

# Revisiting experimental mass limits on HECOs using Dyson-Schwinger resummation

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High-Electric-Charge compact Objects (HECOs) appear in several theoretical particle physics models beyond the Standard Model, and are actively searched for in current colliders, such as the LHC. In such searches, mass bounds of these objects have been placed, using Drell-Yan and photon-fusion processes at tree level so far. However, such estimates are not reliable, given that, as a result of the large values of the electric charge of the HECO, perturbative QED calculations break down. We present a Dyson-Schwinger resummation scheme, which allows for a large gauge coupling and thus makes the computation of the pertinent HECO-production cross sections reliable, thus allowing us to extract improved mass bounds for such objects from ATLAS and MoEDAL searches.

## Alternate track

1. Formal Theory

## I read the instructions above

Yes

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