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Thesis Title:

On the Genesis and Measurement of Complex Organics and Isotopic Ratios in Hypervelocity Impact Ice Spectra

Have you performed research involving human subjects which requires approval from the Institutional Review Board (IRB)?  Yes  No

IRB Protocol Number \_\_\_\_\_

Have you used live animals, animal tissue, or observational animal work which requires approval from the Institutional Animal Care and Use Committee (IACUC)?  Yes  No

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Attach the final copy of thesis/dissertation for committee review. While formatting changes may be requested by the Graduate School, the content of the attached document should be final.

**Approvals:**Committee Chair Name Tobin MunsatSignature  Date Signed 4/11/2022Committee Member Name Sascha KempfSignature  Date Signed 4/11/2022

The final copy of this thesis has been examined by the signatories, and we find that both the content and the form meet acceptable presentation standards of scholarly work in the above-mentioned discipline.