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A comparison between Envisat and ICESat sea ice thickness in the Southern Ocean

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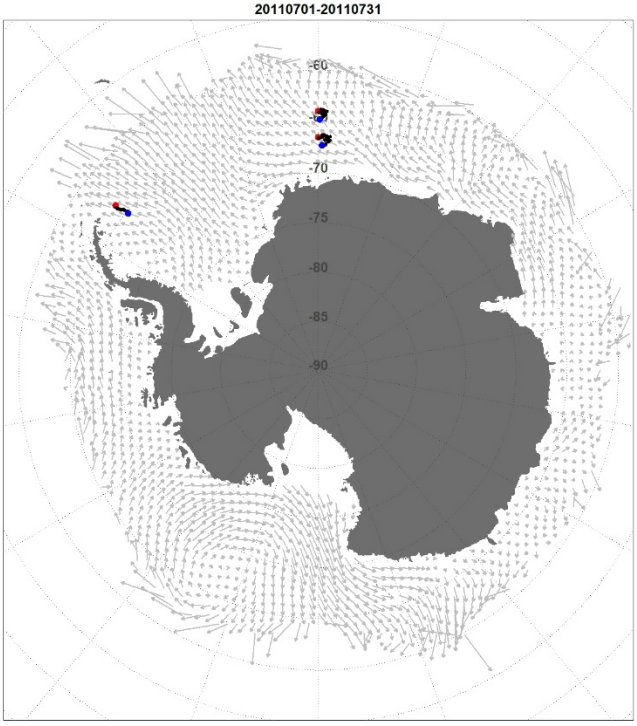

Fig. S1 30-days backtracking of sea ice at the ULS sites (red dots) for the period from July 2 to July 31 by using backward tracking method based on the NSIDC v4 sea ice motion data. The grey vectors represent the monthly mean sea ice drift derived from NSIDC v4.

Table. S1 Changes to the differences that Envisat minus ICESat SIT for each comparison period and each region by replacing snow depth climatology with SICCI AMSR-E snow depth during Envisat SIT retrieval. (Unit: m)

	ABS	WW	EW	EA	RS
FM04	0.25	0.06	-0.07	-0.03	0.08
FM05	-0.14	0.13	-0.05	-0.24	-0.04
FM06	0.11	-0.34	-0.20	0.20	-0.09
FM07	0.03	-0.21	0.09	0.03	0.04
FM08	NAN	-0.08	0.05	-0.04	0.06
MJ04	0.11	0.27	0.03	-0.01	0.07
MJ05	0.24	0.18	-0.07	-0.03	0.11
MJ06	0.06	-0.09	-0.04	-0.03	-0.01
ON04	0.05	-0.01	0.06	-0.06	-0.01
ON05	0.22	-0.02	-0.06	-0.07	-0.01
ON06	0.16	-0.13	-0.01	0.06	0.02
ON07	-0.05	-0.00	-0.01	-0.02	0.11

Table. S2 Changes to the differences that Envisat minus ICESat SIT for each comparison period and each region by subtracting snow depth climatology (used in Envisat retrieval) from ICESat SIT. (Unit: m)

	ABS	WW	EW	EA	RS
FM04	0.31	0.42	0.35	0.28	0.24
FM05	0.32	0.44	0.38	0.27	0.23
FM06	0.31	0.44	0.35	0.24	0.22
FM07	0.23	0.40	0.28	0.18	0.13
FM08	NAN	0.45	0.34	0.26	0.22
MJ04	0.17	0.35	0.20	0.12	0.15
MJ05	0.17	0.35	0.21	0.12	0.15
MJ06	0.18	0.36	0.20	0.12	0.15
ON04	0.20	0.23	0.17	0.12	0.17
ON05	0.20	0.22	0.17	0.12	0.16
ON06	0.19	0.21	0.16	0.12	0.16
ON07	0.19	0.24	0.17	0.12	0.18