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University of Geneva
ISDC & Geneva Observatory
Ch. d'Ecogia 16
CH-1290 Versoix
Switzerland

Dear Dr. Audard:

I am applying for your advertised postdoctoral research position in star formation at the University of Geneva. My curriculum vitae, a publications list, and a statement of my research experience and interests are enclosed for your review. I would appreciate your consideration for this job opening, as my ongoing research projects to study the properties of Galactic center molecular clouds and my extensive radio and millimeter observing experience are an ideal match for the research goals of the STARFORM project. My proposed research will provide quantitative, high-resolution studies of cloud properties in the unique Galactic center environment, which is an important link for connecting our understanding of the properties of nearby massive star formation in our Galaxy, and star formation in extragalactic environments.

I am currently leading multiple research projects including the detection and characterization of a widespread, hot component of molecular gas in the Galactic center using the Green Bank telescope, and a new high-resolution survey of Galactic center gas using the Very Large Array, which will yield the first resolved temperature maps of Galactic center molecular clouds. I propose to expand on these projects by undertaking complementary surveys with the VLA and the Atacama Large Millimeter Array to study the density structure of Galactic center clouds. Together with my existing work, this will allow me to study the physical processes which cause gas conditions in the Galactic center to be different than those in the Galactic disk, and to constrain the initial conditions of Galactic center star formation. As a STARFORM fellow, I will continue to lead independent research projects using cutting-edge, open-access and European facilities including the GBT, Effelsberg, VLA and ALMA.

Sincerely,

Elisabeth Mills