

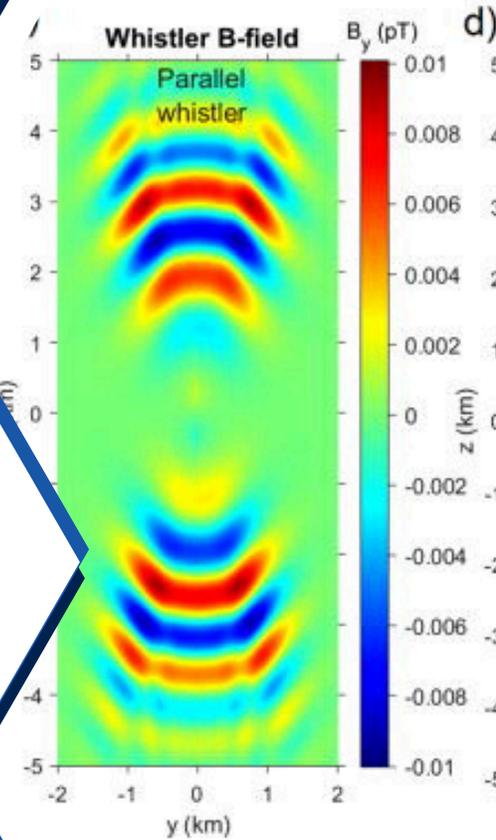
2025 Inspiration Award

BEST FACULTY INNOVATION DISCLOSURE(S)

“Space Debris & Radiation Removal” + “In-situ Passive Tracking & Detection of Space Debris Methodology”

Innovator:

Paul Bernhardt



- Developed by Paul Bernhardt, High-frequency Active Auroral Research Program (HAARP) Chief Scientist, Geophysical Institute.
- Developed Plasma Astrodynamics (PAD) that permits detection and tracking of small space debris in orbit through the Earth's Ionosphere.
- Designed a Space Debris Hunter (SDH) with vector electric and magnetic field sensors of plasma waves emanating from space objects.
- Created new algorithms to distinguish between natural emissions and plasma waves from man-made objects and materials in space.