

## MF/HF 帯オーロラ電波の地上・衛星同時観測

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### Simultaneous ground-based and satellite observations of MF/HF auroral radio emissions

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We report on the first simultaneous measurements of MF/HF auroral radio emissions above 1 MHz by ground-based and satellite instruments. We survey observation data obtained by the ground-based passive receivers installed in Iceland and Svalbard and the Plasma Waves and Sounder experiment (PWS) mounted on the Akebono satellite. This data set includes two simultaneous appearance events, during which the frequencies of aurora roar and MF burst detected at ground level is different from that of THR observed by the Akebono satellite passing over the ground-based stations. This frequency difference supports the previously proposed idea that auroral roar and THR are generated at different altitudes across  $F$  peak. There are no simultaneous observations which indicate the identical generation region of auroral roar and THR in the analyzed data set. Considering detection rate at ground level and in space, detections at ground level and in space are dependent events, although auroral roar and/or MF burst does not always appear when the Akebono satellite passing over the ground-based stations detects THR. This tendency is explained in terms of the idea that the Akebono satellite can detect THR emissions coming from a wider region, and a considerable portion of auroral roar emissions generated in the bottomside  $F$  region is absorbed in the  $D/E$  regions.