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Type: Talk

## Modeling (anti-)deuteron formation at RHIC with a geometric coalescence model

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We study (anti-)deuteron formation rates in heavy-ion collisions in the framework of a coalescence model. Our main assumption hereby is that nucleons are emitted from a spherically symmetric fireball volume, antinucleons from a spherical shell to account for nucleon-antinucleon annihilations at lower beam energies. Comparison with experimental data on the coalescence parameter in the range  $\sqrt{s_{NN}} = 4.7 - 200$  GeV allows us to extract radii of the respective source geometries. Our results are qualitatively supported by data from the UrQMD transport model which shows a comparable trend in the geometric radii as a function of beam energy. We find that at low energies the central region of the fireball suffers from the annihilation effects more than at higher energies

### Is this abstract from experiment?

No

### Internet talk

Yes

### Name of experiment and experimental site

N/A

### Is the speaker for that presentation defined?

Yes

### Details

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