Dr. Patrica Quinn KN219 NOAA PMEL WACSII
Pre-Cruise Meeting 02/26/2014
Agenda Items

Mission Objectives:
Sea spray aerosol (SSA) impacts the Earth's radiation budget indirectly by altering cloud properties including albedo, lifetime, and extent, and directly by scattering solar radiation. The overarching scientific objective of WACSII is to characterize the properties of SSA in its freshly emitted stated to improve model calculations of the climate impacts of SSA. In addition, simultaneous measurements of surface seawater will be made to assess the impact of ocean properties on SSA.

Science Activities

1. To assess how ocean biogeochemistry impacts sea spray particles, measurements will be made in both high and low chlorophyll-a waters and relevant surface seawater parameters will be measured in situ. Freshly emitted sea spray particles will be generated using NOAA Pacific Marine Environmental Laboratory (PMEL)'s Sea Sweep particle generator which will be deployed over the side of the ship next to the bow. Aerosol particles will be drawn from the Sea Sweep into the aerosol inlet located on top of AeroPhys van on the O2 deck. Aerosol will then be distributed to instruments in AeroPhys, AeroChem, Guest, and Russell vans.
2. Characterization of surface ocean organic material to assess its influence on ocean-derived sea spray aerosol particles. Uncontaminated seawater will be fed continuously to seawater van on the main deck and analyzed for fluorescence, particulate organic carbon (POC), and dimethylsulfide (DMS).
3. Comparison of surface and subsurface seawater POC and DOC. CTD sampling of seawater at several depths will be performed to assess which portion(s) of the seawater carbon pool impacts the composition of SSA.
4. Atmospheric sampling will be conducted continuously while the ship is in transit between Sea Sweep working areas. Atmospheric samples will be drawn into 20' high inlets mounted on top of the AeroPhys and Russell vans. Samples will be distributed from the two inlets to instruments in AeroPhys, AeroChem, Guest, and Russell vans.

Agenda Items:

1. Chief Scientist

Dr. Patricia Quinn: Chief Scientist, Principal Investigator
Organization Name 7600 Sand Point Way NE Seattle, WA United States 98115
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2. Identify operating area:
   Northwest Atlantic
   Lat/Lon: 31° 0.0′ N / 65° 0.0′ W

3. Voyage Info:
   a. **NUMBER**: KN219
   b. **MOB**: May 15th @ WHOI
   c. **DEPARTURE**: May 19th WHOI
   d. **ARRIVA**L: June 6th, WHOI
   e. **DEMOB END**: June 7th, WHOI

4. Schedule Notes:
   - Science can move into rooms onboard May 18th

5. Science party (size) : ____

Pre-cruise and Administrative:

1. Financial responsibility: Purchase Order

2. Personnel forms: Due: April 15th 2014 to kgrodzki@whoi.edu
   https://www.whoi.edu/fileserver.do?id=19605&pt=2&p=19610

3. Berthing Plan: Complete and remit to csmith@whoi.edu
   http://www.whoi.edu/cms/files/dpandya/2007/1/kn_sciberth_17271.pdf

4. Any Special Food Requirements? (Kosher, Allergy, Vegetarian, etc)

Instrumentation & Technician Support *:*

1. **General Duties of Marine Technician :**
   SSSG Technicians (WHOI SSSG) (Amy Simoneau + TBA)
   WHOI sssg techs do not stand watches. But are available 24/7 to train and to assist in operations.

2. **Science Party Supplied Equipment:**

   Equipment

   Sea Sweep (1,000 LBS) 6’ x 8’**:** will need to be lowered over the side of the ship with the ship's crane. It is deployed from the stern then pulled along side the ship to the bow. Ideally, it is deployed on the side of the ship that has minimal discharges.

O-2 Deck Van Frame

Vans (x5)

- **Aerochem** (O-2 Deck, port side, forward) 15,000lbs, 480 VAC, 70 A, 3-phase
- **AeroPhys** (O-2 Deck, inboard of AeroChem Van) 17,000lbs, Phone, compressed air, 480 VAC, 70 A, 3-phase
- **SIO Van** (O-2 Deck, Starboard) 15,000lbs, Phone, compressed air, 480 VAC, 70 A, 3-phase
- **PMEL AI Van** (O-1 Deck Port) 12,000lbs, Phone, Fresh water, Ethernet, 480 VAC, 30 A, 3-phase
- **PMEL Storage** (O-1 Deck Starboard) 12,000lbs, 110 VAC

3. **WHOI general use equipment required for cruise :**

Shipboard Equipment

- Deionized Water System
- Fume Hood
- Science Underway Seawater System
- -80 Freezer space
- Scientific Seawater Supply

Shipboard Communication

- Basic Internet access via HiSeasNet

CTD/Water Sampling

- 911+ Rosette 24-position, 10-liter bottle Rosette with dual T/C sensors
- Wet Labs ECO-AFL fluorometer

MET Sensors

- Air temperature
- Barometric Pressure
- Precipitation
- Relative Humidity
- Short Wave Solar Radiation
- Wind speed and direction

Winch:

- CTD Winch with .322" Electro-mechanical wire

Ship *[Other Requirements][Shipboard Equipment/Nav] :*

1. Science/Ship Operations *:*
    a. Instrument Deployment / Recovery Procedures:
    b. Over boarding Equipment (ISM): **SEA SWEEP**
    c. Vans: 5
    d. Night Operations: Yes

2. Deck Safety – Safety Shoes

3. Lab Safety – PPE

4. Hazardous Material**:** YES
   Define_____

Please Submit MSDS electronically to csmith@whoi.edu and provide 3 hard copies of each MSDS to the Knorr's Chief Mate. UNUSED CHEMICALS MUST BE REMOVED AT DEMOBILIZATION BY THE SCIENCE PARTY.

5. Policies: (speed, departure/arrival times, moving aboard, etc.)
   11kts

6. Communication (voice, fax, e-mail, Blog)

Logistics *[Notes]*

1. Shipping gear to and from vessel
   Load list

   a. US Customs (forms and AMS): NO

   b. Berthing plan:

   - http://www.whoi.edu/cms/files/dpandya/2007/1/kn_sciberth_17271.pdf
   - 32 bunks available. Science party to complete and remit to csmith@whoi.edu.
   - No mixed gender berthing

   c. Use of ship's agent or local facilities (financial responsibility)
   -cc kheywood@whoi.edu on all agent communications

Post-Cruise:

1. Actions departing ship

2. UNOLS cruise evaluation [Chief Scientist & Master]

3. Reports to foreign government/State Department [required for work in EEZs]

4. Data delivery [shipboard] USB Hard drive.

5. Data archiving policy
   All data on a WHOI Cruise Data Distribution (which includes all underway data) will, by default be considered publicly available once a copy of it has been

delivered to the chief scientist at the end of the cruise. Please review the Cruise Assignment of Data Access Protection

As of January 1, 2011, the default treatment for underway data from Woods Hole Oceanographic Institution (WHOI) research vessels is:

1. Cruise data files are copied by a WHOI SSSG Technician to the distribution media. One copy is delivered to the cruise Chief Scientist, the other is delivered to WHOI's Data Library and Archives. Please note that the distribution of cruise data to other scientist is the responsibility of the Chief Scientist.
2. The **default** access status for the cruise instrument datasets is that they will be immediately accessible by
the public. If something other than this default protection is desired, the Chief Scientist must assign alternate protection as indicated below. For cruises funded by the National Science Foundation ,the maximum protection is two years, for non-NFS cruises, other guidelines may apply.
3. WHOI maintains a local copy of the cruise shipboard data distribution at its Data Library and Archives, which also honors access moratorium periods. If the cruise Chief Scientist wishes to modify the data protection assignments made in this pre-cruise document upon cruise completion, they should contact the
WHOI Data Library and Archives at dla@whoi.edu, or the SSSG Data Manager at
sssgdatamgr@whoi.edu