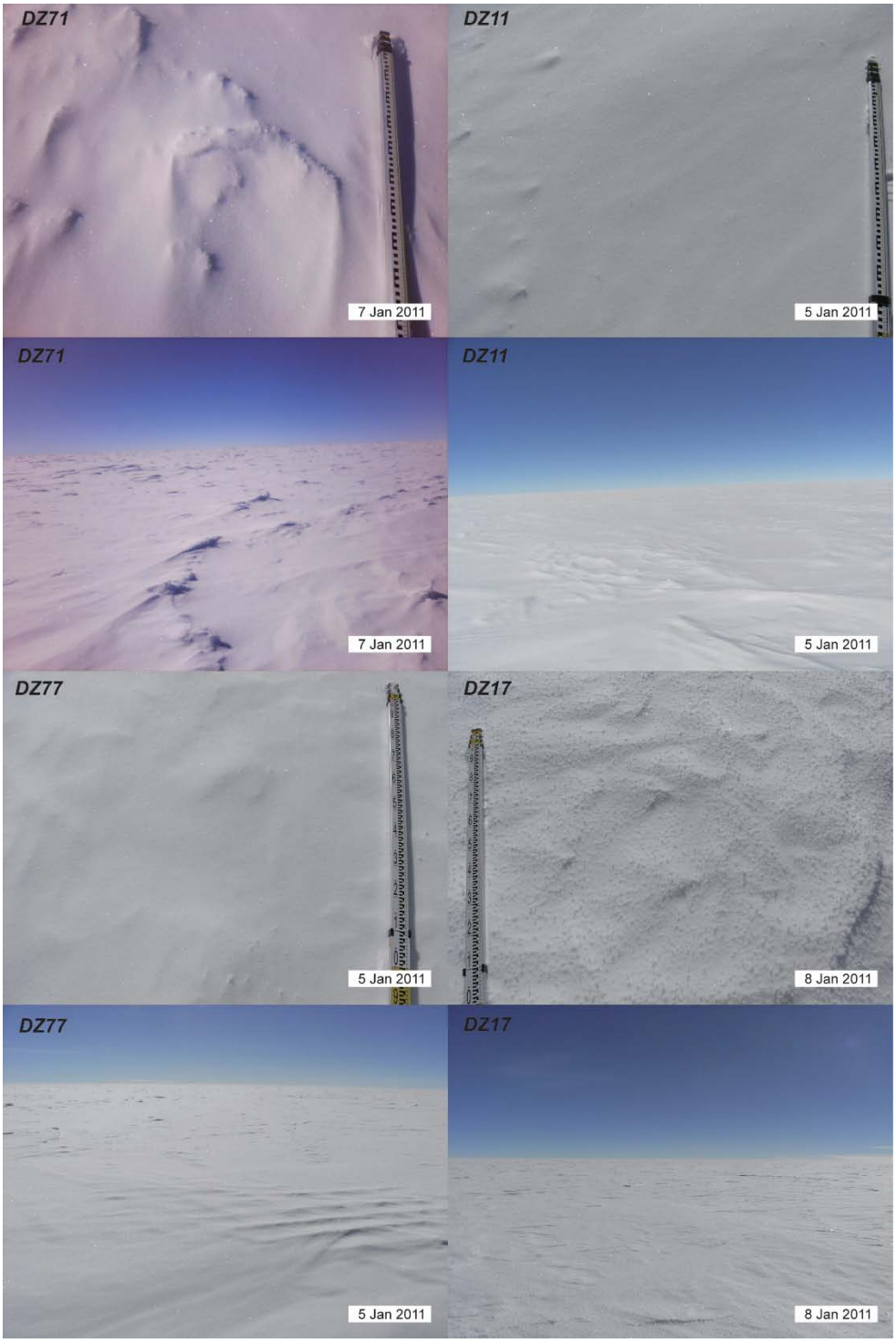
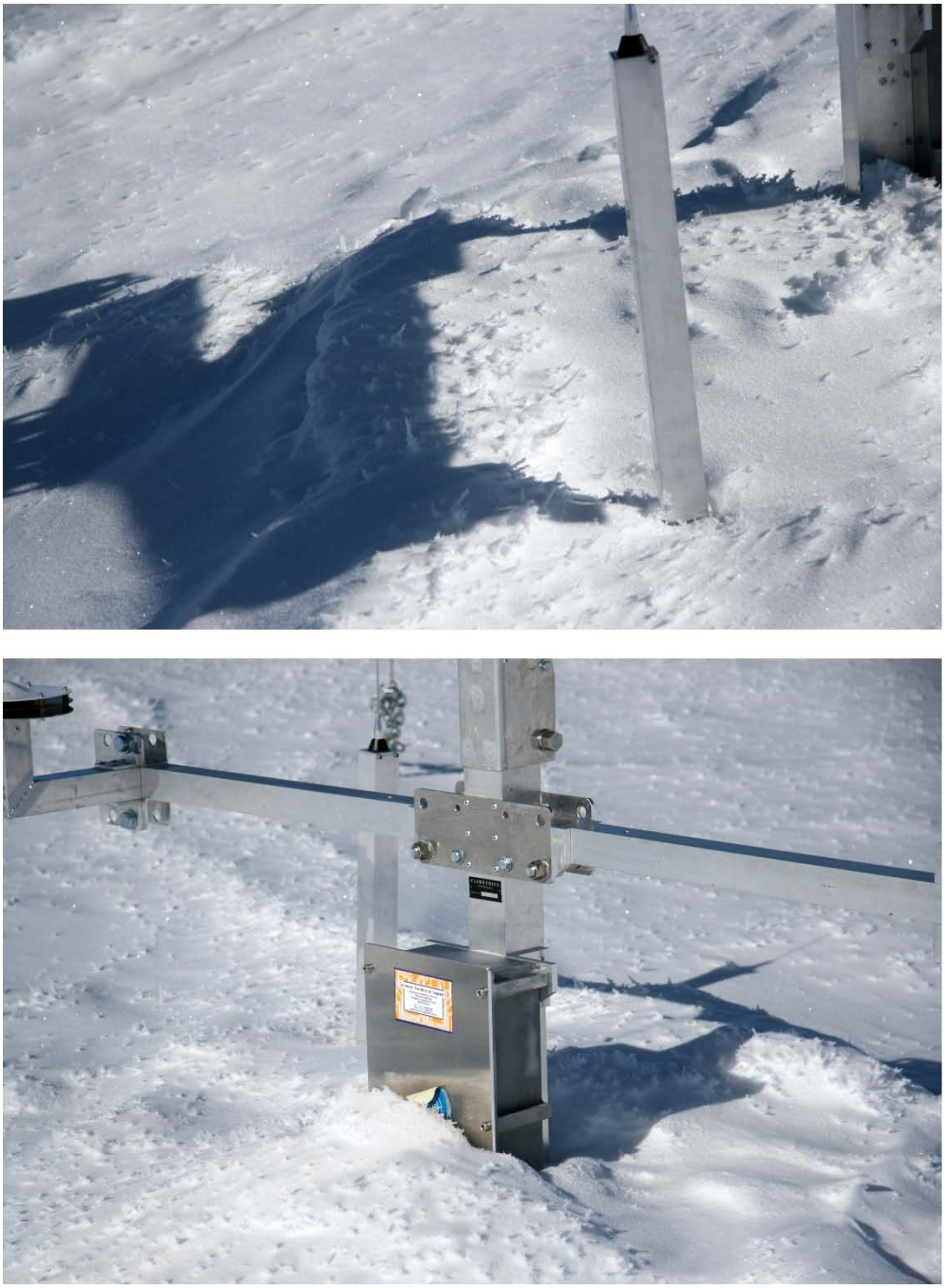
Supplementary file for Ding M., Xiao C., Yang Y., Wang Y., Li C., Yuan N., Shi G., Sun W. & Ming J. 2016. Re-assessment of recent (2008-2013) surface mass balance over Dome Argus, Antarctica. *Polar Research 35.* Correspondence: Cunde Xiao, Institute of Climate System, Chinese Academy of Meteorological Sciences, Beijing 100081, China. E-mail: cdxiao@lzb.ac.cn



Supplementary Fig. S1. The surface morphology of Dome Argus. The site names refer to the locations in Fig. 3. The photographs were taken in January 2011 by Minghu Ding.



Supplementary Fig. S2. Snow dune under Dome A AWS. The photographs were taken on 24 January 2008 by Minghu Ding.

Supplementary Table S1. The characteristics of surface mass balance over Dome Argus.

Site	Long. (E)	Lat. (S)	Elev. (m a.s.l.)	Surface height change (m)		Density ($kg\ m^{-3}$)	Surface mass balance ($kg\ m^2\ a^{-1}$)		
				08-11	11-13		08-11	11-13	08-13
DZ11	77.96	-80.28	4077.16	0.24	0.09	283.5	22.68	12.76	18.71
DZ12[a]	77.95	-80.33	–	0.32[b]	–	307.0	32.24	–	–
DZ13	77.94	-80.37	4082.07	0.22	0.12	261.7	19.19	15.70	17.79
DZ14	77.94	-80.42	4078.99	0.32	0.05	285.0	30.40	7.13	21.09
DZ15	77.93	-80.47	4073.85	0.21	0.31	301.0	21.07	46.65	31.30
DZ16	77.93	-80.51	4072.12	0.24	0.08	295.0	23.60	11.80	18.88
DZ17	77.92	-80.56	4067.95	0.22	0.22	293.5	21.52	31.55	25.53
DZ21	77.69	-80.28	4083.59	0.28	0.08	280.5	26.18	11.22	20.20
DZ22	77.68	-80.33	4087.53	0.30	0.06	280.0	28.00	8.40	20.16
DZ23	77.67	-80.37	4088.03	0.21	0.10	239.3	16.75	11.96	14.83
DZ24	77.66	-80.42	4087.31	0.28	0.10	262.5	24.5	13.13	19.95
DZ25	77.66	-80.47	4083.33	0.33	0.17	262.0	28.82	22.27	26.20
DZ26	77.65	-80.51	4083.02	0.31	0.12	274.0	28.31	16.44	23.56
DZ27	77.64	-80.56	4082.59	0.20	0.22	240.5	16.03	26.46	20.20
DZ31	77.42	-80.28	4089.41	0.12	0.32	335.5	13.42	53.68	29.52
DZ32	77.41	-80.33	4091.82	0.14	0.12	342.0	15.96	19.67	17.44
DZ33	77.4	-80.37	4092.26	0.31	0.20	307.5	31.78	30.75	31.37
DZ34	77.38	-80.42	4091.14	0.24	0.06	277.3	22.19	8.32	16.64
DZ35	77.38	-80.46	4088.60	0.25	0.10	302.5	25.21	14.37	20.87
DZ36	77.37	-80.51	4086.87	0.16	0.22	291.0	15.52	32.01	22.12
DZ37	77.36	-80.56	4084.87	0.18	0.14	297.0	17.82	20.79	19.01
DZ41	77.15	-80.28	4083.28	0.18[b]	0.13	344.5	20.67	22.39	21.36
DZ42	77.14	-80.33	4089.30	0.16	0.14	356.5	19.01	24.96	21.39
DZ43	77.13	-80.37	4090.32	0.17	0.15	295.0	16.72	22.13	18.88
DZ44	77.12	-80.42	4090.48	–	–	372.5	–	–	–
DZ45	77.11	-80.46	4090.48	0.27	0.17	320.0	28.80	27.20	28.16
DZ46	77.10	-80.51	4088.15	0.12	0.15	283.5	11.34	21.26	15.31
DZ47	77.09	-80.55	4084.88	0.31	0.19	276.5	28.57	26.27	27.65
DZ51	76.88	-80.28	4083.17	0.25	0.16	356.0	29.67	28.48	29.19
DZ52	76.86	-80.32	4083.48	0.10	0.16	369.5	12.32	29.56	19.21
DZ53[a]	76.85	-80.37	–	0.28[b]	–	326.0	29.88	–	–
DZ54	76.84	-80.42	4088.46	0.30	0.01	355.0	35.50	1.78	22.01
DZ55	76.83	-80.46	4092.18	0.25	0.18	277.0	23.08	24.93	23.82
DZ56	76.82	-80.51	4091.60	0.23	0.10	260.5	19.97	13.03	17.19
DZ57	76.81	-80.55	4089.43	0.35	0.00	291.8	34.04		20.42
DZ61	76.60	-80.28	4079.06	0.25	0.19	369.0	30.75	35.06	32.47
DZ62	76.59	-80.32	4079.90	0.43	0.17	339.0	48.59	28.82	40.68
DZ63	76.58	-80.37	4079.57	0.11	0.11	349.0	12.80	18.32	15.01
DZ64	76.57	-80.41	4086.01	0.22	0.32	363.0	26.62	58.08	39.2
DZ65	76.55	-80.46	4090.32	0.35	0.25	273.5	31.91	34.19	32.82
DZ66	76.54	-80.50	4089.56	0.31	0.16	268.0	27.69	21.44	25.19
DZ67	76.53	-80.55	4089.96	0.25	0.06	270.0	22.50	8.10	16.74
DZ71	76.33	-80.27	4061.24	0.29	0.02	376.0	36.35	2.82	22.94
DZ72	76.32	-80.32	4067.41	0.17	0.17	376.0	21.31	31.96	25.57
DZ73	76.31	-80.37	4072.86	0.31	0.13	255.5	26.40	16.61	22.48

DZ74	76.29	-80.41	4081.56	0.21	0.19	268.5	18.80	24.84	21.21
DZ75	76.28	-80.46	4084.36	0.14	0.28	292.0	13.63	40.88	24.53
DZ76	76.27	-80.50	4086.53	0.22	0.07	279.0	20.46	9.77	16.18
DZ77	76.25	-80.55	4088.12	0.21	0.17	254.5	17.82	21.63	19.34
Average	–	–	–	0.24 ±0.07	0.15 ±0.08	302.77 ±39.07	23.88 ±7.41	22.43 ±12.15	22.92 ±5.94

[a] The longitude and latitude of the site was measured by high precision GPS for the stakes installed in 2008 were damaged in 2011.
[b] The surface height change was reconstructed by the physical snow layer for the stakes that were damaged.