

Nine InterOcean systems, inc. S4 current meters were deployed measuring the following variables: earth referenced North (v) and East (u) components, (corrected to true North), temperature, T (degrees C), conductivity, C (mS/cm), pressure, P (decibars). U and v components were used to compute speed (S) and direction (D). If T and C were measured, but no pressure was available, a constant pressure (listed below) was used to compute salinity. Not all instruments measured all variables. Instruments are listed below by mooring and depth and show the variables measured and comments about processing.

Instruments were set up to average 1800 half second samples over the first 15 minutes every 30 or 60 minutes (15/30 or 15/60).

Note: there are suggested adjustments to Conductivity, C and/or Temperature, if the adjustments were used when computing salinity they are listed below.

1. W1S 919 5m      u,v. Sampled 15/30, no adjustments.
2. K3S 868 5m      u,v,T. Sampled 15/30, suggested adjustment T +0.65 not included in this file.
3. K5S 860 5m      u,v,T,C. Sampled 15/60, suggested adjustments T +0.26, C +0.35, used when computing salinity. Constant 5 decibars used in salinity computation. For unadjusted file, see Note 1 below.
4. N3S 869 5m      u,v,T. Sampled 15/30, suggested adjustment T +0.325 not included in this file.
5. S3S 765          No Data returned.
6. S5S 766 5m      u,v,T,P,C. Sampled 15/60, pressure data highly unreliable. Do not use. Suggested adjustments T +0.525, C +0.60, used when computing salinity. Constant 5 decibars used in salinity computation. For unadjusted file, see Note 1 below.
7. O3S 242 5m      u,v. Sampled 15/30. No adjustments.
8. O5S 241 5m      u,v. Sampled 15/30. No adjustments.
9. ENS 819 5m      u,v,T,C. Sampled 15/60. No adjustments. Constant 5 decibars used when computing salinity.

The format for these files is generally:

Header with mooring ID (character1–15), depth in meters (character16–20), abbreviated serial number (character 21–30), latitude(character 31–45), longitude(character 46–60), time zone indicator (character 65), and other flags (character 66–69). Some files have the mooring indicator, serial number and depth in the first 15 characters.

Header with month (mm), day (dd), year (yy), hour (hh), minute (mm) for the first scan, month (mm), day (dd), year (yy), hour (hh), minute (mm) for the last scan, sample interval in minutes (mm).

Header listing the number of history headers to follow (nn).

Header containing information about processing done (77 characters).

Data scans:

scan number (5 characters), date (mmddyymm), time (hhmm), speed, direction, u component (cm/sec), v component (cm/sec), temperature degrees C, pressure if present (a constant 5 decibars was used for pressure to compute salinity in all cases), salinity (if conductivity sensor installed; K5S, ENS, S5S), sigma-t (if conductivity sensor installed).

Velocity components have been rotated to true North.

Note 1

For users interested in unadjusted data, K5S860Tr.txt and S5S766Tr.txt are files with the original T and C. They have not been lo passed filtered. These files have not been interpolated to even hours or adjusted to GMT. The time base is in PST (+8).

Unadjusted Data Files:

1. K5S860Tr.txt No adjustments, time base PST (+8)
2. S5S766Tr.txt No adjustments. Pressure highly unreliable. Do not use. Time base PST (+8)

Lo passed files

Files that were sampled 15 minutes every 30 minutes (W1S, K3S, N3S, O3S, O5S), were lo passed filtered with a cosine Lanczos filter with a half power point of approximately 2.5 hours to suppress high frequency signals. The series were interpolated to even hours and decimated to hourly values. The first and last 6 points were deleted. The time base was adjusted to GMT.

ENS819H.txt, K5S860Hn.txt & S5S766Hn.txt were sampled 15 minutes every 60 minutes. They were not filtered, but simply interpolated to even hours and the time base was adjusted to GMT. Salinity was computed using the adjusted temperature and conductivity values shown above for the K5S and S5S meters. There were no adjustments suggested for the ENS meter. The file format should be the same as above.