

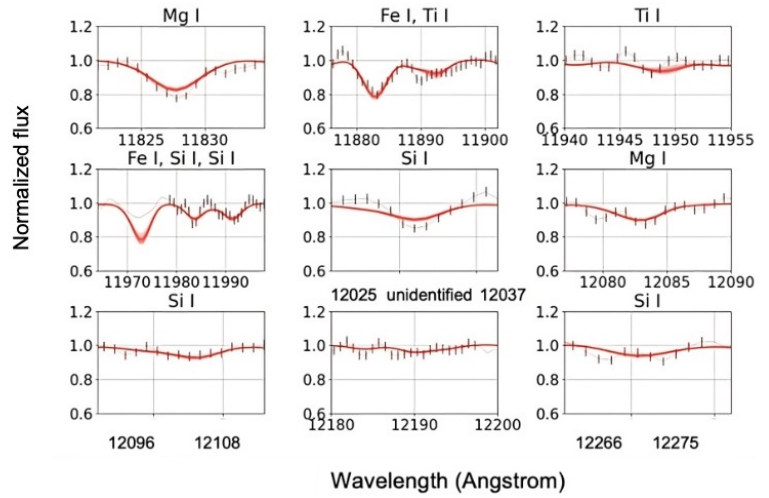
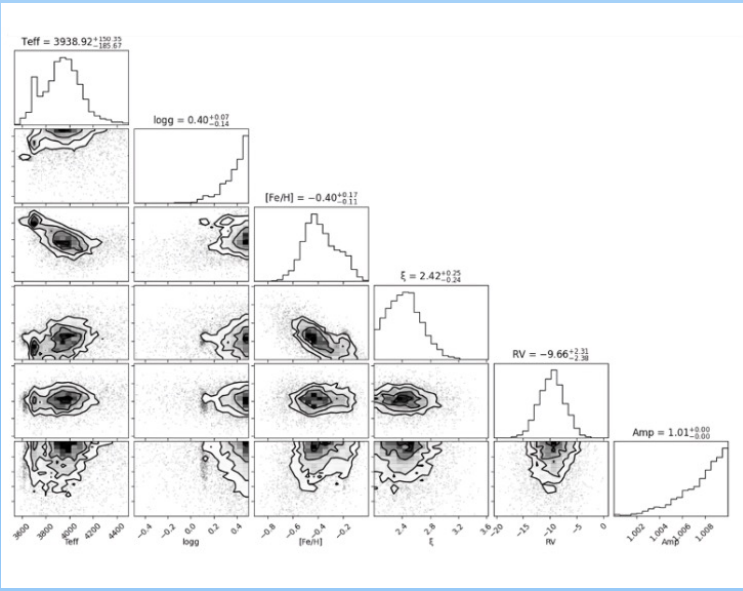
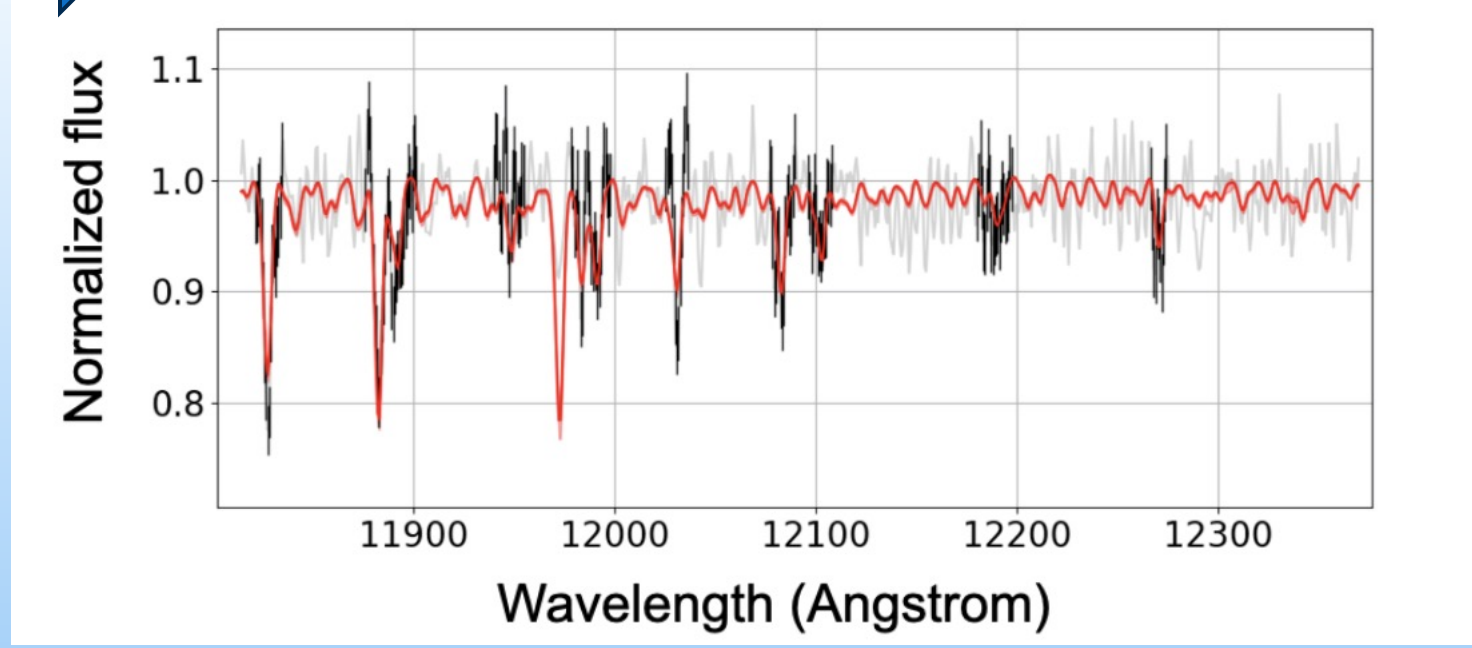
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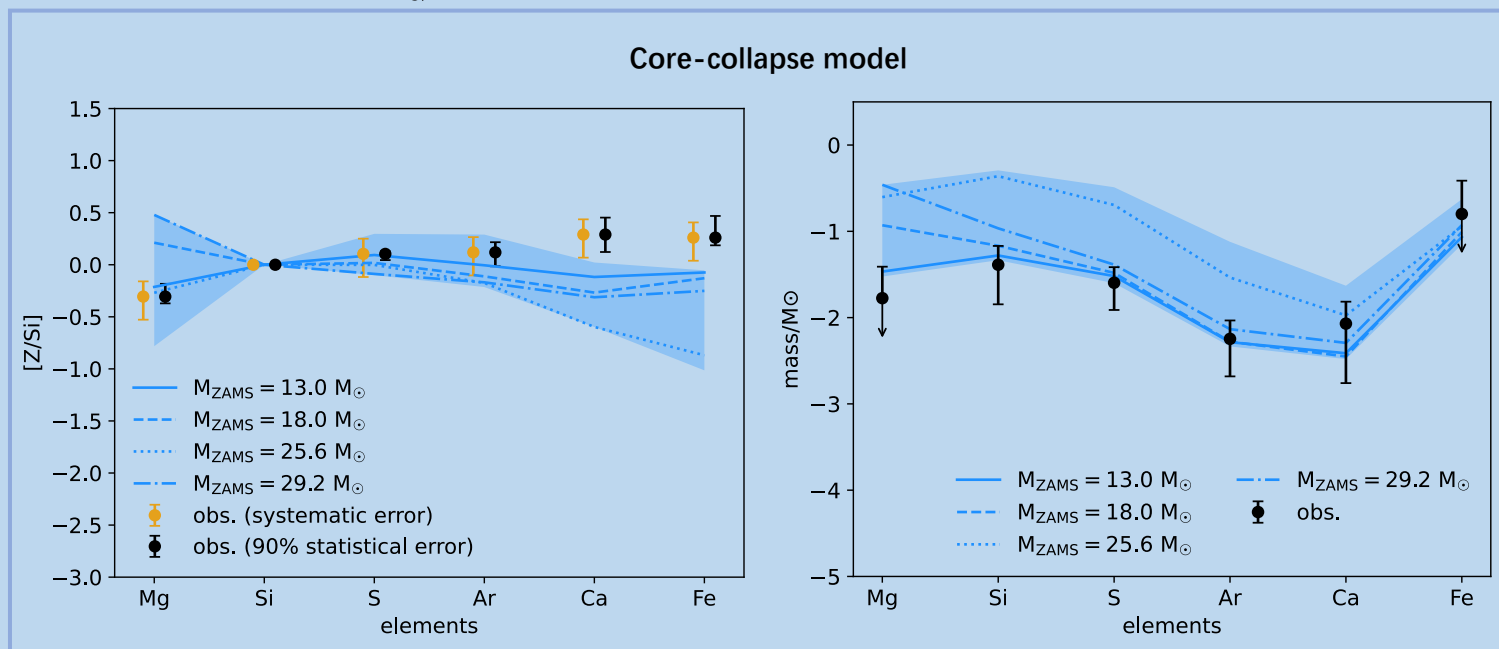
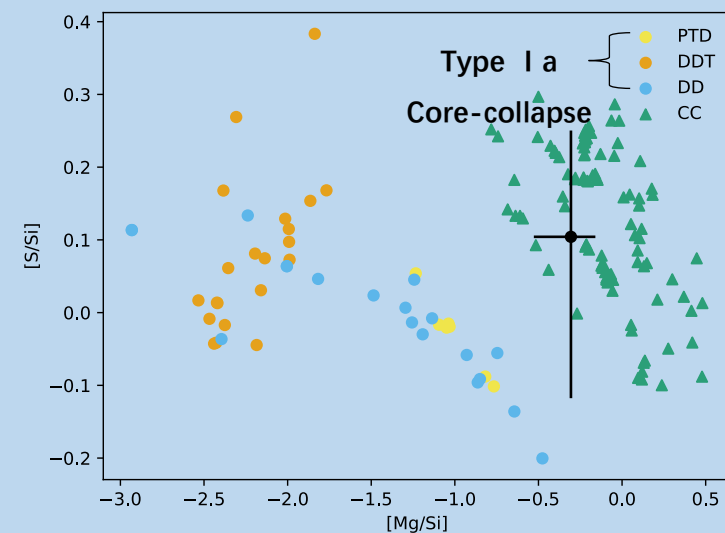
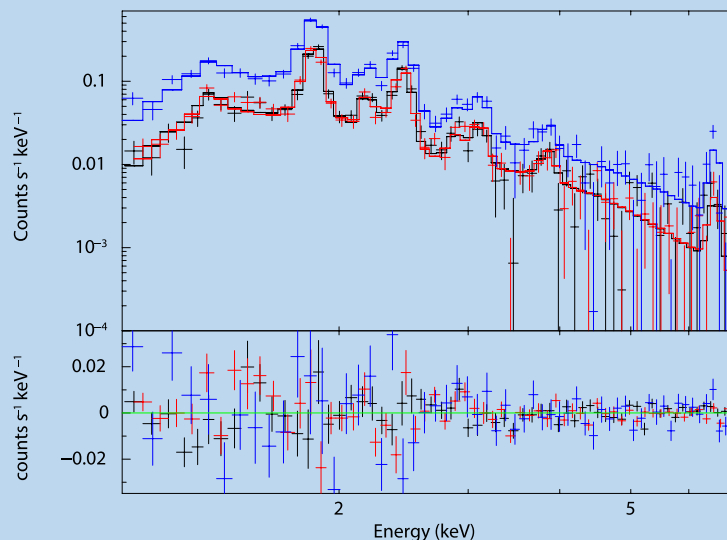
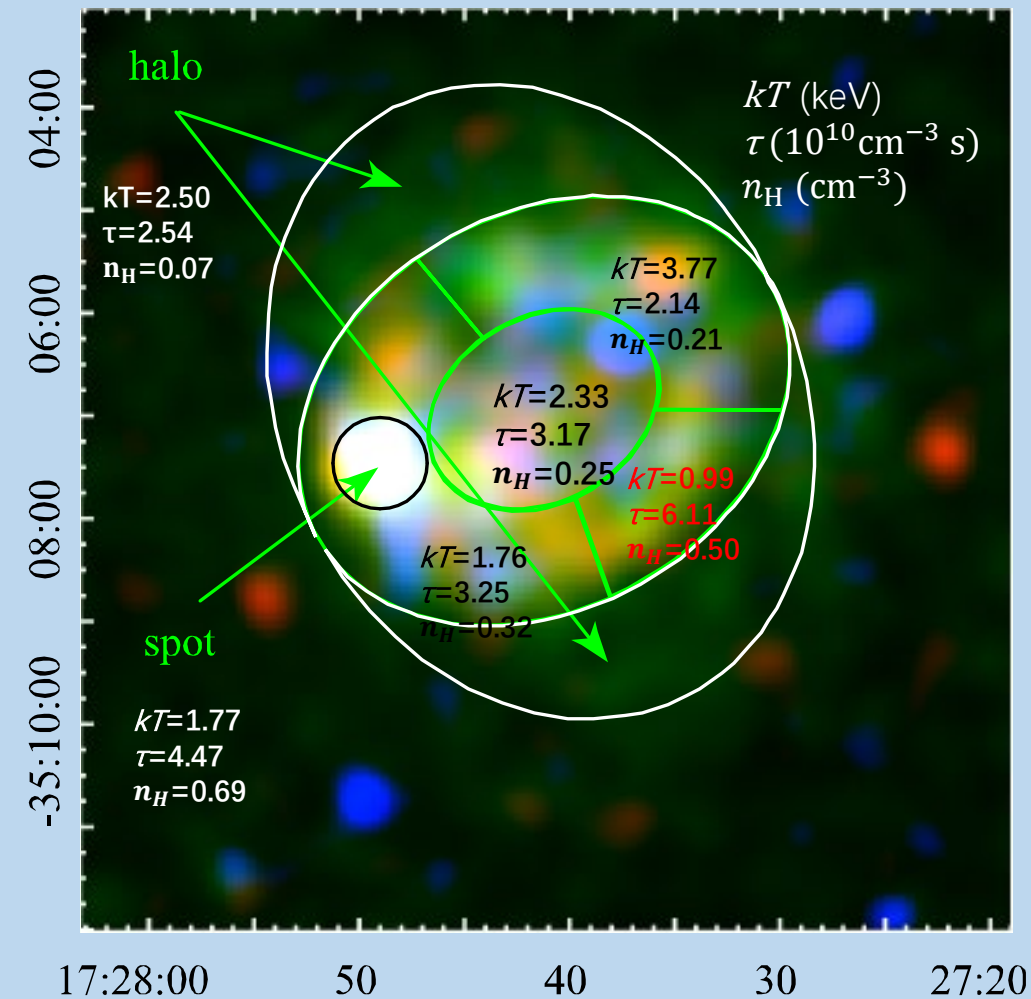
Poster S3.11





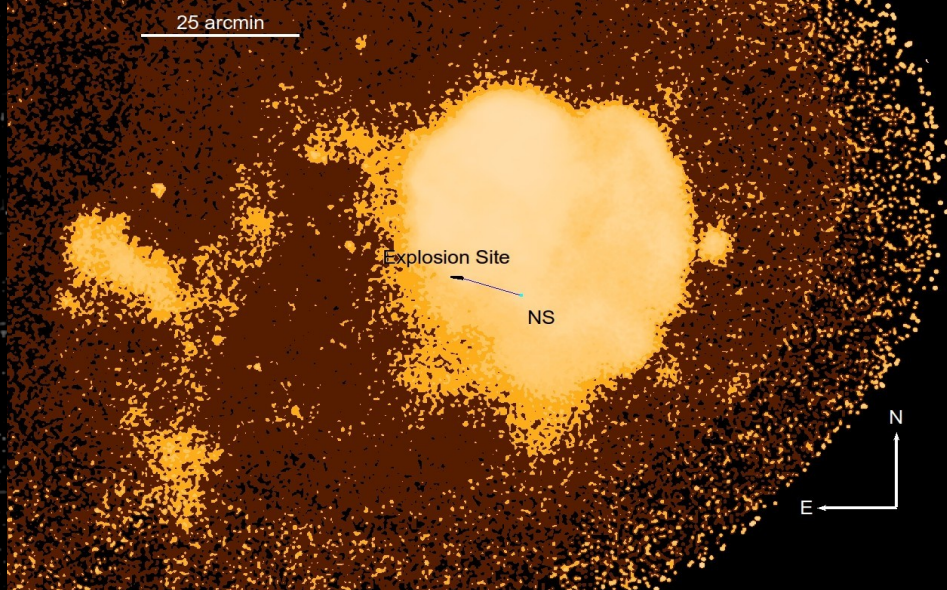
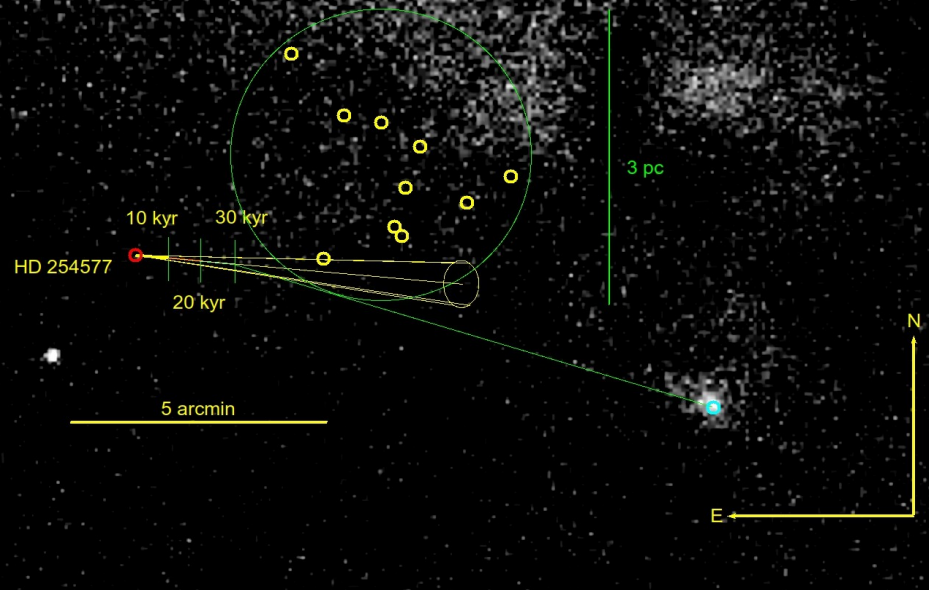
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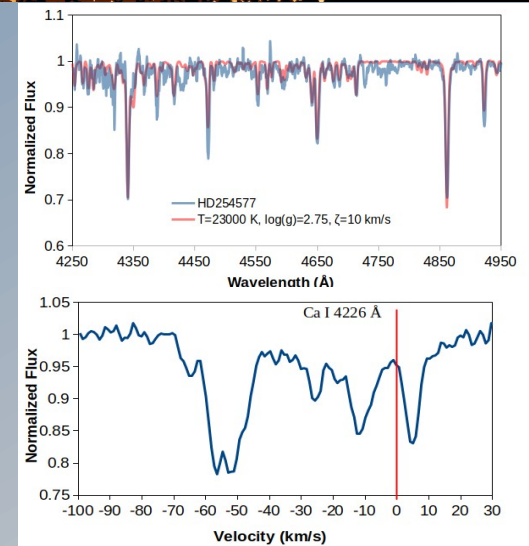
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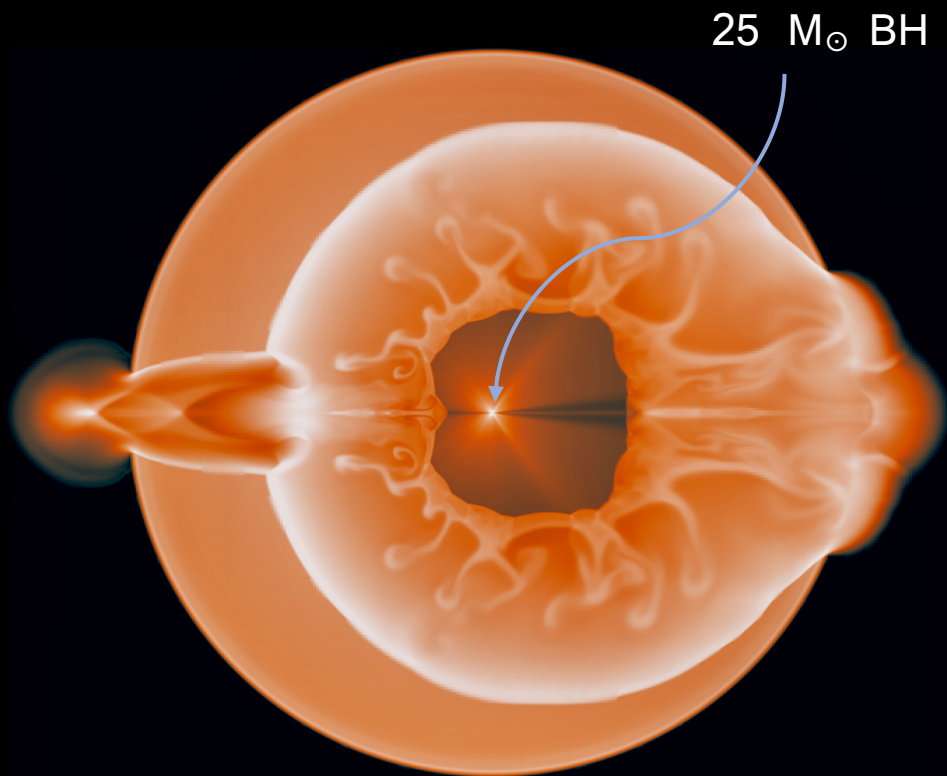
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A black hole forms a second after shock revival and yet culminates in a successful supernova. Microphysics dictate the ejecta composition.

Contact: oliver.e.andersen@astro.su.se

Black Hole Supernovae and their Equation-of-state Dependence

Oliver Eggenberger Andersen¹, Evan O'Connor¹, Haakon Andresen¹, André da Silva Schneider², Sean Couch³
¹Stockholm University, ²Universidade Federal de Santa Catarina, ³Michigan State University

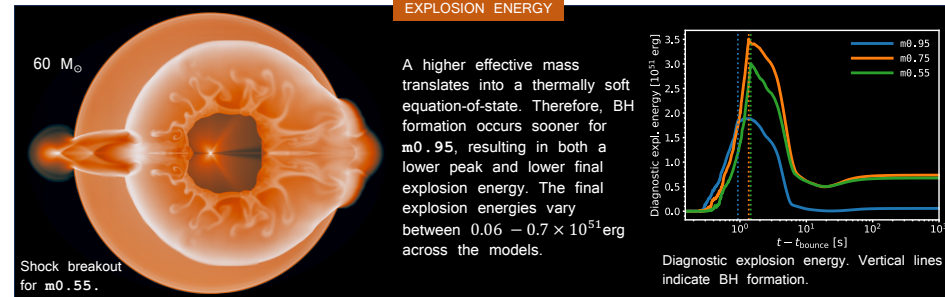
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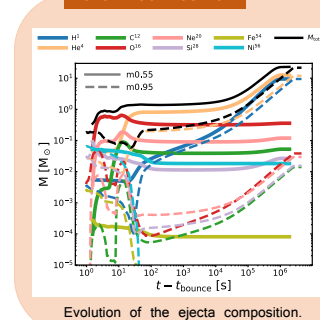
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EXPLOSION ENERGY



EJECTA COMPOSITION

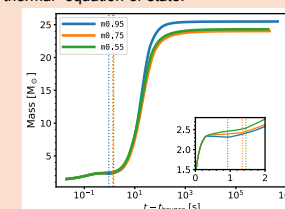


Much of the explosively produced elements accrete onto the BH for the $m0.95$ model compared to $m0.55$. In particular, no Ni^{56} escapes while 1.8% of a solar mass is ejected for $m0.55$. This impacts the light curve and spectrum.

Taking this explosive BH formation channel into account affects the nucleosynthetic feedback into the interstellar medium.

BLACK HOLE

This BH-formation channel, seen by other simulation groups as well [6,7], impacts the compact object mass distribution. The conventional assumption for this progenitor would be that a $47.3 M_{\odot}$ BH is left behind. Here, a $\sim 25 M_{\odot}$ BH is made, with additional variation depending on the thermal equation-of-state.



[1] Schneider A.S., Roberts L.F., Ott C.D., O'Connor E., 2019, PhRvC, 100, 055802
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EXCELENCIA SEVERO OCHOA



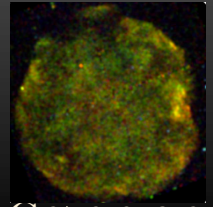
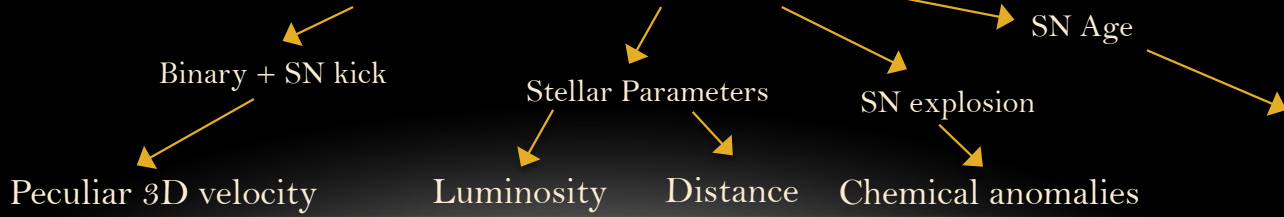
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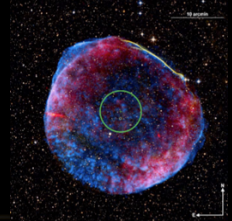
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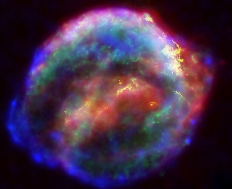
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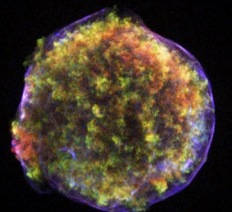
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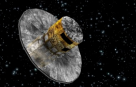
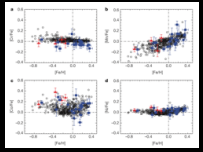
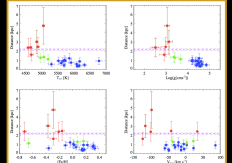
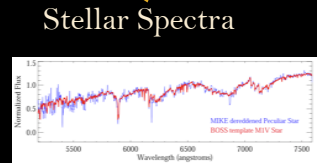
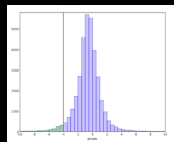
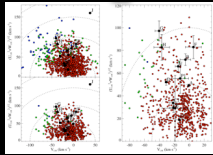
SN 1006



SN 1604
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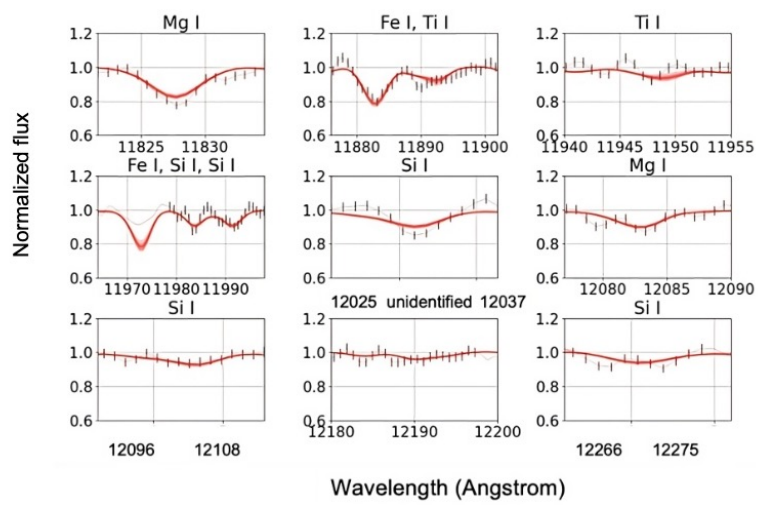
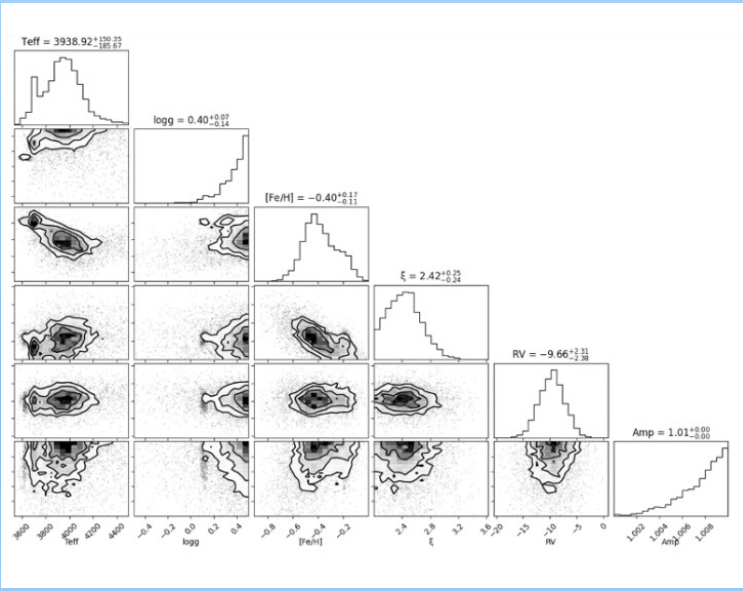
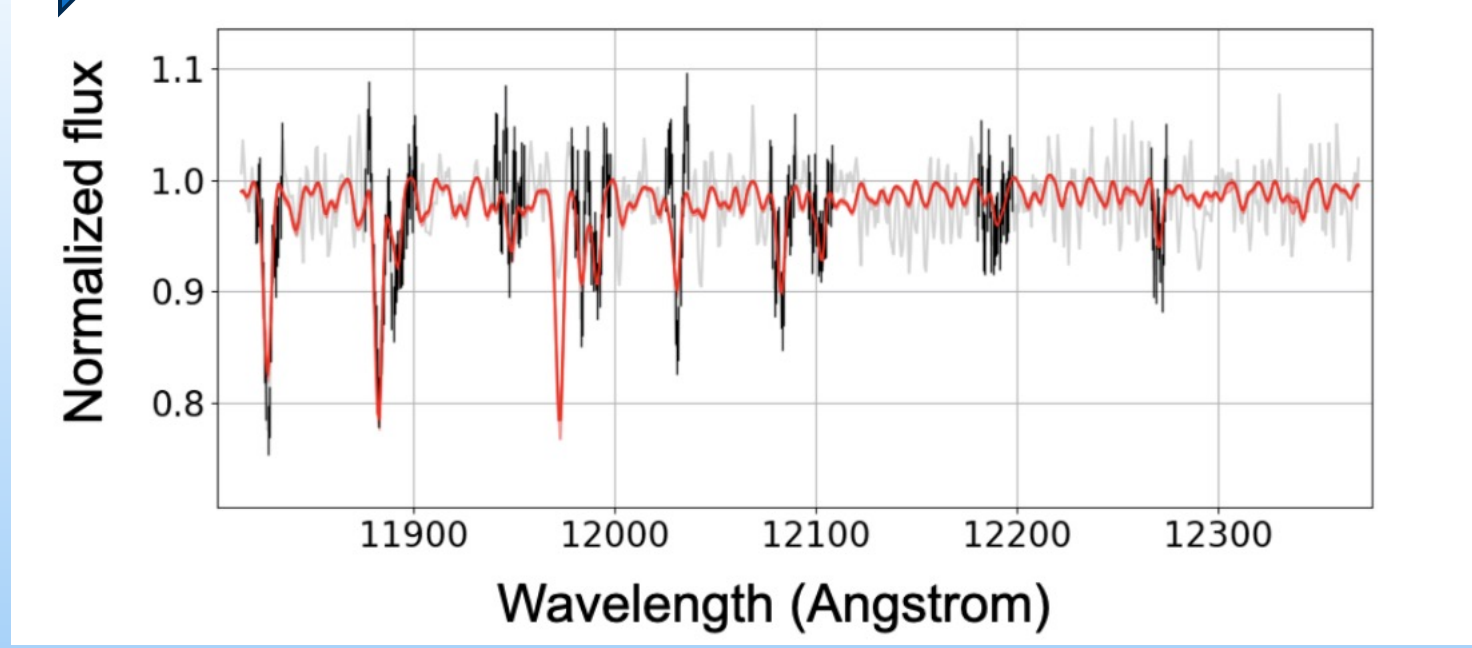
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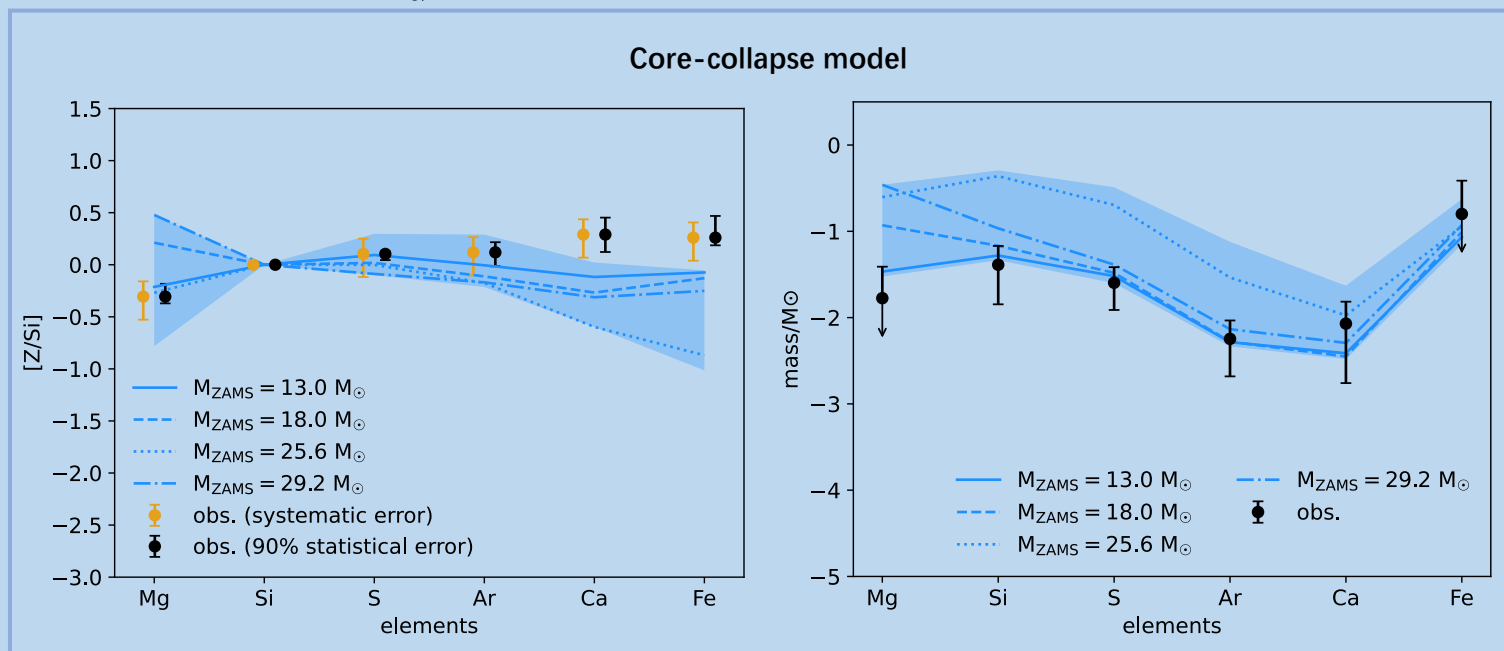
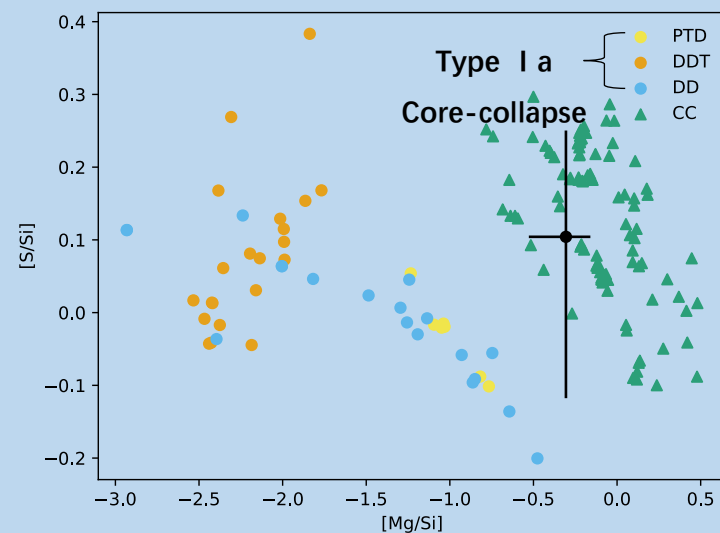
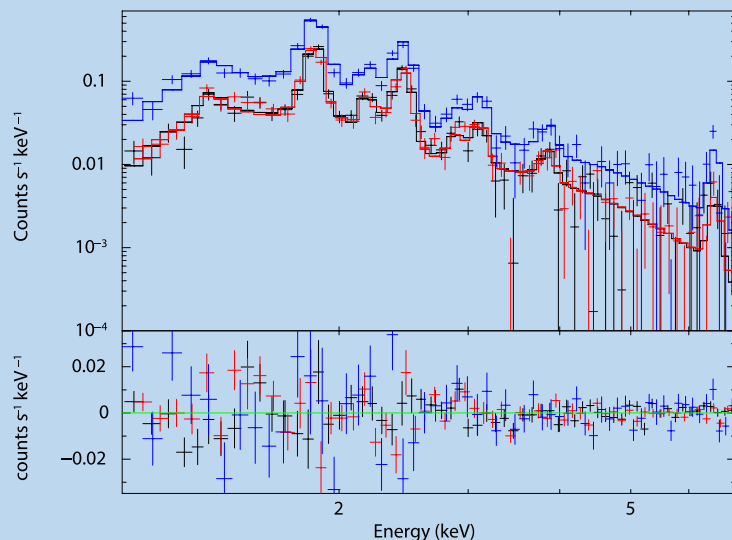
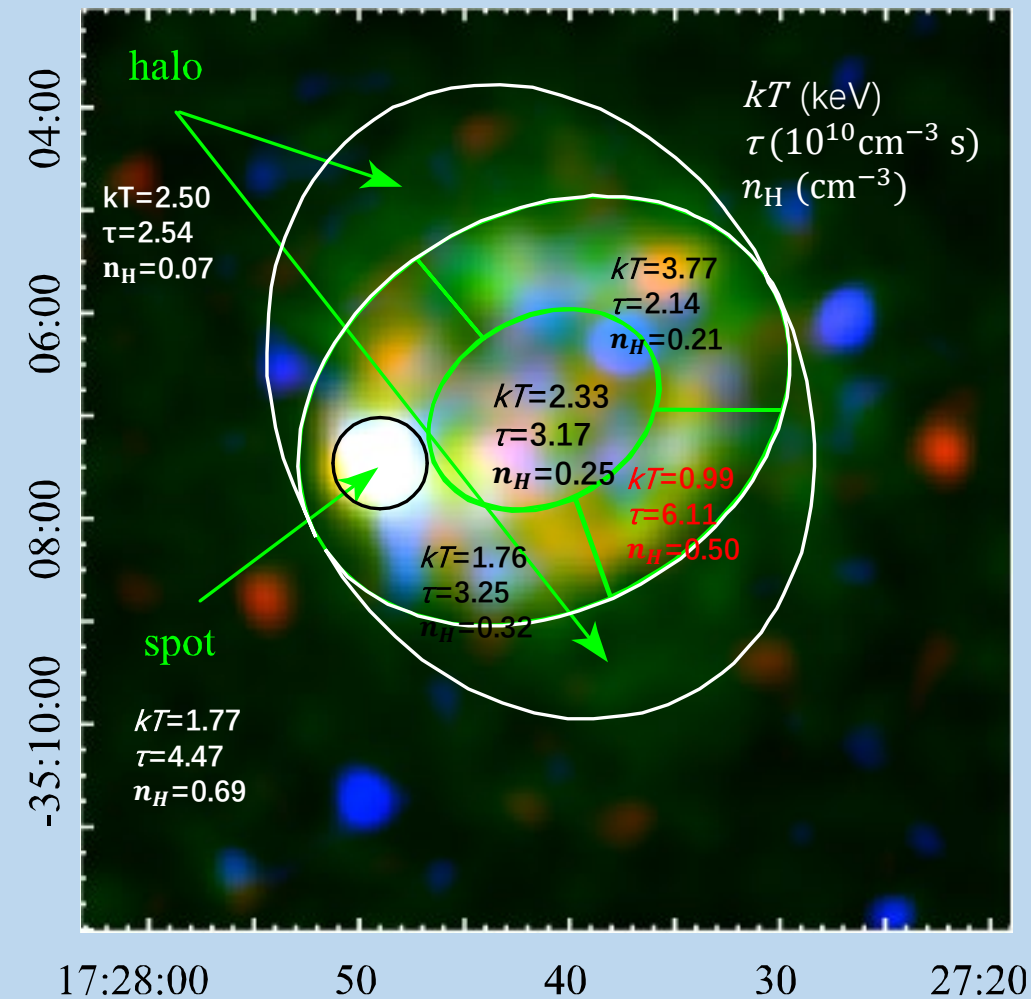
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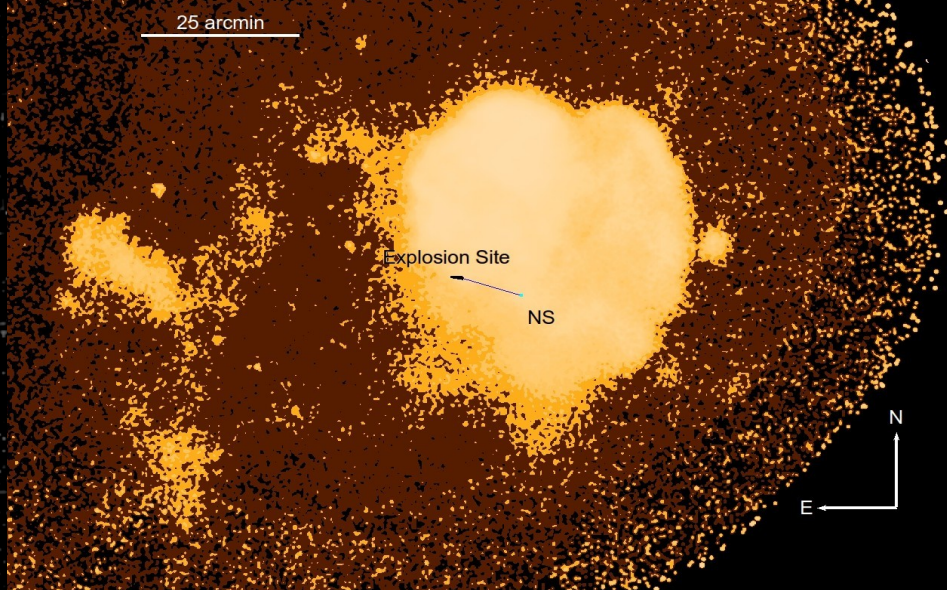
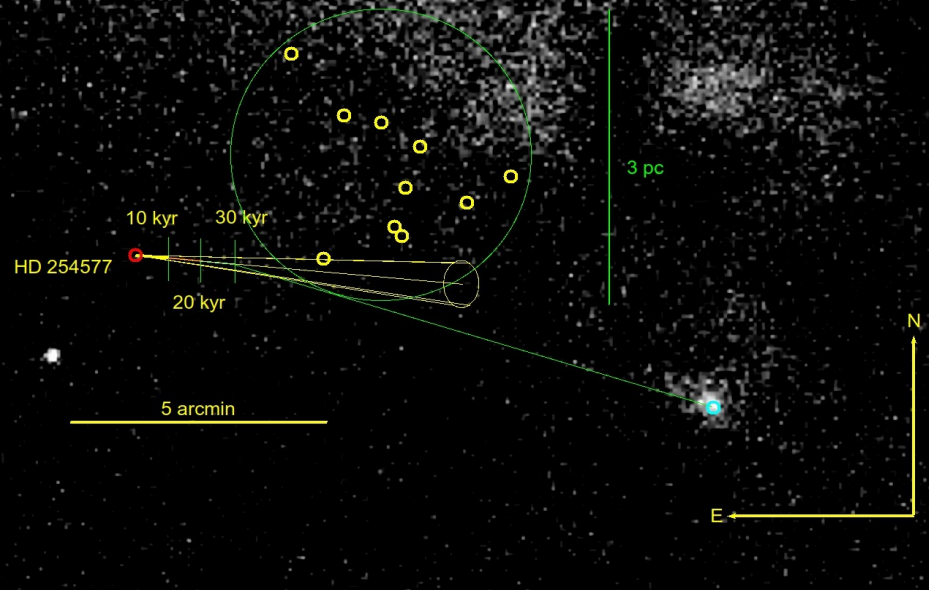
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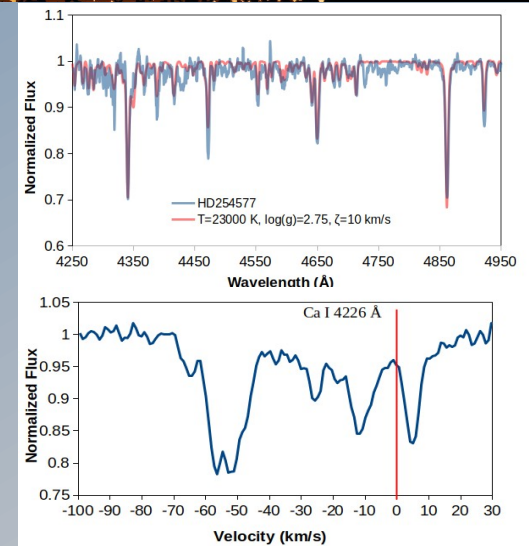
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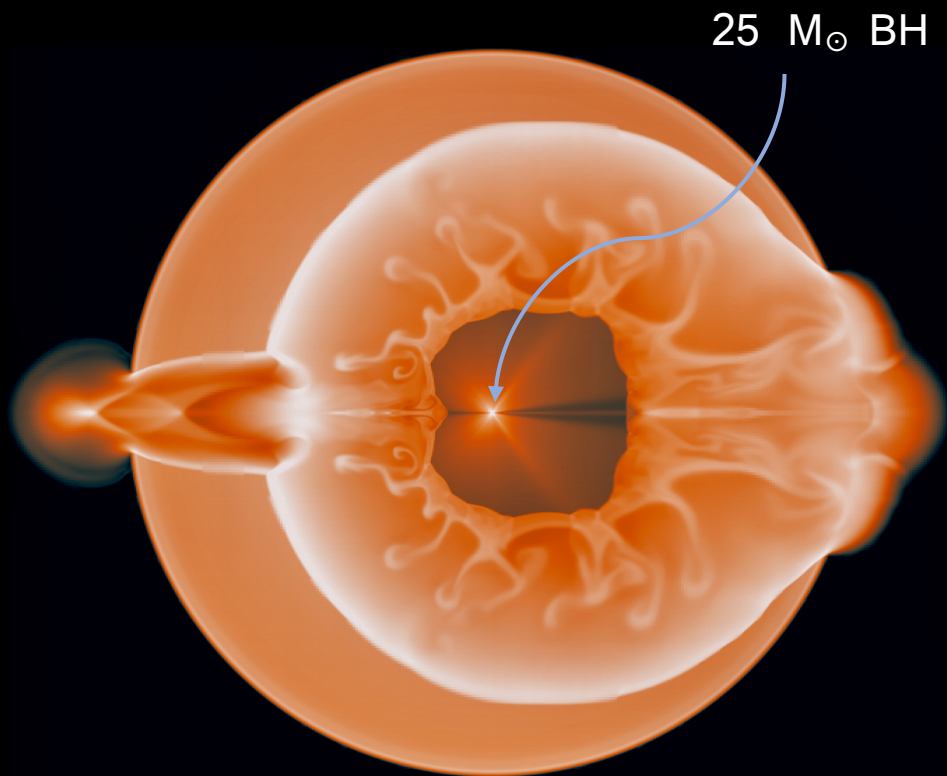
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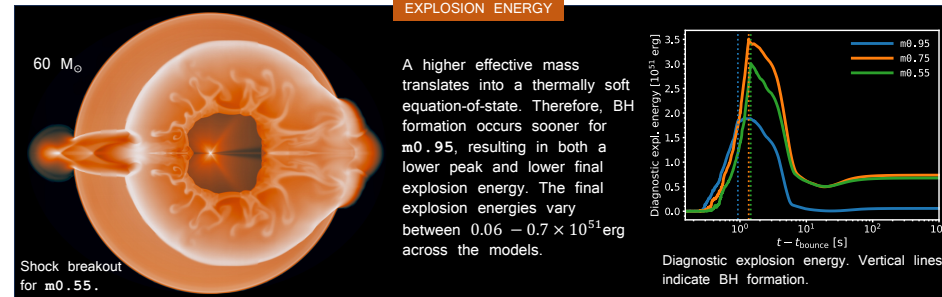
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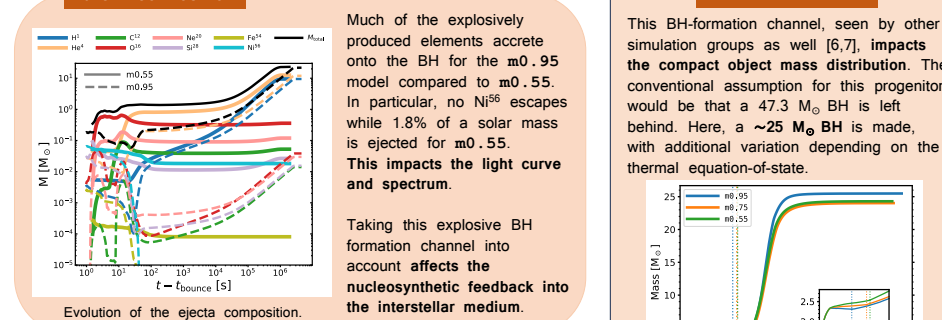
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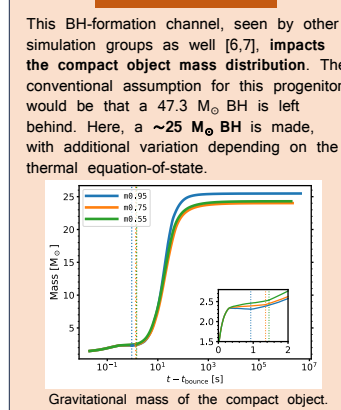
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UNIVERSITAT DE BARCELONA



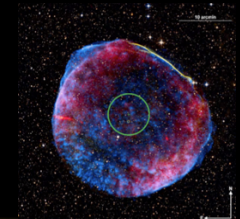
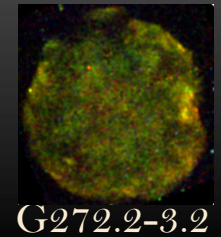
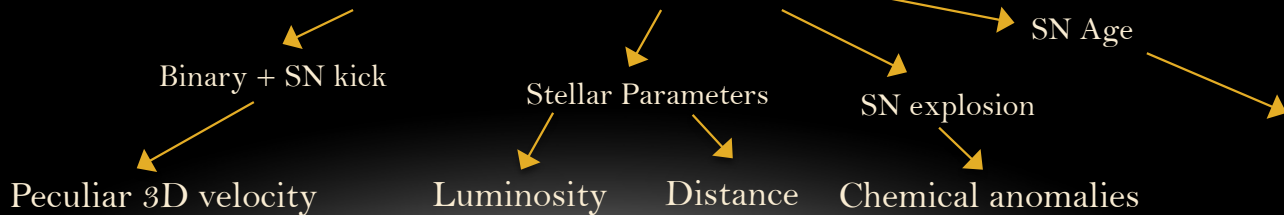
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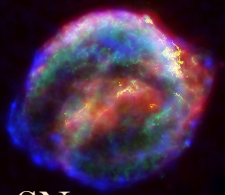
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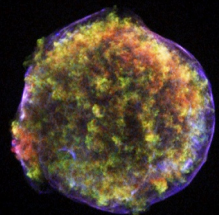
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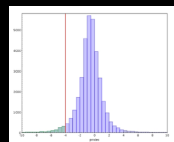
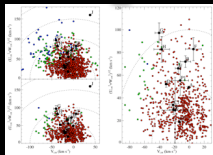


SN 1604
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RV
PM



Stellar Spectra

