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## Hydrography, circulation and warm inflow toward the central Getz Ice Shelf: two years of mooring observations

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As the melt rates of Getz Ice Shelf (GIS) increase, its grounding line is retreating, possibly destabilizing GIS. Detailed oceanographic observations from all the GIS frontal regions are needed to describe its drivers of basal melt and obtain an accurate projection of its melt rates. We present the first mooring observations from the bathymetrically sheltered trough between Siple and Carney Islands - one of the remaining GIS fronts to be described in detail. Although the ocean is colder in this central trough compared to what is observed in adjacent troughs, temperatures more than 1° above freezing are present throughout the mooring period, with a positive mean heat transport directed towards the ice shelf. Output from a high-resolution regional model indicates that heat is advected to the trough from both the eastern Amundsen Sea and from the continental shelf break in the north. The variability in heat content and heat transport are both affected by ocean surface stress, but while westward stress drives increased heat transport towards the ice shelf, eastward stress drives enhanced heat content. These relationships are most prominent in winter. Anomalously low summertime sea ice concentration and weak winds during the mooring period appear to suppress the effect of a strong positive anomaly in cumulative Ekman pumping, causing relatively low heat content during the mooring period compared to long-term estimates from the regional model.