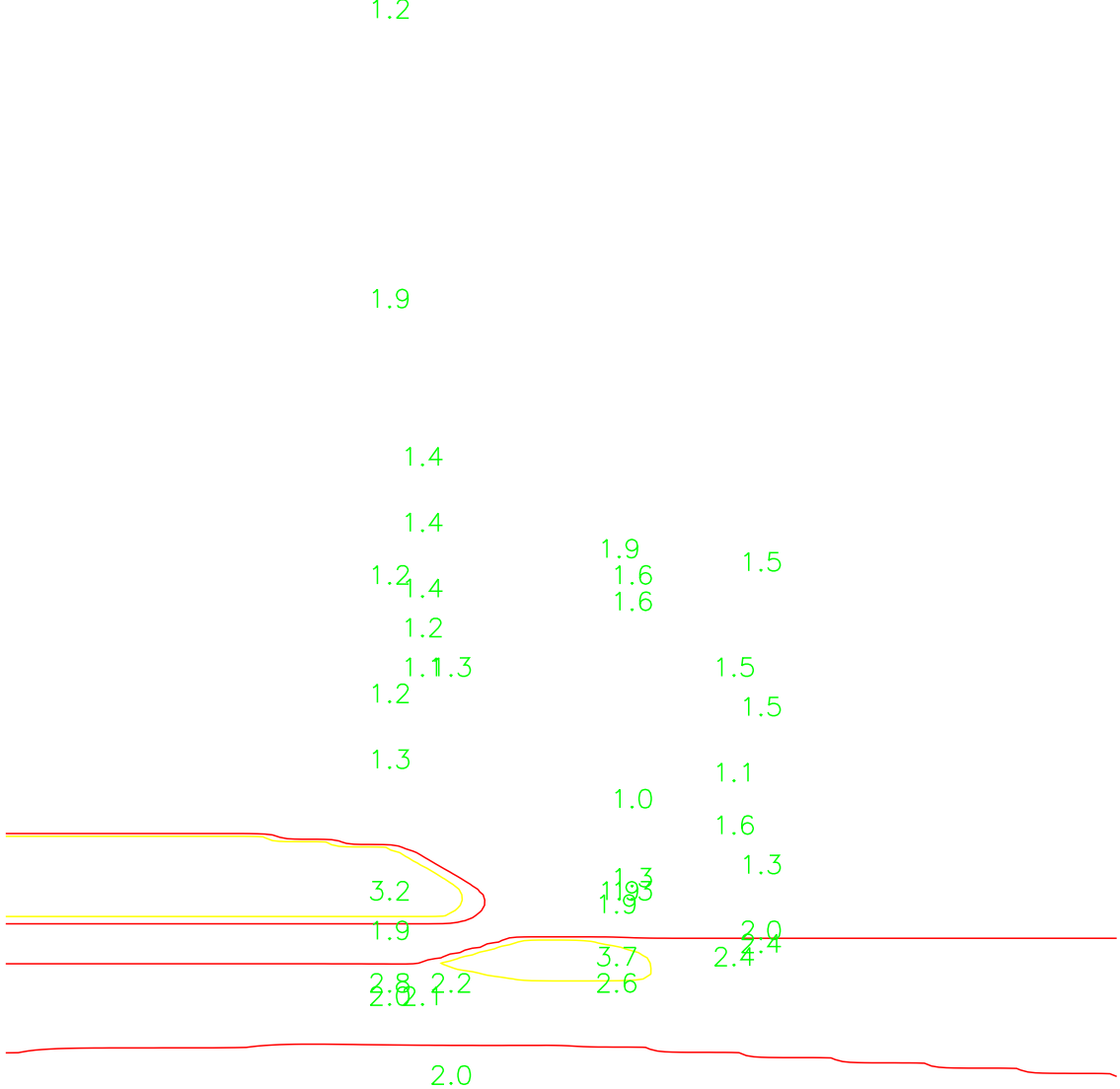
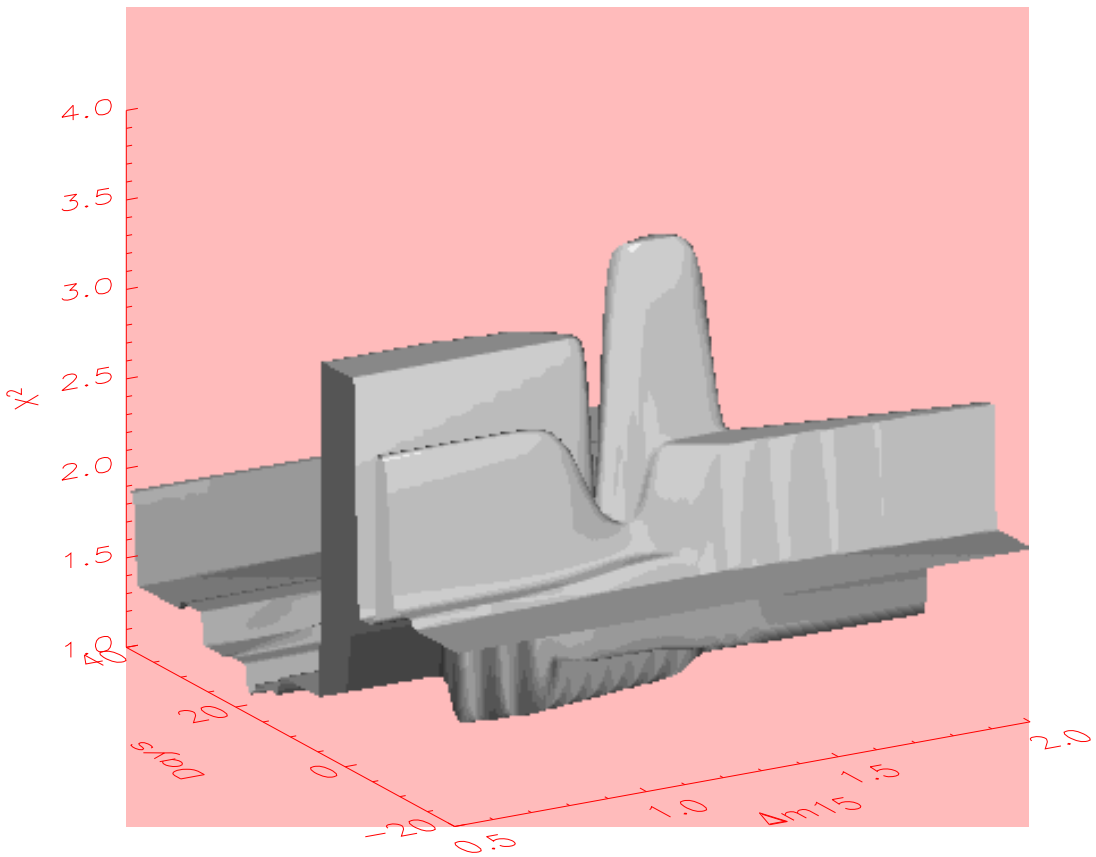
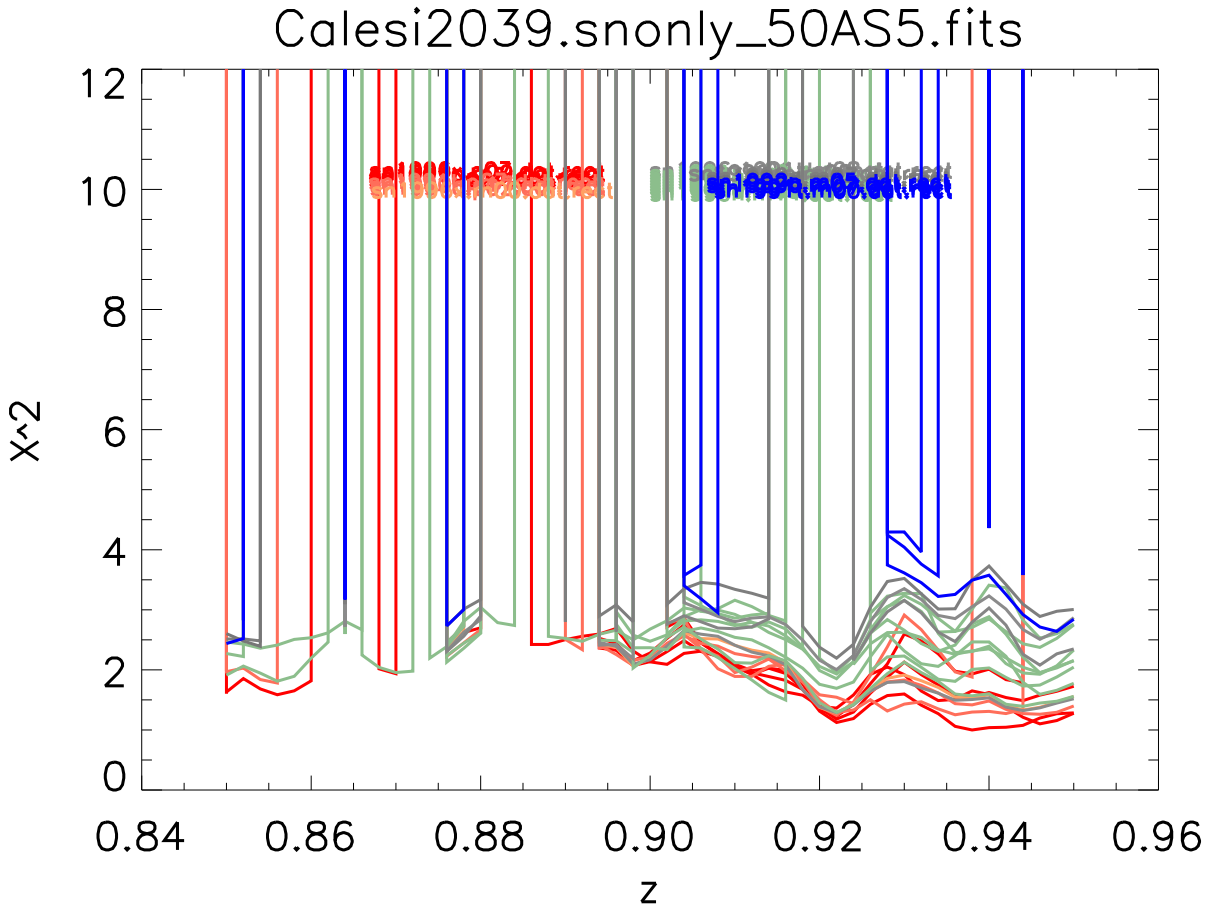
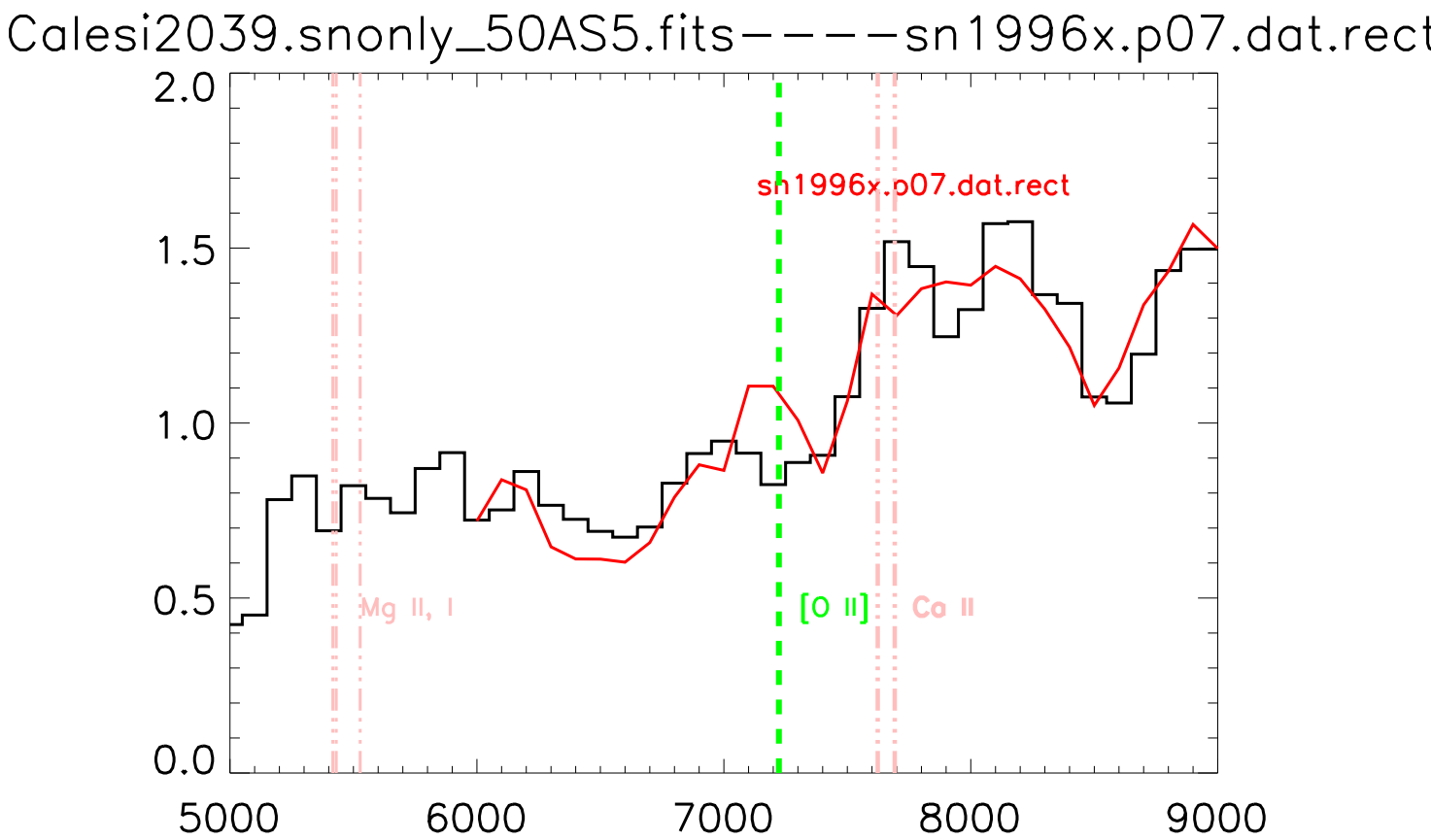
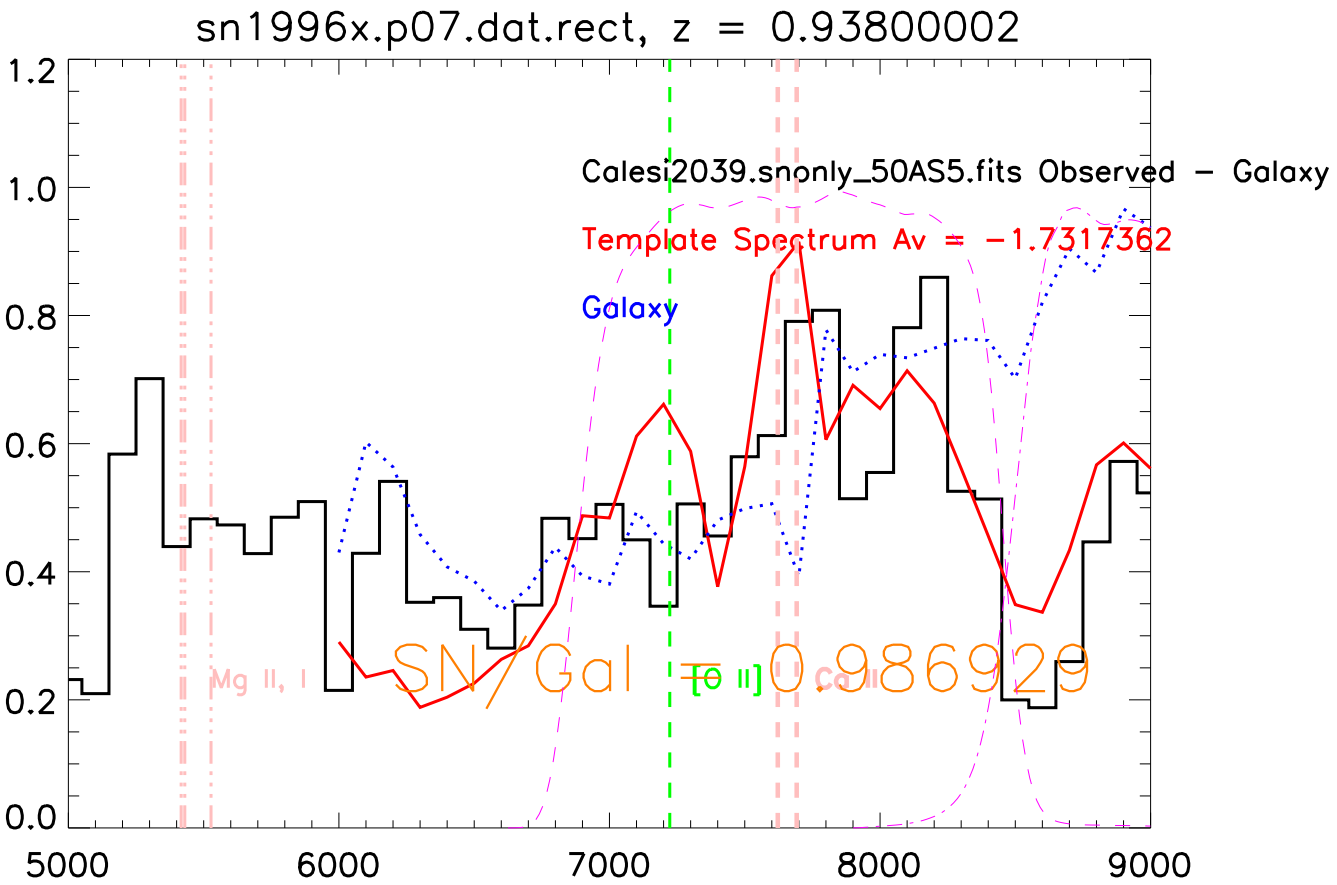

1.2
1.9
1.4
1.4
1.9
1.5
1.2
1.6
1.4
1.6
1.2
1.1
1.3
1.5
1.2
1.5
1.3
1.1
1.0
1.6
1.3
3.2
1.9
1.9
1.9
2.0
2.4
3.7
2.4
2.8
2.2
2.6
2.0
2.1
2.0

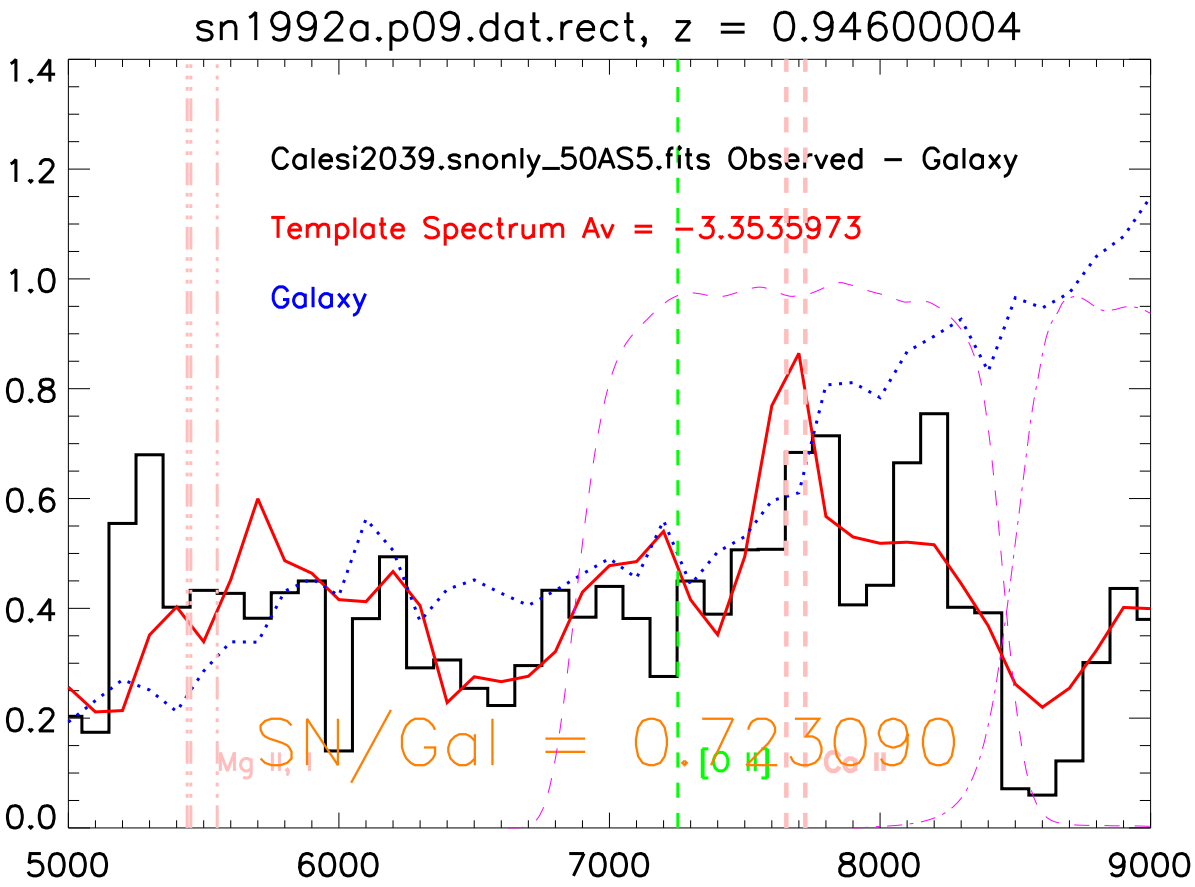


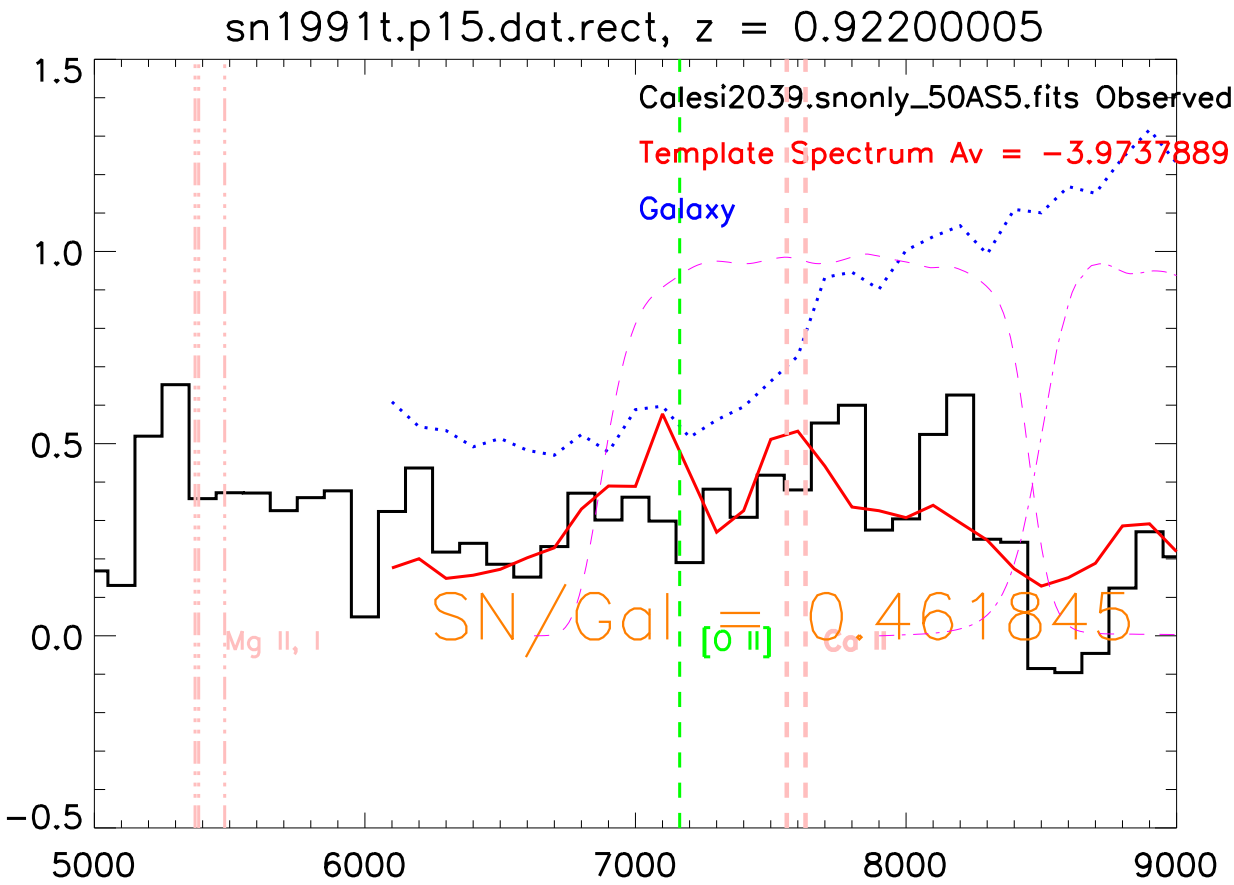
4.0
3.5
3.0
2.5
2.0
1.5
1.0
χ^2
40
20
0
−20
Days
0.5
1.0
1.5
2.0
Δm15

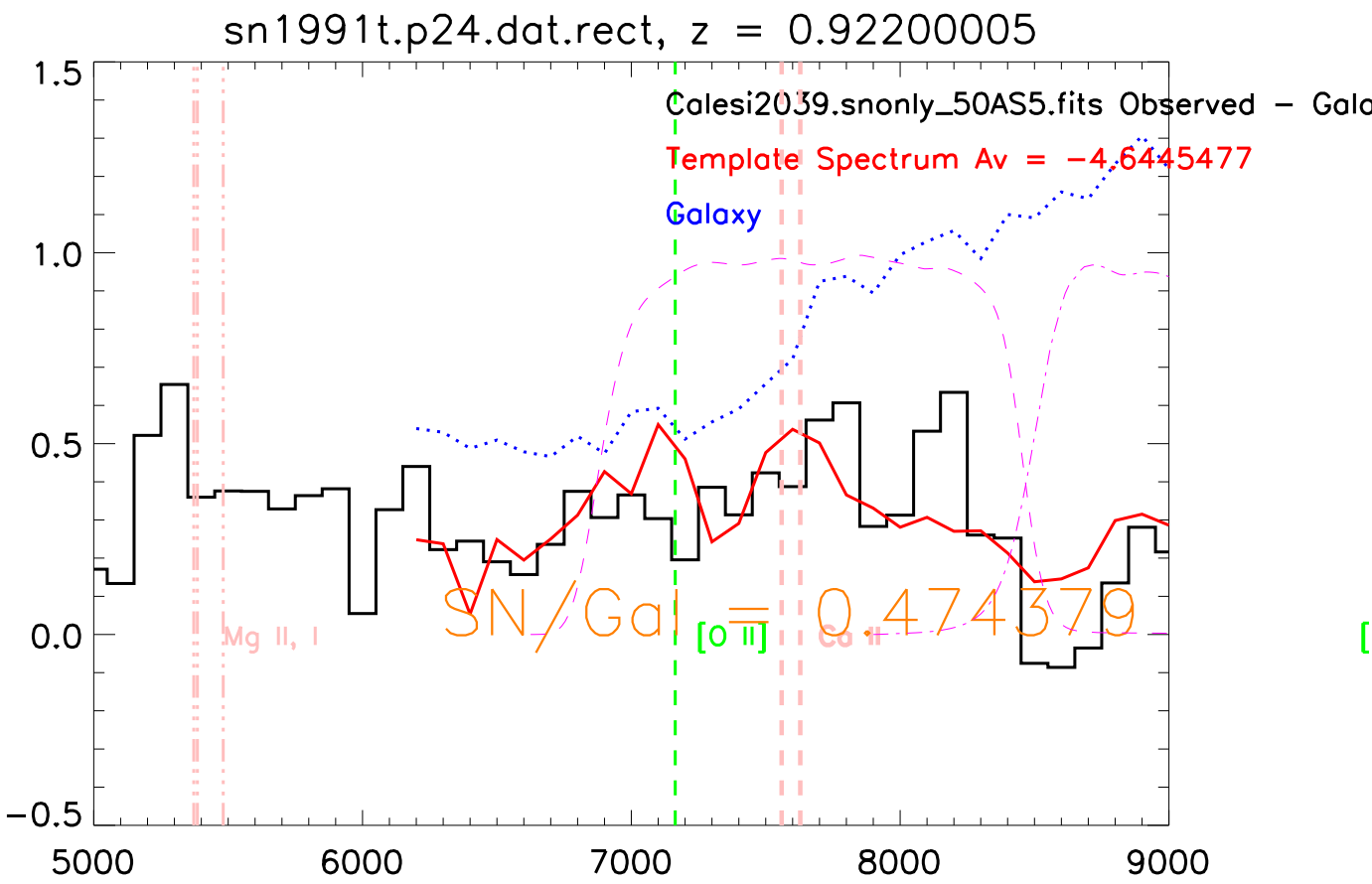

Calesi2039.snonly_50AS5.fits
X^2
z
0
2
4
6
8
10
12
0.84
0.86
0.88
0.90
0.92
0.94
0.96

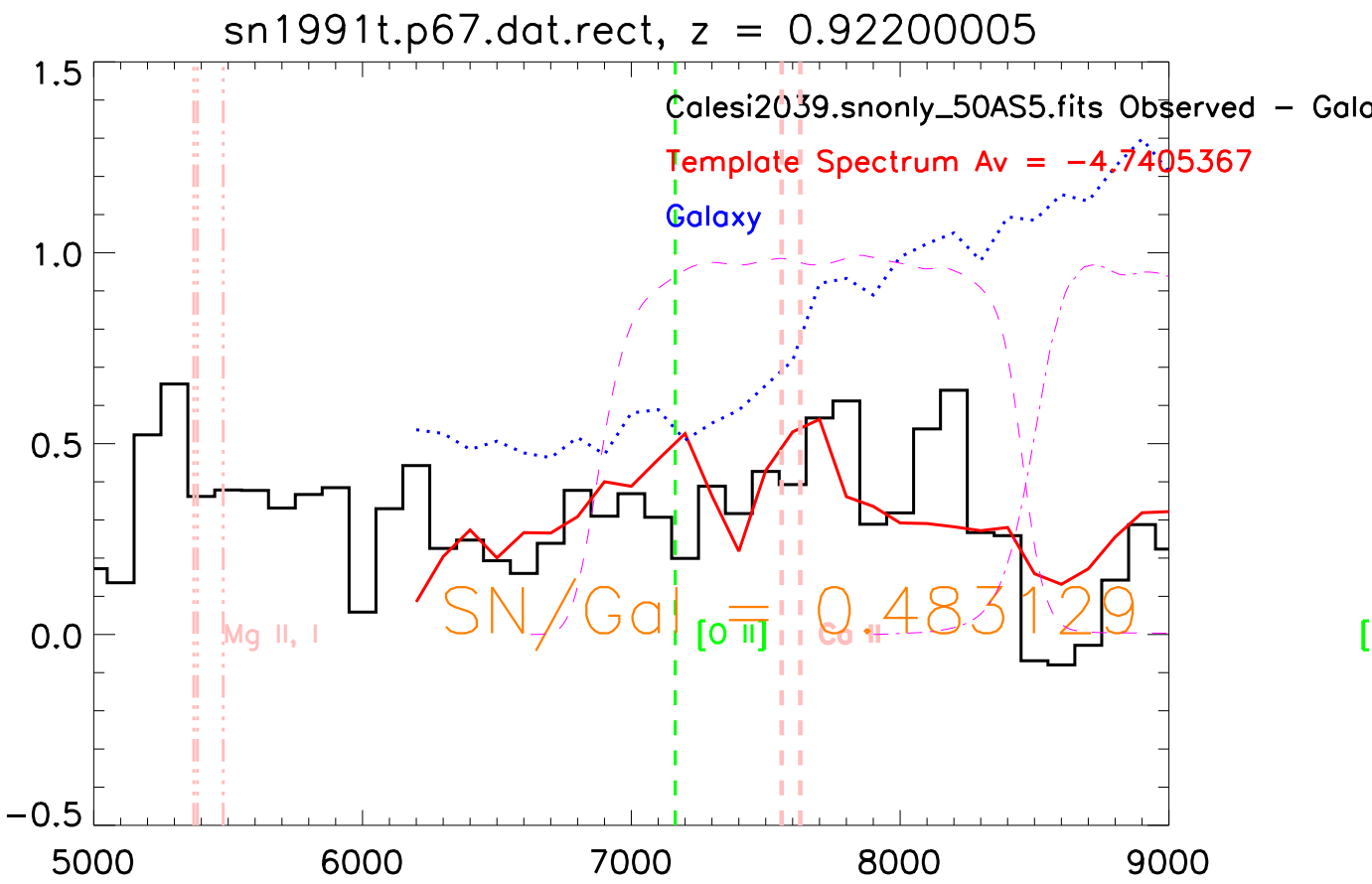

Calesi2039.snonly_50AS5.fits----sn1996x.p07.dat.rect
sn1996x.p07.dat.rect
Mg II, I
[O II]
Ca II
2.0
1.5
1.0
0.5
0.0
5000
6000
7000
8000
9000

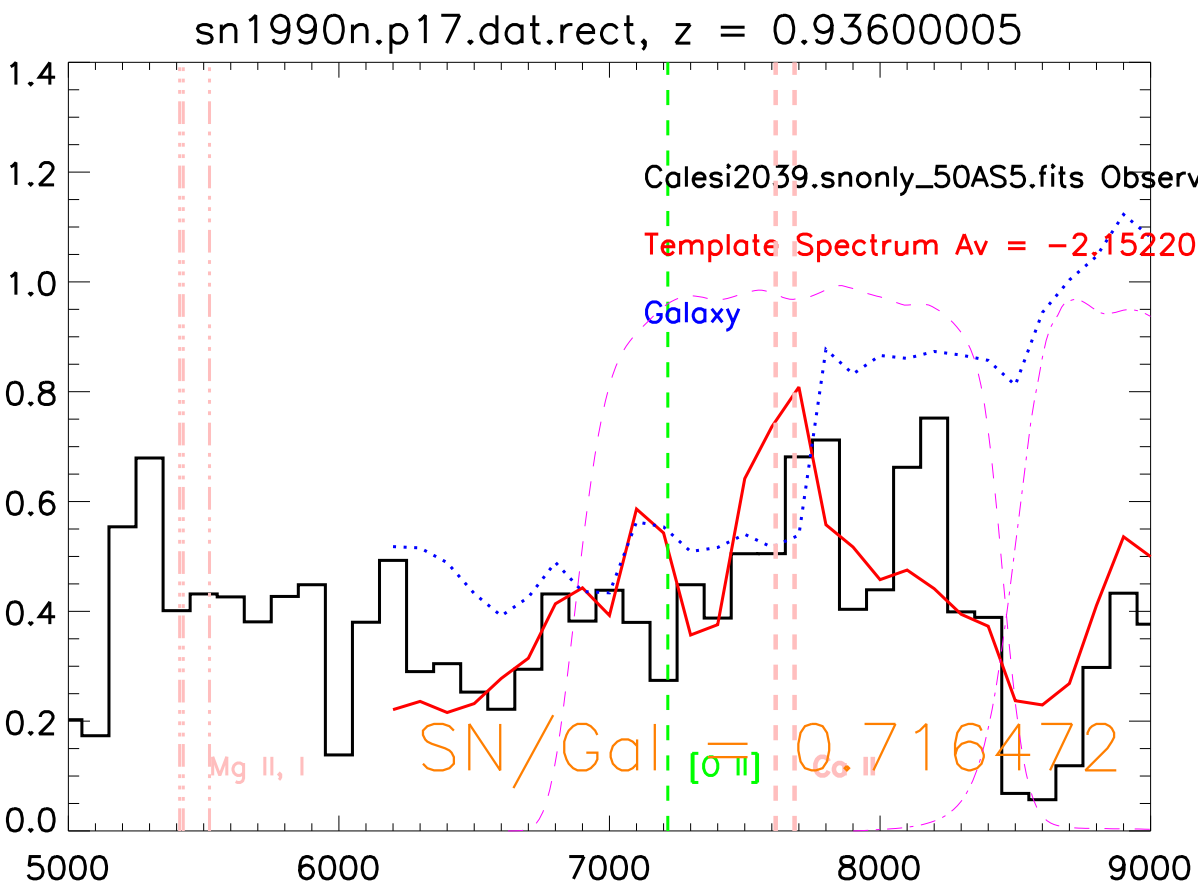

sn1996x.p07.dat.rect, z = 0.93800002
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −1.7317362
Galaxy
SN/Gal = 0.986929
Mg II, I
[O II]
Ca II
1.2
1.0
0.8
0.6
0.4
0.2
0.0
5000
6000
7000
8000
9000

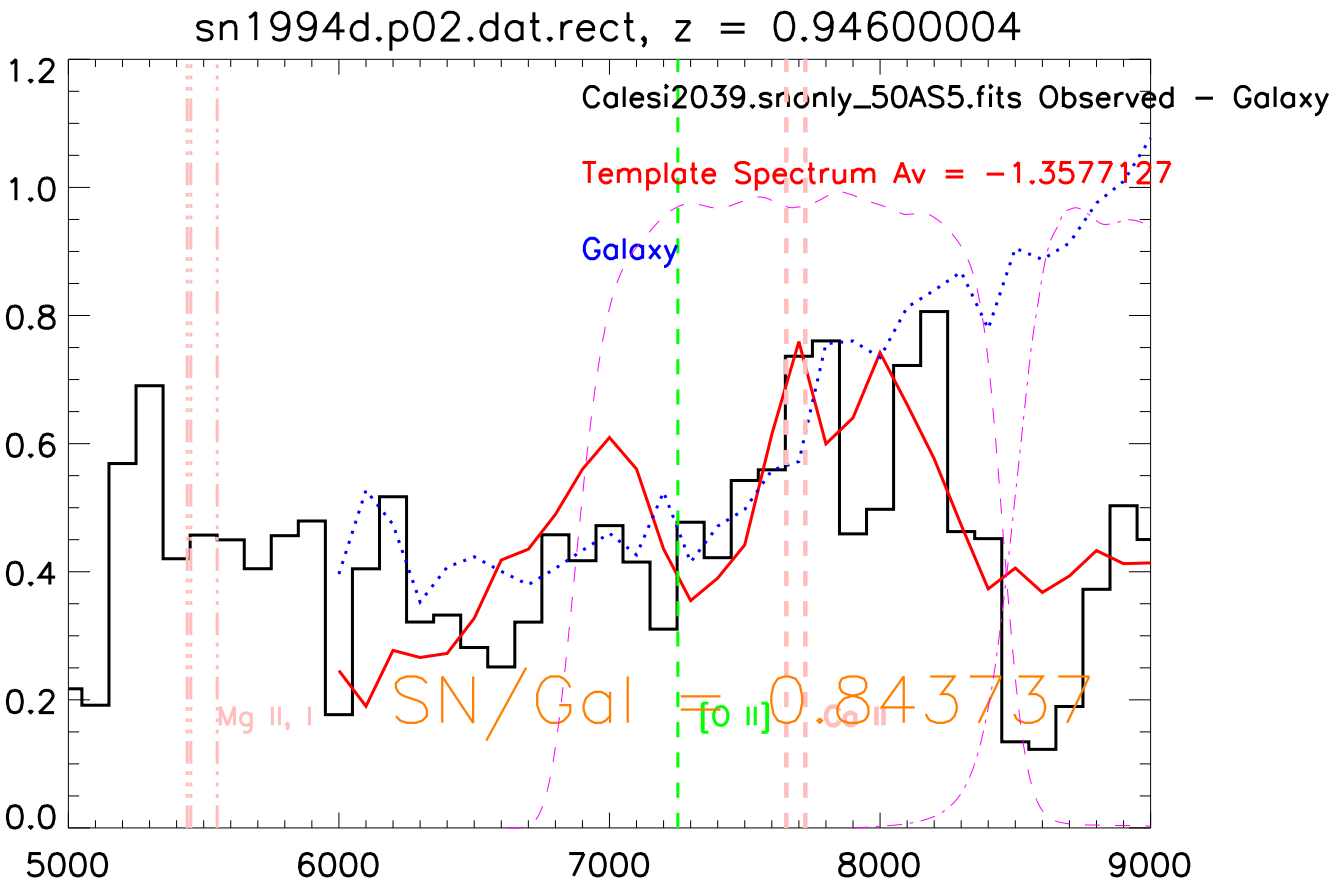

sn1992a.p09.dat.rect, z = 0.94600004
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −3.3535973
Galaxy
SN/Gal = 0.723090
Mg II
[O II]
Ca II
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
5000
6000
7000
8000
9000

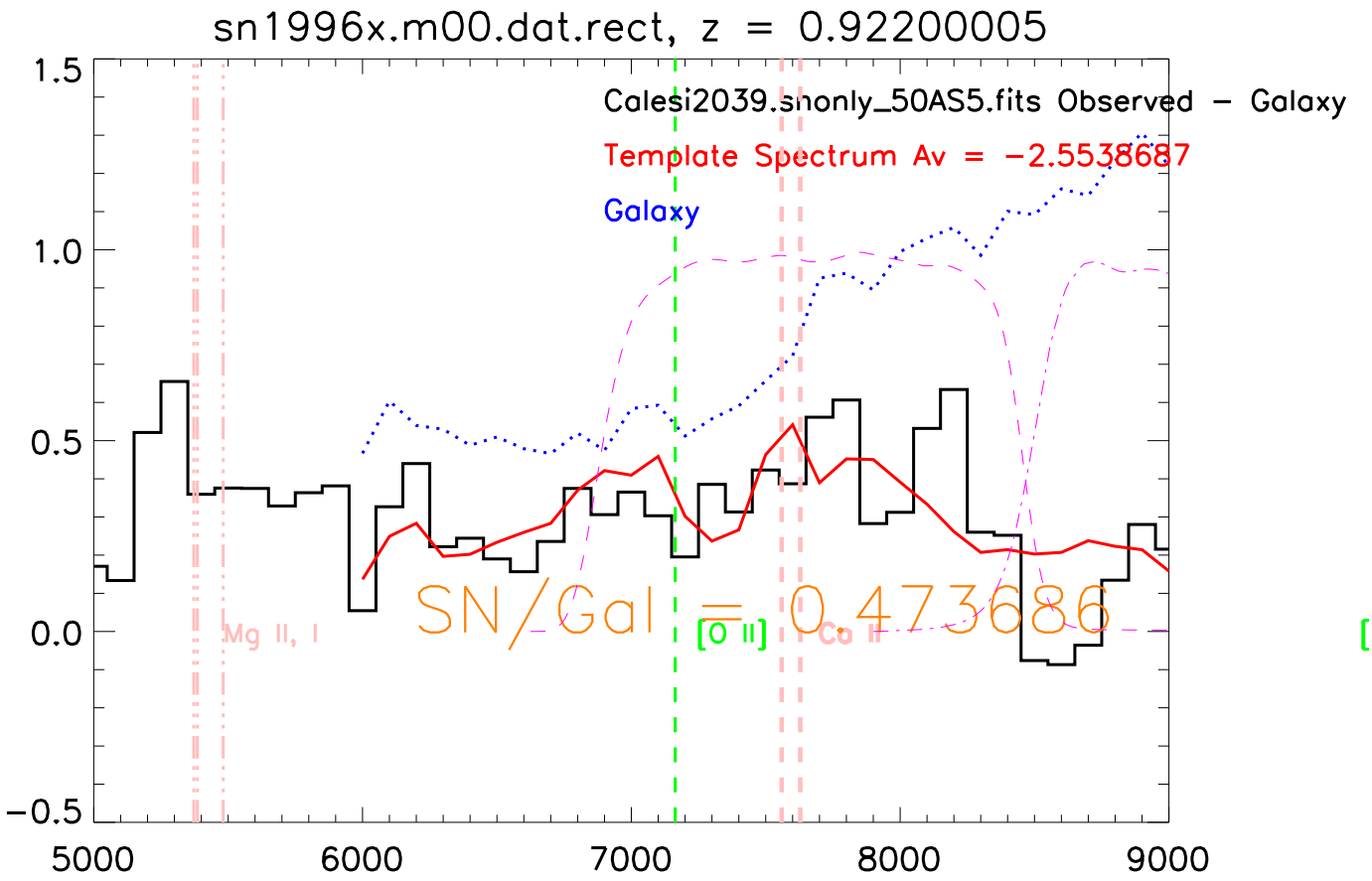

sn1991t.p15.dat.rect, z = 0.92200005
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −3.9737889
Galaxy
SN/Gal = 0.461845
Mg II, I
[O II]
Ca II
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

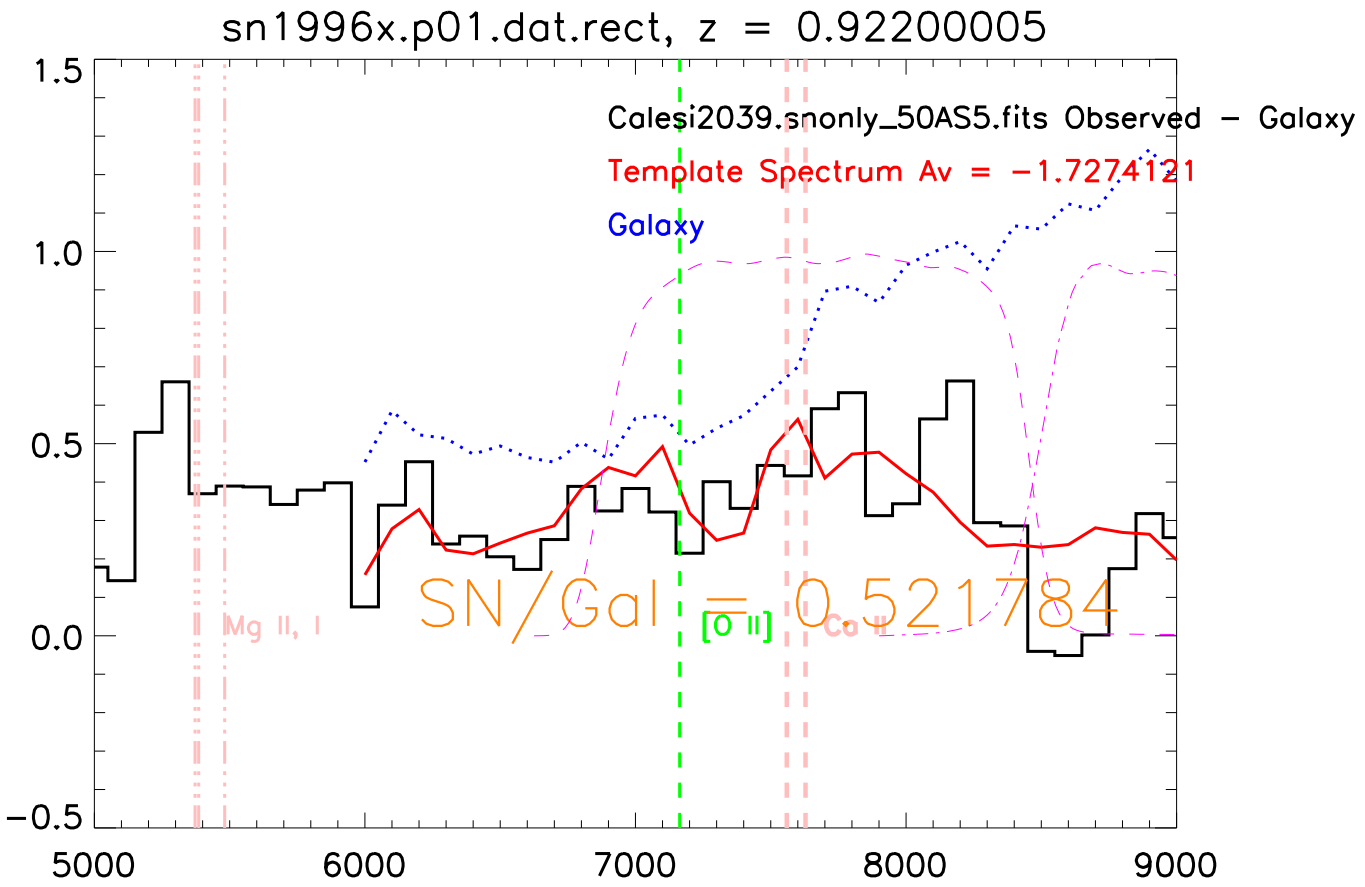

sn1991t.p24.dat.rect, z = 0.92200005
Calesi2039.snonly_50AS5.fits Observed – Gala
Template Spectrum Av = −4.6445477
Galaxy
SN/Gal = 0.474379
Mg II, I
[O II]
Ca II
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

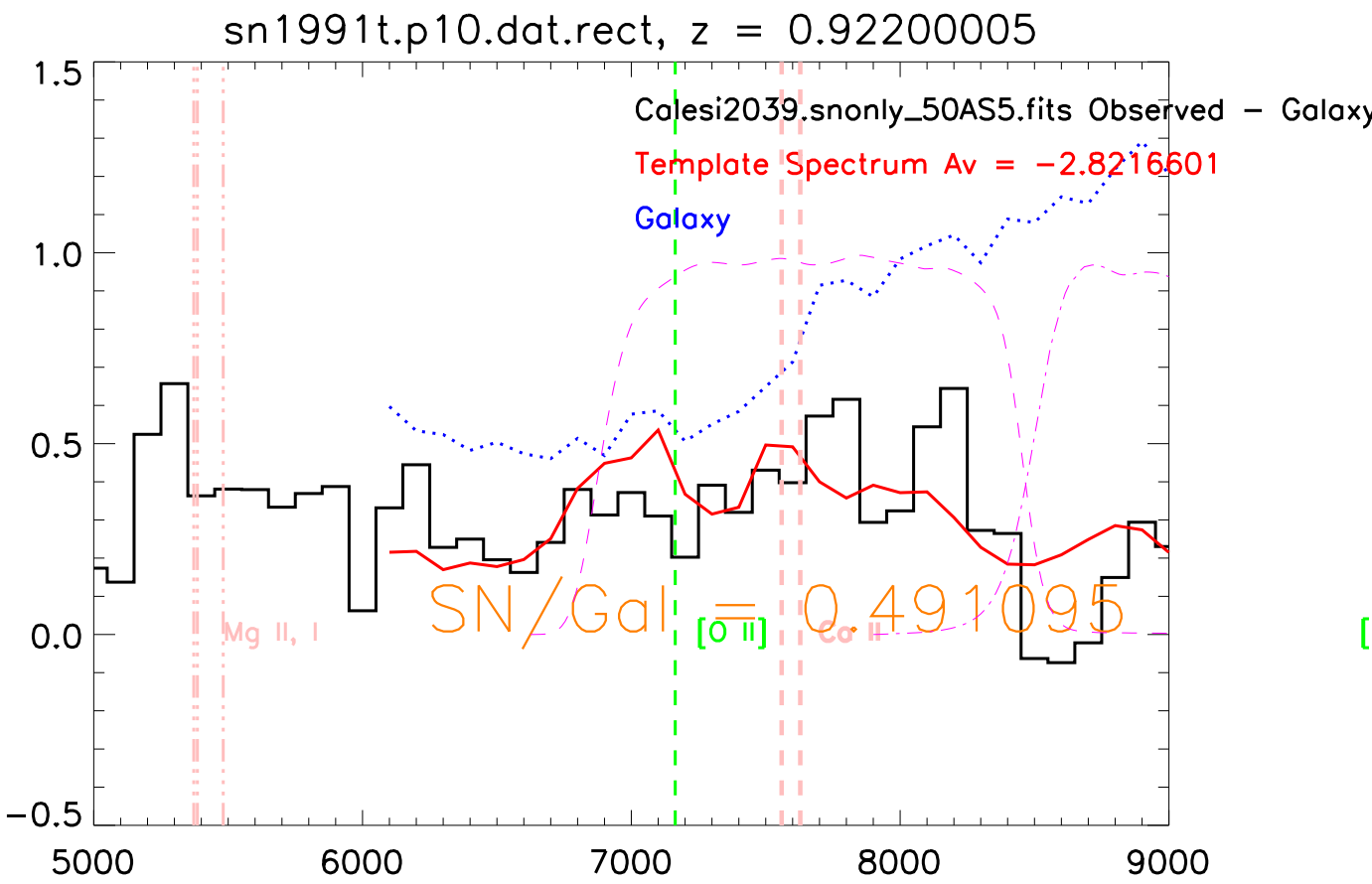

sn1991t.p67.dat.rect, z = 0.92200005
Calesi2039.snonly_50AS5.fits Observed – Gala
Template Spectrum Av = −4.7405367
Galaxy
SN/Gal = 0.483129
Mg II, I
[O II]
Ca II
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

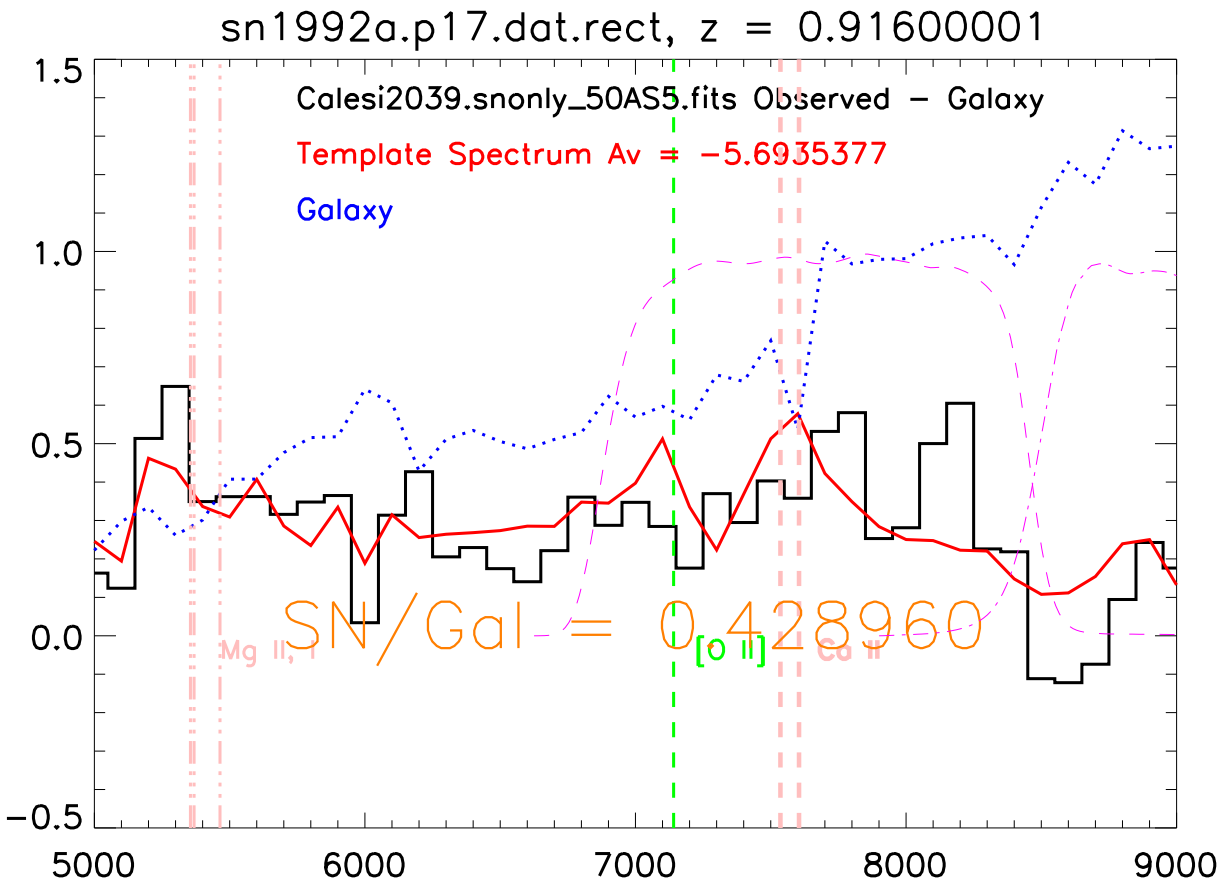

sn1990n.p17.dat.rect, z = 0.93600005
Calesi2039.snonly_50AS5.fits Observed – Gala
Template Spectrum Av = −2.1522013
Galaxy
SN/Gal = 0.716472
Mg II, I
[O II]
Ca II
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
5000
6000
7000
8000
9000

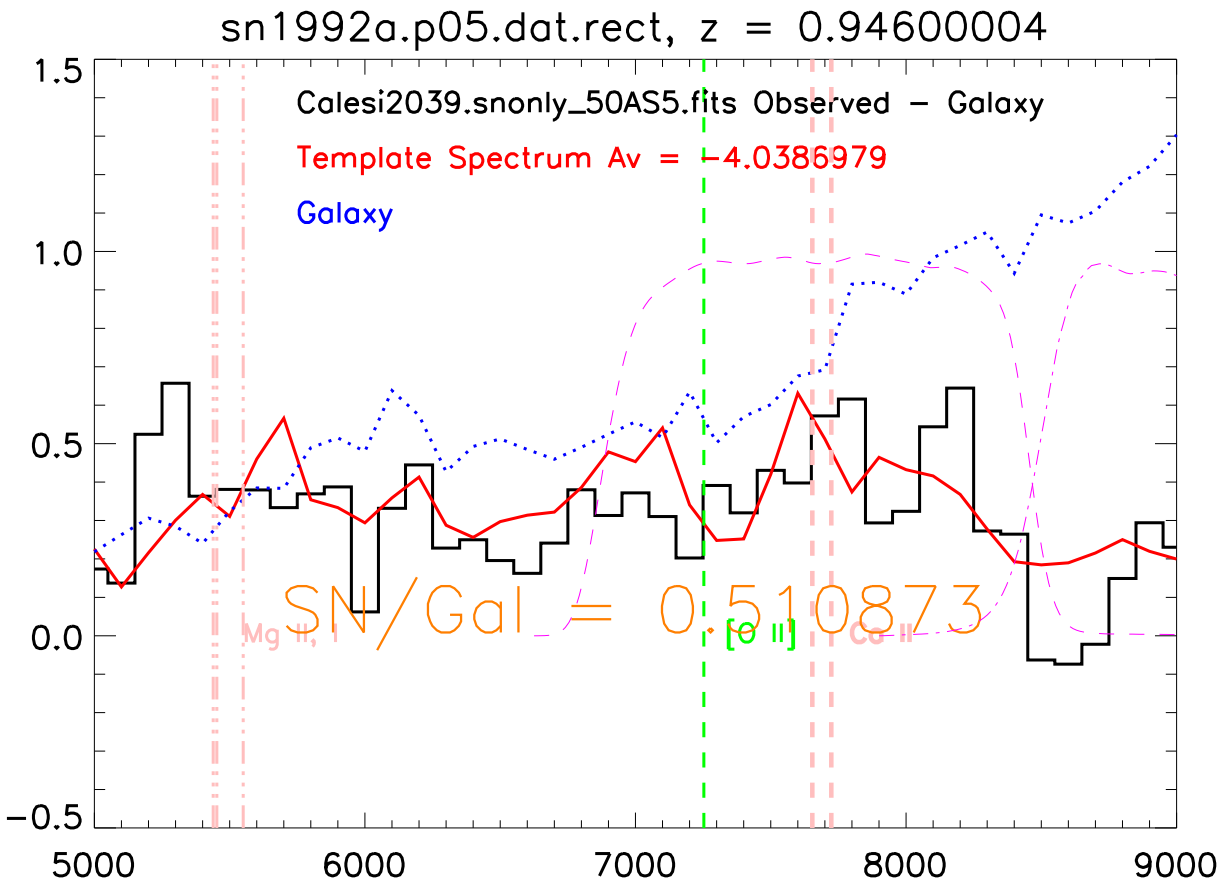

sn1994d.p02.dat.rect, z = 0.94600004
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −1.3577127
Galaxy
SN/Gal = 0.843737
Mg II, I
[O II]
Ca II
1.2
1.0
0.8
0.6
0.4
0.2
0.0
5000
6000
7000
8000
9000

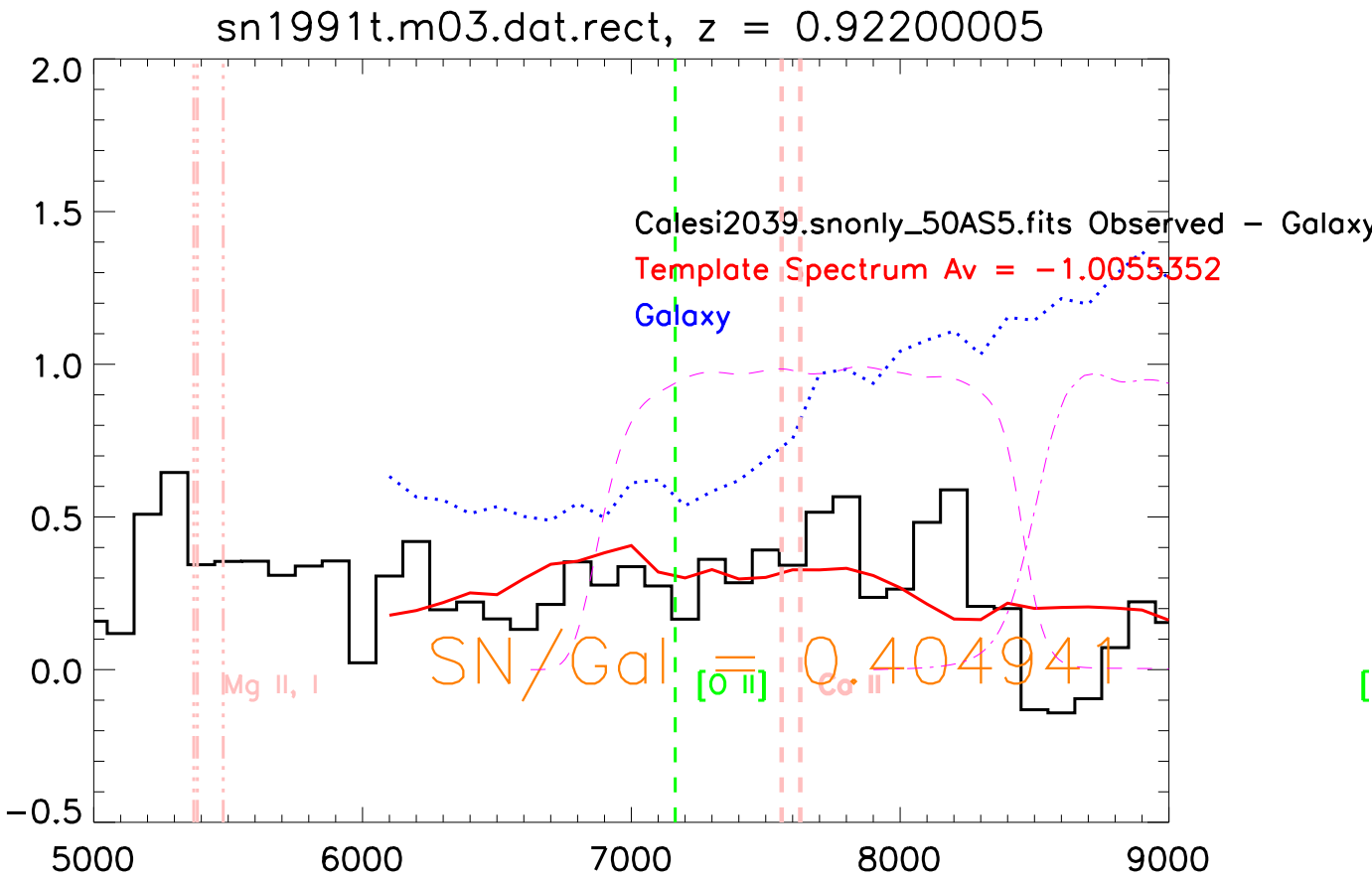

sn1996x.m00.dat.rect, z = 0.92200005
Calesi2039.shonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −2.5538687
Galaxy
SN/Gal = 0.473686
Mg II, I
[O II]
Ca II
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

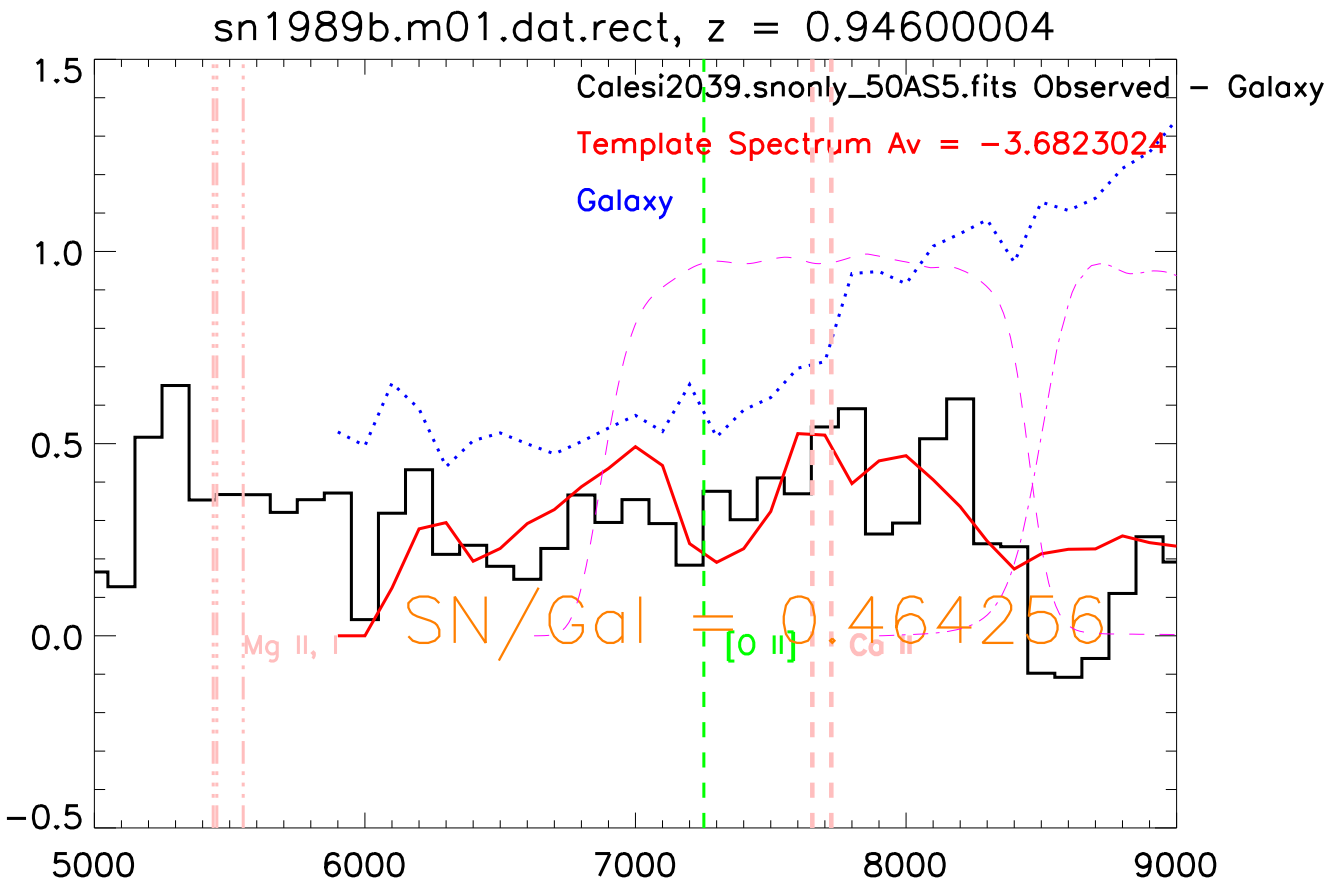

sn1996x.p01.dat.rect, z = 0.92200005
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −1.7274121
Galaxy
SN/Gal = 0.521784
Mg II, I
[O II]
Ca II
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

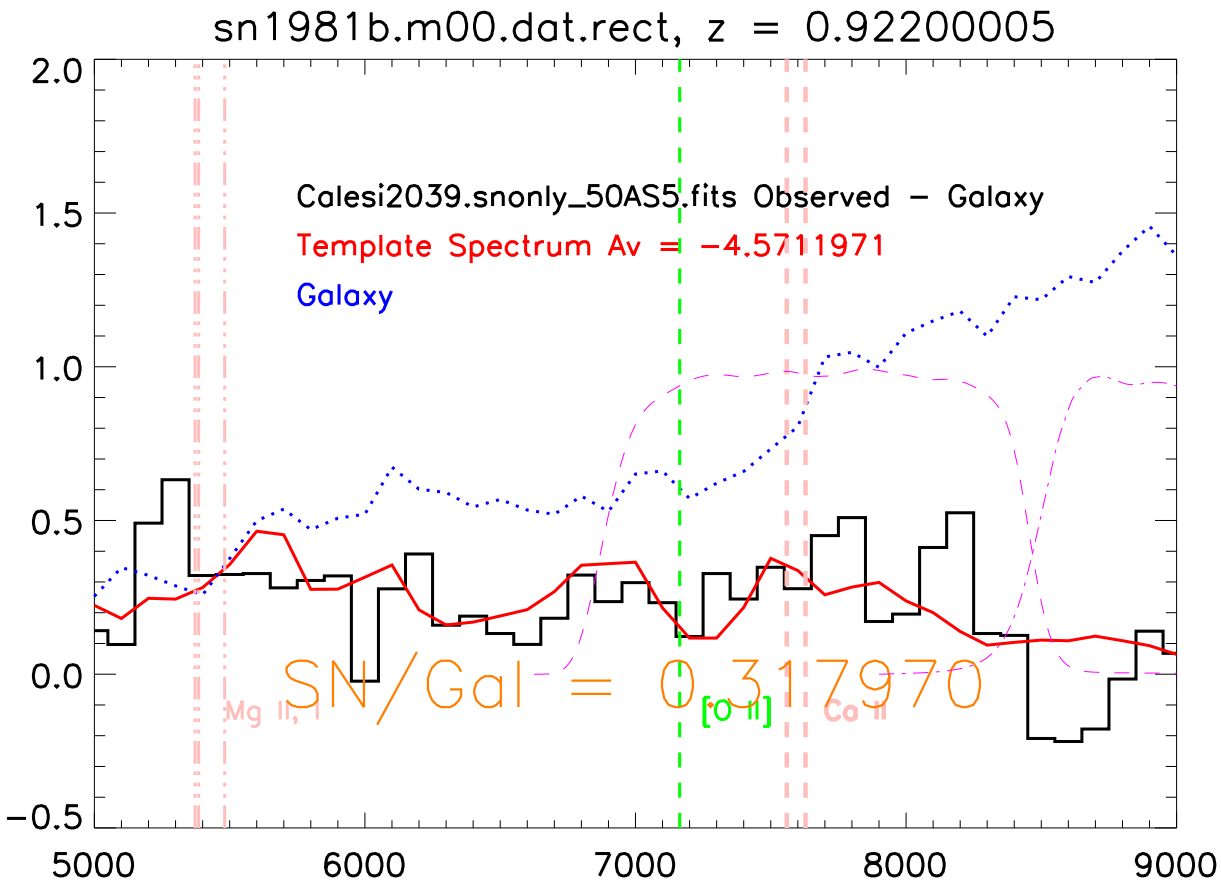

sn1991t.p10.dat.rect, z = 0.92200005
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −2.8216601
Galaxy
SN/Gal = 0.491095
Mg II, I
[O II]
Ca II
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

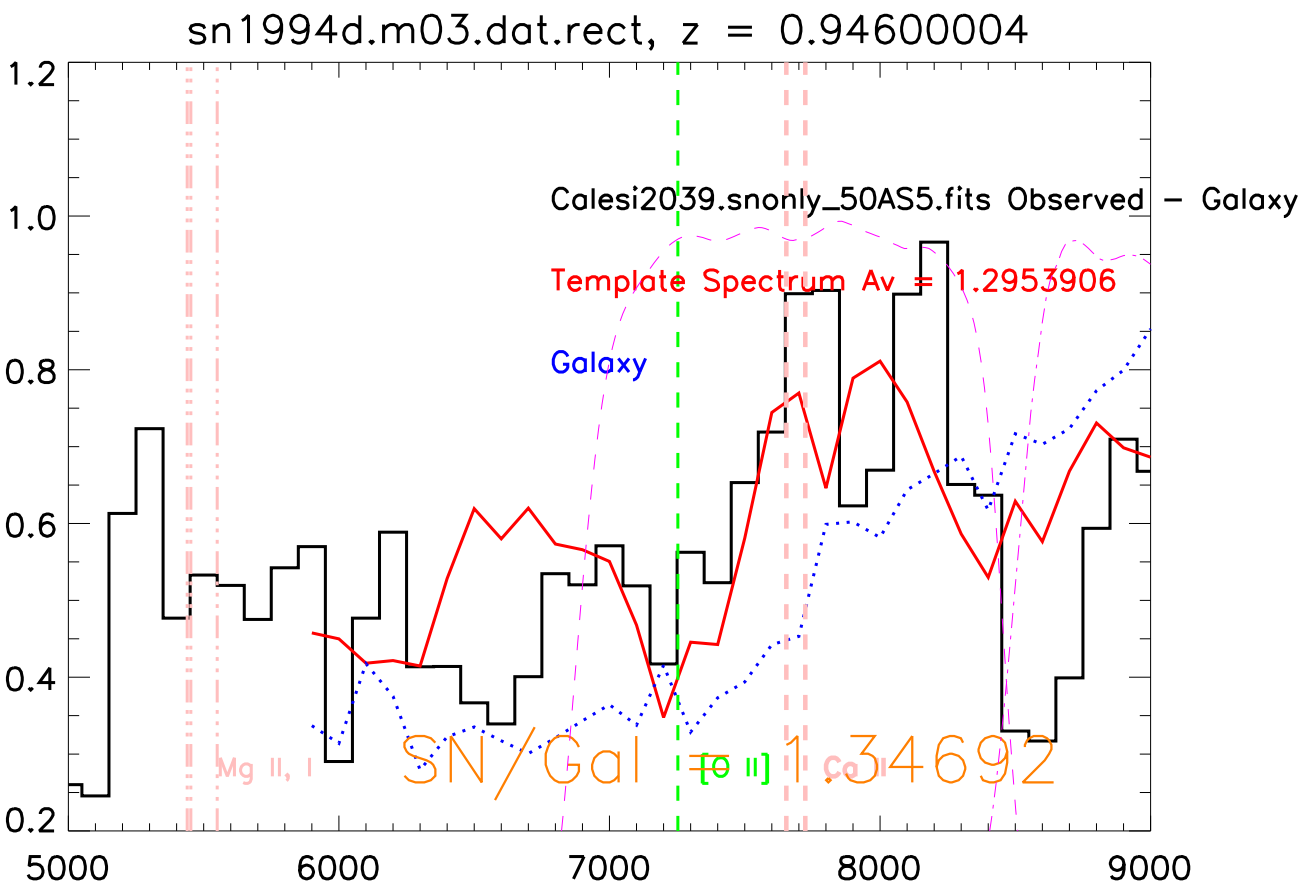

sn1992a.p17.dat.rect, z = 0.91600001
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −5.6935377
Galaxy
SN/Gal = 0.428960
Mg II,
[O II]
Ca II
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

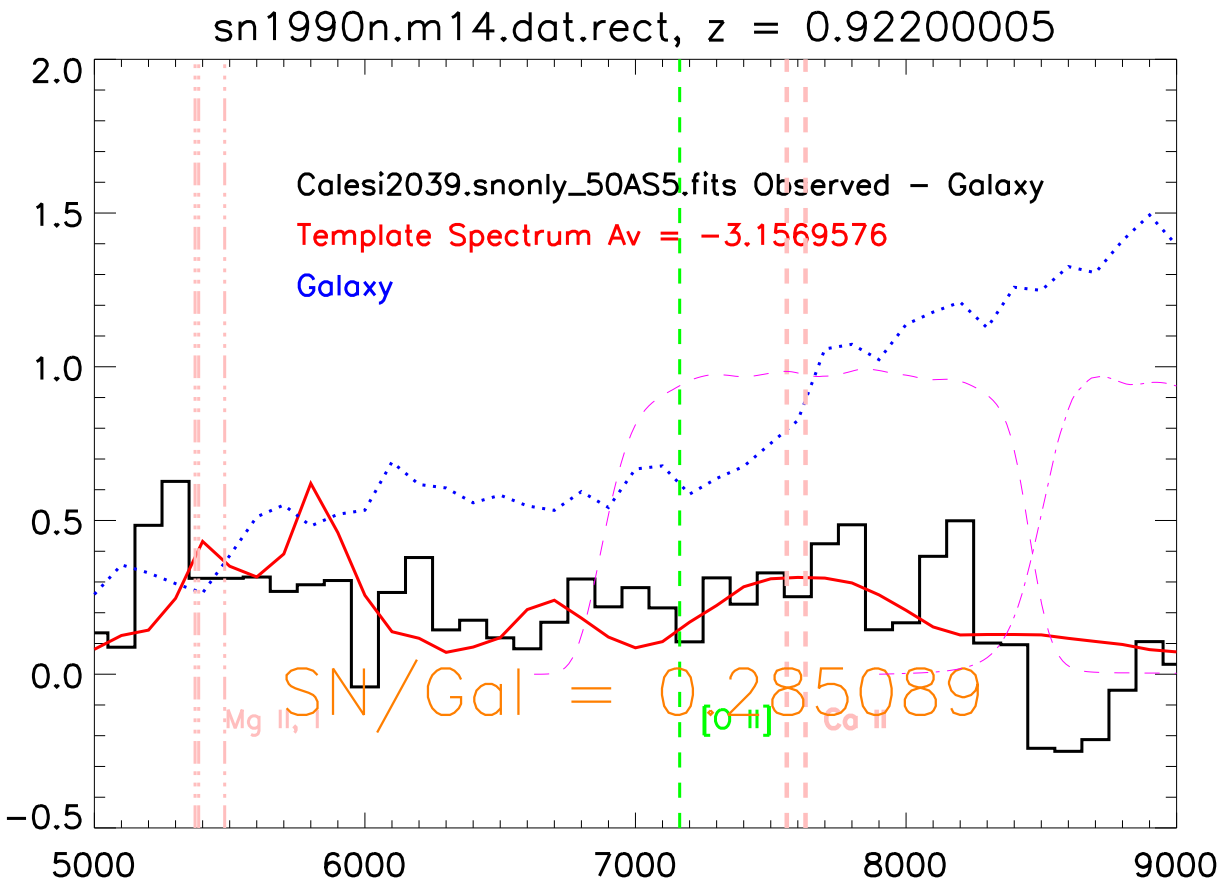

sn1992a.p05.dat.rect, z = 0.94600004
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −4.0386979
Galaxy
SN/Gal = 0.510873
Mg II, I
[O II]
Ca II
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

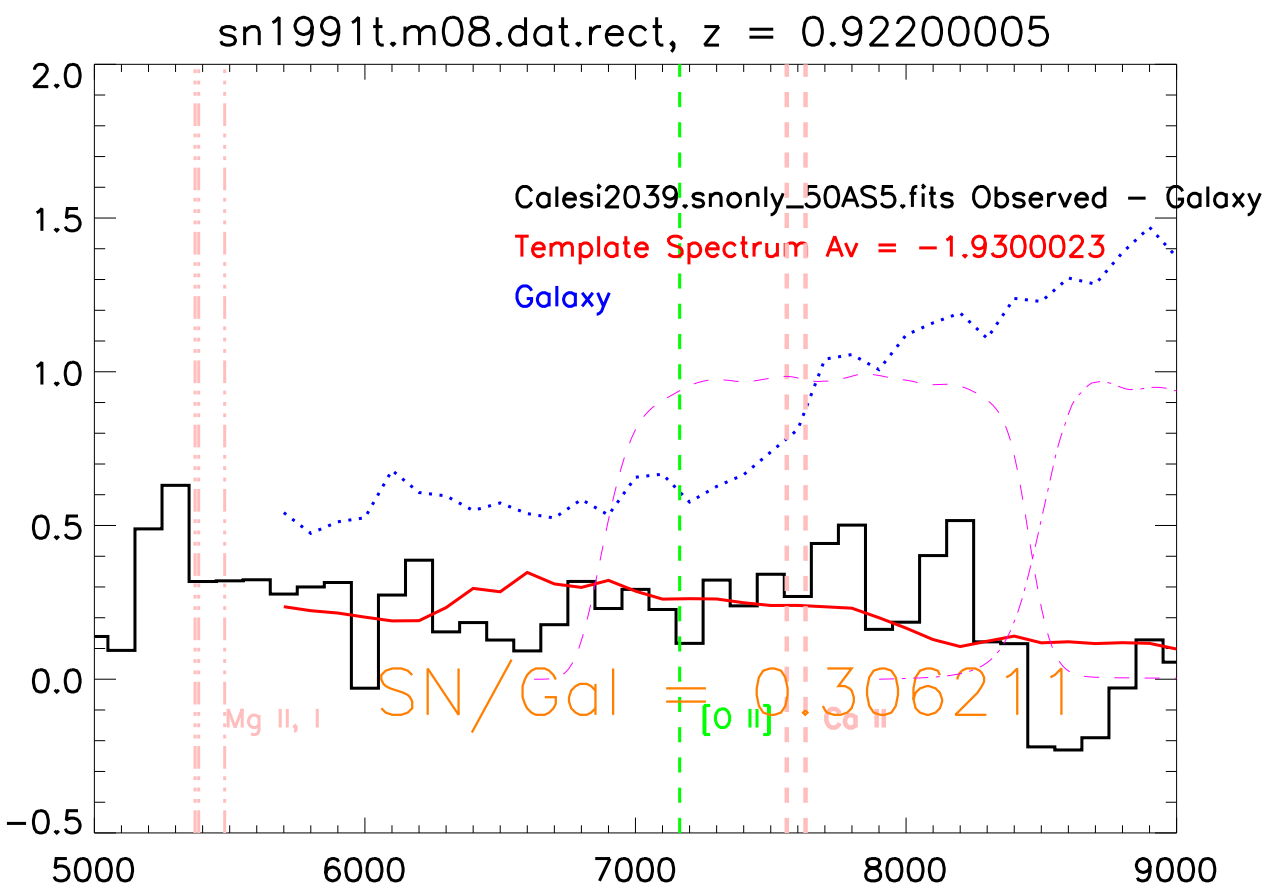

sn1991t.m03.dat.rect, z = 0.92200005
Calesi2039.snonly_50AS5.fits Observed – Galaxy
Template Spectrum Av = −1.0055352
Galaxy
SN/Gal = 0.404941
Mg II, I
[O II]
Ca II
2.0
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

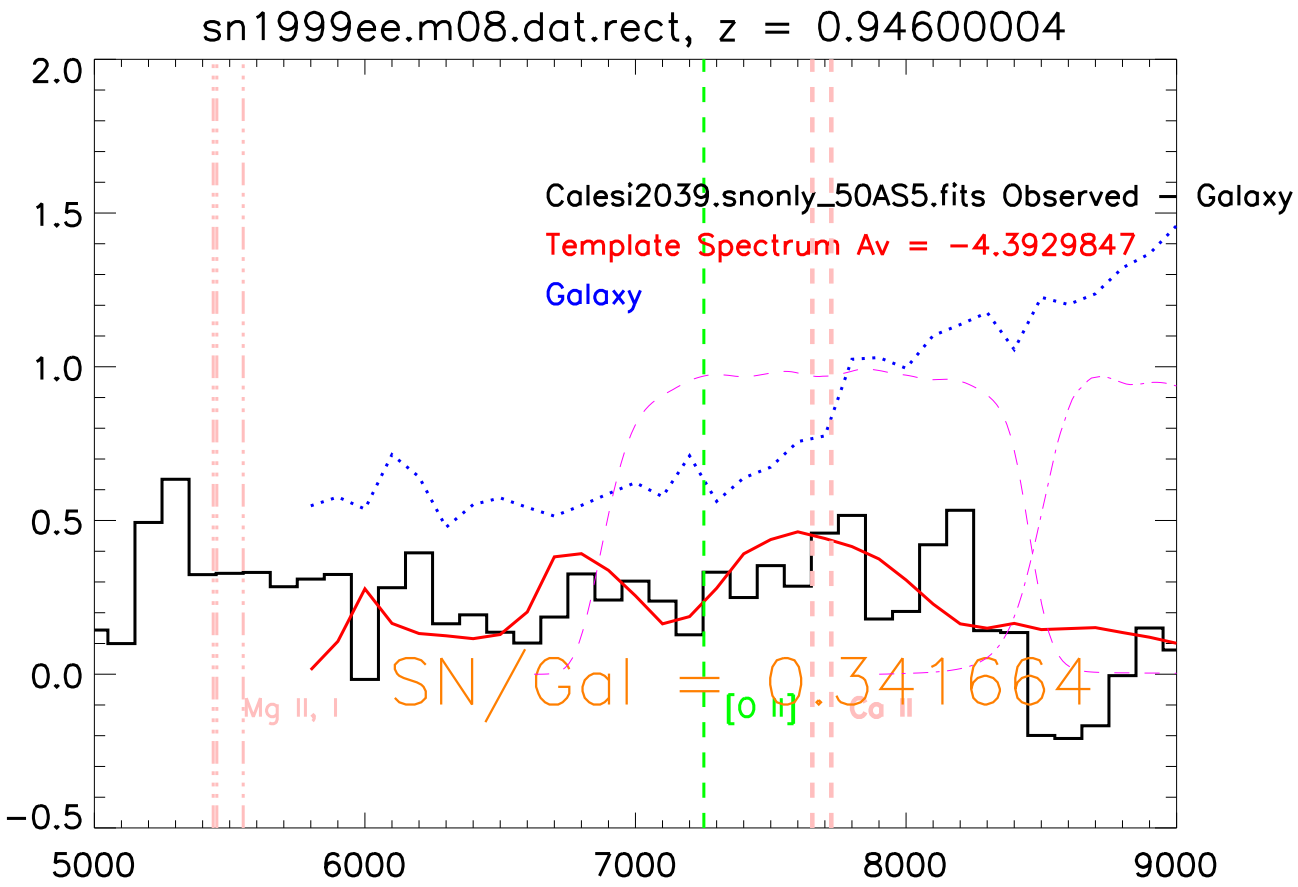

sn1989b.m01.dat.rect, z = 0.94600004
Calesi2039.snonly_50AS5.fits Observed – Galaxy
Template Spectrum Av = −3.6823024
Galaxy
SN/Gal = 0.464256
Mg II, I
[O II]
Ca II
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

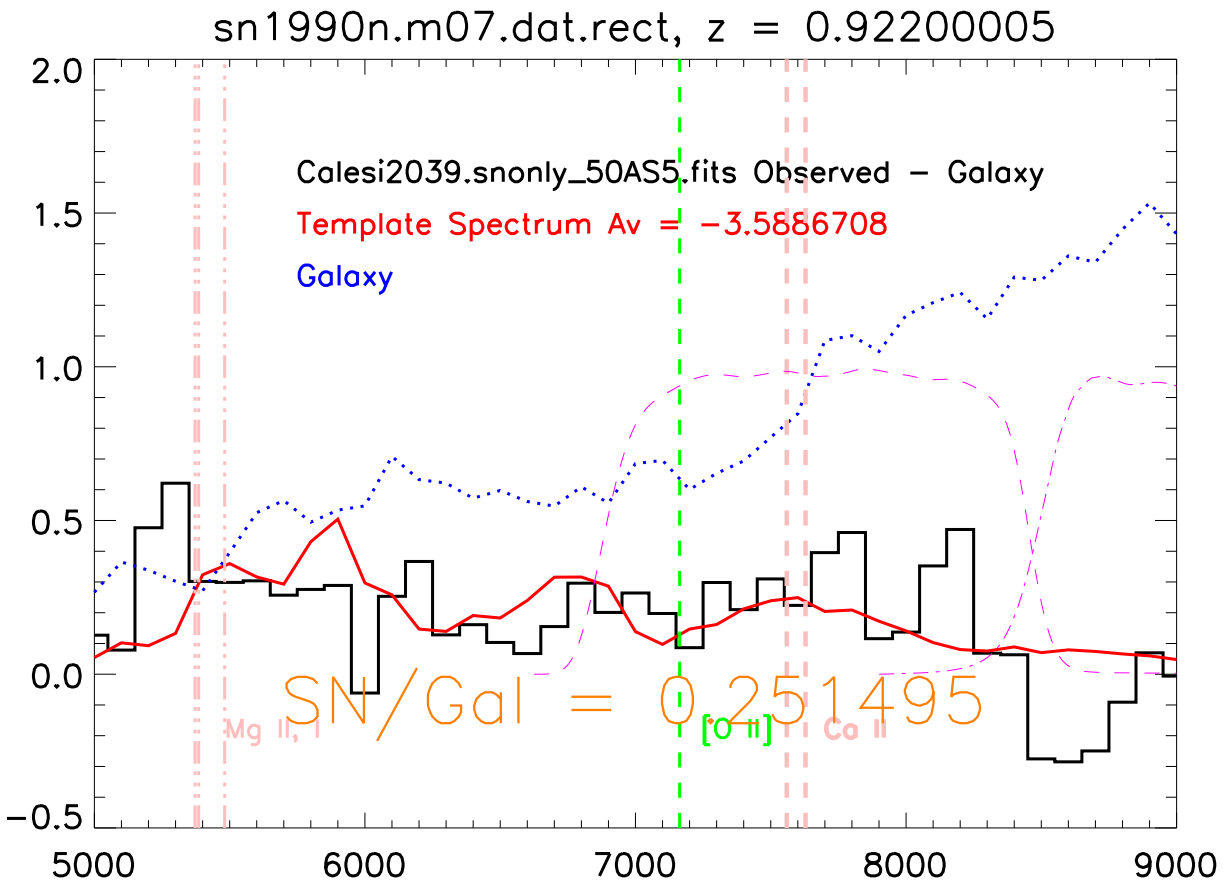

sn1981b.m00.dat.rect, z = 0.92200005
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −4.5711971
Galaxy
SN/Gal = 0.317970
Mg II, I
[O II]
Ca II
2.0
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

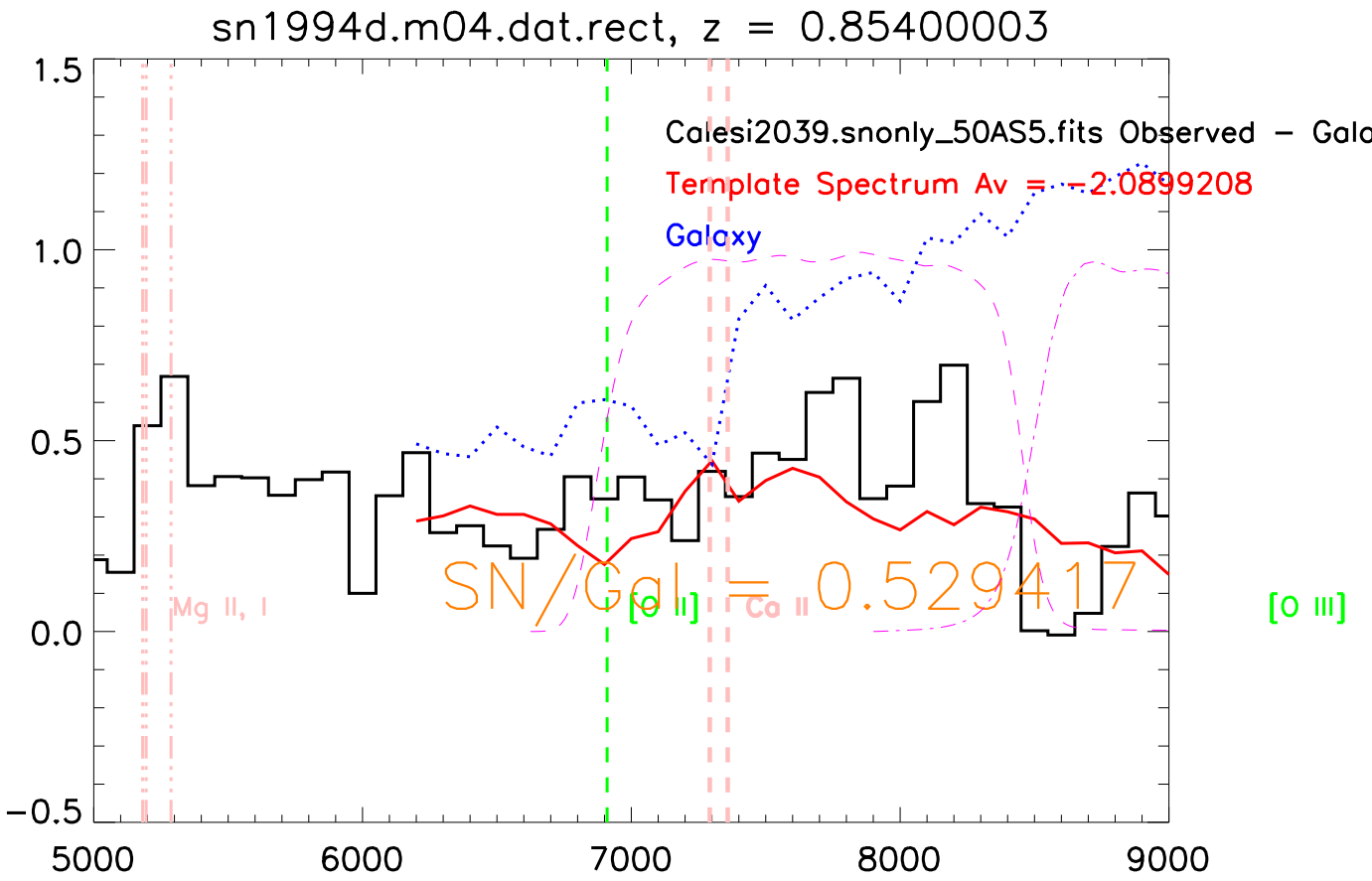

sn1994d.m03.dat.rect, z = 0.94600004
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = 1.2953906
Galaxy
SN/Gal = 1.34692
Mg II, I
[O II]
Ca II
1.2
1.0
0.8
0.6
0.4
0.2
5000
6000
7000
8000
9000

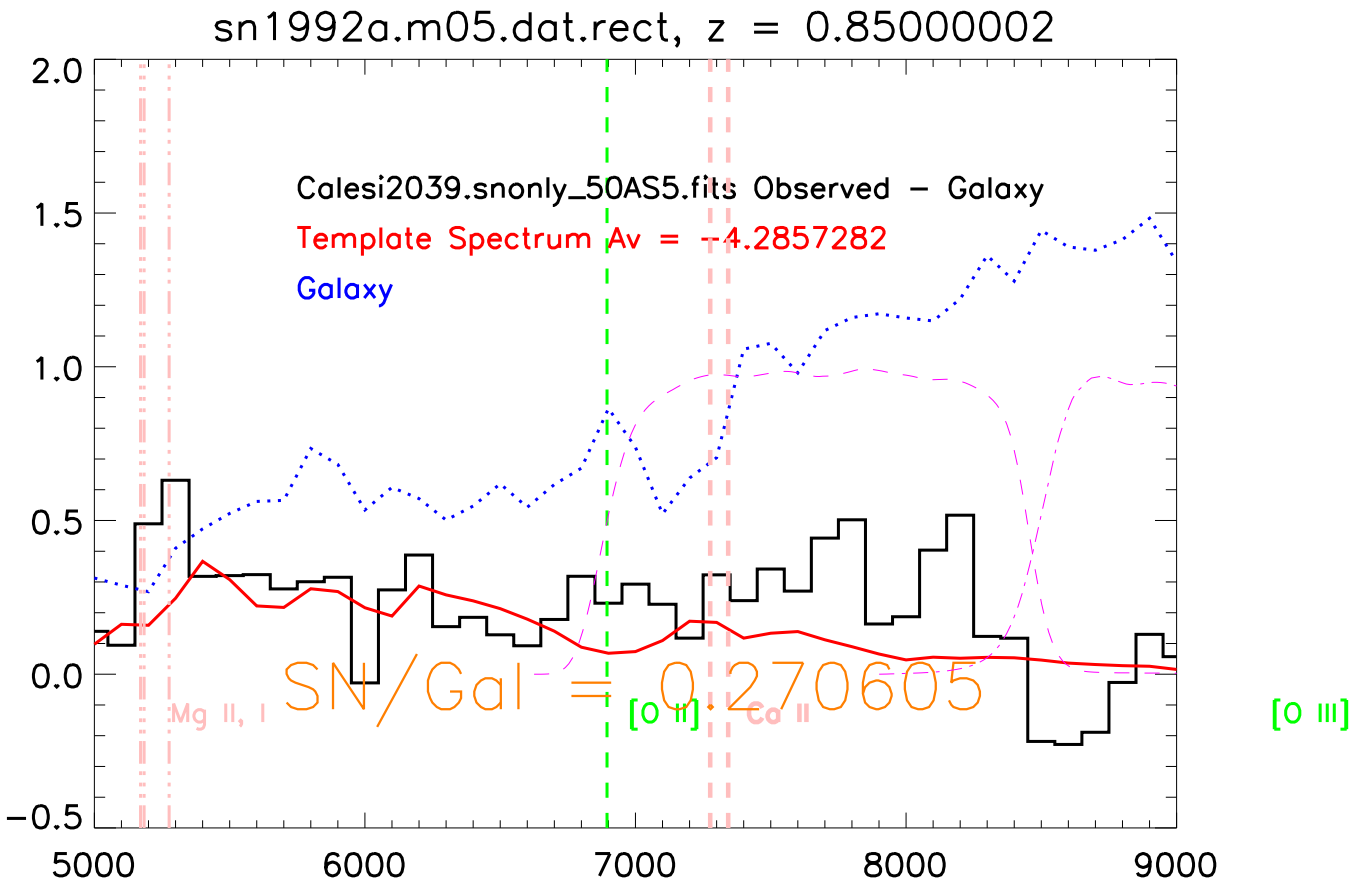

sn1990n.m14.dat.rect, z = 0.92200005
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −3.1569576
Galaxy
SN/Gal = 0.285089
Mg II, 1
[O II]
Ca II
2.0
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

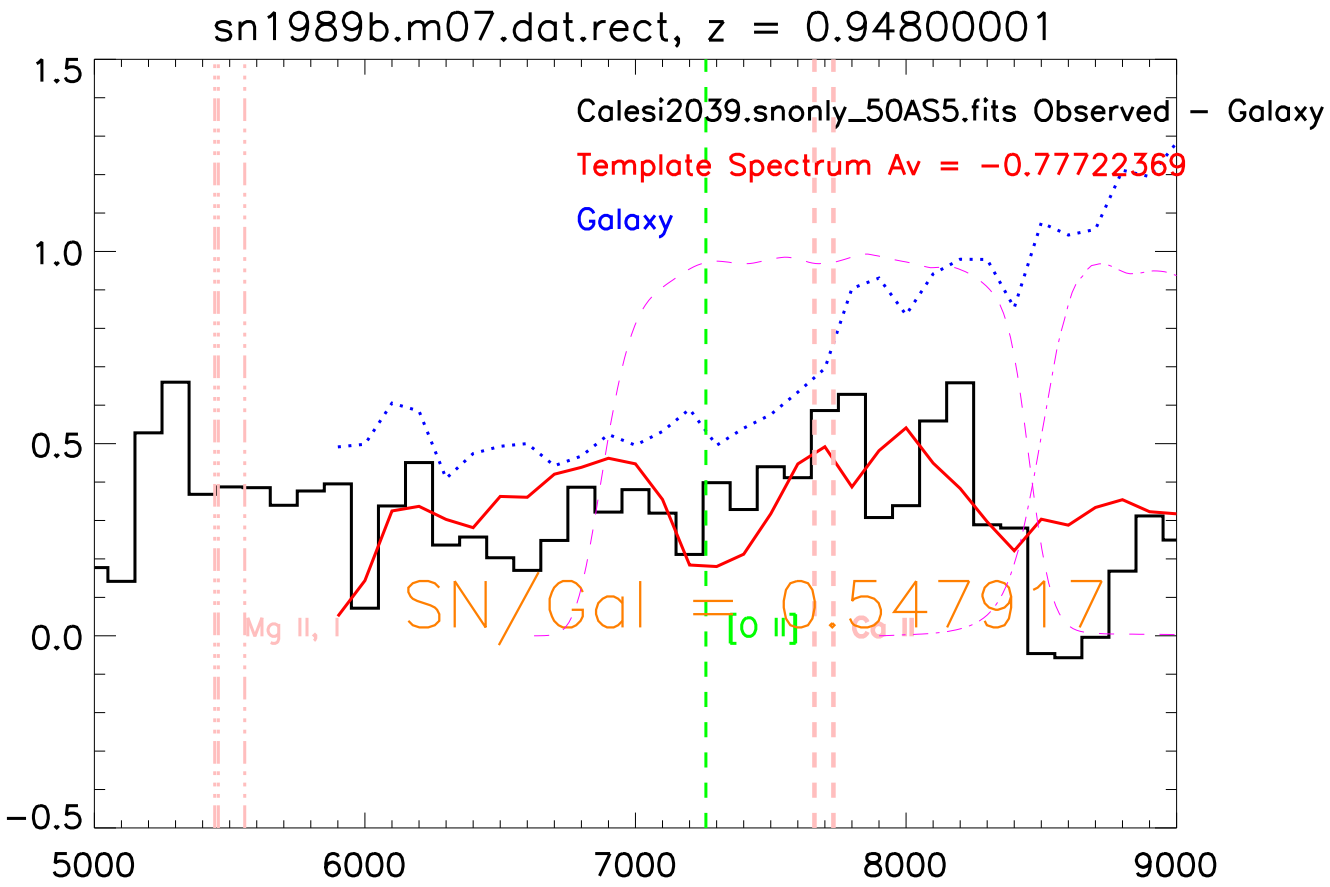

sn1991t.m08.dat.rect, z = 0.92200005
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −1.9300023
Galaxy
SN/Gal = 0.306211
Mg II, I
[O II]
Ca II
2.0
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000

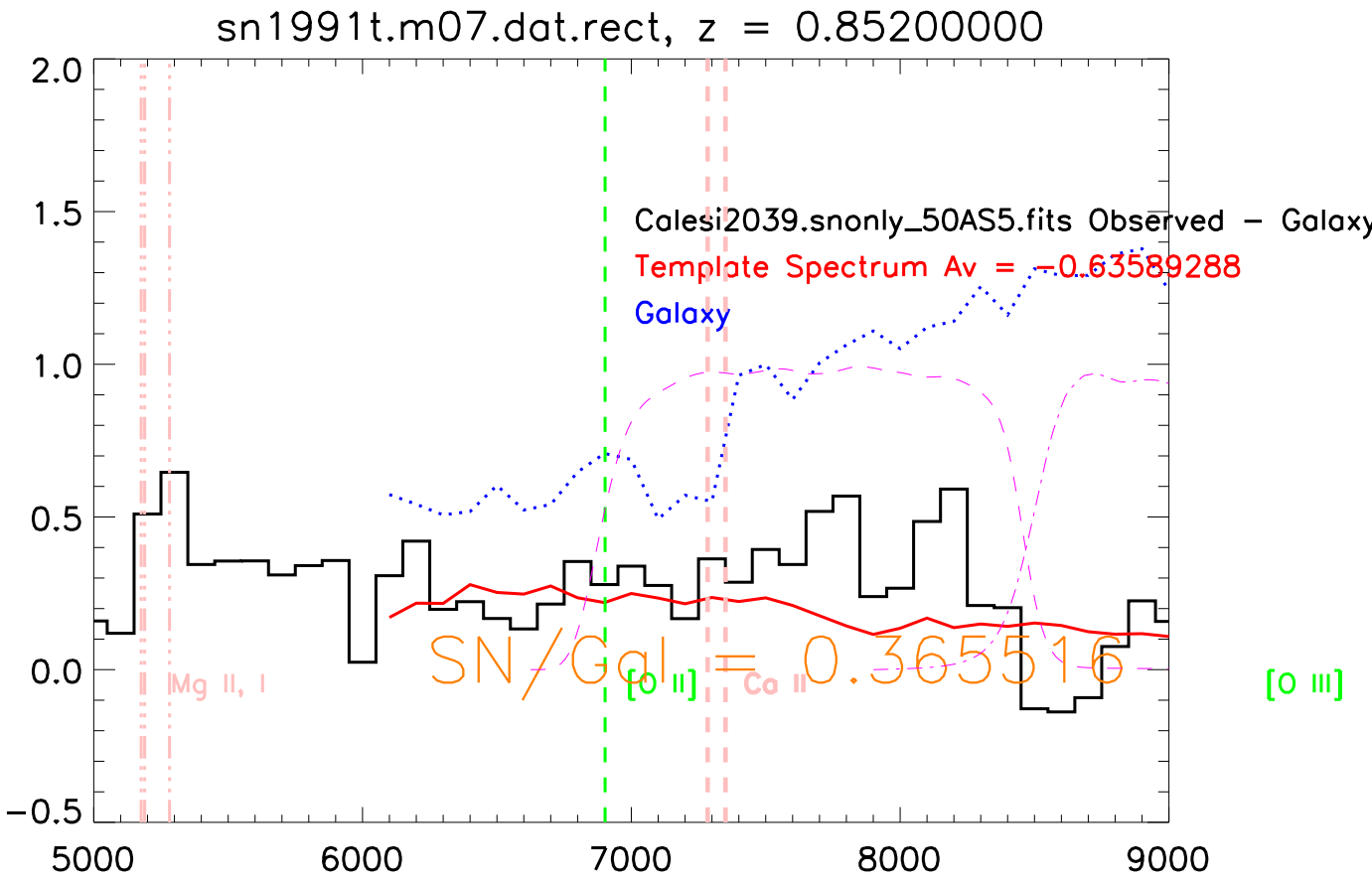

sn1999ee.m08.dat.rect, z = 0.94600004
Calesi2039.snonly_50AS5.fits Observed – Galaxy
Template Spectrum Av = -4.3929847
Galaxy
SN/Gal = 0.341664
Mg II, I
[O II]
Ca II
2.0
1.5
1.0
0.5
0.0
-0.5
5000
6000
7000
8000
9000

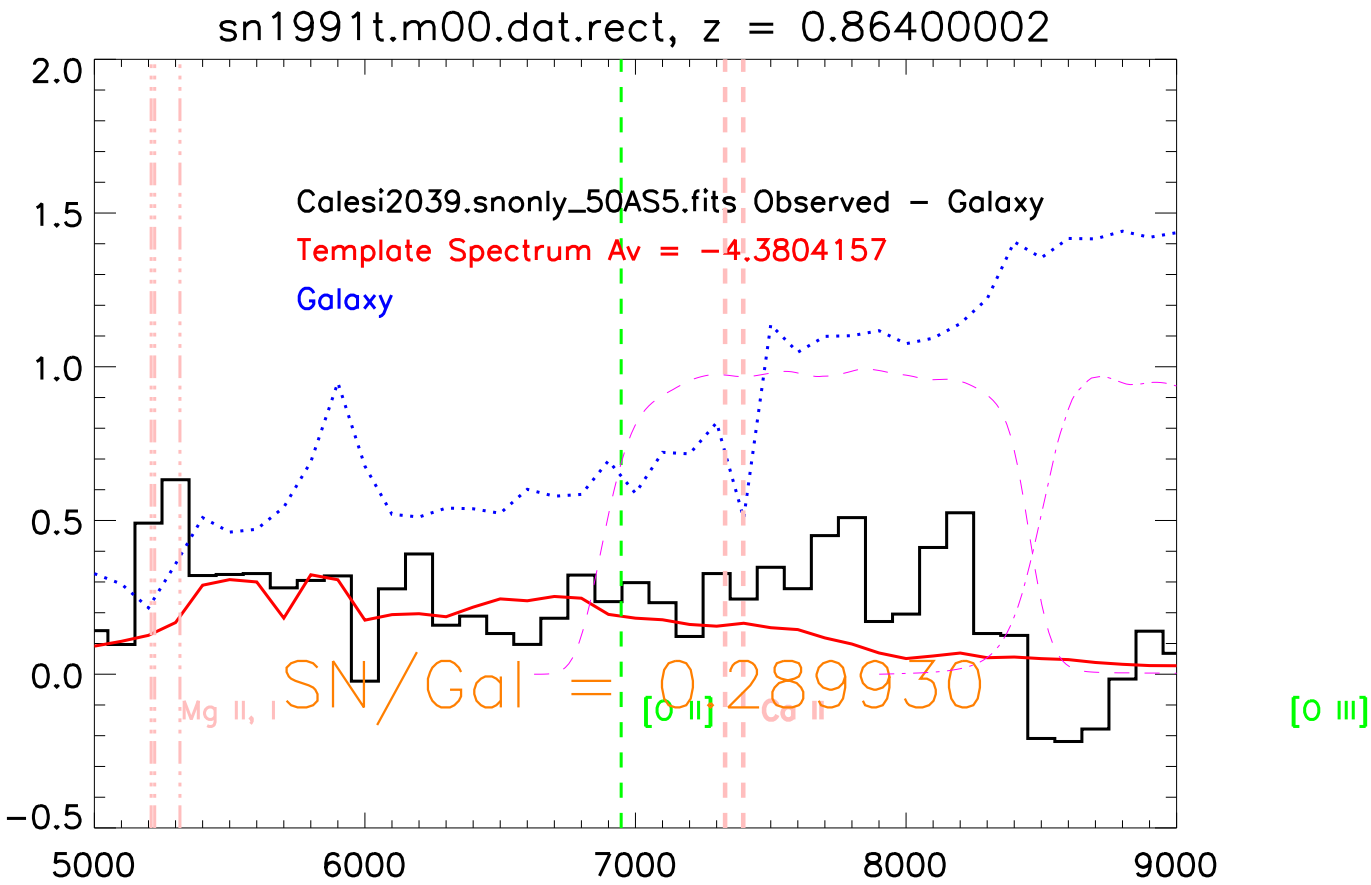

sn1990n.m07.dat.rect, z = 0.92200005
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −3.5886708
Galaxy
SN/Gal = 0.251495
Mg II, I
[O II]
Ca II
2.0
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000


sn1994d.m04.dat.rect, z = 0.85400003
Calesi2039.snonly_50AS5.fits Observed – Gala
Template Spectrum Av = −2.0899208
Galaxy
SN/Gal = 0.529417
Mg II, I
[O II]
Ca II
[O III]
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000


sn1992a.m05.dat.rect, z = 0.85000002
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = -4.2857282
Galaxy
SN/Gal = 0.270605
Mg II, I
[O II]
Co II
[O III]
2.0
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000


sn1989b.m07.dat.rect, z = 0.94800001
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −0.77722369
Galaxy
SN/Gal = 0.547917
Mg II, I
[O II]
Ca II
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000


sn1991t.m07.dat.rect, z = 0.85200000
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −0.63589288
Galaxy
SN/Gal = 0.365516
Mg II, I
[O II]
Ca II
[O III]
2.0
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000


sn1991t.m00.dat.rect, z = 0.86400002
Calesi2039.snonly_50AS5.fits Observed − Galaxy
Template Spectrum Av = −4.3804157
Galaxy
SN/Gal = 0.289930
Mg II, I
[O II]
Ca II
[O III]
2.0
1.5
1.0
0.5
0.0
−0.5
5000
6000
7000
8000
9000