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SUPERNOVAE 2006jf–2006ld

J. Frieman, on behalf of the Sloan Digital Sky Survey II collaboration, reports the discovery of 48 new supernovae (2006jf–2006kd and 2006kg–2006lc; magnitude range $g = 19.8$–23.3) on images taken during Sept. 11–Oct. 21 (details on *CBETs* 680 and 688). All appear to be apparent or possible type-Ia supernovae except for 2006jo and 2006jx (apparent or possible type Ib); 2006kg, 2006kh, 2006kn, and 2006kv (apparent or possible type II); 2006jl (IIn); and 2006lc (probable type-Ic).

In addition, three additional apparent supernovae have been discovered on unfiltered CCD images: 2006ke and 2006kf by J. Schwehr, D. Madison, and W. Li (LOSS/KAIT; cf. *IAUC* 8762); and 2006ld by the "Nearby Supernova Factory" collaboration (details on *CBET* 689).

SN	2006 UT	α_{2000}	δ_{2000}	Mag.	*Offset*
2006ke	Oct. 19.51	$5^h52^m37^s.38$	$+66°49'00''.5$	18.7	$7''.0$ E, $2''.6$ N
2006kf	Oct. 21.46	3 41 50.48	+ 8 09 25.0	17.4	$5''.5$ W, $10''.6$ S
2006ld	Oct. 19.3	0 35 27.81	+ 2 55 50.7	16.0	—

Additional magnitudes for 2006ke in UGC 3365: Oct. 13.52 UT, [19.0; 20.49, 18.3. SN 2006ke appears to be a subluminous type-Ia supernova around maximum light (details on *CBET* 684). Additional magnitudes for 2006kf in UGC 2829: Sept. 26.53, [18.8; Oct. 23.45, 17.6. SN 2006kf is a type-Ia supernova before maximum B brightness (details on *CBET* 691). SN 2006ld in UGC 348 is a type-Ib supernova some 1–2 weeks past maximum (details on *CBET* 689); nothing was visible at the location of 2006ld on a NEAT image taken on Sept. 20 (limiting mag ≈ 20.0).

COMET C/2006 M4 (SWAN)

This comet appears to have undergone an outburst, as indicated by the following visual total-magnitude and coma-diameter estimates: Oct. 20.75 UT, 5.6, 6′ (A. Diepvens, Balen, Belgium, 20×50 binoculars); 20.79, 5.9, 10′ (J. J. Gonzalez, Asturias, Spain, 7×50 binoculars); 23.75, 5.9, 7′ (R. J. Bouma, Groningen, The Netherlands, 15×80 binoculars); 24.04, 5.4, – (B. King, Duluth, MN, naked eye); 24.77, 4.0, 7′ (Diepvens); 24.77, 4.4, 8′ (Bouma, 7×50 binoculars); 24.81, 4.5, 8′ (Gonzalez; 1°.8 tail in p.a. 25°; total mag 4.3 via naked eye).

2006 October 25 *Daniel W. E. Green*