

Matthew D. TANKERSLEY

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August 13, 2023

Dear Dr. Mantelli,

I am writing to express interest in the advertised postdoctoral position in glacial geophysics at AWI and LMU. I believe this position will be an excellent opportunity to expand my skill set in cryospheric research, following my recently submitted Ph.D. in Antarctic geophysics. The first section of my Ph.D. used airborne magnetics data to identify the thickness and distribution of sediments beneath the Ross Ice Shelf and presented possible geologic controls on the overriding ice sheet dynamics (*Geophysical Research Letters*, <https://doi.org/10.1029/2021GL097371>). The second section of my thesis involved developing a gravity inversion algorithm, used to model bathymetry beneath the Ross Ice Shelf. This research is in preparation for submission to a research journal.

While my background has not focused directly on glaciology, I believe my skill set is well suited to this position. I have extensive experience with the full lifecycle of geophysical research, from survey design, data collection, processing, and analysis. I have spent over 16 weeks in remote field camps in Antarctica collecting various types of geophysical data, including hot water drilling. Through my development of a Python package, Antarctic-Plots, and contributions to various open-source projects, I am proficient in coding and creating reproducible and efficient processing workflows.

Thank you for taking the time to review my application. If you have any questions, please email me. For letters of reference, please feel free to use the below contacts:

- Dr. Huw Horgan, Ph.D. Primary Supervisor: huw.horgan@slf.ch
- Dr. Fabio Caratori-Tontini, Ph.D. Secondary Supervisor: fabio.caratori.tontini@unige.it
- Dr. Christine Siddoway, Collaborator: csiddoway@coloradocollege.edu

Sincerely,

Matt Tankersley