COMPARATIVE MAGNETIC AND THERMOANALYTICAL STUDY OF TWO ENSTATITE CHONDRITES : ADHI KOT AND ATLANTA, Elizabeth Król (Institute of Geophysics of the Polish Academy of Sciences, Ks. Janusza 64, 01-452 Warsaw) and Bruno Lang (Warsaw University, Department of Chemistry, Żwirki i Wigury 101, 02-089 Warsaw)

With allowance for the discussion of classification of enstatite chondrites and their relation to aubrites we submit the obtained by us magnetic and thermoanalytical data to be considered as additive arguments. Our study covered the Adhi Kot (EH4) and Atlanta (EL6). meteorites belonging to two distinct groups of enstatite chondrites. Applying AF demagnetization we measured the intensity of natural remanent magnetization (NRM) and determined the mean magnetic susceptibility of the samples. We obtained too the differentialthermal (DTA) and thermogravimetric (TG) curves for meteorites understudy. For measurements of the intensity of NRM a superconducting cryomagnetometer SQUID (2 G Enterprise, USA), while of magnetic susceptibility Kappabridge KLY-2(Czechoslovakia) were used.
The abbreviated magnetic data sheets are given in Fig.1 and 2.
The values 786 x 10^{-4}A/mkg and 196.1 x 10^{-4}A/mkg were obtained as NRM intensities for Atlanta and Adhi Kot respectively, while 17.4x10^{-6} SIu/kg and 43.4x10^{-6} SIu/kg for their susceptibilities. Both meteorites proved to be strongly magnetized. The demagnetization down to 3.2 % of NMR was received for Atlanta at AF field intensity of 250 Oe. For Adhi Kot at this level rested 13.2 % of NRM intensity, this sample being demagnetized without change of direction till 750 Oe field.

The demagnetization curves are similar to those obtained for Abee (EL4) chondrite by Sugiura and Strangway (1981). Against Abee the Adhi Kot exhibited a little bit steeper downfall. In both cases dominate one component of magnetization.

The DTA and TG curves were obtained with Rigaku-Denki thermoanalytical instrument. The DTA curves in Fig. 3 and 4 exhibit striking similarity in their shape and relativily close temperature values for various features. The same is valid for TG curves. The higher values for TG for Adhi Kot express its higher content of oxydable (Fe,Ni) whose oxidation in air is reached at 1000°-1020 °C.

The above study will be continued.

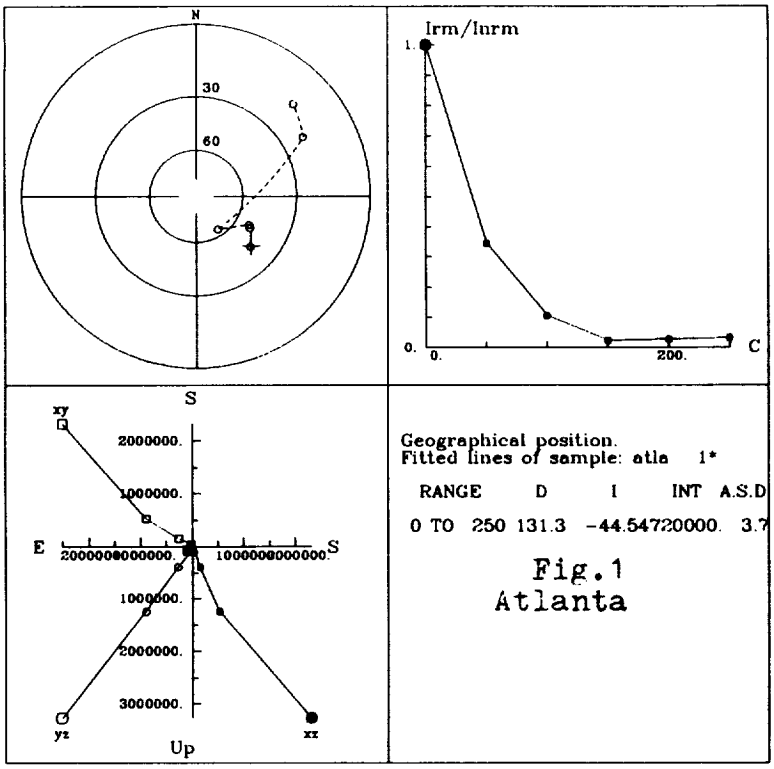

Fig.1
Atlanta

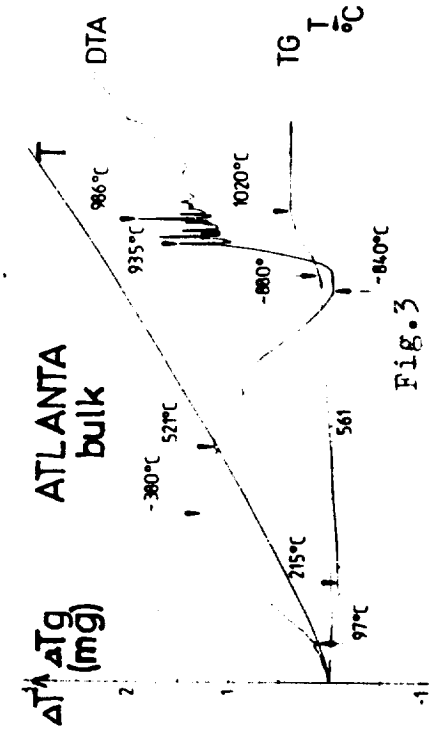

Fig.3

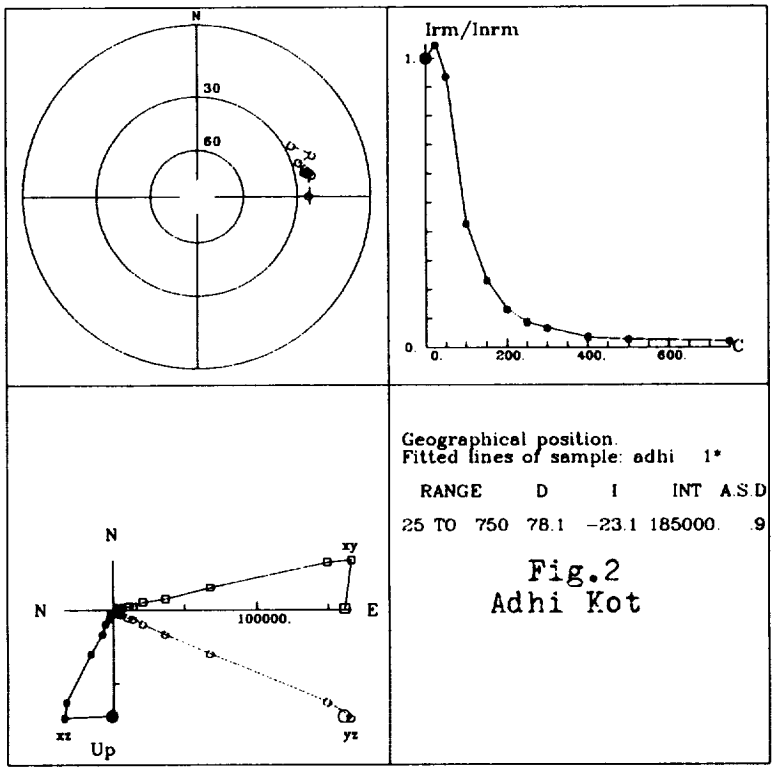

Fig.2
Adhi Kot

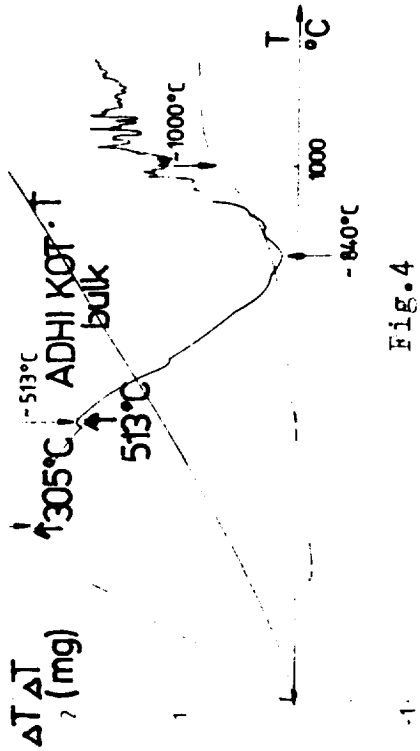

Fig.4