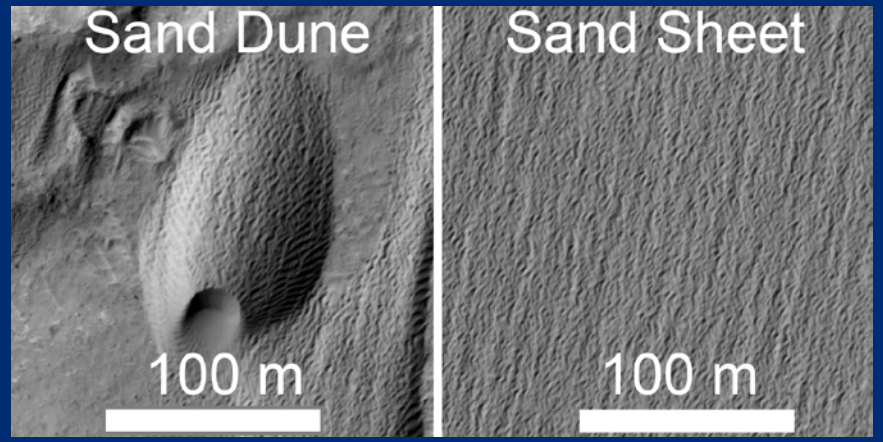
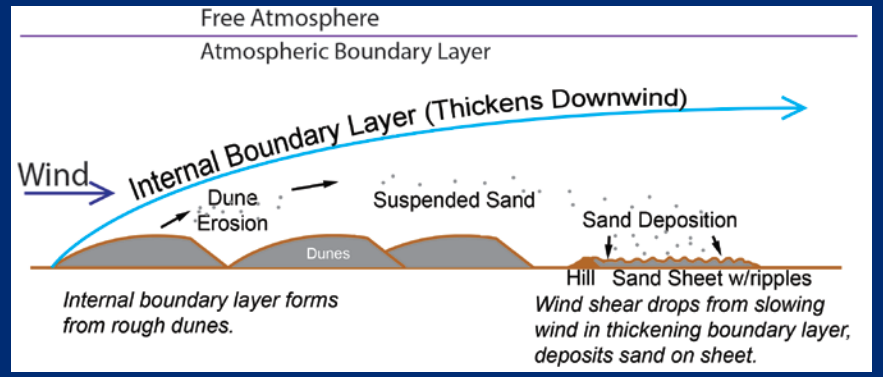
Mars: Destroyer of Sand Dunes

- Measurements from NASA's HiRISE camera show the dunes and the sheets to actively migrate downwind *(top left image)*.
- Modeled winds on Mars are strong enough to erode sand from the brink of sand dunes, carrying the sand downwind and forming non-descript sand sheets *(bottom left schematic)*. This sand source-to-sink relationship is the opposite of what occurs on Earth, likely due to Earth's abundance of water and plant life and Mars' sparser sand supply.
- By understanding this modern-day process, geologists can better interpret Martian sand stones studied from the rovers *(far right image)*, which are a record of past climates and thus habitability.





Mars' current climate may be eroding away the most upwind sand dunes

K. Runyon et al. (2017) Journal of Aeolian Research, http://dx.doi.org/10.1016/j.aeolia.2017.09.001