

Dark Electroweak Baryogenesis

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Current phenomenological constraints, in particular on the CP-violating parameters from ACME, are rapidly hunting the viable visible sector EWBG models to extinction. The same fate is falling upon most WIMP dark matter models as a result of the campaign provisioned by DM direct detection experiments. And yet, here we are, and so apparently is the dark matter. DM might escape the hunting parties turning FIMP or outright Despicable. For EWBG a low energy solution would be desirable - to avoid the hierarchy problem, if SM, as Data seem to suggest, remains valid up to ultra high energies. An elegant solution to the quandary would be to combine the two and have a baryogenesis powered by the Dark Sector, perhaps by the DM itself.

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