



AMS

American Meteorological Society

Supplemental Material

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Supplemental Material to "Error characterization of significant wave heights in multi-decadal satellite altimeter product, model hindcast and in situ measurements, using triple collocation technique" by Dodet et al.

1 List of selected *in situ* platforms

The following table provides information on the *in situ* platforms selected for the study. The following parameters are provided

- Platform : Name of the platform as provided in the CMEMS INSTAC database
- Provider : Name of the institution operating the *in situ* platforms as provided in the CMEMS INSTAC database
- Starting date: year of first valid records after quality checks are applied
- Ending date: year of last valid records after quality checks are applied
- Data coverage: percentage of valid data over the recording period
- N records: number of valid records
- Maximum deviation: maximum deviation (in km) between the time-varying position and the median position
- Resolution: Resolution of Hs measurements (in m) computed as the mode of the distribution of Hs difference over the entire measurement time period. Note that the resolution has changed over time for some of the stations, which may result in a multimodal distribution, and for which the provided value corresponds to the most frequent resolution.

The abbreviations used for the institutions are detailed below:

- BP: British Petroleum Exploration and Production (UK)
- CMM: Centre de Météorologie Marine (France)

- CWB: Central Weather Bureau (CWB) (Taiwan)
- MEDS: Marine Environmental Data Section, Fisheries and Oceans Canada
- Marine Institute: Marine Institute (Ireland)
- Met Office: Met Office (UK)
- NDBC: National Data Buoy Center (NDBC) National Oceanic and Atmospheric Administration (NOAA) (US)
- NMI: Norwegian Meteorological Institute
- SIO: Scripps Institution of Oceanography (US)
- USACE U.S. Army Corps of Engineers (US)
- UW-APL University of Washington Applied Physics Laboratory (US)
- WHOI Woods Hole Oceanographic Institution (WHOI) (US)

Table 1: List of selected *in situ* data

Platform	Provider	Start (yyyy)	End (yyyy)	Coverage (%)	N records	Max. dev. (km)	Resolution (m)
42369	BP	2010	2017	15.63	25886	1	0.01
42392	BP	2010	2017	16.63	28546	0	0.01
42887	BP	2010	2017	17.51	25586	0	0.01
41101	CMM	2007	2012	99.80	38549	0	0.10
41300	CMM	2012	2016	73.48	19097	0	0.10
6100002	CMM	2007	2019	97.89	95844	0	0.10
C6S62	CWB	2012	2016	81.02	25050	0	0.10
C6V27	CWB	2012	2016	91.82	29447	0	0.10
44137	MEDS	1988	2019	77.87	171270	102	0.01
44138	MEDS	1988	2013	62.62	105663	1	0.01
44139	MEDS	1988	2019	73.01	154149	28	0.01
44140	MEDS	1990	2012	70.98	107167	108	0.01
44141	MEDS	1990	2017	79.64	162714	180	0.01
44142	MEDS	1990	2006	79.32	81177	8	0.01
46004	MEDS	1988	2019	82.52	193736	16	0.01
46036	MEDS	1987	2019	89.12	229626	1	0.01
46184	MEDS	1987	2019	87.59	215587	1	0.01
WEL411	MEDS	1999	2007	61.88	87420	1	0.01
WEL426	MEDS	2001	2004	11.66	4991	2	0.03
WEL436	MEDS	2002	2003	30.52	7984	0	0.03
WEL448	MEDS	2007	2016	93.49	154022	10	0.02
WEL449	MEDS	2003	2007	79.83	51129	0	0.01
62095	Marine Institute	2006	2019	90.18	94891	20	0.10
62001	MetOffice	1998	2019	94.33	50582	0	0.10

62029	MetOffice	1991	2019	94.79	183745	0	0.10
62081	MetOffice	1991	2019	90.02	189251	0	0.10
62105	MetOffice	1993	2017	86.30	164877	0	0.10
62163	MetOffice	1995	2019	95.90	180825	0	0.10
64045	MetOffice	1994	2019	92.52	185289	0	0.10
64046	MetOffice	1999	2019	84.14	133136	0	0.10
23095	N/A	2005	2016	60.00	3962	1741	0.50
23097	N/A	2005	2016	60.46	4805	59	0.50
23099	N/A	2005	2016	17.38	1595	568	0.50
23100	N/A	2005	2012	37.49	2984	117	0.50
23101	N/A	2005	2012	49.95	6439	0	0.50
23102	N/A	2006	2010	43.66	1439	1170	0.50
23167	N/A	2005	2008	77.80	2995	684	0.50
23168	N/A	2005	2008	22.11	749	4	0.50
23169	N/A	2005	2011	18.38	2398	57	0.50
23173	N/A	2006	2012	29.44	2818	1320	0.50
23174	N/A	2005	2008	82.29	2551	0	0.50
23455	N/A	2008	2011	20.96	454	209	0.50
23456	N/A	2008	2016	41.86	5209	2329	0.50
23460	N/A	2010	2016	65.52	7380	344	0.50
23494	N/A	2008	2016	66.37	5629	269	0.50
23499	N/A	2008	2013	33.39	438	514	0.50
3100231	N/A	2016	2019	93.67	1960	62	0.03
3100374	N/A	2016	2019	61.20	4539	11	0.01
31051	N/A	2004	2015	31.43	13270	476	0.10
31374	N/A	2011	2016	72.77	23167	217	0.10
31375	N/A	2011	2014	11.23	2633	208	0.10
41001	N/A	1976	2019	69.69	223423	20	0.10
4100300	N/A	2016	2019	95.52	12652	0	0.10
41010	N/A	1988	2019	89.21	281477	8	0.10
46089	N/A	2004	2019	80.83	98091	0	0.01
64071	N/A	2007	2009	94.44	12205	0	0.10
32302	NDBC	1986	1995	90.54	68943	0	0.10
41002	NDBC	1975	2019	76.89	247975	54	0.10
41006	NDBC	1982	1996	82.64	98053	0	0.10
41018	NDBC	1994	1996	72.30	8670	0	0.10
41040	NDBC	2005	2019	87.45	103032	4	0.01
41041	NDBC	2005	2019	96.94	111342	22	0.01
41043	NDBC	2007	2019	98.28	103294	7	0.02
41044	NDBC	2009	2019	96.27	83300	7	0.01
41046	NDBC	2007	2019	93.21	94604	251	0.01
41047	NDBC	2007	2019	88.52	89835	2	0.01
41048	NDBC	2007	2019	91.75	93506	10	0.01
41049	NDBC	2009	2019	97.49	85254	7	0.01
42001	NDBC	1976	2019	90.06	298556	3	0.10
42002	NDBC	1976	2019	93.58	305285	96	0.10

42003	NDBC	1977	2019	89.04	289830	27	0.10
42036	NDBC	1994	2019	88.42	183801	1	0.01
42038	NDBC	2004	2006	96.39	16452	1	0.01
42039	NDBC	1995	2019	92.61	183593	3	0.01
42041	NDBC	1999	2005	74.82	33562	0	0.01
42055	NDBC	2005	2019	91.43	101415	11	0.01
42056	NDBC	2005	2019	86.96	103613	13	0.01
42057	NDBC	2005	2019	70.92	80143	7	0.01
42058	NDBC	2006	2019	72.31	76985	42	0.01
42059	NDBC	2007	2019	79.86	81182	11	0.01
44004	NDBC	1977	2008	85.58	198259	6	0.10
44011	NDBC	1984	2019	76.91	225535	1	0.10
44066	NDBC	2009	2019	67.80	58191	1	0.01
46001	NDBC	1974	2019	92.84	330739	9	0.10
46002	NDBC	1975	2019	85.15	278011	9	0.10
46003	NDBC	1976	1999	88.73	140343	0	0.10
46005	NDBC	1976	2019	79.97	267381	3	0.10
46006	NDBC	1977	2019	71.86	234871	4	0.10
46035	NDBC	1985	2019	87.53	228651	5	0.10
46059	NDBC	1994	2019	78.82	162602	0	0.10
46066	NDBC	2000	2019	76.10	122506	0	0.02
46070	NDBC	2006	2017	80.10	60536	9	0.01
46073	NDBC	2005	2019	59.60	65853	0	0.01
46075	NDBC	2004	2019	92.64	139570	2	0.02
46078	NDBC	2004	2019	73.96	91018	28	0.01
46080	NDBC	2002	2019	63.96	82829	13	0.01
46085	NDBC	2007	2019	74.05	71737	2	0.01
51000	NDBC	2009	2019	95.43	78281	13	0.01
51001	NDBC	1981	2019	74.68	233435	110	0.10
51002	NDBC	1984	2019	83.86	238968	15	0.10
51003	NDBC	1984	2018	91.84	261267	17	0.10
51004	NDBC	1984	2019	85.09	242152	9	0.10
51028	NDBC	1997	2008	89.17	71302	3	0.01
51100	NDBC	2009	2015	88.17	26738	0	0.02
51101	NDBC	2008	2019	83.71	82016	18	0.01
GULLFAKSC	NMI	2017	2019	99.12	78208	0	0.01
HEIMDAL	NMI	2017	2019	99.47	71648	0	0.01
OSEBERG-A	NMI	2017	2019	99.65	77643	0	0.01
SLEIPNER-A	NMI	2017	2019	99.47	78224	0	0.01
NORTHGMT	Oil Gas	2014	2019	99.10	276839	0	0.01
63105	Oil platform	2014	2019	97.16	24	0	0.10
63110	Oil platform	2011	2019	97.74	62003	0	0.10
63113	Oil platform	2011	2019	96.43	62369	0	0.10
42360	Petrobras	2010	2019	87.57	64904	23	0.08
ANASURIA	RWTE	2012	2015	88.55	147650	0	0.01
42099	Scripps	2007	2019	90.01	177151	1	0.01

42395	Shell	2015	2019	80.29	60342	3	0.02
42097	USACE	2016	2019	91.30	41766	0	0.01
46246	UW-APL	2010	2019	86.52	80221	0	0.01
32012	WHOI	2007	2018	91.30	82950	59	0.10
41060	WHOI	2011	2018	73.17	43638	107	0.01
44024	WHOI	2004	2017	76.03	80213	1	0.10