7B.6 WRF model evaluation over Hindu-Kush Himalaya region.

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Research in atmospheric environment over Hindu Kush Himalaya (HKH) and the foothills region is receiving great attention in recent years. Increasing emissions of short lived climate pollutants/forcers (SLCP/F) and their precursors in the foothills region coupled with warming from long lived greenhouse gases are contributing to increased glacial melt, perturbation in the monsoon cycle and deteriorating air quality in the mountain region. To understand pollutant source receptor relationships over HKH region it is imperative that numerical weather models be able to adequately characterize meteorological variables in the region.

This paper presents the preliminary results of the WRF model setup over the HKH region. Specifically, the results evaluating model predictions skills at selected stations over the HKH region will be discussed as a function of altitude with available upper air data and selected surface stations with varying topography. Model results with different horizontal grid resolution and sensitivity to model initialization data, forecast versus reanalysis, will also be presented.