Potential Partnership
NASA Ocean Data Analysis Portal

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Motivation

• Need for a tool to identify collocated satellite and in situ data has been recognized in the satellite, climate, and other research communities
  – Discussed at OceanObs’ 09, MARCDAT3, CLIMAR4, etc.
• Typically data matching is done using one-off programs developed at multiple institutions
• Tool should reduce duplicate development and repeated man hours required to match satellite/in situ data
  – Remove the need for satellite and in situ data to be collocated on a single server
  – Systematically recreate matchups if either in situ or satellite products are re-processed (new versions), i.e., matchup archives are always up-to-date.
Use Cases for Data Matching Service

Defined Use Cases

• Satellite Cal/Val and algorithm development
  – Primary focus of DOMS prototype

• Decision support
  – Planning field campaigns
  – Real-time operational activities

• Scientific investigation
  – Process studies
  – Model assimilation services
  – User friendly interface to support student research

• Future matching capabilities
  – Satellite to satellite
  – Satellite/in situ to model
NASA funded development of the Distributed Oceanographic Match-Up Service (DOMS).

A web-accessible tool that reconciles satellite and in situ datasets.

- Input a series of geospatial references for satellite observations (e.g., footprint location, date, and time).
- Return the in situ observations that are “matched” to the satellite data within a selectable temporal and spatial domain.

DOMS UI, Workflow, and Webservice

- Use UI or API
- Export data subsets
- Export matched data
- Summary graphics
OceanWorks

- NASA funded extension that integrates several technologies into a ocean data analytics platform known as OceanWorks
  - DOMS
  - OceanXtremes
  - MUDROD
  - PO.DAAC data system
- Prototype integration with PO.DAAC’s State of The Ocean (SOTO) – Extremes SOTO
- Strong interest in community to integrate additional in-situ data sources
  - R2R mentioned several times at Ocean Sciences, AGU and other meetings.
Questions?

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Disclaimer: Any opinions, findings, and conclusions or recommendations provided are those of the contributors to the DOMS project and do not necessarily reflect the views of NASA.