

Highlights of the Insight-HXMT X-ray Astronomy Satellite

Wednesday, 14 June 2023 09:00 (30 minutes)

Insight-HXMT (hxmt.cn) is China's first X-ray astronomy satellite and was successfully launched on June 15th, 2017. It carries three sets of collimated X-ray instruments with large effective areas, covering energy ranges of 1-15 keV, 5-30 keV, and 20-250 keV, respectively. In addition, it can also serve as an all-sky monitor for high energy sources between 0.2 to 3 MeV, such as bright pulsars and gamma-ray bursts. This talk will review some highlights of the scientific results of Insight-HXMT, including discoveries of the highest energy fundamental frequency of neutron star's cyclotron absorption feature from an accretion neutron star, the highest energy low frequency quasi-periodic oscillations from an accretion black hole which is evidence for a relativistic jet near the black hole, the first non-thermal X-ray burst associated with a fast radio burst and its identification with a magnetar, the brightest gamma-ray burst GRB 221009A, etc. Insight-HXMT has been performing well in orbit and is expected to operate for several more years. The observational program of Insight-HXMT is open world-wide.

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Session Classification: Wednesday morning session