

A study on active and weak Indian summer monsoon

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Using 39 years (1960-1998) NCEP/NCAR Reanalysis data of zonal wind at 850 mb, the characteristic of Indian monsoon during JJAS (June-July –august – September) is studied. The description of monsoon is based on zonal wind speed which defined as I) active monsoon –wind speed $\geq 15\text{m/s}$ II) Normal monsoon-wind speed between 9m/s to 15m/s III) weak monsoon –wind speed $< 9\text{m/s}$. The time series of zonal wind is plotted over latitude 10N - 20N and longitude 70E - 80E . The period of active and weak monsoon is calculated and it is found that there is no trend to say that wet (dry) monsoon years always have active (weak) monsoon phases or active (weak) monsoon days greater than weak (active) monsoon phases or weak (active) monsoon days. The maximum number of active monsoon days is less than maximum number of weak monsoon days. Also the average wind is plotted during found period and it observes that wind is strong(wind speed more than 15m/s) during active phases and wind is less strong(wind speed less than 9m/s) during weak phases. It is also found that maximum frequency of active or weak monsoon situation is two or three. During the both active and weak monsoon situation the wind at 200 mb over 10N - 20N is also studied. Further studies using the ECMWF data for years 1990 to 2002 will be carried out.