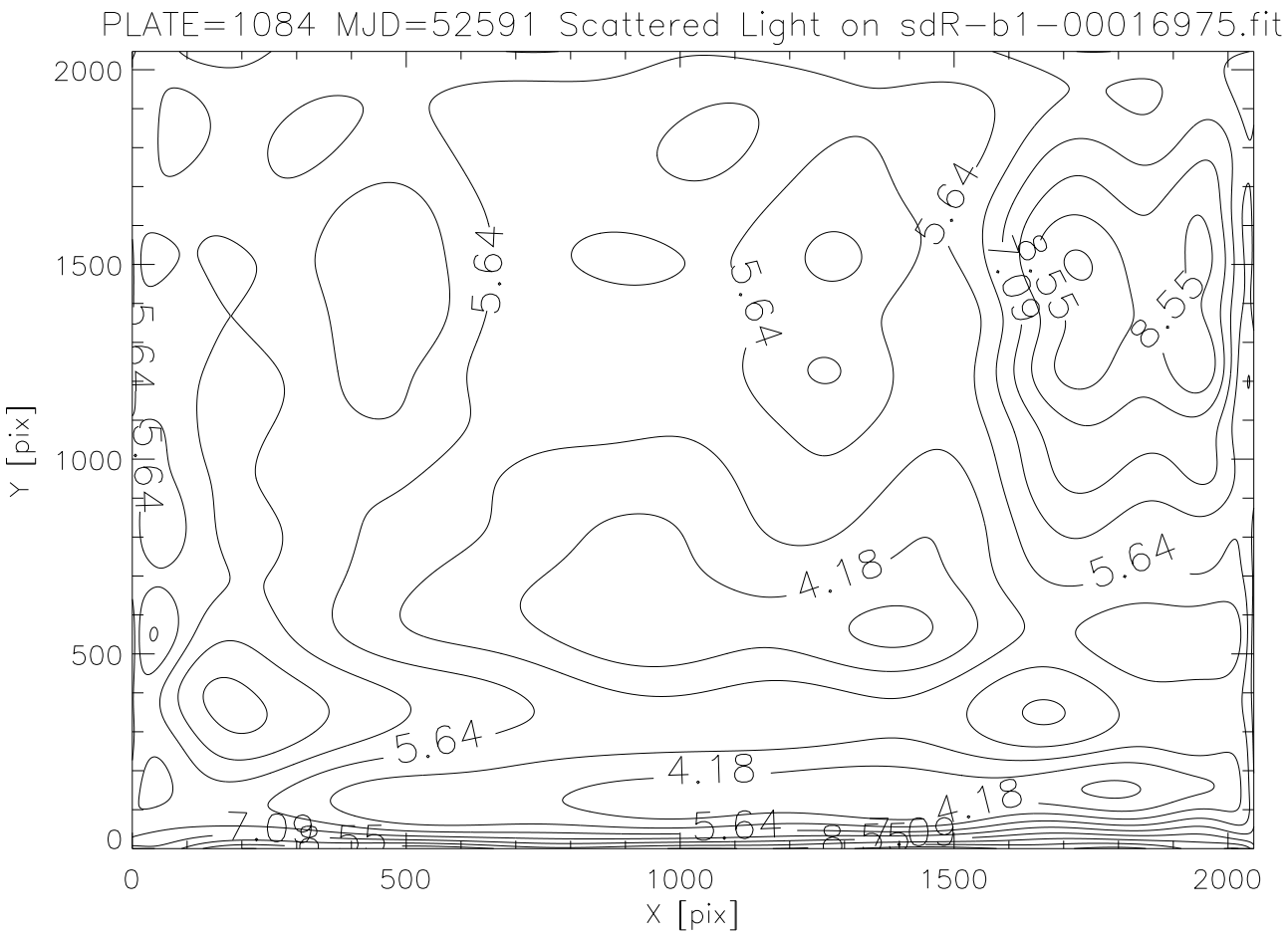

PLATE=1084 MJD=52591 sdR-b1-00016974.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
RED = sky fiber
Dispersion = 16.29 %
Fiber number
Focal Distance [mm]
Airmass

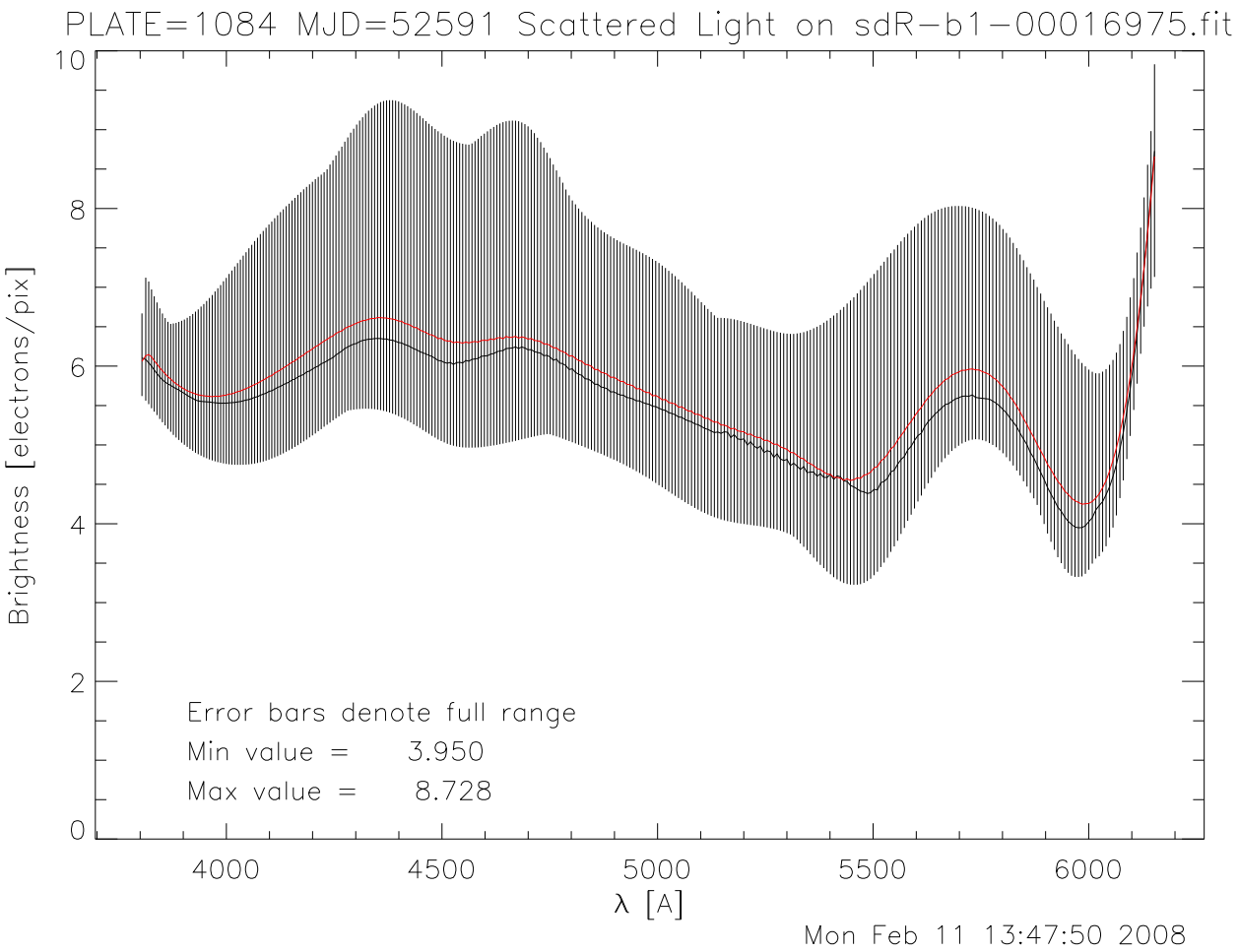

PLATE=1084 MJD=52591 sdR-b1-00016974.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 0.74 %
Fiber number
Focal Distance [mm]
Airmass

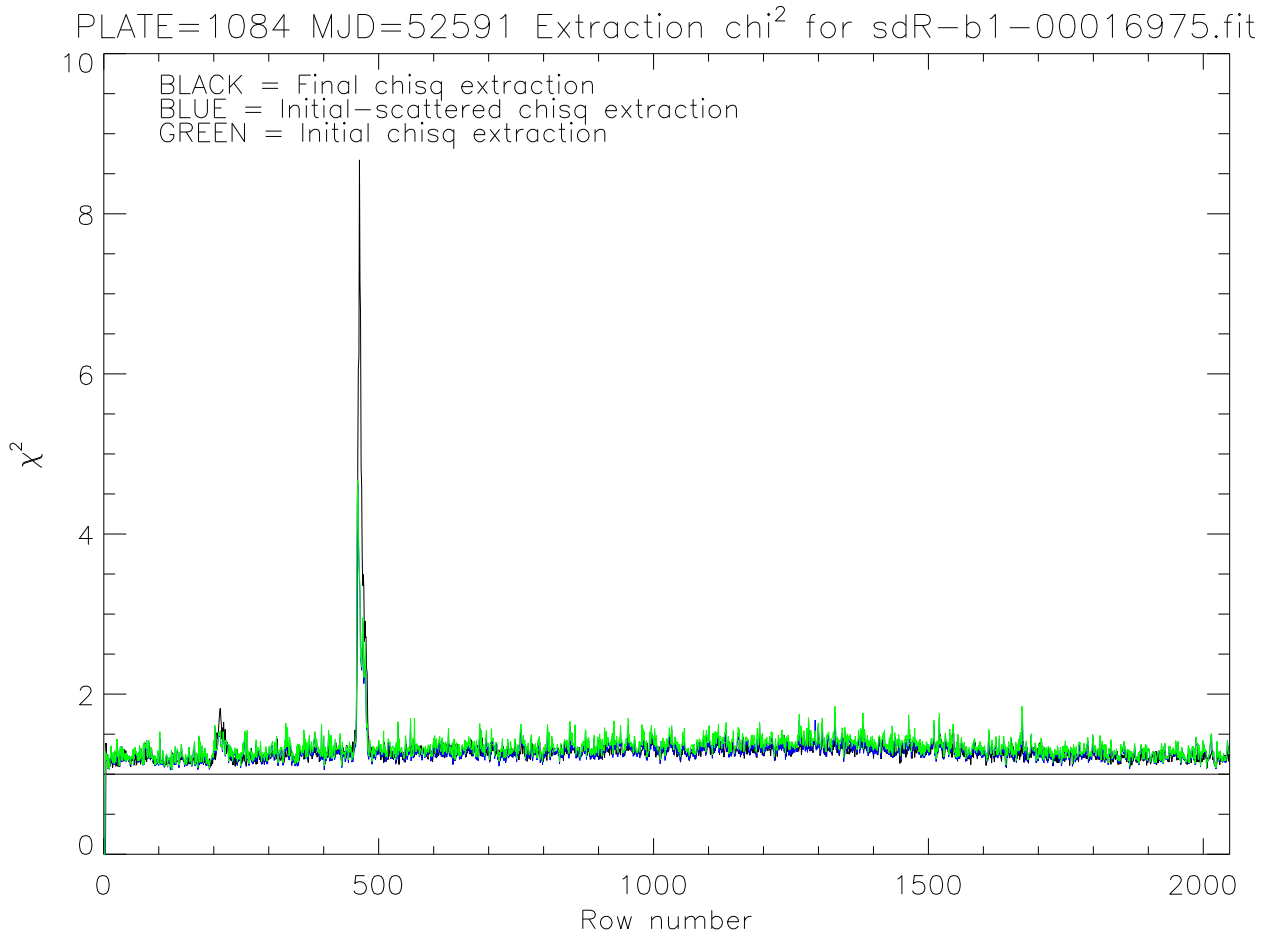

PLATE=1084 MJD=52591 Fiber-Flats for sdR-b1-00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.547
Max value = 1.225
Fiber-Flat
1.5
1.0
0.5
0.0
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:43:45 2008

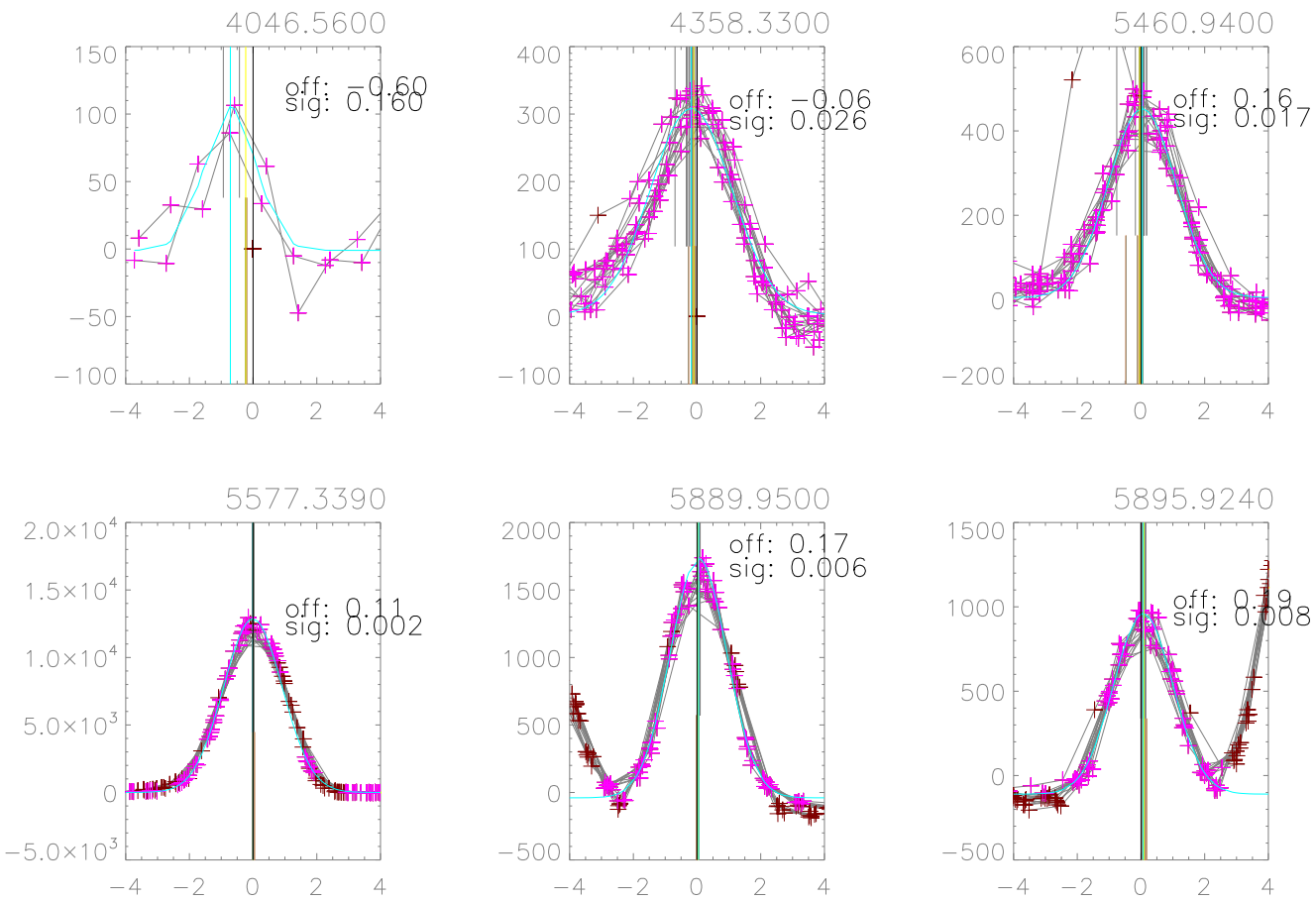

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR−b1−00016975.f
2000
1500
1000
500
0
Y [pix]
0
500
1000
1500
2000
X [pix]
11.8
14.5
17.3

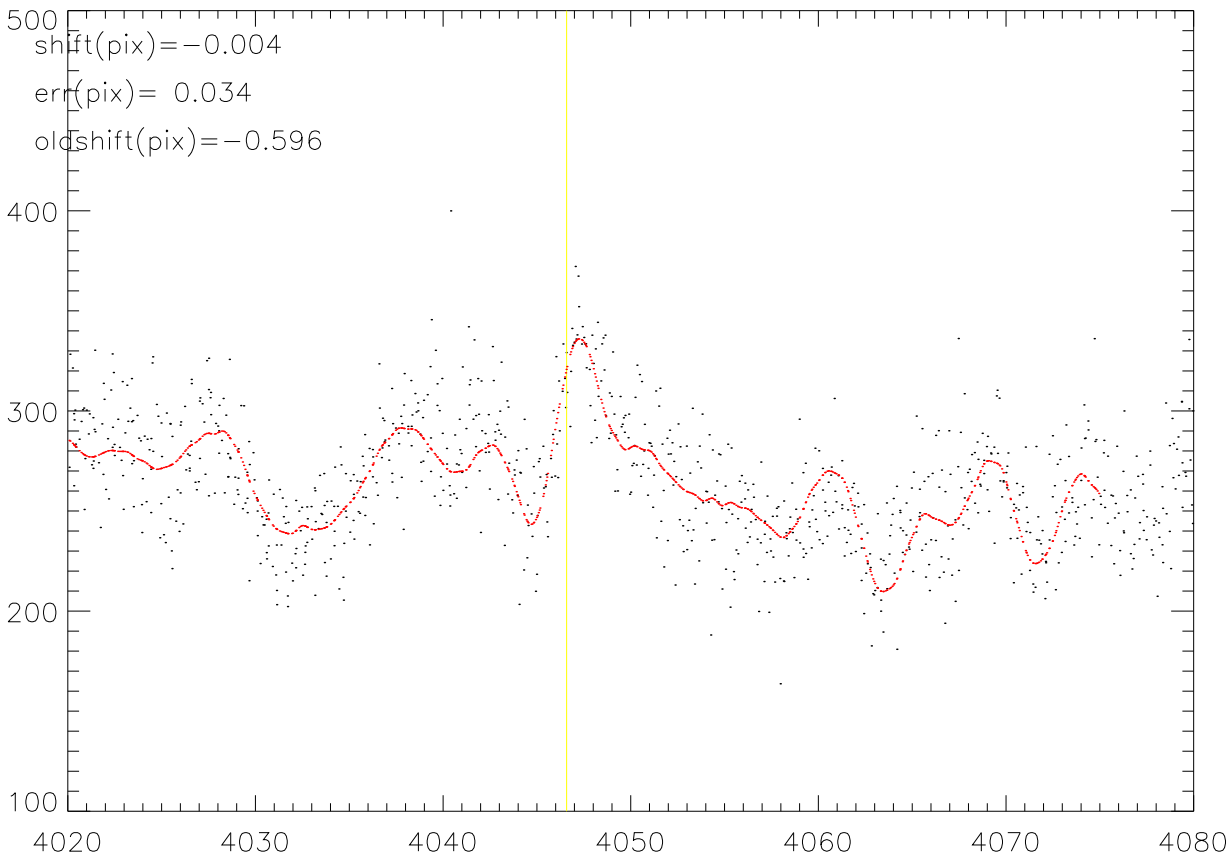

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b1-00016975.f
Brightness [electrons/pix]
20
15
10
5
0
Error bars denote full range
Min value = 10.188
Max value = 14.952
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:44:39 2008

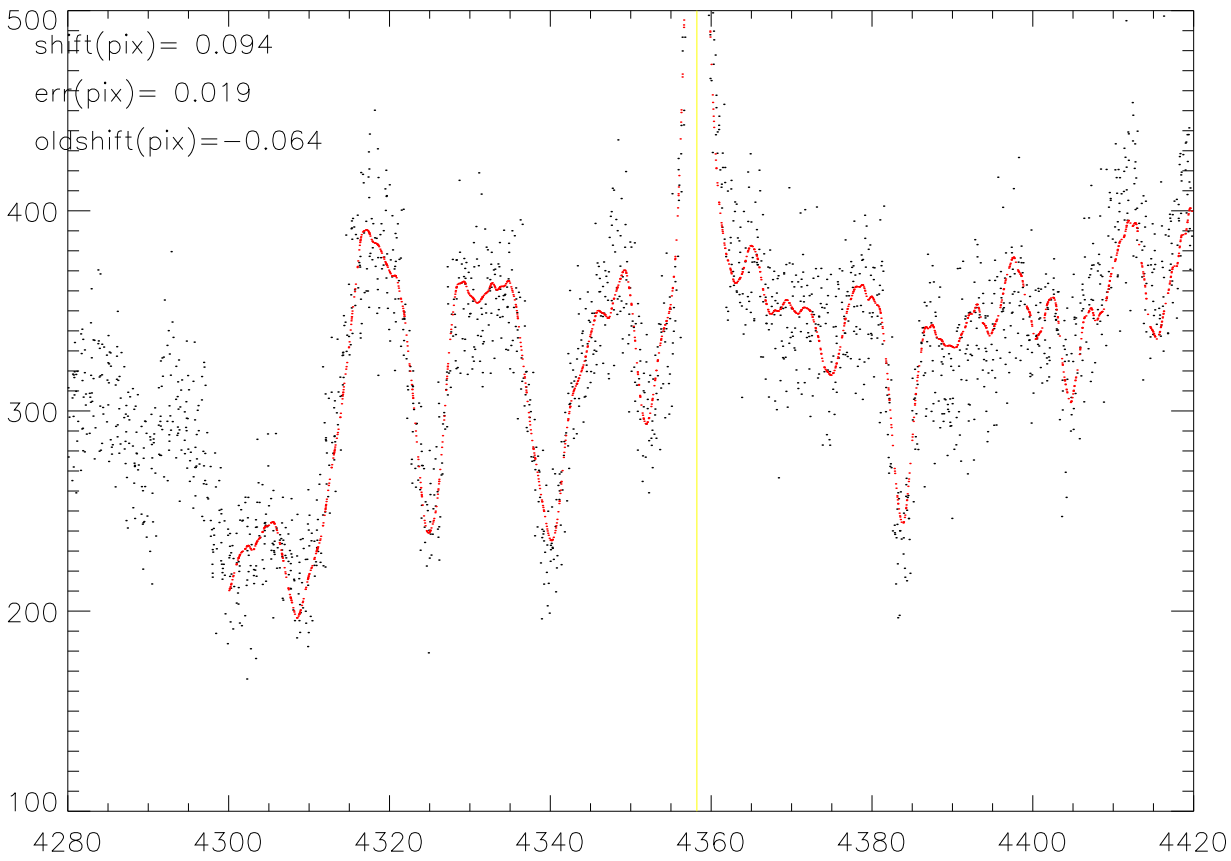

PLATE=1084 MJD=52591 Scattered Light on sdR-b1-00016975.fit
Y [pix]
X [pix]
0
500
1000
1500
2000
5.64
4.18
8.55
7.09

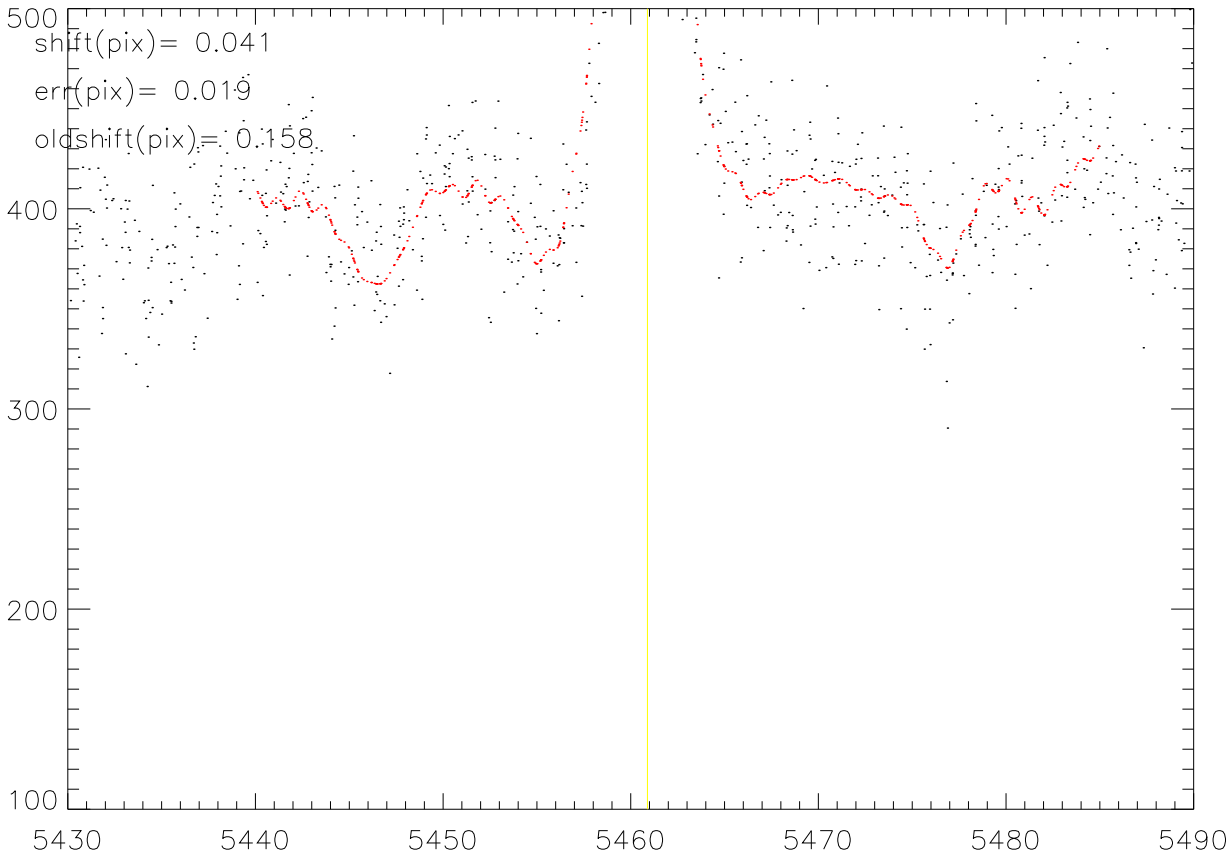

PLATE=1084 MJD=52591 Scattered Light on sdR-b1-00016975.fit
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 3.950
Max value = 8.728
Mon Feb 11 13:47:50 2008

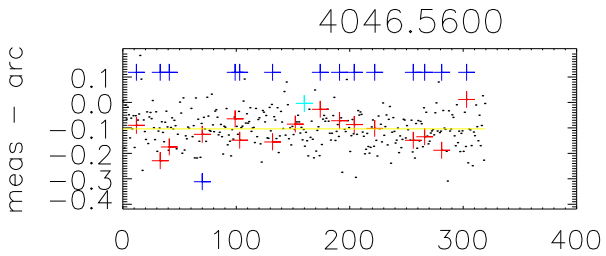

PLATE=1084 MJD=52591 Extraction chi^2 for sdR-b1-00016975.fit
BLACK = Final chisq extraction
BLUE = Initial-scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
Row number
0
2
4
6
8
10
0
500
1000
1500
2000

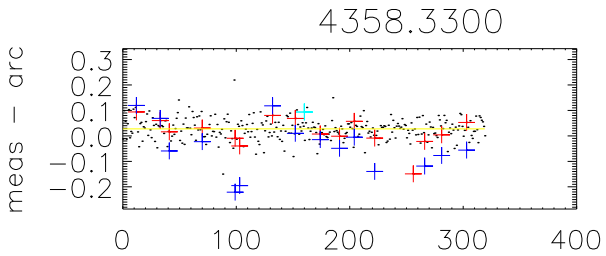

4046.5600
off: −0.60
sig: 0.160
4358.3300
off: −0.06
sig: 0.026
5460.9400
off: 0.16
sig: 0.017
5577.3390
off: 0.11
sig: 0.002
5889.9500
off: 0.17
sig: 0.006
5895.9240
off: 0.19
sig: 0.008

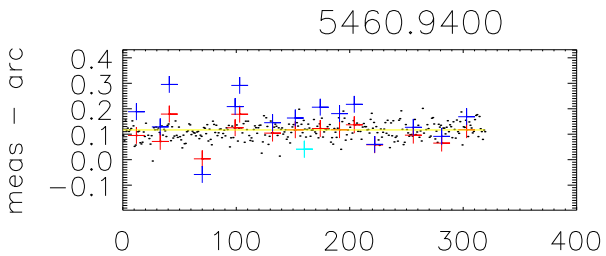

shift(pix)=−0.004
err(pix)= 0.034
oldshift(pix)=−0.596
500
400
300
200
100
4020
4030
4040
4050
4060
4070
4080

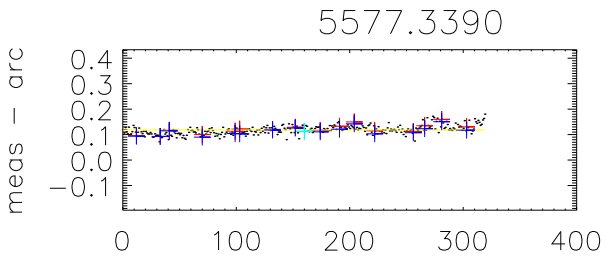

shift(pix)= 0.094
err(pix)= 0.019
oldshift(pix)=-0.064
500
400
300
200
100
4280
4300
4320
4340
4360
4380
4400
4420

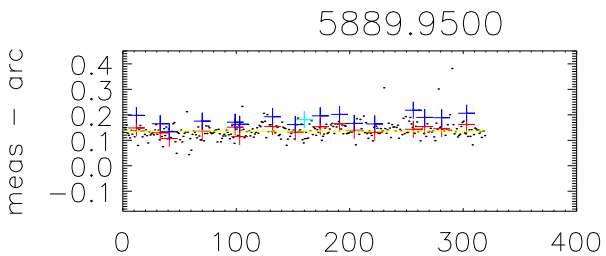

shift(pix)= 0.041
err(pix)= 0.019
oldshift(pix)= 0.158
500
400
300
200
100
5430
5440
5450
5460
5470
5480
5490

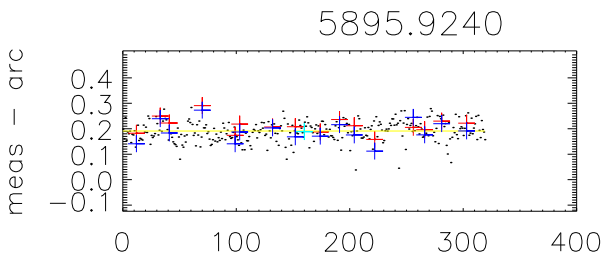

4046.5600
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

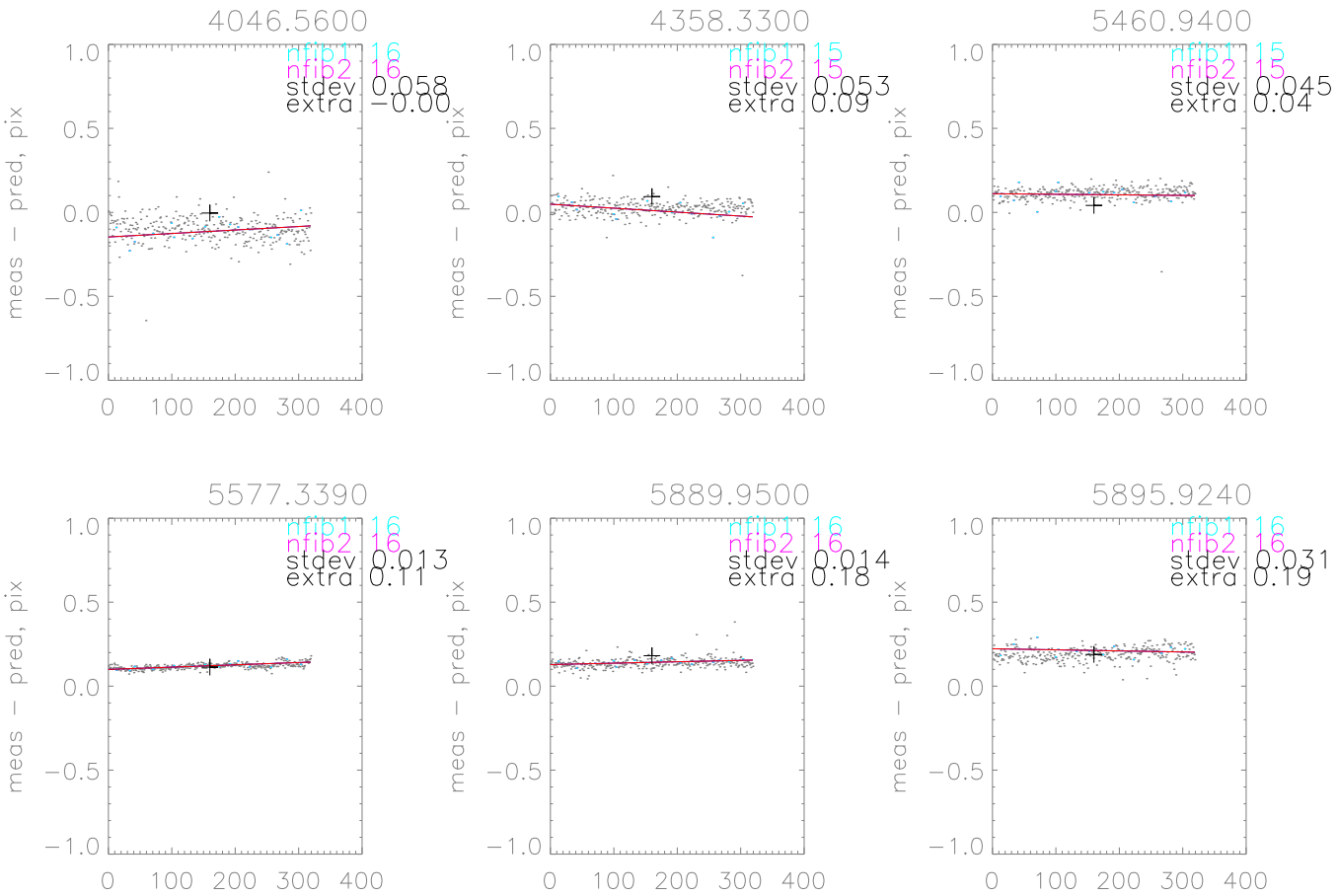

4358.3300
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

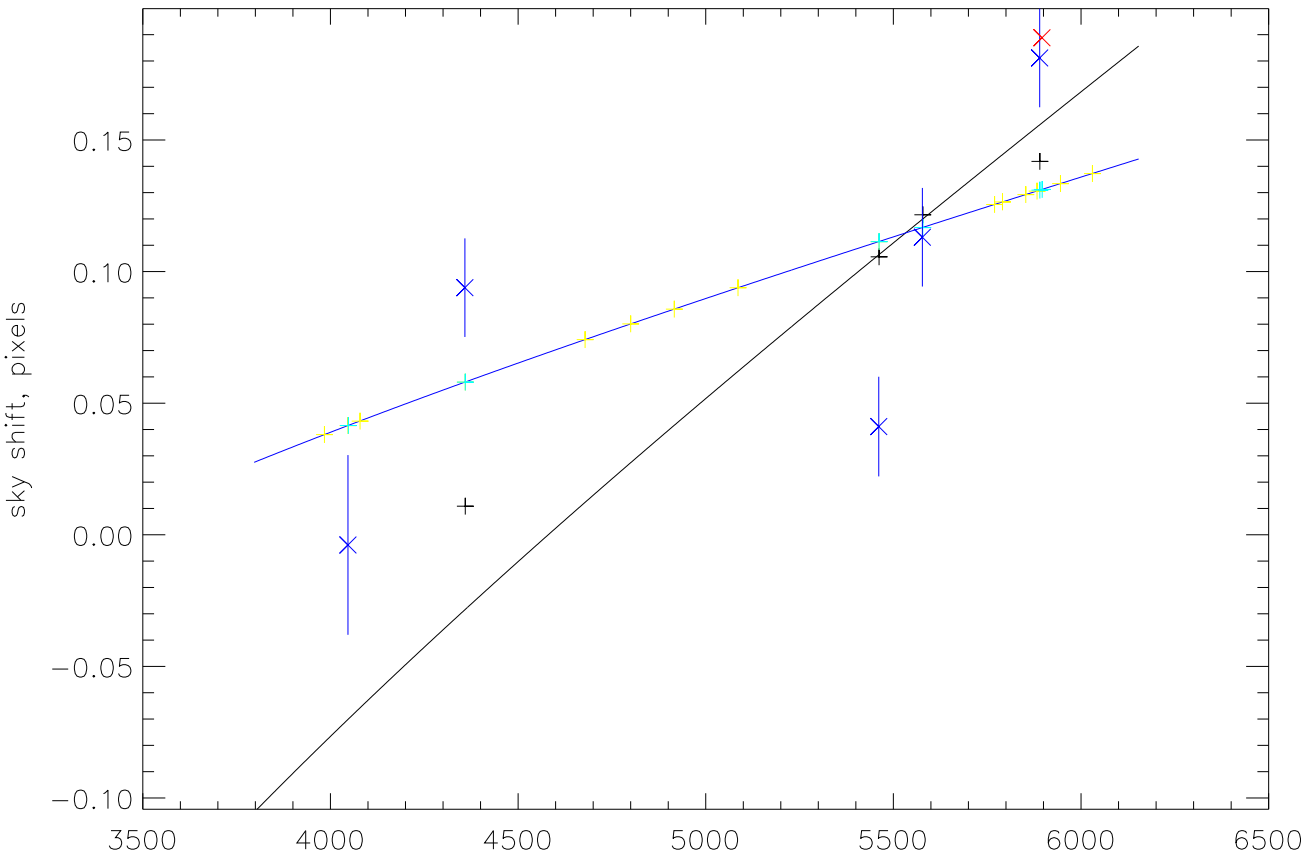

5460.9400
meas − arc
0.4
0.3
0.2
0.1
0.0
−0.1
0
100
200
300
400


5577.3390
meas − arc
0.4
0.3
0.2
0.1
0.0
−0.1
0
100
200
300
400

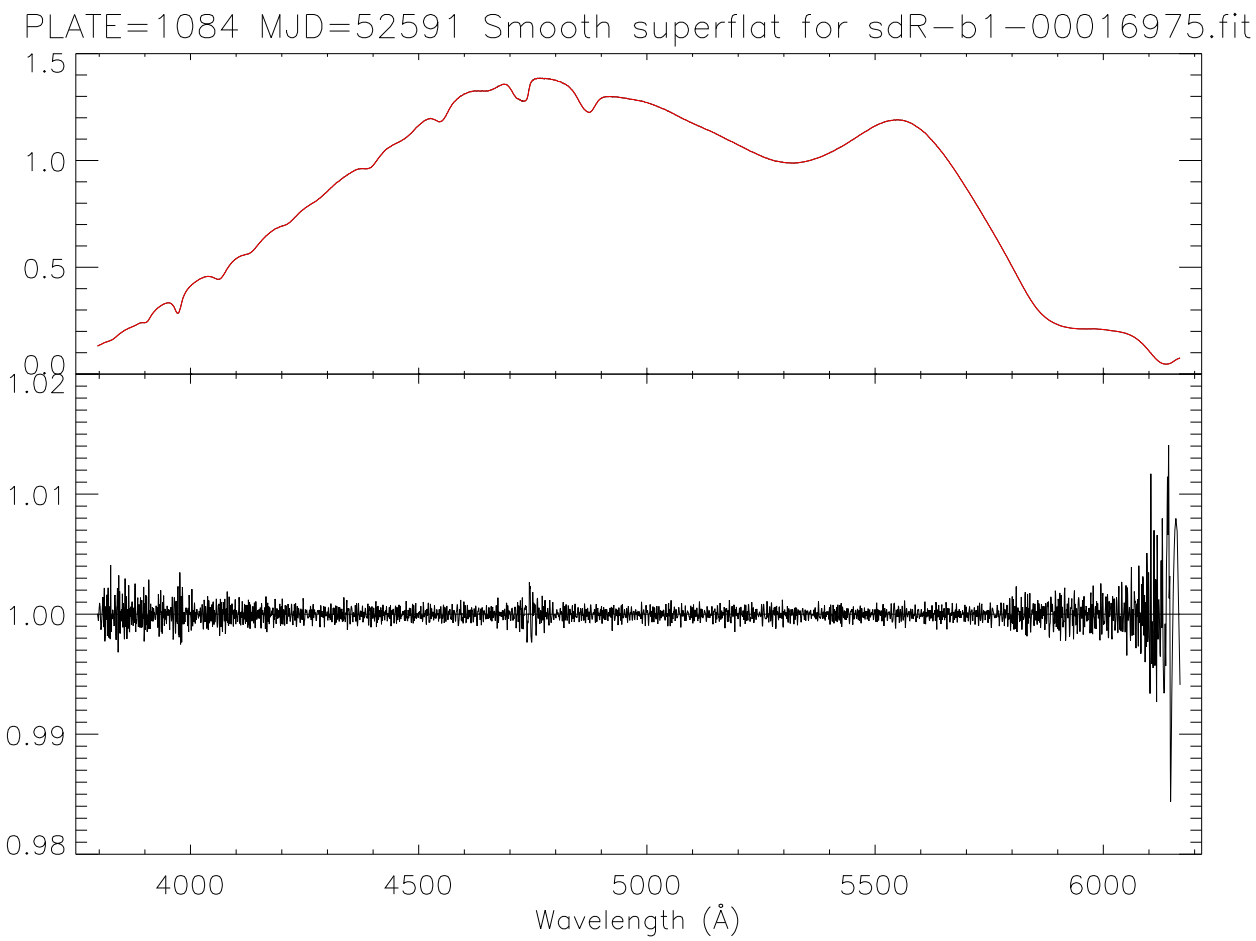

5889.9500
meas − arc
0.4
0.3
0.2
0.1
0.0
−0.1
0
100
200
300
400

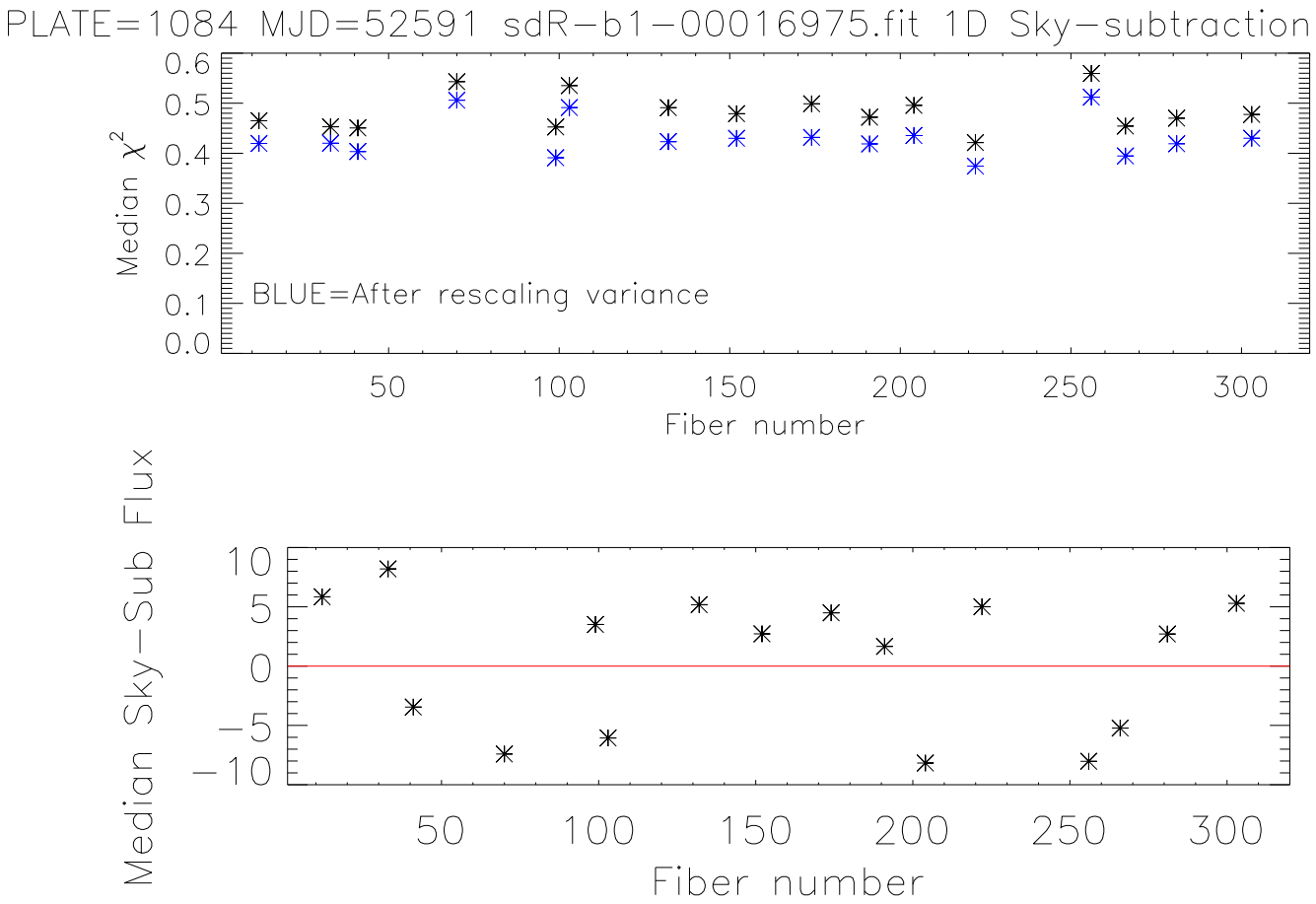

5895.9240
meas − arc
0.4
0.3
0.2
0.1
0.0
−0.1
0
100
200
300
400

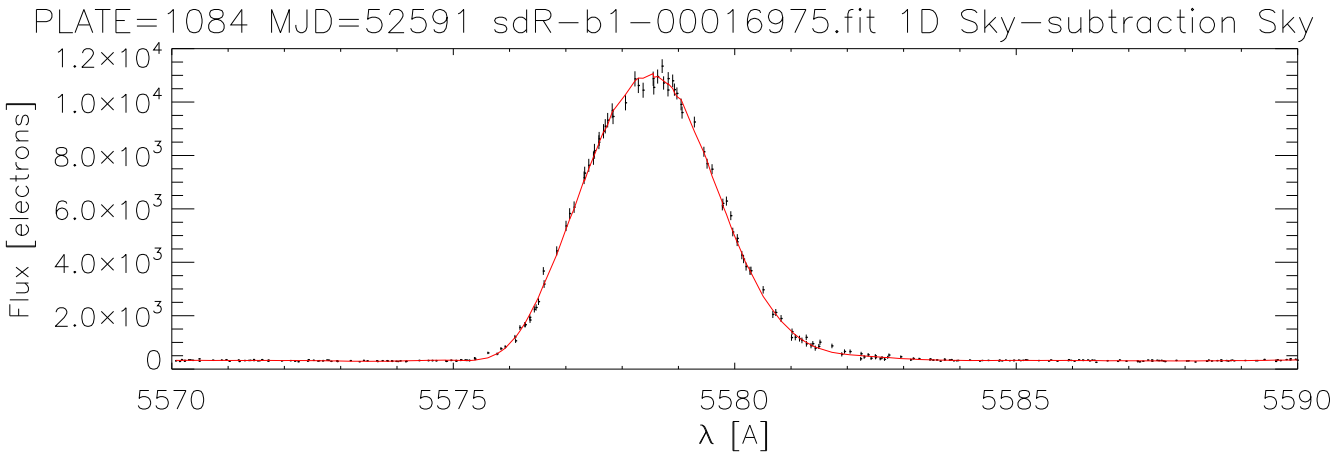

4046.5600
nfib1 16
nfib2 16
stdev 0.058
extra −0.00
4358.3300
nfib1 15
nfib2 15
stdev 0.053
extra 0.09
5460.9400
nfib1 15
nfib2 15
stdev 0.045
extra 0.04
5577.3390
nfib1 16
nfib2 16
stdev 0.013
extra 0.11
5889.9500
nfib1 16
nfib2 16
stdev 0.014
extra 0.18
5895.9240
nfib1 16
nfib2 16
stdev 0.031
extra 0.19
meas − pred, pix
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400

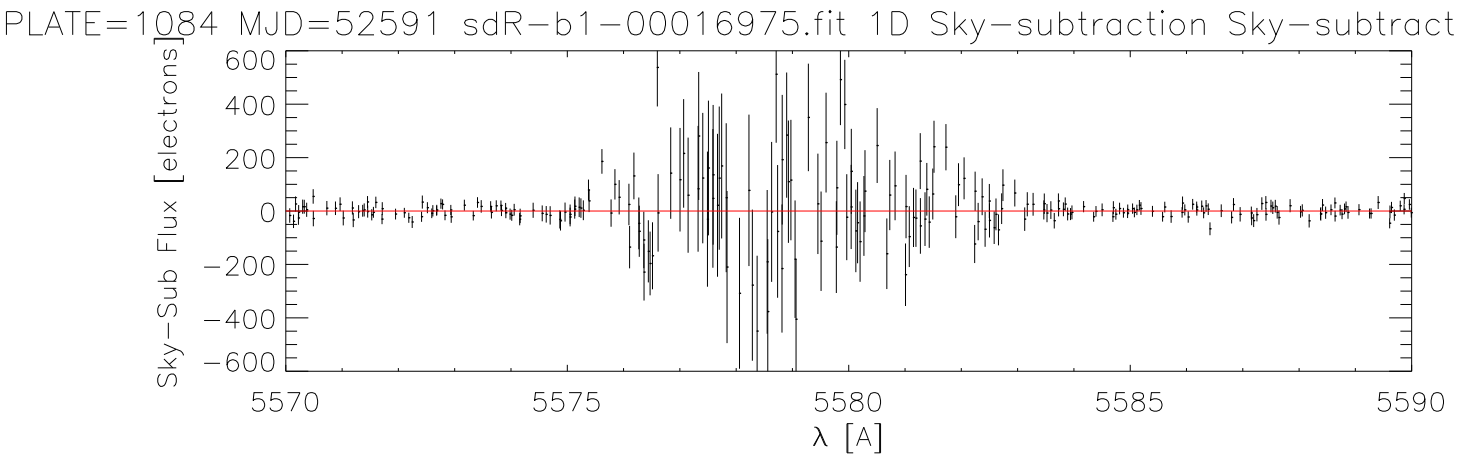

sky shift, pixels
0.15
0.10
0.05
0.00
−0.05
−0.10
3500
4000
4500
5000
5500
6000
6500

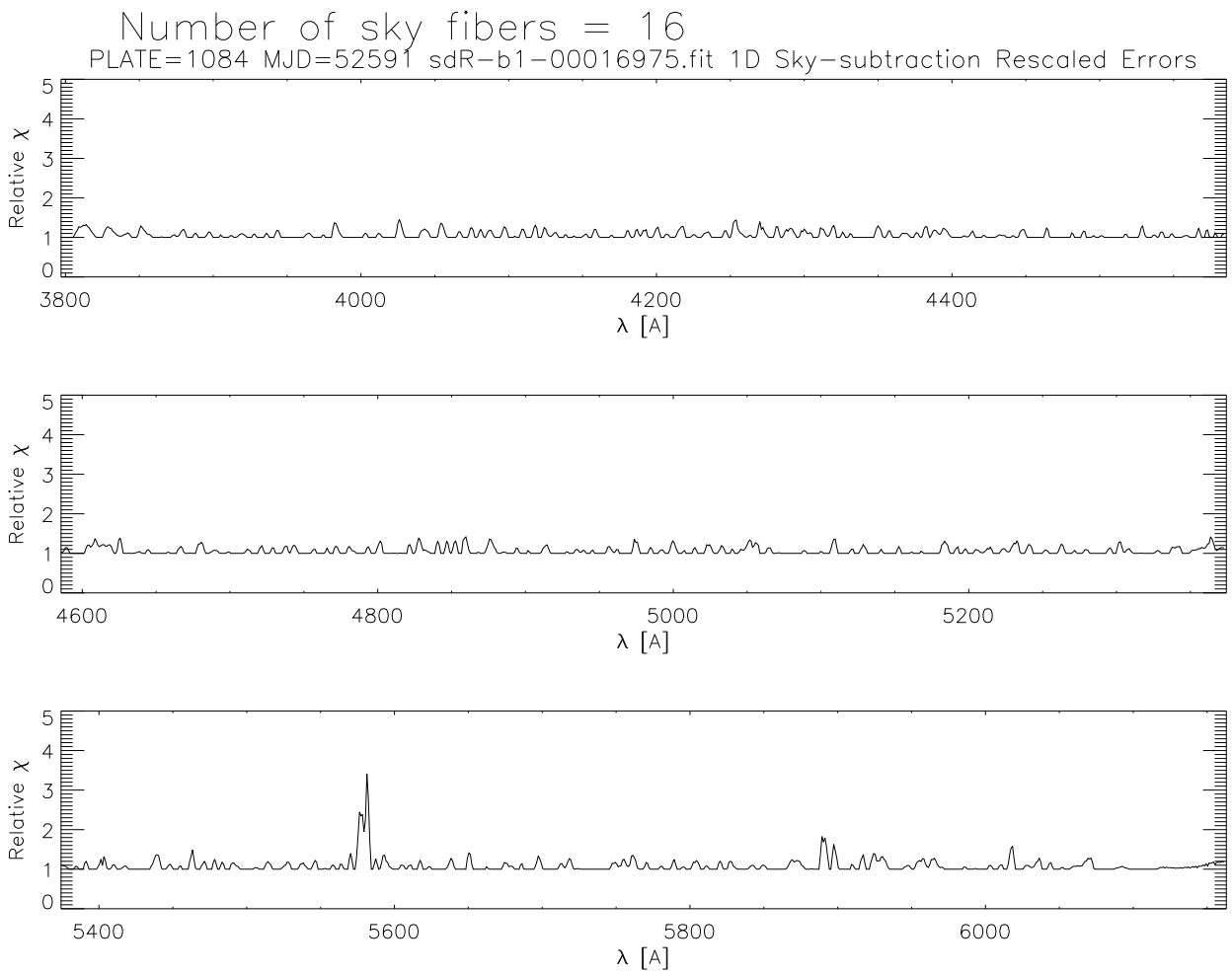
es= 0.0000

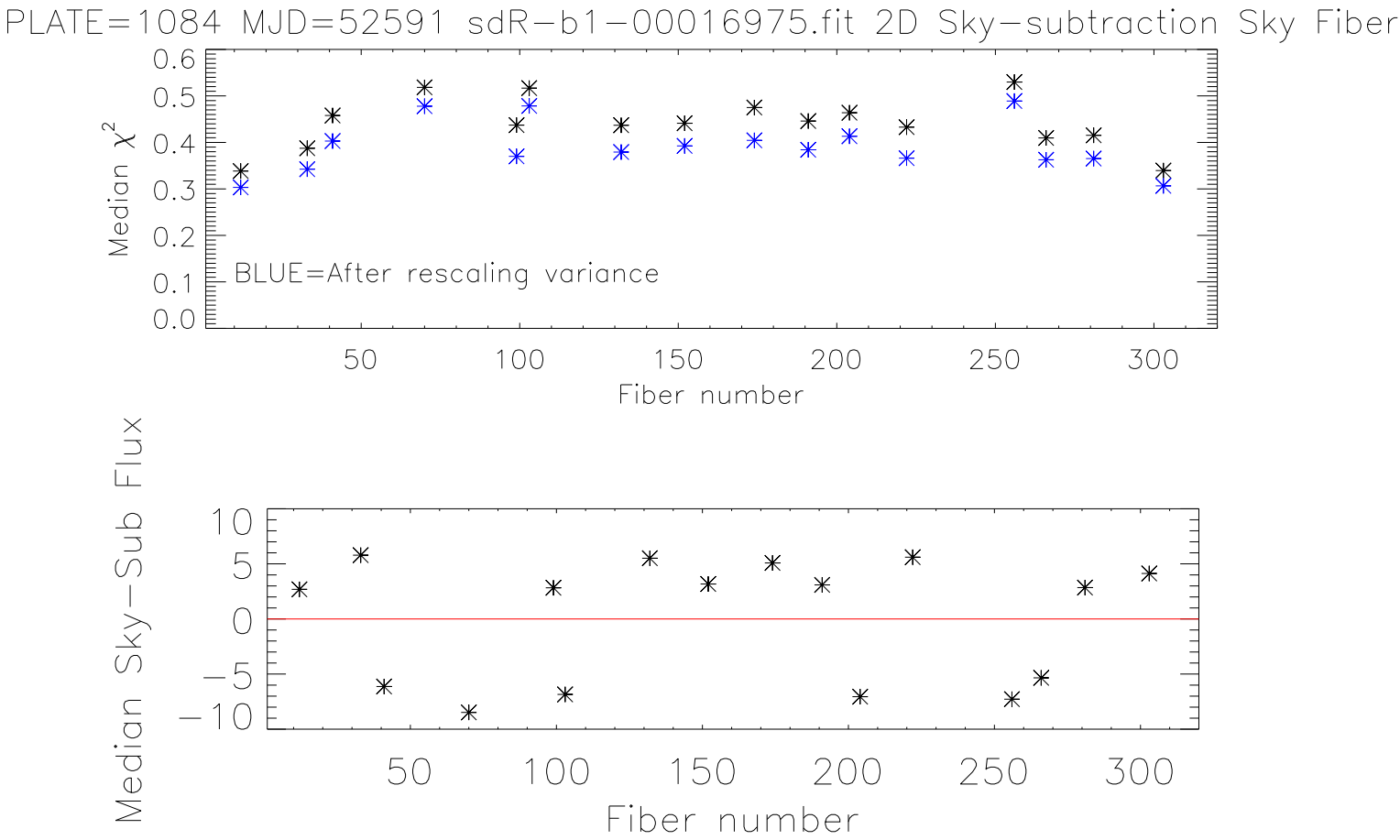

PLATE=1084 MJD=52591 Smooth superflat for sdR-b1-00016975.fit
1.5
1.0
0.5
0.0
1.02
1.01
1.00
0.99
0.98
4000
4500
5000
5500
6000
Wavelength (Å)

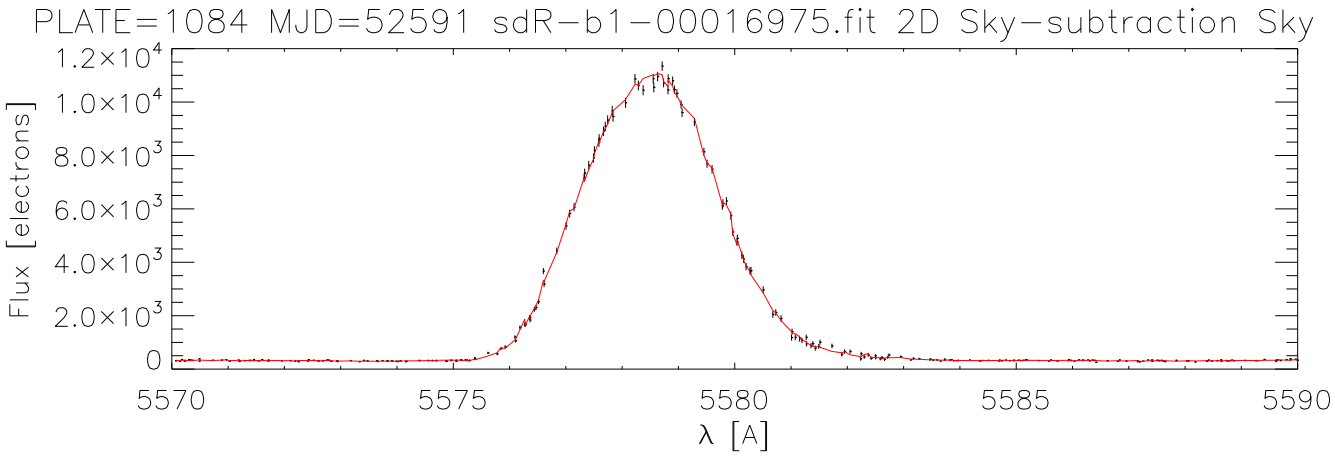

PLATE=1084 MJD=52591 sdR-b1-00016975.fit 1D Sky-subtraction Sky Fiber
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
0.6
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
10
5
0
−5
−10
50
100
150
200
250
300
Fiber number

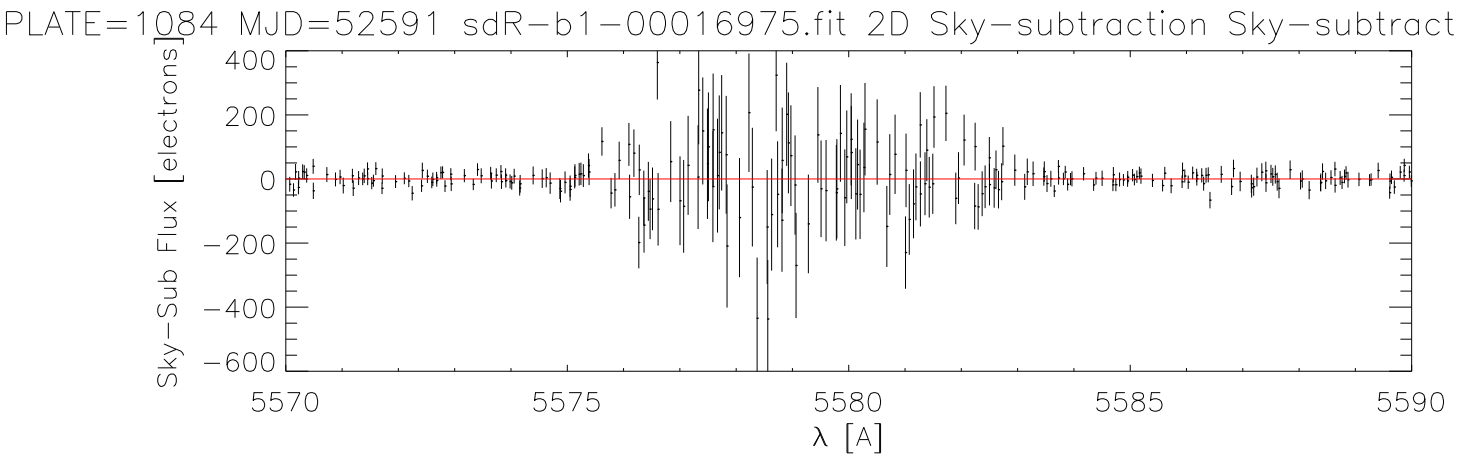

PLATE=1084 MJD=52591 sdR-b1-00016975.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
0
5570
5575
5580
5585
5590
λ [A]

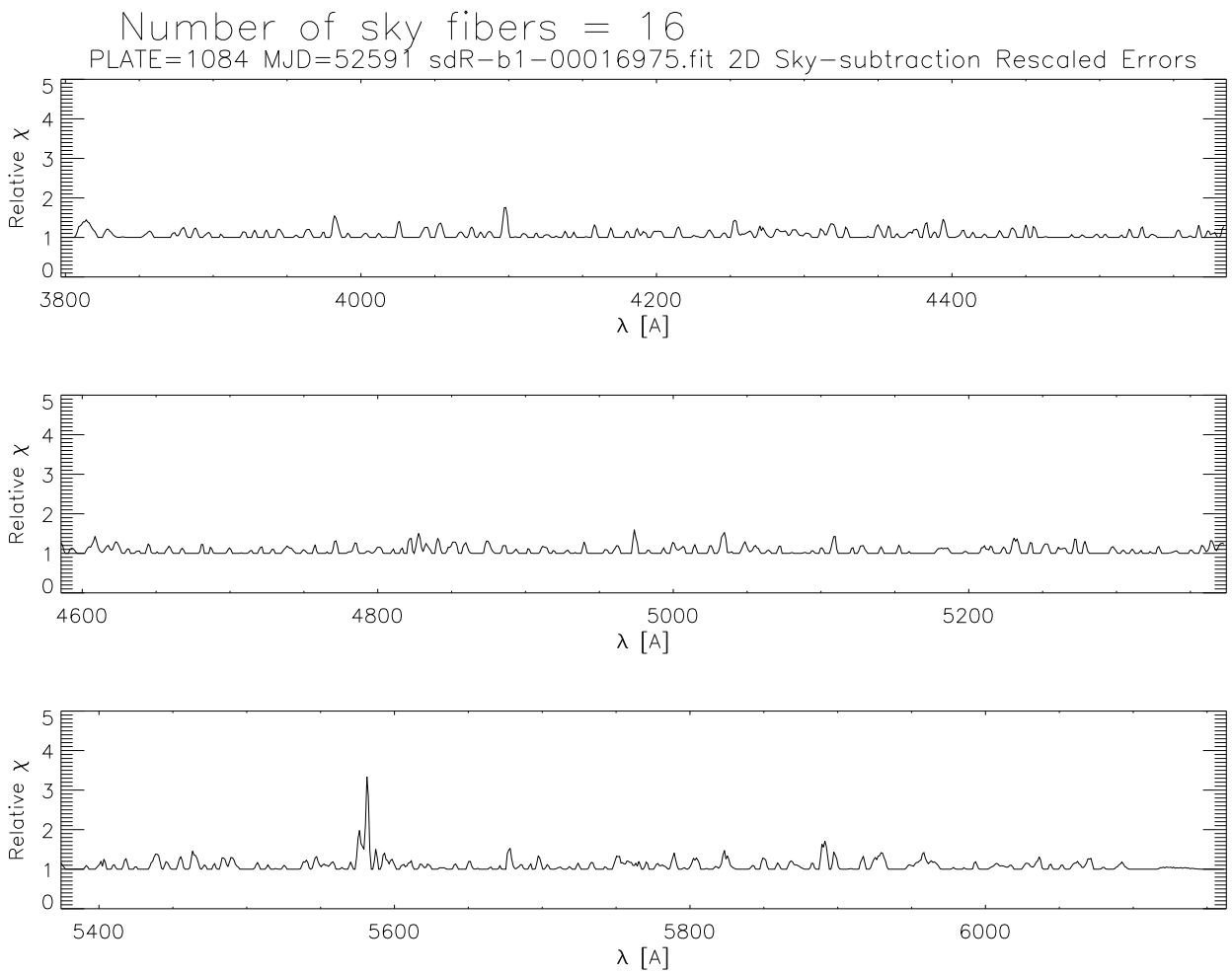

PLATE=1084 MJD=52591 sdR-b1-00016975.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
600
400
200
0
−200
−400
−600
5570
5575
5580
5585
5590
λ [A]

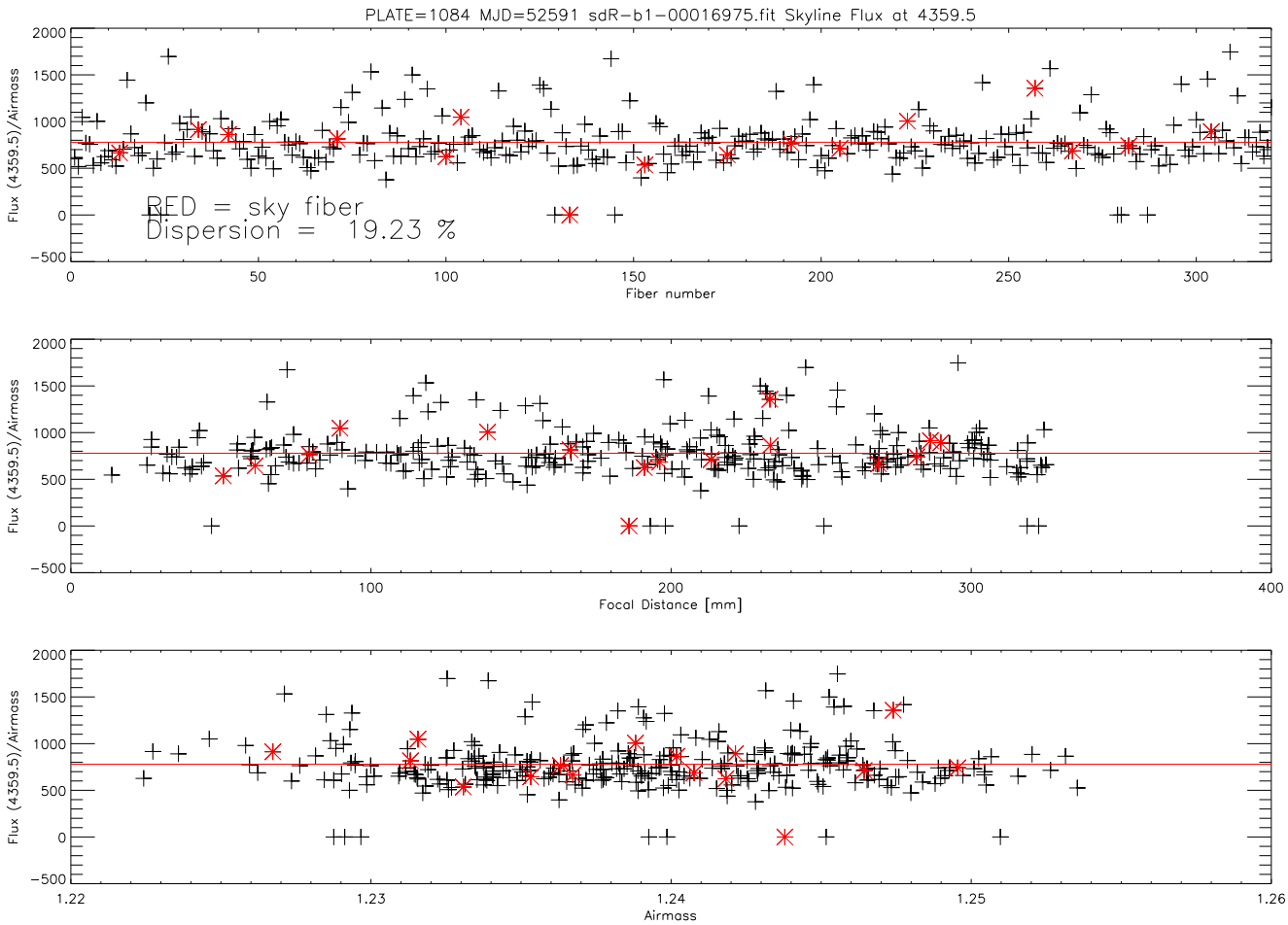

Number of sky fibers = 16
PLATE=1084 MJD=52591 sdR-b1-00016975.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

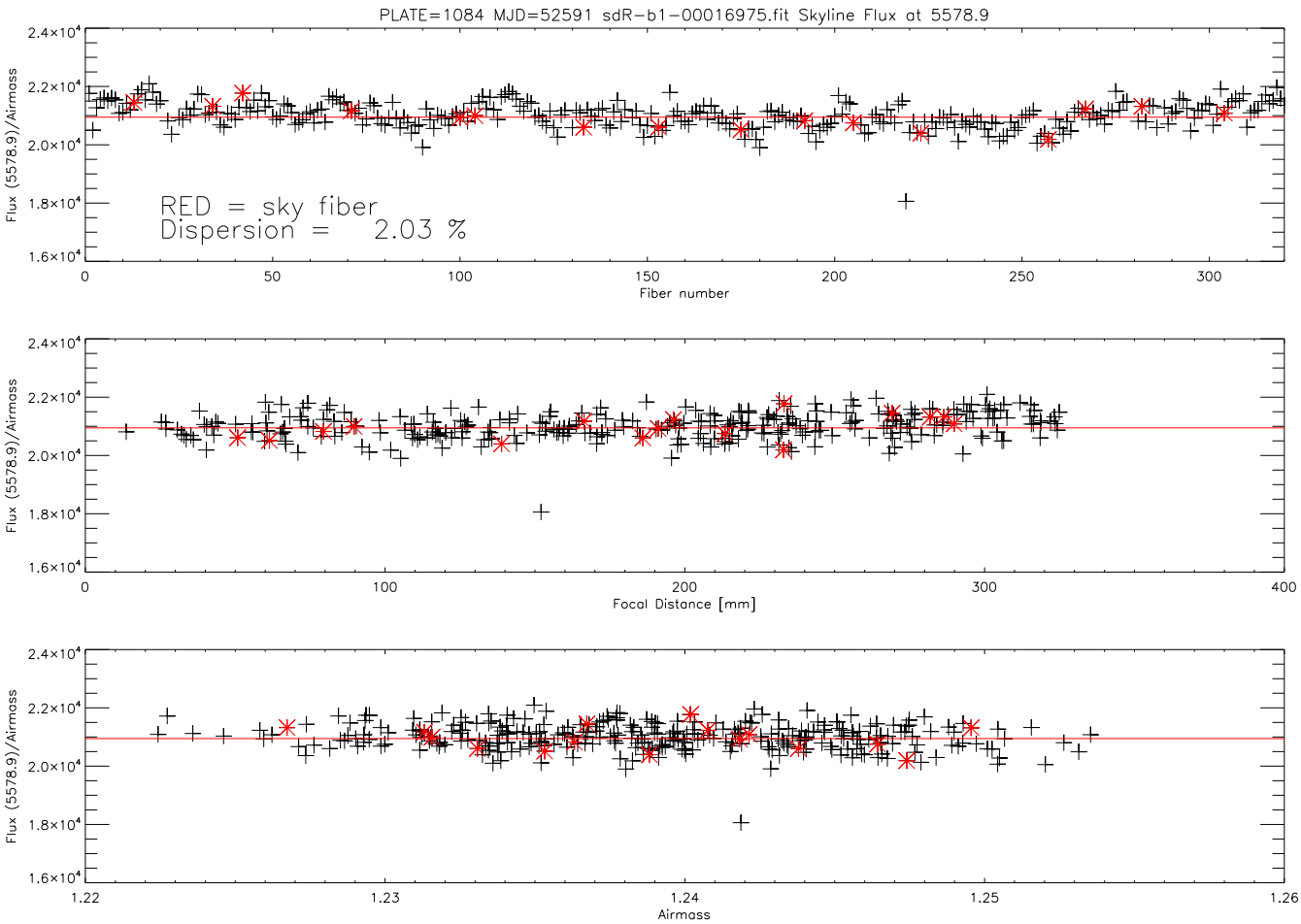

PLATE=1084 MJD=52591 sdR-b1-00016975.fit 2D Sky-subtraction Sky Fiber
Median χ^2
BLUE=After rescaling variance
Fiber number
Median Sky-Sub Flux
Fiber number

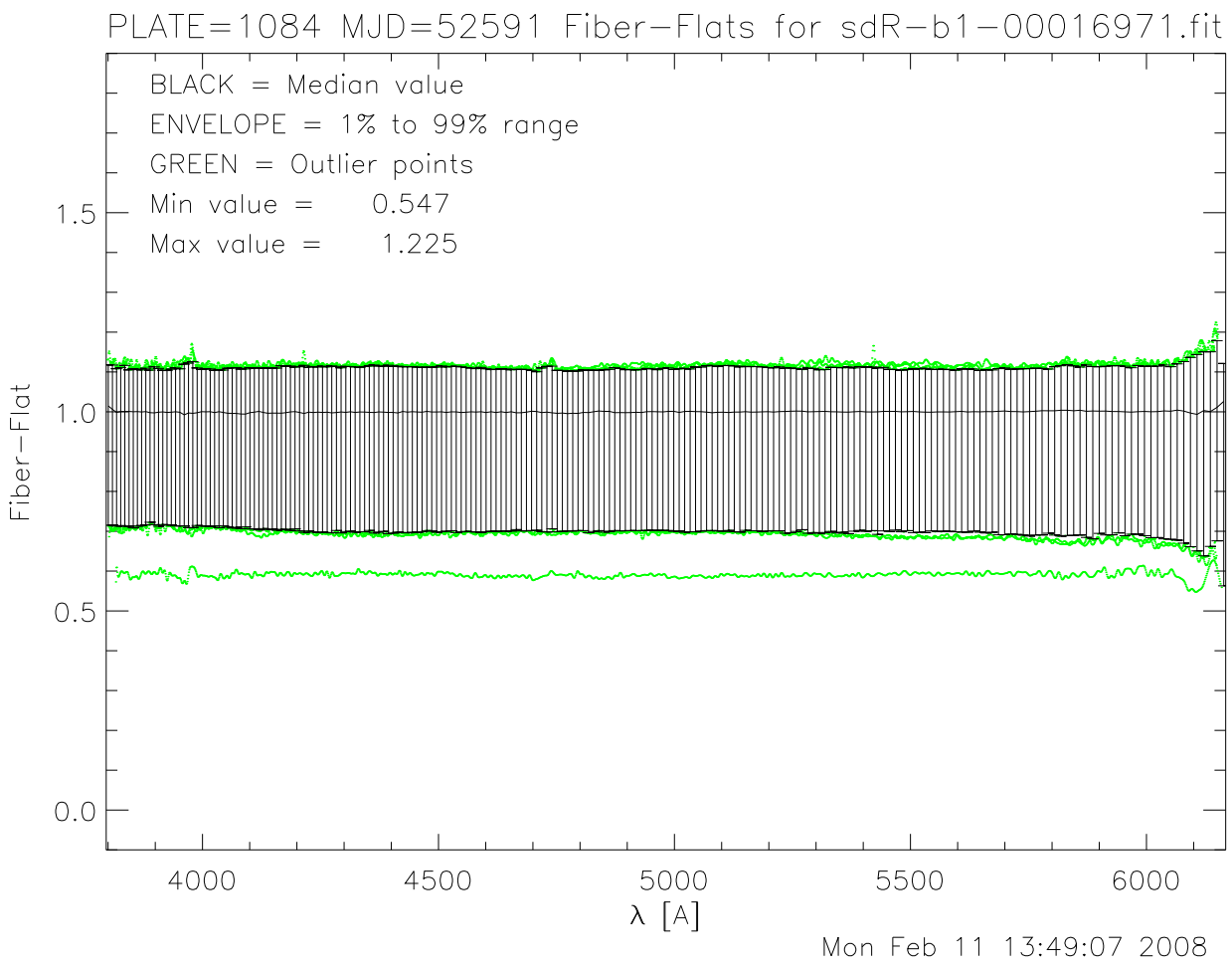

PLATE=1084 MJD=52591 sdR-b1-00016975.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
0
5570
5575
5580
5585
5590
λ [A]

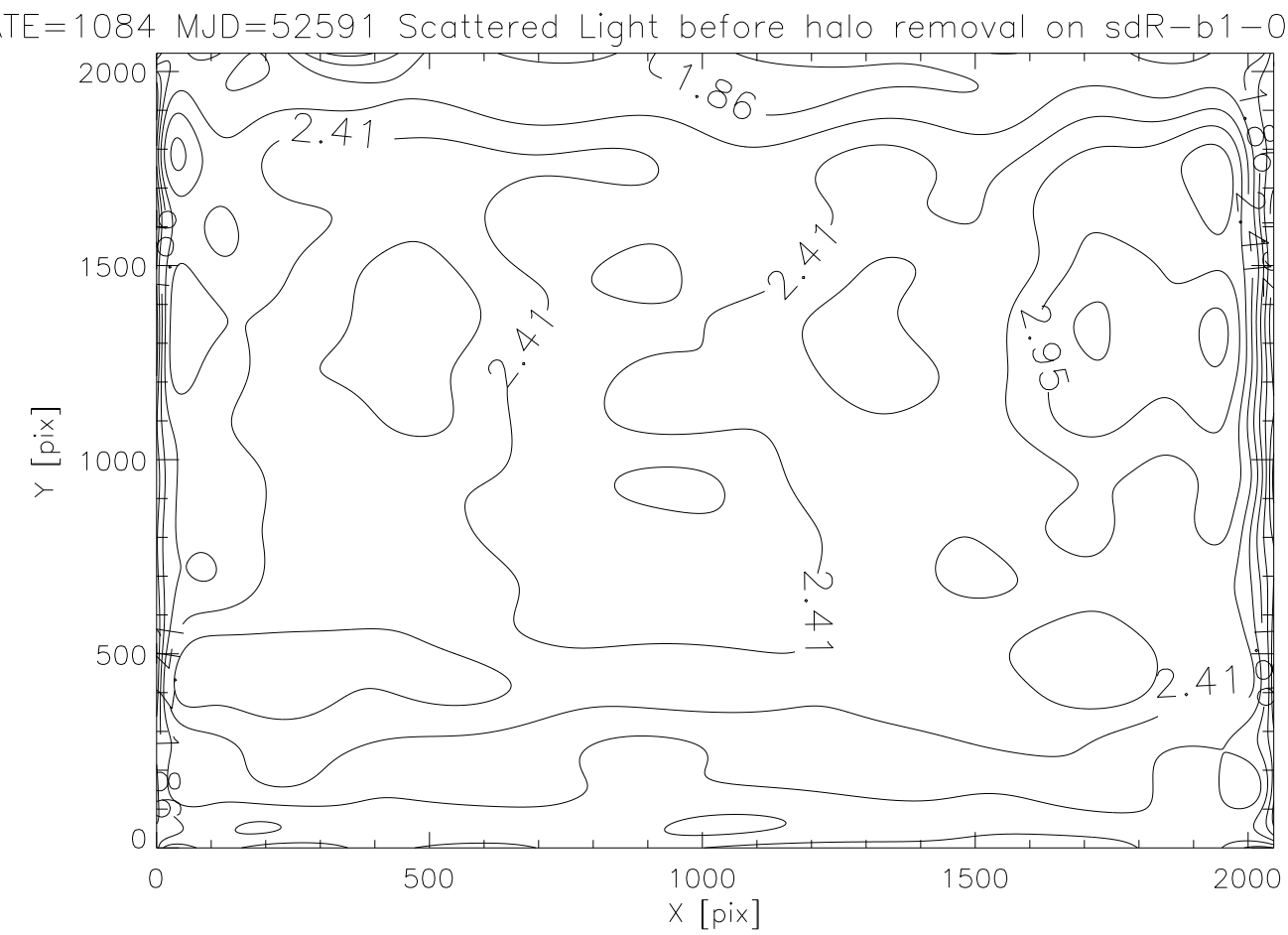

PLATE=1084 MJD=52591 sdR-b1-00016975.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
400
200
0
−200
−400
−600
5570
5575
5580
5585
5590
λ [A]

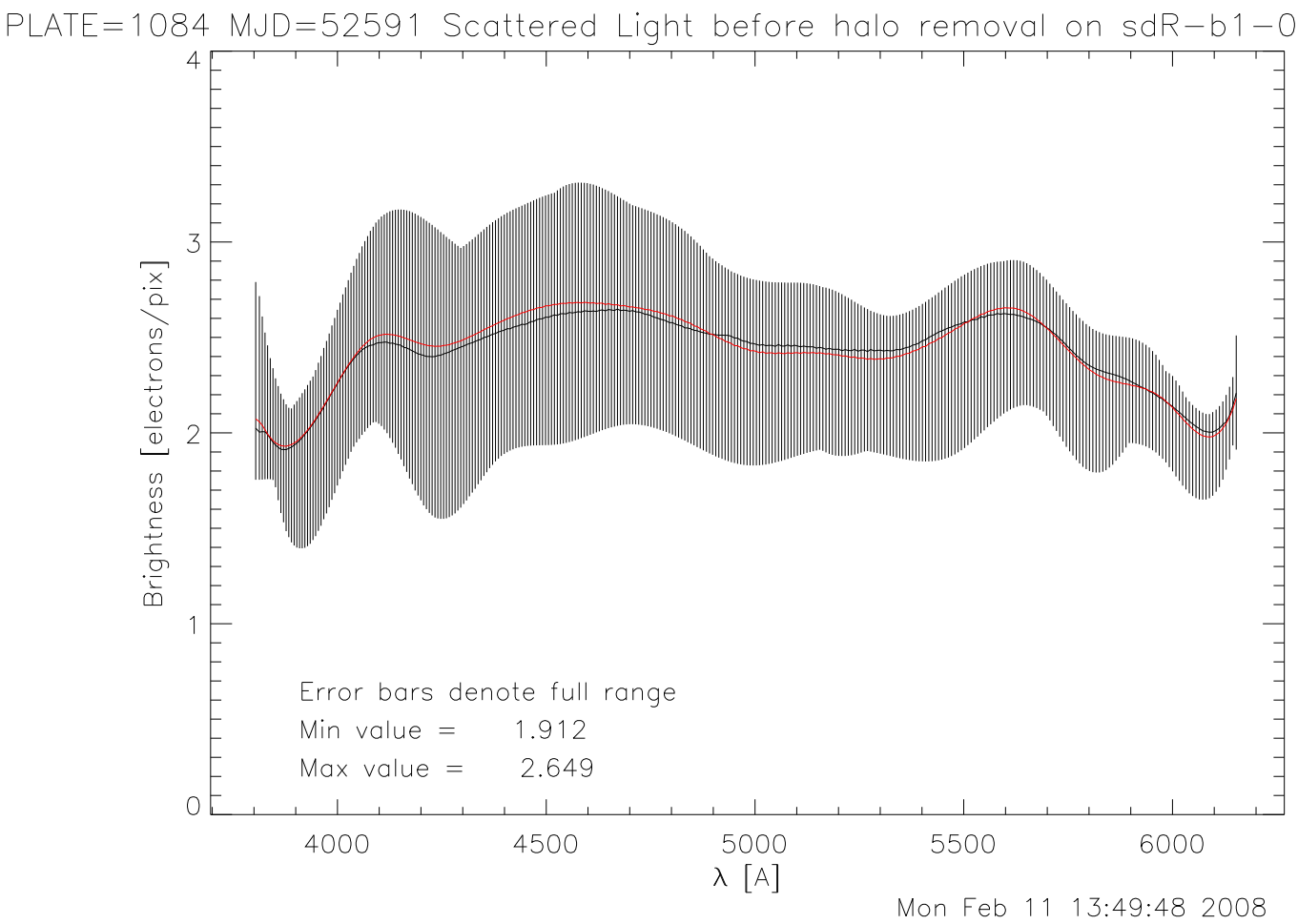

Number of sky fibers = 16
PLATE=1084 MJD=52591 sdR-b1-00016975.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

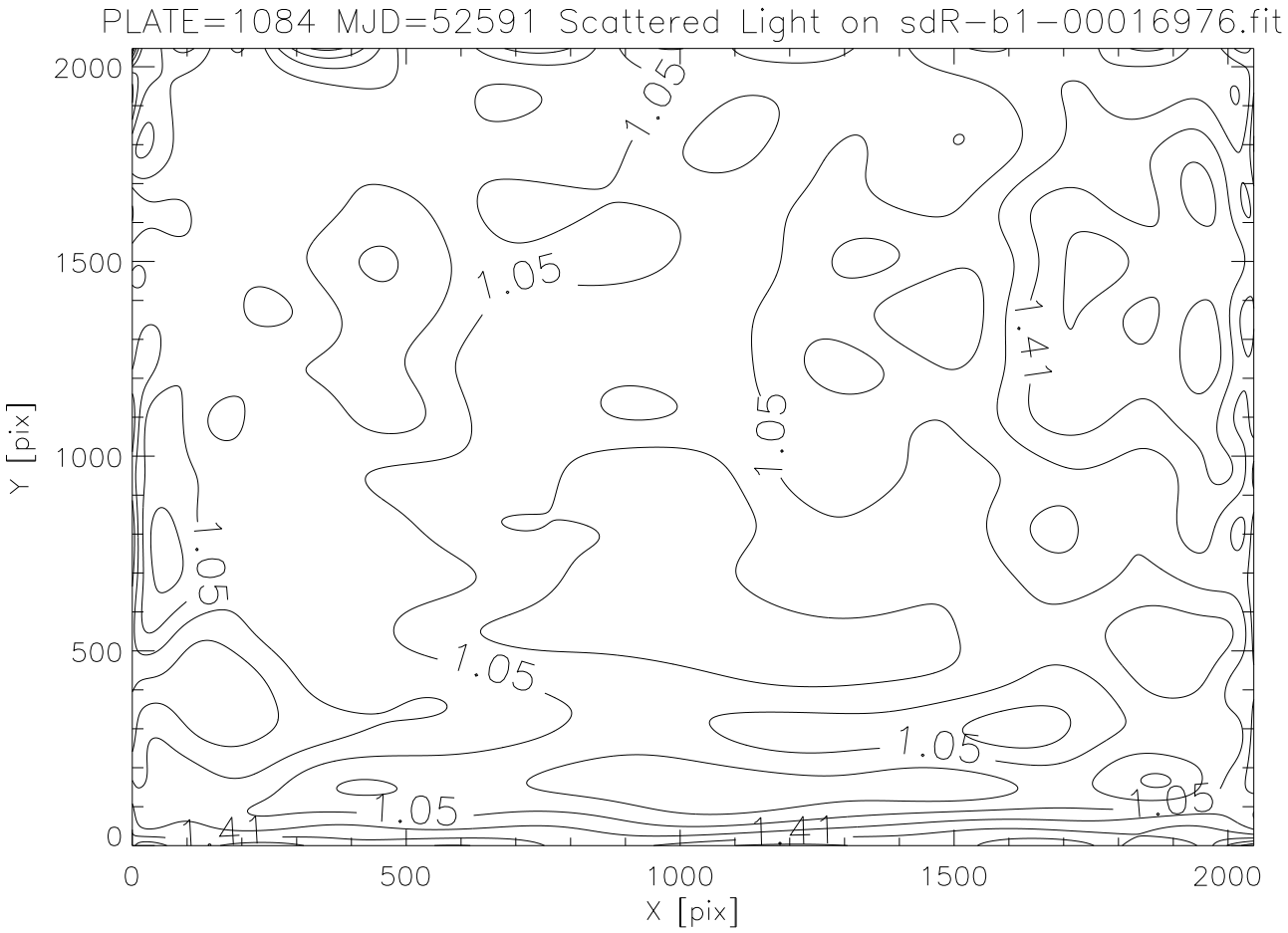

PLATE=1084 MJD=52591 sdR-b1-00016975.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
RED = sky fiber
Dispersion = 19.23 %
Fiber number
Focal Distance [mm]
Airmass

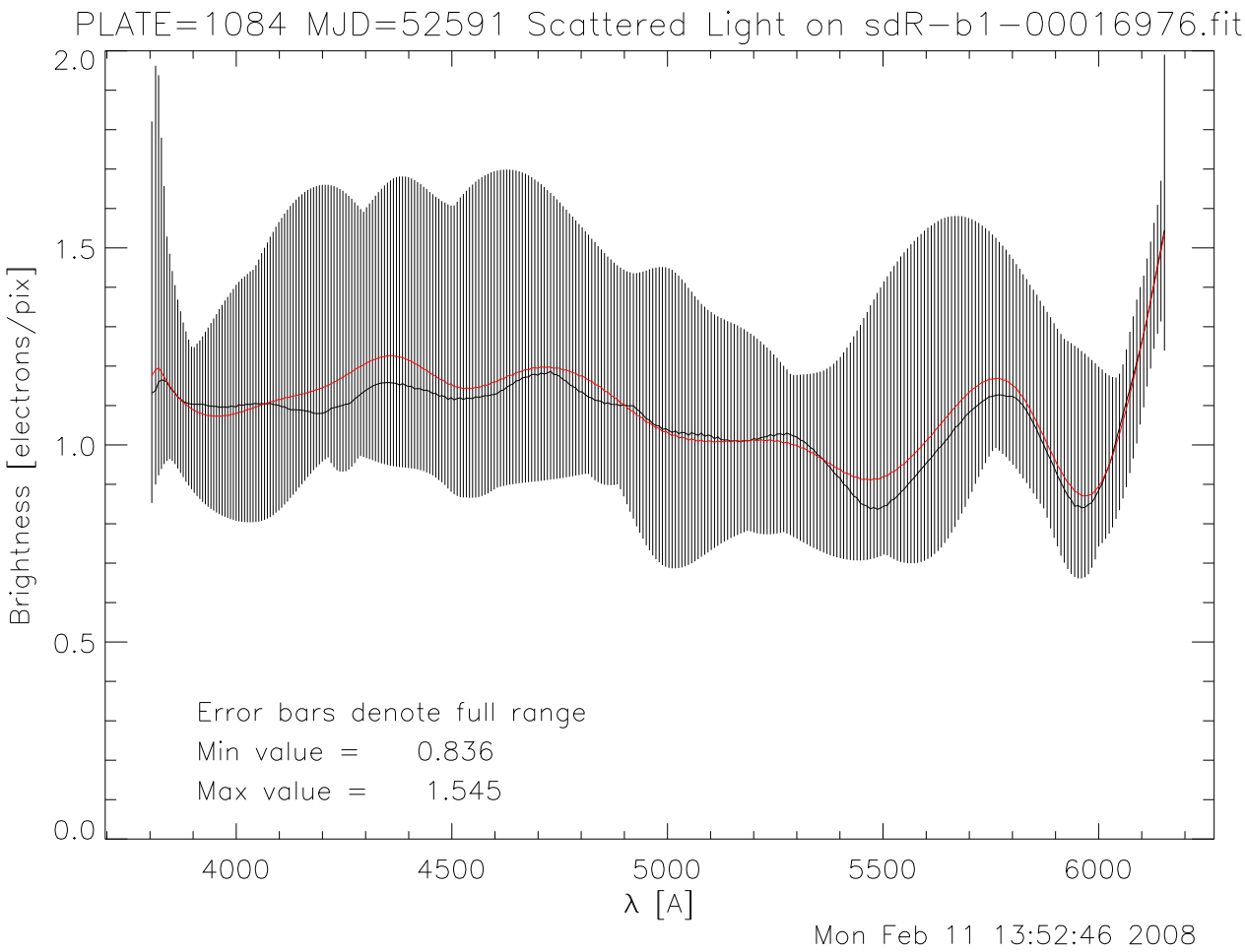

PLATE=1084 MJD=52591 sdR-b1-00016975.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 2.03 %
Fiber number
Focal Distance [mm]
Airmass

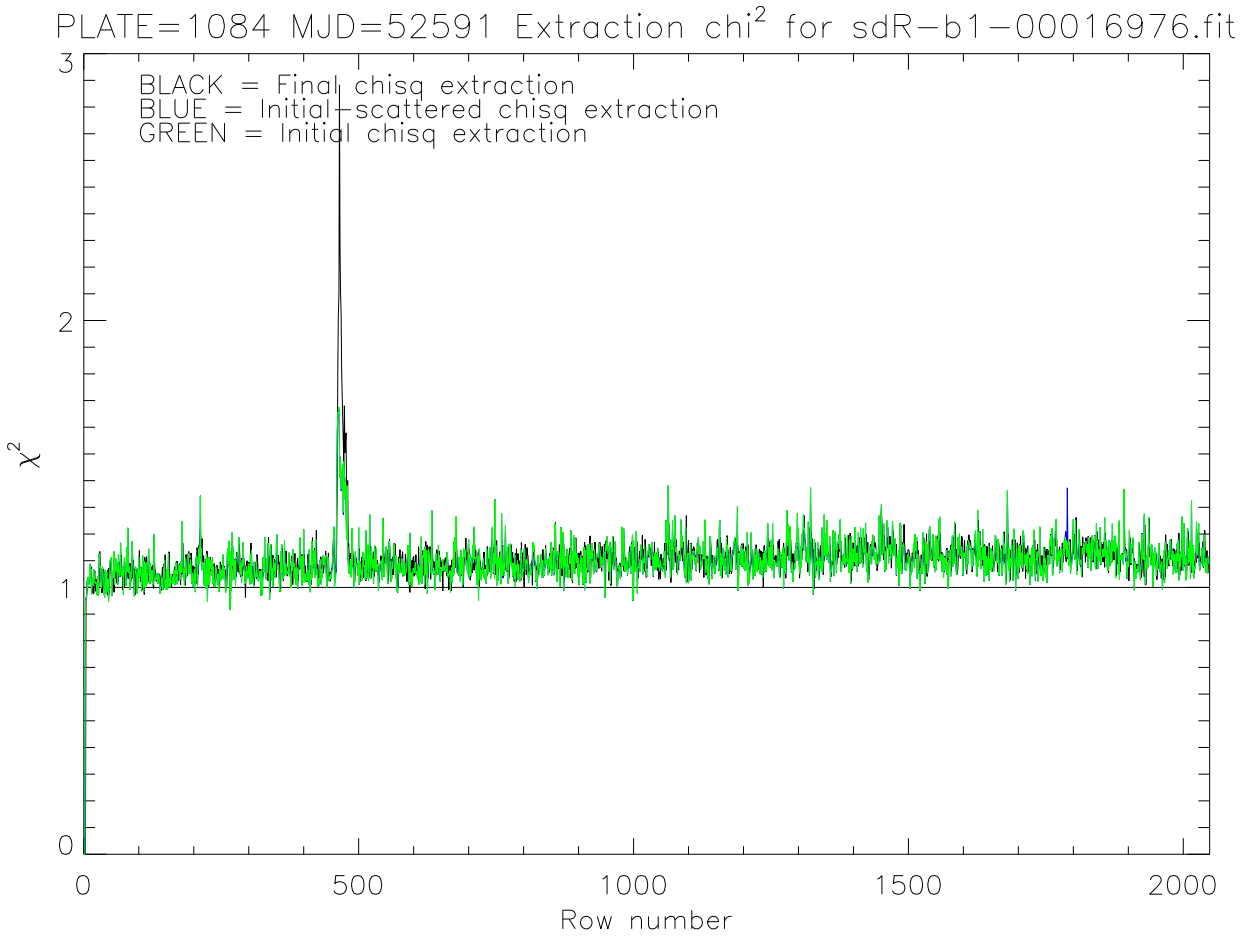

PLATE=1084 MJD=52591 Fiber-Flats for sdR-b1-00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.547
Max value = 1.225
Fiber-Flat
1.5
1.0
0.5
0.0
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:49:07 2008

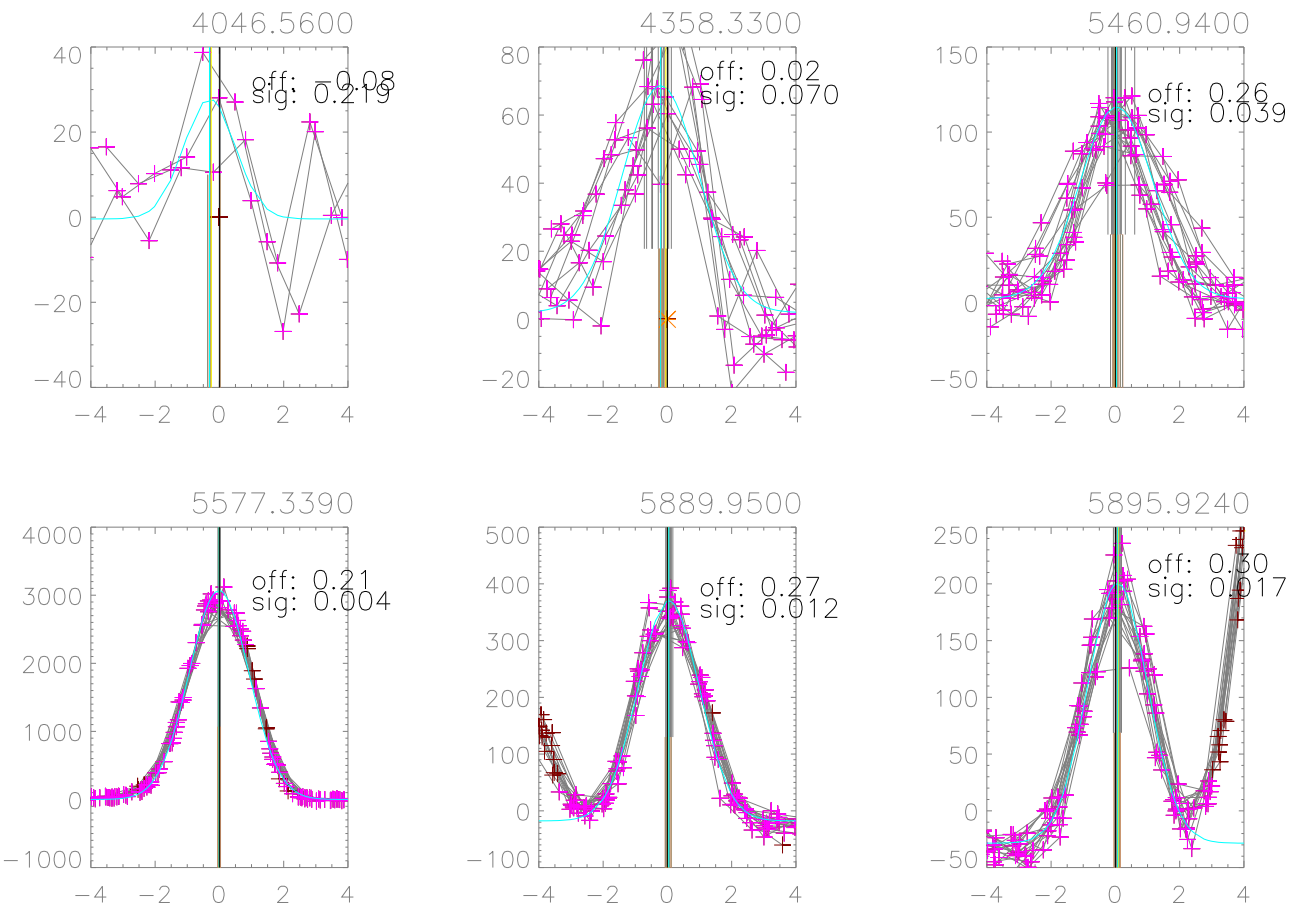

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b1-00016976.f
1.86
2.41
2.41
2.41
2.95
2.41
2.41
2.41
2000
1500
1000
500
0
Y [pix]
0
500
1000
1500
2000
X [pix]

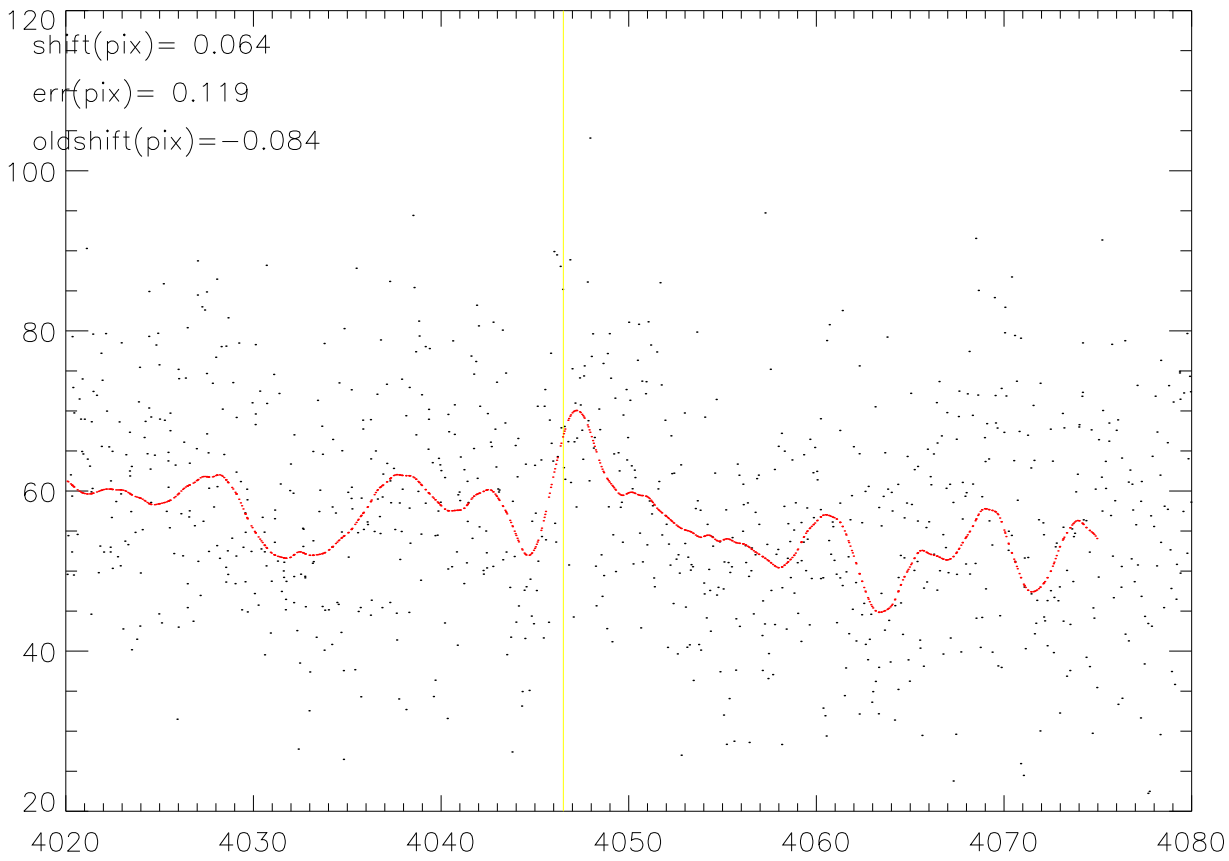

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b1-00016976.f
Brightness [electrons/pix]
0
1
2
3
4
Error bars denote full range
Min value = 1.912
Max value = 2.649
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:49:48 2008

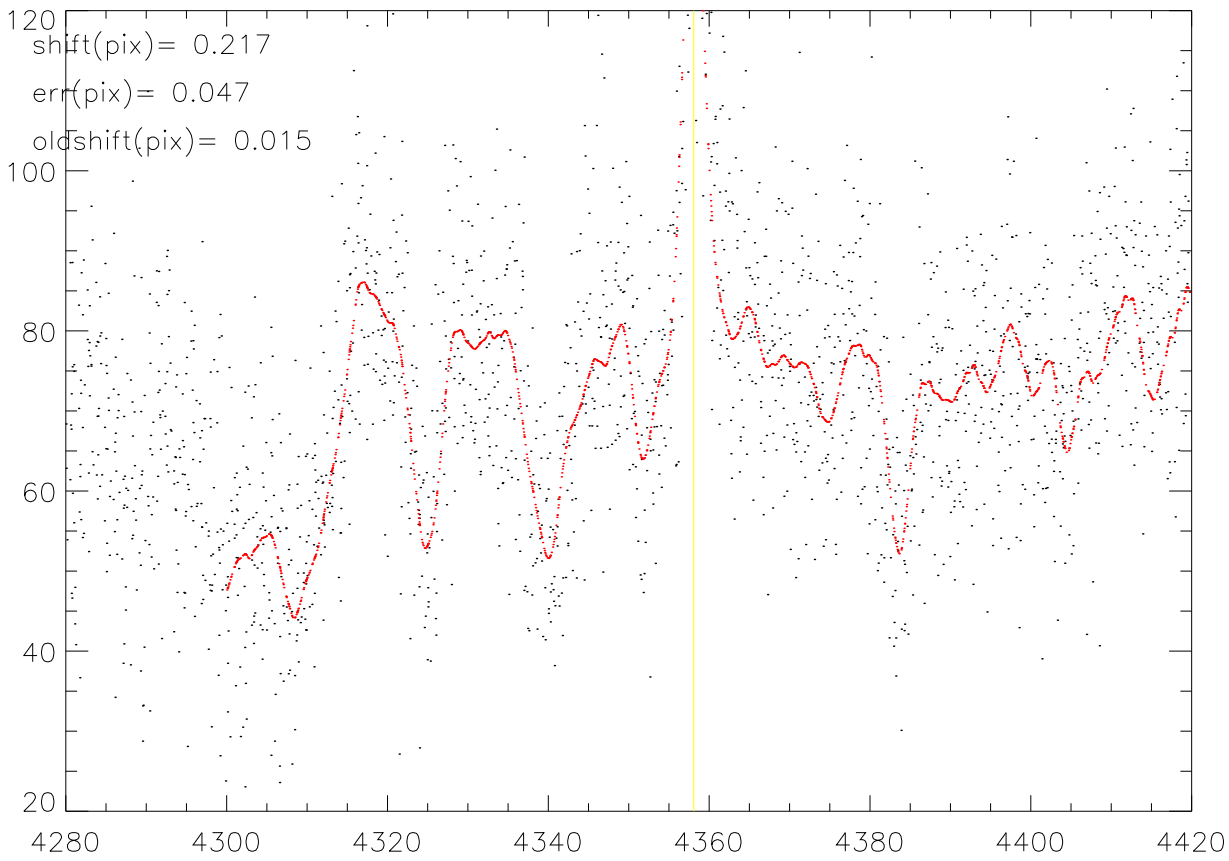

PLATE=1084 MJD=52591 Scattered Light on sdR-b1-00016976.fit
Y [pix]
X [pix]
0
500
1000
1500
2000
1.05
1.41

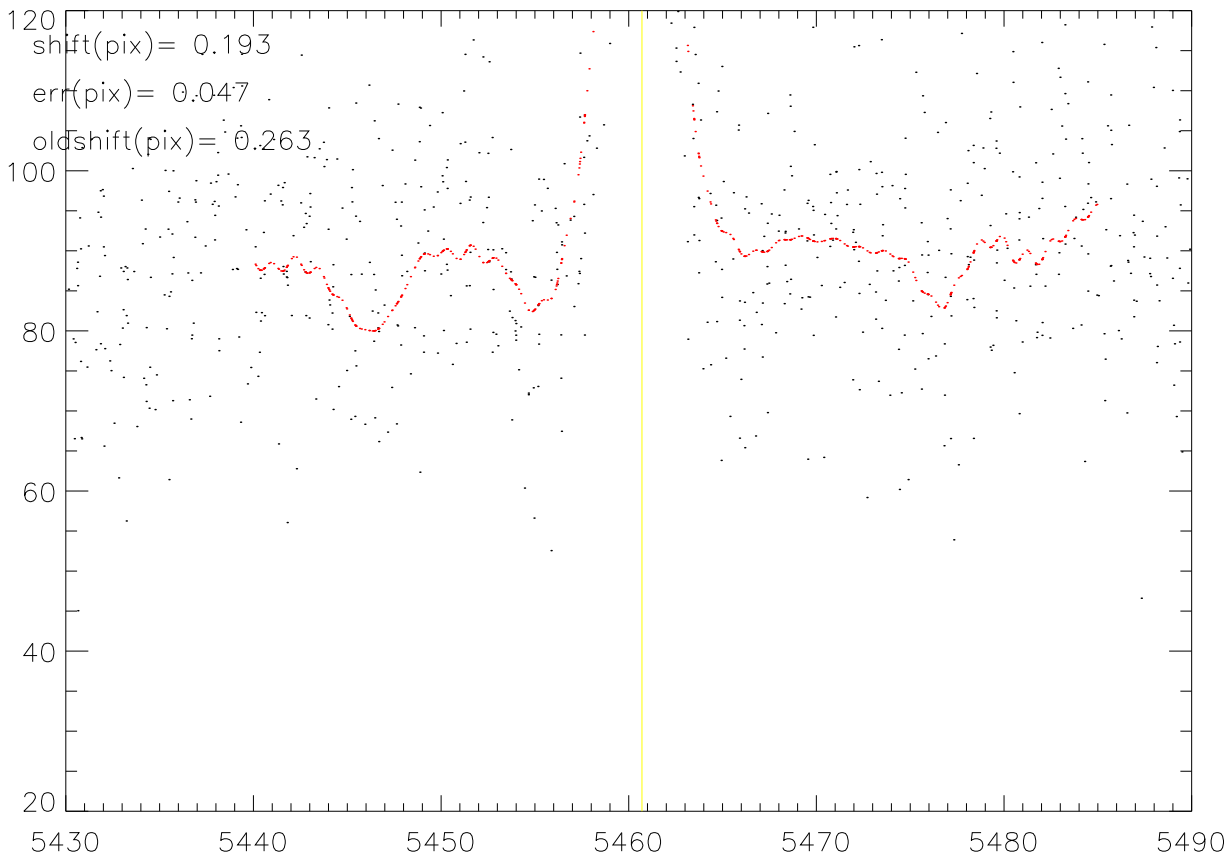

PLATE=1084 MJD=52591 Scattered Light on sdR-b1-00016976.fit
Brightness [electrons/pix]
2.0
1.5
1.0
0.5
0.0
Error bars denote full range
Min value = 0.836
Max value = 1.545
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:52:46 2008

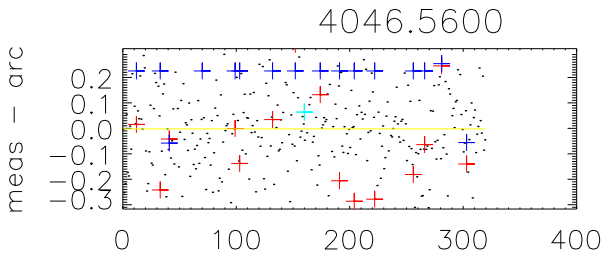

PLATE=1084 MJD=52591 Extraction chi^2 for sdR-b1-00016976.fit
BLACK = Final chisq extraction
BLUE = Initial-scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
0
1
2
3
0
500
1000
1500
2000
Row number

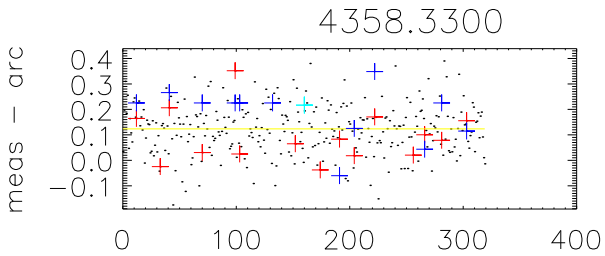

4046.5600
off: −0.08
sig: 0.219
4358.3300
off: 0.02
sig: 0.070
5460.9400
off: 0.26
sig: 0.039
5577.3390
off: 0.21
sig: 0.004
5889.9500
off: 0.27
sig: 0.012
5895.9240
off: 0.30
sig: 0.017

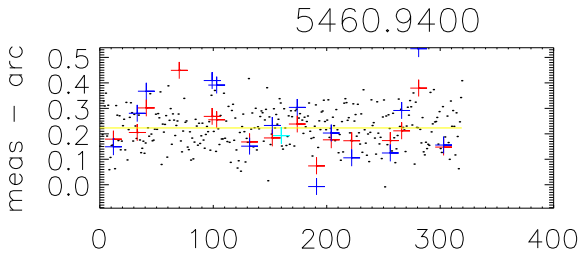

shift(pix)= 0.064
err(pix)= 0.119
oldshift(pix)=−0.084
120
100
80
60
40
20
4020
4030
4040
4050
4060
4070
4080

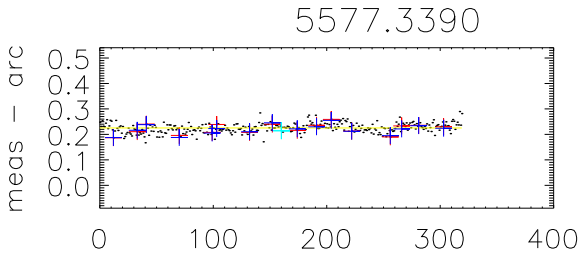

shift(pix)= 0.217
err(pix)= 0.047
oldshift(pix)= 0.015
120
100
80
60
40
20
4280
4300
4320
4340
4360
4380
4400
4420

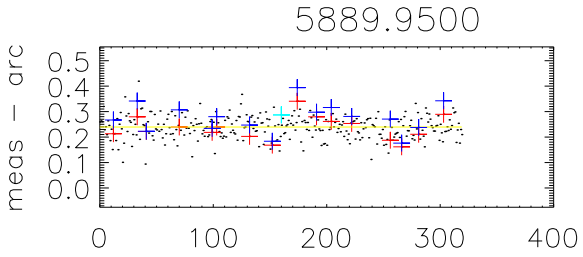

shift(pix)= 0.193
err(pix)= 0.047
oldshift(pix)= 0.263
120
100
80
60
40
20
5430
5440
5450
5460
5470
5480
5490

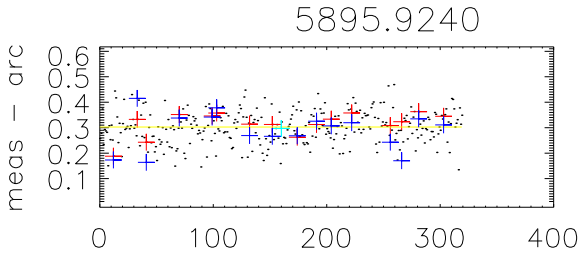

4046.5600
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

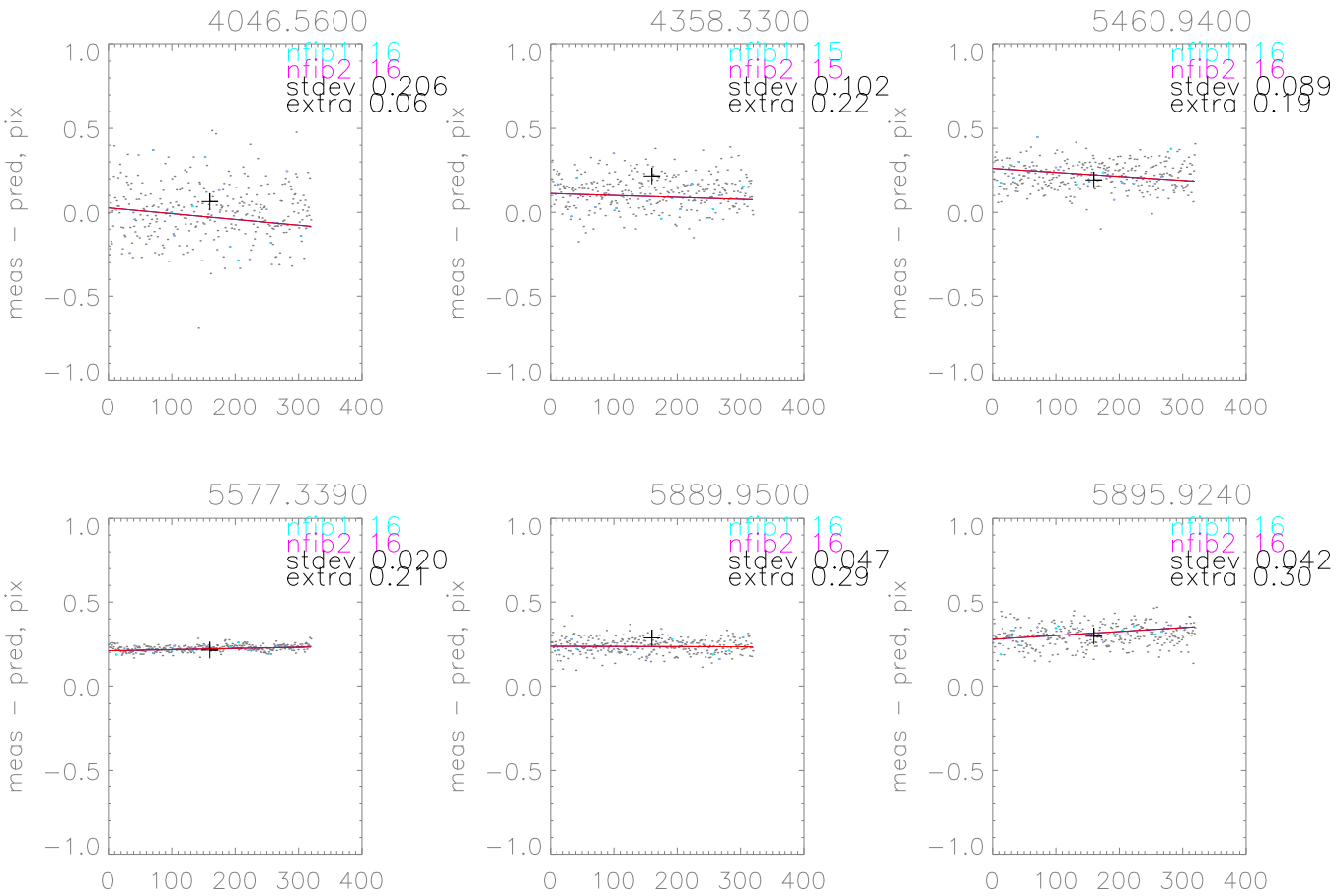

4358.3300
meas − arc
0.4
0.3
0.2
0.1
0.0
−0.1
0
100
200
300
400

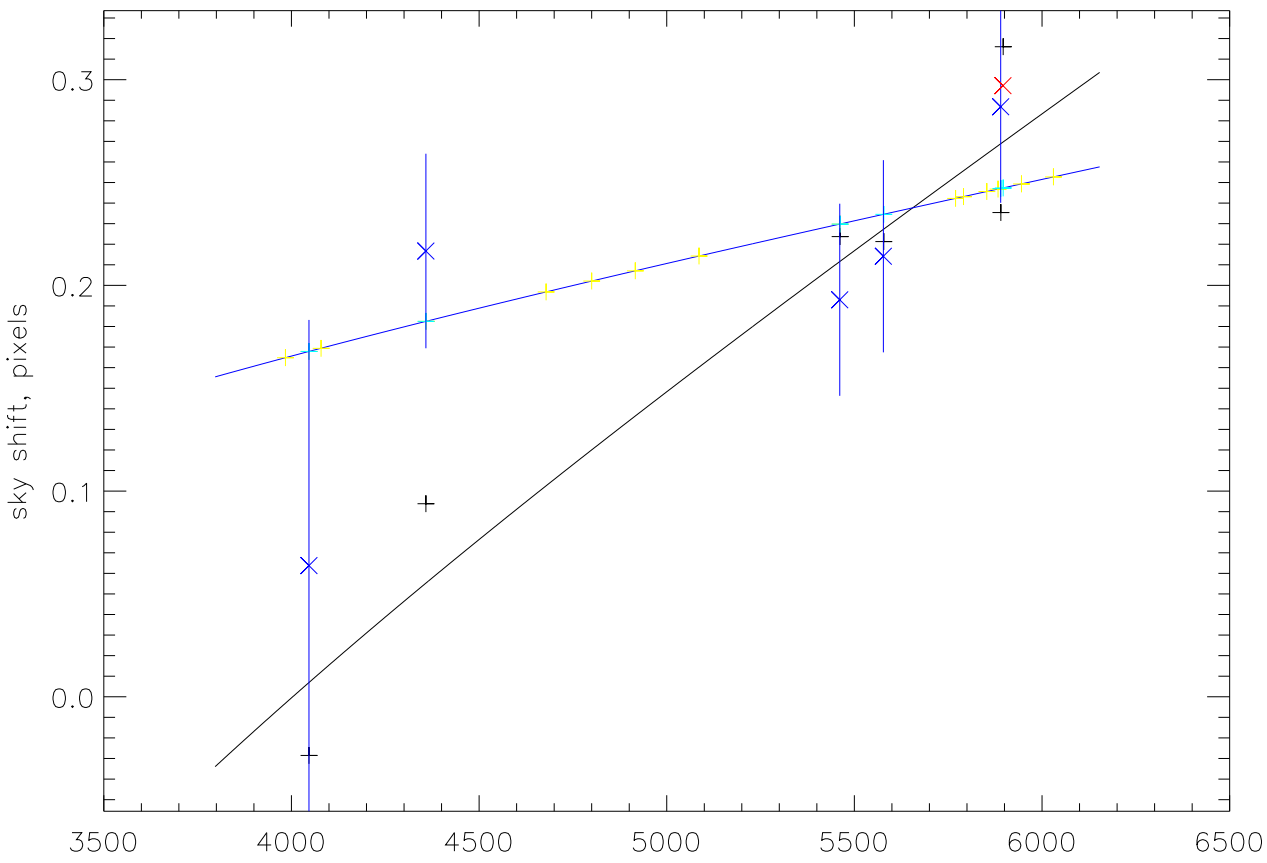

5460.9400
meas − arc
0.5
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400


5577.3390
meas − arc
0.5
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400

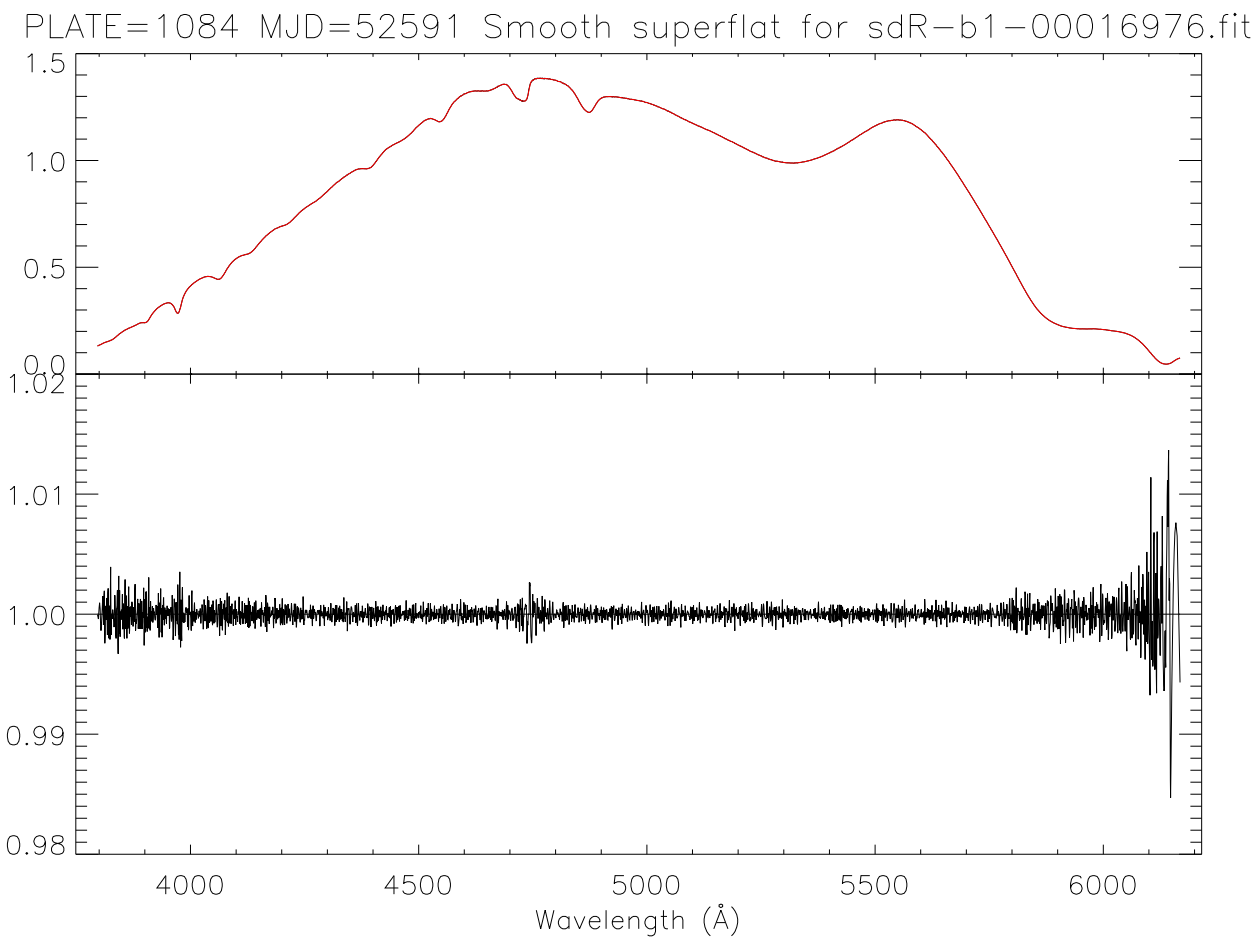

5889.9500
meas − arc
0.5
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400

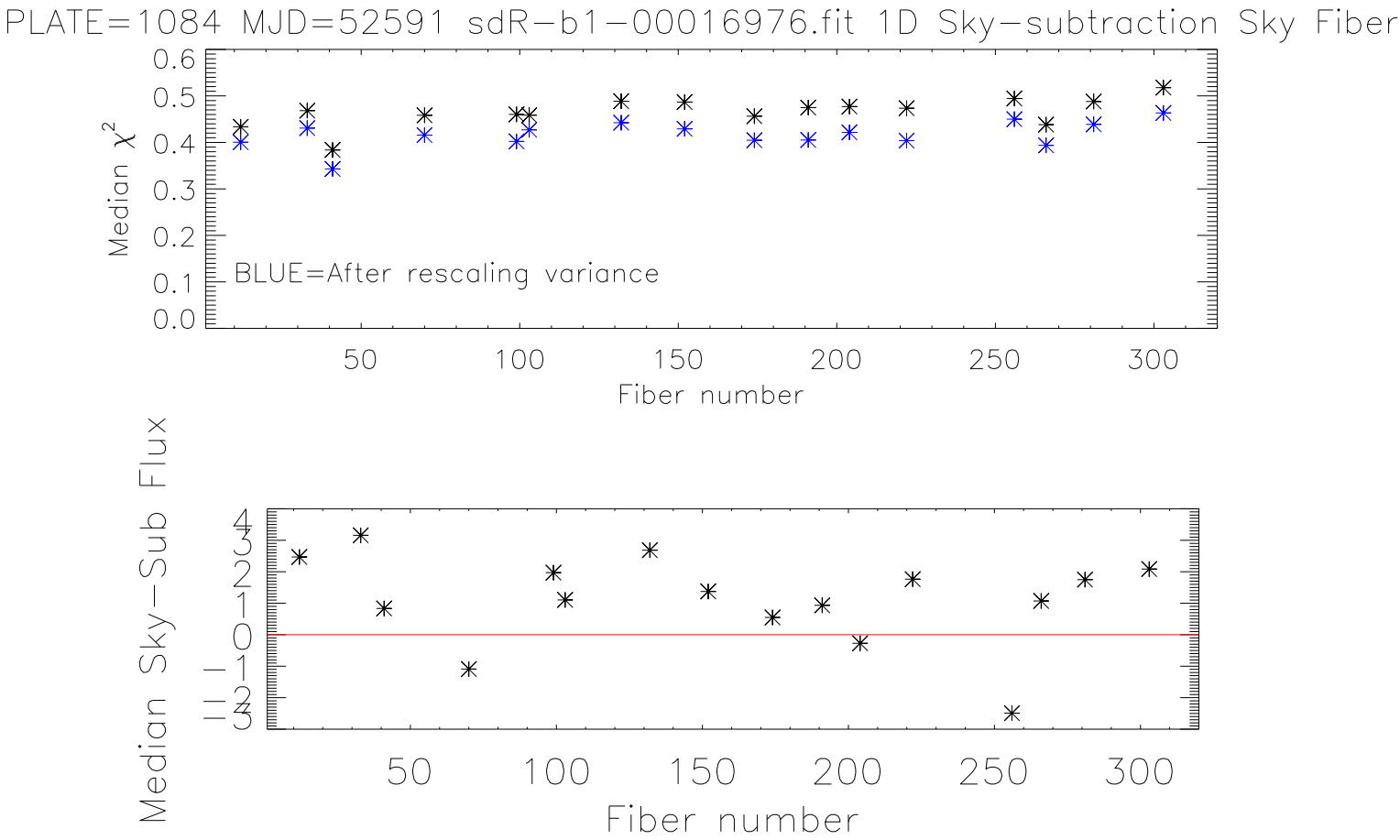

5895.9240
meas − arc
0.6
0.5
0.4
0.3
0.2
0.1
0
100
200
300
400

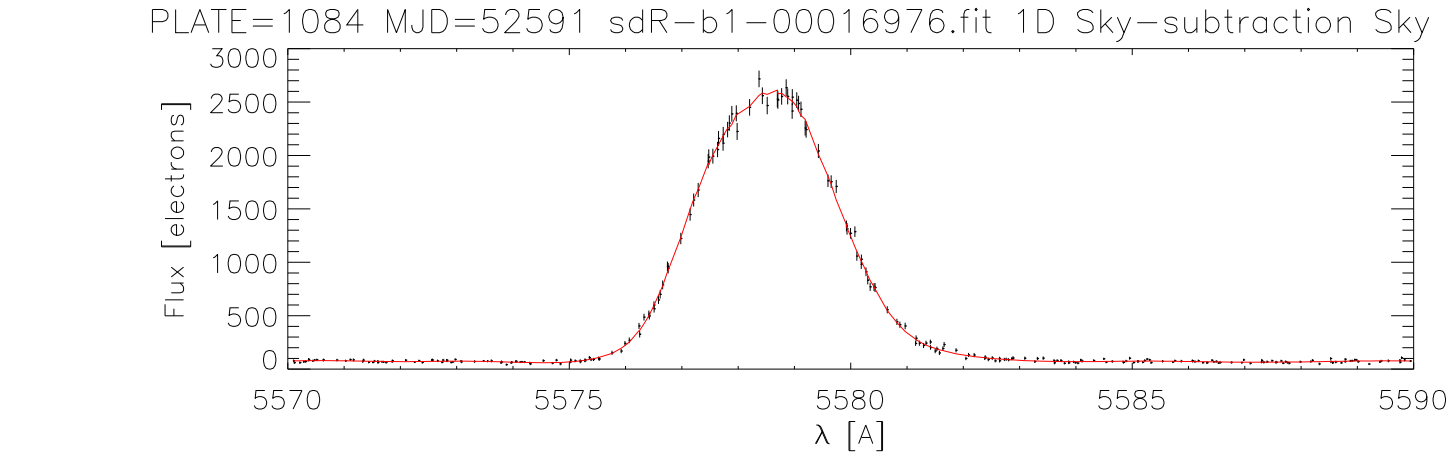

4046.5600
nfib1 16
nfib2 16
stdev 0.206
extra 0.06
4358.3300
nfib1 15
nfib2 15
stdev 0.102
extra 0.22
5460.9400
nfib1 16
nfib2 16
stdev 0.089
extra 0.19
5577.3390
nfib1 16
nfib2 16
stdev 0.020
extra 0.21
5889.9500
nfib1 16
nfib2 16
stdev 0.047
extra 0.29
5895.9240
nfib1 16
nfib2 16
stdev 0.042
extra 0.30
meas − pred, pix
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400

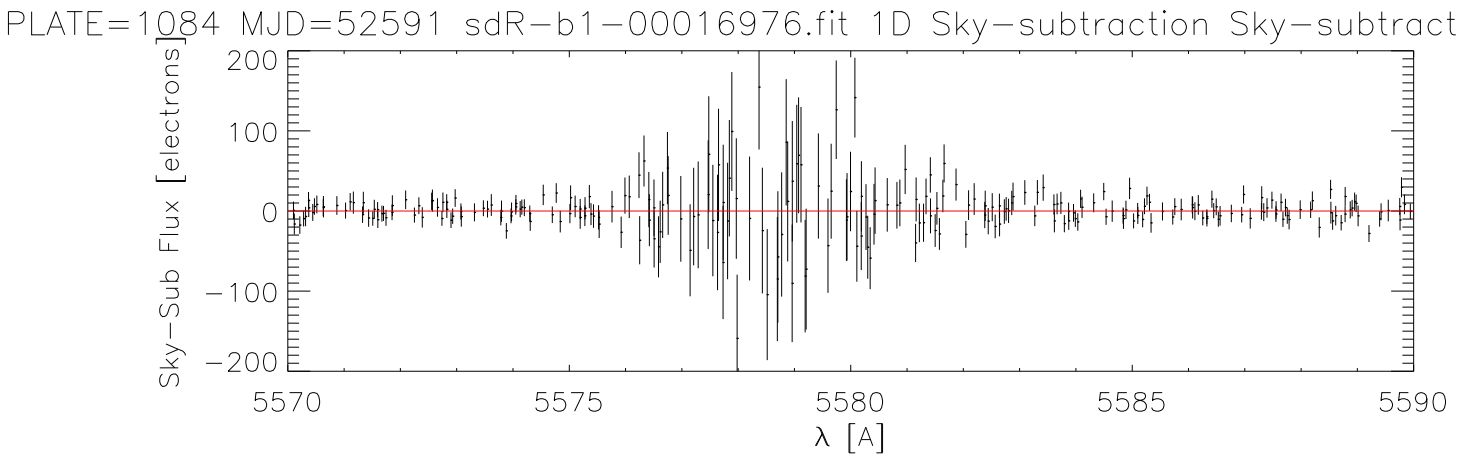

sky shift, pixels
0.3
0.2
0.1
0.0
3500
4000
4500
5000
5500
6000
6500

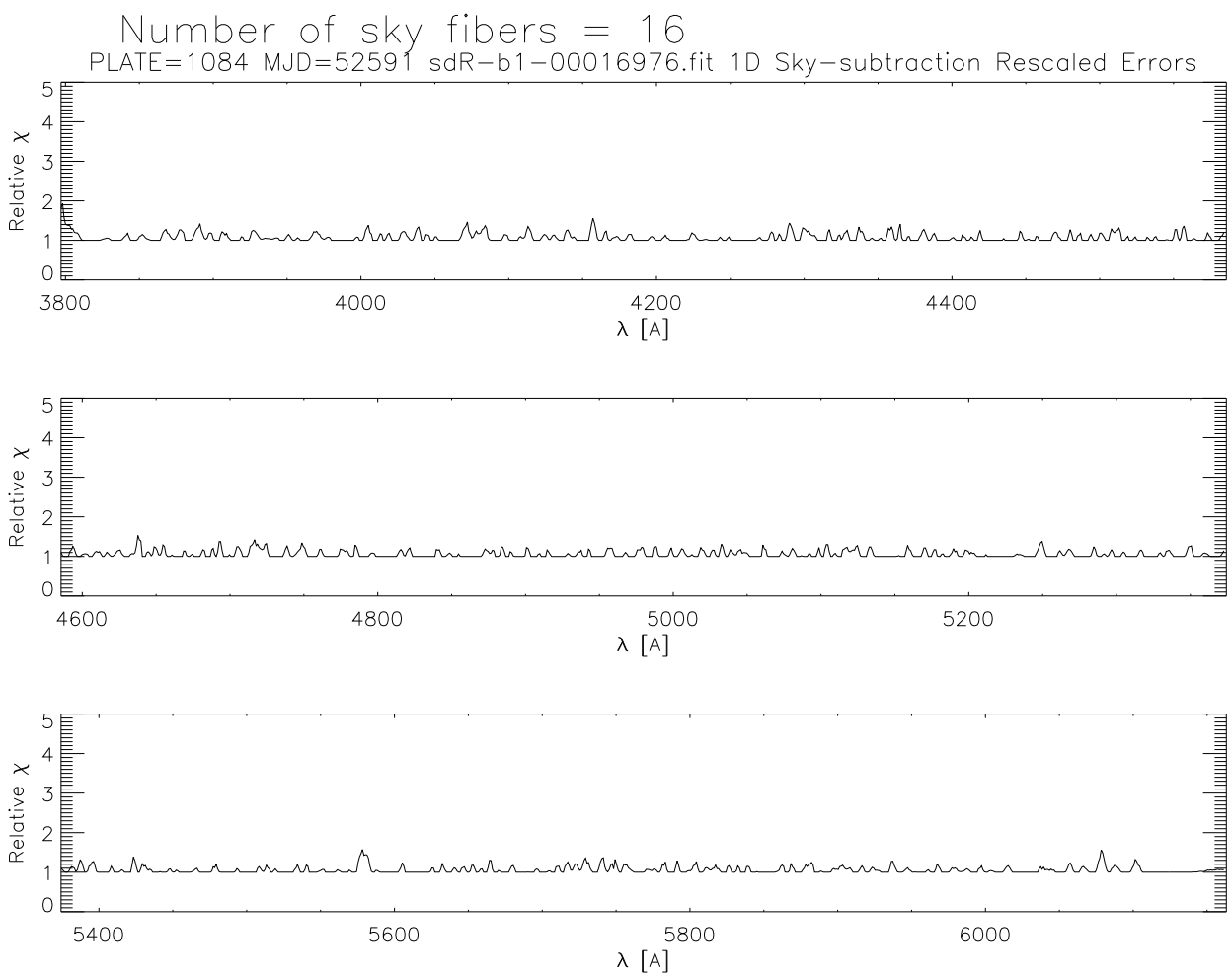
es= 0.0000

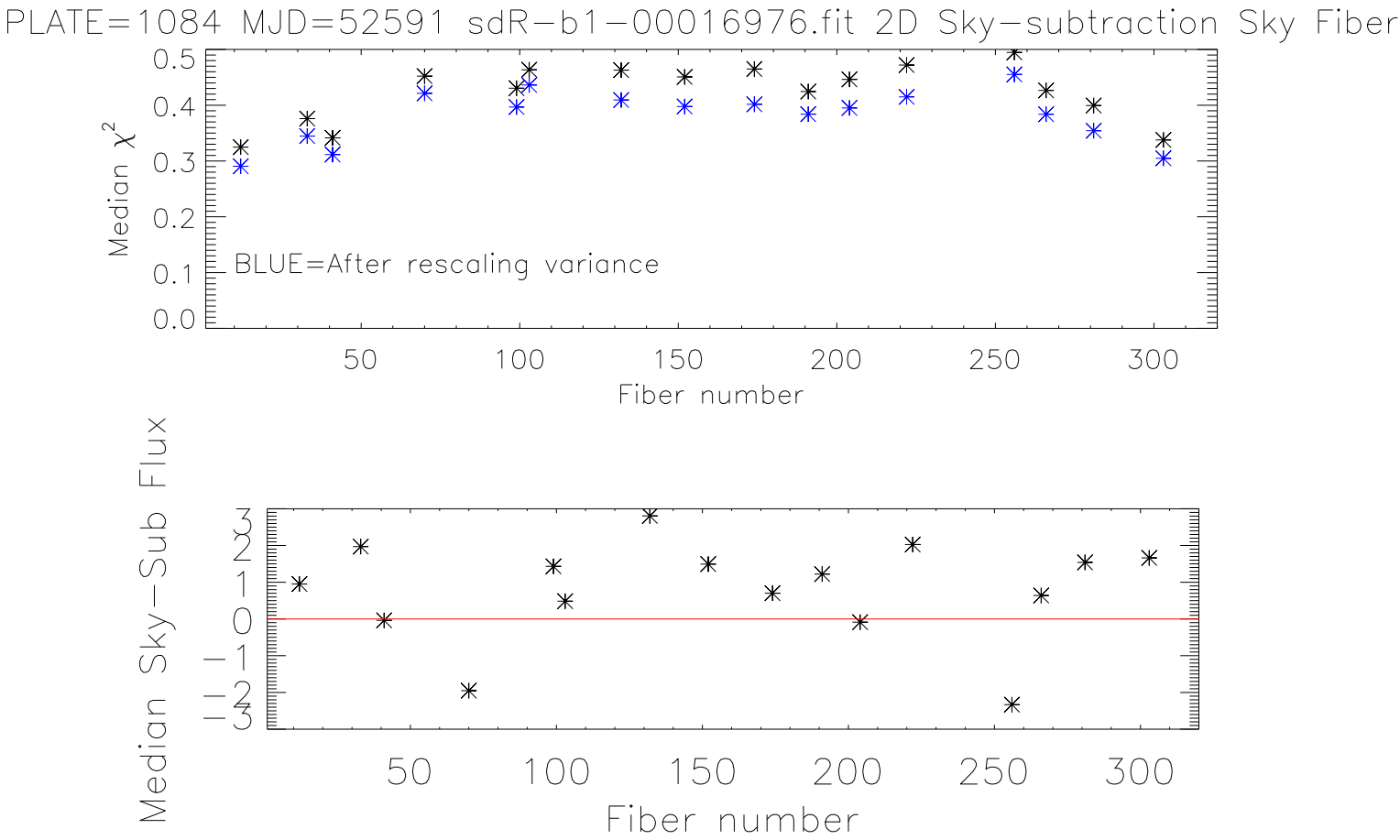

PLATE=1084 MJD=52591 Smooth superflat for sdR-b1-00016976.fit
1.5
1.0
0.5
0.0
1.02
1.01
1.00
0.99
0.98
4000
4500
5000
5500
6000
Wavelength (Å)

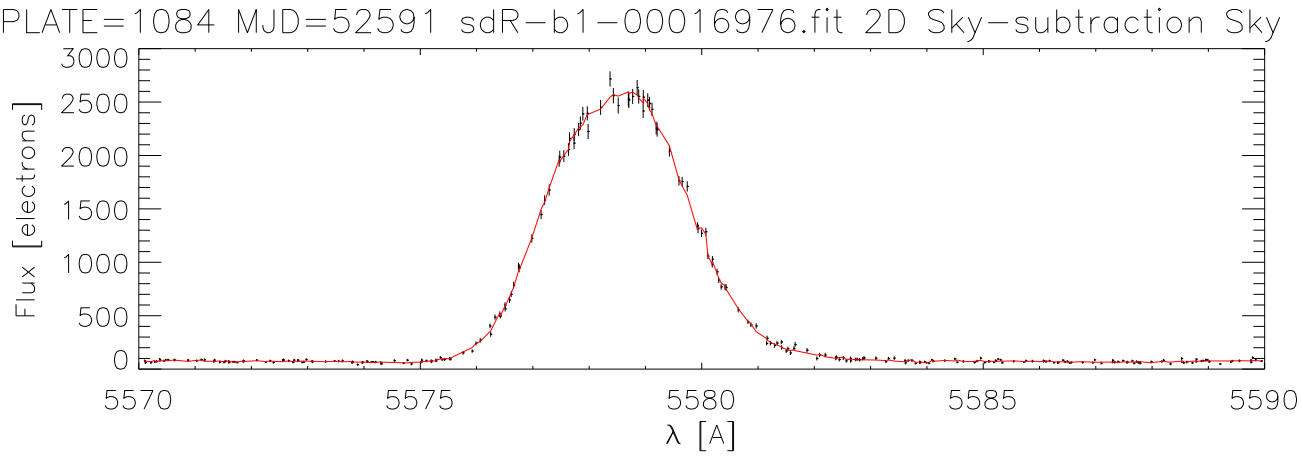

PLATE=1084 MJD=52591 sdR-b1-00016976.fit 1D Sky-subtraction Sky Fiber
Median χ^2
BLUE=After rescaling variance
Fiber number
Median Sky-Sub Flux
Fiber number

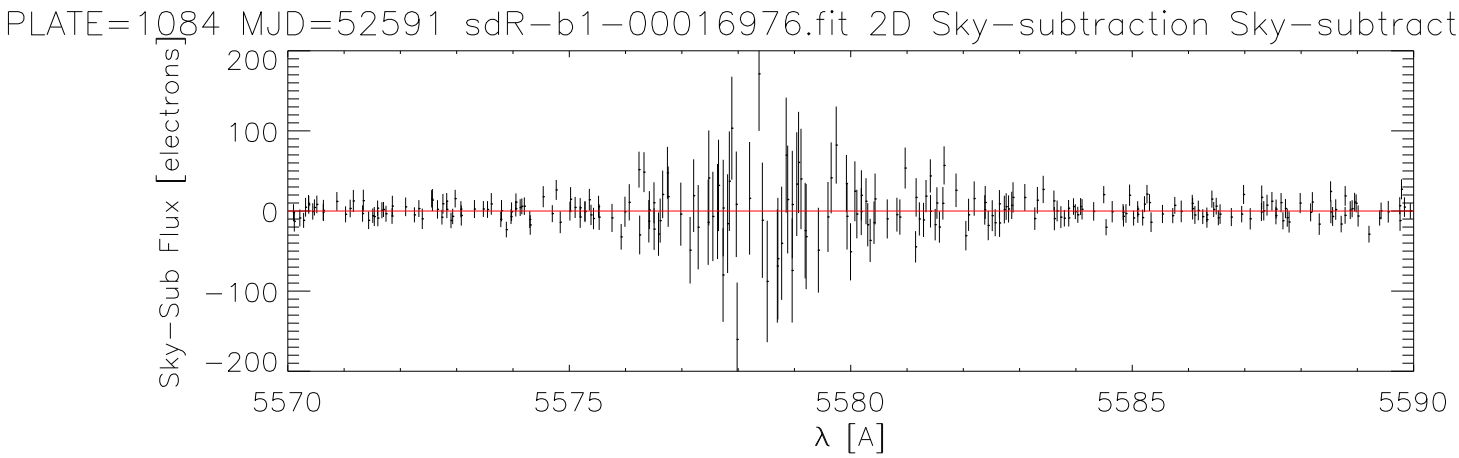

PLATE=1084 MJD=52591 sdR-b1-00016976.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

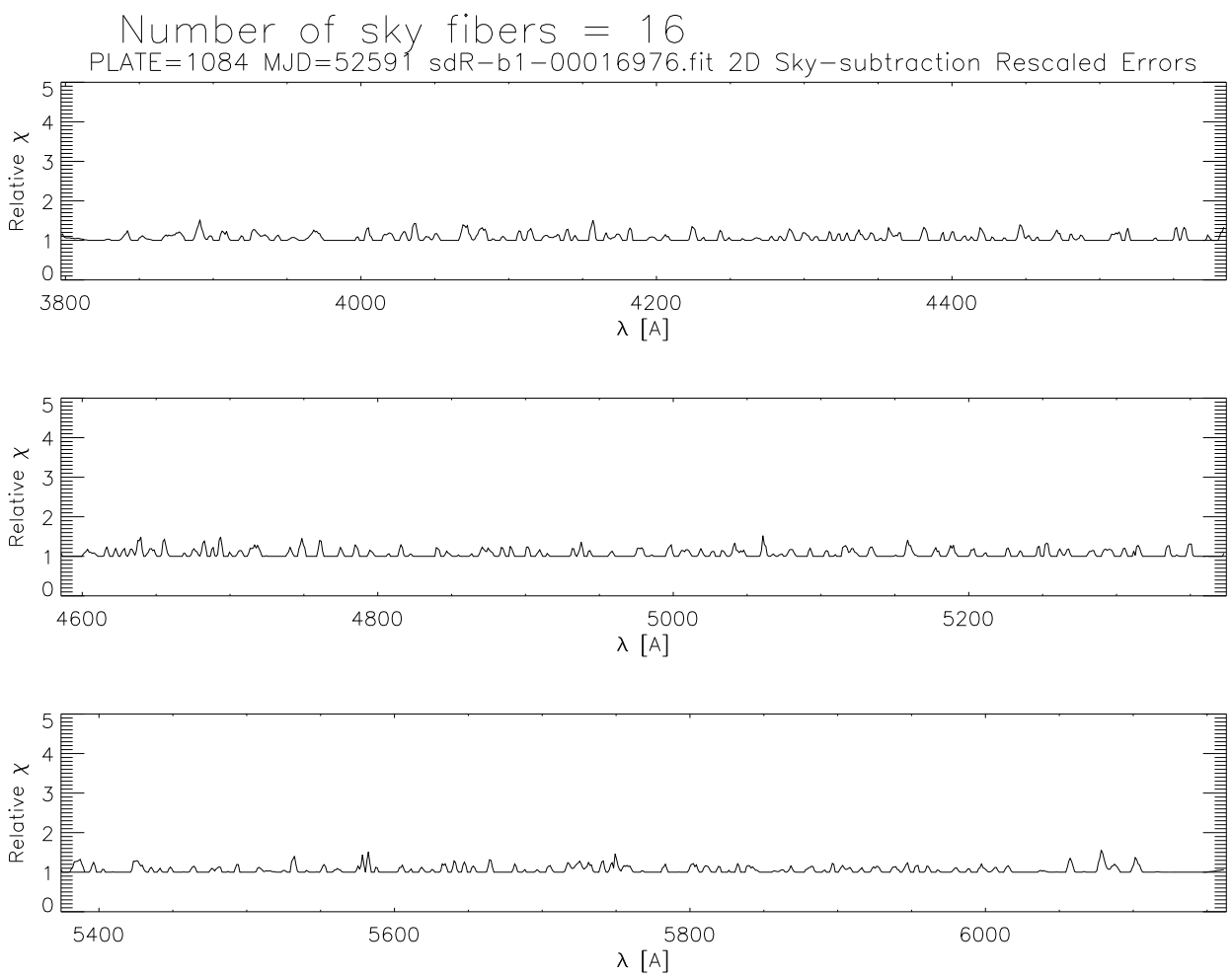

PLATE=1084 MJD=52591 sdR-b1-00016976.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
200
100
0
-100
-200
5570
5575
5580
5585
5590
λ [A]

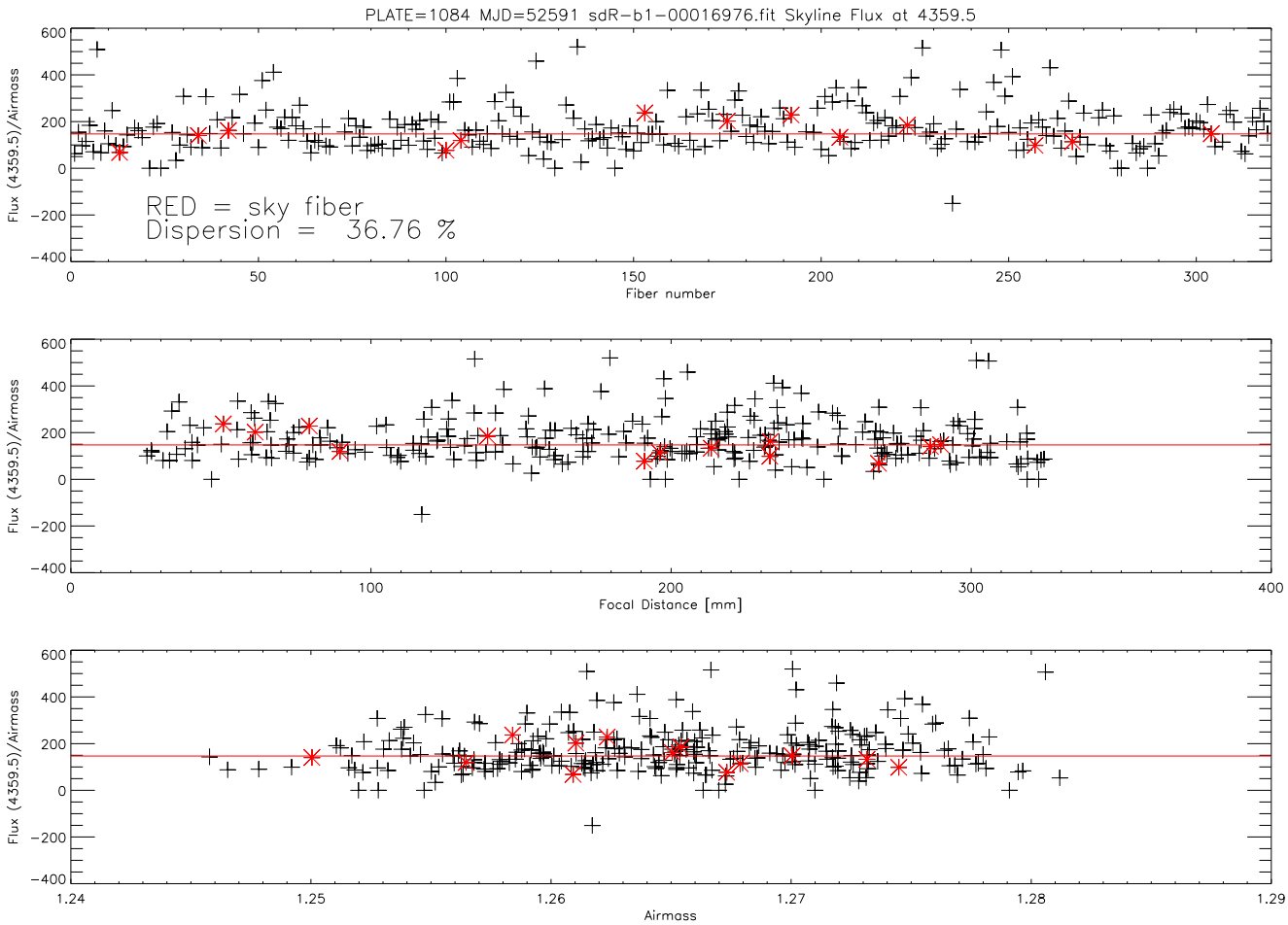

Number of sky fibers = 16
PLATE=1084 MJD=52591 sdR-b1-00016976.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

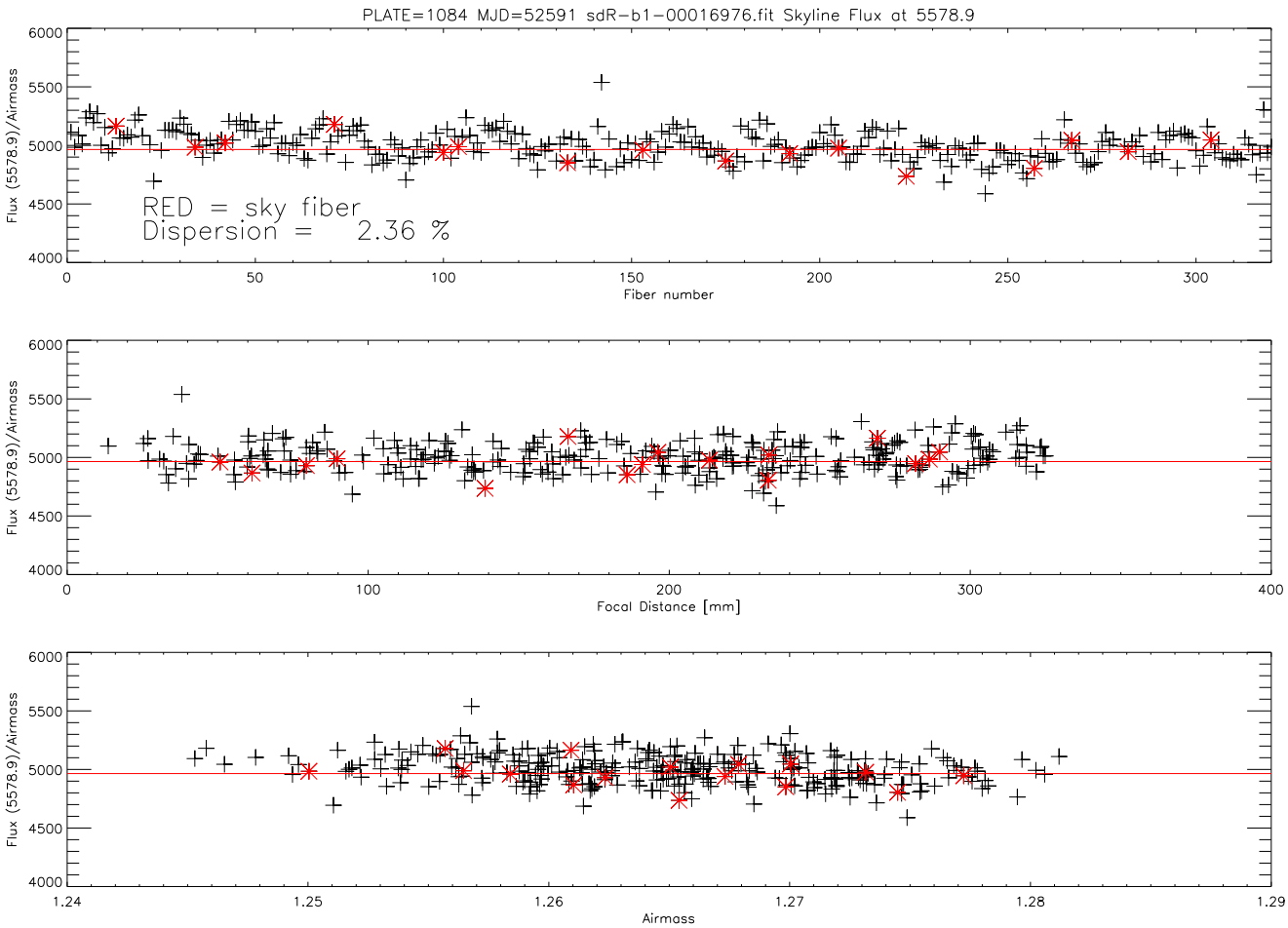

PLATE=1084 MJD=52591 sdR-b1-00016976.fit 2D Sky-subtraction Sky Fiber
Median χ^2
BLUE=After rescaling variance
Fiber number
Median Sky-Sub Flux
Fiber number

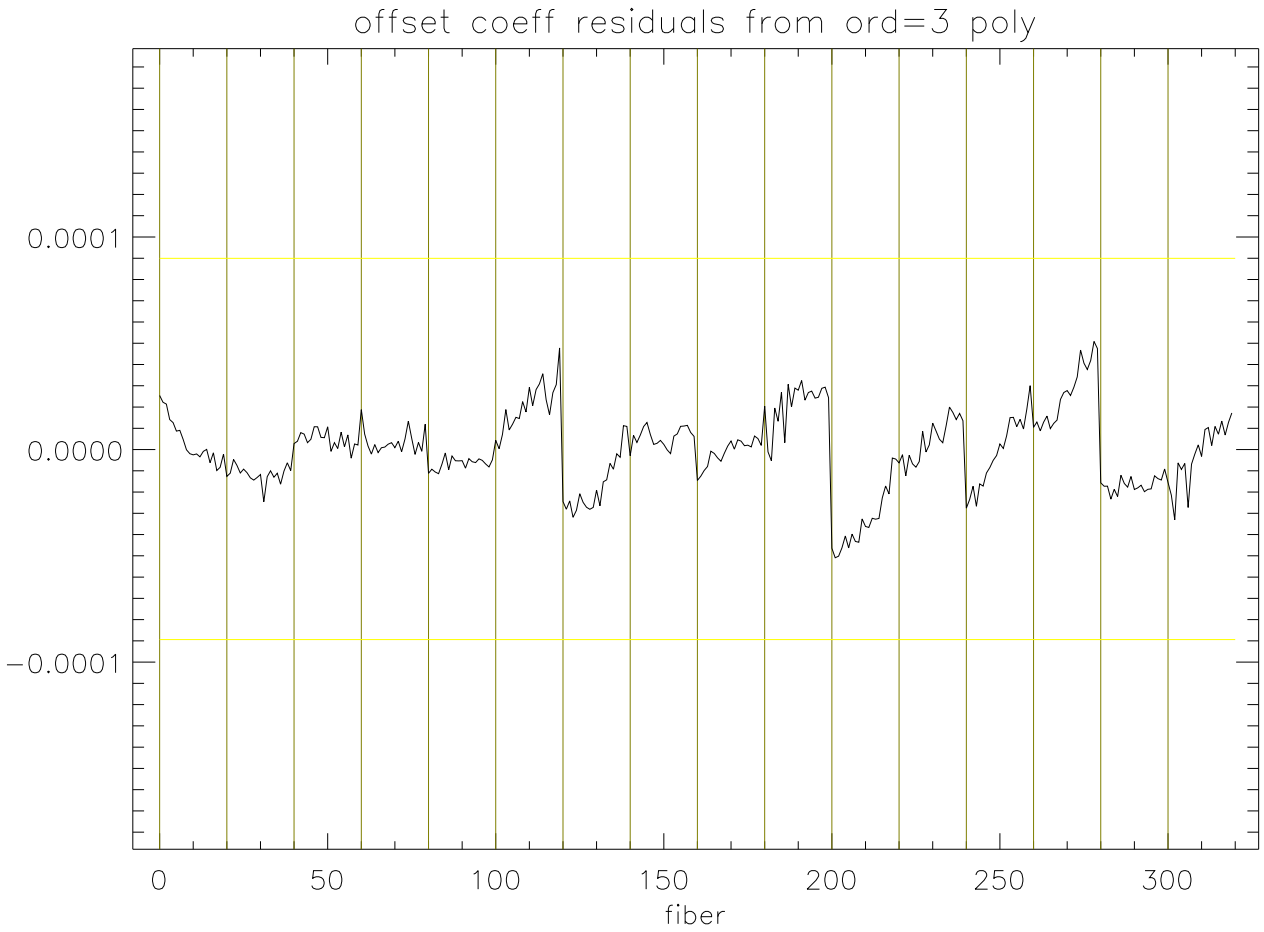

PLATE=1084 MJD=52591 sdR-b1-00016976.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
3000
2500
2000
1500
1000
500
0
5570
5575
5580
5585
5590
λ [A]

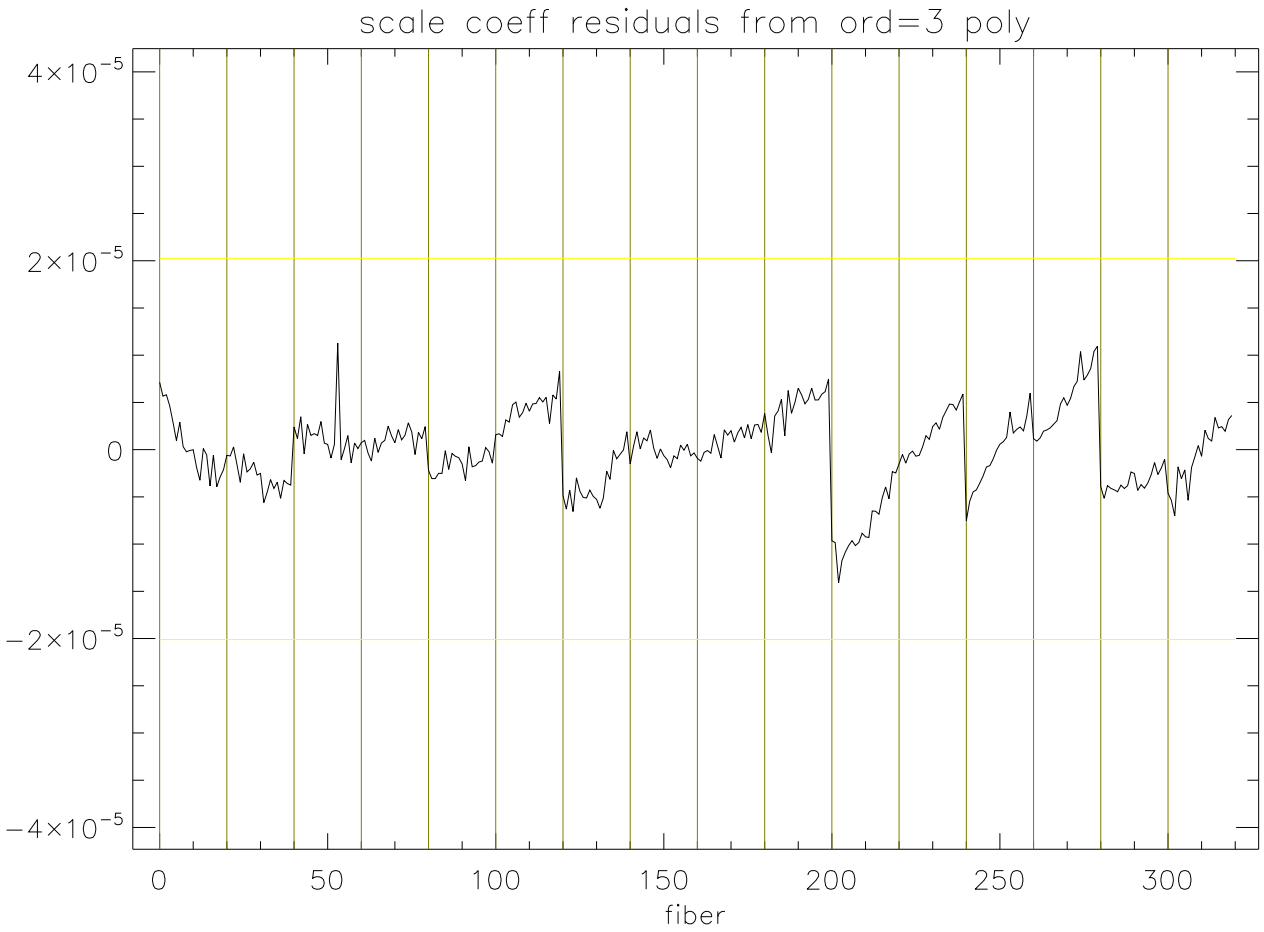

PLATE=1084 MJD=52591 sdR-b1-00016976.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
200
100
0
-100
-200
5570
5575
5580
5585
5590
λ [A]

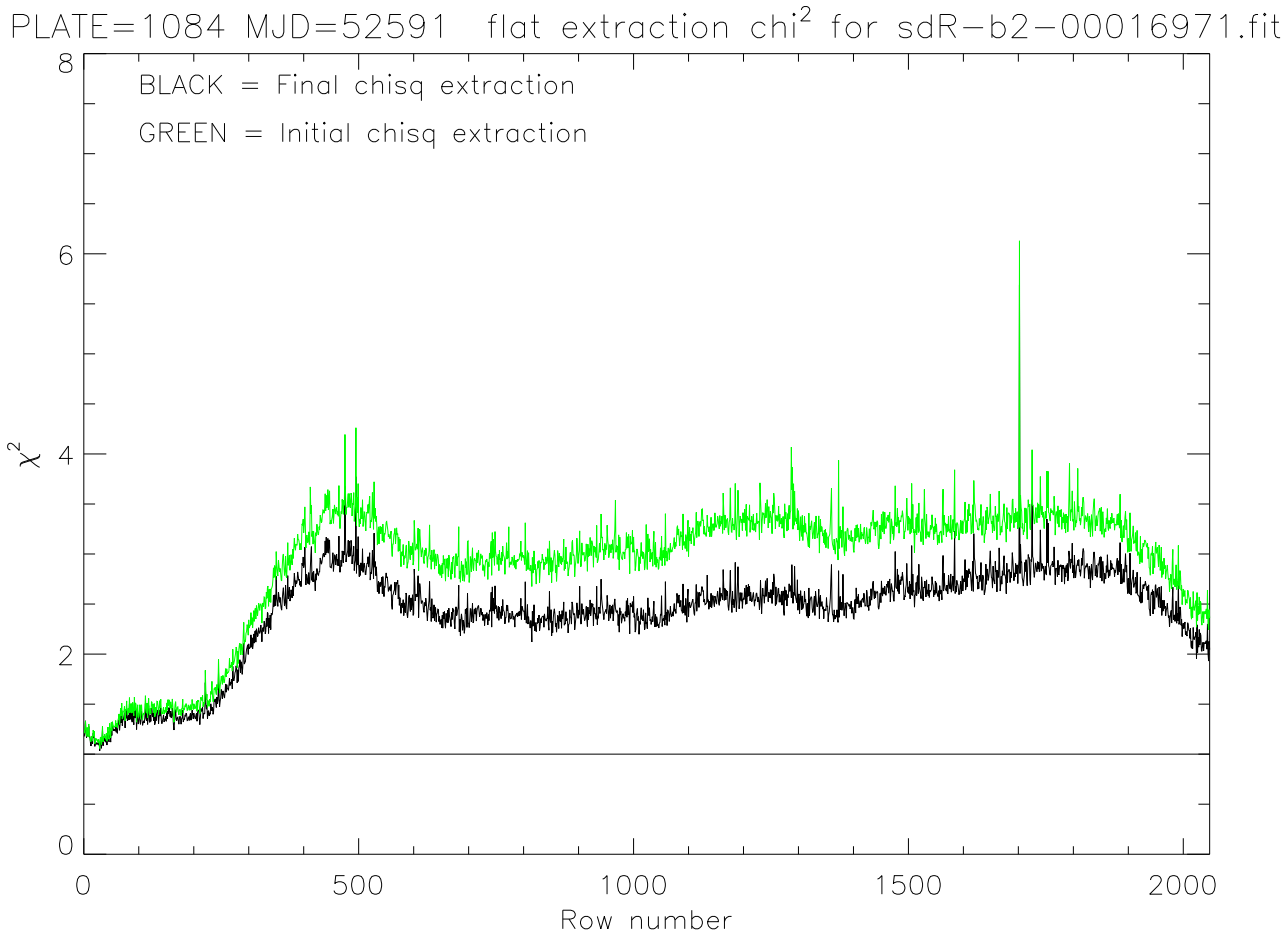

Number of sky fibers = 16
PLATE=1084 MJD=52591 sdR-b1-00016976.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

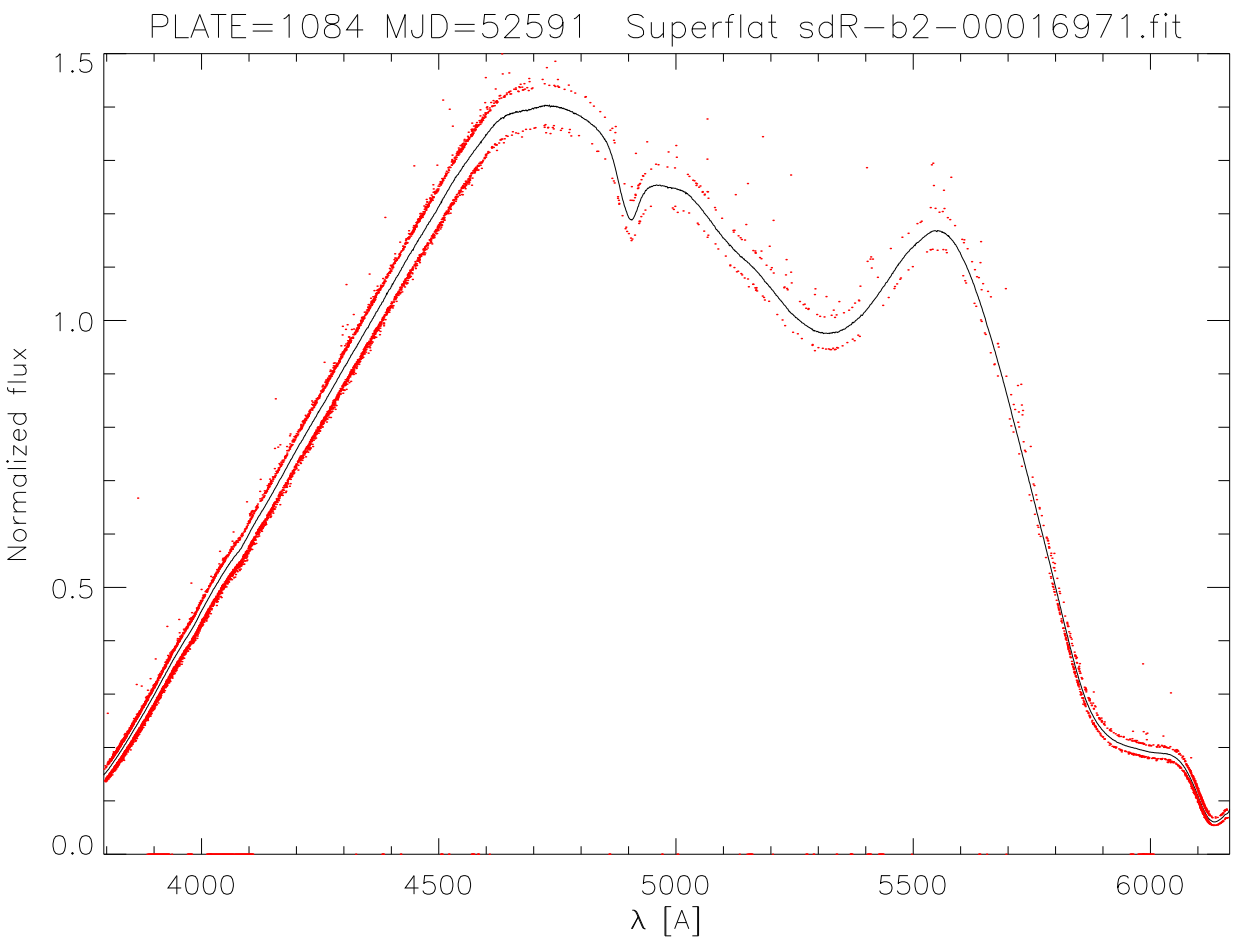

PLATE=1084 MJD=52591 sdR-b1-00016976.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
RED = sky fiber
Dispersion = 36.76 %
Fiber number
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

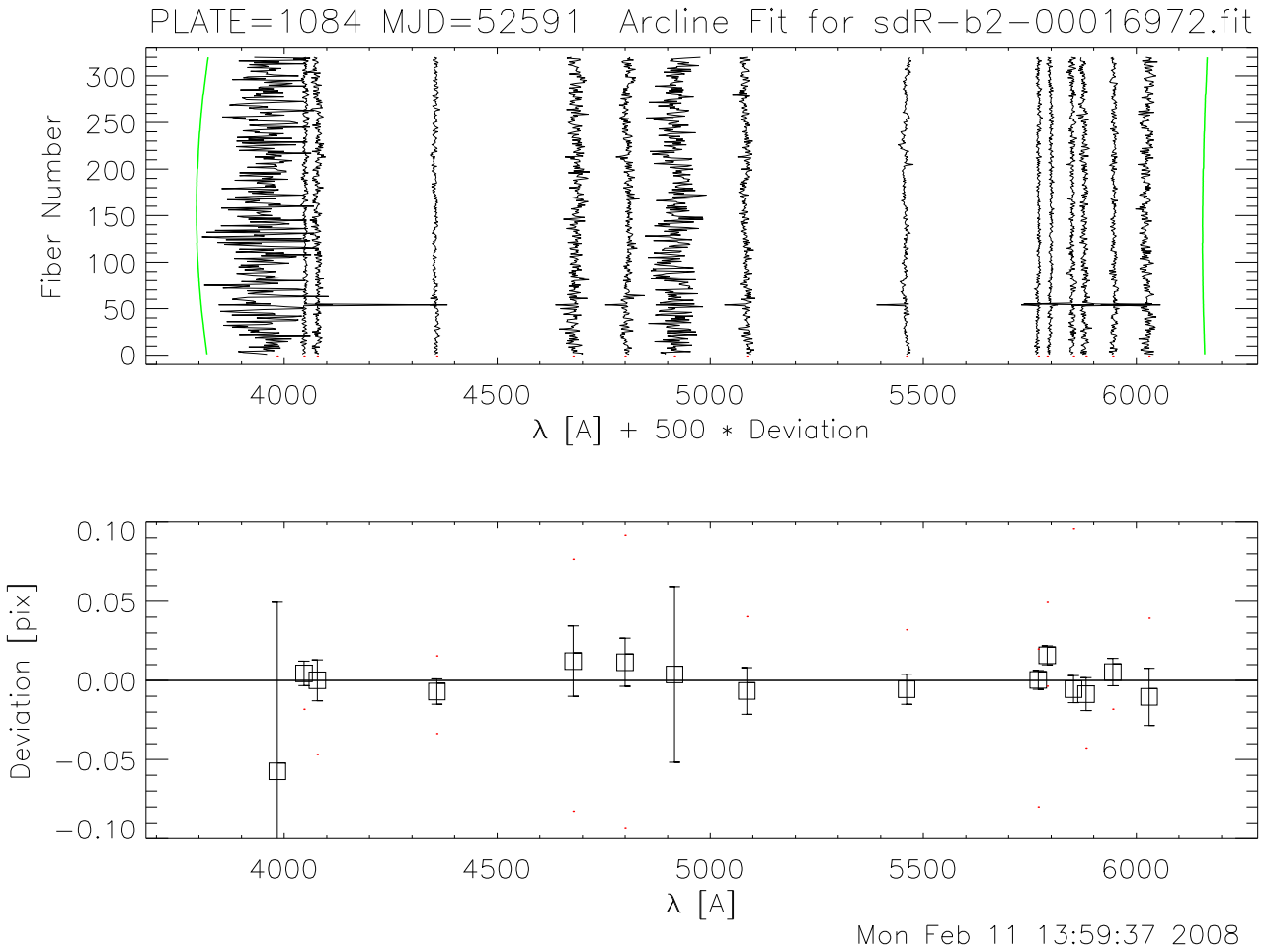

PLATE=1084 MJD=52591 sdR-b1-00016976.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
Fiber number
RED = sky fiber
Dispersion = 2.36 %
Flux (5578.9)/Airmass
Focal Distance [mm]
Flux (5578.9)/Airmass
Airmass

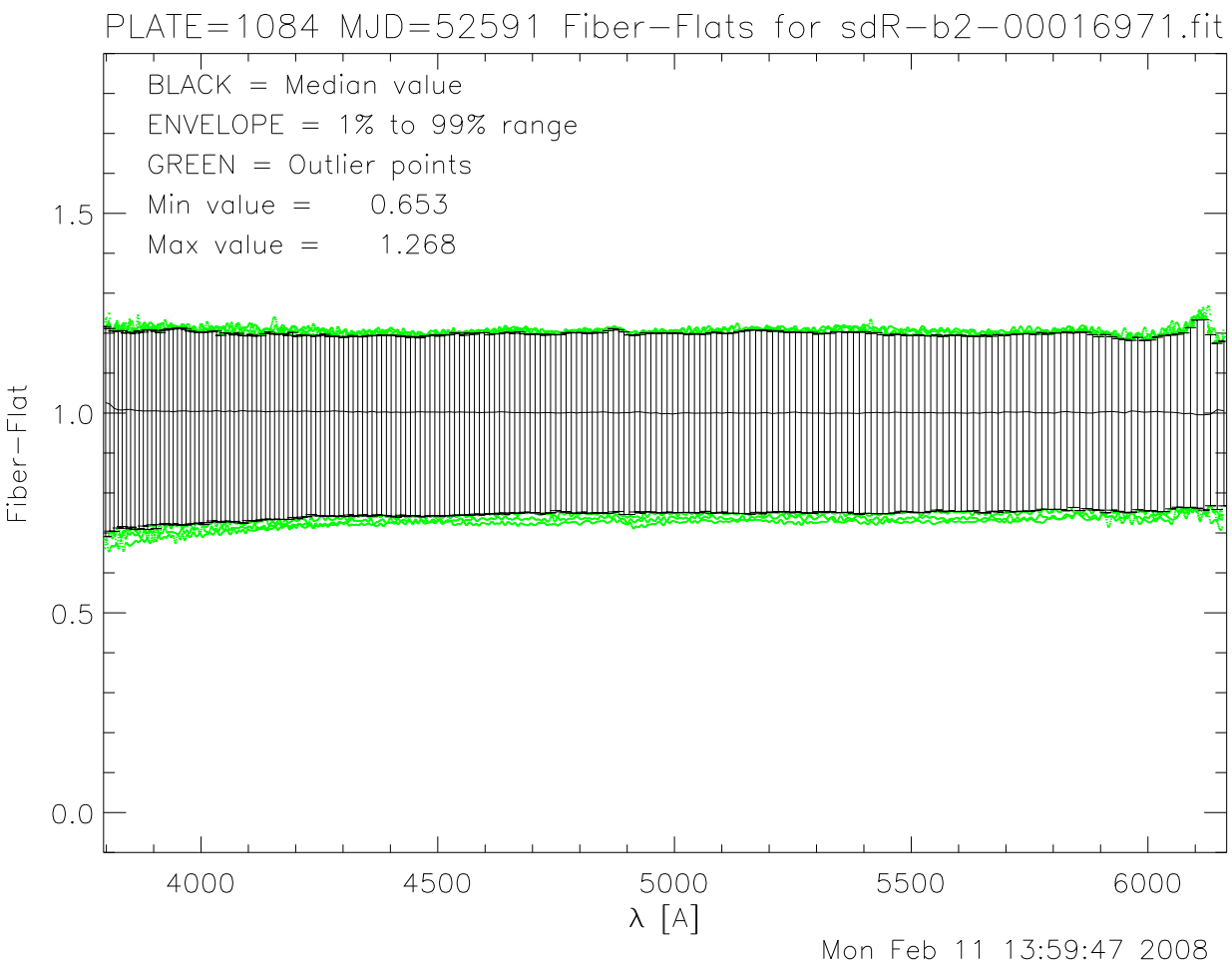

offset coeff residuals from ord=3 poly
0.0001
0.0000
−0.0001
0
50
100
150
200
250
300
fiber

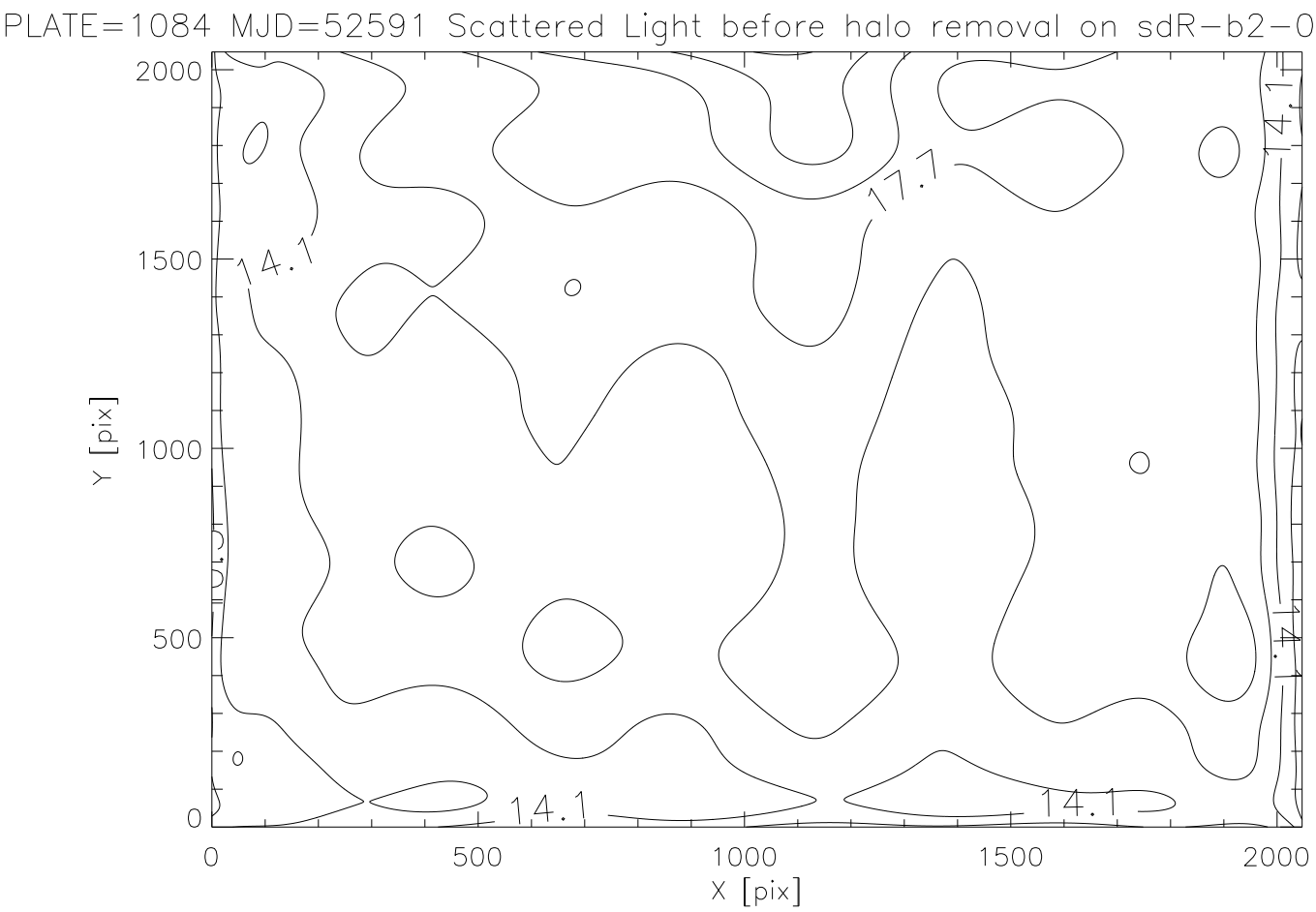

scale coeff residuals from ord=3 poly
4×10^-5
2×10^-5
0
−2×10^-5
−4×10^-5
0
50
100
150
200
250
300
fiber

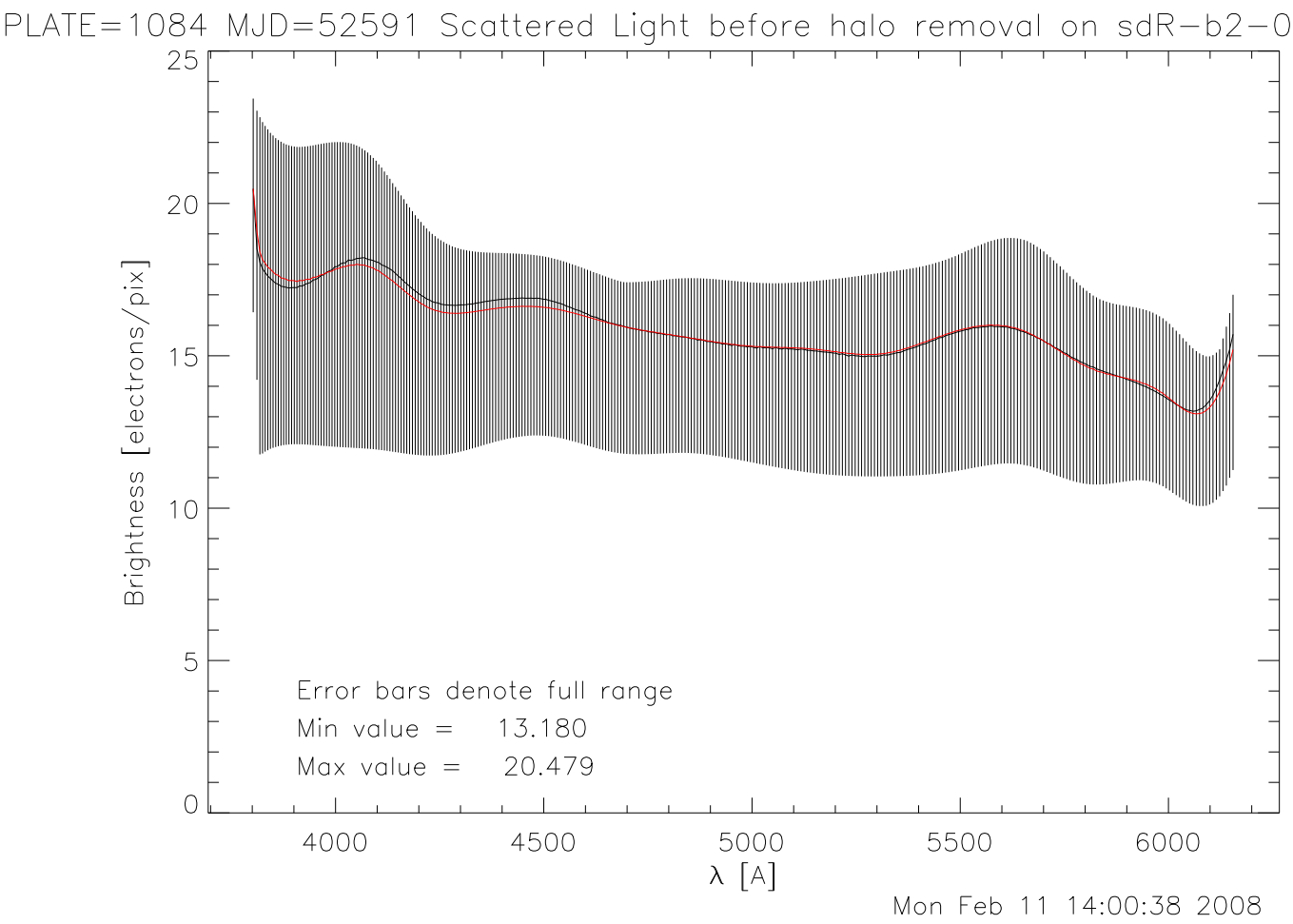

PLATE=1084 MJD=52591 flat extraction chi^2 for sdR-b2-00016971.fit
BLACK = Final chisq extraction
GREEN = Initial chisq extraction
χ^2
0
2
4
6
8
0
500
1000
1500
2000
Row number

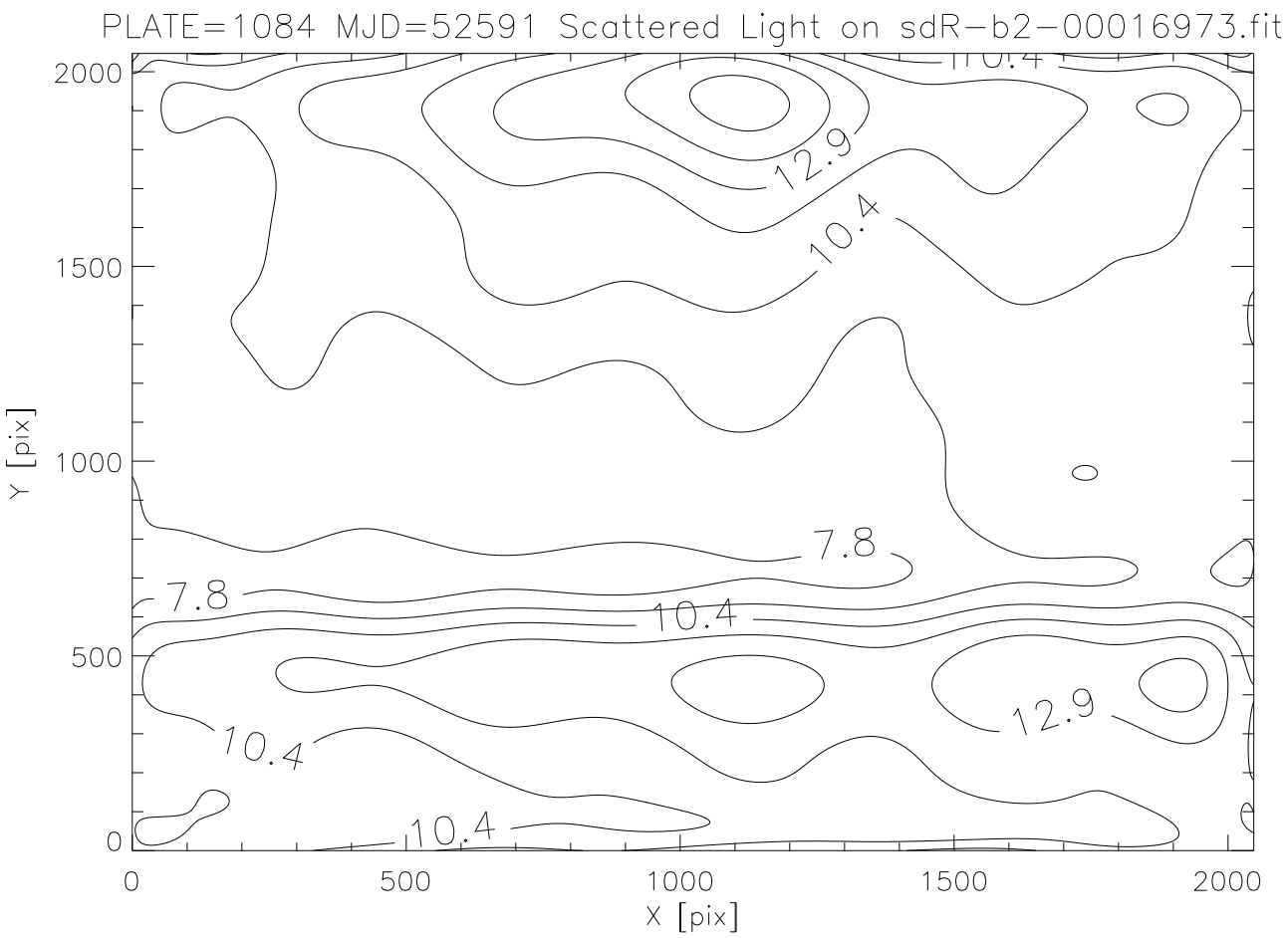

PLATE=1084 MJD=52591 Superflat sdR-b2-00016971.fit
Normalized flux
1.5
1.0
0.5
0.0
4000
4500
5000
5500
6000
λ [A]

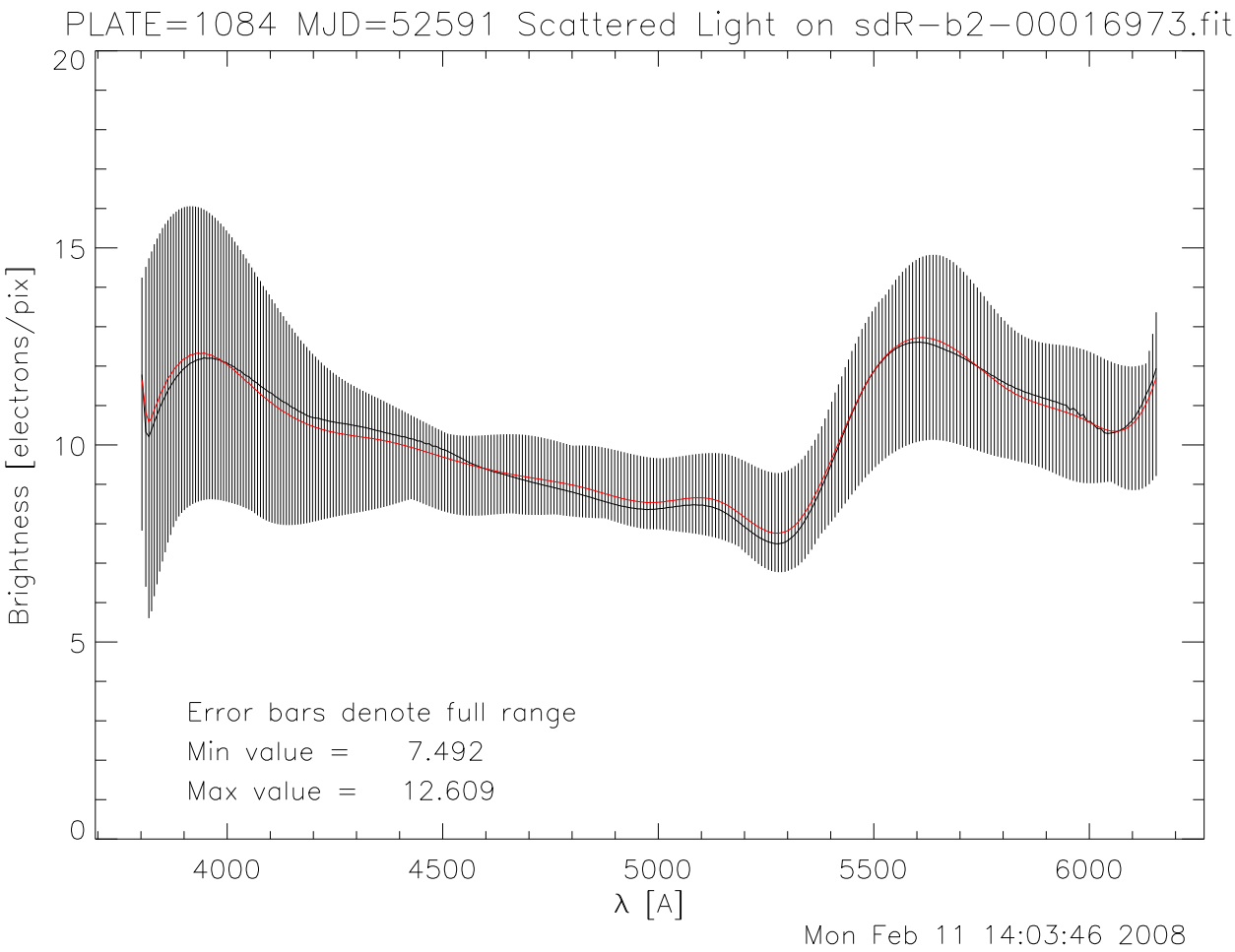

PLATE=1084 MJD=52591 Arcline Fit for sdR-b2-00016972.fit
Fiber Number
300
250
200
150
100
50
0
4000
4500
5000
5500
6000
λ [A] + 500 * Deviation
Deviation [pix]
0.10
0.05
0.00
−0.05
−0.10
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:59:37 2008

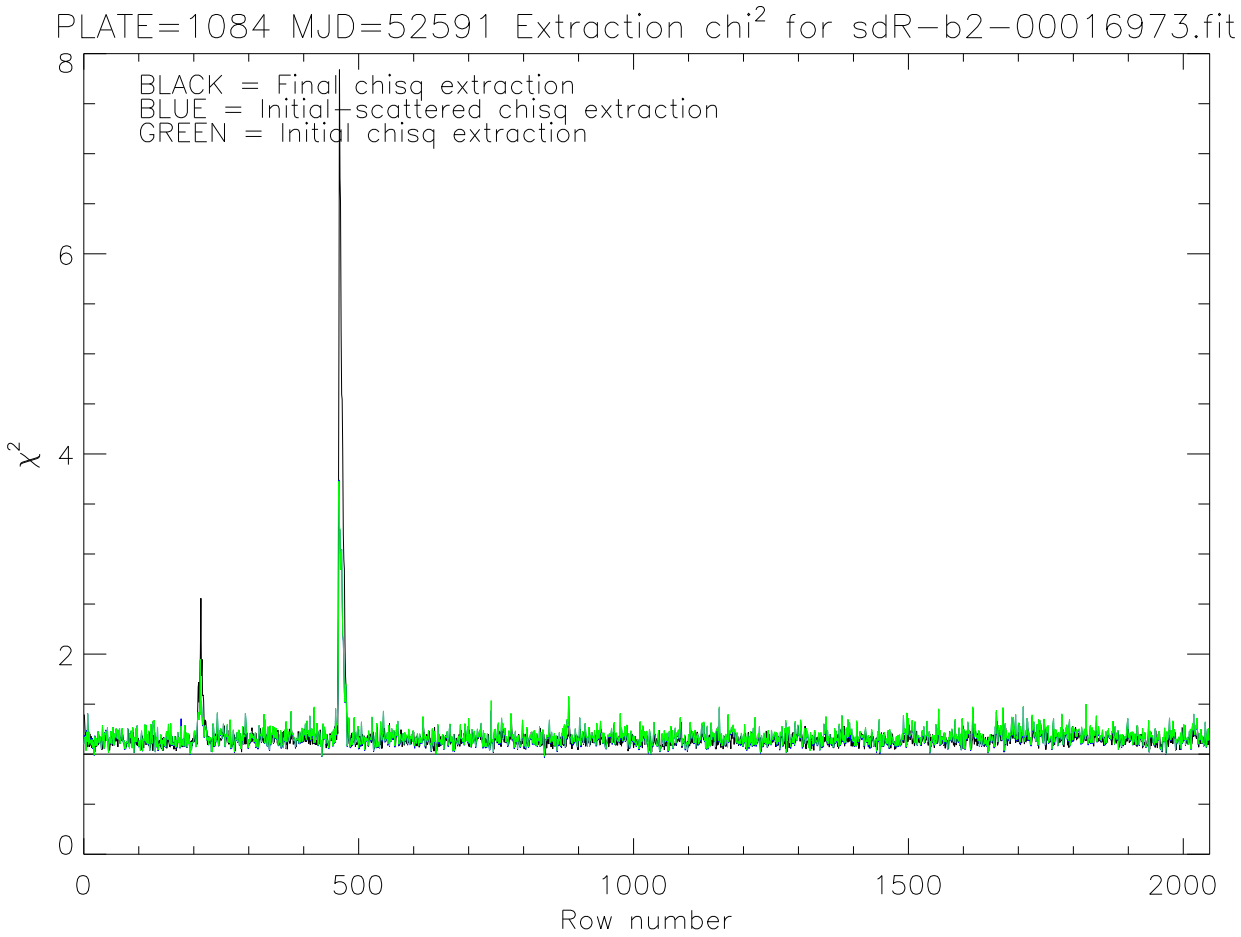

PLATE=1084 MJD=52591 Fiber-Flats for sdR-b2-00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.653
Max value = 1.268
Fiber-Flat
1.5
1.0
0.5
0.0
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 13:59:47 2008

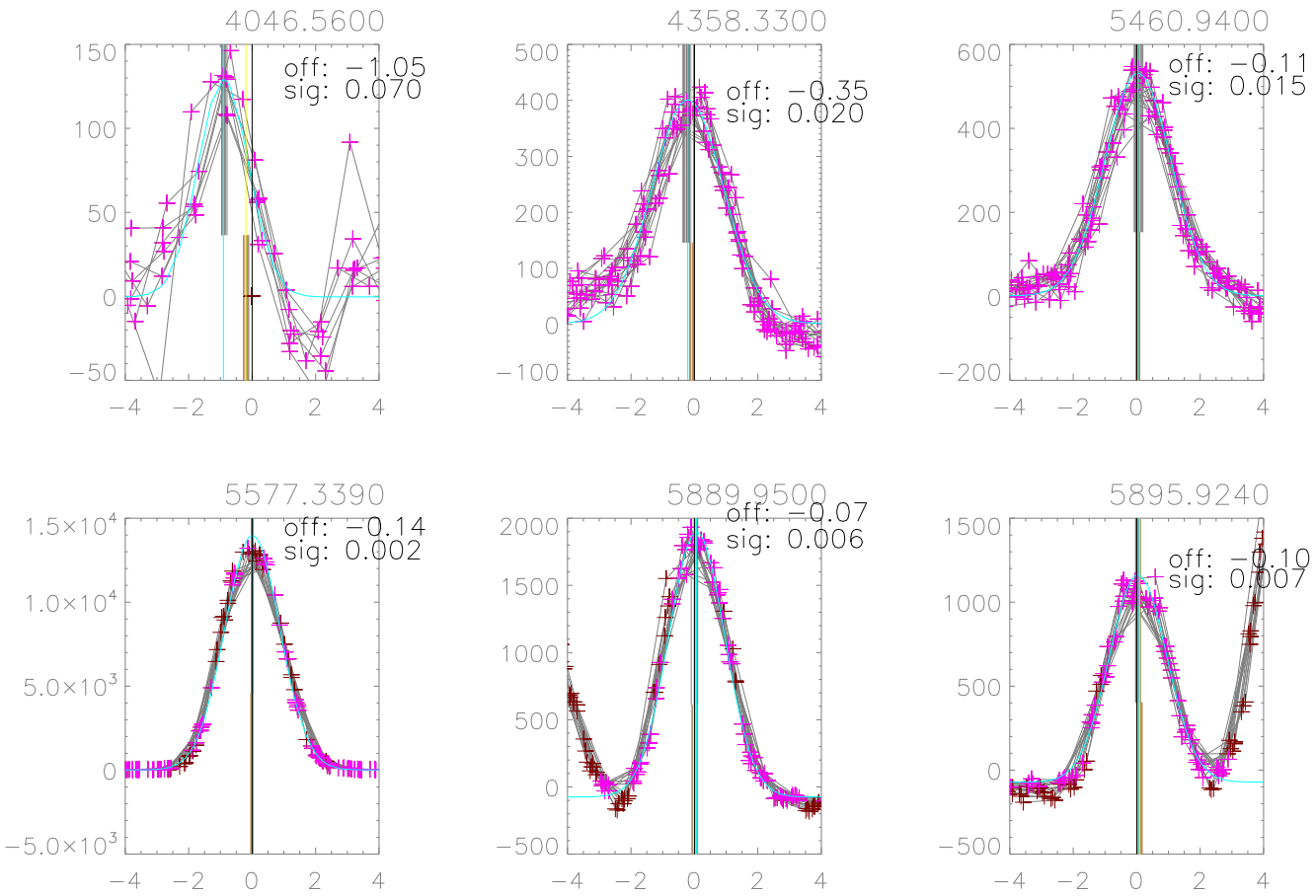

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b2-00016973.f
2000
1500
1000
500
0
Y [pix]
0
500
1000
1500
2000
X [pix]
14.1
17.1
14.1
14.1
14.1
14.1

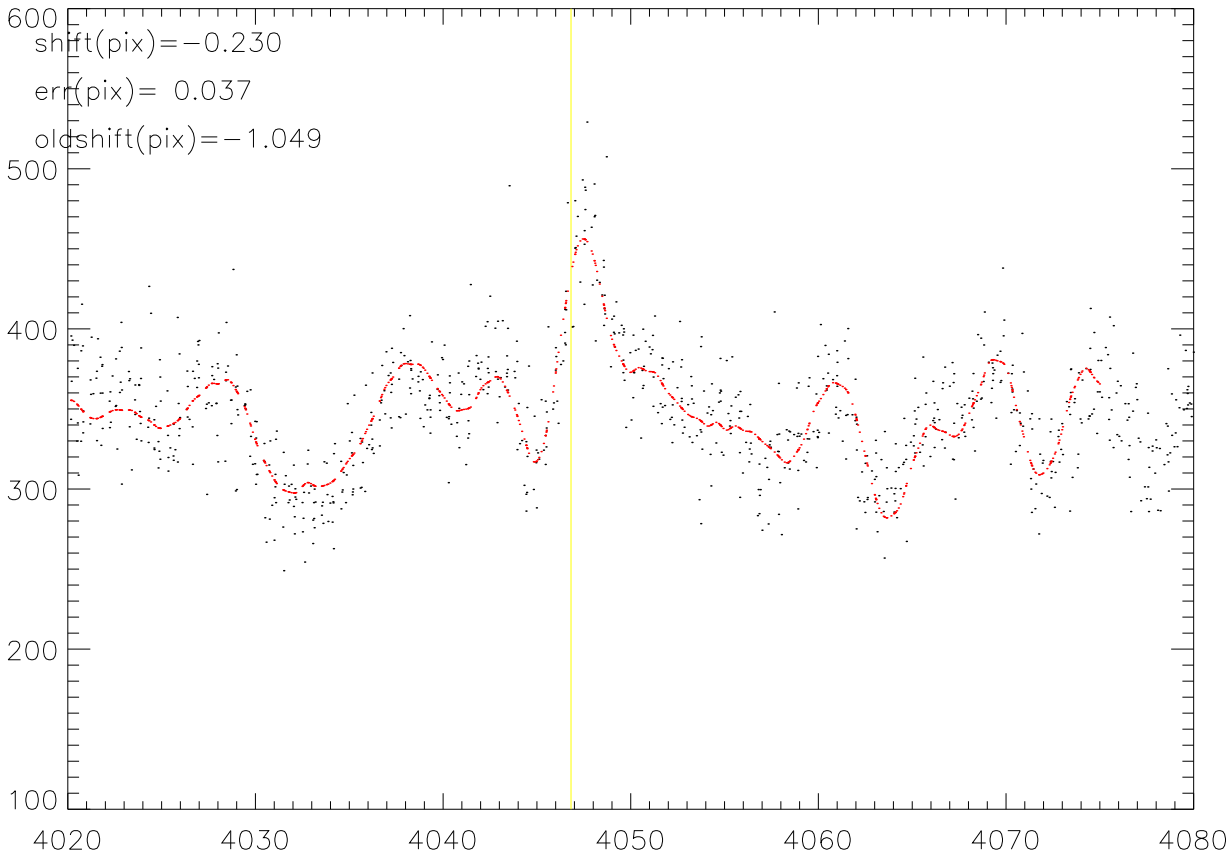

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b2-00016973.f
Brightness [electrons/pix]
25
20
15
10
5
0
Error bars denote full range
Min value = 13.180
Max value = 20.479
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 14:00:38 2008

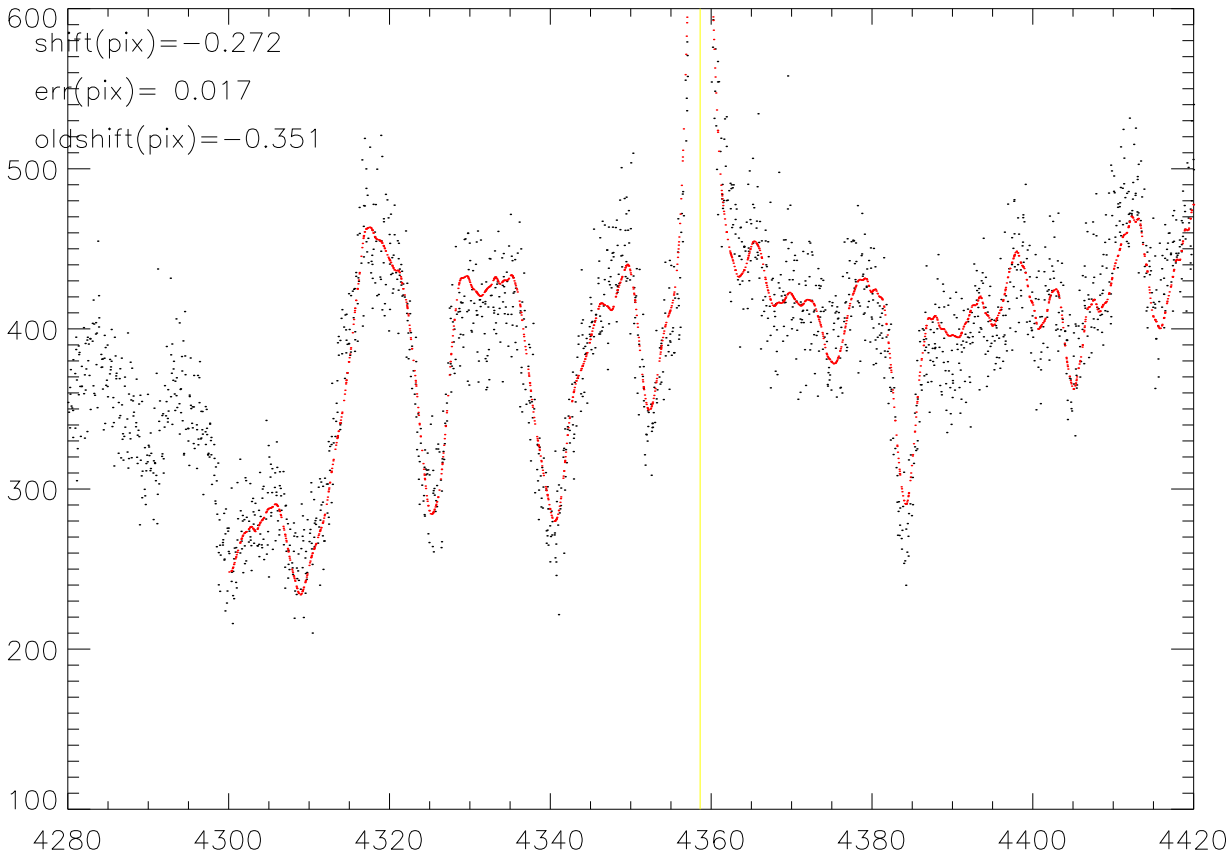

PLATE=1084 MJD=52591 Scattered Light on sdR-b2-00016973.fit
Y [pix]
X [pix]
0
500
1000
1500
2000
12.9
10.4
7.8
0

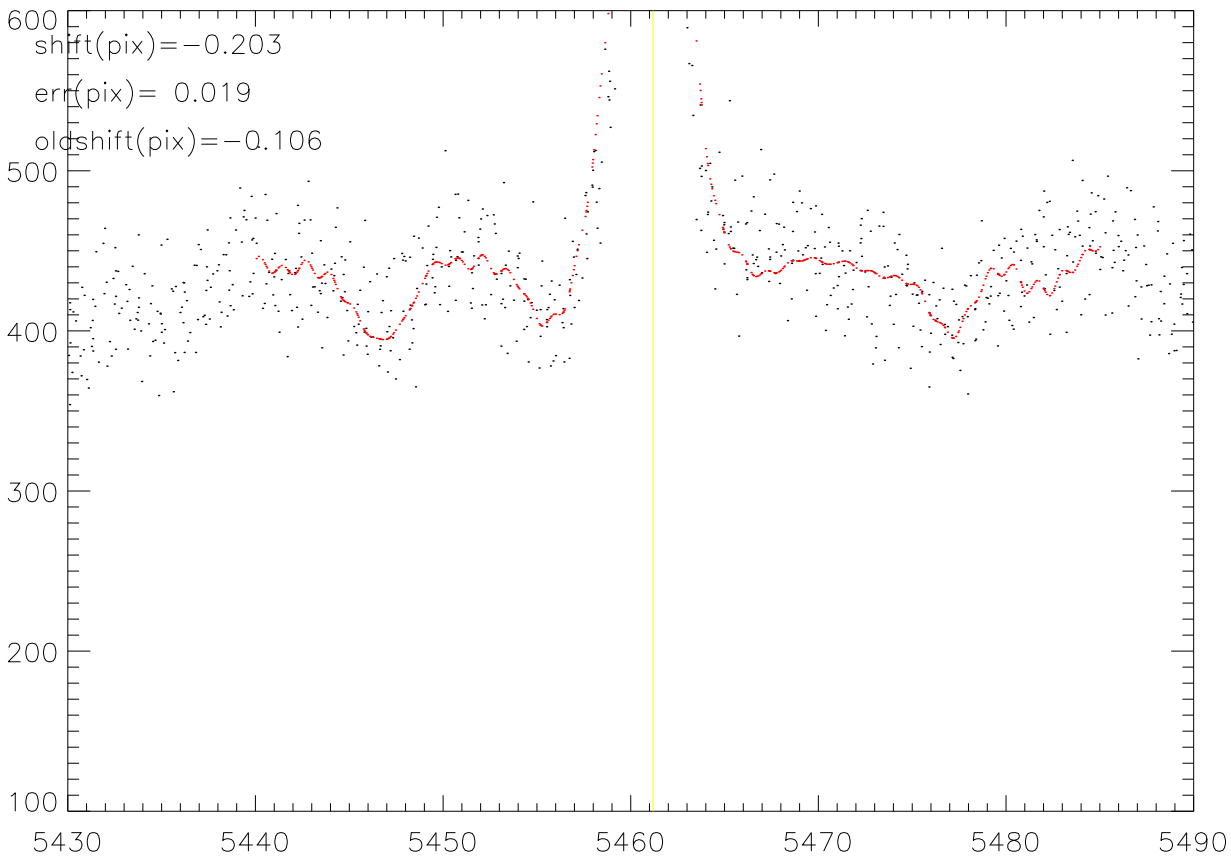

PLATE=1084 MJD=52591 Scattered Light on sdR-b2-00016973.fit
Brightness [electrons/pix]
20
15
10
5
0
4000
4500
5000
5500
6000
λ [A]
Error bars denote full range
Min value = 7.492
Max value = 12.609
Mon Feb 11 14:03:46 2008

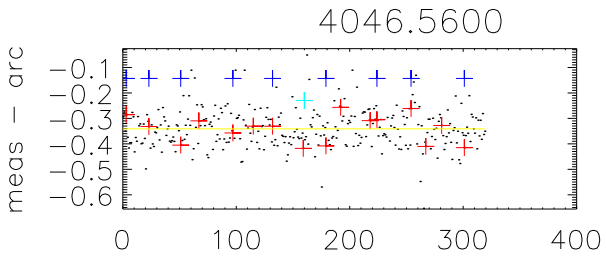

PLATE=1084 MJD=52591 Extraction chi^2 for sdR-b2-00016973.fit
BLACK = Final chisq extraction
BLUE = Initial-scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
0
2
4
6
8
0
500
1000
1500
2000
Row number

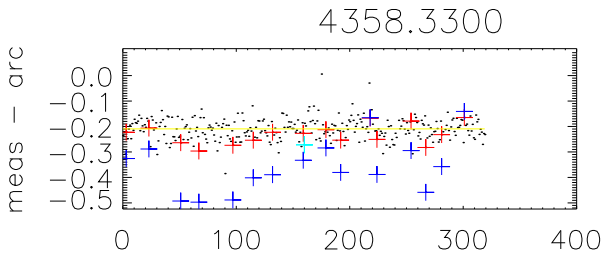

4046.5600
off: −1.05
sig: 0.070
4358.3300
off: −0.35
sig: 0.020
5460.9400
off: −0.11
sig: 0.015
5577.3390
off: −0.14
sig: 0.002
5889.9500
off: −0.07
sig: 0.006
5895.9240
off: −0.10
sig: 0.007

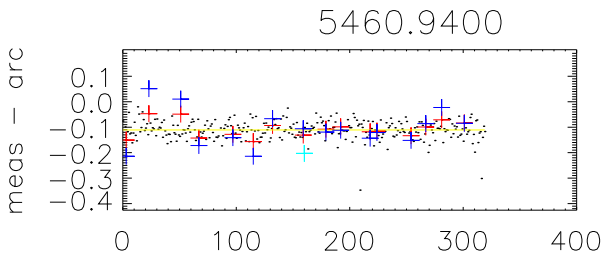

shift(pix)=−0.230
err(pix)= 0.037
oldshift(pix)=−1.049
600
500
400
300
200
100
4020
4030
4040
4050
4060
4070
4080

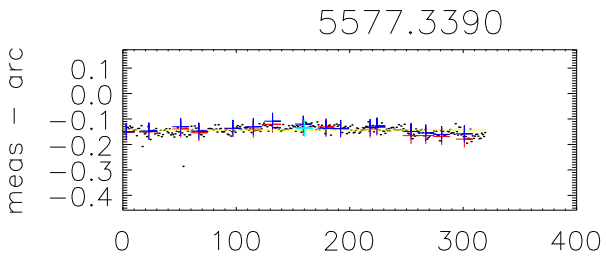

shift(pix)=−0.272
err(pix)= 0.017
oldshift(pix)=−0.351
600
500
400
300
200
100
4280
4300
4320
4340
4360
4380
4400
4420

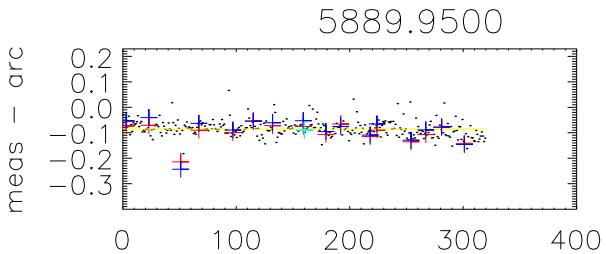

shift(pix)=−0.203
err(pix)= 0.019
oldshift(pix)=−0.106
600
500
400
300
200
100
5430
5440
5450
5460
5470
5480
5490

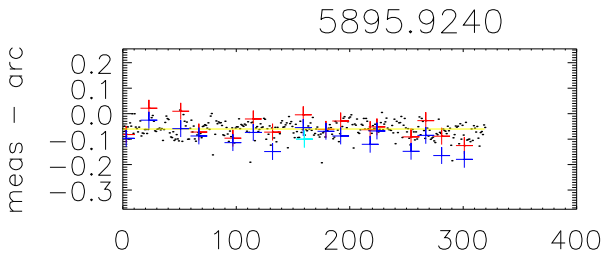

4046.5600
meas − arc
−0.1
−0.2
−0.3
−0.4
−0.5
−0.6
0
100
200
300
400

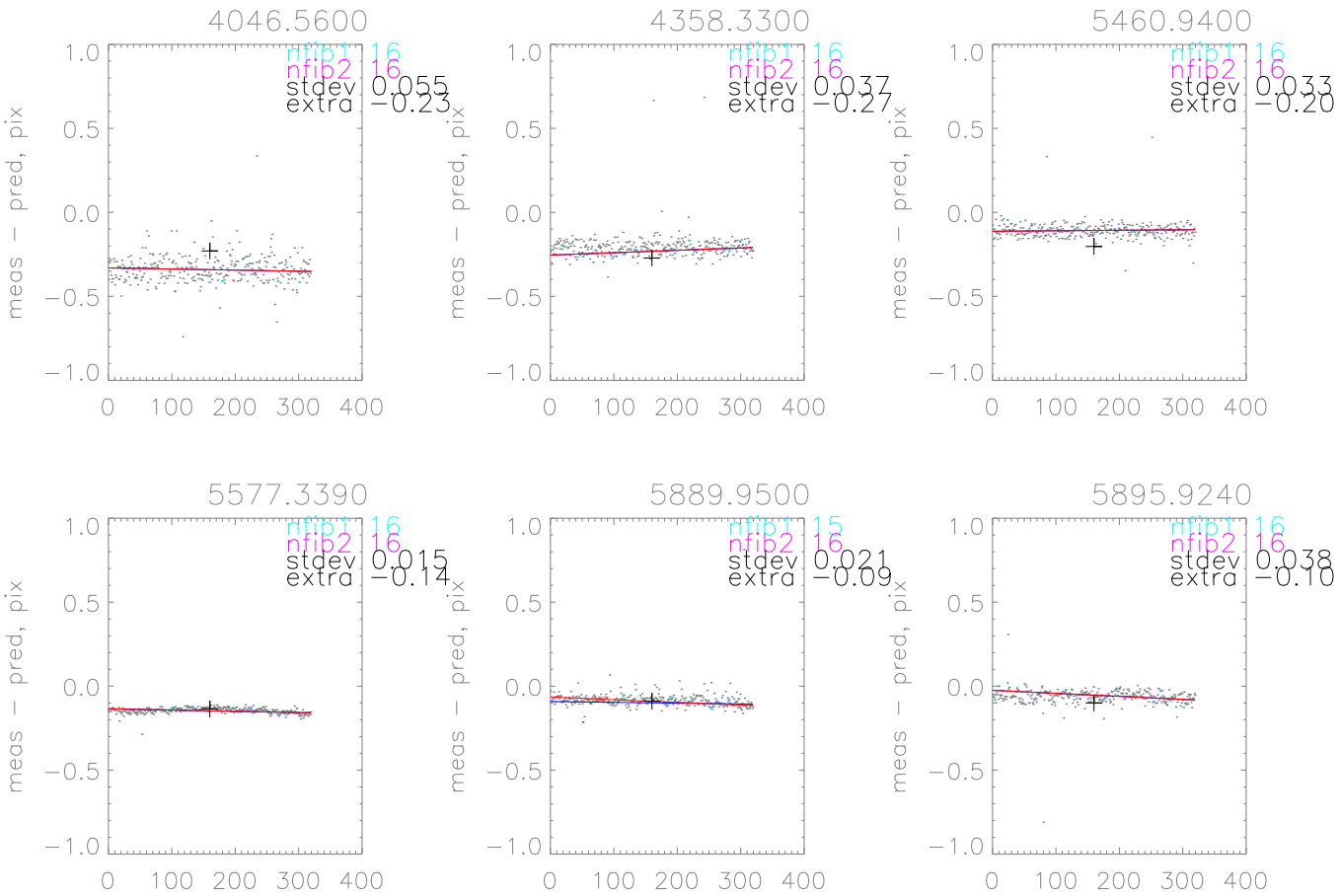

4358.3300
meas − arc
0.0
−0.1
−0.2
−0.3
−0.4
−0.5
0
100
200
300
400

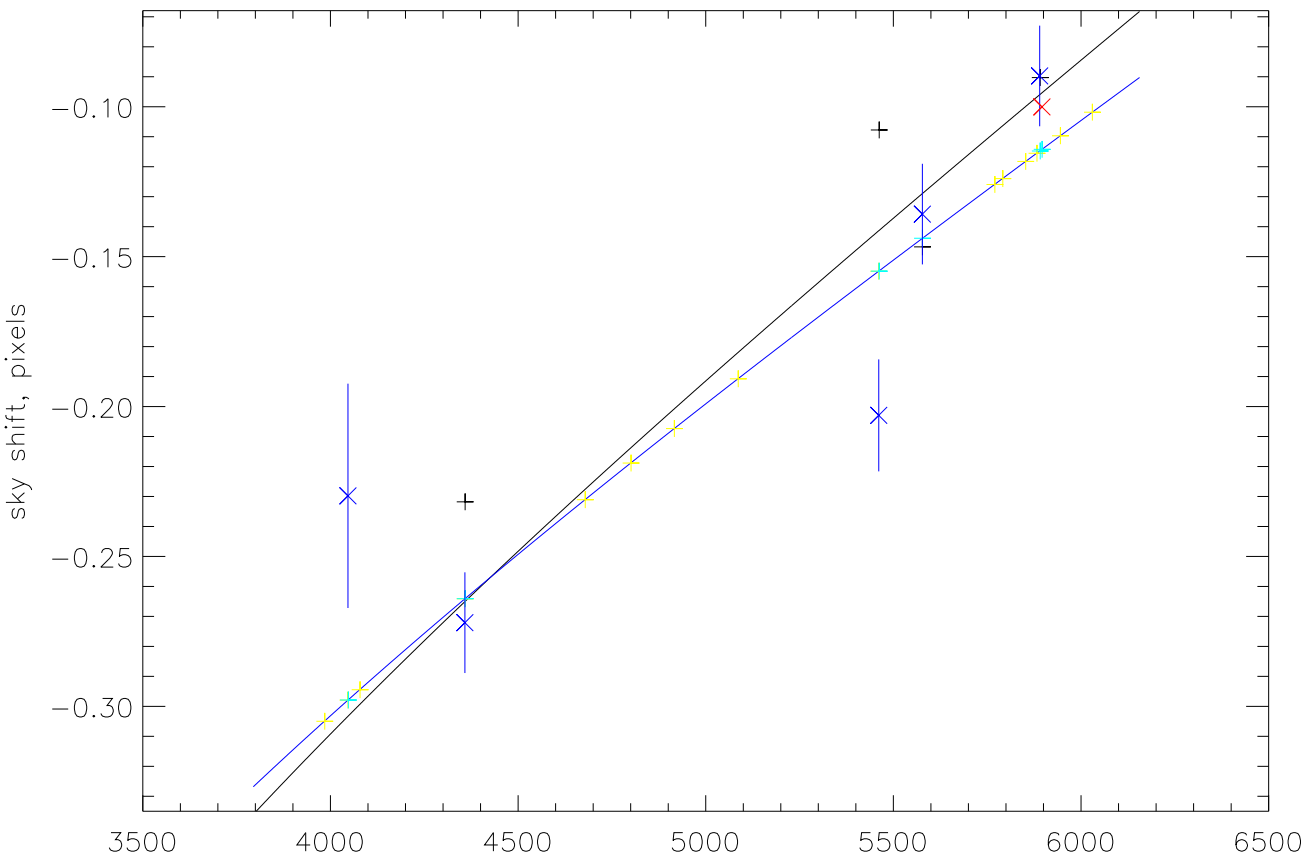

5460.9400
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

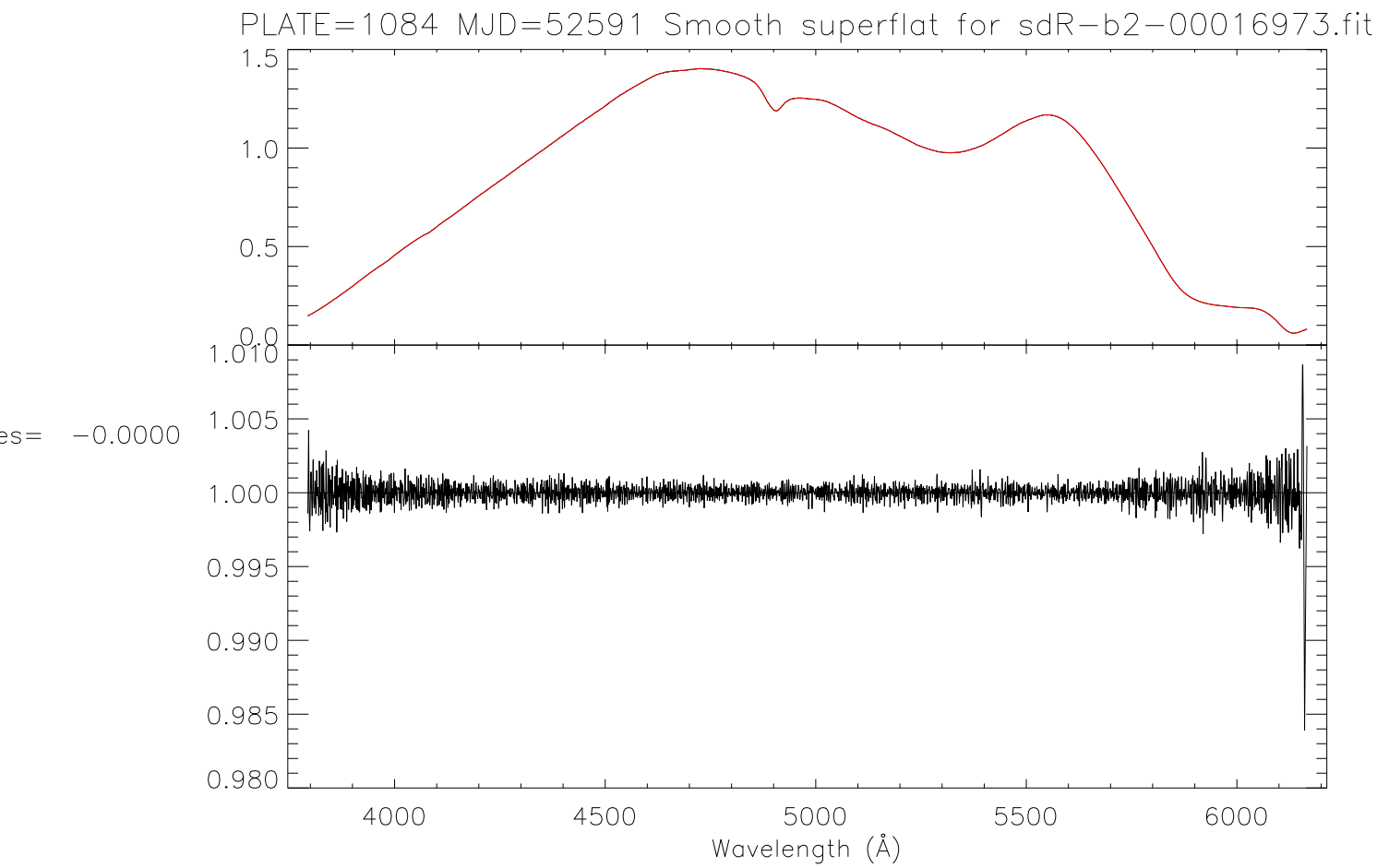

5577.3390
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

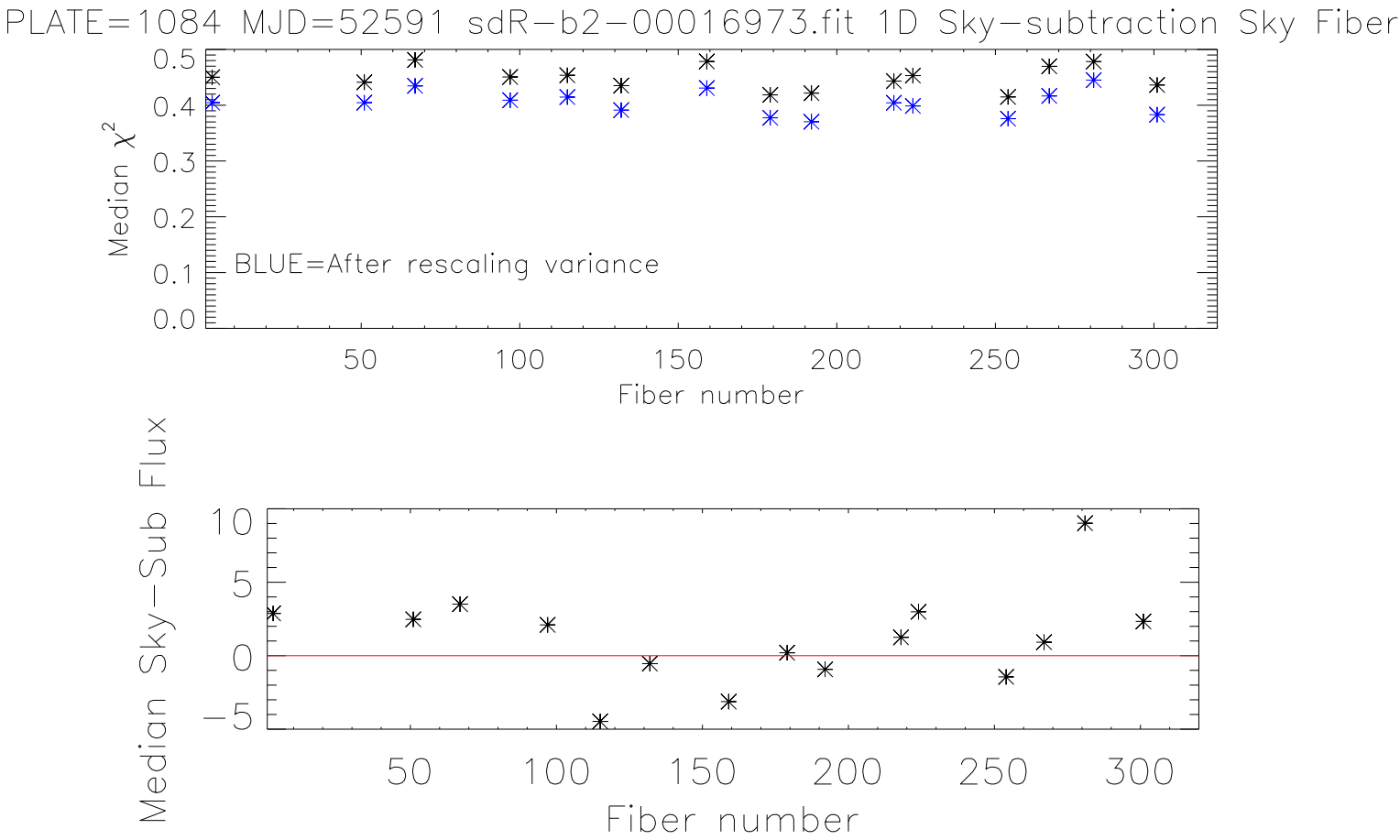

5889.9500
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

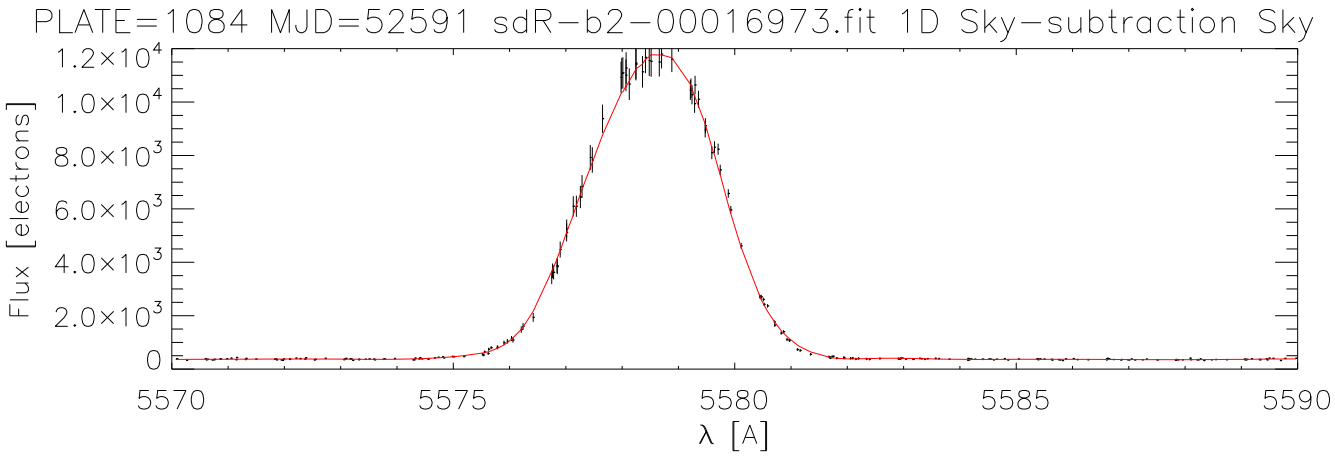

5895.9240
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

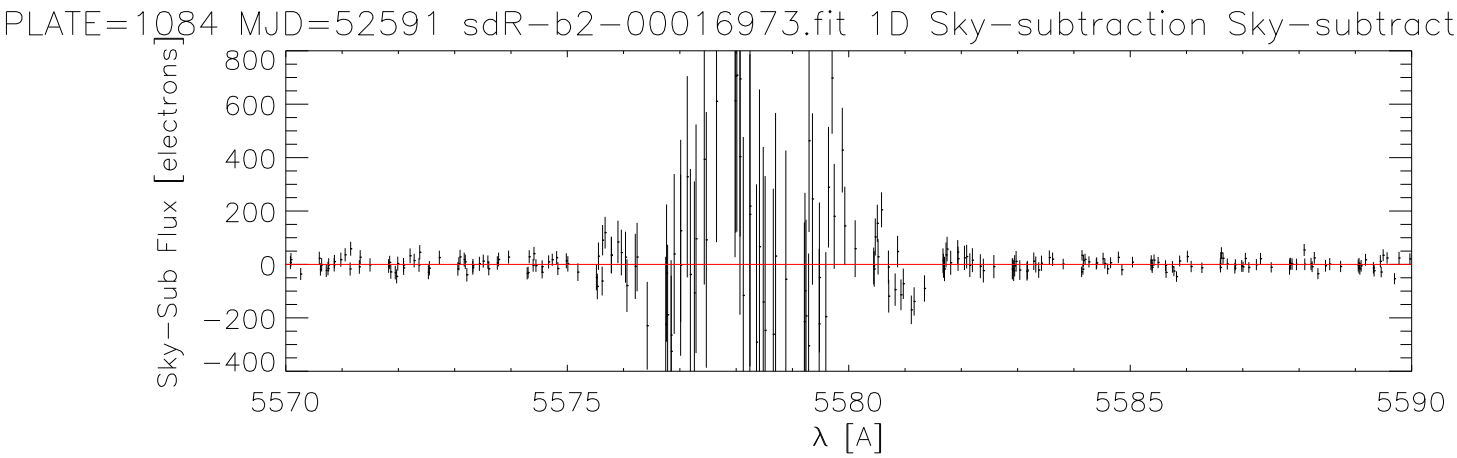

4046.5600
nfib1 16
nfib2 16
stdev 0.055
extra −0.23
4358.3300
nfib1 16
nfib2 16
stdev 0.037
extra −0.27
5460.9400
nfib1 16
nfib2 16
stdev 0.033
extra −0.20
5577.3390
nfib1 16
nfib2 16
stdev 0.015
extra −0.14
5889.9500
nfib1 15
nfib2 16
stdev 0.021
extra −0.09
5895.9240
nfib1 16
nfib2 16
stdev 0.038
extra −0.10
meas − pred, pix
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400

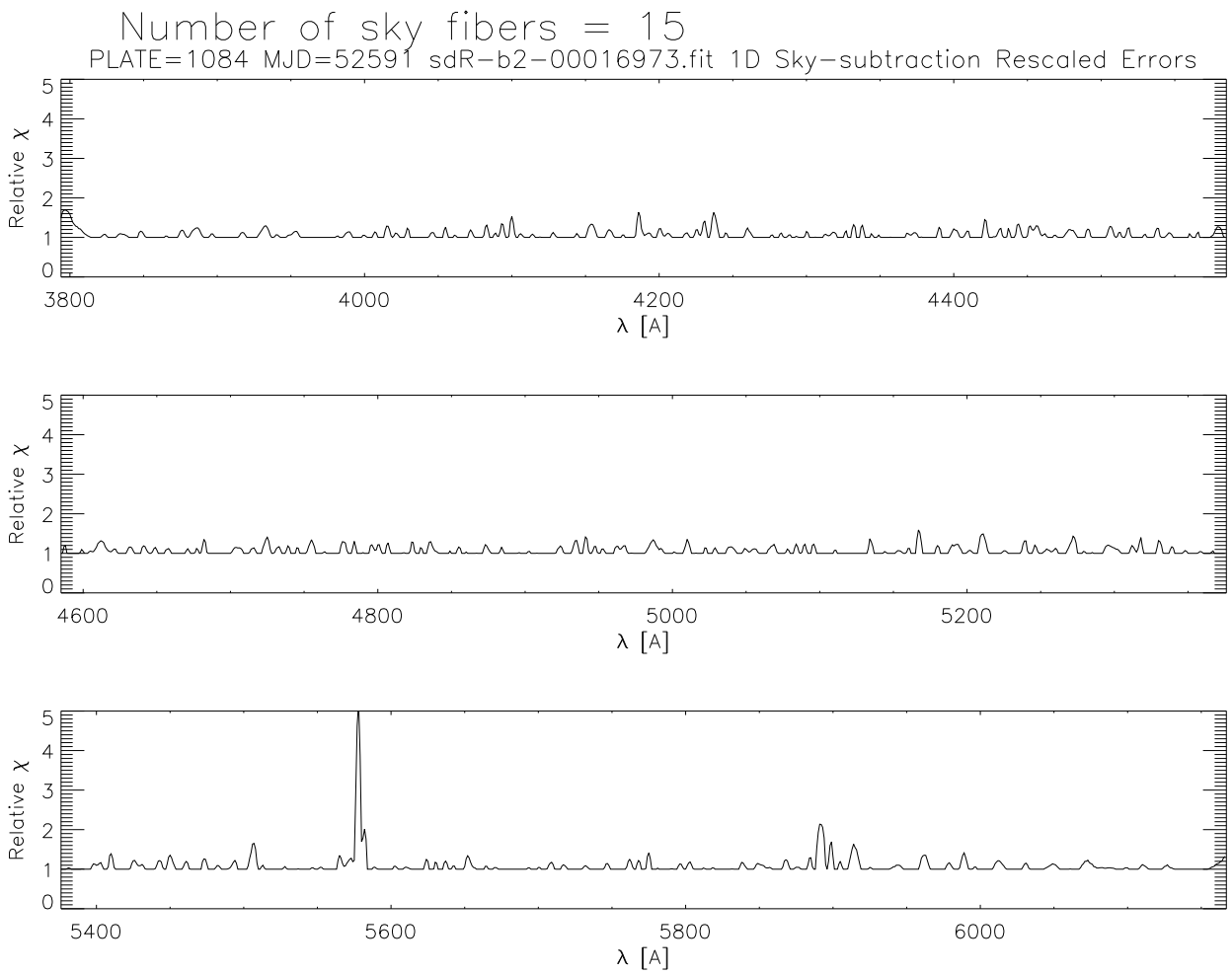

sky shift, pixels
−0.10
−0.15
−0.20
−0.25
−0.30
3500
4000
4500
5000
5500
6000
6500

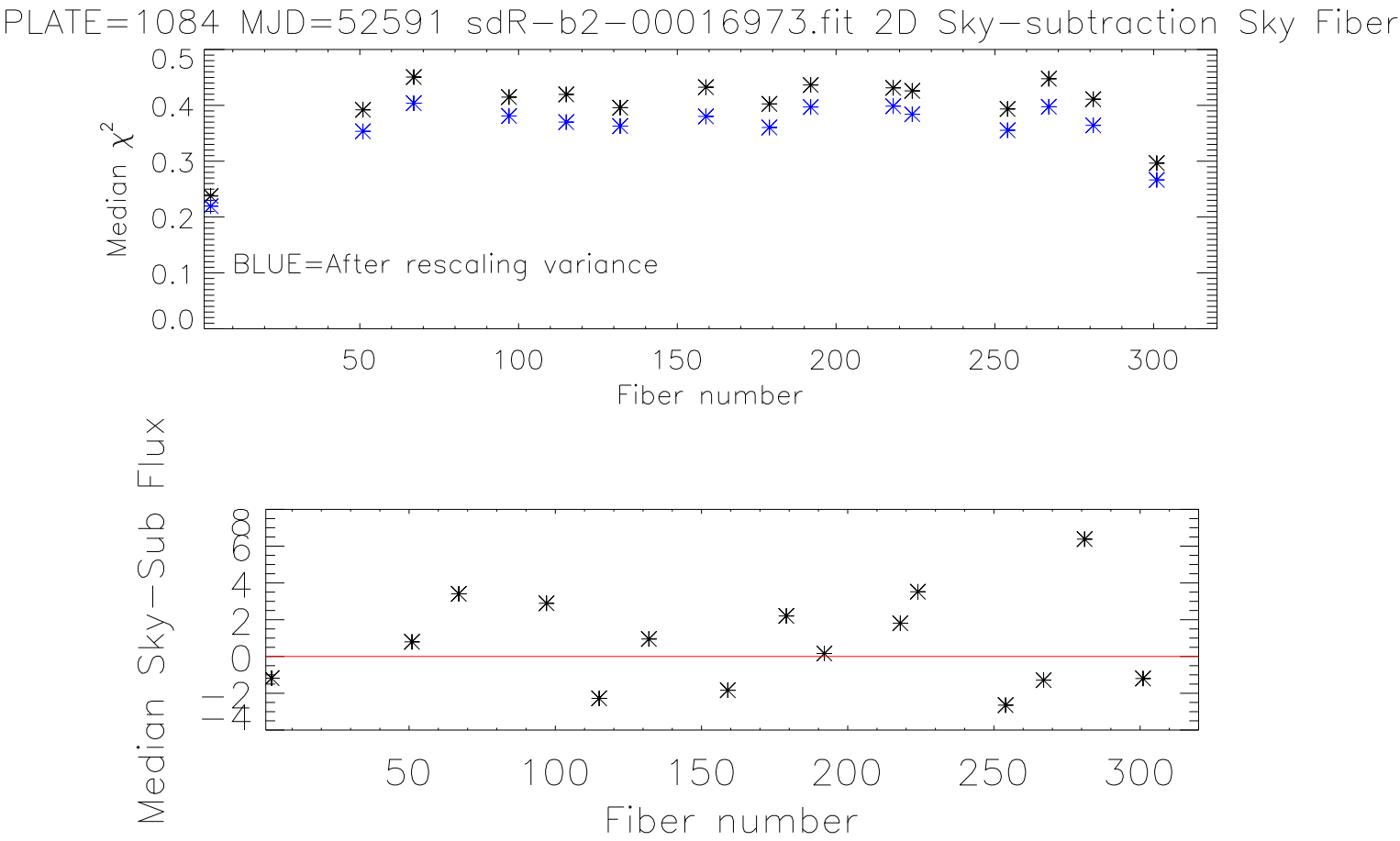

PLATE=1084 MJD=52591 Smooth superflat for sdR-b2-00016973.fit
1.5
1.0
0.5
0.0
1.010
1.005
1.000
0.995
0.990
0.985
0.980
es= −0.0000
4000
4500
5000
5500
6000
Wavelength (Å)

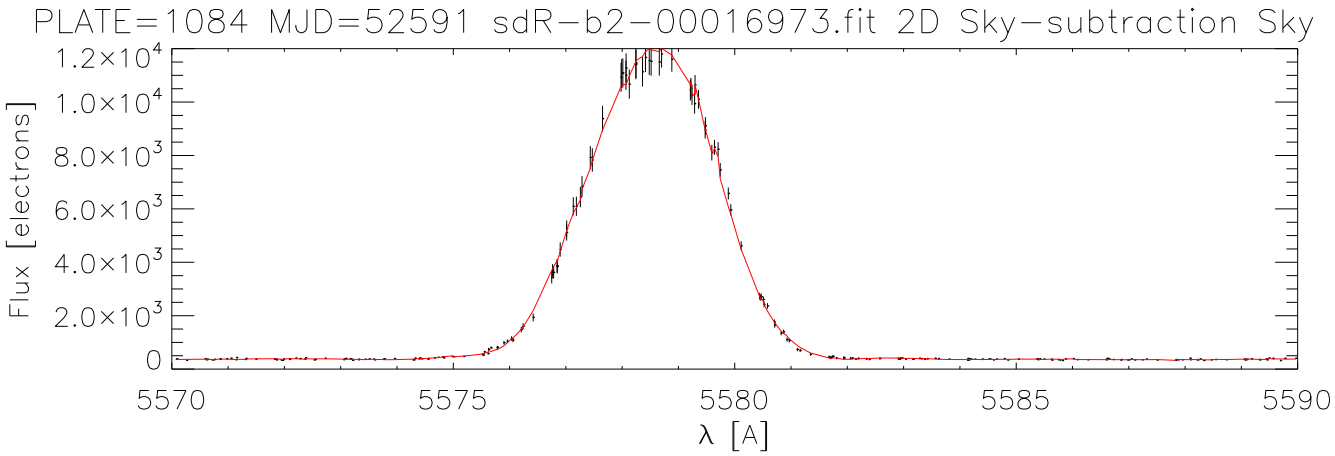

PLATE=1084 MJD=52591 sdR-b2-00016973.fit 1D Sky-subtraction Sky Fiber
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
10
5
0
-5
50
100
150
200
250
300
Fiber number

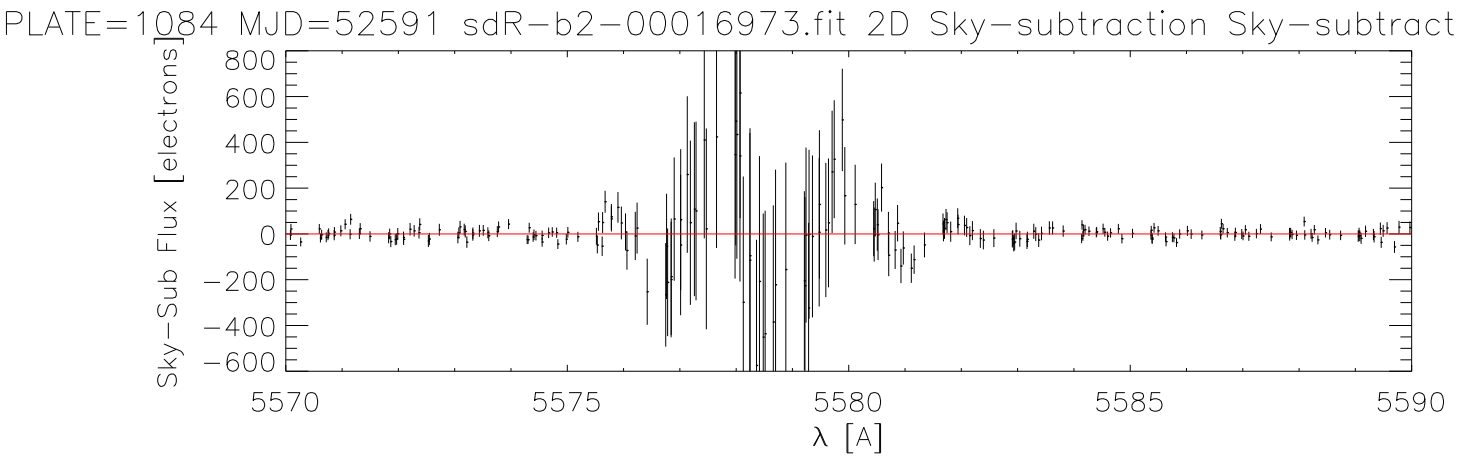

PLATE=1084 MJD=52591 sdR-b2-00016973.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
0
5570
5575
5580
5585
5590
λ [A]

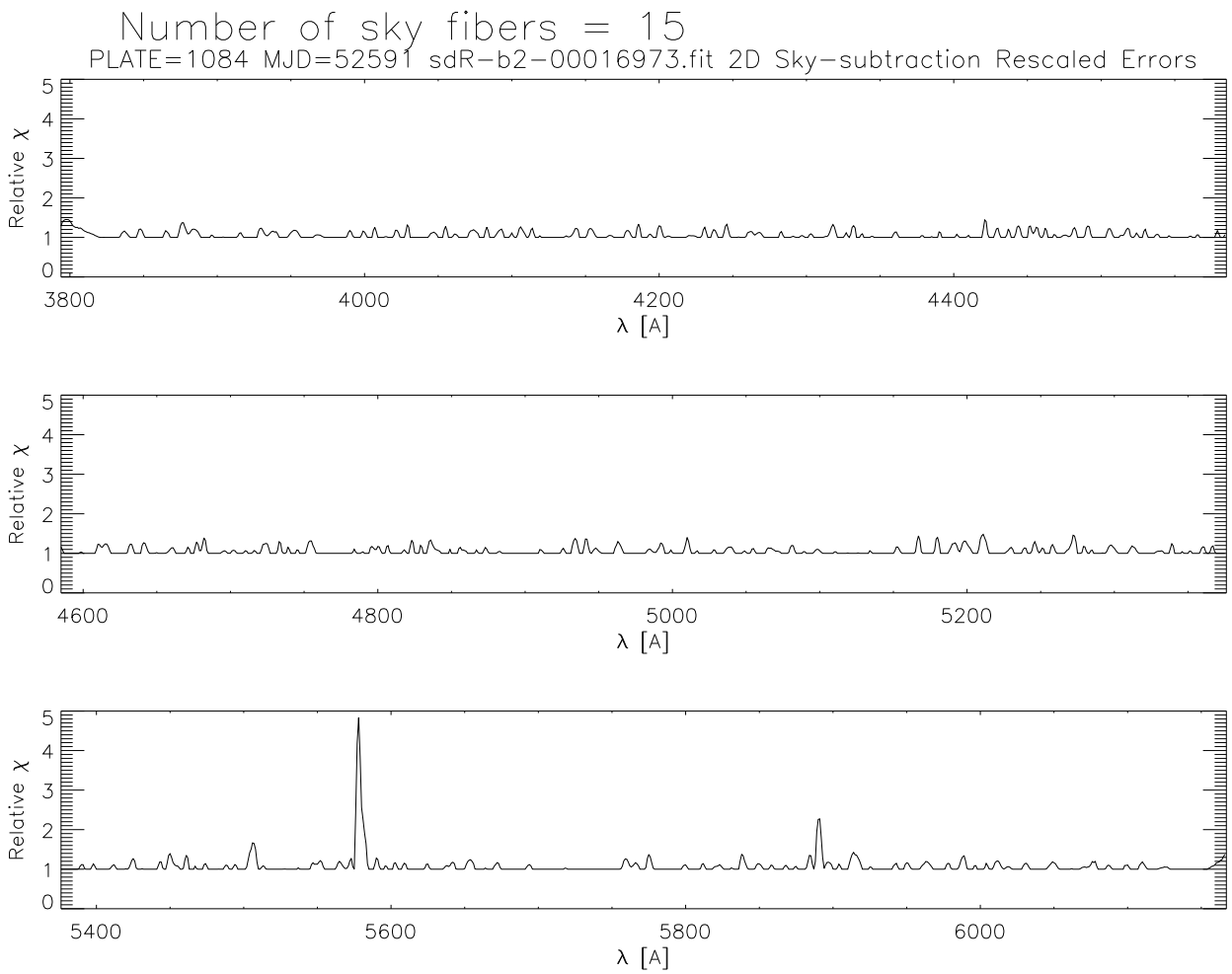

PLATE=1084 MJD=52591 sdR-b2-00016973.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
800
600
400
200
0
−200
−400
5570
5575
5580
5585
5590
λ [A]

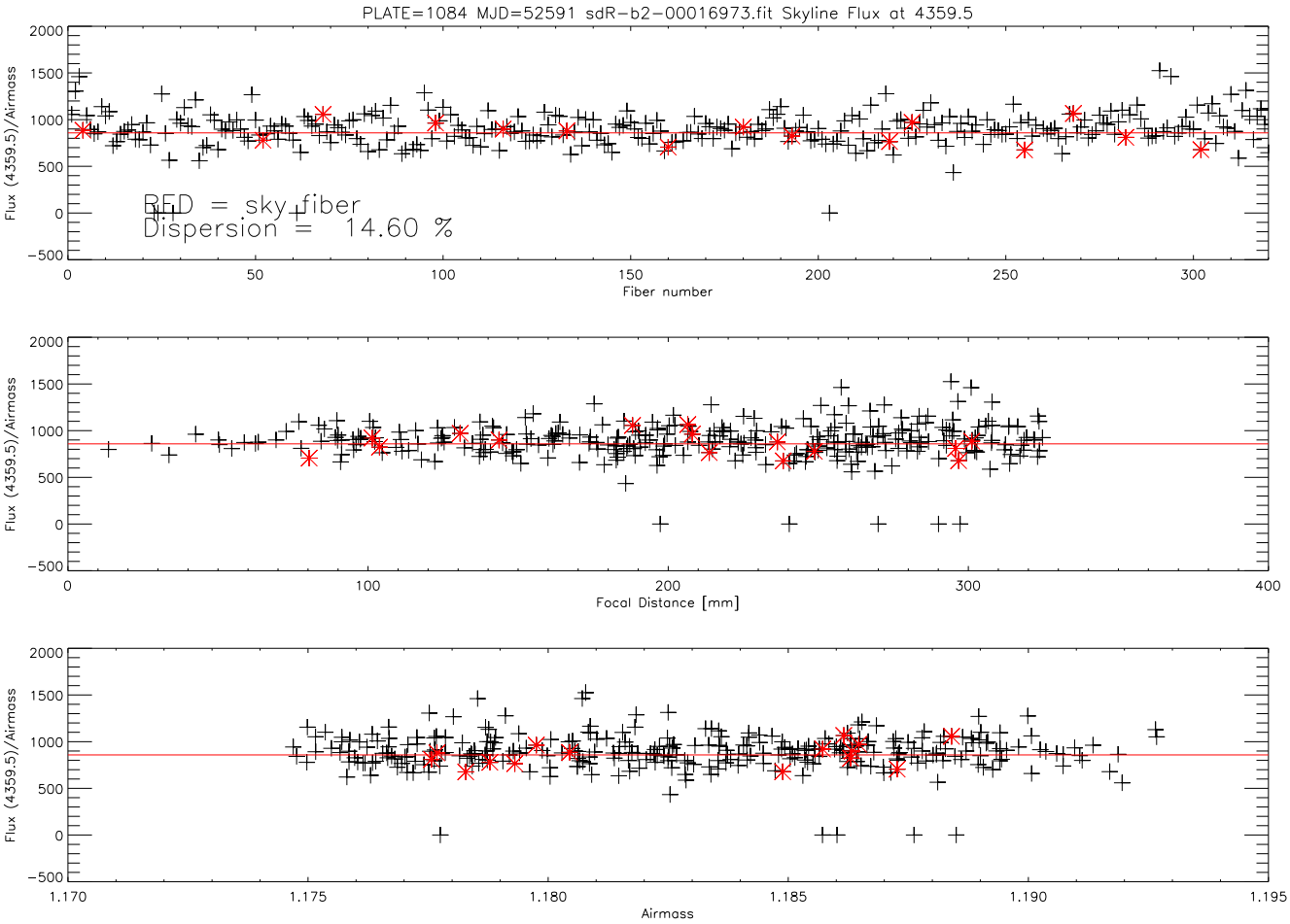

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-b2-00016973.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

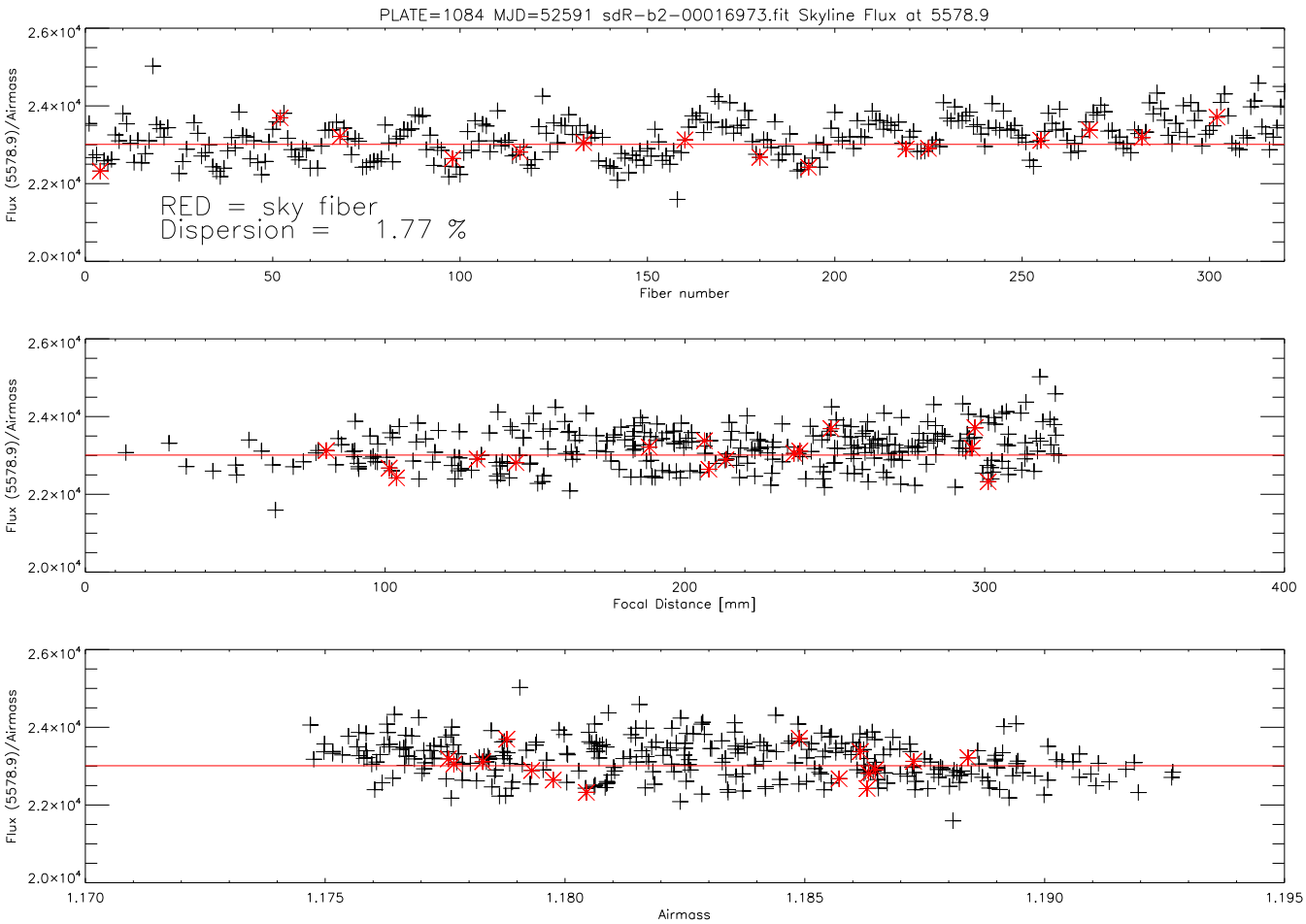

PLATE=1084 MJD=52591 sdR-b2-00016973.fit 2D Sky-subtraction Sky Fiber
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
-4
-2
0
2
4
6
8
50
100
150
200
250
300
Fiber number

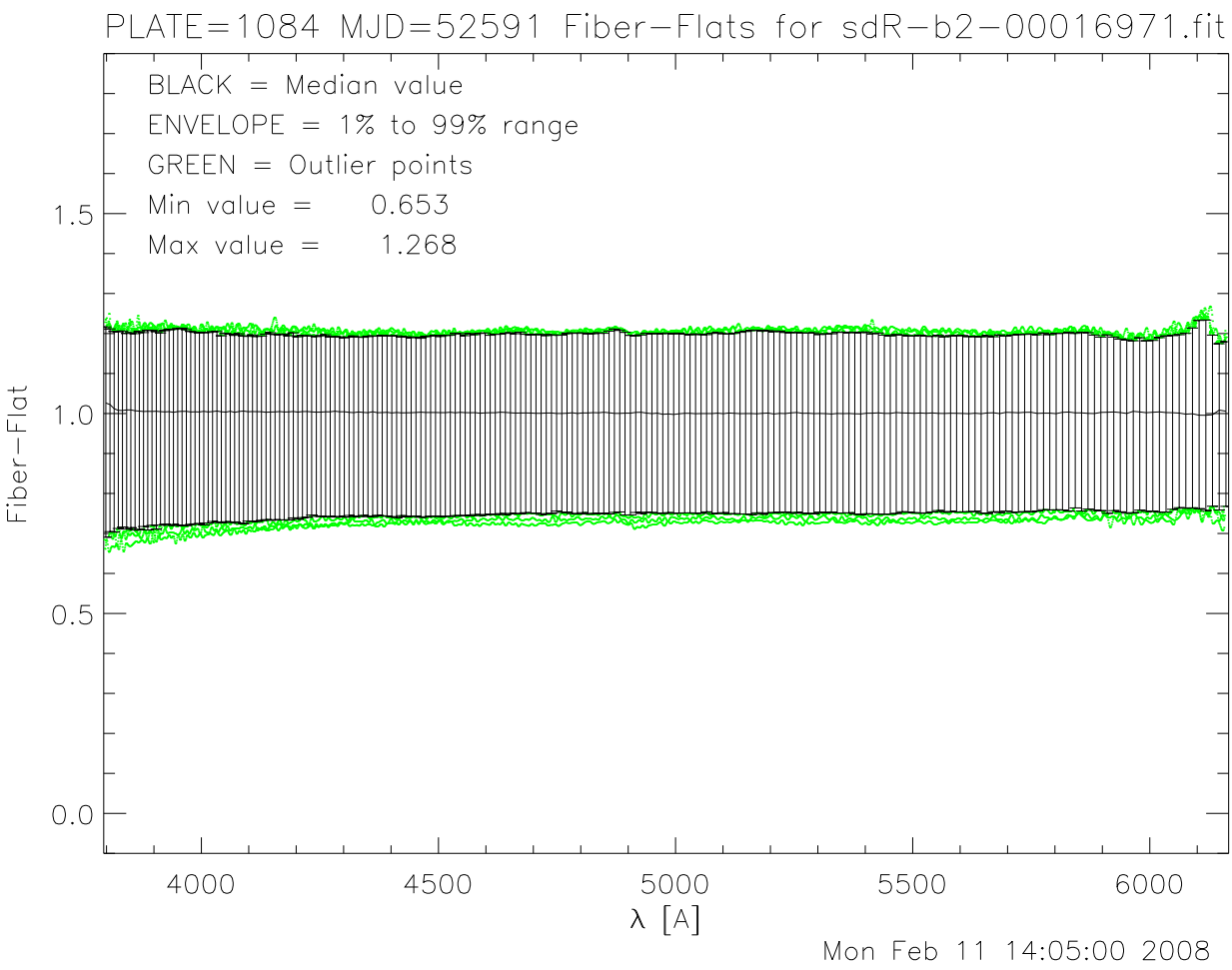

PLATE=1084 MJD=52591 sdR-b2-00016973.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
0
5570
5575
5580
5585
5590
λ [A]

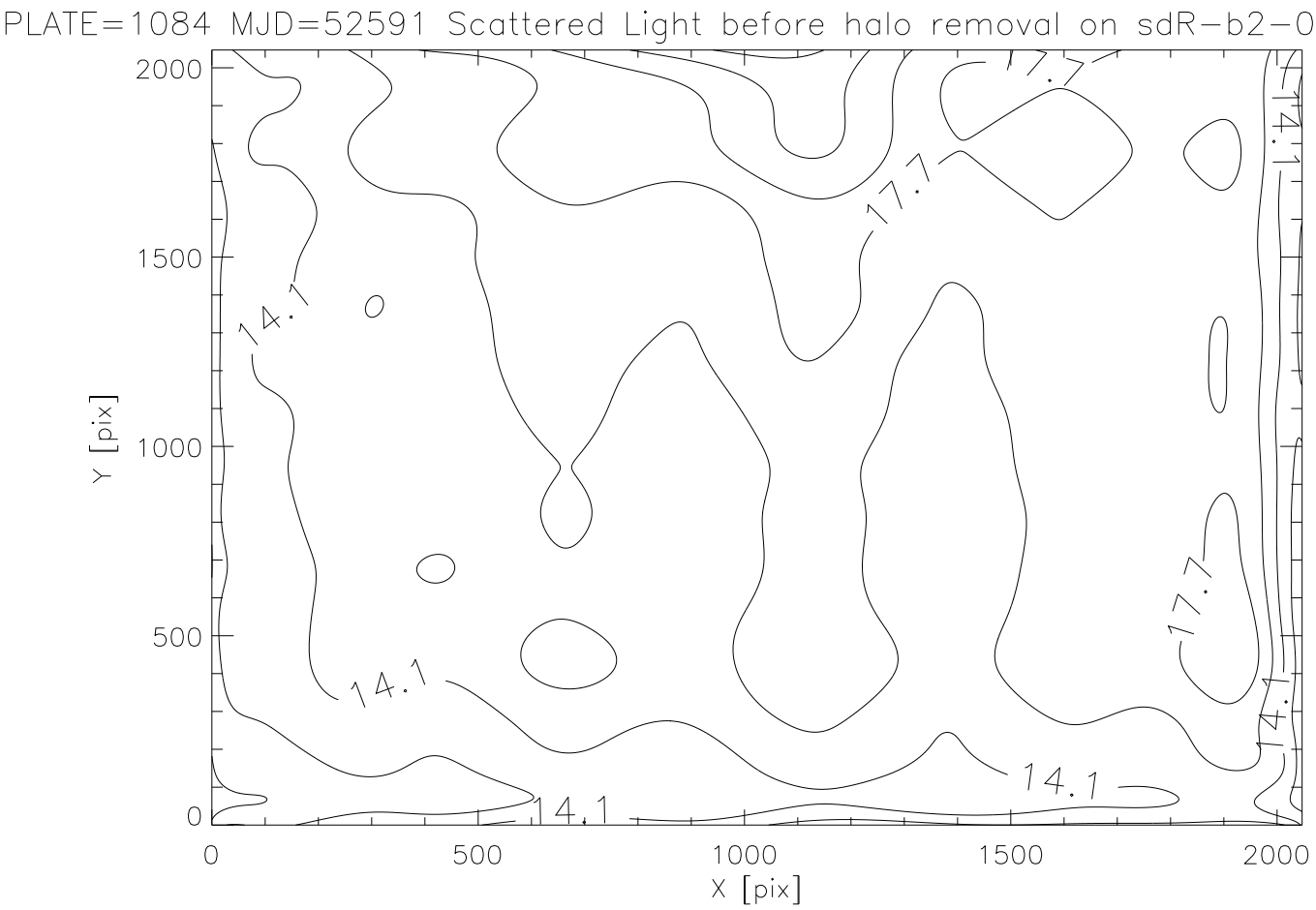

PLATE=1084 MJD=52591 sdR-b2-00016973.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
800
600
400
200
0
−200
−400
−600
5570
5575
5580
5585
5590
λ [A]

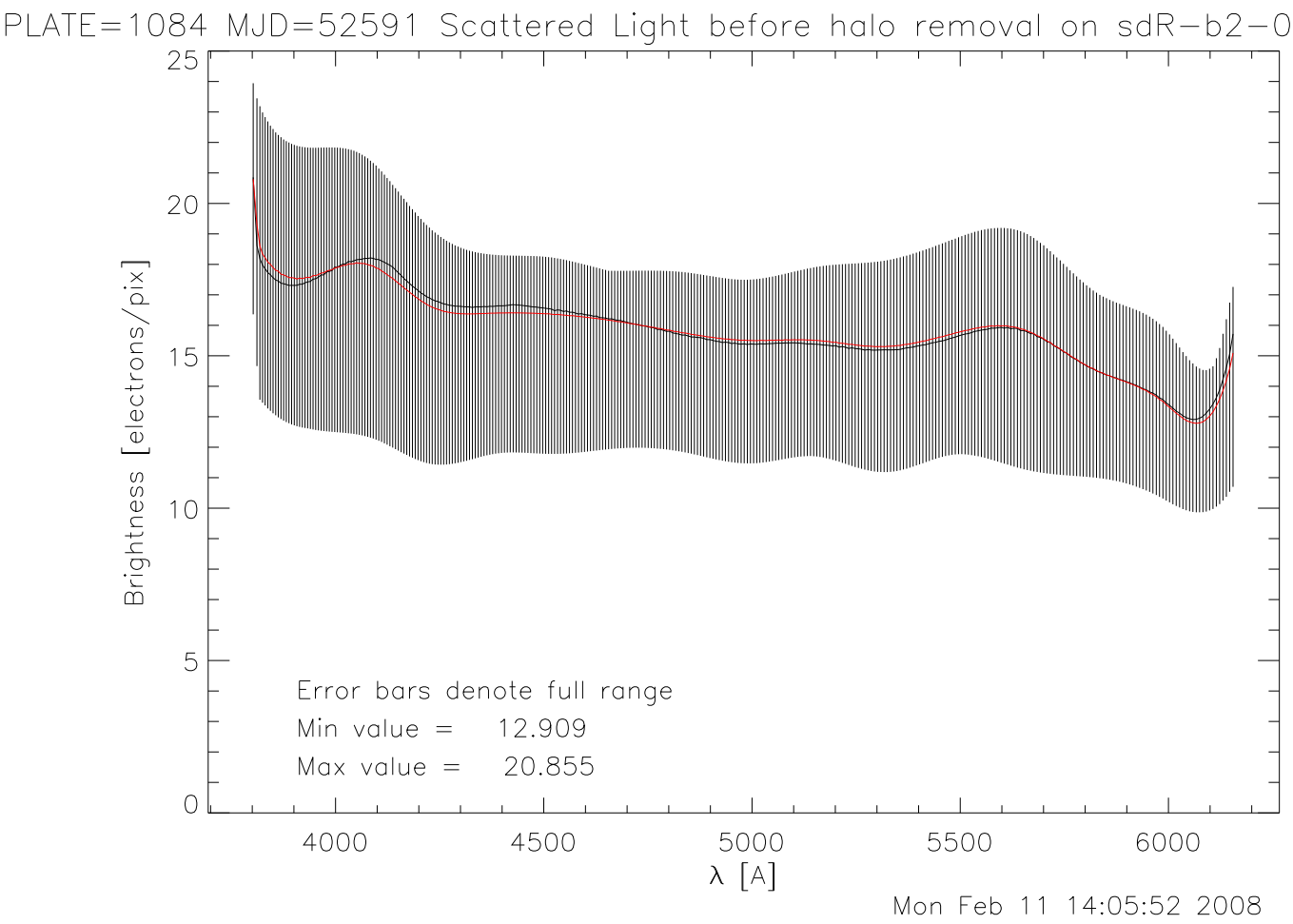

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-b2-00016973.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

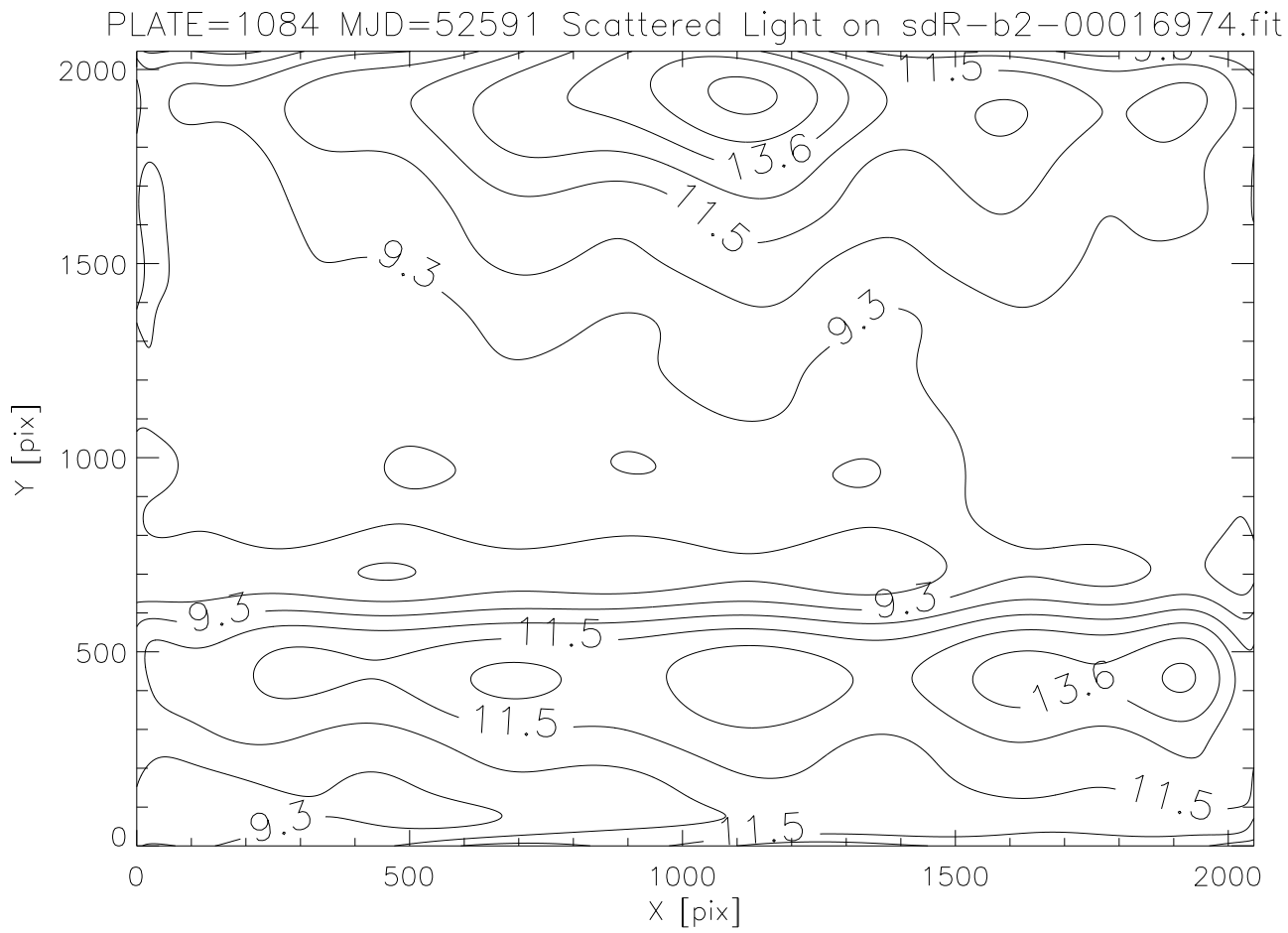

PLATE=1084 MJD=52591 sdR-b2-00016973.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
RED = sky fiber
Dispersion = 14.60 %
Fiber number
Focal Distance [mm]
Airmass

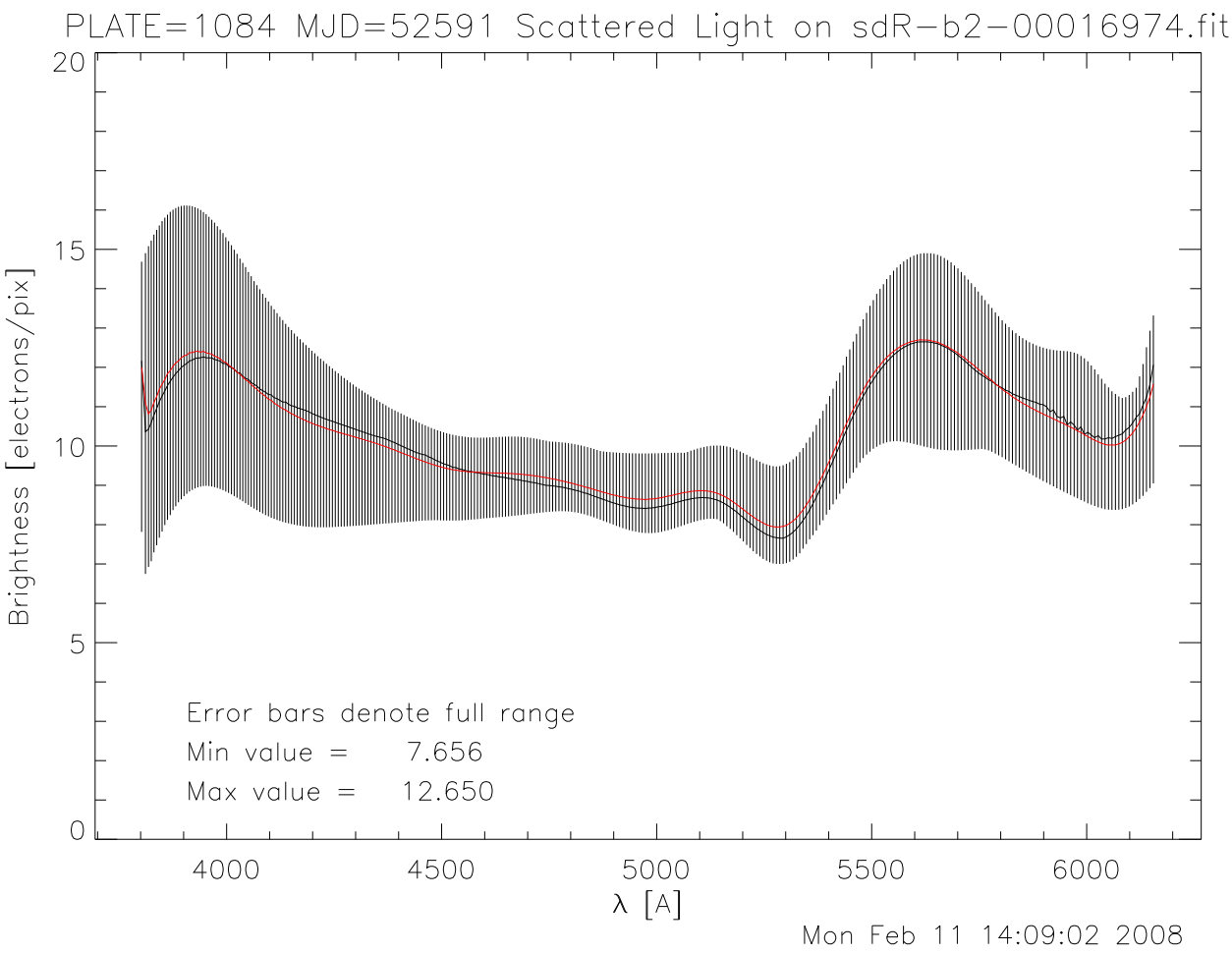

PLATE=1084 MJD=52591 sdR-b2-00016973.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 1.77 %
Fiber number
Focal Distance [mm]
Airmass

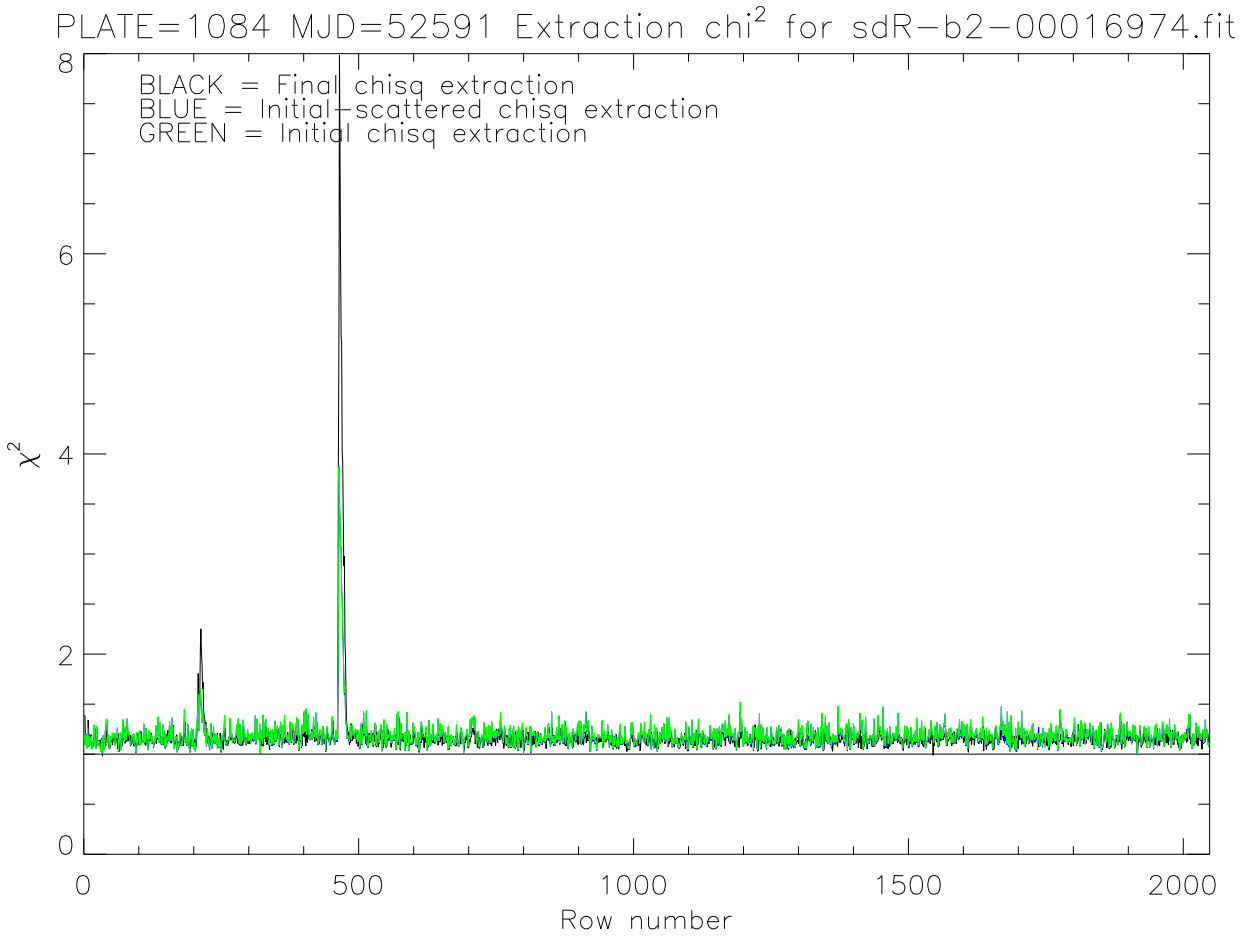

PLATE=1084 MJD=52591 Fiber-Flats for sdR-b2-00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.653
Max value = 1.268
Fiber-Flat
1.5
1.0
0.5
0.0
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 14:05:00 2008

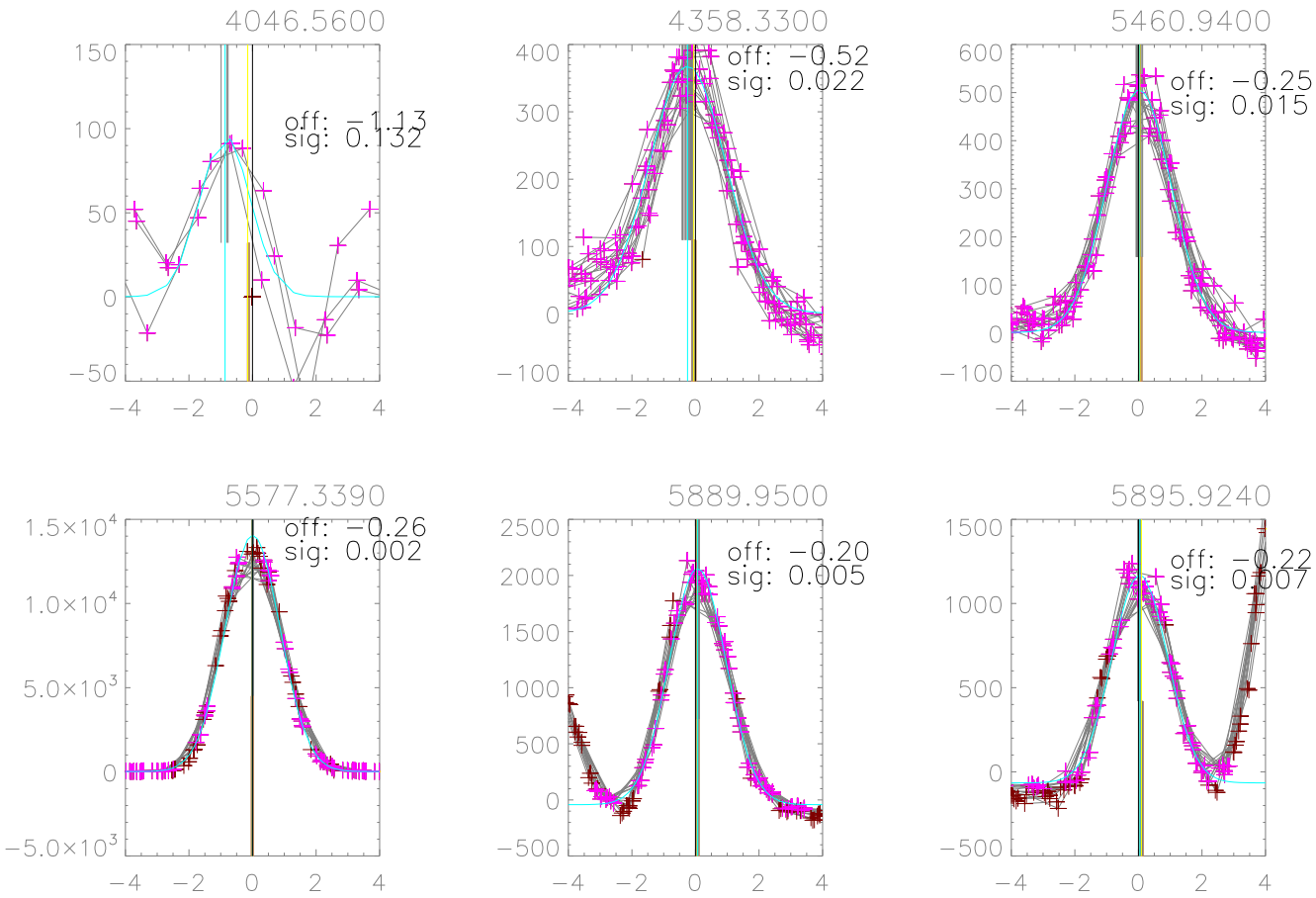

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b2-00016974.f
2000
1500
1000
500
0
Y [pix]
0
500
1000
1500
2000
X [pix]
14.1
0
17.7
14.1
17.7
14.1
17.7
14.1
14.1
14.1

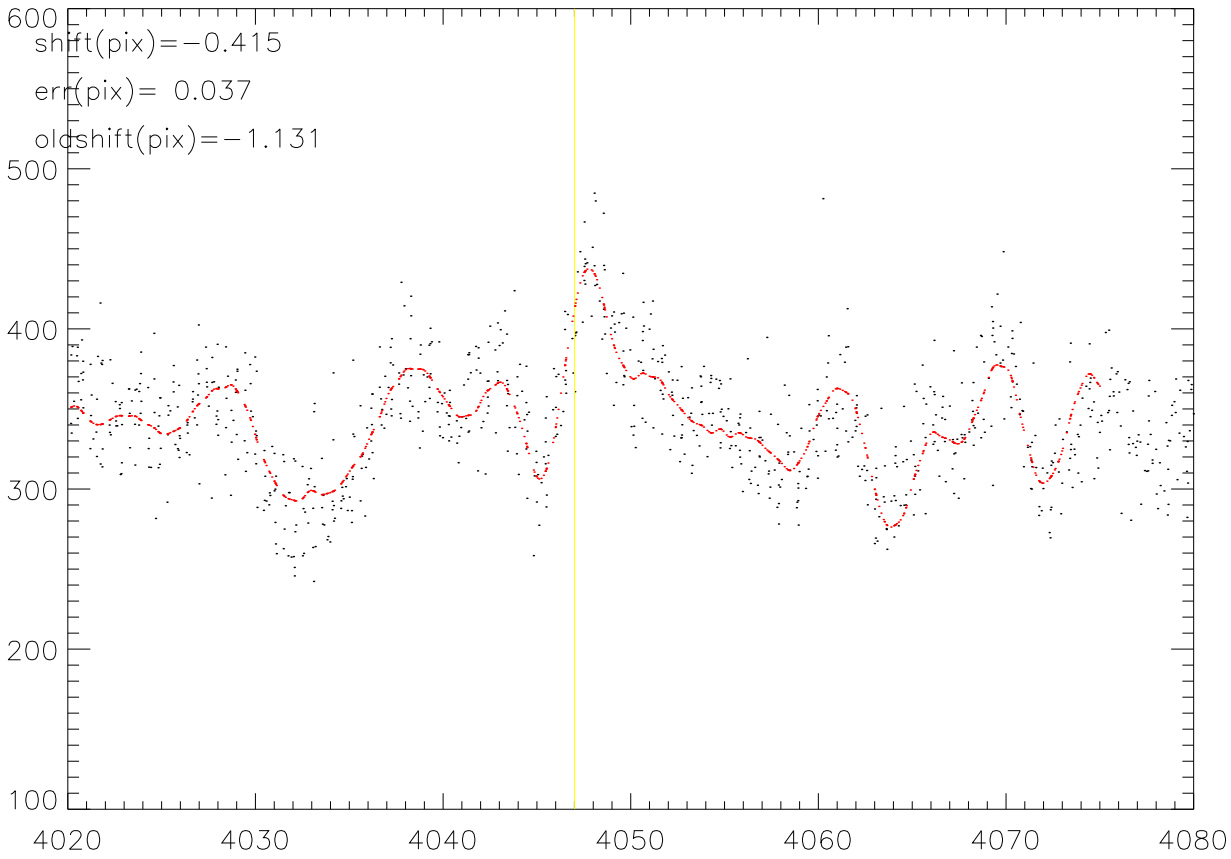

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b2-00016974.f
Brightness [electrons/pix]
25
20
15
10
5
0
4000
4500
5000
5500
6000
λ [A]
Error bars denote full range
Min value = 12.909
Max value = 20.855
Mon Feb 11 14:05:52 2008

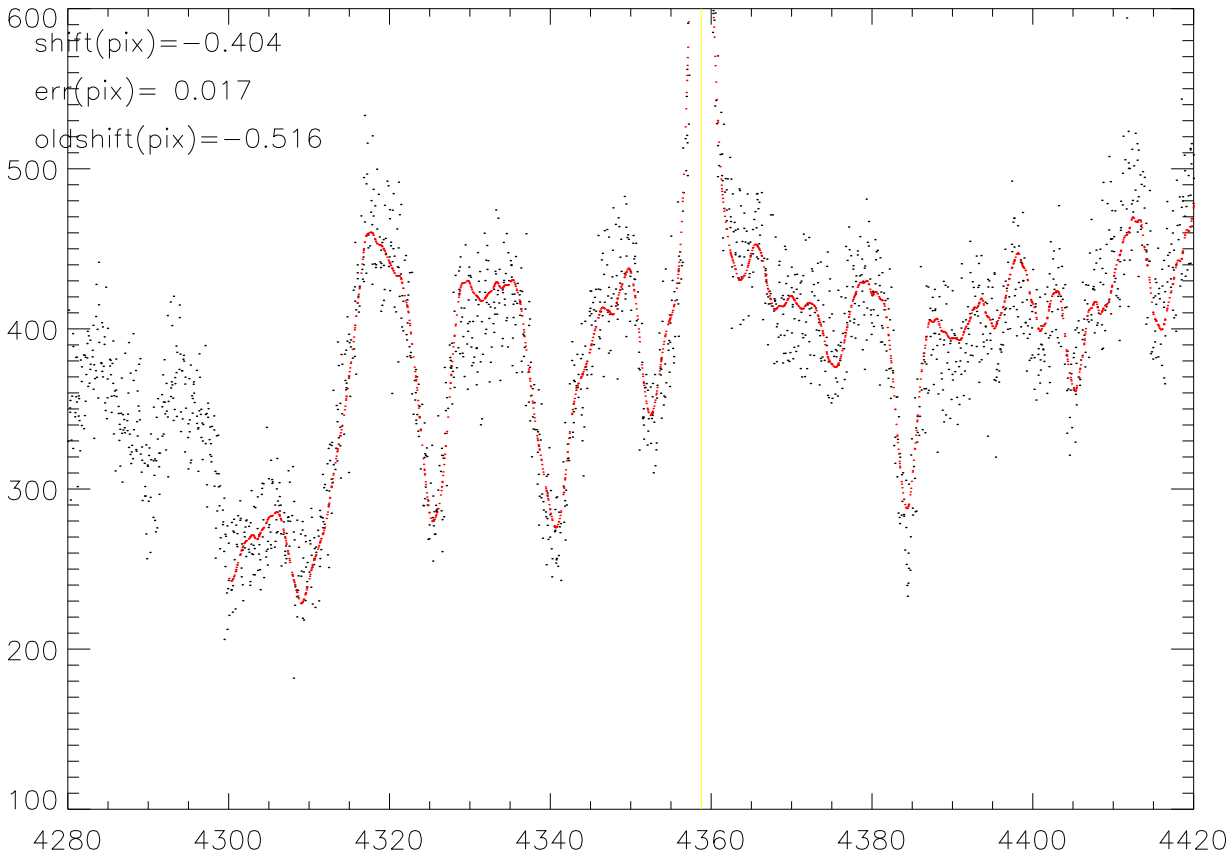

PLATE=1084 MJD=52591 Scattered Light on sdR-b2-00016974.fit
Y [pix]
X [pix]
0
500
1000
1500
2000
9.3
11.5
13.6

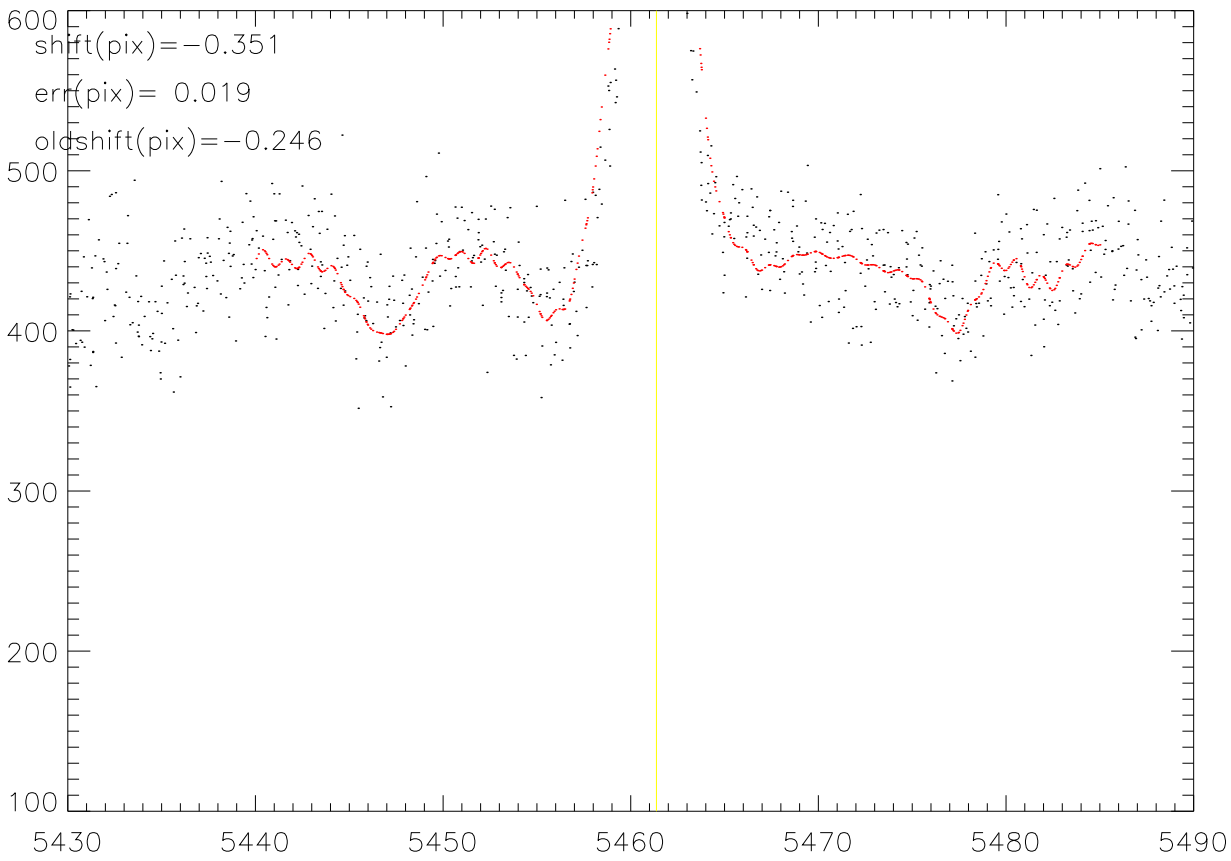

PLATE=1084 MJD=52591 Scattered Light on sdR-b2-00016974.fit
Brightness [electrons/pix]
20
15
10
5
0
4000
4500
5000
5500
6000
λ [A]
Error bars denote full range
Min value = 7.656
Max value = 12.650
Mon Feb 11 14:09:02 2008

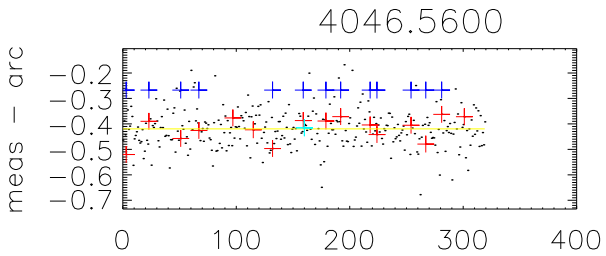

PLATE=1084 MJD=52591 Extraction chi^2 for sdR-b2-00016974.fit
BLACK = Final chisq extraction
BLUE = Initial-scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
0
2
4
6
8
0
500
1000
1500
2000
Row number

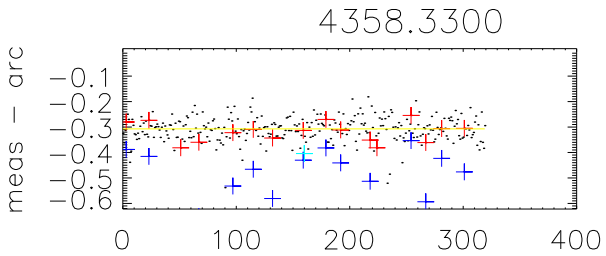

4046.5600
off: −1.13
sig: 0.132
4358.3300
off: −0.52
sig: 0.022
5460.9400
off: −0.25
sig: 0.015
5577.3390
off: −0.26
sig: 0.002
5889.9500
off: −0.20
sig: 0.005
5895.9240
off: −0.22
sig: 0.007

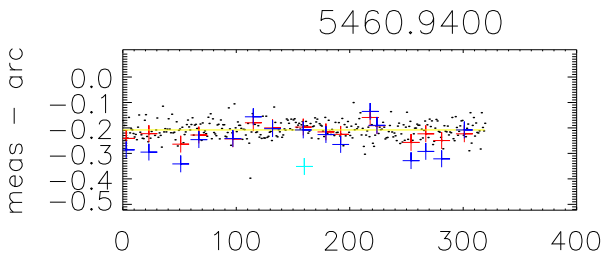

shift(pix)=−0.415
err(pix)= 0.037
oldshift(pix)=−1.131
600
500
400
300
200
100
4020
4030
4040
4050
4060
4070
4080

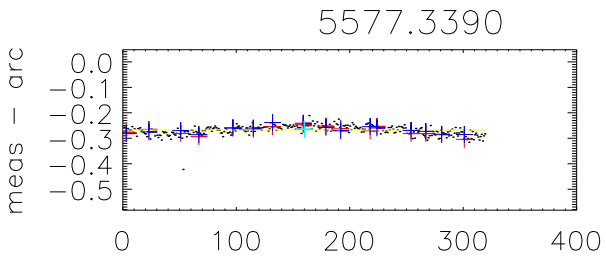

shift(pix)=−0.404
err(pix)= 0.017
oldshift(pix)=−0.516
600
500
400
300
200
100
4280
4300
4320
4340
4360
4380
4400
4420

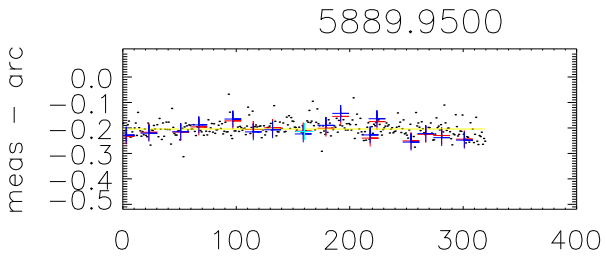

shift(pix)=−0.351
err(pix)= 0.019
oldshift(pix)=−0.246
600
500
400
300
200
100
5430
5440
5450
5460
5470
5480
5490

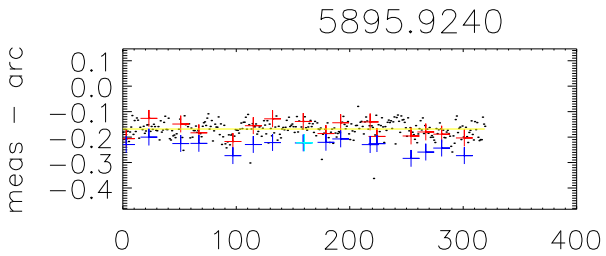

4046.5600
meas − arc
−0.2
−0.3
−0.4
−0.5
−0.6
−0.7
0
100
200
300
400

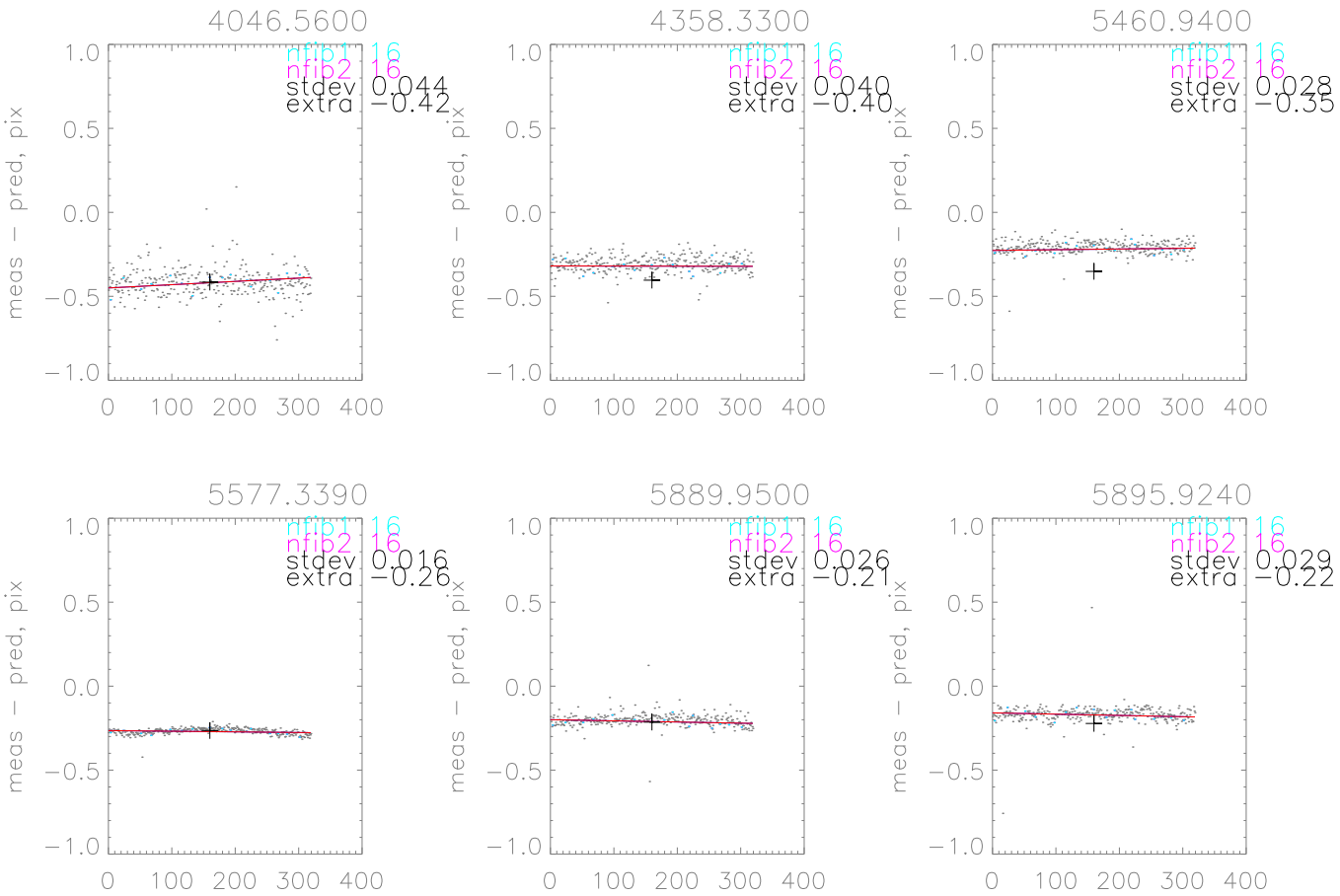

4358.3300
meas − arc
−0.1
−0.2
−0.3
−0.4
−0.5
−0.6
0
100
200
300
400

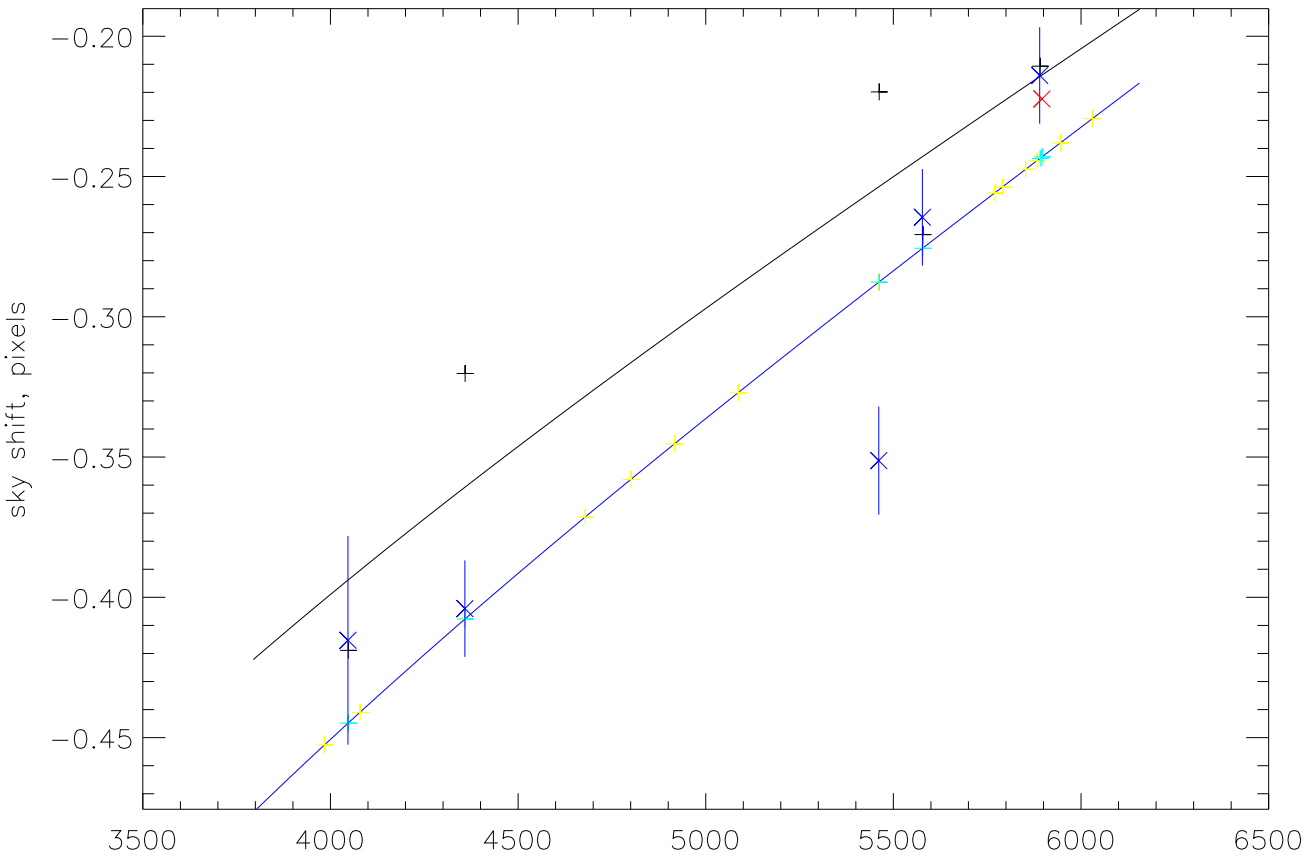

5460.9400
meas − arc
0.0
−0.1
−0.2
−0.3
−0.4
−0.5
0
100
200
300
400

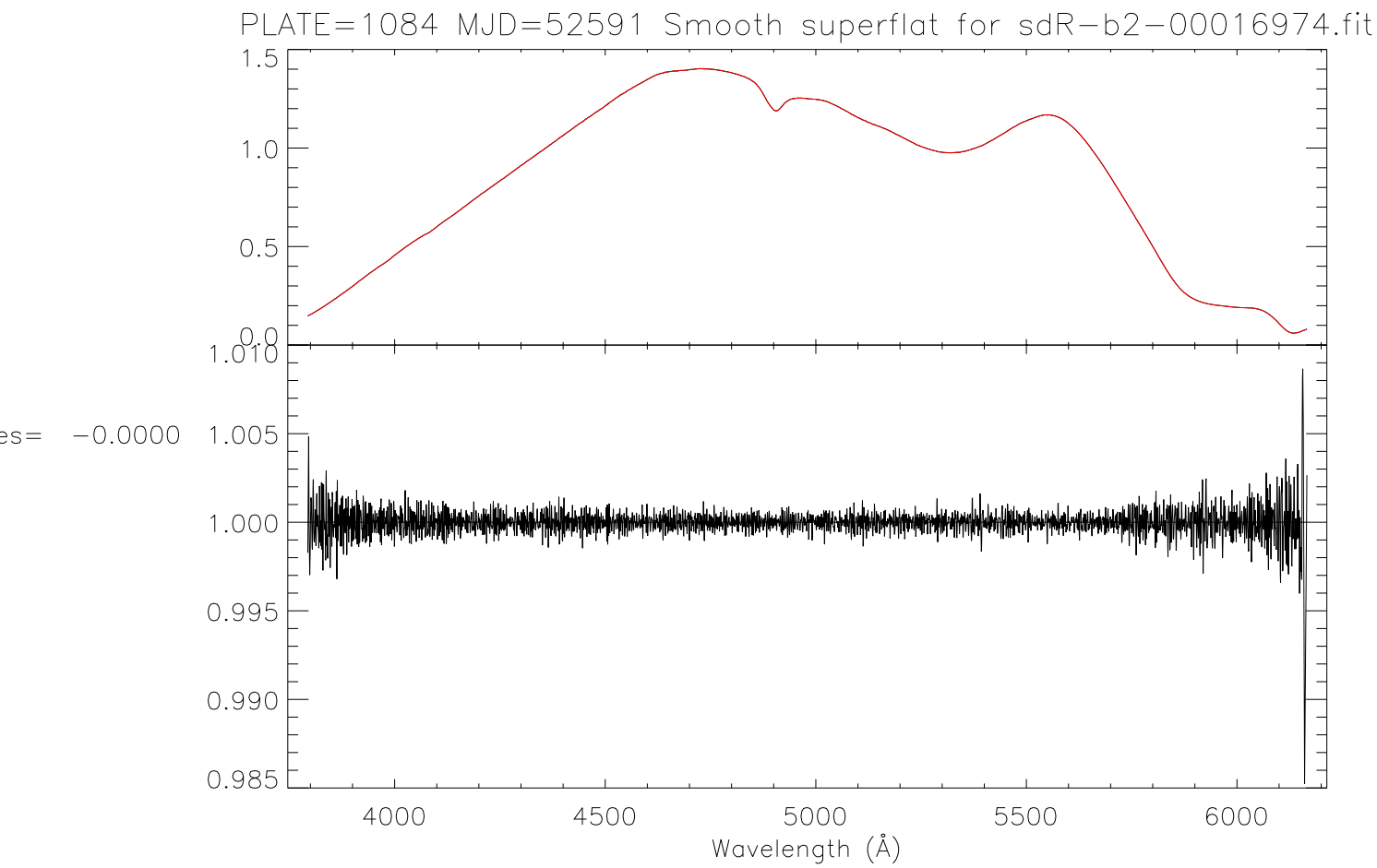

5577.3390
meas − arc
0.0
−0.1
−0.2
−0.3
−0.4
−0.5
0
100
200
300
400


5889.9500
meas − arc
0.0
−0.1
−0.2
−0.3
−0.4
−0.5
0
100
200
300
400

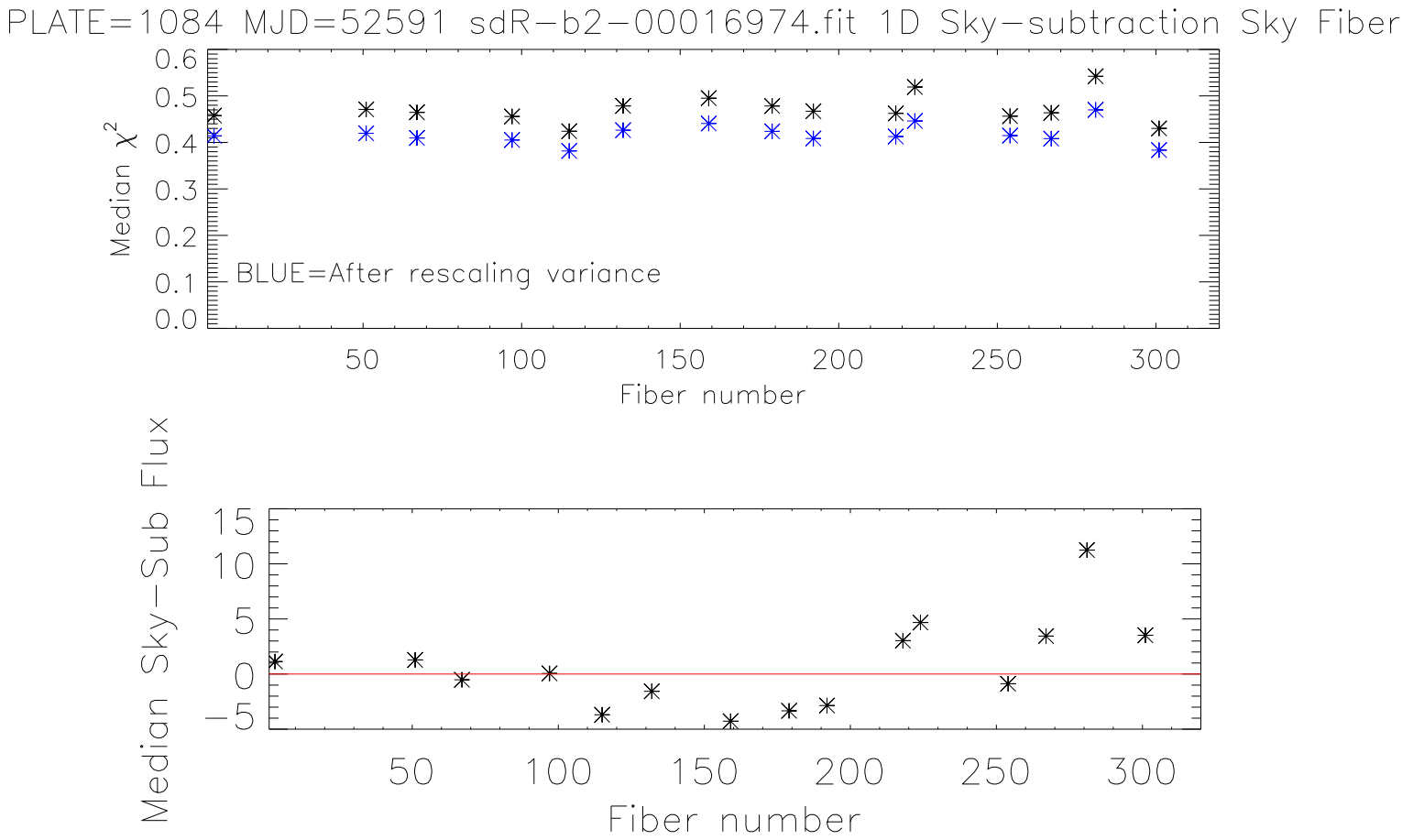

5895.9240
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

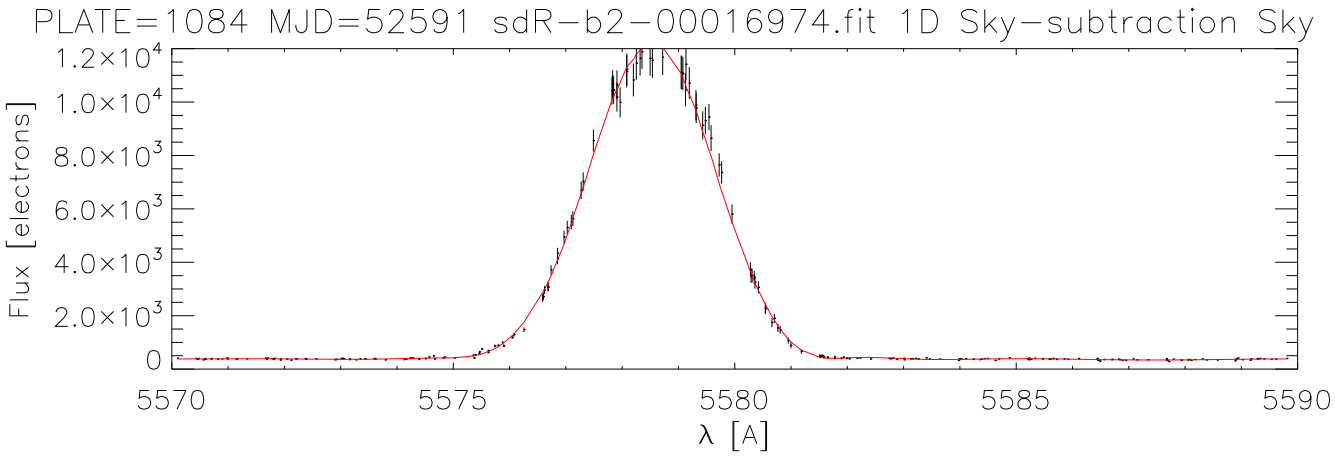

4046.5600
nfib1 16
nfib2 16
stdev 0.044
extra −0.42
4358.3300
nfib1 16
nfib2 16
stdev 0.040
extra −0.40
5460.9400
nfib1 16
nfib2 16
stdev 0.028
extra −0.35
5577.3390
nfib1 16
nfib2 16
stdev 0.016
extra −0.26
5889.9500
nfib1 16
nfib2 16
stdev 0.026
extra −0.21
5895.9240
nfib1 16
nfib2 16
stdev 0.029
extra −0.22
meas − pred, pix
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400

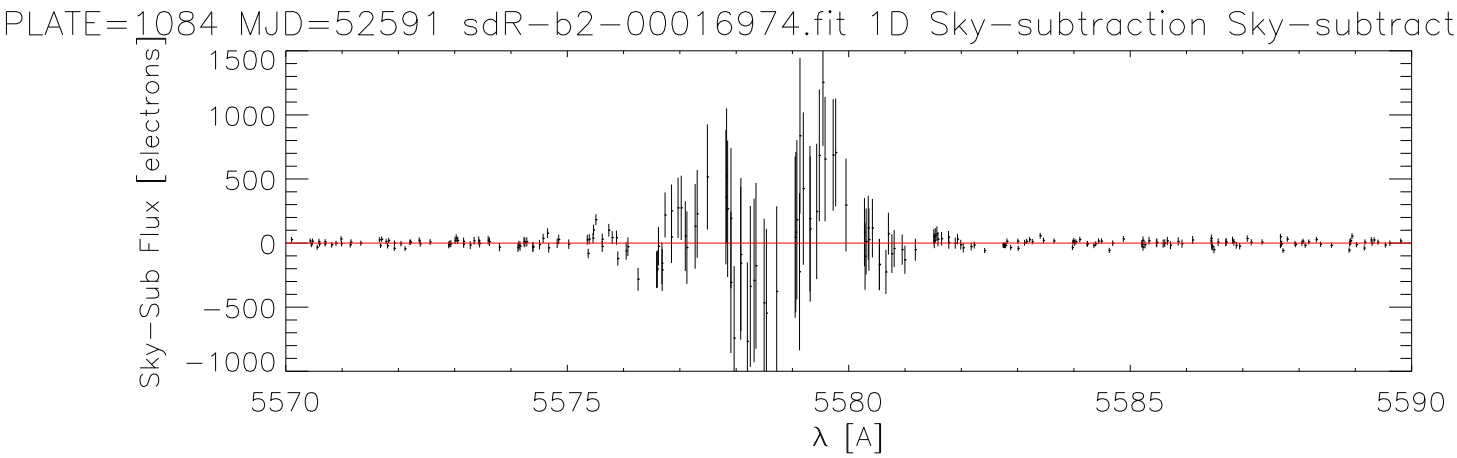

sky shift, pixels
−0.20
−0.25
−0.30
−0.35
−0.40
−0.45
3500
4000
4500
5000
5500
6000
6500

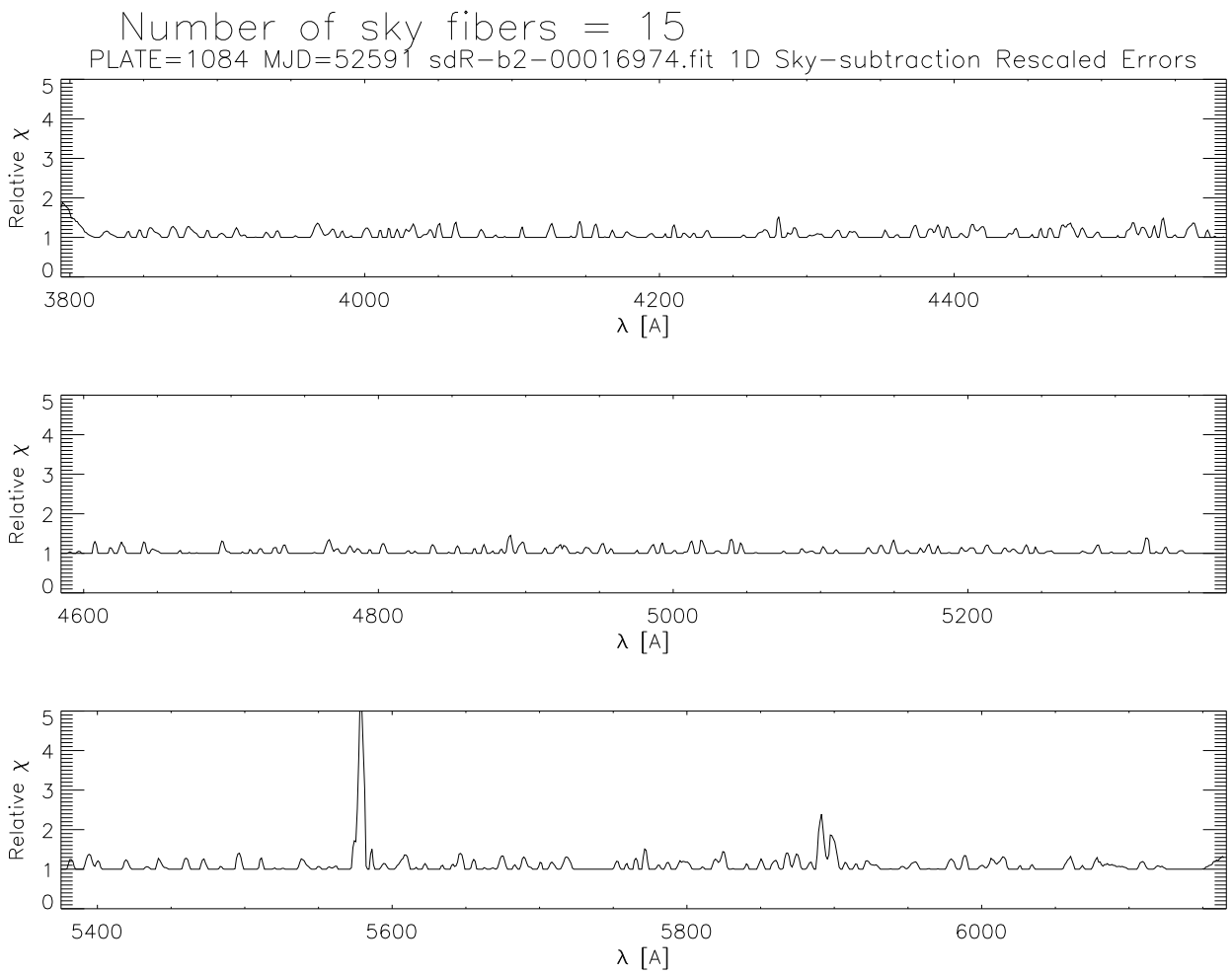

PLATE=1084 MJD=52591 Smooth superflat for sdR-b2-00016974.fit
1.5
1.0
0.5
0.0
1.010
1.005
1.000
0.995
0.990
0.985
4000
4500
5000
5500
6000
Wavelength (Å)

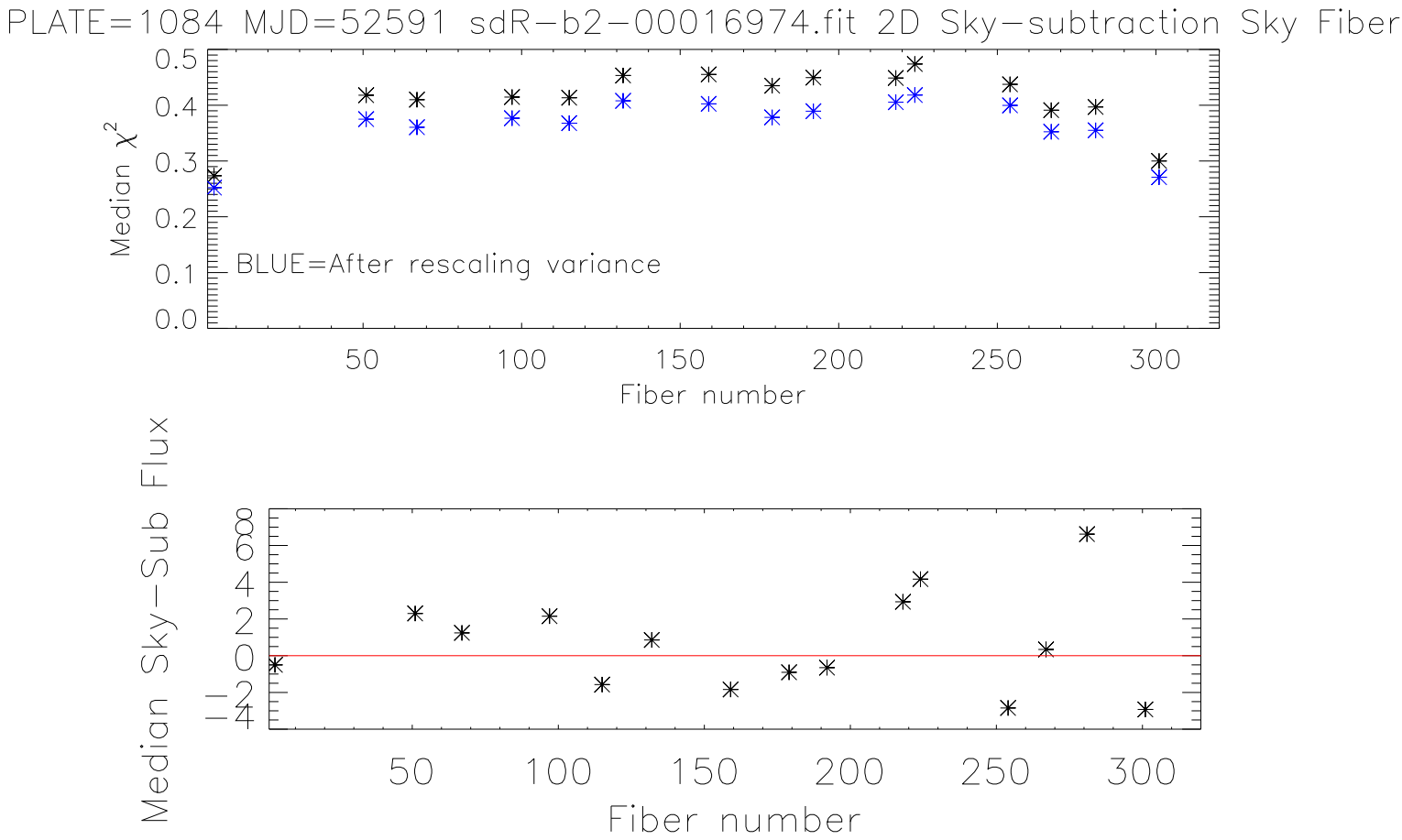
es= −0.0000

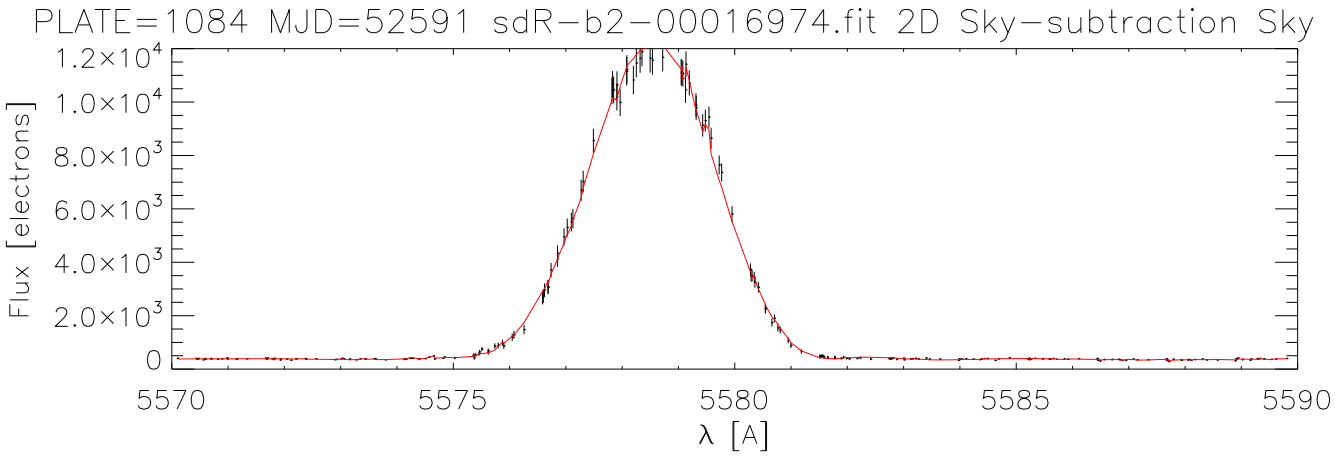

PLATE=1084 MJD=52591 sdR-b2-00016974.fit 1D Sky-subtraction Sky Fiber
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
0.6
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
15
10
5
0
-5
50
100
150
200
250
300
Fiber number

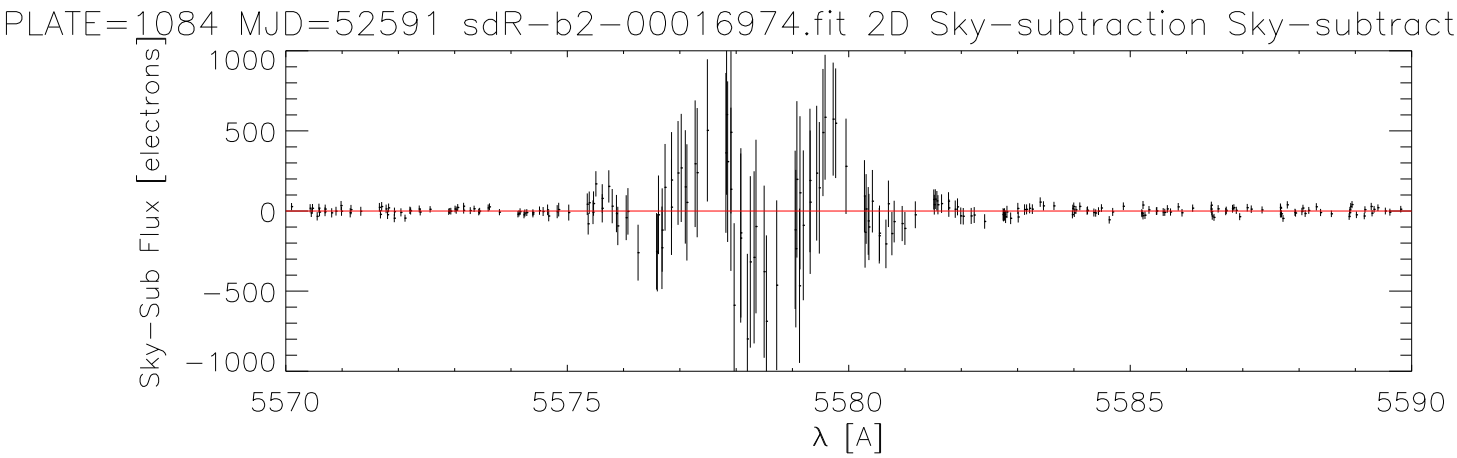

PLATE=1084 MJD=52591 sdR-b2-00016974.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
0
5570
5575
5580
5585
5590
λ [A]

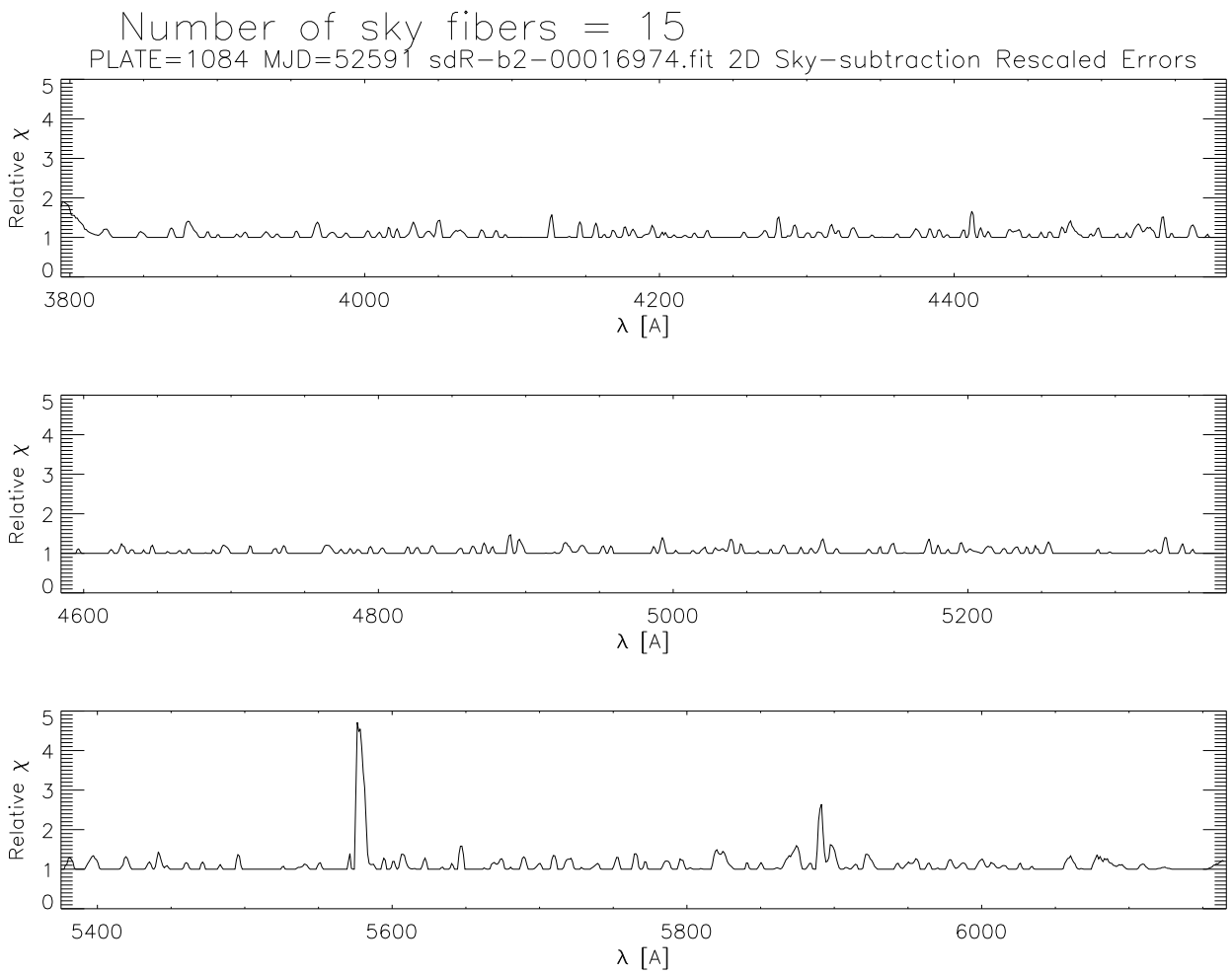

PLATE=1084 MJD=52591 sdR-b2-00016974.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1500
1000
500
0
−500
−1000
5570
5575
5580
5585
5590
λ [A]

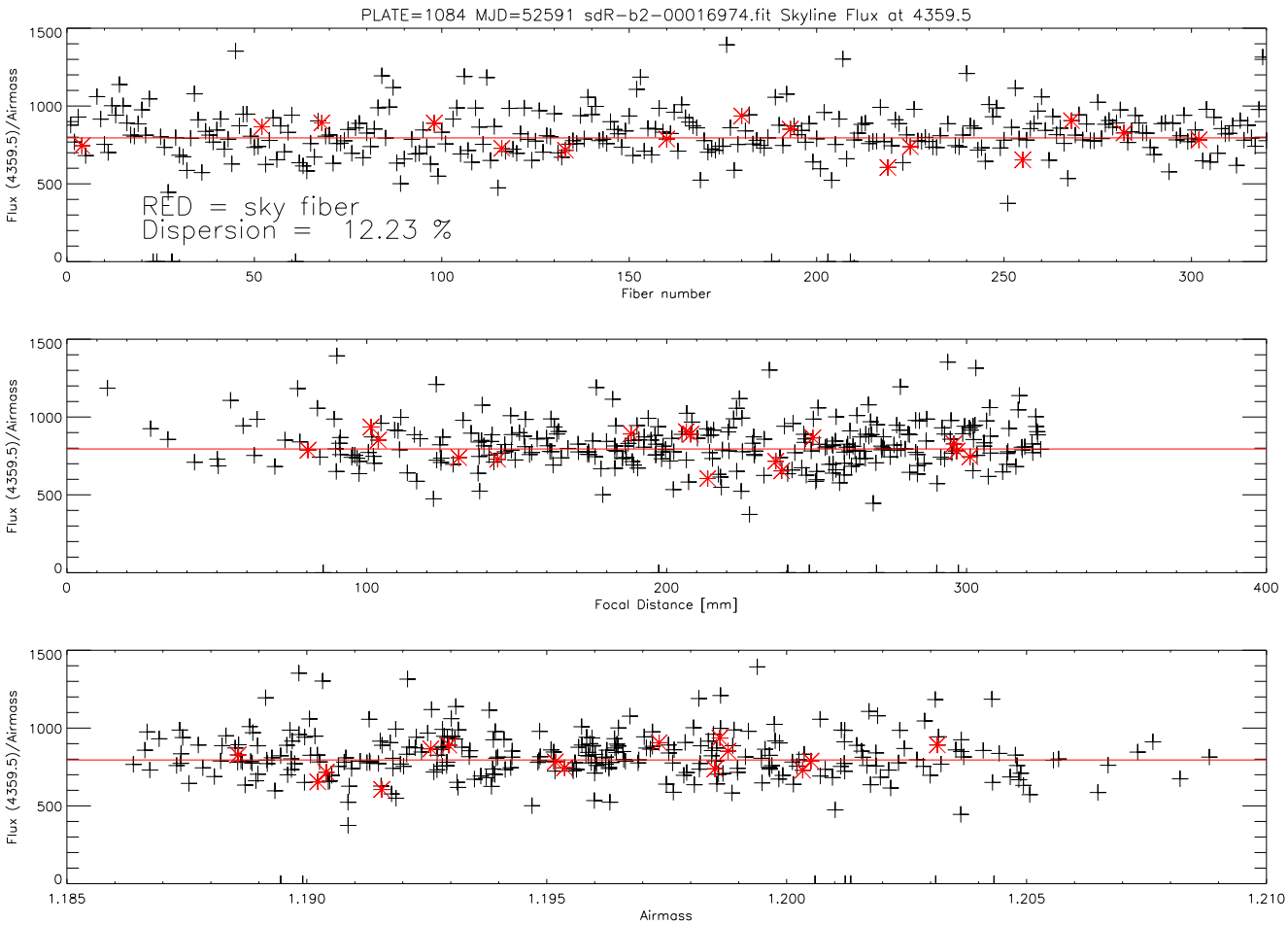

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-b2-00016974.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

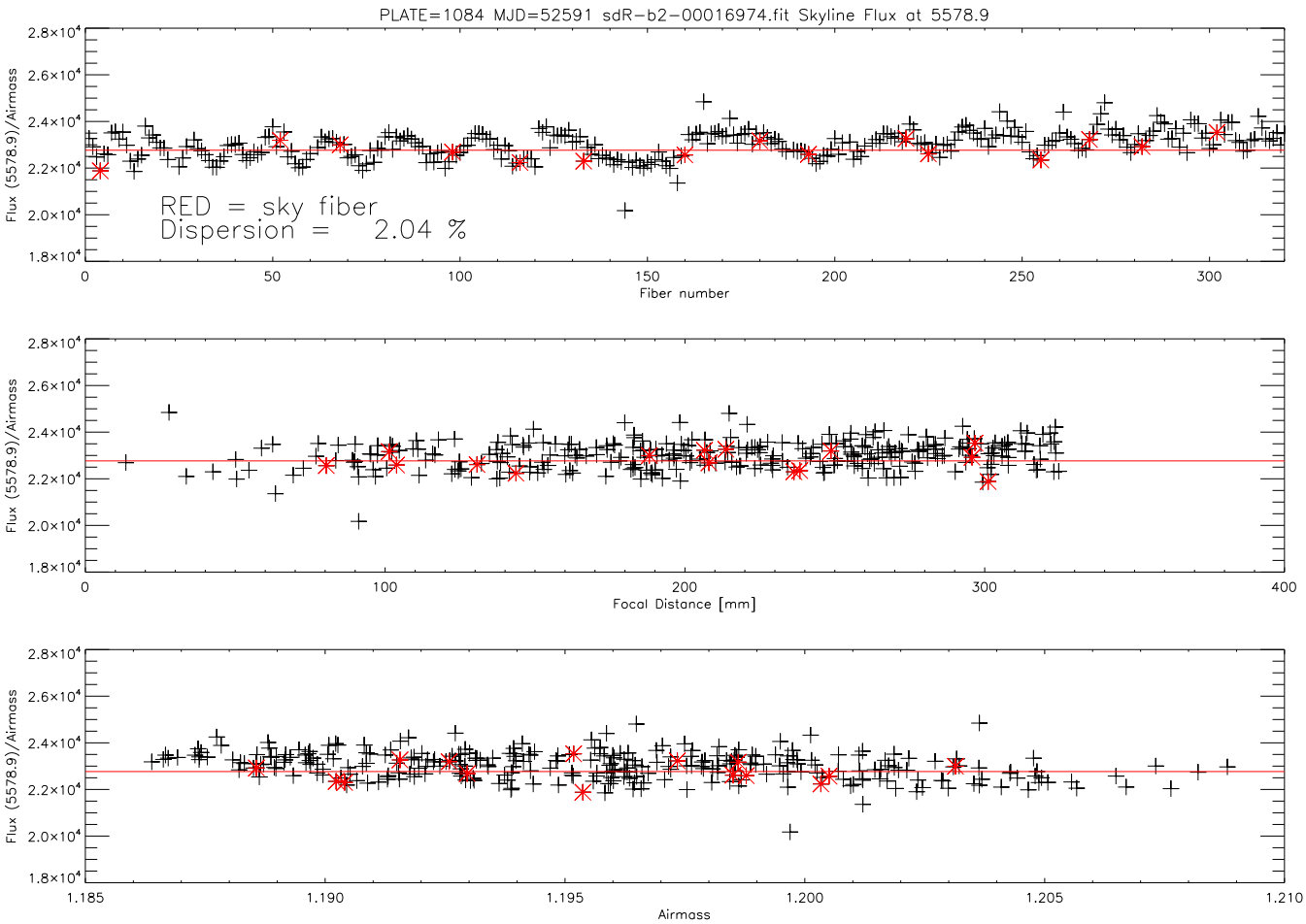

PLATE=1084 MJD=52591 sdR-b2-00016974.fit 2D Sky-subtraction Sky Fiber
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
-4
-2
0
2
4
6
8
50
100
150
200
250
300
Fiber number

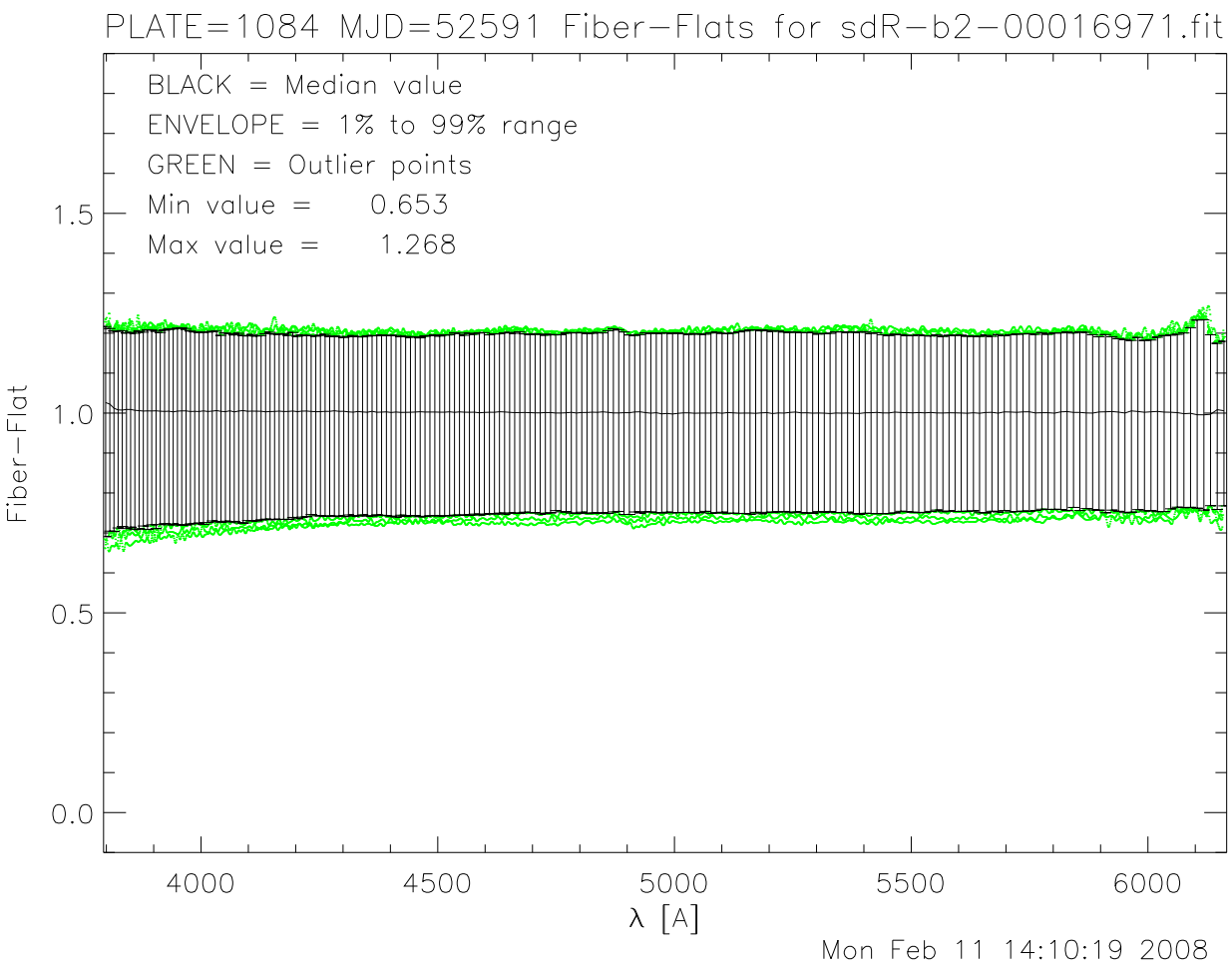

PLATE=1084 MJD=52591 sdR-b2-00016974.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
0
5570
5575
5580
5585
5590
λ [A]

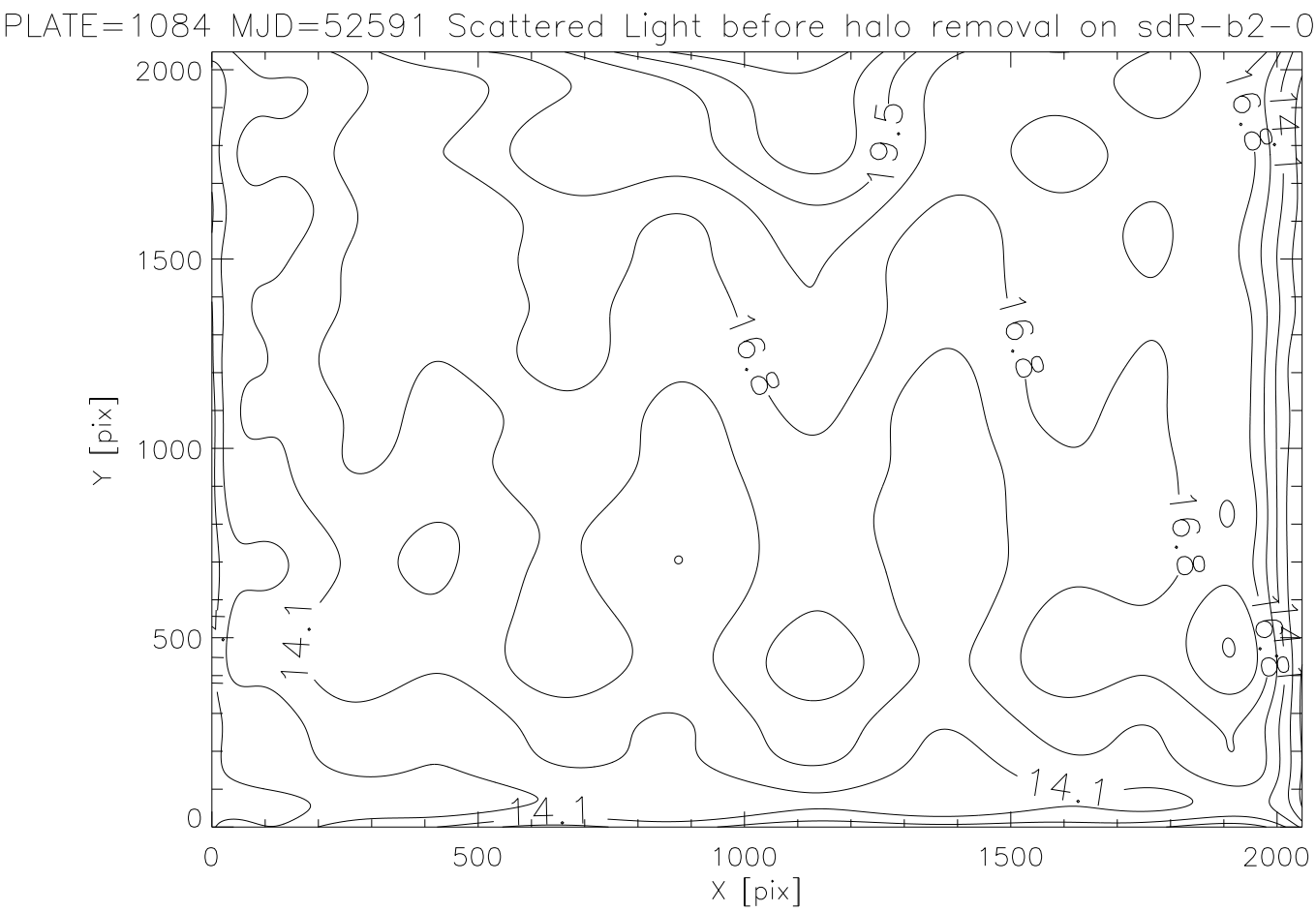

PLATE=1084 MJD=52591 sdR-b2-00016974.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1000
500
0
−500
−1000
5570
5575
5580
5585
5590
λ [A]

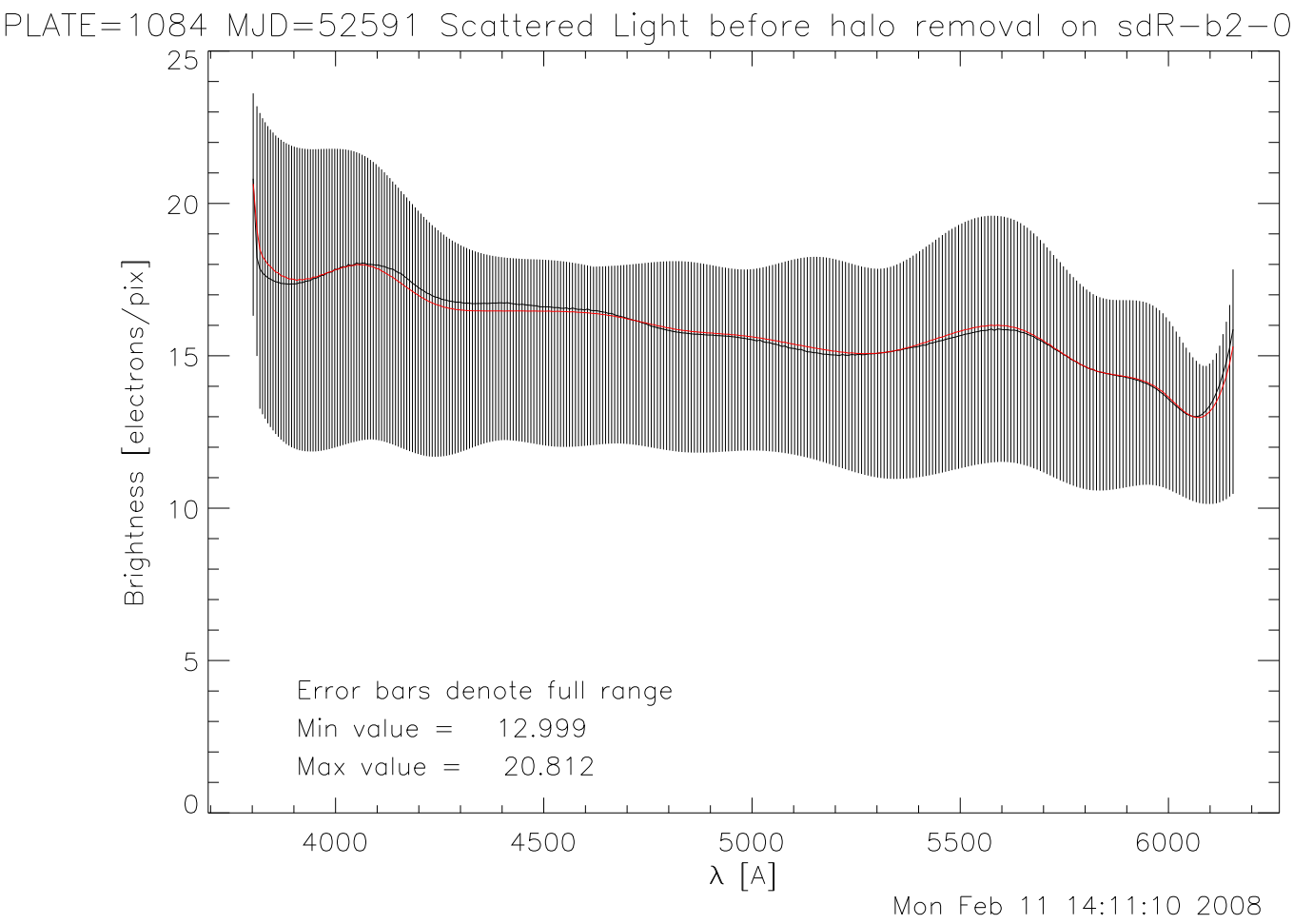

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-b2-00016974.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

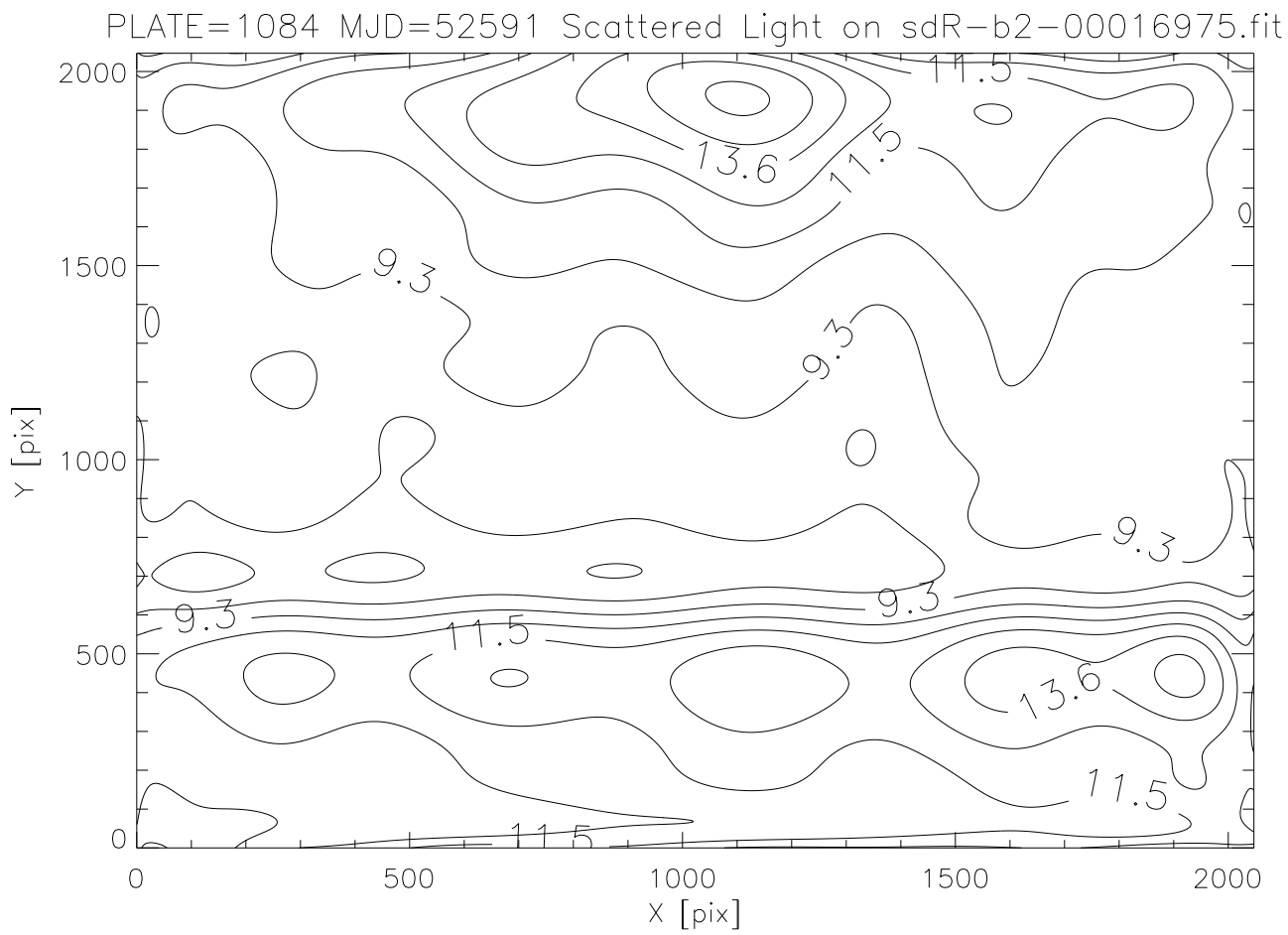

PLATE=1084 MJD=52591 sdR-b2-00016974.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
RED = sky fiber
Dispersion = 12.23 %
Fiber number
Focal Distance [mm]
Airmass

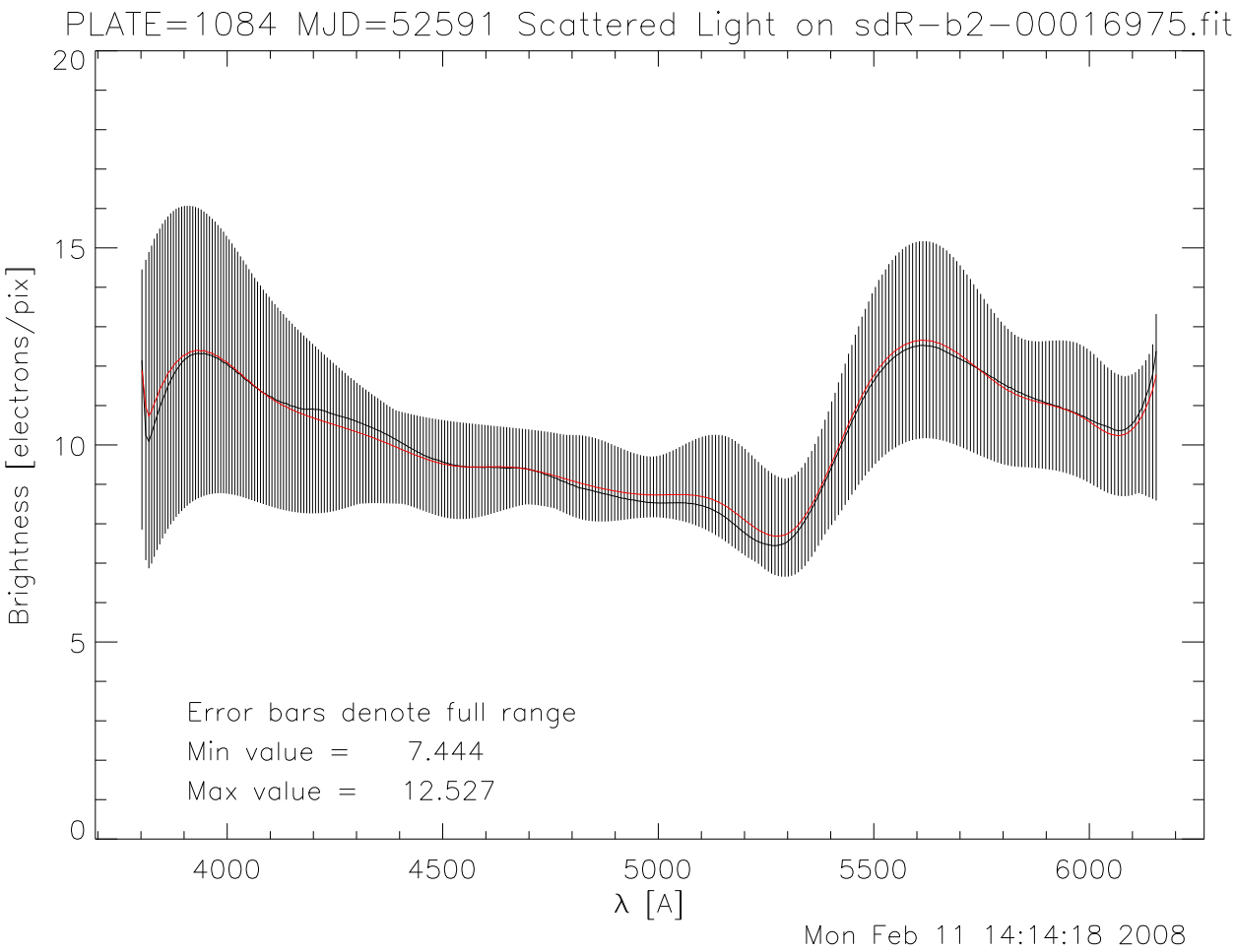

PLATE=1084 MJD=52591 sdR-b2-00016974.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 2.04 %
Fiber number
Focal Distance [mm]
Airmass

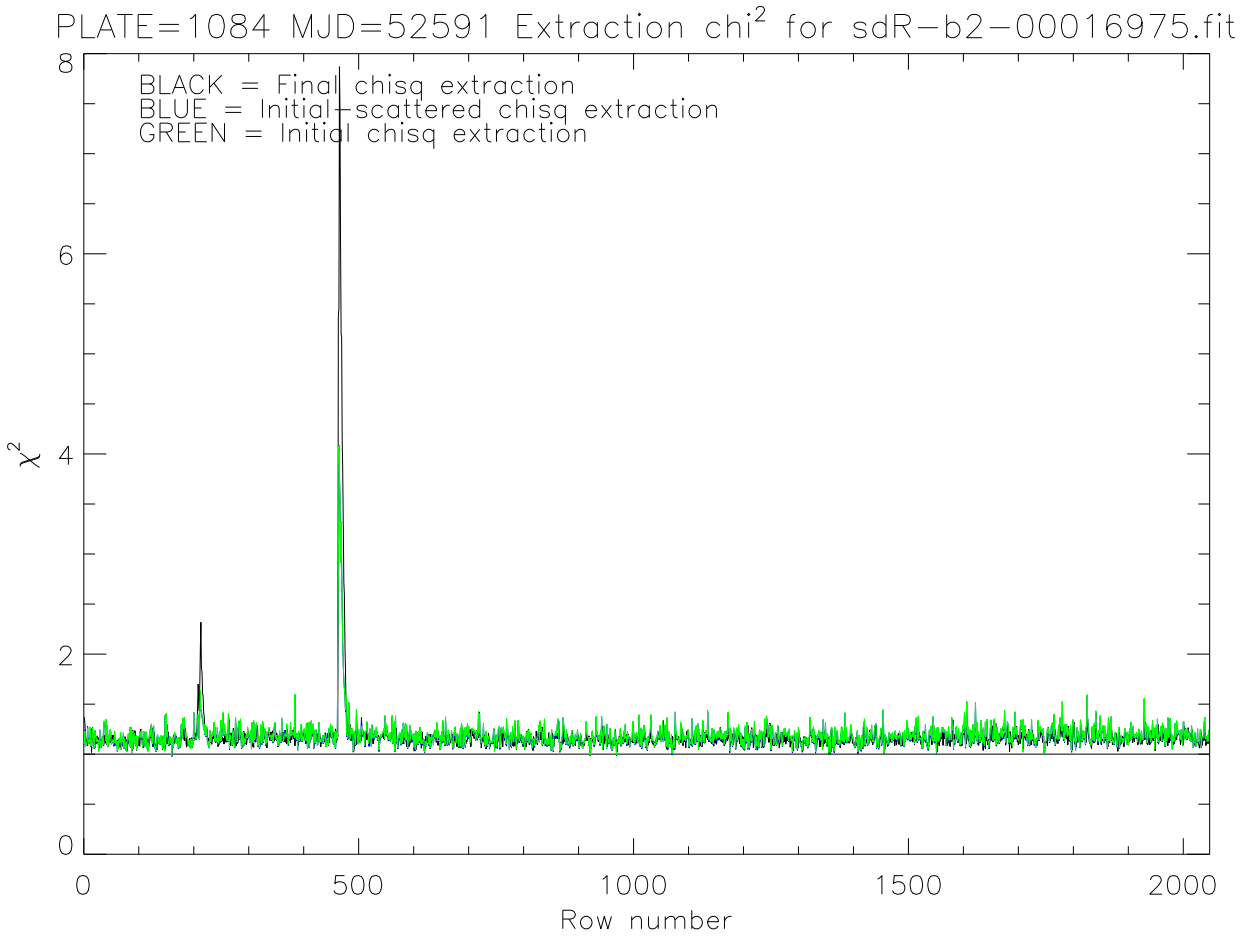

PLATE=1084 MJD=52591 Fiber-Flats for sdR-b2-00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.653
Max value = 1.268
Fiber-Flat
1.5
1.0
0.5
0.0
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 14:10:19 2008

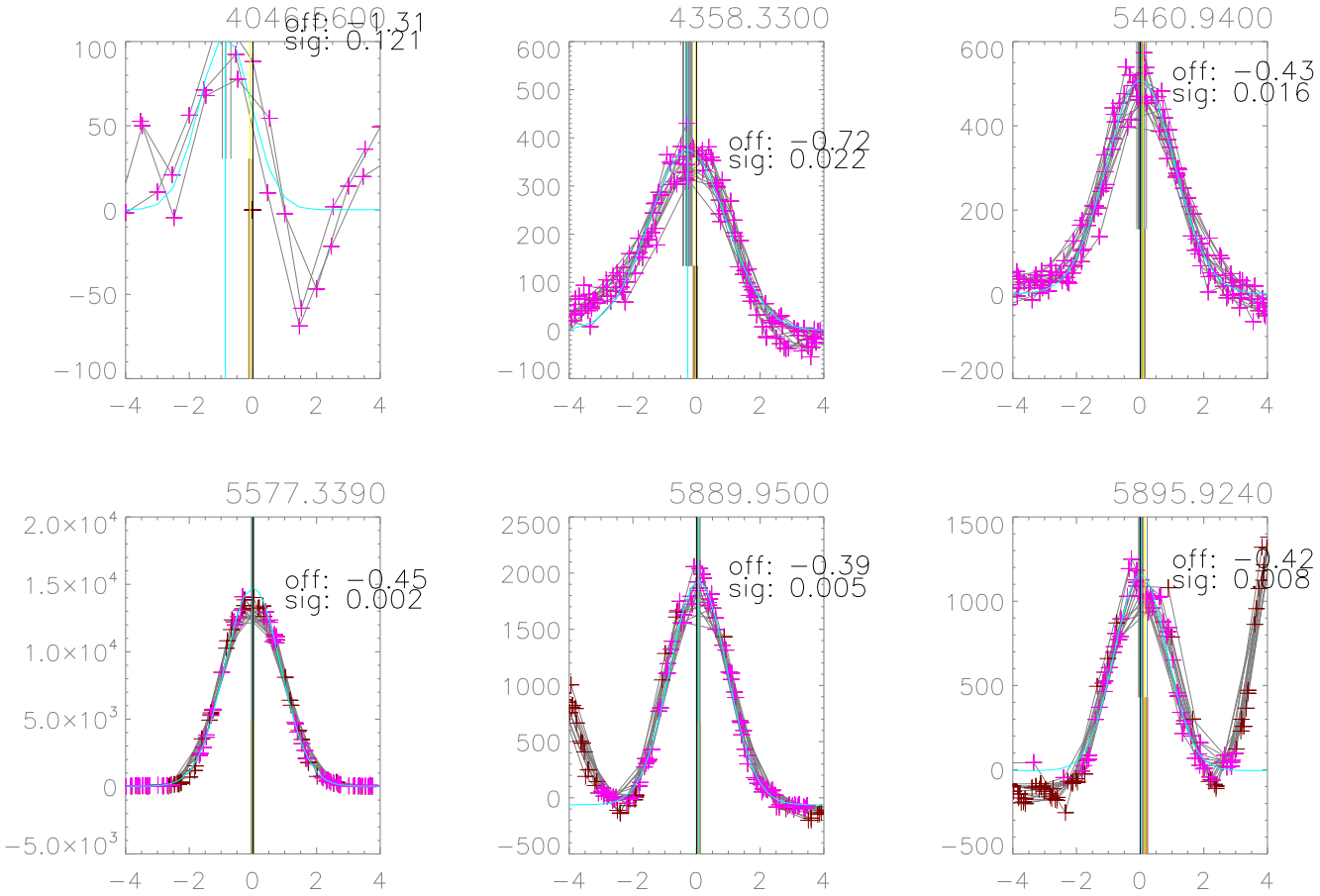

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b2-00016975.f
Y [pix]
X [pix]
0
500
1000
1500
2000
19.5
16.8
14.1
0

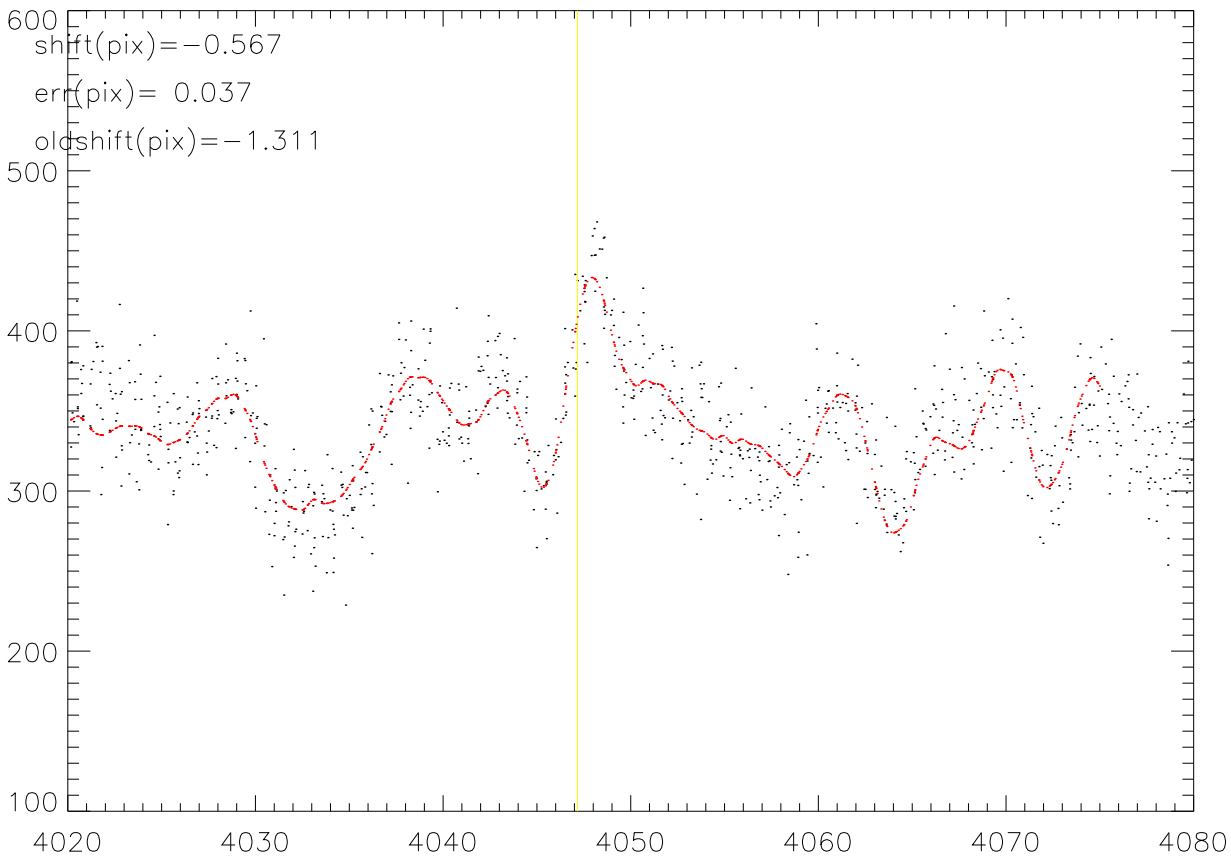

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b2-00016975.f
Brightness [electrons/pix]
25
20
15
10
5
0
Error bars denote full range
Min value = 12.999
Max value = 20.812
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 14:11:10 2008

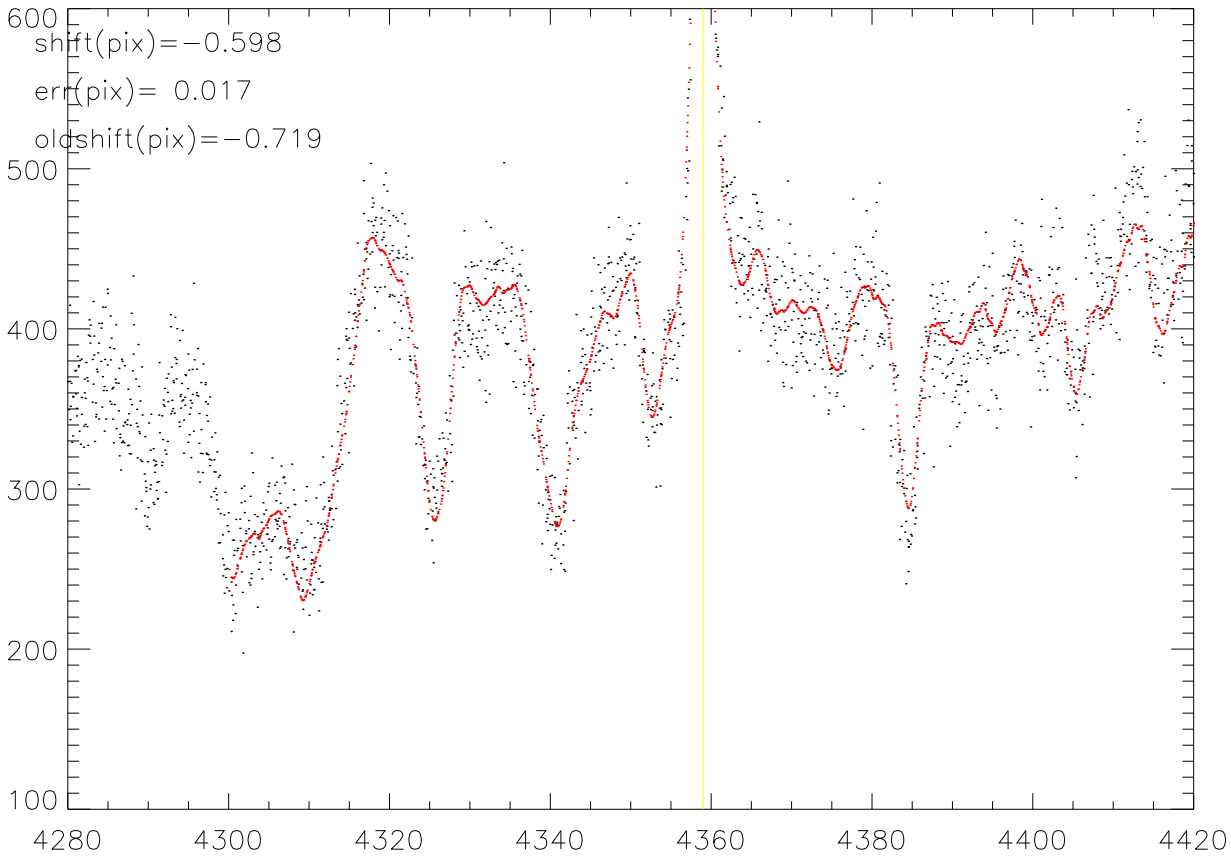

PLATE=1084 MJD=52591 Scattered Light on sdR-b2-00016975.fit
Y [pix]
X [pix]
0
500
1000
1500
2000
13.6
11.5
9.3

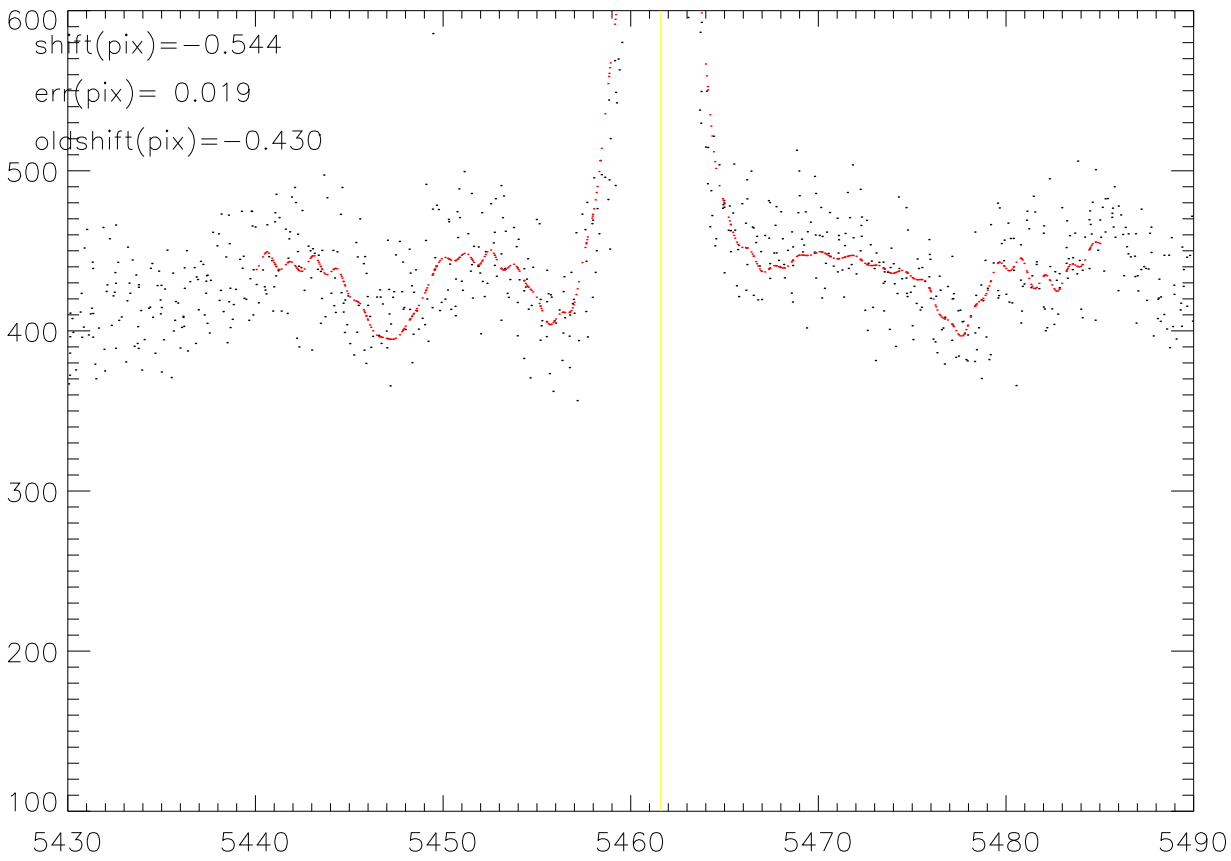

PLATE=1084 MJD=52591 Scattered Light on sdR-b2-00016975.fit
Brightness [electrons/pix]
20
15
10
5
0
4000
4500
5000
5500
6000
λ [A]
Error bars denote full range
Min value = 7.444
Max value = 12.527
Mon Feb 11 14:14:18 2008

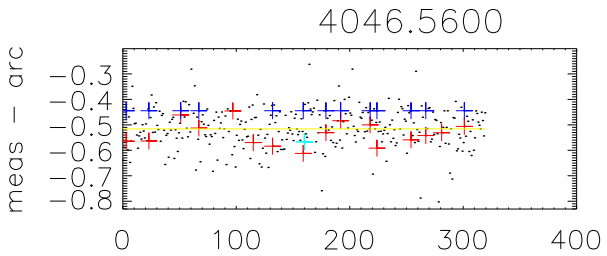

PLATE=1084 MJD=52591 Extraction chi^2 for sdR-b2-00016975.fit
BLACK = Final chisq extraction
BLUE = Initial-scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
0
2
4
6
8
0
500
1000
1500
2000
Row number

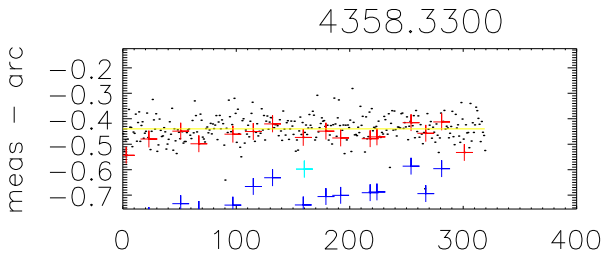

4046.5600
off: −0.31
sig: 0.121
4358.3300
off: −0.72
sig: 0.022
5460.9400
off: −0.43
sig: 0.016
5577.3390
off: −0.45
sig: 0.002
5889.9500
off: −0.39
sig: 0.005
5895.9240
off: −0.42
sig: 0.008

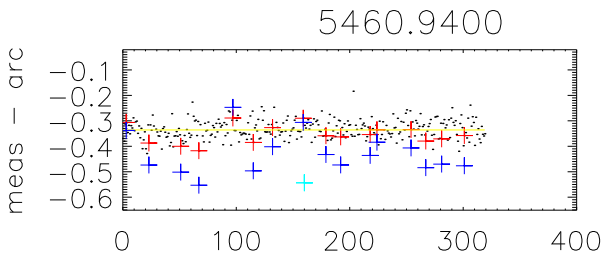

shift(pix)=−0.567
err(pix)= 0.037
oldshift(pix)=−1.311
600
500
400
300
200
100
4020
4030
4040
4050
4060
4070
4080

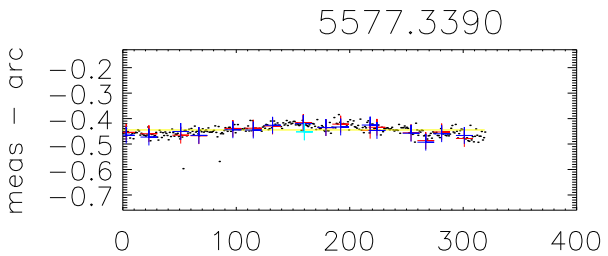

shift(pix)=−0.598
err(pix)= 0.017
oldshift(pix)=−0.719
600
500
400
300
200
100
4280
4300
4320
4340
4360
4380
4400
4420

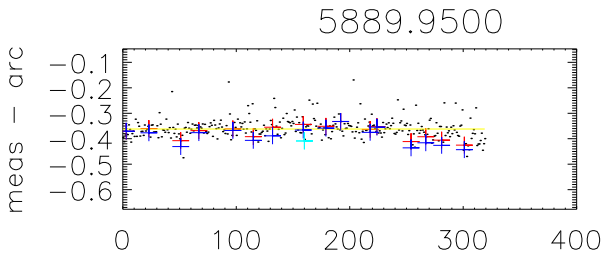

shift(pix)=−0.544
err(pix)= 0.019
oldshift(pix)=−0.430
600
500
400
300
200
100
5430
5440
5450
5460
5470
5480
5490

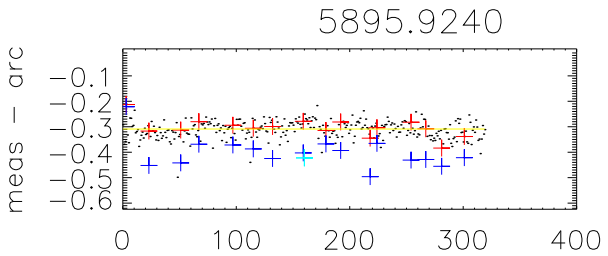

4046.5600
meas − arc
−0.3
−0.4
−0.5
−0.6
−0.7
−0.8
0
100
200
300
400

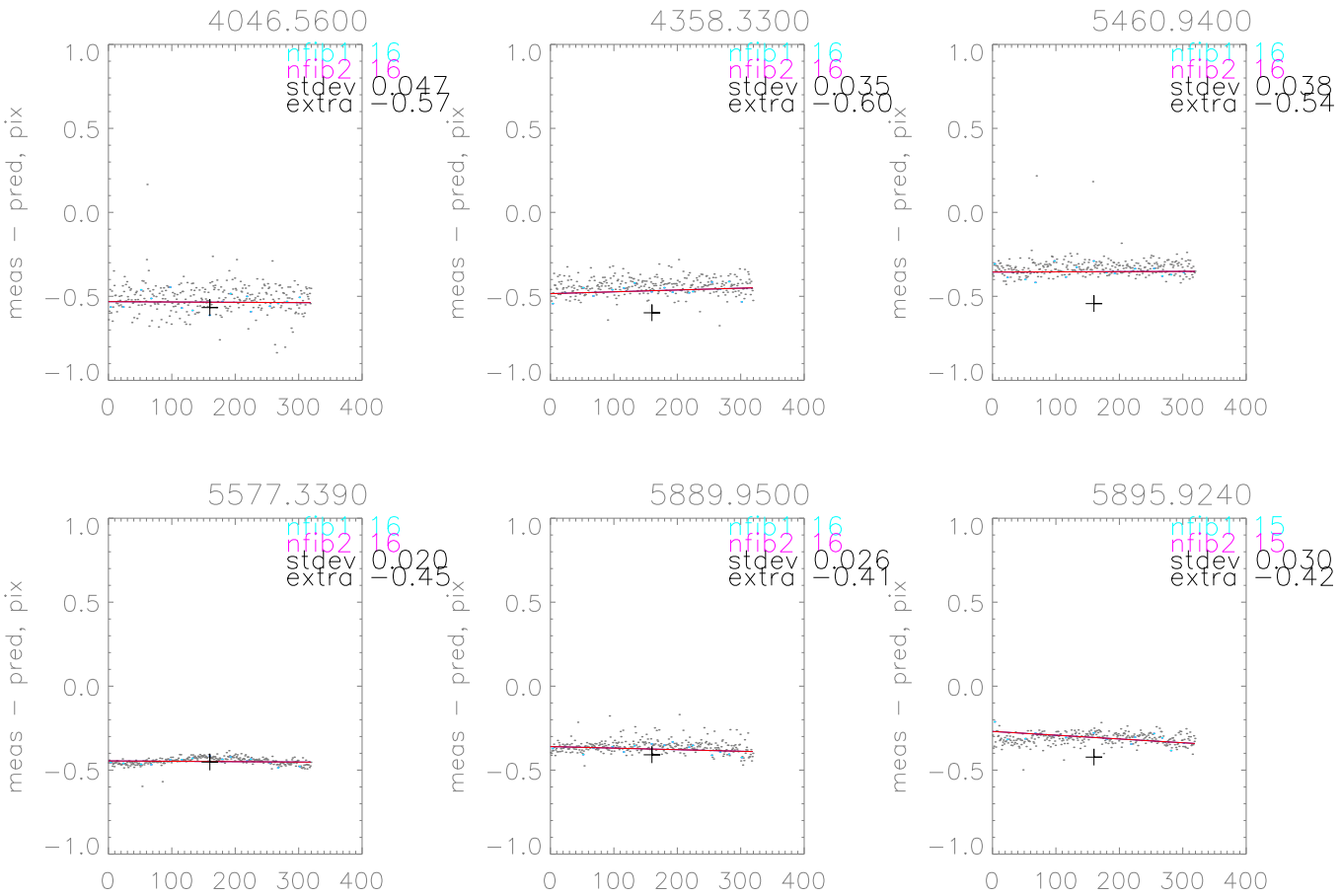

4358.3300
meas − arc
−0.2
−0.3
−0.4
−0.5
−0.6
−0.7
0
100
200
300
400

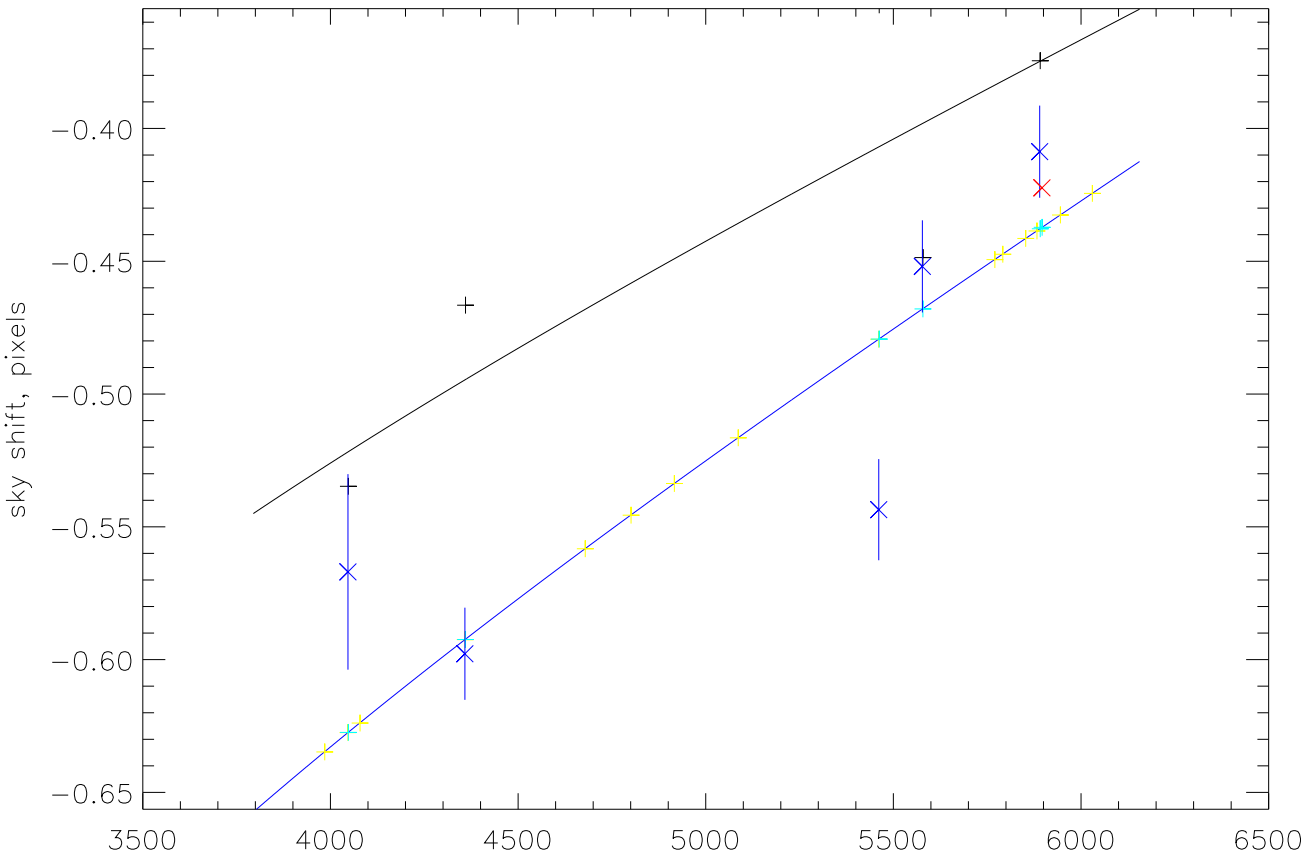

5460.9400
meas − arc
−0.1
−0.2
−0.3
−0.4
−0.5
−0.6
0
100
200
300
400

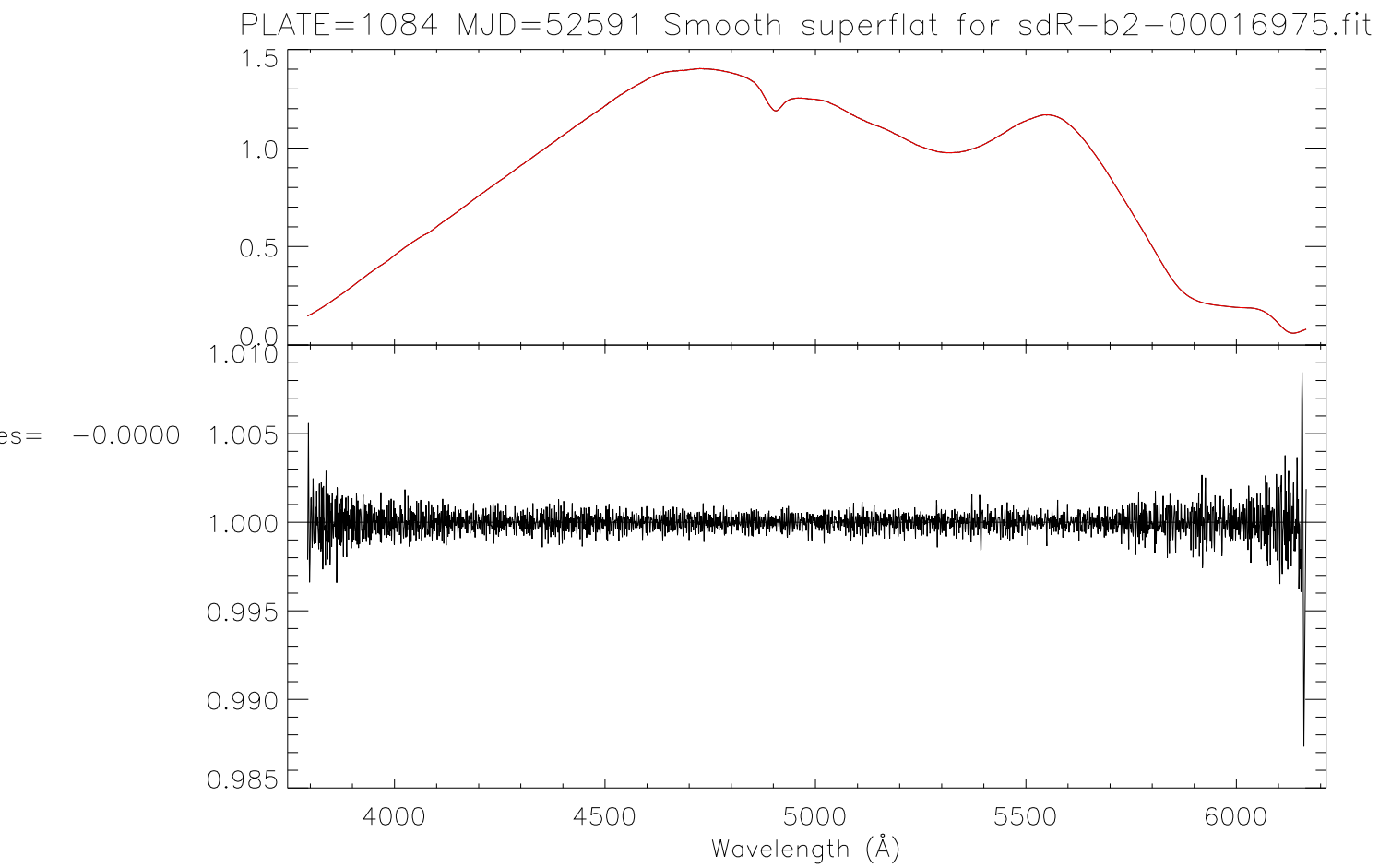

5577.3390
meas − arc
−0.2
−0.3
−0.4
−0.5
−0.6
−0.7
0
100
200
300
400

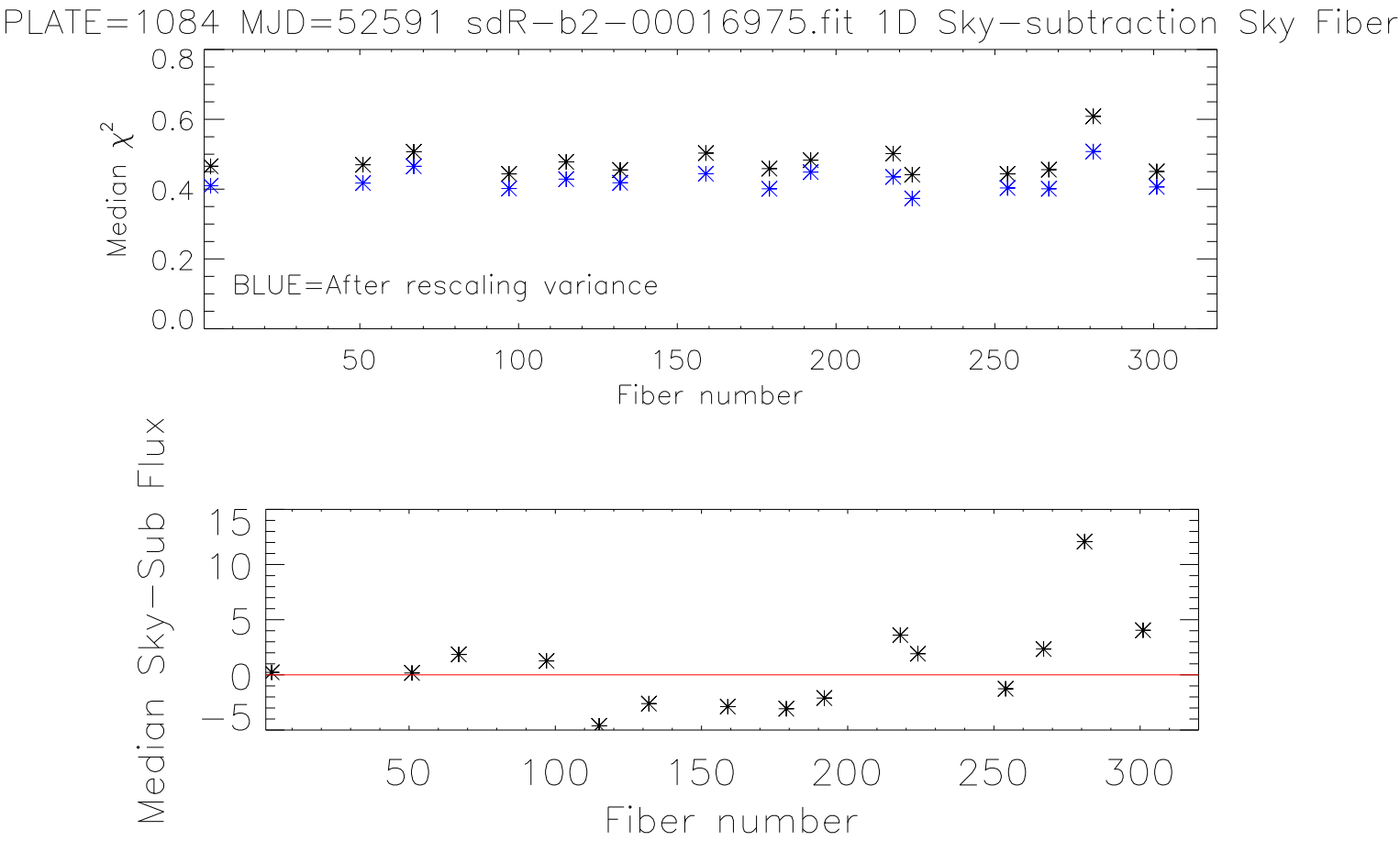

5889.9500
meas − arc
−0.1
−0.2
−0.3
−0.4
−0.5
−0.6
0
100
200
300
400

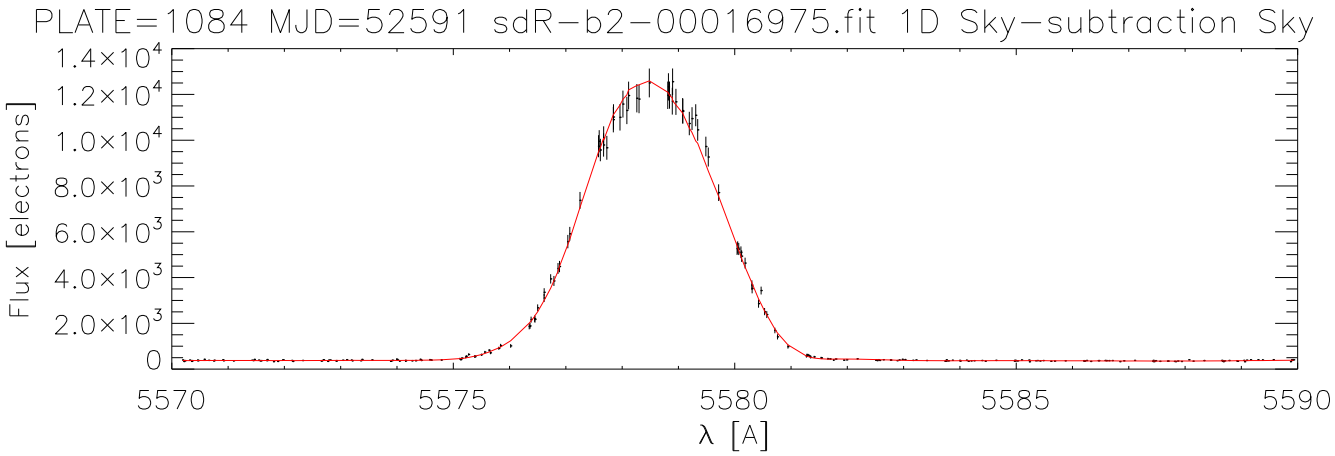

5895.9240
meas − arc
−0.1
−0.2
−0.3
−0.4
−0.5
−0.6
0
100
200
300
400

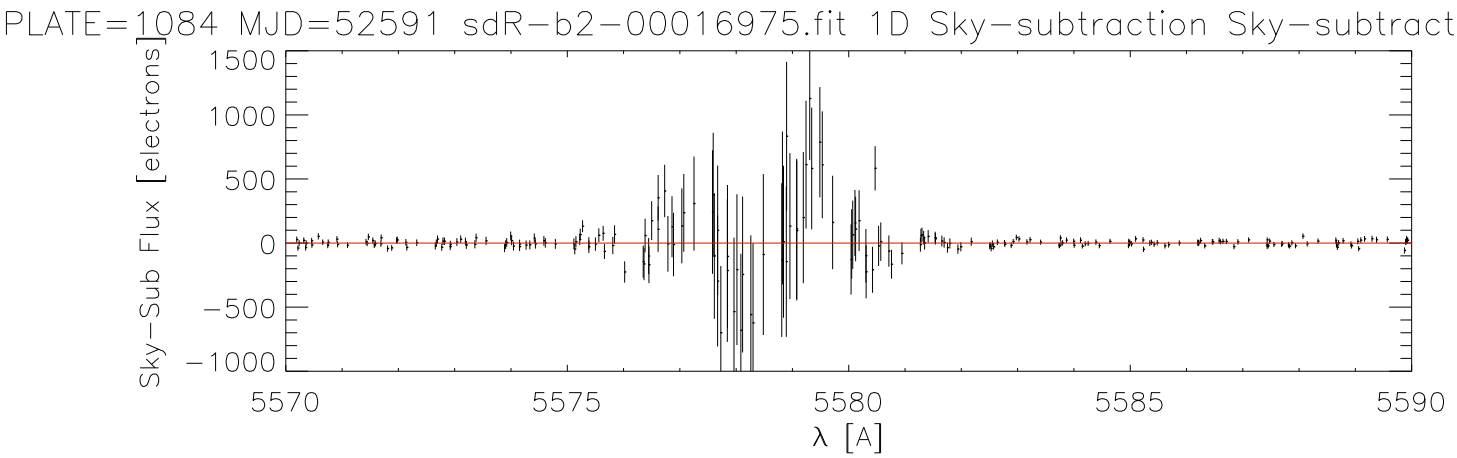

4046.5600
nfib1 16
nfib2 16
stdev 0.047
extra −0.57
4358.3300
nfib1 16
nfib2 16
stdev 0.035
extra −0.60
5460.9400
nfib1 16
nfib2 16
stdev 0.038
extra −0.54
5577.3390
nfib1 16
nfib2 16
stdev 0.020
extra −0.45
5889.9500
nfib1 16
nfib2 16
stdev 0.026
extra −0.41
5895.9240
nfib1 15
nfib2 15
stdev 0.030
extra −0.42
meas − pred, pix
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400

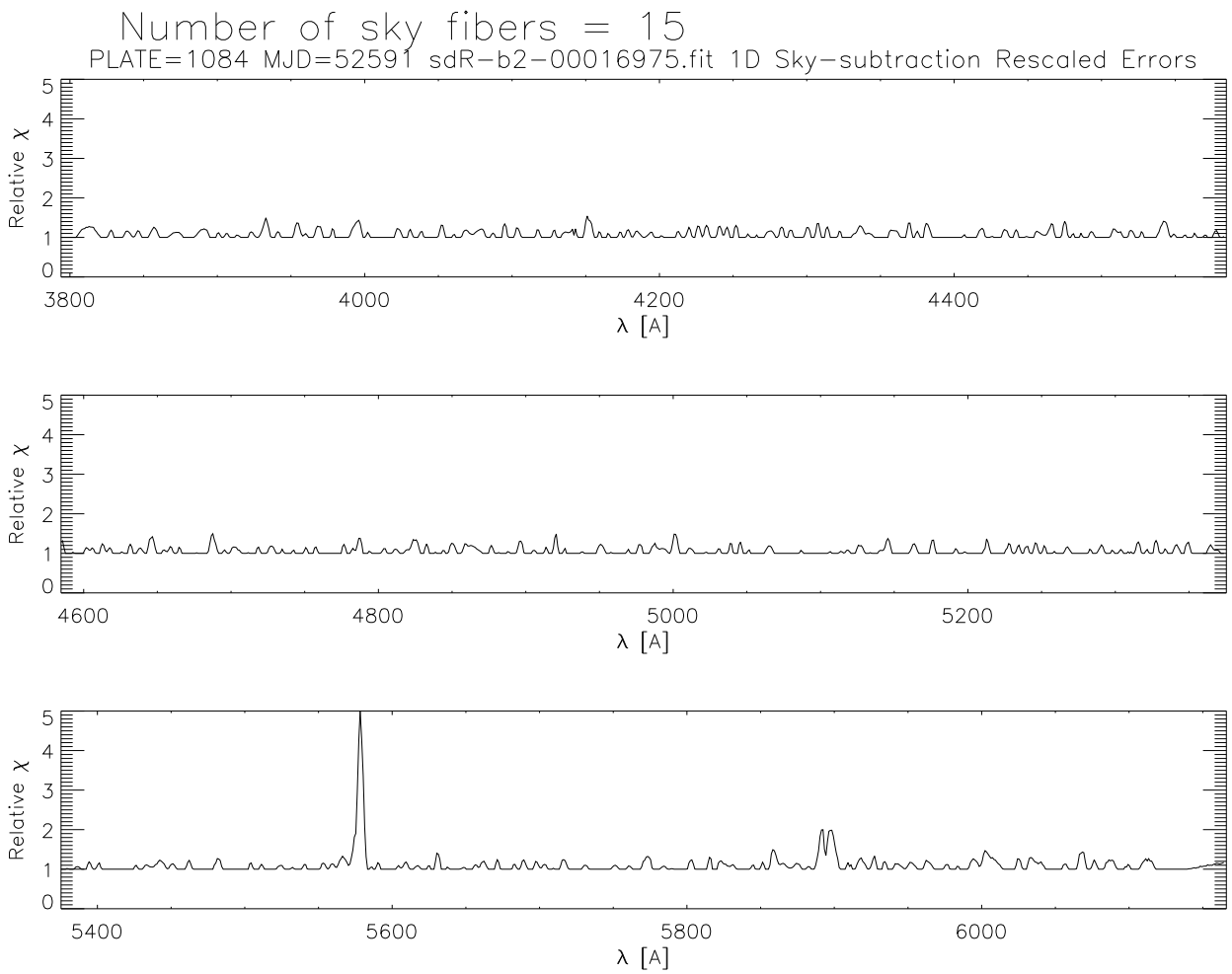

sky shift, pixels
−0.40
−0.45
−0.50
−0.55
−0.60
−0.65
3500
4000
4500
5000
5500
6000
6500

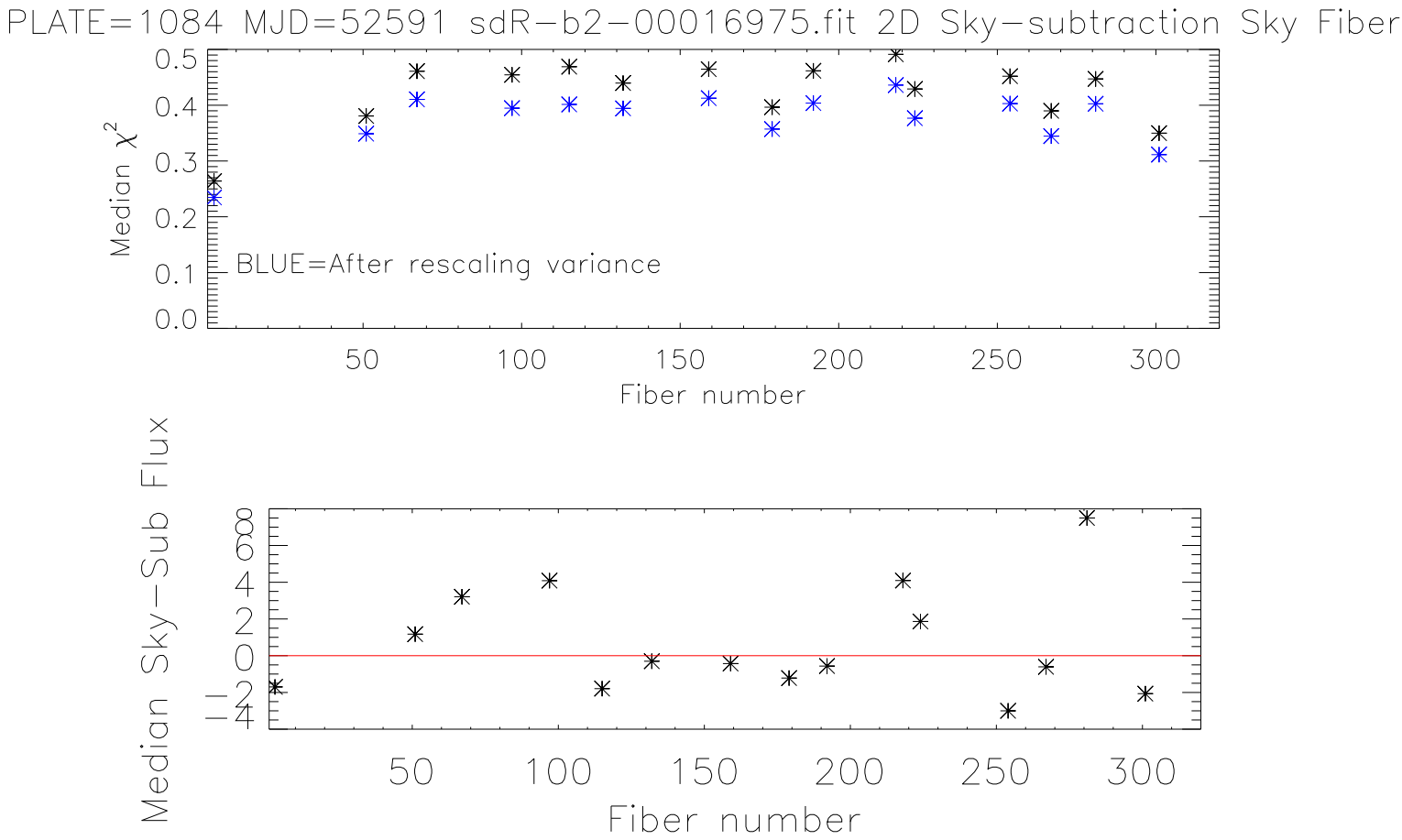

PLATE=1084 MJD=52591 Smooth superflat for sdR-b2-00016975.fit
1.5
1.0
0.5
0.0
1.010
1.005
1.000
0.995
0.990
0.985
es= −0.0000
4000
4500
5000
5500
6000
Wavelength (Å)

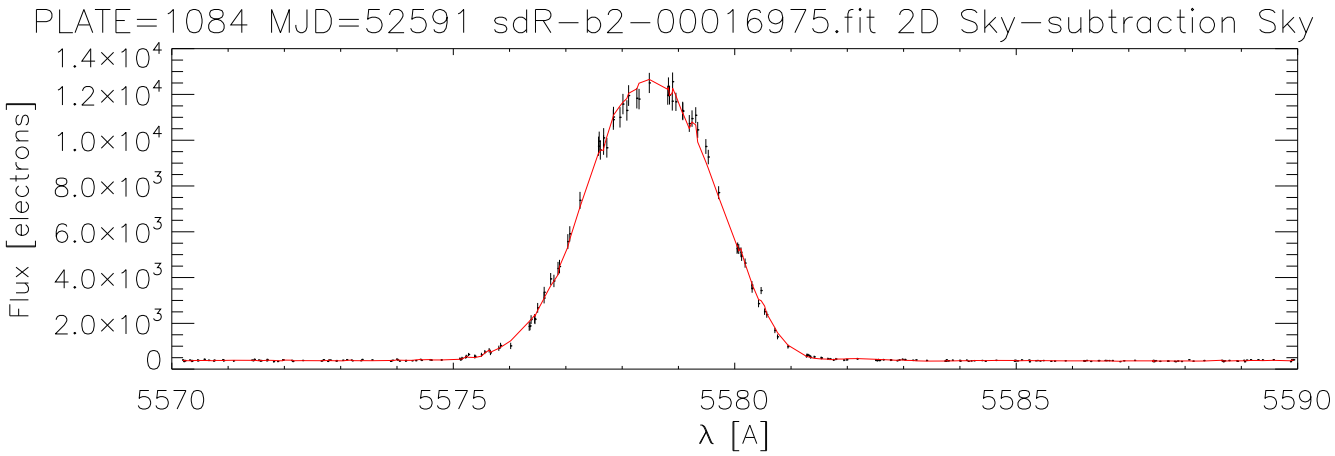

PLATE=1084 MJD=52591 sdR-b2-00016975.fit 1D Sky-subtraction Sky Fiber
Median χ^2
0.0
0.2
0.4
0.6
0.8
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
15
10
5
0
-5
50
100
150
200
250
300
Fiber number

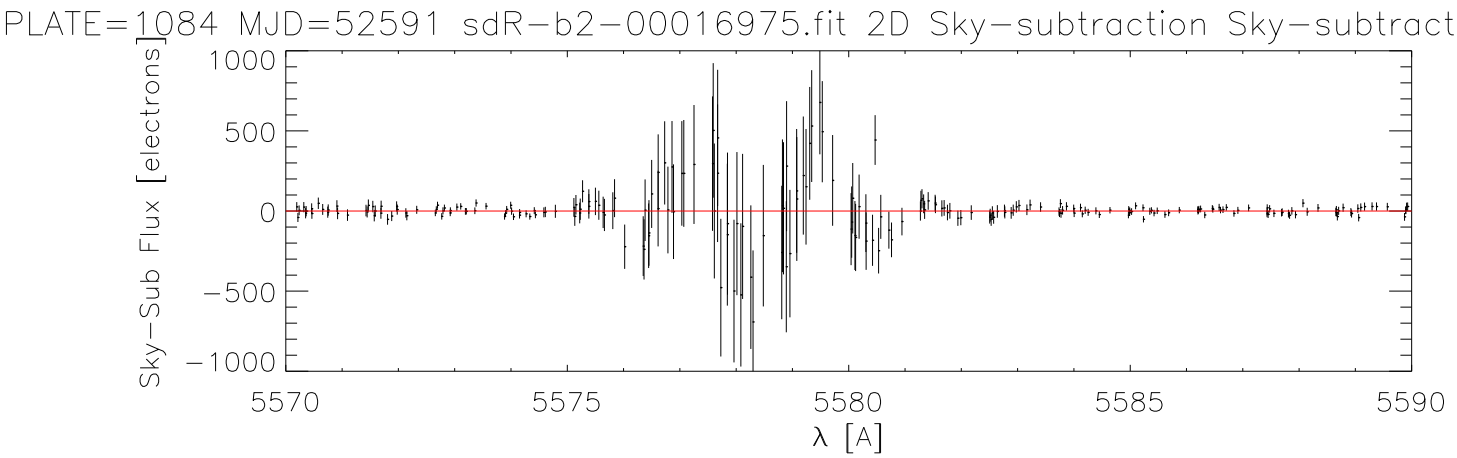

PLATE=1084 MJD=52591 sdR-b2-00016975.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
1.4×10^4
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
0
5570
5575
5580
5585
5590
λ [A]

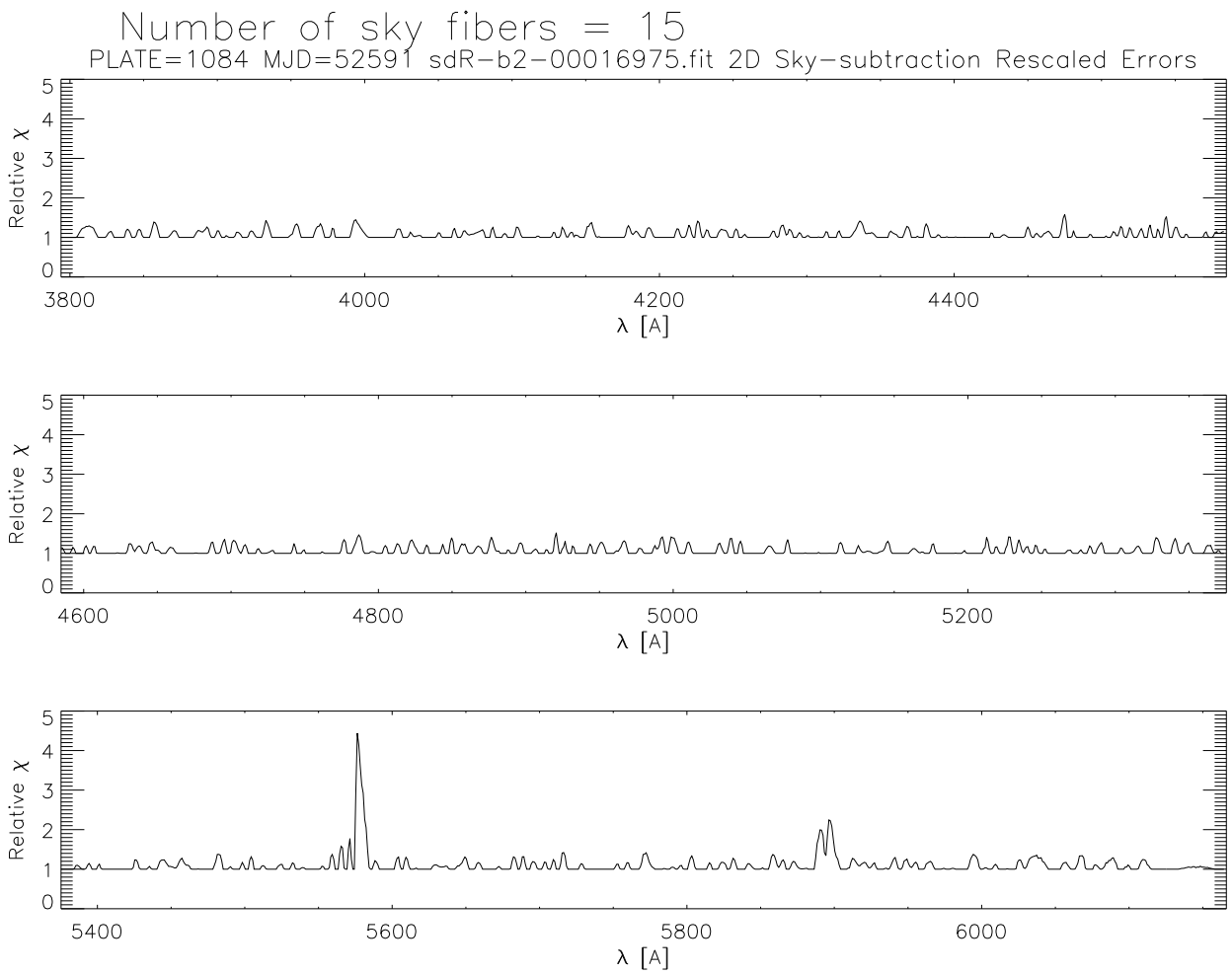

PLATE=1084 MJD=52591 sdR-b2-00016975.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1500
1000
500
0
−500
−1000
5570
5575
5580
5585
5590
λ [A]

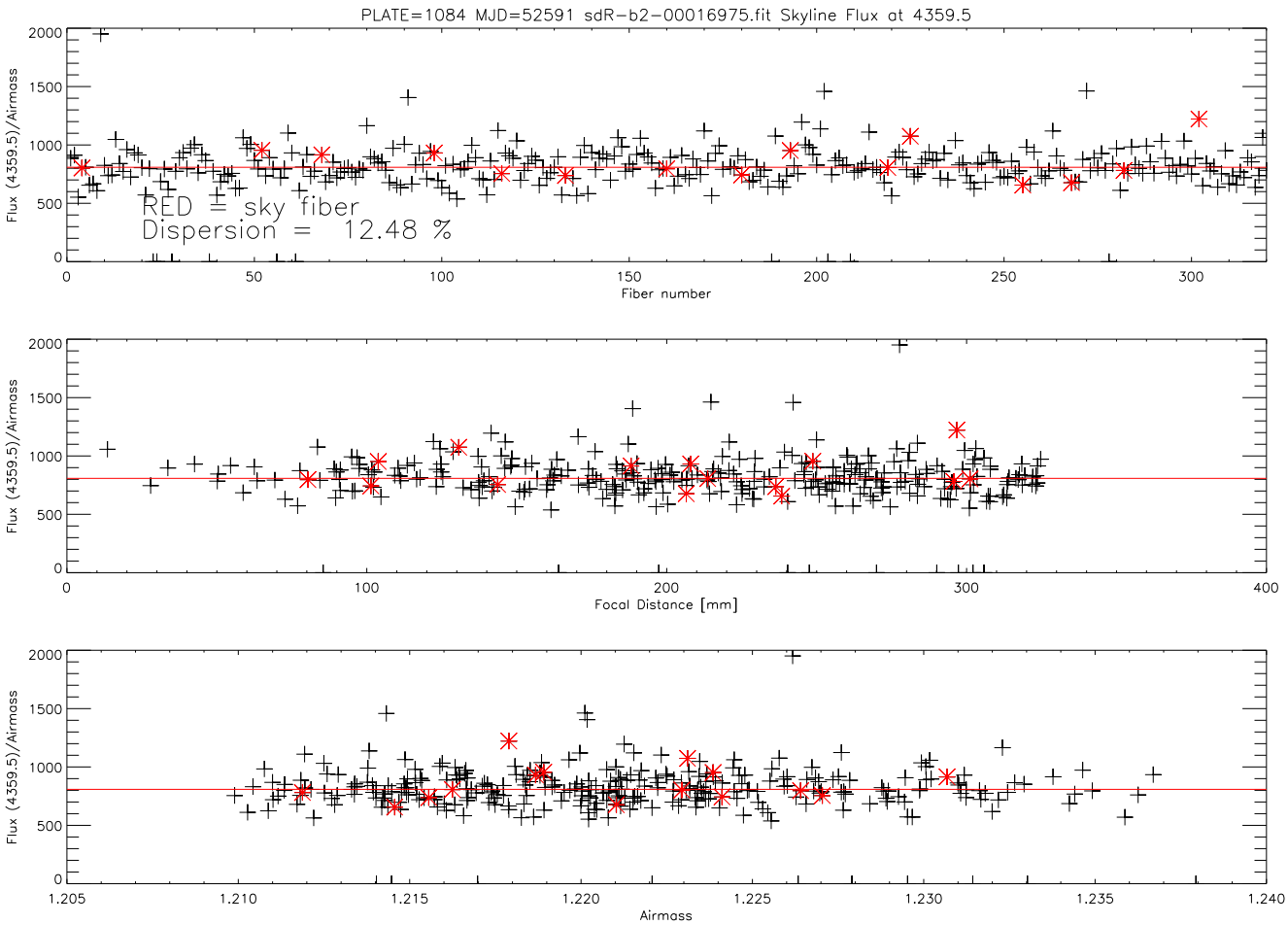

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-b2-00016975.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

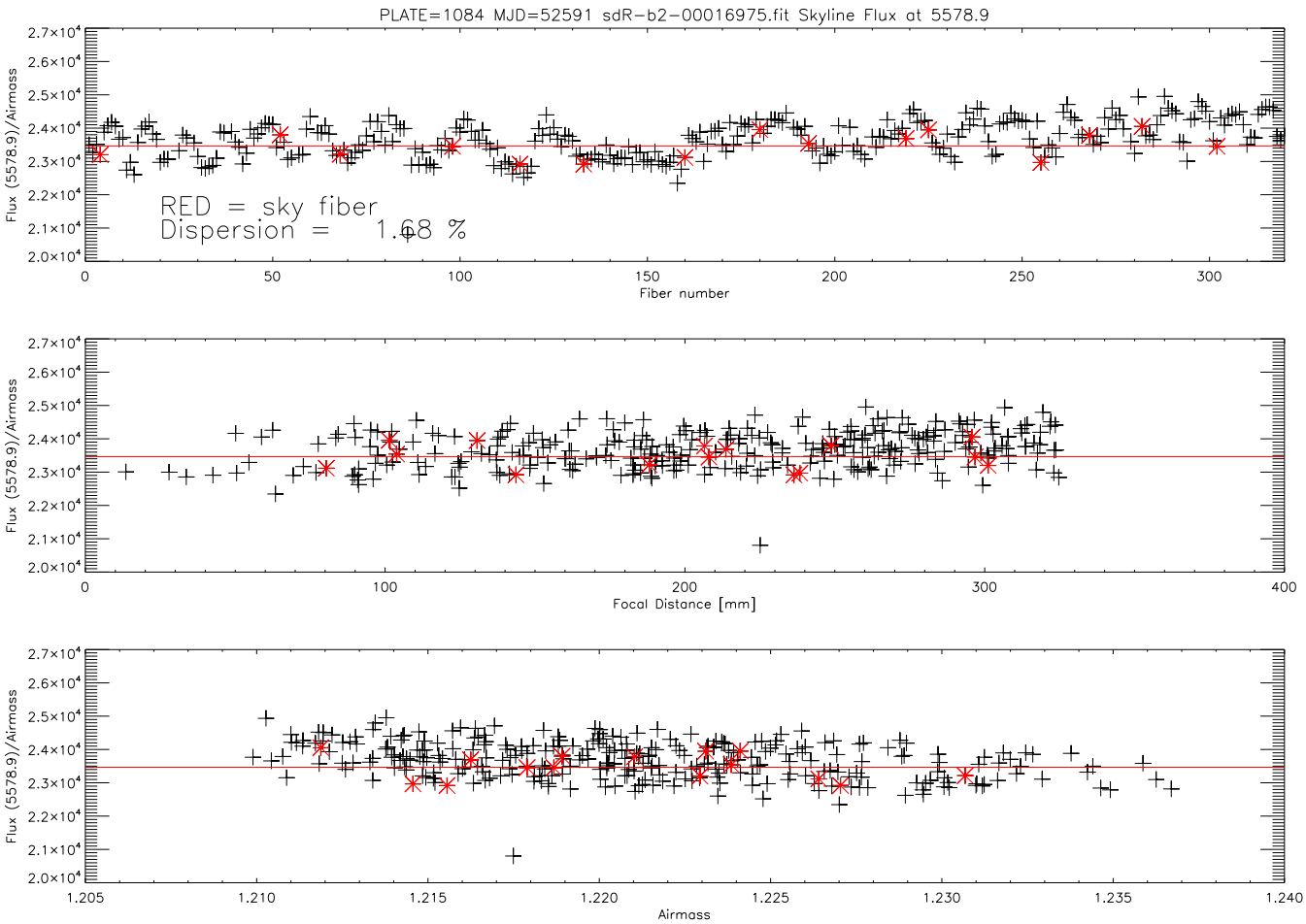

PLATE=1084 MJD=52591 sdR-b2-00016975.fit 2D Sky-subtraction Sky Fiber
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
-4
-2
0
2
4
6
8
50
100
150
200
250
300
Fiber number

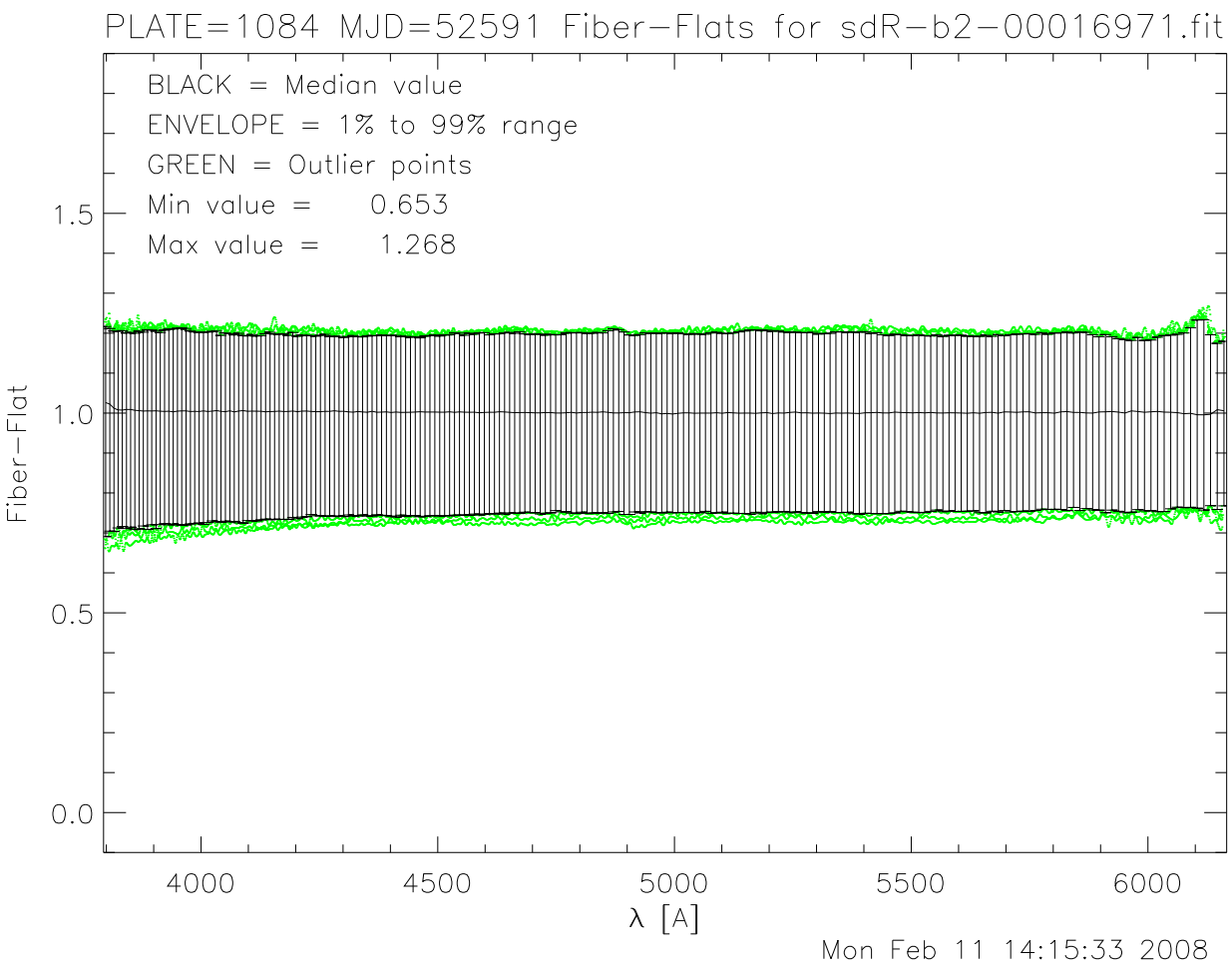

PLATE=1084 MJD=52591 sdR-b2-00016975.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
1.4×10^4
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
0
5570
5575
5580
5585
5590
λ [A]

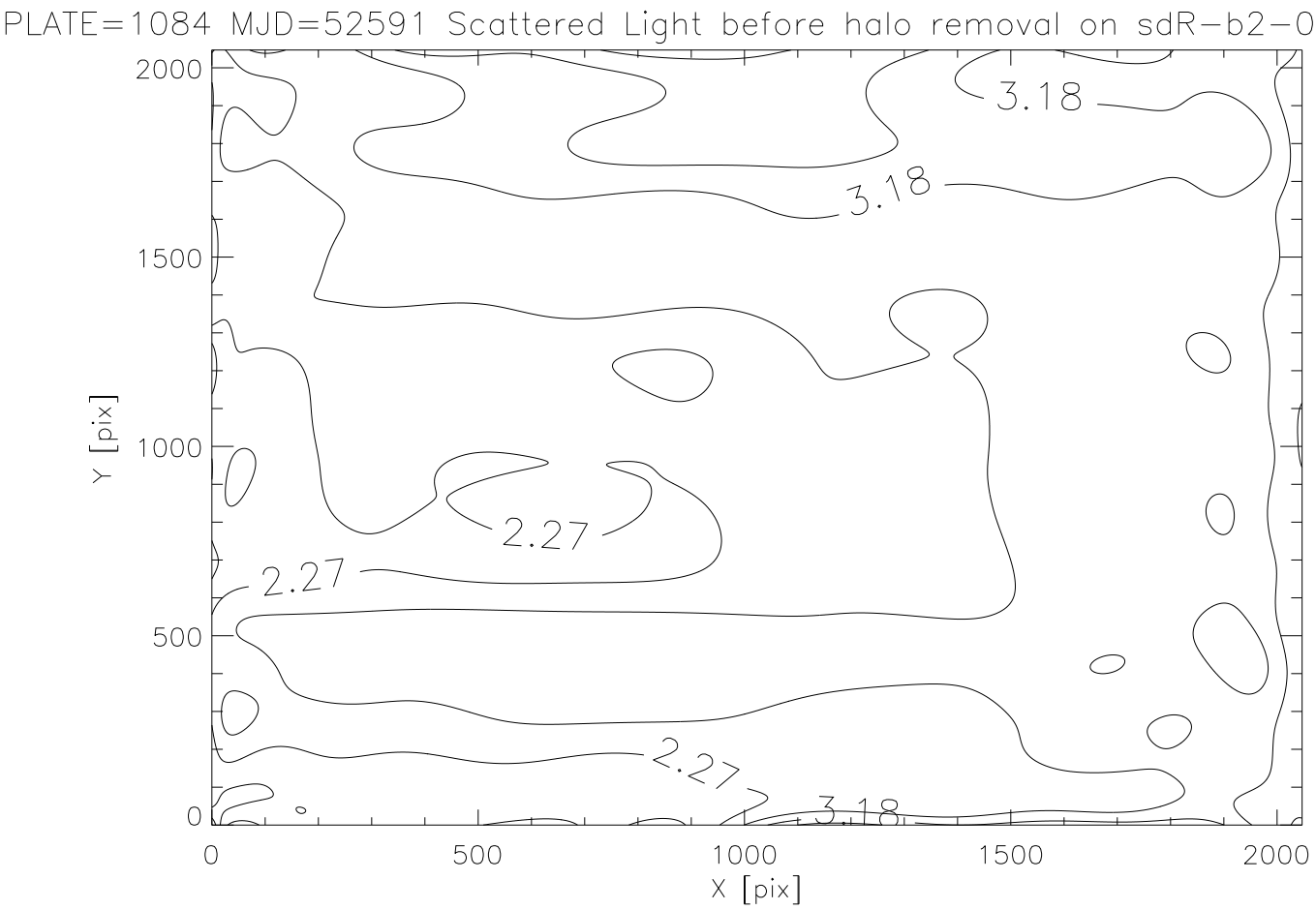

PLATE=1084 MJD=52591 sdR-b2-00016975.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1000
500
0
−500
−1000
5570
5575
5580
5585
5590
λ [A]

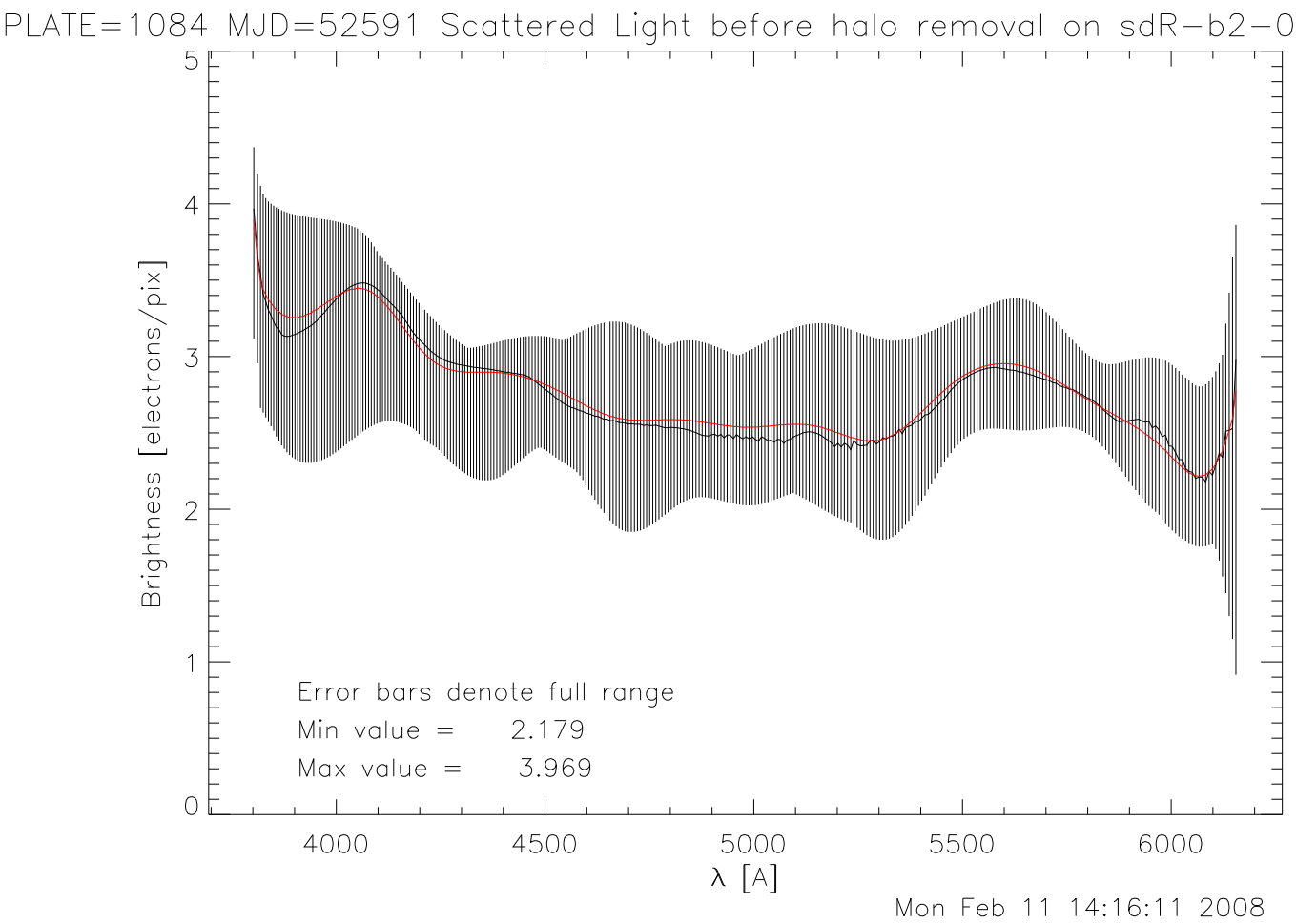

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-b2-00016975.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

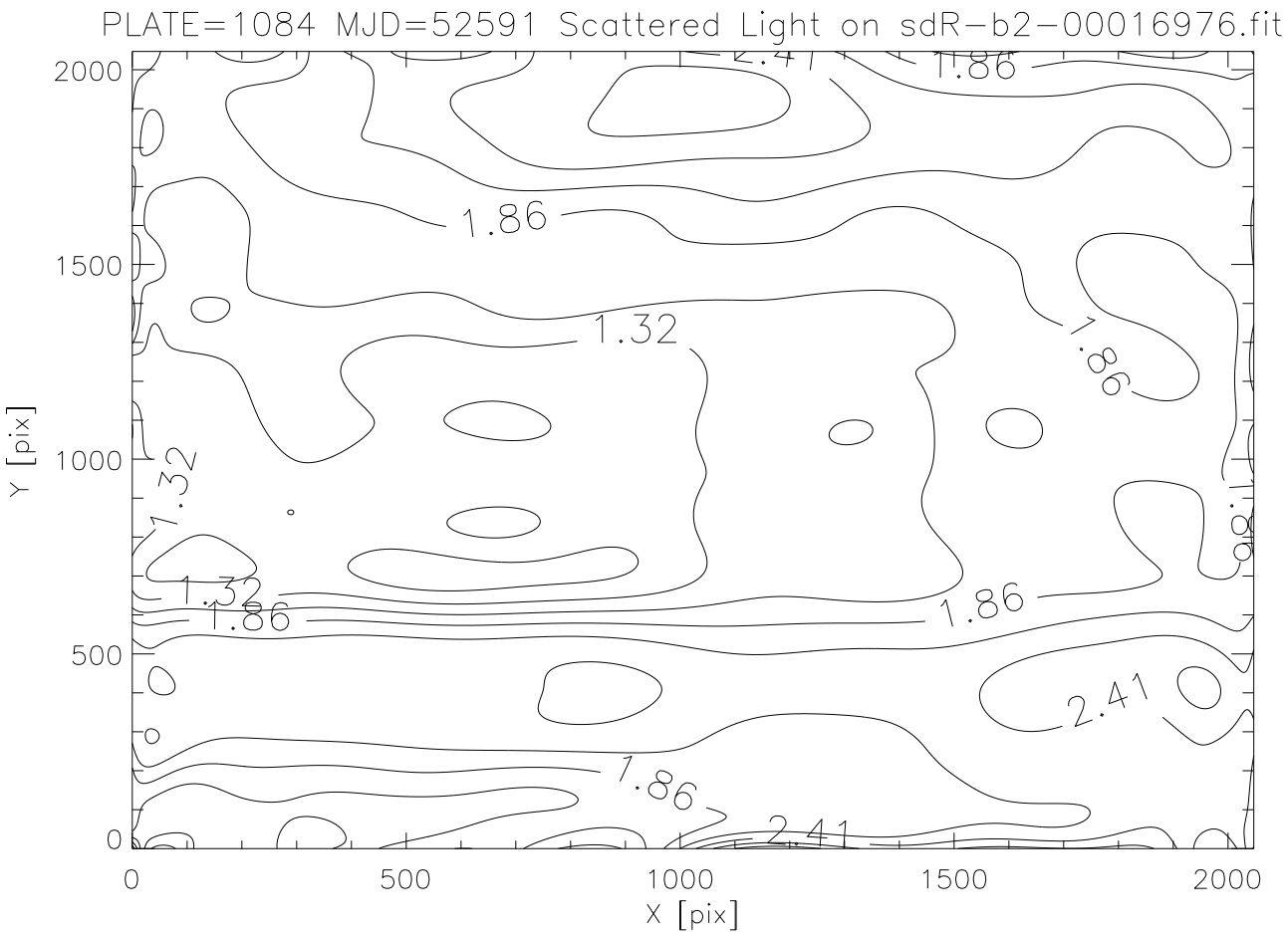

PLATE=1084 MJD=52591 sdR-b2-00016975.fit Skyline Flux at 4359.5
Flux (4359.5)/Airmass
Fiber number
RED = sky fiber
Dispersion = 12.48 %
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

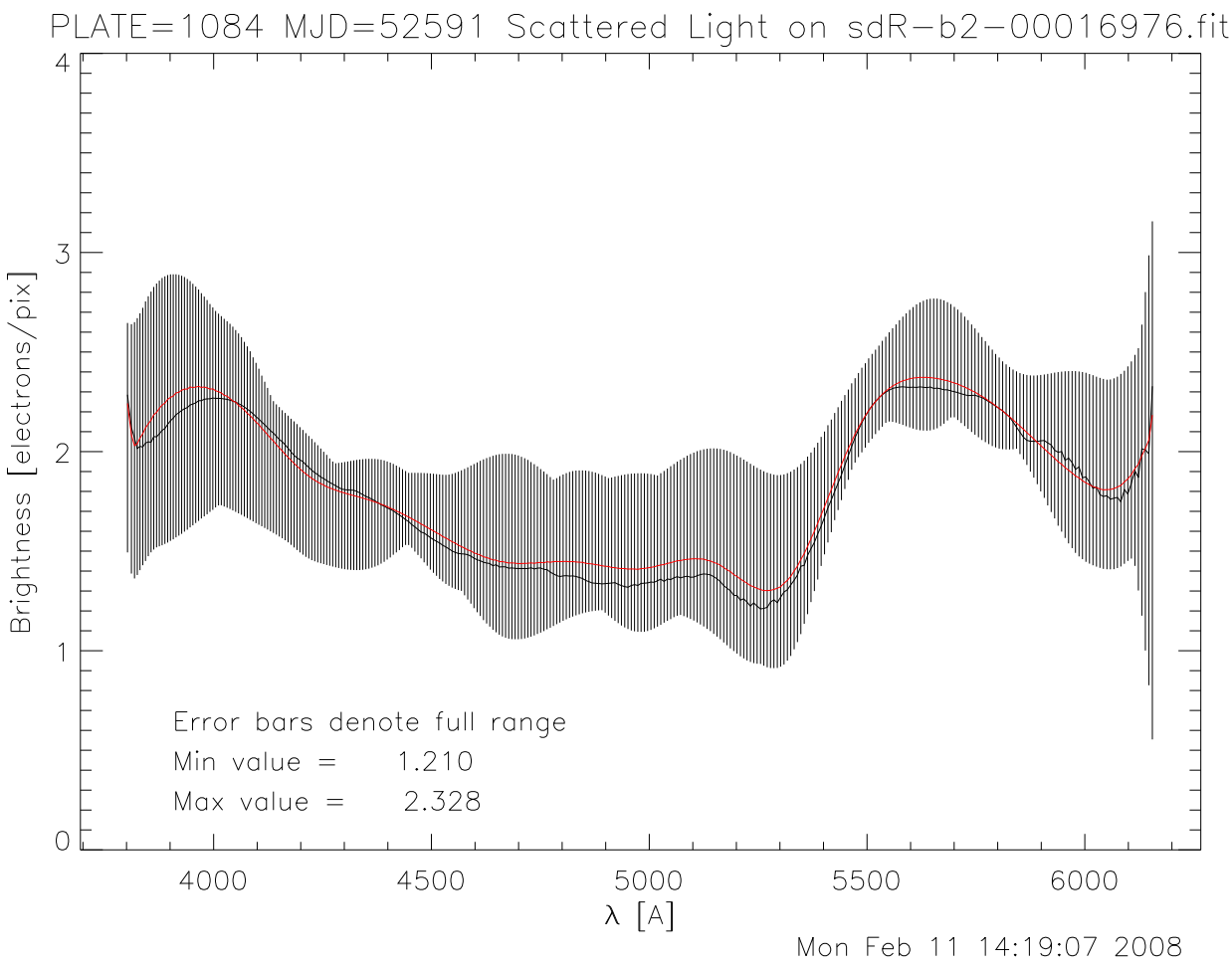

PLATE=1084 MJD=52591 sdR-b2-00016975.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 1.68 %
Fiber number
Focal Distance [mm]
Airmass

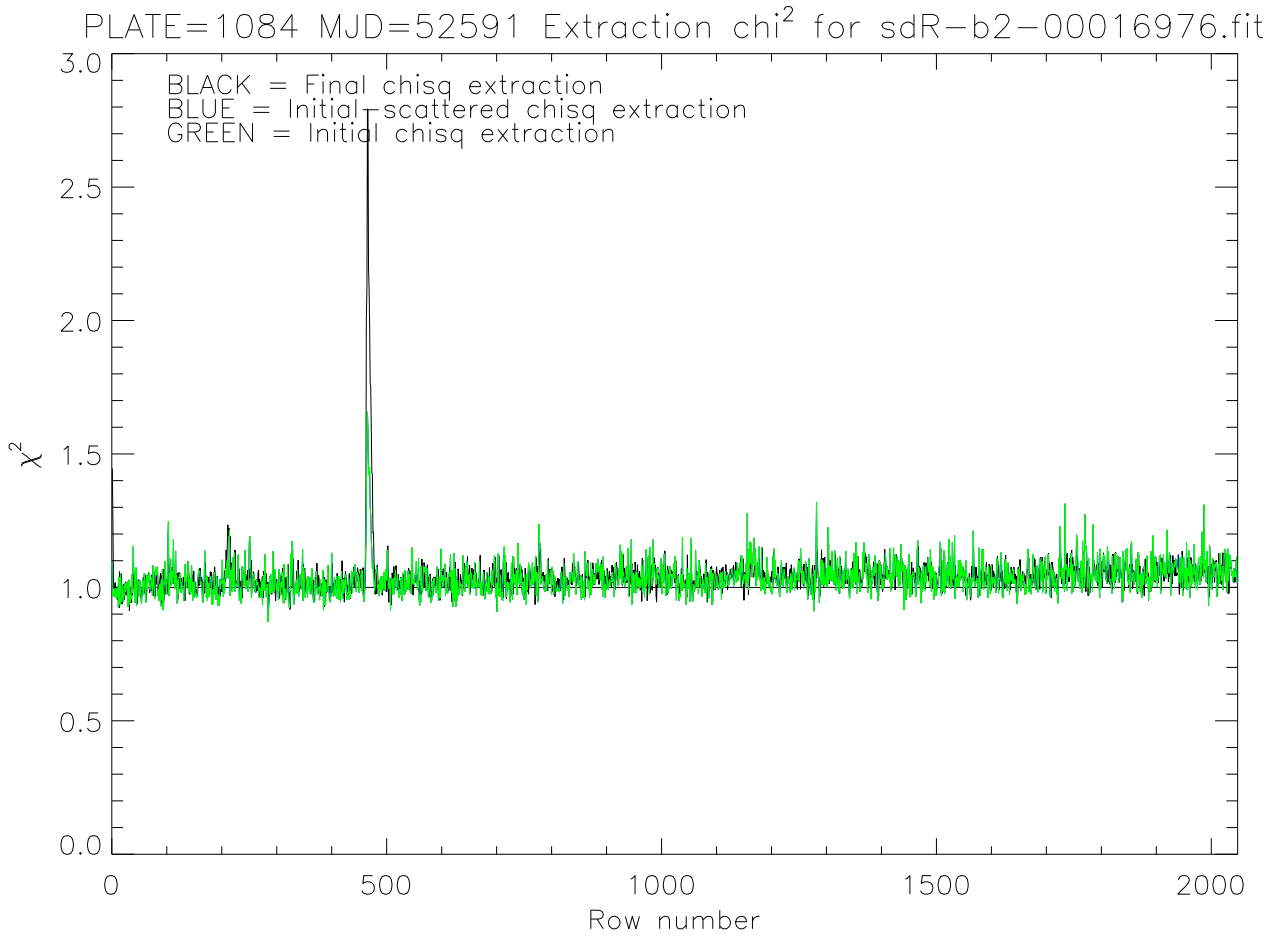

PLATE=1084 MJD=52591 Fiber-Flats for sdR-b2-00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.653
Max value = 1.268
Fiber-Flat
1.5
1.0
0.5
0.0
4000
4500
5000
5500
6000
λ [A]
Mon Feb 11 14:15:33 2008

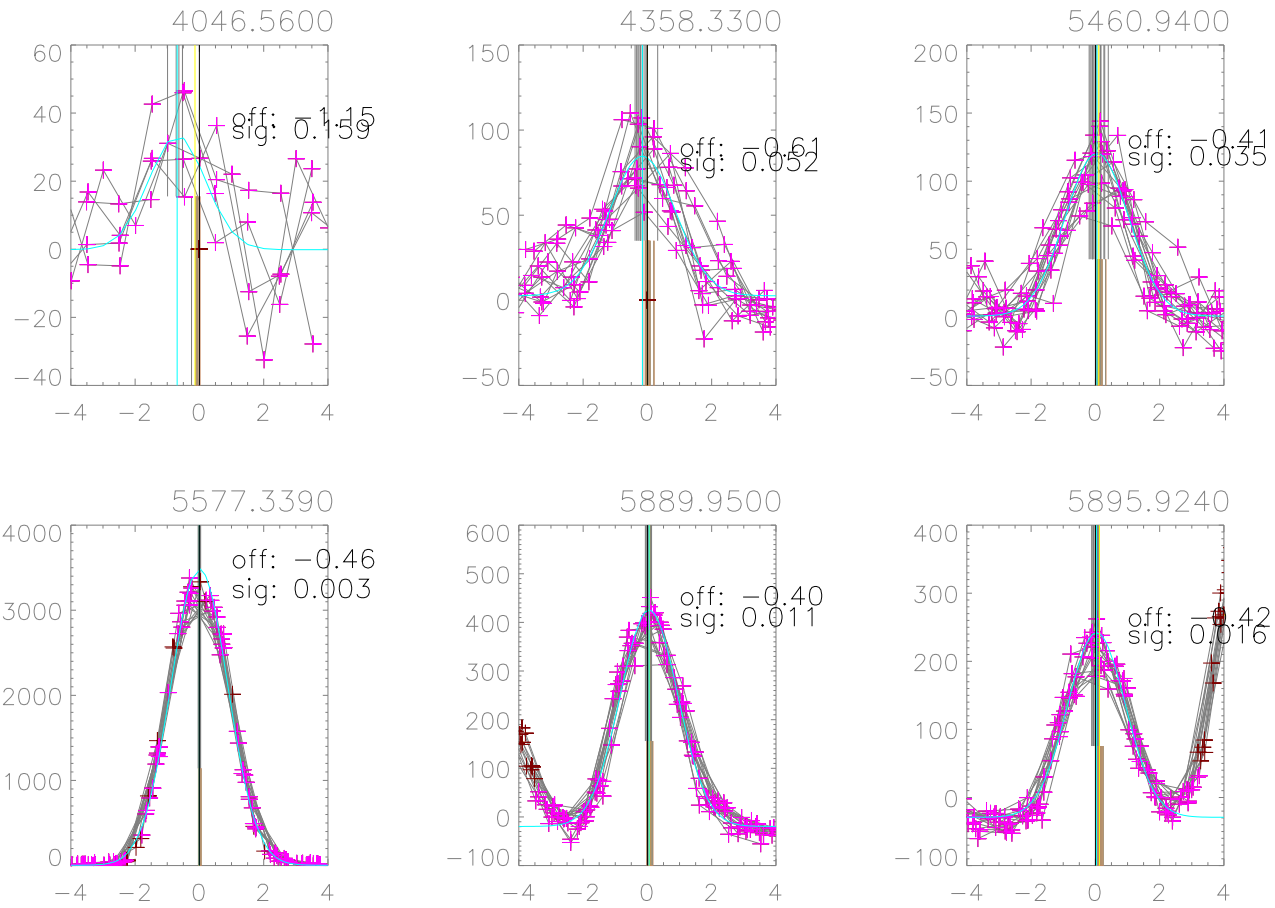

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b2-00016976.f
3.18
3.18
2.27
2.27
2.27
3.18
Y [pix]
X [pix]
0
500
1000
1500
2000

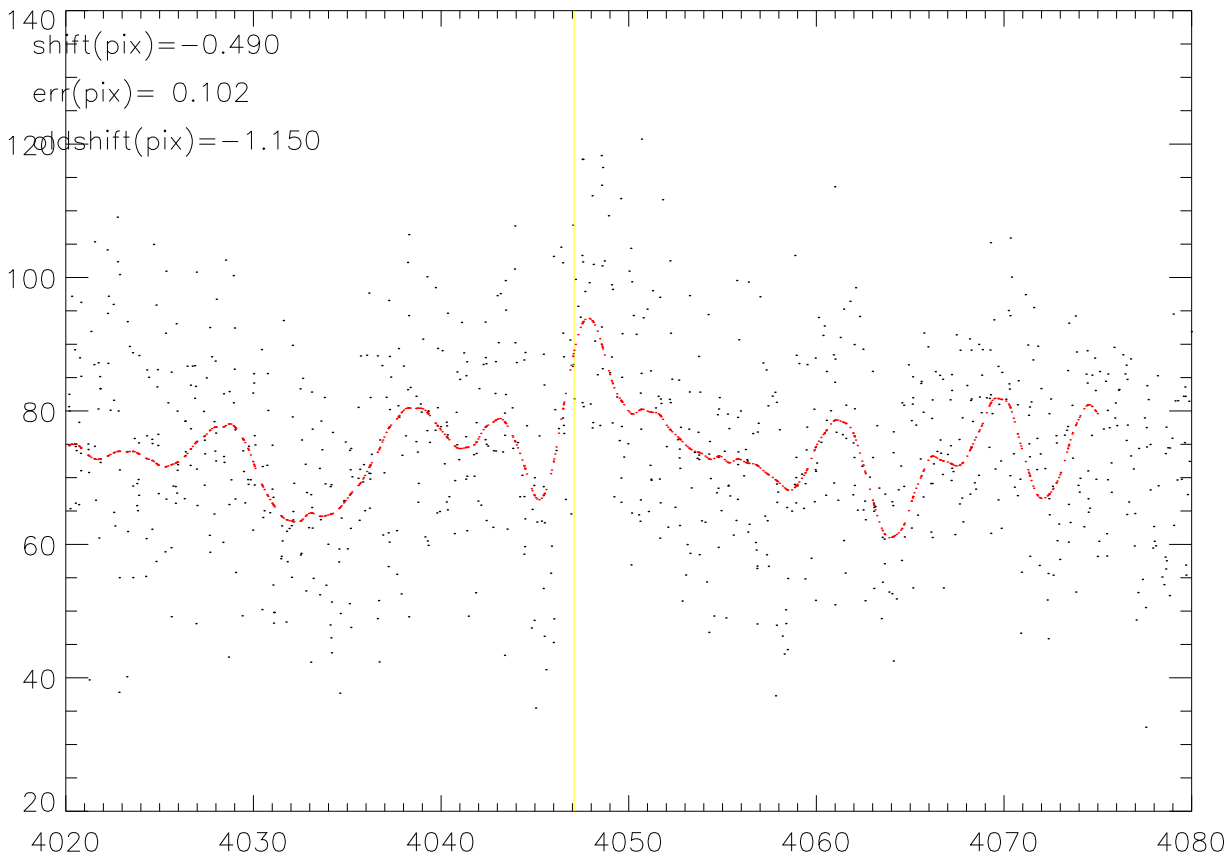

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-b2-00016976.f
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 2.179
Max value = 3.969
Mon Feb 11 14:16:11 2008

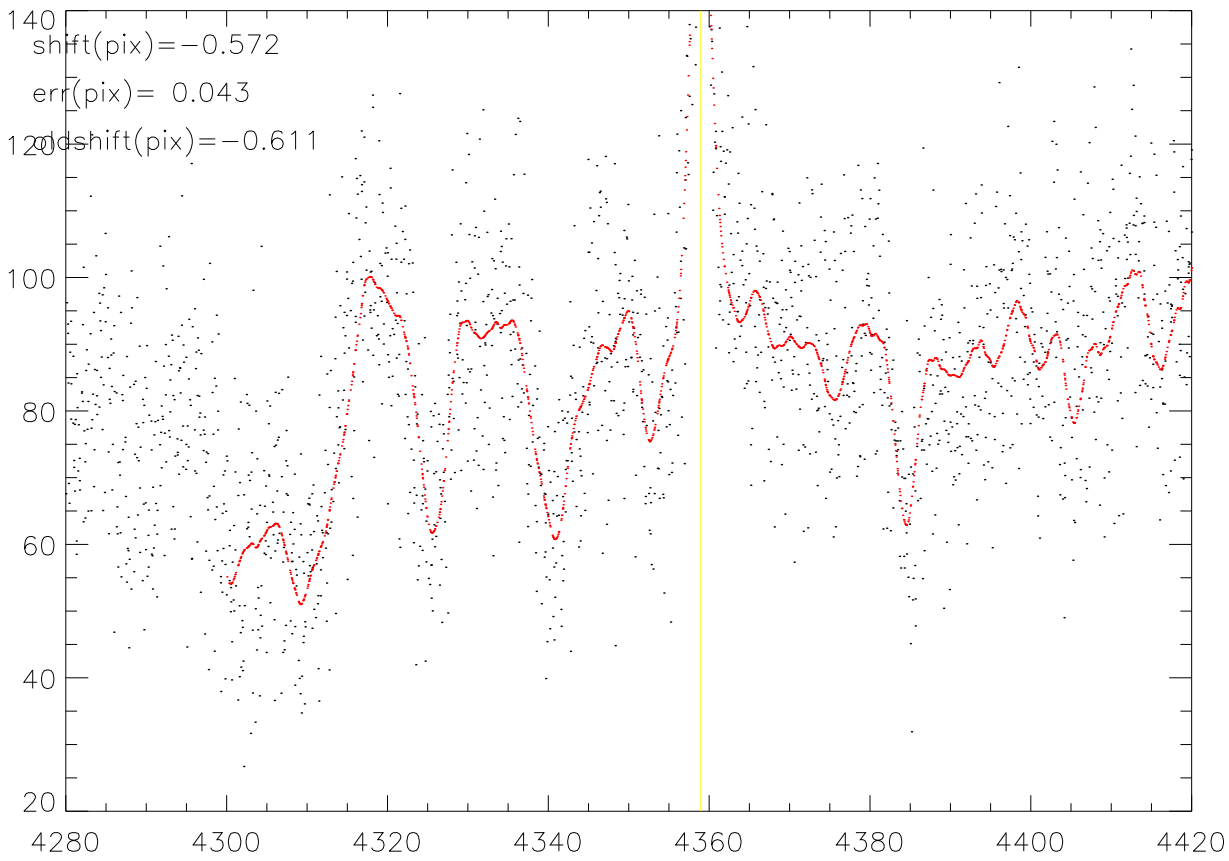

PLATE=1084 MJD=52591 Scattered Light on sdR-b2-00016976.fit
2000
1500
1000
500
0
Y [pix]
0
500
1000
1500
2000
X [pix]
1.86
1.32
2.41

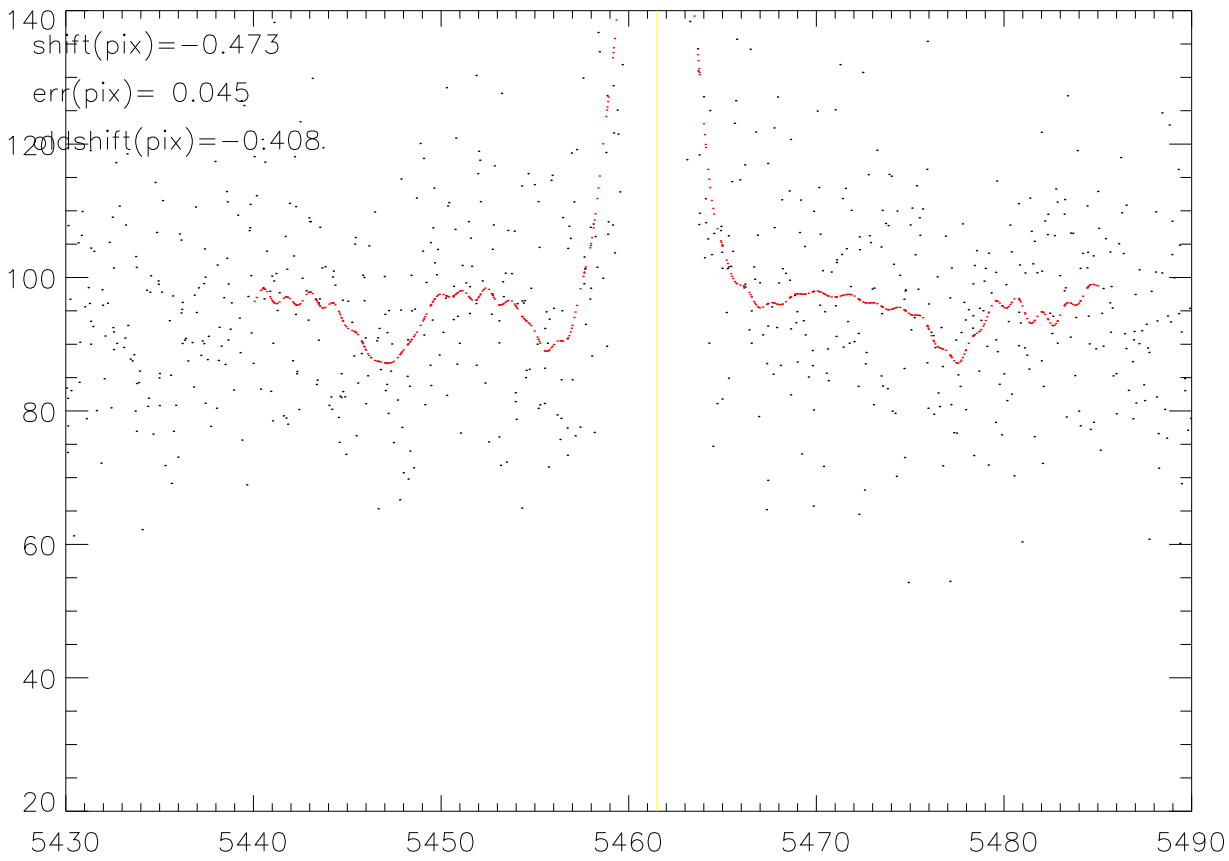

PLATE=1084 MJD=52591 Scattered Light on sdR-b2-00016976.fit
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 1.210
Max value = 2.328
Mon Feb 11 14:19:07 2008

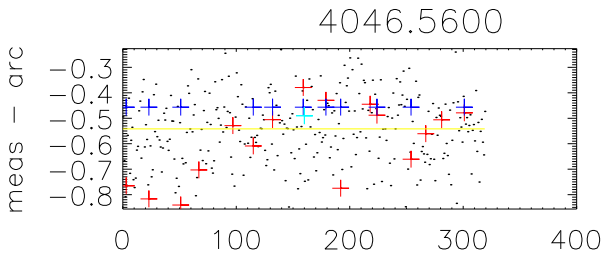

PLATE=1084 MJD=52591 Extraction chi^2 for sdR-b2-00016976.fit
BLACK = Final chisq extraction
BLUE = Initial-scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
500
1000
1500
2000
Row number

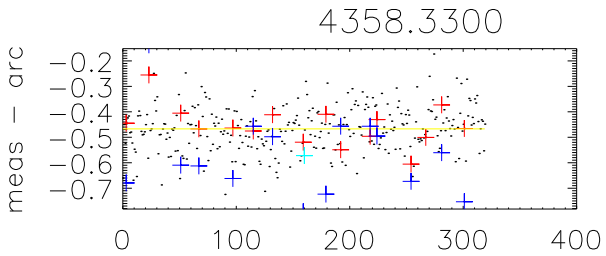

4046.5600
off: −1.15
sig: 0.159
4358.3300
off: −0.61
sig: 0.052
5460.9400
off: −0.41
sig: 0.035
5577.3390
off: −0.46
sig: 0.003
5889.9500
off: −0.40
sig: 0.011
5895.9240
off: −0.42
sig: 0.016

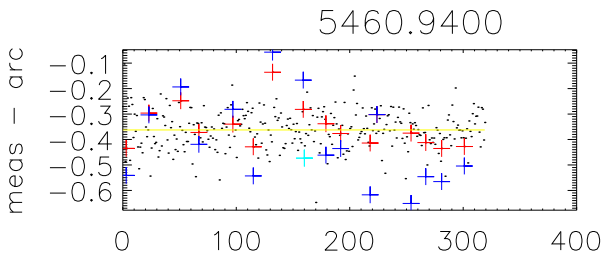

shift(pix)=−0.490
err(pix)= 0.102
oldshift(pix)=−1.150
140
120
100
80
60
40
20
4020
4030
4040
4050
4060
4070
4080

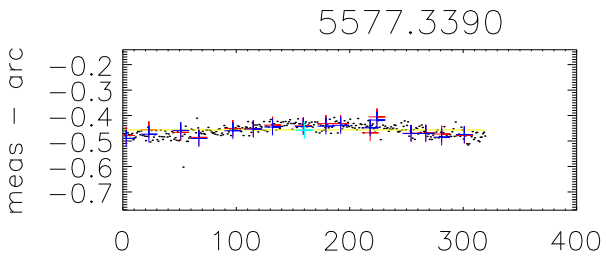

shift(pix)=−0.572
err(pix)= 0.043
oldshift(pix)=−0.611
140
120
100
80
60
40
20
4280
4300
4320
4340
4360
4380
4400
4420

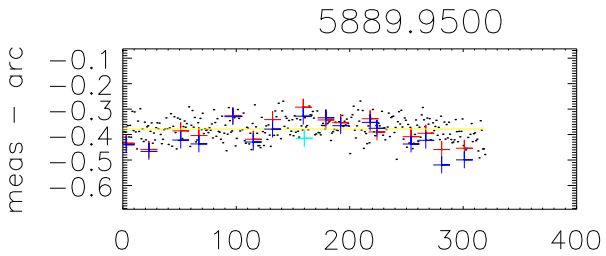

shift(pix)=−0.473
err(pix)= 0.045
oldshift(pix)=−0.408
140
120
100
80
60
40
20
5430
5440
5450
5460
5470
5480
5490

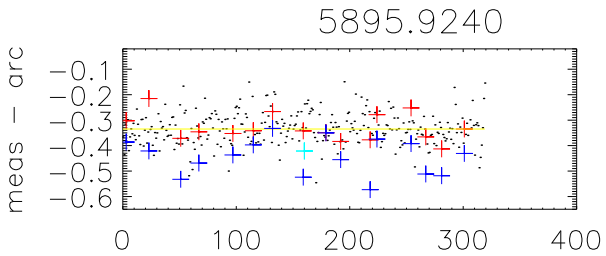

4046.5600
meas − arc
−0.3
−0.4
−0.5
−0.6
−0.7
−0.8
0
100
200
300
400

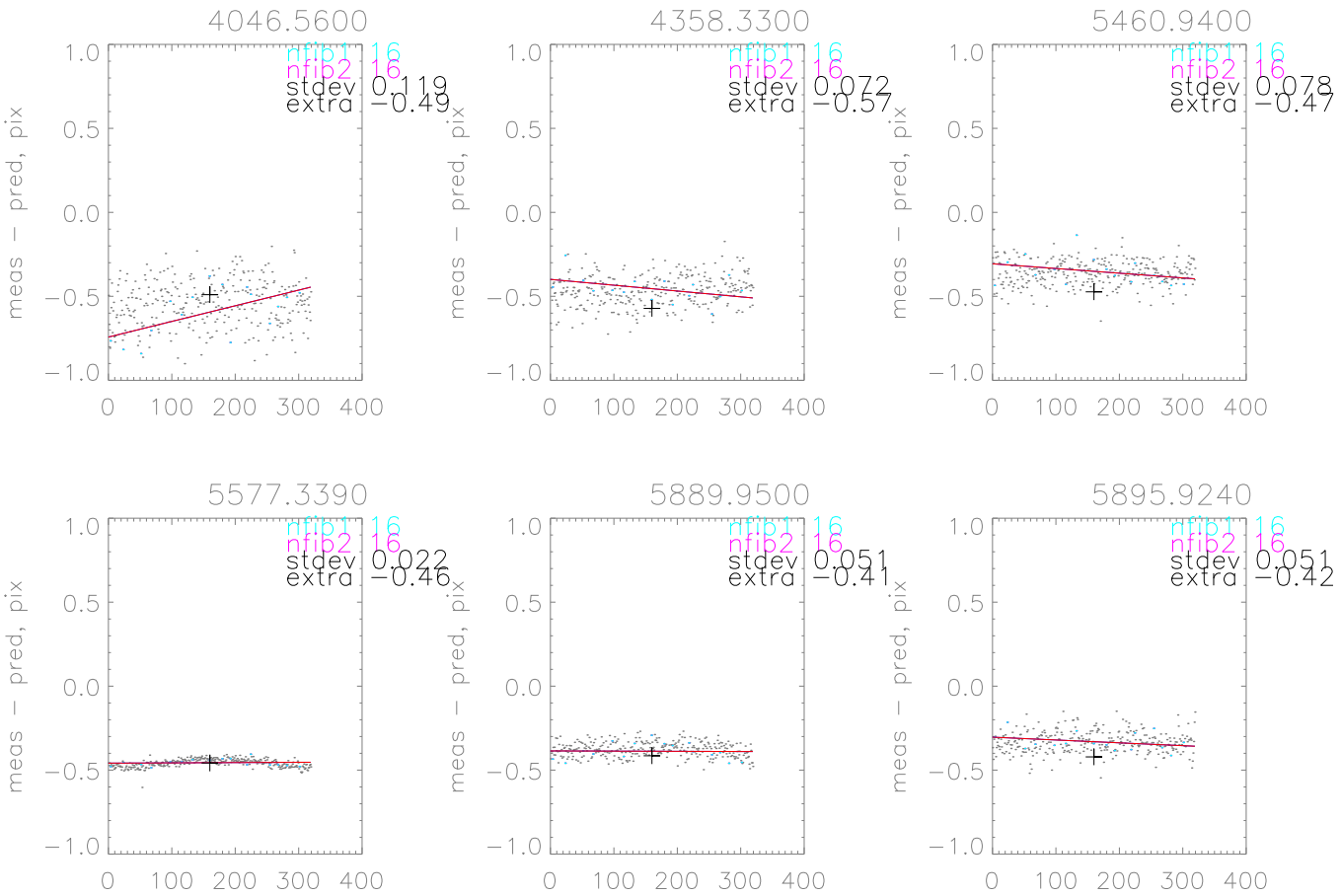

4358.3300
meas − arc
−0.2
−0.3
−0.4
−0.5
−0.6
−0.7
0
100
200
300
400

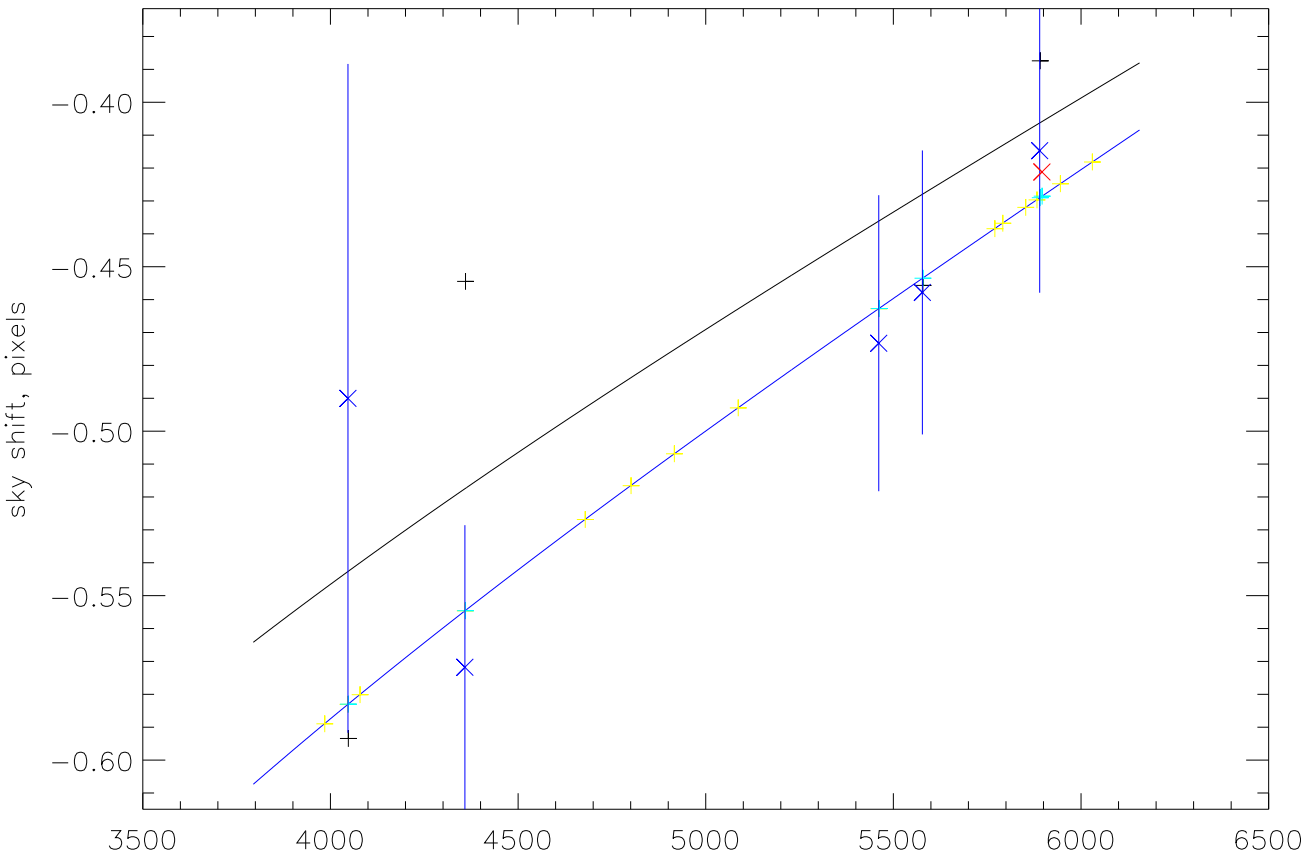

5460.9400
meas − arc
−0.1
−0.2
−0.3
−0.4
−0.5
−0.6
0
100
200
300
400

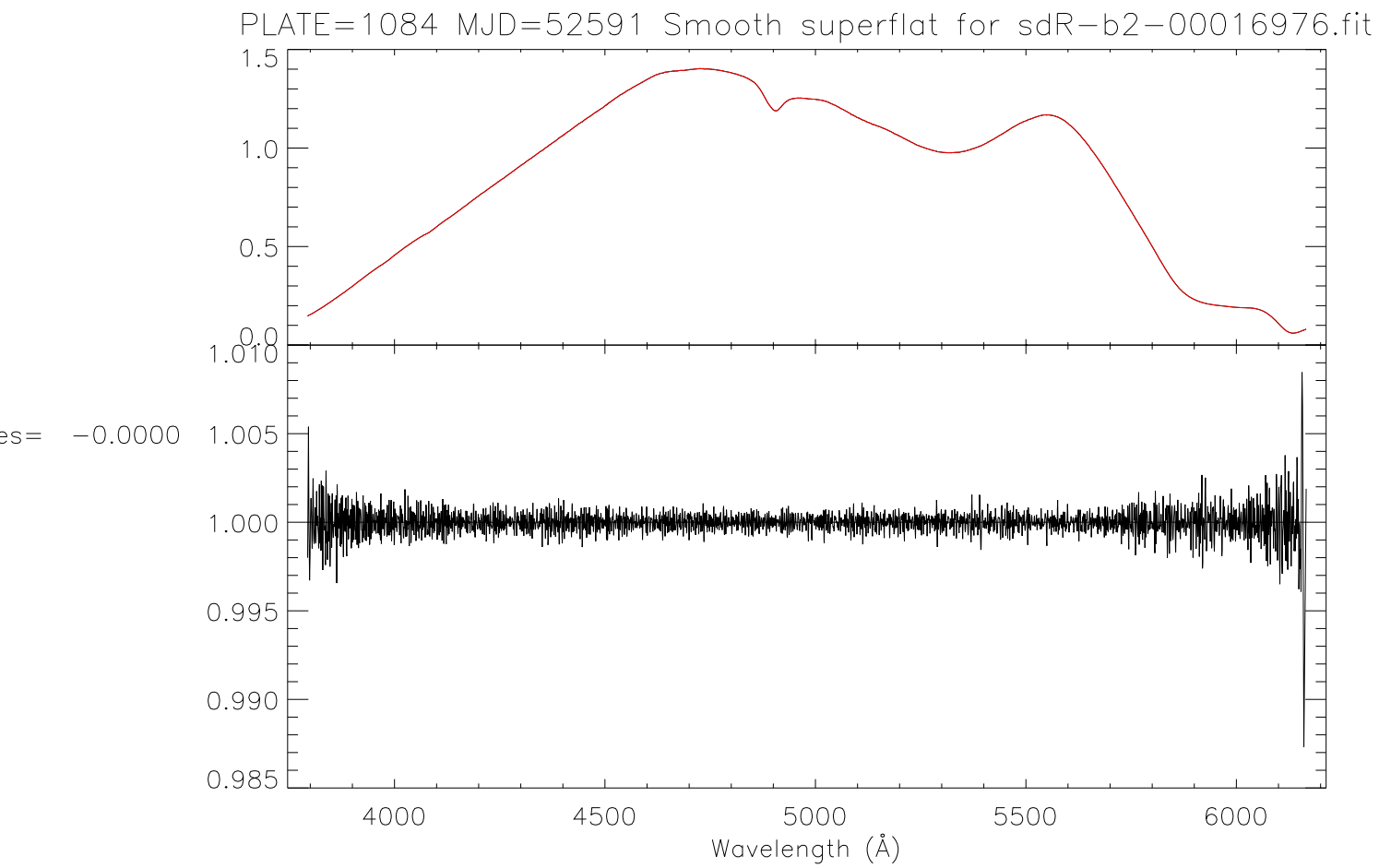

5577.3390
meas − arc
−0.2
−0.3
−0.4
−0.5
−0.6
−0.7
0
100
200
300
400

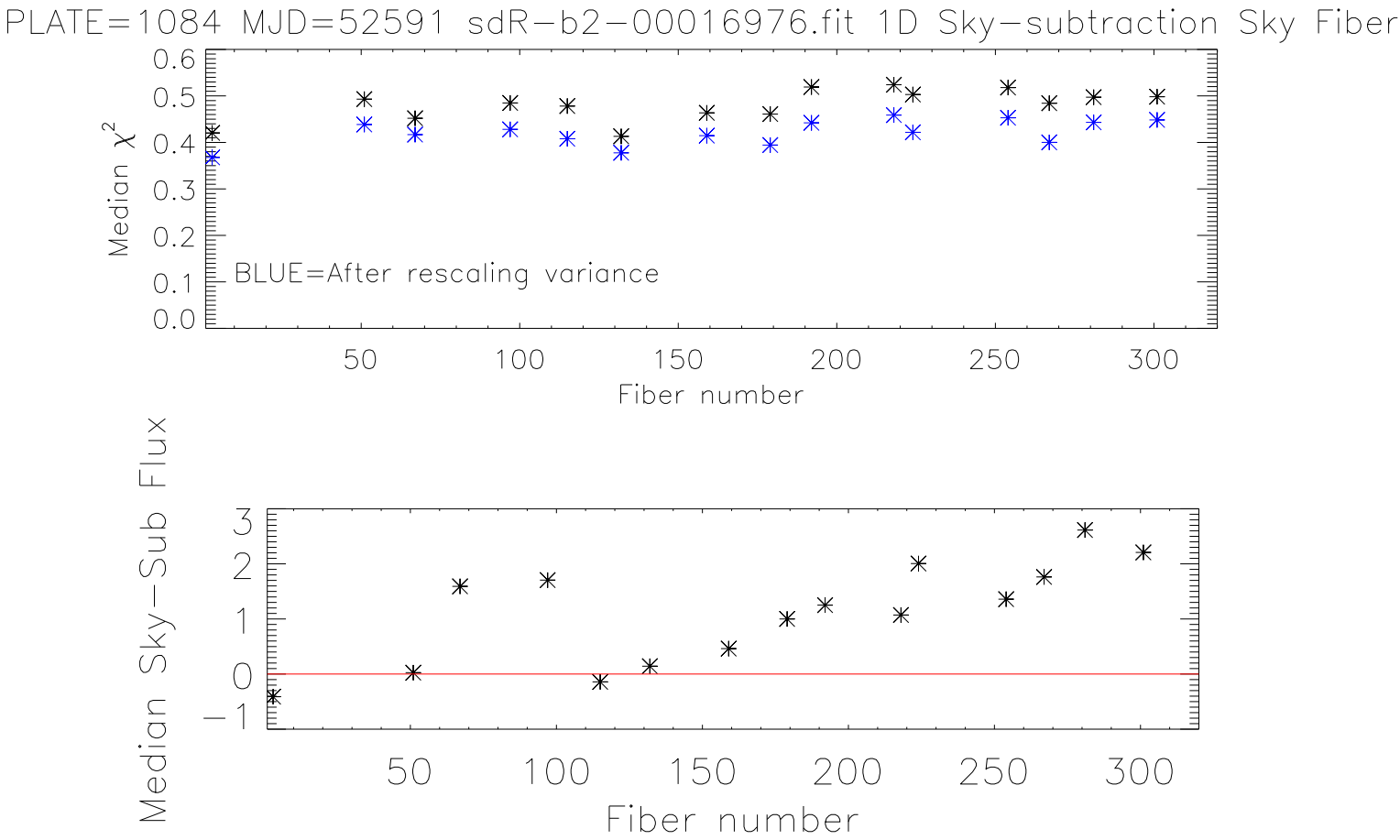

5889.9500
meas − arc
−0.1
−0.2
−0.3
−0.4
−0.5
−0.6
0
100
200
300
400

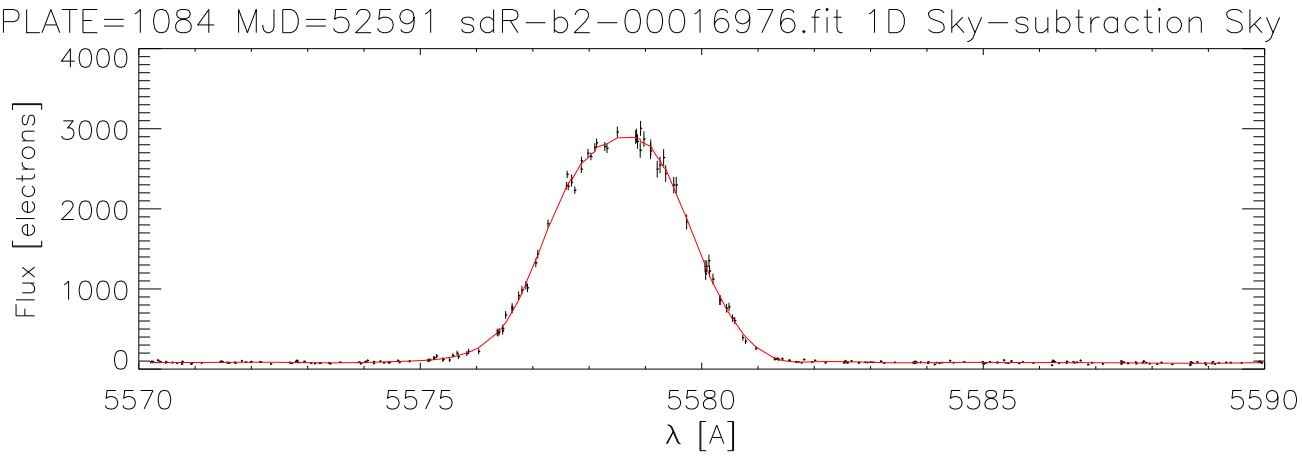

5895.9240
meas − arc
−0.1
−0.2
−0.3
−0.4
−0.5
−0.6
0
100
200
300
400

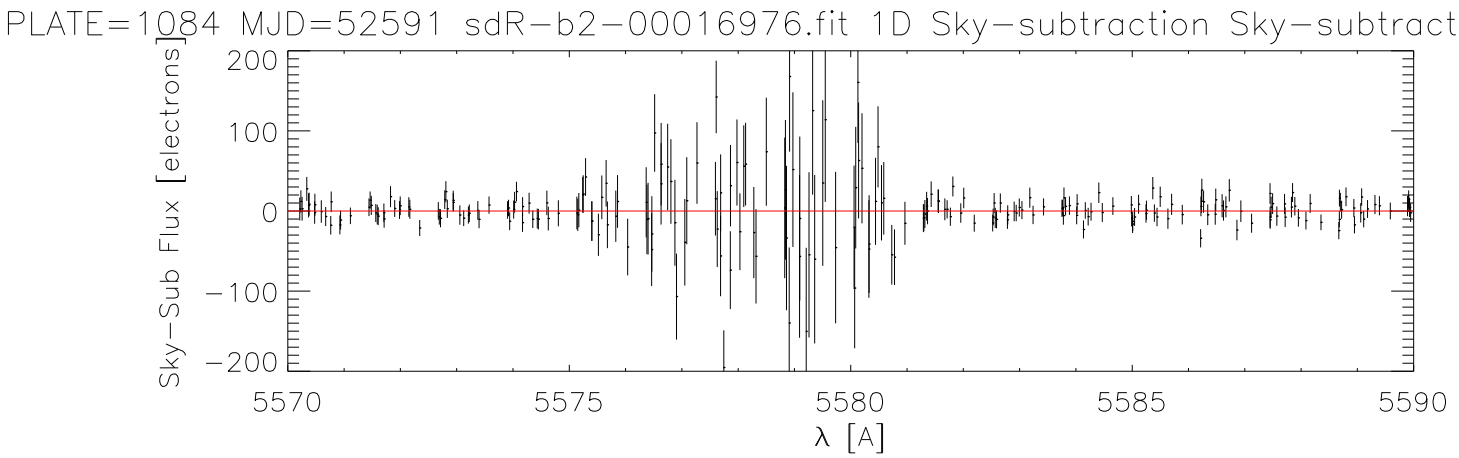

4046.5600
nfib1 16
nfib2 16
stdev 0.119
extra −0.49
4358.3300
nfib1 16
nfib2 16
stdev 0.072
extra −0.57
5460.9400
nfib1 16
nfib2 16
stdev 0.078
extra −0.47
5577.3390
nfib1 16
nfib2 16
stdev 0.022
extra −0.46
5889.9500
nfib1 16
nfib2 16
stdev 0.051
extra −0.41
5895.9240
nfib1 16
nfib2 16
stdev 0.051
extra −0.42
meas − pred, pix
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400

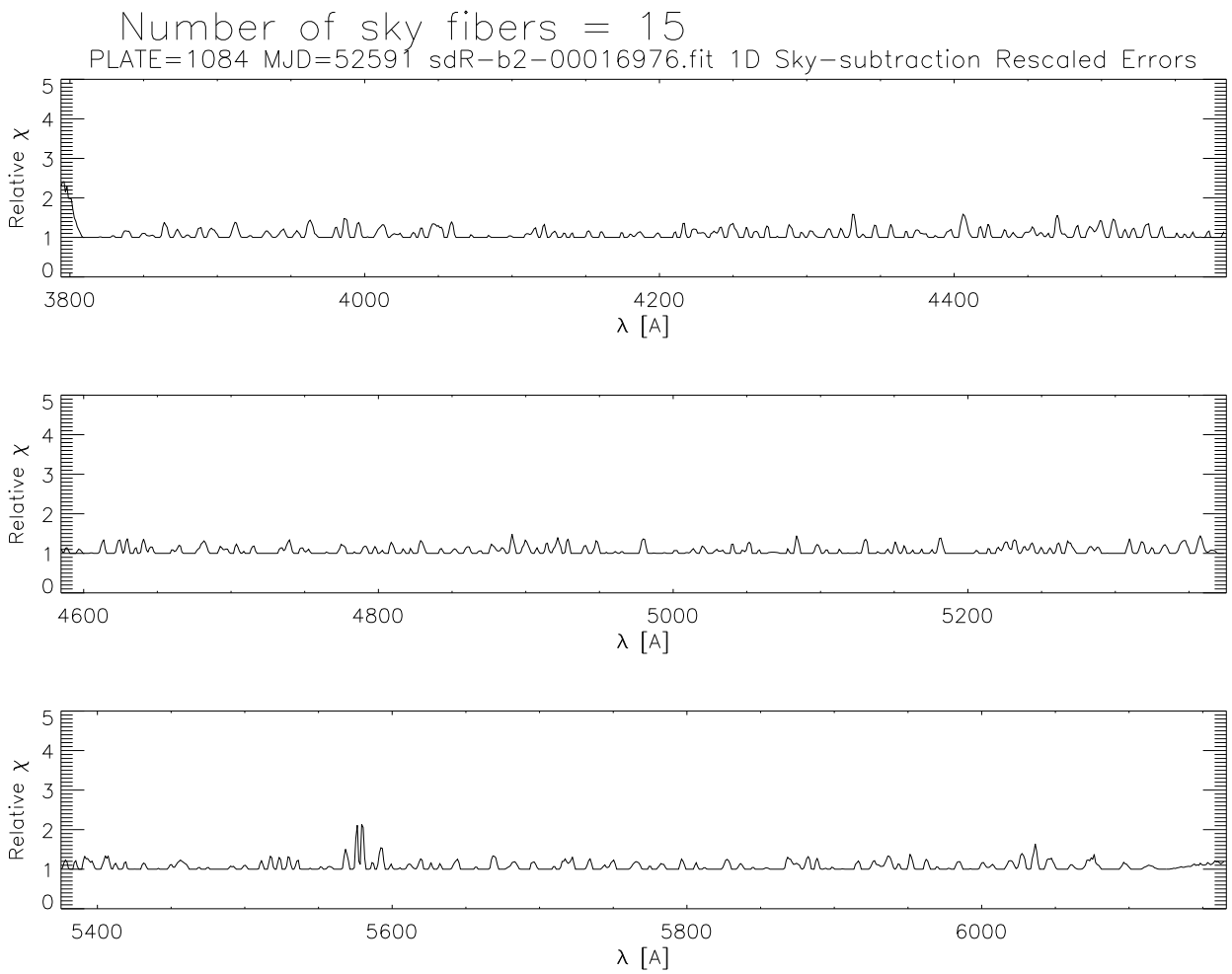

sky shift, pixels
−0.40
−0.45
−0.50
−0.55
−0.60
3500
4000
4500
5000
5500
6000
6500

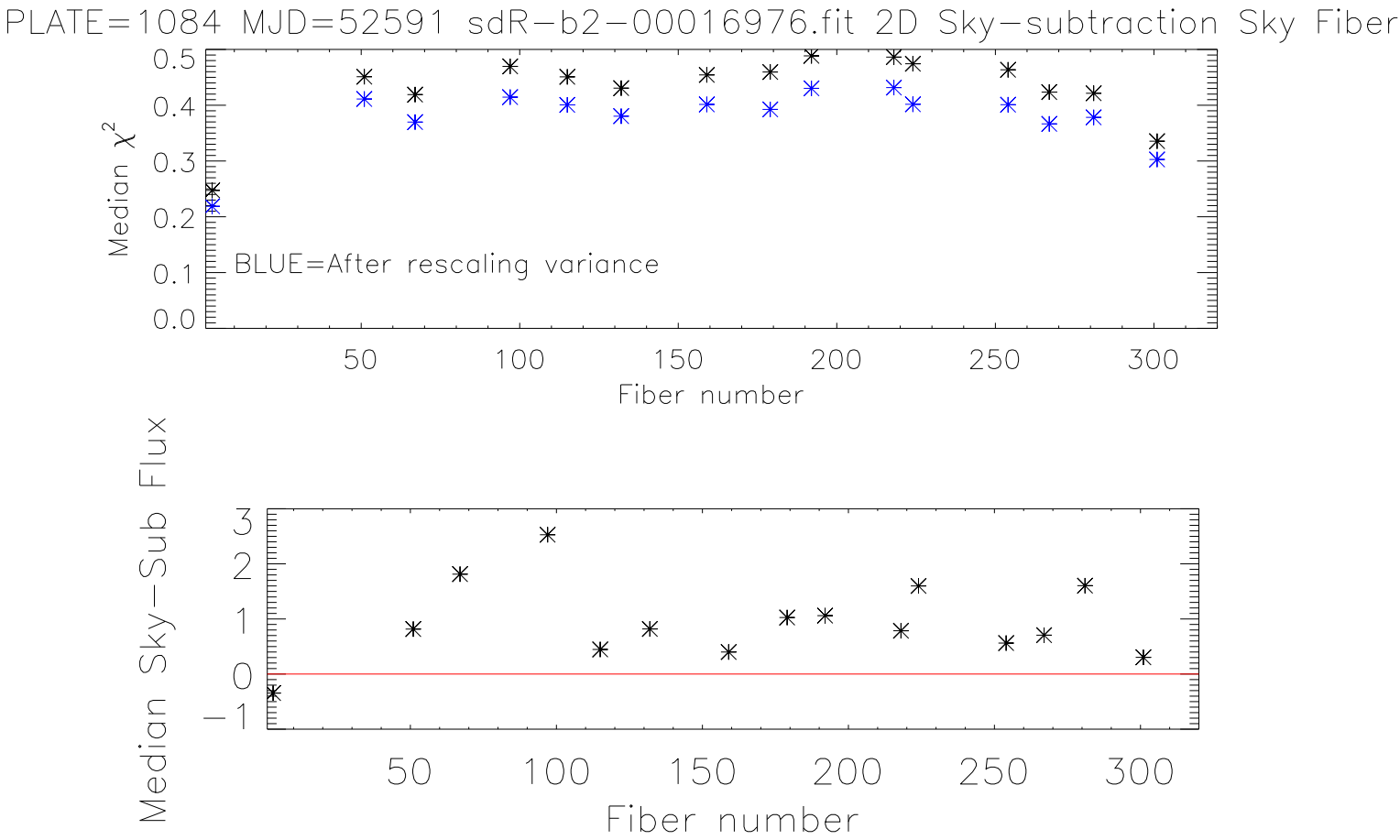

PLATE=1084 MJD=52591 Smooth superflat for sdR-b2-00016976.fit
1.5
1.0
0.5
0.0
es= -0.0000
1.010
1.005
1.000
0.995
0.990
0.985
4000
4500
5000
5500
6000
Wavelength (Å)

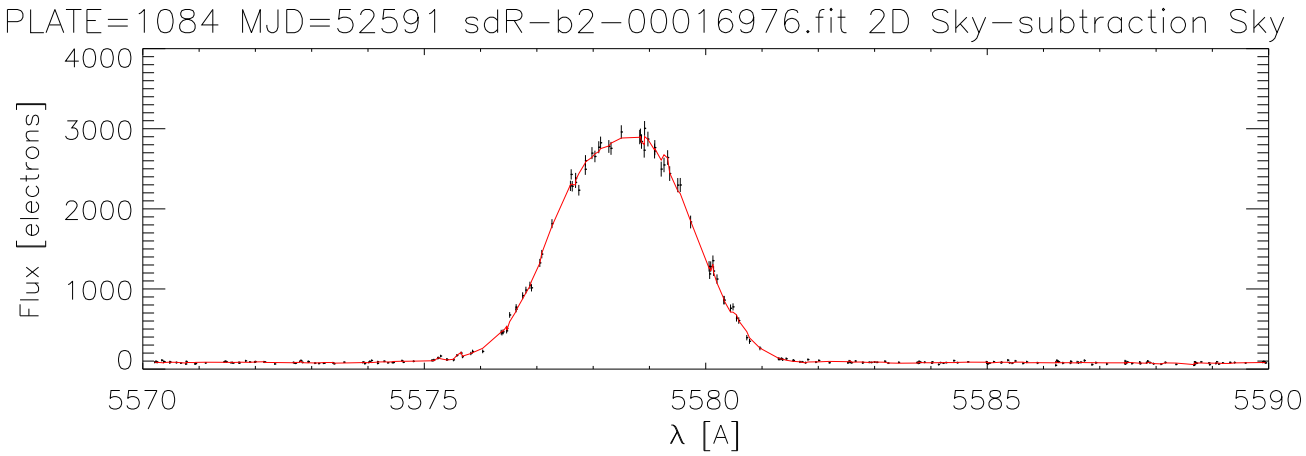

PLATE=1084 MJD=52591 sdR-b2-00016976.fit 1D Sky-subtraction Sky Fiber
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
0.6
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
−1
0
1
2
3
50
100
150
200
250
300
Fiber number

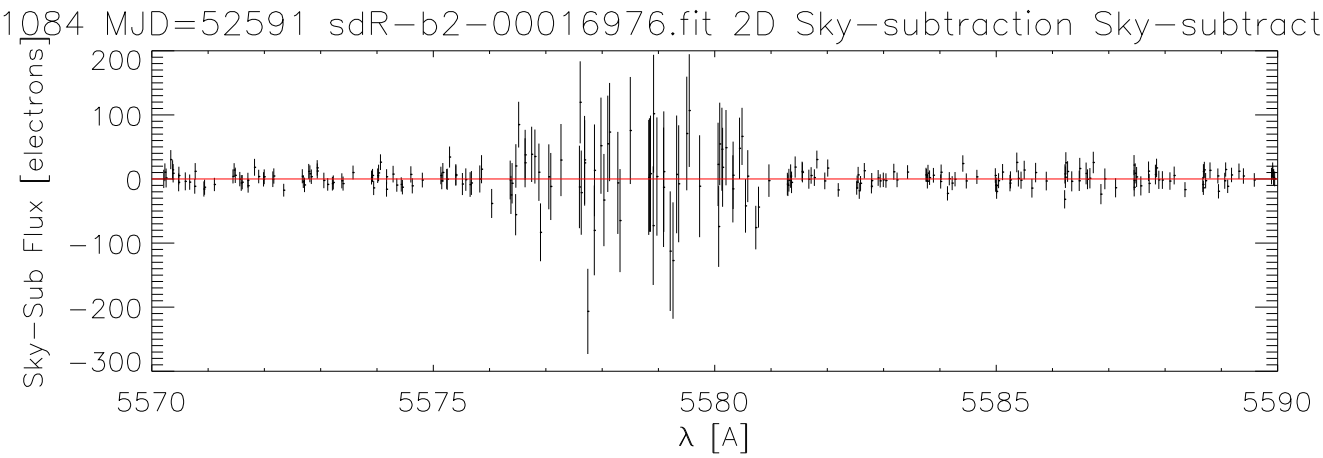

PLATE=1084 MJD=52591 sdR-b2-00016976.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
4000
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]

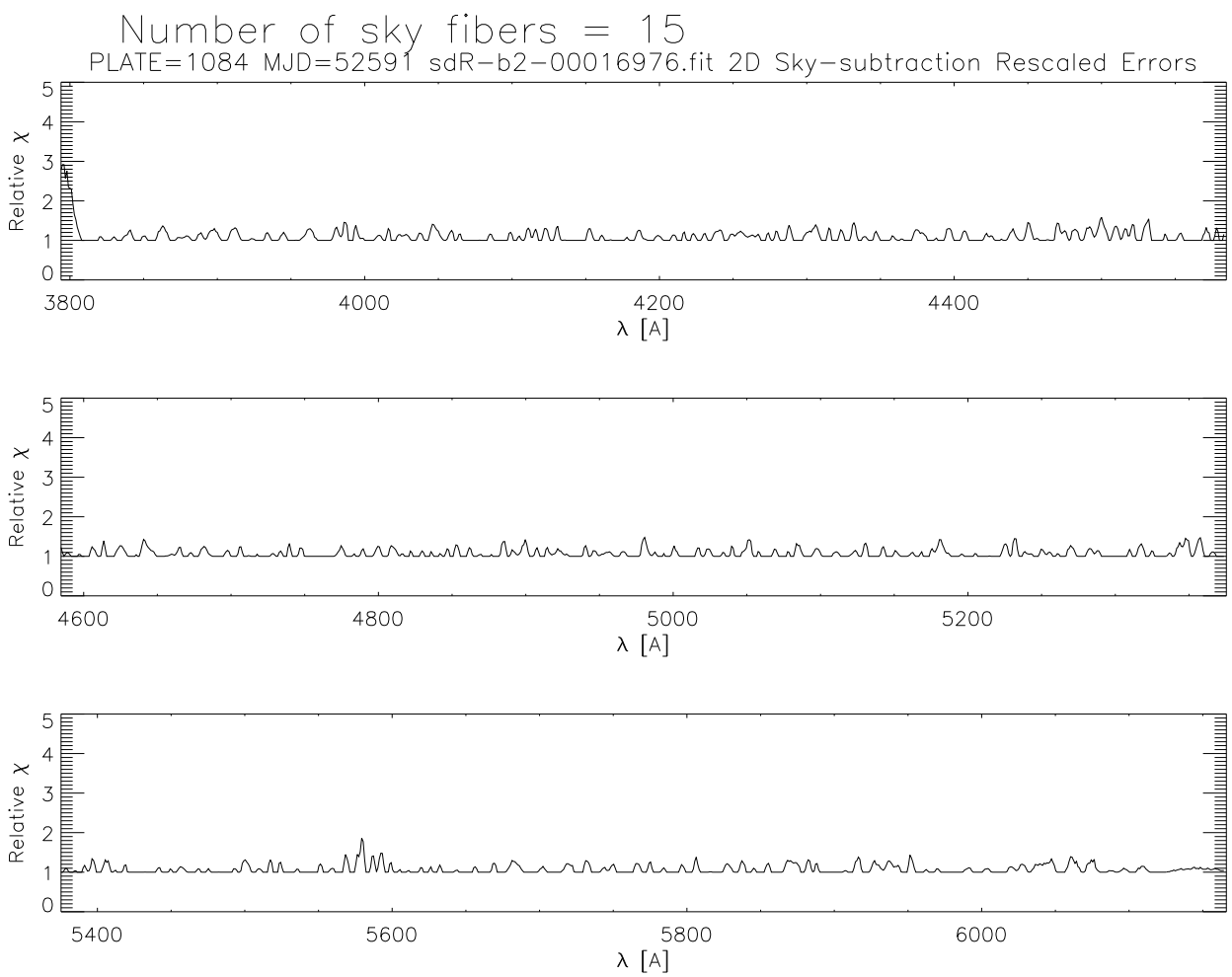

PLATE=1084 MJD=52591 sdR-b2-00016976.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
200
100
0
-100
-200
5570
5575
5580
5585
5590
λ [A]

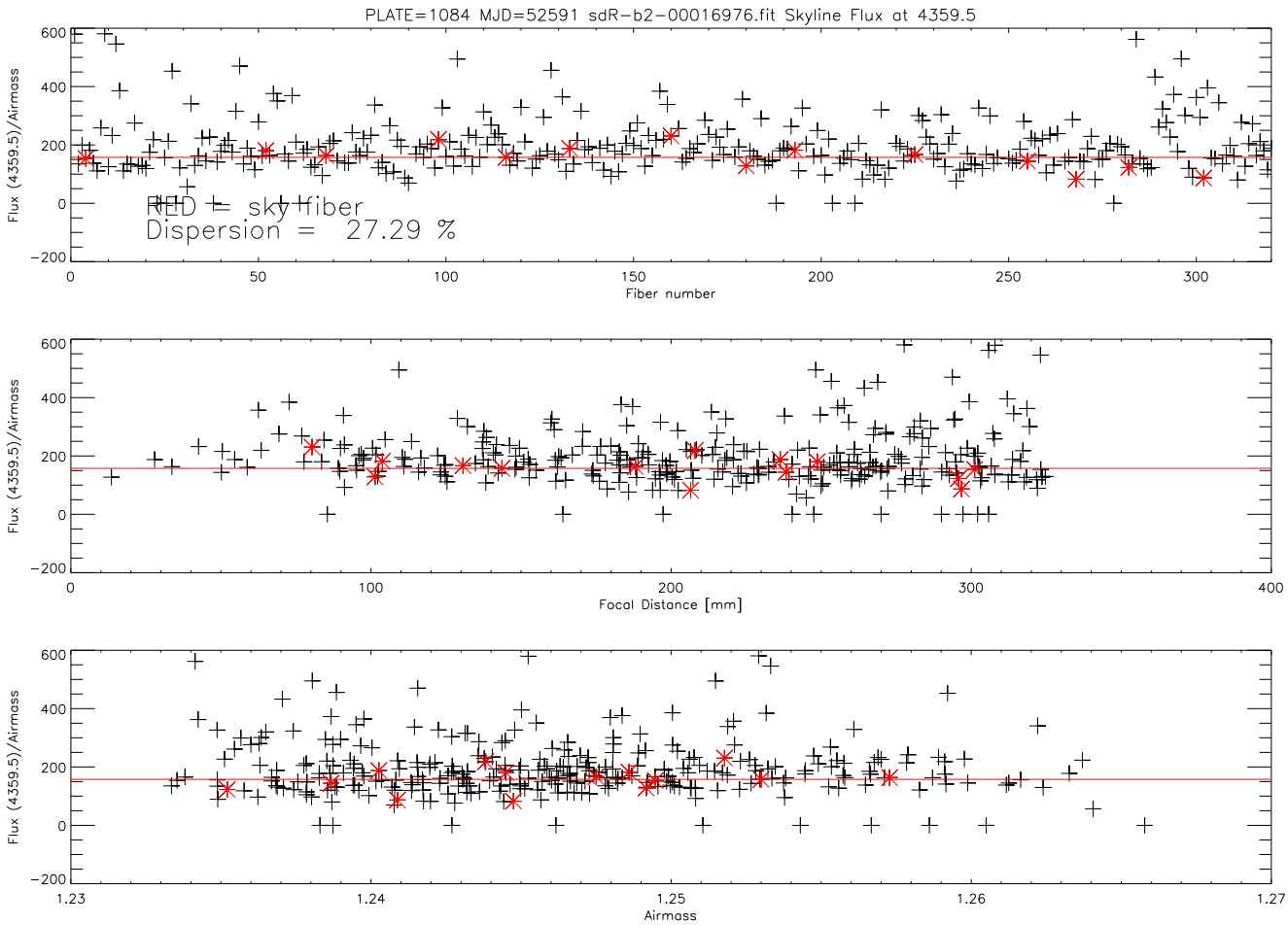

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-b2-00016976.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

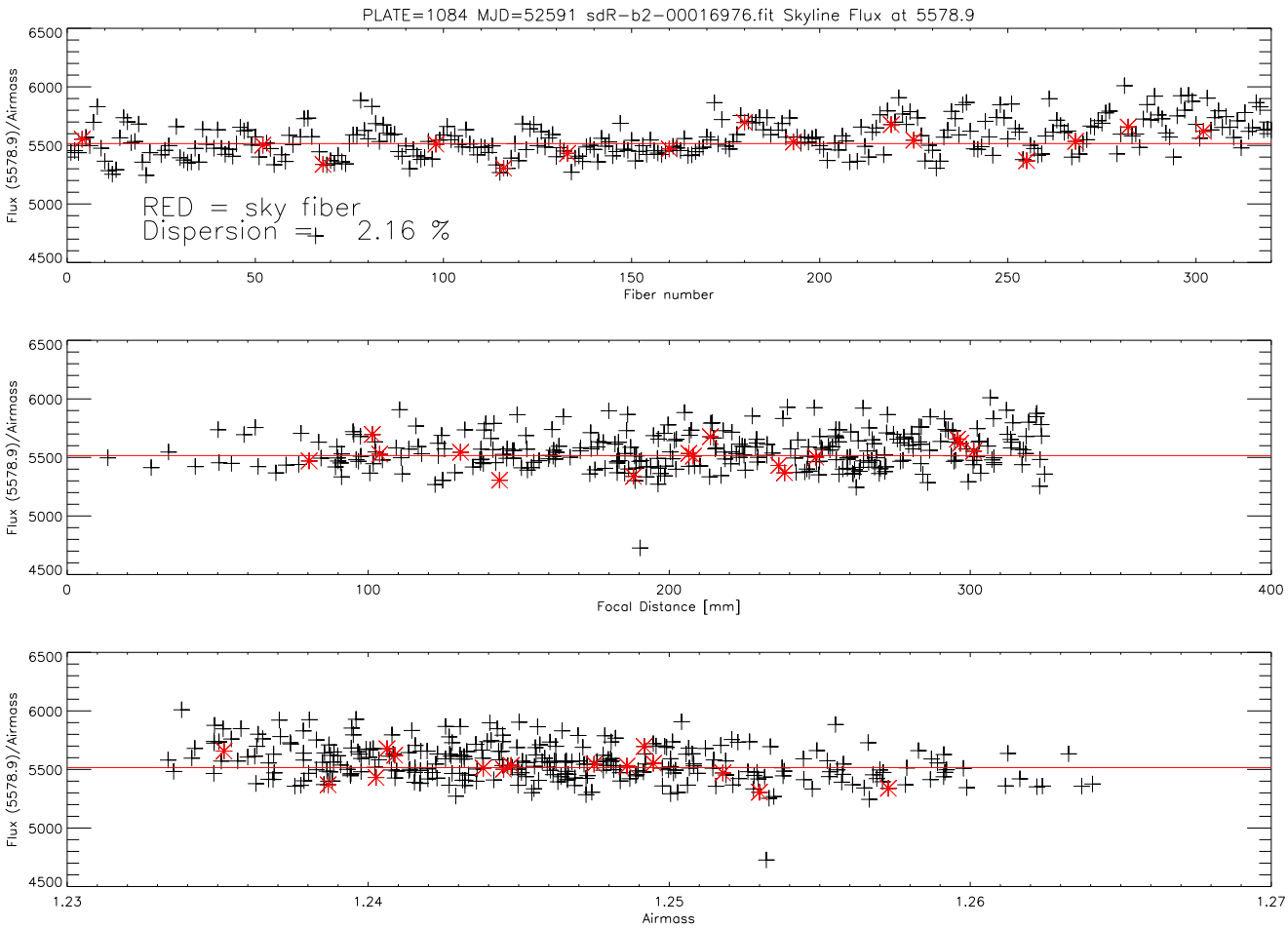

PLATE=1084 MJD=52591 sdR-b2-00016976.fit 2D Sky-subtraction Sky Fiber
Median χ^2
BLUE=After rescaling variance
Fiber number
Median Sky-Sub Flux
Fiber number

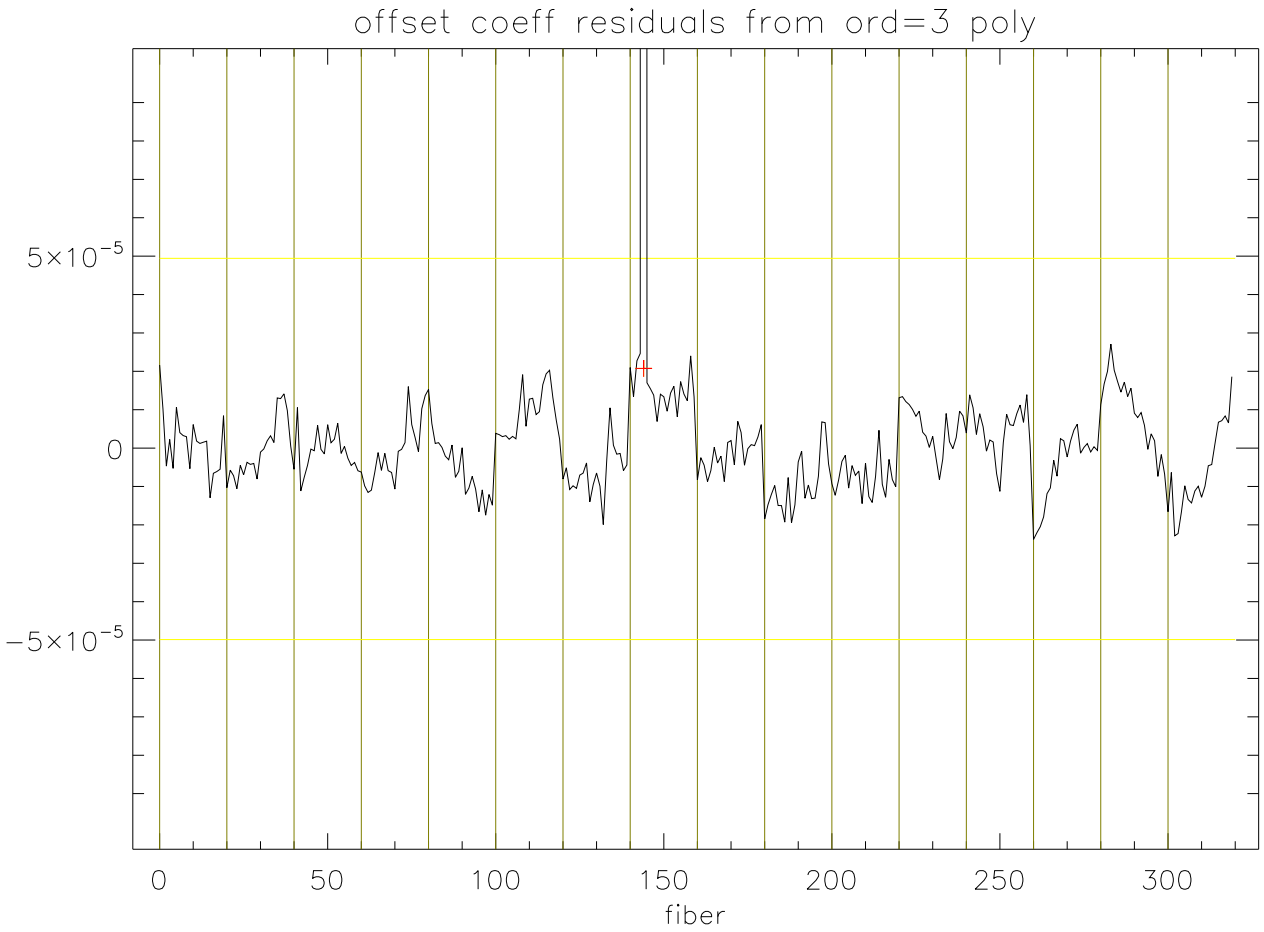

PLATE=1084 MJD=52591 sdR-b2-00016976.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
4000
3000
2000
1000
0
5570
5575
5580
5585
5590
λ [A]

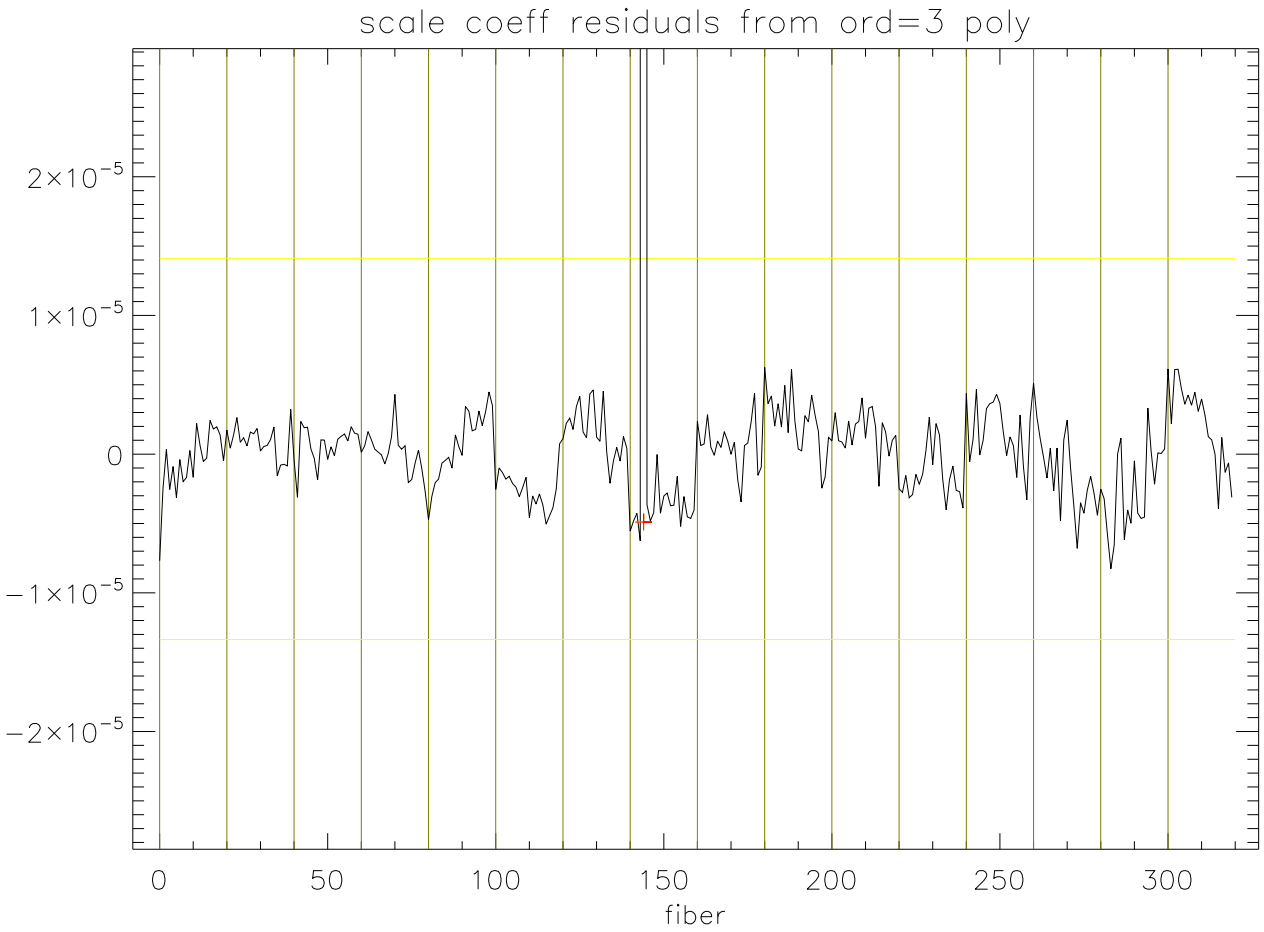

PLATE=1084 MJD=52591 sdR-b2-00016976.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
200
100
0
-100
-200
-300
5570
5575
5580
5585
5590
λ [A]

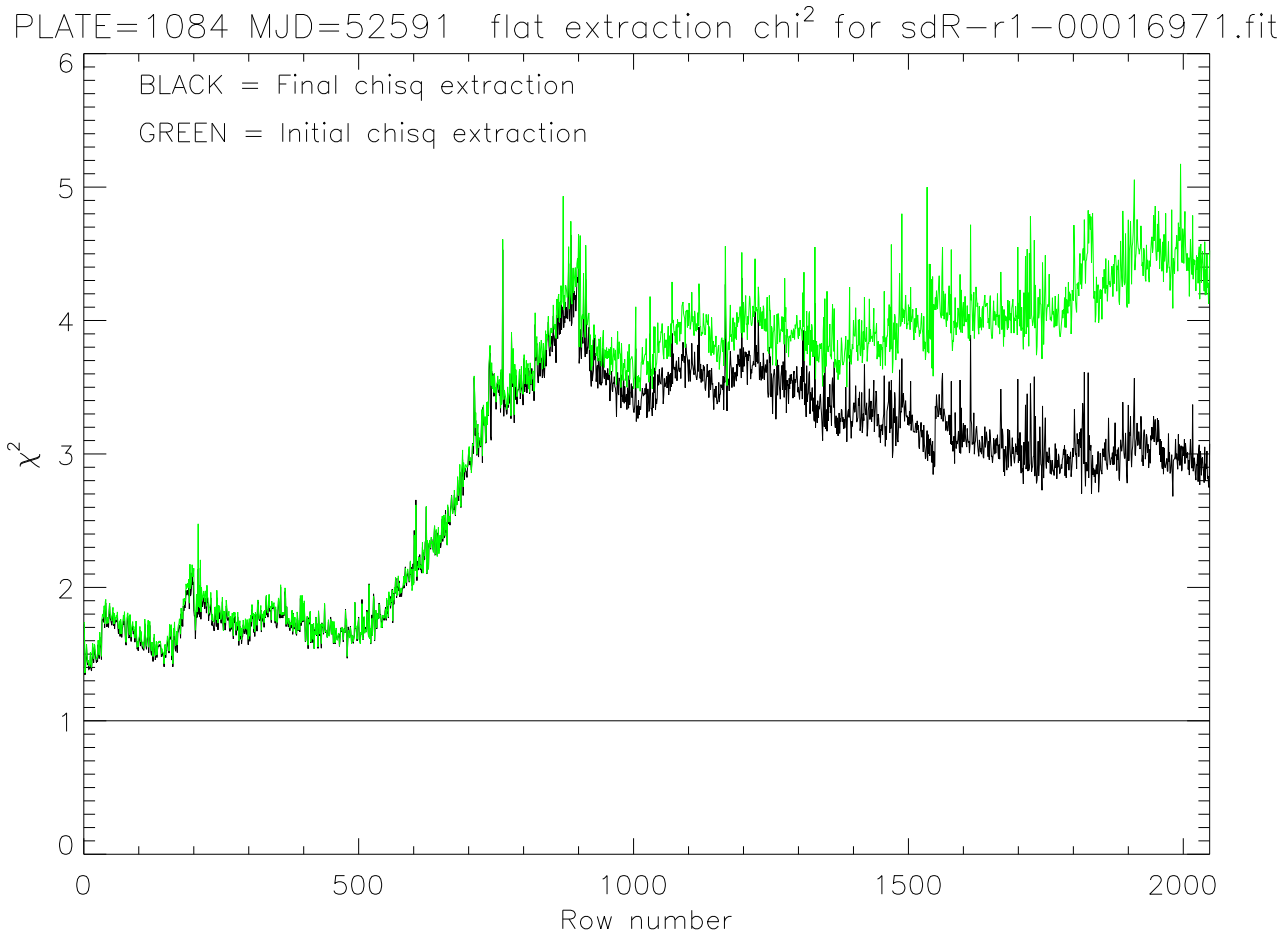

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-b2-00016976.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
0
1
2
3
4
5

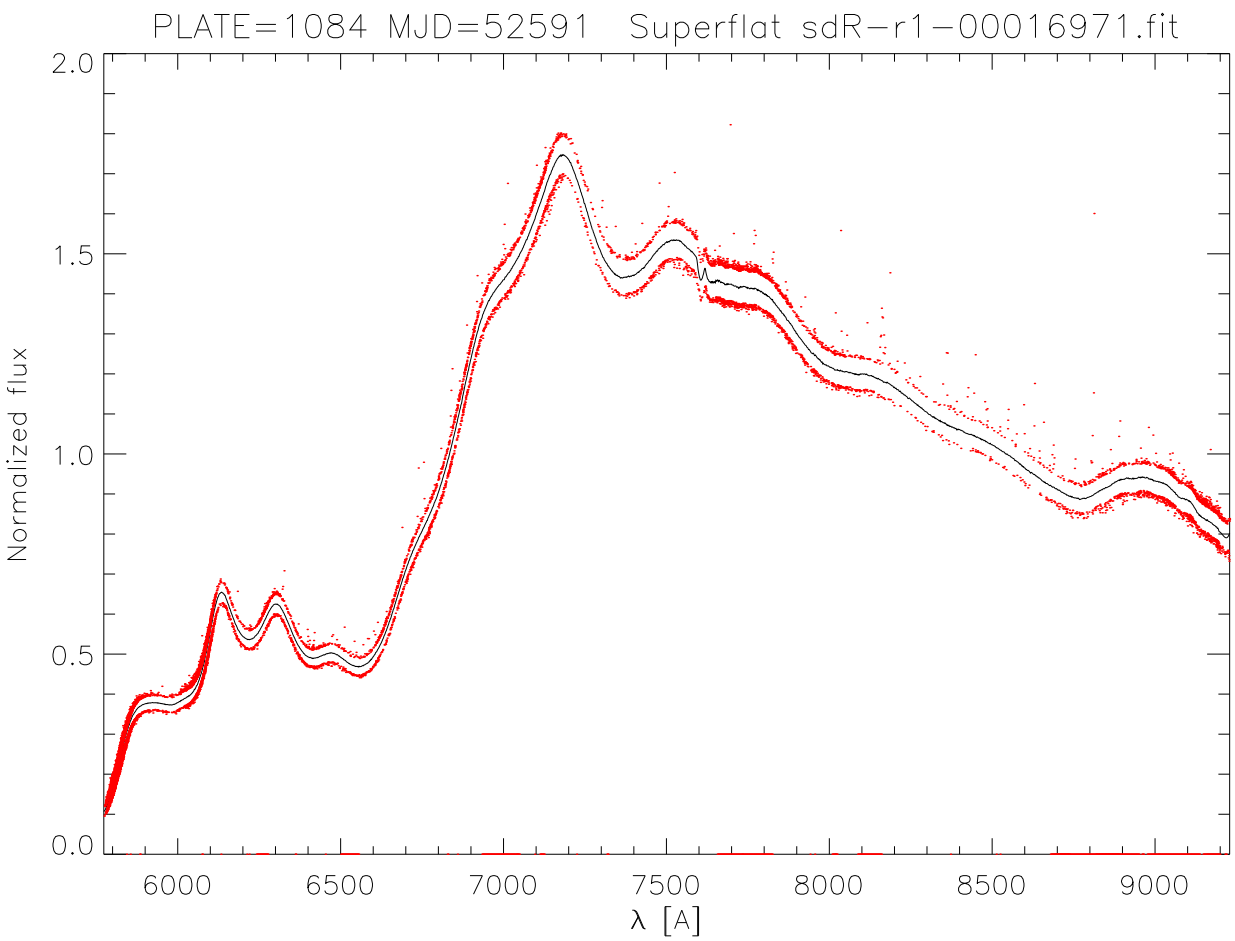

PLATE=1084 MJD=52591 sdR-b2-00016976.fit Skyline Flux at 4359.5
RED = sky fiber
Dispersion = 27.29 %
Flux (4359.5)/Airmass
Fiber number
Flux (4359.5)/Airmass
Focal Distance [mm]
Flux (4359.5)/Airmass
Airmass

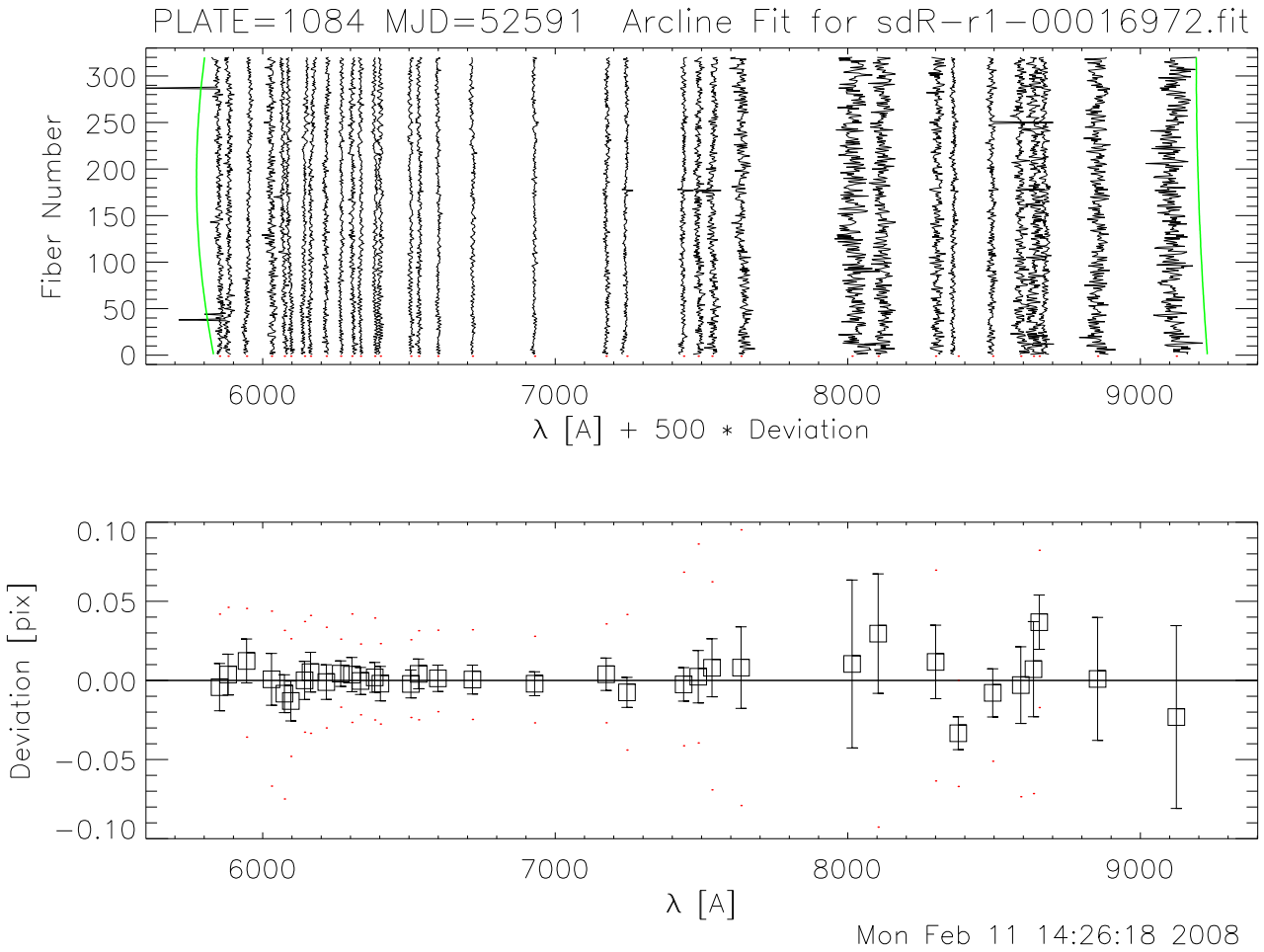

PLATE=1084 MJD=52591 sdR-b2-00016976.fit Skyline Flux at 5578.9
Flux (5578.9)/Airmass
RED = sky fiber
Dispersion = 2.16 %
Fiber number
Flux (5578.9)/Airmass
Focal Distance [mm]
Flux (5578.9)/Airmass
Airmass

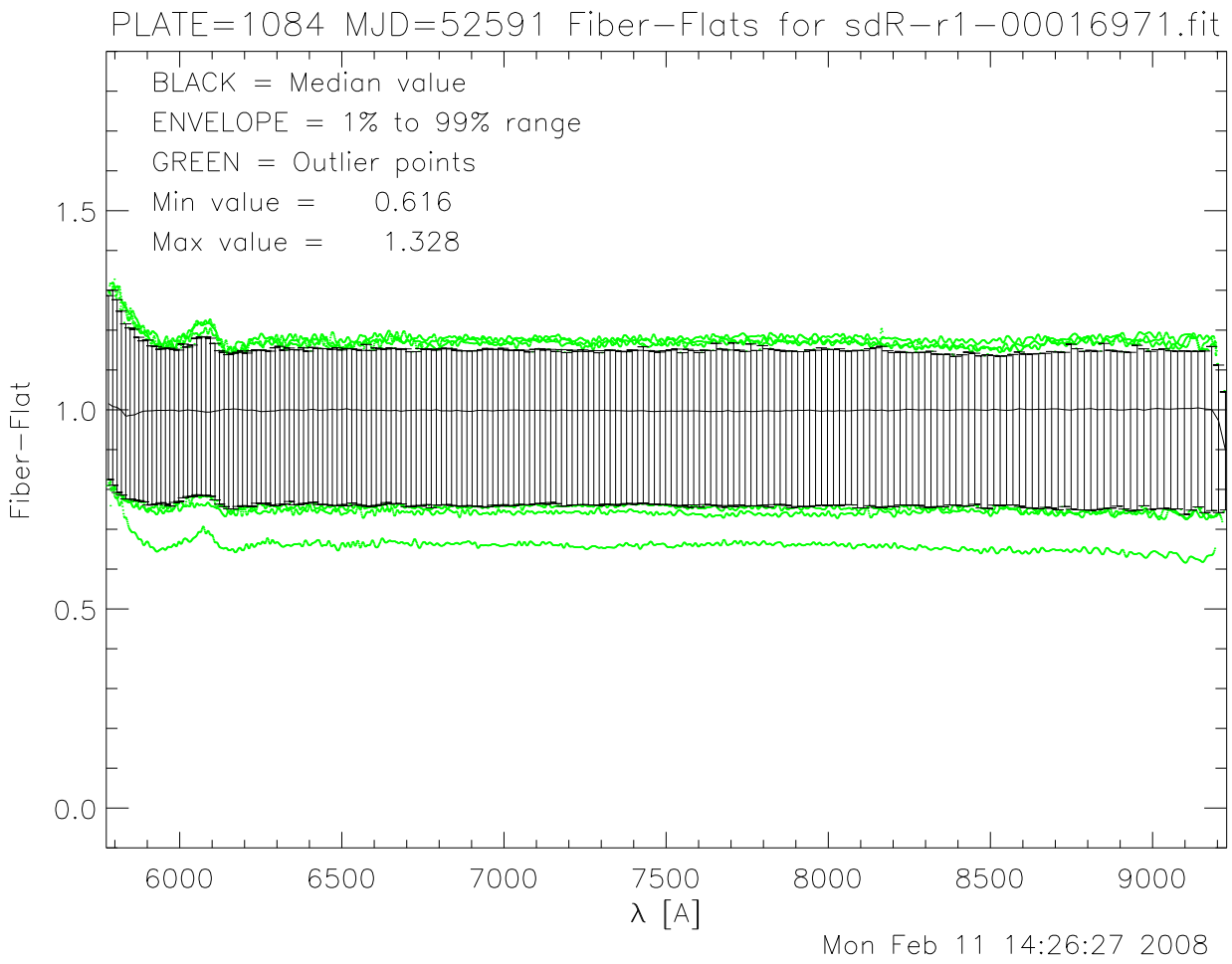

offset coeff residuals from ord=3 poly
5×10⁻⁵
0
−5×10⁻⁵
0
50
100
150
200
250
300
fiber

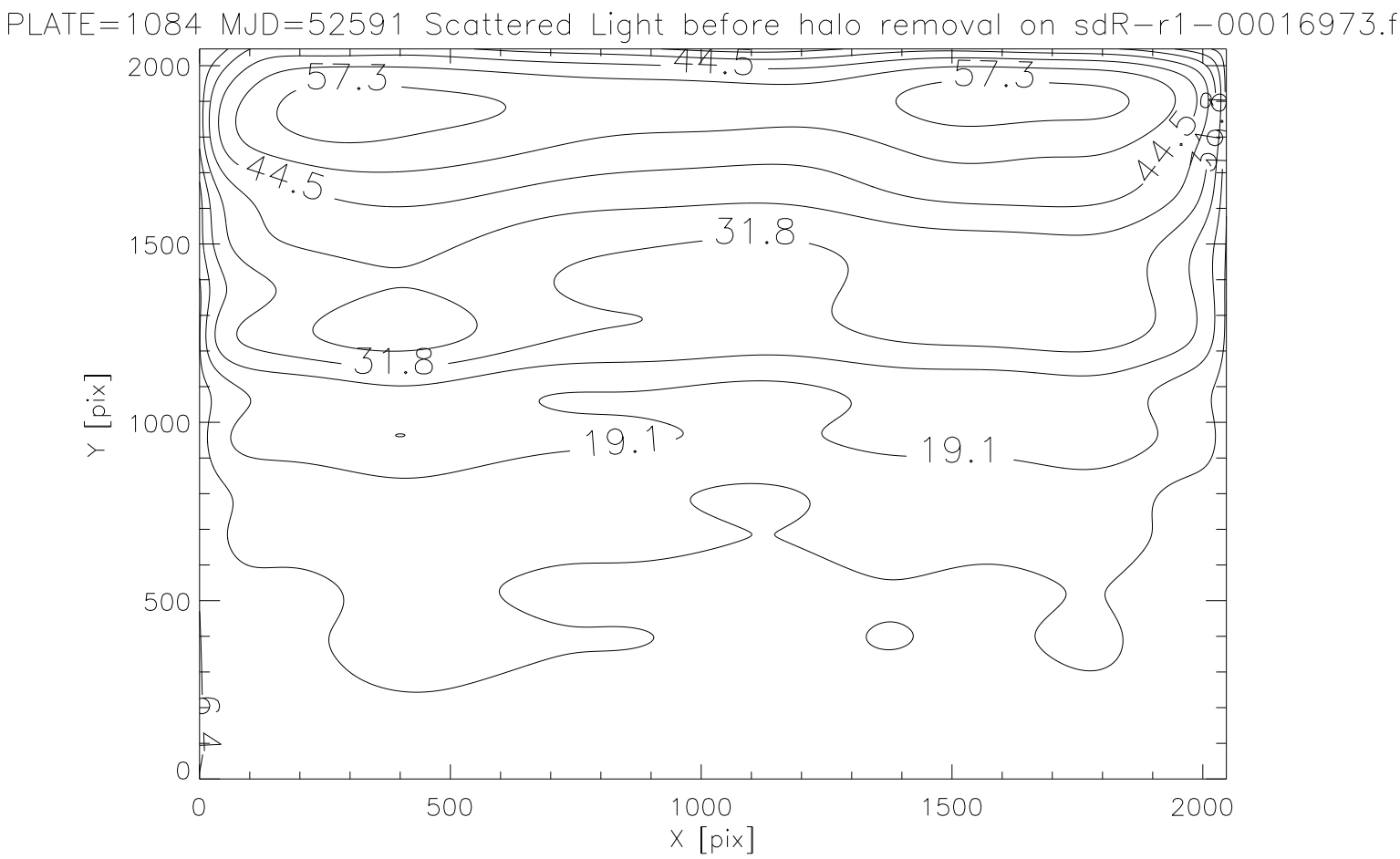

scale coeff residuals from ord=3 poly
2×10⁻⁵
1×10⁻⁵
0
−1×10⁻⁵
−2×10⁻⁵
0
50
100
150
200
250
300
fiber

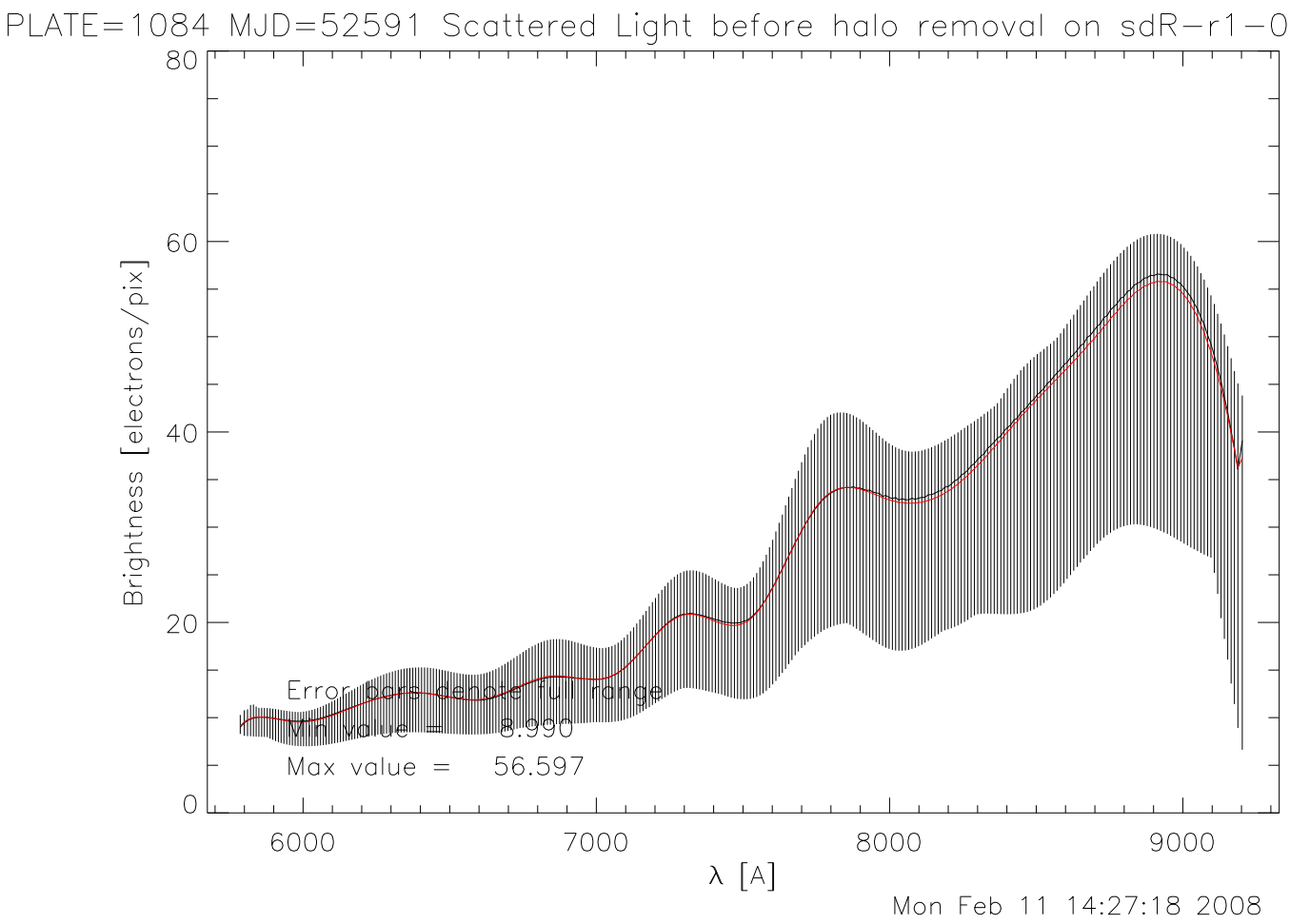

PLATE=1084 MJD=52591 flat extraction chi^2 for sdR−r1−00016971.fit
BLACK = Final chisq extraction
GREEN = Initial chisq extraction
χ^2
Row number
0
1
2
3
4
5
6
0
500
1000
1500
2000

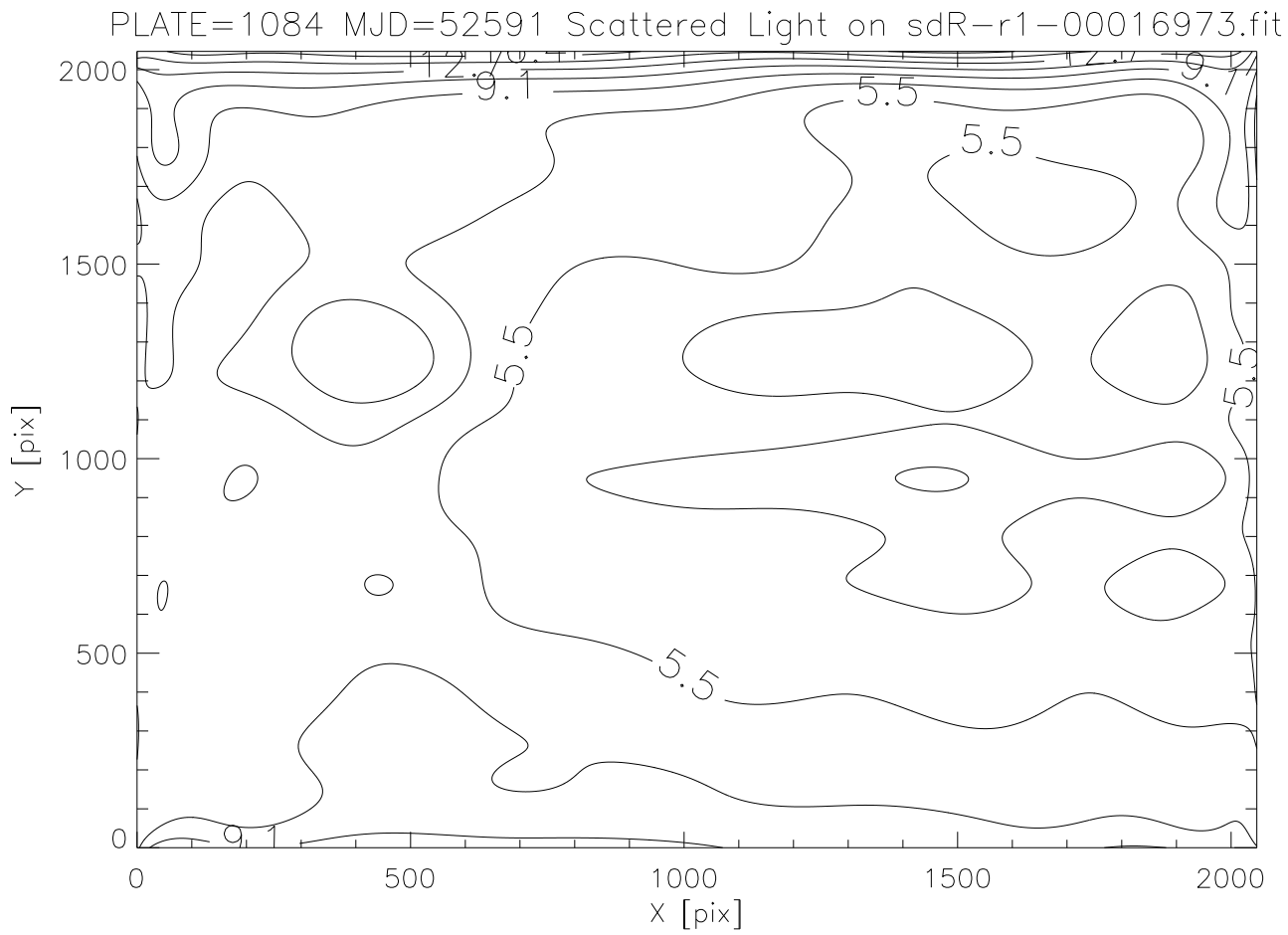

PLATE=1084 MJD=52591 Superflat sdR-r1-00016971.fit
Normalized flux
2.0
1.5
1.0
0.5
0.0
6000
6500
7000
7500
8000
8500
9000
λ [A]

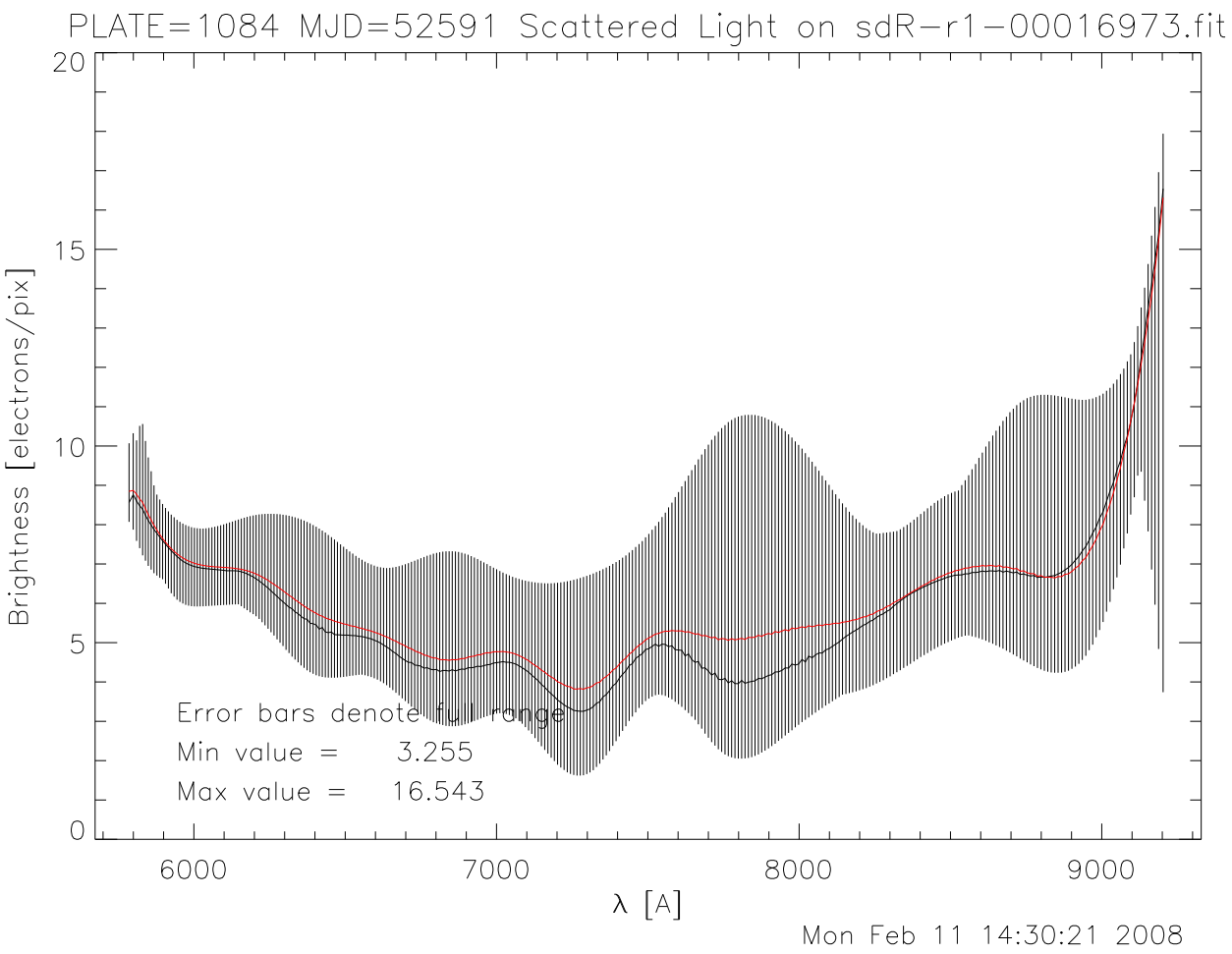

PLATE=1084 MJD=52591 Arcline Fit for sdR-r1-00016972.fit
Fiber Number
300
250
200
150
100
50
0
6000
7000
8000
9000
λ [A] + 500 * Deviation
Deviation [pix]
0.10
0.05
0.00
−0.05
−0.10
6000
7000
8000
9000
λ [A]
Mon Feb 11 14:26:18 2008

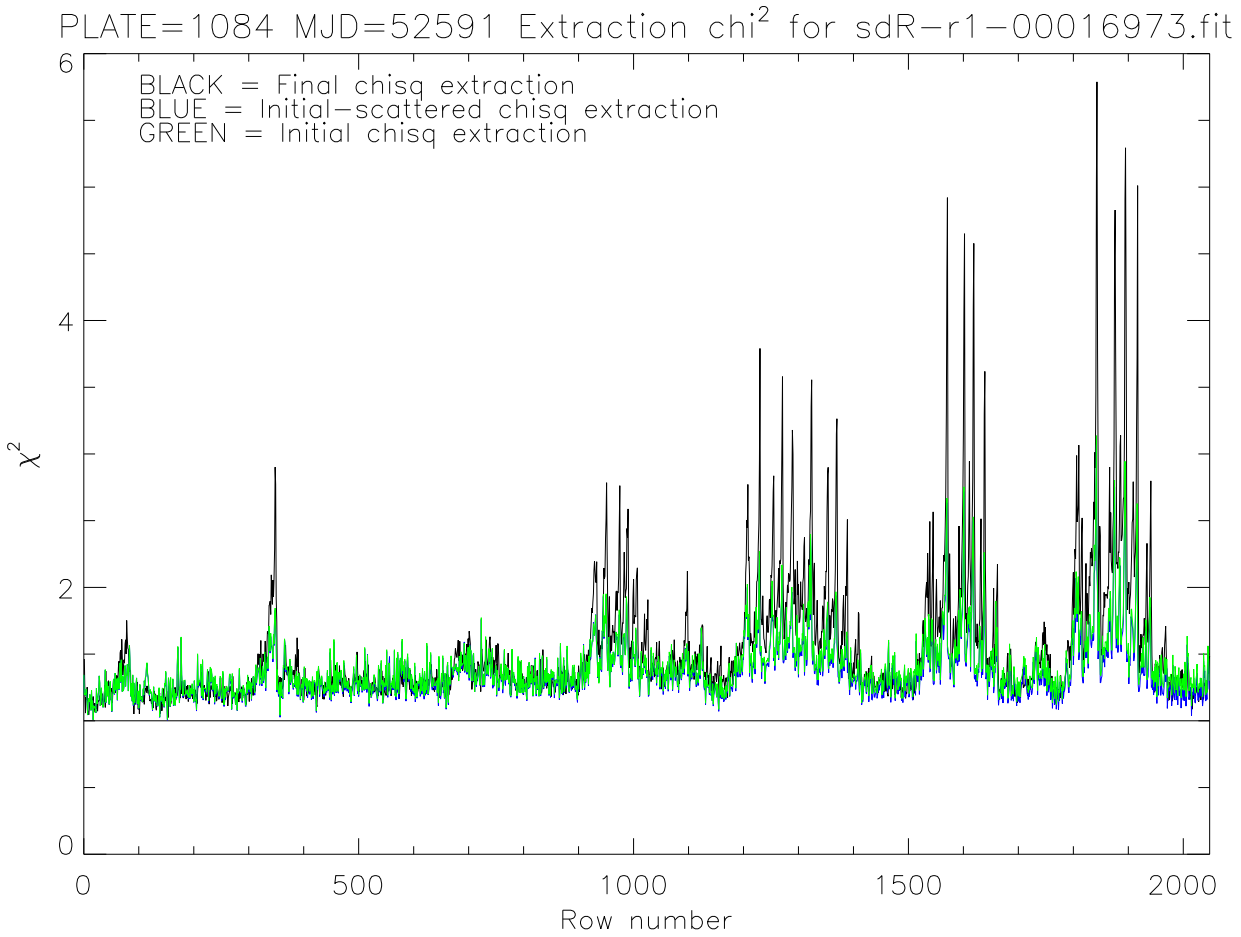

PLATE=1084 MJD=52591 Fiber−Flats for sdR−r1−00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.616
Max value = 1.328
Fiber−Flat
1.5
1.0
0.5
0.0
6000
6500
7000
7500
8000
8500
9000
λ [A]
Mon Feb 11 14:26:27 2008

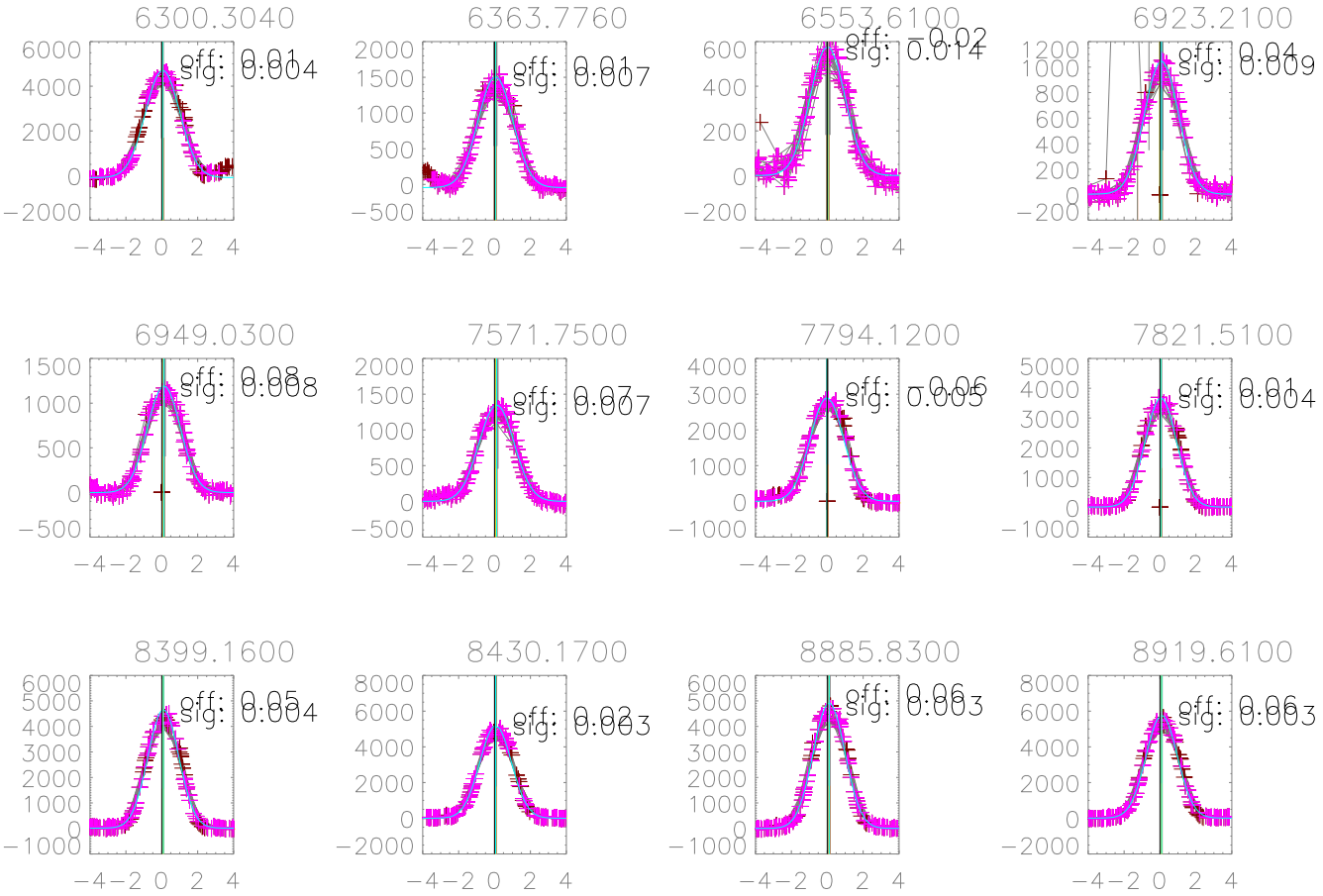

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r1-00016973.fi
57.3
44.5
57.3
44.5
31.8
31.8
19.1
19.1
Y [pix]
X [pix]
0
500
1000
1500
2000

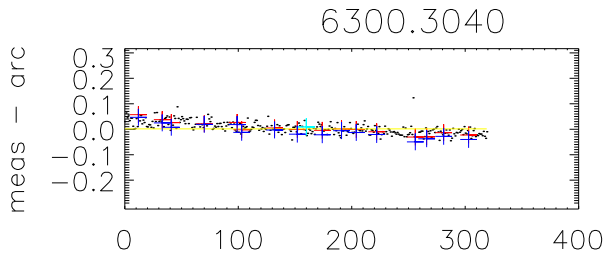

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r1-00016973.fi
Brightness [electrons/pix]
λ [A]
Error bars denote 1σ range
Min value = 8.990
Max value = 56.597
Mon Feb 11 14:27:18 2008

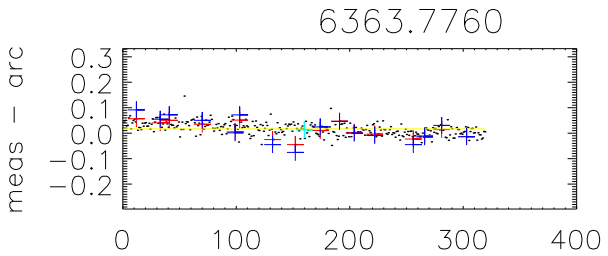

PLATE=1084 MJD=52591 Scattered Light on sdR-r1-00016973.fit
12.7
9.1
5.5
5.5
5.5
5.5
5.5
0
9.1
Y [pix]
X [pix]
0
500
1000
1500
2000

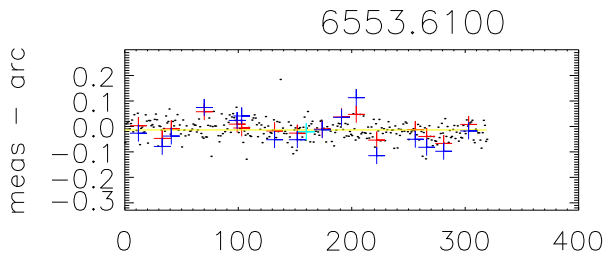

PLATE=1084 MJD=52591 Scattered Light on sdR-r1-00016973.fit
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 3.255
Max value = 16.543
Mon Feb 11 14:30:21 2008

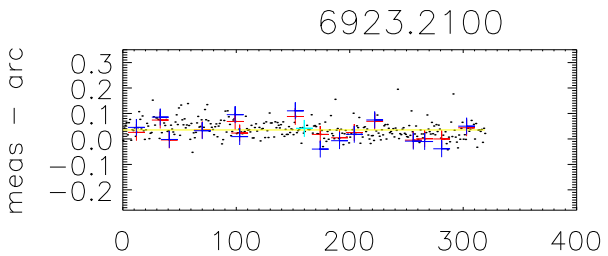

PLATE=1084 MJD=52591 Extraction chi^2 for sdR-r1-00016973.fit
BLACK = Final chisq extraction
BLUE = Initial-scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
0
2
4
6
0
500
1000
1500
2000
Row number

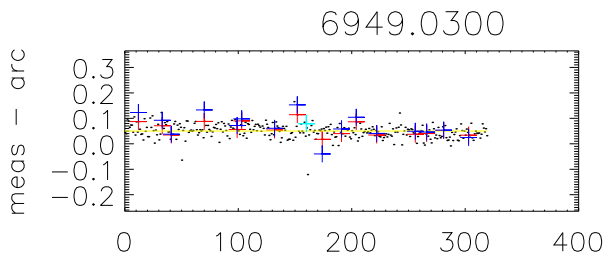

6300.3040
off: 0.01
sig: 0.004
6363.7760
off: 0.01
sig: 0.007
6553.6100
off: −0.02
sig: 0.014
6923.2100
off: 0.04
sig: 0.009
6949.0300
off: 0.08
sig: 0.008
7571.7500
off: 0.07
sig: 0.007
7794.1200
off: −0.06
sig: 0.005
7821.5100
off: 0.01
sig: 0.004
8399.1600
off: 0.05
sig: 0.004
8430.1700
off: 0.02
sig: 0.003
8885.8300
off: 0.06
sig: 0.003
8919.6100
off: 0.06
sig: 0.003

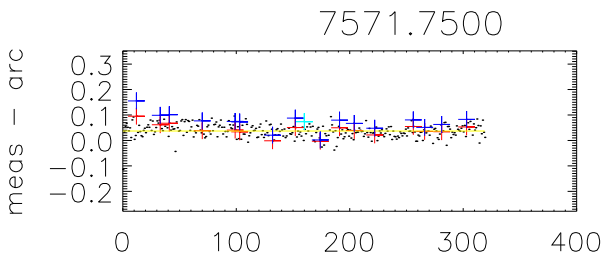

6300.3040
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

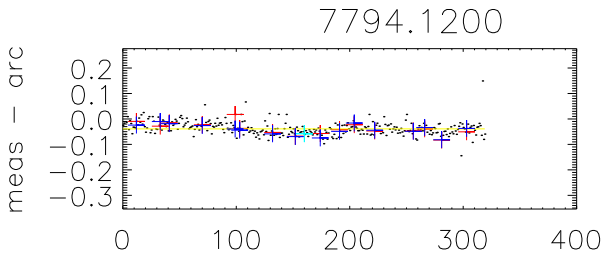

6363.7760
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

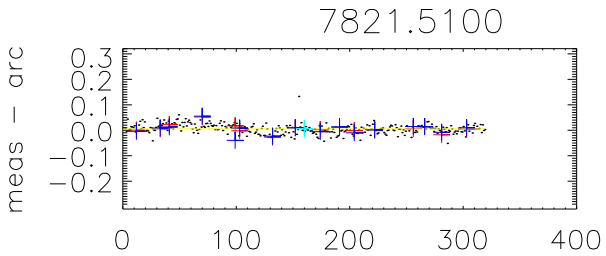

6553.6100
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

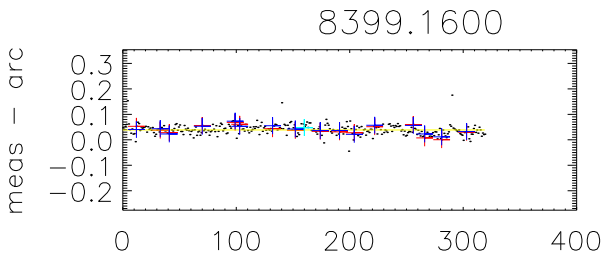

6923.2100
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

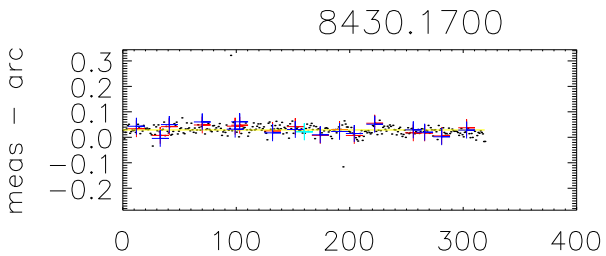

6949.0300
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

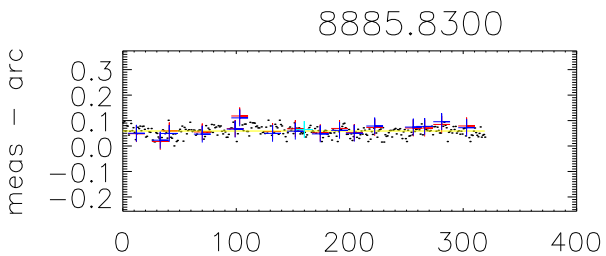

7571.7500
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

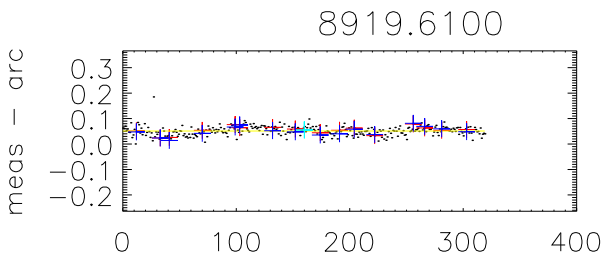

7794.1200
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

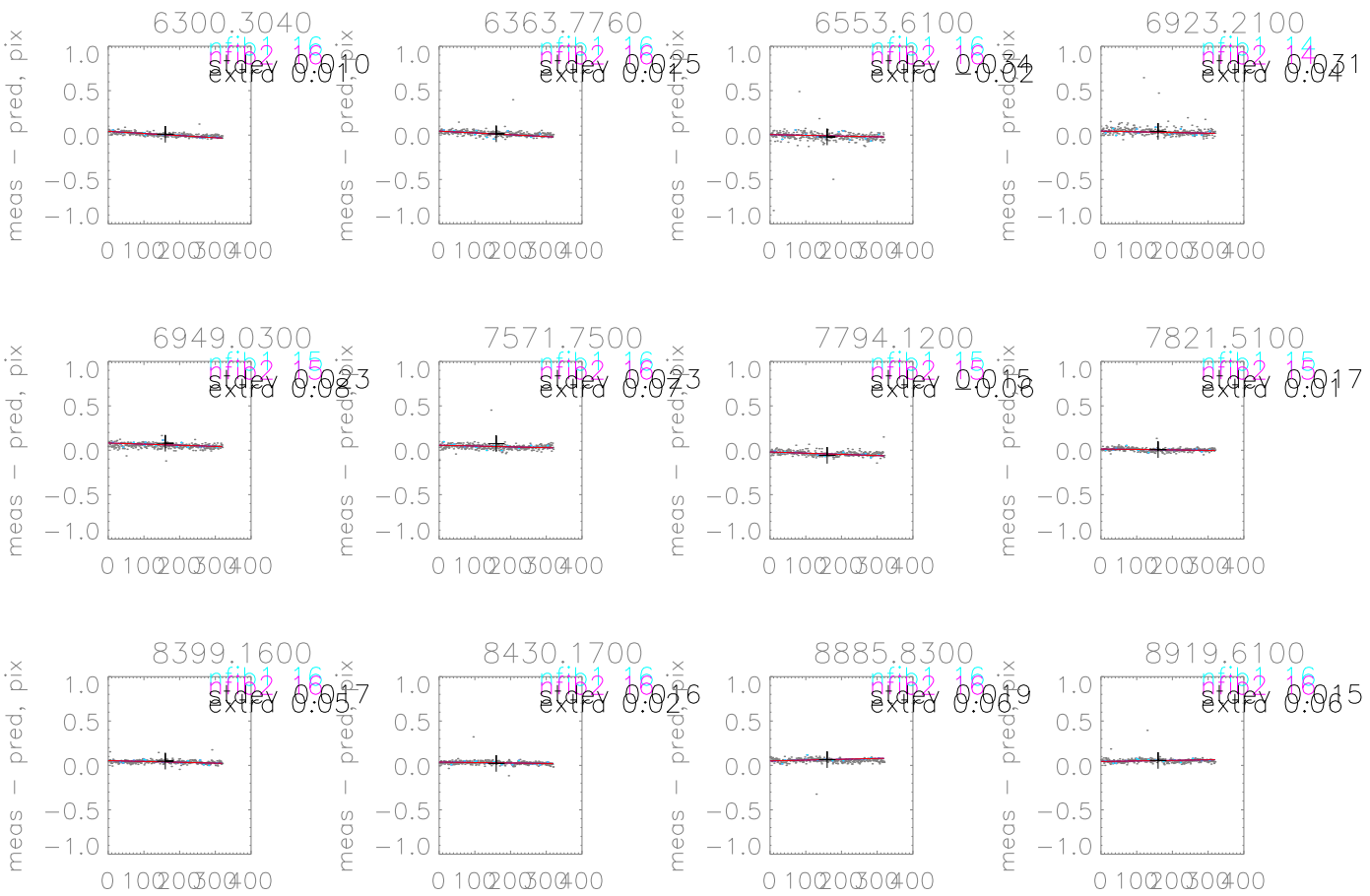

7821.5100
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

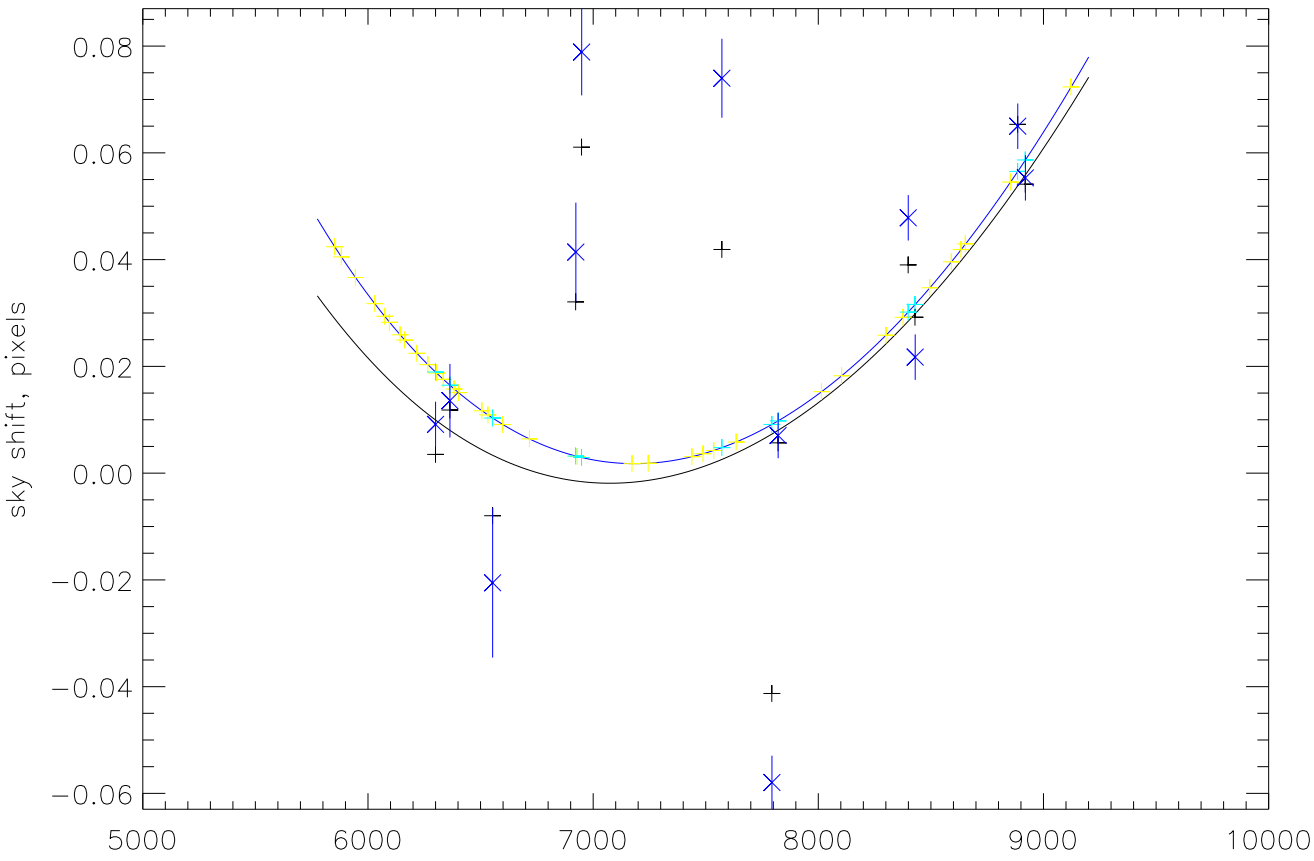

8399.1600
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

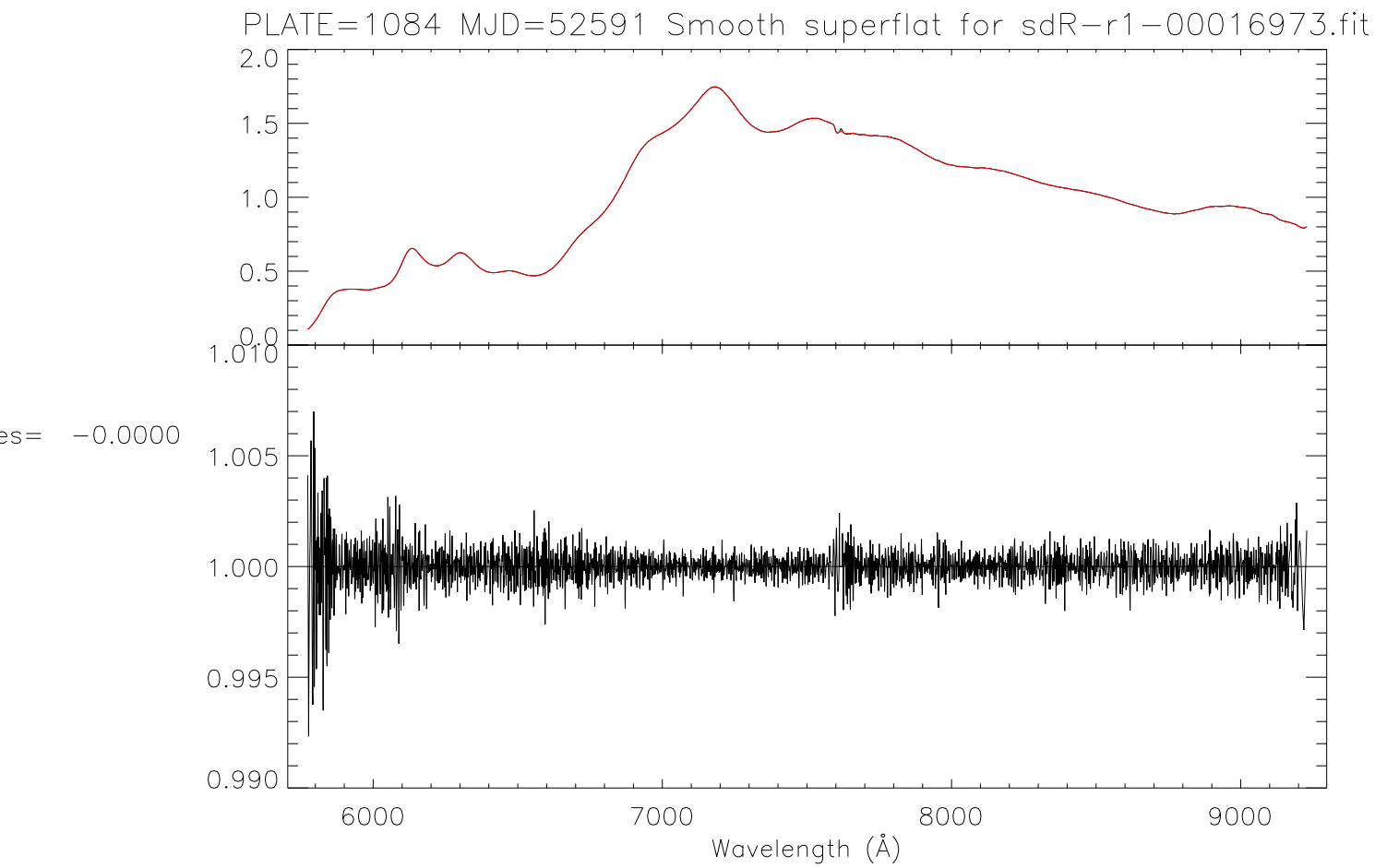

8430.1700
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

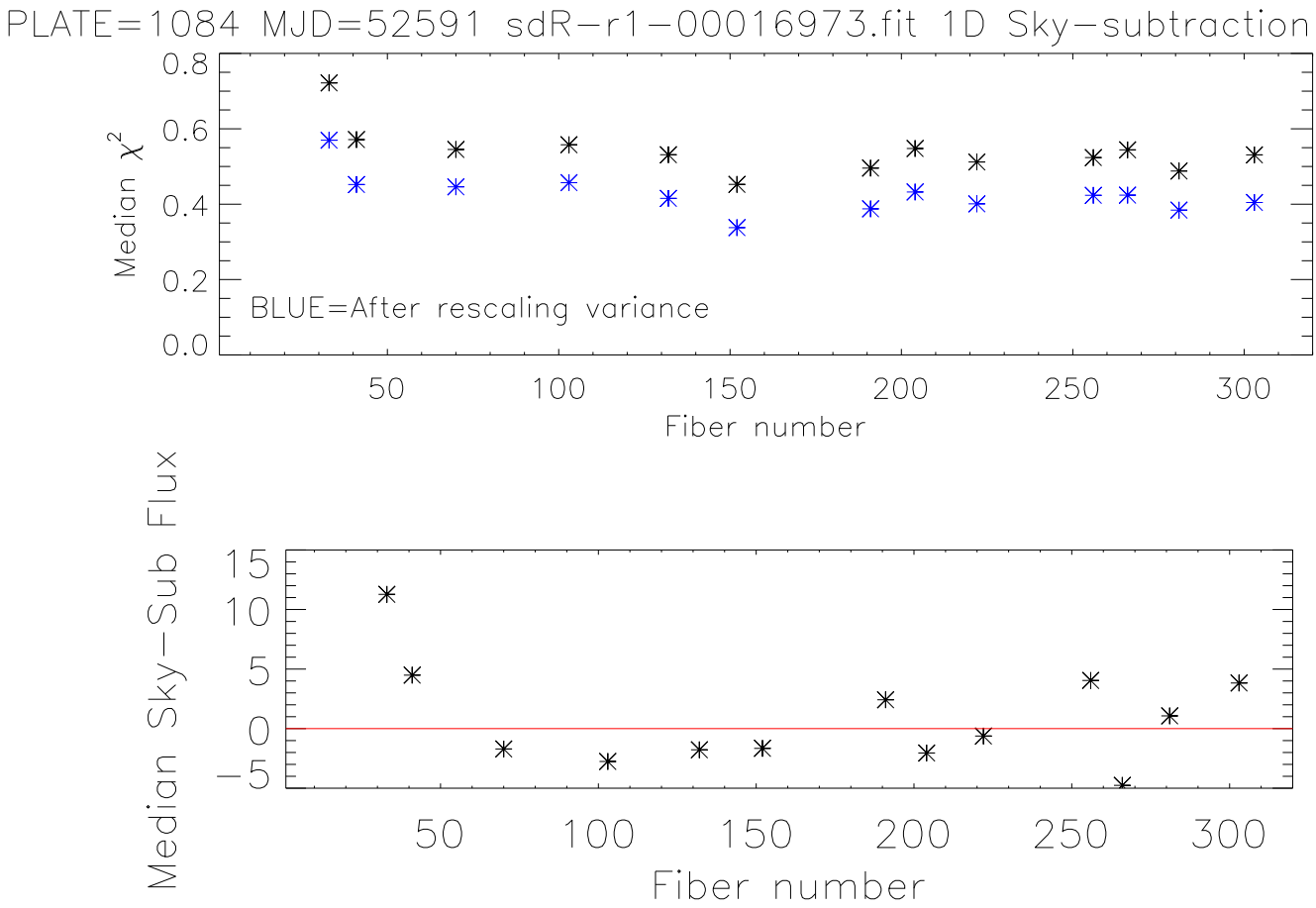

8885.8300
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400


8919.6100
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

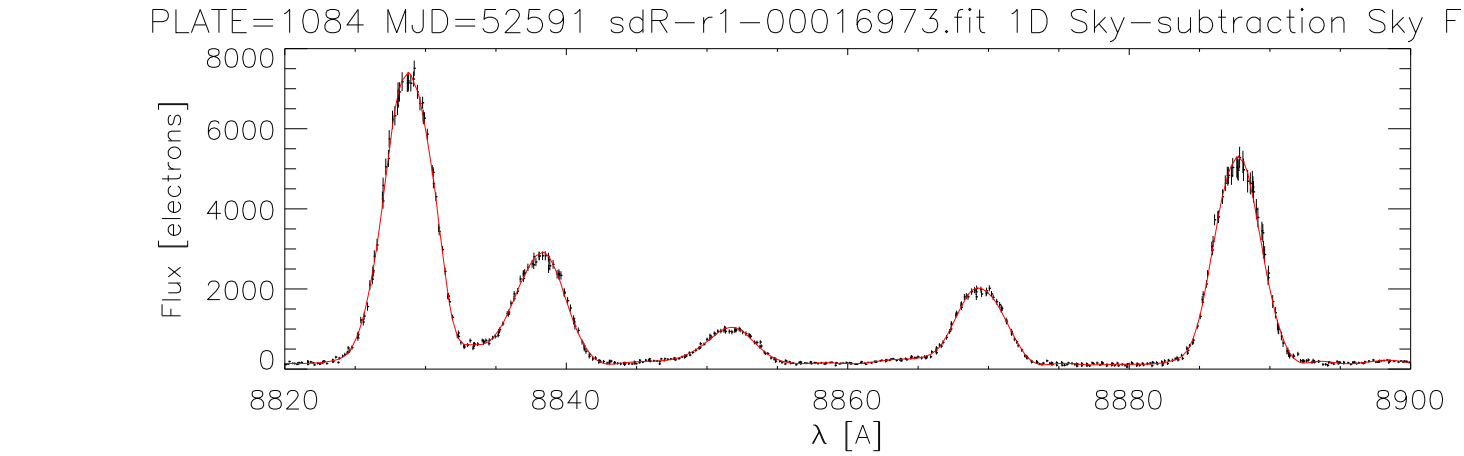

6300.3040
mfhi1 16
stdev 0.010
extra 0.010
6363.7760
mfhi1 16
stdev 0.025
extra 0.025
6553.6100
mfhi1 16
stdev 0.034
extra −0.02
6923.2100
mfhi1 14
stdev 0.031
extra 0.04
6949.0300
mfhi1 15
stdev 0.023
extra 0.08
7571.7500
mfhi1 16
stdev 0.023
extra 0.07
7794.1200
mfhi1 15
stdev 0.015
extra −0.08
7821.5100
mfhi1 15
stdev 0.017
extra 0.01
8399.1600
mfhi1 16
stdev 0.017
extra 0.05
8430.1700
mfhi1 16
stdev 0.016
extra 0.02
8885.8300
mfhi1 16
stdev 0.049
extra 0.06
8919.6100
mfhi1 16
stdev 0.015
extra 0.06
meas − pred, pix
1.0
0.5
0.0
−0.5
−1.0
0 100 200 300 400

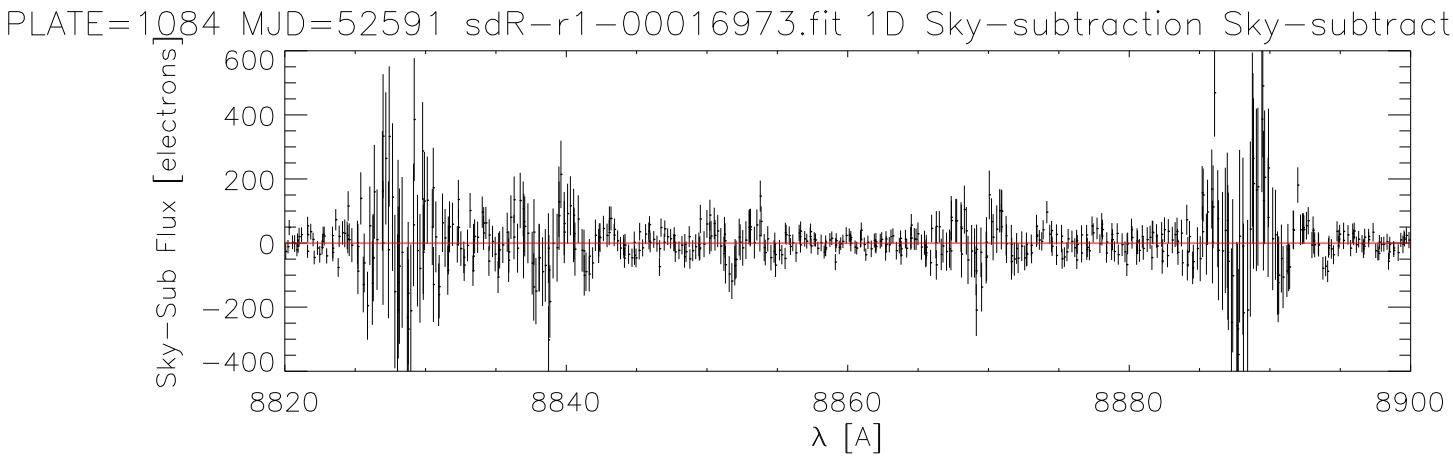

sky shift, pixels
0.08
0.06
0.04
0.02
0.00
−0.02
−0.04
−0.06
5000
6000
7000
8000
9000
10000

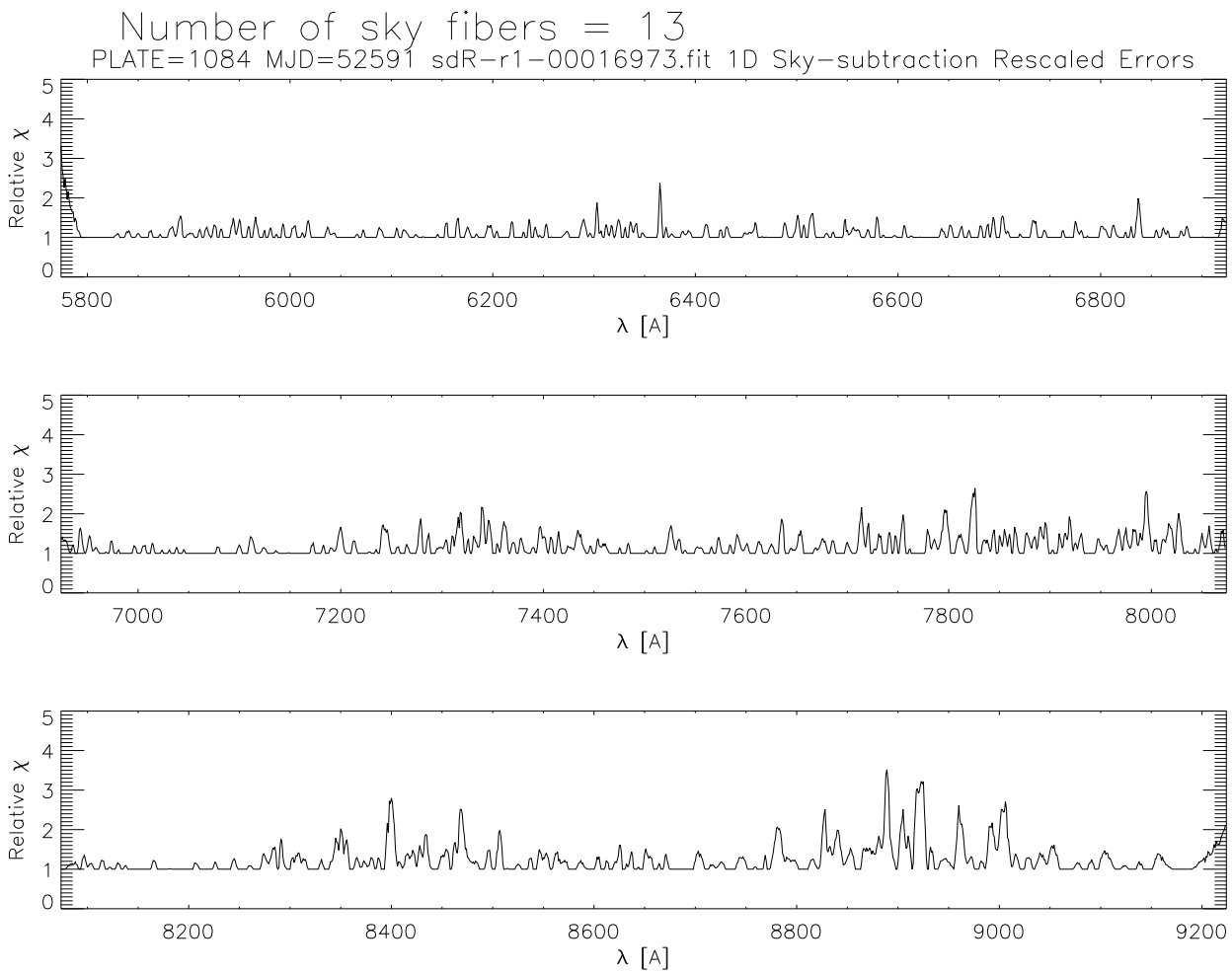

PLATE=1084 MJD=52591 Smooth superflat for sdR-r1-00016973.fit
2.0
1.5
1.0
0.5
0.0
1.010
1.005
1.000
0.995
0.990
es= -0.0000
6000
7000
8000
9000
Wavelength (Å)

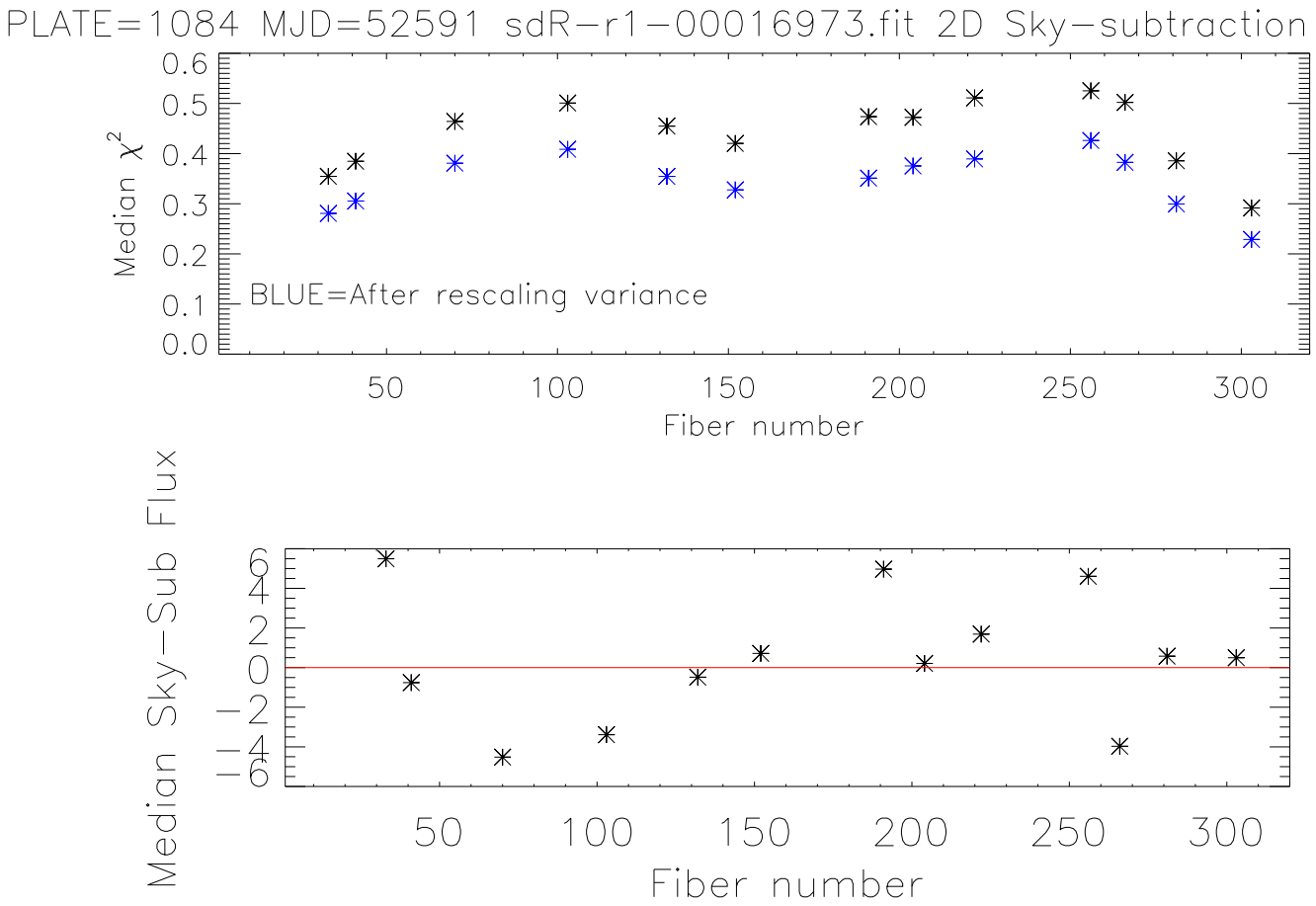

PLATE=1084 MJD=52591 sdR-r1-00016973.fit 1D Sky-subtraction Sky Fibers
Median χ^2
0.0
0.2
0.4
0.6
0.8
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number

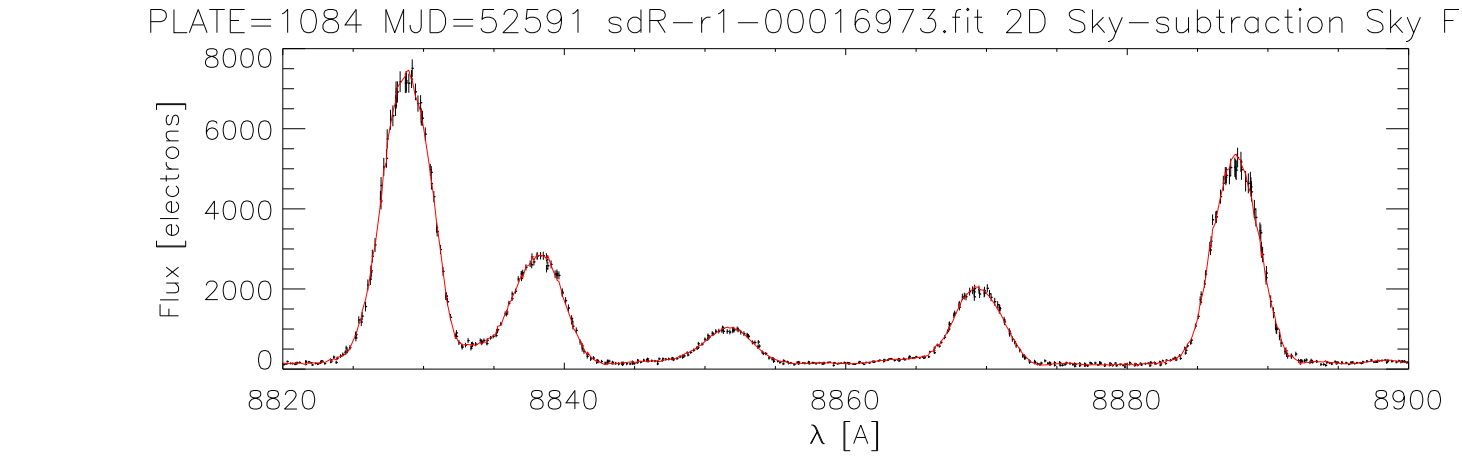
Median Sky-Sub Flux
15
10
5
0
-5
50
100
150
200
250
300
Fiber number

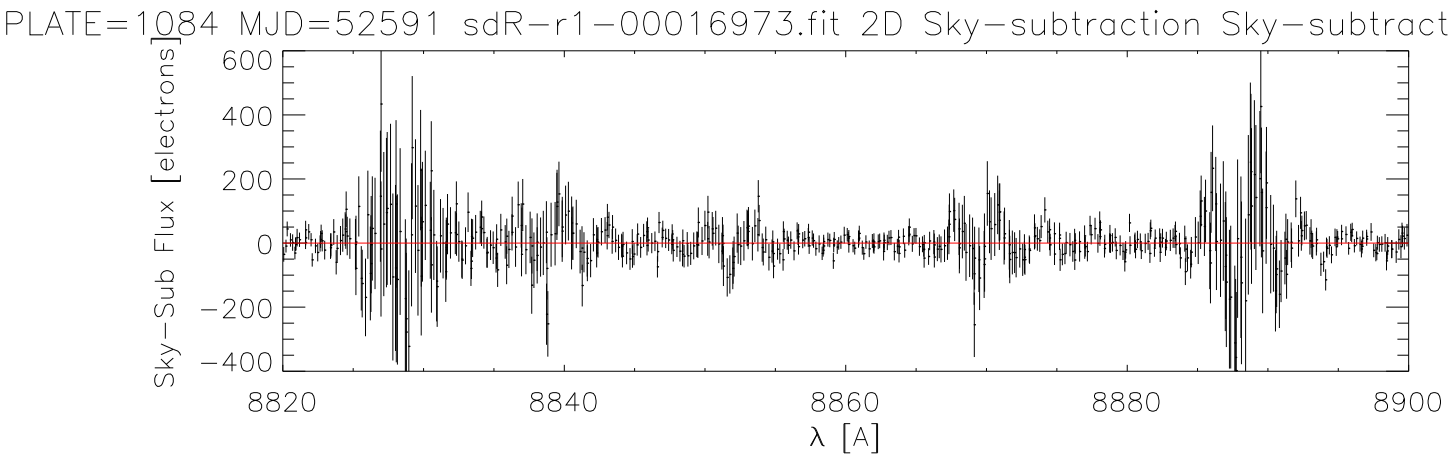

PLATE=1084 MJD=52591 sdR-r1-00016973.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
8000
6000
4000
2000
0
8820
8840
8860
8880
8900
λ [A]

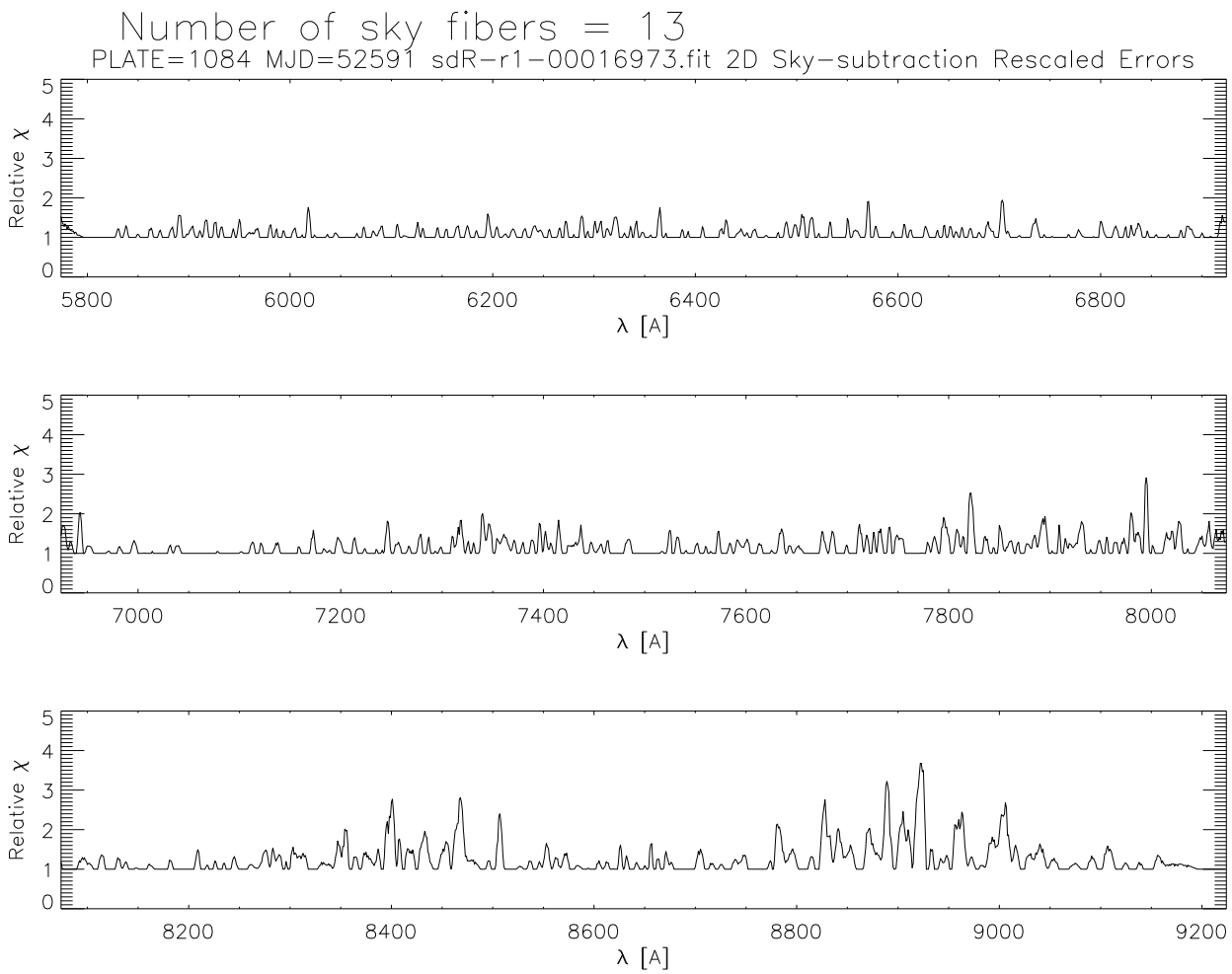

PLATE=1084 MJD=52591 sdR-r1-00016973.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
600
400
200
0
-200
-400
8820
8840
8860
8880
8900
λ [A]

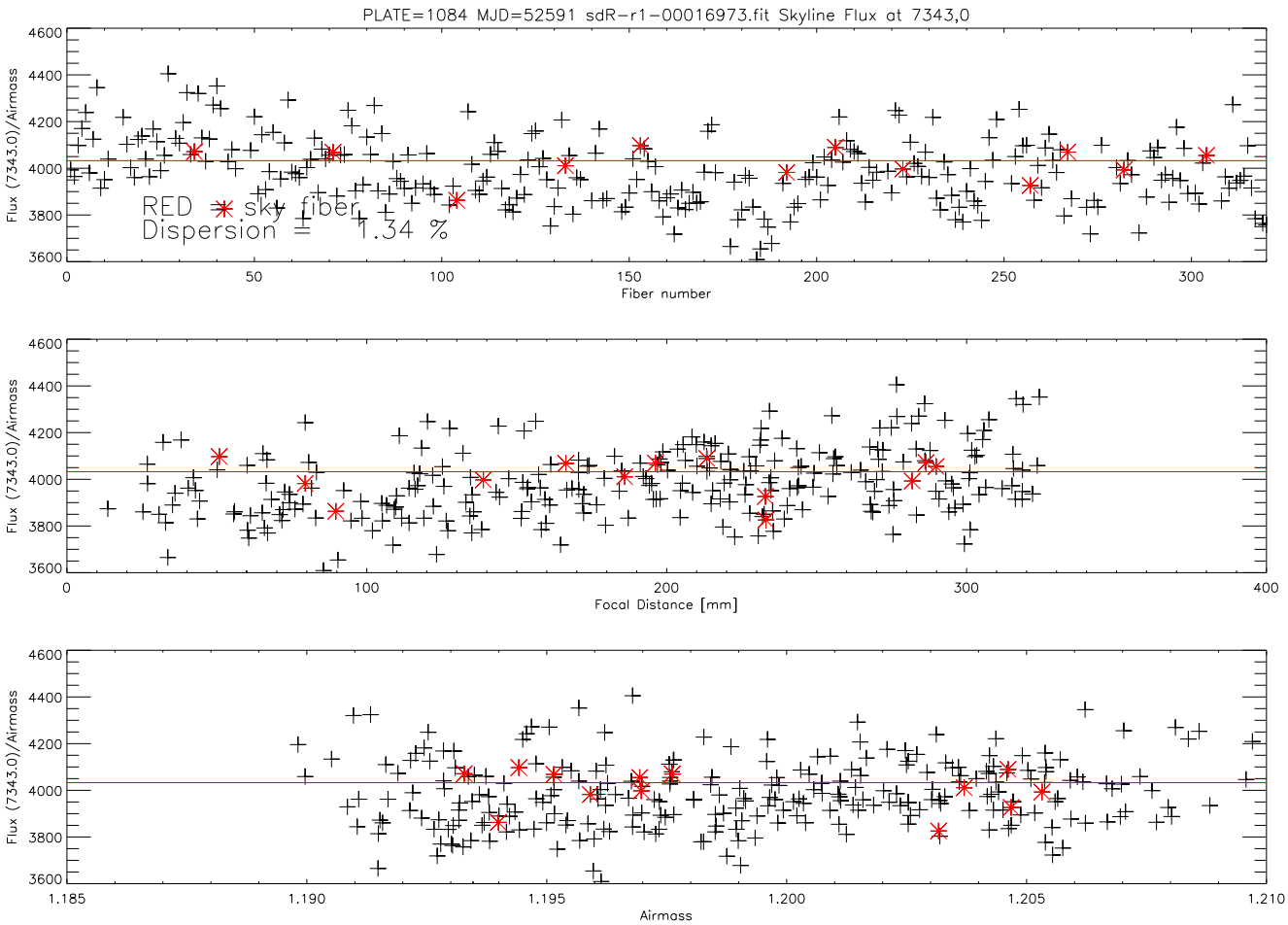

Number of sky fibers = 13
PLATE=1084 MJD=52591 sdR-r1-00016973.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200
0
1
2
3
4
5

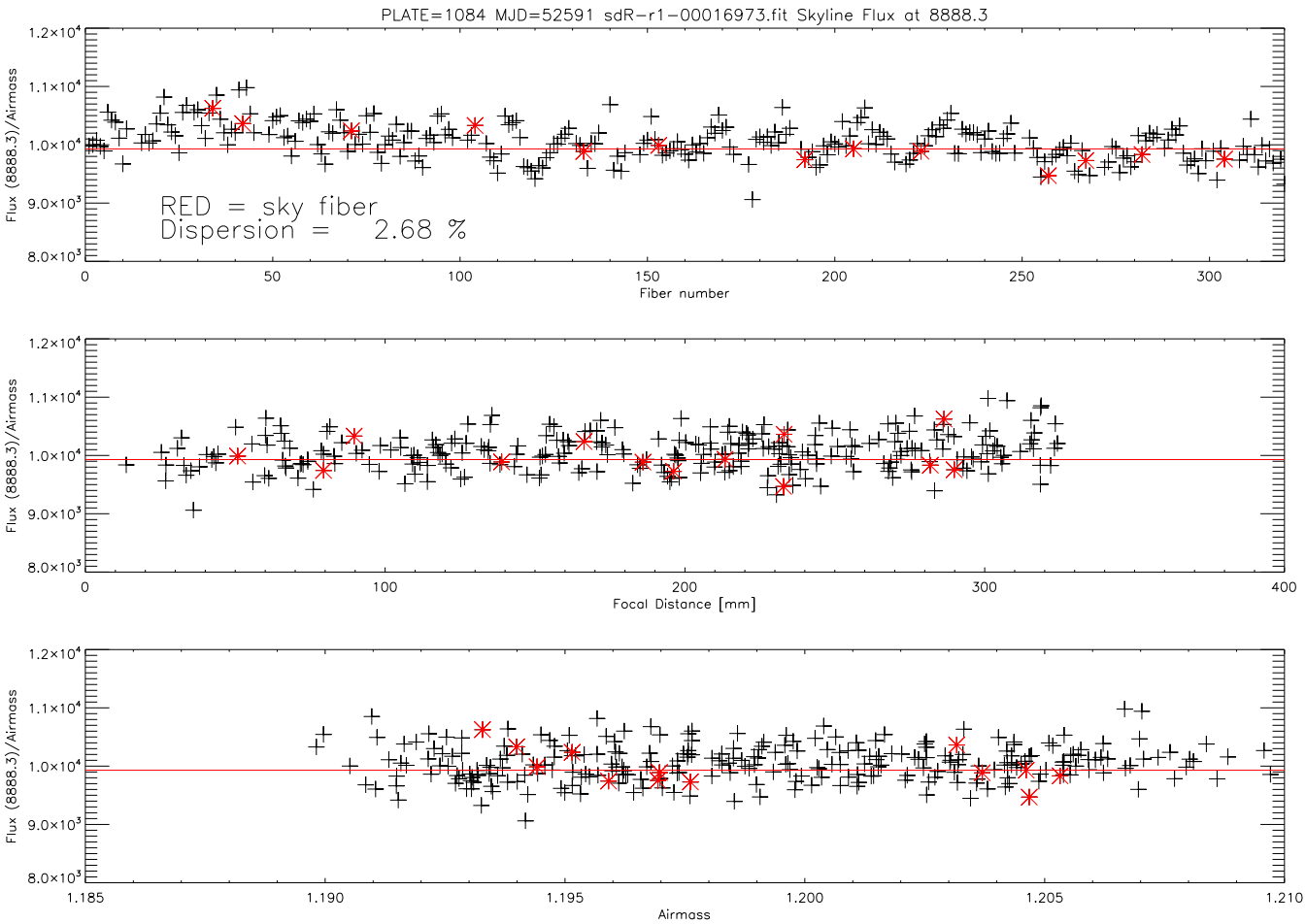

PLATE=1084 MJD=52591 sdR-r1-00016973.fit 2D Sky-subtraction Sky Fibers
Median χ^2
BLUE=After rescaling variance
Fiber number
Median Sky-Sub Flux
Fiber number

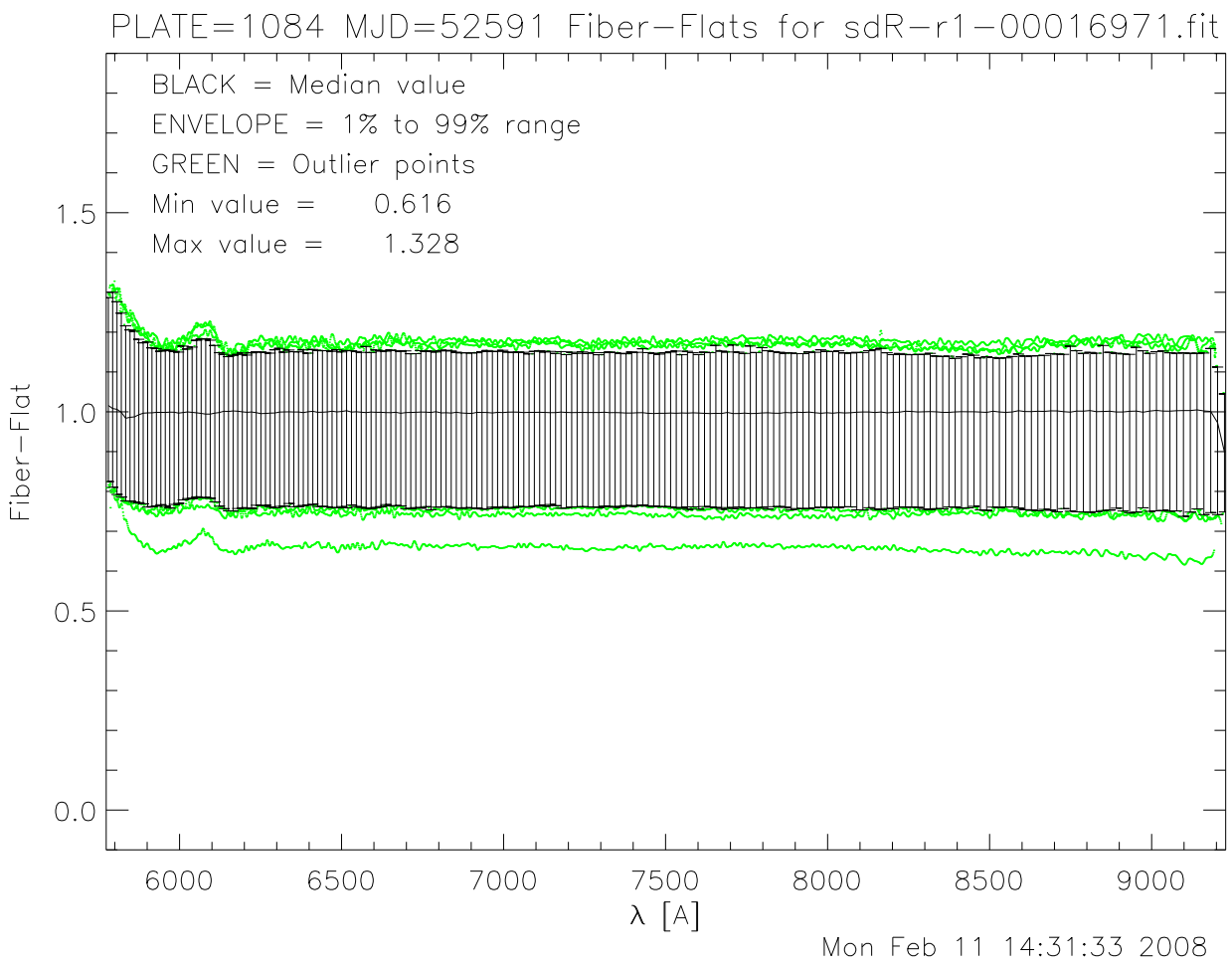

PLATE=1084 MJD=52591 sdR-r1-00016973.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
8000
6000
4000
2000
0
8820
8840
8860
8880
8900
λ [A]

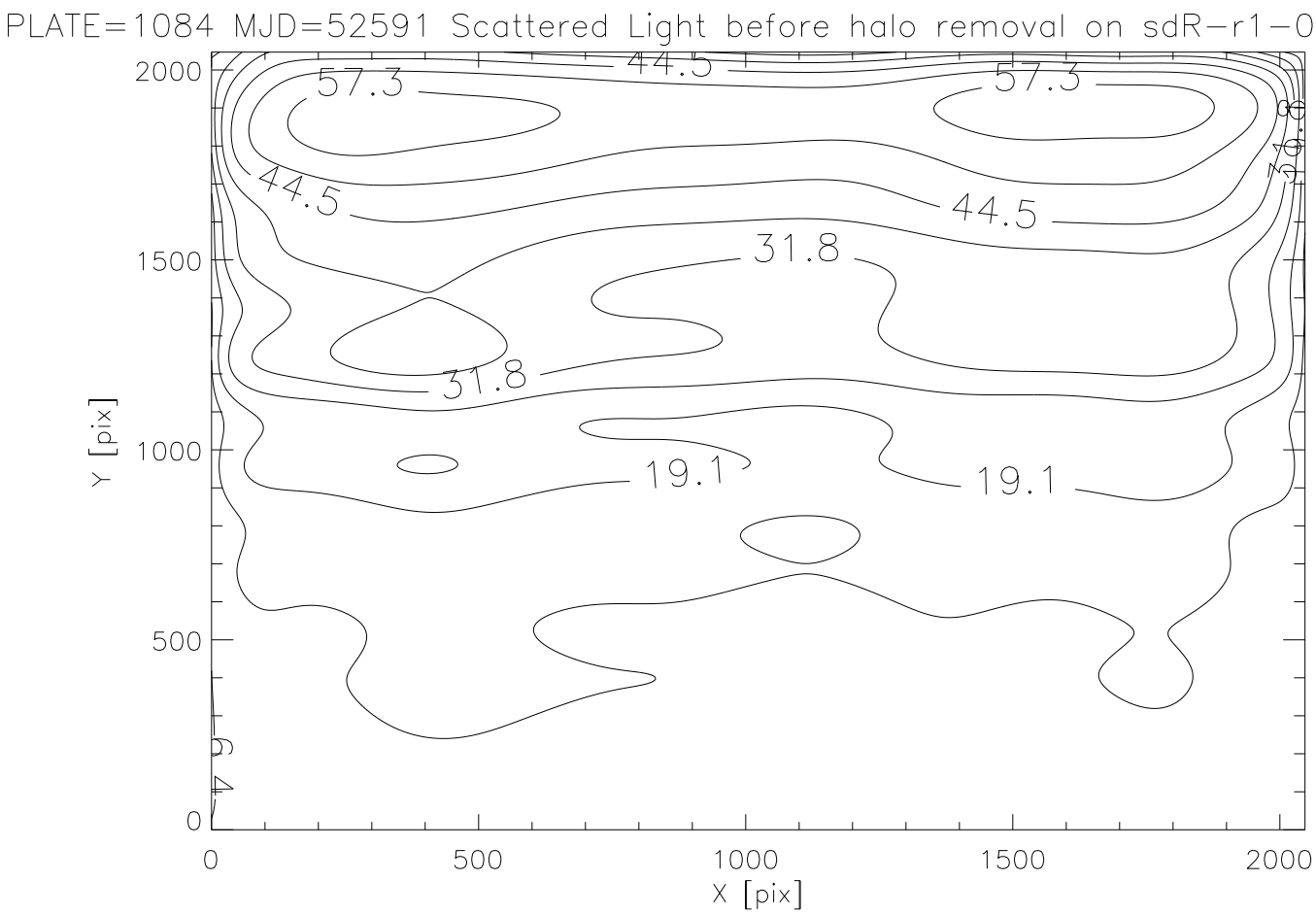

PLATE=1084 MJD=52591 sdR-r1-00016973.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
600
400
200
0
-200
-400
8820
8840
8860
8880
8900
λ [A]

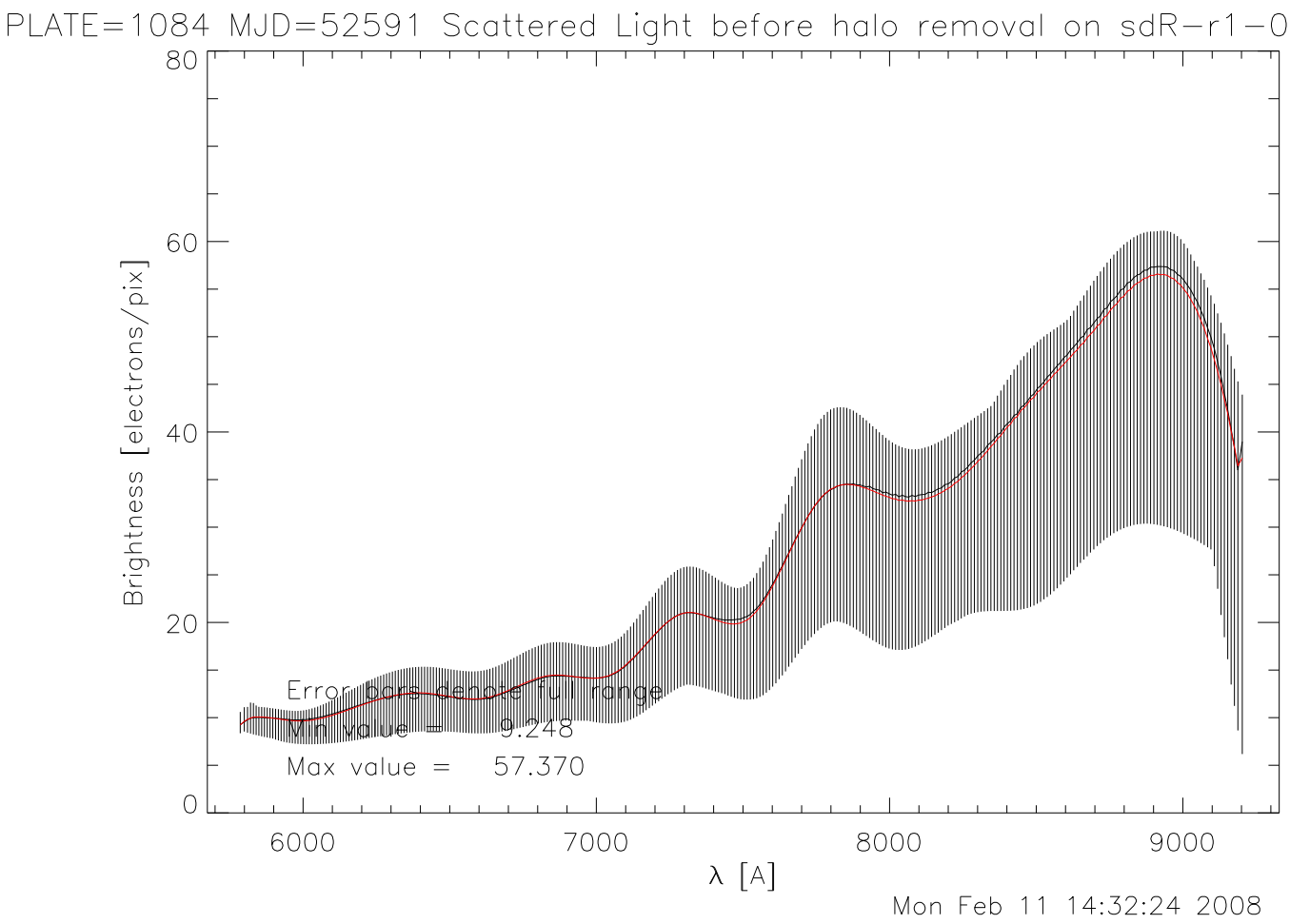

Number of sky fibers = 13
PLATE=1084 MJD=52591 sdR-r1-00016973.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200

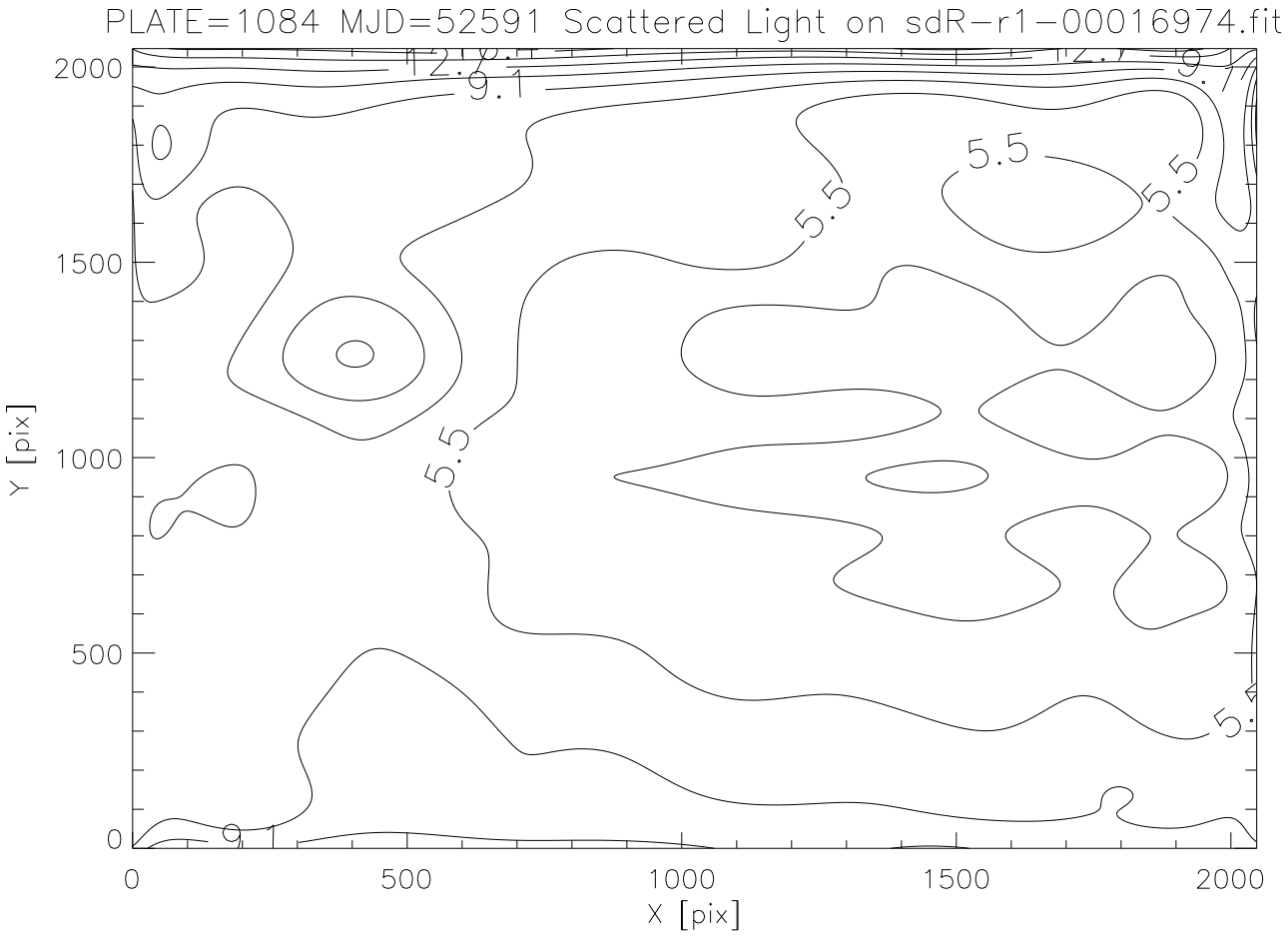

PLATE=1084 MJD=52591 sdR-r1-00016973.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
Fiber number
RED = sky fiber
Dispersion = 1.34 %
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

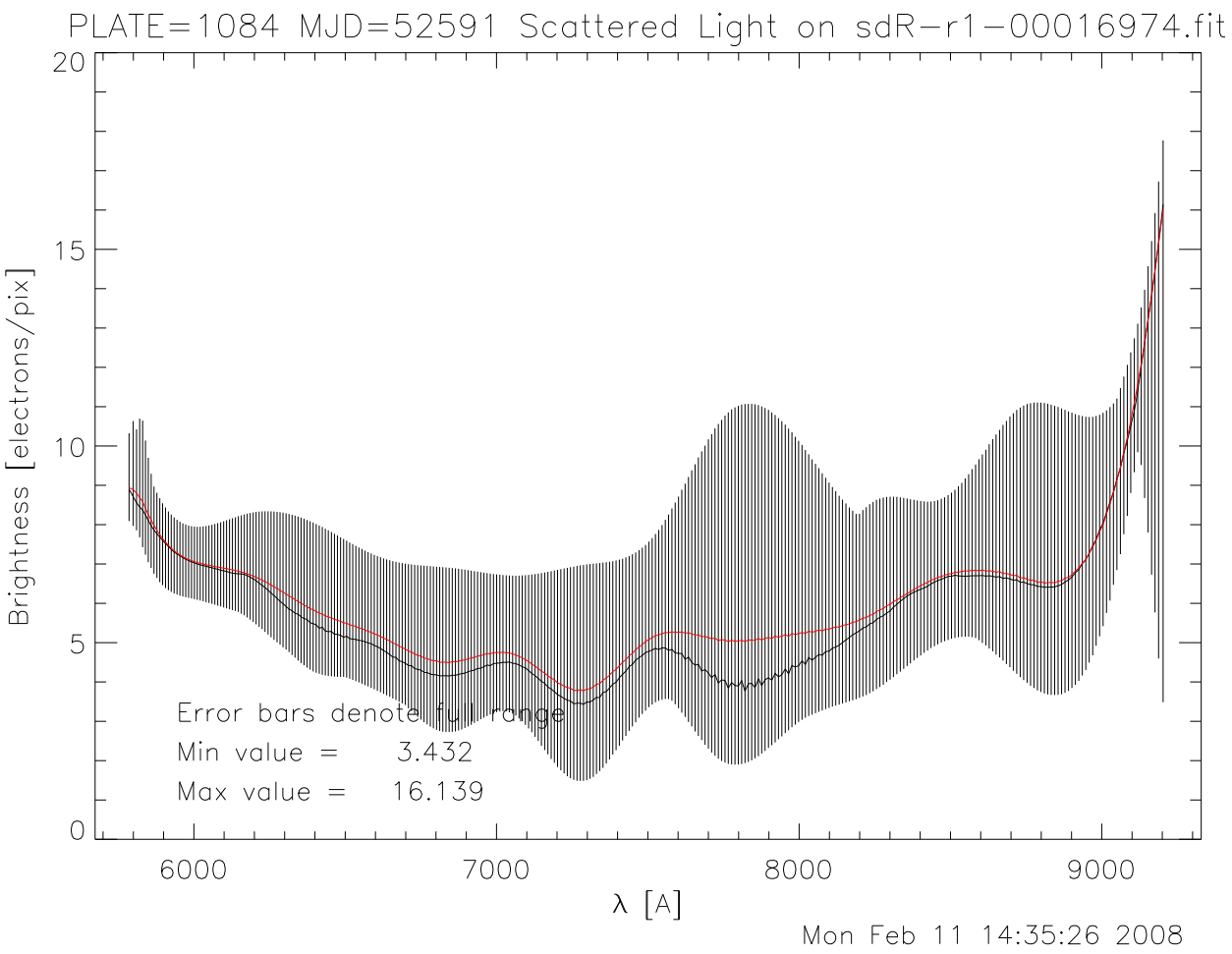

PLATE=1084 MJD=52591 sdR-r1-00016973.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
RED = sky fiber
Dispersion = 2.68 %
Fiber number
Focal Distance [mm]
Airmass

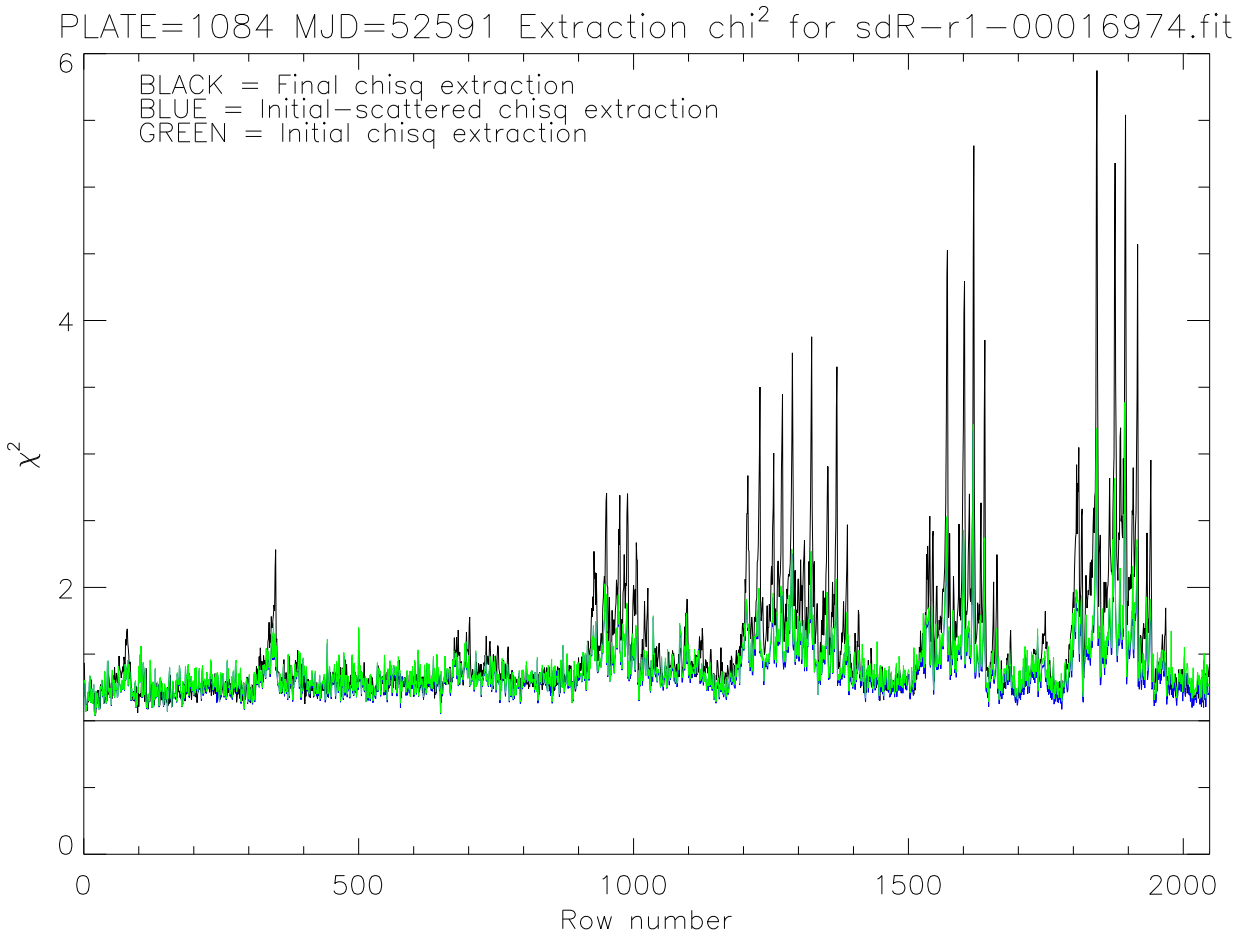

PLATE=1084 MJD=52591 Fiber−Flats for sdR−r1−00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.616
Max value = 1.328
Fiber−Flat
1.5
1.0
0.5
0.0
6000
6500
7000
7500
8000
8500
9000
λ [A]
Mon Feb 11 14:31:33 2008

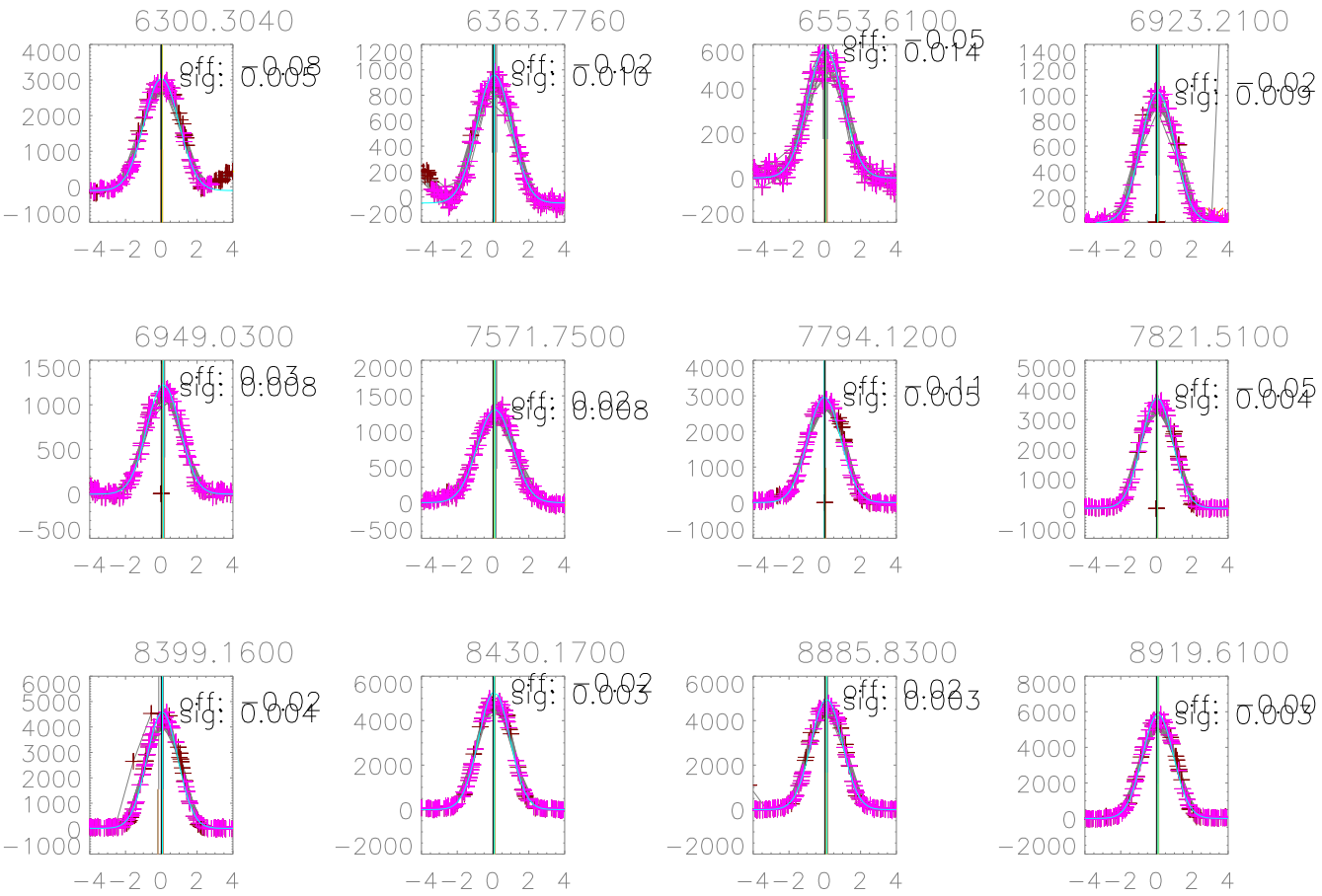

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r1-00016974.fi
57.3
44.5
31.8
19.1
Y [pix]
X [pix]
0
500
1000
1500
2000

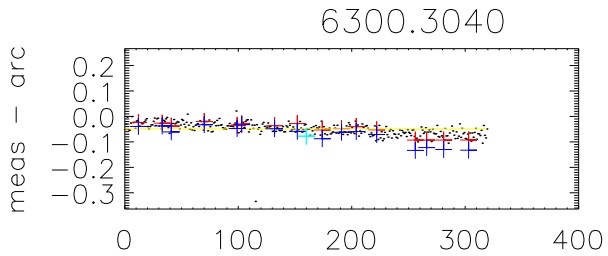

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r1-00016974.fi
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 9.248
Max value = 57.370
Mon Feb 11 14:32:24 2008

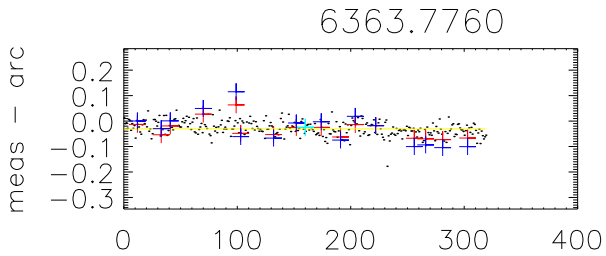

PLATE=1084 MJD=52591 Scattered Light on sdR-r1-00016974.fit
Y [pix]
X [pix]
0
500
1000
1500
2000
12.7
9.1
0
5.5
5.5
5.5
5.5
5.4
9.1

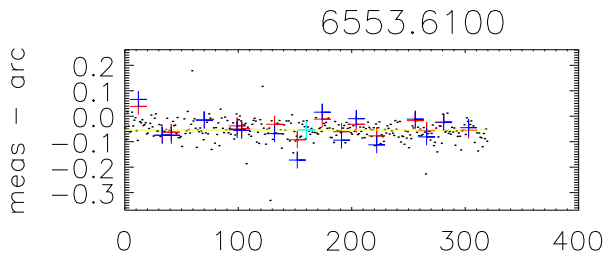

PLATE=1084 MJD=52591 Scattered Light on sdR-r1-00016974.fit
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 3.432
Max value = 16.139
Mon Feb 11 14:35:26 2008

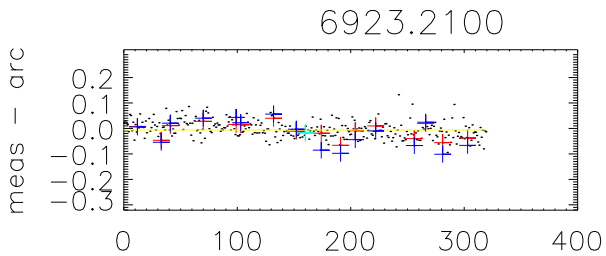

PLATE=1084 MJD=52591 Extraction chi^2 for sdR-r1-00016974.fit
BLACK = Final chisq extraction
BLUE = Initial-scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
0
2
4
6
0
500
1000
1500
2000
Row number

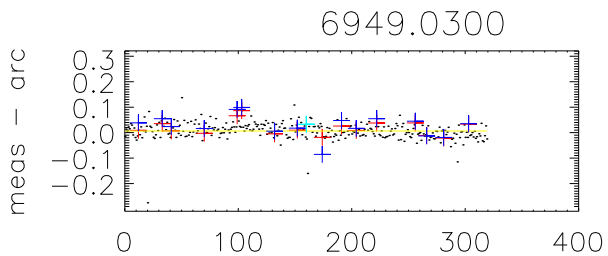

6300.3040
off: −0.08
sig: 0.005
6363.7760
off: −0.02
sig: 0.010
6553.6100
off: −0.05
sig: 0.014
6923.2100
off: −0.02
sig: 0.009
6949.0300
off: 0.03
sig: 0.008
7571.7500
off: 0.02
sig: 0.008
7794.1200
off: −0.11
sig: 0.005
7821.5100
off: −0.05
sig: 0.004
8399.1600
off: −0.02
sig: 0.004
8430.1700
off: −0.02
sig: 0.003
8885.8300
off: 0.02
sig: 0.003
8919.6100
off: −0.00
sig: 0.003

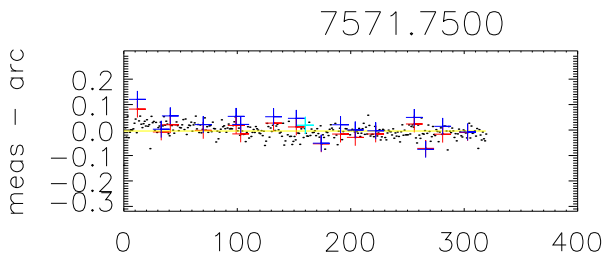

6300.3040
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

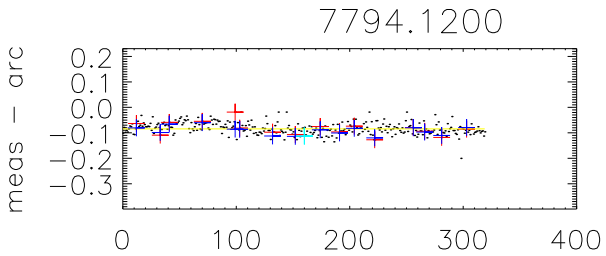

6363.7760
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

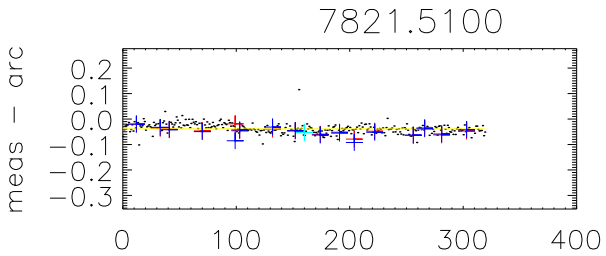

6553.6100
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

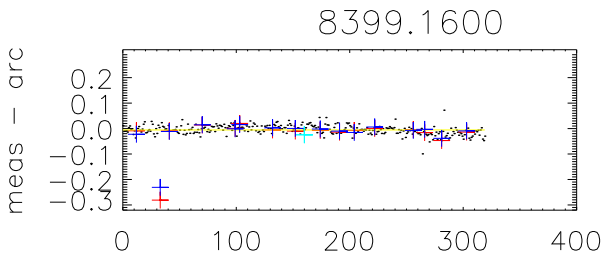

6923.2100
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

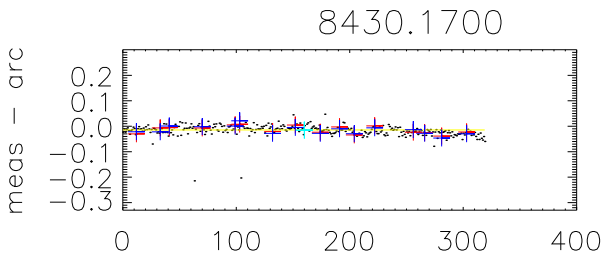

6949.0300
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

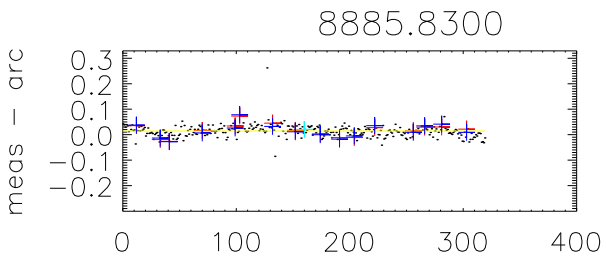

7571.7500
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

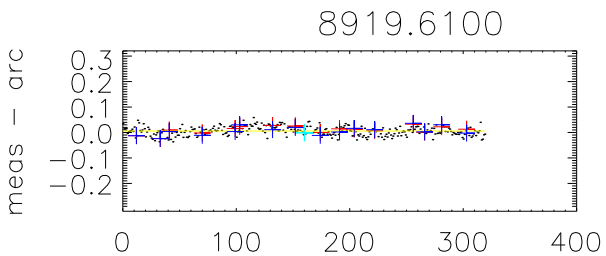

7794.1200
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

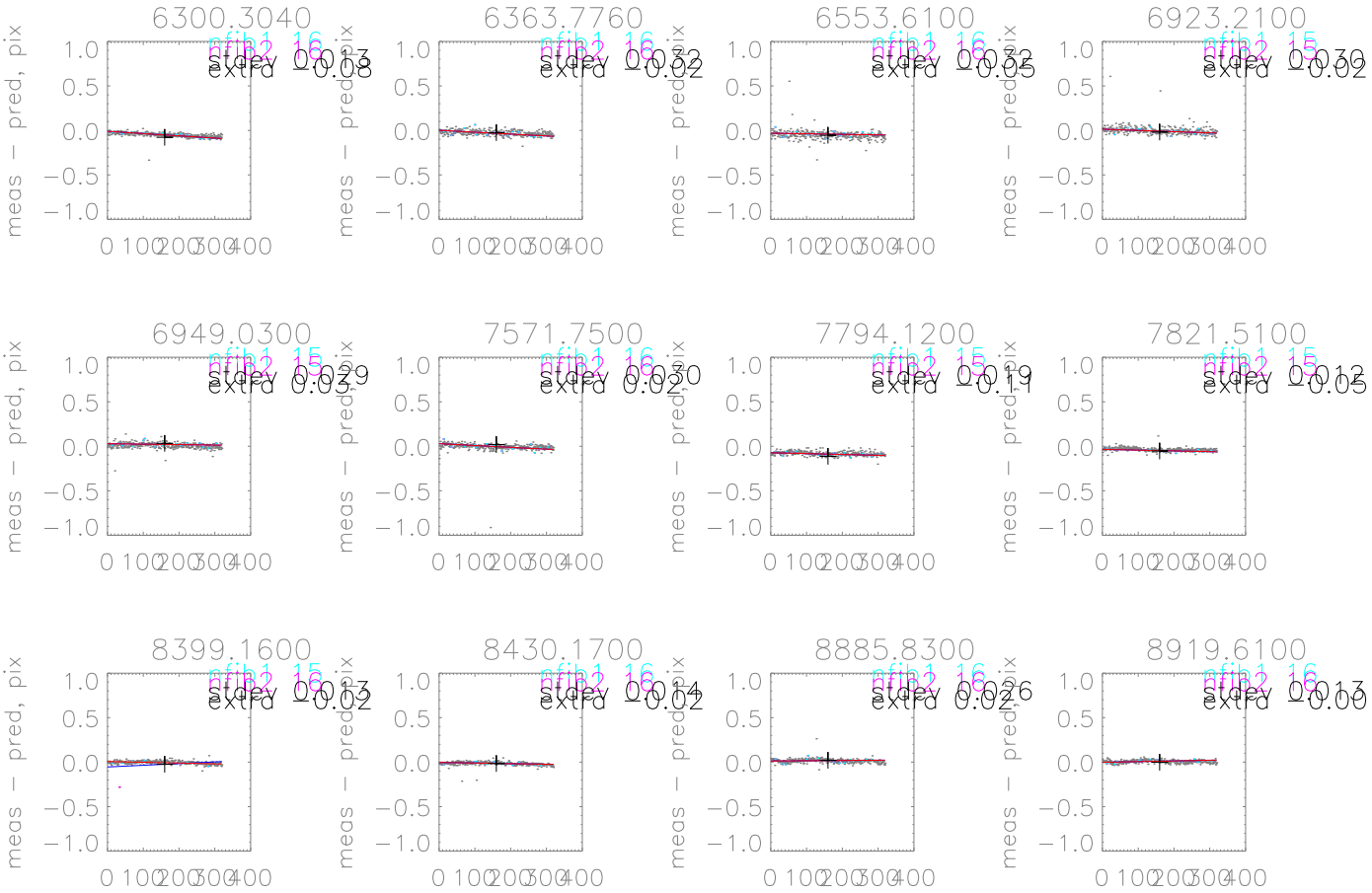

7821.5100
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

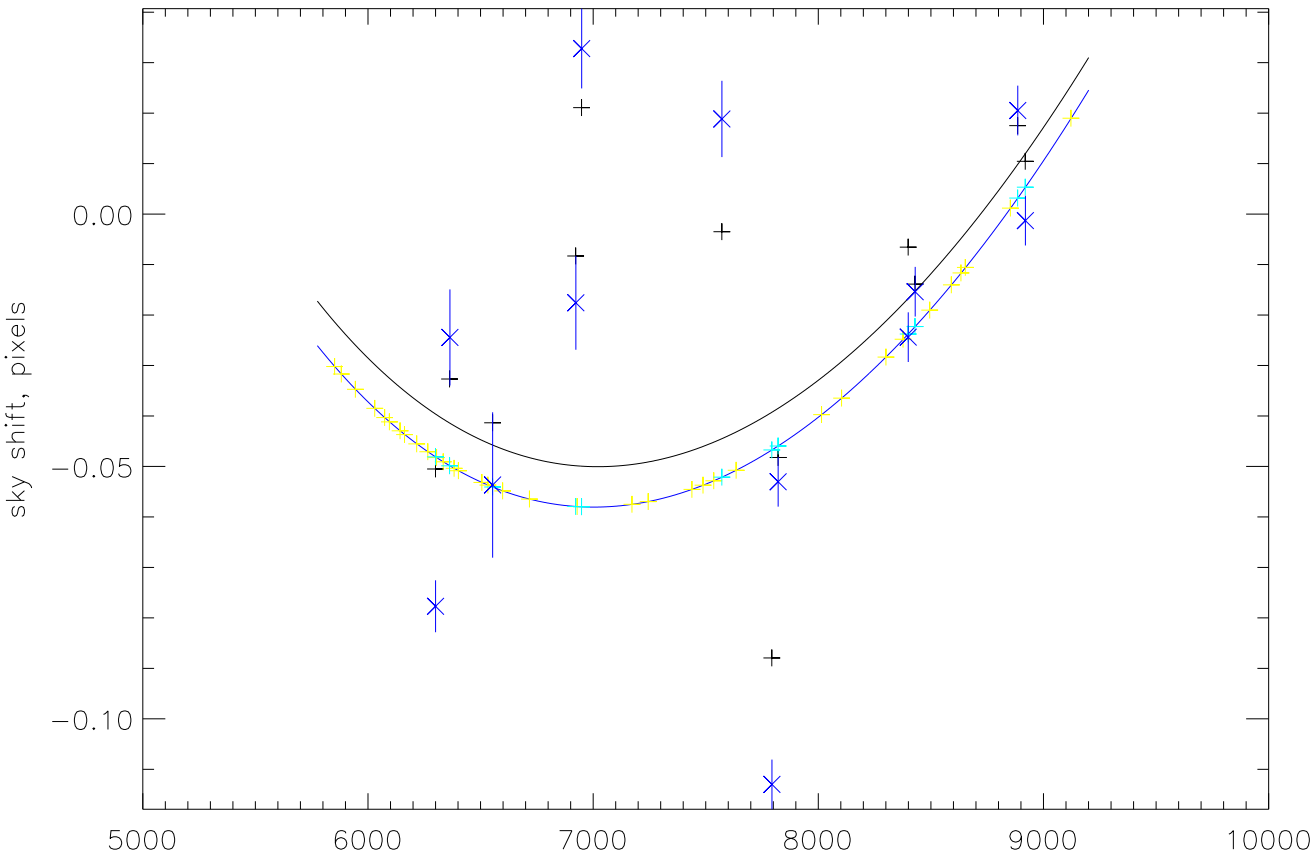

8399.1600
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

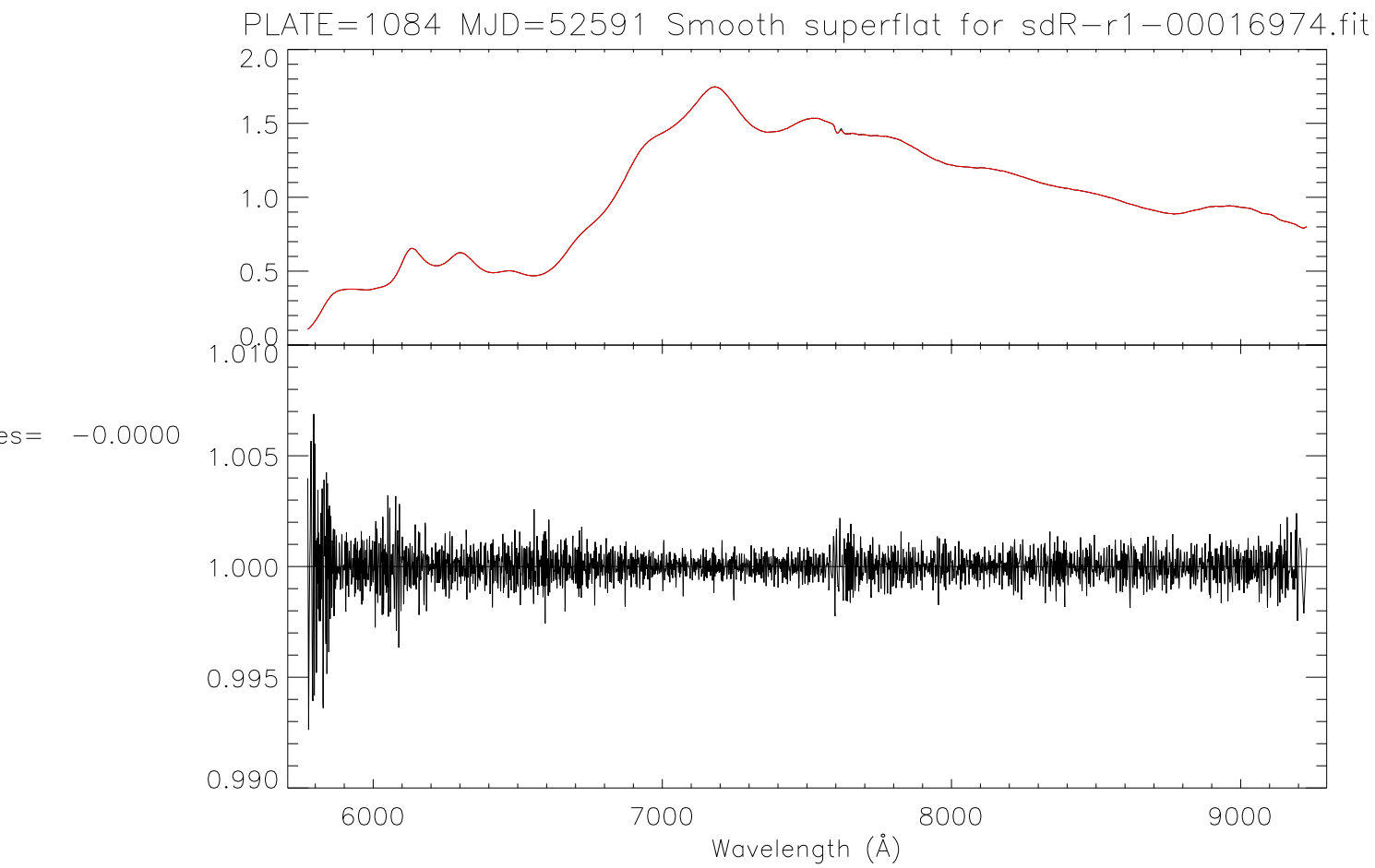

8430.1700
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400


8885.8300
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

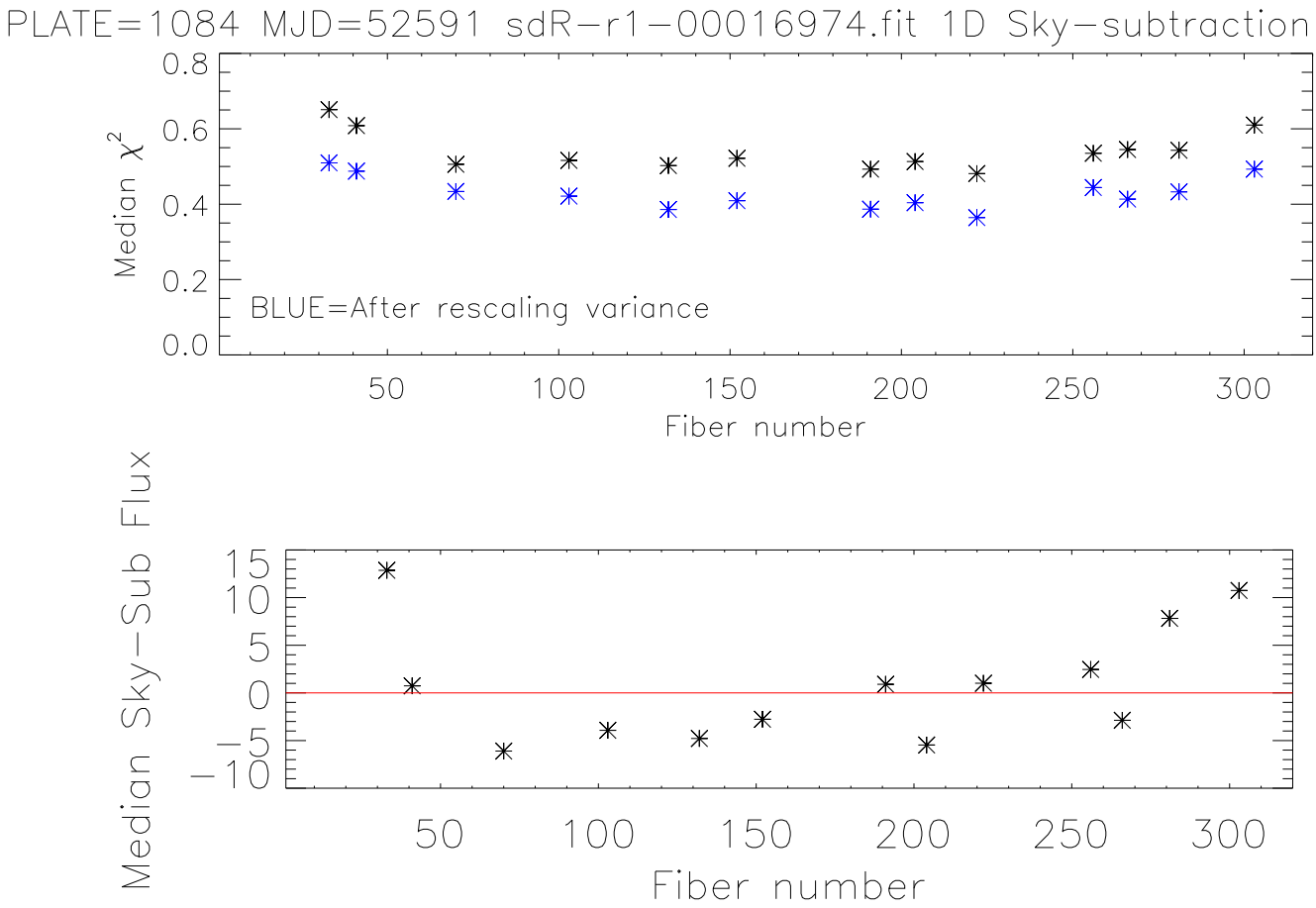

8919.6100
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

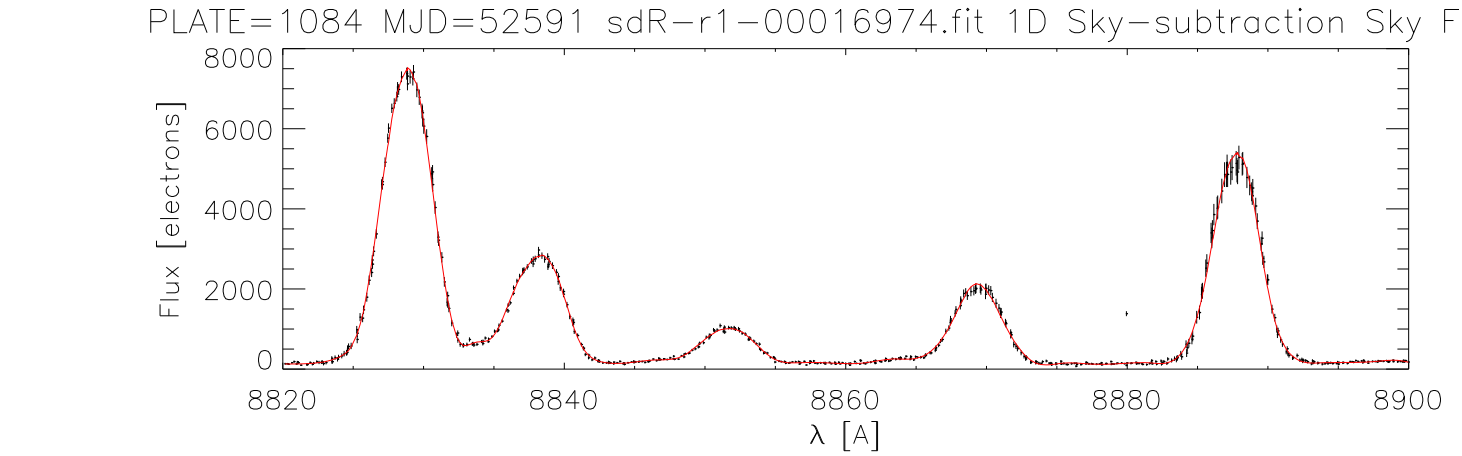

6300.3040
stdev 0.013
extra −0.08
6363.7760
stdev 0.012
extra −0.02
6553.6100
stdev 0.012
extra −0.05
6923.2100
stdev 0.010
extra −0.02
6949.0300
stdev 0.029
extra 0.03
7571.7500
stdev 0.030
extra 0.02
7794.1200
stdev 0.019
extra −0.11
7821.5100
stdev 0.012
extra −0.05
8399.1600
stdev 0.013
extra −0.02
8430.1700
stdev 0.014
extra −0.02
8885.8300
stdev 0.026
extra 0.02
8919.6100
stdev 0.013
extra −0.00
meas − pred, pix
mfhd2 16
mfhd1 15

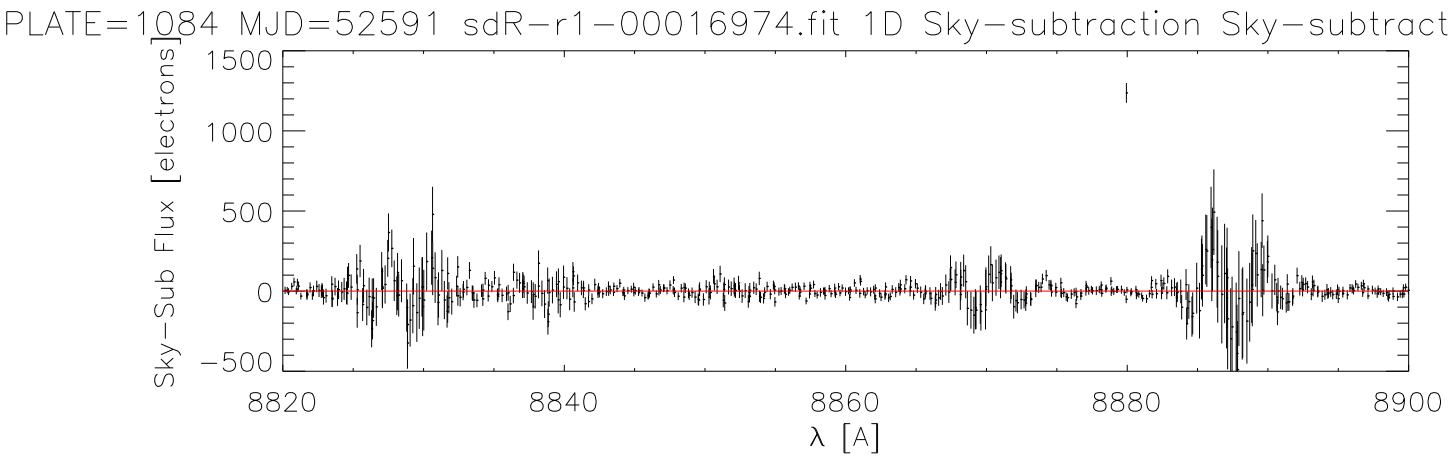

sky shift, pixels
0.00
−0.05
−0.10
5000
6000
7000
8000
9000
10000

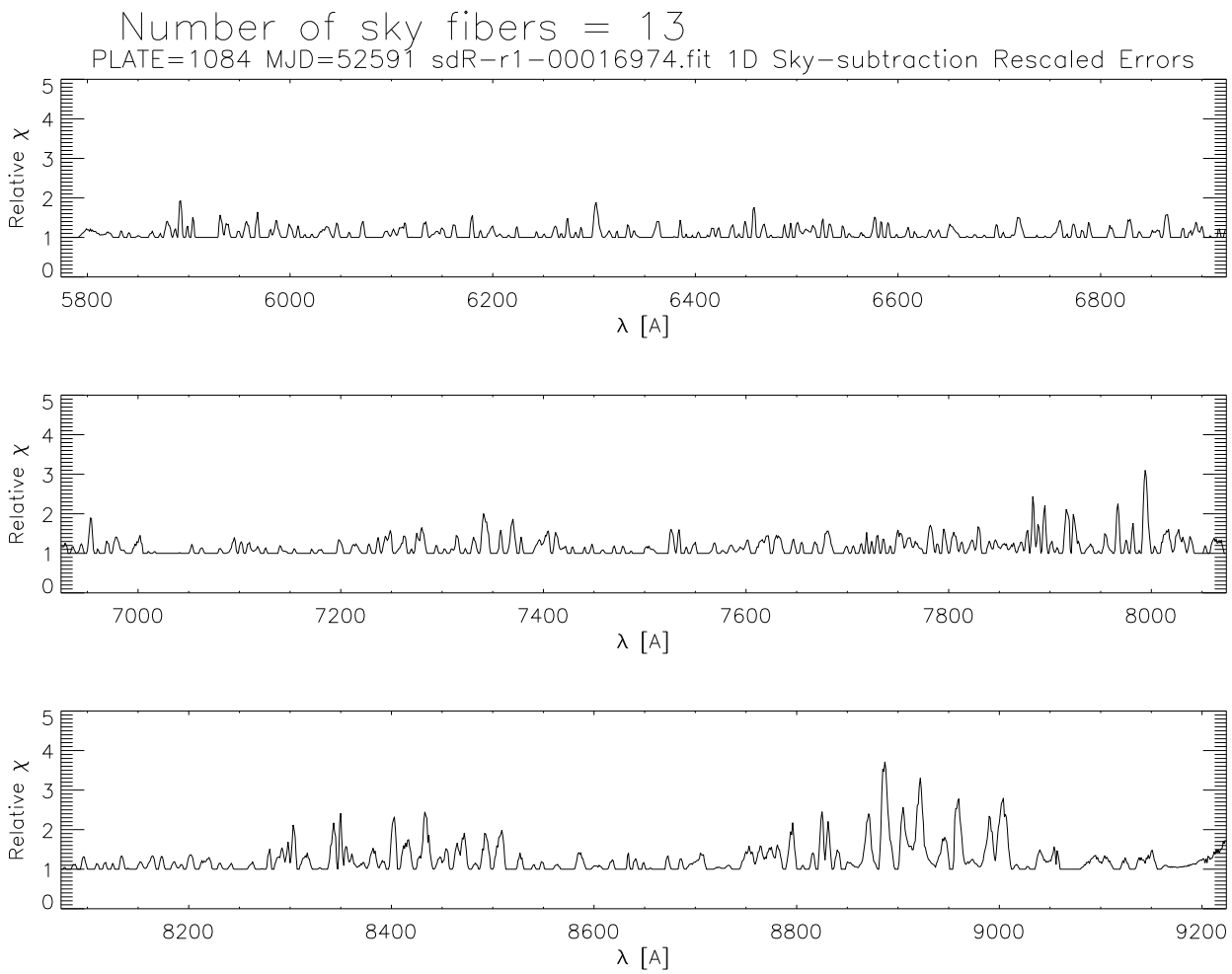

PLATE=1084 MJD=52591 Smooth superflat for sdR-r1-00016974.fit
2.0
1.5
1.0
0.5
0.0
1.010
1.005
1.000
0.995
0.990
6000
7000
8000
9000
Wavelength (Å)

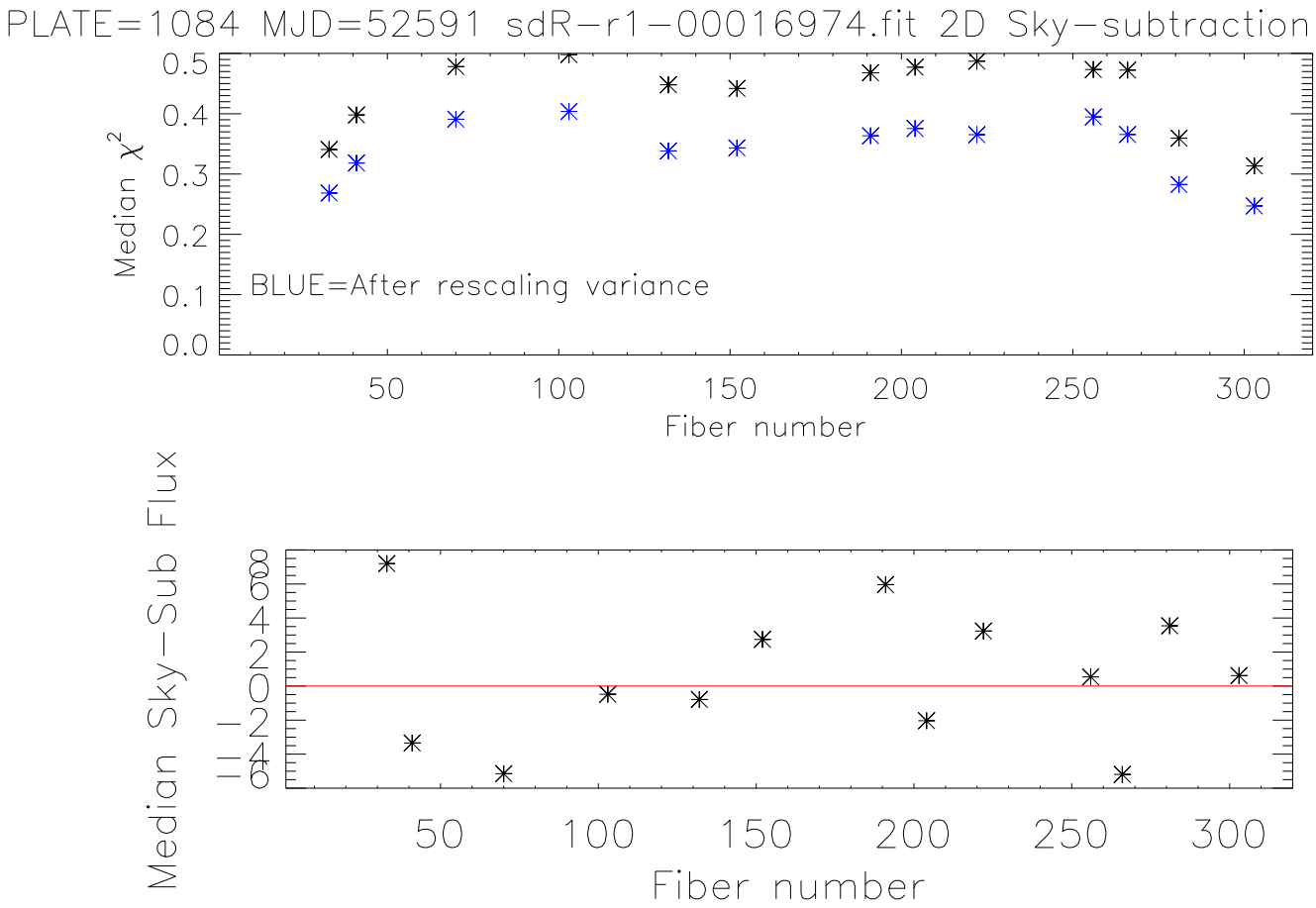
es= −0.0000

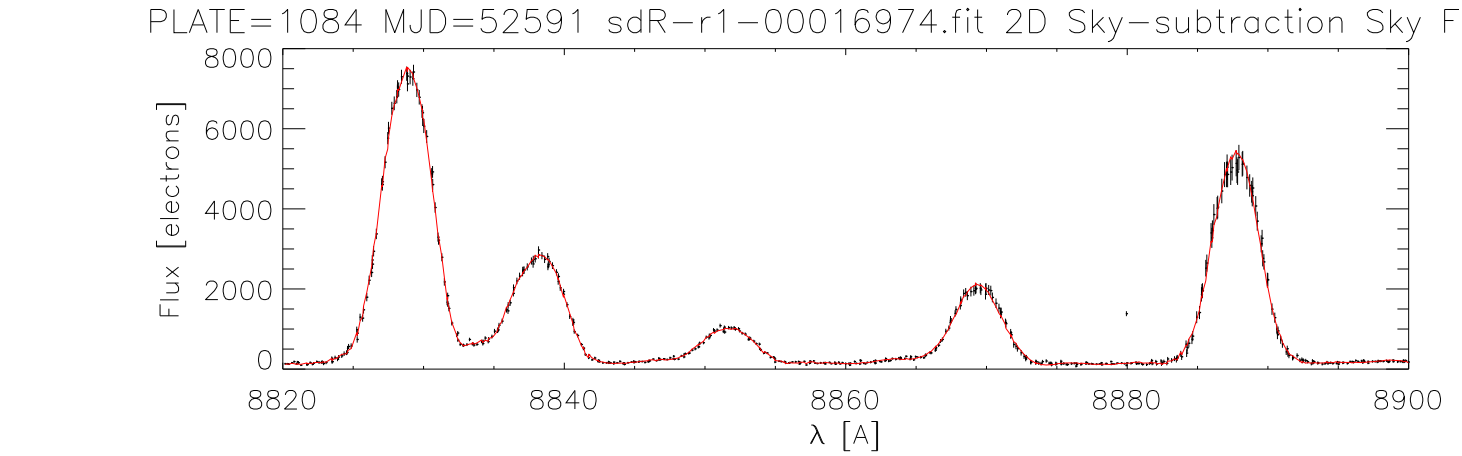

PLATE=1084 MJD=52591 sdR-r1-00016974.fit 1D Sky-subtraction Sky Fibers
Median χ^2
0.0
0.2
0.4
0.6
0.8
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
15
10
5
0
-5
-10
50
100
150
200
250
300
Fiber number

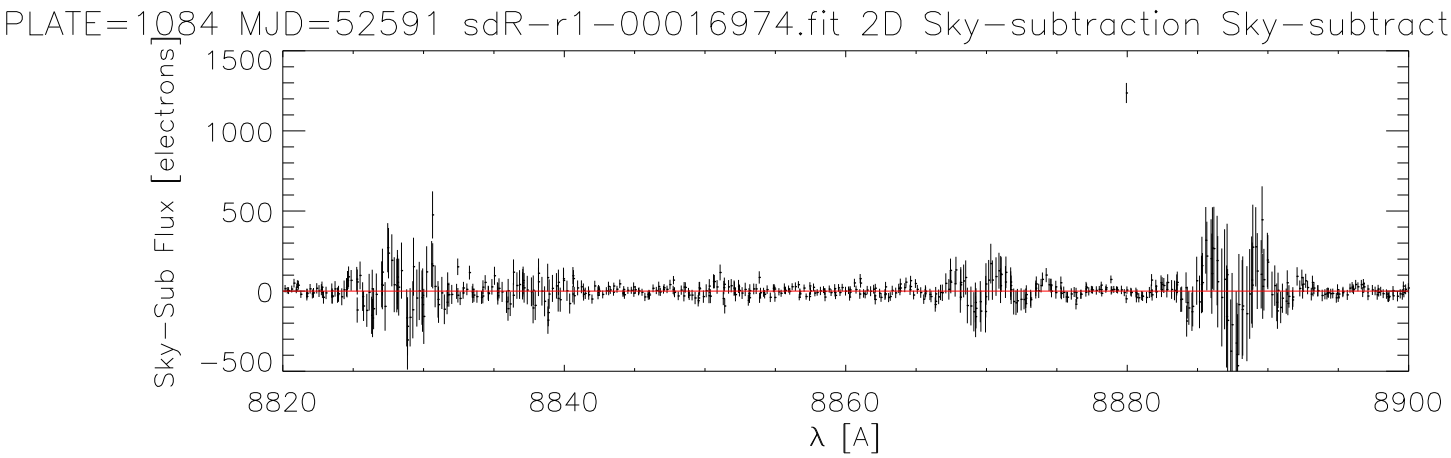

PLATE=1084 MJD=52591 sdR-r1-00016974.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
8000
6000
4000
2000
0
8820
8840
8860
8880
8900
λ [A]

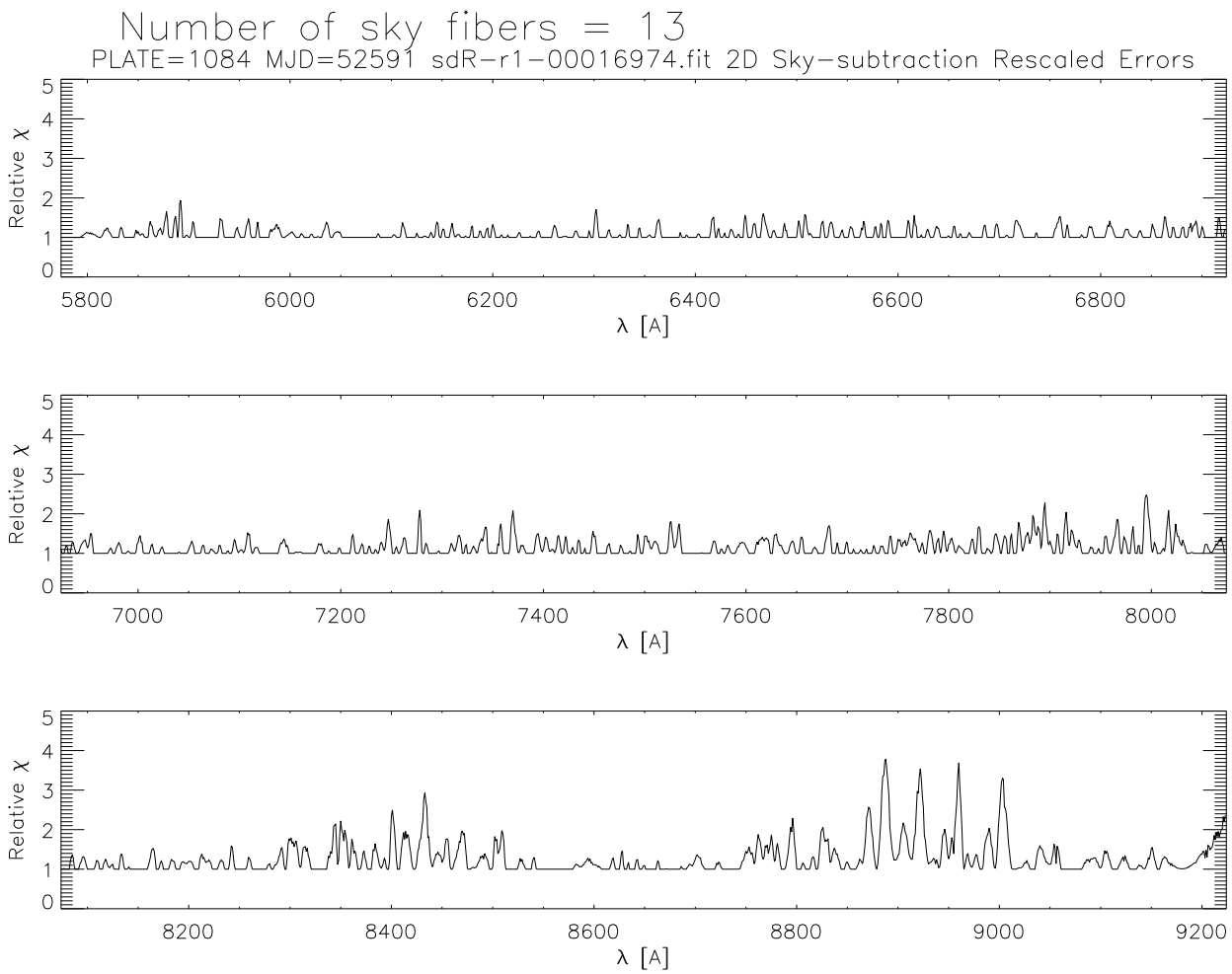

PLATE=1084 MJD=52591 sdR-r1-00016974.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1500
1000
500
0
-500
8820
8840
8860
8880
8900
λ [A]

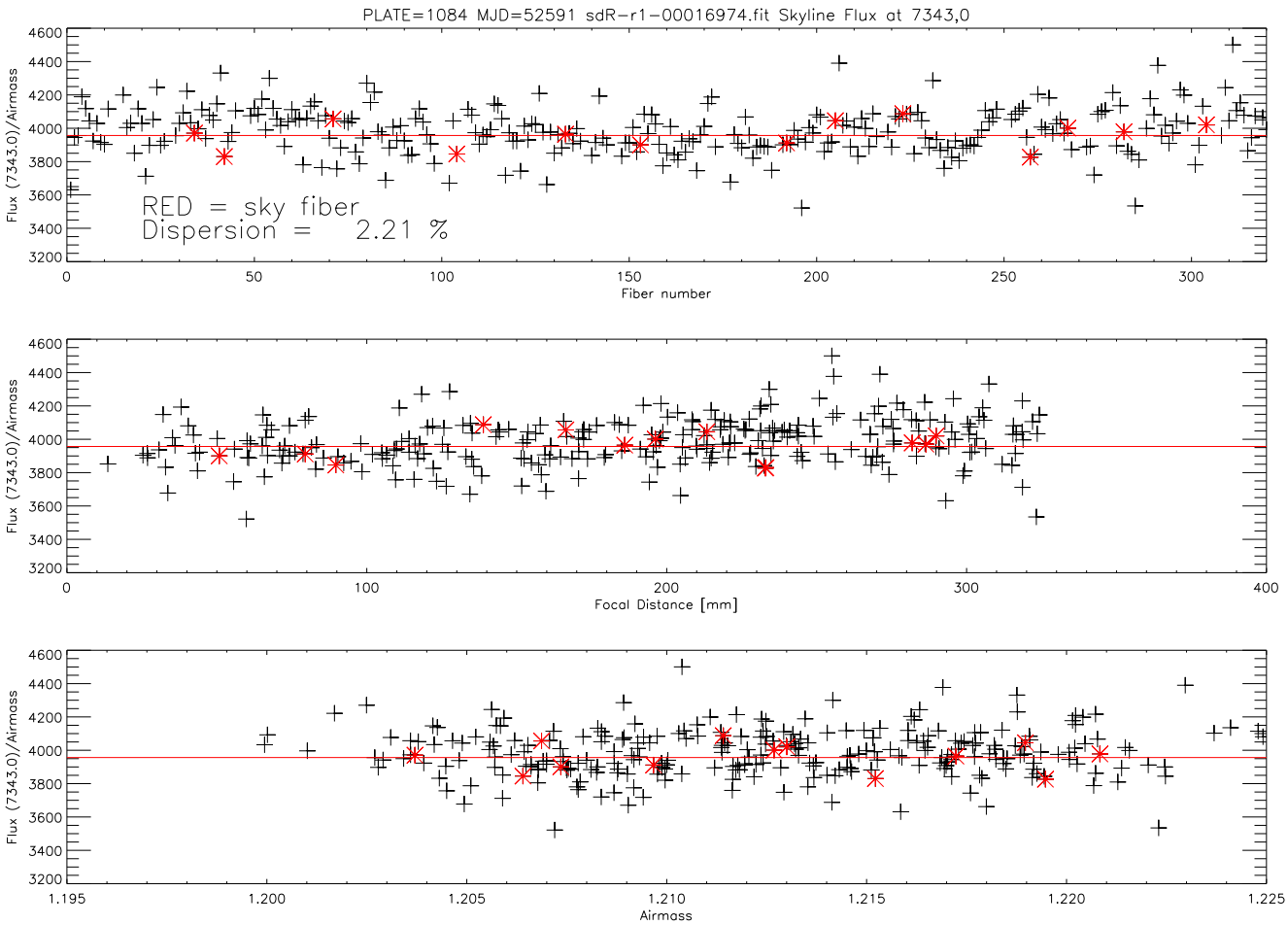

Number of sky fibers = 13
PLATE=1084 MJD=52591 sdR-r1-00016974.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200

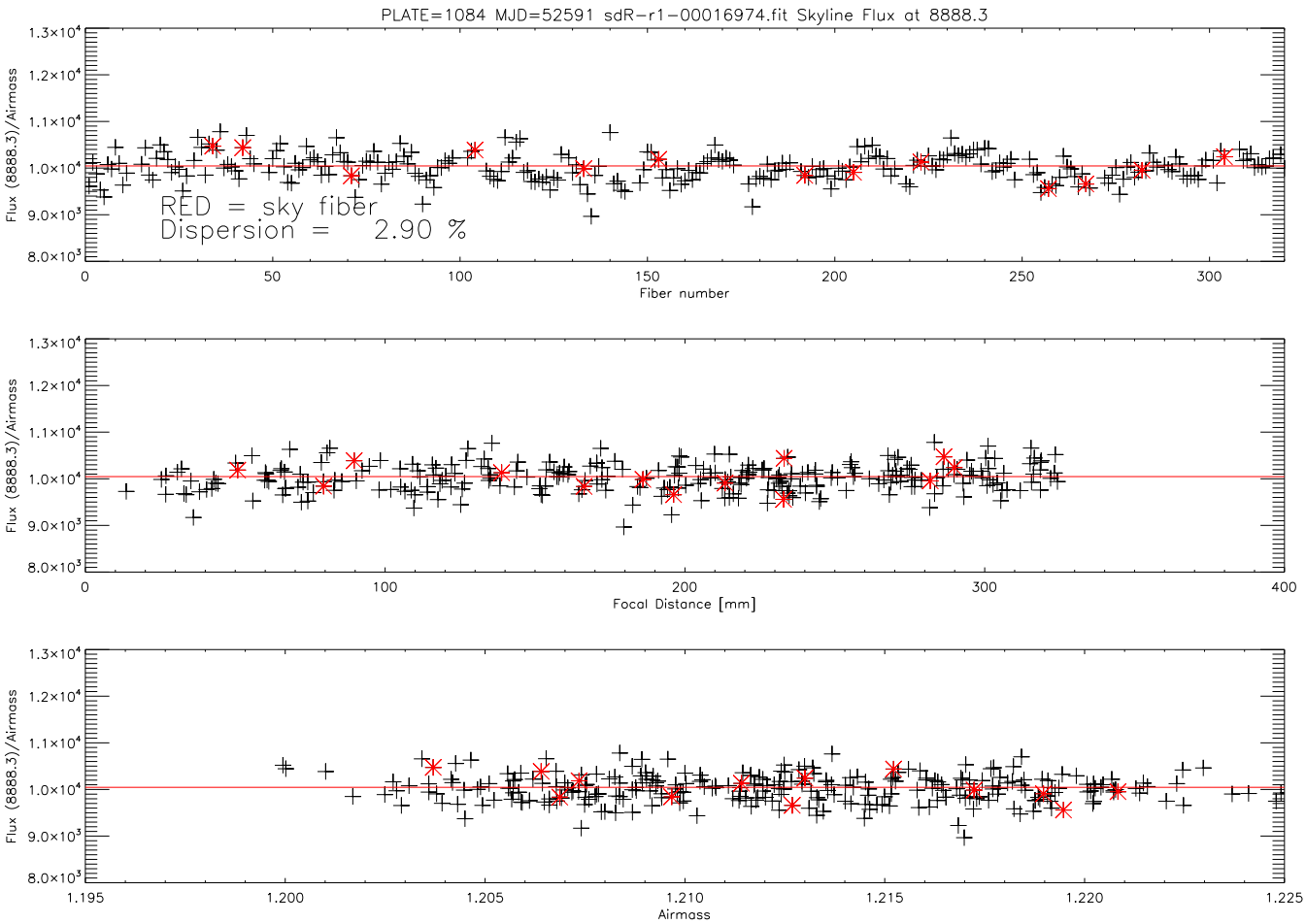

PLATE=1084 MJD=52591 sdR-r1-00016974.fit 2D Sky-subtraction Sky Fibers
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
-11
-6
-4
-2
0
2
4
6
8
50
100
150
200
250
300
Fiber number

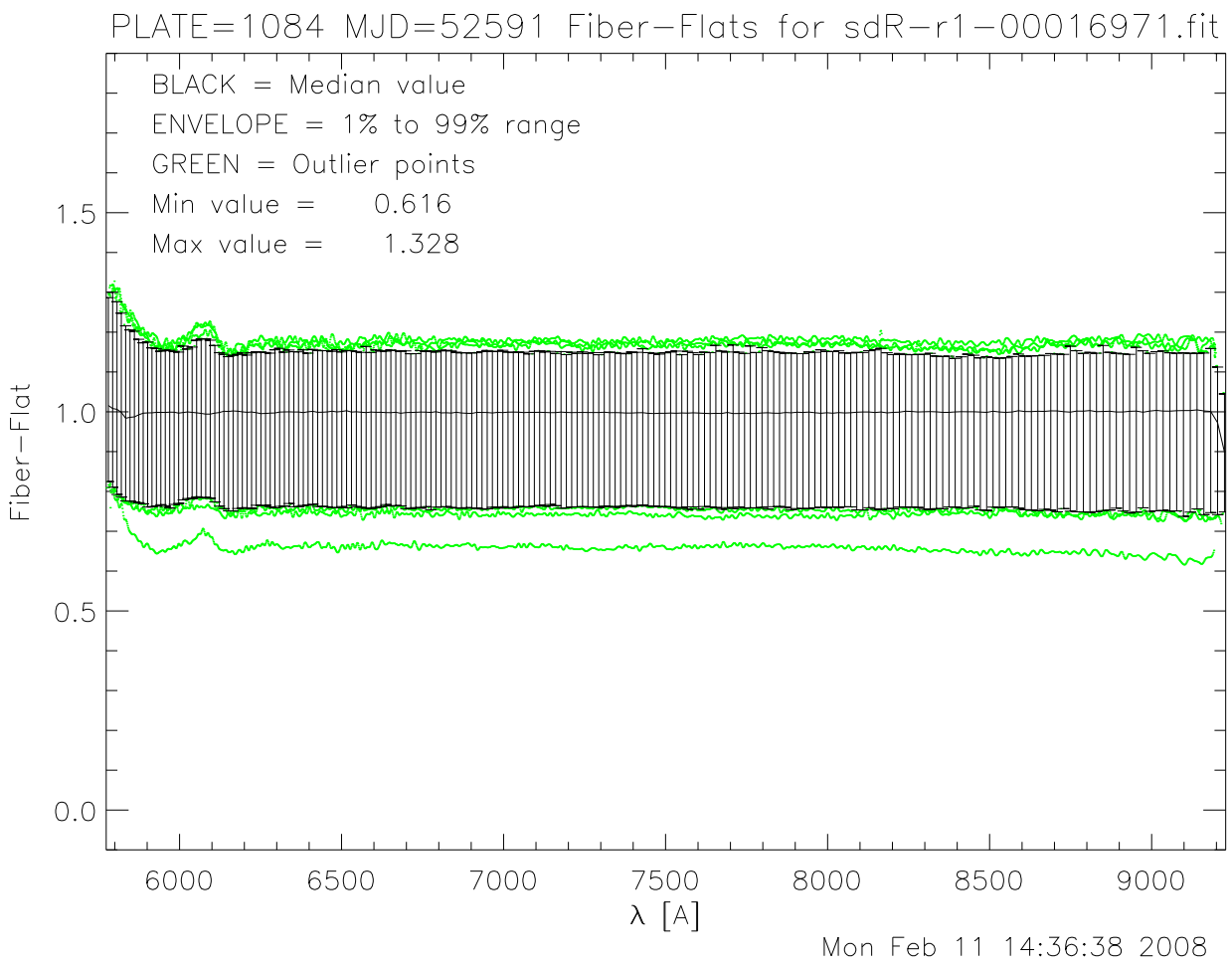

PLATE=1084 MJD=52591 sdR-r1-00016974.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
8000
6000
4000
2000
0
8820
8840
8860
8880
8900
λ [A]

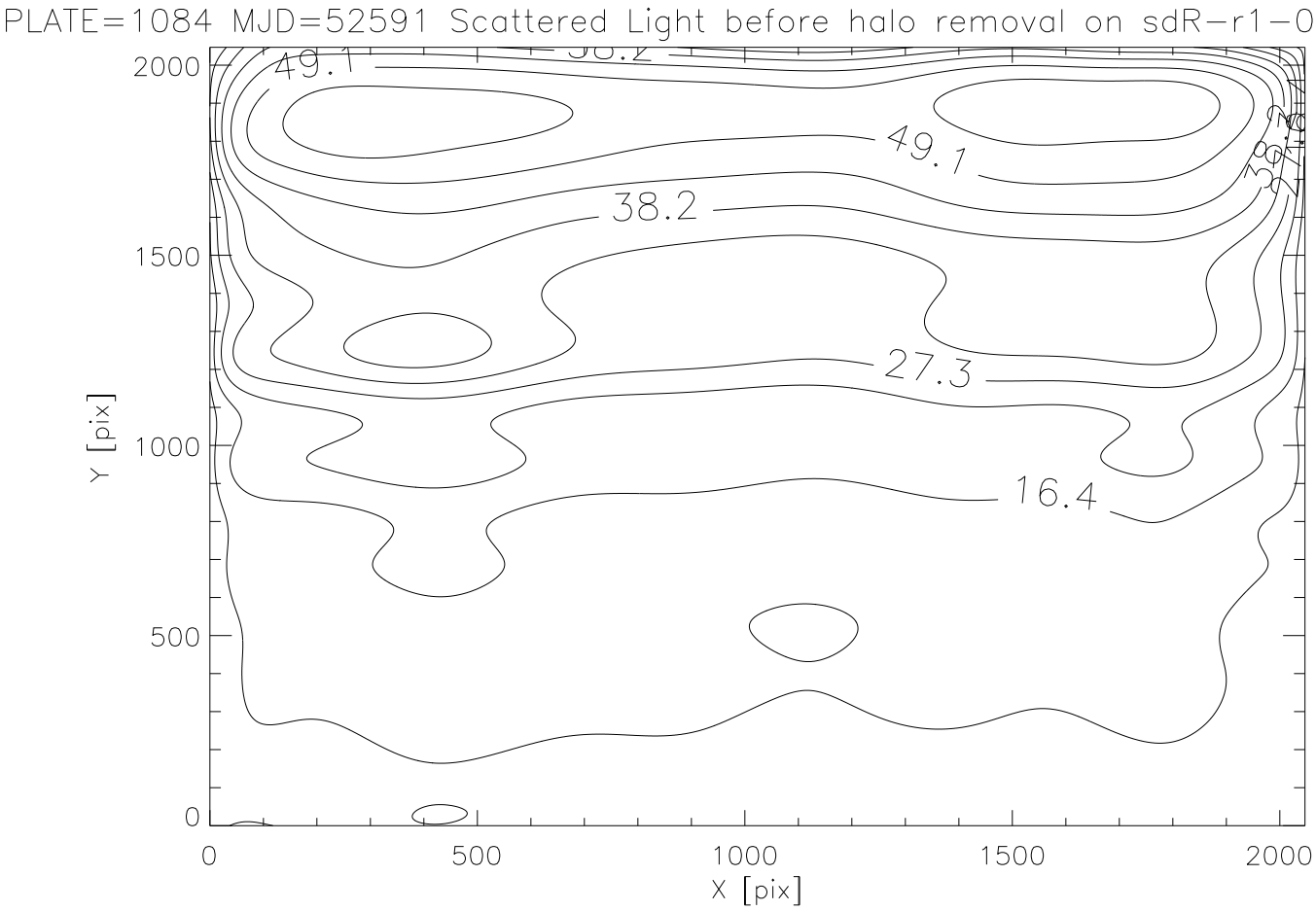

PLATE=1084 MJD=52591 sdR-r1-00016974.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
1500
1000
500
0
-500
8820
8840
8860
8880
8900
λ [A]

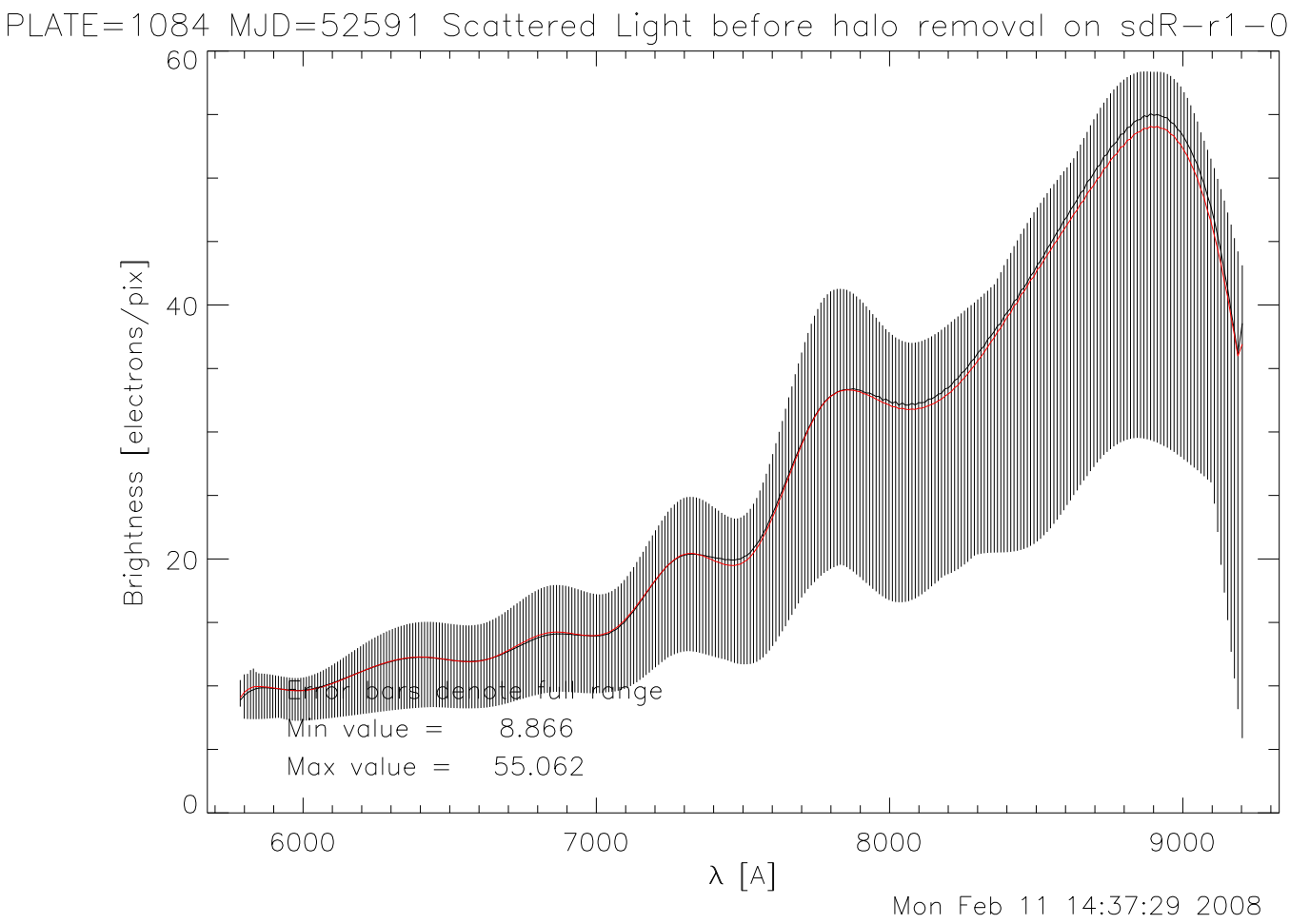

Number of sky fibers = 13
PLATE=1084 MJD=52591 sdR-r1-00016974.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200
0
1
2
3
4
5

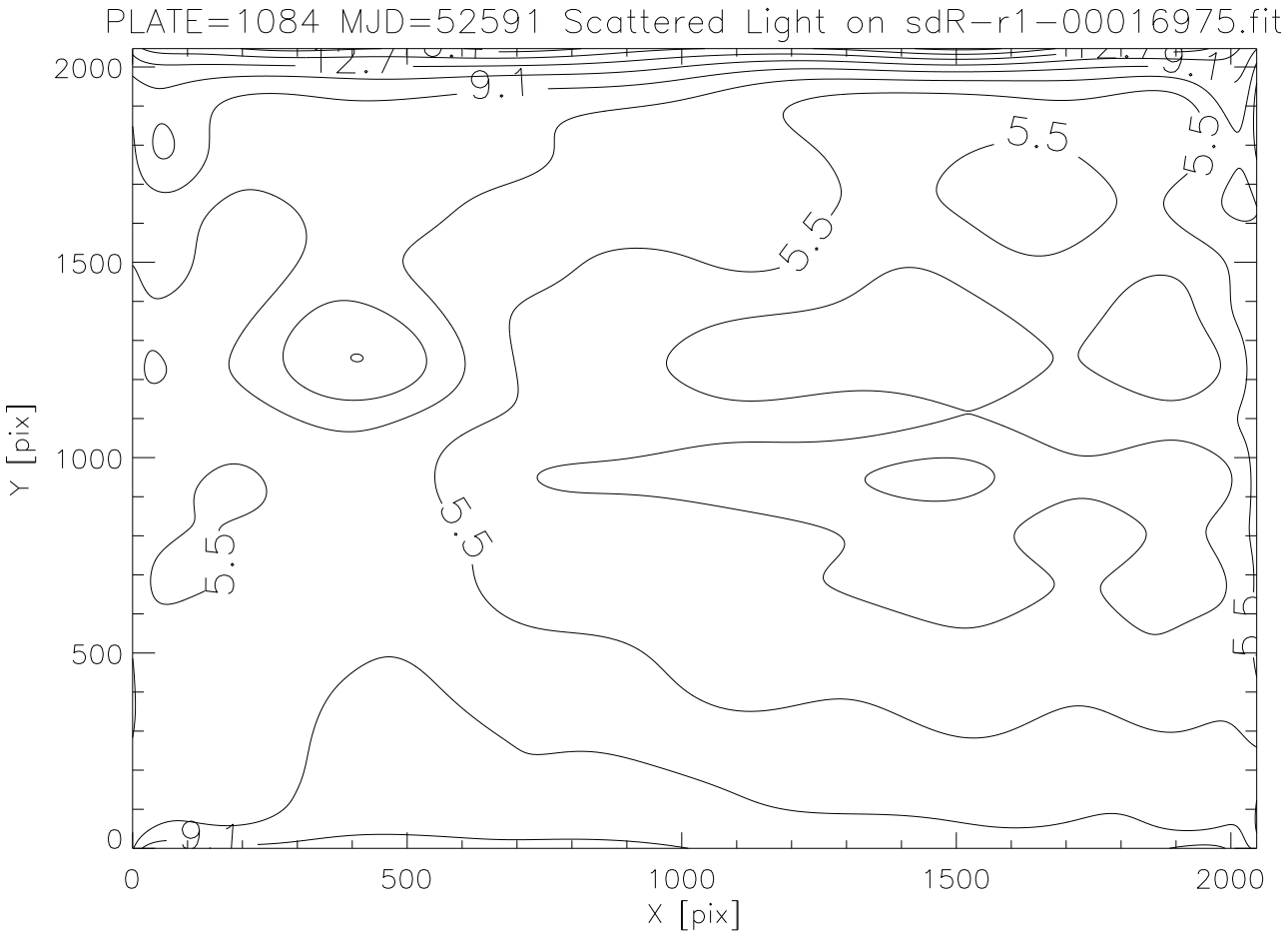

PLATE=1084 MJD=52591 sdR-r1-00016974.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 2.21 %
Fiber number
Focal Distance [mm]
Airmass

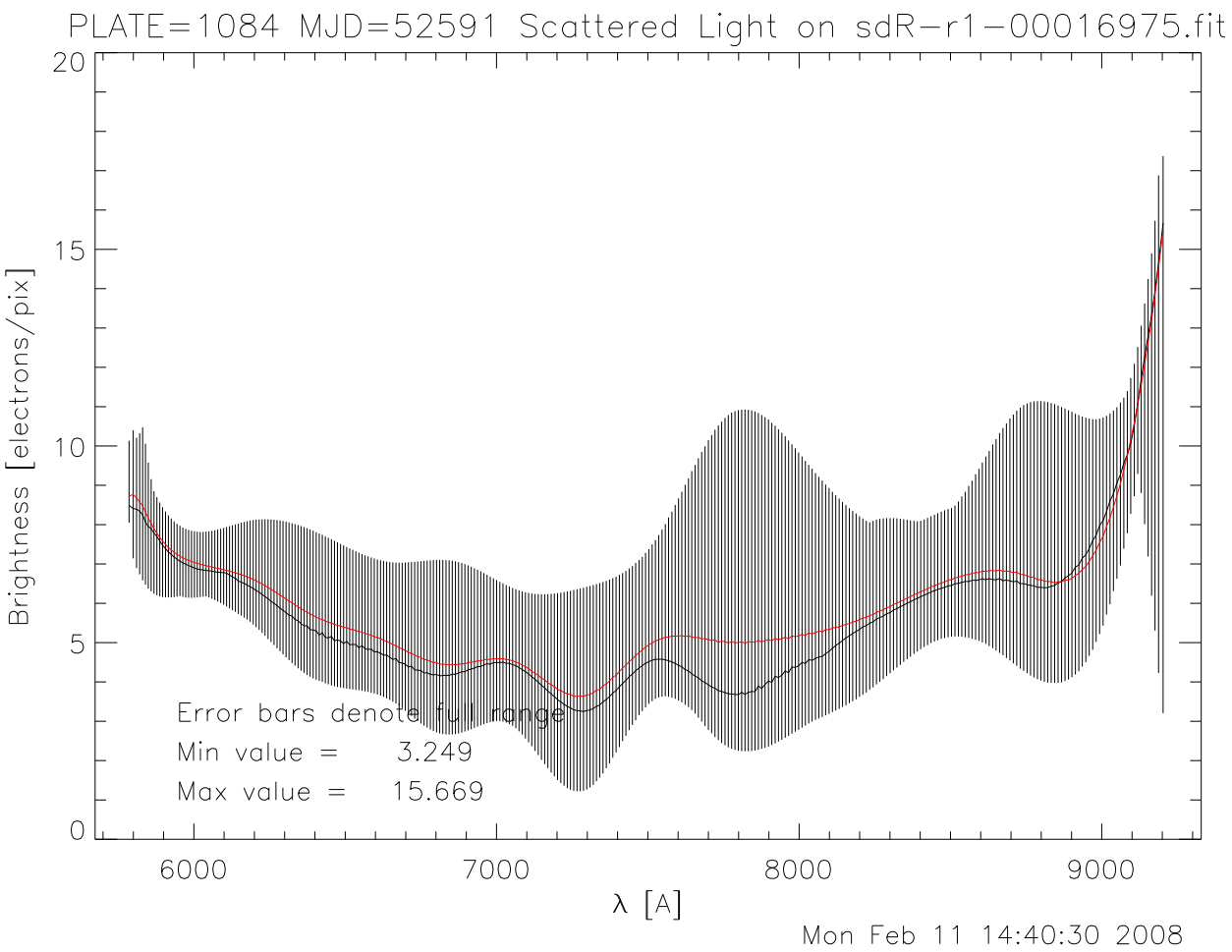

PLATE=1084 MJD=52591 sdR-r1-00016974.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
RED = sky fiber
Dispersion = 2.90 %
Fiber number
Focal Distance [mm]
Airmass

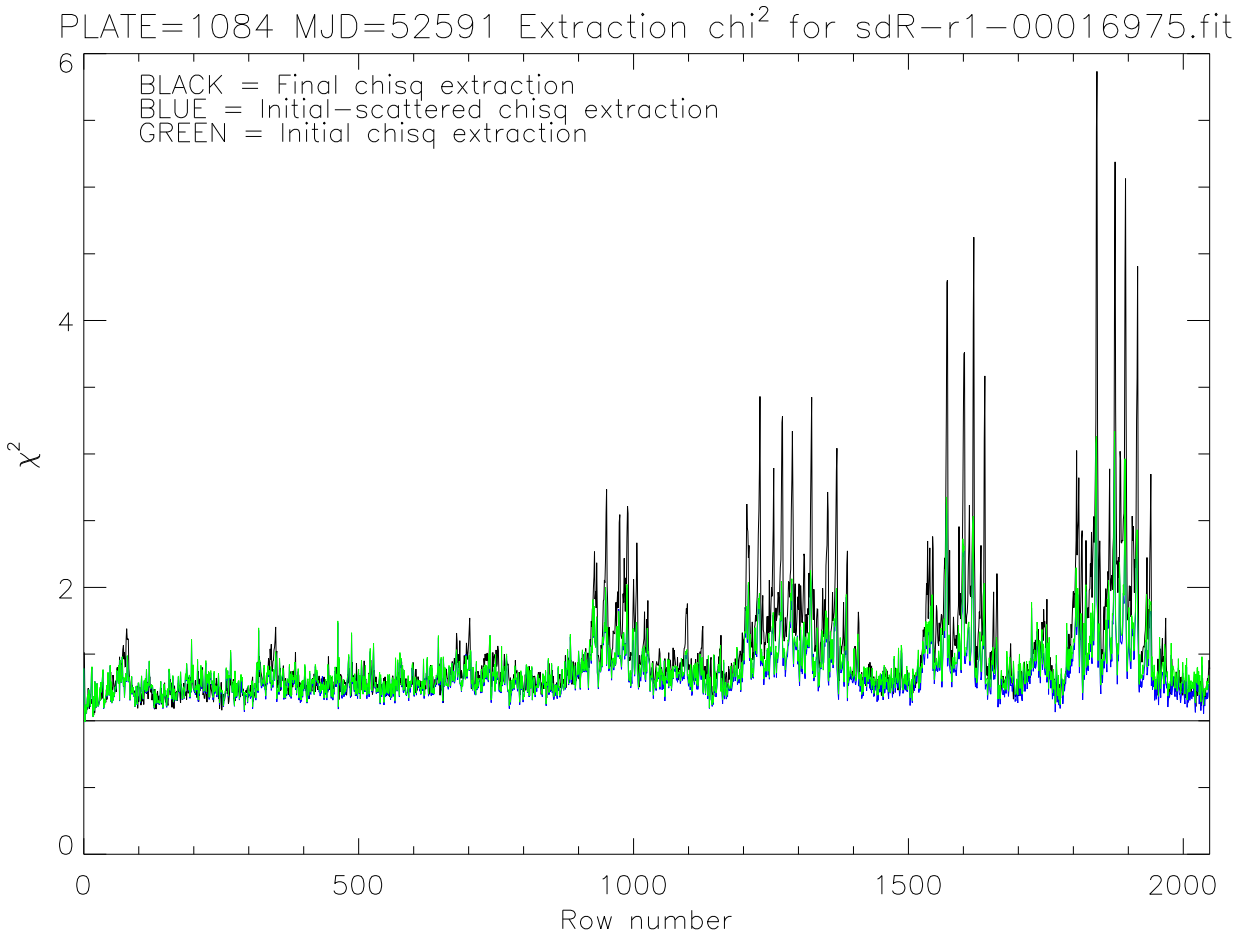

PLATE=1084 MJD=52591 Fiber−Flats for sdR−r1−00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.616
Max value = 1.328
Fiber−Flat
1.5
1.0
0.5
0.0
6000
6500
7000
7500
8000
8500
9000
λ [A]
Mon Feb 11 14:36:38 2008

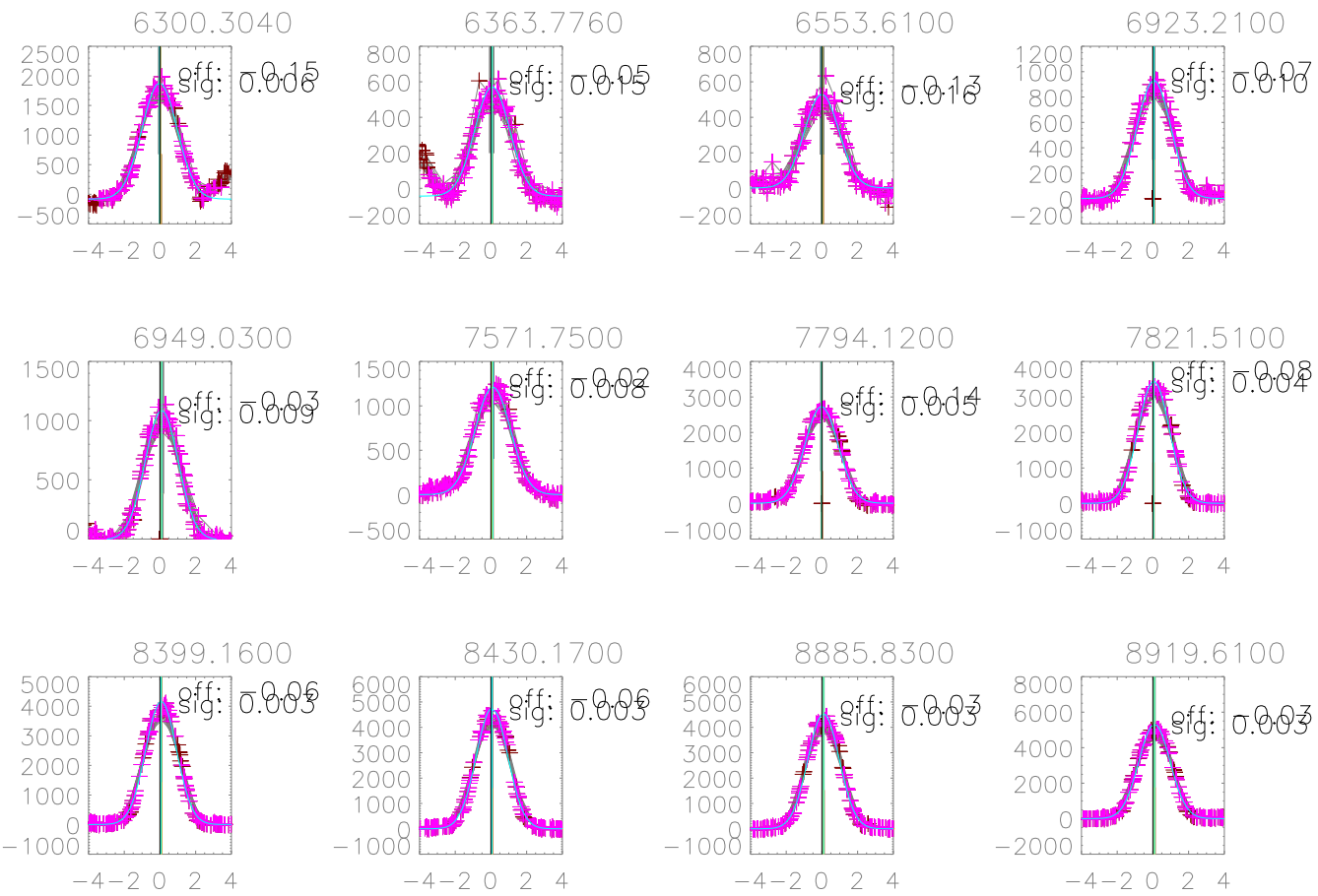

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r1-00016975.fi
49.1
38.2
27.3
16.4
Y [pix]
X [pix]
0
500
1000
1500
2000

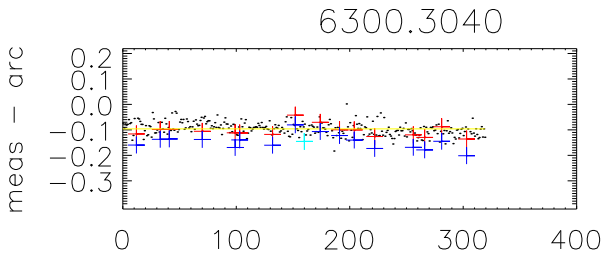

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r1-00016975.fi
60
40
20
0
Brightness [electrons/pix]
Error bars denote full range
Min value = 8.866
Max value = 55.062
6000
7000
8000
9000
λ [A]
Mon Feb 11 14:37:29 2008

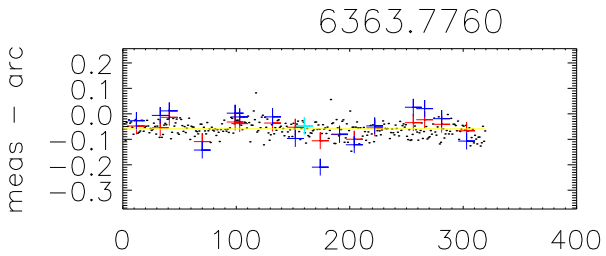

PLATE=1084 MJD=52591 Scattered Light on sdR-r1-00016975.fit
Y [pix]
X [pix]
0
500
1000
1500
2000
9.1
5.5
0

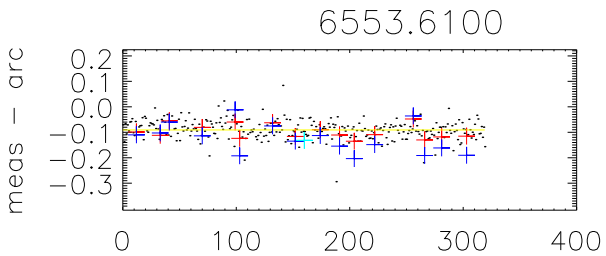

PLATE=1084 MJD=52591 Scattered Light on sdR-r1-00016975.fit
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 3.249
Max value = 15.669
Mon Feb 11 14:40:30 2008

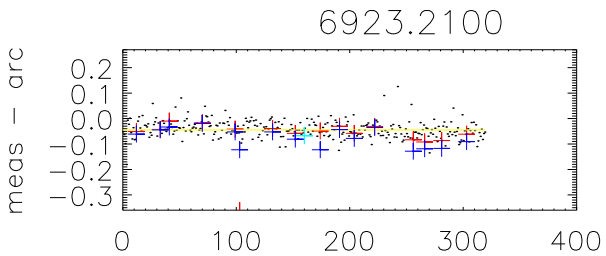

PLATE=1084 MJD=52591 Extraction chi^2 for sdR−r1−00016975.fit
BLACK = Final chisq extraction
BLUE = Initial−scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
0
2
4
6
0
500
1000
1500
2000
Row number

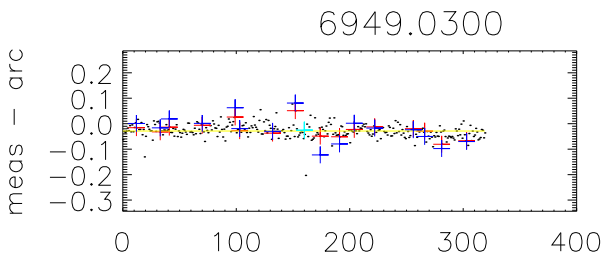

6300.3040
off: −0.15
sig: 0.006
6363.7760
off: −0.05
sig: 0.015
6553.6100
off: −0.13
sig: 0.016
6923.2100
off: −0.07
sig: 0.010
6949.0300
off: −0.03
sig: 0.009
7571.7500
off: −0.02
sig: 0.008
7794.1200
off: −0.14
sig: 0.005
7821.5100
off: −0.08
sig: 0.004
8399.1600
off: −0.06
sig: 0.003
8430.1700
off: −0.06
sig: 0.003
8885.8300
off: −0.03
sig: 0.003
8919.6100
off: −0.03
sig: 0.003

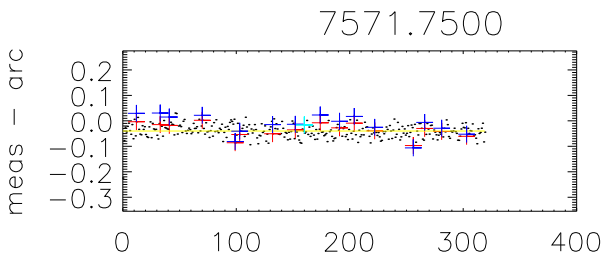

6300.3040
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

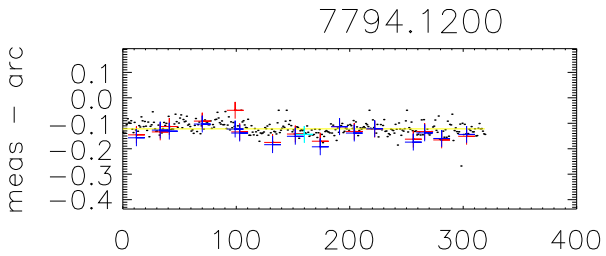

6363.7760
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

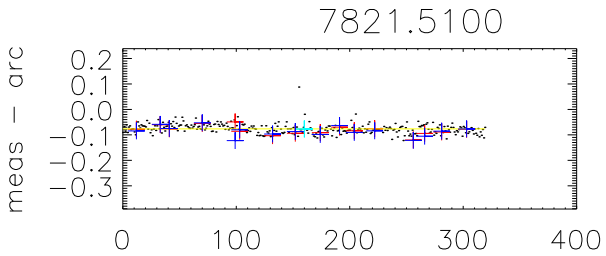

6553.6100
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

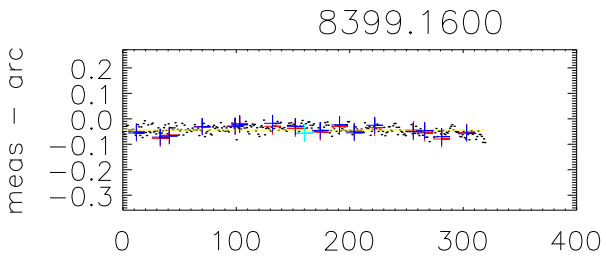

6923.2100
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

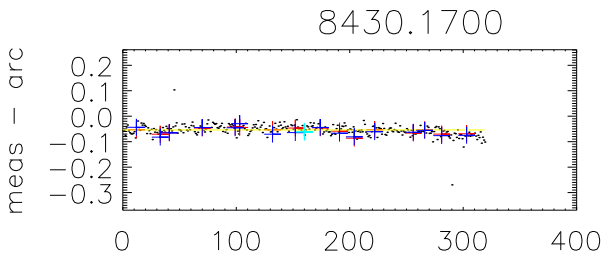

6949.0300
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

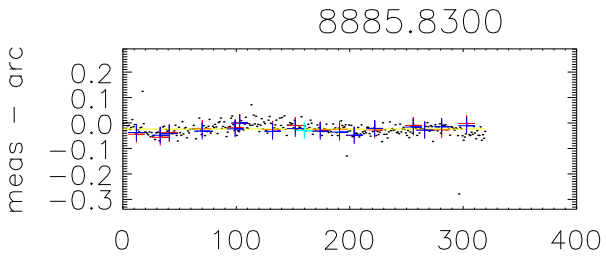

7571.7500
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

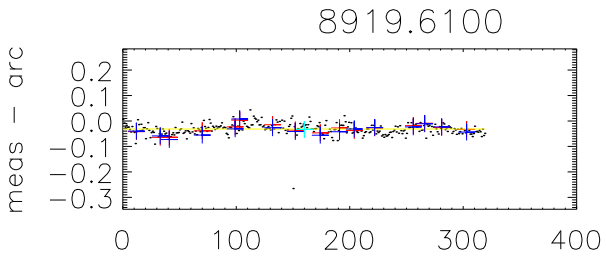

7794.1200
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

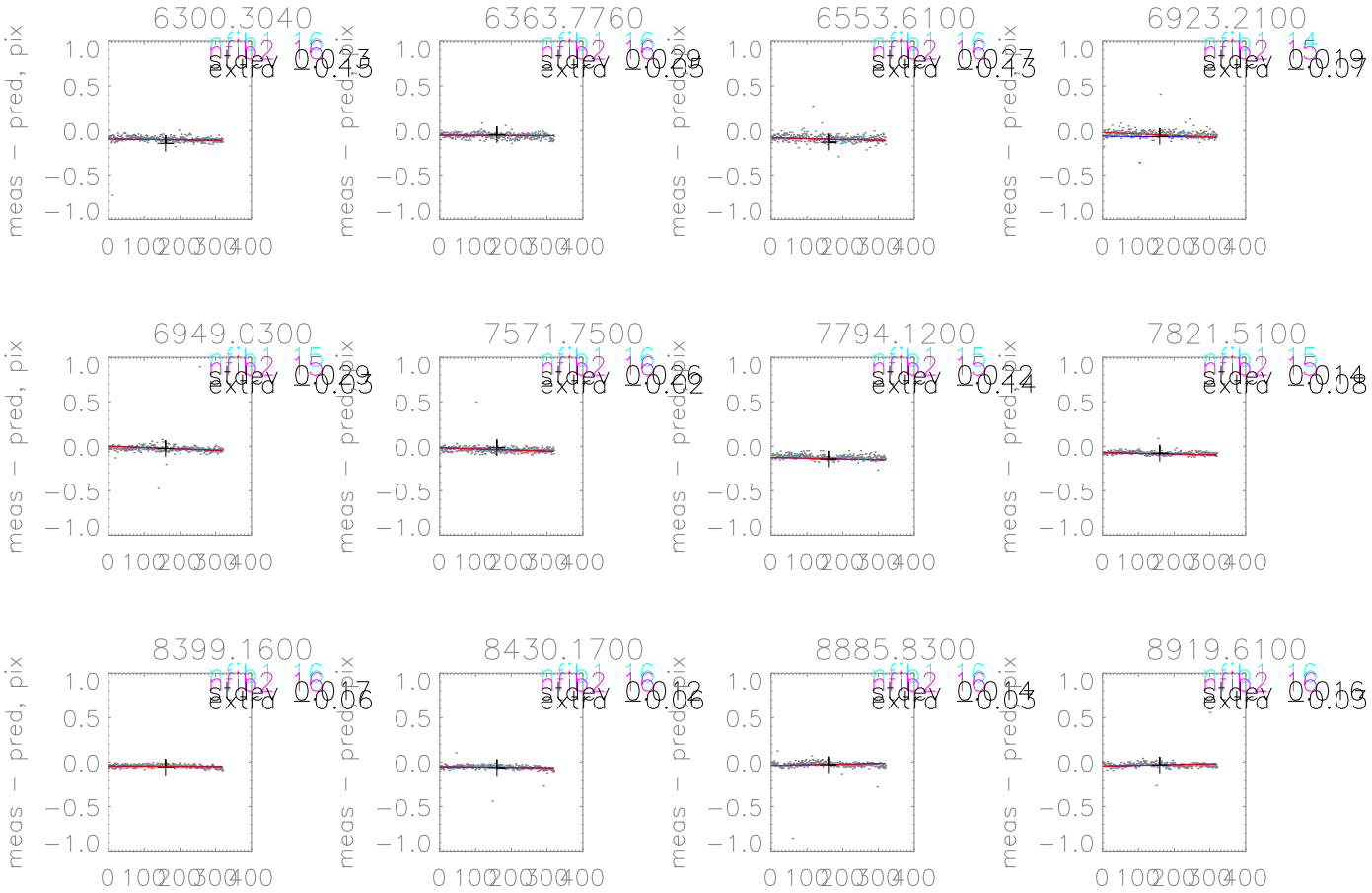

7821.5100
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

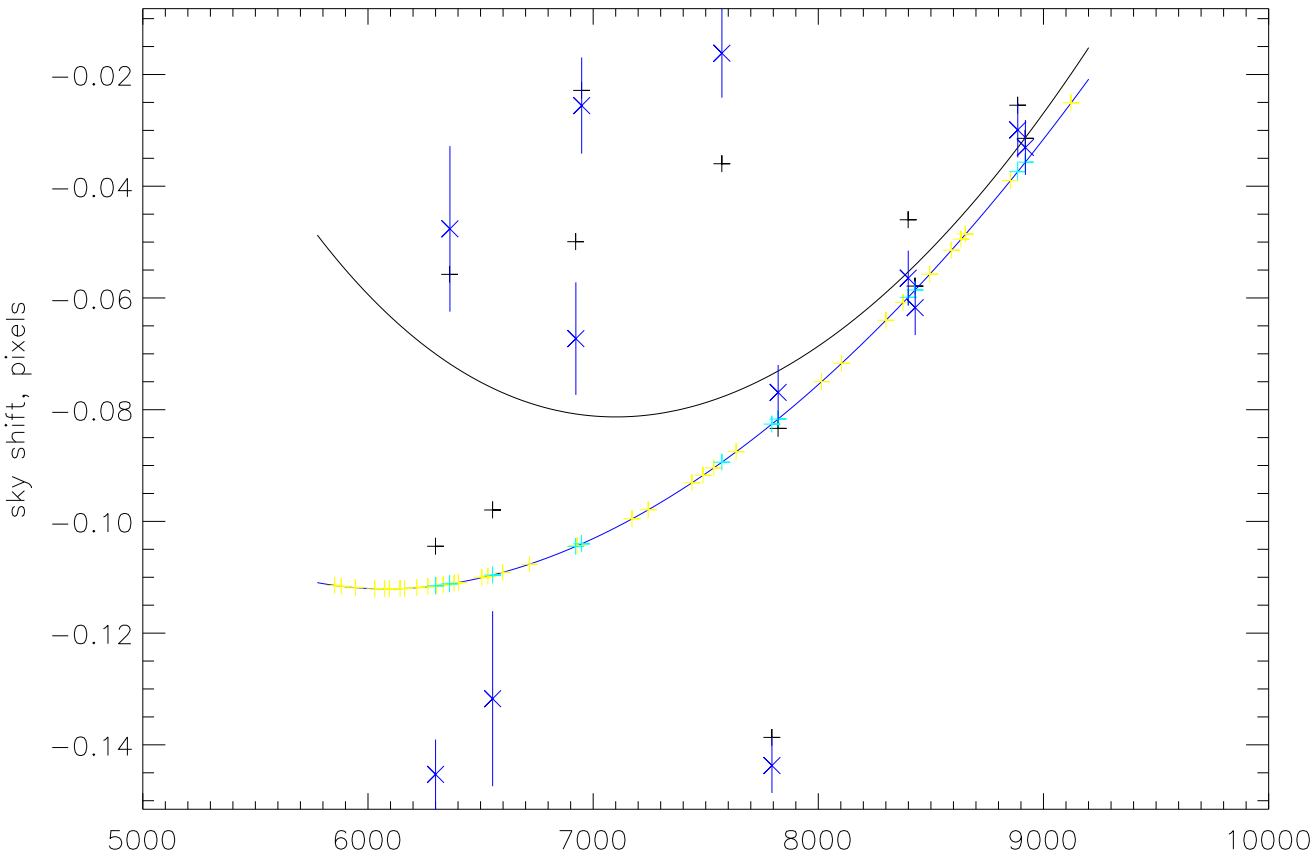

8399.1600
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

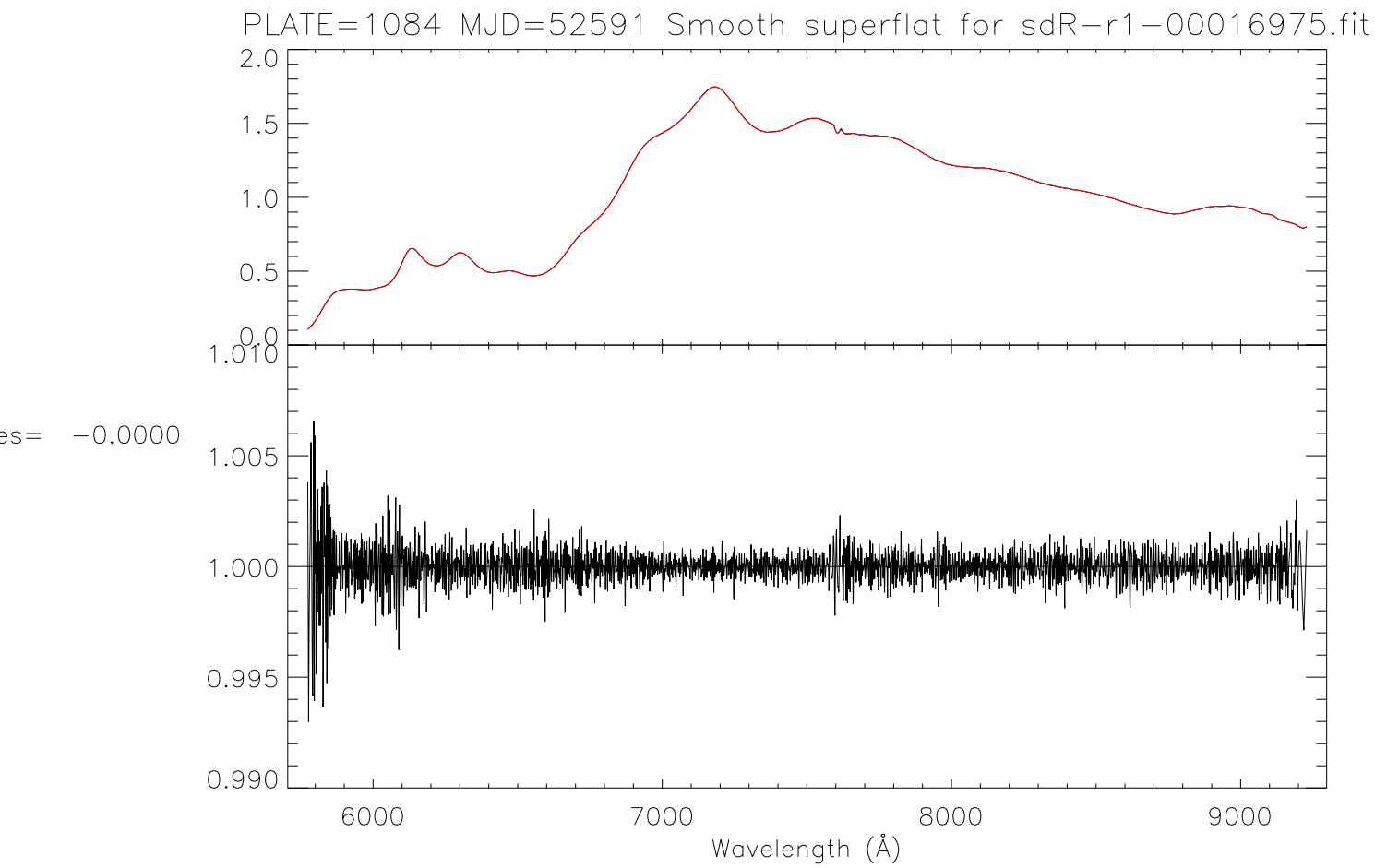

8430.1700
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

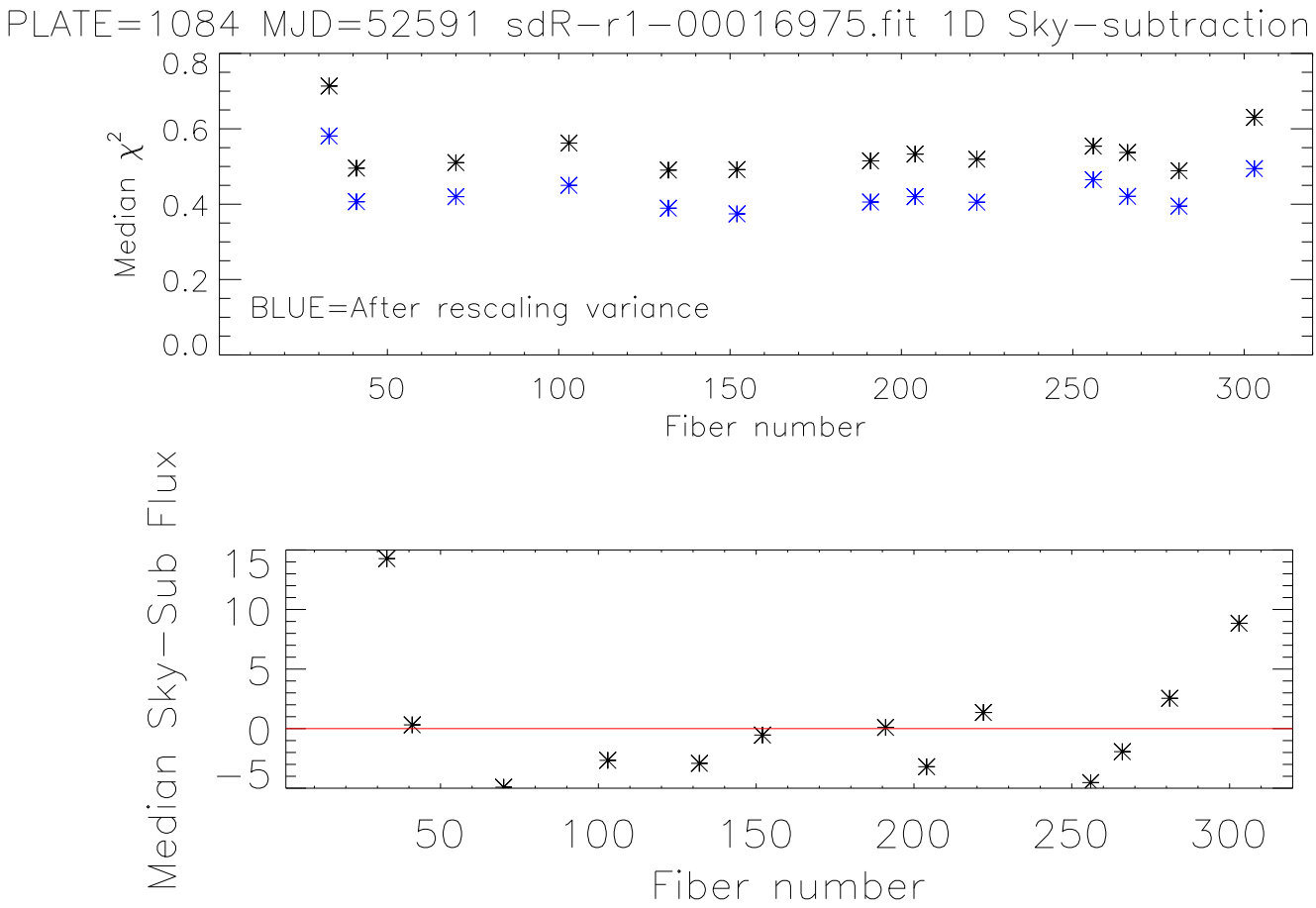

8885.8300
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

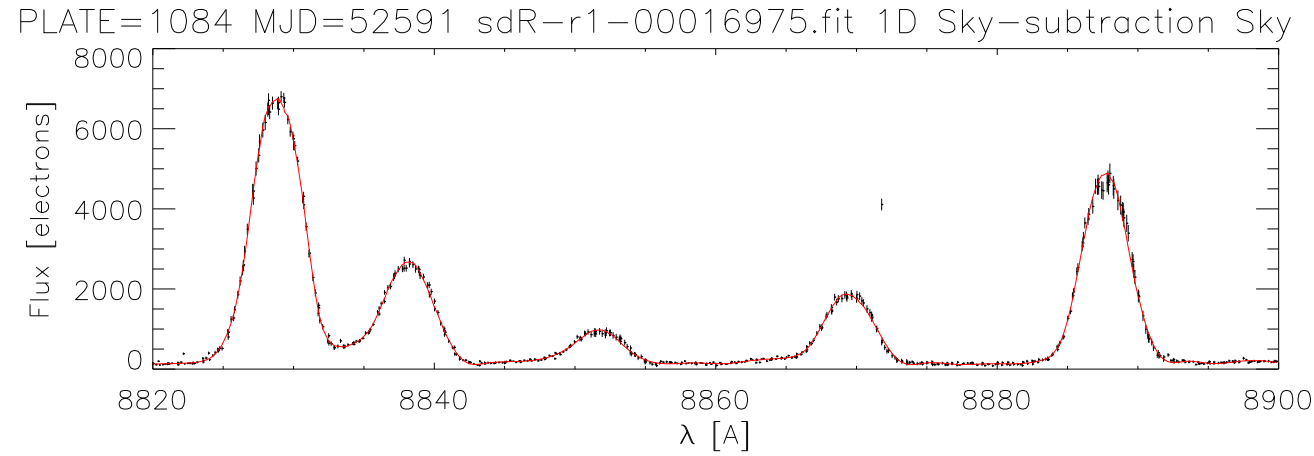

8919.6100
meas − arc
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400

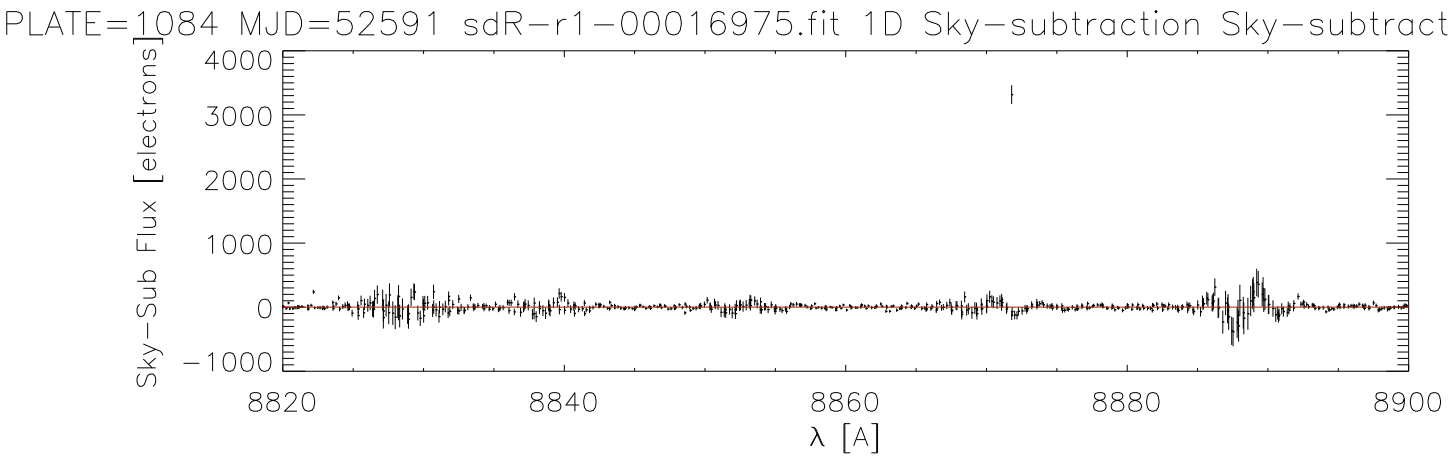

6300.3040
mfib1 16
mfib2 16
stdev 0.023
extra 0.045
6363.7760
mfib1 16
mfib2 16
stdev 0.029
extra 0.055
6553.6100
mfib1 16
mfib2 16
stdev 0.027
extra 0.043
6923.2100
mfib1 14
mfib2 15
stdev 0.019
extra 0.07
6949.0300
mfib1 15
mfib2 15
stdev 0.029
extra 0.03
7571.7500
mfib1 16
mfib2 16
stdev 0.026
extra 0.02
7794.1200
mfib1 15
mfib2 15
stdev 0.022
extra 0.044
7821.5100
mfib1 15
mfib2 15
stdev 0.014
extra 0.08
8399.1600
mfib1 16
mfib2 16
stdev 0.017
extra 0.06
8430.1700
mfib1 16
mfib2 16
stdev 0.012
extra 0.06
8885.8300
mfib1 16
mfib2 16
stdev 0.014
extra 0.03
8919.6100
mfib1 16
mfib2 16
stdev 0.016
extra 0.03
meas − pred, pix
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400

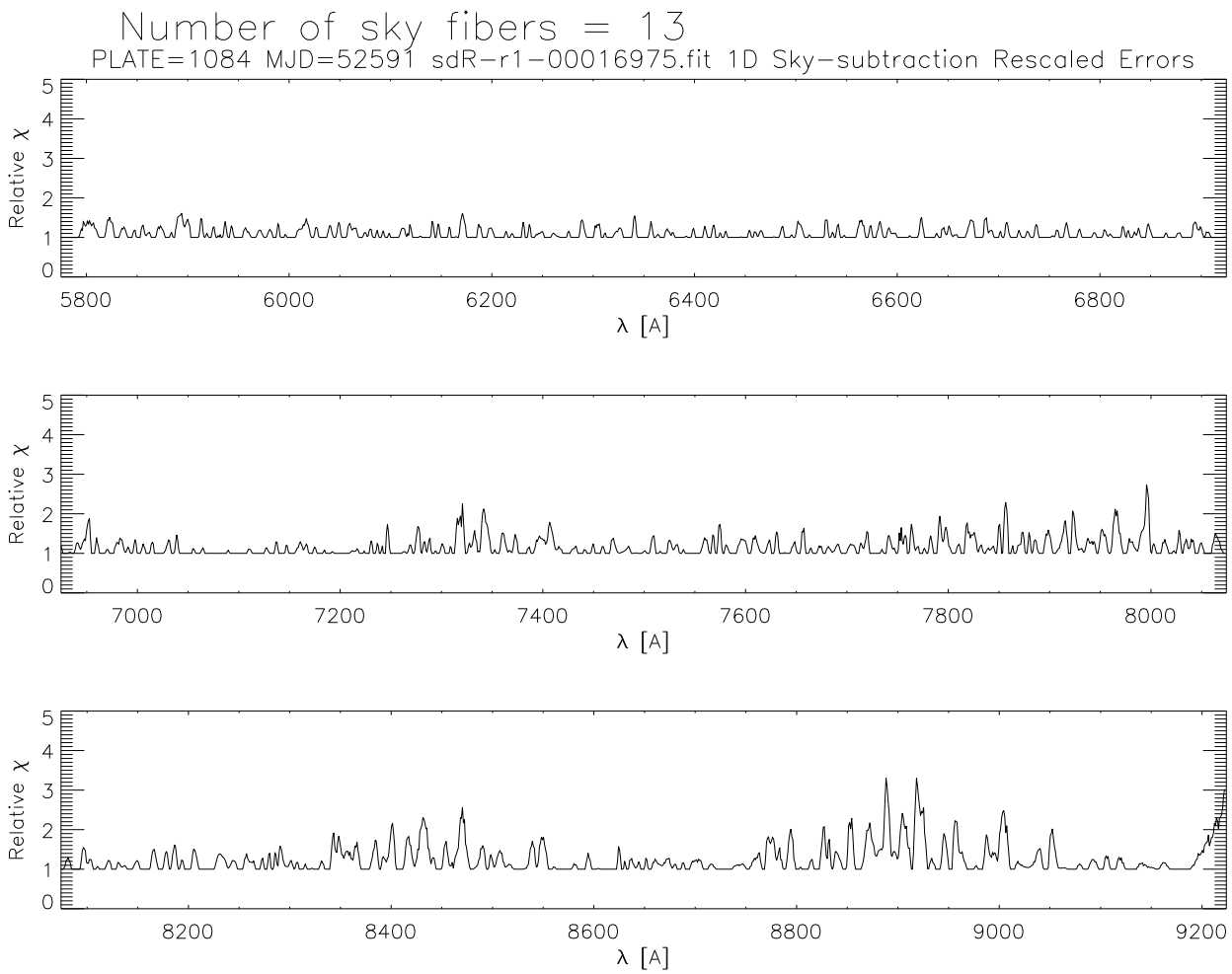

sky shift, pixels
−0.02
−0.04
−0.06
−0.08
−0.10
−0.12
−0.14
5000
6000
7000
8000
9000
10000

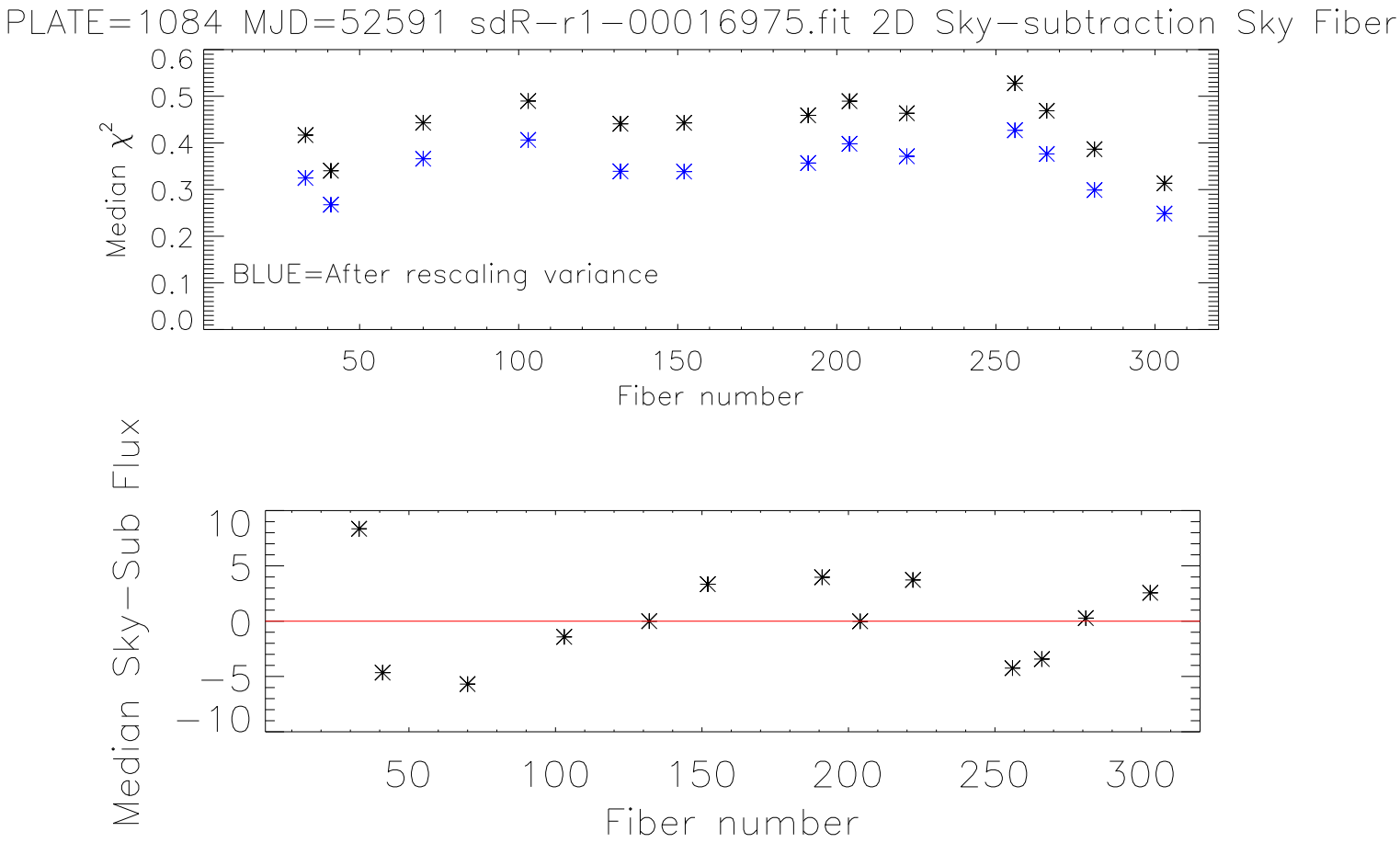

PLATE=1084 MJD=52591 Smooth superflat for sdR-r1-00016975.fit
2.0
1.5
1.0
0.5
0.0
1.010
1.005
1.000
0.995
0.990
es= −0.0000
6000
7000
8000
9000
Wavelength (Å)

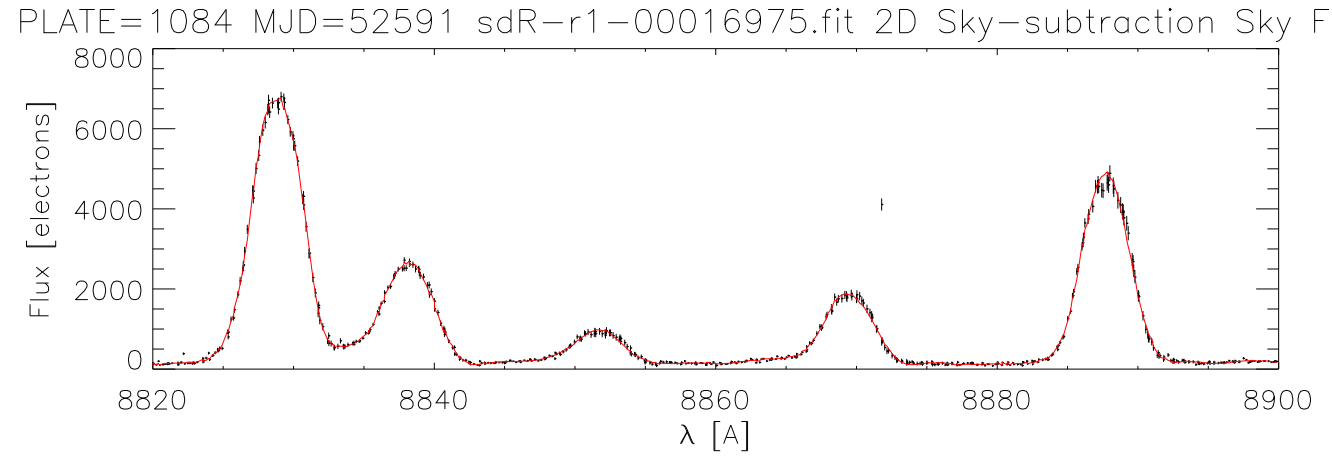

PLATE=1084 MJD=52591 sdR-r1-00016975.fit 1D Sky-subtraction Sky Fibers
Median χ^2
0.0
0.2
0.4
0.6
0.8
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
15
10
5
0
-5
50
100
150
200
250
300
Fiber number

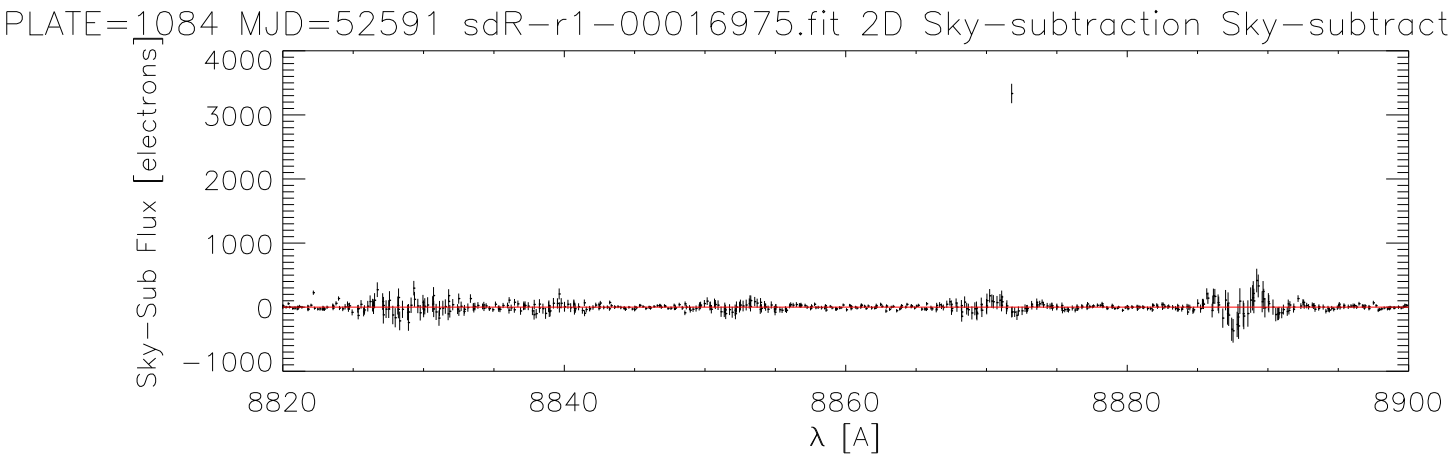

PLATE=1084 MJD=52591 sdR-r1-00016975.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
8000
6000
4000
2000
0
8820
8840
8860
8880
8900
λ [A]

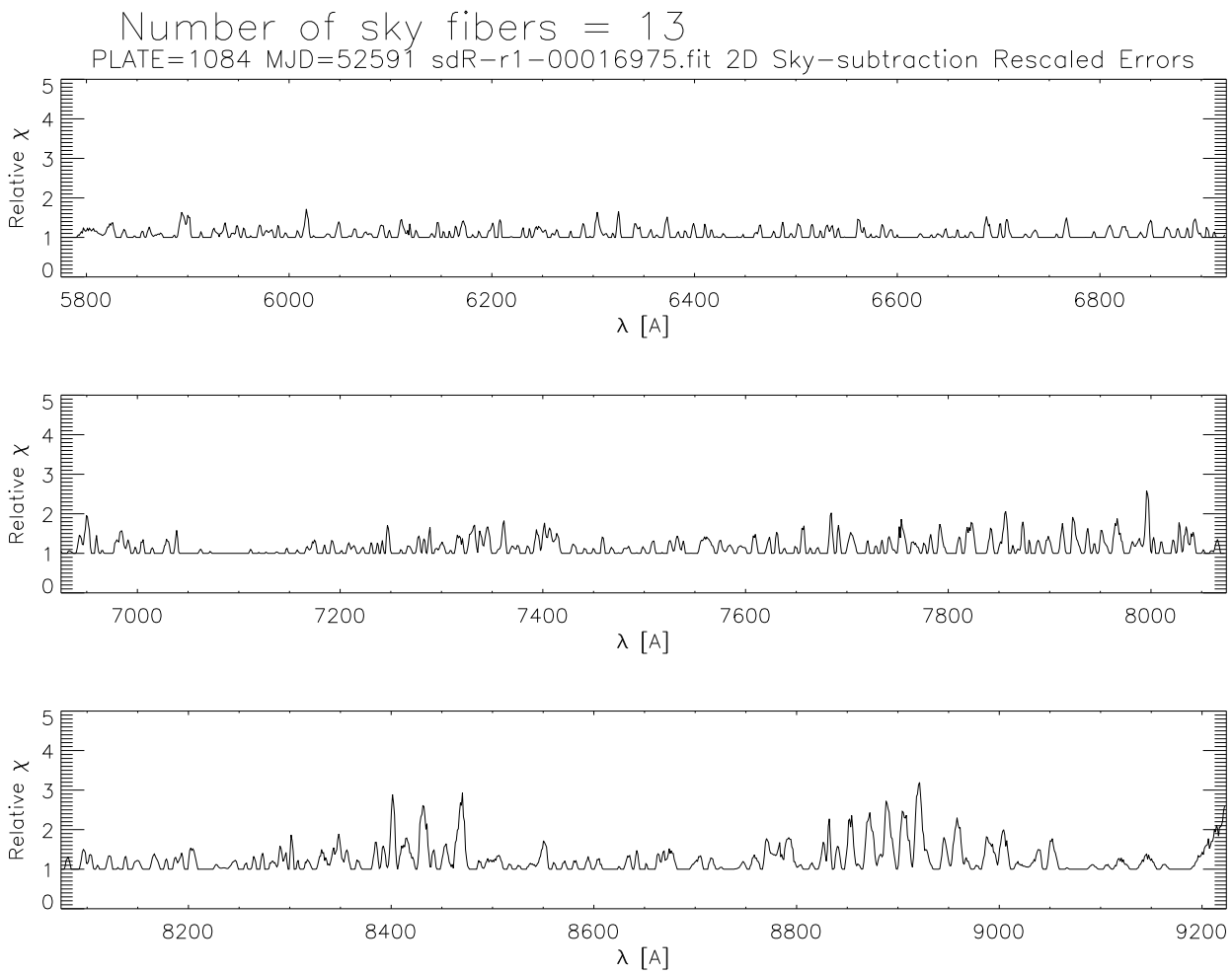

PLATE=1084 MJD=52591 sdR-r1-00016975.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
4000
3000
2000
1000
0
-1000
8820
8840
8860
8880
8900
λ [A]

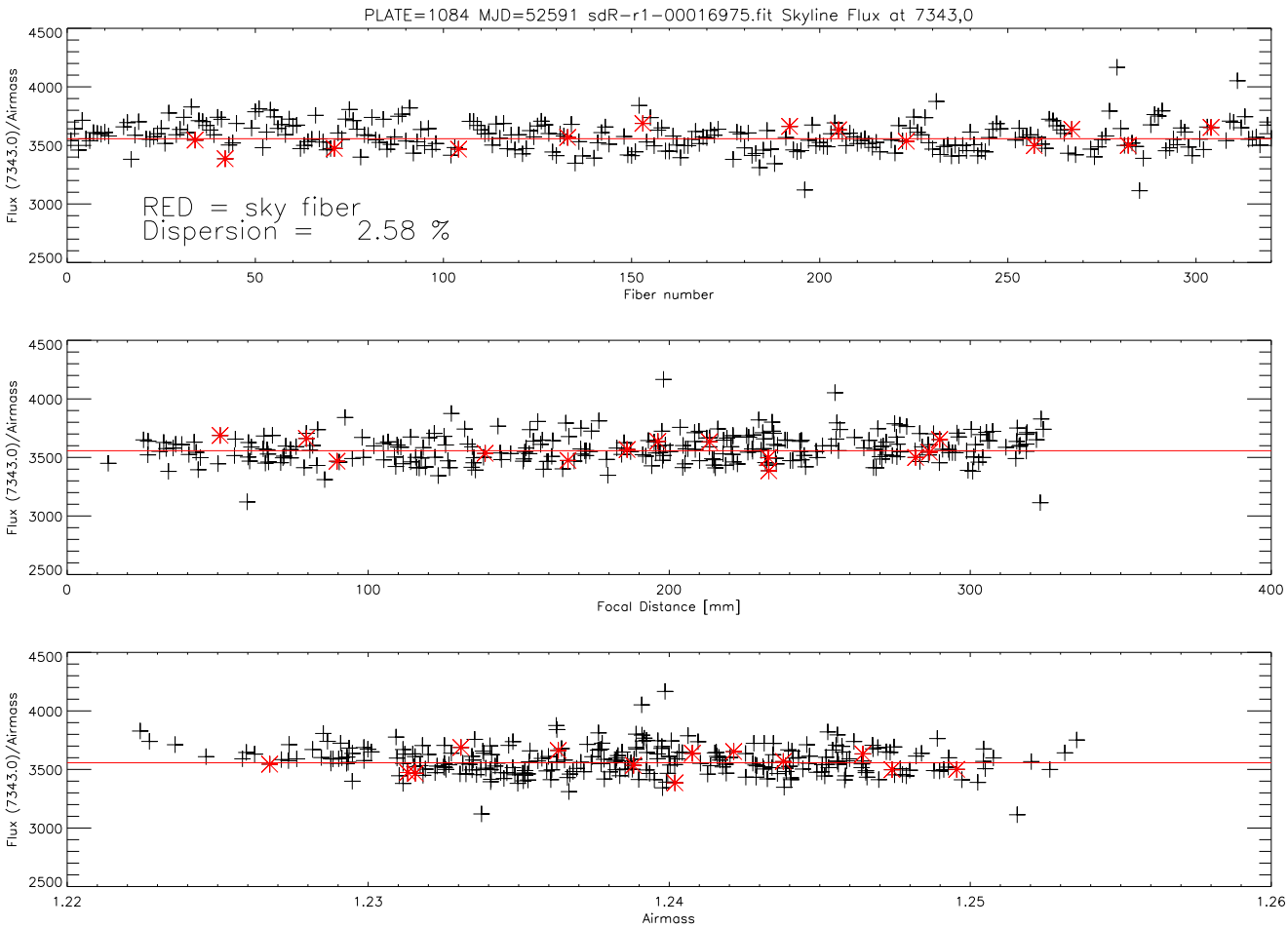

Number of sky fibers = 13
PLATE=1084 MJD=52591 sdR-r1-00016975.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200
0
1
2
3
4
5

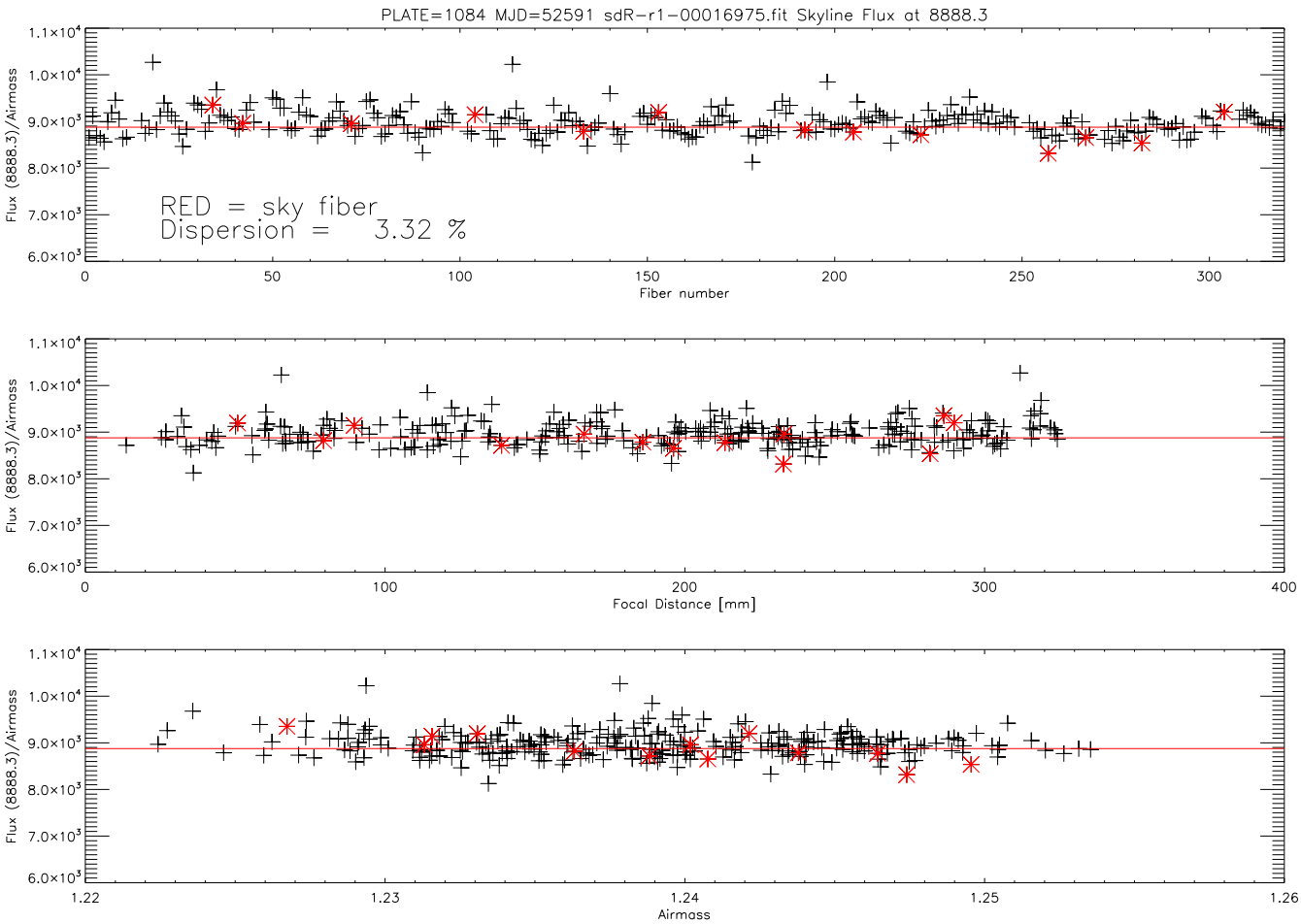

PLATE=1084 MJD=52591 sdR-r1-00016975.fit 2D Sky-subtraction Sky Fibers
Median χ^2
BLUE=After rescaling variance
Fiber number
Median Sky-Sub Flux
Fiber number

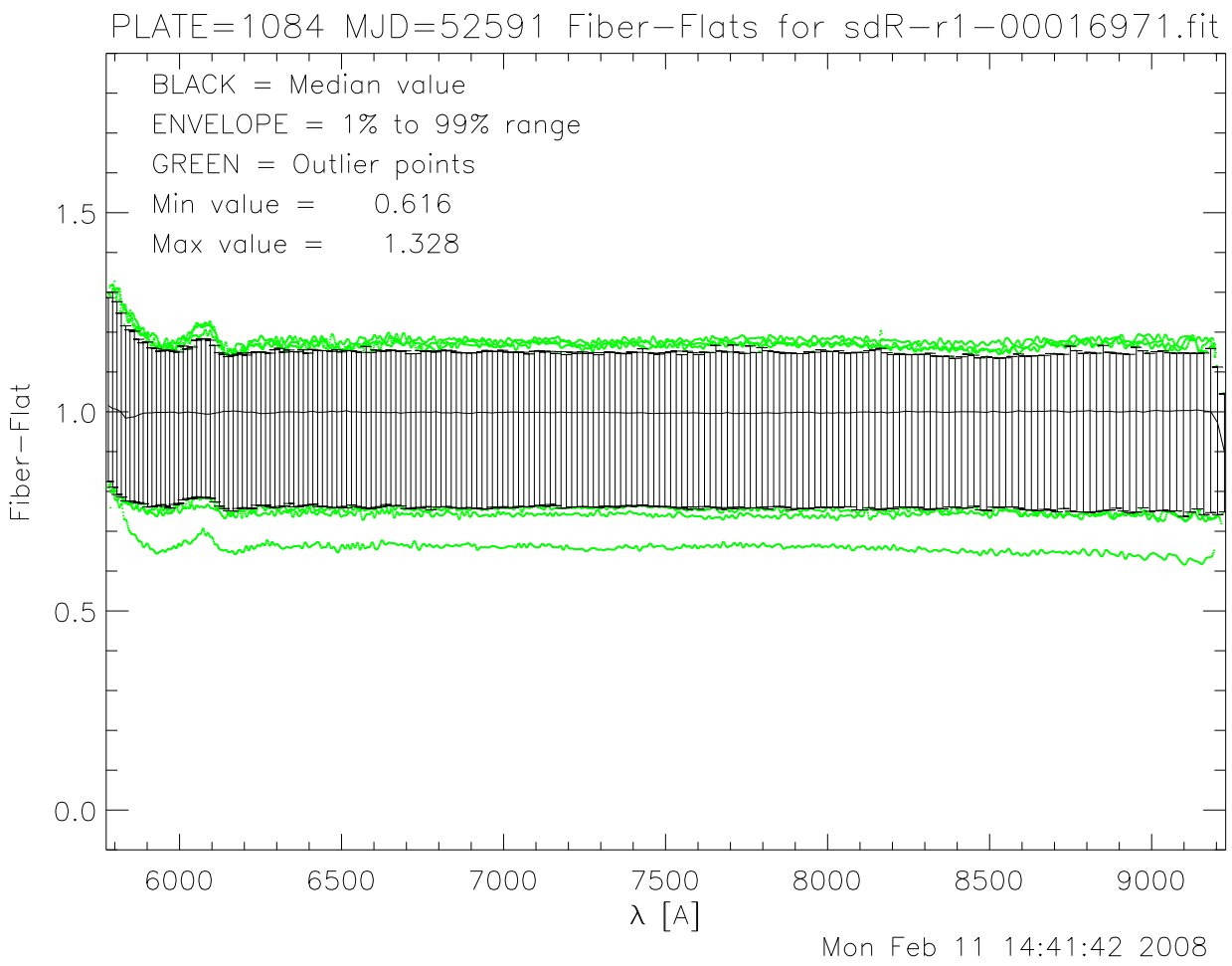

PLATE=1084 MJD=52591 sdR-r1-00016975.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
8000
6000
4000
2000
0
8820
8840
8860
8880
8900
λ [A]

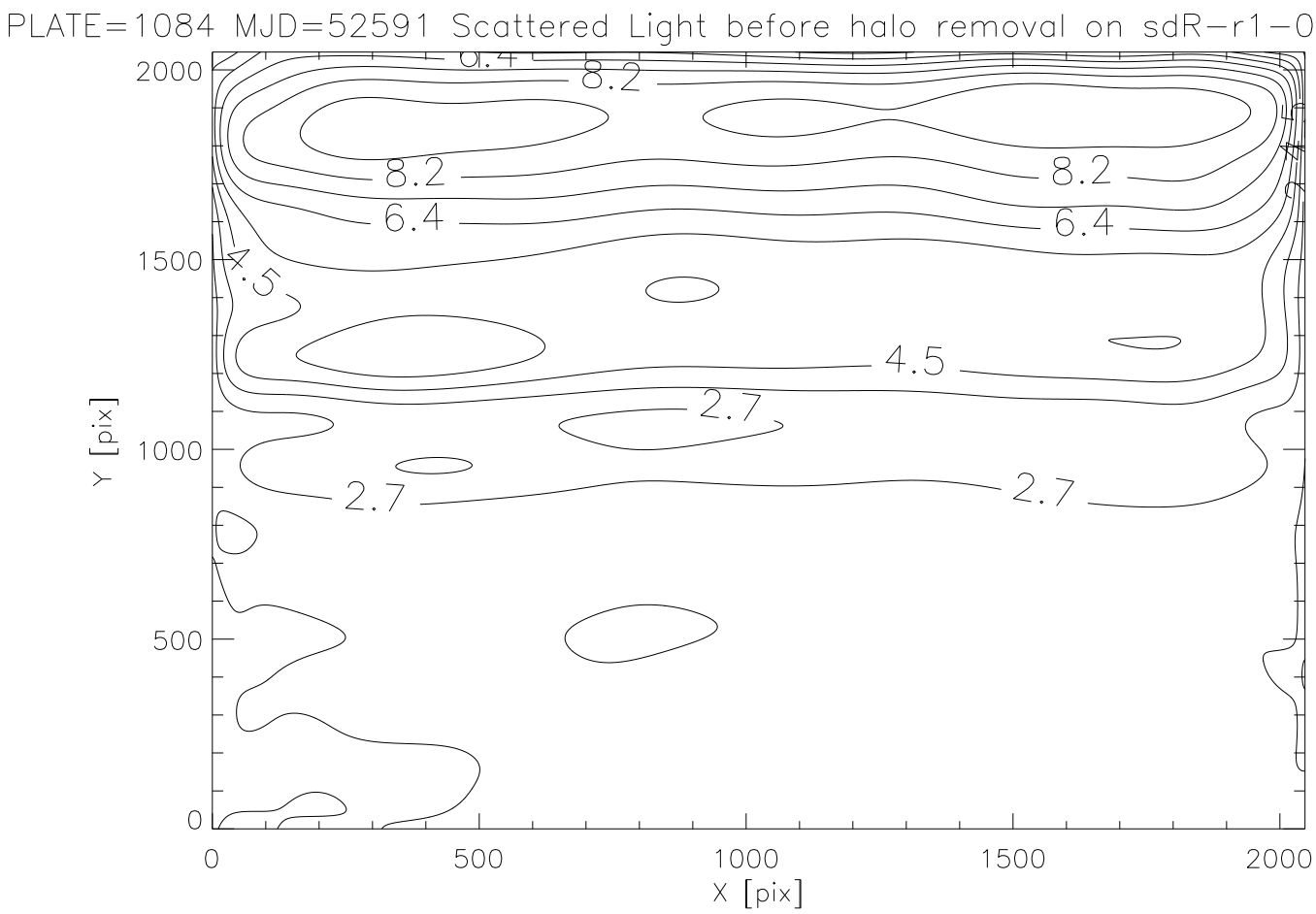

PLATE=1084 MJD=52591 sdR-r1-00016975.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
4000
3000
2000
1000
0
-1000
8820
8840
8860
8880
8900
λ [A]

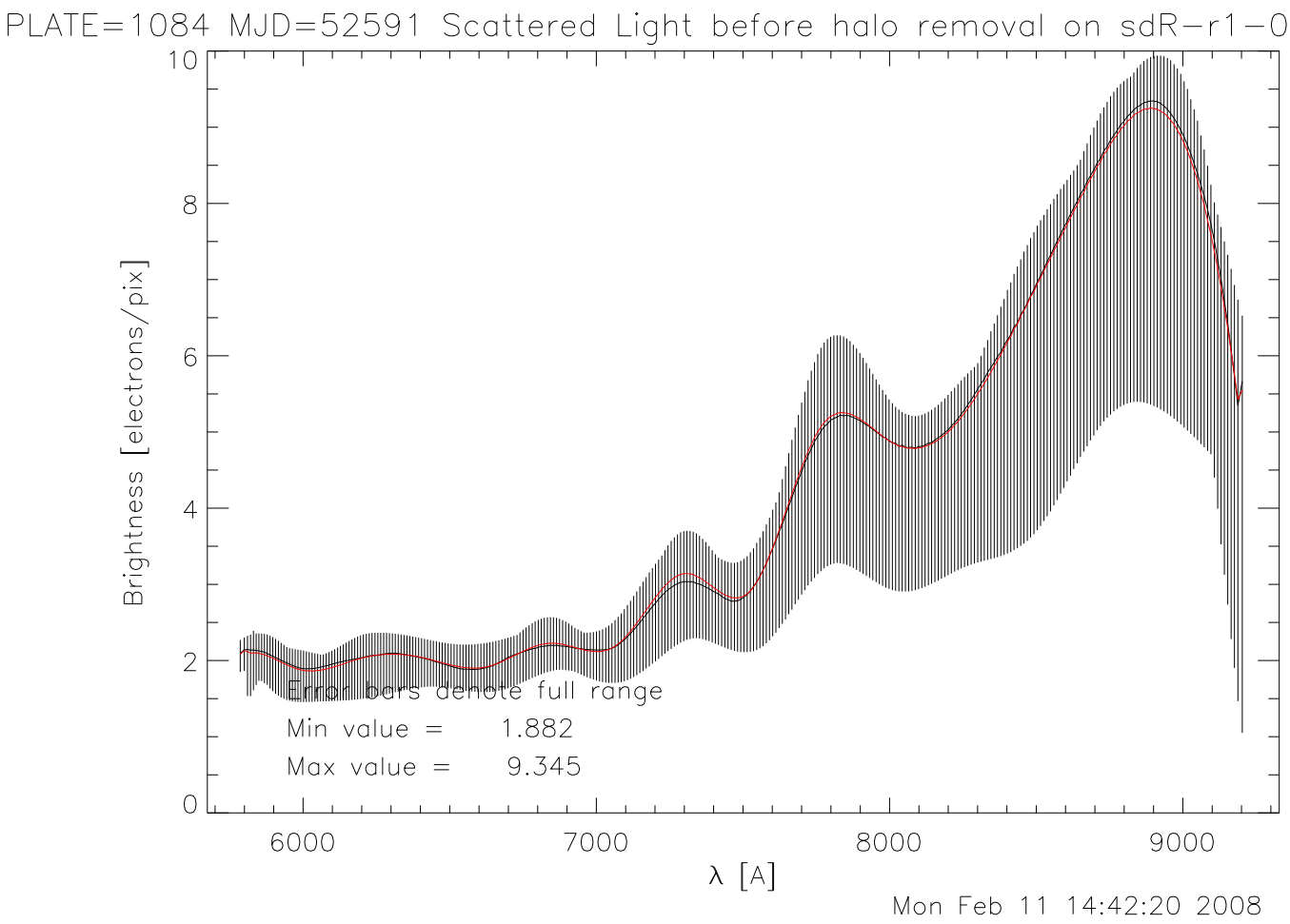

Number of sky fibers = 13
PLATE=1084 MJD=52591 sdR-r1-00016975.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200

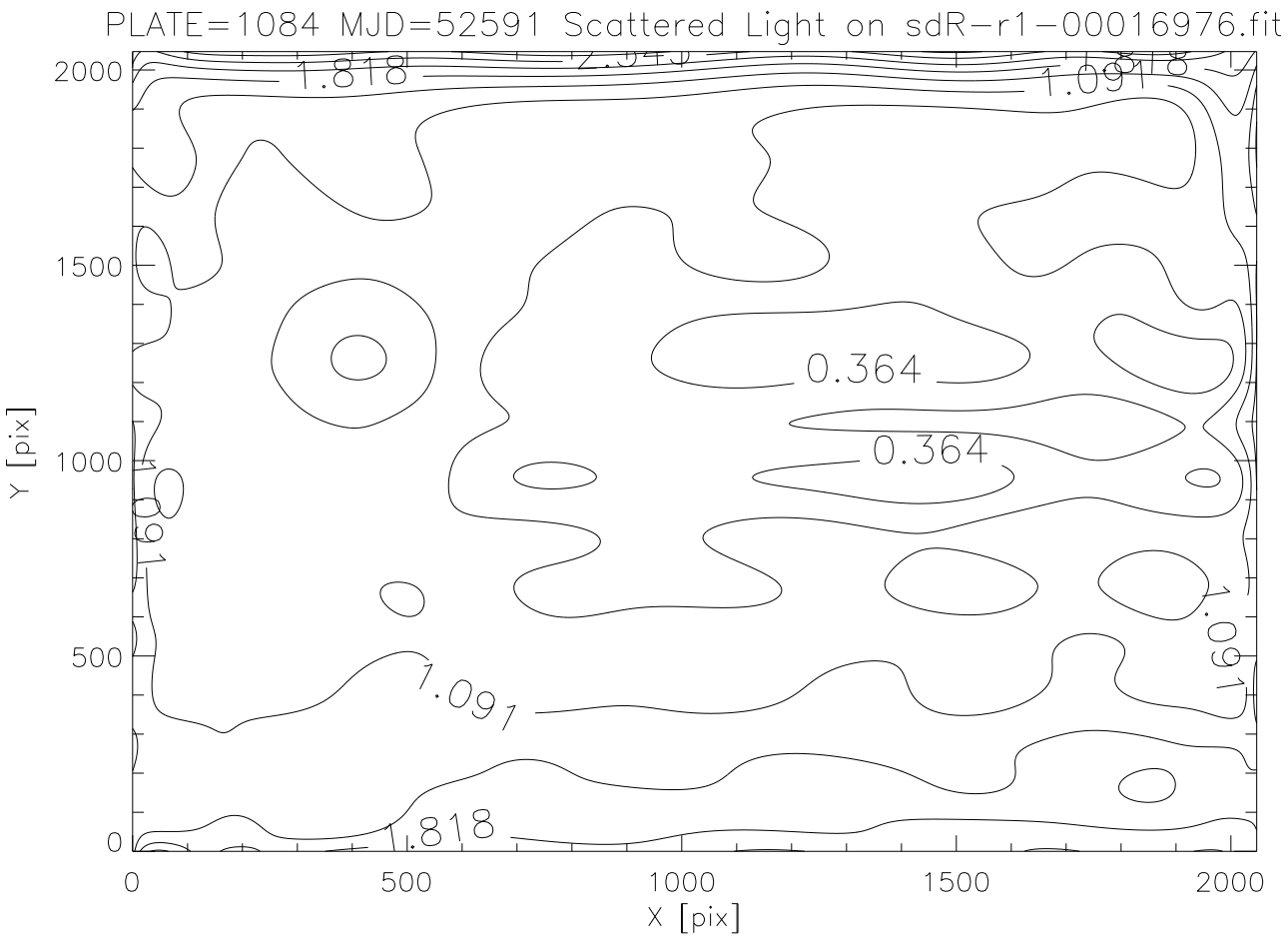

PLATE=1084 MJD=52591 sdR-r1-00016975.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 2.58 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

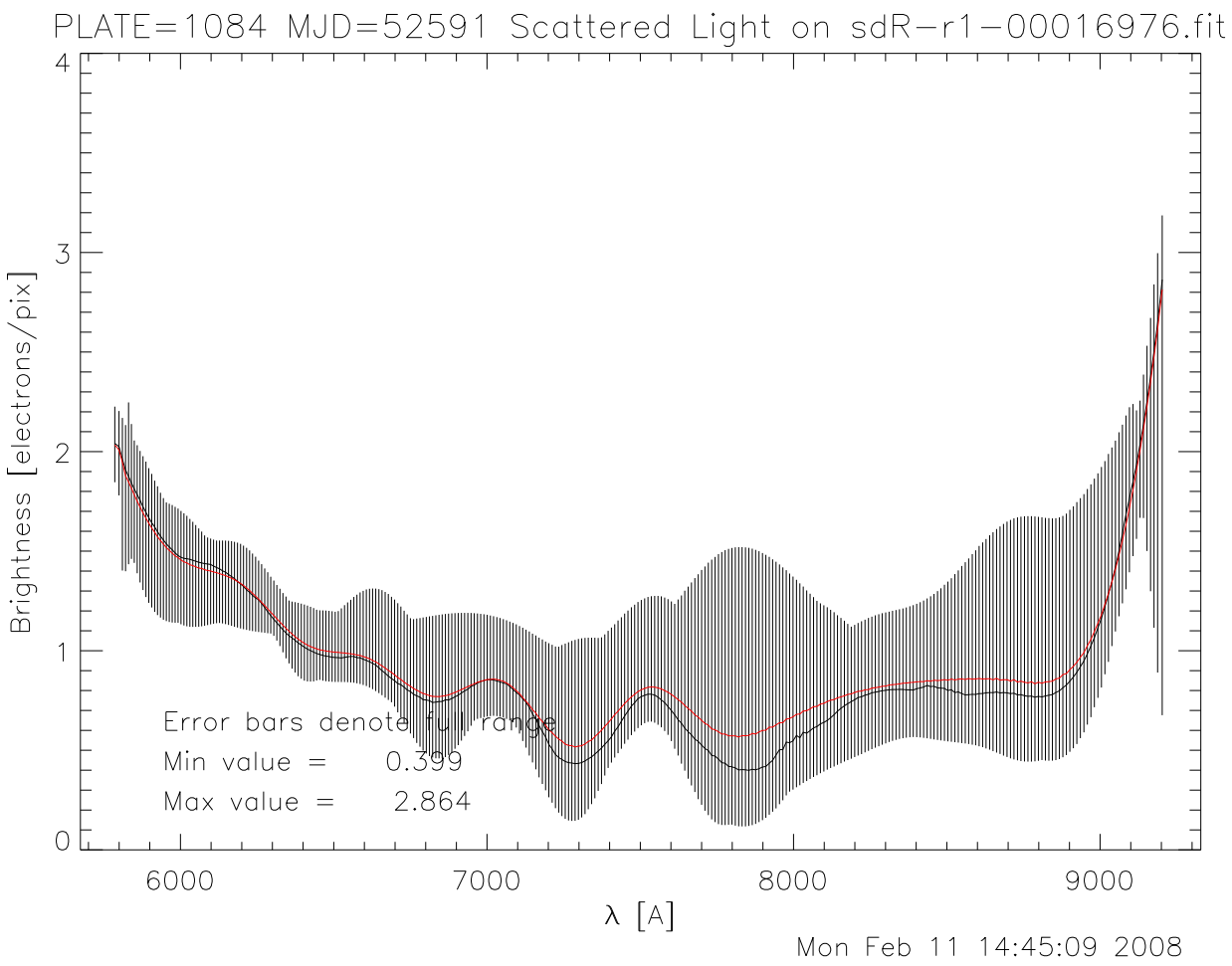

PLATE=1084 MJD=52591 sdR-r1-00016975.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
RED = sky fiber
Dispersion = 3.32 %
Fiber number
Focal Distance [mm]
Airmass

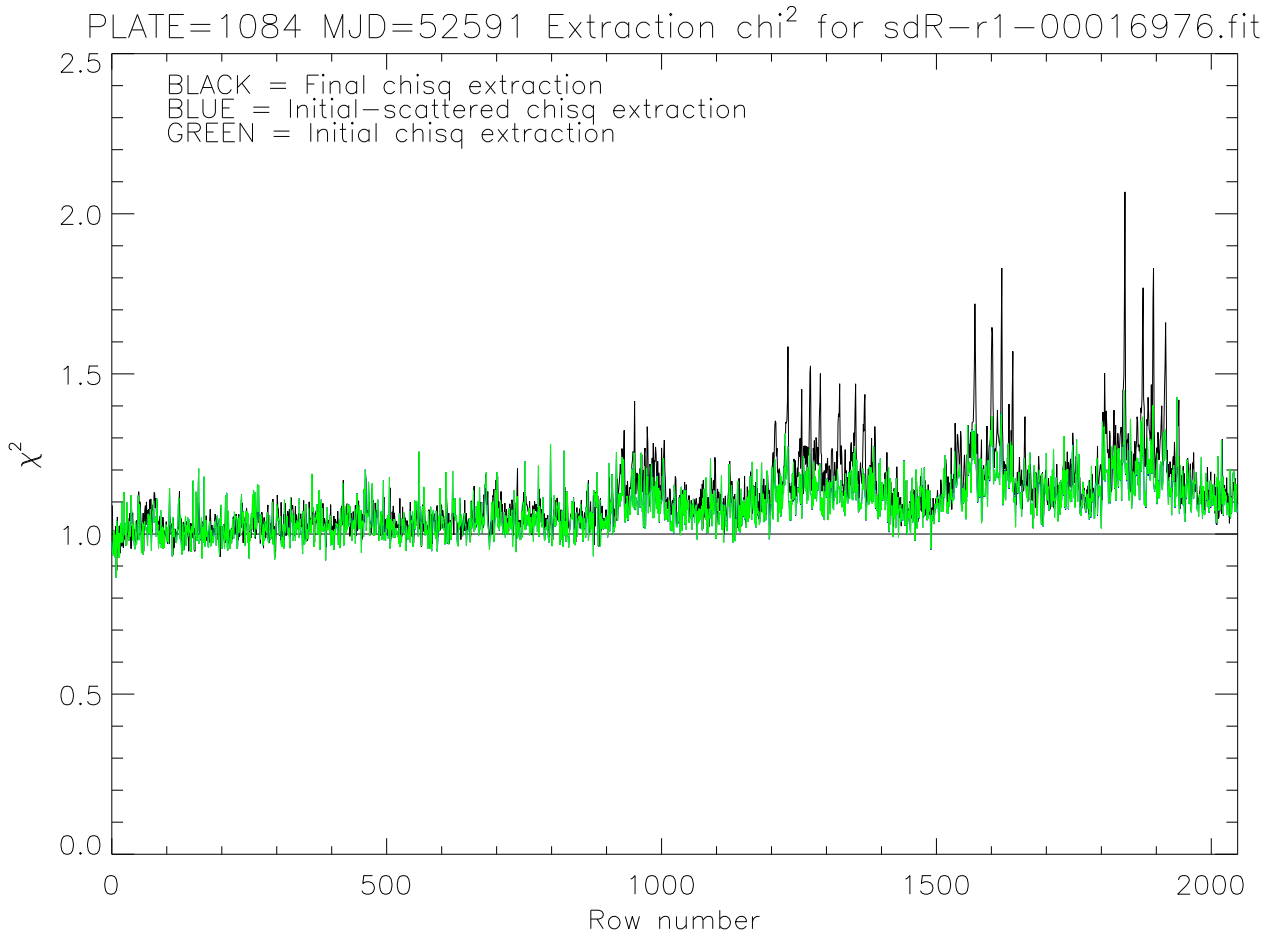

PLATE=1084 MJD=52591 Fiber−Flats for sdR−r1−00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.616
Max value = 1.328
Fiber−Flat
1.5
1.0
0.5
0.0
6000
6500
7000
7500
8000
8500
9000
λ [A]
Mon Feb 11 14:41:42 2008

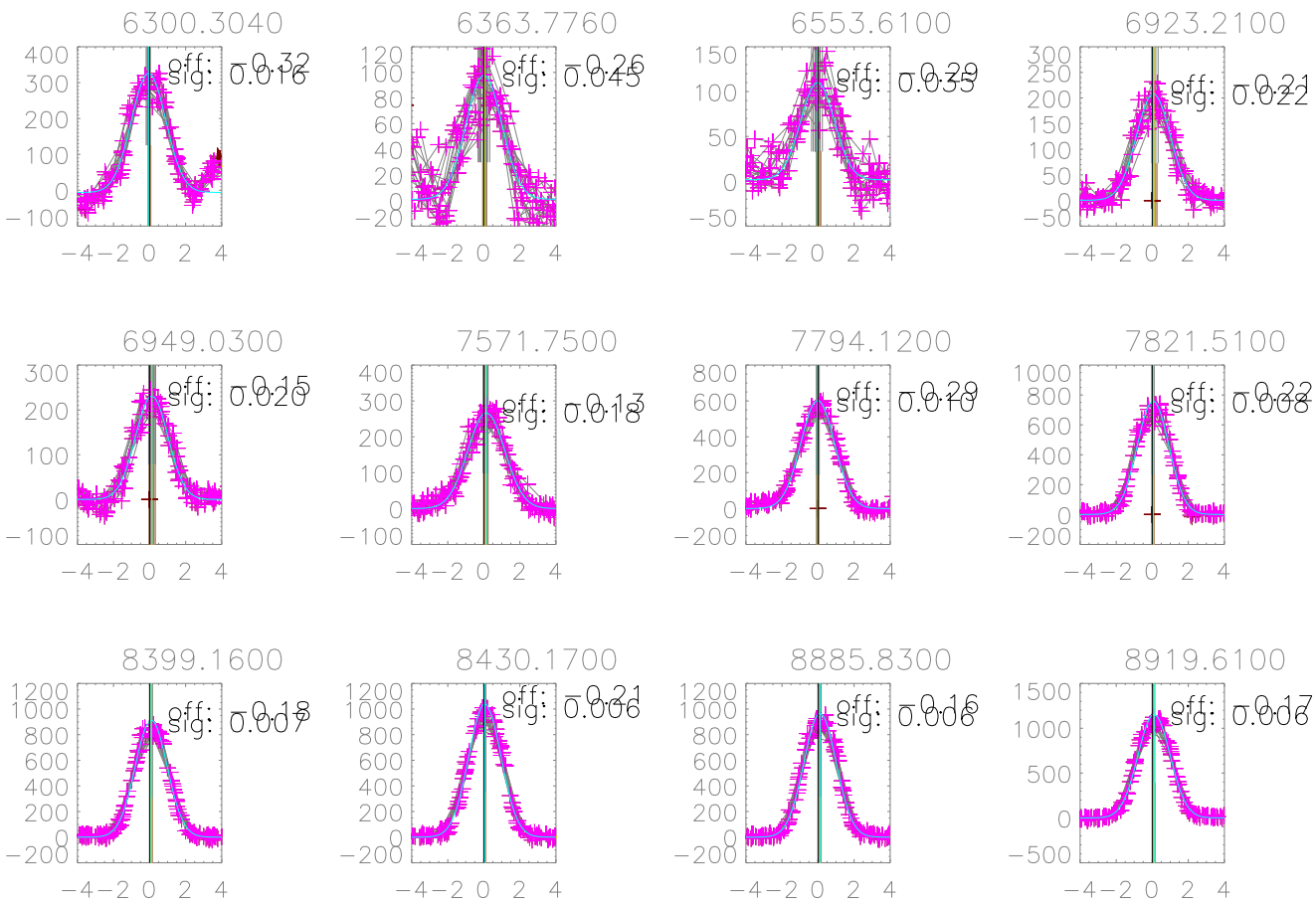

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r1-00016976.fi
8.2
8.2
8.2
6.4
6.4
4.5
4.5
2.7
2.7
2.7
Y [pix]
X [pix]
0
500
1000
1500
2000

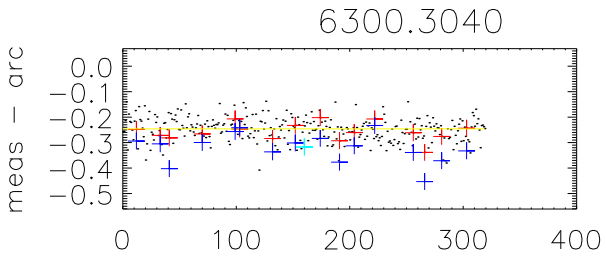

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r1-00016976.fi
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 1.882
Max value = 9.345
Mon Feb 11 14:42:20 2008

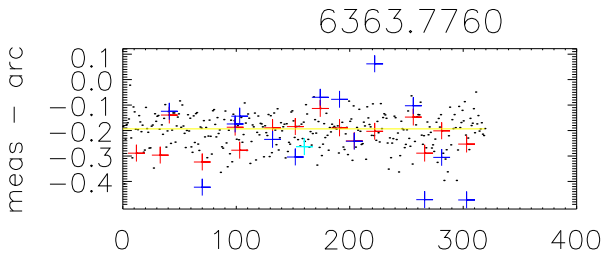

PLATE=1084 MJD=52591 Scattered Light on sdR-r1-00016976.fit
1.818
1.091
0.364
0.364
1.091
1.091
1.091
1.818
Y [pix]
X [pix]
0
500
1000
1500
2000

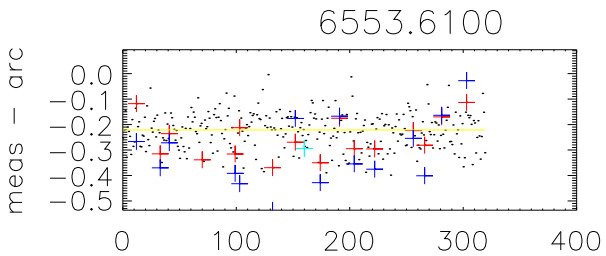

PLATE=1084 MJD=52591 Scattered Light on sdR-r1-00016976.fit
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 0.399
Max value = 2.864
Mon Feb 11 14:45:09 2008

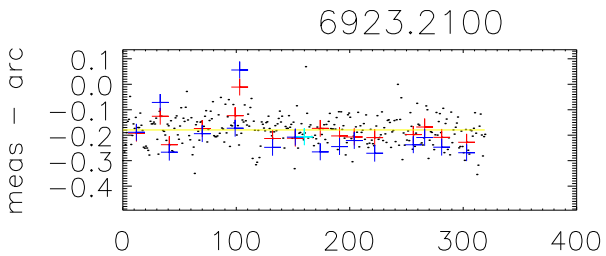

PLATE=1084 MJD=52591 Extraction chi^2 for sdR−r1−00016976.fit
BLACK = Final chisq extraction
BLUE = Initial−scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
2.5
2.0
1.5
1.0
0.5
0.0
0
500
1000
1500
2000
Row number

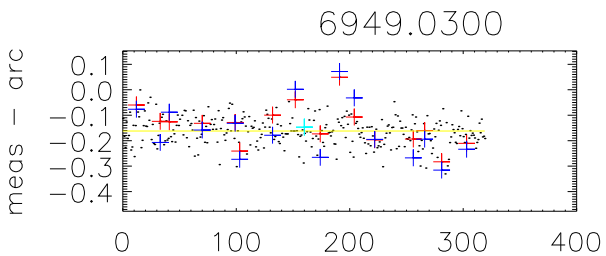

6300.3040
off: -0.32
sig: 0.016
6363.7760
off: -0.26
sig: 0.045
6553.6100
off: -0.29
sig: 0.035
6923.2100
off: -0.21
sig: 0.022
6949.0300
off: -0.15
sig: 0.020
7571.7500
off: -0.13
sig: 0.018
7794.1200
off: -0.29
sig: 0.010
7821.5100
off: -0.22
sig: 0.008
8399.1600
off: -0.18
sig: 0.007
8430.1700
off: -0.21
sig: 0.006
8885.8300
off: -0.16
sig: 0.006
8919.6100
off: -0.17
sig: 0.006

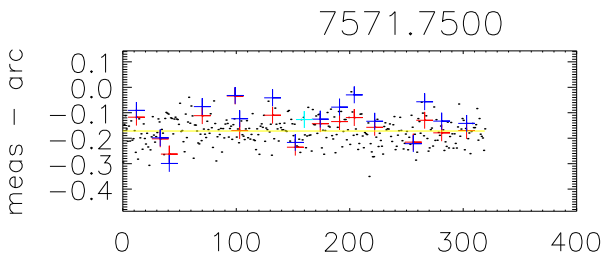

6300.3040
meas − arc
0.0
−0.1
−0.2
−0.3
−0.4
−0.5
0
100
200
300
400

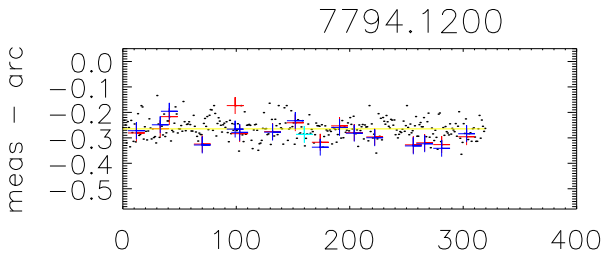

6363.7760
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

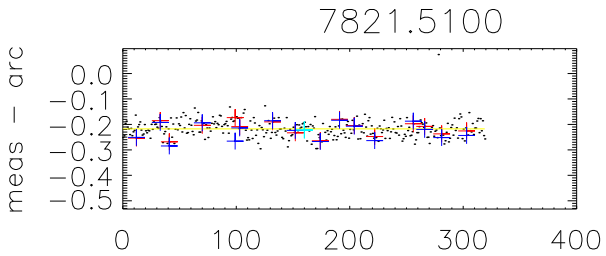

6553.6100
meas − arc
0.0
−0.1
−0.2
−0.3
−0.4
−0.5
0
100
200
300
400

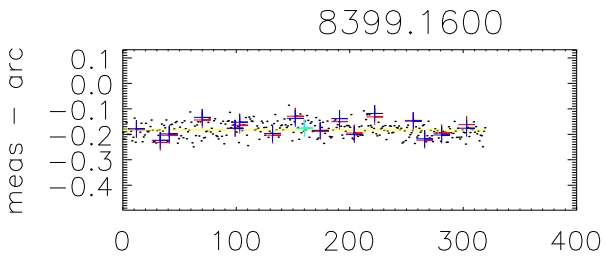

6923.2100
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

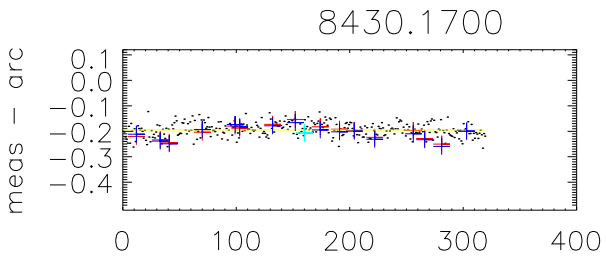

6949.0300
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

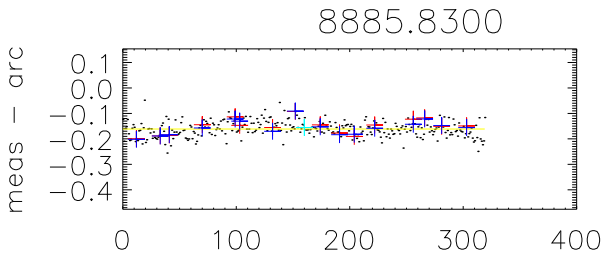

7571.7500
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

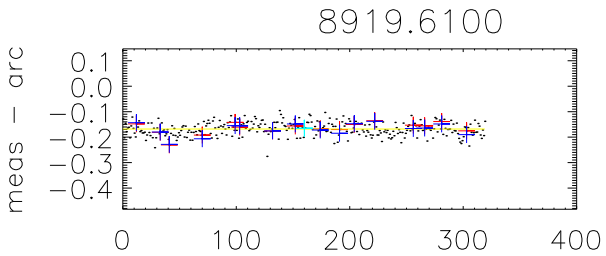

7794.1200
meas − arc
0.0
−0.1
−0.2
−0.3
−0.4
−0.5
0
100
200
300
400

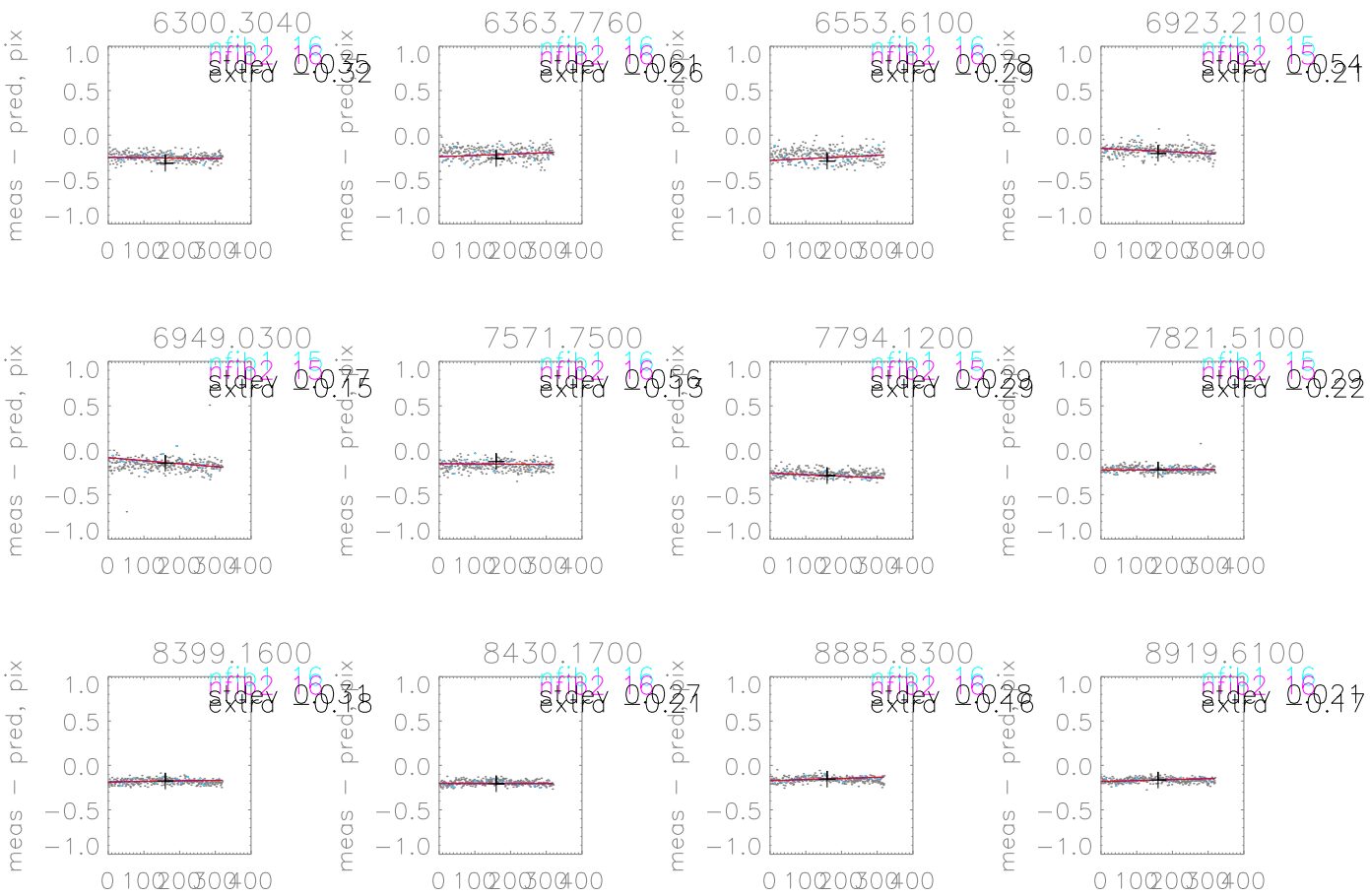

7821.5100
meas − arc
0.0
−0.1
−0.2
−0.3
−0.4
−0.5
0
100
200
300
400

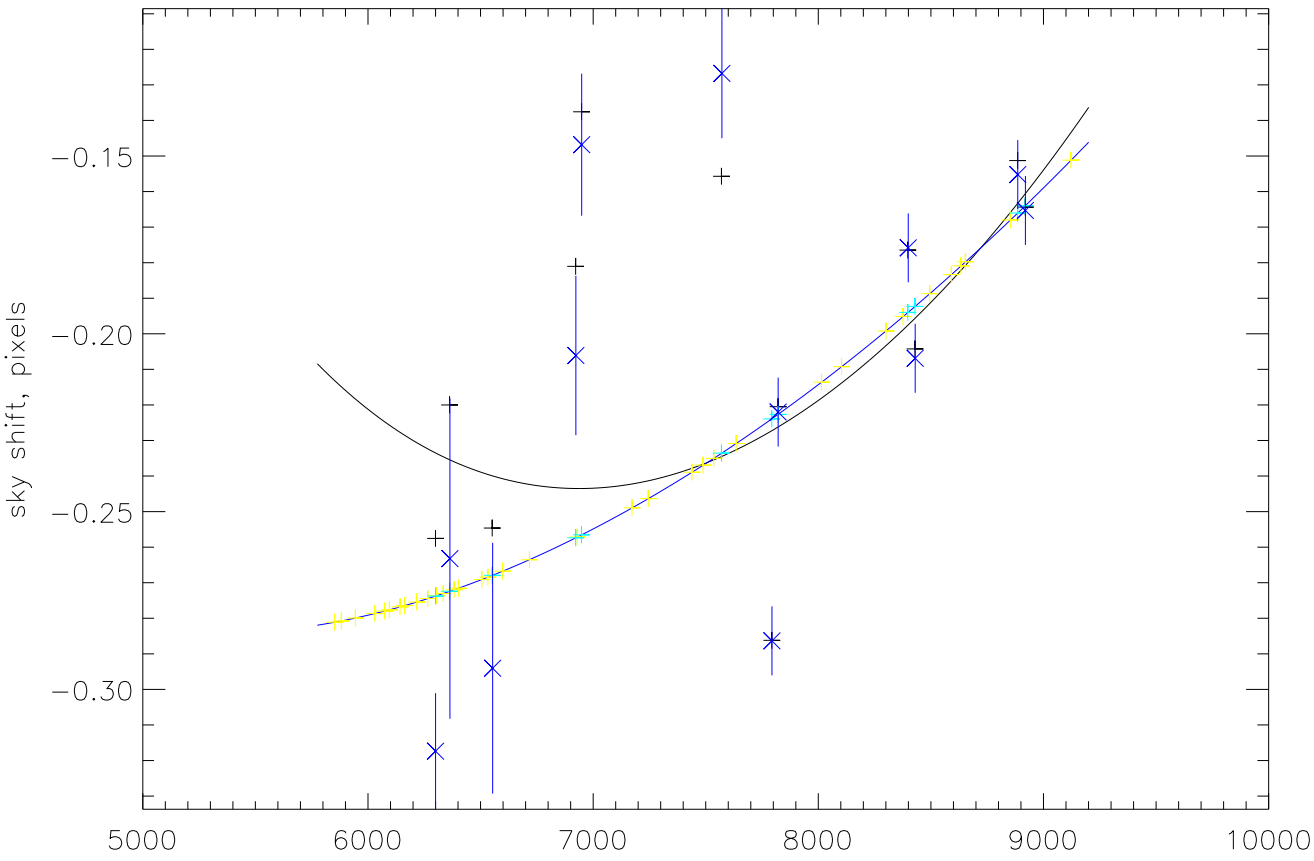

8399.1600
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400


8430.1700
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

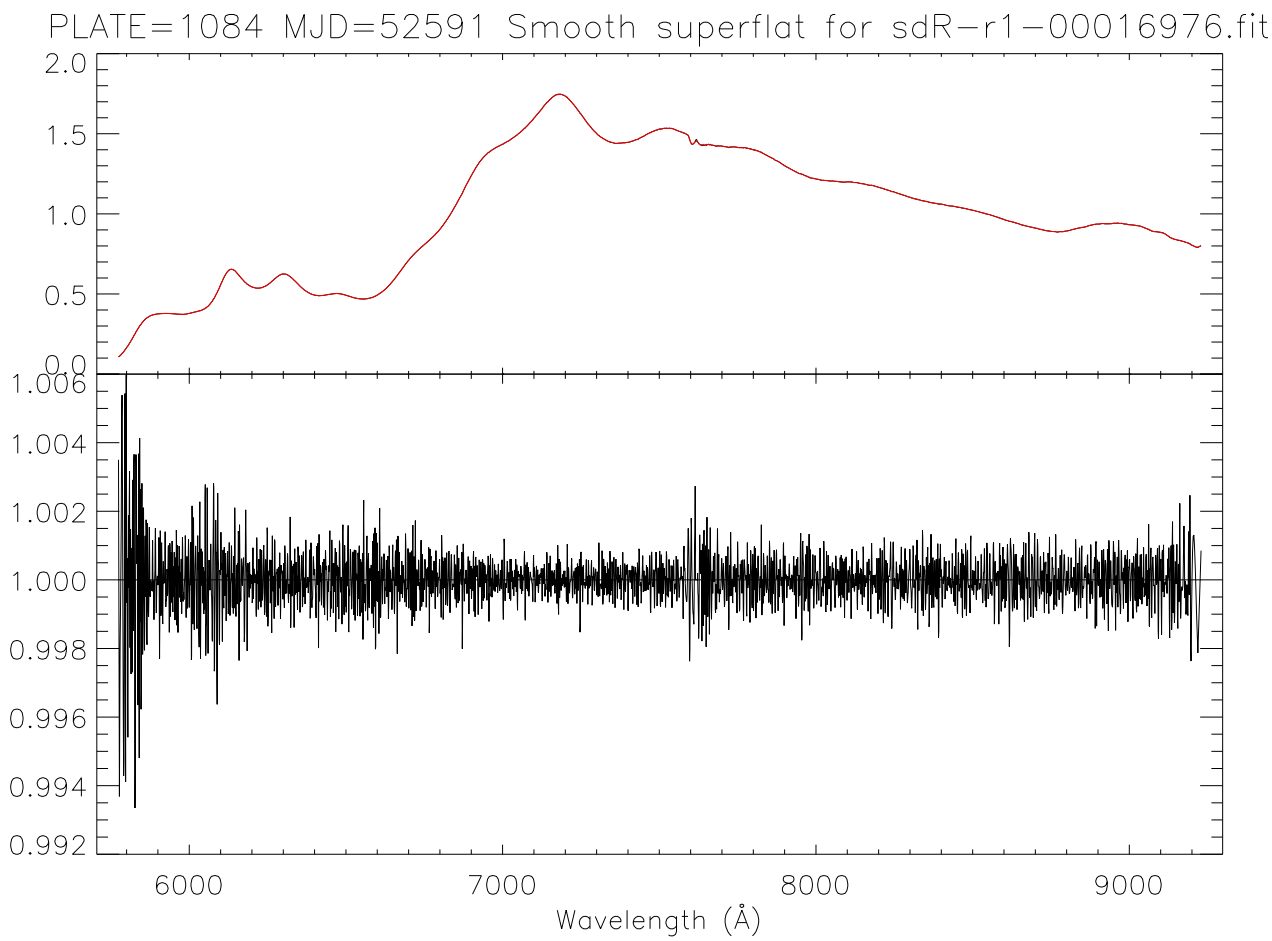

8885.8300
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

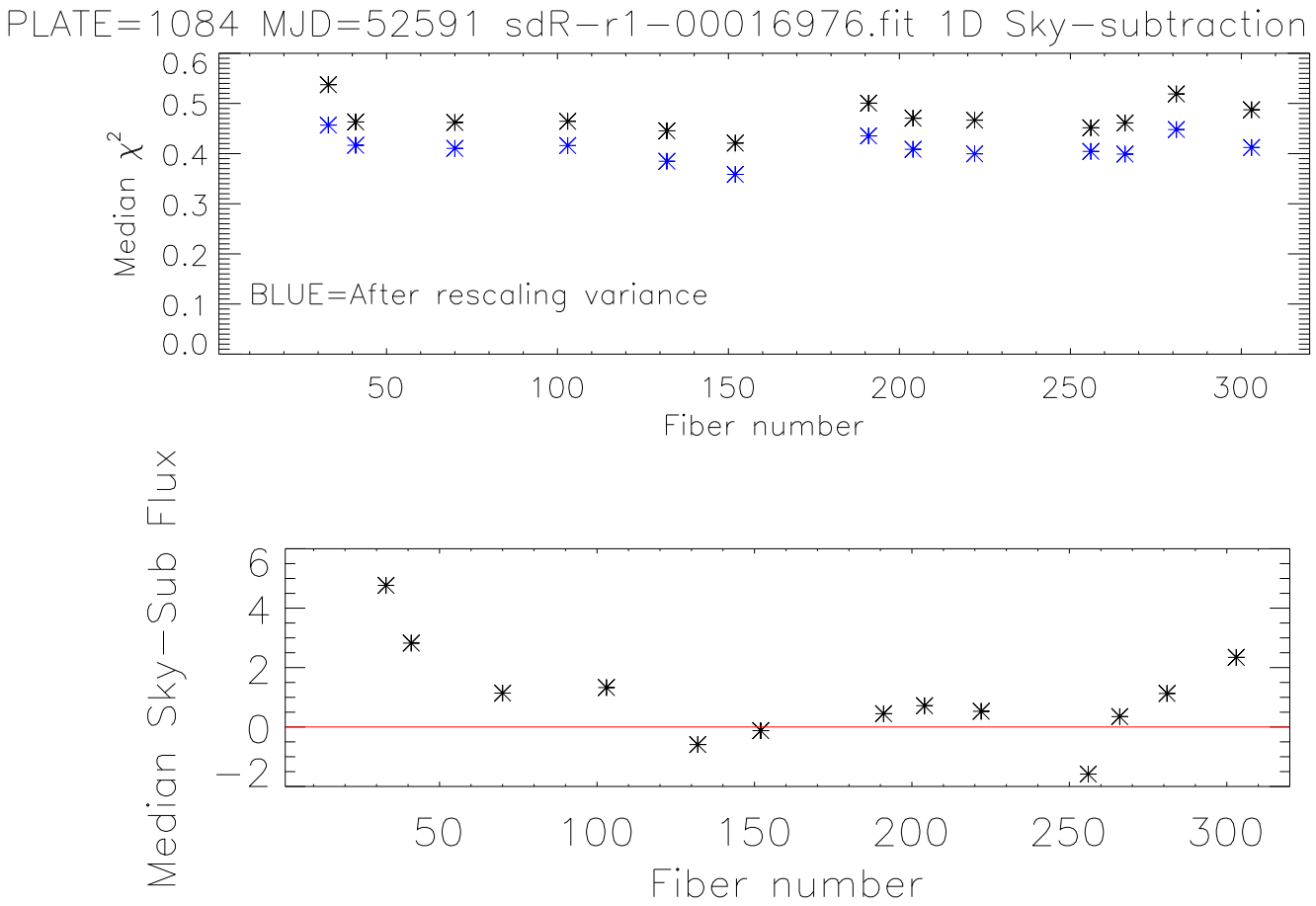

8919.6100
meas − arc
0.1
0.0
−0.1
−0.2
−0.3
−0.4
0
100
200
300
400

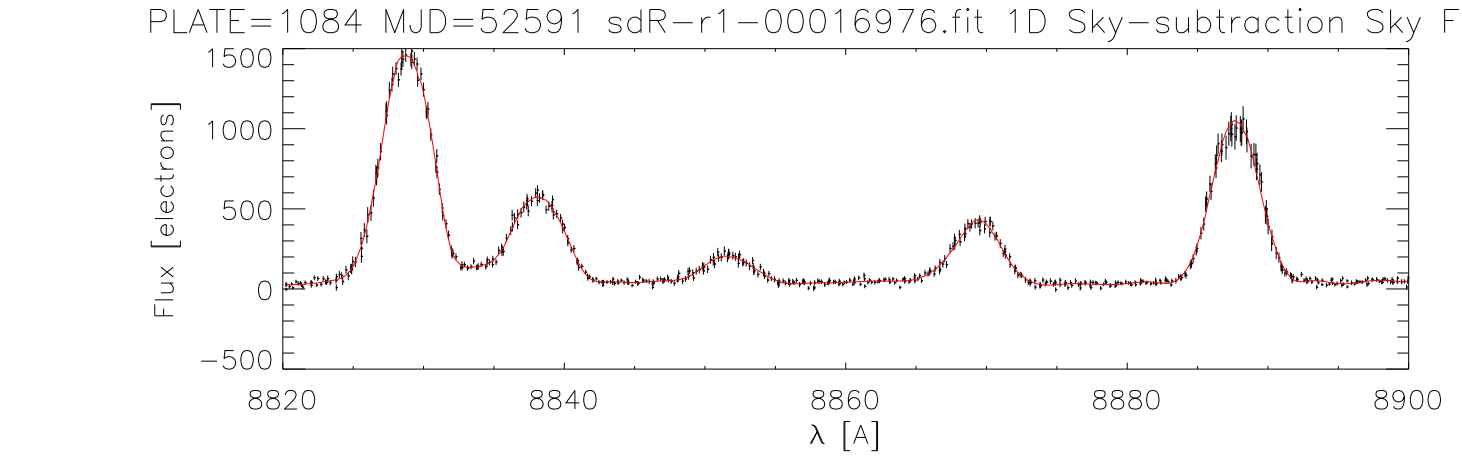

6300.3040
6363.7760
6553.6100
6923.2100
6949.0300
7571.7500
7794.1200
7821.5100
8399.1600
8430.1700
8885.8300
8919.6100
meas − pred, pix
mfib1 16
mfib2 15
stdev 0.035
extrd 0.32
stdev 0.061
extrd 0.26
stdev 0.078
extrd 0.29
stdev 0.054
extrd 0.21
stdev 0.077
extrd 0.15
stdev 0.056
extrd 0.13
stdev 0.039
extrd 0.29
stdev 0.029
extrd 0.22
stdev 0.031
extrd 0.18
stdev 0.027
extrd 0.21
stdev 0.028
extrd 0.46
stdev 0.021
extrd 0.47
1.0
0.5
0.0
−0.5
−1.0
0 100 200 300 400

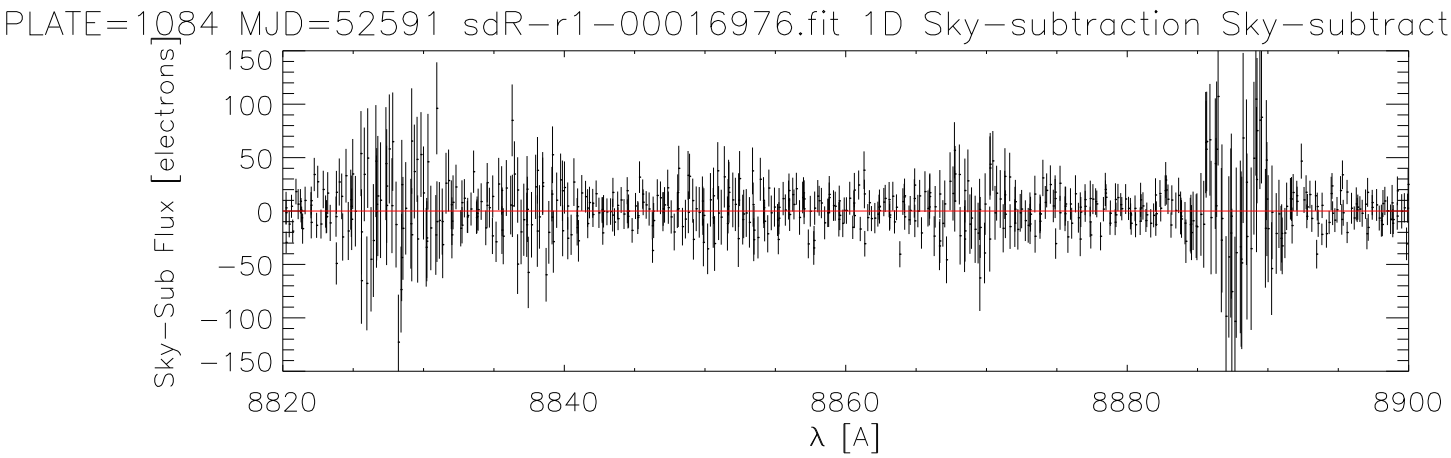

sky shift, pixels
−0.15
−0.20
−0.25
−0.30
5000
6000
7000
8000
9000
10000

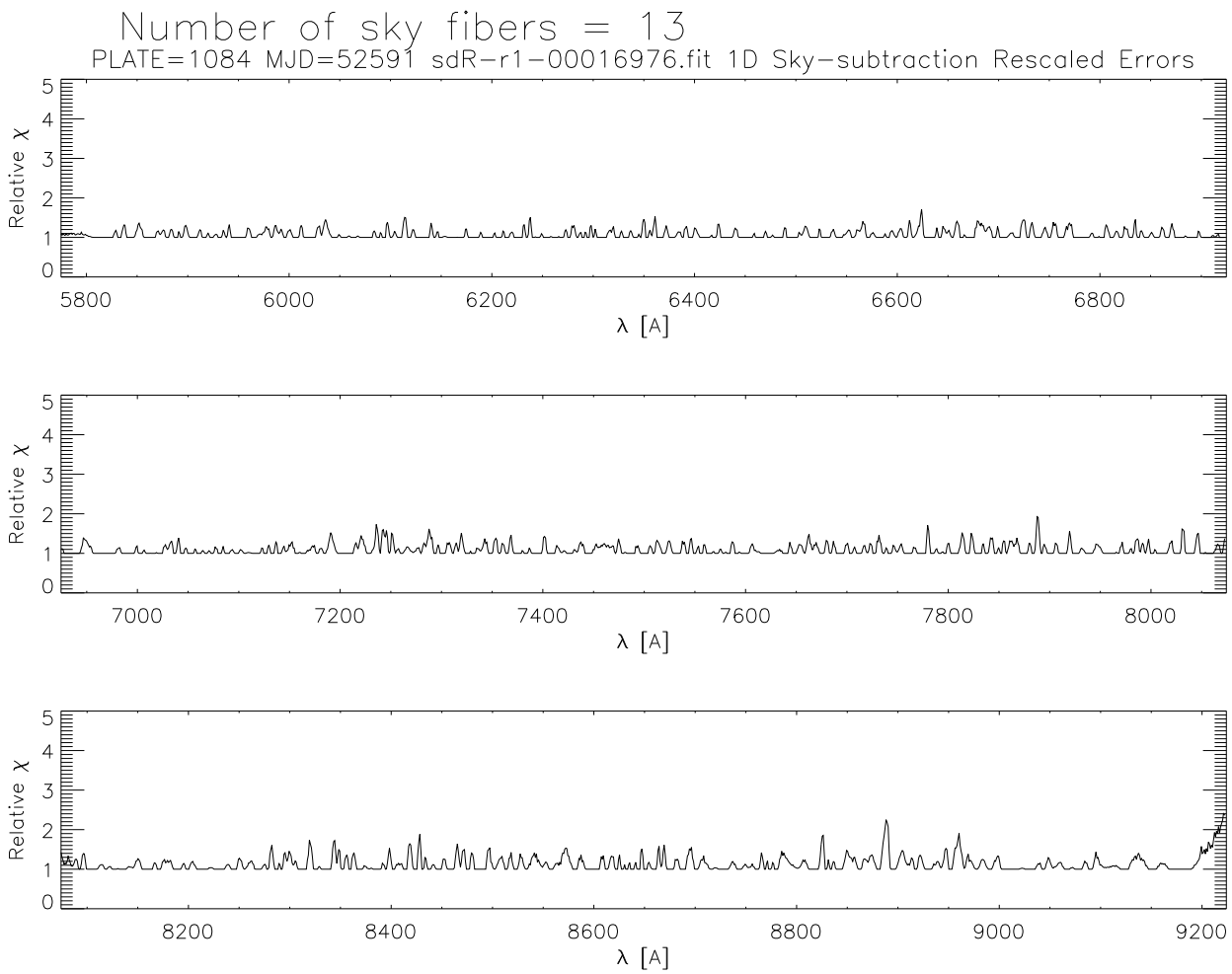
es= 0.0000

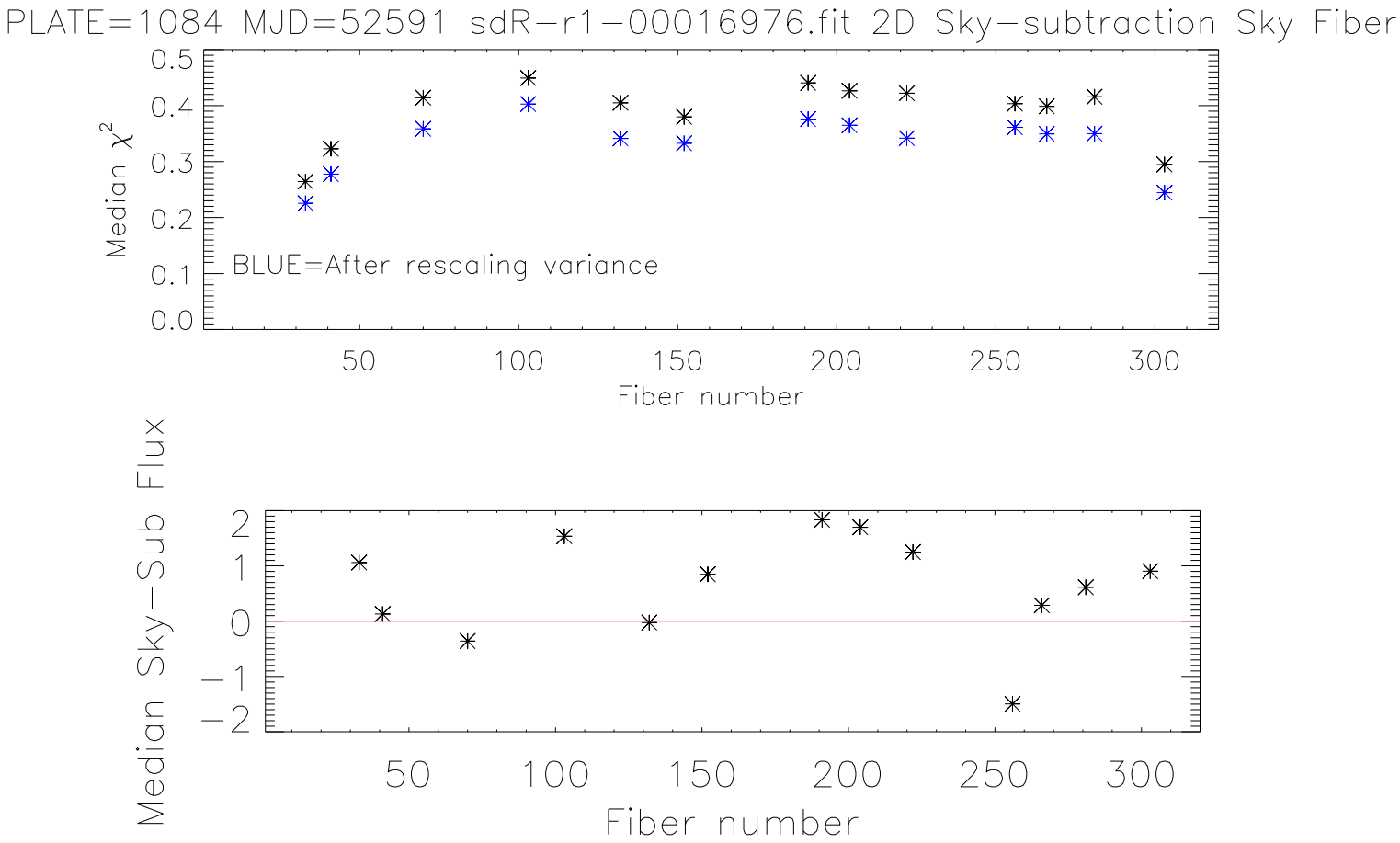

PLATE=1084 MJD=52591 Smooth superflat for sdR-r1-00016976.fit
2.0
1.5
1.0
0.5
0.0
1.006
1.004
1.002
1.000
0.998
0.996
0.994
0.992
6000
7000
8000
9000
Wavelength (Å)

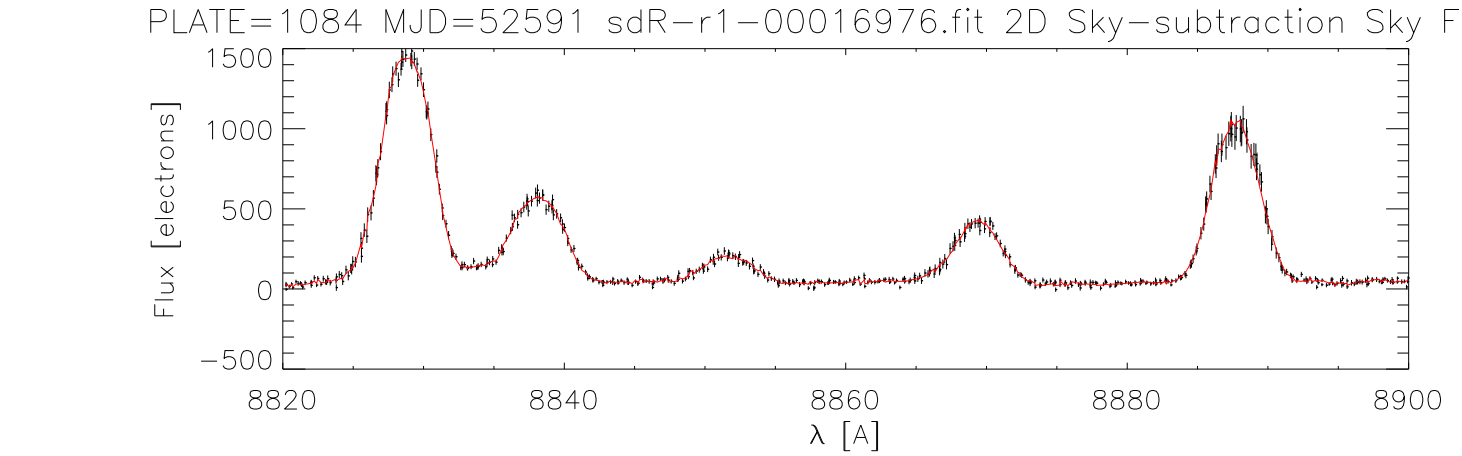

PLATE=1084 MJD=52591 sdR-r1-00016976.fit 1D Sky-subtraction Sky Fibers
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
0.6
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
-2
0
2
4
6
50
100
150
200
250
300
Fiber number

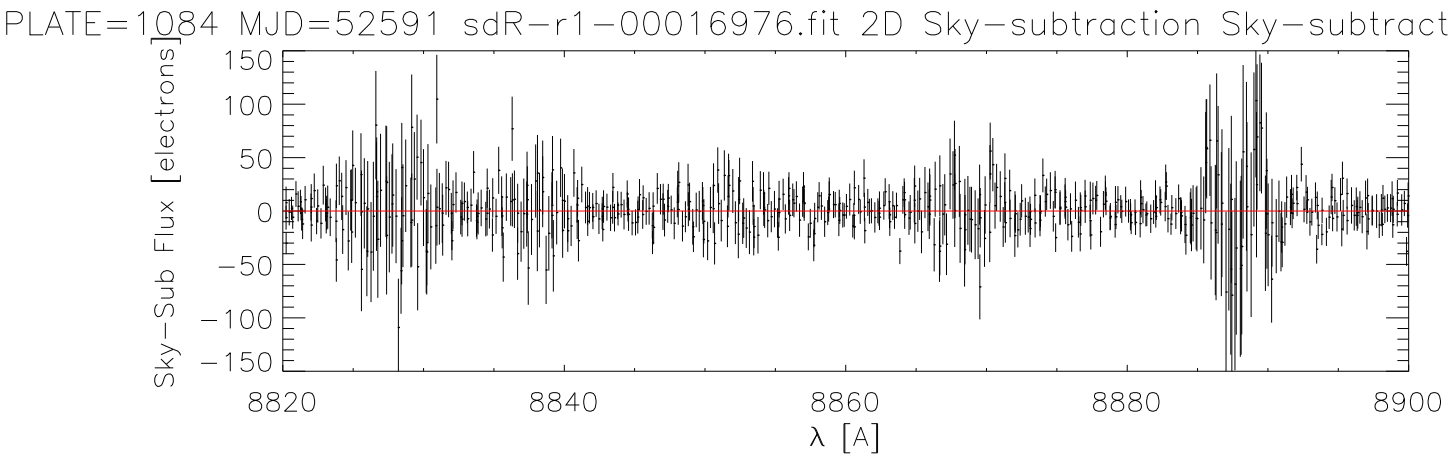

PLATE=1084 MJD=52591 sdR-r1-00016976.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
1500
1000
500
0
-500
8820
8840
8860
8880
8900
λ [A]

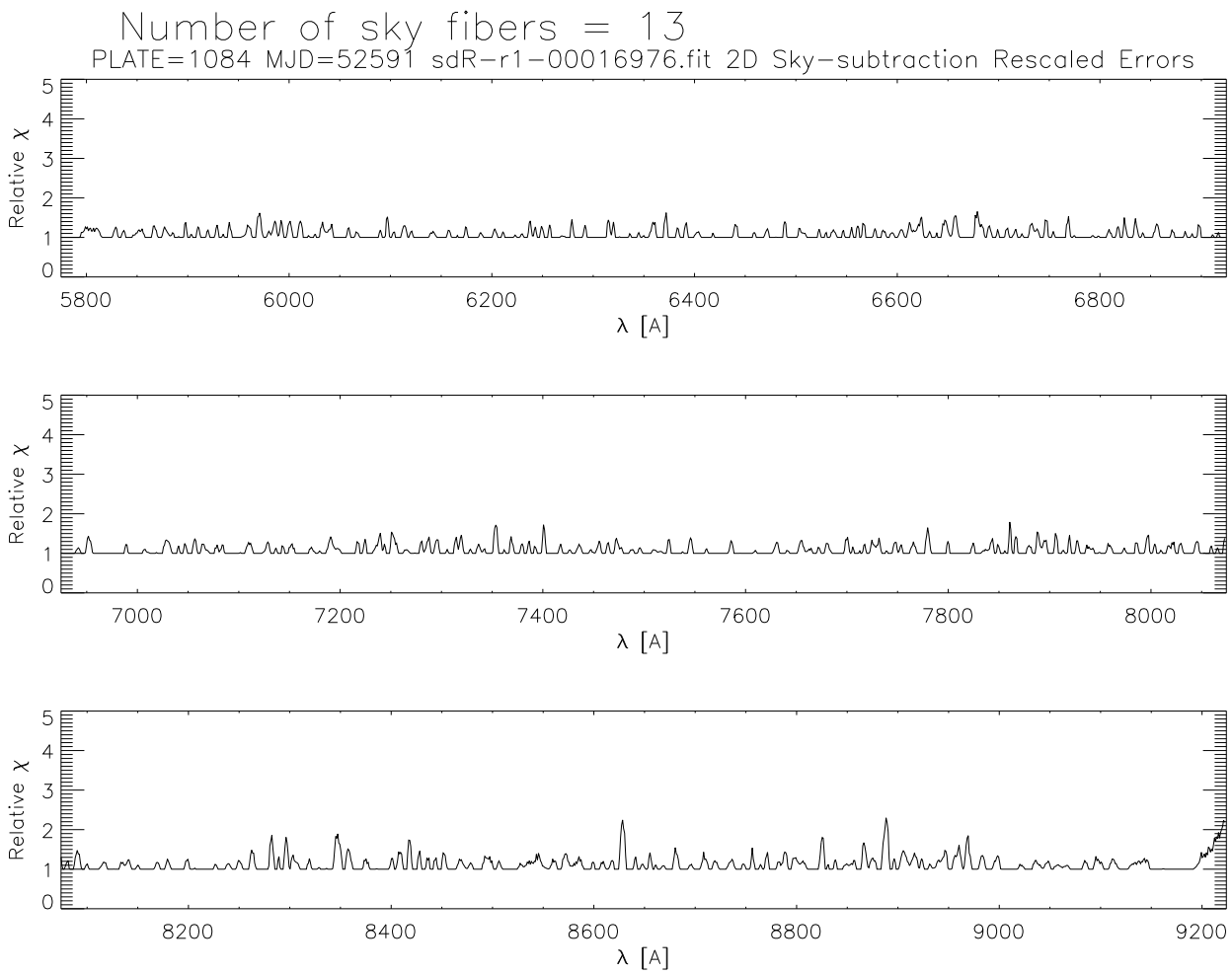

PLATE=1084 MJD=52591 sdR-r1-00016976.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
150
100
50
0
-50
-100
-150
8820
8840
8860
8880
8900
λ [A]

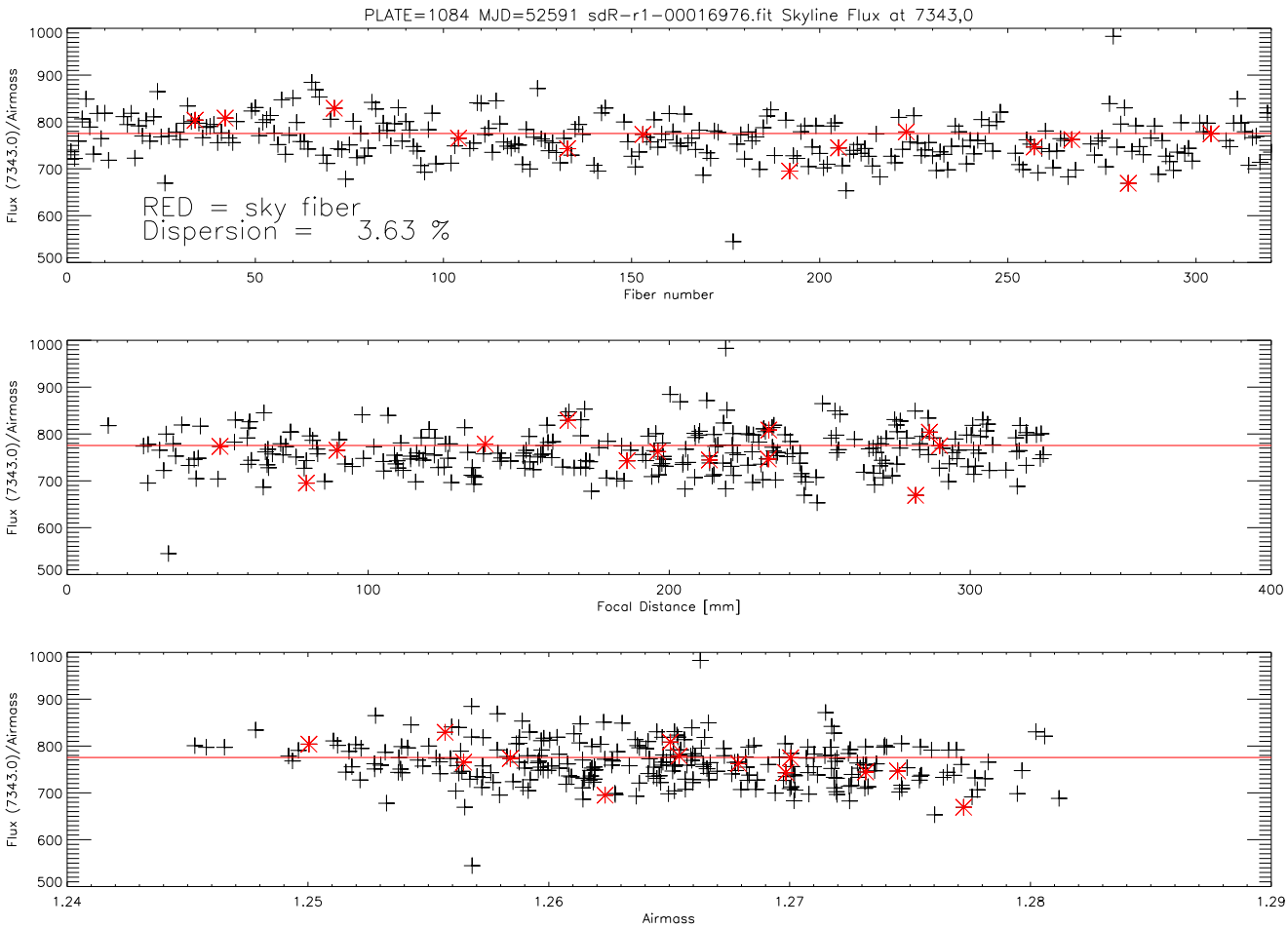

Number of sky fibers = 13
PLATE=1084 MJD=52591 sdR-r1-00016976.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200
0
1
2
3
4
5

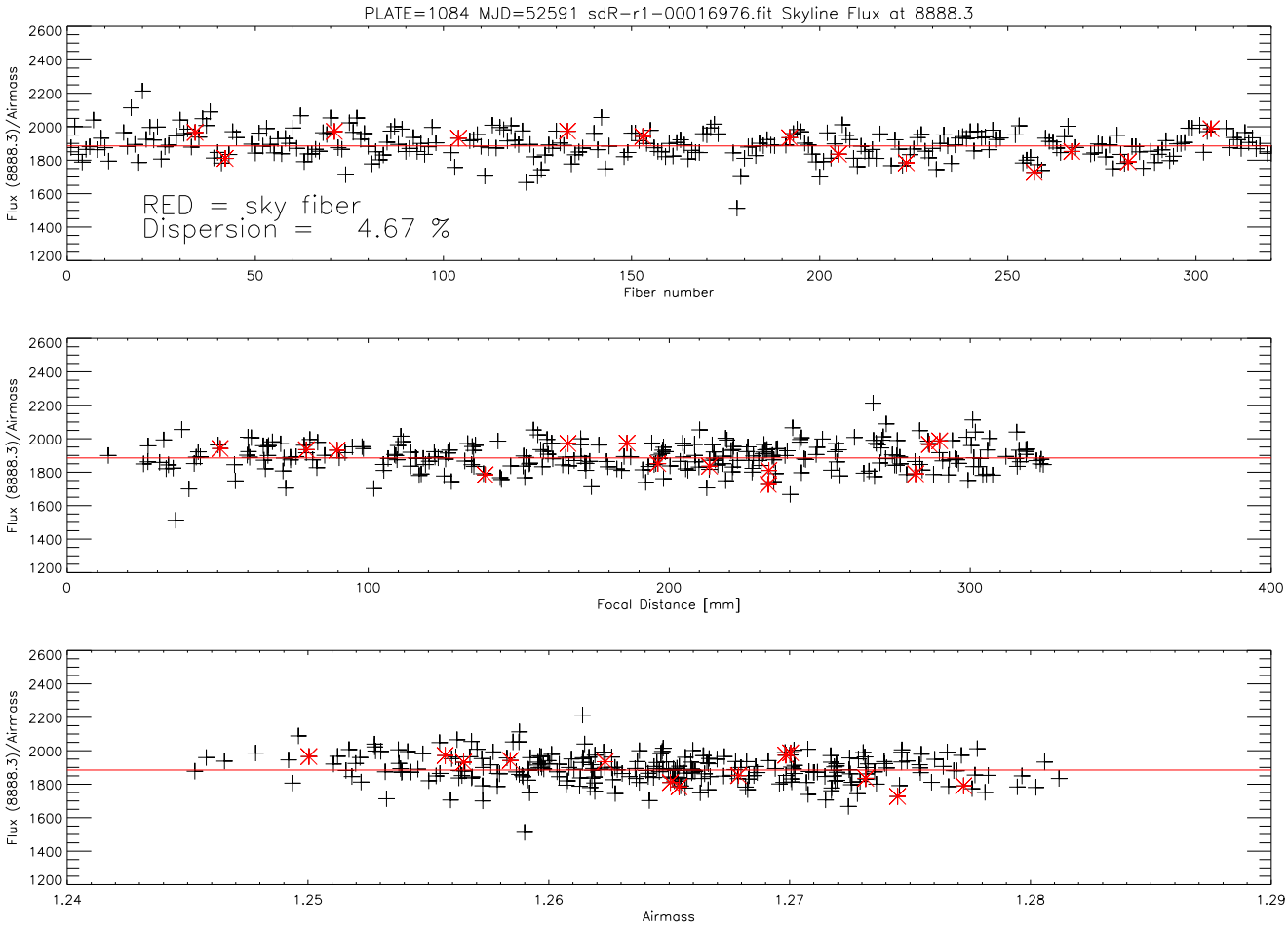

PLATE=1084 MJD=52591 sdR-r1-00016976.fit 2D Sky-subtraction Sky Fibers
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
2
1
0
−1
−2
50
100
150
200
250
300
Fiber number

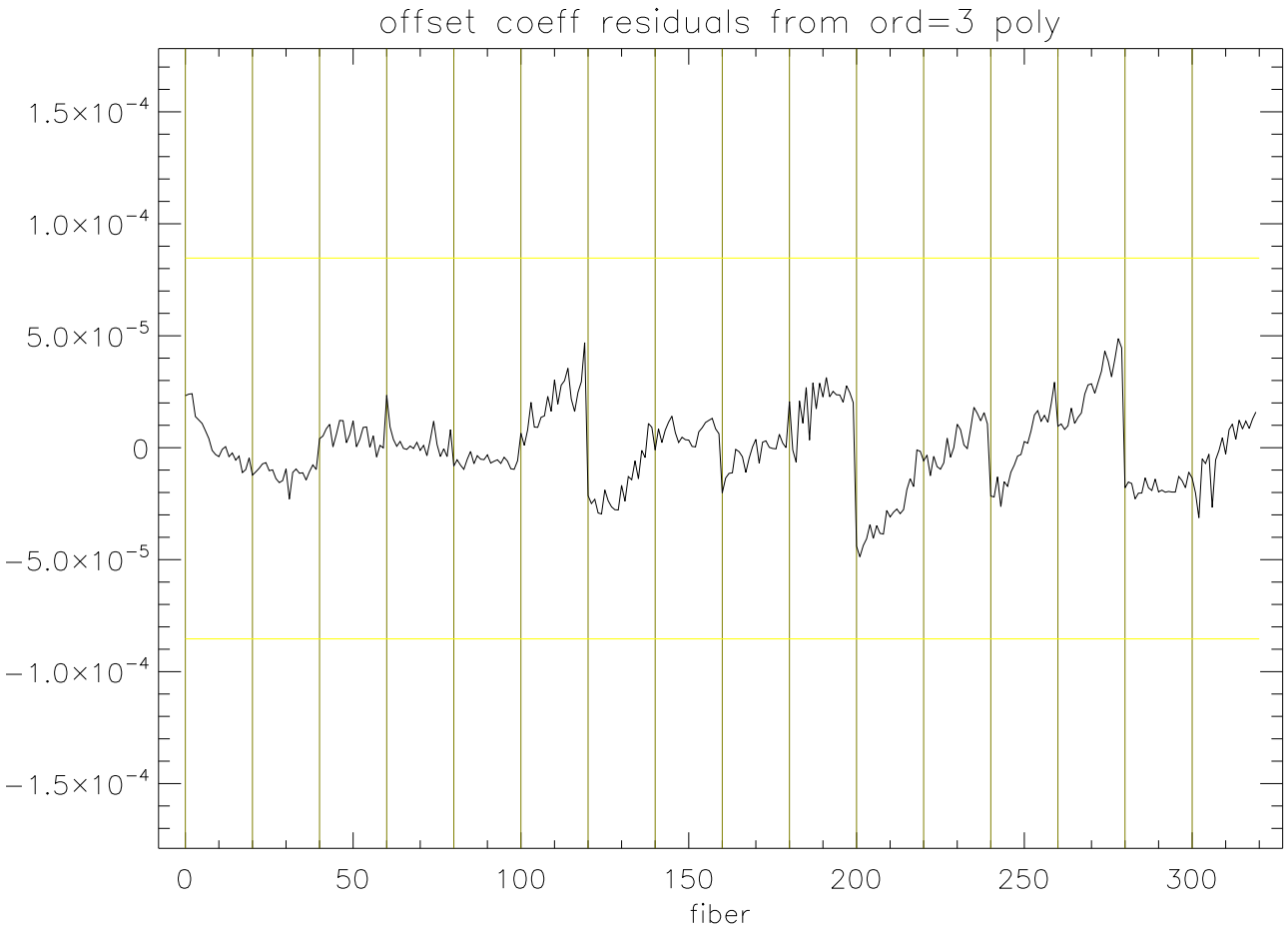

PLATE=1084 MJD=52591 sdR-r1-00016976.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
1500
1000
500
0
−500
8820
8840
8860
8880
8900
λ [A]

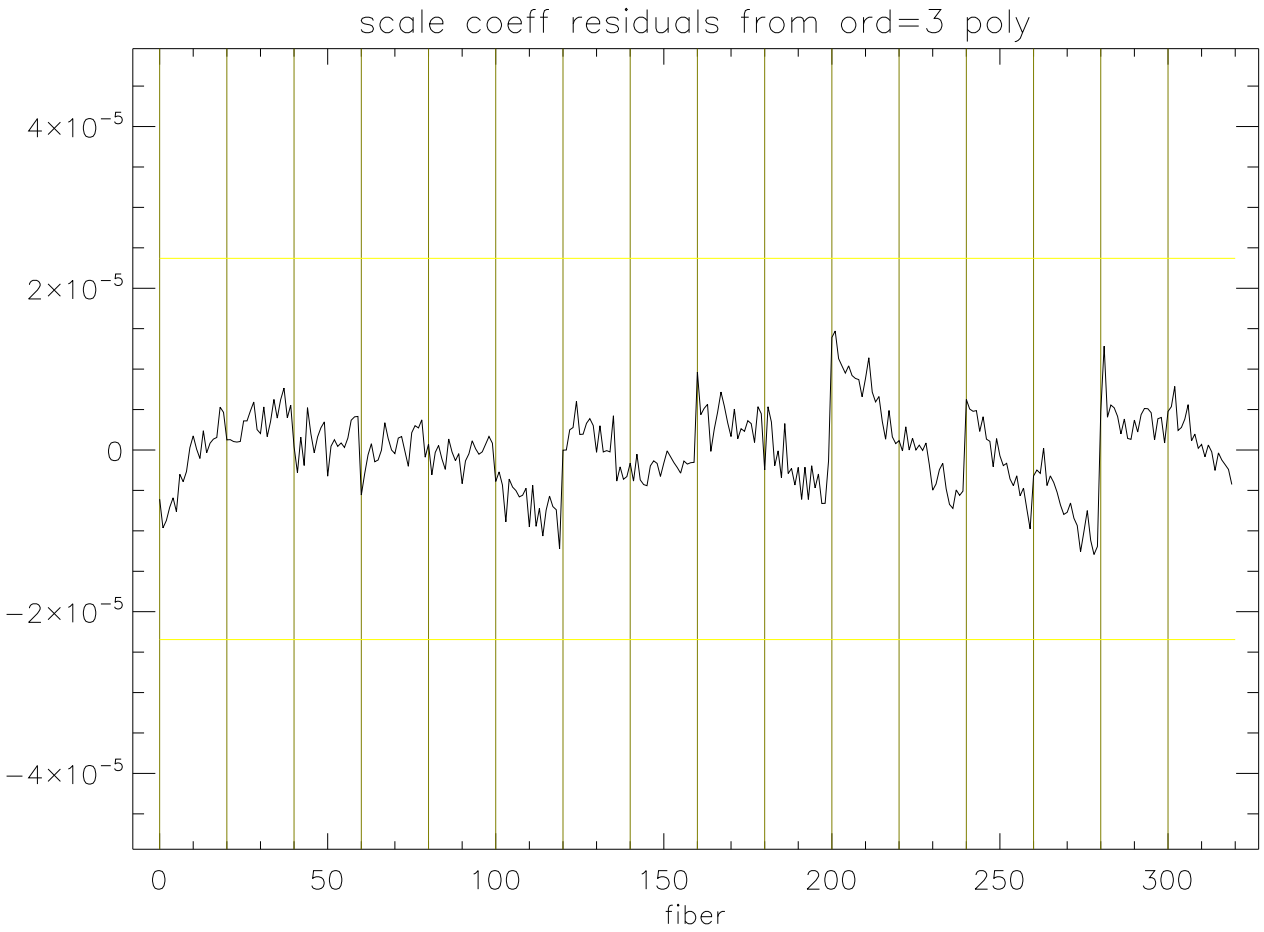

PLATE=1084 MJD=52591 sdR-r1-00016976.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
150
100
50
0
−50
−100
−150
8820
8840
8860
8880
8900
λ [A]

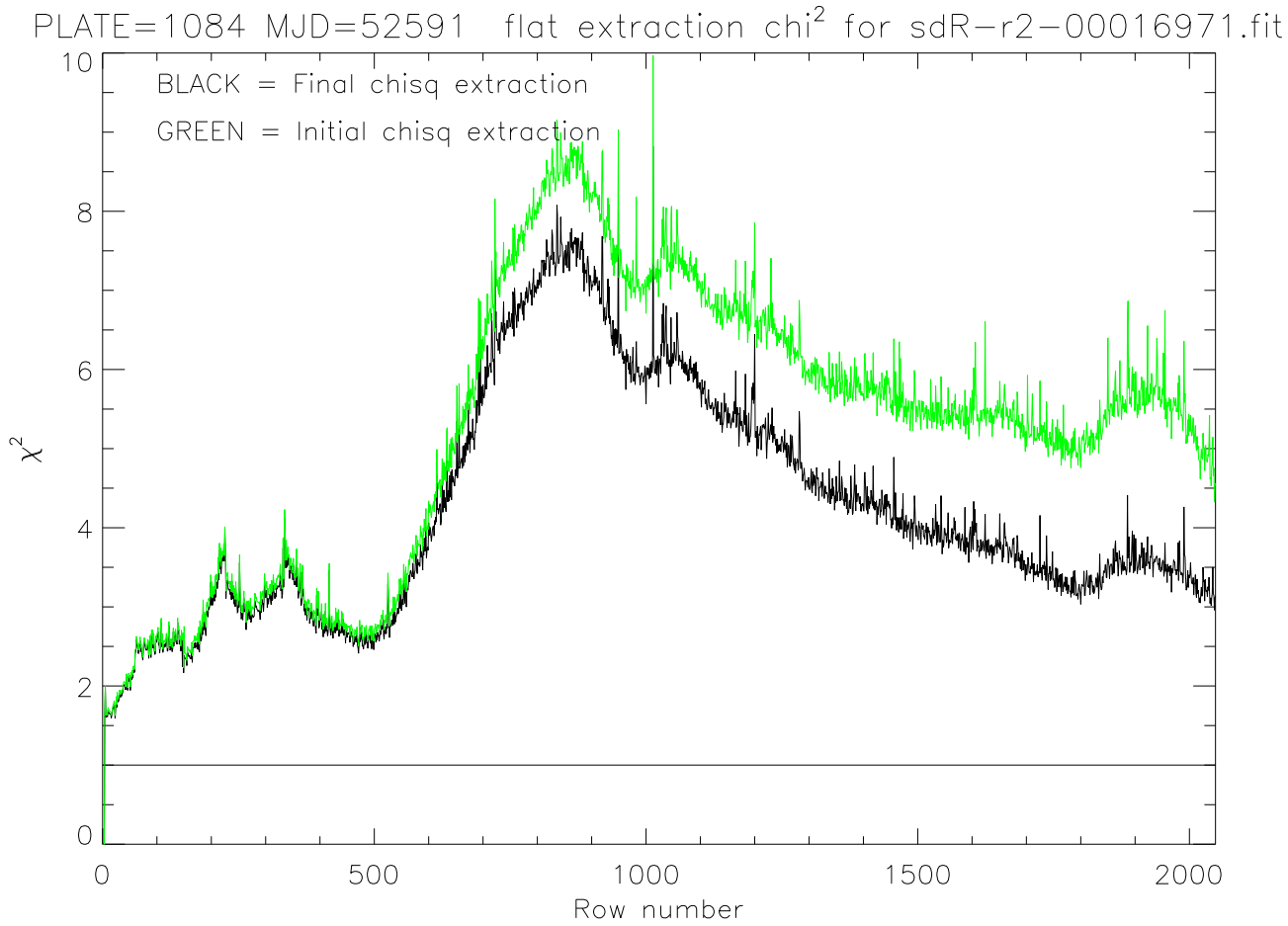

Number of sky fibers = 13
PLATE=1084 MJD=52591 sdR-r1-00016976.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200
0
1
2
3
4
5

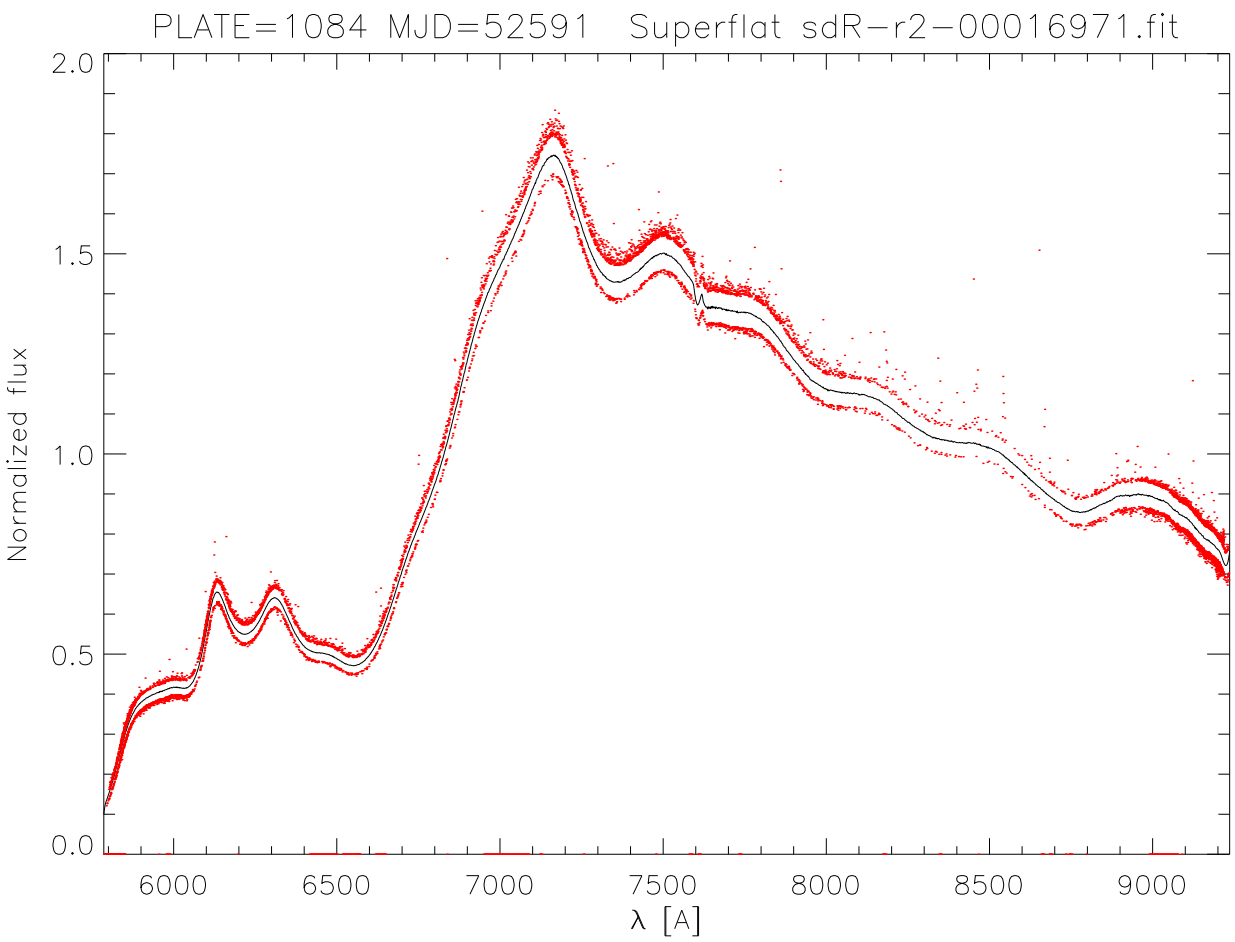

PLATE=1084 MJD=52591 sdR-r1-00016976.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 3.63 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

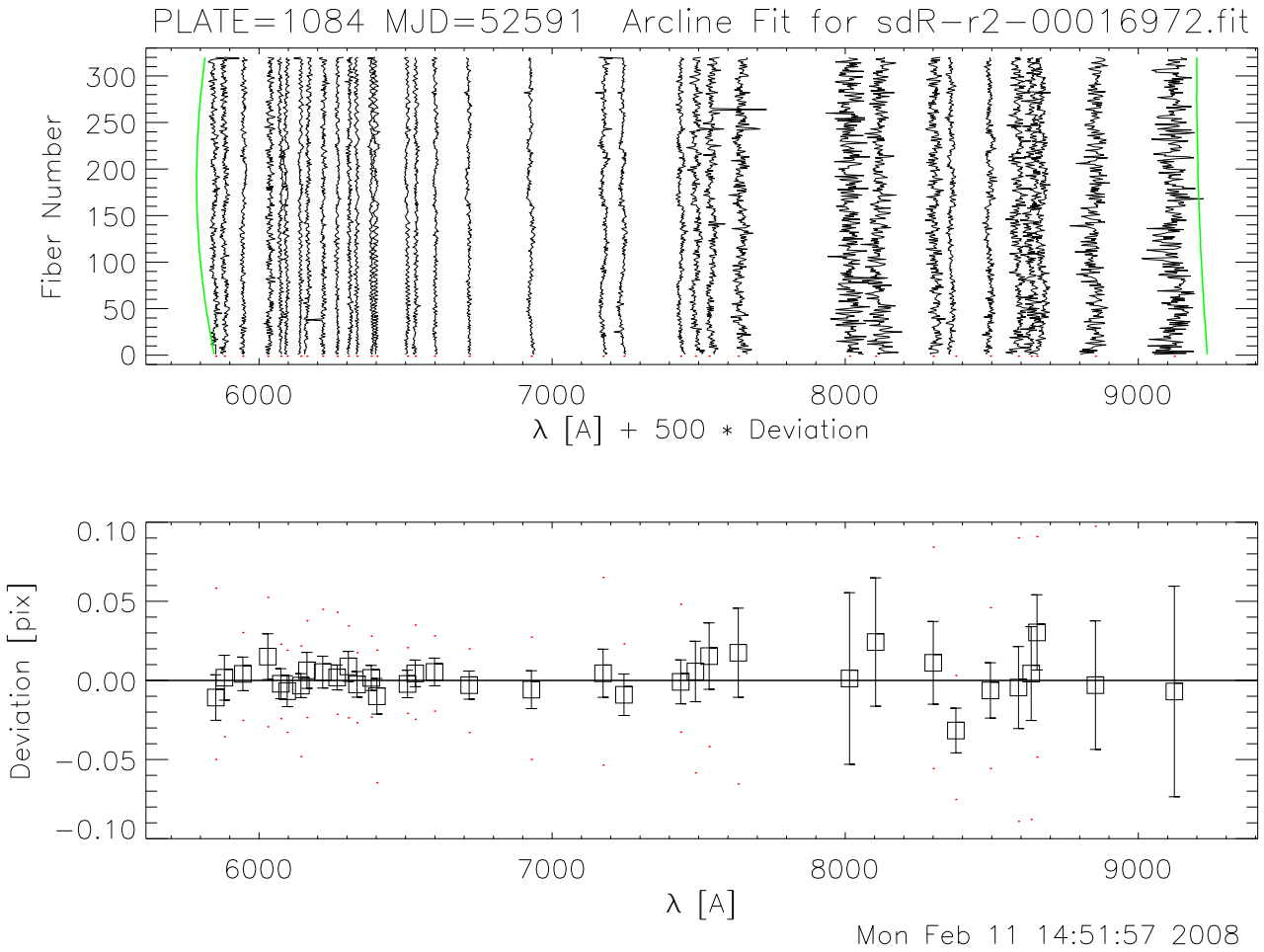

PLATE=1084 MJD=52591 sdR-r1-00016976.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
RED = sky fiber
Dispersion = 4.67 %
Fiber number
Focal Distance [mm]
Airmass

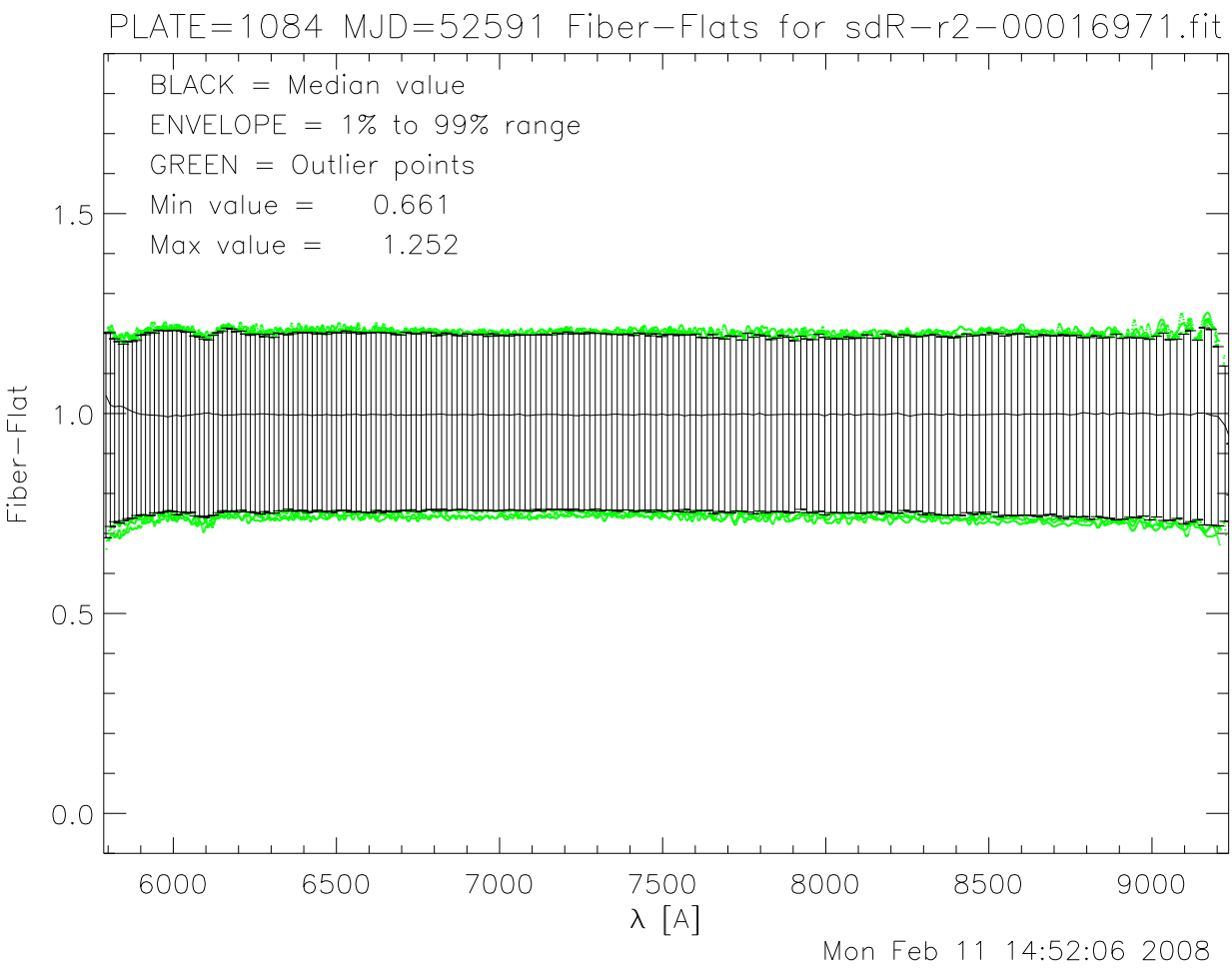

offset coeff residuals from ord=3 poly
1.5×10⁻⁴
1.0×10⁻⁴
5.0×10⁻⁵
0
−5.0×10⁻⁵
−1.0×10⁻⁴
−1.5×10⁻⁴
0
50
100
150
200
250
300
fiber

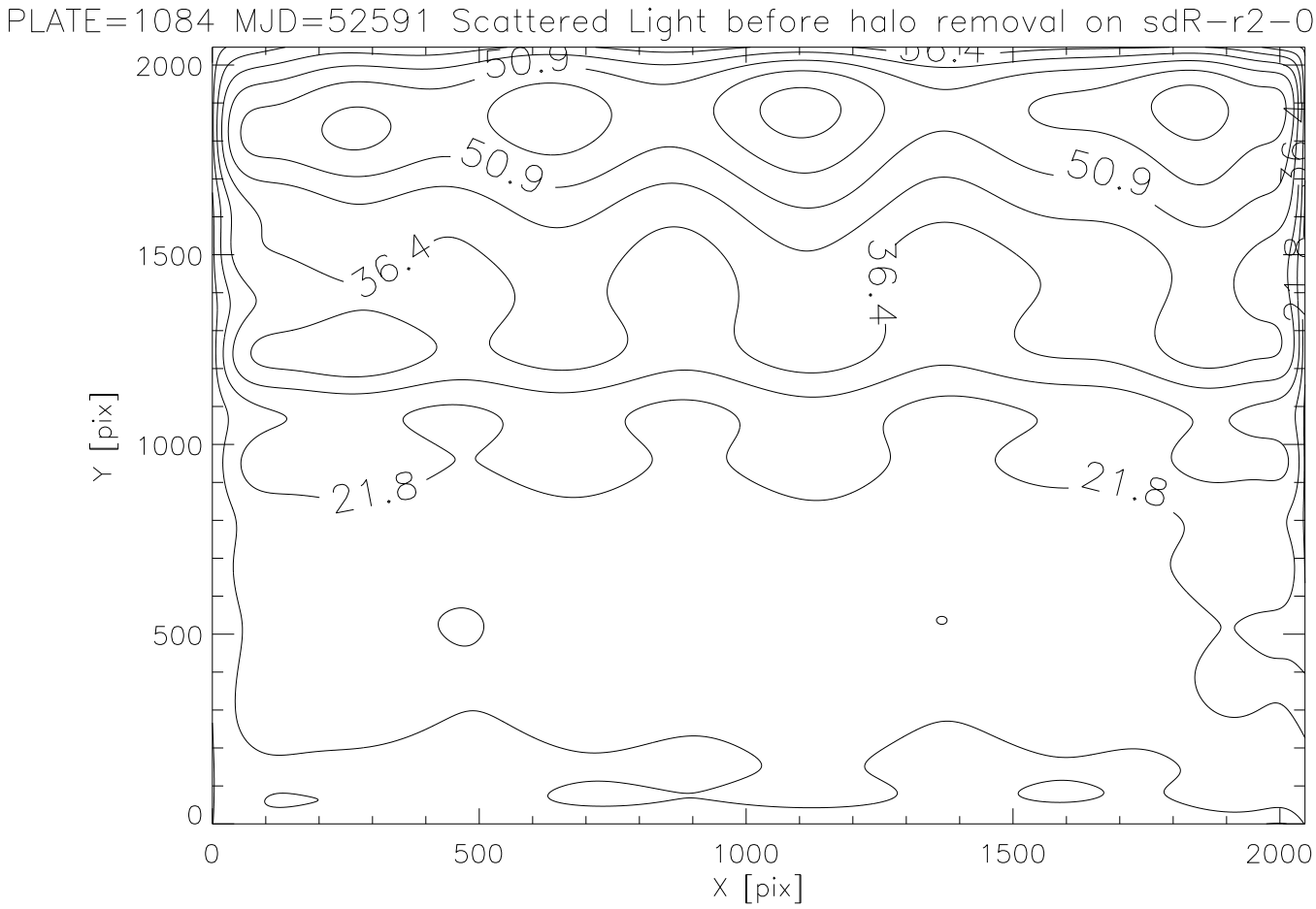

scale coeff residuals from ord=3 poly
4×10⁻⁵
2×10⁻⁵
0
−2×10⁻⁵
−4×10⁻⁵
0
50
100
150
200
250
300
fiber

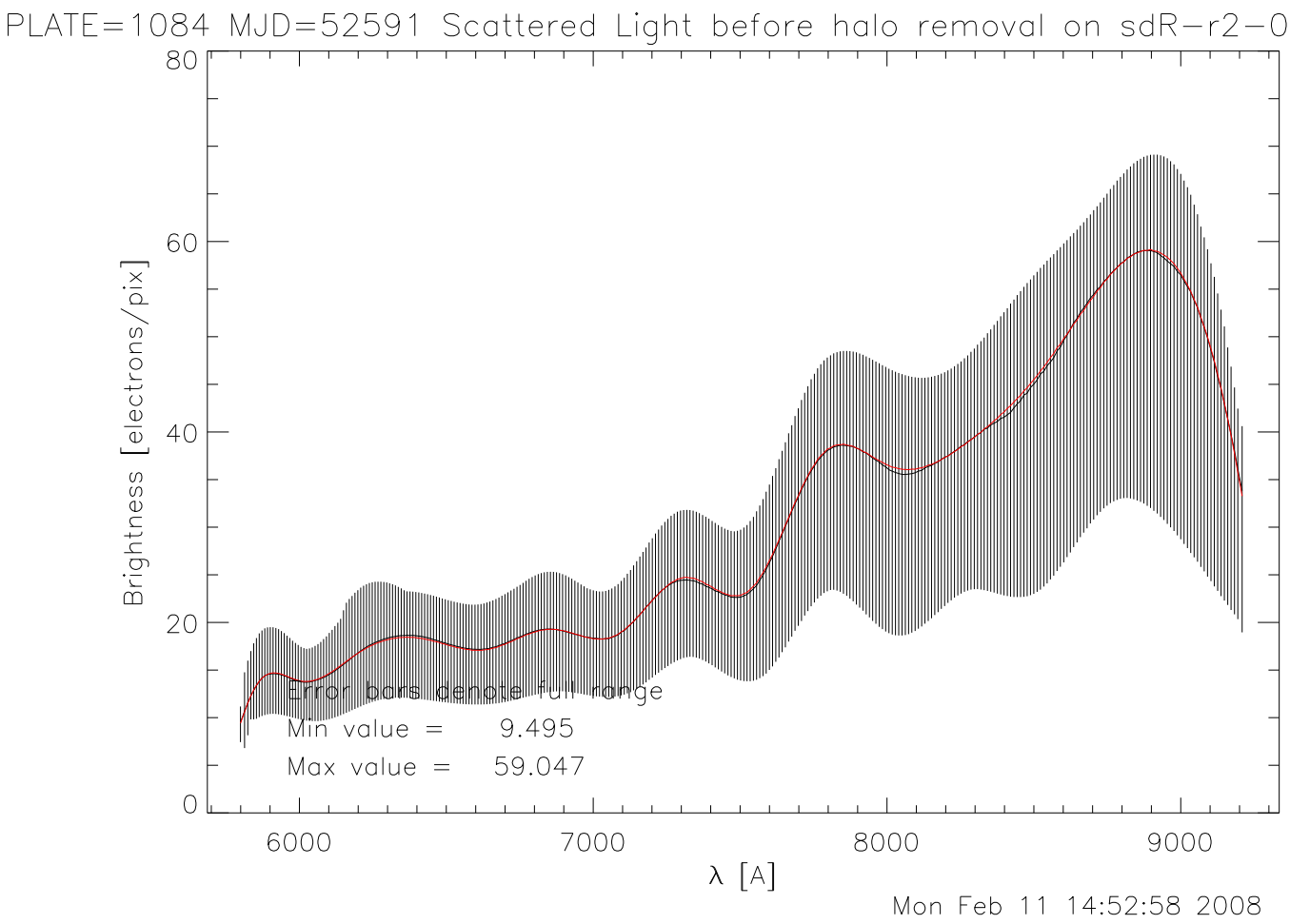

PLATE=1084 MJD=52591 flat extraction chi^2 for sdR-r2-00016971.fit
BLACK = Final chisq extraction
GREEN = Initial chisq extraction
χ^2
Row number
0
2
4
6
8
10
0
500
1000
1500
2000

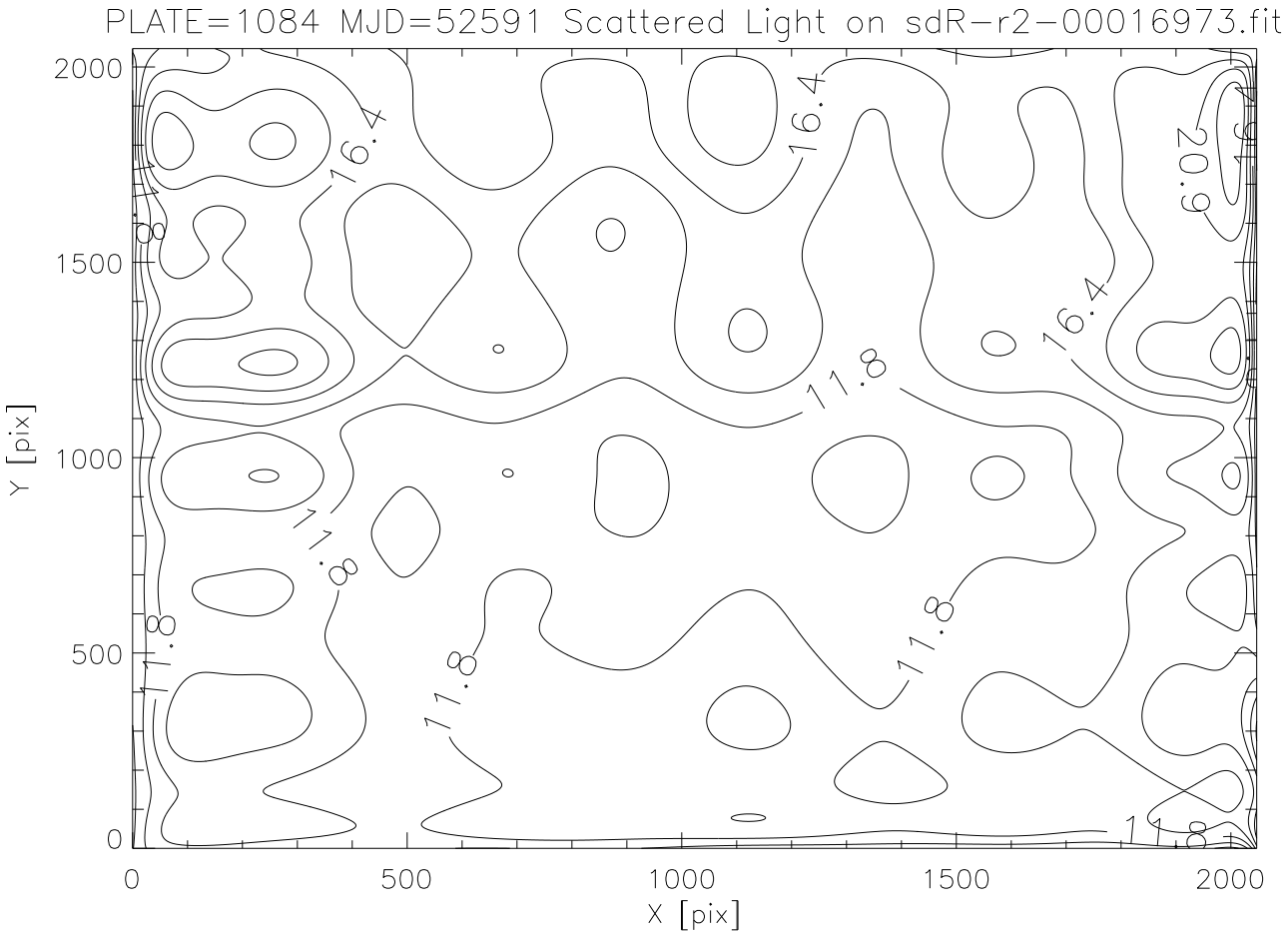

PLATE=1084 MJD=52591 Superflat sdR-r2-00016971.fit
Normalized flux
2.0
1.5
1.0
0.5
0.0
6000
6500
7000
7500
8000
8500
9000
λ [A]

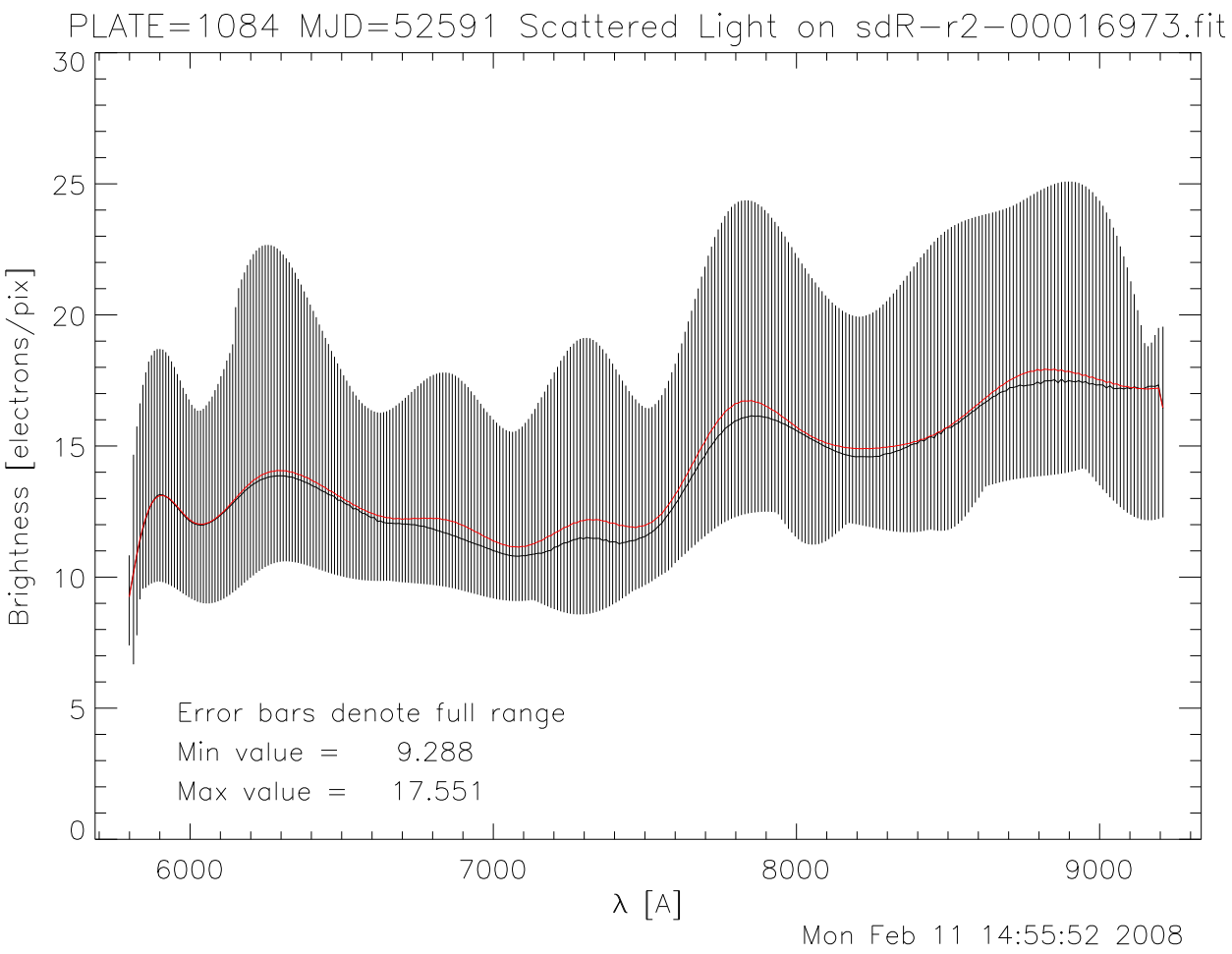

PLATE=1084 MJD=52591 Arcline Fit for sdR-r2-00016972.fit
Fiber Number
300
250
200
150
100
50
0
6000
7000
8000
9000
λ [A] + 500 * Deviation
Deviation [pix]
0.10
0.05
0.00
−0.05
−0.10
6000
7000
8000
9000
λ [A]
Mon Feb 11 14:51:57 2008

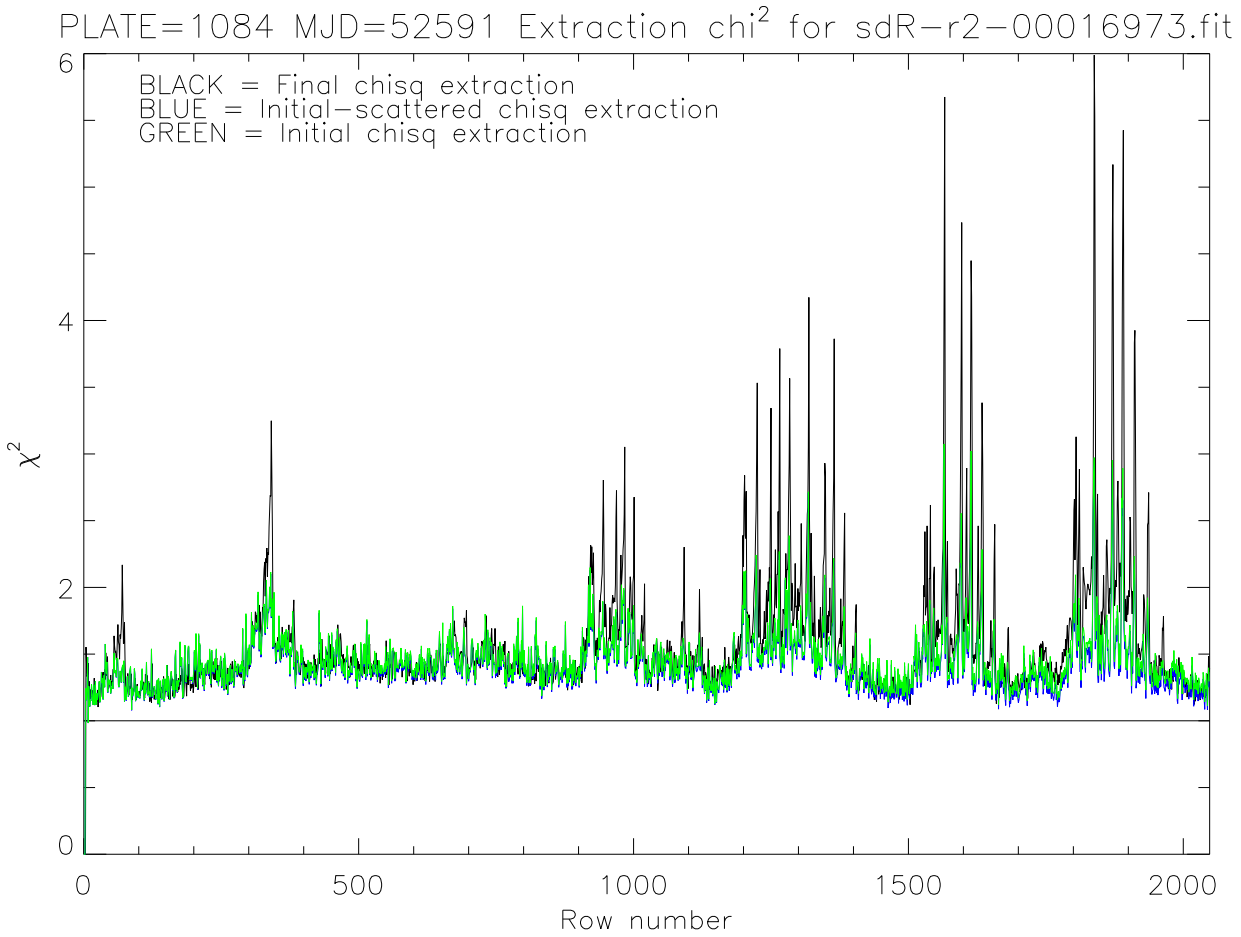

PLATE=1084 MJD=52591 Fiber−Flats for sdR−r2−00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.661
Max value = 1.252
Fiber−Flat
1.5
1.0
0.5
0.0
6000
6500
7000
7500
8000
8500
9000
λ [A]
Mon Feb 11 14:52:06 2008

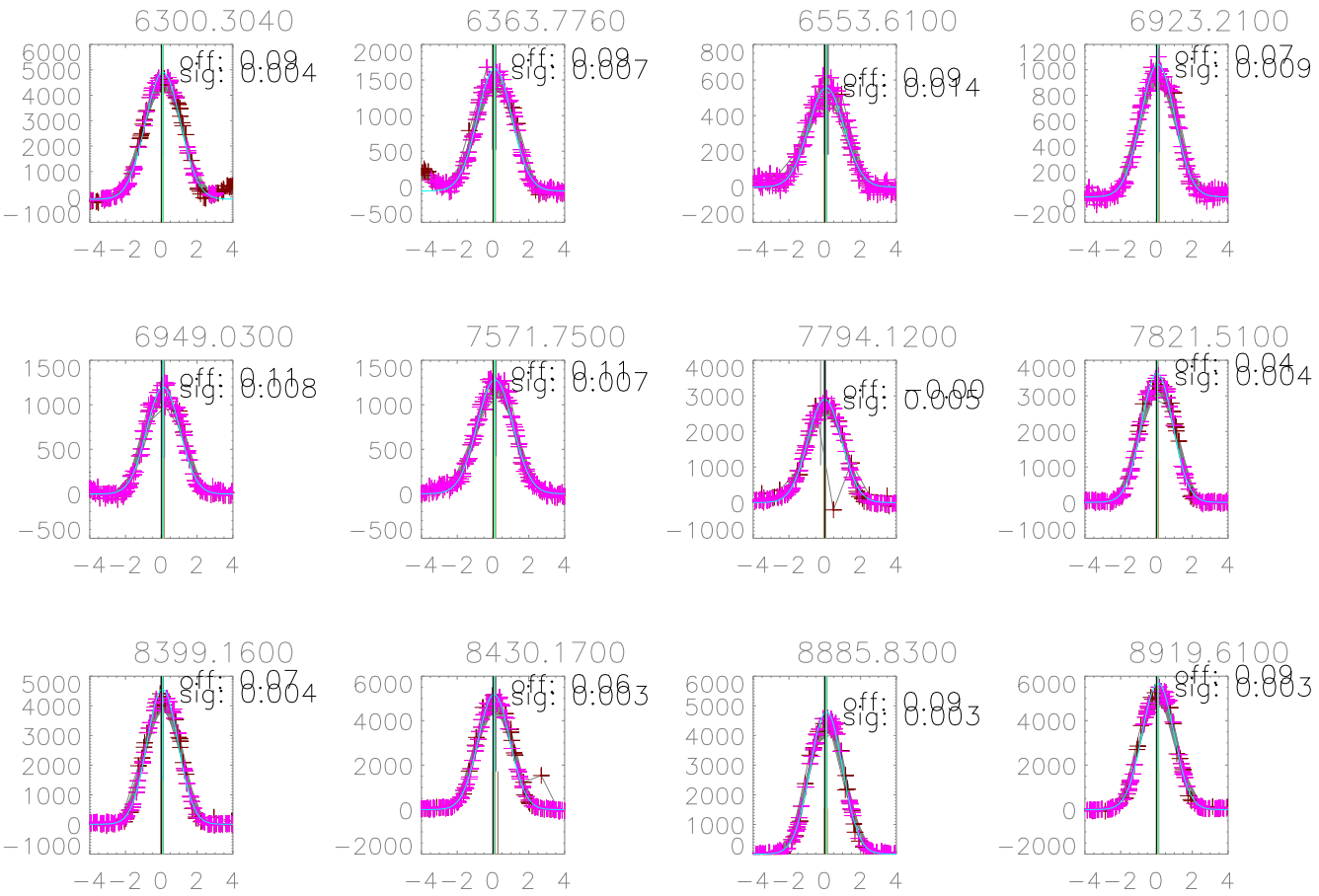

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r2-00016973.fi
50.9
50.9
50.9
36.4
36.4
21.8
21.8
Y [pix]
X [pix]
0
500
1000
1500
2000

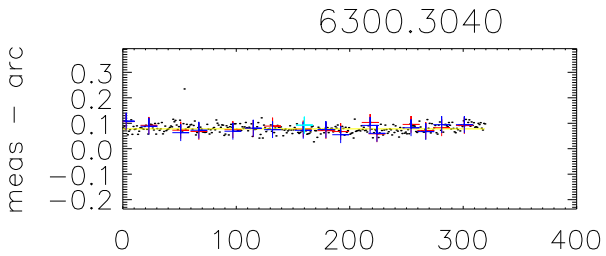

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r2-00016973.fi
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 9.495
Max value = 59.047
Mon Feb 11 14:52:58 2008

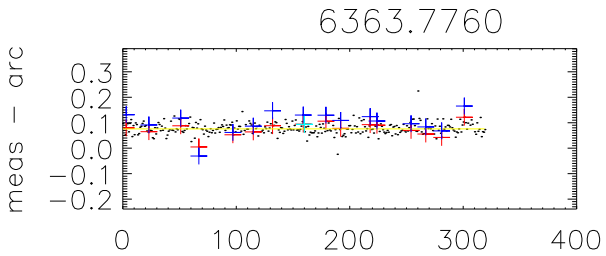

PLATE=1084 MJD=52591 Scattered Light on sdR-r2-00016973.fit
Y [pix]
X [pix]
0
500
1000
1500
2000
16.4
11.8
20.9

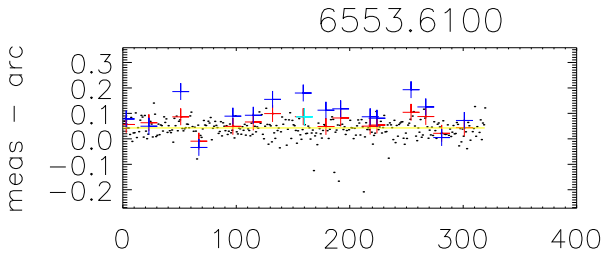

PLATE=1084 MJD=52591 Scattered Light on sdR-r2-00016973.fit
Brightness [electrons/pix]
30
25
20
15
10
5
0
6000
7000
8000
9000
λ [A]
Error bars denote full range
Min value = 9.288
Max value = 17.551
Mon Feb 11 14:55:52 2008

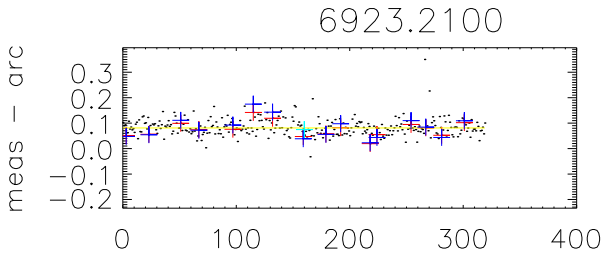

PLATE=1084 MJD=52591 Extraction chi^2 for sdR-r2-00016973.fit
BLACK = Final chisq extraction
BLUE = Initial-scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
0
2
4
6
0
500
1000
1500
2000
Row number

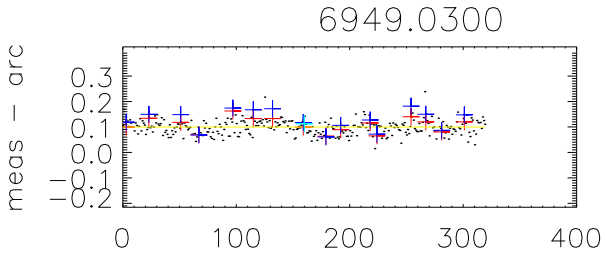

6300.3040
off: 0.09
sig: 0.004
6363.7760
off: 0.08
sig: 0.007
6553.6100
off: 0.09
sig: 0.014
6923.2100
off: 0.07
sig: 0.009
6949.0300
off: 0.11
sig: 0.008
7571.7500
off: 0.11
sig: 0.007
7794.1200
off: -0.00
sig: 0.005
7821.5100
off: 0.04
sig: 0.004
8399.1600
off: 0.07
sig: 0.004
8430.1700
off: 0.06
sig: 0.003
8885.8300
off: 0.09
sig: 0.003
8919.6100
off: 0.09
sig: 0.003

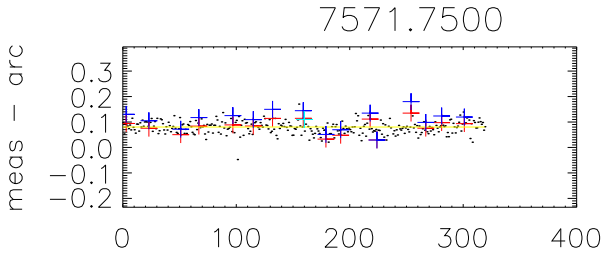

6300.3040
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

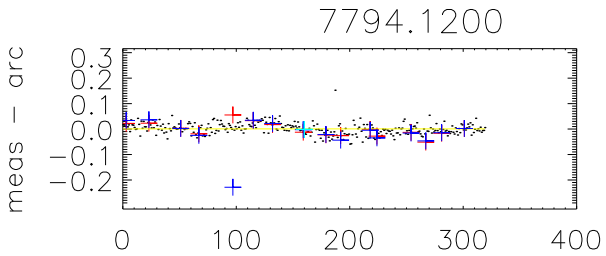

6363.7760
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

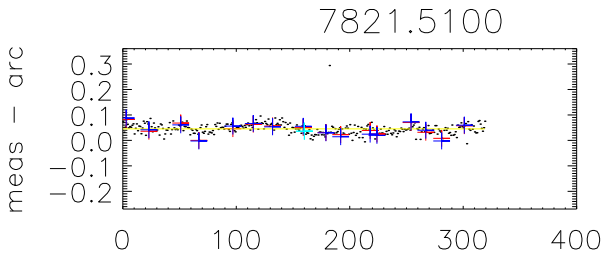

6553.6100
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

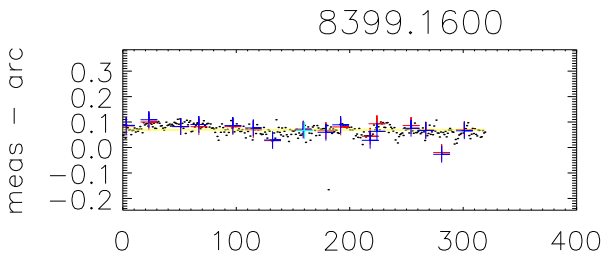

6923.2100
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

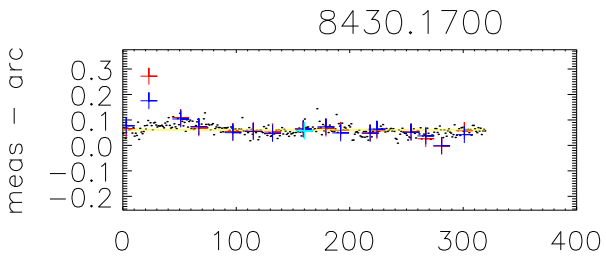

6949.0300
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

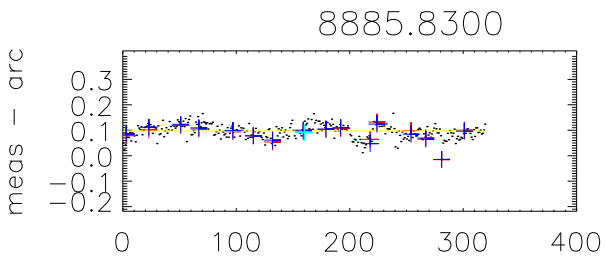

7571.7500
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

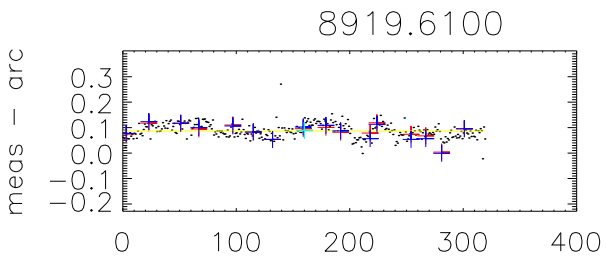

7794.1200
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

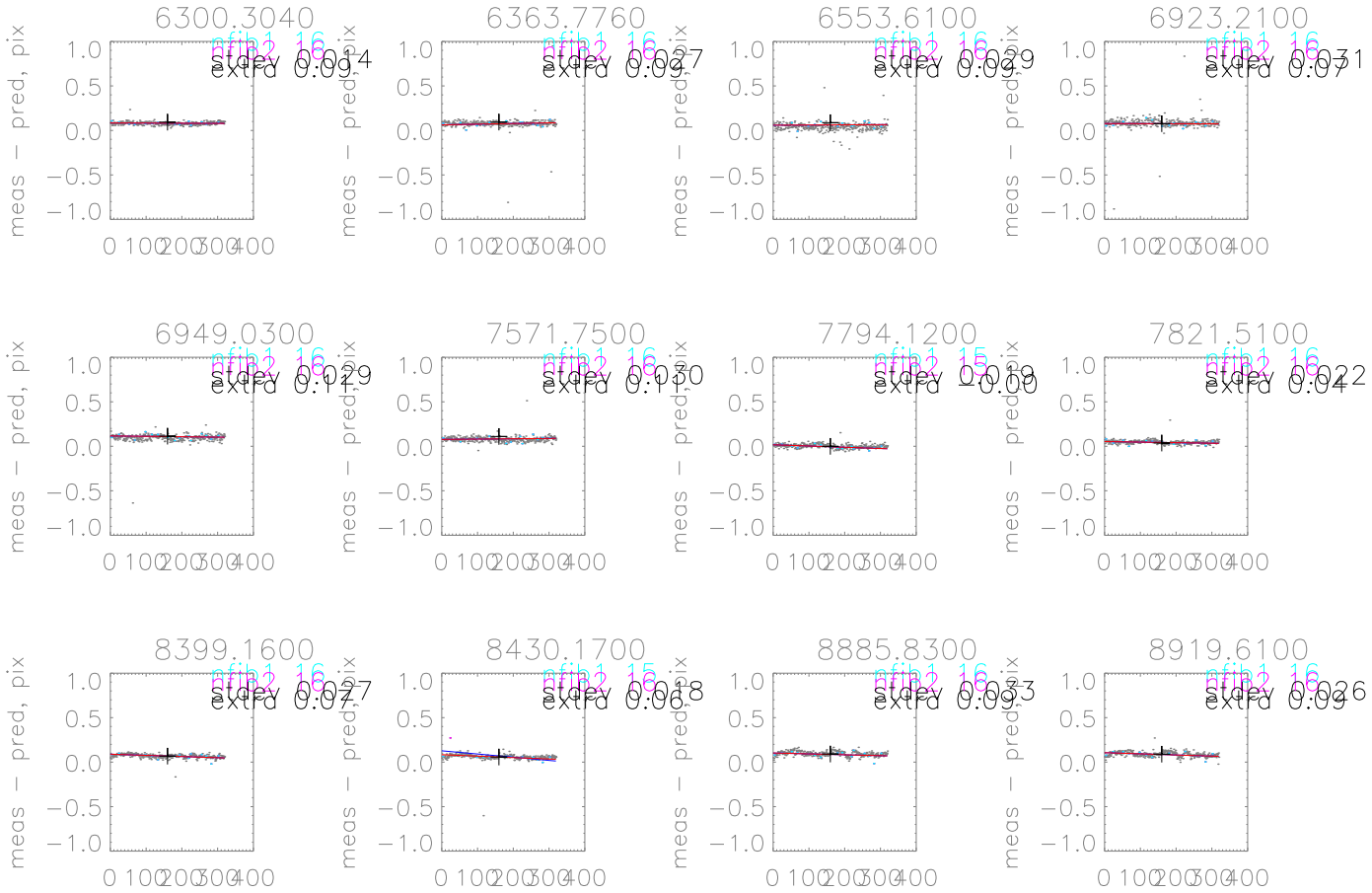

7821.5100
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

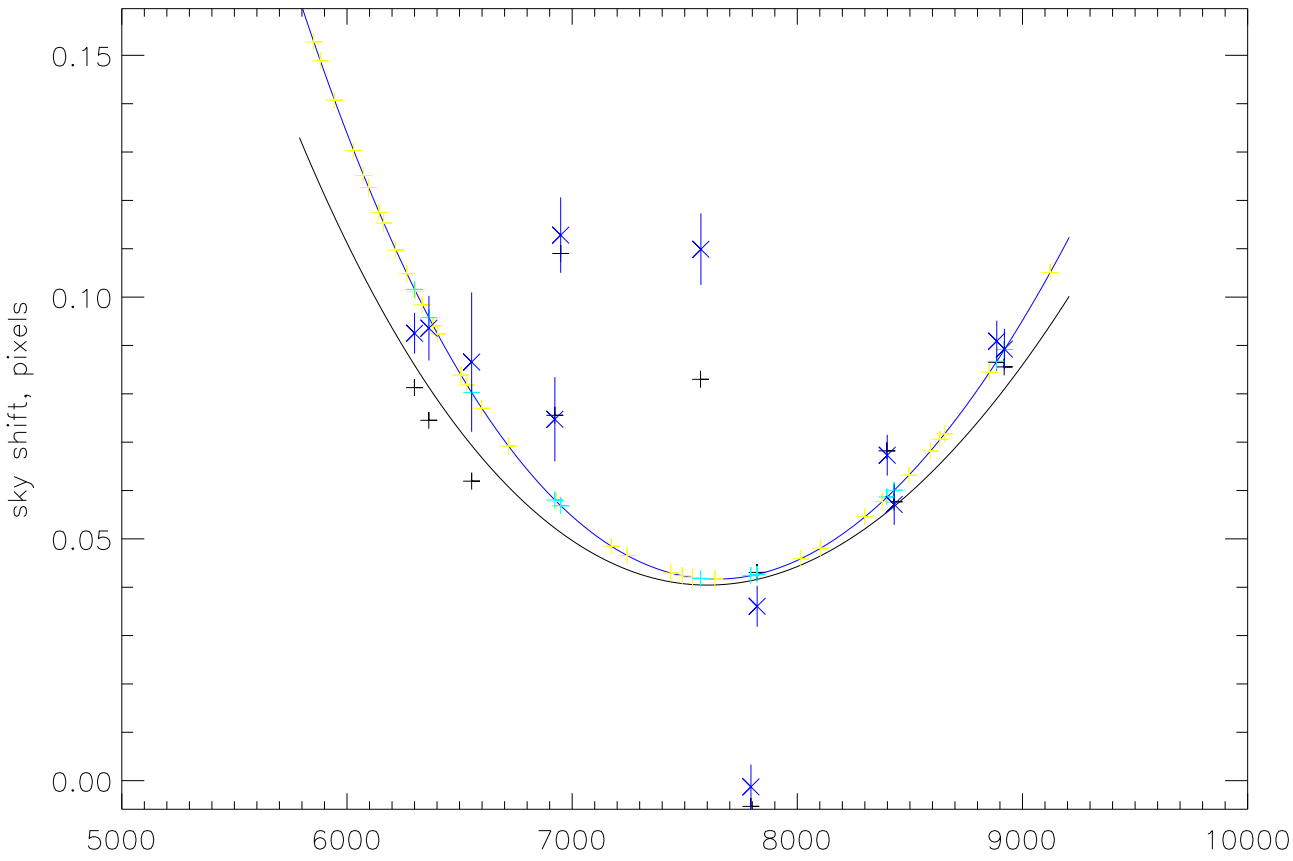

8399.1600
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

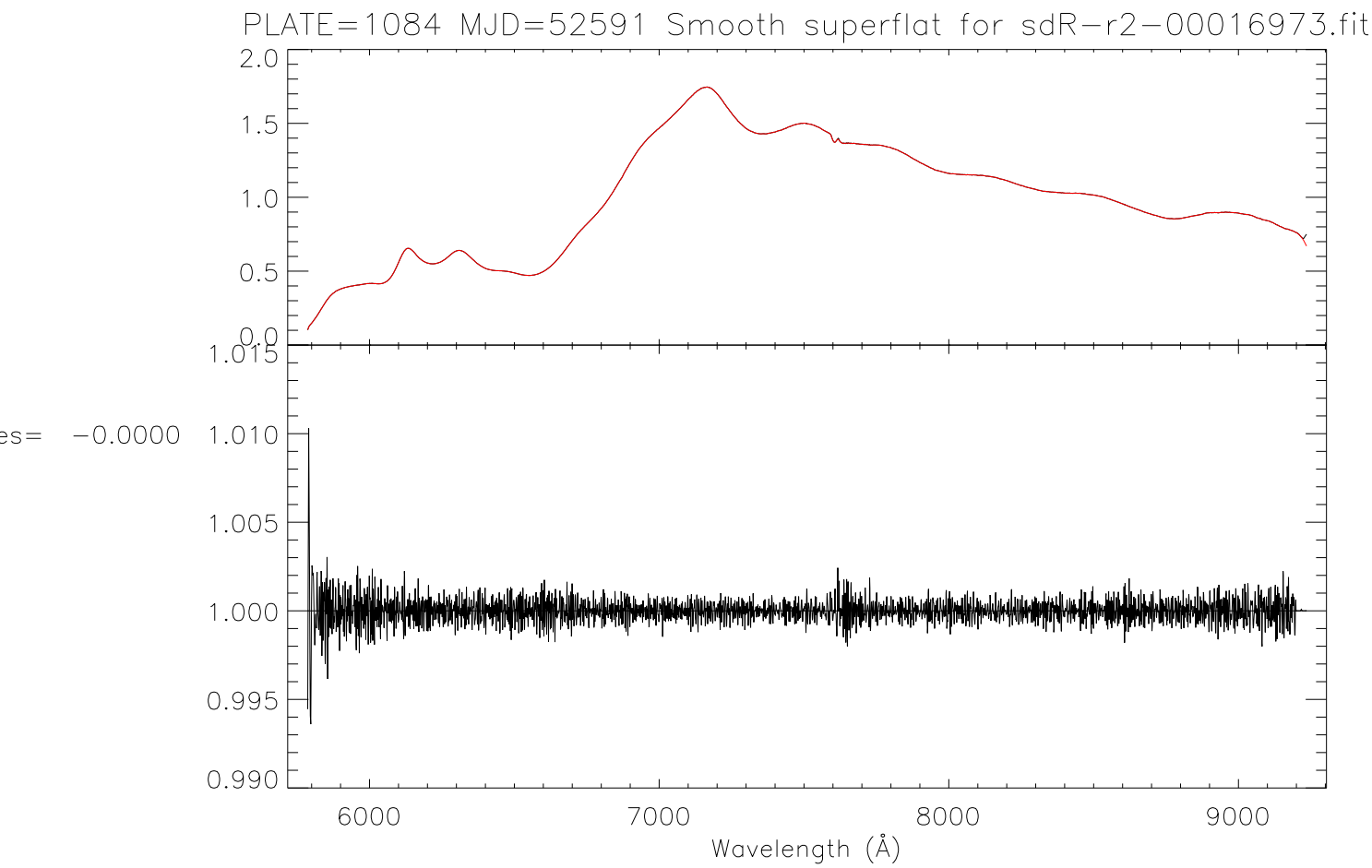

8430.1700
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400


8885.8300
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

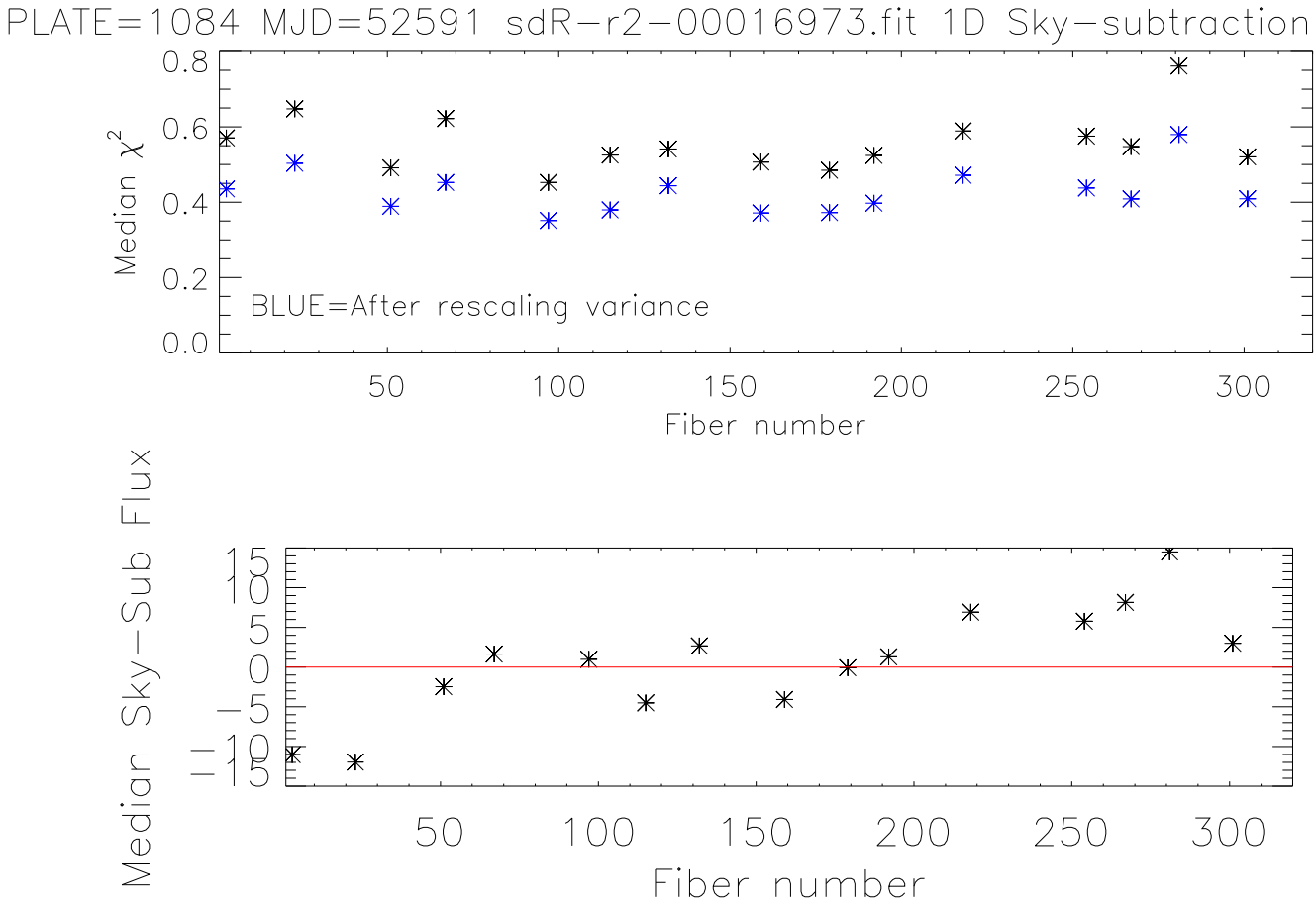

8919.6100
meas − arc
0.3
0.2
0.1
0.0
−0.1
−0.2
0
100
200
300
400

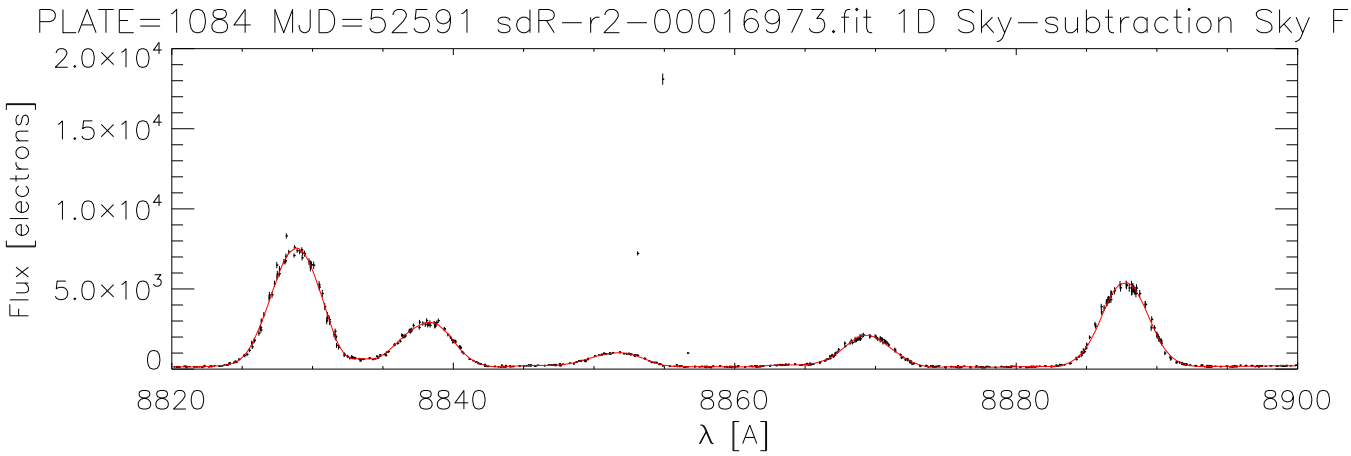

6300.3040
mfib1 16
mfib2 16
stdev 0.014
extra 0.09
6363.7760
mfib1 16
mfib2 16
stdev 0.027
extra 0.06
6553.6100
mfib1 16
mfib2 16
stdev 0.029
extra 0.04
6923.2100
mfib1 16
mfib2 16
stdev 0.031
extra 0.07
6949.0300
mfib1 16
mfib2 16
stdev 0.029
extra 0.12
7571.7500
mfib1 16
mfib2 16
stdev 0.030
extra 0.11
7794.1200
mfib1 15
mfib2 16
stdev 0.019
extra -0.00
7821.5100
mfib1 16
mfib2 16
stdev 0.022
extra 0.04
8399.1600
mfib1 16
mfib2 16
stdev 0.027
extra 0.07
8430.1700
mfib1 15
mfib2 16
stdev 0.048
extra 0.06
8885.8300
mfib1 16
mfib2 16
stdev 0.033
extra 0.09
8919.6100
mfib1 16
mfib2 16
stdev 0.026
extra 0.09
meas − pred, pix
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400

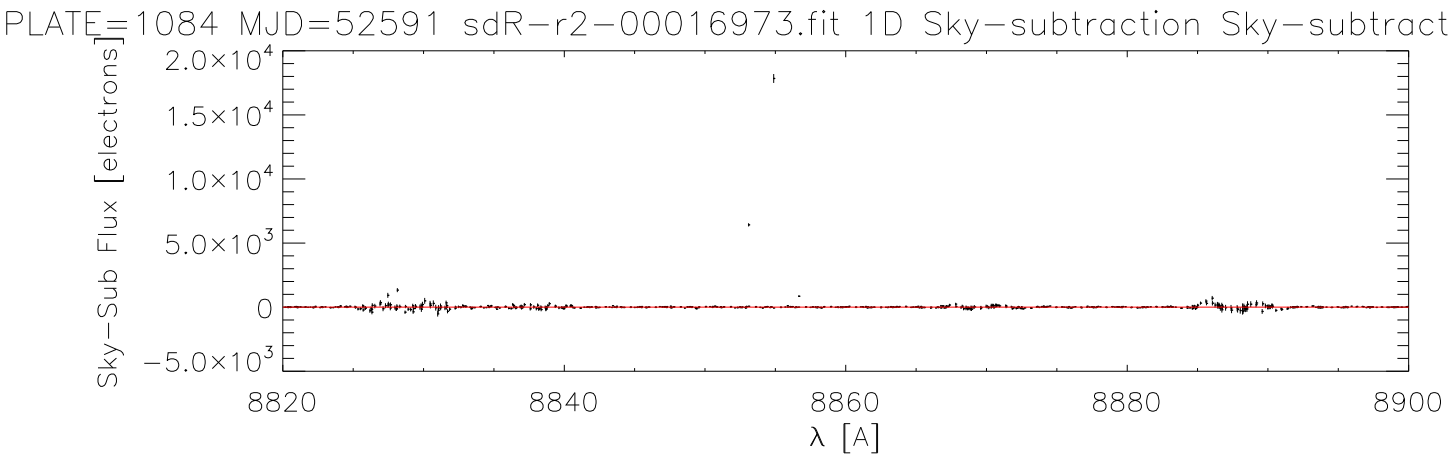

0.15
0.10
0.05
0.00
sky shift, pixels
5000
6000
7000
8000
9000
10000

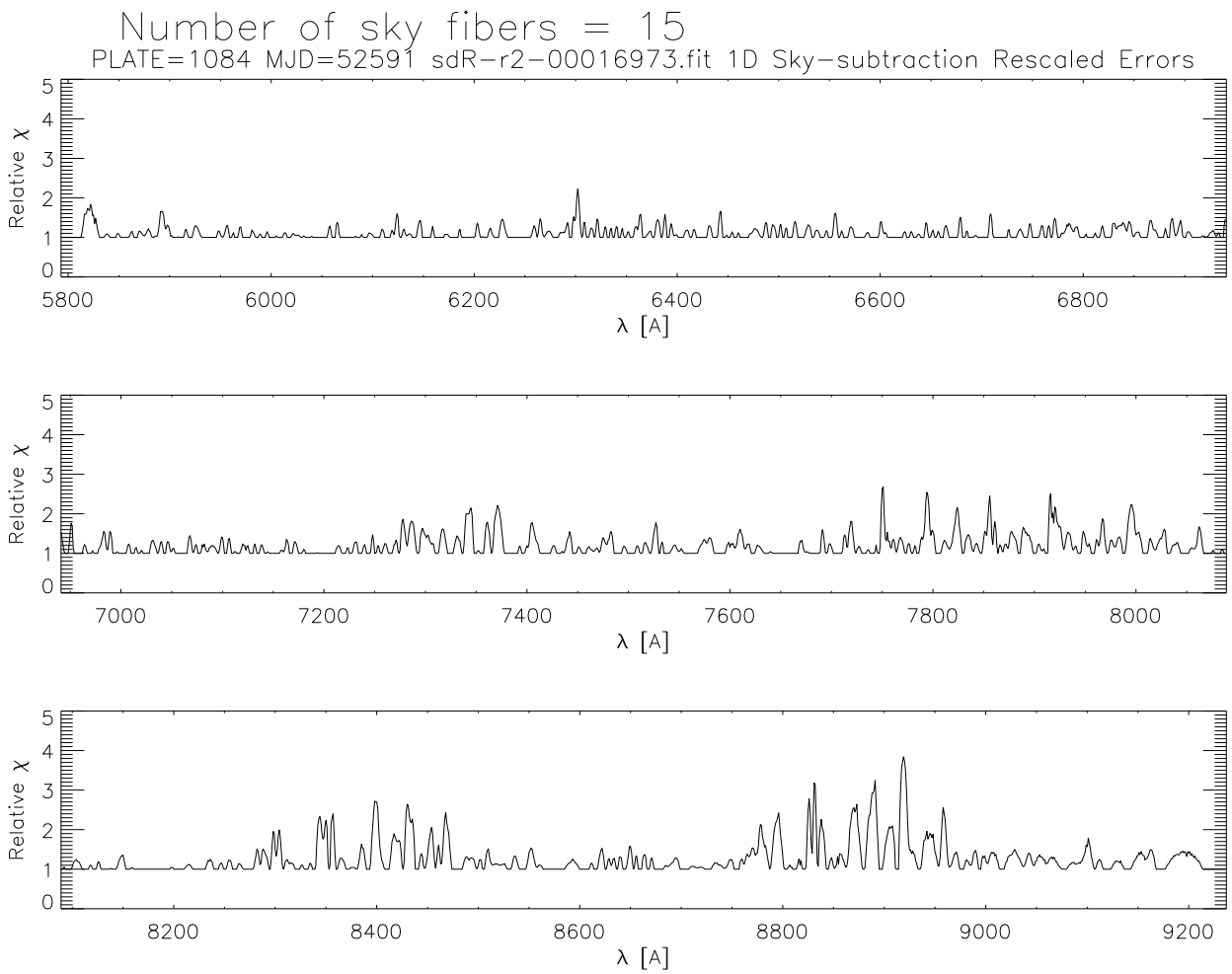

PLATE=1084 MJD=52591 Smooth superflat for sdR-r2-00016973.fit
2.0
1.5
1.0
0.5
0.0
1.015
1.010
1.005
1.000
0.995
0.990
6000
7000
8000
9000
Wavelength (Å)

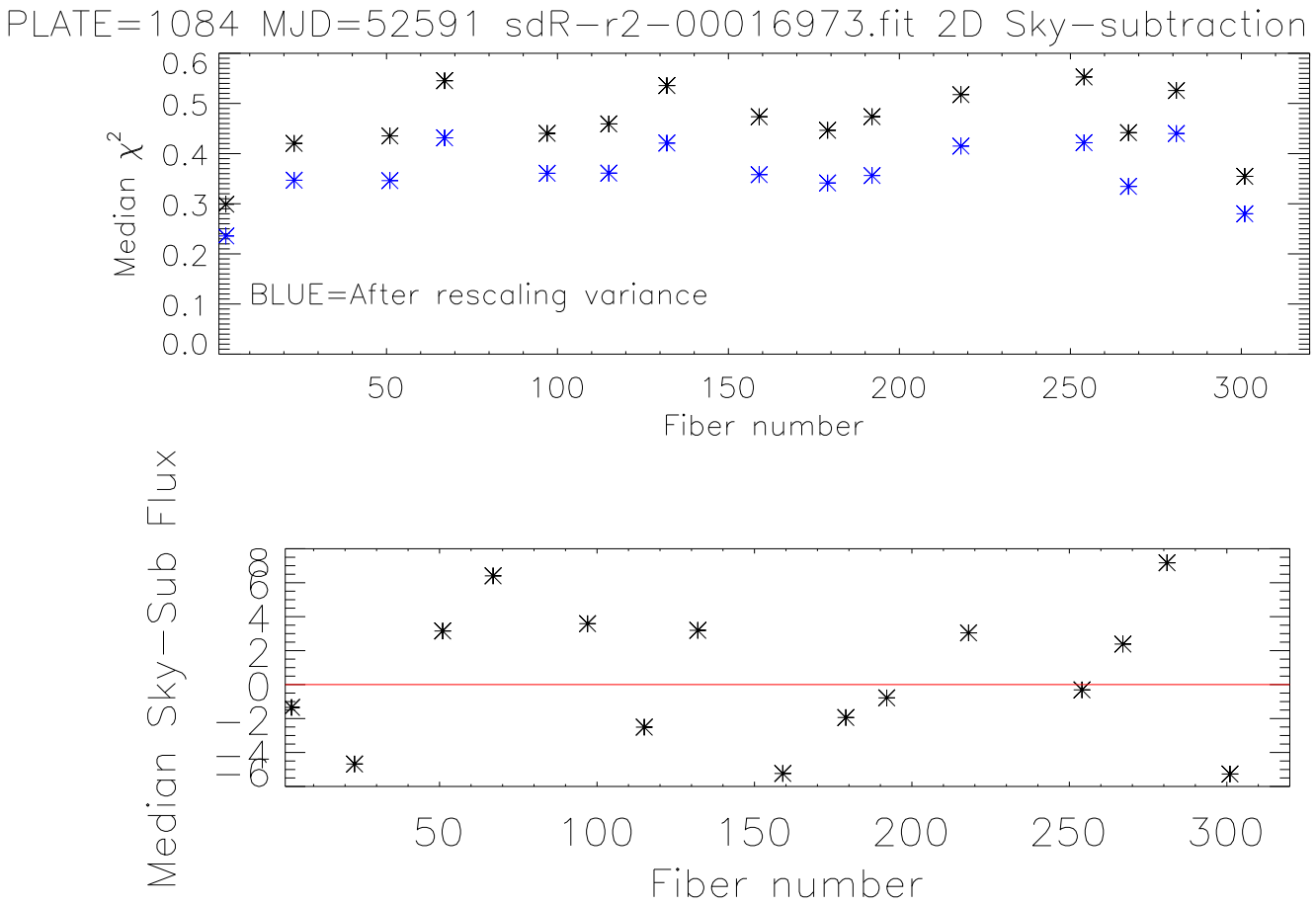
es= −0.0000

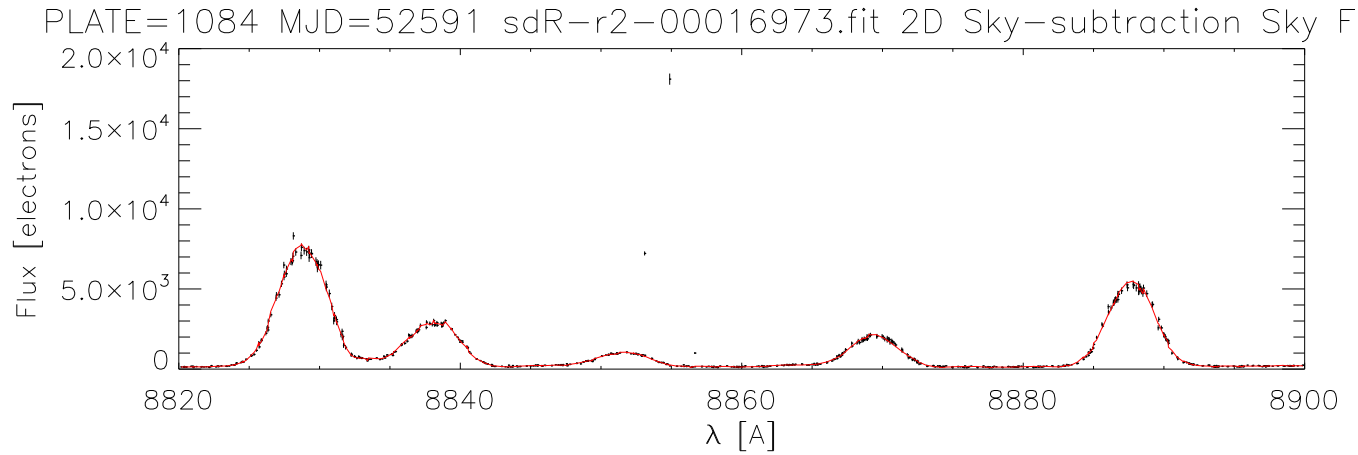

PLATE=1084 MJD=52591 sdR-r2-00016973.fit 1D Sky-subtraction Sky Fibers
Median χ^2
0.0
0.2
0.4
0.6
0.8
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
15
10
5
0
-5
-10
-15
50
100
150
200
250
300
Fiber number

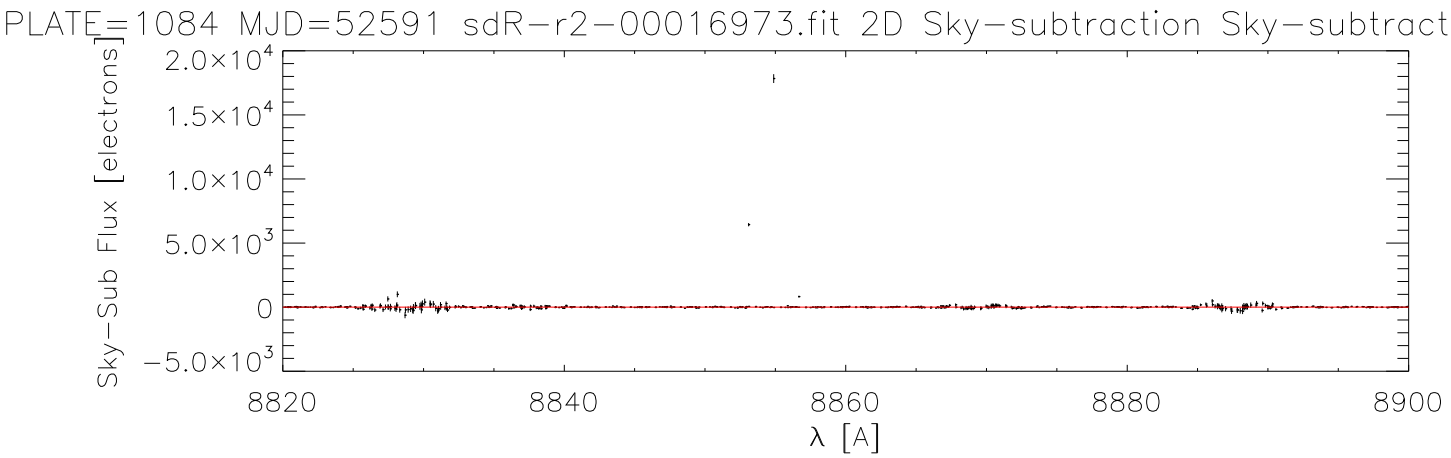

PLATE=1084 MJD=52591 sdR-r2-00016973.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
2.0×10^4
1.5×10^4
1.0×10^4
5.0×10^3
0
8820
8840
8860
8880
8900
λ [A]

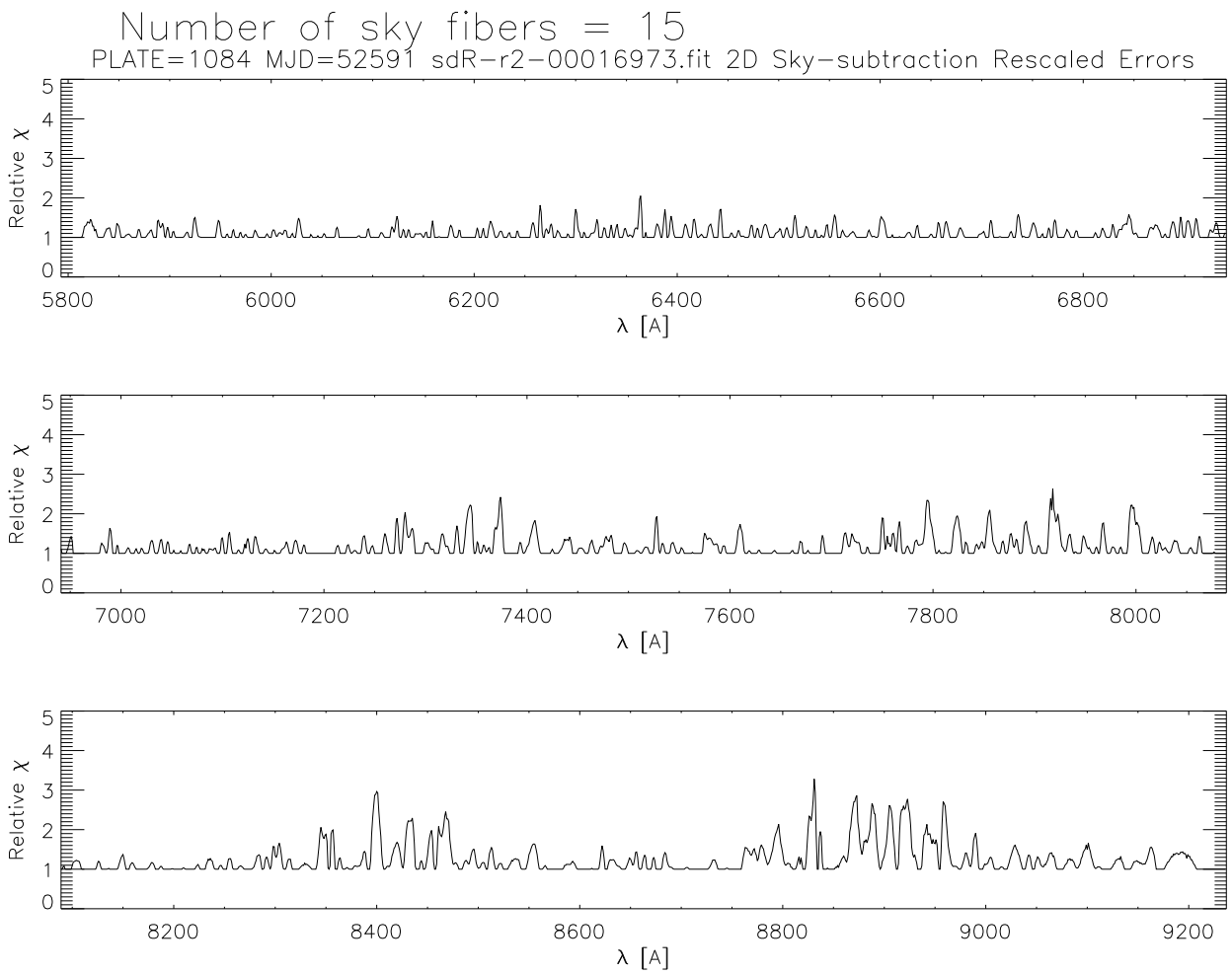

PLATE=1084 MJD=52591 sdR-r2-00016973.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
2.0×10^4
1.5×10^4
1.0×10^4
5.0×10^3
0
-5.0×10^3
8820
8840
8860
8880
8900
λ [A]

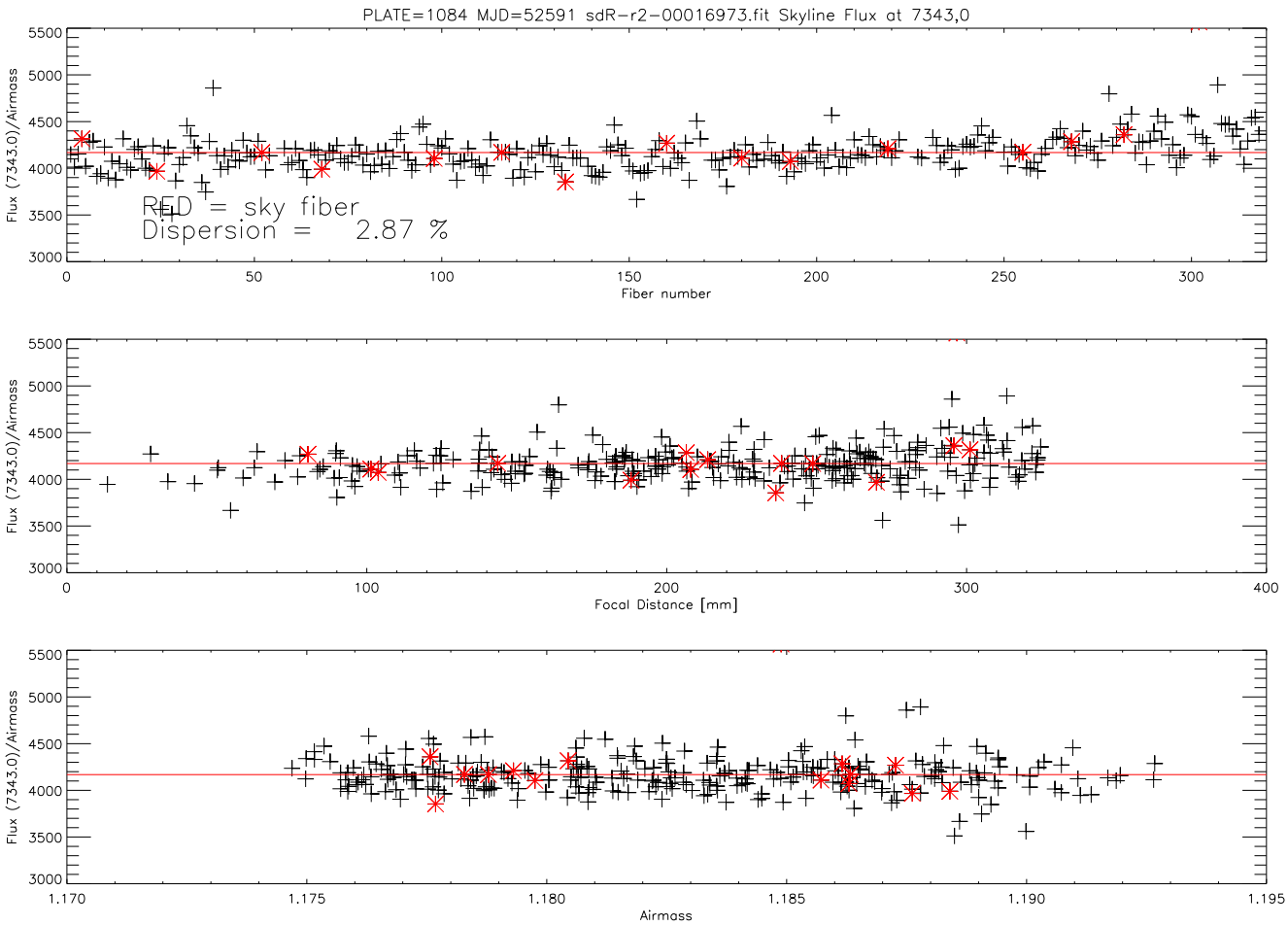

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-r2-00016973.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200

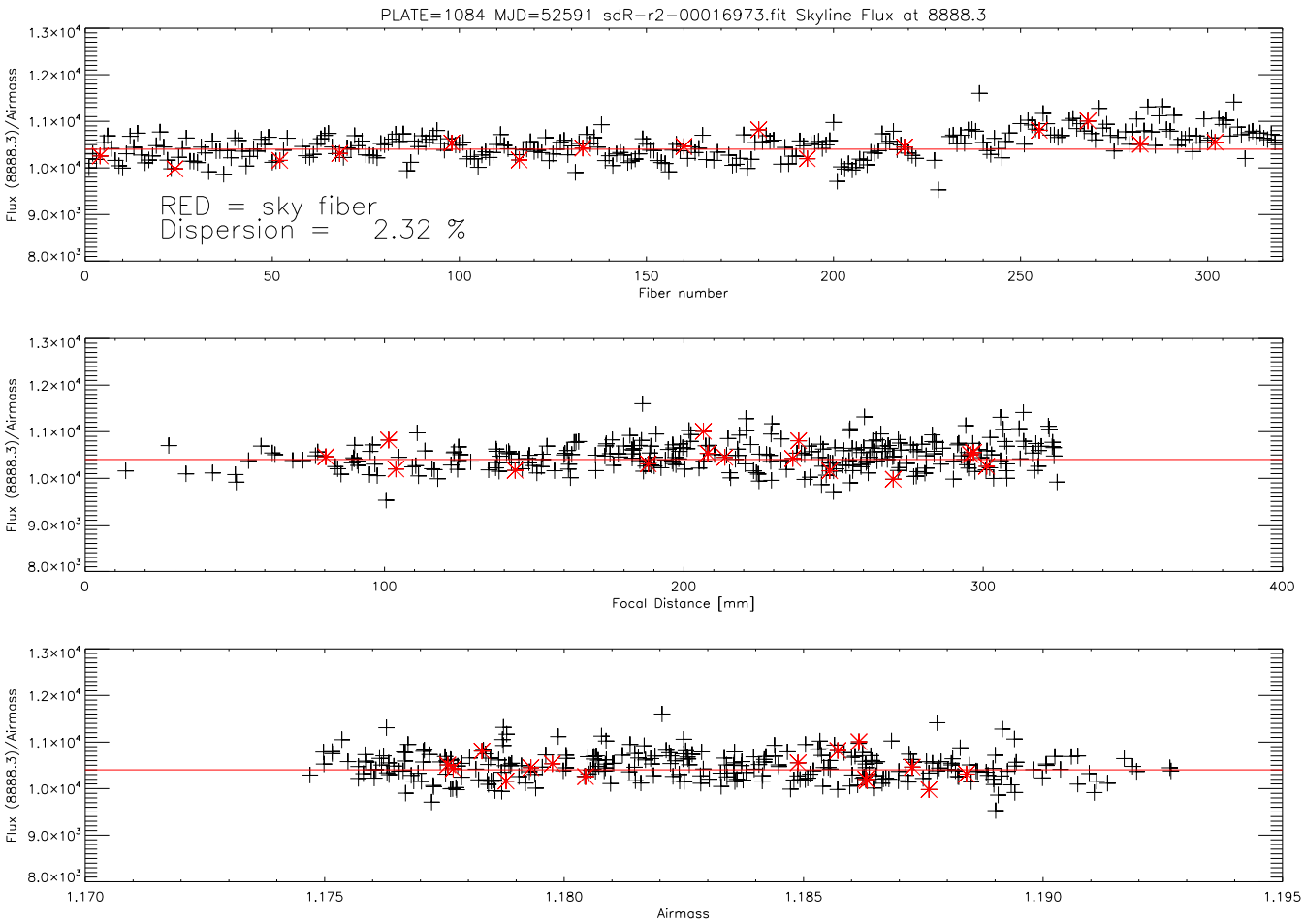

PLATE=1084 MJD=52591 sdR-r2-00016973.fit 2D Sky-subtraction Sky Fibers
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
0.6
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
-11
-6
-4
-2
0
2
4
6
8
50
100
150
200
250
300
Fiber number

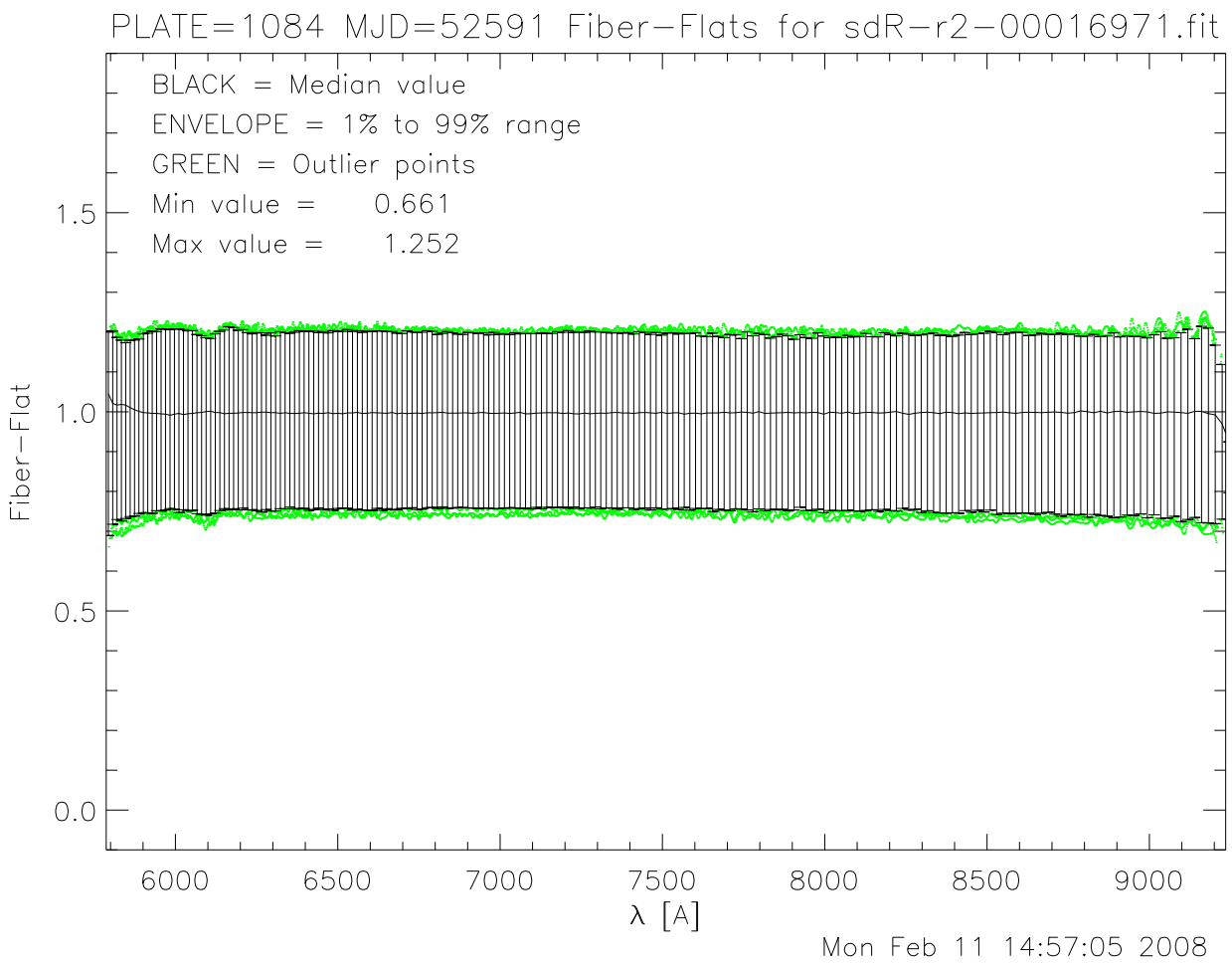

PLATE=1084 MJD=52591 sdR-r2-00016973.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
2.0×10^4
1.5×10^4
1.0×10^4
5.0×10^3
0
8820
8840
8860
8880
8900
λ [A]

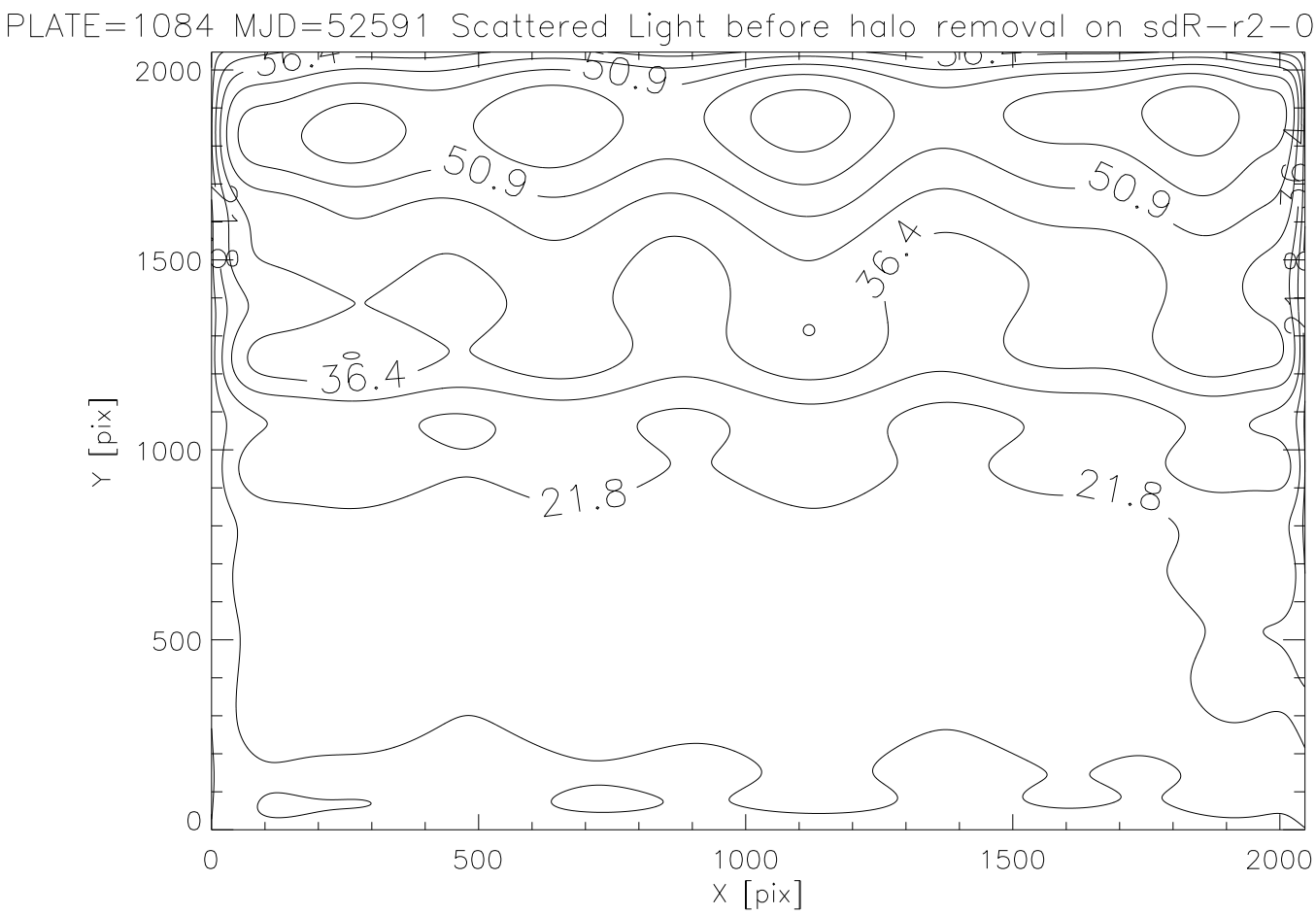

PLATE=1084 MJD=52591 sdR-r2-00016973.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
2.0×10^4
1.5×10^4
1.0×10^4
5.0×10^3
0
-5.0×10^3
8820
8840
8860
8880
8900
λ [A]

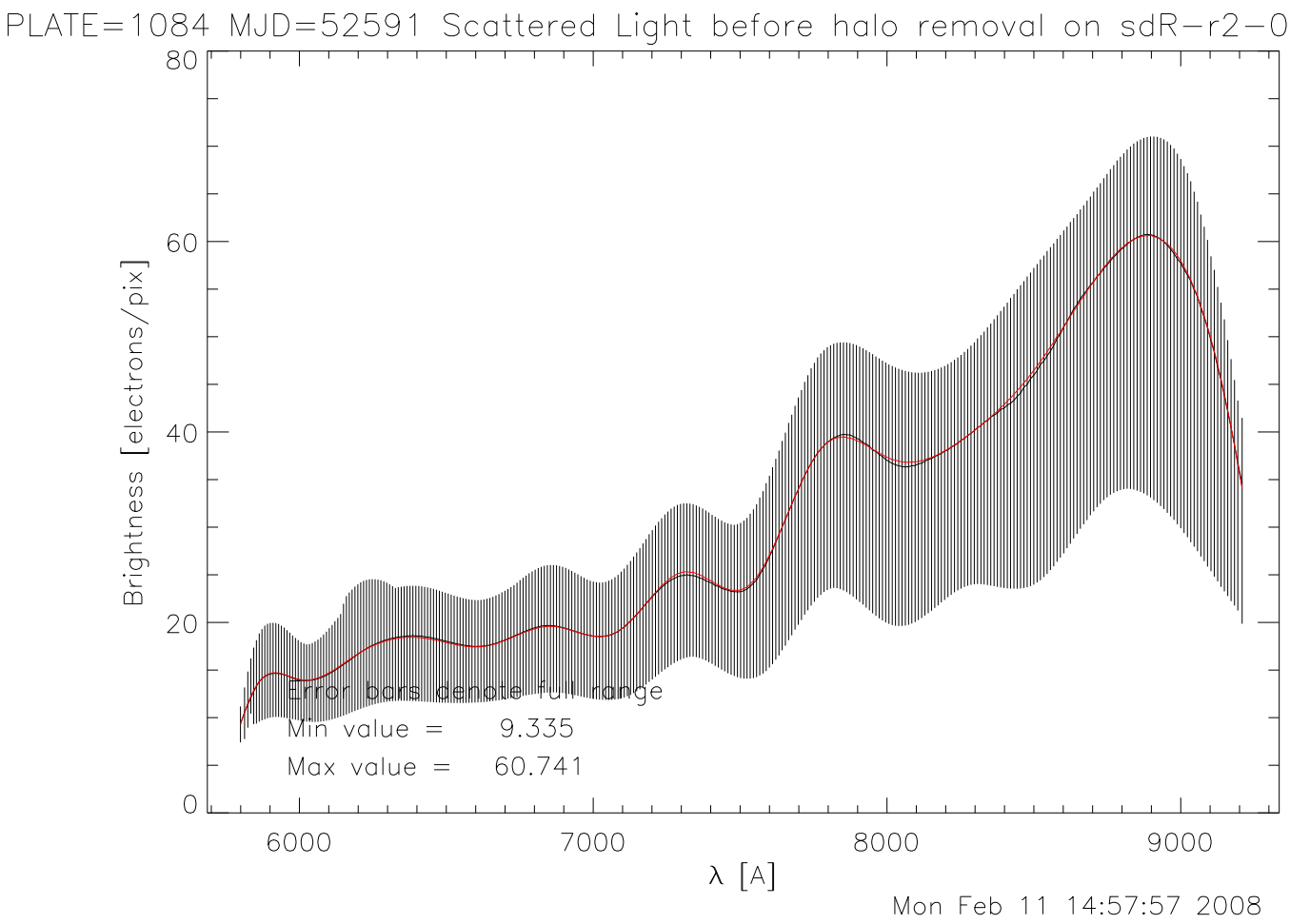

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-r2-00016973.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200

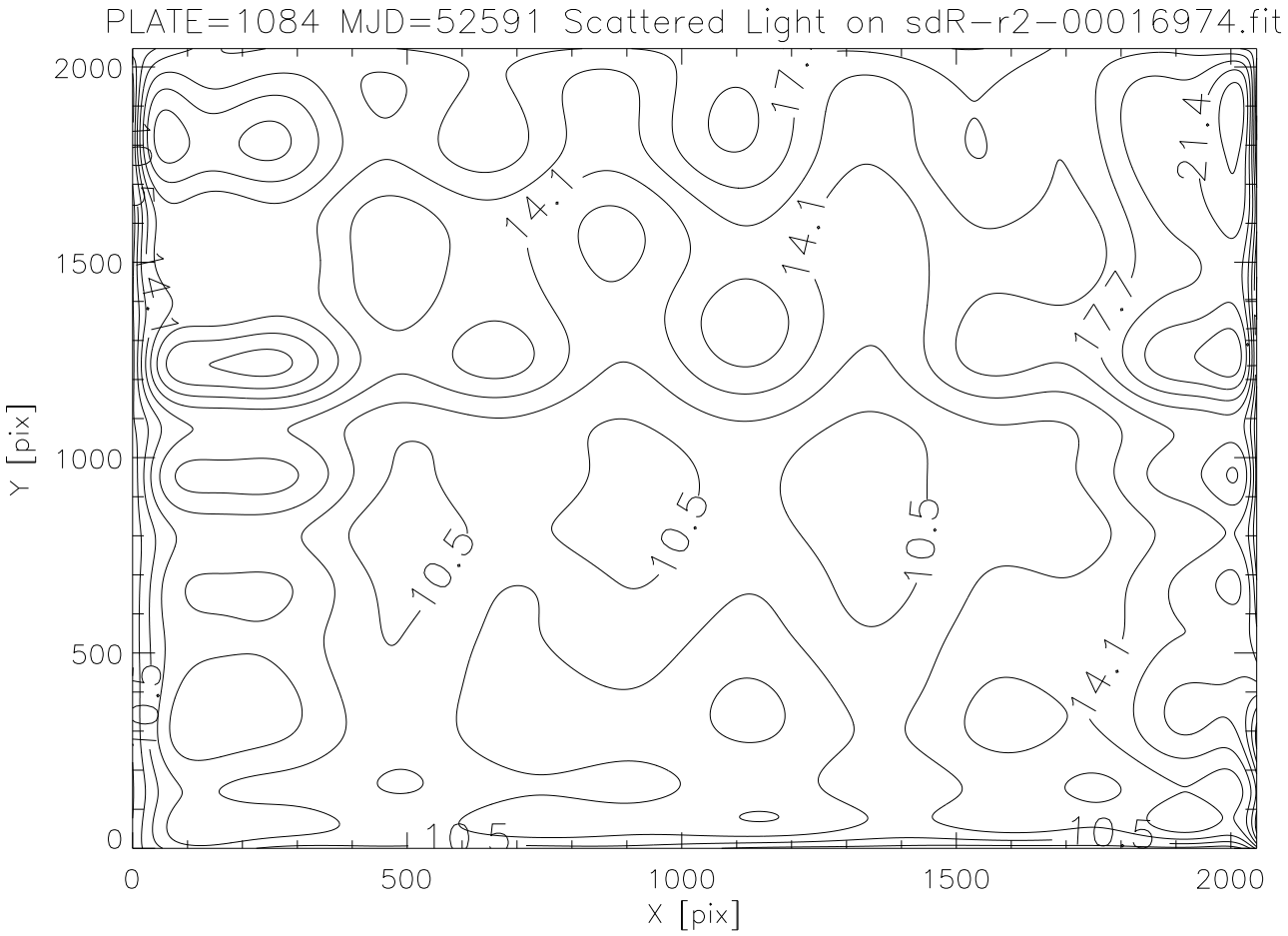

PLATE=1084 MJD=52591 sdR-r2-00016973.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 2.87 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

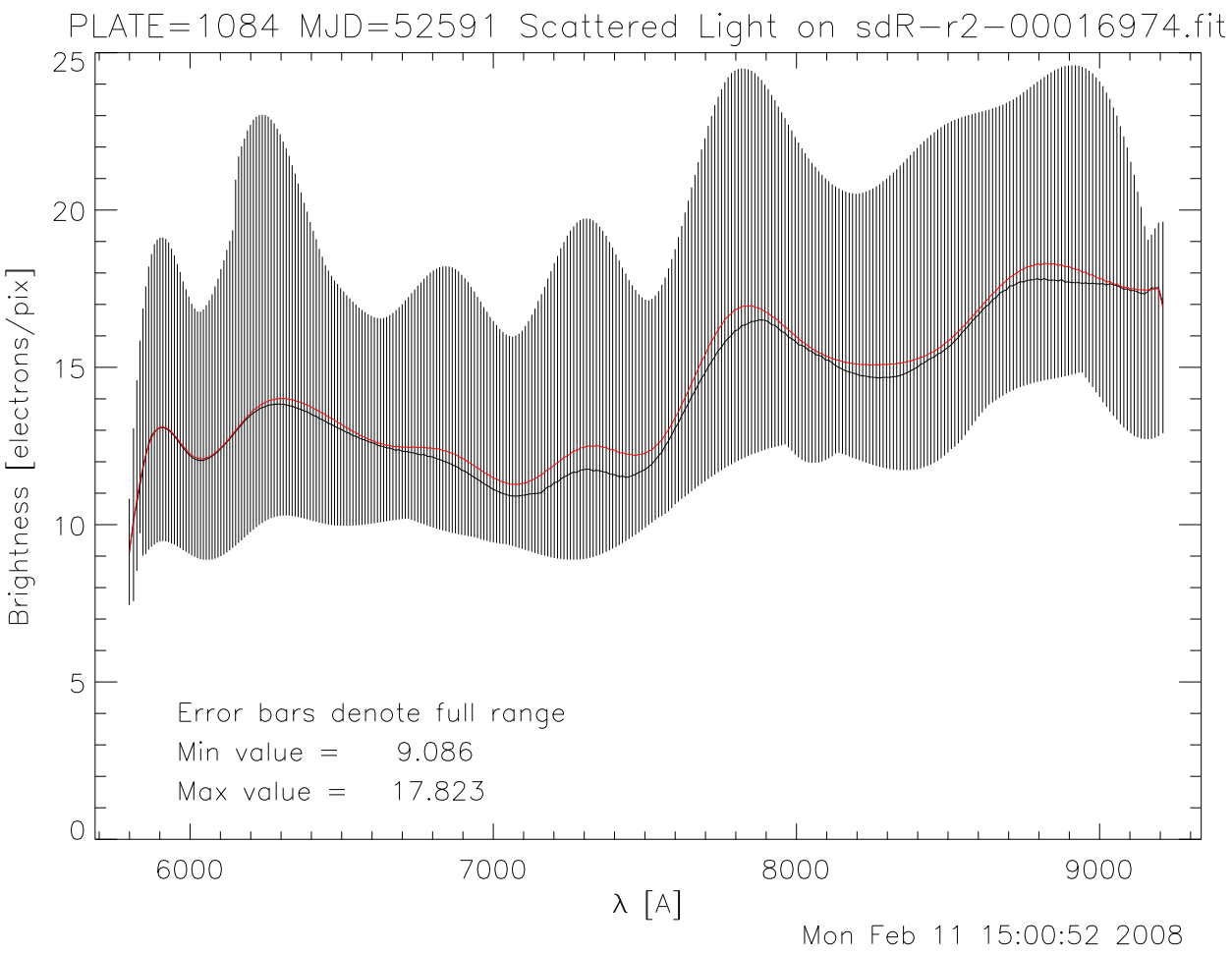

PLATE=1084 MJD=52591 sdR-r2-00016973.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
RED = sky fiber
Dispersion = 2.32 %
Fiber number
Focal Distance [mm]
Airmass

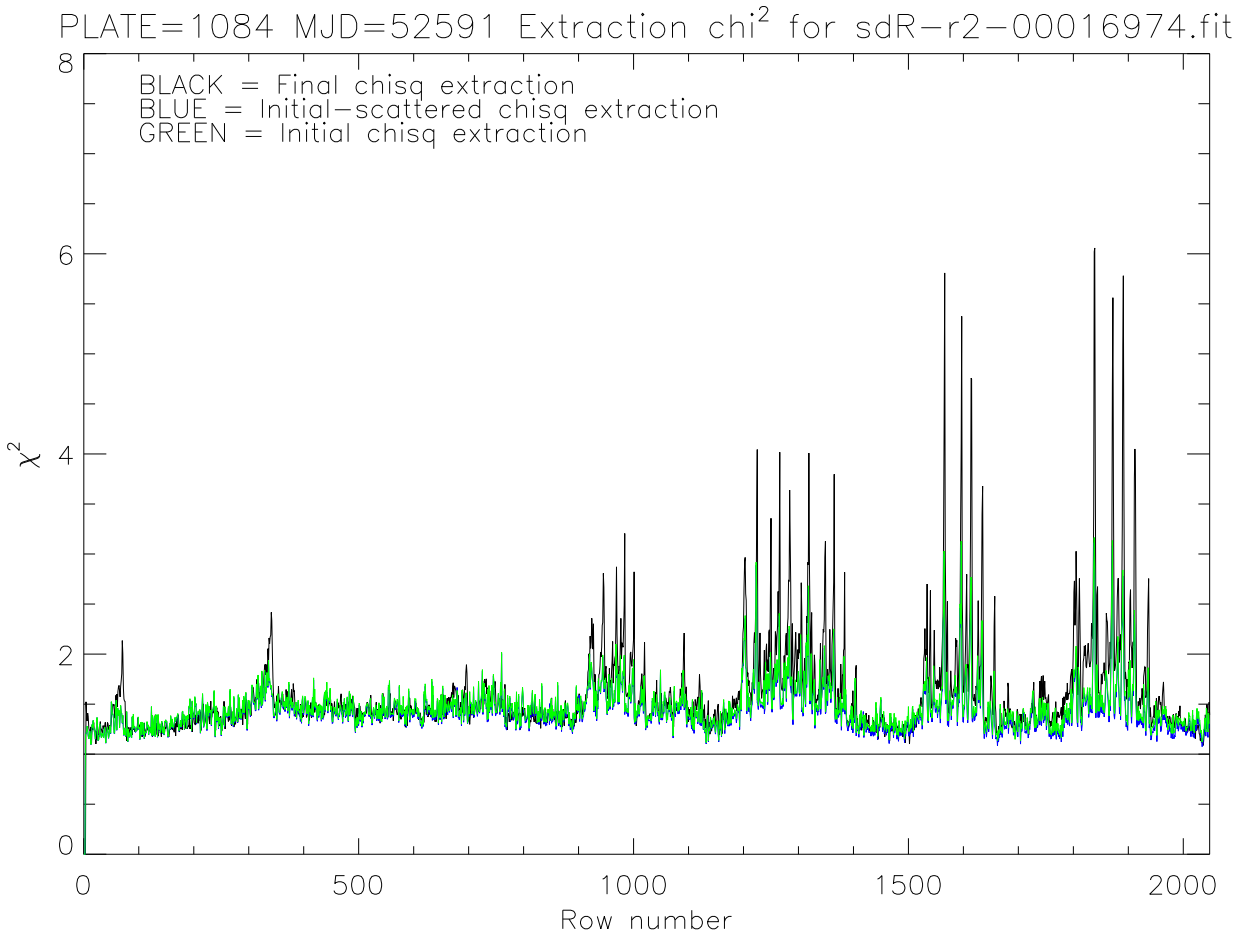

PLATE=1084 MJD=52591 Fiber−Flats for sdR−r2−00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.661
Max value = 1.252
Fiber−Flat
1.5
1.0
0.5
0.0
6000
6500
7000
7500
8000
8500
9000
λ [A]
Mon Feb 11 14:57:05 2008

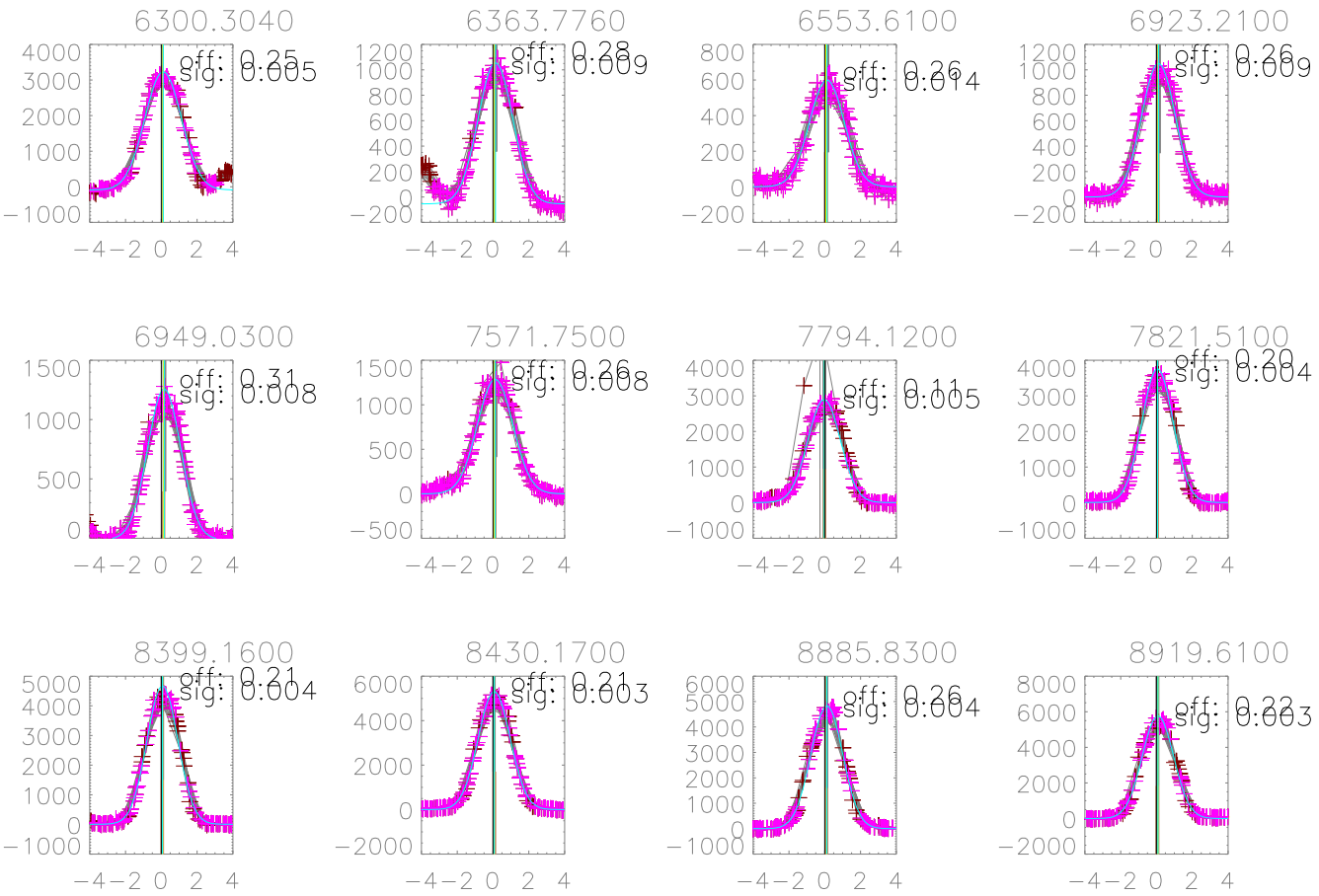

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r2-00016974.fi
50.9
50.9
50.9
36.4
36.4
21.8
21.8
Y [pix]
X [pix]
0
500
1000
1500
2000

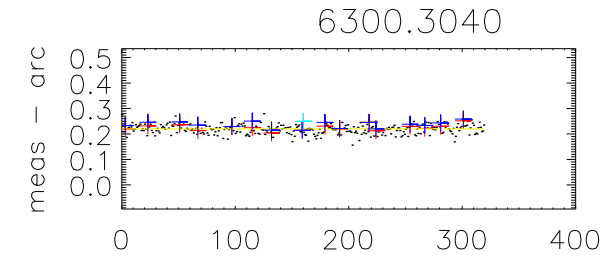

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r2-00016974.fi
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 9.335
Max value = 60.741
Mon Feb 11 14:57:57 2008

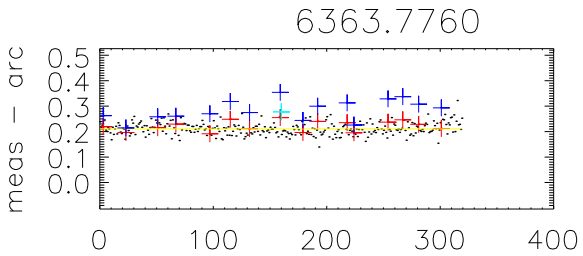

PLATE=1084 MJD=52591 Scattered Light on sdR-r2-00016974.fit
Y [pix]
X [pix]
0
500
1000
1500
2000
10.5
14.1
17.7
21.4

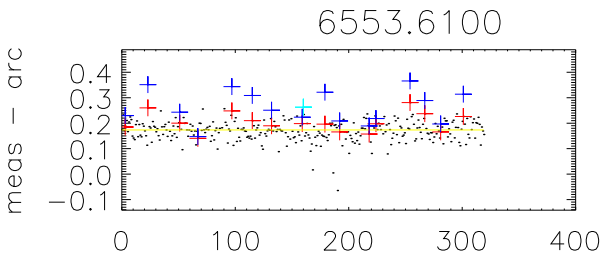

PLATE=1084 MJD=52591 Scattered Light on sdR-r2-00016974.fit
Brightness [electrons/pix]
25
20
15
10
5
0
6000
7000
8000
9000
λ [A]
Error bars denote full range
Min value = 9.086
Max value = 17.823
Mon Feb 11 15:00:52 2008

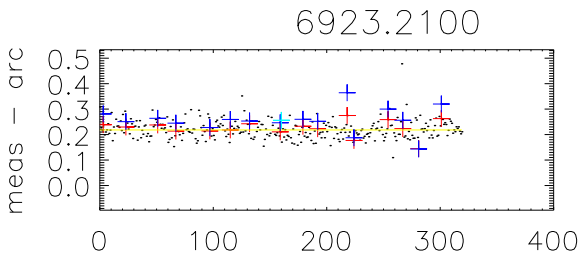

PLATE=1084 MJD=52591 Extraction chi^2 for sdR-r2-00016974.fit
BLACK = Final chisq extraction
BLUE = Initial-scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
0
2
4
6
8
0
500
1000
1500
2000
Row number

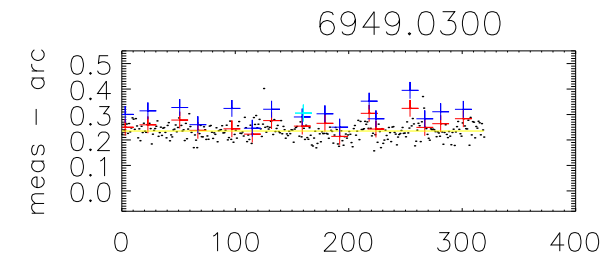

6300.3040
off: 0.25
sig: 0.005
6363.7760
off: 0.28
sig: 0.009
6553.6100
off: 0.26
sig: 0.014
6923.2100
off: 0.26
sig: 0.009
6949.0300
off: 0.31
sig: 0.008
7571.7500
off: 0.26
sig: 0.008
7794.1200
off: 0.11
sig: 0.005
7821.5100
off: 0.20
sig: 0.004
8399.1600
off: 0.21
sig: 0.004
8430.1700
off: 0.21
sig: 0.003
8885.8300
off: 0.26
sig: 0.004
8919.6100
off: 0.22
sig: 0.003

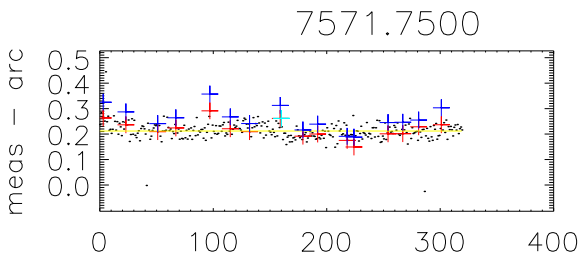

6300.3040
meas − arc
0.5
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400

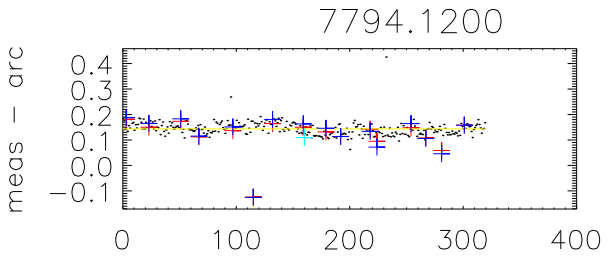

6363.7760
meas − arc
0.5
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400

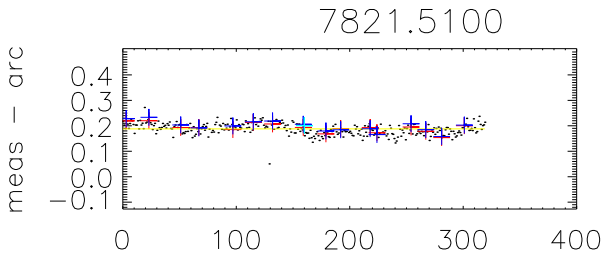

6553.6100
meas − arc
0.4
0.3
0.2
0.1
0.0
−0.1
0
100
200
300
400

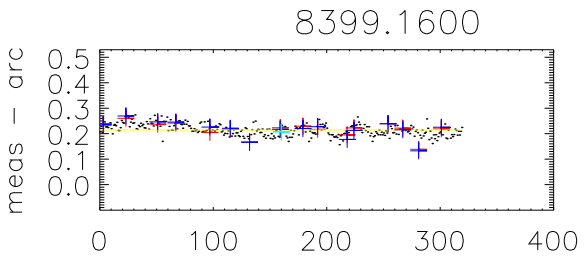

6923.2100
meas − arc
0.5
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400

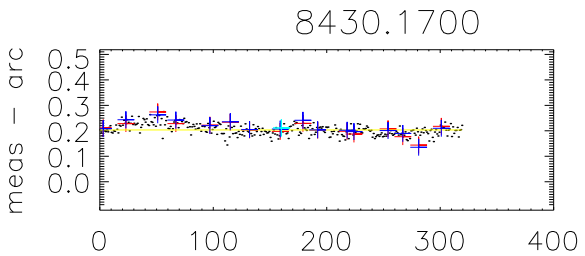

6949.0300
meas − arc
0.5
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400

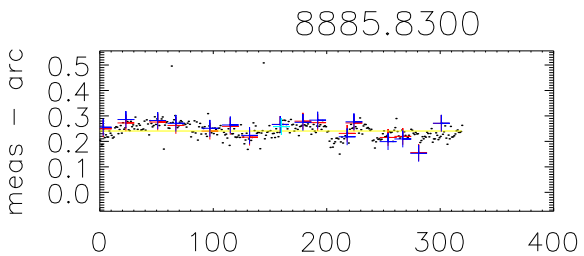

7571.7500
meas − arc
0.5
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400

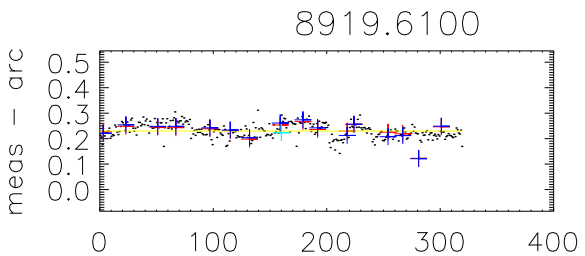

7794.1200
meas − arc
0.4
0.3
0.2
0.1
0.0
−0.1
0
100
200
300
400

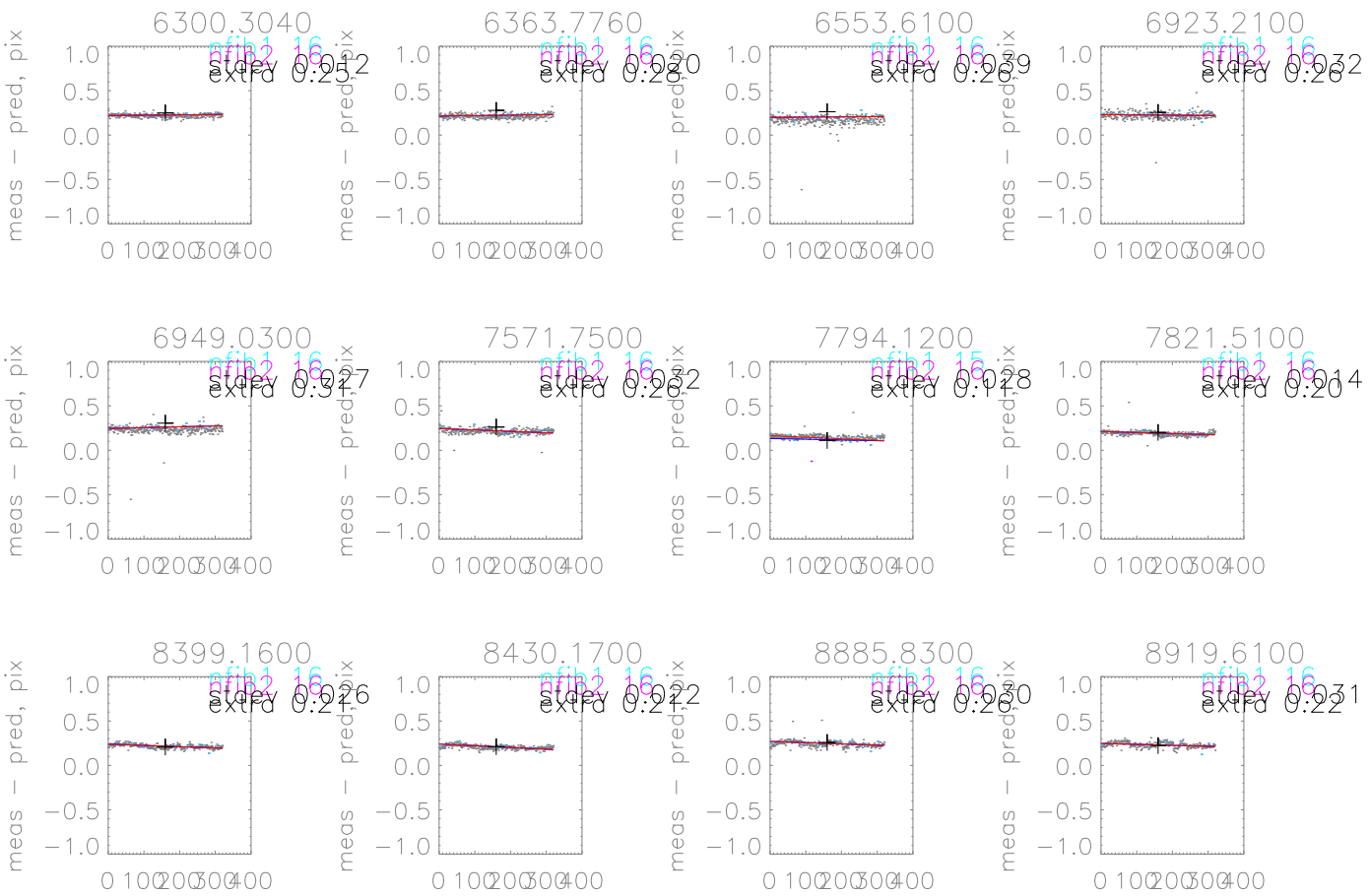

7821.5100
meas − arc
0.4
0.3
0.2
0.1
0.0
−0.1
0
100
200
300
400

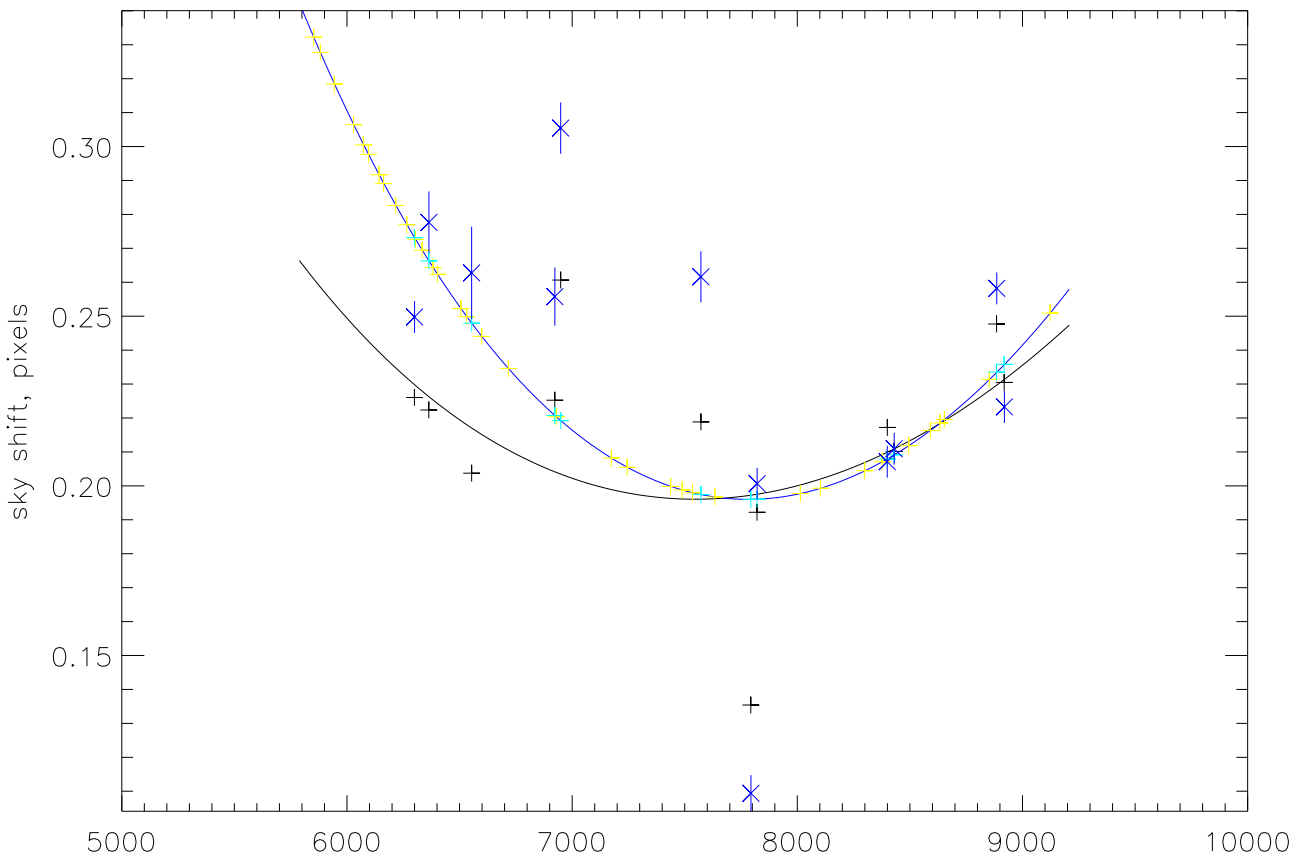

8399.1600
meas − arc
0.5
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400

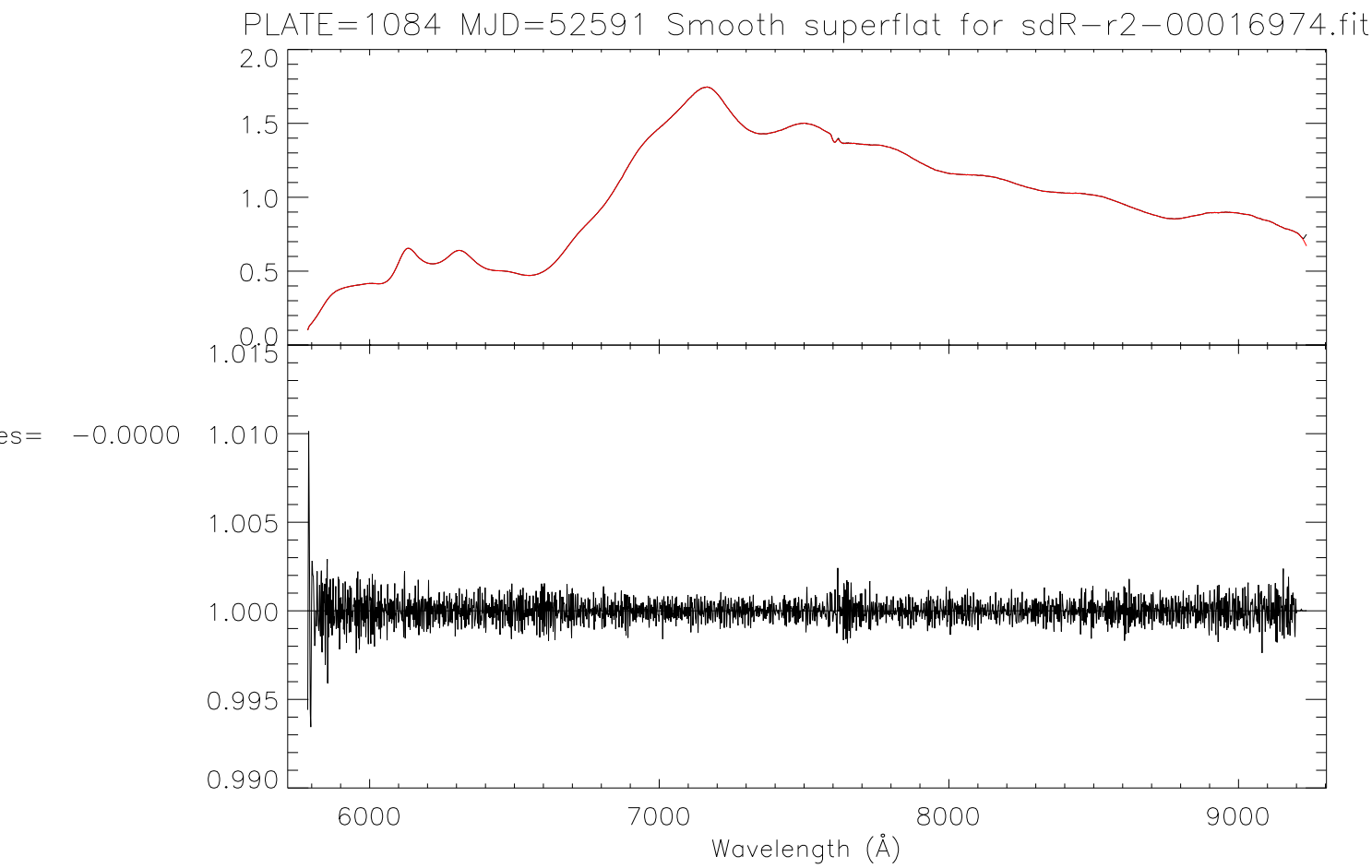

8430.1700
meas − arc
0.5
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400


8885.8300
meas − arc
0.5
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400

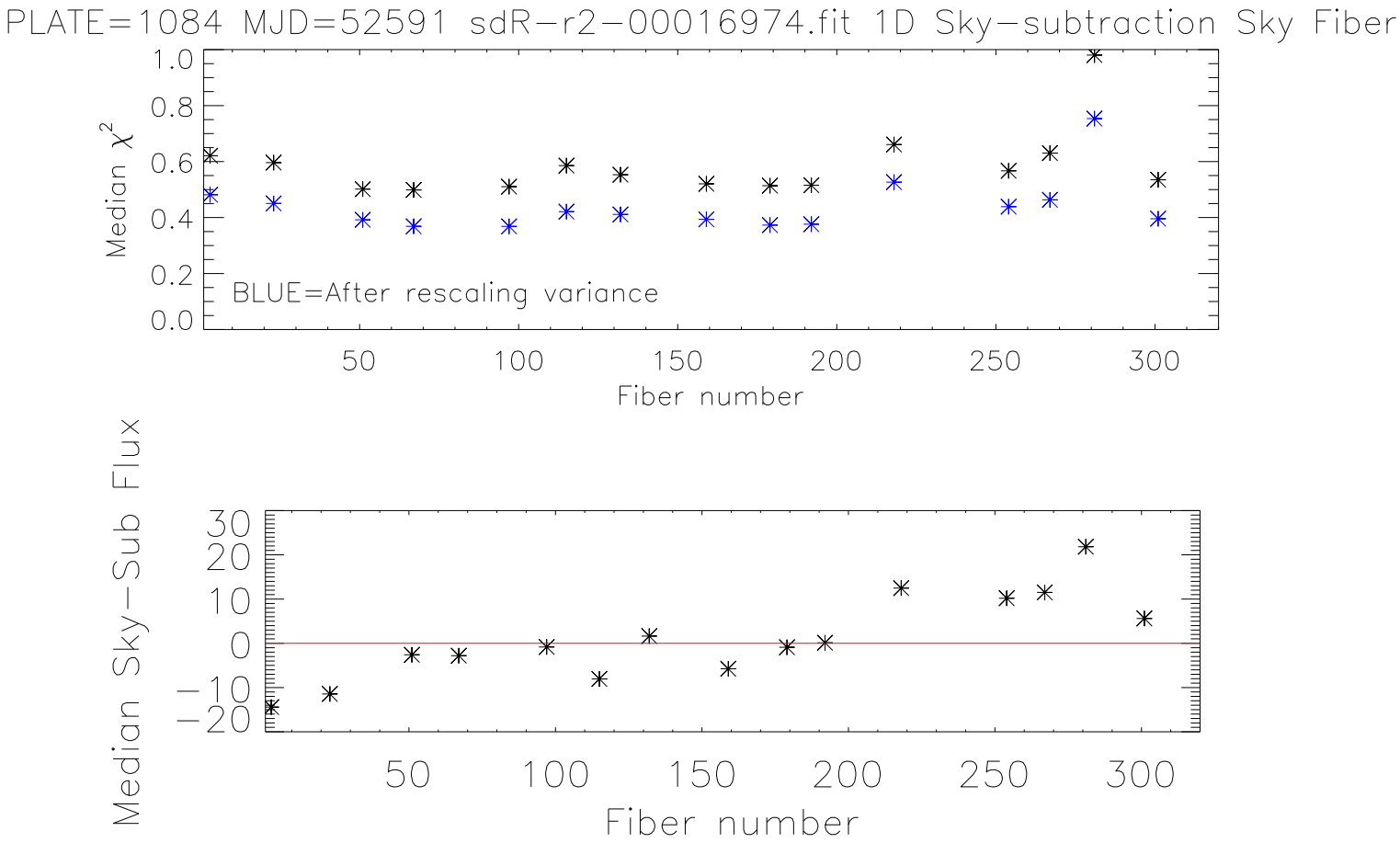

8919.6100
meas − arc
0.5
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400

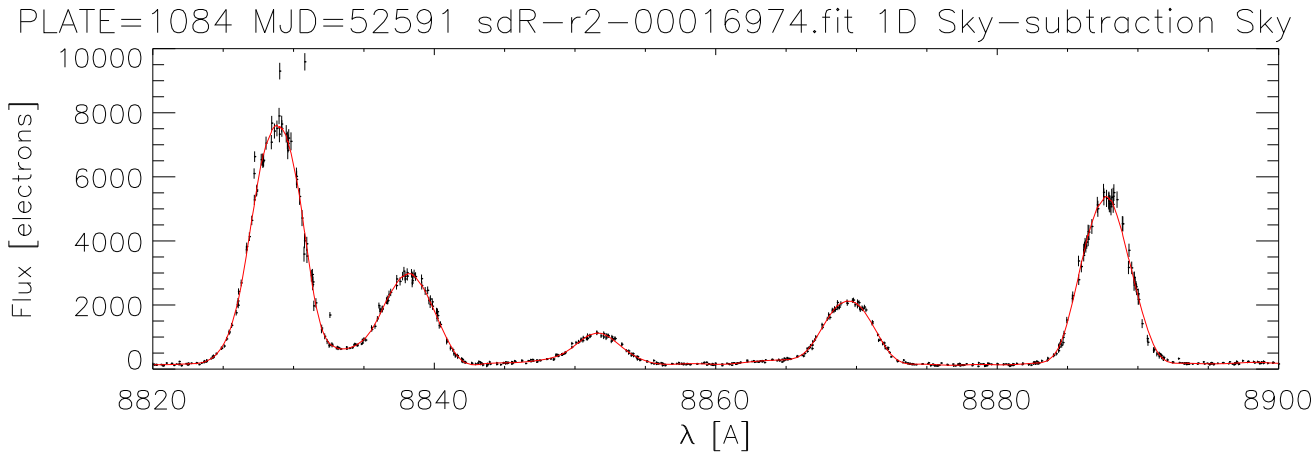

6300.3040
stdev 0.012
extra 0.25
6363.7760
stdev 0.020
extra 0.28
6553.6100
stdev 0.039
extra 0.26
6923.2100
stdev 0.032
extra 0.26
6949.0300
stdev 0.027
extra 0.31
7571.7500
stdev 0.032
extra 0.26
7794.1200
stdev 0.028
extra 0.11
7821.5100
stdev 0.014
extra 0.20
8399.1600
stdev 0.026
extra 0.21
8430.1700
stdev 0.022
extra 0.21
8885.8300
stdev 0.030
extra 0.26
8919.6100
stdev 0.031
extra 0.22
meas − pred, pix
mfhb2 16
mfhb1 16
mfhb2 15

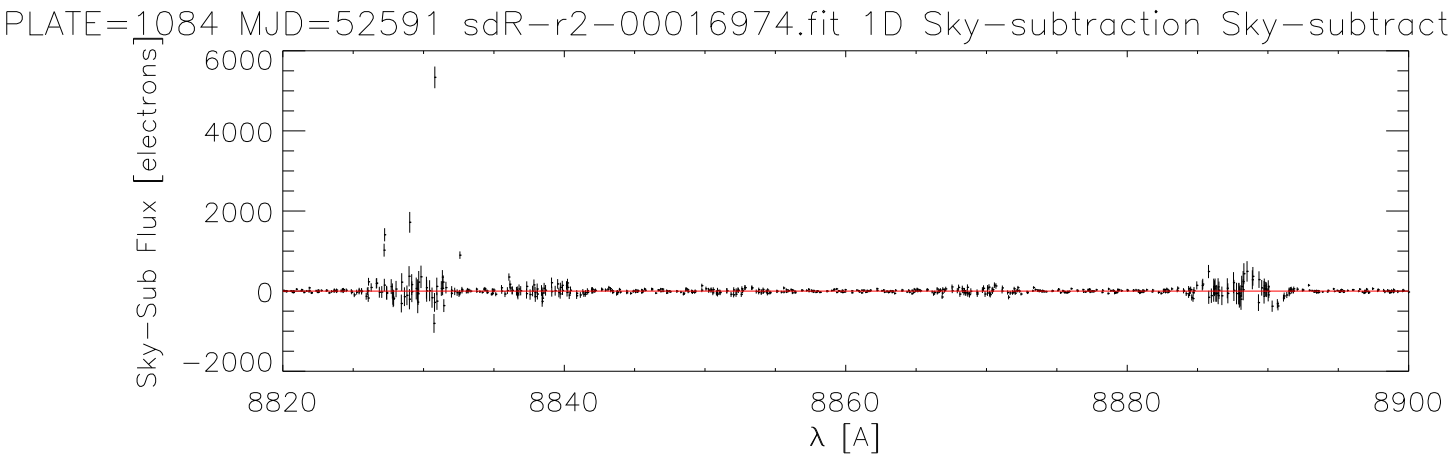

sky shift, pixels
0.30
0.25
0.20
0.15
5000
6000
7000
8000
9000
10000

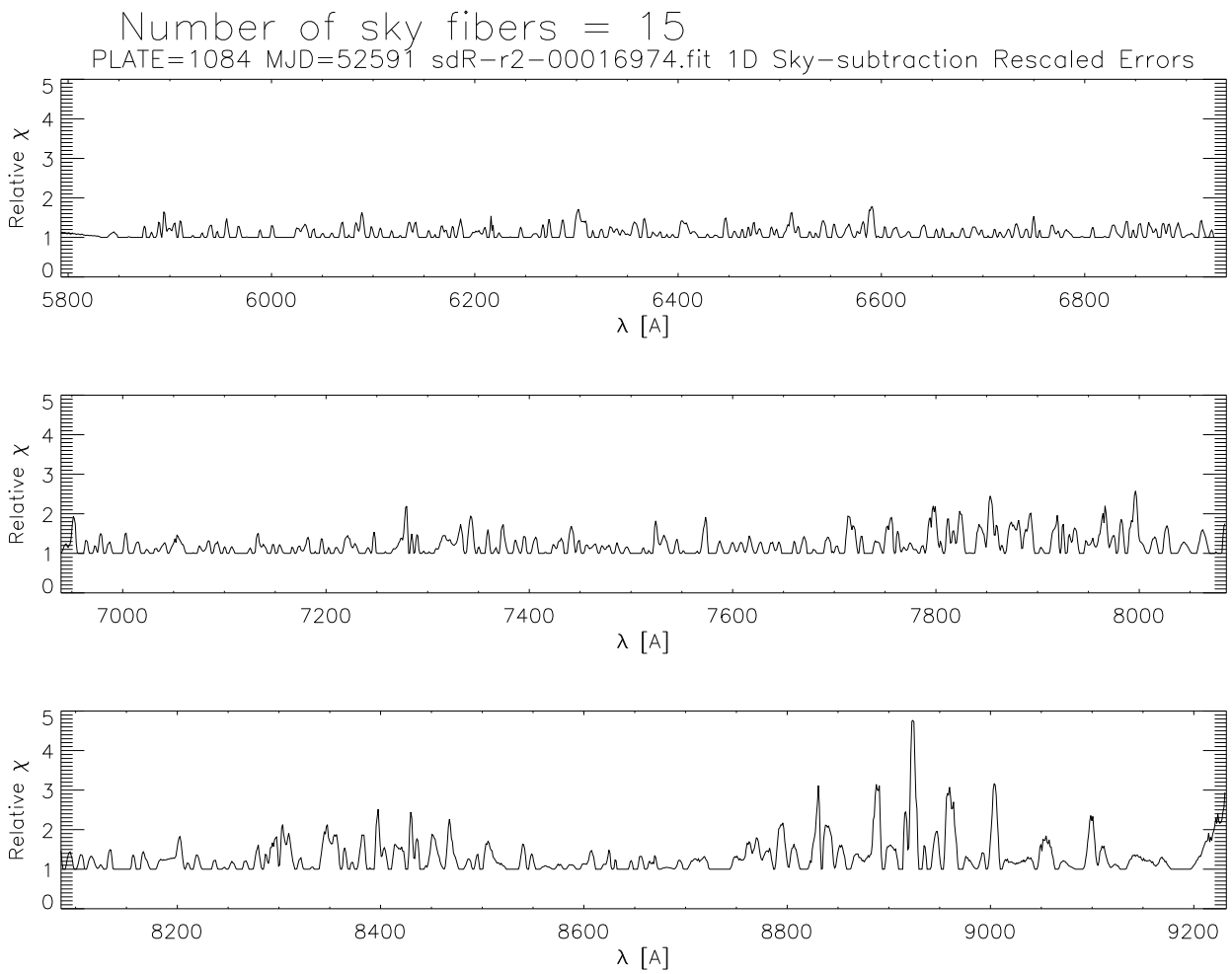

PLATE=1084 MJD=52591 Smooth superflat for sdR-r2-00016974.fit
2.0
1.5
1.0
0.5
0.0
1.015
1.010
1.005
1.000
0.995
0.990
6000
7000
8000
9000
Wavelength (Å)

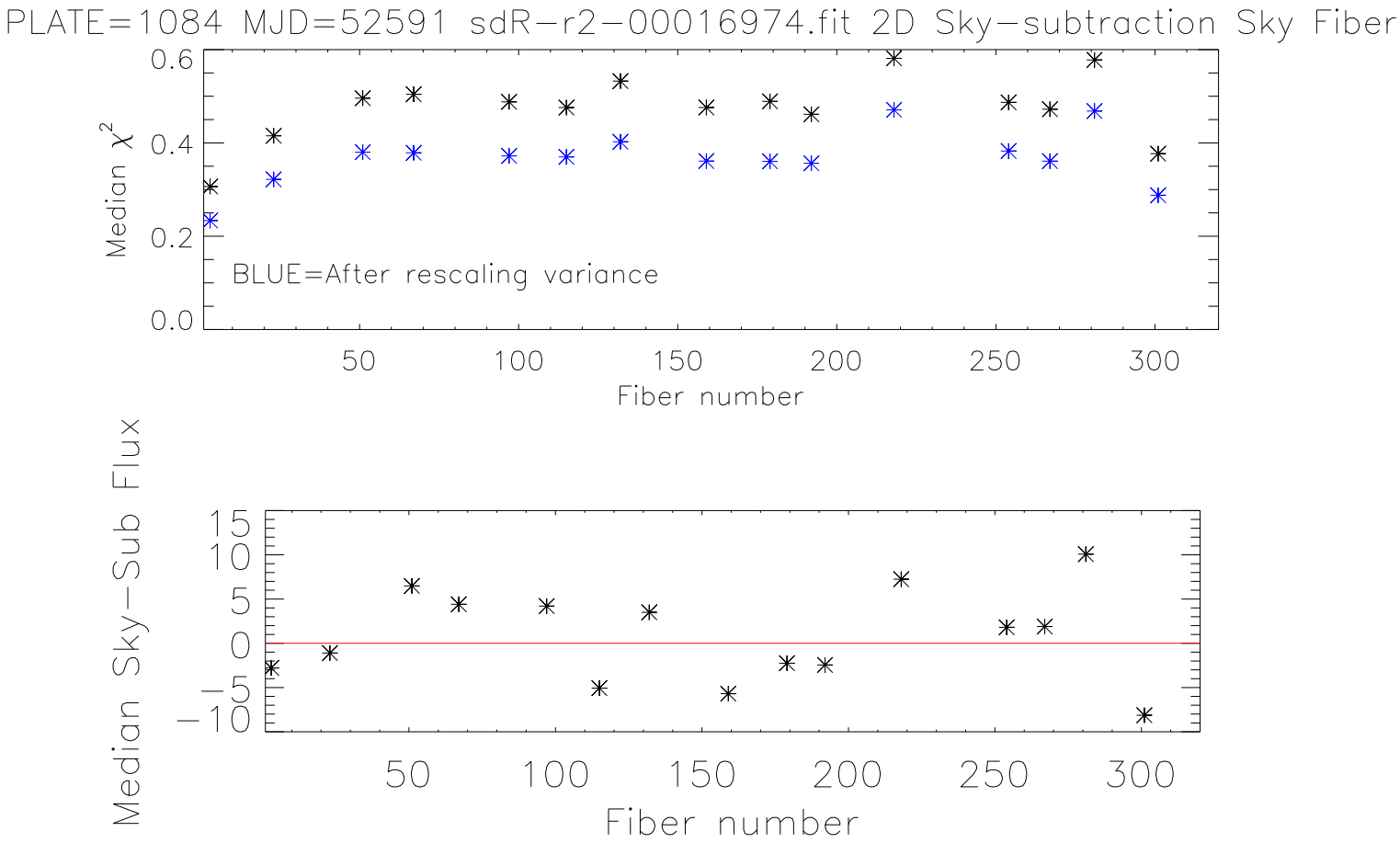
es= −0.0000

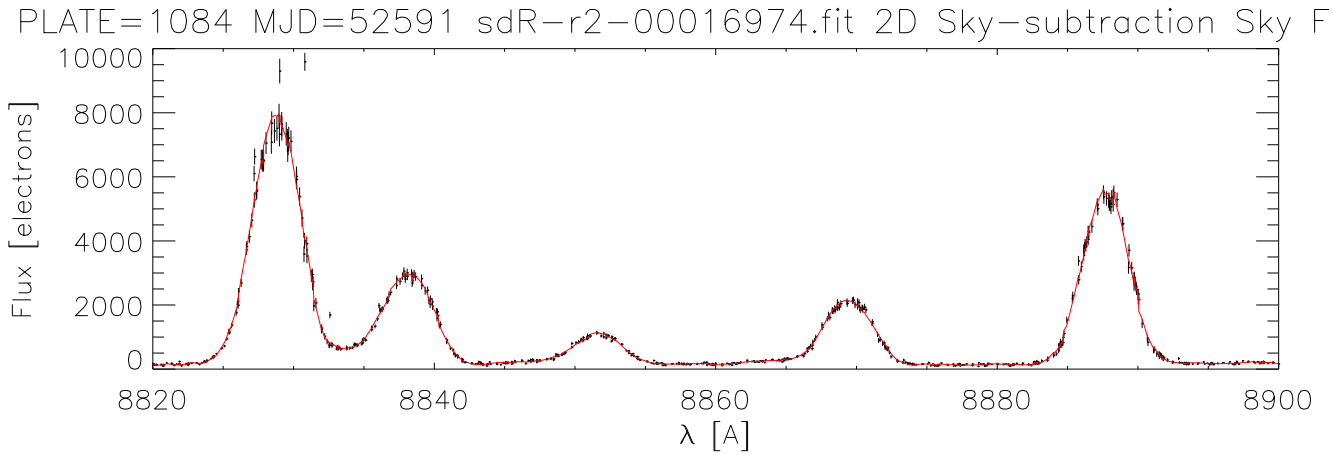

PLATE=1084 MJD=52591 sdR-r2-00016974.fit 1D Sky-subtraction Sky Fibers
Median χ^2
1.0
0.8
0.6
0.4
0.2
0.0
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
30
20
10
0
-10
-20
50
100
150
200
250
300
Fiber number

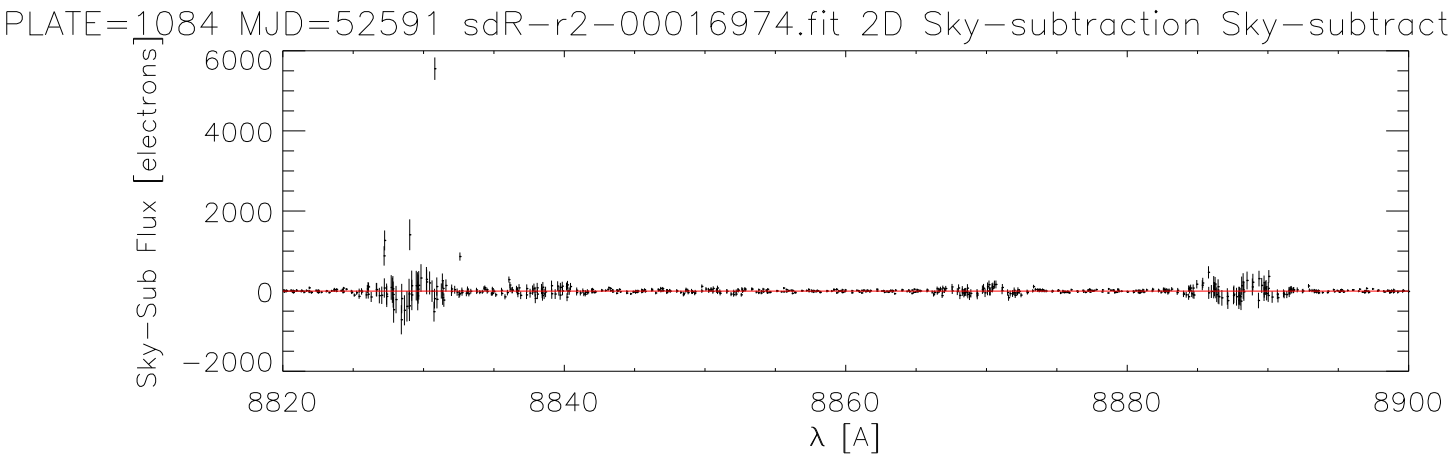

PLATE=1084 MJD=52591 sdR-r2-00016974.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
10000
8000
6000
4000
2000
0
8820
8840
8860
8880
8900
λ [A]

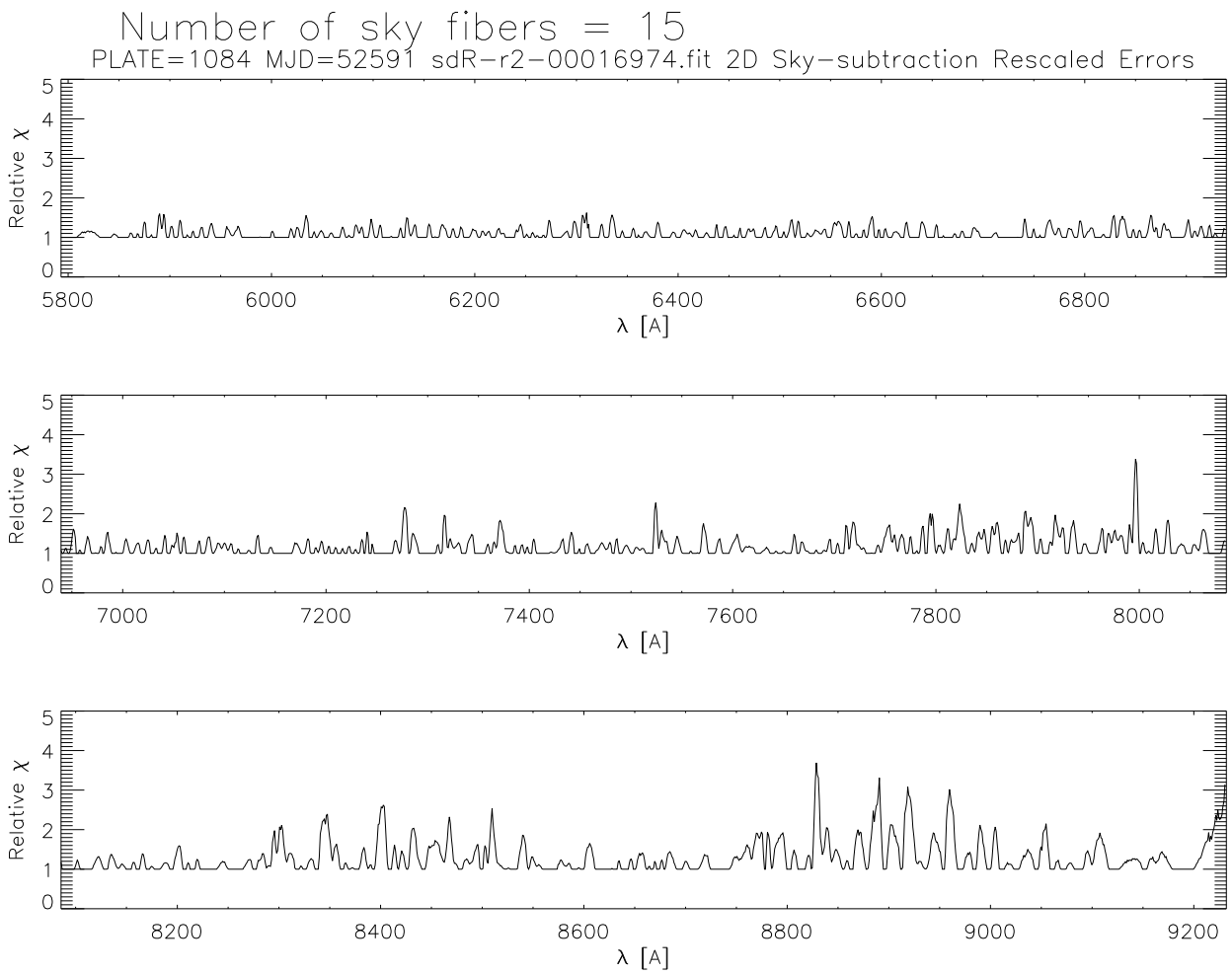

PLATE=1084 MJD=52591 sdR-r2-00016974.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
6000
4000
2000
0
-2000
8820
8840
8860
8880
8900
λ [A]

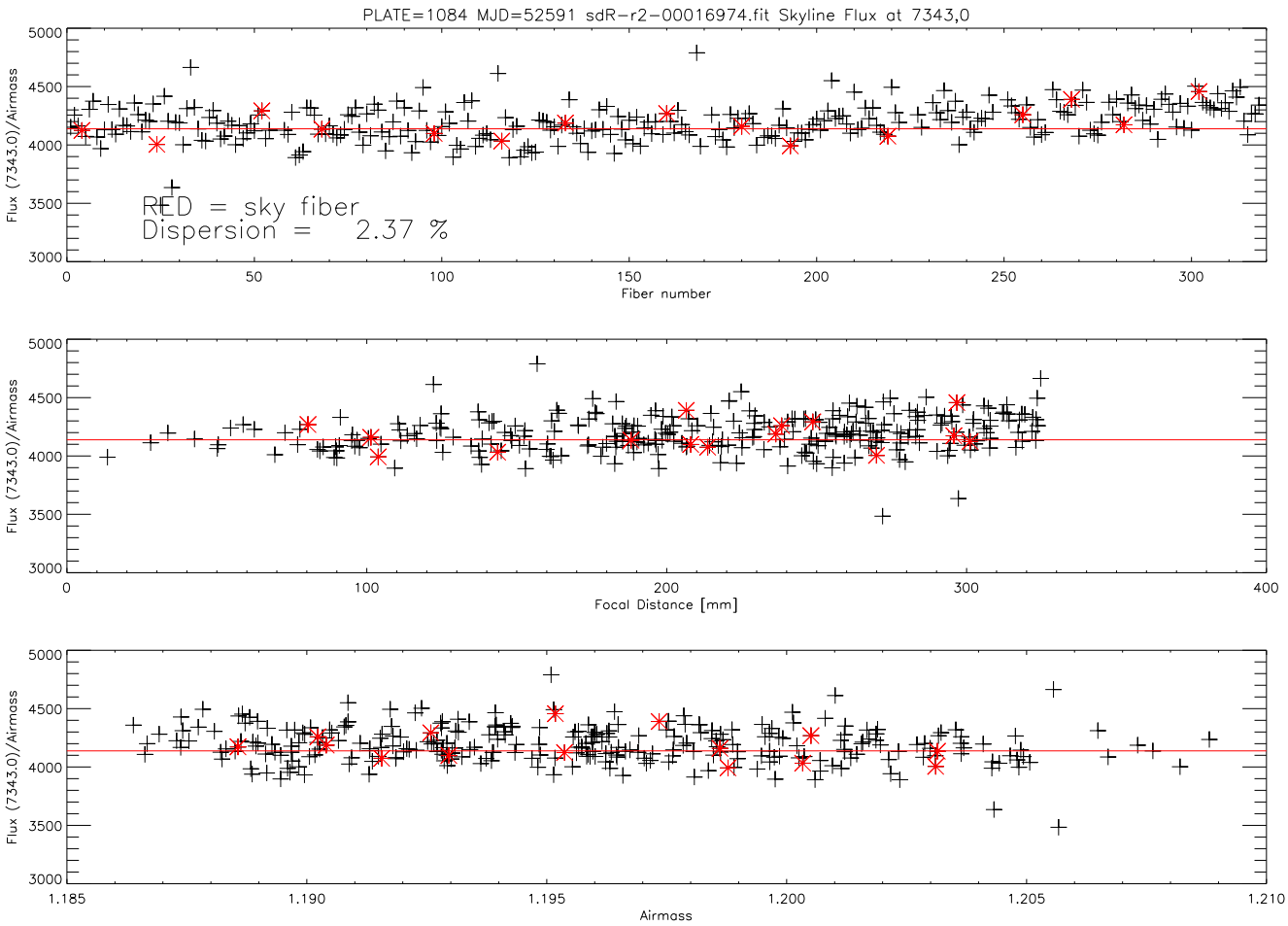

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-r2-00016974.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200
0
1
2
3
4
5

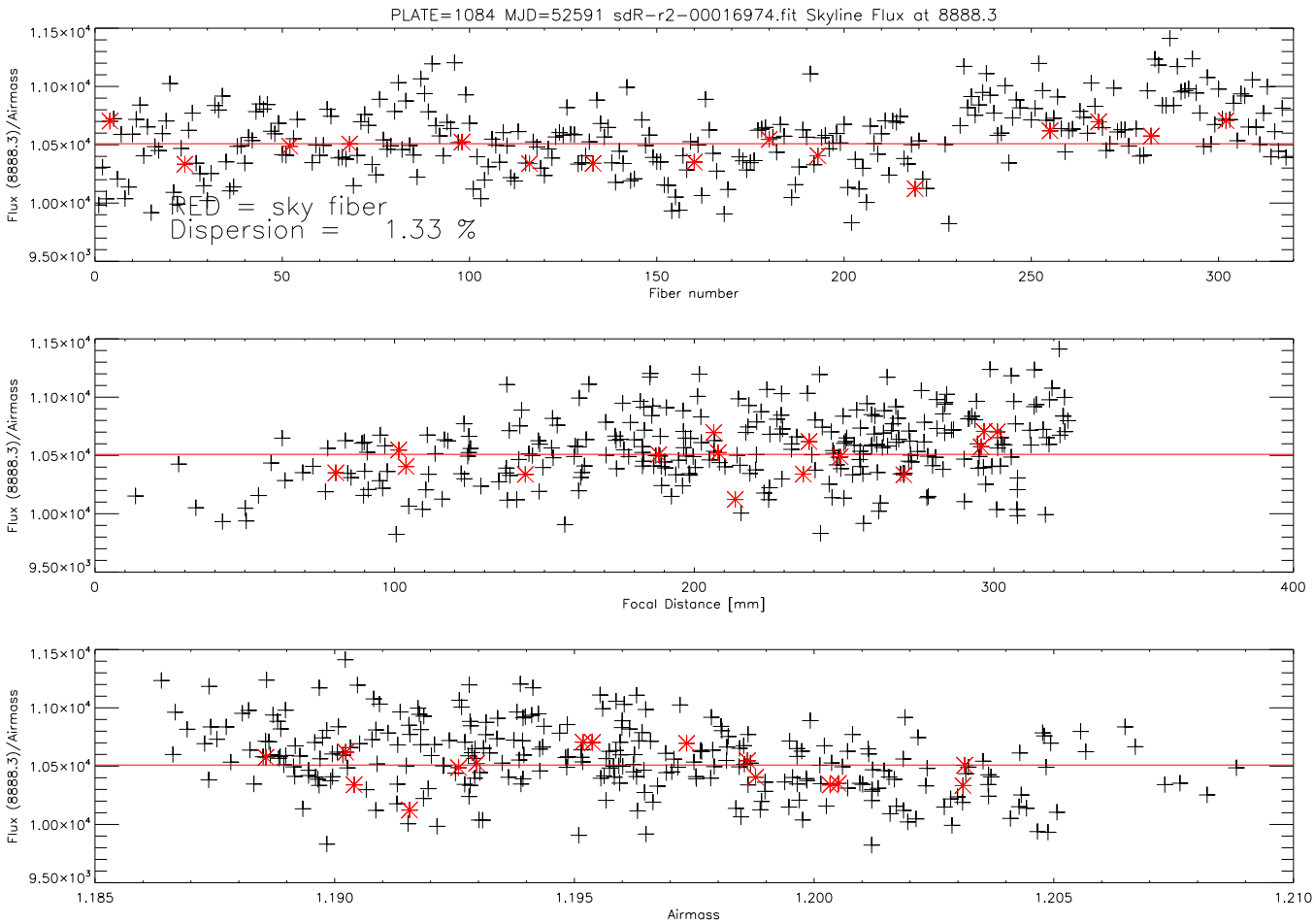

PLATE=1084 MJD=52591 sdR-r2-00016974.fit 2D Sky-subtraction Sky Fibers
Median χ^2
0.0
0.2
0.4
0.6
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
15
10
5
0
-5
-10
50
100
150
200
250
300
Fiber number

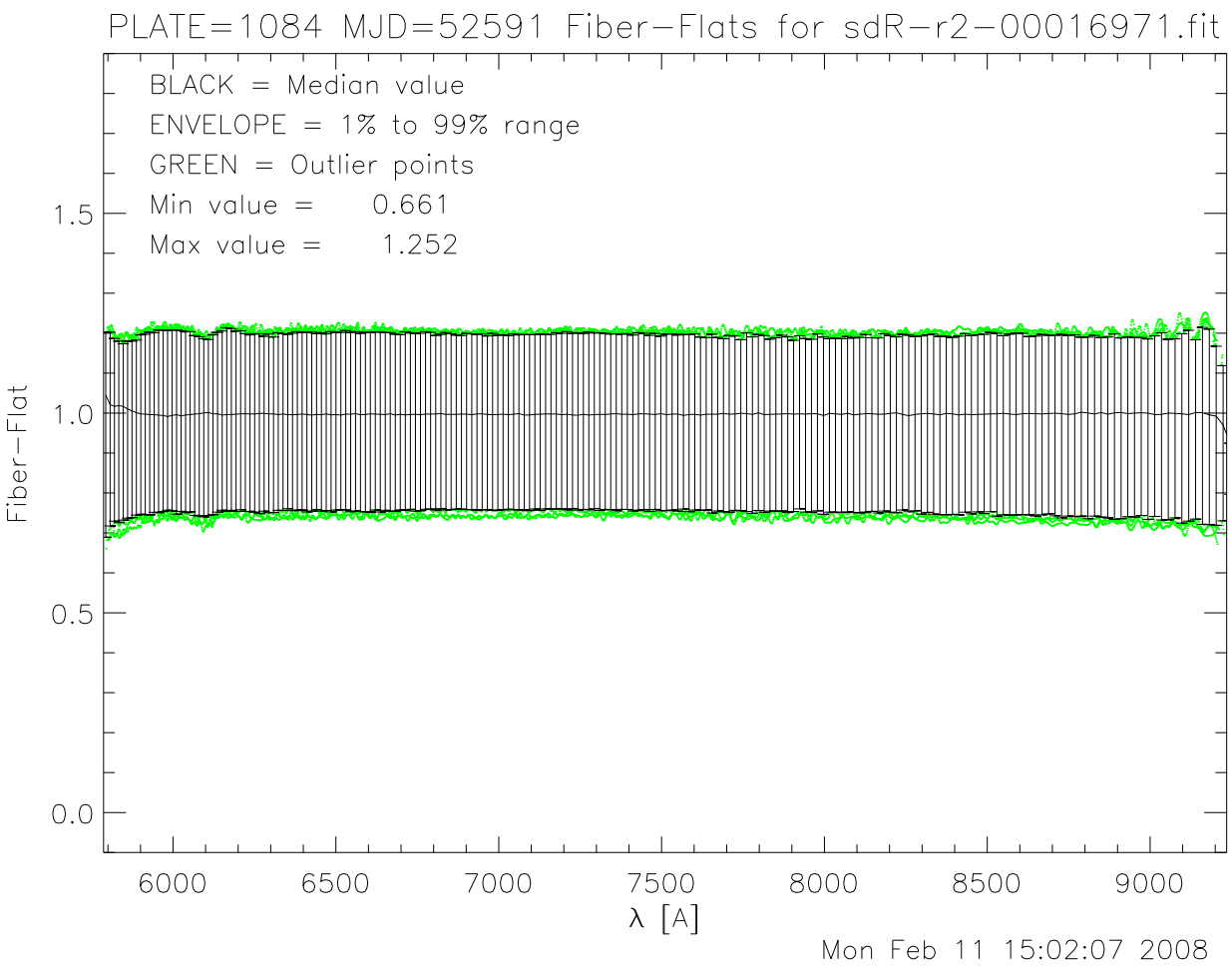

PLATE=1084 MJD=52591 sdR-r2-00016974.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
10000
8000
6000
4000
2000
0
8820
8840
8860
8880
8900
λ [A]

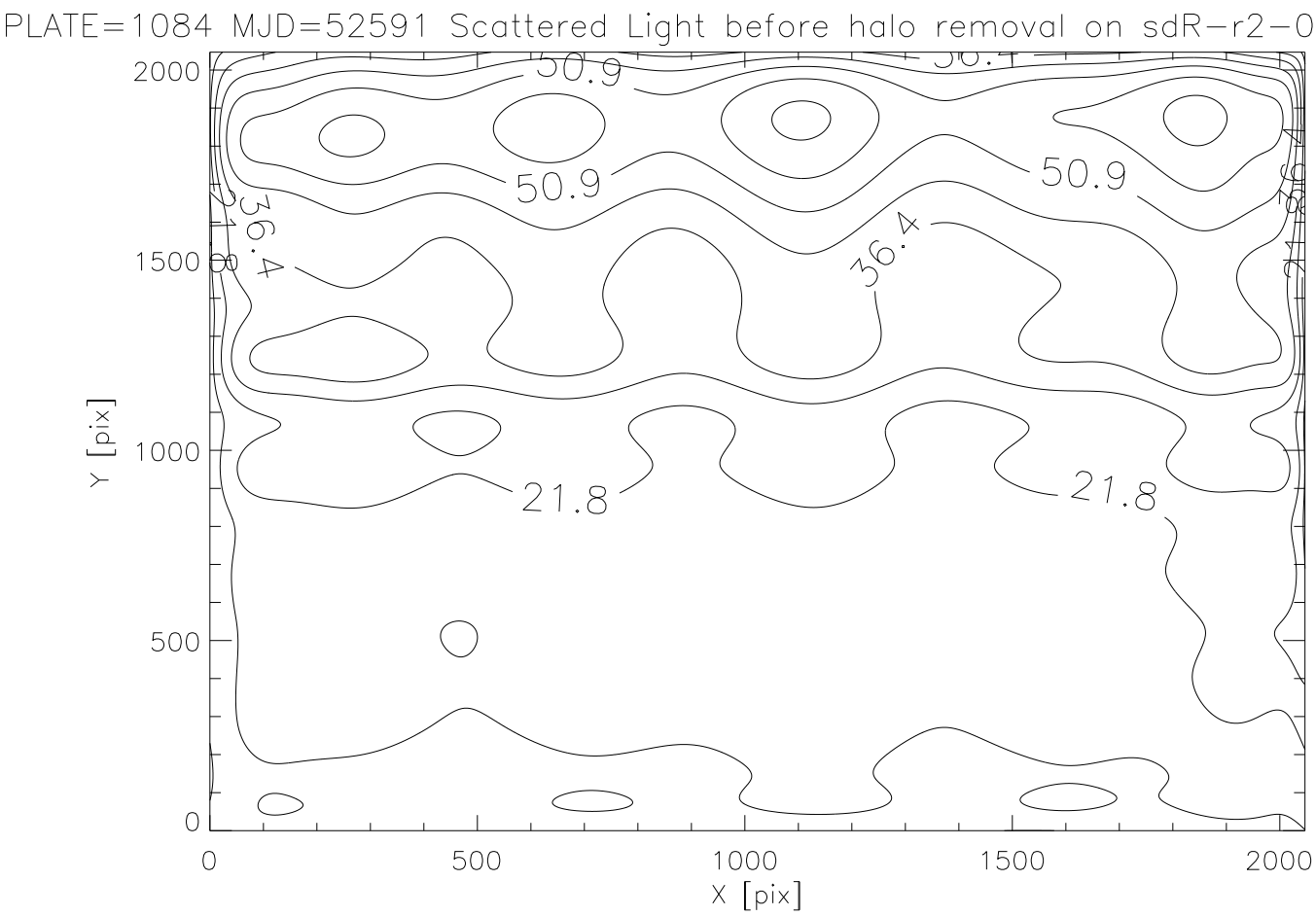

PLATE=1084 MJD=52591 sdR-r2-00016974.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
6000
4000
2000
0
-2000
8820
8840
8860
8880
8900
λ [A]

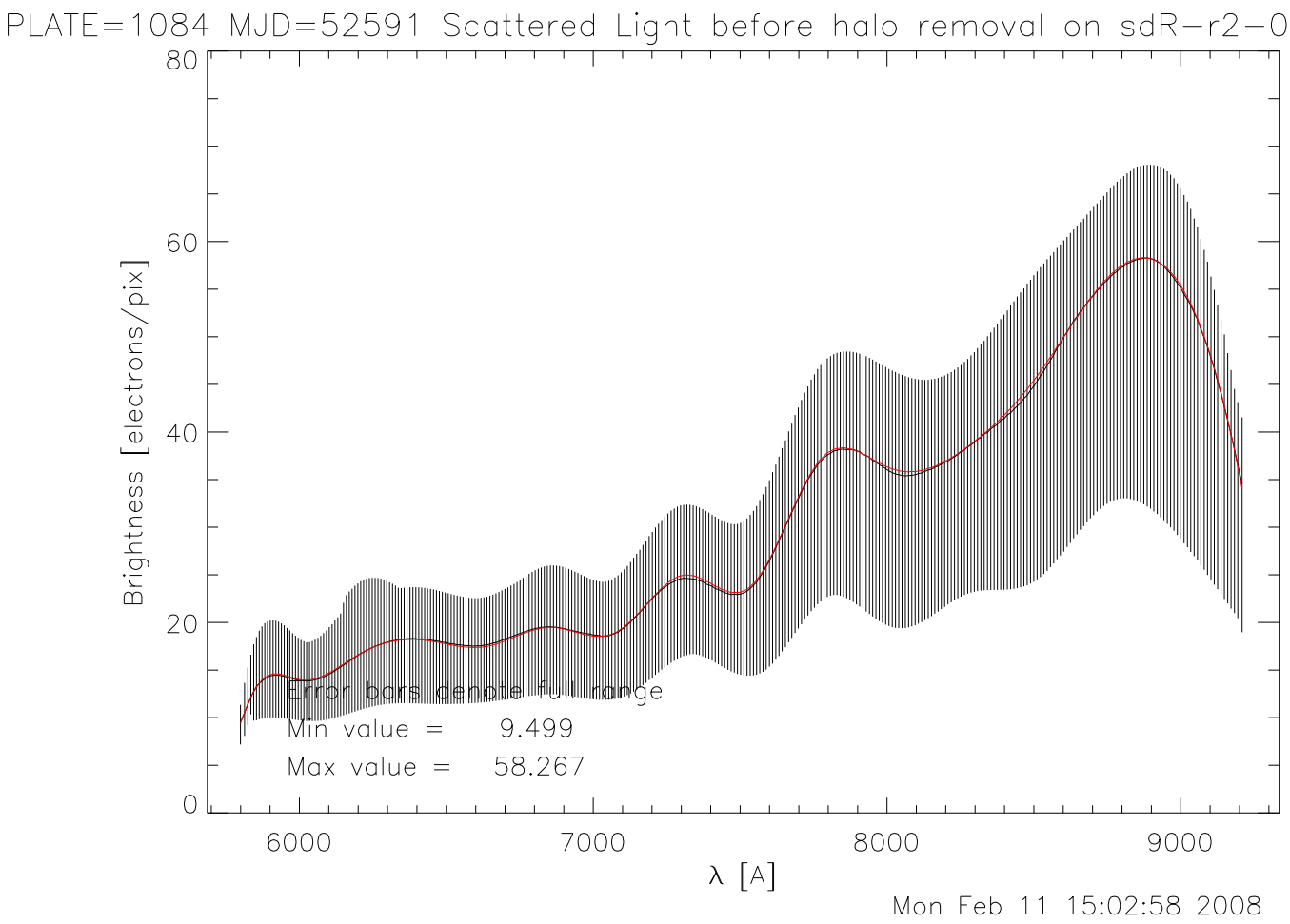

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-r2-00016974.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200

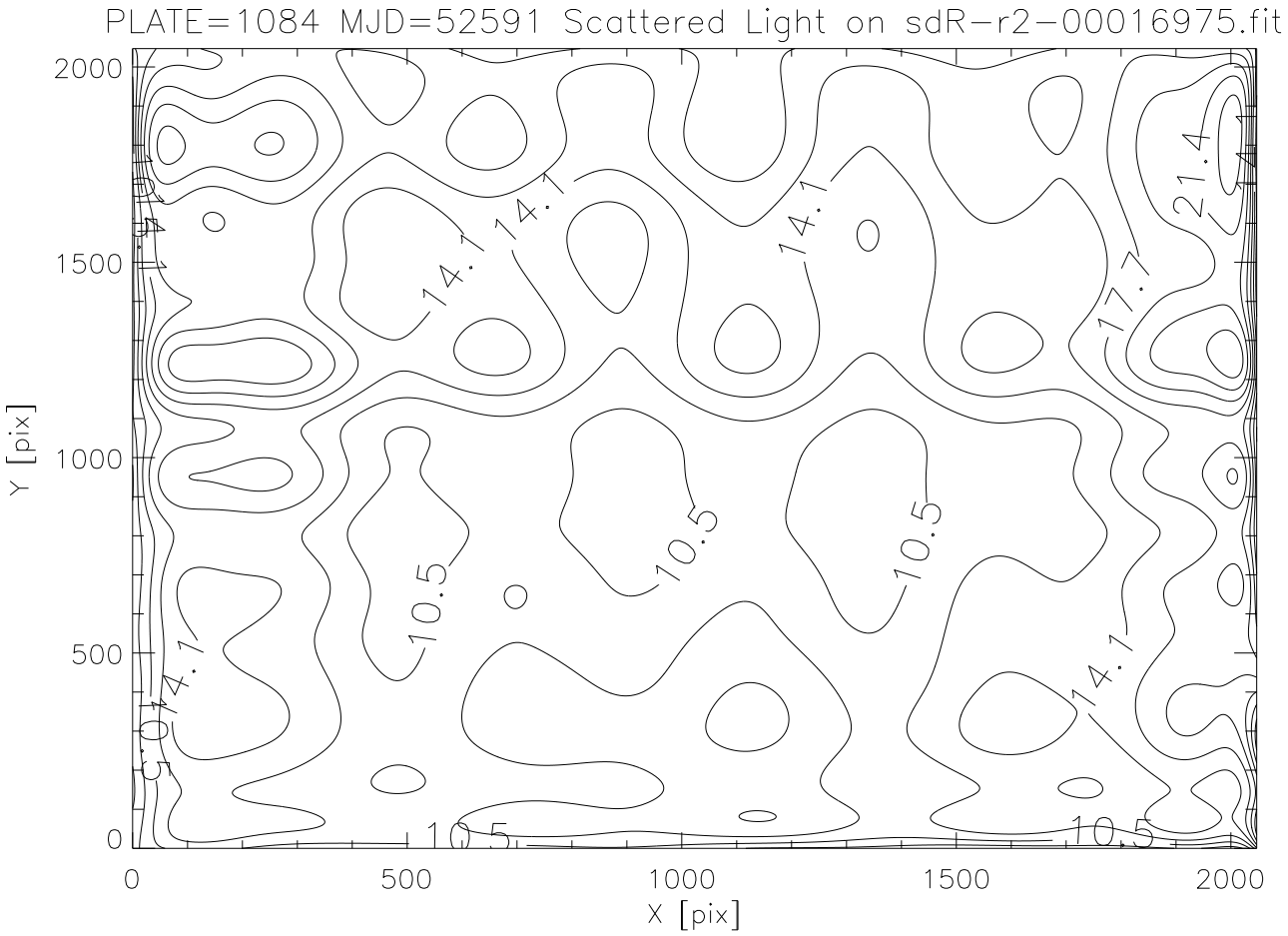

PLATE=1084 MJD=52591 sdR-r2-00016974.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
Fiber number
RED = sky fiber
Dispersion = 2.37 %
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

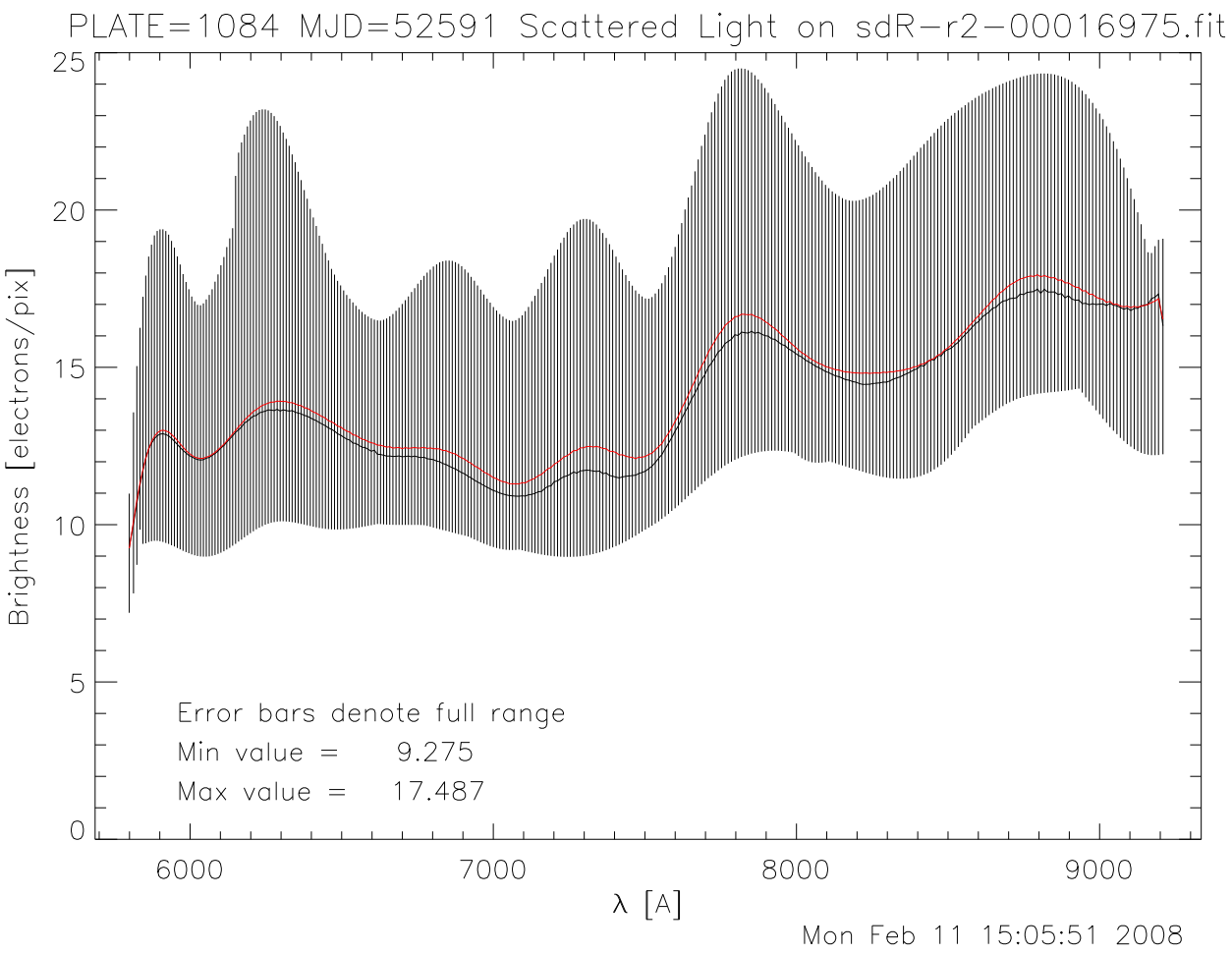

PLATE=1084 MJD=52591 sdR-r2-00016974.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
1.15×10^4
1.10×10^4
1.05×10^4
1.00×10^4
9.50×10^3
RED = sky fiber
Dispersion = 1.33 %
0
50
100
150
200
250
300
Fiber number
Flux (8888.3)/Airmass
1.15×10^4
1.10×10^4
1.05×10^4
1.00×10^4
9.50×10^3
0
100
200
300
400
Focal Distance [mm]
Flux (8888.3)/Airmass
1.15×10^4
1.10×10^4
1.05×10^4
1.00×10^4
9.50×10^3
1.185
1.190
1.195
1.200
1.205
1.210
Airmass

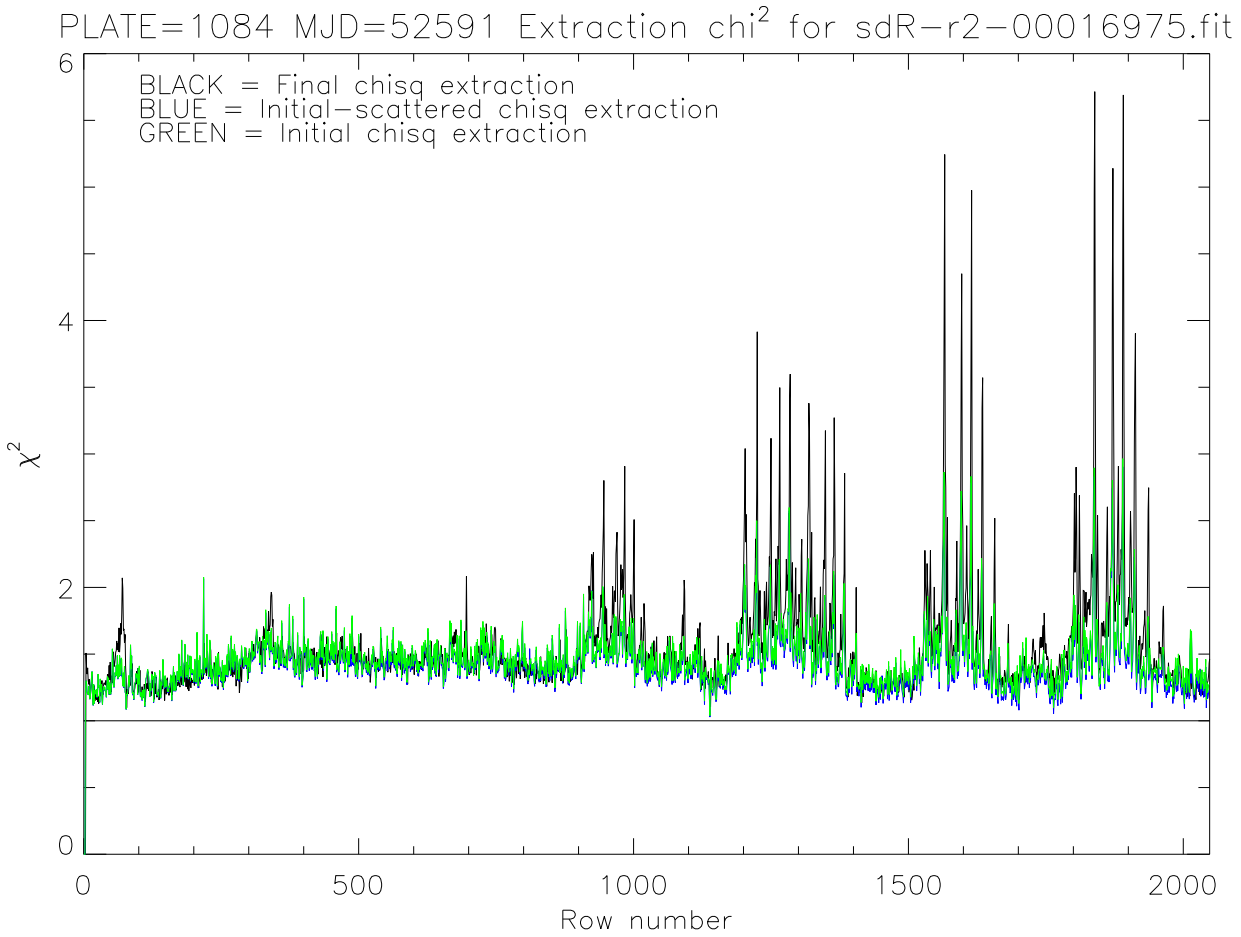

PLATE=1084 MJD=52591 Fiber−Flats for sdR−r2−00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.661
Max value = 1.252
Fiber−Flat
1.5
1.0
0.5
0.0
6000
6500
7000
7500
8000
8500
9000
λ [A]
Mon Feb 11 15:02:07 2008

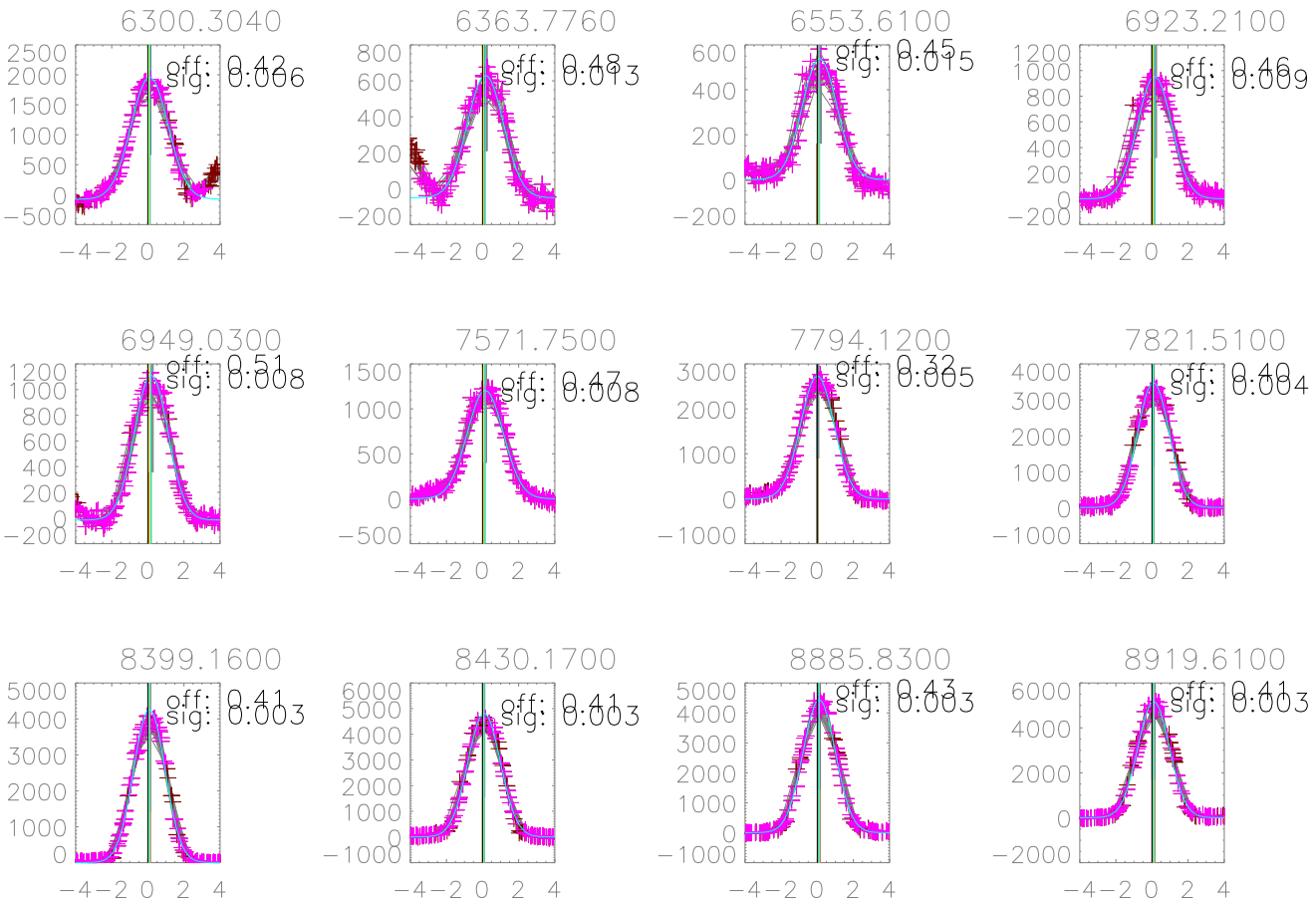

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r2-00016975.fi
50.9
50.9
50.9
36.4
36.4
36.4
21.8
21.8
Y [pix]
X [pix]
0
500
1000
1500
2000

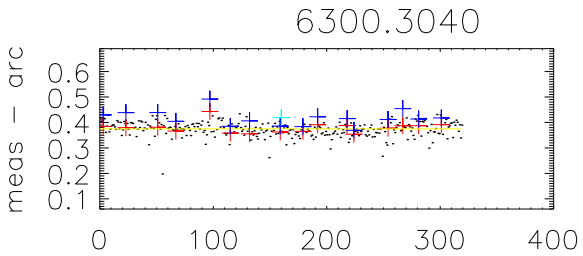

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r2-00016975.fi
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 9.499
Max value = 58.267
Mon Feb 11 15:02:58 2008

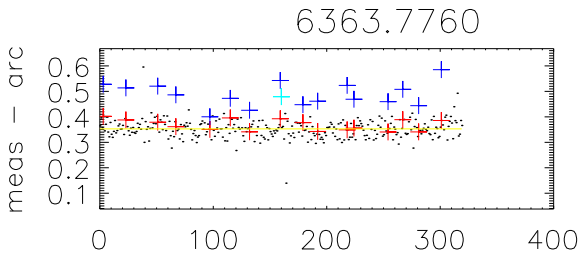

PLATE=1084 MJD=52591 Scattered Light on sdR-r2-00016975.fit
Y [pix]
X [pix]
0
500
1000
1500
2000
10.5
14.1
17.7
21.4

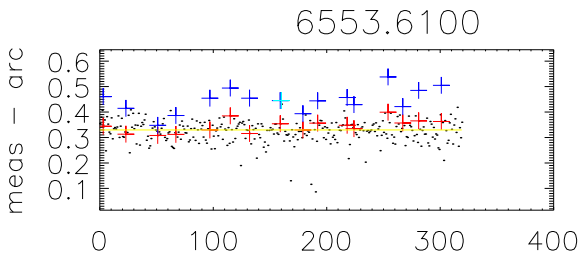

PLATE=1084 MJD=52591 Scattered Light on sdR-r2-00016975.fit
Brightness [electrons/pix]
25
20
15
10
5
0
6000
7000
8000
9000
λ [A]
Error bars denote full range
Min value = 9.275
Max value = 17.487
Mon Feb 11 15:05:51 2008

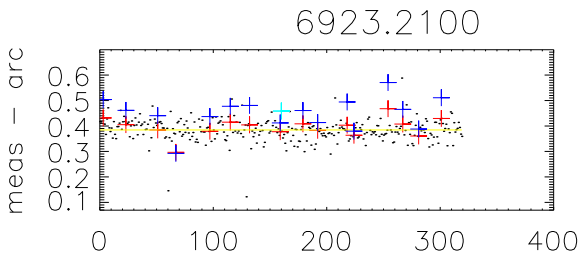

PLATE=1084 MJD=52591 Extraction chi^2 for sdR−r2−00016975.fit
BLACK = Final chisq extraction
BLUE = Initial−scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
0
2
4
6
0
500
1000
1500
2000
Row number

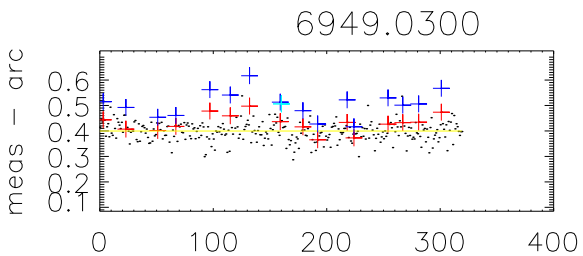

6300.3040
off: 0.42
sig: 0.006
6363.7760
off: 0.48
sig: 0.013
6553.6100
off: 0.45
sig: 0.015
6923.2100
off: 0.46
sig: 0.009
6949.0300
off: 0.51
sig: 0.008
7571.7500
off: 0.47
sig: 0.008
7794.1200
off: 0.32
sig: 0.005
7821.5100
off: 0.40
sig: 0.004
8399.1600
off: 0.41
sig: 0.003
8430.1700
off: 0.41
sig: 0.003
8885.8300
off: 0.43
sig: 0.003
8919.6100
off: 0.41
sig: 0.003

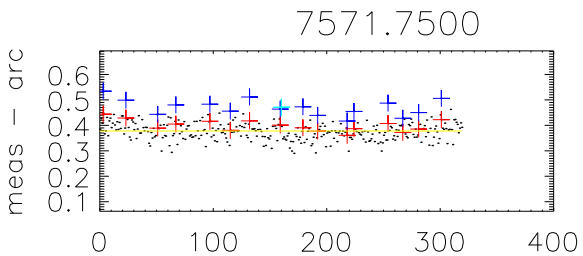

6300.3040
meas − arc
0.1
0.2
0.3
0.4
0.5
0.6
0
100
200
300
400

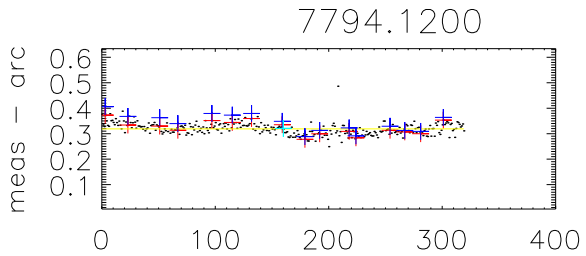

6363.7760
meas − arc
0.1
0.2
0.3
0.4
0.5
0.6
0
100
200
300
400

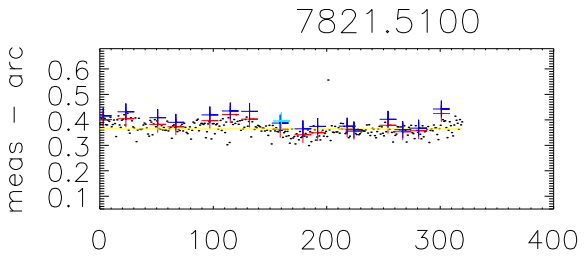

6553.6100
meas − arc
0.1
0.2
0.3
0.4
0.5
0.6
0
100
200
300
400

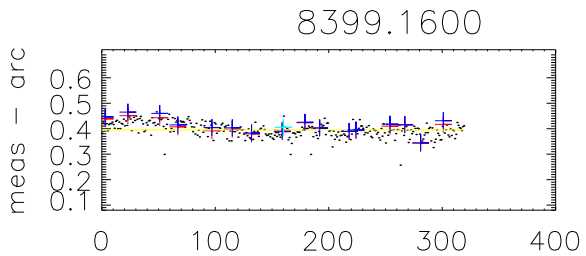

6923.2100
meas − arc
0.1
0.2
0.3
0.4
0.5
0.6
0
100
200
300
400

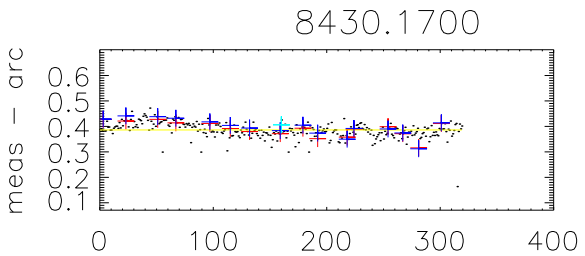

6949.0300
meas − arc
0.1
0.2
0.3
0.4
0.5
0.6
0
100
200
300
400

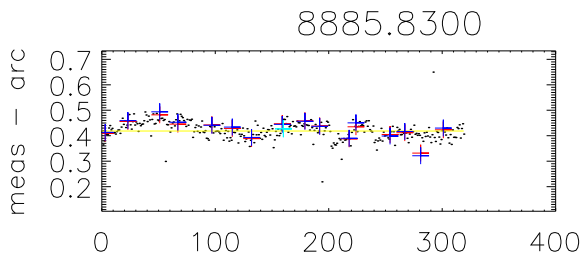

7571.7500
meas − arc
0.1
0.2
0.3
0.4
0.5
0.6
0
100
200
300
400

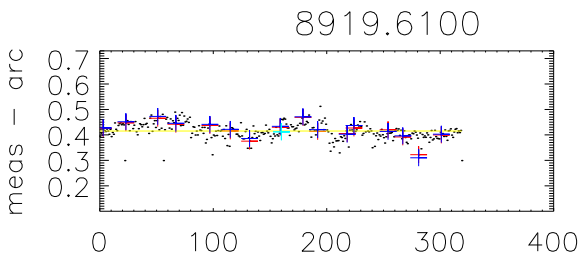

7794.1200
meas − arc
0.6
0.5
0.4
0.3
0.2
0.1
0
100
200
300
400

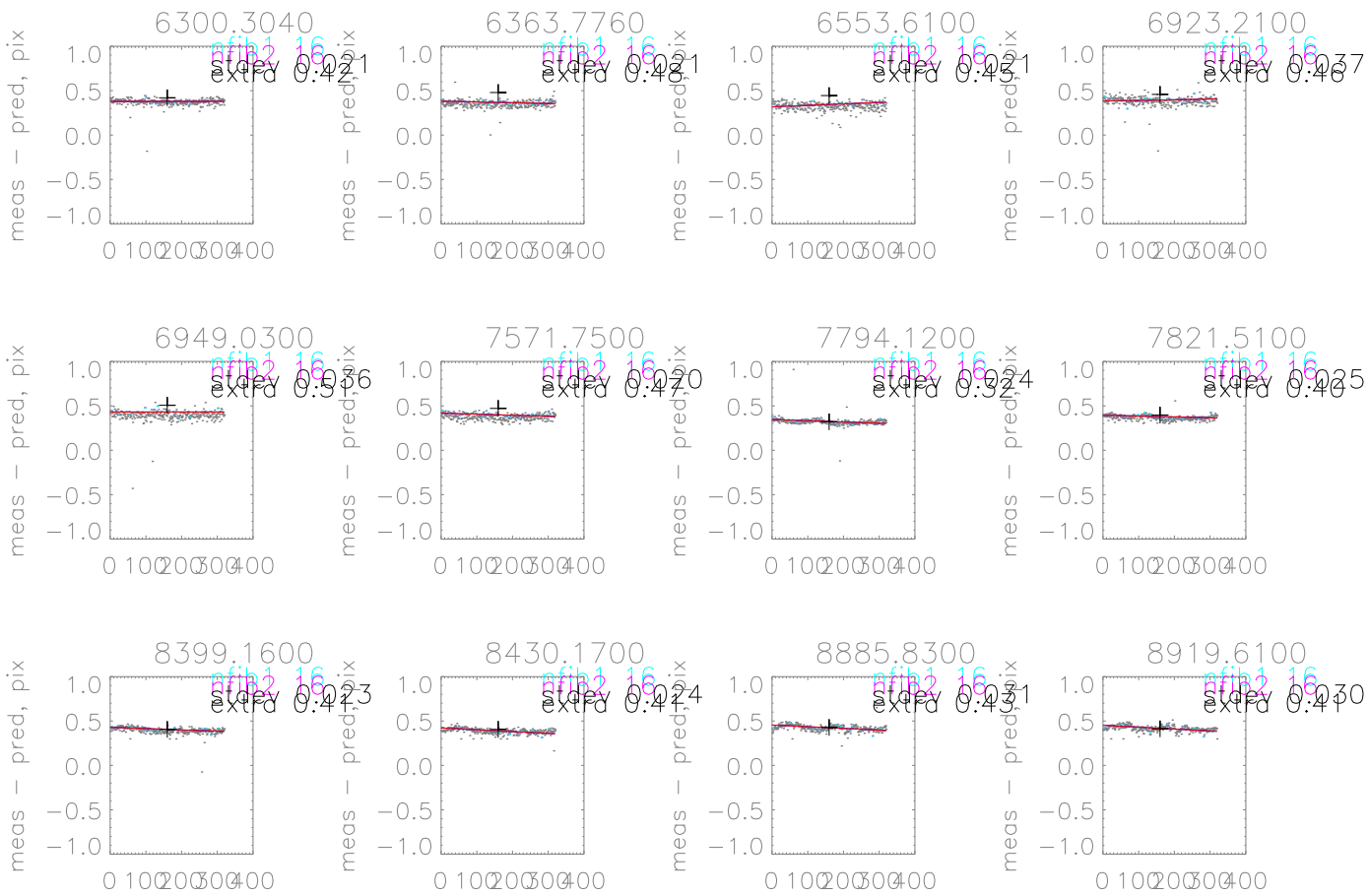

7821.5100
meas − arc
0.6
0.5
0.4
0.3
0.2
0.1
0
100
200
300
400

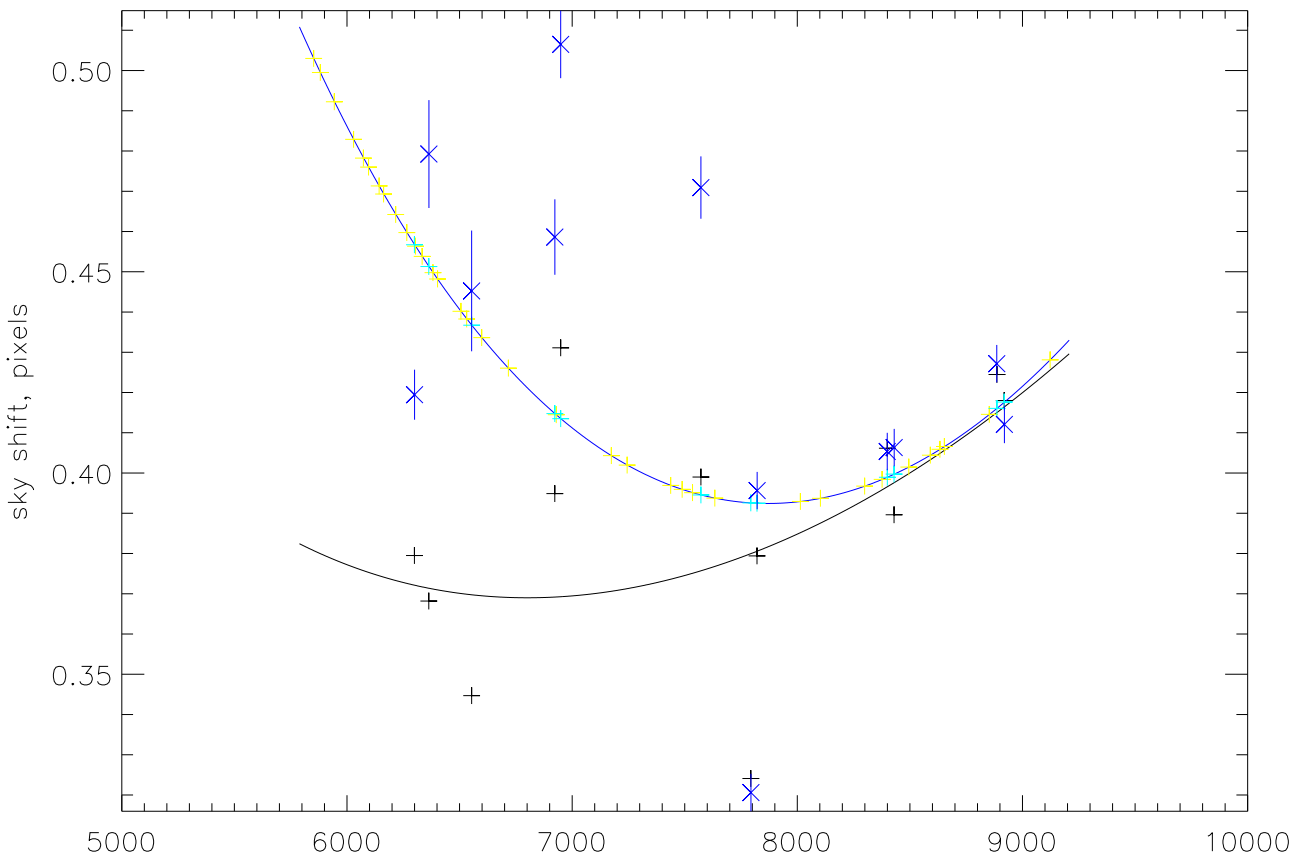

8399.1600
meas − arc
0.6
0.5
0.4
0.3
0.2
0.1
0
100
200
300
400

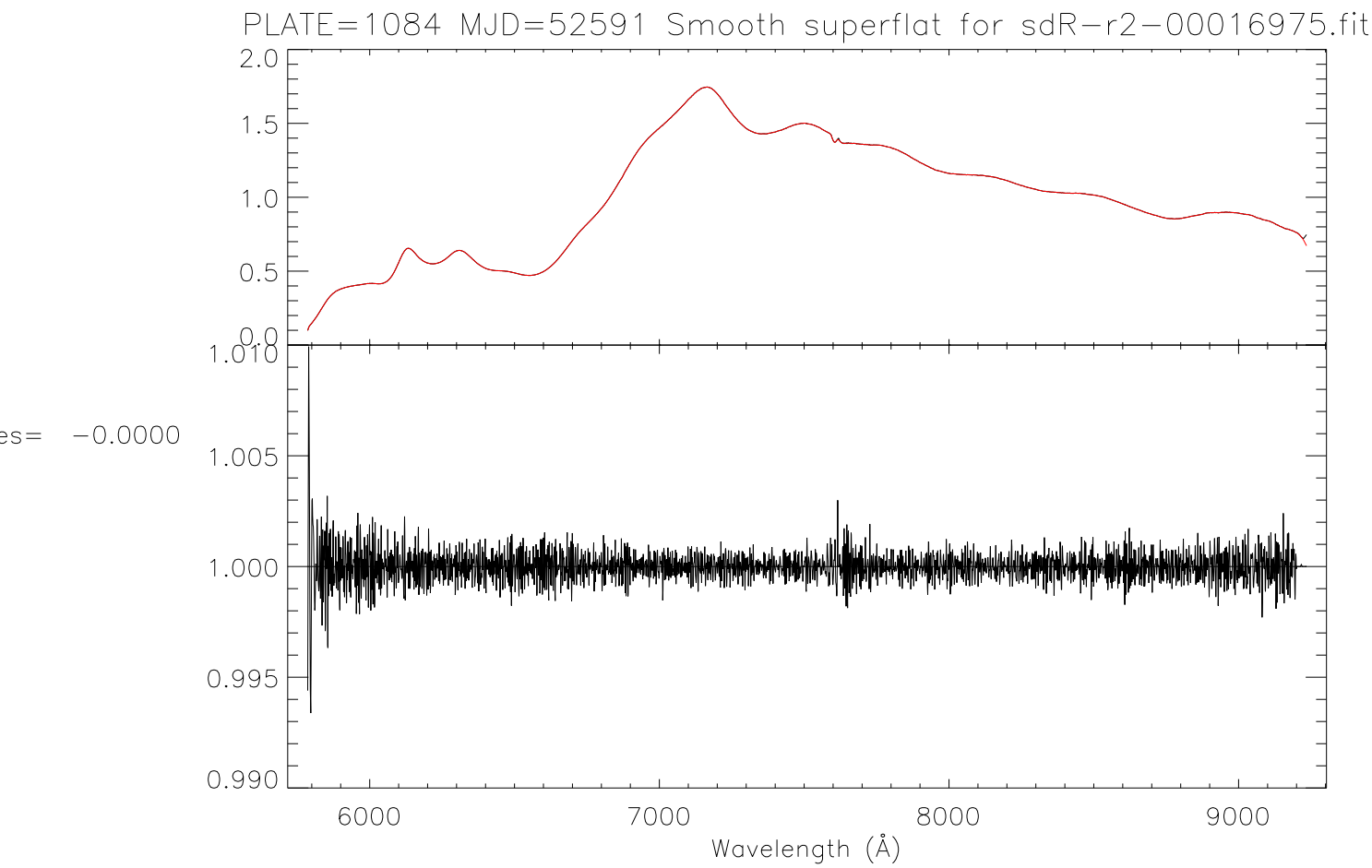

8430.1700
meas − arc
0.6
0.5
0.4
0.3
0.2
0.1
0
100
200
300
400


8885.8300
meas − arc
0.7
0.6
0.5
0.4
0.3
0.2
0
100
200
300
400

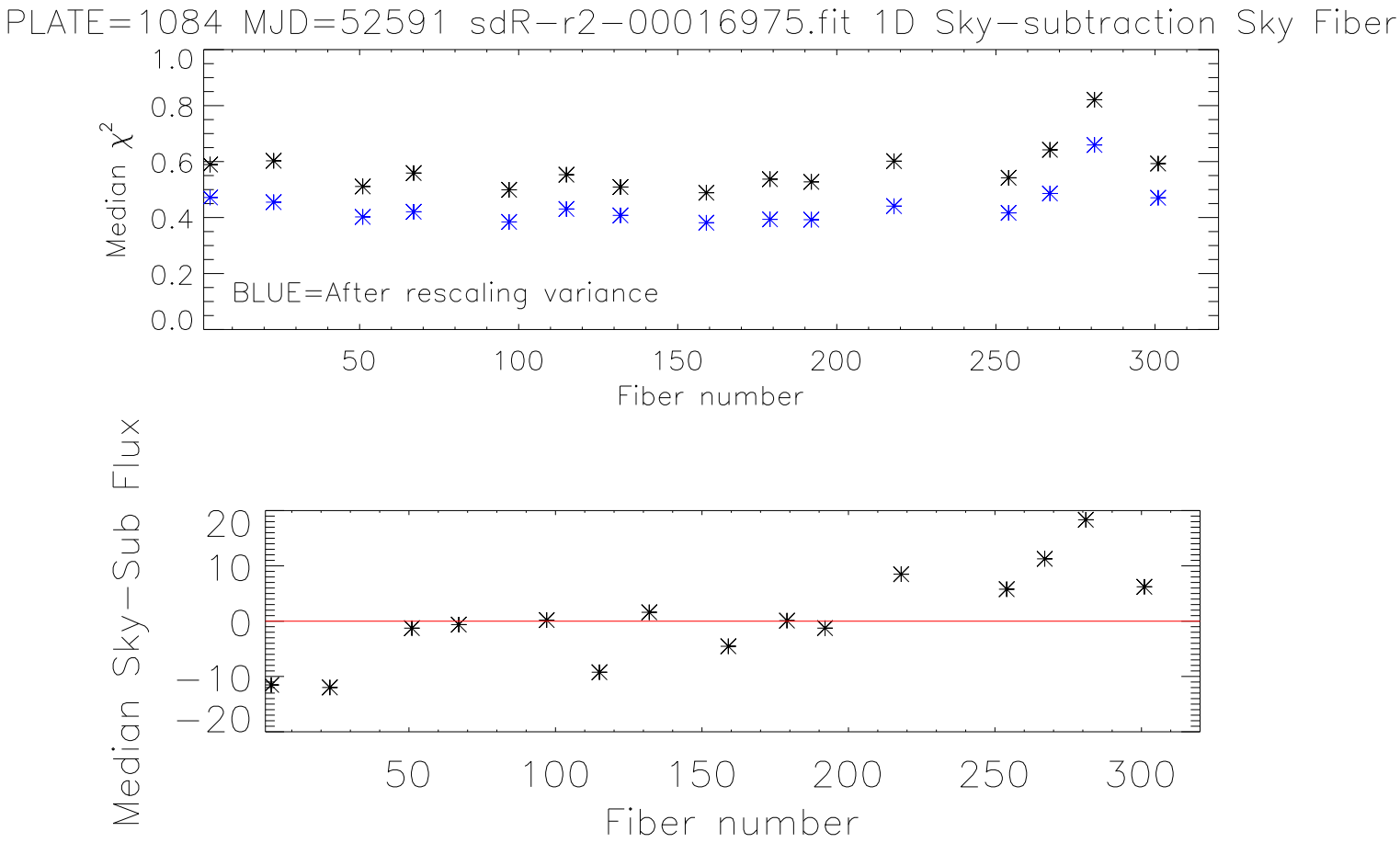

8919.6100
meas − arc
0.7
0.6
0.5
0.4
0.3
0.2
0
100
200
300
400

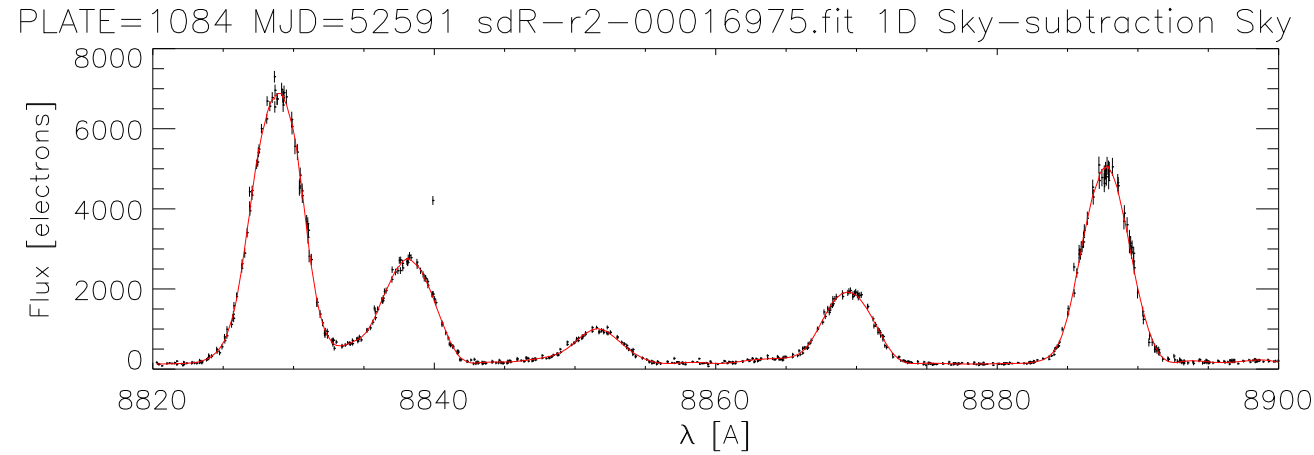

6300.3040
stdev 0.021
extra 0.42
6363.7760
stdev 0.021
extra 0.48
6553.6100
stdev 0.021
extra 0.45
6923.2100
stdev 0.037
extra 0.46
6949.0300
stdev 0.036
extra 0.51
7571.7500
stdev 0.020
extra 0.47
7794.1200
stdev 0.024
extra 0.32
7821.5100
stdev 0.025
extra 0.46
8399.1600
stdev 0.023
extra 0.42
8430.1700
stdev 0.024
extra 0.42
8885.8300
stdev 0.031
extra 0.43
8919.6100
stdev 0.030
extra 0.41
meas − pred, pix
mfhd2 16

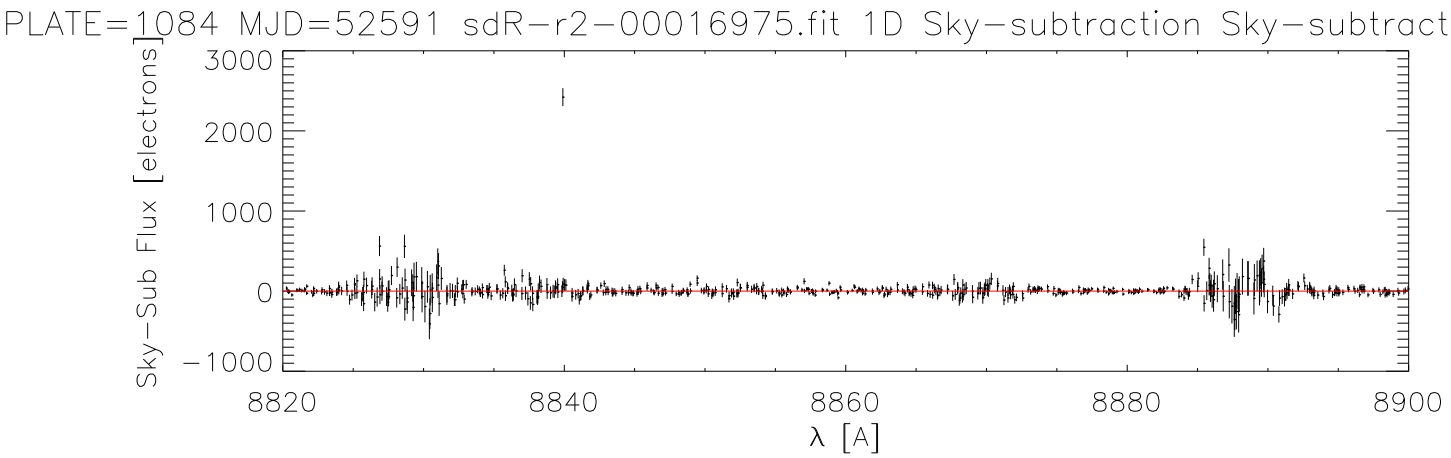

sky shift, pixels
0.50
0.45
0.40
0.35
5000
6000
7000
8000
9000
10000

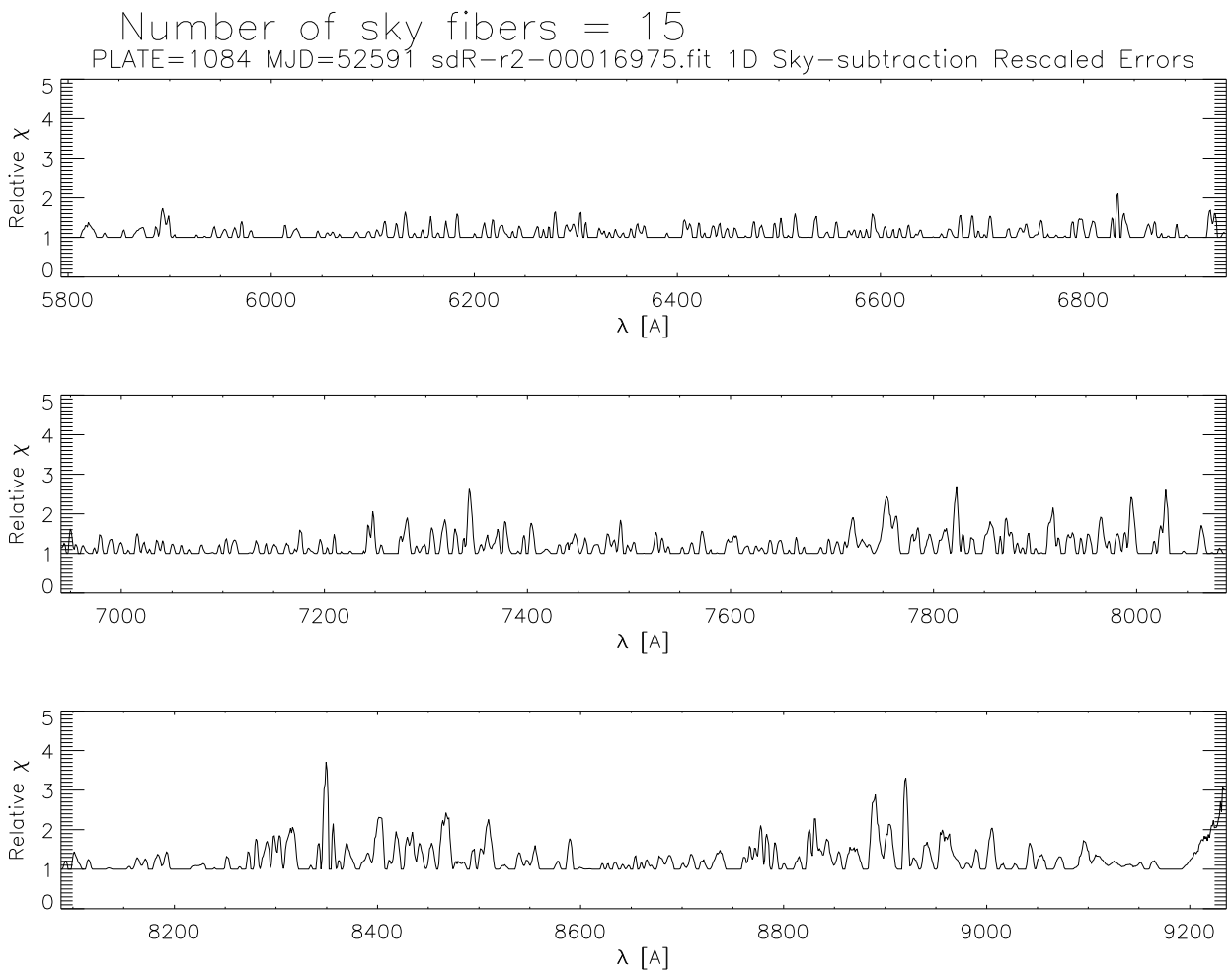

PLATE=1084 MJD=52591 Smooth superflat for sdR-r2-00016975.fit
2.0
1.5
1.0
0.5
0.0
1.010
1.005
1.000
0.995
0.990
6000
7000
8000
9000
Wavelength (Å)

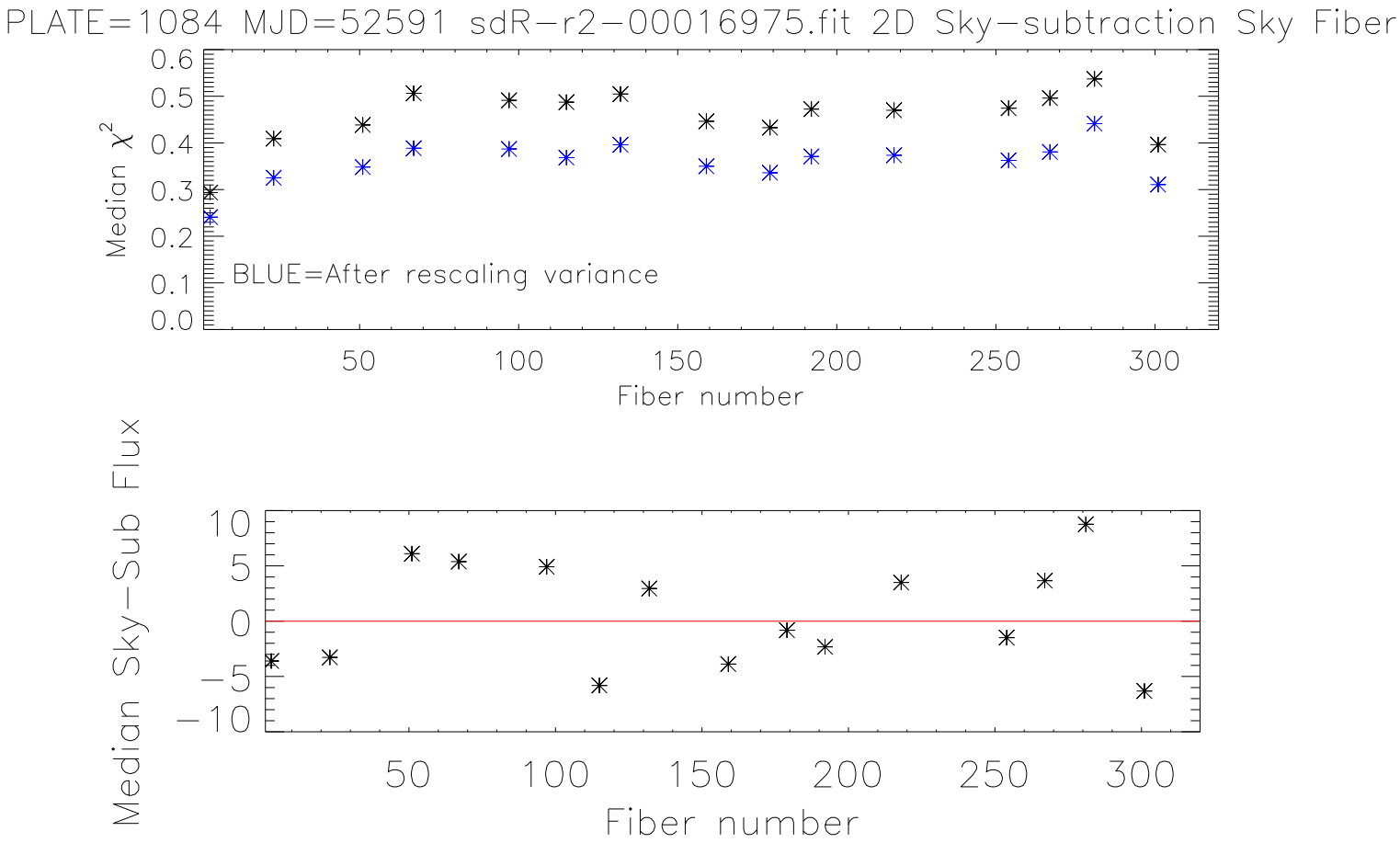
es= −0.0000

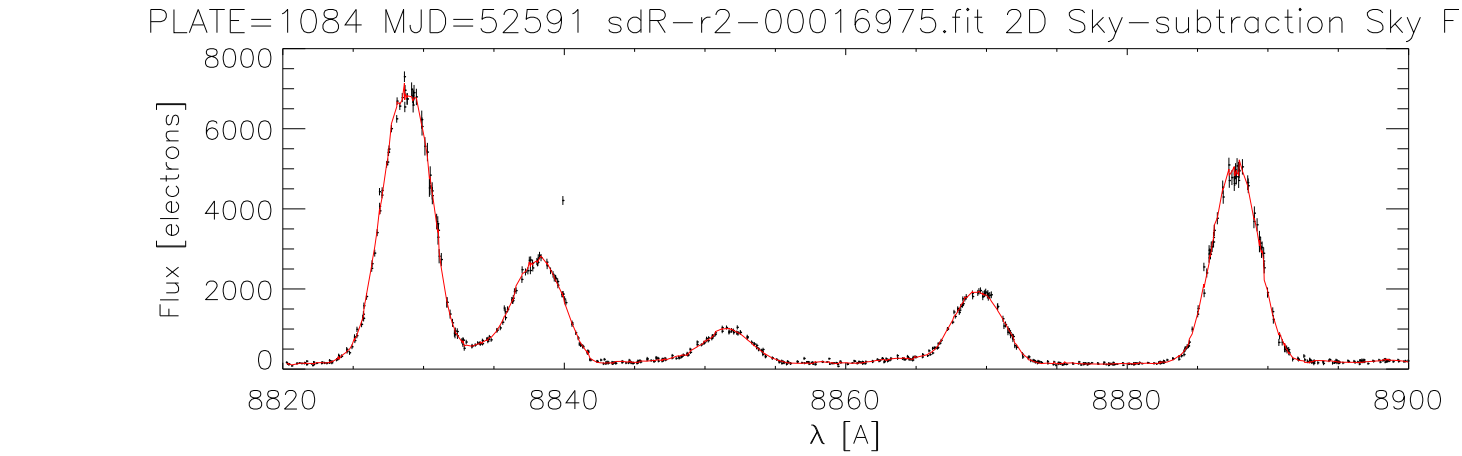

PLATE=1084 MJD=52591 sdR-r2-00016975.fit 1D Sky-subtraction Sky Fibers
Median χ^2
1.0
0.8
0.6
0.4
0.2
0.0
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
20
10
0
-10
-20
50
100
150
200
250
300
Fiber number

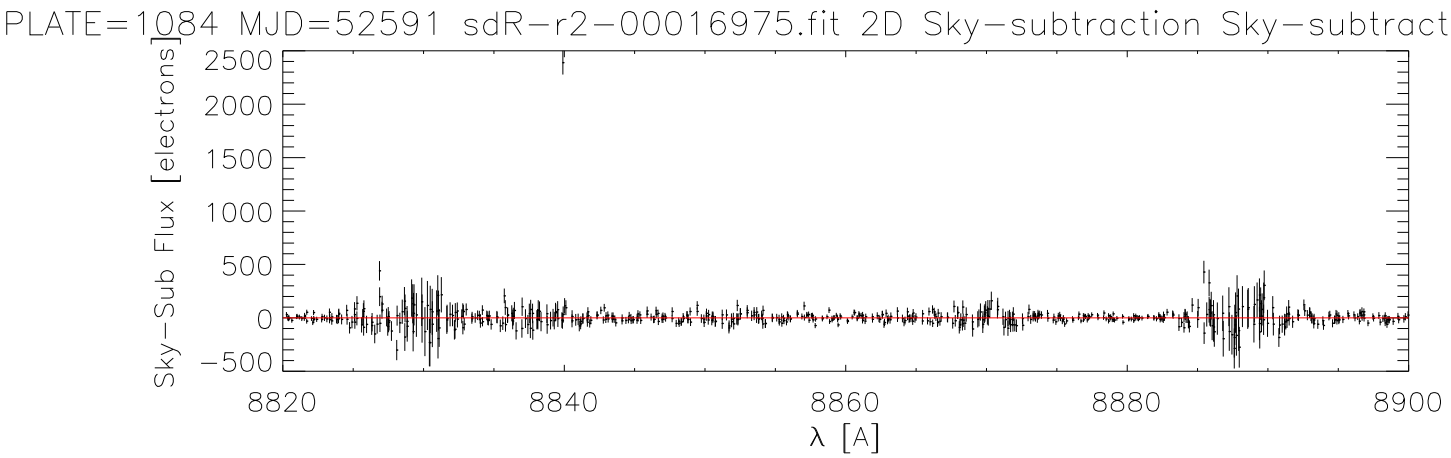

PLATE=1084 MJD=52591 sdR-r2-00016975.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
8000
6000
4000
2000
0
8820
8840
8860
8880
8900
λ [A]

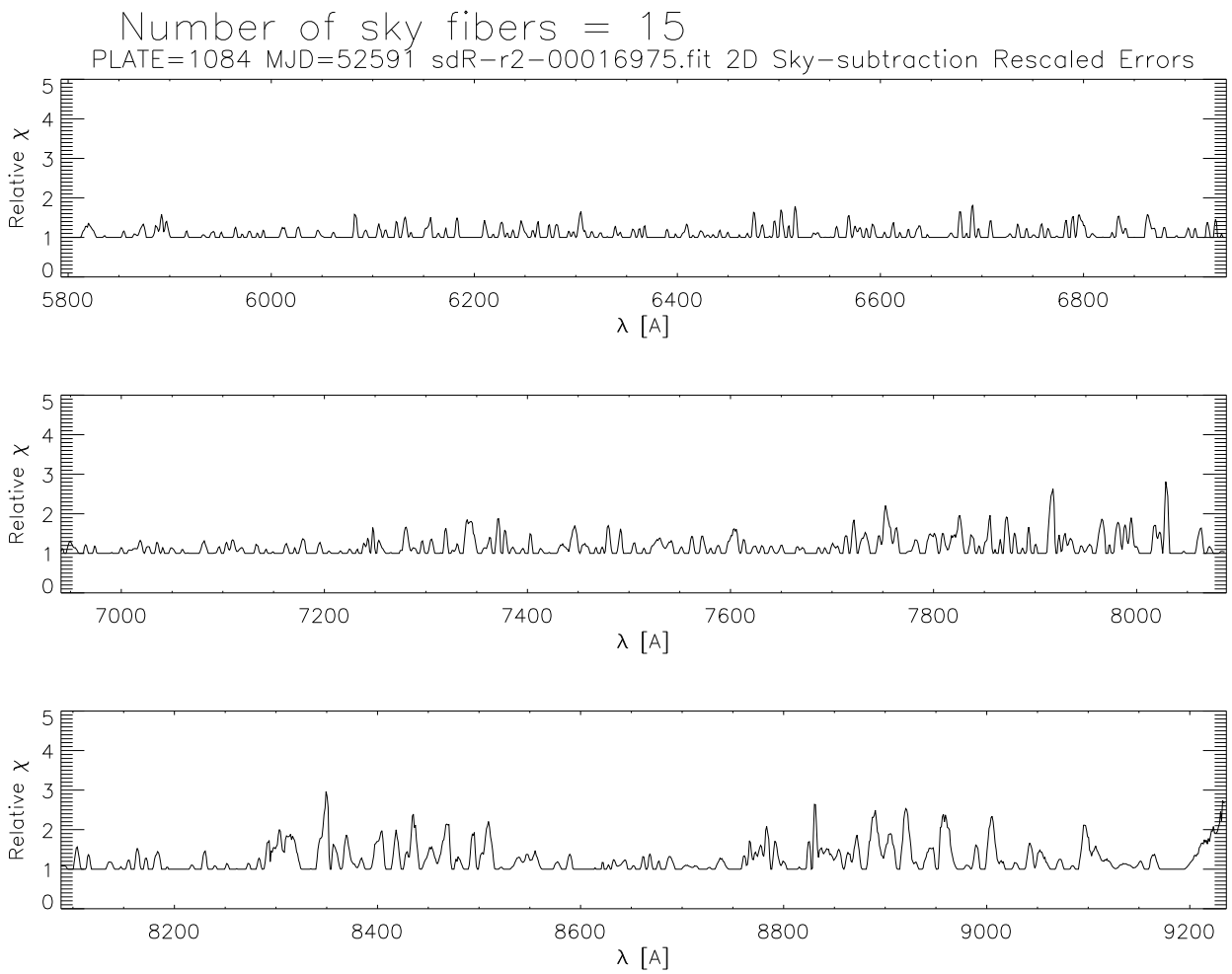

PLATE=1084 MJD=52591 sdR-r2-00016975.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
3000
2000
1000
0
-1000
8820
8840
8860
8880
8900
λ [A]

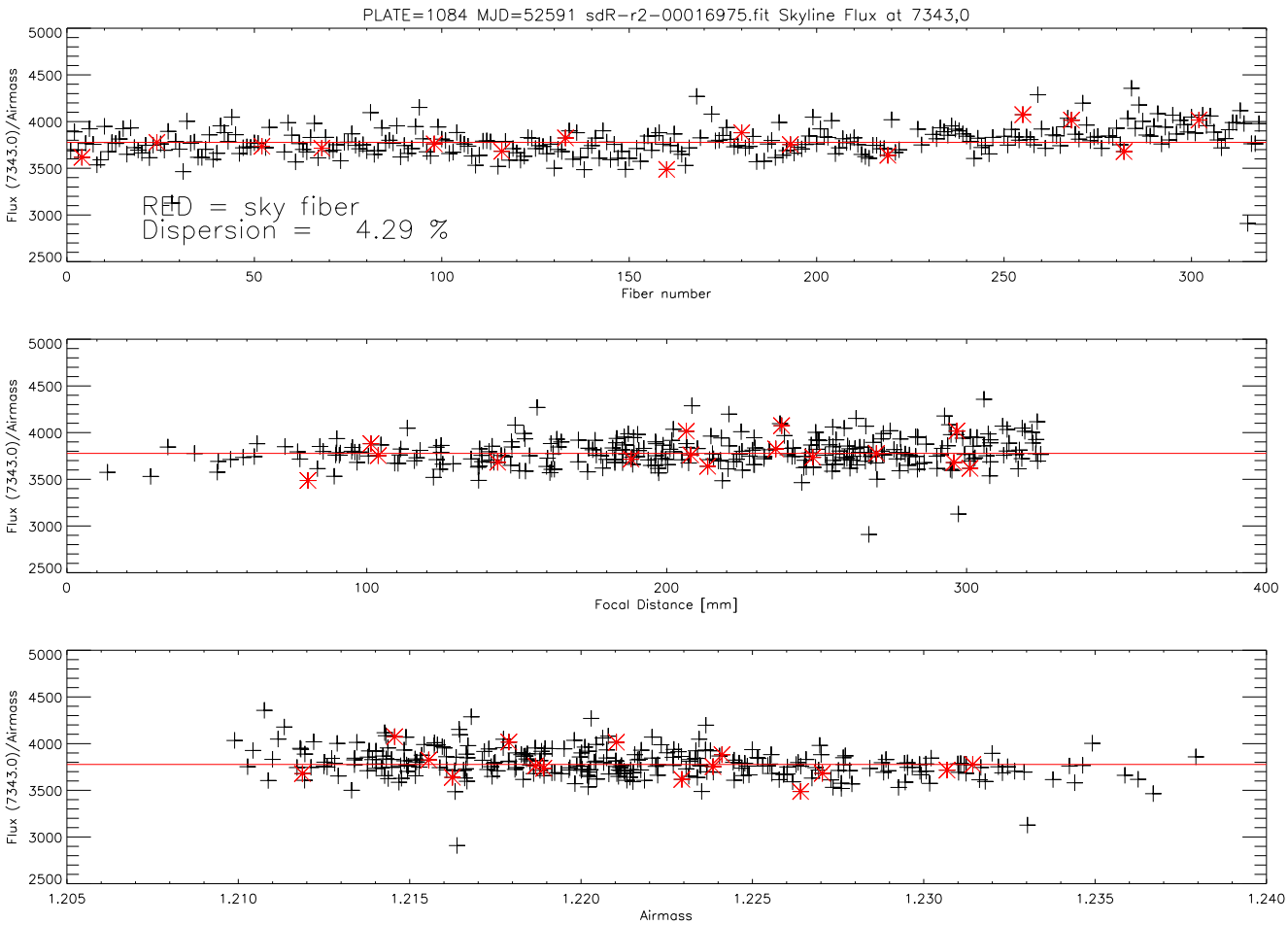

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-r2-00016975.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200

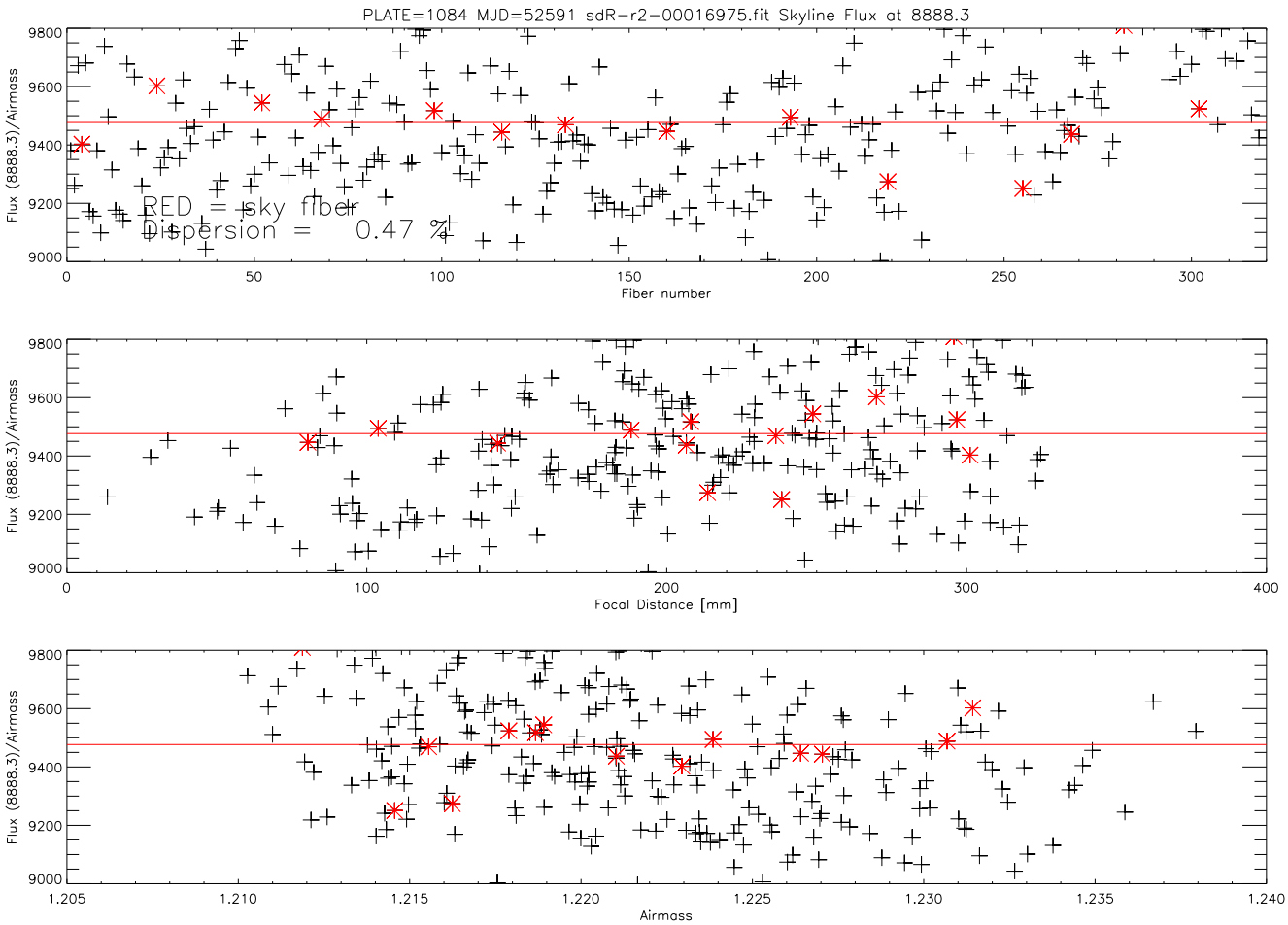

PLATE=1084 MJD=52591 sdR-r2-00016975.fit 2D Sky-subtraction Sky Fibers
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
0.6
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
10
5
0
−5
−10
50
100
150
200
250
300
Fiber number

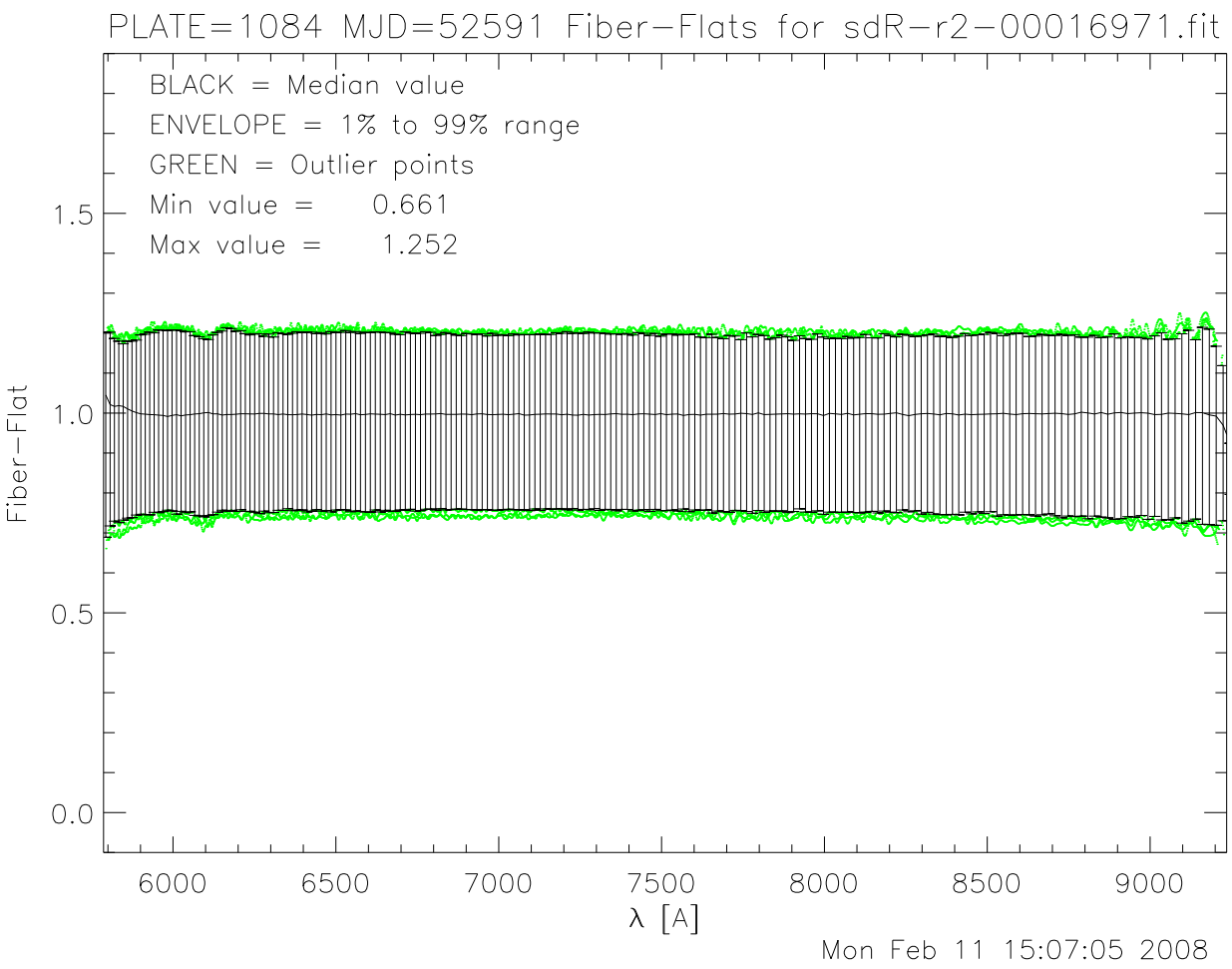

PLATE=1084 MJD=52591 sdR-r2-00016975.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
8000
6000
4000
2000
0
8820
8840
8860
8880
8900
λ [A]

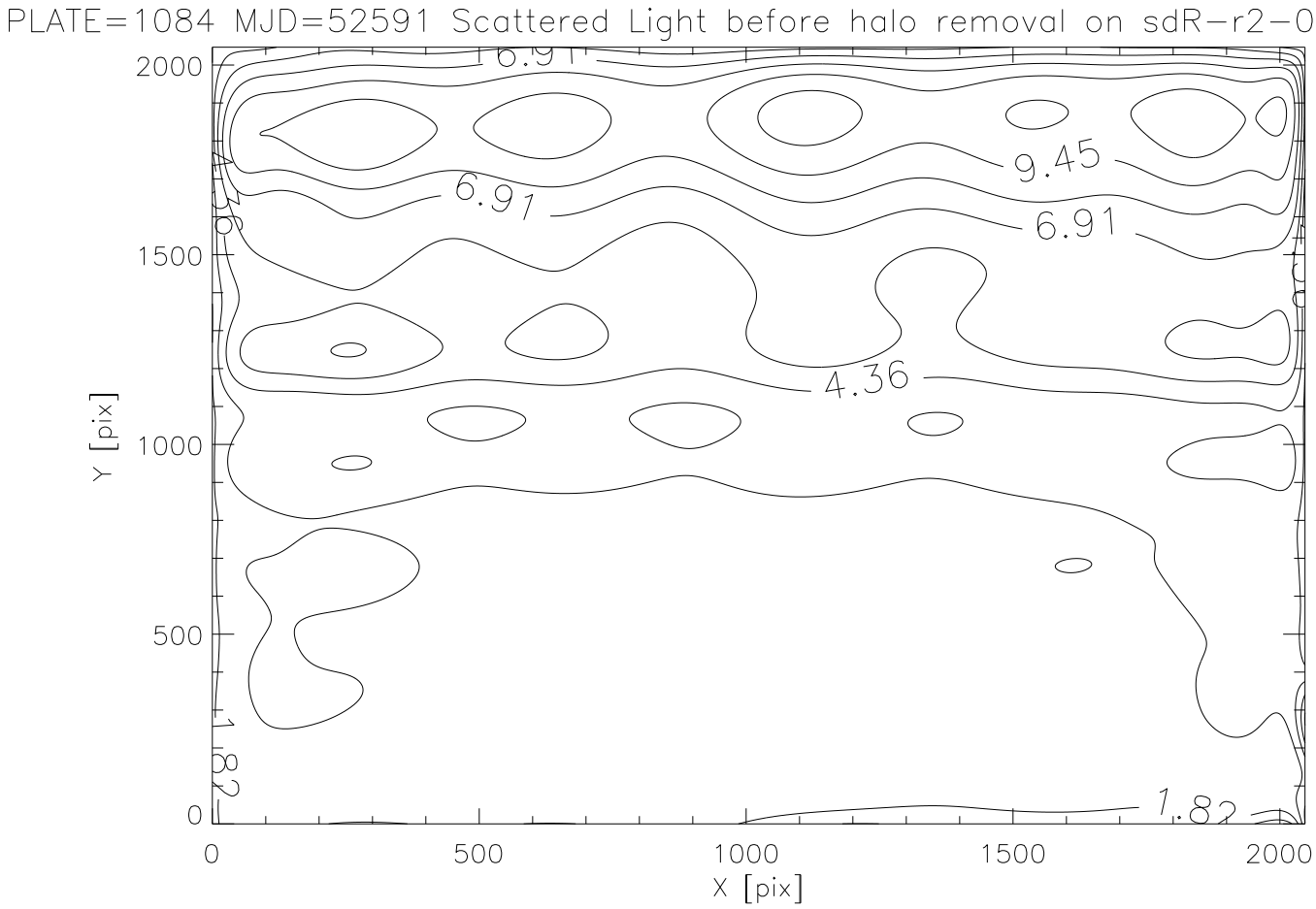

PLATE=1084 MJD=52591 sdR-r2-00016975.fit 2D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
2500
2000
1500
1000
500
0
-500
8820
8840
8860
8880
8900
λ [A]

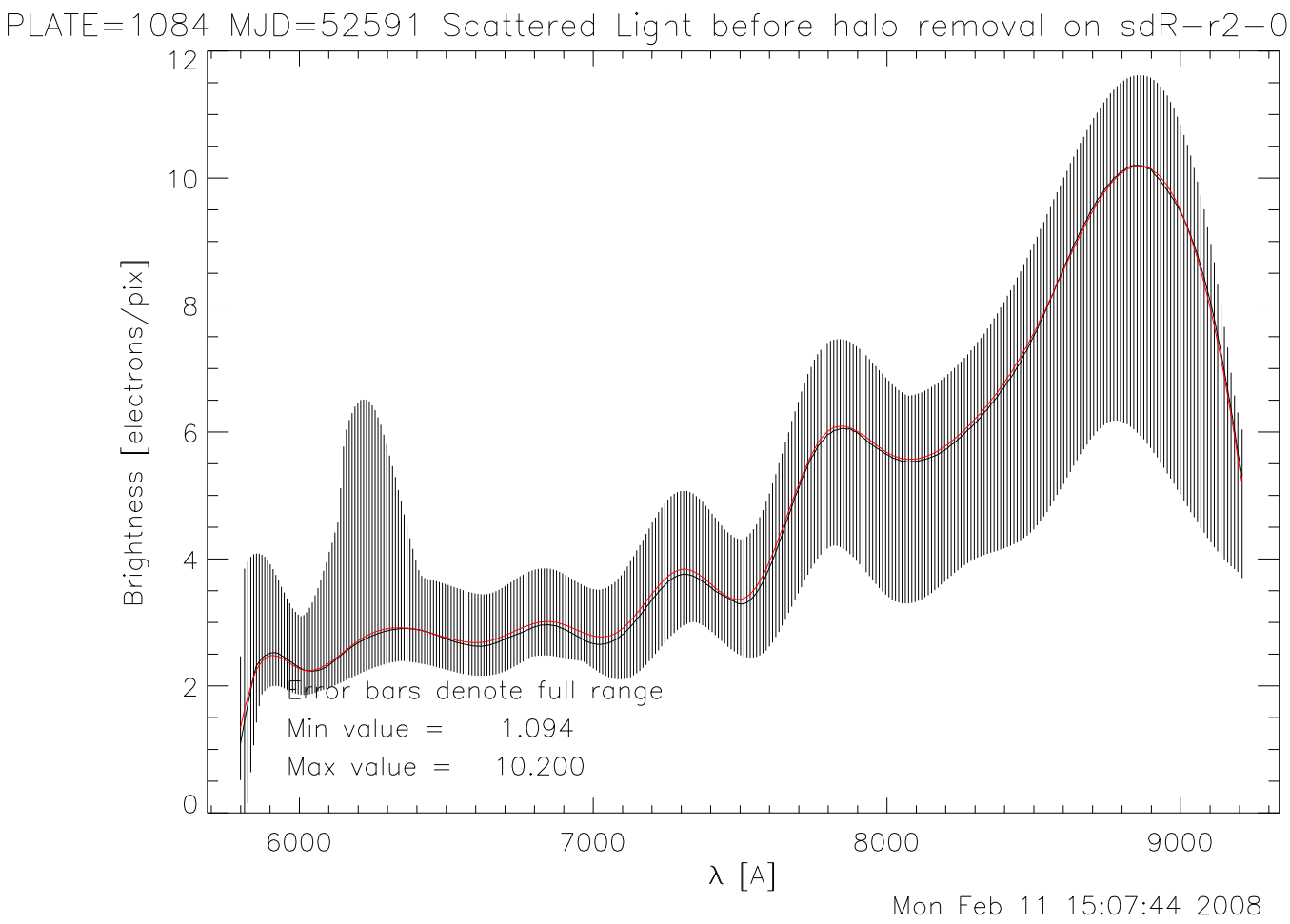

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-r2-00016975.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200

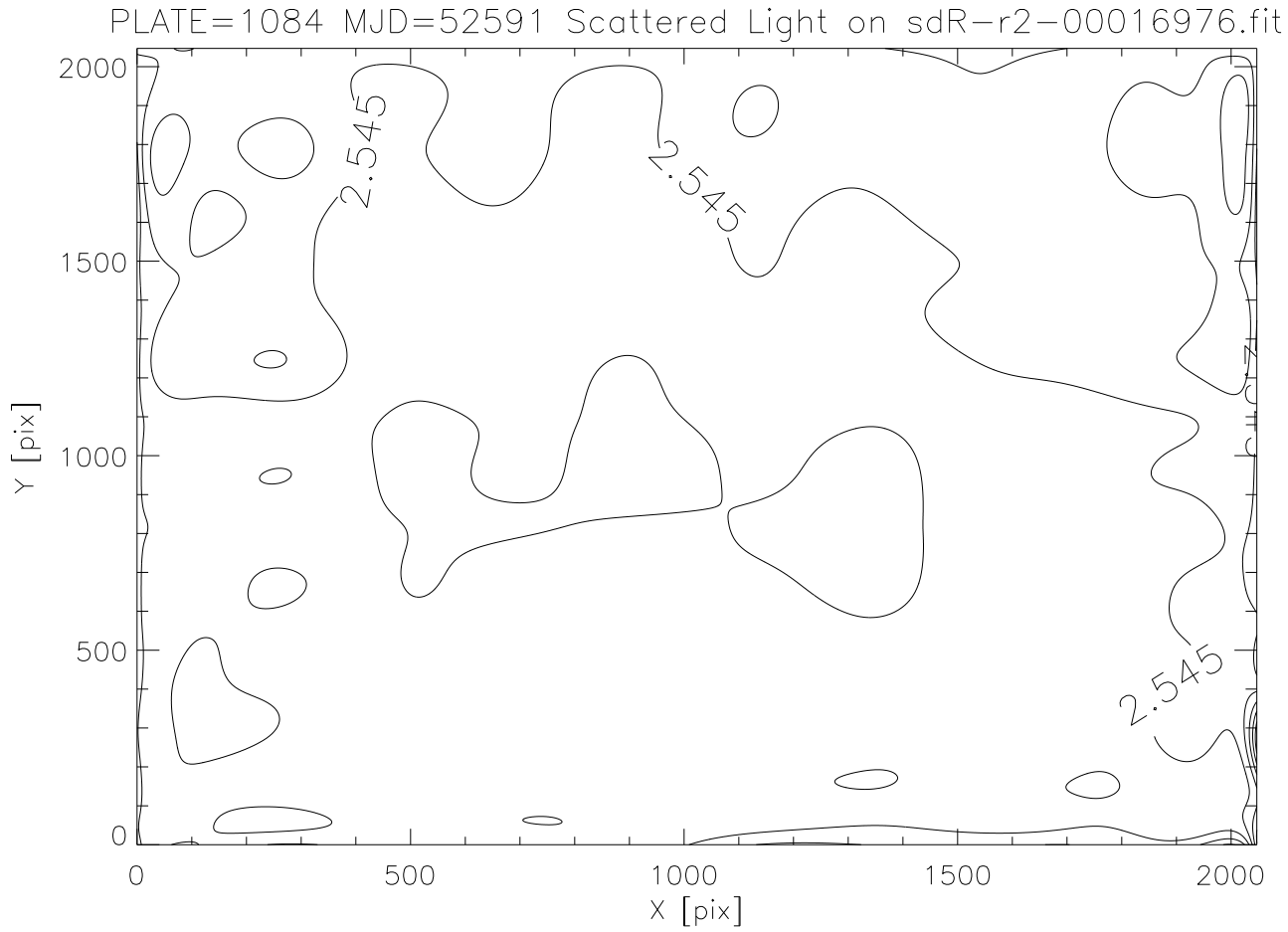

PLATE=1084 MJD=52591 sdR-r2-00016975.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 4.29 %
Fiber number
Flux (7343.0)/Airmass
Focal Distance [mm]
Flux (7343.0)/Airmass
Airmass

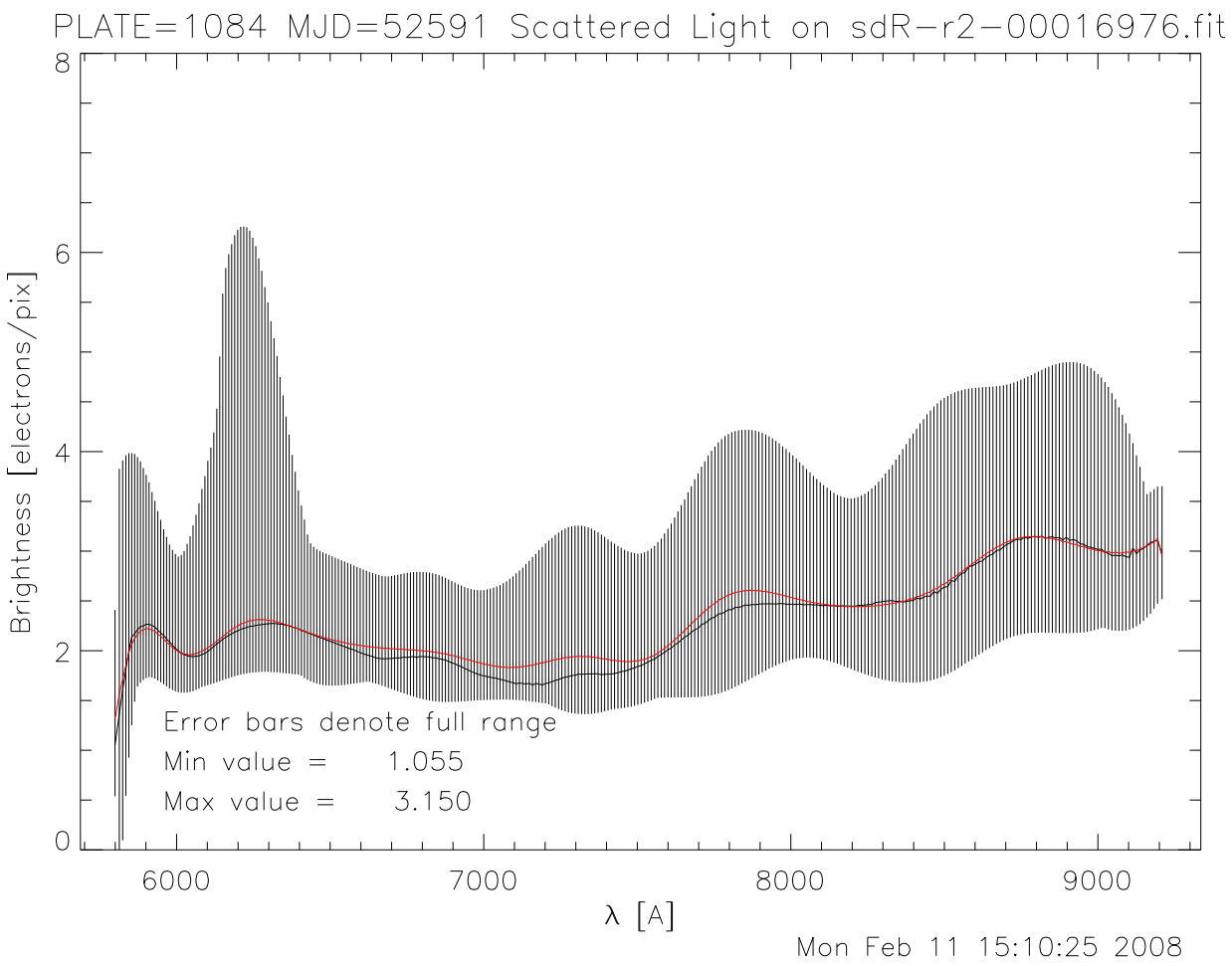

PLATE=1084 MJD=52591 sdR-r2-00016975.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
Fiber number
RED = sky fiber
Dispersion = 0.47 %
Flux (8888.3)/Airmass
Focal Distance [mm]
Flux (8888.3)/Airmass
Airmass

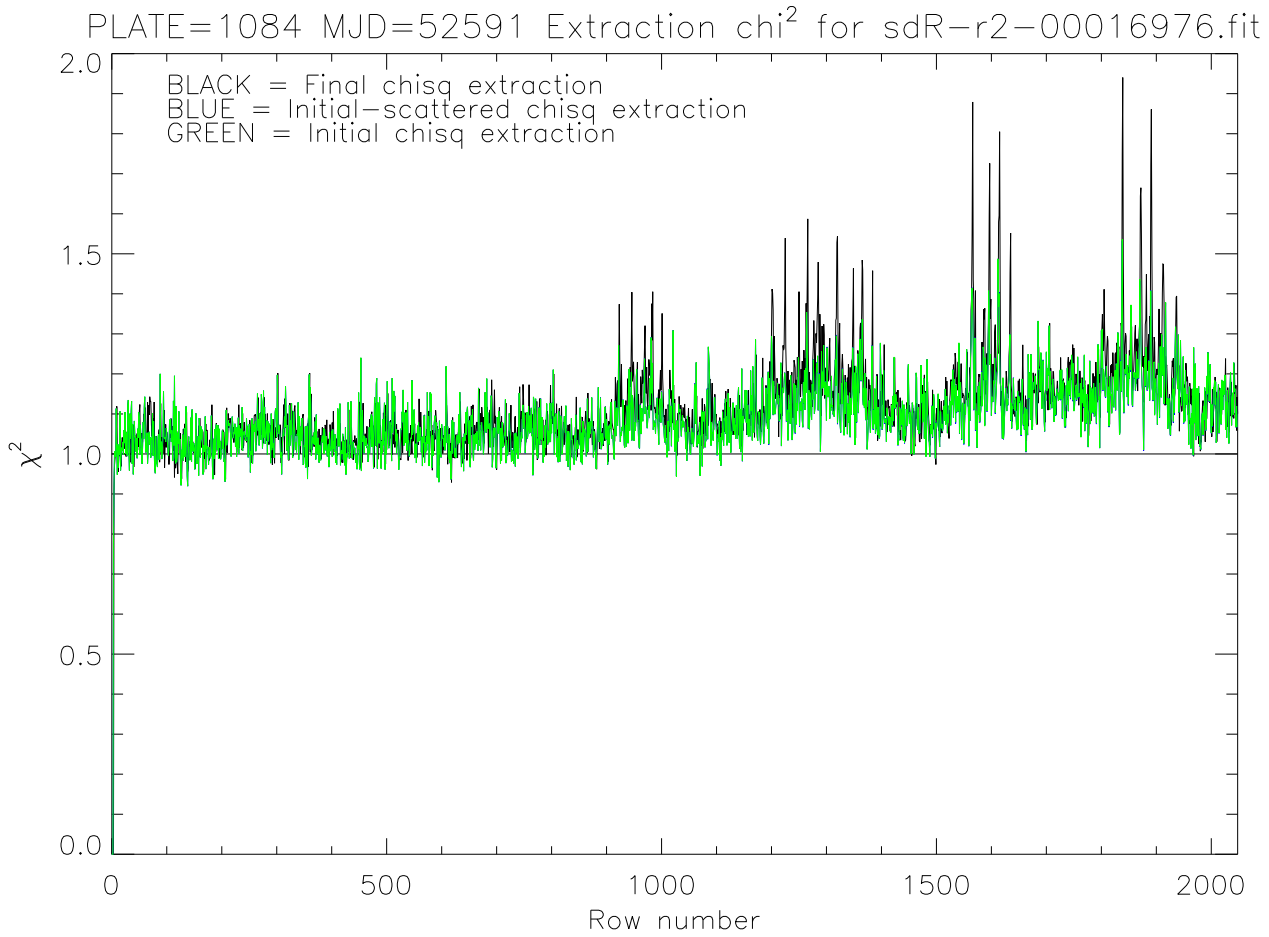

PLATE=1084 MJD=52591 Fiber−Flats for sdR−r2−00016971.fit
BLACK = Median value
ENVELOPE = 1% to 99% range
GREEN = Outlier points
Min value = 0.661
Max value = 1.252
Fiber−Flat
1.5
1.0
0.5
0.0
6000
6500
7000
7500
8000
8500
9000
λ [A]
Mon Feb 11 15:07:05 2008

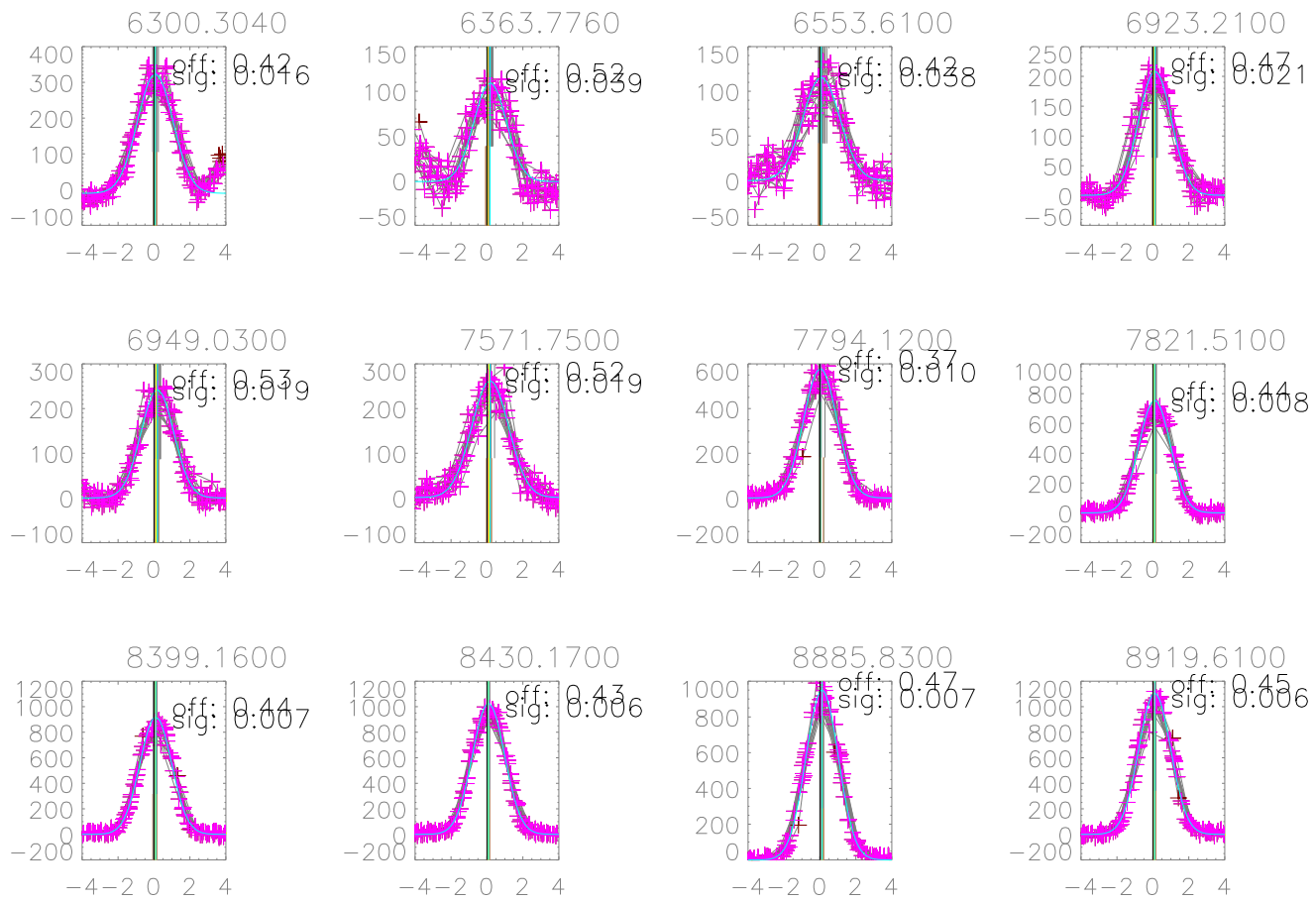

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r2-00016976.fi
6.91
9.45
6.91
6.91
4.36
4.36
1.82
1.82
Y [pix]
X [pix]
0
500
1000
1500
2000

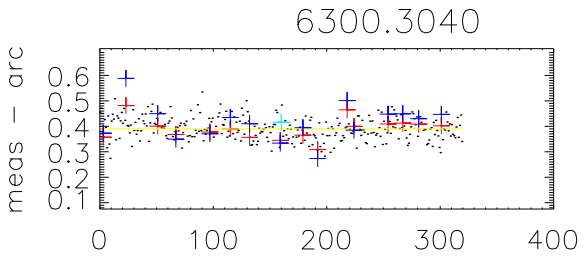

PLATE=1084 MJD=52591 Scattered Light before halo removal on sdR-r2-00016976.fi
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 1.094
Max value = 10.200
Mon Feb 11 15:07:44 2008

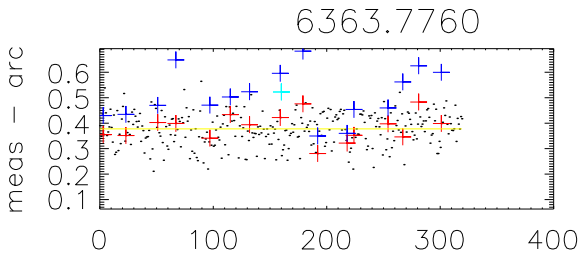

PLATE=1084 MJD=52591 Scattered Light on sdR-r2-00016976.fit
2.545
2.545
2.545
Y [pix]
X [pix]
0
500
1000
1500
2000

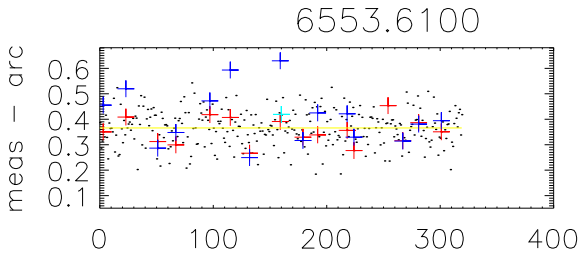

PLATE=1084 MJD=52591 Scattered Light on sdR-r2-00016976.fit
Brightness [electrons/pix]
λ [A]
Error bars denote full range
Min value = 1.055
Max value = 3.150
Mon Feb 11 15:10:25 2008

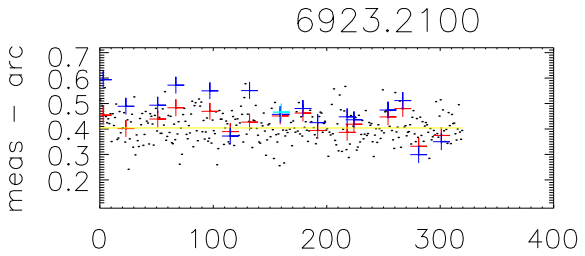

PLATE=1084 MJD=52591 Extraction chi^2 for sdR−r2−00016976.fit
BLACK = Final chisq extraction
BLUE = Initial−scattered chisq extraction
GREEN = Initial chisq extraction
χ^2
2.0
1.5
1.0
0.5
0.0
0
500
1000
1500
2000
Row number

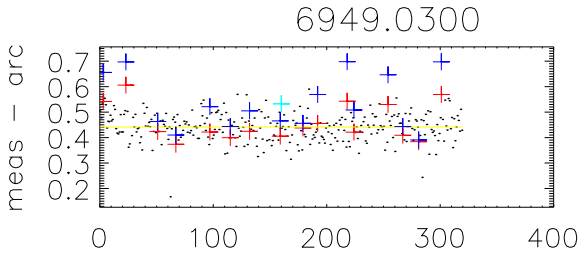

6300.3040
off: 0.42
sig: 0.016
6363.7760
off: 0.52
sig: 0.039
6553.6100
off: 0.42
sig: 0.038
6923.2100
off: 0.47
sig: 0.021
6949.0300
off: 0.53
sig: 0.019
7571.7500
off: 0.52
sig: 0.019
7794.1200
off: 0.37
sig: 0.010
7821.5100
off: 0.44
sig: 0.008
8399.1600
off: 0.44
sig: 0.007
8430.1700
off: 0.43
sig: 0.006
8885.8300
off: 0.47
sig: 0.007
8919.6100
off: 0.45
sig: 0.006

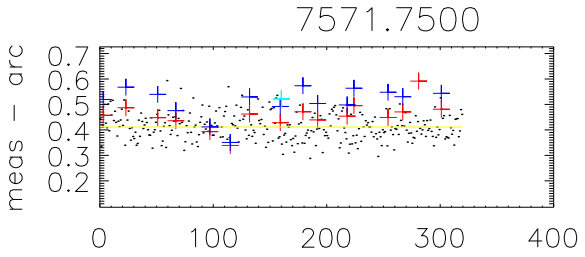

6300.3040
meas − arc
0.6
0.5
0.4
0.3
0.2
0.1
0
100
200
300
400

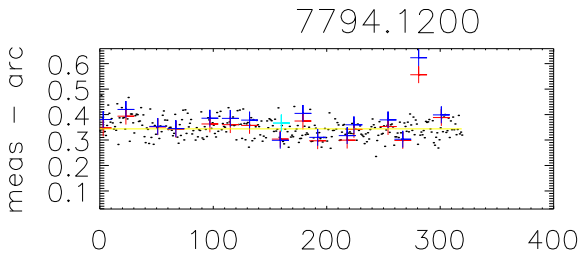

6363.7760
meas − arc
0.6
0.5
0.4
0.3
0.2
0.1
0
100
200
300
400

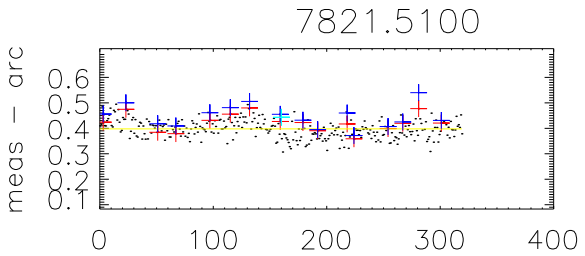

6553.6100
meas − arc
0.6
0.5
0.4
0.3
0.2
0.1
0
100
200
300
400

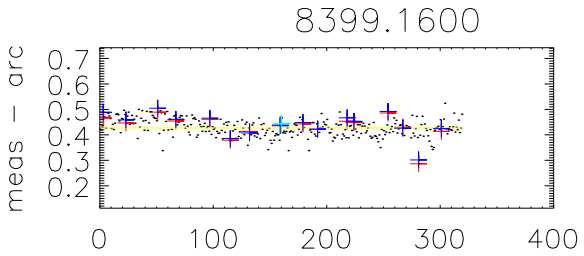

6923.2100
meas − arc
0.7
0.6
0.5
0.4
0.3
0.2
0
100
200
300
400

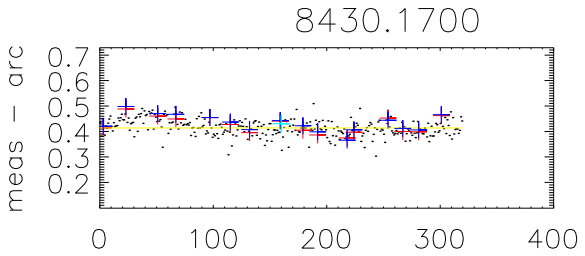

6949.0300
meas − arc
0.7
0.6
0.5
0.4
0.3
0.2
0
100
200
300
400

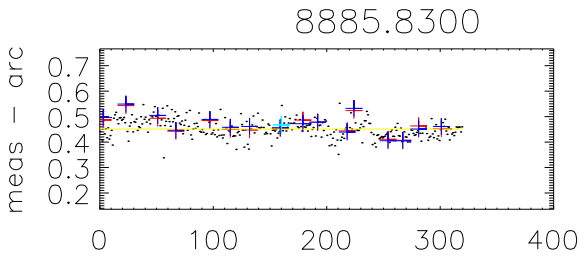

7571.7500
meas − arc
0.7
0.6
0.5
0.4
0.3
0.2
0
100
200
300
400

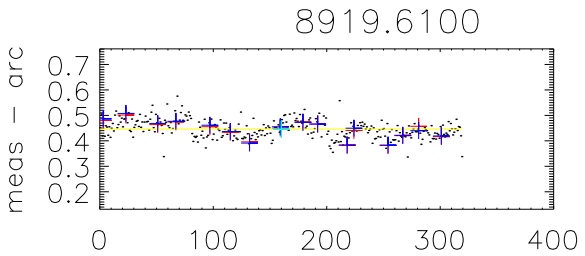

7794.1200
meas − arc
0.6
0.5
0.4
0.3
0.2
0.1
0
100
200
300
400

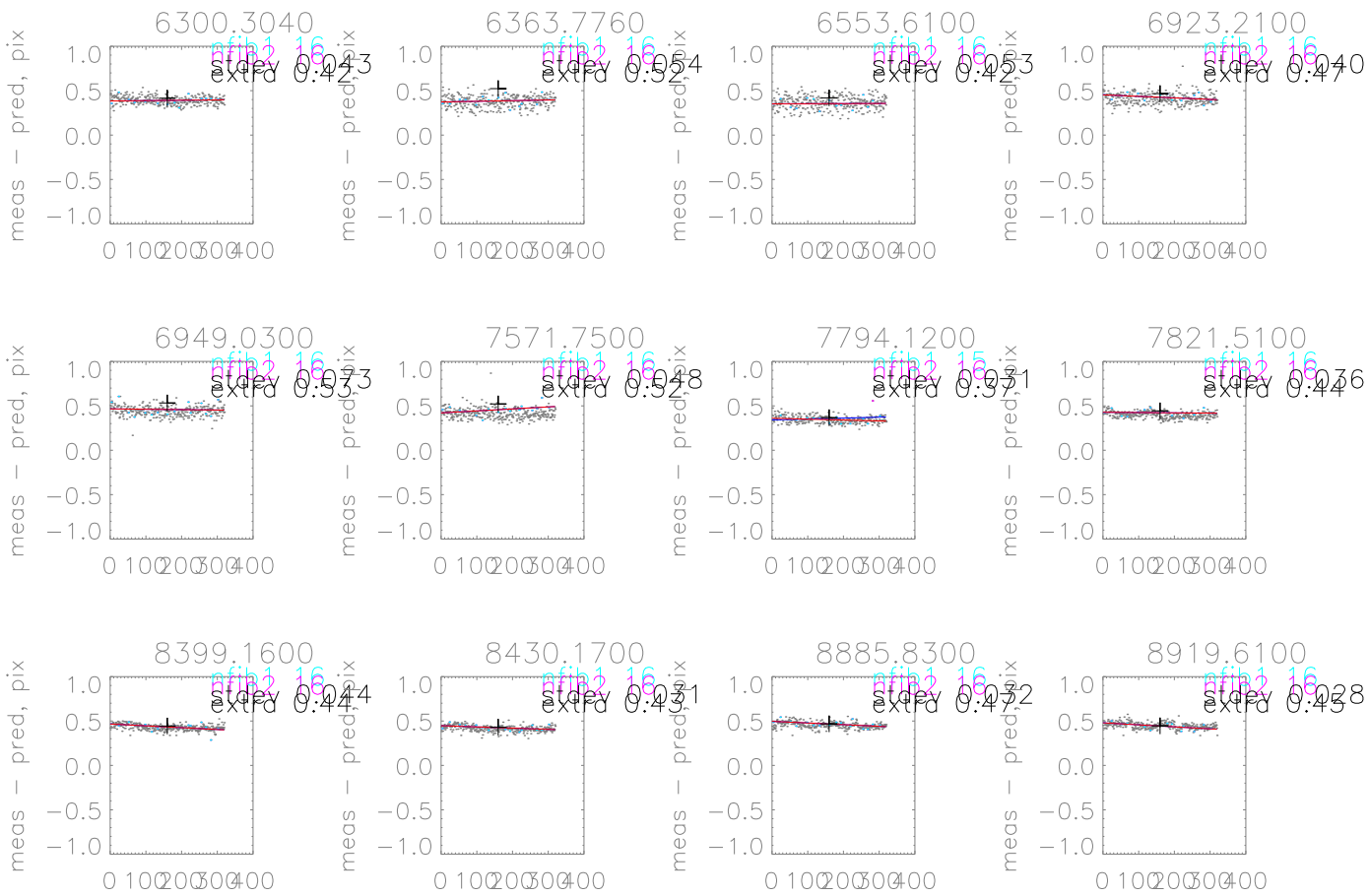

7821.5100
meas − arc
0.6
0.5
0.4
0.3
0.2
0.1
0
100
200
300
400

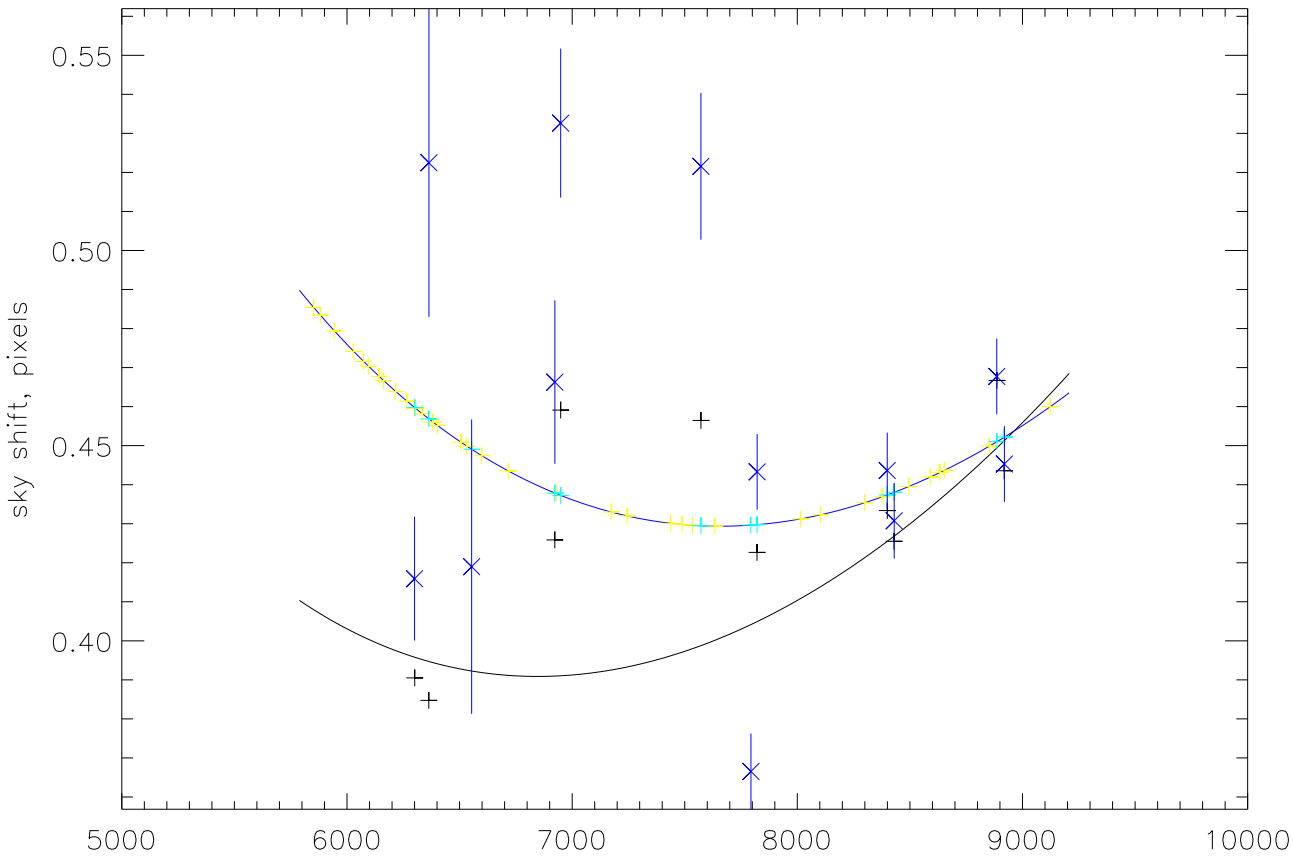

8399.1600
meas − arc
0.7
0.6
0.5
0.4
0.3
0.2
0
100
200
300
400

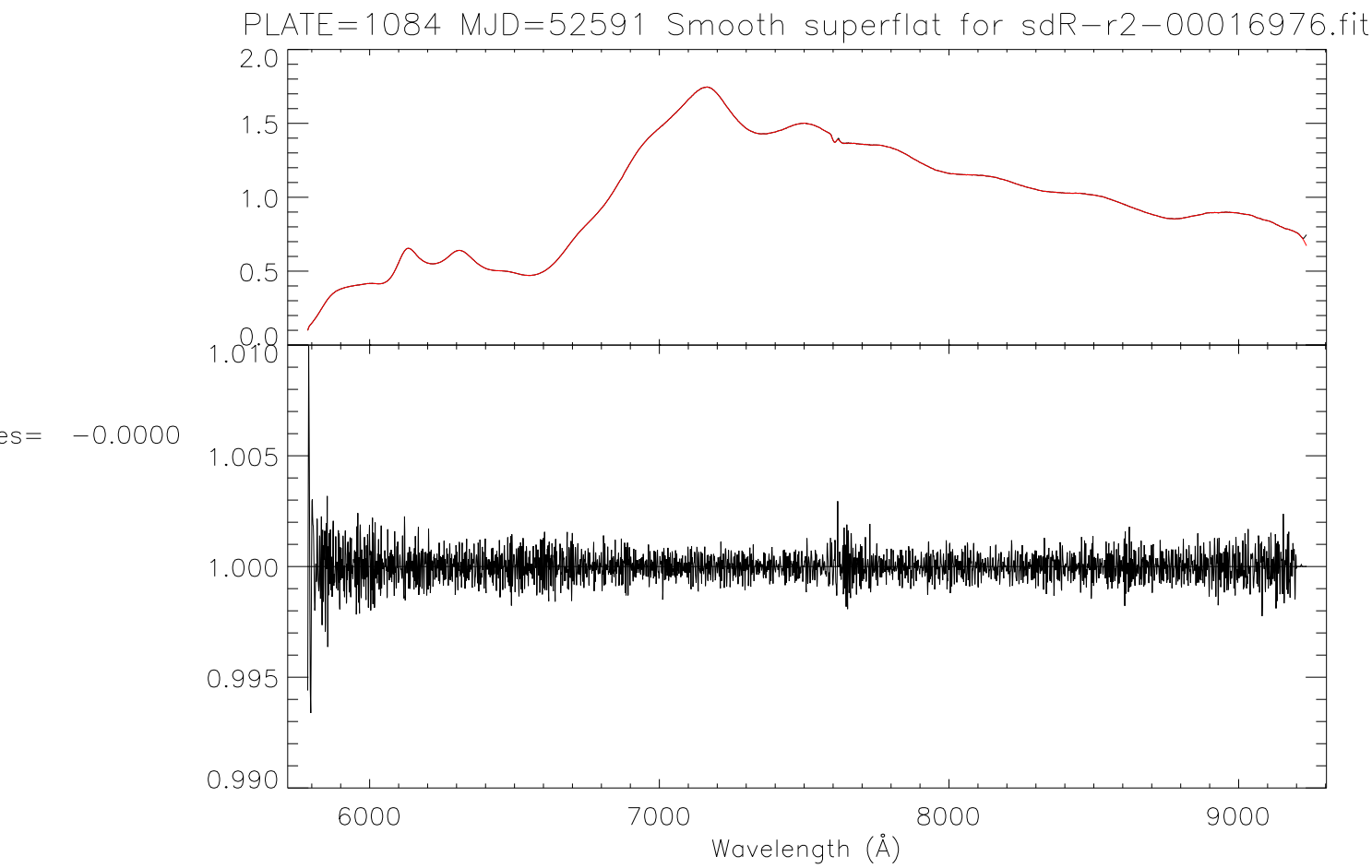

8430.1700
meas − arc
0.7
0.6
0.5
0.4
0.3
0.2
0
100
200
300
400


8885.8300
meas − arc
0.7
0.6
0.5
0.4
0.3
0.2
0
100
200
300
400

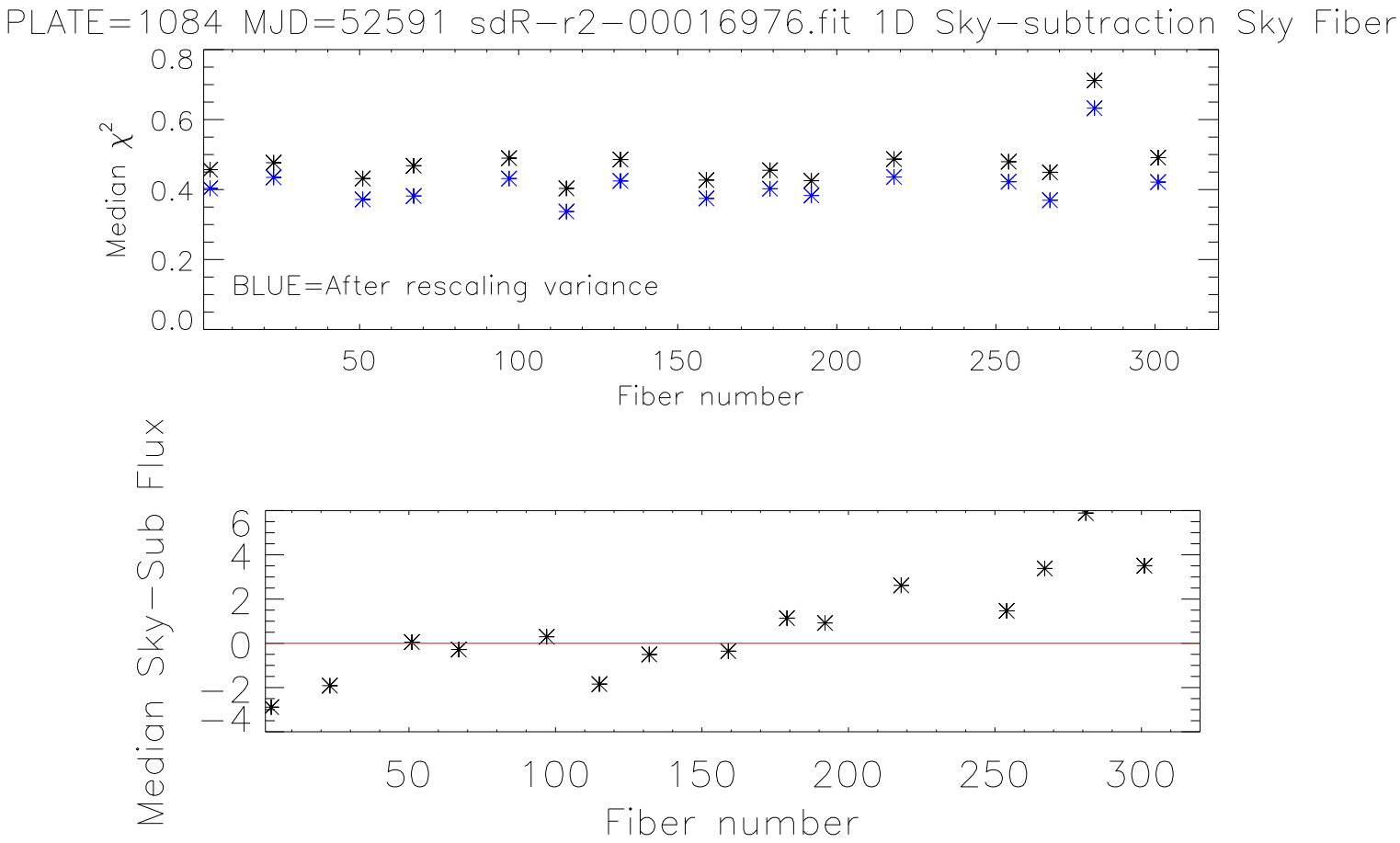

8919.6100
meas − arc
0.7
0.6
0.5
0.4
0.3
0.2
0
100
200
300
400

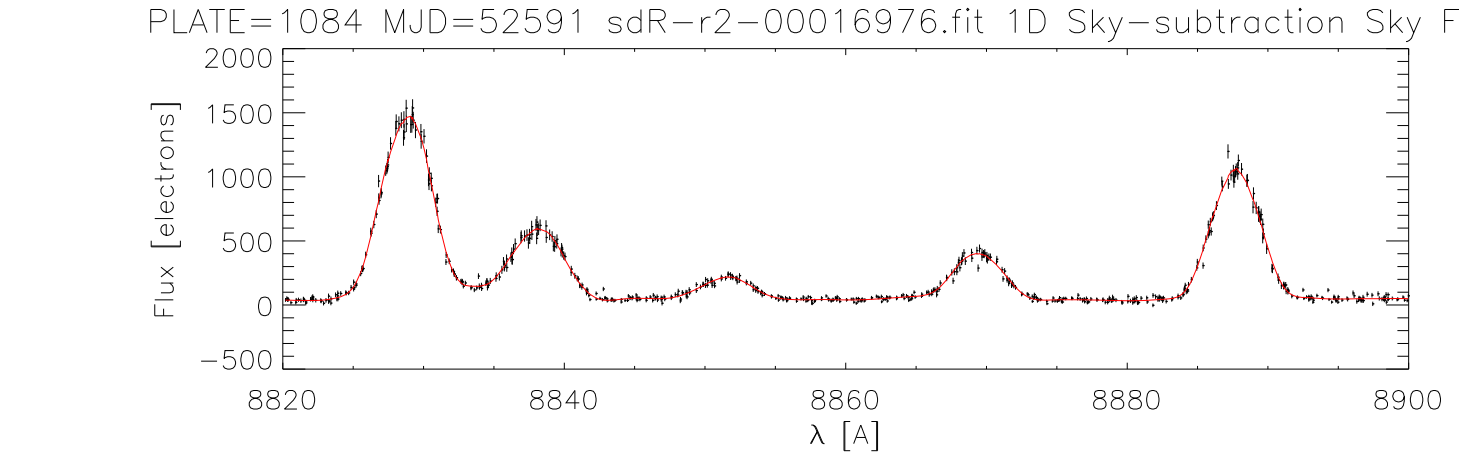

6300.3040
stdev 0.043
extra 0.42
6363.7760
stdev 0.054
extra 0.52
6553.6100
stdev 0.053
extra 0.42
6923.2100
stdev 0.040
extra 0.47
6949.0300
stdev 0.073
extra 0.53
7571.7500
stdev 0.048
extra 0.52
7794.1200
stdev 0.071
extra 0.37
7821.5100
stdev 0.076
extra 0.44
8399.1600
stdev 0.044
extra 0.44
8430.1700
stdev 0.031
extra 0.43
8885.8300
stdev 0.032
extra 0.47
8919.6100
stdev 0.028
extra 0.45
meas − pred, pix
mfb32 16
mfb31 16

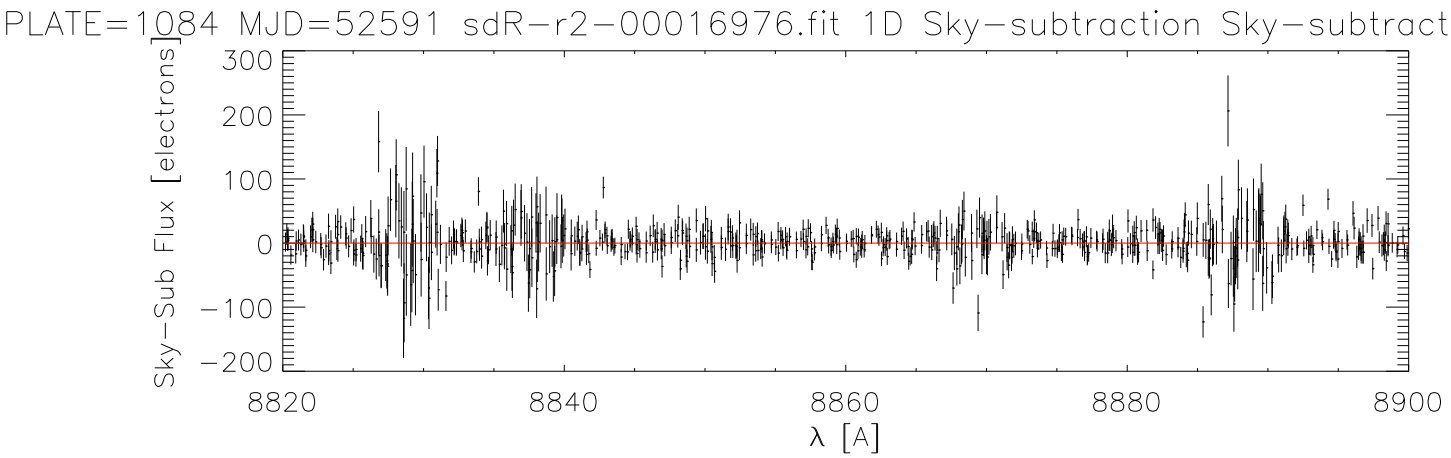

0.55
0.50
0.45
0.40
sky shift, pixels
5000
6000
7000
8000
9000
10000

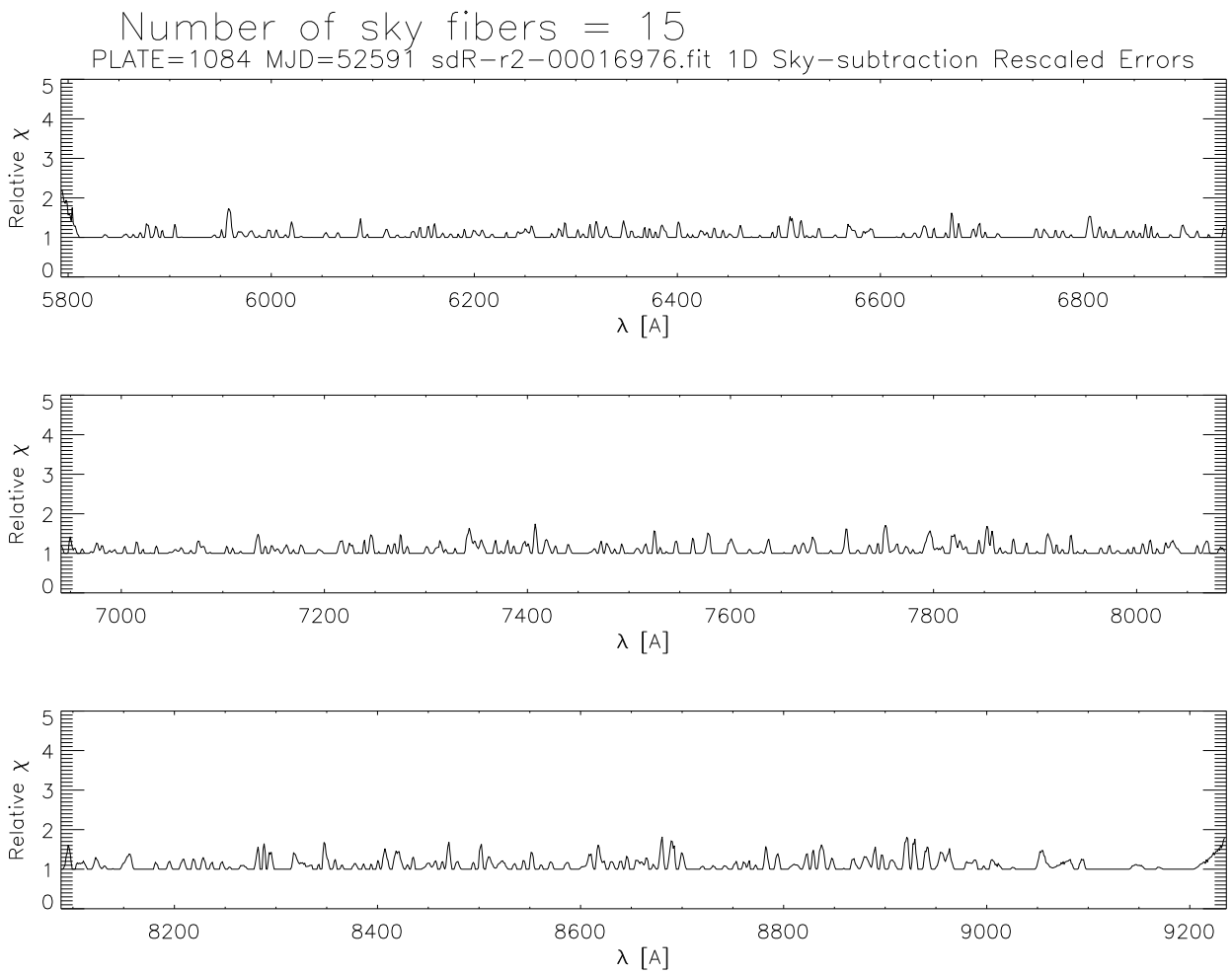

PLATE=1084 MJD=52591 Smooth superflat for sdR-r2-00016976.fit
2.0
1.5
1.0
0.5
0.0
1.010
1.005
1.000
0.995
0.990
6000
7000
8000
9000
Wavelength (Å)

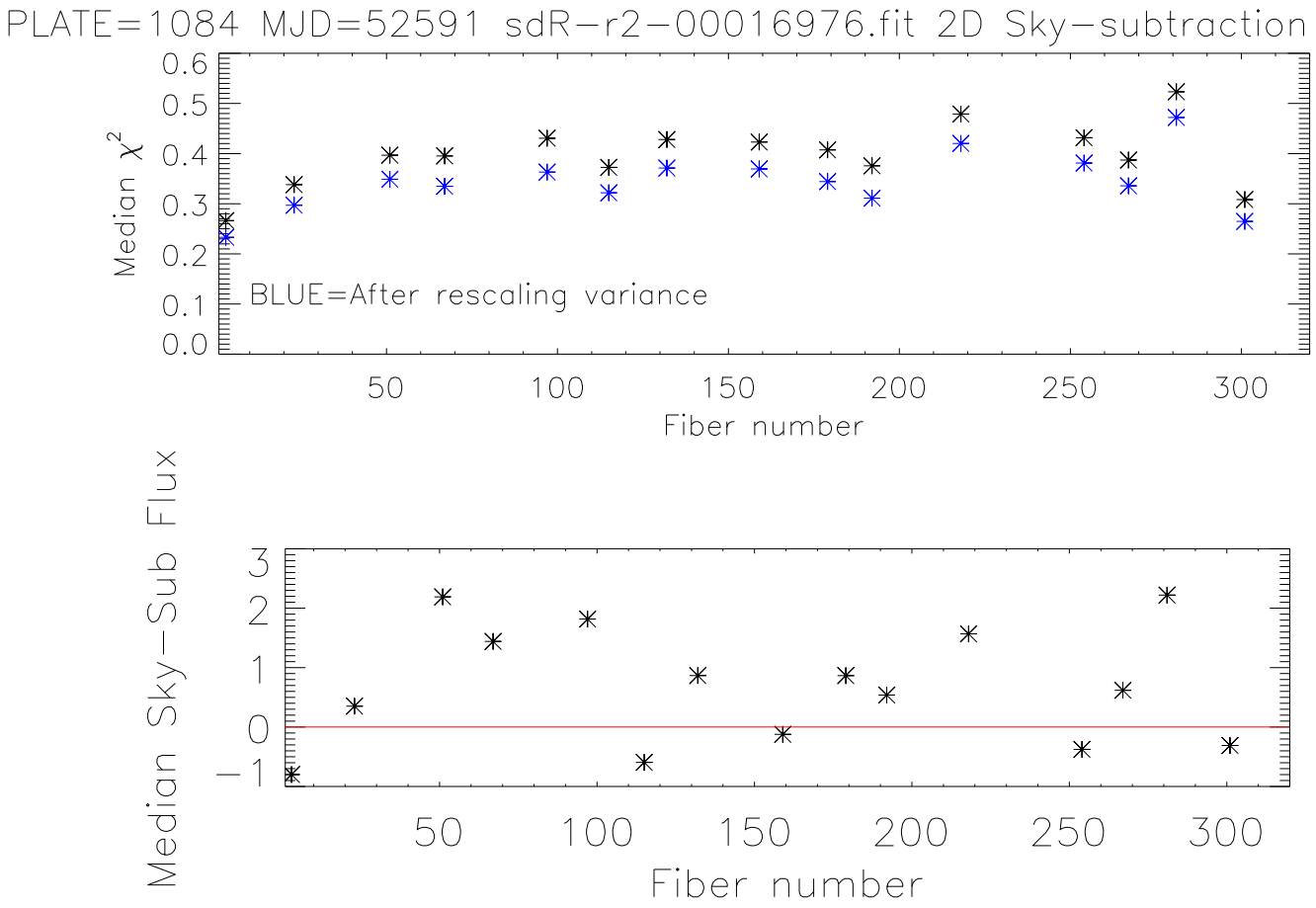
es= −0.0000

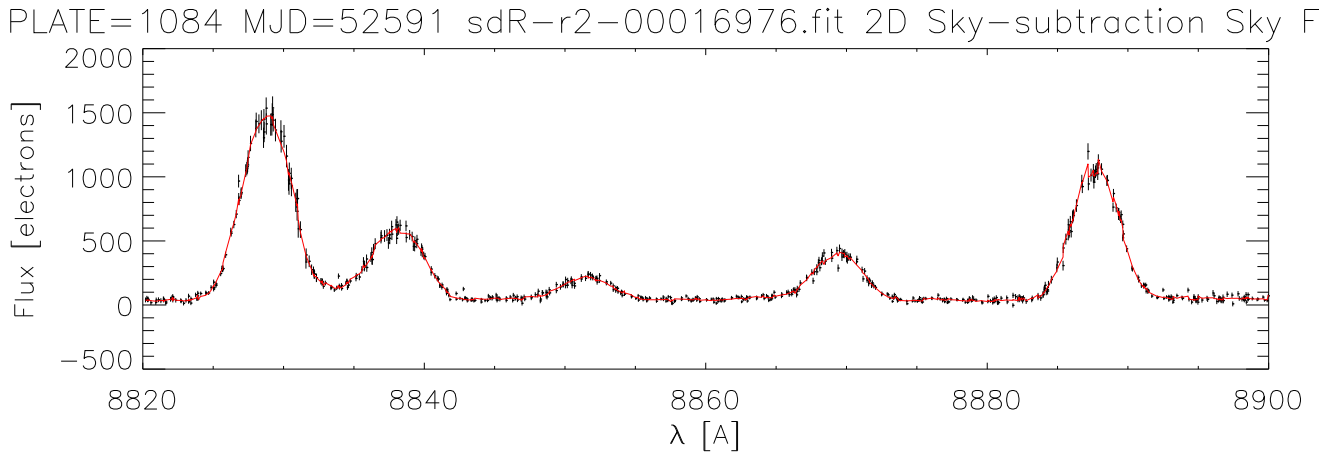

PLATE=1084 MJD=52591 sdR-r2-00016976.fit 1D Sky-subtraction Sky Fibers
Median χ^2
0.0
0.2
0.4
0.6
0.8
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
-4
-2
0
2
4
6
50
100
150
200
250
300
Fiber number

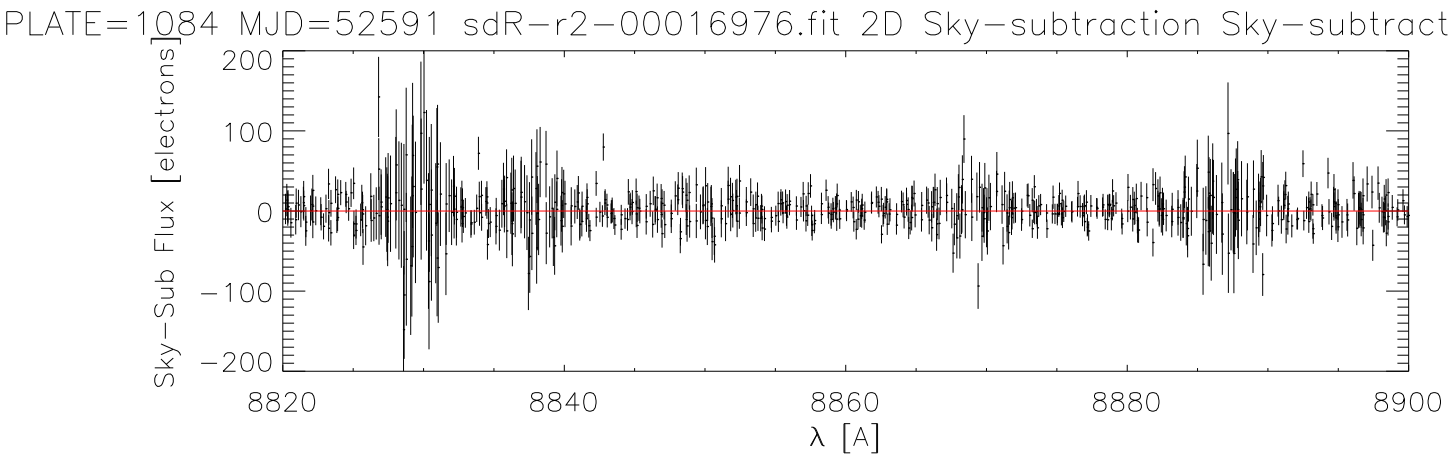

PLATE=1084 MJD=52591 sdR-r2-00016976.fit 1D Sky-subtraction Sky Fibers
Flux [electrons]
2000
1500
1000
500
0
-500
8820
8840
8860
8880
8900
λ [A]

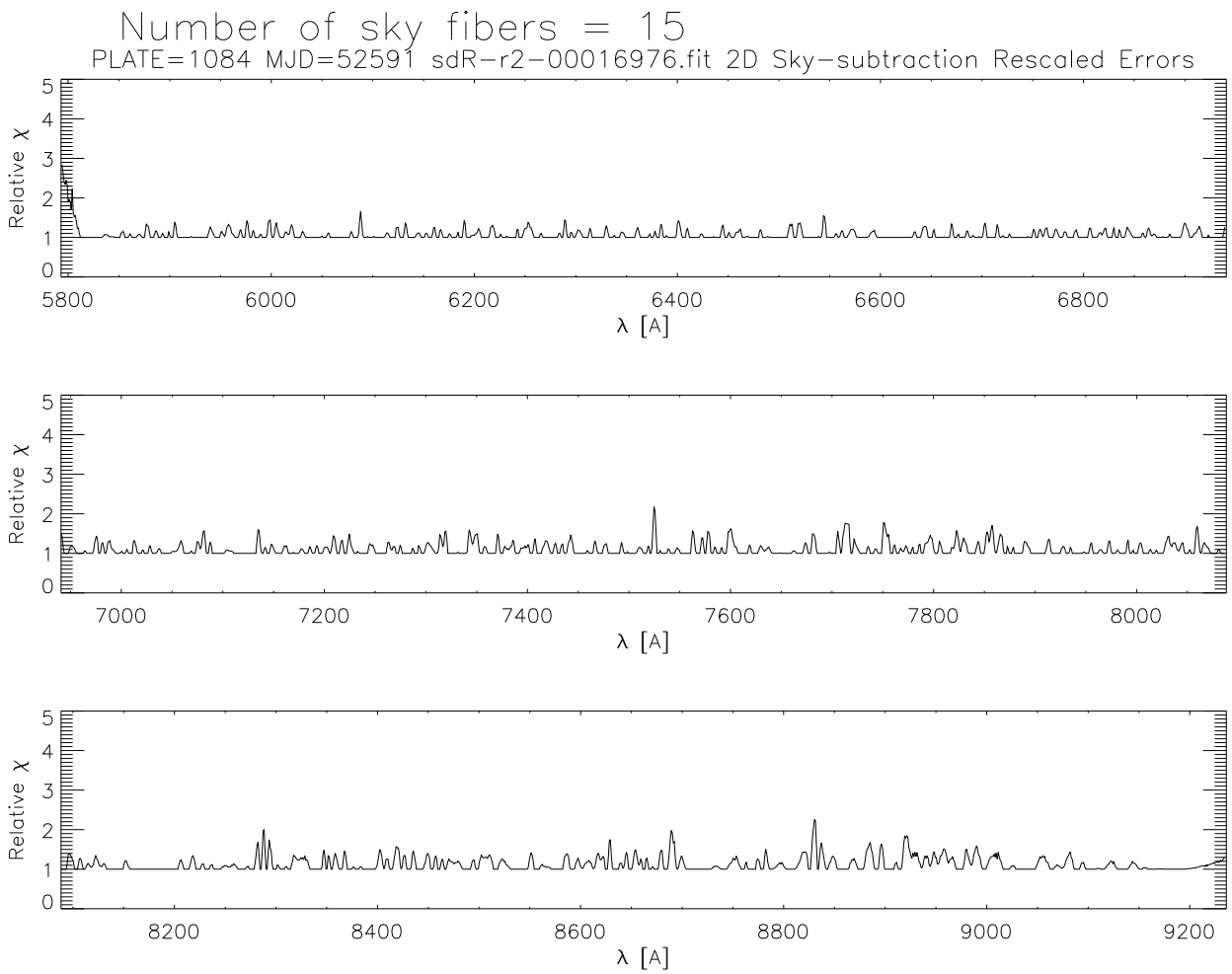

PLATE=1084 MJD=52591 sdR-r2-00016976.fit 1D Sky-subtraction Sky-subtracted Sky F
Sky-Sub Flux [electrons]
300
200
100
0
-100
-200
8820
8840
8860
8880
8900
λ [A]

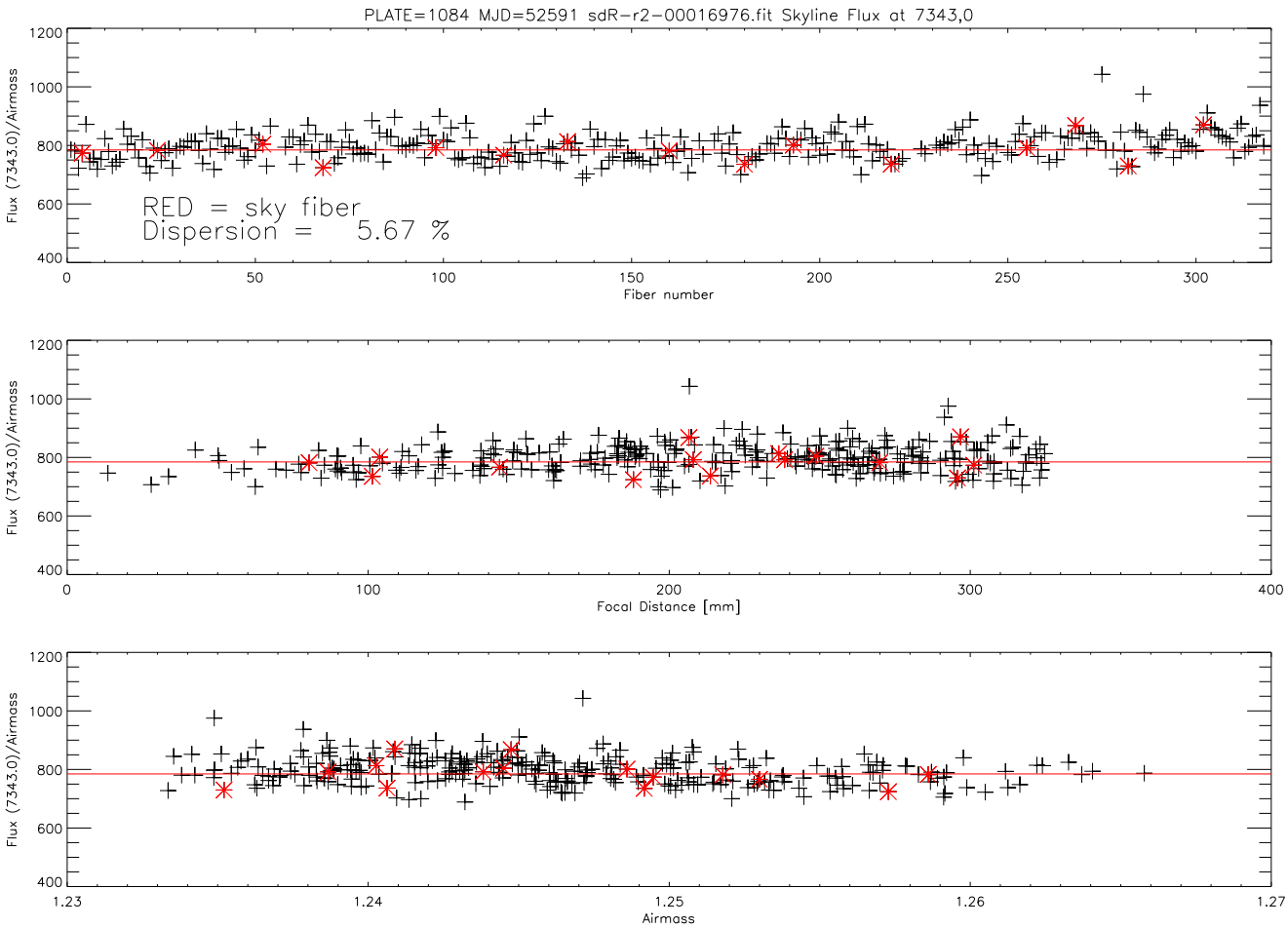

Number of sky fibers = 15
PLATE=1084 MJD=52591 sdR-r2-00016976.fit 1D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200
0
1
2
3
4
5

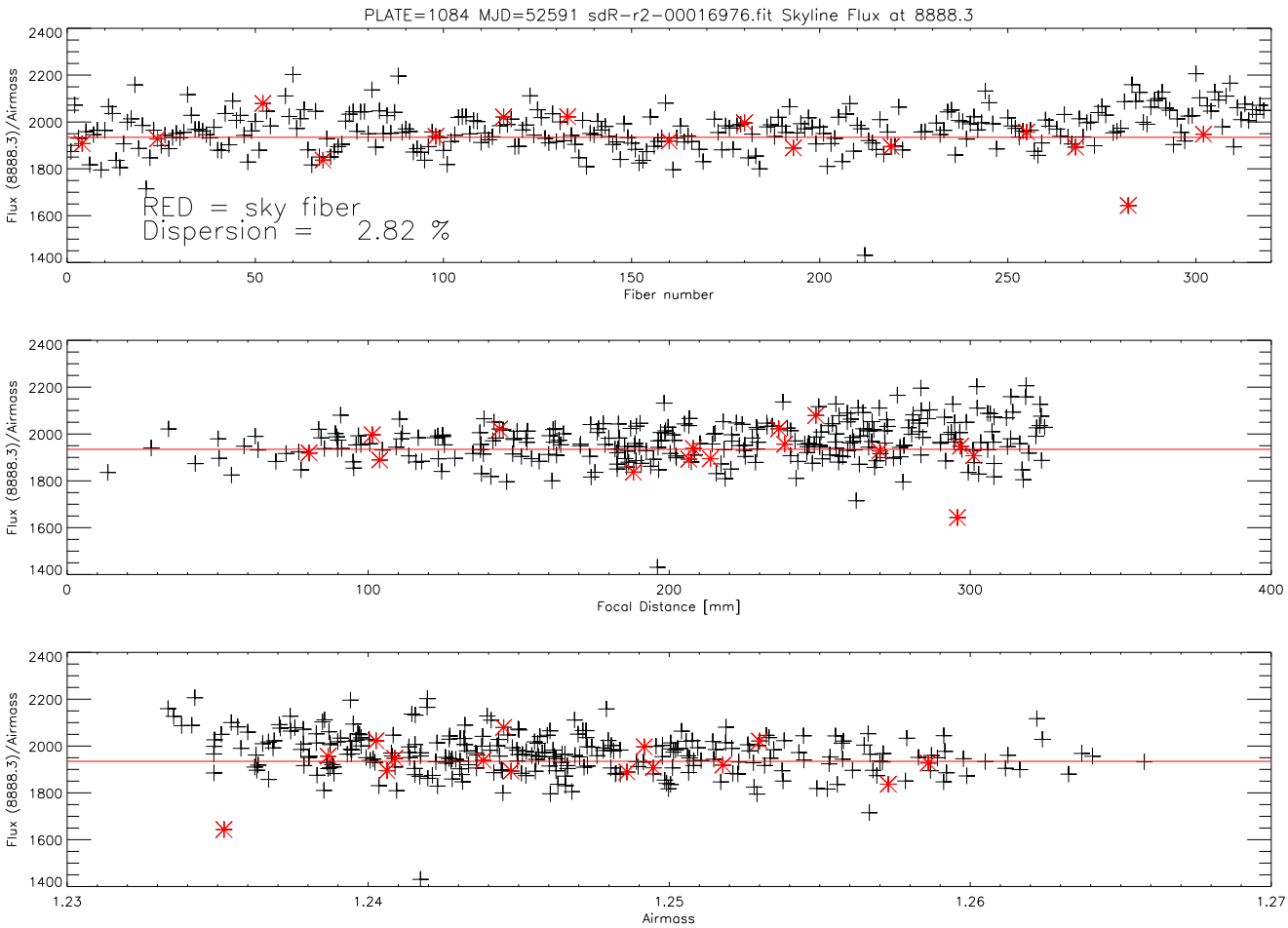

PLATE=1084 MJD=52591 sdR-r2-00016976.fit 2D Sky-subtraction Sky Fibers
Median χ^2
0.0
0.1
0.2
0.3
0.4
0.5
0.6
BLUE=After rescaling variance
50
100
150
200
250
300
Fiber number
Median Sky-Sub Flux
-1
0
1
2
3
50
100
150
200
250
300
Fiber number


PLATE=1084 MJD=52591 sdR-r2-00016976.fit 2D Sky-subtraction Sky Fibers
Flux [electrons]
2000
1500
1000
500
0
-500
8820
8840
8860
8880
8900
λ [A]


PLATE=1084 MJD=52591 sdR-r2-00016976.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 = 15
PLATE=1084 MJD=52591 sdR-r2-00016976.fit 2D Sky-subtraction Rescaled Errors
Relative χ
λ [A]
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
9200
0
1
2
3
4
5


PLATE=1084 MJD=52591 sdR-r2-00016976.fit Skyline Flux at 7343,0
Flux (7343.0)/Airmass
RED = sky fiber
Dispersion = 5.67 %
Fiber number
Focal Distance [mm]
Airmass


PLATE=1084 MJD=52591 sdR-r2-00016976.fit Skyline Flux at 8888.3
Flux (8888.3)/Airmass
RED = sky fiber
Dispersion = 2.82 %
Fiber number
Focal Distance [mm]
Airmass