

Abstract Submitted  
for the APR11 Meeting of  
The American Physical Society

**Measurement of the top quark pair production cross section with early ATLAS data** BABAK ABI, Oklahoma State University, ATLAS COLLABORATION — We present a measurement of the  $t\bar{t}$  production cross section at a center of mass energy of 7 TeV performed by the ATLAS Collaboration. We select events with only one charged lepton (electron or muon), large transverse missing energy, and at least 3 jets. The data used for this analysis corresponds to integrated luminosity of  $35 \text{ pb}^{-1}$ . The likelihood method is used to distinguish the  $t\bar{t}$  production from background. We also use information about the presence of b-quark jets to improve the separation between signal and background.

Babak Abi  
Oklahoma State University

Date submitted: 14 Jan 2011

Electronic form version 1.4