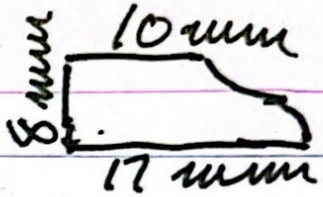
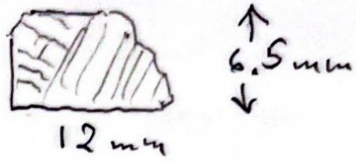
Albion (Washington, USA) 3 Jan 93



Strongly relicated IVA structure.
Bandwidth ~ 0.28 mm, Of.
No visible inclusions
Taenite lamellae are now represented by "dots" of taenite, the result of strong heating.

Our compositional data are essentially identical to those for Gibeon, which is widely distributed. To my knowledge Gibeon does not show this relicated structure, so there is reason to support the ASU view that the iron is a new = independent ~~iron~~ meteorite.

Aldama (LC 1240) 21 May 97



Regular Widmanstätten pattern

Bandwidth 0.4-1.2 (uncorrected)

Plessite: net type

Taenite: all 'lamellae' appear as stringers of 5-10 μ particles or irregular masses of taenite (reheating)

Schreibersite: not observable

Thermal history: has been reheated, structures are severely modified

GHANIM IN1303

2 Feb. 89: The polished and etched surface is 13×5 mm, we can see Widmanstätten structure of straight (Fig 1) Kamacite lamellae with a width of 0.7 - 1 mm. Teanite and rhabdite occurs at rim of Kamacite. Also, we can observe plessite, schreibersite occurs at rim of plessite. (Fig 2)

There is "cohenite" (Looks more like teanite) in the form of 1-mm island in kamacite. some Kamacite exhibiti re- crystalized texture (Fig 3)

This Al-Ghanim sample is the only unweathered piece in the Smithsonian Collection

Fig 1.

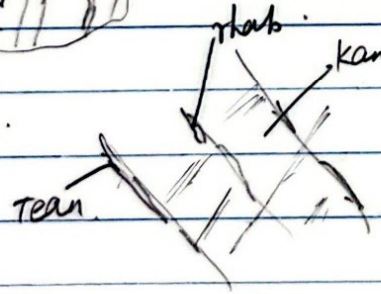
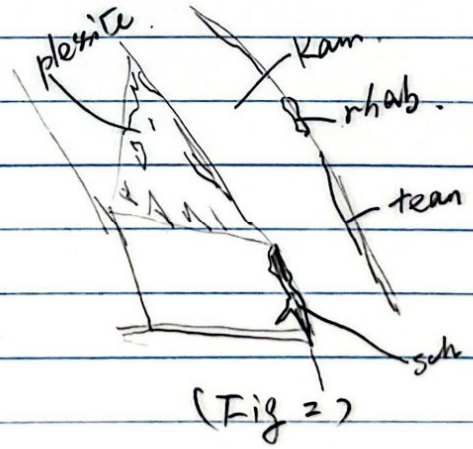


Fig 3.



(Fig 2)

CANYON DIABLO / CAP C RO RE

Algoma (Wisconsin, USA)

13 VII 68. Sample weighing ~ 10 g from U. Wisconsin. Polished and etched 30 sec nital. Kam. bands quite sharply defined, wide taenite borders. Kam bands vary greatly in width, with a gradation down to plessite bands 0.05 cm across, but approaching 1 cm in width. The "primary" bands vary from about 0.7 to 1.4 mm. Even a single, continuous band can show such variations. This suggests the difficulties which band width measurements encounter (or rapid cooling-rate determinations!). Buchwald class Om-Og. Schreibersite present as small (0.05 × 0.2 mm) inclusions, chiefly at grain boundaries, but sometimes in the bands. No other inclusions observed. Light weathering inward from crest. The structure consists almost entirely of 1 Kam. bands, of which 80% of area could be called plessite.

27 VI 88 DJM

ALISKEROVO

Slightly swollen kamacite bands of varying widths ~ 1.5 - 2.0 mm.
Numerous tiny rhabdites and a few larger schreibersite inclusions.
No sulfides; no silicates; no carbides seen. DJM
Mean band width by JTW 1.3 ± 0.2

Small dark equiaxial inclusions were observed by JTW and confirmed by DJM AER showed them to be daubreelite. Thus no carbides have been found, despite the ~~iron~~ chemical resemblance to IIIE