

IBEX Data Release 11

This data release incorporates IBEX data products from three publications in 2016. The data includes interstellar oxygen parameters for 2009 and 2010 from Schwadron et al. (2016), spin-angle count rates for the warm breeze fit from Kubiak et al. (2016) and all-sky maps of secondary interstellar helium and oxygen from Park et al. (2016), as well as additional supporting data products.

[Determination of Interstellar O Parameters Using the First Two Years of Data from the Interstellar Boundary Explorer](#)

by Schwadron et al.

- Includes Data Products: Interstellar Oxygen Parameters for the first two years of the IBEX mission, State Information for the Earth and IBEX, and Spin-Axis data for IBEX.
- Provides the first detailed analysis of interstellar neutral (ISN) oxygen properties using IBEX data.
- Finds that ISN oxygen parameters are similar to those of the He primary component, indicating that the local interstellar plasma near the Sun is relatively unaffected by turbulent heating.
- Observes key differences between primary O and He parameter tubes (relation between speed and longitude), which indicate enhanced filtration of interstellar oxygen due to its higher charge-exchange ionization rate.
- Derives ISN O density that, within uncertainties, is consistent with previous estimates.

[Interstellar Neutral Helium in the Heliosphere from IBEX Observations. IV. Flow Vector, Mach Number, and Abundance of the Warm Breeze](#)

by Kubiak et al.

- Includes Data Products: IBEX Spin-Angle Count Rates, Covariance Matrix of IBEX Spin-Angle Count Rates, and IBEX Good Times for Warm Breeze fit.
- Determines the temperature, abundance, and inflow velocity vector of the Warm Breeze with greater precision than was previously possible.
- Finds that compared to ISN He, the Warm breeze is 25% higher in temperature, with only 5.7% of the density and 40% of the inflow speed and that the inflow is shifted by $\sim 5^\circ$ in ecliptic longitude and $\sim 7^\circ$ in latitude.
- Shows that the inflow speeds of the Warm Breeze, ISN He and ISN H are co-planar.
- These findings strongly indicate that the Warm Breeze is the secondary population of ISN He and that the ribbon center points along the local interstellar magnetic field.

[IBEX Observations of Secondary Interstellar Helium and Oxygen Distributions](#)

by Park et al.

- Includes Data Products: All-Sky Maps of Secondary Interstellar He and O, Measured Data Files of Direct Events, List of Super Good Times, and Orbit Information files.
- Produces all-sky maps for He and O atoms with sputtering corrections in IBEX reference frame.
- Investigates the directional distributions of the secondary interstellar neutral He and O atoms at Earth's orbit.
- Discusses the relationship between the flow speeds and directions of the secondary interstellar neutral He and O atoms.