R011-02
C 会場 ：9/27　AM1 （9:00-10:30）
9:15〜9:30

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Classification of Satellite-Obtained Time Series Data: A Comparative Study of Rule-Based and Machine-Learning Approaches

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Due to communication volume constraints, nanosatellites conducting scientific observations must reduce downlink data through onboard data preprocessing. Therefore, we conducted a study to classify time series data of the geomagnetic field obtained from the SWARM satellite, aiming to determine the most suitable onboard classification method for phenomena in the geomagnetic field. We employed rule-based, K-means, and combined CNN methods for the classifications. The experimental results clearly demonstrated the effectiveness of the machine-learning model with LSTM networks.