



Cloud Liquid Water Content Variability over the Indian Region

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This paper presents the aircraft measurements of liquid water content (LWC) which are taken during three different missions organized by Institutes ongoing CAIPEEX project. The three missions are Pathankot (32.2250N, 75.6340E); Hyderabad (17.4480N, 78.3810E,) and Bangalore (13.1350N, 77.6150E) respectively. The LWC data is collected for fifteen flight days at the above locations. Each second LWC values are analyzed to study their vertical and frequency distribution. The preliminary results of this study show that the nature of LWC profile at above three locations is same showing the average LWC as 0.28, 0.33 and .036 gm m⁻³ respectively. The range of LWC varies at all three locations. It is minimum at Pathankot and maximum at Bangalore. The LWC values are compared with the adiabatic values at the same temperature, pressure and humidity conditions. The analysis shows consistent small adiabatic fraction in all the cases. The horizontal and vertical distributions of LWC have been studied. In the horizontal a large spread has been observed. The maximum LWC has been found to increase steeply over Pathankot and gently over Bangalore.