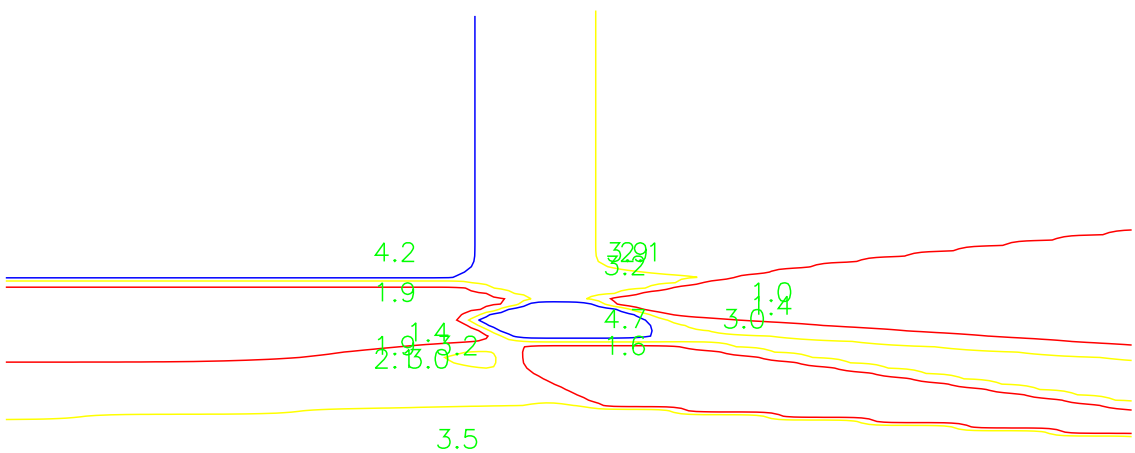
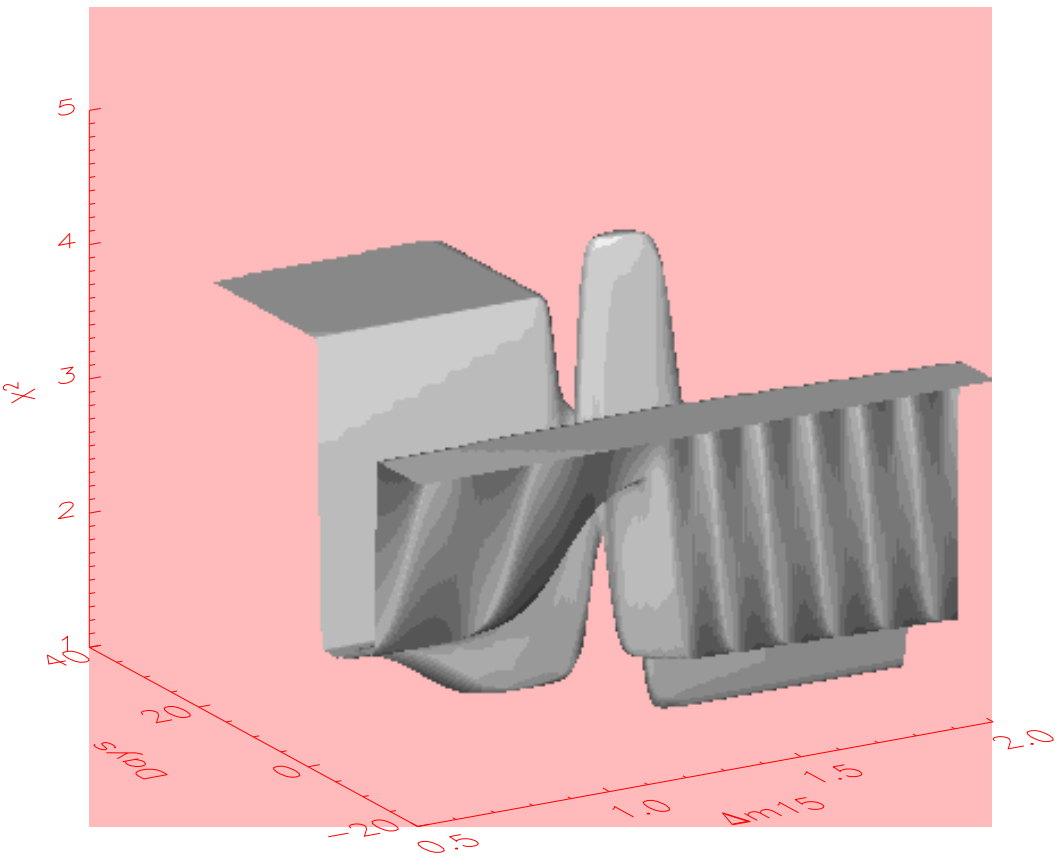
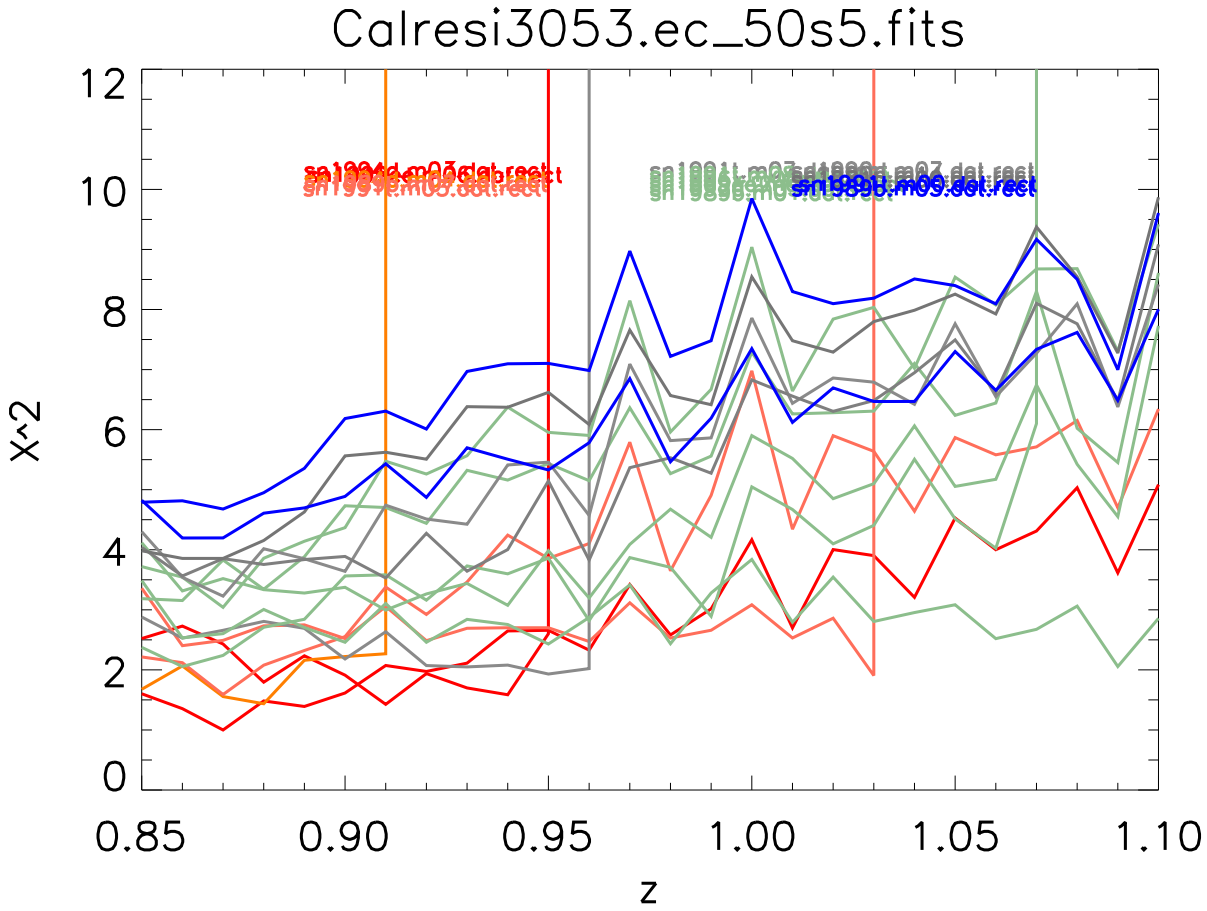
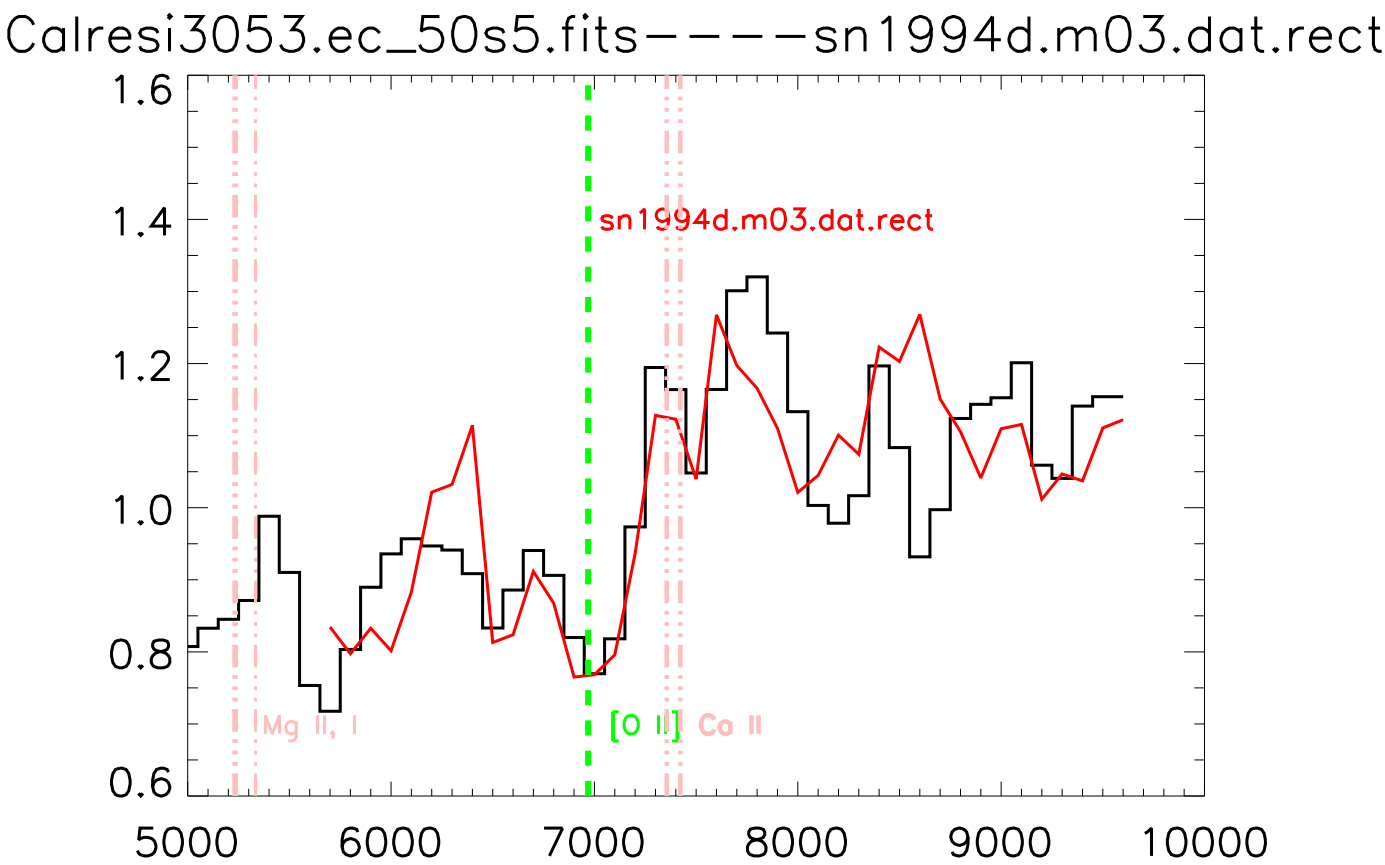
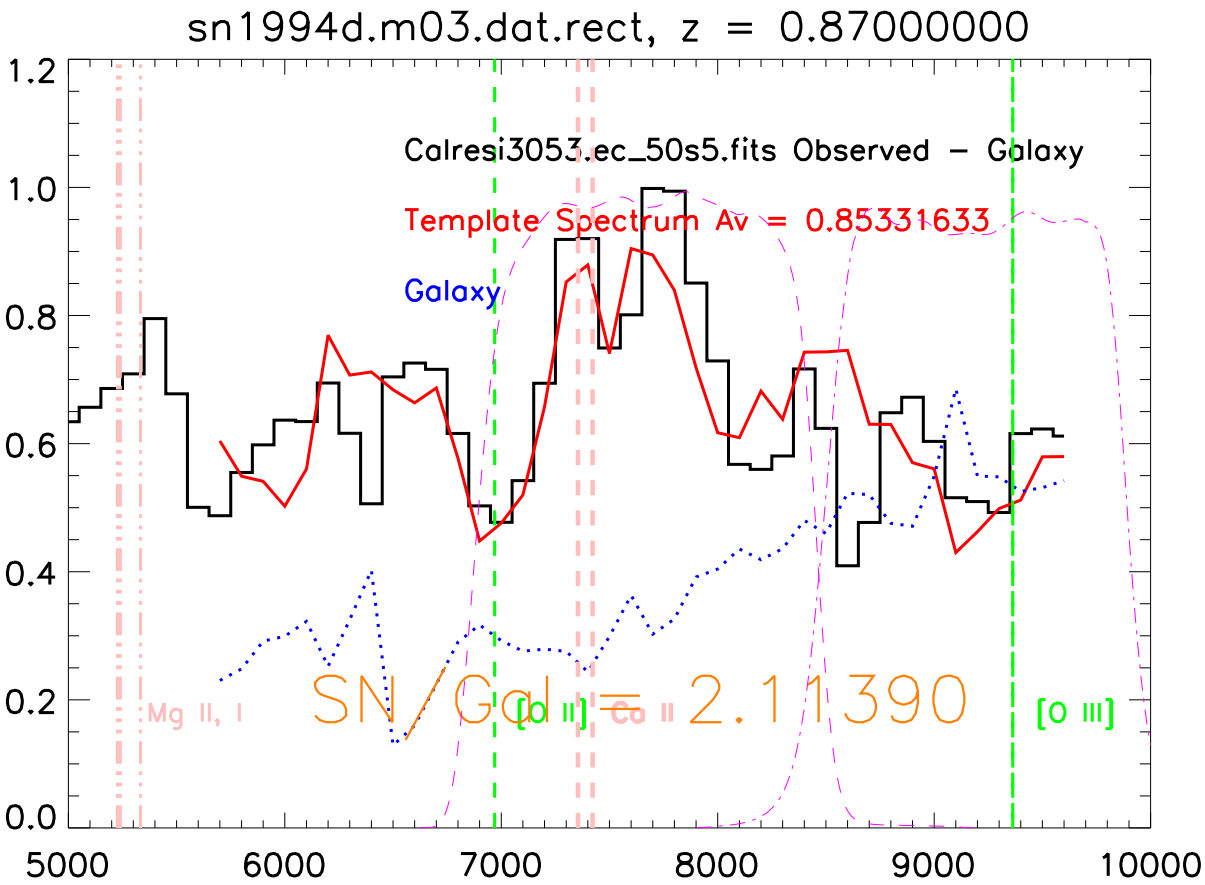
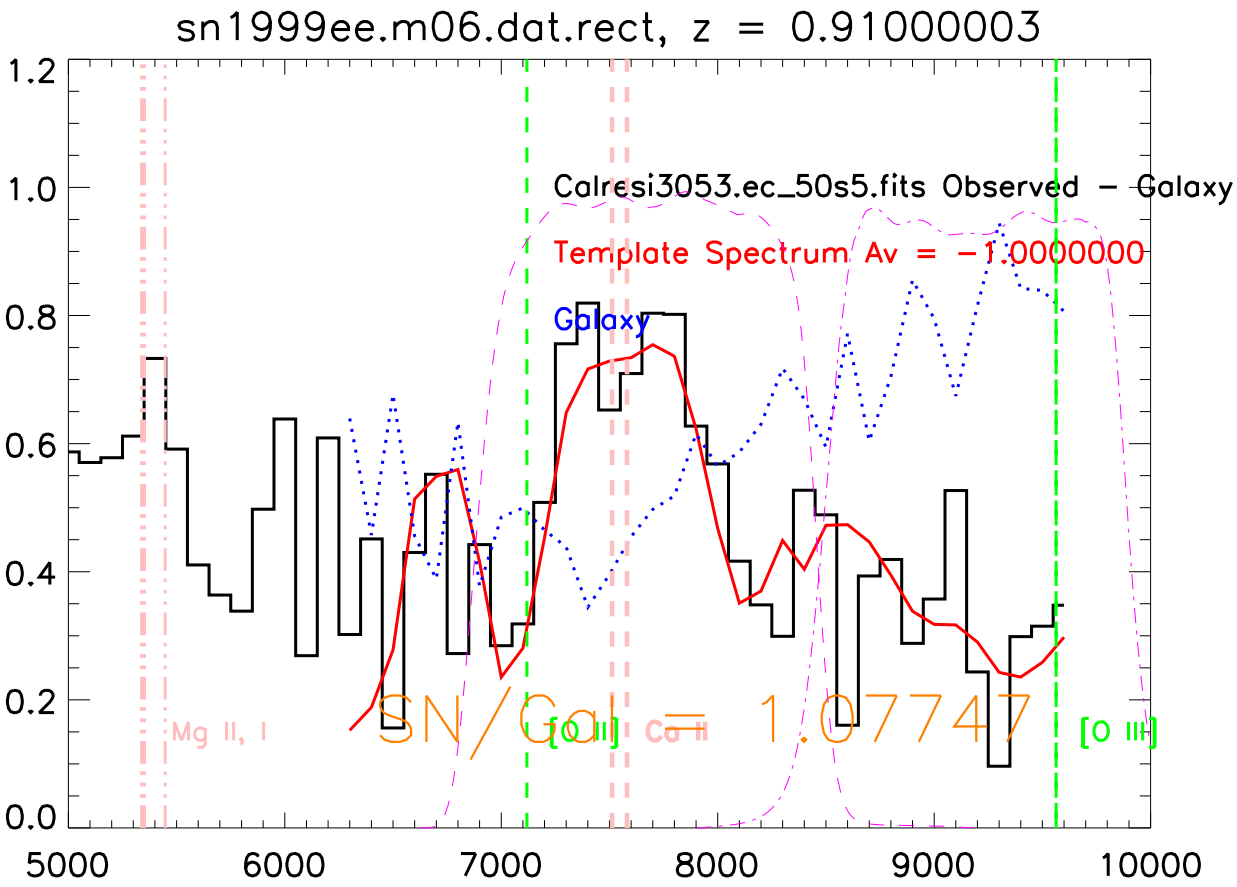

4.2
1.9
3.2
1.0
3.0
4.7
1.6
1.4
3.5

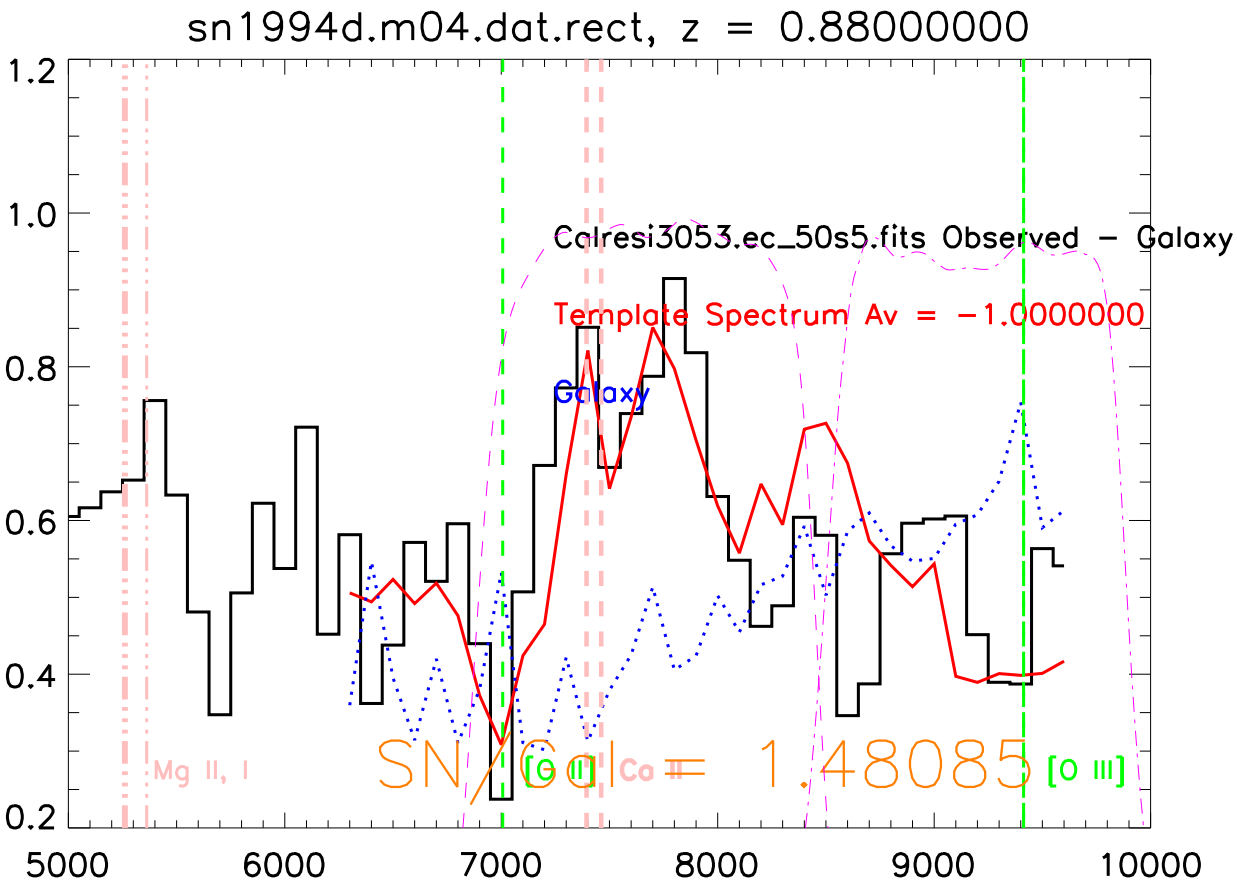

χ^2
5
4
3
2
1
40
20
0
−20
$\sin^2 2\theta$
0.5
1.0
1.5
2.0
Δm^2_{15}

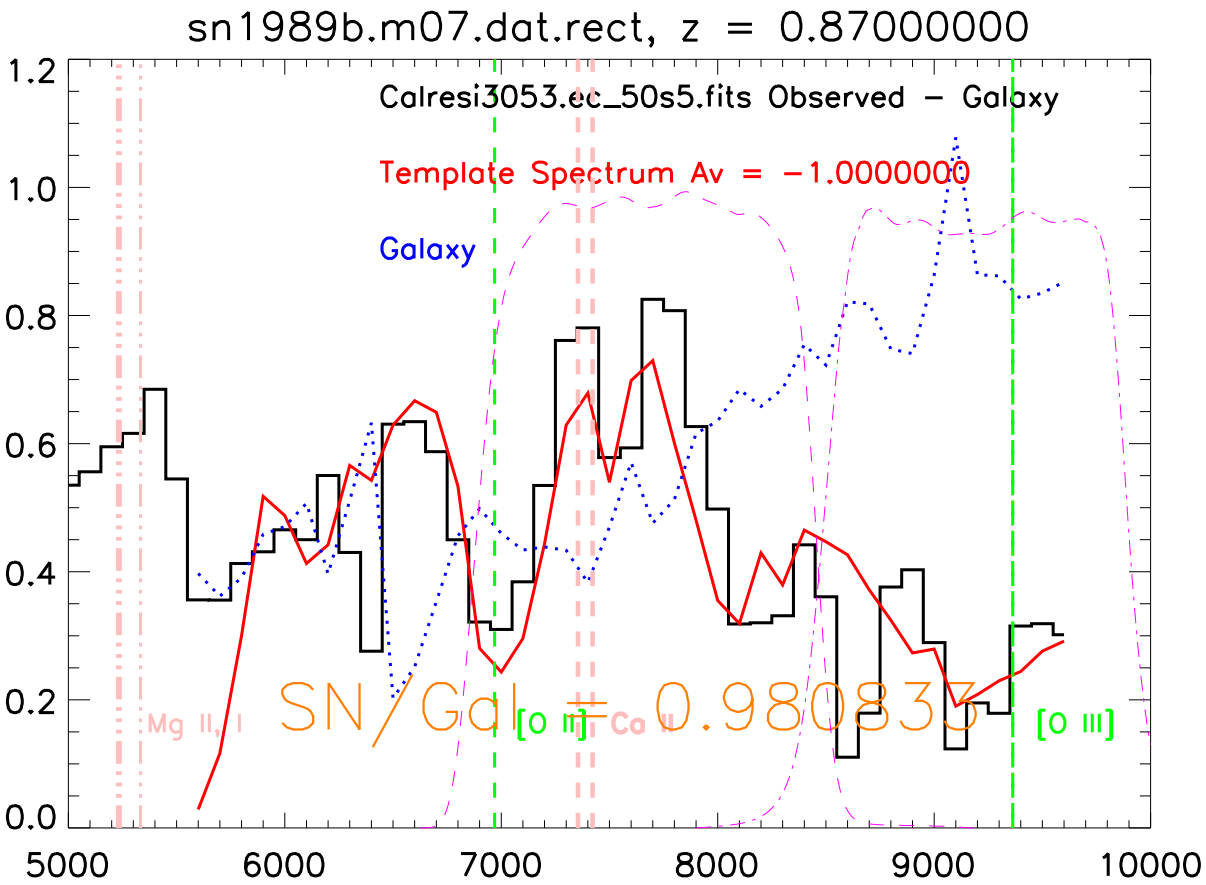

Calresi3053.ec_50s5.fits
X^2
z
0
2
4
6
8
10
12
0.85
0.90
0.95
1.00
1.05
1.10
sn1998b.m09.dat.rect

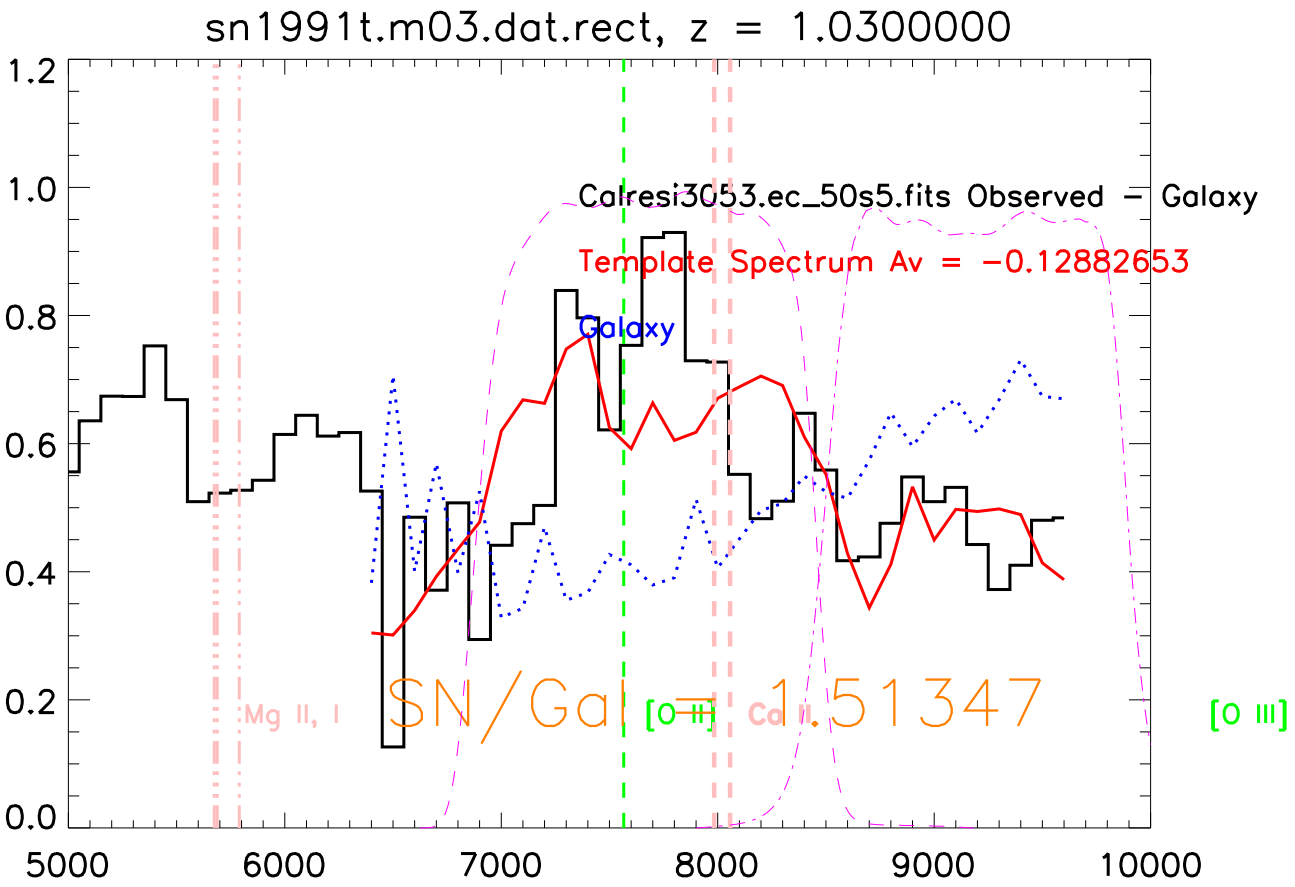

Calresi3053.ec_50s5.fits----sn1994d.m03.dat.rect
sn1994d.m03.dat.rect
Mg II, I
[O II]
Ca II
1.6
1.4
1.2
1.0
0.8
0.6
5000
6000
7000
8000
9000
10000

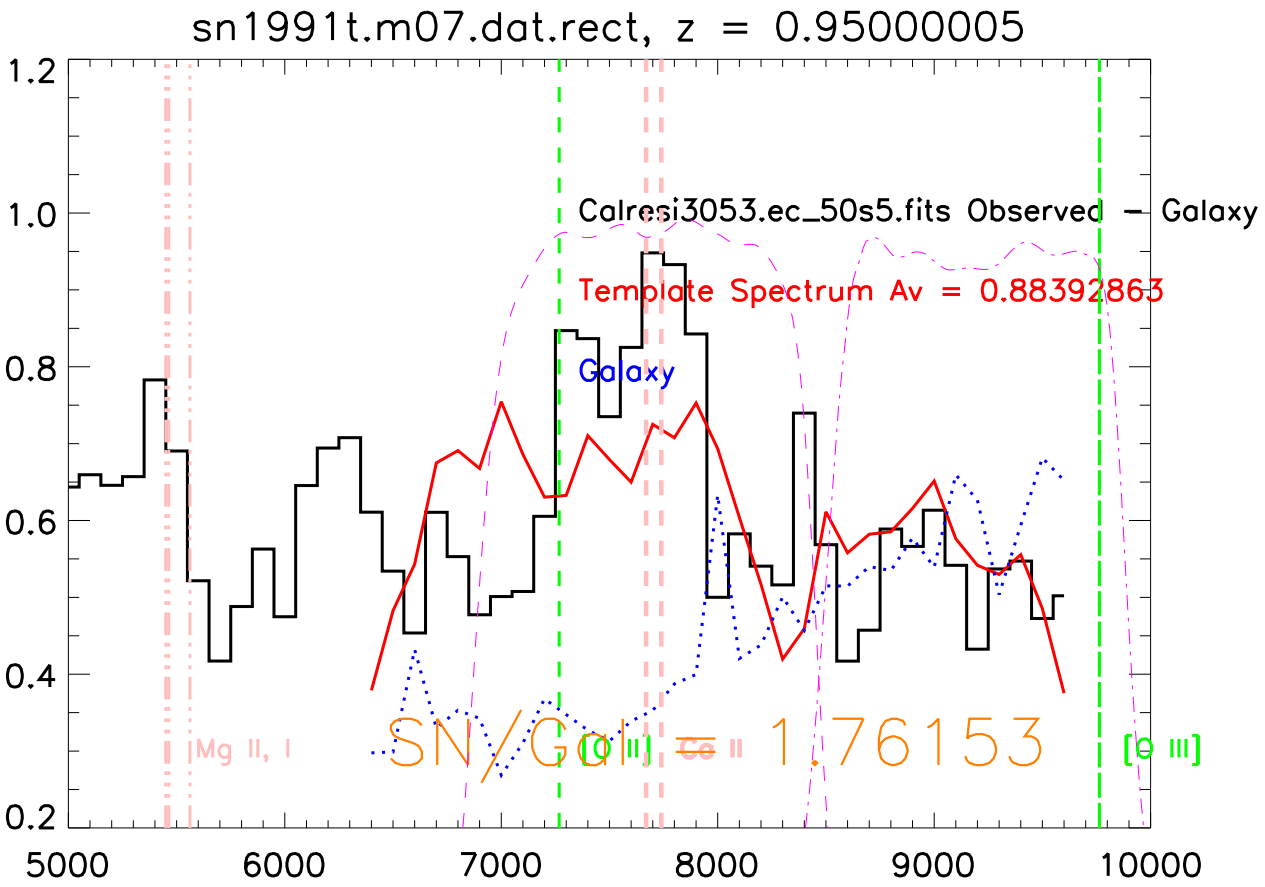

sn1994d.m03.dat.rect, z = 0.87000000
Calresi3053.ec_50s5.fits Observed – Galaxy
Template Spectrum Av = 0.85331633
Galaxy
SN/Gal = 2.11390
Mg II, I
[O II]
Ca II
[O III]
1.2
1.0
0.8
0.6
0.4
0.2
0.0
5000
6000
7000
8000
9000
10000

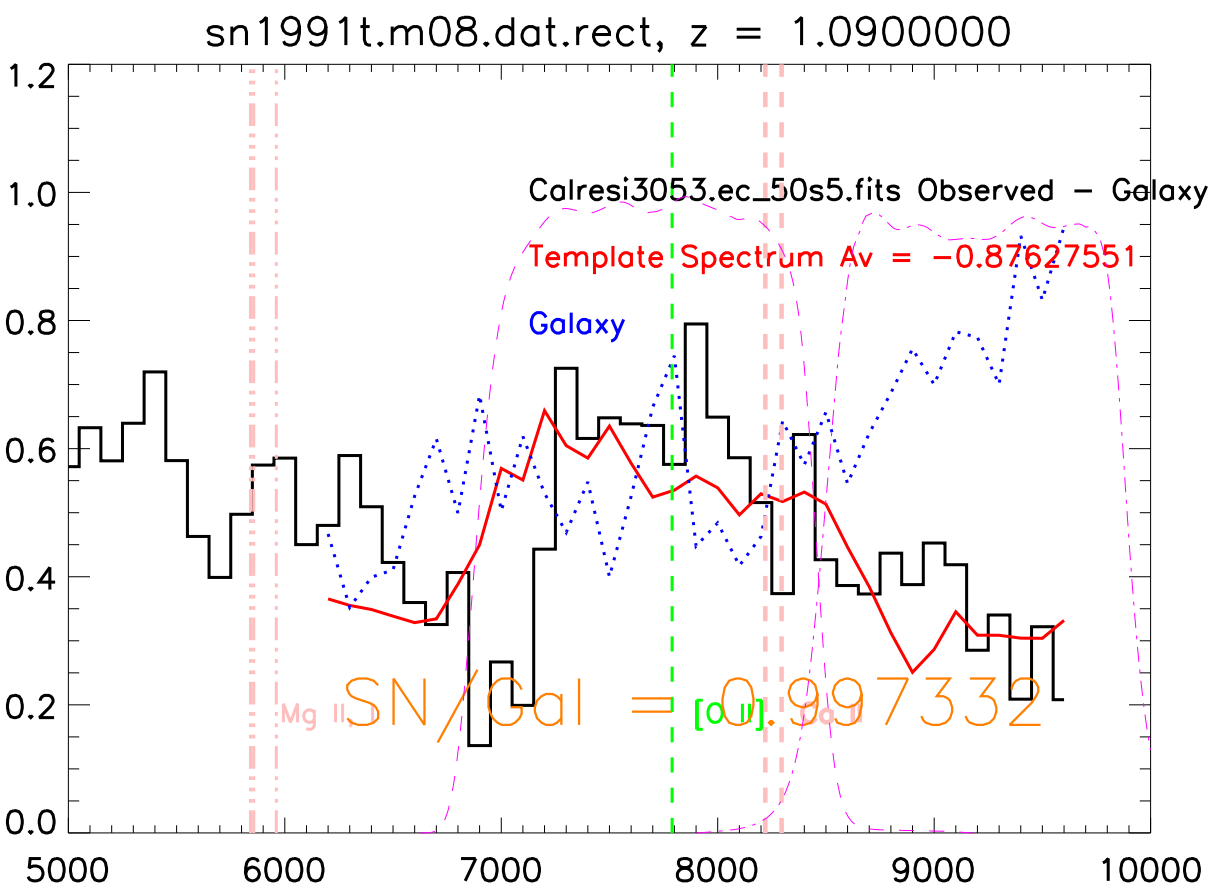

sn1999ee.m06.dat.rect, z = 0.91000003
Calresi3053.ec_50s5.fits Observed − Galaxy
Template Spectrum Av = −1.0000000
Galaxy
SN/Gal = 1.07747
Mg II, I
[O II]
Ca II
[O III]
1.2
1.0
0.8
0.6
0.4
0.2
0.0
5000
6000
7000
8000
9000
10000

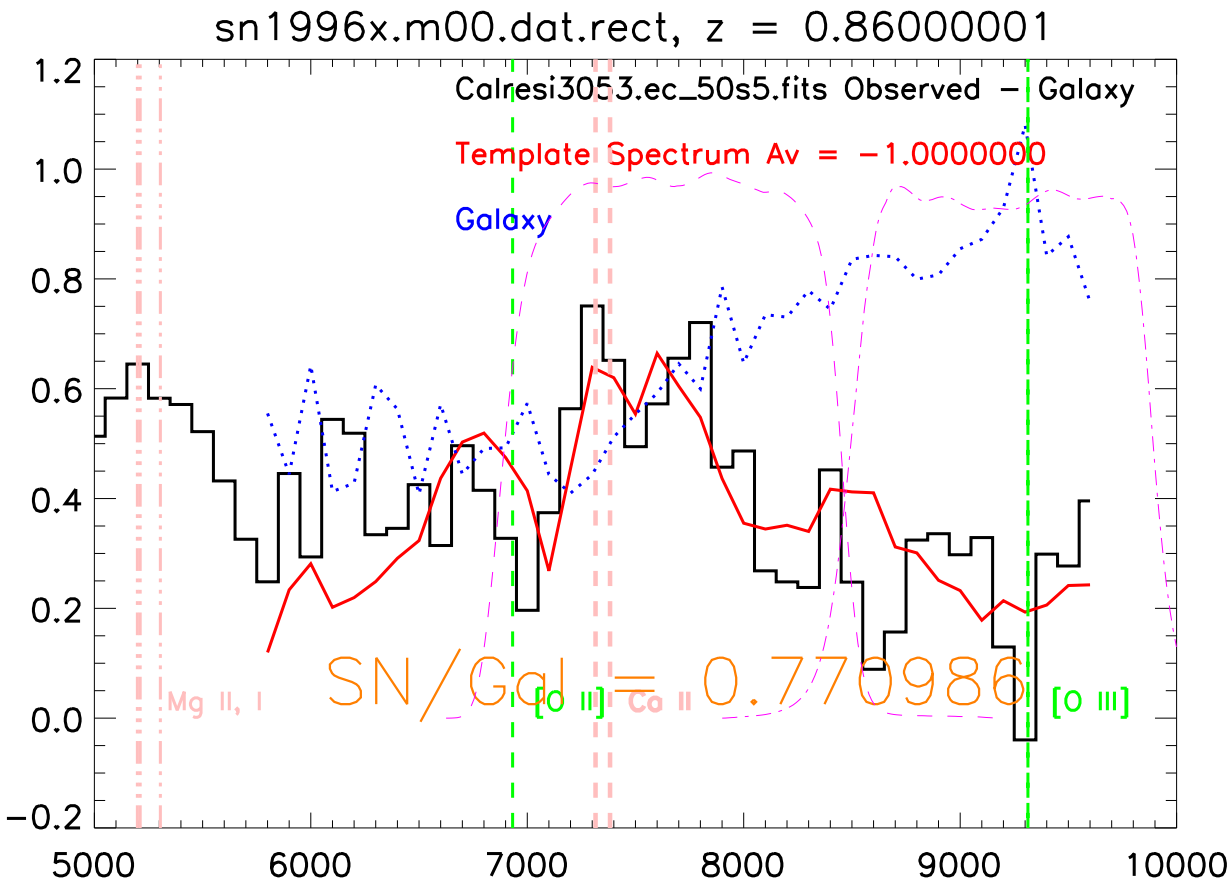

sn1994d.m04.dat.rect, z = 0.88000000
Calresi3053.ec_50s5.fits Observed − Galaxy
Template Spectrum Av = −1.0000000
Galaxy
SN/Gal = 1.48085
Mg II, I
[O II]
Ca II
[O III]
1.2
1.0
0.8
0.6
0.4
0.2
5000
6000
7000
8000
9000
10000

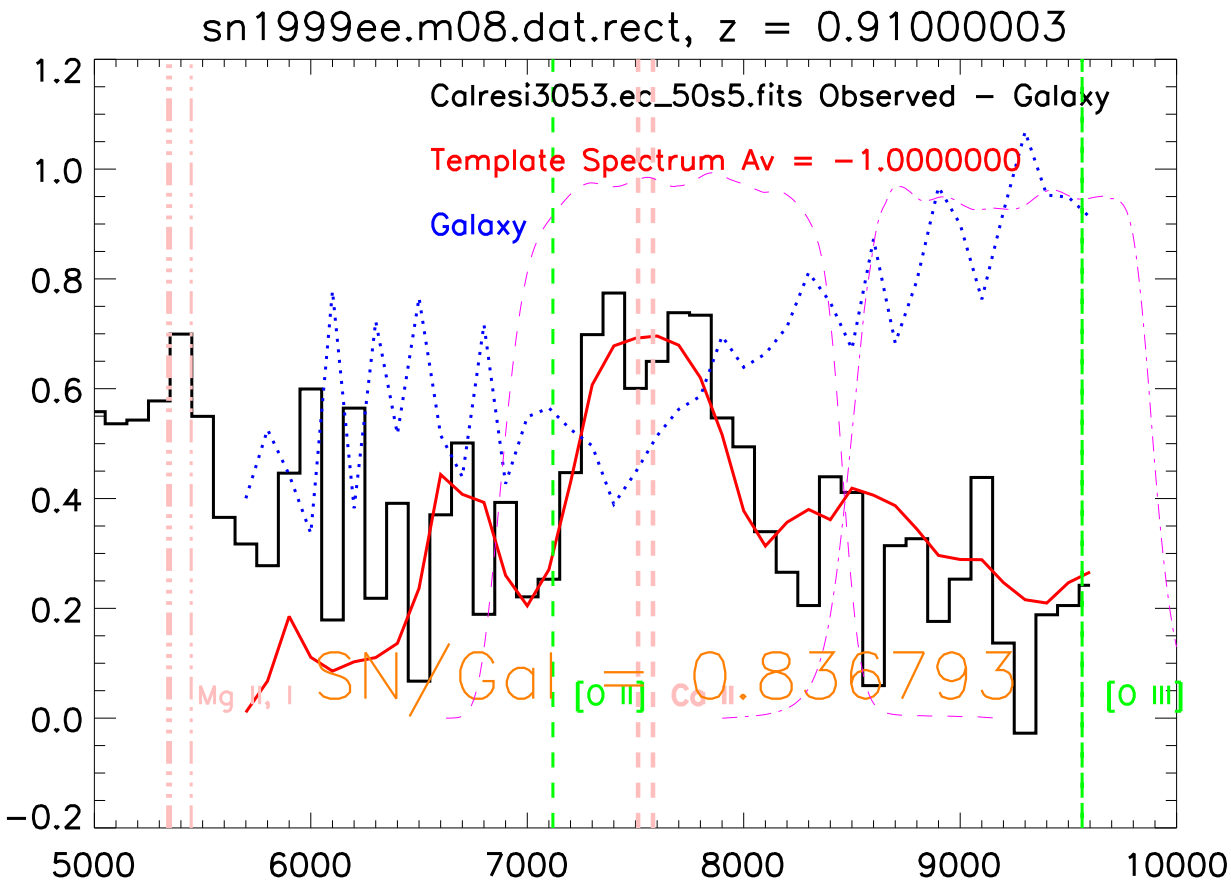

sn1989b.m07.dat.rect, z = 0.87000000
Calresi3053.ec_50s5.fits Observed − Galaxy
Template Spectrum Av = −1.0000000
Galaxy
SN/Gal = 0.980833
Mg II, I
[O II]
Ca II
[O III]
1.2
1.0
0.8
0.6
0.4
0.2
0.0
5000
6000
7000
8000
9000
10000

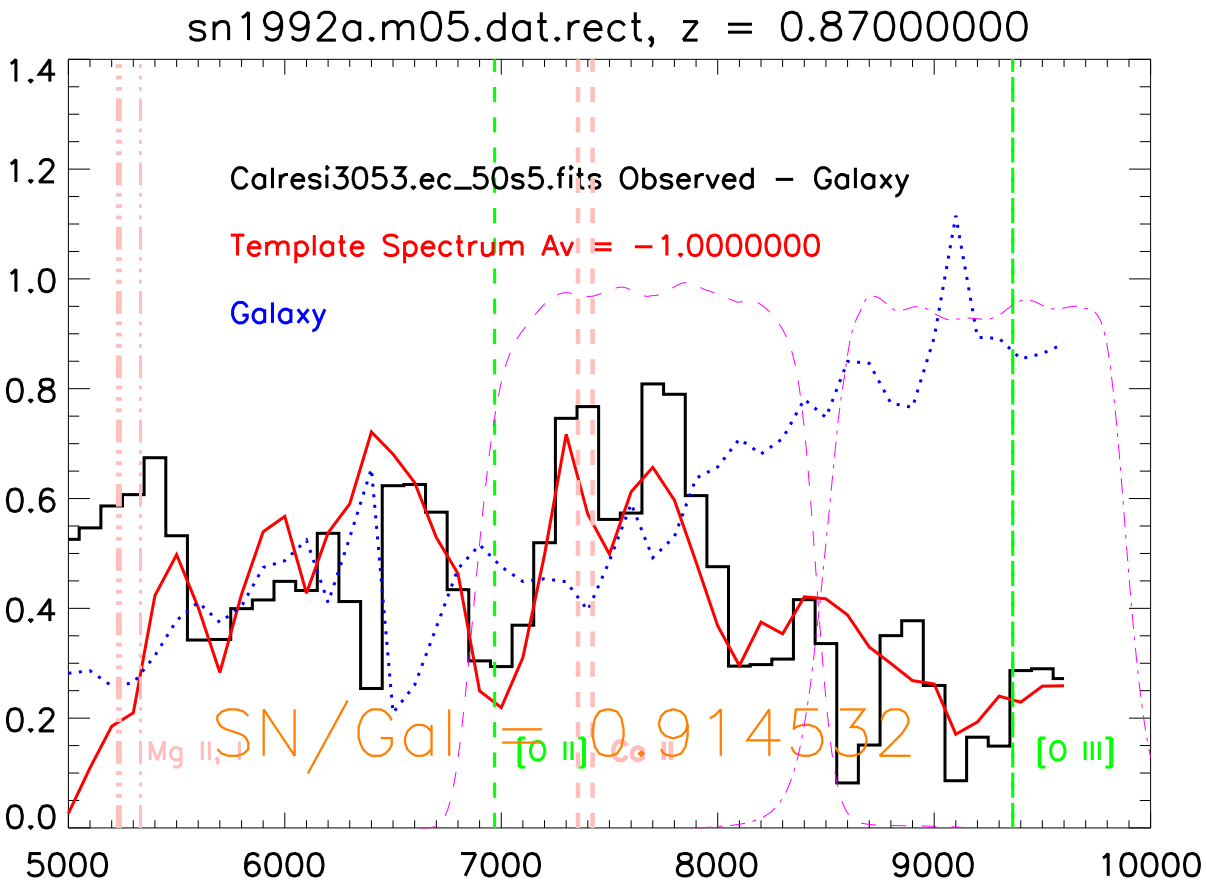

sn1991t.m03.dat.rect, z = 1.0300000
Calresi3053.ec_50s5.fits Observed – Galaxy
Template Spectrum Av = -0.12882653
Galaxy
SN/Gal = 1.51347
Mg II, I
[O II]
Ca II
[O III]
1.2
1.0
0.8
0.6
0.4
0.2
0.0
5000
6000
7000
8000
9000
10000

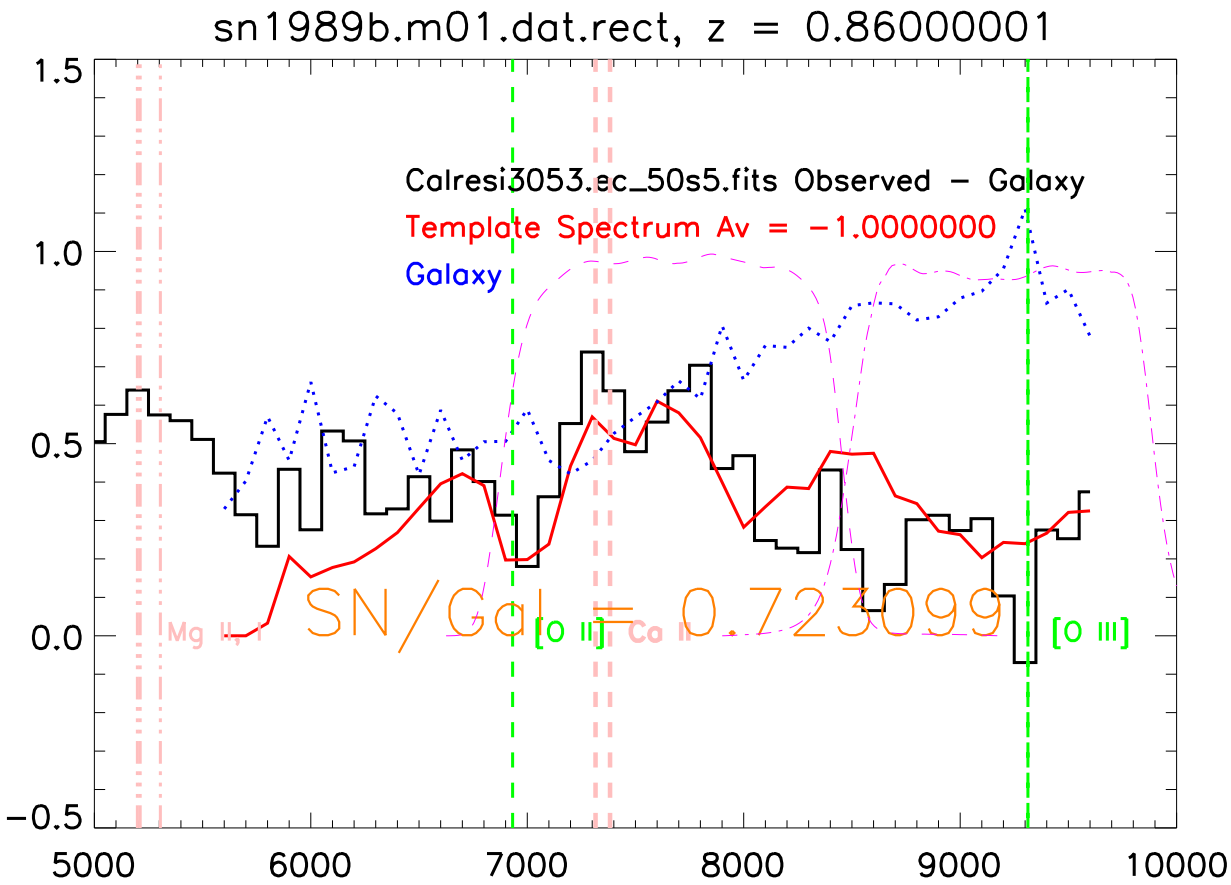

sn1991t.m07.dat.rect, z = 0.95000005
Calresi3053.ec_50s5.fits Observed
Galaxy
Template Spectrum Av = 0.88392863
Galaxy
SN/Gal = 1.76153
Mg II, I
Ca II
[O III]
[O III]
1.2
1.0
0.8
0.6
0.4
0.2
5000
6000
7000
8000
9000
10000

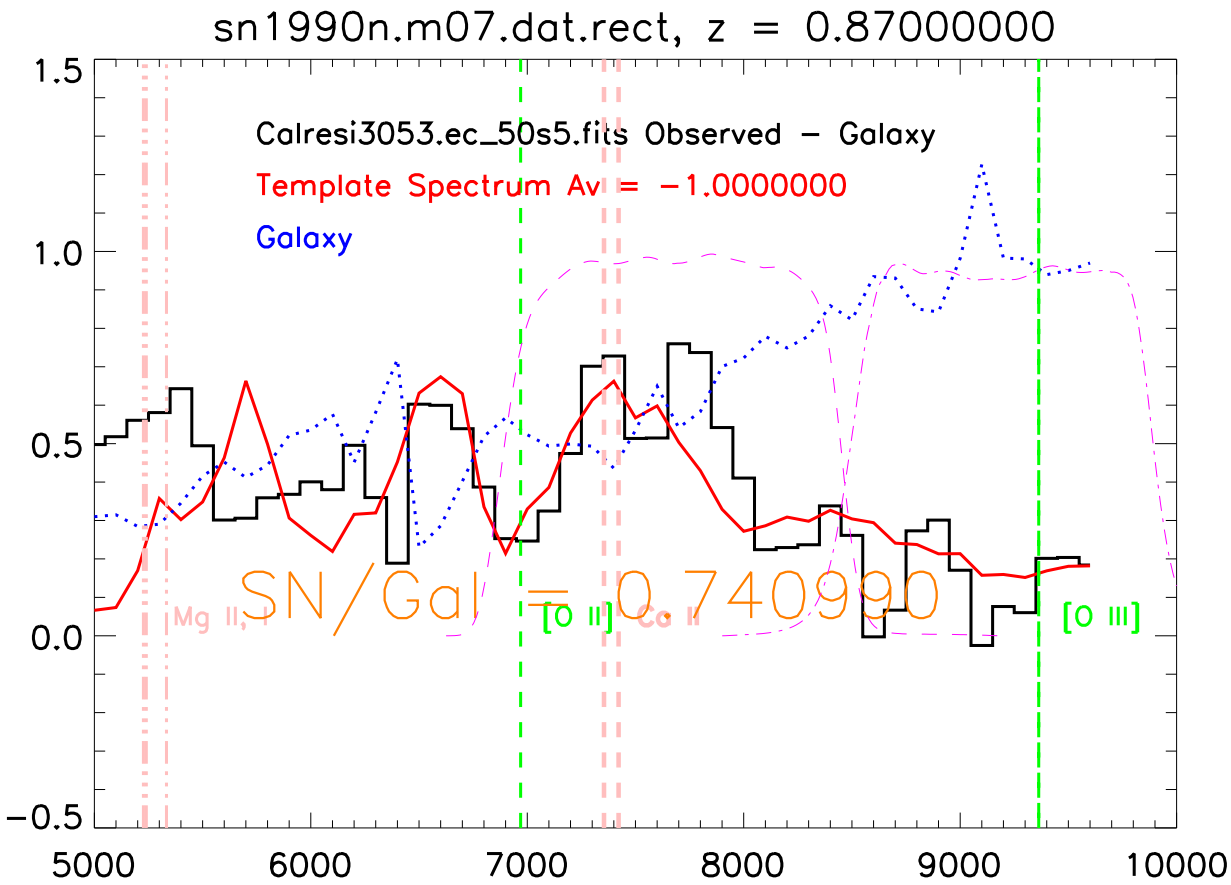

sn1991t.m08.dat.rect, z = 1.0900000
Calresi3053.ec_50s5.fits Observed – Galaxy
Template Spectrum Av = −0.87627551
Galaxy
SN/Gal = 0.997332
Mg II
[O II]
Ca II
[O III]
1.2
1.0
0.8
0.6
0.4
0.2
0.0
5000
6000
7000
8000
9000
10000

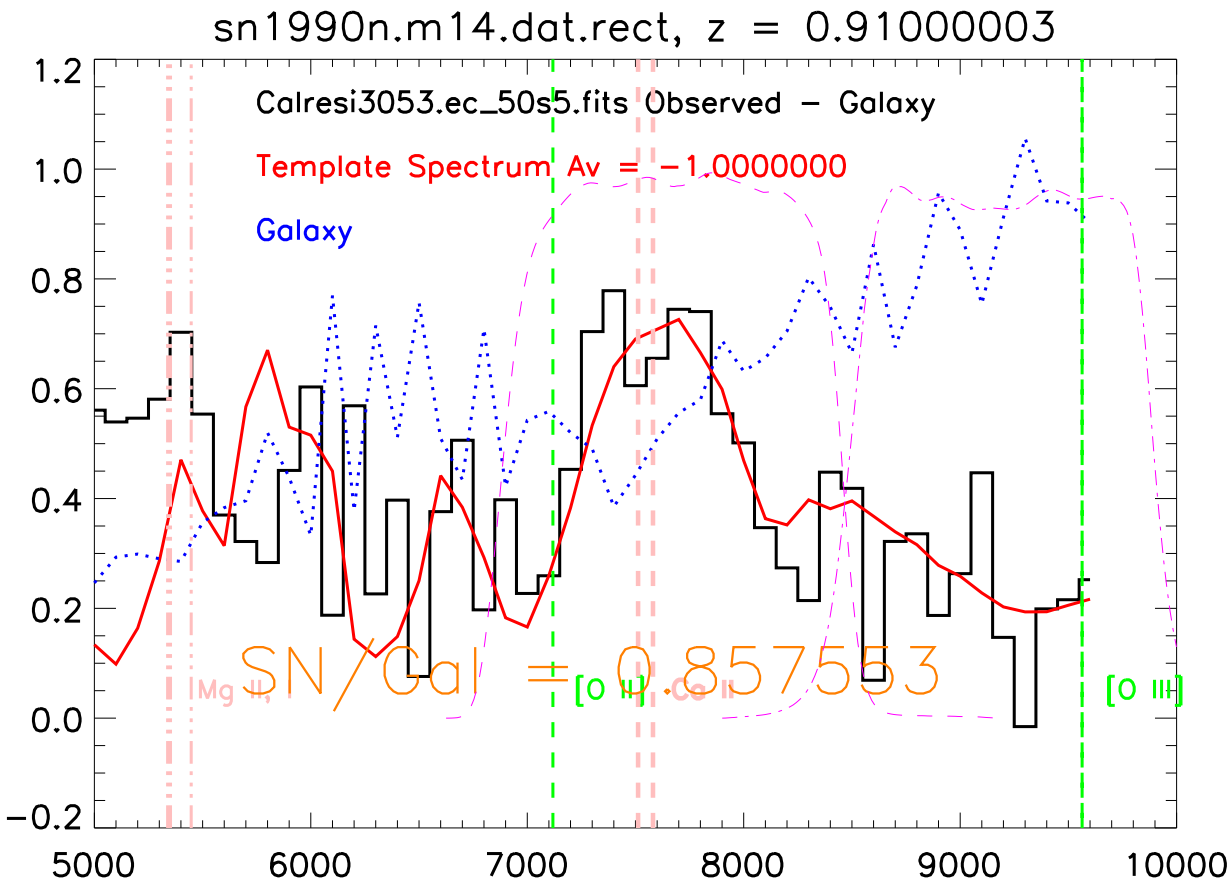

sn1996x.m00.dat.rect, z = 0.86000001
Calresi3053.ec_50s5.fits Observed − Galaxy
Template Spectrum Av = −1.0000000
Galaxy
SN/Gal = 0.770986
Mg II, I
[O II]
Ca II
[O III]
1.2
1.0
0.8
0.6
0.4
0.2
0.0
−0.2
5000
6000
7000
8000
9000
10000

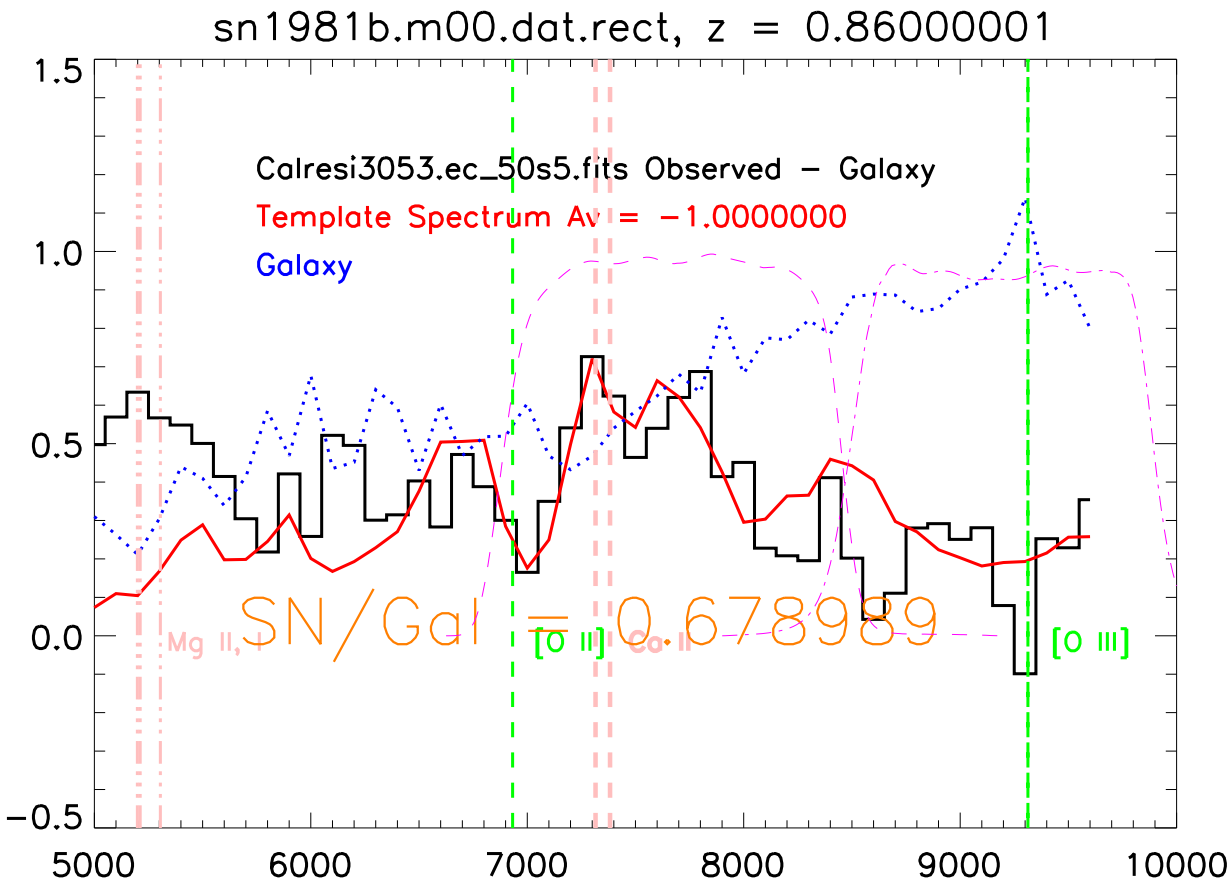

sn1999ee.m08.dat.rect, z = 0.91000003
Calresi3053.ec_50s5.fits Observed − Galaxy
Template Spectrum Av = −1.0000000
Galaxy
SN/Gal = 0.836793
Mg II, I
[O II]
Ca II
[O III]
1.2
1.0
0.8
0.6
0.4
0.2
0.0
−0.2
5000
6000
7000
8000
9000
10000

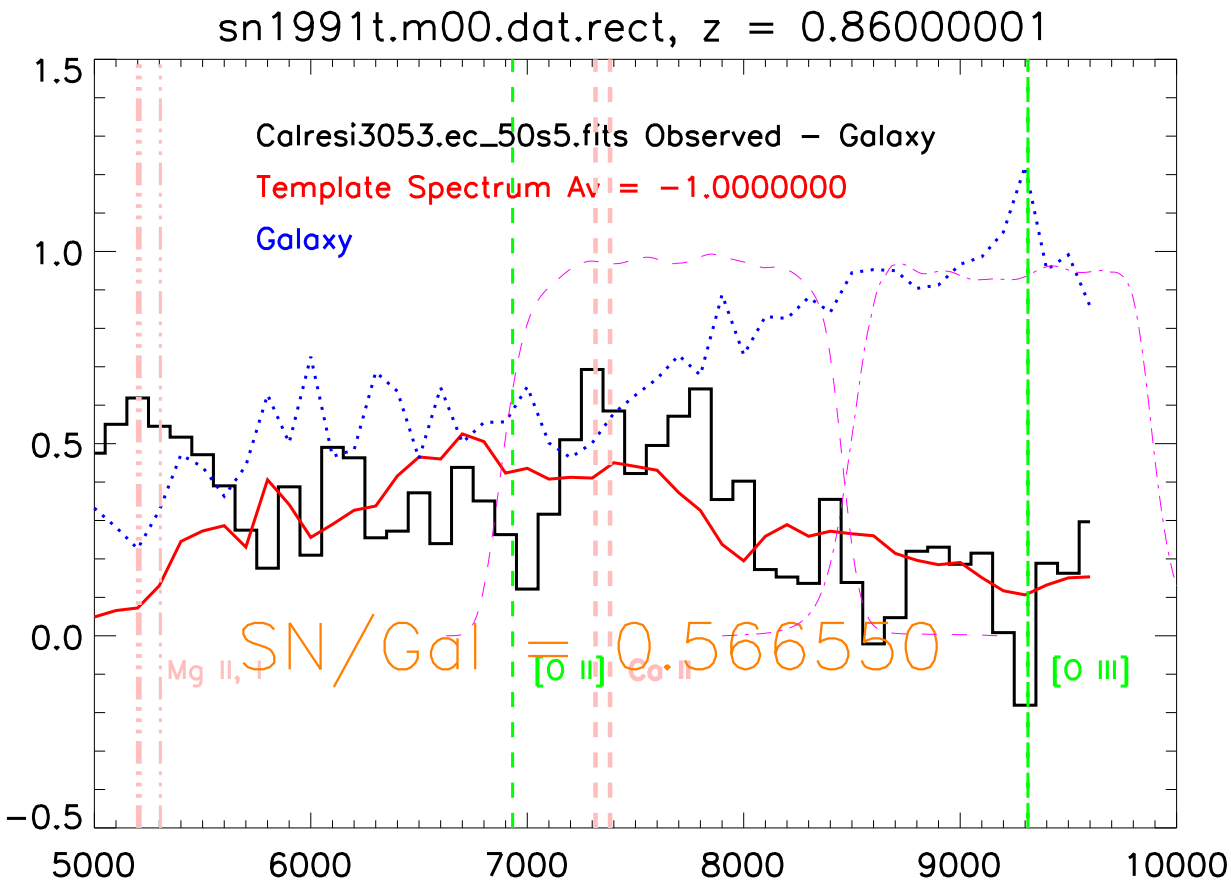

sn1992a.m05.dat.rect, z = 0.87000000
Calresi3053.ec_50s5.fits Observed − Galaxy
Template Spectrum Av = −1.0000000
Galaxy
SN/Gal = 0.914532
[O II]
[O III]
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
5000
6000
7000
8000
9000
10000

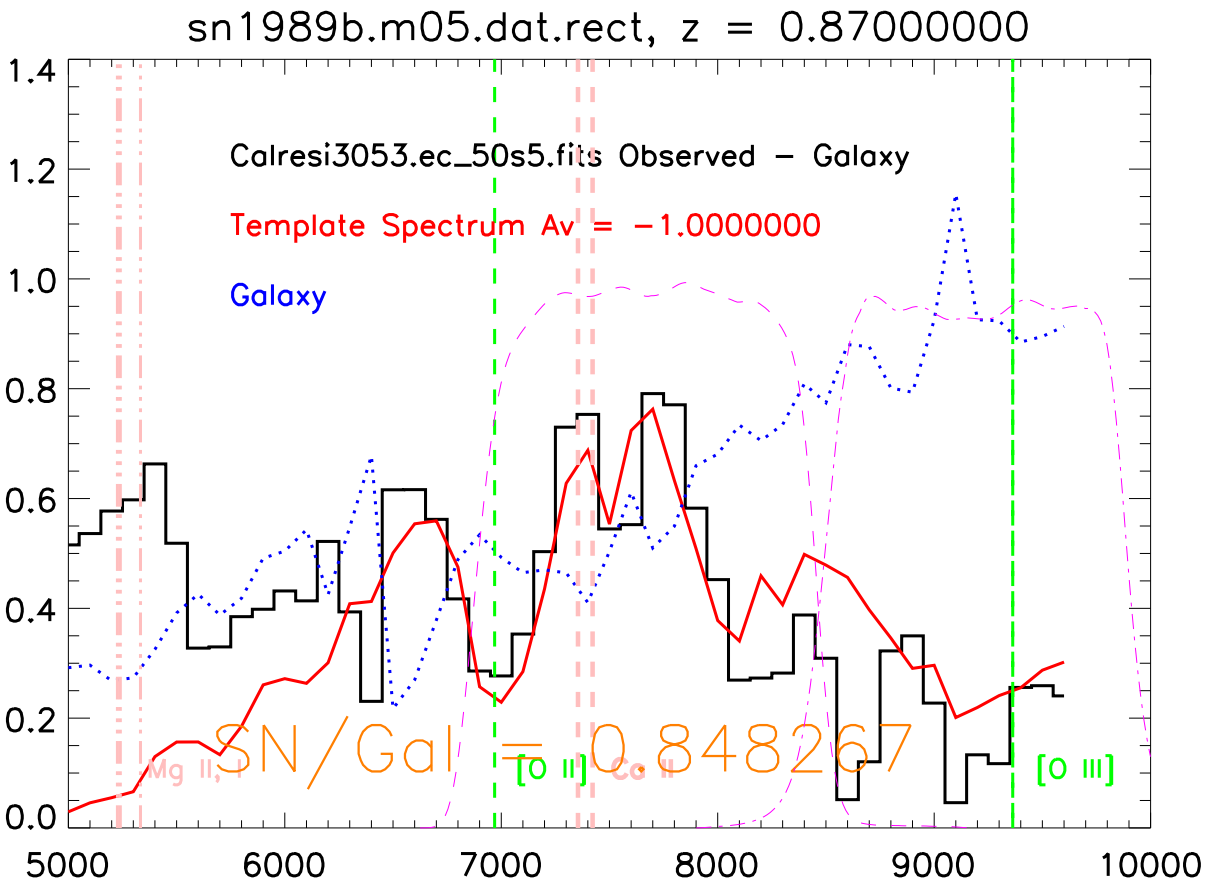

sn1989b.m01.dat.rect, z = 0.86000001
Calresi3053.ec_50s5.fits Observed − Galaxy
Template Spectrum Av = −1.0000000
Galaxy
SN/Gal = 0.723099
Mg II
[O II]
Ca II
[O III]
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000
10000


sn1990n.m07.dat.rect, z = 0.87000000
Calresi3053.ec_50s5.fits Observed − Galaxy
Template Spectrum Av = −1.0000000
Galaxy
SN/Gal = 0.740990
Mg II
[O II]
Ca II
[O III]
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000
10000


sn1990n.m14.dat.rect, z = 0.91000003
Calresi3053.ec_50s5.fits Observed − Galaxy
Template Spectrum Av = −1.0000000
Galaxy
SN/Gal = 0.857553
Mg II
[O II]
Ca II
[O III]
1.2
1.0
0.8
0.6
0.4
0.2
0.0
−0.2
5000
6000
7000
8000
9000
10000


sn1981b.m00.dat.rect, z = 0.86000001
Calresi3053.ec_50s5.fits Observed − Galaxy
Template Spectrum Av = −1.0000000
Galaxy
SN/Gal = 0.678989
Mg II,
[O II]
Ca II
[O III]
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000
10000


sn1991t.m00.dat.rect, z = 0.86000001
Calresi3053.ec_50s5.fits Observed − Galaxy
Template Spectrum Av = −1.0000000
Galaxy
SN/Gal = 0.566550
Mg II,
[O II]
Ca II
[O III]
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000
10000


sn1989b.m05.dat.rect, z = 0.87000000
Calresi3053.ec_50s5.fits Observed − Galaxy
Template Spectrum Av = −1.0000000
Galaxy
SN/Gal = 0.848267
[O II]
[O III]
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
5000
6000
7000
8000
9000
10000