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Pseudo-monopoles from dark topological defects

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We discuss a dark photon model with successive symmetry breaking $SU(2)_D \rightarrow U(1)_D \rightarrow \mathbb{Z}_2$ in the dark sector. Various dark topological defects appear, such as monopoles, dyons, strings and beads. They are shown to induce QED electromagnetic fields through kinetic and magnetic mixing between $U(1)_{\text{QED}}$ and $U(1)_D$. In particular, dark beads appear from a distance to be particles with magnetic and electric charge, which we call pseudo-monopoles (dyons).

Primary authors: CHITOSE, Akifumi (The University of Tokyo); IBE, Masahiro (Institute for Cosmic Ray Research, University of Tokyo)

Presenter: CHITOSE, Akifumi (The University of Tokyo)

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