

Isotopic fractionation in SW and Earth Wind (EW): Toward the understanding of the solar isotopic composition

Minoru Ozima^{1*}

¹University of Tokyo

The analysis of SW implanted in lunar soils is still the best approach to resolve the solar isotopic composition, one of the most important problems in cosmochemistry. In analogous way, we proposed that the Earth-escaping oxygen ions (EW-O⁺) implanted on the lunar soils would yield unique information on the evolution of the biogenic atmosphere [1, 2]. However, in order to conclude the indigenous isotopic components of the Sun, it is imperative to understand the putative isotopic fractionation processes. We address this issue on the basis of the first principle calculation (Yamada et al., this meeting).

[1] Ozima M., Seki K., Terada N., Miura Y.N., Podosek F.A. and Shinagawa H., *Nature*, 436, 655-659, 2005.

[2] Ozima M., Yin Qing-Zhu, Podosek F.A., and Miura Y.N., *Proc. National Academy of Sciences of the USA*, 105, 17654-17658, 2008.

Keywords: SW, Earth Wind, EW, Solar isotopic composition, isotopic fractionation