



Contribution ID: 274

Type: **Talk**

Search for exotic B meson decays at CMS

Thursday 2 September 2021 13:00 (30 minutes)

We present the first search for a light scalar arising from the decay of a B meson at CMS enabled by the novel technique of data scouting. In order to explore otherwise inaccessible phase space at low dimuon mass and non-zero displacement from the interaction point, a dedicated high rate dimuon trigger stream is used. No significant excesses are found and stringent constraints set on a wide range of scalar mass and lifetime hypotheses. Sensitivity projections for such exotic B decays using the CMS phase II L1 track trigger are also explored. Finally, using this search and the sensitivity studies, we show that CMS reach for such decays are competitive with LHCb and Belle II.

Is this abstract from experiment?

Yes

Name of experiment and experimental site

CMS Collaboration

Is the speaker for that presentation defined?

Yes

Details

Hardik Routray
Rutgers University-New Brunswick
<http://www.physics.rutgers.edu/hex/CMS.html>

Internet talk

Yes

Primary author: ROUTRAY, Hardik (Rutgers State Univ. of New Jersey (US))

Presenter: ROUTRAY, Hardik (Rutgers State Univ. of New Jersey (US))

Session Classification: A High Energy Particle Physics