

Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Measurement of the $t\bar{t}$ spin correlations, top quark polarization and related angular variables ABRAHAM MATHEW KOSHY, JASON THIEMANN, GIULIA NEGRO, ANDREAS JUNG, Purdue University, CMS COLLABORATION¹ — The ongoing CMS analysis on the measurement of the full spin density production matrix, which includes multi-differential measurements of variables sensitive to the top quark spin correlation, polarization, and related angular observables, is presented. Events containing two leptons, two b-jets, and additional jets, as well as missing transverse momentum produced in proton-proton collisions at a center-of-mass energy of 13 TeV are considered. The data corresponds to an integrated luminosity of 137/fb collected with the CMS detector at the LHC. Results are used to challenge Standard Model predictions and also to indirectly search for contributions of new physics.

¹We work with CMS collaboration. This abstract/talk has been approved by CMS conference committee.

Abraham Koshy
Purdue University

Date submitted: 03 Jan 2021

Electronic form version 1.4