Phobos slips past Jupiter (w/ video)

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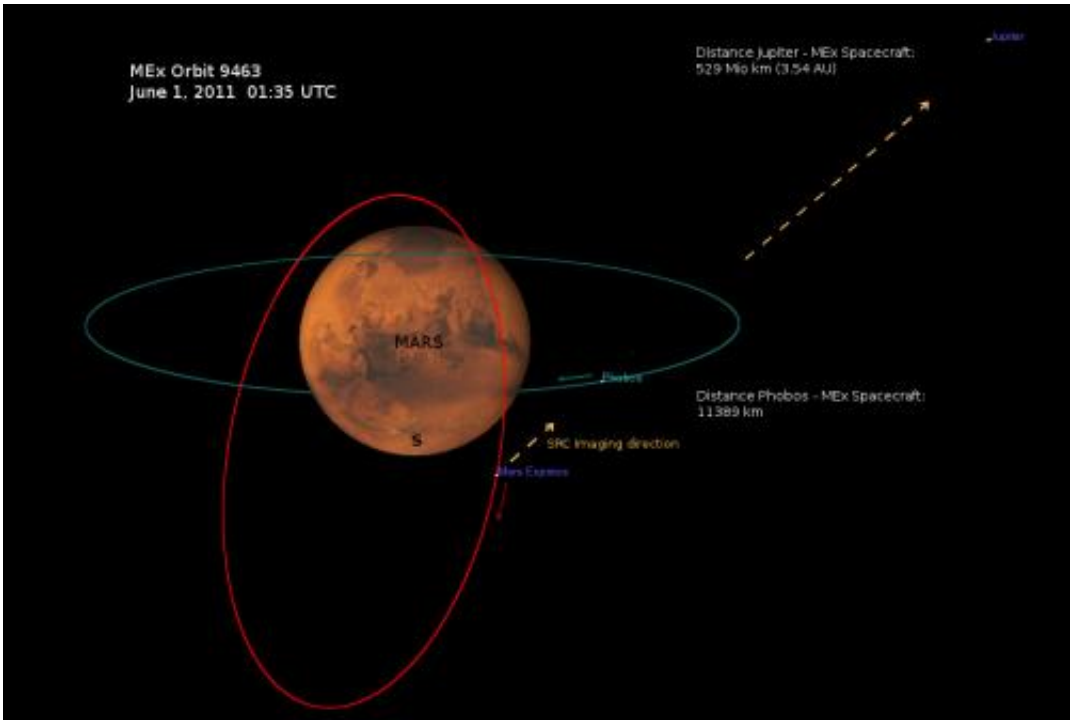
Three frames from the series of 104 taken by Mars Express during the Phobos-Jupiter conjunction on 1 June 2011. Credits: ESA/DLR/FU Berlin (G. Neukum)

(PhysOrg.com) -- Earlier this month, ESA's Mars Express performed a special manoeuvre to observe an unusual alignment of Jupiter and the martian moon Phobos. The impressive images have now been processed into a movie of this rare event.

At the moment when Mars Express, Phobos, and Jupiter aligned on 1 June 2011, there was a distance of 11 389 km between the spacecraft and Phobos, and a further 529 million km to Jupiter.

The High Resolution Stereo Camera on Mars Express was kept fixed on Jupiter for the conjunction, ensuring that the planet remained static in the frame. The operation returned a total of 104 images over a period of 68 seconds, all of them taken using the camera's super-resolution channel.

By knowing the exact moment when Jupiter passed behind Phobos, the observation will help to verify and even improve our knowledge of the orbital position of the martian moon.



The trajectories of Phobos and Mars Express at the time of the conjunction with Jupiter on 1 June 2011. The graphic was created using Celestia software. The letter 'S' denotes the South Pole of Mars

The images shown here were processed at the Department of Planetary Sciences and Remote Sensing at the Institute of Geological Sciences of the Freie Universität Berlin.

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