電離圏下部の大規模波動構造、プラズマバブルの理解のための３次元電波レイトレーシング手法の開発

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Three-dimensional ray tracing for an understanding of Large-Scale Wave Structure (LSWS) and Equatorial Plasma Bubble (EPB)

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Day-to-day variability of plasma bubble, which is influenced by LSWS and EIA, have been closely investigated and clarified by integration of all existing ground- and space-based ionosphere-monitoring resources in Asia-Oceania region. Plasma bubble is considered as the most severe and urgent issue for civilian communication and navigation. I am developing a radio propagation simulator based on three-dimensional raytracing to elucidate the underlying physics of plasma bubble seeding and its characteristic, and to determine plasma bubble position from the direction finding of transequatorial propagation or TEP.

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