

Fall 2020 Progress Status Presentation

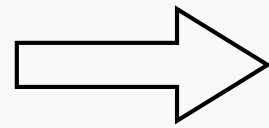
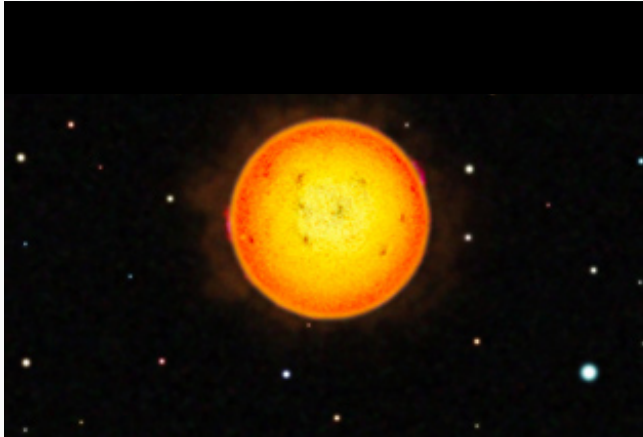
**Status report: systematic research for
light curves of supernovae**

2020.10.09

Sei Saito (M2)

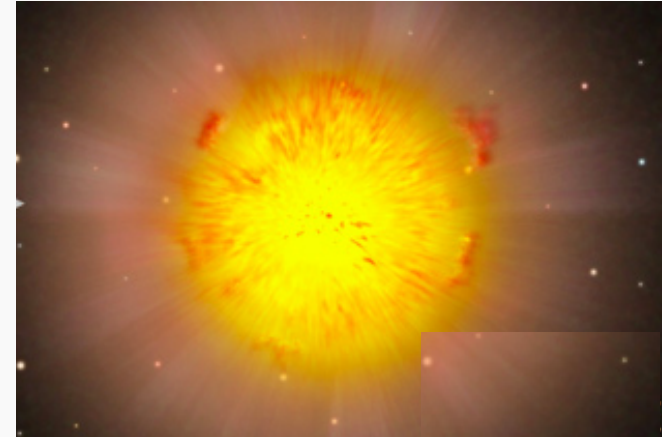
Astronomy

Star: most basic component



Evolution

Supernova: explosion at end



<https://www.astroarts.co.jp/news/2012/07/02kiss/index-j.shtml>

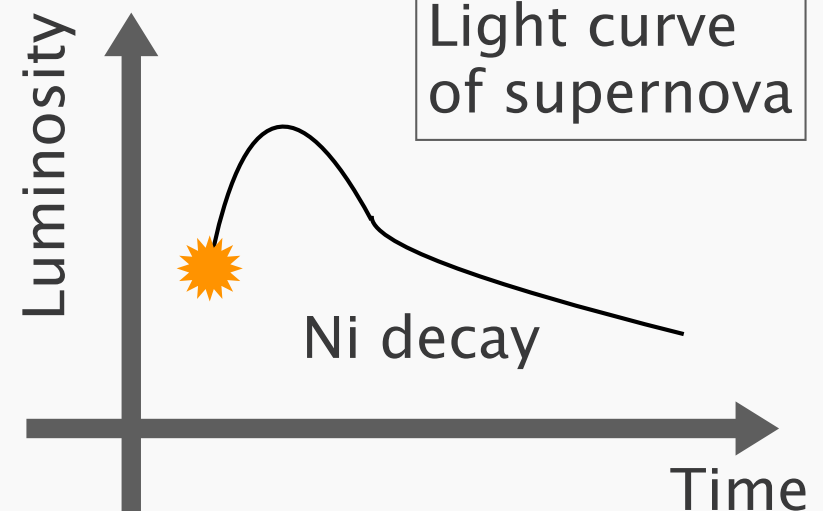
Unclear stellar evolution

Diversity of stellar evolution

—> Diversity of supernova

Supernova

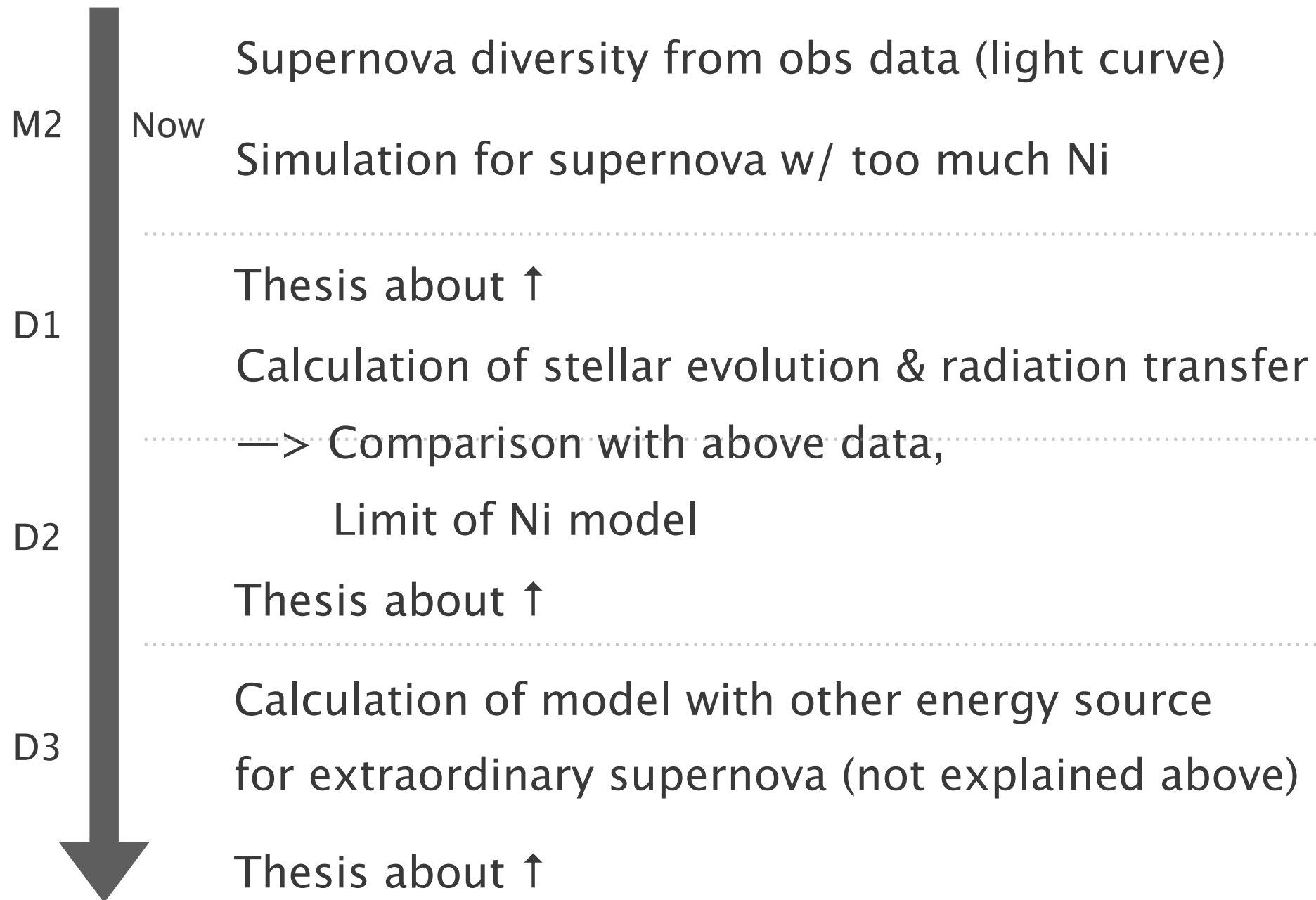
—> Stellar evolution



Systematic research for light curve of supernova

- > ~ 10 % of supernovae; too much Ni (energy source)
 - > New explosion mechanism (producing much Ni) ?
Other energy source ?

 - > Trying to produce too much Ni with hydro simulation
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1 month in Chile (D1)

- Expert on supernova diversity, Joseph Anderson
- Expert on applying data science to supernovae, Francisco Foster
- Many telescope —> Much time for observation

1 month in Sweden, Stockholm university (D2)

- Expert on supernova diversity, Francesco Taddia
- Expert on supernova polarization, Mattia Bulla

> 1 month for international conference, workshop or school

- M1: Chile (1 w), Russia (1 w), Hawaii (1w), other (3d + 3d)
 - M2: America (1 w), Sendai (2 d), Hiroshima (1 w)
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