Initial results of observation of interplanetary dust by NOZOMI Mars Dust Counter

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http://www.geol.s.u-tokyo.ac.jp/~sho/index-j.html

To discover Martian dust ring/torus, Mars Dust Counter (MDC) is on board ISAS spacecraft NOZOMI (PLANET-B). NOZOMI, which was launched successfully on July 4th, 1998. MDC NOZOMI is an improved version of impact-ionization dust detectors on board HITEN and BREMSAT. It weighs only 730g with the sensor aperture area of 140cm$^2$. Detectable velocity ($v$) range is between 1km/s and more than 70km/s, which will cover circummartian (low $v$), interplanetary (mid $v$), and interstellar (high $v$) particles. MDC has already detected more than 20 interplanetary dust particles including two particles at the Leonids event. MDC will continue observing interplanetary dust by NOZOMI arrival at Mars in 2004.
図 1 MDC の記録したダスト衝突(98 年 7 月 13 日)。

図 2 Leonids 流星群遭遇時の衝突シグナル(98 年 11 月 18 日)。電荷の立ち上がりが早い。