肖静

Dr. Xiao has been trained for many years in numerical simulation and dynamic analysis about the atmosphere of Earth at Nanjing University. Then her research scope extended to Mars since she joined the MUST in 2016. The subjects includes:

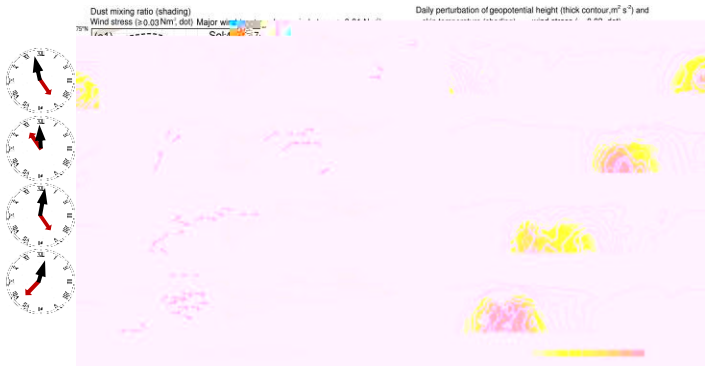
Topographic convections and precipitation

Convective structure and dynamics of spiral rainbands in tropical cyclone (TC)

Dust climate on Mars and related dynamical processes

High-resolution numerical simulation of the Martian atmospheric conditions for (Entrance, Descending and Landing) EDL process of China's First Mars Mission (2020)

Dr. Xiao and her group have been participated in the first Mars exploration mission of China (Tianwen-1). The Mars climate model MarsWRF was used to perform series of five-domain nesting simulations (finest grid size ~3.6 km) to provided the thermal and wind fields around the preferred landing area. Our results validated the reference conditions (provided by engineering models) and further gave the mesoscale flow structures and convective activities.



Dust mixing ratio (shading)
Major wind vectors (arrows)

Geopotential height (navy contours)
Zonal skin temperature anomaly (shading)

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Jan. 2019 – Apr. 2019*: Visiting scholar University of California in Los Angeles (UCLA).*
Oct. 2016 – Sep. 2018*: Research assistant, Macau University of Science and Technology.*

Spring 2018