

Additional file 1: Table S1 Tsunami heights on the Sanriku coast reported by Iki (1897) and computed from the 6 models.

No.	Location	in Japanese	Longitude	Latitude	Iki height (m)	2011 (L200 km)	2011 (L150 km)	1896 inversion	1896 final	uniform 3.5–7 km	uniform 0–3.5 km
1	Shirogane	白銀	141.5415	40.5238	3.05	4.26	3.28	2.47	2.32	2.16	2.02
2	Sameminato	鮫港	141.5542	40.5306	3.05	4.15	3.16	2.23	2.14	1.81	1.86
3	Kofunado	小舟渡	141.6739	40.4535	6.1	5.48	5.61	6.82	5.97	5.99	3.87
4	Taneichi	種市	141.7205	40.4079	9.14	5.57	6.14	6.80	6.01	6.15	4.35
5	Shukunohe	宿ノ戸	141.7525	40.3696	10.67	5.31	6.17	8.60	7.71	7.83	5.34
6	Yagi	八木	141.7667	40.3456	10.67	4.82	5.17	5.69	4.88	4.92	3.94
7	Okonai	小子内	141.7699	40.3365	12.19	9.00	8.25	7.80	6.99	7.08	4.82
8	Shiromae	白前	141.8228	40.2516	18.9	8.91	9.28	14.36	13.27	12.33	10.55
9	Shimomugyo	下麦生	141.8315	40.2239	8.53	5.37	5.75	14.12	13.63	13.22	7.99
10	Oosaki	大崎	141.7967	40.2053	7.62	5.39	6.01	4.63	4.33	4.21	2.66
11	Kosode	小袖	141.8494	40.1680	13.72	6.53	6.73	10.70	10.57	9.53	7.19
12	Kuki	久喜	141.8453	40.1336	12.19	7.82	8.21	10.09	9.68	7.92	5.91
13	Tamagawa	玉川	141.8315	40.0801	18.29	7.76	8.44	7.93	7.46	6.61	6.63
14	Horiuchi	堀内	141.8601	40.0527	12.19	10.33	11.20	9.33	10.23	8.66	6.18
15	Ootanabe	太田名部	141.9051	40.0093	15.24	15.03	16.01	12.91	13.44	13.04	10.03
16	Aketo	明戸	141.9431	39.9454	12.19	14.34	15.25	11.06	12.74	12.55	10.35
17	Raga	羅賀	141.9396	39.9389	22.86	20.46	21.56	15.28	17.70	17.54	13.81
18	Omoto	小本	141.9734	39.8468	12.19	19.30	19.10	11.83	15.53	15.89	11.58
19	Taro	田老	141.9724	39.7351	14.63	13.69	12.65	9.16	11.06	11.14	7.69
20	Oosawa	大沢	141.9705	39.6616	10.06	13.14	11.02	8.42	11.35	11.59	9.03
21	Kuwagasaki	鍬ヶ崎	141.9682	39.6447	9.14	4.77	4.37	2.80	3.76	3.35	2.95
22	Miyako	宮古	141.9609	39.6409	4.57	3.10	1.86	1.16	1.72	1.32	1.06
23	Sokei	磯鷄	141.9637	39.6299	6.1	6.23	5.60	4.26	5.09	5.24	4.34
24	Takahama	高浜	141.9558	39.6061	3.05	4.88	3.63	3.23	4.03	3.35	2.94
25	Kanehama	金浜	141.9445	39.5966	3.96	5.33	3.70	2.87	3.89	2.89	1.91
26	Shirahama	白浜	141.9783	39.6106	8.53	5.52	4.09	3.70	4.90	4.55	2.81
27	Aramaki	荒巻	142.0223	39.6158	12.19	22.67	19.35	11.40	17.57	18.44	14.70
28	Otobe	音部	142.0282	39.5987	9.14	17.72	15.26	10.42	14.06	14.46	11.14
29	Omoe	重茂	142.0276	39.5747	10.97	17.39	13.36	10.39	13.21	13.39	9.31
30	Aneyoshi	姉吉	142.0520	39.5328	18.9	19.52	15.92	13.46	19.50	19.76	17.21
31	Chikei	千鷄	142.0339	39.5300	17.07	22.50	17.75	11.40	16.48	16.39	11.28
32	Oosawa	大沢	141.9758	39.4829	3.96	5.15	4.05	2.80	3.78	3.82	2.99
33	Yamada	山田	141.9534	39.4671	5.49	6.96	4.79	3.79	4.81	4.61	3.05
34	Orikasa	織笠	141.9624	39.4510	3.35	6.27	4.41	3.10	3.95	3.38	2.30
35	Ooura	大浦	142.0043	39.4477	4.88	5.79	4.73	3.05	4.59	4.15	3.09
36	Koyadori	小谷鳥	142.0109	39.4272	15.24	18.25	13.17	8.06	12.04	12.08	10.04
37	Tanohama	田ノ浜	141.9855	39.4189	9.14	11.93	7.94	5.34	8.14	8.01	5.82
38	Funakoshi	船越	141.9771	39.4274	15.24	13.71	9.25	7.23	9.68	8.97	6.27
39	Namiita	浪板	141.9380	39.3835	10.67	15.44	10.85	6.74	8.73	8.71	7.38
40	Kirikiri	吉里吉里	141.9441	39.3723	10.67	14.36	8.24	6.20	9.43	8.44	5.74
41	Ando	安渡	141.9180	39.3581	4.27	7.64	5.24	3.49	5.08	4.10	2.38
42	Ootsuchi	大槌	141.9079	39.3572	2.74	6.01	4.25	3.06	4.45	3.74	2.55
43	Nebama	根浜	141.9038	39.3262	5.49	11.45	7.26	5.00	7.03	5.77	3.65
44	Hakozaki	箱崎	141.9154	39.3236	5.79	7.88	5.44	3.35	5.30	4.53	3.80
45	Shirahama	白浜	141.9450	39.3294	8.53	13.34	7.02	5.08	7.71	7.56	6.09
46	Kariyado	仮宿	141.9455	39.3160	17.68	24.05	11.29	6.83	15.00	14.18	10.83
47	Ryouishi	両石	141.8908	39.3086	11.28	22.93	13.67	8.68	14.31	11.29	6.55
48	Kamaishi	釜石	141.8884	39.2740	4.57	8.96	6.27	4.20	5.06	4.76	4.28
49	Kamaishi	釜石	141.8884	39.2740	8.23	8.96	6.27	4.20	5.06	4.76	4.28
50	Ureishi	嬉石	141.8868	39.2653	4.27	7.08	4.55	2.99	4.40	3.39	2.89
51	Heita	平田	141.8908	39.2462	5.18	9.07	5.42	3.66	5.13	4.62	4.03
52	Hongo	本郷	141.8871	39.2089	14.02	22.07	10.40	8.50	16.31	15.43	11.71
53	Koshirohama	小白浜	141.8674	39.2068	16.46	21.45	12.06	7.23	11.85	10.06	6.45
54	Arakawa	荒川	141.8659	39.1921	10.67	16.26	9.08	6.01	9.24	7.54	5.59
55	Yoshihama	吉浜	141.8358	39.1470	24.38	21.72	14.27	10.55	14.85	13.26	9.47
56	Urahama	浦浜	141.8143	39.1150	9.75	14.61	8.83	5.38	8.94	7.77	5.17
57	Okira	越喜来	141.8091	39.1026	10.36	23.47	7.93	5.21	15.04	11.44	6.87
58	Koishihama	小石浜	141.8213	39.0767	10.36	15.05	7.55	4.95	9.58	7.66	5.57
59	Shirahama	白浜	141.8133	39.0574	21.95	30.68	17.52	10.69	19.22	15.75	12.55
60	Ryori	綾里	141.7965	39.0436	10.67	14.18	9.63	6.71	10.76	9.69	8.07
61	Akazaki	赤崎	141.7386	39.0649	3.66	6.60	4.31	2.71	4.24	3.35	2.74
62	Ofunato	大船渡	141.7234	39.0616	3.35	5.01	3.36	2.23	3.15	2.55	2.08
63	Shimofunato	下船渡	141.7224	39.0387	5.49	7.89	3.93	2.02	4.77	3.14	1.99
64	MassakiHosoura	末崎細浦	141.7152	39.0158	6.71	8.66	3.73	1.55	3.90	2.49	1.62
65	Tadaide	唯出	141.7098	38.9850	10.67	14.81	8.95	5.22	10.41	8.56	5.55
66	Oonohama	大野浜	141.6969	38.9687	7.92	13.57	8.41	4.51	8.28	6.44	4.37
67	Tomarihama	泊浜	141.6912	38.9569	7.62	8.17	4.91	2.54	5.28	3.93	2.67
68	Mikkaichi	三日市	141.6839	38.9974	2.44	4.77	3.10	1.79	2.65	1.90	1.72
69	Kachikida	勝木田	141.6660	39.0059	2.74	5.40	3.33	1.84	3.35	2.34	1.59
70	Osabe	長部	141.6218	38.9923	3.35	5.67	3.99	2.25	3.96	3.14	1.85
71	Oosawa	大沢	141.6330	38.9626	6.1	5.97	4.39	2.55	4.37	3.55	3.25
72	Tadanokoshi	只越	141.6339	38.9304	8.53	16.35	10.04	5.62	9.10	8.03	5.10
73	Ishihama	石浜	141.6480	38.9122	8.53	14.70	11.01	5.41	10.27	8.86	6.12
74	Baba	馬場	141.6513	38.9021	9.75	19.49	13.93	5.80	12.88	10.32	8.47
75	Yadohama	宿浜	141.6385	38.9019	4.27	7.87	5.25	2.94	4.69	3.54	3.07
76	Nagasaki	長崎	141.6248	38.8551	6.71	9.25	6.69	2.97	5.85	4.23	3.02
77	Komagata	駒形	141.6176	38.8406	4.27	5.18	3.48	1.80	3.18	2.42	1.85
78	Urahama	浦浜	141.6141	38.8648	2.13	3.50	2.50	1.36	1.92	1.54	1.43
79	Tsurugasaki	鶴ヶ浦	141.6107	38.8868	4.27	6.72	4.20	1.72	4.16	3.15	2.09
80	Kajigasaki	梶ヶ崎	141.6037	38.8857	1.52	3.19	1.95	0.96	1.60	1.05	0.95
81	Katahama	片浜	141.5882	38.8745	2.13	3.57	2.26	1.17	1.99	1.39	1.19
82	Saichi	最知	141.5823	38.8533	2.44	4.13	2.75	1.51	1.98	1.59	1.36
83	Ootani	大谷	141.5750	38.8153	5.18	7.65	6.02	2.71	4.31	3.59	3.51
84	Hikadohama	日門浜	141.5547	38.8087	5.18	8.90	6.65	2.78	5.36	3.38	3.09
85	Oosawa	大沢	141.5294	38.7944	8.23	10.32	9.57	3.54	7.64	6.10	5.37
86	Nijuichihama	二十一浜	141.5195	38.7595	6.1	8.16	7.43	3.32	5.66	4.64	4.22

87	Kurauchi	蔵内	141.5286	38.7519	6.1	10.58	8.47	3.27	7.28	6.20	4.91
88	Minatohama	湊浜	141.5351	38.7400	6.71	8.93	7.22	2.31	5.63	4.00	2.90
89	Tanoura	田の浦	141.5439	38.7357	4.88	8.07	7.41	3.22	5.73	4.94	4.37
90	Irimae	伊里前	141.5220	38.7160	3.35	8.37	6.59	2.82	5.18	3.76	2.99
91	Hosoura	細浦	141.4983	38.6953	3.66	7.93	6.42	2.45	4.90	3.79	2.91
92	Shimizuham	清水浜	141.4908	38.6906	3.35	8.07	6.98	2.39	5.16	4.38	3.52
93	Hiraiso	平磯	141.4728	38.6792	3.96	5.54	4.52	2.03	3.42	2.39	2.55
94	Shizugawa	志津川	141.4504	38.6742	2.13	4.86	3.42	1.92	2.73	2.23	2.20
95	Hayashihama	林浜	141.4456	38.6678	1.83	3.85	2.84	1.39	2.03	1.66	2.02
96	Oritate	折立	141.4416	38.6476	2.74	6.10	4.26	2.18	3.53	2.78	2.63
97	Mizunohe	水戸辺	141.4545	38.6426	2.44	4.25	2.88	1.41	2.34	2.18	2.04
98	Tsunomiya	津ノ宮	141.4852	38.6415	3.96	5.97	4.55	1.87	3.57	2.85	2.32
99	Takihama	滝浜	141.4911	38.6419	3.96	7.73	6.02	1.69	4.46	3.62	3.34
100	Fujinohama	藤ノ浜	141.5026	38.6386	5.18	9.22	7.48	2.27	5.26	4.69	3.81
101	Nagashimizu	長清水	141.5094	38.6367	4.88	8.85	7.50	1.92	6.33	5.68	4.58
102	Kotaki	小滝	141.5266	38.6268	6.1	15.93	11.79	2.32	8.21	7.56	6.10
103	Ooyubi	大指	141.5204	38.6097	5.18	11.86	9.09	1.92	6.47	6.54	4.52
104	Koyubi	小指	141.5084	38.6041	4.57	12.43	9.23	2.17	7.34	7.45	5.12
105	Aikawa	相川	141.5015	38.6035	4.57	9.34	7.21	2.43	5.36	4.46	3.20
106	Oomuro	大室	141.4948	38.5921	3.96	8.41	6.06	1.49	3.83	3.68	2.68
107	Shirahama	白浜	141.4753	38.5858	2.74	4.24	4.05	1.36	2.98	2.32	2.16
108	Naburihama	名振浜	141.4948	38.5325	3.35	8.17	5.22	1.94	4.30	4.64	2.68
109	Myojinhama	明神浜	141.4821	38.5203	2.44	4.82	3.59	1.63	2.30	1.94	1.89
110	Okatsu	雄勝	141.4672	38.5187	3.05	7.05	4.83	2.18	3.31	2.76	2.53
111	Funado	舟戸	141.4666	38.5129	2.74	7.55	5.72	2.82	4.35	3.83	3.41
112	Karakuwa	唐桑	141.4789	38.5131	1.83	4.59	3.45	1.49	2.13	1.70	1.78
113	Wakehama	分浜	141.4895	38.4982	2.13	4.40	3.23	1.37	2.17	1.74	1.56
114	Namiita	浪板	141.4903	38.4887	2.44	8.42	6.32	1.76	3.95	4.91	2.88
115	Yubihama	指浜	141.4833	38.4712	2.74	6.09	3.81	2.11	2.40	3.49	2.21
116	Omaehama	御前浜	141.4754	38.4659	3.05	7.29	6.18	1.80	4.21	4.19	2.88
117	Onoura	尾浦	141.4938	38.4552	2.44	6.17	4.16	1.66	2.59	2.36	2.00
118	Takenoura	竹ノ浦	141.4896	38.4438	2.13	5.05	2.91	1.90	2.12	2.08	1.99
119	Ishihama	石浜	141.4606	38.4468	2.44	4.83	4.09	1.82	2.10	2.06	2.06
120	Onagawa	女川	141.4468	38.4455	2.74	7.04	5.84	2.55	3.78	3.61	3.23
121	Kojohama	小乗浜	141.4549	38.4381	1.83	3.89	3.28	1.46	1.90	1.43	1.59
122	Takashiro	高白	141.4628	38.4242	2.44	6.13	4.29	1.58	2.48	2.35	2.15
123	Yokoura	横浦	141.4696	38.4063	2.74	5.34	3.29	1.56	2.06	2.02	1.74
124	Nonohama	野々浜	141.4693	38.3943	3.05	5.70	4.74	1.83	2.92	2.64	2.42
125	Iigohama	飯子浜	141.4815	38.3985	2.74	5.89	3.06	1.56	2.21	2.02	1.85
126	Narahama	ナラ浜	141.5009	38.4023	3.35	9.36	6.70	1.98	3.77	4.61	3.23
127	Maeamiurahama	前網浦浜	141.5148	38.3928	3.05	11.89	8.30	2.49	3.55	5.61	2.97
128	Yoriiiso	寄磯	141.5252	38.3900	2.74	6.07	4.17	1.76	2.89	2.69	2.65
129	Maeamiurahama	前網	141.5164	38.3904	2.44	6.89	4.96	1.99	2.89	2.55	2.21
130	Samegaura	鮫力浦	141.4883	38.3824	3.05						
131	Tanigawa	谷川	141.4899	38.3671	3.35	9.35	6.63	2.80	3.97	3.58	3.28
132	Tomarihama	泊浜	141.5225	38.3566	6.1	8.71	6.03	1.75	2.64	3.23	2.21
133	Niiyamahama	新山	141.5262	38.3286	3.05	12.96	8.65	2.19	4.08	5.81	4.10
134	Yamadori	山雉	141.5256	38.2958	4.27	7.92	6.22	1.61	2.30	3.03	2.32
135	Ayukawa	鮎川	141.5083	38.2985	2.13	7.78	4.46	1.94	2.28	3.00	2.11
136	Obuchi	小淵	141.4704	38.3204	2.44	2.19	2.04	1.19	1.40	1.28	1.20
137	Ooharahama	大原浜	141.4742	38.3332	1.83	2.76	2.00	1.09	1.27	1.20	1.32
138	Koamikura	小網倉	141.4582	38.3514	2.13	3.08	2.61	1.48	1.52	1.80	1.64
139	Kitsunozaki	狐崎	141.4208	38.3507	0.61	2.21	1.71	0.58	0.90	0.90	0.81
140	Kitunozaki	狐崎	141.4208	38.3507	0.91	2.21	1.71	0.58	0.90	0.90	0.81
141	Oginohama	荻ノ浜	141.4478	38.3765	2.13	2.52	1.76	0.73	1.06	0.81	0.98
142	Momonoura	桃ノ浦	141.4315	38.3991	1.22	3.48	2.44	1.13	1.49	1.24	1.34
143	Hamagurihama	蛤浜	141.4096	38.4040	1.83	3.87	2.87	1.14	1.53	1.54	1.42
144	Watanoha	渡ノ波	141.3646	38.4128	1.52	2.17	1.49	0.81	0.95	0.72	0.85
	K					0.64	1.32	1.61	0.42	1.18	1.48
	K					0.48	1.44	1.37	1.91	1.40	1.40