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**Composite resonances at a multi-TeV muon collider** KE-PAN XIE, Seoul Natl Univ, DA LIU, UC Davis, LIAN-TAO WANG, University of Chicago — Multi-TeV vector and fermionic resonances generally exist in the composite Higgs models. In this work we investigate the phenomenology of the resonances at high-energy muon colliders, taking the minimal coset  $SO(5)/SO(4)$  as the benchmark model. Various possible production and decay processes are studied, and detailed collider simulations are further performed for the most promising channels. For the vector resonances, the projections are made via the radiative return production followed by di-boson and di-fermion decay channels; while for the fermionic resonances, projections are made for the single and pair productions and the exclusive decay of the charge-5/3 top partner  $X_{5/3}$ . The interplay between vector and fermionic resonances are also considered.

Ke-Pan Xie  
Seoul Natl Univ

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