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## Monitoring $^{39}\text{Ar}$ Background for DarkSide-20k with DArT in ArDM

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The current landscape for the hunt of particle Dark Matter (DM) requires us to achieve state of the art ability to mitigate and account for the various backgrounds. DarkSide-20k, a 20-tonn scale double phase TPC, will commission its voyage for the DM with an exclusion sensitivity to spin-independent WIMP-nucleon interaction of  $6.3 \times 10^{-48} \text{ cm}^2$  (90% C.L.) @  $1 \text{ TeV}/c^2$  with a  $200 \text{ t} \times \text{year}$  exposure. Thorough material assays campaign is being carried out to report and avoid various instrumental background, leaving aside the background contribution of  $^{39}\text{Ar}$  from the total mass of LAr inside the TPC itself. With purpose of solving this, the project DArT in ArDM is almost ready for commissioning at LSC, Spain with a sensitivity to measure UAr depletion factor exceeding 1000 with statistical accuracy better than 10% in one week of counting time. At present, the primary detector is taking data in a test setup.

**Primary author:** GAHAN, Devidutta (University of Cagliari, Italy)

**Presenter:** GAHAN, Devidutta (University of Cagliari, Italy)

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