

Table F6. SNID templates.

| SN | t_d (d) | $t_{ln} - t_d$ (d) | $t_{fd} - t_d$ (d) | $t - t_{0,ln}$ (d) | References |
|---------------------|--------------|-----------------------|-----------------------|---|--|
| 1986L | 2446711.1 | -5.6 | 0.0 | 7,[27:33] | IAUC 4260, 1 |
| 1990E | 2447937.62 | -5.12 | 0.0 | 9,19 | IAUC 4965, 2 |
| 1999br | 2451280.9 | -8.0 | 0.0 | 15,18,25,33 | IAUC 7141, IAUC 7143, 3 |
| 1999em | 2451480.94 | -8.99 | -1.43 | [7:10],12,[14:16],21,26,29,31,35,39 | IAUC 7294, 1, 4, 5 |
| 1999gi | 2451522.32 | -6.64 | 0.0 | 4,6,7,30,35,38 | IAUC 7329, IAUC 7334, 5 |
| 1999go | 2451535.7 | -8.0 | 0.0 | 9,10,14 | IAUC 7337, 6 |
| 2000dc | 2451765.8 | -7.0 | 0.0 | 20 | IAUC 7476, 7 |
| 2000dj | 2451795.9 | -10.413 | 0.0 | 23 | IAUC 7490, IAUC 7491, 5 |
| 2000el | 2451869.53 | -33.83 | -28.93 | 39 | IAUC 7523, IAUC 7531, 6 |
| 2001X | 2451968.3 | -10.3 | 0.0 | 9,27,36 | IAUC 7591, 5 |
| 2001do | 2452135.7 | -4.0 | 0.0 | 31,39 | IAUC 7682, 7 |
| 2001fa | 2452200.9 | -5.0 | 0.0 | [4:7],30,31 | IAUC 7737, 7, 8 |
| 2002an | 2452297.02 | -4.98 | 0.0 | 16,22,25 | IAUC 7805, IAUC 7808, 5, 9 |
| 2002ce | 2452375.378 | -5.678 | 0.0 | 4 | IAUC 7875, 6 |
| 2002gd ^a | 2452553.37 | -4.09 | -2.84 | 6,8,12,23,31,35,38 | IAUC 7986, IAUC 7990, 1, 5 |
| 2003Z | 2452669.2 | -9.0 | 0.0 | 10,28,30 | IAUC 8062, 5, 10 |
| 2003bn | 2452697.98 | -6.48 | -5.15 | 18,37 | IAUC 8088, 1 |
| 2003ej | 2452779.8 | -9.0 | 0.0 | 6,14,19 | IAUC 8134, 1 |
| 2003hg | 2452869.9 | -9.0 | 0.0 | 8,32 | IAUC 8184, 1, 9 |
| 2003hl | 2452872.0 | -9.0 | 0.0 | 12,33 | IAUC 8184, 1, 5 |
| 2003iq | 2452921.458 | -2.988 | 0.0 | 9,16,21,29 | IAUC 8219, 1, 5 |
| 2004ci | 2453173.497 | -4.597 | -1.697 | 6 | IAUC 8357, 6 |
| 2004er | 2453273.9 | -4.02 | 0.0 | 12 | IAUC 8412, IAUC 8415, 1 |
| 2004et | 2453275.5 | -4.983 | -4.017 | 9,20,24,30,35,38 | IAUC 8413, 5, 11 |
| 2004fc | 2453299.89 | -7.0 | -4.766 | 9,33 | IAUC 8422, 1, 6 |
| 2004fx | 2453316.94 | -16.02 | -10.01 | 19,31 | IAUC 8431, 1, 6 |
| 2005ay | 2453456.58 | -7.459 | 0.0 | 7,8,19,23,25 | IAUC 8500, IAUC 8502, 5, 8, 12 |
| 2005cs | 2453550.407 | -1.977 | -0.997 | 4,5,9,11,[13:15],17,34,36 | IAUC 8553, 5, 13, 14 |
| 2005dz | 2453623.71 | -7.91 | 0.0 | 6,20 | IAUC 8598, 1, 9 |
| 2006Y | 2453770.08 | -6.99 | 0.0 | 26,32 | IAUC 8668, 1 |
| 2006bc | 2453819.15 | -8.063 | 0.0 | 9 | IAUC 8693, 1 |
| 2006bp | 2453835.1 | -1.423 | -0.453 | 4,8,10,16,22,26,34 | IAUC 8700, 15 |
| 2006it | 2454009.67 | -4.98 | 0.0 | 11,14 | IAUC 8758, 1 |
| 2006iw | 2454011.798 | -2.061 | 0.0 | 19 | CBET 663, 1, 16 |
| 2007hv | 2454352.87 | -10.37 | 0.0 | 7 | CBET 1056, 8 |
| 2007il | 2454353.95 | -8.01 | 0.0 | 26 | CBET 1062, 1 |
| 2007pk | 2454414.81 | -4.98 | 0.0 | 3,4,6,7,28,38 | CBET 1129, 8, 17 |
| 2008bh | 2454548.66 | -10.09 | 0.0 | 13,38 | CBET 1311, 1 |
| 2008br | 2454564.265 | -4.942 | 0.0 | 7,21,29,36 | CBET 1332, 1 |
| 2008ho | 2454796.61 | -8.84 | 0.0 | 18,23 | CBET 1587, 1 |
| 2008if | 2454812.71 | -9.98 | 0.0 | 11,[13:17],22,29 | CBET 1619, 1 |
| 2008il | 2454827.64 | -4.95 | 0.0 | 3 | CBET 1634, 1 |
| 2008in | 2454827.29 | -2.84 | -2.34 | 5,6,8,9,29,32,38 | CBET 1636, 1, 8, 18 |
| 2009ao | 2454894.62 | -8.0 | 0.0 | 28,34 | CBET 1711, 1 |
| 2009bz | 2454919.98 | -7.95 | 0.0 | 9,23,27,36 | CBET 1748, 1 |
| 2010id | 2455455.83 | -5.01 | -1.087 | 4,16 | CBET 2467, ATel 2862, 19 |
| 2012aw | 2456003.36 | -1.591 | -0.011 | [2:10],[12:15],24,29,40 | CBET 3054, ATel 3996, 20 |
| 2013am | 2456373.138 | -1.44 | 0.0 | 2,12,16,23,29 | CBET 3440, 21, 22 |
| 2013by ^a | 2456406.042 | -3.17 | -2.29 | 4,36 | CBET 3506, 23 |
| 2013ej | 2456498.95 | -1.91 | -1.325 | 4,[7:10],[12:14],[16:21],23,25,26,28,35,37,39 | CBET 3606, ATel 5237, SN Web ^b , 24, 25, 26, 27 |
| 2013fs | 2456572.96 | -2.14 | -1.223 | [2:4],6,11,18,20,22,27,29,31,32,39 | CBET 3671, 25, 28 |
| 2013hj | 2456638.8 | -3.1 | 0.0 | 9,19 | CBET 3757, 25 |
| 2014G | 2456672.074 | -3.724 | -0.963 | 3,4,10,14,17,26,37,39 | CBET 3787, 29 |
| LSQ14gv | 2456674.8 | -4.1 | 0.0 | 8 | PESSTO SSDR2, 30 |
| 2014cx | 2456902.97 | -1.08 | -0.07 | 8 | ATel 6436, 25, 31 |
| 2014cy | 2456900.5 | -1.7 | 0.0 | 10 | CBET 3964, 25, 30 |
| 2015bs | 2456925.5 | -10.0 | 0.0 | 22 | 32 |
| ASAS14ha | 2456910.79 | -1.96 | 0.0 | 24,30,39 | ATEL 6460, 25 |
| 2016esw | 2457608.814 | -1.012 | 0.0 | 5,6,19,26,32 | TNSTR 542, 33 |

Column 1: SN names. Column 2: discovery epochs. Column 3 and 4: last nondetection and first detection epochs, respectively, with respect to the discovery epoch. Column 5: Values are expressed with respect to the discovery epoch. Adjacent ages are listed in brackets. Column 6: references for data.

^aExplosion time constraint obtained through polynomial fit to pre-maximum *VRI* photometry.

^bC. Feliciano report on the *Bright Supernova* website (<http://www.rochesterastronomy.org/snimages/>)

References: (1) Gutiérrez et al. (2017); (2) Schmidt et al. (1993); (3) Pastorello et al. (2004); (4) Elmhamdi et al. (2003); (5) Faran et al. (2014a); (6) Shivvers et al. (2017); (7) Faran et al. (2014b); (8) Hicken et al. (2017); (9) Harutyunyan et al. (2008); (10) Spiro et al. (2014); (11) Sahu et al. (2006); (12) Gal-Yam et al. (2008); (13) Pastorello et al. (2009); (14) Pastorello et al. (2006); (15) Quimby et al. (2007); (16) Sako et al. (2018); (17) Inserra et al. (2013); (18) Roy et al. (2011); (19) Gal-Yam et al. (2011); (20) Dall'Orta et al. (2014); (21) Tomasella et al. (2018); (22) Zhang et al. (2014); (23) Valenti et al. (2015); (24) Valenti et al. (2014); (25) Childress et al. (2016); (26) Dhungana et al. (2016); (27) Yuan et al. (2016); (28) Yaron et al. (2017); (29) Terreran et al. (2016); (30) Valenti et al. (2016); (31) Huang et al. (2016); (32) Anderson et al. (2018); (33) de Jaeger et al. (2018).

REFERENCES

- Anderson J. P., et al., 2018, *Nature Astronomy*, **2**, 574
- Childress M. J., et al., 2016, *PASA*, **33**, e055
- Dall’Ora M., et al., 2014, *ApJ*, **787**, 139
- Dhungana G., et al., 2016, *ApJ*, **822**, 6
- Elmhamdi A., et al., 2003, *MNRAS*, **338**, 939
- Faran T., et al., 2014a, *MNRAS*, **442**, 844
- Faran T., et al., 2014b, *MNRAS*, **445**, 554
- Gal-Yam A., et al., 2008, *ApJ*, **685**, L117
- Gal-Yam A., et al., 2011, *ApJ*, **736**, 159
- Gutiérrez C. P., et al., 2017, *ApJ*, **850**, 89
- Harutyunyan A. H., et al., 2008, *A&A*, **488**, 383
- Hicken M., et al., 2017, *ApJS*, **233**, 6
- Huang F., et al., 2016, *ApJ*, **832**, 139
- Inserra C., et al., 2013, *A&A*, **555**, A142
- Pastorello A., et al., 2004, *MNRAS*, **347**, 74
- Pastorello A., et al., 2006, *MNRAS*, **370**, 1752
- Pastorello A., et al., 2009, *MNRAS*, **394**, 2266
- Quimby R. M., Wheeler J. C., Höflich P., Akerlof C. W., Brown P. J., Rykoff E. S., 2007, *ApJ*, **666**, 1093
- Roy R., et al., 2011, *ApJ*, **736**, 76
- Sahu D. K., Anupama G. C., Srividya S., Muneer S., 2006, *MNRAS*, **372**, 1315
- Sako M., et al., 2018, *PASP*, **130**, 064002
- Schmidt B. P., et al., 1993, *AJ*, **105**, 2236
- Shivvers I., et al., 2017, *PASP*, **129**, 054201
- Spiro S., et al., 2014, *MNRAS*, **439**, 2873
- Terreran G., et al., 2016, *MNRAS*, **462**, 137
- Tomasella L., et al., 2018, *MNRAS*, **475**, 1937
- Valenti S., et al., 2014, *MNRAS*, **438**, L101
- Valenti S., et al., 2015, *MNRAS*, **448**, 2608
- Valenti S., et al., 2016, *MNRAS*, **459**, 3939
- Yaron O., et al., 2017, *Nature Physics*, **13**, 510
- Yuan F., et al., 2016, *MNRAS*, **461**, 2003
- Zhang J., et al., 2014, *ApJ*, **797**, 5
- de Jaeger T., et al., 2018, *MNRAS*, **478**, 3776

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