

Nuclear Experiment

Jet-hadron correlations in STAR

Alice Ohlson, for the STAR Collaboration

(Submitted on 29 Jun 2011)

In recent years, the study of dihadron correlations has been one of the primary methods used to investigate the propagation and modification of hard-scattered partons through the QGP. Due to recent advances in jet-finding algorithms, it is now possible to use reconstructed jets in these correlation studies, extending the kinematic reach compared to dihadron analyses. The results of the jet-hadron correlation analysis indicate a broadening and softening of jets that interact with the medium. Jet-hadron correlations can also be used to assess the systematics of other jet-like correlation analyses, such as 2+1 correlations. It is shown that the jets selected in 2+1 correlations are relatively unmodified. Future work will include an analysis of jet-hadron correlations with respect to the event plane to measure the pathlength dependence of parton energy loss. The first steps in this analysis indicate that complications arise when calculating the event plane in the presence of a jet as well as in calculating jet v_2 . The data analyzed were collected by the STAR detector in $\sqrt{s_{NN}} = 200$ GeV Au-Au collisions at the Relativistic Heavy Ion Collider (RHIC).

Comments: 8 pages, 7 figures, Proceedings for the 27th Winter Workshop on Nuclear Dynamics

Subjects: **Nuclear Experiment (nucl-ex)**Cite as: [arXiv:1106.6032](https://arxiv.org/abs/1106.6032) [nucl-ex](or [arXiv:1106.6032v1](https://arxiv.org/abs/1106.6032v1) [nucl-ex] for this version)

Submission history

From: Alice Ohlson [[view email](#)]

[v1] Wed, 29 Jun 2011 19:30:32 GMT (261kb,D)

[Which authors of this paper are endorsers?](#)

Download:

- [PDF](#)
- [Other formats](#)

Current browse context:

nucl-ex

[< prev](#) | [next >](#)[new](#) | [recent](#) | [1106](#)

References & Citations:

- [INSPIRE HEP](#)
([refers to](#) | [cited by](#))
- [NASA ADS](#)

Bookmark (what is this?)

