SOOS
SOUTHERN OCEAN OBSERVING SYSTEM

PHYSICAL OCEANOGRAPHIC ESSENTIAL OCEAN VARIABLES

	Repeat Hydrography	Floats/ drifters	Underway sampling	Moorings/ Landers	Tide gauges	Buoys/ ASVs	Animal sensors	Gliders/ AUVs	Satellites	Links to other EOV details
Temperature	xx	xx	xx	xx		xx	xx	xx	xx	
Salinity	xx	xx	xx	xx		xx	xx	xx	xx	
Dissolved Oxygen	x	x	x	x		x	x	x		
Macronutrients	x	x	x	x						
Velocity	xx	xx	xx	xx				xx		
Turbulence	x		x					x		
Sea surface height					xx				xx	
Seabed pressure				xx					x	
Transient tracers (CFCs etc)	x									
Non-transient tracers (oxygen isotopes, noble gases etc)	x		x							
Air-sea fluxes/surface atmosphere variables (*)			xx			xx				Air-Sea Fluxes EOVs
Bathymetry (=)			xx						xx	
Sea-ice variables										Sea-Ice EOVs

Ice-shelf variables										Ice-Shelf EOVs
Hyperspectral reflectance (+)										
Multispectral backscatter (+)										
Photosynthetically Active Radiation (PAR) (+)										
Fluorescence (+)										
Multispectral irradiance (+)										

XX = highest priority
X = secondary priority

Red x = Mature, available technology
Blue x = Developmental or maturing technology

Notes:
(*) air-sea fluxes, or surface atmosphere parameters, and known to be critical to SOOS. Specialist input is being sought through the SOOS Air-Sea Fluxes Working Group.

(=) bathymetry is anomalous here, it being a variable that requires extensive survey as opposed to sustained observation to determine its time-varying properties. Nonetheless, it is poorly known in some key places, and is critical to many of the physical goals of SOOS, so is included here for completeness.

(+) it is believed that the optical parameters listed are important to SOOS, but predominantly in a biogeochemical rather than physical content. They are listed here to ensure they are not omitted, though expert input is needed to determine the exact variables required. No attempt is made here to prioritise them.