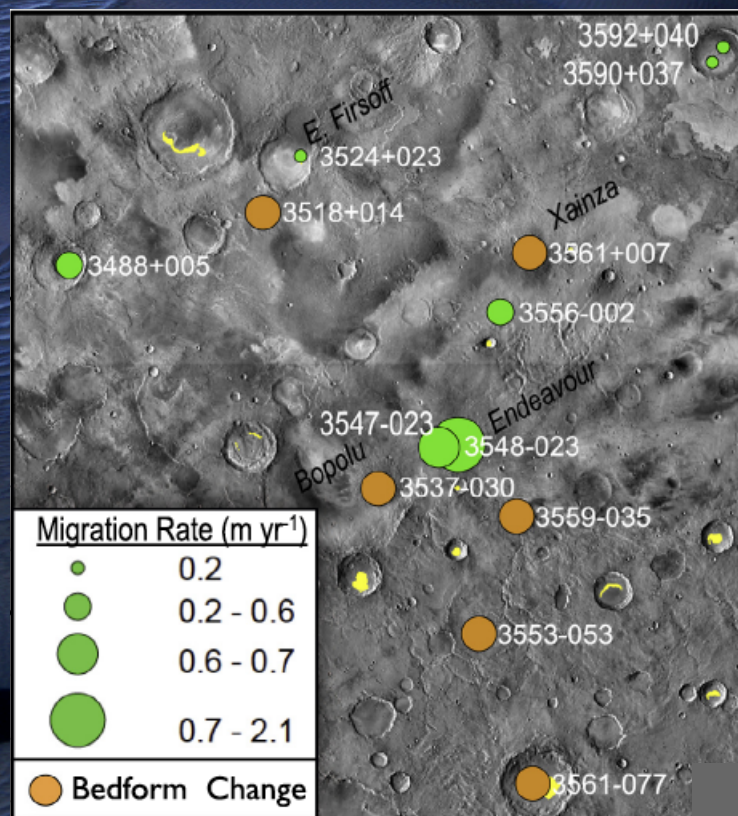
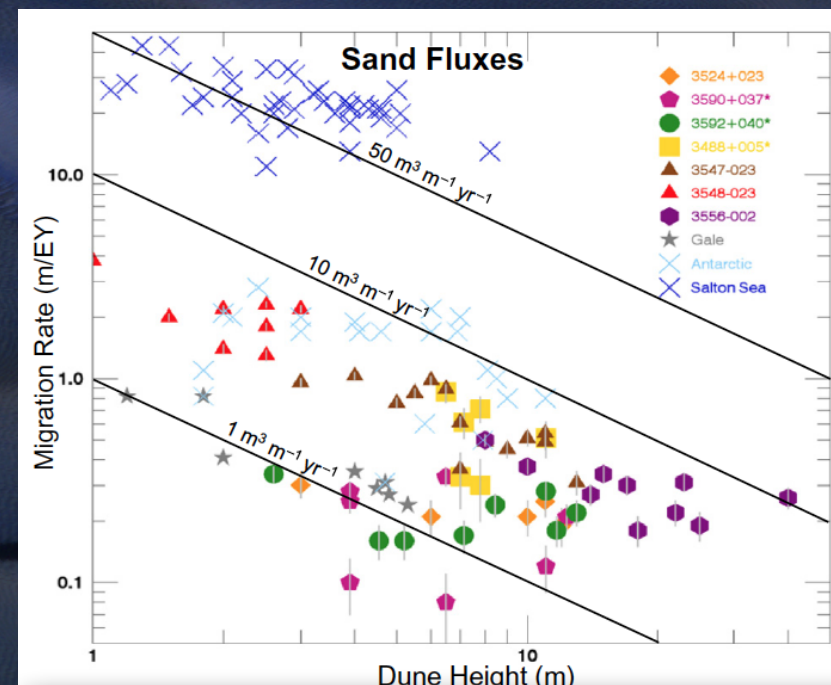


# Aeolian dune sediment flux heterogeneity in Meridiani Planum, Mars

- Some of the earliest indications of Martian sand dune mobility under current climate condition were at Endeavour crater in Meridiani Planum (Chojnacki et al., 2011; 2015)
- Dune fields across Meridiani Planum were examined for aeolian (wind-driven) surface changes and to test the hypothesis that dune sites surrounding Endeavour crater were also active and part of region-wide sediment migration
- Dunes were studied in high-resolution HiRISE images and topography
- All sites show evidence for activity, many sites showed bulk dune migration (~54%). Substantial geographic and temporal variability of dune crest fluxes was observed
- Annual measurements show some dune crest fluxes can vary by a factor of five
- Host craters' parameters were compared with activity revealing notable trends



Study region in central Meridiani Planum with dune field locations and dune activity classifications shown. Migration rates are averages over two to four Mars years.



Comparison of dune migration rates vs. heights for martian and terrestrial dunes. Plot is in log-log space and diagonal lines are isopleths of sand flux. Blue symbols are terrestrial examples.

Backplane: Migrating "Barchan" Dunes of Meridiani