

专刊

Supernova neutrino detection on earth

郭新恒¹, 黄明阳¹, 杨炳麟^{2,3}

¹ College of Nuclear Science and Technology, Beijing Normal University, Beijing 100875, China

² Department of Physics and Astronomy, Iowa State University, Ames, Iowa 5001, USA

³ Institute of Theoretical Physics, Chinese Academy of Sciences, Beijing 100190, China

收稿日期 2009-8-27 修回日期 2009-9-17 网络版发布日期 2010-1-5 接受日期 2010-1-5

摘要

In this paper, we first discuss the detection of supernova neutrinos on earth. Then we propose a possible method to acquire information about θ_{13} smaller than 1.5° by detecting the ratio of the event numbers of different flavor supernova neutrinos. Such an sensitivity cannot yet be achieved by the Daya Bay reactor neutrino experiment.

关键词 [supernova](#), [neutrino](#), [collective effects](#), [MSW effects](#), [earth matter effects](#), [Daya Bay](#)

分类号

DOI:

通讯作者:

郭新恒 xhguo@bnu.edu.cn

作者个人主页:

郭新恒¹; 黄明阳¹; 杨炳麟^{2,3}

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF](#) (871KB)

▶ [\[HTML全文\]](#) (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 “supernova, neutrino, collective effects, MSW effects, earth matter effects, Daya Bay” 的 相关文章](#)

▶ 本文作者相关文章

· [郭新恒](#)

· [黄明阳](#)

· [杨炳麟](#)

·