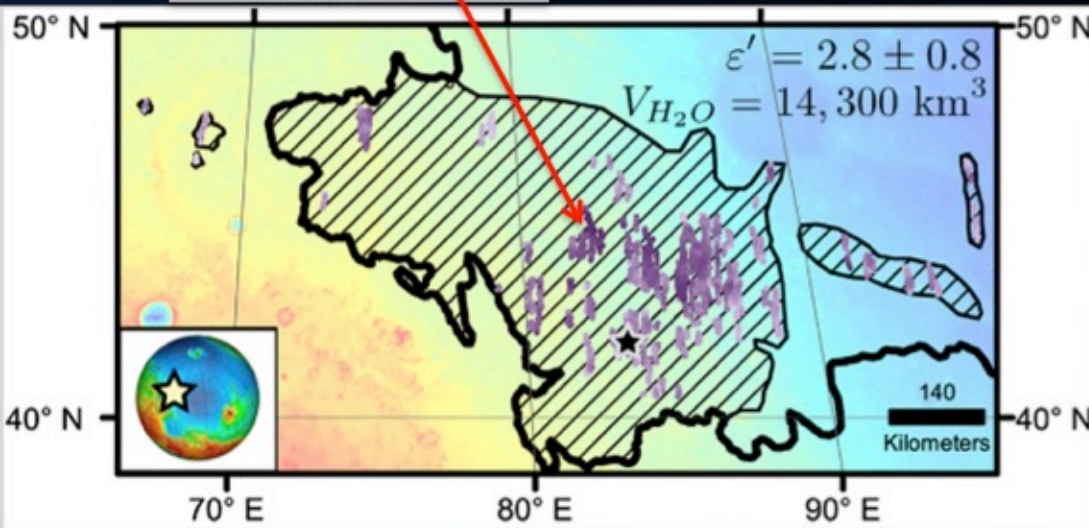


Lake Superior-Sized Ice Deposit on Mars



The Mars Reconnaissance Orbiter has identified a region of Mars called Utopia Planitia (hashed at left) that has significant amounts of subsurface ice.

- MRO's ground-penetrating Shallow Radar (SHARAD) instrument indicated that the cracked and pitted plains of this region (inset, top) contains as much water as Lake Superior in the great lakes. The radargrams show a subsurface reflector (below, white arrows) that is interpreted as the bottom of an ice-rich deposit.

- Water cannot persist at this latitude at the surface of Mars today, but this deposit is buried between a layer of martian regolith that is between 1-10 meters (3-33 feet) thick. This material has a distinctive texture including scalloped pits and polygonal cracking that, in the Canadian Arctic, is usually indicative of ground ice.
- The identification of a ice deposit of this size nearly doubles the known volume of ice in the northern plains of Mars, a source of water that is considered a potential resource for future human exploration.

