

Abstract Submitted
for the APR07 Meeting of
The American Physical Society

Cosmic-ray strangelets in the Earth's atmosphere BENJAMIN
MONREAL, MIT — If strange quark matter is stable in small lumps, we expect to
find such lumps, called “strangelets”, on Earth due to a steady flux in cosmic rays.
Following recent astrophysical models, we predict the strangelet flux at the top of
the atmosphere, and trace the strangelets' behavior in atmospheric chemistry and
circulation. We show that several strangelet species may have large abundances in
the atmosphere; that they should respond favorably to laboratory-scale preconcentration
techniques; and that they present promising targets for mass spectroscopy
experiments.

Benjamin Monreal
MIT

Date submitted: 12 Jan 2007

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