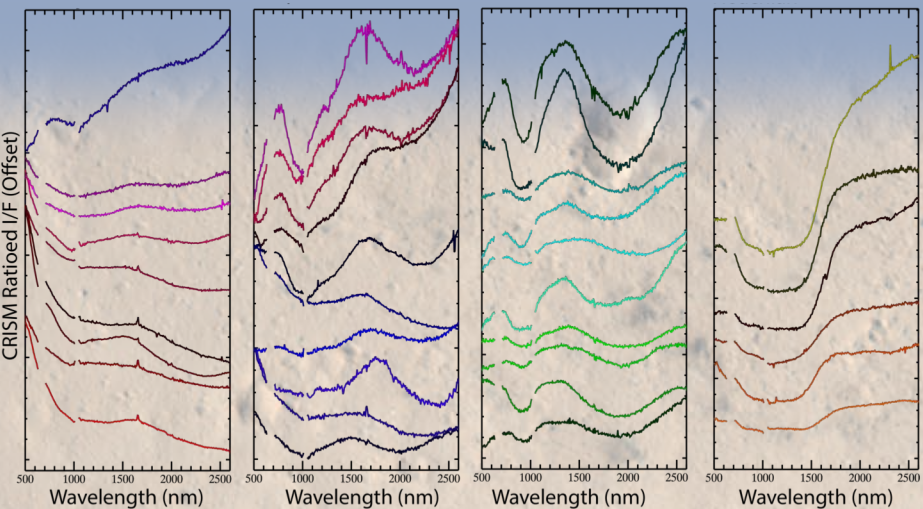


Amazonian (Young) → Hesperian → Noachian (Old)



Study region:

Small relatively dust-free exposures of otherwise dusty Amazonian terrain (e.g., recent craters)

Analysis:

Shape of the 1- μ m band in CRISM spectra associated with iron in mafic minerals

Mars: Composition beneath the dust

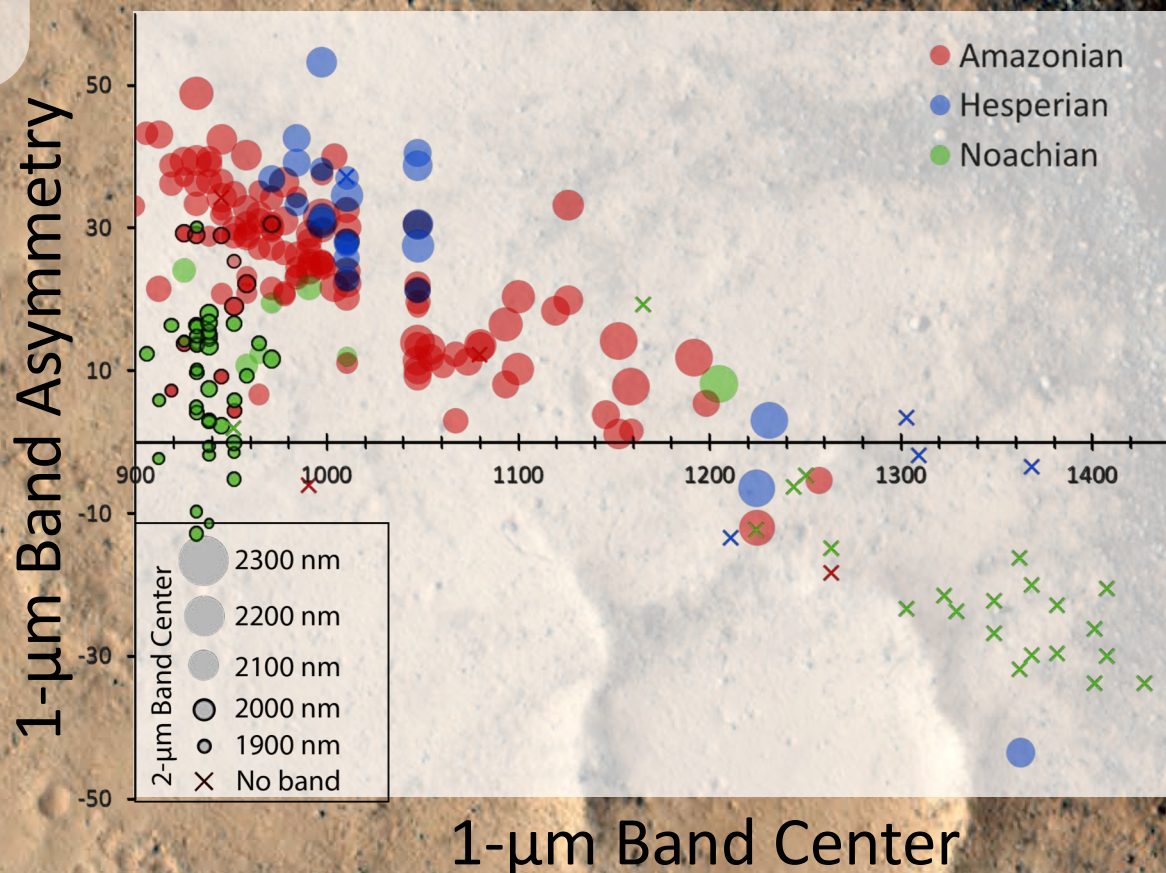
Question:

What is the composition of the youngest, often dust-covered terrain on Mars?

Results:

Composition from spectra imply younger Amazonian materials similar to intermediate-aged Hesperian volcanic rocks; ancient Noachian rocks remain distinct from other eras

Low Si elemental data over young Amazonian terrain is likely due to dust cover and not unique underlying rock composition



Recent fresh crater, PSP_002183_1970
NASA/JPL/University of Arizona

Composition of the youngest rocks are comparable to intermediate-aged volcanic terrain. The most ancient volcanic material is compositionally distinct, suggesting early igneous evolution of the crust.

