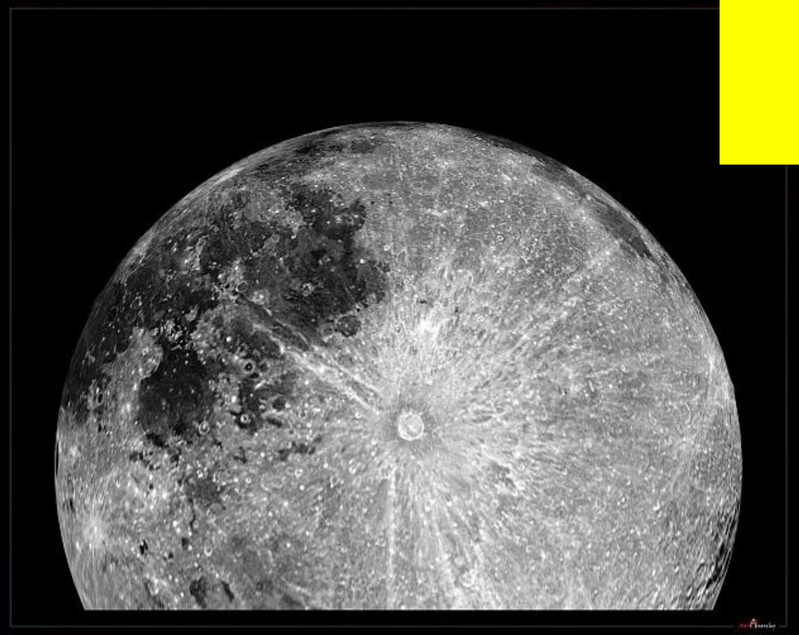
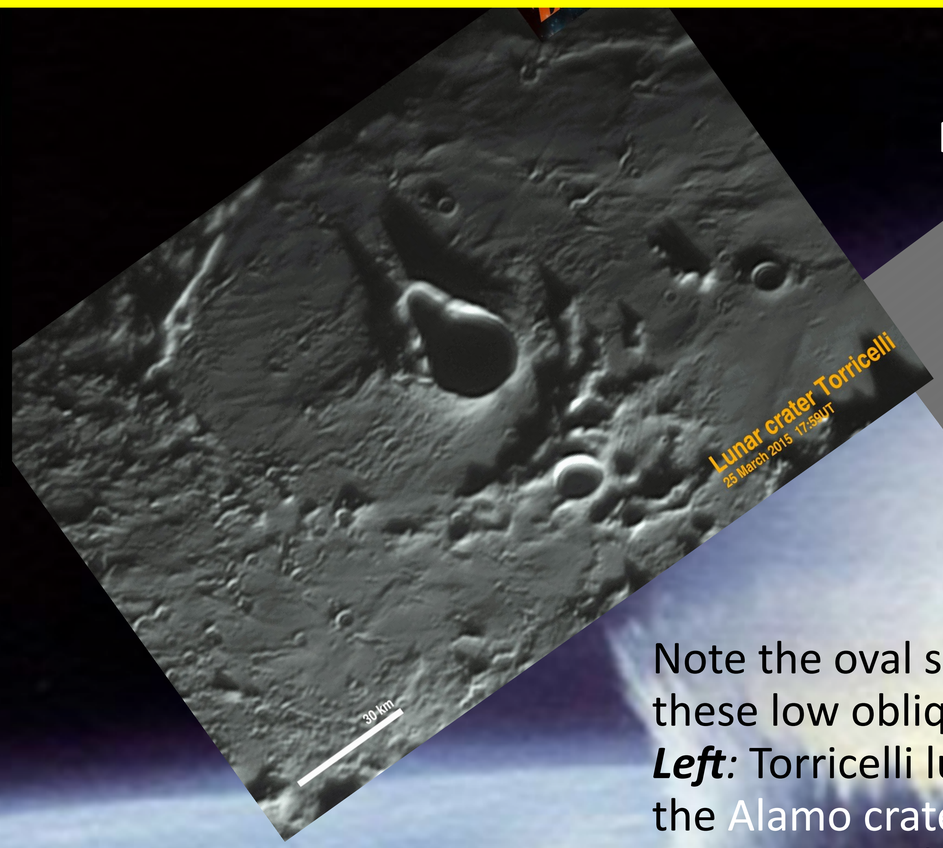
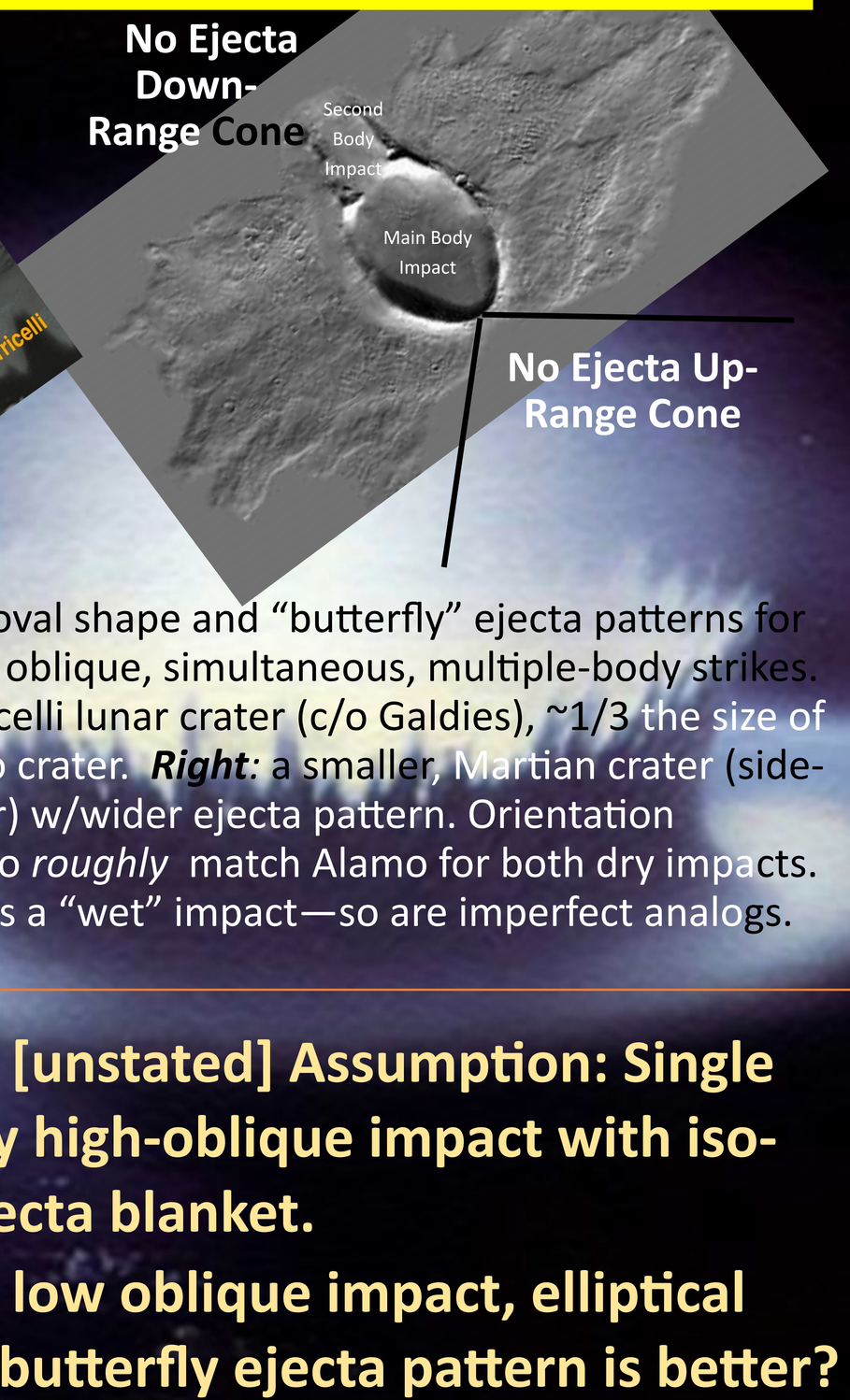
OBLIQUE IMPACT CHARACTERISTICS ON MARS, LUNA & A PLEISTOCENE EARTH ANALOG?



Tycho. A simple single, orthogonal (between 90° & 30°) lunar bolide strike. Rays, no non-ejecta cones. This is the assumed Alamo impact analog and might be correct. But, see next poster.

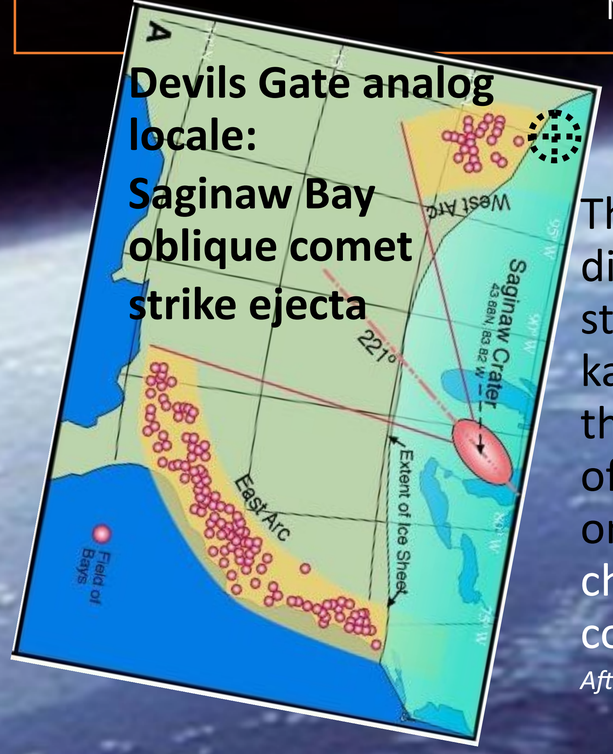
NASA





Note the oval shape and "butterfly" ejecta patterns for these low oblique, simultaneous, multiple-body strikes. ***Left:*** Torricelli lunar crater (c/o Galdies), ~1/3 the size of the Alamo crater. ***Right:*** a smaller, Martian crater (side-scan radar) w/wider ejecta pattern. Orientation changed to *roughly* match Alamo for both dry impacts. Alamo was a "wet" impact—so are imperfect analogs.

www.cintos.org



Devils Gate analog locale:

Saginaw Bay oblique comet strike ejecta

The "Carolina Bays" appear to be distal ejecta from an oblique comet strike on the ~1-2 km thick Nebraskan glacier covering Michigan. Note the butterfly pattern and long reach of the ejecta blanket. Ejecta that fell on the ice now looks like till. Note characteristic no-ejecta down-range cone for oblique impacts.

After www.cintos.org

Previous [unstated] Assumption: Single cometary high-oblique impact with isotropic ejecta blanket.

Maybe a low oblique impact, elliptical crater & butterfly ejecta pattern is better?