

This experimental program will continue the exploration of the use of the meteorburst radio channel for the precision synchronization of clocks and frequency standards at remote sites. A precise rubidium frequency reference and time reference at a client site will be brought into synchronization with references at a master site via two-way time transfer techniques, such as those employed over leased satellite communications channels. The meteorburst channel is intermittent and sporadic, so opportunities for the transfer of timing information are limited compared to that under existing satellite-based systems.

This project builds on experiments performed under a prior experimental license (WN2XHU) granted under file no. 0189-EX-CN-2023, which expired in 2025. The signal design and processing techniques will be similar to those used in the previous work, and the antenna installations we will use were erected during the previous effort. The previous work has established the effectiveness of this system. Resumed operation under the new license will enable data collection tests designed to support a trade study describing potential performance at other sites and under various operating parameters.

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