

## EBS/CMOP Undergraduate Intern Mentoring Opportunity

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**Project Title:**

Detecting Dissolved Organic Carbon in the Columbia River Estuary

**Context for Project:**

The CMOP SATURN collaboratory has a number of optical instruments that have the potential to yield rich information about DOC dynamics and has yet to be carefully analyzed for scientific purposes.

**Brief Description.**

The project will seek to better understand the relationship between the concentration of Dissolved Organic Carbon (DOC) and optical methods of detecting DOC in aquatic ecosystems. A large database of optical measurements collected during the last three years of the CMOP program will be analyzed to assess a variety of optical measurements including absorbance and florescence measurements from in situ instrumentation and spectrofluorometric measurements from cruise samples. In addition, new samples will be analyzed as they become available during CMOP research initiative activities during summer 2012.

**Proposed Outcomes/Broader Impact:**

The goal of the project is to link optical measurements from the SATURN observatory with DOC concentrations in the Columbia River to better assess the spatial and temporal variability in DOC loading to the estuary and coastal ocean. Laboratory research will be minimal and data analysis will be emphasized during the course of the internship. It is expected that the selected student will do the bulk of the data analysis that will result in a manuscript for publication, and depending on their progress, the student could be the first author of the manuscript.

**Proposed timeline (within a 10 week span):** Week 1-2: Literature Search and Reading, Week 3-5: Database analysis, dataset compilation and new sample collection/measurements, Week 6-9: Data analysis and report/manuscript writing. Data dissemination activities (group presentation, weekly progress reports) will be expected throughout.