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Observing the history of binary star systems

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A majority of massive stars spend a least part of their lives along with a companion. Depending on their evolutionary stage and their orbital parameters, this can produce phenomenons that are unique to binary systems. They are born and evolve up until their final stages, where both stars collapsed into compact objects, which can brutally merge and give rise to gravitational waves. Stellar binaries go through many peculiar phases that need to be characterized in order to better understand the various evolutionary channels that lead them to merge -or not.
One of those phases is the X-ray binary phase, where a compact object feeds from a companion star and emits great quantities of high energy radiation. I will present an observational study which targeted a system that is so unique, that we still struggle to understand its local environment: stellar wind, circumbinary disk, the presence of a cavity... which teaches us how binary interaction impacts the lives of massive stars. I will then try to go back in time to quantify the exact impact of the supernova event that preceeds the X-ray phase, and maybe even go further back to find out where these peculiar systems were born in the Milky Way.