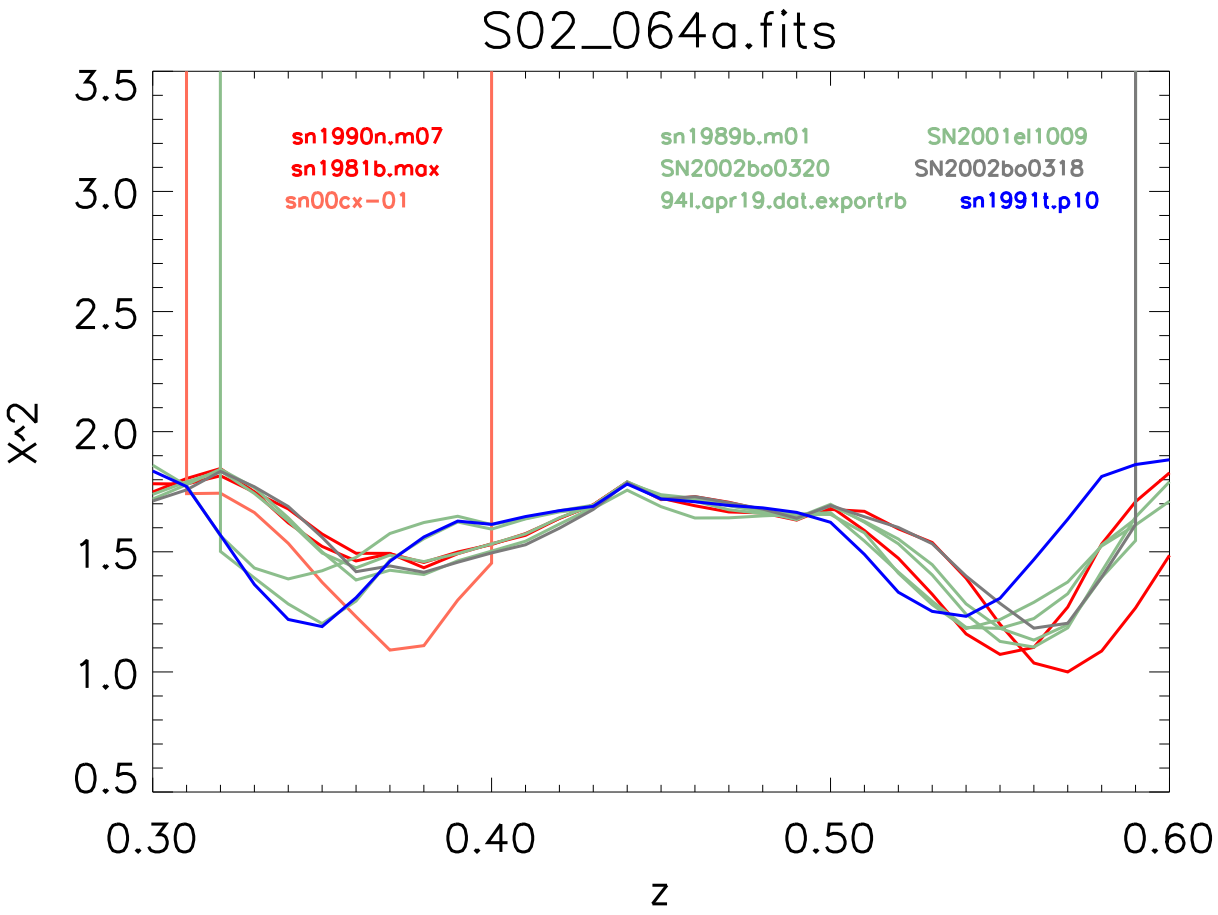
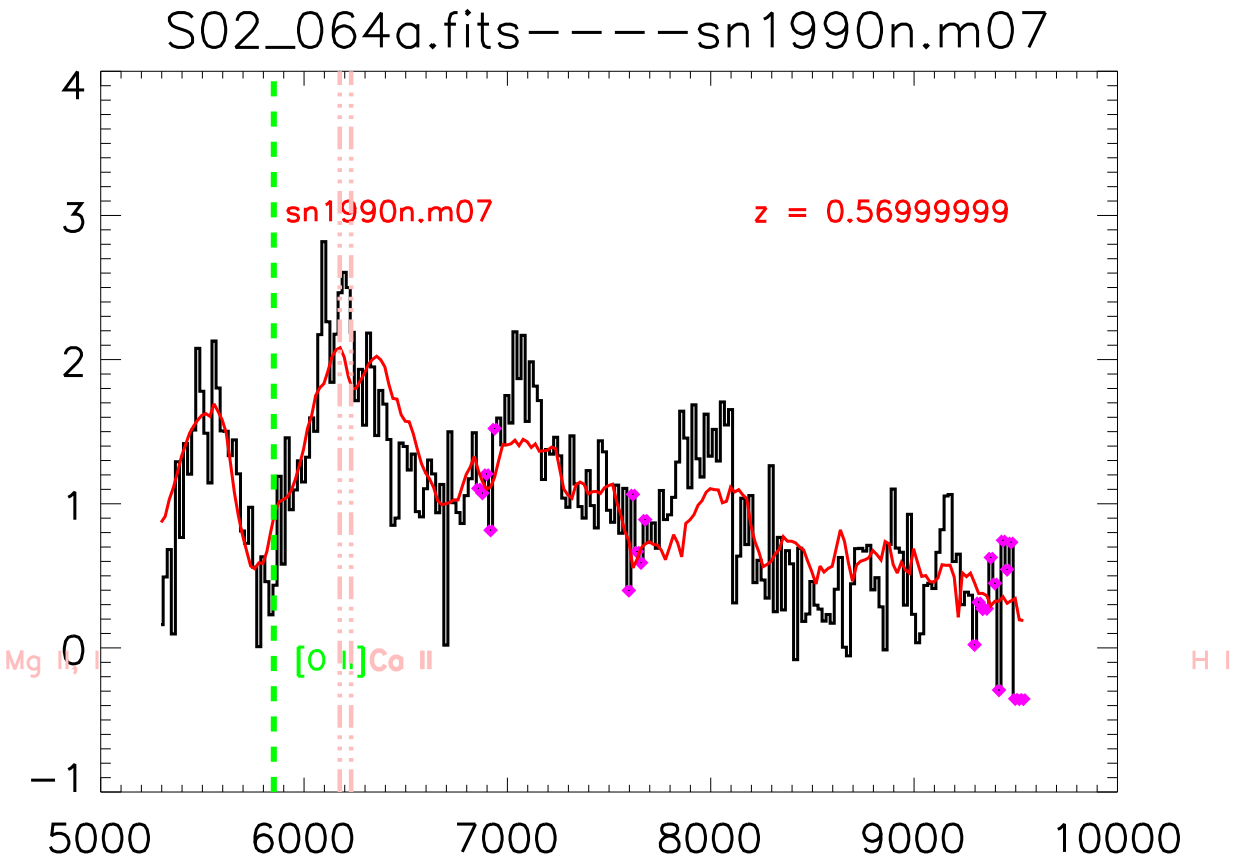
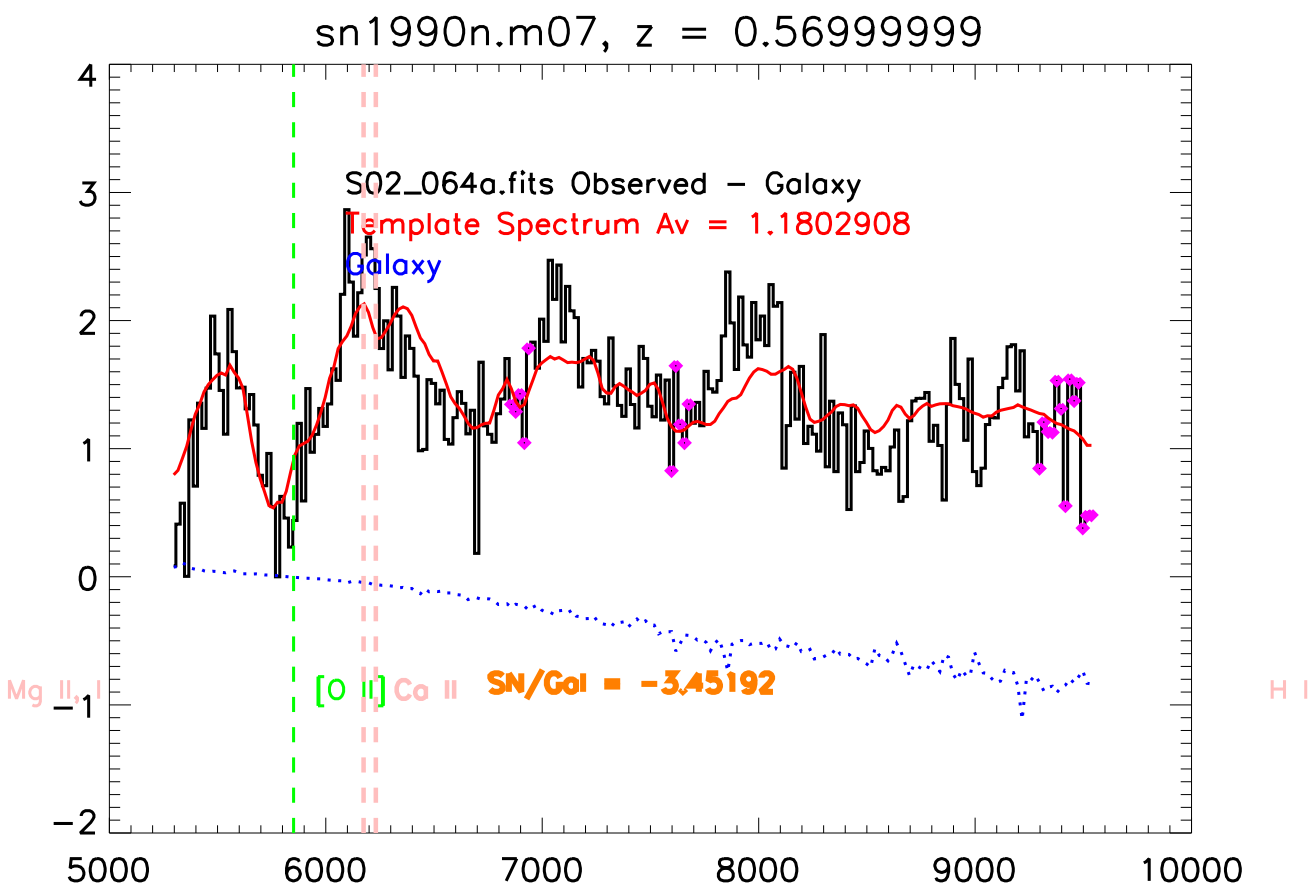
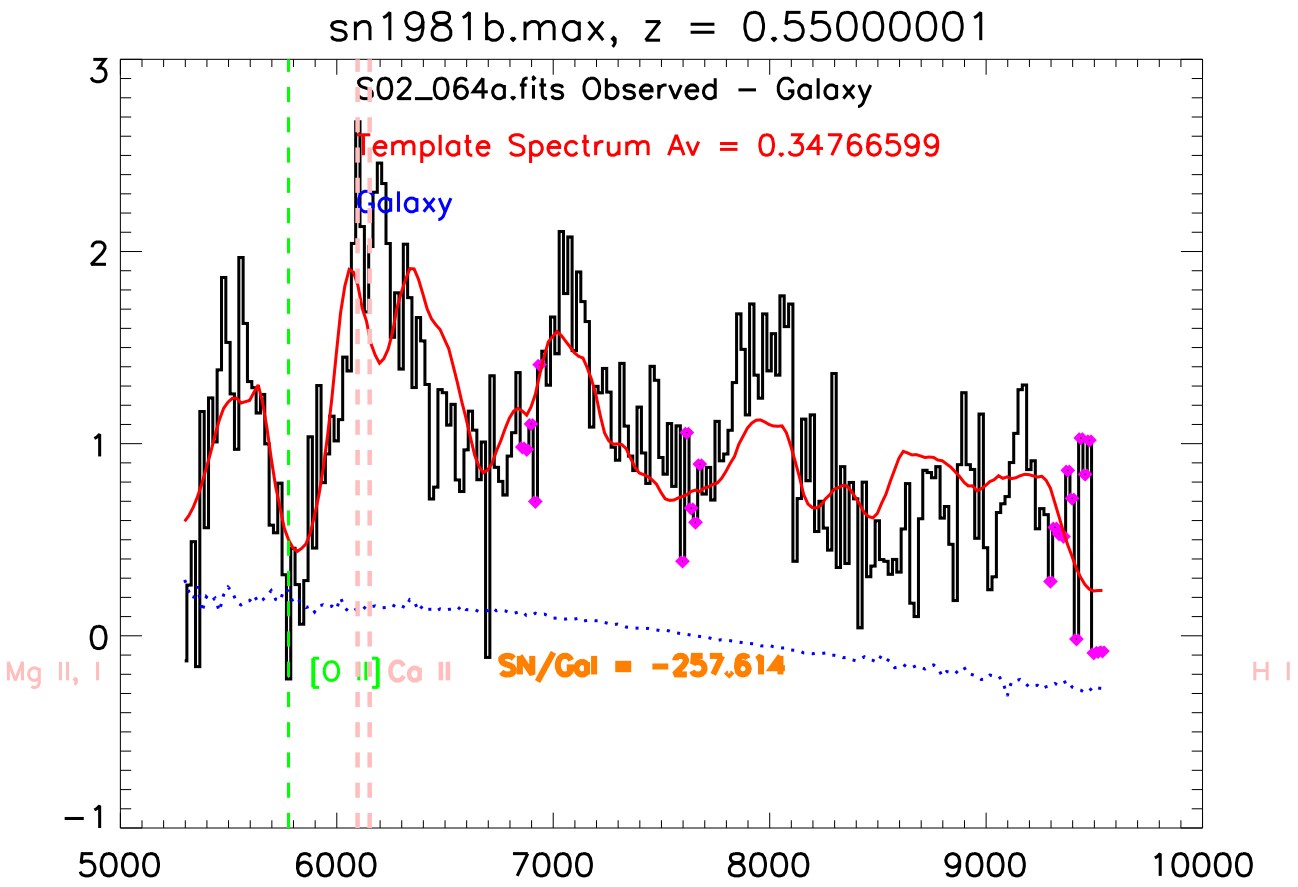
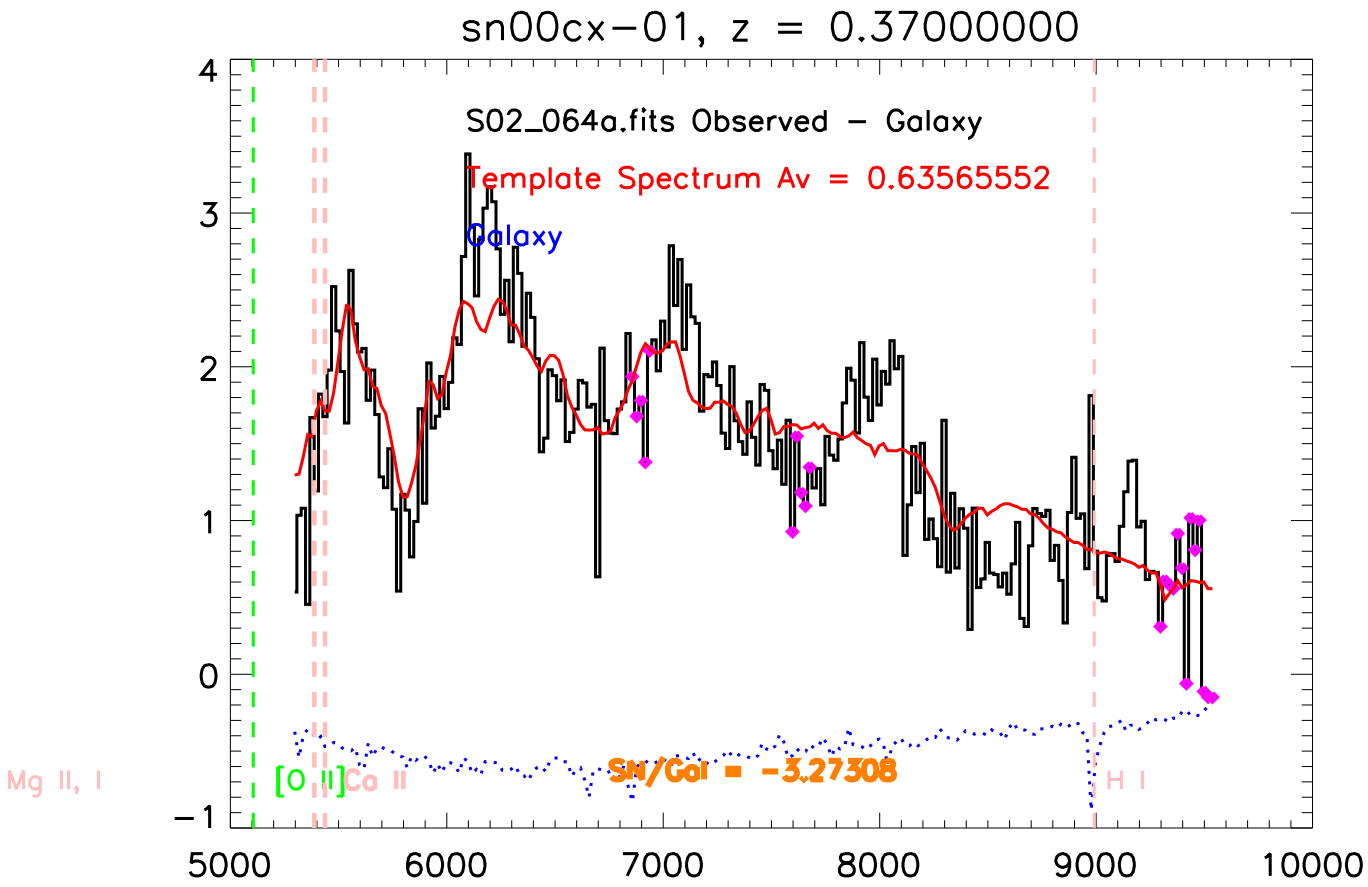
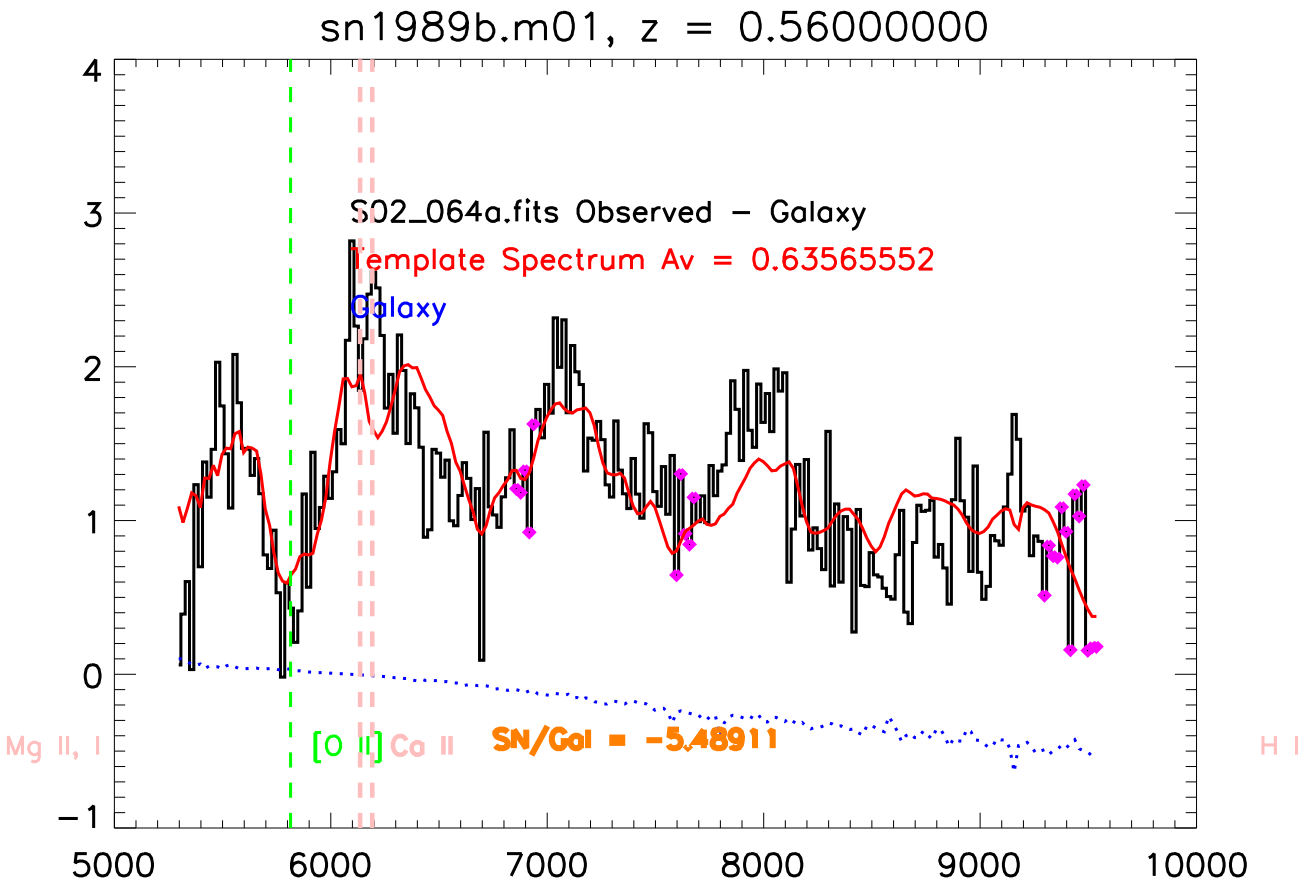

S02_064a.fits
sn1990n.m07
sn1981b.max
sn00cx-01
sn1989b.m01
SN2002bo0320
94I.apr19.dat.exportrb
SN2001el1009
SN2002bo0318
sn1991t.p10
X^2
z
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.30
0.40
0.50
0.60

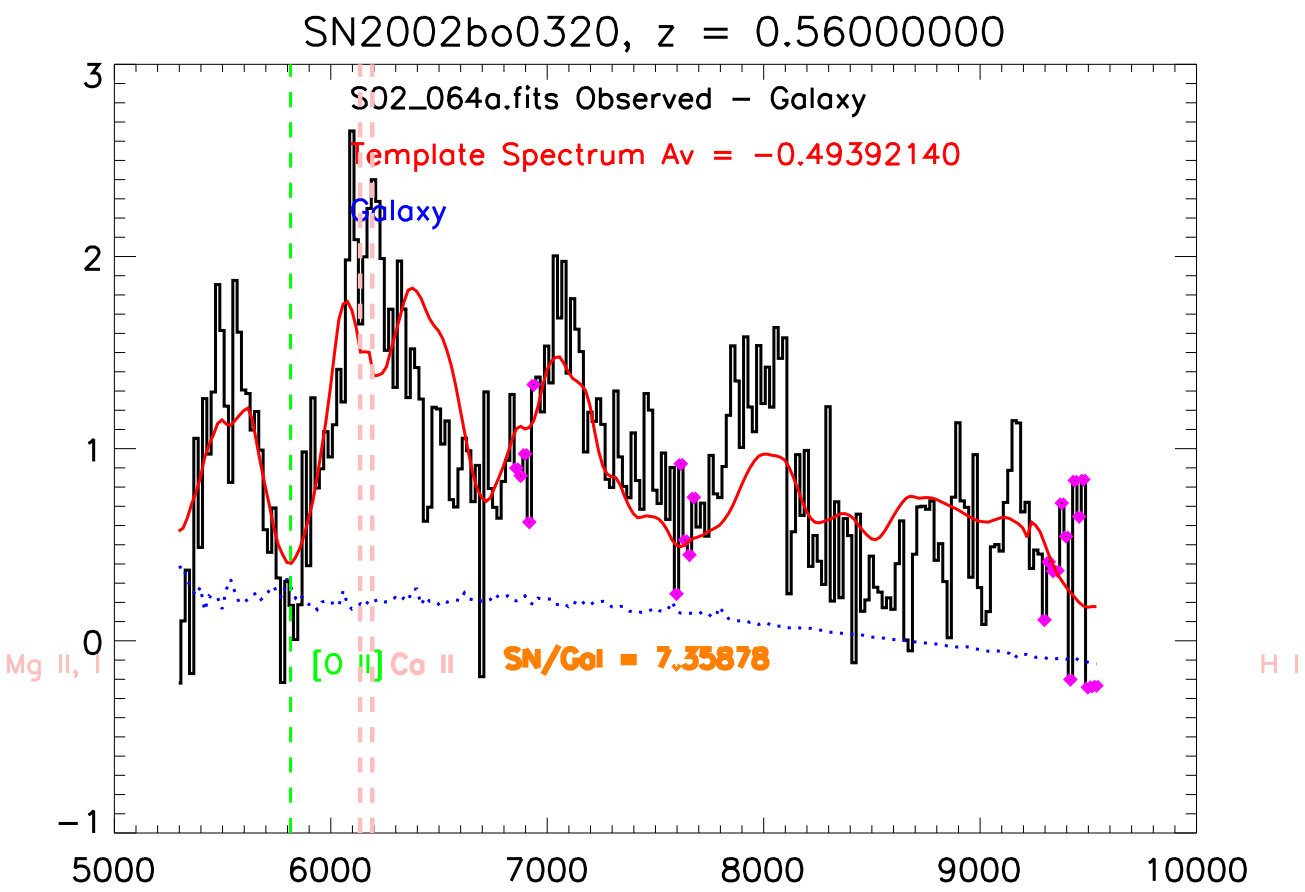

S02_064a.fits----sn1990n.m07
sn1990n.m07
z = 0.56999999
Mg II
[O I]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

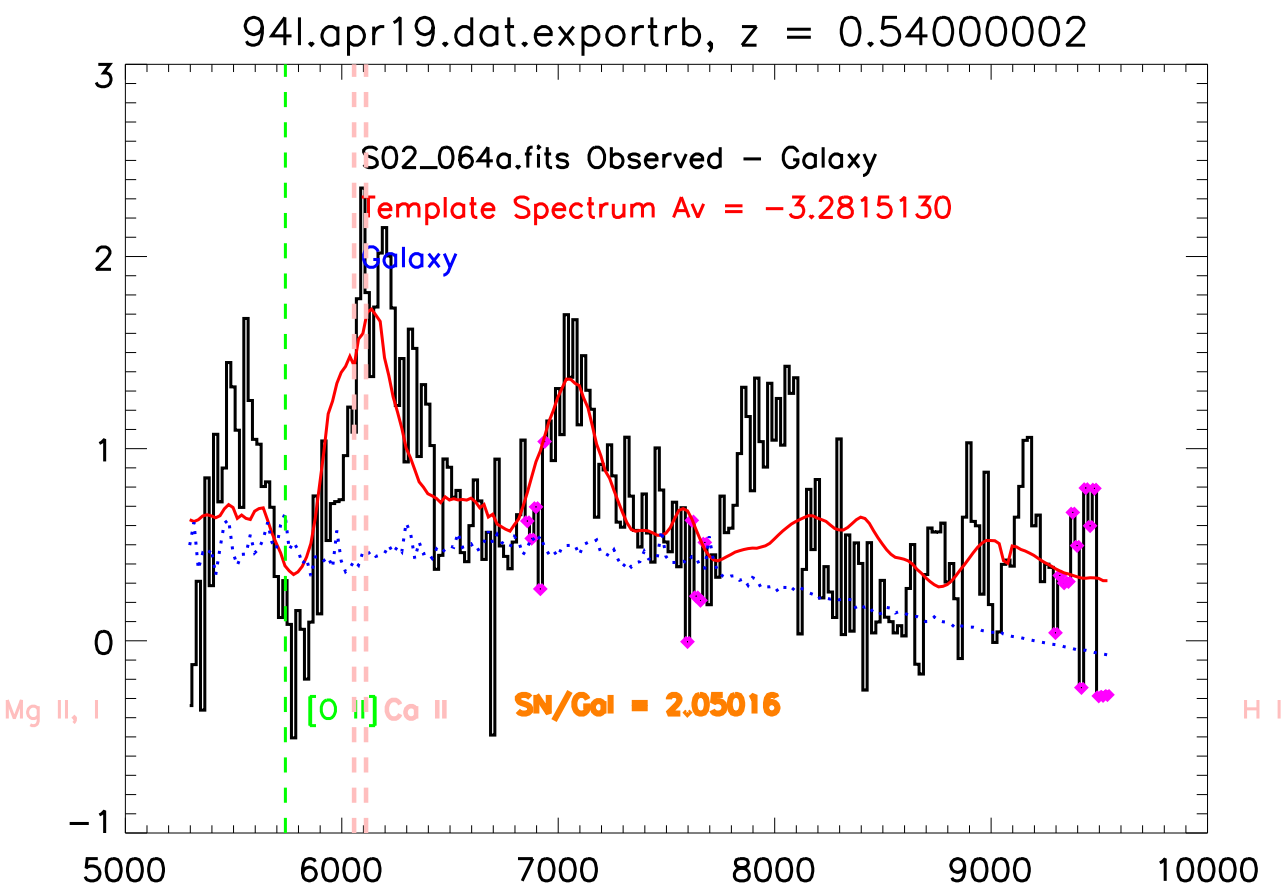

sn1990n.m07, z = 0.56999999
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.1802908
Galaxy
SN/Gal = −3.45192
[O II]
Ca II
Mg II
H I
4
3
2
1
0
−1
−2
5000
6000
7000
8000
9000
10000

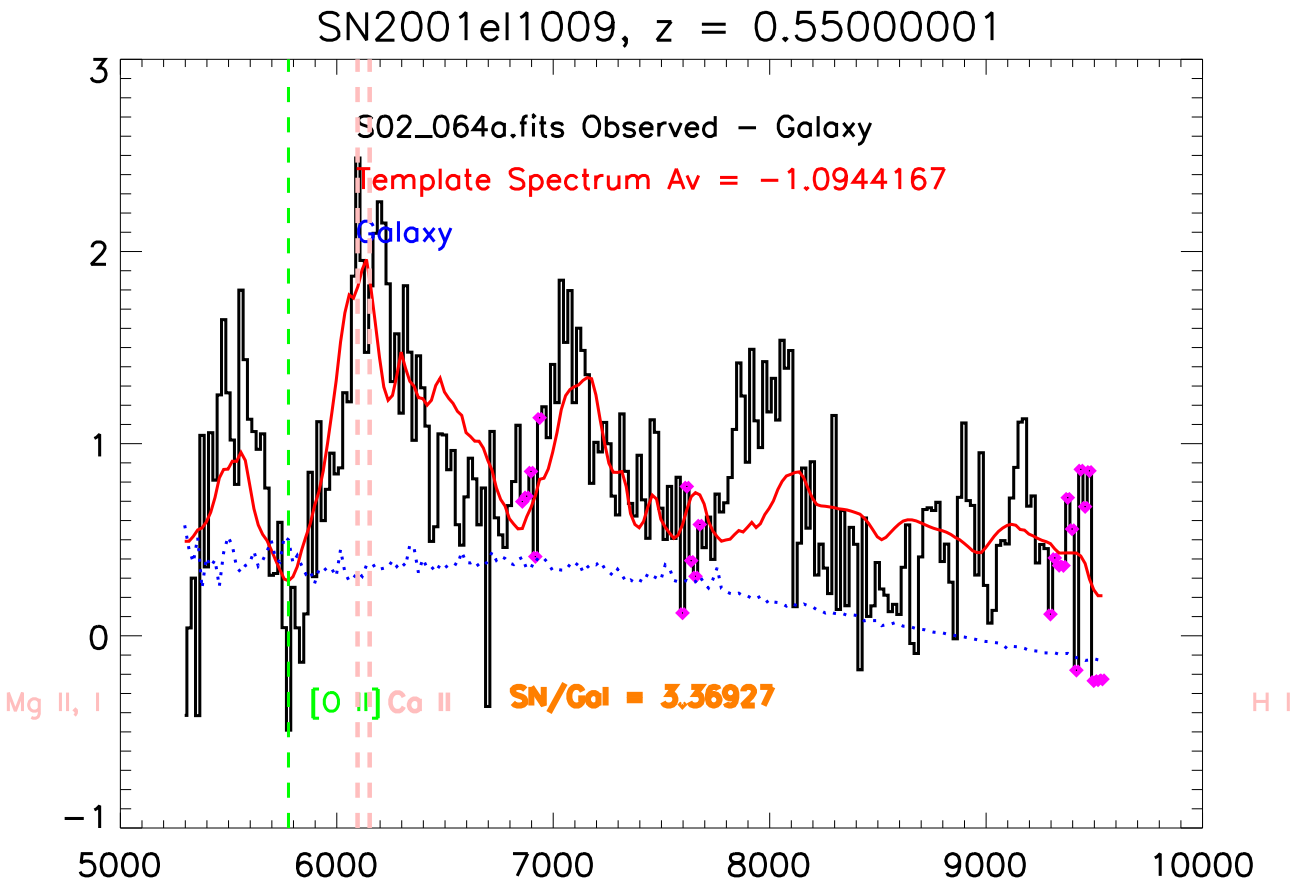

sn1981b.max, z = 0.55000001
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.34766599
Galaxy
SN/Gal = −257.614
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

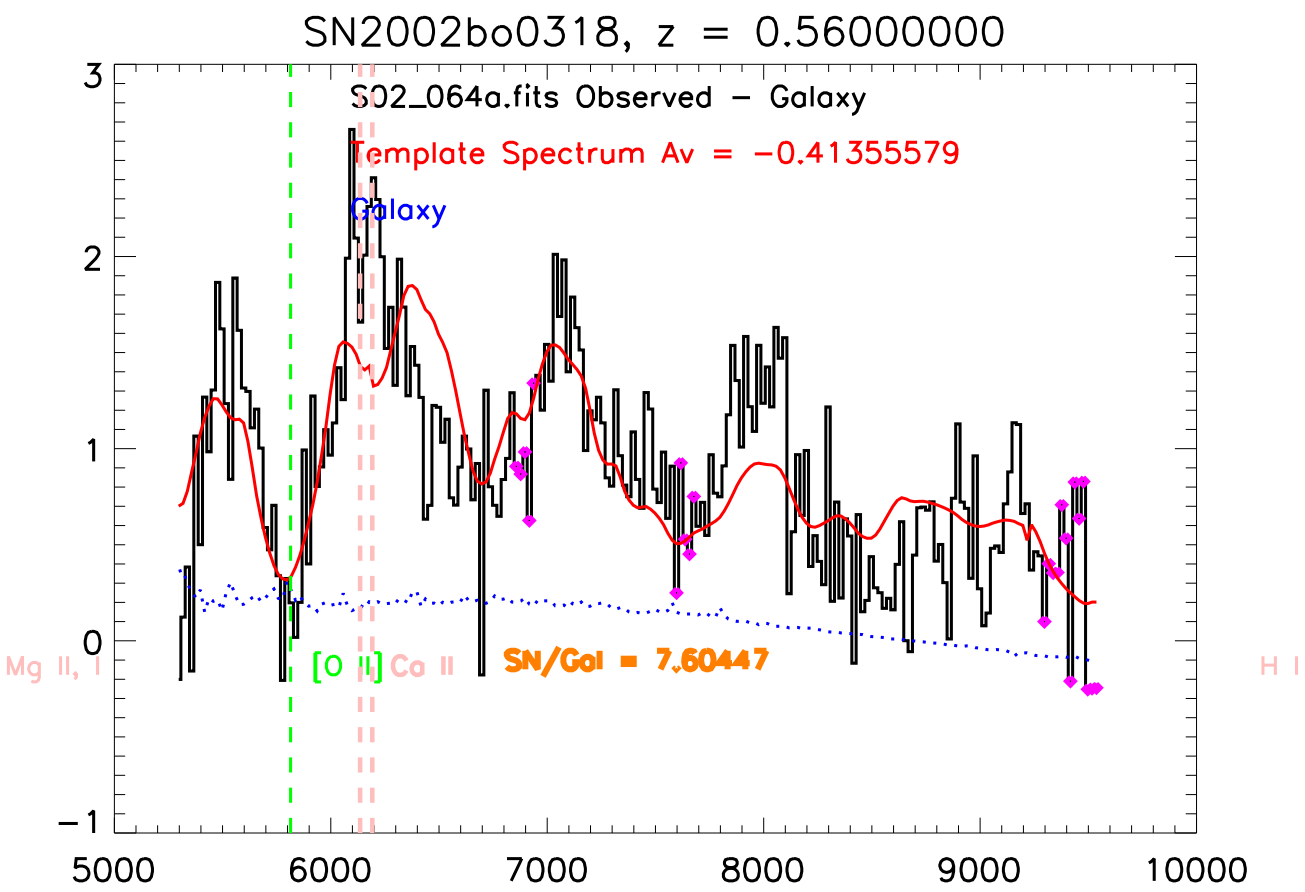

sn00cx−01, z = 0.37000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.63565552
Galaxy
SN/Gal = −3.27308
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

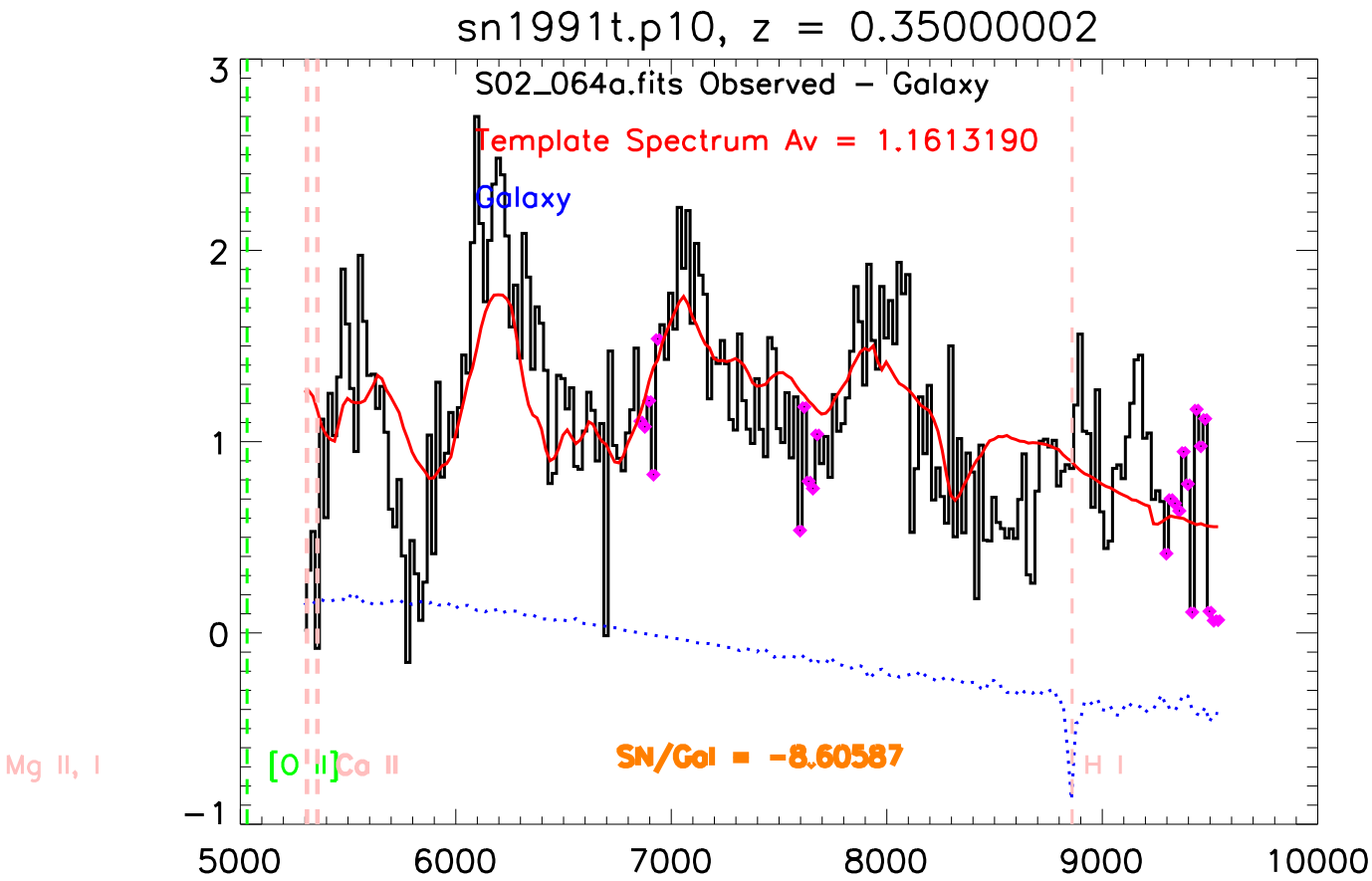

sn1989b.m01, z = 0.56000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.63565552
Galaxy
SN/Gal = -5.48911
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

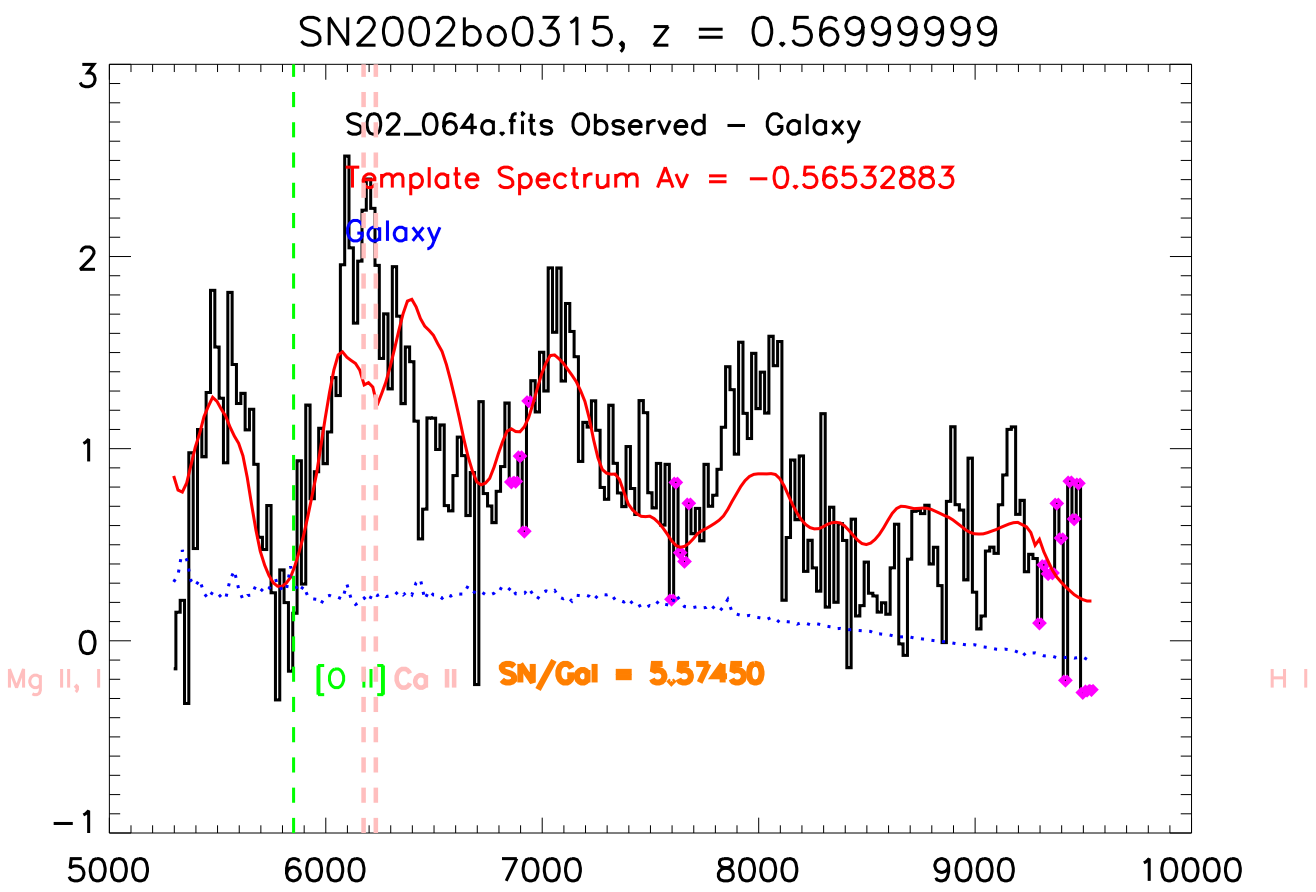

SN2002bo0320, z = 0.56000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.49392140
Galaxy
SN/Gal = 7.35878
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

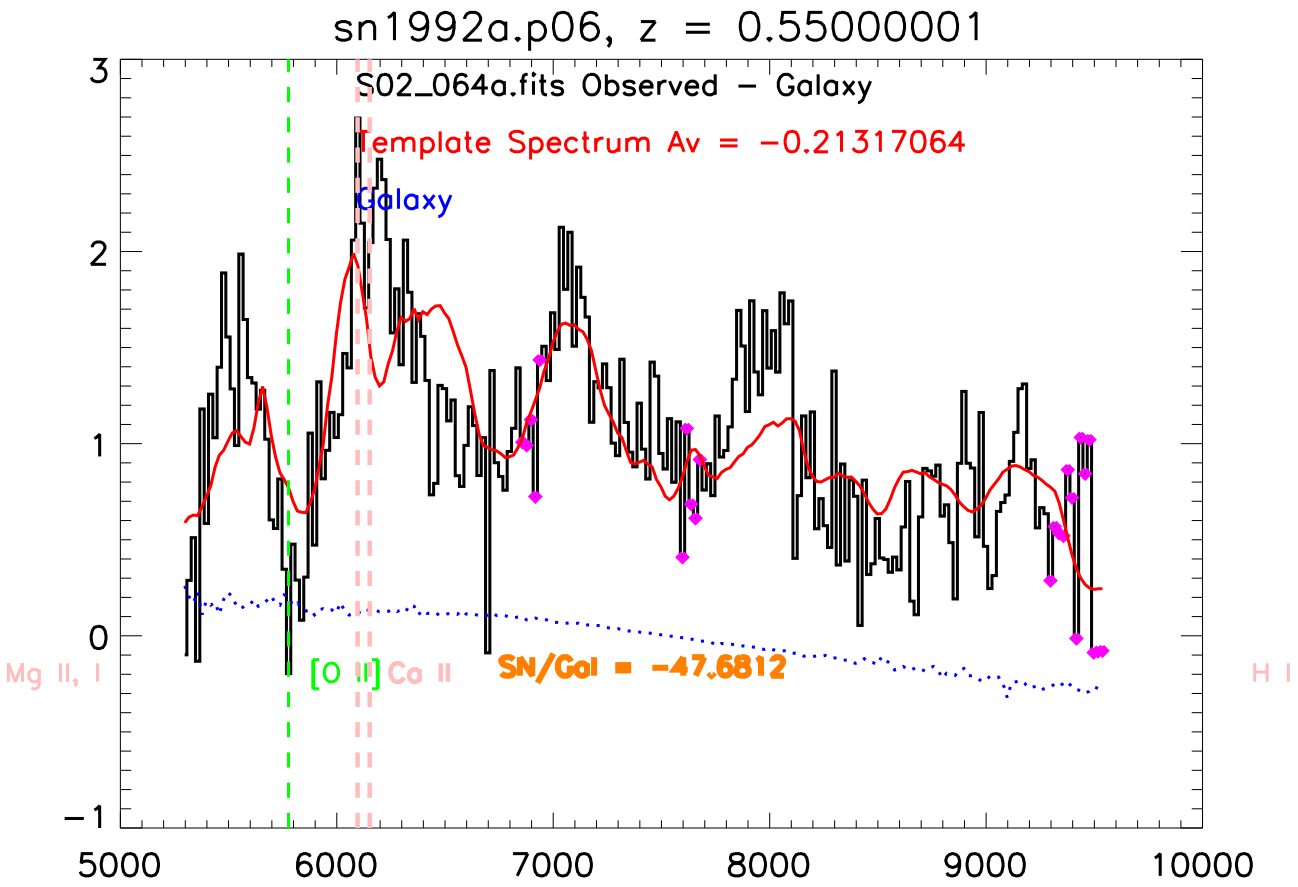

94I.apr19.dat.exportrb, z = 0.54000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −3.2815130
Galaxy
SN/GoI = 2.05016
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

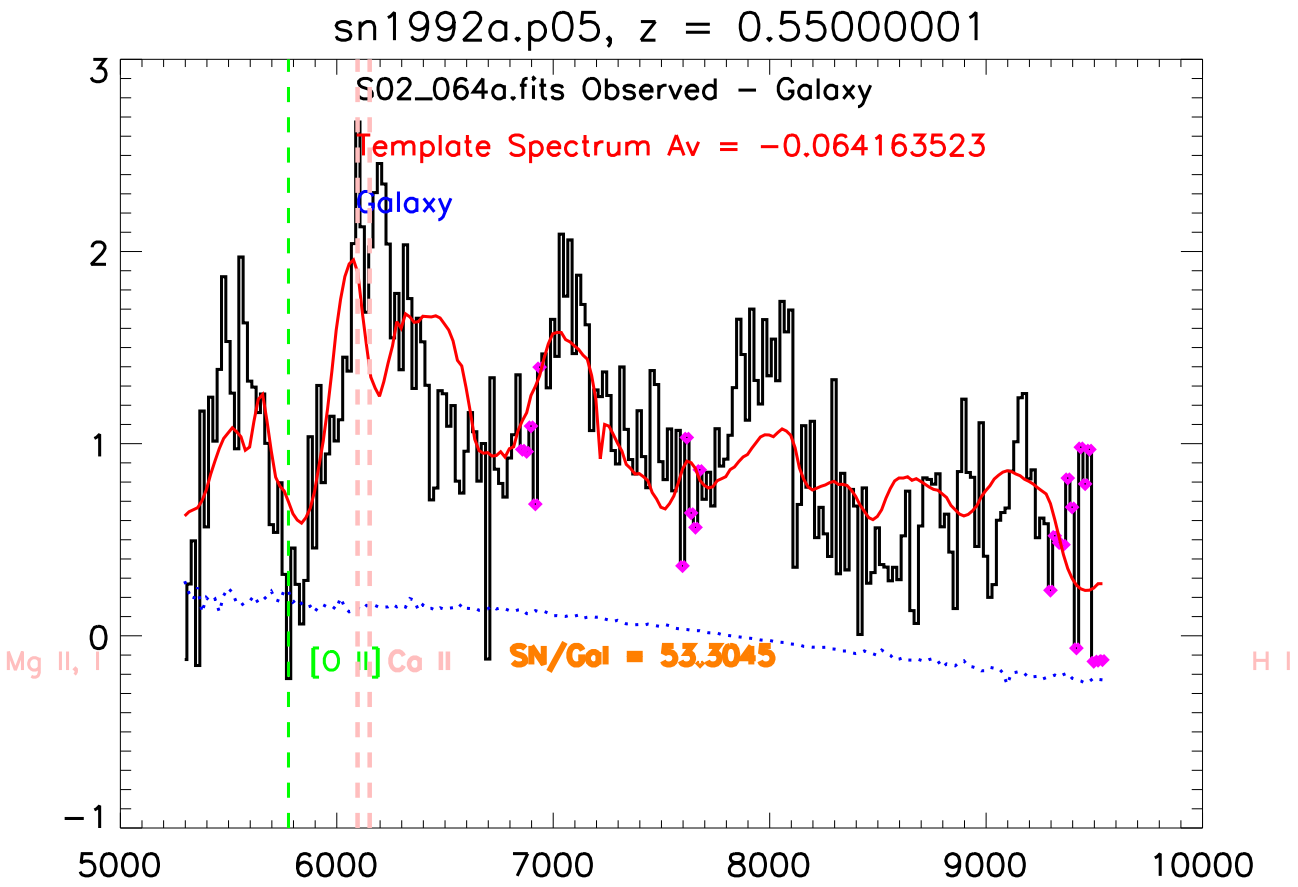

SN2001el1009, z = 0.55000001
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −1.0944167
Galaxy
Mg II, I
[O II]
Ca II
SN/Gal = 3.36927
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

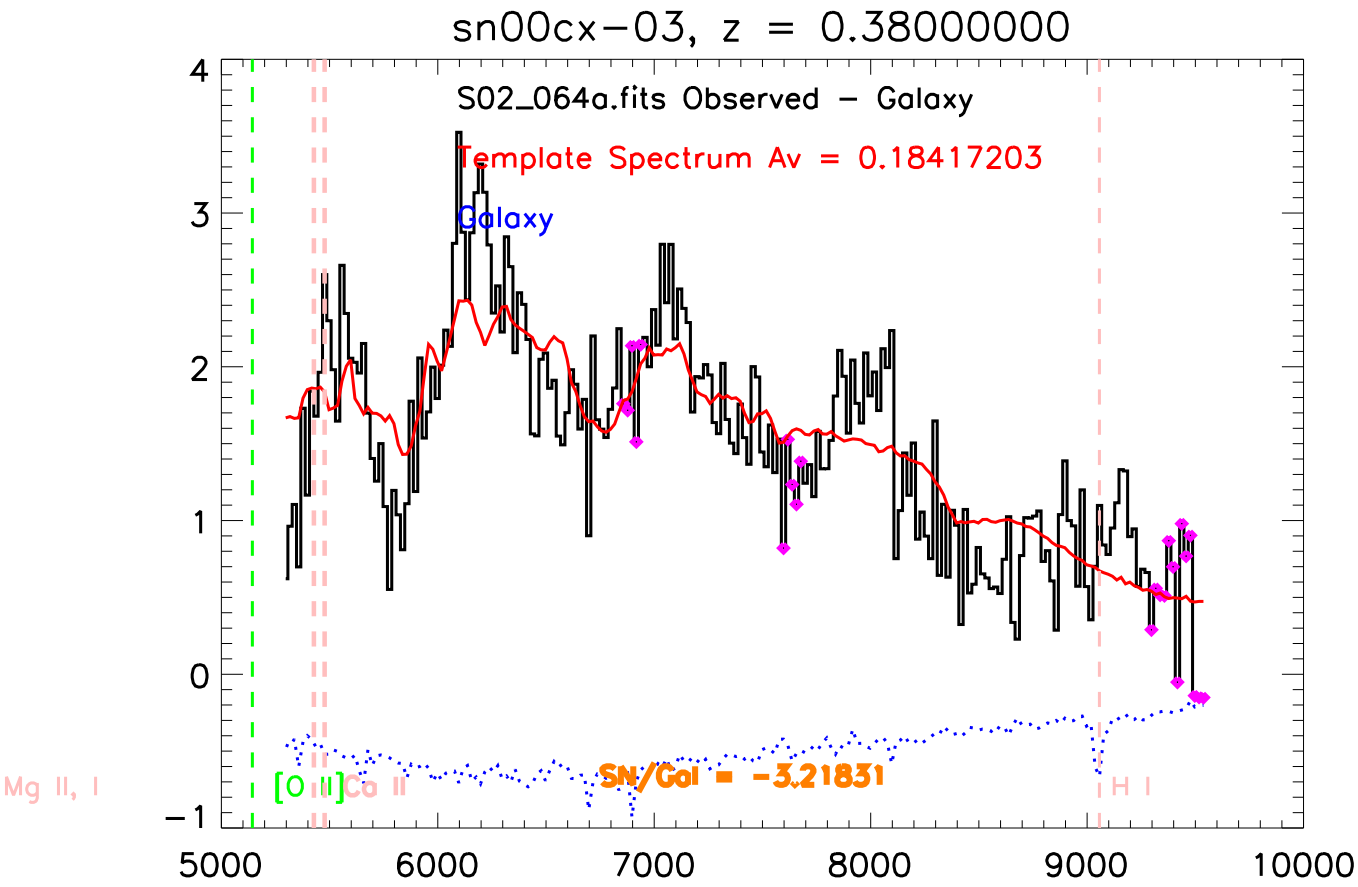

SN2002bo0318, z = 0.56000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.41355579
Galaxy
SN/Gal = 7.60447
[O II]
Ca II
Mg II, I
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

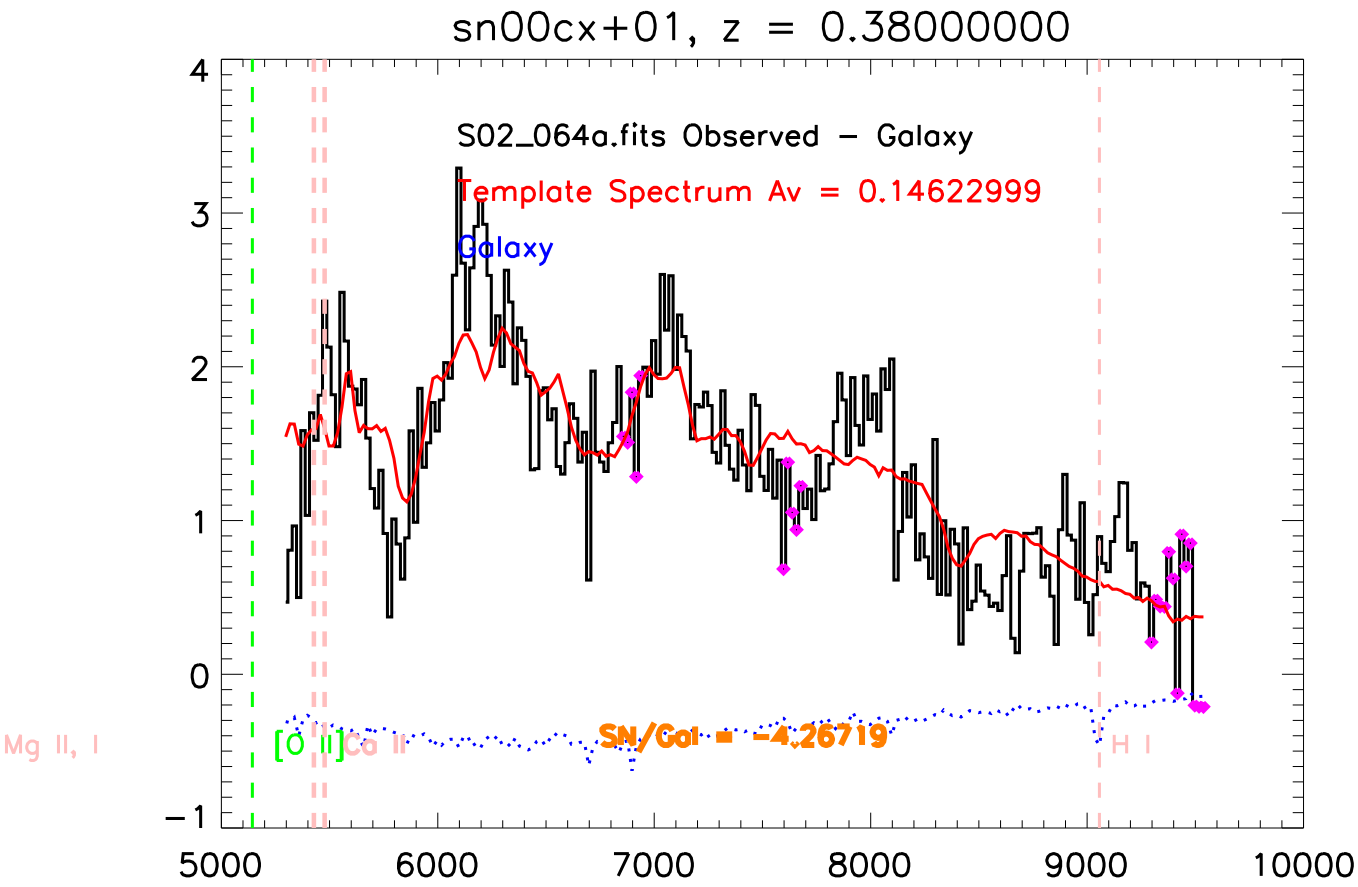

sn1991t.p10, z = 0.35000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.1613190
Galaxy
SN/Gal = −8.60587
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

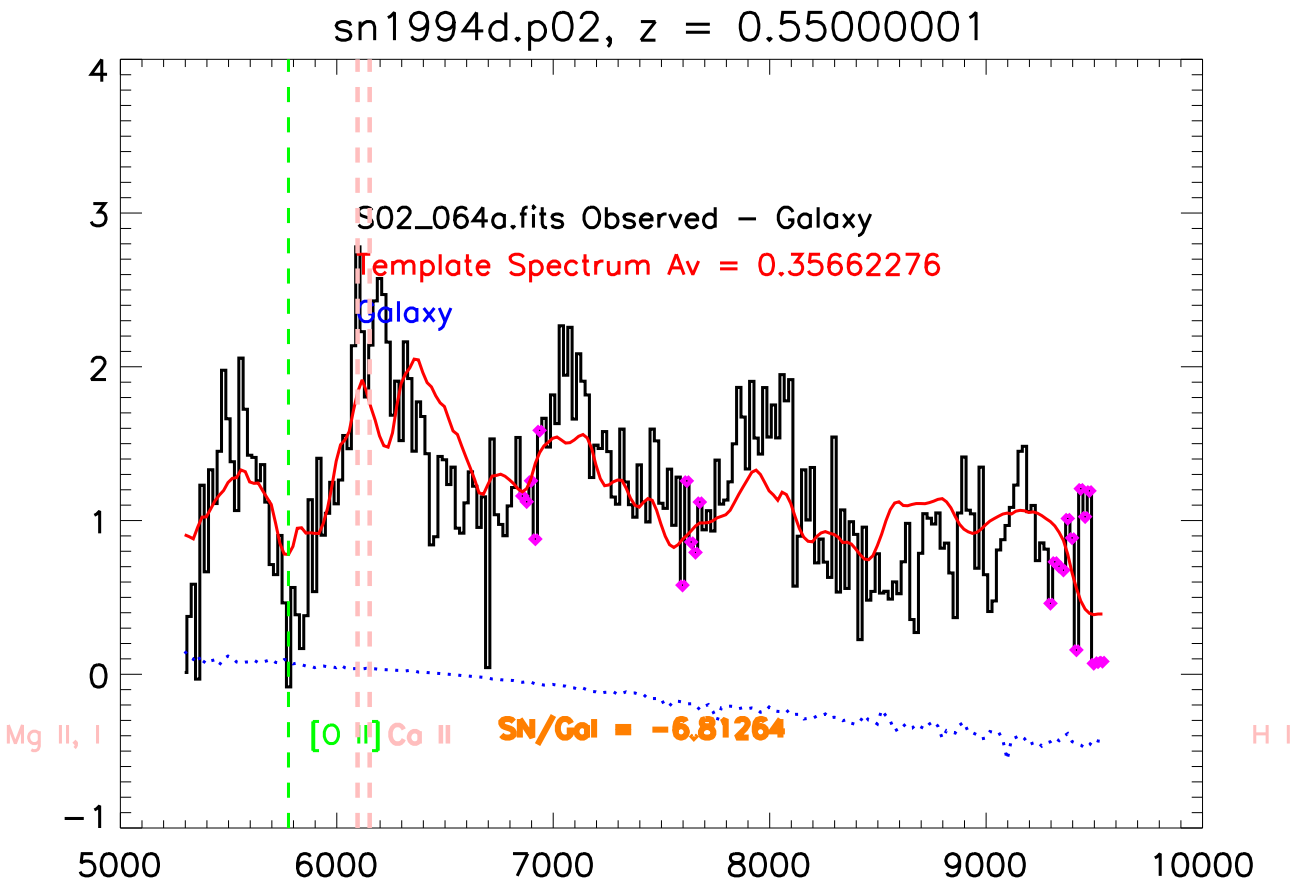

SN2002bo0315, z = 0.56999999
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.56532883
Galaxy
Mg II, I
[O II]
Ca II
SN/Gal = 5.57450
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

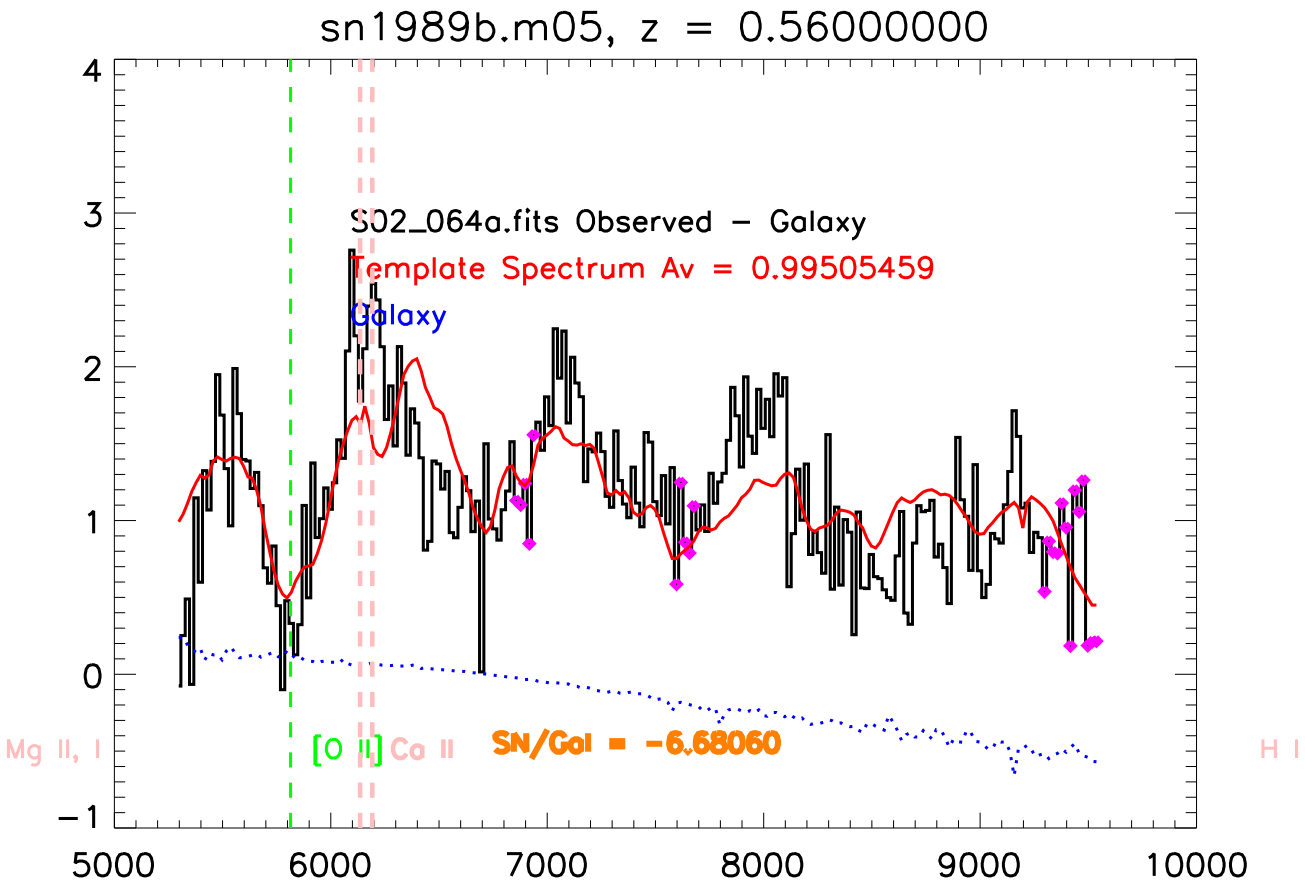

sn1992a.p06, z = 0.55000001
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.21317064
Galaxy
SN/Gal = −47.6812
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

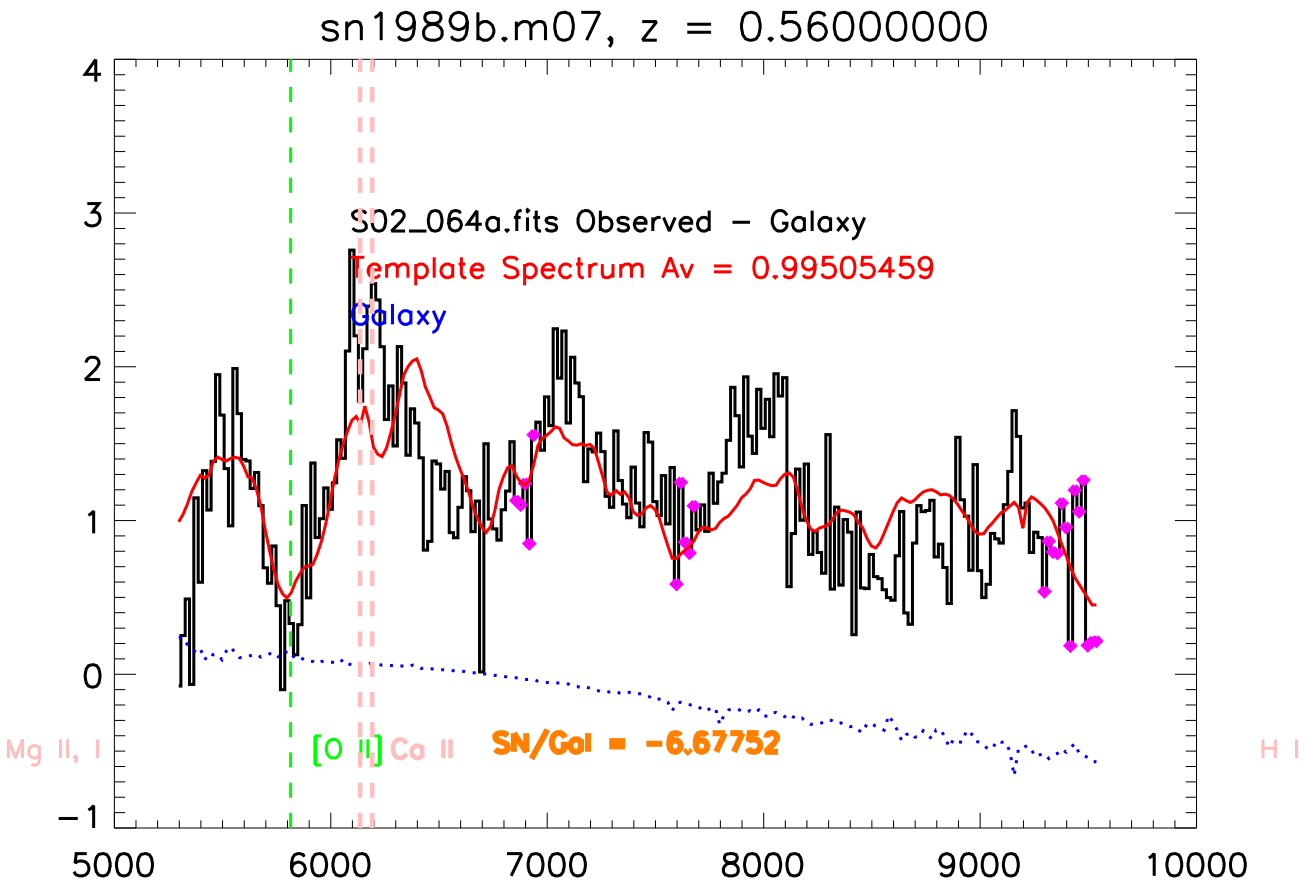

sn1992a.p05, z = 0.55000001
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.064163523
Galaxy
SN/Gal = 53.3045
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

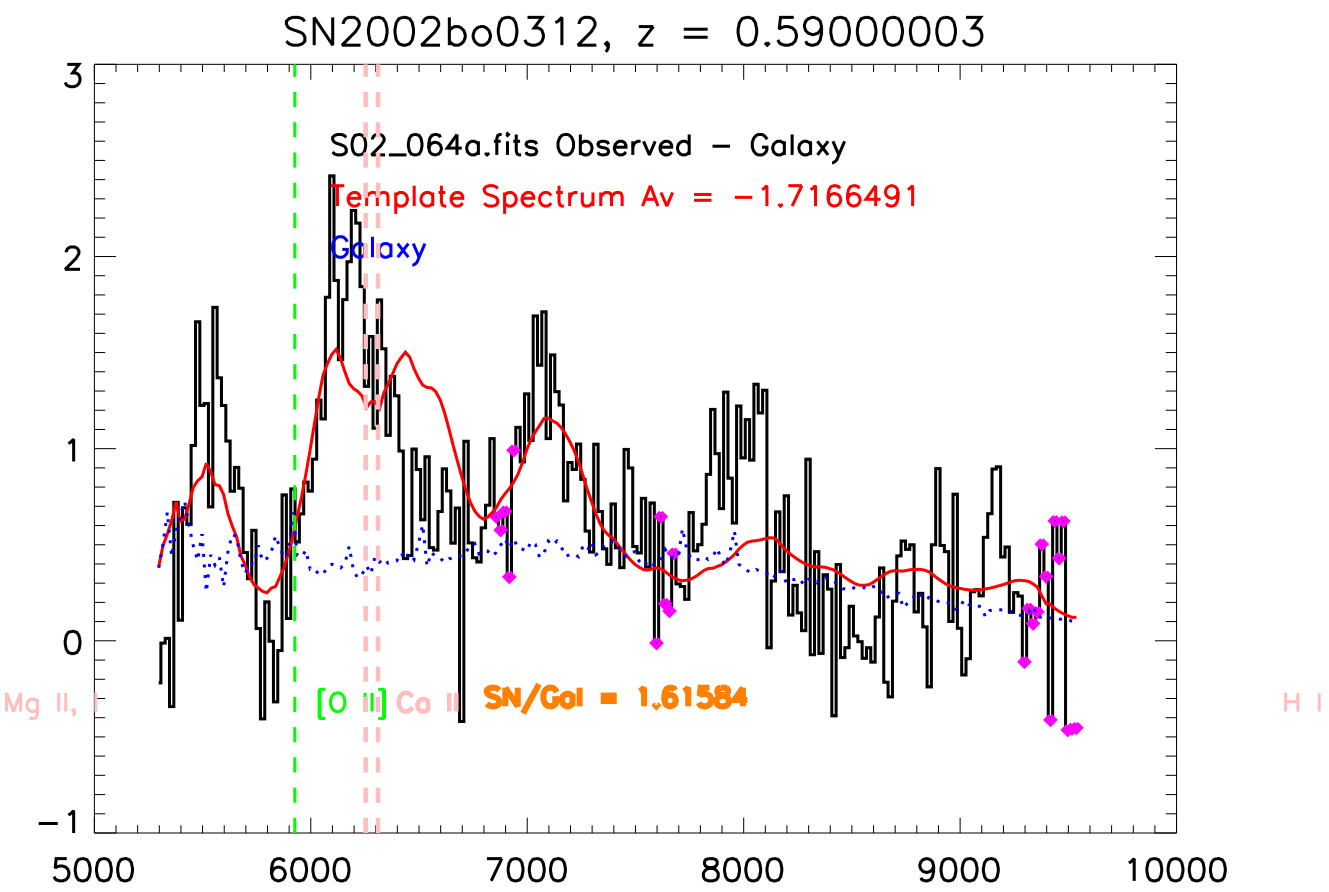

sn00cx−03, z = 0.38000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.18417203
Galaxy
SN/Gal = −3.21831
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

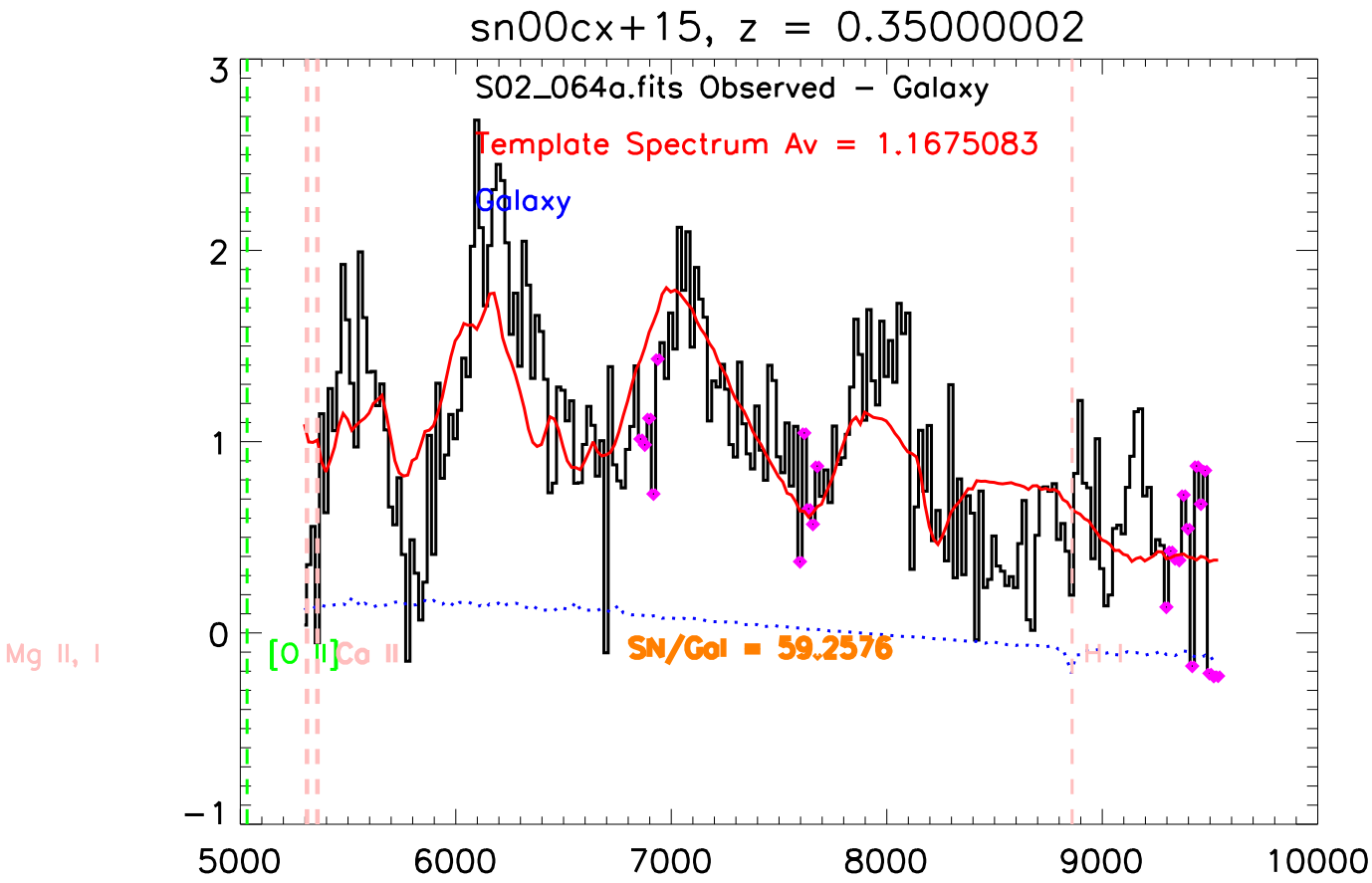

sn00cx+01, z = 0.38000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.14622999
Galaxy
SN/Gal = −4.26719
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

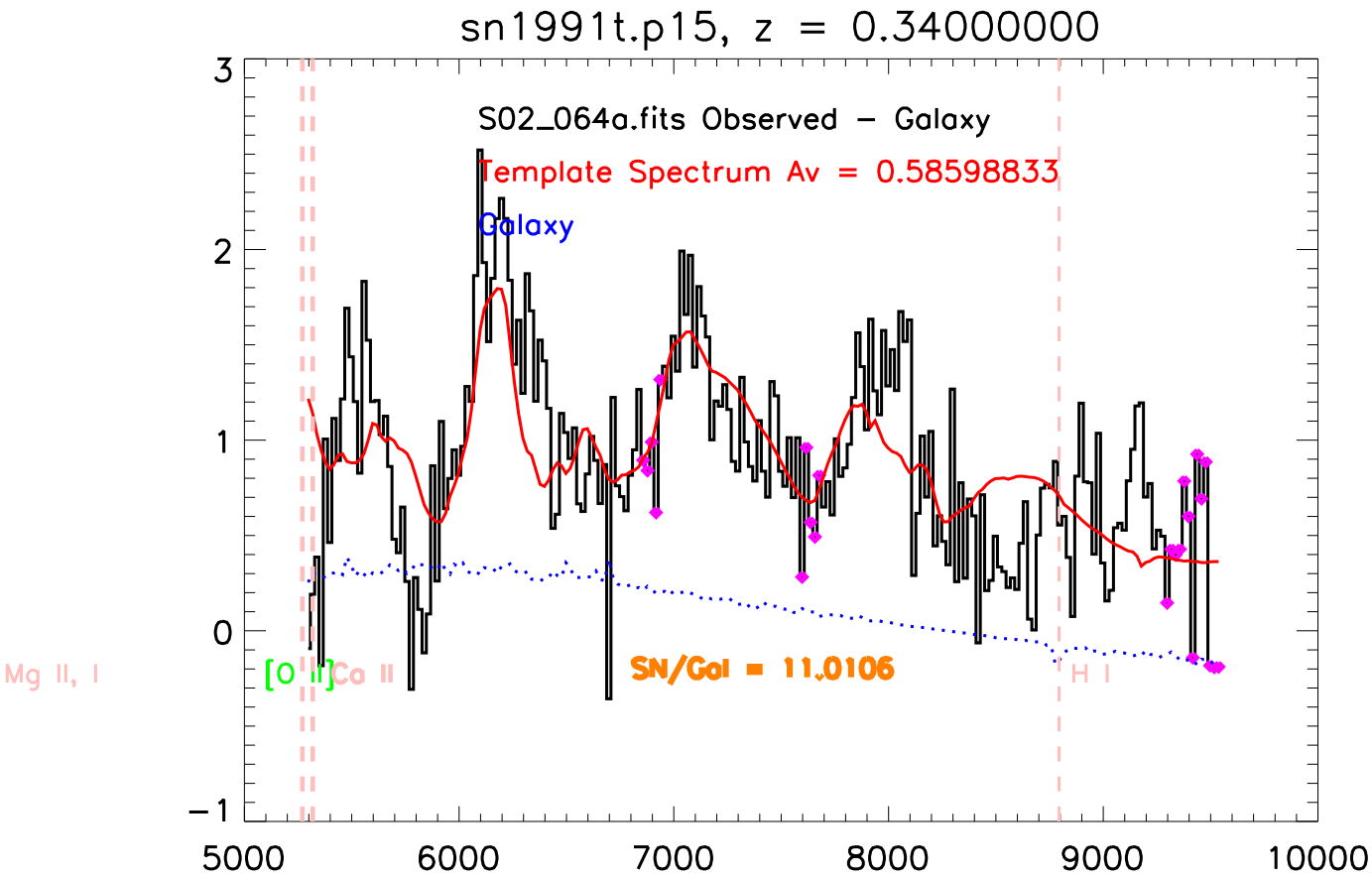

sn1994d.p02, z = 0.55000001
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.35662276
Galaxy
SN/Gal = -6.81264
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

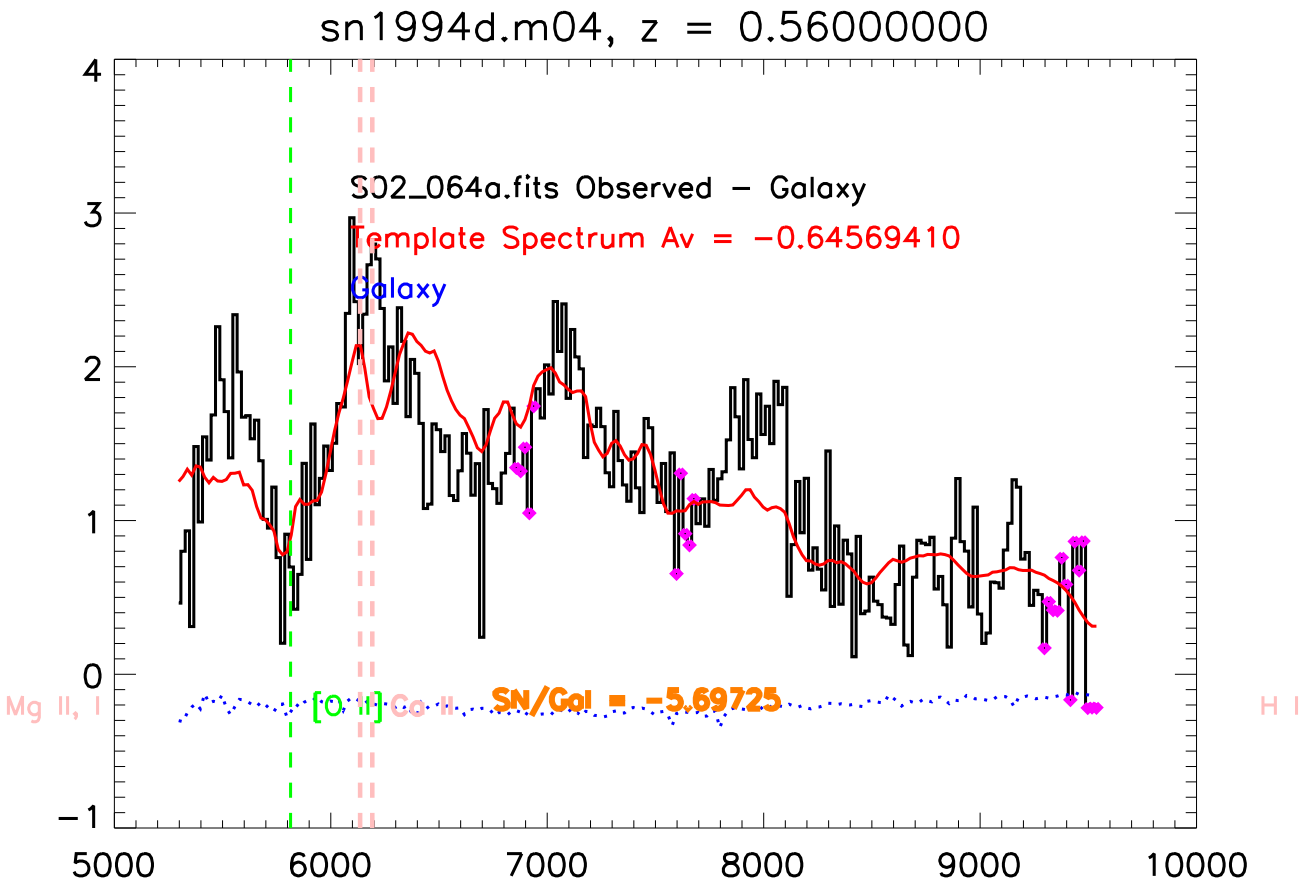

sn1989b.m05, z = 0.56000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.99505459
Galaxy
SN/Gal = −6.68060
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

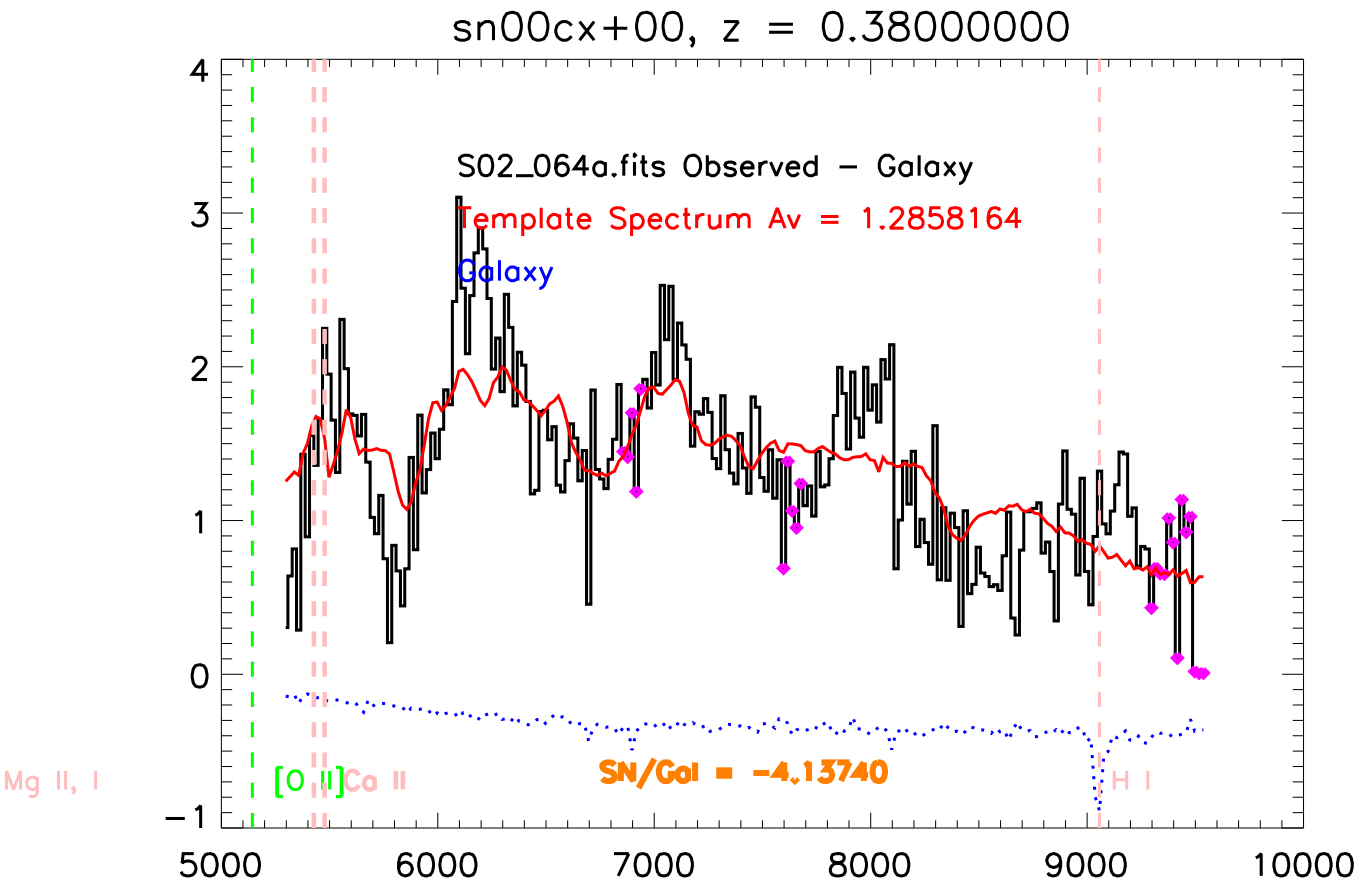

sn1989b.m07, z = 0.56000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.99505459
Galaxy
SN/Gal = -6.67752
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

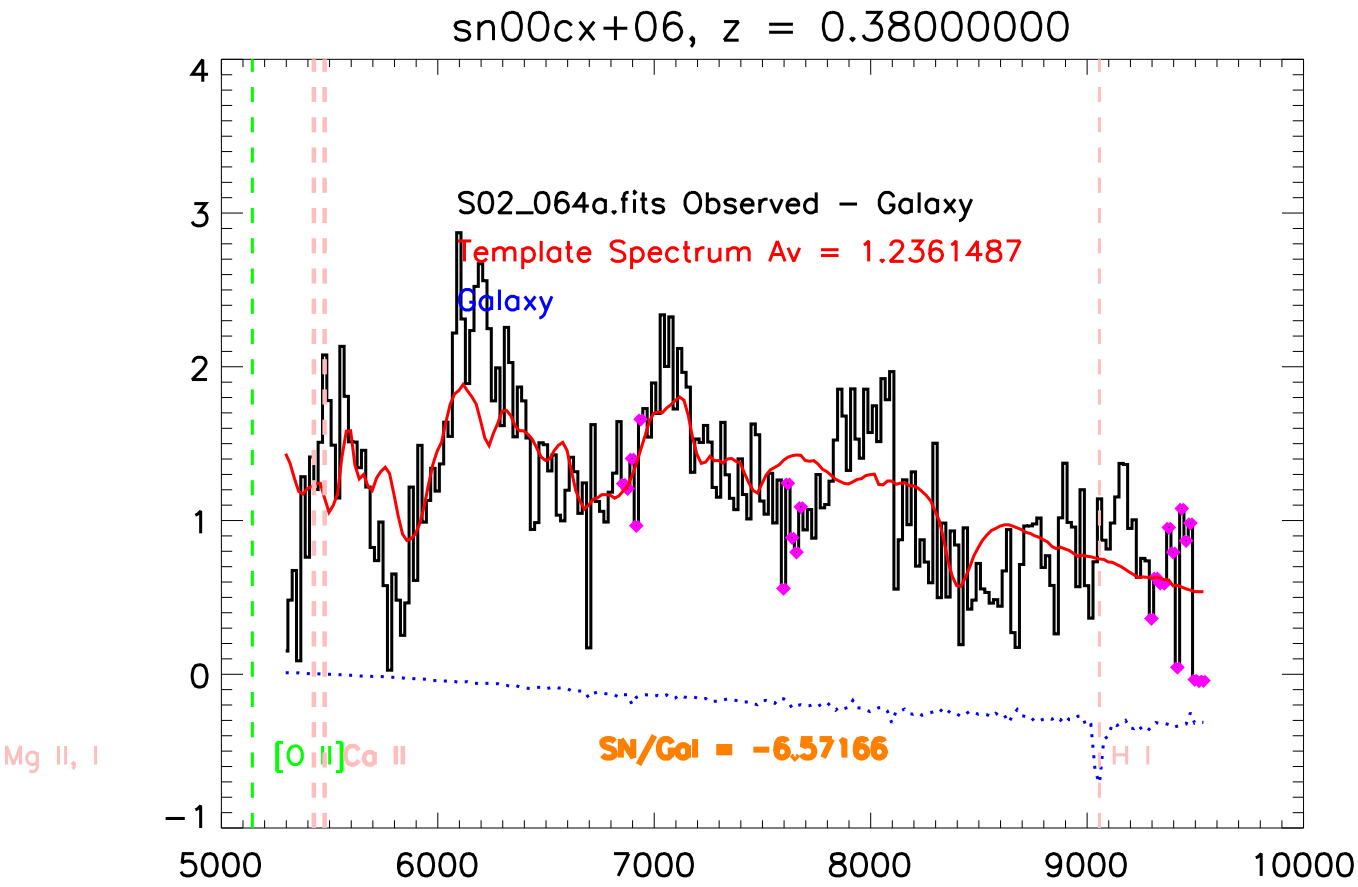

SN2002bo0312, z = 0.59000003
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −1.7166491
Galaxy
[O II]
Ca II
SN/Gal = 1.61584
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

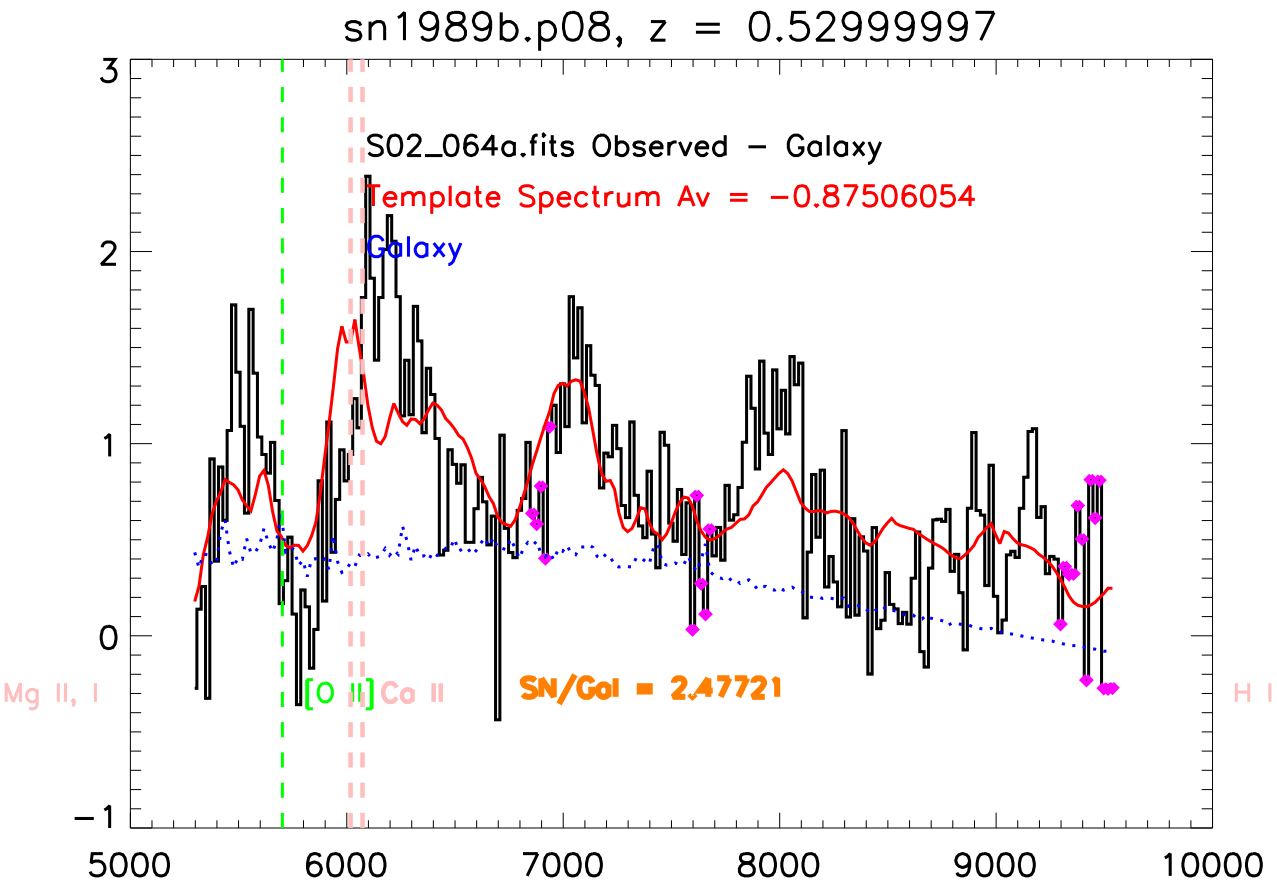

sn00cx+15, z = 0.35000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.1675083
Galaxy
SN/Gal = 59.2576
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

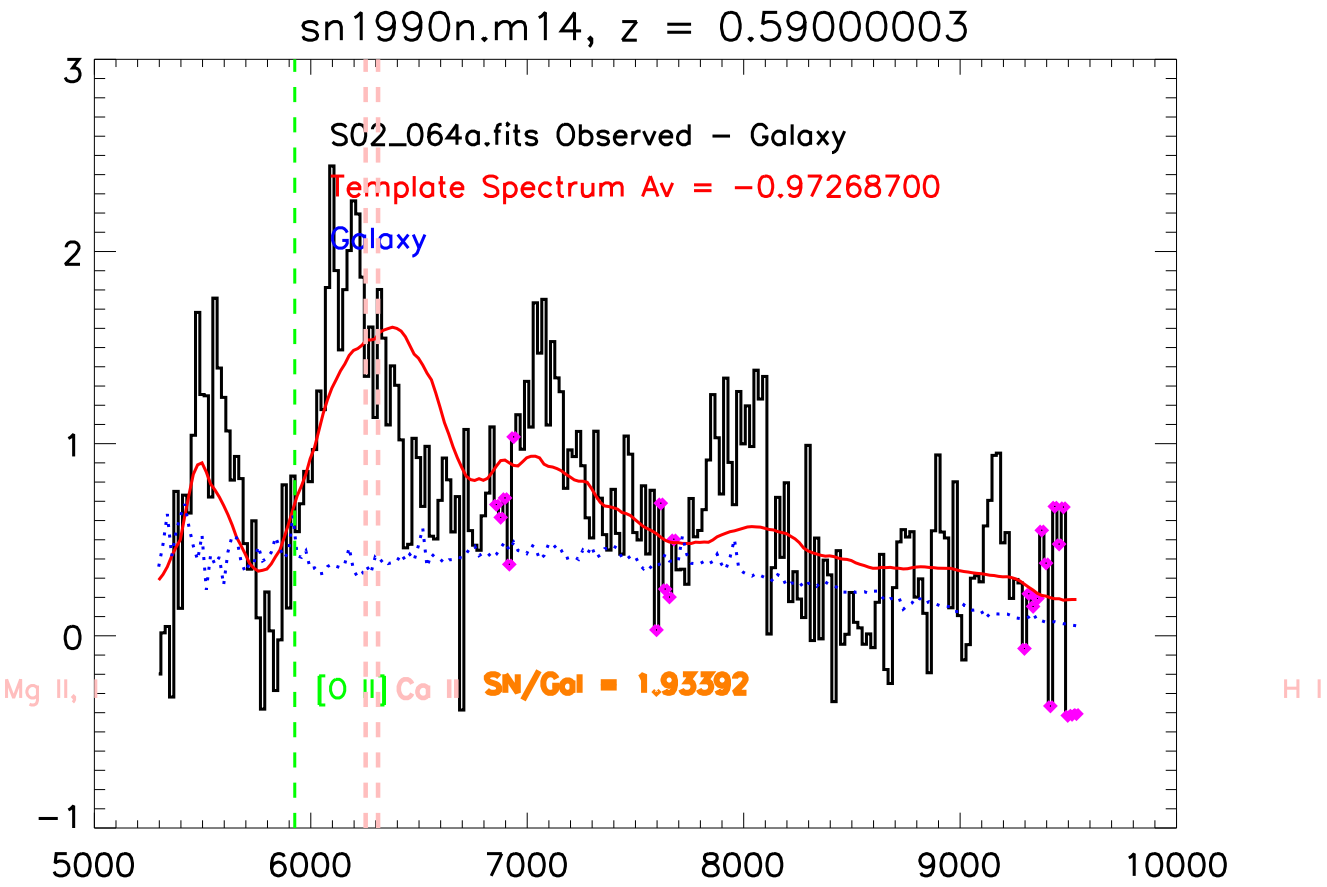

sn1991t.p15, z = 0.34000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.58598833
Galaxy
SN/Gal = 11.0106
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

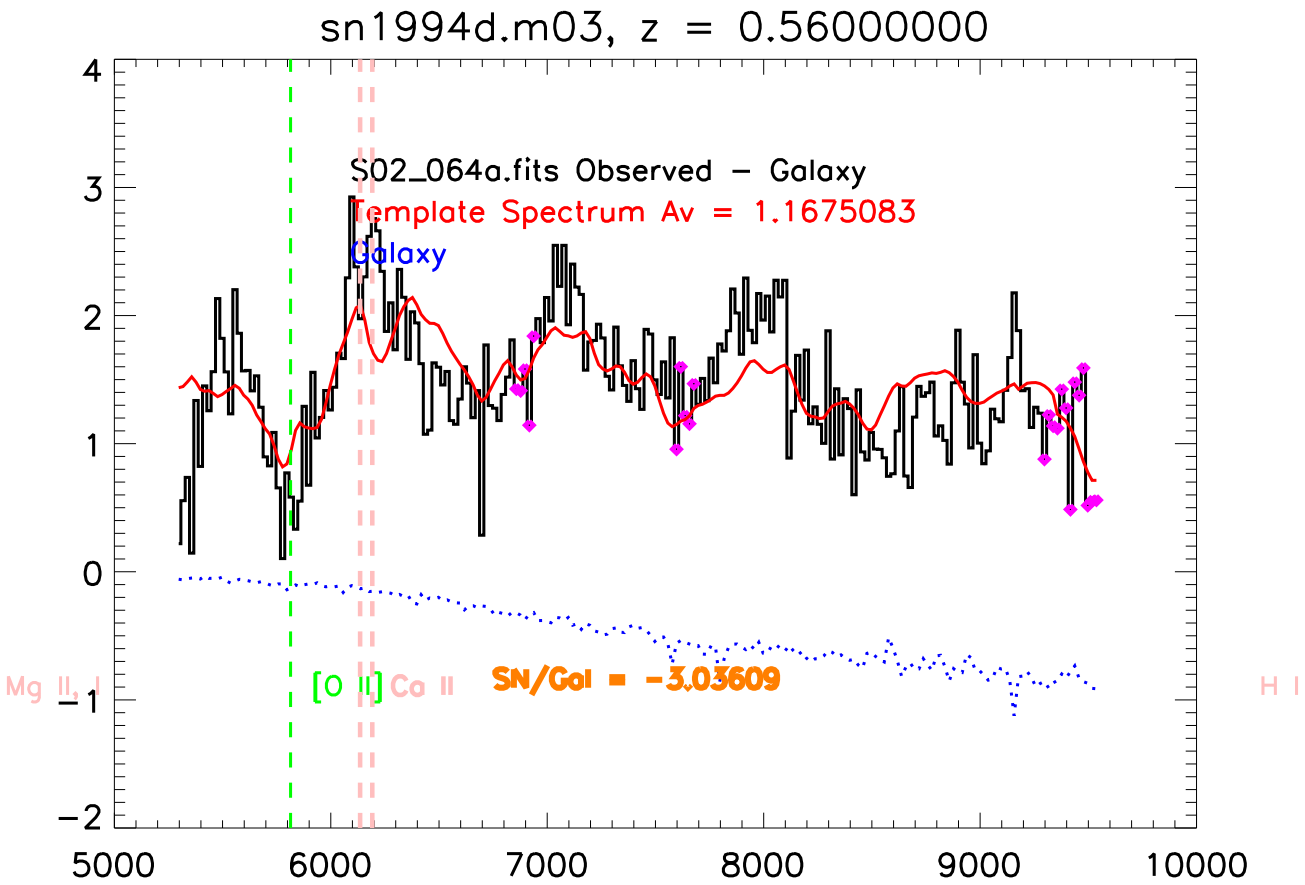

sn1994d.m04, z = 0.56000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.64569410
Galaxy
SN/Gal = -5.69725
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

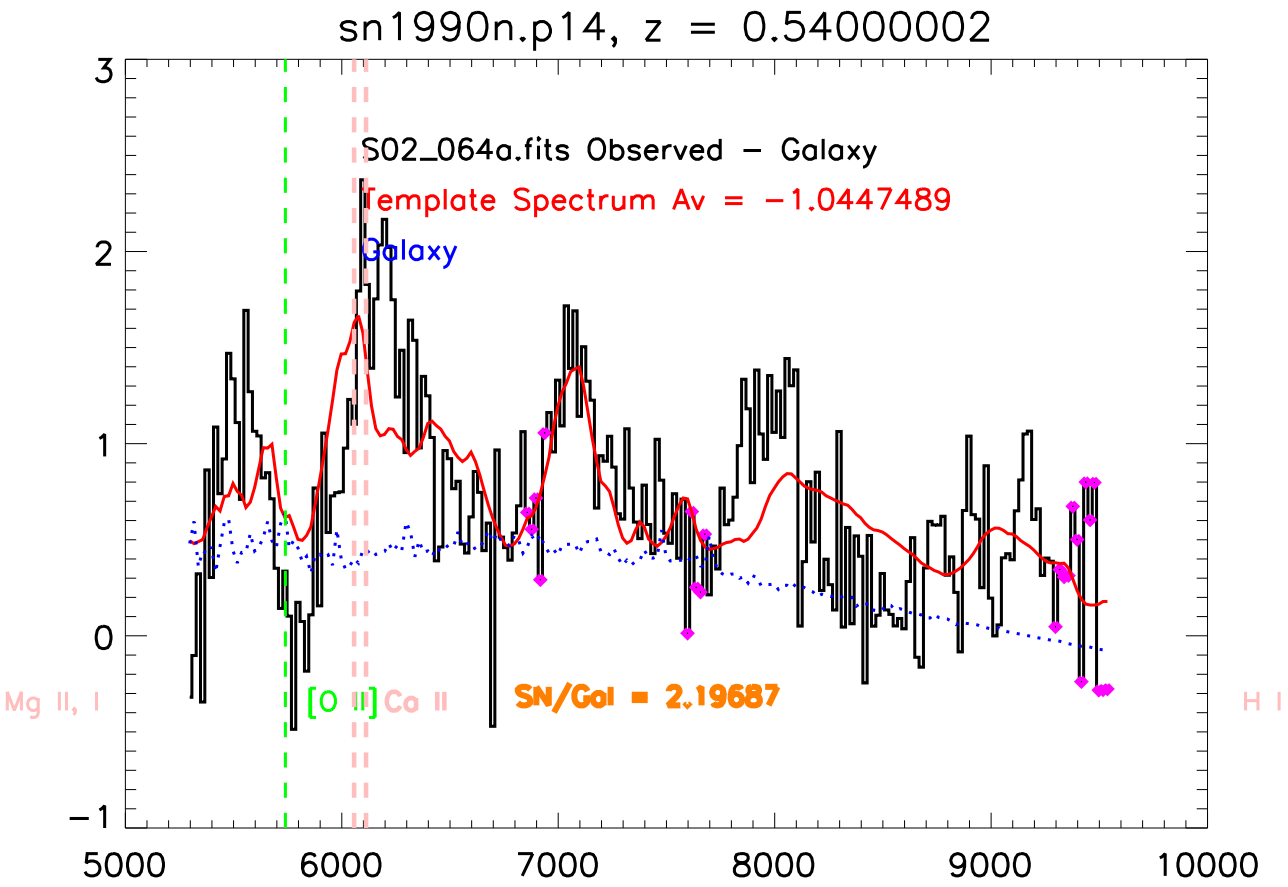

sn00cx+00, z = 0.38000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.2858164
Galaxy
SN/Gal = -4.13740
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

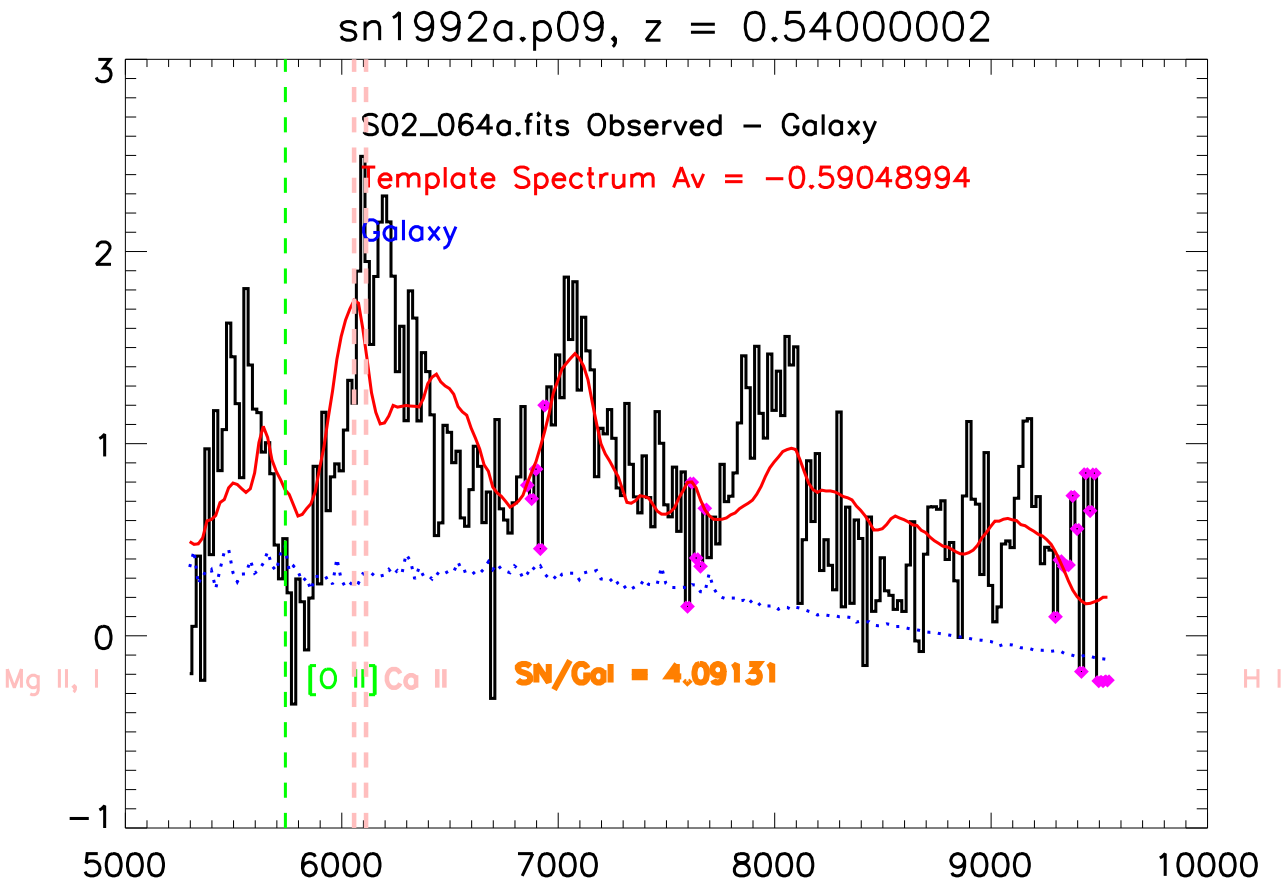

sn00cx+06, z = 0.38000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.2361487
Galaxy
SN/Gal = -6.57166
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

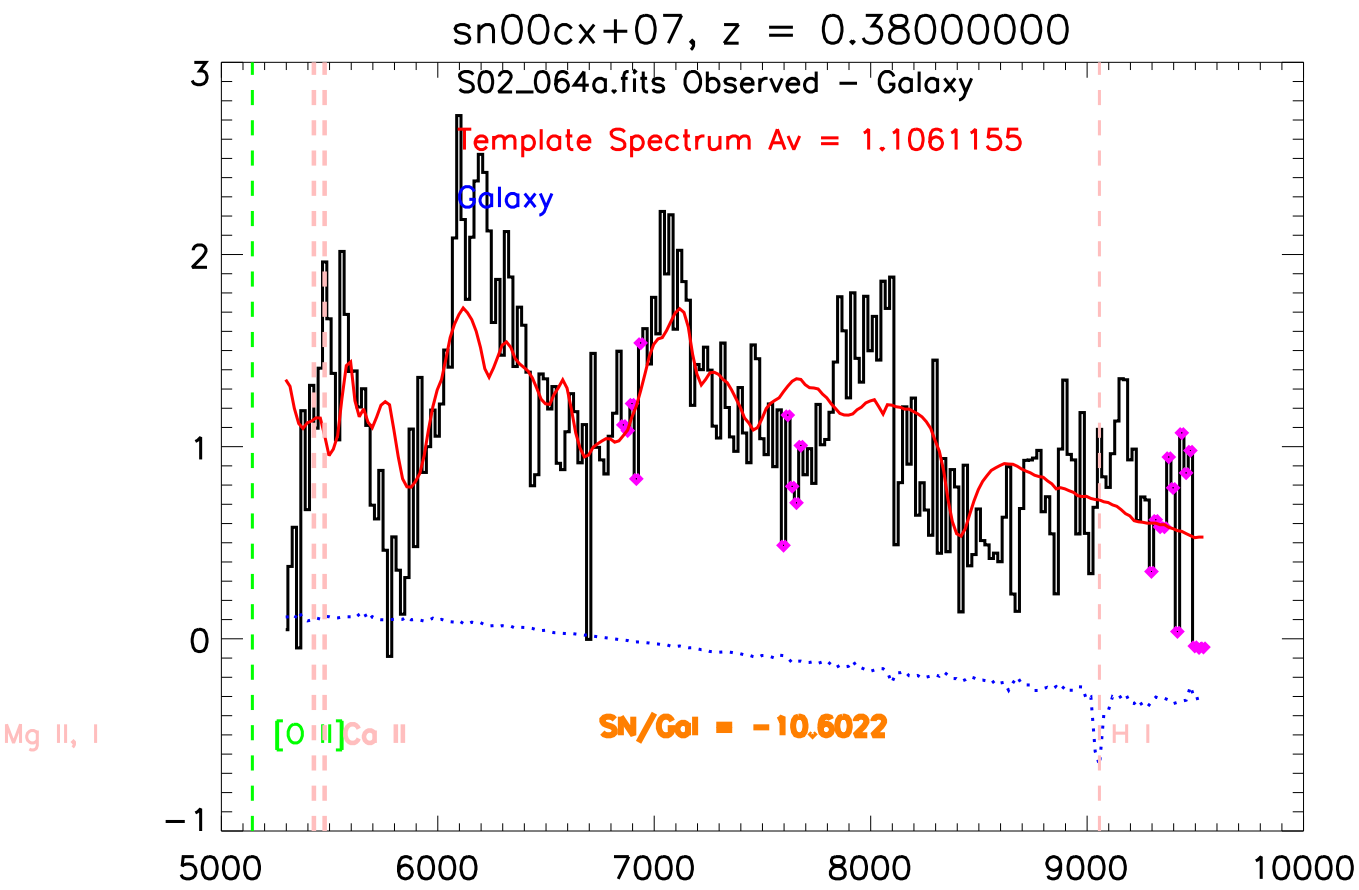

sn1989b.p08, z = 0.52999997
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.87506054
Galaxy
SN/Gal = 2.47721
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

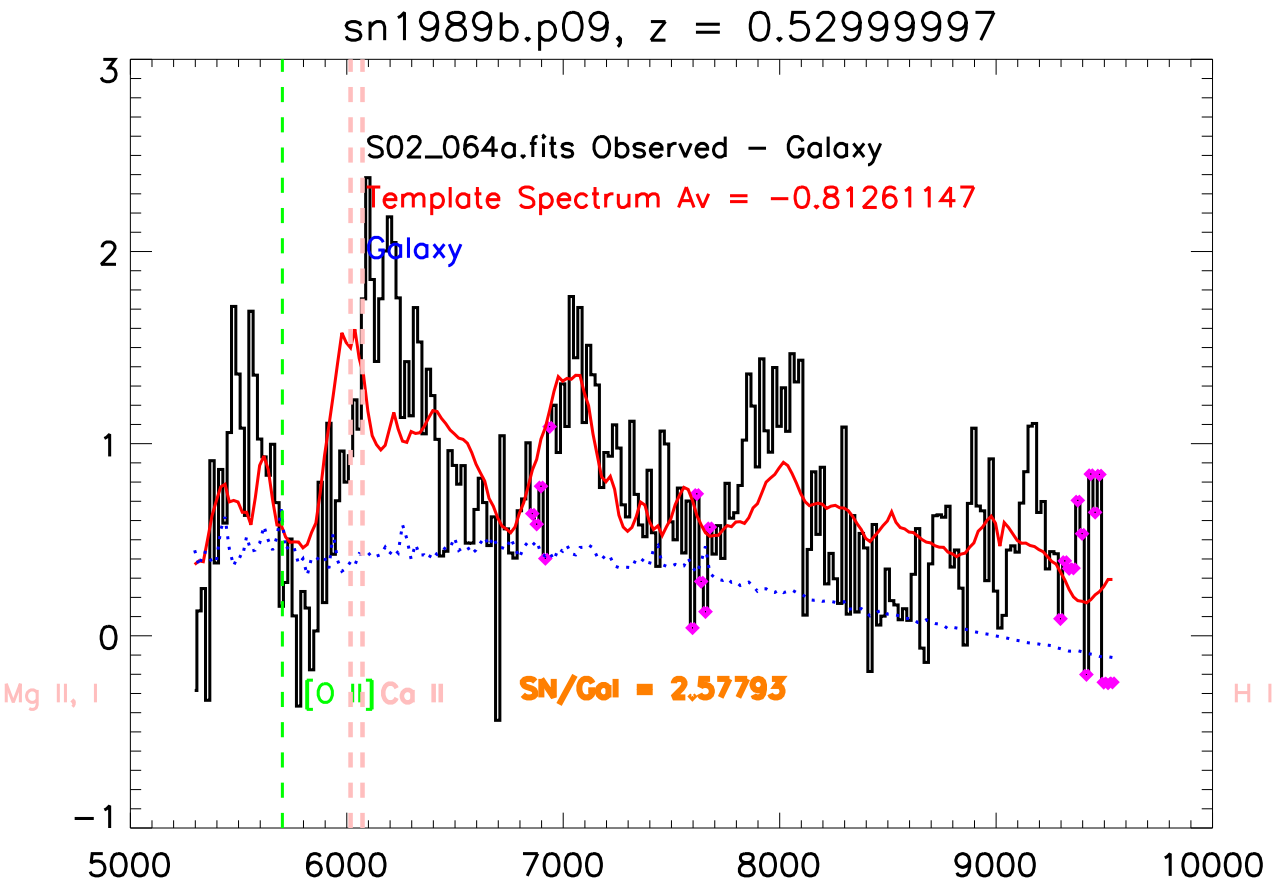

sn1990n.m14, z = 0.59000003
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.97268700
Galaxy
[O II]
Ca II
SN/Gal = 1.93392
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

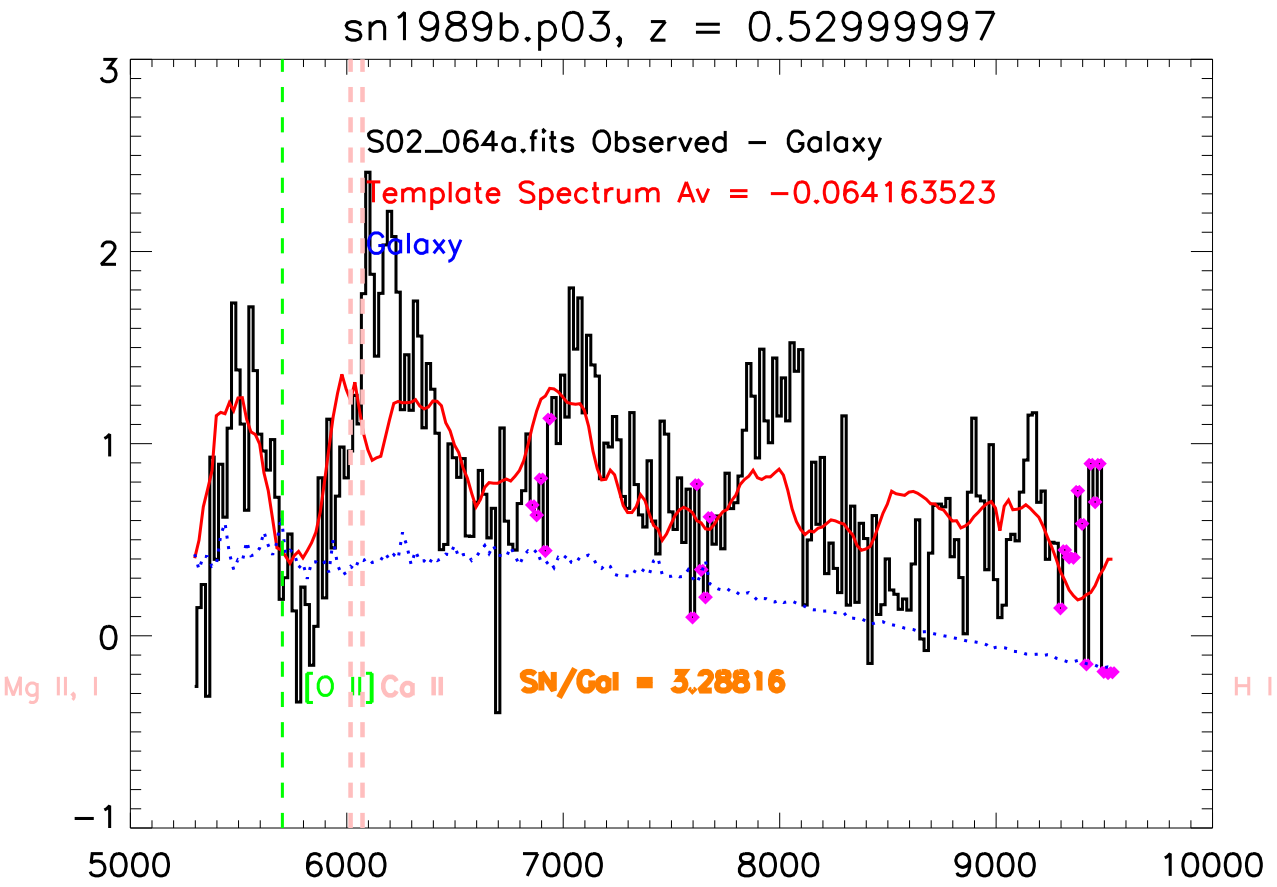

sn1994d.m03, z = 0.56000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.1675083
Galaxy
SN/Gal = −3.03609
Mg II
[O II]
Ca II
H I
4
3
2
1
0
−1
−2
5000
6000
7000
8000
9000
10000

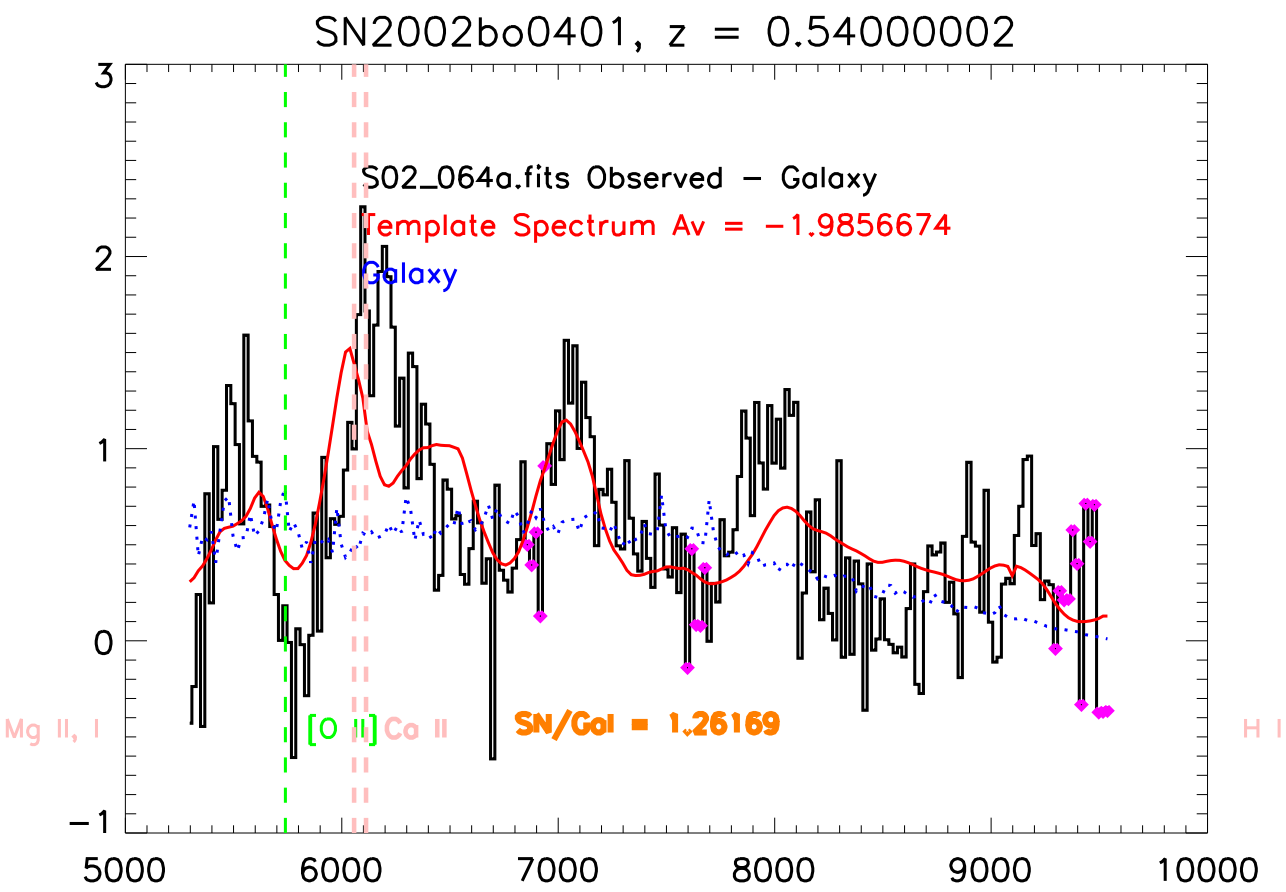

sn1990n.p14, z = 0.54000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −1.0447489
Galaxy
Mg II, I
[O II]
Ca II
SN/Gal = 2.19687
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1992a.p09, z = 0.54000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.59048994
Galaxy
SN/Gal = 4.09131
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn00cx+07, z = 0.38000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.1061155
Galaxy
SN/Gal = −10.6022
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1989b.p09, z = 0.52999997
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.81261147
Galaxy
SN/Gal = 2.57793
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1989b.p03, z = 0.52999997
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.064163523
Galaxy
SN/Gal = 3.28816
[O II]
Ca II
Mg II, I
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


SN2002bo0401, z = 0.54000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −1.9856674
Galaxy
SN/Gal = 1.26169
Mg II, I
[O II]
Ca II
H I
3
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−1
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9000
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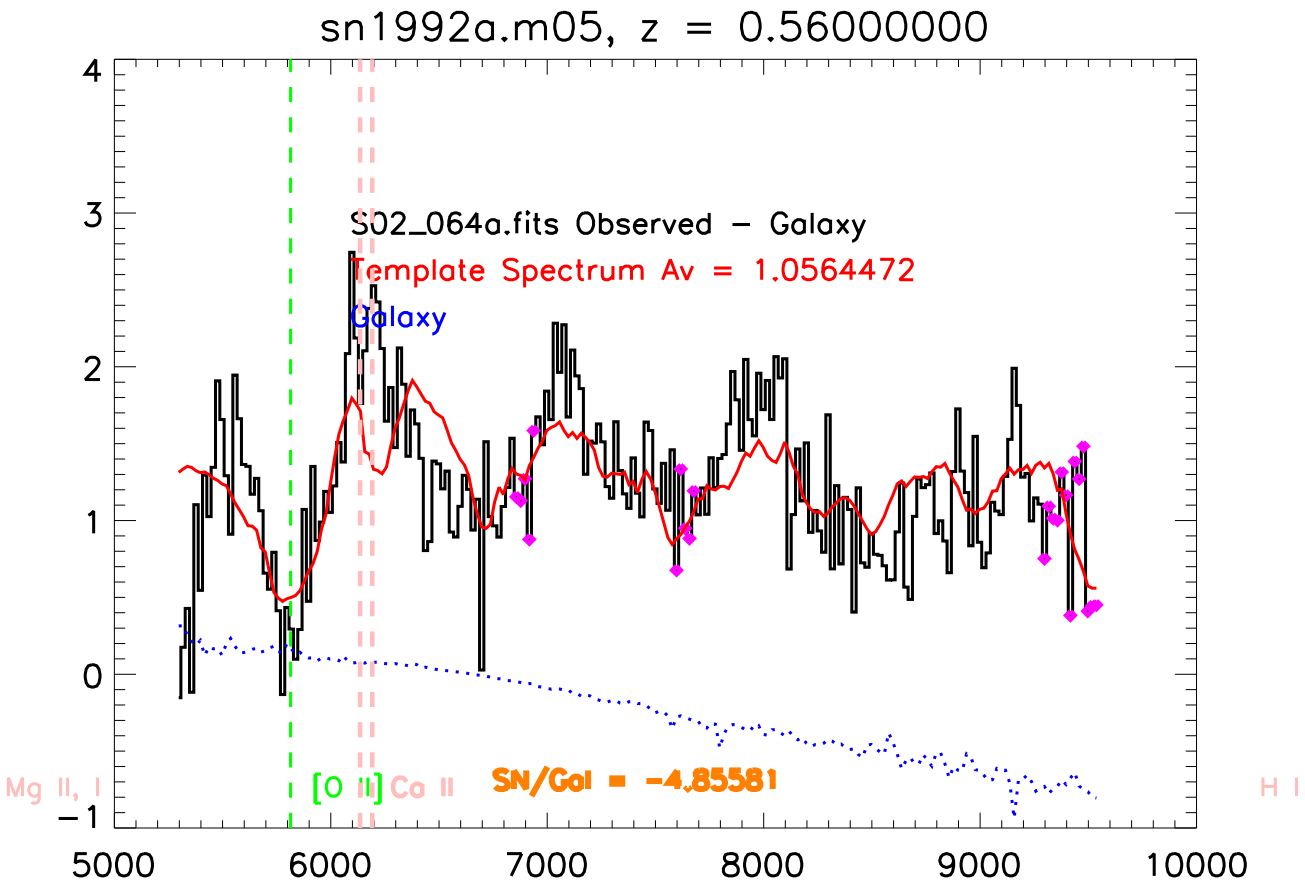
sn1992a.m05, z = 0.56000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.0564472
Galaxy
SN/Gal = −4.85581
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
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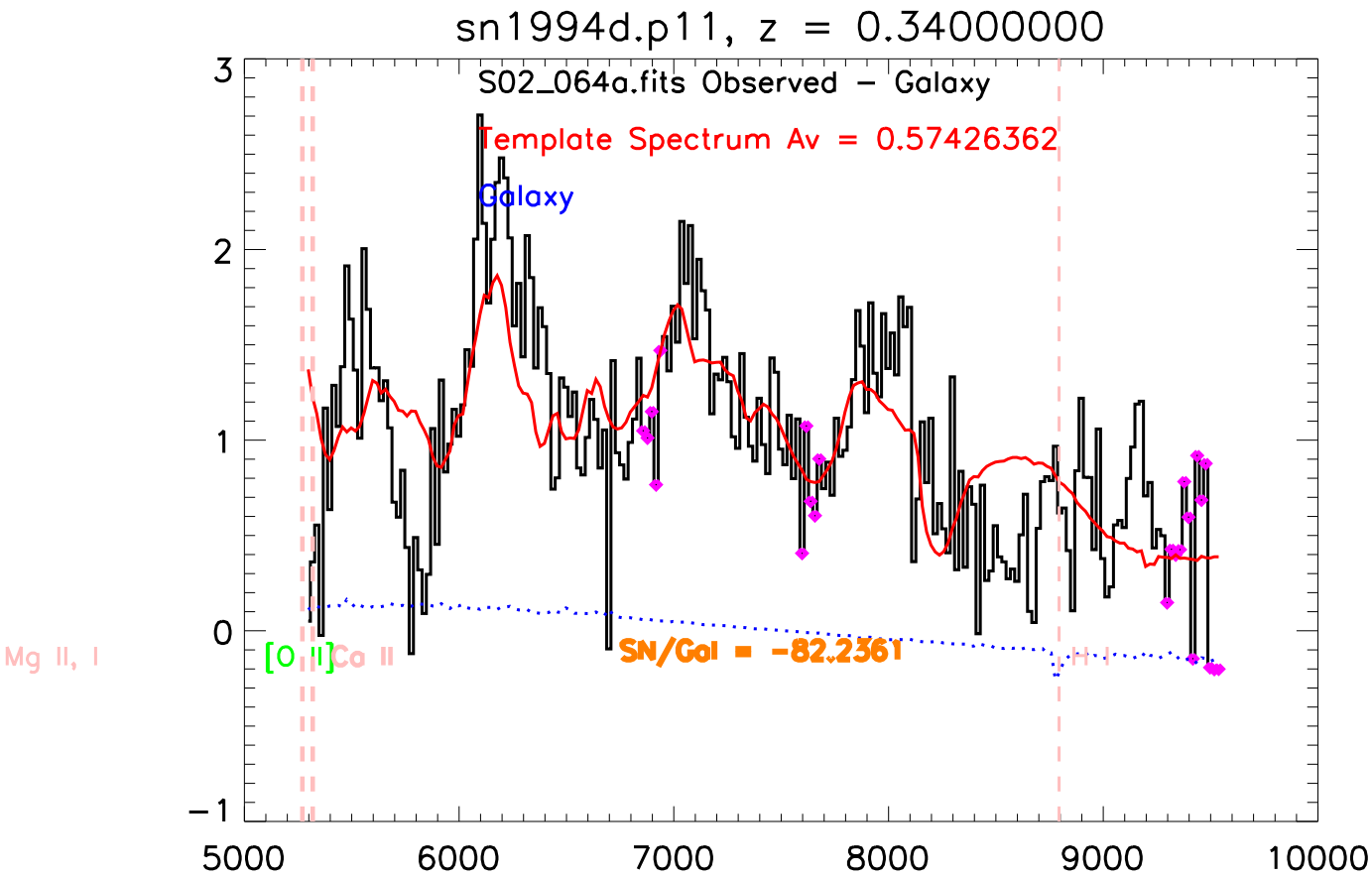
7000
8000
9000
10000


sn1994d.p11, z = 0.34000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.57426362
Galaxy
SN/Gal = -82.2361
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
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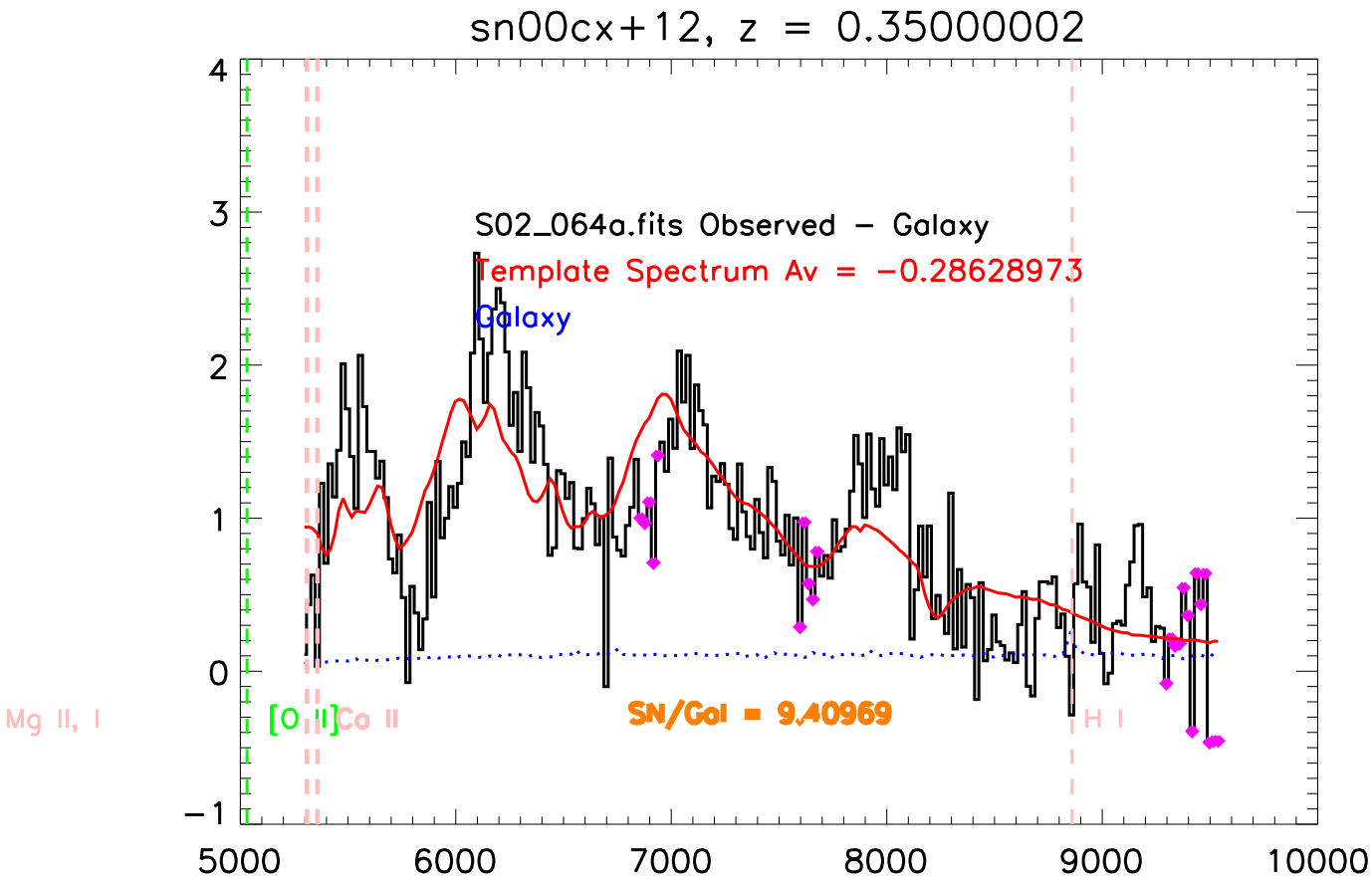
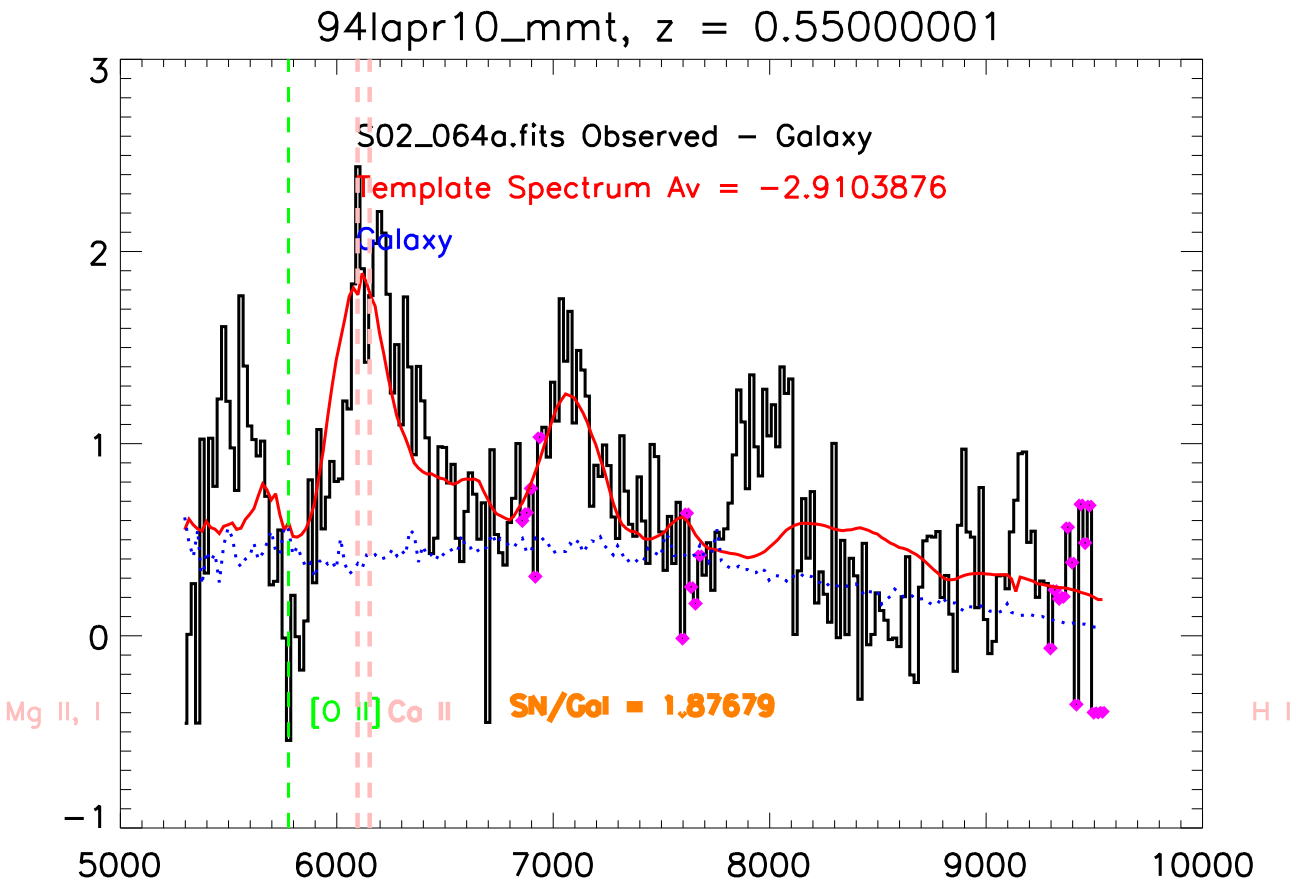
6000
7000
8000
9000
10000


sn00cx+12, z = 0.35000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.28628973
Galaxy
SN/Gal = 9.40969
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


94lapr10_mmt, z = 0.55000001
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −2.9103876
Galaxy
Mg II, I
[O II]
Ca II
SN/Gal = 1.87679
H I
3
2
1
0
−1
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7000
8000
9000
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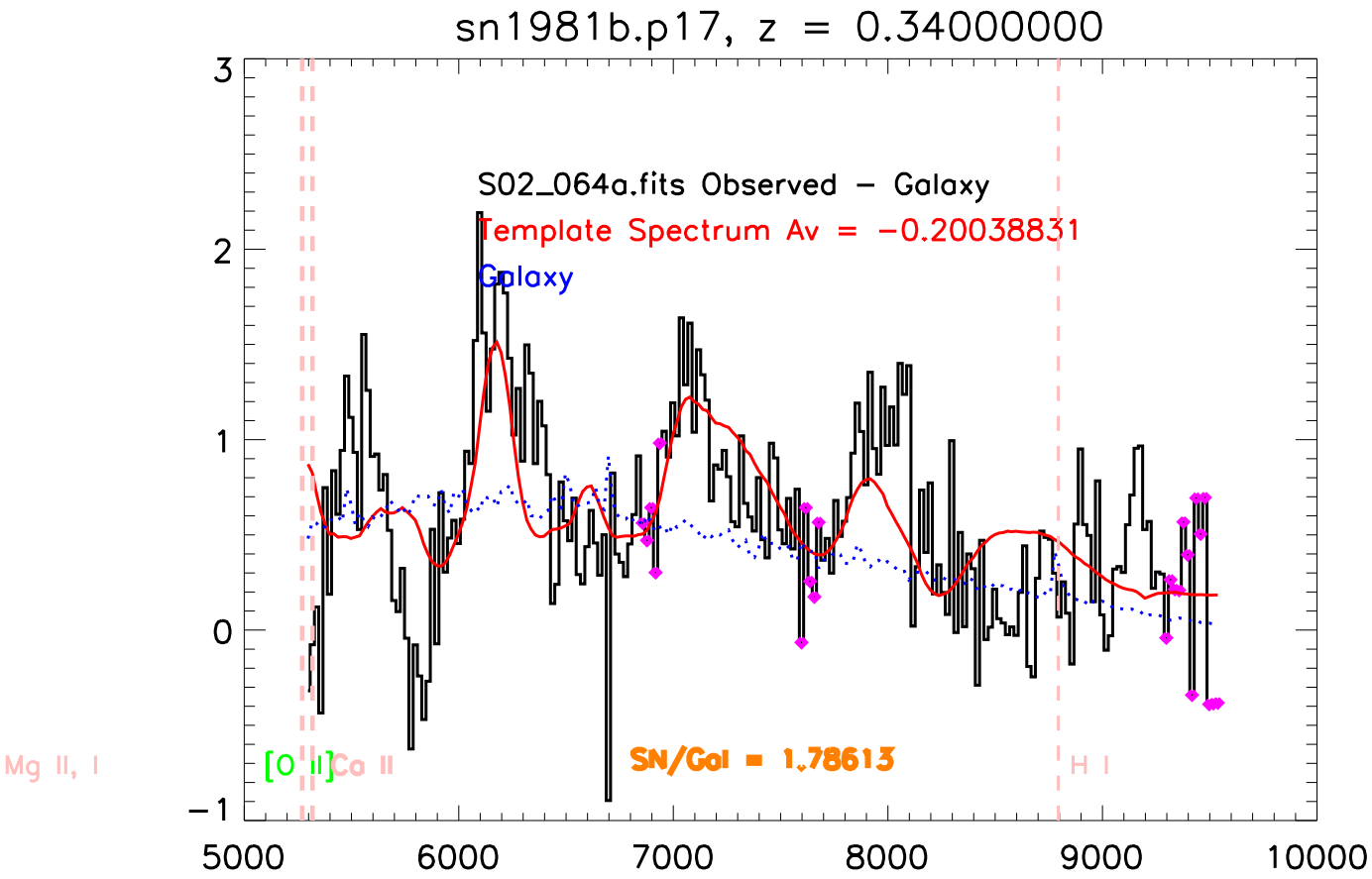
sn1981b.p17, z = 0.34000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.20038831
Galaxy
SN/Gal = 1.78613
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
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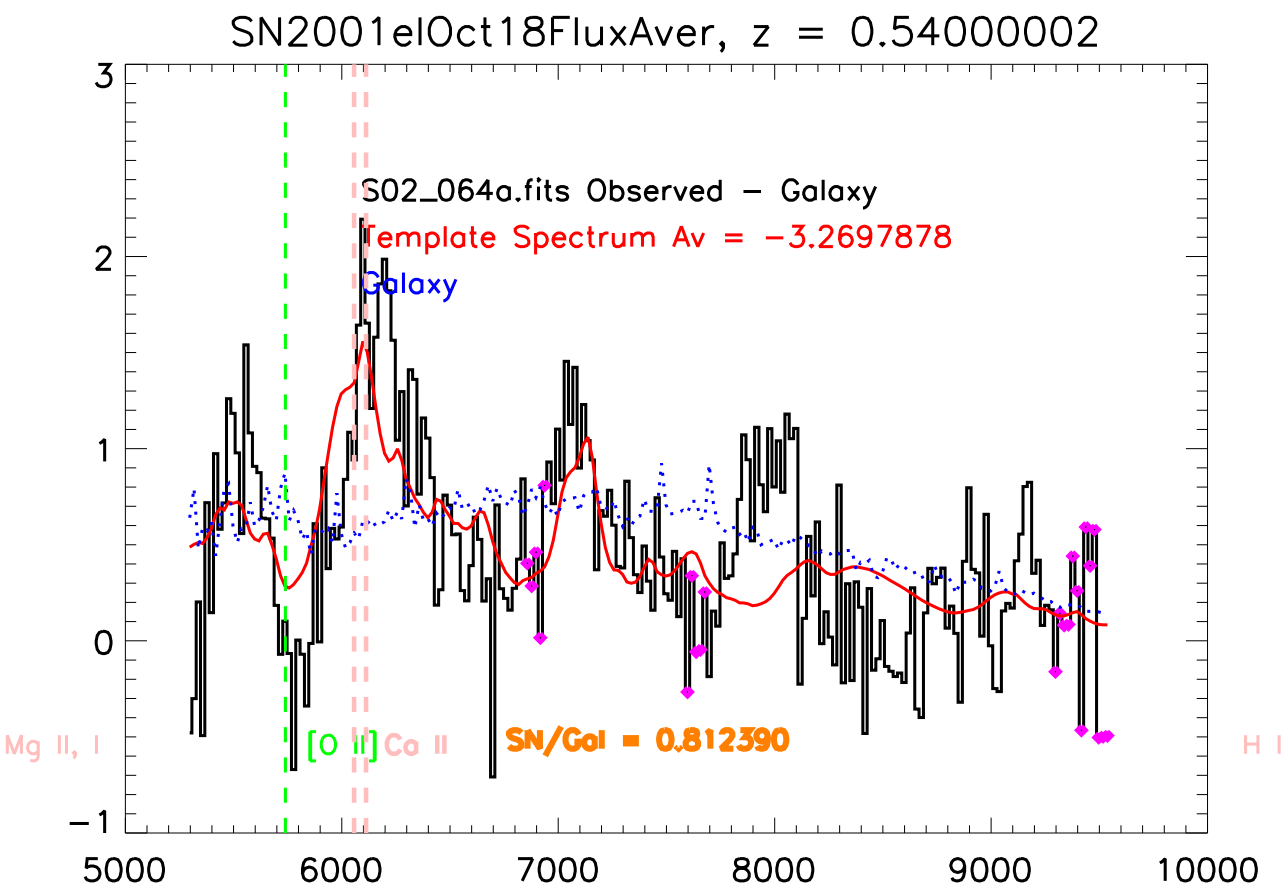
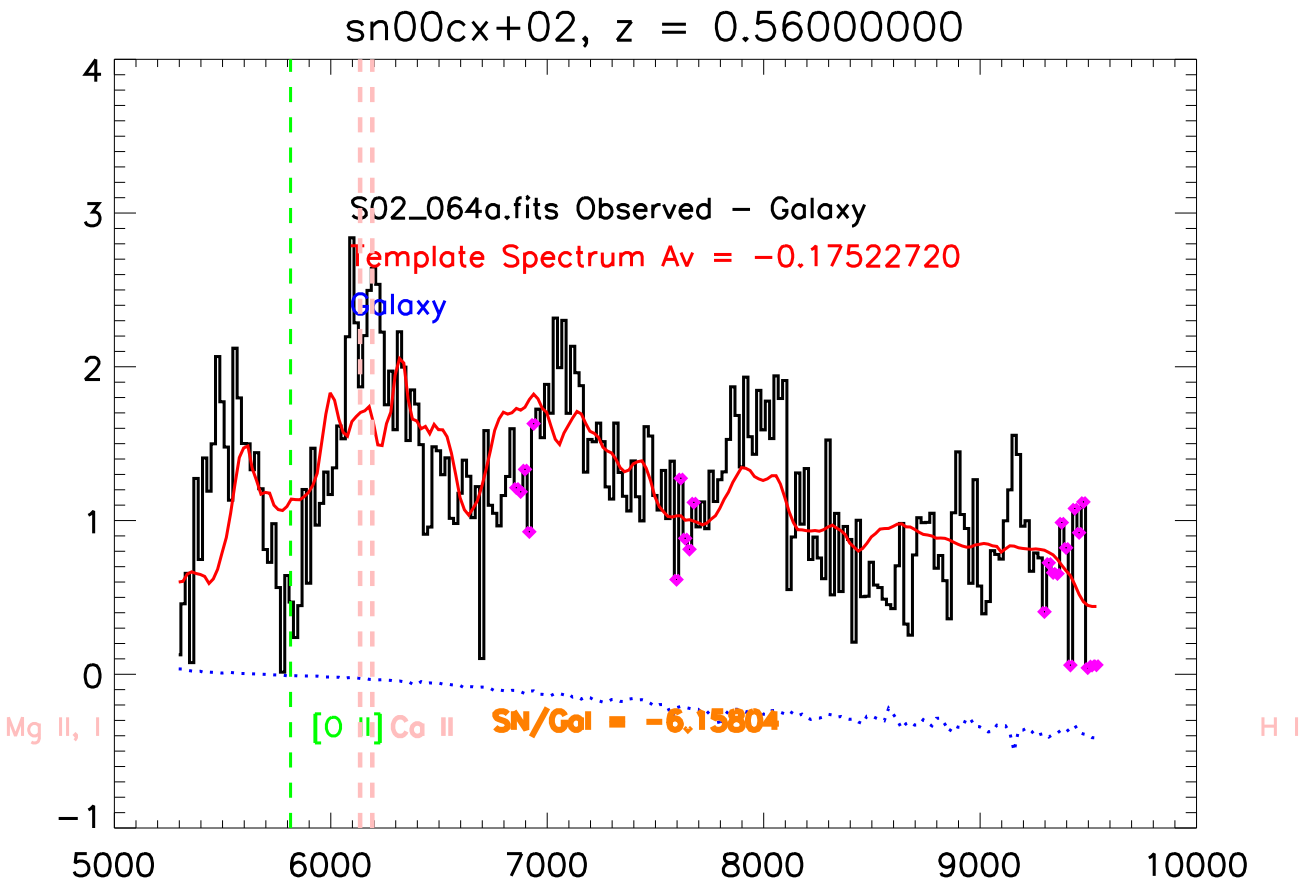
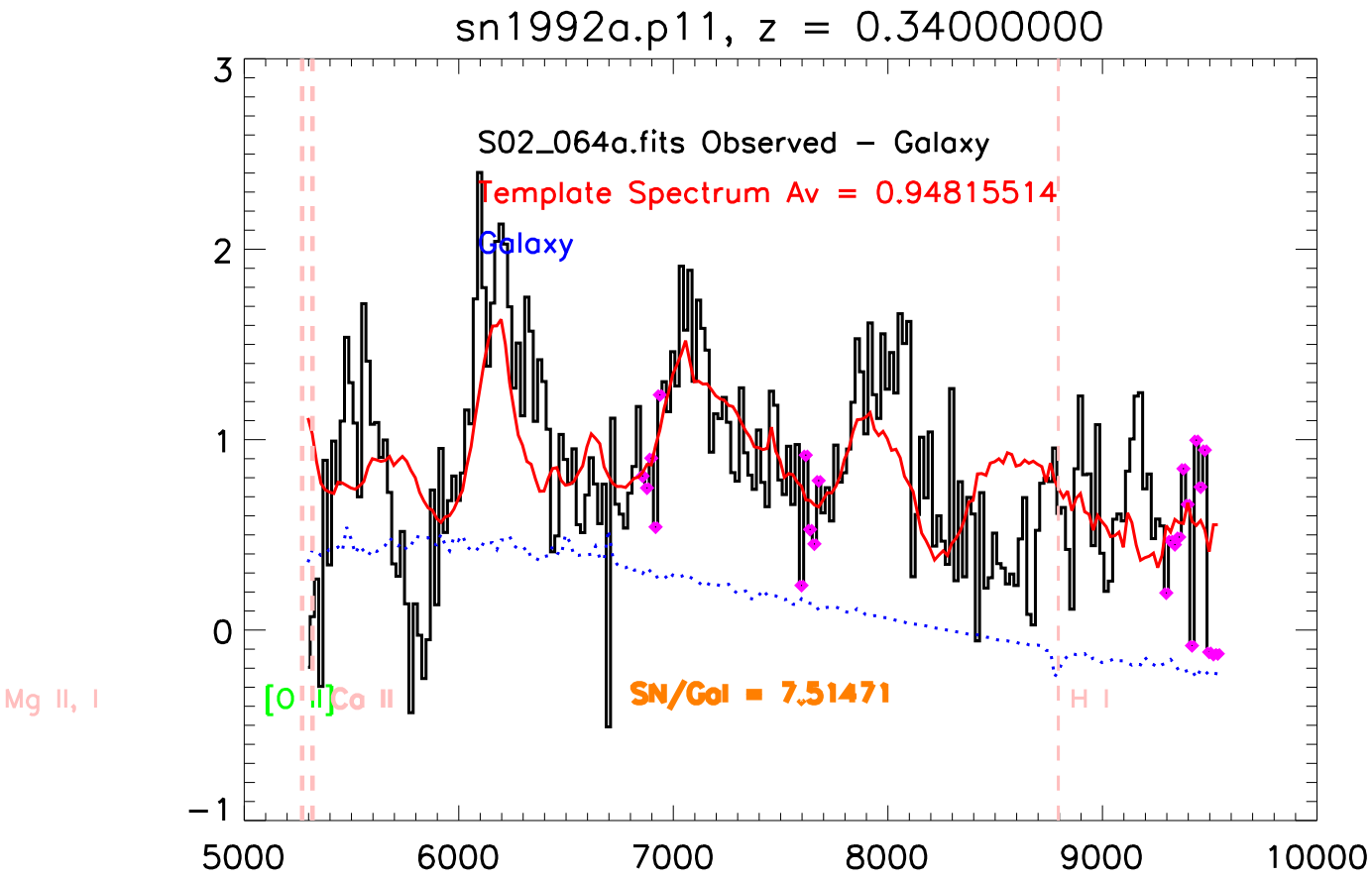
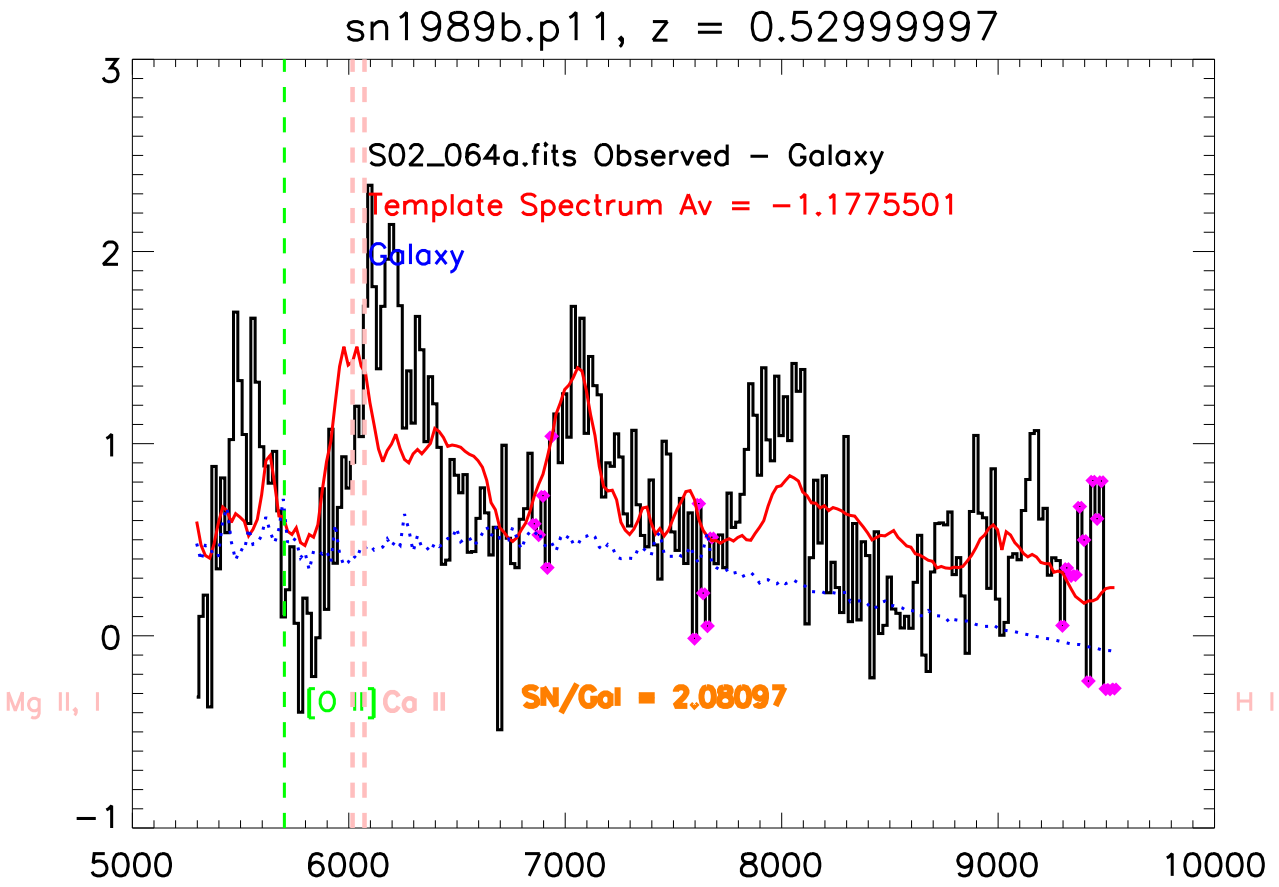
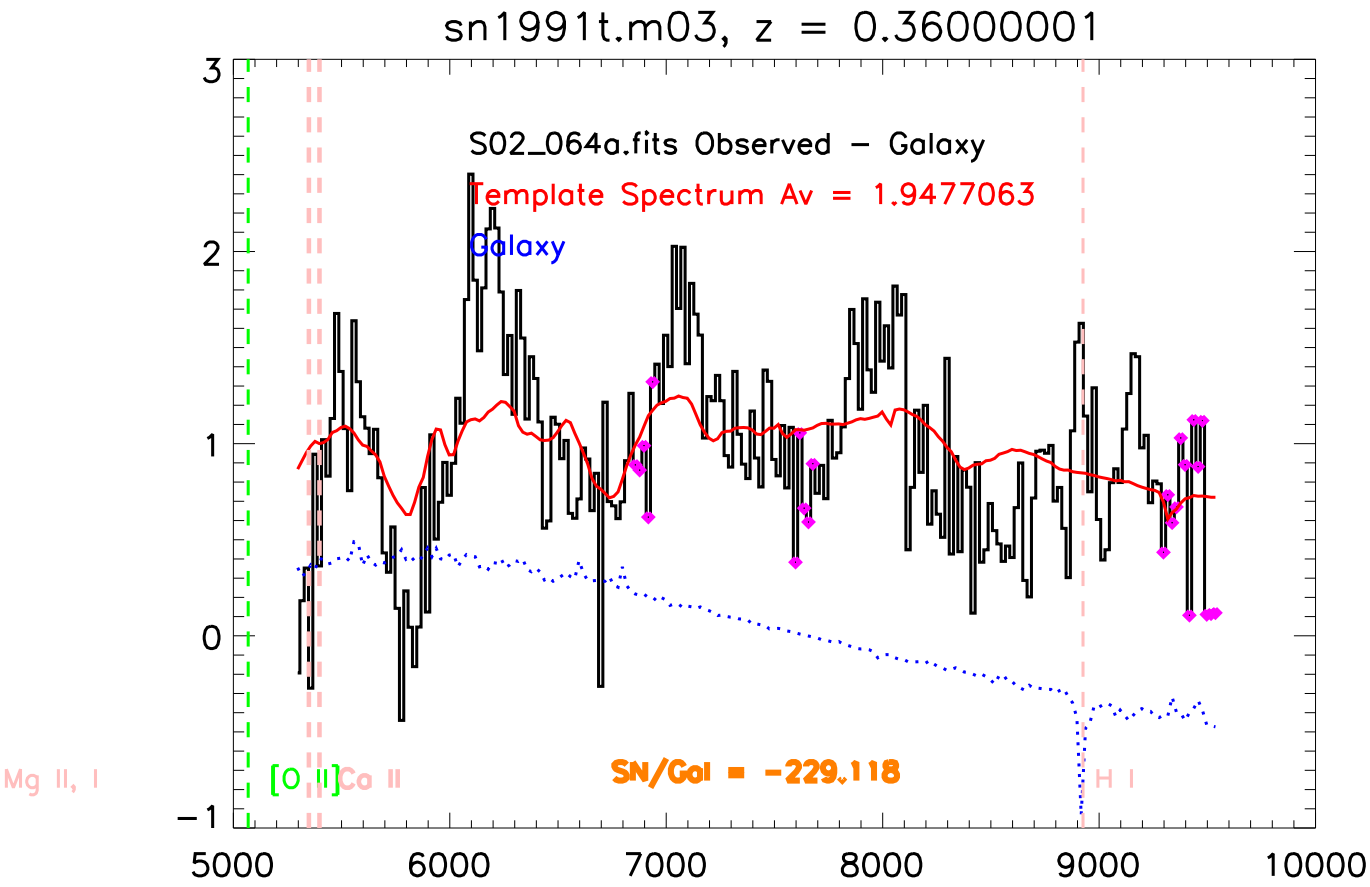
6000
7000
8000
9000
10000

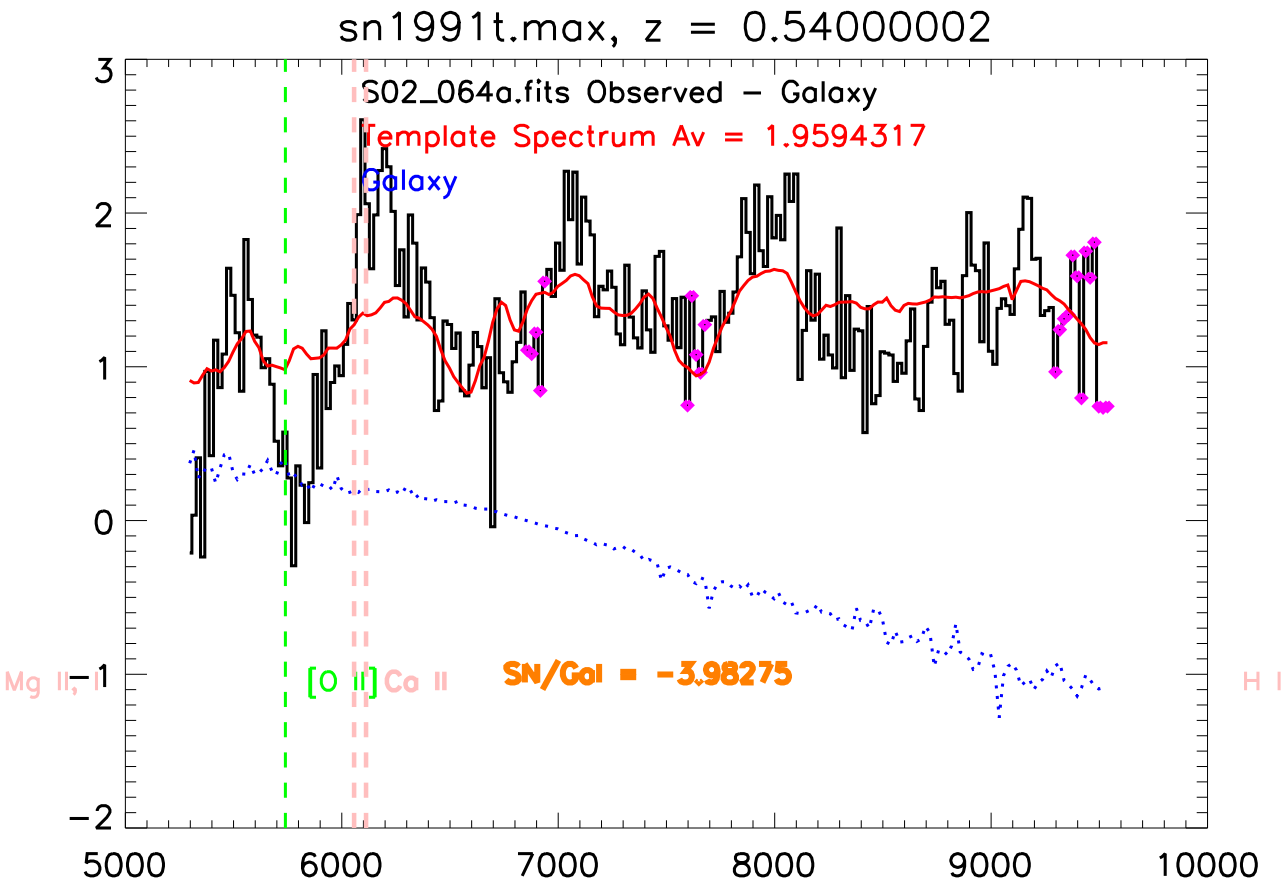

SN2001elOct18FluxAver, z = 0.54000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −3.2697878
Galaxy
SN/Gal = 0.812390
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

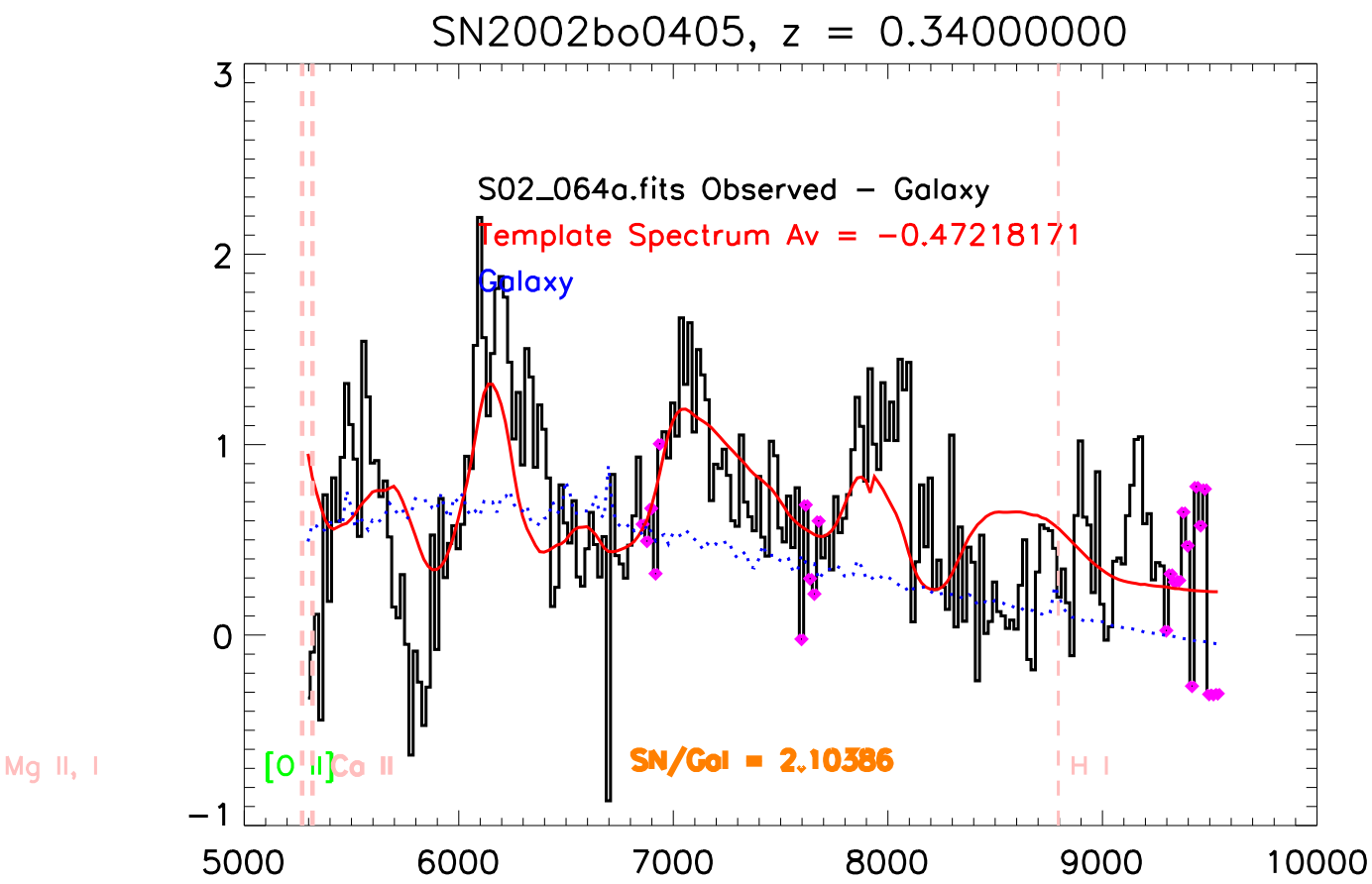

sn00cx+02, z = 0.56000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.17522720
Galaxy
SN/Gal = −6.15804
Mg II, I
[O II]
Ca II
H I
4
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

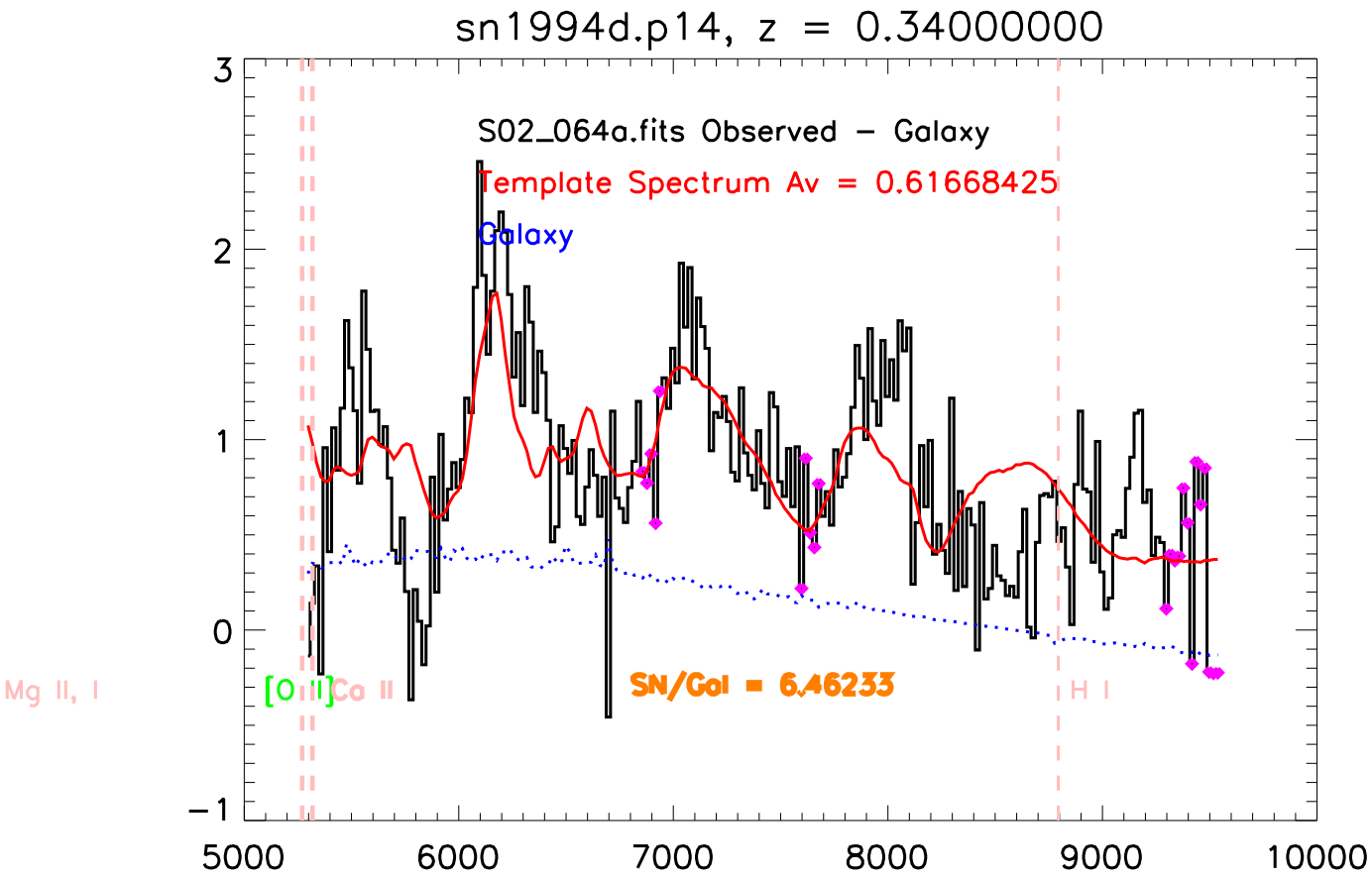

sn1992a.p11, z = 0.34000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.94815514
Galaxy
SN/Gal = 7.51471
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

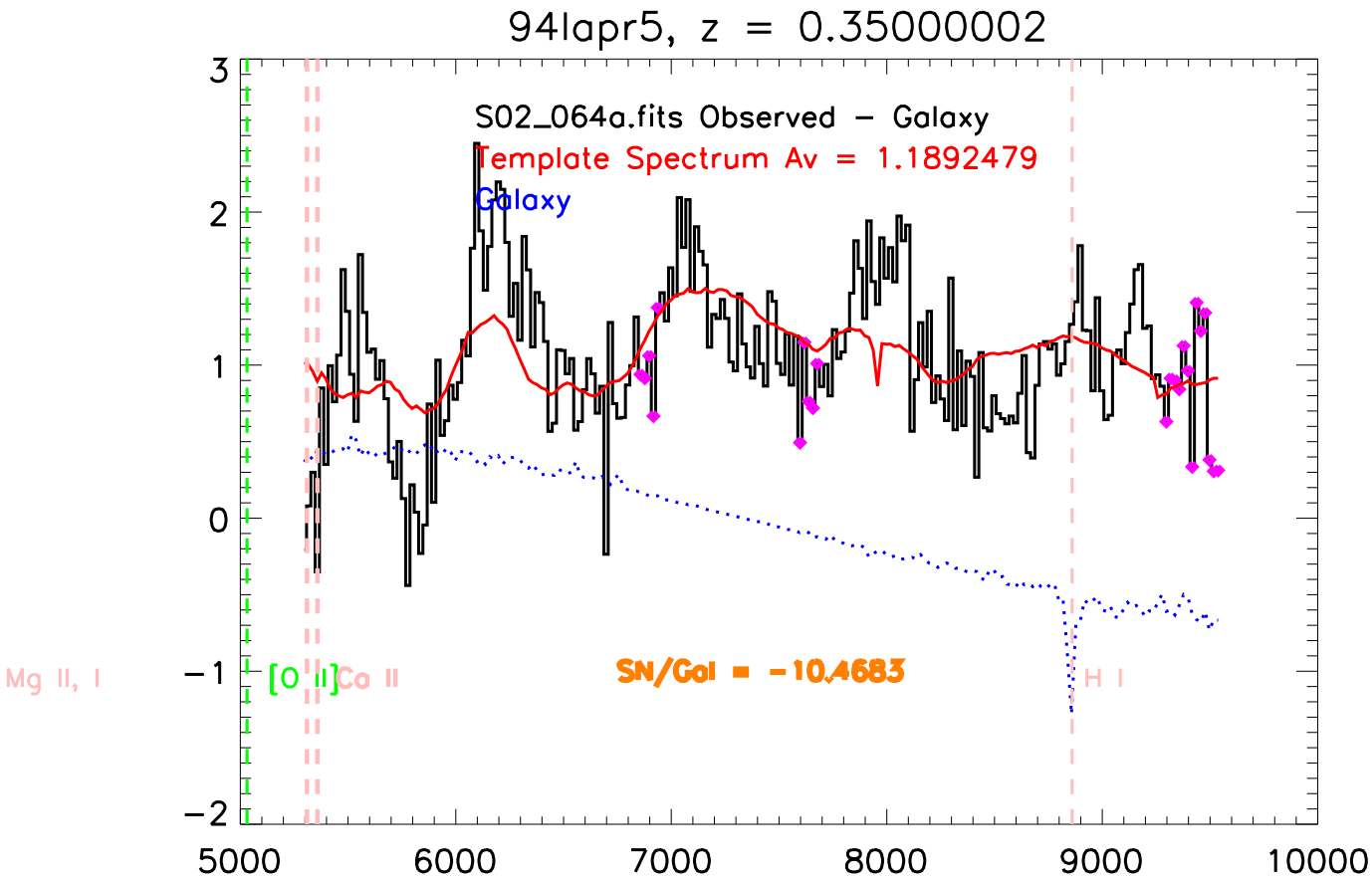

sn1989b.p11, z = 0.52999997
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −1.1775501
Galaxy
SN/Gal = 2.08097
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

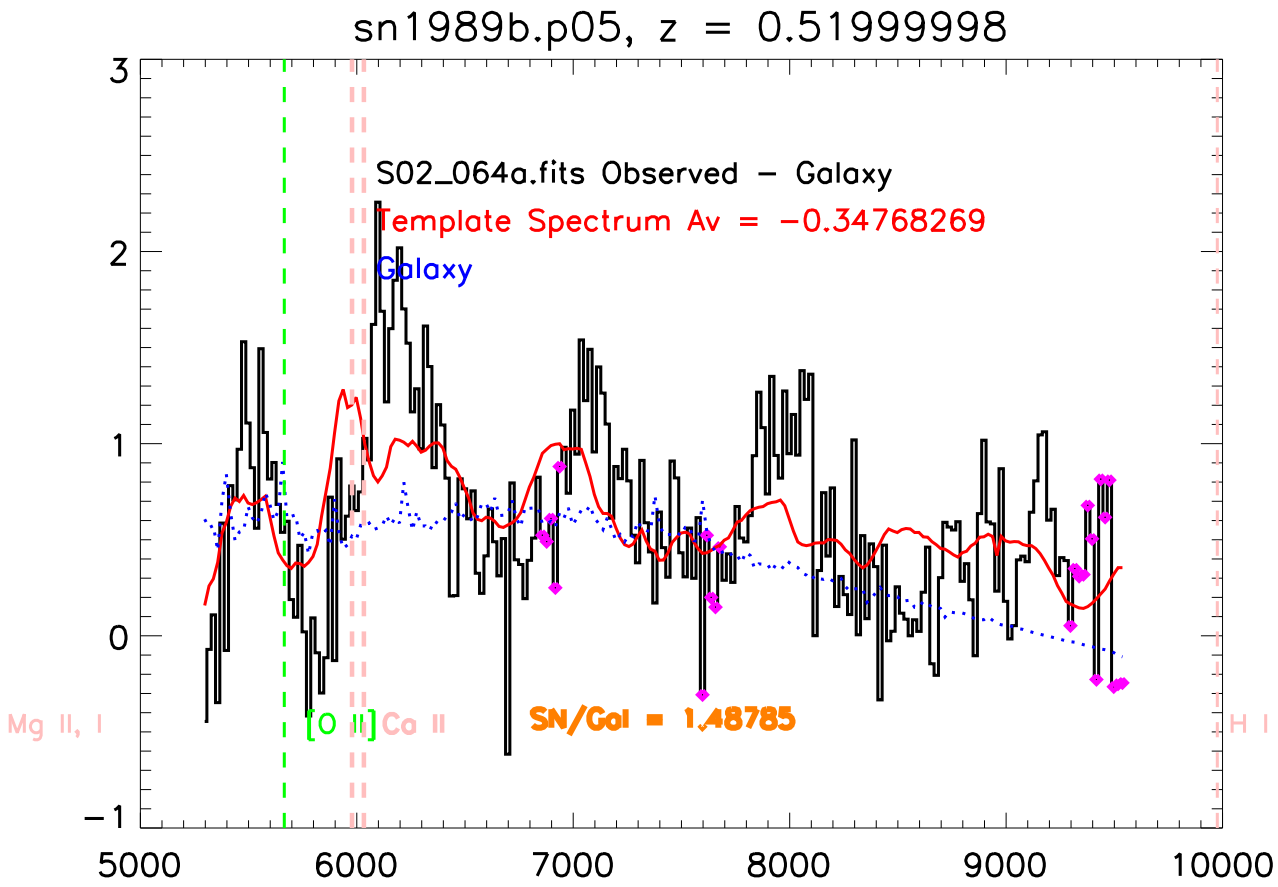

sn1991t.m03, z = 0.36000001
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.9477063
Galaxy
SN/Gal = -229.118
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

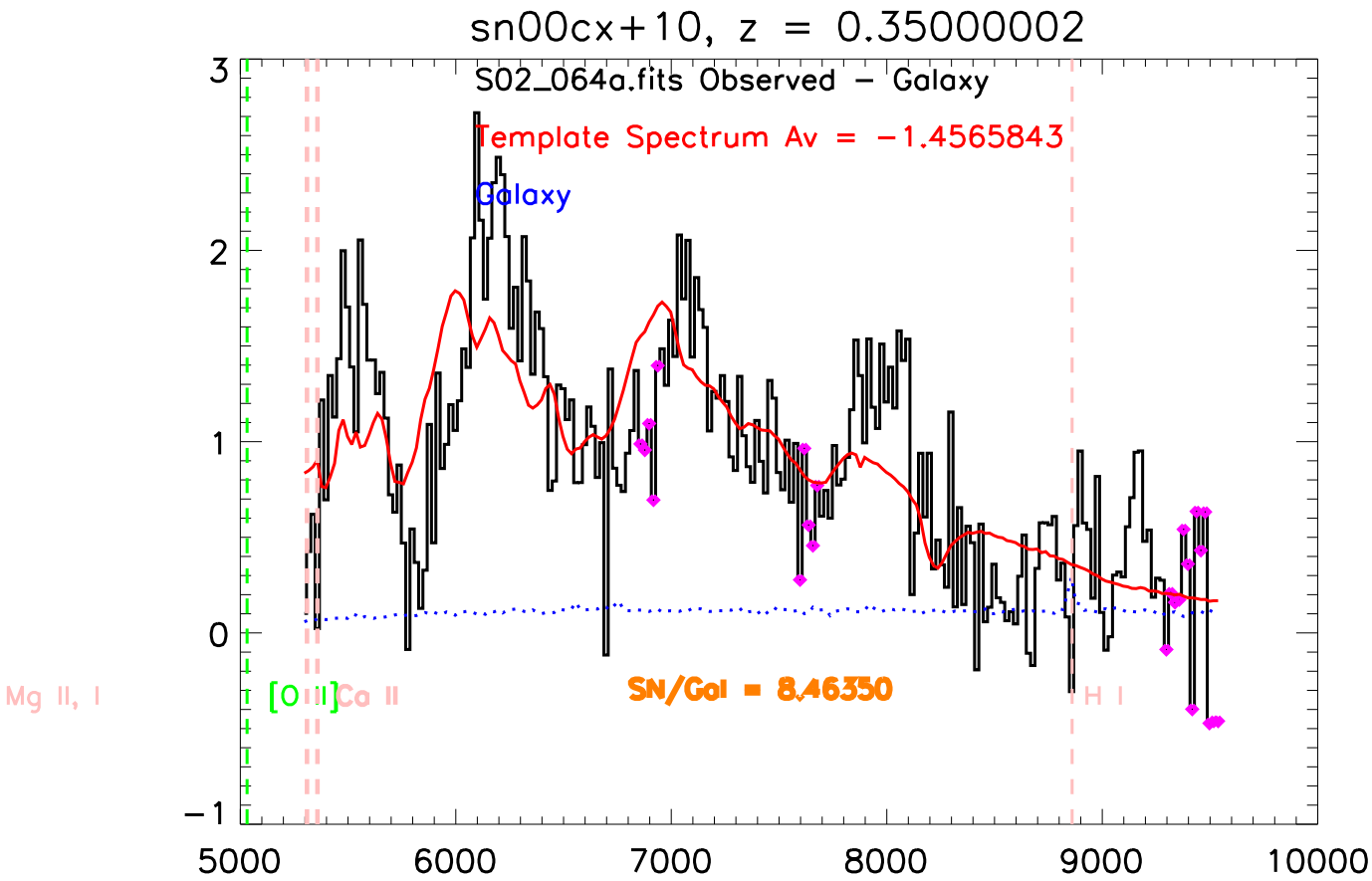

sn1991t.max, z = 0.54000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.9594317
Galaxy
SN/Gal = −3.98275
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
−2
5000
6000
7000
8000
9000
10000

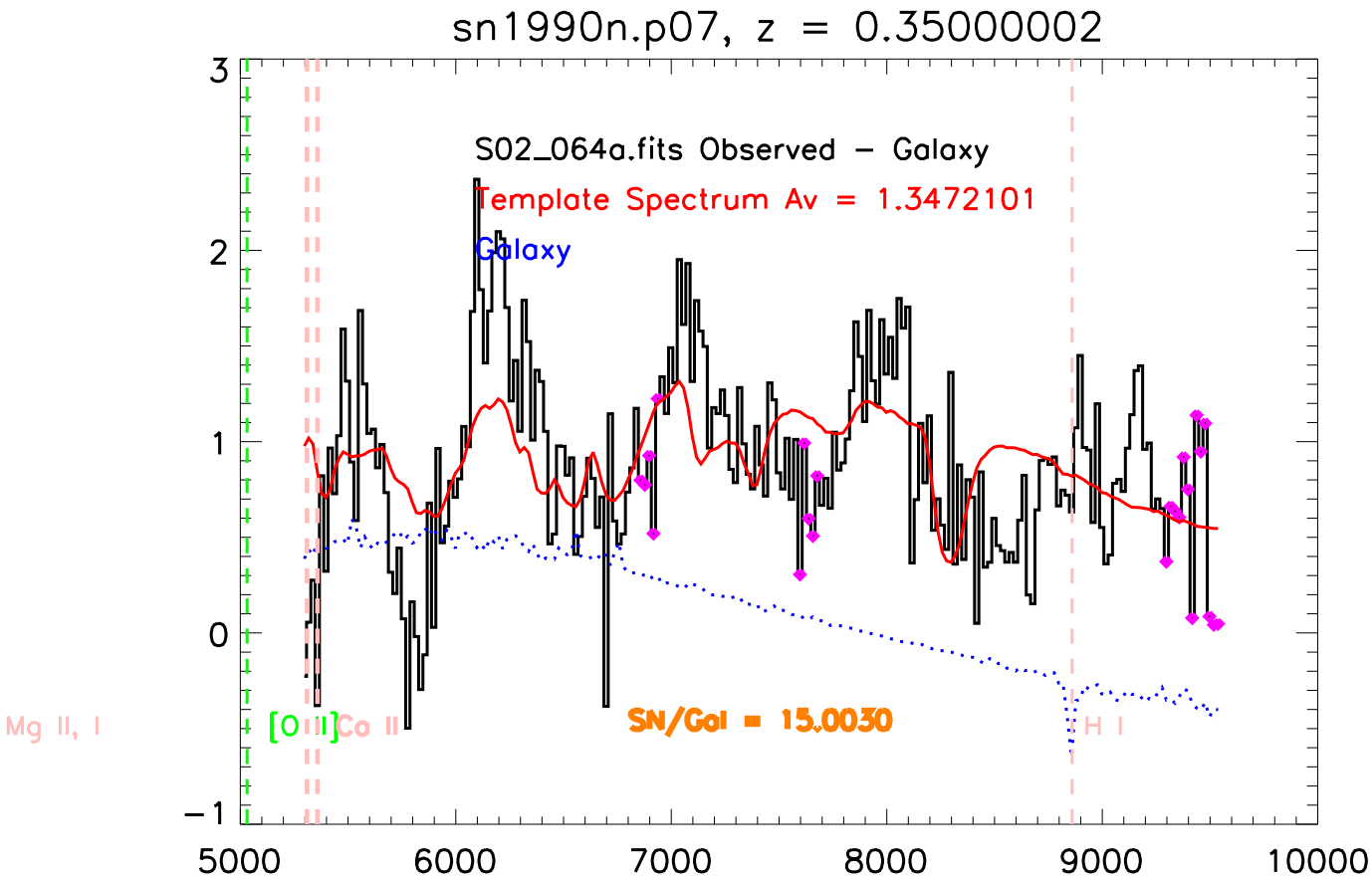

SN2002bo0405, z = 0.34000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.47218171
Galaxy
SN/Gal = 2.10386
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

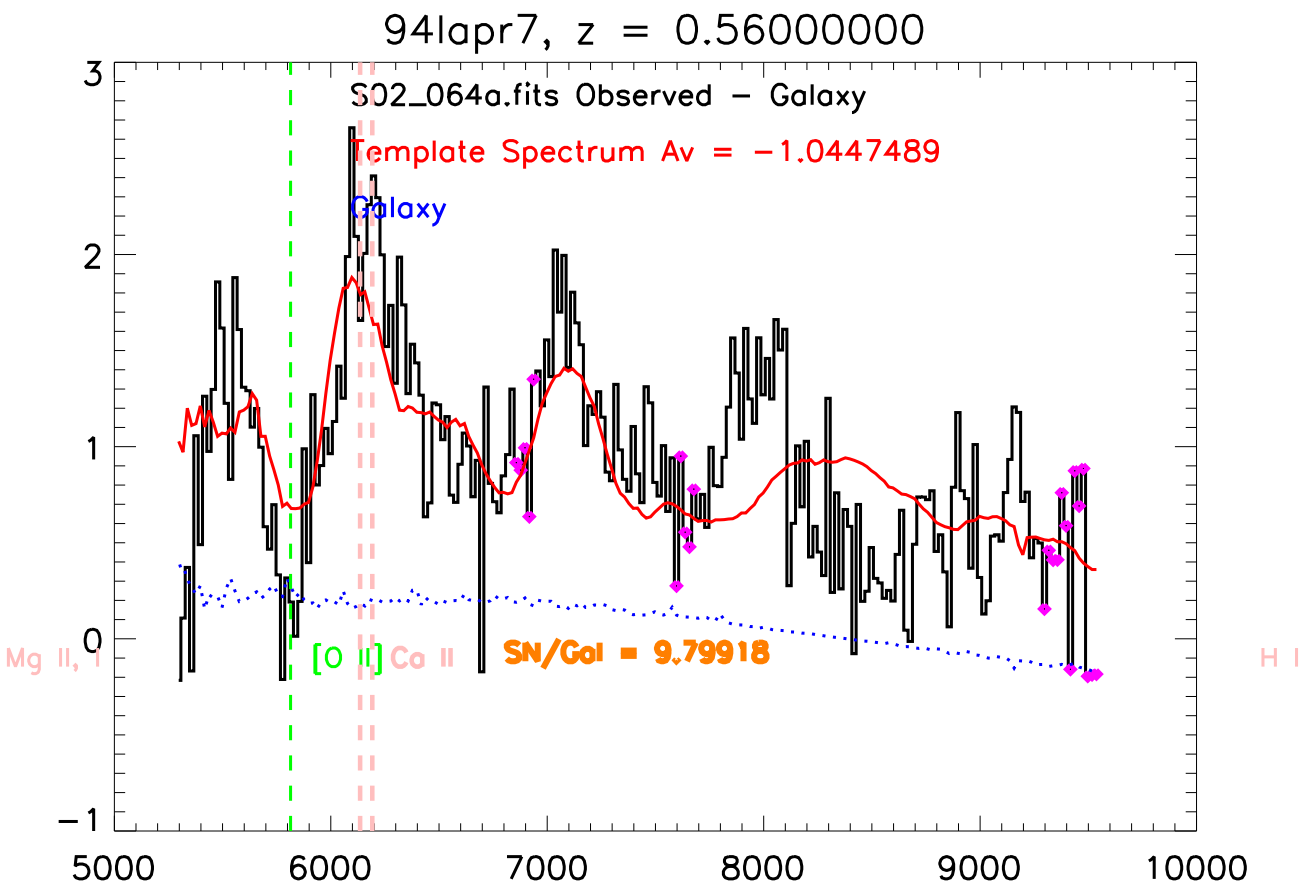

sn1994d.p14, z = 0.34000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.61668425
Galaxy
SN/Gal = 6.46233
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

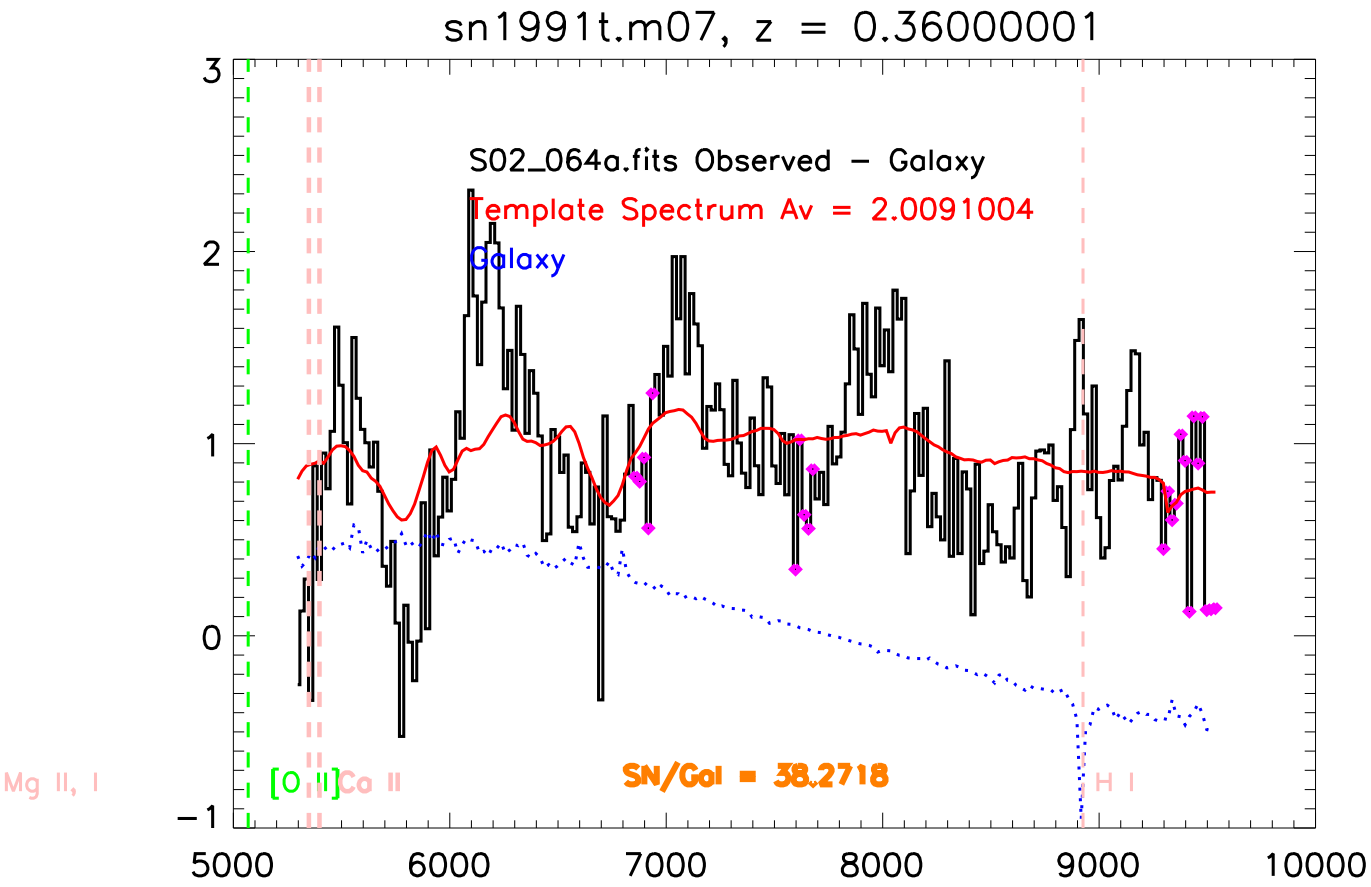

94lapr5, z = 0.35000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.1892479
Galaxy
SN/Gal = −10.4683
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
−2
5000
6000
7000
8000
9000
10000

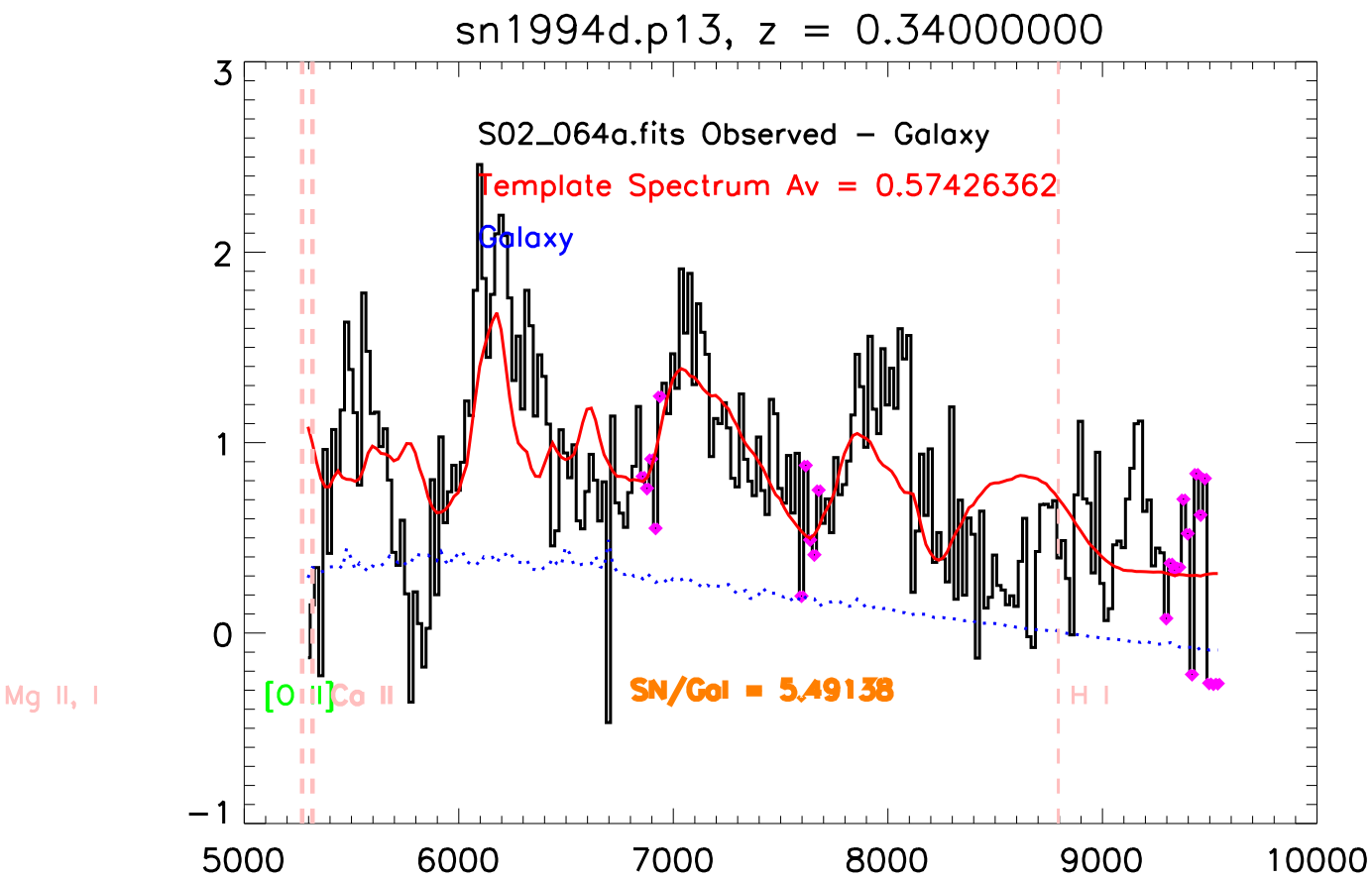

sn1989b.p05, z = 0.51999998
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.34768269
Galaxy
SN/Gal = 1.48785
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn00cx+10, z = 0.35000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −1.4565843
Galaxy
SN/Gal = 8.46350
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1990n.p07, z = 0.35000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.3472101
Galaxy
SN/Gal = 15.0030
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


94lapr7, z = 0.56000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −1.0447489
Galaxy
SN/Gal = 9.79918
[O II]
Ca II
Mg II, I
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1991t.m07, z = 0.36000001
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 2.0091004
Galaxy
SN/Gal = 38.2718
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1994d.p13, z = 0.34000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.57426362
Galaxy
SN/Gal = 5.49138
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
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6000
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9000
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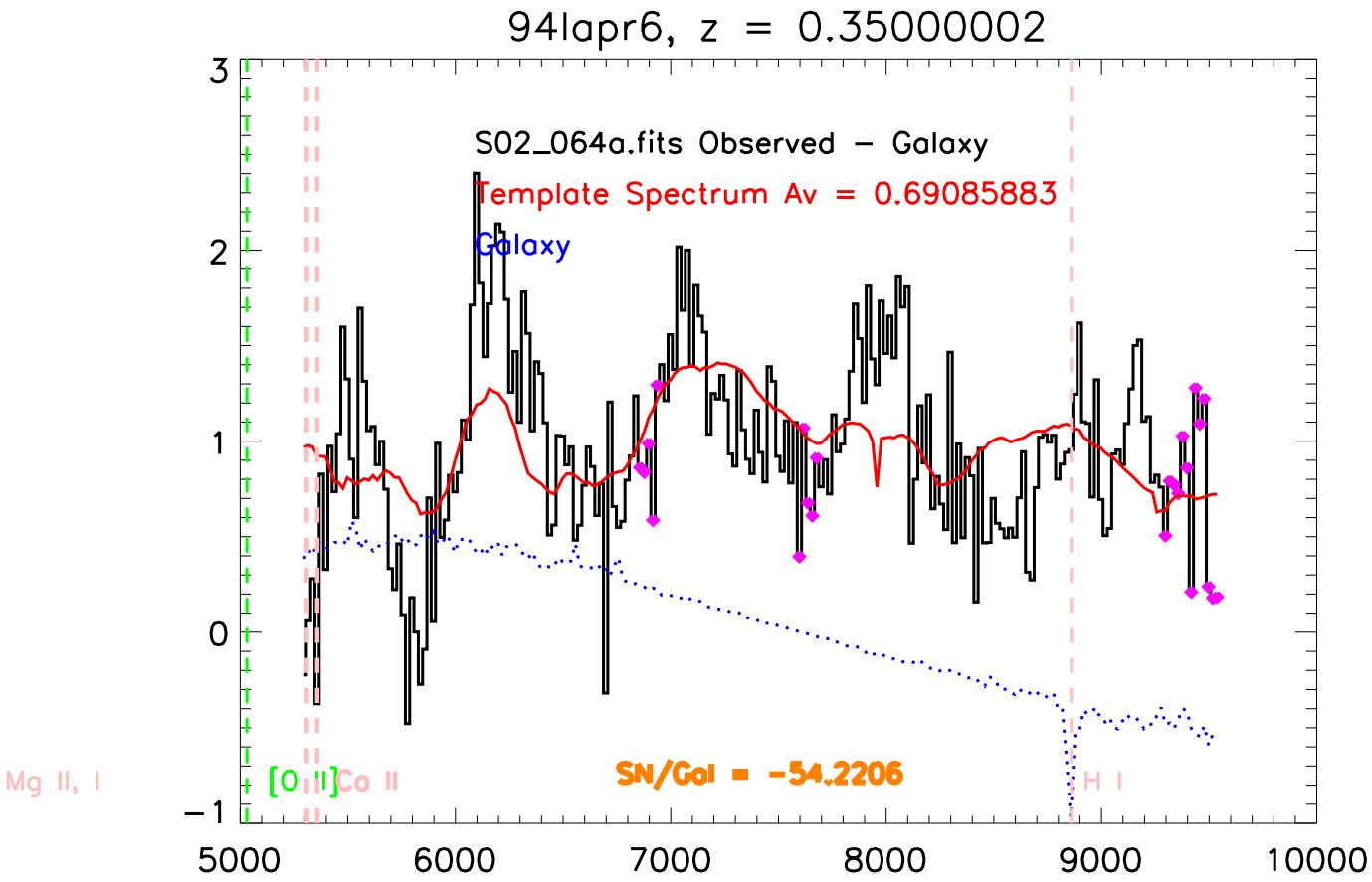
94lapr6, z = 0.35000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.69085883
Galaxy
SN/Gal = -54.2206
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
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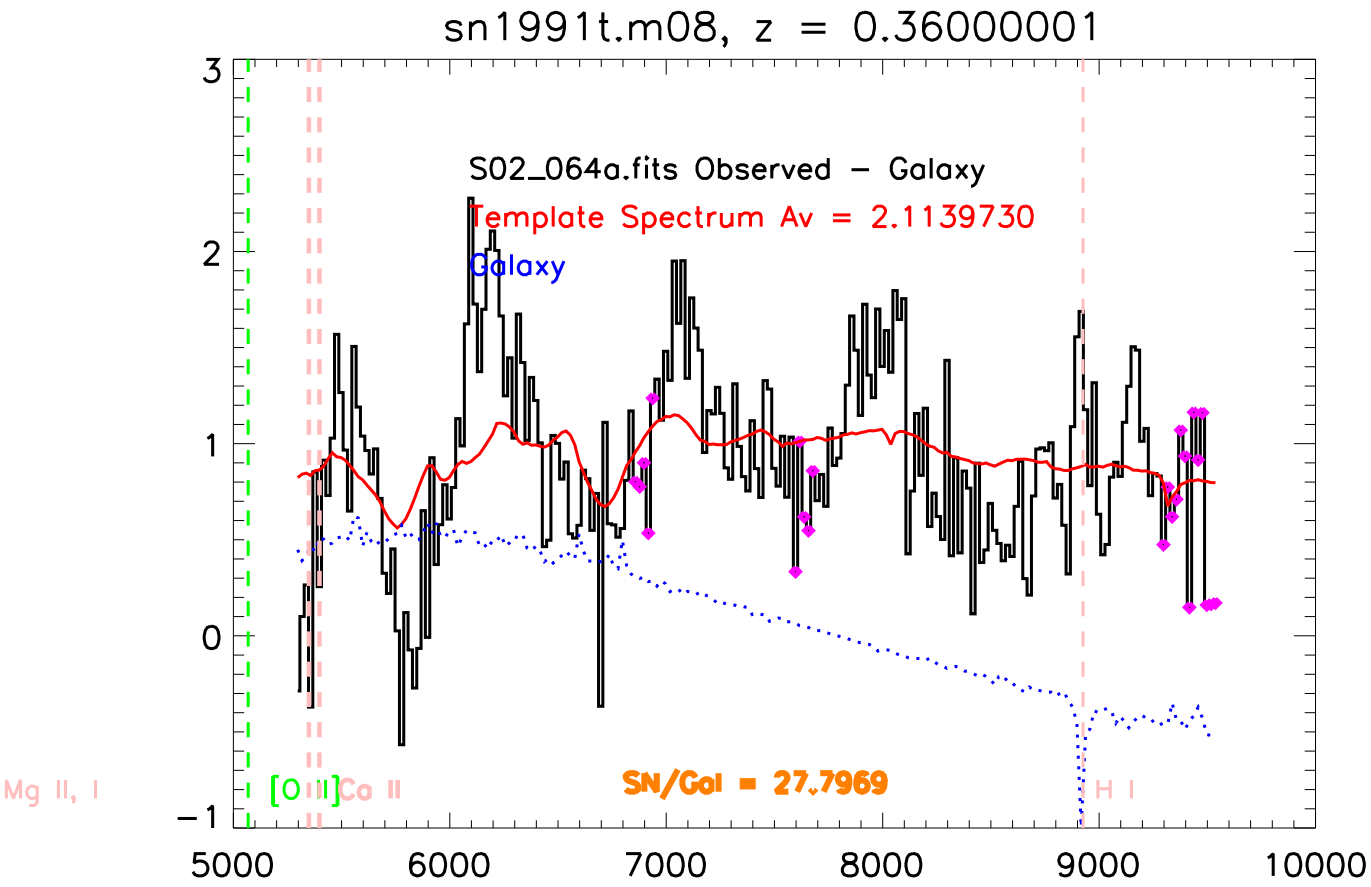
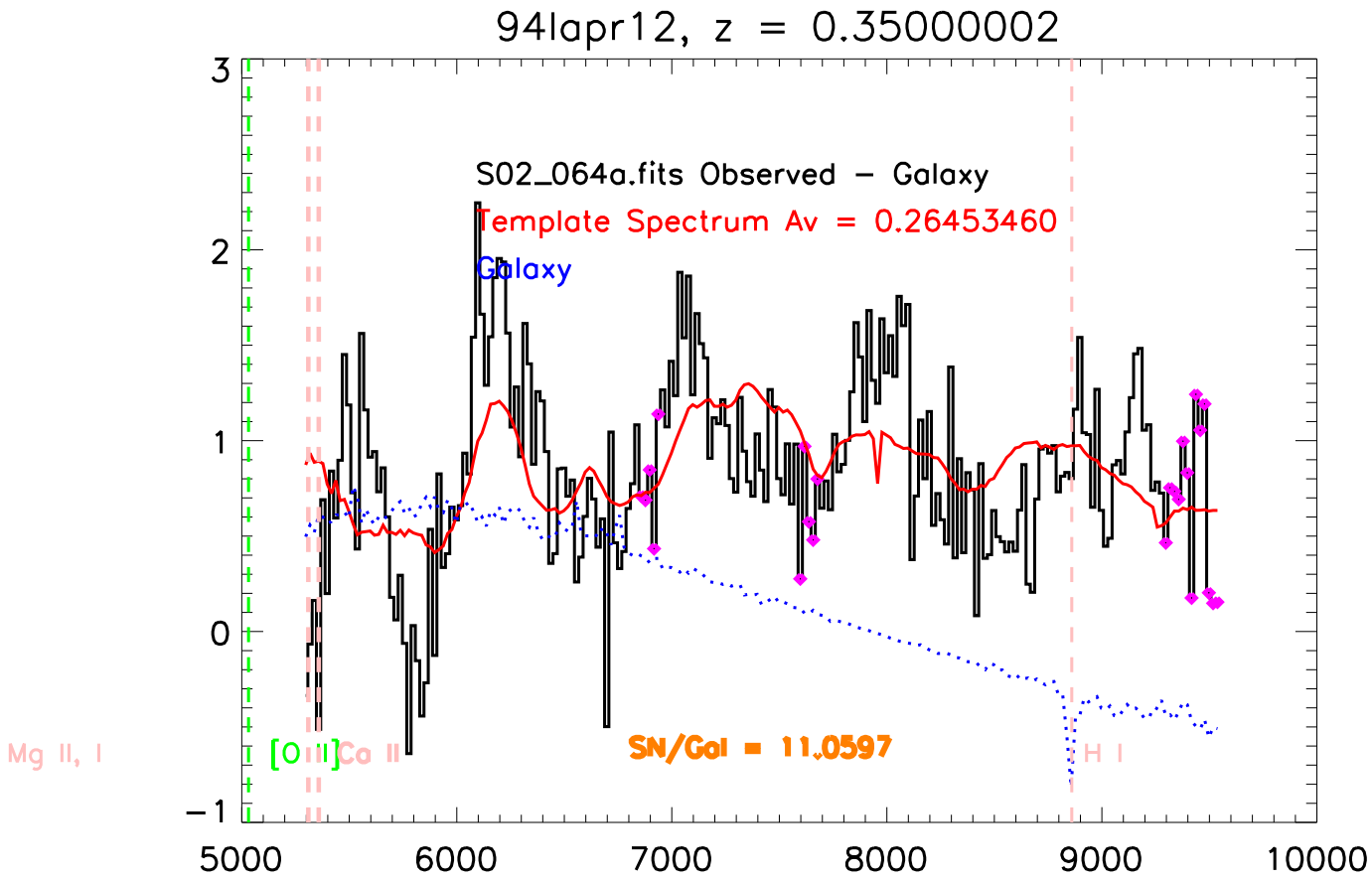
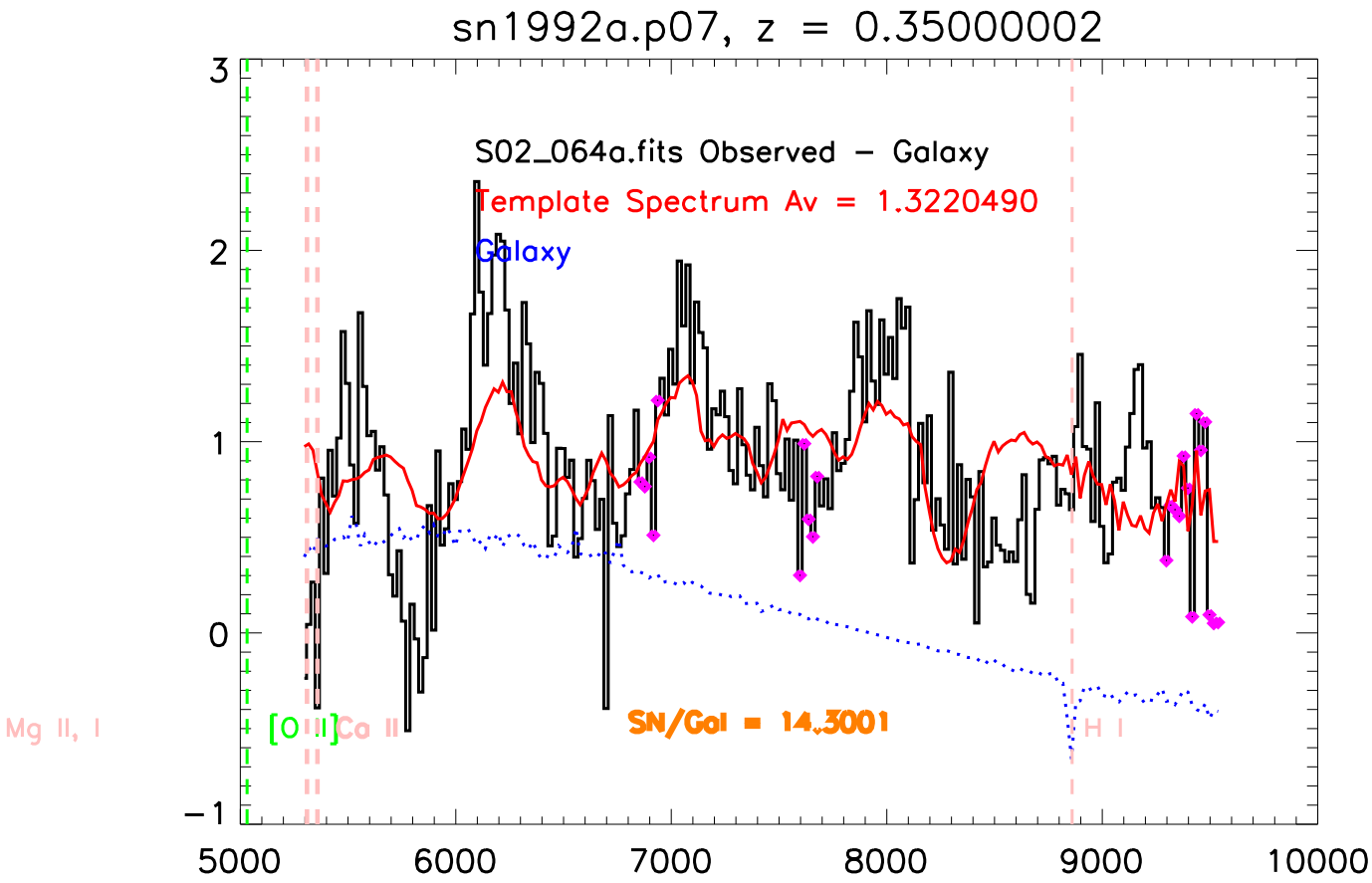
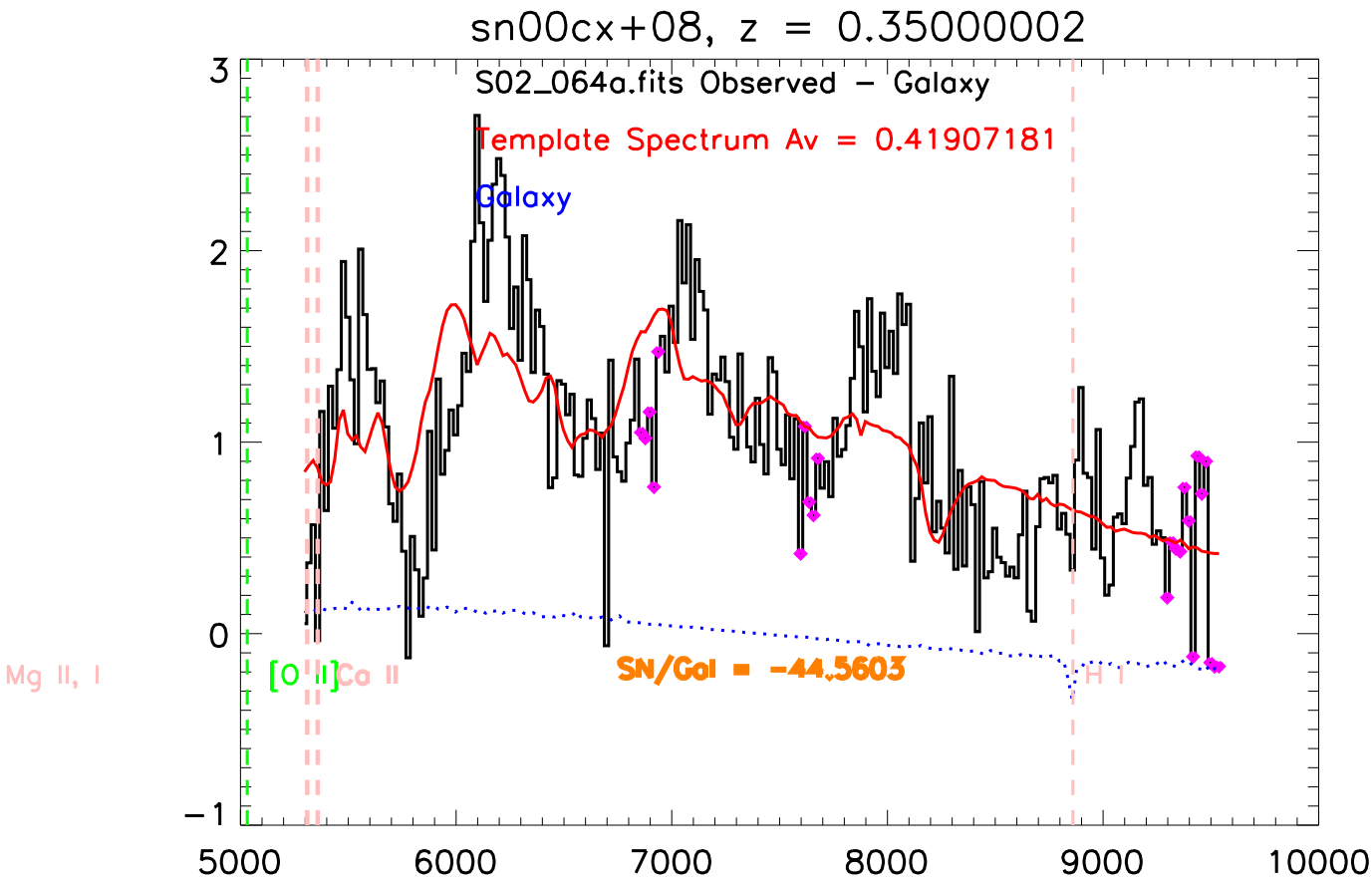
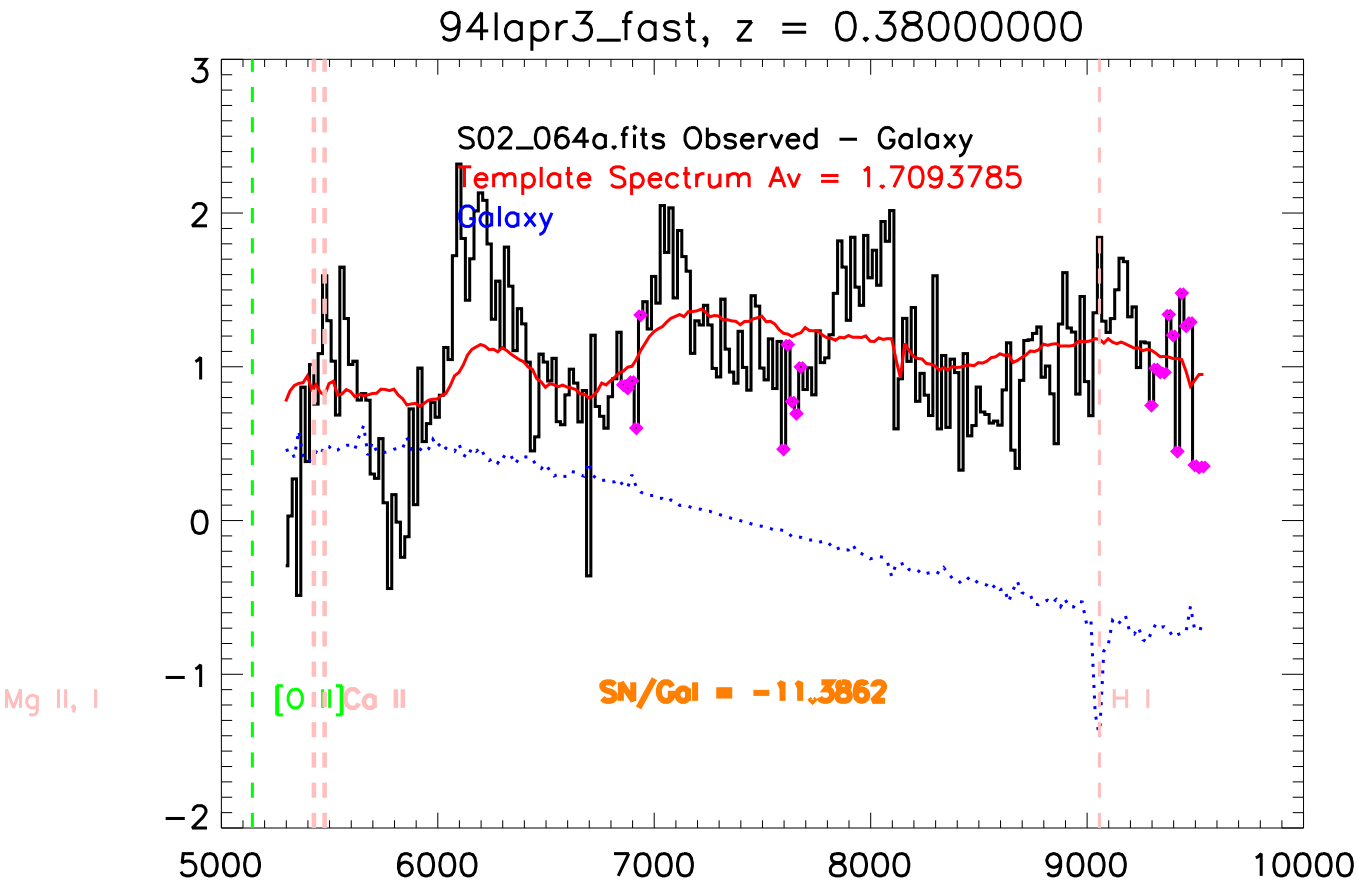
9000
10000

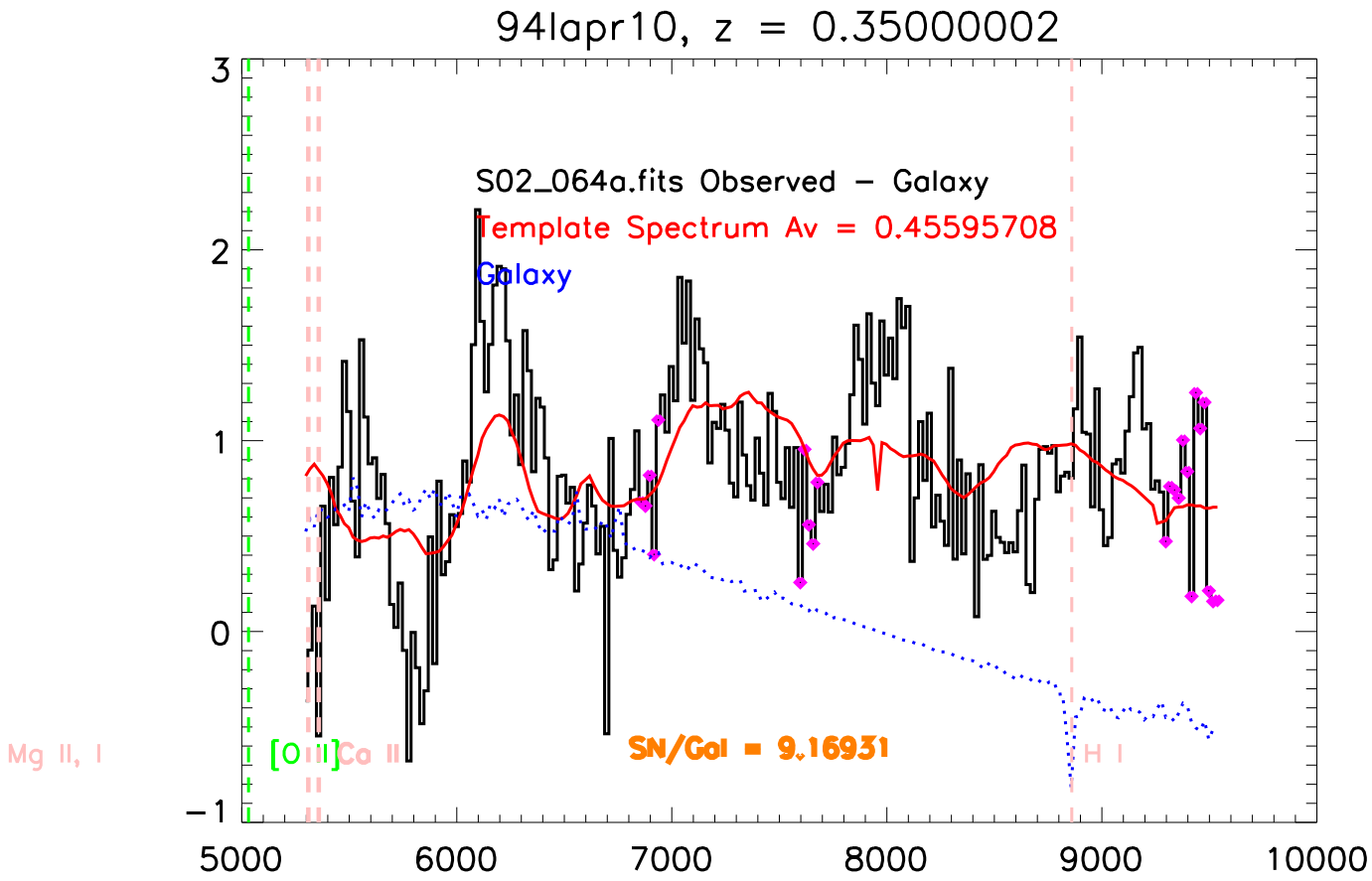

sn1991t.m08, z = 0.36000001
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 2.1139730
Galaxy
SN/Gal = 27.7969
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

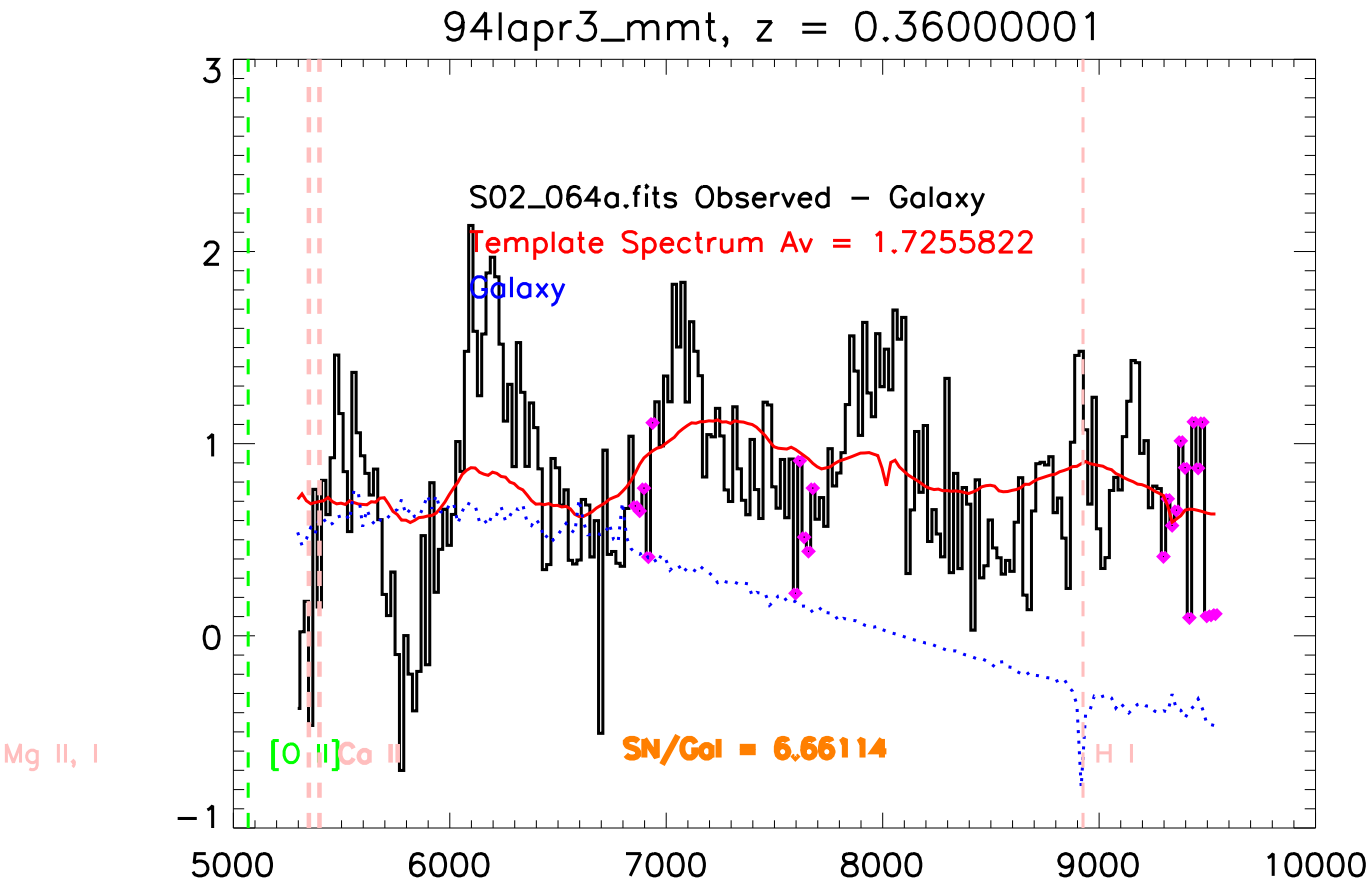

94lapr12, z = 0.35000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.26453460
Galaxy
SN/Gal = 11.0597
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

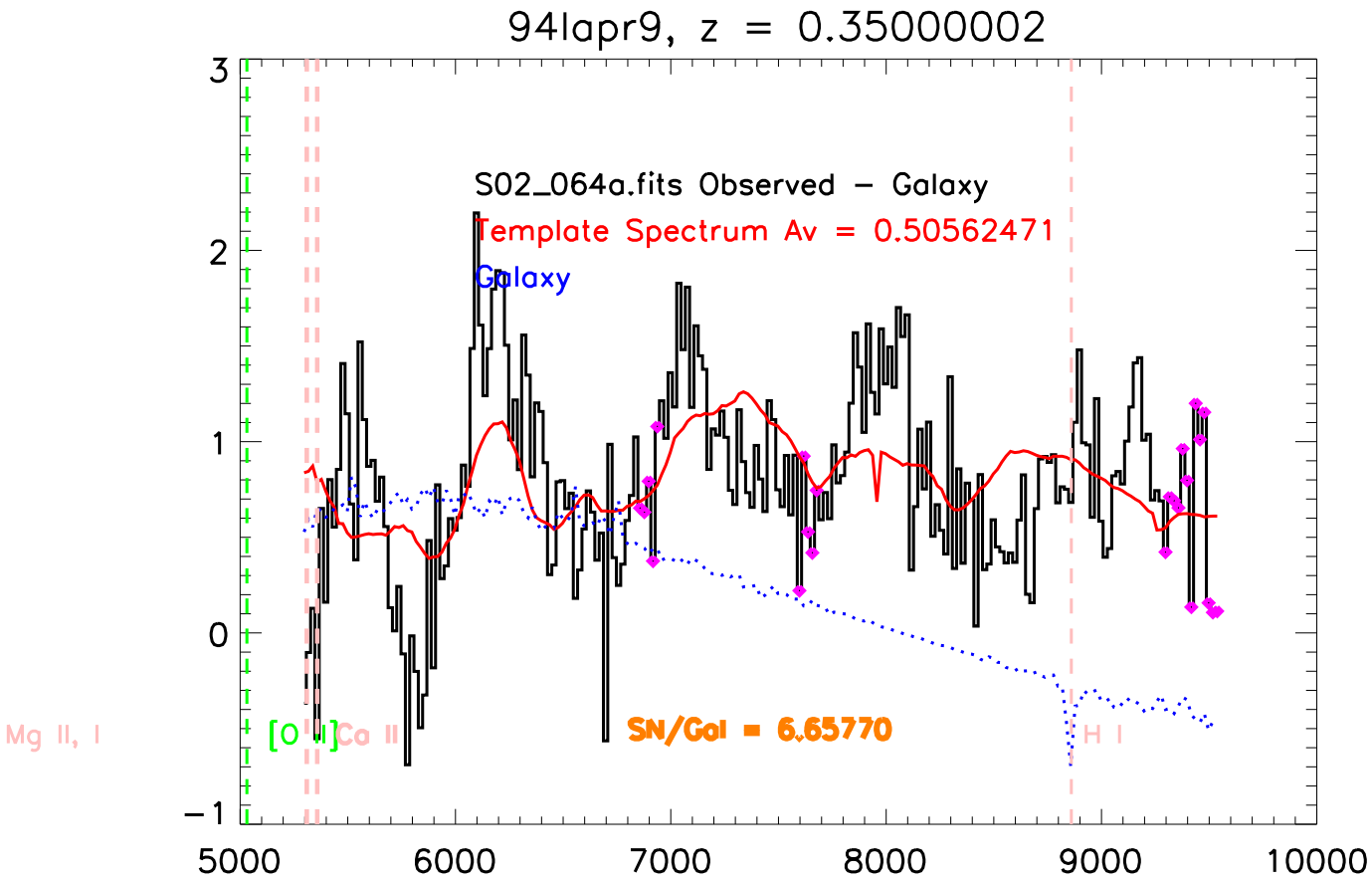

sn1992a.p07, z = 0.35000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.3220490
Galaxy
SN/Gal = 14.3001
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

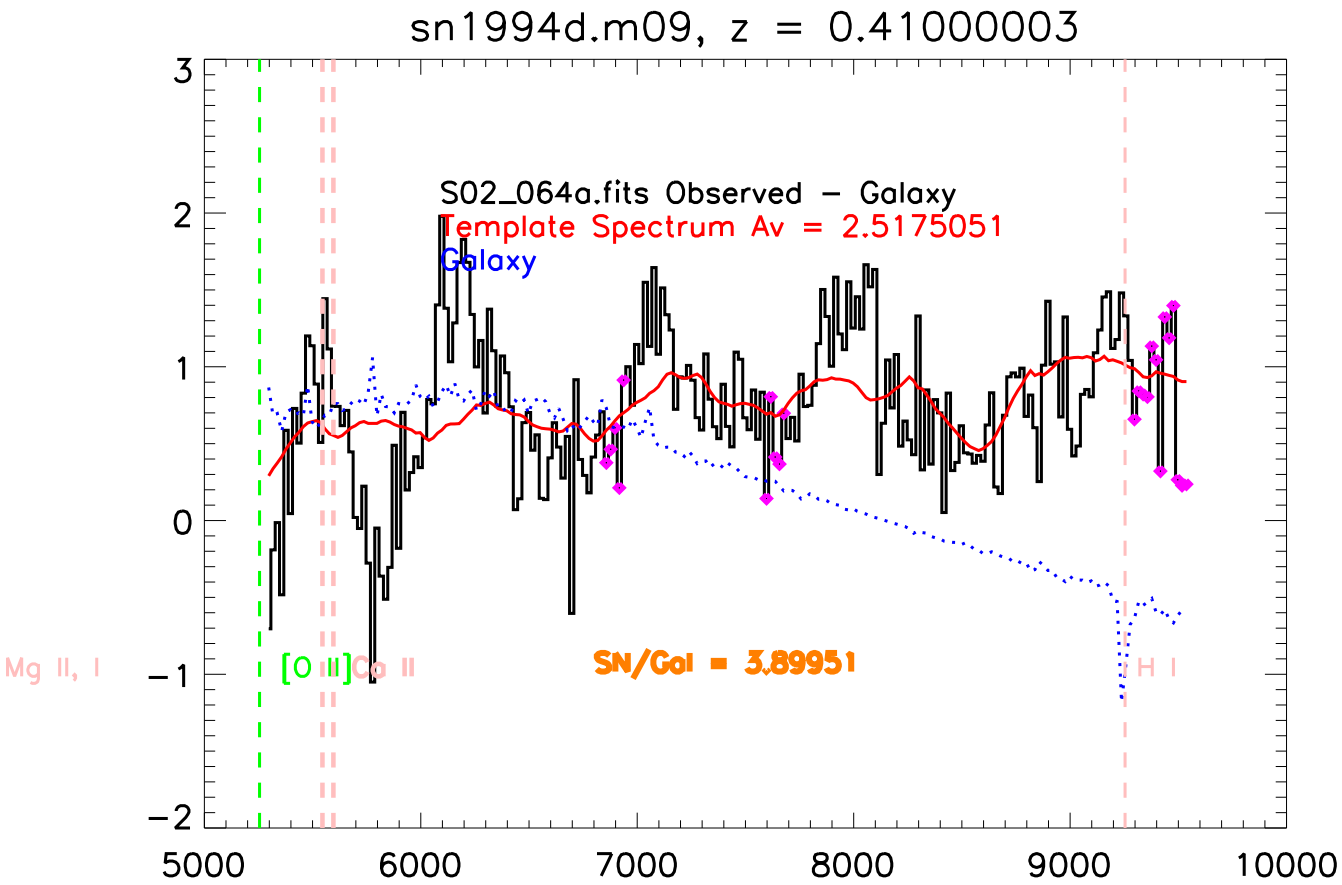

sn00cx+08, z = 0.35000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.41907181
Galaxy
SN/Gal = −44.5603
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000

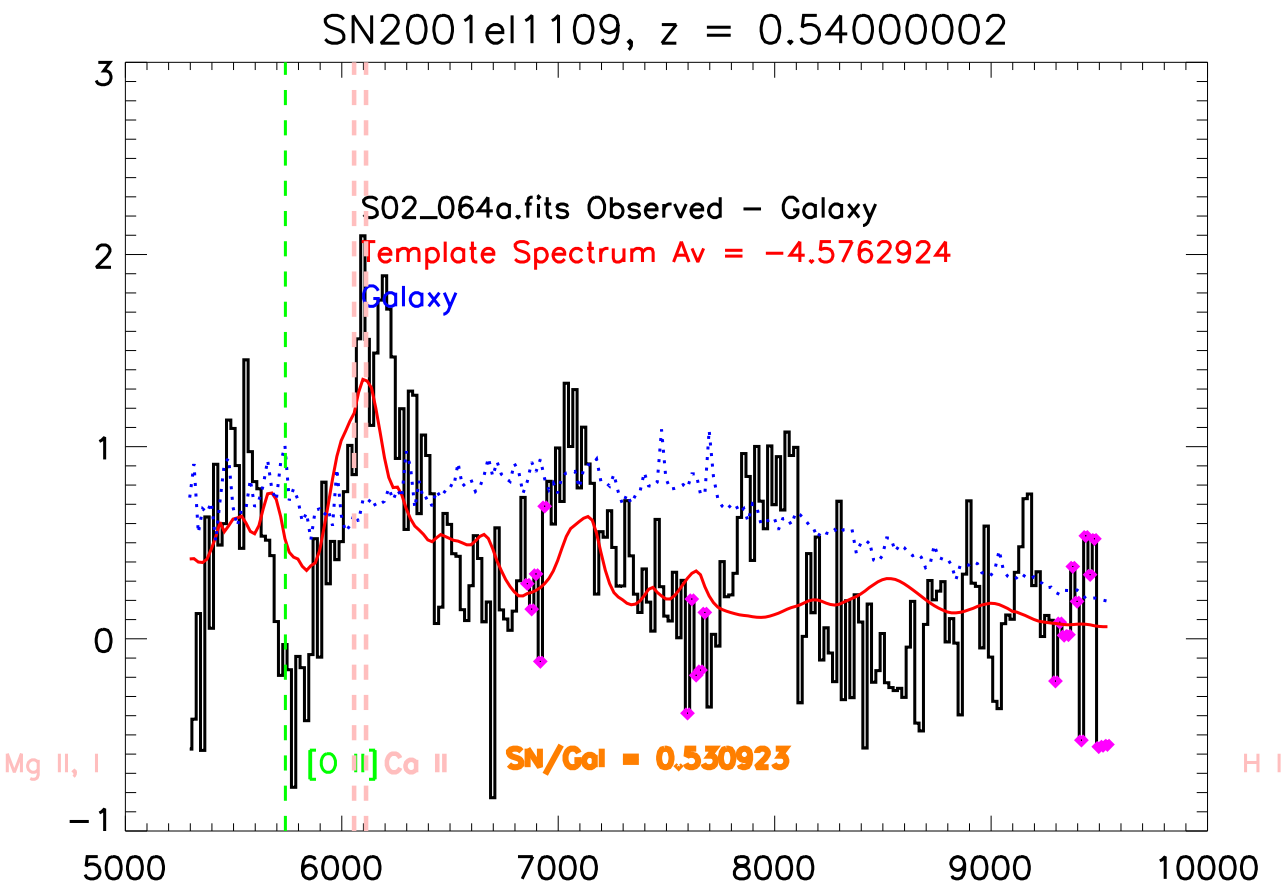

94lapr3_fast, z = 0.38000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.7093785
Galaxy
SN/Gal = −11.3862
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
−2
5000
6000
7000
8000
9000
10000

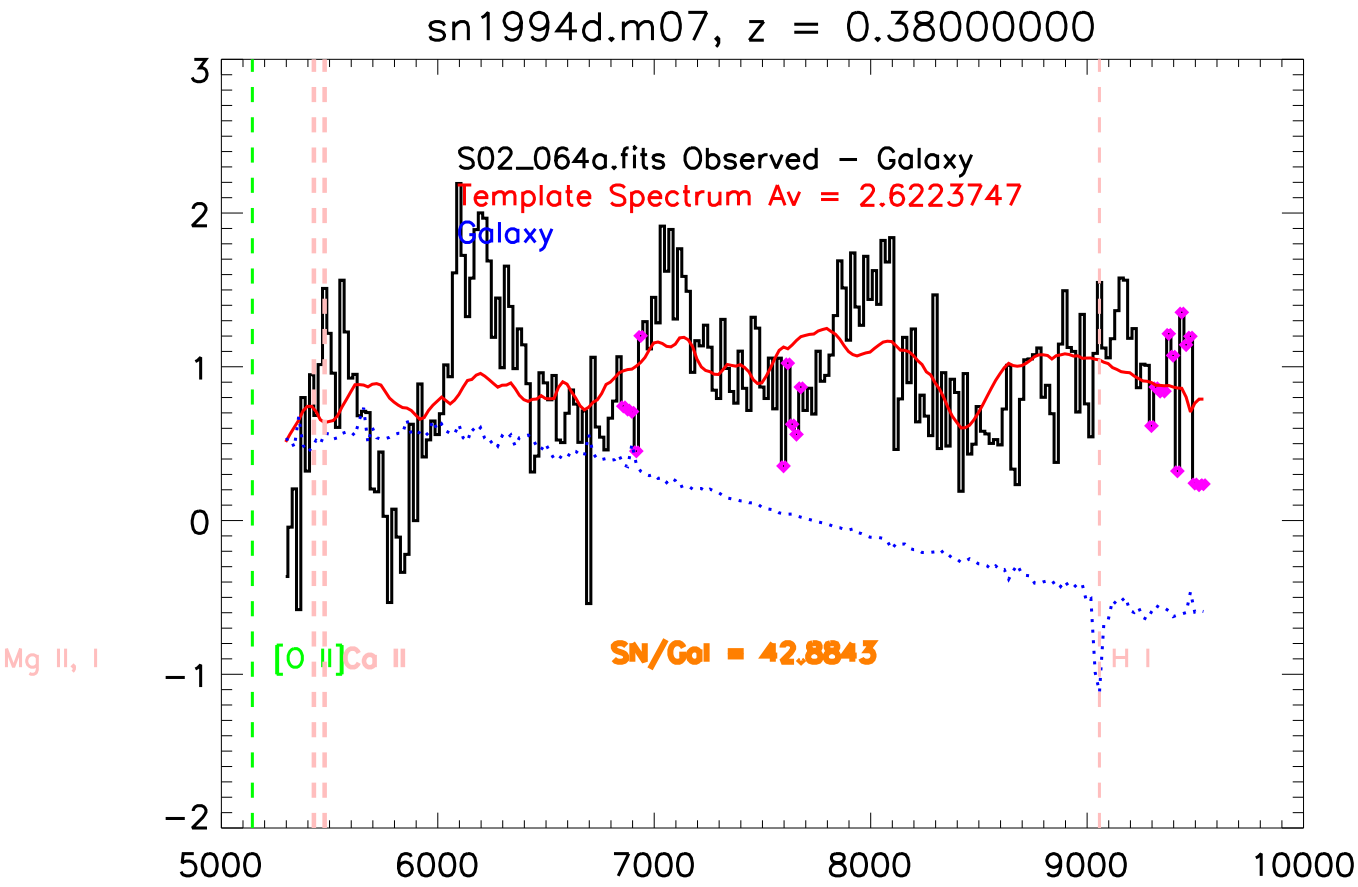

94lapr10, z = 0.35000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.45595708
Galaxy
SN/Gal = 9.16931
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


94lapr3_mmt, z = 0.36000001
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.7255822
Galaxy
SN/Gal = 6.66114
Mg II, I
[O II]Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


94lapr9, z = 0.35000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.50562471
Galaxy
SN/Gal = 6.65770
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1994d.m09, z = 0.41000003
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 2.5175051
Galaxy
SN/Gal = 3.89951
Mg II, I
[O II]Ca II
H I
3
2
1
0
−1
−2
5000
6000
7000
8000
9000
10000


SN2001el1109, z = 0.54000002
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −4.5762924
Galaxy
SN/Gal = 0.530923
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1994d.m07, z = 0.38000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 2.6223747
Galaxy
SN/Gal = 42.8843
Mg II, I
[O II]
Ca II
H I
3
2
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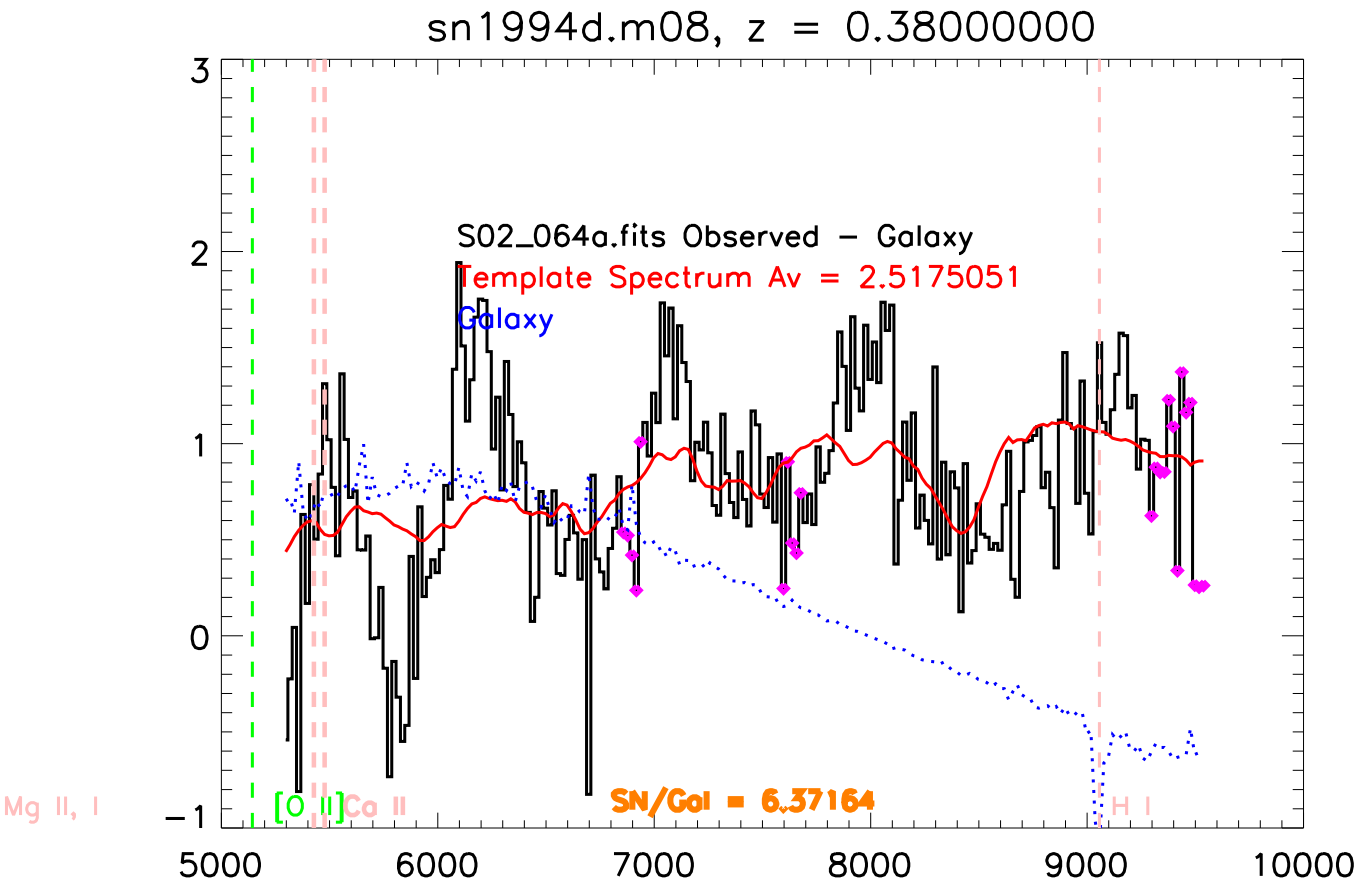
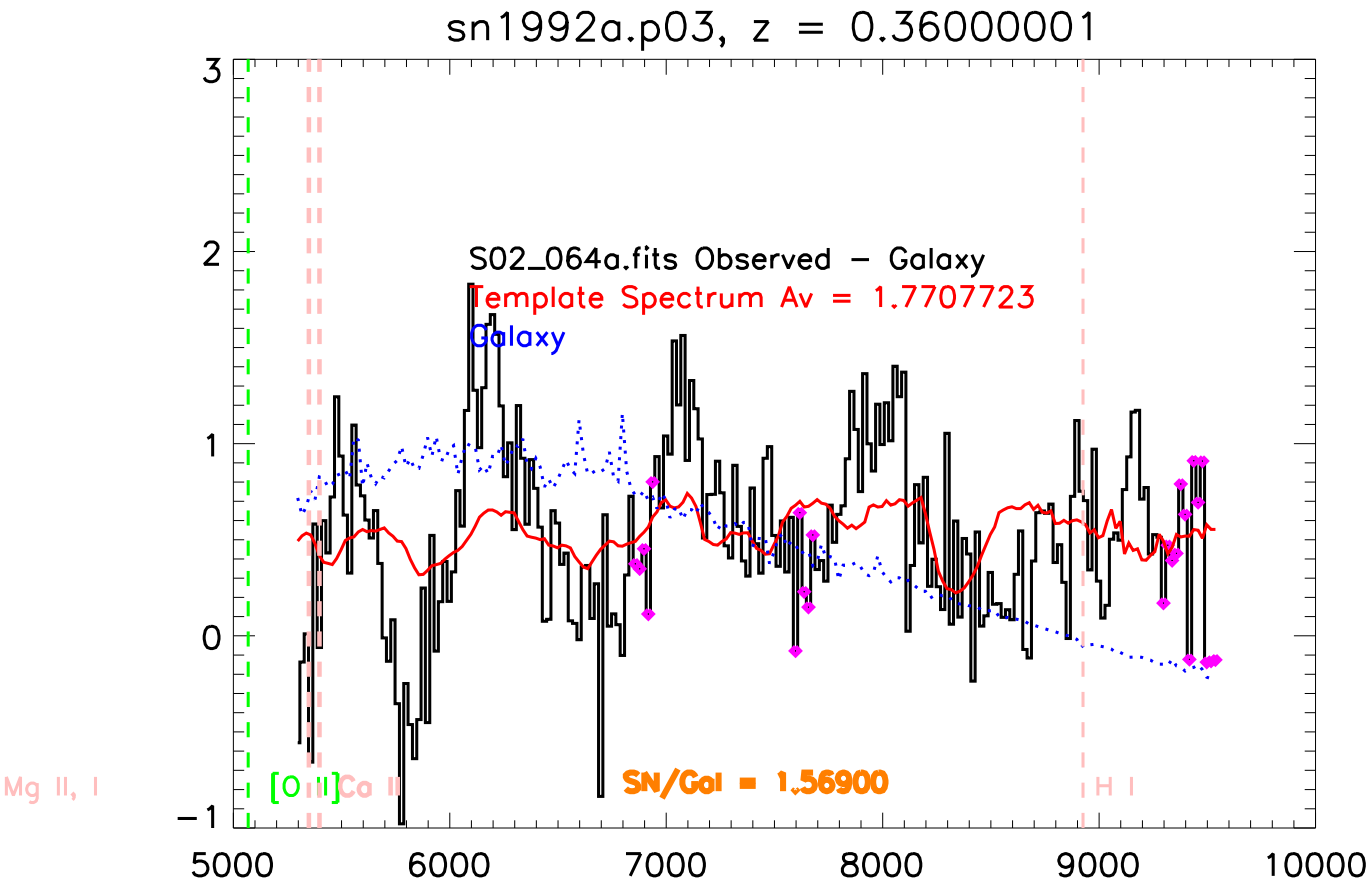
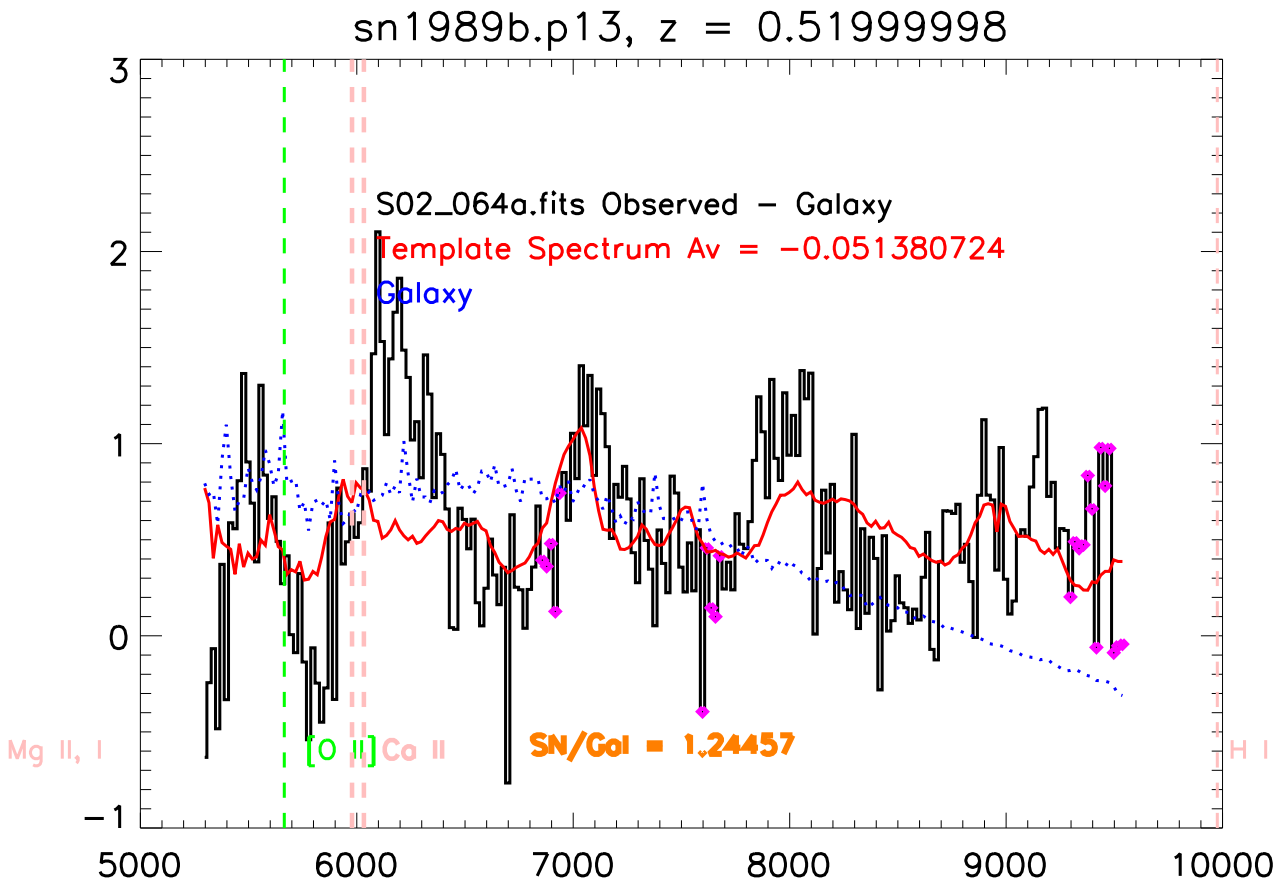
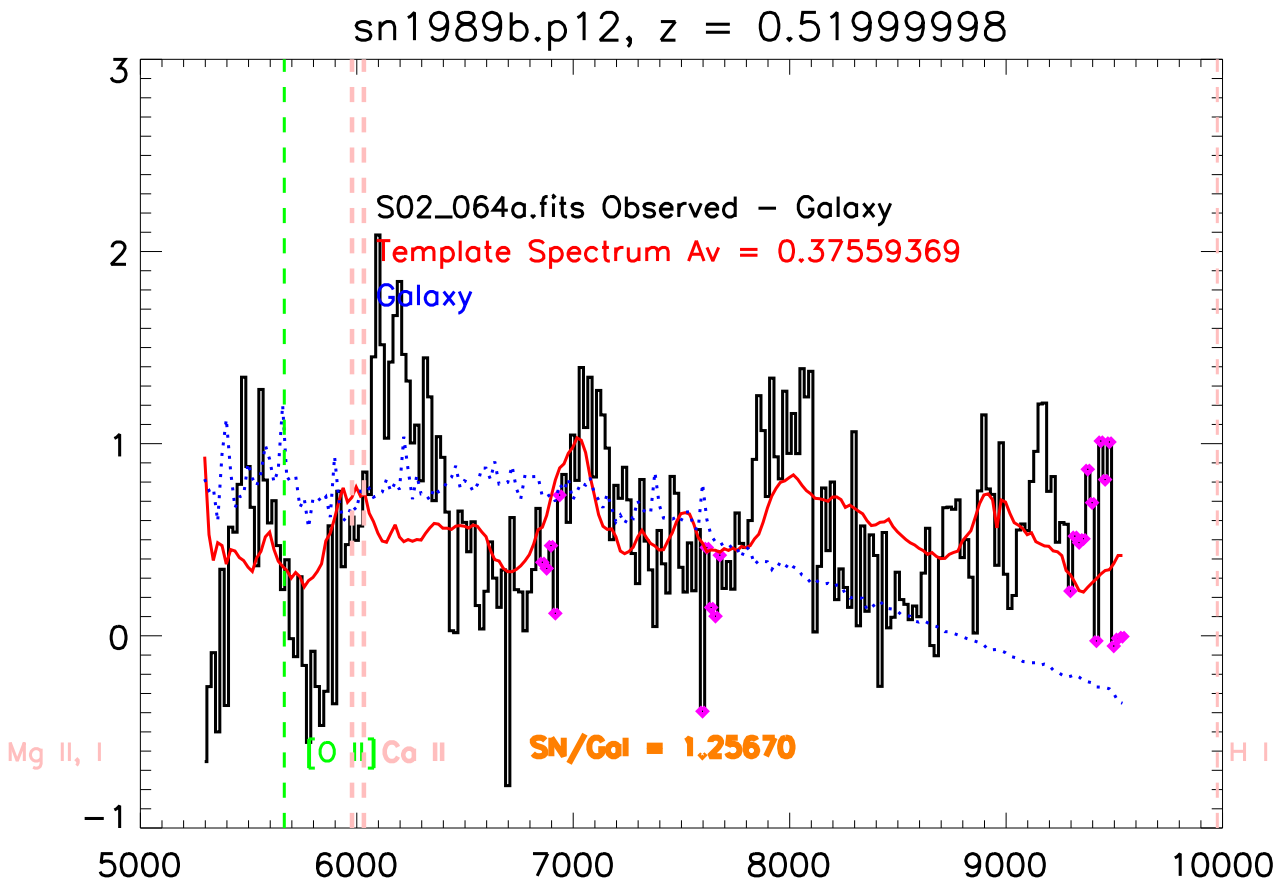
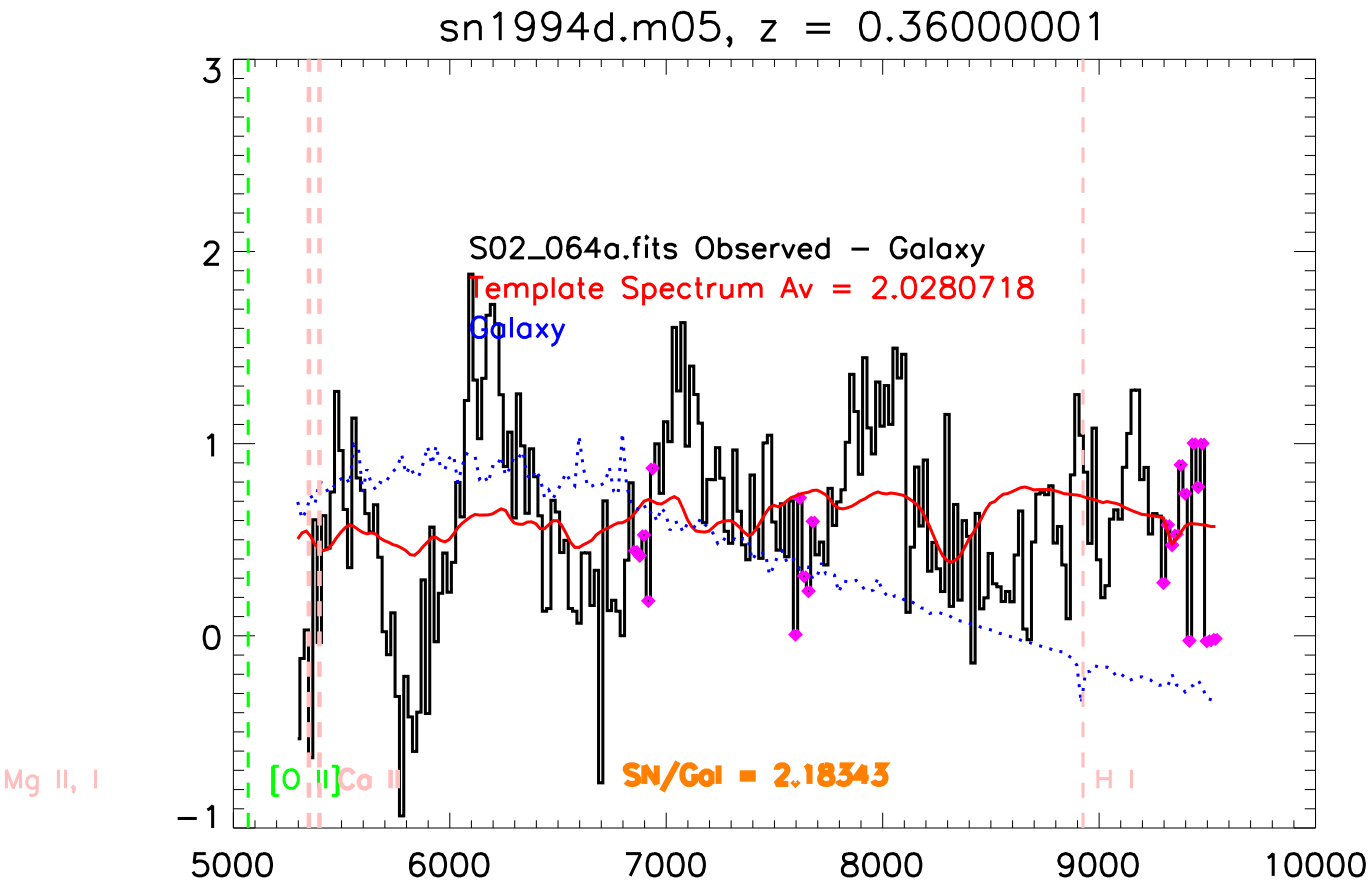
0
−1
−2
5000
6000
7000
8000
9000
10000

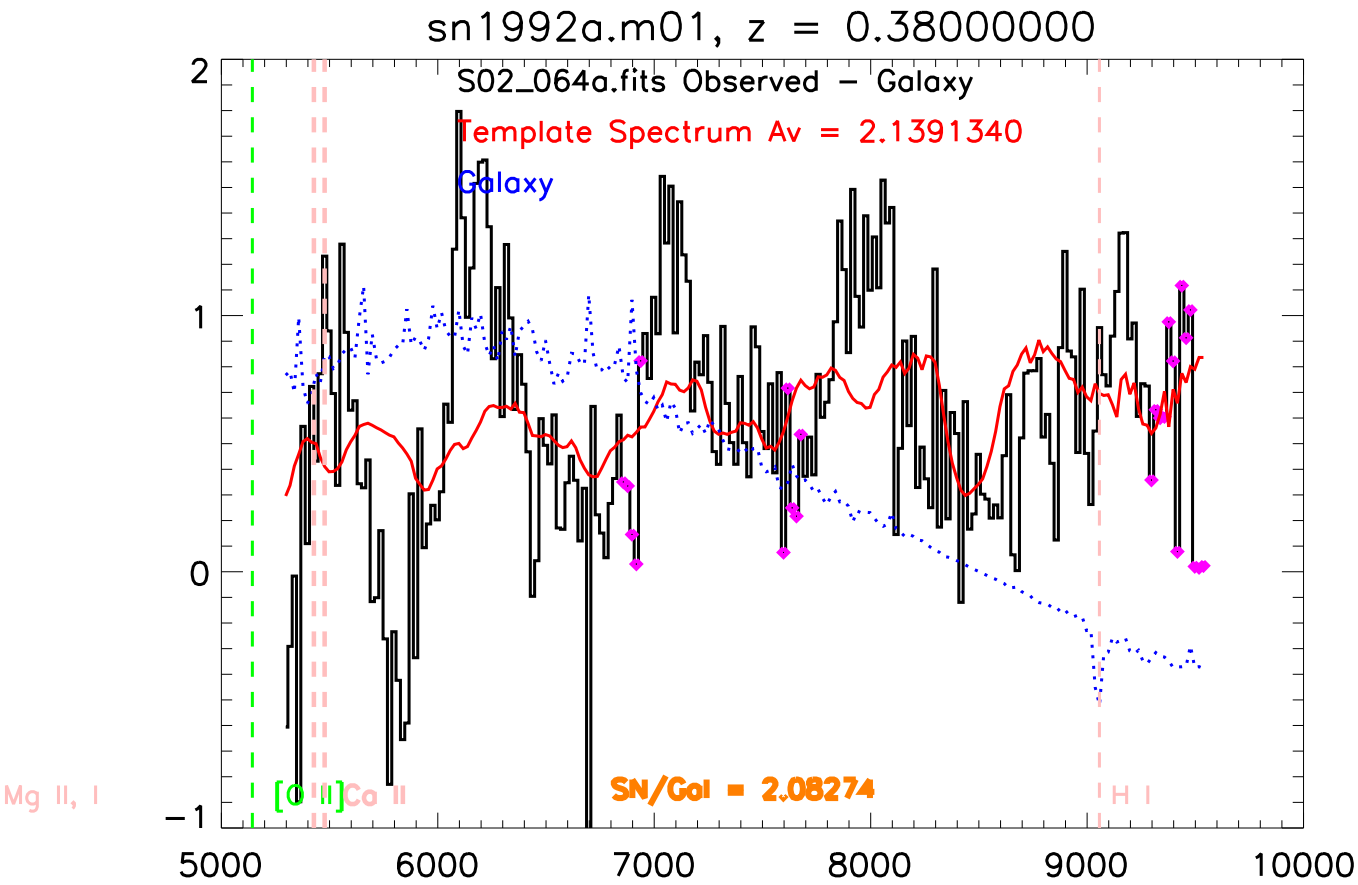

sn1994d.m08, z = 0.38000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 2.5175051
Galaxy
SN/Gal = 6.37164
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1992a.p03, z = 0.36000001
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 1.7707723
Galaxy
SN/Gal = 1.56900
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1989b.p13, z = 0.51999998
S02_064a.fits Observed − Galaxy
Template Spectrum Av = −0.051380724
Galaxy
Mg II, I
[O II]
Ca II
SN/Gal = 1.24457
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1989b.p12, z = 0.51999998
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 0.37559369
Galaxy
SN/Gal = 1.25670
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1994d.m05, z = 0.36000001
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 2.0280718
Galaxy
SN/Gal = 2.18343
Mg II, I
[O II]
Ca II
H I
3
2
1
0
−1
5000
6000
7000
8000
9000
10000


sn1992a.m01, z = 0.38000000
S02_064a.fits Observed − Galaxy
Template Spectrum Av = 2.1391340
Galaxy
SN/Gal = 2.08274
Mg II, I
[O II]
Ca II
H I
2
1
0
−1
5000
6000
7000
8000
9000
10000