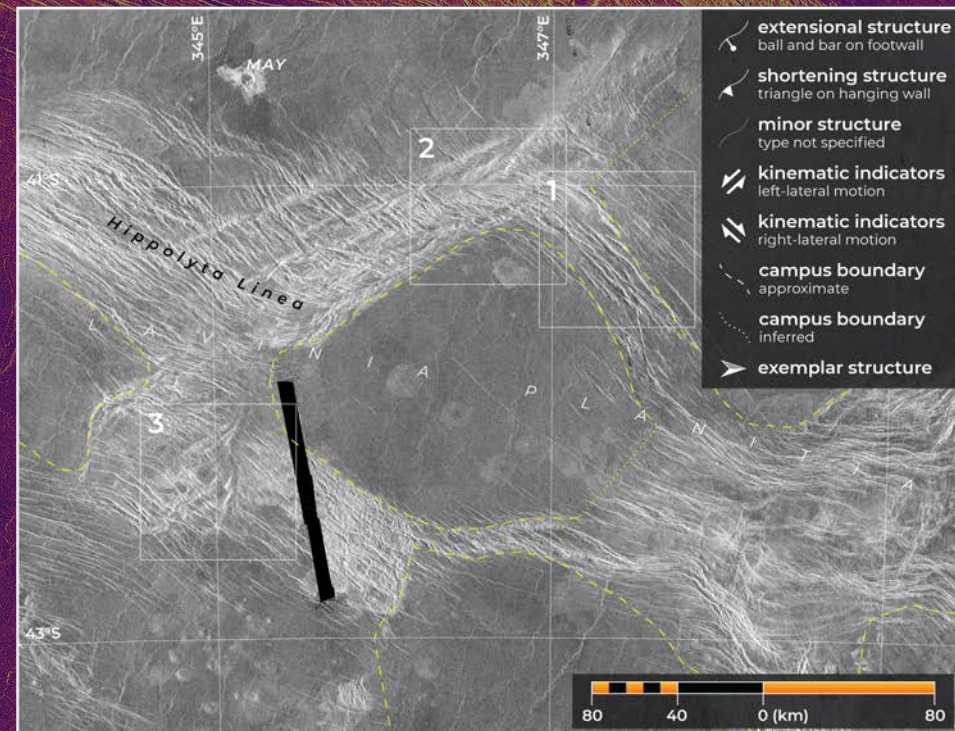


# a globally fragmented and mobile lithosphere on Venus

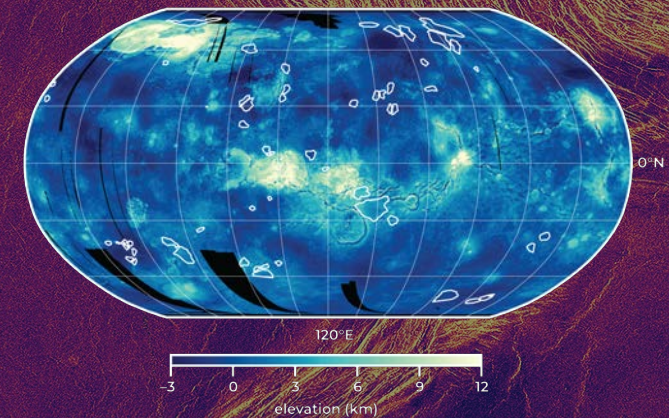
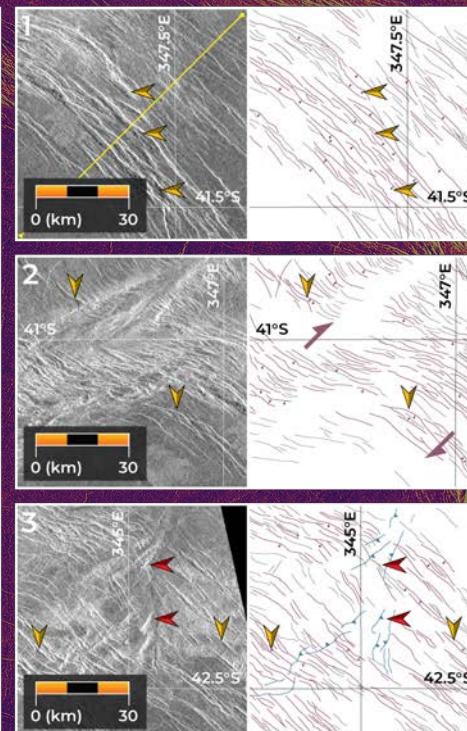
Byrne, P. K., Ghail, R. C., Şengör, A. M. C., James, P. B., Klimczak, C., and Solomon, S. C.

Proceedings of the National Academy of Sciences 118 (26) e2025919118

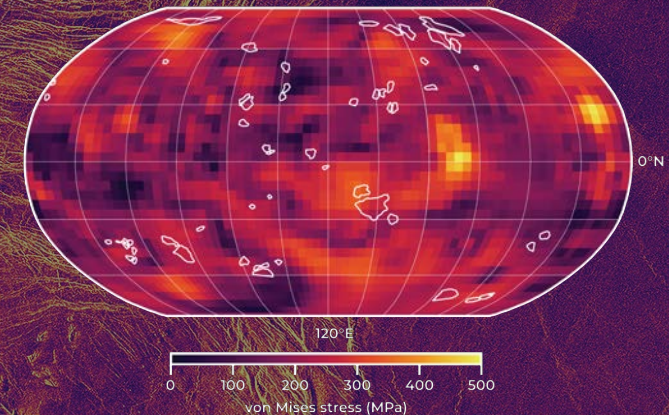
▼ at numerous sites across Venus, bands of tectonic structures delineate undeformed, low-lying areas



▼ many of these bands show evidence for lateral, as well as vertical, deformation



◀ this pattern of deformation occurs across the planet, mainly in the lowlands



◀ mantle convective stresses are enough to fragment and move the lithosphere

- much of Venus' lithosphere is broken into individual crustal blocks
- these blocks have jostled and moved like pack ice—in several places geologically recently
- this behavior arises from convection of the mantle, akin to how mantle motion drives plate tectonics on Earth