#111 Received 01/20/2015

Zawdie, Katherine; Huba, Joseph; Drob, Douglas; Coker, Clayton; McDonald, Sarah
Naval Research Laboratory

Ionospheric Raytracing with MoJo

Abstract:
To understand HF radio wave propagation through the ionosphere we have created a new full-physics, ionospheric raytracing model called MOJO (MOdified JOnes-Stephenson). This new code represents a significant advance, capitalizing on modern computational techniques as well as incorporating new understanding of the spatiotemporal variability of the background ionosphere. In this paper we exploit the high-fidelity capabilities of SAMI3 (Sami3 is Another Model of the Ionosphere) and MOJO to simulate traveling ionospheric disturbances (TIDs), examining the relationship between various HF propagation observables and TID characteristics.