

Canadian Association of Physicists Division of Atmospheric and Space Physics
Annual Workshop 18-21 February 2020, Fredericton, NB Canada

G.C. Hussey, A.S. Maxworth; K.A. McWilliams; G.J. Sofko; H.G. James; A. Yau

University of Saskatchewan

Proton Whistlers Observed with RRI on ePOP/SWARM-E

Natural radio emissions of proton whistler waves have been observed with the RRI (Radio Receiver Instrument) on ePOP/SWARM-E. The RRI was configured as a polarimeter for a campaign from 19 May to 19 August, 2018 to observe natural radio emissions. In addition to electron whistler observations, cases of proton whistlers, which are generated from the latter, were observed (proton gyrofrequencies, cross-over frequencies, etc.). Here we present the generation sources of the proton whistlers, including mapping their source locations, as observed by RRI: locally generated; trans-equatorial proton whistlers (TEPW); and ionospherically reflected proton whistlers (IRPW).

ePOP/RRI; proton whistlers