

Dynamics of Earth and Ocean Systems (DEOS)

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Abstract: The Dynamics of Earth and Ocean Systems (DEOS) program was developed in 1997 to promote long-term observations in the oceans. DEOS, under the sponsorship of the Consortium for Ocean Research and Education (CORE). DEOS supports NSF planning for the Ocean Observations Initiative (OOI) Major Research Equipment and Facilities Construction (MRE-FC) program, and advocates the collection of long-term time-series data with the recognition that this is the only viable approach to observe transients and changes and to enhance the signal-to-noise ratio of weak signals. Moored ocean buoys as well as seafloor-cabled systems are technically feasible approaches for making sustained time series observations in the oceans and will be important

components of any long-term ocean observing system. DEOS includes measurements over large time and spatial scales including global and coastal observatories and regional networks. The need for real-time delivery of heterogeneous data, integrated with processing, acquisition, and archiving systems is shared by systems at all scales. The OOI MRE-FC has been included in the President's budget for funding in FY06 for five years at a total level of approximately \$120M. I shall describe current planning for the OOI including early results from several pilot projects undertaken in the past year to demonstrate technologies needed for supporting this permanent presence in the oceans.