**DYKE SWARMS OF THE MARAM CORONA AREA, PARGA CHASMATA, SE OF ATLA REGIO, VENUS.** K. Mghazli[1], H. El Bilali[2], R.E. Ernst[2,3], N. Youbi[1] [1]Department of Geology, Faculty of Sciences-Semlalia, Cadi Ayyad University, Marrakesh, Morocco; mghazli.k@gmail.com. [2]Department of Earth Sciences, Carleton University, Ottawa, Ontario, Canada; hafidaelbilali@cunet.carleton.ca; richard.ernst@ernstgeosciences.com, [3]Faculty of Geology and Geography, Tomsk State University, Tomsk, Russia.

**Introduction:** The strong association between coronae and chasma has been extensively discussed (e.g. [1-6]). One example of this relationship is the 10,000 km long Parga Chasmata which connects Atla Regio with Themis Regio. Based on detailed mapping of graben fissure systems and interpreted rift faults along a 1500 km long segment of Parga Chasmata, Graff et al. [6] recognized that many corona represent the locus of local triple junction rift centres within the broader rift zone.

**Maram Corona Study Area:** We have selected a region along Parga Chasmata for detailed study. This area is about 2000 km southeast from the centre of Atla Regio (Fig. 1). For this area the grouping of rift segments and coronae into local triple junction centres [6] is shown in Fig. 2.

The goal of this present research is to provide detailed mapping (1:500,000 scale) of the graben fissure systems, lava flows and rift faults integrated with the topographic changes in order to provide insights into setting of these corona within the rift. Our mapping builds on the previous reconnaissance-scale mapping (1:5,000,000 scale) of Taussig Quadrangle (V–39) by [7].

Mapping of grabens is shown in Fig. 3a and these are provisionally grouped and colour-coded into distinct sets (Fig. 3b) which can be interpreted to represent dyke swarms [8-9]. In Fig. 3C the main swarms are generalized: notably there is an impressive radiating swarm (red lines) centred on Maram corona, a possible radiating swarm (white lines) focussed on centre 2, and a circumferential system (pink lines) surrounding centre 1. Additional extensive linear swarms (e.g., green, yellow, pink, and blue lines) are present which may belong to magmatic centres outside the map area.

**Future Work:** Along with continued mapping of grabens, the research will also turn to mapping of flows and integrating the flows and grabens into a geological history. The nature of the sharp topographic changes across Maram corona (Fig. 4) will also be addressed.

**References:** [1] Hamilton, V.E., Stofan, E.R. (1996) Icarus, 121, 171–194. [2] Martin, P., Stofan, E.R. (2004). 35th LPSC, Abstract 1576. [3] Martin, P., et al. (2007) JGR, 112, E04S03. [4] Smrekar, S.E., et al. (2010). JGR, 115, No. E07010. [5] Ivanov, M.A., Head, J.W. (2015). Planet. Space Sci., 113-114, 10-32. [6] Graff, J.R., et al. (2018). Icarus, 306, 122-138. [7] Brian, A.W., et al. (2005). USGS SIM 2813. [8] Grosfils E.B., and Head J.W. (1994) GRL, 21, 701–704. [9] Buchan, K.L. and Ernst R.E. (2021) Gond. Res., 100, 25-43.

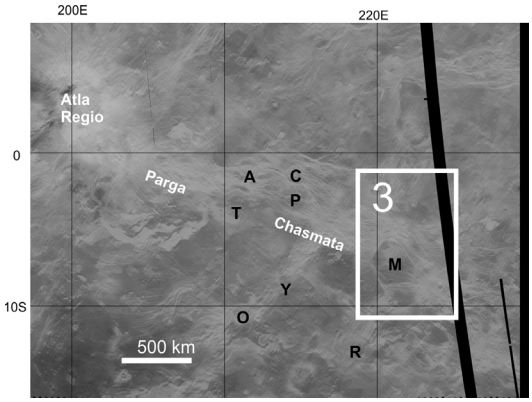


***Figure 1:*** *Location map of present study along Parga Chasma. Named corona (in black letters) are: A = Attabeira, C = Chantico,* ***M = Maram****, O= Oduduwa, P= Pazar-ana, R = Repa, T = Tadaka, and Y = Ya-Yerv.*

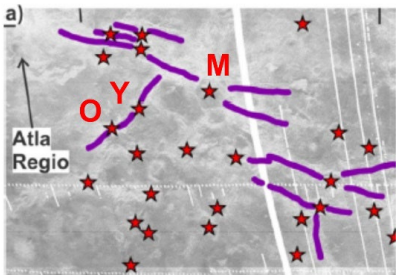


***Figure 2.:*** *Relationship between rift segments and magmatic centres (mostly coronae) along Parga Chasma near Atla Regio [after 6]. M = Maram, O = Oduduwa and Y = Ya-Yerv coronae.*

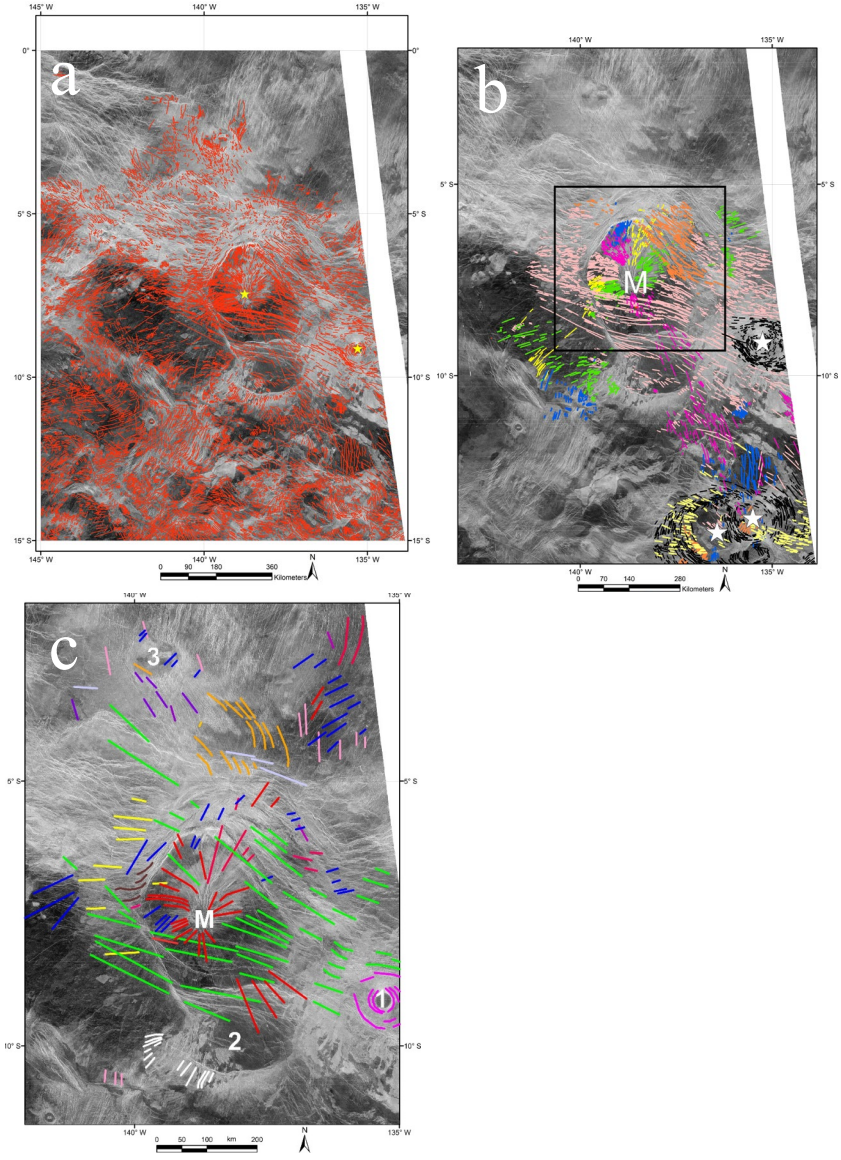


***Figure 3:*** *Mapping of graben-fissure systems in the vicinity of Maram Corona (M). a) all lines, b) lines grouped into swarms distinguished by colour, c) generalized lines of the main swarms. Box shows location of Figure 4*

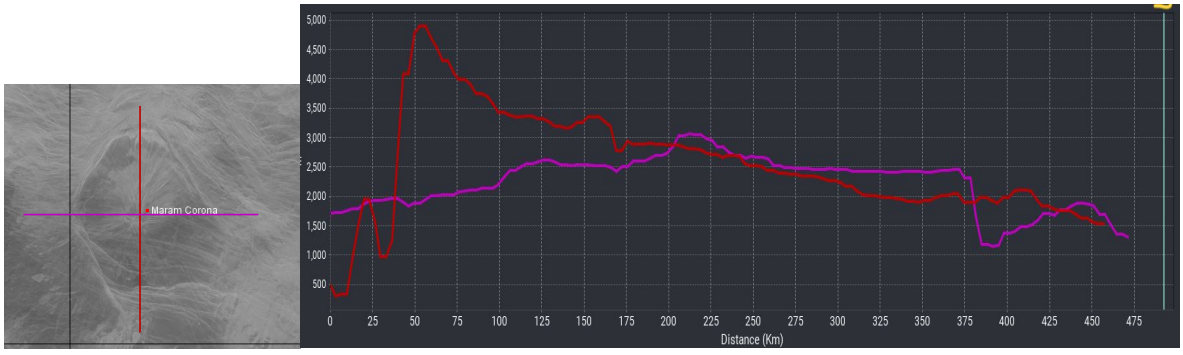


***Figure 4:*** *Topographic profiles across Maram Corona.*