

Figure 6. Yardang morphologies found in the Medusae Fossae Formation. (a) Yardangs in Apollinaris Sulci with smooth, bulbous, concave heads (portion of HiRISE image ESP_016123_1675). (b) Shorter, more equant yardangs of the Zephyria region in the western Medusae Fossae (portion of HiRISE image ESP_017047_1770). (c) Faceted, flat-topped yardangs in northern Zephyria Planum (portion of CTX image P02_001791_1852). (d) Faceted yardangs with concave backs and more gently-sloping sides, located in far eastern Lucus Planum (portion of HiRISE image PSP_006273_1715). (e) Yardangs in western Apollinaris Sulci, at the foot of Apollinaris Patera (portion of HiRISE image PSP_009464_1695). (f) Faceted/bidirectional yardangs south of Nicholson Crater. (portion of HiRISE image PSP_008158_1825). Locations are shown in Figure 1.

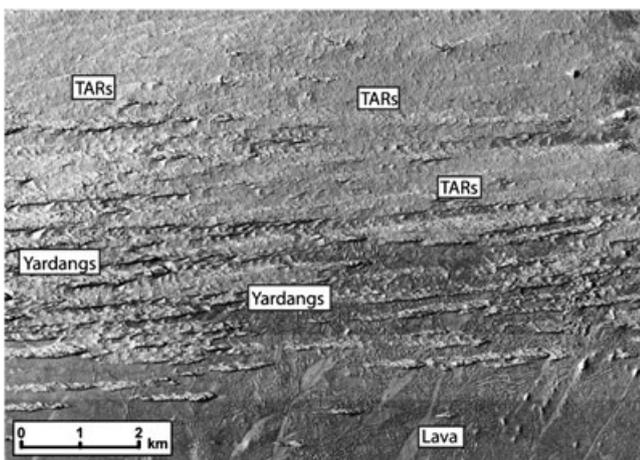


Figure 7. Fresh TARs composed of material shed by yardangs in northern Zephyria Planum (portion of CTX image P02_001791_1852).

crests, dull linear or polygonal secondary bedforms, and the appearance of superposed craters (Figure 8(a), (b)). Heavily indurated and eroded TARs are also found within the MFF, with rounded, etched, or flattened crests, rough or featureless

inter-TAR areas, and a greater abundance of craters (visible at MOC-scale) than indurated TARs (Figure 9). While TARs elsewhere on Mars are generally crisp and uncratered (Thomas *et al.*, 1999), the MFF features display a distinct progression of induration from extremely fresh forms with sharp crests to dulled, abraded and eroded forms.

Figure 10 shows an area of the MFF where the progression of TARs from fresh to heavily eroded can be seen in a small geographic area. This section of the MFF is composed of a generally smooth surface marked by numerous secondaries from a nearby 22-km impact crater to the southwest. At high resolution it can be seen that there are transverse aeolian ridges (TARs) on the surface, many of which are highly eroded. Fresh-looking network TARs with crisp crests can be observed in the deeper craters (Figure 10, A), where they were either more recently active or better sheltered from erosion. Moderately degraded TARs with flattened crests and subdued morphology can be seen in slightly shallower craters (Figure 10, B), and heavily degraded TARs are present on the upper flat surface of the deposit, with fluted and crenulated crests and craters (Figure 10, D). The rays of a fresh, primary crater preserved some of the original TAR texture (Figure 10, C, dotted outline), providing evidence that the sparse bedforms that cover the surface were once more continuous, and perhaps more like an undulating sheet than a series of