

**Lampiran 1. Data Pengukuran Tinggi dan Periode Gelombang di Laboratorium (Tetrapod d=15cm, T=1s)**

DATA HASIL UJI TETRAPOD (D=15CM)						d=	15			
						tinggi flume=	69			
T=1.5										
WAKTU	SENSOR 1 (CM)	SENSOR 2 (CM)	SENSOR 3 (CM)	kejadian gelombang	H sensor 1	Hi	H sensor 2	Hi	H sensor 3	Hi
16:34:10.022	52	55	54		17		14		15	
16:34:10.162	55	56	54		14		13		15	
16:34:10.300	55	54	55		15		15		14	
16:34:10.439	53	54	54		16		15		15	
16:34:10.532	52	54	54		17		15		15	
16:34:10.671	53	54	54		16		15		15	
16:34:10.812	53	55	54		16		14		15	
16:34:10.951	52	54	54		17		15		15	
16:34:11.092	54	54	54	1	15	3	15	2	15	1
16:34:11.185	55	54	54		14		15		15	
16:34:11.326	54	55	54		15		14		15	
16:34:11.467	53	54	54		16		15		15	
16:34:11.607	52	54	54		17		15		15	
16:34:11.747	52	55	54		17		14		15	
16:34:11.886	52	58	54		17		11		15	
16:34:11.980	52	55	54		17		14		15	
16:34:12.118	55	54	54		14		15		15	
16:34:12.259	56	56	54	2	13	4	13	4	15	0
16:34:12.399	53	54	54		16		15		15	
16:34:12.539	52	55	54		17		14		15	
16:34:12.678	53	54	54		16		15		15	
16:34:12.771	52	55	54		17		14		15	
16:34:12.910	51	54	55		18		15		14	
16:34:13.050	53	53	54		16		16		15	
16:34:13.190	54	53	55		15		16		14	
16:34:13.327	54	56	54		15		13		15	
16:34:13.467	53	55	54	3	16	3	14	3	15	1
16:34:13.561	52	56	54		17		13		15	
16:34:13.701	52	55	54		17		14		15	
16:34:13.841	51	57	53		18		12		16	
16:34:13.982	52	55	54		17		14		15	
16:34:14.122	54	62	55		15		7		14	
16:34:14.214	55	54	53		14		15		16	
16:34:14.353	53	54	54		16		15		15	
16:34:14.493	53	54	54		16		15		15	
16:34:14.632	52	55	54	4	17	4	14	8	15	2
16:34:14.771	52	55	54		17		14		15	
16:34:14.911	52	54	54		17		15		15	
16:34:15.050	53	54	54		16		15		15	
16:34:15.142	55	53	55		14		16		14	
16:34:15.282	54	54	54		15		15		15	
16:34:15.419	53	55	54		16		14		15	
16:34:15.559	52	55	54		17		14		15	
16:34:15.698	53	54	54		16		15		15	
16:34:15.837	53	60	53	5	16	3	9	7	16	2
16:34:15.929	52	55	54		17		14		15	
16:34:16.068	56	55	55		13		14		14	
16:34:16.207	54	55	54		15		14		15	
16:34:16.348	54	55	54		15		14		15	
16:34:16.488	52	55	55		17		14		14	
16:34:16.628	53	54	54		16		15		15	
16:34:16.720	52	55	54		17		14		15	
16:34:16.860	52	54	54		17		15		15	
16:34:17.000	53	54	53	6	16	4	15	1	16	2
16:34:17.140	55	54	54		14		15		15	
16:34:17.279	54	54	54		15		15		15	
16:34:17.418	53	54	54		16		15		15	
16:34:17.511	52	54	54		17		15		15	
16:34:17.652	53	54	54		16		15		15	
16:34:17.792	53	55	54		16		14		15	
16:34:17.931	51	57	54		18		12		15	
16:34:18.070	54	55	54		15		14		15	
16:34:18.209	55	54	55	7	14	4	15	3	14	1
16:34:18.301	54	54	55		15		15		14	
16:34:18.440	52	55	54		17		14		15	
16:34:18.580	54	55	54		15		14		15	
16:34:18.719	53	56	54		16		13		15	
16:34:18.859	52	54	54		17		15		15	
16:34:18.999	53	57	53		16		12		16	
16:34:19.092	55	55	55		14		14		14	
16:34:19.232	55	55	54		14		14		15	
16:34:19.372	53	54	54	8	16	3	15	3	15	2

16:34:19.511	52	55	54		17		14		15
16:34:19.650	54	56	54		15		13		15
16:34:19.789	52	54	54		17		15		15
16:34:19.882	58	54	55		11		15		14
16:34:20.021	53	55	54		16		14		15
16:34:20.161	56	53	55		13		16		14
16:34:20.299	54	55	54		15		14		15
16:34:20.439	52	54	55		17		15		14
16:34:20.577	52	54	54	9	17	6	15	3	15
16:34:20.717	52	54	54		17		15		15
16:34:20.810	51	54	55		18		15		14
16:34:20.951	53	54	54		16		15		15
16:34:21.089	55	57	55		14		12		14
16:34:21.229	55	54	54		14		15		15
16:34:21.370	53	54	54		16		15		15
16:34:21.464	53	54	54		16		15		15
16:34:21.604	53	54	54		16		15		15
16:34:21.742	53	56	54	10	16	4	13	3	15
16:34:21.881	51	54	55		18		15		14
16:34:22.019	53	54	54		16		15		15
16:34:22.157	54	55	55		15		14		14
16:34:22.296	54	55	54		15		14		15
16:34:22.389	52	54	55		17		15		14
16:34:22.528	52	54	54		17		15		15
16:34:22.667	53	54	54		16		15		15
16:34:22.806	52	55	54		17		14		15
16:34:22.947	55	54	54	11	14	4	15	1	15
16:34:23.087	55	55	54		14		14		15
16:34:23.180	54	57	54		15		12		15
16:34:23.319	53	53	54		16		16		15
16:34:23.458	52	55	55		17		14		14
16:34:23.598	53	54	54		16		15		15
16:34:23.736	52	56	55		17		13		14
16:34:23.877	52	55	54		17		14		15
16:34:23.970	53	54	53		16		15		16
16:34:24.110	55	54	55	12	14	3	15	4	14
16:34:24.251	55	54	54		14		15		15
16:34:24.390	52	54	54		17		15		15
16:34:24.529	52	55	54		17		14		15
16:34:24.668	52	55	54		17		14		15
16:34:24.762	51	55	55		18		14		14
16:34:24.902	55	55	54		14		14		15
16:34:25.041	54	53	55		15		16		14
16:34:25.182	55	54	54		14		15		15
16:34:25.321	55	54	54	13	14	4	15	2	15
16:34:25.460	52	54	55		17		15		14
16:34:25.554	53	54	54		16		15		15
16:34:25.693	54	56	54		15		13		15
16:34:25.833	53	54	54		16		15		15
16:34:25.971	54	53	53		15		16		16
16:34:26.112	54	53	54		15		16		15
16:34:26.205	54	54	54		15		15		15
16:34:26.346	52	55	54		17		14		15
16:34:26.486	52	56	54	14	17	2	13	3	15
16:34:26.628	52	54	54		17		15		15
16:34:26.767	51	58	54		18		11		15
16:34:26.907	53	55	53		16		14		16
16:34:26.999	54	54	55		15		15		14
16:34:27.139	55	55	54		14		14		15
16:34:27.277	54	55	54		15		14		15
16:34:27.417	53	54	55		16		15		14
16:34:27.556	53	54	54		16		15		15
16:34:27.696	52	54	54	15	17	4	15	4	15
16:34:27.790	51	54	54		18		15		15
16:34:27.930	53	54	54		16		15		15
16:34:28.070	54	54	55		15		15		14
16:34:28.210	54	54	54		15		15		15
16:34:28.350	55	57	54		14		12		15
16:34:28.490	53	56	55		16		13		14
16:34:28.583	54	54	54		15		15		15
16:34:28.721	52	57	54		17		12		15
16:34:28.861	51	55	55	16	18	4	14	3	14

16:34:29.000	53	54	54		16		15		15
16:34:29.140	54	55	54		15		14		15
16:34:29.279	53	55	54		16		14		15
16:34:29.373	53	55	55		16		14		14
16:34:29.512	53	54	54		16		15		15
16:34:29.651	53	57	54		16		12		15
16:34:29.791	51	54	54		18		15		15
16:34:29.931	52	53	54		17		16		15
16:34:30.071	55	56	54	17	14	4	13	4	15
16:34:30.165	54	54	54		15		15		15
16:34:30.304	54	56	54		15		13		15
16:34:30.442	53	54	54		16		15		15
16:34:30.582	53	54	54		16		15		15
16:34:30.722	52	56	54		17		13		15
16:34:30.861	52	55	55		17		14		14
16:34:30.954	53	55	53		16		14		16
16:34:31.094	54	54	54		15		15		15
16:34:31.233	53	53	54	18	16	2	16	3	15
16:34:31.374	52	54	54		17		15		15
16:34:31.513	53	54	54		16		15		15
16:34:31.607	53	55	54		16		14		15
16:34:31.746	53	55	54		16		14		15
16:34:31.886	52	58	54		17		11		15
16:34:32.025	54	55	55		15		14		14
16:34:32.164	55	54	54		14		15		15
16:34:32.305	53	55	54		16		14		15
16:34:32.397	52	54	54	19	17	3	15	4	15
16:34:32.537	52	54	54		17		15		15
16:34:32.677	52	55	54		17		14		15
16:34:32.817	52	55	54		17		14		15
16:34:32.957	54	54	54		15		15		15
16:34:33.098	54	53	55		15		16		14
16:34:33.190	54	53	54		15		16		15
16:34:33.330	53	54	55		16		15		14
16:34:33.470	52	54	54		17		15		15
16:34:33.609	53	54	54	20	16	2	15	2	15
16:34:33.747	53	54	54		16		15		15
16:34:33.886	52	57	56		17		12		13
16:34:33.980	54	55	55		15		14		14
16:34:34.119	57	53	54		12		16		15
16:34:34.260	54	54	55		15		15		14
16:34:34.399	53	55	55		16		14		14
16:34:34.539	55	54	54		14		15		15
16:34:34.680	52	56	54		17		13		15
16:34:34.771	54	55	55	21	15	5	14	4	14
16:34:34.911	55	54	53		14		15		16
16:34:35.053	54	54	55		15		15		14
16:34:35.193	54	55	54		15		14		15
16:34:35.334	52	55	55		17		14		14
16:34:35.428	53	54	54		16		15		15
16:34:35.567	53	54	55		16		15		14
16:34:35.706	53	55	55		16		14		14
16:34:35.845	53	55	55		16		14		14
16:34:35.984	54	56	55	22	15	3	13	2	14
16:34:36.123	55	54	55		14		15		14
16:34:36.261	54	53	54		15		16		15
16:34:36.355	52	55	54		17		14		15
16:34:36.495	52	54	54		17		15		15
16:34:36.634	53	56	55		16		13		14
16:34:36.774	51	54	54		18		15		15
16:34:36.914	53	54	59		16		15		10
16:34:37.054	55	54	55		14		15		14
16:34:37.148	55	53	54	23	14	4	16	3	15
16:34:37.288	52	54	54		17		15		15
16:34:37.428	52	54	54		17		15		15
16:34:37.568	53	54	54		16		15		15
16:34:37.708	52	55	54		17		14		15
16:34:37.801	52	55	55		17		14		14
16:34:37.940	56	54	55		13		15		14
16:34:38.079	55	54	54		14		15		15
16:34:38.218	55	53	60		14		16		15
16:34:38.356	57	55	55	24	12	5	14	2	14
16:34:38.496	53	55	54		16		14		15
16:34:38.635	52	54	56		17		15		13
16:34:38.728	52	54	55		17		15		14
16:34:38.868	52	55	54		17		14		15
16:34:39.007	54	56	55		15		13		14
16:34:39.148	54	54	54		15		15		15
16:34:39.288	53	54	55		16		15		14
16:34:39.381	53	54	54		16		15		15
16:34:39.521	53	55	55	25	16	2	14	2	14

(Tetrapod d=15cm, T=0.9s)

DATA HASIL UJI TETRAPOD (D=15CM)						d=	15			
						tinggi flume=	69			
T=0.9 S										
WAKTU	SENSOR 1 (CM)	SENSOR 2 (CM)	SENSOR 3 (CM)	kejadian gelombang	H sensor 1	Hi	H sensor 2	Hi	H sensor 3	Hi
16:36:06.066	52	54	54		17		15		15	
16:36:06.206	52	55	54		17		14		15	
16:36:06.347	53	54	54		16		15		15	
16:36:06.488	54	54	54		15		15		15	
16:36:06.628	54	55	54		15		14		15	
16:36:06.721	52	54	54		17		15		15	
16:36:06.860	51	54	54		18		15		15	
16:36:07.001	51	54	54	1	18	3	15	1	15	0
16:36:07.141	53	55	54		16		14		15	
16:36:07.281	54	54	54		15		15		15	
16:36:07.419	54	54	54		15		15		15	
16:36:07.511	54	54	54		15		15		15	
16:36:07.651	52	54	54		17		15		15	
16:36:07.792	51	54	54		18		15		15	
16:36:07.932	52	55	54		17		14		15	
16:36:08.073	53	55	54	2	16	3	14	1	15	0
16:36:08.167	54	55	54		15		14		15	
16:36:08.307	54	55	54		15		14		15	
16:36:08.446	53	54	54		16		15		15	
16:36:08.584	52	54	54		17		15		15	
16:36:08.724	52	54	54		17		15		15	
16:36:08.863	53	54	54		16		15		15	
16:36:08.956	53	55	54		16		14		15	
16:36:09.095	54	55	54	3	15	2	14	1	15	0
16:36:09.235	54	54	53		15		15		16	
16:36:09.375	54	54	54		15		15		15	
16:36:09.515	51	54	54		18		15		15	
16:36:09.655	52	56	54		17		13		15	
16:36:09.747	53	54	54		16		15		15	
16:36:09.887	54	55	54		15		14		15	
16:36:10.027	54	57	54		15		12		15	
16:36:10.167	54	56	54	4	15	3	13	3	15	1
16:36:10.306	52	54	54		17		15		15	
16:36:10.447	50	55	54		19		14		15	
16:36:10.540	52	55	54		17		14		15	
16:36:10.680	53	54	54		16		15		15	
16:36:10.820	55	55	54		14		14		15	
16:36:10.960	53	55	54		16		14		15	
16:36:11.098	53	55	54		16		14		15	
16:36:11.238	53	55	54	5	16	5	14	1	15	0
16:36:11.332	51	55	54		18		14		15	
16:36:11.470	52	54	55		17		15		14	
16:36:11.611	53	54	54		16		15		15	
16:36:11.749	54	55	54		15		14		15	
16:36:11.887	53	55	54		16		14		15	
16:36:12.027	54	54	53		15		15		16	
16:36:12.121	52	54	54		17		15		15	
16:36:12.259	52	55	54	6	17	3	14	1	15	2
16:36:12.400	52	54	54		17		15		15	
16:36:12.539	54	55	54		15		14		15	
16:36:12.678	55	54	54		14		15		15	
16:36:12.817	54	53	54		15		16		15	
16:36:12.909	53	56	53		16		13		16	
16:36:13.049	52	54	54		17		15		15	
16:36:13.189	52	54	54		17		15		15	
16:36:13.329	53	55	54	7	16	3	14	3	15	1
16:36:13.468	55	55	54		14		14		15	
16:36:13.608	54	54	54		15		15		15	
16:36:13.701	53	53	54		16		16		15	
16:36:13.842	52	54	54		17		15		15	
16:36:13.981	55	53	54		14		16		15	
16:36:14.121	53	55	54		16		14		15	
16:36:14.261	52	55	54		17		14		15	
16:36:14.401	55	54	54	8	14	3	15	2	15	0

16:36:14.495		54	55	54		15		14		15	
16:36:14.635		53	54	54		16		15		15	
16:36:14.773		52	54	54		17		15		15	
16:36:14.914		51	54	54		18		15		15	
16:36:15.053		51	54	54		18		15		15	
16:36:15.147		53	54	54		16		15		15	
16:36:15.286		54	55	54		15		14		15	
16:36:15.426		54	59	55	9	15	3	10	5	14	1
16:36:15.564		53	55	54		16		14		15	
16:36:15.704		53	54	54		16		15		15	
16:36:15.843		51	56	54		18		13		15	
16:36:15.937		51	54	54		18		15		15	
16:36:16.078		53	54	54		16		15		15	
16:36:16.218		54	54	54		15		15		15	
16:36:16.358		54	58	54		15		11		15	
16:36:16.498		53	55	54	10	16	3	14	4	15	0
16:36:16.637		53	53	54		16		15		15	
16:36:16.728		53	54	54		16		15		15	
16:36:16.867		52	54	54		17		15		15	
16:36:17.005		55	54	54		14		15		15	
16:36:17.145		55	55	55		14		14		14	
16:36:17.284		53	54	54		16		15		15	
16:36:17.422		55	54	53		14		15		16	
16:36:17.561		51	54	54	11	18	3	15	2	15	2
16:36:17.654		52	54	54		17		15		15	
16:36:17.793		52	54	54		17		15		15	
16:36:17.932		54	54	54		15		15		15	
16:36:18.072		54	54	54		15		15		15	
16:36:18.212		54	55	54		15		14		15	
16:36:18.353		52	53	53		17		16		16	
16:36:18.447		51	55	54		18		14		15	
16:36:18.587		54	55	55	12	15	3	14	2	14	2
16:36:18.727		52	54	54		17		15		15	
16:36:18.866		55	55	54		14		14		15	
16:36:19.006		54	55	54		15		14		15	
16:36:19.100		53	53	54		16		16		15	
16:36:19.239		53	55	53		16		14		16	
16:36:19.380		52	57	54		17		12		15	
16:36:19.521		52	55	54		17		14		15	
16:36:19.662		54	55	54	13	15	3	14	4	15	1
16:36:19.802		54	54	54		15		15		15	
16:36:19.896		54	56	54		15		13		15	
16:36:20.036		53	57	54		16		12		15	
16:36:20.175		51	55	54		18		14		15	
16:36:20.314		54	54	54		15		15		15	
16:36:20.455		53	54	54		16		15		15	
16:36:20.548		55	55	54		14		14		15	
16:36:20.688		55	54	54	14	14	4	15	3	15	0
16:36:20.828		53	54	54		16		15		15	
16:36:20.967		52	56	54		17		13		15	
16:36:21.107		52	55	54		17		14		15	
16:36:21.246		53	55	54		16		14		15	
16:36:21.339		53	55	54		16		14		15	
16:36:21.478		54	54	54		15		15		15	
16:36:21.618		54	55	55		15		14		14	
16:36:21.758		55	54	55	15	14	2	15	2	14	1
16:36:21.900		52	54	54		17		15		15	
16:36:22.039		54	57	54		15		12		15	
16:36:22.132		53	54	54		16		15		15	
16:36:22.273		53	54	54		16		15		15	
16:36:22.413		54	54	55		15		15		14	
16:36:22.552		54	54	54		15		15		15	
16:36:22.692		53	54	53		16		15		16	
16:36:22.833		54	53	54	16	15	2	16	4	15	2
16:36:22.926		52	54	54		17		15		15	
16:36:23.067		52	54	54		17		15		15	
16:36:23.206		54	54	54		15		15		15	
16:36:23.347		54	55	55		15		14		14	
16:36:23.487		54	54	54		15		15		15	
16:36:23.580		52	53	54		17		16		15	
16:36:23.720		52	54	55		17		15		14	
16:36:23.861		51	54	55	17	18	2	15	2	14	1

16:36:24.002	53	54	54	18	16	2	15	3	15	2
16:36:24.141	54	55	54		15		14		15	
16:36:24.281	54	55	54		15		14		15	
16:36:24.374	54	57	54		15		12		15	
16:36:24.513	52	54	55		17		15		14	
16:36:24.653	52	54	55		17		15		14	
16:36:24.792	52	55	53		17		14		16	
16:36:24.932	53	55	55		16		14		14	
16:36:25.071	54	54	54	19	15	4	15	3	15	2
16:36:25.166	54	57	55		15		12		14	
16:36:25.306	53	54	53		16		15		16	
16:36:25.445	52	54	54		17		15		15	
16:36:25.584	51	54	54		18		15		15	
16:36:25.723	52	54	54		17		15		15	
16:36:25.863	55	55	54		14		14		15	
16:36:25.956	54	54	54		15		15		15	
16:36:26.097	54	55	54	20	15	2	14	3	15	2
16:36:26.238	52	56	55		17		13		14	
16:36:26.379	52	53	54		17		16		15	
16:36:26.518	52	54	55		17		15		14	
16:36:26.611	52	54	54		17		15		15	
16:36:26.751	54	55	53		15		14		16	
16:36:26.891	54	54	54		15		15		15	
16:36:27.030	54	54	54		15		15		15	
16:36:27.170	53	53	55	21	16	5	16	2	14	2
16:36:27.311	51	54	55		18		15		14	
16:36:27.403	53	54	53		16		15		16	
16:36:27.543	53	55	54		16		14		15	
16:36:27.682	56	55	54		13		14		15	
16:36:27.823	55	54	55		14		15		14	
16:36:27.962	53	54	53		16		15		16	
16:36:28.102	54	54	55		15		15		14	
16:36:28.196	51	56	54	22	18	4	13	2	15	1
16:36:28.337	52	55	54		17		14		15	
16:36:28.477	53	54	54		16		15		15	
16:36:28.617	55	55	55		14		14		14	
16:36:28.757	54	55	55		15		14		14	
16:36:28.849	53	54	55		16		15		14	
16:36:28.990	52	54	54		17		15		15	
16:36:29.130	53	55	54		16		14		15	
16:36:29.271	52	55	54	23	17	3	14	2	15	1
16:36:29.411	54	54	54		15		15		15	
16:36:29.552	55	55	55		14		14		14	
16:36:29.646	54	56	55		15		13		14	
16:36:29.786	52	54	54		17		15		15	
16:36:29.926	52	54	54		17		15		15	
16:36:30.066	52	56	55		17		13		14	
16:36:30.205	53	55	54		16		14		15	
16:36:30.345	55	54	54	24	14	4	15	1	15	1
16:36:30.438	55	55	54		14		14		15	
16:36:30.577	55	54	54		14		15		15	
16:36:30.716	54	55	55		15		14		14	
16:36:30.856	51	54	55		18		15		14	
16:36:30.995	51	55	54		18		14		15	
16:36:31.089	55	55	55		14		14		14	
16:36:31.228	55	55	54		14		14		15	
16:36:31.369	54	54	55	25	15	3	15	2	14	1
16:36:31.510	53	55	54		16		14		15	
16:36:31.651	52	53	55		17		16		14	
16:36:31.792	52	55	54		17		14		15	
16:36:31.885	52	55	54		17		14		15	
16:36:32.025	55	54	54		14		15		15	
16:36:32.165	55	54	54		14		15		15	
16:36:32.304	54	55	54		15		14		15	

(Tetrapod  $d=15\text{cm}$ ,  $T=0.8\text{s}$ )

DATA HASIL UJI TETRAPOD (D=15CM)						d=	15			
						tinggi flume=	69			
T=0.8 S										
WAKTU	SENSOR 1 (CM)	SENSOR 2 (CM)	SENSOR 3 (CM)	kejadian gelombang	H sensor 1	Hi	H sensor 2	Hi	H sensor 3	Hi
16:37:43.034	53	54	55		16		15		14	
16:37:43.171	53	57	54		16		12		15	
16:37:43.309	54	54	55		15		15		14	
16:37:43.447	55	55	54		14		14		15	
16:37:43.586	58	54	54		11		15		15	
16:37:43.727	52	53	54		17		16		15	
16:37:43.866	52	54	55	1	17	6	15	4	14	1
16:37:43.958	55	55	54		14		14		15	
16:37:44.096	54	54	54		15		15		15	
16:37:44.236	55	55	54		14		14		15	
16:37:44.374	54	54	54		15		15		15	
16:37:44.512	50	54	54		19		15		15	
16:37:44.651	52	53	54		17		16		15	
16:37:44.743	55	55	54	2	14	5	14	2	15	0
16:37:44.882	54	54	54		15		15		15	
16:37:45.022	56	55	54		13		14		15	
16:37:45.161	56	54	54		13		15		15	
16:37:45.300	50	55	54		19		14		15	
16:37:45.439	51	54	54		18		15		15	
16:37:45.534	52	54	54		17		15		15	
16:37:45.672	54	54	54	3	15	6	15	1	15	0
16:37:45.811	55	56	54		14		13		15	
16:37:45.949	55	55	54		14		14		15	
16:37:46.089	52	57	54		17		12		15	
16:37:46.228	51	54	54		18		15		15	
16:37:46.368	52	54	54		17		15		15	
16:37:46.460	55	54	54		14		15		15	
16:37:46.597	55	56	54	4	14	4	13	3	15	0
16:37:46.737	54	55	54		15		14		15	
16:37:46.878	52	55	54		17		14		15	
16:37:47.017	51	53	54		18		16		15	
16:37:47.156	54	54	54		15		15		15	
16:37:47.250	54	54	54		15		15		15	
16:37:47.390	55	57	54		14		12		15	
16:37:47.529	54	55	54	5	15	4	14	4	15	0
16:37:47.667	52	54	54		17		15		15	
16:37:47.807	52	53	54		17		16		15	
16:37:47.947	52	54	54		17		15		15	
16:37:48.040	53	55	54		16		14		15	
16:37:48.180	54	54	54		15		15		15	
16:37:48.320	54	54	54		15		15		15	
16:37:48.459	54	54	54	6	15	2	15	2	15	0
16:37:48.597	50	54	55		19		15		14	
16:37:48.736	51	55	54		18		14		15	
16:37:48.829	53	54	54		16		15		15	
16:37:48.969	54	54	54		15		15		15	
16:37:49.110	55	54	54		14		15		15	
16:37:49.249	53	53	54		16		16		15	
16:37:49.388	51	56	54	7	18	5	13	3	15	1
16:37:49.527	52	53	54		17		16		15	
16:37:49.621	54	55	54		15		14		15	
16:37:49.761	54	54	55		15		15		14	
16:37:49.899	55	55	54		14		14		15	
16:37:50.038	55	54	54		14		15		15	
16:37:50.178	51	53	54		18		16		15	
16:37:50.318	53	53	54	8	16	4	16	2	15	1

16:37:50.412	52	55	54		17		14		15	
16:37:50.553	54	54	54		15		15		15	
16:37:50.692	55	55	54		14		14		15	
16:37:50.833	55	54	54		14		15		15	
16:37:50.973	52	53	54		17		16		15	
16:37:51.067	50	53	54		19		16		15	
16:37:51.206	54	55	54	9	15	5	14	2	15	0
16:37:51.346	56	54	54		13		15		15	
16:37:51.486	55	57	54		14		12		15	
16:37:51.625	55	54	54		14		15		15	
16:37:51.764	57	53	54		12		16		15	
16:37:51.859	51	54	55		18		15		14	
16:37:51.999	52	56	54		17		13		15	
16:37:52.137	53	54	54	10	16	6	15	4	15	1
16:37:52.277	56	55	54		13		14		15	
16:37:52.417	54	53	54		15		16		15	
16:37:52.556	53	54	54		16		15		15	
16:37:52.648	52	53	54		17		16		15	
16:37:52.788	51	54	54		18		15		15	
16:37:52.928	53	54	54		16		15		15	
16:37:53.068	54	54	54	11	15	5	15	2	15	0
16:37:53.208	54	55	54		15		14		15	
16:37:53.345	55	59	54		14		10		15	
16:37:53.439	52	54	54		17		15		15	
16:37:53.578	51	55	54		18		14		15	
16:37:53.717	53	54	54		16		15		15	
16:37:53.855	54	56	54		15		13		15	
16:37:53.994	55	55	54	12	14	4	14	5	15	0
16:37:54.131	54	54	55		15		15		14	
16:37:54.268	54	54	54		15		15		15	
16:37:54.405	50	54	54		19		15		15	
16:37:54.496	53	55	54		16		14		15	
16:37:54.635	54	54	55		15		15		14	
16:37:54.773	55	55	54		14		14		15	
16:37:54.911	53	54	54	13	16	5	15	1	15	1
16:37:55.049	54	54	54		15		15		15	
16:37:55.186	52	54	54		17		15		15	
16:37:55.325	52	55	54		17		14		15	
16:37:55.417	55	54	54		14		15		15	
16:37:55.555	55	55	54		14		14		15	
16:37:55.692	54	54	55		15		15		14	
16:37:55.828	52	53	54	14	17	3	16	2	15	1
16:37:55.965	52	54	54		17		15		15	
16:37:56.103	52	55	54		17		14		15	
16:37:56.241	55	54	54		14		15		15	
16:37:56.380	56	55	54		13		14		15	
16:37:56.470	55	53	54		14		16		15	
16:37:56.608	53	54	54		16		15		15	
16:37:56.745	51	53	54	15	18	5	16	2	15	0
16:37:56.881	53	56	54		16		13		15	
16:37:57.019	54	54	54		15		15		15	
16:37:57.158	56	55	54		13		14		15	
16:37:57.296	54	55	54		15		14		15	
16:37:57.432	53	54	54		16		15		15	
16:37:57.524	52	54	54		17		15		15	
16:37:57.662	52	55	54	16	17	4	14	2	15	0
16:37:57.802	54	54	54		15		15		15	
16:37:57.939	55	56	54		14		13		15	
16:37:58.078	54	54	54		15		15		15	
16:37:58.216	53	54	55		16		15		14	
16:37:58.354	51	53	54		18		16		15	
16:37:58.446	50	53	54		19		16		15	
16:37:58.584	54	54	54	17	15	5	15	3	15	1



16:37:58.723	55	54	54		14		15		15	
16:37:58.859	54	56	54		15		13		15	
16:37:58.996	55	53	54		14		16		15	
16:37:59.135	51	54	54		18		15		15	
16:37:59.274	52	53	54		17		16		15	
16:37:59.366	52	54	54		17		15		15	
16:37:59.502	55	54	54	18	14	4	15	3	15	0
16:37:59.640	55	57	54		14		12		15	
16:37:59.778	53	55	54		16		14		15	
16:37:59.915	52	54	54		17		15		15	
16:38:00.053	51	54	54		18		15		15	
16:38:00.191	52	55	54		17		14		15	
16:38:00.329	54	54	54		15		15		15	
16:38:00.421	55	56	54	19	14	4	13	3	15	0
16:38:00.557	54	54	54		15		15		15	
16:38:00.695	51	53	54		18		16		15	
16:38:00.833	52	53	54		17		16		15	
16:38:00.973	52	54	54		17		15		15	
16:38:01.112	53	54	54		16		15		15	
16:38:01.249	56	55	54		13		14		15	
16:38:01.342	54	58	54	20	15	5	11	5	15	0
16:38:01.479	52	54	54		17		15		15	
16:38:01.616	56	53	54		13		16		15	
16:38:01.754	53	55	54		16		14		15	
16:38:01.892	54	54	54		15		15		15	
16:38:02.028	56	55	54		13		14		15	
16:38:02.166	54	54	54		15		15		15	
16:38:02.304	52	54	54	21	17	4	15	2	15	0
16:38:02.441	51	54	54		18		15		15	
16:38:02.534	53	54	54		16		15		15	
16:38:02.672	53	54	54		16		15		15	
16:38:02.809	55	56	54		14		13		15	
16:38:02.946	55	55	54		14		14		15	
16:38:03.084	57	54	55		12		15		14	
16:38:03.222	54	54	54	22	15	6	15	2	15	1
16:38:03.360	52	54	54		17		15		15	
16:38:03.451	54	54	54		15		15		15	
16:38:03.589	58	54	54		11		15		15	
16:38:03.725	54	54	54		15		15		15	
16:38:03.863	58	54	54		11		15		15	
16:38:04.002	51	53	53		18		16		16	
16:38:04.143	52	54	54	23	17	7	15	1	15	1
16:38:04.280	54	55	54		15		14		15	
16:38:04.373	54	54	54		15		15		15	
16:38:04.510	57	55	54		12		14		15	
16:38:04.647	54	54	54		15		15		15	
16:38:04.785	54	55	53		15		14		16	
16:38:04.923	52	53	54		17		16		15	
16:38:05.063	53	56	54	24	16	5	13	3	15	1
16:38:05.199	54	54	54		15		15		15	
16:38:05.337	56	55	54		13		14		15	
16:38:05.430	55	54	55		14		15		14	
16:38:05.567	51	53	53		18		16		16	
16:38:05.707	53	53	54		16		16		15	
16:38:05.845	53	55	54		16		14		15	
16:38:05.983	54	54	54	25	15	5	15	2	15	2

(Tetrapod d=17cm, T=1s)

DATA HASIL UJI TETRAPOD (D=17CM)							d=	17		
							tinggi flume=	69		
T=1 s										
WAKTU	SENSOR 1 (CM)	SENSOR 2 (CM)	SENSOR 3 (CM)	kejadian gelombang	H sensor 1	Hi	H sensor 2	Hi	H sensor 3	Hi
16:19:44.064	53	52	52		16		17		17	
16:19:44.204	53	53	52		16		16		17	
16:19:44.344	52	52	52		17		17		17	
16:19:44.484	52	54	52		17		15		17	
16:19:44.623	49	58	52		20		11		17	
16:19:44.716	50	56	52		19		13		17	
16:19:44.857	51	52	52		18		17		17	
16:19:44.995	53	51	52		16		18		17	
16:19:45.134	54	52	52	1	15	5	17	7	17	0
16:19:45.274	54	54	52		15		15		17	
16:19:45.414	53	53	52		16		16		17	
16:19:45.507	51	54	52		18		15		17	
16:19:45.645	50	54	52		19		15		17	
16:19:45.783	49	52	52		20		17		17	
16:19:45.925	51	53	52		18		16		17	
16:19:46.064	53	52	53		16		17		16	
16:19:46.204	55	53	52		14		16		17	
16:19:46.298	53	53	52	2	16	6	16	2	17	1
16:19:46.436	52	53	52		17		16		17	
16:19:46.576	51	55	52		18		14		17	
16:19:46.716	51	56	52		18		13		17	
16:19:46.855	50	53	52		19		16		17	
16:19:46.949	52	56	52		17		13		17	
16:19:47.090	54	54	52		15		15		17	
16:19:47.229	53	52	52		16		17		17	
16:19:47.369	53	54	52		16		15		17	
16:19:47.507	52	53	52	3	17	4	16	4	17	0
16:19:47.648	50	56	52		19		13		17	
16:19:47.741	56	59	52		13		10		17	
16:19:47.881	50	54	53		19		15		16	
16:19:48.020	52	53	52		17		16		17	
16:19:48.159	52	53	52		17		16		17	
16:19:48.298	52	52	52		17		17		17	
16:19:48.436	52	53	52		17		16		17	
16:19:48.528	52	55	52		17		14		17	
16:19:48.667	51	53	52	4	18	6	16	7	17	1
16:19:48.806	49	53	52		20		16		17	
16:19:48.947	49	52	52		20		17		17	
16:19:49.086	51	53	52		18		16		17	
16:19:49.227	53	53	53		16		16		16	
16:19:49.319	53	52	52		16		17		17	
16:19:49.459	52	54	52		17		15		17	
16:19:49.599	52	54	52		17		15		17	
16:19:49.739	50	53	52		19		19		17	
16:19:49.879	49	52	53	5	20	4	17	2	16	1
16:19:50.020	50	54	52		19		15		17	
16:19:50.112	54	56	52		15		13		17	
16:19:50.253	52	52	53		17		17		16	
16:19:50.394	53	52	52		16		17		17	
16:19:50.533	53	53	53		16		16		16	
16:19:50.674	51	54	52		18		15		17	
16:19:50.766	50	53	52		19		16		17	
16:19:50.905	49	58	52		20		11		17	
16:19:51.043	50	52	52	6	19	5	17	6	17	1
16:19:51.183	51	53	53		18		16		16	
16:19:51.321	52	51	53		17		18		16	
16:19:51.461	53	52	52		16		17		17	
16:19:51.552	53	53	53		16		16		16	
16:19:51.691	51	66	53		18		3		16	
16:19:51.831	50	55	52		19		14		17	
16:19:51.970	49	53	53		20		16		16	
16:19:52.109	51	54	52		18		15		17	
16:19:52.251	53	52	53	7	16	4	17	15	16	1
16:19:52.343	53	51	52		16		18		17	
16:19:52.482	55	52	52		14		17		17	
16:19:52.622	53	54	52		16		15		17	
16:19:52.761	50	54	52		19		15		17	
16:19:52.899	50	54	52		19		15		17	
16:19:53.038	50	54	52		19		15		17	
16:19:53.132	50	53	52		19		16		17	
16:19:53.272	53	52	53		16		17		16	
16:19:53.412	53	52	52	8	16	5	17	3	17	1

16:19:53.551	53	53	52		16		16		17
16:19:53.691	52	54	53		17		15		16
16:19:53.831	51	55	51		18		14		18
16:19:53.924	50	53	53		19		16		16
16:19:54.064	50	54	52		19		15		17
16:19:54.203	50	52	52		19		17		17
16:19:54.343	53	53	53		16		16		16
16:19:54.482	53	51	52		16		18		17
16:19:54.576	53	53	53	9	16	3	16	4	17
16:19:54.716	51	53	52		18		16		17
16:19:54.857	50	54	52		19		15		17
16:19:54.996	49	54	52		20		15		17
16:19:55.136	50	52	52		19		17		17
16:19:55.276	52	54	53		17		15		16
16:19:55.370	53	54	53		16		15		16
16:19:55.509	53	59	52		16		10		17
16:19:55.648	53	54	52		16		15		17
16:19:55.788	52	54	52	10	17	4	15	7	17
16:19:55.928	50	54	52		19		15		17
16:19:56.021	50	52	52		19		17		17
16:19:56.161	51	52	52		18		17		17
16:19:56.302	54	55	52		15		14		17
16:19:56.441	54	53	53		15		16		16
16:19:56.581	54	52	52		15		17		17
16:19:56.722	52	53	53		17		16		16
16:19:56.814	51	54	52		18		15		17
16:19:56.953	50	58	52	11	19	4	11	6	17
16:19:57.093	51	52	52		18		17		17
16:19:57.234	50	51	52		19		18		17
16:19:57.374	54	52	52		15		17		17
16:19:57.468	52	53	52		17		16		17
16:19:57.609	54	63	52		15		6		17
16:19:57.748	52	53	52		17		16		17
16:19:57.889	52	54	52		17		15		17
16:19:58.030	50	55	52		19		14		17
16:19:58.171	50	53	52	12	19	4	16	12	17
16:19:58.263	50	53	52		19		16		17
16:19:58.403	53	52	53		16		17		16
16:19:58.542	52	51	52		17		18		17
16:19:58.681	53	53	52		16		16		17
16:19:58.822	53	56	52		16		13		17
16:19:58.915	50	54	52		19		15		17
16:19:59.056	51	53	52		18		16		17
16:19:59.197	50	52	52		19		17		17
16:19:59.337	51	56	52	13	18	3	13	5	17
16:19:59.477	51	52	53		18		17		16
16:19:59.571	52	51	52		17		18		17
16:19:59.710	53	53	52		16		16		17
16:19:59.849	52	54	52		17		15		17
16:19:59.988	51	55	52		18		14		17
16:20:00.128	51	54	52		18		15		17
16:20:00.266	49	52	52		20		17		17
16:20:00.406	51	55	52		18		14		17
16:20:00.498	52	55	53	14	17	4	14	4	16
16:20:00.639	54	52	52		15		17		17
16:20:00.778	53	52	52		16		17		17
16:20:00.917	52	54	52		17		15		17
16:20:01.057	51	54	52		18		15		17
16:20:01.150	50	55	52		19		14		17
16:20:01.289	50	58	53		19		11		16
16:20:01.427	51	53	52		18		16		17
16:20:01.566	52	52	53		17		17		16
16:20:01.706	53	53	52	15	16	4	16	6	17
16:20:01.846	53	52	52		16		17		17
16:20:01.938	51	53	52		18		16		17
16:20:02.078	50	57	52		19		12		17
16:20:02.217	50	53	52		19		16		17
16:20:02.357	50	53	52		19		16		17
16:20:02.497	51	55	53		18		14		16
16:20:02.637	52	53	53		17		16		16
16:20:02.729	53	52	52		16		17		17
16:20:02.870	52	53	52	16	17	3	16	5	17
16:20:03.008	52	56	52		17		13		17
16:20:03.147	50	54	52		19		15		17
16:20:03.285	49	53	52		20		16		17
16:20:03.425	50	53	52		19		16		17
16:20:03.518	51	54	53		18		15		16
16:20:03.658	53	53	52		16		16		17
16:20:03.798	53	52	52		16		17		17
16:20:03.937	52	53	52		17		16		17
16:20:04.076	51	54	52	17	18	4	15	4	17

16:20:04.215	49	54	52		20		15		17
16:20:04.308	50	54	52		19		15		17
16:20:04.448	50	51	52		19		18		17
16:20:04.586	51	53	53		18		16		16
16:20:04.726	53	51	52		16		18		17
16:20:04.864	54	57	52		15		12		17
16:20:05.004	52	53	53		17		16		16
16:20:05.099	51	54	52		18		15		17
16:20:05.239	50	53	52	18	19	5	16	6	17
16:20:05.379	50	54	52		19		15		17
16:20:05.517	51	52	52		18		17		17
16:20:05.657	52	52	53		17		17		16
16:20:05.750	53	52	52		16		17		17
16:20:05.890	53	56	52		16		13		17
16:20:06.029	52	55	52		17		14		17
16:20:06.169	50	55	52		19		14		17
16:20:06.308	50	55	52		19		14		17
16:20:06.448	50	53	52	19	19	3	16	4	17
16:20:06.588	52	53	52		17		16		17
16:20:06.680	52	52	53		17		17		16
16:20:06.821	52	51	52		17		18		17
16:20:06.960	53	53	52		16		16		17
16:20:07.101	52	53	52		17		16		17
16:20:07.240	51	54	52		18		15		17
16:20:07.334	50	53	52		19		16		17
16:20:07.473	50	54	52		19		15		17
16:20:07.613	51	52	52	20	18	3	17	3	17
16:20:07.754	53	53	52		16		16		17
16:20:07.893	52	53	52		17		16		17
16:20:08.033	53	53	52		16		16		17
16:20:08.126	51	54	52		18		15		17
16:20:08.267	49	55	51		20		14		18
16:20:08.406	49	53	52		20		16		17
16:20:08.546	51	53	52		18		16		17
16:20:08.686	51	56	52		18		13		17
16:20:08.779	52	54	53	21	17	4	15	3	16
16:20:08.920	53	56	52		16		13		17
16:20:09.059	53	53	52		16		16		17
16:20:09.198	56	55	52		13		14		17
16:20:09.339	50	56	52		19		13		17
16:20:09.480	49	56	52		20		13		17
16:20:09.572	50	52	52		19		17		17
16:20:09.713	53	52	53		16		17		16
16:20:09.851	53	52	52		16		17		17
16:20:09.991	53	52	52	22	16	7	17	4	17
16:20:10.131	53	53	52		16		16		17
16:20:10.270	51	54	52		18		15		17
16:20:10.362	50	53	52		19		16		17
16:20:10.503	49	53	52		20		16		17
16:20:10.643	49	52	52		20		17		17
16:20:10.783	51	51	53		18		18		16
16:20:10.923	52	51	52		17		18		17
16:20:11.016	53	53	52		16		16		17
16:20:11.155	52	52	53	23	17	4	17	3	16
16:20:11.296	50	52	52		19		17		17
16:20:11.436	49	53	52		20		16		17
16:20:11.577	50	53	53		19		16		16
16:20:11.670	51	52	52		18		17		17
16:20:11.810	52	54	53		17		15		16
16:20:11.949	53	51	52		16		18		17
16:20:12.088	53	54	52		16		15		17
16:20:12.229	52	61	52		17		8		15
16:20:12.368	50	56	52	24	19	4	13	10	17
16:20:12.461	50	53	52		19		16		17
16:20:12.600	50	52	52		19		17		17
16:20:12.740	51	52	53		18		17		16
16:20:12.880	52	53	53		17		16		16
16:20:13.020	52	52	52		17		17		17
16:20:13.162	56	53	53		13		16		16
16:20:13.254	52	54	52		17		15		17
16:20:13.394	50	53	52		19		16		17
16:20:13.534	50	54	52	25	19	6	15	2	17

(Tetrapod d=17cm, T=0.9s)

DATA HASIL UJI TETRAPOD (D=17CM)						d=	17			
						tinggi flume=	69			
T=0.9 S										
WAKTU	SENSOR 1 (CM)	SENSOR 2 (CM)	SENSOR 3 (CM)	kejadian gelombang	H sensor 1	Hi	H sensor 2	Hi	H sensor 3	Hi
16:23:06.288	52	53	52		17		16		17	
16:23:06.426	53	51	52		16		18		17	
16:23:06.567	53	52	52		16		17		17	
16:23:06.661	51	53	52		18		16		17	
16:23:06.800	48	53	52		21		16		17	
16:23:06.941	50	54	52		19		15		17	
16:23:07.081	53	54	52		16		15		17	
16:23:07.221	51	52	52	1	18	5	17	3	17	0
16:23:07.314	53	51	52		16		18		17	
16:23:07.454	53	52	52		16		17		17	
16:23:07.594	51	52	52		18		17		17	
16:23:07.733	52	56	52		17		13		17	
16:23:07.872	51	53	53		18		16		16	
16:23:08.011	52	53	52		17		16		17	
16:23:08.104	52	53	52		17		16		17	
16:23:08.244	52	51	52	2	17	2	18	5	17	1
16:23:08.383	53	52	52		16		17		17	
16:23:08.522	51	54	52		18		15		17	
16:23:08.663	50	55	52		19		14		17	
16:23:08.757	48	56	52		21		13		17	
16:23:08.898	51	54	52		18		15		17	
16:23:09.037	52	53	52		17		16		17	
16:23:09.176	53	53	53		16		16		16	
16:23:09.313	53	52	52	3	16	5	17	4	17	1
16:23:09.454	55	54	53		14		15		16	
16:23:09.547	52	53	52		17		16		17	
16:23:09.687	50	54	53		19		15		16	
16:23:09.826	53	53	53		16		16		16	
16:23:09.966	52	53	52		17		16		17	
16:23:10.106	53	52	53		16		17		16	
16:23:10.246	53	51	53		16		18		16	
16:23:10.340	52	54	53	4	17	5	15	3	16	1
16:23:10.480	49	53	52		20		16		17	
16:23:10.620	49	54	52		20		15		17	
16:23:10.760	52	54	52		17		15		17	
16:23:10.898	52	53	53		17		16		16	
16:23:11.036	53	51	53		16		18		16	
16:23:11.129	52	62	54		17		7		15	
16:23:11.269	52	54	53		17		15		16	
16:23:11.409	51	54	52	5	18	4	15	11	17	2
16:23:11.549	52	54	52		17		15		17	
16:23:11.689	53	54	52		16		15		17	
16:23:11.829	52	53	52		17		16		17	
16:23:11.922	52	52	53		17		17		16	
16:23:12.061	53	51	53		16		18		16	
16:23:12.200	51	52	52		18		17		17	
16:23:12.339	49	55	52		20		14		17	
16:23:12.479	49	53	52	6	20	4	16	4	17	1
16:23:12.572	51	53	53		18		16		16	
16:23:12.712	55	54	53		14		15		16	
16:23:12.851	52	52	53		17		17		16	
16:23:12.990	53	52	53		16		17		16	
16:23:13.130	51	53	53		18		16		16	
16:23:13.270	50	55	52		19		14		17	
16:23:13.362	51	54	53		18		15		16	
16:23:13.501	51	54	52	7	18	5	15	3	17	1
16:23:13.639	52	54	53		17		15		16	
16:23:13.779	52	53	53		17		16		16	
16:23:13.918	53	52	53		16		17		16	
16:23:14.057	51	53	53		18		16		16	
16:23:14.149	50	53	52		19		16		17	
16:23:14.288	49	56	53		20		13		16	
16:23:14.428	55	53	52		14		16		17	
16:23:14.566	52	53	59	8	17	6	16	4	10	7

16:23:14.706	53	54	54		16		15		15
16:23:14.846	54	51	53		15		18		16
16:23:14.939	51	54	53		18		15		16
16:23:15.078	56	53	52		13		16		17
16:23:15.217	54	54	53		15		15		16
16:23:15.355	51	54	52		18		15		17
16:23:15.496	53	53	52		16		16		17
16:23:15.636	53	53	53	9	16	5	16	3	16
16:23:15.729	53	51	53		16		18		16
16:23:15.867	51	53	52		18		16		17
16:23:16.006	52	55	52		17		14		17
16:23:16.147	49	54	53		20		15		16
16:23:16.286	51	52	52		18		17		17
16:23:16.427	55	53	53		14		16		16
16:23:16.519	54	54	53		15		15		16
16:23:16.659	53	52	53	10	16	6	17	4	16
16:23:16.800	51	58	53		18		11		16
16:23:16.939	51	54	52		18		15		17
16:23:17.079	48	54	52		21		15		17
16:23:17.219	52	52	52		17		17		17
16:23:17.311	51	56	53		18		13		16
16:23:17.451	52	54	52		17		15		17
16:23:17.590	53	51	53		16		18		16
16:23:17.730	51	52	53	11	18	5	17	7	16
16:23:17.870	56	53	52		13		16		17
16:23:18.010	53	53	53		16		16		16
16:23:18.104	51	52	52		18		17		17
16:23:18.244	52	53	53		17		16		16
16:23:18.382	53	52	52		16		17		17
16:23:18.521	53	53	53		16		16		16
16:23:18.662	51	53	53		18		16		16
16:23:18.755	55	53	52	12	14	5	16	1	17
16:23:18.895	49	53	53		20		16		16
16:23:19.035	51	54	52		18		15		17
16:23:19.175	52	53	53		17		16		16
16:23:19.315	53	56	52		16		13		17
16:23:19.456	53	52	54		16		17		15
16:23:19.549	51	53	53		18		16		16
16:23:19.690	48	53	52		21		16		17
16:23:19.831	54	53	53	13	15	5	16	4	16
16:23:19.971	52	54	53		17		15		16
16:23:20.111	53	53	52		16		16		17
16:23:20.204	54	51	53		15		18		16
16:23:20.343	53	51	53		16		18		16
16:23:20.481	51	52	52		18		17		17
16:23:20.620	50	53	52		19		16		17
16:23:20.760	49	53	52		20		16		17
16:23:20.899	52	53	53	14	17	5	16	3	16
16:23:20.991	54	53	52		15		16		17
16:23:21.130	53	52	52		16		17		17
16:23:21.270	54	52	53		15		17		16
16:23:21.410	53	52	52		16		17		17
16:23:21.551	51	53	52		18		16		17
16:23:21.690	48	54	52		21		15		17
16:23:21.783	51	53	52		18		16		17
16:23:21.923	52	54	52	15	17	6	15	2	17
16:23:22.063	52	52	53		17		17		16
16:23:22.201	53	54	53		16		15		16
16:23:22.341	52	59	52		17		10		17
16:23:22.480	49	54	52		20		15		17
16:23:22.573	51	53	53		18		16		16
16:23:22.712	51	53	52		18		16		17
16:23:22.852	53	52	53		16		17		16
16:23:22.991	52	55	53	16	17	4	14	7	16
16:23:23.132	53	53	52		16		16		17
16:23:23.226	52	52	52		17		17		17
16:23:23.367	49	52	52		20		17		17
16:23:23.505	49	54	53		20		15		16
16:23:23.645	50	54	52		19		15		17
16:23:23.784	52	53	52		17		16		17
16:23:23.924	53	52	53		16		17		16
16:23:24.018	53	52	52	17	16	4	17	2	17

16:23:24.159	52	53	52		17		16		17	
16:23:24.297	49	52	53		20		17		16	
16:23:24.437	49	54	53		20		15		16	
16:23:24.577	50	56	52		19		13		17	
16:23:24.671	54	53	52		15		16		17	
16:23:24.811	53	53	53		16		16		16	
16:23:24.952	54	53	52		15		16		17	
16:23:25.091	51	52	52	18	18	5	17	4	17	1
16:23:25.230	55	52	53		14		17		16	
16:23:25.369	48	54	53		21		15		16	
16:23:25.462	52	54	52		17		15		17	
16:23:25.601	52	53	51		17		16		18	
16:23:25.740	52	52	53		17		17		16	
16:23:25.880	53	53	52		16		16		17	
16:23:26.019	51	52	52		18		17		17	
16:23:26.157	49	54	53	19	20	7	15	2	16	2
16:23:26.251	50	55	53		19		14		16	
16:23:26.391	52	53	52		17		16		17	
16:23:26.529	53	52	52		16		17		17	
16:23:26.669	53	51	53		16		18		16	
16:23:26.809	53	52	53		16		17		16	
16:23:26.947	52	53	53		17		16		16	
16:23:27.040	50	53	53		19		16		16	
16:23:27.179	48	58	53	20	21	3	11	7	16	1
16:23:27.318	51	53	52		18		16		17	
16:23:27.459	53	53	52		16		16		17	
16:23:27.598	52	51	53		17		18		16	
16:23:27.738	53	51	52		16		18		17	
16:23:27.830	52	52	52		17		17		17	
16:23:27.971	51	53	52		18		16		17	
16:23:28.112	48	55	53		21		14		16	
16:23:28.252	53	53	52	21	16	5	16	4	17	1
16:23:28.391	52	53	51		17		16		18	
16:23:28.483	52	53	53		17		16		16	
16:23:28.622	54	51	52		15		18		17	
16:23:28.762	52	52	52		17		17		17	
16:23:28.902	57	52	53		12		17		16	
16:23:29.041	48	54	53		21		15		16	
16:23:29.180	51	54	52		18		15		17	
16:23:29.273	52	52	52	22	17	9	17	3	17	2
16:23:29.413	52	52	52		17		17		17	
16:23:29.553	54	53	52		15		16		17	
16:23:29.692	53	52	52		16		17		17	
16:23:29.830	50	54	52		19		15		17	
16:23:29.971	49	53	53		20		16		16	
16:23:30.064	51	64	52		18		5		17	
16:23:30.204	52	53	51		17		16		18	
16:23:30.343	52	51	53	23	17	5	18	13	16	2
16:23:30.482	53	52	52		16		17		17	
16:23:30.621	52	54	52		17		15		17	
16:23:30.761	51	53	53		18		16		16	
16:23:30.853	48	53	53		21		16		16	
16:23:30.992	49	55	53		20		14		16	
16:23:31.131	52	53	51		17		16		18	
16:23:31.272	52	52	53		17		17		16	
16:23:31.413	52	50	52	24	17	5	19	5	17	2
16:23:31.506	52	52	52		17		17		17	
16:23:31.644	50	54	52		19		15		17	
16:23:31.785	48	55	53		21		14		16	
16:23:31.923	50	54	52		19		15		17	
16:23:32.063	52	53	52		17		16		17	
16:23:32.202	56	52	53		13		17		16	
16:23:32.295	53	52	53		16		17		16	
16:23:32.434	52	52	52	25	17	8	17	3	17	1

(Tetrapod d=17cm, T=0.8s)

DATA HASIL UJI TETRAPOD (D=17CM)						d=	17			
						tinggi flume	69			
T=0.8 S										
WAKTU	SENSOR 1 (CM)	SENSOR 2 (CM)	SENSOR 3 (CM)	kejadian gelombang	H sensor 1	Hi	H sensor 2	Hi	H sensor 3	Hi
16:25:03.291	53	52	52		16		17		17	
16:25:03.431	53	52	52		16		17		17	
16:25:03.527	51	53	52		18		16		17	
16:25:03.665	50	53	52		19		16		17	
16:25:03.807	52	54	52		17		15		17	
16:25:03.945	52	55	52		17		14		17	
16:25:04.085	53	53	52	1	16	3	16	3	17	0
16:25:04.225	53	52	52		16		17		17	
16:25:04.318	51	53	52		18		16		17	
16:25:04.458	51	53	52		18		16		17	
16:25:04.598	48	53	52		21		16		17	
16:25:04.738	50	54	52		19		15		17	
16:25:04.877	54	55	52		15		14		17	
16:25:04.970	53	54	52	2	16	6	15	3	17	0
16:25:05.111	54	52	52		15		17		17	
16:25:05.249	49	51	52		20		18		17	
16:25:05.387	49	52	52		20		17		17	
16:25:05.526	50	55	53		19		14		16	
16:25:05.666	54	53	53		15		16		16	
16:25:05.759	54	55	52		15		14		17	
16:25:05.899	53	51	52	3	16	5	18	4	17	1
16:25:06.038	51	52	52		18		17		17	
16:25:06.178	49	52	52		20		17		17	
16:25:06.318	49	54	52		20		15		17	
16:25:06.457	51	52	52		18		17		17	
16:25:06.549	54	54	52		15		15		17	
16:25:06.688	54	52	52		15		17		17	
16:25:06.828	52	52	52	4	17	5	17	2	17	0
16:25:06.969	50	53	52		19		16		17	
16:25:07.107	49	54	52		20		15		17	
16:25:07.247	50	52	52		19		17		17	
16:25:07.340	53	54	52		16		15		17	
16:25:07.479	54	54	52		15		15		17	
16:25:07.618	55	54	52		14		15		17	
16:25:07.758	52	51	52	5	17	6	18	3	17	0
16:25:07.897	51	52	52		18		17		17	
16:25:08.038	49	55	52		20		14		17	
16:25:08.130	51	53	52		18		16		17	
16:25:08.269	53	52	52		16		17		17	
16:25:08.408	53	54	52		16		15		17	
16:25:08.548	51	51	52		18		18		17	
16:25:08.689	48	52	52	6	21	5	17	4	17	0
16:25:08.781	51	56	52		18		13		17	
16:25:08.921	52	54	53		17		15		16	
16:25:09.061	53	53	53		16		16		16	
16:25:09.200	53	53	52		16		16		17	
16:25:09.338	51	54	60		18		15		9	
16:25:09.478	49	51	53		20		18		16	
16:25:09.571	51	52	53	7	18	4	17	5	16	8
16:25:09.710	50	53	53		19		16		16	
16:25:09.850	52	52	53		17		17		16	
16:25:09.989	53	53	52		16		16		17	
16:25:10.129	52	52	53		17		17		16	
16:25:10.269	50	53	53		19		16		16	
16:25:10.361	48	53	53		21		16		16	
16:25:10.500	50	54	52	8	19	5	15	2	17	1



16:25:10.639	51	52	53		18		17		16
16:25:10.778	53	53	53		16		16		16
16:25:10.917	53	53	52		16		16		17
16:25:11.058	53	52	53		16		17		16
16:25:11.152	49	53	52		20		16		17
16:25:11.290	48	52	52		21		17		17
16:25:11.430	51	53	53	9	18	5	16	1	16
16:25:11.568	56	53	53		13		16		16
16:25:11.709	53	55	53		16		14		16
16:25:11.848	52	53	53		17		16		16
16:25:11.942	50	53	53		19		16		16
16:25:12.080	50	52	52		19		17		17
16:25:12.219	52	53	53		17		16		16
16:25:12.358	57	53	52	10	12	7	16	3	17
16:25:12.499	53	60	52		16		9		17
16:25:12.640	53	53	53		16		16		16
16:25:12.733	52	58	53		17		11		16
16:25:12.873	49	53	53		20		16		16
16:25:13.012	49	53	52		20		16		17
16:25:13.152	52	54	53		17		15		16
16:25:13.292	52	53	52	11	17	4	16	7	17
16:25:13.384	55	52	52		14		17		17
16:25:13.524	51	57	52		18		12		17
16:25:13.664	49	52	53		20		17		16
16:25:13.804	48	52	52		21		17		17
16:25:13.945	50	52	52		19		17		17
16:25:14.083	53	53	53		16		16		16
16:25:14.176	53	53	52	12	16	7	16	5	17
16:25:14.316	53	53	53		16		16		16
16:25:14.457	50	57	53		19		12		16
16:25:14.596	48	53	53		21		16		16
16:25:14.736	49	55	52		20		14		17
16:25:14.874	51	53	52		18		16		17
16:25:14.967	54	53	52		15		16		17
16:25:15.106	53	54	57	13	16	6	15	4	12
16:25:15.246	52	56	53		17		13		16
16:25:15.386	48	54	53		21		15		16
16:25:15.527	48	53	53		21		16		16
16:25:15.621	50	53	52		19		16		17
16:25:15.762	55	55	52		14		14		17
16:25:15.903	54	53	57		15		16		12
16:25:16.042	53	55	53	14	16	7	14	3	16
16:25:16.180	49	53	52		20		16		17
16:25:16.320	49	53	53		20		16		16
16:25:16.414	50	56	52		19		13		17
16:25:16.554	52	53	52		17		16		17
16:25:16.694	54	53	52		15		16		17
16:25:16.833	53	53	57		16		16		12
16:25:16.974	50	55	52	15	19	5	14	3	17
16:25:17.066	48	53	53		21		16		16
16:25:17.206	49	55	53		20		14		16
16:25:17.347	52	53	53		17		16		16
16:25:17.487	54	53	52		15		16		17
16:25:17.626	54	52	57		15		17		12
16:25:17.765	51	52	54		18		17		15
16:25:17.858	49	52	53	16	20	6	17	3	16
16:25:17.997	49	54	53		20		15		17
16:25:18.136	51	61	52		18		8		17
16:25:18.276	52	53	52		17		16		17
16:25:18.416	53	53	52		16		16		17
16:25:18.555	52	53	54		17		16		15
16:25:18.650	49	52	52		20		17		17
16:25:18.789	51	53	53	17	18	4	16	9	16

16:25:18.929	50	53	52		19		16		17	
16:25:19.068	52	53	53		17		16		16	
16:25:19.207	54	57	53		15		12		16	
16:25:19.346	52	52	53		17		17		16	
16:25:19.440	50	52	53		19		17		16	
16:25:19.579	48	53	52		21		16		17	
16:25:19.719	50	53	52	18	19	6	16	5	17	1
16:25:19.861	52	53	53		17		16		16	
16:25:20.001	53	55	52		16		14		17	
16:25:20.095	53	52	52		16		17		17	
16:25:20.233	52	53	52		17		16		17	
16:25:20.373	54	52	52		15		17		17	
16:25:20.513	49	53	53		20		16		16	
16:25:20.654	51	53	53	19	18	5	16	3	16	1
16:25:20.792	53	53	52		16		16		17	
16:25:20.885	53	52	55		16		17		14	
16:25:21.026	52	55	53		17		14		16	
16:25:21.166	50	52	52		19		17		17	
16:25:21.306	49	52	53		20		17		16	
16:25:21.446	50	53	53		19		16		16	
16:25:21.587	52	54	52	20	17	4	15	3	17	3
16:25:21.681	53	53	52		16		16		17	
16:25:21.819	53	52	55		16		17		14	
16:25:21.959	51	56	54		18		13		15	
16:25:22.098	49	54	60		20		15		9	
16:25:22.237	49	53	52		20		16		17	
16:25:22.332	51	54	53		18		15		16	
16:25:22.470	53	55	52	21	16	4	14	4	17	8
16:25:22.610	53	52	57		16		17		12	
16:25:22.749	53	53	53		16		16		16	
16:25:22.890	50	58	52		19		11		17	
16:25:23.030	48	53	52		21		16		17	
16:25:23.124	50	54	53		19		15		16	
16:25:23.262	52	54	53		17		15		16	
16:25:23.401	54	53	52	22	15	6	16	6	17	5
16:25:23.540	54	52	55		15		17		14	
16:25:23.679	50	55	52		19		14		17	
16:25:23.820	49	52	52		20		17		17	
16:25:23.912	49	56	52		20		13		17	
16:25:24.054	53	54	52		16		15		17	
16:25:24.194	53	54	52		16		15		17	
16:25:24.332	53	52	53	23	16	5	17	4	16	3
16:25:24.471	53	53	53		16		16		16	
16:25:24.610	48	53	54		21		16		15	
16:25:24.703	51	55	53		18		14		16	
16:25:24.842	50	55	53		19		14		16	
16:25:24.982	53	54	52		16		15		17	
16:25:25.122	53	52	52		16		17		17	
16:25:25.261	52	52	53	24	17	5	17	3	16	2
16:25:25.401	49	55	52		20		14		17	
16:25:25.494	49	52	52		20		17		17	
16:25:25.634	51	52	53		18		17		16	
16:25:25.774	56	53	53		13		16		16	
16:25:25.913	53	57	53		16		12		16	
16:25:26.053	54	51	54		15		18		15	
16:25:26.146	51	53	52	25	18	7	16	6	17	2

(Dolos d=15cm, T=1s)

DATA HASIL UJI DOLOS (D=15CM)						d=	15			
						tinggi flume=	69			
T=1 S										
WAKTU	SENSOR 1 (CM)	SENSOR 2 (CM)	SENSOR 3 (CM)	kejadian gelombang	H sensor 1	Hi	H sensor 2	Hi	H sensor 3	Hi
17:13:07.786	54	54	54		15		15		15	
17:13:07.880	53	53	54		16		16		15	
17:13:08.020	53	54	54		16		15		15	
17:13:08.159	53	54	54		16		15		15	
17:13:08.299	51	54	55		18		15		14	
17:13:08.439	52	55	54		17		14		15	
17:13:08.579	54	55	54		15		14		15	
17:13:08.672	54	54	54		15		15		15	
17:13:08.814	54	54	54	1	15	3	15	2	15	1
17:13:08.955	53	53	55		16		16		14	
17:13:09.093	54	54	54		15		15		15	
17:13:09.233	52	54	54		17		15		15	
17:13:09.326	52	55	54		17		14		15	
17:13:09.467	53	56	54		16		13		15	
17:13:09.606	54	55	54		15		14		15	
17:13:09.745	54	53	54		15		16		15	
17:13:09.885	53	54	54		16		15		15	
17:13:10.022	53	55	54	2	16	2	14	3	15	1
17:13:10.115	53	61	54		16		8		15	
17:13:10.255	53	55	54		16		14		15	
17:13:10.394	52	55	54		17		14		15	
17:13:10.533	53	54	54		16		15		15	
17:13:10.674	54	54	54		15		15		15	
17:13:10.813	54	53	54		15		16		15	
17:13:10.907	53	55	55		16		14		14	
17:13:11.044	53	54	54		16		15		15	
17:13:11.184	53	55	54	3	16	2	14	8	15	1
17:13:11.324	52	55	54		17		14		15	
17:13:11.464	52	55	54		17		14		15	
17:13:11.605	55	54	54		14		15		15	
17:13:11.696	55	54	54		14		15		15	
17:13:11.837	54	53	54		15		16		15	
17:13:11.977	54	56	54		15		13		15	
17:13:12.117	53	54	54		16		15		15	
17:13:12.255	52	55	55		17		14		14	
17:13:12.394	51	54	54	4	18	4	15	3	15	1
17:13:12.533	52	55	54		17		14		15	
17:13:12.625	55	53	54		14		16		15	
17:13:12.764	54	54	54		15		15		15	
17:13:12.903	53	57	54		16		12		15	
17:13:13.042	53	53	54		16		16		15	
17:13:13.181	53	55	54		16		14		15	
17:13:13.321	52	55	54		17		14		15	
17:13:13.414	52	54	54		17		15		15	
17:13:13.553	52	55	54	5	17	3	14	4	15	0
17:13:13.692	55	54	54		14		15		15	
17:13:13.833	53	55	54		16		14		15	
17:13:13.974	53	54	55		16		15		14	
17:13:14.114	53	55	54		16		14		15	
17:13:14.207	53	54	54		16		15		15	
17:13:14.347	52	55	54		17		14		15	
17:13:14.485	52	55	54		17		14		15	
17:13:14.624	54	60	55		15		9		14	
17:13:14.763	54	56	54	6	15	3	13	6	15	1
17:13:14.902	53	55	54		16		14		15	
17:13:14.995	54	54	55		15		15		14	
17:13:15.134	53	54	54		16		15		15	
17:13:15.273	53	55	54		16		14		15	
17:13:15.414	51	55	55		18		14		14	
17:13:15.554	52	54	53		17		15		16	
17:13:15.694	54	53	55		15		16		14	
17:13:15.786	54	54	54		15		15		15	
17:13:15.926	54	56	55	7	15	3	13	3	14	2
17:13:16.065	53	54	54		16		15		15	
17:13:16.206	53	55	54		16		14		15	
17:13:16.346	52	54	54		17		15		15	
17:13:16.439	52	54	54		17		15		15	
17:13:16.579	55	55	55		14		14		14	
17:13:16.719	55	53	54		14		16		15	
17:13:16.858	54	54	55		15		15		14	
17:13:16.999	53	55	54		16		14		15	
17:13:17.137	53	56	54	8	16	3	13	3	15	1

17:13:17.231	52	55	54		17		14		15
17:13:17.371	53	54	54		16		15		15
17:13:17.512	53	56	54		16		13		15
17:13:17.652	54	55	55		15		14		14
17:13:17.791	55	54	54		14		15		15
17:13:17.932	54	54	54		15		15		15
17:13:18.025	53	54	54		16		15		15
17:13:18.163	54	55	54		15		14		15
17:13:18.302	52	54	54	9	17	3	15	2	15
17:13:18.442	53	54	54		16		15		15
17:13:18.582	52	54	55		17		15		14
17:13:18.723	54	55	55		15		14		14
17:13:18.815	54	55	54		15		14		15
17:13:18.954	53	55	54		16		14		15
17:13:19.093	54	53	54		15		16		15
17:13:19.233	53	55	54		16		14		15
17:13:19.373	54	54	54		15		15		15
17:13:19.512	52	54	54	10	17	2	15	2	15
17:13:19.604	54	55	55		15		14		14
17:13:19.744	54	53	54		15		16		15
17:13:19.883	53	53	55		16		16		14
17:13:20.023	59	54	54		10		15		15
17:13:20.161	53	54	54		16		15		15
17:13:20.302	53	54	54		16		15		15
17:13:20.394	51	55	54		18		14		15
17:13:20.534	53	56	54		16		13		15
17:13:20.673	54	56	55	11	15	8	13	3	14
17:13:20.813	54	54	54		15		15		15
17:13:20.953	53	54	54		16		15		15
17:13:21.094	53	56	54		16		13		15
17:13:21.186	53	54	54		16		15		15
17:13:21.325	52	54	54		17		15		15
17:13:21.464	52	54	54		17		15		15
17:13:21.602	54	55	54		15		14		15
17:13:21.742	54	54	54		15		15		15
17:13:21.881	55	54	54	12	14	3	15	2	15
17:13:22.020	54	55	54		15		14		15
17:13:22.114	54	54	54		15		15		15
17:13:22.254	53	54	54		16		15		15
17:13:22.394	52	54	54		17		15		15
17:13:22.533	54	54	54		15		15		15
17:13:22.673	55	54	54		14		15		15
17:13:22.810	55	53	54		14		16		15
17:13:22.902	55	54	54		14		15		15
17:13:23.040	54	55	55	13	15	3	14	2	14
17:13:23.180	53	54	54		16		15		15
17:13:23.319	52	55	54		17		14		15
17:13:23.457	51	54	54		18		15		15
17:13:23.597	52	58	53		17		11		16
17:13:23.691	54	56	54		15		13		15
17:13:23.830	55	54	54		14		15		15
17:13:23.969	54	54	54		15		15		15
17:13:24.107	53	54	54		16		15		15
17:13:24.248	55	54	55	14	14	4	15	4	14
17:13:24.389	52	54	54		17		15		15
17:13:24.481	52	55	54		17		14		15
17:13:24.621	54	54	53		15		15		16
17:13:24.759	54	57	55		15		12		14
17:13:24.901	54	54	54		15		15		15
17:13:25.041	52	54	54		17		15		15
17:13:25.181	53	54	54		16		15		15
17:13:25.274	53	54	54		16		15		15
17:13:25.412	52	54	54	15	17	2	15	3	15
17:13:25.551	52	54	54		17		15		15
17:13:25.691	54	55	54		15		14		15
17:13:25.831	54	54	54		15		15		15
17:13:25.970	54	54	54		15		15		15
17:13:26.062	53	54	55		16		15		14
17:13:26.201	53	54	54		16		15		15
17:13:26.340	53	55	54		16		14		15
17:13:26.478	51	54	54		18		15		15
17:13:26.615	52	55	54	16	17	3	14	1	15
17:13:26.755	54	55	54		15		14		15
17:13:26.848	54	54	54		15		15		15
17:13:26.988	53	54	55		16		15		14
17:13:27.128	53	57	55		16		12		14
17:13:27.266	54	55	54		15		14		15
17:13:27.407	52	54	54		17		15		15
17:13:27.546	53	54	55		16		15		14
17:13:27.638	52	54	53		17		15		16
17:13:27.776	54	53	55	17	15	2	16	4	14

17:13:27.917	54	53	54		15		16		15
17:13:28.055	53	56	55		16		13		14
17:13:28.193	53	54	54		16		15		15
17:13:28.333	52	55	54		17		14		15
17:13:28.471	51	54	54		18		15		15
17:13:28.565	52	54	54		17		15		15
17:13:28.704	54	54	54		15		15		15
17:13:28.843	54	58	55		15		11		14
17:13:28.982	53	53	54	18	16	3	16	5	15
17:13:29.121	53	54	55		16		15		14
17:13:29.259	53	54	54		16		15		15
17:13:29.351	55	55	54		14		14		15
17:13:29.491	51	54	54		18		15		15
17:13:29.629	54	55	53		15		14		16
17:13:29.768	54	55	55		15		14		14
17:13:29.907	55	54	54		14		15		15
17:13:30.047	53	54	56		16		15		13
17:13:30.186	53	55	55	19	16	4	14	1	14
17:13:30.277	53	55	54		16		14		15
17:13:30.415	51	54	54		18		15		15
17:13:30.555	53	54	54		16		15		15
17:13:30.695	53	54	53		16		15		16
17:13:30.836	55	54	55		14		15		14
17:13:30.975	54	54	54		15		15		15
17:13:31.069	54	55	55		15		14		14
17:13:31.207	54	54	54		15		15		15
17:13:31.346	52	54	54	20	17	4	15	1	15
17:13:31.486	51	54	54		18		15		15
17:13:31.624	54	54	54		15		15		15
17:13:31.763	54	56	55		15		13		14
17:13:31.856	54	54	54		15		15		15
17:13:31.994	53	54	54		16		15		15
17:13:32.134	53	54	55		16		15		14
17:13:32.273	54	55	54		15		14		15
17:13:32.412	53	54	54		16		15		15
17:13:32.552	51	55	54	21	18	3	14	2	15
17:13:32.645	53	57	53		16		12		16
17:13:32.785	54	54	54		15		15		15
17:13:32.924	55	55	54		14		14		15
17:13:33.064	53	55	55		16		14		14
17:13:33.205	53	54	55		16		15		14
17:13:33.344	53	57	55		16		12		14
17:13:33.437	52	54	54		17		15		15
17:13:33.575	51	55	54		18		14		15
17:13:33.714	54	54	54	22	15	4	15	3	15
17:13:33.853	54	55	55		15		14		14
17:13:33.991	56	54	54		13		15		15
17:13:34.130	55	56	55		14		13		14
17:13:34.270	53	54	54		16		15		15
17:13:34.363	54	54	54		15		15		15
17:13:34.504	52	55	54		17		14		15
17:13:34.644	52	54	53		17		15		16
17:13:34.784	54	59	55		15		10		14
17:13:34.925	54	54	55	23	15	4	15	5	14
17:13:35.065	53	54	55		16		15		14
17:13:35.158	53	55	55		16		14		14
17:13:35.298	54	54	54		15		15		15
17:13:35.439	53	54	54		16		15		15
17:13:35.578	51	55	54		18		14		15
17:13:35.718	52	55	53		17		14		16
17:13:35.856	54	54	55		15		15		14
17:13:35.950	54	53	54		15		16		15
17:13:36.087	52	55	55	24	17	3	14	2	14
17:13:36.225	53	54	55		16		15		14
17:13:36.364	53	54	54		16		15		15
17:13:36.503	51	54	55		18		15		14
17:13:36.643	53	54	54		16		15		15
17:13:36.736	54	54	54		15		15		15
17:13:36.877	56	55	54		13		14		15
17:13:37.015	53	53	54		16		16		15
17:13:37.156	53	59	55		16		10		14
17:13:37.298	54	54	54	25	15	5	15	6	15

(Dolos d=15cm, T=0.9s)

DATA HASIL UJI DOLOS (D=15CM)						d=	15			
						tinggi flume=	69			
T=0.9 S										
WAKTU	SENSOR 1 (CM)	SENSOR 2 (CM)	SENSOR 3 (CM)	kejadian gelombang	H sensor 1	Hi	H sensor 2	Hi	H sensor 3	Hi
17:14:29.832	54	54	55		15		15		14	
17:14:29.972	54	55	54		15		14		15	
17:14:30.112	55	54	53		14		15		16	
17:14:30.252	53	53	54		16		16		15	
17:14:30.392	52	54	54		17		15		15	
17:14:30.486	51	54	54		18		15		15	
17:14:30.626	52	55	54		17		14		15	
17:14:30.764	55	54	54	1	14	4	15	2	15	2
17:14:30.904	54	55	54		15		14		15	
17:14:31.042	54	55	54		15		14		15	
17:14:31.183	52	55	55		17		14		14	
17:14:31.277	52	55	54		17		14		15	
17:14:31.417	51	56	54		18		13		15	
17:14:31.555	52	54	55		17		15		14	
17:14:31.696	55	55	54		14		14		15	
17:14:31.835	54	56	54	2	15	4	13	2	15	1
17:14:31.973	53	54	54		16		15		15	
17:14:32.067	52	54	55		17		15		14	
17:14:32.207	54	55	54		15		14		15	
17:14:32.349	52	55	54		17		14		15	
17:14:32.490	53	54	54		16		15		15	
17:14:32.630	55	55	54		14		14		15	
17:14:32.724	55	55	55		14		14		14	
17:14:32.864	54	54	54	3	15	3	15	1	15	1
17:14:33.005	53	55	55		16		14		14	
17:14:33.145	51	55	54		18		14		15	
17:14:33.283	51	55	54		18		14		15	
17:14:33.421	59	54	54		10		15		15	
17:14:33.560	54	55	54		15		14		15	
17:14:33.654	54	56	54		15		13		15	
17:14:33.792	53	54	54		16		15		15	
17:14:33.933	52	54	54	4	17	8	15	2	15	1
17:14:34.074	51	54	54		18		15		15	
17:14:34.210	52	55	54		17		14		15	
17:14:34.351	54	54	54		15		15		15	
17:14:34.443	54	54	54		15		15		15	
17:14:34.582	55	56	54		14		13		15	
17:14:34.721	53	56	54		16		13		15	
17:14:34.861	52	54	54		17		15		15	
17:14:35.001	52	54	54	5	17	4	15	2	15	0
17:14:35.139	52	55	54		17		14		15	
17:14:35.231	54	55	54		15		14		15	
17:14:35.371	54	54	54		15		15		15	
17:14:35.512	54	55	54		15		14		15	
17:14:35.651	53	55	54		16		14		15	
17:14:35.791	52	56	54		17		13		15	
17:14:35.886	54	55	54		15		14		15	
17:14:36.026	52	55	54	6	17	2	14	2	15	0
17:14:36.167	55	54	54		14		15		15	
17:14:36.307	54	57	55		15		12		14	
17:14:36.446	54	54	54		15		15		15	
17:14:36.586	52	54	54		17		15		15	
17:14:36.680	51	55	54		18		14		15	
17:14:36.819	52	54	54		17		15		15	
17:14:36.960	54	54	54		15		15		15	
17:14:37.099	54	54	55	7	15	4	15	3	14	1

17:14:37.240	54	57	54		15		12		15
17:14:37.379	53	55	54		16		14		15
17:14:37.473	53	54	54		16		15		15
17:14:37.613	52	54	54		17		15		15
17:14:37.754	53	54	54		16		15		15
17:14:37.894	56	55	54		13		14		15
17:14:38.034	55	54	55		14		15		14
17:14:38.127	55	60	54	8	14	4	9	6	15
17:14:38.267	54	54	55		15		15		14
17:14:38.407	52	54	54		17		15		15
17:14:38.547	54	54	54		15		15		15
17:14:38.685	55	54	54		14		15		15
17:14:38.822	54	55	54		15		14		15
17:14:38.962	54	54	55		15		15		14
17:14:39.056	56	55	54		13		14		15
17:14:39.194	53	54	55	9	16	4	15	1	15
17:14:39.334	52	55	54		17		14		15
17:14:39.474	52	54	54		17		15		15
17:14:39.613	52	54	54		17		15		15
17:14:39.754	54	55	55		15		14		14
17:14:39.847	54	55	54		15		14		15
17:14:39.988	54	55	54		15		14		15
17:14:40.127	53	54	54		16		15		15
17:14:40.267	52	54	54	10	17	2	15	1	15
17:14:40.406	51	55	54		18		14		15
17:14:40.500	52	54	54		17		15		15
17:14:40.641	55	54	55		14		15		14
17:14:40.783	54	55	55		15		14		14
17:14:40.921	55	55	55		14		14		14
17:14:41.063	54	55	55		15		14		14
17:14:41.157	53	55	53		16		14		16
17:14:41.298	51	54	54	11	18	4	15	1	15
17:14:41.439	53	54	54		16		15		15
17:14:41.579	54	55	55		15		14		14
17:14:41.719	55	55	53		14		14		16
17:14:41.858	54	54	54		15		15		15
17:14:41.949	53	54	55		16		15		14
17:14:42.088	52	55	53		17		14		16
17:14:42.227	51	54	54		18		15		15
17:14:42.366	54	54	54	12	15	4	15	1	15
17:14:42.506	54	55	55		15		14		14
17:14:42.644	54	55	53		15		14		16
17:14:42.783	55	53	55		14		16		14
17:14:42.877	52	54	55		17		15		14
17:14:43.014	52	55	54		17		14		15
17:14:43.153	51	54	54		18		15		15
17:14:43.290	54	55	54		15		14		15
17:14:43.430	55	54	55	13	14	4	15	2	14
17:14:43.569	54	57	55		15		12		14
17:14:43.662	53	55	55		16		14		14
17:14:43.801	54	53	55		15		16		14
17:14:43.942	52	54	54		17		15		15
17:14:44.082	52	54	54		17		15		15
17:14:44.222	55	54	54		14		15		15
17:14:44.360	54	55	55		15		14		14
17:14:44.453	54	55	54	14	15	3	14	4	15
17:14:44.594	53	54	55		16		15		14
17:14:44.734	53	53	55		16		16		14
17:14:44.873	51	54	54		18		15		15
17:14:45.013	54	54	54		15		15		15
17:14:45.153	55	55	55		14		14		14
17:14:45.246	54	54	54		15		15		15
17:14:45.383	58	54	54		11		15		15
17:14:45.521	53	54	55	15	16	7	15	2	14
17:14:45.662	52	56	54		17		13		15
17:14:45.800	52	54	54		17		15		15
17:14:45.938	54	54	54		15		15		15
17:14:46.033	55	55	54		14		14		15
17:14:46.173	56	54	54		13		15		15
17:14:46.310	54	56	54		15		13		15
17:14:46.450	53	54	55		16		15		14
17:14:46.589	55	55	55	16	14	4	14	2	14

17:14:46.729	51	54	54		18		15		15
17:14:46.867	58	55	54		11		14		15
17:14:46.961	55	54	54		14		15		15
17:14:47.100	55	54	54		14		15		15
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17:14:47.379	52	56	55		17		13		14
17:14:47.519	52	55	55		17		14		14
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17:14:47.750	55	54	54		14		15		15
17:14:47.888	55	54	55		14		15		14
17:14:48.028	54	56	54		15		13		15
17:14:48.166	54	53	55		15		16		14
17:14:48.307	52	55	55		17		14		14
17:14:48.447	51	54	55		18		15		14
17:14:48.540	51	54	54		18		15		15
17:14:48.682	54	54	54	18	15	4	15	3	15
17:14:48.822	54	54	54		15		15		15
17:14:48.961	56	56	54		13		13		15
17:14:49.100	54	54	55		15		15		14
17:14:49.240	52	54	55		17		15		14
17:14:49.334	53	54	54		16		15		15
17:14:49.472	52	55	54		17		14		15
17:14:49.611	55	55	54		14		14		15
17:14:49.751	55	55	54	19	14	4	14	2	15
17:14:49.890	54	56	55		15		13		14
17:14:50.027	54	53	55		15		16		14
17:14:50.119	53	54	55		16		15		14
17:14:50.260	52	54	54		17		15		15
17:14:50.399	51	54	55		18		15		14
17:14:50.539	54	54	54		15		15		15
17:14:50.676	55	54	54		14		15		15
17:14:50.814	53	57	53	20	16	4	12	4	16
17:14:50.909	53	61	55		16		8		14
17:14:51.046	52	54	54		17		15		15
17:14:51.188	52	55	54		17		14		15
17:14:51.329	53	55	54		16		14		15
17:14:51.471	54	54	55		15		15		14
17:14:51.609	57	57	55		12		12		14
17:14:51.703	54	55	57		15		14		12
17:14:51.843	52	57	55	21	17	5	12	7	14
17:14:51.982	52	55	54		17		14		15
17:14:52.121	51	54	54		18		15		15
17:14:52.260	53	54	54		16		15		15
17:14:52.399	54	54	55		15		15		14
17:14:52.537	55	59	54		14		10		15
17:14:52.631	53	54	55		16		15		14
17:14:52.770	53	54	55		16		15		14
17:14:52.910	52	55	54	22	17	4	14	5	15
17:14:53.048	52	54	54		17		15		15
17:14:53.187	58	55	54		11		14		15
17:14:53.325	55	54	54		14		15		15
17:14:53.419	55	56	58		14		13		11
17:14:53.556	53	53	55		16		16		14
17:14:53.696	53	54	54		16		15		15
17:14:53.837	52	54	53		17		15		16
17:14:53.975	53	55	54	23	16	6	14	3	15
17:14:54.114	53	55	54		16		14		15
17:14:54.207	55	54	54		14		15		15
17:14:54.347	58	56	53		11		13		16
17:14:54.485	53	55	55		16		14		14
17:14:54.624	52	54	54		17		15		15
17:14:54.763	51	54	54		18		15		15
17:14:54.901	52	54	54		17		15		15
17:14:55.041	56	55	54	24	13	7	14	2	15
17:14:55.135	55	55	54		14		14		15
17:14:55.275	53	54	54		16		15		15
17:14:55.414	53	54	54		16		15		15
17:14:55.553	53	53	55		16		16		14
17:14:55.693	51	55	54		18		14		15
17:14:55.830	51	55	54		18		14		15
17:14:55.922	54	55	54		15		14		15
17:14:56.060	55	54	55	25	14	4	15	2	14



(Dolos d=15cm, T=0.8s)

DATA HASIL UJI DOLOS (D=15CM)					d=	15				
					tinggi flume=	69				
T=0.8S										
WAKTU	SENSOR 1 (CM)	SENSOR 2 (CM)	SENSOR 3 (CM)	kejadian gelombang	H sensor 1	Hi	H sensor 2	Hi	H sensor 3	Hi
17:16:01.935	54	56	54		15		13		15	
17:16:02.074	54	55	54		15		14		15	
17:16:02.215	53	56	54		16		13		15	
17:16:02.355	51	54	54		18		15		15	
17:16:02.448	52	53	54		17		16		15	
17:16:02.589	53	55	54		16		14		15	
17:16:02.730	55	54	54	1	14	4	15	3	15	0
17:16:02.869	55	55	54		14		14		15	
17:16:03.009	53	56	54		16		13		15	
17:16:03.150	51	54	54		18		15		15	
17:16:03.244	51	55	54		18		14		15	
17:16:03.385	53	54	54		16		15		15	
17:16:03.525	55	54	54		14		15		15	
17:16:03.663	54	55	54	2	15	4	14	2	15	0
17:16:03.803	54	54	54		15		15		15	
17:16:03.895	52	56	54		17		13		15	
17:16:04.037	51	54	54		18		15		15	
17:16:04.177	53	54	54		16		15		15	
17:16:04.317	54	54	54		15		15		15	
17:16:04.454	55	56	54		14		13		15	
17:16:04.595	55	54	54	3	14	4	15	2	15	0
17:16:04.688	53	54	54		16		15		15	
17:16:04.826	51	54	54		18		15		15	
17:16:04.966	52	55	54		17		14		15	
17:16:05.105	54	54	54		15		15		15	
17:16:05.244	55	56	54		14		13		15	
17:16:05.383	55	54	54		14		15		15	
17:16:05.476	52	54	54	4	17	4	15	2	15	0
17:16:05.617	52	54	54		17		15		15	
17:16:05.757	52	54	54		17		15		15	
17:16:05.897	53	55	54		16		14		15	
17:16:06.036	55	55	54		14		14		15	
17:16:06.177	56	54	54		13		15		15	
17:16:06.270	53	54	54		16		15		15	
17:16:06.410	53	55	54	5	16	4	14	1	15	0
17:16:06.550	54	56	54		15		13		15	
17:16:06.690	53	55	54		16		14		15	
17:16:06.830	54	54	54		15		15		15	
17:16:06.970	55	55	54		14		14		15	
17:16:07.065	55	54	55		14		15		14	
17:16:07.205	52	53	54		17		16		15	
17:16:07.343	51	54	54	6	18	4	15	3	15	1
17:16:07.482	53	55	54		16		14		15	
17:16:07.621	55	54	54		14		15		15	
17:16:07.759	55	56	54		14		13		15	
17:16:07.852	55	54	54		14		15		15	
17:16:07.990	51	54	54		18		15		15	
17:16:08.129	50	54	54		19		15		15	
17:16:08.268	53	54	54	7	16	5	15	2	15	0

17:16:08.405	54	54	54		15		15		15	
17:16:08.544	54	55	54		15		14		15	
17:16:08.683	54	54	54		15		15		15	
17:16:08.775	54	54	54		15		15		15	
17:16:08.916	51	55	54		18		14		15	
17:16:09.056	52	54	54		17		15		15	
17:16:09.194	54	55	55	8	15	3	14	1	14	1
17:16:09.333	54	54	54		15		15		15	
17:16:09.471	54	55	54		15		14		15	
17:16:09.565	56	53	54		13		16		15	
17:16:09.708	51	54	54		18		15		15	
17:16:09.848	52	54	54		17		15		15	
17:16:09.988	53	54	54		16		15		15	
17:16:10.127	54	55	54	9	15	5	14	2	15	0
17:16:10.220	55	54	54		14		15		15	
17:16:10.361	54	54	54		15		15		15	
17:16:10.500	57	54	54		12		15		15	
17:16:10.640	53	53	55		16		16		14	
17:16:10.781	54	54	55		15		15		14	
17:16:10.921	54	54	54		15		15		15	
17:16:11.012	55	54	54	10	14	4	15	1	15	1
17:16:11.151	54	55	54		15		14		15	
17:16:11.289	55	54	54		14		15		15	
17:16:11.430	52	55	54		17		14		15	
17:16:11.570	53	56	54		16		13		15	
17:16:11.710	54	55	54		15		14		15	
17:16:11.804	55	55	54		14		14		15	
17:16:11.944	55	54	55	11	14	3	15	2	14	1
17:16:12.084	51	55	54		18		14		15	
17:16:12.223	52	56	54		17		13		15	
17:16:12.364	53	58	54		16		11		15	
17:16:12.503	54	55	54		15		14		15	
17:16:12.596	55	55	54		14		14		15	
17:16:12.737	54	55	55		15		14		14	
17:16:12.875	51	54	54	12	18	4	15	4	15	1
17:16:13.013	51	55	54		18		14		15	
17:16:13.153	53	55	54		16		14		15	
17:16:13.293	54	55	54		15		14		15	
17:16:13.385	55	56	54		14		13		15	
17:16:13.525	54	55	55		15		14		14	
17:16:13.662	52	54	54		17		15		15	
17:16:13.802	50	55	54	13	19	5	14	2	15	1
17:16:13.943	52	54	54		17		15		15	
17:16:14.083	54	55	54		15		14		15	
17:16:14.177	56	55	54		13		14		15	
17:16:14.317	55	54	54		14		15		15	
17:16:14.458	52	55	54		17		14		15	
17:16:14.598	53	54	54		16		15		15	
17:16:14.736	52	62	54	14	17	4	7	8	15	0
17:16:14.875	53	55	54		16		14		15	
17:16:14.969	55	55	54		14		14		15	
17:16:15.110	54	54	54		15		15		15	
17:16:15.248	54	54	54		15		15		15	
17:16:15.387	53	54	53		16		15		16	
17:16:15.526	51	56	54		18		13		15	
17:16:15.668	53	54	54	15	16	4	15	2	15	1
17:16:15.761	55	55	54		14		14		15	
17:16:15.901	54	54	54		15		15		15	
17:16:16.040	55	54	54		14		15		15	
17:16:16.178	51	54	53		18		15		16	
17:16:16.319	52	54	54		17		15		15	
17:16:16.412	53	55	54		16		14		15	
17:16:16.552	55	54	54	16	14	4	15	1	15	1

17:16:16.694	55	54	54		14		15		15	
17:16:16.833	54	55	54		15		14		15	
17:16:16.974	51	55	54		18		14		15	
17:16:17.113	53	55	54		16		14		15	
17:16:17.206	53	55	54		16		14		15	
17:16:17.345	53	54	54		16		15		15	
17:16:17.485	54	56	55	17	15	4	13	2	14	1
17:16:17.625	55	55	55		14		14		14	
17:16:17.764	52	54	54		17		15		15	
17:16:17.904	52	56	54		17		13		15	
17:16:17.997	52	54	54		17		15		15	
17:16:18.138	54	55	54		15		14		15	
17:16:18.278	54	56	54		15		13		15	
17:16:18.417	54	58	55	18	15	3	11	4	14	1
17:16:18.557	52	56	53		17		13		16	
17:16:18.696	52	54	54		17		15		15	
17:16:18.789	52	54	54		17		15		15	
17:16:18.930	54	54	55		15		15		14	
17:16:19.070	55	56	54		14		13		15	
17:16:19.209	54	55	55		15		14		14	
17:16:19.350	56	54	53	19	13	4	15	2	16	2
17:16:19.443	53	53	55		16		16		14	
17:16:19.582	52	54	54		17		15		15	
17:16:19.723	54	55	54		15		14		15	
17:16:19.863	55	55	54		14		14		15	
17:16:20.004	55	55	54		14		14		15	
17:16:20.142	54	54	54		15		15		15	
17:16:20.236	52	54	54	20	17	3	15	2	15	1
17:16:20.375	52	54	55		17		15		14	
17:16:20.515	54	54	55		15		15		14	
17:16:20.654	55	55	54		14		14		15	
17:16:20.794	55	54	54		14		15		15	
17:16:20.933	54	54	54		15		15		15	
17:16:21.027	52	55	54		17		14		15	
17:16:21.167	55	55	54	21	14	3	14	1	15	1
17:16:21.307	53	55	54		16		14		15	
17:16:21.447	54	55	54		15		14		15	
17:16:21.586	56	55	54		13		14		15	
17:16:21.725	54	55	54		15		14		15	
17:16:21.817	52	54	54		17		15		15	
17:16:21.956	51	56	54		18		13		15	
17:16:22.096	52	59	54	22	17	5	10	5	15	0
17:16:22.235	54	55	55		15		14		14	
17:16:22.375	55	55	54		14		14		15	
17:16:22.515	54	54	55		15		15		14	
17:16:22.608	53	55	54		16		14		15	
17:16:22.749	51	54	54		18		15		15	
17:16:22.889	52	58	54		17		11		15	
17:16:23.029	54	54	54	23	15	4	15	4	15	1
17:16:23.168	57	54	54		12		15		15	
17:16:23.307	55	55	55		14		14		14	
17:16:23.401	52	54	54		17		15		15	
17:16:23.541	50	53	55		19		16		14	
17:16:23.681	52	56	54		17		13		15	
17:16:23.820	54	55	54		15		14		15	
17:16:23.960	55	55	53	24	14	7	14	3	16	2
17:16:24.099	55	54	54		14		15		15	
17:16:24.193	54	54	54		15		15		15	
17:16:24.333	52	54	54		17		15		15	
17:16:24.473	52	54	54		17		15		15	
17:16:24.613	54	55	54		15		14		15	
17:16:24.752	54	54	54		15		15		15	
17:16:24.893	55	54	54	25	14	3	15	1	15	0

(Dolos d=17cm, T=1s)

DATA HASIL UJI DOLOS (D=17CM)						d=	17			
						tinggi flume=	69			
T=1 S										
WAKTU	SENSOR 1 (CM)	SENSOR 2 (CM)	SENSOR 3 (CM)	kejadian gelombang	H sensor 1	Hi	H sensor 2	Hi	H sensor 3	Hi
17:23:15.755	52	53	52		17		16		17	
17:23:15.896	50	54	52		19		15		17	
17:23:15.990	50	55	52		19		14		17	
17:23:16.129	50	52	53		19		17		16	
17:23:16.268	50	51	52		19		18		17	
17:23:16.409	52	52	52		17		17		17	
17:23:16.551	53	53	52		16		16		17	
17:23:16.645	52	53	52		17		16		17	
17:23:16.786	51	54	51	1	18	3	15	4	18	2
17:23:16.926	50	53	52		19		16		17	
17:23:17.064	50	53	52		19		16		17	
17:23:17.202	55	52	52		14		17		17	
17:23:17.342	51	52	52		18		17		17	
17:23:17.434	53	51	52		16		18		17	
17:23:17.573	53	53	53		16		16		16	
17:23:17.713	51	54	52		18		15		17	
17:23:17.852	50	54	52		19		15		17	
17:23:17.992	51	55	52	2	18	5	14	4	17	1
17:23:18.130	50	54	52		19		15		17	
17:23:18.224	50	53	53		19		16		16	
17:23:18.363	51	51	52		18		18		17	
17:23:18.503	52	51	52		17		18		17	
17:23:18.642	55	53	52		14		16		17	
17:23:18.780	51	54	52		18		15		17	
17:23:18.919	52	55	52		17		14		17	
17:23:19.011	50	53	52		19		16		17	
17:23:19.151	51	53	52	3	18	5	16	4	17	1
17:23:19.291	50	54	53		19		15		16	
17:23:19.430	51	50	52		18		19		17	
17:23:19.571	52	51	53		17		18		16	
17:23:19.663	53	54	53		16		15		16	
17:23:19.803	53	53	52		16		16		17	
17:23:19.942	50	54	51		19		15		18	
17:23:20.082	50	54	52		19		15		17	
17:23:20.222	50	54	51		19		15		18	
17:23:20.361	50	52	52	4	19	3	17	4	17	2
17:23:20.454	51	52	52		18		17		17	
17:23:20.594	53	52	52		16		17		17	
17:23:20.735	54	52	52		15		17		17	
17:23:20.875	52	57	51		17		12		18	
17:23:21.015	50	54	51		19		15		18	
17:23:21.154	51	53	52		18		16		17	
17:23:21.248	50	52	51		19		17		18	
17:23:21.387	51	52	53		18		17		16	
17:23:21.527	50	52	52	5	19	4	17	5	17	2
17:23:21.666	53	53	52		16		16		17	
17:23:21.806	54	51	52		15		18		17	
17:23:21.900	51	54	52		18		15		17	
17:23:22.042	51	57	51		18		12		18	
17:23:22.182	51	53	52		18		16		17	
17:23:22.321	49	52	53		20		17		16	
17:23:22.461	51	53	53		18		16		16	
17:23:22.599	54	54	52		15		15		17	
17:23:22.692	53	52	52	6	16	5	17	6	17	2
17:23:22.831	53	52	52		16		17		17	
17:23:22.970	52	56	52		17		13		17	
17:23:23.109	52	54	52		17		15		17	
17:23:23.249	49	54	52		20		15		17	
17:23:23.388	49	53	52		20		16		17	
17:23:23.481	51	53	53		18		16		16	
17:23:23.623	52	52	52		17		17		17	
17:23:23.762	53	53	52		16		16		17	
17:23:23.903	52	53	52	7	17	4	16	4	17	1

17:23:24.044	51	55	52		18		14		17
17:23:24.136	51	53	52		18		16		17
17:23:24.278	50	57	52		19		12		17
17:23:24.417	50	52	52		19		17		17
17:23:24.556	51	51	53		18		18		16
17:23:24.697	52	51	53		17		18		16
17:23:24.790	52	51	52		17		18		17
17:23:24.928	54	53	52		15		16		17
17:23:25.068	51	54	52	8	18	4	15	6	17
17:23:25.209	51	55	51		18		14		18
17:23:25.350	49	53	51		20		16		18
17:23:25.489	49	54	52		20		15		17
17:23:25.582	50	52	52		19		17		17
17:23:25.720	52	52	54		17		17		15
17:23:25.860	54	51	52		15		18		17
17:23:25.999	52	52	51		17		17		18
17:23:26.139	53	53	52		16		16		17
17:23:26.280	50	57	52	9	19	5	12	6	17
17:23:26.371	49	53	52		20		16		17
17:23:26.512	49	53	52		20		16		17
17:23:26.652	51	52	53		18		17		16
17:23:26.791	52	53	53		17		16		16
17:23:26.930	53	50	52		16		19		17
17:23:27.023	54	52	51		15		17		18
17:23:27.164	51	53	52		18		16		17
17:23:27.303	50	60	52		19		9		17
17:23:27.442	49	54	52	10	20	5	15	10	17
17:23:27.584	51	53	52		18		16		17
17:23:27.724	51	52	53		18		17		16
17:23:27.817	53	52	52		16		17		17
17:23:27.957	53	51	51		16		18		18
17:23:28.095	52	54	52		17		15		17
17:23:28.235	51	55	52		18		14		17
17:23:28.375	51	53	52		18		16		17
17:23:28.514	49	53	51		20		16		18
17:23:28.605	49	53	52	11	20	4	16	4	17
17:23:28.743	50	53	52		19		16		17
17:23:28.883	53	51	53		16		18		16
17:23:29.021	54	51	52		15		18		17
17:23:29.160	52	53	53		17		16		16
17:23:29.298	51	58	52		18		11		17
17:23:29.390	50	59	52		19		10		17
17:23:29.531	49	55	51		20		14		18
17:23:29.669	50	56	52		19		13		17
17:23:29.808	52	52	52	12	17	5	17	8	17
17:23:29.950	52	54	52		17		15		17
17:23:30.090	53	52	52		16		17		17
17:23:30.183	53	54	52		16		15		17
17:23:30.324	51	53	52		18		16		17
17:23:30.464	50	54	52		19		15		17
17:23:30.603	49	55	51		20		14		18
17:23:30.742	49	54	52		20		15		17
17:23:30.836	52	52	52		17		17		17
17:23:30.975	52	52	52	13	17	4	17	3	17
17:23:31.113	52	52	52		17		17		17
17:23:31.252	52	52	52		17		17		17
17:23:31.392	51	57	52		18		12		17
17:23:31.532	50	53	52		19		16		17
17:23:31.624	49	56	51		20		13		18
17:23:31.764	49	54	53		20		15		16
17:23:31.903	51	52	52		18		17		17
17:23:32.041	53	52	52		16		17		17
17:23:32.180	53	52	52	14	16	4	17	5	17
17:23:32.318	52	53	51		17		16		18
17:23:32.457	51	54	52		18		15		17
17:23:32.549	50	53	52		19		16		17
17:23:32.690	50	52	51		19		17		18
17:23:32.828	49	56	52		20		13		17
17:23:32.968	51	53	52		18		16		17
17:23:33.106	53	51	52		16		18		17
17:23:33.246	53	52	52		16		17		17
17:23:33.339	52	53	52	15	17	4	16	5	17
17:23:33.477	54	54	52		15		15		17
17:23:33.616	49	53	52		20		16		17
17:23:33.756	51	54	52		18		15		17
17:23:33.897	50	53	53		19		16		16
17:23:33.991	51	52	52		18		17		17
17:23:34.132	54	56	53		15		13		16
17:23:34.272	54	52	52		15		17		17
17:23:34.410	53	54	52		16		15		17
17:23:34.549	51	61	52	16	18	5	8	9	17

17:23:34.688	50	53	51		19		16		18
17:23:34.782	49	52	52		20		17		17
17:23:34.921	50	52	53		19		17		16
17:23:35.060	51	52	52		18		17		17
17:23:35.200	52	53	53		17		16		16
17:23:35.341	53	52	52		16		17		17
17:23:35.479	52	56	52		17		13		17
17:23:35.572	52	54	52		17		15		17
17:23:35.711	51	52	51	17	18	4	17	4	18
17:23:35.852	49	53	52		20		16		17
17:23:35.991	50	54	52		19		15		17
17:23:36.131	53	52	52		16		17		17
17:23:36.269	52	52	52		17		17		17
17:23:36.363	54	53	52		15		16		17
17:23:36.502	52	53	52		17		16		17
17:23:36.642	51	56	51		18		13		18
17:23:36.782	50	52	52		19		17		17
17:23:36.921	49	53	53	18	20	5	16	4	16
17:23:37.013	50	54	51		19		15		18
17:23:37.153	52	51	52		17		18		17
17:23:37.293	53	51	52		16		18		17
17:23:37.432	53	52	52		16		17		17
17:23:37.572	52	53	52		17		16		17
17:23:37.713	51	57	51		18		12		18
17:23:37.806	50	53	52		19		16		17
17:23:37.947	50	53	52		19		16		17
17:23:38.087	50	53	52	19	19	3	16	6	17
17:23:38.229	51	52	52		18		17		17
17:23:38.368	52	52	52		17		17		17
17:23:38.461	53	52	52		16		17		17
17:23:38.601	51	53	52		18		16		17
17:23:38.741	51	54	52		18		15		17
17:23:38.882	49	54	52		20		15		17
17:23:39.021	49	52	53		20		17		16
17:23:39.159	51	53	53		18		16		16
17:23:39.253	50	52	52	20	19	4	17	2	17
17:23:39.393	52	51	52		17		18		17
17:23:39.534	53	52	51		16		17		18
17:23:39.673	53	53	52		16		16		17
17:23:39.814	50	56	52		19		13		17
17:23:39.906	50	53	55		19		16		14
17:23:40.047	50	57	52		19		12		17
17:23:40.186	52	53	52		17		16		17
17:23:40.327	51	51	52		18		18		17
17:23:40.467	54	50	52	21	15	4	19	7	17
17:23:40.562	53	53	52		16		16		17
17:23:40.701	52	55	52		17		14		17
17:23:40.840	51	54	52		18		15		17
17:23:40.981	50	56	52		19		13		17
17:23:41.119	49	52	52		20		17		17
17:23:41.258	49	52	52		20		17		17
17:23:41.352	52	51	52		17		18		17
17:23:41.491	52	51	52		17		18		17
17:23:41.629	53	54	51	22	16	4	15	5	18
17:23:41.768	52	59	52		17		10		17
17:23:41.909	51	54	51		18		15		18
17:23:42.048	50	54	52		19		15		17
17:23:42.141	50	53	52		19		16		17
17:23:42.281	51	51	52		18		18		17
17:23:42.393	52	54	51		17		15		18
17:23:42.495	53	53	52		16		16		17
17:23:42.602	53	53	52		16		16		17
17:23:42.762	52	54	52	23	17	3	15	8	17
17:23:42.882	53	51	51		16		18		18
17:23:42.991	54	51	51		15		18		18
17:23:43.112	55	53	51		14		16		18
17:23:43.234	55	53	51		14		16		18
17:23:43.351	51	55	52		18		14		17
17:23:43.452	53	54	52		16		15		17
17:23:43.573	52	52	52		17		17		17
17:23:43.687	52	52	51		17		17		18
17:23:43.792	52	52	51	24	17	4	17	4	18
17:23:43.901	51	52	51		18		17		18
17:23:44.110	51	52	51		18		17		18
17:23:44.214	53	55	52		16		14		17
17:23:44.328	55	56	52		14		13		17
17:23:44.436	57	57	52		12		12		17
17:23:44.541	57	56	52		12		13		17
17:23:44.659	56	55	52		13		14		17
17:23:44.761	53	53	52		16		16		17
17:23:44.879	53	53	51	25	16	6	16	5	18

(Dolos d=17cm, T=0.9s)

DATA HASIL UJI DOLOS (D=17CM)						d=	17			
						tinggi flume=	69			
T=0.9 S										
WAKTU	SENSOR 1 (CM)	SENSOR 2 (CM)	SENSOR 3 (CM)	kejadian gelombang	H sensor 1	Hi	H sensor 2	Hi	H sensor 3	Hi
17:24:52.424	49	53	52		20		16		17	
17:24:52.564	49	52	52		20		17		17	
17:24:52.702	51	52	52		18		17		17	
17:24:52.843	52	53	52		17		16		17	
17:24:52.982	53	51	52		16		18		17	
17:24:53.075	52	51	51		17		18		18	
17:24:53.214	50	53	51		19		16		18	
17:24:53.352	50	53	52	1	19	4	16	2	17	1
17:24:53.492	50	53	51		19		16		18	
17:24:53.633	51	52	52		18		17		17	
17:24:53.726	52	51	52		17		18		17	
17:24:53.865	54	60	52		15		9		17	
17:24:54.006	53	52	52		16		17		17	
17:24:54.147	51	54	52		18		15		17	
17:24:54.288	49	52	52		20		17		17	
17:24:54.428	51	54	52	2	18	5	15	9	17	1
17:24:54.522	50	54	52		19		15		17	
17:24:54.663	52	52	51		17		17		18	
17:24:54.802	54	53	52		15		16		17	
17:24:54.941	53	52	52		16		17		17	
17:24:55.082	50	53	52		19		16		17	
17:24:55.176	49	53	52		20		16		17	
17:24:55.316	51	54	52		18		15		17	
17:24:55.456	50	55	51	3	19	5	14	3	18	1
17:24:55.595	54	51	51		15		18		18	
17:24:55.735	54	50	52		15		19		17	
17:24:55.874	52	51	52		17		18		17	
17:24:55.967	51	52	52		18		17		17	
17:24:56.109	51	53	52		18		16		17	
17:24:56.248	50	54	52		19		15		17	
17:24:56.390	50	53	51		19		16		18	
17:24:56.530	51	52	51	4	18	4	17	4	18	1
17:24:56.622	53	55	52		16		14		17	
17:24:56.761	53	51	52		16		18		17	
17:24:56.902	51	53	52		18		16		17	
17:24:57.042	50	53	52		19		16		17	
17:24:57.182	49	55	52		20		14		17	
17:24:57.276	50	53	52		19		16		17	
17:24:57.417	52	53	51		17		16		18	
17:24:57.556	53	56	51	5	16	4	13	5	18	1
17:24:57.695	53	51	52		16		18		17	
17:24:57.836	52	54	52		17		15		17	
17:24:57.976	49	52	52		20		17		17	
17:24:58.068	51	54	51		18		15		18	
17:24:58.208	51	53	51		18		16		18	
17:24:58.348	52	52	51		17		17		18	
17:24:58.487	53	52	52		16		17		17	
17:24:58.625	53	51	52	6	16	4	18	3	17	1
17:24:58.764	52	53	52		17		16		17	
17:24:58.857	50	52	52		19		17		17	
17:24:58.996	50	53	52		19		16		17	
17:24:59.136	51	53	51		18		16		18	
17:24:59.275	52	52	52		17		17		17	
17:24:59.415	53	51	52		16		18		17	
17:24:59.553	54	55	52		15		14		17	
17:24:59.644	52	53	53	7	17	4	16	4	16	2

17:24:59.786	49	52	52		20		17		17
17:24:59.925	49	54	52		20		15		17
17:25:00.063	51	54	51		18		15		18
17:25:00.203	51	52	52		18		17		17
17:25:00.341	54	52	52		15		17		17
17:25:00.434	53	50	52		16		19		17
17:25:00.575	54	60	52		15		9		17
17:25:00.713	49	53	52	8	20	5	16	10	17
17:25:00.853	48	57	53		21		12		16
17:25:00.993	51	54	53		18		15		16
17:25:01.132	52	53	53		17		16		16
17:25:01.225	52	51	53		17		18		16
17:25:01.367	53	50	54		16		19		15
17:25:01.506	52	52	52		17		17		17
17:25:01.645	49	54	53		20		15		16
17:25:01.783	48	54	52	9	21	5	15	7	17
17:25:01.923	52	57	52		17		12		17
17:25:02.015	51	53	52		18		16		17
17:25:02.155	52	52	53		17		17		16
17:25:02.295	53	50	52		16		19		17
17:25:02.434	52	52	52		17		17		17
17:25:02.574	49	53	53		20		16		16
17:25:02.712	49	54	52		20		15		17
17:25:02.806	50	53	52	10	19	4	16	7	17
17:25:02.944	53	52	52		16		17		17
17:25:03.084	52	52	52		17		17		17
17:25:03.224	54	50	52		15		19		17
17:25:03.363	52	53	53		17		16		16
17:25:03.456	50	53	53		19		16		16
17:25:03.598	49	58	52		20		11		17
17:25:03.737	49	54	51		20		15		18
17:25:03.877	52	53	52	11	17	5	16	8	17
17:25:04.017	52	52	52		17		17		17
17:25:04.158	52	53	52		17		16		17
17:25:04.251	53	53	52		16		16		17
17:25:04.391	50	53	53		19		16		16
17:25:04.530	51	57	52		18		12		17
17:25:04.670	50	55	52		19		14		17
17:25:04.810	51	55	52		18		14		17
17:25:04.904	53	51	52	12	16	3	18	6	17
17:25:05.044	53	53	52		16		16		17
17:25:05.184	53	53	52		16		16		17
17:25:05.322	51	52	53		18		17		16
17:25:05.460	49	53	52		20		16		17
17:25:05.601	49	56	52		20		13		17
17:25:05.694	50	53	52		19		16		17
17:25:05.834	53	52	52		16		17		17
17:25:05.975	53	51	51	13	16	4	18	5	18
17:25:06.114	52	51	52		17		18		17
17:25:06.254	51	54	52		18		15		17
17:25:06.349	49	58	52		20		11		17
17:25:06.489	49	54	52		20		15		17
17:25:06.627	51	52	51		18		17		18
17:25:06.767	51	53	51		18		16		18
17:25:06.907	50	50	52		19		19		17
17:25:07.046	53	53	52	14	16	3	16	8	17
17:25:07.138	50	53	52		19		16		17
17:25:07.279	50	54	53		19		15		16
17:25:07.419	48	55	51		21		14		18
17:25:07.557	47	53	51		22		16		18
17:25:07.699	50	53	51		19		16		18
17:25:07.837	53	52	52		16		17		17
17:25:07.931	52	52	51		17		17		18
17:25:08.070	51	53	52	15	18	6	16	3	17
17:25:08.211	49	53	52		20		16		17
17:25:08.351	48	55	51		21		14		18
17:25:08.492	50	53	51		19		16		18
17:25:08.586	50	53	52		19		16		17
17:25:08.726	51	50	52		18		19		17
17:25:08.865	49	52	52		20		17		17
17:25:09.007	50	52	54		19		17		15
17:25:09.148	49	53	52	16	20	3	16	5	17



17:25:09.241	48	56	51		21		13		18
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17:25:09.521	49	55	51		20		14		18
17:25:09.661	48	51	51		21		18		18
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17:25:09.939	47	52	53		22		17		16
17:25:10.032	51	52	52		18		17		17
17:25:10.171	49	60	51	17	20	4	9	9	18
17:25:10.310	50	53	52		19		16		17
17:25:10.451	47	52	51		22		17		18
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17:25:10.683	48	53	52		21		16		17
17:25:10.821	48	53	53		21		16		16
17:25:10.962	48	52	52		21		17		17
17:25:11.102	48	59	52		21		10		17
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17:25:11.337	47	53	53		22		16		16
17:25:11.476	48	53	52		21		16		17
17:25:11.617	47	50	52		22		19		17
17:25:11.758	47	52	53		22		17		16
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17:25:12.036	47	54	52		22		15		17
17:25:12.130	48	56	52		21		13		17
17:25:12.271	47	53	51	19	22	1	16	6	18
17:25:12.411	47	51	53		22		18		16
17:25:12.551	47	51	52		22		18		17
17:25:12.691	47	52	53		22		17		16
17:25:12.785	47	53	52		22		16		17
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17:25:13.065	46	55	52		23		14		17
17:25:13.204	46	53	52		23		16		17
17:25:13.343	46	53	52	20	23	1	16	4	17
17:25:13.436	46	51	52		23		18		17
17:25:13.575	46	52	53		23		17		16
17:25:13.716	46	56	52		23		13		17
17:25:13.856	46	53	53		23		16		16
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17:25:14.135	51	57	52		18		12		17
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17:25:14.508	53	51	52		16		18		17
17:25:14.649	47	53	52		22		16		17
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17:25:15.298	53	55	52		16		14		17
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17:25:15.578	51	53	54		18		16		15
17:25:15.669	49	53	52		20		16		17
17:25:15.808	48	54	52		21		15		17
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17:25:16.226	53	51	52		16		18		17
17:25:16.368	53	50	53		16		19		16
17:25:16.460	51	55	53	23	18	5	14	8	16
17:25:16.600	51	52	52		18		17		17
17:25:16.739	48	57	54		21		12		15
17:25:16.879	51	53	53		18		16		16
17:25:17.020	51	56	52		18		13		17
17:25:17.160	52	53	52		17		16		17
17:25:17.252	53	51	53		16		18		16
17:25:17.392	51	54	53		18		15		16
17:25:17.531	56	53	52	24	13	5	16	6	17
17:25:17.669	48	54	53		21		15		16
17:25:17.809	48	53	52		21		16		17
17:25:17.949	51	53	51		18		16		18
17:25:18.042	53	54	52		16		15		17
17:25:18.182	52	51	53		17		18		16
17:25:18.323	53	53	52		16		16		17
17:25:18.463	50	53	53		19		16		16
17:25:18.603	49	54	52	25	20	5	15	3	17

(Dolos d=17cm, T=0.8s)

DATA HASIL UJI DOLOS (D=17CM)					d=	17				
					tinggi flur	69				
T=0.8 S										
WAKTU	SENSOR 1 (CM)	SENSOR 2 (CM)	SENSOR 3 (CM)	kejadian gelombang	H sensor 1	Hi	H sensor 2	Hi	H sensor 3	Hi
17:26:20.073	53	53	52		16		16		17	
17:26:20.212	53	53	54		16		16		15	
17:26:20.352	51	51	52		18		18		17	
17:26:20.492	48	53	55		21		16		14	
17:26:20.585	48	55	52		21		14		17	
17:26:20.727	50	53	52		19		16		17	
17:26:20.865	53	52	52	1	16	5	17	4	17	3
17:26:21.005	53	52	53		16		17		16	
17:26:21.145	54	51	52		15		18		17	
17:26:21.238	49	52	52		20		17		17	
17:26:21.376	51	52	52		18		17		17	
17:26:21.515	49	55	52		20		14		17	
17:26:21.656	52	52	52		17		17		17	
17:26:21.795	54	54	52	2	15	5	15	4	17	1
17:26:21.933	53	55	53		16		14		16	
17:26:22.026	50	52	52		19		17		17	
17:26:22.166	50	54	53		19		15		16	
17:26:22.308	48	55	52		21		14		17	
17:26:22.447	51	53	52		18		16		17	
17:26:22.588	54	54	52		15		15		17	
17:26:22.727	54	52	52	3	15	6	17	3	17	1
17:26:22.820	54	52	52		15		17		17	
17:26:22.961	50	52	53		19		17		16	
17:26:23.101	47	53	53		22		16		16	
17:26:23.241	50	57	52		19		12		17	
17:26:23.383	52	53	52		17		16		17	
17:26:23.475	53	53	52		16		16		17	
17:26:23.615	53	51	58	4	16	7	18	6	11	6
17:26:23.754	51	52	55		18		17		14	
17:26:23.894	49	53	53		20		16		16	
17:26:24.033	49	53	52		20		16		17	
17:26:24.172	51	53	52		18		16		17	
17:26:24.265	53	55	52		16		14		17	
17:26:24.405	54	51	52		15		18		17	
17:26:24.546	51	53	59	5	18	5	16	4	10	7
17:26:24.687	48	54	53		21		15		16	
17:26:24.827	49	52	52		20		17		17	
17:26:24.919	51	54	53		18		15		16	
17:26:25.059	52	54	52		17		15		17	
17:26:25.197	53	51	52		16		18		17	
17:26:25.339	53	51	53		16		18		16	
17:26:25.479	49	60	53	6	20	5	9	9	16	1
17:26:25.620	51	53	53		18		16		16	
17:26:25.712	51	53	52		18		16		17	
17:26:25.851	51	52	52		18		17		17	
17:26:25.989	53	52	52		16		17		17	
17:26:26.129	53	51	52		16		18		17	
17:26:26.269	51	53	53		18		16		16	
17:26:26.407	49	54	52	7	20	4	15	3	17	1

17:26:26.500	48	52	52		21		17		17	
17:26:26.639	50	54	53		19		15		16	
17:26:26.780	52	52	52		17		17		17	
17:26:26.919	53	51	58		16		18		11	
17:26:27.059	54	51	53		15		18		16	
17:26:27.199	50	53	53		19		16		16	
17:26:27.294	49	53	53	8	20	6	16	3	16	6
17:26:27.433	49	53	52		20		16		17	
17:26:27.572	51	54	52		18		15		17	
17:26:27.711	54	53	57		15		16		12	
17:26:27.852	54	51	51		15		18		18	
17:26:27.946	51	54	55		18		15		14	
17:26:28.085	49	53	52		20		16		17	
17:26:28.225	49	55	53	9	20	5	14	4	16	6
17:26:28.363	52	52	52		17		17		17	
17:26:28.503	53	53	52		16		16		17	
17:26:28.642	53	51	52		16		18		17	
17:26:28.736	53	51	58		16		18		11	
17:26:28.873	49	55	52		20		14		17	
17:26:29.012	48	52	52		21		17		17	
17:26:29.150	49	59	52	10	20	5	10	8	17	6
17:26:29.288	53	54	52		16		15		17	
17:26:29.428	53	52	52		16		17		17	
17:26:29.567	53	52	52		16		17		17	
17:26:29.662	50	53	54		19		16		15	
17:26:29.801	48	52	52		21		17		17	
17:26:29.941	50	53	53		19		16		16	
17:26:30.081	51	54	52	11	18	5	15	2	17	2
17:26:30.221	54	56	54		15		13		15	
17:26:30.362	54	51	53		15		18		16	
17:26:30.456	52	51	52		17		18		17	
17:26:30.595	51	53	58		18		16		11	
17:26:30.735	47	54	51		22		15		18	
17:26:30.873	49	54	53		20		15		16	
17:26:31.012	54	53	52	12	15	7	16	5	17	7
17:26:31.105	55	52	53		14		17		16	
17:26:31.241	53	52	53		16		17		16	
17:26:31.381	50	54	52		19		15		17	
17:26:31.520	48	59	52		21		10		17	
17:26:31.662	48	56	53		21		13		16	
17:26:31.801	51	54	52		18		15		17	
17:26:31.941	54	53	53	13	15	7	16	7	16	1
17:26:32.035	53	51	54		16		18		15	
17:26:32.175	51	54	56		18		15		13	
17:26:32.313	49	54	51		20		15		18	
17:26:32.453	47	52	53		22		17		16	
17:26:32.591	52	53	52		17		16		17	
17:26:32.729	52	52	52		17		17		17	
17:26:32.822	53	52	52	14	16	6	17	3	17	5
17:26:32.961	52	51	54		17		18		15	
17:26:33.098	49	53	53		20		16		16	
17:26:33.239	47	55	52		22		14		17	
17:26:33.378	49	54	53		20		15		16	
17:26:33.473	51	53	52		18		16		17	
17:26:33.613	53	53	52		16		16		17	
17:26:33.754	53	51	53	15	16	6	18	4	16	2
17:26:33.895	51	52	54		18		17		15	
17:26:34.036	51	52	52		18		17		17	
17:26:34.175	48	54	52		21		15		17	
17:26:34.268	49	54	52		20		15		17	
17:26:34.411	52	53	52		17		16		17	
17:26:34.551	53	52	53		16		17		16	
17:26:34.690	53	52	57	16	16	5	17	2	12	5

17:26:34.830	52	55	53		17		14		16
17:26:34.923	50	54	52		19		15		17
17:26:35.064	49	55	53		20		14		16
17:26:35.204	51	55	52		18		14		17
17:26:35.345	53	53	52		16		16		17
17:26:35.483	54	51	54		15		18		15
17:26:35.575	56	51	52	17	13	7	18	4	17
17:26:35.715	49	54	53		20		15		16
17:26:35.854	48	56	53		21		13		16
17:26:35.993	51	54	52		18		15		17
17:26:36.134	52	53	52		17		16		17
17:26:36.273	54	52	52		15		17		17
17:26:36.366	53	50	53		16		19		16
17:26:36.506	50	51	53	18	19	6	18	6	16
17:26:36.646	47	53	53		22		16		16
17:26:36.784	49	55	53		20		14		16
17:26:36.926	51	53	53		18		16		16
17:26:37.066	54	52	52		15		17		17
17:26:37.160	53	51	52		16		18		17
17:26:37.299	51	52	52		18		17		17
17:26:37.438	48	53	51	19	21	7	16	4	18
17:26:37.579	52	53	52		17		16		17
17:26:37.721	51	54	52		18		15		17
17:26:37.813	52	54	52		17		15		17
17:26:37.953	53	52	52		16		17		17
17:26:38.094	53	52	52		16		17		17
17:26:38.232	49	52	59		20		17		10
17:26:38.372	48	52	52	20	21	5	17	2	17
17:26:38.512	49	52	53		20		17		16
17:26:38.606	51	53	53		18		16		16
17:26:38.746	54	53	52		15		16		17
17:26:38.885	54	52	52		15		17		17
17:26:39.026	50	53	54		19		16		15
17:26:39.166	47	53	53		22		16		16
17:26:39.260	49	54	52	21	20	7	15	2	17
17:26:39.399	51	55	52		18		14		17
17:26:39.538	53	52	51		16		17		18
17:26:39.678	54	51	52		15		18		17
17:26:39.817	51	51	52		18		18		17
17:26:39.956	49	53	52		20		16		17
17:26:40.051	47	54	54		22		15		15
17:26:40.192	50	54	52	22	19	7	15	4	17
17:26:40.331	52	54	52		17		15		17
17:26:40.471	53	52	52		16		17		17
17:26:40.611	58	51	52		11		18		17
17:26:40.704	50	55	52		19		14		17
17:26:40.843	47	55	56		22		14		13
17:26:40.983	48	55	53		21		14		16
17:26:41.121	50	53	52	23	19	11	16	4	17
17:26:41.261	54	52	53		15		17		16
17:26:41.400	54	51	54		15		18		15
17:26:41.494	53	50	58		16		19		11
17:26:41.632	49	56	51		20		13		18
17:26:41.772	47	53	53		22		16		16
17:26:41.913	50	53	52		19		16		17
17:26:42.053	53	52	52	24	16	7	17	6	17
17:26:42.148	53	51	52		16		18		17
17:26:42.287	52	53	57		17		16		12
17:26:42.428	50	54	52		19		15		17
17:26:42.568	47	52	52		22		17		17
17:26:42.707	48	54	53		21		15		16
17:26:42.846	51	54	52		18		15		17
17:26:42.985	54	56	59	25	15	7	13	5	10

### Skenario I

d=15							
T=1							
sensor 1	sensor 1 (m)	sensor 2	sensor 2 (m)	sensor 3	sensor 3 (m)	rata2 H sebelum breakwater	H sesudah breakwater
3	0.03	2	0.02	1	0.01	0.025	0.01
4	0.04	4	0.04	0	0	0.04	0
3	0.03	3	0.03	1	0.01	0.03	0.01
4	0.04	8	0.08	2	0.02	0.06	0.02
3	0.03	7	0.07	2	0.02	0.05	0.02
4	0.04	1	0.01	2	0.02	0.025	0.02
4	0.04	3	0.03	1	0.01	0.035	0.01
3	0.03	3	0.03	2	0.02	0.03	0.02
6	0.06	3	0.03	1	0.01	0.045	0.01
4	0.04	3	0.03	1	0.01	0.035	0.01
4	0.04	1	0.01	1	0.01	0.025	0.01
3	0.03	4	0.04	2	0.02	0.035	0.02
4	0.04	2	0.02	1	0.01	0.03	0.01
2	0.02	3	0.03	2	0.02	0.025	0.02
4	0.04	4	0.04	2	0.02	0.04	0.02
4	0.04	3	0.03	1	0.01	0.035	0.01
4	0.04	4	0.04	1	0.01	0.04	0.01
2	0.02	3	0.03	2	0.02	0.025	0.02
3	0.03	4	0.04	1	0.01	0.035	0.01
2	0.02	2	0.02	1	0.01	0.02	0.01
5	0.05	4	0.04	2	0.02	0.045	0.02
3	0.03	2	0.02	2	0.02	0.025	0.02
4	0.04	3	0.03	5	0.05	0.035	0.05
5	0.05	2	0.02	1	0.01	0.035	0.01
2	0.02	2	0.02	2	0.02	0.02	0.02

d=15							
T=0.9							
sensor 1	sensor 1 (m)	sensor 2	sensor 2 (m)	sensor 3	sensor 3 (m)	rata2 H sebelum breakwater	H sesudah breakwater
3	0.03	1	0.01	0	0	0.02	0
3	0.03	1	0.01	0	0	0.02	0
2	0.02	1	0.01	0	0	0.015	0
3	0.03	3	0.03	1	0.01	0.03	0.01
5	0.05	1	0.01	0	0	0.03	0
3	0.03	1	0.01	2	0.02	0.02	0.02
3	0.03	3	0.03	1	0.01	0.03	0.01
3	0.03	2	0.02	0	0	0.025	0
3	0.03	5	0.05	1	0.01	0.04	0.01
3	0.03	4	0.04	0	0	0.035	0
3	0.03	2	0.02	2	0.02	0.025	0.02
3	0.03	2	0.02	2	0.02	0.025	0.02
3	0.03	4	0.04	1	0.01	0.035	0.01
4	0.04	3	0.03	0	0	0.035	0
2	0.02	2	0.02	1	0.01	0.02	0.01
2	0.02	4	0.04	2	0.02	0.03	0.02
2	0.02	2	0.02	1	0.01	0.02	0.01
2	0.02	3	0.03	2	0.02	0.025	0.02
4	0.04	3	0.03	2	0.02	0.035	0.02
2	0.02	3	0.03	2	0.02	0.025	0.02
5	0.05	2	0.02	2	0.02	0.035	0.02
4	0.04	2	0.02	1	0.01	0.03	0.01
3	0.03	2	0.02	1	0.01	0.025	0.01
4	0.04	1	0.01	1	0.01	0.025	0.01
3	0.03	2	0.02	1	0.01	0.025	0.01

d=15							
T=0.8							
sensor 1	sensor 1 (m)	sensor 2	sensor 2 (m)	sensor 3	sensor 3 (m)	rata2 H sebelum breakwater	H sesudah breakwater
6	0.06	4	0.04	1	0.01	0.05	0.01
5	0.05	2	0.02	0	0	0.035	0
6	0.06	1	0.01	0	0	0.035	0
4	0.04	3	0.03	0	0	0.035	0
4	0.04	4	0.04	0	0	0.04	0
2	0.02	2	0.02	0	0	0.02	0
5	0.05	3	0.03	1	0.01	0.04	0.01
4	0.04	2	0.02	1	0.01	0.03	0.01
5	0.05	2	0.02	0	0	0.035	0
6	0.06	4	0.04	1	0.01	0.05	0.01
5	0.05	2	0.02	0	0	0.035	0
4	0.04	5	0.05	0	0	0.045	0
5	0.05	1	0.01	1	0.01	0.03	0.01
3	0.03	2	0.02	1	0.01	0.025	0.01
5	0.05	2	0.02	0	0	0.035	0
4	0.04	2	0.02	0	0	0.03	0
5	0.05	3	0.03	1	0.01	0.04	0.01
4	0.04	3	0.03	0	0	0.035	0
4	0.04	3	0.03	0	0	0.035	0
5	0.05	5	0.05	0	0	0.05	0
4	0.04	2	0.02	0	0	0.03	0
6	0.06	2	0.02	1	0.01	0.04	0.01
7	0.07	1	0.01	1	0.01	0.04	0.01
5	0.05	3	0.03	1	0.01	0.04	0.01
5	0.05	2	0.02	2	0.02	0.035	0.02

## Skenario II

d=17							
T=1							
sensor 1	sensor 1 (m)	sensor 2	sensor 2 (m)	sensor 3	sensor 3 (m)	rata2 H sebelum breakwater	H sesudah breakwater
5	0.05	7	0.07	0	0	0.06	0
6	0.06	2	0.02	1	0.01	0.04	0.01
4	0.04	4	0.04	0	0	0.04	0
6	0.06	7	0.07	1	0.01	0.065	0.01
4	0.04	2	0.02	1	0.01	0.03	0.01
5	0.05	6	0.06	1	0.01	0.055	0.01
4	0.04	15	0.15	1	0.01	0.095	0.01
5	0.05	3	0.03	1	0.01	0.04	0.01
3	0.03	4	0.04	2	0.02	0.035	0.02
4	0.04	7	0.07	1	0.01	0.055	0.01
4	0.04	6	0.06	1	0.01	0.05	0.01
4	0.04	12	0.12	0	0	0.08	0
3	0.03	5	0.05	1	0.01	0.04	0.01
4	0.04	4	0.04	1	0.01	0.04	0.01
4	0.04	6	0.06	1	0.01	0.05	0.01
3	0.03	5	0.05	1	0.01	0.04	0.01
4	0.04	4	0.04	1	0.01	0.04	0.01
5	0.05	6	0.06	1	0.01	0.055	0.01
3	0.03	4	0.04	1	0.01	0.035	0.01
3	0.03	3	0.03	1	0.01	0.03	0.01
4	0.04	3	0.03	2	0.02	0.035	0.02
7	0.07	4	0.04	1	0.01	0.055	0.01
4	0.04	3	0.03	1	0.01	0.035	0.01
4	0.04	10	0.1	2	0.02	0.07	0.02
6	0.06	2	0.02	1	0.01	0.04	0.01

d=17							
T=0.9							
sensor 1	sensor 1 (m)	sensor 2	sensor 2 (m)	sensor 3	sensor 3 (m)	rata2 H sebelum breakwater	H sesudah breakwater
5	0.05	3	0.03	0	0	0.04	0
2	0.02	5	0.05	1	0.01	0.035	0.01
5	0.05	4	0.04	1	0.01	0.045	0.01
5	0.05	3	0.03	1	0.01	0.04	0.01
4	0.04	11	0.11	2	0.02	0.075	0.02
4	0.04	4	0.04	1	0.01	0.04	0.01
5	0.05	3	0.03	1	0.01	0.04	0.01
6	0.06	4	0.04	7	0.07	0.05	0.07
5	0.05	3	0.03	2	0.02	0.04	0.02
6	0.06	4	0.04	1	0.01	0.05	0.01
5	0.05	7	0.07	1	0.01	0.06	0.01
5	0.05	1	0.01	1	0.01	0.03	0.01
5	0.05	4	0.04	2	0.02	0.045	0.02
5	0.05	3	0.03	1	0.01	0.04	0.01
6	0.06	2	0.02	1	0.01	0.04	0.01
4	0.04	7	0.07	1	0.01	0.055	0.01
4	0.04	2	0.02	1	0.01	0.03	0.01
5	0.05	4	0.04	1	0.01	0.045	0.01
7	0.07	2	0.02	2	0.02	0.045	0.02
3	0.03	7	0.07	1	0.01	0.05	0.01
5	0.05	4	0.04	1	0.01	0.045	0.01
9	0.09	3	0.03	2	0.02	0.06	0.02
5	0.05	13	0.13	2	0.02	0.09	0.02
5	0.05	5	0.05	2	0.02	0.05	0.02
8	0.08	3	0.03	1	0.01	0.055	0.01

d=17							
T=0.8							
sensor 1	sensor 1 (m)	sensor 2	sensor 2 (m)	sensor 3	sensor 3 (m)	rata2 H sebelum breakwater	H sesudah breakwater
3	0.03	3	0.03	0	0	0.03	0
6	0.06	3	0.03	0	0	0.045	0
5	0.05	4	0.04	1	0.01	0.045	0.01
5	0.05	2	0.02	0	0	0.035	0
6	0.06	3	0.03	0	0	0.045	0
5	0.05	4	0.04	0	0	0.045	0
4	0.04	5	0.05	8	0.08	0.045	0.08
5	0.05	2	0.02	1	0.01	0.035	0.01
5	0.05	1	0.01	1	0.01	0.03	0.01
7	0.07	3	0.03	1	0.01	0.05	0.01
4	0.04	7	0.07	1	0.01	0.055	0.01
7	0.07	5	0.05	1	0.01	0.06	0.01
6	0.06	4	0.04	5	0.05	0.05	0.05
7	0.07	3	0.03	5	0.05	0.05	0.05
5	0.05	3	0.03	5	0.05	0.04	0.05
6	0.06	3	0.03	5	0.05	0.045	0.05
4	0.04	9	0.09	2	0.02	0.065	0.02
6	0.06	5	0.05	1	0.01	0.055	0.01
5	0.05	3	0.03	1	0.01	0.04	0.01
4	0.04	3	0.03	3	0.03	0.035	0.03
4	0.04	4	0.04	8	0.08	0.04	0.08
6	0.06	6	0.06	5	0.05	0.06	0.05
5	0.05	4	0.04	3	0.03	0.045	0.03
5	0.05	3	0.03	2	0.02	0.04	0.02
7	0.07	6	0.06	2	0.02	0.065	0.02

Skenario III

d=15							
T=1							
sensor 1	sensor 1 (m)	sensor 2	sensor 2 (m)	sensor 3	sensor 3 (m)	rata2 H sebelum breakwater	H sesudah breakwater
3	0.03	2	0.02	1	0.01	0.025	0.01
2	0.02	3	0.03	1	0.01	0.025	0.01
2	0.02	8	0.08	1	0.01	0.05	0.01
4	0.04	3	0.03	1	0.01	0.035	0.01
3	0.03	4	0.04	0	0	0.035	0
3	0.03	6	0.06	1	0.01	0.045	0.01
3	0.03	3	0.03	2	0.02	0.03	0.02
3	0.03	3	0.03	1	0.01	0.03	0.01
3	0.03	2	0.02	1	0.01	0.025	0.01
2	0.02	2	0.02	1	0.01	0.02	0.01
8	0.08	3	0.03	1	0.01	0.055	0.01
3	0.03	2	0.02	0	0	0.025	0
3	0.03	2	0.02	1	0.01	0.025	0.01
4	0.04	4	0.04	2	0.02	0.04	0.02
2	0.02	3	0.03	2	0.02	0.025	0.02
3	0.03	1	0.01	1	0.01	0.02	0.01
2	0.02	4	0.04	2	0.02	0.03	0.02
3	0.03	5	0.05	1	0.01	0.04	0.01
4	0.04	1	0.01	3	0.03	0.025	0.03
4	0.04	1	0.01	2	0.02	0.025	0.02
3	0.03	2	0.02	1	0.01	0.025	0.01
4	0.04	3	0.03	2	0.02	0.035	0.02
4	0.04	5	0.05	2	0.02	0.045	0.02
3	0.03	2	0.02	2	0.02	0.025	0.02
5	0.05	6	0.06	1	0.01	0.055	0.01
d=15							
T=0.9							
sensor 1	sensor 1 (m)	sensor 2	sensor 2 (m)	sensor 3	sensor 3 (m)	rata2 H sebelum breakwater	H sesudah breakwater
4	0.04	2	0.02	2	0.02	0.03	0.02
4	0.04	2	0.02	1	0.01	0.03	0.01
3	0.03	1	0.01	1	0.01	0.02	0.01
8	0.08	2	0.02	1	0.01	0.05	0.01
4	0.04	2	0.02	0	0	0.03	0
2	0.02	2	0.02	0	0	0.02	0
4	0.04	3	0.03	1	0.01	0.035	0.01
4	0.04	6	0.06	1	0.01	0.05	0.01
4	0.04	1	0.01	1	0.01	0.025	0.01
2	0.02	1	0.01	1	0.01	0.015	0.01
4	0.04	1	0.01	2	0.02	0.025	0.02
4	0.04	1	0.01	2	0.02	0.025	0.02
4	0.04	2	0.02	2	0.02	0.03	0.02
3	0.03	4	0.04	1	0.01	0.035	0.01
7	0.07	2	0.02	1	0.01	0.045	0.01
4	0.04	2	0.02	1	0.01	0.03	0.01
7	0.07	3	0.03	1	0.01	0.05	0.01
4	0.04	3	0.03	1	0.01	0.035	0.01
4	0.04	2	0.02	1	0.01	0.03	0.01
4	0.04	4	0.04	2	0.02	0.04	0.02
5	0.05	7	0.07	3	0.03	0.06	0.03
4	0.04	5	0.05	1	0.01	0.045	0.01
6	0.06	3	0.03	5	0.05	0.045	0.05
7	0.07	2	0.02	2	0.02	0.045	0.02
4	0.04	2	0.02	1	0.01	0.03	0.01



d=15							
T=0.8							
sensor 1	sensor 1 (m)	sensor 2	sensor 2 (m)	sensor 3	sensor 3 (m)	rata2 H sebelum breakwater	H sesudah breakwater
4	0.04	3	0.03	0	0	0.035	0
4	0.04	2	0.02	0	0	0.03	0
4	0.04	2	0.02	0	0	0.03	0
4	0.04	2	0.02	0	0	0.03	0
4	0.04	1	0.01	0	0	0.025	0
4	0.04	3	0.03	1	0.01	0.035	0.01
5	0.05	2	0.02	0	0	0.035	0
3	0.03	1	0.01	1	0.01	0.02	0.01
5	0.05	2	0.02	0	0	0.035	0
4	0.04	1	0.01	1	0.01	0.025	0.01
3	0.03	2	0.02	1	0.01	0.025	0.01
4	0.04	4	0.04	1	0.01	0.04	0.01
5	0.05	2	0.02	1	0.01	0.035	0.01
4	0.04	8	0.08	0	0	0.06	0
4	0.04	2	0.02	1	0.01	0.03	0.01
4	0.04	1	0.01	1	0.01	0.025	0.01
4	0.04	2	0.02	1	0.01	0.03	0.01
3	0.03	4	0.04	1	0.01	0.035	0.01
4	0.04	2	0.02	2	0.02	0.03	0.02
3	0.03	2	0.02	1	0.01	0.025	0.01
3	0.03	1	0.01	1	0.01	0.02	0.01
5	0.05	5	0.05	0	0	0.05	0
4	0.04	4	0.04	1	0.01	0.04	0.01
7	0.07	3	0.03	2	0.02	0.05	0.02
3	0.03	1	0.01	0	0	0.02	0

### Skenario IV

d=17							
T=1							
sensor 1	sensor 1 (m)	sensor 2	sensor 2 (m)	sensor 3	sensor 3 (m)	rata2 H sebelum breakwater	H sesudah breakwater
3	0.03	4	0.04	2	0.02	0.035	0.02
5	0.05	4	0.04	1	0.01	0.045	0.01
5	0.05	4	0.04	1	0.01	0.045	0.01
3	0.03	4	0.04	2	0.02	0.035	0.02
4	0.04	5	0.05	2	0.02	0.045	0.02
5	0.05	6	0.06	2	0.02	0.055	0.02
4	0.04	4	0.04	1	0.01	0.04	0.01
4	0.04	6	0.06	1	0.01	0.05	0.01
5	0.05	6	0.06	3	0.03	0.055	0.03
5	0.05	10	0.1	2	0.02	0.075	0.02
4	0.04	4	0.04	2	0.02	0.04	0.02
5	0.05	8	0.08	2	0.02	0.065	0.02
4	0.04	3	0.03	1	0.01	0.035	0.01
4	0.04	5	0.05	2	0.02	0.045	0.02
4	0.04	5	0.05	1	0.01	0.045	0.01
5	0.05	9	0.09	1	0.01	0.07	0.01
4	0.04	4	0.04	2	0.02	0.04	0.02
5	0.05	4	0.04	2	0.02	0.045	0.02
3	0.03	6	0.06	1	0.01	0.045	0.01
4	0.04	2	0.02	1	0.01	0.03	0.01
4	0.04	7	0.07	4	0.04	0.055	0.04
4	0.04	5	0.05	1	0.01	0.045	0.01
3	0.03	8	0.08	1	0.01	0.055	0.01
4	0.04	4	0.04	1	0.01	0.04	0.01
6	0.06	5	0.05	1	0.01	0.055	0.01

d=17							
T=0.9							
sensor 1	sensor 1 (m)	sensor 2	sensor 2 (m)	sensor 3	sensor 3 (m)	rata2 H sebelum breakwater	H sesudah breakwater
4	0.04	2	0.02	1	0.01	0.03	0.01
5	0.05	9	0.09	1	0.01	0.07	0.01
5	0.05	3	0.03	1	0.01	0.04	0.01
4	0.04	4	0.04	1	0.01	0.04	0.01
4	0.04	5	0.05	1	0.01	0.045	0.01
4	0.04	3	0.03	1	0.01	0.035	0.01
4	0.04	4	0.04	2	0.02	0.04	0.02
5	0.05	10	0.1	1	0.01	0.075	0.01
5	0.05	7	0.07	2	0.02	0.06	0.02
4	0.04	7	0.07	1	0.01	0.055	0.01
5	0.05	8	0.08	2	0.02	0.065	0.02
3	0.03	6	0.06	1	0.01	0.045	0.01
4	0.04	5	0.05	2	0.02	0.045	0.02
3	0.03	8	0.08	1	0.01	0.055	0.01
6	0.06	3	0.03	2	0.02	0.045	0.02
3	0.03	5	0.05	3	0.03	0.04	0.03
4	0.04	9	0.09	2	0.02	0.065	0.02
3	0.03	7	0.07	5	0.05	0.05	0.05
1	0.01	6	0.06	2	0.02	0.035	0.02
1	0.01	4	0.04	1	0.01	0.025	0.01
6	0.06	6	0.06	1	0.01	0.06	0.01
9	0.09	4	0.04	1	0.01	0.065	0.01
5	0.05	8	0.08	3	0.03	0.065	0.03
5	0.05	6	0.06	2	0.02	0.055	0.02
5	0.05	3	0.03	2	0.02	0.04	0.02
d=17							
T=0.8							
sensor 1	sensor 1 (m)	sensor 2	sensor 2 (m)	sensor 3	sensor 3 (m)	rata2 H sebelum breakwater	H sesudah breakwater
5	0.05	4	0.04	3	0.03	0.045	0.03
5	0.05	4	0.04	1	0.01	0.045	0.01
6	0.06	3	0.03	1	0.01	0.045	0.01
7	0.07	6	0.06	3	0.03	0.065	0.03
5	0.05	4	0.04	4	0.04	0.045	0.04
5	0.05	9	0.09	1	0.01	0.07	0.01
4	0.04	3	0.03	1	0.01	0.035	0.01
6	0.06	3	0.03	3	0.03	0.045	0.03
5	0.05	4	0.04	3	0.03	0.045	0.03
5	0.05	8	0.08	3	0.03	0.065	0.03
5	0.05	2	0.02	2	0.02	0.035	0.02
7	0.07	5	0.05	4	0.04	0.06	0.04
7	0.07	7	0.07	1	0.01	0.07	0.01
6	0.06	3	0.03	2	0.02	0.045	0.02
6	0.06	4	0.04	2	0.02	0.05	0.02
5	0.05	2	0.02	2	0.02	0.035	0.02
7	0.07	4	0.04	2	0.02	0.055	0.02
6	0.06	6	0.06	1	0.01	0.06	0.01
7	0.07	4	0.04	2	0.02	0.055	0.02
5	0.05	2	0.02	4	0.04	0.035	0.04
7	0.07	2	0.02	2	0.02	0.045	0.02
7	0.07	4	0.04	3	0.03	0.055	0.03
11	0.11	4	0.04	4	0.04	0.075	0.04
7	0.07	6	0.06	4	0.04	0.065	0.04
7	0.07	5	0.05	4	0.04	0.06	0.04

**Lampiran 2. Perhitungan Gelombang**

KETERANGAN				T	g	Hs	Hmax	Hmin
SEBELUM <i>BREAKWATER</i>	SKENARIO	<i>BREAKWATER</i>	d					
	SEBELUM <i>BREAKWATER</i>	SKENARIO I	tetrapod	0.15	1	9.81	0.0338	0.06
0.15				0.9	9.81	0.0272	0.04	0.015
0.15				0.8	9.81	0.0366	0.05	0.02
SKENARIO II		tetrapod	0.17	1	9.81	0.0484	0.095	0.03
			0.17	0.9	9.81	0.0478	0.09	0.03
			0.17	0.8	9.81	0.046	0.065	0.03
SKENARIO III		dolos	0.15	1	9.81	0.0326	0.055	0.02
			0.15	0.9	9.81	0.035	0.06	0.015
			0.15	0.8	9.81	0.0326	0.06	0.02
SKENARIO IV		dolos	0.17	1	9.81	0.0476	0.075	0.03
			0.17	0.9	9.81	0.0498	0.075	0.025
			0.17	0.8	9.81	0.0522	0.075	0.035
SESUDAH <i>BREAKWATER</i>	SKENARIO I	tetrapod	0.15	1	9.81	0.0156	0.05	0
			0.15	0.9	9.81	0.0104	0.02	0
			0.15	0.8	9.81	0.0048	0.02	0
	SKENARIO II	tetrapod	0.17	1	9.81	0.01	0.02	0
			0.17	0.9	9.81	0.0148	0.07	0
			0.17	0.8	9.81	0.0244	0.08	0
	SKENARIO III	dolos	0.15	1	9.81	0.0132	0.03	0
			0.15	0.9	9.81	0.014	0.05	0
			0.15	0.8	9.81	0.0068	0.02	0
	SKENARIO IV	dolos	0.17	1	9.81	0.016	0.04	0.01
			0.17	0.9	9.81	0.0168	0.05	0.01
			0.17	0.8	9.81	0.0248	0.04	0.01

### Lampiran 3. Perhitungan Panjang Gelombang dan Cepat Rambat Gelombang

KETERANGAN			T	L0 (meter)	d/L0	d/L	Ks	Klasifikasi Perairan	L	C
SKENARIO	d	1.56T <sup>2</sup>								
SEBELUM BREAKWATER	SKENARIO I	0.15	1	1.56	0.096154	0.137627	0.9358	Transisi	1.089904	1.09087
		0.15	0.9	1.2636	0.118708	0.157032	0.921	Transisi	0.955221	1.062223
		0.15	0.8	0.9984	0.15024	0.183502	0.913	Transisi	0.817432	1.022642
	SKENARIO II	0.17	1	1.56	0.108974	0.148728	0.92602	Transisi	1.143027	1.143938
		0.17	0.9	1.2636	0.134536	0.17038	0.916	Transisi	0.997768	1.109615
		0.17	0.8	0.9984	0.170272	0.202058	0.913	Transisi	0.841344	1.066287
	SKENARIO III	0.15	1	1.56	0.096154	0.137627	0.9358	Transisi	1.089904	1.09087
		0.15	0.9	1.2636	0.118708	0.157032	0.921	Transisi	0.955221	1.062223
		0.15	0.8	0.9984	0.15024	0.183502	0.913	Transisi	0.817432	1.022642
	SKENARIO IV	0.17	1	1.56	0.108974	0.148728	0.92602	Transisi	1.143027	1.143938
		0.17	0.9	1.2636	0.134536	0.17038	0.916	Transisi	0.997768	1.109615
		0.17	0.8	0.9984	0.170272	0.202058	0.913	Transisi	0.841344	1.066287
SESUDAH BREAKWATER	SKENARIO I	0.15	1	1.56	0.096154	0.137627	0.9358	Transisi	1.089904	1.09087
		0.15	0.9	1.2636	0.118708	0.157032	0.921	Transisi	0.955221	1.062223
		0.15	0.8	0.9984	0.15024	0.183502	0.913	Transisi	0.817432	1.022642
	SKENARIO II	0.17	1	1.56	0.108974	0.148728	0.92602	Transisi	1.143027	1.143938
		0.17	0.9	1.2636	0.134536	0.17038	0.916	Transisi	0.997768	1.109615
		0.17	0.8	0.9984	0.170272	0.202058	0.913	Transisi	0.841344	1.066287
	SKENARIO III	0.15	1	1.56	0.096154	0.137627	0.9358	Transisi	1.089904	1.09087
		0.15	0.9	1.2636	0.118708	0.157032	0.921	Transisi	0.955221	1.062223
		0.15	0.8	0.9984	0.15024	0.183502	0.913	Transisi	0.817432	1.022642
	SKENARIO IV	0.17	1	1.56	0.108974	0.148728	0.92602	Transisi	1.143027	1.143938
		0.17	0.9	1.2636	0.134536	0.17038	0.916	Transisi	0.997768	1.109615
		0.17	0.8	0.9984	0.170272	0.202058	0.913	Transisi	0.841344	1.066287

**Lampiran 4.** Perhitungan Koefisien Refleksi, Koefisien Transmisi, dan Kecuraman Gelombang

SKENARIO	d	T	H(max)i	H(min)i	Hi	Hr	Kr	Rata-rata Kr	Hi/L	Rata-rata Hi/L
SKENARIO I	0.15	1	0.08	0.01	0.045	0.035	0.7777778	0.703703704	0.041288	0.036464907
	0.15	0.9	0.05	0.01	0.03	0.02	0.6666667		0.031406	
	0.15	0.8	0.05	0.01	0.03	0.02	0.6666667		0.0367	
SKENARIO II	0.17	1	0.15	0.02	0.085	0.065	0.7647059	0.807282913	0.074364	0.067983075
	0.17	0.9	0.13	0.01	0.07	0.06	0.8571429		0.070157	
	0.17	0.8	0.09	0.01	0.05	0.04	0.8		0.059429	
SKENARIO III	0.15	1	0.08	0.01	0.045	0.035	0.7777778	0.768518519	0.041288	0.046071222
	0.15	0.9	0.07	0.01	0.04	0.03	0.75		0.041875	
	0.15	0.8	0.08	0.01	0.045	0.035	0.7777778		0.05505	
SKENARIO IV	0.17	1	0.1	0.02	0.06	0.04	0.6666667	0.656565657	0.052492	0.05933266
	0.17	0.9	0.1	0.02	0.06	0.04	0.6666667		0.060134	
	0.17	0.8	0.09	0.02	0.055	0.035	0.6363636		0.065372	

SKENARIO	d	T	H(max)i	H(min)i	Hi	Ht	Kt	Rata-rata Kt	Hi/L	Rata-rata Hi/L
SKENARIO 1	0.15	1	0.05	0	0.045	0.025	0.3822222	0.265185185	0.041288	0.036464907
	0.15	0.9	0.02	0	0.03	0.01	0.16		0.031406	
	0.15	0.8	0.02	0	0.03	0.01	0.2533333		0.0367	
SKENARIO 2	0.17	1	0.02	0	0.085	0.01	0.0588235	0.336369748	0.074364	0.067983075
	0.17	0.9	0.07	0	0.07	0.035	0.3942857		0.070157	
	0.17	0.8	0.08	0	0.05	0.04	0.556		0.059429	
SKENARIO 3	0.15	1	0.03	0	0.045	0.015	0.1866667	0.261111111	0.041288	0.046071222
	0.15	0.9	0.05	0	0.04	0.025	0.45		0.041875	
	0.15	0.8	0.02	0	0.045	0.01	0.1466667		0.05505	
SKENARIO 4	0.17	1	0.04	0.01	0.06	0.015	0.2	0.204949495	0.052492	0.05933266
	0.17	0.9	0.05	0.01	0.06	0.02	0.2766667		0.060134	
	0.17	0.8	0.04	0.01	0.055	0.015	0.1381818		0.065372	

**Lampiran 5.** Dokumentasi Penelitian di Laboratorium Hidrolika Pantai



Pengambilan data dengan *breakwater* tetrapod pada  $d=17$  cm di *wave flume* dengan  $T=1$  s



Pengambilan data dengan *breakwater* tetrapod pada  $d=17$  cm di *wave flume* dengan  $T=0.8$  s



Model fisik *breakwater* tetrapod yang diujikan pada *wave flume*



Gelombang yang menjaral di *wave flume*



Sensor ultrasonik yang dipasang pada *wave flume*



Pengambilan data dengan *breakwater* dolos pada  $d=15$  cm di *wave flume* dengan  $T=0.8$  s



Gelombang yang menjalar mengenai *breakwater* dolos



Pengambilan data dengan *breakwater* dolos pada  $d=17$  cm di *wave flume* dengan  $T=0.9$  s