CRAAReadme10_26n.pdf

30 Aanderaa meters were deployed measuring the following variables: speed, S, direction, D (corrected to true North), temperature, T, conductivity, C, pressure, P. Pressure was measured in pounds per square inch (PSI), then converted to decibars to compute salinity if C and T were available. Conductivity was measured in mmho/cm. S and D were used to compute u and v components of velocity. If T and C were measured, but no pressure was available, a constant pressure (listed below) was used to compute salinity. Salinity was computed using algorithms from the UNESCO Report 44, Algorithms for Computation of Fundamental Properties of SeaWater 1983. Units of salinity are PSS-78.

Not all instruments measured all variables. Instruments are listed below by mooring and depth and show the variables measured and comments about processing.

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

W1S

1. W1S 7260 1m T,C. Salinity computed using suggested adjustments T -1.2, constant 1 decibar used to compute salinity.

S3A

2. S3A 2249 41m S,D,T,P,C. Pressure range was 0-200 PSI, accuracy +/- 1% of range, resolution 0.1% of range.

3. S3A 1297 46m S,D,T. No particular problems.

4. S3A 2491 51m S,D,T. Note the change in u, v components beginning 12/10/90. This sudden drop is not reflected in the other meters on this mooring. Questionable.

5. S3A 3440 56m S,D,T,P. Pressure range was 0-1000 PSI, accuracy +/- 1% of range, resolution 0.1% of range. No particular problems.

S5A

6. S5A 7103 35m S,D,T,C. Constant 31 decibars used to compute salinity.

7. S5A 5100 45m S,D,T. No particular problems.

8. S5A 5213 65m S,D,T,P,C. Pressure range was 0-1000 PSI, accuracy +/- 1% of range, resolution 0.1% of range.

9. S5A 3218 87m S,D,T. Pressure no good, no problems with other variables.

O3A

10. O3A 2520 35m T. Multiple large gaps in spd. Temperature variable OK.

11. O3A 4922 45m S,D,T,C. Constant 45 decibars used to compute salinity. On 12/02/90 temperature values bad, T & C zeroed out. Compass reading constant beginning 12/27/90, no velocities after that.

12. O3A 7655 50m S,D,T. No special problems.

ENA

13. ENA 6526 8m S,D,T,P,C. Constant 8 decibars used to compute salinity. Note the speed shows a significant die off on 12/3/90. The u, v components were zeroed out because the speed is questionable. Per mooring notes the rotor and gimble were broken when retrieved. The pressure average changed on 1/18/91 0500 indicating the mooring may have been moved. Data may be questionable.

14. ENA 7104 13m S,D,T. Note the pressure channel from the 8m instrument indicates the mooring may have moved. Data may be questionable.

15. ENA 0525 16m T. Note the pressure channel from the 8m instrument indicates the mooring may have moved. Data may be questionable.

ESA

16. ESA 2521 8m S,D,T,P. Pressure range was 0-200 PSI, accuracy +/- 1% of range, resolution 0.1% of range. Conductivity out of sensor range; no useful C data.

17. ESA 1566 12m T. Speeds went to 0.9, only temperature useful.

For the following meters on surface moorings: a constant 1 decibar was used to compute salinity.

18. K1S 3140 1m T,C.

19. K3S 5762 1m T,C. Suggested adjustment T +0.02

20. K5S 1908 1m T,C.

21. B1S 2127 1m T,C. B1S.2127 had major problems with its time base from 11/18/90 0400 through 12/17/90 2200. The values have been set to zero within that time period. A large drop in temperature at both the N5 and B1 site was used to align the remainder of the file, 12/17/90 to the end. Suspect temperatures were recorded near the end of the record.

22. O3S 7366 1m T,C.

23. O5S 2256 1m T,C.

24. ENS 1907 1m T,C.

25. N1S 2254 1m T,C. Suggested adjustment T +0.125

26. N3S 3139 1m T,C. Suggested adjustment T +0.125

27. N5S 1906 1m T,C. Suggested adjustment C +1.2

28. S3S 1905 1m T,C. Suggested adjustment T -0.285, C +1.0

29. W3S 8410 1m T,C.

30. S5S 2506 2m T,C. No Data Returned

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 (mmddyyhhmm), time (hhmm), speed, direction, u component (cm/sec), v component (cm/sec), temperature degrees C, pressure if present, salinity (if conductivity sensor installed; K5S, ENS, S5S), sigma-t if conductivity sensor installed.

Velocity components have been rotated to true North.

Lo passed files
Files were sampled every 30 minutes and were lo passed filtered using a cosine Lanczos filter with a half power point of approximately 2.5 hours to suppress high frequency signals. The series was interpolated to even hours and decimated to hourly values. File names with the instrument serial number followed by an 'L' were lo passed. The first and last 6 points were deleted. The time base was adjusted to GMT.