



SATELLITE MONITORING OF DUST STORMS OVER SOUTHWEST ASIA

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Satellite remote sensing provides important observational constraints for monitoring dust life cycle and improving the understanding of its effects on local to global scales. The present work analyzes the dust aerosol patterns over the arid environment of southwest Asia particularly in southeastern Iran, by means of multiple satellite platforms aiming to reveal dynamic, spatio-temporal distribution and trends. This work also investigates the modulation in dust activity over southwest (SW) Asia attributed to changes in the mean sea level pressure (MSLP) between the Caspian Sea (CS) and Hindu Kush (HK) during the summer months (June-July-August-September, JJAS) of the period 2000-2014. satellite observations were includes TOMS, OMI, METEOSAT, MODIS, MISR and HYSPLIT forward trajectories. The results indicated, several dust's hot points in the study area. It is found that in few cases the dust storms from Sistan in south east Iran affect central/south Arabian Sea and India, while they control the aerosol loading over northernmost Arabian Sea. The Infrared Difference Dust Index (IDDI) images confirming the main pathways of the dust plumes and illustrating the importance of the region as one of the most active dust sources in southwest Asia.