Platform Parameter	Repeat hydrography	Argo and other drifters*	Underway samplimg	Moorings	Tide gauges	Animal sensors	Glider/AUV	Satellite	Airborne	Ice stations	Ice Shelf Stations & Traverses (surface)
Temperature			XBT, XCTD	Yes							<- suspended moorings CTDs, and distributed temperature sensing (DTS)
Salinity			XBT, XCTD	Yes							<- suspended moorings CTDs
Velocity			In surface layer	Yes				Surface			<-moorings (ADCPs)
Tracers Nutrients Oxygen Microstructure				Developing Yes							
Seaice Wind, accumulation								If ice-free		Automatic weather stations on ice shelves and fast ice	ice shelves
Sea surface height (SLR) Seabed pressure								If ice-free			
Ice SHELF topography								InSAR, Radar and Laser altimetry	Radar (RES) and Laser altimetry		GPS (spot values or traverse)
Ice SHELF thickness								buoyancy estimates from surface topography	Radio Echo Sounding (RES), buoyancy estimates from surface topography		seismic, RES
Ice SHELF flow speed								InSAR, feature			GPS
Glacier topography								tracking, InSAR, Radar and Laser altimetry	Radar (RES) and Laser altimetry		GPS

Glacier flow speed				InSAR, feature tracking,		GPS, boreholes to measure depth profiles of velocity.
SST SSS				If ice-free If ice-free		
Bottom topography below ice SHELF				THE HEE	gravimetry	seismic
Bottom topography (seafloor Bathymetry under floating ice ?)					gravimetry	seismic
Bottom topography (Bedrock under grounded ice)					RES, gravimetry	RES, Seismic
Ice SHELF basal melt/freeze rates	upward looking altimeter					Phase Coherent RES (instrument at surface)
Ice SHELF englacial temperatures (for ocean ice heat transfer fluxes)	Embedded temperature e sensors (boreholes)	r				Embedded temperatur e sensors: thermistor chains or DTS (boreholes)

^{*} Good as complement to other methods, but there is a problem with the drifters moving out of the measurement region too fast.

DTS - Distributed Temperature Sensing - e.g. optic fibre systems

RES - Radar echo Sounding - i.e. Radar that penetrates ice sheets