Contribution ID: **3484**   Type: **Invited Speaker / Conférencier(ère) invité(e)**

(I) Optical Communication for Space Based Applications

Tuesday 7 June 2022 11:15 (30 minutes)

The narrow beam divergence of an optical communication link results in low probability of interference, improved privacy, and licence-free operation. It also allows significantly higher data rates than traditional RF communication, with lower power consumption. These advantages are of interest for satellite mission applications such as deep-space communication and earth observation satellites which generate large data volumes, and are critical to LEO mega-constellation communication networks which require hundreds of intersatellite links to support terrestrial communication for the general public on Earth. To support the mega-constellation business concepts, the satellite terminals must achieve demanding performance objectives despite aggressive targets for cost and production rates.

Honeywell has leveraged decades of experience in reliable space optics and mass production of space hardware to develop a low-cost optical communication terminal designed for manufacturability. Multiple iterations of our baseline terminal design have been built and tested, and we are now expanding into customized terminals for specific use cases. This presentation will describe the Honeywell baseline terminal and discuss some of the options needed for specific mission applications. It will also look at the development process and some of the key challenges for creating high performance optical instruments for use in space.

Author: HUDSON, Danya (Honeywell Aerospace)

Presenter: HUDSON, Danya (Honeywell Aerospace)

Session Classification: T2-5 Private Sector Physicists (CAP-DAPI) | Physicien(ne)s dans le secteur privé (ACP-DPAI)

Track Classification: Symposia Day (Tues. June 7) / Journée de symposiums (mardi, le 7 juin): Symposia Day (CAP) - Private Sector Physicists