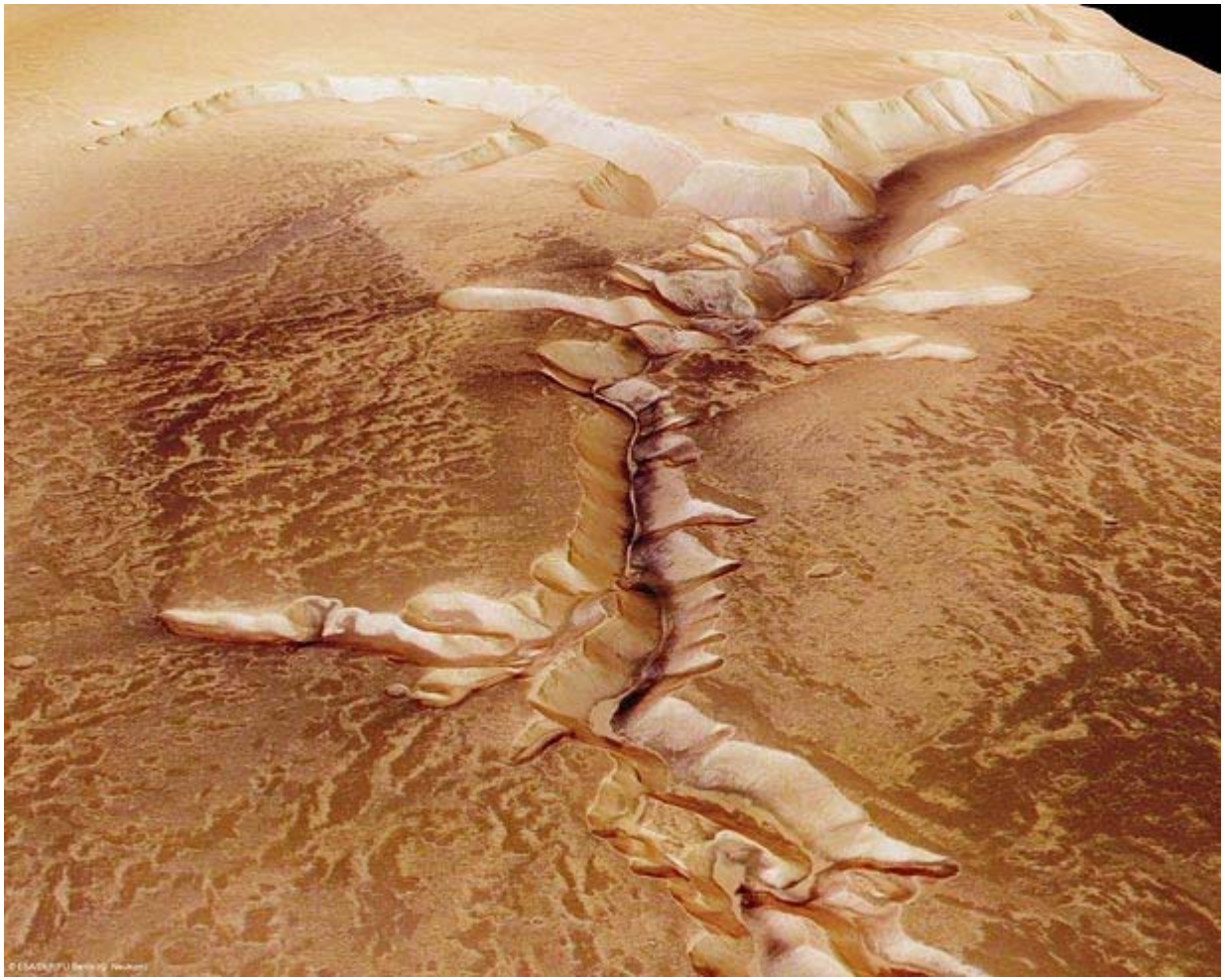
Mars Express 3D images



The High-Resolution Stereo Camera (HRSC) on board ESA's Mars Express has returned images of Echus Chasma, one of the largest water source regions on the Red Planet. Echus Chasma is an approximately 100 km long and 10 km wide incision in the Lunae Planum high plateau north of Valles Marineris, the 'Grand Canyon' of Mars

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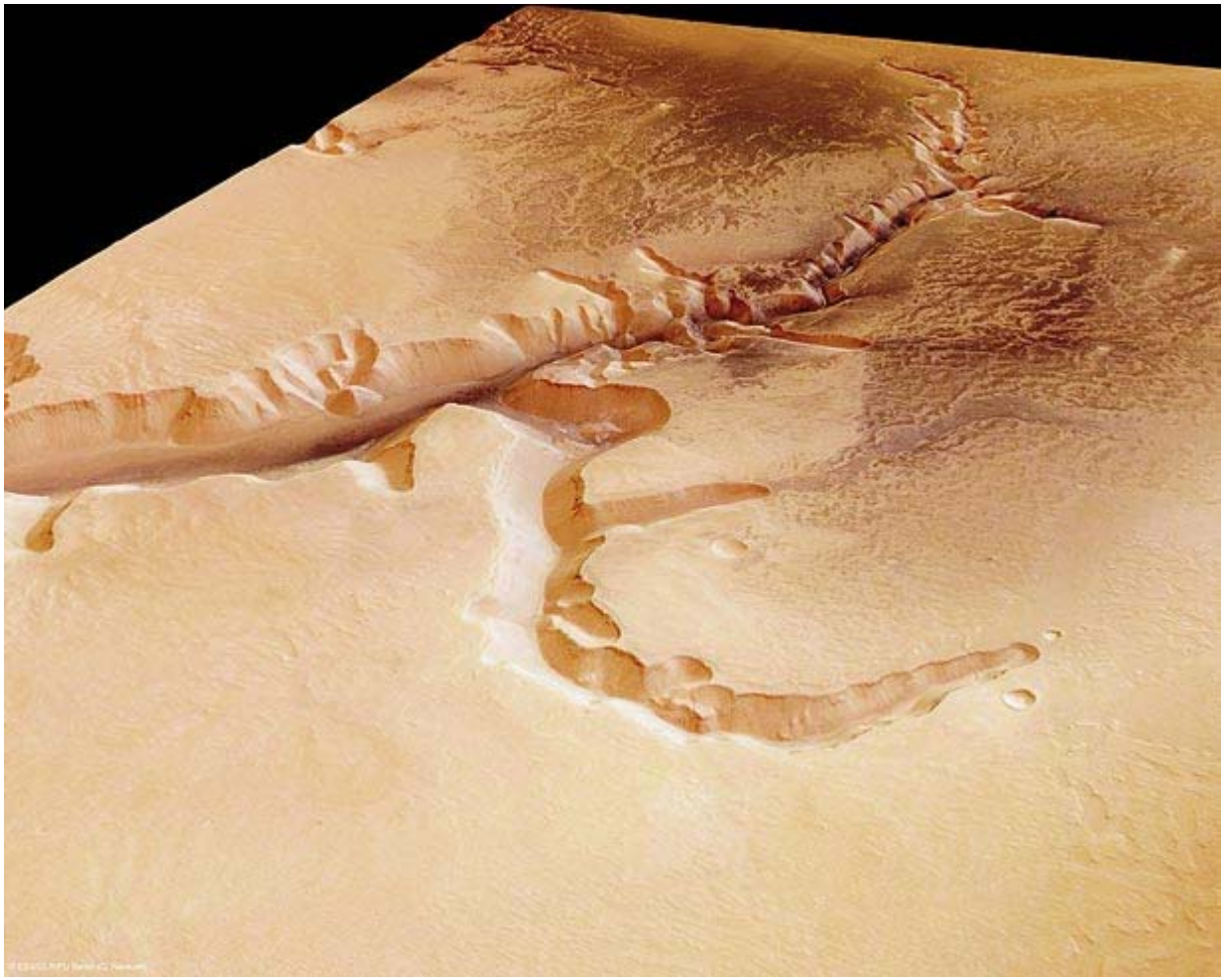

Echus Chasma is bounded to the west by the Echus Chasma plateau which lies about 4 km above the Echus Chasma floor. On the plateau are deeply incised valleys which connect to the Echus Chasma valley

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Image 3 of 7

The images of the Echus Chasma plateau show valleys that are about 10 km long and 1000 m deep. The main valley, Kasei Valles, is about 4 km in depth

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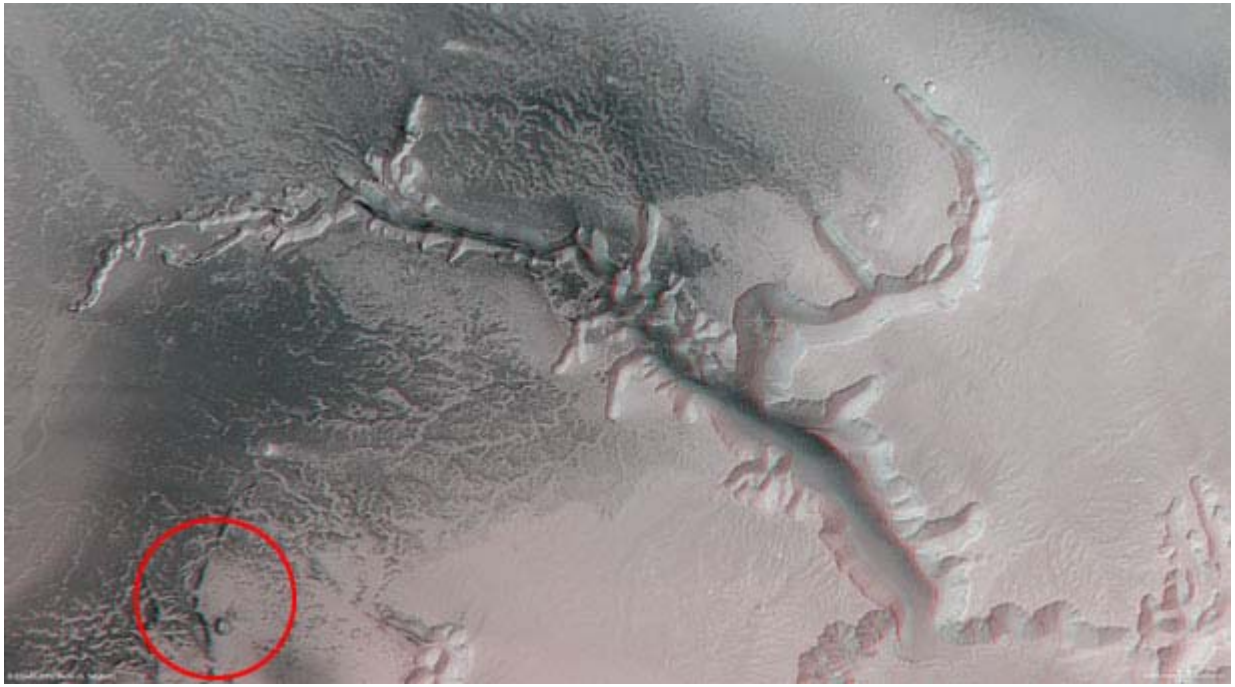

One possible indication for volcanic activity in the past is be a sickle-shaped, 25-km long dike (circled)

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Two impact craters with a diameter of approximately 8 km are located south-east of the dike. The eastern crater was partly eroded as the valley formed. A large portion of the crater collapsed into the valley and its debris was removed.

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The dark material shows a network of light-coloured, shallowly incised valleys. They look similar to drainage networks known on Earth

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A 4000-m-high cliff marks the edge of the source area of Kasei Valles in its western part. Gigantic water falls may have once plunged over these cliffs on to the valley floor. The original shoreline is still partially visible. The remarkably smooth valley floor was later flooded by basaltic lava

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