

Testing the origin of the magnetic record of chondrites

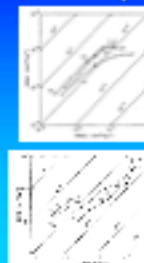
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1

NRM: SIRM demagnetization plots

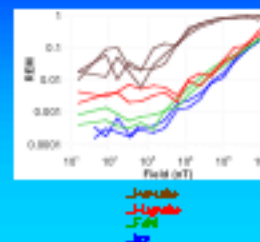
- Introduced by Pátek, Cizkova and Winklowskí in 1990 's
- The shape of the curve can tell about the origin of the RM



2

REM ratio

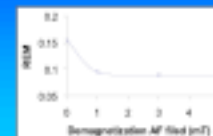
- Introduced by Pátek, Cizkova and Winklowskí in 1990 's
- REM = R/SIRM
- After calibration REM can be used as paleomagnetic indicator



3

REM (AF) curves

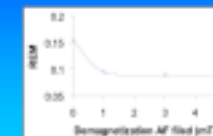
- Introduced by Pátek et al. in 2005
- The shape of the curve can tell about the origin of the RM



4

Neuschwanstein EL6

- RM is similar to the one in the chondritic phase
- The magnetic record is stable
- The RM (AF) curve is similar to the one in the chondritic phase

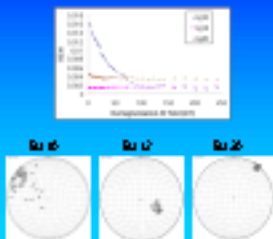


It is similar to the one in the chondritic phase, even though it is very homogeneous in the presence of the RM

5

Chondrules of Bjurböle L4

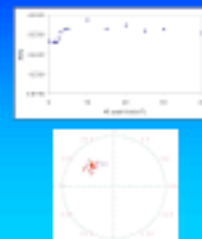
- Main magnetic phase was identified as magnetite and hematite
- Some chondrules show TRM-like RM, some show strong RM overlap – lightning in Solar nebula?



6

Chondrules of Avanhandava H4

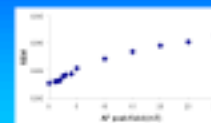
- RM is similar to the one in the chondritic phase
- The magnetic record is stable
- The RM (AF) curve is similar to the one in the chondritic phase – magnetic overlap in opposite direction of shock annealing?



7

Shock experiments with the chondrules of Avanhandava H4

- The chondrules are similar to the one in the chondritic phase
- Subsequently they are shocked with the peak pressure in the magnetically correlated direction – 200 GPa
- The RM (AF) curve is similar to the one in the chondritic phase



8

Conclusions

- The RM (AF) curve is similar to the one in the chondritic phase
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9

Other applications – future work

- Separate PSA values for different components
- Study of viscous magnetization effects
- Calibration of the PSA values as a function of the shock pressure

10

Acknowledgements

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