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1991 OA

E. L. G. Bowell, Lowell Observatory, reports the discovery by H. E. Holt of a fast-moving asteroidal object on films taken with the Palomar 0.46-m Schmidt telescope by Holt, T. M. King, C. M. Olmstead, and C. E. Petry. Very preliminary orbital elements are:

T = 1991 June 18.83 ET Peri. = 316.00
e = 0.6246 Node = 306.24 1950.0
q = 1.0323 AU Incl. = 5.52
a = 2.7501 AU n = 0.21612 P = 4.56 years

1991 ET	R.A. (1950)	Decl.	Delta	r	V
July 23	21 21.20	-20 52.4	0.116	1.127	13.4
28	21 25.89	-15 35.1			
Aug. 2	21 28.13	-12 04.9	0.172	1.184	14.2
7	21 29.10	- 9 42.6			
12	21 29.45	- 8 05.1	0.238	1.250	14.8
17	21 29.65	- 6 58.0			
22	21 29.96	- 6 11.8	0.314	1.322	15.6
27	21 30.54	- 5 40.1			
Sept. 1	21 31.48	- 5 18.6	0.401	1.399	16.5

IAUC 5314

NOVA IN SAGITTARIUS

The following position was measured by P. M. Kilmartin from films taken by A. C. Gilmore with the 0.6-m f/14 Cassegrain telescope at Mount John University Observatory on July 30.4 UT: R.A. = 18h10m58s.12 +/- 0s.10, Decl. = -32 13'23".6 +/- 0".2 (equinox 1950.0).

Further visual observations (cf. IAUC 5313): July 30.37 UT, 8.1 (A. F. Jones, Nelson, New Zealand); 30.45, 8.5 (P. Williams, Heathcote, New South Wales); 30.46, 8.2 (Jones); 30.46, 8.6 (T. B. Tregaskis, Mt. Eliza, Victoria); 31.090, 8.4 (J. E. Bortle, Stormville, NY).

IAUC 5315

PERIODIC COMET GRIGG-SKJELLERUP

T. Morley and H. Bohnhardt, European Space Operations Centre, write: "The European Space Agency has approved the mission known as Giotto Extended Mission (GEM) for a spacecraft encounter with P/Grigg-Skjellerup on 1992 July 10. High-quality astrometry of the comet is needed at ESOC to determine the most accurate cometary orbit possible for the flyby. Since there will be no 'Pathfinder Project' using observations of other cometary missions, the importance of ground-based astrometry for orbit improvement is even higher than during the P/Halley campaign. We would appreciate receiving high-quality astrometric data of P/Grigg-Skjellerup within two days of observation; astrometry will be of highest priority during the two months prior to encounter. We can be reached at ESOC/ECD/OAD, Robert-Bosch-Str. 5, D-6100 Darmstadt, Germany; e-mail TMORLEY@ESOC.BITNET or HBOEHNHA@ESOC.BITNET."

IAUC 5315

NOVA SAGITTARII 1991

M. Della Valle, European Southern Observatory, reports: "Spectrograms (range 390-720 nm, resolution about 0.1 nm) of Nova Sgr 1991 (cf. IAUC 5313, 5315) were obtained on Aug. 1.3 and 2.3 UT with the ESO/Max-Planck-Institut 2.2-m telescope (+ EFOSC) at La Silla. Analysis of the spectra finds very strong and broad Balmer emission lines superimposed on a relatively weak continuum. The FWZI width of H-alpha, H-beta, H-gamma, and H-delta emissions are about 9500, 8000, 9000, and 8500 km/s, respectively. Other prominent features are visible at 449, 466, 503, 518, and 590 nm. The Balmer emission lines tend to have a saddle-shaped profile with the redward maximum

stronger than the blue one. The large expansion velocity, the rate of decline in optical light and the shape of the emission lines suggest a striking similarity with the outburst of Nova Cyg 1975 (see Rosino and Tempesti 1977, Sov. Astron. 21, 291)."

S. Prins, Astronomical Institute, University of Amsterdam, reports the following photometric observations obtained on Aug. 2.4 UT with the ESO 1-m telescope at La Silla: V = 9.98, B-V = +0.15, U-B = -0.75, V-R = +1.24, V-I = +1.46.

IAUC 5316

V919 SAGITTARII

R. J. Ivison and M. K. Bang, Lancashire Polytechnic; F. Comeron and J. Marti, University of Barcelona, report: "This Z And-type classical symbiotic star appears to be in outburst. Observations from the Roque de los Muchachos Observatory, La Palma, on July 31.1 and Aug. 2.2 UT, using the 2.5-m Isaac Newton (+ Manchester Echelle Spectrometer/IPCS) and 1-m Jacobus Kapteyn (+ People's Photometer) telescopes, reveal that the He II (468.6 nm) line has disappeared and that [O III] (500.7 nm) is also absent. The He I (501.5 nm) line shows a P-Cyg profile and the H-alpha (656.3 nm) recombination line is strong, broad, and has a deep central reversal. Comparison with photometric standards gives V = 11.1, B-V = +0.4, V-R = +0.8, which suggests a 1.5-mag rise in V from quiescence and a color change to spectral class F. V919 Sgr is located at R.A. = 19h00m51s.6, Decl. = -17 04'24" (equinox 1950.0). Infrared observations with the U.K. Infrared Telescope and visual monitoring are planned."

IAUC 5317

LSI +61 303

J. Marti and F. Comeron, University of Barcelona, communicate: "We have detected an unexpected optical brightening of the x-ray binary LSI +61 303 (R.A. = 2h36m41s, Decl. = +61 00'.9, equinox 1950.0). Observations were carried out with the 1-m Jacobus Kapteyn Telescope at the Observatory of El Roque de los Muchachos using the two-channel People's Photometer. Preliminary reductions give the following Johnson V magnitudes: July 31.25 UT, 7.8; Aug. 1.15, 7.9; 2.20, 7.9. These values are about 3 mag brighter than usual."

IAUC 5317

FG SERPENTIS

U. Munari, Asiago Astrophysical Observatory, communicates: "Optical and infrared absolute spectrophotometry (330-1150 nm), secured on Aug. 2.9 UT at the 1.8-m telescope of Mt. Ekar (with a Boller & Chivens spectrograph + CCD), confirms that the symbiotic nova FG Ser (= AS 296) is currently undergoing a total eclipse of the outbursting white dwarf by the M5 III companion (cf. IAUC 5311). The TiO bands of the cool giant now dominate the whole observed spectral range. The veiling blue continuum and the Balmer continuum in emission, which normally dominate shortward of 550 nm, have disappeared. The integrated fluxes of H I emission lines are now 0.6 of the non-eclipse values, 0.4 of the He I lines' fluxes, and 0.7 of the forbidden lines' fluxes. The UBVRI/JHKL photometry performed since the beginning of the outburst in 1988 (cf. IAUC 4622) shows another eclipse in the last third of 1989. The resulting orbital period is 650 +/- 12 days."

Photometry by A. C. Gilmore, Mt. John University Observatory: Aug. 2.45 UT, V = 12.05 +/- 0.02, U-B = +0.12 +/- 0.05, B-V = +1.80 +/- 0.02, V-R = +1.60 +/- 0.02.

IAUC 5318

PERIODIC COMET MACHHOLZ

Total visual magnitude estimates: July 31.89 UT, 8.9 (A. Pereira, Cabo da Roca, Portugal, 0.15-m reflector; coma dia. about 5'); Aug. 1.20, 8.0 (D. Machholz, Emigrant Gap, CA, 0.12-m refractor; 3' x 4' coma, elongated east-west); 2.46, 9.5 (T. Seki, Geisei, Japan, 0.21-m refractor); 4.17, 9.0 (C. S. Morris, Lockwood Valley, CA, 0.51-m reflector).

IAUC 5318

D.G.Buczynski