Circular No. 8684

## Central Bureau for Astronomical Telegrams INTERNATIONAL ASTRONOMICAL UNION

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## SUPERNOVAE 2006aq AND 2006ar

Further to IAUC 8683, T. Boles reports the discovery of two apparent supernovae. Additional magnitudes of 2006aq in MCG +07-24-32: 1986 Feb. 10, [20.5 (Digitized Sky Survey, blue); 1997 June 3, [21.0 (DSS, red); 2005 Jan. 12, [19.5; May 11, [19.5; Mar. 6.952 UT, 18.6. Magnitudes of 2006ar in MCG +11-13-36: 1996 Dec. 7, [20.5 (DSS, blue); 1997 Jan. 10, [21.0 (DSS, red); 2005 Jan. 4, [19.5; Apr. 3, [19.5; 2006 Mar. 6.947, 18.2.

SN	2006  UT	$\alpha_{2000}$	$\delta_{2000}$	Mag.	$O\!f\!fset$
2006aq 2006ar	Mar. 5.992 Mar. 5.907	$\frac{11}{48}^{\rm h}48^{\rm m}19\overset{\rm s}{.}49\\10\ 37\ 30.75$	$+38^{\circ}44^{'}48\overset{''}{.}0\\+65\ 00\ 58.1$	$\begin{array}{c} 18.6 \\ 18.2 \end{array}$	6".4 W, 6".4 S 8".1 W, 7".5 S

## RS OPHIUCHI

T. J. O'Brien, T. W. B. Muxlow, S. T. Garrington, and R. J. Davis, Jodrell Bank Observatory, University of Manchester; S. P. S. Eyres, University of Central Lancashire; M. F. Bode, Liverpool John Moores University; R. W. Porcas, Max-Planck-Institut für Radioastronomie, Bonn; and A. Evans, Keele University, report that 5- and 6-cm MERLIN imaging has unambiguously resolved the expanding radio source associated with the current outburst of RS Oph. An image taken on Mar. 2 at 5 cm is consistent with a radio source of flux density  $40 \pm 2$  mJy, extended east-west. Another image taken on Mar. 6 at 6 cm shows a similar total flux density, but the source has expanded sufficiently to enable some simple modelling of the underlying structure. Again the source is unambiguously resolved east-west; careful imaging suggests that the source could be either a double or triple structure. Although it is difficult to distinguish these from a single extended source, the more complex models suggest that there is one main component of 30 mJy with another 10 mJy distributed either in a second component to the east or in two components, 60 mas apart, straddling the bright central source — the easterly being brighter than its western counterpart. This structure is very similar to that seen in an image taken with the European VLBI Network 77 days after the 1985 outburst (Taylor et al. 1989, MNRAS 237, 81). Assuming the three-component structure to be correct and a distance to RS Oph of 1600 pc, these positions imply (symmetric) expansion velocities in the plane of the sky of around 4000 km/s. This is similar to the highest velocities seen in optical spectroscopy (cf. CBET 403). VLBA imaging on Feb. 26 and EVN imaging on Mar. 5/6 are awaiting correlation. Further VLBI imaging is being scheduled.

2006 March 8

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