

## 4.1-P22. Reconstruction of weather situations and aerosol transport over the Himalayan complex terrain.

An accurate reconstruction and reliable prediction of weather situation are desired to understand, model and predict suspected particulate transport and deposition over the region of interest. Reconstruction and prediction of diverse weather situations that could possibly prevail over the extreme terrains of Himalayas at high spatial resolution have been remained to be of great challenge. In this paper, we will present some of the successfully reconstructed weather situation over the extreme terrains encompassed by the Nepal Himalaya at the resolution of 1km x 1km horizontal grid size. Fictitious particulates released in different parts of the southern plain and their transport and deposition patterns over the mountainous areas as revealed by numerical simulation will also be presented. The knowledge of transport and deposition patterns of fictitious particulates can have significant applications in assessing possible risks of human suffering from suspected particulates.

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