



INPFC  
Doc. 2760

Correction to Doc. 2617--Study of Dall's

porpoise's echolocating pulses and  
specification of the sound generators.

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Table 1. Results of analyses of Dall's porpoise's clicks

Measuring point		Sound pressure P <sub>1</sub> (dB)	Frequency f (kHz)	Sound pressure P <sub>2</sub> (dB)	Time t <sub>1</sub> (ms)	Sound pressure P <sub>3</sub> (dB)	Time t <sub>2</sub> (ms)	Sound pressure P <sub>4</sub> (dB)	Time t <sub>3</sub> (ms)	Pulse width $\tau$ ( $\mu$ s)	Max. sound pressure P <sub>max</sub> (dB)	Max. interval T <sub>max</sub> (ms)	Min. interval T <sub>min</sub> (ms)	Number of pulse N
1	A	43	149	41	1.2	41	0.53	33	0.55	53	} 60	67	62	18
	B	59	149	57	1.3	54	0.44	49	0.66	58				
	C	39	145	57	1.3	56	0.38	45	0.72	56				
2	D	41	142	30	0.69					62	} 61	28	7.8	47*
	E	61	149							51				
	F	57	138							47				
	G	58	135							51				
	H	52	135							49				
	I	36	139	28	0.72	34	0.72	30	0.28	47				
3	J	63	149	53	0.64	53	0.83			60	63	41	33	21
4	K	57	135	53	0.44	48	0.67			64	57	28	21	14
5	L	54	139	43	0.83	52	1.0			56	54	85	22	9
6	M	59	142							51	60	150	19	26
7	N	64	139							56	65	130	30	15

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kept on the port side for a while, and recording was made. But as the net broke, the porpoise got away. The weather was bad and the waves were high on that day. The hydraulic equipment of the line hauler was not allowed to stop, so it was a noisy recording. But recording was done for about two minutes.

At 7:00 A.M. on 2nd July, in latitude  $56^{\circ}32'N$  and  $178^{\circ}32'$  east longitude, after retrieving gears the boat was lying, when about 10 dall porpoises approached the boat. Two to four individuals swam at 2 ~ 3 meters per second shifting positions with each other, as if they got interested in the hydrophone hanging on the port side. They approached the microphone within one to two meters distance repeatedly. Recording was made for about 10 minutes. The weather was fine and the sea was calm. Only the auxilliary engine (310 H.P.) was operating. The condition was perfect for recording. From the observation of the oscilloscope, the clicks generated by dall porpoises were roughly from 130 to 150 kHz of frequency with 50 to 65  $\mu s$  of pulse widths and 40 to 65 dB of sound pressures. The echolocating pulses were analyzed in detail about the parameters shown in figure 2 and its results are shown in table 1. The photographs of echolocating pulses at measuring point 1-A are shown in figure 3 as a typical one.