



Nuclear Theory

# Nuclear collision in strong magnetic field

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(Submitted on 23 Jun 2011)

We studied nucleus-nucleus collision in strong magnetic field based on a transport model. It is found that neutrons and protons can be separated from a nucleus by strong magnetic field and neutron-rich high density nuclear matter and low density proton collectivity matter can be formed during nucleus-nucleus collision. The electric field produced by proton collectivity can accelerate proton and charged meson up to very high energies. Besides the studies of isospin physics such as symmetry energy, these results may help us to understand the acceleration mechanisms of high energy charged particles in the cosmic rays

Comments: 8 pages, 4 figs  
Subjects: **Nuclear Theory (nucl-th)**; High Energy Astrophysical Phenomena (astro-ph.HE)  
Journal reference: Physics Letters B 700 (2011) 249--253  
DOI: [10.1016/j.physletb.2011.05.004](https://doi.org/10.1016/j.physletb.2011.05.004)  
Cite as: **arXiv:1106.4612 [nucl-th]**  
(or **arXiv:1106.4612v1 [nucl-th]** for this version)

## Submission history

From: Gao-Chan Yong [[view email](#)]  
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