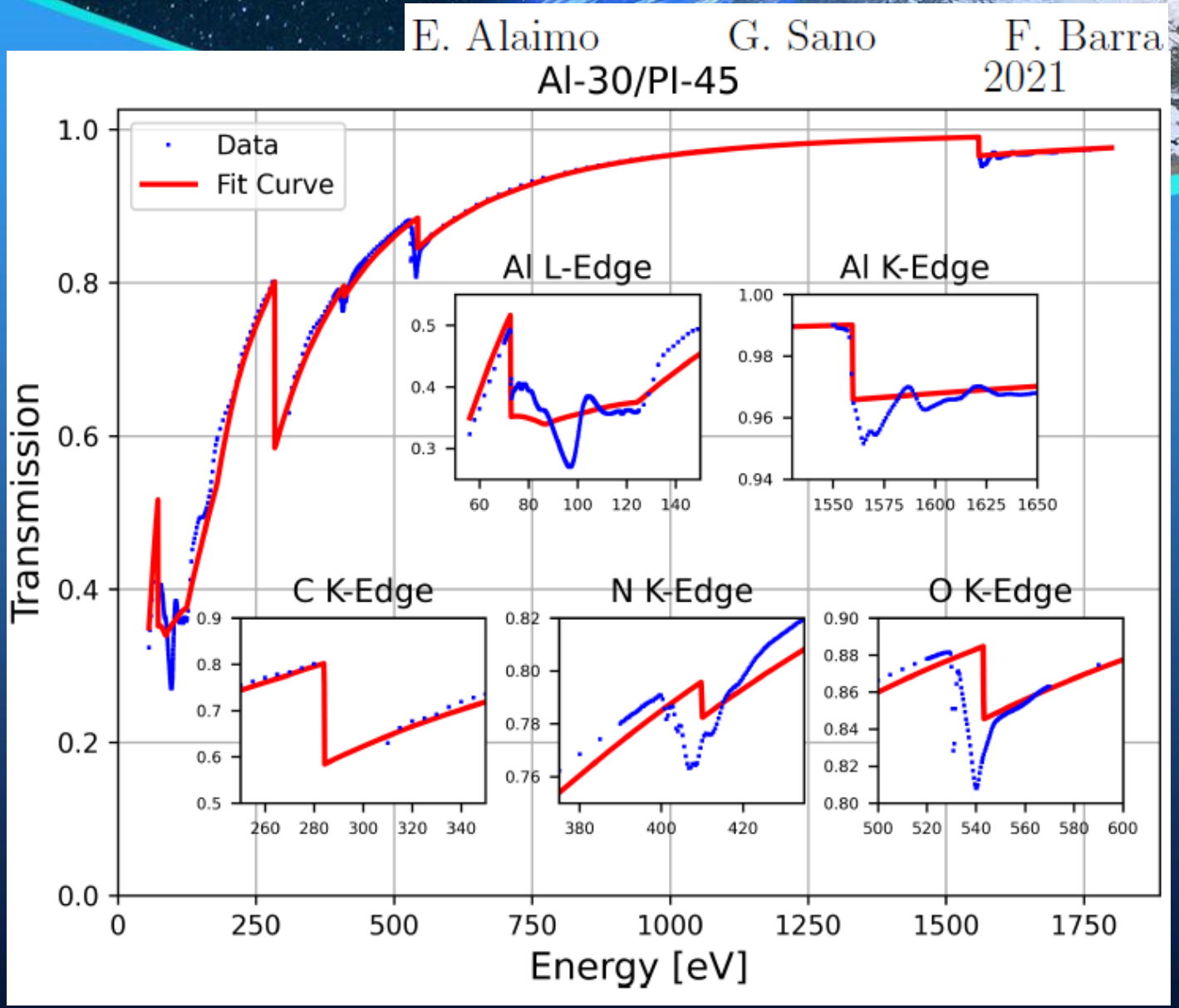
Edoardo Alaimo

Education level:

- Bachelor's degree in Physics, final assignment on GW170817
- Graduating master student in Physics from the University of Palermo (Unipa), by the end of July (2022)
- Curriculum: mostly Astrophysically oriented (introductory courses on General Relativity, Astrophysics, High Energy Astroph., Stellar Evolution, and Astrophysics X-ray Lab.)
- After 1.5 years of pandemic and *online physics*, really decided to spend some time in the Lab to get hands dirty…

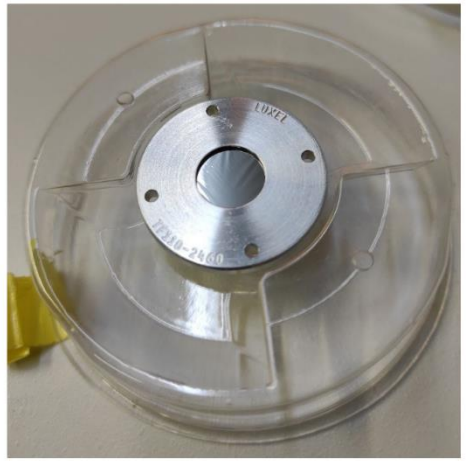
(Beginning of) Research.

- Been collaborating since the last year with Prof. Marco Barbera, and his research team from Unipa and INAF
- Side Project (assignment) for X-ray Astroph. Lab: Analysis of XAS data from Trieste synchrotron Elettra (data provided by Barbera and the team; X-ray properties and modeling of thin film filter samples



(Current) Research.

- In the last year, experimental thesis – advisor M. Barbera: “CHARACTERIZATION AND MODELLING OF THE UV-VIS-IR TRANSMISSION OF MULTILAYER THIN FILM FILTERS FOR APPLICATIONS IN HIGH ENERGY ASTROPHYSICS”



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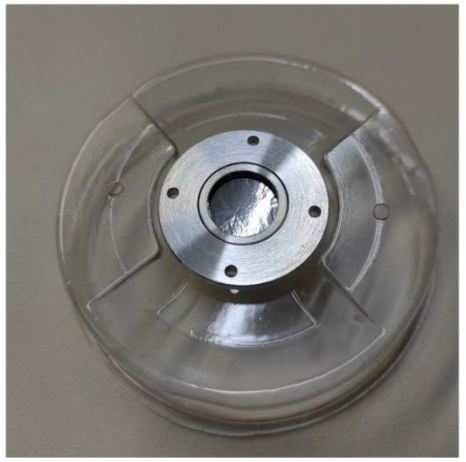

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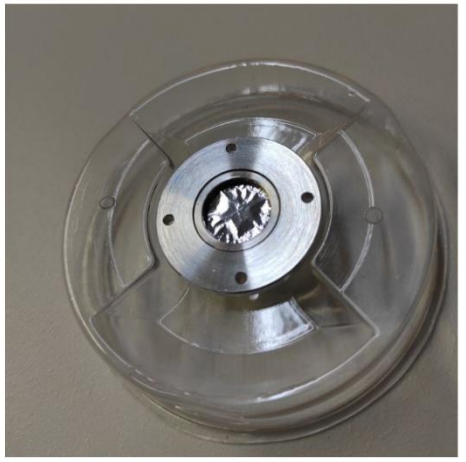

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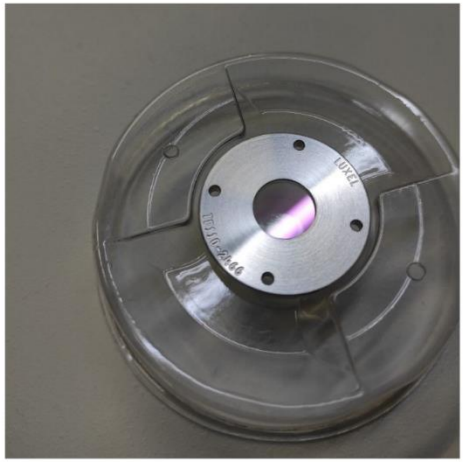

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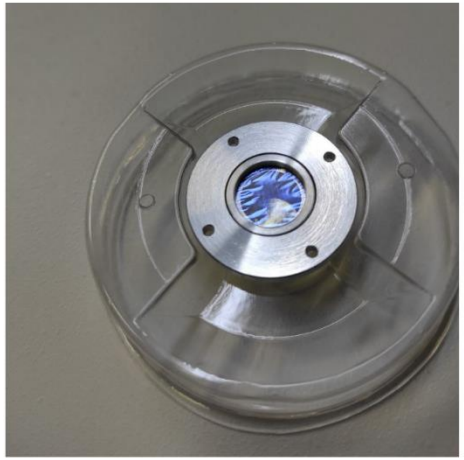

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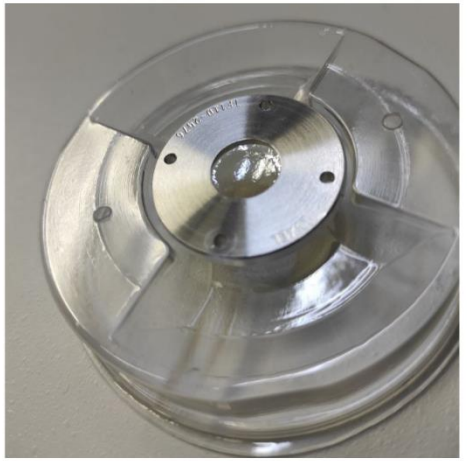

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PI-45

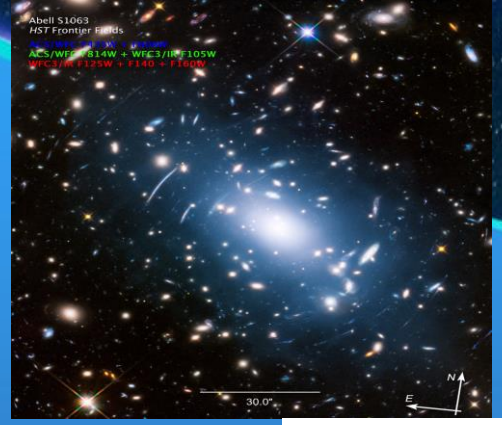
(Current) Research.

- Using spectrophotometers (UV-Vis) and FTIR-spectrometers to probe the filters
- Understand the optical modeling in this spectral band (matrix transmission modeling): bilayers (PI/Al) described by 4 layers to take into account the amorphous aluminum oxide
- Develop strategies (python scripts and algorithms) to optically describe the filters layers: develop a model n and k versus energy (optical constants) of polyimide in the Vis-IR-MIR band, estimate thicknesses of polyimide, aluminum and oxide layers
- Understand samples defects and possible degradation with time

Future prospects

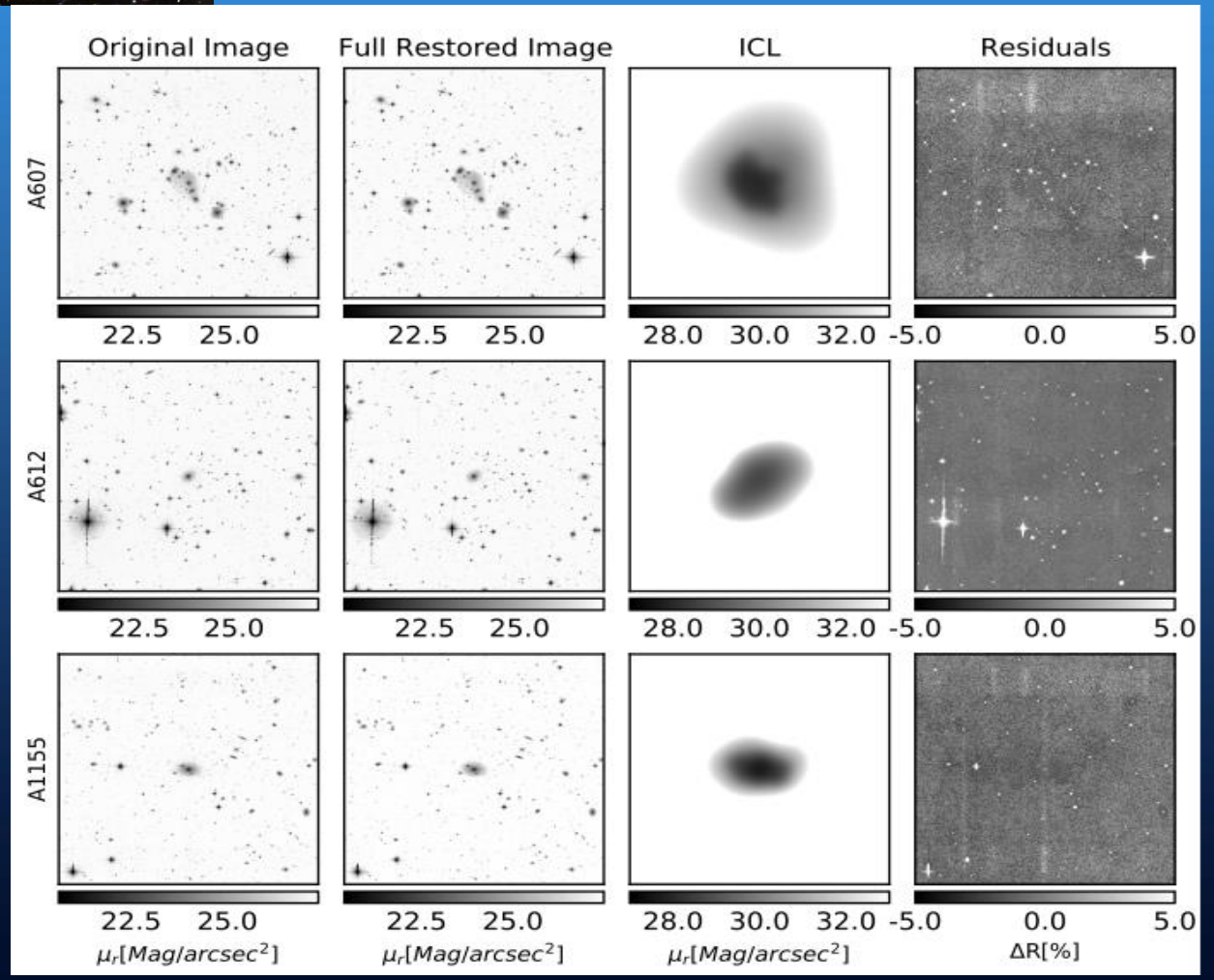
- Graduate next month
- Becoming a PhD student (possibly in Palermo), working on EUV – soft-X modeling of filters for wide range characterizations and applications (i.e. in future EUV telescopes and missions)
- Learn how and then do experimental research (X-ray absorption and photoelectron spectroscopy analyses) in beamlines and synchrotrons
- Get involved in high energy science studies along the way (neutron star mergers, BHs related studies, relativistic hydrodynamics? Who knows)

Amaël ELLIEN



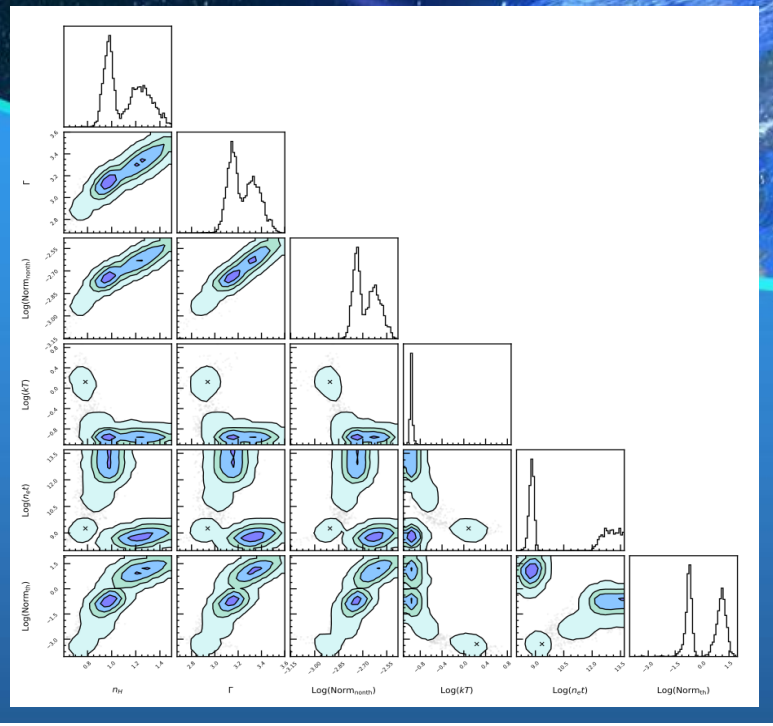
Education Level:

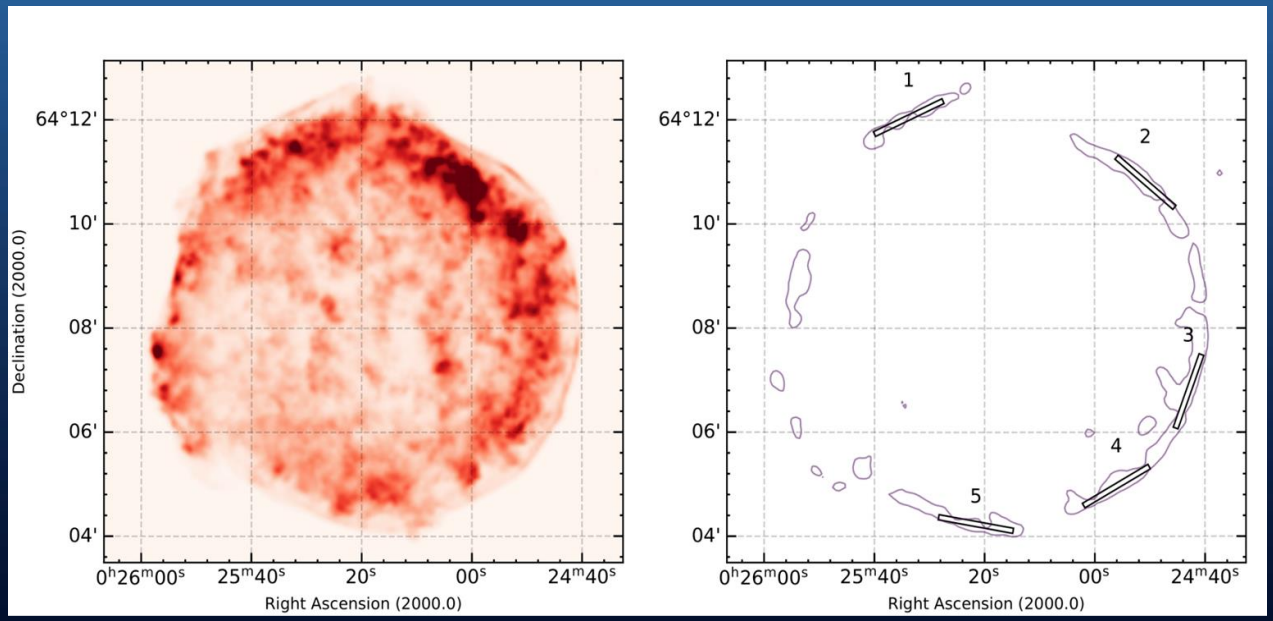
- PhD at Institut d'Astrophysique de Paris, Sorbonne Université (2017 - 2020)
- Detection of Intracluster light in Galaxy clusters
  - ❖ Development of a LSB-dedicated detection algorithm based on wavelets and multiscale analysis
  - ❖ Creation of galaxy cluster simulations to test the algorithm
  - ❖ Application to LSB images of galaxy clusters in the optical/IR (CFIS/UNIONS + Euclid? + Vera Rubin LSST?)



Current Research and Future Prospects

- Postdoc at Anton Pannekoek Instituut, University of Amsterdam (2020 - now)
- Developing new and advanced data analysis for Athena
  - ❖ Works mainly on Supernovae remnants in the X-rays for now
  - ❖ Using Bayesian inference on Chandra archival data to perform in depth analysis of shock spectra
  - ❖ Objective by the end of the postdoc is to mix up Bayesian with spatial analysis methods (wavelets?)





ANTON PANNEKOEK INSTITUUT

Credit: ESA/IRAP/CNRS/UT3/CNES/Fab&Fab/ACO