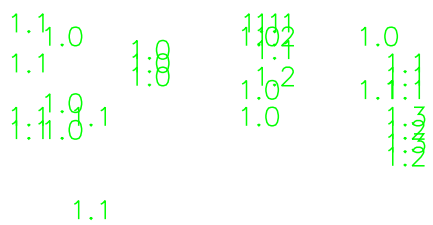
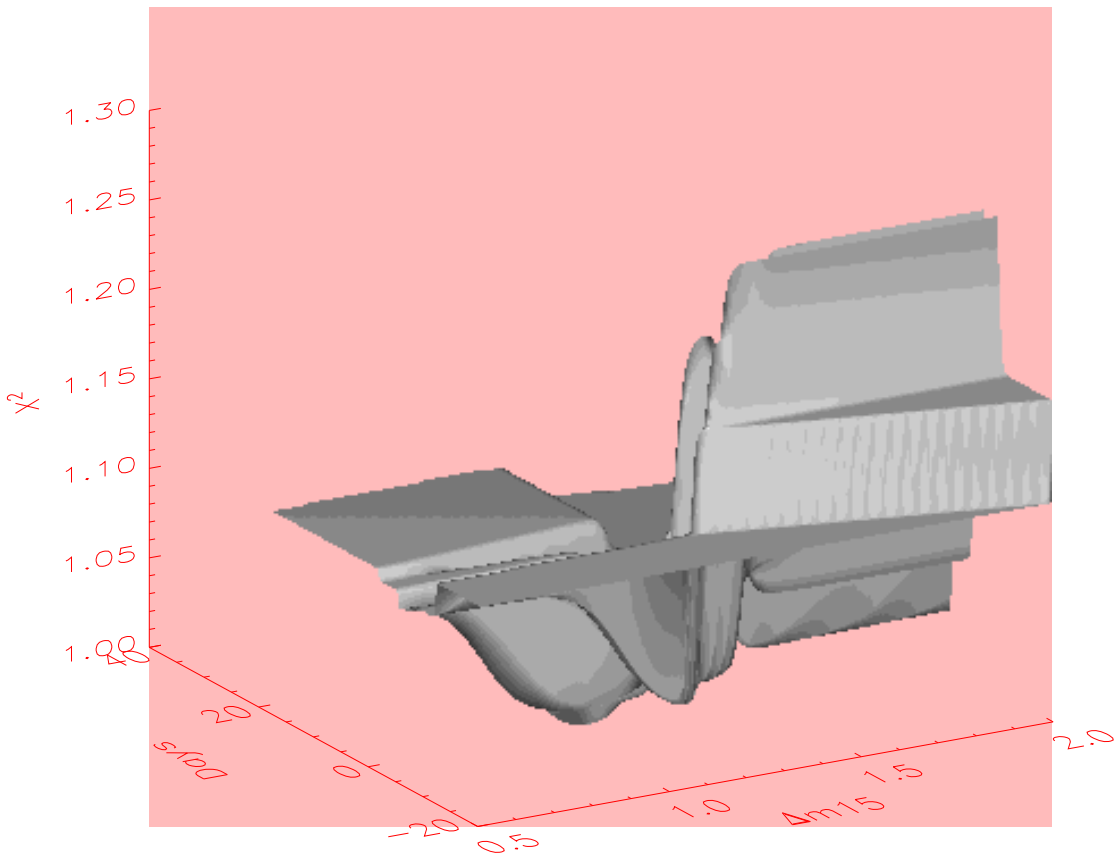
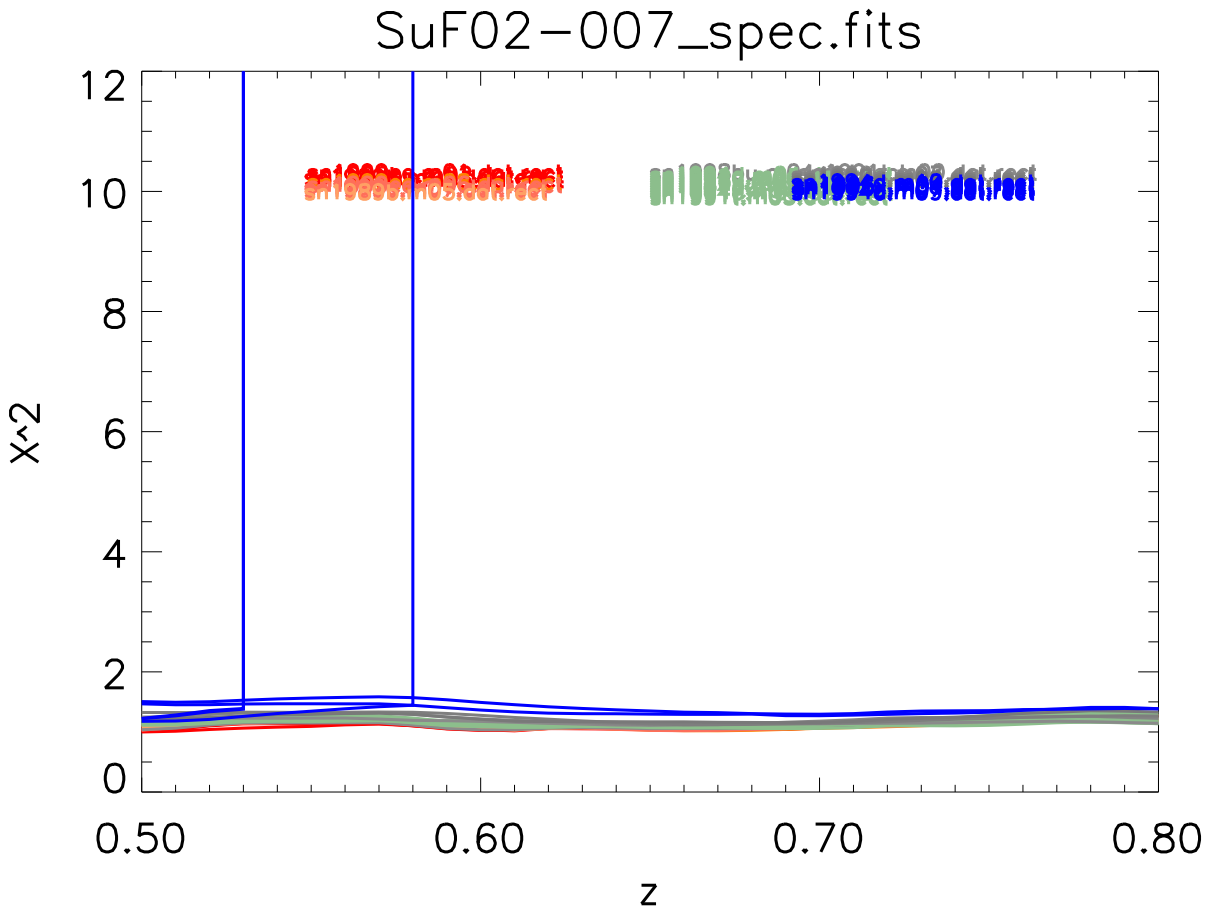
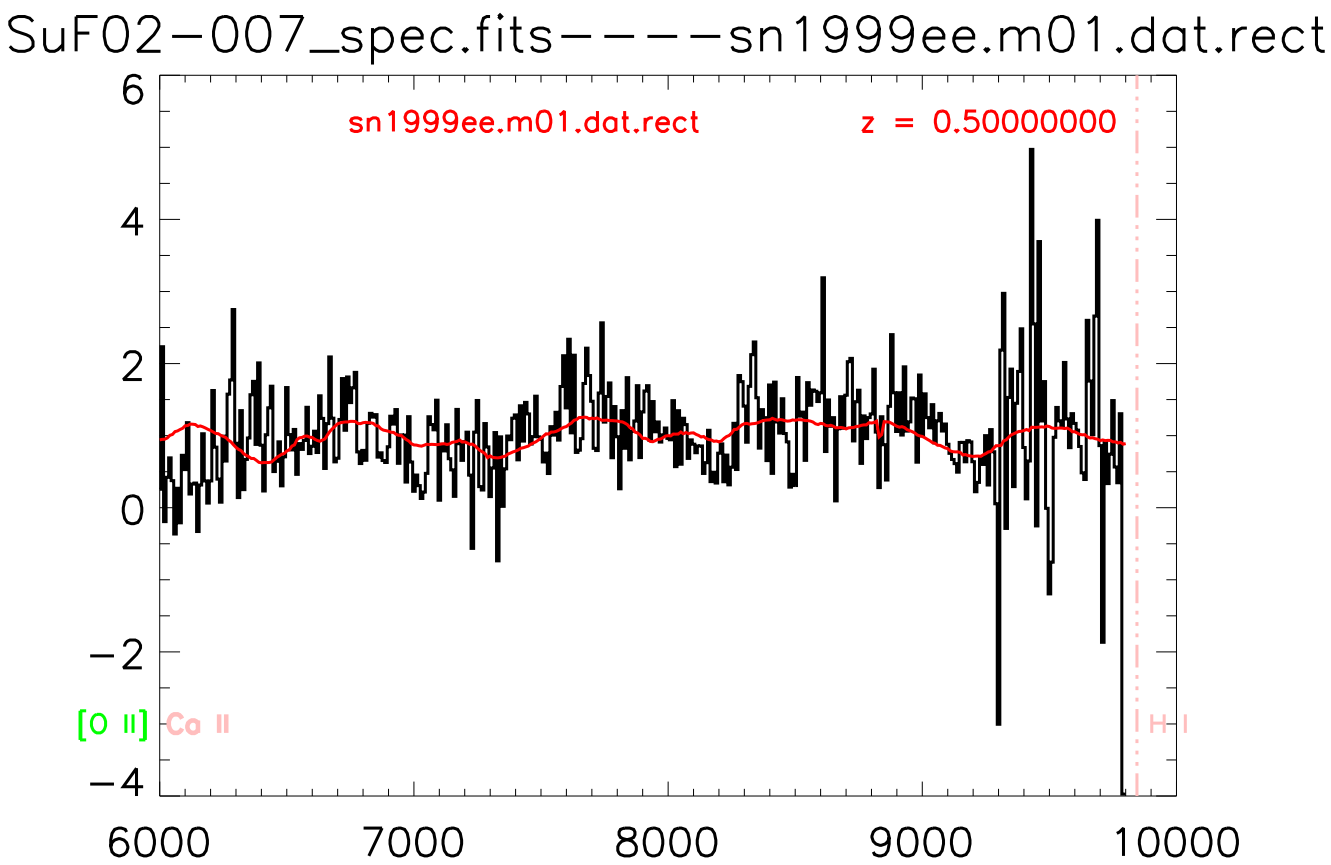
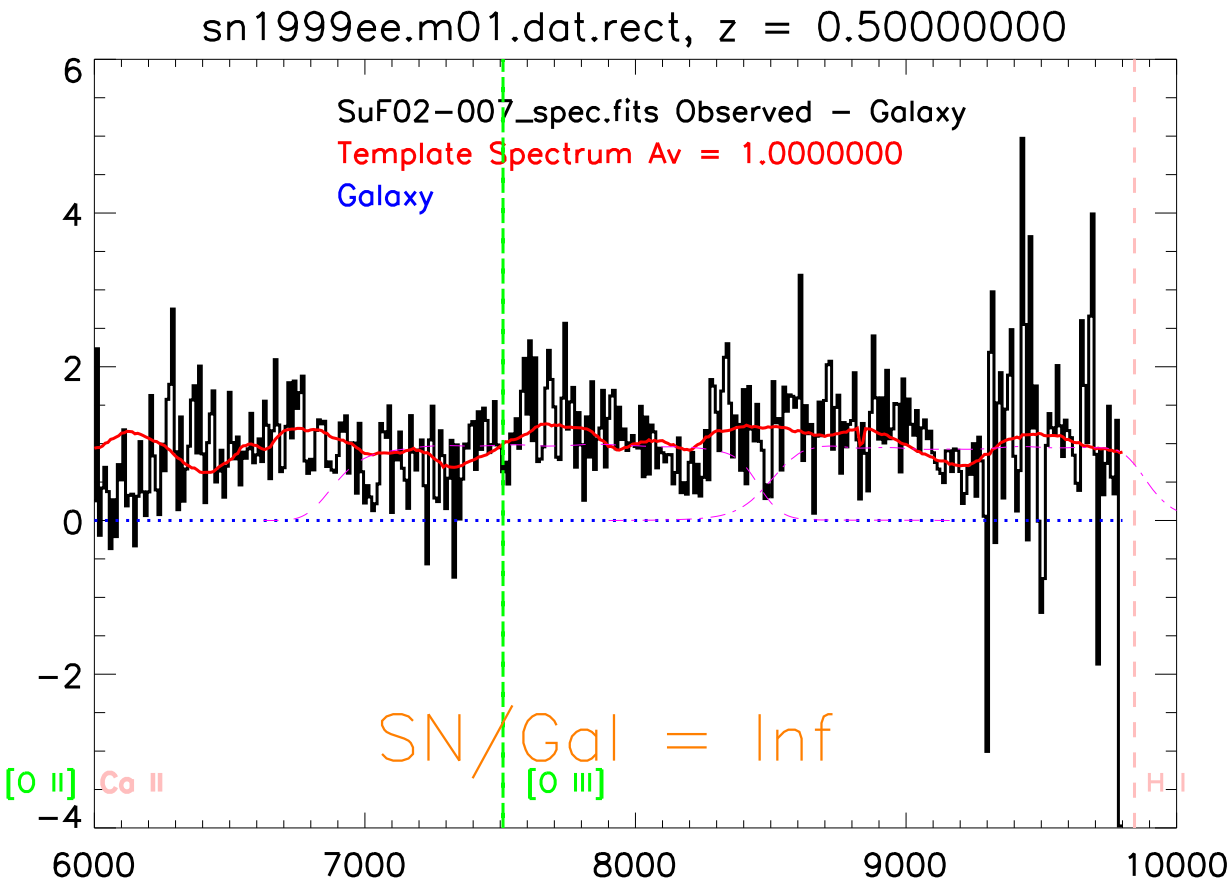


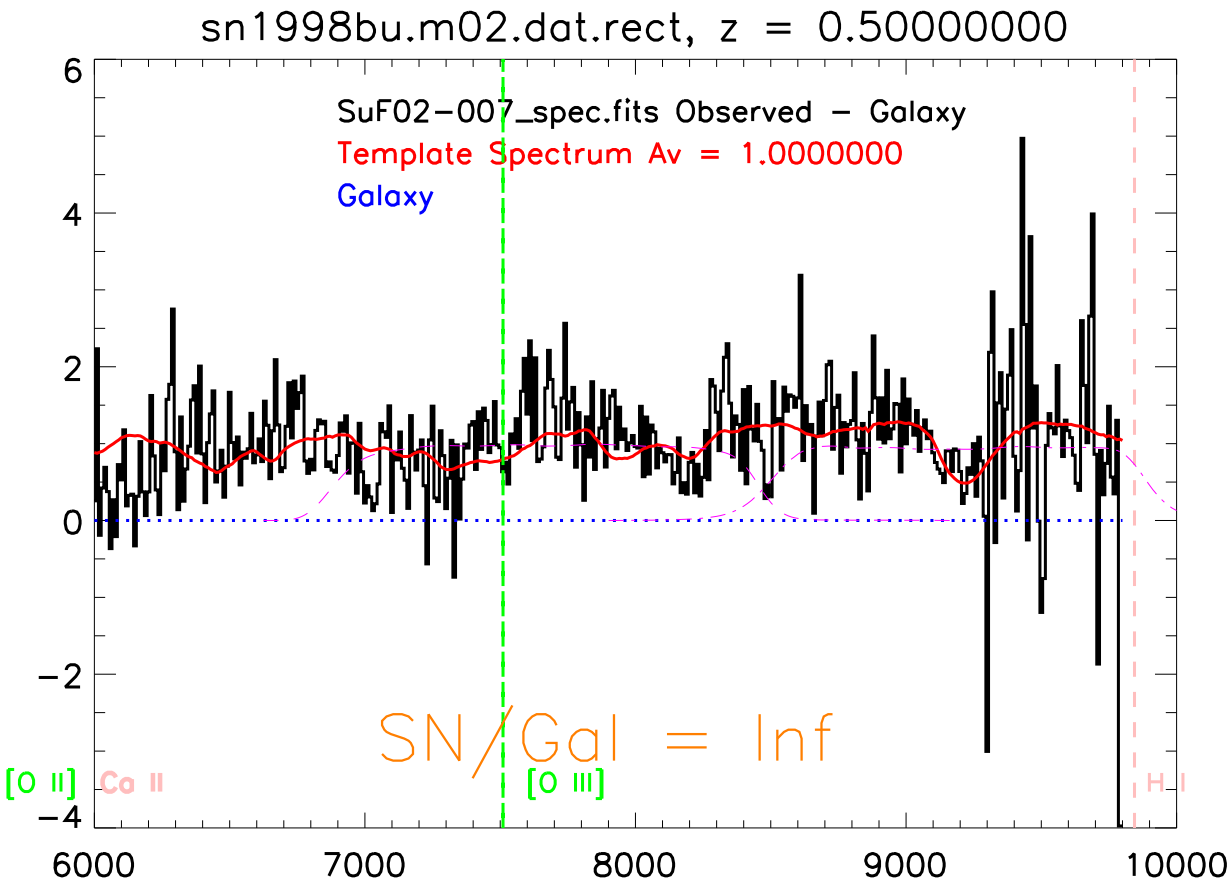


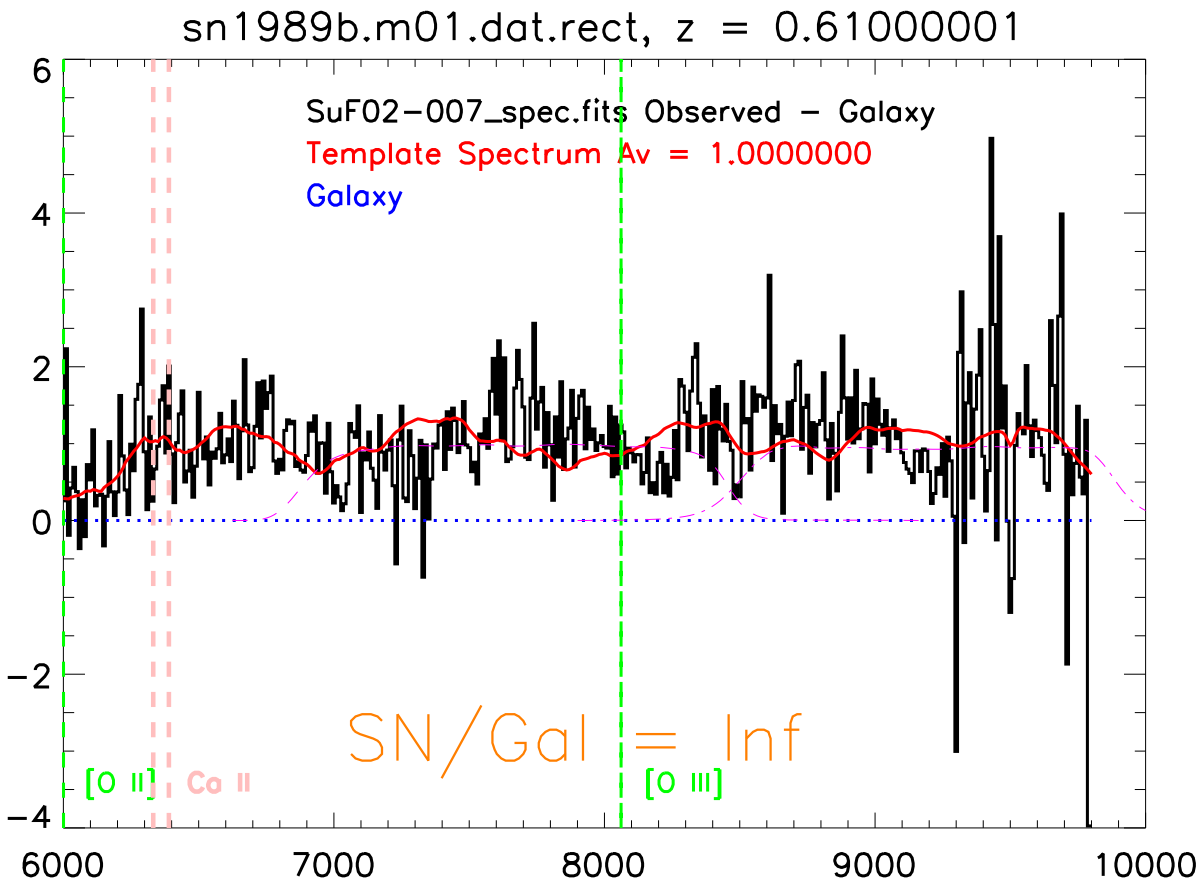
1.30
1.25
1.20
1.15
1.10
1.05
1.00
χ^2
40
20
0
−20
Days
0.5
1.0
1.5
2.0
Δm15

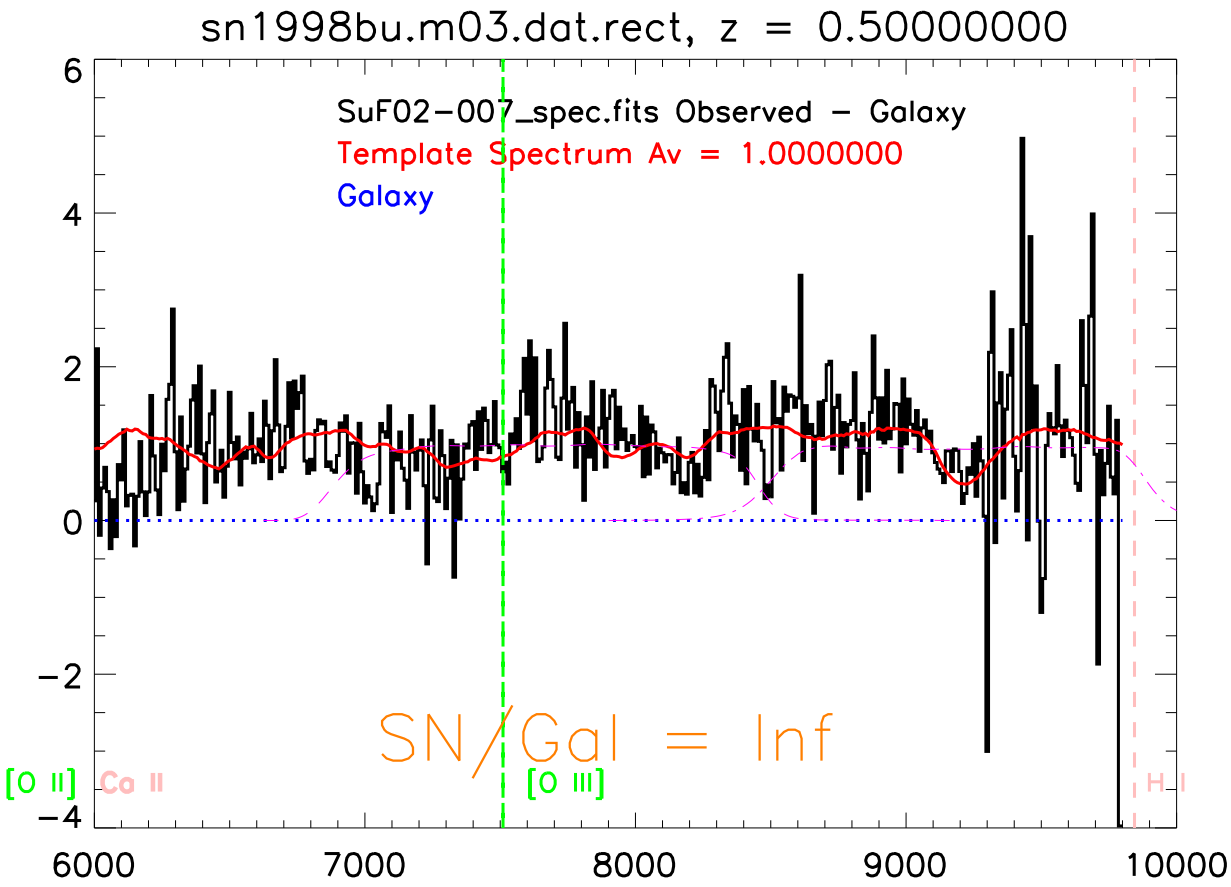

SuF02−007_spec.fits
12
10
8
6
4
2
0
X^2
0.50
0.60
0.70
0.80
z

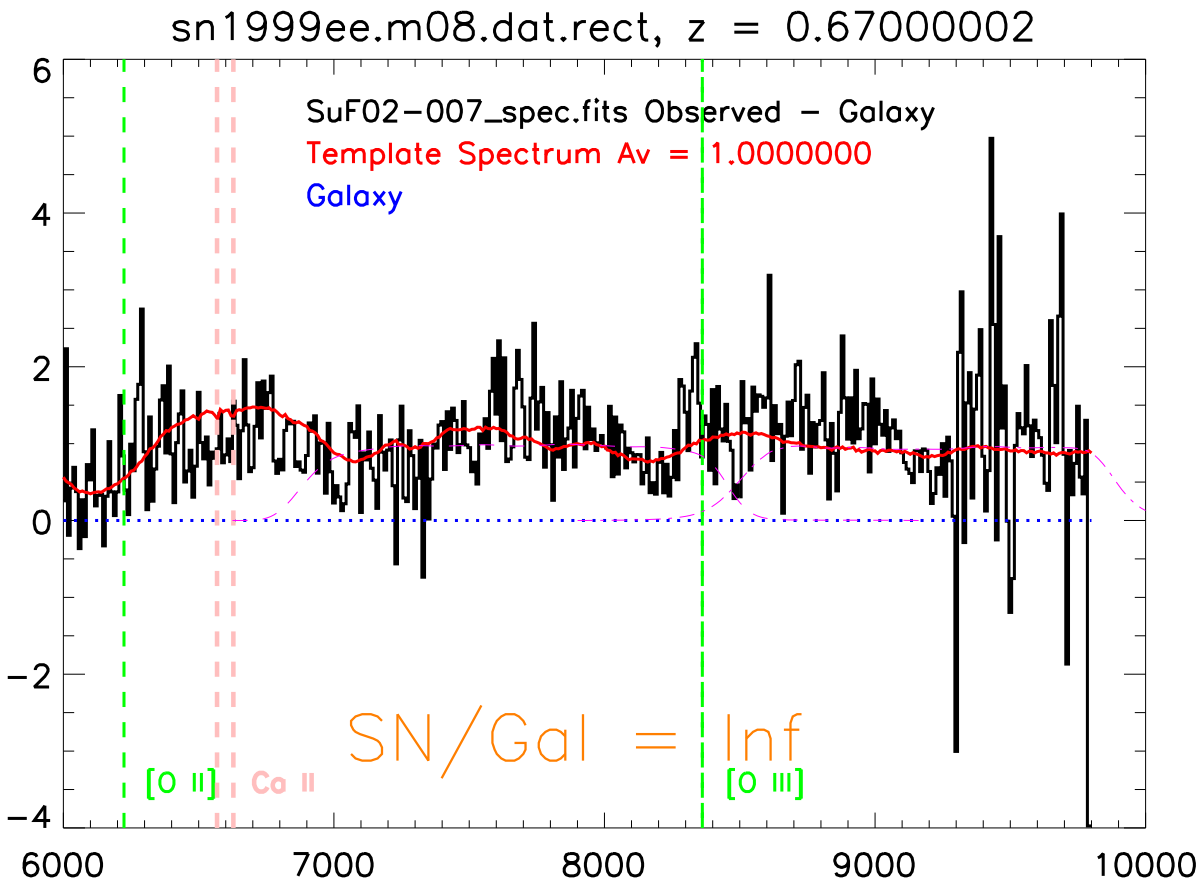

SuF02−007_spec.fits−−−−sn1999ee.m01.dat.rect
sn1999ee.m01.dat.rect
z = 0.50000000
6
4
2
0
−2
−4
[O II]
Ca II
H I
6000
7000
8000
9000
10000


sn1999ee.m01.dat.rect, z = 0.50000000
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
H I
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

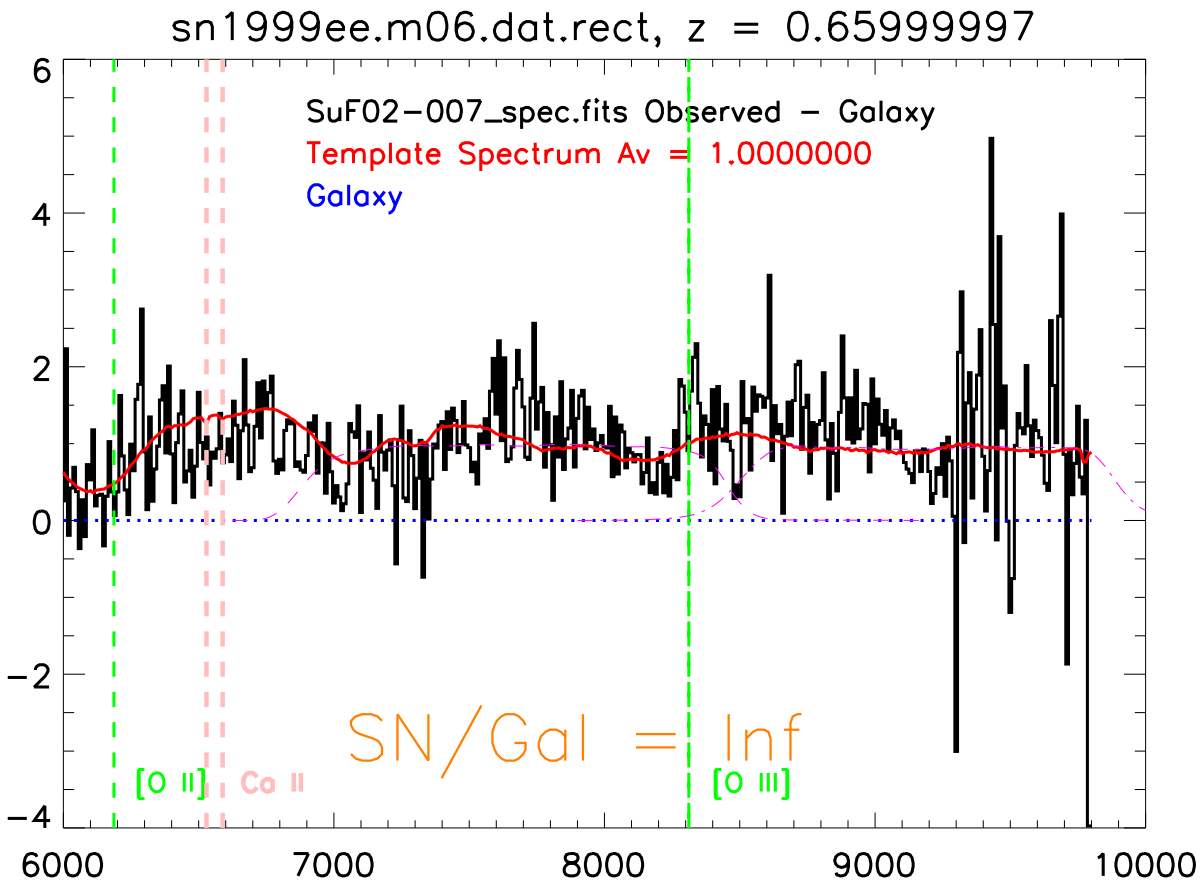

sn1998bu.m02.dat.rect, z = 0.50000000
SuF02-007_spec.fits Observed − Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
H I
6
4
2
0
−2
−4
6000
7000
8000
9000
10000


sn1989b.m01.dat.rect, z = 0.61000001
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

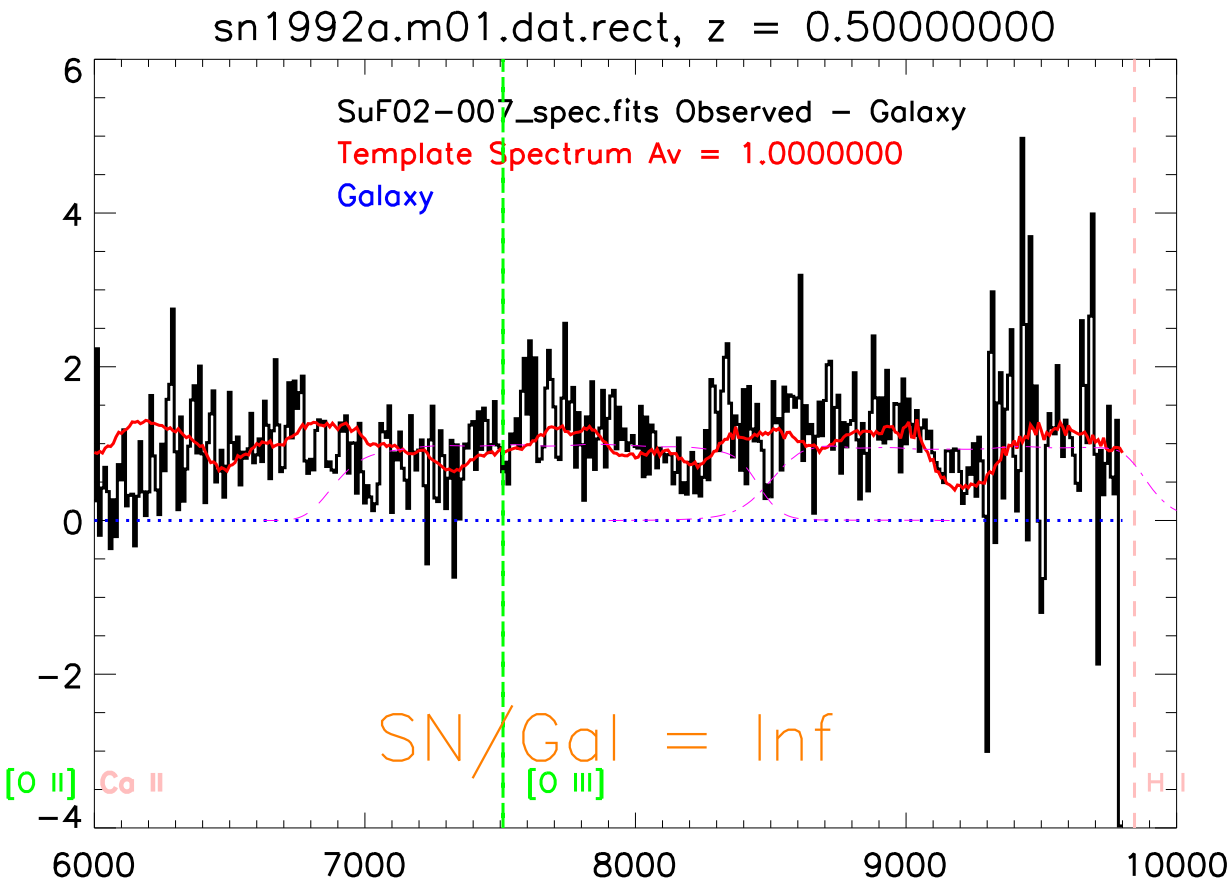

sn1998bu.m03.dat.rect, z = 0.50000000
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
H I
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

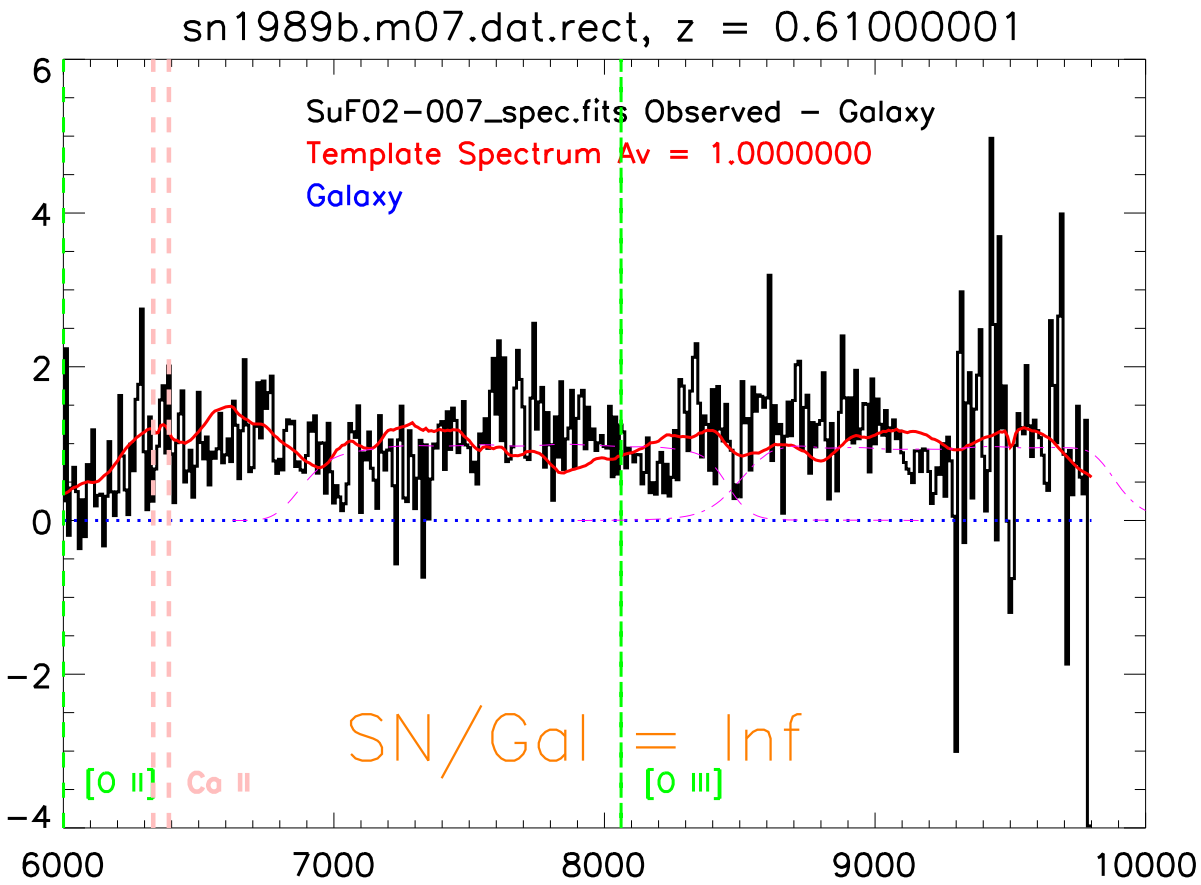

sn1999ee.m08.dat.rect, z = 0.67000002
SuF02−007_spec.fits Observed − Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

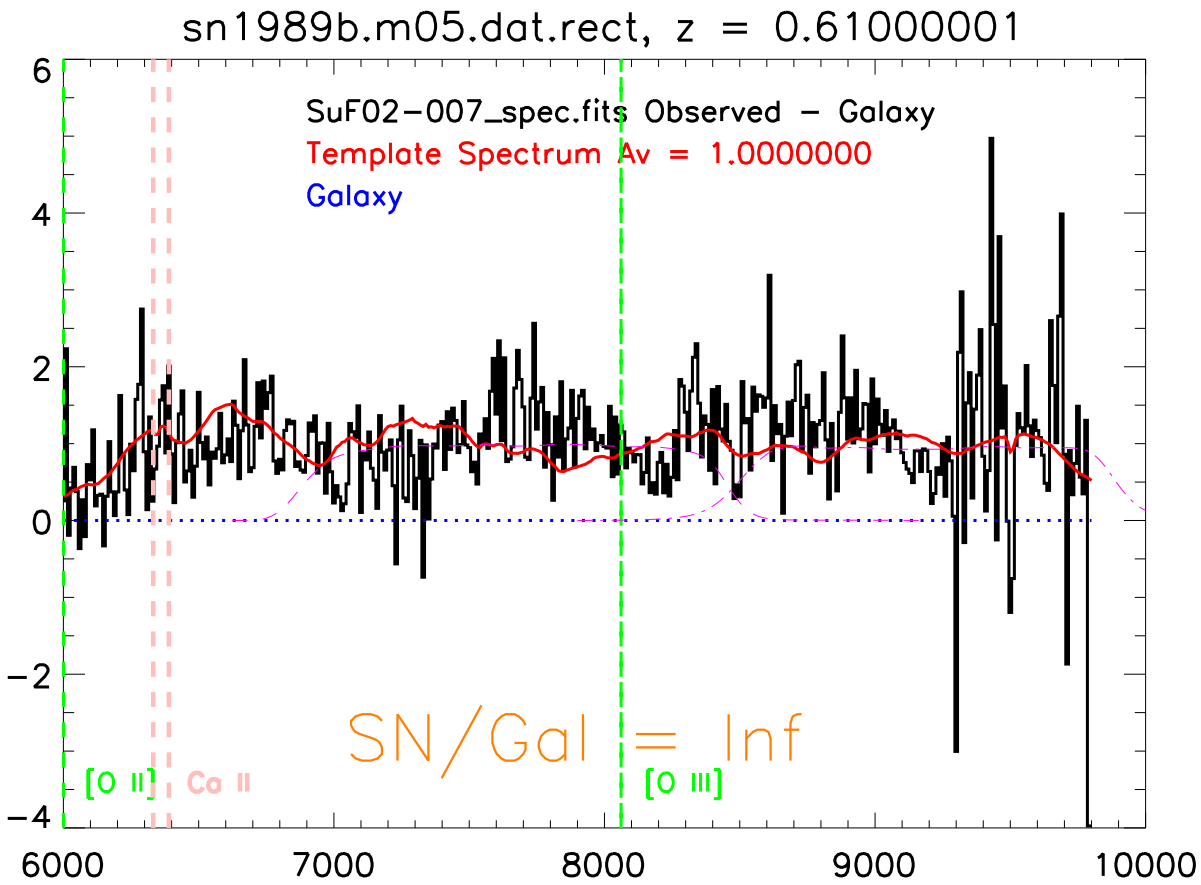
Mg II, I

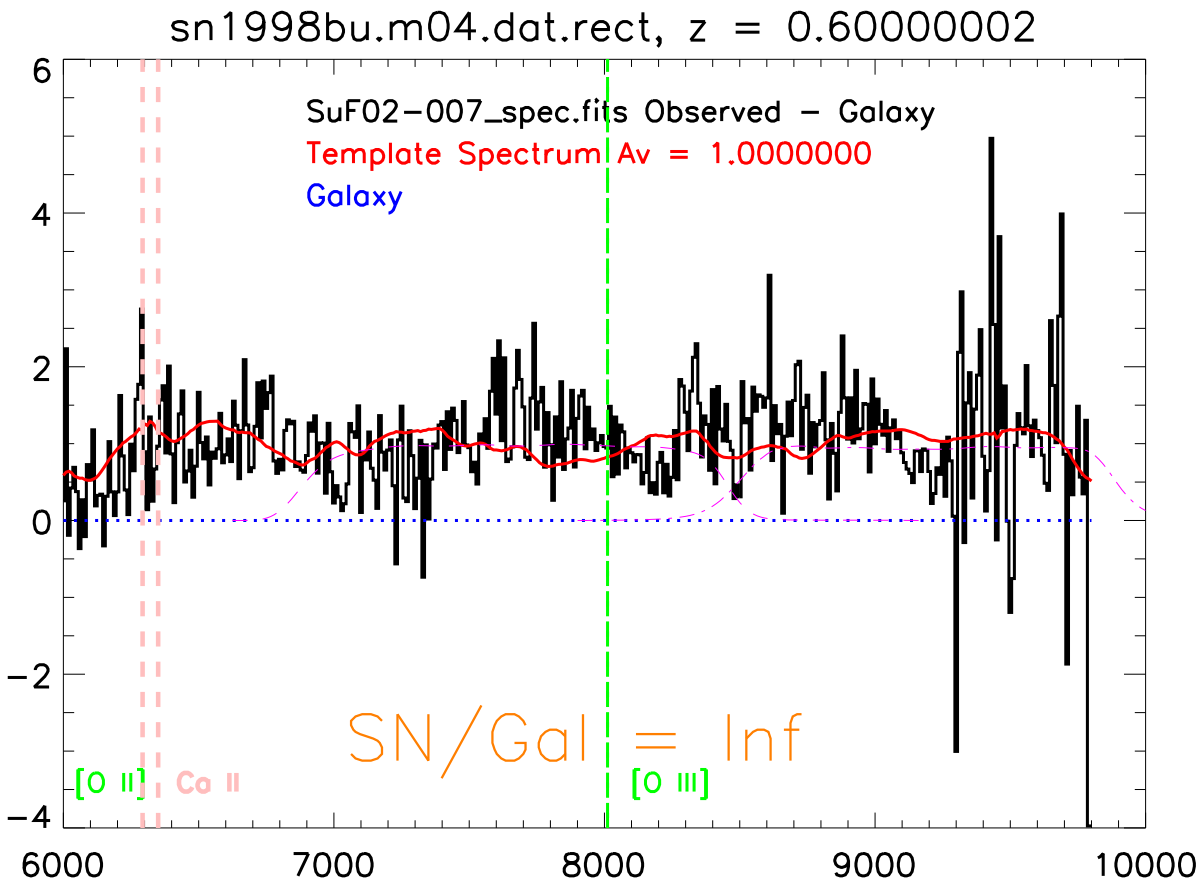

sn1999ee.m06.dat.rect, z = 0.65999997
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

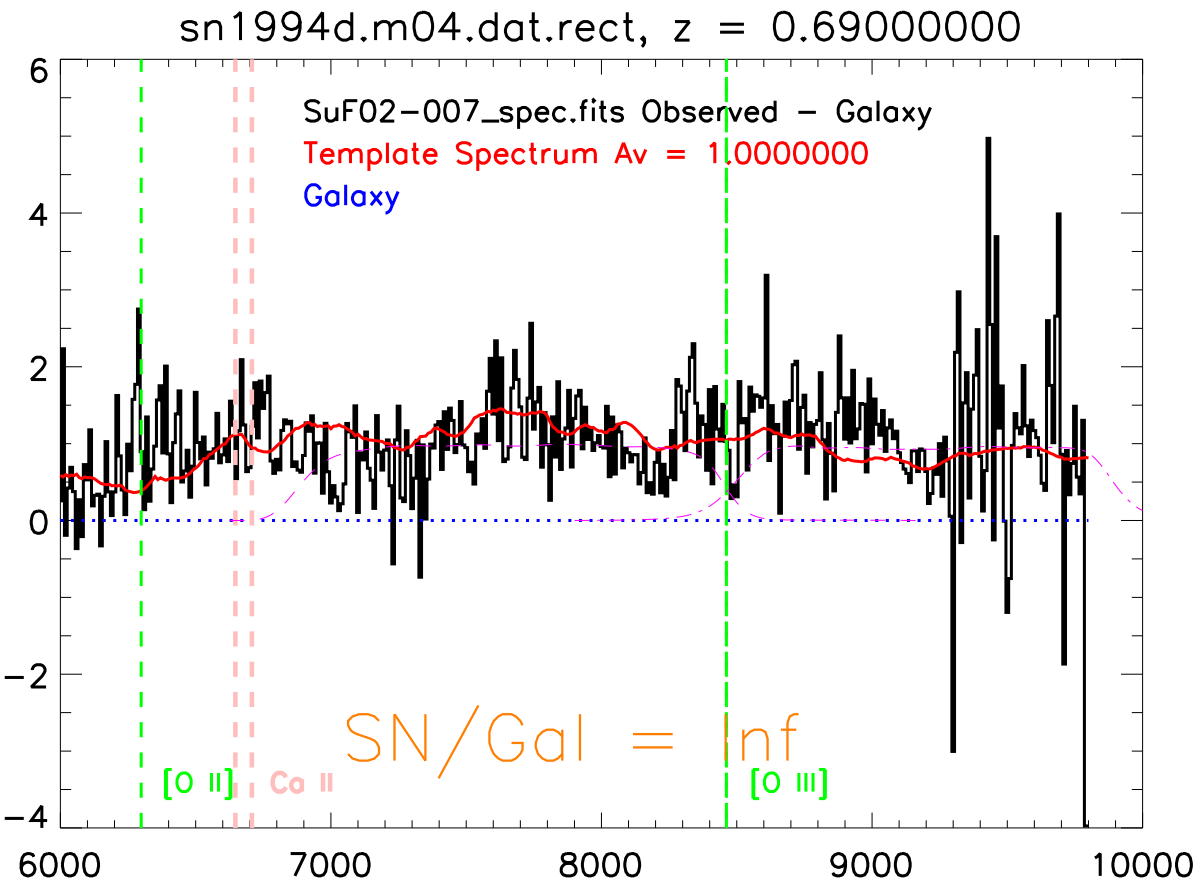
Mg II, I


sn1992a.m01.dat.rect, z = 0.50000000
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
H I
6
4
2
0
-2
-4
6000
7000
8000
9000
10000

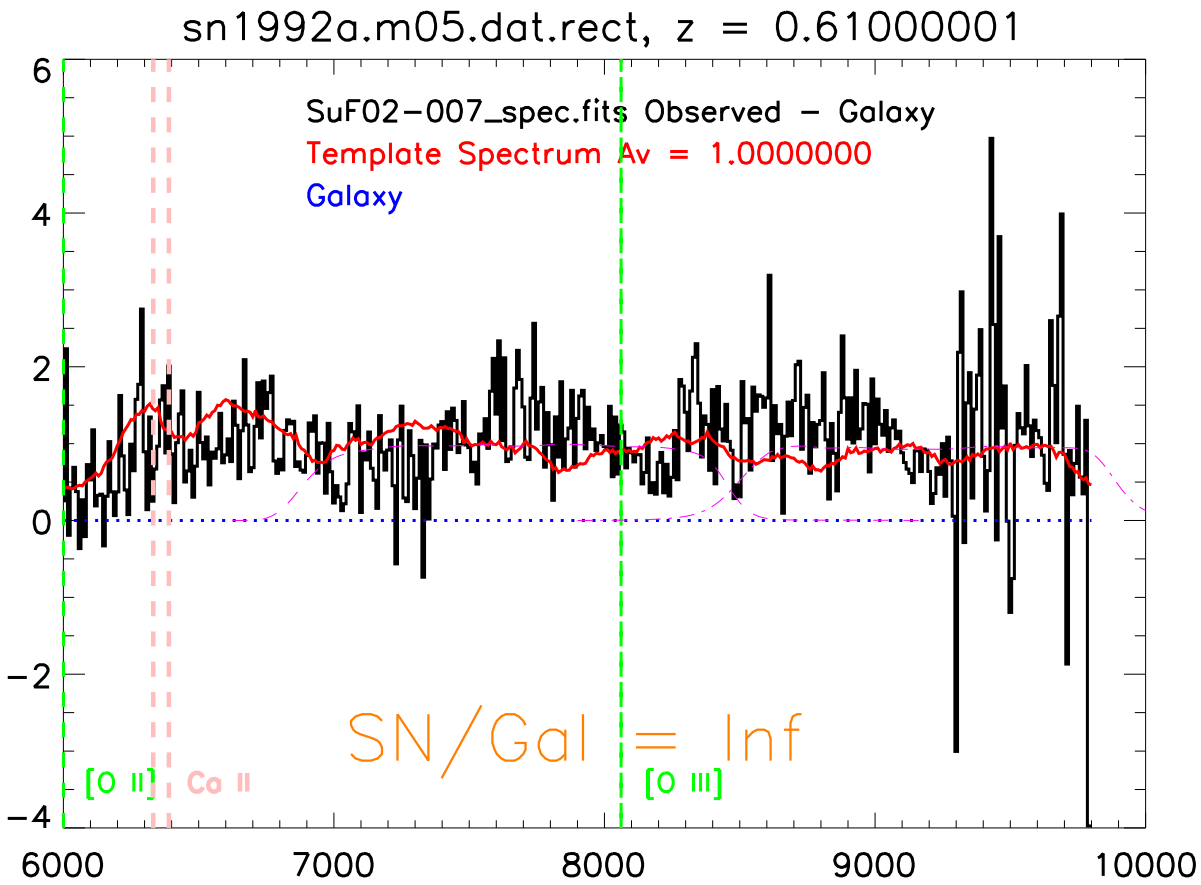

sn1989b.m07.dat.rect, z = 0.61000001
SuF02-007_spec.fits Observed − Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

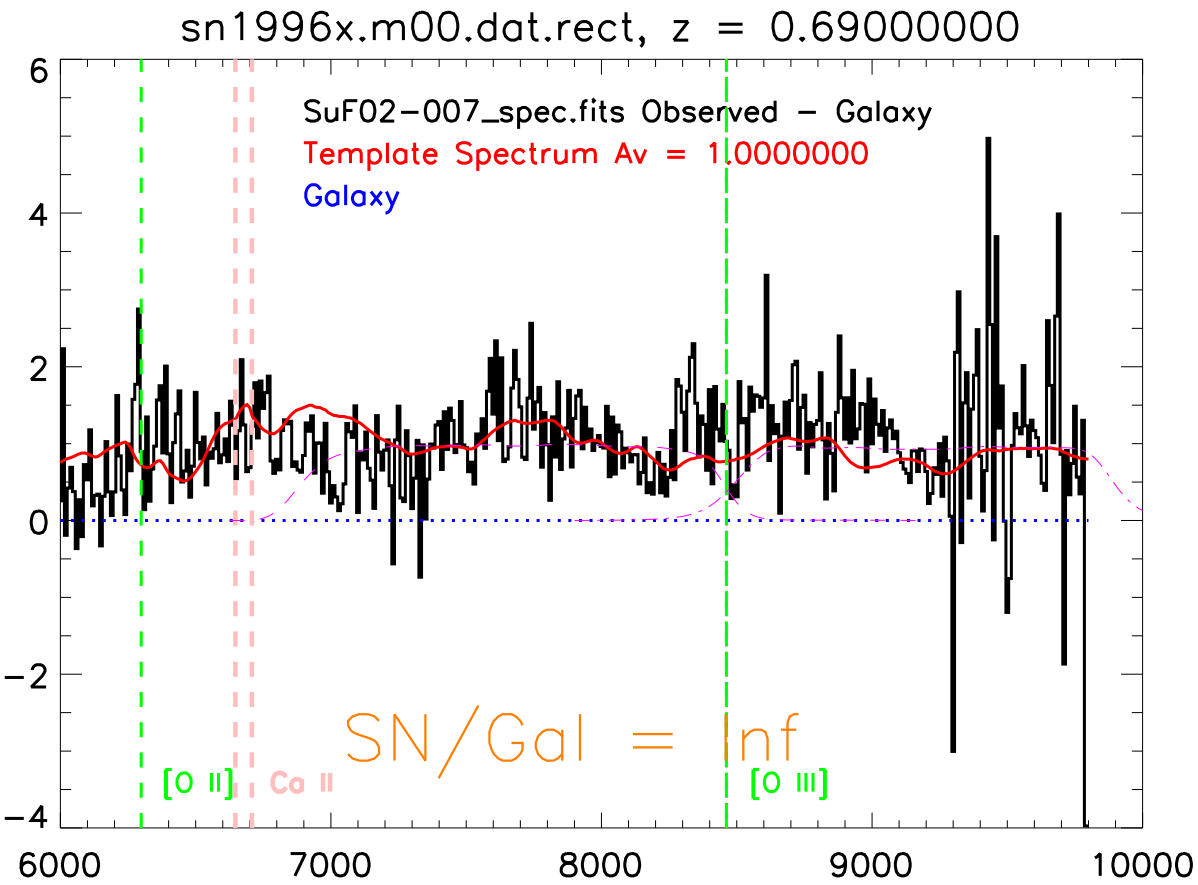

sn1989b.m05.dat.rect, z = 0.61000001
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000


sn1998bu.m04.dat.rect, z = 0.60000002
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

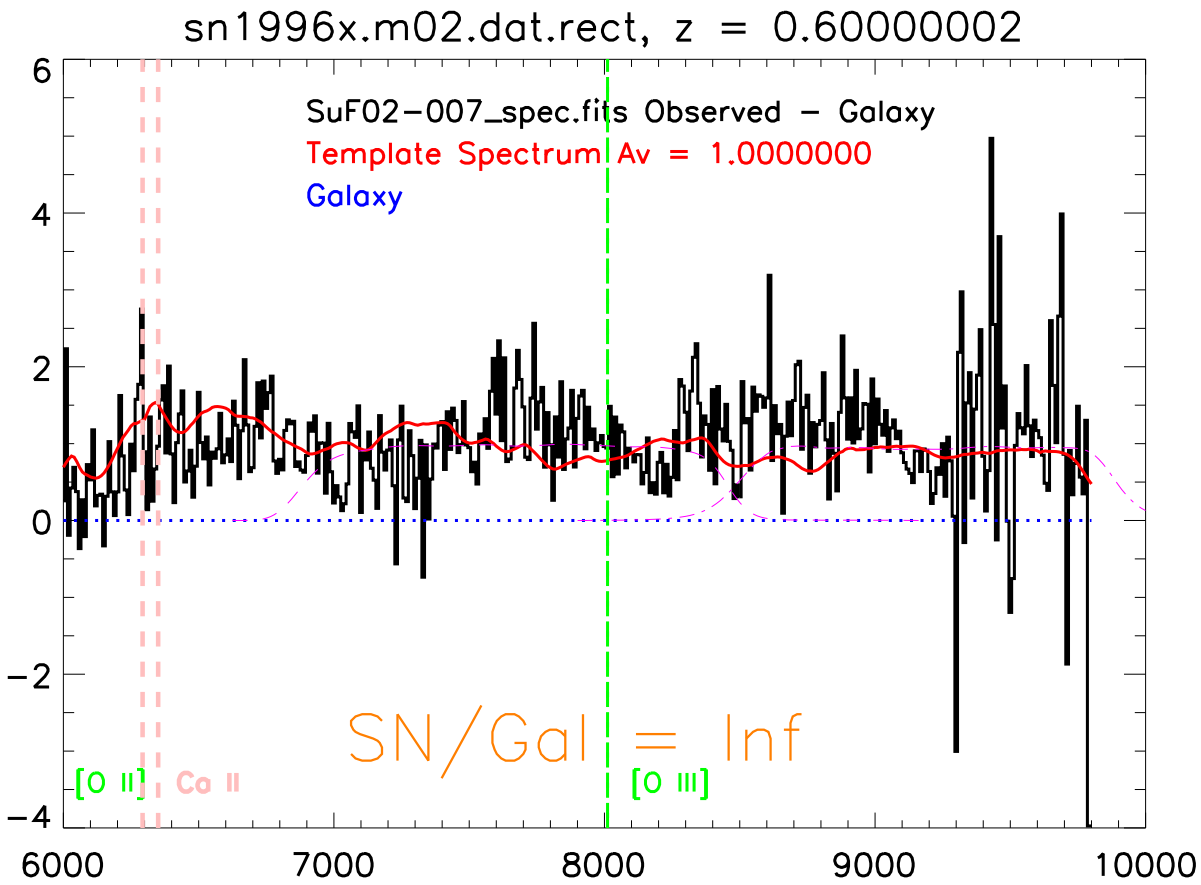

sn1994d.m04.dat.rect, z = 0.69000000
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

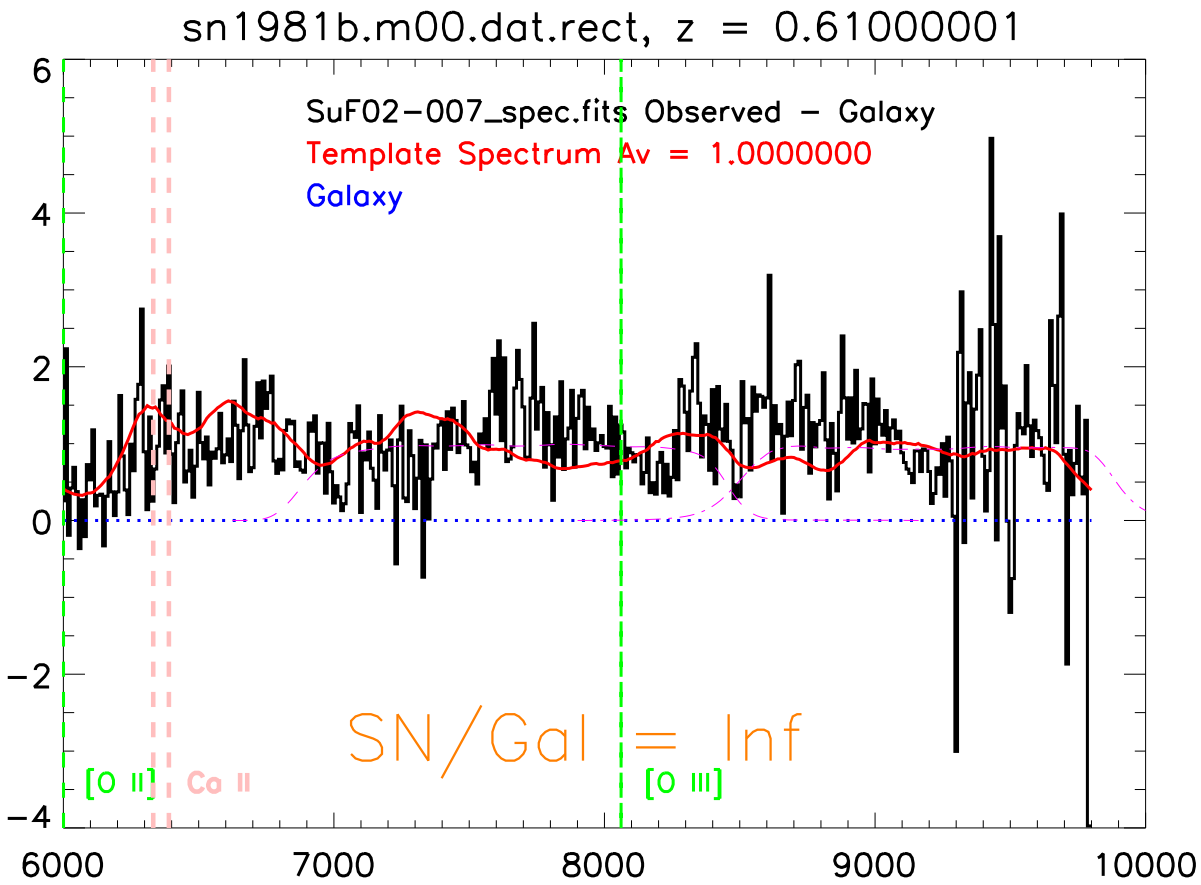
Mg II, I

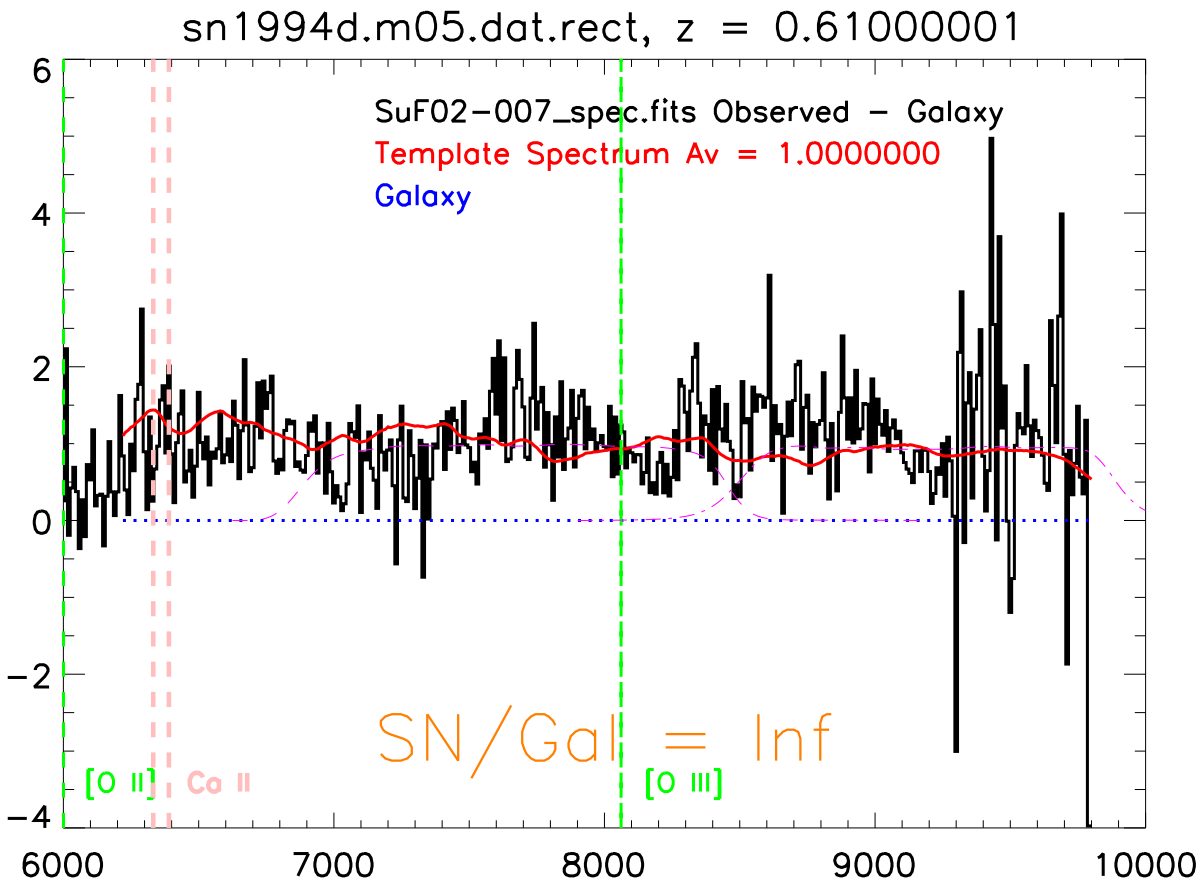

sn1992a.m05.dat.rect, z = 0.61000001
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

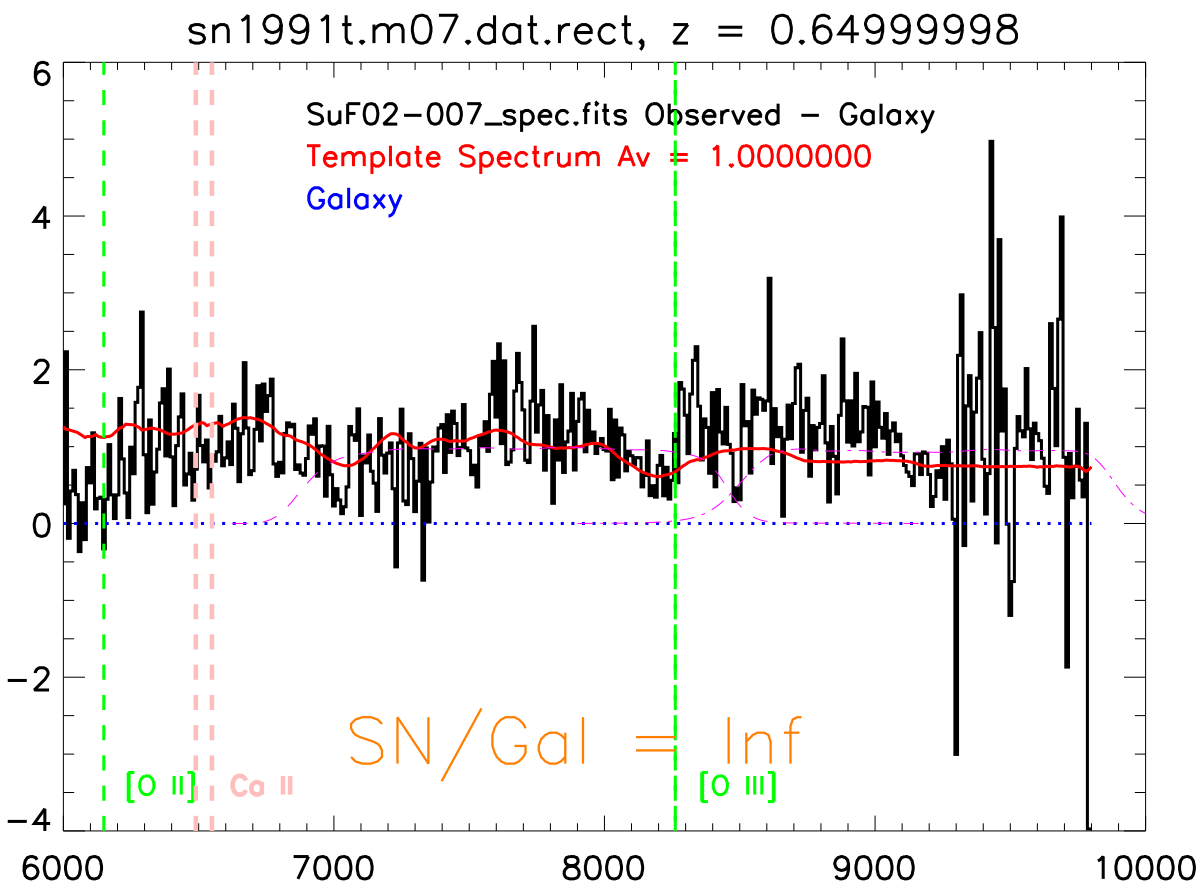

sn1996x.m00.dat.rect, z = 0.69000000
SuF02-007_spec.fits Observed − Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

Mg II, I

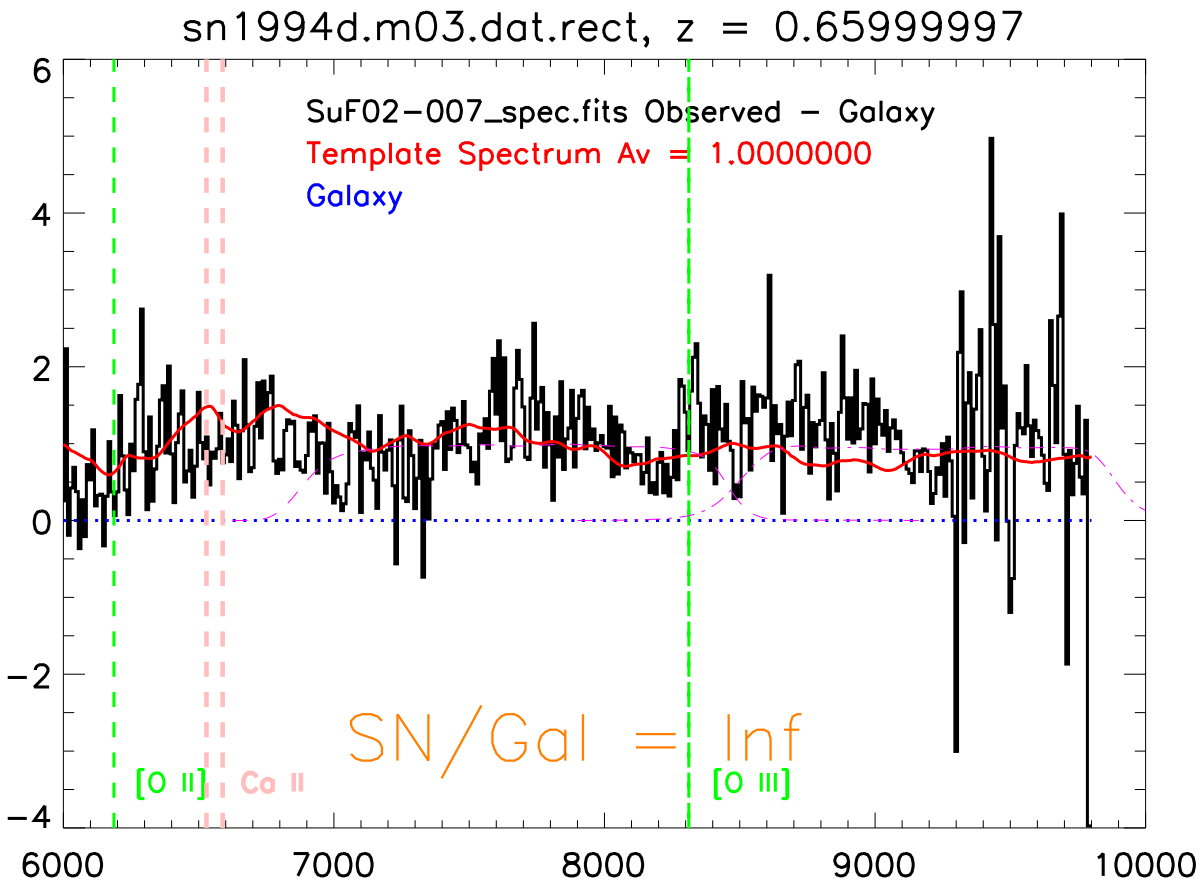

sn1996x.m02.dat.rect, z = 0.60000002
SuF02-007_spec.fits Observed − Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000


sn1981b.m00.dat.rect, z = 0.61000001
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

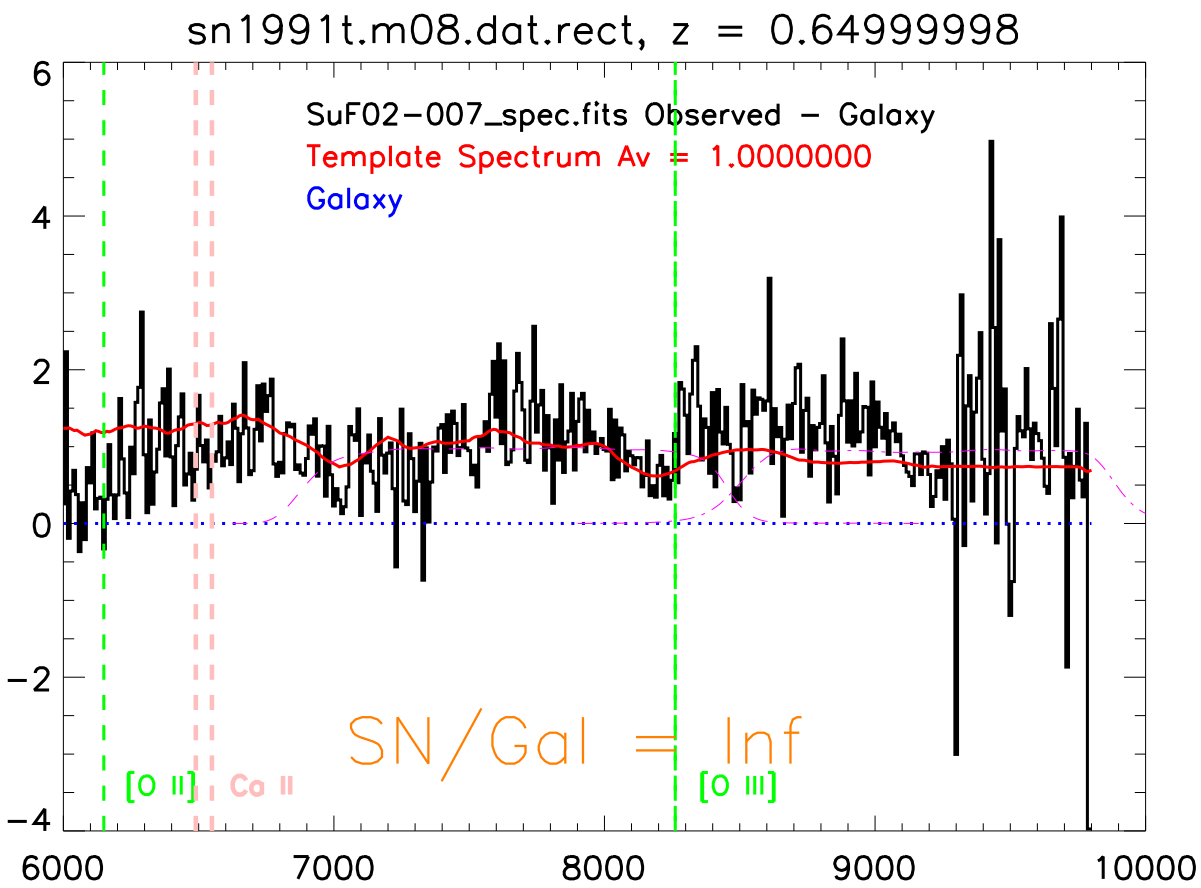

sn1994d.m05.dat.rect, z = 0.61000001
SuF02−007_spec.fits Observed − Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000


sn1991t.m07.dat.rect, z = 0.64999998
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

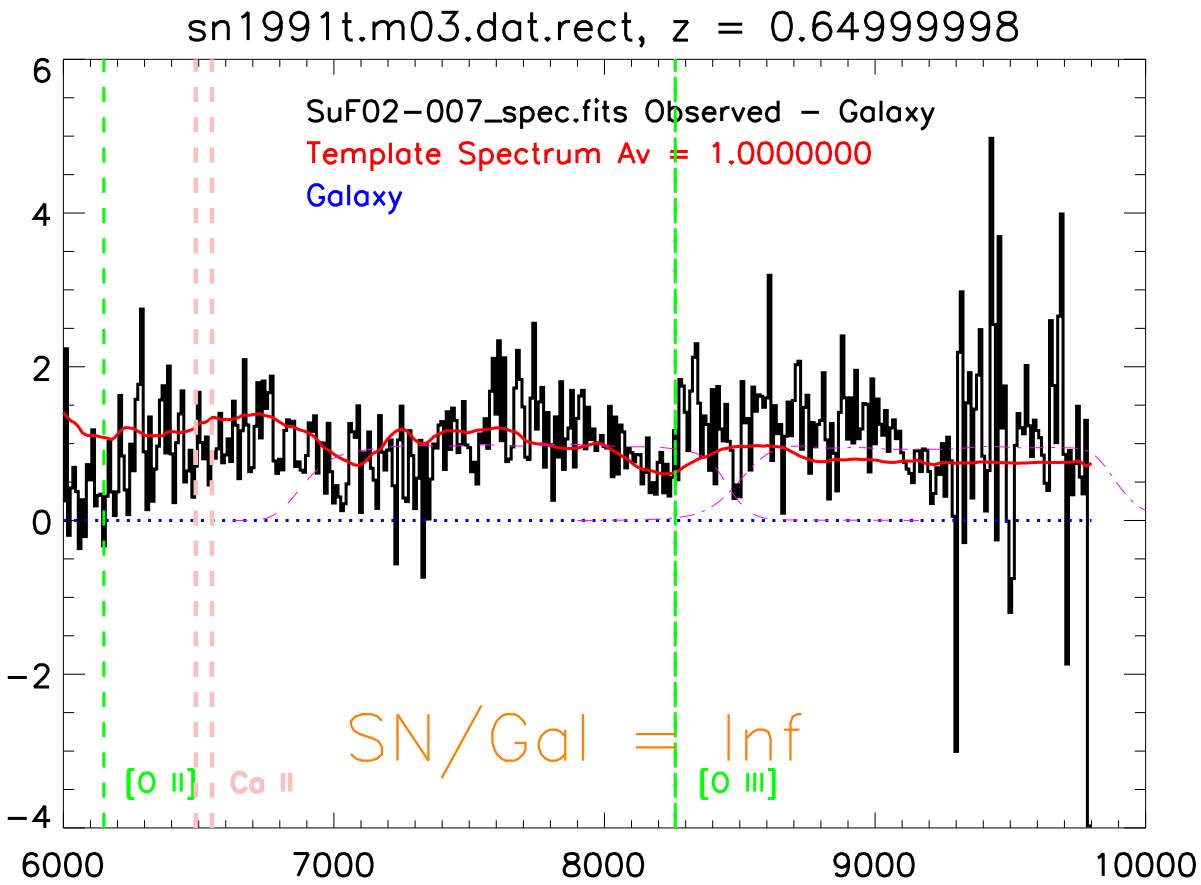
Mg II, I


sn1994d.m03.dat.rect, z = 0.65999997
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

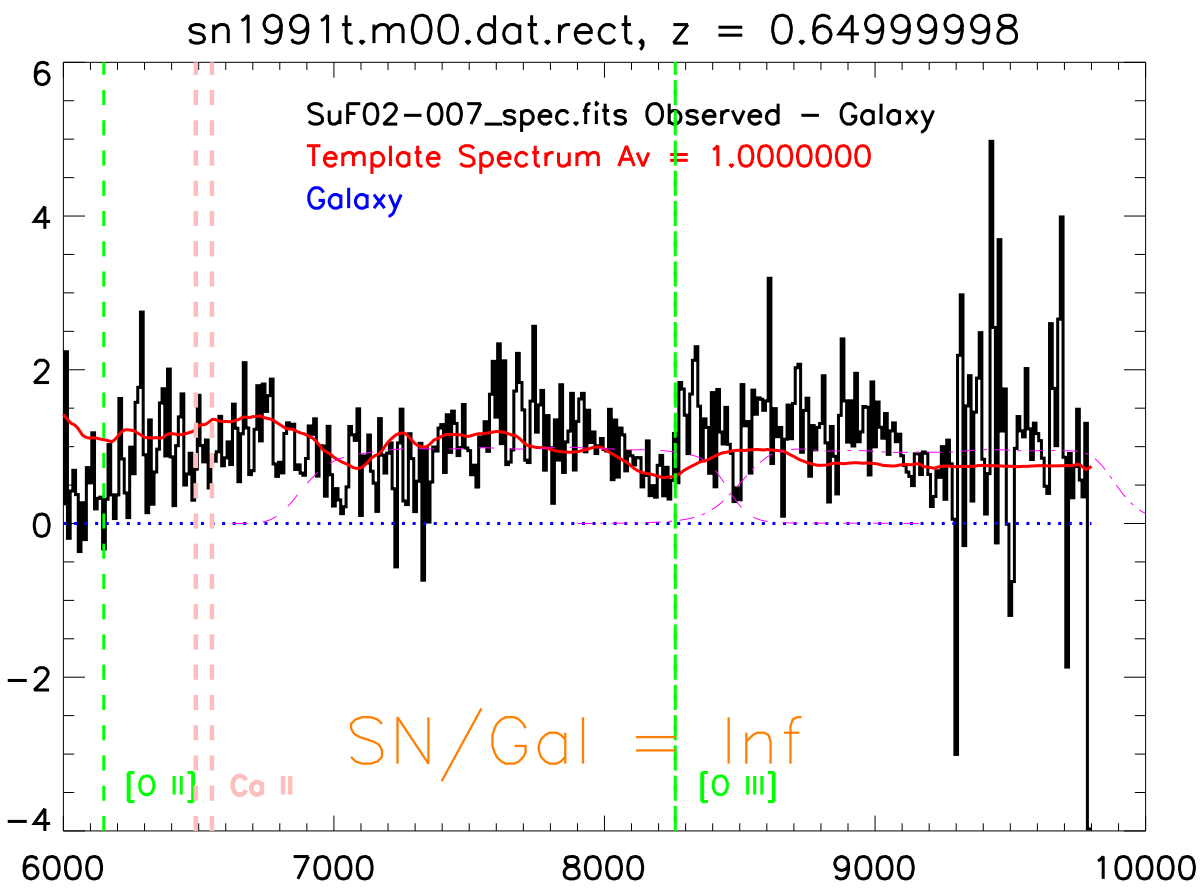
Mg II, I


sn1991t.m08.dat.rect, z = 0.64999998
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

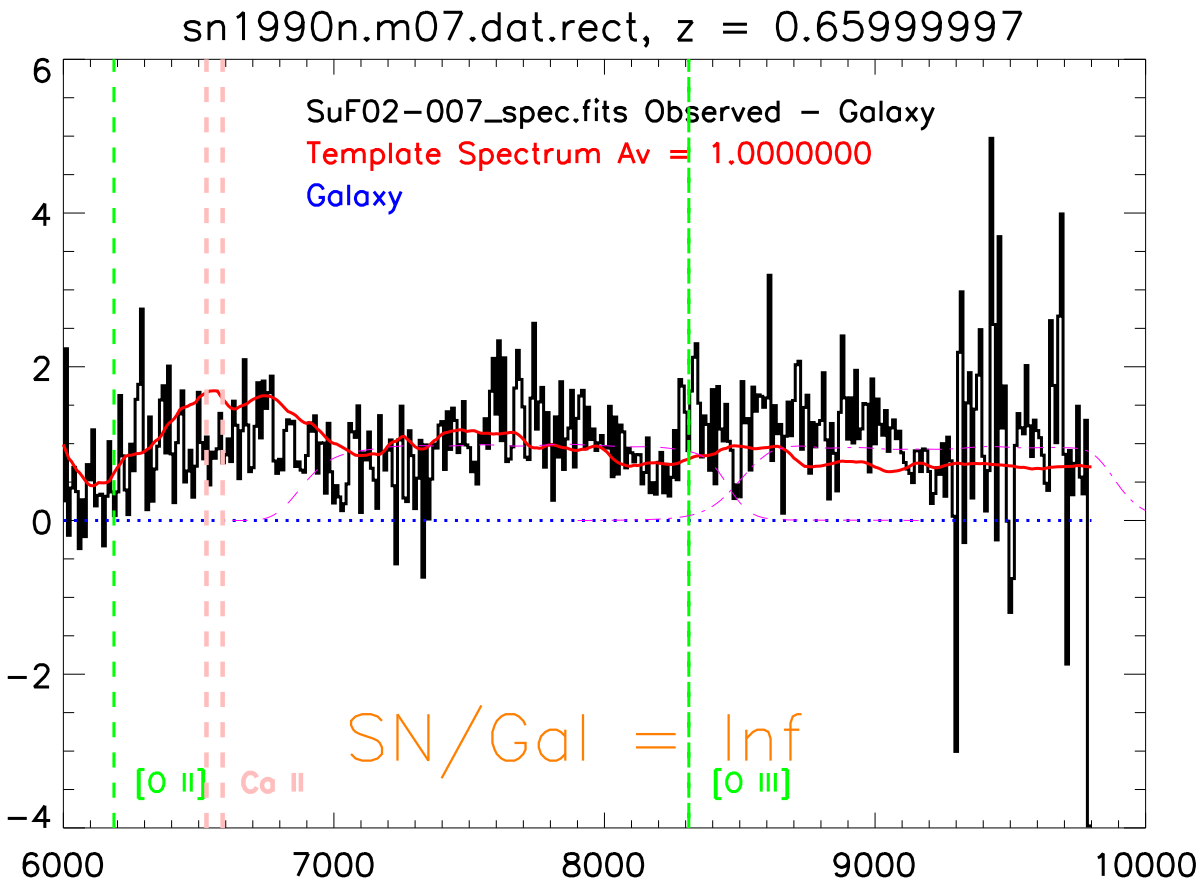
Mg II, I


sn1991t.m03.dat.rect, z = 0.64999998
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

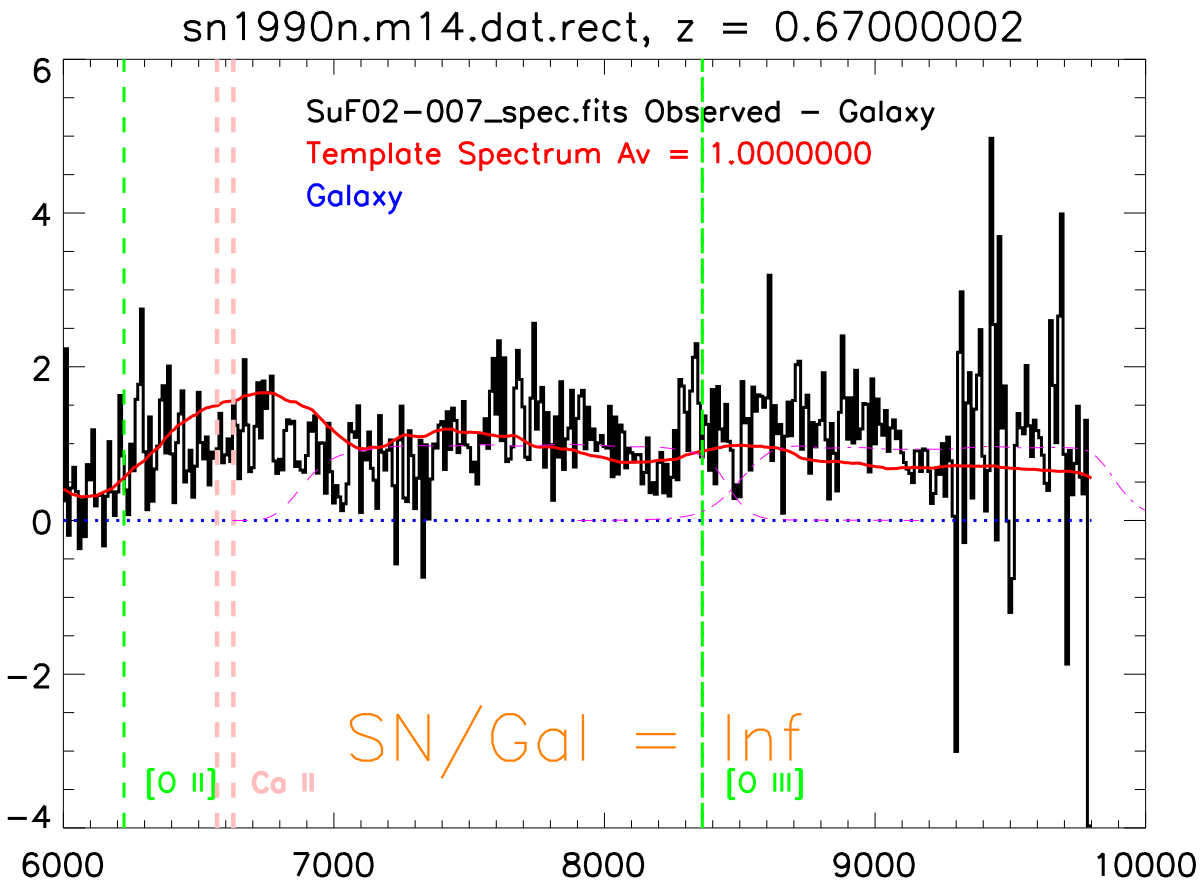
Mg II, I


sn1991t.m00.dat.rect, z = 0.64999998
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

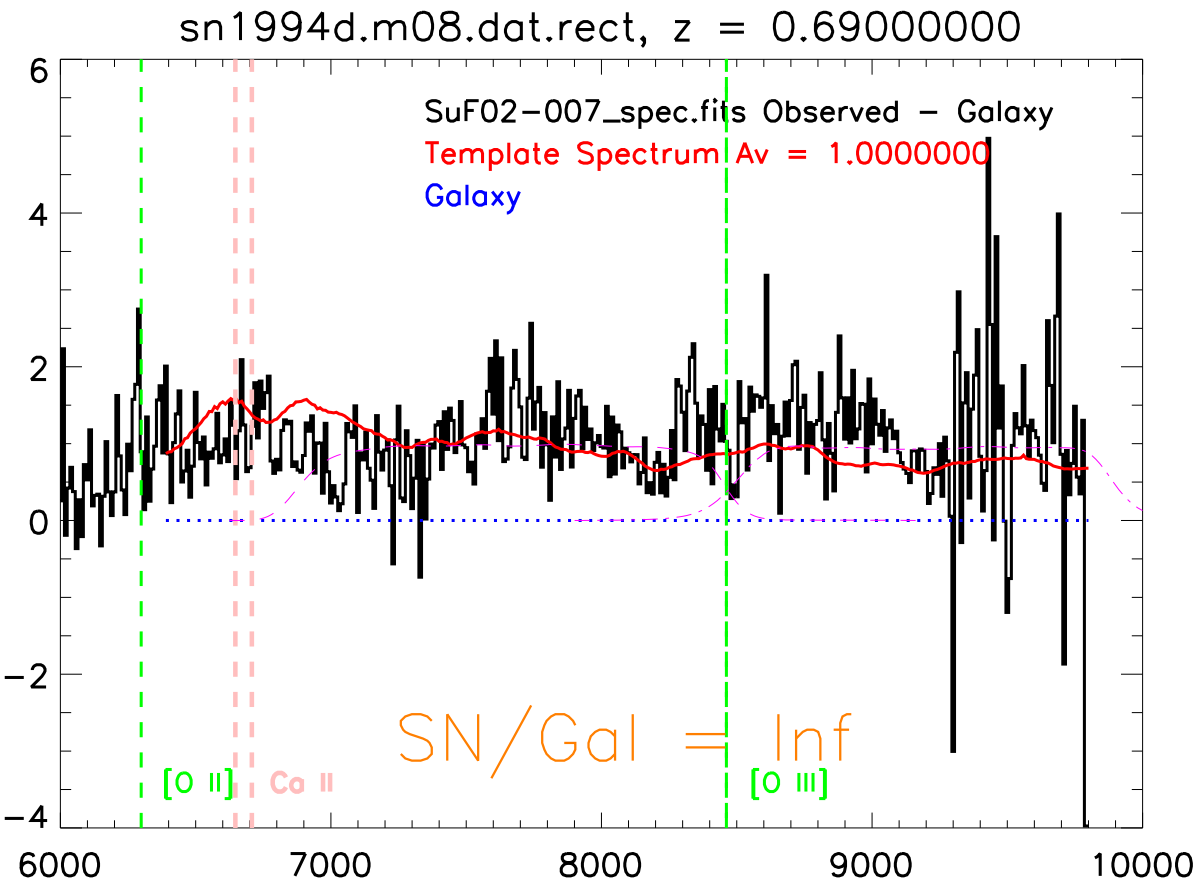
Mg II, I


sn1990n.m07.dat.rect, z = 0.65999997
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

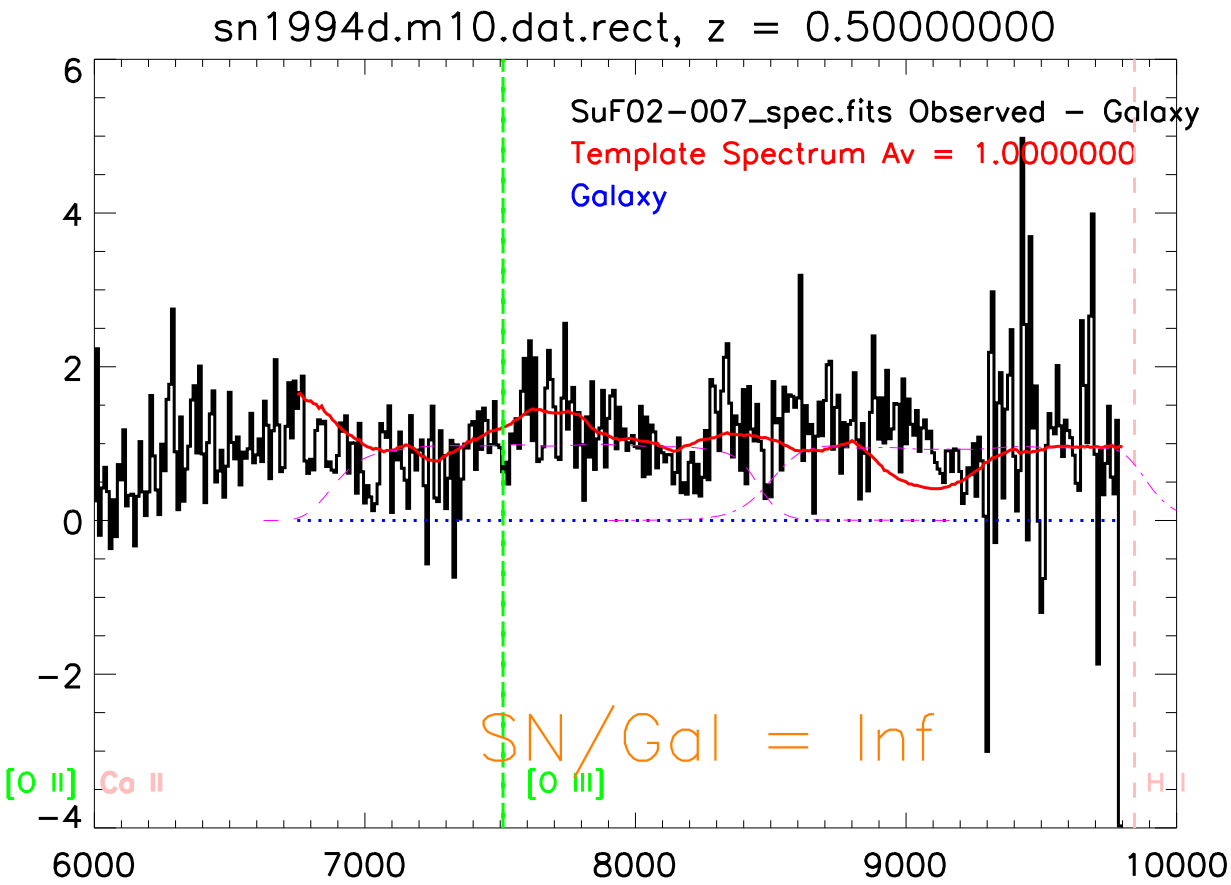
Mg II, I

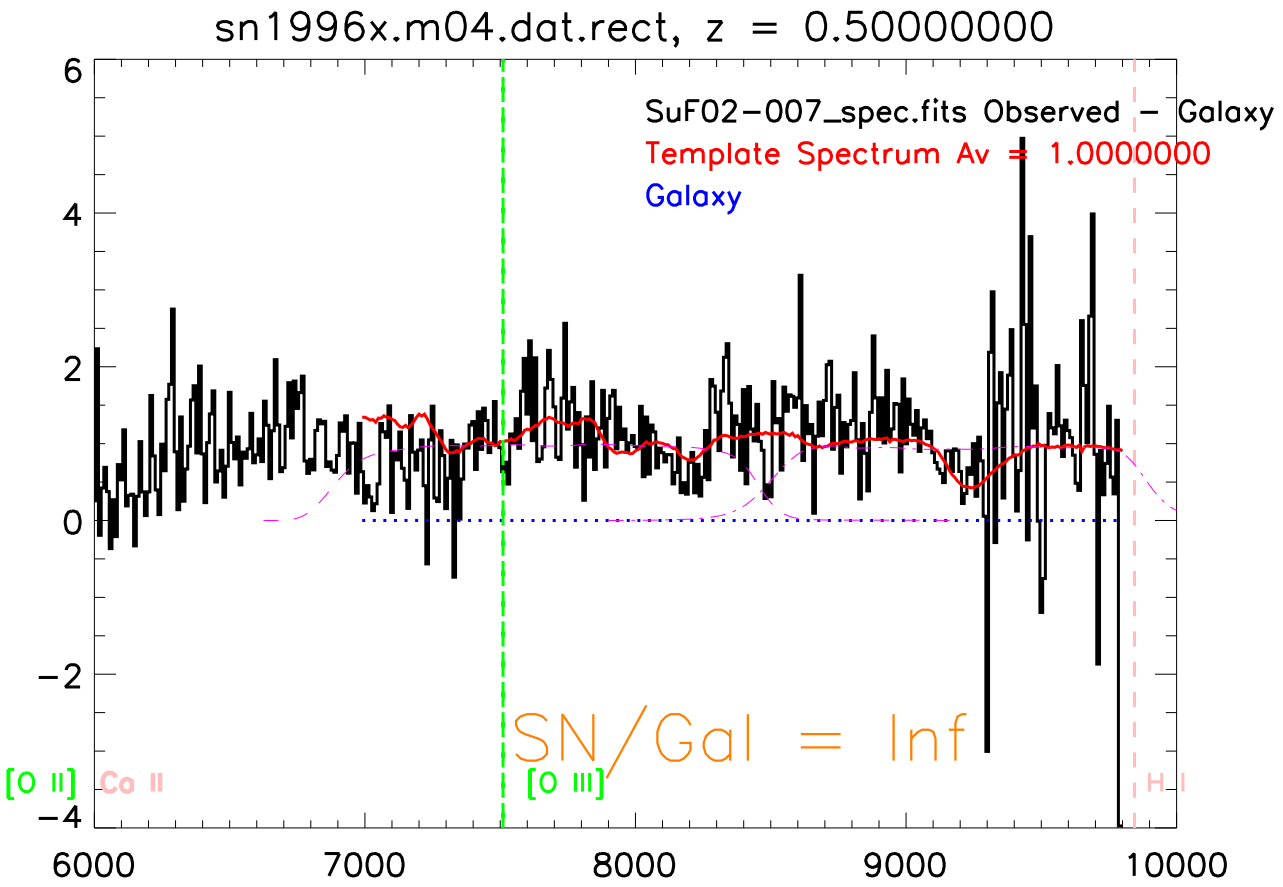

sn1990n.m14.dat.rect, z = 0.67000002
SuF02-007_spec.fits Observed − Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

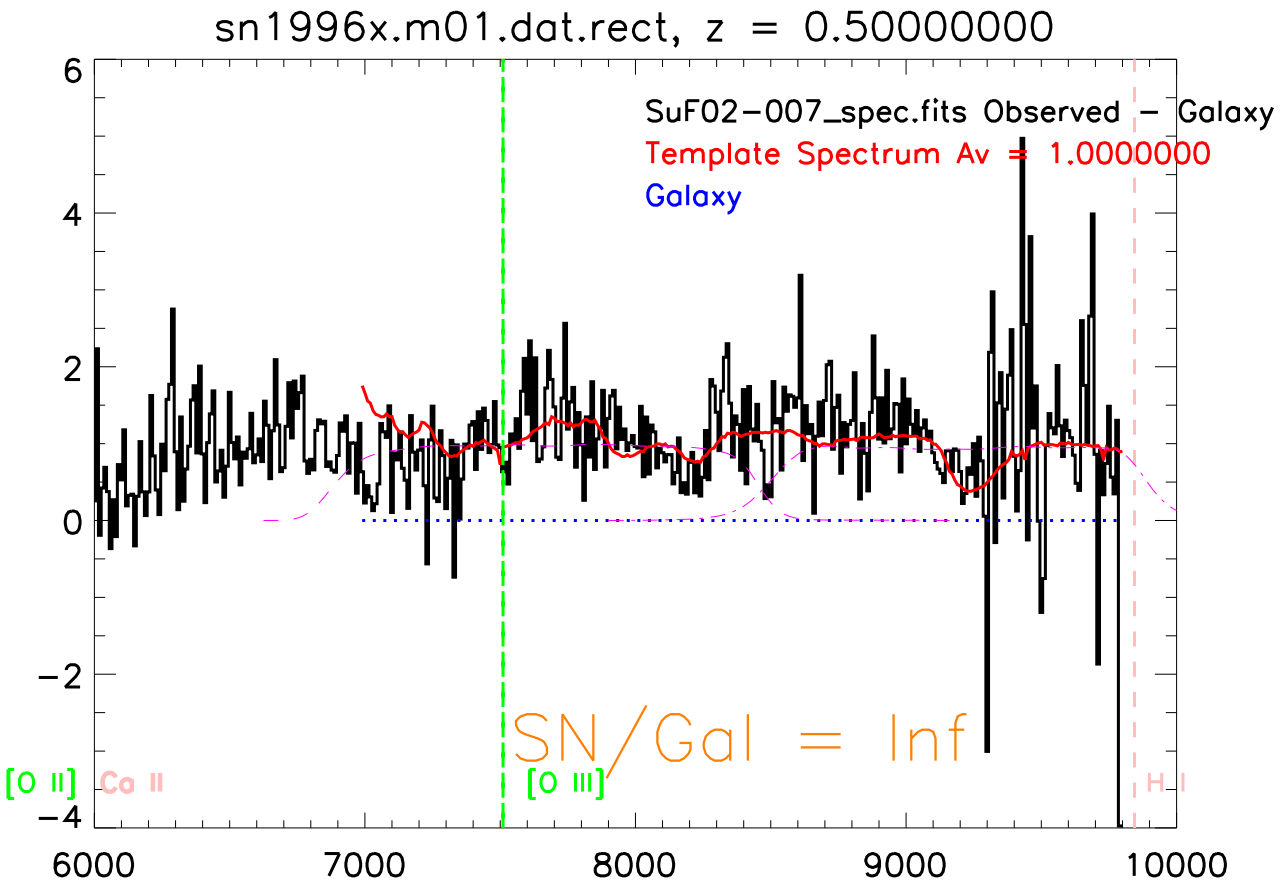
Mg II, I

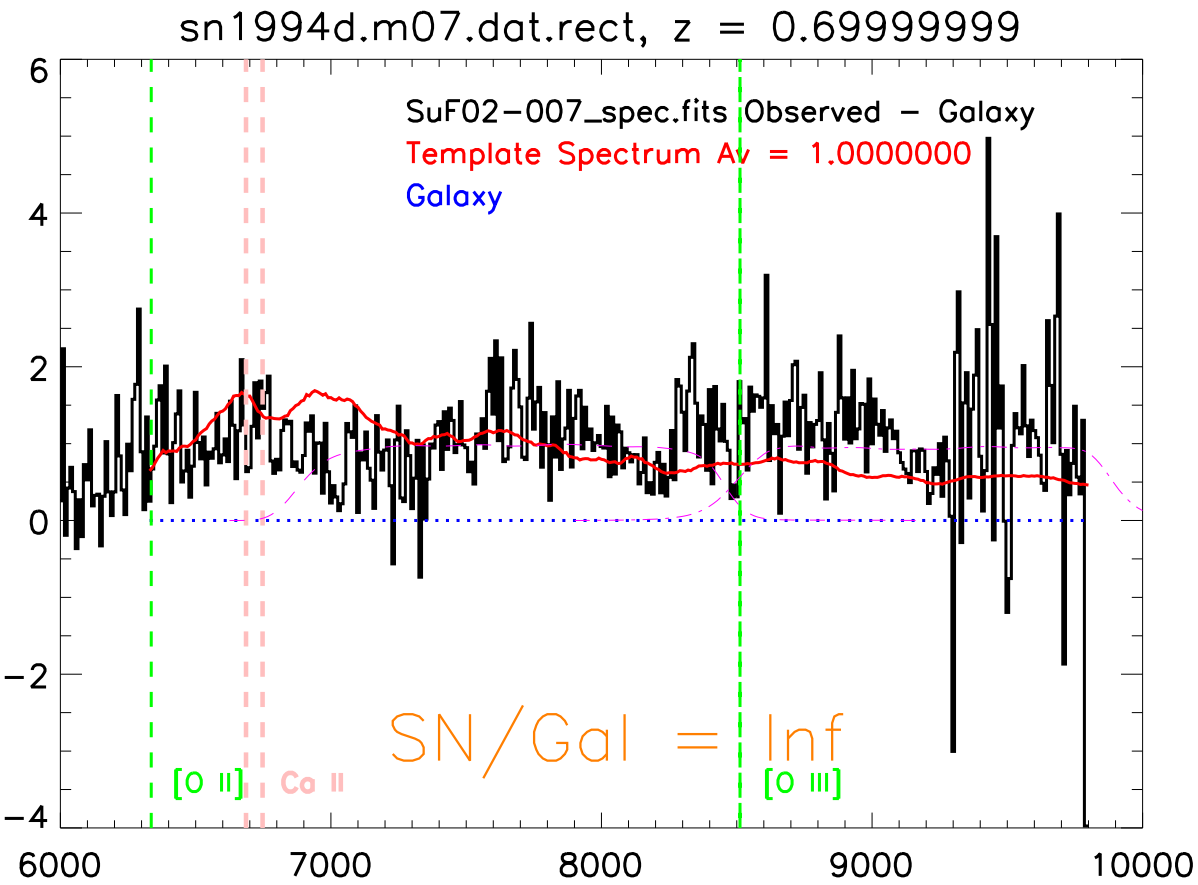

sn1994d.m08.dat.rect, z = 0.69000000
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
-2
-4
6000
7000
8000
9000
10000

Mg II, I

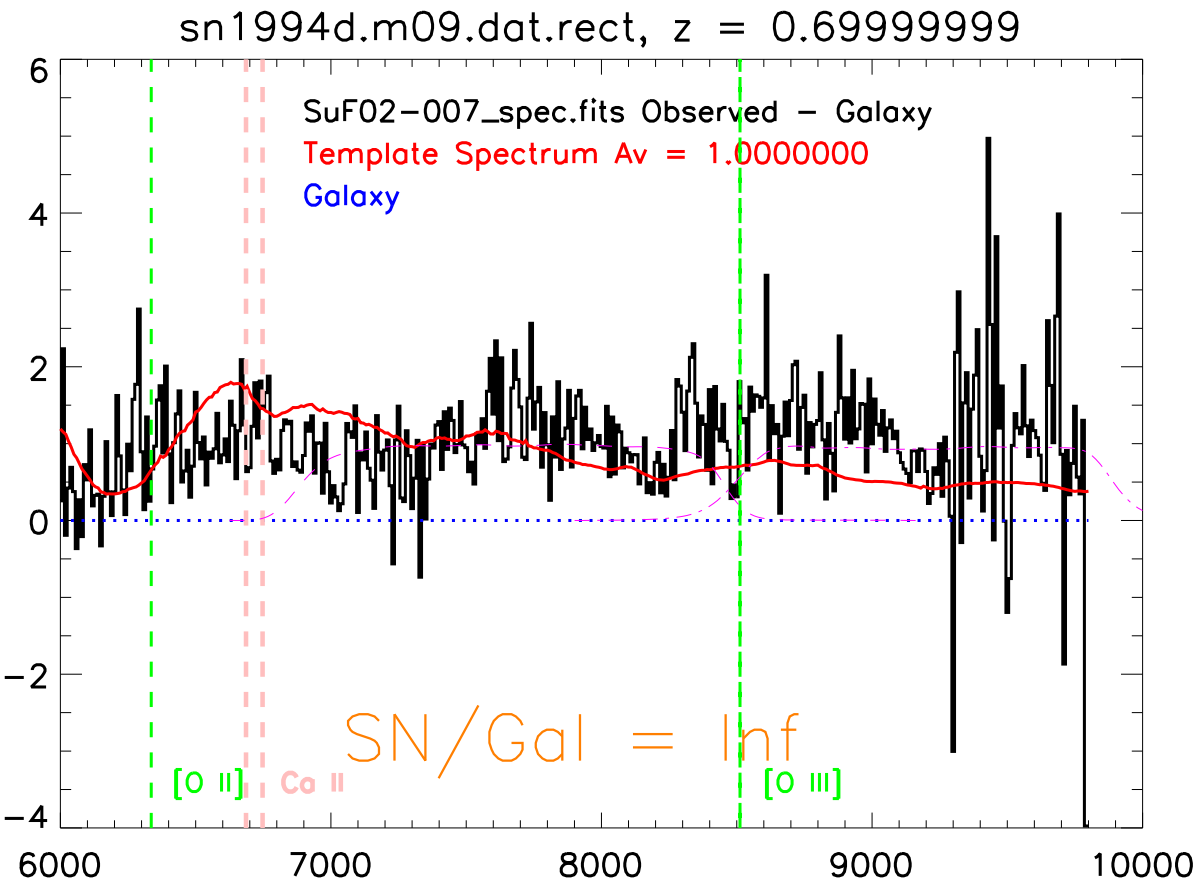

sn1994d.m10.dat.rect, z = 0.50000000
SuF02-007_spec.fits Observed - Galaxy
Template Spectrum Av = 1.0000000
Galaxy
S/N Gal = Inf
[O II]
Ca II
[O III]
H I
6
4
2
0
-2
-4
6000
7000
8000
9000
10000


sn1996x.m04.dat.rect, z = 0.50000000
SuF02-007_spec.fits Observed − Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
H I
6
4
2
0
−2
−4
6000
7000
8000
9000
10000


sn1996x.m01.dat.rect, z = 0.50000000
SuF02-007_spec.fits Observed − Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
H I
6
4
2
0
−2
−4
6000
7000
8000
9000
10000


sn1994d.m07.dat.rect, z = 0.69999999
SuF02-007_spec.fits Observed − Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

Mg II, I


sn1994d.m09.dat.rect, z = 0.69999999
SuF02-007_spec.fits Observed − Galaxy
Template Spectrum Av = 1.0000000
Galaxy
SN/Gal = Inf
[O II]
Ca II
[O III]
6
4
2
0
−2
−4
6000
7000
8000
9000
10000

Mg II, I