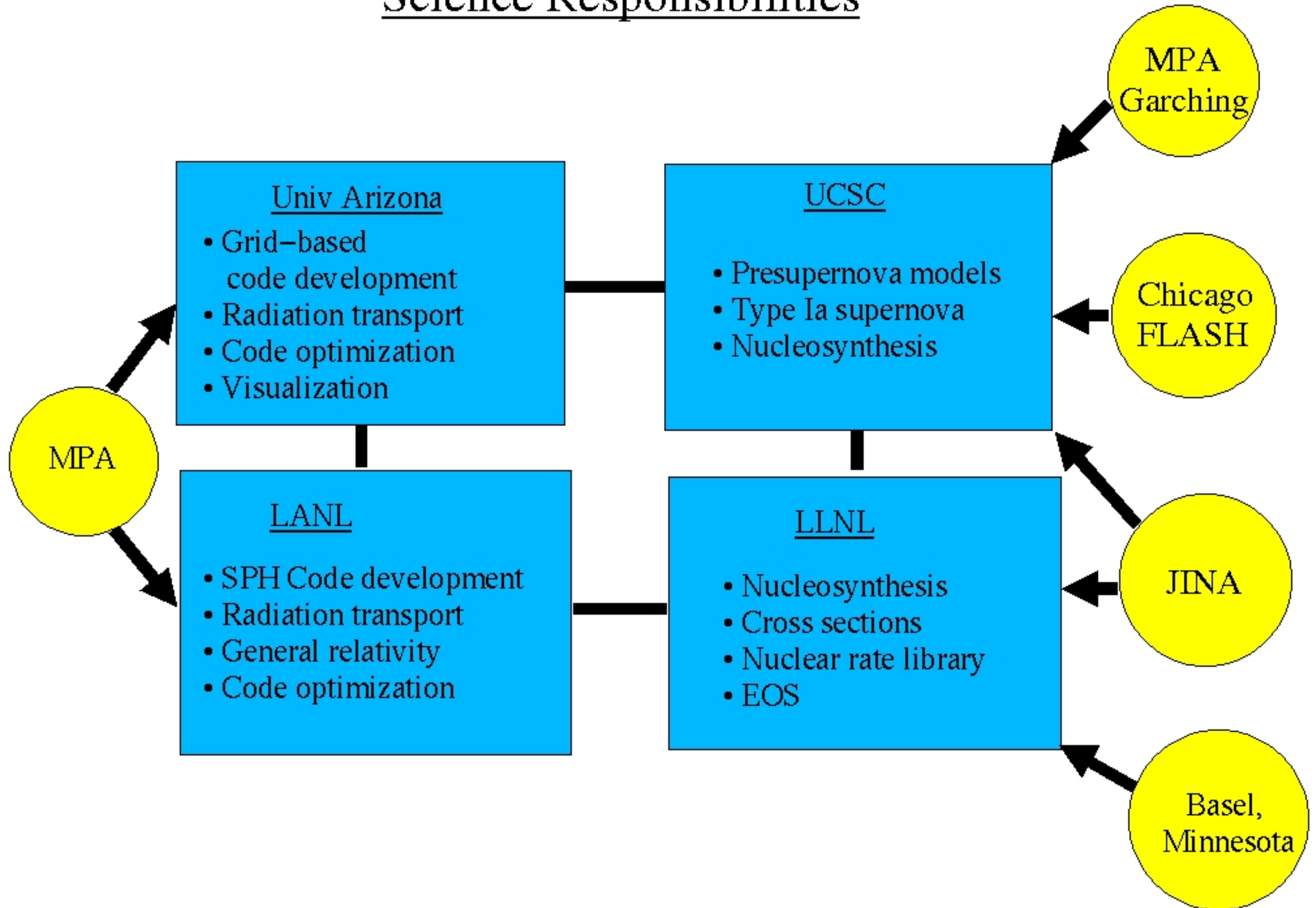
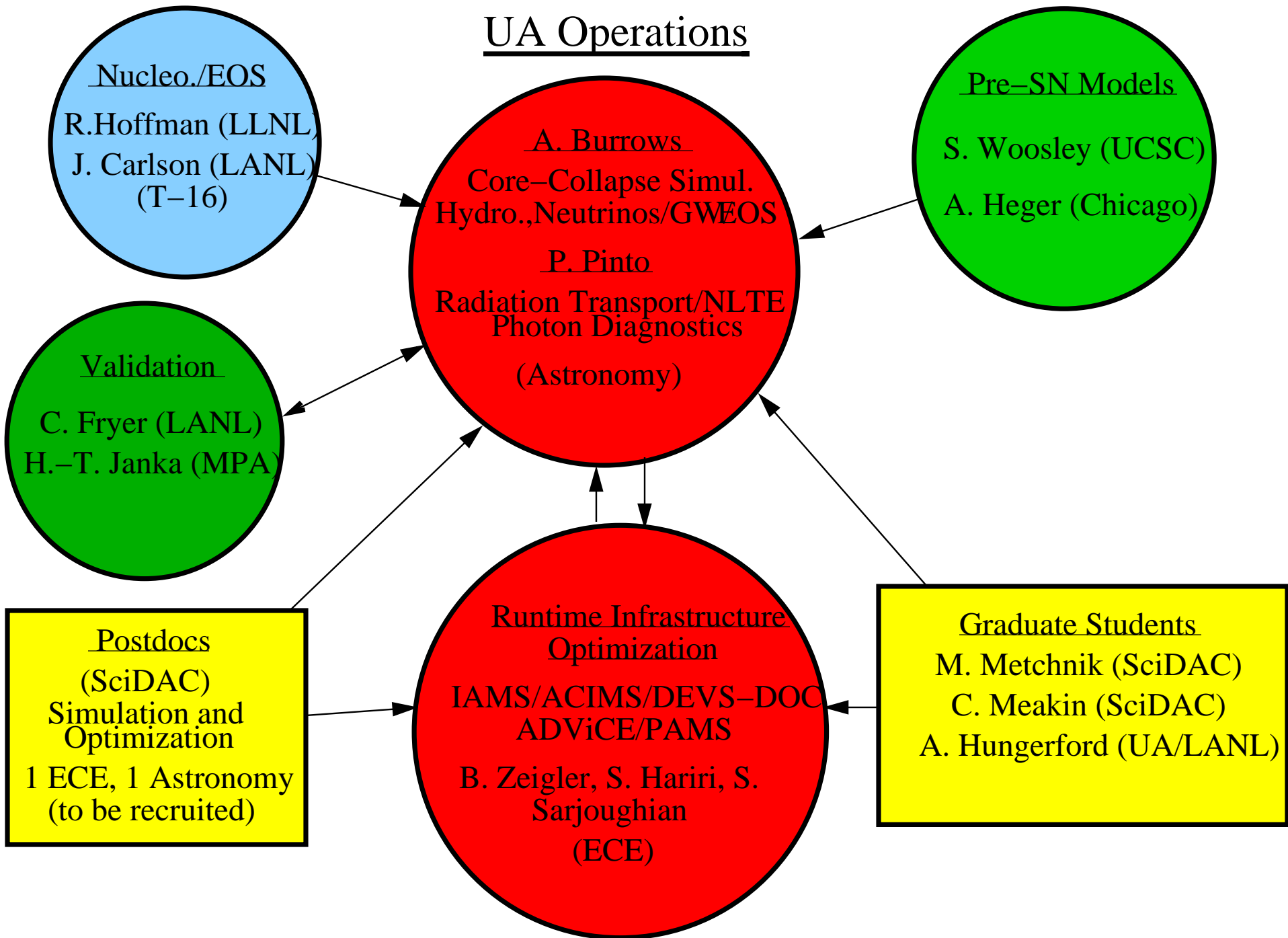


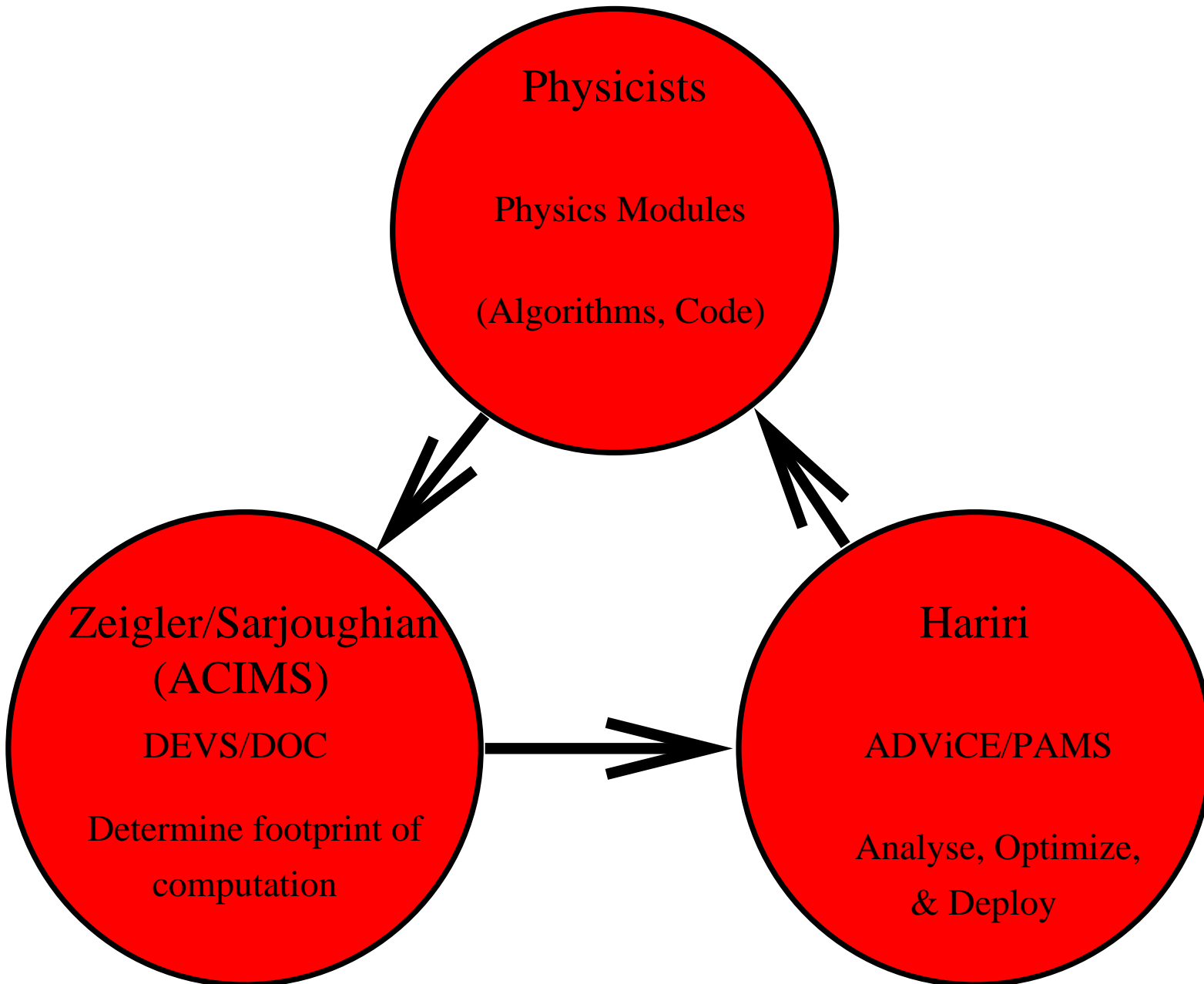
Science Responsibilities



UA Operations



UA Interactive Astrophysical Modeling System (IAMS)



Lichtenstadt/Livne/Burrows 2D Effort

2D Multi-Group flux-limited Diffusion

Explicit 2nd-order scheme with subcycling

Neutrino-Matter coupling:

2nd-order implicit

Hydro: Eulerian, Godunov, PPM-like

to be upgraded to Implicit VULCAN

Basic neutrino transport variable:

$f(e,n,r)$ in Eulerian frame

Lorentz transformations between local and lab frames

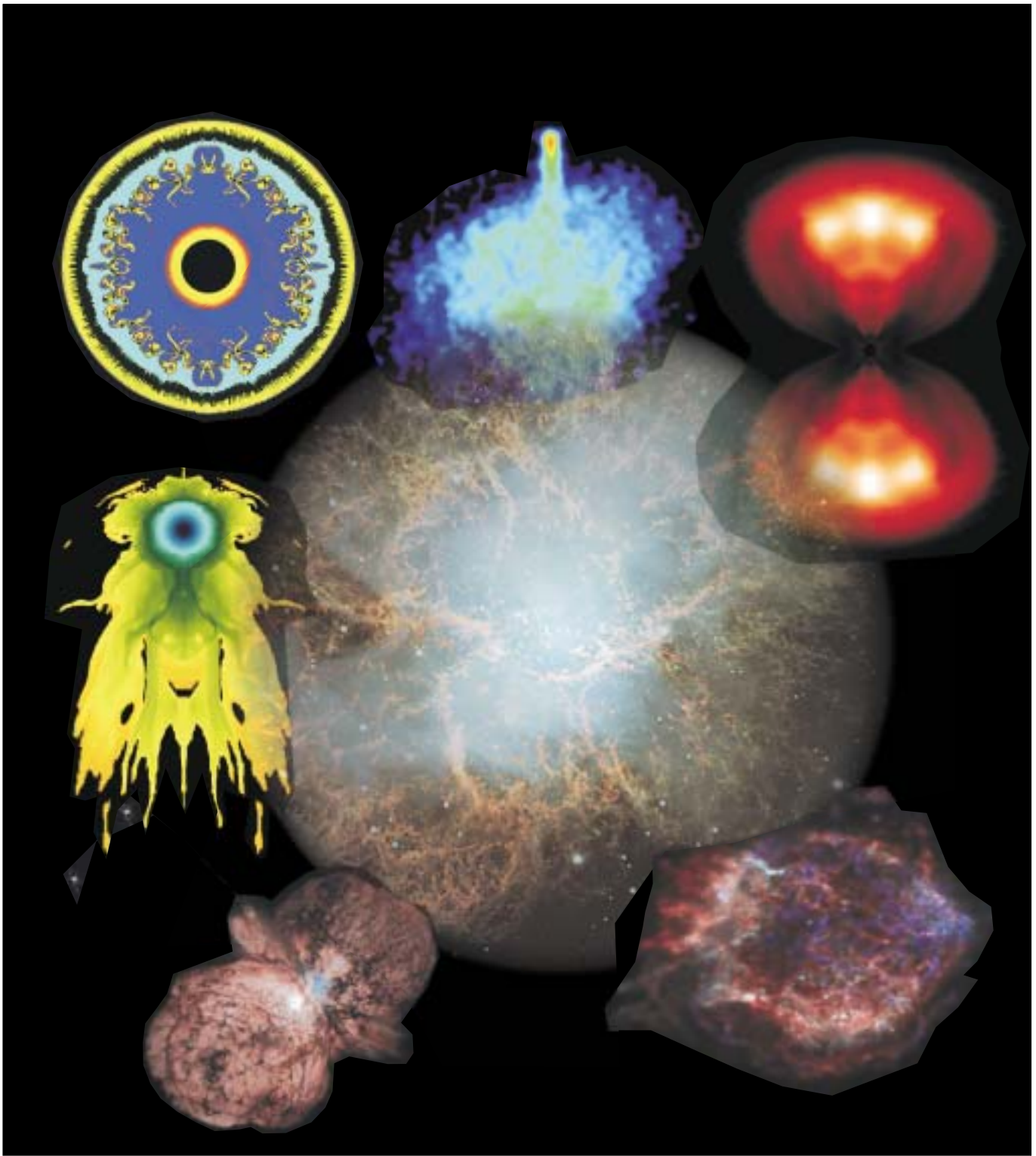
Explicit transport leads to a simple, tractable,
parallelizable algorithm

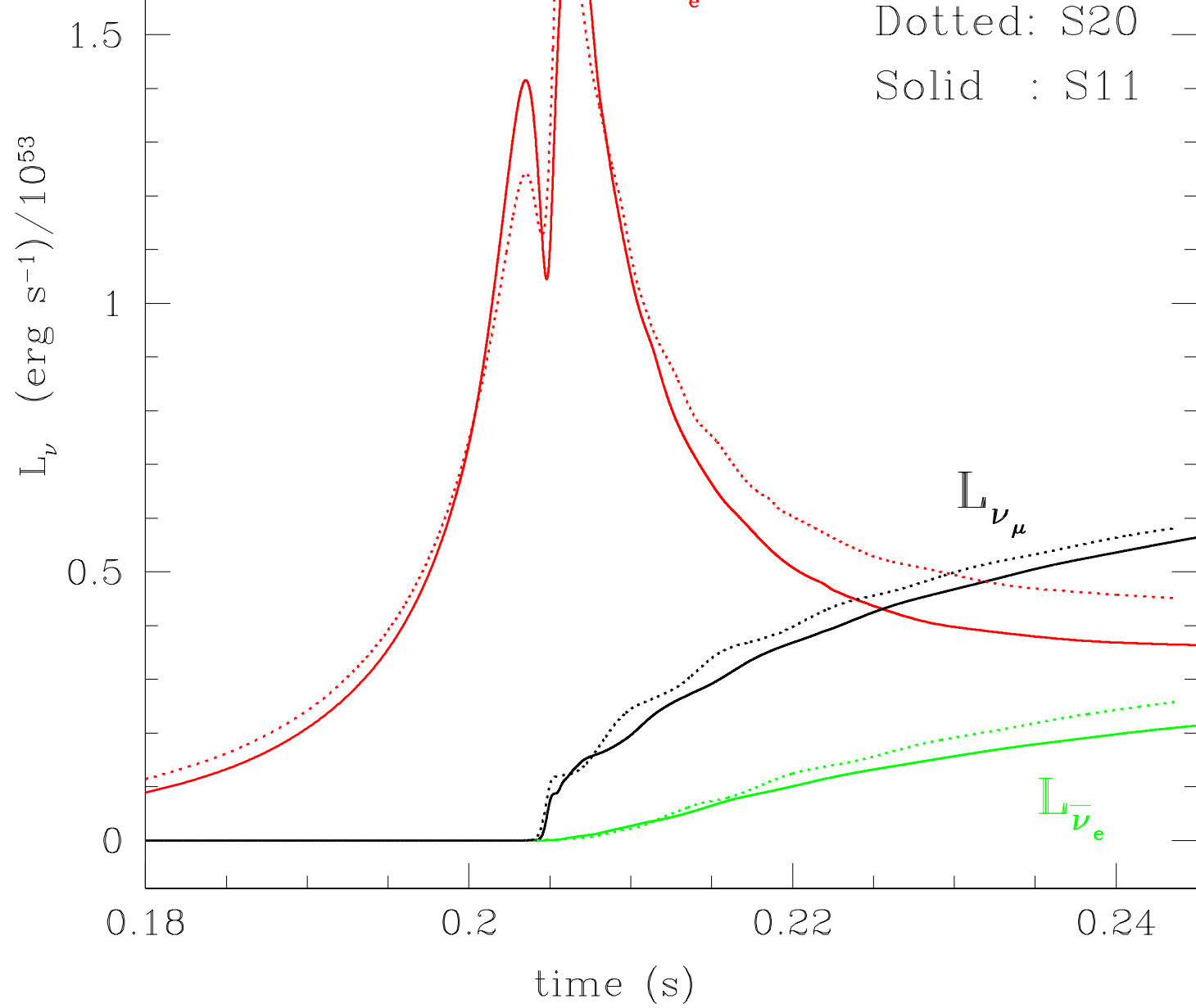
Limitations

Flux-limited

not GR

Levermore-Pomraning





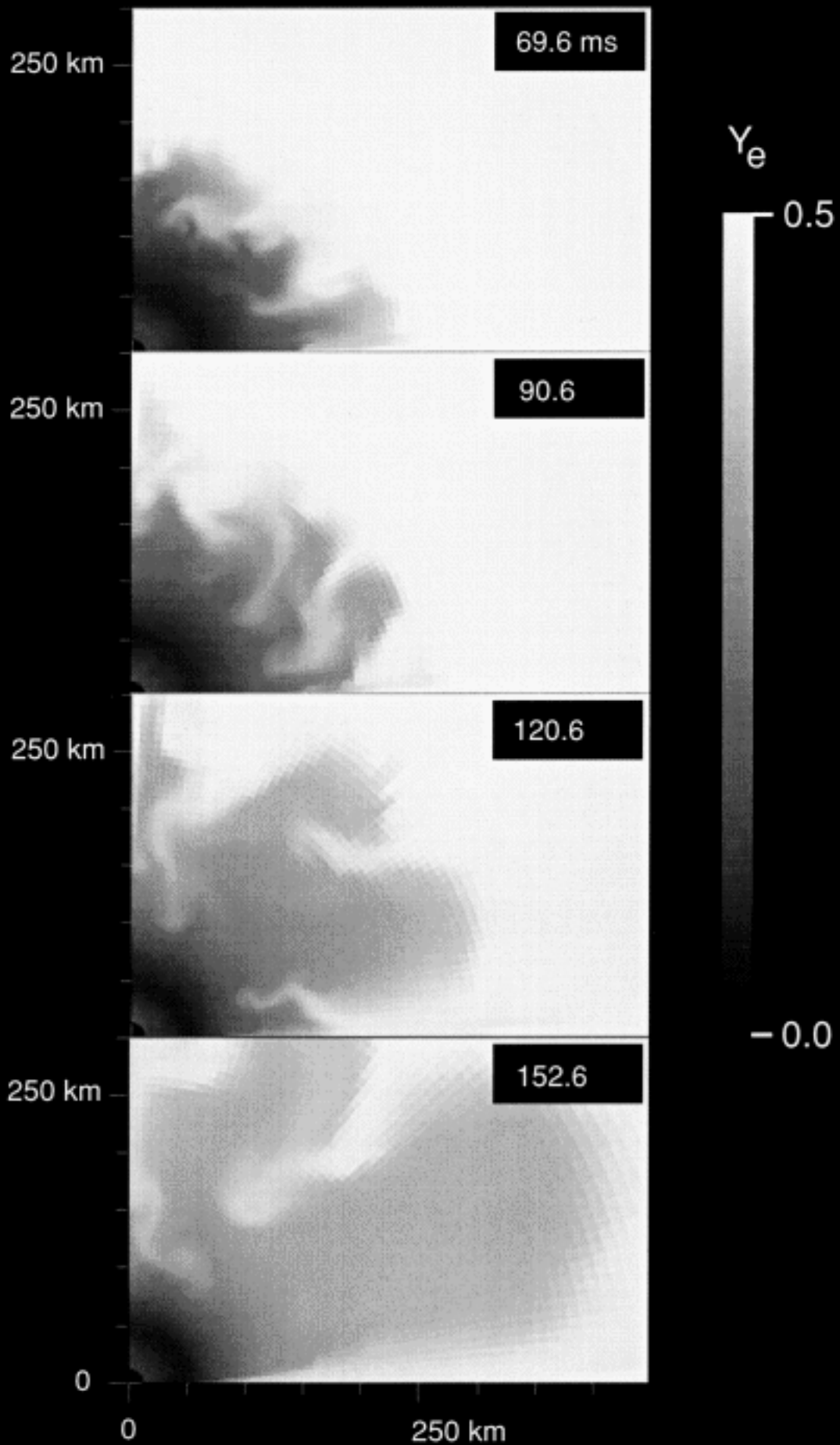


Fig. 10

