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## Plenary - Gamma-ray bursts and other transients: Ephemeral tests of extreme physics

*Tuesday, 10 July 2012 09:30 (1 hour)*

### Abstract content <br> &nbsp; (Max 300 words)

Gamma-ray bursts were discovered serendipitously by test ban treaty verification programmes in the 1960s. They became one of the longest-lasting enigma's in astrophysics until observations with new technologies in 1990s revealed them to be distant explosions, in which massive stars in their death form a black hole. Both in probing the extreme end of gravitational physics and magnetohydrodynamics, and in probing the very distant Universe, they allow us to test fundamental physics in regimes well beyond the reach of terrestrial laboratories. I will give an overview of the current state of affairs, and will also show how time-domain astronomy with modern radio telescopes such as LOFAR and ultimately the SKA may lead us to even rarer and stranger objects, possibly signalling even more extreme physics.

### Apply to be<br> consider for a student <br> &nbsp; award (Yes / No)?

No

### Would you like to <br> submit a short paper <br> for the Conference <br> Proceedings (Yes / No)?

No

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