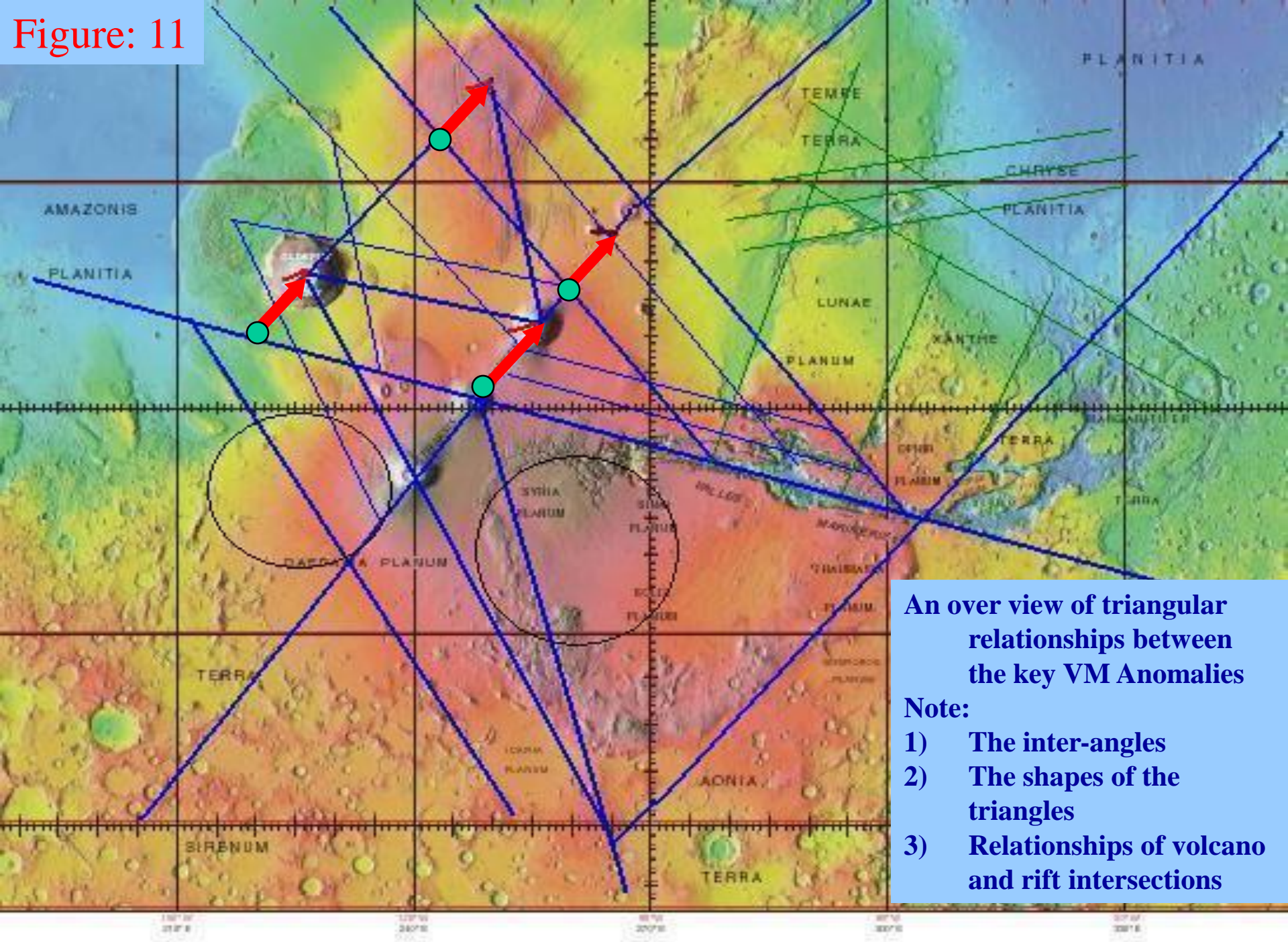


Figure: 11



An over view of triangular relationships between the key VM Anomalies

Note:

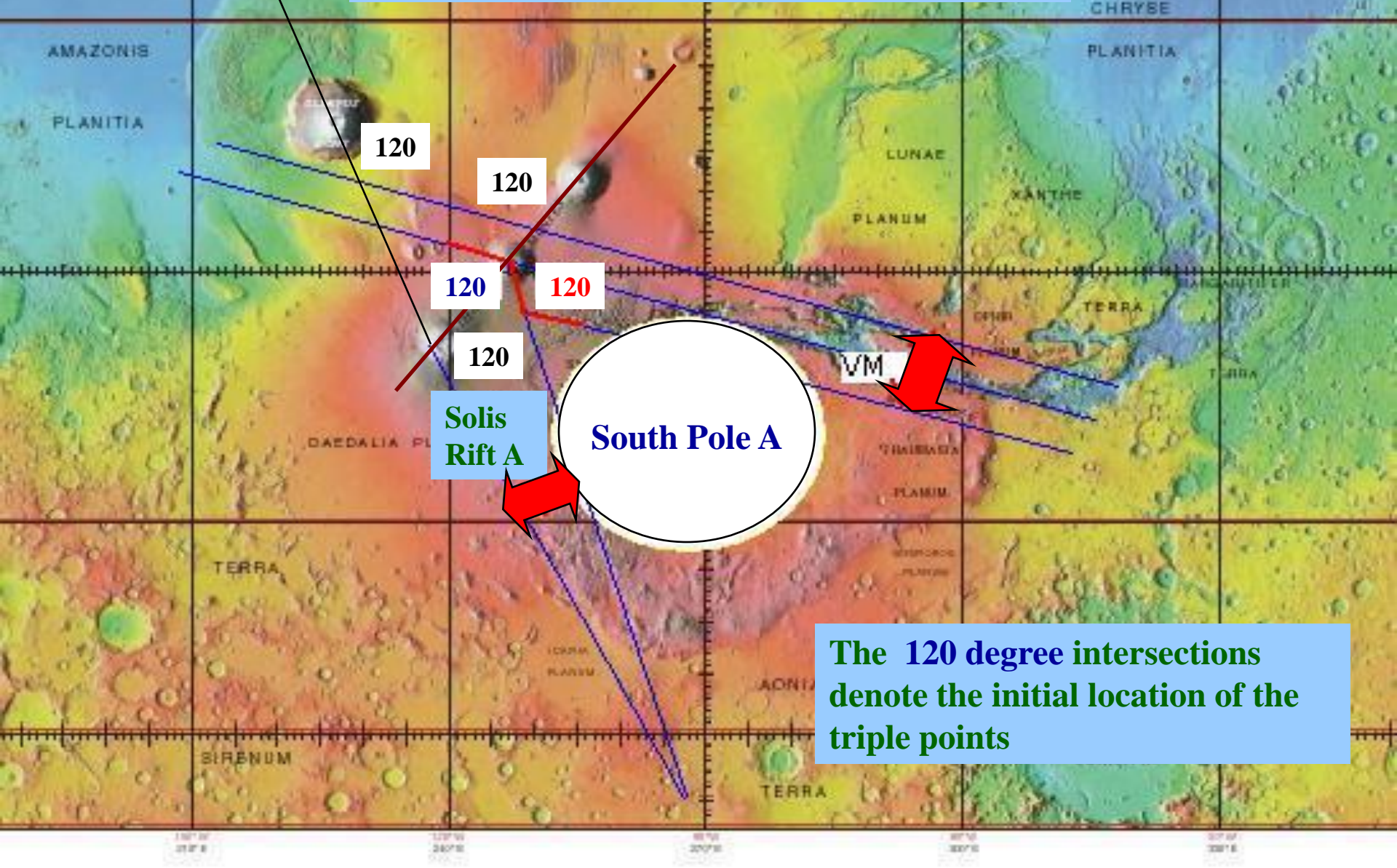
- 1) The inter-angles
- 2) The shapes of the triangles
- 3) Relationships of volcano and rift intersections

Figure: 12

The Mars South pole was initially on Solis Planum. Rifting occurred either side of the pole, with an active water cycle, thick atmosphere and deep seas.

Amazon Sea

Tharsis Sea

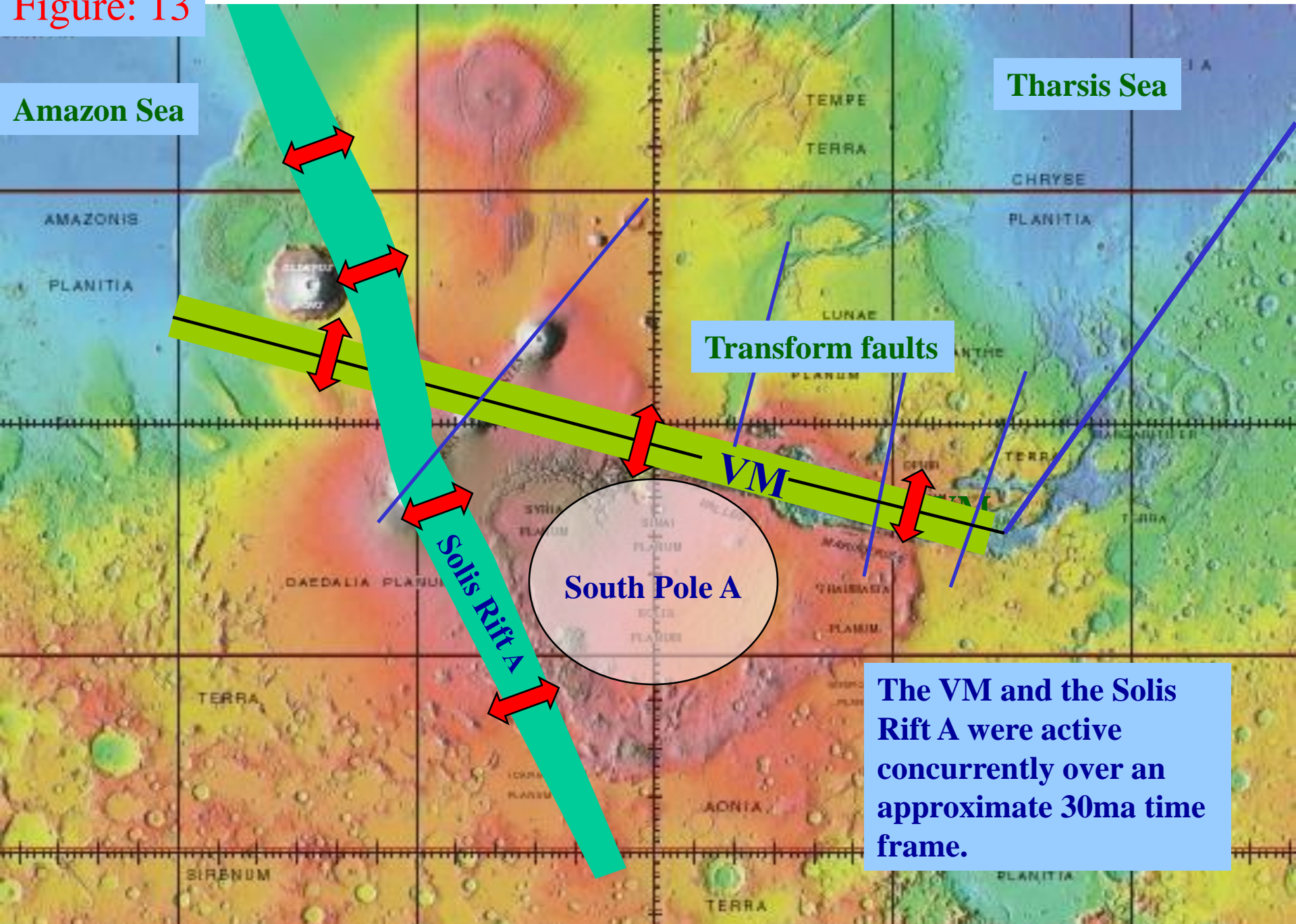


The 120 degree intersections denote the initial location of the triple points

Figure: 13

Amazon Sea

Tharsis Sea



Transform faults

South Pole A

The VM and the Solis Rift A were active concurrently over an approximate 30ma time frame.

Figure: 14

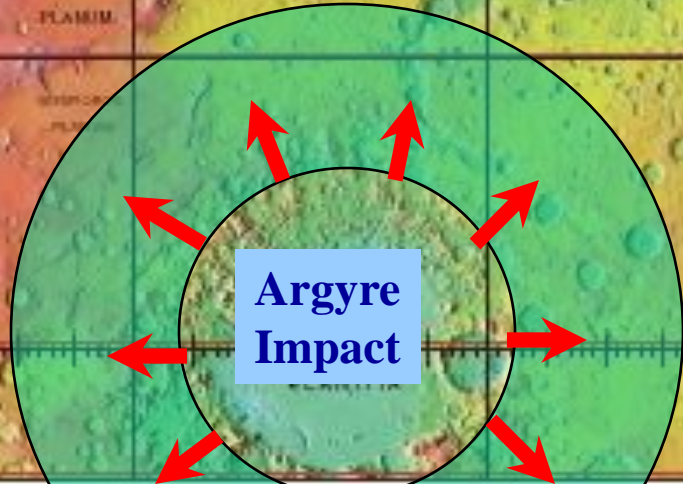
Amazon Sea

Tharsis Sea

Transform faults

South Pole A

Solis Rift A



The Argyre meteorite hit Mars at 20 degrees north from the pole at a low angle to the horizon. The crater is roughly 4 times the size of the crater we see today.

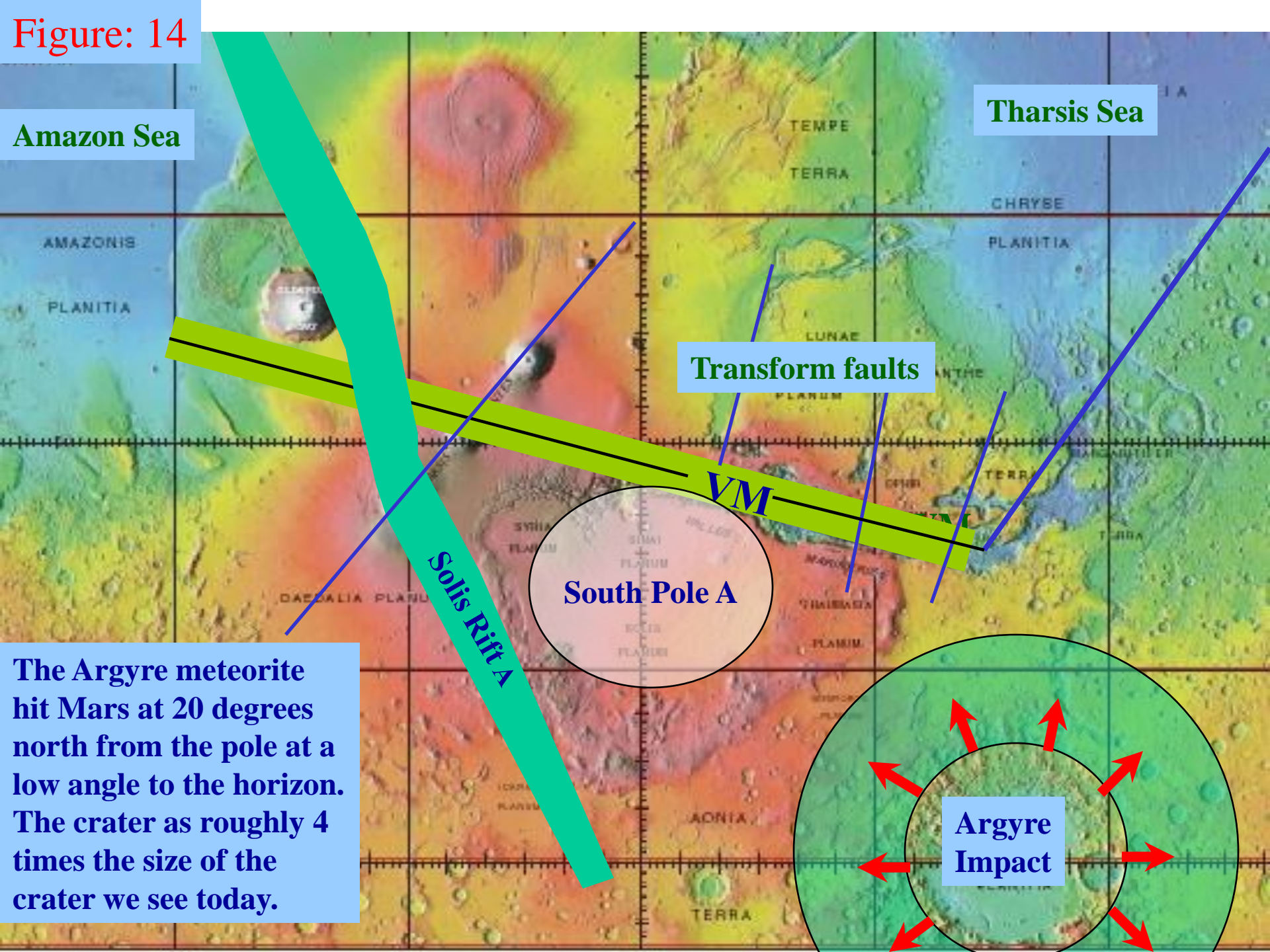


Figure: 15

Amazon Sea

Tharsis Sea

The seas froze over, and the ice was covered with 5m to 10m of very fine airborne silts

Transform faults activated

Argyre was an Angular impact

Dust covered the planet for 10 years, cooled the planet surface, and covered the icecap with 20m of airborne silt – this choked the water cycle and cooled the oceans & seas which gradually became filled with pack ice.

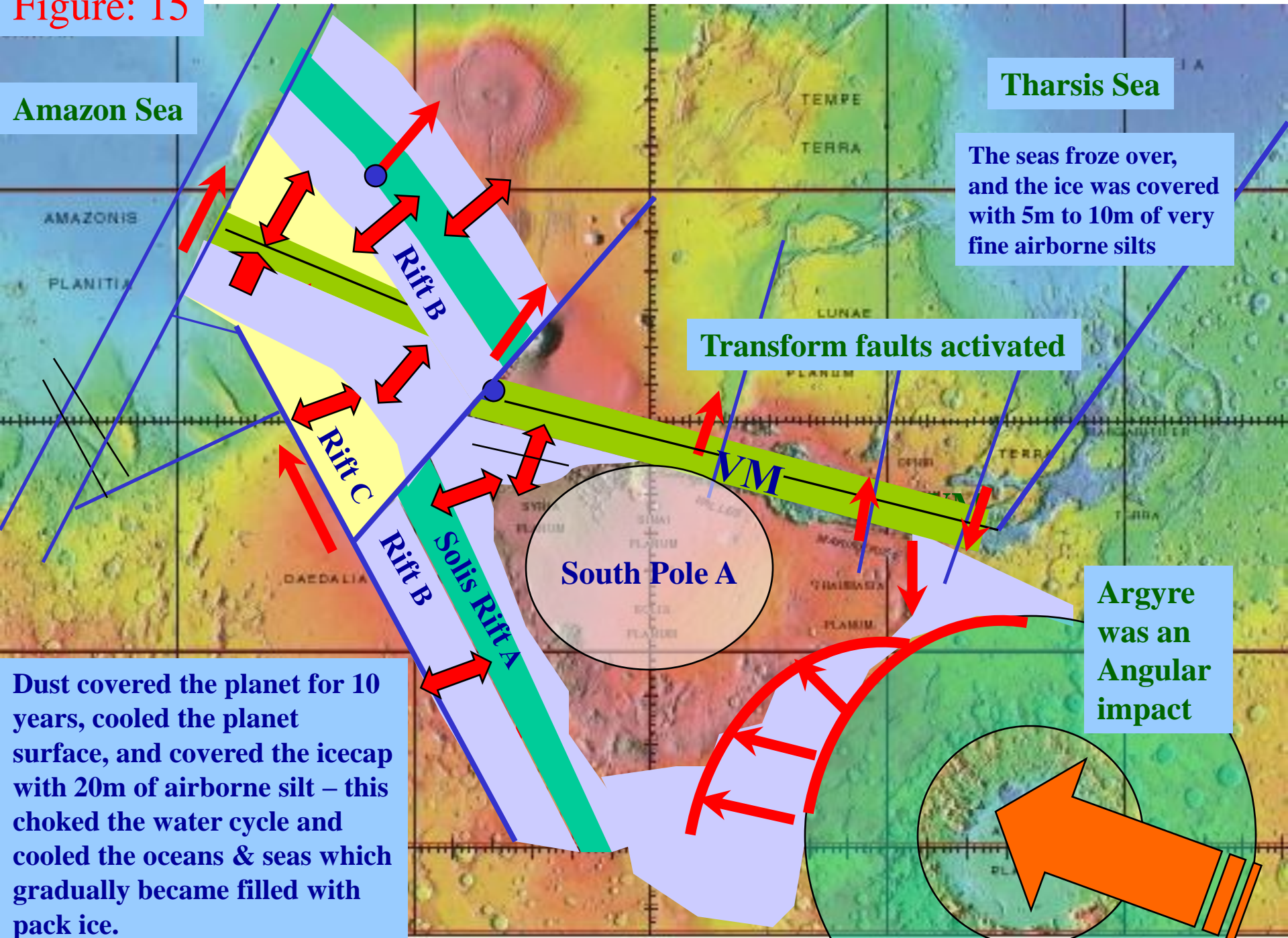
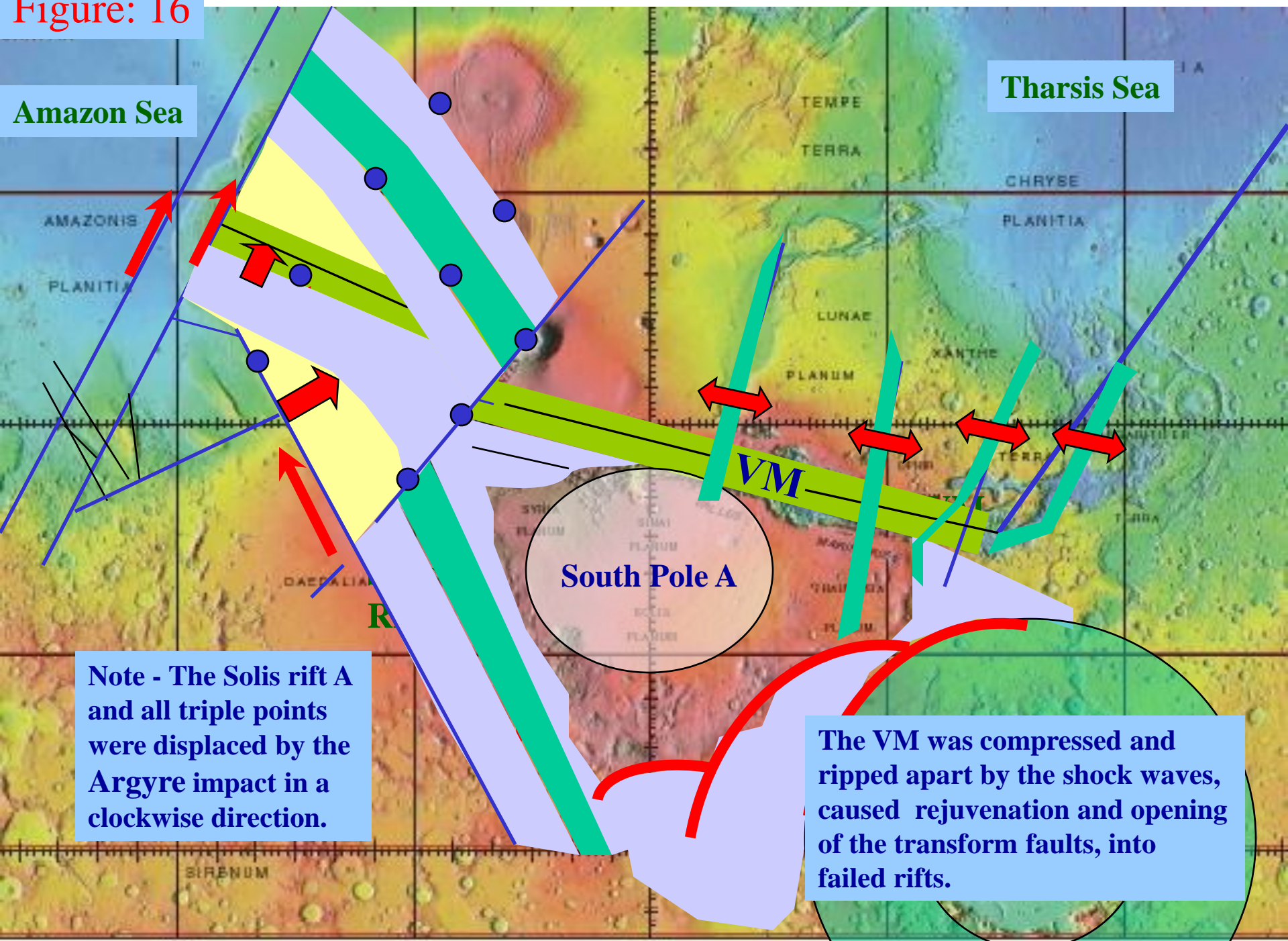


Figure: 16



Amazon Sea

Tharsis Sea

South Pole A

VM

Note - The Solis rift A and all triple points were displaced by the Argyre impact in a clockwise direction.

The VM was compressed and ripped apart by the shock waves, caused rejuvenation and opening of the transform faults, into failed rifts.

Figure: 17

Amazon Sea

Tharsis Sea

Transform faults

South Pole B

The pole moved to Pole B. The atmosphere was thinned and the water was trapped at the poles and the weight of ice caused the crust to settle and new triple points to form

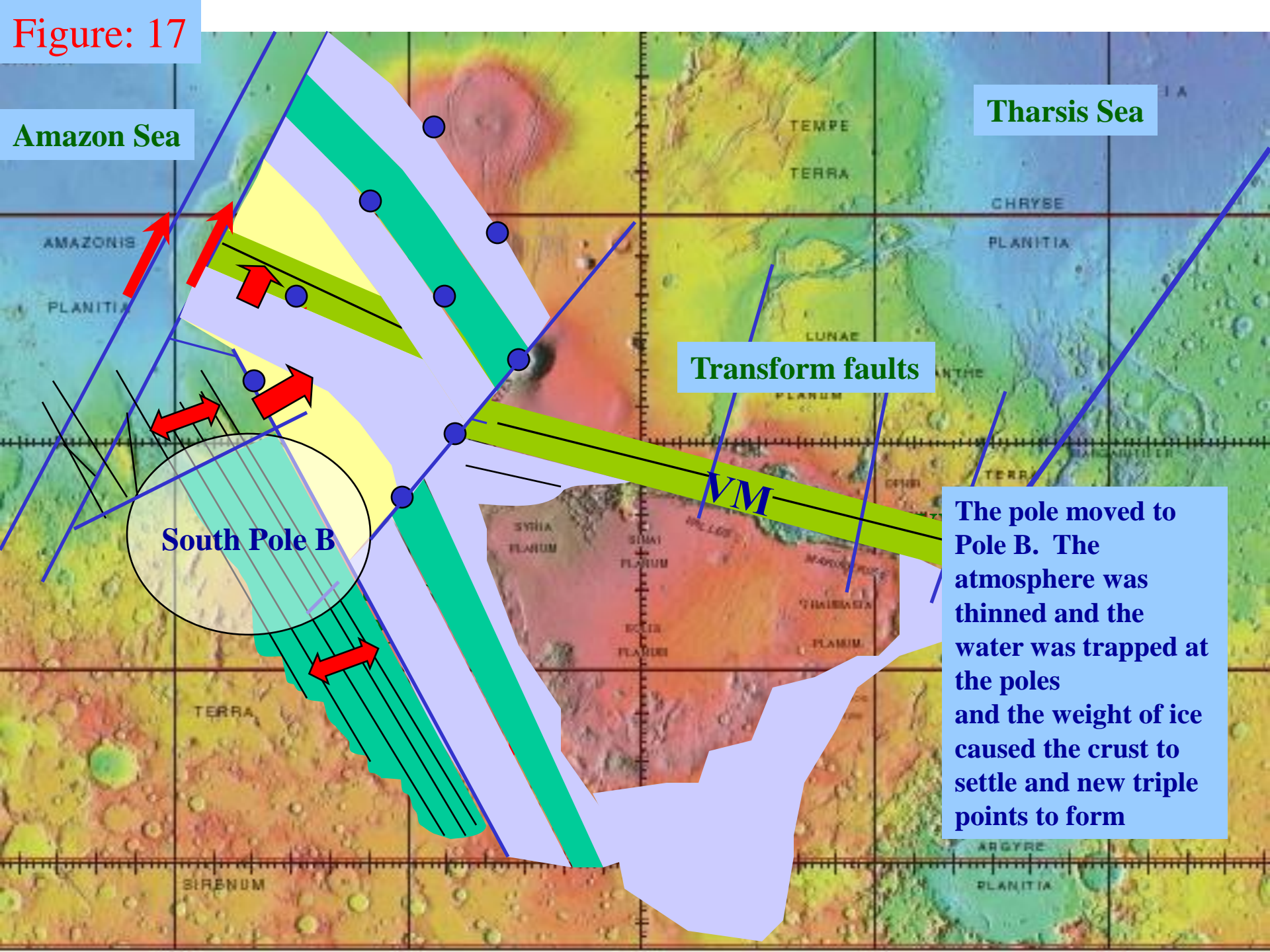


Figure: 18

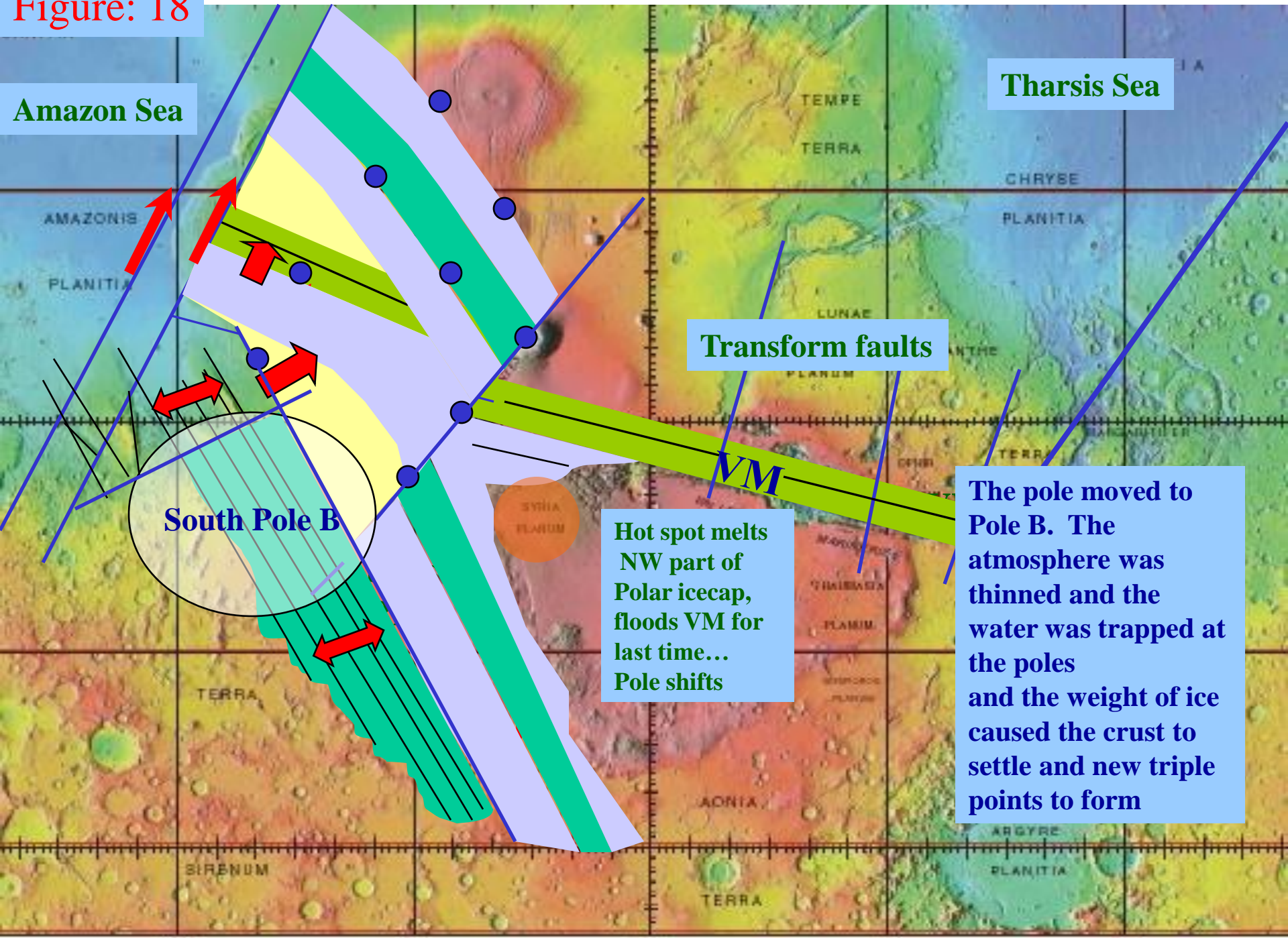
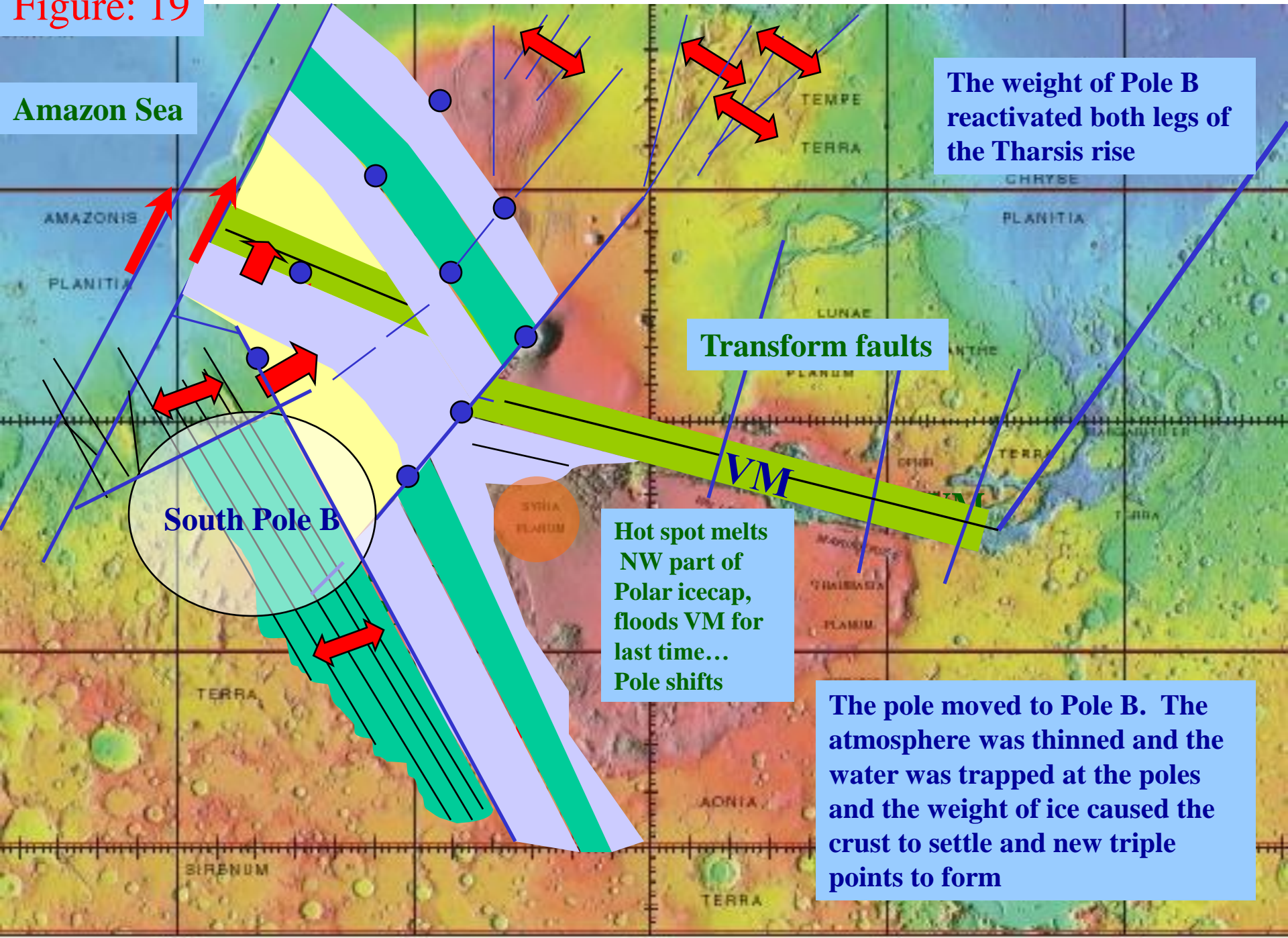


Figure: 19

Amazon Sea



The weight of Pole B reactivated both legs of the Tharsis rise

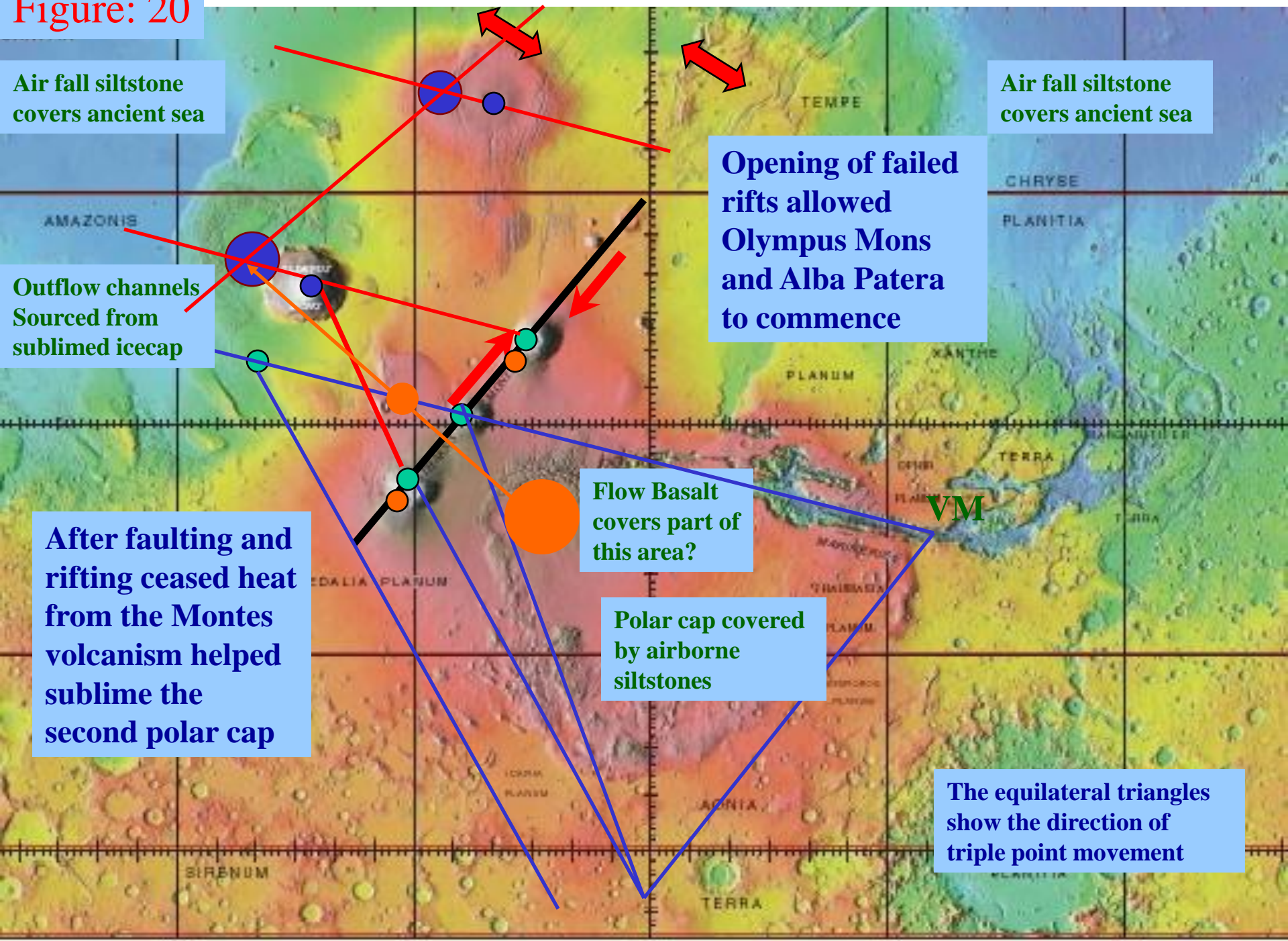
Transform faults

South Pole B

Hot spot melts NW part of Polar icecap, floods VM for last time... Pole shifts

The pole moved to Pole B. The atmosphere was thinned and the water was trapped at the poles and the weight of ice caused the crust to settle and new triple points to form

Figure: 20



Air fall siltstone covers ancient sea

Opening of failed rifts allowed Olympus Mons and Alba Patera to commence

Outflow channels Sourced from sublimed icecap

After faulting and rifting ceased heat from the Montes volcanism helped sublime the second polar cap

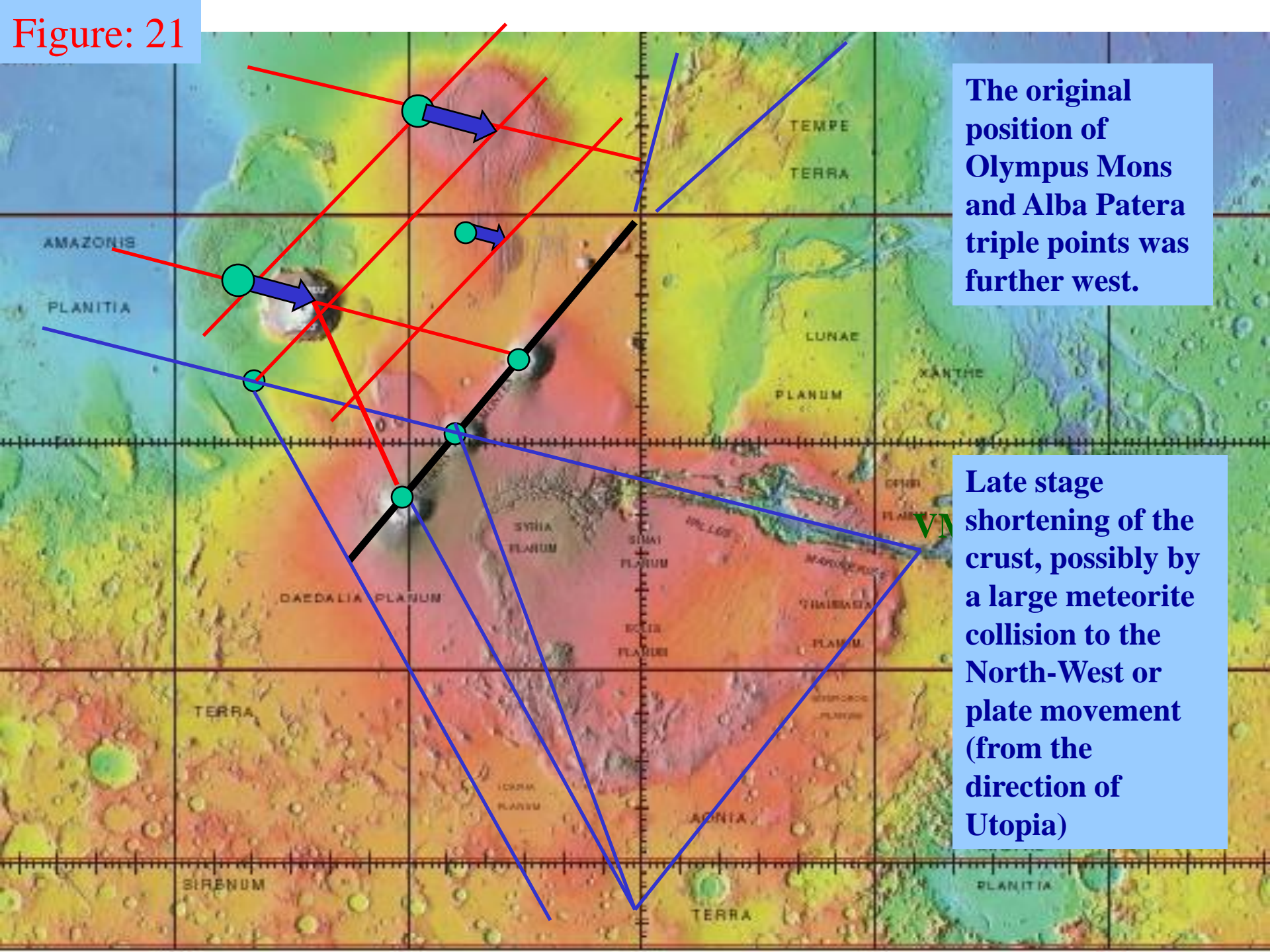
Flow Basalt covers part of this area?

Polar cap covered by airborne siltstones

The equilateral triangles show the direction of triple point movement

VM

Figure: 21



The original position of Olympus Mons and Alba Patera triple points was further west.

Late stage shortening of the crust, possibly by a large meteorite collision to the North-West or plate movement (from the direction of Utopia)

Figure: 22

Olympic Mons & Alba Patera may still be active even today.

All the current Volcanoes formed after faulting and rifting ceased (possible same age as Tempe Terra Rifts). The magma came up the same triple points which were displaced by faulting initiated by the Argyre impact.

Wind erosion and dune formation - sulfide nodules that grew insitu in the airborne silt get converted to iron nodules and scatters in the dunes as the siltstone erodes, while evaporite crystals get eroded out of the matrix

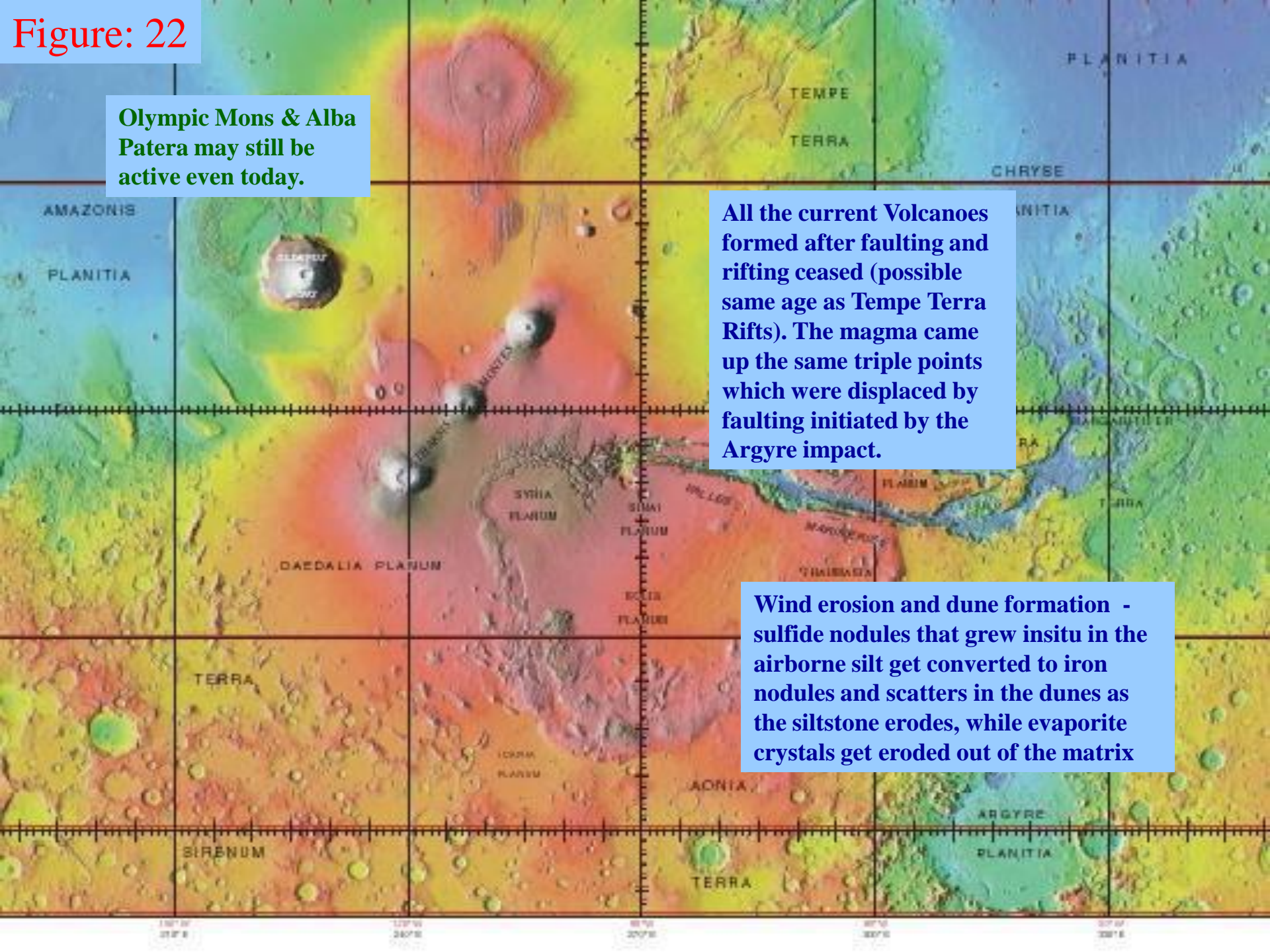
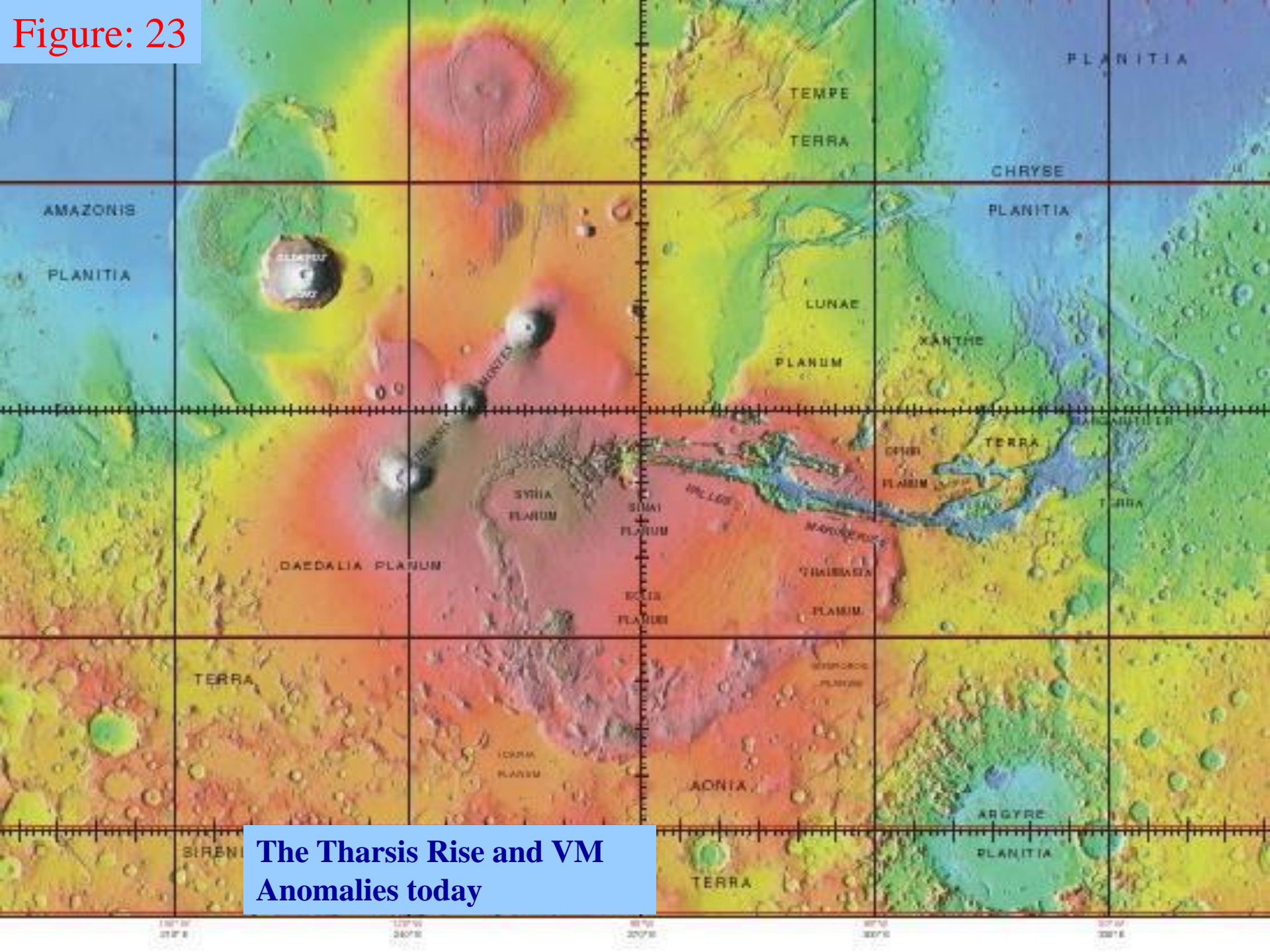


Figure: 23



The Tharsis Rise and VM Anomalies today