



Photo: showing 12m (vertical height) transmit antenna.

Research conducted under the following National Science Foundation grants:

Grant#

9907854 Collaborative Research: Coastal Ocean Advances in Shelf Transport (COAST)

0237710 Collaborative Research: Productivity, Biogeochemical Transformations and Cross-Margin Transport in an Eastern Boundary Buoyant Plume Region

0000734 Collaborative Research: GLOBEC: Mapping the Evolution of Mesoscale Jets and Eddies in the Upwelling Ecosystem off Cape Blanco, Oregon, Using Long-Range High Frequency Radar

Fee Exempt:

This research is being sponsored by federally funded research grants to a public university, and as such should be considered fee exempt.

Research Objectives:

Mapping of the ocean surface currents along the Oregon coast is the primary objective. This research is on going, hence the request for a 5 year license.

Technique:

The equipment measures ocean currents using the echoes of radio waves scattered continuously from ocean waves. The received radio waves are shifted in frequency by the combined effects of ocean waves and ocean currents. The known properties of the ocean waves are then subtracted, leaving the effects of the ocean currents.

Frequencies and Emissions:

Note: when entering frequencies on the WWW form provided, errors were encountered generating multiples of the same frequencies. Below find a list of desired frequencies (six total).

Frequency MHz	Station Class	Output Pwr/ERP	Mean/Peak	Frequency Tolerance	Emission Designator	Modulating Signal
4.375-4.425	FX	90W/40W	P	0.0010%	50K0P0N	FM Sweep

4.445-4.495	FX	90W/40W	P	0.0010%	50K0P0N	FM Sweep
5.525-4.575	FX	90W/40W	P	0.0010%	50K0P0N	FM Sweep
4.555-4.605	FX	90W/40W	P	0.0010%	50K0P0N	FM Sweep
4.575-4.625	FX	90W/40W	P	0.0010%	50K0P0N	FM Sweep
4.775-4.825	FX	90W/40W	P	0.0010%	50K0P0N	FM Sweep