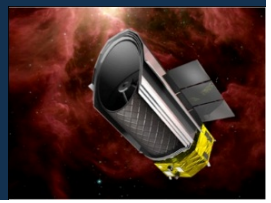
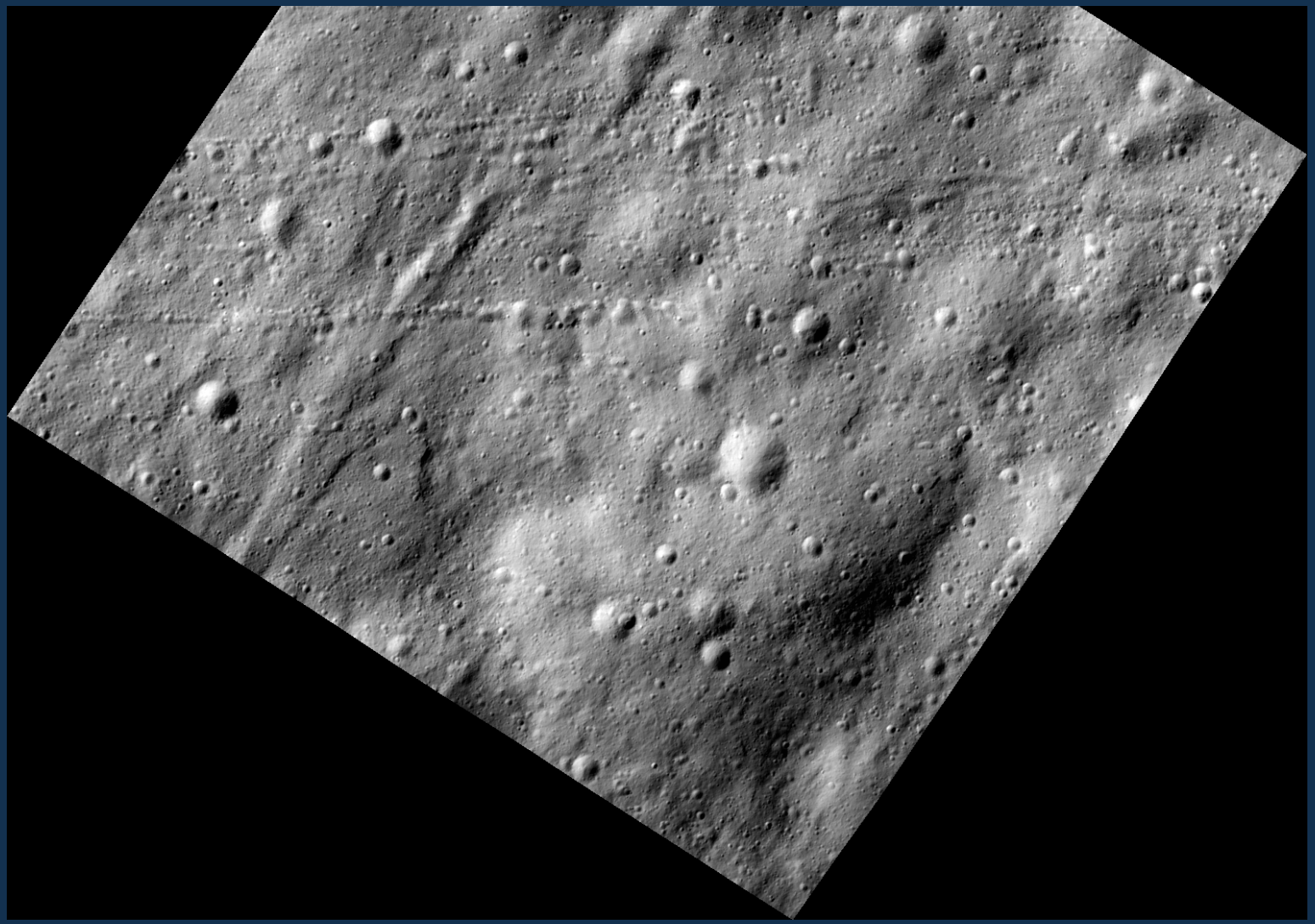
Vesta Main Enigmas

Vesta's enigmas could be studied by means of MIR-FIR imaging spectroscopy. The Vesta potentially resolvable diameter (0.4-0.6 arcsec) would allow to investigate the mineralogy of large areas of the Vesta surface.

- Composition of dark-hydrated materials
- Detection of plagioclase
- Olivine are present on Vesta?
- Mesosiderites come from Vesta?
- Dust ring around Vesta?



Vesta Main Enigmas



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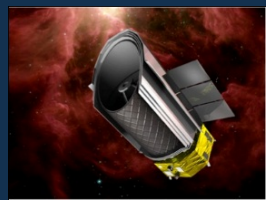
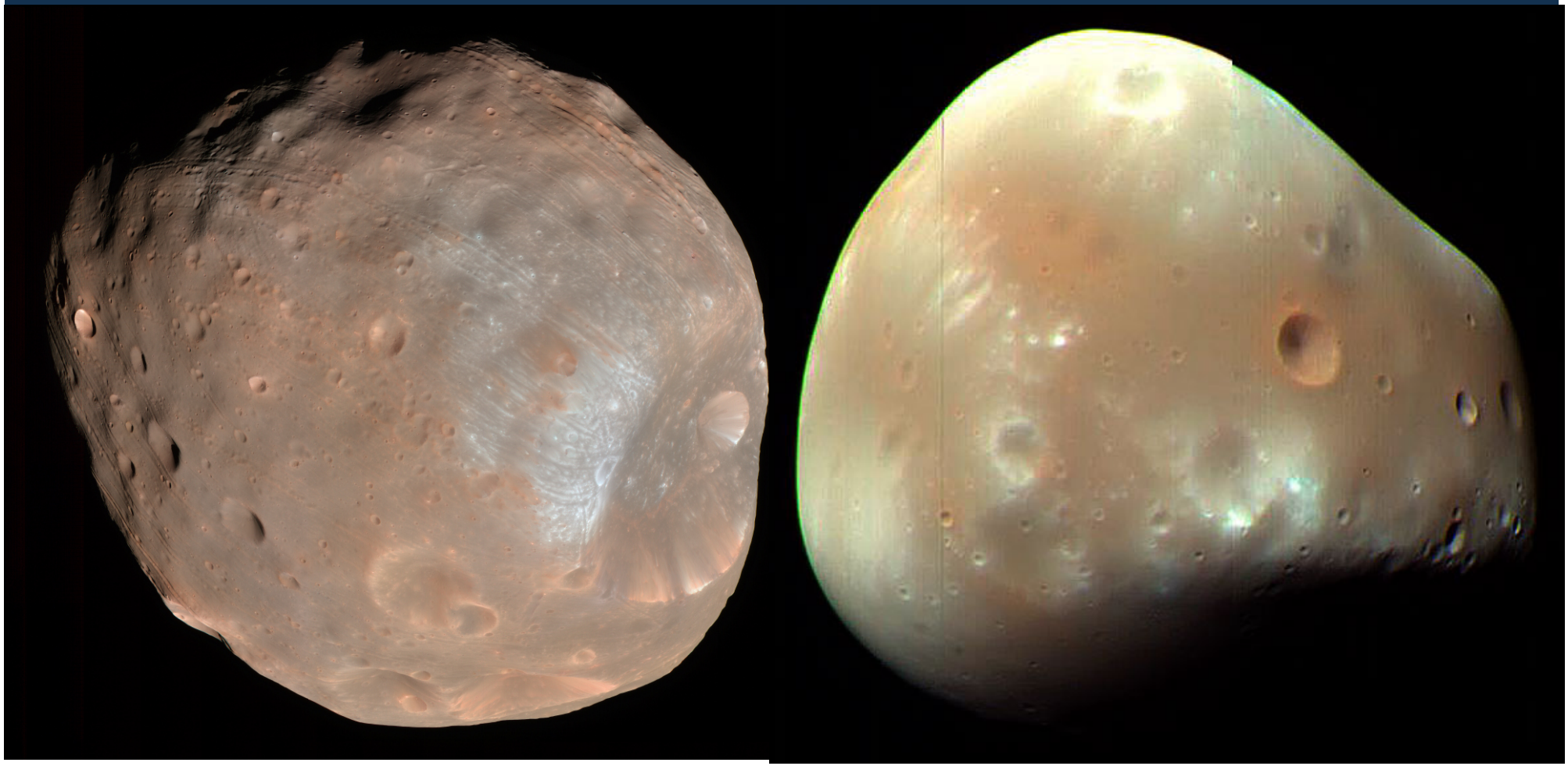
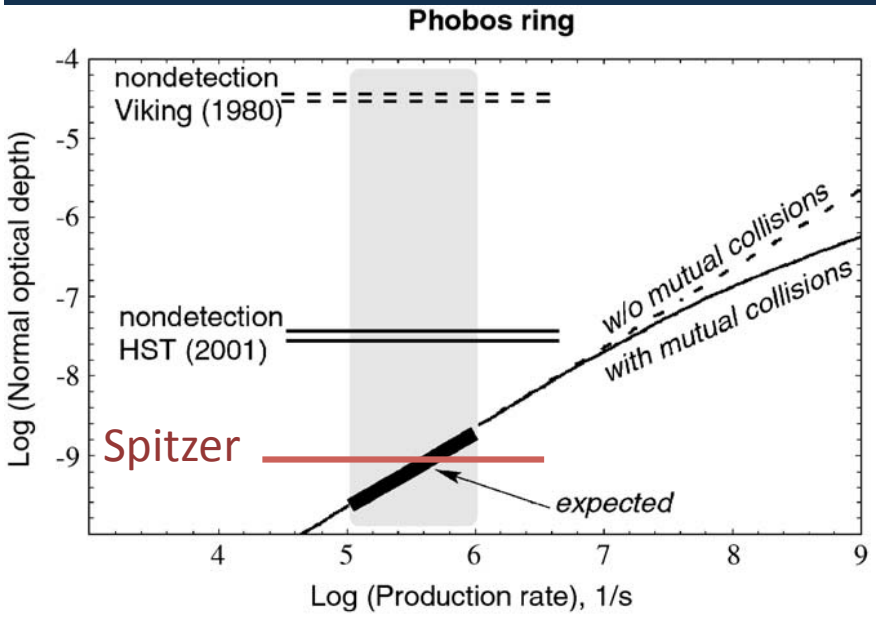


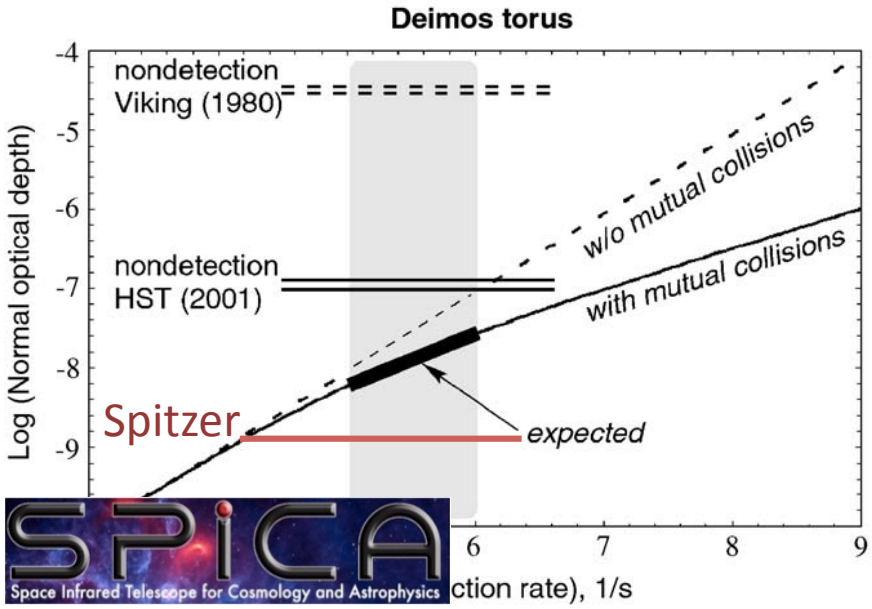
Martian dust Torus (1)

Two tenuous dusty torus should be present around Mars formed by the impact ejecta from the martian moons Phobos and Deimos (Krivov and Hamilton, 1997 and refs therein)



Martian dust Torus (2)

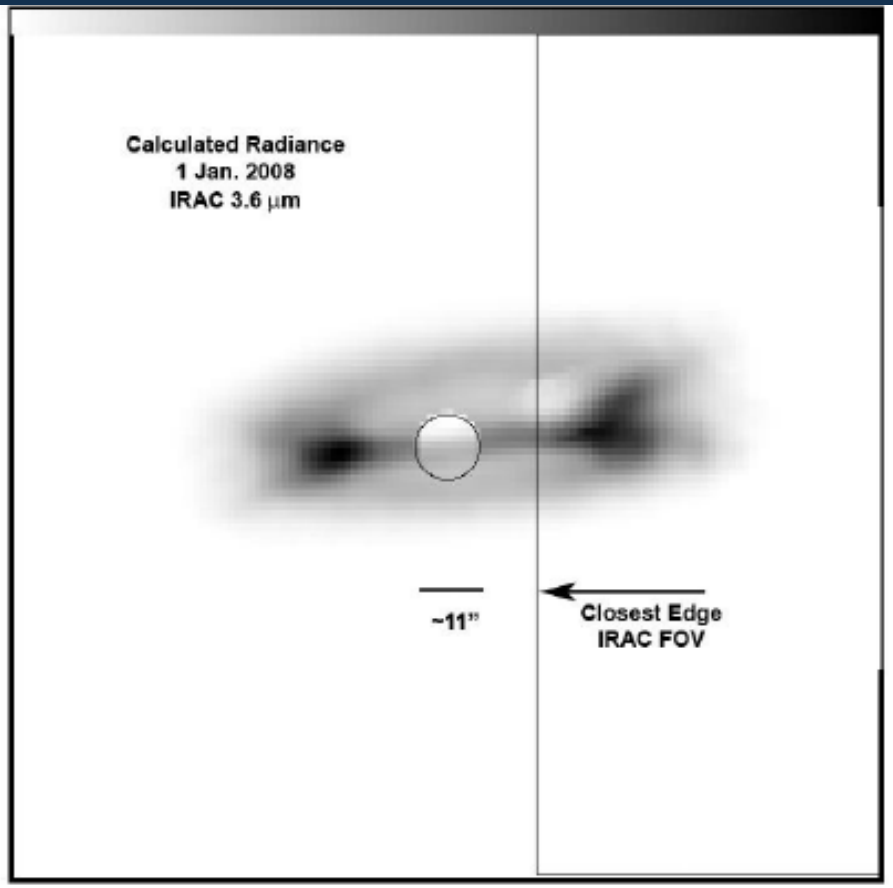




Both belts are seen edge-on and have the maximum optical depth, during Mars' equatorial plane crossings. Of course, the chances to detect the belts are the best if a plane crossing occurs close to opposition, when geocentric distance to the planet is at a minimum.

Martian dust Torus (3)

One of the most promising opportunity to observe the Torus is end of 2022



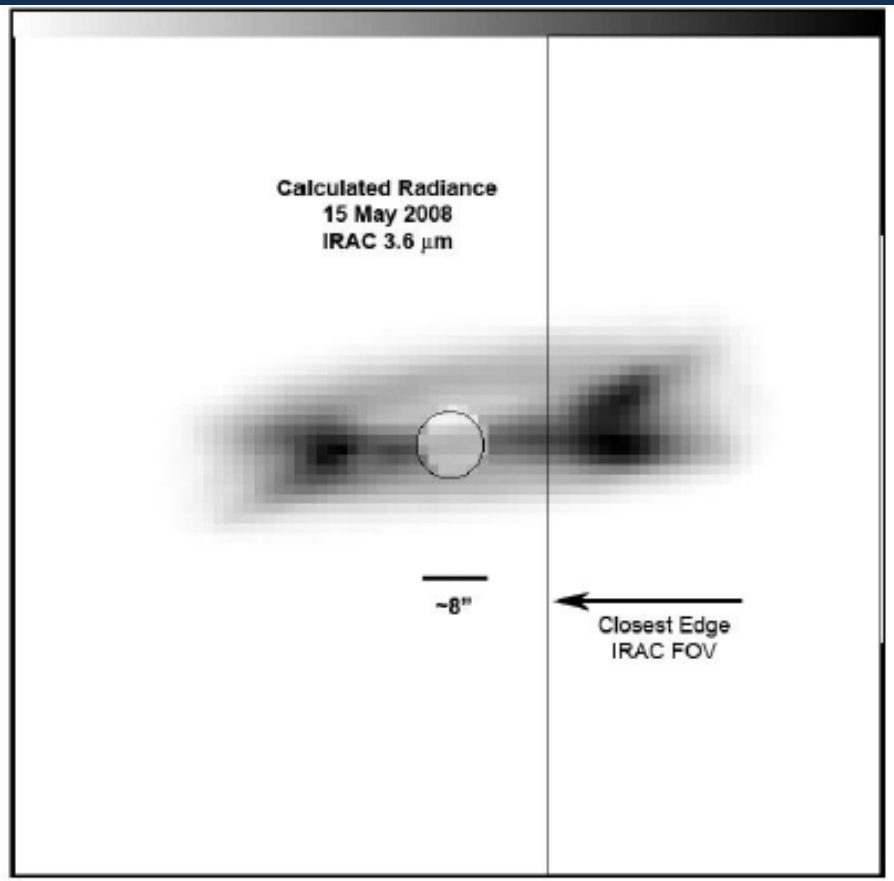


Figure 2. Distribution of the radiation flux from the Deimos torus as seen in on 1 Jan. (left) and 15 May (right) 2008 in the 3.6 μm IRAC filter. Angular resolution on the plots is 1.2″. Dark areas represent the regions of highest flux.

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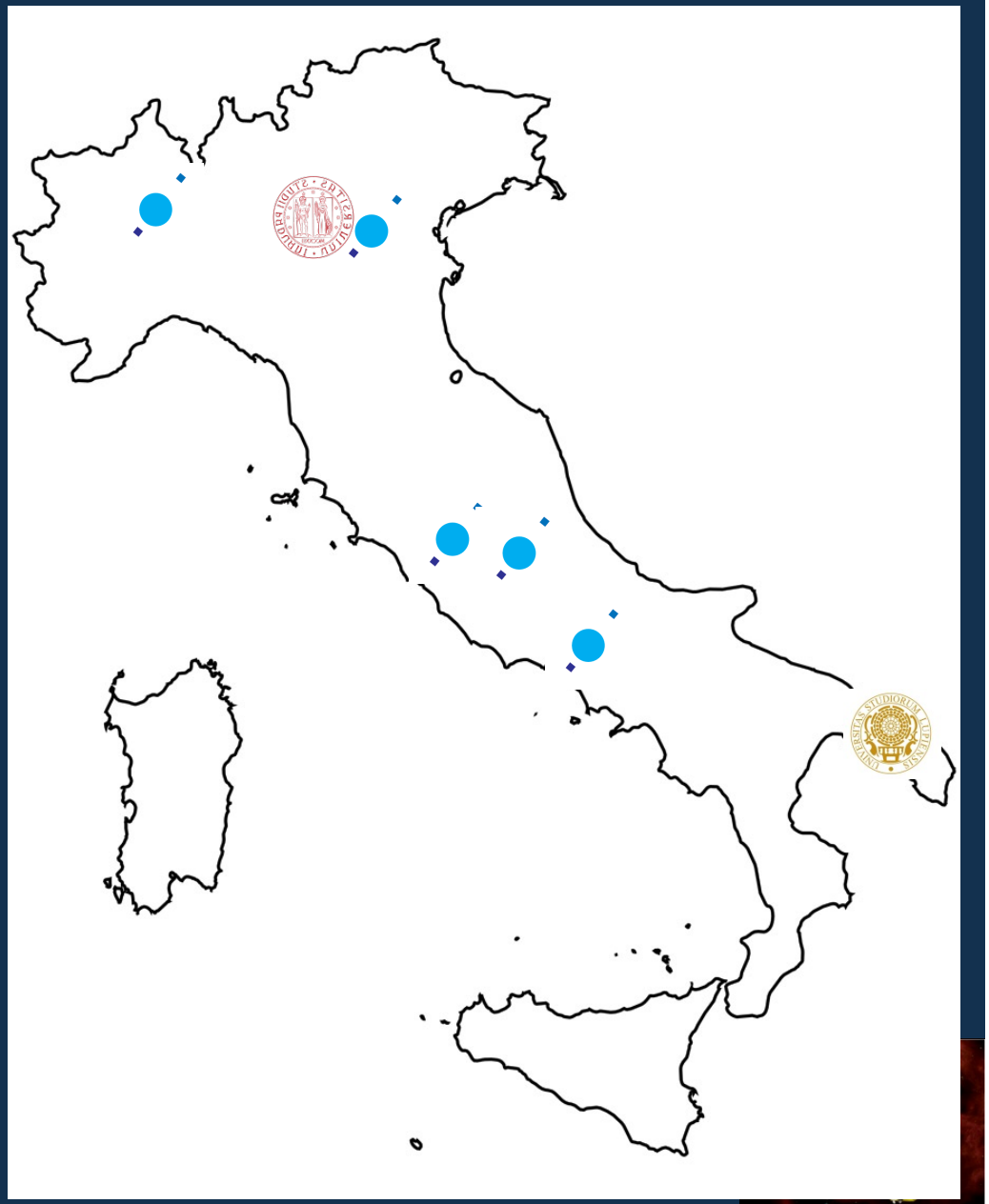

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