

1 J/ψ production in jets in p+p collisions at $\sqrt{s} = 500$ GeV by
2 STAR

3 Qian Yang (for the STAR Collaboration)
4 Shandong University

5
6 **Abstract**

7 The suppression of J/ψ production caused by the color-screening effect in heavy-
8 ion collisions is considered as an evidence of the creation of quark-gluon plasma.
9 To interpret the observed suppression in heavy-ion collisions, a good understanding
10 of its production mechanism in p+p collisions is needed. However, the production
11 of J/ψ in hadronic collisions remains not fully understood and requires further
12 studies. Recently, J/ψ production in jets was proposed as a useful observable
13 to help explore the J/ψ production mechanism, and to differentiate various J/ψ
14 production models.

15 In this talk, we will present the measurement of the fraction of charged jet
16 transverse momentum (p_T) carried by the J/ψ meson, $z(J/\psi) \equiv p_T(J/\psi)/p_T(jet)$,
17 at mid-pseudorapidity ($|\eta| < 1$) with a kinematic cut of $p_T(J/\psi) > 5$ GeV/c in p+p
18 collisions at $\sqrt{s} = 500$ GeV by the STAR experiment. The comparison to model
19 calculations and similar measurements carried out at the LHC will be presented,
20 and its physics implications will be discussed.