



Contribution ID: 2

Type: **not specified**

A New Way to Measure Spin at Hadron Colliders

Sunday, 28 August 2011 11:45 (25 minutes)

I propose a new technique for determining the spin of new massive particles that might be discovered at the Large Hadron Collider. The method relies on pair-production of the new particles in a kinematic regime where the vector boson fusion production mechanism is enhanced. For this regime, I show that the distribution of the leading jets as a function of their relative azimuthal angle can be used to distinguish spin-0 from spin-1/2 particles. I argue that this method should be applicable in a wide range of new physics scenarios.

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Session Classification: Parallel Session 1

Track Classification: SUSY: phenomenology