

CTD QC Report: PRIAs 2015

The file used in this QC routine is: ESD_NCRMP_CTD_2015_PRIA.csv

QC run at: 2021-03-03 08:27:29 HST

Number of rows in data file: 1443

Number of casts in data file: 76

Check the location and time ranges

| | Min | Max |
|-------------|---------------------|---------------------|
| LATITUDE | -0.3892417 | 16.7634269 |
| LONGITUDE | -176.6239 | -159.9750 |
| UTCDATETIME | 2015-01-26 23:19:00 | 2015-04-28 21:33:00 |

Check the cruises, dates, and number of casts associated with each island.

| LOCATION | CRUISE | NO.CASTS | UTCDATETIME.range |
|----------------|----------------|----------|--|
| Baker Island | HA1501_PHOENIX | 10 | 2015-02-08 23:40:00, 2015-02-12 00:37:00 |
| Howland Island | HA1501_PHOENIX | 8 | 2015-02-04 21:14:00, 2015-02-07 20:39:00 |
| Jarvis Island | HA1501_LINE | 15 | 2015-04-09 00:37:00, 2015-04-13 20:24:00 |
| Johnston Atoll | HA1501_PHOENIX | 10 | 2015-01-26 23:19:00, 2015-01-29 02:05:00 |
| Kingman Reef | HA1501_LINE | 15 | 2015-04-24 15:55:00, 2015-04-28 21:33:00 |
| Palmyra Atoll | HA1501_LINE | 18 | 2015-04-15 20:50:00, 2015-04-22 13:38:00 |

Check for NULLs in all metadata fields

“No” signifies that no NULL data exist. “Yes” signifies that NULL values are present. NULL values are only ok if present in the ASSOC_OCC_SITEID field (not every cast is associated with an OCC site).

| | NULLs? |
|--------------|--------|
| SHALLOWCTDID | No |
| CTDCASTID | No |
| REGIONCODE | No |
| CASTYEAR | No |
| CRUISE | No |
| LOCATION | No |
| LATITUDE | No |
| LONGITUDE | No |
| UTCDATETIME | No |
| WATERSAMPLE | No |

(continued)

| | NULLs? |
|------------------|--------|
| ASSOC_OCC_SITEID | Yes |
| ASSOC_REA_SITE | No |
| OFFSHORE_YN | No |
| SURVEY_DESIGN | No |

Check for NULLs in all data fields

“No” signifies that no NULL data exist. “Yes” signifies that NULL values are present. NULL values may be present in data fields if there were bad or missing data in a cast.

| | NULLs? |
|----------------|--------|
| PRESSURE_DB | No |
| DEPTH_M | No |
| TEMP_DEGC | Yes |
| COND_S_PER_M | Yes |
| SALN_PSU | Yes |
| DENSITY_SIGMAT | Yes |

[1] “The following casts are missing at least one temperature value:”

| Casts missing temperature values |
|----------------------------------|
| HA1501_PHOENIX_JOH_SN4282_002 |
| HA1501_LINE_JAR_SN4818_002 |
| HA1501_LINE_JAR_SN4818_012 |
| HA1501_LINE_PAL_SN4818_005 |
| HA1501_LINE_PAL_SN4818_007 |
| HA1501_LINE_PAL_SN4282_007 |
| HA1501_LINE_KIN_SN4282_001 |
| HA1501_LINE_KIN_SN4818_009 |
| HA1501_LINE_KIN_SN4282_002 |

[1] “The following casts are missing at least one salinity value:”

| Casts missing salinity values |
|-------------------------------|
| HA1501_PHOENIX_JOH_SN4282_002 |
| HA1501_PHOENIX_HOW_SN4282_002 |
| HA1501_PHOENIX_BAK_SN4282_001 |
| HA1501_LINE_PAL_SN4282_002 |
| HA1501_LINE_PAL_SN4282_004 |
| HA1501_LINE_PAL_SN4282_005 |
| HA1501_LINE_PAL_SN4282_007 |
| HA1501_LINE_KIN_SN4282_001 |
| HA1501_LINE_KIN_SN4282_002 |
| HA1501_LINE_KIN_SN4282_003 |

(continued)

Casts missing salinity values

HA1501_LINE_KIN_SN4282_004

Check for data values out of expected ranges

Make sure that the CTD data values are within a reasonable range. Parameters with “Yes” flags are outside a general expected range (but may not necessarily be incorrect).

| | Min | Max | Flag |
|----------------|---------|----------|------|
| PRESSURE_DB | 1.002 | 28.067 | No |
| DEPTH_M | 0.805 | 28 | No |
| TEMP_DEGC | 25.3182 | 29.3997 | No |
| COND_S_PER_M | 4.66718 | 5.866739 | No |
| SALN_PSU | 30.0085 | 35.917 | No |
| DENSITY_SIGMAT | 19.4327 | 23.8193 | Yes |

Summary of casts

| SHALLOWCTDID | LATITUDE | LONGITUDE | UTCDATETIME | ASSOC_OCC_SITEID | ASSOC_REA_SITE | SURVEY_DESIGN | MIN_DEPTH | MAX_DEPTH |
|-------------------------------|------------|-----------|---------------------|------------------|----------------|-------------------|-----------|-----------|
| HA1501_LINE_JAR_SN4282_001 | -0.3676560 | -159.9792 | 2015-04-09 19:36:00 | OCC-JAR-002 | JAR-642 | Permanent | 1.000 | 14.000 |
| HA1501_LINE_JAR_SN4282_002 | -0.3619630 | -159.9956 | 2015-04-10 21:58:00 | NA | JAR-667 | Stratified_Random | 1.000 | 19.000 |
| HA1501_LINE_JAR_SN4282_003 | -0.3814090 | -160.0122 | 2015-04-11 20:06:00 | NA | JAR-663 | Stratified_Random | 1.000 | 10.000 |
| HA1501_LINE_JAR_SN4282_004 | -0.3646100 | -159.9849 | 2015-04-12 20:51:00 | NA | JAR-634 | Stratified_Random | 1.000 | 19.000 |
| HA1501_LINE_JAR_SN4282_005 | -0.3823360 | -160.0027 | 2015-04-13 20:24:00 | OCC-JAR-007 | JAR-625 | Permanent | 1.000 | 19.000 |
| HA1501_LINE_JAR_SN4818_001 | -0.3823400 | -160.0031 | 2015-04-09 00:37:00 | OCC-JAR-008 | JAR-04 | Permanent | 1.000 | 28.000 |
| HA1501_LINE_JAR_SN4818_002 | -0.3892417 | -160.0089 | 2015-04-09 01:12:00 | NA | JAR-2074 | Random | 1.000 | 27.000 |
| HA1501_LINE_JAR_SN4818_003 | -0.3677638 | -159.9788 | 2015-04-09 21:30:00 | OCC-JAR-003 | JAR-01 | Permanent | 1.000 | 27.000 |
| HA1501_LINE_JAR_SN4818_004 | -0.3593308 | -159.9750 | 2015-04-09 22:36:00 | NA | JAR-2075 | Random | 1.000 | 27.000 |
| HA1501_LINE_JAR_SN4818_005 | -0.3689570 | -160.0081 | 2015-04-10 21:15:00 | OCC-JAR-013 | JAR-11 | Permanent | 1.000 | 22.000 |
| HA1501_LINE_JAR_SN4818_006 | -0.3651765 | -160.0164 | 2015-04-10 22:02:00 | NA | JAR-2076 | Random | 1.000 | 22.000 |
| HA1501_LINE_JAR_SN4818_007 | -0.3760502 | -160.0139 | 2015-04-11 00:21:00 | OCC-JAR-011 | JAR-07 | Permanent | 1.000 | 26.000 |
| HA1501_LINE_JAR_SN4818_008 | -0.3690127 | -160.0081 | 2015-04-11 22:07:00 | OCC-JAR-013 | JAR-11 | Permanent | 1.000 | 28.000 |
| HA1501_LINE_JAR_SN4818_010 | -0.3677868 | -159.9788 | 2015-04-12 22:02:00 | OCC-JAR-003 | JAR-01 | Permanent | 1.000 | 26.000 |
| HA1501_LINE_JAR_SN4818_012 | -0.3630665 | -159.9912 | 2015-04-24 19:57:00 | OCC-JAR-001 | JAR-08 | Permanent | 1.000 | 28.000 |
| HA1501_LINE_KIN_SN4282_001 | 6.3821107 | -162.3806 | 2015-04-24 15:55:00 | NA | KIN-474 | Stratified_Random | 1.000 | 19.000 |
| HA1501_LINE_KIN_SN4282_002 | 6.4033273 | -162.3423 | 2015-04-26 16:07:00 | NA | KIN-463 | Stratified_Random | 1.000 | 16.000 |
| HA1501_LINE_KIN_SN4282_003 | 6.3784133 | -162.4210 | 2015-04-26 16:25:00 | NA | KIN-477 | Stratified_Random | 1.000 | 21.000 |
| HA1501_LINE_KIN_SN4282_004 | 6.4383120 | -162.3867 | 2015-04-28 21:33:00 | NA | KIN-464 | Stratified_Random | 1.000 | 15.000 |
| HA1501_LINE_KIN_SN4818_001 | 6.3818519 | -162.3464 | 2015-04-24 19:50:00 | OCC-KIN-006 | KIN-11 | Permanent | 1.006 | 21.159 |
| HA1501_LINE_KIN_SN4818_002 | 6.3822422 | -162.3840 | 2015-04-24 21:14:00 | OCC-KIN-009 | KIN-13 | Permanent | 0.986 | 20.082 |
| HA1501_LINE_KIN_SN4818_003 | 6.3736451 | -162.3841 | 2015-04-24 23:43:00 | NA | KIN-5147 | Random | 0.998 | 17.126 |
| HA1501_LINE_KIN_SN4818_004 | 6.3903755 | -162.3607 | 2015-04-25 00:51:00 | OCC-KIN-022 | KIN-03 | Permanent | 0.971 | 18.204 |
| HA1501_LINE_KIN_SN4818_005 | 6.4213709 | -162.4477 | 2015-04-25 21:00:00 | NA | KIN-5148 | Random | 0.990 | 24.234 |
| HA1501_LINE_KIN_SN4818_006 | 6.4021345 | -162.3857 | 2015-04-25 22:50:00 | OCC-KIN-014 | KIN-62 | Permanent | 0.972 | 25.356 |
| HA1501_LINE_KIN_SN4818_007 | 6.4204541 | -162.3796 | 2015-04-25 23:59:00 | OCC-KIN-024 | KIN-10 | Permanent | 1.001 | 25.409 |
| HA1501_LINE_KIN_SN4818_008 | 6.3932648 | -162.3475 | 2015-04-26 18:22:00 | NA | KIN-5149 | Random | 0.954 | 25.398 |
| HA1501_LINE_KIN_SN4818_009 | 6.4387807 | -162.3880 | 2015-04-26 21:47:00 | OCC-KIN-002 | KIN-04 | Permanent | 0.929 | 15.845 |
| HA1501_LINE_KIN_SN4818_010 | 6.4457869 | -162.3824 | 2015-04-26 22:53:00 | NA | KIN-5150 | Random | 0.943 | 26.138 |
| HA1501_LINE_KIN_SN4818_012 | 6.3818027 | -162.3464 | 2015-04-28 00:19:00 | OCC-KIN-006 | KIN-11 | Permanent | 0.966 | 26.598 |
| HA1501_LINE_PAL_SN4282_001 | 5.8661440 | -162.0486 | 2015-04-15 20:50:00 | NA | PAL-740 | Stratified_Random | 1.000 | 14.000 |
| HA1501_LINE_PAL_SN4282_002 | 5.8749610 | -162.0162 | 2015-04-16 18:28:00 | NA | PAL-745 | Stratified_Random | 1.000 | 8.000 |
| HA1501_LINE_PAL_SN4282_003 | 5.8670650 | -162.0168 | 2015-04-17 21:13:00 | NA | PAL-720 | Stratified_Random | 1.000 | 9.000 |
| HA1501_LINE_PAL_SN4282_004 | 5.8675210 | -162.0661 | 2015-04-18 19:45:00 | NA | PAL-630 | Stratified_Random | 1.000 | 14.000 |
| HA1501_LINE_PAL_SN4282_005 | 5.8660676 | -162.0479 | 2015-04-20 15:40:00 | NA | PAL-856 | Stratified_Random | 1.000 | 11.000 |
| HA1501_LINE_PAL_SN4282_006 | 5.8743110 | -162.1279 | 2015-04-21 22:02:00 | NA | PAL-695 | Stratified_Random | 1.000 | 14.000 |
| HA1501_LINE_PAL_SN4282_007 | 5.8955403 | -162.1328 | 2015-04-22 13:38:00 | NA | PAL-742 | Stratified_Random | 1.000 | 15.000 |
| HA1501_LINE_PAL_SN4818_001 | 5.8637904 | -162.0306 | 2015-04-15 22:04:00 | OCC-PAL-008 | PAL-25 | Permanent | 1.019 | 22.303 |
| HA1501_LINE_PAL_SN4818_002 | 5.8546010 | -162.0292 | 2015-04-15 23:19:00 | NA | PAL-5132 | Random | 0.805 | 26.601 |
| HA1501_LINE_PAL_SN4818_003 | 5.8973304 | -162.0782 | 2015-04-16 20:25:00 | OCC-PAL-003 | PAL-64 | Permanent | 0.992 | 19.268 |
| HA1501_LINE_PAL_SN4818_004 | 5.9054692 | -162.0772 | 2015-04-16 21:57:00 | NA | PAL-5133 | Random | 0.996 | 27.684 |
| HA1501_LINE_PAL_SN4818_005 | 5.8954565 | -162.0860 | 2015-04-16 22:21:00 | OCC-PAL-063 | PAL-21 | Permanent | 0.997 | 25.745 |
| HA1501_LINE_PAL_SN4818_006 | 5.8696061 | -162.0751 | 2015-04-17 20:13:00 | OCC-PAL-012 | PAL-65 | Permanent | 0.976 | 20.162 |
| HA1501_LINE_PAL_SN4818_007 | 5.8663676 | -162.1096 | 2015-04-18 00:00:00 | OCC-PAL-014 | PAL-19 | Permanent | 0.956 | 26.732 |
| HA1501_LINE_PAL_SN4818_008 | 5.8641146 | -162.1270 | 2015-04-18 01:07:00 | OCC-PAL-015 | PAL-26 | Permanent | 0.915 | 16.154 |
| HA1501_LINE_PAL_SN4818_009 | 5.8815183 | -162.1777 | 2015-04-18 20:01:00 | NA | PAL-5134 | Random | 0.977 | 25.274 |
| HA1501_LINE_PAL_SN4818_010 | 5.8824788 | -162.1213 | 2015-04-18 21:12:00 | OCC-PAL-018 | PAL-5006 | Permanent | 1.006 | 17.367 |
| HA1501_LINE_PAL_SN4818_012 | 5.8753354 | -162.1390 | 2015-04-20 23:31:00 | OCC-PAL-062 | PAL-17 | Permanent | 2.000 | 21.000 |
| HA1501_PHOENIX_BAK_SN4282_001 | 0.2042613 | -176.4728 | 2015-02-09 21:34:00 | NA | BAK-457 | Stratified_Random | 1.000 | 15.000 |
| HA1501_PHOENIX_BAK_SN4282_002 | 0.1946534 | -176.4604 | 2015-02-10 23:37:00 | NA | BAK-452 | Stratified_Random | 1.000 | 13.000 |
| HA1501_PHOENIX_BAK_SN4282_003 | 0.1869299 | -176.4678 | 2015-02-11 01:05:00 | NA | BAK-462 | Stratified_Random | 1.000 | 20.000 |
| HA1501_PHOENIX_BAK_SN4282_004 | 0.1876804 | -176.4744 | 2015-02-11 21:15:00 | NA | BAK-469 | Stratified_Random | 1.000 | 23.000 |
| HA1501_PHOENIX_BAK_SN4282_005 | 0.2009239 | -176.4656 | 2015-02-11 22:42:00 | NA | BAK-441 | Stratified_Random | 1.000 | 11.000 |
| HA1501_PHOENIX_BAK_SN4818_001 | 0.1986425 | -176.4849 | 2015-02-08 23:40:00 | OCC-BAK-011 | BAK-11 | Permanent | 0.960 | 27.320 |
| HA1501_PHOENIX_BAK_SN4818_002 | 0.1946064 | -176.4628 | 2015-02-10 22:28:00 | OCC-BAK-014 | BAK-16 | Permanent | 0.953 | 11.482 |
| HA1501_PHOENIX_BAK_SN4818_003 | 0.2049966 | -176.4744 | 2015-02-11 01:01:00 | OCC-BAK-003 | BAK-14 | Permanent | 1.048 | 18.698 |
| HA1501_PHOENIX_BAK_SN4818_004 | 0.1883854 | -176.4800 | 2015-02-11 21:42:00 | OCC-BAK-008 | BAK-02 | Permanent | 1.086 | 23.461 |
| HA1501_PHOENIX_BAK_SN4818_005 | 0.1870224 | -176.4705 | 2015-02-12 00:37:00 | OCC-BAK-007 | BAK-50 | Permanent | 1.150 | 19.241 |
| HA1501_PHOENIX_HOW_SN4282_001 | 0.8113879 | -176.6116 | 2015-02-04 23:43:00 | NA | HOW-646 | Stratified_Random | 1.000 | 8.000 |
| HA1501_PHOENIX_HOW_SN4282_002 | 0.8127988 | -176.6233 | 2015-02-06 23:53:00 | NA | HOW-647 | Stratified_Random | 1.000 | 19.000 |
| HA1501_PHOENIX_HOW_SN4818_001 | 0.8095982 | -176.6023 | 2015-02-04 22:02:00 | NA | HOW-1049 | Random | 1.060 | 26.433 |
| HA1501_PHOENIX_HOW_SN4818_002 | 0.8093462 | -176.6106 | 2015-02-04 21:14:00 | OCC-HOW-003 | HOW-12 | Permanent | 0.972 | 24.230 |
| HA1501_PHOENIX_HOW_SN4818_003 | 0.8041478 | -176.6211 | 2015-02-05 20:28:00 | OCC-HOW-016 | HOW-05 | Permanent | 1.081 | 27.486 |
| HA1501_PHOENIX_HOW_SN4818_004 | 0.7987726 | -176.6202 | 2015-02-06 20:44:00 | OCC-HOW-005 | HOW-11 | Permanent | 1.035 | 27.129 |
| HA1501_PHOENIX_HOW_SN4818_005 | 0.8196717 | -176.6161 | 2015-02-06 21:49:00 | OCC-HOW-001 | HOW-13 | Permanent | 0.955 | 22.075 |
| HA1501_PHOENIX_HOW_SN4818_006 | 0.8148492 | -176.6239 | 2015-02-07 20:39:00 | OCC-HOW-009 | HOW-14 | Permanent | 1.036 | 26.582 |
| HA1501_PHOENIX_JOH_SN4282_001 | 16.7372270 | -169.5494 | 2015-01-26 23:19:00 | NA | JOH-776 | Stratified_Random | 1.000 | 11.000 |
| HA1501_PHOENIX_JOH_SN4282_002 | 16.6906390 | -169.5043 | 2015-01-27 23:15:00 | NA | JOH-722 | Stratified_Random | 1.000 | 15.000 |
| HA1501_PHOENIX_JOH_SN4282_003 | 16.7322890 | -169.4300 | 2015-01-28 21:34:00 | NA | JOH-714 | Stratified_Random | 1.000 | 13.000 |
| HA1501_PHOENIX_JOH_SN4818_001 | 16.7214993 | -169.5241 | 2015-01-26 23:54:00 | OCC-JOH-007 | JOH-11 | Permanent | 0.978 | 10.066 |
| HA1501_PHOENIX_JOH_SN4818_002 | 16.6826474 | -169.5262 | 2015-01-27 21:48:00 | NA | JOH-2120 | Random | 1.027 | 20.106 |
| HA1501_PHOENIX_JOH_SN4818_003 | 16.6916669 | -169.5270 | 2015-01-27 22:55:00 | OCC-JOH-006 | JOH-56 | Permanent | 1.072 | 18.467 |
| HA1501_PHOENIX_JOH_SN4818_004 | 16.7410349 | -169.5246 | 2015-01-28 03:00:00 | NA | JOH-2121 | Random | 1.091 | 12.075 |
| HA1501_PHOENIX_JOH_SN4818_005 | 16.7116014 | -169.4796 | 2015-01-28 21:45:00 | OCC-JOH-004 | JOH-07 | Permanent | 0.980 | 16.183 |
| HA1501_PHOENIX_JOH_SN4818_006 | 16.7285577 | -169.4856 | 2015-01-29 00:04:00 | OCC-JOH-018 | JOH-09 | Permanent | 1.047 | 10.088 |
| HA1501_PHOENIX_JOH_SN4818_007 | 16.7634269 | -169.5119 | 2015-01-29 02:05:00 | OCC-JOH-011 | JOH-10 | Permanent | 1.036 | 15.098 |