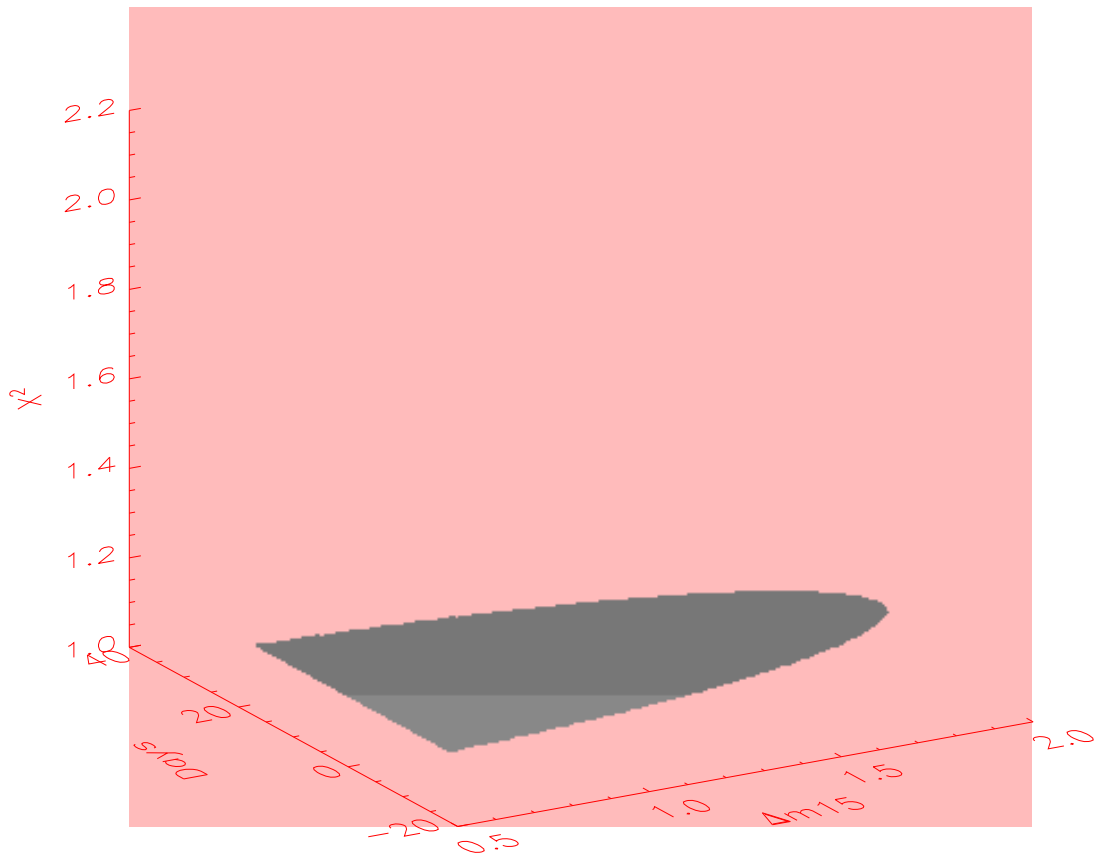
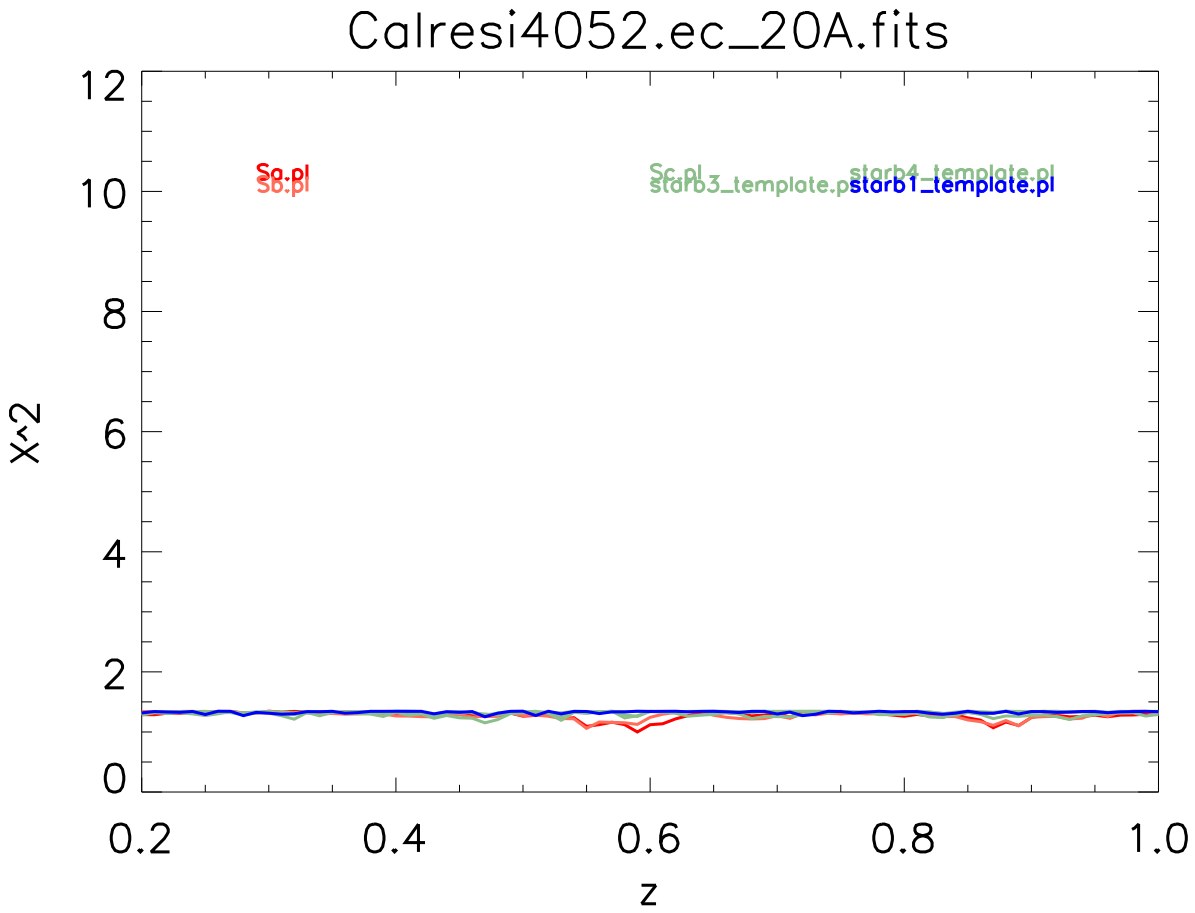
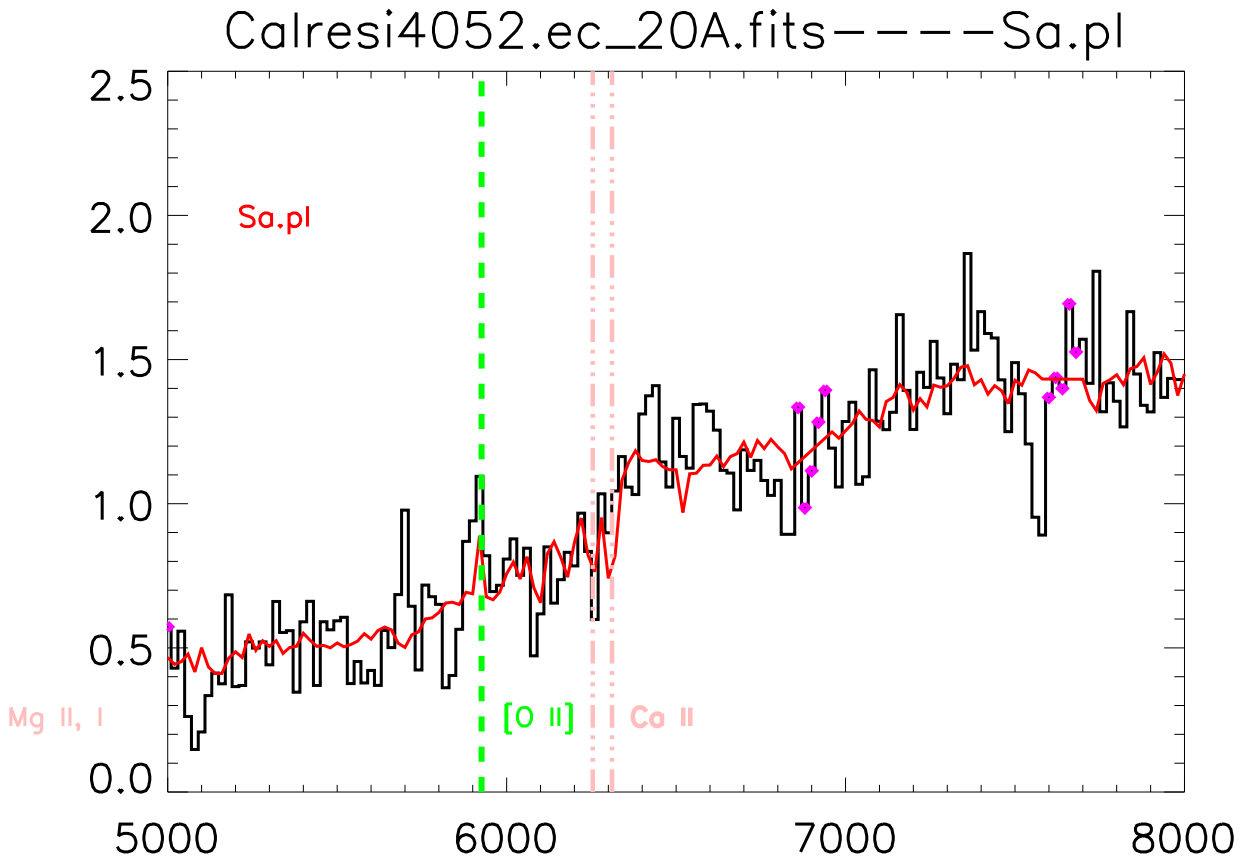
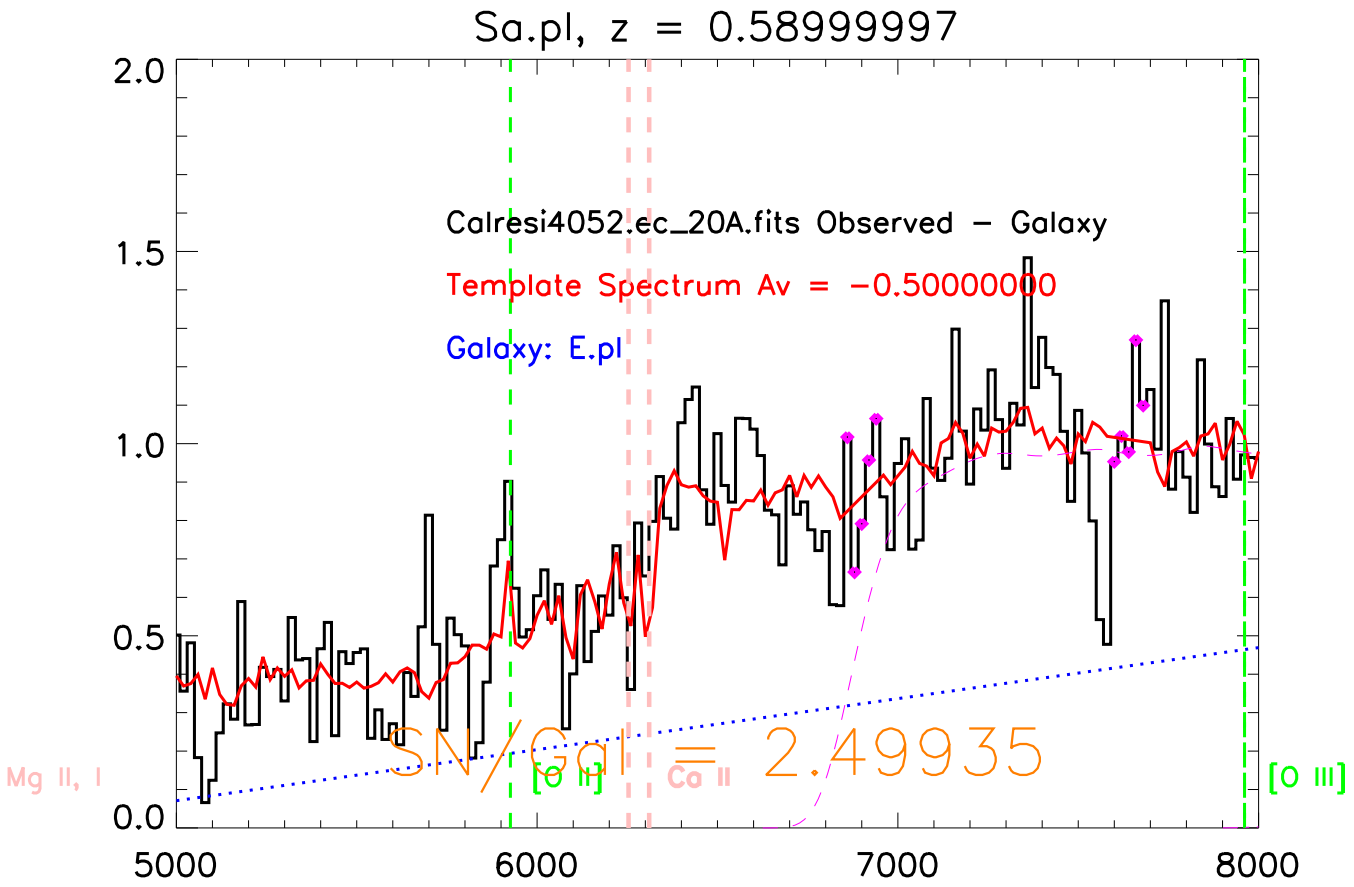
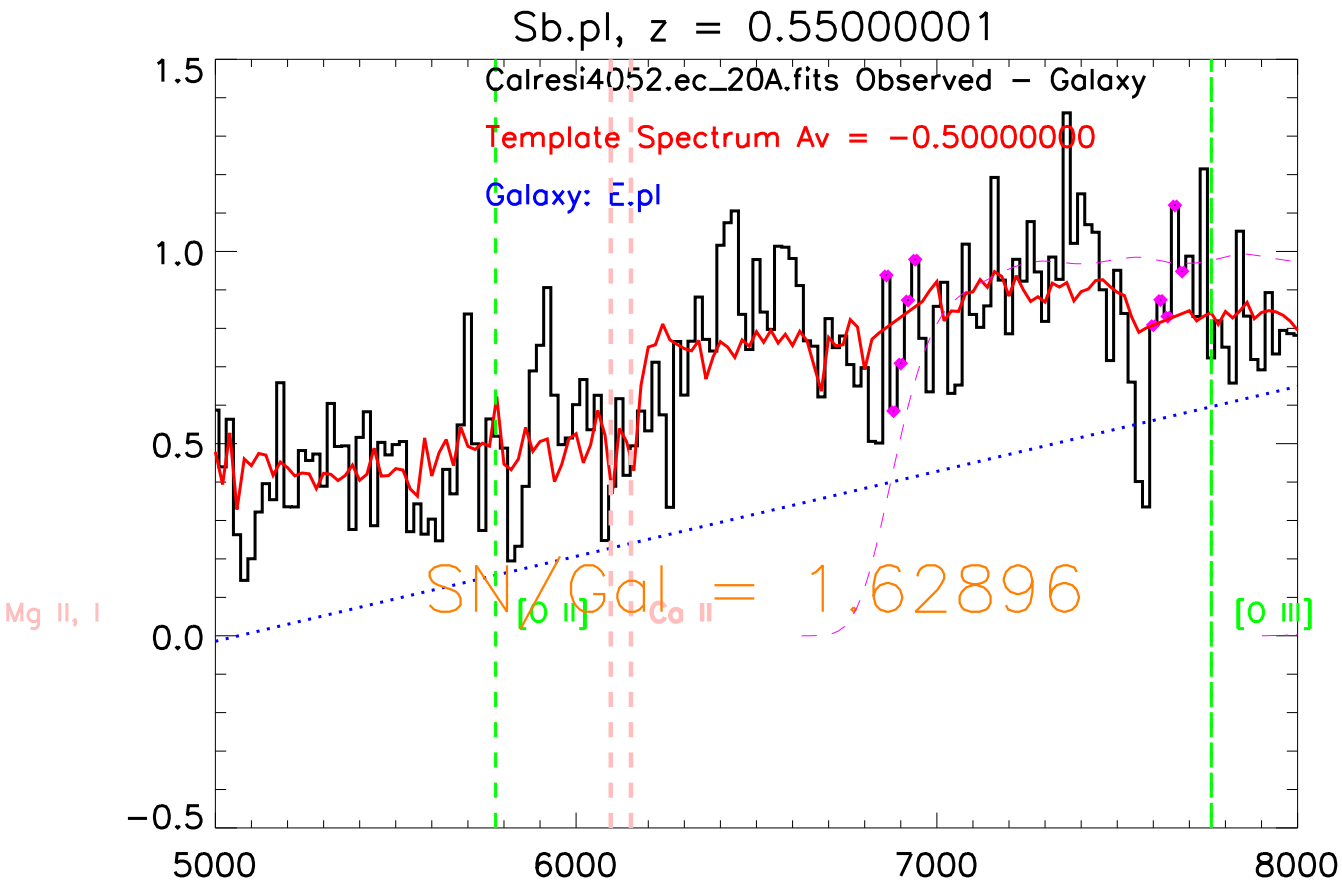
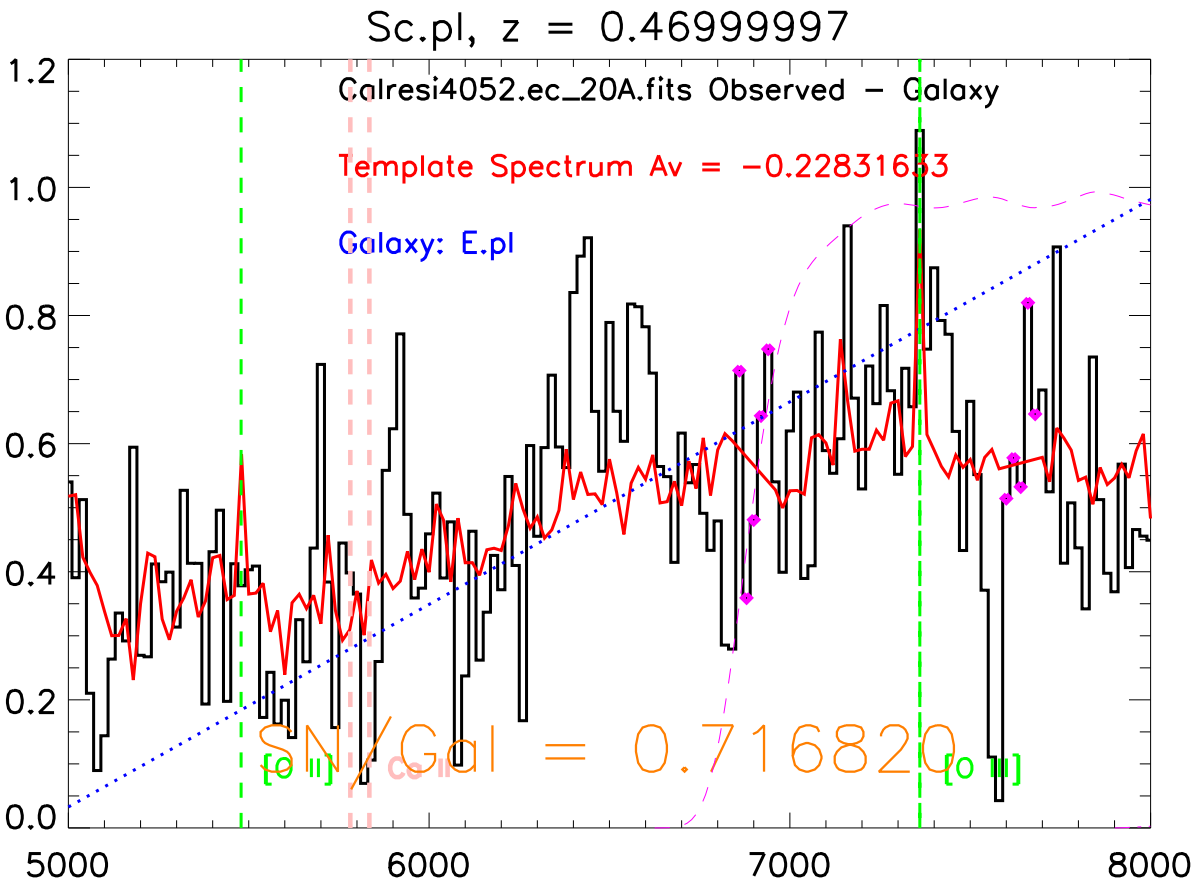

2.2
2.0
1.8
1.6
1.4
1.2
1.0
χ²
40
20
0
−20
dots
0.5
1.0
1.5
2.0
Δm15


Calresi4052.ec_20A.fits
Sa.pl
Sb.pl
Sc.pl
starb3_template.pl
starb4_template.pl
starb1_template.pl
X^2
z
0
2
4
6
8
10
12
0.2
0.4
0.6
0.8
1.0

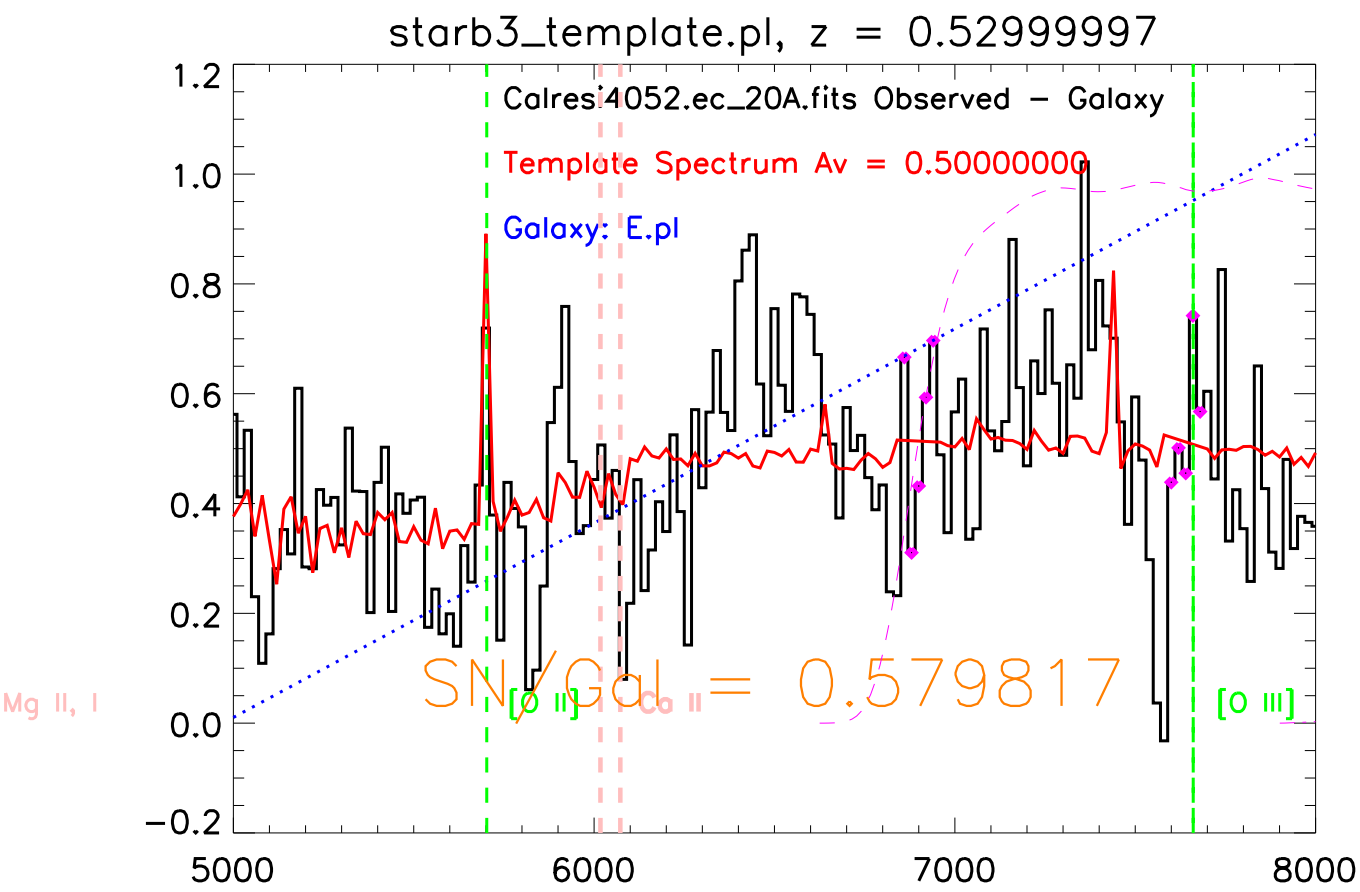

Calresi4052.ec_20A.fits----Sa.pl
2.5
2.0
1.5
1.0
0.5
0.0
Sa.pl
Mg II, I
[O II]
Ca II
5000
6000
7000
8000

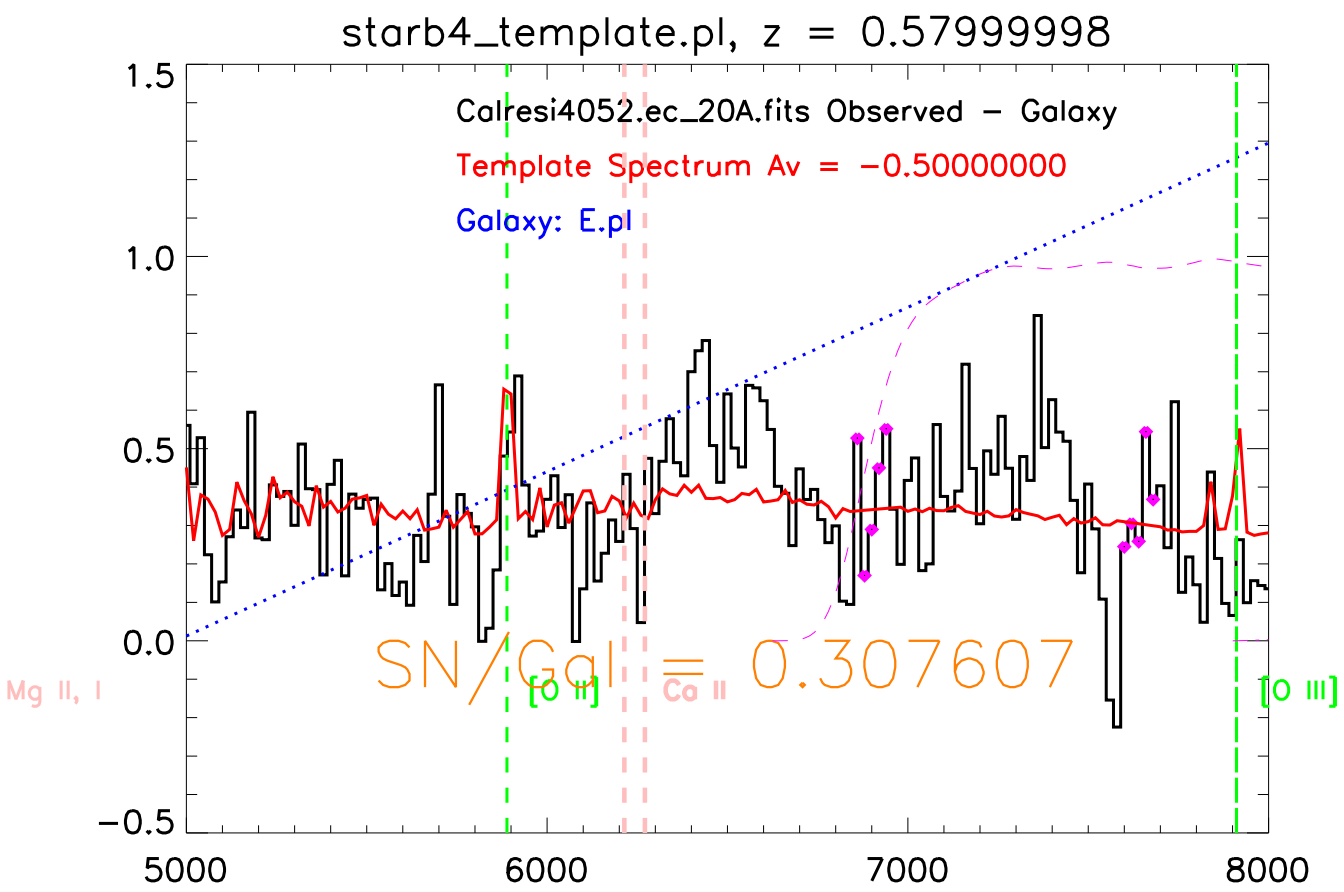

Sa.pl, z = 0.58999997
Calresi4052.ec_20A.fits Observed − Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal = 2.49935
Mg II, I
[O II]
Ca II
[O III]
2.0
1.5
1.0
0.5
0.0
5000
6000
7000
8000

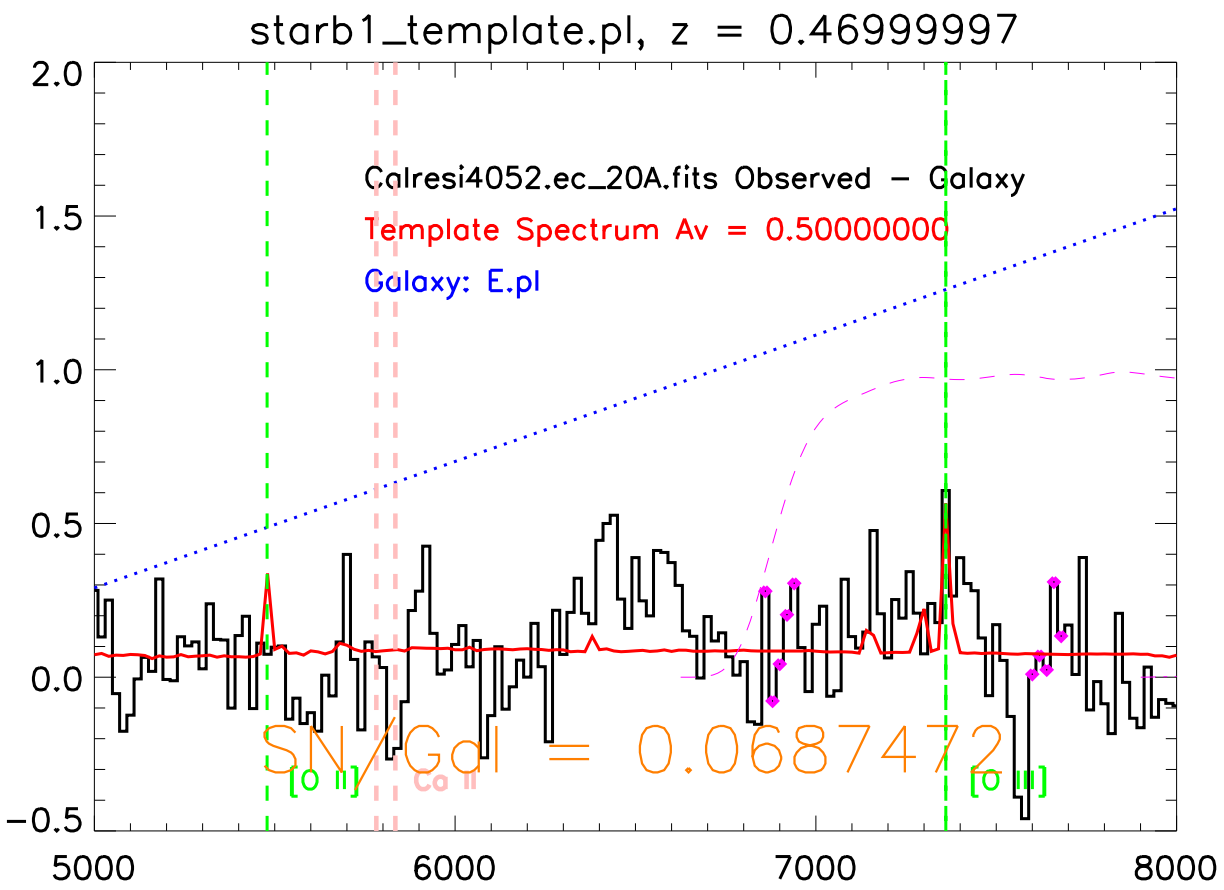

Sb.pl, z = 0.55000001
Calresi4052.ec_20A.fits Observed − Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal = 1.62896
Mg II, I
[O II]
Ca II
[O III]
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000


Sc.pl, z = 0.46999997
Calresi4052.ec_20A.fits Observed − Galaxy
Template Spectrum Av = −0.22831633
Galaxy: E.pl
S/N/Gal = 0.716820
[O II]
[O III]
1.2
1.0
0.8
0.6
0.4
0.2
0.0
5000
6000
7000
8000

Mg II, I


starb3_template.pl, z = 0.52999997
Calres:4052.ec_20A.fits Observed − Galaxy
Template Spectrum Av = 0.50000000
Galaxy: E.pl
SN/Gal = 0.579817
[O II]
Ca II
[O III]
Mg II, I
1.2
1.0
0.8
0.6
0.4
0.2
0.0
−0.2
5000
6000
7000
8000


starb4_template.pl, z = 0.57999998
Calresi4052.ec_20A.fits Observed − Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal = 0.307607
Mg II, I
[O II]
Ca II
[O III]
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000


starb1_template.pl, z = 0.46999997
Calresi4052.ec_20A.fits Observed − Galaxy
Template Spectrum Av = 0.50000000
Galaxy: E.pl
SN/Gal = 0.0687472
[O II]
Ca II
[O III]
2.0
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000

Mg II, I