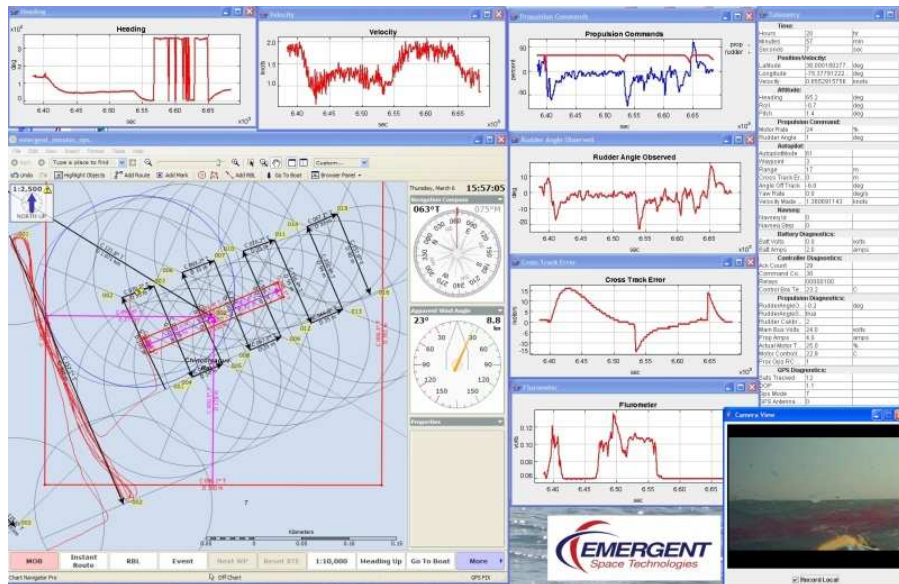**Harmful Algal Bloom Monitoring Exercise Conducted**
03/07/2008

A recent Harmful Algal Bloom (HAB) exercise was conducted in the waters of Virginia. During the exercise Rhodamine dye was dispersed into the water to simulate a HAB. A Voyager class Autonomous Surface Vehicle (ASV) platform equipped with sensors was deployed for this exercise. The platform monitored the simulated bloom using a repeated transect line as well as a basic raster scan pattern. The exercise provided an opportunity to checkout platform sensors, systems, and algorithms that would be used to detect and monitor such an event. The simulated bloom could have just as easily been an oil, chemical, or sewage spill/release.

The screen shot displays various telemetry values received from the platform. The heading plot shows the orientation of the platform. The velocity plot shows the speed of the platform. The affects of wind/current can be observed with different heading. The propulsion commands plot shows the propulsion (red) and steering (blue) commands generated by the onboard autopilot. The table on the right shows instantaneous telemetry values from the platform giving additional vital information on platform performance. The large situational awareness screen shows the platform's location on a NOAA nautical chart and plots the course (red). Compass heading and wind angle in relation to the platform are also shown in the upper right hand corner on virtual instrument gauges. The flurometer plot on the bottom is the actual reading from a Rhodamine flurometer and it shows the peaks as it passes through the simulated bloom. Finally, the lower right hand side of the screen shows a view from the forward looking camera on the platform. Notice the simulated bloom in the cameras field of view. This display provides an operator with additional perspective to events occurring on the water.

Screen shot of Platform Mission Operations Suite Telemetry Displays