Possible oscillations of westerly jet meandering mode in association with Dansgaard-Oeschger Cycles

Ryuji Tada[1]; Kana Nagashima[2]; Shin Toyoda[3]; Atsushi Tani[4]

[1] DEPS, Univ. Tokyo; [2] Earth and Planetary Sci, Univ of Tokyo; [3] Dept. Appl. Phys., Okayama Univ. Sci.; [4] Earth and Space Sci., Osaka Univ.

It is well demonstrated that Asian monsoon varied in association with the Dansgaard-Oeschger Cycles [DOC]. Recent studies further suggest that such millennial-scale monsoon variability may have been caused by oscillations in westerly jet circulation patterns between two different modes of meandering. Because topographic effect of Himalaya and Tibetan Plateau [HTP] is considered as the possible cause of meandering, and the two different courses of the westerly jet circulation is expected to the north and the south of HTP, it is hypothesized that uplift of HTP and consequent emergence of the bimodal westerly jet circulation patterns is the cause of the millennial-scale variability of the Asian monsoon in association with the DOC.