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INTERNATIONAL ASTRONOMICAL UNION

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SUPERNOVA 2005ae IN ESO 209-9

Further to *IAUC* 8353, R. Martin reports the discovery of an apparent supernova (mag 17.5) on images taken on Feb. 1.598 and 2.603 UT. SN 2005ae is located at $\alpha = 7^h58^m15^s.84$, $\delta = -49^\circ51'19''.9$ (equinox 2000.0), which is 13''.5 east and 13''.9 south of the center of ESO 209-9 and in an area where there is substantial background luminosity from the galaxy. Nothing was visible at this location on an image taken on Jan. 31.661 (limiting magnitude $g \approx 18.0$). Martin reports the following magnitudes obtained of the new object on Feb. 8.520: $V = 15.9$, $R = 15.4$, $I = 14.7$.

SUPERNOVA 2005ab IN NGC 4617

S. Benetti writes: "F. Di Mille, Universitá di Padova, on behalf of the 'RTN Winter School on Supernovae' in Asiago, reports that a noisy spectrum (range 390–815 nm, resolution 2.3 nm) of SN 2005ab (cf. *IAUC* 8478), taken on Feb. 9.00 UT with the Asiago 1.22-m telescope (+ Boller & Chivens spectrograph), is that of a type-II supernova shortly after explosion. The spectrum consists of a blue continuum overimposed by a relatively broad (5400 km/s) Hα emission line."

COMET C/2004 Q2 (MACHHOLZ)

J. H. Sastri and R. Vasundhara, Indian Institute of Astrophysics, Bangalore, reports that R-band CCD images of comet C/2004 Q2 were obtained in January by K. Kuppuswamy and C. Velu with the 1.02-m f/13 telescope at the Vainu Bappu Observatory, Kavalur, which reveal dust fans via the spatial filter of Larson and Sekanina (1984, *A.J.* **89**, 571) with the following lengths ($\pm$ 15'') and position angles ($\pm$ 10°) for each of the three fans: Jan. 2.6625 UT, fan 1, 150'' in p.a. 291°; fan 2, 150'' in p.a. 252°; fan 3, 60'' in p.a. 216°. Jan. 15.6344, fan 1, 150'' in p.a. 40°; fan 2, 150'' in p.a. 252°; fan 3, 60'' in p.a. 216°. The dust features were modeled after Vasundhara (2002, *A.Ap.* **382**, 342), indicating that the latitude ranges of the active regions on the nucleus that produce the fans are as follows (direction of fitted north rotational pole $\alpha = 190^\circ \pm 10^\circ$, $\delta = +50^\circ \pm 10^\circ$, equinox 2000.0): fan 1, -15° to 0°; fan 2, -50° to -35°; fan 3, -78° to -70°. Assuming silicate grains of size 0.1–30 μm and Fulle's (1987, *A.Ap.* **171**, 327) relation between grain velocity and the forces on each grain, a rotation period of 0.38 ± 0.08 day is estimated for the comet's nucleus.

Naked-eye total-magnitude estimates by J. Gonzalez, Asturias, Spain: Jan. 9.81 UT, 3.4; 17.07, 3.7; 22.80, 4.1; 31.95, 4.3; Feb. 7.81, 4.8.

  Daniel W. E. Green