



Astrophysical Radiation Hydrodynamics (Paperback)

By -

Springer, Netherlands, 2011. Paperback. Condition: New. Language: English . Brand New Book ***** Print on Demand *****.This NATO Advanced Research Workshop was devoted to the presentation, evaluation, and critical discussion of numerical methods in nonrelativistic and relativistic hydrodynamics, radiative transfer, and radiation-coupled hydrodynamics. The unifying theme of the lectures was the successful application of these methods to challenging problems in astrophysics. The workshop was subdivided into 3 somewhat independent topics, each with their own subtheme. Under the heading radiation hydrodynamics were brought together context, theory, methodology, and application of radiative transfer and radiation hydrodynamics in astrophysics. The intimate coupling between astronomy and radiation physics was underscored by examples from past and present research. Frame-dependence of both the equation of transfer (plus moments) and the underlying radiation quantities was discussed and clarified. Limiting regimes in radiation-coupled flow were identified and described; the dynamic diffusion regime received special emphasis. Numerical methods for continuum and line transfer equations in a given background were presented. Two examples of methods for computing dynamically coupled radiation/matter fields were given. In 1-D and assuming LTE the complete equations of radiation hydrodynamics can be solved with current computers. Such is not the case in...



READ ONLINE
[6.97 MB]

Reviews

If you need adding benefit, a must buy book. It really is written in straightforward words and phrases rather than difficult to understand. Your life period is going to be change the instant you total reading this ebook.

-- **Letha Okuneva**

This is an amazing ebook that we have possibly go through. It really is filled with wisdom and knowledge Its been developed in an extremely straightforward way and is particularly merely after i finished reading this ebook where in fact altered me, affect the way in my opinion.

-- **Berta Schmidt**