

Proposal Acronym	SOMOC
Proposal Title:	The upper branch of the Southern Ocean Meridional Overturning Circulation (SOMOC)
Surname:	Cerovecki
First name(s):	Ivana
Research area:	Environment and geosciences ENV
Sub-discipline of research area:	Oceanography
Category of research:	basic
[Redacted]	[Redacted]
Abstract:	<p>The global ocean overturning circulation plays a central role in climate and climate variability by storing and transporting heat, fresh water, carbon and nutrients around the world ocean. While the primary site of surface water subduction into ocean interior in the North Atlantic is well studied and understood, the return pathway and the dominant physical processes by which deep waters return to the surface in the Southern Ocean to close the meridional overturning circulation is still not well known. Yet, the deep water upwelling in the Southern Ocean is of fundamental importance for climate, since the upwelled waters control the rate of ocean heat and carbon uptake from the atmosphere, and supply of nutrients for the global thermocline. We propose to provide a three-dimensional quantitative estimates of water masses that comprise the returning portion of the overturning circulation and physical processes involved using the results of a data assimilating ocean circulation model.</p>
Does this proposal possess any of the sensitive ethical issues detailed in ethical issues table?:	No