

Long Baseline Navigation Activity

An AUV is navigating with LBL. The transponders A and B are 0.81 km apart. The speed of sound in water is 1500 m/s. Use the data provided to map the path of the AUV using the scale legend below.

Ping #	Ping round trip time in seconds		One way time to AUV		Distance to AUV in meters	
	Transponder A	Transponder B	Transponder A	Transponder B	Transponder A	Transponder B
1	0.400	0.689	0.200	0.345	300	517
2	0.293	0.817	0.147	0.409	220	613
3	0.211	0.951	0.106	0.476	158	713
4	0.337	0.940	0.169	0.470	253	705
5	0.467	0.951	0.234	0.476	350	713
6	0.524	0.800	0.262	0.400	393	600
7	0.604	0.656	0.302	0.328	453	492
8	0.700	0.525	0.350	0.263	525	394
9	0.800	0.563	0.400	0.282	600	422

