

MARS IN A MINUTE:

What Happens When the Sun Blocks our Signal?

About every two years, Earth and Mars wind up on opposite sides of the sun. That's called "solar conjunction."

It's like being on either side of a huge bonfire: we can't see Mars, and our landers, rovers, and orbiters can't see us.

If our spacecraft send back signals, charged particles from the sun could interfere, causing gaps in the data that reach us.

That's not a big deal: if something's missing, it can always be resent later. But, no way do we want to lose data when we send up commands. Receiving a partial command could confuse the spacecraft, putting them in grave danger!

So, mission controllers plan ahead by sending up simple to-do lists, including regular health check ups.

Back home, this break in communications lets team members catch up on other work... or take a well-deserved vacation!

Solar conjunction lasts just a few weeks. Then it's back to the grindstone... on Earth and on Mars.