

Mars in a Minute: How Did Mars Get Such Enormous Mountains?

Mount Everest may be the ultimate climbing challenge on Earth, but it has nothing on the volcanoes of Mars. Olympus Mons on Mars, is more than twice as tall! How did these mega-mountains form?

Early on, Mars had really active volcanoes, fed by hot, rising blobs of rock from deep inside. But Mars doesn't have tectonic plates that move over hotspots, like in Hawaii. So instead of getting a chain of volcanoes, you could keep building one huge one. And, with the lower gravity on Mars, that magma could be pushed to great heights.

On any planet, a lot of what it looks like outside is tied to what goes on inside. Studying how heat flows out from a planet can tell us a lot.

NASA's InSight mission carries a special probe to burrow down and measure heat flow. That can teach us not just about how Mars works today, but how it – and all rocky planets – form, including Earth, and even planets in other solar systems.