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)
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COMET P/2009 S1 (GIBBS)

A. R. Gibbs reports his discovery of a comet on unfiltered CCD images taken with the Catalina 0.68-m Schmidt telescope (discovery observation tabulated below); four co-added 30-s exposures show an $8'' \times 10''$ compact coma elongated in the direction of the faint $20''$ tail (p.a. 270°), while four co-added 80-s frames from Sept. 20.43–20.46 UT show the narrow tail to be $45''$ long. After posting on the 'NEOCP' webpage, other CCD astrometrists have commented on the object's cometary appearance. E. Guido, Castellammare di Stabia, Italy, writes that fourteen co-added unfiltered 120-s exposures taken by G. Sostero and himself remotely using a 0.25-m reflector near Mayhill, NM, on Sept. 21.4 show a condensed coma nearly $8''$ in diameter and a broad tail about $20''$ long in p.a. 260°. H. Sato (Ōta-ku, Tokyo, Japan, also remotely using a 0.25-m reflector near Mayhill on Sept. 21.4) reports a coma diameter of $12''$, slightly elongated in p.a. 320°. R. Miles (2.0-m "Faulkes Telescope North" at Haleakala, Sept. 21.6) measures a $5''$ tail in p.a. 277°. L. Buzzi (Varese, Italy, 0.60-m reflector, Sept. 22.1) notes that stacked images totalling 20 min exposure time show a strong central condensation and a faint tail $\sim 20''$ long in p.a. $\sim 270°$.

2009 UT	α_{2000}	δ_{2000}	Mag.	*Observer*
Sept.20.38191	$3^h59^m54^s.60$	$-10°17'18''.3$	18.6	Gibbs

The available astrometry, the following preliminary elliptical orbital elements, and an ephemeris appear on *MPEC* 2009-S70.

$$\begin{array}{lll} T = 2009\ \text{July}\ 24.990\ \text{TT} & \omega = 221^\circ.712 & \\ e = 0.35021 & \Omega = 155.805 & \Big\}\, 2000.0 \\ q = 2.36593\ \text{AU} & i = 25.378 & \end{array}$$
$$a = 3.64108\ \text{AU} \qquad n^\circ = 0.141860 \qquad P = 6.95\ \text{years}$$

2007 TY_{430}

K. S. Noll, Space Telescope Science Institute (STSI); W. M. Grundy, Lowell Observatory; S. D. Benecchi, STSI; and H. A. Levison, Southwest Research Institute, report observations of the known transneptunian minor-planet binary 2007 TY_{430} (cf. *MPEC* 2008-M38; *IAUC* 8962) starting at 2008 Sept. 20.5253 UT with the Wide Field Planetary Camera 2 on the Hubble Space Telescope. At the time of these observations, the binary was separated by $0''.248 \pm 0''.001$ in α and $0''.399 \pm 0''.001$ in δ, with a difference between the two components of 0.22 ± 0.10 magnitude.

2009 September 22 *Daniel W. E. Green*