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The Gamow Explorer

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Gamma Ray Bursts (GRBs) are bright backlights that can be used to probe the high redshift universe ($z > 6$) when the first stars were born, galaxies formed and Hydrogen was reionized. Since the afterglow is bright only for a few days, speed is of the essence. Gamow Explorer is optimized to quickly identify high redshift events to trigger follow-up spectroscopic observations with JWST and $>8\text{m}$ class ground-based telescopes. A wide field of view Lobster Eye X-ray Telescope will find GRBs and locate them with arc minute precision. A rapidly slewing spacecraft will point a 5 photometric channel Photo-z Infra-Red Telescope to identify high redshift ($z > 6$) GRBs using the Lyman-drop out. The Gamow Explorer will also rapidly identify X-ray and IR counterparts associated with GW events. The mission will be proposed to the 2021 NASA MIDEX call and if approved launched in 2028.

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