Contribution ID: **46** Type: **Invited talk**

Dark stars: structure, evolution and impacts upon the high-redshift Universe

Thursday 11 November 2010 10:00 (30 minutes)

The most compelling and popular models for dark matter predict that it should congregate and annihilate in stellar cores. Stars where annihilation contributes substantially to the total energy budget look very different to those with which we are familiar. I will describe the general features of stars modified by dark matter annihilation with the help of a series of grids of 'dark' stellar evolutionary models, and will detail the public code with which they were computed. I will go on to discuss possible impacts of dark stars on the high-redshift Universe, including the history of reionisation, drawing on dedicated models for dark star atmospheres and the stellar populations to which they would belong.

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