

## Thermal desorption of Na in meteoroids: Dependence on perihelion distance of meteor showers

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Chemical compositions of many meteor showers, for example Na, Mg, Fe, Si, Ca..., has been revealed. However, it is unknown whether they are intrinsic properties of parent bodies or not. Results may be considerable to be after changed by the effect, such like cosmic ray, sputtering by the solar wind, thermal desorption by solar heating and so on.

The clear difference of Na content between orbits with small perihelion ( $q \sim 0.2\text{AU}$ ) and long perihelion ( $q \sim 1\text{AU}$ ) is also reported. A Geminid meteor shower ( $q \sim 0.14\text{AU}$ ) represented extreme Na depletion. On the other hand, Leonid meteor showers with relatively long perihelion distance  $\sim 1\text{AU}$  have no evidence of metamorphic metal compositions. Na contents were almost solar composition in two - dust trails' formed in difference of 100 years (Kasuga et al., 2006).

In this presentation, the thermal desorption by solar heating effect on the meteoroids' compositions, especially about Na, was studied by considering the previous observations. Based on the calculated equilibrium temperatures of the meteoroids at each perihelion distance,

the possibility of the effect was discussed.