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## CTD DOWNLOAD FILES

CTD data is delivered to the user in a zip file. The data is comma delimited with the following file format. Those fields which are shaded in the following table are only downloaded if they were selected as part of the original search parameters.

The format of all date/time fields in download files is dd/MM/YYYY HH24:mi. Those users importing data into MS-Excel should ensure that they have their Regional Settings Properties for Short Date Style set to d/MM/yy. Excel users should also note that MS-Excel will only load the first 65536 rows of any download file.

Times are in UTC for all Franklin voyages and Southern Surveyor voyages after 1996. Times for other voyages are not reliable.

### CTD DOWNLOAD FILE FORMAT DESCRIPTION

Field Name	Type	Units	Range	Codes	Description
SURVEY_NAME	VARCHAR(12)				name given to vessel based survey expedition
STATION_NO	NUMBER(6)				oceanographic station number
START_TIME	DATE				start time of dip
END_TIME	DATE				end time of dip
MIN_DEPTH	NUMBER(5:1)	metres			minimum depth
MAX_DEPTH	NUMBER(5:1)	metres			maximum depth
BOTTOM_DEPTH	NUMBER(5:1)	metres			water depth at start of dip
BOTTOM_TIME	DATE				time of maximum depth of dip
BOTTOM_LAT	NUMBER(7:5)	degrees	0 - 90		latitude at time of maximum ctd depth
BOTTOM_LON	NUMBER(8:5)	degrees	0 - 180		longitude at time of maximum ctd depth
END_LAT	NUMBER(7:5)	degrees	0 - 90		latitude at end of dip
END_LON	NUMBER(8:5)	degrees	0 - 180		longitude at end of dip
START_LAT	NUMBER(7:5)	degrees	0 - 90		latitude at start of dip
START_LON	NUMBER(8:5)	degrees	0 - 180		longitude at start of dip
PROJECT_NAME	VARCHAR(300)				name assigned to project
MARLIN_ID	NUMBER(7)				ID of the MarLIN record which describes this ctd
PRESSURE	NUMBER(5)	decibars	0 - 10000		pressure value

TEMPERATURE_VALUE	NUMBER(16:6)	deg C	-3 - 35		temperature value
TEMPERATURE_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for temperature value
SALINITY_VALUE	NUMBER(16:6)	psu	0 – 38.5		salinity value
SALINITY_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for salinity value
OXYGEN_VALUE	NUMBER(16:6)	micromole/litre	0 - 600		oxygen value
OXYGEN_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for oxygen value
FLUORESCENCE_VALUE	NUMBER(16:6)	arbitrary units			fluorescence value
FLUORESCENCE_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for fluorescence value
OBS_VALUE	NUMBER(16:6)	volts	0 - 10		obs value
OBS_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for obs value
PAR_VALUE	NUMBER(16:6)	UE/m**2/sec			par value
PAR_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for par value
PH_VALUE	NUMBER(16:6)	ph	0 - 10		ph value
PH_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for ph value
TURBIDITY_VALUE	NUMBER(16:6)	%	0 -100		turbidity value
TURBIDITY_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for turbidity value

### CTD Temperature Notes

For CTD temperature values up to the end of 1989 the temperature scale is t68 (IPTS-68). From 01-JAN-1990 onwards the temperature scale is t90 (ITS-90). The conversion between the two temperature scales in the 'Oceanographic' range is:

$t_{68} = 1.00024 \times t_{90}$  or

$t_{90} = 0.99976 \times t_{68}$

All CTD temperature values in the warehouse are in the t90 scale.

## HYDROLOGY DOWNLOAD FILES

Hydrology data is delivered to the user in a zip file. The data is comma delimited with the following file format. Those fields which are shaded in blue in the following table are only downloaded if they were selected as part of the original search parameters or if 'All parameters' is selected. Those fields shaded in green are only downloaded when 'All parameters' is selected in the data search.

The format of all date/time fields in download files is dd/MM/YYYY HH24:mi. Those users importing data into MS-Excel should ensure that they have their Regional Settings Properties for Short Date Style set to d/MM/yy. Excel users should also note that MS-Excel will only load the first 65536 rows of any download file.

Times are in UTC for all Franklin voyages and Southern Surveyor voyages after 1996. Times for other voyages are not reliable.

### HYDROLOGY DOWNLOAD FILE FORMAT DESCRIPTION

Field Name	Type	Units	Range	Codes	Description
SURVEY_NAME	VARCHAR(12)				name given to vessel based survey expedition
STATION_NO	NUMBER(6)				oceanographic station number
START_TIME	DATE				start time of dip
END_TIME	DATE				end time of dip
MIN_DEPTH	NUMBER(5:1)	metres			minimum depth
MAX_DEPTH	NUMBER(5:1)	metres			maximum depth
BOTTOM_DEPTH	NUMBER(5:1)	metres			water depth at start of dip
BOTTOM_TIME	DATE				time of maximum depth of dip
BOTTOM_LAT	NUMBER(7:5)	degrees	0 - 90		latitude at time of maximum ctd depth
BOTTOM_LON	NUMBER(8:5)	degrees	0 - 180		longitude at time of maximum ctd depth
END_LAT	NUMBER(7:5)	degrees	0 - 90		latitude at end of dip
END_LON	NUMBER(8:5)	degrees	0 - 180		longitude at end of dip
START_LAT	NUMBER(7:5)	degrees	0 - 90		latitude at start of dip
START_LON	NUMBER(8:5)	degrees	0 - 180		longitude at end of dip

PROJECT_NAME	VARCHAR(300)				name assigned to project
MARLIN_ID	NUMBER(7)				ID of the MarLIN record which describes this hydrology dataset
BOTTLE_NUMBER	NUMBER(6)				number given to bottle on rosette
PRESSURE	NUMBER(5)	decibars	0 - 10000		pressure value for ship depth for coastal station
ROSETTE_POSITION	NUMBER(16:6)		1 - 24		position of bottle in rosette
ROSETTE_POSITION_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for rosette position
NITRATE_VALUE	NUMBER(16:6)	micromole/litre	0 - 50		nitrate value-all negative values have been set to zero, and flagged to below detection limits using qc flag '63' (good data which has been manually adjusted and the flag is user defined)
NITRATE_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for nitrate value
NITRITE_VALUE	NUMBER(16:6)	micromole/litre	0 - 5		nitrite value-all negative values have been set to zero, and flagged to below detection limits using qc flag '63' (good data which has been manually adjusted and the flag is user defined)
NITRITE_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for nitrite value
OXYGEN_VALUE	NUMBER(16:6)	micromole/litre	0 - 600		oxygen value
OXYGEN_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for oxygen value
PHOSPHATE_VALUE	NUMBER(16:6)	micromole/litre	0 - 3		phosphate value-all negative values have been set to zero, and flagged to below detection limits using qc flag '63' (good data which has been manually adjusted and the flag is user defined)
PHOSPHATE_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for phosphate value
SALINITY_VALUE	NUMBER(16:6)	psu	0 - 38.5		salinity value
SALINITY_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for salinity value
SILICATE_VALUE	NUMBER(16:6)	micromole/litre	0 - 220		silicate value-all negative values have been set to zero, and flagged to below detection limits using qc flag '63' (good data which has been manually adjusted and the flag is user defined)
SILICATE_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for silicate value
TEMPERATURE_VALUE	NUMBER(16:6)	deg C	-3 - 35		temperature value

TEMPERATURE_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for temperature value
AMMONIA_VALUE	NUMBER(16:6)	micromole/litre	0 - 2.5		ammonia value-all negative values have been set to zero, and flagged to below detection limits using qc flag '63' (good data which has been manually adjusted and the flag is user defined)
AMMONIA_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag for ammonia value

## MOORED INSTRUMENT DOWNLOAD FILES

Moored instrument data is delivered to the user in a zip file. The data is comma delimited with the following file format. Those fields which are shaded in the following table are only downloaded if they were selected as part of the original search parameters.

The format of all date/time fields in download files is dd/MM/YYYY HH24:mi. Those users importing data into MS-Excel should ensure that they have their Regional Settings Properties for Short Date Style set to d/MM/yy. Excel users should also note that MS-Excel will only load the first 65536 rows of any download file.

### MOORED INSTRUMENT DOWNLOAD FILE FIELDS

Field Name	Type	Units	Range	Codes	Description
SURVEY_NAME	VARCHAR(12)				name given to groupings of moored instrument deployments (eg in some cases the name of the experiment)
STATION_NO	NUMBER(6)				oceanographic station number
START_TIME	DATE				time the meter entered the water
END_TIME	DATE				time the meter exited the water
NOMINAL_METER_DEPTH	NUMBER(5)	metres			how far under water the meter was supposed to be
METER_TYPE	VARCHAR(20)			METER_TYPE	allows differentiation between different moored instrument datasets
START_LAT	NUMBER(7:5)	degrees	0 - 90		start latitude
START_LON	NUMBER(8:5)	degrees	0 - 180		start longitude
FILTER_ID	VARCHAR(15)				name of the filter used to produce this data from the raw format
PROJECT_NAME	VARCHAR(300)				name assigned to project
MARLIN_ID	NUMBER(7)				ID of the MarLIN record which describes this moored instrument dataset
MODEL_NO	VARCHAR(16)				model number of moored instrument
TIME_SECONDS	NUMBER	seconds			in seconds since 1 January on the year of start_time



TIME	DATE				nominal time to which this record relates (UTC)
TIME_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with this item for historical records simply indicates whether data has been filtered
EAST_COMPONENT	NUMBER(5:2)	cm/sec	-300 - 200		velocity component of the current parallel to the equator
EAST_COMPONENT_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with this item for historical records simply indicates whether data has been filtered
NORTH_COMPONENT	NUMBER(5:2)	cm/sec	-300 - 200		velocity component of the current perpendicular to the equator
NORTH_COMPONENT_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with this item for historical records simply indicates whether data has been filtered
PRESSURE	NUMBER(5:2)	decibars	0 - 10000		calibrated pressure meter reading
PRESSURE_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with this item for historical records simply indicates whether data has been filtered
TEMPERATURE_VALUE	NUMBER(5:2)	deg C	-3 - 35		calibrated temperature gauge reading
TEMPERATURE_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with this item for historical records simply indicates whether data has been filtered
SALINITY_VALUE	NUMBER(4:2)	psu	0 – 38.5		derived quantity based on temperature depth and conductivity
SALINITY_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with this item for historical records simply indicates whether data has been filtered

## GIS DOWNLOAD FILES

GIS data is delivered to the user in a zip file with the following files zipped files being delivered depending on whether the data is in ArcView or MapInfo format.

### GIS ZIP FILE FORMAT

GIS Type	File Extension	File Description
ArcView	.shp	
	.shx	
	.dbf	
	.sbn	
	.sbx	
	.doc	License Agreement Document if applicable
MapInfo	.id	
	.dat	
	.map	
	.tab	
	.doc	License Agreement Document if applicable

## BIOLOGY DOWNLOAD FILES

Biology data is delivered to the user in a zip file containing four files. Each data file is comma delimited and the files have the following formats.

The format of all date/time fields in download files is dd/MM/YYYY HH24:mi. Those users importing data into MS-Excel should ensure that they have their Regional Settings Properties for Short Date Style set to d/MM/yy. Excel users should also note that MS-Excel will only load the first 65536 rows of any download file.

Times are in UTC for Southern Surveyor voyages after 1996, times for other voyages are not reliable.

### CATCH HEADER DOWNLOAD FILE FORMAT

Field	Type	Units	Range	Codes	Description
SURVEY_NAME	VARCHAR(12)				name given to vessel based survey expedition
PROJECT_NAME	NUMBER(6)				name assigned to project
MARLIN_ID	NUMBER(7)				ID of the MarLIN record which describes this catch dataset
OPERATION_NO	NUMBER(4)				fisheries operation number
OPERATION_START_TIME	DATE				time instrument deployed in water
OPERATION_END_TIME	DATE				time instrument out of water
OPERATION_START_LAT	NUMBER(7:5)	degrees	0 - 90		latitude at start of deployment
OPERATION_START_LON	NUMBER(8:5)	degrees	0 - 180		longitude at start of deployment
OPERATION_END_LAT	NUMBER(7:5)	degrees	0 - 90		latitude at end of deployment
OPERATION_END_LON	NUMBER(8:5)	degrees	0 - 180		longitude at end of deployment
DEPLOYMENT_TYPE	VARCHAR(16)			DEPLOYMENT_TYPE	type of this deployment (trawl sled etc)
OPERATION_MAX_DEPTH	NUMBER(5:1)	metres			maximum depth of deployment

DEPLOYMENT_DESCRIPTION	VARCHAR(80)				description (name) given to the deployment/operation
LOCATION_SELECTION	VARCHAR(16)			LOCATION_SELECTION	code of deployment location selection method
COMPONENT_NAME	VARCHAR(80)				common name of equipment or instrument.
COMPONENT_NO	NUMBER(2)				sequence number assigned to gear component
CATCH_START_TIME	DATE				start date/time of catch (UTC)
CATCH_END_TIME	DATE				end date/time of catch (UTC)
UTC_OFFSET	NUMBER(3:1)	hours			offset in hours to UTC required to give local time
CATCH_START_LAT	NUMBER(7:5)	degrees	0 - 90		catch start latitude (decimal degrees)
CATCH_START_LON	NUMBER(8:5)	degrees	0 - 180		catch start longitude (decimal degrees)
CATCH_END_LAT	NUMBER(7:5)	degrees	0 - 90		catch end latitude (decimal degrees)
CATCH_END_LON	NUMBER(8:5)	degrees	0 - 180		catch end longitude (decimal degrees)
CATCH_START_DEPTH	NUMBER(5)	metres			catch start depth in m if available
CATCH_END_DEPTH	NUMBER(5)	metres			catch end depth in m if available
CATCH_MIN_DEPTH	NUMBER(5)	metres			catch minimum depth
CATCH_MAX_DEPTH	NUMBER(5)	metres			catch maximum depth
TOTAL_CATCH_WT	NUMBER(7:3)	kg			weight of total catch
FRACTION_SAMPLED	NUMBER(4:1)		0 – 100		fraction of catch sampled
DISCARDED_CATCH_WT	NUMBER(7:3)	kg			weight of discarded catch fraction
SAMPLED_CATCH_WT	NUMBER(7:3)	kg			weight of sampled catch fraction
COMMENTS	VARCHAR(255)				field for comments regarding catch

## CATCH COMPOSITION DOWNLOAD FILE FORMAT

Field	Type	Units	Range	Codes	Description
SURVEY_NAME	VARCHAR(12)				name given to vessel based survey expedition
OPERATION_NO	NUMBER(4)				fisheries operation number
COMPONENT_NAME	VARCHAR(80)				common name of equipment or instrument.
COMPONENT_NO	NUMBER(2)				sequence number assigned to gear component
CATCH_START_TIME	DATE				start date/time of catch (UTC)
CATCH_END_TIME	DATE				end date/time of catch (UTC)
UTC_OFFSET	NUMBER(3:1)	hours			offset in hours to UTC required to give local time
CATCH_START_LAT	NUMBER(7:5)	degrees	0 - 90		catch start latitude (decimal degrees)
CATCH_START_LON	NUMBER(8:5)	degrees	0 - 180		catch start longitude (decimal degrees)
CATCH_END_LAT	NUMBER(7:5)	degrees	0 - 90		catch end latitude (decimal degrees)
CATCH_END_LON	NUMBER(8:5)	degrees	0 - 180		catch end longitude (decimal degrees)
CATCH_MIN_DEPTH	NUMBER(5)	metres			catch minimum depth in metres
CATCH_MAX_DEPTH	NUMBER(5)	metres			catch maximum depth in metres
CAAB_SPECIES_CODE	NUMBER(8)				numeric version of current CAAB code for the species e.g. 37004001 for CAAB species 37 004001
SCIENTIFIC_NAME	VARCHAR(255)				latest scientific name for the species
ORIGINAL_SPECIES_CODE	VARCHAR(8)				species codes which appeared in the original data
SPECIES_ID_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with species identification
CATCH_COUNT	NUMBER(5)				count of individuals of this species in sample
CATCH_COUNT_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with catch count
CATCH_WEIGHT	NUMBER(7:3)				weight of this species in sample
CATCH_WEIGHT_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with catch weight
QUANTITY_MEASURED_CODE	VARCHAR(16)			QUANTITY_MEASUR	how measured quantity was determined

				ED_CODE	
SPECIMEN_DATA_FLAG	VARCHAR(1)				indicates that biological sample or measurement exists for specimen/s from this species and catch
COMMENTS	VARCHAR(255)				field for comments

## CATCH MEASUREMENT DOWNLOAD FILE FORMAT

Field	Type	Units	Range	Codes	Description
SURVEY_NAME	VARCHAR(12)				name given to vessel based survey expedition
OPERATION_NO	NUMBER(4)				fisheries operation number
COMPONENT_NAME	VARCHAR(80)				common name of equipment or instrument.
COMPONENT_NO	NUMBER(2)				sequence number assigned to gear component
CATCH_START_TIME	DATE				start date/time of catch (UTC)
CATCH_END_TIME	DATE				end date/time of catch (UTC)
UTC_OFFSET	NUMBER(3:1)	hours			offset in hours to UTC required to give local time
CATCH_START_LAT	NUMBER(7:5)	degrees	0 - 90		catch start latitude (decimal degrees)
CATCH_START_LON	NUMBER(8:5)	degrees	0 - 180		catch start longitude (decimal degrees)
CATCH_END_LAT	NUMBER(7:5)	degrees	0 - 90		catch end latitude (decimal degrees)
CATCH_END_LON	NUMBER(8:5)	degrees	0 - 180		catch end longitude (decimal degrees)
CAAB_SPECIES_CODE	NUMBER(8)				numeric version of current CAAB code for the species e.g. 37004001 for CAAB species 37 004001
SCIENTIFIC_NAME	VARCHAR(255)				latest scientific name for the species
ORIGINAL_SPECIES_CODE	VARCHAR(8)				species codes which appeared in the original data
SEX_CODE	VARCHAR(10)			SEX_CODE	indicates sex of individual
MEDIAN_LENGTH	NUMBER(7:2)	cm			mid-point of the length class for which the count applies
INTERVAL_WIDTH	NUMBER(3:1)	cm			total width of the length class for which the

					count applies
SPECIMEN_COUNT	NUMBER(5)				number of individuals of this species in specified length class of specified sex
LENGTH_METHOD_CODE	VARCHAR(2)			LENGTH_METHOD_CODE	indicates measurement method e.g. fork length total length etc
COUNT_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with this data item

## CATCH SPECIMEN DOWNLOAD FILE FORMAT

Field	Type	Units	Range	Codes	Description
SURVEY_NAME	VARCHAR(12)				name given to vessel based survey expedition
OPERATION_NO	NUMBER(4)				fisheries operation number
COMPONENT_NAME	VARCHAR(80)				common name of equipment or instrument.
COMPONENT_NO	NUMBER(2)				sequence number assigned to gear component
CATCH_START_TIME	DATE				start date/time of catch (UTC)
CATCH_END_TIME	DATE				end date/time of catch (UTC)
UTC_OFFSET	NUMBER(3:1)	hours			offset in hours to UTC required to give local time
CATCH_START_LAT	NUMBER(7:5)	degrees	0 - 90		catch start latitude (decimal degrees)
CATCH_START_LON	NUMBER(8:5)	degrees	0 - 180		catch start longitude (decimal degrees)
CATCH_END_LAT	NUMBER(7:5)	degrees	0 - 90		catch end latitude (decimal degrees)
CATCH_END_LON	NUMBER(8:5)	degrees	0 - 180		catch end longitude (decimal degrees)
CAAB_SPECIES_CODE	NUMBER(8)				numeric version of current CAAB code for the species e.g. 37004001 for CAAB species 37 004001
SCIENTIFIC_NAME	VARCHAR(255)				latest scientific name for the species
ORIGINAL_SPECIES_CODE	VARCHAR(8)				species codes which appeared in the original data

SPECIMEN_NUMBER	NUMBER(3)				sequential number of individual being measured
SEX_CODE	VARCHAR(10)			SEX_CODE	indicates sex of individual
LENGTH	NUMBER(7)	cm			length of the specimen
LENGTH_METHOD_CODE	VARCHAR(2)			LENGTH_METHOD_CODE	indicates measurement method e.g. fork length total length etc
LENGTH_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with catch lengths
WEIGHT_METHOD_CODE	VARCHAR(2)			WEIGHT_METHOD_CODE	indicates measurement method e.g. whole fish part only etc
WEIGHT_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with catch weights
MATURATION_STAGE_CODE	VARCHAR(6)			**currently being defined	
MAT_STAGE_QC_FLAG	NUMBER(8)		0 - 255	QC_FLAGS	quality flag
GONAD_WEIGHT	NUMBER(8)	g			weight of the gonads of specimen
GONAD_WT_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with gonad weights
STOMACH_FULLNESS_CODE	VARCHAR(6)			STOMACH_FULLNESS_CODE	indicates stomach fullness of the specimen
STOMACH_FULLNESS_QC_FLAG	NUMBER(3)		0 - 255	QC_FLAGS	quality flag associated with stomach fullness
COMMENTS	VARCHAR(2)				field for comments



## NETCDF DOWNLOAD FILES

NetCDF data as described on the application interface is delivered to the user archived in a zip file.

### NETCDF DESCRIPTION

NetCDF is a binary file format for storing data.

NetCDF data is:

- *Self-Describing*. A netCDF file includes information about the data it contains.
- *Architecture-independent*. A netCDF file is represented in a form that can be accessed by computers with different ways of storing integers, characters, and floating-point numbers.
- *Direct-access*. A small subset of a large dataset may be accessed efficiently, without first reading through all the preceding data.
- *Appendable*. Data can be appended to a netCDF dataset along one dimension without copying the dataset or redefining its structure. The structure of a netCDF dataset can be changed, though this sometimes causes the dataset to be copied.
- *Sharable*. One writer and multiple readers may simultaneously access the same netCDF file.

Further information on netCDF may be obtained at <http://www.unidata.ucar.edu/packages/netcdf/index.html>

## LISTING OF CODES

Code Name	Code Value	Description
METER_TYPE	Current Meter	current meter deployed
METER_TYPE	Tide Gauge	tide gauge deployed
QUANTITY_MEASURED_CODE	Measured	catch totally measured
QUANTITY_MEASURED_CODE	Raised	catch species were weighed but sub-sample measured
QUANTITY_MEASURED_CODE	Estimated	catch species quantity was estimated
QUANTITY_MEASURED_CODE	Guessed	catch species quantity was guessed
DEPLOYMENT_TYPE	CTD Cast	deployment of CTD gear
DEPLOYMENT_TYPE	Current Meter	deployment of current meter
DEPLOYMENT_TYPE	Tide Gauge	deployment of tide gauge
DEPLOYMENT_TYPE	Underway System	deployment of underway system
DEPLOYMENT_TYPE	Catch	Catch
DEPLOYMENT_TYPE	Video	Video
DEPLOYMENT_TYPE	Acoustics	Acoustics
DEPLOYMENT_TYPE	Sediment Grab	Sediment grab
DEPLOYMENT_TYPE	Hydrology Cast	Hydrology Cast
DEPLOYMENT_TYPE	Catch Failed	Catch Failed
LENGTH_METHOD_CODE	Standard Length	Standard length (SL)
LENGTH_METHOD_CODE	Total Length	Total length (TL)
LENGTH_METHOD_CODE	Caudal Fork	Caudal fork (CF)
LENGTH_METHOD_CODE	Carpace Length	Carpace length (CL)
LENGTH_METHOD_CODE	Disk Width	Disk width (DW)
LENGTH_METHOD_CODE	Mantle Length	Mantle length (ML)
LENGTH_METHOD_CODE	Overall Length	Overall Length (OL)
LENGTH_METHOD_CODE	Other	Other type of length measurement
WEIGHT_CODE	Total Weight	Total weight
WEIGHT_CODE	Truncated Weight	Truncated weight (without head)
WEIGHT_CODE	Gutted Weight	Gutted weight
WEIGHT_CODE	Frozen Weight	Frozen weight
WEIGHT_CODE	Dried Weight	Dried weight

LOCATION_SELECTION	Survey Location	Survey location
LOCATION_SELECTION	Aimed At Target	Aimed at target
LOCATION_SELECTION	Random Location	Random location
LOCATION_SELECTION	Other	Other selection method
SEX_CODE	Male	Male
SEX_CODE	Female	Female
SEX_CODE	Juvenile	Juvenile - immature individual
SEX_CODE	Indeterminate	Impossible to determine
STOMACH_FULLNESS_CODE	0	Empty stomach
STOMACH_FULLNESS_CODE	1	Quarter full
STOMACH_FULLNESS_CODE	2	Half full
STOMACH_FULLNESS_CODE	3	3/4 full
STOMACH_FULLNESS_CODE	4	Full stomach
STOMACH_FULLNESS_CODE	E	Everted, fullness unknown

## LISTING OF QUALITY CONTROL FLAGS

QC Flag	Data State	Operation	Error Type
0	Good	None	No error – data is good
1	Good	None	Hardware error
2	Good	None	Software error
3	Good	None	Operator error
4	Good	None	Error flagged by hardware
5	Good	None	Error flagged by processor
6	Good	None	Analytical error
7	Good	None	Recording anomaly
8	Good	None	Data stream corrupted
9	Good	None	Data out of range
10	Good	None	Anomalous spike
11	Good	None	Preliminary processing (calibration) only
12	Good	None	Unprocessed (uncalibrated) or processing error
13	Good	None	No data – data missing for unknown reason
14	Good	None	Timing error
15	Good	None	User defined – user must fully describe
16	Good	Interpolated	No error – data is good
17	Good	Interpolated	Hardware error
18	Good	Interpolated	Software error
19	Good	Interpolated	Operator error
20	Good	Interpolated	Error flagged by hardware
21	Good	Interpolated	Error flagged by processor
22	Good	Interpolated	Analytical error
23	Good	Interpolated	Recording anomaly
24	Good	Interpolated	Data stream corrupted
25	Good	Interpolated	Data out of range
26	Good	Interpolated	Anomalous spike
27	Good	Interpolated	Preliminary processing (calibration) only

28	Good	Interpolated	Unprocessed (uncalibrated) or processing error
29	Good	Interpolated	No data – data missing for unknown reason
30	Good	Interpolated	Timing error
31	Good	Interpolated	User defined – user must fully describe
32	Good	Filtered	No error – data is good
33	Good	Filtered	Hardware error
34	Good	Filtered	Software error
35	Good	Filtered	Operator error
36	Good	Filtered	Error flagged by hardware
37	Good	Filtered	Error flagged by processor
38	Good	Filtered	Analytical error
39	Good	Filtered	Recording anomaly
40	Good	Filtered	Data stream corrupted
41	Good	Filtered	Data out of range
42	Good	Filtered	Anomalous spike
43	Good	Filtered	Preliminary processing (calibration) only
44	Good	Filtered	Unprocessed (uncalibrated) or processing error
45	Good	Filtered	No data – data missing for unknown reason
46	Good	Filtered	Timing error
47	Good	Filtered	User defined – user must fully describe
48	Good	Manually adjusted	No error – data is good
49	Good	Manually adjusted	Hardware error
50	Good	Manually adjusted	Software error
51	Good	Manually adjusted	Operator error
52	Good	Manually adjusted	Error flagged by hardware
53	Good	Manually adjusted	Error flagged by processor
54	Good	Manually adjusted	Analytical error
55	Good	Manually adjusted	Recording anomaly
56	Good	Manually adjusted	Data stream corrupted
57	Good	Manually adjusted	Data out of range
58	Good	Manually adjusted	Anomalous spike
59	Good	Manually adjusted	Preliminary processing (calibration) only
60	Good	Manually adjusted	Unprocessed (uncalibrated) or processing error
61	Good	Manually adjusted	No data – data missing for unknown reason

62	Good	Manually adjusted	Timing error
63	Good	Manually adjusted	User defined – user must fully describe
64	Suspect	None	No error – data is good
65	Suspect	None	Hardware error
66	Suspect	None	Software error
67	Suspect	None	Operator error
68	Suspect	None	Error flagged by hardware
69	Suspect	None	Error flagged by processor
70	Suspect	None	Analytical error
71	Suspect	None	Recording anomaly
72	Suspect	None	Data stream corrupted
73	Suspect	None	Data out of range
74	Suspect	None	Anomalous spike
75	Suspect	None	Preliminary processing (calibration) only
76	Suspect	None	Unprocessed (uncalibrated) or processing error
77	Suspect	None	No data – data missing for unknown reason
78	Suspect	None	Timing error
79	Suspect	None	User defined – user must fully describe
80	Suspect	Interpolated	No error – data is good
81	Suspect	Interpolated	Hardware error
82	Suspect	Interpolated	Software error
83	Suspect	Interpolated	Operator error
84	Suspect	Interpolated	Error flagged by hardware
85	Suspect	Interpolated	Error flagged by processor
86	Suspect	Interpolated	Analytical error
87	Suspect	Interpolated	Recording anomaly
88	Suspect	Interpolated	Data stream corrupted
89	Suspect	Interpolated	Data out of range
90	Suspect	Interpolated	Anomalous spike
91	Suspect	Interpolated	Preliminary processing (calibration) only
92	Suspect	Interpolated	Unprocessed (uncalibrated) or processing error
93	Suspect	Interpolated	No data – data missing for unknown reason
94	Suspect	Interpolated	Timing error
95	Suspect	Interpolated	User defined – user must fully describe

96	Suspect	Filtered	No error – data is good
97	Suspect	Filtered	Hardware error
98	Suspect	Filtered	Software error
99	Suspect	Filtered	Operator error
100	Suspect	Filtered	Error flagged by hardware
101	Suspect	Filtered	Error flagged by processor
102	Suspect	Filtered	Analytical error
103	Suspect	Filtered	Recording anomaly
104	Suspect	Filtered	Data stream corrupted
105	Suspect	Filtered	Data out of range
106	Suspect	Filtered	Anomalous spike
107	Suspect	Filtered	Preliminary processing (calibration) only
108	Suspect	Filtered	Unprocessed (uncalibrated) or processing error
109	Suspect	Filtered	No data – data missing for unknown reason
110	Suspect	Filtered	Timing error
111	Suspect	Filtered	User defined – user must fully describe
112	Suspect	Manually adjusted	No error – data is good
113	Suspect	Manually adjusted	Hardware error
114	Suspect	Manually adjusted	Software error
115	Suspect	Manually adjusted	Operator error
116	Suspect	Manually adjusted	Error flagged by hardware
117	Suspect	Manually adjusted	Error flagged by processor
118	Suspect	Manually adjusted	Analytical error
119	Suspect	Manually adjusted	Recording anomaly
120	Suspect	Manually adjusted	Data stream corrupted
121	Suspect	Manually adjusted	Data out of range
122	Suspect	Manually adjusted	Anomalous spike
123	Suspect	Manually adjusted	Preliminary processing (calibration) only
124	Suspect	Manually adjusted	Unprocessed (uncalibrated) or processing error
125	Suspect	Manually adjusted	No data – data missing for unknown reason
126	Suspect	Manually adjusted	Timing error
127	Suspect	Manually adjusted	User defined – user must fully describe
128	Bad	None	No error – data is good
129	Bad	None	Hardware error

130	Bad	None	Software error
131	Bad	None	Operator error
132	Bad	None	Error flagged by hardware
133	Bad	None	Error flagged by processor
134	Bad	None	Analytical error
135	Bad	None	Recording anomaly
136	Bad	None	Data stream corrupted
137	Bad	None	Data out of range
138	Bad	None	Anomalous spike
139	Bad	None	Preliminary processing (calibration) only
140	Bad	None	Unprocessed (uncalibrated) or processing error
141	Bad	None	No data – data missing for unknown reason
142	Bad	None	Timing error
143	Bad	None	User defined – user must fully describe
144	Bad	Interpolated	No error – data is good
145	Bad	Interpolated	Hardware error
146	Bad	Interpolated	Software error
147	Bad	Interpolated	Operator error
148	Bad	Interpolated	Error flagged by hardware
149	Bad	Interpolated	Error flagged by processor
150	Bad	Interpolated	Analytical error
151	Bad	Interpolated	Recording anomaly
152	Bad	Interpolated	Data stream corrupted
153	Bad	Interpolated	Data out of range
154	Bad	Interpolated	Anomalous spike
155	Bad	Interpolated	Preliminary processing (calibration) only
156	Bad	Interpolated	Unprocessed (uncalibrated) or processing error
157	Bad	Interpolated	No data – data missing for unknown reason
158	Bad	Interpolated	Timing error
159	Bad	Interpolated	User defined – user must fully describe
160	Bad	Filtered	No error – data is good
161	Bad	Filtered	Hardware error
162	Bad	Filtered	Software error
163	Bad	Filtered	Operator error



164	Bad	Filtered	Error flagged by hardware
165	Bad	Filtered	Error flagged by processor
166	Bad	Filtered	Analytical error
167	Bad	Filtered	Recording anomaly
168	Bad	Filtered	Data stream corrupted
169	Bad	Filtered	Data out of range
170	Bad	Filtered	Anomalous spike
171	Bad	Filtered	Preliminary processing (calibration) only
172	Bad	Filtered	Unprocessed (uncalibrated) or processing error
173	Bad	Filtered	No data – data missing for unknown reason
174	Bad	Filtered	Timing error
175	Bad	Filtered	User defined – user must fully describe
176	Bad	Manually adjusted	No error – data is good
177	Bad	Manually adjusted	Hardware error
178	Bad	Manually adjusted	Software error
179	Bad	Manually adjusted	Operator error
180	Bad	Manually adjusted	Error flagged by hardware
181	Bad	Manually adjusted	Error flagged by processor
182	Bad	Manually adjusted	Analytical error
183	Bad	Manually adjusted	Recording anomaly
184	Bad	Manually adjusted	Data stream corrupted
185	Bad	Manually adjusted	Data out of range
186	Bad	Manually adjusted	Anomalous spike
187	Bad	Manually adjusted	Preliminary processing (calibration) only
188	Bad	Manually adjusted	Unprocessed (uncalibrated) or processing error
189	Bad	Manually adjusted	No data – data missing for unknown reason
190	Bad	Manually adjusted	Timing error
191	Bad	Manually adjusted	User defined – user must fully describe
192	No QC	None	No error – data is good
193	No QC	None	Hardware error
194	No QC	None	Software error
195	No QC	None	Operator error
196	No QC	None	Error flagged by hardware
197	No QC	None	Error flagged by processor

198	No QC	None	Analytical error
199	No QC	None	Recording anomaly
200	No QC	None	Data stream corrupted
201	No QC	None	Data out of range
202	No QC	None	Anomalous spike
203	No QC	None	Preliminary processing (calibration) only
204	No QC	None	Unprocessed (uncalibrated) or processing error
205	No QC	None	No data – data missing for unknown reason
206	No QC	None	Timing error
207	No QC	None	User defined – user must fully describe
208	No QC	Interpolated	No error – data is good
209	No QC	Interpolated	Hardware error
210	No QC	Interpolated	Software error
211	No QC	Interpolated	Operator error
212	No QC	Interpolated	Error flagged by hardware
213	No QC	Interpolated	Error flagged by processor
214	No QC	Interpolated	Analytical error
215	No QC	Interpolated	Recording anomaly
216	No QC	Interpolated	Data stream corrupted
217	No QC	Interpolated	Data out of range
218	No QC	Interpolated	Anomalous spike
219	No QC	Interpolated	Preliminary processing (calibration) only
220	No QC	Interpolated	Unprocessed (uncalibrated) or processing error
221	No QC	Interpolated	No data – data missing for unknown reason
222	No QC	Interpolated	Timing error
223	No QC	Interpolated	User defined – user must fully describe
224	No QC	Filtered	No error – data is good
225	No QC	Filtered	Hardware error
226	No QC	Filtered	Software error
227	No QC	Filtered	Operator error
228	No QC	Filtered	Error flagged by hardware
229	No QC	Filtered	Error flagged by processor
230	No QC	Filtered	Analytical error
231	No QC	Filtered	Recording anomaly

232	No QC	Filtered	Data stream corrupted
233	No QC	Filtered	Data out of range
234	No QC	Filtered	Anomalous spike
235	No QC	Filtered	Preliminary processing (calibration) only
236	No QC	Filtered	Unprocessed (uncalibrated) or processing error
237	No QC	Filtered	No data – data missing for unknown reason
238	No QC	Filtered	Timing error
239	No QC	Filtered	User defined – user must fully describe
240	No QC	Manually adjusted	No error – data is good
241	No QC	Manually adjusted	Hardware error
242	No QC	Manually adjusted	Software error
243	No QC	Manually adjusted	Operator error
244	No QC	Manually adjusted	Error flagged by hardware
245	No QC	Manually adjusted	Error flagged by processor
246	No QC	Manually adjusted	Analytical error
247	No QC	Manually adjusted	Recording anomaly
248	No QC	Manually adjusted	Data stream corrupted
249	No QC	Manually adjusted	Data out of range
250	No QC	Manually adjusted	Anomalous spike
251	No QC	Manually adjusted	Preliminary processing (calibration) only
252	No QC	Manually adjusted	Unprocessed (uncalibrated) or processing error
253	No QC	Manually adjusted	No data – data missing for unknown reason
254	No QC	Manually adjusted	Timing error
255	No QC	Manually adjusted	User defined – user must fully describe

## LISTING OF SOURCES

A field within the download data files for all data types except GIS data is the 'Survey\_Name'. For an explanation of Survey Names see the table below.

For data which has been sourced from a ship the format for the corresponding survey name is up to twelve characters. The first (up to six) characters represent the ship name followed by the year of the voyage then the no of the voyage that year (eg FR199806 is the survey name for the sixth Franklin voyage undertaken in 1998). Therefore in the table below 'XXXXXX' represents the year and voyage number.

Survey Name	Source Name	Source Type
ABXXXXXX	Jacqueline D	Ship
ALBAXXXXXX	Alba	Ship
BACAXXXXXX	Bacaevo	Ship
BERGXXXXXX	Berg-1	Ship
COURXXXXXX	Courageous	Ship
CS-BAR-ALL	Barrow Island	Coastal Station
DES92-4	Derwent Estuary	Locality
DMXXXXXX	Diamantina	Ship
EQUAXXXXXX	Equator	Ship
FRXXXXXX	Franklin	Ship
KAMEXXXXXX	Kamensky	Ship
KORIXXXXXX	Korifei	Ship
LIRAXXXXXX	Lira	Ship
M-ACE83-CH	ACE Cape Howe Moorings (1983)	Mooring
M-ACE83-MI	ACE Maria Island Mooring (1983)	Mooring
M-ACE83-NE	ACE Newcastle Moorings (1983)	Mooring
M-ACE83-SP	ACE Stanwell Park Moorings (1983)	Mooring
M-ACE83-SSI	ACE South Solitary Island Mooring (1983)	Mooring
M-ARA-GOC87	Gulf of Carpentaria Moorings (1987)	Mooring
M-BASS-UN91	Bass Strait Moorings - UNSW (1991)	Mooring
M-DEV91	Devonport Moorings (1992)	Mooring

M-EH89	Evans Head Upwelling Moorings (1989)	Mooring
M-EZ88	Tasmania: Storm Bay Moorings (1988)	Mooring
M-GBR-CS85	AIMS Coral Sea Moorings (1985)	Mooring
M-HALMA93	Halmahera Sea Moorings (1993)	Mooring
M-HEARD90	Heard Island Moorings (1990)	Mooring
M-ICM694	ICM6/Ningaloo Reef Moorings (1994)	Mooring
M-LHR89	Tasman Sea Moorings (1989)	Mooring
M-LUCIE86-AS	LUCIE: alongshore Moorings (1986/7)	Mooring
M-LUCIE86-CM	LUCIE: Cape Mentelle Moorings (1987)	Mooring
M-LUCIE86-DO	LUCIE: Dongara Moorings (1986/7)	Mooring
M-MAKA93	Makassar Strait Moorings (1993)	Mooring
M-MALUKU93	Maluku Strait Moorings (1993)	Mooring
M-MERTZ98	Mertz Polynya Moorings (1998)	Mooring
M-NWS95	North West Shelf Moorings (all years)	Mooring
M-PCM3-91-2	Tasman Sea/PCM3 Moorings (1991)	Mooring
M-SA89	South Australian Upwelling M'gs (1989)	Mooring
M-SAFDE95	Southern Ocean Moorings (1995)	Mooring
M-SAZ97-8	Southern Ocean Moorings (1997-99)	Mooring
M-SEF96	SEF-Gabo Reef Moorings (1996)	Mooring
M-SO91-93	Southern Ocean Moorings (1991-93)	Mooring
M-TASE88	Tasmania: East Coast Moorings (1988)	Mooring
M-TASW88	Tasmania: West Coast Moorings (1988)	Mooring
M-TIMORS88	Timor Sea Moorings (1988)	Mooring
M-TOGA90	TOGA Moorings (1990)	Mooring
M-TROP97	TROPICS 97 - Sepik River Moorings (1997)	Mooring
M-WAB95	West Australian Basin Moorings (1995)	Mooring
MY-TICXXXXXX	Mys Tichy	Ship
P-DERXXXXXX	Pr. Deruygin	Ship
P-MERXXXXXX	Pulk. Meridian	Ship
POEXXXXXXX	Pride of Eden	Ship
POSEXXXXXX	Poseidon	Ship
PROMXXXXXX	Prometey	Ship
RACHXXXXXX	Rachel	Ship
RADUXXXXXX	Raduga	Ship

SESKXXXXXX	Seskar	Ship
SHANXXXXXX	Shantar	Ship
SOXXXXXX	Soela	Ship
SPXXXXXX	Sprightly	Ship
SRTMXXXXXX	SRTM 8-449	Ship
SSXXXXXX	Southern Surveyor	Ship
SUTCXXXXXX	Sutchan	Ship
TICHXXXXXX	Tichookeanscy	Ship