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2004 PB_{108} AND (60621) 2000 FE_8

K. S. Noll, Space Telescope Science Institute (STScI); W. M. Grundy, Lowell Observatory; S. D. Kern, STScI; H. F. Levison, Southwest Research Institute; and D. C. Stephens, Brigham Young University, report the detection of binary companions to two additional transneptunian objects: 2004 PB_{108} (cf. *MPECs* 2004-R17; *MPO* 86538) and (60621) 2000 FE_8 (cf. *MPECs* 2000-F46; *MPO* 110654). Both were found on images obtained with the High Resolution Camera of the Advanced Camera for Surveys on the Hubble Space Telescope, using the clear filters with one 300-s exposure at each of four dithered positions on the detector. The observations of 2004 PB_{108} were made during 2006 Aug. 4.300–4.377 UT; its two components were separated by an angular distance of $0''.172 \pm 0''.003$ and differ in brightness by 1.2 mag, with the fainter component lying at a position angle of $298^\circ \pm 2^\circ$ from the primary (the projected separation of the objects in the sky plane is 5320 ± 90 km). The observations of (60621) were made during 2007 Jan. 15.066–15.091; its two components were separated by an angular distance of $0''.044 \pm 0''.003$ and differ in brightness by 0.6 mag, the fainter component lying at a position angle of $187^\circ \pm 11^\circ$ from the primary (the projected separation of the objects in the sky plane is 1180 ± 80 km).

COMET C/2006 P1 (McNAUGHT)

N. Dello Russo, R. J. Vervack, Jr., H. A. Weaver, and C. M. Lisse, Applied Physics Laboratory, Johns Hopkins University, report the detection of parent volatiles in comet C/2006 P1 on Jan. 27 ($r = 0.55$ AU, $\Delta = 1.05$ AU, geocentric velocity = +38.2 km/s) using the NASA Infrared Telescope Facility (+ CSHELL). The following species were detected: H_2O, CO, CH_4, HCN, C_2H_2, C_2H_6, NH_3, H_2CO, CH_3OH, NH_2, and OH. For an aperture of size $1'' \times 3''$ centered on the nucleus, they obtained the following line fluxes ($\times 10^{-18}$ W m^{-2}) for representative emission lines: H_2O (ν_3-ν_2 2_{20}-2_{21}), 60; CO (1-0 R0), 20; CH_4 (ν_3 R0), 9.8; HCN (ν_3 R6), 19; C_2H_2 (ν_3 R3), 15; C_2H_6 (ν_7 $^RQ_0$), 38; NH_3 [ν_1 aqQ(3,3)], 10; H_2CO (ν_1, several blended lines at 2781 cm^{-1}), 11. The continuum flux densities [$\times 10^{-15}$ W m^{-2} (cm^{-1})$^{-1}$] within the above aperture were 1.2, 1.7, 2.1, and 7 at 3.02, 3.30, 3.59, and 4.69 microns, respectively. Preliminary results are given assuming a rotational temperature of 150 K for all species. The H_2O production rate was 1.7×10^{30} molecules/s, and the abundances relative to H_2O were as follows: CO, 2 percent; CH_4, 0.45 percent; C_2H_6, 0.45 percent; C_2H_2, 0.5 percent; H_2CO, 0.5 percent; NH_3, 2 percent; HCN, 0.25 percent.

