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# Endurance Array OOIFB Update

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# Endurance Array Turn Cruises

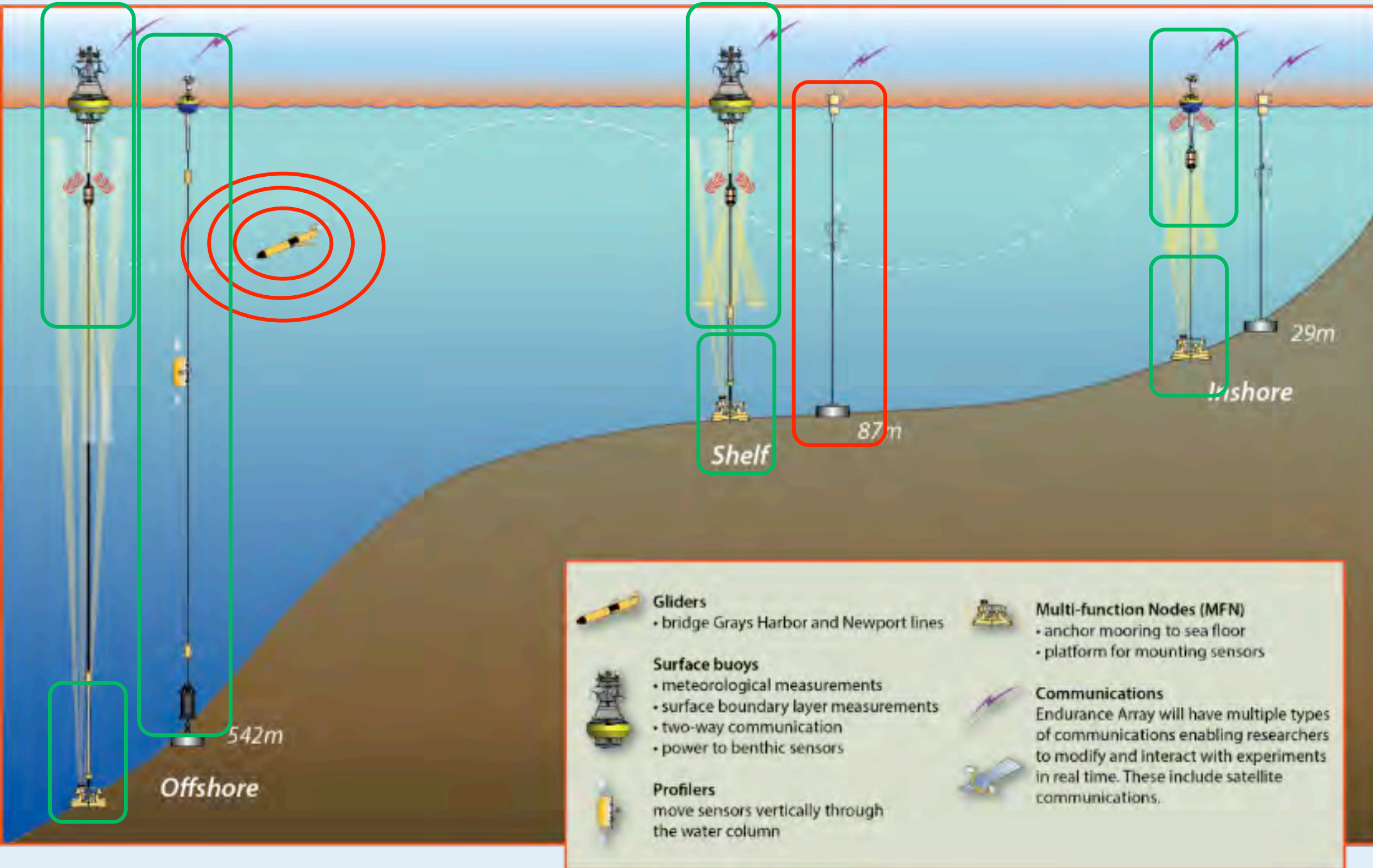
- Cruise on R/V *Thompson* 1 – 19 July. Adhered to UNOLS, UW, and OSU guidance for COVID-19 precautions. Newport, OR – Newport OR.
- The Endurance 14 cruise scheduled 24 Mar - 9 Apr 2021 (Sikuliaq), *i.e.*, there will be successive 9-month deployments. Seven days transit charge. Will likely reduce length of cruise by at least 2 days due to cost (54 k day rate)
- Endurance 15 cruise scheduled 15 -30 Oct 2021 (Revelle). This is late in the weather window. Day rate (54k) has a significant increase over years.



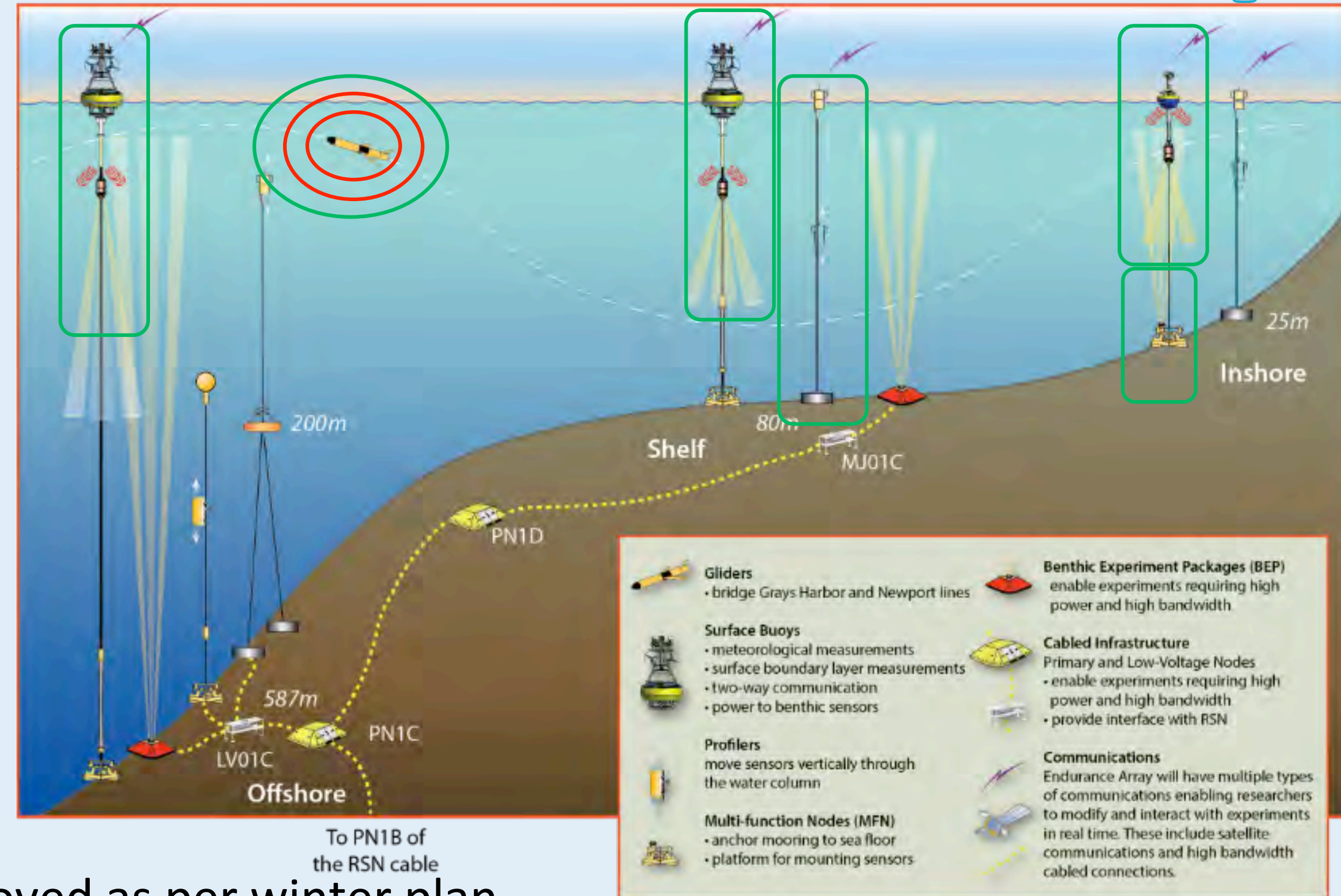


# Endurance Array Platform Status

Endurance Array – Grays Harbor Line



Endurance Array - Newport Hydrographic Line



Inshore Oregon and Washington CSPP's not currently deployed as per winter plan.



# Endurance 13 Mooring Status

Platform	Infrastructure %	Instruments Deployed %	Near Real Time Delivered %	Data Collected %
Oregon inshore	94%	100%	95%	95%
Oregon shelf	78%	95%	100%	100%
Oregon offshore	85%	100%	100%	100%
Washington inshore	94%	95%	100%	100%
Washington shelf	82%	97%	96%	96%
Washington offshore	88%	93%	96%	96%
Washington offshore profiler	82%	100%	100%	100%

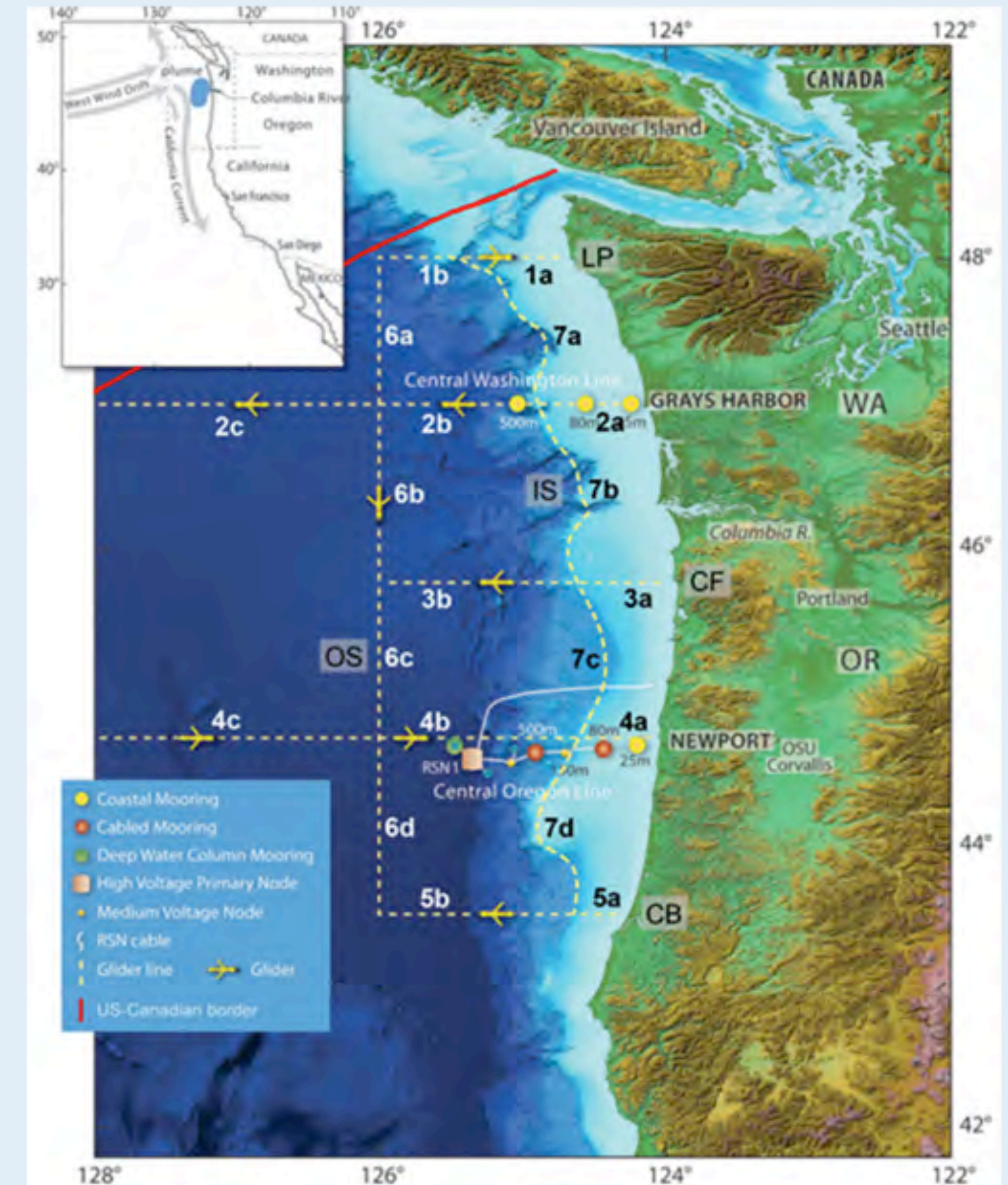
% takes into account electronics intentionally turned off (e.g., acoustic modems, Freewave etc.)





# Endurance Array Glider Coverage

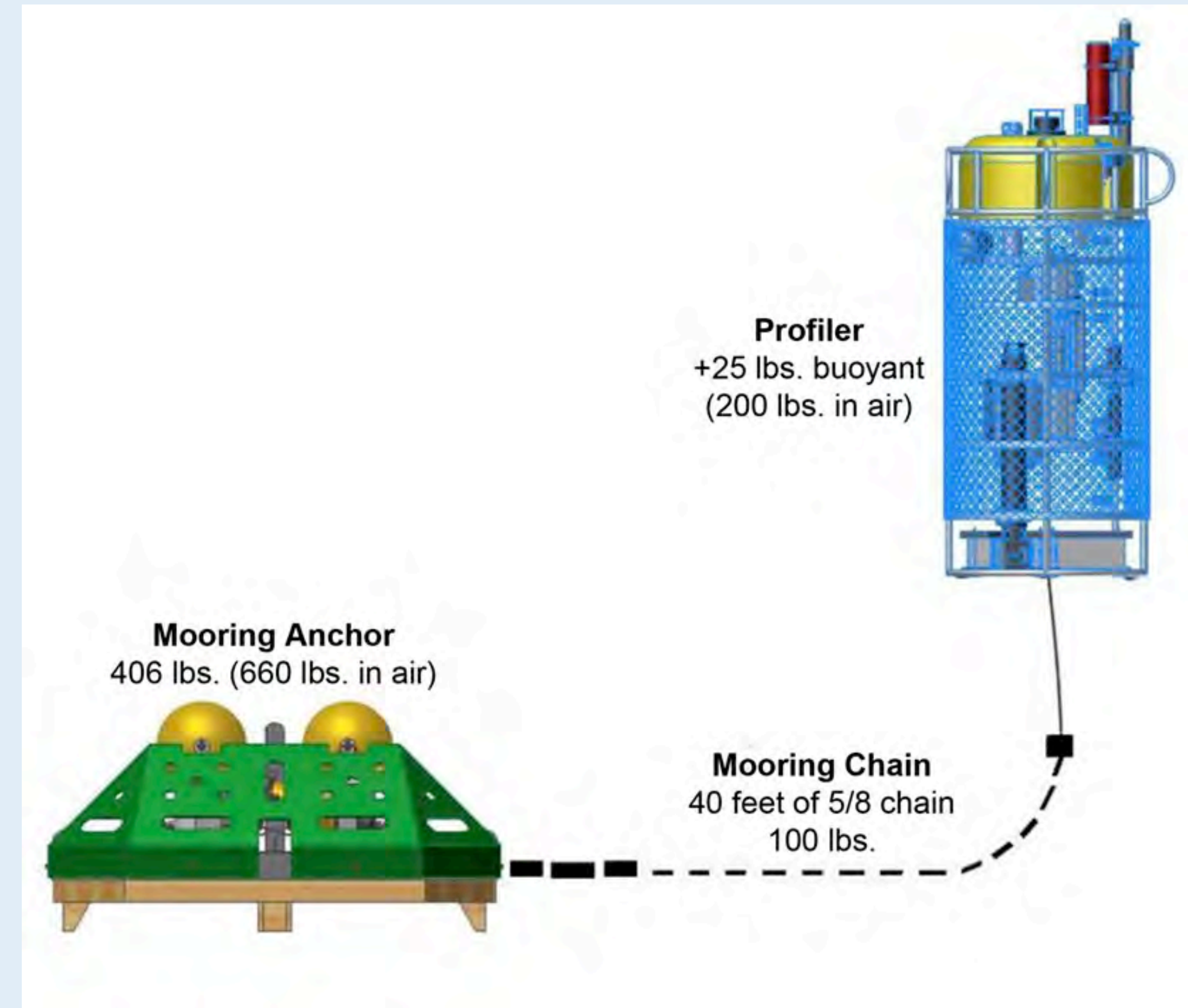
- 6 gliders deployed since May 2020 meeting; 4 gliders deployed on July 2020 Endurance 13, 1 in June and 1 in September (12 per scope)
- Less than full scope of gliders deployed due to COVID-19, slow servicing, and reduced number of gliders (10 versus 12 due to loss of 2 gliders in 2018 and early 2020)
- COVID-19 had impacts on TWR supply chain (radome fin components and science bay instrument servicing by Sea-Bird)
- 4/6 deployments to duration (last recovery 15 Oct 2020)
- one glider leaked (not a digifin leak), 1 glider recovered for a stuck buoyancy pump 6 days after deployment, 1 glider recovered after 93 days for unexpected battery depletion
- one glider currently deployed
- 3-4 glider deployments planned for late Oct 2020, we now have gliders sections in house and should be in reasonable shape over the winter
- new G3 glider received in August, tested on 8 Oct. Anticipate it will be operational for next deployment
- a second G3 glider is on order, this will bring us back to full scope early next year





# Endurance Array CSPP Deployment Summary

- 0 CSPPs operated with 0 deployments during May and June (244 scoped profiler-days) (COVID-19)
- 4 CSPPs operated with 4 deployments during July through October (266 of 390 scoped profiler-days)
  - 2 deployments completed with full depletion of batteries (77 and 70 days respectively)
  - 1 deployment stopped early due to a battery failure (59 days)
  - 1 CSPP is currently operating at the Oregon shelf (60 days) and will be turned later this month.
  - September deployment at Washington shelf site unsuccessful. Will redeploy later.





# Community Engagement (full list in quarterly reports)

- February 2020 Ocean Sciences meeting (5 papers/posters, staffed OOI booth)
- Early March seminar and workshop at Hatfield Marine Science Center
- New M2M tools being developed and made available with links from OOI website
- Advised 2 summer REU students through Rutgers (posters submitted to Fall AGU)
- September 9 dissolved Oxygen (DO) webinar
- Contributing 2 posters to Fall AGU (one with RCA)
- Winter quarter webinar being planned
- Dever now on GOOS Ocean Observing Panel for Climate (OOPC) Boundary Systems Task Team (BS-TT) with California Current webinar planned for Jan or Feb 2021



# Challenges

- Deploying full glider scope
  - Slow servicing due to supply chain disruption, specifically Digifin replacement by radome fin upgrades is lagging
  - Two gliders under scope – one in house and tested but not deployed yet; a second on order
- Ship costs and scheduling
  - 7 days transit costs for spring 2021 cruise - plan to address in part through one time reduction in ship time request, adds risk to completion
  - higher day rates, weather window for fall 2021 cruise - adds risk to completion of full scope of cruise







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Questions?



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