OCEAN SURVEY EXPERIMENT
Science Goals & Observational Applications

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Goal: Collect observations targeted at better understanding the response of hurricanes to changes in underlying ocean conditions. The observational data collected in this experiment will be used to evaluate and improve hurricane model physics related to air-sea interaction [*IFEX Goals 1, 3*]. See the 2019 HRD HFP web page for additional details:
http://www.aoml.noaa.gov/hrd/HFP2019/index.html

Observational Applications: Physical parameterizations related to air-sea coupling in hurricane forecast models remain to be evaluated and improved to improve track and intensity prediction. The ocean and near-surface atmosphere observations from this experiment would provide a unique data set for model evaluation and physics improvement. The upper ocean kinematic and thermodynamic structure, as well as surface fluxes can be assessed in the hurricane prediction models by comparing to the observations collected in this experiment. The observational data can also be analyzed to derive new physics for the coupled hurricane model. Furthermore, the observational data collected in this experiment can also be used for model initialization purpose to improve the representation of the ocean and near-surface structure. Furthermore, detailed sampling of the kinematic and thermodynamic and structure of the ocean before the storm and in storm should provide better initialization of the ocean model used in the coupled hurricane modeling system.