

R010-21

B 会場 : 11/25 PM1 (13:45-15:45)

14:15~14:30:00

1872 年 2 月の激甚太陽嵐・磁気嵐とその影響

#早川 尚志¹⁾

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The extreme solar and geomagnetic storms in February 1872 and their terrestrial impacts

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Intense solar eruptions occasionally impact near-Earth space environments, developing geomagnetic storms and extending auroral ovals to the lower geomagnetic latitudes. So far the greatest geomagnetic storm in the last 2 centuries have been considered to be the Carrington storm in 1859. However, recent archival investigations have revealed a number of geomagnetic storms that were as intense as or even possibly more intense than the Carrington storm even in the last 2 centuries. The February 1872 superstorm was one of the most significant cases in such extreme storms. This presentation aims at reconstructing temporal and spatial evolutions of the source active region, geomagnetic disturbances in the mid to low geomagnetic latitudes, and extension of the auroral oval on the basis of archival investigations from multiple countries, following Hayakawa et al. (2023, ApJ, 959, 23) and subsequent studies. The intensity of this superstorm doubled or even tripled the May 2024 storm in terms of the Dst estimate and offers us an extreme case for discussions on the space weather hazard mitigations.