

## Title

Operations and results from the 200 Gbps TBIRD lasercom mission

## Abstract

Since launch in May 2022, the TeraByte Infrared Delivery (TBIRD) mission has successfully demonstrated 200 Gbps laser communications from a 6U CubeSat and has transferred >1 TB in a pass from low Earth orbit to ground. To support the narrow downlink beam needed for high rate communications, the payload provides pointing feedback to the host spacecraft to precisely track the ground station throughout the 5-minute pass. The space and ground terminals utilize fiber-coupled coherent transceivers in conjunction with an automatic repeat request (ARQ) system to guarantee error-free communication through an atmospheric fading channel. This paper presents an overview of the link operations and mission results to date.

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