

Station Name:

Line P

**Type of Station (moored / ship-based) and Location
(geographic region / latitude and longitude coordinates):**

Ship-based, moored

Eastern Subarctic Pacific

Stations:

P1	48:34.5 N	125:30.0 W
P2	48:36.0 N	126:00.0 W
P3	48:37.5 N	126:20.0 W
P4	48:39.0 N	126:40.0 W
P5	48:41.5 N	127:10.0 W
P6	48:44.6 N	127:40.0 W
P7	48:46.6 N	128:10.0 W
P8	48:49.0 N	128:40.0 W
P9	48:51.4 N	129:10.0 W
P10	48:53.6 N	129:40.0 W
P11	48:56.0 N	130:10.0 W
P12	48:58.2 N	130:40.0 W
P13	49:02.6 N	131:40.0 W
P14	49:07.4 N	132:40.0 W
P15	49:12.0 N	133:40.0 W
P16	49:17.0 N	134:40.0 W
P17	49:21.0 N	135:40.0 W
P18	49:26.0 N	136:40.0 W
P19	49:30.0 N	137:40.0 W
P20	49:34.0 N	138:40.0 W
P21	49:38.0 N	139:40.0 W
P22	49:42.0 N	140:40.0 W
P23	49:46.0 N	141:40.0 W
P24	49:50.2 N	142:40.0 W
P25	50:00.0 N	143:36.3 W
P35	50:00.0 N	144:18.2 W
P26	50:00.0 N	145:00.0 W

**Carbon and biogeochemistry measurements at the station
(indicate the frequency of observations, the year measurements began, and if they are surface / full water column, etc.):**

Frequency:

Stn P26 occupied for extended periods until June 1981

Line P occupied several times per year between April 1959 and November 1987 and three times/year after May 1988

Carbon:

A_T: Begun in 1956; Stations P4, P12, P16, P20, P26, full profiles

TIC: Begun in 1970; Stations P4, P12, P16, P20, P26, full profiles

pH: Begun in 1956; Stations P4, P12, P16, P20, P26, full profiles; Station P26, mooring sensor

pCO₂: Begun in 1973; Continuous underway, surface; Station P26, mooring sensor

Nutrients:

PO₄, NO₃+NO₂: Begun in 1956; Stations P2, P4, P8, P12, P16, P20, P26, full profiles; All stations, surface

Si: Begun in 1958; Stations P2, P4, P8, P12, P16, P20, P26, full profiles; All stations, surface

Dissolved Oxygen: Begun in 1956; Stations P2, P4, P8, P12, P16, P20, P26, full profiles; Station P26, mooring sensor

Iron (including speciation): Begun in 1997; Station P26, full profiles

Principle Investigators / Contact Points:

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Affiliation of this station with national, regional, or global research programs and process studies:

Line P has served as a focus point for projects under SOLAS, JGOFS, and WOCE, as well as smaller monitoring and process studies affiliated with numerous other institutions, including the University of Victoria, the University of British Columbia, and the Pacific Marine Environmental Laboratory (Seattle)

Web-site or links to other information:

http://www-sci.pac.dfo-mpo.gc.ca/osap/projects/linepdata/default_e.htm

Site Overview:

Lisa Miller, Fisheries and Oceans Canada

Oceanographic observations at Station P (50:00.0 N, 145:00.0 W) date from its inception as a weather station in 1949, and measurements along the transit route between Victoria, British Columbia and Station P were initiated in 1959. The number of different measurements has increased dramatically over that period, from just bathythermographs at the beginning to over 20 parameters which are now measured on a regular, ongoing basis. Inorganic carbon measurements were in place by the mid-1970s. The greatest value of the Line P timeseries may lie in the fact that this is an area with relatively small seasonal and interannual variations. Thus, it may be possible to extract robust long-term climate change signals earlier at Station P than in more variable regions.

In addition to the routine timeseries measurements, every cruise, including the winter expeditions, is now oversubscribed with interdisciplinary process studies affiliated with both large (*e.g.* SOLAS) and small programs. As an active and dynamic program, Fisheries and Oceans is committed to maintaining the Line P time series for the foreseeable future, despite ongoing ups and downs, and continual tension regarding ship time and the need for creative financing.