



Contribution ID: 1

Type: **Talk**

## Probing Velocity Dependent Self Interacting Dark Matter with Neutrino Telescopes.

*Tuesday 24 July 2018 15:40 (20 minutes)*

In this talk velocity dependent self-interacting dark matter models (vdSIDM) will be considered. A brief discussion on how dark matter self interactions might alleviate potential CDM problems at small scales will be presented. Following it will be shown that data already collected by the IceCube-DeepCore neutrino telescopes can probe most of the interesting vdSIDM parameter space. Finally that indirect detection through neutrinos can compete with the strong existing limits from direct detection experiments, specially in the case of isospin violation.

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**Session Classification:** 2.4 Theory

**Track Classification:** Indirect Detection