SPECTROMETRY AND POLARIMETRY OF COMET 8P/TUTTLE. S. F. Velichko[1,2], F. P. Velichko[1], M. Kuznetsov[2]. [1]Institute of Astronomy of Karazin Kharkiv National University, Svobody sq.4, 61077 Kharkiv, Ukraine, honorus@mail.ru. [2]International Center for Astronomical, Medical and Ecological Research, Kyiv, Ukraine

Spectrometry and polarimetry of comet 8P/Tuttle were carried out with 2-m telescope of IC AMER (peak Terskol, Caucasus) and with 0.7-m telescope of Institute of Astronomy of Karazin Kharkiv National University, respectively.

Spectral observations were obtained on January 12, 2008 by using multi-mode cassegren-echelle spectrograph in range of wavelengths from 3900Å to 5300Å with resolution $\lambda/\Delta\lambda$=1500. We have calculated production rates of C_3 and C_2 molecules and dust production in blue continuum of the comet. The comet dust production in near-nucleus region D=1854 km equals to log(Afρ(4450Å))=6,87 cm. The production rates of carbon molecules are the following: log Q(C3)= 28,56 mol/s, log Q(C2)= 28,58 mol/s.

Polarimetric observations were obtained on January 9, 2008 by using one-channel photometer-polarimeter with wide-band red continuum filter WRC (7228/1140Å) [1]. The value of linear polarization equals to P=8,2±0,3% under the comet phase angle α=66°,8. Diameter of observed coma region is about ten times more then for the spectrometry (D=17236 km). The obtained value of polarization degree is considerably less, than the observed one for dust-rich comets (P≈20%, [2]).

Thus, the observed in near-nucleus region dust production Afρ characterizes the comet as a very dust-rich object. But the linear polarization of wide region of coma is close to values of poor-dust comets. It means that the dust component of Tuttle's atmosphere concentrates into small near-nucleus region, mainly.

References: [1] Velichko S.F. et al., (2005) *Earth, Moon, and Planets* 97, 379-386. [2] Kiselev N.N. et al., (2005) *Earth, Moon, and Planets* 97, 365-378.