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SEASONAL VARIATION IN THE ISOTOPIC COMPOSITION OF GROUND LEVEL VAPOUR (GLV) –UNRAVELING MONSOON DYNAMICS

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Abstract

A stronger isotopic depletion in the ground level vapour (GLV) has been noticed in the monsoon period (June –September) during all the years from 2007-2013 at Roorkee, India. GLV received during southwest (SW) monsoon period is always depleted as compared to the GLV received during pre-monsoon (January-May) and post-monsoon period (October-December). Further, it has been found that synoptic weather circulation along with the prevailing local conditions show strong influence on the isotope composition of GLV. The present study provides insight into the atmospheric dynamics, though long term data is required to verify the philosophy and results of the paper.

Keywords: seasonal variation, isotopes, ground level vapour, monsoon dynamics