R-process Nucleosynthesis in Magnetically driven Explosion of Core-Collapse Supernovae

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Simulations
- 2D axisymmetric MHD
- High resolution: $\Delta \text{min}=30m$
  => capturing MRI
- Neutrino: light bulb with $L_\nu$ obtained by IDSA in a low resolution simulation
- Ye evolution
- EOS: Shen
- Progenitor: 15Msun (Woosley+95)
- Weak initial B field: $2 \times 10^{11} G$
- Rapid initial rotation: $\Omega_{in} = 2.7 \text{rad/s}$
Neutrino heating-dominant explosion

Magnetic-dominant explosion

R-process occurs in MD explosion. In NHD explosion, no feature for r-process. We found intermediate abundance pattern between the two extremes. 

=> Close to that of Honda Star?