

Observational Schools in ChETEC-INFRA: plans for 2022

Andreas Korn

together with

Camilla Juul-Hansen, Arunas Kucinskas & Gabriele Cescutti



The three pillars of ChETEC-INFRA



All pillars have several aspects to them: theory, application/experiment, TNA, training, outreach

Today is all about astrophysics training. 🚀

The Galactic-archaeology landscape

Gaia dynamics for 1+ billion stars

> Gaia-ESO, APOGEE, GALAH, soon WEAVE and 4MOST detailed chemistry for millions of stars

© Gaia DPAC

But nuclear astrophysics has specific needs on rare and hard-to-observe elements and isoptopes. An on-going challenge to combine these views!

Chemistry in Gaia DR3 (2022)

Gaia's RVS spectrograph takes near-IR spectra (846-871 nm @ R=11,500) of millions of bright stars! First data available before the 2022 schools!



What ChETEC-INFRA contributes

As part of the ChETEC-INFRA network, we provide **Trans-National Acccess** (TNA) to a number of medium-size telescopes with spectroscopic capabilities. The current call has its deadline a week from today. Consider applying!

Additionally, we will organize **Observational Schools** which offer hands-on experience with the technologies and methodologies used to constrain the nuclear history of the universe. In 2022

- 1-week school with **remote access to the Nordic Optical Telescope** (NOT) on the Canaries (Spain). Depending on the whereabouts (e.g. Moletai Observatory) additional access to local telescopes.
- One school in connection with **Nuclear Physics in Astrophysics** (NPA). Even for this one we will have remote access to the NOT.
- Approach: immersion = learning by doing
- From observations to scientific results: preparation and execution of spectroscopic observations, data reduction, data analysis.
- A great opportunity to learn the nitty-gritty of stellar spectroscopy.



NPA-X at CERN

The school will take place during the week leading up to the NPA conference, i.e. August 29th to September 2nd.

Nuclear Physics	in Astrophysics - X	
Sep 5 – 9, 2022 CERN Europe/Zurich timezone		Enter your search term Q
OverviewTimetablePrevious NPA ConferencesInternational Advisory BoardLocal Organizing Committee	Every two years the Nuclear Physics in Astrophysics Conference bring multi-disciplinary community of experimental and theoretical nuclear astrophysicists and cosmo-chemists to discuss the current challenge developing research fields. The conference series is supported by the Nuclear Physics Division of Society. NPA-X is jointly organized by the n_TOF and ISOLDE Collabor Note the postponed dates: 5-9 September 2022	gs together researchers from a physicists, astronomers, es of these exciting and fast of the European Physical rations at CERN.
	Starts Sep 5, 2022, 8:00 AM CERN Ends Sep 9, 2022, 8:00 PM 500/1-001 - N Europe/Zurich Go to map	Main Auditorium
	Alberto Mengoni	

Consider applying! More information will follow via email.

The NOT, a spectroscopy workhorse

A 2.56m telescope (presently run by Arhus University & University of Turku) at the best site in Europe: Roque de los Muchachos, La Palma, Canarias, Spain.





The fiber-fed FIES spectrograph covers 370 nm $< \lambda < 830$ nm in a single exposure at 25,000 < resolving power R < 67,000.