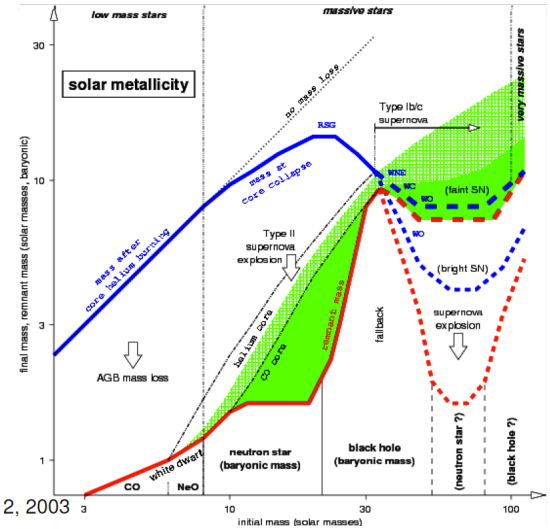
Summary of WG2 meeting (Stellar-Mass Black Holes)

- In accretion disks we can have various types of thermal-viscous instabilities:
  - Radiation pressure instability
  - Partial hydrogen ionization instability
- They can lead to:
  - Short term limit cycle oscillations in black hole x-ray binaries (tens-hundreds seconds scales)
  - Cyclic activity of quasars (scales of tens-thousands of years)
  - X-ray novae eruptions (scales of months-years)
  - Long-term activity cycles in AGN (scales of millions of years)

Agnieszka Janiuk
(Center for Theoretical Physics, PAS)

1) Ultraluminous X-ray sources (ULXs)
2) Metallicity & ULX formation
3) Metallicity measurements
4) Modelling the vicinity of ULXs



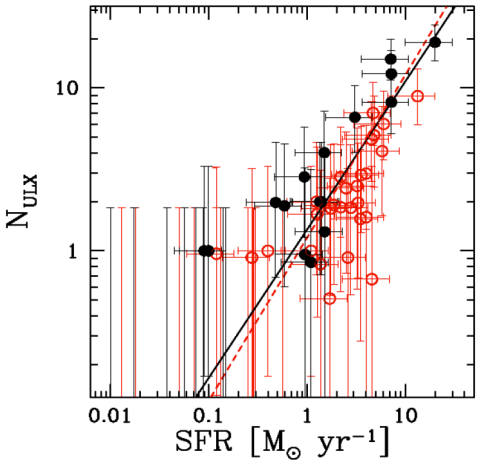
Emanuele Ripamonti
(Universita' di Milano-Bicocca)

High mass X-ray binary LSI +61 303

- Emits also in radio and gamma-rays (Fermi-LAT, MAGIC, VERITAS)
- Two important periodicities:
  Φ modulates the flux (radio, Halpha, X-rays, HE, VHE) along the orbit
  Θ modulates the amplitude and orbital occurrence of the large radio (and Halpha) outburst around apoastron
- Large radio outburst: optically thick emission then optically thin outburst
  - in microquasars: steady jet then transient jet
- Unified model of X-ray states with radio jets:
  direct connection between radio and X-ray states:

Lisa Zimmermann
(Max Planck Institute for Radio Astronomy)

1) METALLICITY strongly AFFECTS BH mass
2) ULXs might be explained as massive BH Binaries
3) Massive BH binaries important in star clusters



Michela Mapelli
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