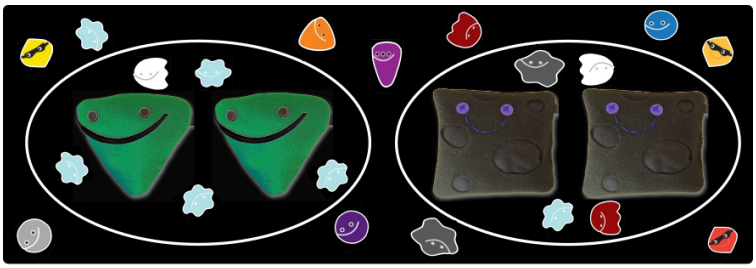

Contribution ID: **24** Type: **not specified**

Indirect search for dark matter bound state formation

Tuesday, 15 June 2021 23:20 (35 minutes)

Title: Indirect search for dark matter bound state formation Abstract: Indirect searches for dark matter (DM) have conventionally been applied to the products of DM annihilation or decay. If DM couples to light force carriers, however, it can be captured into bound states via dissipation of energy that may yield detectable signals. We extend the indirect searches to DM bound state formation and transitions between bound levels, and constrain the emission of unstable dark photons. Our results significantly refine the predicted signal flux that could be observed in experiments. As a concrete example, we use Fermi-LAT dwarf spheroidal observations to obtain constraints in terms of the dark photon mass and energy which we use to search for the formation of stable or unstable bound states.

Presenter: BALDES, Jason (Université Libre de Bruxelles)

Session Classification: Poster session (Gather town)