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MoEDAL, MAPP and the lifetime frontier

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The unprecedented collision energy of the LHC has opened up a new discovery regime. The first LHC dedicated search experiment, MoEDAL, has inaugurated the lifetime frontier being optimised for searches of long-lived particles. MoEDAL is designed to search highly ionising particle avatars of new physics, such as magnetic monopoles and dyons, using proton and heavy-ion collisions at the LHC. The upgrade for MoEDAL at Run 3 - the MAPP detector (MoEDAL Apparatus for Penetrating Particles) - will extend the physics reach to include feebly interacting, long-lived messengers of physics beyond the Standard Model. This will allow us to explore a number of models of new physics, including dark sector models, in a complementary way to that of the main LHC detectors. The presentation will focus on recent results on magnetic monopoles, dyons, and highly charged particles, and plans for the LHC Run 3.

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