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To whom it may concern,

This letter is to strongly support Professor Helen Phillips's proposal to establish an Australian facility of Current and Pressure recording Inverted Echo Sounders (CPIES).

I am a Professor at the Inha University, Korea, where I joined the faculty of the Department of Ocean Sciences in 2015. My main research interests fall broadly within "Exploring ocean physical processes using acoustic signals." My primary observational tool is the CPIES, which is an ocean bottom-moored instrument that measures bottom pressure and acoustic echo time from the seafloor to the sea surface. The array of CPIES can monitor the change of 3-D oceanic environments such as temperature and currents. Over the last 20 years, I have been working on more than ten field program research projects mainly using the CPIES in the Northwestern Pacific and its marginal seas, the Chukchi Sea in the Arctic, and the Southeast Indian Ridge (SEIR) region in the Antarctic Circumpolar Current (ACC) south of Australia.

As a Partner Investigator of Prof. Phillips's pending ARC Discovery Project titled "Antarctica's leaky defence to poleward ocean heat transport", I am very keen to maintain our strong research collaboration for better understanding of fundamental ocean dynamics in the ACC south of Australia, where Prof. D. Randy Watts at the University of Rhode Island, Dr. Jisoo Park at the Korea Polar Research Institute (KOPRI), and I are maintaining an array of 16 CPIES and a tall current mooring. The value of all those equipments is approximately USD$2.2 million (USD $960k for 12 CPIES from URI, USD $240k for one tall current mooring from KOPRI, and USD $240k for 4 CPIES from Inha University, and deployment and recovery costs of about USD $800k). I understand Prof. Phillips's proposed initial deployment location for the Australian CPIES, which is in the Polar Front meander downstream of the Southeast Indian Ridge in the location of the Australian SWOT voyage, is highly complementary to our existing instrumental array targeted to measure the cross-frontal heat flux in the ACC region.

Professor Phillips has made important and successful contributions to the oceanography community by tackling critical environmental issues in the Southern Ocean through her work in understanding the pathways of heat and other properties spreading through

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the ocean. I strongly believe that the establishment of a new CPIES array, which will be maintained simultaneously together with our existing array, would bring us an excellent opportunity to increase our knowledge about the dynamics governing the cross-frontal heat fluxes at two fronts in the ACC. To enhance the collaboration and to maximize the scientific outputs, I am willing to provide advice during her research team's development of their expertise in the use of CPIES, and open to harvesting data from the new CPIES array if RV Araon is available. Please feel free to contact me if I can be of further assistance in this matter.

Sincerely,

Jae-Hun Park