

# Project description

## 1. General Information

1.1 Cruise name and/or number:	NISKINE PILOT - F2017-129
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1.2 Sponsoring institution(s):		
Name	Address	Name of Director
Woods Hole Oceanographic Institution	Kerry Ström Marine Operations Coordinator Kstrom@whoi.edu Tel: +1 508-289-3938 Woods Hole Oceanographic Institution 266 Woods Hole Rd. #37 Woods Hole, MA 02543	Mark Abbott

1.3 Scientist in charge of the project:	
Name:	Harper Simmons
Country:	US
Affiliation:	University of Alaska Fairbanks
Address:	2150 Koyukuk Drive Fairbanks, Alaska 99775 US
Telephone:	1 907 474 5729
Email:	hlsimmons@alaska.edu

1.4 Entity(ies) /Participant(s) from coastal State involved in the planning of the project:	
Name:	See Section 6.2.
Country:	
Affiliation:	
Address:	
Telephone:	
Fax:	
Email:	
Website (for CV and photo):	

## 2. Description of Project

2.1 Nature and objectives of the project:
Refine forecasting of upper-ocean shear set by the interaction of wind-forced high mode near-inertial waves and mesoscale conditions.

2.2 Relevant previous or future research projects:
Better understanding of upper ocean mixing is needed to improve models and predictions. Shear and strain of the thermocline also affect short to midrange acoustic propagation.

2.3 Previous publications relating to the project:
Near-Inertial Internal Gravity Waves in the Ocean Matthew H. Alford, Jennifer A. MacKinnon, Harper L. Simmons, Jonathan D. Nash Annual Review of Marine Science 2016 8:1, 95-1

## 3. Geographical Areas

3.1 Indicate geographical areas in which the project is to be conducted (with reference in latitude and longitude, including coordinates of cruise track/ way points):
1) 63N, 25W 2) 61.5N, 27W 3) 61N, 28W 4) 58N, 28W 5) 58N, 23W 6) 61N, 23W

3.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical areas of the intended work and, as far as practicable, the location and depth of sampling stations, the tracks of survey lines, and the locations of installations and equipment.
Chart provided - see Section 10.1.

## 4. Methods and Means to be Used

4.1 Particulars of vessel:
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Name:	NEIL ARMSTRONG
Type/Class:	Ship
Nationality (Flag state):	United States
Identification Number (IMO/Lloyds No.):	9688946
Owner:	United States Navy
Operator:	Woods Hole Oceanographic Institution
Overall length (meters):	72.50
Maximum draught (meters):	4.60
Displacement/Gross tonnage:	2603.00
Propulsion:	2 Siemens AC Electric Motors, 2350 HP
Cruising:	11.00
Maximum speed:	14.00
Call sign:	
INMARSAT number and method and capability of communication (including emergency frequencies):	INMARSAT C- (IMN#) 436903967
Name of master:	Captain Kent Sheasley
Number of crew:	20
Number of scientists on board:	24

4.2 Other craft in the project, including its use:  
none

4.3 Particulars of methods and scientific instruments:		
Types of samples and measurements	Methods to be used	Instruments to be used
Upper ocean temperature salinity and velocity	Operation of remote controlled Kayak	ROSS

4.4 Indicate nature and quantity of substances to be released into the marine environment:  
No

4.5 Indicate whether drilling will be carried out. If yes, please specify:  
No

4.6 Indicate whether explosives will be used. If yes, please specify type and trade name, chemical content, depth of trade class and stowage, size, depth of detonation, frequency of detonation, and position in latitude and longitude:  
No

4.7 Indicate whether protected species be studied. If yes, please specify:  
No

## 5. Installations and Equipment

Details of installations and equipment (including dates of laying, servicing, method and anticipated timeframe for recovery, locations and depth, and measurements):  
No

## 6. Dates

6.1 Expected dates of first entry into and final departure from the research area by the research vessel and/or other platforms:  
Project Start Date: Apr 15, 2018  
Project End Date: Jun 30, 2018

6.2 Coastal State-specific details:		
Coastal Area	Estimated Entry Date	Estimated Departure Date
Iceland	Apr 15, 2018	Jun 30, 2018
Explanation of multiple entries: N/A		
Research will be performed: between 12-200 nm		
Extent to which Iceland will be enabled to participate or to be represented in the research project: Icelandic partners will be participating in the cruise.		
Name, affiliation and contact information for all participants from Iceland: We have travelled to Iceland and met with scientists and Icelandic coast guard personnel. We have two berths for personnel from the		

Icelandic Coast Guard and MFRI (Marine and Freshwater Research Institute). Names of participants TBD.

7. Port Calls

Port	Arrival Date	End Date	Special Logistical Requirements	Shipping Agent
Reykjavik	4/15/2018	6/30/2018	Possible crane for container loading/unloading	TBD

8. Participation of the representative of the coastal State

8.1 Modalities of the participation of the representative of the coastal State in the research project:  
See Section 6.2.

8.2 Proposed dates and ports for embarkation/disembarkation:  
See Section 6.2.

9. Access to Data, Samples and Research Results

9.1 Expected dates of submission to coastal State of preliminary report, which should include the expected dates of submission of the data and research results:  
No more than 60 days from the end date of the research as provided in Section 6.1.

9.2 Anticipated dates of submission to the coastal State of the final report:  
No more than 2 years from the end date of the research as provided in Section 6.1.

9.3 Proposed means for access by coastal State to data (including format) and samples:  
Data will be provided through official channels at no cost to the coastal State(s). Samples will be provided upon request.

9.4 Proposed means to provide coastal State with assessment of data, samples and research results:  
Assessment of data, samples and research results will be provided at no cost to the coastal State(s).

9.5 Proposed means to provide assistance in assessment or interpretation of data, samples and research results:  
Assistance in further assessment or interpretation will be provided upon request.

9.6 Proposed means of making results internationally available:  
The project funds the creation of a data server that will be used to disseminate reports and data as appropriate and in agreement with data sharing agreements between the US and Iceland and as approved by the funding agency.

10. List of Supporting Documentation

10.1 List of attachments, such as additional forms required by the coastal State, etc.:

Attachment Type	Description	Attachment	Submission Date
Proposed Cruise Track	Proposed track and study area	3514375000_NISKINE_study_area.png	Dec 18, 2017

