Signal list BWFZ Metocean Campaign RVO.nl

Date: 25-02-2016

Source: Fugro

No	Signal	Description	[Unit]	Height	Value (example)	Sensor	Sample interval [s]	Resolution primary signal	Remark
	timestamp		YYYY-mm-dd HH:MM	m	19-6-2015 0:00		-		
1	WS149_L1CD_airPressure	Air Pressure	hPa	0,5	1024,8	Vaisala PTB330A	30		measured at 0.5 m height
2	WS149_L1CD_airTemperature	Air Temperature	°C	4,1	13,4668	Vaisala HMP155	5		measured at 4.1 m height
3	WS149_L1CD_airHumidity (missing)	Air Humidity	%	4,1		Vaisala HMP155	5		measured at 4.1 m height
4	WS149_L1CD_AqDir0004	Current Direction	°	-4	180				
5	WS149_L1CD_AqDir0006	Current Direction	°	-6	184,219				
6	WS149_L1CD_AqDir0008	Current Direction	°	-8	184,219				
7	WS149_L1CD_AqDir0010	Current Direction	°	-10	184,219				
8	WS149_L1CD_AqDir0012	Current Direction	°	-12	182,812				
9	WS149_L1CD_AqDir0014	Current Direction	°	-14	185,625				
10	WS149_L1CD_AqDir0016	Current Direction	°	-16	184,219	Nortek Aquadopp	N/A		Current direction Rel to North in CW direction at 4 .. 30 m waterdepth
11	WS149_L1CD_AqDir0018	Current Direction	°	-18	184,219				
12	WS149_L1CD_AqDir0020	Current Direction	°	-20	185,625				
13	WS149_L1CD_AqDir0022	Current Direction	°	-22	184,219				
14	WS149_L1CD_AqDir0024	Current Direction	°	-24	185,625				
15	WS149_L1CD_AqDir0026	Current Direction	°	-26	185,625				
16	WS149_L1CD_AqDir0028	Current Direction	°	-28	185,625				
17	WS149_L1CD_AqDir0030	Current Direction	°	-30	196,875				
18	WS149_L1CD_AqSpd0004	Current Speed	cm/s	-4	49,2188				
19	WS149_L1CD_AqSpd0006	Current Speed	cm/s	-6	51,5625				
20	WS149_L1CD_AqSpd0008	Current Speed	cm/s	-8	51,5625				
21	WS149_L1CD_AqSpd0010	Current Speed	cm/s	-10	51,5625				
22	WS149_L1CD_AqSpd0012	Current Speed	cm/s	-12	51,5625				
23	WS149_L1CD_AqSpd0014	Current Speed	cm/s	-14	52,7344				
24	WS149_L1CD_AqSpd0016	Current Speed	cm/s	-16	52,7344	Nortek Aquadopp	N/A		
25	WS149_L1CD_AqSpd0018	Current Speed	cm/s	-18	51,5625				
26	WS149_L1CD_AqSpd0020	Current Speed	cm/s	-20	50,3906				
27	WS149_L1CD_AqSpd0022	Current Speed	cm/s	-22	50,3906				
28	WS149_L1CD_AqSpd0024	Current Speed	cm/s	-24	50,3906				
29	WS149_L1CD_AqSpd0026	Current Speed	cm/s	-26	49,2188				
30	WS149_L1CD_AqSpd0028	Current Speed	cm/s	-28	45,7031				
31	WS149_L1CD_AqSpd0030	Current Speed	cm/s	-30	32,8125				
32	WS149_L1CD_hm0	Estimate Significant Wave Height	m		0,7813				Estimate of significant wave height, Hs
33	WS149_L1CD_hm0a		m		0				???
34	WS149_L1CD_hm0b		m		0,7813				???
35	WS149_L1CD_hmax		m		1,05469				= Max(H): Height of the highest individual wave in the sample, measured from crest to
36	WS149_L1CD_mdir	Wave Direction averaged over whole spectrum	°		348,75				
37	WS149_L1CD_mdira		°		231,328				Wave direction averaged over the whole spectrum
38	WS149_L1CD_mdirb		°		348,75				
39	WS149_L1CD_sprtp				36,9141				???
40	WS149_L1CD_thhf				80,8594	Wavesense 3 0			???
41	WS149_L1CD_thmax				5,4688				???
42	WS149_L1CD_thtp				349,453				Mean wave direction at the spectral peak
43	WS149_L1CD_tm01				4,6875				Estimate of the average wave period
44	WS149_L1CD_tm02				4,4531				
45	WS149_L1CD_tm02a				13,8281				Another estimate of the average wave period
46	WS149_L1CD_tm02b				4,4531				
47	WS149_L1CD_tp				6,0547				Period of spectral peak = 1/fp,
48	WS149_L1CD_WaterTemp0001		°C		14,79				???
49	WS149_L1CD_TemperatureSG		°C		14,7812	Aanderaa WLR (SeaGuard) via			
50	WS149_L1CD_TideLevelSG				33,6792				
51	WS149_L1IA_Inflow angle 30m	Inflow Angle	°	30	-1,58203				
52	WS149_L1IA_Inflow angle 40m	Inflow Angle	°	40	16,3477				
53	WS149_L1IA_Inflow angle 60m	Inflow Angle	°	60	-1,75781				
54	WS149_L1IA_Inflow angle 80m	Inflow Angle	°	80	1,75781	ZephIR 300S Lidar / Fugro calculation			?Atan(avg(Wsvert) / avg(Wshor)) ?
55	WS149_L1IA_Inflow angle 100m	Inflow Angle	°	100	6,15234				
56	WS149_L1IA_Inflow angle 120m	Inflow Angle	°	120	-8,4375				
57	WS149_L1IA_Inflow angle 140m	Inflow Angle	°	140	6,32813				
58	WS149_L1IA_Inflow angle 160m	Inflow Angle	°	160	5,09766				
59	WS149_L1IA_Inflow angle 180m	Inflow Angle	°	180	3,33984				
60	WS149_L1IA_Inflow angle 200m	Inflow Angle	°	200	19,5117				
61	WS149_L1SDT_TI 040m ref	Turbulence Intensity LiDAR Reference Height	-	40	0,133057				Std / Avg
62	WS149_L1SDT_TI 030m	Turbulence Intensity LiDAR		30	0,112305				
63	WS149_L1SDT_TI 040m	Turbulence Intensity LiDAR		40	0,118408				
64	WS149_L1SDT_TI 060m	Turbulence Intensity LiDAR		60	0,144043				
65	WS149_L1SDT_TI 080m	Turbulence Intensity LiDAR		80	0,155029				
66	WS149_L1SDT_TI 100m	Turbulence Intensity LiDAR		100	0,129395	ZephIR 300S Lidar			
67	WS149_L1SDT_TI 120m	Turbulence Intensity LiDAR		120	0,144043				
68	WS149_L1SDT_TI 140m	Turbulence Intensity LiDAR		140	0,108643				
69	WS149_L1SDT_TI 160m	Turbulence Intensity LiDAR		160	0,124512				
70	WS149_L1SDT_TI 180m	Turbulence Intensity LiDAR		180	0,106201				
71	WS149_L1SDT_TI 200m	Turbulence Intensity LiDAR		200	0,093994				

No	Signal	Description	[Unit]	Height	Value (example)	Sensor	Sample interval [s]	Resolution primary signal	Remark
72	WS149_L1SDT_WindDir004m	Wind Direction GILL	°	4	258,047	Gill Windsonic M	1		rel to north ??
73	WS149_L1SDT_WindGust004m	Wind Gust GILL	m/s	4	4,27734				max peak over XX seconds of 10 minutes
74	WS149_L1SDT_WindSpeed004m	Wind Speed GILL	m/s	4	3,33984				
75	WS149_L1SDT_WindDir040m_ref	Wind Direction LiDAR Reference Height		40	258,984				Internal signal for the Lidar
76	WS149_L1SDT_WindDir030m	Wind Direction LiDAR	°	30	262,5	ZephIR 300S Lidar	≈ 17.4 s1)		
77	WS149_L1SDT_WindDir040m	Wind Direction LiDAR	°	40	194,648				
78	WS149_L1SDT_WindDir060m	Wind Direction LiDAR	°	60	254,062				
79	WS149_L1SDT_WindDir080m	Wind Direction LiDAR	°	80	251,602				
80	WS149_L1SDT_WindDir100m	Wind Direction LiDAR	°	100	272,344				
81	WS149_L1SDT_WindDir120m	Wind Direction LiDAR	°	120	238,242				
82	WS149_L1SDT_WindDir140m	Wind Direction LiDAR	°	140	262,5				
83	WS149_L1SDT_WindDir160m	Wind Direction LiDAR	°	160	256,172				
84	WS149_L1SDT_WindDir180m	Wind Direction LiDAR	°	180	263,203				
85	WS149_L1SDT_WindDir200m	Wind Direction LiDAR	°	200	289,922				
86	WS149_L1SDT_WindSpeed040m_refh	Wind Speed LiDAR Reference height		40	3,69141				Internal signal for the Lidar
87	WS149_L1SDT_WindSpeed030mh	Wind Speed LiDAR	m/s	30	3,63281	ZephIR 300S Lidar	≈ 17.4 s1)		
88	WS149_L1SDT_WindSpeed040mh	Wind Speed LiDAR	m/s	40	3,63281				
89	WS149_L1SDT_WindSpeed060mh	Wind Speed LiDAR	m/s	60	3,86719				
90	WS149_L1SDT_WindSpeed080mh	Wind Speed LiDAR	m/s	80	3,80859				
91	WS149_L1SDT_WindSpeed100mh	Wind Speed LiDAR	m/s	100	3,75				
92	WS149_L1SDT_WindSpeed120mh	Wind Speed LiDAR	m/s	120	3,69141				
93	WS149_L1SDT_WindSpeed140mh	Wind Speed LiDAR	m/s	140	3,80859				
94	WS149_L1SDT_WindSpeed160mh	Wind Speed LiDAR	m/s	160	3,86719				
95	WS149_L1SDT_WindSpeed180mh	Wind Speed LiDAR	m/s	180	4,04297				
96	WS149_L1SDT_WindSpeed200mh	Wind Speed LiDAR	m/s	200	3,80859				
97	WS149_L1VS_Wind Shear 40m-30m	Wind Shear	(m/s)/m	40-30 (Δ)	0	Fugro Calculation			ΔWS/ΔH
98	WS149_L1VS_Wind Shear 60m-40m	Wind Shear	(m/s)/m	60-40 (Δ)	0,011719				
99	WS149_L1VS_Wind Shear 80m-60m	Wind Shear	(m/s)/m	80-60 (Δ)	-0,00293				
100	WS149_L1VS_Wind Shear 100m-80m	Wind Shear	(m/s)/m	100-80 (Δ)	-0,00293				
101	WS149_L1VS_Wind Shear 120m-100m	Wind Shear	(m/s)/m	120-100 (Δ)	-0,00293				
102	WS149_L1VS_Wind Shear 140m-120m	Wind Shear	(m/s)/m	140-120 (Δ)	0,005859				
103	WS149_L1VS_Wind Shear 160m-140m	Wind Shear	(m/s)/m	160-140 (Δ)	0,00293				
104	WS149_L1VS_Wind Shear 180m-160m	Wind Shear	(m/s)/m	180-160 (Δ)	0,008789				
105	WS149_L1VS_Wind Shear 200m-180m	Wind Shear	(m/s)/m	200-180 (Δ)	-0,011719				
106	WS149_L1VS_Wind Veer 40m-30m	Wind Veer	°/m	40-30 (Δ)	6,78516	Fugro Calculation			ΔWD/ΔH
107	WS149_L1VS_Wind Veer 60m-40m	Wind Veer	°/m	60-40 (Δ)	-2,9707				
108	WS149_L1VS_Wind Veer 80m-60m	Wind Veer	°/m	80-60 (Δ)	0,123047				
109	WS149_L1VS_Wind Veer 100m-80m	Wind Veer	°/m	100-80 (Δ)	-1,03711				
110	WS149_L1VS_Wind Veer 120m-100m	Wind Veer	°/m	120-100 (Δ)	1,70508				
111	WS149_L1VS_Wind Veer 140m-120m	Wind Veer	°/m	140-120 (Δ)	-1,21289				
112	WS149_L1VS_Wind Veer 160m-140m	Wind Veer	°/m	160-140 (Δ)	0,316406				
113	WS149_L1VS_Wind Veer 180m-160m	Wind Veer	°/m	180-160 (Δ)	-0,351562				
114	WS149_L1VS_Wind Veer 200m-180m	Wind Veer	°/m	200-180 (Δ)	-1,33594				

This is the approximate time between the beginning of one sweep of the profile and the next one, the interval may vary slightly. The ZephIR sweeps one level at a time beginning at the lowest one, and after the top level has been swept it uses some time for calculations and re-focusing back to the lowest level for a new sweep