TSF19-2019-000155

Abstract for an Invited Paper
for the TSF19 Meeting of
the American Physical Society

High Energy Astrophysics Missions

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X-ray and gamma-ray observations of the Universe are necessary to understand the makeup and workings of the cosmos. Much of the baryonic matter in the Universe is primarily observable in X-rays, and the sites of the most energetic processes are observable in X-rays and gamma-rays. Over the past twenty years, groundbreaking discoveries have been made by large missions like the *Chandra X-ray Observatory*, *XMM-Newton* observatory, and *Fermi Gamma-ray Space Telescope*, as well as medium and small class missions like the *Neil Gehrels Swift Observatory*, the *Nuclear Spectroscopic Telescope Array (NuSTAR)*, *Hitomi*, and *Suzaku*. With the groundwork laid by the above missions, we are poised to address fundamental questions about the cosmos. I will discuss what can be learned from upcoming and proposed missions like the Athena X-ray Observatory, the X-ray Imaging and Spectroscopy Mission, the extended Roentgen Survey with an Imaging Telescope Array, the Imaging X-ray Polarimetry Explorer, the Spectroscopic Time-Resolving Observatory for Broadband Energy X-rays, and the Lynx X-ray Observatory. I will focus in particular on Lynx, a NASA flagship mission concept, with the power to transform our understanding of the cosmos through unprecedented X-ray vision into the otherwise invisible Universe. It is designed to pursue three fundamental science pillars: (1) seeing the dawn of black holes; (2) revealing what drives galaxy formation and evolution; and (3) unveiling the energetic side of stellar evolution and stellar ecosystems.