



VHF Bermuda Radar

CARE Review
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Experiment Specifications

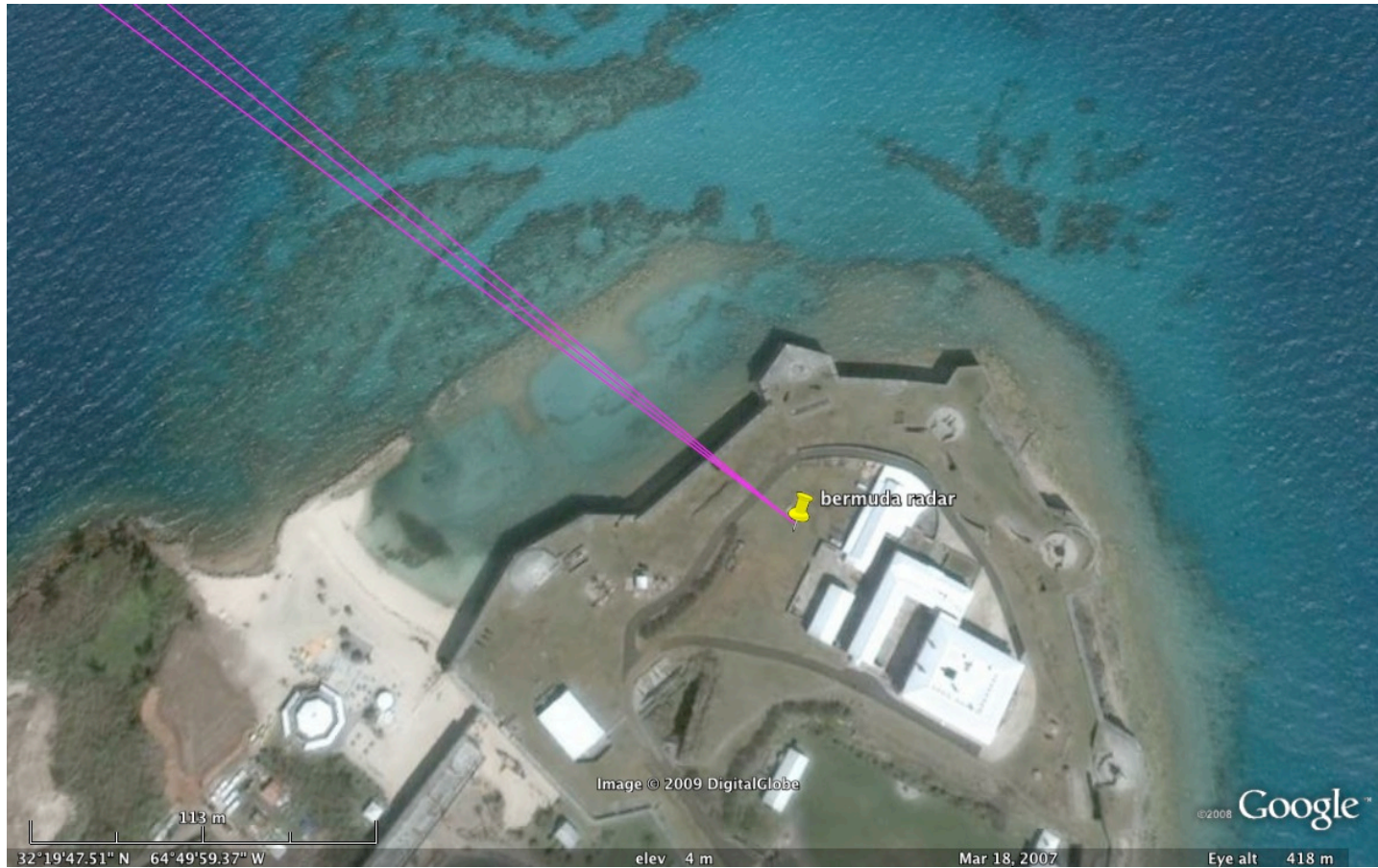
- VHF detection of field aligned plasma irregularities during sounding rocket chemical release
- Chemical release to occur at an altitude of 280 km
- Radar has to be oriented perpendicular to the Earth magnetic field at 280 km

Radar Description



- **Frequency:** 50 MHz
- **Location:** 32.32952°N, 64.83289°W, Maritime Museum near Dockyard, Bermuda
- **Antenna:** Two phased sub-arrays of four 24-element COCO strings with an east-west separation of 50 m. On transmission both sub-arrays are excited simultaneously. On reception each sub-array is sampled independently for interferometric detection of the scattering regions.
- **Beam pointing:** Both sub-arrays are pointed to the NNW in at an elevation angle of approximately 10.8 degrees to achieve perpendicularity to the geomagnetic field at 280 km altitude.
- **HPBW:** In azimuth 3 degrees, in elevation 20 degrees

Maritime Museum, Dockyard



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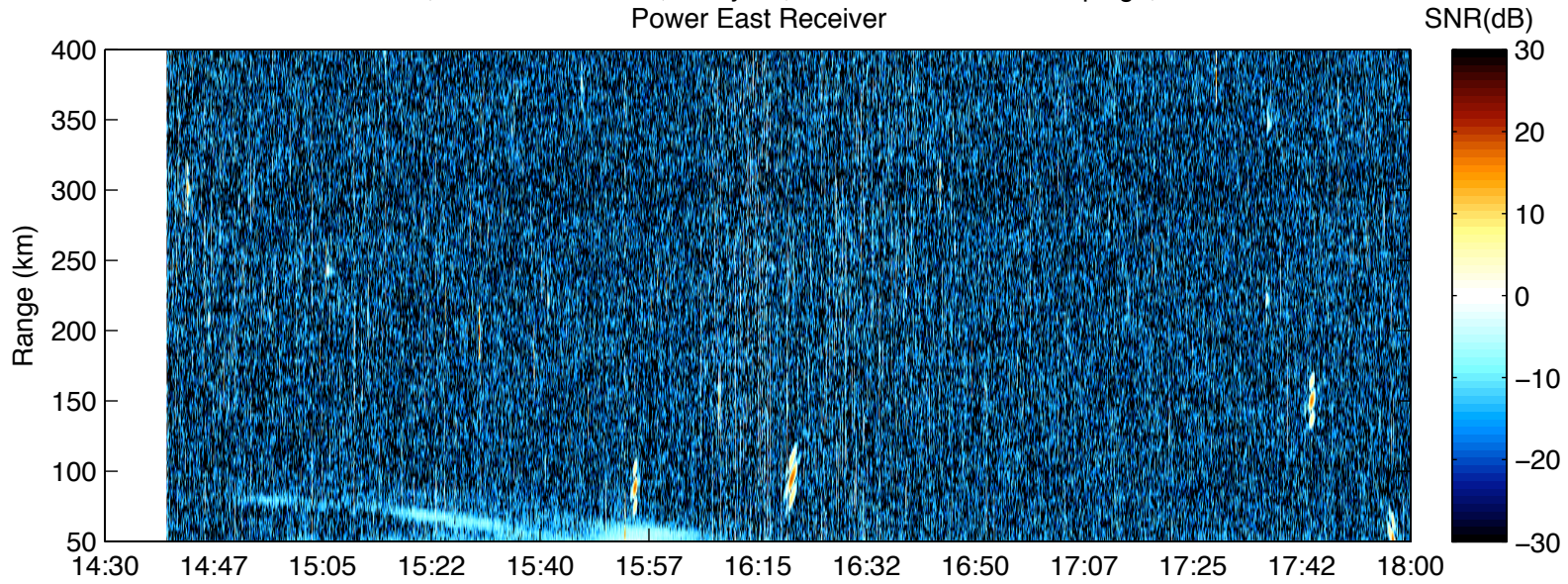


Physical Layout



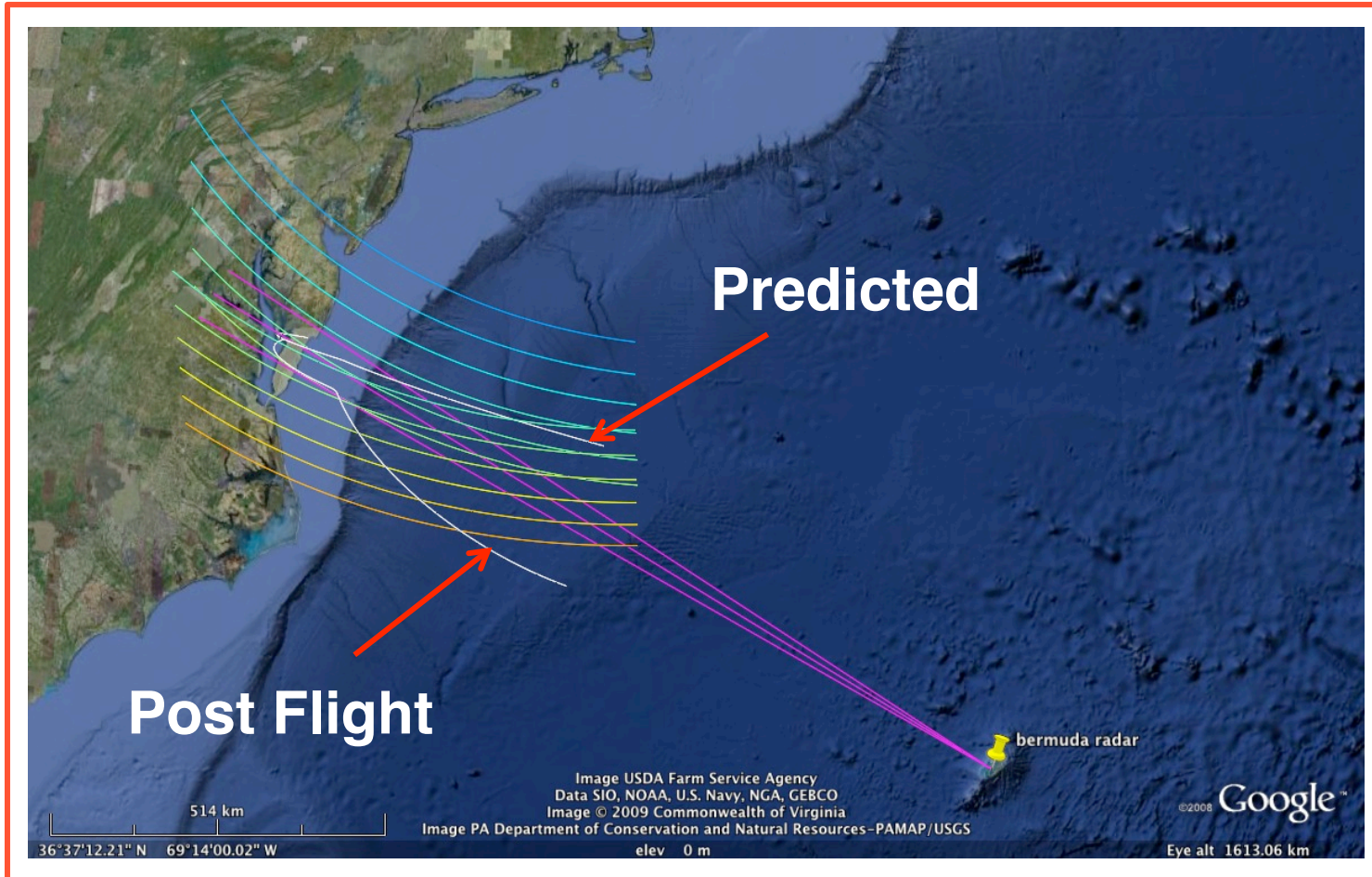


VHF Radar, Maritime Museum, Dockyard, Bermuda – CARE Campaign, 2009
Power East Receiver



September 19, 2009 LT (hr:mm)







Acknowledgements

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