COMETS C/2004 V6–V13

Further to IAUC 8455, all the SOHO comets announced there were Kreutz sungrazers except for C/2004 V9 and C/2004 V10, which belong to the Marsden group. Marsden adds (MPEC 2004-X73) that C/2004 V9 may be identical with C/1999 J6, with a 5.49-yr period. Also, S. Höing reports that he learned of the appearance of C/2004 V13 on the C3 images from J. Sachs, who evidently was the first to notice it.

SUPERNOVAE 2004gt AND 2004gv

K. Kinugasa and H. Kawakita, Gunma Astronomical Observatory; and H. Yamaoka, Kyushu University, report that a low-resolution spectrogram (range 390–750 nm) of SN 2004gt, taken on Dec. 17.8 UT with the Gunma 0.65-m telescope (+ GCS), shows He I 587.6-nm absorption prominently, suggesting that it is a type-Ib supernova near maximum light. A W-shaped absorption around 500 nm is also prominent. Adopting the NED recession velocity (1648 km/s), the expansion velocity (deduced from the absorption minimum of He I) is \( \sim 12000 \) km/s.

M. Ganeshalingam, B. J. Swift, and A. V. Filippenko, University of California, Berkeley, report that inspection of CCD spectra (range 330–1060 nm), obtained on Dec. 18 UT with the Shane 3-m reflector at Lick Observatory, reveals that SN 2004gt (IAUC 8454) is of type Ib/Ic, not far from maximum brightness. The He I/Na I absorption near 570 nm is strong, but the only clear He I line is an absorption trough near 1040 nm attributed to He I 1083-nm. Other type-Ic supernovae have shown evidence for a small quantity of He (e.g., SN 1994I; Filippenko et al. 1995, Ap.J. 450, L11). The substantial strength of the O I 777.4-nm trough in SN 2004gt is more consistent with a type-Ic than a type-Ib classification (Matheson et al. 2001, A.J. 121, 1648), though type Ib is still a possibility. It is difficult to distinguish unambiguously between the Ib and Ic subclasses with a single optical spectrum obtained near maximum brightness; further observations are thus encouraged.

Ganeshalingam, Swift, F. J. D. Serduke, and Filippenko add that inspection of CCD spectra obtained on Dec. 17 UT reveals that SN 2004gv (IAUC 8454) is probably of type Ib/Ic, not far from maximum brightness. The O I 777.4-nm line is weak, perhaps suggesting that the supernova is of type Ib rather than Ic (Matheson et al. 2001, A.J. 121, 1648). SN 2004gv appears to be associated with young stars in the outskirts of the type-S0 host galaxy, as evidenced by narrow emission lines typical of H II regions.

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