

专刊

金核--金核与质子-质子对撞中矢量介子 $K^{*0}(892)$ 和 $\phi(1020)$ 的自旋排列

唐泽波

(Department of Modern Physics, University of Science and Technology of China, Hefei 230026, China)

收稿日期 2007-7-17 修回日期 网络版发布日期 接受日期

**摘要** We present the preliminary results on the spin alignment matrix element  $\rho_{00}$  for vector mesons  $K^{*0}(892)$  and  $\phi(1020)$  in mid-central (20%—60%) Au+Au and p+p collisions at  $s_{NN}=200\text{GeV}$ . The values of  $\rho_{00}$  with respect to reaction plane in Au+Au collisions are  $0.36 \pm 0.02(\text{stat}) \pm 0.13(\text{sys})$  for  $K^{*0}(892)$  and  $0.38 \pm 0.01(\text{stat}) \pm 0.04(\text{sys})$  for  $\phi(1020)$ . No evident global spin alignment with respect to reaction plane is observed in the measured  $p_T$  region up to  $5\text{GeV}/c$  with current sensitivity.  $\rho_{00}$  with respect to the production plane of the vector meson is also measured for  $K^{*0}(892)$  and  $\phi(1020)$  in Au+Au collisions, and for  $\phi(1020)$  in p+p collisions. No significant difference for the  $\rho_{00}$  between Au+Au and p+p collisions is observed with our data sample.

**关键词** [spin alignment](#) [global polarization](#) [vector meson](#)

分类号

**DOI:**

通讯作者:

唐泽波 [zbtang@mail.ustc.edu.cn](mailto:zbtang@mail.ustc.edu.cn)

作者个人主页: 唐泽波

#### 扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF\(1014KB\)](#)

▶ [\[HTML全文\]\(0KB\)](#)

▶ [参考文献\[PDF\]](#)

▶ [参考文献](#)

服务与反馈

▶ [把本文推荐给朋友](#)

▶ [加入我的书架](#)

▶ [加入引用管理器](#)

▶ [引用本文](#)

▶ [Email Alert](#)

相关信息

▶ [本刊中 包含“spin alignment”  
的 相关文章](#)

▶ 本文作者相关文章

• [唐泽波](#)