BOSTON UNIVERSITY

Boston University College of Arts & Sciences
Center for Space Physics

2019—2020 SPACE PHYSICS SEMINAR SERIES

Variability in the Position of the IBEX ENA Ribbon

The Interstellar Boundary Explorer (IBEX) mission, launched in 2008, measures energetic neutral atoms (ENAs) produced by charge-exchange interactions between solar wind protons and interstellar neutrals at the boundary of the heliosphere. Among its numerous discoveries, IBEX observed a narrow ribbon (~20o) of enhanced ENA emissions at energies from ~0.2 keV to ~6 keV encircling the celestial sphere, with an intensity factor ~2-3 times greater than the surrounding globally distributed flux (GDF). The ribbon is brightest at ~1 keV and broadens with increasing energy.

In this talk, I will present an overview of the IBEX mission and review the scientific discoveries obtained to date using observations of ENAs from distant plasma regions within our solar system and beyond. I will then focus on the ENA ribbon properties and their variations over 9 years of data, and discuss the implications of these results on the ribbon origin and dominant physical processes.

Thursday, September 26th

4:00-5:00 p.m.

725 Commonwealth Ave | Room 502

Maher A. Dayeh

Southwest Research Institute