



# CARICOOS

CARIBBEAN COASTAL OCEAN OBSERVING SYSTEM

## CARICOOS Hurricane Glider Operation in NE Caribbean

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**Performance Period: June 1, 2019 – November 30, 2019**

### LONG-TERM GOALS

Our long-term goal is to continue the collaborative efforts with NOAA/AOML and U.S. Navy Naval Oceanographic Office (NAVO) by assisting in the deployments, recoveries and refurbishment of SeaGliders. The gliders, deployed during the 2019 hurricane season, provided highly valuable open ocean data towards the improvement of hurricane intensity forecasts.

### MILESTONES / OBJECTIVES

MILESTONE / TASK	Q1	Q2	Q3	Q4	EXPECTED COMPLETION DATE	CURRENT STATUS
<b>MONITORING UPPER OCEAN PROPERTIES AND CLIMATE VARIABILITY</b>						
Deployment, retrieval, and refurbishment of NOAA-AOML gliders					November 2019	Completed
Deployment and retrieval US NAVY gliders					November 2019	Completed

### WORK COMPLETED

- Received 5 NOAA-AOML SeaGliders (SG663, SG664, SG665, SG666 and SG667) on July 1, 2019.
- Assisted NOAA-AOML personnel with the refurbishment and preparation of the underwater gliders.
- Two NOAA-AOML SeaGliders (SG663 and SG664) were deployed from R/V Sultana at the SR site located south of La Parguera, Lajas on July 16, 2019.
- Two NOAA-AOML SeaGliders (SG665 and SG666) were deployed from M/V Mariangie at the NR site located north of San Juan on July 18, 2019.
- NAVO gliders (NG 231, NG278, and NG282) were received on September 3, 2019.
- NAVO gliders (NG231, NG278 and NG282) were deployed from R/V Sultana at SR site located south of La Parguera, Lajas on September 9, 2019.



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- Assisted NOAA-AOML personnel with the piloting of the gliders SG663 and SG664 from October 28, 2019 to November 8, 2019.
- On November 11, 2019, an emergency recovery of NAVO glider NG278 was performed.
- On November 12, 2019, CARICOOS team recovered NOAA-AOML SeaGliders (SG663 and SG664) and NAVO glider (NG231) and, on November 14, 2019, the NOAA-AOML SeaGliders (SG665 and SG666).

## **MAJOR OUTCOMES**

- The expansion of glider observations in the tropical Atlantic waters with the US Navy gliders has allow to cover more ground in areas embedded in the “hurricane alley”, which frequently experiences tropical cyclonic events and where most events reach their peak intensity.
- The data collected has contributed into resolving, understanding, and monitoring upper-ocean dynamics for improving forecasts of tropical cyclone intensification. Furthermore, the acquired data has provided a better understanding of the mesoscale processes driving complex energetic hydrodynamics off the south coast of Puerto Rico.

## **RELATED PROJECTS**

None

## **WORK PLAN FOR UPCOMING PERFORMANCE PERIOD (December 1, 2019 – May 31, 2020)**

- Coordinate the deployment of several underwater gliders for the 2020 Atlantic hurricane season.
- Contract adequate private vessels in the region and or entities that can provide ship support services to deploy the underwater gliders.
- CARICOOS will assist NOAA/AOML personnel with the refurbishment of the underwater gliders to prepare them for the 2020 Atlantic hurricane season.

## **PUBLICATIONS & PRODUCTS**

None