

OVERVIEW

LARGE FACILITIES WORKSHOP

2021 WEBINAR SERIES

APRIL 7, 2021

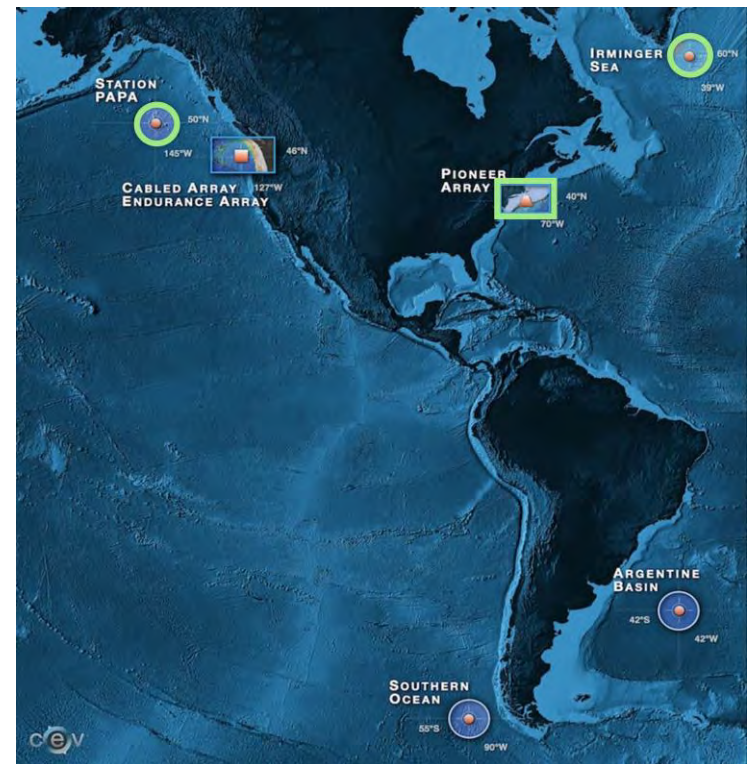


National
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OOI-CGSN: Operations during COVID-19

OOI-CGSN Overview

- CGSN: Coastal & Global Scale Nodes portion of the Ocean Observatories Initiative
- Operates & manages the Pioneer, Papa, and Irminger arrays
- Arrays include surface & subsurface moorings as well as gliders and AUVs
- Multiple cruises per year supported by significant shore-based repair and refurbishment program



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Initial Impacts

- Institution access restricted to essential personnel, UNOLS declared cruise hiatus
- Halt to all CGSN cruise & facility-based activities
- In the interim: Work from Home
 - Software development
 - Data quality and delivery
 - Engineering & design activities
 - Documentation updates
- **Safety of personnel was primary concern**
 - Required facility access and cruise protocols prior to re-start of operations
 - Needed to manage different levels of risk tolerance
 - Focus on communication and open dialogue

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Stage #1: Facility Protocols

Developed safe work practices for on site activities:

- Social distancing & occupancy restrictions
- PPE stations at each facility
- Personnel schedule tracking & shift work
- Self-assessment & approval prior to on site work
- Testing and exposure response protocols

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Stage #2: Cruise Protocols

Developed pre-cruise and shipboard protocols

- Risk assessment & mitigation
- Testing & isolation requirements
- Coordination of mobilization & demobilization activities
- Safe crewing limits for vessel and science personnel
- Shipboard operations & medical response

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Stage #3: Prioritize Activities

Once available resources and ongoing risks were defined:

- Existing infrastructure was reviewed and prioritized
 - Review included current status (operational/damaged), data delivery, data quality, and impact to science
- Where possible, sampling rates were adjusted to allow moorings to operate longer
- Refurbishment actions/schedule developed after cruise scopes were defined

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Results

In 2020:

- One cruise to Station Papa was canceled early on due to travel risks and lack of testing
- 2 x Pioneer cruises were de-scoped to turn at-risk infrastructure
- Irminger cruise turned all infrastructure successfully

In 2021:

- Currently performing a full turn of Pioneer, and plan full turns of Papa & Irminger

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Going Forward

1. Personnel training/cross-training. Resources are stretched due to overlapping isolation periods, cruise schedules, work protocol inefficiencies, and familial commitments. Post-COVID, hiring/cross-training will be a priority to maximize available skills.
2. Infrastructure flexibility & reliability. Find alternate sources for key components to mitigate vendor delays, simplify designs (COTS products), to reduce prep time and improve interchangeability, decrease power usage, and increase survivability. Also, evaluate sampling schemes to maximize deployment duration when necessary.