

Abbreviation	Definition
MAR model: criteria for melt occurrence (Sect. 2.1)	
LWC _{0.4}	liquid water content in the first metre is greater than 0.4 mm w.e. (water equivalent)
MF _{0.4}	total meltwater production over the day exceeds 0.4 mm w.e.
Passive microwave: criteria for melt occurrence (Sect. 2.2.2)	
zwa	threshold based on winter mean temperature brightness, Zwally and Fiegles (1994)
ALA	threshold based on winter mean temperature brightness, Ashcraft and Long (2006)
240	fixed threshold method (Tedesco, 2007)
PMWAll	Condition when zwa, ALA, 240 all report melt occurrence
Active microwave (QuikSCAT): criteria for melt occurrence (Sect. 2.2.1)	
QuikSCAT ft3	threshold based on winter mean backscatter (Steiner and Tedesco, 2014)
Observation-based regions of high melt occurrence (Sect. 3.2)	
CL region	high melt at the centre-east of the Larsen C ice shelf, melt days exceeding 1 SD of PMWAll mean melt occurrence
NL region	high melt in the north and west of the NE basin, consisting of the NE basin above the mean latitude of CL region, which excludes the CL region
Conditions for melt occurrence (Sect. 4.2)	
PMWEx	PMWAll reports melt occurrence but MAR does not
QSEx	QuikSCAT ft3 reports melt occurrence but MAR does not
MAR-R	criteria when MAR data is used only when AWS data is available