Contribution ID: **76** Type: **Invited Oral**

Compact clocks & cavities for space and ground applications

Compact robust atomic clocks are being developed as remote timing references with extended holdover to mitigate difficulties arising from loss of disciplining during periods when GNSS satellite constellations are unavailable. This paper describes progress on two NPL low SWaP trapped ion atomic clock systems, namely the ytterbium multi-ion 12.6 GHz microwave clock and the strontium single ion 445 THz optical clock, together with potential applications.

Author: GILL, Patrick (National Physical Laboratory)

Co-authors: SPAMPINATO, Alessio (National Physical Laboratory); ALLEN, Ben (National Physical Laboratory); HOCKLEY, Gary (National Physical Laboratory); BARWOOD, Geoffrey (National Physical Laboratory); HUANG, Guilong (National Physical Laboratory); KLEIN, Hugh (National Physical Laboratory); HILL, Ian (National Physical Laboratory); SILVER, Jonathan (National Physical Laboratory); STACEY, Jonathan (National Physical Laboratory); HAJI, Mohsin (National Physical Laboratory); TSOULOS, Peter (National Physical Laboratory); MULHOLLAND, Sean (National Physical Laboratory)

Presenter: GILL, Patrick (National Physical Laboratory)

Session Classification: Null

Track Classification: Miniature, Portable and Space Systems