## Progress on Old and New Themes in cosmology (PONT) 2014



Contribution ID: 65

Type: not specified

## **Closing in on Axion Dark Matter**

Monday 14 April 2014 15:15 (30 minutes)

The axion is well motivated dark matter candidate with a very different phenomenology than WIMPs. It is produced non-thermally in the early universe and its low mass,  $m_a < meV$ , and feeble interactions makes its detection very demanding, requiring highly specialised experiments for even slightly different axion masses. In this talk I review the predictions for the axion mass focusing on the standard-thermal-scenario (where axion strings and domain walls contribute significantly to the DM abundance) and discuss the experimental possibilities for its detection, in a region which has been foolishly neglected, and turns out to be the most relevant if the BICEP2 claim of detection of primordial waves is confirmed. The only relevant experiment to look for axions in the mid-future seems to be the recently proposed International AXion Obserbatory (IAXO), which can search for solar axions, and which will be also briefly touched upon in the talk.

Author: REDONDO, Javier (LMU/MPP Munich) Presenter: REDONDO, Javier (LMU/MPP Munich)

Session Classification: Afternoon session