**Using Oceanographic Data in Giovanni-4 and Federated Giovanni: Synergistic Scenarios**

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Giovanni-4 (G4) , the next generation of the Geospatial Interactive Online Visualization ANd aNalysis Infrastructure (Giovanni) is now available to the public in Verson 4.13. G4 will fully replace the current Giovanni system (Giovanni-3) at the end of August 2015. G4 offers faster results, more visualization capabilities, and a single user interface through which any data variables in the system can be selected for simultaneous analysis. The Federated Giovanni project is currently adding data variables from partner data centers, which are the Land Processes DAAC (LPDAAC), the Physical Oceanography DAAC (PODAAC), the Ocean Biology Processing Group (OBPG), and the MODIS Adaptive Processing System (MODAPS). The unprecedented side-by-side availability of these data variables in the G4 system can enable improved insight into oceanographic events and processes. Several potential analysis scenarios are presented here, including the impact of severe storms on ocean optical properties and salinity in the coastal zone; depiction of the variable wind regime and chlorophyll concentrations in the equatorial Pacific during El Niño and La Niña events; examination of land vegetation indices, sea surface temperature, and ocean optical properties for coastal regions during drought conditions; and the effect of dust storms on adjacent ocean basins. The scenarios will demonstrate how G4 and Federated Giovanni provide a gateway for to access and visualize remotely sensed data variables that will be of greatest use to a particular research topic.