



**For Details, Contact:**

**Patrick Kelly, VP Sales and Marketing**  
Coastal Environmental Systems  
820 – 1<sup>st</sup> Avenue S  
Seattle, WA  
Pkelly@coastalenvironmental.com  
www.coastalenvironmental.com  
206.682.6048

---

**COASTAL ENVIRONMENTAL SYSTEMS**

**First SMOOS (U) is up and running - ready to add to Warfighters capability!**

---

**Seattle, WA:** SMOOS (U), the Navy's Shipboard Meteorological and Oceanographic Observing System (Upgrade), recently installed on the USS George Washington (CVN73), is up and running, including interfaces to NITES (Naval Integrated Tactical Environmental (Sub) System) and the MWS (Moriah Wind System). The primary purpose of SMOOS is to measure meteorological parameters used to determine Evaporation Duct Height.

Evaporation Duct Height is the most commonly occurring anomalous propagation phenomenon over the ocean. The height of this Duct is dependent on atmospheric variables and is a major input to microwave propagation prediction models. The Duct has a large effect on radar and communications propagation.

*In a paper published by the Naval Post Graduate School, it was noted that "commanders could better utilize and position their assets to improve force protection or strike effectiveness based on knowledge of the future propagation conditions throughout the tactical battle space. Radar and optical sensor systems could also be adjusted and employed to achieve optimum performance in the current environment"<sup>1</sup>*

The second SMOOS will be installed this month on the USS John F. Kennedy (CVN67). SMOOS (U) is composed of many sensors located at various places on the ship. There is a set of two Meteorological (MET) sensors, a Seawater Surface Temperature (SST) sensor, Cloud Height, Visibility, and Precipitation sensors. The MET sensor suite consists of sensors to measure Air Temperature, Relative Humidity, Barometric Pressure, Solar Radiation, and Wind Speed and Direction. The SST measures both Sky Temperature and Sea Surface Temperature using infrared technology. Data is sent to the NITES system and exchanged with the MWS system.

Coastal's history with the SMOOS program is a long one. The Coastal solution for the original SMOOS, some 16 years ago, was rated technically Number One. However, Coastal, as a sub-contractor, was not allowed to implement this resolution, as the prime contract was awarded to another company not proposing the Coastal Solution. Coastal bid as the prime for the upgrade and was awarded the contract.

---

<sup>1</sup> EVALUATING MODEL PREDICTIONS OF LOW-LEVEL MICROWAVE PROPAGATION OVER THE OCEAN, Paul Frederickson\*, Kenneth Davidson and Adam Newton, Naval Postgraduate School, Monterey, CA 93943

**For Immediate Release**

. . . . .