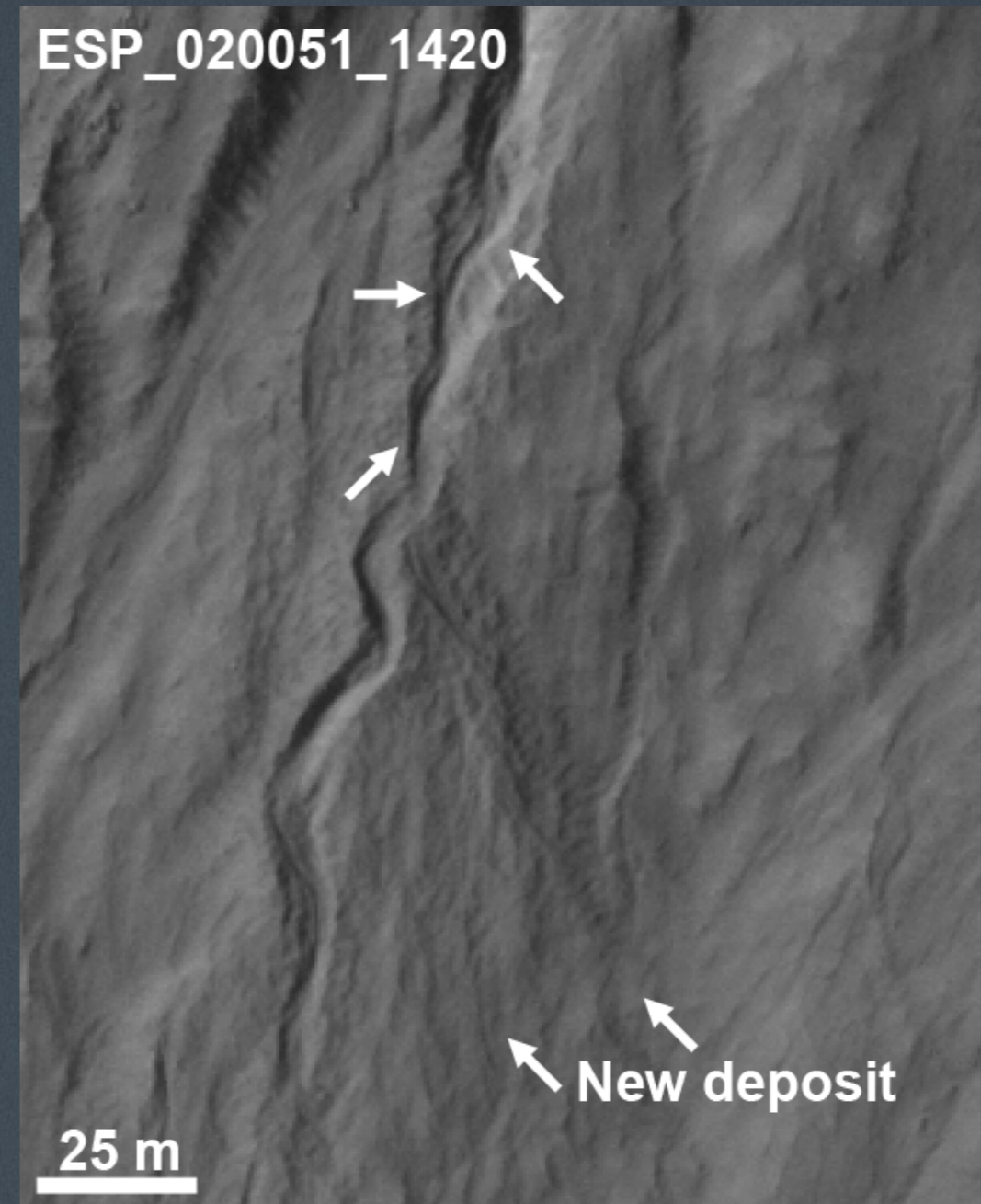


# Present-Day Gully Formation on Mars

- Precise targeting by MRO/HiRISE enables extensive repeat imaging to detect changes.
- Activity is common: 14% of southern-hemisphere monitoring sites show changes in at least one gully over a mean interval of  $\sim 2$  Mars years.
- Changes in gullies include channel incision and substantial mass movements, and fresh-appearing sites are the most likely to be active.
- Activity is seasonally controlled and correlated with seasonal frost, which is mostly CO<sub>2</sub>.
- “Gully-forming” mass movements are distinct from RSL, the most likely candidates for present-day surface liquid. RSL may drive formation of some fine channels.
- Current processes with little or no liquid water appear capable of driving most gully formation.



Dundas et al., 2014, in press (Icarus)