

NOAA PMEL Ocean Climate Station reference time series

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NOAA Pacific Marine Environmental Laboratory (PMEL) operates two Ocean Climate Station moorings in the North Pacific and is proposing to initiate a third site in the Southern Ocean. The two presently operating sites are the Kuroshio Extension Observatory (KEO) located at 32.3°N, 144.5°E, in the recirculation gyre south of the Kuroshio Extension; and Station P, located at 50°N, 145°W, in the Gulf of Alaska. The proposed new station would be in the high surface flux region of the Agulhas Return Current. All sites carry a full suite of meteorological sensors to monitor the bulk air-sea heat, moisture and momentum fluxes; an air and sea pCO₂ system for monitoring CO₂ uptake and outgassing; and additional subsurface sensors. These stations contribute to the global network of OceanSITES reference stations. Their data are being used to assess satellite and Numerical Weather Prediction products, and to examine important processes within the climate system. Because the air masses at station P and the proposed Agulhas Return Current site can sometimes originate from or move into the subpolar regions, it is expected that these reference stations will be particularly useful for studies of high latitude surface heat fluxes.