

## Heaviside's dolphins (*Cephalorhynchus heavisidii*) relax acoustic crypsis to increase communication range

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**Appendix S1:** Measured parameters from 159 Heaviside's dolphin pulsed signals grouped by signal type. Parameter abbreviations: ICI<sub>5th</sub>, ICI<sub>MED</sub> and ICI<sub>95th</sub> = 5<sup>th</sup>, median (50<sup>th</sup>) and 95<sup>th</sup> percentile interclick intervals (ms); F<sub>P</sub> = peak frequency (kHz); F<sub>C</sub> = centroid frequency (kHz); BW<sub>RMS</sub> = root mean square bandwidth (kHz); BW<sub>10dB</sub> = -10 dB bandwidth (kHz); Q<sub>RMS</sub> = F<sub>C</sub>/BW<sub>RMS</sub>; Dur<sub>10dB</sub> = -10 dB click duration (μs)

Signal Type	ICI <sub>5th</sub>	ICI <sub>50th</sub>	ICI <sub>95th</sub>	F <sub>P</sub>	F <sub>C</sub>	BW <sub>RMS</sub>	BW <sub>10dB</sub>	Q <sub>RMS</sub>	Dur <sub>10dB</sub>
NBHF Click Train	24.4	27.9	33.0	121.5	130.5	12.8	27.0	10.2	60.8
NBHF Click Train	30.4	50.2	98.6	130.5	132.9	11.8	32.6	11.2	84.6
NBHF Click Train	25.2	29.0	65.2	131.6	132.3	10.6	25.9	12.4	61.3
NBHF Click Train	23.5	31.9	48.3	130.5	131.0	13.9	24.8	9.5	61.3
NBHF Click Train	24.1	28.9	49.5	121.5	124.1	8.5	19.1	14.5	70.3
NBHF Click Train	31.4	38.6	60.1	127.1	134.1	19.9	58.5	6.8	74.1
NBHF Click Train	15.5	29.8	58.5	127.1	131.3	15.8	57.4	8.3	85.9
NBHF Click Train	21.3	29.0	42.5	128.3	127.6	9.6	21.4	13.3	77.8
NBHF Click Train	25.6	30.1	36.7	136.1	132.4	9.7	31.5	13.7	53.7
NBHF Click Train	27.1	34.5	63.8	122.6	136.6	20.4	61.9	6.7	72.2
NBHF Click Train	21.0	25.7	29.0	127.1	129.4	10.5	25.9	12.4	54.9
NBHF Click Train	33.9	53.8	141.2	127.1	128.8	10.4	31.5	12.4	51.7
NBHF Click Train	42.8	67.2	114.1	123.8	126.0	7.1	23.6	17.8	63.9
NBHF Click Train	22.4	28.1	34.3	128.3	130.1	8.5	23.6	15.3	69.6
NBHF Click Train	14.0	22.3	67.0	122.6	135.0	26.7	93.4	5.1	39.8
NBHF Click Train	26.6	33.8	44.4	128.3	123.2	7.7	27.0	15.9	59.4
NBHF Click Train	17.3	23.5	61.5	137.3	131.3	10.4	31.5	12.6	60.1

NBHF Click Train	40.1	57.0	87.5	122.6	139.6	27.8	69.8	5.0	74.7
NBHF Click Train	24.1	28.7	34.3	127.1	131.3	13.6	33.8	9.7	51.2
NBHF Click Train	10.6	13.5	21.9	122.6	130.2	14.5	37.1	9.0	49.8
NBHF Click Train	25.2	27.7	31.9	135.0	130.7	10.0	23.6	13.1	72.1
NBHF Click Train	26.1	35.6	73.4	122.6	131.9	14.2	23.6	9.3	70.3
NBHF Click Train	22.9	27.9	42.6	130.5	130.5	9.0	28.1	14.5	65.5
NBHF Click Train	20.9	25.2	36.9	138.4	136.0	16.3	33.8	8.3	51.0
NBHF Click Train	17.6	26.6	42.7	121.5	134.0	20.8	69.8	6.5	51.2
NBHF Click Train	23.2	28.7	46.1	136.1	130.5	14.0	28.1	9.3	56.8
NBHF Click Train	18.7	25.0	49.7	127.1	127.2	11.1	23.6	11.5	64.9
NBHF Click Train	21.2	25.2	42.3	130.5	131.7	15.9	33.8	8.3	54.3
NBHF Click Train	19.8	30.4	49.3	121.5	132.4	15.4	32.6	8.6	63.7
NBHF Click Train	17.1	22.2	29.7	136.1	131.6	11.5	31.5	11.4	67.9
NBHF Click Train	18.1	27.3	37.7	131.6	137.3	20.9	69.8	6.6	77.6
NBHF Click Train	27.3	29.9	41.4	121.5	133.8	20.3	46.1	6.6	65.3
NBHF Click Train	47.9	54.3	61.2	122.6	130.3	11.7	30.4	11.1	91.5
Buzz	6.4	7.0	10.9	137.3	136.6	14.5	30.4	9.4	55.2
Buzz	9.0	9.5	10.1	130.5	132.6	13.2	43.9	10.1	55.9
Buzz	4.2	5.4	7.7	121.5	143.2	31.4	77.6	4.6	39.8
Buzz	2.6	4.4	7.9	123.8	132.3	23.1	40.5	5.7	62.0
Buzz	2.1	2.3	4.6	122.6	130.2	12.7	36.0	10.3	76.6
Buzz	11.2	13.5	15.0	118.1	150.5	39.9	113.6	3.8	54.2
Buzz	5.6	6.6	10.4	122.6	134.0	25.6	51.8	5.2	95.5
Buzz	2.9	3.3	4.4	128.3	132.6	11.3	38.3	11.8	42.7
Buzz	6.7	10.2	11.0	137.3	134.9	17.4	47.3	7.8	54.9
Buzz	4.9	6.3	8.2	126.0	128.0	9.9	18.0	12.9	83.5
Buzz	8.8	9.0	10.3	135.0	138.6	17.2	39.4	8.0	84.6
Buzz	6.5	7.9	9.3	120.4	138.8	25.4	85.5	5.5	71.2
Buzz	6.7	7.7	11.4	135.0	146.1	16.8	50.6	8.7	51.0
Buzz	7.2	7.4	9.2	130.5	135.9	21.8	69.8	6.2	74.3
Buzz	9.9	11.1	13.0	115.9	125.3	21.6	24.8	5.8	145.3
Buzz	6.7	7.8	9.1	111.4	125.4	25.4	33.8	4.9	135.9
Buzz	6.1	7.3	9.0	121.5	125.0	15.1	10.1	8.3	128.7
Buzz	6.2	6.6	9.5	115.9	130.7	25.0	49.5	5.2	79.3
Buzz	8.1	8.7	9.9	124.9	129.0	14.8	21.4	8.7	121.2
Buzz	3.8	4.8	12.9	124.9	126.9	14.8	24.8	8.6	83.7
Buzz	5.9	8.9	12.4	118.1	127.9	18.1	21.4	7.1	79.5
Buzz	5.8	6.7	10.5	121.5	128.5	10.3	27.0	12.5	55.0
Buzz	9.4	10.6	12.3	121.5	124.0	12.9	27.0	9.6	54.9
Buzz	4.3	4.7	6.6	124.9	130.4	19.5	25.9	6.7	62.0
Buzz	8.0	8.3	8.7	120.4	108.5	23.3	68.6	4.7	30.4
Buzz	10.7	11.2	12.6	126.0	131.5	16.3	33.8	8.1	66.5
Buzz	5.7	7.0	8.2	128.3	128.0	13.4	24.8	9.6	78.1
Buzz	4.4	4.5	5.0	113.6	136.8	32.1	97.9	4.3	86.3

Buzz	8.0	9.8	11.3	122.6	133.7	24.9	32.6	5.4	66.2
Buzz	2.1	2.9	5.5	119.3	138.1	24.9	67.5	5.6	52.3
Buzz	4.3	5.9	8.2	119.3	133.2	21.5	57.4	6.2	80.2
Buzz	5.3	7.4	11.3	126.0	135.8	18.9	25.9	7.2	102.1
Buzz	3.4	6.1	12.9	138.4	134.0	21.0	40.5	6.4	71.0
Buzz	1.8	3.0	5.7	122.6	136.0	23.7	52.9	5.7	68.9
Buzz	3.6	6.6	11.3	123.8	131.5	18.5	27.0	7.1	117.7
Buzz	8.0	10.1	11.7	124.9	131.0	12.3	47.3	10.6	71.7
Buzz	3.3	6.2	7.7	128.3	129.4	13.6	30.4	9.5	55.2
Buzz	8.5	8.9	10.7	130.5	134.7	15.8	28.1	8.6	71.5
Buzz	7.0	7.6	12.4	122.6	132.6	31.6	83.3	4.2	57.8
Buzz	3.3	3.5	8.4	137.3	131.5	9.2	28.1	14.3	56.8
Burst-pulse	1.0	1.1	1.1	122.6	169.9	39.1	132.8	4.3	29.5
Burst-pulse	1.8	2.1	2.7	120.4	132.5	34.4	110.3	3.8	35.4
Burst-pulse	1.3	1.6	11.2	99.0	122.3	36.3	126.0	3.4	32.8
Burst-pulse	1.4	1.8	2.1	119.3	127.1	11.3	31.5	11.3	75.5
Burst-pulse	1.4	1.5	1.6	108.0	119.5	23.7	78.8	5.1	57.3
Burst-pulse	1.4	1.4	1.6	124.9	148.6	36.6	88.9	4.1	60.6
Burst-pulse	1.6	1.6	1.8	97.9	120.9	40.1	133.9	3.0	81.9
Burst-pulse	1.6	1.7	1.8	126.0	131.6	29.9	56.3	4.4	57.8
Burst-pulse	5.4	6.7	7.7	122.6	129.2	18.3	28.1	7.1	58.3
Burst-pulse	1.6	1.7	1.8	145.1	121.4	24.4	81.0	5.0	29.0
Burst-pulse	1.4	1.6	1.7	136.1	122.0	30.4	115.9	4.0	26.4
Burst-pulse	1.5	1.5	1.5	126.0	125.6	24.0	31.5	5.2	63.2
Burst-pulse	1.5	1.6	1.6	91.1	95.2	24.7	47.3	3.9	47.6
Burst-pulse	1.6	1.6	1.7	124.9	124.1	19.9	56.3	6.2	34.7
Burst-pulse	1.3	1.3	1.3	112.5	123.6	20.5	66.4	6.0	53.0
Burst-pulse	1.3	1.3	1.6	135.0	135.5	14.3	14.6	9.5	96.9
Burst-pulse	1.6	1.6	1.8	120.4	112.7	16.7	56.3	6.7	40.8
Burst-pulse	1.4	1.4	1.6	120.4	123.9	21.0	60.8	5.9	33.7
Burst-pulse	1.6	1.6	1.7	105.8	111.5	18.4	45.0	6.0	71.0
Burst-pulse	1.5	1.6	1.7	109.1	110.5	24.7	63.0	4.5	55.4
Burst-pulse	1.4	1.4	1.4	115.9	109.4	36.0	68.6	3.0	36.6
Burst-pulse	1.5	1.6	1.9	104.6	105.3	23.3	40.5	4.5	35.1
Burst-pulse	1.3	1.5	1.6	132.8	121.4	32.3	132.8	3.8	32.3
Burst-pulse	2.7	2.9	4.8	109.1	122.9	34.3	91.1	3.6	57.5
Burst-pulse	1.4	1.4	1.5	106.9	151.5	40.9	129.4	3.7	15.5
Burst-pulse	1.4	1.4	1.5	91.1	105.2	28.6	79.9	3.7	40.1
Burst-pulse	1.6	1.6	1.9	111.4	106.8	27.9	61.9	3.8	31.1
Burst-pulse	1.1	1.2	1.7	105.8	121.7	36.3	112.5	3.4	19.6
Burst-pulse	1.6	1.6	1.9	113.6	105.2	32.8	141.8	3.2	24.7
Burst-pulse	1.6	1.7	2.1	112.5	105.8	29.6	137.3	3.6	29.2
Burst-pulse	1.2	1.3	1.5	102.4	102.7	22.9	51.8	4.5	30.0
Burst-pulse	1.4	1.4	1.6	110.3	105.0	19.1	49.5	5.5	29.5

Burst-pulse	1.4	1.4	1.7	118.1	113.5	21.2	57.4	5.3	41.5
Burst-pulse	1.5	1.6	1.8	131.6	117.8	37.8	126	3.1	38.4
Burst-pulse	1.4	1.5	1.5	126.0	115.0	26.2	77.6	4.4	27.6
Burst-pulse	1.5	1.6	1.7	127.1	122.1	20.5	74.3	6.0	19.3
Burst-pulse	1.6	1.6	1.8	105.8	121.4	38.7	118.1	3.1	33.0
Burst-pulse	1.5	1.6	1.7	83.3	89.8	36.6	154.1	2.5	22.7
Burst-pulse	1.3	1.6	1.8	108.0	104.0	28.3	72.0	3.7	67.0
Burst-pulse	1.5	1.5	1.5	74.3	89.2	28.3	84.4	3.2	25.4
Burst-pulse	1.4	1.4	1.5	115.9	115.9	26.9	94.5	4.3	41.3
Burst-pulse	1.2	1.2	1.3	104.6	103.7	22.8	34.9	4.6	79.9
Burst-pulse	1.6	1.6	1.7	103.5	107.6	24.1	76.5	4.5	40.3
Burst-pulse	1.4	1.5	1.6	94.5	95.4	31.1	78.8	3.1	21.4
Burst-pulse	1.6	1.6	1.7	120.4	119.5	18.6	37.1	6.4	44.3
Burst-pulse	1.6	1.7	1.9	111.4	133.3	38.3	124.9	3.5	49.0
Burst-pulse	1.5	1.6	1.6	124.9	128.6	28.7	95.6	4.5	53.7
Burst-pulse	1.4	1.6	1.6	112.5	122.1	35.7	78.8	3.4	46.5
Burst-pulse	1.4	1.6	1.7	103.5	112.8	21.1	52.9	5.3	56.8
Burst-pulse	1.5	1.5	1.6	101.3	116.6	38.5	147.4	3.0	33.7
Burst-pulse	1.6	1.6	1.7	91.1	104.3	38.3	123.8	2.7	43.2
Burst-pulse	1.3	1.5	1.7	130.5	131.8	24.4	25.9	5.4	62.5
Burst-pulse	1.3	1.6	1.7	112.5	113.5	22.7	55.1	5.0	84.2
Burst-pulse	1.4	1.4	1.5	122.6	118.9	23.8	37.1	5.0	49.7
Burst-pulse	1.8	1.9	2.0	74.3	84.2	24.7	73.1	3.4	61.6
Burst-pulse	1.4	1.5	1.5	117.0	124.7	26.1	43.9	4.8	62.0
Burst-pulse	1.8	1.8	2.0	119.3	126.9	25.6	74.25	5.0	95.5
Burst-pulse	1.9	2.3	2.9	126.0	151.2	36.0	102.4	4.2	33.0
BB Click Train	15.4	24.0	34.1	113.6	110.7	37.9	142.9	2.9	27.4
BB Click Train	8.1	13.7	17.8	180.0	172.3	39.1	141.8	4.4	22.1
BB Click Train	13.8	16.0	20.1	130.5	129.2	18.7	23.6	6.9	50.9
BB Click Train	15.0	18.7	27.1	113.6	155.3	41.9	156.4	3.7	27.4
BB Click Train	42.9	53.4	87.3	79.9	101.3	25.5	50.6	4.0	43.4
BB Click Train	16.5	20.5	23.4	142.9	108.3	37.9	129.4	2.9	25.7
BB Click Train	26.2	27.9	30.7	109.1	114.5	21.5	51.8	5.3	31.1
BB Click Train	19.8	25.6	41.2	82.1	84.0	21.0	67.5	4.0	20.7
BB Click Train	64.3	83.8	133.3	54.0	89.8	29.9	118.1	3.0	19.4
BB Click Train	104.0	118.1	254.7	91.1	86.6	29.4	78.8	2.9	34.6
BB Click Train	32.9	79.2	194.4	77.6	88.4	34.2	129.4	2.6	41.2
BB Click Train	57.4	125.7	227.3	82.1	104.0	33.2	108.0	3.1	41.3
BB Click Train	23.6	26.9	28.6	119.3	117.4	16.3	33.8	7.2	46.2
BB Click Train	33.0	43.4	127.2	136.1	129.2	14.9	55.1	8.7	32.3
BB Click Train	7.7	10.7	17.1	112.5	110.9	28.0	81.0	4.0	36.1
BB Click Train	36.5	39.2	48.4	119.3	101.0	23.7	69.8	4.3	69.4
BB Click Train	20.0	21.3	23.1	133.9	118.6	21.2	50.6	5.6	40.5
BB Click Train	52.7	70.1	135.2	121.5	130.5	27.0	81.0	4.8	37.9

BB Click Train	15.6	21.6	75.9	138.4	128.1	27.4	113.6	4.7	46.2
BB Click Train	22.6	31.4	57.6	100.1	91.7	30.4	87.8	3.0	22.6
BB Click Train	86.8	95.1	118.8	108.0	105.5	24.5	72.0	4.3	43.6
BB Click Train	30.2	36.0	47.4	94.5	104.1	30.0	61.9	3.5	33.3
BB Click Train	26.1	29.6	39.5	118.1	131.0	24.5	46.1	5.3	50.4
BB Click Train	30.2	34.7	40.5	79.9	101.3	25.6	50.6	4.0	43.6
BB Click Train	18.8	22.6	24.4	122.6	120.4	19.9	78.8	6.0	46.7
BB Click Train	33.4	41.8	47.0	120.4	129.2	27.9	101.3	4.6	45.1
BB Click Train	3.6	4.1	4.6	92.3	88.8	31.9	117.0	2.8	15.1
BB Click Train	21.3	22.3	24.6	135.0	122.3	27.5	101.3	4.4	13.9

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