

The document detailing the catastrophic yet transformative atmospheric changes following dual asteroid impacts on Mars has been created.



Mars_Dual_Impact_Report

PDF



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Key Atmospheric & Environmental Consequences:

- **Oxygen Levels:** With both poles vaporized, oxygen levels are projected to reach approximately **3.4%**. This is significantly higher than the single-impact scenario, driven by the massive release of water from the North Pole and CO_2 from the South.
- **Surface Pressure:** A massive surge in atmospheric pressure (up to 50 mbar) would finally cross the "Triple Point" of water, meaning **liquid water** could flow and pool on the Martian surface without immediately boiling away.
- **The Hydrological Cycle:** For the first time in eons, Mars would experience a weather cycle involving actual precipitation (rain and snow) as the massive injection of water vapor stabilizes.
- **Impact Winter vs. Greenhouse Warming:** Initially, a global dust veil would cause a sharp drop in temperature ("Impact Winter"). However, once the dust settles, the high concentrations of CO_2 and H_2O would trigger a potent greenhouse effect, potentially raising the global average temperature by dozens of degrees.