

A simple simulation technique for gravitational lenses

CRISTIAN EDUARD RUSU and BETRIA SILVANA ROSSA

ABSTRACT.

The present article discusses the simulation of Gravitational Lensing with an algorithm developed in C++ and using the EasyBMP library. The algorithm numerically solves the general gravitational lens equation in the astrophysically significant weak field case, for any single-plane lens configuration. Examples of execution are considered, and a discussion is carried out on the advantages and disadvantages of the direct simulation technique employed.

THE UNIVERSITY OF TOKYO
DEPARTMENT OF ASTRONOMY
GRADUATE SCHOOL OF SCIENCE,
7-3-1, HONGO, BUNKYO-KU, TOKYO 113-0033, JAPAN
E-mail address: eduard.rusu@nao.ac.jp

OSAKA UNIVERSITY
DEPARTMENT OF INFORMATION AND COMPUTER SCIENCE
SCHOOL OF SCIENCE ENGINEERING
1-1 MACHIKANAYAMA-CHO, TOYONAKA-SHI, OSAKA 560-0043, JAPAN
E-mail address: rossa@am.sanken.osaka-u.ac.jp