## A High-Order Low-Order Algorithm with Exponentially-Convergent Monte Carlo for Thermal Radiative Transfer

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Introduction



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## Outline

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## Overview

Introduction

- We are interested in modeling thermal radiation transport in the high-energy density physics regime
  - Temperatures on order of  $10^6$  K or more
  - Significant energy and momentum may be exchanged with material

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 Low-Order Solver
 High-Order Solver
 Algorithm
 Computational Results
 Conclusions

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## Overview

Introduction

- We are interested in modeling thermal radiation transport in the high-energy density physics regime
  - Temperatures on order of 10<sup>6</sup> K or more
  - Significant energy and momentum may be exchanged with material
- Radiative transfer simulations important in modeling:
  - Material under extreme conditions
  - Inertial confinement fusion
  - Supernovae and other astrophysical phenomena.

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