

DPF-PHENO 2024

Contribution ID: 623

Type: **not specified**

New Signatures for Color-Sextet Scalars

Thursday 16 May 2024 15:15 (15 minutes)

Color-sextet scalars have well-known renormalizable couplings to quark pairs, but they could have an array of other possible couplings to the Standard Model. This talk will focus on proposed LHC searches for two operators of mass dimension six which include these sextet scalars. The first of these operators involves color-sextet scalars in a channel with jets and a hard opposite-sign lepton pair. The other operator of interest generates the counterpart processes with neutrinos, which produce jets in association with missing transverse energy in addition to possible leptons. Single production of the sextet scalars will be examined, along with tailored searches that would allow discovery/exclusion of these particles to be established to a higher sensitivity level than current ATLAS/CMS searches for the majority of the parameter space.

Mini Symposia (Invited Talks Only)

Author: SCHWIND, Katherine (The Ohio State University)

Presenter: SCHWIND, Katherine (The Ohio State University)

Session Classification: Physics Beyond the Standard Model

Track Classification: Other BSM