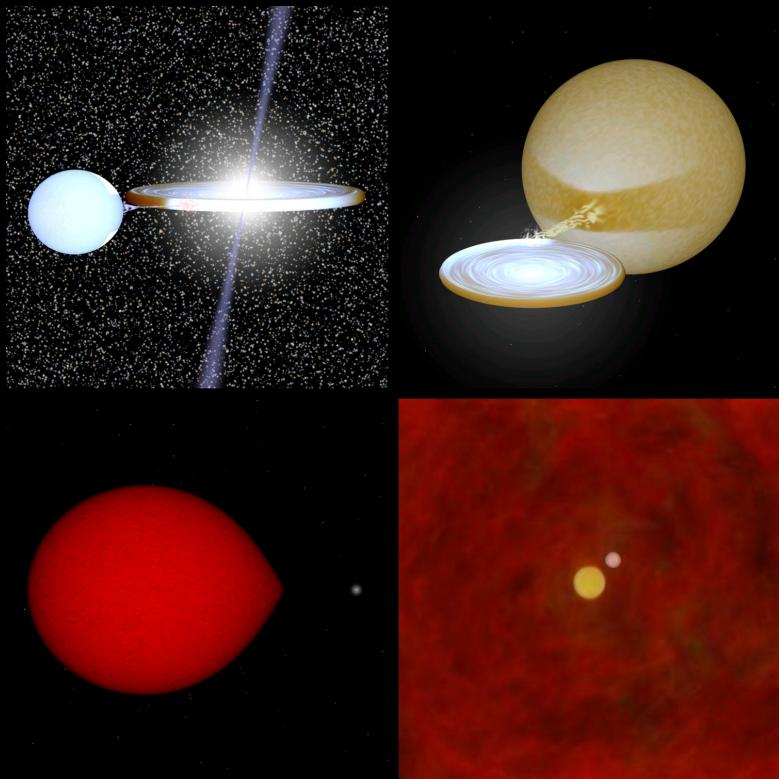
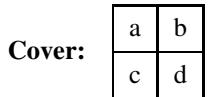


Formation and evolution of compact binaries



Marc van der Sluys

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- a):** The donor in the 11.4-minute X-ray binary in the globular cluster NGC 6624 is probably the inner $0.1 M_{\odot}$ or less of a helium white dwarf.
- b):** A low-mass X-ray binary in which a star as massive as the sun transfers mass to a neutron star.
- c):** A red giant on the verge of filling its Roche lobe and engulfing the white dwarf, that is six times less massive, in a common envelope.
- d):** At the end of a spiral-in phase a common envelope becomes too dilute to cause any more drag forces and a double white dwarf emerges.

The figures a) through c) were created with the programme Binsim 0.8.1, written by Robert Hynes (<http://www.phys.lsu.edu/~rih/binsim/>).

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(met een samenvatting in het Nederlands)

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Promotor: Prof. Dr. Frank Verbunt

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*to Daphny,
who will live on in my heart
for the rest of my life*

*and to Birgit,
who makes my life
worthwhile again*

