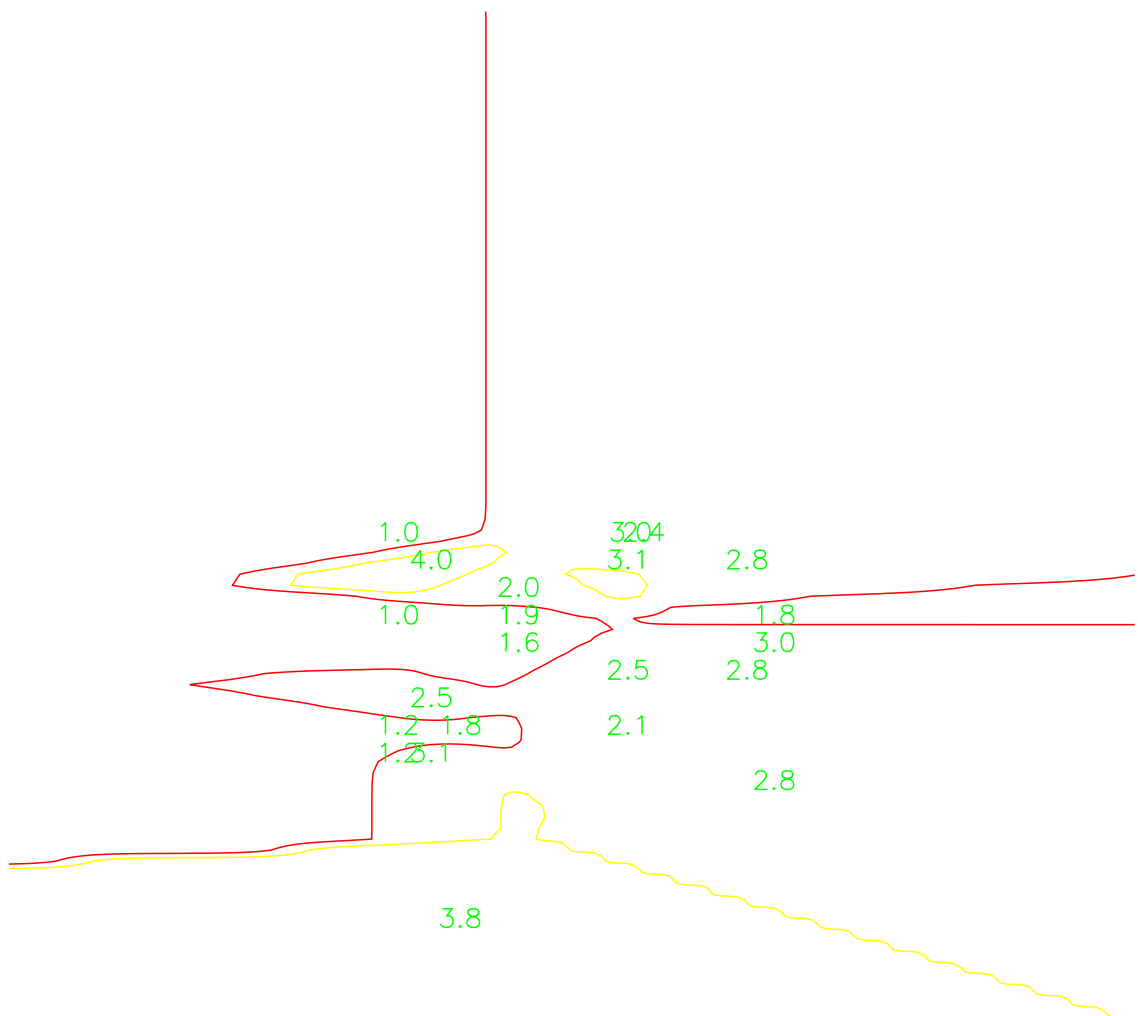
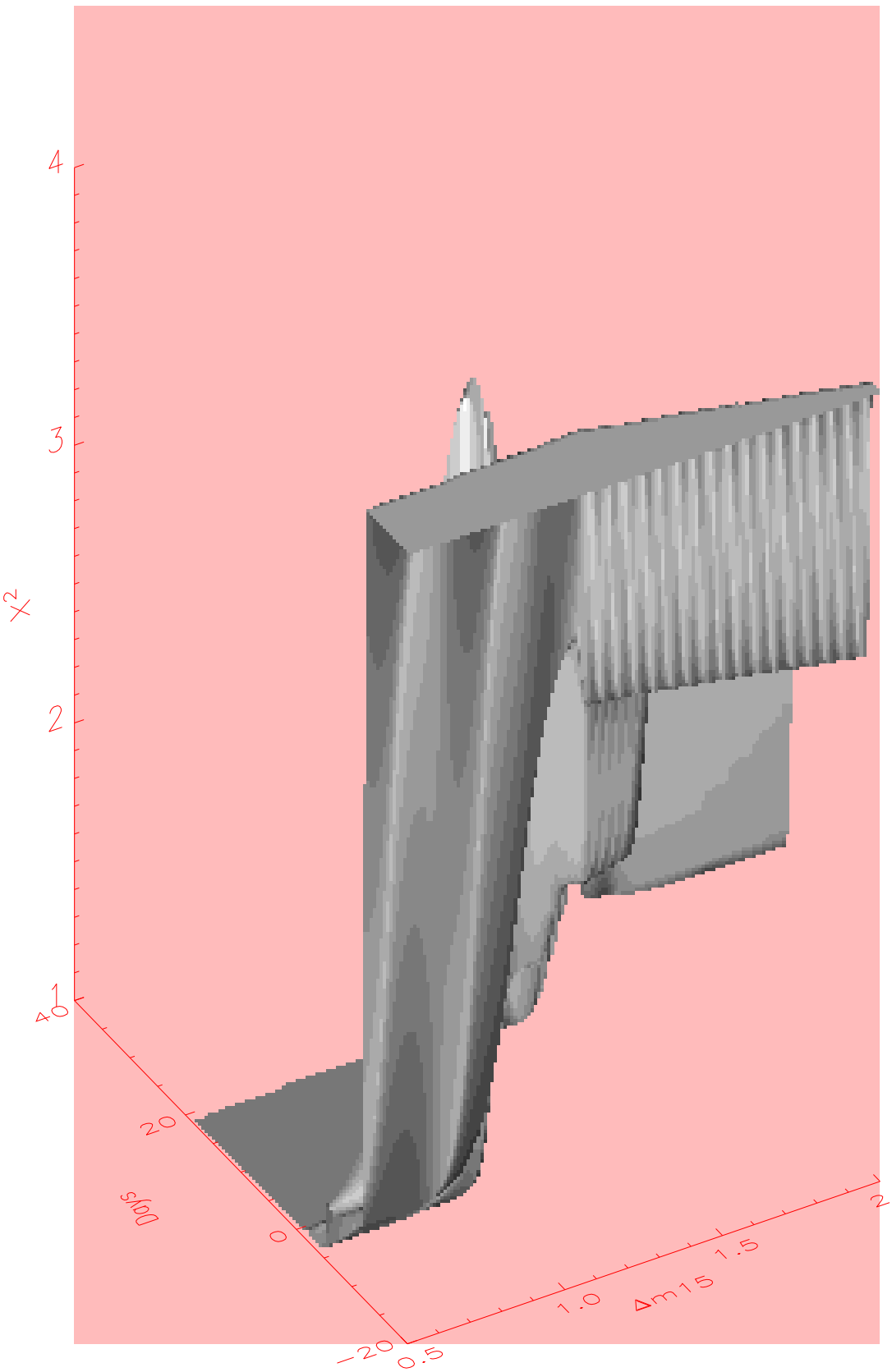
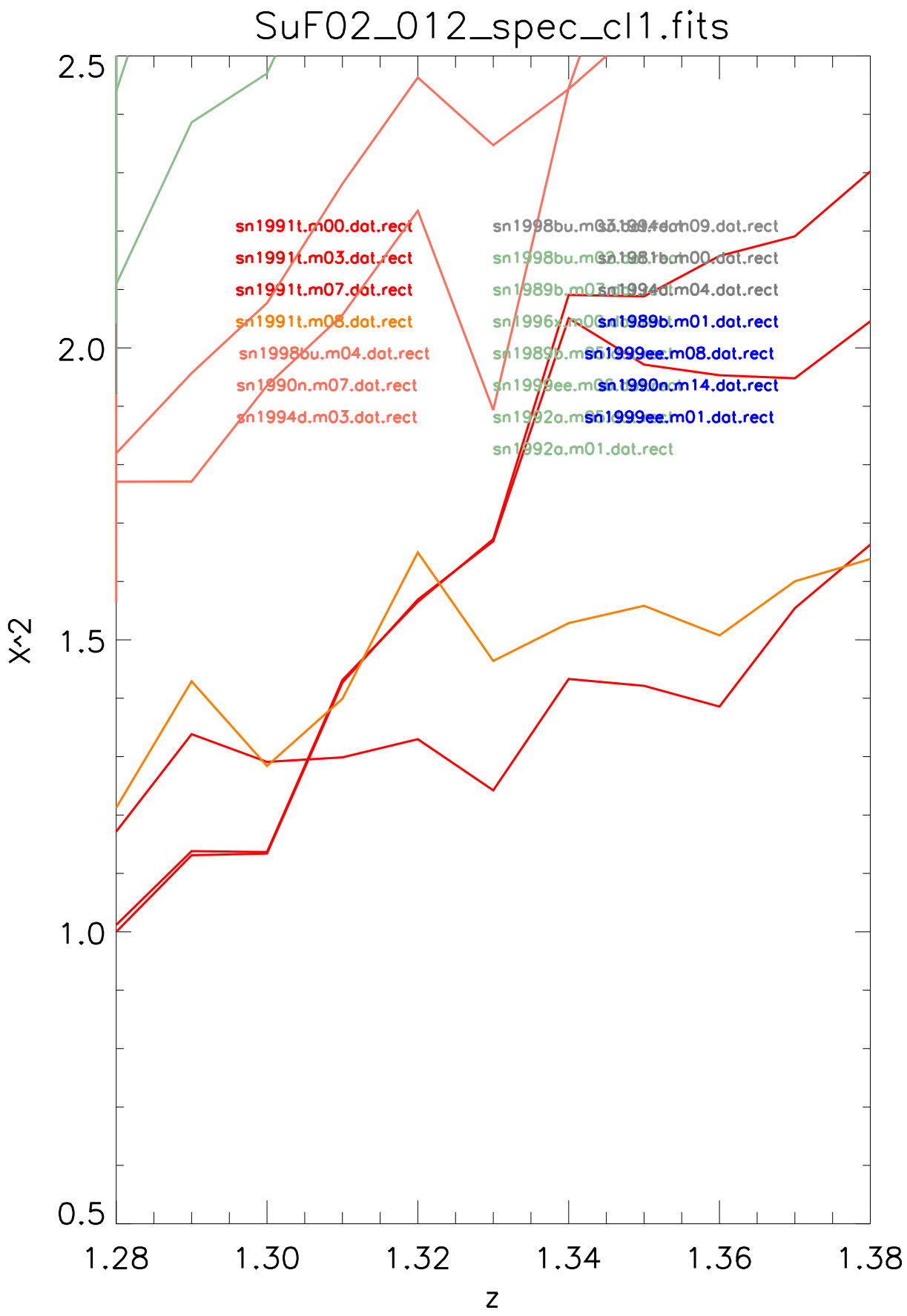
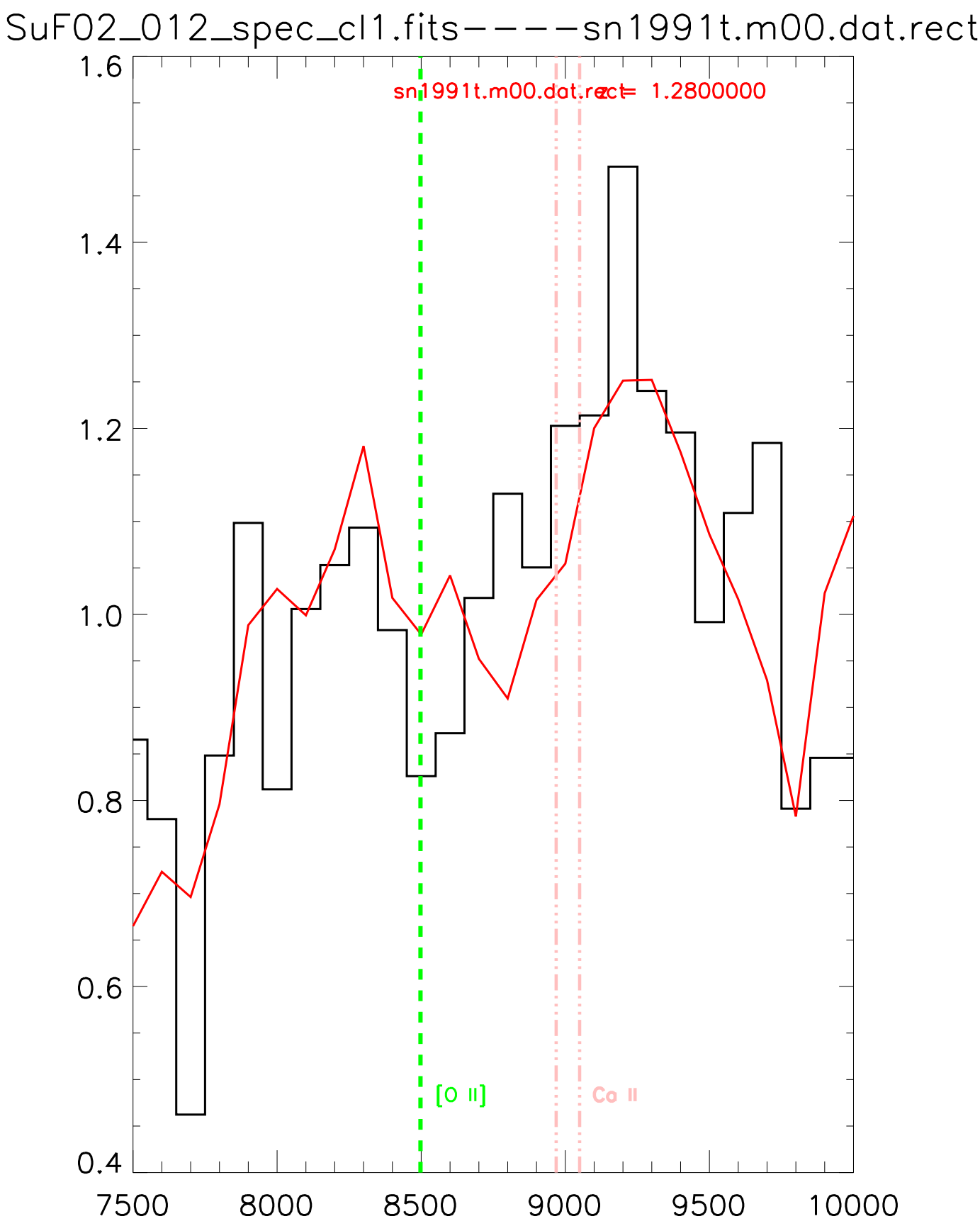
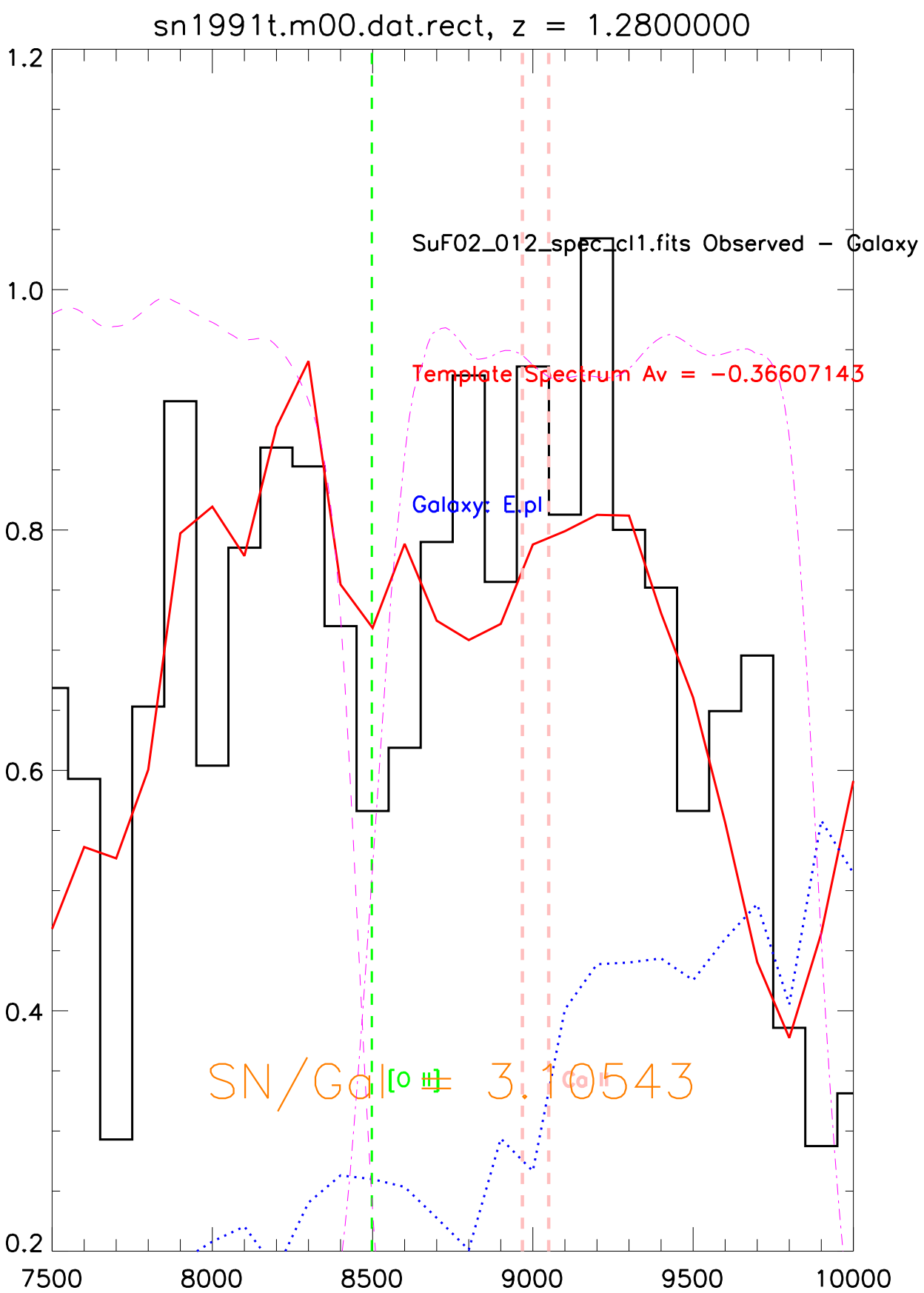
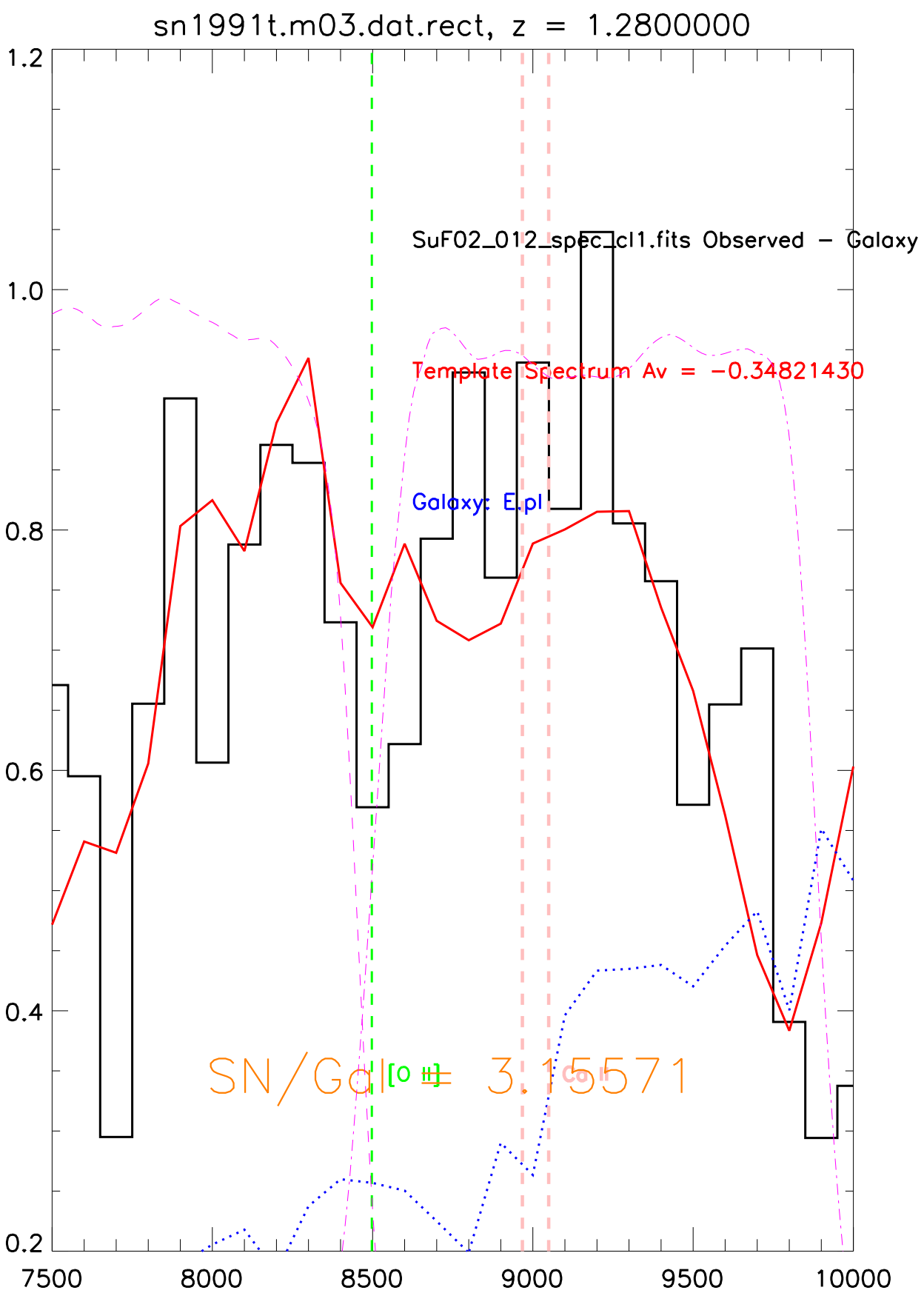

1.0
4.0
2.0
1.0
1.9
1.6
3204
3.1
2.8
1.8
3.0
2.5
2.8
2.5
1.2
1.8
2.1
1.2
3.1
2.8
3.8

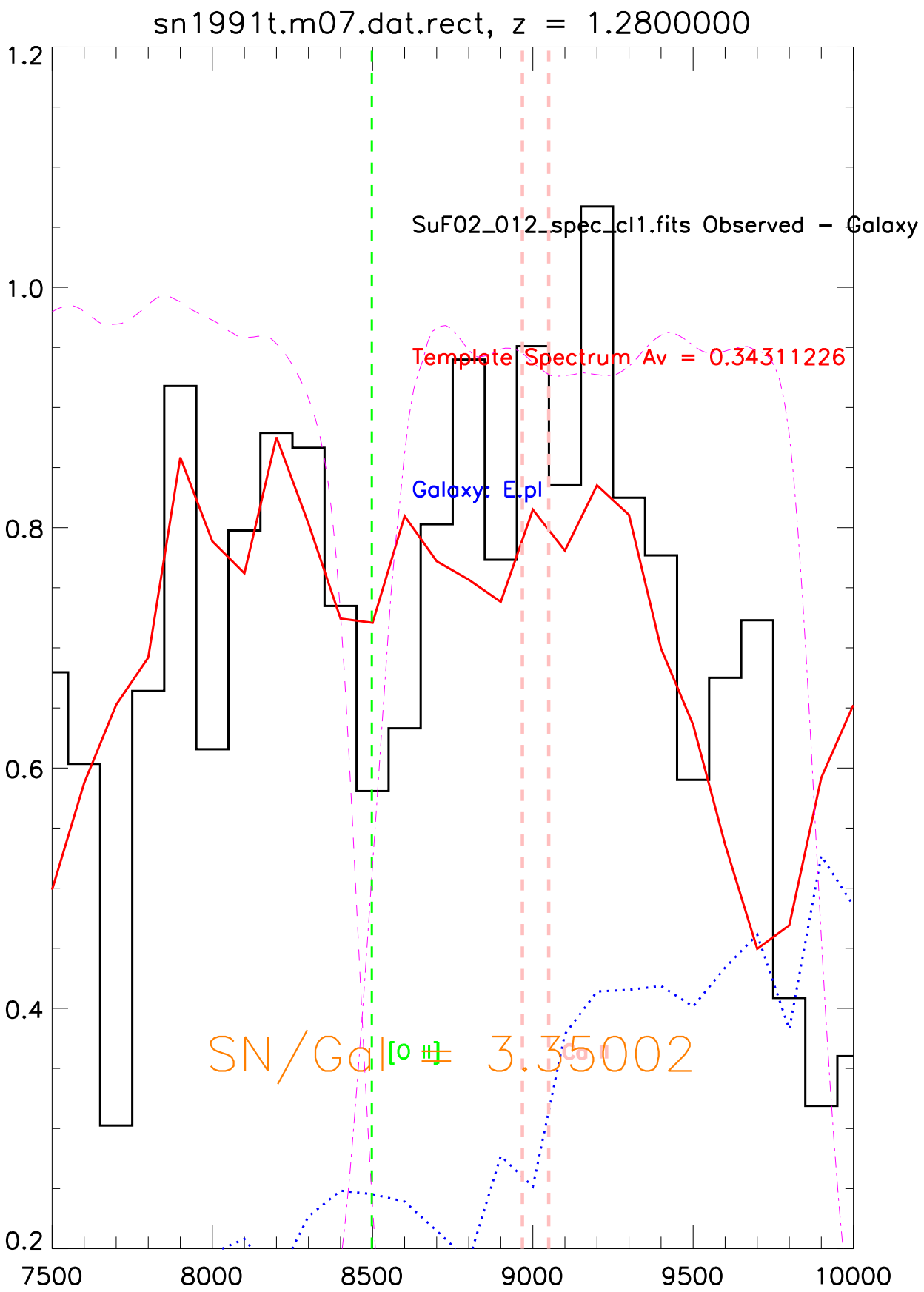

4
3
2
1
χ^2
40
20
0
−20
days
0.5
1.0
1.5
2.0
Δm15

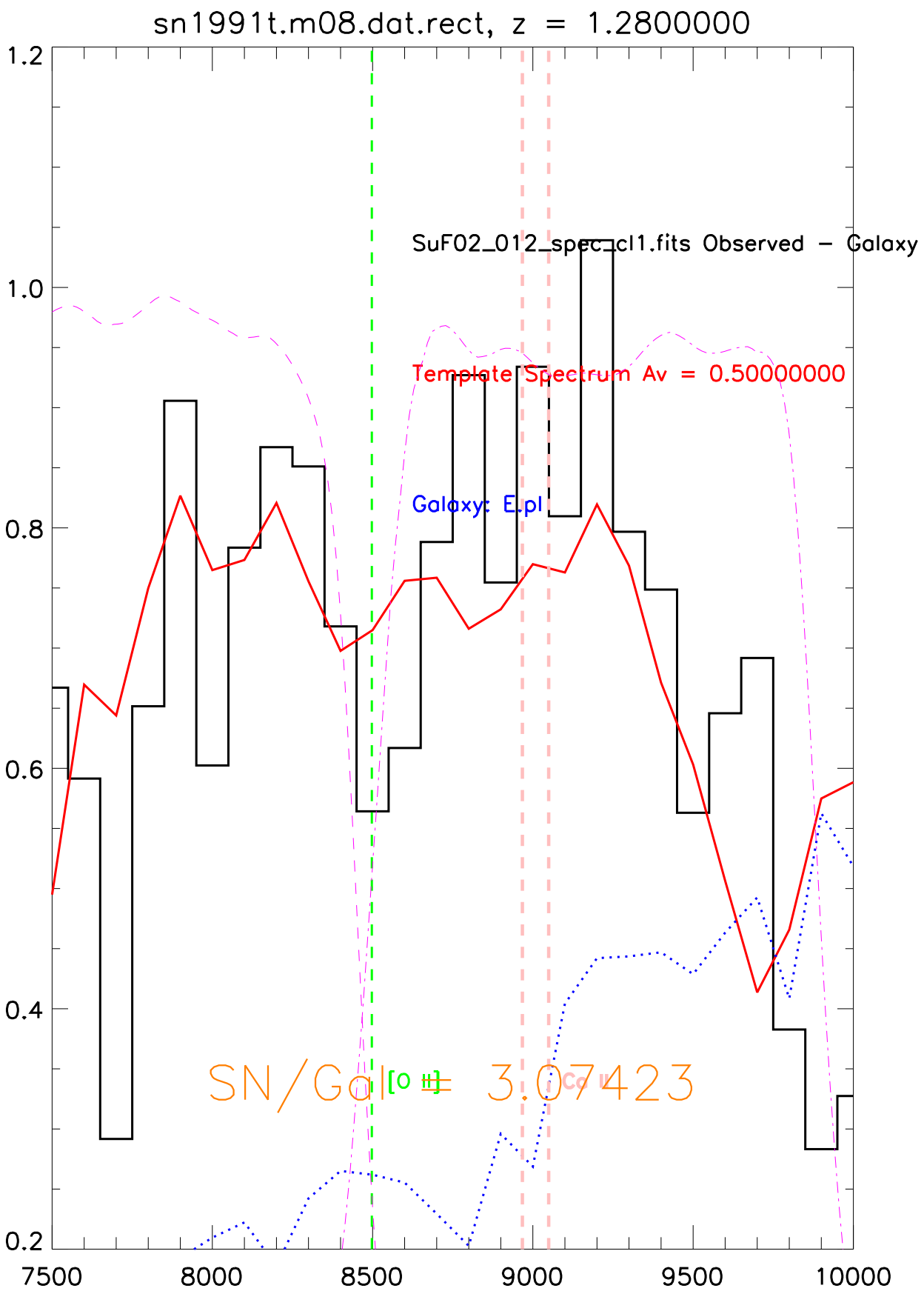

SuF02_012_spec_cl1.fits
2.5
2.0
1.5
1.0
0.5
X^2
1.28
1.30
1.32
1.34
1.36
1.38
z
sn1991t.m00.dat.rect
sn1991t.m03.dat.rect
sn1991t.m07.dat.rect
sn1991t.m08.dat.rect
sn1998bu.m04.dat.rect
sn1990n.m07.dat.rect
sn1994d.m03.dat.rect
sn1998bu.m03.dat.rect
sn1998bu.m09.dat.rect
sn1998bu.m02.dat.rect
sn1989b.m00.dat.rect
sn1989b.m04.dat.rect
sn1996x.m01.dat.rect
sn1989b.m01.dat.rect
sn1999ee.m08.dat.rect
sn1999ee.m05.dat.rect
sn1990n.m14.dat.rect
sn1992a.m05.dat.rect
sn1999ee.m01.dat.rect
sn1992a.m01.dat.rect

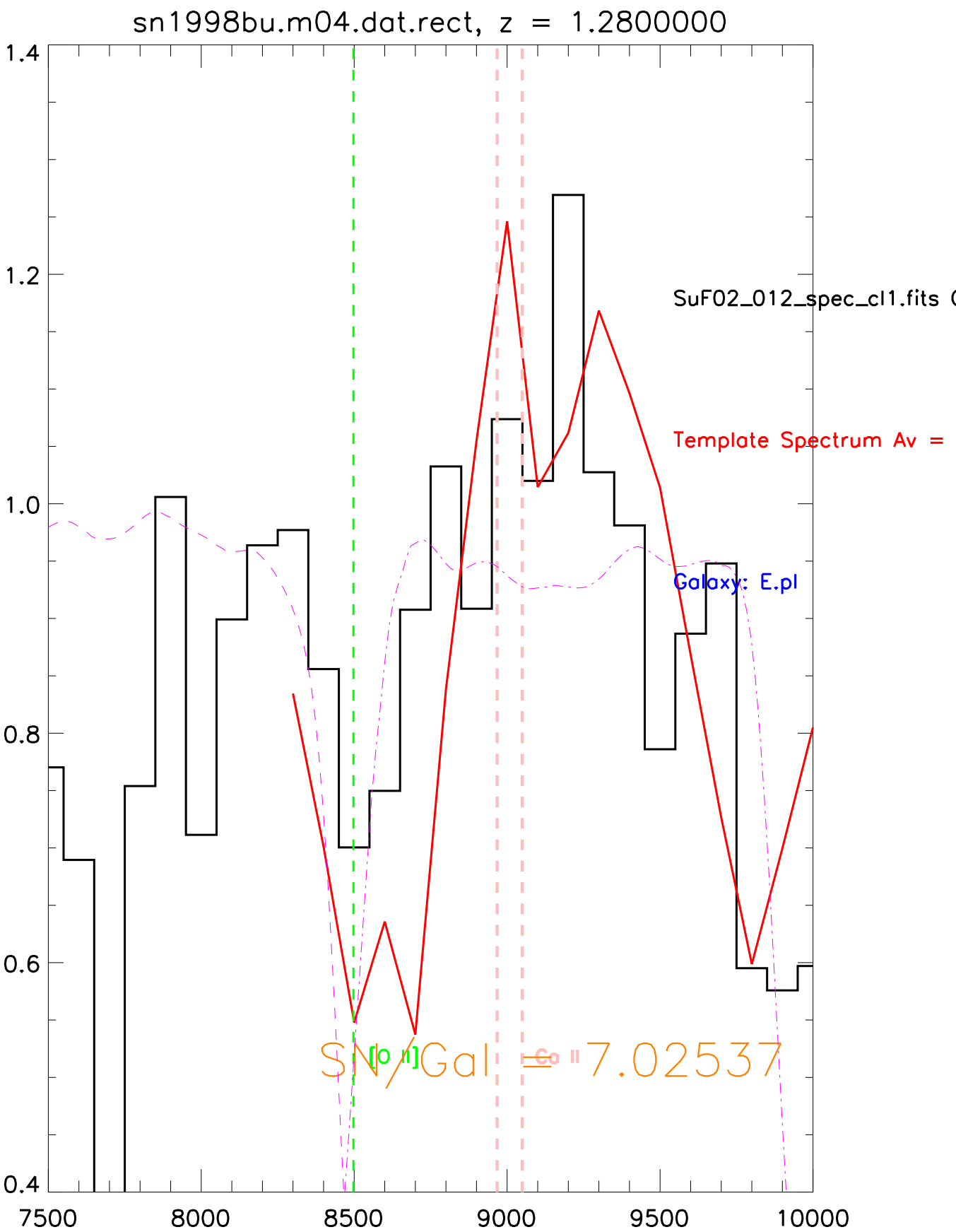

SuF02_012_spec_cl1.fits----sn1991t.m00.dat.rect
sn1991t.m00.dat.rect z= 1.2800000
[O II]
Co II
1.6
1.4
1.2
1.0
0.8
0.6
0.4
7500
8000
8500
9000
9500
10000

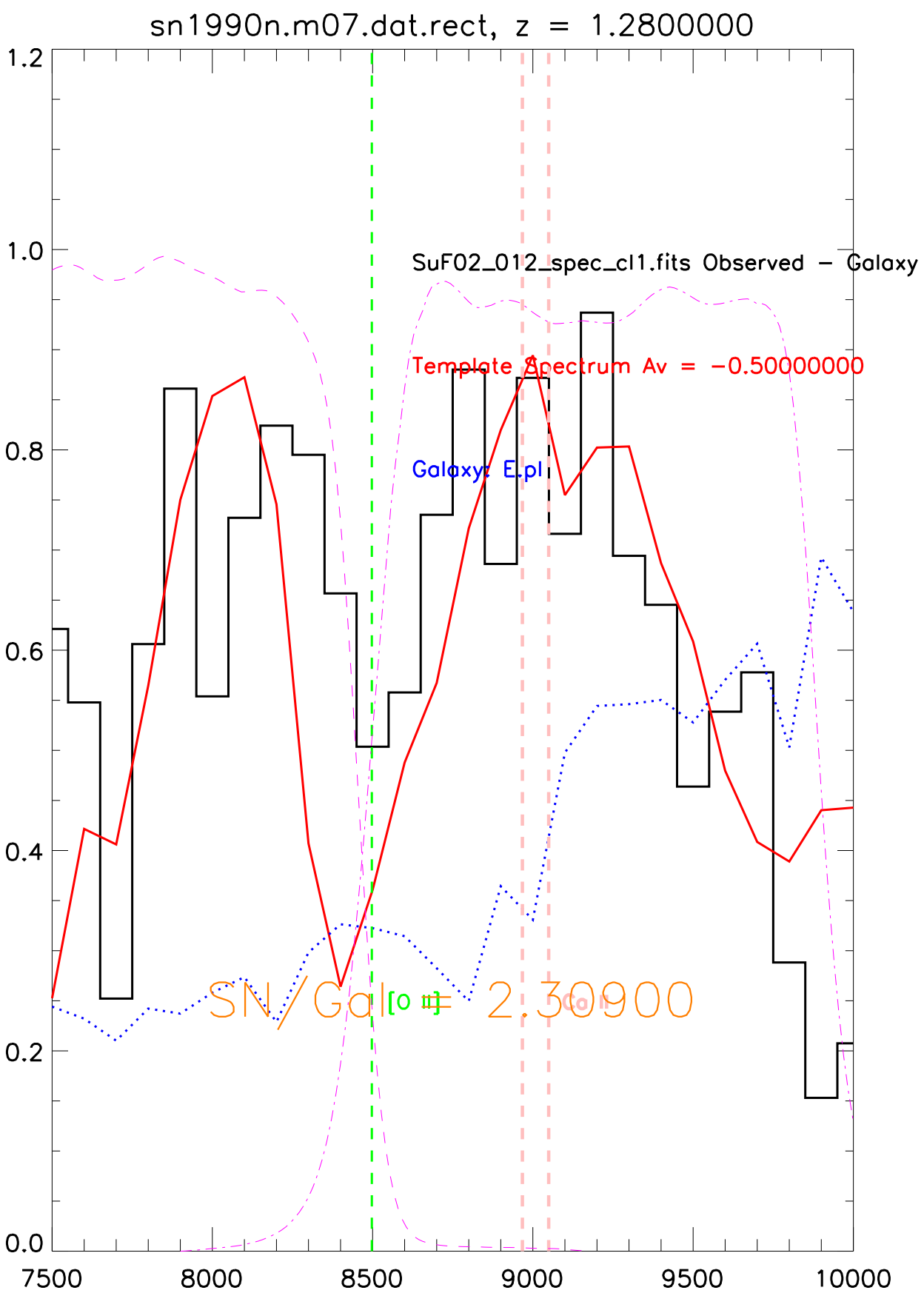

sn1991t.m00.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed – Galaxy
Template Spectrum Av = −0.36607143
Galaxy: E.pl
SN/Gal = 3.10543
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000

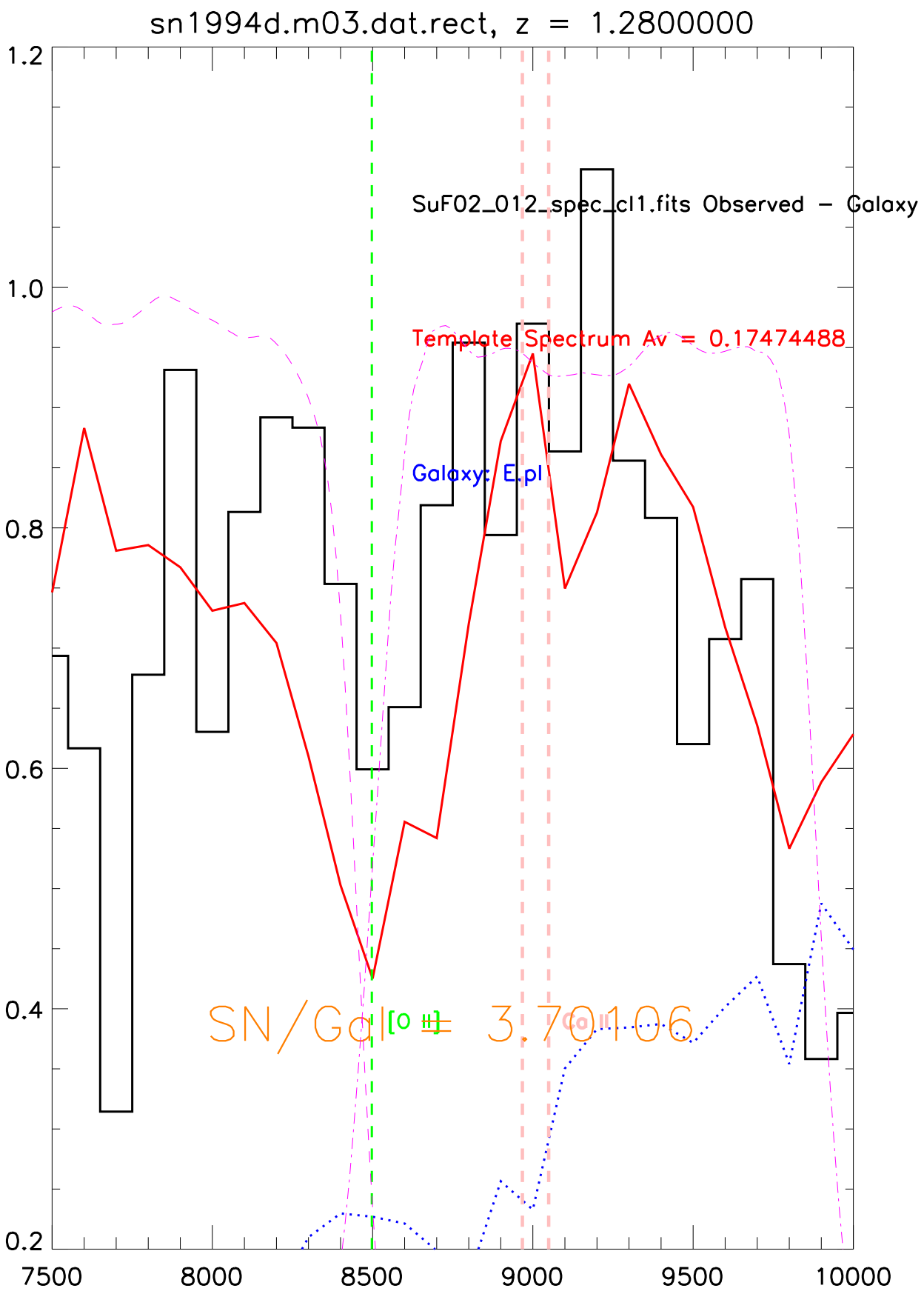

sn1991t.m03.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed − Galaxy
Template Spectrum Av = −0.34821430
Galaxy: E.pl
SN/Gal[O II] = 3.15571
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000

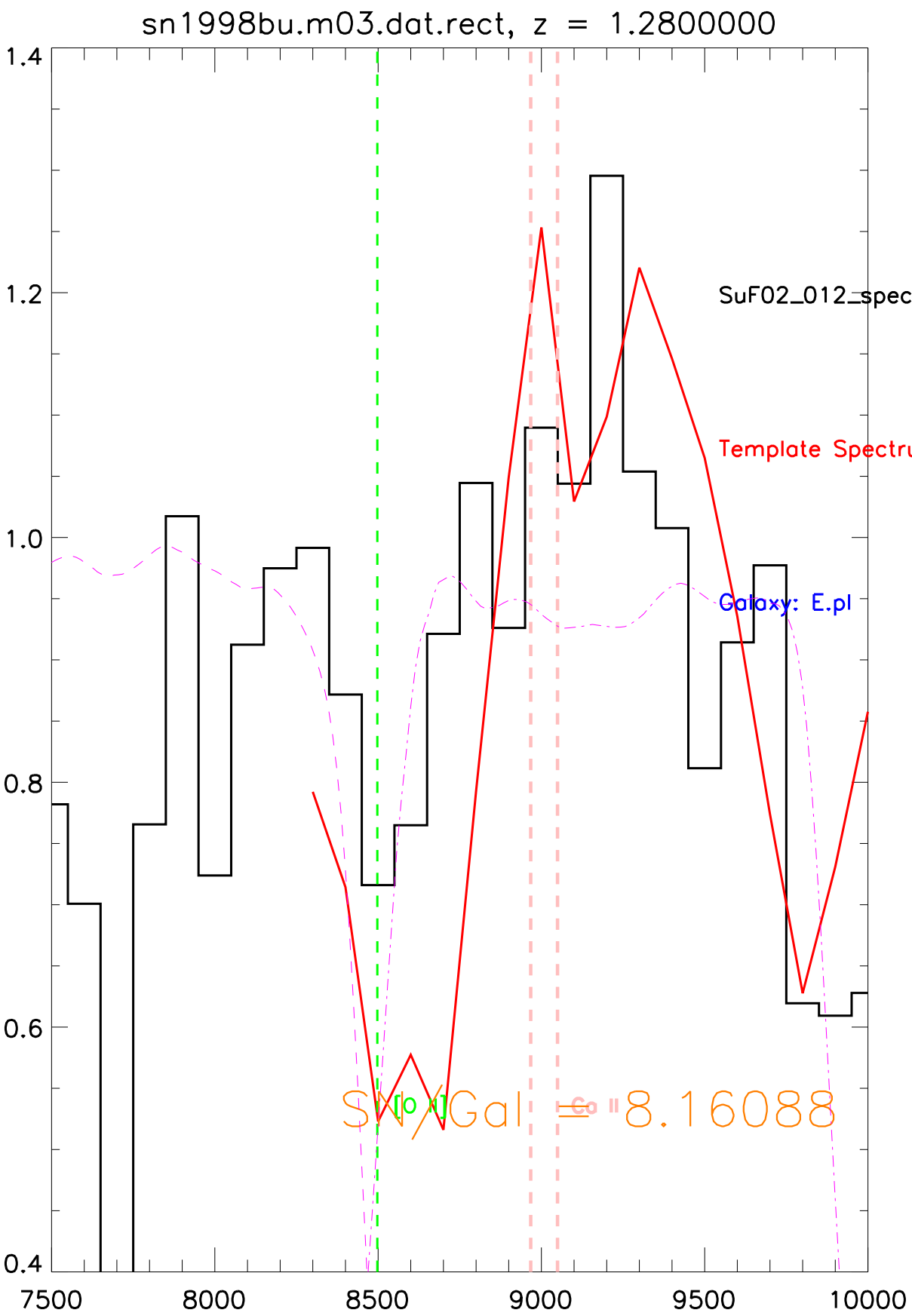

sn1991t.m07.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed – Galaxy
Template Spectrum Av = 0.34311226
Galaxy: E.pl
SN/Gal
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000

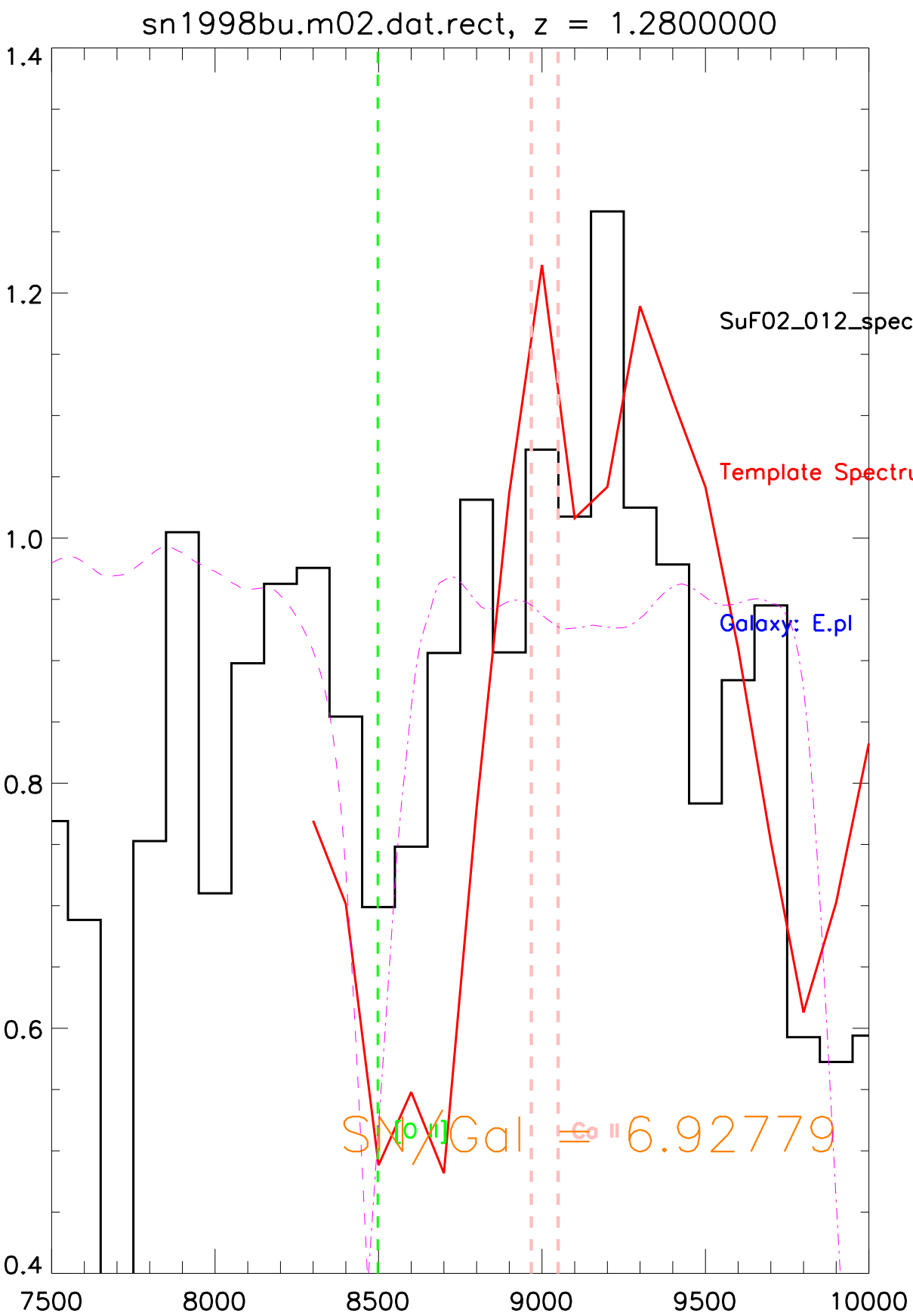

sn1991t.m08.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed – Galaxy
Template Spectrum Av = 0.50000000
Galaxy: E.pl
SN/Gal[O II] = 3.07423
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000

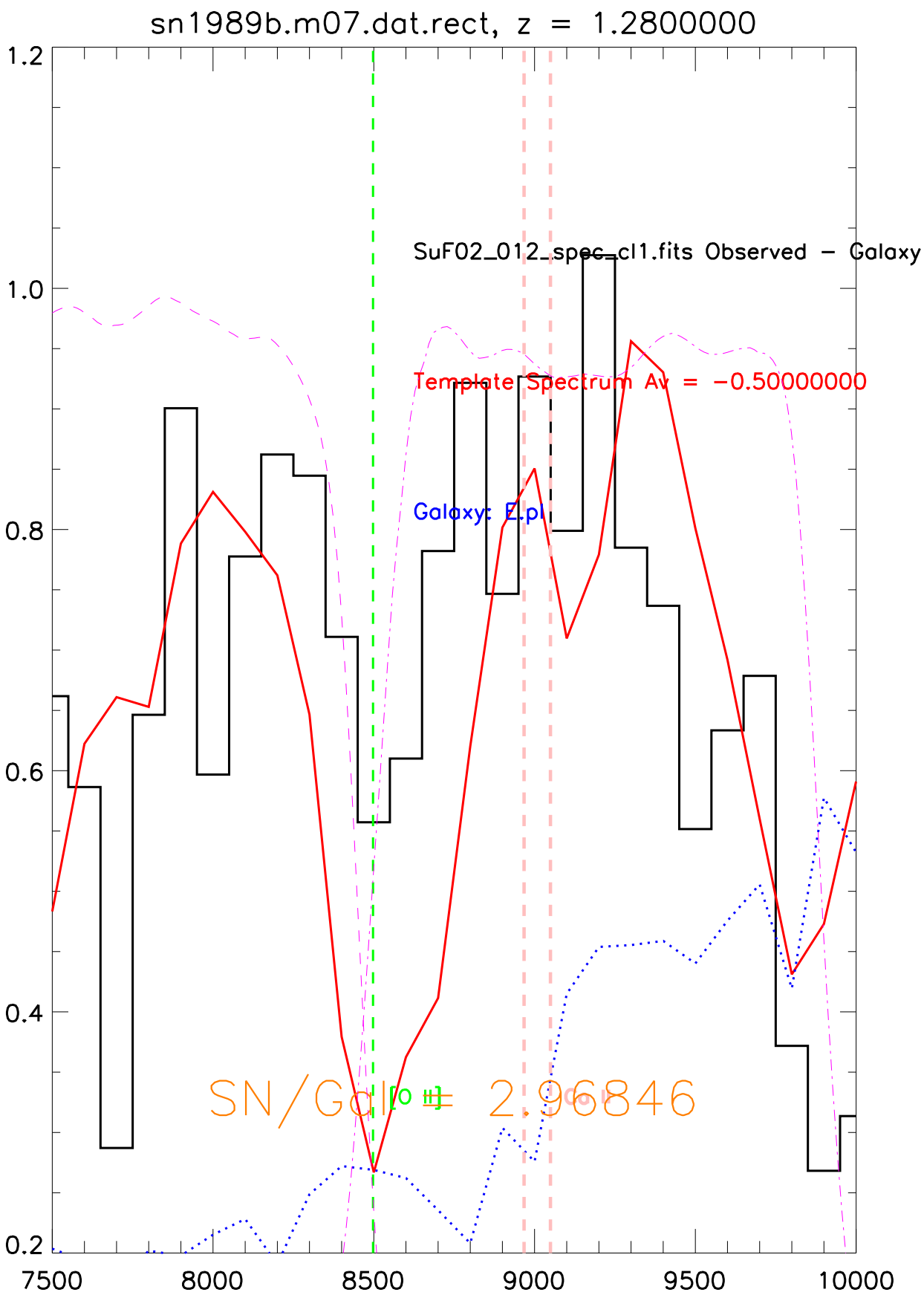

sn1998bu.m04.dat.rect, z = 1.2800000
1.4
1.2
1.0
0.8
0.6
0.4
7500
8000
8500
9000
9500
10000
SuF02_012_spec_cl1.fits
Template Spectrum Av =
Galaxy: E.pl
[O II]
SN/Gal = 7.02537

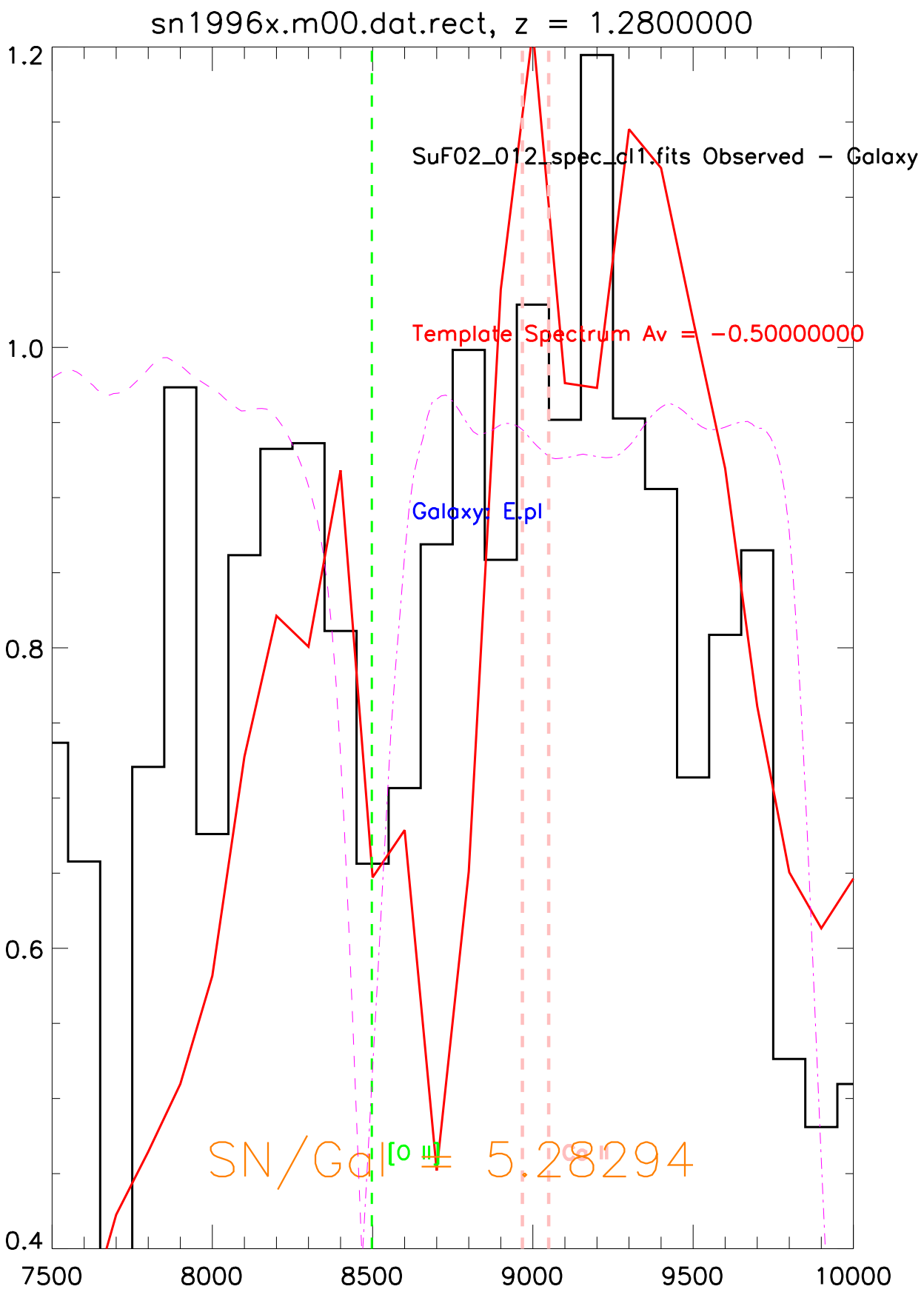

sn1990n.m07.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed – Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal[O II] = 2.30900
1.2
1.0
0.8
0.6
0.4
0.2
0.0
7500
8000
8500
9000
9500
10000

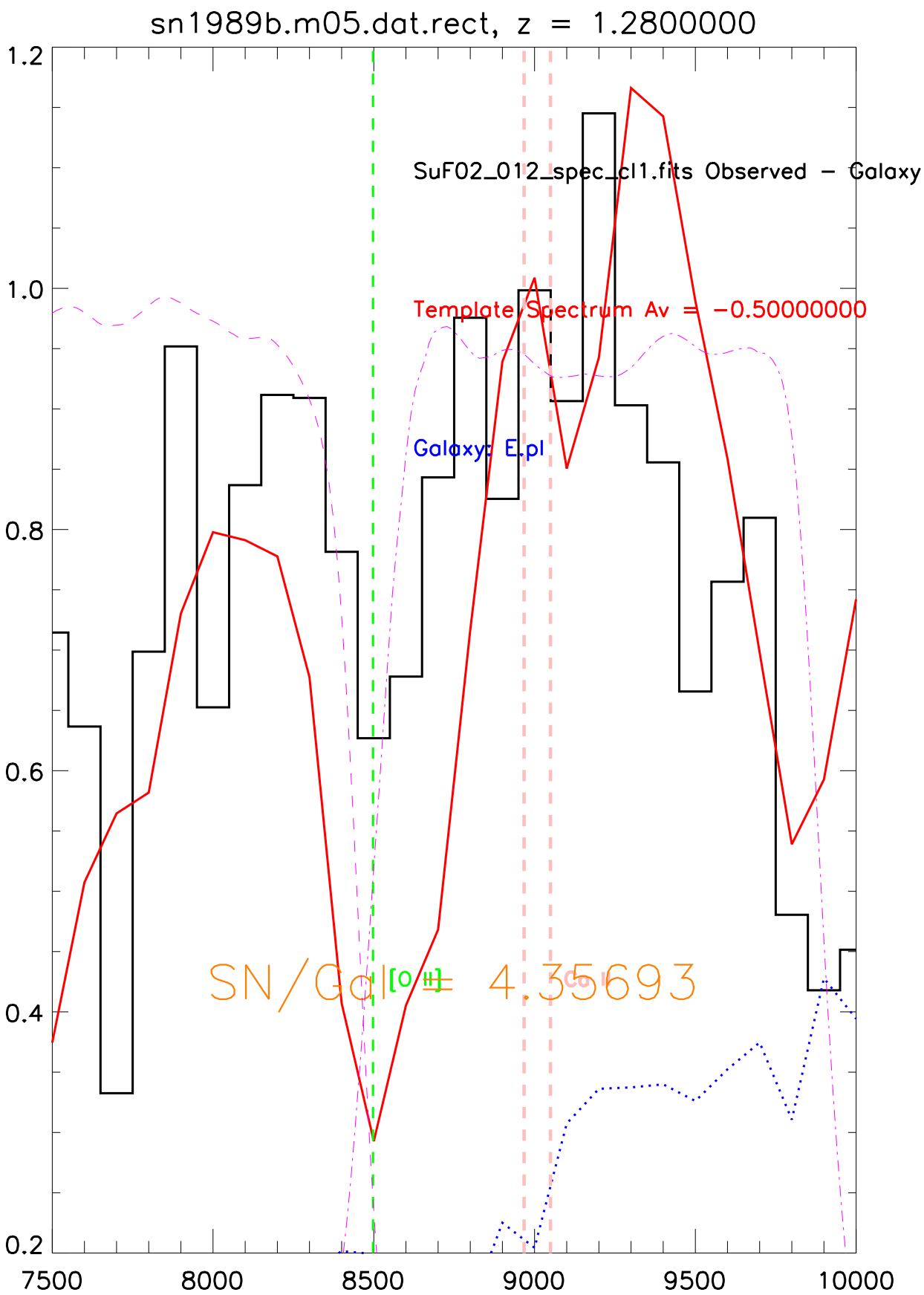

sn1994d.m03.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed − Galaxy
Template Spectrum Av = 0.17474488
Galaxy: E.pl
SN/Gal[O II] = 3.70106
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000

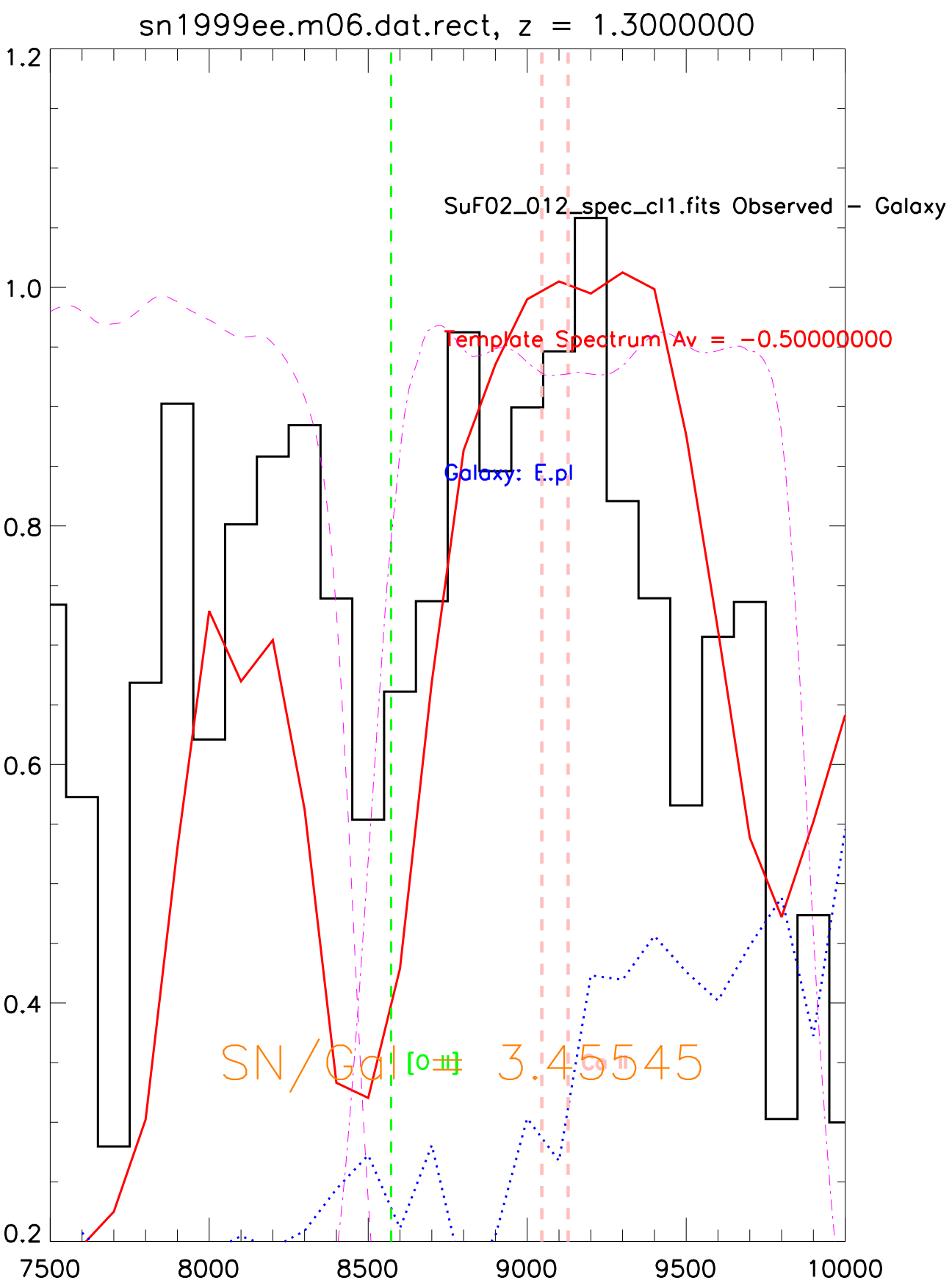

sn1998bu.m03.dat.rect, z = 1.2800000
1.4
1.2
1.0
0.8
0.6
0.4
7500
8000
8500
9000
9500
10000
SuF02_012_spec_cl1.fits
Template Spectrum Av =
Galaxy: E.pl
SNXGal = 8.16088

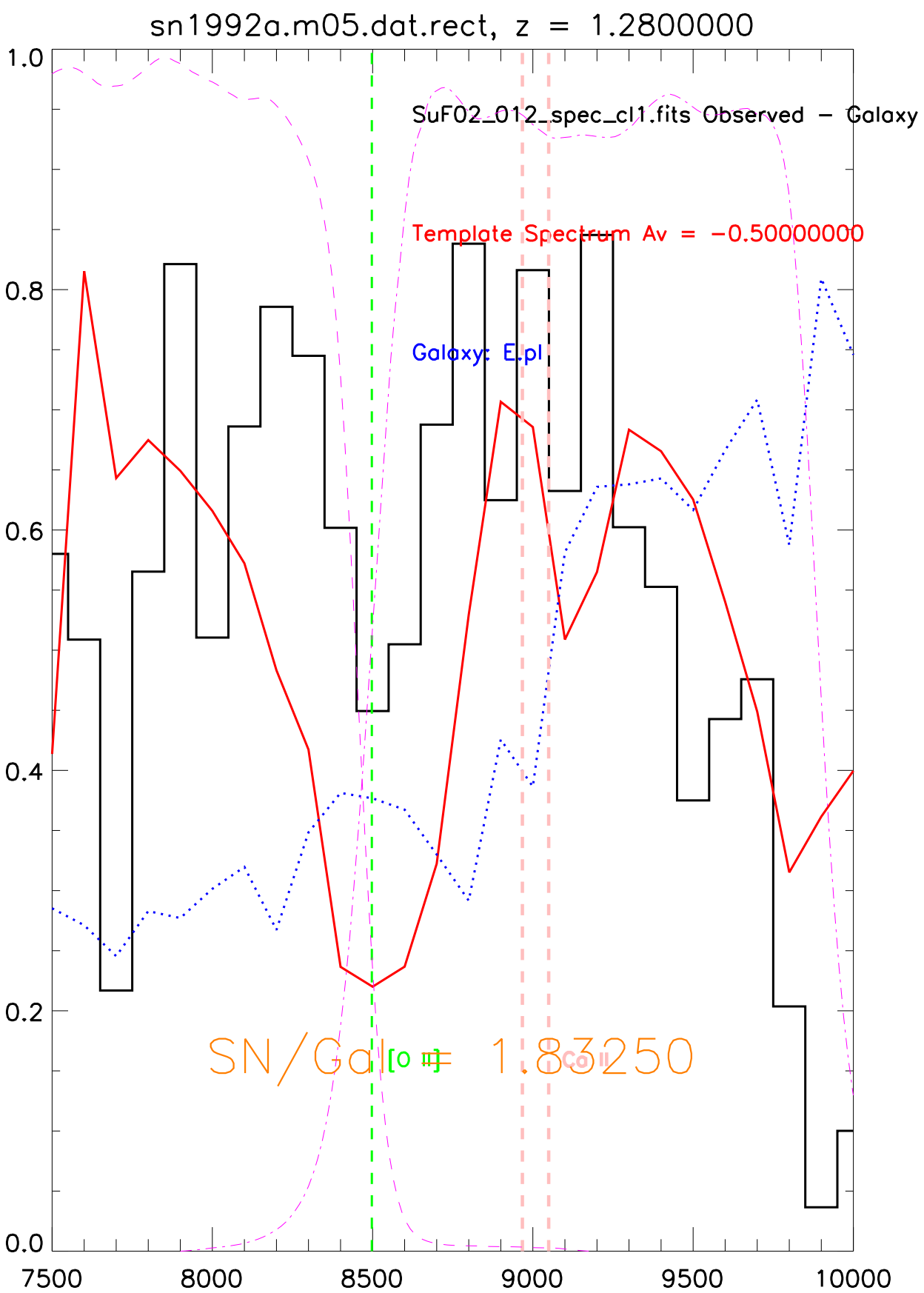

sn1998bu.m02.dat.rect, z = 1.2800000
1.4
1.2
1.0
0.8
0.6
0.4
7500
8000
8500
9000
9500
10000
SuF02_012_spec_cl1.fits
Template Spectrum Av =
Galaxy: E.pl
SN/Gal = 6.92779

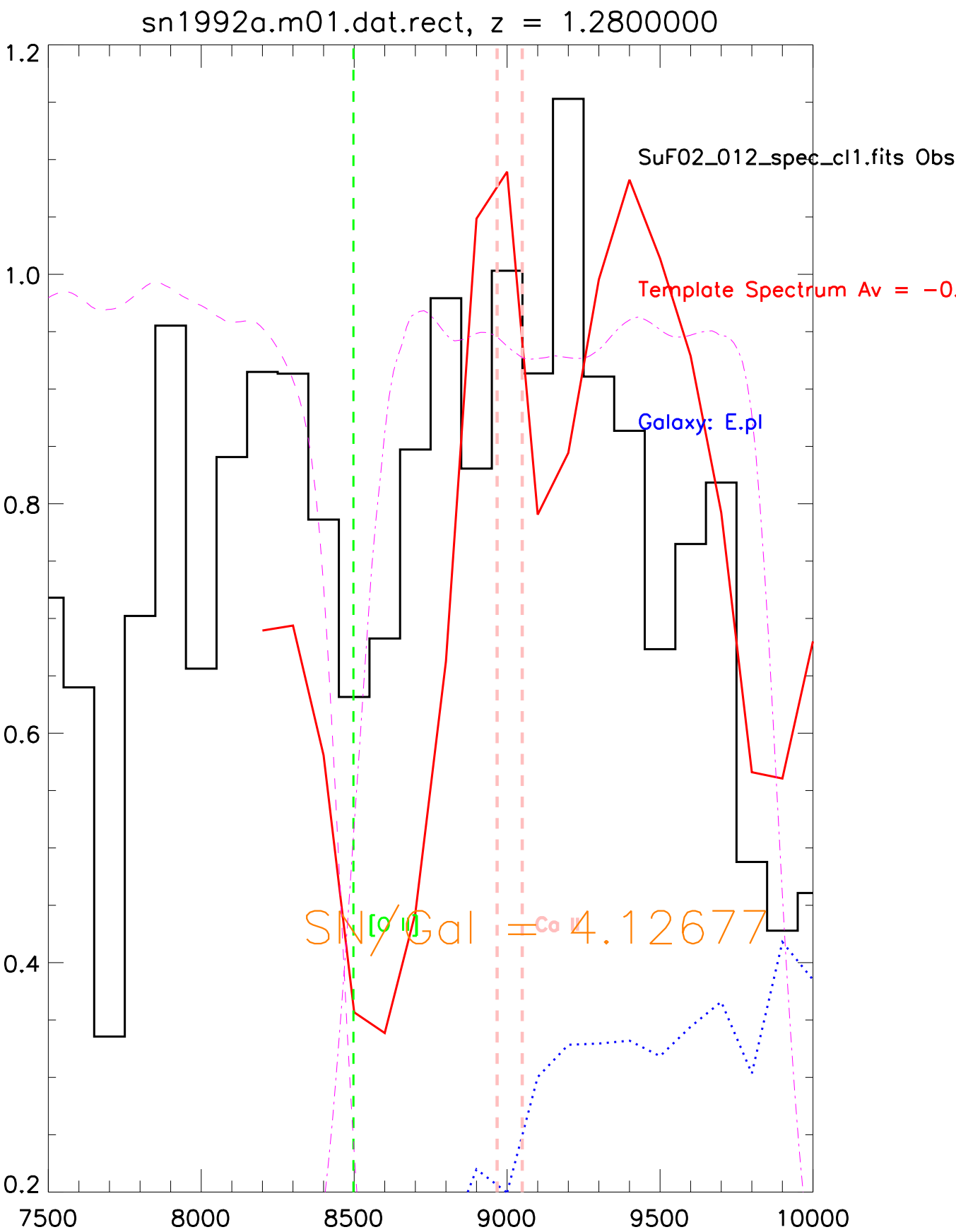

sn1989b.m07.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed − Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal[0 =] = 2.96846
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000

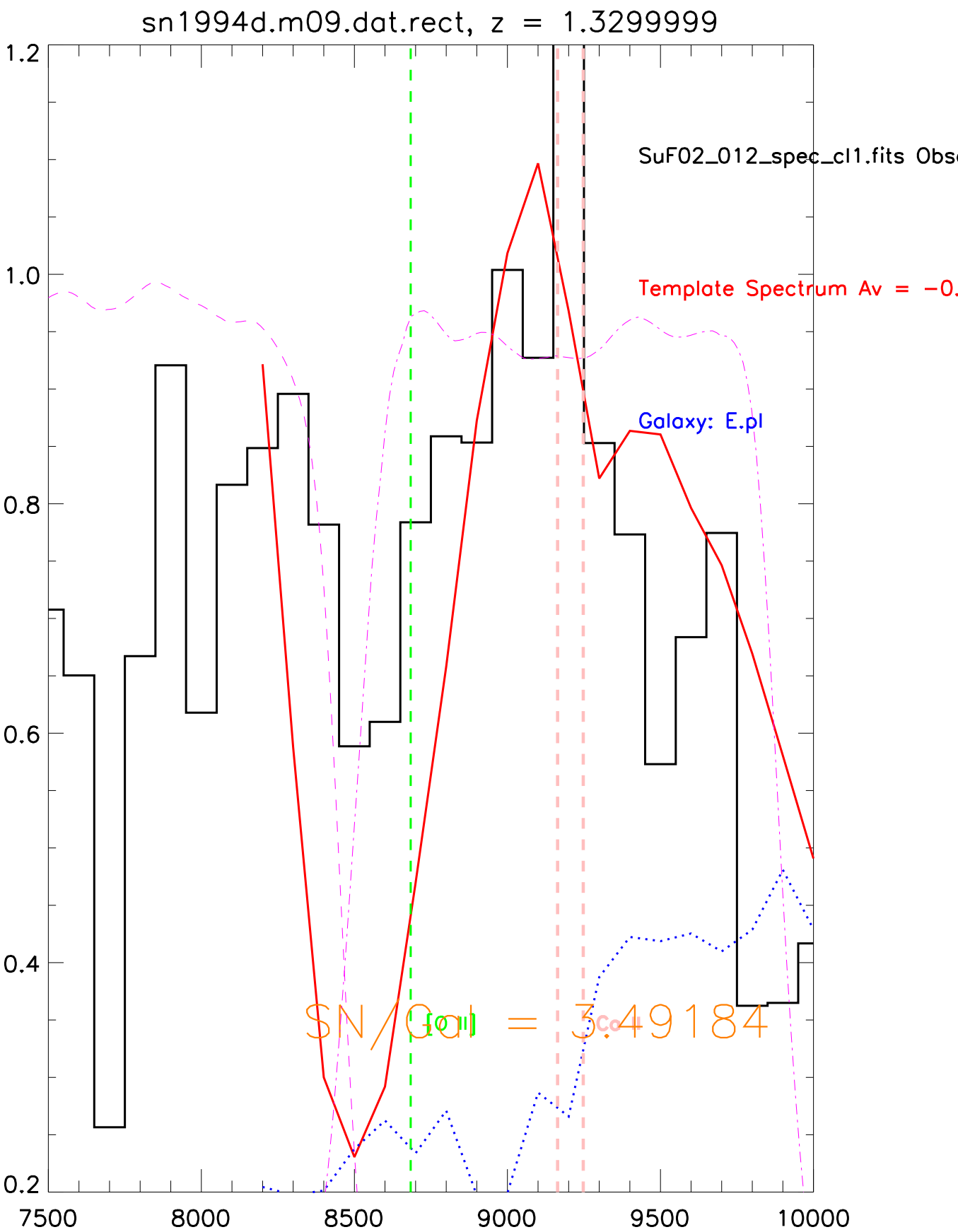

sn1996x.m00.dat.rect, z = 1.2800000
SuF02_012_spec_dl1.fits Observed – Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal = 5.28294
1.2
1.0
0.8
0.6
0.4
7500
8000
8500
9000
9500
10000

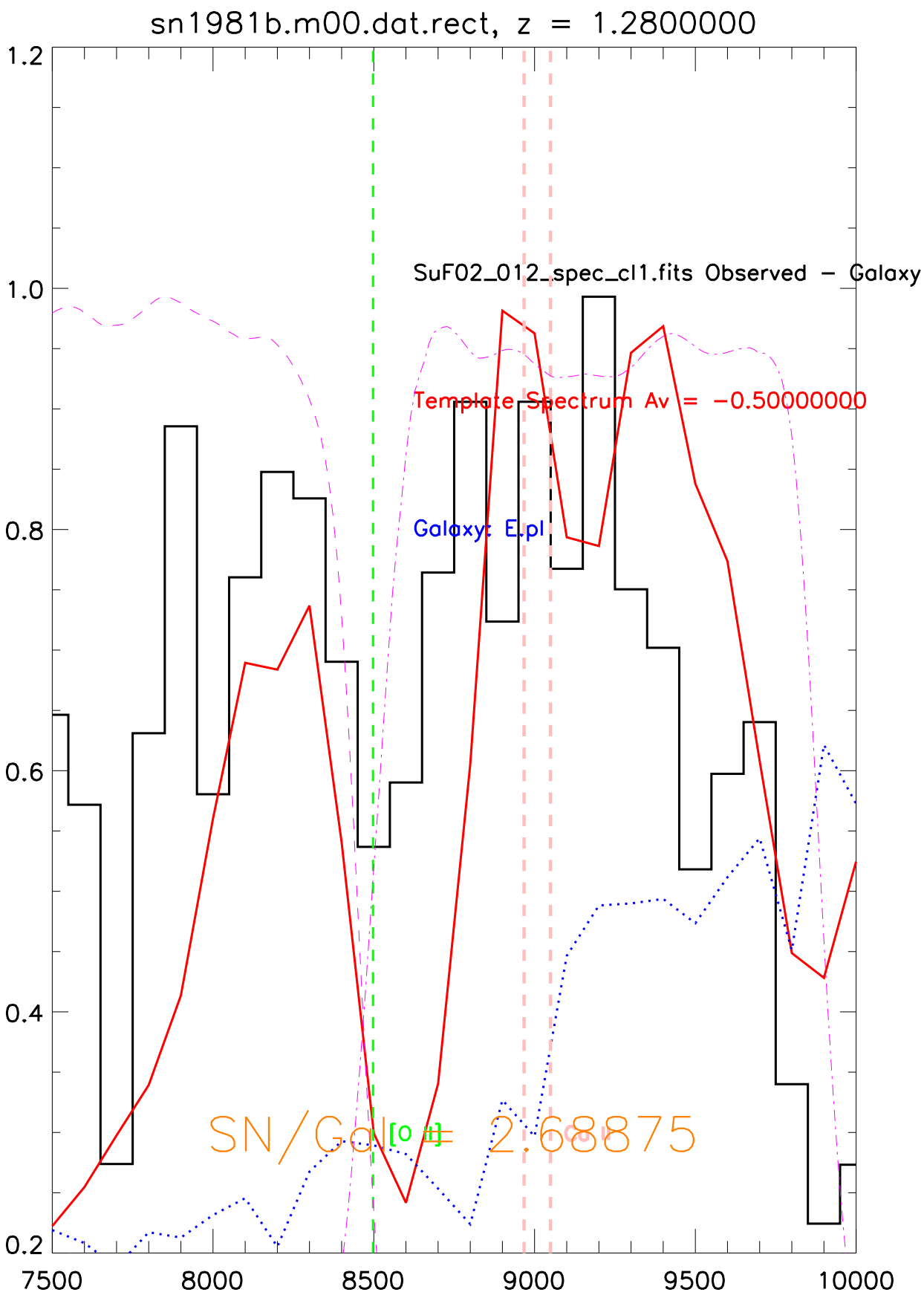

sn1989b.m05.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed − Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal[O II] = 4.35693
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000

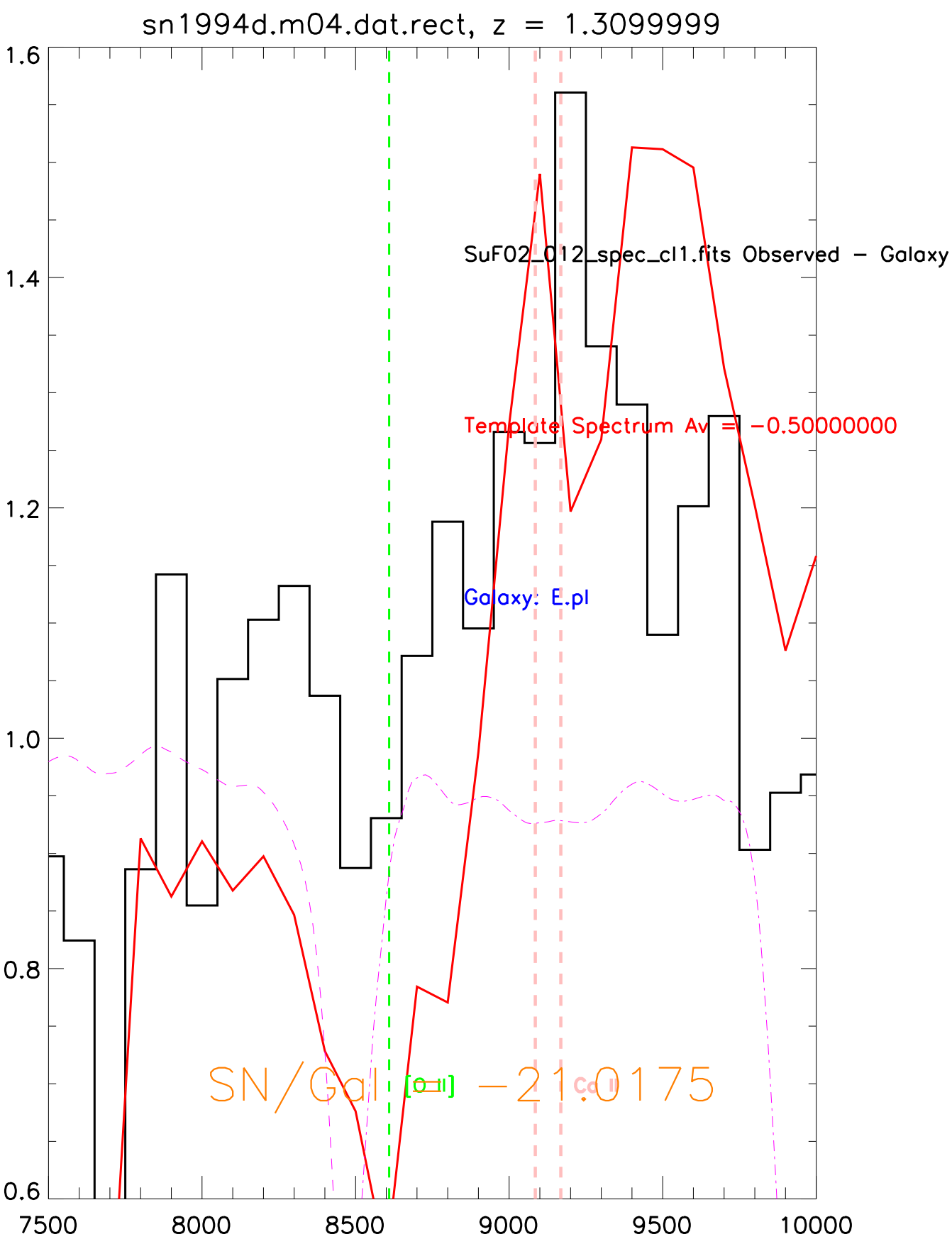

sn1999ee.m06.dat.rect, z = 1.3000000
SuF02_012_spec_cl1.fits Observed – Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal [0=#] 3.45545
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000

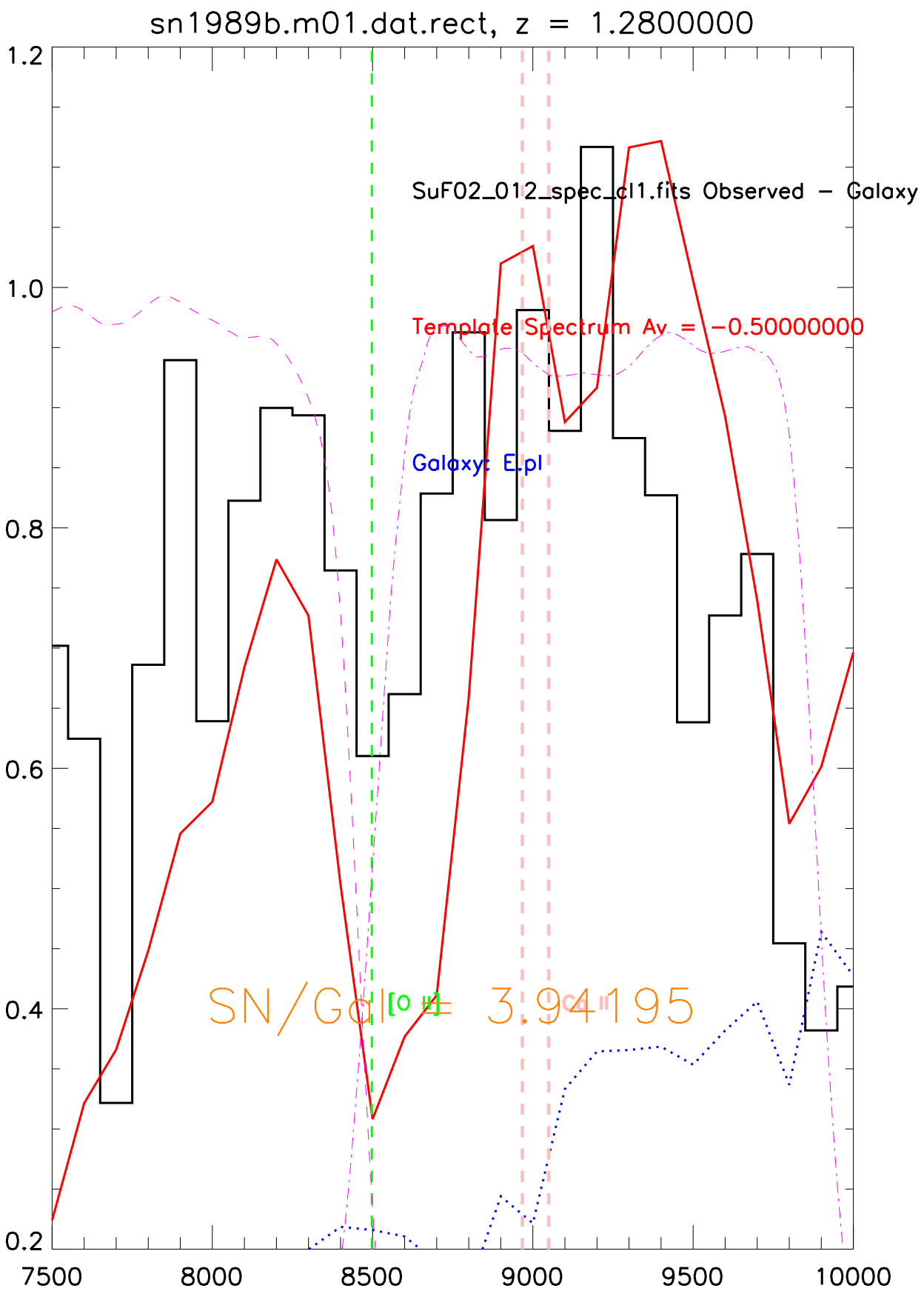

sn1992a.m05.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed – Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal = 1.83250
[O II]
Ca II
1.0
0.8
0.6
0.4
0.2
0.0
7500
8000
8500
9000
9500
10000

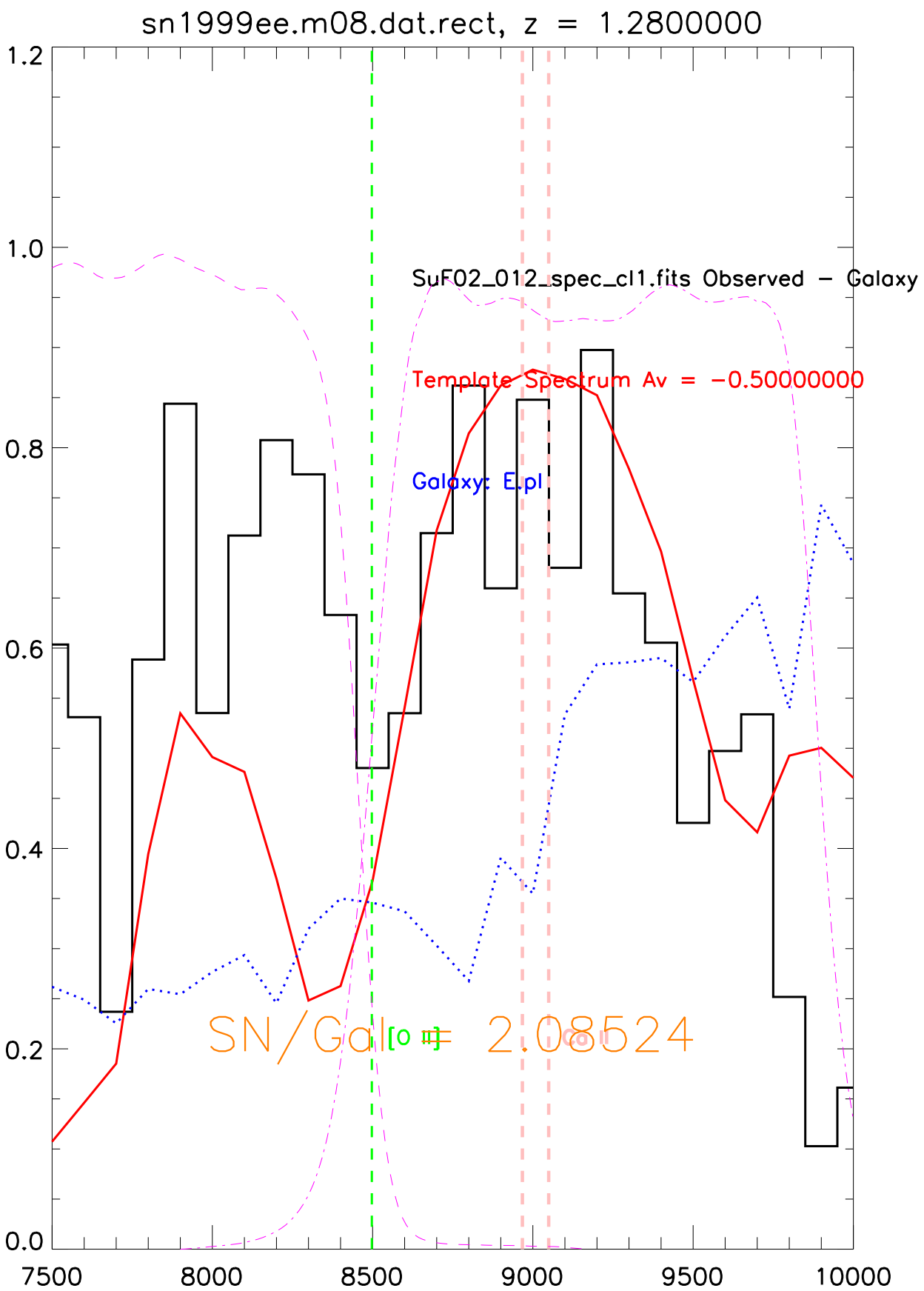

sn1992a.m01.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Obs
Template Spectrum Av = −0.
Galaxy: E.pl
SN/Gal = 4.12677
[O II]
Ca II
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000

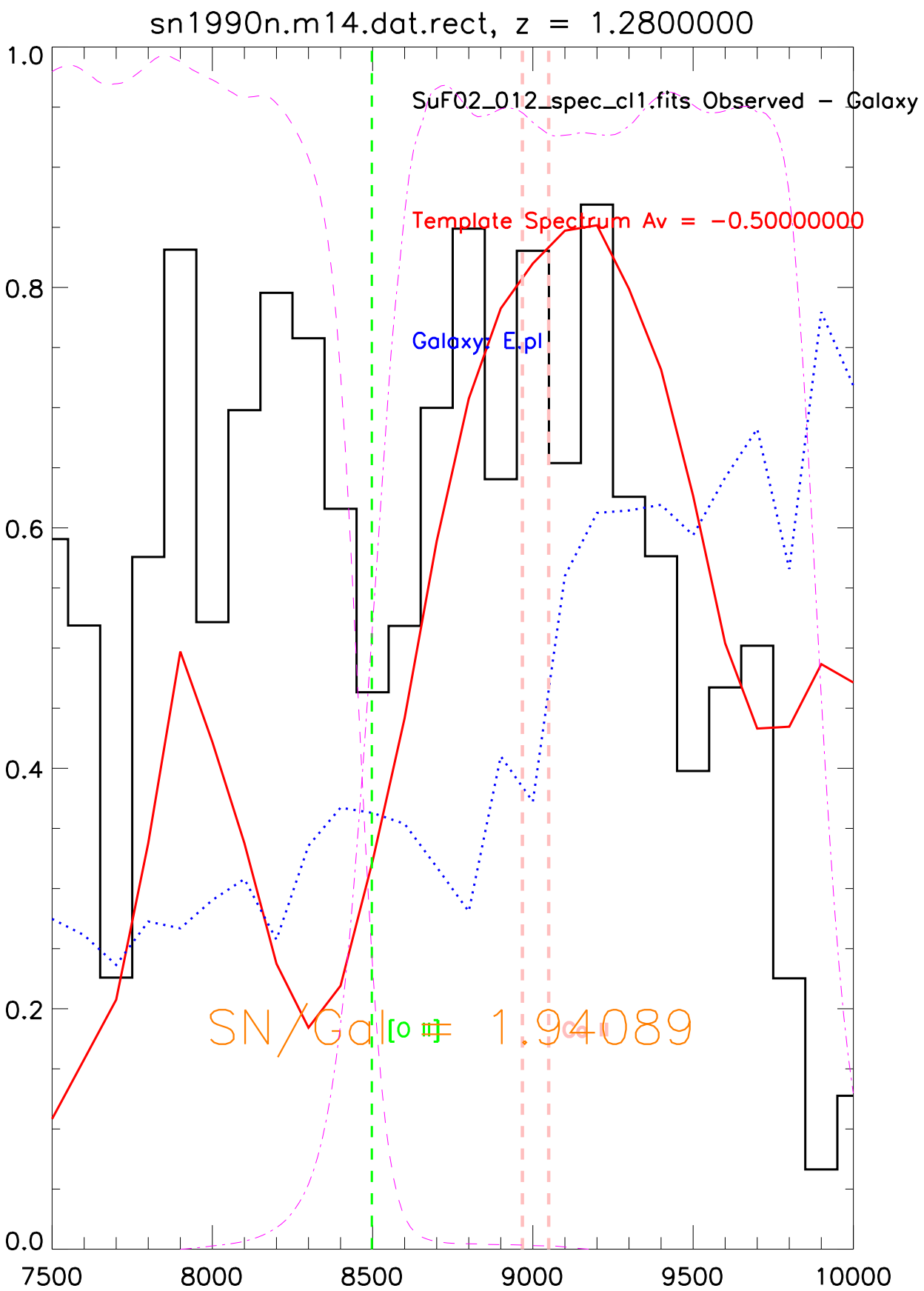

sn1994d.m09.dat.rect, z = 1.3299999
SuF02_012_spec_cl1.fits Obs
Template Spectrum Av = −0.
Galaxy: E.pl
SN/Gal = 3.49184
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000

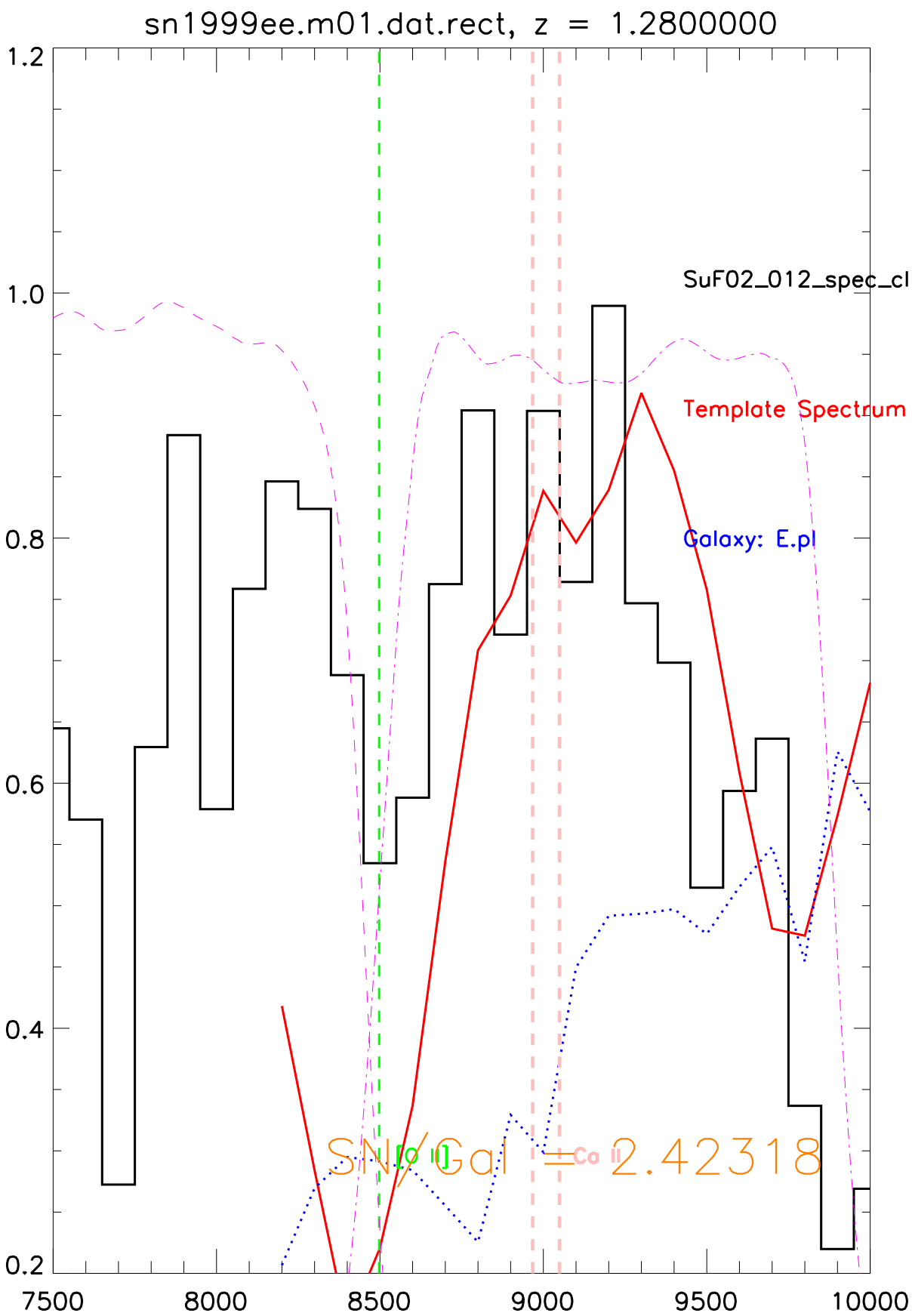

sn1981b.m00.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed – Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal[O II] = 2.68875
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000


sn1994d.m04.dat.rect, z = 1.3099999
SuF02_012_spec_cl1.fits Observed − Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal −21.0175
1.6
1.4
1.2
1.0
0.8
0.6
7500
8000
8500
9000
9500
10000


sn1989b.m01.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed − Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal = 3.94195
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000


sn1999ee.m08.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed − Galaxy
Template Spectrum Av = −0.50000000
Galaxy: E.pl
SN/Gal[0 #] = 2.08524
1.2
1.0
0.8
0.6
0.4
0.2
0.0
7500
8000
8500
9000
9500
10000


sn1990n.m14.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Observed - Galaxy
Template Spectrum Av = -0.50000000
Galaxy: E.pl
SN/Gal[0 =
1.94089
1.0
0.8
0.6
0.4
0.2
0.0
7500
8000
8500
9000
9500
10000


sn1999ee.m01.dat.rect, z = 1.2800000
SuF02_012_spec_cl1.fits Obs
Template Spectrum Av = −0.
Galaxy: E.pl
SN/Gal = 2.42318
[O II]
Ca II
1.2
1.0
0.8
0.6
0.4
0.2
7500
8000
8500
9000
9500
10000