

2018 WHITE PAPER SUBMISSIONS TEMPLATE

White Papers will solicit scientific rationales for deep-sea exploration (below 200 meters) focusing on expanding knowledge in the subject areas and regions of the ASPIRE Initiative. These papers are not funding proposals; they will be used as background materials to direct focused workshop discussions. White Papers must include the following headings (unless otherwise noted).

CONTACT INFORMATION

[Primary Contact Email Address Home Institution Office Phone]:

CAPT. Richard Brennan, NOAA/OCS, Chief, Hydrographic Surveys Branch

WILLING TO ATTEND WORKSHOP? (Yes/No): **Yes**

TARGET NAME(S) [Main Feature(s)/Area(s) of Interest]: Outer Limits of Blake-Bahama Ridge

GEOGRAPHIC AREA(S) OF INTEREST WITHIN THE NORTH ATLANTIC OCEAN (Indicate all that apply)

| Northwest | North Central | Northeast **X Southwest** | South Central | Southeast

RELEVANT SUBJECT AREA(S) (Indicate all that apply)

| Biology **X Geology** | Chemistry **X Physical Oceanography** | Marine Archaeology | Other

DESCRIPTION OF TOPIC OR REGION RECOMMENDED FOR EXPLORATION

Brief Overview of Area/Feature

The Blake-Bahama outer ridge is a complex sedimentary structure off the southeast coast of the U.S./southwest part of the North Atlantic Ocean, influenced by both underlying structure and regional currents along the margin.

Brief Summary of Current State of Knowledge

The seaward end of the Blake-Bahama Ridge is poorly defined, with only sparse bathymetric sounding lines crossing the area. The extensive literature in this area (see examples in URLs below) is limited by the lack of high resolution bathymetric information.

<https://academic.oup.com/gji/article-pdf/195/3/1519/17052629/ggt327.pdf>

http://www.who.edu/cms/files/Flood%26Giosan_45601.pdf

[https://doi.org/10.1175/1520-0485\(1997\)027<2187:DFATWB>2.0.CO;2](https://doi.org/10.1175/1520-0485(1997)027<2187:DFATWB>2.0.CO;2)

Rationale for Future Exploration

Existing bathymetric data hints at subtle bathymetric detail that, if fully mapped, would provide much improved insight into the sedimentary and morphological processes of this important area of the continental margin. Additional bathymetry in the Blake-Bahama Ridge area would also assist the United States in convincingly establishing the outer limits of its continental shelf in this area. Moreover, the United States and the Commonwealth of The Bahamas are engaged in maritime boundary negotiations, including in the Blake-Bahama Ridge area. The two nations hold different views on several important matters, including the location of the base of the continental slope in this area. Thus, in addition to strengthening the U.S. documentation establishing the outer limits of the continental shelf, additional bathymetry would also help inform ongoing boundary negotiations.

RELEVANT PARTNERSHIPS (If applicable) (e.g. SponGES, ATLAS, Canada Healthy Oceans Network, etc.): The Atlantic Ocean Research Alliance Atlantic Seabed Mapping International Working Group SeaBed 2030, and US SeaBed 2030, Office of Coast Survey, USGS, Department of State.

Below is a figure (cut into priority sub-areas) and attached are shapefiles of the survey area we're interested in. The figure contains the survey area (outlined in red) and displays the MBS survey lines that currently reside in the NCEI repository. The proposed survey polygon is approximately 42,894 km² and doesn't appear to have many overlapping MBS lines within it.

