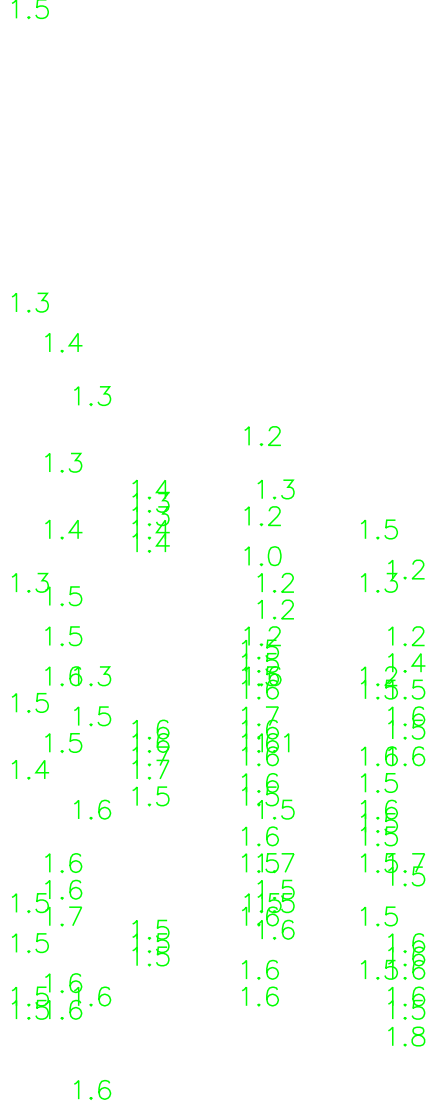
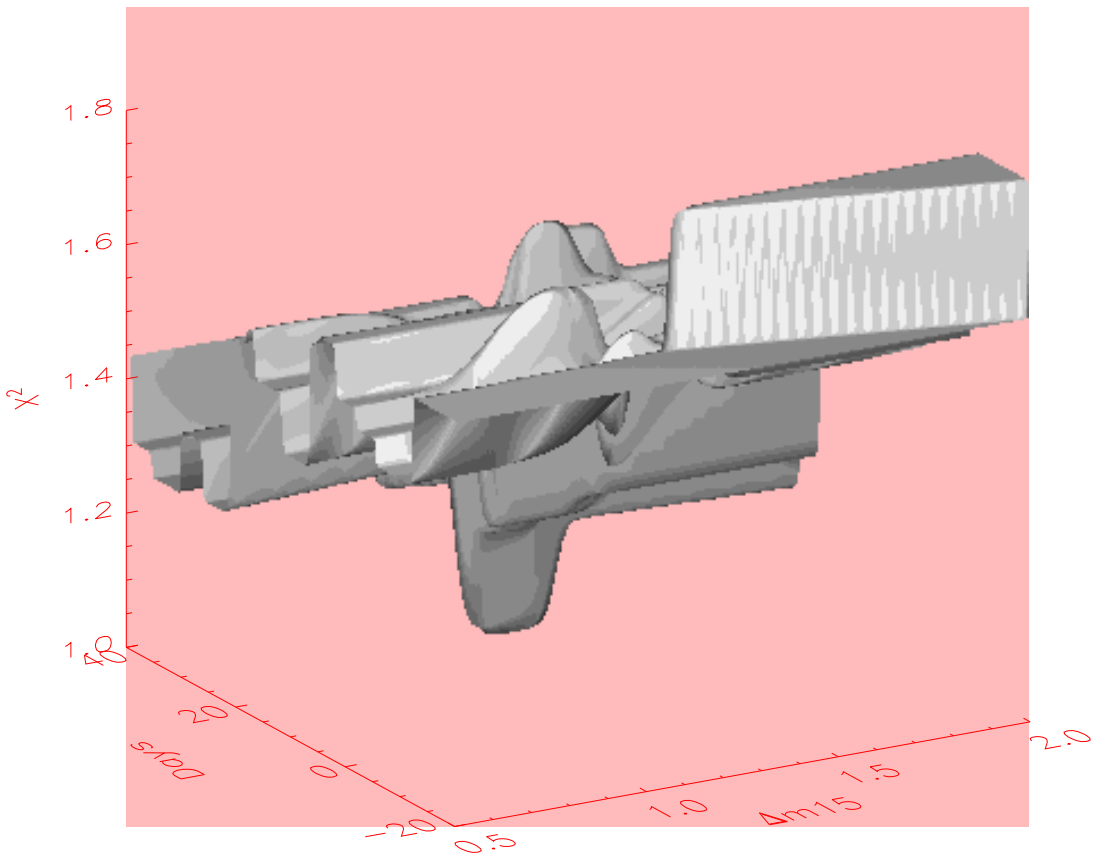
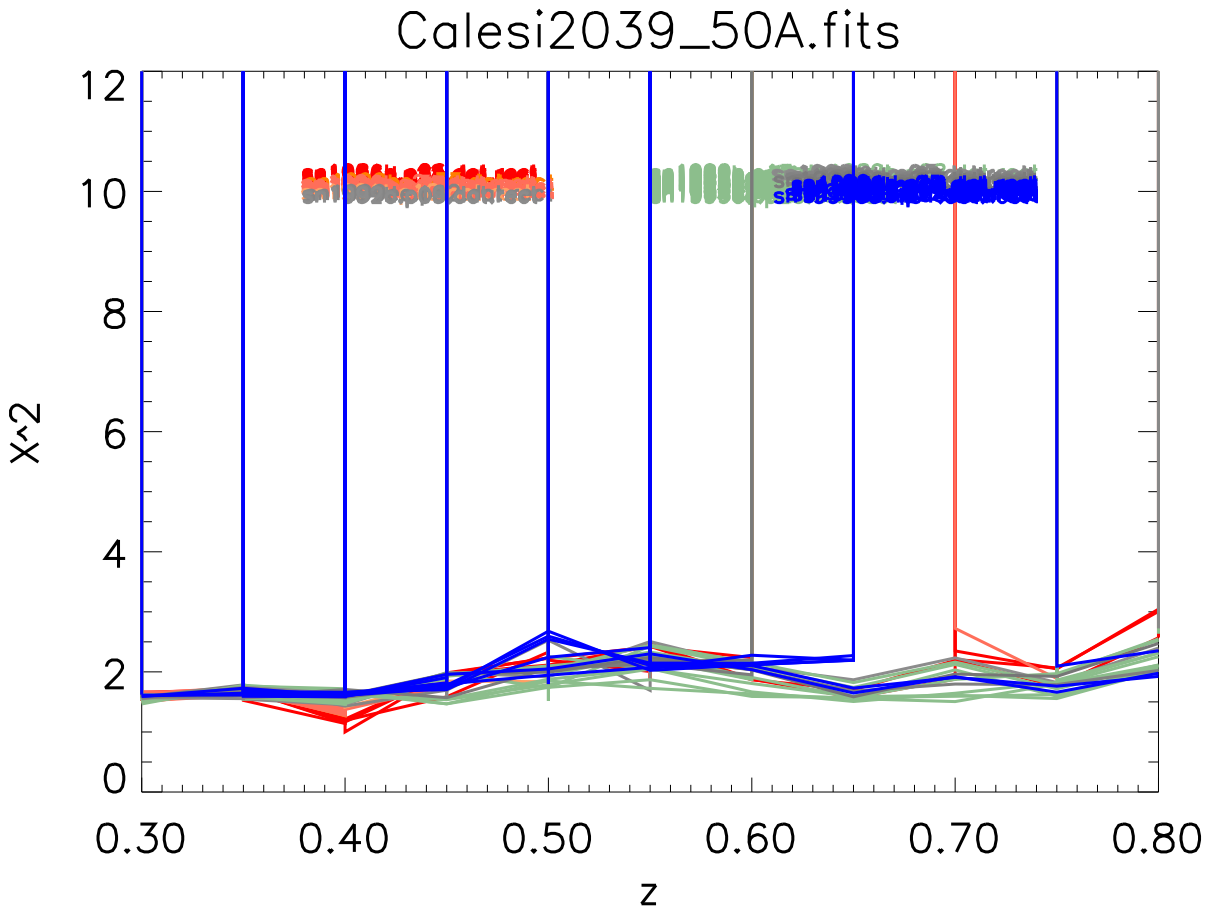
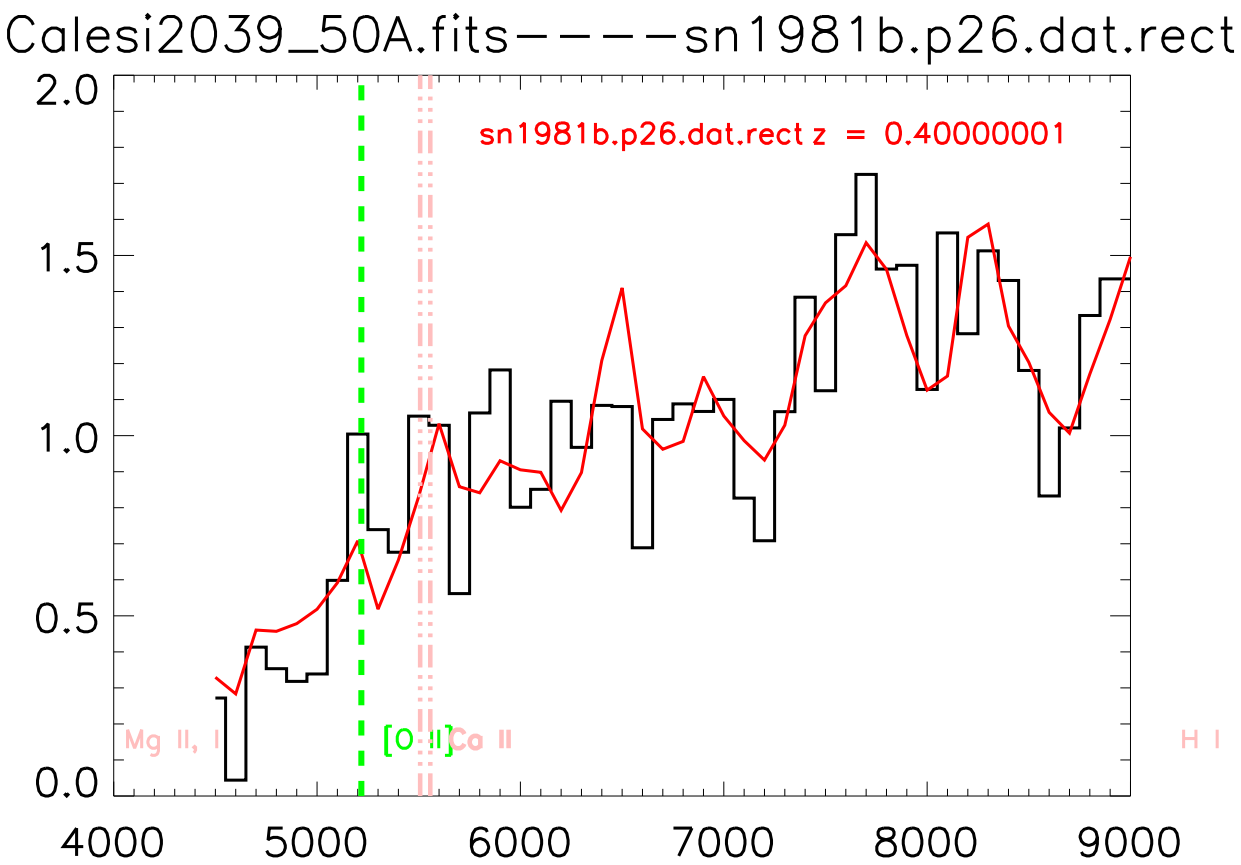
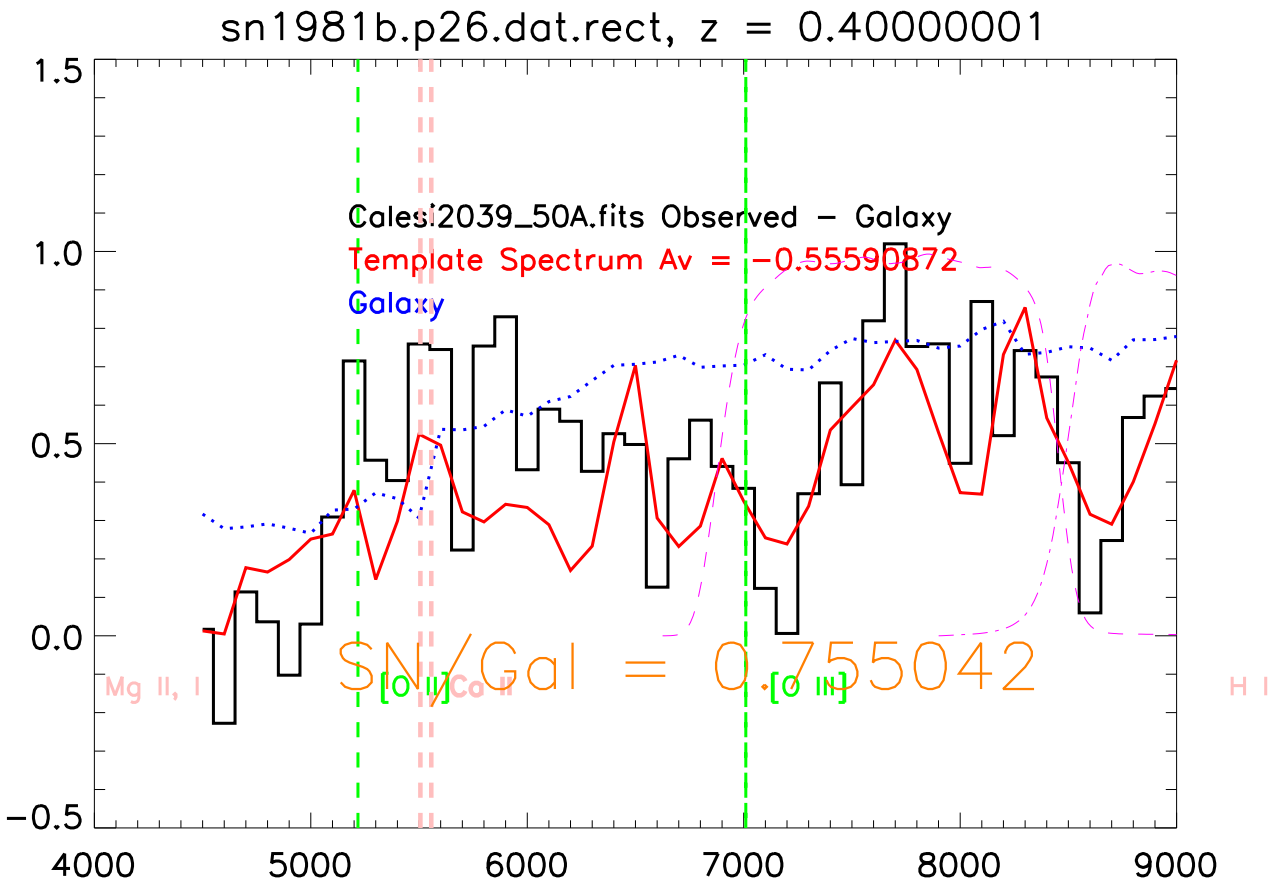


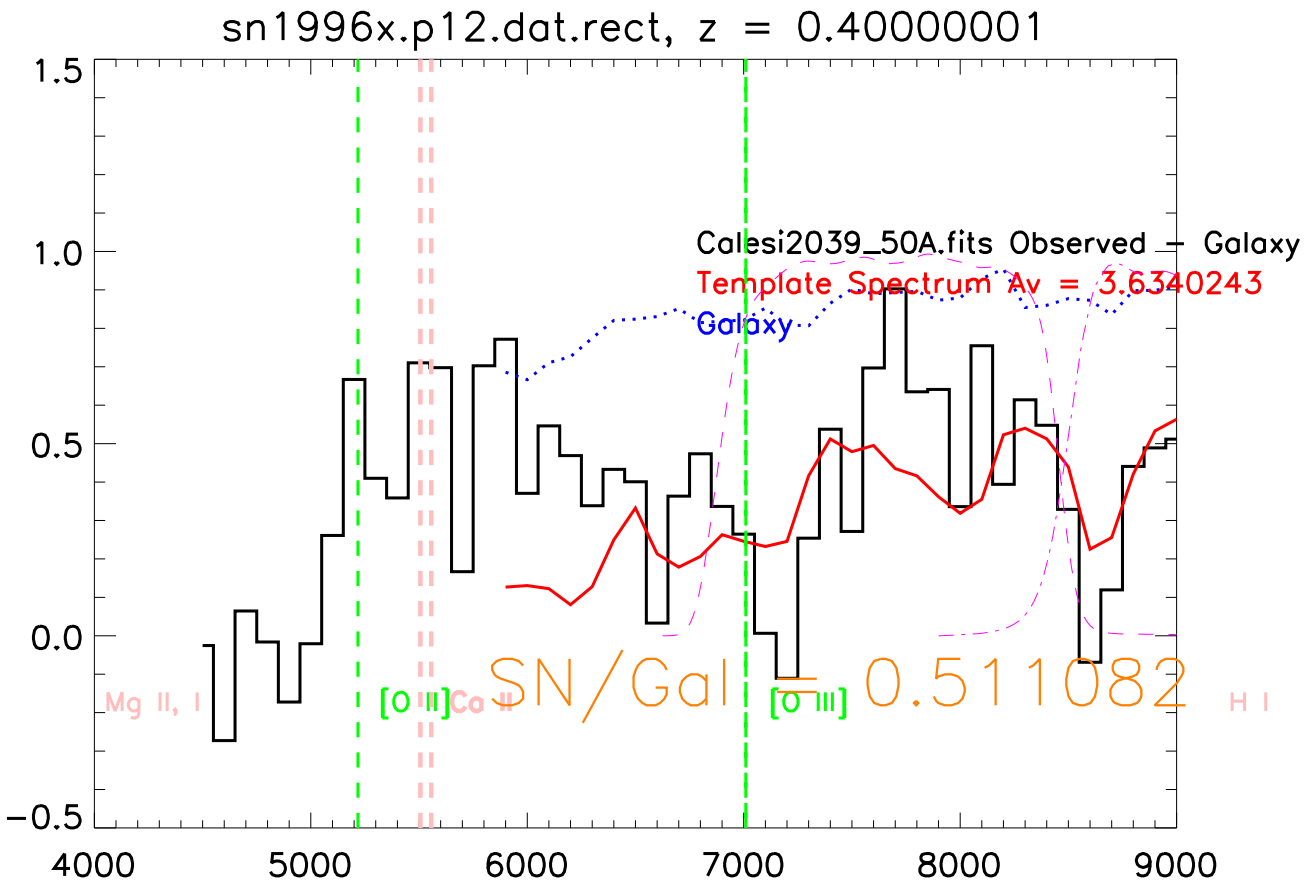


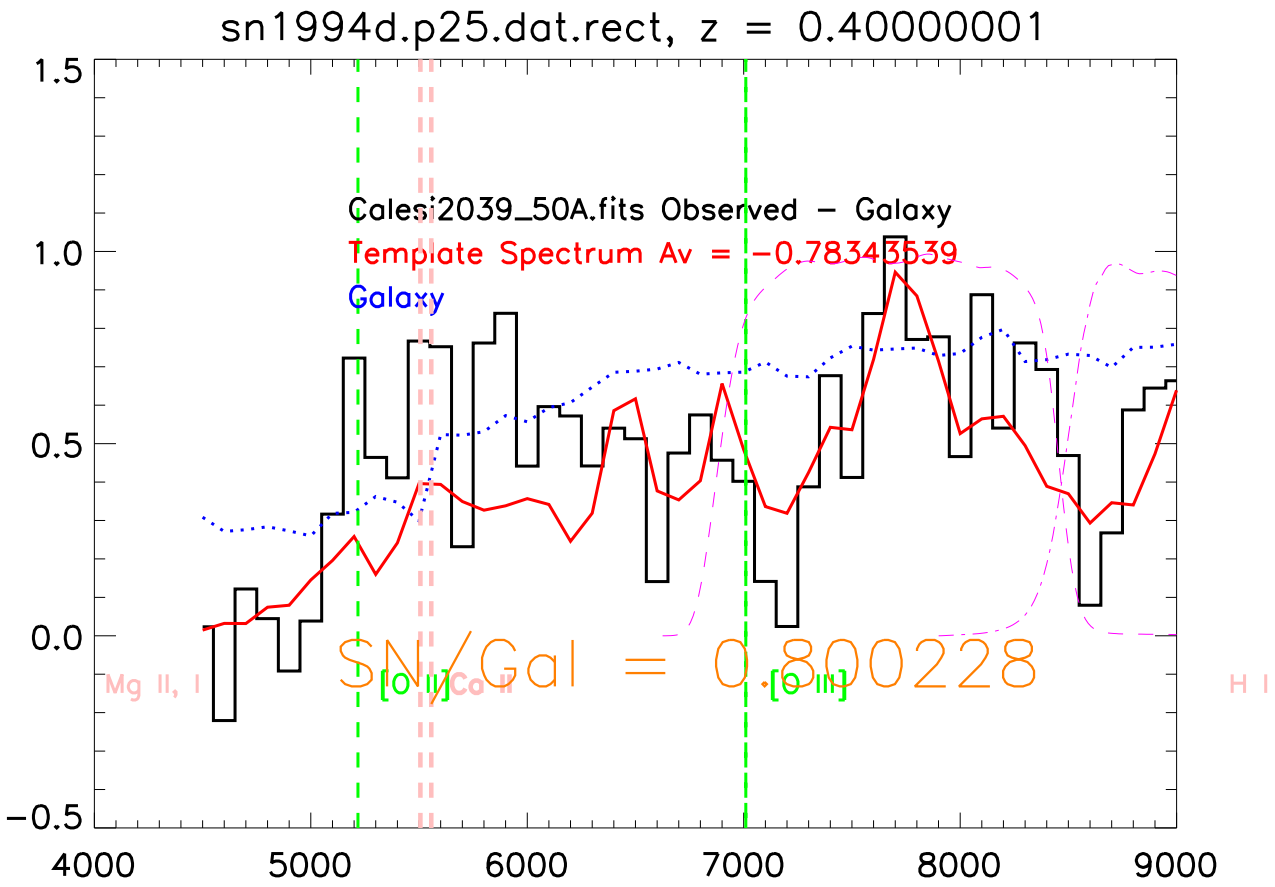
1.8
1.6
1.4
1.2
1.0
χ^2
40
20
0
−20
Days
0.5
1.0
1.5
2.0
Δm15

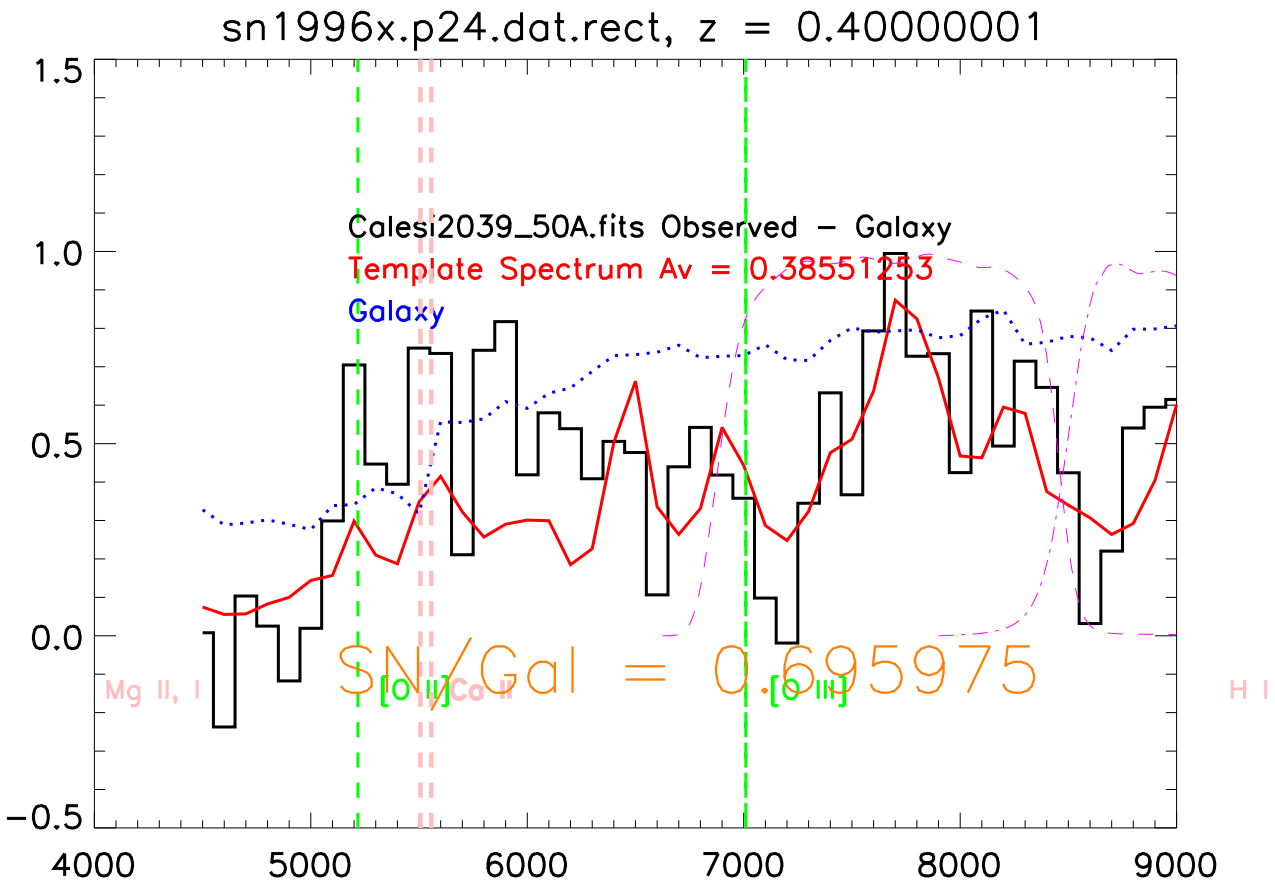

Calesi2039_50A.fits
12
10
8
6
4
2
0
X^2
0.30
0.40
0.50
0.60
0.70
0.80
z

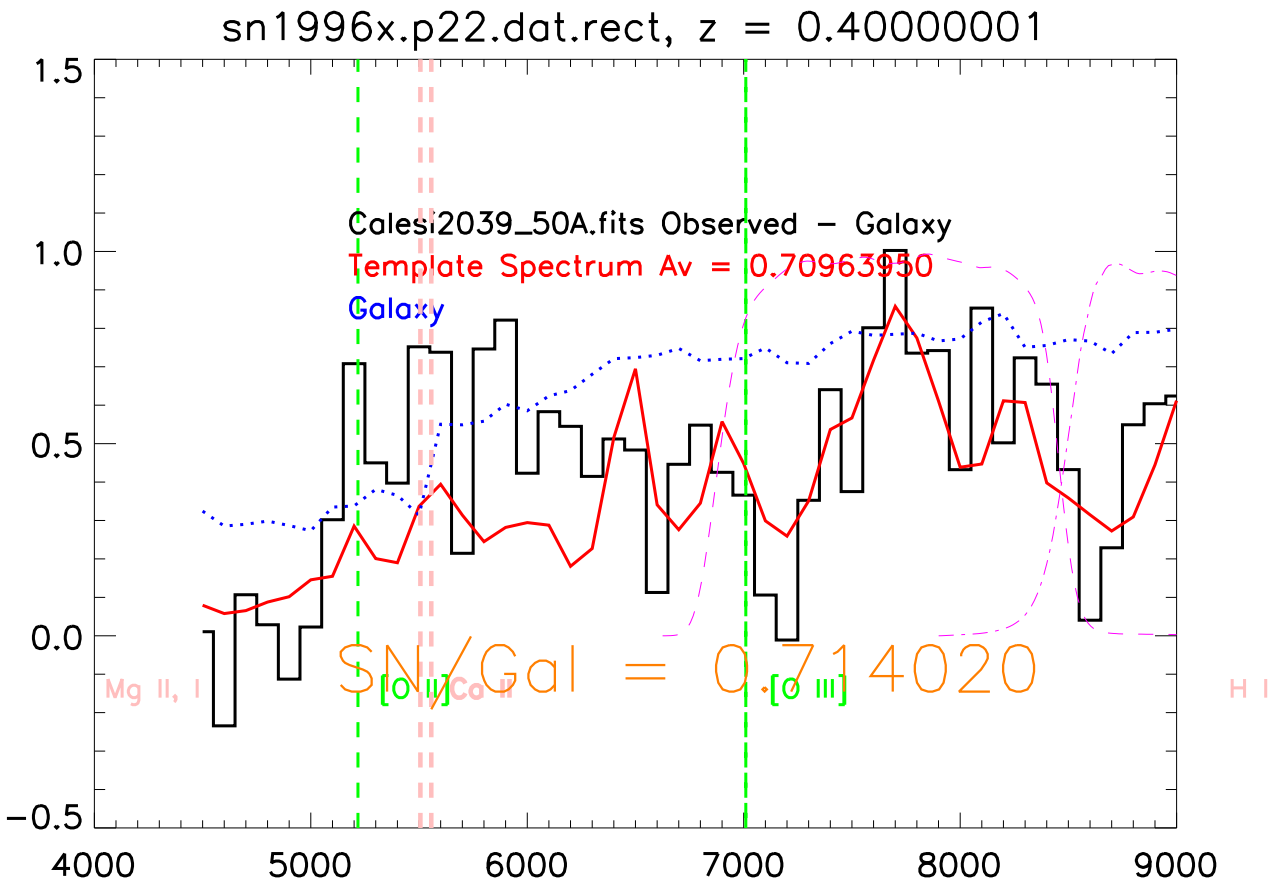

Calesi2039_50A.fits----sn1981b.p26.dat.rect
sn1981b.p26.dat.rect z = 0.40000001
Mg II, I
[O II]
Ca II
H I
2.0
1.5
1.0
0.5
0.0
4000
5000
6000
7000
8000
9000

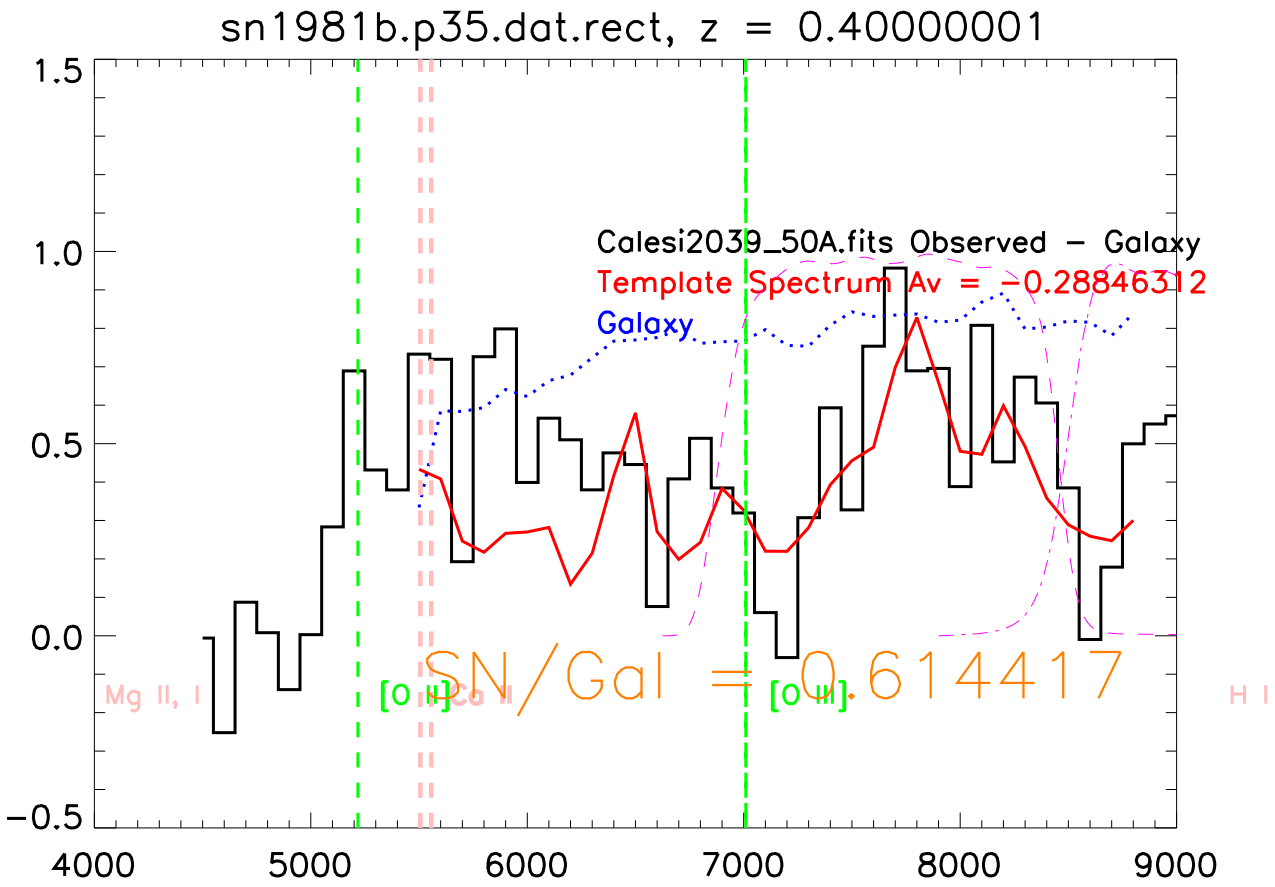

sn1981b.p26.dat.rect, z = 0.40000001
Cales!2039_50A.fits Observed − Galaxy
Template Spectrum Av = −0.55590872
Galaxy
S/N/Gal = 0.755042
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

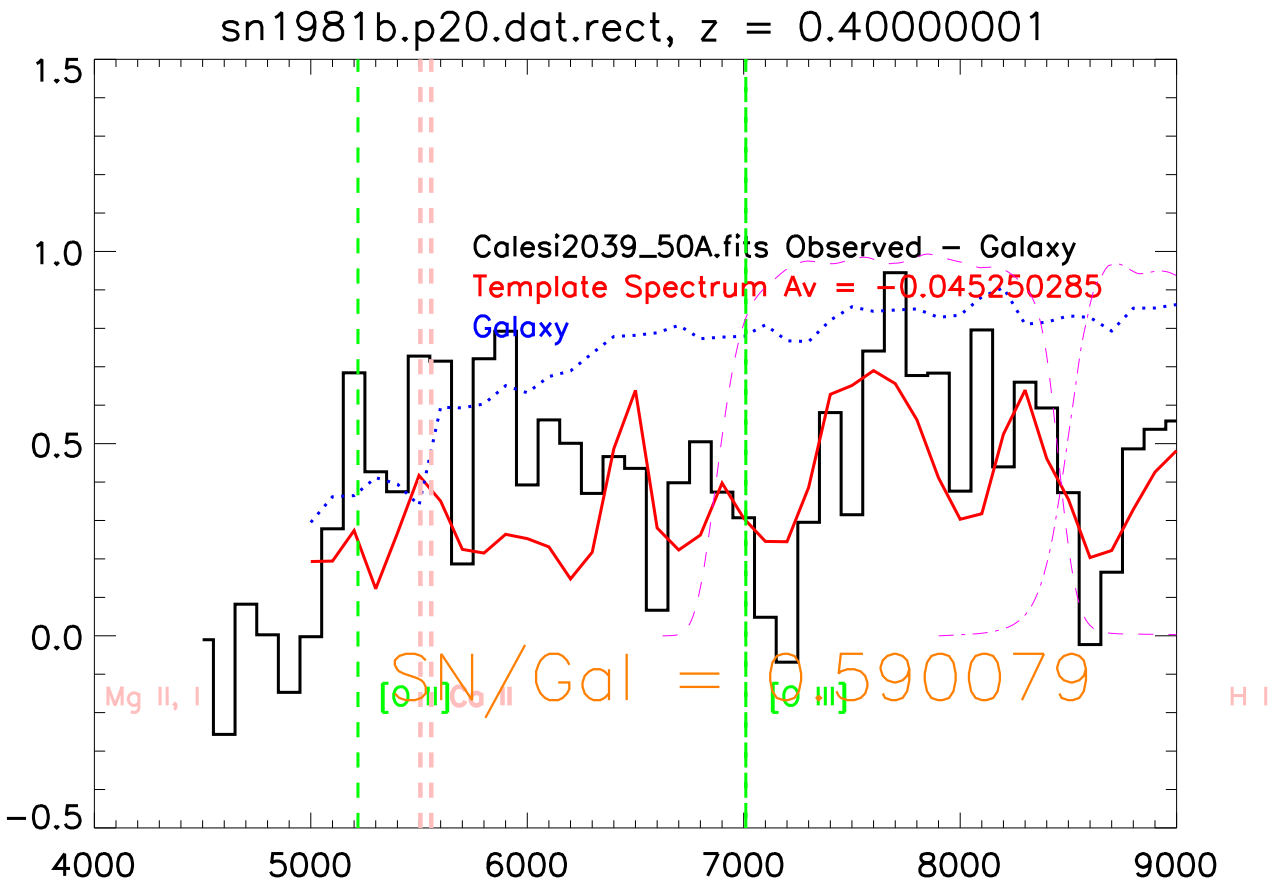

sn1996x.p12.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed – Galaxy
Template Spectrum Av = 3.6340243
Galaxy
SN/Gal = 0.511082
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

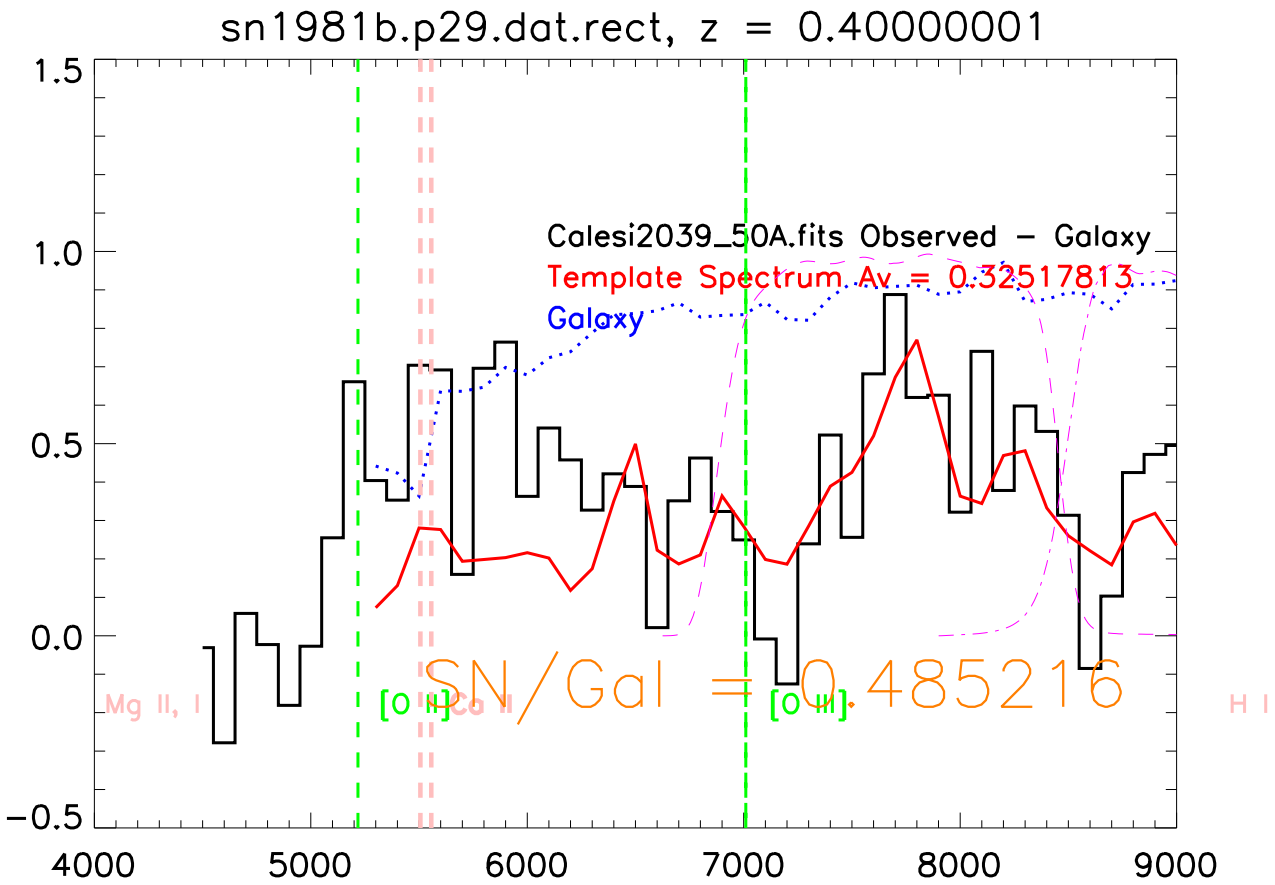

sn1994d.p25.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −0.78343539
Galaxy
S/N/Gal = 0.800228
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

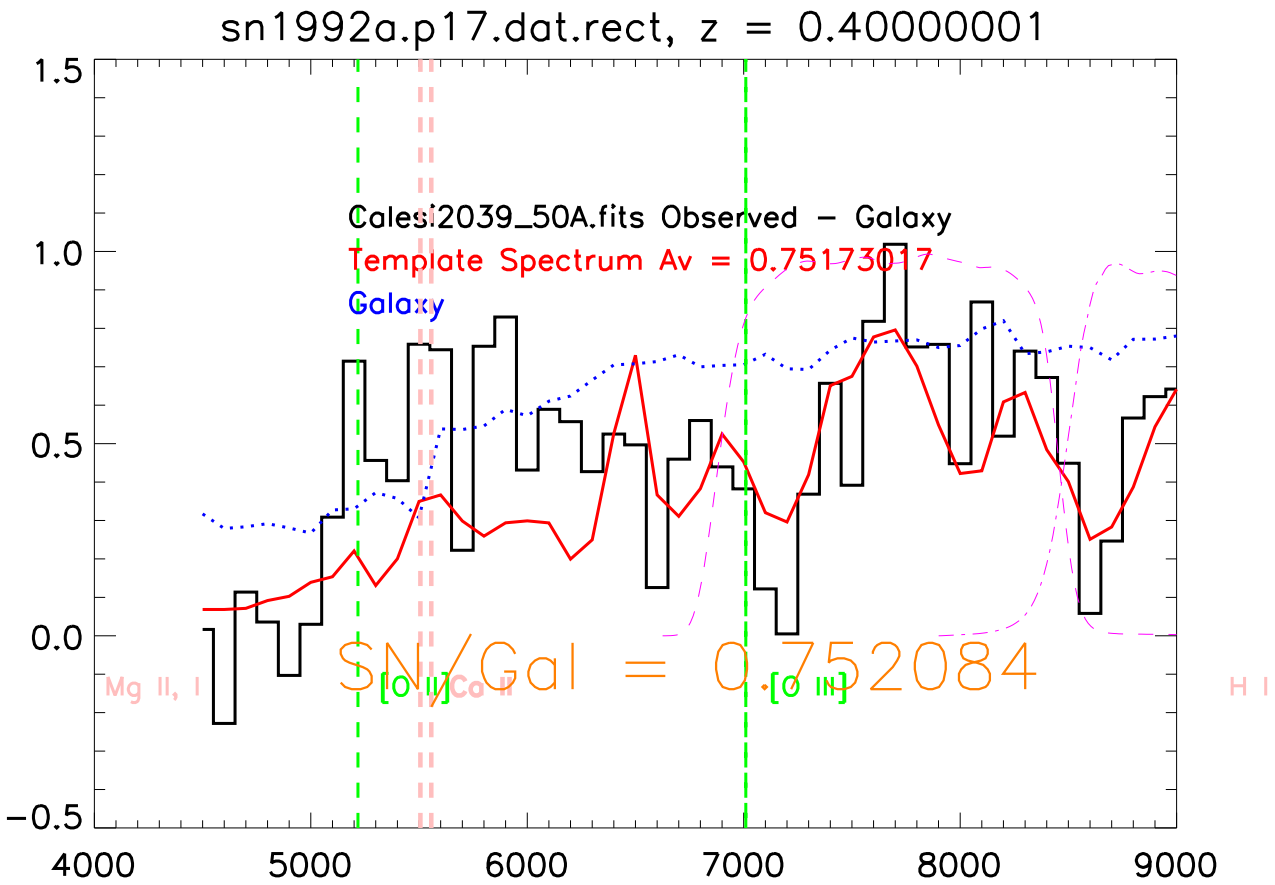

sn1996x.p24.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 0.38551253
Galaxy
SN/Gal = 0.695975
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

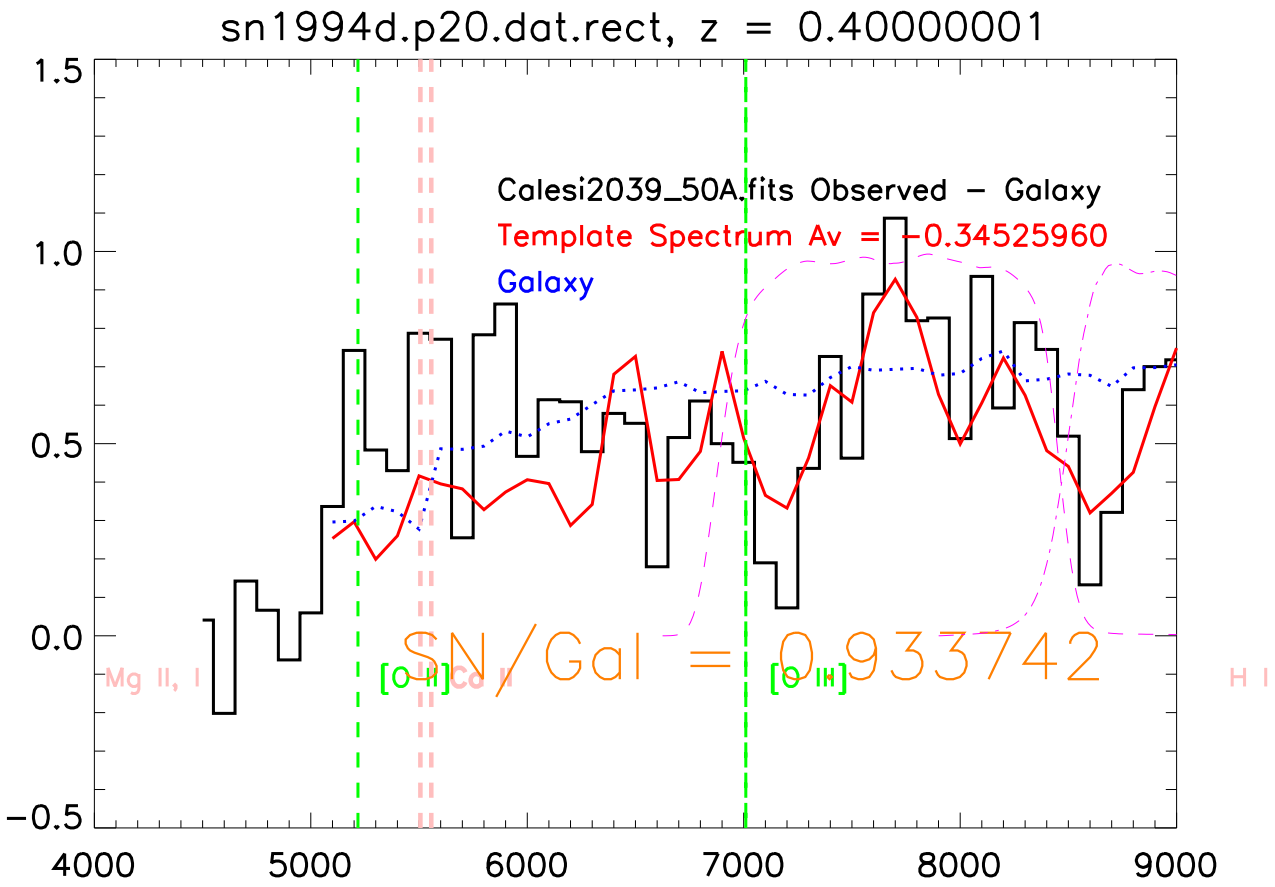

sn1996x.p22.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 0.70963950
Galaxy
SN/Gal = 0.714020
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

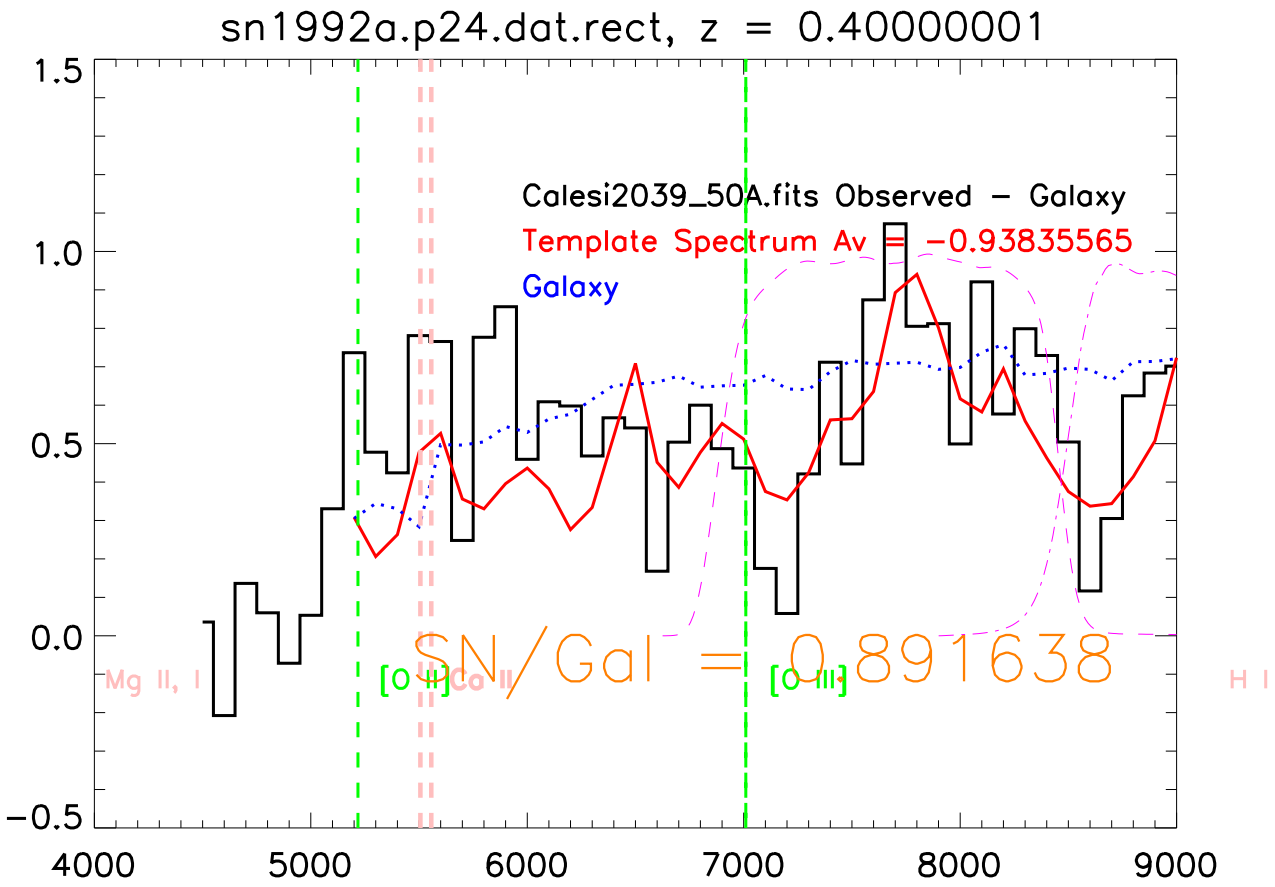

sn1981b.p35.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −0.28846312
Galaxy
SN/Gal = 0.614417
[O II]
[O III]
Mg II, I
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

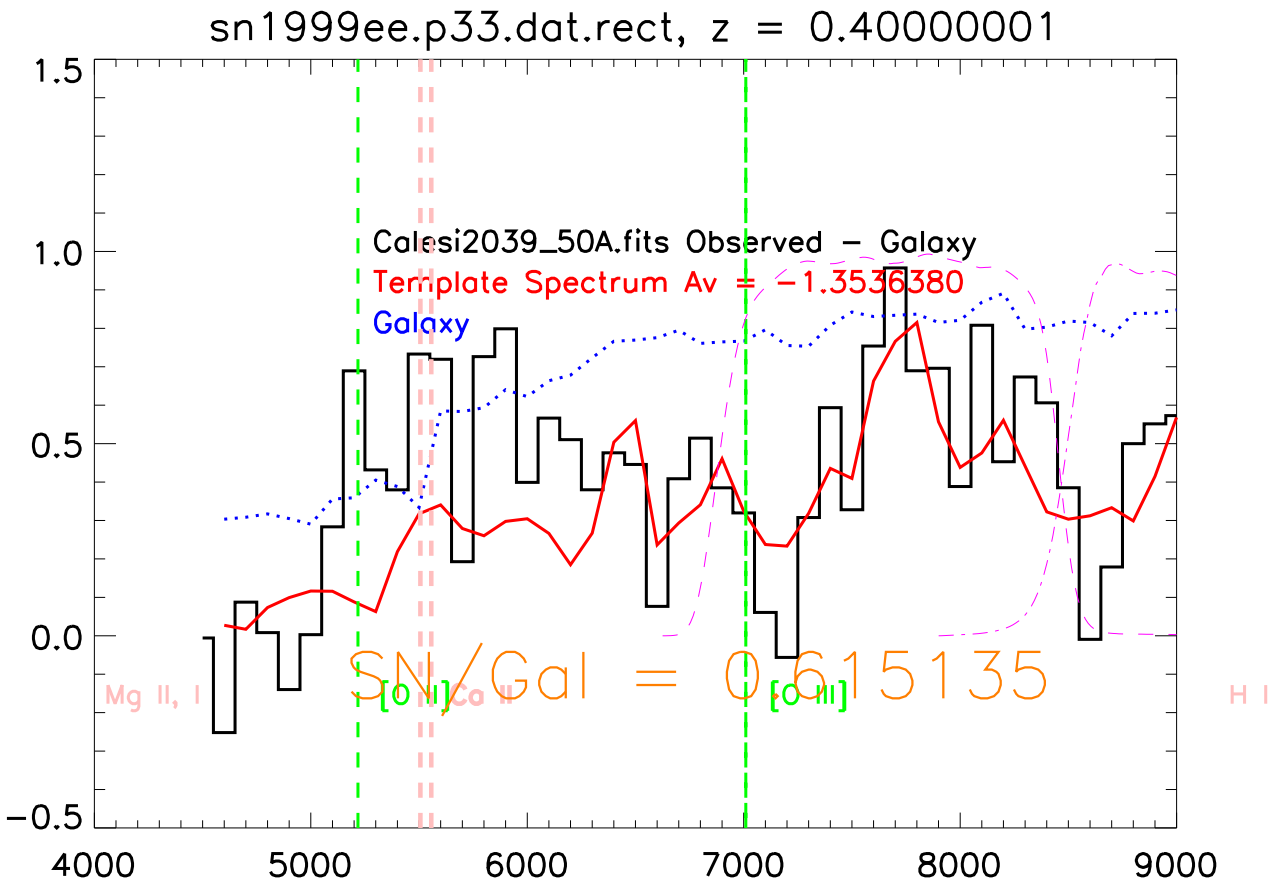

sn1981b.p20.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −0.045250285
Galaxy
SN/Gal = 0.590079
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

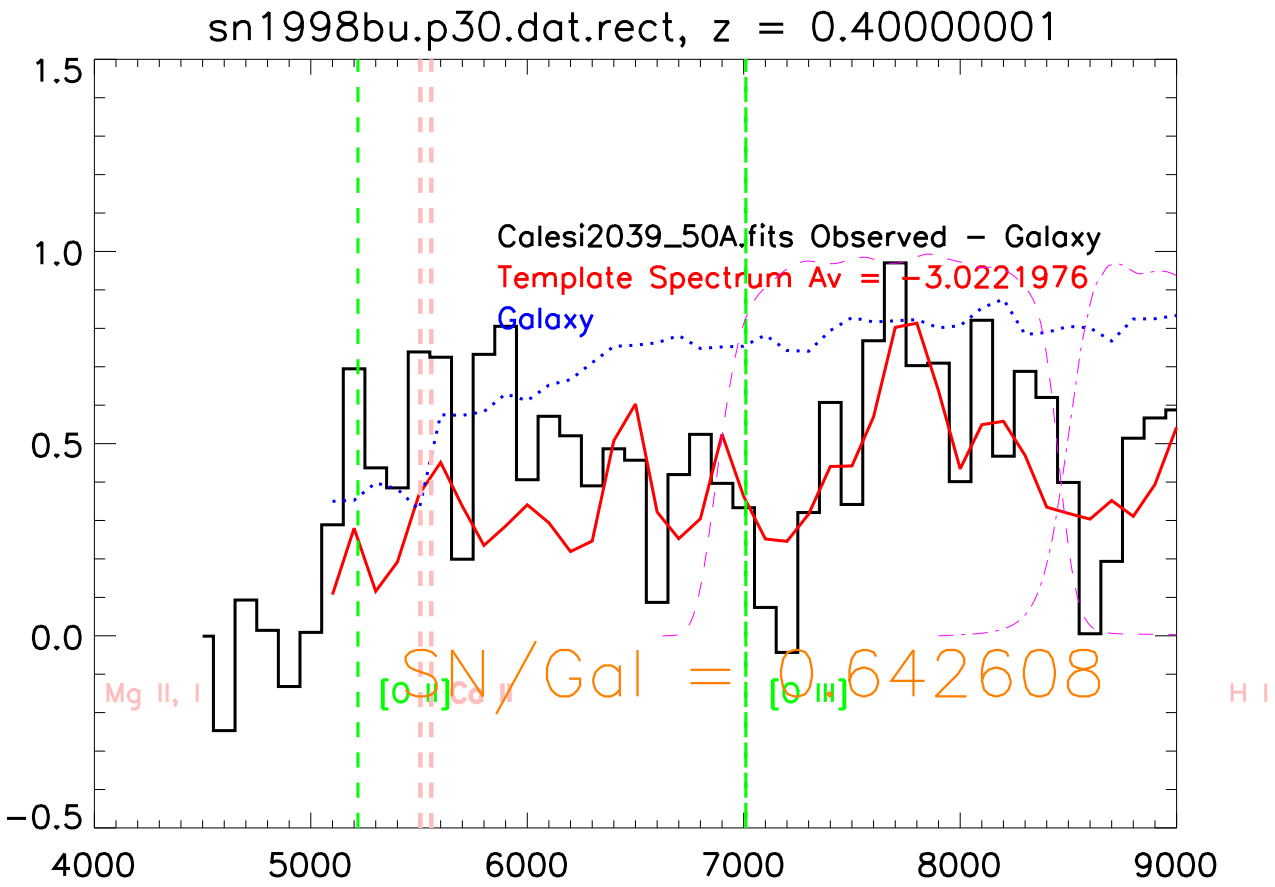

sn1981b.p29.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av. = 0.32517813
Galaxy
SN/Gal = 0.485216
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

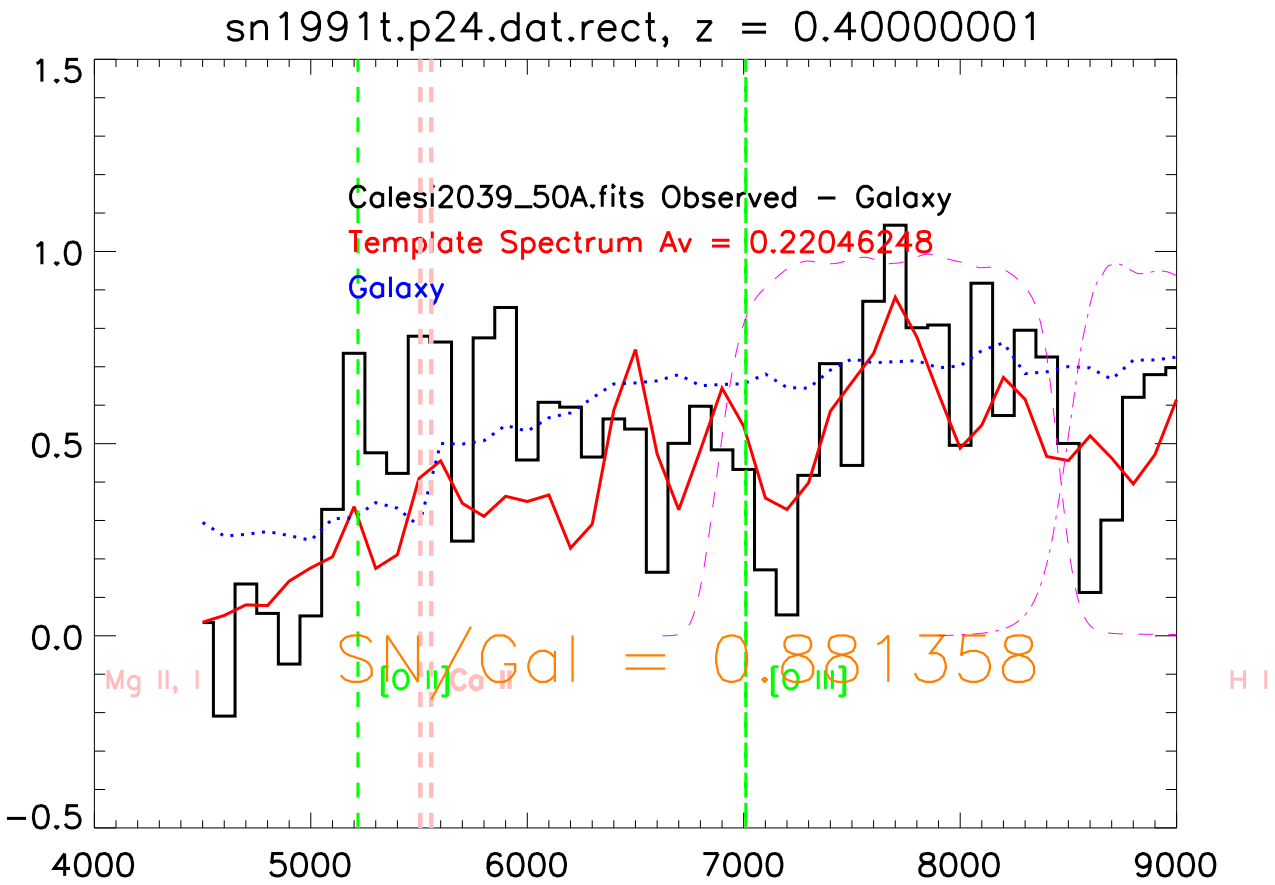

sn1992a.p17.dat.rect, z = 0.40000001
Cales2039_50A.fits Observed − Galaxy
Template Spectrum Av = 0.75173017
Galaxy
S/N/Gal = 0.752084
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

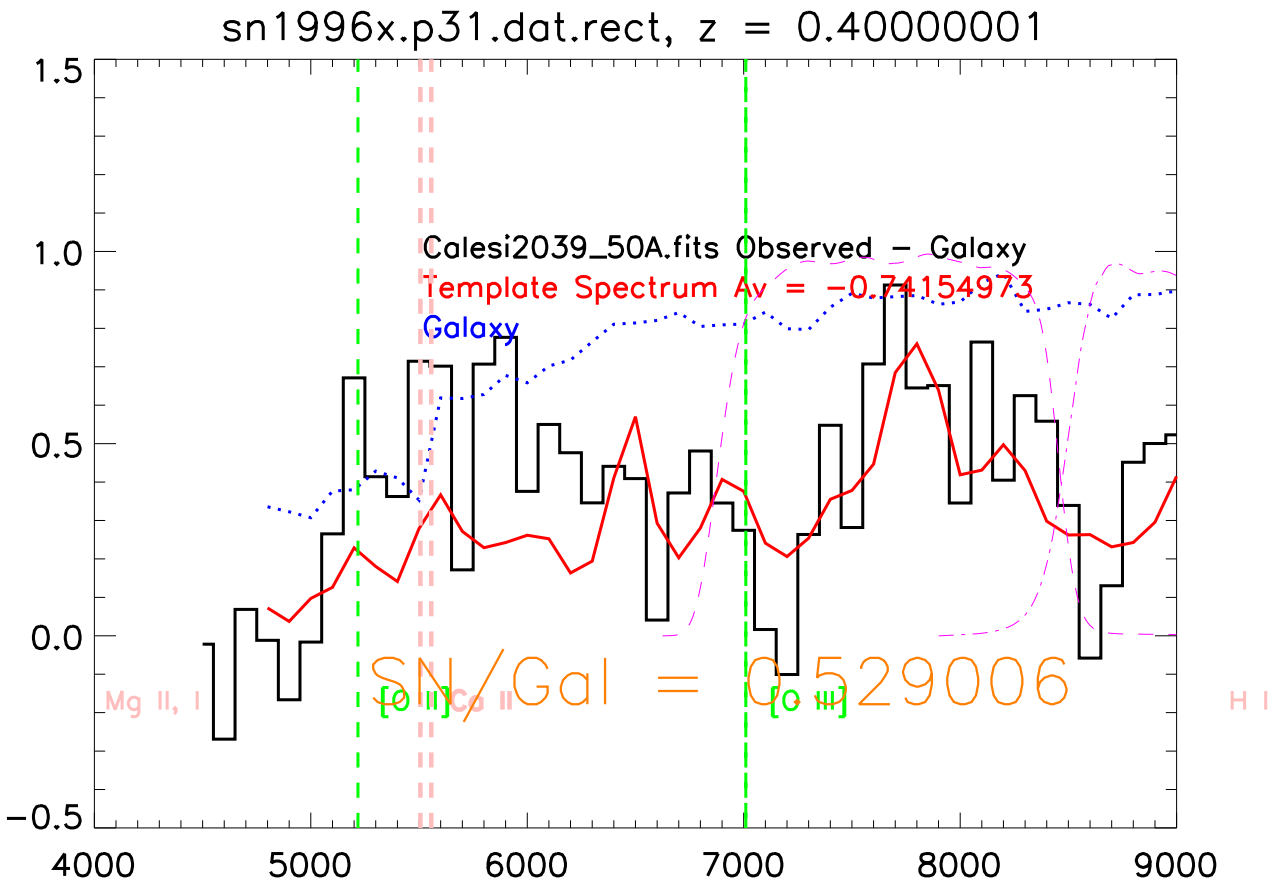

sn1994d.p20.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −0.34525960
Galaxy
SN/Gal = 0.933742
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

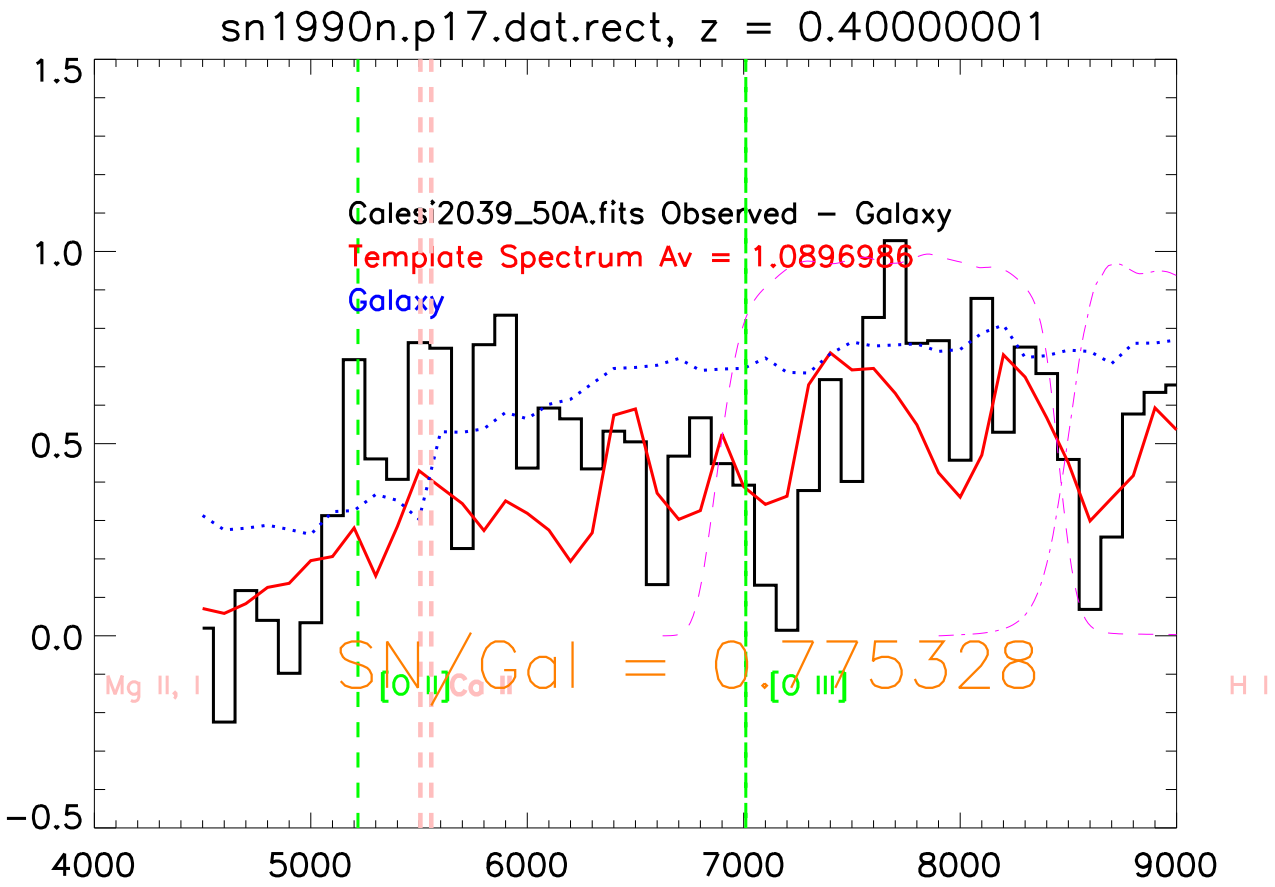

sn1992a.p24.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −0.93835565
Galaxy
SN/Gal = 0.891638
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

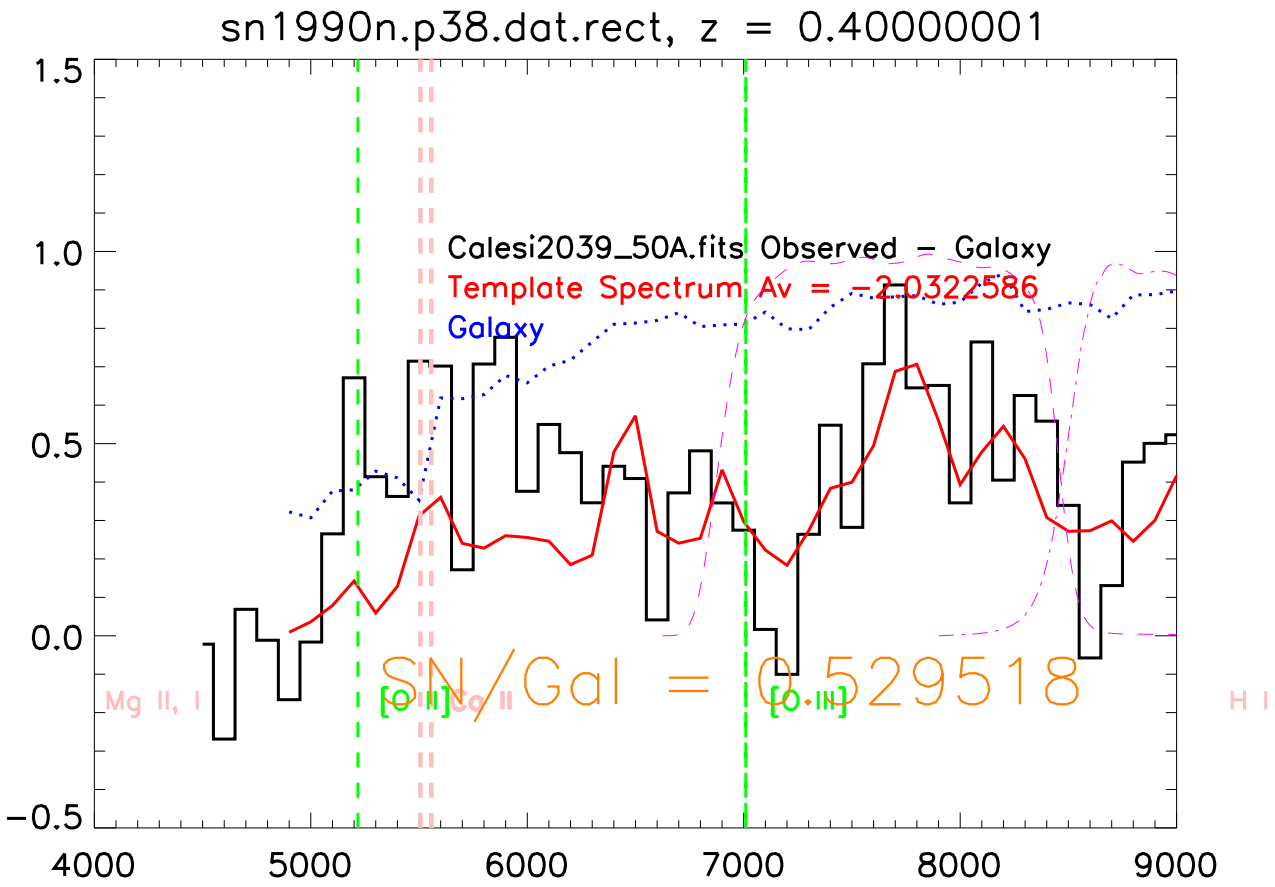

sn1999ee.p33.dat.rect, z = 0.40000001
Calsi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −1.3536380
Galaxy
SN/Gal = 0.6615135
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

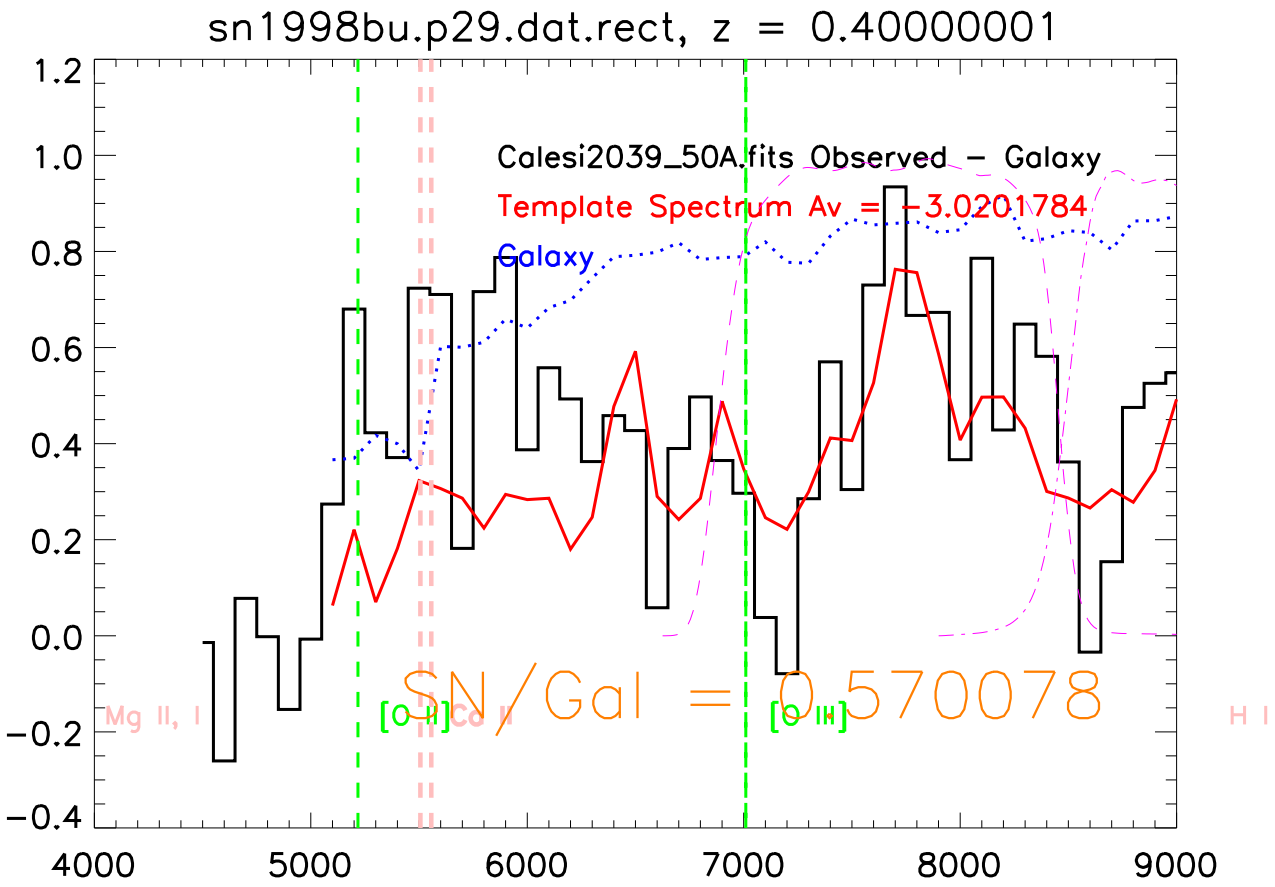

sn1998bu.p30.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −3.0221976
Galaxy
SN/Gal = 0.642608
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

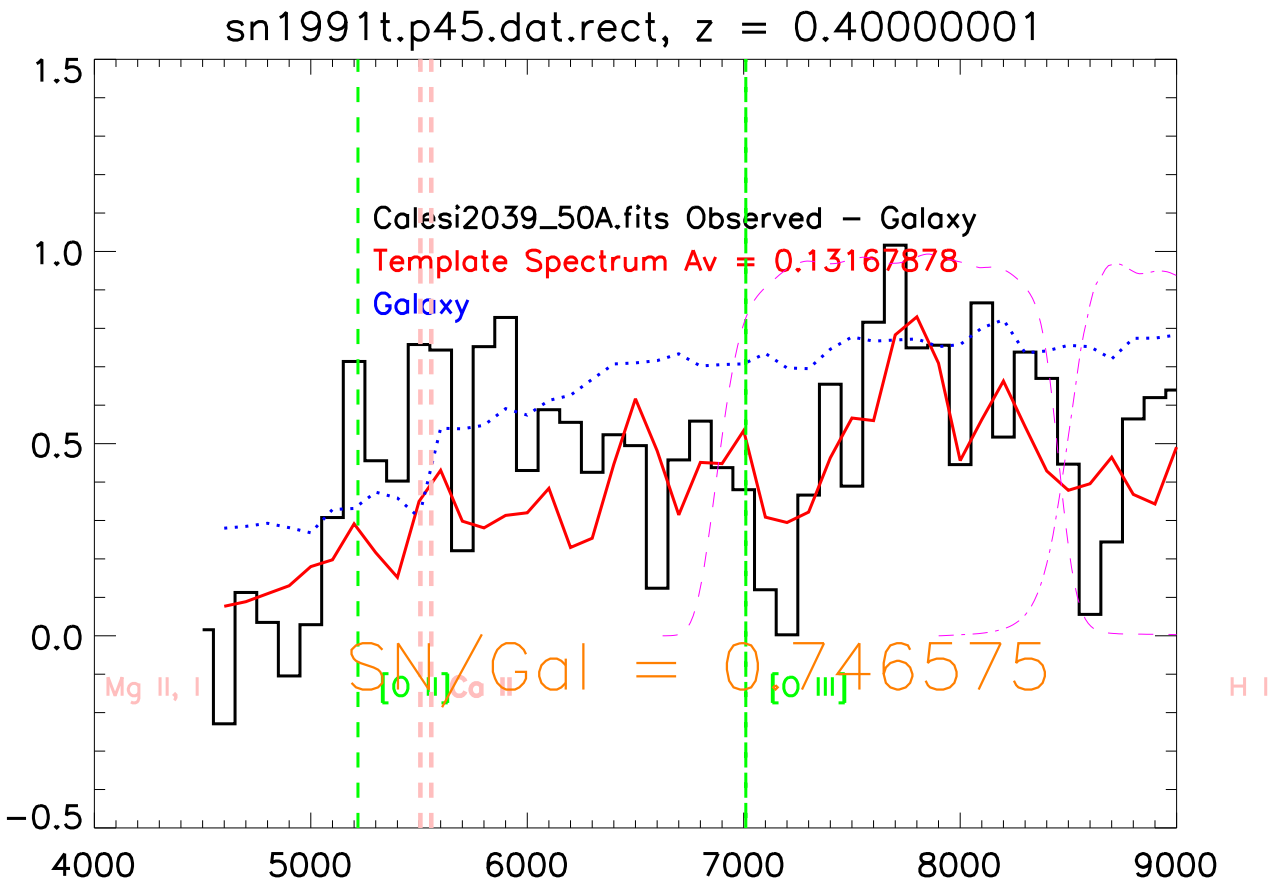

sn1991t.p24.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 0.22046248
Galaxy
SN/Gal = 0.881358
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

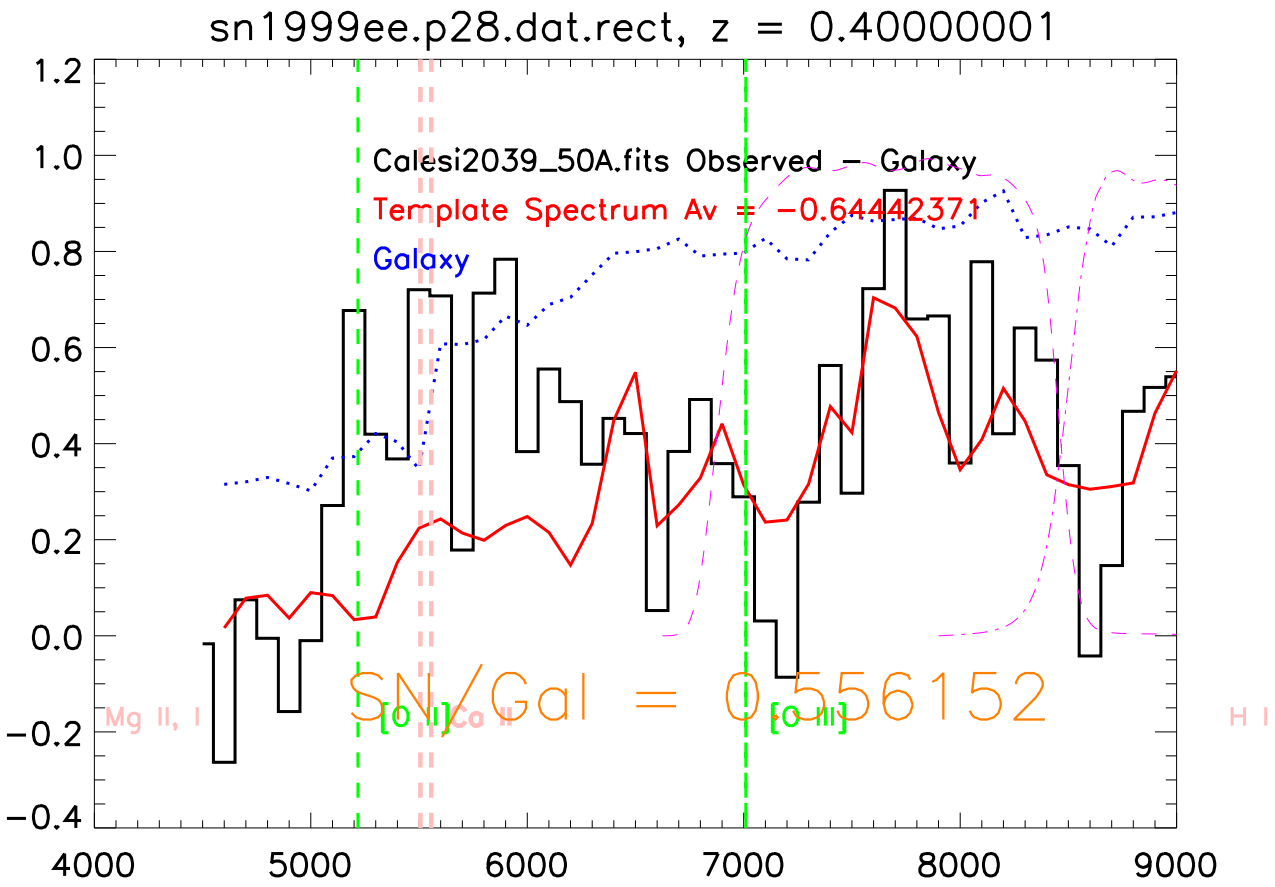

sn1996x.p31.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −0.74154973
Galaxy
SN/Gal = G529006
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

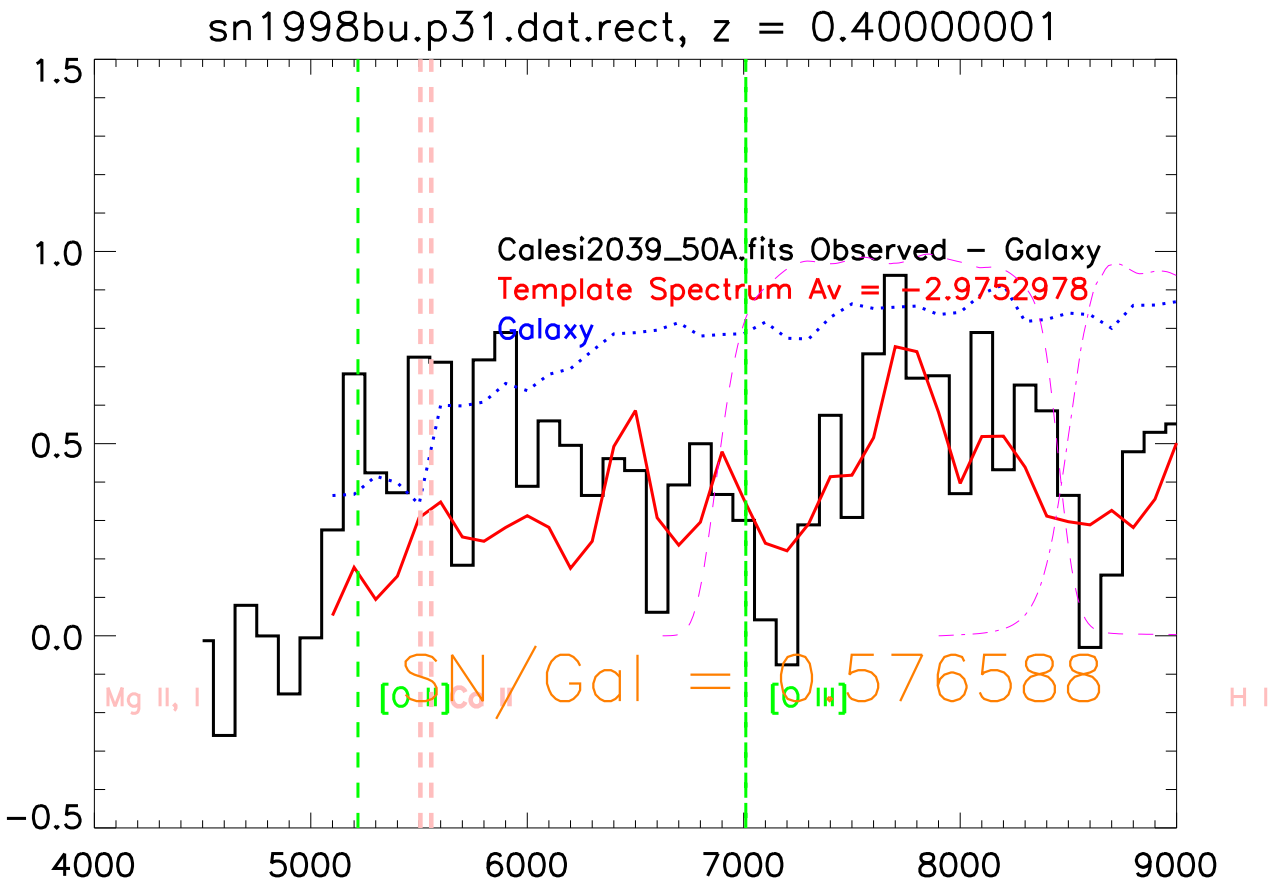

sn1990n.p17.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 1.0896986
Galaxy
S/N/Gal = 0.775328
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

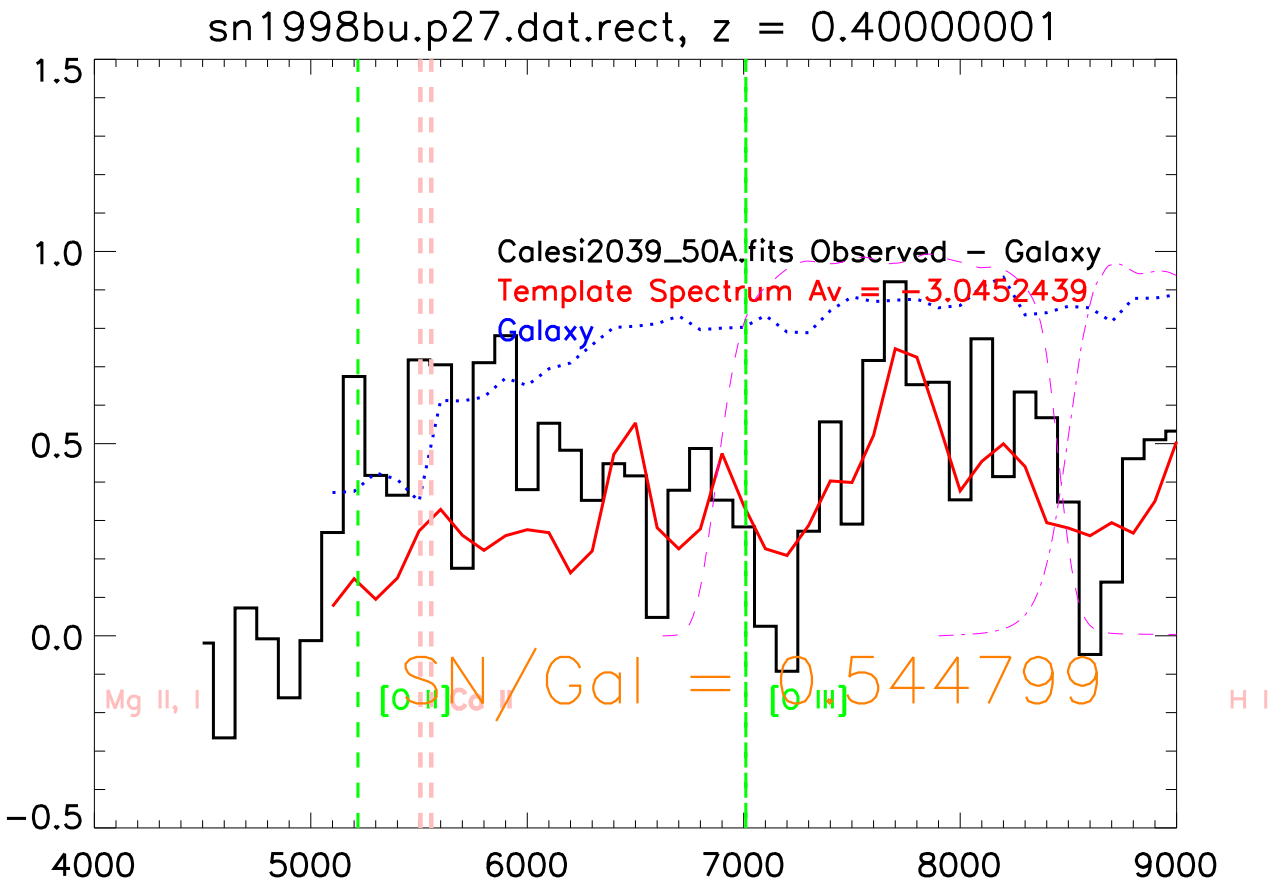

sn1990n.p38.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed - Galaxy
Template Spectrum Av = -2.0322586
Galaxy
SN/Gal = 0.529518
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

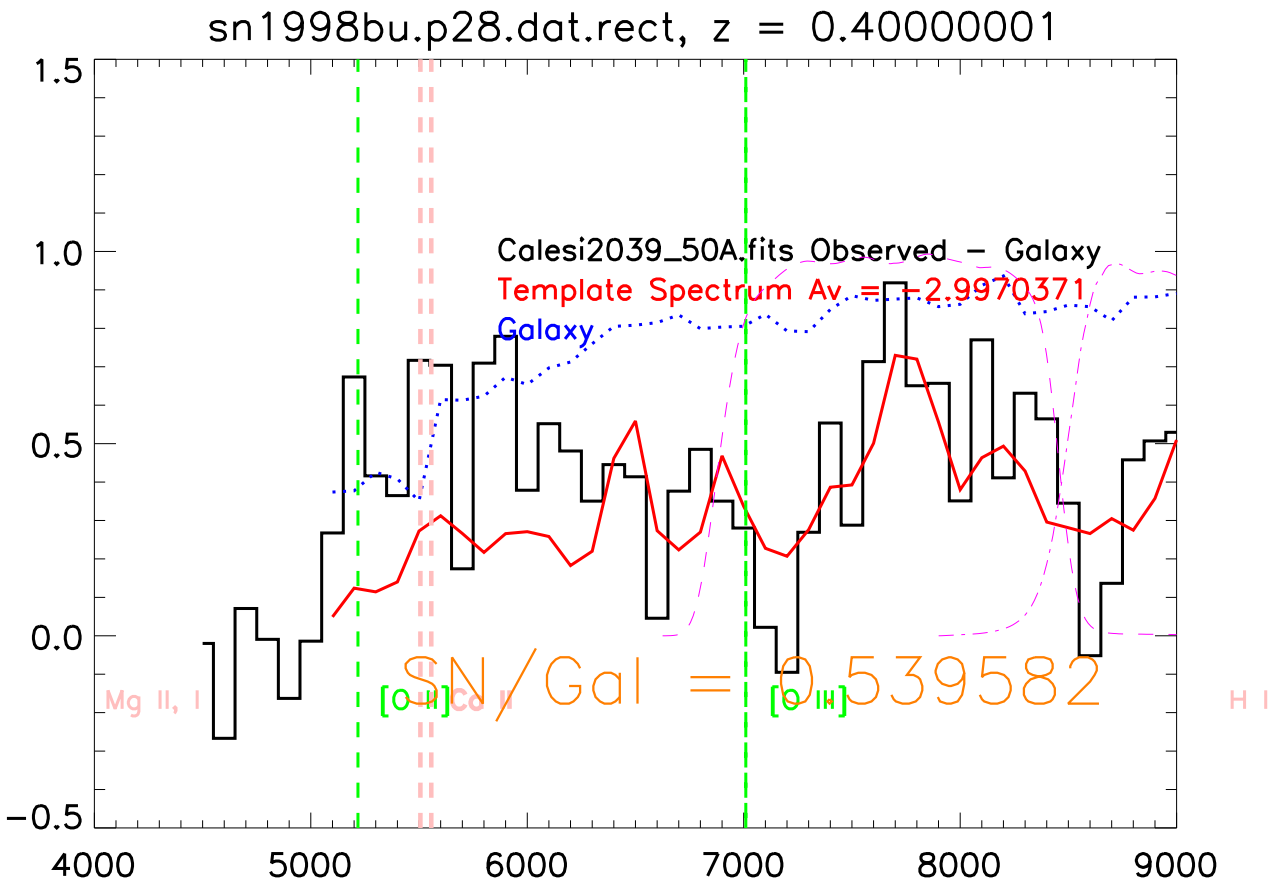

sn1998bu.p29.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −3.0201784
Galaxy
SN/Gal = 0.570078
Mg II, I
[O II]
Ca II
[O III]
H I
1.2
1.0
0.8
0.6
0.4
0.2
0.0
−0.2
−0.4
4000
5000
6000
7000
8000
9000

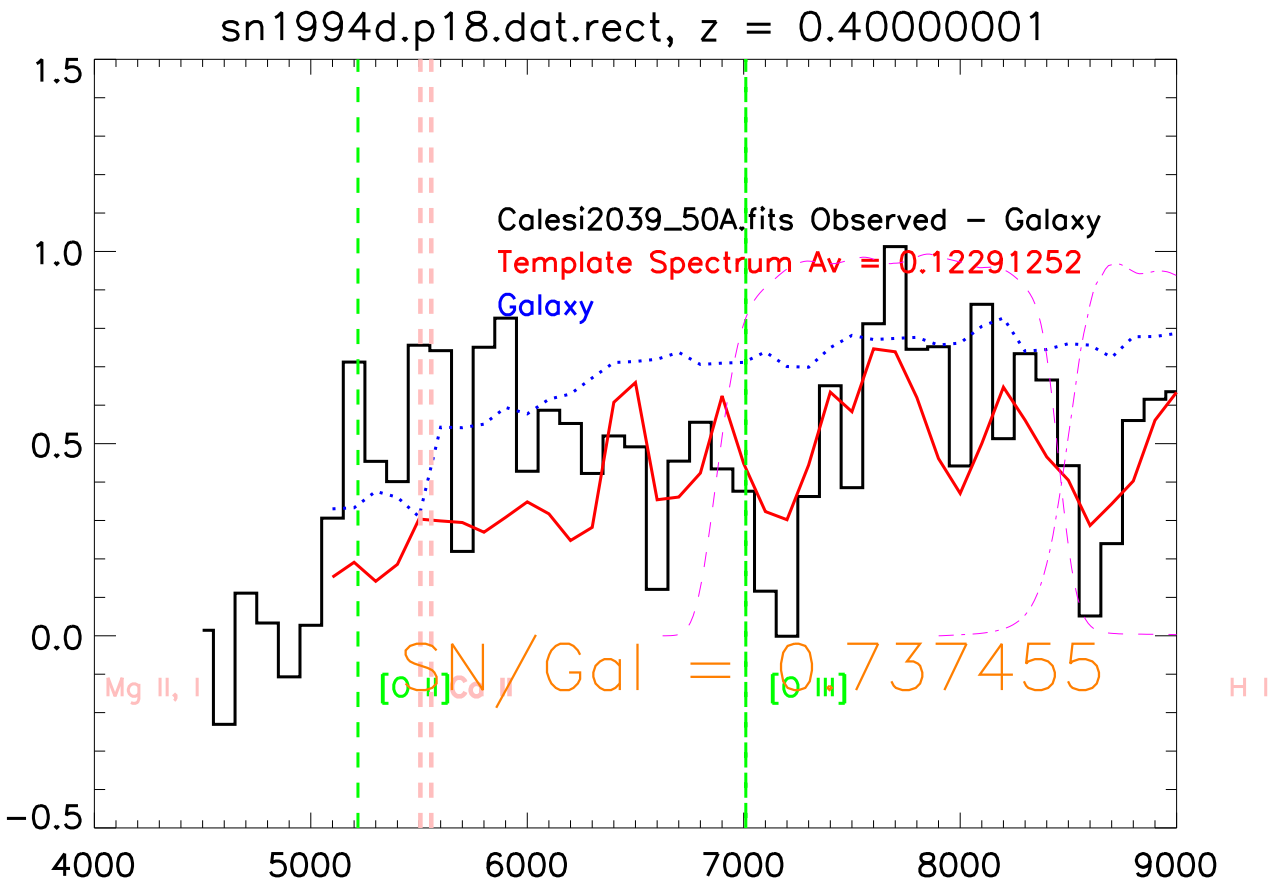

sn1991t.p45.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 0.13167878
Galaxy
SN/Gal = 0.746575
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

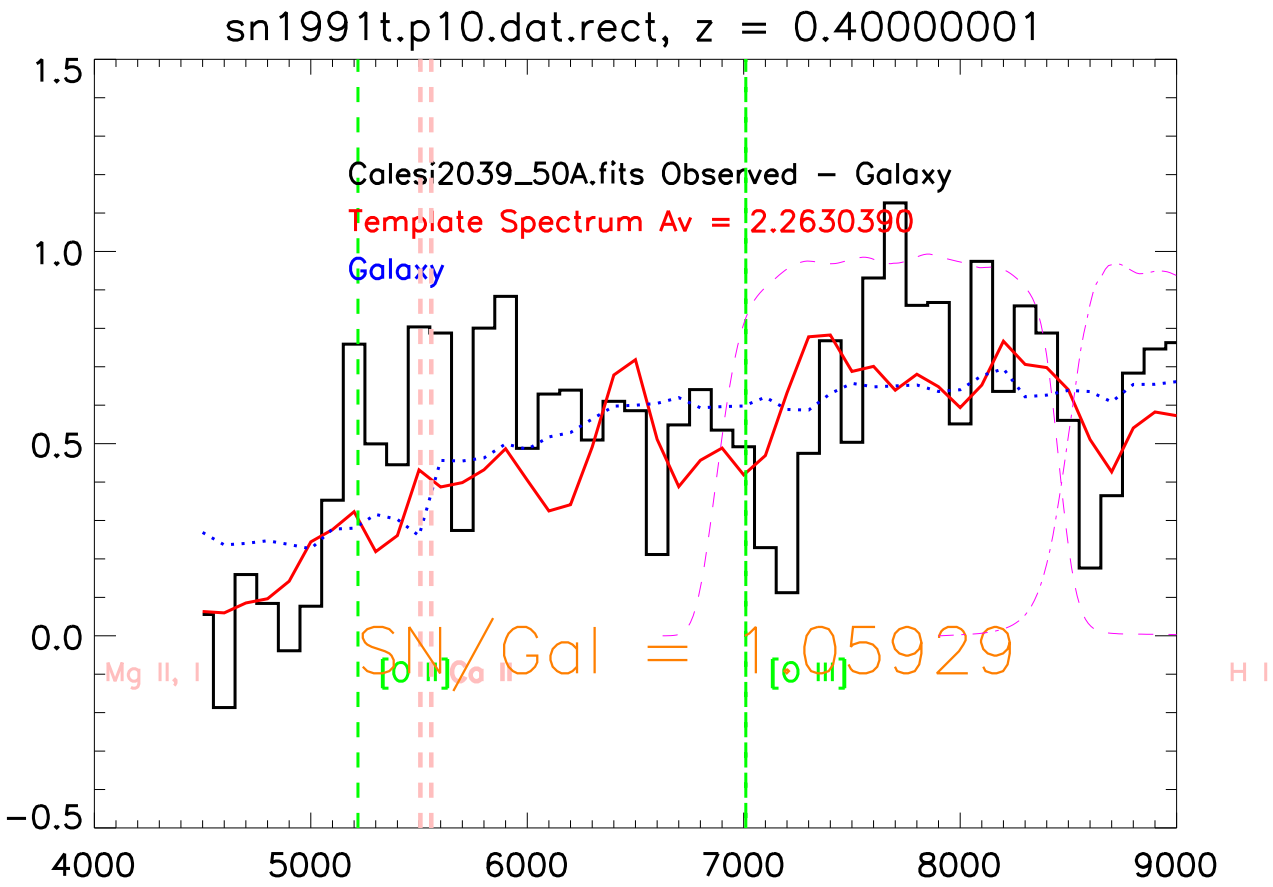

sn1999ee.p28.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed – Galaxy
Template Spectrum Av = −0.64442371
Galaxy
SN/Gal = 0.556152
Mg II, I
[O II]
Ca II
[O III]
H I
1.2
1.0
0.8
0.6
0.4
0.2
0.0
−0.2
−0.4
4000
5000
6000
7000
8000
9000

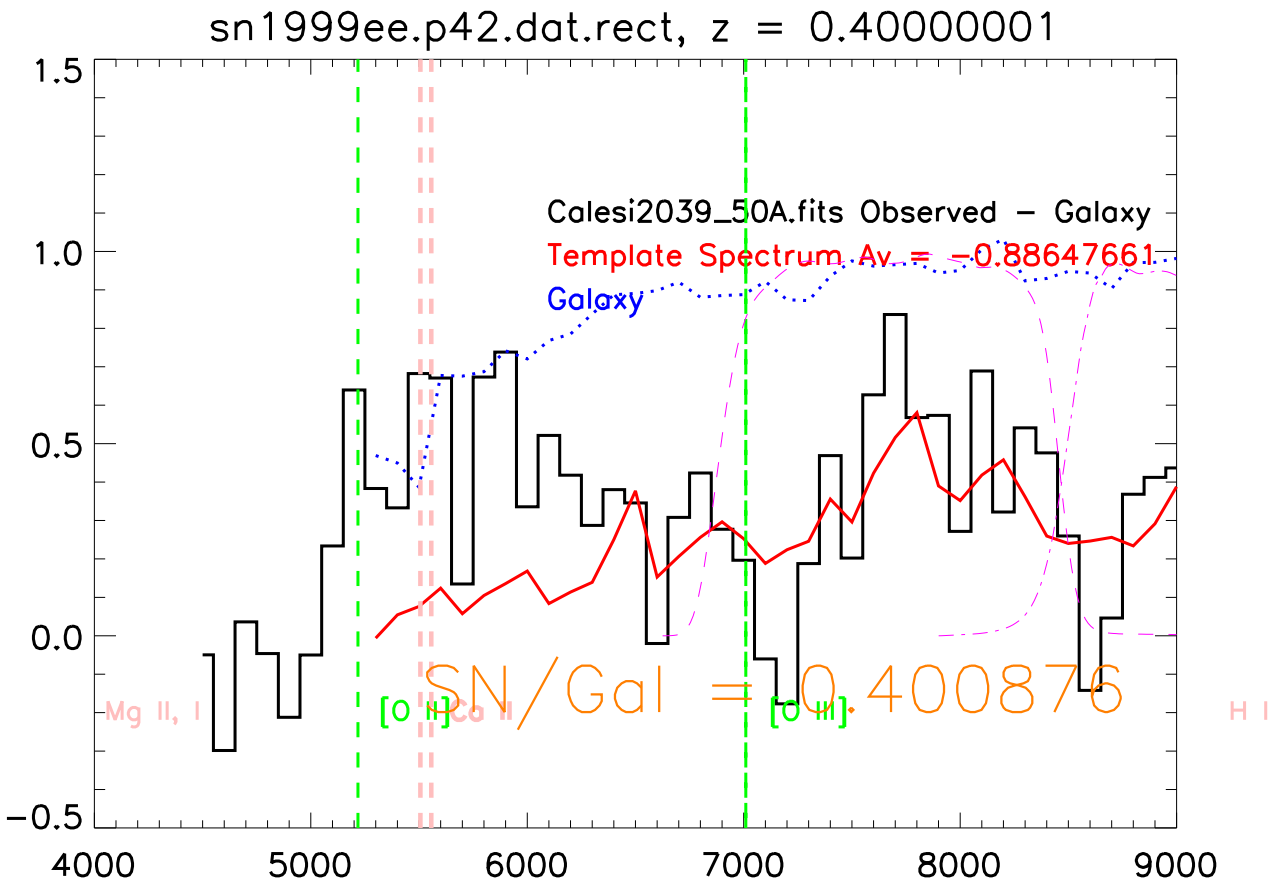

sn1998bu.p31.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −2.9752978
Galaxy
SN/Gal = 0.576588
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

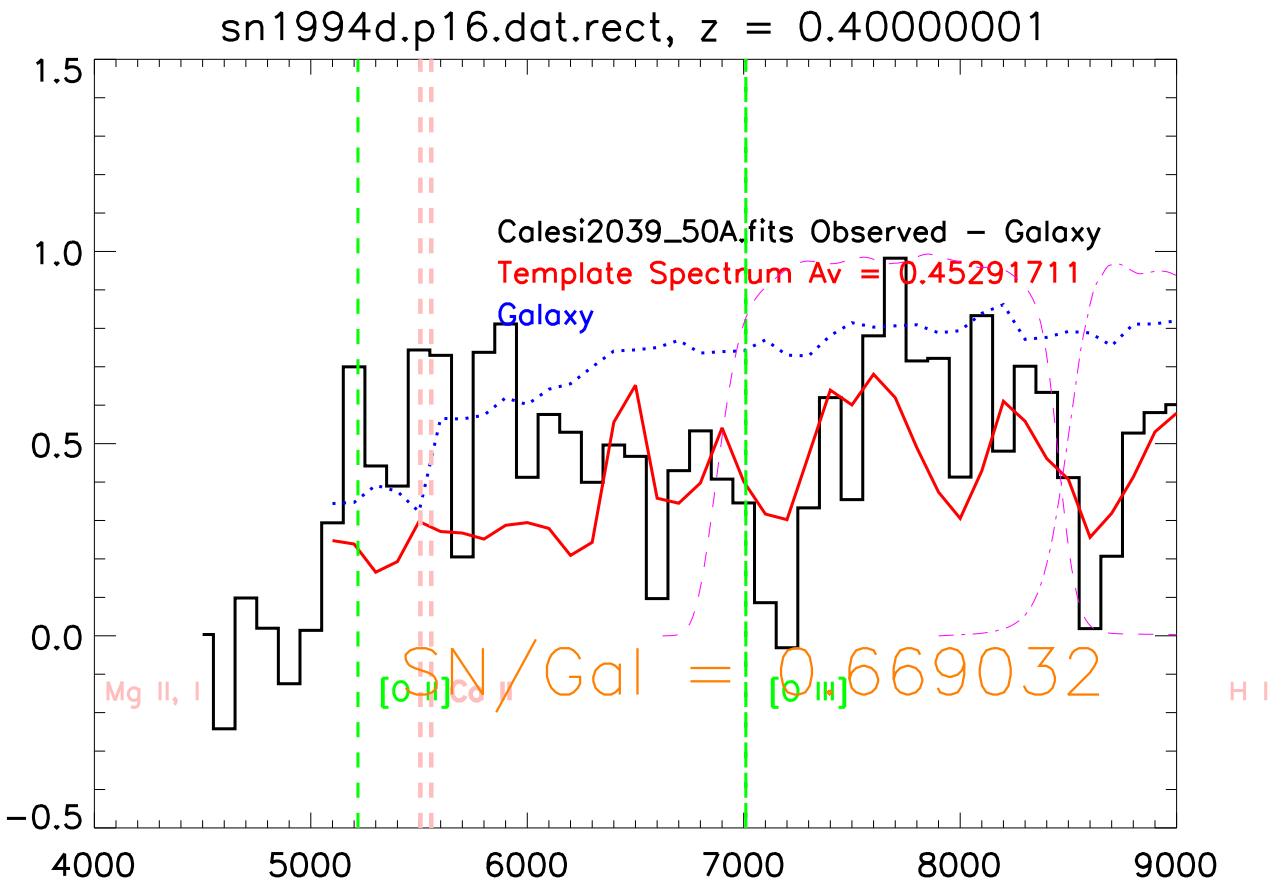

sn1998bu.p27.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 3.0452439
Galaxy
SN/Gal = 0.544799
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

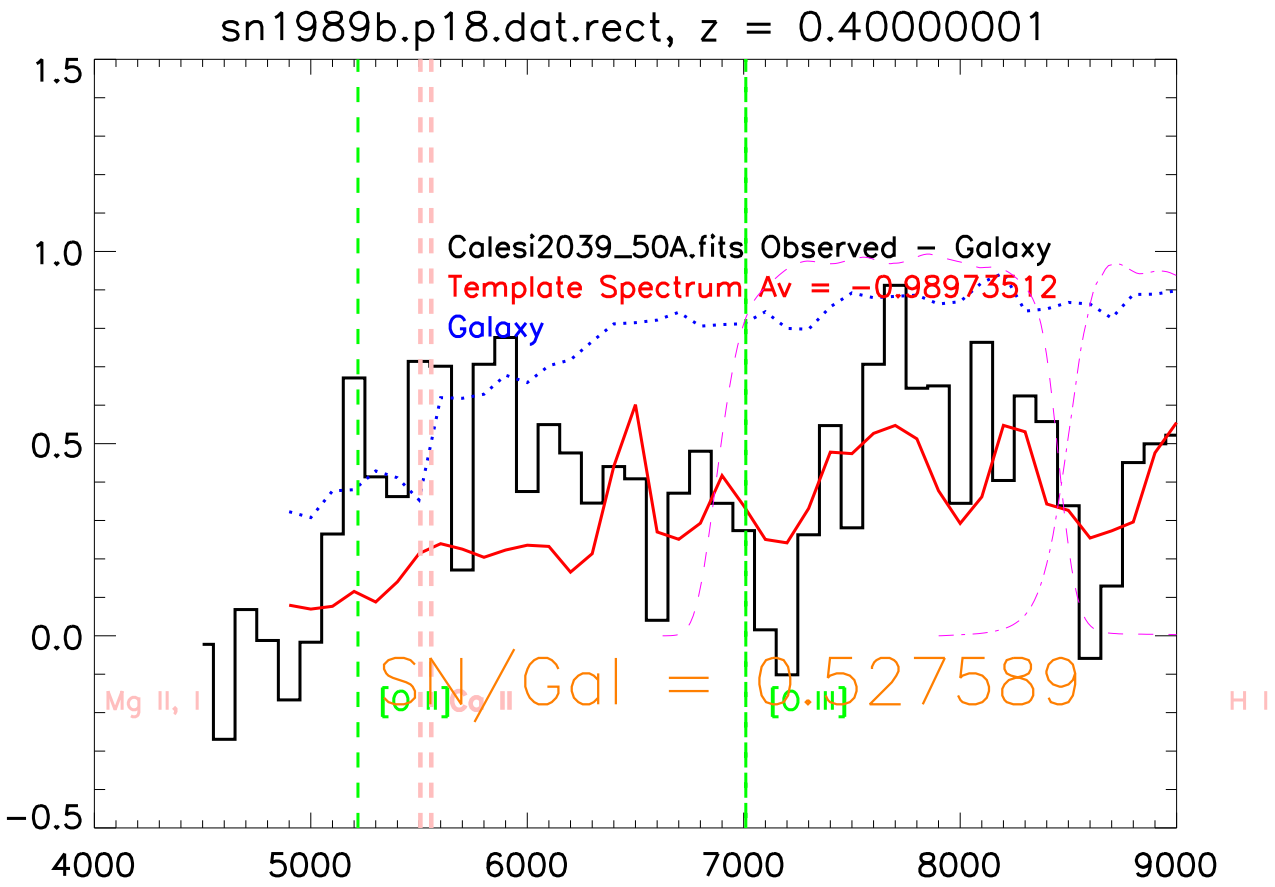

sn1998bu.p28.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.9970371
Galaxy
SN/Gal = 0.539582
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

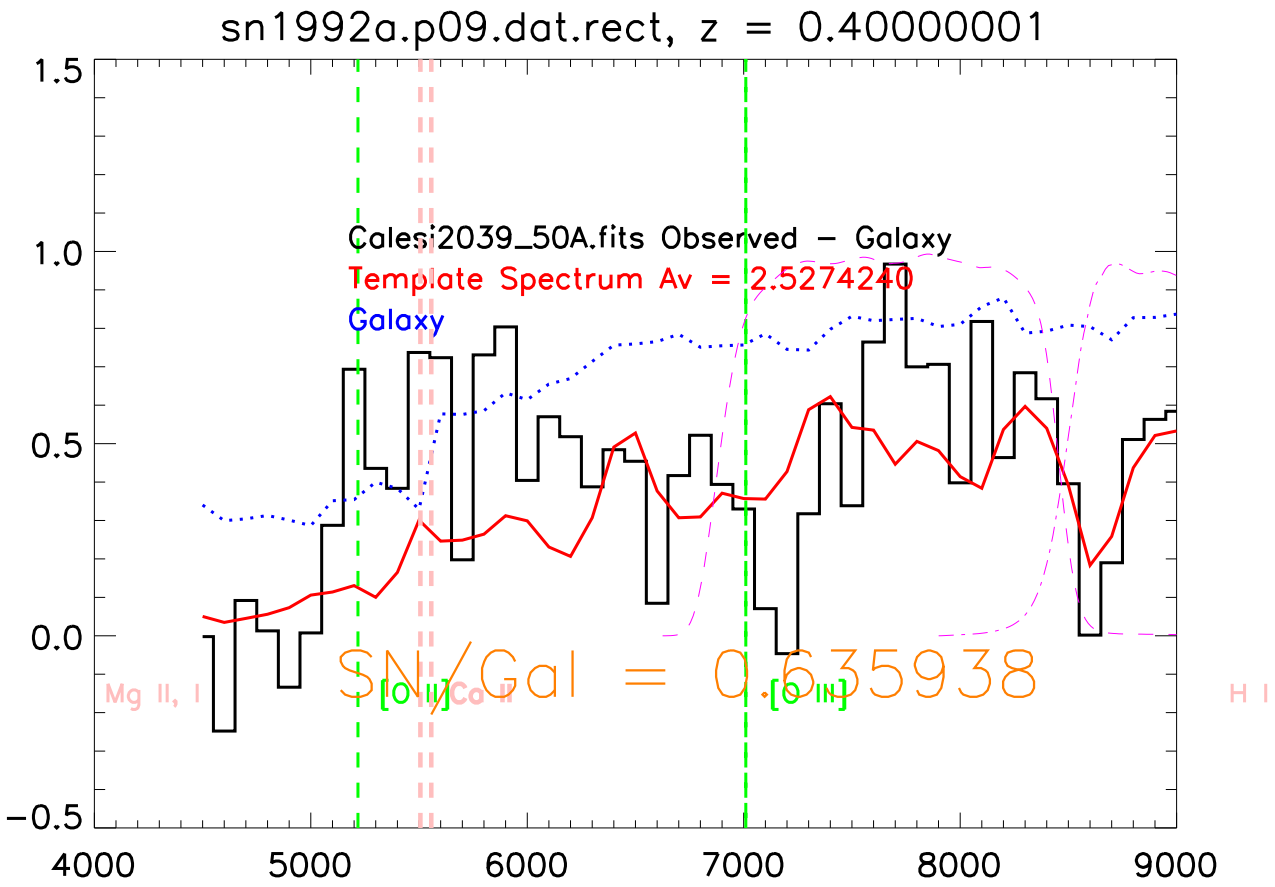

sn1994d.p18.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 0.12291252
Galaxy
SN/Gal = 0.737455
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

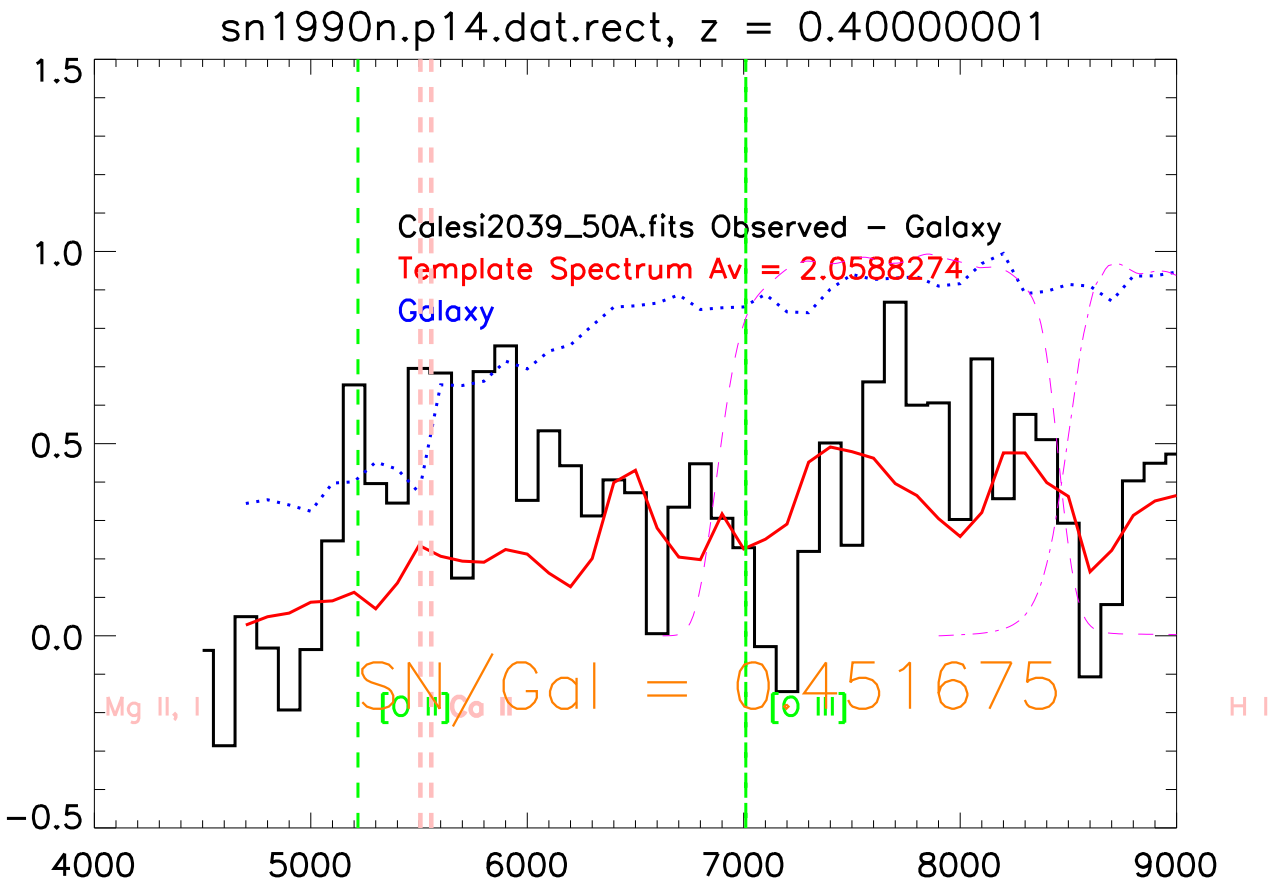

sn1991t.p10.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.2630390
Galaxy
SN/Gal = 1.05929
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

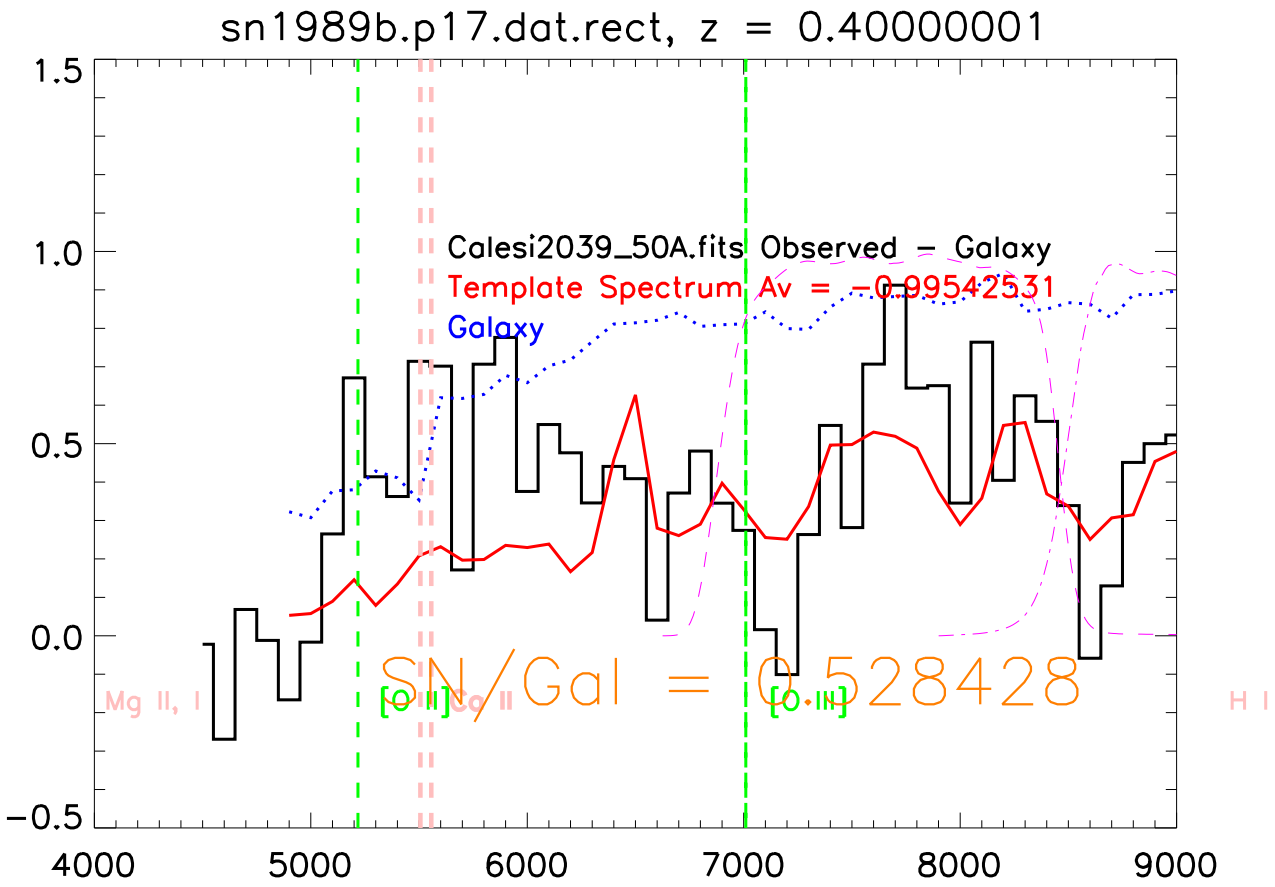

sn1999ee.p42.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −0.88647661
Galaxy
SN/Gal = 0.400876
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

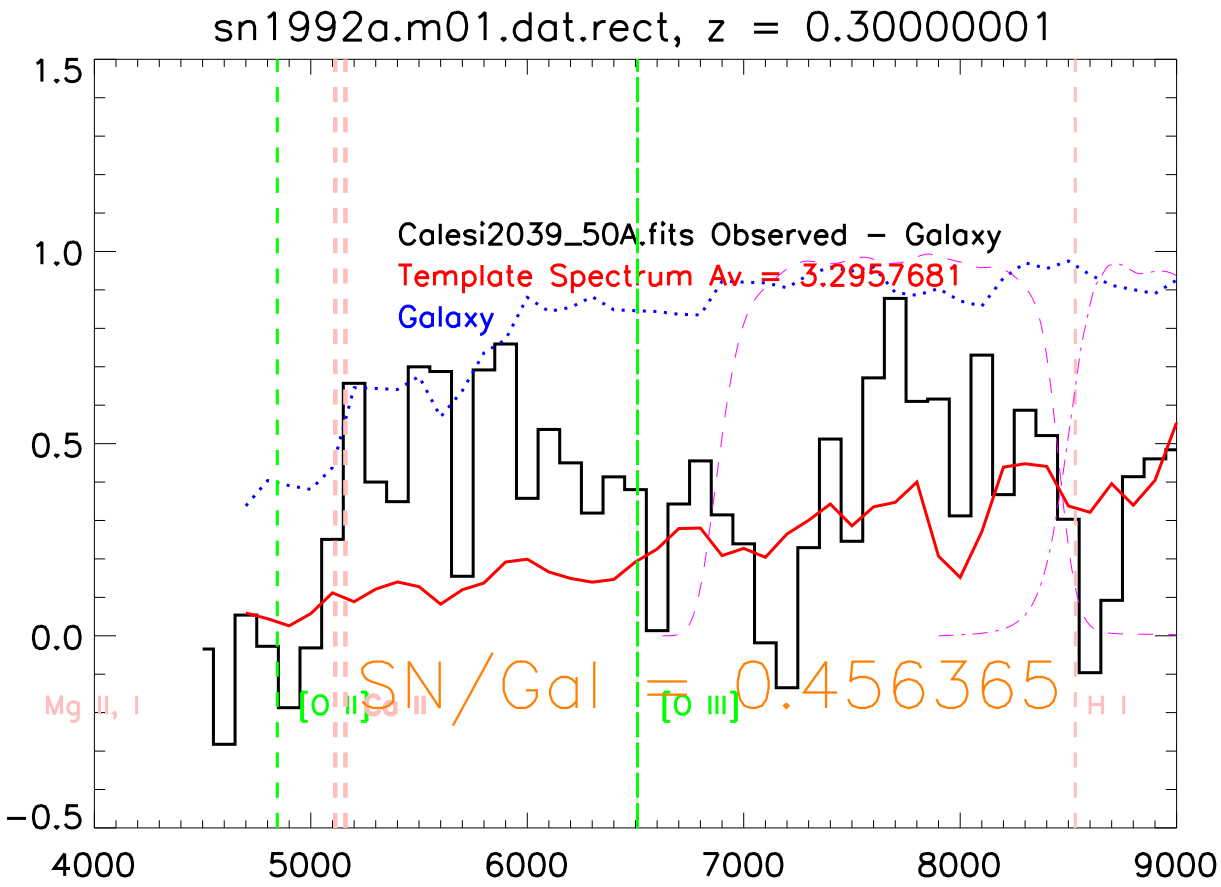

sn1994d.p16.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 0.45291711
Galaxy
SN/Gal = 0.669032
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

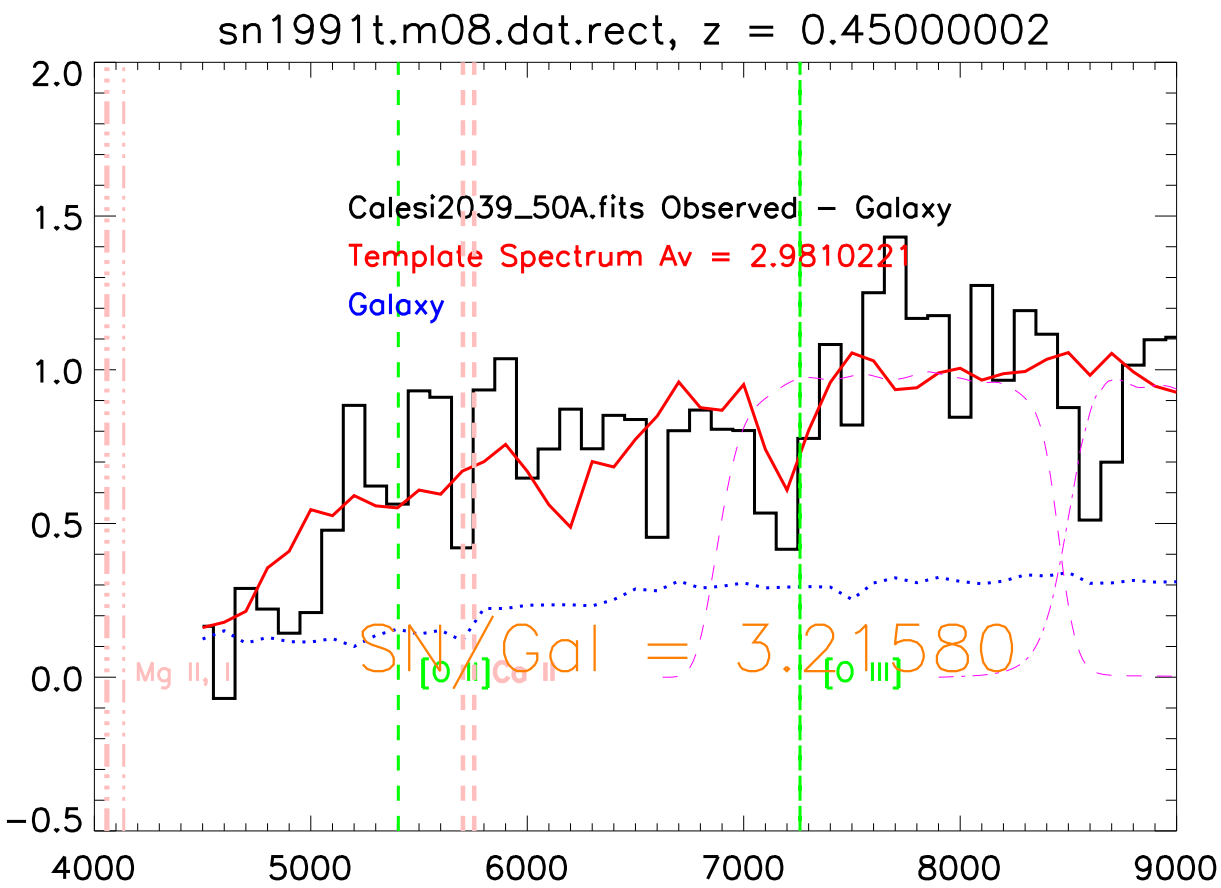

sn1989b.p18.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed - Galaxy
Template Spectrum Av = -0.98973512
Galaxy
SN/Gal = 0.527589
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

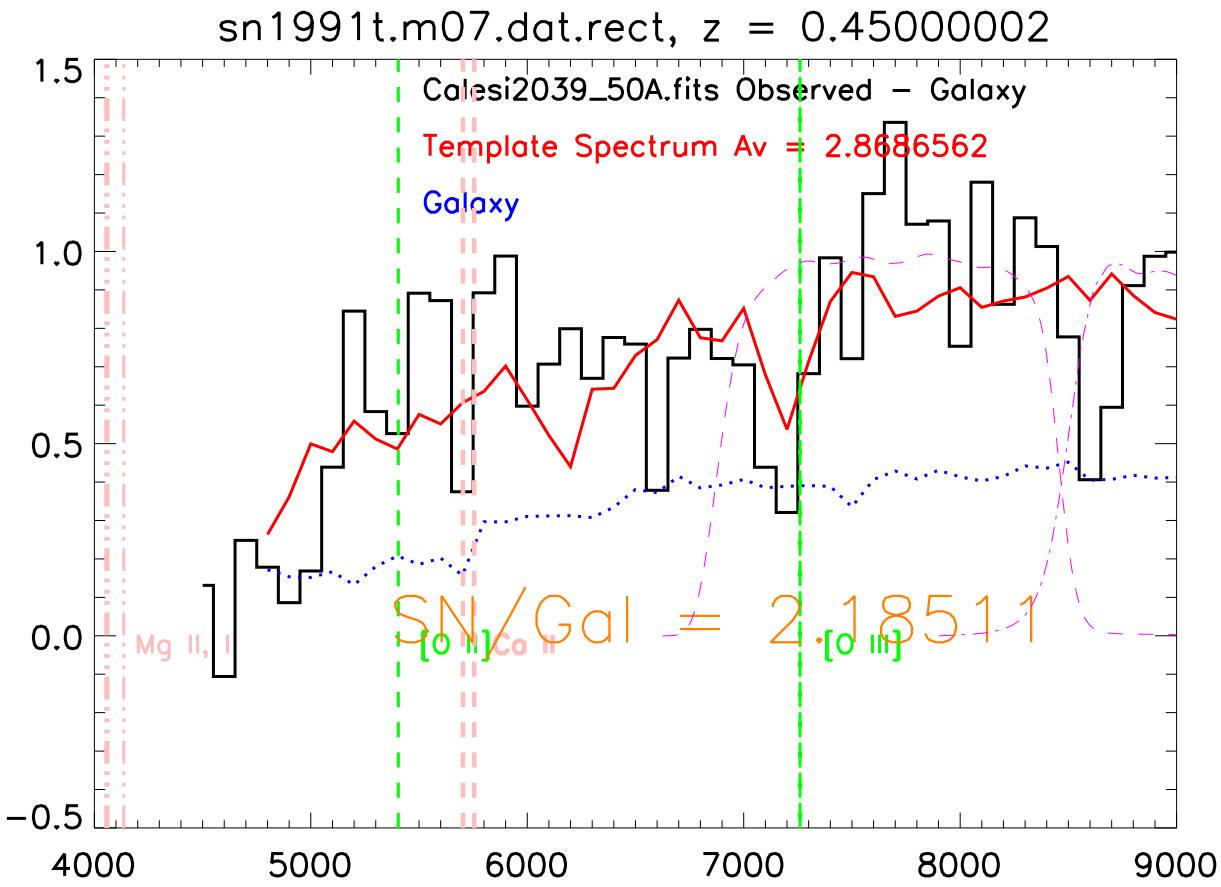

sn1992a.p09.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.5274240
Galaxy
SN/Gal = 0.635938
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

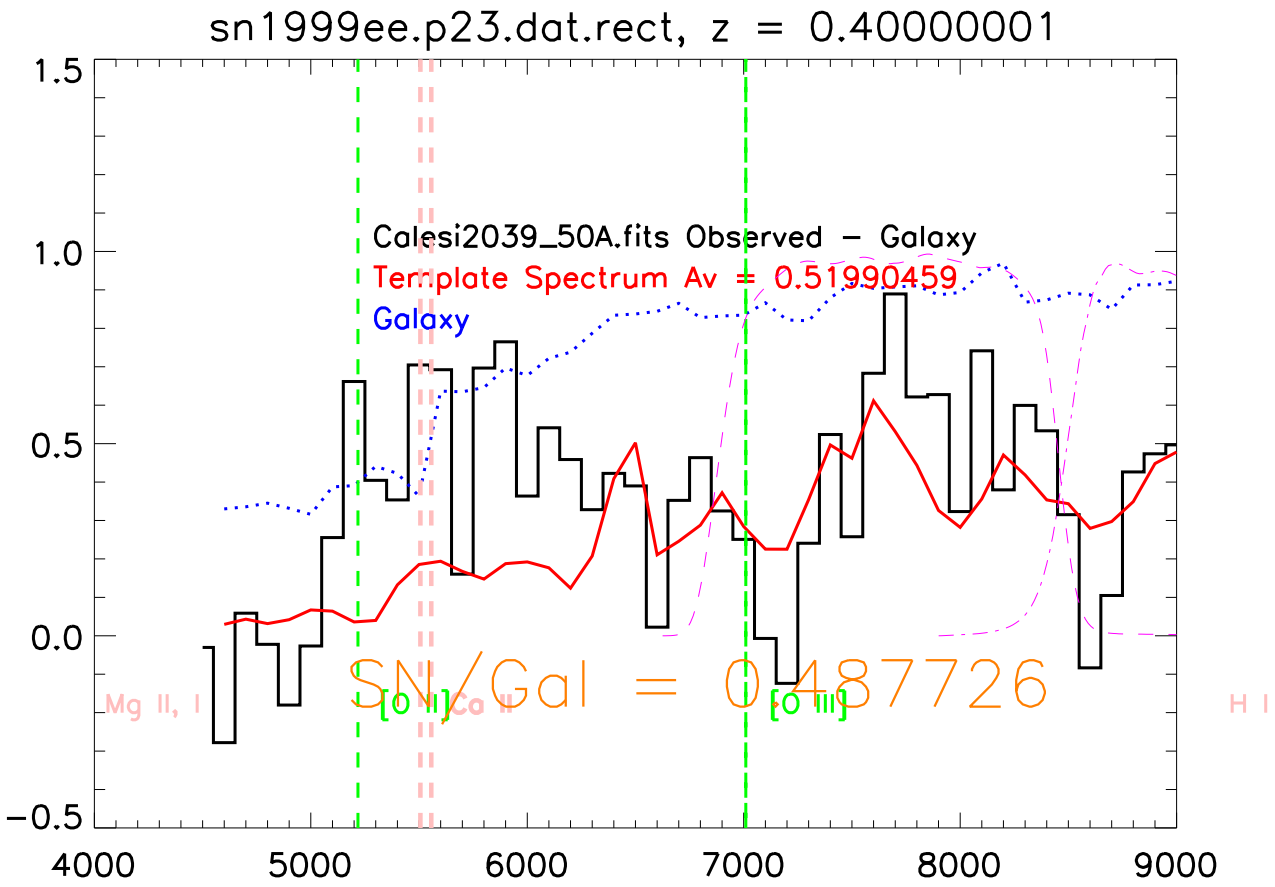

sn1990n.p14.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.0588274
Galaxy
SN/Gal = 0.451675
[O II]
[O III]
Mg II, I
Ca II
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

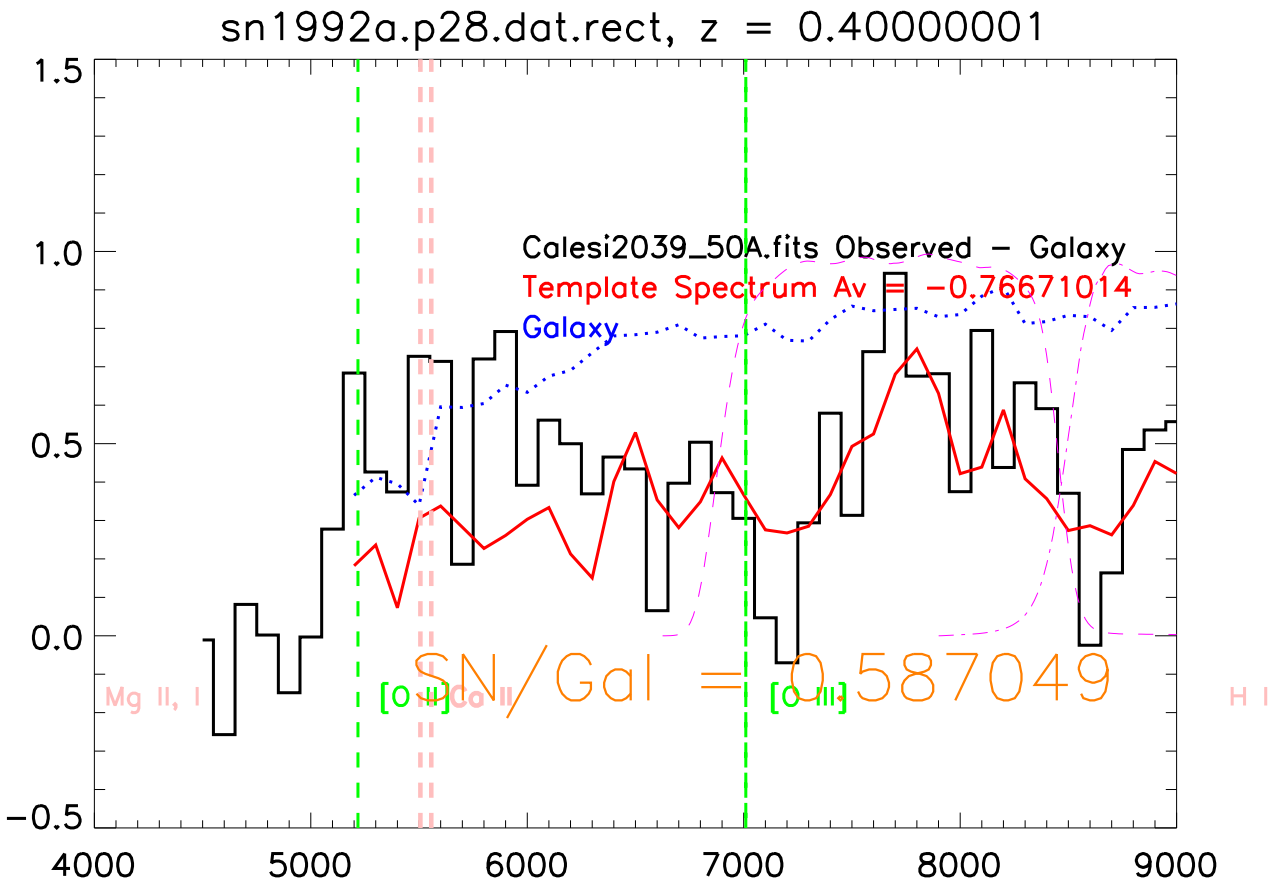

sn1989b.p17.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed - Galaxy
Template Spectrum Av = -0.99542531
Galaxy
SN/Gal = 0.528428
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

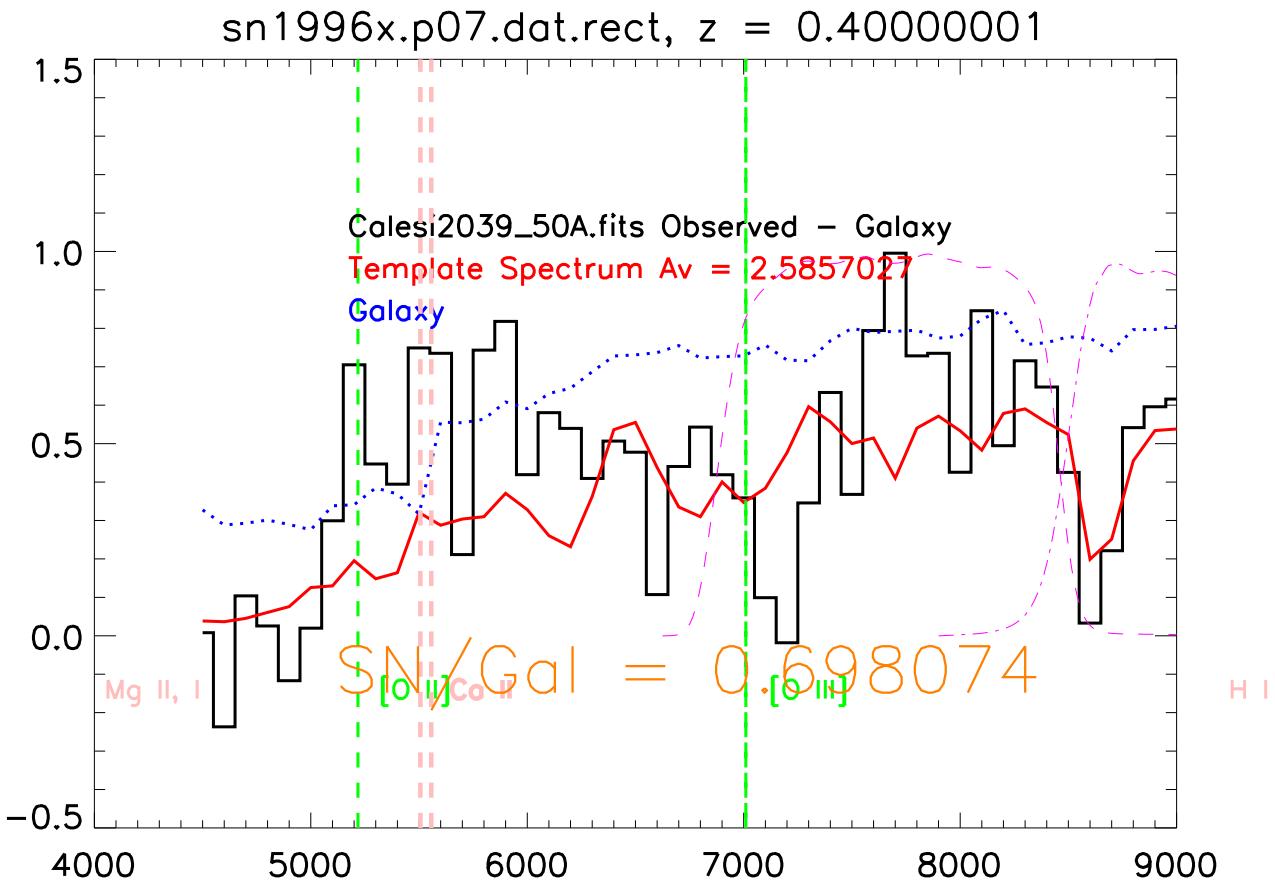

sn1992a.m01.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 3.2957681
Galaxy
SN/Gal = 0.456365
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

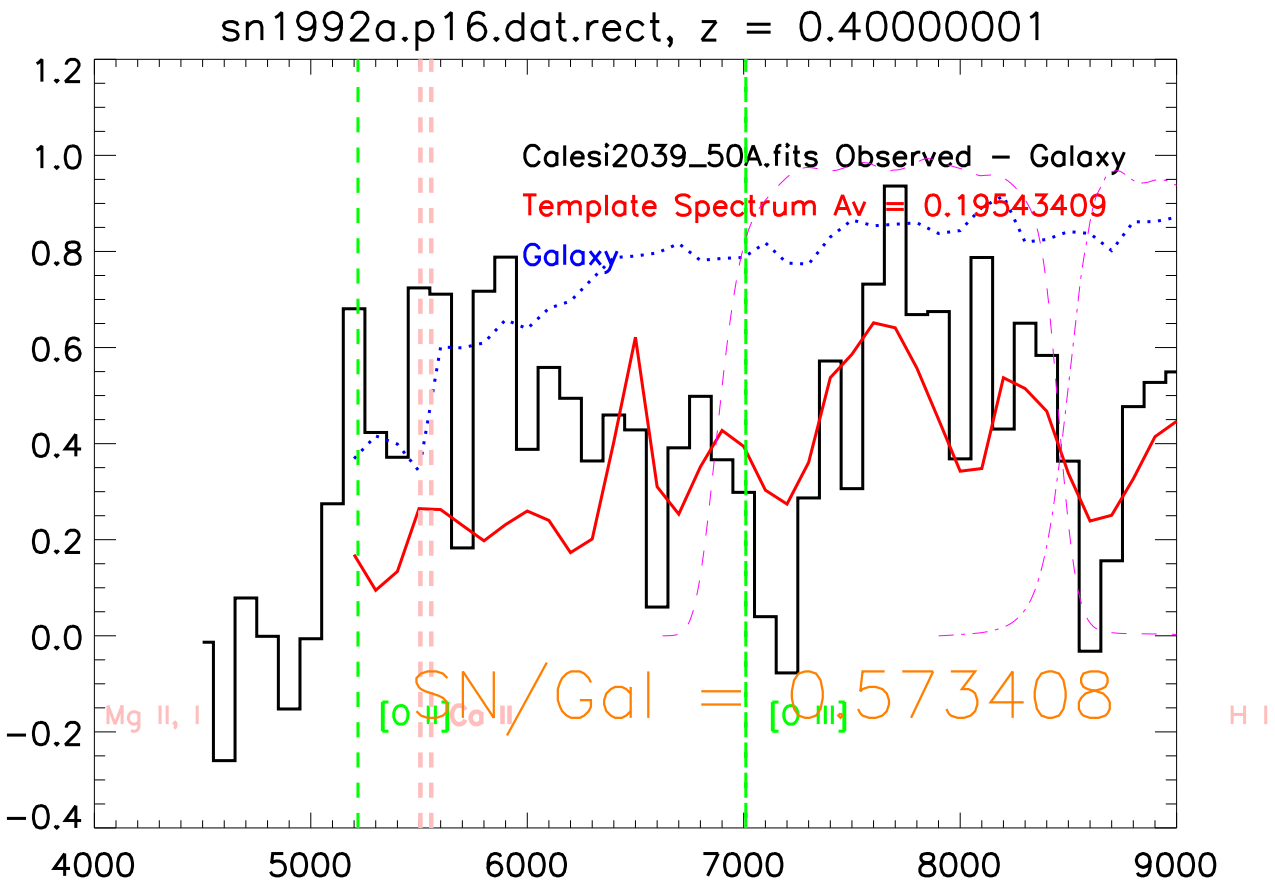

sn1991t.m08.dat.rect, z = 0.45000002
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.9810221
Galaxy
SN/Gal = 3.21580
Mg II, I
[O II]
Ca II
[O III]
H I
2.0
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

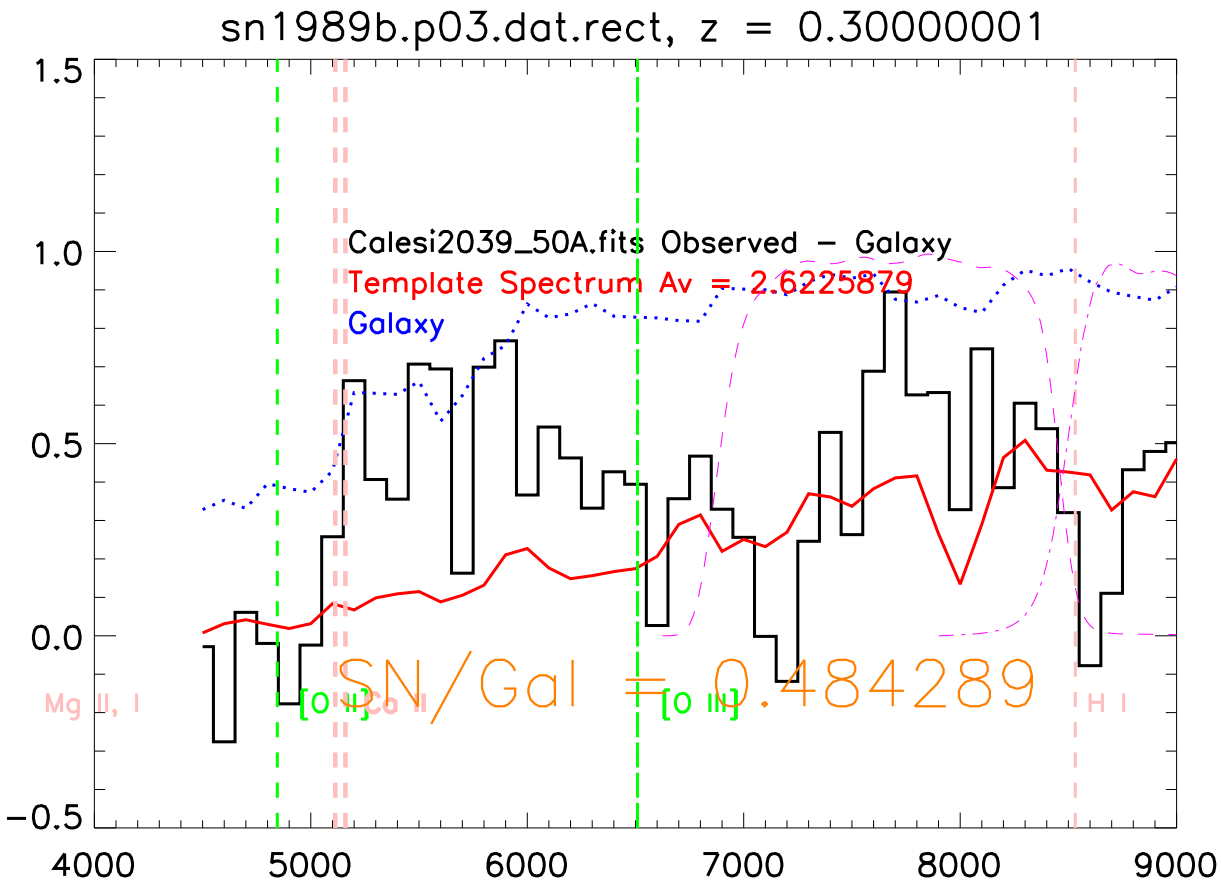

sn1991t.m07.dat.rect, z = 0.45000002
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.8686562
Galaxy
SN/Gal = 2.18511
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

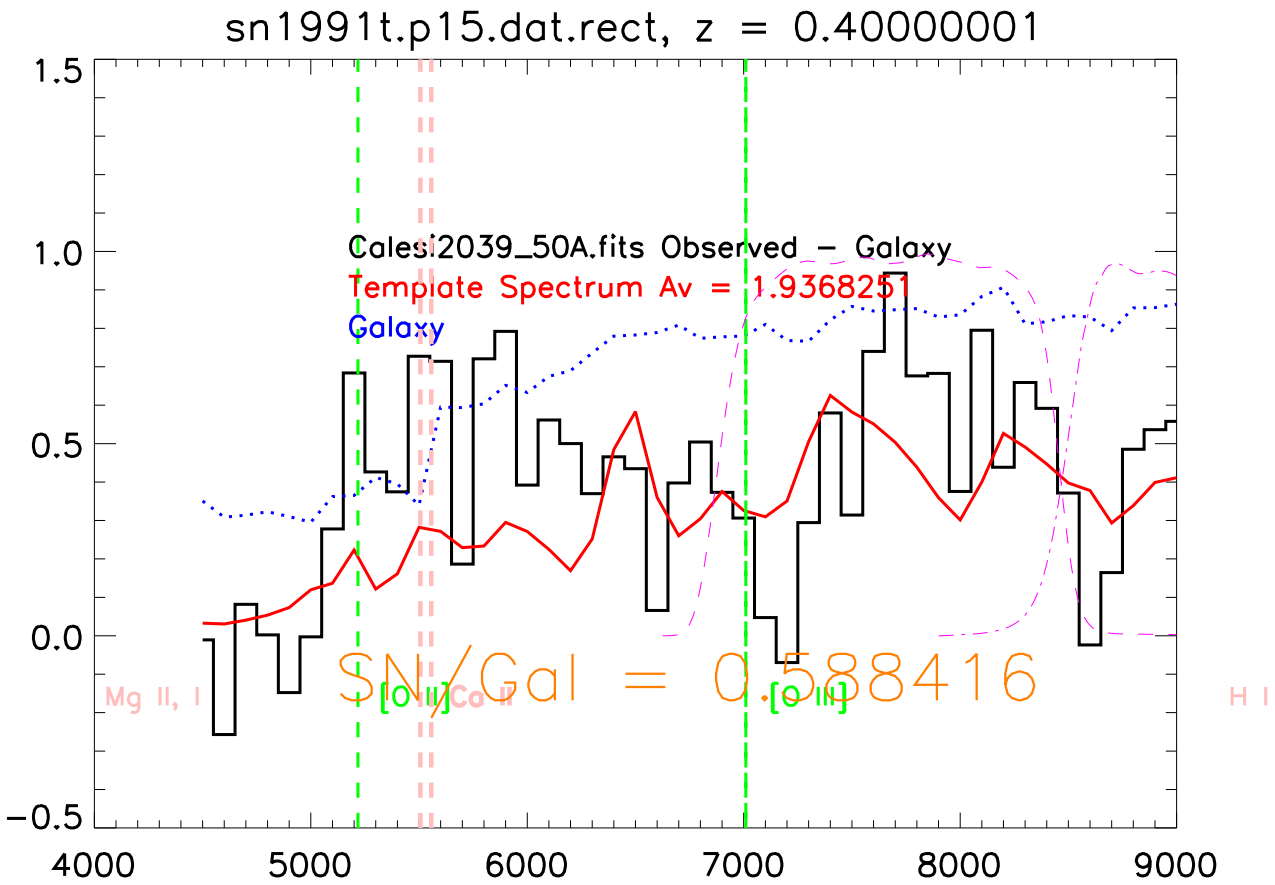

sn1999ee.p23.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 0.51990459
Galaxy
SN/Gal = 0.487726
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

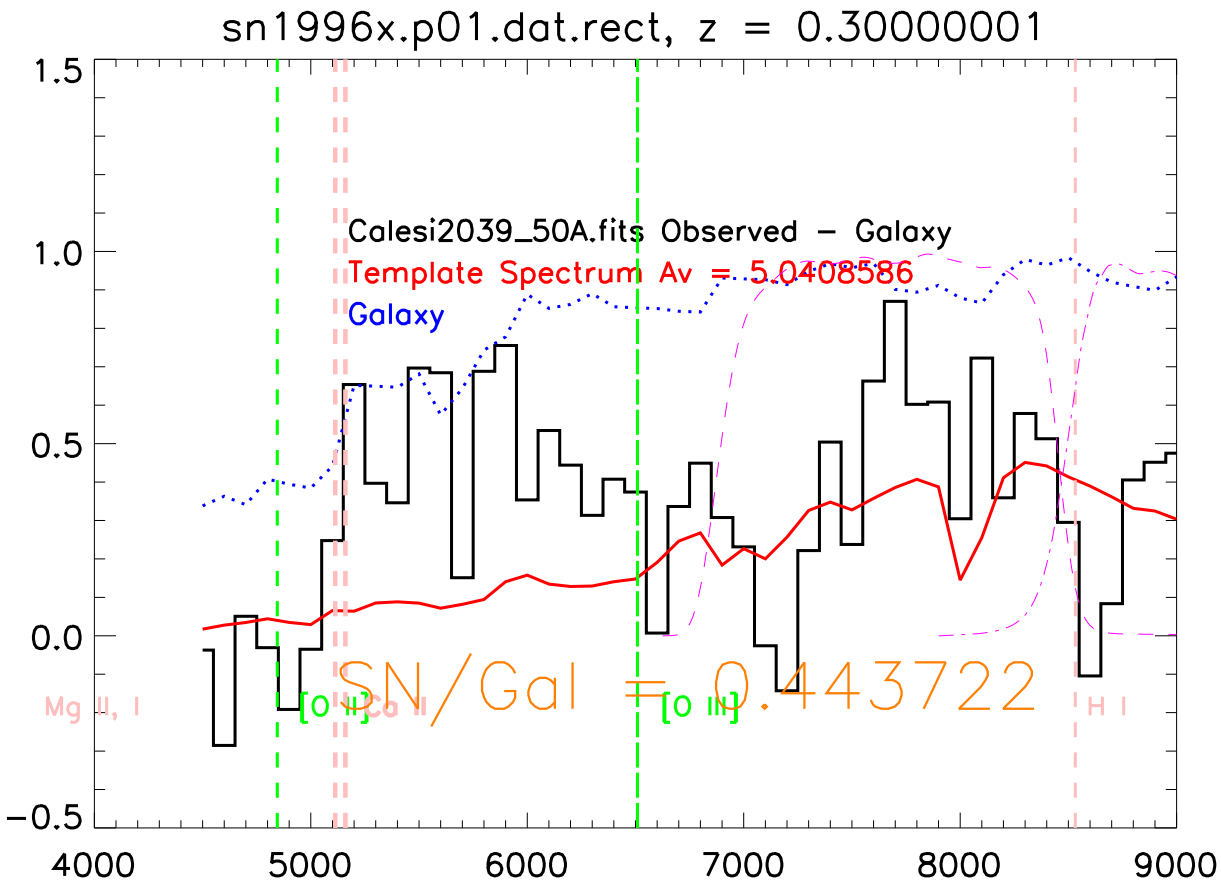

sn1992a.p28.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −0.76671014
Galaxy
SN/Gal = 0.587049
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

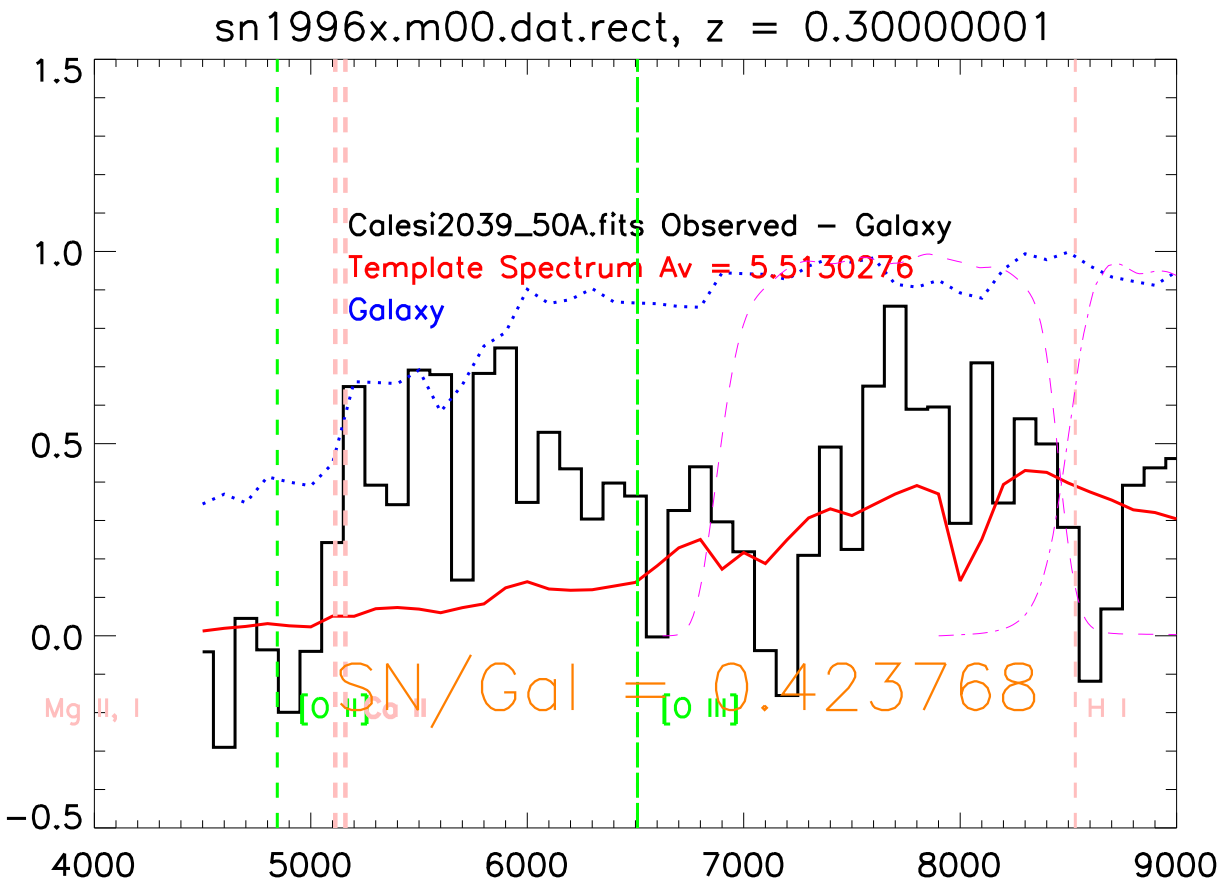

sn1996x.p07.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.5857027
Galaxy
SN/Gal = 0.698074
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

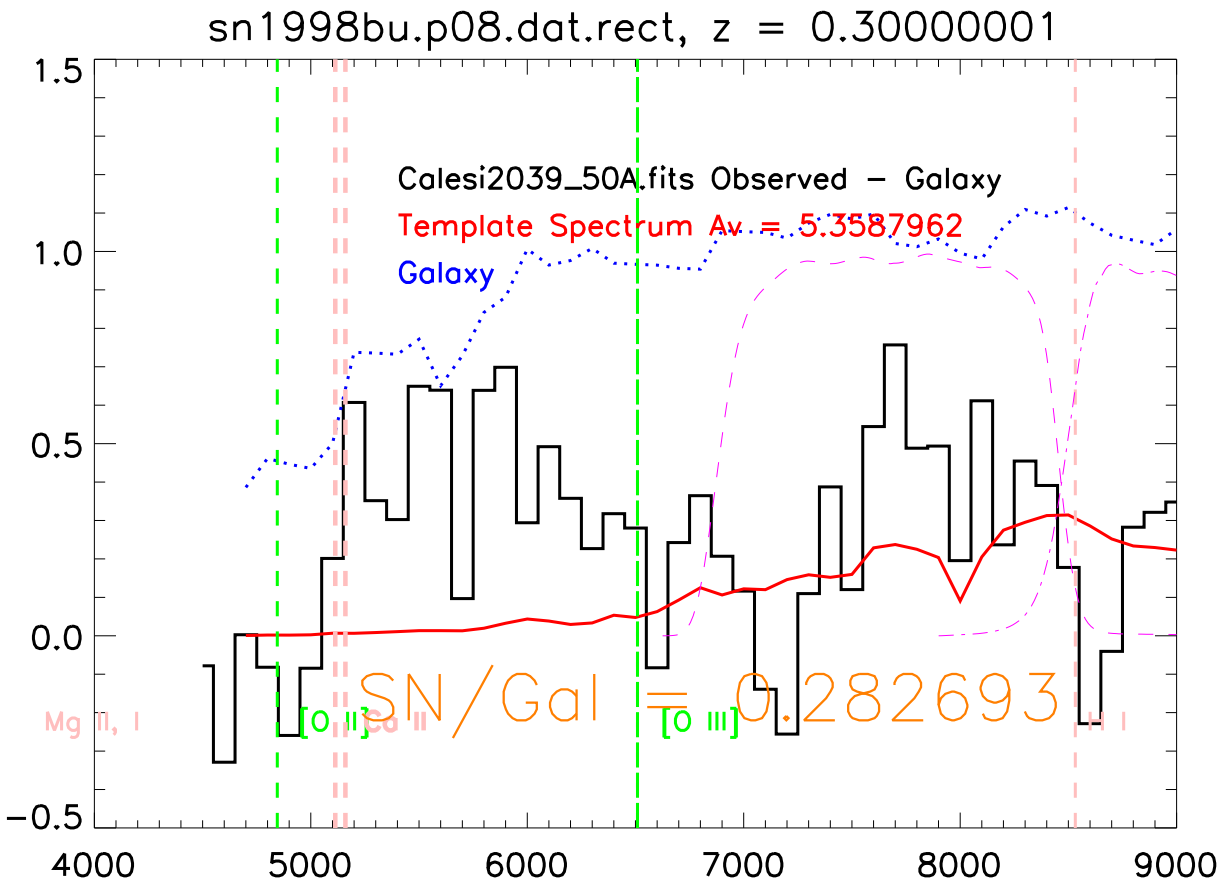

sn1992a.p16.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 0.19543409
Galaxy
SN/Gal = 0.573408
Mg II, I
[O II]
Ca II
[O III]
H I
1.2
1.0
0.8
0.6
0.4
0.2
0.0
−0.2
−0.4
4000
5000
6000
7000
8000
9000

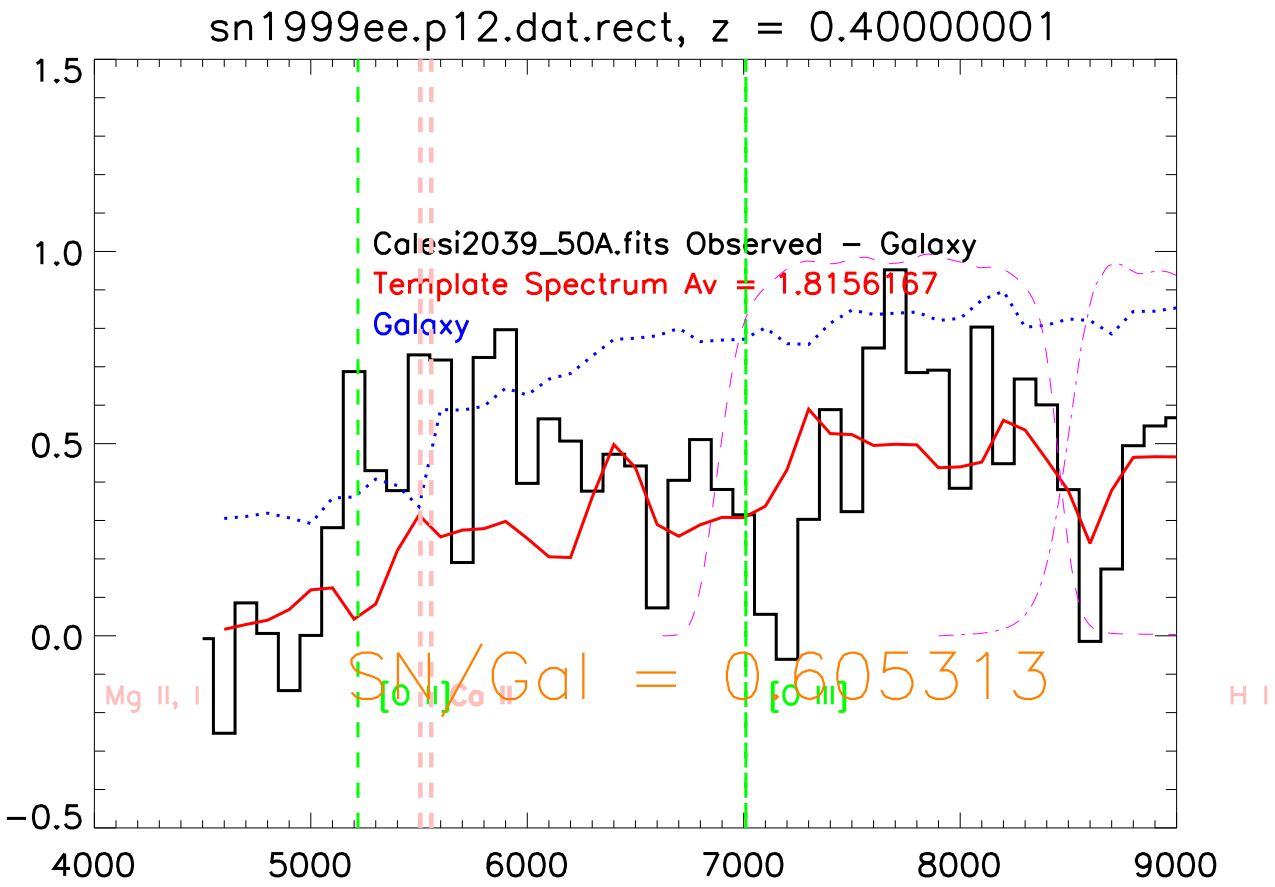

sn1989b.p03.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.6225879
Galaxy
SN/Gal = 0.484289
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

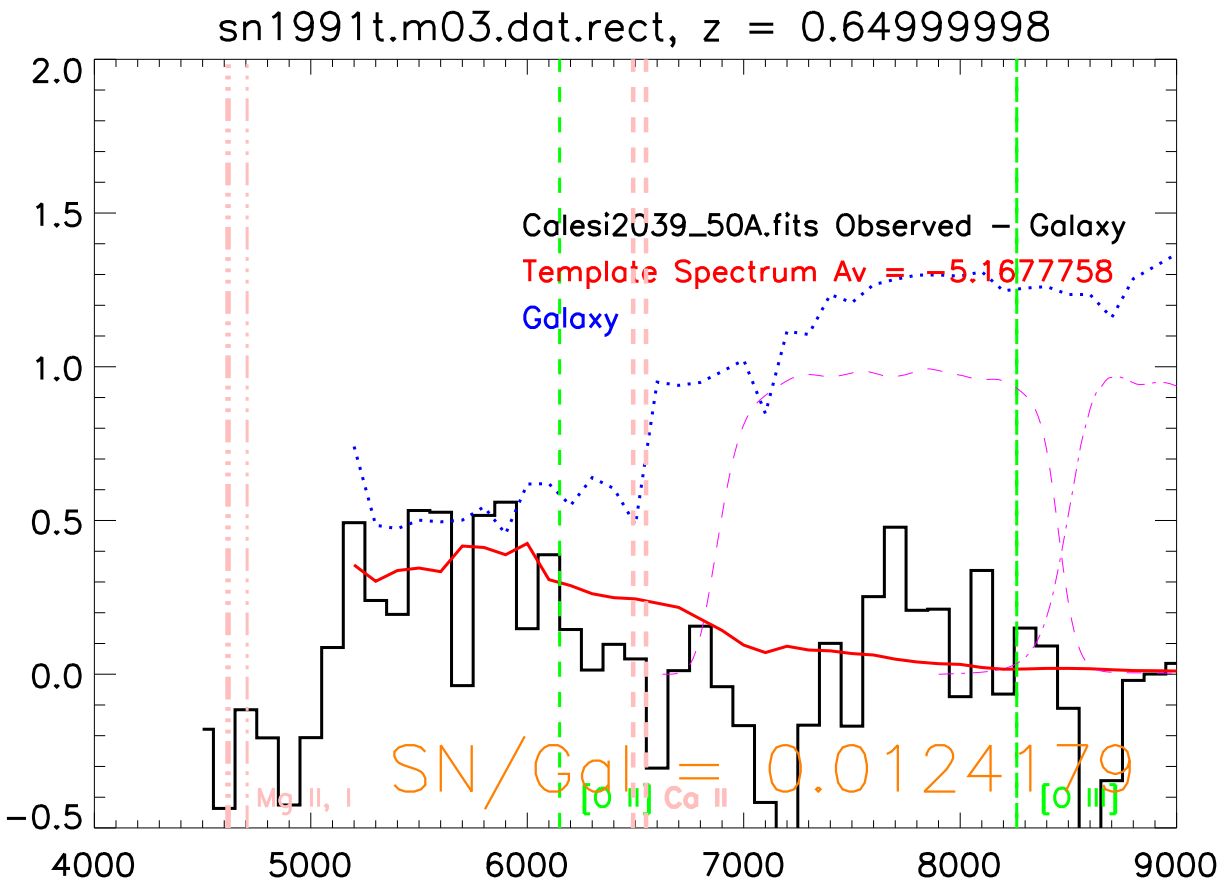

sn1991t.p15.dat.rect, z = 0.40000001
Cales!2039_50A.fits Observed − Galaxy
Template Spectrum Av = 1.9368251
Galaxy
SN/Gal = 0.588416
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

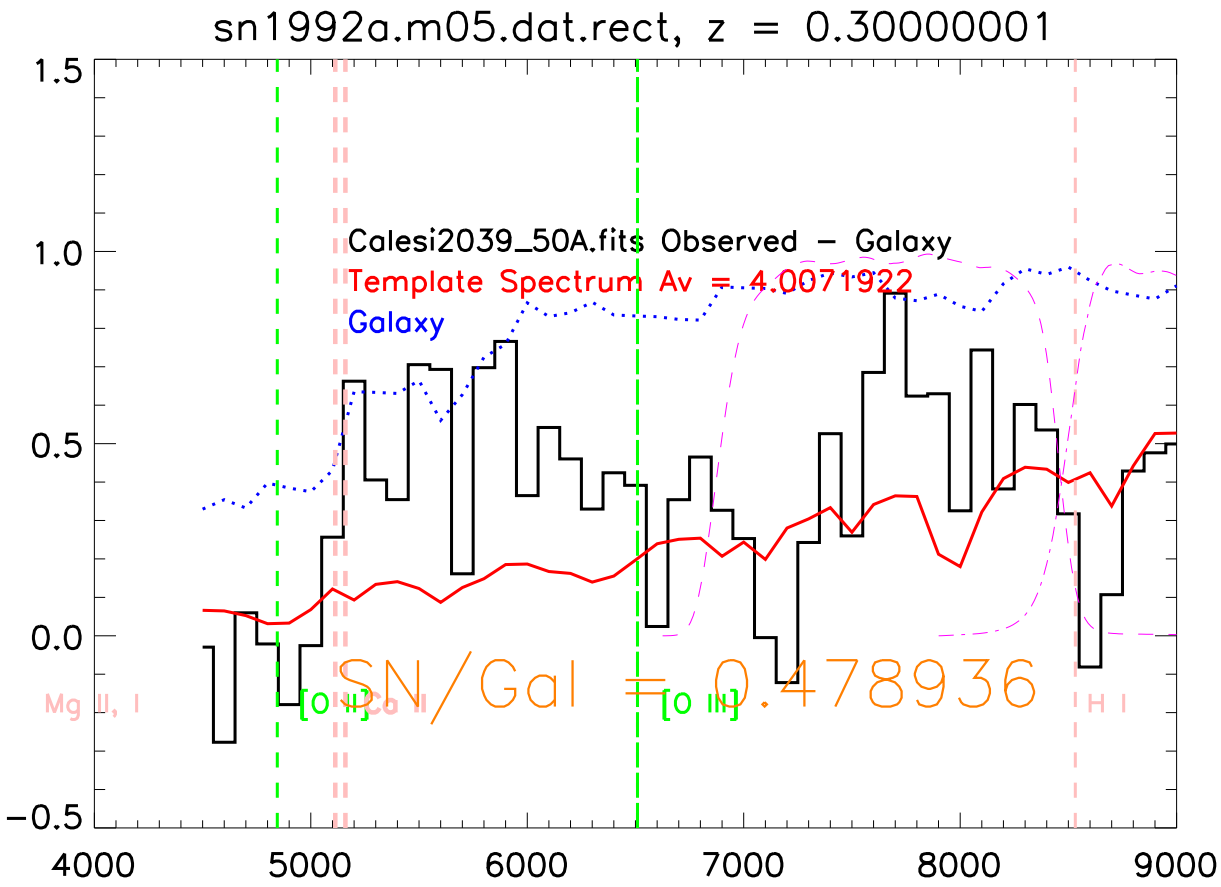

sn1996x.p01.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 5.0408586
Galaxy
SN/Gal = 0.443722
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

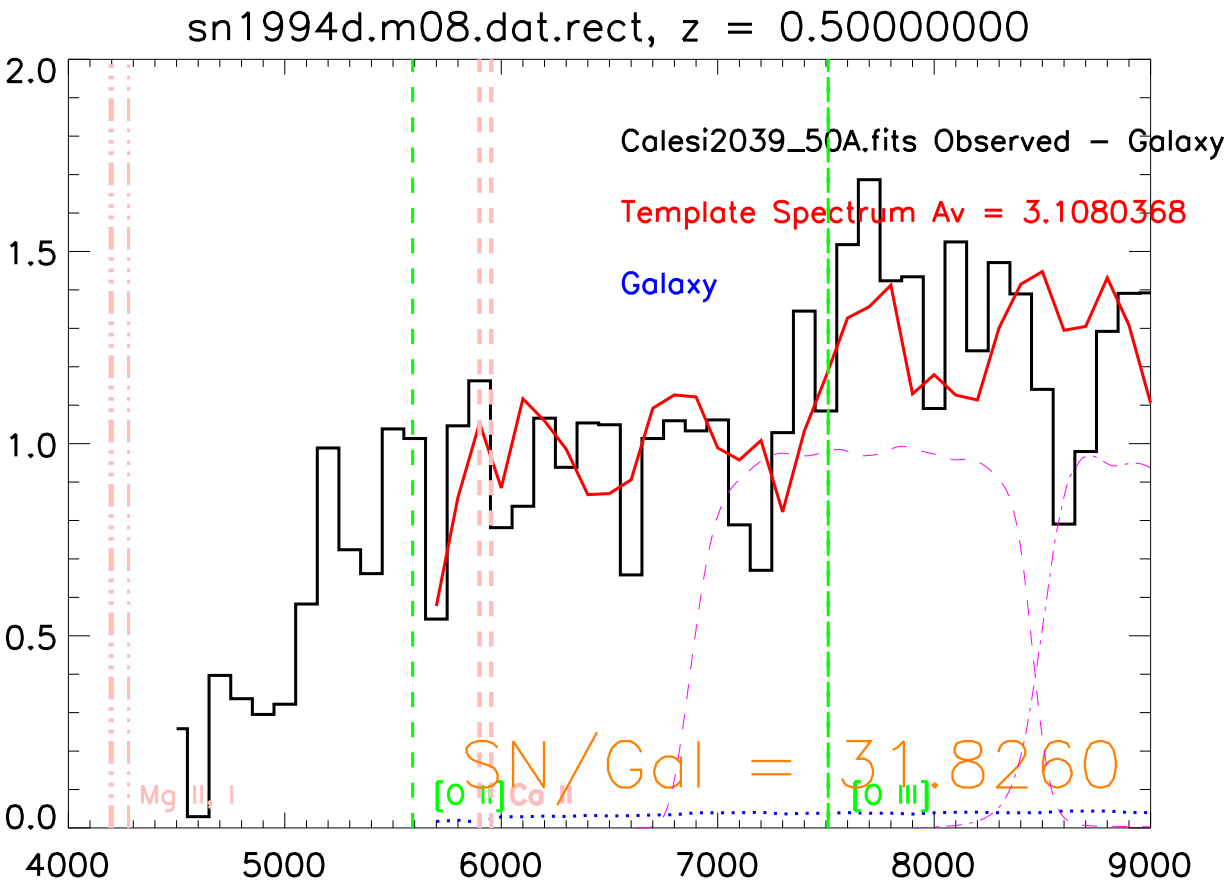

sn1996x.m00.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 5.5130276
Galaxy
SN/Gal = 0.423768
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

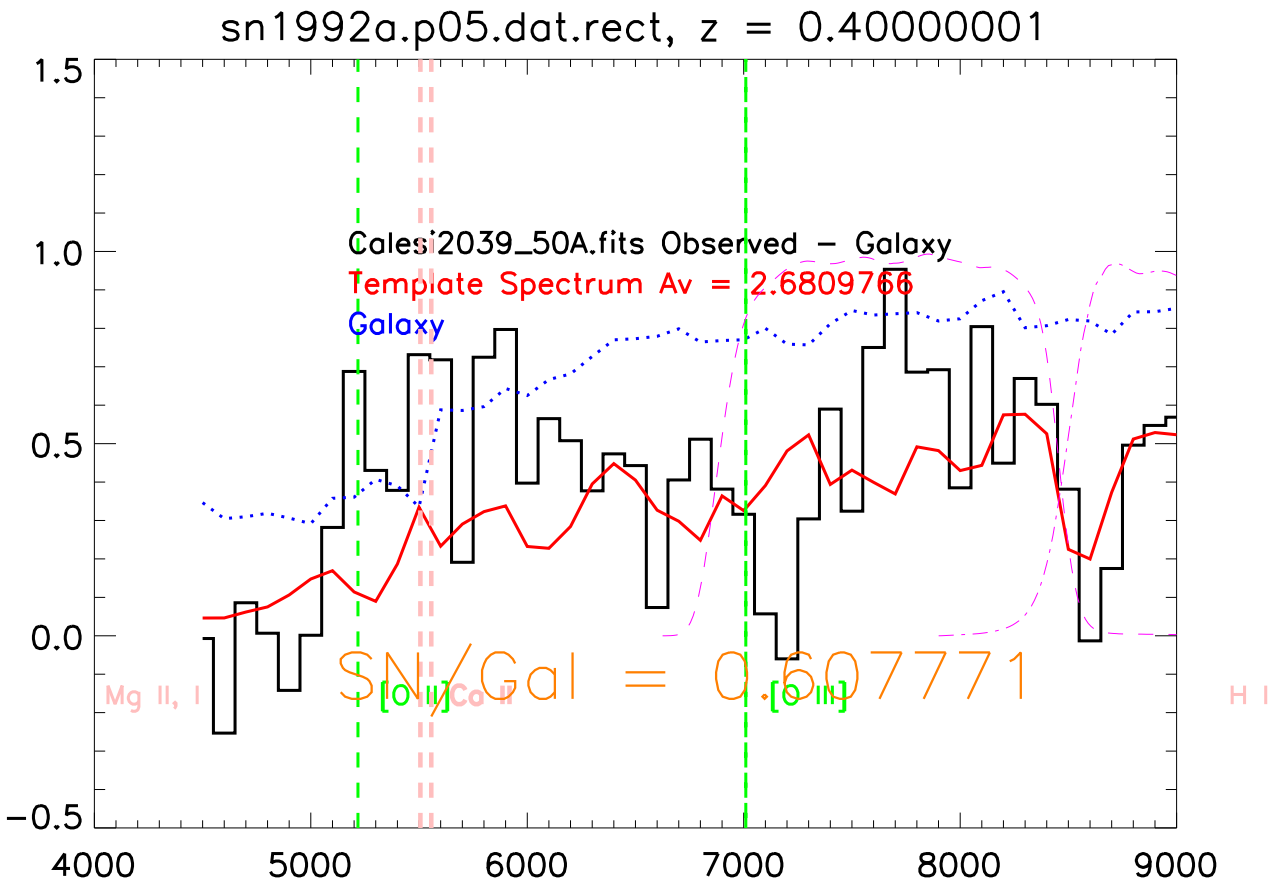

sn1998bu.p08.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 5.3587962
Galaxy
SN/Gal = 0.282693
Mg II, I
[O II]
Ca II
[O III]
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

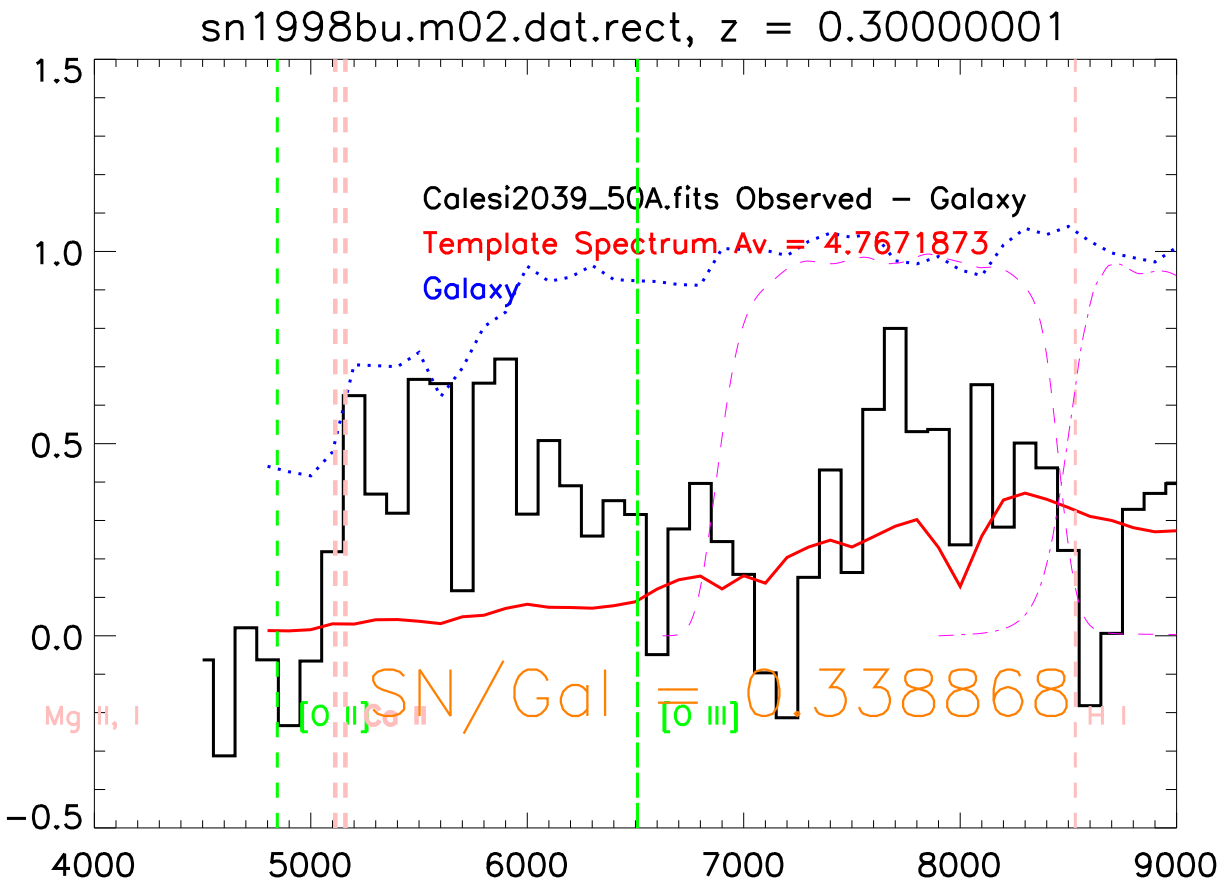

sn1999ee.p12.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 1.8156167
Galaxy
SN/Gal = 0.605313
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

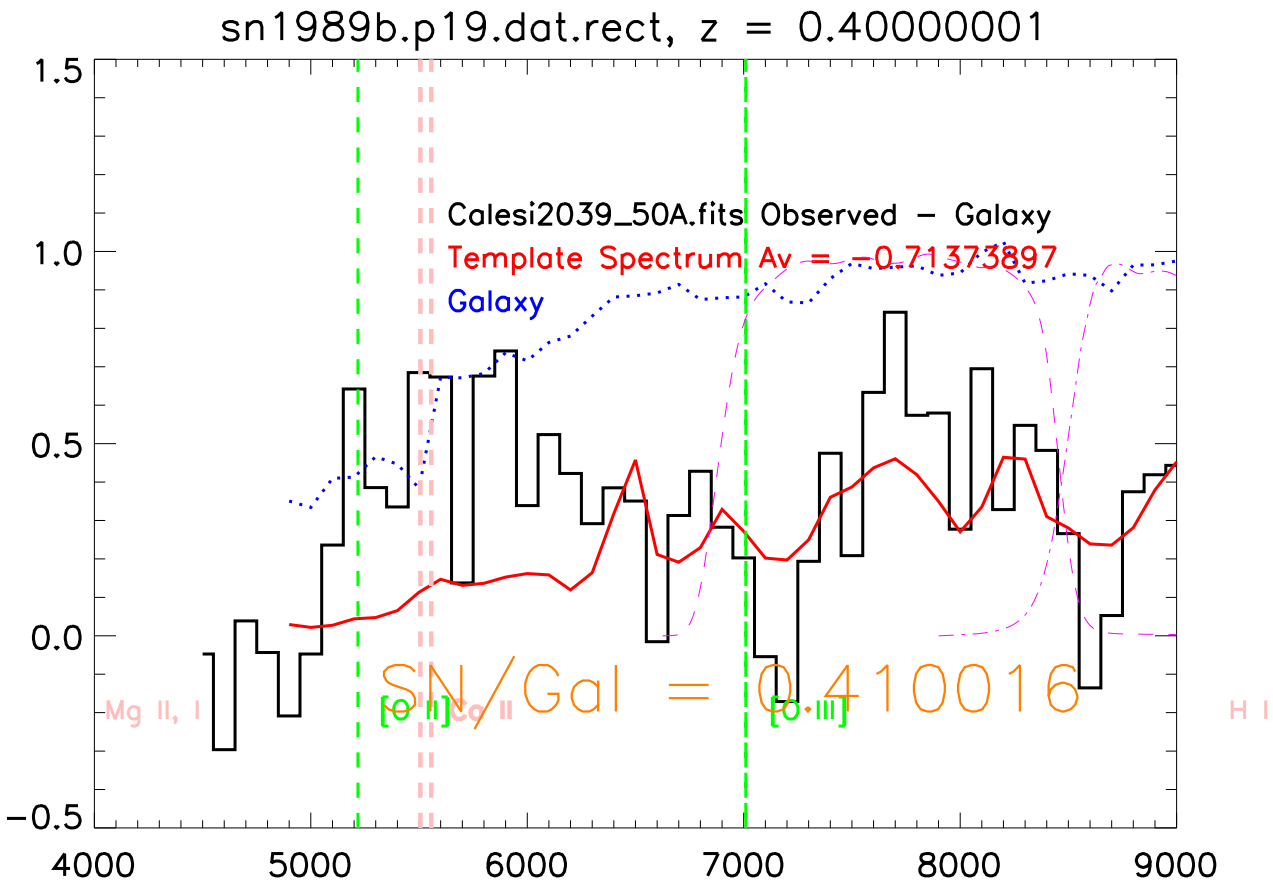

sn1991t.m03.dat.rect, z = 0.64999998
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −5.1677758
Galaxy
SN/Gal = 0.0124179
Mg II, I
[O II]
Ca II
[O III]
2.0
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

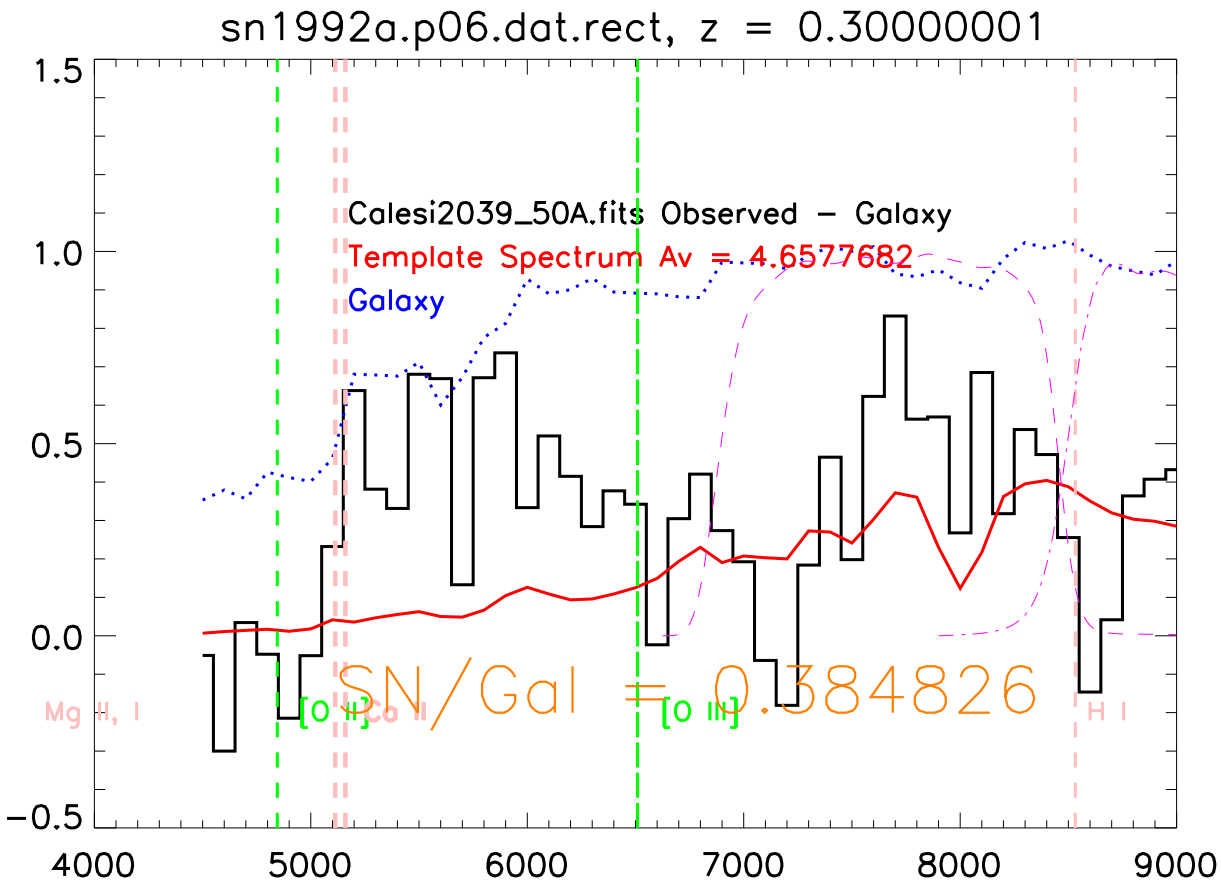

sn1992a.m05.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 4.0071922
Galaxy
SN/Gal = 0.478936
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

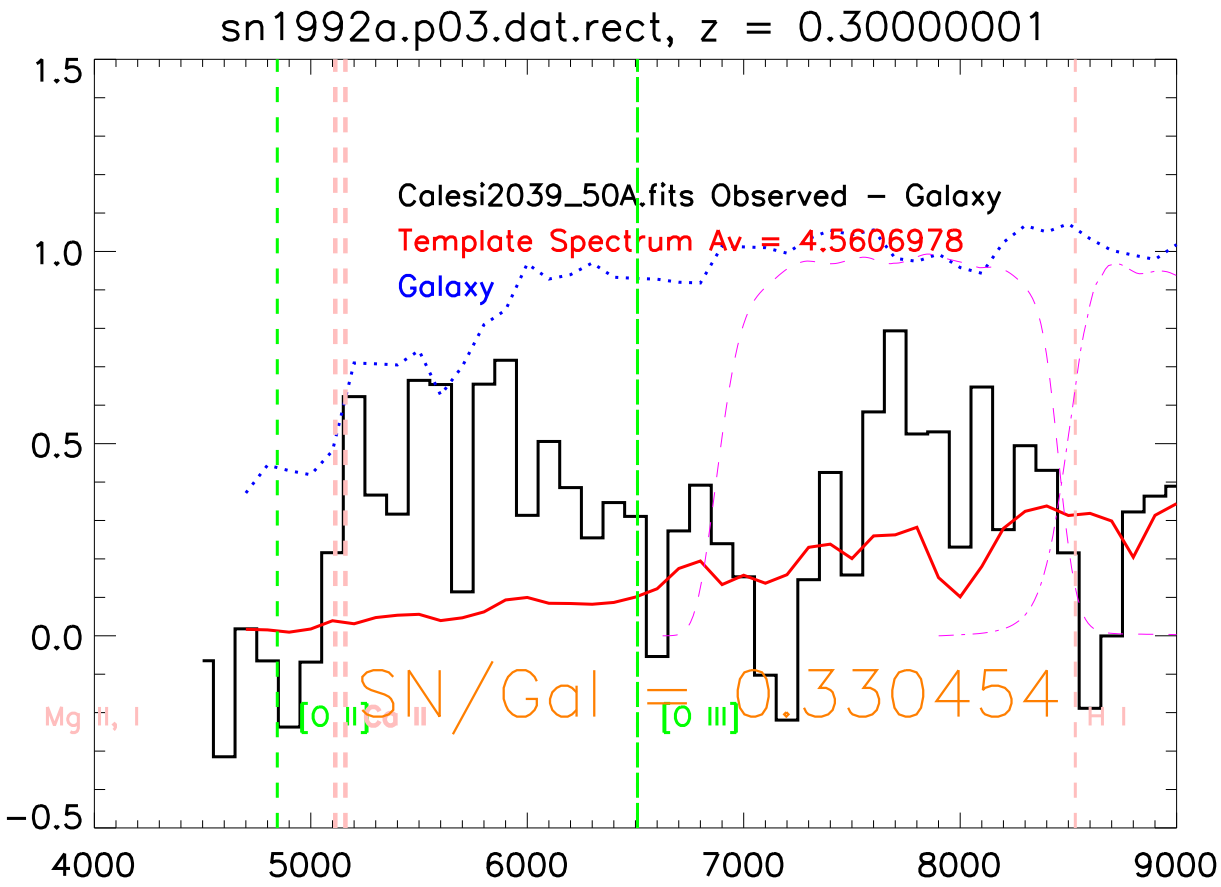

sn1994d.m08.dat.rect, z = 0.50000000
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 3.1080368
Galaxy
SN/Gal = 31.8260
Mg II
[O II]
Ca II
[O III]
2.0
1.5
1.0
0.5
0.0
4000
5000
6000
7000
8000
9000

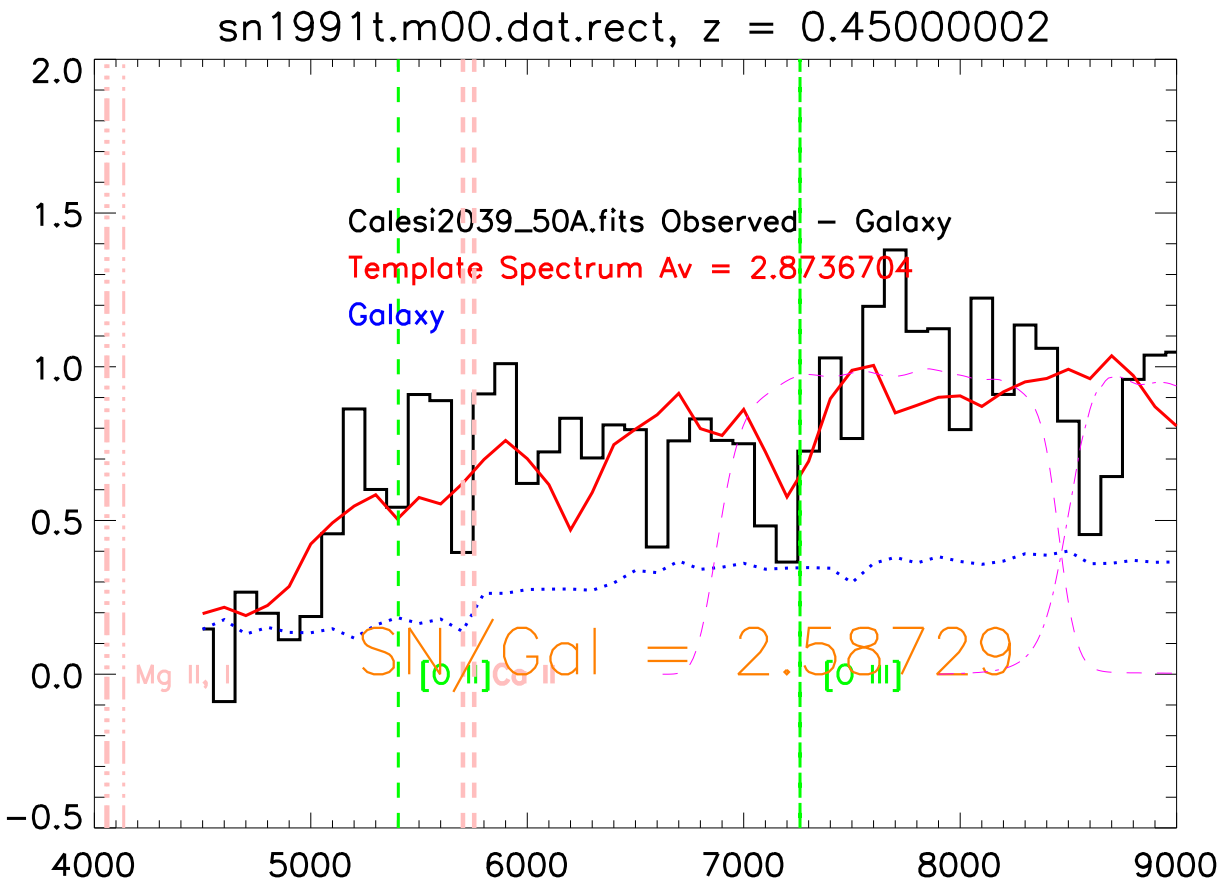

sn1992a.p05.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.6809766
Galaxy
SN/Gal = 0.607771
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

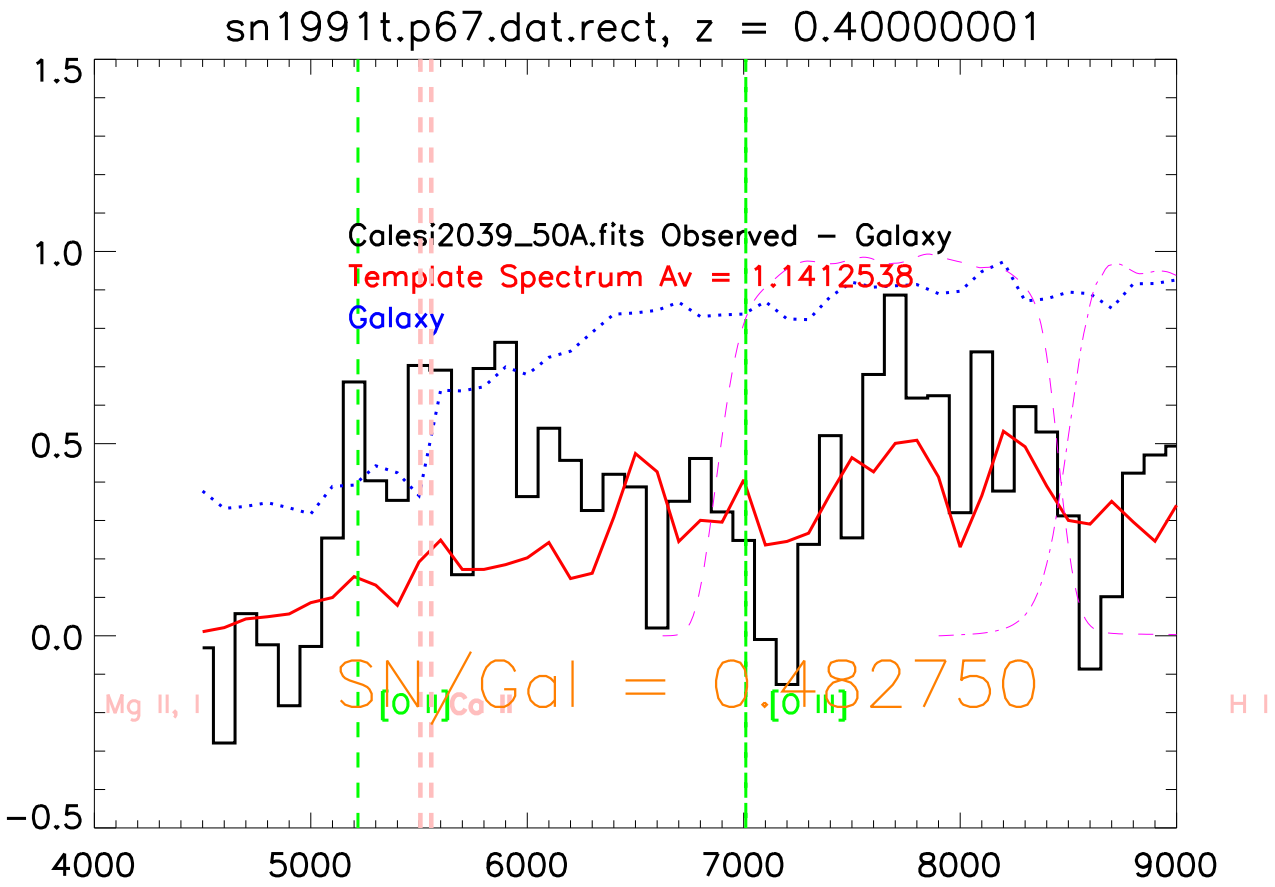

sn1998bu.m02.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av. = 4.7671873
Galaxy
SN/Gal = 0.338868
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

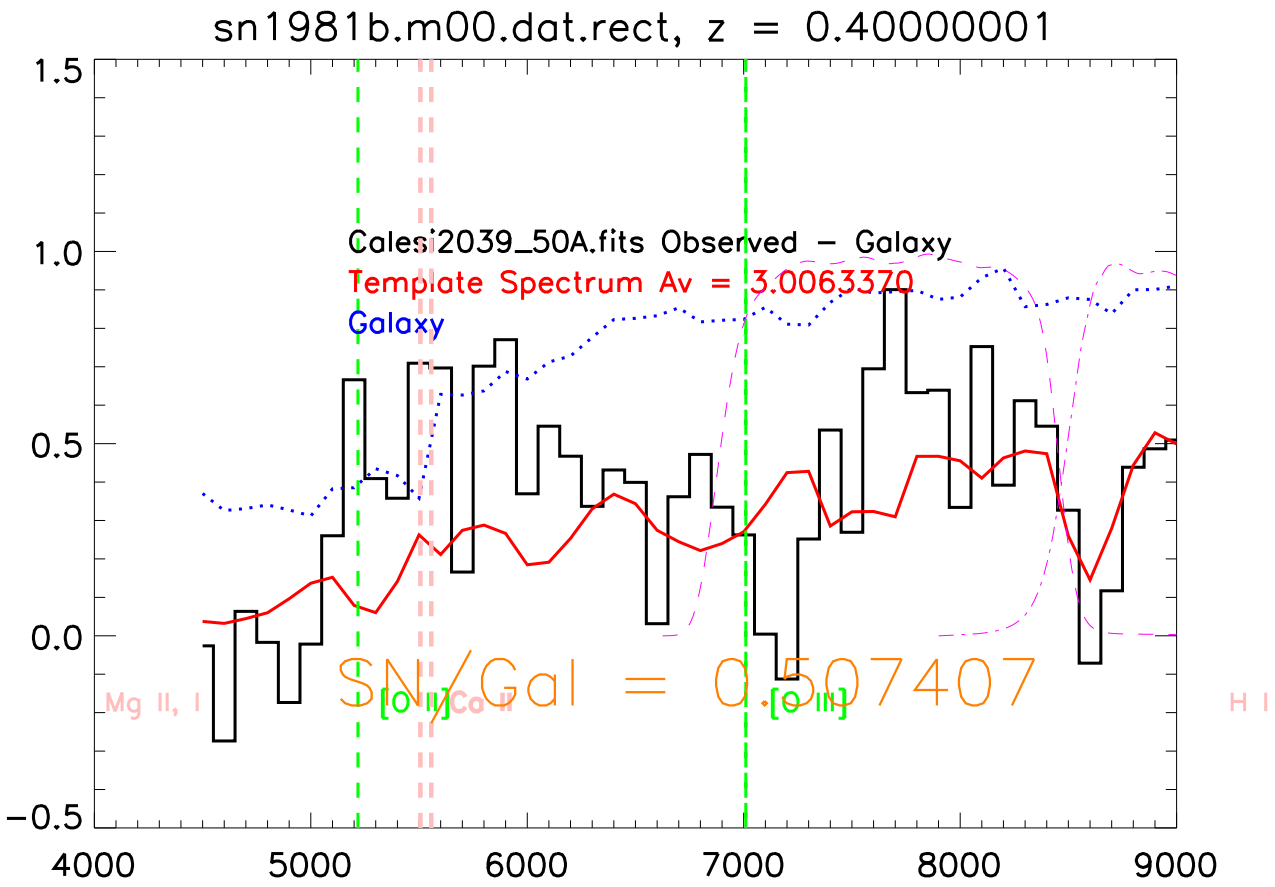

sn1989b.p19.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −0.71373897
Galaxy
SN/Gal = 0.410016
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

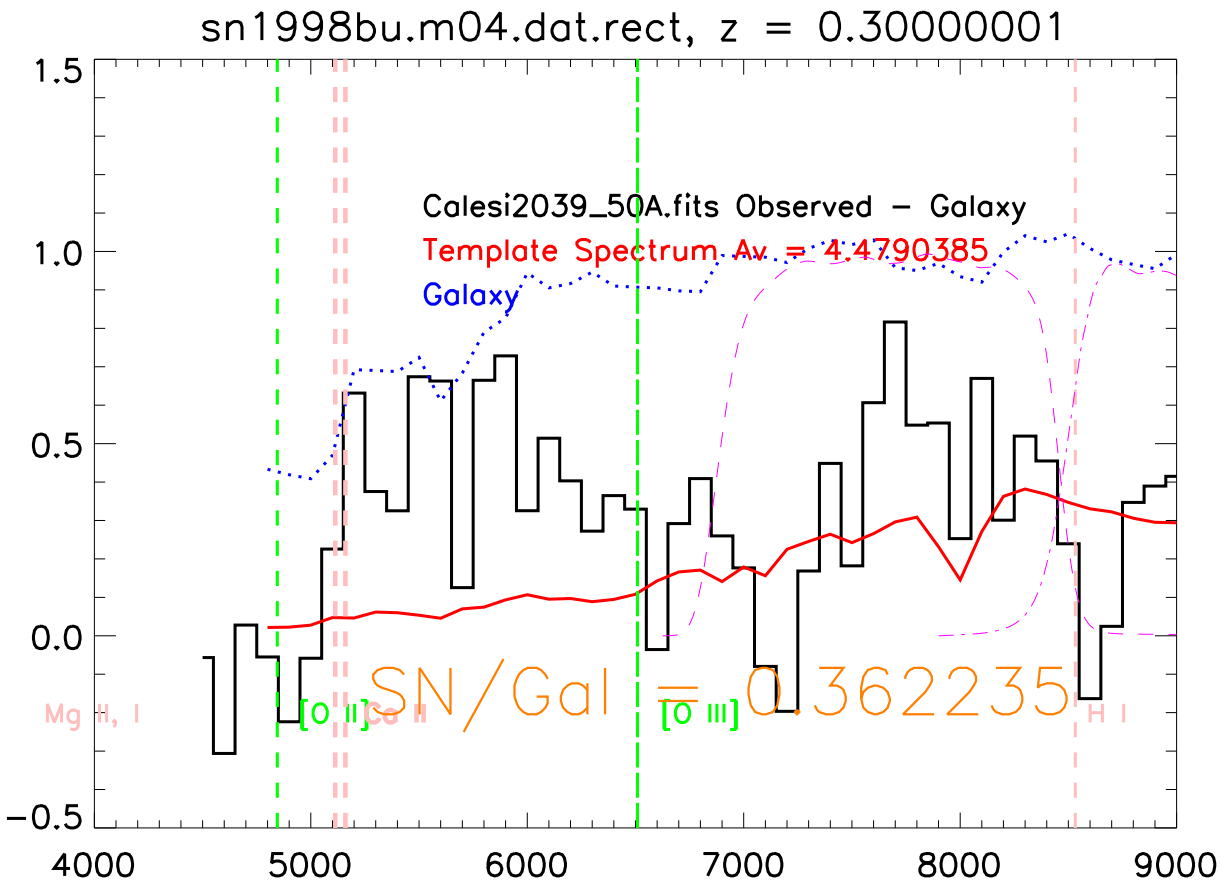

sn1992a.p06.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 4.6577682
Galaxy
SN/Gal = 0.384826
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

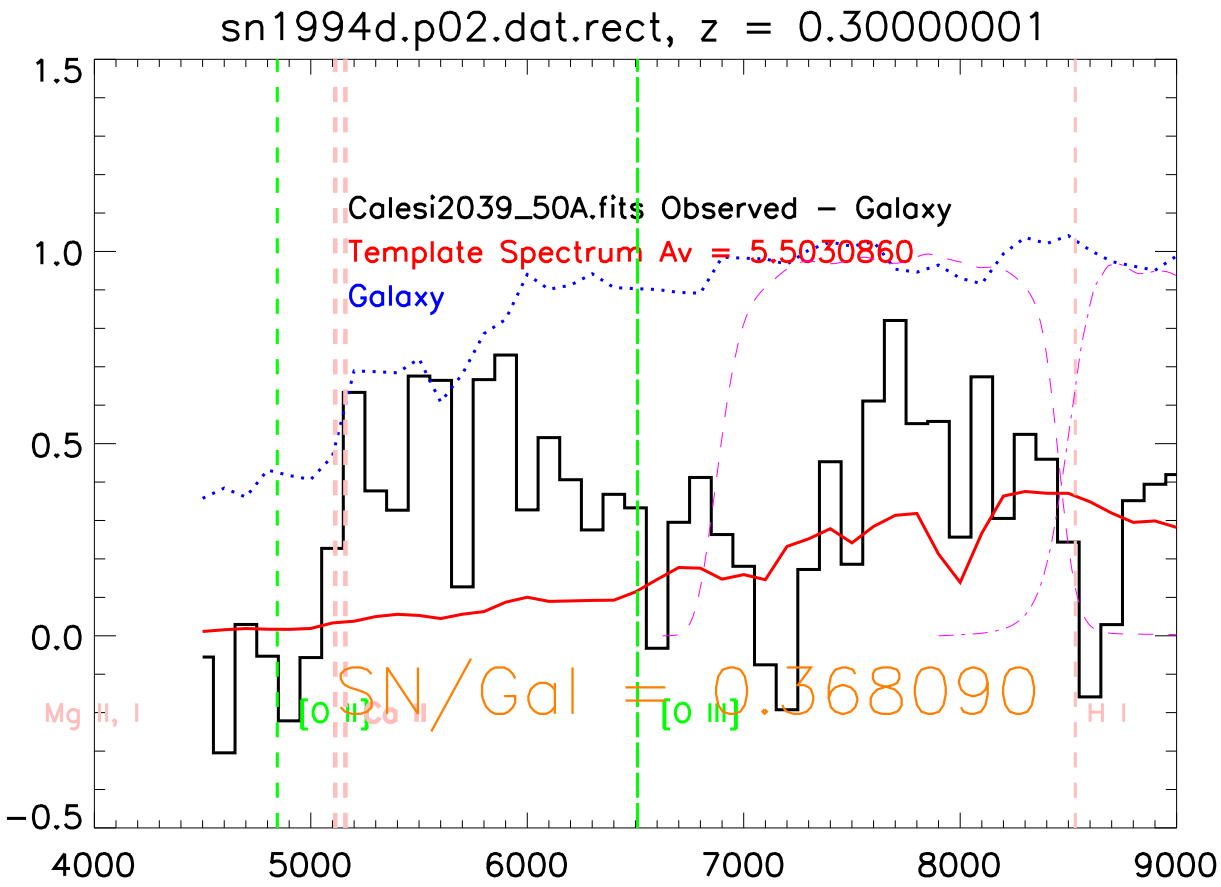

sn1992a.p03.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 4.5606978
Galaxy
SN/Gal = 0.330454
[O II]
[O III]
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

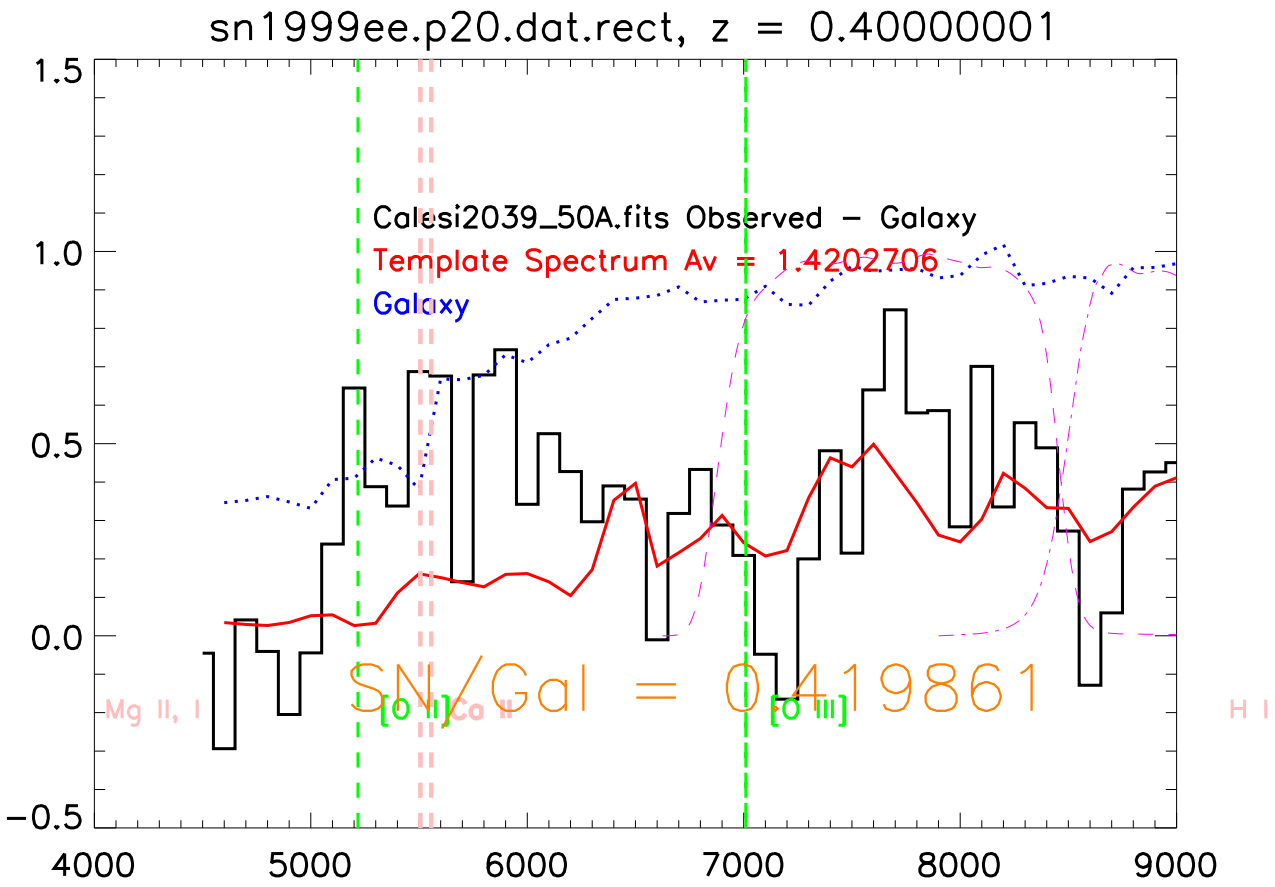

sn1991t.m00.dat.rect, z = 0.45000002
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.8736704
Galaxy
SN/Gal = 2.58729
[O II]
[O III]
2.0
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

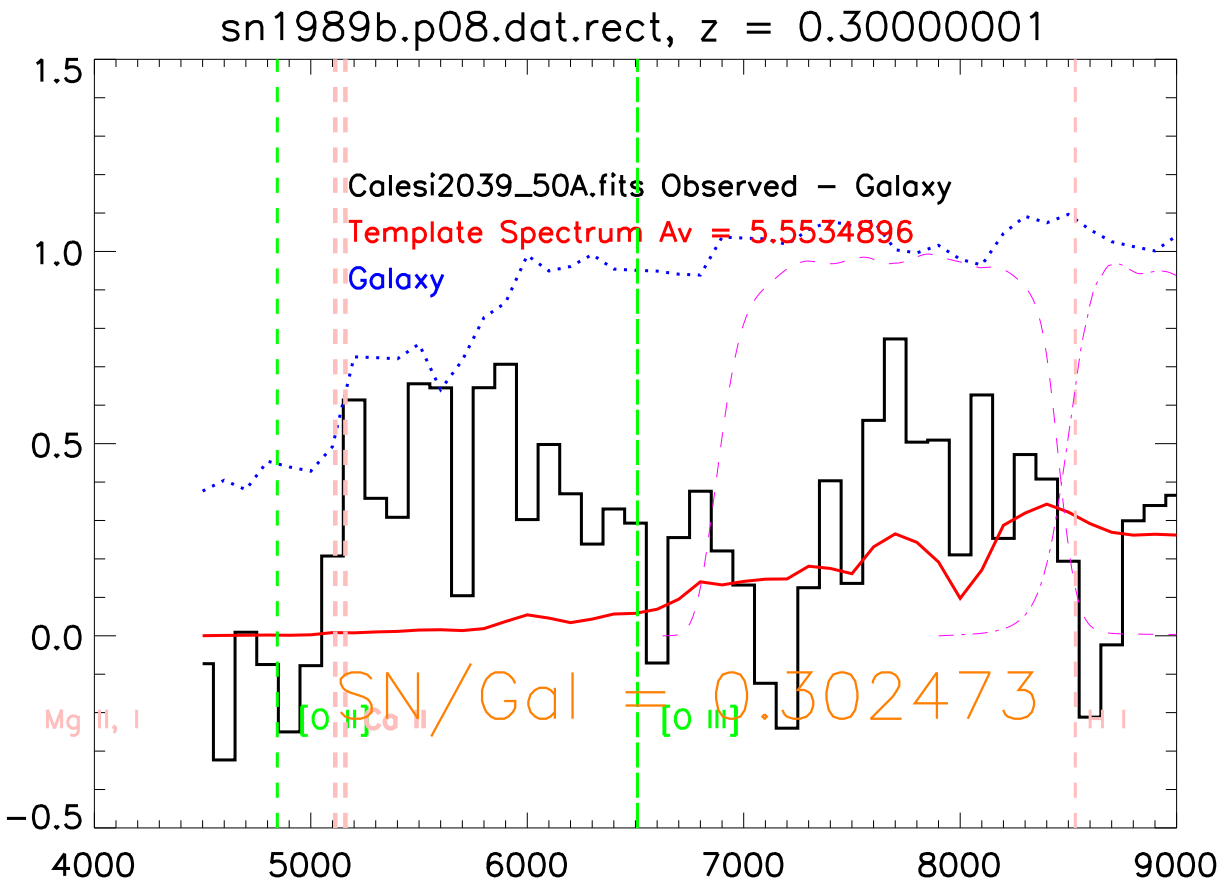

sn1991t.p67.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 1.1412538
Galaxy
SN/Gal = 0.482750
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

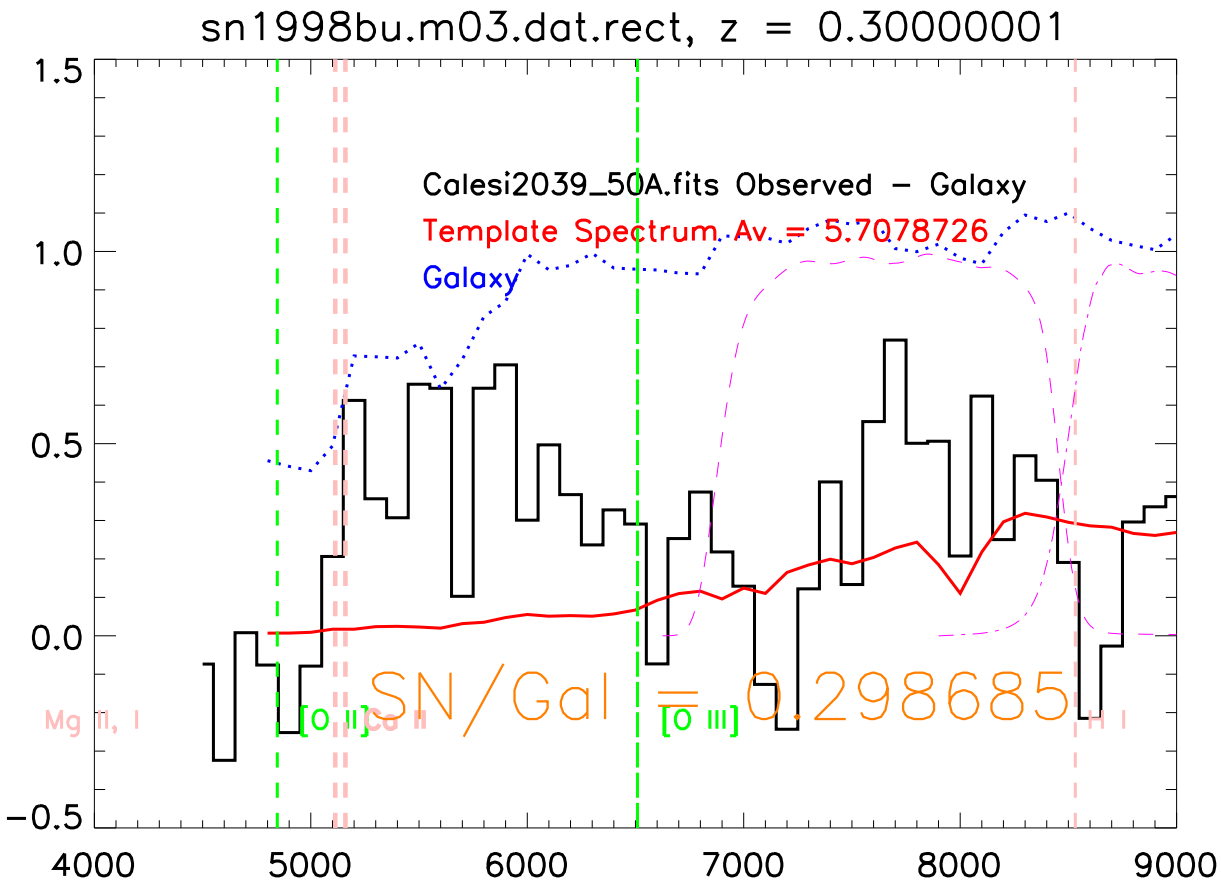

sn1981b.m00.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 3.0063370
Galaxy
SN/Gal = 0.507407
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

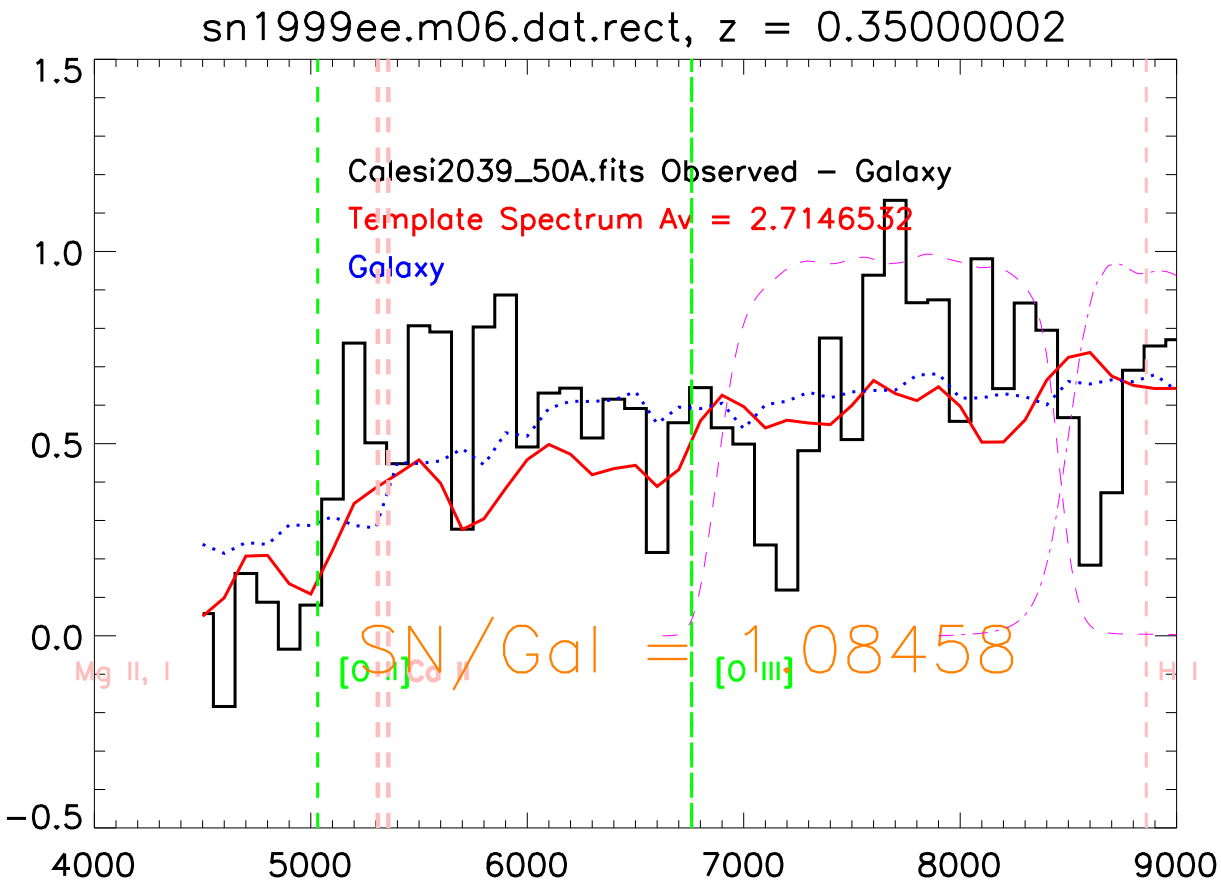

sn1998bu.m04.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 4.4790385
Galaxy
SN/Gal = 0.362235
[O II]
[O III]
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

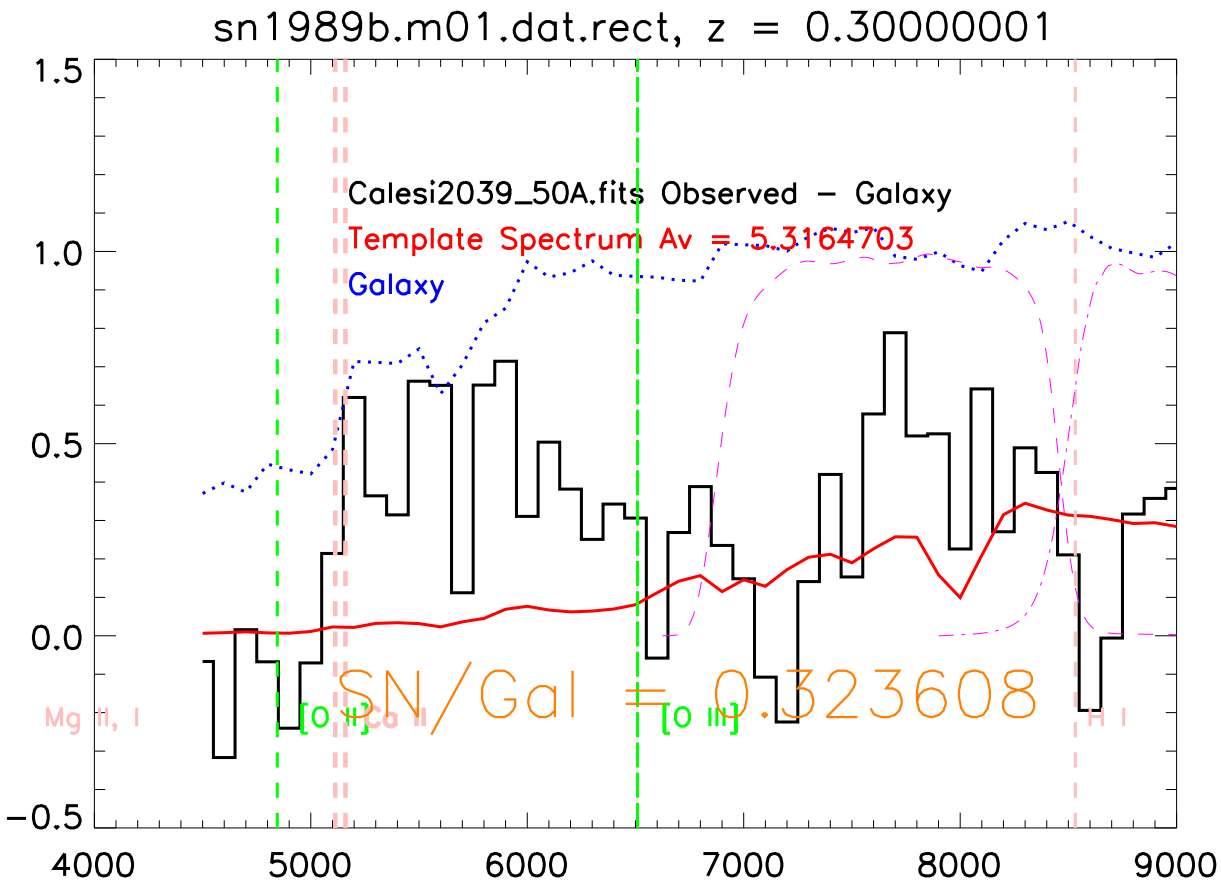

sn1994d.p02.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 5.5030860
Galaxy
SN/Gal = 0.0368090
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

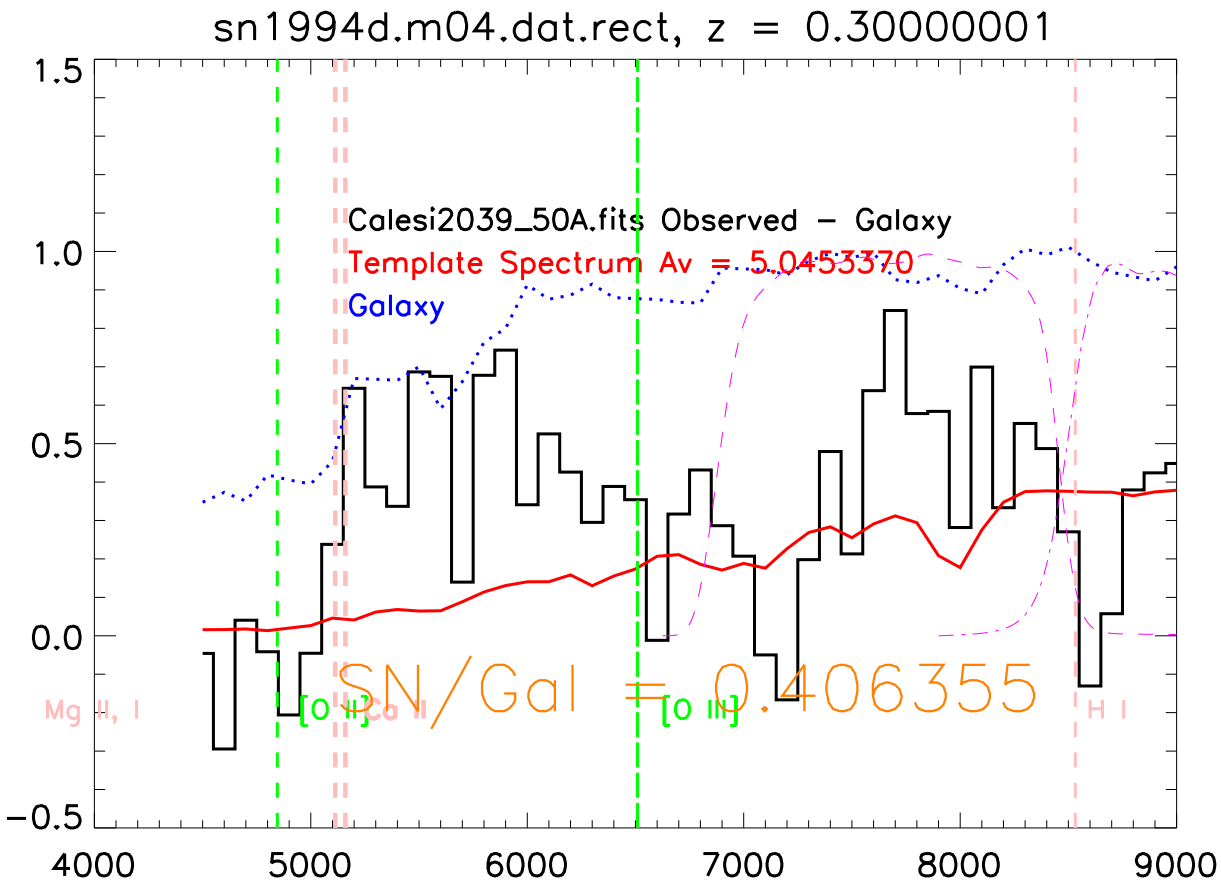

sn1999ee.p20.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 1.4202706
Galaxy
SN/Gal = 0.419861
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

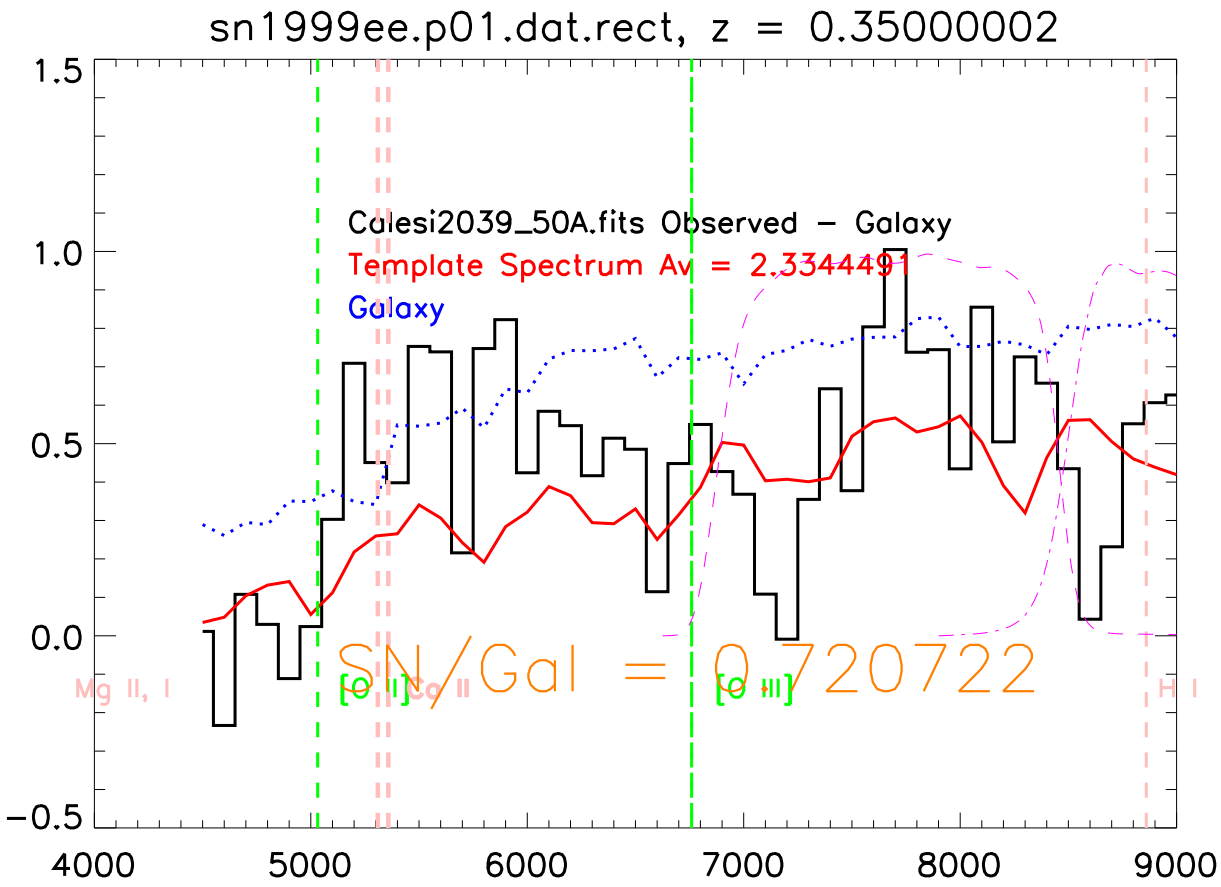

sn1989b.p08.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 5.5534896
Galaxy
SN/Gal = 0.302473
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

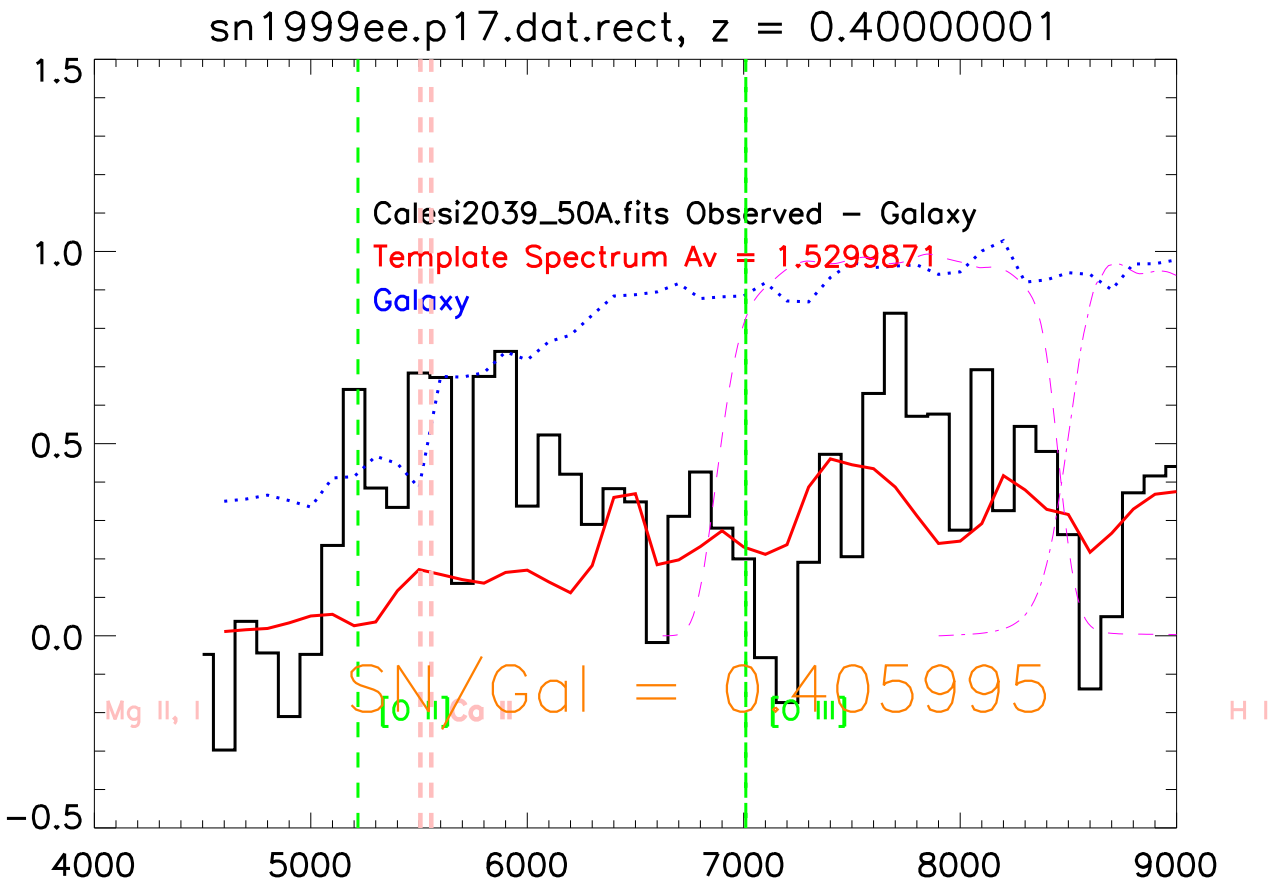

sn1998bu.m03.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av. = 5.7078726
Galaxy
SN/Gal = 0.298685
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

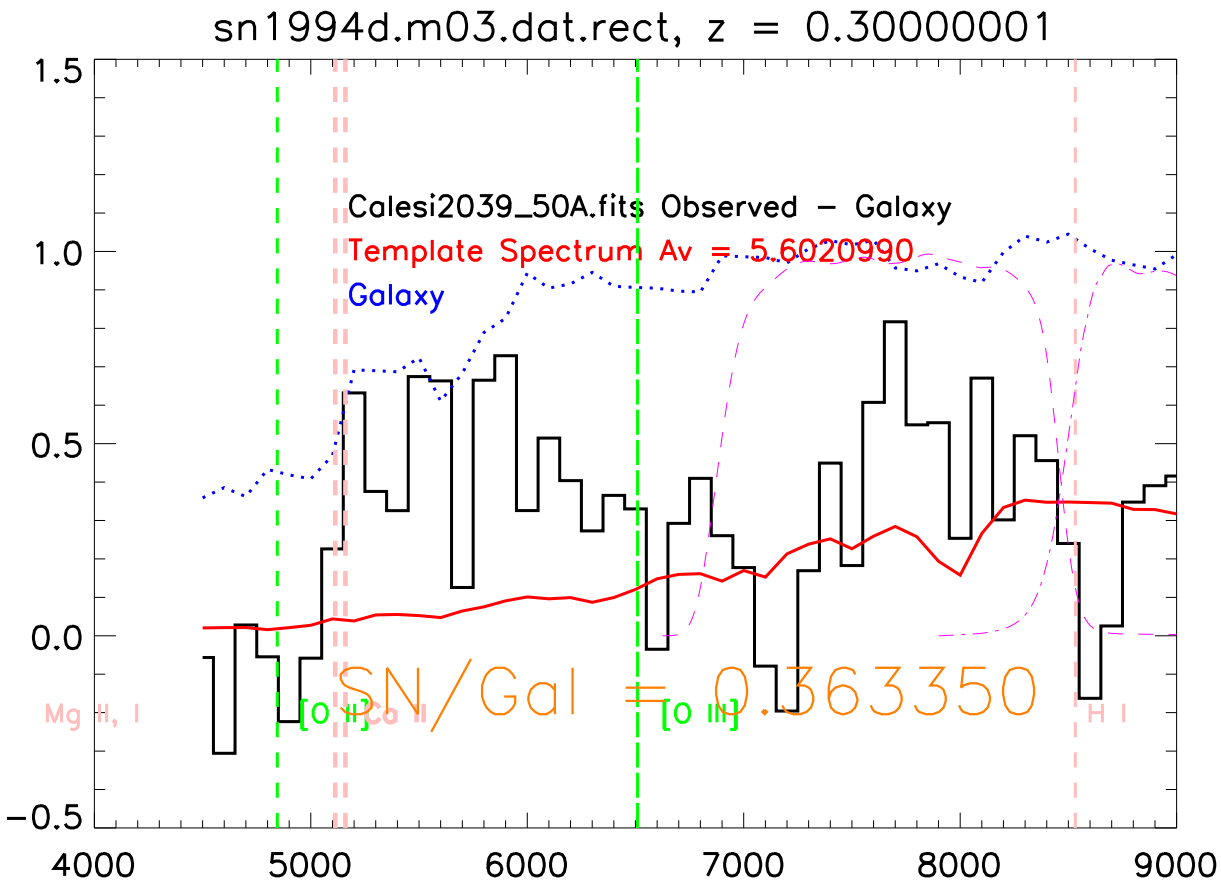

sn1999ee.m06.dat.rect, z = 0.35000002
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.7146532
Galaxy
SN/Gal = 1.08458
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

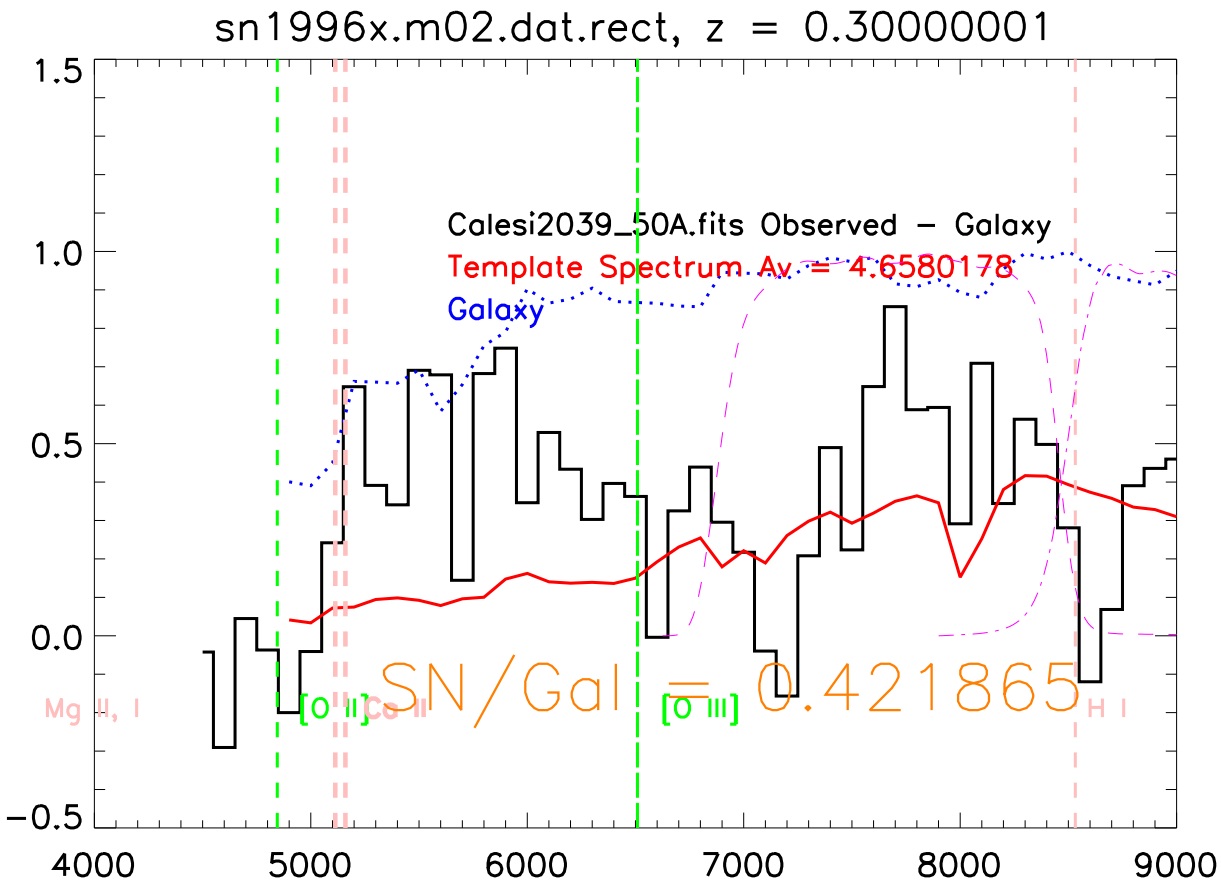

sn1989b.m01.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 5.3164703
Galaxy
SN/Gal = 0.323608
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

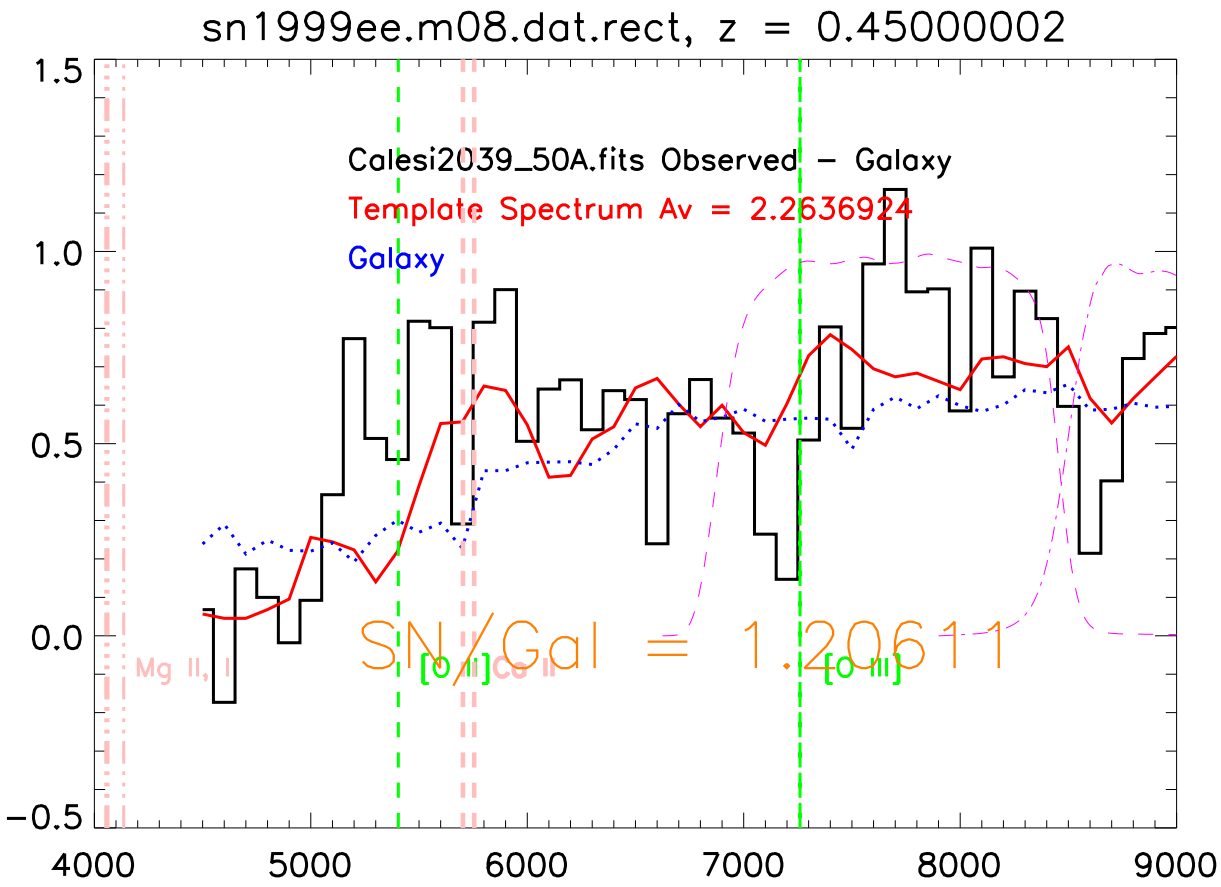

sn1994d.m04.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 5.0453370
Galaxy
SN/Gal = 0.406355
[O II]
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

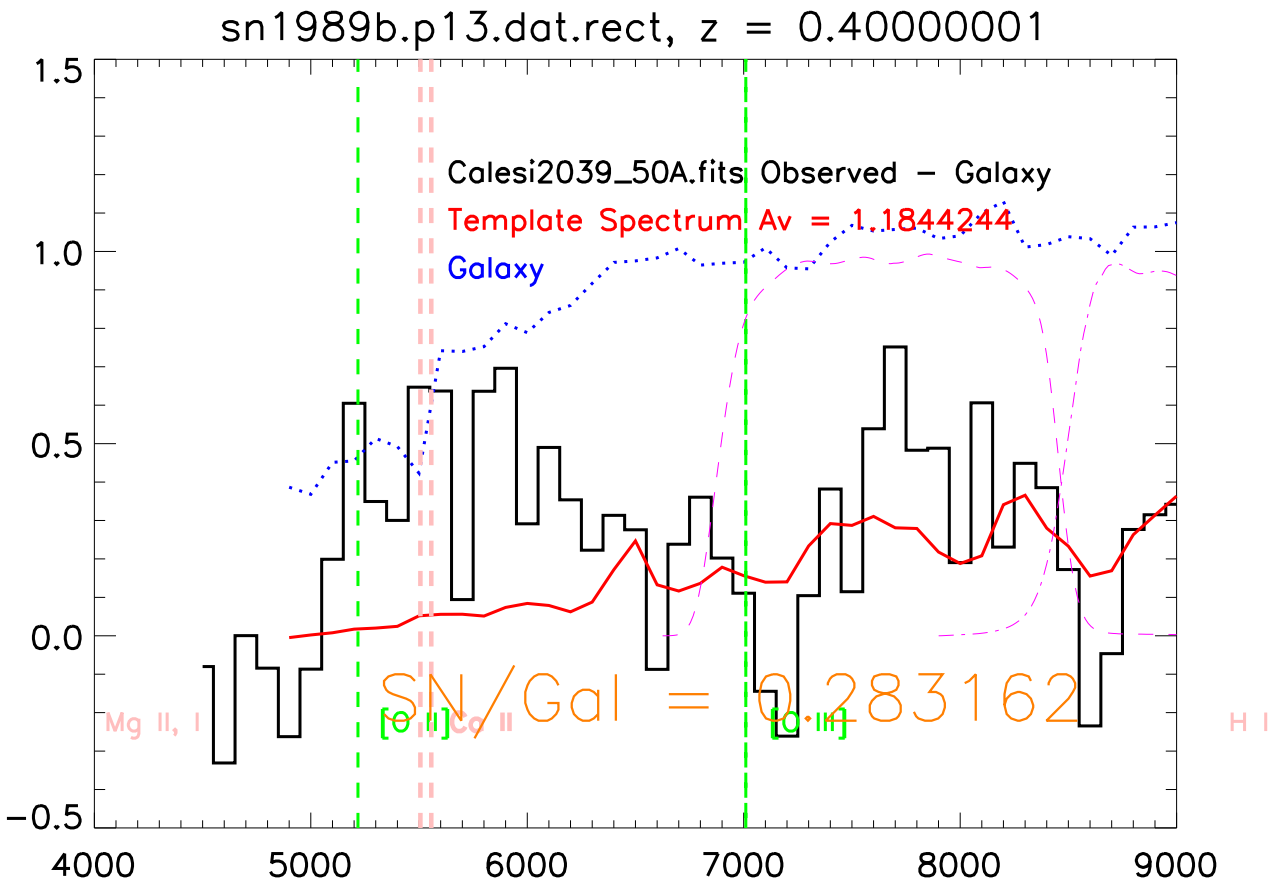

sn1999ee.p01.dat.rect, z = 0.35000002
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.3344491
Galaxy
SN/Gal = 0.720722
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

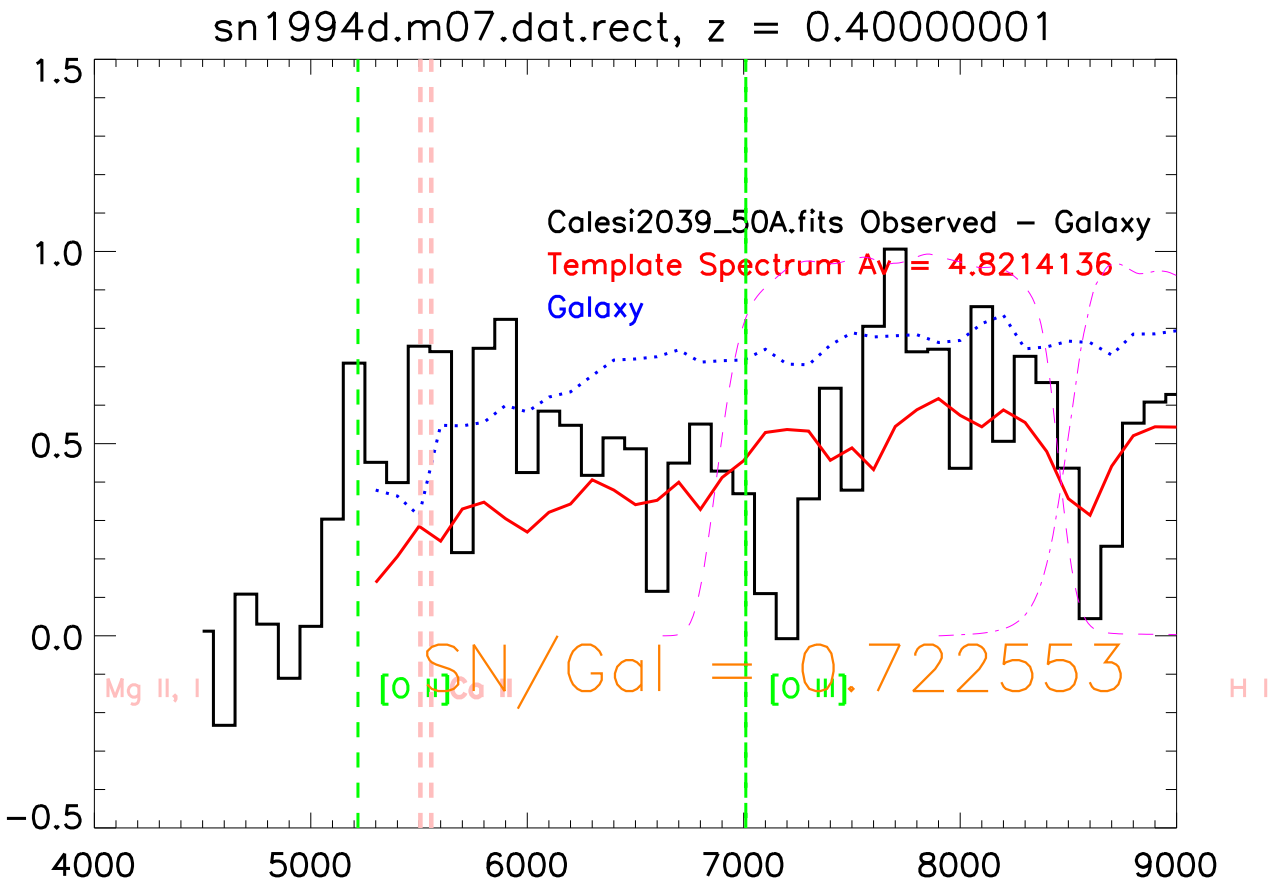

sn1999ee.p17.dat.rect, z = 0.40000001
Calsi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 1.5299871
Galaxy
SN/Gal = 0.405995
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

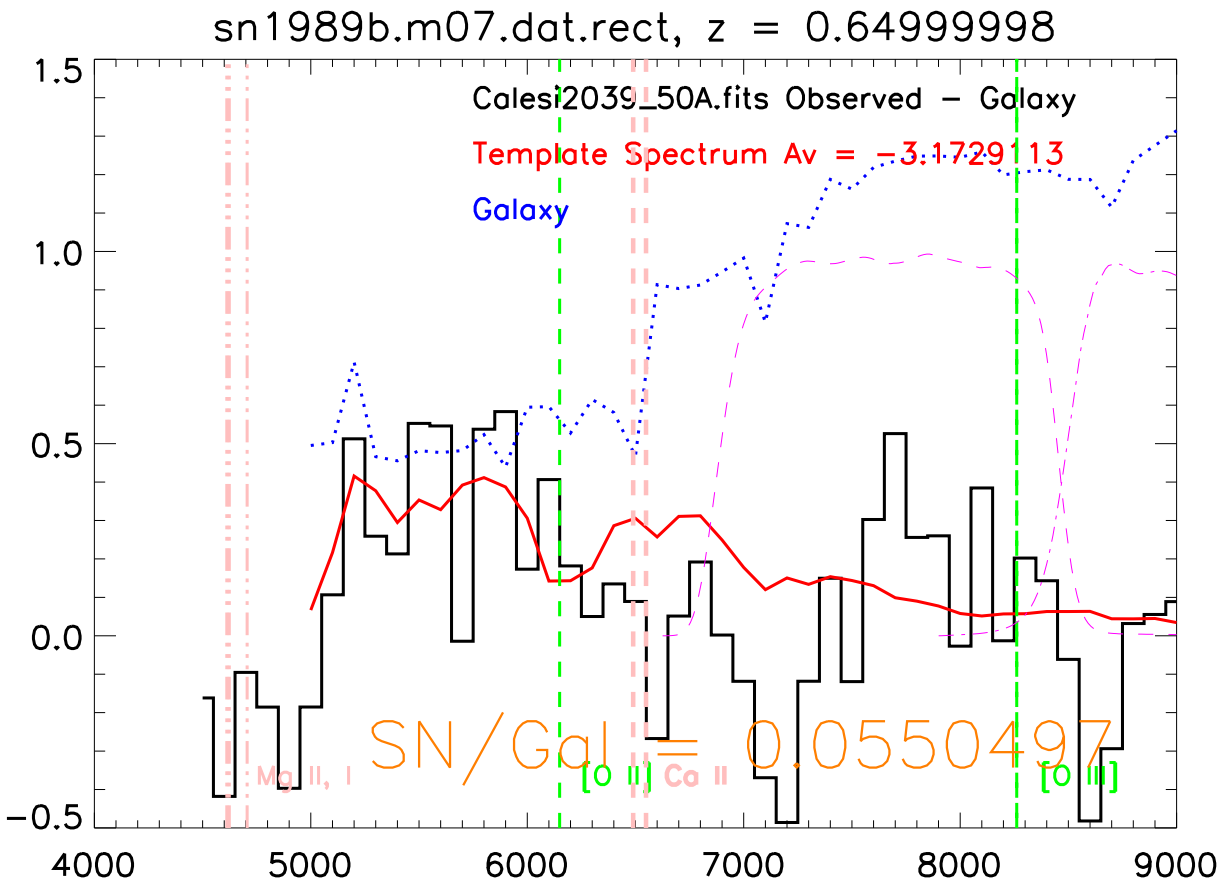

sn1994d.m03.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 5.6020990
Galaxy
SN/Gal = 0.0363350
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

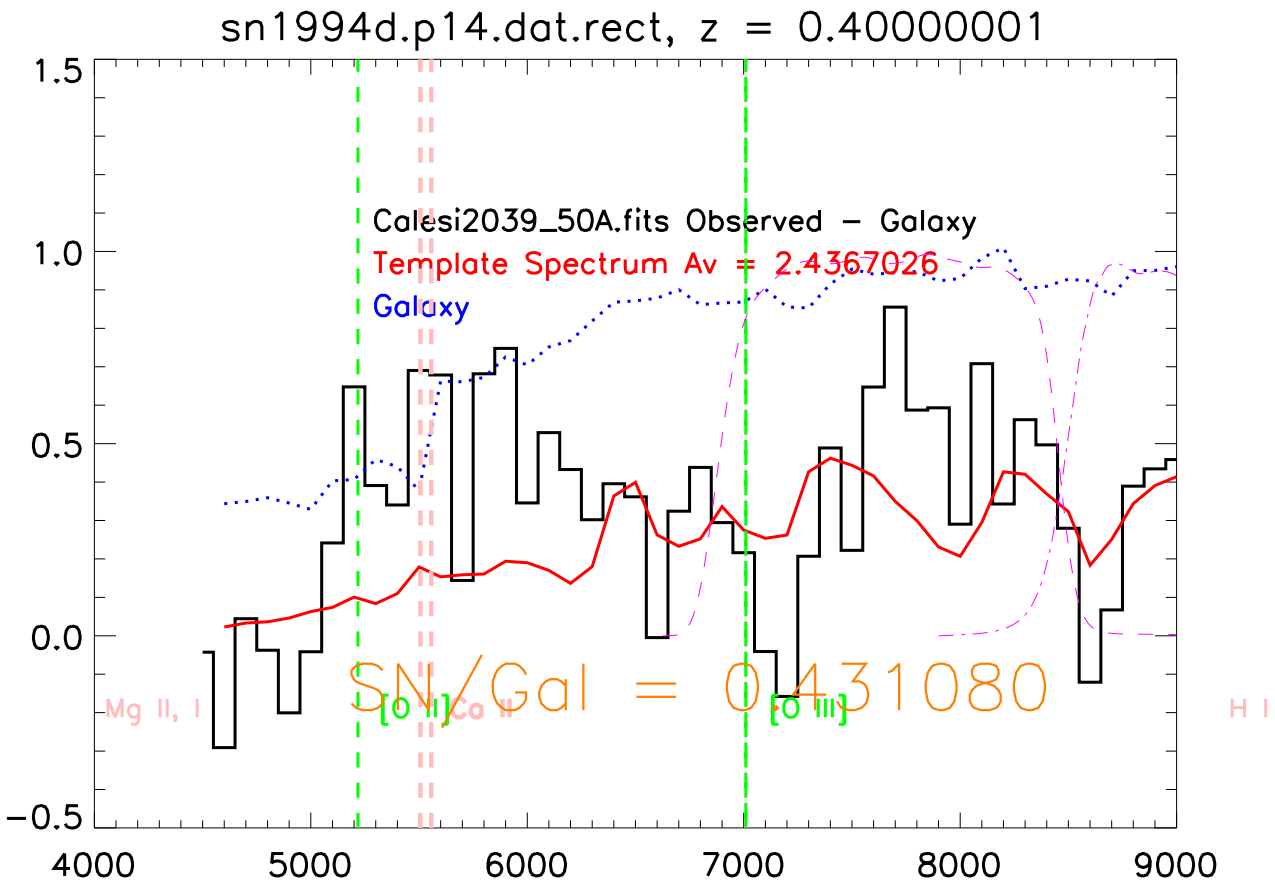

sn1996x.m02.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 4.6580178
Galaxy
SN/Gal = 0.421865
[O II]
Ca II
[O III]
H I
Mg II, I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

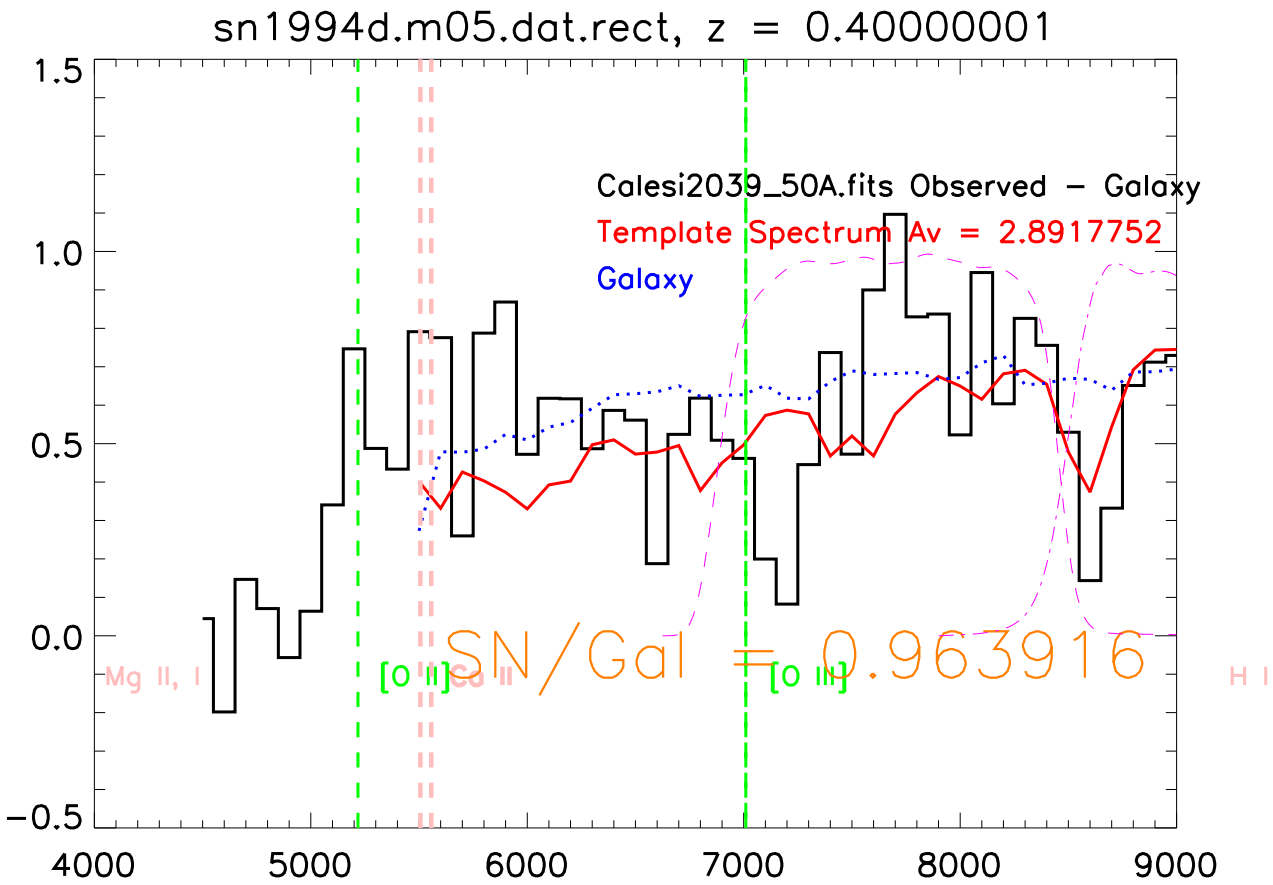

sn1999ee.m08.dat.rect, z = 0.45000002
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.2636924
Galaxy
SN/Gal = 1.20611
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

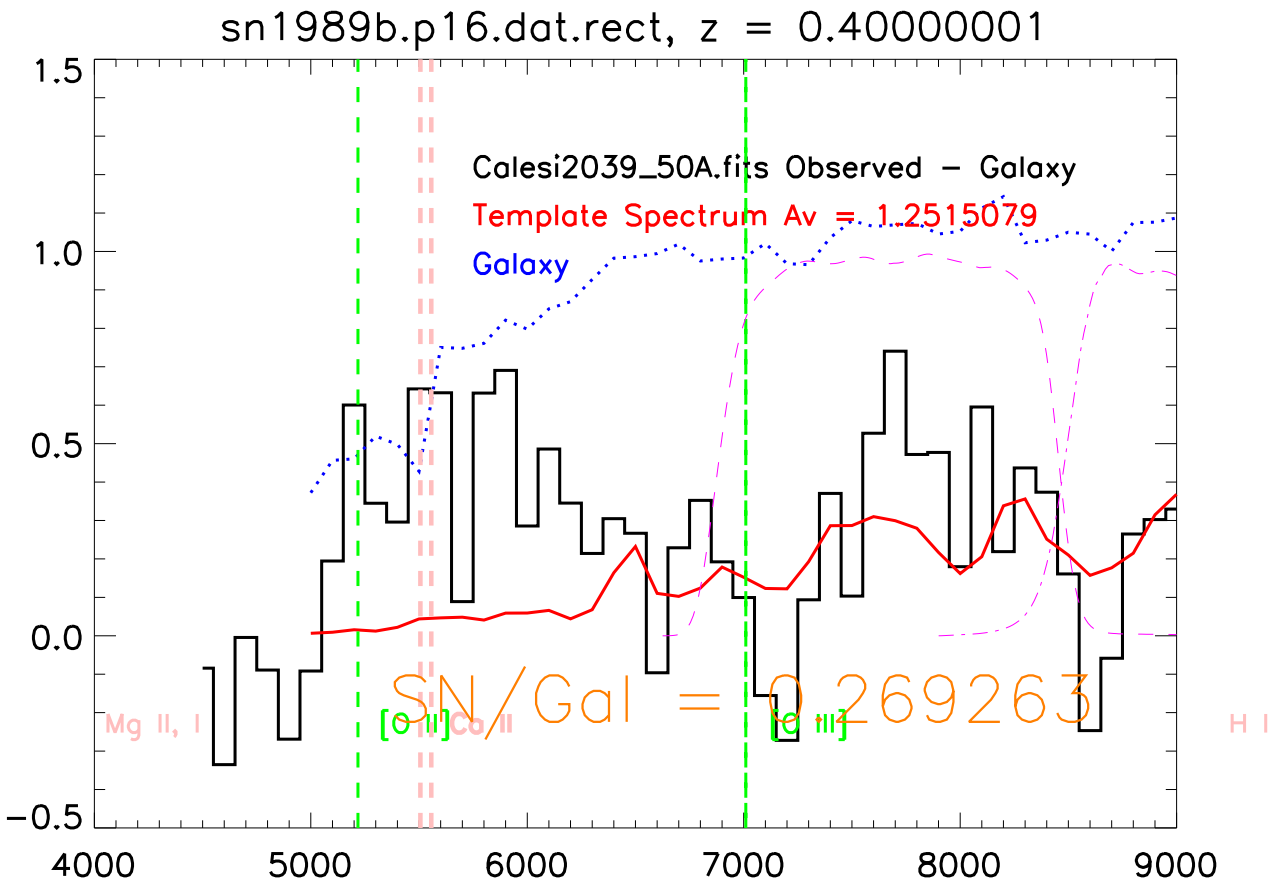

sn1989b.p13.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 1.1844244
Galaxy
SN/Gal = 0.283162
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

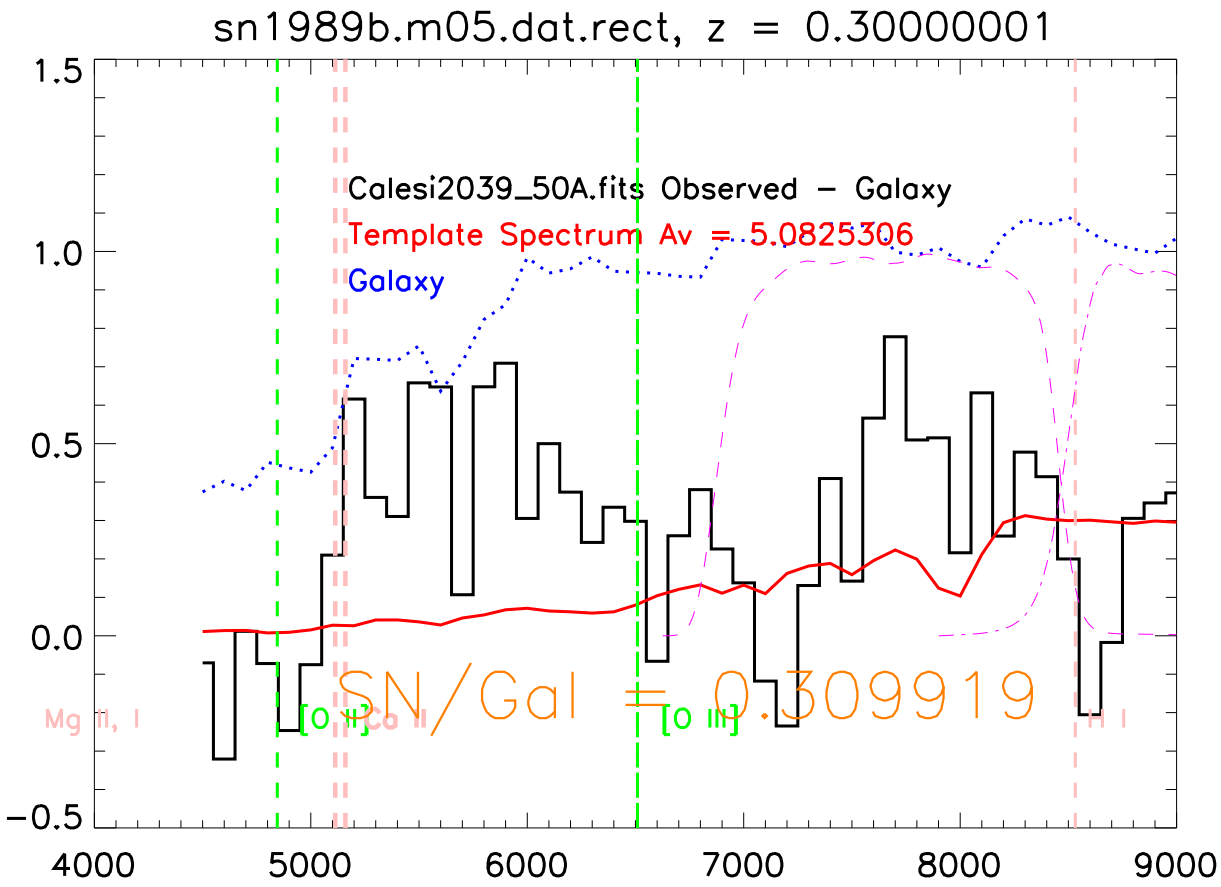

sn1994d.m07.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 4.8214136
Galaxy
SN/Gal = 0.722553
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

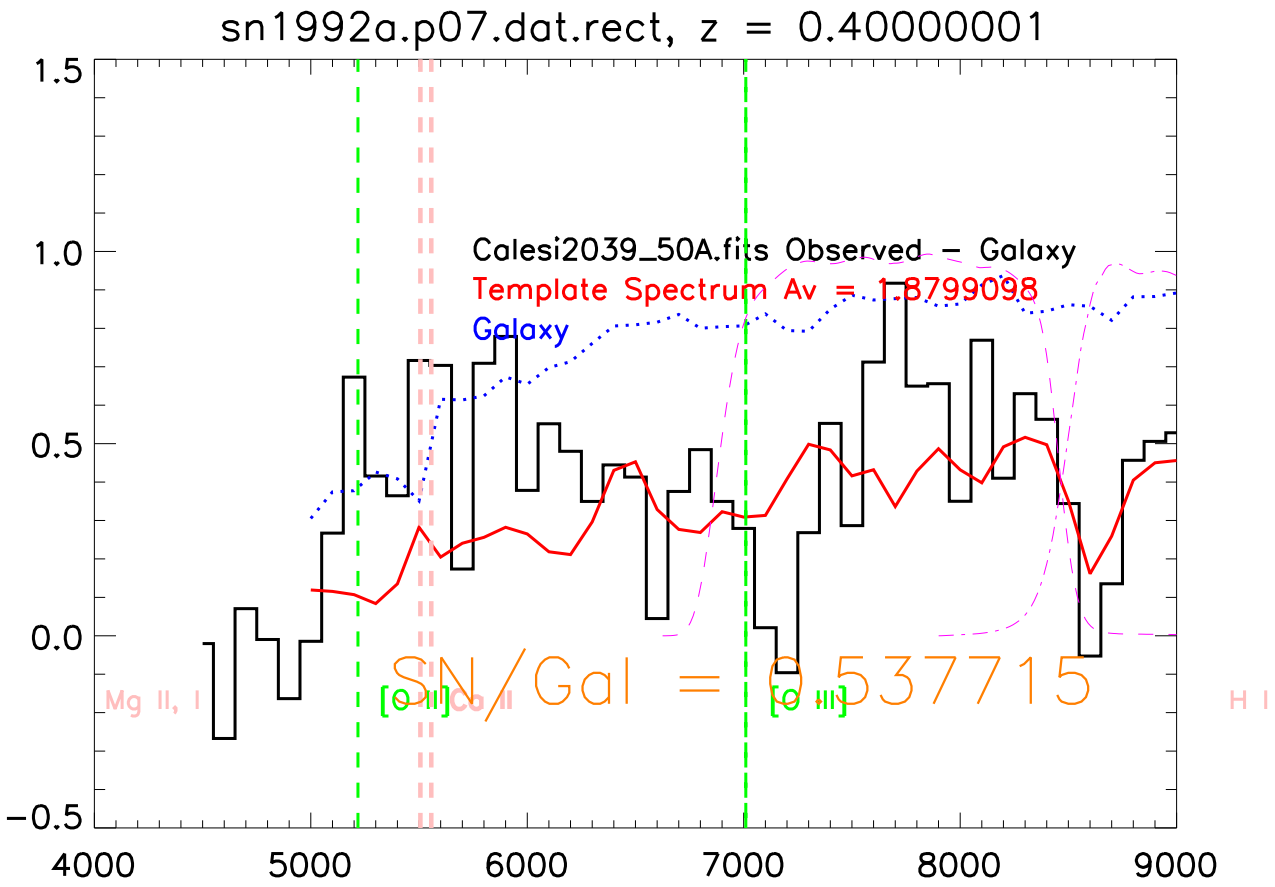

sn1989b.m07.dat.rect, z = 0.64999998
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = −3.1729113
Galaxy
SN/Gal = 0.0550497
Mg II, I
[O II]
Ca II
[O III]
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

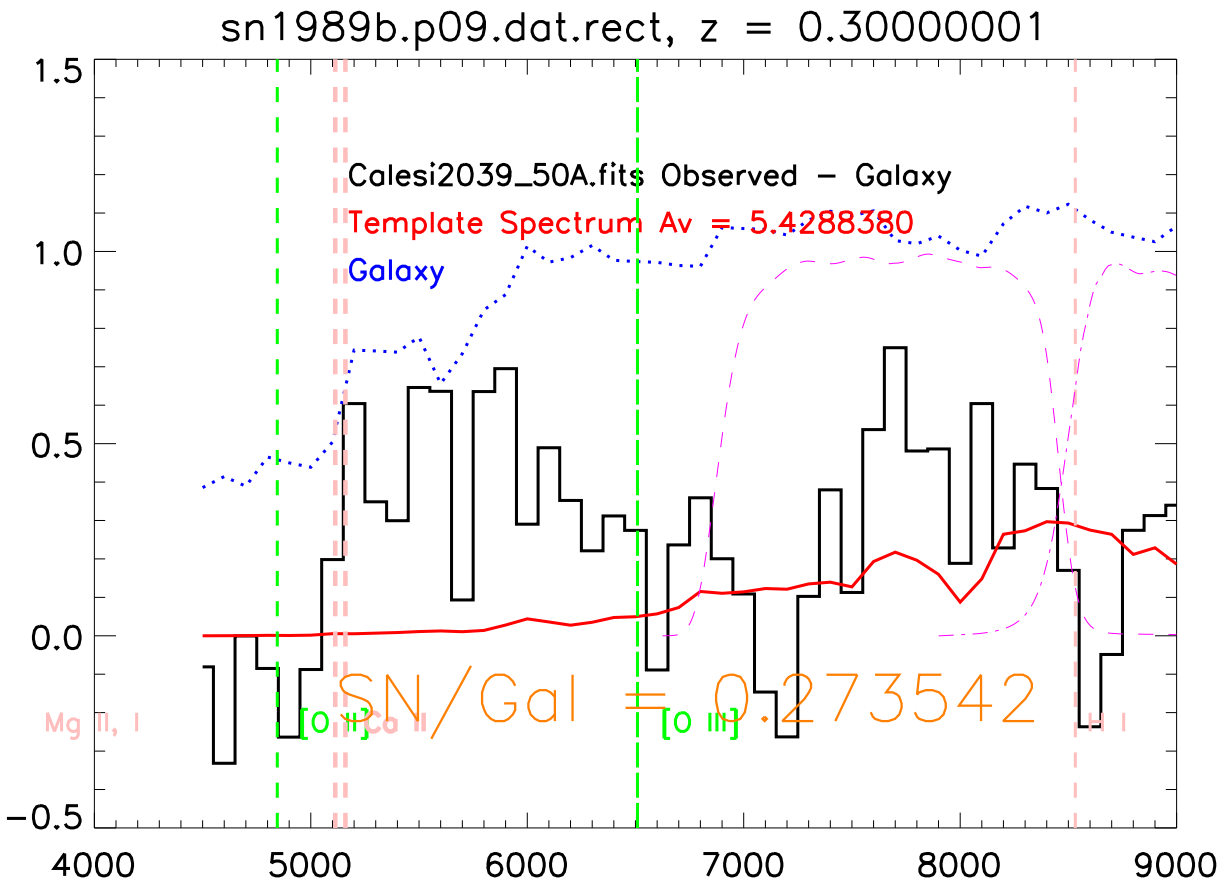

sn1994d.p14.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.4367026
Galaxy
SN/Gal = 0.431080
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

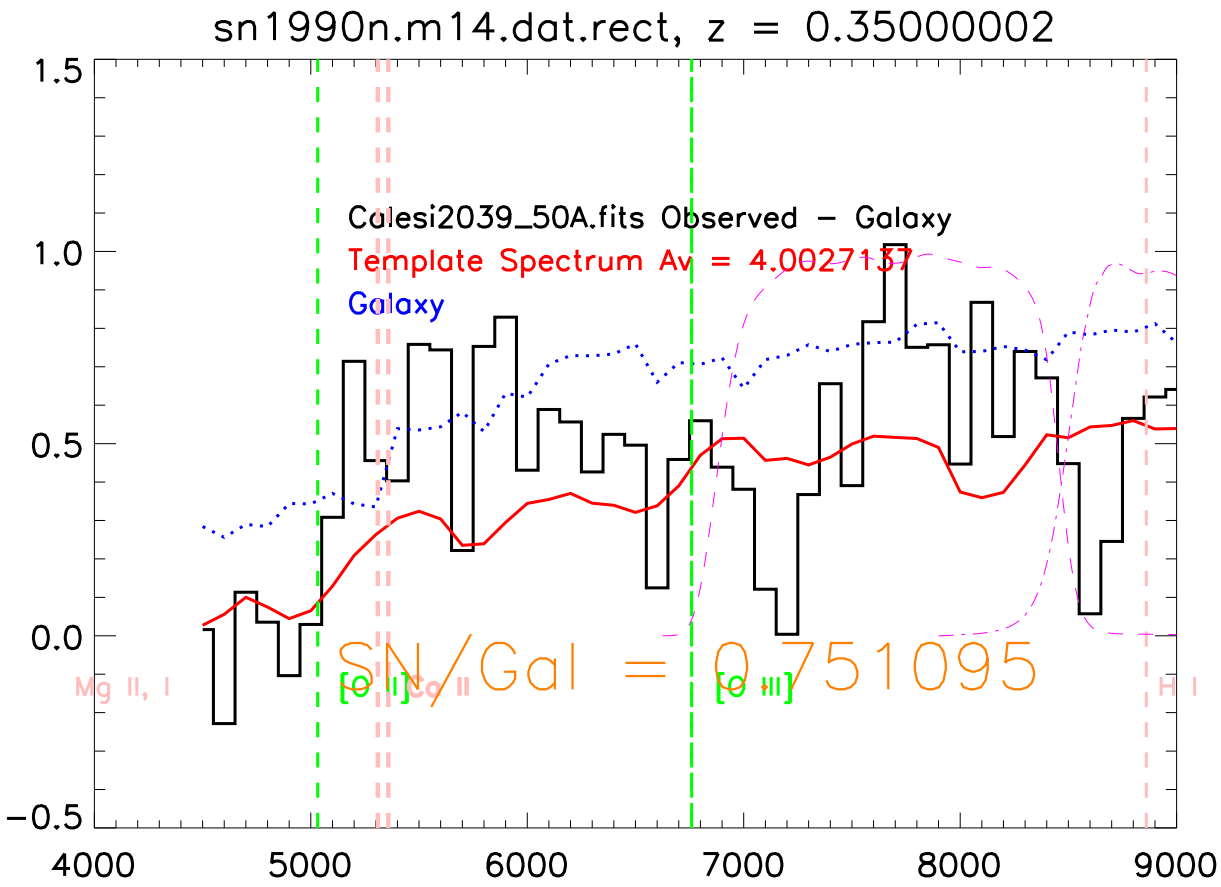

sn1994d.m05.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.8917752
Galaxy
SN/Gal = 0.963916
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

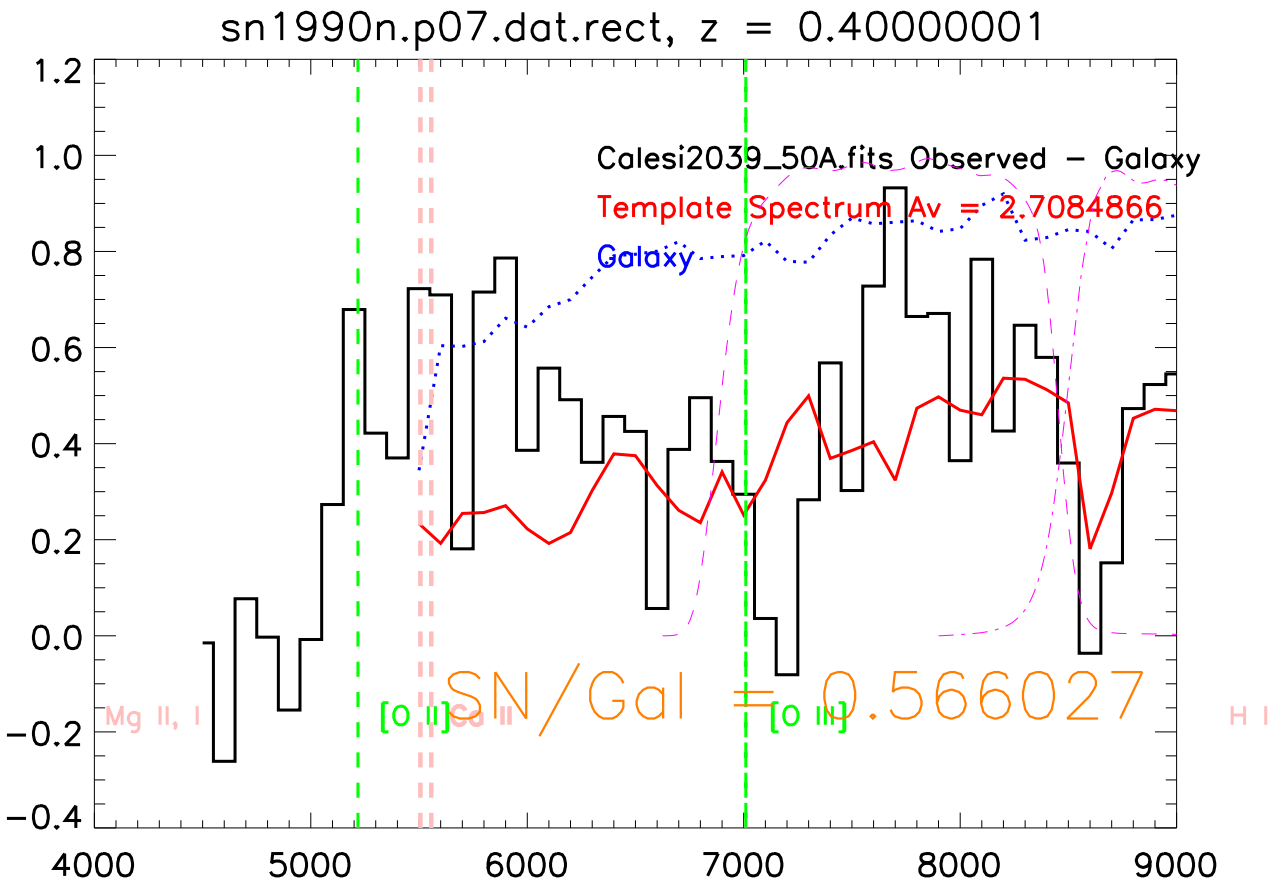

sn1989b.p16.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 1.2515079
Galaxy
SN/Gal = 0.269263
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

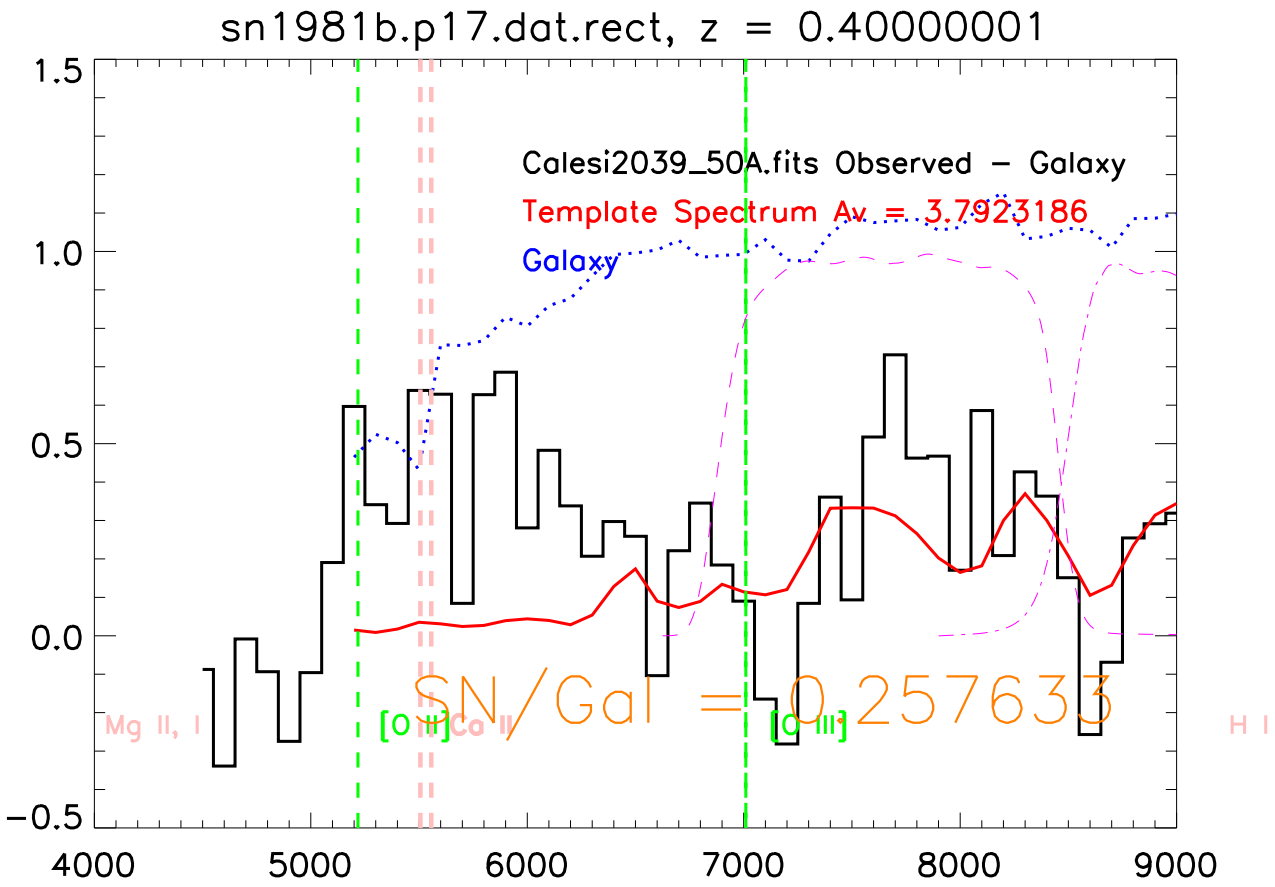

sn1989b.m05.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 5.0825306
Galaxy
SN/Gal = 0.309919
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

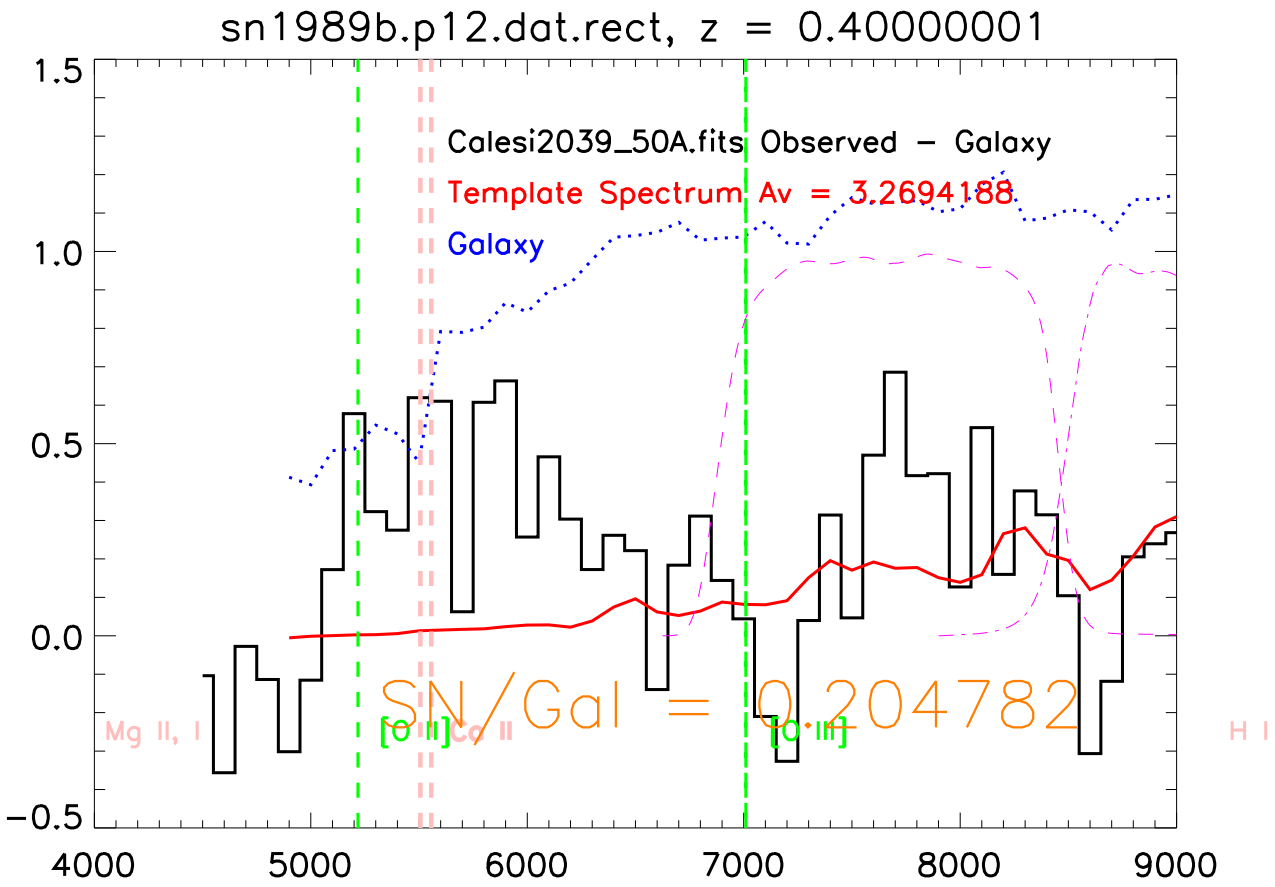

sn1992a.p07.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 1.8799098
Galaxy
SN/Gal = 0.537715
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

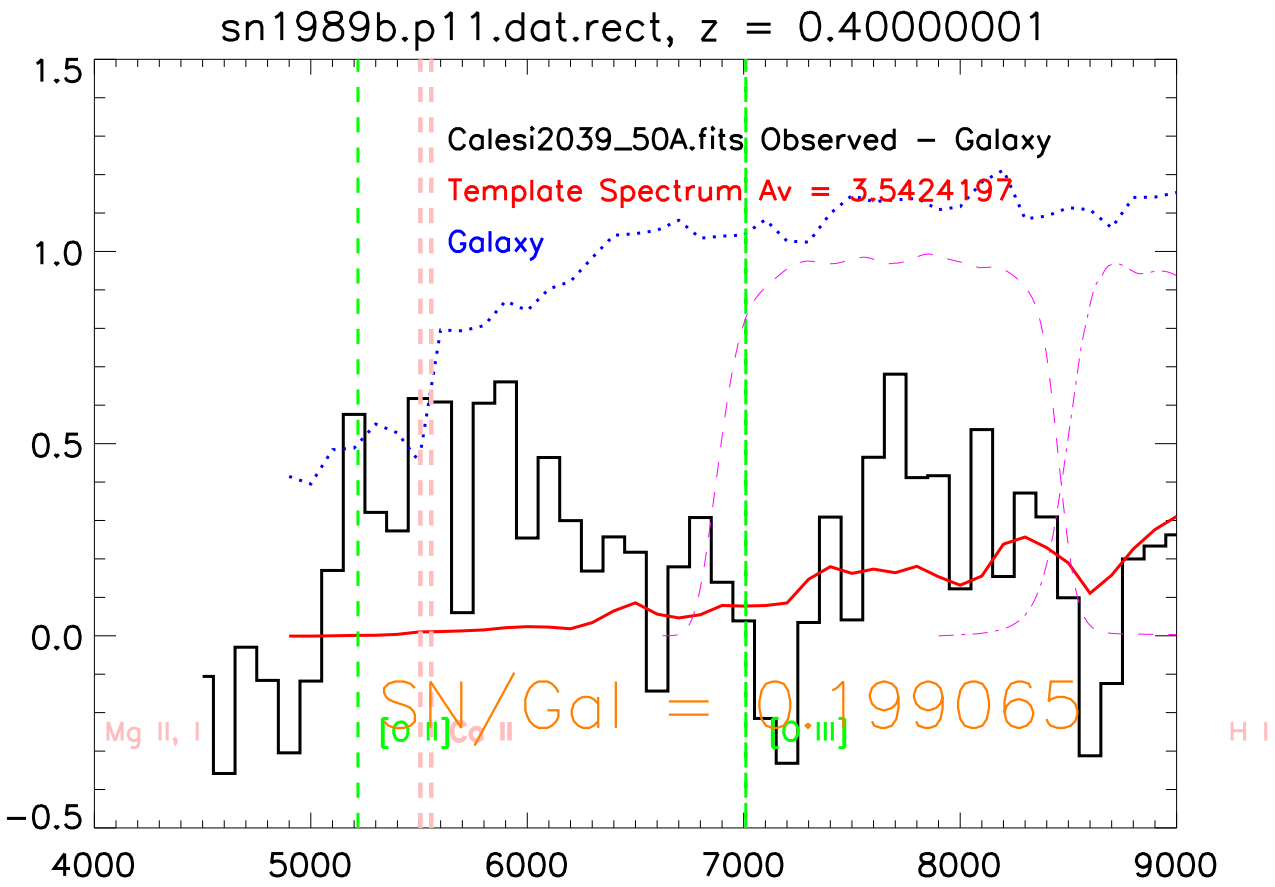

sn1989b.p09.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 5.4288380
Galaxy
SN/Gal = 0.273542
[O II]
[O III]
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

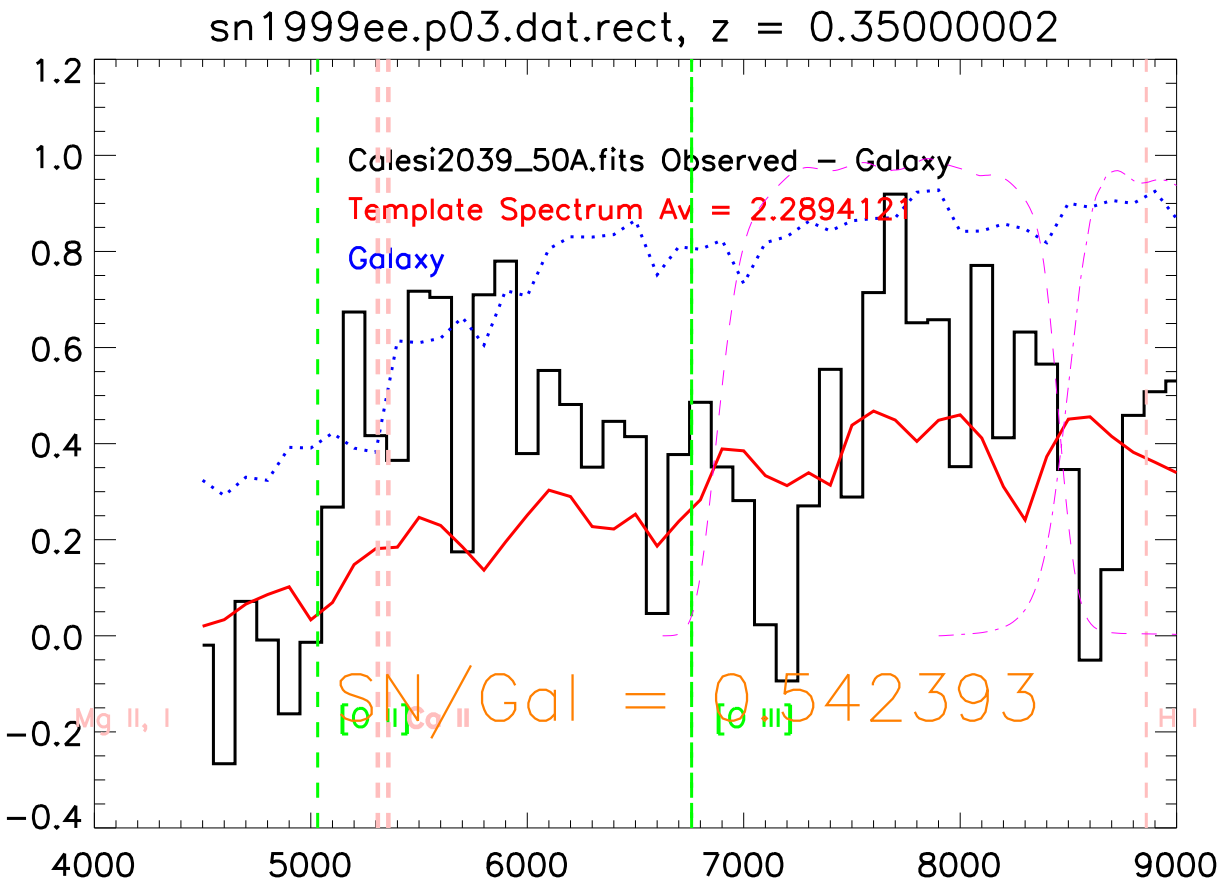

sn1990n.m14.dat.rect, z = 0.35000002
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 4.0027137
Galaxy
SN/Gal = 0.751095
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

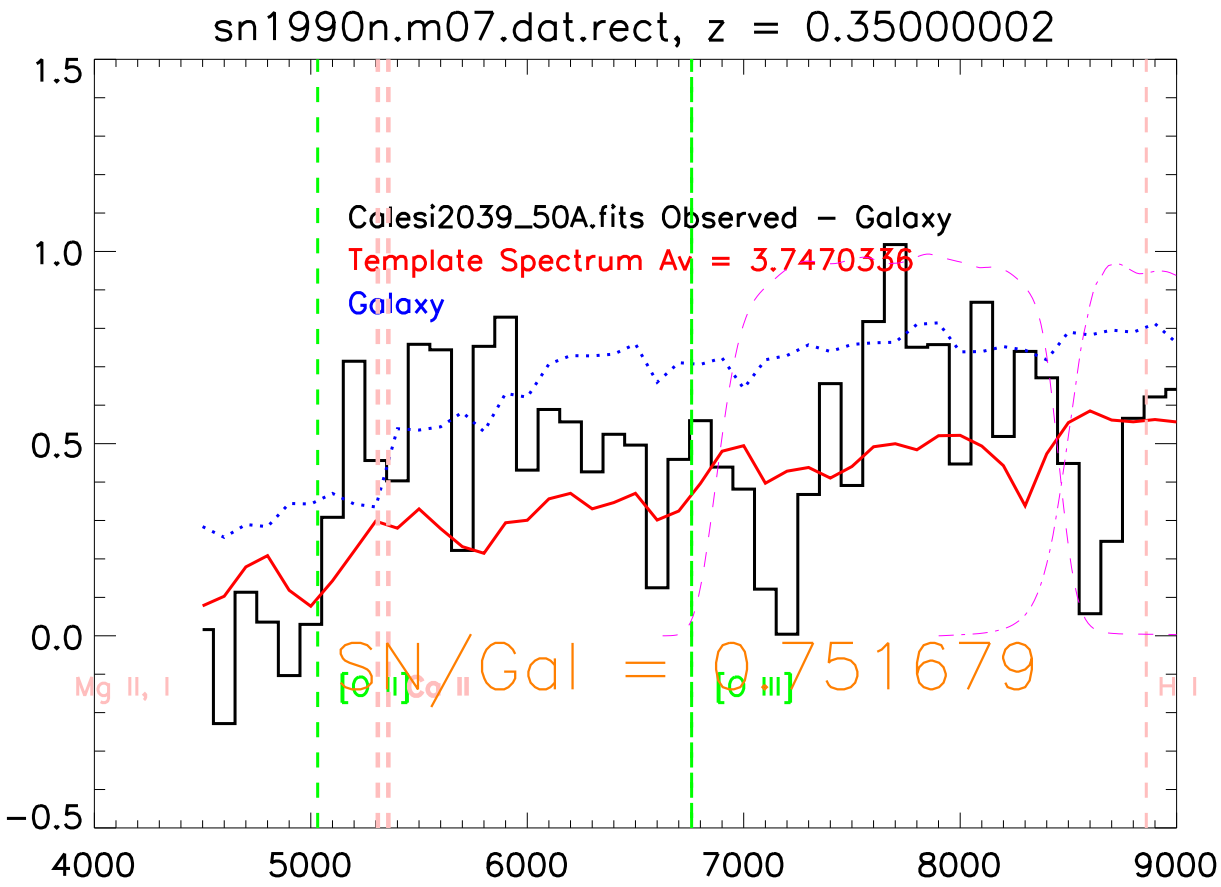

sn1990n.p07.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.7084866
Galaxy
SN/Gal = 0.566027
Mg II, I
[O II]
Ca II
[O III]
H I
1.2
1.0
0.8
0.6
0.4
0.2
0.0
−0.2
−0.4
4000
5000
6000
7000
8000
9000

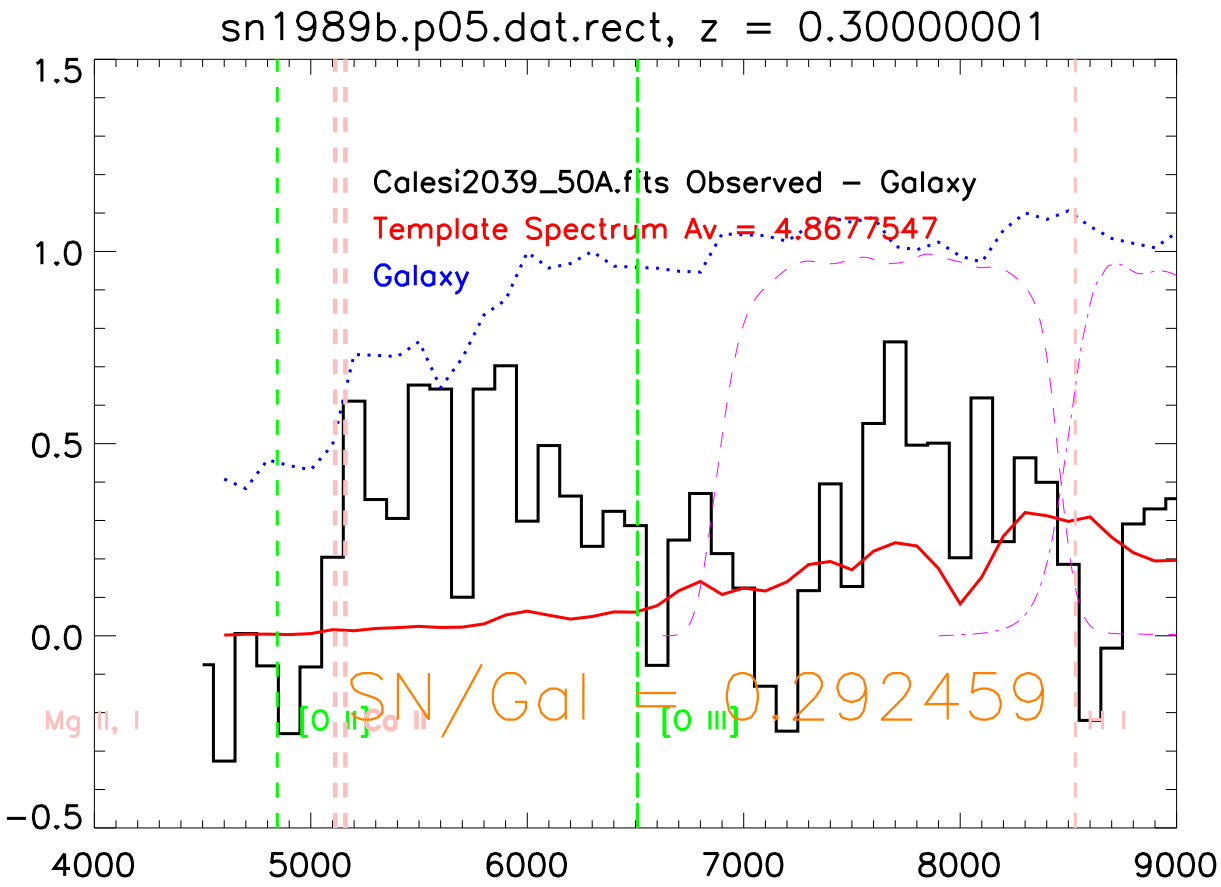

sn1981b.p17.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 3.7923186
Galaxy
SN/Gal = 0.257633
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

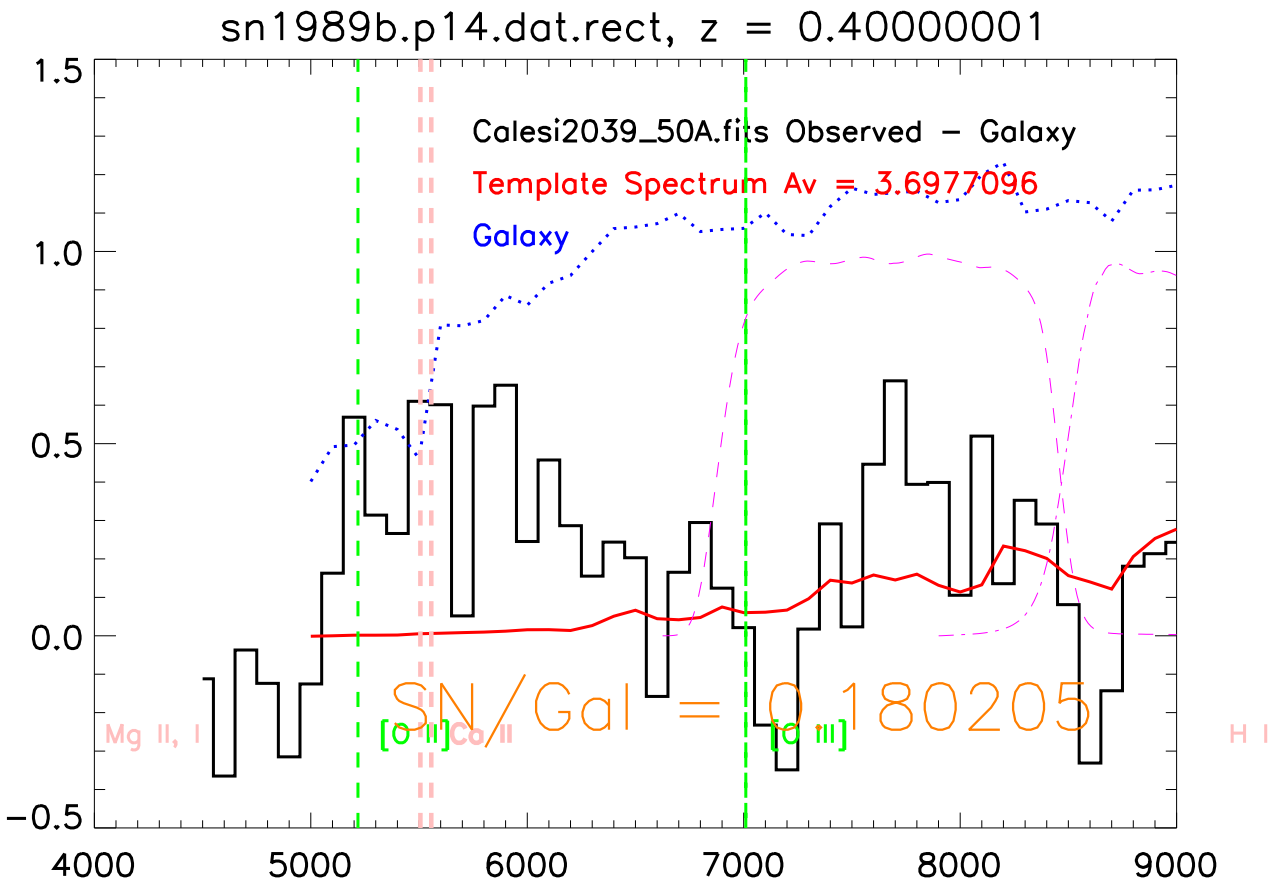

sn1989b.p12.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 3.2694188
Galaxy
SN/Gal = 0.204782
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000

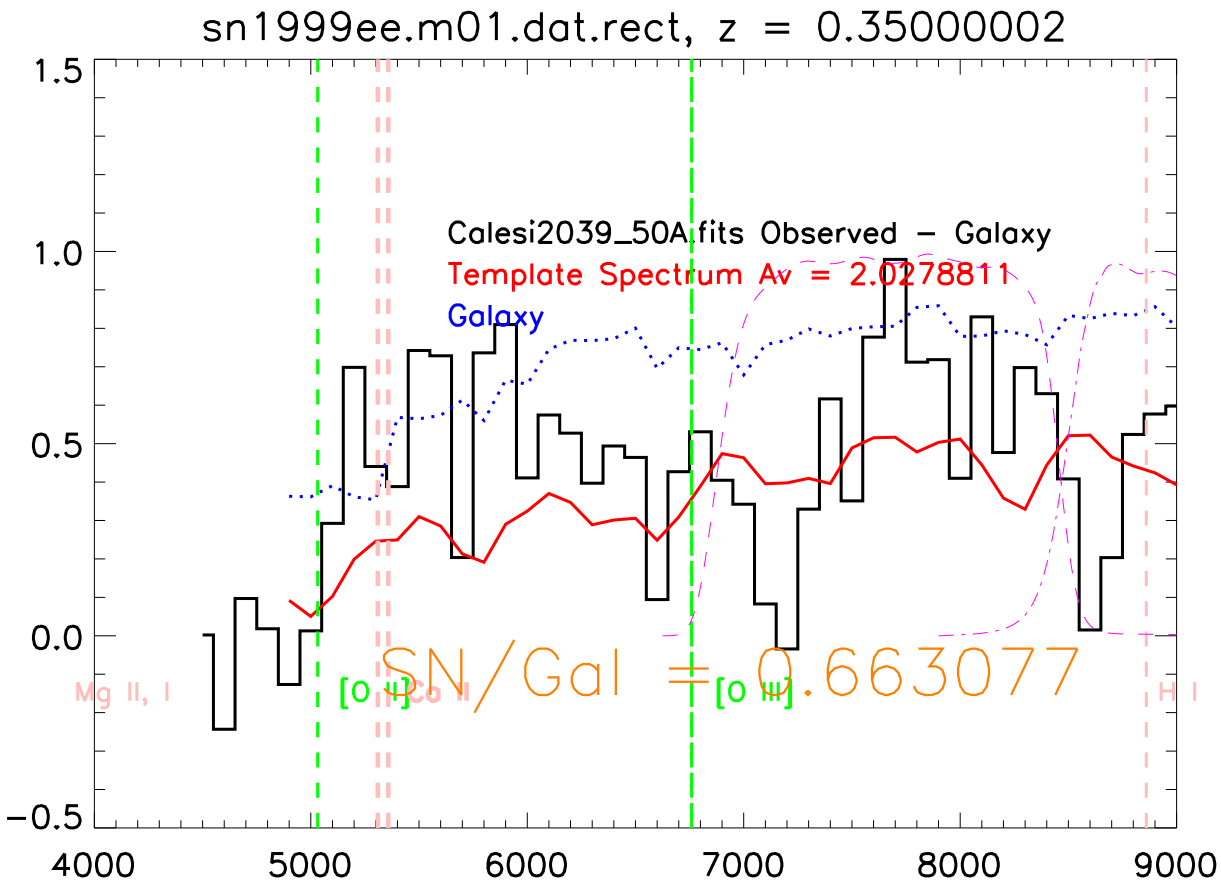

sn1989b.p11.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 3.5424197
Galaxy
SN/Gal = 0.199065
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000


sn1999ee.p03.dat.rect, z = 0.35000002
Calesi2039_50A.fits Observed – Galaxy
Template Spectrum Av = 2.2894121
Galaxy
SN/Gal = 0.542393
Mg II, I
[O II]
Ca II
[O III]
H I
1.2
1.0
0.8
0.6
0.4
0.2
0.0
−0.2
−0.4
4000
5000
6000
7000
8000
9000


sn1990n.m07.dat.rect, z = 0.35000002
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 3.7470336
Galaxy
SN/Gal = 0.751679
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000


sn1989b.p05.dat.rect, z = 0.30000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 4.8677547
Galaxy
SN/Gal = 0.292459
[O II]
[O III]
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000


sn1989b.p14.dat.rect, z = 0.40000001
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 3.6977096
Galaxy
SN/Gal = 0.180205
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000


sn1999ee.m01.dat.rect, z = 0.35000002
Calesi2039_50A.fits Observed − Galaxy
Template Spectrum Av = 2.0278811
Galaxy
SN/Gal = 0.663077
Mg II, I
[O II]
Ca II
[O III]
H I
1.5
1.0
0.5
0.0
−0.5
4000
5000
6000
7000
8000
9000