

## A NuSTAR view of SS433

SS433 is a galactic microquasar with powerful outflows, originated in jets, accretion disk and winds, with well known orbital, precessional and nutational periods. In this work we present a characterization of different outflows parameters throughout the precessional cycle of the system, by analyzing 10 NuSTAR (3–70 keV) observations of  $\sim 30$  ks that span  $\sim 1.5$  precessional cycles. We have extracted averaged spectra and model them using a combination of a double thermal jet model (bjet) and pure neutral and relativistic reflection (xillverCp and relxillpCp) over an accretion disk (diskbb). As a result, we find an average jet bulk velocity of  $\beta \sim 0.29$  with an opening angle  $< 0.6$  degrees. The western to eastern jet flux contribution becomes  $\sim 1$  on intermediate phases, about 35% of the total precessional orbit. The 3–70 keV total unabsorbed luminosity of the jets and disk ranges from  $2\text{--}20 \times 10^{37}$  erg/s, with the jet being completely soft dominated (3–10 keV) while the disk reflection component completely hard dominated (10–70 keV). The central source and lower parts of the jets could be hidden by an optically thick region of  $\tau \sim \text{NH} \sim 1.5 \times 10^{22}$  cm $^{-2}$  and size  $R \sim \text{NH} / n_{e0} \sim 1.5 \times 10^9$  cm.

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