

Computer resources of the Guaix group

Hardware and software

Sergio Pascual Ramírez



IV Guaix group meeting

Servers at CPD

Server room:

- Controlled environment (temperature, power). No failure in years
- Paid hosting (yearly)
- Heavily firewalled (VPN access)
- Rack servers



Servers at CPD

nartex.hst.ucm.es aka:

- guaix.ucm.es
- guaix.fis.ucm.es

Linux, 64 Gb RAM, 2 proc.

RAID Storage: 14 Tb (SAS) + 2 Tb (SATA) + 2 Tb (Main drive)

Running VMs to host our webpage(s). Typically 4 VMs + containers.

Running Rocky 9

- reflex.hst.ucm.es
- calyx.fis.ucm.es

Linux, 8 Gb RAM, 1 proc. Simple servers, hosting a MQTT server to receive photometer data (STARS4ALL). Not for computing

- lilax.hst.ucm.es
- ninox.fis.ucm.es

Linux, 128 Gb RAM
Running RHEL 9
Project AC3



Local storage at Físicas building

radix.fis.ucm.es

RAID Storage: 40 Tb

helix.fis.ucm.es

RAID Storage: 40 Tb + 16 Tb

NAS DS1821+

Only for storage. They can be accessed via web, but also with rsync. Radix is recommended, it's basically empty

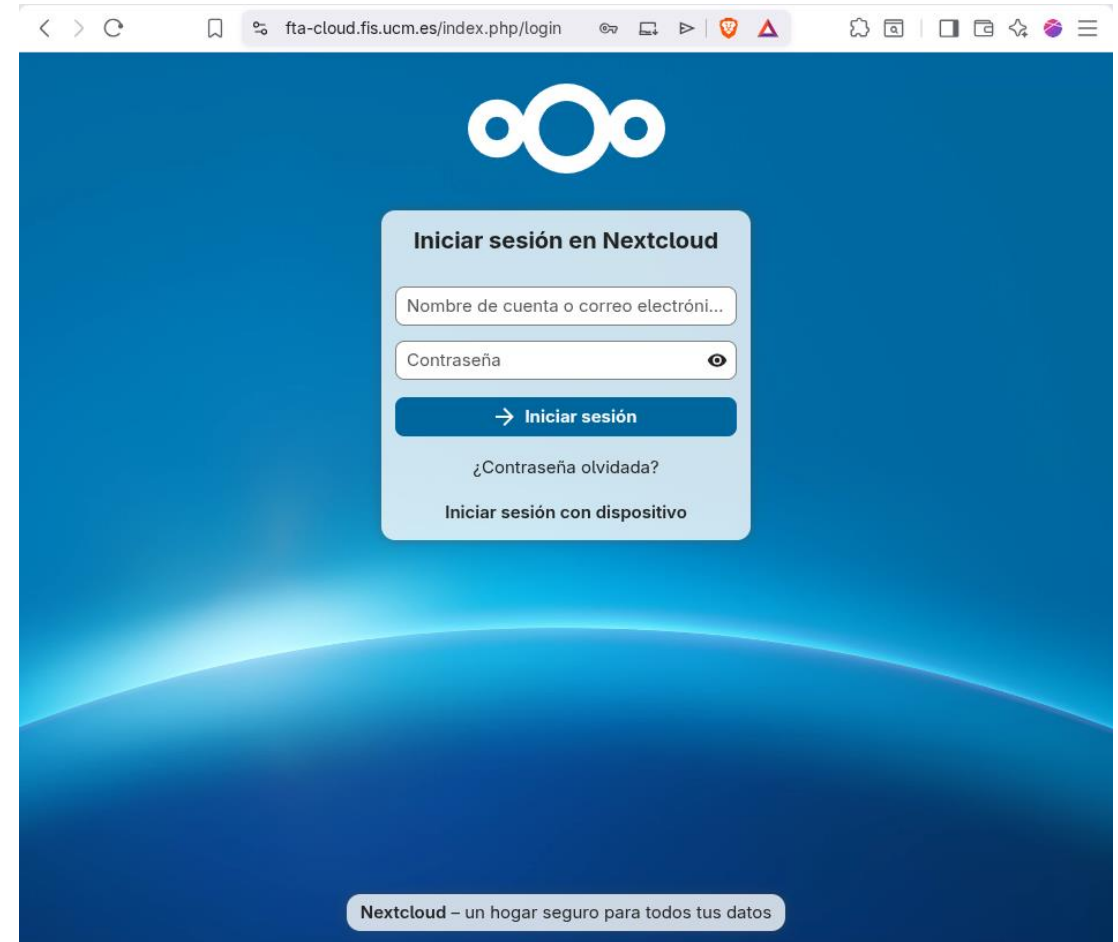


Online storage

<https://fta-cloud.fis.ucm.es/> FTA Department. 500 Gb
(Ask me) Nextcloud

<https://ucmdrive.ucm.es/> UCM. 300 Gb (with UCM
account) Nextcloud

<https://www.office.com/>. One drive, 1Tb (with UCM
account) Includes Office 365



Computing resources: HTC Condor

HTCondor is a workload management system for high throughput computing (HTC).

In HTC, parallelization is achieved by dividing the workload in small independent chunks.

Our cluster is formed by computers that were abandoned/not used or its owners gracefully are allowing its use.

We plan to add 3 new 64 Gb nodes after the new racks are installed in LICA during January.

Platform	Slots	Cpus	Gpus	TotalGb	FreCpu	FreeGb
x64/AlmaLinux10	0	18	0	61.86	18	61.86
x64/Fedora43	0	4	0	15.50	4	15.50
x64/AlmaLinux10	0	4	0	30.96	4	30.96
x64/RedHat9	0	12	0	125.02	12	125.02
x64/Fedora43	0	8	0	31.23	8	31.23
x64/AlmaLinux9	0	8	0	62.19	8	62.19
x64/RedHat9	0	12	0	125.01	12	125.01
x64/AlmaLinux9	0	16	0	46.82	16	46.82
x64/AlmaLinux9	0	8	0	15.34	8	15.34
x64/AlmaLinux9	0	8	0	15.33	8	15.33
x64/AlmaLinux10	0	8	0	15.26	8	15.26

You can find more details in the materials of this workshop: <https://indico.iparcos.ucm.es/event/8/>

More computing resources

IPARCOS GPU server. 2 GPUS. 64 Gb RAM, 20 cores. Works with condor (Contact Daniel Nieto d.nieto@ucm.es)

Aljuarismi (Contact aljuarismi@ucm.es)

AMD Ryzen 3990X, 64 cores, 256GB RAM, 2TB + 14Tb. 176 Tb of storage (no GPUs). Queues managed with slurm.

Brigit UCM HPC computer. (Contact Santiago Cano scano@ucm.es)

A grand total of 880 threads and 2085 Gb RAM. 176 Tb of storage. GPUs added this year. Queues managed with slurm.



Indico

Indico is an event management platform. We are using a site named `indico.iparcos.ucm.es`, and it is expected to be used by IPARCOS institute.

I encourage you to use the platform for your own meetings and workshops. Contact me to create an event.

The screenshot displays the Indico web interface. At the top, there is a blue header with the Indico logo, a language selector set to 'Español', and a location selector set to 'Europe/Madrid'. Below the header is a navigation bar with 'Inicio' and 'Crear evento'. The main content area is titled 'Astro-seminars' and features a search bar. A list of events is shown, categorized by month. For December 2025, there are two events: one on December 12th by Junais and another on December 4th by Hareesh Thuruthipilly. For November 2025, there are three events: one on November 28th by Alondra Solá-Molina, one on November 20th by Fabián Rosales-Ortega, and one on November 6th by John Barentine. Each event entry includes a date, a title, and a 'RECORDING' button. A sidebar on the right shows the user 'astro-seminars-committee' under the 'Gestores' section. At the bottom, there is a footer with the Indico logo, version information 'Hecho con Indico v3.3.8', and links for 'Ayuda' and 'Contactar'.

Indico

Europe/Madrid Español Inicio de sesión

Inicio Crear evento

Home » Seminars » Astro-seminars

Astro-seminars

Introduzca su término de búsqueda

Crear evento

Navegar

Categoría superior

Gestores

astro-seminars-committee

diciembre de 2025

12 dic Junais, "Low surface brightness galaxies in the era of deep large-sky surveys and artificial intelligence" NUEVO RECORDING

04 dic Hareesh Thuruthipilly, "Tracing the Faint Universe: Low-Surface-Brightness Galaxies in Wide-Field Surveys" RECORDING

noviembre de 2025

28 nov Alondra Solá-Molina, "MOSAIC at ELT. Seis mastodontes para desvelar los secretos del universo joven"

20 nov Fabián Rosales-Ortega, "New empirical metallicity relations for the local and high-redshift universe derived from DESIRED, the largest catalogue of high-quality Te-based data" RECORDING

06 nov John Barentine, "Protecting space" RECORDING

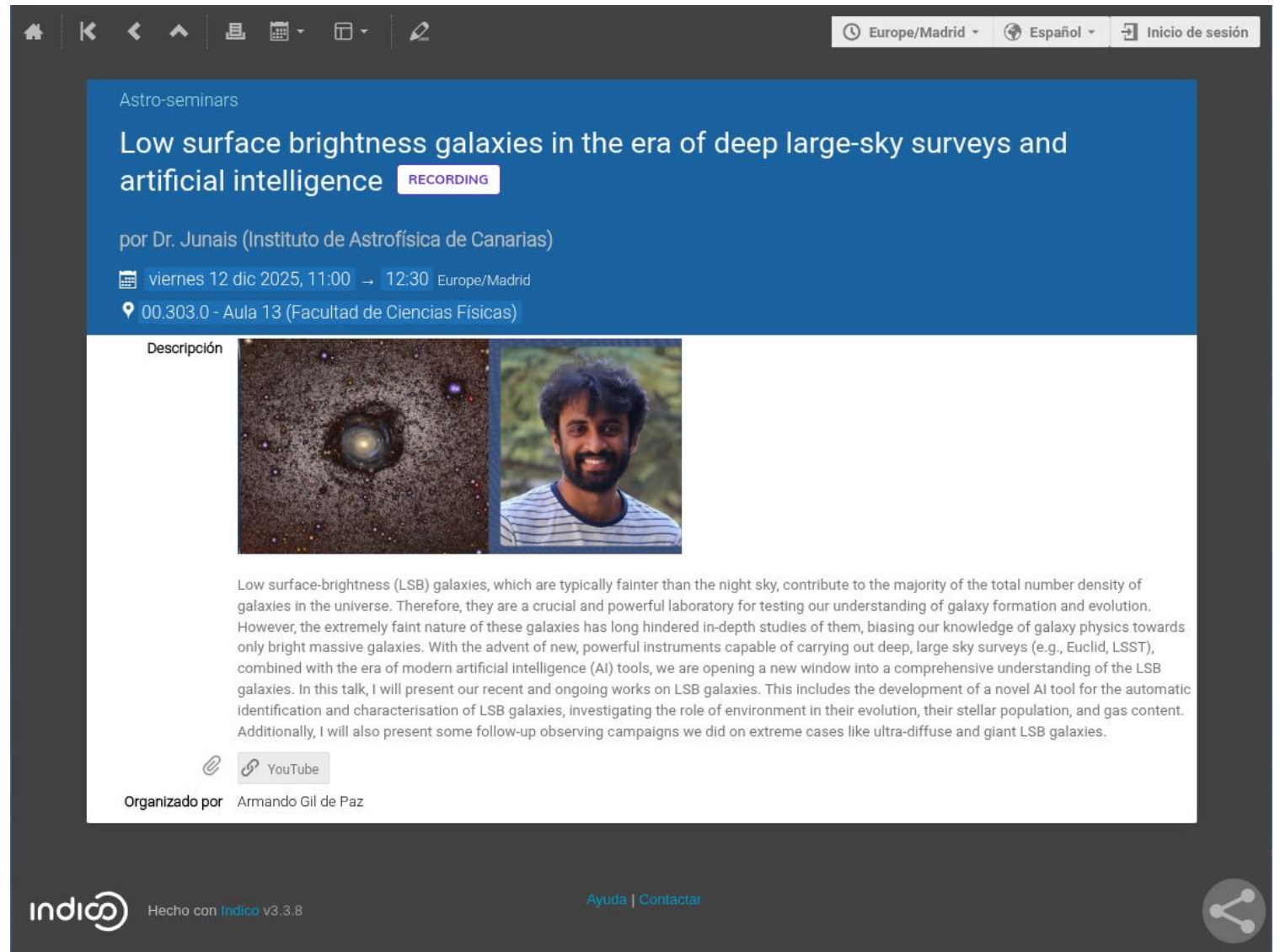
Hay 29 eventos pasados. [Mostrar](#)

Indico Hecho con Indico v3.3.8 Ayuda | Contactar

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The screenshot shows an Indico event page. At the top, there's a navigation bar with icons for home, back, forward, and search, along with language and session controls. The event title is "Astro-seminars" and the main topic is "Low surface brightness galaxies in the era of deep large-sky surveys and artificial intelligence", marked as "RECORDING". The speaker is "Dr. Junais (Instituto de Astrofísica de Canarias)". The date and time are "viernes 12 dic 2025, 11:00 → 12:30" in the "Europe/Madrid" zone. The location is "00.303.0 - Aula 13 (Facultad de Ciencias Físicas)". Under the "Descripción" section, there are two images: a galaxy and a portrait of Dr. Junais. The description text discusses LSB galaxies and the use of AI tools. At the bottom, it says "Organizado por Armando Gil de Paz" and includes a YouTube link icon. The footer shows the Indico logo, version "v3.3.8", and links for "Ayuda" and "Contactar".

Astro-seminars

Low surface brightness galaxies in the era of deep large-sky surveys and artificial intelligence


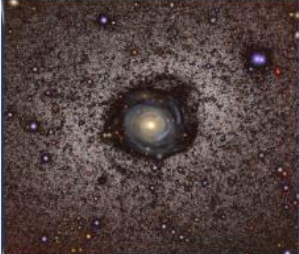
RECORDING

por Dr. Junais (Instituto de Astrofísica de Canarias)

viernes 12 dic 2025, 11:00 → 12:30 Europe/Madrid

00.303.0 - Aula 13 (Facultad de Ciencias Físicas)

Descripción



Low surface-brightness (LSB) galaxies, which are typically fainter than the night sky, contribute to the majority of the total number density of galaxies in the universe. Therefore, they are a crucial and powerful laboratory for testing our understanding of galaxy formation and evolution. However, the extremely faint nature of these galaxies has long hindered in-depth studies of them, biasing our knowledge of galaxy physics towards only bright massive galaxies. With the advent of new, powerful instruments capable of carrying out deep, large sky surveys (e.g., Euclid, LSST), combined with the era of modern artificial intelligence (AI) tools, we are opening a new window into a comprehensive understanding of the LSB galaxies. In this talk, I will present our recent and ongoing works on LSB galaxies. This includes the development of a novel AI tool for the automatic identification and characterisation of LSB galaxies, investigating the role of environment in their evolution, their stellar population, and gas content. Additionally, I will also present some follow-up observing campaigns we did on extreme cases like ultra-diffuse and giant LSB galaxies.

Organizado por Armando Gil de Paz

indico Hecho con indico v3.3.8 Ayuda | Contactar

Communities

Github

Highly recommended to use version control -> git.

<https://www.w3schools.com/git/>

We have an institutional page in github.com

<https://github.com/guaix-ucm>

Zenodo

A free repository located at CERN. It hosts data, documents, software, etc. It provides a DOI, so data elements can be cited.

<https://zenodo.org/communities/guaix-ucm/>

UCM group of Extragalactic Astrophysics and Astronomical Instrumentation

New upload

Search Members About

12 results found Sort by Newest

Versions

View all versions

Access status

Open

Resource types

Software

Publication

Poster

October 19, 2023 (v0.14) Software Open

guaix-ucm/megaradrp: Release v0.14

Sergio Pascual; Nicolás Cardiel; Pablo Picazo-Sánchez

Maintenance release to work with Python 3.12 and Cython >= 3

Uploaded on October 19, 2023

14 more versions exist for this record

707 76

October 19, 2023 (v0.20) Software Open

guaix-ucm/pyemir: Release v0.20

Sergio Pascual; Nicolás Cardiel

Maintenance update: Works with python 3.12 Fixes for ReadTheDocs Correcting several deprecations in scipy and photutils Full Changelog: <https://github.com/guaix-ucm/pyemir/compare/v0.19...v0.20>

Uploaded on October 19, 2023

11 more versions exist for this record

207 34

Others

Containers:

<https://quay.io/organization/guaix-ucm>