



IARPA HF Geolocation Phase 1B Proposers' Day
Riverdale, MD July 13, 2012

- Lowell Digisonde International, LLC.
- Lead Investigator: Dr. Bodo Reinisch
- Current Team Members:
 - Ryan Hamel
 - Ivan Galkin
 - Xueqin Huang



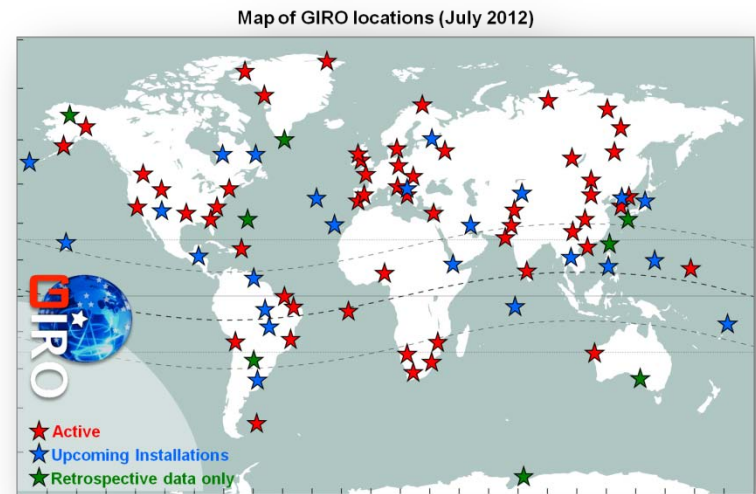
Digisonde 128
(1970)



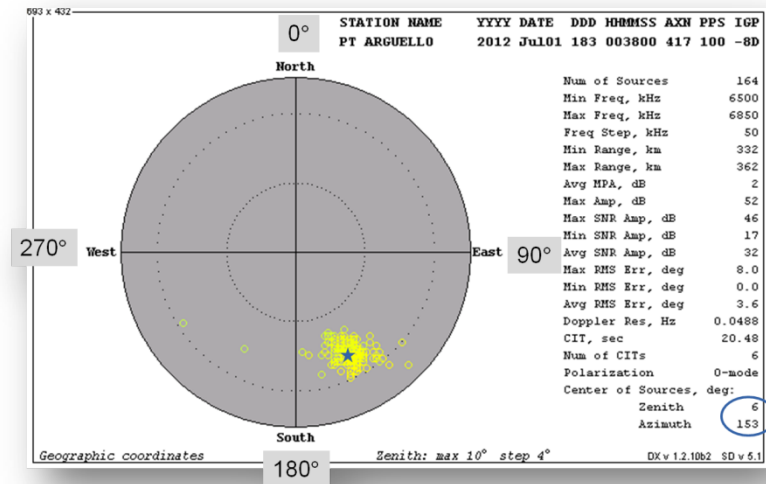
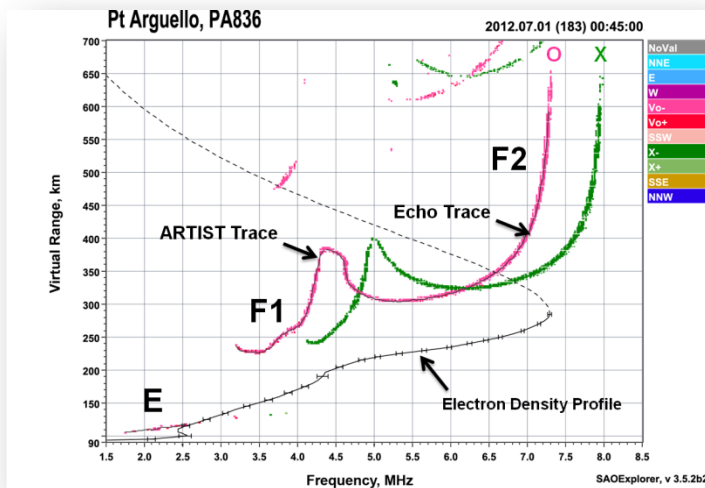
Digisonde 256
(1978)

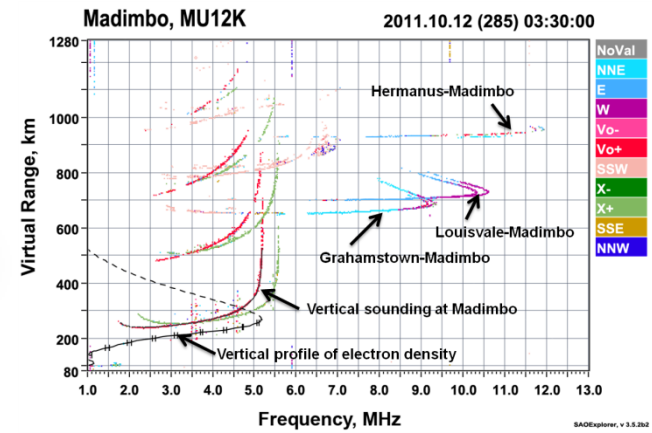


Digisonde DPS
(1993)



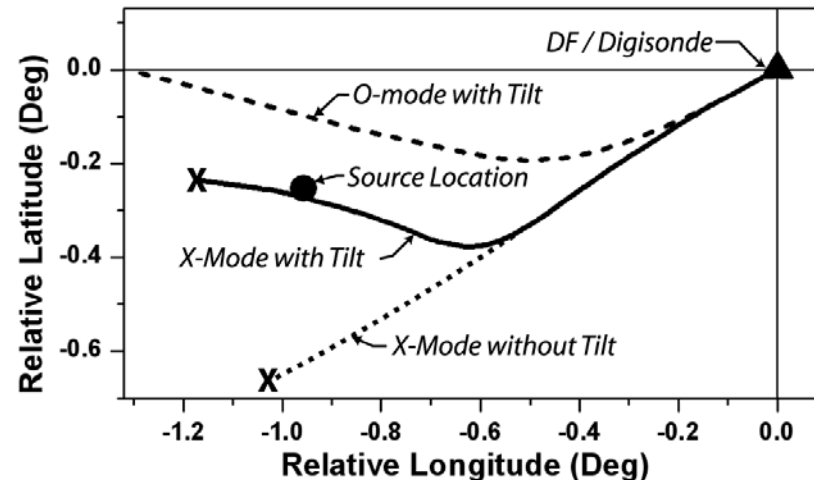
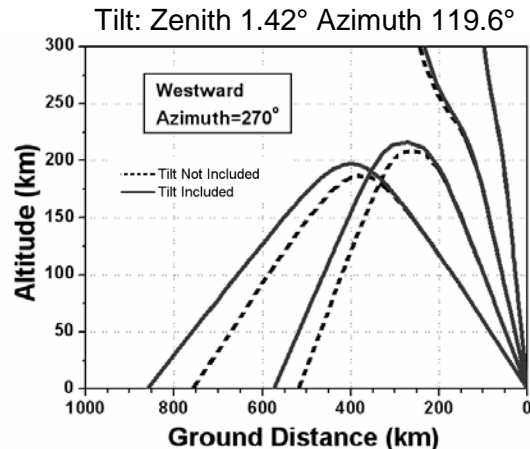
- HF ionospheric sounding
 - Ionogram-derived electron density profiles
 - Skymap-derived ionospheric tilt
 - Raytracing through tilted ionosphere





- Digisonde 4D
 - Generation 4 of Lowell ionospheric sounders
 - 37 instruments built since 2008
- Ray tracing in tilted ionosphere
 - Tilt angle used to build 3D density distribution

Millstone Hill, 2002/282/1200UT
f=10MHz





- Cooperation scenarios:
 - Provide digisonde sensing capability to other groups
 - Provide ray tracing calculations based on 3D electron density distributions from digisonde data
 - Operate a real-time 3D assimilating model based on adjustable IRI maps of NmF2 and hmF2
 - Provide ground-truth oblique sounding data for Observing System Simulation Experiment (OSSE)



Contact Information

- Dr. Bodo W. Reinisch, CEO
- Lowell Digisonde International, LCC
- Bodo.Reinisch@digisonde.com
- +1 978 735 4752
- www.digisonde.com