NV dome fold interference

The NV domes formed by the superposition of four folding events. The D1-D2, and D2-D4 fold interferences are directly responsible for the outcrop pattern of the NV domes, as type 1 and type 3 fold inference patterns respectively (Fig. 3).

D1: E-W shortening

Upright F1 folds and steep N-S-striking S1 fabrics. *(Fig. western Vergenoeg dome closure, and NV domes interiors.)*

D2 and D3 N-S shortening

D2: Dome-scale NE-plunging F2 anticlines with steep E-W-striking S2 fabrics. *(Fig. main ENE-WSW elongation of the NV domes in map view, and western Vergenoeg dome closure.)*

D3: Shallowly W-plunging recumbent to inclined F3 folds, with shallow NW-dipping S3 fabrics. (*Fig. NV domes interiors)*

D4 NE-SW shortening

NE-plunging F4 folds and moderately NE-dipping S4 fabrics.
(Fig. Karub Syncline and eastern Namibfontein dome closure)

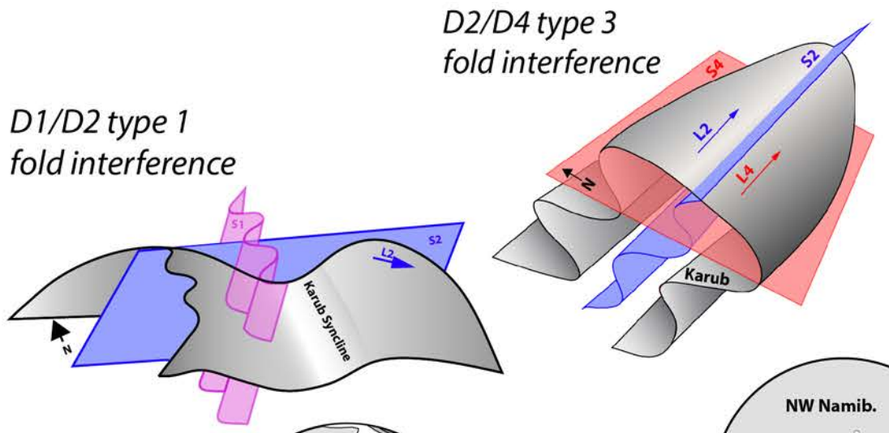
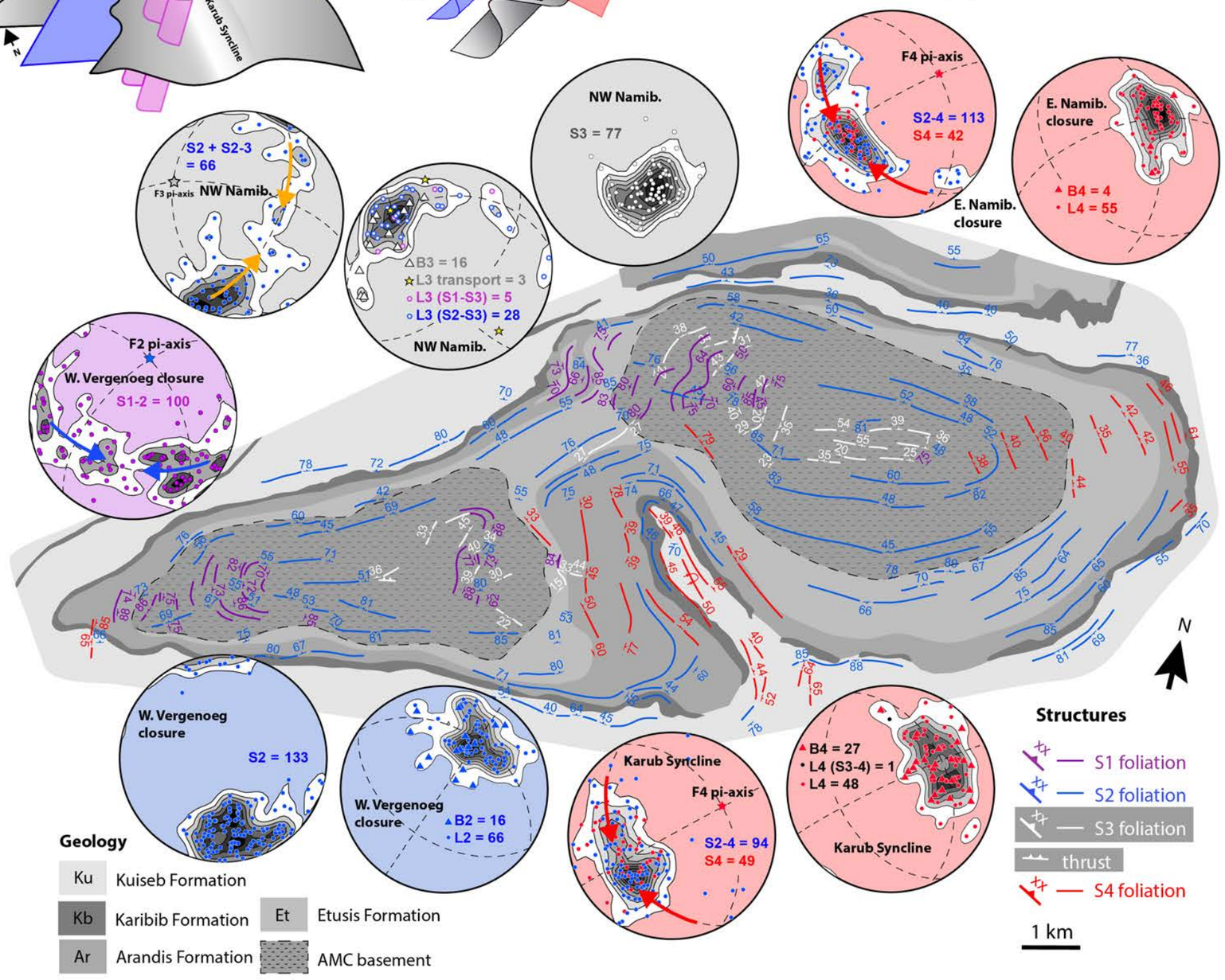


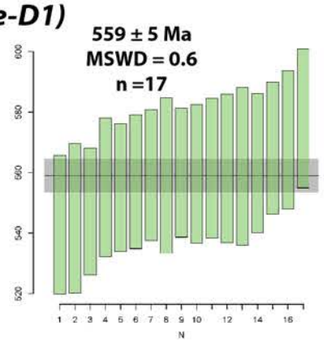
Figure: Formline map and equal area lower hemisphere stereonets of NV domes structures. Deformation fabrics are colour-coded, D1 in purple, D2 in blue, D3 in gray, and D4 in red. Cartoon sketches show the main fold interference types responsible for the NV domes outcrop patterns.



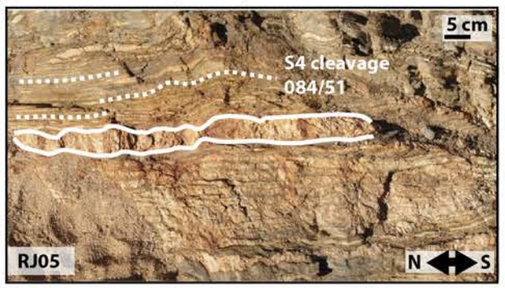
Age dating extras

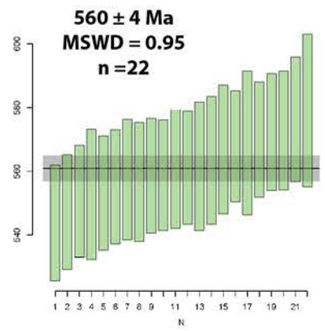
Field photographs and $^{206}Pb/^{238}U$ weighted mean plots of dated samples.

S-type granite with S1 cleavage (pre-D1)

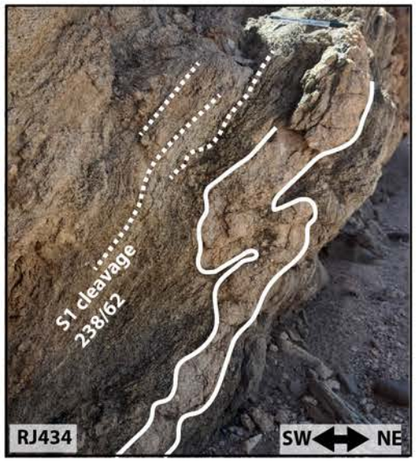


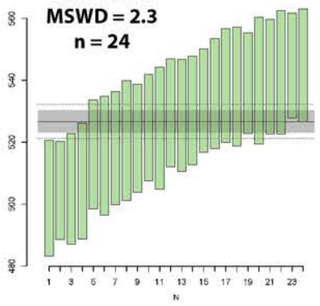
granite sill (pre-syn D1?)



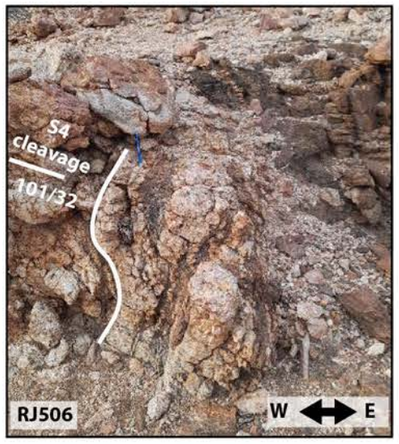


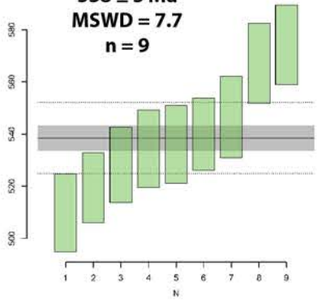
F1-folded granite (pre-syn-D1)



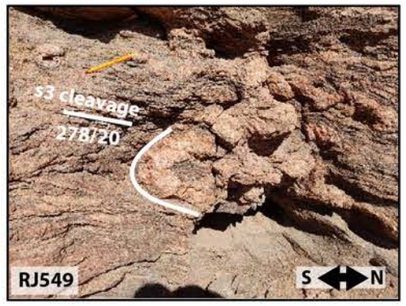


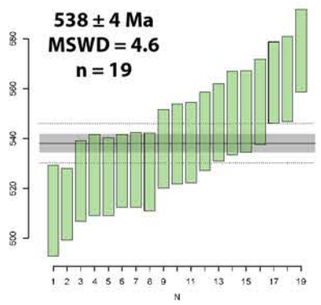
F4-folded granite (pre-D4)



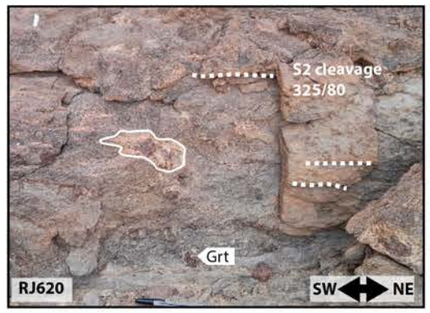


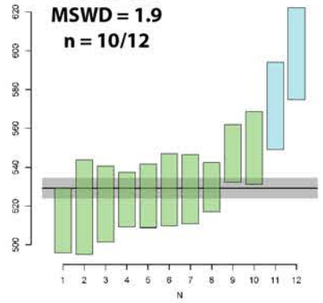
F3-folded granite (pre-D3)



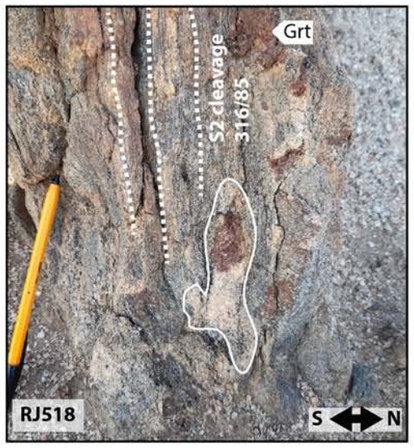


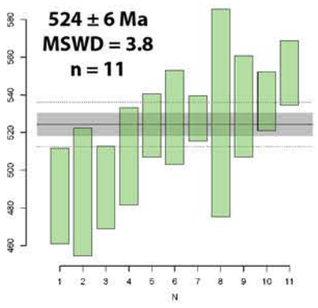
S2 leucosome (syn-D2)



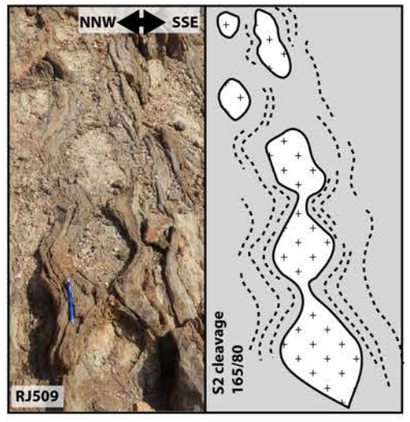


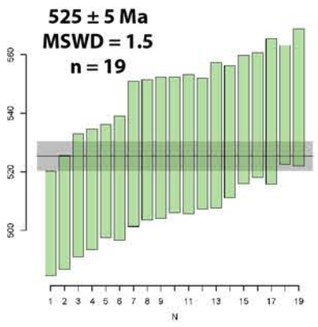
S2 leucosome (syn-D2)



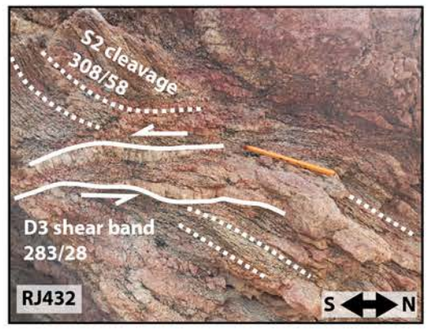


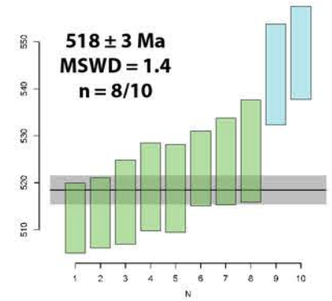
S2 leucogranite (syn-D2)



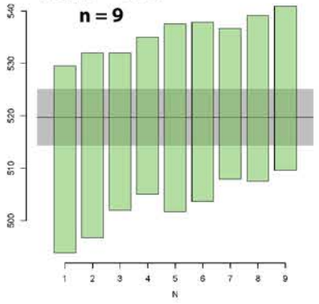


S3 leucosome (syn-D3)

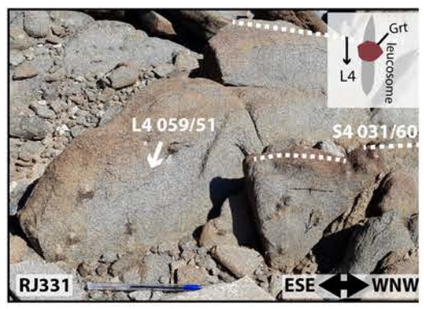


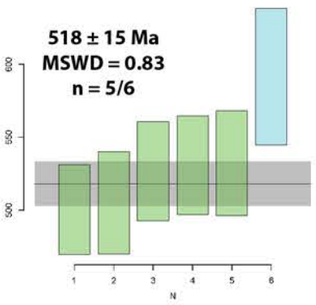


undeformed granite cutting S3 (post-D3)



L4 leucosome (syn-D4)





L4 leucosome (syn-D4)