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Exotic branes in Exceptional Field Theory: the SL(5) duality group

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ABSTRACT: We study how exotic branes, i.e. branes whose tensions are proportional to $g_s^{-\alpha}$, with $\alpha > 2$, are realised in Exceptional Field Theory (EFT). The generalised torsion of the Weitzenböck connection of the SL(5) EFT which, in the language of gauged supergravity describes the embedding tensor, is shown to classify the exotic branes whose magnetic fluxes can fit into four internal dimensions. By analysing the weight diagrams of the corresponding representations of SL(5) we determine the U-duality orbits relating geometric and non-geometric fluxes. As a further application of the formalism we consider the Kaluza-Klein monopole of 11D supergravity and rotate it into the exotic $6^{(3,1)}$-brane.

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