



## Poster session 4 - Friday 8 July

### **P4.033 Short-baseline neutrino oscillations, Planck, and Icecube**

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The oscillation explanation to the short-baseline anomalies, to be viable, needs to be reconciled with the modern cosmological constraints. We critically reexamine proposals to solve this problem by endowing the “sterile” neutrinos with a secluded interaction. We show that the cosmological constraints from the recent measurements from the Planck satellite place severe restrictions on the allowed properties of the secluded interactions, and both the mediator mass and the coupling constant have to lie in a specific window. Intriguingly, most of this window can be tested at Icecube and the next generation of Cosmic Microwave Background experiments.