**Data Release 9:** Sokół et al. 2015, *Interstellar Neutral Helium in the Heliosphere from IBEX Observations. II. The Warsaw Test Particle Model (WTPM)*

**File name:** totalIonizationHe.txt

**File description:** total ionization rates for interstellar neutral helium in the ecliptic plane at 1 AU as Carrington rotation averages. Total ionization rates are given as a sum of photoionization by solar EUV radiation, charge exchange with solar wind protons and alpha-particles for the stationary atom approximation, and electron impact ionization for the slow solar wind regime.

**File contents:** time [decimal year], ionization rate [s^-1], Carrington rotation number

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**References:**

**general:** Sokół et al., 2015, *Interstellar Neutral Helium in the Heliosphere from IBEX Observations. II. The Warsaw Test Particle Model (WTPM)*, ApJS

**photoionization:** Sokół & Bzowski, 2014, *Photoionization rates for helium: update*, arXiv:1411.4826

**charge exchange and electron impact ionization:** Bzowski et al. 2013, *Modulation of neutral interstellar He, Ne, O in the heliosphere: survival probabilities and abundances at IBEX*, Astronomy & Astrophysics Vol 557, A50, doi:10.1051/0004-6361/201321700

**solar wind structure:** Sokół et al. 2013, *Heliolatitude and time variations of solar wind structure from in-situ measurements and interplanetary scintillation observations*, Solar Physics Vol 285, pp 167-200, doi:10.1007/s11207-012-9993-9

**More details about the ionization models available at:**

<http://www.cbk.waw.pl/~jsokol/solarParamsModel.html>