

Final report of the Open RIA Meeting “Preparing the open call for second-generation surveys with the JST250 at the OAJ”

Javier Zaragoza Cardiel (CEFCA)

1. Introduction and objectives

Following integration, commissioning and beginning of scientific operation of JPCam, the wide-field 1.2Gpix camera integrated at the Cassegrain focus of the JST250 telescope, the ICTS Observatorio Astrofísico de Javalambre (OAJ) announced its first competitive open call for observing time with this new facility in the first half of 2025. The OAJ is now preparing a competitive open call for long-term surveys with JPCam at the JST250. The call for proposals is expected in the second half of 2026.

The JST250 is a Ritchey-Chrétien telescope with a 2.55m primary mirror and an altazimuth mount. The focal plane corresponds to a Cassegrain design. The M1 and M2 mirrors have a hyperbolic aspheric surface. The telescope is equipped with a field corrector behind the central hole of M1, consisting of 3 fused silica lenses with 4 aspheric surfaces and diameters between 500–600mm. The two mirrors and the three lenses are designed to optimize the quality of the polychromatic image and maintain low distortion across the entire field of view, which has a diameter of 3 degrees (476mm).

JPCam is the main scientific instrument of the JST250 telescope and has been designed to perform the Javalambre-Physics of the Accelerating Universe Astrophysical Survey (J-PAS, <https://www.j-pas.org/>), a photometric survey of the northern sky. The camera is equipped with a mosaic of 14 state-of-the-art detectors. These are large-format, low noise CCD detectors with 9,216×9,232 pixels of 10µm developed by Teledyne-e2V. JPCam is installed at the Cassegrain focus of the JST250 telescope and provides a large effective field of view of about 3.4 square degrees with a pixel scale of 0.2267 "/pixel.

JPCam is equipped with the J-PAS filter system, a set of 54 narrowband filters (~14.5nm FWHM) that are contiguous and equally spaced between 370 and 920nm, plus 2 broadband filters in both extremes of the optical wavelength range. These filters, designed to allow for panoramic spectrophotometric observations, are distributed across 4 filter trays, 14 filters per tray, so that each detector observes through one of them. Three additional filter trays, each one equipped with 14 identical copies of Sloan g, r and i, respectively, are also available. Therefore, the observation strategy requires a prior understanding of the distribution of the filters in the instrument as well as the use of tools created for defining observational strategies with JPCam.

With the coming open call, the OAJ intends to offer the JST250-JPCam tandem to the community for long-term surveys that will coexist with J-PAS. These so-called second-generation surveys of JST250 may make use of JPCam and the available filters, require the definition of new optical filters, or demand the development of new instrumentation.

The objective of this meeting is to present to the scientific community the upcoming public call for second-generation surveys with JPCam installed on the JST250 telescope. The meeting will present

the details of the call, as well as the operation and modes of the JPCam instrument and the set of specific tools created to support users in preparing their observation proposals. At the same time, the community is encouraged to present the scientific projects envisaged with this large field of view multifilter OAJ facility that is going to be offered, to trigger discussion on the technical aspects that will help in the definition of the potential proposed programs. We therefore welcome contributions from the entire community, from all fields, of current examples or concrete ideas of scientific projects to be conducted as surveys with JPCam.



2. SOC and LOC

Scientific Organizing Committee (SOC) :

- Javier Zaragoza Cardiel (CEFCA)
- Antonio Marín Franch (CEFCA)
- Carlos López San-Juan (CEFCA)
- Héctor Vázquez Ramió (CEFCA)
- Mireia Montes Quiles (ICE-CSIC)
- Rosa González Delgado (IAA)
- Adriano Campo Bagatin (UA)
- Aurora Sicilia Aguilar (University of Dundee)

Local Organizing Committee (LOC):

- Javier Zaragoza Cardiel
- Juan Antonio Fernández Ontiveros
- Luisa Valdivielso Casas
- Tamara Civera Lorenzo
- Ana López Colás
- Nischal Acharya
- Adrián Hidalgo

3. Organization and participants

- ◆ Type of Event: Hybrid, remote and in person.
- ◆ Dates: 02/06/2026 abd 03/06/2026
- ◆ Venue: In person in Centro de Estudios de Física del Cosmos de Aragón (CEFCA) / Virtually using zoom.
- ◆ Media Announcement: Via mailing lists: sea-anuncios, JPAS and J-PLUS collaborations.

Participant Statistics:

- ◆ Total Number: 48 participants. 30 in person, 18 virtual.
- ◆ Gender and Diversity Balance: 10 Females, 38 Males. 28 permanent, 8 postdocs, 6 PhD students, 3 RyC, 1 retired, 1 emeritus, and 1 technician.

Meeting Photos:





4. Specific contributions related to ICTSs/RIA

Observatorio Astrofísico de Javalambre. Antonio Marín-Franch. Introduction and description of the Observatorio Astrofísico de Javalambre, which is considered an ICTS.

Scientific highlights in J-PAS and miniJPAS. Silvia Bonoli. Summary of the scientific results of J-PAS, which is the main project observed with JPCam at the OAJ.

Observatory Data Processing. Héctor Vázquez Ramió. Description of the data processing of the data taken at the OAJ.

Data delivered & Data access. Tamara Civera. Description of the delivered data and the access to the data taken at the OAJ.

JPCam future call for proposals, observing strategies and tools. Javier Zaragoza Cardiel. Description of the call for proposals to observe with JPCam at the 2.5m Javalambre Survey Telescope in the OAJ. Description of the observing strategies and tools to plan observations and to estimate exposure times of JPCam.

Practical Session. Plan your observations with JPCam. Javier Zaragoza Cardiel. Practical session where we described how to use the observing planner and exposure time calculator tools created specifically for JPCam.

The J-PAS Observing Strategy: Hard-Won Lessons and Free Tips. Alessandro Ederoclite. Presentation on how J-PAS strategy was designed as an example for those interested in defining a new survey for JPCam.

There were fifteen more contributed talks presenting different legacy projects with JPCam from different researchers (see program below).

5. Sponsors

CEFCA

RIA. Coffee breaks. 629.6€

Gobierno de Aragón.

Ministerio de Ciencia, Innovación y Universidades.

6. Media impact

<https://www.cefca.es/noticias/mostrar/356>

<https://www.diariodeteruel.es/teruel/el-cefca-toca-la-excelencia-cientifica-al-abrir-su-gran-telescopio-a-otros-grupos-de-investigacion>

<https://ecodeteruel.tv/15-posibles-proyectos-para-el-telescopio-principal-de-javalambre/>

7. Summary of the meeting

We had fifteen contributed presentations on scientific projects with JPCam within the open-time offering. Fourteen of these projects are planned to be presented in the next Call for Proposals for Legacy Surveys with JPCam. A discussion on project feasibility took place, and all projects were deemed suitable for the next call for proposals, considering the available observing time and observing modes. Additionally, we provided an overview of the infrastructure, data processing, and data access for the instruments at the OAJ, along with details on the JPCam observing modes available in the upcoming call. We also explained how to plan an observing strategy with JPCam and estimate the observation time required for different scientific projects. In summary, the meeting

successfully introduced the upcoming call for competitive open time for legacy surveys with JPCam on the JST250 telescope, outlined the details of the call, presented the tools available for proposal preparation, and encouraged the community to share scientific projects, fostering discussions on technical aspects to refine potential programs.

Appendix.

First Name	Last Name	Affiliation
Nischaslg	Acharya	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Jairo Andres	Alzate Trujillo	Instituto de Astrofísica de Andalucía (IAA-CSIC)
Borja	Anguiano	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Karla	Arellano-Cordova	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Maria Del Carmen	Argudo-Fernández	Universidad de Granada
Marc	Balcells	Isaac Newton Group of Telescopes
Jose David	Balseca Cisneros	University of Alicante
Joao Pedro	Benedetti	IAC
Silvia	Bonoli	DIPC
Marcelo	Borges Fernandes	Observatório Nacional
Joel	Bregman	University of Michigan
Adriano	Campo Bagatin	Universidad de Alicante
Alberto J	Castro-Tirado	IAA-CSIC
Javier	Cenarro	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Tamara	Civera	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Simone	Daflon	Observatório Nacional
Andrés	Del Pino Molina	IAA-CSIC
Renato	Dupke	ON
Luis	Díaz-García	Instituto de Astrofísica de Andalucía (IAA-CSIC))
Alessandro	Ederoclite	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
David	Fernández Gil	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Juan Antonio	Fernández Ontiveros	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Francisco José	Galindo Guil	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Armando	Gil De Paz	Universidad Complutense de Madrid

First Name	Last Name	Affiliation
Rosa María	González Delgado	IAA (CSIC)
Antonio	Hernán Caballero	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Adrian	Hidalgo	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Yangyang	Huang	University of Chinese Academy of Sciences
Raúl	Infante-Sainz	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Sayali	Kulkarni	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Jiangtao	Li	Purple Mountain Observatory
Javier	Lizaga Villarroya	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Rafael	Luque	Instituto de Astrofísica de Andalucía – CSIC
Carlos	López San Juan	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Antonio	Marín-Franch	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Mariano	Moles	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
David	Morate	Instituto de Astrofísica de Canarias
Bojan	Novakovic	CEFCA / ARAID
Stylianos	Pyrzas	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Francisco Javier	Saez Ruiz	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Toni	Santana-Ros	University of Alicante
Aurora	Sicilia-Aguilar	University of Dundee
Patricia	Sánchez-Blázquez	UCM
Luisa	Valdivielso Casas	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Alexandre	Vazdekis Vazdekis	IAC
Héctor	Vázquez Ramió	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Javier	Zaragoza-Cardiel	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)
Stefano	Zarattini	Centro de Estudios de Física del Cosmos de Aragón (CEFCA)

**Preparing the open call for second-generation surveys with the
JST250 at the OAJ
(2-3 June 2026)
Program**

All times are given in Teruel local time (CEST)

Tuesday 2 June	Wednesday 3 June
9:00-09:15 Welcome/opening. Javier Cenarro. 9:15-9:30 Observatorio Astrofísico de Javalambre. Antonio Marín-Franch. 9:30-9:45 Scientific highlights in J-PAS and miniJPAS. Silvia Bonoli . 9:45-10:10 Observatory Data Processing. Héctor Vázquez Ramió. 10:10-10:30 Data delivered & Data access. Tamara Civera.	9:00-09:25 Observing the ET Field with JST250. Yang Huang. <u>Galaxy evolution</u> 9:25-9:50 JST250/JPCam – EDF-N COsmic noon Survey (J-ECOS). Jiang-Tao Li. 9:50-10:15 Constraining the Late-Time Build-Up of Cluster ETGs from $z \approx 1$ to 0.2 via UV-Sensitive Young Stellar Components. Alexandre Vazdekis Vazdekis. 10:15-10:40 JPCam studies in the Virgo-A subcluster. Luis Diaz-Garcia. 10:40-11:05 CATARSIS-J: Cluster Analysis with TARgeted Spectroscopic and Imaging Surveys in the J-PAS Era. P. Sánchez-Blázquez.
10:30-11:00 Coffee break	11:05-11:35 Coffee break
11:00-12:00 JPCam future call for proposals, observing strategies and tools. Javier Zaragoza-Cardiel 12:00-12:15 The J-PAS Observing Strategy: Hard-Won Lessons and Free Tips. Alessandro Ederoclite. <u>Solar system & Time domain</u> 12:15-12:40 An AI-Assisted Unfiltered Time-Domain Survey with JST250. Alessandro Ederoclite. 12:40-13:05 J-FAST: A Legacy Survey of Fast Optical Transients with JST250/JPCam. Alberto J. Castro-Tirado. 13:05-13:30 J-ARRAS: near-UV spectrophotometry of Solar System small bodies with the T250/JPCam. David Morate	11:35-12:00 The JACGALS (J-PAS Analysis of Cavity Galaxies Legacy Survey) project. Maria del Carmen Argudo-Fernández. 12:00-12:25 The J-PAS view of the Hercules Supercluster. Stefano Zarattini. <u>Solar system & Time domain</u> 12:25-12:50 Multi-epoch Observational Search for Slow-moving objects. Jose David Balseca Cisneros. 12:50-13:15 TORICO: A JST250 Deep Twilight Survey for Interior-Earth Objects. Toni Santana-Ros. 13:15-14:00 Discussion & Questions
13:30-15:30 Lunch	14:00 End of the meeting
<u>Stellar physics</u> 15:30-15:55 J-ATLAS: Javalambre Andromeda and Triangulum Legacy Astrophysical Survey. Andrés del Pino Molina & Borja Anguiano. 15:55-16:20 J-GAPS: A Legacy Multi-filter Survey of the Galactic Anticentre with JST250/JPCam. Jairo Alzate Trujillo. 16:20-16:45 MACS-14: Massive Anticenter Cosmic Survey in 14 Filters. Marcelo Borges Fernandes.	
16:45-17:15 Coffee break	
17:15-18:00 Plan your project with JPCam observing tools. Javier Zaragoza-Cardiel.	