



# Searching for fractionally charged particles with DAMPE

## Executive summary

- With the good charge resolution of the PSD and STK sub detectors of DAMPE, which has been working stably on-orbit for more than five years, the work of searching FCP in space is ongoing.
- The FCP is assumed to be heavy lepton and its existence will break the QCD theory or extend the standard model.
- Based on DAMPE detector, a series of selections are set to study the FCP, and the methods will be present in this work.
- A MC simulation of FCP has been performed and an evaluation of the search efficiency has been carried out