

A SMEX FUV mission can effectively address 1/3rd of Astro2020 Key Questions

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- The threat of no access to the UV upon Hubble's demise is real
- To fill the void, the CETUS team derived a SMEX-class mission concept comprising a 0.5-m OTA + RP~20,000 grating covering $\lambda\lambda$ 102-142 nm + MCP CsI detector
- With high TRLs, the mission can be built relatively quickly, within a SMEX cost cap
- This SMEX can contribute to answering 8 of 24 Key Science Questions posed by Astro2020 (Astro2020 Final Report, pg. 2-49)

THEME: New messengers and new physics

What powers diversity of explosive phenomena across the EM spectrum? *

THEME: Cosmic Ecosystems

How do gas, metals, and dust flow into, through, and out of galaxies? *

How does gas flow from parsec scales down to protostars and disks?

What are the most extreme stars and stellar populations?

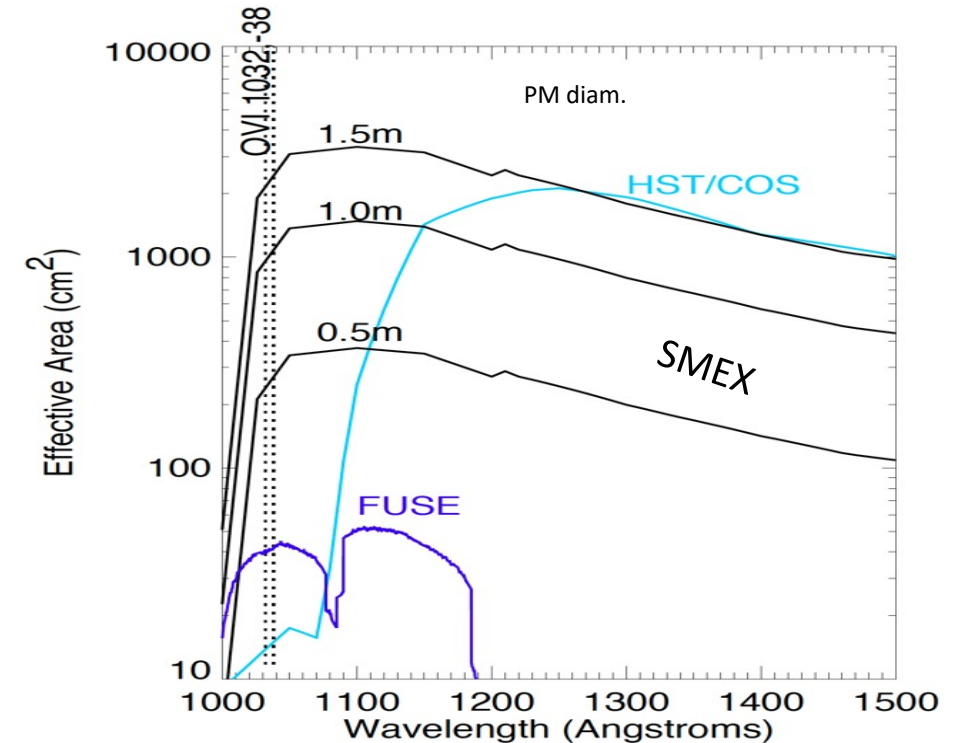
How do star-forming structures arise from, and interact with, the diffuse medium?

THEME: Worlds and Suns in Context

How does multiplicity affect the way a star lives and dies? *

How do the Sun and other stars create space weather?

What are the properties of individual planets, and which processes lead to planetary diversity? * (cf. ExoPAG 25 –T. Richey-Yowell and by K. Colon)



A SMEX can fill the LUV/FUV void left by the demise of HST

Details by request

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