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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 $\alpha = 7^{\rm h}58^{\rm m}15\overset{\rm s}{.}84$, $\delta = -49^{\rm o}51'19\overset{''}{.}9$ (equinox 2000.0), which is $13\overset{''}{.}5$ east and $13\overset{''}{.}9$ 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 ($\pm\ 10^{\rm o}$) for each of the three fans: Jan. 2.6625 UT, fan 1, $150''$ in p.a. $291^{\rm o}$; fan 2, $150''$ in p.a. $252^{\rm o}$; fan 3, $60''$ in p.a. $216^{\rm o}$. Jan. 15.6344, fan 1, $150''$ in p.a. $40^{\rm o}$; fan 2, $150''$ in p.a. $252^{\rm o}$; fan 3, $60''$ in p.a. $216^{\rm o}$. 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 $\alpha = 190^{\rm o} \pm 10^{\rm o}$, $\delta = +50^{\rm o} \pm 10^{\rm o}$, equinox 2000.0): fan 1, $-15^{\rm o}$ to $0^{\rm o}$; fan 2, $-50^{\rm o}$ to $-35^{\rm o}$; fan 3, $-78^{\rm o}$ to $-70^{\rm o}$. 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.

