

Title: Lightning activity in the regions of MCS over Czechia

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Abstract: This bachelor's thesis deals with lightning activity and its detection in mesoscale convective systems (MCS) over the Czech Republic and adjacent areas. The first part describes the formation and development of MCS, electrical charge distribution inside clouds, types of lightning and their detection. The second part is devoted to five specific MCS that occurred in different time periods. Data of lightning detection network (LINET) are used to describe the characteristics of lightning, especially their temporal and spatial development, occurrence of different types of lightning and development of their current amplitude and altitude.

Keywords: Mesoscale convective system, lightning activity, lightning detection