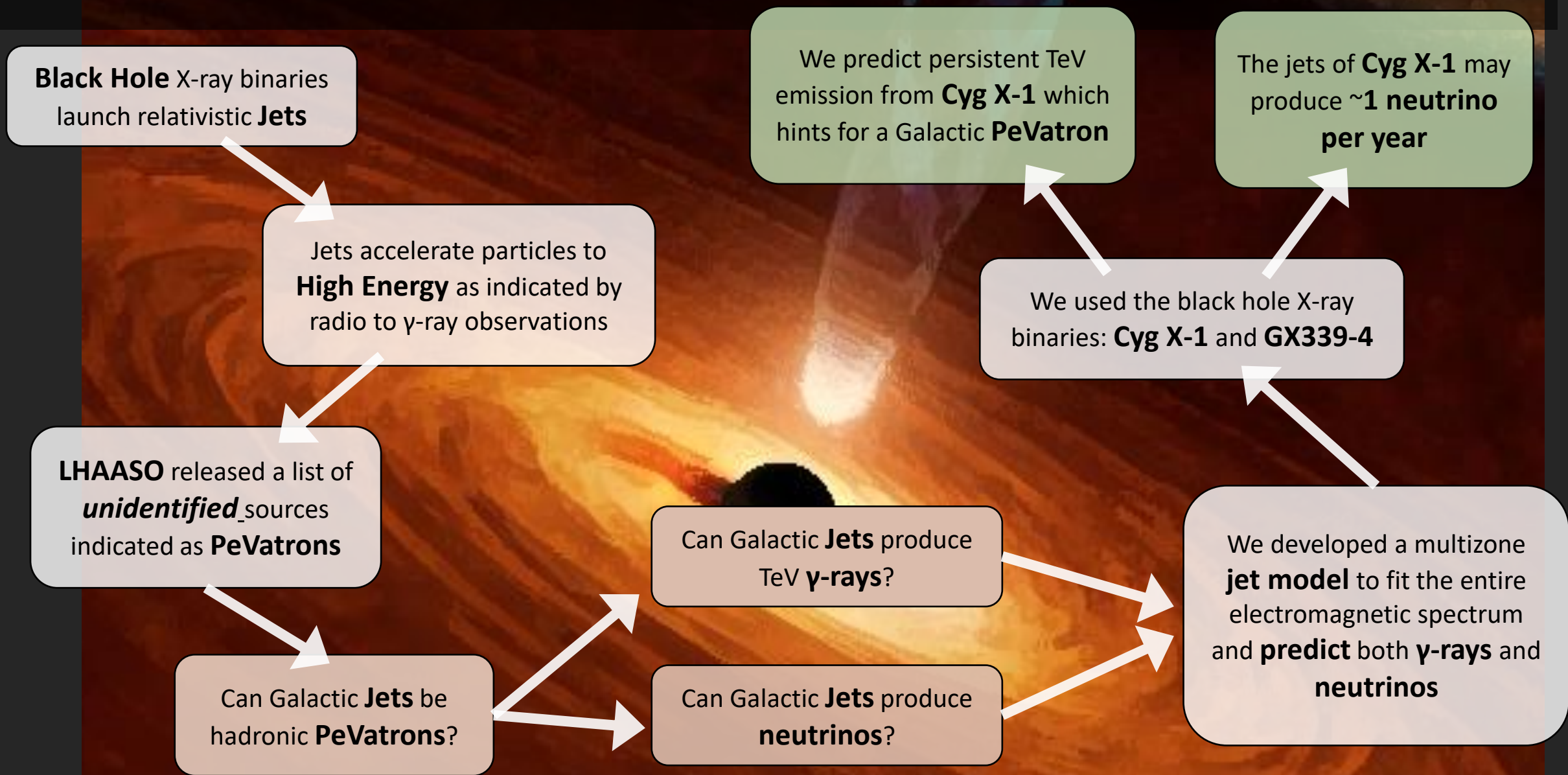


Black-hole X-ray binaries in the new era of multi-messenger astronomy

Dimitris Kantzas, 314, @ 18:00 on 16th of July 2021



Black Hole X-ray binaries launch relativistic **Jets**

Jets accelerate particles to **High Energy** as indicated by radio to γ -ray observations

LHAASO released a list of *unidentified* sources indicated as **PeVatrons**

Can Galactic **Jets** be hadronic **PeVatrons**?

Can Galactic **Jets** produce TeV **γ -rays**?

Can Galactic **Jets** produce **neutrinos**?

We developed a multizone **jet model** to fit the entire electromagnetic spectrum and **predict** both **γ -rays** and **neutrinos**

We used the black hole X-ray binaries: **Cyg X-1** and **GX339-4**

We predict persistent TeV emission from **Cyg X-1** which hints for a Galactic **PeVatron**

The jets of **Cyg X-1** may produce **~1 neutrino per year**