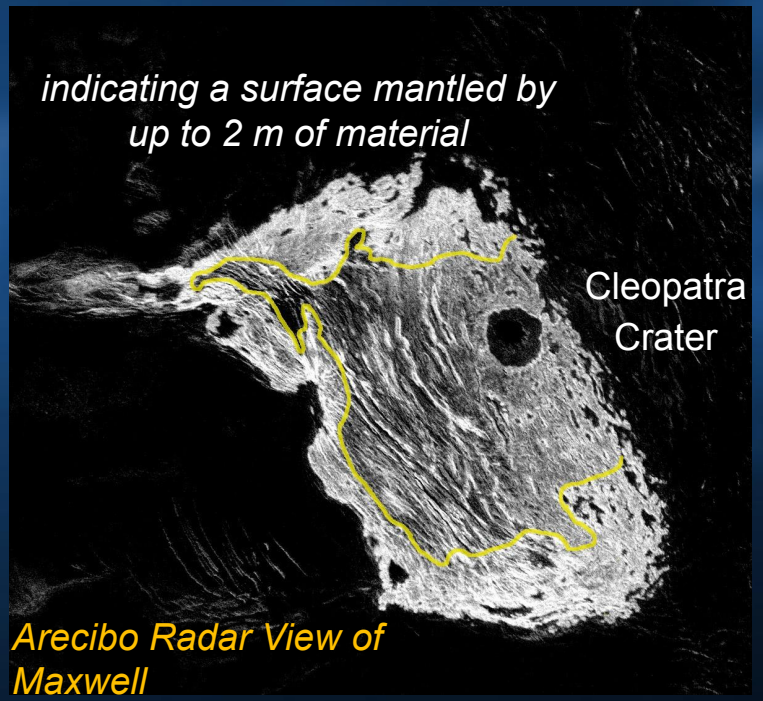
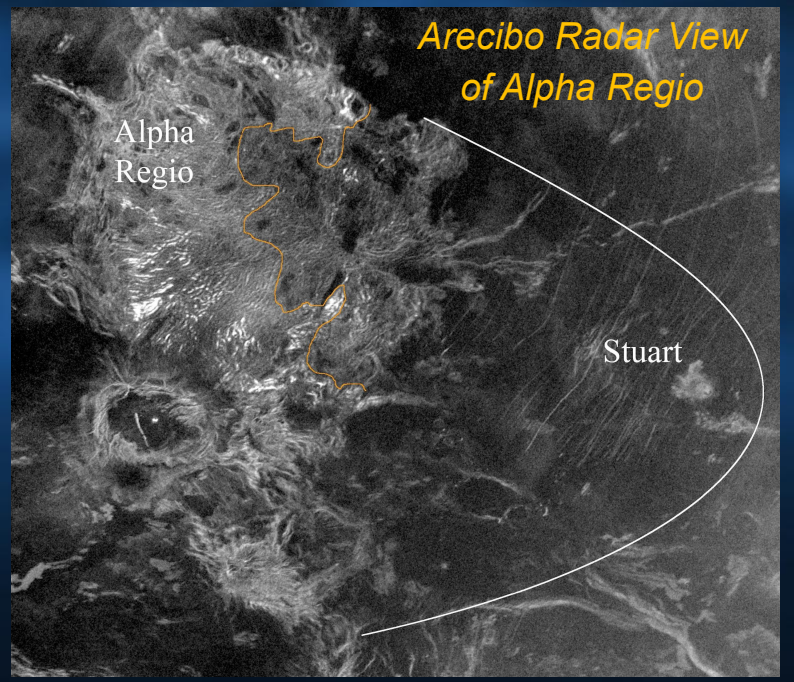
Impact Ejecta across Venus' Tallest Mountains

Earth-based radar and Magellan data show that the 90-km crater Cleopatra covered much of Maxwell Montes, the tallest mountain range on Venus, with fine ejecta.

- Highlands on Venus may hold the record of an ancient water-rich period.
- Knowing whether the surface exposes the original rock is crucial.
- Radar can map locations where the surface is most likely to be pristine!
- Future orbital or landed studies must consider the thickness of ejecta, source material, and effects of shock or melting on ejecta mineralogy.





Area outlined in orange is mantled by material from 70-km Stuart crater. From Campbell et al. (2014)

Campbell and Whitten (2022) *Geophysical Research Letters*