Appendix A

Introduction to Table

Some of the ice information in this table may appear contradictory, however it comes from different sources. In this Table we did not try to rationalize the information; that is done in Section 10 of the main report where global pressures are determined. To explain further, the information in Column 6 of the Table is taken from local observations of ice actually interacting with the Molikpaq, whereas the information in Column 7 is from the Ice Observer, and is a more general reflection of ice conditions in a 1 to 2 km radius of the Molikpaq. Note that from March 25 to April 12 the greatest Ice Observer thickness was 7 m. A constant thickness is reasonable, since the ice did not move during this period; however on-ice thickness measurements by drilling during this period were up to 10m. As explained above, thickness information in the Table is presented as found in the original sources. Best estimates of thickness for relating to loads and global pressures are presented in Section 10 of the main report, as well as in the event summary table in Appendix K.

List of Time Periods with SY or MY Ice

Event or time period #	Corresponding Event ID (see Event Table in Appendix D)	Period of interest (approx. times)		Ice type (SY or MY) and concentration	Local ice thicknesses	Thickness of thickest ice (from Hourly Ice Observations)	Failure mode(s)	Ice velocity (m/s)	Ice drift direction to (degrees)	Loaded faces (100% contact unless otherwise noted)	Approximate maximum face load (MN)	Temperature for 72 hours leading up to event (deg. C)	Comments
		Start	End										
1	**1110**	10-Nov-85 02:00	10-Nov-85 16:00	SY (variable concentration - 2/10ths to 5/10ths) in FY matrix	Level ice thickness is 0.5 - 1.5 m; SY ridge with max height 3 m on East face at approx. 03:30; where ice impacts MAC rubble pile is 1 - 2 m high	1.5 - 2 m	Flexure/Crushing/Cracking/Rubble pileup	0.2 to 0.4	300 to 320	NE (mainly sliding), E, SE, S, SW (mainly sliding)	70	-23	ice impact occurs for most of the day but data only available up to 15:50; difficult to divide this time period into several 'events'
2	**1119**	19-Nov-85 03:00	19-Nov-85 19:40	SY floe with SY or MY hummock	1m thick SY ice floe with 1 - 4m thick hummock on West face; just FY ice on all other faces; crushed ice pile up to 2.5m thick at SW corner of W face	1.5 m	Crushing/Flexure/Rubble pileup	0.001	90	SW, W, NW, N (sliding)	low	-19	can look at SG and extensometers
3	**1127**	27-Nov-85 12:00	27-Nov-85 14:00	SY? SY floe reported in CHC 14-55; ThinFY floe reported in rubble maps CHC 14-63	Level ice thickness is 0.5 - 0.7 m; SY ridge with max height 1 m impacts East face	0.4 - 0.7 m	Flexure/Crushing/Rubble pileup	0.75	285	NE (sliding), E, SE, S (sliding)	73	-18	SY floe impacts E face after OW conditions
4	**1216**	16-Dec-85 08:00	16-Dec-85 10:15	SY? SY in FY matrix reported in CHC 14-55; TFY ice only is reported in rubble maps CHC 14-63 (thickest ice thought to be compacted FY in landfast ice)	Level ice thickness is 0.4 - 0.7 m; rubble pile near MAC is up to 2 m high; ridges with max height 0.5 m on East face	0.5 m	Crushing/Flexure	0.42	300	NE, E, SE, S	70	-21	
5	**0307**	07-Mar-86 15:30	07-Mar-86 18:00	MY floe	Two floes bonded together, heavily ridged (one ridge up to 6 m high at intersection); small ridge 1 - 2 m high contacted West face	4 - 6 m	Crushing	0.05	130 to 160	W, NW, N (possibly not entire face)	146	-26	
6	**0308**	08-Mar-86 15:00	08-Mar-86 23:00	SY or MY? MY floe reported in video summary and CHC 14-55; only SY ice reported in rubble map in CHC 14-63 (time period 13:00 - 13:30)	Average level ice thickness 4 m; rubble piles up to 10m high off North face *** Ice stationary around MAC from 8 Mar - 12 Apr. Survey of ice conditions shown in Figure 9 in Frederking and Sudom, 2006 (CRST papers) ***	3 - 4 m	Crushing/Rubble pileup	0 - 0.05	130	W, NW, N, NE (some sliding)	170	-26	Some ice interaction info taken from rubble map drawn at 13:00 - 13:30 (before event start)
7	**0322**	22-Mar-86 23:00	23-Mar-86 16:00	SY	See Figure 9 in Frederking and Sudom, 2006	7 m	Crushing/Rubble pileup	creep	200	NW, N, NE, E(10%)	79	-27	Ice interaction info taken from rubble map drawn at 23 Mar 08:30
8	**0325A**	25-Mar-86 08:00	25-Mar-86 11:00	SY or MY? MY floe reported in CHC 14-55; only SY ice reported in rubble map in CHC 14-63	Level ice thickness 2.5 - 3 m; rubble piles of unspecified height See Figure 9 in Frederking and Sudom, 2006	7 m	Creep/Buckling	creep	180 to 200	NW, N, NE	119	-24	Ice interaction info taken from rubble map for 08:00 - 11:00, and event summary table entry for 08:40
9	**0325B**	25-Mar-86 14:00	25-Mar-86 17:00	SY (possibly MY??)	Level ice thickness 2.5 - 3 m; rubble piles of unspecified height See Figure 9 in Frederking and Sudom, 2006	7 m	Crushing/Buckling	creep	200 to 220	NW, N, NE	95	-24	
10	**0327**	27-Mar-86 17:35	?	SY	Level ice thickness 2.5 -3m; 2/10 ridging with max height 5m See Figure 9 in Frederking and Sudom, 2006	7 m	Rubbling/Compression	creep (30 cm in one day)	315	mainly S, SE	low	-28	can look at SG and extensometers
11	**0406**	06-Apr-86 22:00	07-Apr-86 05:00	SY	2.5 - 3 m	7 m	Slow creep	creep	180	N	30		
12	**0411**	11-Apr-86 21:30	11-Apr-86 22:00	SY	See Figure 9 in Frederking and Sudom, 2006	7 m	small amount of rubbling?	creep	360	SW, S, SE	low	-25	ice is creeping - may not be significant loading; can look at SG/ext.
13	**0412A**	12-Apr-86 07:30	12-Apr-86 09:45	MY	Average ice thickness 3.5 - 6m; hummock on East face (average height 6.5m, max 10 m); rubble up to top of ice deflectors; 0.8m thick refrozen wake on South face	7 m	Crushing/Flexure/Rubble pileup	0.07 to 0.1	280 to 290	NE (sliding), E, SE, S	122	-23	
14	**-**	12-Apr-86 09:45	12-Apr-86 11:00	MY	Ice thickness 3 - 4m	7 m		0.1	290	NE (some loading possible?), E (variable - 0% to 100%), SE, S (variable - 100% to 25%)	133	-23	
15	**0412B, 0412C, 0412D, 0412E**	12-Apr-86 11:00	12-Apr-86 14:35	MY	Ice thickness 4 - 6m; extrusion 8m high on East face	7 m	Crushing/Flexure	0.05 - 0.02	290	E (25%), SE, S (25%)	217	-23	
16	**0512A**	12-May-86 02:45	12-May-86 04:30	FY with MY inclusions	Level ice thickness 1.7 - 2m; ridge height average 1.5m, max 2.5m	3.5 m	Crushing	0.17 to creep	185	N, NE, E	159	-6	
17	**0522A**	22-May-86 08:00	22-May-86 12:00	MY	Ice thickness 2 - 3m	3.5 m	Crushing/Cracking	creep	210	N, NE, E	112	-9	
18	**0522B**	22-May-86 12:30	22-May-86 16:00	MY	Level ice thickness 3 - 4m; ridge height average 1m, max 2m	3.5 m	Crushing/Cracking	0.08	240	N (50%), NE, E	147	-9	
19	**0602A**	02-Jun-86 12:00	02-Jun-86 19:00	FY with 2/10ths MY inclusions	Ice thickness 1.8 - 2.5m	3.5 m	Creep/Crushing	creep to 0.01	250	E	129	-1	
20	**0602B**	02-Jun-86 19:00	02-Jun-86 21:30	FY with 2/10ths MY inclusions	Ice thickness 1.8 - 2.5m	3.5 m	Creep/Crushing	creep to 0.01	250	E	75	-2	
21	**0625A**	25-Jun-86 05:30	25-Jun-86 06:45	FY (possibly SY) matrix with SY inclusions	Ice thickness 1.5 - 2.5m	2.5 m	Crushing	0.2 to creep	100	W, SW	low	5	check SG and extensometer; possibly hard for Ice Observer to determine ice type due to late season warmer ice