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# Constraints on light vector mediators through COHERENT data

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The observation of coherent elastic neutrino-nucleus scattering performed by the COHERENT experiment with cesium iodide in 2017 and with liquid argon in 2020, represents an innovative and powerful tool for investigating non-standard interactions not included in the Standard Model and interactions mediated by yet to be discovered light neutral vector bosons.
We present new constraints on three different models of light mediators, namely universal, B-L and Lμ – Lτ models, involving a light vector Z'mediator, by exploiting the data recently released by the COHERENT Collaboration. We compare the results obtained from a combination of the cesium-iodide and argon data sets with the limits obtained by other experiments, and with the parameter region that could explain the anomalous magnetic moment of the muon.

## Collaboration name

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