# SuperDARN 昭和 SENSU レーダーのイメージング化と将来展望

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## SuperDARN Syowa SENSU imaging radar and the future perspective

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SENSU Syowa HF radars are important ocmponents of SuperDARN, the international HF radars network since 1995 and have significantly contributed to understanding not only magnetosphere – ionosphere system and their couplings but also MLT region dynamics. As SuperDARN radars were originally designed to reveal global polar plasma convection patterns in both hemispheres in real time, its spatial resolution has been relatively low. As the number of new scientific targets like comparison with mid and small scale aurora phenomena and fine height profile of neutral wind distributions have been increasing, higher spatial (and temporal) resolution obvervations have been essentially desired. Imaging radar technique has been tried to be applied and developed to overcome this issue. We show the current status of our preparation of the SENSU imaging radar system, and will discuss particularly on the scientific targets and the future perspectives which can be revealed by this new technique using SuperDARN.

1995 年より、国際ネットワーク観測プロジェクトである SuperDARN の一翼を担ってきた SENSU 昭和基地 HF レーダーの空間分解能を飛躍的に向上させる為のイメージング化の準備を進めている。この進捗状況と、これによって飛躍的発展が期待される研究等の将来展望を議論する。