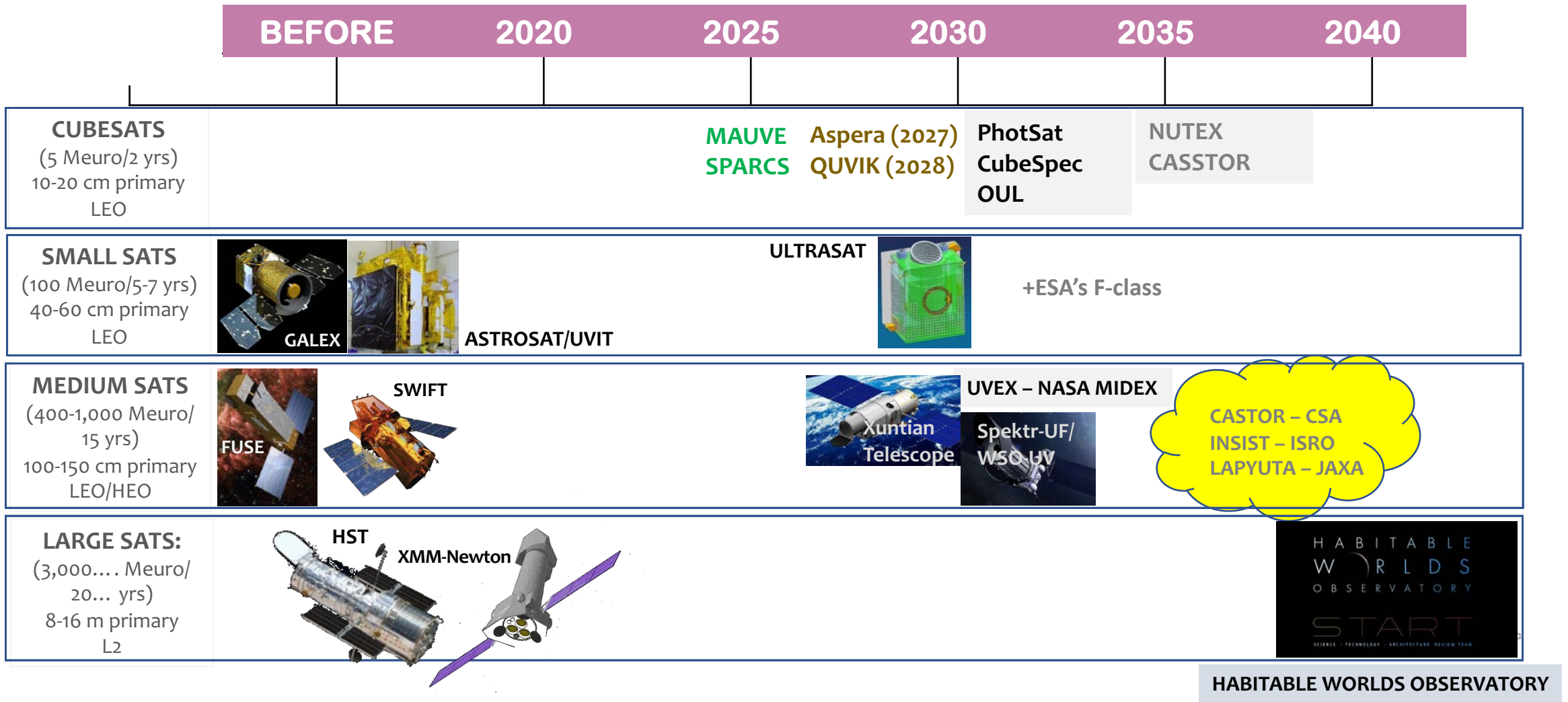


Concluding Remarks



**From the HST UV Initiative to the Next
UV Observatory**

**Making the Most of Today's UV
Window While Shaping Tomorrow's
Missions**



Anju Panthi	UOCS XX: ultraviolet signatures of binary evolution in the open cluster Berkeley 21
Joshua Emanuel Lara Sabala	Optimizing Atomic Parameters for UV Spectral Synthesis: A Comparative Study of Evolutionary Algorithms
Julia Roman-Duval	Hubble status and outlook
Sonika Piridi	Study of integrated far-ultraviolet (FUV) emissions from Galactic globular clusters using UVIT/AstroSat observation
Diego Edgardo Beltrán Flores	The T-GEX project II: chemical fingerprints and Galactic origins of UV-bright FGK stars
Dolon Bhattacharyya	CETIM-Earth: Modelling Thermospheric Structure and Atmospheric Escape from Exo-Earths for the Habitable Worlds Observatory
Cynthia Froning	HST Characterization of the Stellar XUV Emission of HWO Target Stars
Seth Redfield	Our Immediate Interstellar Medium and its Impact on Stars and Planets as Revealed by High Resolution UV Spectroscopy
Jade Yeung	An Exposure Time Calculator for CASTOR's UV Multi-Object Spectrograph
Giulio Del Zanna	Atomic modelling in the UV for stellar atmospheres
Noelia Bornay	Far UV reflectometry of meteorites
Peter Johnson Brown	The Swift Optical Ultraviolet Supernova Archive Value-Added Catalog
Matt Kalscheur	Analyzing Inner Disk UV-H2 for Signs of Shadowing in EP Cha
Yago Ascasibar	Galactic ageing and quenching over the last 10 billion years
Sergey Karpov	Looking for objects with unusually bright UV emission in modern sky surveys
Chayan Mondal	Probing the Interstellar Dust of Galaxies at Redshift $\sim 0.4 - 0.8$ in the AstroSat UV Deep Field
Svea Hernandez	Building the UV Legacy: Massive-Star Feedback from HST to HWO
Maria S. Kirsanova	The OPTIMus Survey of Massive Star-Forming Regions : Science Goals and Prospects for UV Follow-Up
Maria Luiza L. Dantas	The T-GEX project I: hidden UV-bright FGK stars and the UV excess of quiescent galaxies

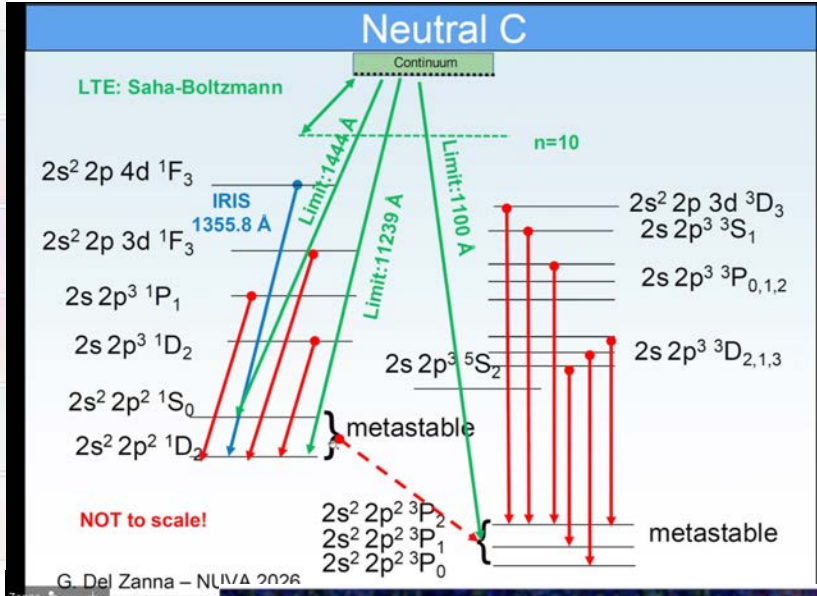


Optical Design and Estimated Performance of LyRIC Spectroscopy

LyRIC: Lyman UV Radiation from Interstellar medium and Circum-galactic medium

Ying Yang · Li Ji · Zheng Lou · Shunai Zhang · Keqiang Qiu

NUVA 2026
2026/10/07



Characterization of the StellarXUV Emission of Exoplanet Host Stars

Cynthia S. Froning
Southwest Research Institute

Far UV reflectometry of meteorites

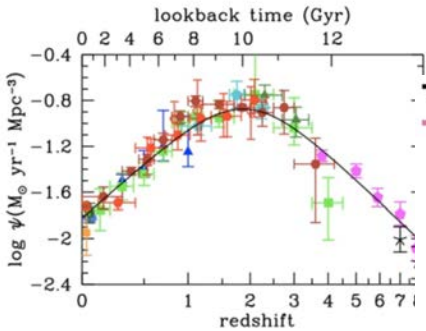
Norilia Borrey^{1,2}, Ananya Brahm^{1,2}, María Frutos^{1,2}, Raúl de la Fuente Marcos^{1,2}, Ana Gómez de Castro^{1,2}
¹Instituto de Ciencias Matemáticas, UCM; ²Spain Center for Ultraviolet Astronomy (SCUA); e-mail: borrey@icmat.ucm.es

The need to obtain reflectance spectra of Solar System materials in the VUV range

- Below 200 nm, it is necessary to leave Earth's atmosphere, which limits the available options for studying Solar System bodies.
- Meteorites serve as proxies for minor Solar System bodies and can be studied easily and cost-effectively in the laboratory.
- The data obtained are vital for the design of FUV space missions.

The questions after T-GEX I

- Do these stars share a common Galactic origin?
- Do they carry a chemical fingerprint of their formation history?



Madau & Dickinson (2014)

Galactic archaeology

UV

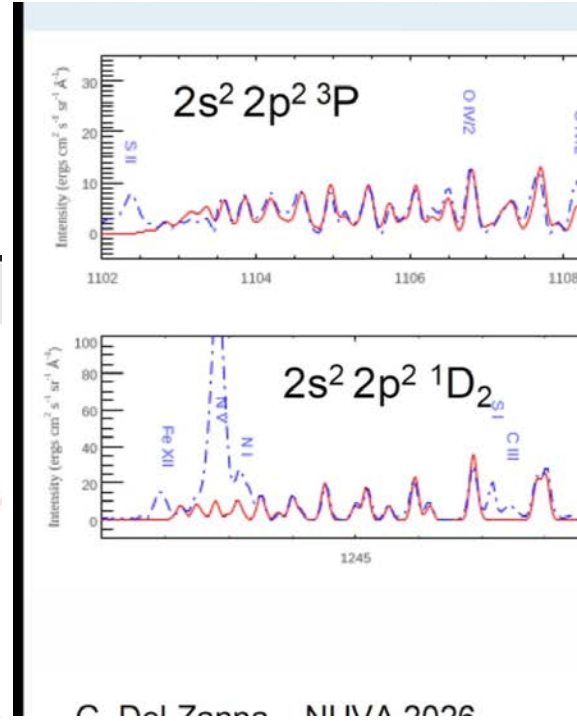
The T-GEX project

II. Chrono-chemo-dynamic signatures of UV-bright FGK stars

D. Beltrán^{1,2,3,4}, M. L. L. Dattar^{1,2,3,4}, R. Soullam^{1,2,3,4}, and P. B. Tissera^{1,2,3,4}

¹ Instituto de Astronomía, Pontificia Universidad Católica de Chile, Av. Vicuña Mackenna 4960, Santiago, Chile

~190 nm.
eolite's samples.



Blue: solar SOHO SUMER spectrum
Red: scaled theoretical C I spectra

Paul Scowen	HWO Investment in Key Technologies and Instrument Concepts for UV-Vis Astrophysics
Martin Barstow	Planning for a UK-led instrument contribution to the Habitable Worlds Observatory
Tyrone Woods	The Cosmological Advanced Survey Telescope for Optical and UV Research
Gareth T. Jones	Unlocking the evolution of star formation with CASTOR
Ana I Gómez de Castro	Towards an international lunar orbiter for UV imaging
Verhamme, Anne	Swiss contribution to UVEX, confirmed NASA mission which will fly in the early 2030s
Emily Farr	MANTIS : Recent Instrument Development and Optical Testing of an EUV - Optical SmallSat
Sarah Tuttle	Determining Intergalactic Structure with Cosmic Origins (DISCO) : A proposed FUV spectroscopic SMEX
Sreejith Aickara Gopinathan	Wide-band Atmospheric Laboratory for Transiting Exoplanet Research (WALTzER): ESA F mission concept
Ying Yang	Optical Design and Performance of LyRIC for Lyman Ultraviolet Diffuse-Emission Spectroscopy
C. Ertley	The Current State of the Art in Large-Format Microchannel Plate Detectors for Ultraviolet Astronomy
Ana Iglesias Moreno	Environmental stability of extra narrowband for FUV instrumentation
Ananya Brahmi	UV ellipsometry to measure the spectropolarimetric signal of chiral amino acids abundant in space ices.
Alejandro García-Cañas	Rejecting Lyman- α with an innovative optical reflecting notch filter
Shu Niu	Vacuum ultraviolet quantum efficiency measurement of a GSENSE2020BSI-PS CMOS camera using synchrotron radiation
Charles Lee	Digital micromirror device as a reconfigurable slit unit for UV multi-object spectroscopy
Nuria Gutiérrez Luna	VUV Optical Technologies for Space Astrophysics



Microchannel Plate Photodetector

Photocathode converts a photon to electron

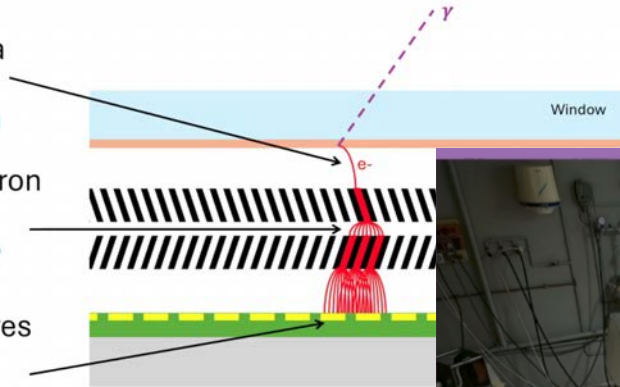
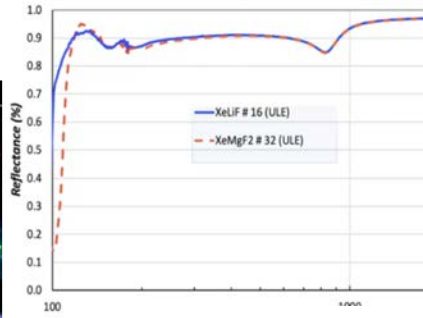
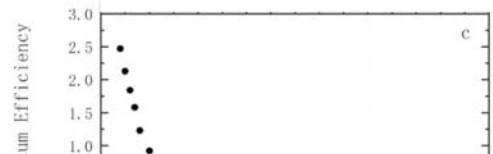
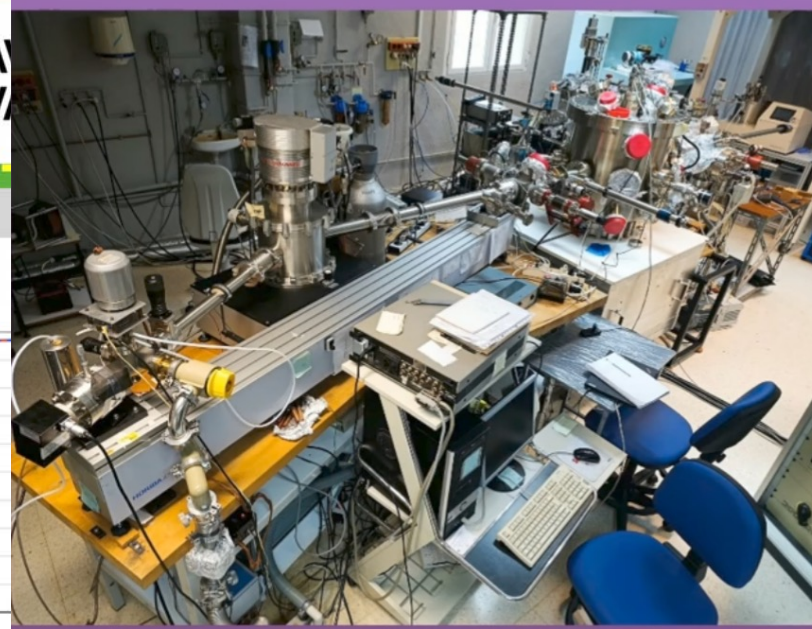
- Alkali halides, Multialkali, GaAs, GaN

MCP(s) amplify the electron by 10^4 to 10^7

- Conventional or nanofabricated MCP

Patterned anode measures charge centroid

- Cross strip, Cross delayline, ASIC (Medipix or Timepix), Phosphor.



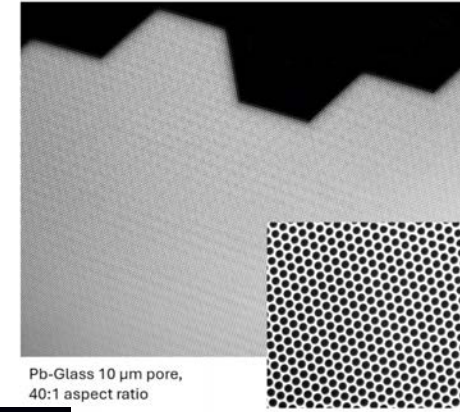
Borosilicate Glass

Best block with standard draw process

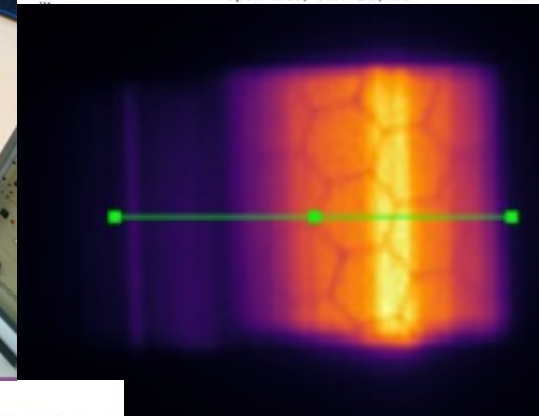


Photo of 6 μm pore, 63% open area, 60:1 L/d, C5

Pb-Silicate Glass



Pb-Glass 10 μm pore, 40:1 aspect ratio



Swift
Optical
Ultraviolet
Supernova
Archive
Value-added Catalog

Dr. Peter J. Brown
Texas A&M University



Two useful quantities

$$QE = \frac{N_e}{N_p}$$

counts generated electrons per incident photon and can exceed unity in the VUV.

$$PDP = \frac{N_{\text{detected photons}}}{N_p}$$

estimates the probability of detecting an incident photon.

- QE reaches ~ 2.5 at 58 nm because $QY > 1$.
- The corresponding PDP is ~ 0.96 .
- Response declines toward 200 nm.

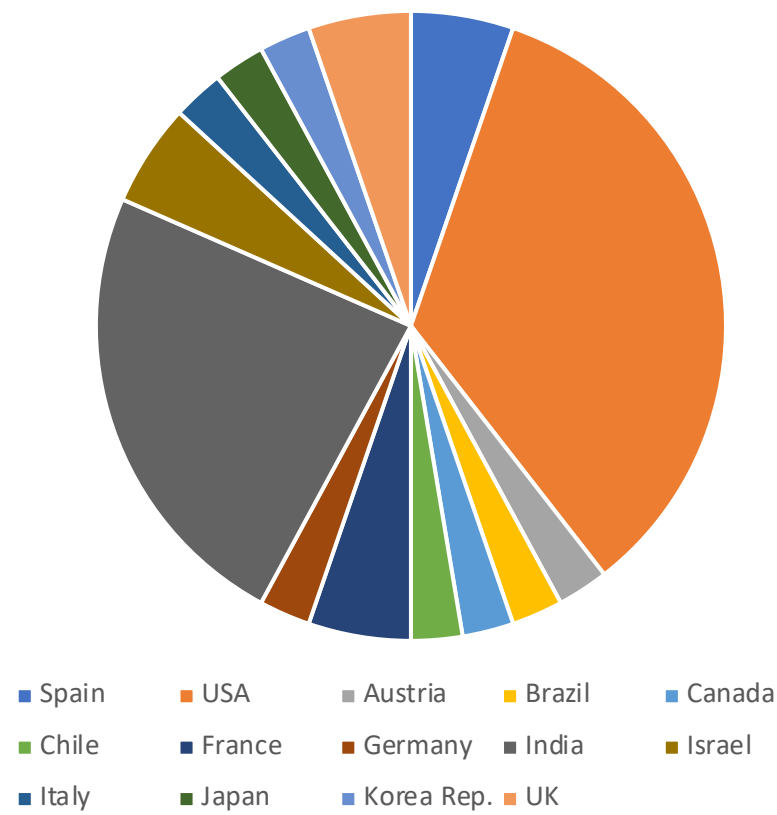
Available materials below 120 nm



Limitation: LiF is hygroscopic. Humidity degrades its transparency.

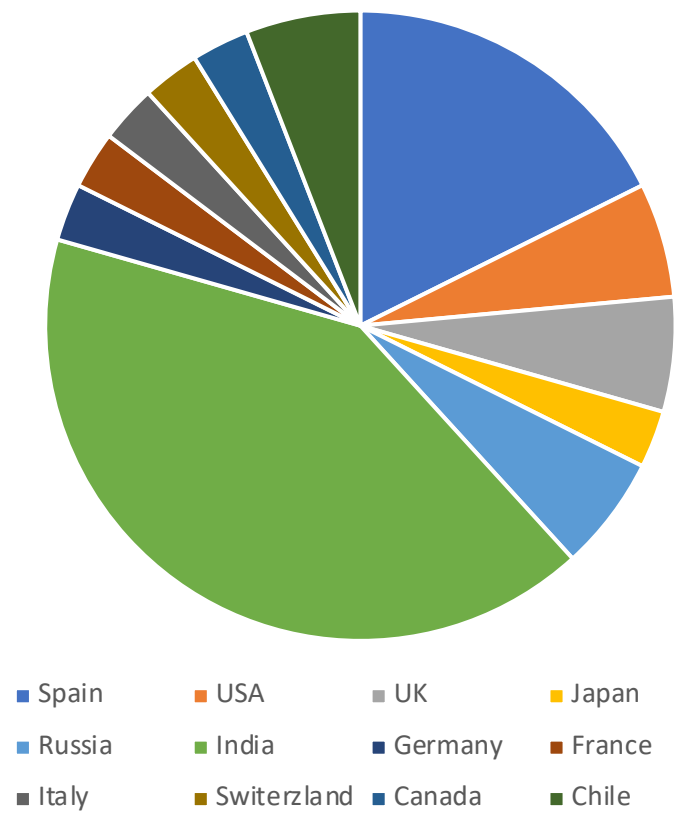
On the path to the New Ultraviolet Astronomy:
scientific challenges and new technologies

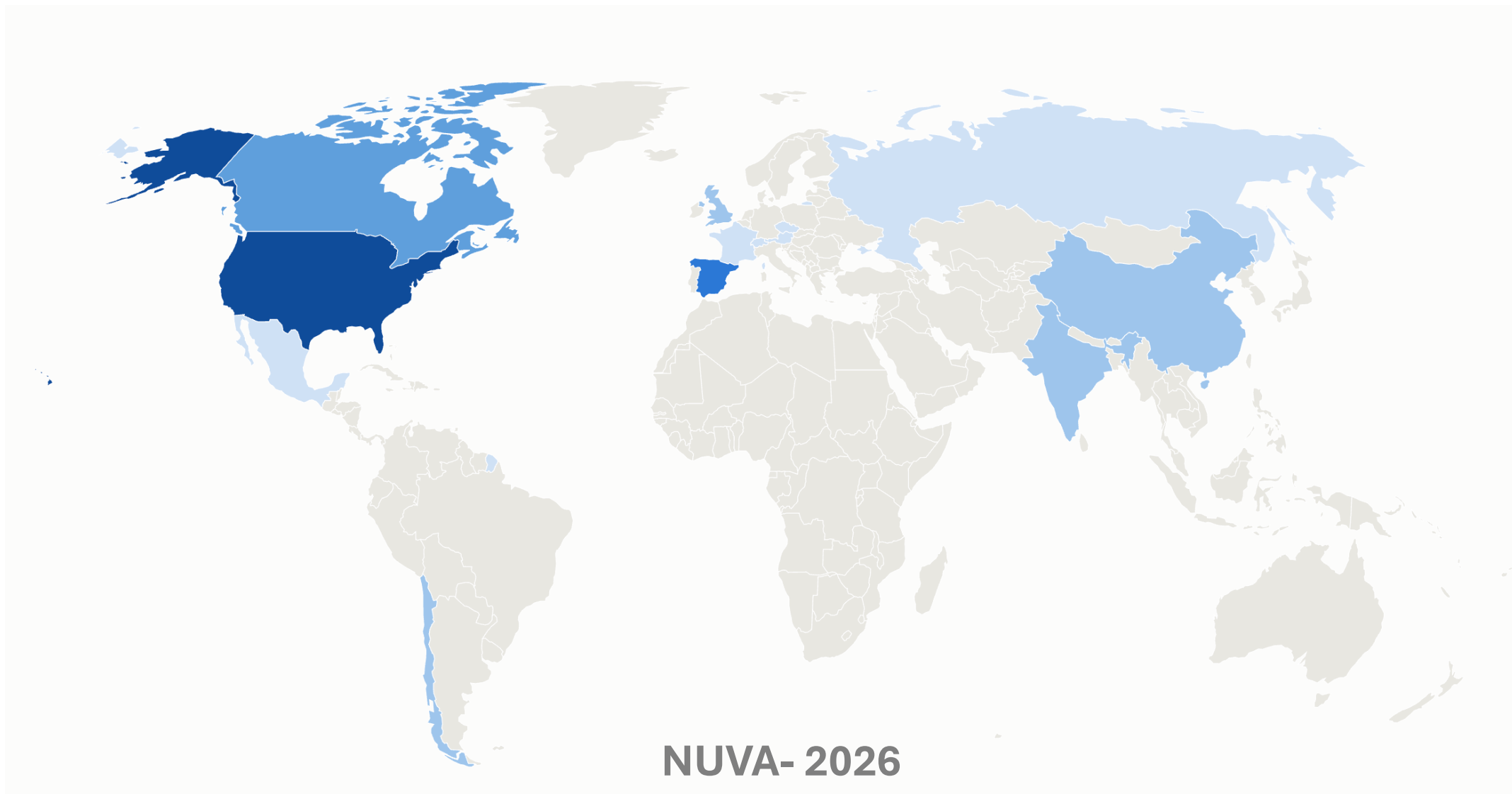
Presentations 2023



Amazing scientific results obtained from Astrosat/UVIT
by the Indian astronomical community

Presentations 2024





See you next year on-line

THANKS TO THE LOC

Raul de la Fuente
María de Frutos

Sonia Lizarbe

