Supported by NOAA’s Climate Observation Division, NOAA’s Ocean Acidification Program, and a variety of partners.
NOAA PMEL Mooring Network

- air $pCO_2$
- seawater $pCO_2$
- pH
- temp
- salinity
- dissolved $O_2$
- chlorophyll
- turbidity
Long-term, sustained monitoring is critical to understanding OA
International OA Mooring Network
WHAT the network needs to provide:

**Goal 1.** An understanding of **global OA conditions**:
Identify spatial/temporal patterns and assess generality of response; document and assess variation to infer mechanisms driving condition; quantify rate of change and ID areas of vulnerability

**Goal 2.** An understanding of **ecosystem response to OA**:
Measure biological responses to physical/chemical changes; quantify rate of change and ID areas of vulnerability

**Goal 3.** Input data to **optimize modeling for OA**:
Provide spatially and temporally resolved data for model initial conditions and evaluation; then use model output to aid #1-2
Spatial Temporal Network Design

OCEANS

1. Utilize **GO-SHIP** global plan and similar research cruises for critical OA components to Network
2. Participate in **VOS/SoOP** global plan and enhance coverage (S hemisphere, Indian O, Arctic, etc)
3. Contribute to **OceanSITES** deepwater reference stations and enhance to address gaps (high latitudes, S Pacific, BATS, etc)
4. Participate in ongoing developments to collect OA relevant data with sufficient quality from **floats**
5. Contribute to development of **glider** technology for deployment