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HUBS: Hot Universe Baryon Surveyor

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In China, HUBS is being proposed as a major X-ray mission for the next decade. It is designed to effectively probe hot gas in the circumgalactic and intergalactic space and thus to address the long-standing issue of “missing” baryons in the local universe. The hot gas is expected to produce only weak emission in soft X-rays, due to its low density, making it technically difficult to detect. On the other hand, the spectrum of the emission is expected to be line rich, so it would be quite effective to detect the gas in relatively bright lines. The scientific objective of HUBS is not just to find the “missing” baryons, but to see their spatial distribution and to measure their physical and chemical properties. An instrument with a combination of high spectral resolution, large effective area, and large field of view would be required for such purposes. HUBS will couple a large TES-based X-ray imaging array to an X-ray telescope, to satisfy these requirements. A preliminary design of HUBS will be presented.

Less than 5 years of experience since completion of Ph.D

N

Student (Ph.D., M.Sc. or B.Sc.)

N

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