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Interest in MetNet :

First, a meteorological network would provide much better and more, interesting data than the point observations made so far, which is a very important point for atmospheric modeling. I have worked in particular with 1-D planetary boundary layer modeling and focused on the turbulence and radiative transfer. I could participate in model predictions made for the landers, as well as model validation with the model data. Furthermore, turbulence schemes could be more accurately evaluated with the help of high-frequency observations of temperatures and winds in the boundary layer on many levels above the surface.

Second, I am participating in France (LATMOS, formerly known as Service d'Aéronomie) in the calibration of the ODS instrument that has been developed in LATMOS and that is considered also for the MetNet payload. The instrument data retrieval algorithm includes presently observations of water ice clouds and dust, but the algorithm needs to be refined. New dust observations show that the Martian dust is brighter than previously thought (Määttänen et al., 2009 versus Ockert-Bell et al., 1999), so the dust refractive indices need to be updated to new values. The Martian atmosphere also hosts equatorial high-altitude CO_2 clouds that can be observed with the ODS instrument. I will add the CO_2 clouds in the retrieval algorithms. If ODS flies with MetNet one day, I will participate in the data analysis. This data will be very important for my own studies on the CO_2 ice clouds.

Overall I believe that my expertise in modeling the Martian atmosphere will be a benefit for the Science Team, and I see MetNet as a mission with very large scientific potential that will have a strong impact on the Martian community.

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