

PS-InSAR analysis of Sentinel-1 data for detecting ground motion in temperate oceanic climate zones: a case study in the Republic of Ireland

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Supplementary material

Table S1: Sentinel-1A/B images used for AOI-1. Descending track n° 96. The perpendicular baseline is calculated in respect to the reference date (in bold).

Image n°	Acquisition date	Perpendicular baseline (m)
1	04/05/2015	112.43
2	16/05/2015	-24.8705
3	09/06/2015	-35.767
4	03/07/2015	77.1755
5	15/07/2015	-34.4214
6	27/07/2015	-21.5258
7	08/08/2015	-88.702
8	20/08/2015	-6.19497
9	01/09/2015	-7.29564
10	13/09/2015	-9.72996
11	25/09/2015	-40.3839
12	07/10/2015	-86.5183
13	19/10/2015	-55.0287
14	31/10/2015	18.6685
15	12/11/2015	-5.74177
16	24/11/2015	35.5622
17	06/12/2015	21.5316
18	18/12/2015	-77.5842
19	30/12/2015	21.9567
20	11/01/2016	73.3488
21	23/01/2016	39.2786
22	04/02/2016	10.6061
23	16/02/2016	-70.6966
24	28/02/2016	-45.4398
25	11/03/2016	-23.1001
26	23/03/2016	49.2929
27	04/04/2016	26.1946
28	16/04/2016	-60.8741
29	28/04/2016	-70.1117
30	10/05/2016	-40.7066
31	22/05/2016	32.3598
32	03/06/2016	31.6325
33	15/06/2016	-21.302

34	09/07/2016	-44.3711
35	21/07/2016	24.0798
36	02/08/2016	49.5054
37	14/08/2016	-46.6503
38	26/08/2016	-94.9245
39	07/09/2016	-82.2349
40	19/09/2016	-16.2421
41	01/10/2016	80.623
42	07/10/2016	-26.1752
43	13/10/2016	-27.3037
44	19/10/2016	-63.7661
45	25/10/2016	-40.9045
46	31/10/2016	72.4123
47	06/11/2016	-16.6485
48	12/11/2016	-13.5807
49	18/11/2016	-8.46761
50	24/11/2016	-67.4847
51	30/11/2016	78.5071
52	06/12/2016	-14.0471
53	12/12/2016	50.5075
54	18/12/2016	37.8115
55	24/12/2016	-7.54097
56	30/12/2016	110.179
57	05/01/2017	-83.6377
58	11/01/2017	86.3499
59	17/01/2017	-48.3789
60	23/01/2017	-45.5042
61	29/01/2017	56.4953
62	04/02/2017	-74.8881
63	16/02/2017	-32.4562
64	22/02/2017	-32.6461
65	28/02/2017	0
66	06/03/2017	-134.133
67	12/03/2017	56.5142
68	18/03/2017	-79.3864
69	24/03/2017	-47.3195
70	30/03/2017	-3.11492
71	05/04/2017	-55.8488
72	11/04/2017	25.4073
73	17/04/2017	-76.9661
74	29/04/2017	11.0811
75	05/05/2017	-39.5138
76	11/05/2017	34.5995
77	17/05/2017	-44.1722
78	23/05/2017	49.3835
79	29/05/2017	-99.5145

80	04/06/2017	-67.7144
81	10/06/2017	49.0357
82	16/06/2017	-71.5059
83	22/06/2017	47.8197
84	28/06/2017	-71.5612
85	04/07/2017	-64.7897
86	10/07/2017	25.701
87	16/07/2017	-103.801
88	22/07/2017	19.9249
89	28/07/2017	-16.7652
90	03/08/2017	-18.5799
91	09/08/2017	31.0668
92	15/08/2017	-127.418
93	21/08/2017	-28.2876
94	27/08/2017	-49.4938
95	02/09/2017	-23.9055
96	08/09/2017	18.8197
97	14/09/2017	-56.1282
98	20/09/2017	44.7638
99	26/09/2017	-66.0394
100	02/10/2017	-18.1279
101	08/10/2017	1.51267
102	14/10/2017	-69.8183
103	20/10/2017	25.7824
104	26/10/2017	-33.5794
105	01/11/2017	16.3065
106	07/11/2017	20.1635
107	13/11/2017	-36.9044
108	25/11/2017	-44.0607
109	01/12/2017	16.7557
110	07/12/2017	-50.6689
111	13/12/2017	-10.3605
112	19/12/2017	78.8551
113	25/12/2017	-10.9649
114	31/12/2017	25.0104
115	06/01/2018	18.1807
116	12/01/2018	-10.0085
117	18/01/2018	78.398
118	24/01/2018	-75.7563
119	30/01/2018	26.1006
120	05/02/2018	-9.24539
121	11/02/2018	31.0007
122	17/02/2018	66.99
123	23/02/2018	-134.925
124	01/03/2018	49.3965

Table S2: Sentinel-1A/B images used for AOI-1. Ascending track n° 74. The perpendicular baseline is calculated in respect to the reference date (in bold).

Image n°	Acquisition date	Perpendicular baseline (m)
1	20/04/2015	35.3561
2	02/05/2015	-22.2666
3	14/05/2015	18.5805
4	26/05/2015	-108.232
5	07/06/2015	-91.6407
6	19/06/2015	4.51999
7	13/07/2015	14.0724
8	25/07/2015	-129.35
9	06/08/2015	-88.2659
10	18/08/2015	-40.2259
11	30/08/2015	41.6203
12	11/09/2015	2.47965
13	23/09/2015	-69.6041
14	05/10/2015	-108.595
15	17/10/2015	-51.6506
16	29/10/2015	68.4652
17	10/11/2015	117.317
18	22/11/2015	21.4647
19	04/12/2015	-37.0924
20	16/12/2015	-17.0032
21	28/12/2015	11.8333
22	09/01/2016	89.1908
23	21/01/2016	49.3981
24	02/02/2016	-11.1864
25	14/02/2016	-57.8129
26	26/02/2016	-38.0763
27	09/03/2016	53.2961
28	21/03/2016	-6.06565
29	02/04/2016	-76.6995
30	14/04/2016	-115.786
31	26/04/2016	-30.799
32	08/05/2016	-46.0522
33	20/05/2016	50.5568
34	01/06/2016	4.27851
35	13/06/2016	-78.4286
36	07/07/2016	-27.0948
37	19/07/2016	32.8008
38	31/07/2016	-6.96396
39	12/08/2016	-70.0281
40	27/01/2017	40.9496
41	14/02/2017	-13.0069
42	20/02/2017	-25.6065
43	27/05/2017	10.2003

44	02/06/2017	-58.6791
45	08/06/2017	0
46	14/06/2017	-55.9496
47	20/06/2017	-24.841
48	26/06/2017	32.2194
49	02/07/2017	-40.4539
50	08/07/2017	56.3031
51	14/07/2017	-49.8765
52	20/07/2017	-42.7094
53	26/07/2017	-32.7185
54	01/08/2017	-36.8459
55	07/08/2017	38.5097
56	13/08/2017	-71.4477
57	19/08/2017	-16.9
58	25/08/2017	17.3046
59	31/08/2017	-57.4319
60	06/09/2017	86.8067
61	12/09/2017	-90.9003
62	18/09/2017	10.9889
63	24/09/2017	-38.1594
64	30/09/2017	-101.549
65	06/10/2017	45.3924
66	12/10/2017	-116.596
67	18/10/2017	64.2881
68	24/10/2017	-57.6225
69	30/10/2017	-49.0724
70	05/11/2017	67.0978
71	11/11/2017	-31.3555
72	17/11/2017	62.0041
73	23/11/2017	-49.4392
74	05/12/2017	111
75	17/12/2017	119.971
76	23/12/2017	-22.8972
77	29/12/2017	104.293
78	04/01/2018	46.5335
79	10/01/2018	-17.7609
80	16/01/2018	76.8057
81	22/01/2018	-48.0234
82	28/01/2018	52.9649
83	03/02/2018	23.3396
84	09/02/2018	20.0036
85	15/02/2018	49.832
86	21/02/2018	-45.3657
87	27/02/2018	18.8071
88	05/03/2018	-46.7599

Table S3: ENVISAT images used for AOI-1. Descending track n° 352. The perpendicular baseline is calculated in respect to the reference date (in bold).

Image n°	Acquisition date	Perpendicular baseline (m)
1	03/01/2003	-245.419
2	07/02/2003	125.941
3	27/06/2003	-401.526
4	01/08/2003	-386.379
5	14/11/2003	-836.17
6	27/02/2004	-576.77
7	02/04/2004	822.289
8	07/05/2004	-846.027
9	20/08/2004	-157.037
10	29/10/2004	156.733
11	11/02/2005	-295.646
12	22/04/2005	186.886
13	09/09/2005	-225.358
14	18/11/2005	331.473
15	03/03/2006	132.693
16	16/06/2006	0
17	29/09/2006	-767.431
18	12/01/2007	689.596
19	27/04/2007	-239.56
20	28/12/2007	-356.035
21	25/07/2008	138.432
22	20/02/2009	-79.6245
23	01/05/2009	-121.642
24	18/09/2009	478.52
25	12/03/2010	-124.307
26	25/06/2010	26.326
27	30/07/2010	-332.555
28	08/10/2010	470.46

Table S4: Sentinel-1A/B images used for AOI-2. Descending track n° 125. The perpendicular baseline is calculated in respect to the reference date (in bold).

Image n°	Acquisition date	Perpendicular baseline (m)
1	06/05/2015	57.0604
2	18/05/2015	30.3772
3	30/05/2015	62.9574
4	11/06/2015	-20.2757
5	23/06/2015	-23.9855
6	05/07/2015	-9.63135
7	17/07/2015	34.8494
8	29/07/2015	4.70515
9	22/08/2015	-12.0871
10	03/09/2015	-69.4932
11	15/09/2015	-34.6645

12	27/09/2015	18.5168
13	09/10/2015	-36.4187
14	21/10/2015	-94.9927
15	02/11/2015	-4.65532
16	14/11/2015	36.4969
17	26/11/2015	67.9828
18	08/12/2015	87.9598
19	20/12/2015	-29.54
20	01/01/2016	-12.5785
21	13/01/2016	10.7243
22	25/01/2016	23.055
23	06/02/2016	80.8678
24	18/02/2016	-16.5448
25	01/03/2016	-61.6642
26	13/03/2016	-70.5601
27	25/03/2016	35.9688
28	06/04/2016	76.7843
29	18/04/2016	-11.9152
30	30/04/2016	-54.9055
31	12/05/2016	-70.0261
32	24/05/2016	18.476
33	29/06/2016	-31.0768
34	11/07/2016	-79.747
35	23/07/2016	-18.9757
36	04/08/2016	92.4065
37	16/08/2016	9.75581
38	09/09/2016	-80.6345
39	21/09/2016	-59.695
40	03/10/2016	65.5474
41	09/10/2016	-15.8839
42	15/10/2016	28.2344
43	21/10/2016	-84.1705
44	27/10/2016	21.5775
45	08/11/2016	-16.8641
46	14/11/2016	41.7382
47	26/11/2016	10.9207
48	02/12/2016	77.3763
49	08/12/2016	-25.7624
50	14/12/2016	90.7451
51	20/12/2016	9.75691
52	26/12/2016	56.7955
53	01/01/2017	83.0097
54	07/01/2017	-47.2689
55	13/01/2017	107.812
56	19/01/2017	-88.2022
57	25/01/2017	23.4302

58	31/01/2017	0
59	06/02/2017	-25.6805
60	12/02/2017	92.4766
61	18/02/2017	-44.2428
62	24/02/2017	34.6448
63	02/03/2017	-73.7774
64	08/03/2017	-63.1705
65	14/03/2017	45.3194
66	20/03/2017	-103.506
67	26/03/2017	34.7402
68	01/04/2017	-54.6901
69	07/04/2017	-37.3864
70	13/04/2017	-14.7387
71	19/04/2017	-69.4401
72	25/04/2017	37.6044
73	01/05/2017	-27.3304
74	07/05/2017	23.9028
75	13/05/2017	27.1342
76	19/05/2017	-43.4075
77	25/05/2017	-20.2223
78	31/05/2017	-120.699
79	06/06/2017	14.5456
80	12/06/2017	16.231
81	18/06/2017	-65.1492
82	24/06/2017	66.9707
83	30/06/2017	-89.3276
84	06/07/2017	-41.891
85	12/07/2017	12.9794
86	18/07/2017	-96.6513
87	24/07/2017	22.5692
88	30/07/2017	-31.1666
89	05/08/2017	35.3899
90	11/08/2017	-19.7343
91	17/08/2017	-109.002
92	23/08/2017	-37.4067
93	29/08/2017	-62.2916
94	04/09/2017	24.0934
95	10/09/2017	-22.5244
96	16/09/2017	-12.8957
97	22/09/2017	38.2365
98	28/09/2017	-65.787
99	04/10/2017	18.2931
100	10/10/2017	-32.057
101	16/10/2017	-19.5486
102	22/10/2017	37.3712
103	28/10/2017	-31.7248

104	03/11/2017	69.133
105	09/11/2017	-32.4074
106	15/11/2017	30.5758
107	27/11/2017	-46.2577
108	03/12/2017	73.359
109	09/12/2017	-60.5635
110	15/12/2017	55.2602
111	21/12/2017	58.4118
112	27/12/2017	-7.31441
113	02/01/2018	73.1323
114	08/01/2018	-8.24146
115	14/01/2018	55.6453
116	20/01/2018	53.8247
117	26/01/2018	-61.4247

Table S5: Sentinel-1A/B images used for AOI-2. Ascending track n° 103. The perpendicular baseline is calculated in respect to the reference date (in bold).

Image n°	Acquisition date	Perpendicular baseline (m)
1	22/04/2015	70.4855
2	04/05/2015	24.1937
3	16/05/2015	16.0193
4	28/05/2015	-94.5609
5	09/06/2015	-100.495
6	15/07/2015	57.9695
7	27/07/2015	-86.2912
8	08/08/2015	-108.957
9	20/08/2015	-42.3599
10	01/09/2015	19.6661
11	13/09/2015	34.0524
12	25/09/2015	-12.9018
13	07/10/2015	-59.6149
14	31/10/2015	-22.2888
15	12/11/2015	87.9665
16	24/11/2015	100.416
17	06/12/2015	-7.1784
18	18/12/2015	-30.1244
19	30/12/2015	-39.3724
20	11/01/2016	60.9897
21	23/01/2016	77.0504
22	04/02/2016	28.0997
23	16/02/2016	-46.9448
24	28/02/2016	-91.6057
25	11/03/2016	-17.9643
26	23/03/2016	24.7216
27	04/04/2016	-28.2727
28	16/04/2016	-81.4133

29	28/04/2016	-54.0242
30	10/05/2016	-92.2383
31	03/06/2016	20.4512
32	15/06/2016	-40.4601
33	27/06/2016	-102.63
34	09/07/2016	-66.5168
35	21/07/2016	72.1193
36	02/08/2016	23.2599
37	14/08/2016	-45.336
38	26/08/2016	-102.373
39	07/09/2016	-40.8255
40	19/09/2016	-19.9321
41	01/10/2016	68.5334
42	07/10/2016	-51.4172
43	13/10/2016	10.1246
44	19/10/2016	41.142
45	25/10/2016	-51.3726
46	31/10/2016	66.1708
47	06/11/2016	-66.4941
48	12/11/2016	40.7869
49	18/11/2016	-51.4197
50	24/11/2016	22.4266
51	30/11/2016	86.9131
52	06/12/2016	-65.7504
53	12/12/2016	94.3633
54	18/12/2016	-49.7799
55	24/12/2016	20.392
56	30/12/2016	59.4642
57	05/01/2017	-25.1075
58	11/01/2017	74.5211
59	17/01/2017	-22.9649
60	23/01/2017	8.37303
61	29/01/2017	16.8963
62	04/02/2017	0
63	10/02/2017	72.048
64	16/02/2017	-50.4325
65	22/02/2017	13.7334
66	28/02/2017	46.0492
67	06/03/2017	-17.7989
68	12/03/2017	27.8209
69	18/03/2017	-69.5463
70	24/03/2017	12.9356
71	30/03/2017	-12.6228
72	05/04/2017	-59.1379
73	11/04/2017	-34.6806
74	17/04/2017	-120.447

75	23/04/2017	-21.3535
76	29/04/2017	-23.0015
77	05/05/2017	-134.96
78	11/05/2017	14.6206
79	17/05/2017	-102.946
80	23/05/2017	42.6282
81	29/05/2017	-44.0133
82	04/06/2017	-42.2154
83	10/06/2017	16.6411
84	16/06/2017	-79.1216
85	22/06/2017	30.8334
86	28/06/2017	-16.7782
87	04/07/2017	23.1559
88	10/07/2017	38.4792
89	16/07/2017	-76.8963
90	22/07/2017	20.0104
91	28/07/2017	-31.6419
92	03/08/2017	8.38714
93	09/08/2017	36.3136
94	15/08/2017	-78.2854
95	21/08/2017	35.0552
96	27/08/2017	-39.9778
97	02/09/2017	-9.2512
98	08/09/2017	67.2593
99	14/09/2017	-94.8147
100	20/09/2017	44.0612
101	26/09/2017	-93.5154
102	02/10/2017	-33.1219
103	08/10/2017	-15.6469
104	14/10/2017	-87.6
105	20/10/2017	60.2102
106	26/10/2017	-100.379
107	01/11/2017	29.6299
108	07/11/2017	16.9476
109	13/11/2017	27.6739
110	19/11/2017	50.3165
111	25/11/2017	-85.0375
112	01/12/2017	76.0983
113	07/12/2017	45.9145
114	13/12/2017	24.1066
115	19/12/2017	107.381
116	25/12/2017	-53.6528
117	31/12/2017	159.894
118	06/01/2018	-36.4855
119	12/01/2018	42.0025
120	18/01/2018	52.6423

121	24/01/2018	-54.6264
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Table S6: ENVISAT images used for AOI-2. Descending track n° 37. The perpendicular baseline is calculated in respect to the reference date (in bold).

Image n°	Acquisition date	Perpendicular baseline (m)
1	07/11/2002	-343.654
2	12/12/2002	747.138
3	27/03/2003	10.3572
4	01/05/2003	1327.39
5	05/06/2003	-748.389
6	01/01/2004	613.356
7	11/03/2004	557.847
8	20/05/2004	110.852
9	24/06/2004	-136.465
10	29/07/2004	257.788
11	02/09/2004	724.43
12	07/10/2004	53.0648
13	20/01/2005	-320.711
14	27/10/2005	420.197
15	09/02/2006	-428.99
16	16/03/2006	523.164
17	25/05/2006	-407.924
18	29/06/2006	561.661
19	07/09/2006	563.333
20	12/10/2006	-365.261
21	21/12/2006	391.623
22	25/01/2007	-556.975
23	05/04/2007	-383.956
24	19/07/2007	0
25	23/08/2007	259.919
26	01/11/2007	264.818
27	06/12/2007	-643.587
28	29/05/2008	16.2524
29	11/09/2008	-578.814
30	16/10/2008	118.999
31	29/01/2009	-474.444
32	09/04/2009	-257.916
33	14/05/2009	69.8494
34	27/08/2009	382.534
35	05/11/2009	193.01
36	08/07/2010	-254.769