

Cosmic Rays Likely Fried Fobos

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The  **Moscow Times**

The head of Russia's space agency said Tuesday that cosmic radiation was the most likely cause of the failure of a Mars moon probe that crashed to Earth this month, and suggested that a low quality, imported component may have been vulnerable to the radiation.

☒ The failure of the unmanned Fobos-Grunt probe was a severe embarrassment for Russia's space program, and agency head Vladimir Popovkin initially suggested that it could have been due to foreign sabotage.

☒ But on Tuesday he said in televised remarks that an investigation showed the probable cause was "localized influence of heavily radiated space particles."

Speaking in the city of Voronezh where the report was presented to Deputy Prime Minister Dmitry Rogozin, Popovkin said two units of the Fobos-Grunt probe's onboard computer system went into an energy-saving "restart" mode, apparently due to the radiation, while the craft was in its second orbit.

It was not immediately clear why the units could not be brought out of that mode. Popovkin said some microchips used on the craft were imported and possibly of inadequate quality

to resist radiation. He did not specify where the chips were manufactured.

Yury Koptev, a former space agency head who led the investigation, said 62 percent of the microchips used in the probe were "industrial" class, a less-sophisticated level than should be used in space flight.

☒ Popovkin said the craft's builder, Moscow-based NPO Lavochkin, should have taken into account the possibility of radiation interfering with the operation and said Lavochkin officials would face punishment for the oversight.

☒ Popovkin later announced that a planned launch on March 30 of three astronauts to the space station, or ISS, aboard a Soyuz capsule will be postponed "likely until the end of April" because of technical problems. He did not specify, but RIA-Novosti cited the director of Russia's cosmonaut-training program as saying leaks had been found in the capsule's seals.

☒ It would be the second significant postponement of a manned Russian launch in the past year. The August crash of the supply ship pushed back a manned launch to the ISS because the booster rocket that failed in the crash was similar to the ones used in manned missions.

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