

WHOI OneArgo Deployment Plans: October 2022 Edition

last updated: October 21, 2022.

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Update log:

Oct 5: One PNE S2a to be returned from Port Everglades, startup failure

Oct 5: Set I5 BGC locations to plan from Lynne

Oct 5: added UGOS cruise in May 2023

Oct 20: revised PNE plan

Oct 24: updated Revelle Indian dates

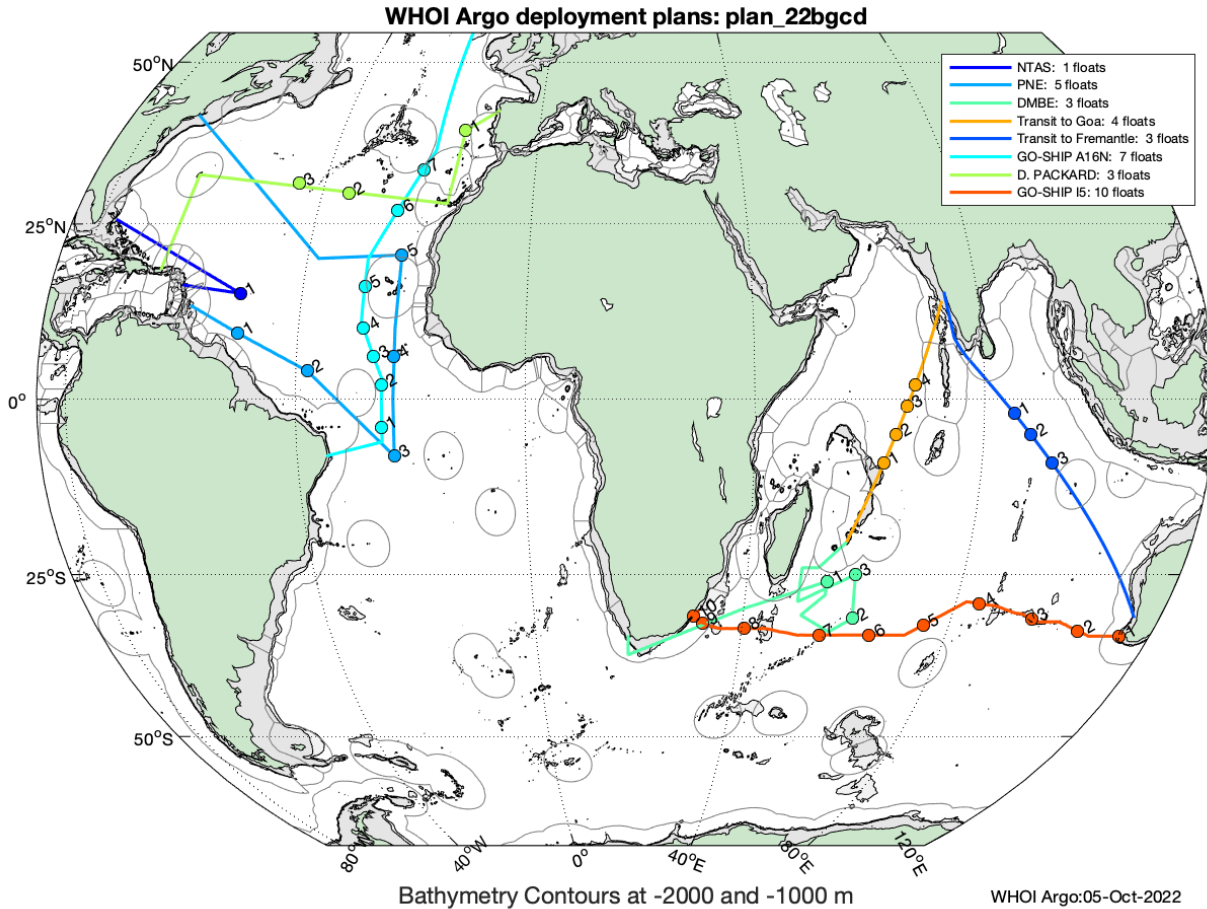
Cruises in Preparation

Cruise	Ship	Departs	Shipping	Inventory
UGOS-3 Gulf of Mexico	<i>RV Pelican</i>	Cocodrie Oct 1	Loaded Sep 30, Cocodrie	8 S2A (UGOS) - deployed 1 ALTO RBR - deployed
NTAS	<i>Ron Brown</i>	Port Everglades MOB Oct 3 Departs Oct 4	Loaded Oct 3, Port Everglades	3 core 1 BGC
PNE	<i>Ron Brown</i>	Barbados Nov 1	Loaded Oct 3, Port Everglades	6 core (1 returned) 5 BGC
Indian Ocean Transit	<i>RV Laura Bassi</i>	Trieste, Italy, Nov 15 2022	Air freight to Trieste, agent: GFC Shipping	8 core
SANAE	<i>SA Agulhas II</i>	Cape Town December	Air freight to J&D	5 - 8 core
GO-SHIP A16N	<i>Ron Brown</i>	Recife/Natal Mar 9, 2023	Departs Rhode Island, Feb 17?	1 Deep (NOAA) 10 core 7 BGC
Deep Madagascar Basin Exp. (and transits after)	<i>R. Revelle</i>	Cape Town MOB Apr 3, 2023 Mauritius (May 27) Goa (Jun 7 -10) Goa (Jun 26-28) Fremantle (Jul 14)	Container	3 Deep (Menezes) 8-12 core 10 BGC
Marion Island	<i>SA Agulhas II</i>	Cape Town Apr 2023	Air freight to J&D	0 floats (this year's inventory going to R. Revelle in Indian)
EKAMSAT Arabian Sea	<i>R. Revelle</i>	Goa	load Apr 3 in Capetown	0 floats
UGOS-3 Gulf of Mexico	<i>RV Pelican</i>	Cocodrie May?	Ground freight	16 S2A (UGOS) RBR PSAL2 floats?
Packard Delivery Spain to MBARI	<i>RV David Packard</i>	Vigo, Spain July 27, 2023	TBD	0 - 8 core 3 BGC RBR PSAL2 floats?
GO-SHIP I5	<i>R. Revelle</i>	Fremantle July 24, 2023	TBD	10 core (10 BGC, covered by UW?)
RoCS Caribbean	<i>M/V Bulk Xaymaca</i>	New Orleans Date TBD	Ground freight	4 core
RoCS Indian	<i>TBD</i>	New York Jan 2023?	TBD	4-6 core

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SANAE	<i>SA Agulhas II</i>	Cape Town December	Air freight to J&D	5 - 8 core
Lindblad Expeditions	<i>TBD</i>	Ushuaia Oct-Dec 2023	Container departs USA Aug 2023	6-12 core
Totals				81-104 core & UGOS 26 WHOI GO-BGC

Plans by Program

BGC Argo Plan



Key Dates:

Oct 4: Loading NTAS and PNE: 6 BGC floats

Feb 17, 2023: Loading A16N, 7 BGC floats

Apr 3, 2023: Loading Indian Ocean expedition in Cape Town, 10 BGC floats

Jul 24, 2023, Loading I5 in Fremantle, 10 BGC/SOCCOM floats to be covered by UW?

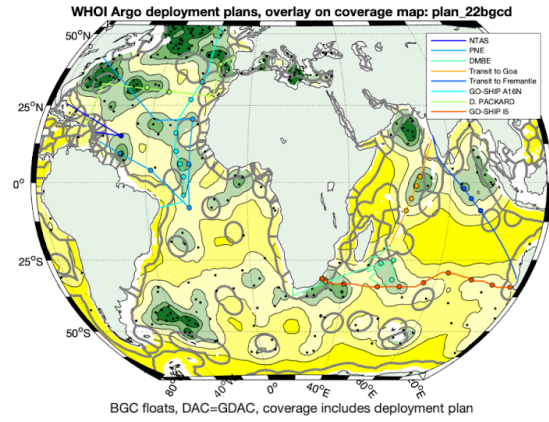
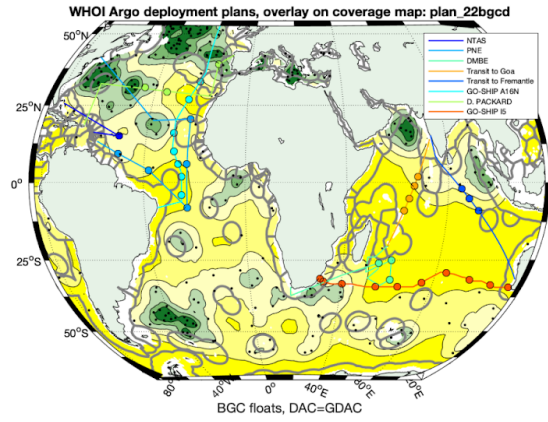
July 27 2023: David Packard departs Spain, 3 BGC floats?

See Appendix I for list of deployment locations.

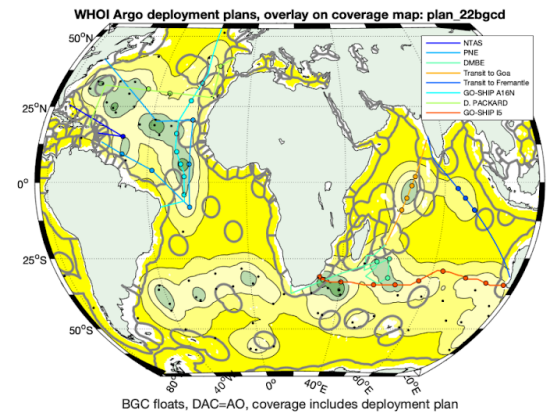
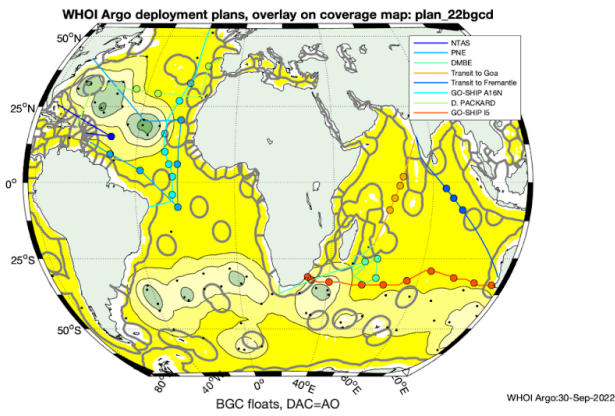
BGC Coverage:

('BGC' float define as WMO# listed in file argo_bio-profile_index.txt at the GDAC)

International BGC Coverage Before/After deployments in plan

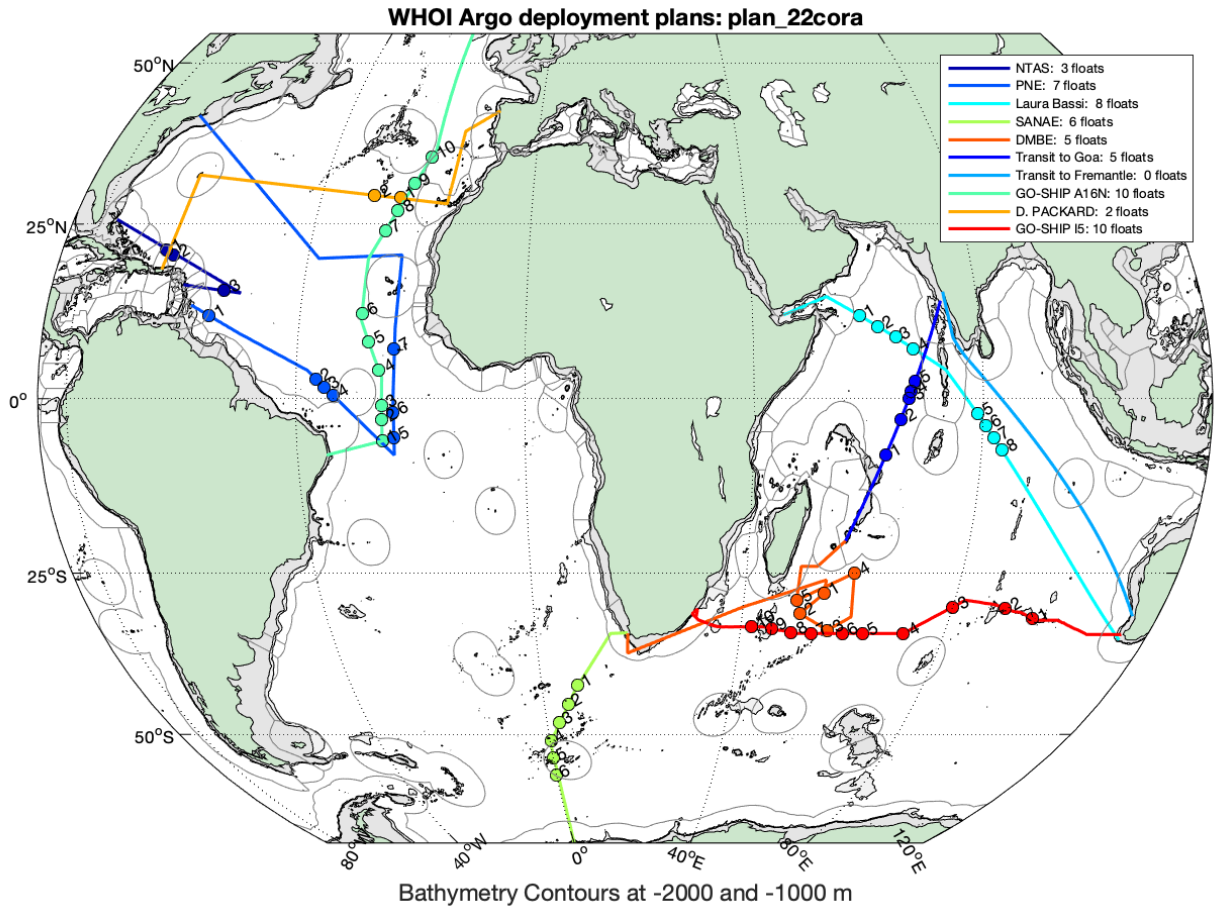


GO-BGC/SOCOON fleet coverage: Before/after deployments

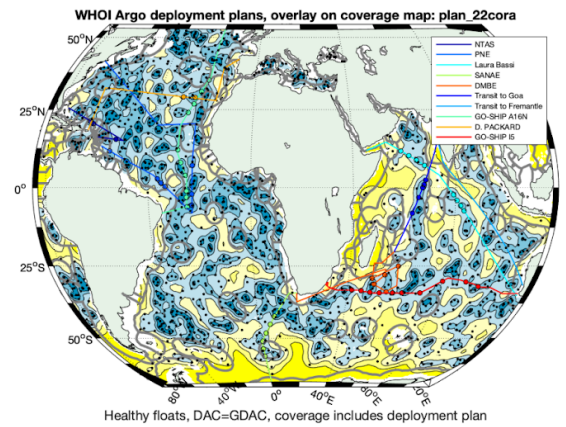
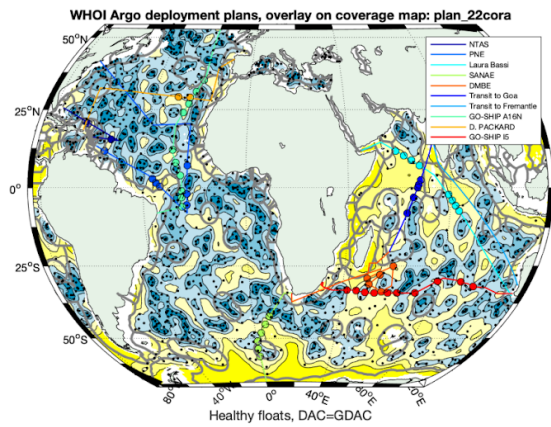


Core Argo Plan

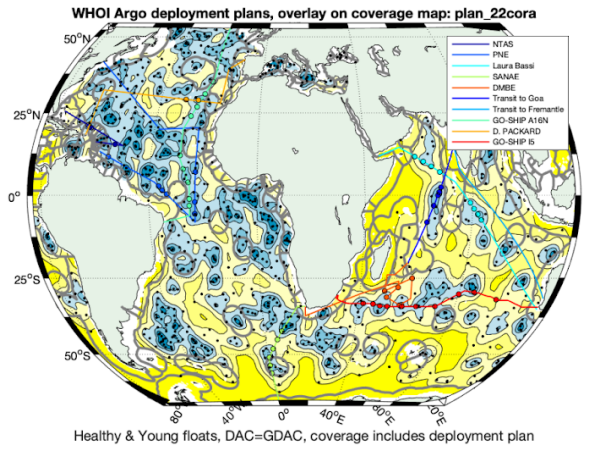
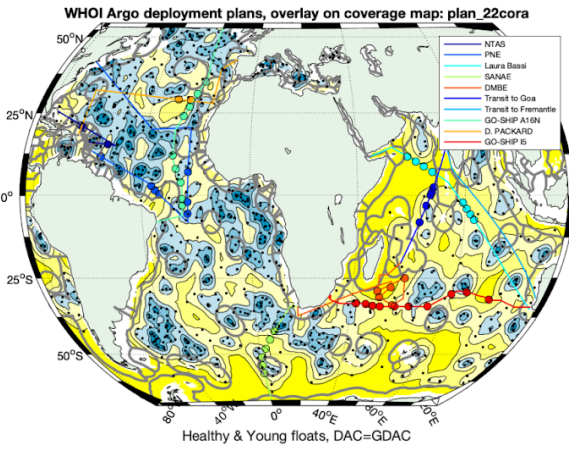
See Appendix II for list of deployment locations.



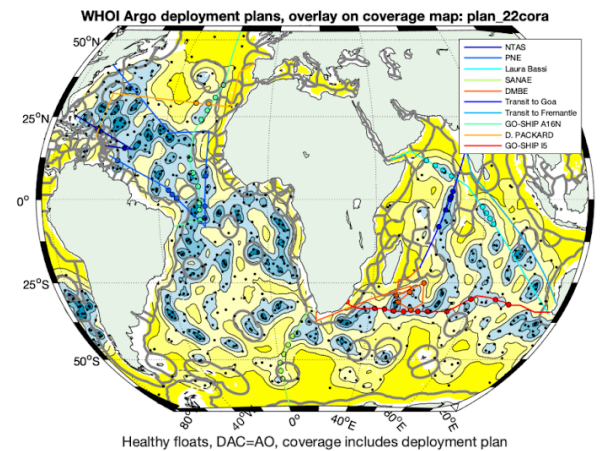
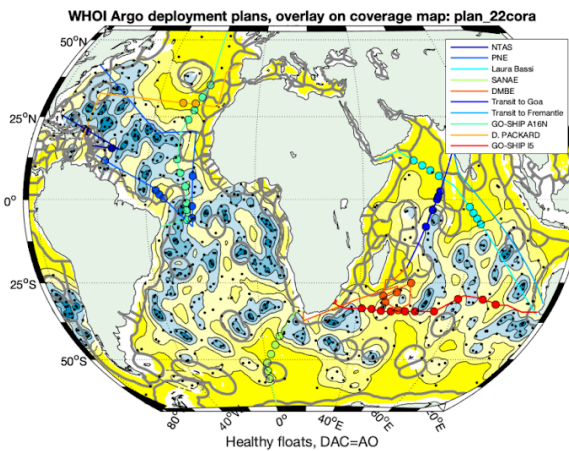
Overlay of plan on current 'Healthy' Fleet: Coverage Before/After deployments.



Overlay of plan on current 'Healthy & Young' Fleet: Coverage Before/After deployments.



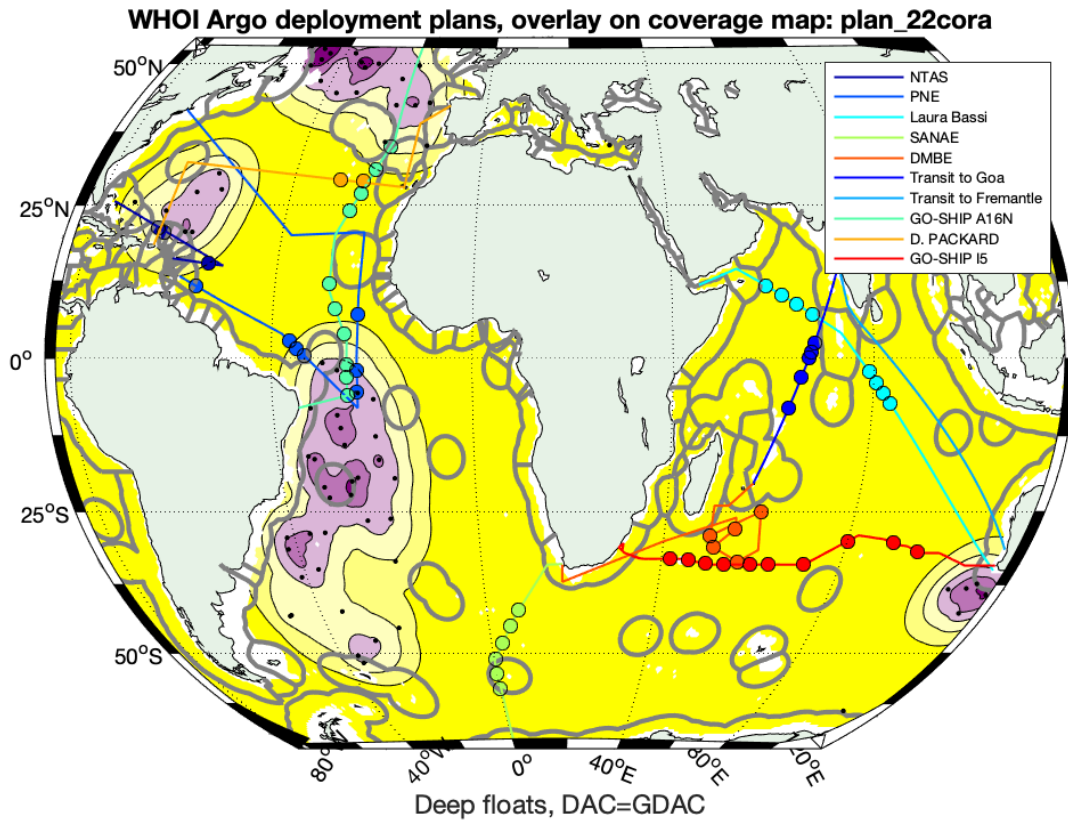
Overlay on current 'Healthy' Fleet of USA (aoml dac): Coverage Before/After deployments.



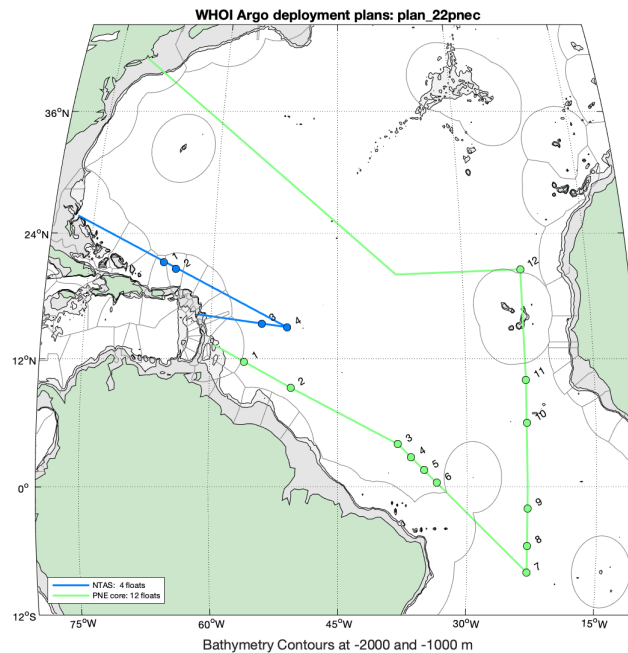
Deep Argo Plan

WHOI plans to have one Deep SOLO ready for deployment in North Atlantic during GO-SHIP A16N, exact deployment location TBD.

Cruise tracks overlay on nominal Deep Argo coverage map.



Plans for Individual Cruises



NTAS

Proposed deployment locations (latitude,longitude) and range or allowable tolerance.

- 1, 21.173, -66.000, NTAS, 1, core, (between 66° 45' W and 63° 53' W)
- 2, 20.556, -64.500, NTAS, 2, core, (between 66° 45' W and 63° 53' W)
- 3, 15.343, -54.000, NTAS, 3, core, (east of 56°W)
- 4, 15.000, -51.000, NTAS, 4, G0-BGC, (east of 56°W)

The first two NTAS deployments are targeted for the EEZ of USA north of Puerto Rico and the EEZ of the neighboring British Virgin Island. Anywhere in the range of 66° 45' W and 63° 53' W is acceptable and avoids the domain of other countries. The tolerance for deployments of floats 3 and 4 is anywhere on high seas east of 56°W.

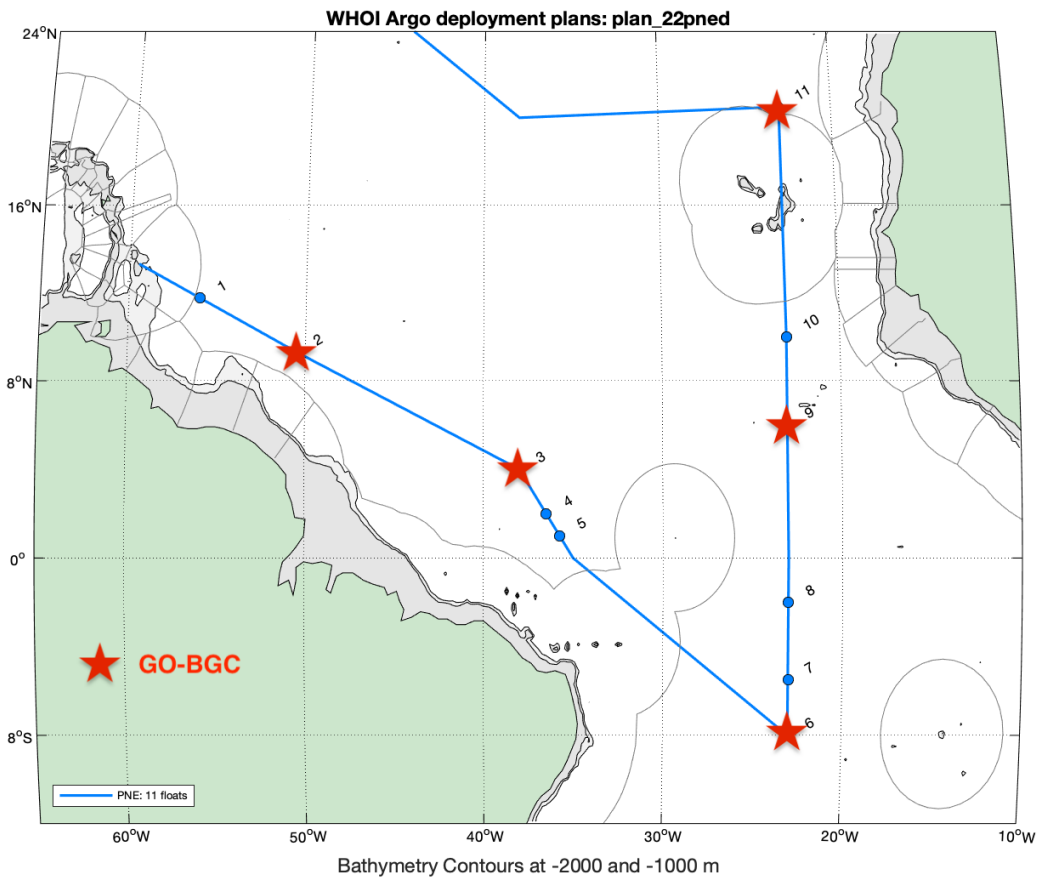
PNE OneArgo Deployment Plan (revised Oct 20)

Inventory:

7 MRV S2a core floats, Serial Numbers: 7620, 7704, 7706, 7709, 7710, 7718, 7731
5 SBE NAVIS GO-BGC, Serial Numbers: 1350, 1353, 1356, 1359, 1360

Proposed deployment locations (latitude,longitude)

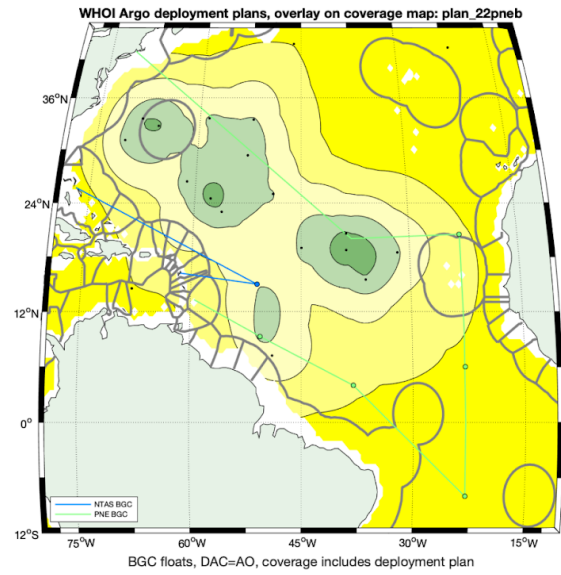
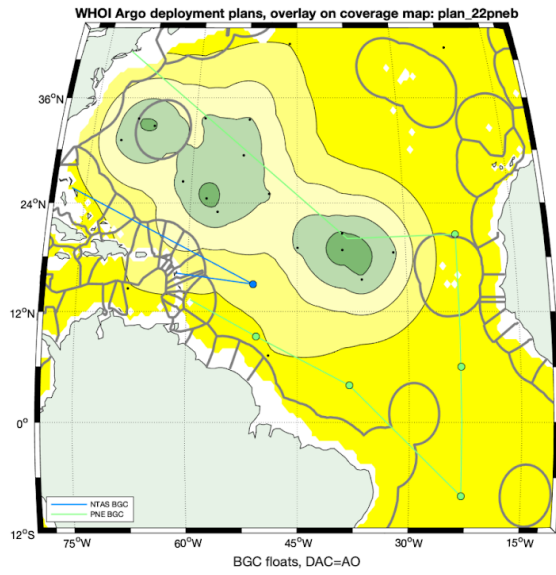
- 1, 11.744, -56.000, PNE, core, outside EEZ
- 2, 9.300, -50.500, PNE, GO-BGC at or near test station
- 3, 4.000, -38.000, PNE, GO-BGC at or near mooring
- 4, 2.000, -36.500, PNE, core
- 5, 1.000, -35.750, PNE, core
- 6, -8.000, -23.000, PNE, GO-BGC at nearest station
- 7, -5.500, -23.000, PNE, core
- 8, -2.000, -23.000, PNE, core
- 9, 6.000, -23.000, PNE, GO-BGC at nearest station
- 10, 10.000, -23.000, PNE, core
- 11, 20.500, -23.000, PNE, GO-BGC at nearest station, outside EEZ



Impact of NTAS/PNE deployments coverage of N. Atlantic. Core Argo: Healthy & Young floats



Impact of NTAS/PNE deployments coverage of N. Atlantic. GO-BGC



N/R Laura Bassi

<https://www.eurofleets.eu/vessel/rv-laura-bassi/>

[https://en.wikipedia.org/wiki/Laura_Bassi_\(icebreaker\)](https://en.wikipedia.org/wiki/Laura_Bassi_(icebreaker))

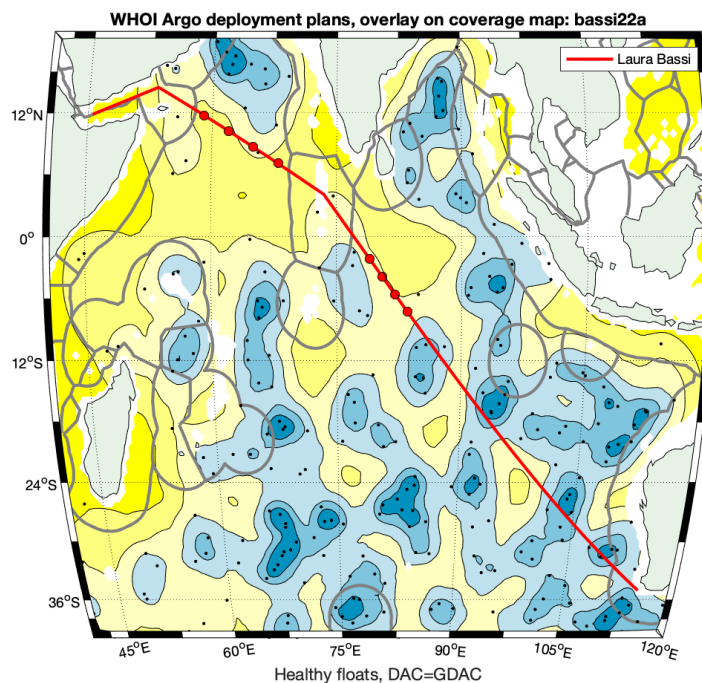
(ship itinerary courtesy Giorgio Dall'Olmo)

The ship will leave Trieste for Ravenna (Italy) on November 15th. She will reach Ravenna (Italy) on the 16th. She will then depart Ravenna for Port Said (Nov 24th) where they will load military personnel to protect the ship from pirates. After that they will go through the Red Sea and reach Malé in the Maldives (expected ~Dec 10th). Ship's speed can reach ~13 knots. After reaching Malé the ship will go towards the southwest corner of Australia and then sail towards Christchurch, New Zealand (~ Dec 28th) .

Proposed locations for Argo Deployments. Latitude, Longitude.

- 1, Laura Bassi, 11.759, 59.000
- 2, Laura Bassi, 10.245, 62.000
- 3, Laura Bassi, 8.689, 65.000
- 4, Laura Bassi, 7.096, 68.000
- 5, Laura Bassi, -2.164, 79.000
- 6, Laura Bassi, -3.869, 80.500
- 7, Laura Bassi, -5.564, 82.000
- 8, Laura Bassi, -7.245, 83.500

Map of Deployment locations overlay with current coverage of core Argo fleet ("healthy" floats)



Appendices

Appendix I: Proposed BGC deployment locations

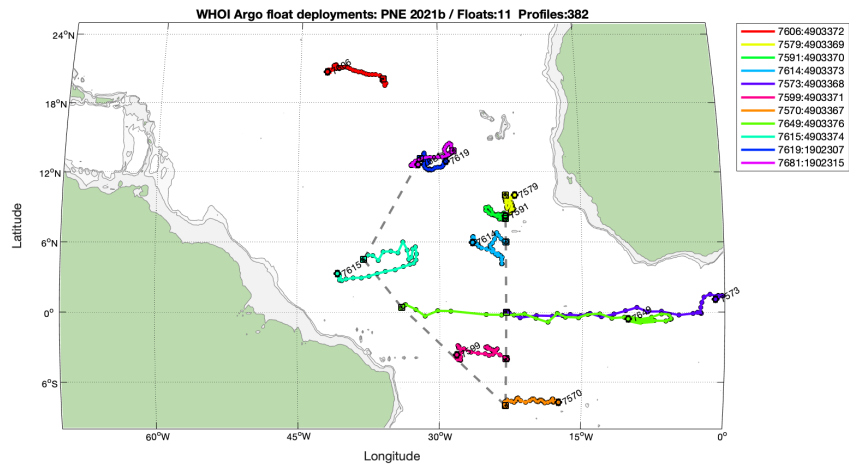
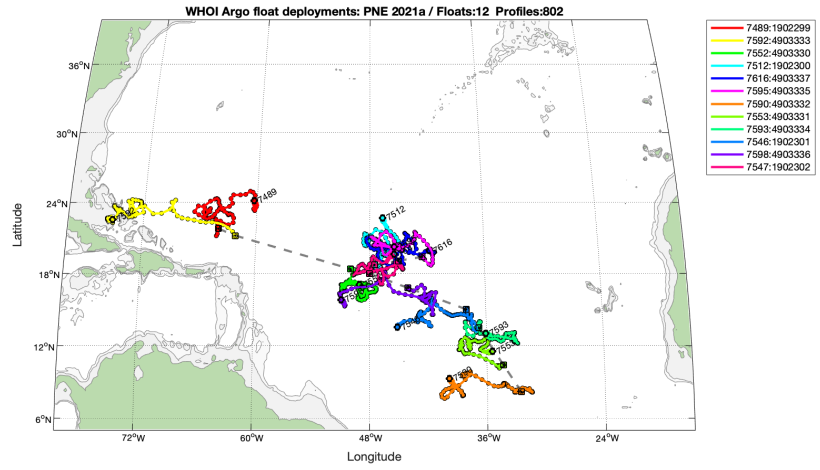
- 1, 15.000, -51.000, NTAS, 1, WHOI GO-BGC
- 2, 9.300, -50.500, PNE, 1, WHOI GO-BGC
- 3, 4.000, -38.000, PNE, 2, WHOI GO-BGC
- 4, -8.000, -23.000, PNE, 3, WHOI GO-BGC
- 5, 6.000, -23.000, PNE, 4, WHOI GO-BGC
- 6, 20.500, -23.000, PNE, 5, WHOI GO-BGC
- 7, -26.000, 55.000, DMBE, 1, WHOI GO-BGC
- 8, -31.500, 61.000, DMBE, 2, WHOI GO-BGC
- 9, -25.000, 60.000, DMBE, 3, WHOI GO-BGC
- 10, -9.000, 62.784, Transit to Goa, 1, WHOI GO-BGC
- 11, -5.000, 64.654, Transit to Goa, 2, WHOI GO-BGC
- 12, -1.000, 66.525, Transit to Goa, 3, WHOI GO-BGC
- 13, 2.000, 67.928, Transit to Goa, 4, WHOI GO-BGC
- 14, -2.000, 85.155, Transit to Fremantle, 1, WHOI GO-BGC
- 15, -5.000, 88.209, Transit to Fremantle, 2, WHOI GO-BGC
- 16, -9.000, 92.282, Transit to Fremantle, 3, WHOI GO-BGC
- 17, -4.000, -25.000, GO-SHIP A16N, 1, WHOI GO-BGC
- 18, 2.000, -25.000, GO-SHIP A16N, 2, WHOI GO-BGC
- 19, 6.000, -26.499, GO-SHIP A16N, 3, WHOI GO-BGC
- 20, 10.000, -28.500, GO-SHIP A16N, 4, WHOI GO-BGC
- 21, 16.000, -29.000, GO-SHIP A16N, 5, WHOI GO-BGC
- 22, 27.000, -25.064, GO-SHIP A16N, 6, WHOI GO-BGC
- 23, 33.000, -21.687, GO-SHIP A16N, 7, WHOI GO-BGC
- 24, 39.000, -15.000, D. PACKARD, 1, WHOI GO-BGC
- 25, 29.500, -35.000, D. PACKARD, 2, WHOI GO-BGC
- 26, 31.000, -45.000, D. PACKARD, 3, WHOI GO-BGC
- 27, -34.174, 114.100, GO-SHIP I5, 1, SOCCOM
- 28, -33.376, 105.500, GO-SHIP I5, 2, SOCCOM
- 29, -31.626, 95.600, GO-SHIP I5, 3, SOCCOM
- 30, -29.256, 84.400, GO-SHIP I5, 4, SOCCOM
- 31, -32.499, 75.000, GO-SHIP I5, 5, SOCCOM
- 32, -33.994, 65.100, GO-SHIP I5, 6, SOCCOM
- 33, -33.997, 55.300, GO-SHIP I5, 7, SOCCOM
- 34, -32.999, 40.400, GO-SHIP I5, 8, SOCCOM
- 35, -32.138, 32.300, GO-SHIP I5, 9, SOCCOM
- 36, -31.127, 30.500, GO-SHIP I5, 10, SOCCOM

Appendix II: Proposed Core deployment locations

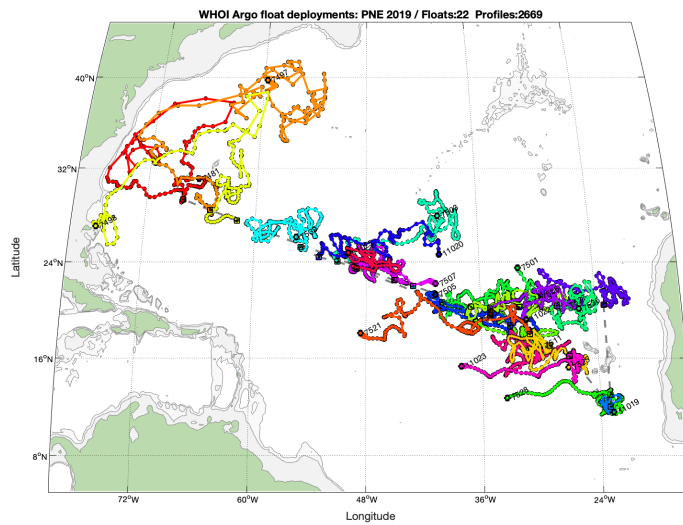
1, 21.173, -66.000, NTAS, 1, WHOI core
2, 20.556, -64.500, NTAS, 2, WHOI core
3, 15.343, -54.000, NTAS, 3, WHOI core
4, 11.744, -56.000, PNE, 1, WHOI core
5, 2.800, -36.500, PNE, 2, WHOI core
6, 1.600, -35.000, PNE, 3, WHOI core
7, 0.400, -33.500, PNE, 4, WHOI core
8, -5.500, -23.000, PNE, 5, WHOI core
9, -2.000, -23.000, PNE, 6, WHOI core
10, 7.000, -23.000, PNE, 7, WHOI core
11, 11.759, 59.000, Laura Bassi, 1, WHOI core
12, 10.245, 62.000, Laura Bassi, 2, WHOI core
13, 8.689, 65.000, Laura Bassi, 3, WHOI core
14, 7.096, 68.000, Laura Bassi, 4, WHOI core
15, -2.164, 79.000, Laura Bassi, 5, WHOI core
16, -3.869, 80.500, Laura Bassi, 6, WHOI core
17, -5.564, 82.000, Laura Bassi, 7, WHOI core
18, -7.245, 83.500, Laura Bassi, 8, WHOI core
19, -42.000, 7.615, SANAE, 1, WHOI core
20, -45.000, 5.156, SANAE, 2, WHOI core
21, -48.000, 2.750, SANAE, 3, WHOI core
22, -51.000, 0.345, SANAE, 4, WHOI core
23, -54.000, 0.000, SANAE, 5, WHOI core
24, -57.000, 0.000, SANAE, 6, WHOI core
25, -28.000, 55.000, DMBE, 1, WHOI core
26, -31.000, 51.000, DMBE, 2, WHOI core
27, -33.500, 57.000, DMBE, 3, WHOI core
28, -25.000, 60.000, DMBE, 4, WHOI core
29, -29.000, 50.000, DMBE, 5, WHOI core
30, -8.000, 63.252, Transit to Goa, 1, WHOI core
31, -3.000, 65.590, Transit to Goa, 2, WHOI core
32, 0.000, 66.992, Transit to Goa, 3, WHOI core
33, 1.000, 67.460, Transit to Goa, 4, WHOI core
34, 2.500, 68.161, Transit to Goa, 5, WHOI core
35, -6.000, -25.000, GO-SHIP A16N, 1, WHOI core
36, -3.000, -25.002, GO-SHIP A16N, 2, WHOI core
37, -1.000, -25.001, GO-SHIP A16N, 3, WHOI core
38, 4.000, -25.507, GO-SHIP A16N, 4, WHOI core
39, 8.000, -27.501, GO-SHIP A16N, 5, WHOI core
40, 12.000, -29.000, GO-SHIP A16N, 6, WHOI core
41, 24.000, -26.749, GO-SHIP A16N, 7, WHOI core
42, 27.000, -25.064, GO-SHIP A16N, 8, WHOI core
43, 31.000, -22.814, GO-SHIP A16N, 9, WHOI core
44, 35.000, -20.562, GO-SHIP A16N, 10, WHOI core
45, 29.000, -25.000, D. PACKARD, 1, WHOI core
46, 29.200, -30.000, D. PACKARD, 2, WHOI core
47, -31.791, 96.000, GO-SHIP I5, 1, WHOI core
48, -30.205, 90.000, GO-SHIP I5, 2, WHOI core
49, -30.007, 80.000, GO-SHIP I5, 3, WHOI core
50, -34.000, 72.000, GO-SHIP I5, 4, WHOI core
51, -33.992, 64.000, GO-SHIP I5, 5, WHOI core
52, -33.993, 60.000, GO-SHIP I5, 6, WHOI core
53, -34.010, 54.000, GO-SHIP I5, 7, WHOI core
54, -33.836, 50.000, GO-SHIP I5, 8, WHOI core
55, -33.196, 46.000, GO-SHIP I5, 9, WHOI core
56, -32.999, 42.000, GO-SHIP I5, 10, WHOI core

Appendix III: Float trajectories from past deployments on PNE and NTAS cruises

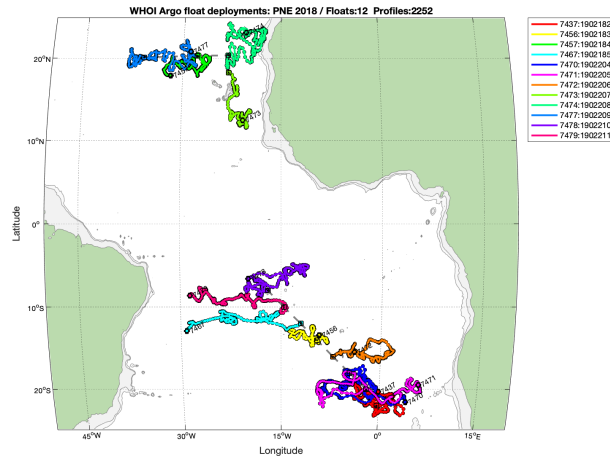
PNE 2021: <http://argo.whoi.edu/solo2/maps/2021cruises.html>



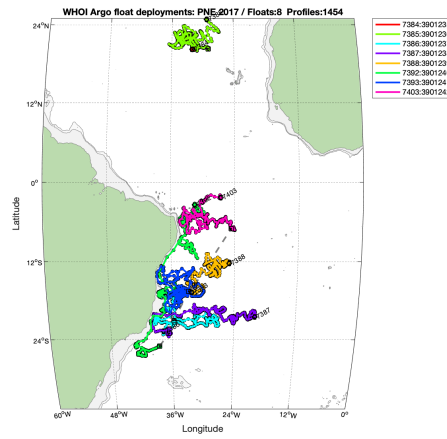
PNE 2019: <http://argo.whoi.edu/solo2/maps/2019cruises.html>



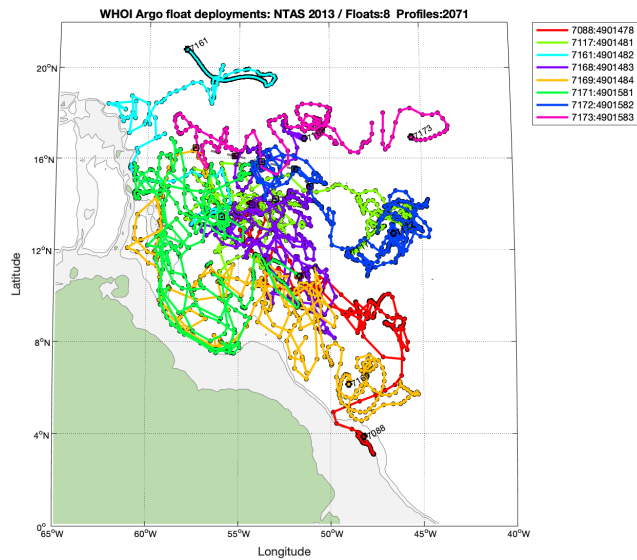
PNE 2018: <http://argo.whoi.edu/solo2/maps/2018cruises.html>



PNE 2017: <http://argo.whoi.edu/solo2/maps/2017cruises.html>

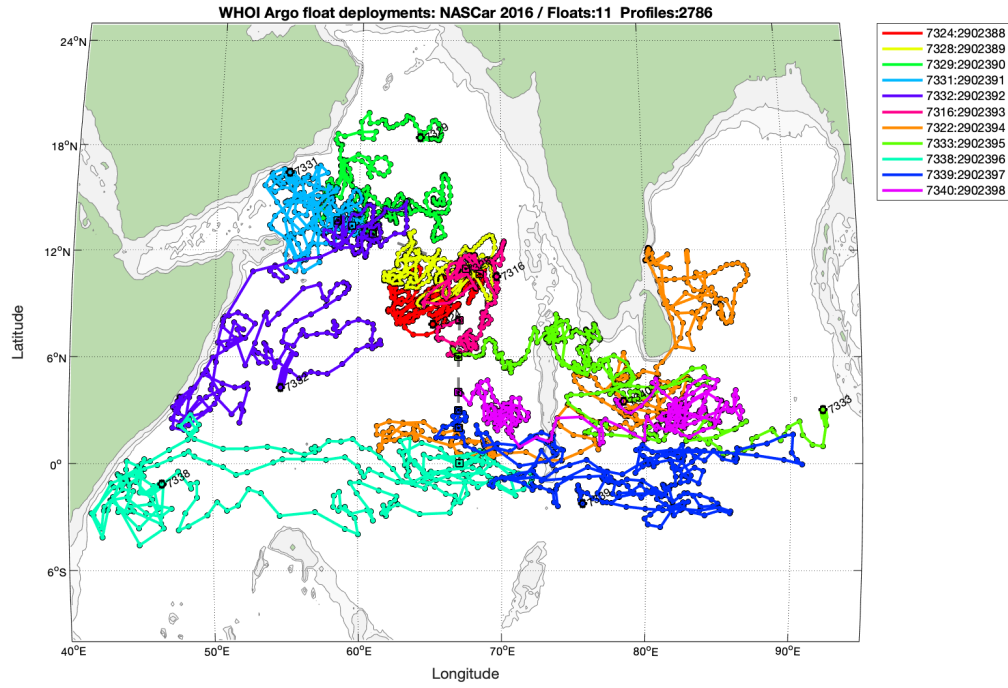


NTAS 2013: <http://argo.whoi.edu/solo2/maps/2013cruises.html>

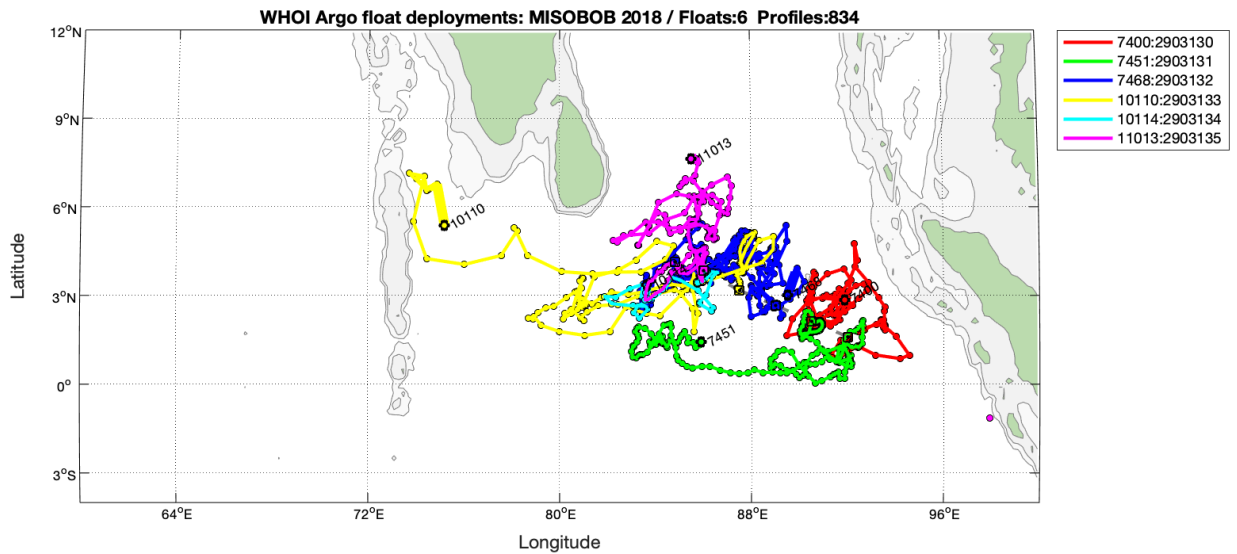


Appendix IV: Float trajectories from past WHOI deployments in Indian Basin

NASCar 2016: <http://argo.whoi.edu/solo2/maps/2016cruises.html>

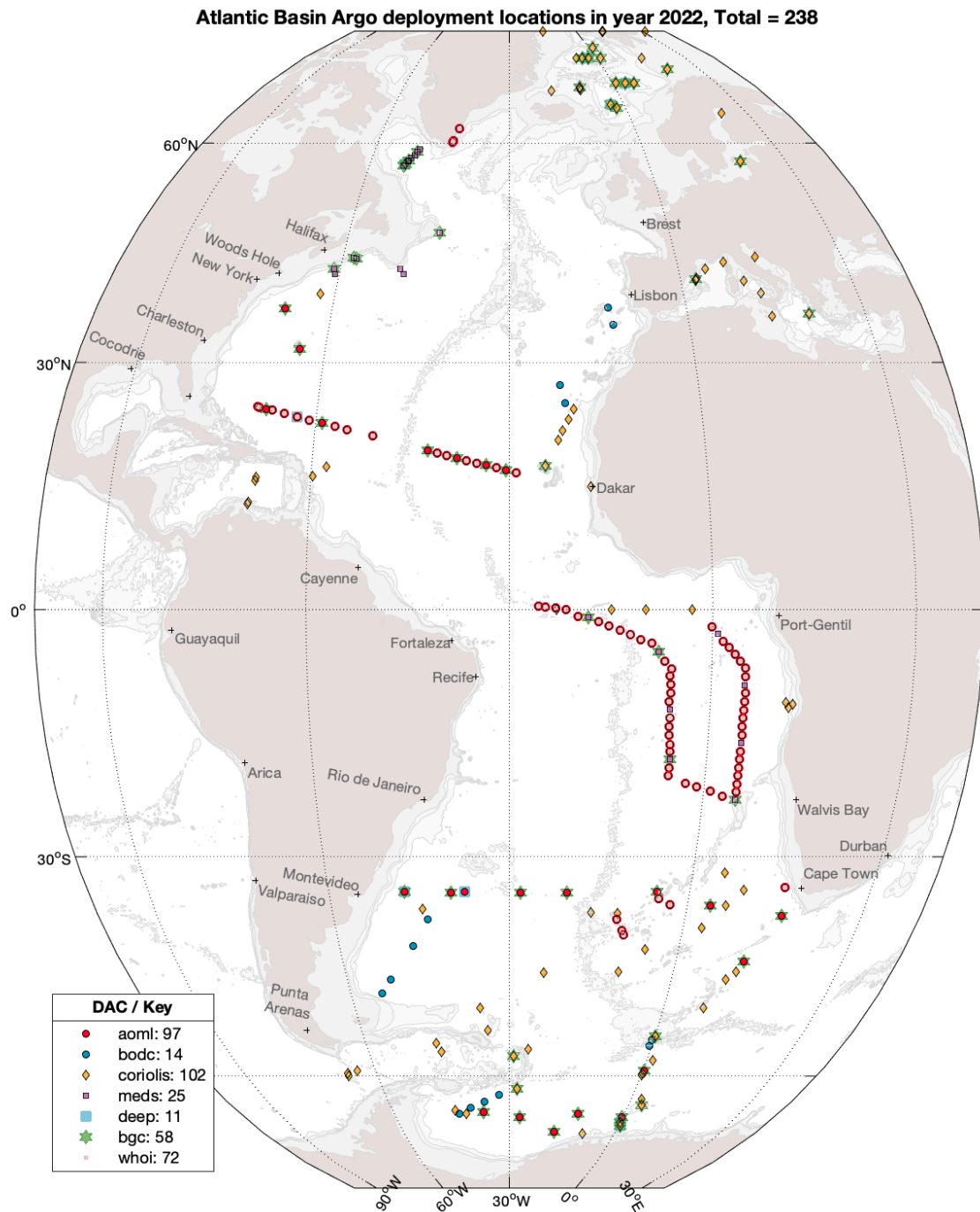


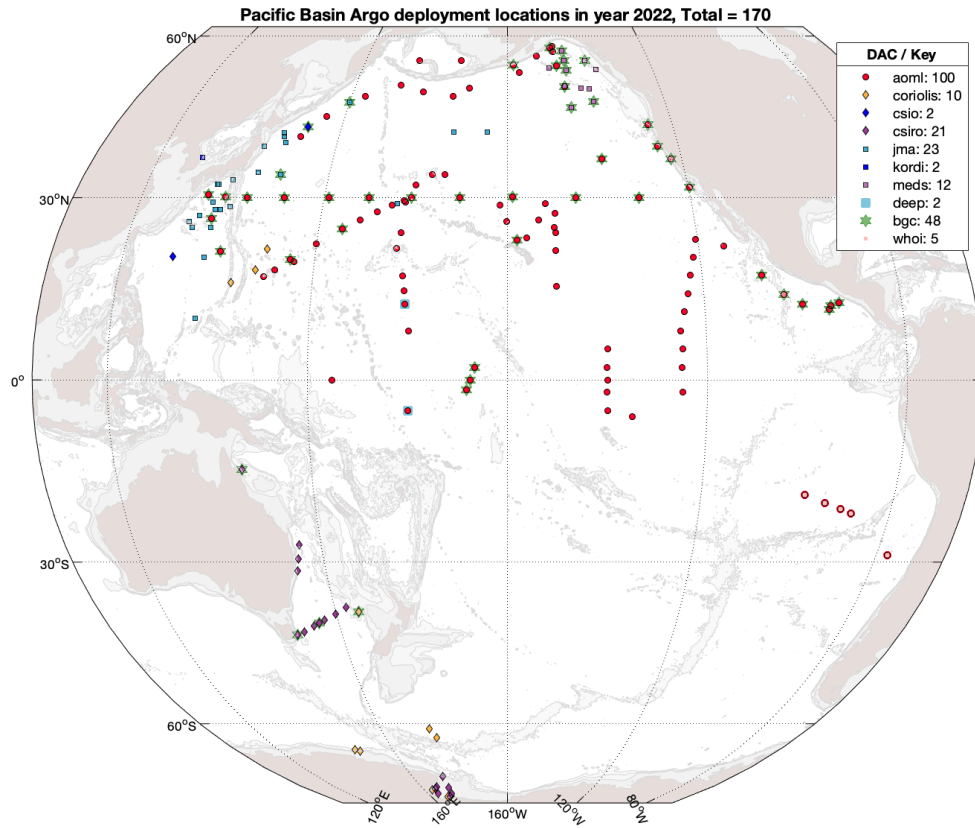
MISOBOB 2018: <http://argo.whoi.edu/solo2/maps/2018cruises.html>



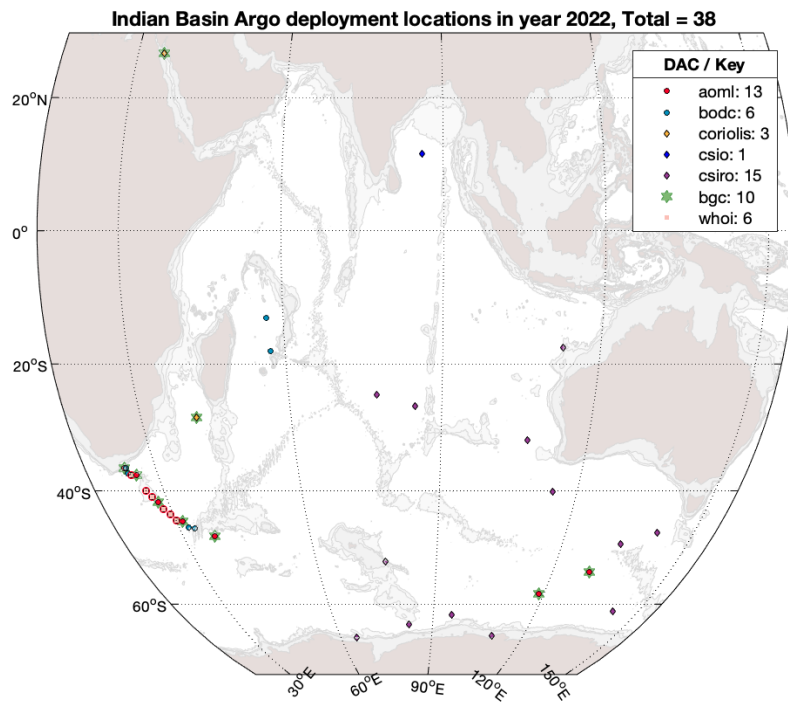
Appendix V: Maps of Deployments in 2022 thus far

<http://argo.whoi.edu/argo/maps/deployment/>





Pelle Robbins, WHOI Argo: 26-Sep-2022



Pelle Robbins, WHOI Argo: 26-Sep-2022