Circular No. 8523

Central Bureau for Astronomical Telegrams
INTERNATIONAL ASTRONOMICAL UNION
Mailstop 18, Smithsonian Astrophysical Observatory, Cambridge, MA 02138, U.S.A.
IAUSUBS@CFA.HARVARD.EDU or FAX 617-495-7231 (subscriptions)
CBAT@CFA.HARVARD.EDU (science)
URL http://cfa-www.harvard.edu/iau/cbat.html ISSN 0081-0304
Phone 617-495-7440/7244/7444 (for emergency use only)

NEW SATELLITES OF SATURN

Twelve new satellites of Saturn (S/2004 S 7–S/2004 S 18) have been reported by D. Jewitt, S. Sheppard, and J. Kleyna in data obtained during 2004 Dec.–2005 Mar. with the Subaru and Gemini 8-m telescopes and the Keck 10-m telescope, aided by B. G. Marsden's ongoing linkages and search ephemerides. The astrometry and orbital data appear on *MPEC* 2005-J13, showing retrograde orbits for 11 of the satellites; orbital periods range from 820 to 1354 days. Diameters estimated from the apparent red magnitudes (assuming 4-percent geometric albedo) range from 3 to 7 km.

SUPERNOVA 2005by IN UGC 8701

Further to *IAUC* 8519, S. Park and W. Li report the LOSS discovery of an apparent supernova on unfiltered KAIT images taken on May 2.38 (at mag 18.8) and 3.38 UT (mag 18.4). SN 2005by is located at $\alpha = 13^{\rm h}45^{\rm m}46^{\rm s}.91$, $\delta = +22^\circ 05' 46''.8$ (equinox 2000.0), which is $18''.4$ east and $27''.2$ north of the center of UGC 8701. Nothing was visible at this position on KAIT images taken on 2004 May 12.35 (limiting mag 20.0) or 2005 Apr. 20.40 (limiting mag 19.0).

M. Modjaz, R. Kirshner, and P. Challis, Harvard-Smithsonian Center for Astrophysics, report that a spectrogram (range 340–730 nm) of SN 2005by, obtained by T. Groner on May 4.31 UT with the F. L. Whipple Observatory 1.5-m telescope (+ FAST), shows it to be a type-II supernova. The spectrum consists of a flat continuum and P-Cyg lines of Hα and Hβ. Adopting the NED recession velocity of 8202 km/s for the host galaxy (from Falco *et al.* 1999, *PASP* **111**, 438), the expansion velocity derived from the minimum of the Hβ line is $\sim$ 13000 km/s.

V5115 SAGITTARII

R. J. Rudy, R. W. Russell, and D. K. Lynch, Aerospace Corporation, report on 0.8–5.0-μm spectroscopy of this nova (cf. *IAUC* 8500, 8501) obtained on Apr. 17 with the Infrared Telescope Facility (+ SpeX). In addition to the emission features of hydrogen, V5115 Sgr showed the strong, fluorescently excited lines of O I that are typical of a nova shortly after outburst, along with many lines of N I, but no prominent features from C I. Widths (FWHM) for the stronger emission were 3000 km/s. Fe II emission was present but there was no evidence of the CO bands at 2.3 and 4.6 μm or thermal emission from dust. The reddening derived from the O I lines was $E(B-V) = 0.53$.

2005 May 4 *Daniel W. E. Green*