Annex VIII

Proposed Ingest Format

The two basic metadata record types (header and data) are listed. Within the data record type, there are different subsidiary record types defined for the different sensor types that are presently defined (the data record list could be expanded in the future). The descriptions of the fields that make up each record type are listed in Table 1.

1. Header Record (HR is the identifier for the metadata header record)

HR; ts; WMOn; stn; Ain; ind; oed; cnty; ragy; Idum; DA; Lat; Lon; WC; lngth; brth; diam; hult; huln; mtyp; cmsy; Stt; foo; dfmt; wdpth; plt; DI; WebA; footnote # 1; footnote # 2; footnote # 3; footnote # 4; footnote # 5

2. Data Records (DR is the identifier for the sensor information record, thus designated data record) the first six elements will link the data record to the header record. A data records will only exist when there is an actual sensor on the platform and it can be repeated for every sensor of a given type.

"Sno" in the eighth element represents the sequence number of sensors located on the platform e.g. if two anemometer sensors were on the platform there would be two data records for anemometers indicated in elements 7 and 8 as AN;1 and AN;2".

The "ind" field is a critical part in linking records in the case where a platform was moved or totally re-equipped or redesigned, this will allow the correct data records to be linked to the proper header record especially in cases where the same identifier was reissued at a later date.

AN metadata record: **Anemometer** sensor (**AN** in 7th element)

DR; ts; WMOn; stn; AIn; ind; AN; Sno; anmI; aMS; anmL; anDB; anDC; hwl; ouAN; sfWD; sfWS; apWD; apWS; amWS; cmpT; apWG; amWG; amScd; amID; amSD; footnote # 1

AT metadata record: **Air temperature** sensor (AT in 7th element)..

DR; ts; WMOn; stn; AIn; ind; AT; Sno; ats; atsMS; atsL; atsDB; atsC; atswl; ouAT; sfAT; apAT; atScd; atID; atSD; footnote # 1; footnote # 2

WT metadata record: **Water temperature** sensor (WT in 7th element).

DR; ts; WMOn; stn; AIn; ind; WT; Sno; wts; wtsMS; wtsL; wtsDB; wtsC; dws; ouWT; sfWT; apWT; wtScd; wtID; wtSD; footnote # 1

SA metadata record: **Salinity** sensor (SA in 7th element).

DR; ts; WMOn; stn; AIn; ind; SA; Sno; Sstp, Ssm; SsL; SsDB; SsC; dss; ouSs; sfSs; apSs; mSs; SsScd; SsID; SsSD; footnote # 1

BP metadata record: **Barometric Pressure** (BP in 7th element).

DR; ts; WMOn; stn; AIn; ind; BP; Sno; bps; bpsMS; bpsL; bpsDB; bpsC; bpswl; ouBP; sfBP; apBP; bpScd; bpsID; bpsSD

RH metadata record: **Relative Humidity** (wet bulb/dew point) sensor (RH in 7th element)

DR; ts; WMOn; stn; AIn; ind; RH; Sno; hs; hsMS; hsL; hsDB; hsC; hswl; ouHS; sfHS; apHS; hsScd; hsID; hsSD

PG metadata record: **Precipitation** gauge (PG in 7th element).

DR; ts; WMOn; stn; AIn; ind; PG; Sno; pg; pgMS; pgL; pgDB; pgC; pgwl; pupg; sfPG; apPG; pgScd; pgID; pgSD

RD metadata record: **Radiation** sensor (RD in 7th element).

DR; ts; WMOn; stn; AIn; ind; RD; Sno; srs; rMS; rsL; rsDB; rsC; srwl; ours; sfSR; apSR; srScd; rsID; rsSD

CR metadata record: **Ocean Current** sensor (CR in 7th element).

DR; ts; WMOn; stn; AIn; ind; CR; Sno; OC; Tsmoc; dmOC; ouOC; sfOC; apOC; ocScd; ocID; ocSD

WS metadata record: **Wave Spectra** (WS in 7th element).

DR; ts; WMOn; stn; AIn; ind; WS; Sno; wasp; Digf; Nblks; Npts; spAT; sfWAS, apWAS

HV metadata record: **Horizontal Visibility** (HV in 7th element).

DR; ts; WMOn; stn; AIn; ind; HV; Sno; hvm; hvit; hvl; hvDB; hvC; hvwl; hvou; hvsf; hvap; hvScd; hvID; hvSD

Table 1
ODAS Metadata-base Contents

Record type and sequence #		Field Abbre-viation	Input codes	Description of fields
Header Record (HR)				
HR	1	ts	MB DB ID FP IS AL CM PF OT	Type of station - Moored Buoy Drifting buoy Ice Drifter Fixed Platform (oil Rig, etc.) Island Station Automatic Light Station Coastal Marine Automated Station Profiling floats (e.g. ARGO - a global array of profiling floats) Other (specify in footnote # 1 Header Record)
	2	WMOn		WMO Number - 5 digit identifier
	3	stn		Unique call sign if available; otherwise, station name (C-MAN, Platforms, etc.)
	4	AIn		Additional Identifier Number ; define in footnote # 2 (e.g. ARGOS = up to 7 digits, GOES No., others)
	5	ind		Period of validity / beginning of historical record (initiation date - year, month, day e.g. 19950321) date of mooring, launching, or platform instrumentation (date the platform began collecting weather observations under its current ID and location). If the platform is moved or assigned a new ID then a new period of validity should be initiated.
	6	oed		Operational end date of platform operations (year, month, day e.g. 20000127). This item is associated with the entry above which shows the beginning date and this item the ending date when a platform closed operations. If for example a moored buoy was placed in the Great Lakes each Spring and withdrawn each Winter the beginning date would not change unless the identifier, ownership, or location changed at some point. When one of these change a new beginning date should be entered ind above and a operational end date entered in this field.
	7	cnty	see list	Country of ownership - International Organization for Standardization (ISO) country code (Alpha-2; two character alpha code)
	8	ragy		Responsible agency/organization within a country responsible for the platform s operations, launch, and metadata [e.g. in the USA it could be National Ocean Service (NOS) NOAA , National Data Buoy Center (NDBC) NOAA, Woods Hole Institute, etc.] List the full name of the organization or agency responsible. There should be a link between the responsible agency/organization and web address listed in item 114.
	9	ldmu		Last date metadata updated (year, month, day e.g. 20000527 representing 27 May 2000)
	10	DA	 1 2 3 4 5	Degree of Automation Fully automated Always supplemented with manual input Occasionally supplemented with manual input Fully manual (no automation) Unknown
	11	Lat		latitude - degrees, up to three decimal places if available (e.g. 50. 985 N/S)
	12	Lon		Longitude - degrees, up to three decimal places if available (e.g. 124.976 E/W)
	13	WC		Watch Circle - nearest whole meter (e.g. 346.5 = 347 meters) . The maximum distance a moored buoy can be located from its central position related to the length and type of mooring. Outside the watch circle and the moored buoy is likely adrift.
	14	lngth		Length - the length of the platform (if rectangular or boat shape hull). See code diam below if the platform is a discus. Meters to tenths (e.g. 26. 9 meters)
	15	brth		Breath - the breath (width) of the platform (if rectangular or boat shaped hull). Meters to tenths (e.g. 12.6 m)
	16	diam		Diameter - platform dimension for discus type hulls. Diameter in meters to tenths (e.g. 6.0 m)

Record type and sequence #		Field Abbre-viation	Input codes	Description of fields
	17	hult		Hull type
			DS	Discus (Cylinders)
			BS	Boat shaped hull
			RS	Rectangular shape
			SP	Spars
			OD	ODAS 30 series
			NM	NOMAD
			TR	Torus
			CN	Conic
			OR	Omnidirectional wave-rider
			DR	Directional wave-rider
			OT	Other (specify in footnote # 3 Header Record)
	18	huln		Hull or platform number - enter as assigned (a combination of numeric and alpha characters if required)
	19	mtyp		Mooring type - Mooring type if a moored buoy or drouge type if drifting buoy.
			AC	All Chain (shallow depths generally up to 90 meters)
			ST	Semitaut (intermediated depths generally 60 to 600 meters-generally nylon cable)
			FC	Float Inverse Catenary (deep ocean generally 600 to 6000 m-generally nylon with glass floats)
			PC	Poly-nylon Inverse Catenary (deep ocean generally 1200 to 6000 m)
				Drouge Type
			HS	Holey sock drogue
			TS	Tristar
			WS	Window shade
			PA	Parachute
			NL	Non-Lagrangian sea anchor
				Use for either mooring or drouge as needed
			OT	Other (specify in footnote # 4 Header Record)
	20	cmsy		Satellite Data Collection System - system used to transmit the observations
			GO	GOES DCP
			AR	ARGOS PTT
			GA	GOES primary ARGOS backup
			RF	RF
			OT	Other (specify in footnote # 5 Header Record)
	21	Stt		Satellite transmission time - time slot assigned for observation transmission. Hours and minutes UTC (e.g. 1230) or for example, on the hour, on the half hour, two orbits per day, etc.
	22	foo		Frequency of observations - hours and minutes (e.g. every hour = 1.0, every 6 hours = 6.0, or every half hour 0.5, etc., I = irregular)
	23	dfmt		Data format - data format (WMO codes; Pub 306) the observations was transmitted or digitized (i.e. observational form).
				Buoy code -FM 18-X
				Ship code - FM 13-X
				TESAC - FM 64-IX
				WAVEOB - FM 65-IX
				BUFR - FM 94-XI
				Other WMO codes added as needed
				Note: use actual WMO Code designator as the abbreviation (e.g. FM 18-X)
	24	wdpth		Water Depth (nearest whole meter)
	25	plt		Payload Type (e.g. DACT, VEEP, GSBP, ZENO, ODAS33, etc.) Details should be provided regarding each type of payload (payload description)
	26	DI		Digital image - a phtograph or schematic of the platform and equipment
			AV	Available in digital file
			NA	Not available
	27	WebA		Web Address (URL) where additional information can be obtained

Record type and sequence #		Field Abbre-viation	Input codes	Description of fields
ANEMOMETER (AN)				
DR	1	anmI		Anemometer instrument type
			P	propeller/vane
			TC	three cup
			FC	four cup
			S	sonic
			WT	WOTAN (wind observation through ambient noise)
			OT	other (define in footnote)
	2	aMS		Anemometer - model (manufacturer/series no.)
	3	anmL		Anemometer - location
			FM	foremast
			AM	aftmast
			CM	centermast (mainmast)
			RY	right yardarm
			LY	left yardarm
			OT	other (define in footnote)
	4	anDB		Anemometer - distance from the bow or front of platform (meters to tenths)
	5	anDC		Anemometer - distance from center line or from center of discus (meters to tenths)
	6	hwl		Anemometer- height above water line (meters to tenths). Value can be negative for WOTAN
	7	ouAN		Anemometer - operational range and units of measurement (e.g. 0 to 60 m/s ; 000 to 360 degrees)
	8	sfWD		Sampling frequency (Hz) - wind direction (e.g. 1.28 Hz)
	9	sfWS		Sampling frequency (Hz) - wind speed (e.g. 1.28 Hz)
	10	apWD		Averaging period (minutes to tenths) - wind direction (e.g. 8.0 minutes)
	11	apWS		Averaging period (minutes to tenths) - wind speed (e.g. 8.0 minutes)
	12	amWS		Averaging method - wind speed
			S	Scalar
			V	Vector
	13	cmpT		Compass type/model No. - anemometer
	14	apWG		Averaging period (seconds) - wind gust (e.g. 5 seconds)
	15	amWG		Averaging method - wind gust
			S	Scalar
			V	Vector
	16	amScd		Calibration date- Anemometer sensor No. Date sensor was last calibrated (year, month, day e.g. 20000723)
	17	amID		Anemometer sensor installation date (year, month, day e.g. 19950228). If the direction sensor and speed sensor are separate instruments then use footnote # 1 in the Anemometer data record to enter the dates for speed sensor and this position for direction sensor.
	18	amSD		Anemometer out of service dates (beginning and ending dates; year, month, day e.g. 19960123-19960212). If known these dates should be entered anytime either the direction , speed, or both is unavailable due to equipment outage (non-reporting or invalid reports)
AIR TEMPERATURE (AT)				
DR	1	ats		Air temperature sensor- instrument type
			ER	
			M	electrical resistance thermometer
			MS	mercury-in-glass thermometer
			A	screen shelter - mercury thermometer
			AS	alcohol-in-glass thermometer
			OT	screen shelter - alcohol thermometer
				other (specify in footnote # 1 in the air temperature data record)

Record type and sequence #		Field Abbre-viation	Input codes	Description of fields
	2	atsMS		Air temperature sensor - model (manufacturer/series no.)
	3	atsL		Air temperature sensor - location
			FM	foremast
			AM	aftmast
			CM	centermast (mainmast)
			RY	right yardarm
			LY	left yardarm
			OT	other (specify in footnote # 2 in the air temperature data record)
	4	atsDB		Air temperature sensor - distance (meters to tenths) from bow or front of platform note: leave this field blank if platform is a discus
	5	atsC		Air temperature sensor - distance (meters to tenths) from center line or center of discus
	6	atswl		Air temperature sensor - height (meters to tenths) above water line
	7	ouAT		Air temperature sensor - Operational range and units of measurement (e.g. - 40C to + 50C)
	8	sfAT		Sampling frequency (Hz) - air temperature sensor (e.g. 1.28 Hz)
	9	apAT		Averaging period (minutes to tenths) - air temperature sensor (e.g. 8.0 minutes)
	10	atScd		Calibration date- Air temperature sensor No. Date sensor was last calibrated (year, month, day e.g. 20000723)
	11	atID		Air temperature sensor installation date (year, month, day e.g. 19950228).
	12	atSD		Air temperature sensor out of service dates (beginning and ending dates; year, month, day e.g. 19960123-19960212). If known these dates should be entered anytime the air temperature is unavailable due to equipment outage (non-reporting or invalid reports)
WATER TEMPERATURE (WT)				
DR	1	wts		Water temperature sensor - instrument type
			HC	Hull contact sensor
			HT	"Through hull" sensor
			RT	Radiation thermometer
			ER	Electrical resistance thermometer
			TT	Trailing thermistor
			BU	Bucket thermometer
			CTD	CTD (conductivity-temperature-depth)
			STD	STD (salinity-temperature-depth)
			RM	refractometer
			XC	XCTD (expendable CTD probe)
			NS	Nansen cast
			AL	ALACE (autonomus Lagrangian Circulation Explorer)
			XBT	Expendable Bathythermograph
			OT	Other (specify in footnote # 1 in the water temperature data record)
	2	wtsMS		Water (sea) temperature sensor - model (manufacturer/series no.)
	3	wtsL		Water temperature sensor - location (e.g. port bow, bottom of discus, etc.)
	4	wtsDB		Water temperature sensor - distance (meters to tenths) from the bow or front of platform Note: left blank for discus hulls and subsurface temperatures
	5	wtsC		Water temperature sensor- distance (meters to tenths) from center line or center of discus
	6	dws		Depth of water temperature sensor; tenths of meters (e.g. 10.3 meters) below the water line.
	7	ouWT		Operational range and units of measurement-water temperature sensor (e.g. range - 4 C to + 40 C)
	8	sfWT		Sample frequency (Hz) - Water temperature sensor (e.g. 1.28 Hz)
	9	apWT		Averaging period (minutes to tenths) - Water temperature sensor (e.g. 8.0 minutes)

Record type and sequence #		Field Abbre-viation	Input codes	Description of fields
	10	wtScd		Calibration date- Water temperature sensor No. Date sensor was last calibrated (year, month, day e.g. 20000723)
	11	wtID		Water temperature sensor installation date (year, month, day e.g. 19950228).
	12	wtSD		Water temperature sensor out of service dates (beginning and ending dates; year, month, day e.g. 19960123-19960212). If known these dates should be entered anytime the water temperature is unavailable due to equipment outage (non-reporting or invalid reports)
SALINITY (SA)				
DR	1	Sstp	 CTD STD RM XC NS AL OT	Salinity - sensor type CTD (conductivity-temperature-depth) STD (salinity-temperature-depth) refractometer XCTD (expendable CTD probe) Nansen cast ALACE (autonomus Lagrangian Circulation Explorer) Other (specify in footnote # 1 in the salinity data record)
	2	Ssm		Salinity sensor (model/manufacturer/series no.)
	3	SsL		Salinity sensor No. - Location (note: to be used only for those sensors attached to a platform)
	4	SsDB		Salinity sensor No. - distance from bow or front of platform Note: to be used only when sensor is attached to a platform (same as location above)
	5	SsC		Salinity sensor No. - distance from center line or center of discus
	6	dss		Depth of salinity sensor No. - meters to tenths (e.g. 10.7 m) of salinity sensor below the water line (surface of the water)
	7	ouSs		Salinity sensor - operational range and units of measurement (e.g. 25 to 45 parts per thousand. Salinity is calculated based on the measurement of chlorinity)
	8	sfSs		Sample frequency - available only for automated digital sensors
	9	apSs		Averaging period - available only for automated digital sensors
	10	mSs		Method used to compute the salinity (e.g. chlorinity, electrical conductivity, refractive index, etc.)
	11	SsScd		Calibration date - salinity sensor No. Date the sensor was last calibrated (year, month, day e.g. 20000207)
	12	SsID		salinity sensor installation date (year, month, day e.g. 19950228).
	13	SsSD		Salinity sensor out of service dates (beginning and ending dates; year, month, day e.g. 19960123-19960212). If known these dates should be entered anytime the salinity is unavailable due to equipment outage (non-reporting or invalid reports)
BAROMETRIC PRESSURE (BP)				
DR	1	bps		Barometric pressure sensor - instrument type
	2	bpsMS		Barometric pressure sensor - model (manufacturer/series no.)
	3	bpsL		Barometric pressure sensor - location (e.g. centermast)
	4	bpsDB		Barometric pressure sensor - distance (meters to tenths) from the bow or front of platform Note: leave this field blank if platform is a discus
	5	bpsC		Barometric pressure sensor - distance (meters to tenths) from center line or center of discus
	6	bpswl		Barometric pressure sensor - height (meters to tenths) above water line
	7	ouBP		Barometric pressure sensor - Operational range and units of measurement (e.g. 900-1100 hPa)
	8	sfBP		Sampling frequency (Hz) - Barometric pressure sensor (e.g. 1.28 Hz)
	9	apBP		Averaging period (minutes to tenths) - Barometric pressure sensor (e.g. 8.0 minutes)

Record type and sequence #		Field Abbre-viation	Input codes	Description of fields
	10	bpScd		calibration date - barometric pressure sensor No. Latest date of calibration (year, month, day e.g. 20000207)
	11	bpsID		Barometric pressure sensor installation date (year, month, day e.g. 19950228).
	12	bpsSD		Barometric pressure sensor out of service dates (beginning and ending dates; year, month, day e.g. 19960123-19960212). If known these dates should be entered anytime the barometric pressure is unavailable due to equipment outage (non-reporting or invalid reports)
RELATIVE HUMIDITY (RH)				
DR	1	hs		Relative Humidity (wet bulb/dew point) sensor -instrument type
	2	hsMS		Relative Humidity (wet bulb/dew point) sensor -model (manufacturer/series no.)
	3	hsL		Relative Humidity (wet bulb/dew point) sensor -location (left yardarm mast)
	4	hsDB		Relative Humidity sensor - distance (meters to tenths) from the bow or front of platform Note: leave this field blank if platform is a discus
	5	hsC		Relative Humidity sensor - distance (meters to tenths) from center line or center of discus
	6	hswl		Relative Humidity sensor - height (meters to tenths) above water line
	7	ouhs		Relative Humidity (wet bulb/dew point) sensor - Operational range and units of measurement (e.g. range 0-100 %)
	8	sfhs		Sampling frequency (Hz)-Relative Humidity (wet bulb/dew point) sensor (e.g. 1 Hz)
	9	aphs		Averaging period (minutes)-Relative Humidity (wet bulb/dew point) sensor (e.g.1 min.)
	10	hsScd		Calibration date - Relative Humidity (wet bulb/dew point) sensor No. Latest date the sensor was calibrated (year, month, day e.g. 20000207)
	11	hsID		Relative Humidity (wet bulb/dew point) sensor installation date (year, month, day e.g. 19950228).
	12	hsSD		Relative Humidity (wet bulb/dew point) sensor out of service dates (beginning and ending dates; year, month, day e.g. 19960123-19960212). If known, these dates should be entered anytime the Relative Humidity (wet bulb/dew point) is unavailable due to equipment outage (non-reporting or invalid reports)
PRECIPITATION (PG)				
DR	1	pg		Precipitation gauge -instrument type (e. g. weighing bucket, tipping bucket, etc.)
	2	pgMS		Precipitation gauge - model (manufacturer/series no.)
	3	pgL		Precipitation gauge -location
	4	pgDB		Precipitation gauge - distance (meters to tenths) from the bow or front of platform
	5	pgC		Precipitation gauge - distance (meters to tenths) from center line or off center of a discus
	6	pgwl		Precipitation gauge- height (meters to tenths) above water line
	7	oupg		Precipitation gauge - Operational range and units of measurement (e.g. 0 to 25 cm per hour)
	8	sfPG		Sampling frequency - Precipitation gauge (e.g. continuous)
	9	apPG		Averaging period-Precipitation gauge (e.g. 6 hours; then reset)
	10	pgScd		Calibration date -Precipitation gauge No. Latest date sensor/gauge was calibrated (year, month, day e.g. 20000207)
	11	pgID		Precipitation gauge installation date (year, month, day e.g. 19950228).
	12	pgSD		Precipitation gauge out of service dates (beginning and ending dates; year, month, day e.g. 19960123-19960212). If known, these dates should be entered anytime the precipitation measurement is unavailable due to equipment outage (non-reporting or invalid reports)

Record type and sequence #		Field Abbre-viation	Input codes	Description of fields
RADIATION (RD)				
DR	1	srs		Solar radiation sensor -instrument type
	2	rMS		Radiation sensor - model (manufacturer/series no.)
	3	rsL		Radiation sensor -location (e.g. foremast)
	4	rsDB		Radiation sensor - distance (meters to tenths) from the bow or front of platform Note: leave this field blank if platform is a discus
	5	rsC		Radiation sensor - distance (meters to tenths) from center line or center of discus
	6	srwl		Solar radiation sensor- height (meters to tenths) above water line
	7	ours		Radiation sensor - Operational range and units of measurement (e.g. 0.07-1.65 cal. cm^{-2} min^{-1})
	8	sfSR		Sampling frequency (Hz)-Solar radiation sensor (e.g. 1 Hz)
	9	apSR		Averaging period (minutes to tenths) - Solar radiation sensor (e.g. 8.0 minutes)
	10	srScd		Calibration date - Solar radiation sensor No. Latest date the sensor was calibrated (year, month, day e.g. 20000207)
	11	rsID		Radiation sensor installation date (year, month, day e.g. 19950228).
	12	rsSD		Radiation sensor out of service dates (beginning and ending dates; year, month, day e.g. 19960123-19960212). If known, these dates should be entered anytime the radiation measurement is unavailable due to equipment outage (non-reporting or invalid reports)
OCEAN CURRENTS (CR)				
DR	1	OC	C M E	Ocean current speed reported calculated measured estimated
	2	TSmoc		Type sensor measuring ocean currents (type/model/manufacturer)
	3	dmOC		Depth of measurement (in meters, e.g. 10 m) of the ocean current
	4	ouOC		Ocean currents - Operational range and units of measurement (range e.g.-10 m/s to +10m/s)
	5	sfOC		Sampling frequency (Hz) -Ocean currents (e.g.0.667 Hz)
	6	apOC		Averaging period (minutes to tenths) - Ocean currents (e.g. 20.0 minutes)
	7	ocScd		Calibration date - Ocean current sensor (year, month, day e.g. 20000208)
	8	ocID		Ocean current sensor installation date (year, month, day e.g. 19950228).
	9	ocSD		Ocean current sensor out of service dates (beginning and ending dates; year, month, day e.g. 19960123-19960212). If known, these dates should be entered anytime the ocean current measurement is unavailable due to equipment outage (non-reporting or invalid reports)
WAVE SPECTRA (WS)				
DR	1	wasp		Wave spectra - type of surface elevation sensor (From which wave spectra is derived)
	2	Digf		Digital filter used - wave spectra
	3	Nblks		Number of blocks used for averaging - wave spectra
	4	Npts		Number of points in each block - wave spectra
	5	spAT		Spectral analysis technique (e.g. FFT, MEM, etc.)
	6	sfWAS		Sampling frequency -Wave spectra (e.g. 2.56 Hz)
	7	apWAS		Averaging period- length of record for averaging period -Wave spectra (e.g. 20 minutes)

Record type and sequence #		Field Abbre-viation	Input codes	Description of fields
HORIZONTAL VISIBILITY (HV)				
DR	1	hvm	 MAN ATM	Horizontal visibility manual automated
	2	hvit		Instrument type (automated sensor) - model/manufacturer/series no.
	3	hvl		Location - Horizontal visibility sensor No.
	4	hvDB		Horizontal visibility sensor - distance (meters to tenths) from the bow or front of platform Note: leave this field blank if platform is a discus
	5	hvC		Horizontal visibility sensor - distance (meters to tenths) from center line or center of discus
	6	hvwl		Horizontal visibility sensor- height (meters to tenths) above water line
	7	hvou		Horizontal visibility sensor - Operational range and units of measurement (e.g. 0000 to 9999 meters or < 0.1km -10km)
	8	hvsf		Sampling frequency - Horizontal visibility sensor No.
	9	hvap		Averaging period - Horizontal visibility sensor No.
	10	hvScd		Calibration date- Horizontal visibility sensor No. Latest date sensor was calibrated (year, month, day e.g. 20000208)
	11	hvID		Horizontal visibility sensor installation date (year, month, day e.g. 19950228).
	12	hvSD		Horizontal visibility sensor out of service dates (beginning and ending dates; year, month, day e.g. 19960123-19960212). If known, these dates should be entered anytime the visibility measurement is unavailable due to equipment outage (non-reporting or invalid reports)

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