

JAVIER ZARAGOZA CARDIEL

JPCAM CALL FOR PROPOSALS 2025B-2026A OBSERVING STRATEGIES AND TOOLS



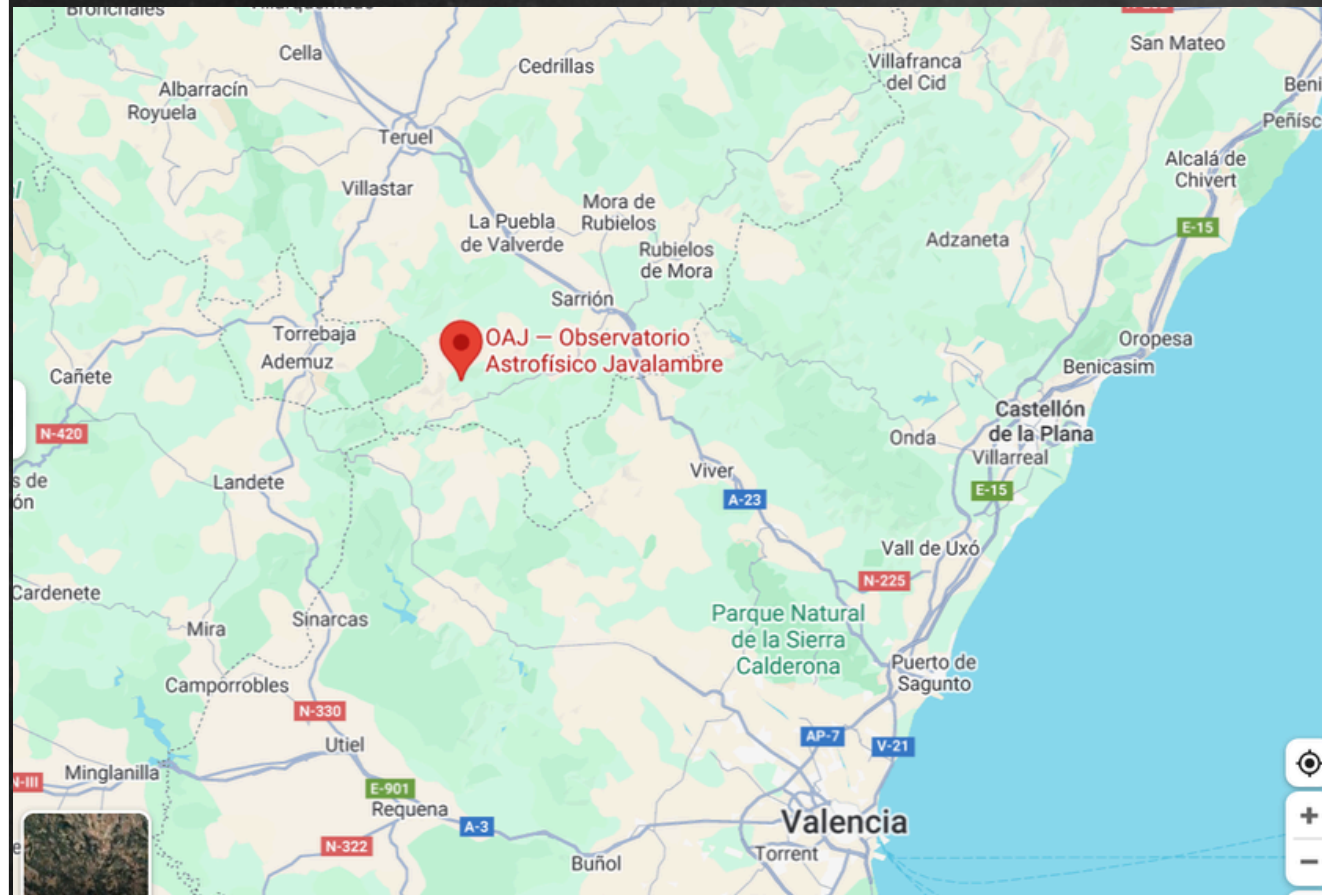
JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

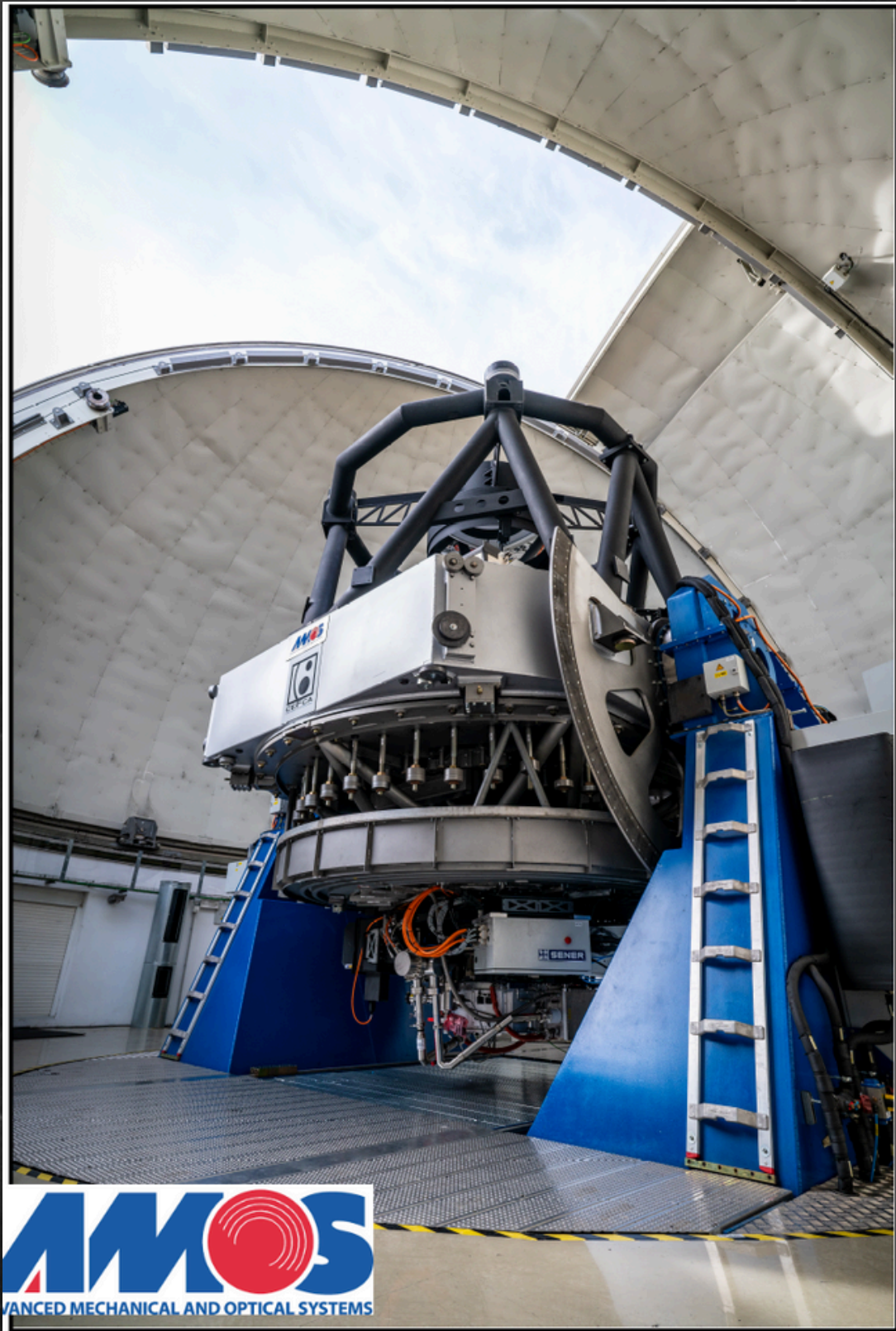
Observatorio Astrofísico de Javalambre

OAJ is included in the Spanish map of Infraestructuras Científico-Técnicas Singulares (ICTS), so OAJ offers at least 20% as Open Time

Pico del Buitre 1957m
40° 02' 28.67" North
01° 00' 59.10" West



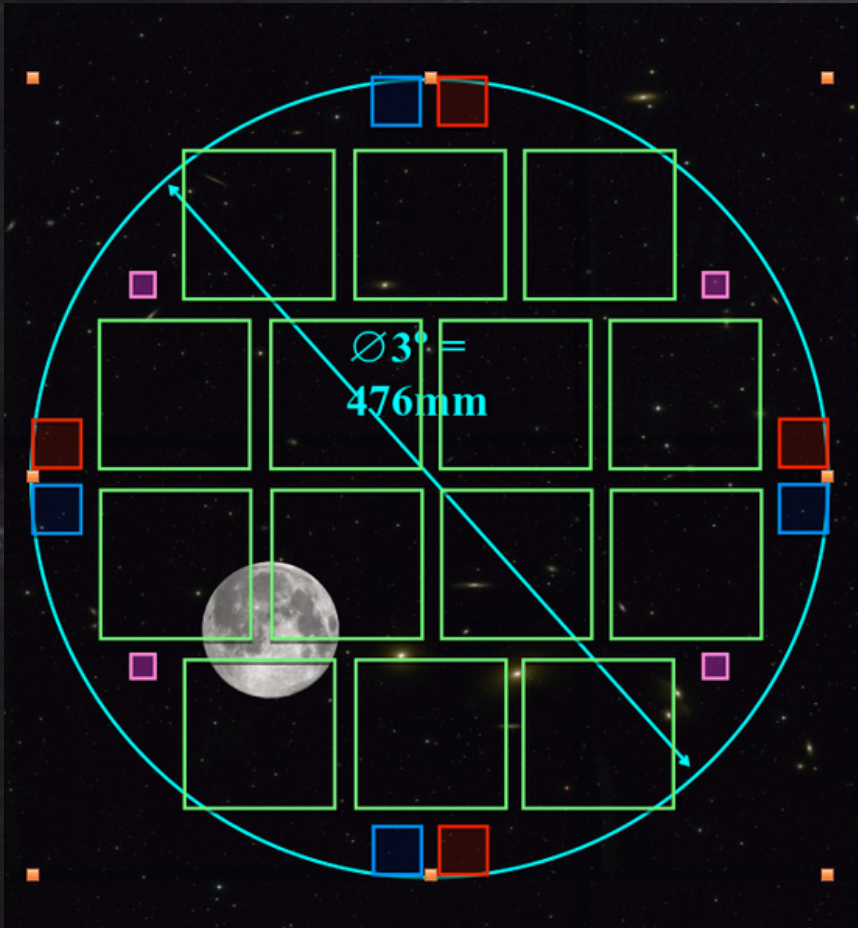
Javalambre Survey Telescope (JST250)



JST250	
Optical configuration	Ritchey Chrétien like, equipped with a field corrector
M1 diameter	2.55 m
M2 diameter	1.18 m, with an hexapod system
Field Corrector	3 aspherical lenses
FoV diameter	3 deg (476 mm physical size)
Effective collecting area	3.75 m ²
Etendue	26.5 m ² deg ²
EE50 (radius)	<4.75 microns (polychromatic) over the whole FoV
Focal length	9098 mm
Plate scale	22.67 arcsec/mm
Mount	Altazimuthal
Focus	Cassegrain

JPCAM CALL FOR PROPOSALS 2025A-2026B
OBSERVING STRATEGIES AND TOOLS

JPCam main characteristics



CCD format	14x9216x9232, 10 μm pix -1 1.2Gpix camera
Pixel scale	0.2265 ''/pix
Unvignetted FoV	3.4deg 2 – (14 \times) 0.48deg \times 0.51deg
Read out time (633kHz) Read out noise (633kHz)	10.9 s (full frame) – 6.1 s (2x2 binning) 5.5 e – (RMS)
Read out time (400kHz) Read out noise (400kHz)	16.4 s (full frame) – 8.9 s (2x2 binning) 4.3 e – (RMS)
Gain	2.274 e – /ADU
Minimum exposure time	0.1 s
Exposure homogeneity Full well Dark current	1 ms > 125 000 e – 0.001 e – /pix/s

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

JPCam Call for Proposals

- The total time offered is 200 hours in a period of 1 year. This time includes all sky conditions: dark, grey, bright; photometric/no photometric; good and bad seeing. Filler programs are welcome.
- Period offered is 2025B-2026A.
- Shared risk, so no guaranteed to delivered data to the approved programs. Expected shutdown of 4 contiguous months due to updates. We will publish the expected period for the shutdown (when known).
- All the filters offered: 54 narrow band, 2 medium band, 3 broad band.
- Deadline 15th April.
- Open time offered to the international community.
- Proposals will be sent by the PIs via the oajweb portal:
<https://oajweb.cefca.es/>
- Projects will be evaluated by the OAJ-TAC based on scientific merit.
- Approved programs will start in July 2025.

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

JPCam proposal submission

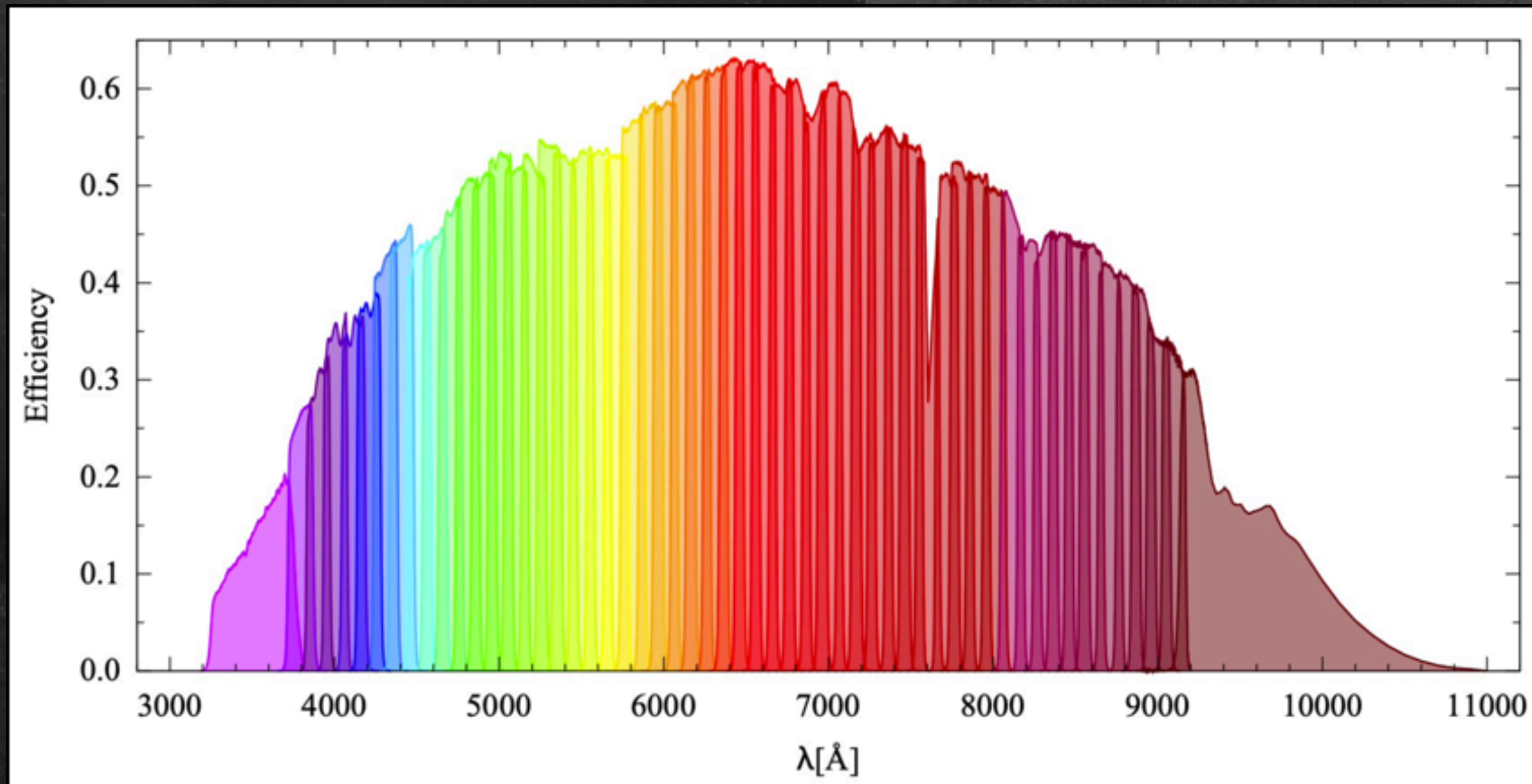
- Proposals should be sent through the OAJ web portal
<https://oajweb.cefca.es/>
- Registration is required.
- Easy to use, but manual available at 'User home' once registered or here:
https://oajweb.cefca.es/doc/tac/proposals_manual_v6.pdf

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

JPCam filter system

54 narrow band, 2 medium band, 3 broad band (gri)

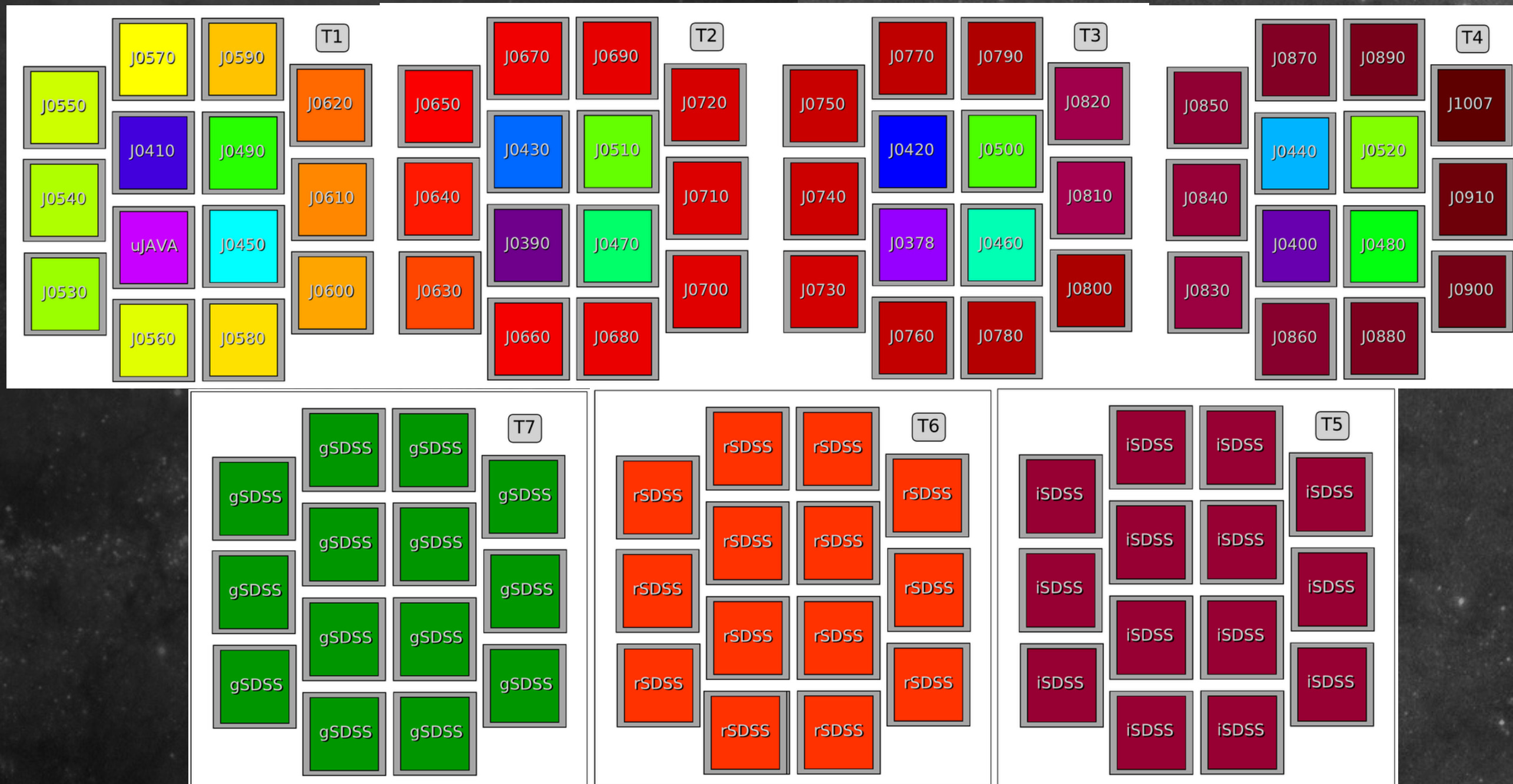


JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

Observing Modes Offered

- All filters offered: 54 narrow band, 2 medium band, 3 broad band (g, r, and i)
- Distribution of filters can not be changed*.

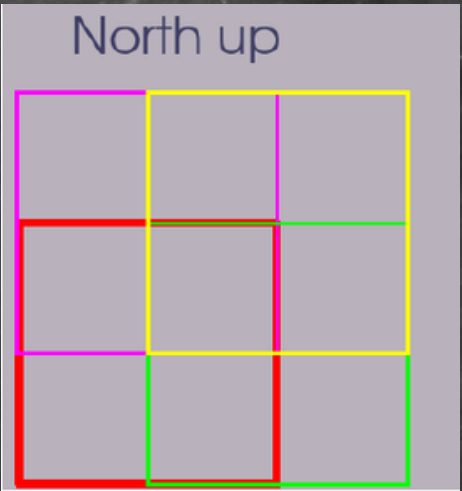


JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

	Mode 02	Mode 03
Filter Tray	T5, T6, T7 broad band (<i>gri</i>)	T1, T2, T3, T4 narrow band
Readout noise	5.5e ⁻	5.5e ⁻
Gain	2.274e ⁻ ADU ⁻¹	2.274e ⁻ ADU ⁻¹
Binning	1×1	2×2
Readout time	10.9s	6.1s

Dithering 850"
(0.5*CCD eff size)



Observing Modes Offered & Supported

- T1, T2, T3, T4 (narrow band trays) binning 2x2 (0.453"/pix)
- T5, T6, T7 (broad band trays) binning 1x1 (0.2265"/pix)
- 4 Dithers. 0.236 degrees shift recommended. This is the recommended/supported option. If background subtraction and flux calibration precision are not important this dither pattern can be relaxed.
- Pointings need to be defined using JOP <https://www.cefca.es/jop/plan/field.html>
- Minimum exposure time: 0.1 second (small exposure times <10s should be justified).
- Maximum INDIVIDUAL exposure time: 300 seconds (per dither/exposure), so 1200 in total for 4 dithers. If you need more time, just make more exposures, always a multiple of 4 in T1234 because of the dithering pattern needed.
- There is no minimum area.

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OBSERVING STRATEGIES AND TOOLS

Data products

- Raw scientific data, bias, darks, flatfields.
- Scientific data reduced in a standard way with pipelines developed by CEFCA.
- Flux-calibrated precision $<1\%$ when standard supported mode is used.

Non-standard observations

- Non-standard observations: different dither pattern, different pointings, different filter distribution, no filter, longer exposure times, different readout modes, etc.
- PI must obtain OAJ technical approval if non-standard observations are requested. This approval should be included in the technical justification of the proposal.
- Any special calibration needed will be charged to the project.

Different dithering patterns could be proposed, but this can affect the quality of the offered data reduction (flux calibration and sky subtraction).

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

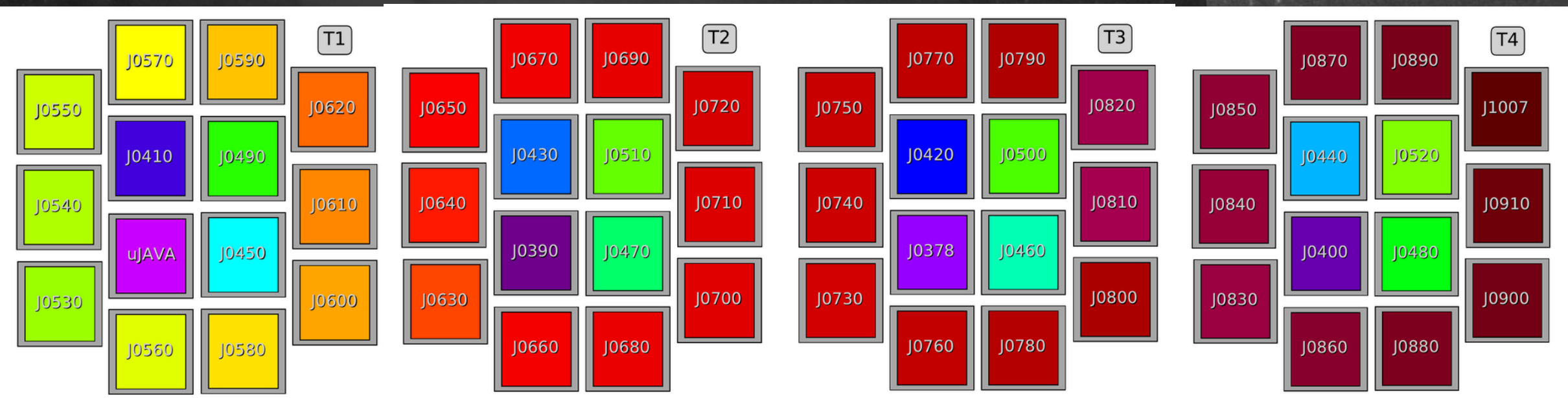
JPCam observational strategy

- JPCam has gaps between its CCDs, and the 14 CCDs can either share the same filter (for Broad Band observations) or use different filters (for Narrow Band observations).
- A specific strategy is needed to achieve a contiguous imaging area.
- Dithering is essential not only for accurate flux calibration but also for optimal sky background subtraction.
- Two observational strategies are offered:
 - Broad Band Strategy (T5, T6, T7, using gri filters, where all 14 CCDs share the same filter)
 - Narrow Band Strategy (T1, T2, T3, T4)

JPCAM CALL FOR PROPOSALS 2025A-2026B

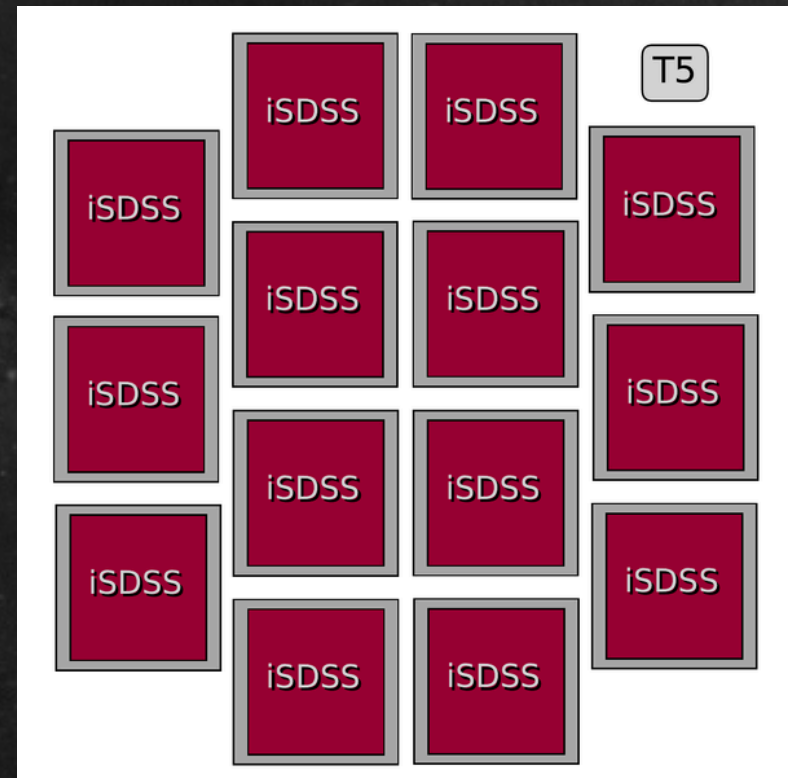
OBSERVING STRATEGIES AND TOOLS

JPCam observational strategy



Narrow Band strategy

Spatial coverage is achieved by observing contiguous pointings, shifting each pointing by the effective (unvignetted) size of the CCD in both RA and Dec. Different CCDs exhibit varying spatial coverage, although there is a common central area that expands as more pointings are added.



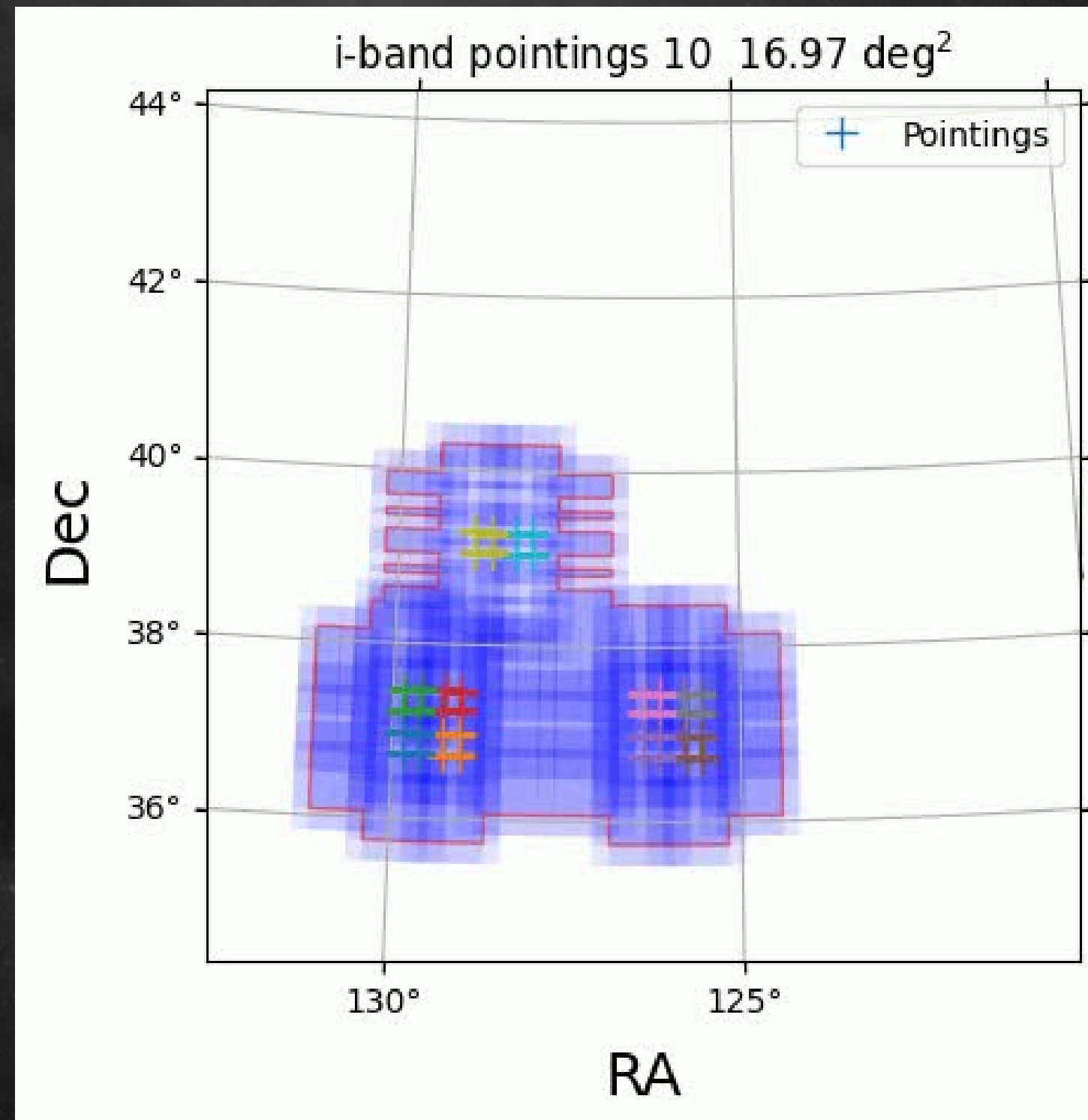
Broad Band strategy for gSDSS, rSDSS, iSDSS

The default (and recommended) strategy to observe a specific contiguous area is to observe a set of 4 pointings to fill the gaps between CCDs and then shift in RA and Dec (if needed) by the size of JPCam.

Dithering in both strategies needed

Dithering is needed for accurate flux calibration as well as optimal sky background subtraction.

Broad Band strategy



Broad Band strategy for iSDSS

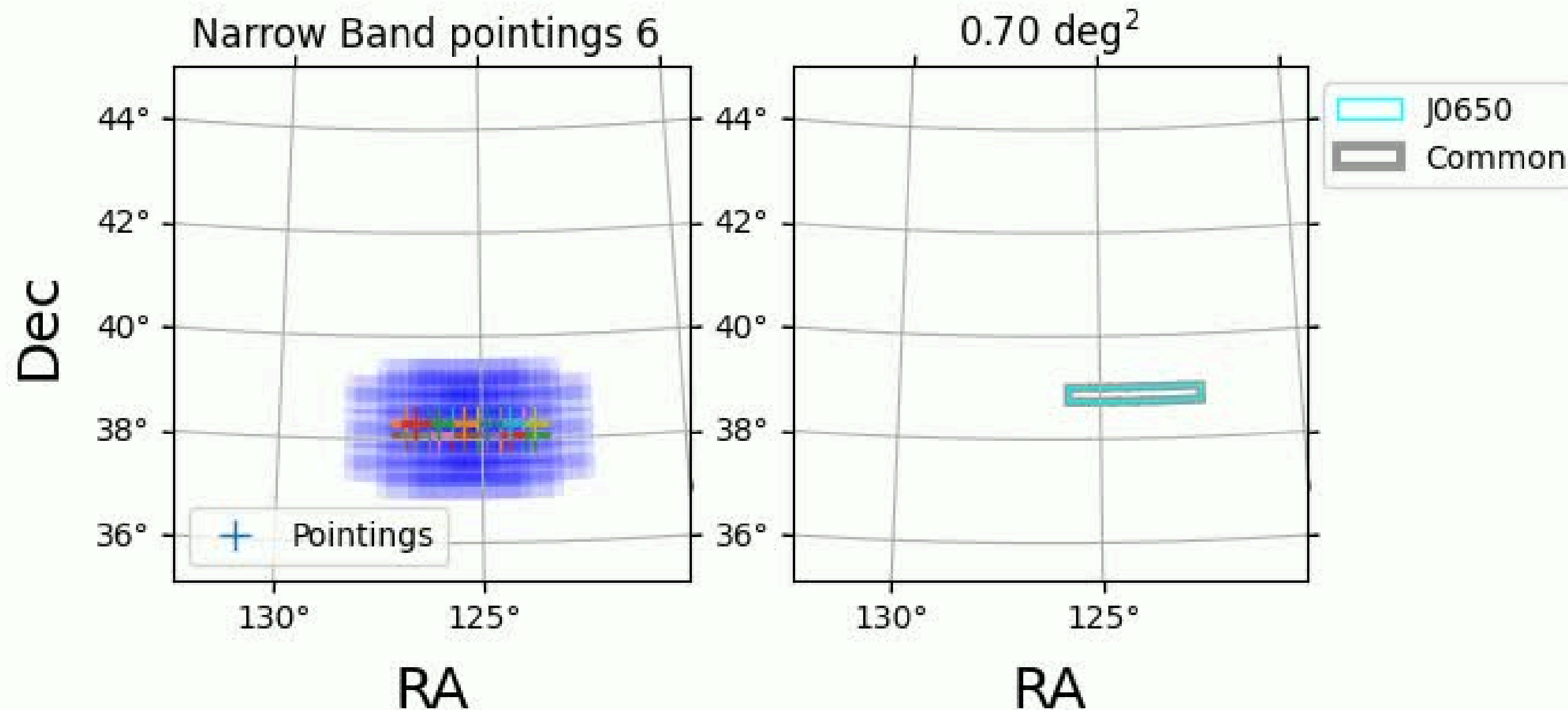
The supported default (and recommended) strategy to observe a specific contiguous area is to observe a set of 4 pointings to fill the gaps between CCDs and then shift in RA and Dec (if needed) by the size of JPCam.

For the user, internal pointings (dithers+covering gaps) are invisible and they do not exist

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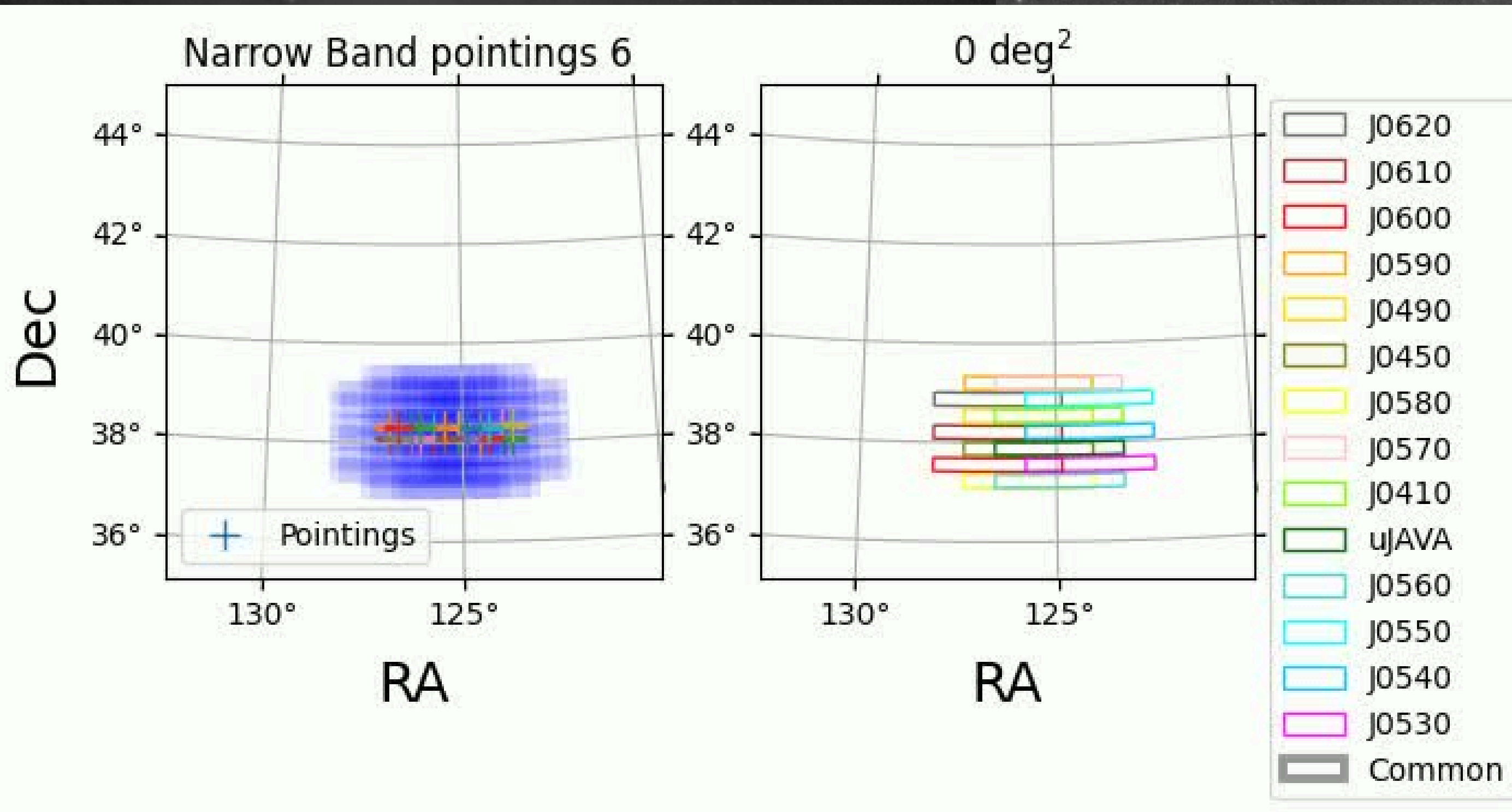
OBSERVING STRATEGIES AND TOOLS

Narrow Band strategy



The supported default (and recommended) strategy to grow spatial coverage is achieved by observing contiguous pointings, shifting each pointing by the effective (unvignetted) size of the CCD in both RA and Dec.

Narrow Band strategy



Different CCDs exhibit varying spatial coverage, although there is a common central area that expands as more pointings are added.

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

Do I need to calculate the pointings for my project?

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

Do I need to calculate the pointings for my project?

Yes

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OBSERVING STRATEGIES AND TOOLS

Do I need to calculate the pointings for my project?

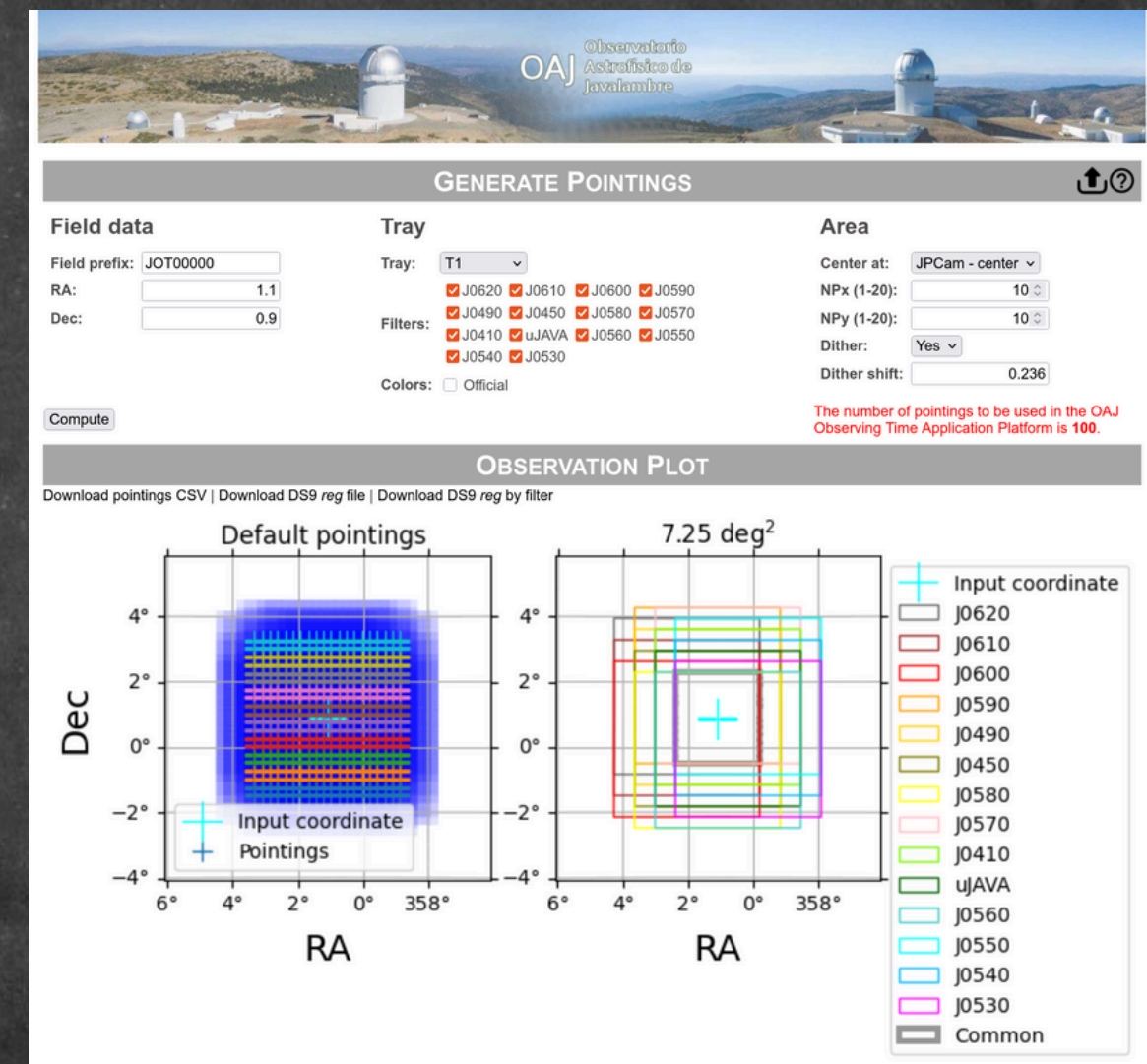
Yes

But don't worry, we provide you with an easy observing tool!

<https://www.cefca.es/jop/plan/field.html>

JPCam Observing Planner

JOP




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OBSERVING STRATEGIES AND TOOLS

JOP

<https://www.cefca.es/jop/plan/field.html>

But I do not know how to use it



OAJ

Observatorio
Astrofísico de
Javalambre

GENERATE POINTINGS

Field data

Field prefix:

RA:

Dec:

Compute

Tray

Tray:

Filters:

☒ J0620

☒ J0610

☒ J0600

☒ J0590

☒ J0490

☒ J0450

☒ J0580

☒ J0570

☒ J0410

☒ uJAVA

☒ J0560

☒ J0550

☒ J0540

☒ J0530

Colors: ☒ Official

Area

Center at:

NPx (1-20):

NPy (1-20):

Dither:

Dither shift:

The number of pointings to be used in the OAJ
Observing Time Application Platform is 16.

OBSERVATION PLOT

Authors: Javier Zaragoza; Javier Hernández. Comments, bugs, and suggestions: [jzaragoza at cefca.es](mailto:jzaragoza@cefca.es)


JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

JOP

<https://www.cefca.es/jop/plan/field.html>


But I do not know how to use it



OAJ

Observatorio
Astrofísico de
Javalambre

GENERATE POINTINGS



Field data

Field prefix:

RA:

Dec:

Compute

Tray

Tray:

T1

Filters:

☒ J0620

☒ J0610

☒ J0600

☒ J0590

☒ J0490

☒ J0450

☒ J0580

☒ J0570

☒ J0410

☒ uJAVA

☒ J0560

☒ J0550

☒ J0540

☒ J0530

Colors: ☒ Official

Area

Center at:

JPCam - center

NPx (1-20):

4

NPy (1-20):

4

Dither:

Yes

Dither shift:

0.236

The number of pointings to be used in the OAJ
Observing Time Application Platform is 16.

OBSERVATION PLOT

Authors: Javier Zaragoza; Javier Hernández. Comments, bugs, and suggestions: [jzaragoza at cefca.es](mailto:jzaragoza@cefca.es)

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

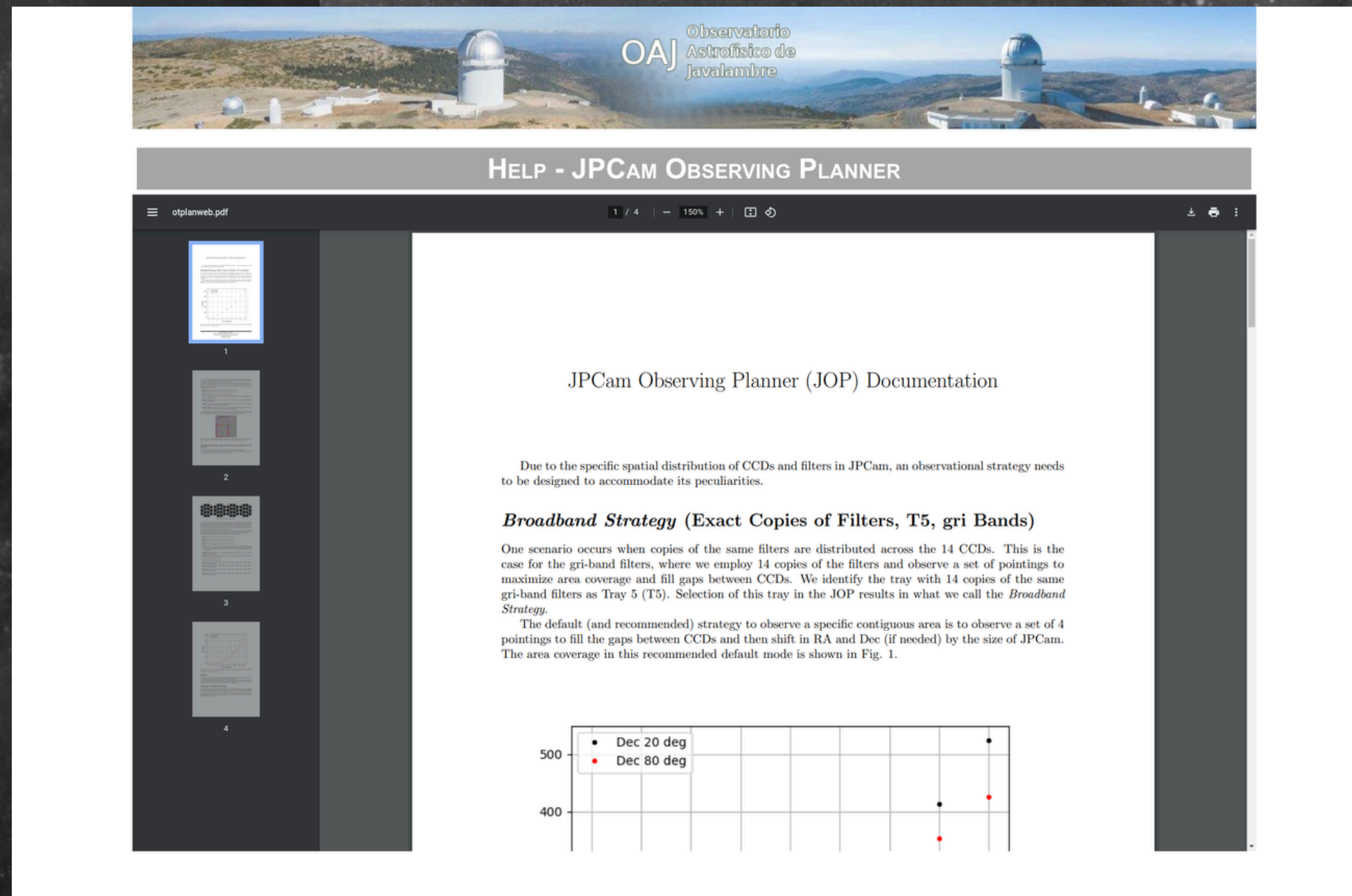
JOP <https://www.cefca.es/jop/plan/field.html>

But I do not know how to use it

Read the documentation...

Here we will present the main points.

We will see specific example cases at the end

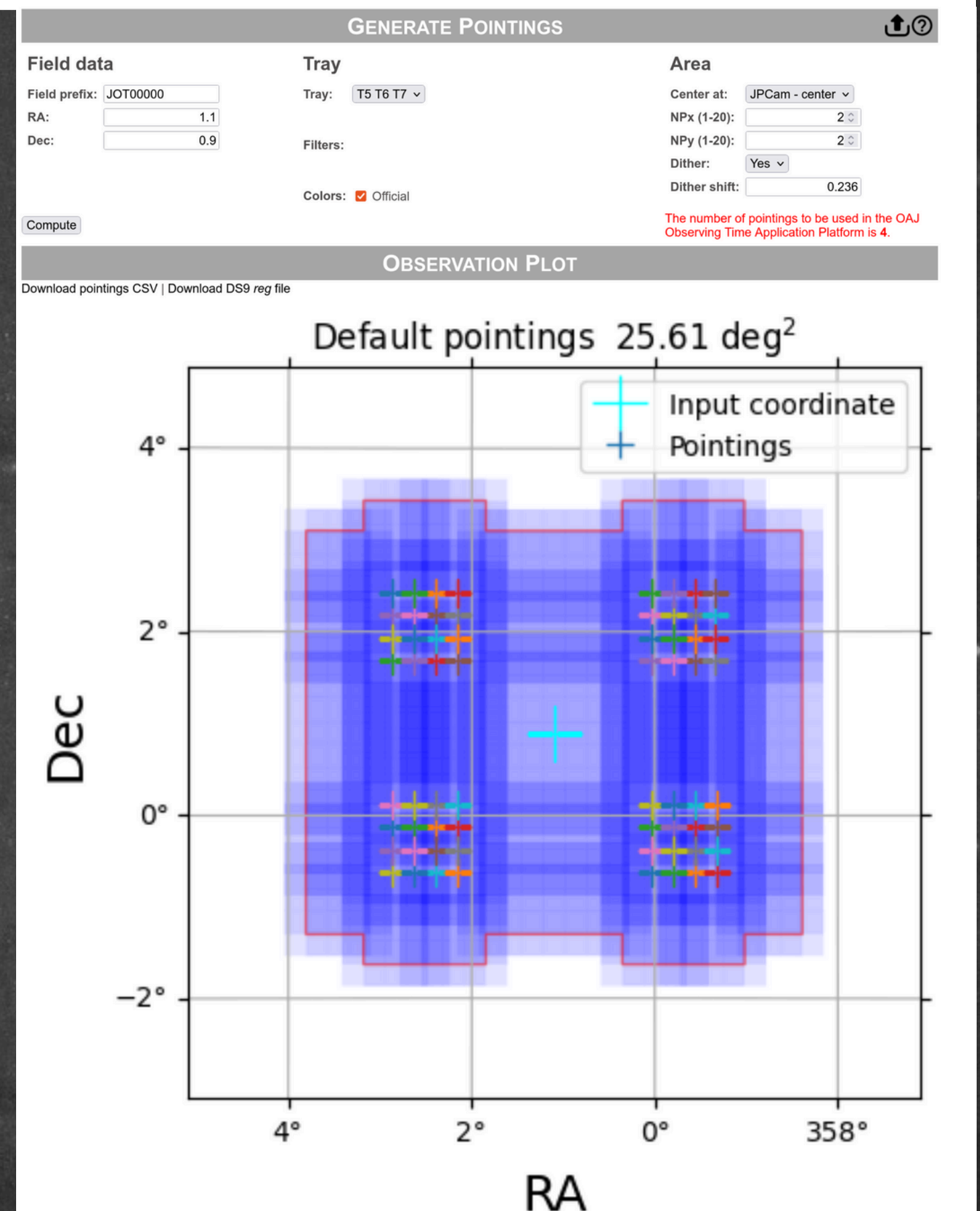


JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

JOP Broad band strategy (T5, T6, T7)

- Field Prefix: A name of your choice.
- RA of the center of the pointing (in degrees).
- Dec of the center of the pointing (in degrees).
- NPx: Number of pointings of the grid in RA to increase the area (not to cover CCD gaps which is managed internally).
- NPy: Number of pointings of the grid in Dec to increase the area (not to cover CCD gaps which is managed internally).
- Dither: Use of dither (True/False). Use of dithering is highly recommended as it is the supported option by the OAJ to ensure optimal reduced data.
- Dither Shift: The dither shift (in degrees). A shift of 0.236 degrees is the recommended option by the OAJ to ensure optimal reduced data.
- Number of pointings output in red (NPx X NPy). This number is the one to be used as “N. Points” in the JETC and “Number of pointings” in the oajweb portal application.

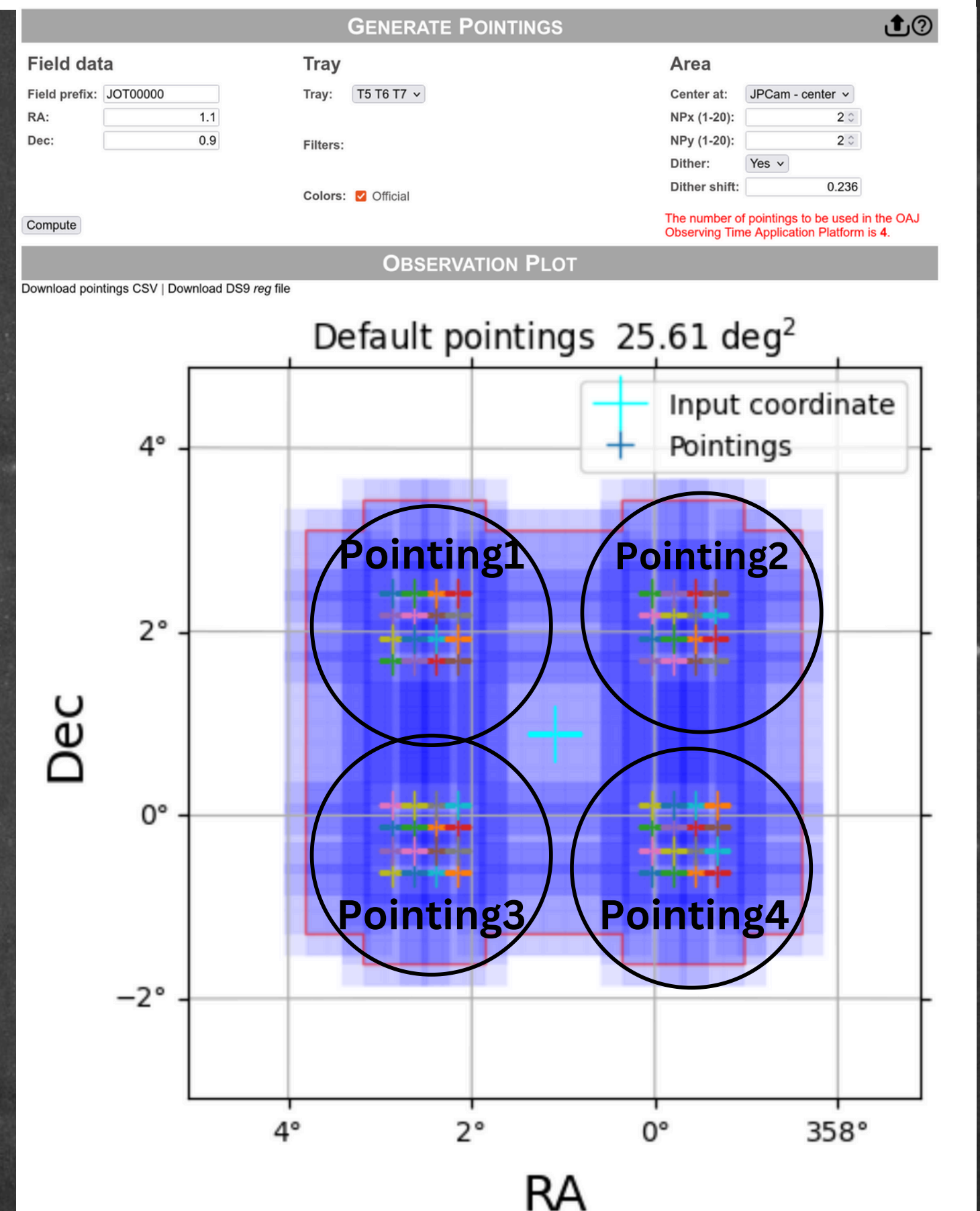


JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

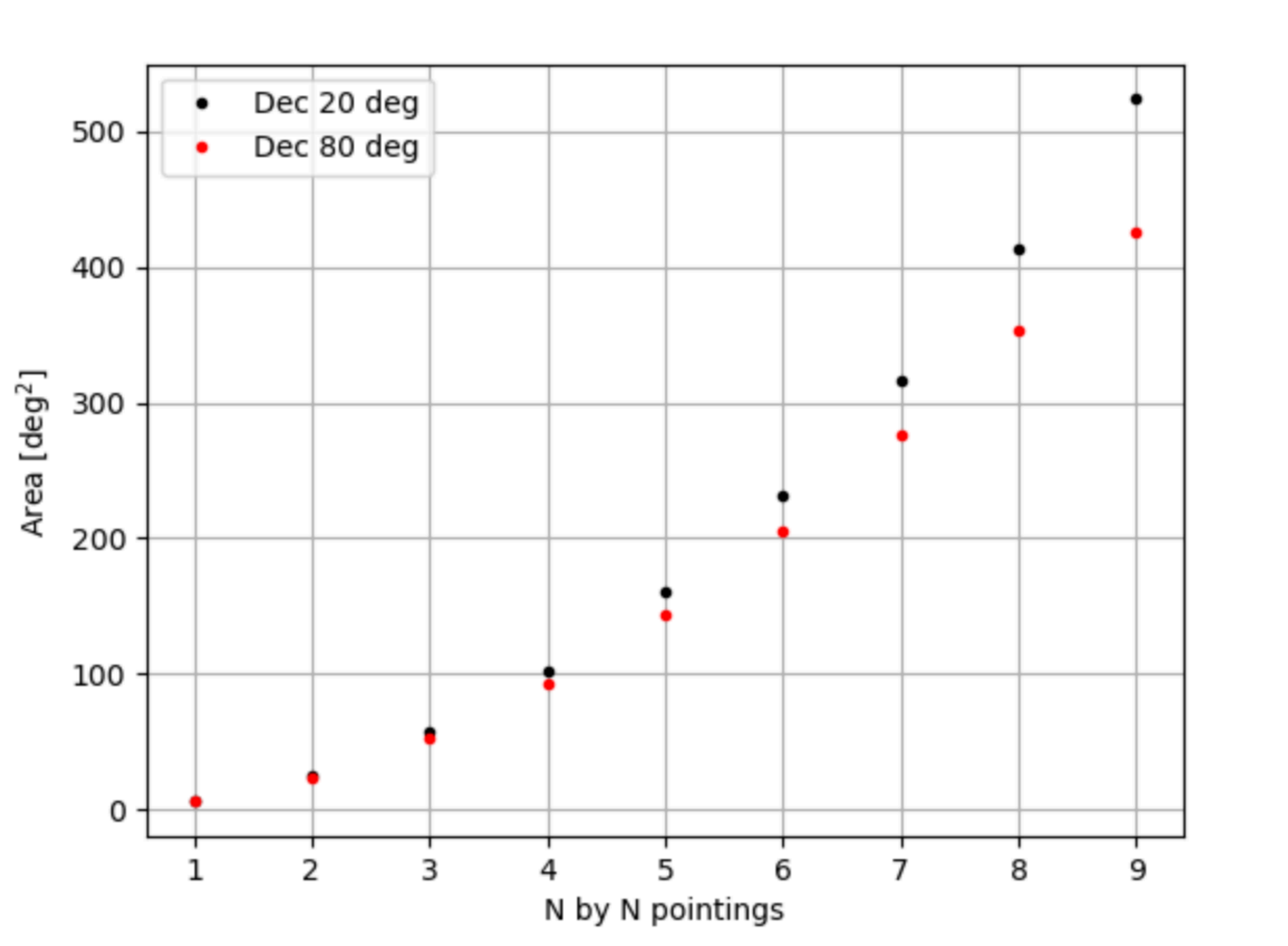
JOP Broad band strategy (T5, T6, T7)

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OBSERVING STRATEGIES AND TOOLS

JOP Broad band strategy (T5, T6, T7) covered area

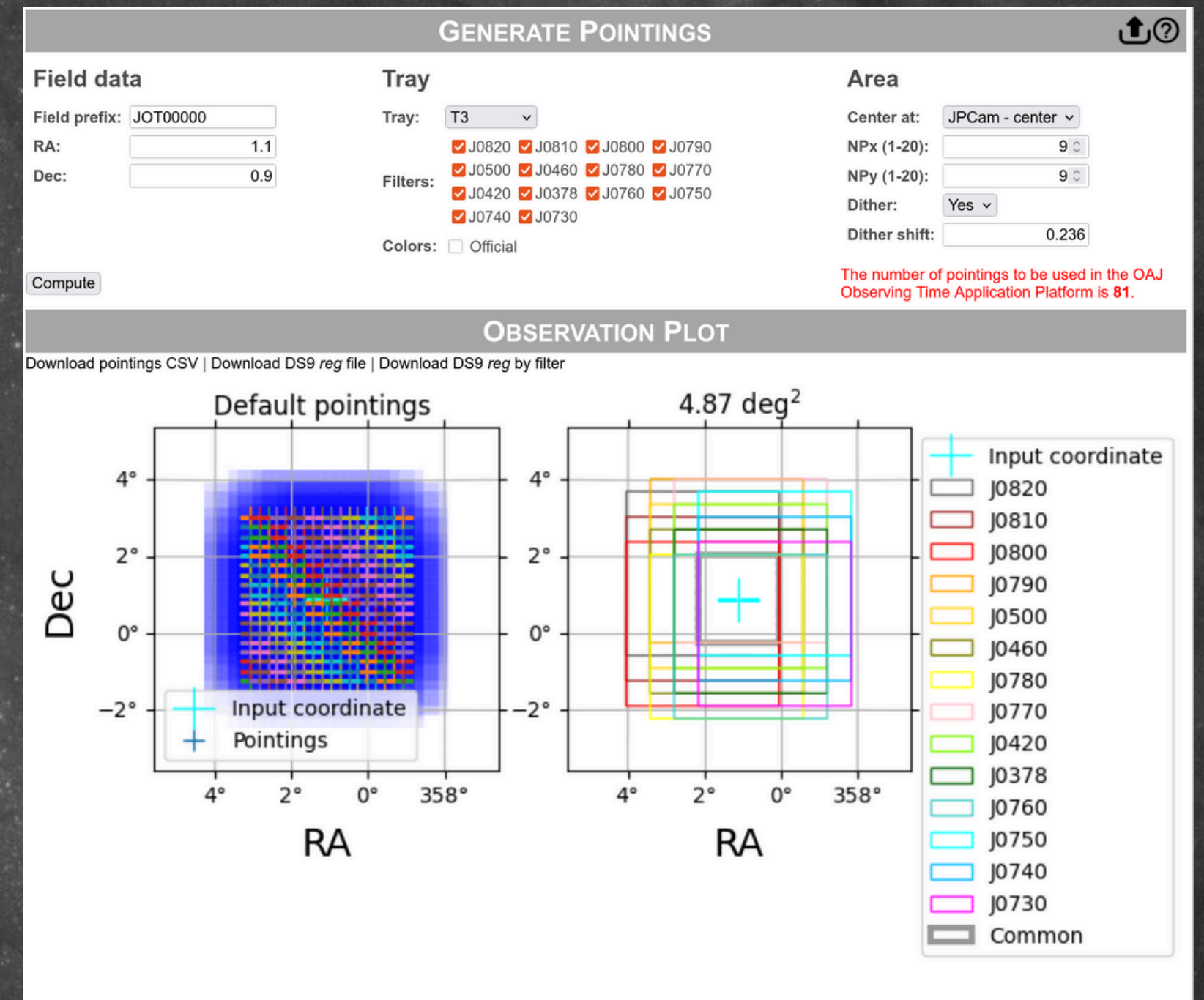


JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

JOP Narrow band strategy (T1234)

- Field Prefix: A name of your choice.
- RA of the center of the pointing (in degrees).
- Dec of the center of the pointing (in degrees).
- NPx: Number of pointings of the grid in RA to grow the area.
- NPy: Number of pointings of the grid in Dec to grow the area.
- Tray: Values: 'T1', 'T2', 'T3', or 'T4'. Specific filters can be selected or deselected as desired.
- The use of official filter colors is optional; better color contrast can be obtained with non-official colors.
- Dither: Use of dither (True/False). Dithering is the supported mode by the OAJ for optimal data reduction.
- Dither Shift: The dither shift (in degrees). A shift of 0.236 degrees is recommended for optimal data reduction by the OAJ.
- Number of pointings output in red (NPx X NPy). This number is the one to be used as "N. Points" in the JETC and "Number of pointings" in the oajweb portal application.

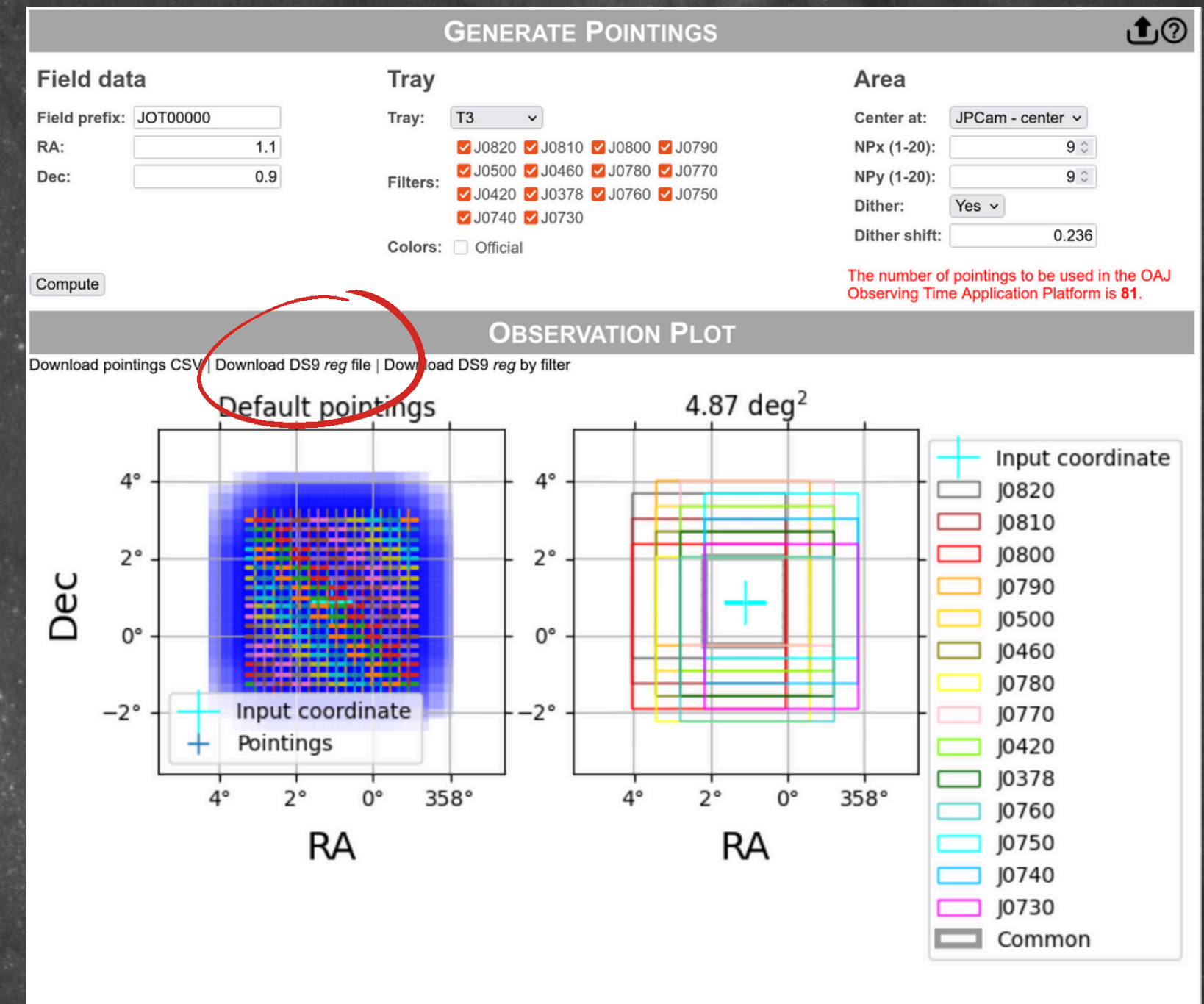


JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

JOP Narrow band strategy (T1234)

- Field Prefix: A name of your choice.
- RA of the center of the pointing (in degrees).
- Dec of the center of the pointing (in degrees).
- NPx: Number of pointings of the grid in RA to grow the area.
- NPy: Number of pointings of the grid in Dec to grow the area.
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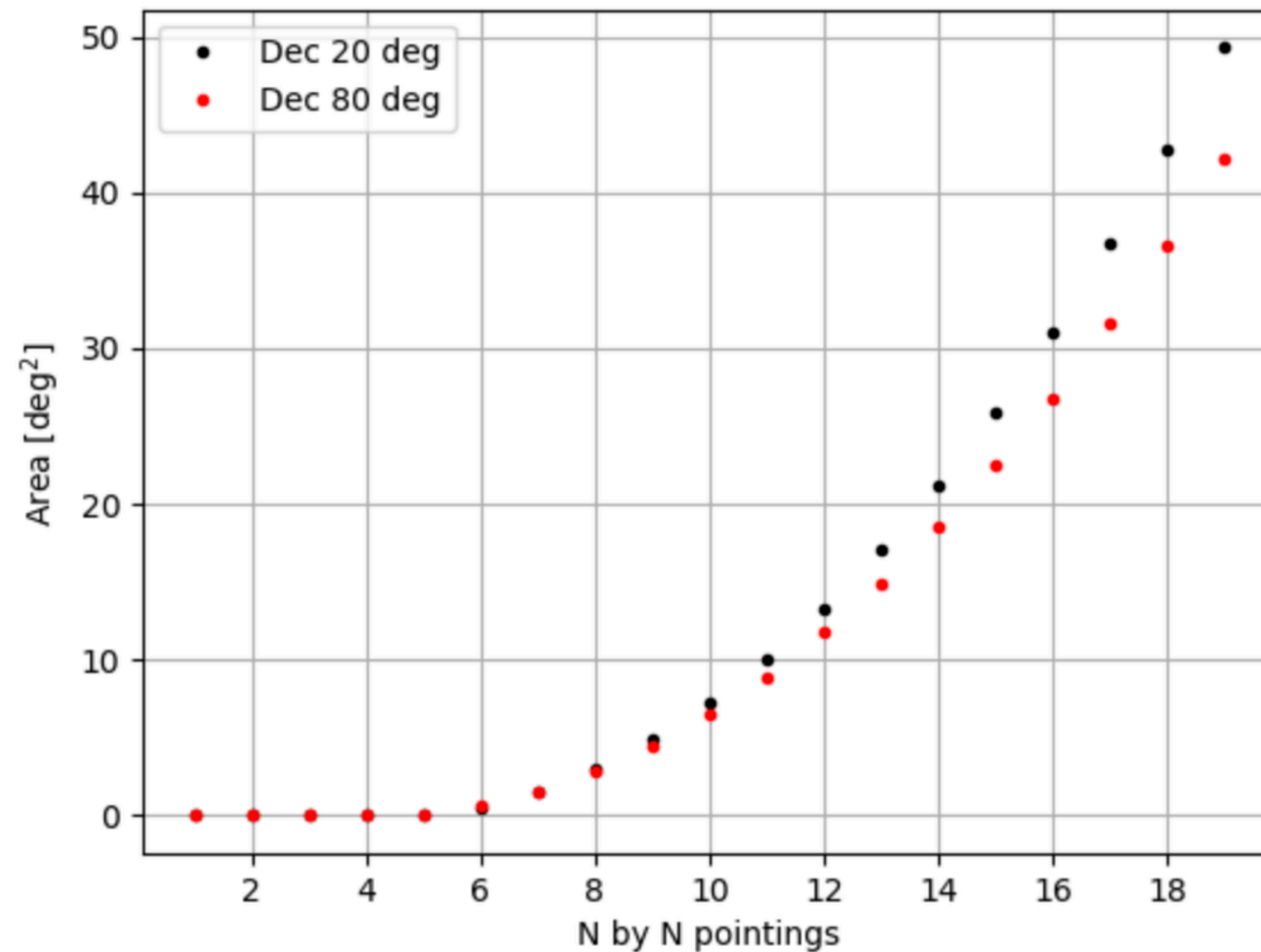


Common area region can be downloaded in ds9 format for further exploration. Pointings can be downloaded in csv format.

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

J-OP Narrow band strategy (T1234) covered area



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OBSERVING STRATEGIES AND TOOLS

Ok, I know the pointings I need to cover the desired area.
What is the time I need to reach my desired depth?

<https://www.cefca.es/jop/>

JPCam Exposure Time Calculator JETC



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OBSERVING STRATEGIES AND TOOLS

JETC <https://www.cefca.es/jop/>

But I do not know how to use it!

OAJ

CEFCA

OAJ

Observatorio
Astrofísico de
Javalambre

Input Magnitude (in AB mag):
22

Input Band:
J0378

Reference Band for Normalization (if empty, input band is used):
Select...

Tray/Filter:
☒ T1 ☒ T2 ☒ T3 ☒ T4 ☐ iSDSS (T5)
☐ gSDSS (T7) ☐ rSDSS (T6) ☐ open

Exposure Time [s]:
240

Desired SNR:

Number of Exposures:
4

Aperture's Diameter in Arcsec:
3

Extended Object:
☐ If pressed, aperture diameter disables

Airmass:
1.1

Gain:
1

FWHM (arcsec):
1

Binning:
1

Sky Brightness:
Dark

Input Spectrum:
starburst E(B-V) < 0.1

☐ Stars
☐ AGNs
☒ Galaxies

☐ Upload pysynphot readable format spectrum. If pressed, input spectrum from list disables

No file uploaded.
Redshift:
0

Calculate

Counts

λ [Å]

SNR

λ [Å]

magAB

λ [Å]

JPCam Exposure Time Calculator

Input Spectra

Band	Wavelength	SNR	Counts	ExpTime	Uncertainty on observed mag
uJAVA	3571.4	1.8	247.8	240	0.55
J0378	3786.7	3.8	531.4	240	0.27
J0390	3904.2	5.1	754.9	240	0.20
J0400	4008.9	10.2	1743.3	240	0.10
J0410	4116.2	5.1	755.0	240	0.20
J0420	4209.9	5.1	756.0	240	0.20
J0430	4312.2	6.1	936.8	240	0.16
J0440	4406.4	7.2	1152.6	240	0.14
J0450	4515.3	4.9	735.3	240	0.20
J0460	4609.5	4.7	702.6	240	0.21
J0470	4705.0	6.6	1044.5	240	0.15
J0480	4815.4	6.8	1073.7	240	0.15
J0490	4912.3	8.5	1349.9	240	0.12
J0500	5001.5	10.6	1677.3	240	0.09
J0510	5100.1	6.0	959.2	240	0.17
J0520	5208.7	5.3	821.9	240	0.19

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

JETC <https://www.cefca.es/jop/>

But I do not know how to use it!

OAJ

CEFCA

OAJ

Observatorio
Astronómico de
Javalambre

Input Magnitude (in AB mag):
Input Band:
Reference Band for Normalization (if empty, input band is used):
Tray/Filter:
Exposure Time [s]:
Desired SNR:
Number of Exposures:
Aperture's Diameter in Arcsec:
Extended Object:
Airmass:
Gain:
FWHM (arcsec):
Binning:
Sky Brightness:
Input Spectrum:

☐ Stars

☐ AGNs

☒ Galaxies

Upload pysynphot readable format spectrum. If pressed, input spectrum from list disables

No file uploaded. Redshift:

Drag and Drop or Select a File

0

Calculate

JPCam Exposure Time Calculator

Counts

λ [Å]

SNR

λ [Å]

magAB

λ [Å]

Input Spectra

Band	Wavelength	SNR	Counts	ExpTime	Uncertainty on observed mag
uJAVA	3571.4	1.8	247.8	240	0.55
J0378	3786.7	3.8	531.4	240	0.27
J0390	3904.2	5.1	754.9	240	0.20
J0400	4008.9	10.2	1743.3	240	0.10
J0410	4116.2	5.1	755.0	240	0.20
J0420	4209.9	5.1	756.0	240	0.20
J0430	4312.2	6.1	936.8	240	0.16
J0440	4406.4	7.2	1152.6	240	0.14
J0450	4515.3	4.9	735.3	240	0.20
J0460	4609.5	4.7	702.6	240	0.21
J0470	4705.0	6.6	1044.5	240	0.15
J0480	4815.4	6.8	1073.7	240	0.15
J0490	4912.3	8.5	1349.9	240	0.12
J0500	5001.5	10.6	1677.3	240	0.09
J0510	5100.1	6.0	959.2	240	0.17
J0520	5208.7	5.3	821.9	240	0.19

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

JETC <https://www.cefca.es/jop/>

But I do not know how to use it!

Read the help!

Here we will present the main points.

We will see specific example cases.

OAJ

CEPCA

JPCam Exposure Time Calculator - Help Page

<< Back to JPCam Exposure Time Calculator

Input Descriptions

Input Magnitude (in AB mag):
The apparent magnitude in the AB magnitude system.

Input Band:
The photometric band in which the main calculation is going to be performed.

Reference Band for Normalization (if empty, input band is used):
An optional field to specify the band to normalize to the input magnitude value, which can be different as the "input band" if input spectrum data is introduced below from predefined available options, or user defined ones.

Tray/Filter:
Tray or filter to be used during observation. This includes specific filter distribution like in T1, T2, T3, T4, and the trays where copy of all filters are available: gSDSS, iSDSS, and rSDSS. No filter (open) is also available.

T1

J0550

J0570

J0590

J0410

J0490

J0540

uJAVA

J0450

J0530

J0560

J0580

J0620

J0610

J0600

T2

J0650

J0670

J0690

J0430

J0510

J0640

J0390

J0470

J0630

J0660

J0680

T3

J0720

J0750

J0770

J0790

J0420

J0500

J0710

J0740

J0378

J0460

J0700

J0730

J0760

J0780

T4

J0820

J0850

J0870

J0890

J0440

J0520

J0810

J0840

J0400

J0480

J0800

J0830

J0860

J0880

J1007

J0910

J0900

Exposure Time [s]:
The total duration of the exposure time in seconds. This time includes all exposures (if more than one). If defined, Desired SNR is disabled. This box will be enable only if desired SNR is empty.

Desired SNR:

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

JETC

- Input Magnitude (in AB mag)
- Input Band: The photometric band in which the main calculation is going to be performed.
- Reference Band for Normalization (if empty, input band is used, optional).
- Tray/Filter: Tray or filter to estimate output. No filter (open) is also available.
- Exposure Time [s]: This time is the sum for all exposures. If defined, Desired SNR is disabled. This box will be enable only if desired SNR is empty.
- Desired SNR: The desired Signal-to-Noise Ratio (SNR) for the observation. If defined, Exposure time is disabled. This box will be enable only if Exposure Time is empty.
- Number of Exposures: The number of exposures to be taken. The supported value is 4 or multiples of 4 for narrow band strategy, since this is the value entirely supported by the OAJ in order to perform the optimized dither pattern (4 exposures) and deliver reduced images.
- Aperture's Diameter in Arcsec.
- Extended Object: If selected, the aperture's diameter will be disabled and output information, Counts and SNR, are defined within a pixel, while input magnitudes are defined in mag/arcsec².
- FWHM (arcsec).
- Binning: The binning factor of the CCD detector. Supported modes are binning 1 for iSDSS, gSDSS, and rSDSS, while 2 for T1, T2, T3, and T4.
- Sky Brightness: Sky brightness during observation: Dark, Gray, or Bright.
- Input Spectrum from different options or Upload own spectrum in pysynphot readable format.
- Redshift: The redshift value for the object.

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

- Input Magnitude (in AB mag)
- Input Band: The photometric band in which the main calculation is going to be performed.
- Reference Band for Normalization (if empty, input band is used, optional).
- Tray/Filter: Tray or filter to estimate output. No filter (open) is also available.
- Exposure Time [s]: This time is the sum for all exposures. If defined, Desired SNR is disabled. This box will be enable only if desired SNR is empty.
- Desired SNR: The desired Signal-to-Noise Ratio (SNR) for the observation. If defined, Exposure time is disabled. This box will be enable only if Exposure Time is empty.
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- Aperture's Diameter in Arcsec.
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- FWHM (arcsec).
- **Binning: The binning factor of the CCD detector. Supported modes are binning 1 for iSDSS, gSDSS, and rSDSS, while 2 for T1, T2, T3, and T4.**
- Sky Brightness: Sky brightness during observation: Dark, Gray, or Bright.
- Input Spectrum from different options or Upload own spectrum in pysynphot readable format.
- Redshift: The redshift value for the object.

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

IMPORTANT!!!

- In the JETC the Exposure time is always defined as the sum of the individual exposure times.

$\text{individual ExposureTime} = \text{ExpTime} / \text{Number of Exposures}$

- Therefore, larger ExpTime is possible such that individual ExpTime is less or equal than 300 seconds

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

JETC

Input Magnitude (in AB mag):
22

Input Band:
J0450

Reference Band for Normalization (if empty, input band is used):
Select...

Tray/Filter:
☒ T1 ☒ T2 ☒ T3 ☐ T4 ☐ iSDSS ☐ gSDSS ☐ rSDSS ☐ open

Exposure Time [s]:
240

Desired SNR:

Number of Exposures:
4

Aperture's Diameter in Arcsec:
3

Extended Object:
☐ If pressed, aperture diameter disables

Airmass:
1.1

Gain:
1

FWHM (arcsec):
1

Binning:
1

Sky Brightness:
Dark

Input Spectrum:
Sc

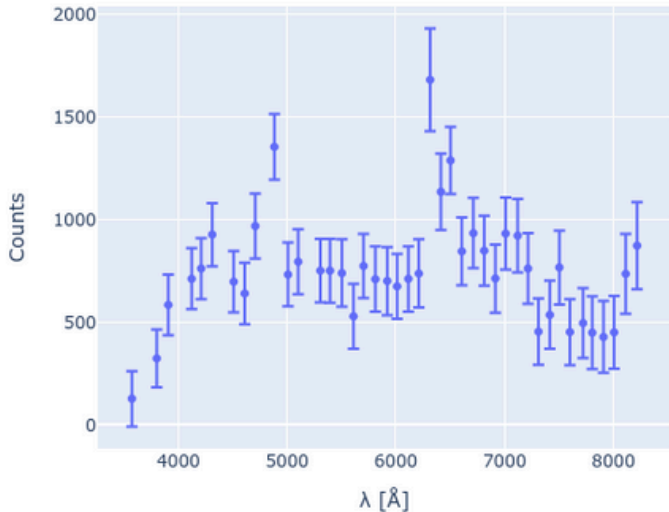
☐ Stars
☐ AGNs
☒ Galaxies

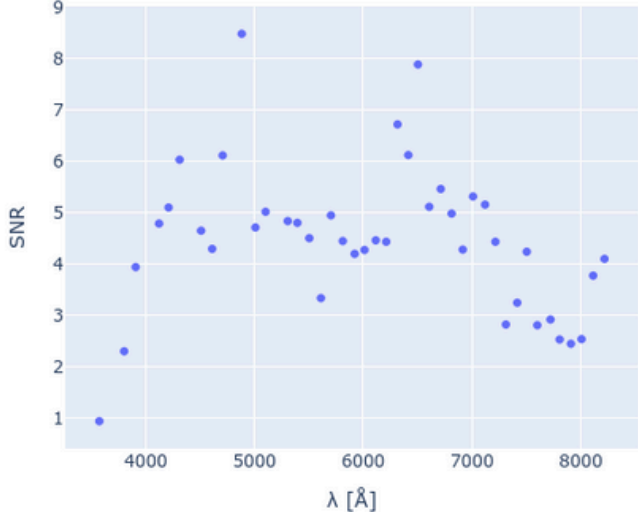
☐ Upload pysynphot readable format spectrum. If pressed, input spectrum from list disables

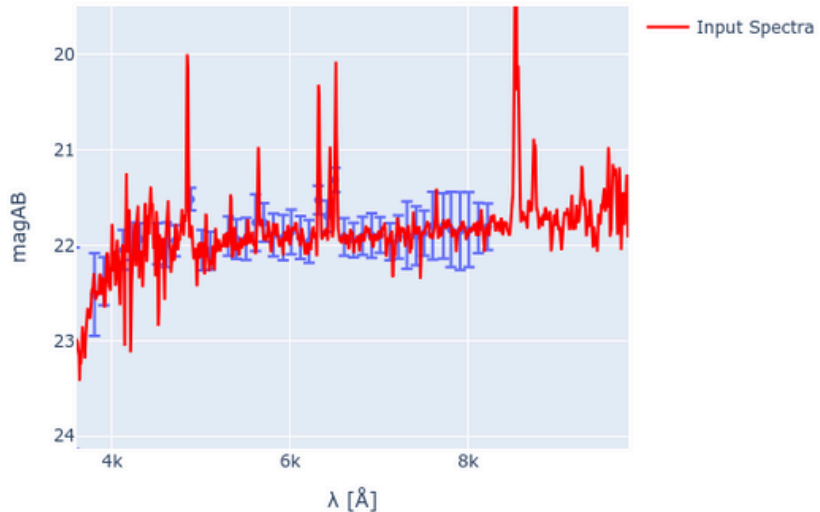
No file uploaded.
Redshift:
0.3

Calculate

JPCam Exposure Time Calculator







Band	Wavelength	SNR	Counts	ExpTime	Uncertainty on observed mag
uJAVA	3572.2	0.9	127.7	240	1.06
J0378	3800.8	2.3	324.9	240	0.43
J0390	3906.6	3.9	584.9	240	0.25
J0410	4121.8	4.8	712.7	240	0.21
J0420	4209.2	5.1	761.7	240	0.20
J0430	4310.8	6.0	926.7	240	0.17
J0450	4508.3	4.7	698.1	240	0.21
J0460	4609.9	4.3	641.2	240	0.23
J0470	4706.5	6.1	969.0	240	0.16
J0490	4882.4	8.5	1354.8	240	0.12
J0500	5007.8	4.7	733.4	240	0.21
J0510	5101.6	5.0	795.4	240	0.20
J0530	5305.1	4.8	752.0	240	0.21
J0540	5393.8	4.8	751.2	240	0.21
J0550	5503.4	4.5	740.6	240	0.22
J0560	5610.3	3.3	529.0	240	0.30
J0570	5702.4	5.0	774.5	240	0.20

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

JETC Project total time

- Once you have decided the Trays you want to observe and the total exposure times for each Tray, the final time estimation of the project can be estimated.
- N. Points is the total number of pointings (the one in red in the JOP tool) for each Tray i.
- ExpTime is the total exposure time for the Tray i.
- N. Exp is the number of exposures to take in Tray i.

IMPORTANT!!!!!!! The individual exposure time (which is not the one to be input) will be:

$$\text{individual ExpTime} = \text{ExpTime} / \text{N. Exp}$$

The one to be input and used in the JETC is the total exposure time, so the sum of each individual exposure

Project Total Time

T1:

N. Points T1:

81

ExpTime T1 [s]:

240

N. Exp T1:

4

T2:

N. Points T2:

81

ExpTime T2 [s]:

240

N. Exp T2:

4

T3:

N. Points T3:

81

ExpTime T3 [s]:

240

N. Exp T3:

4

T4:

N. Points T4:

81

ExpTime T4 [s]:

480

N. Exp T4:

8

gSDSS (T7):

N. Points gSDSS:

0

ExpTime gSDSS [s]:

0

N. Exp gSDSS:

0

rSDSS (T6):

N. Points rSDSS:

0

ExpTime rSDSS [s]:

0

N. Exp rSDSS:

0

iSDSS (T5):

N. Points iSDSS:

1

ExpTime iSDSS [s]:

480

N. Exp iSDSS:

16

Open:

N. Points open:

0

ExpTime open [s]:

0

N. Exp open:

0

Calculate total time

The total time for your project is: 48.45 h

JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

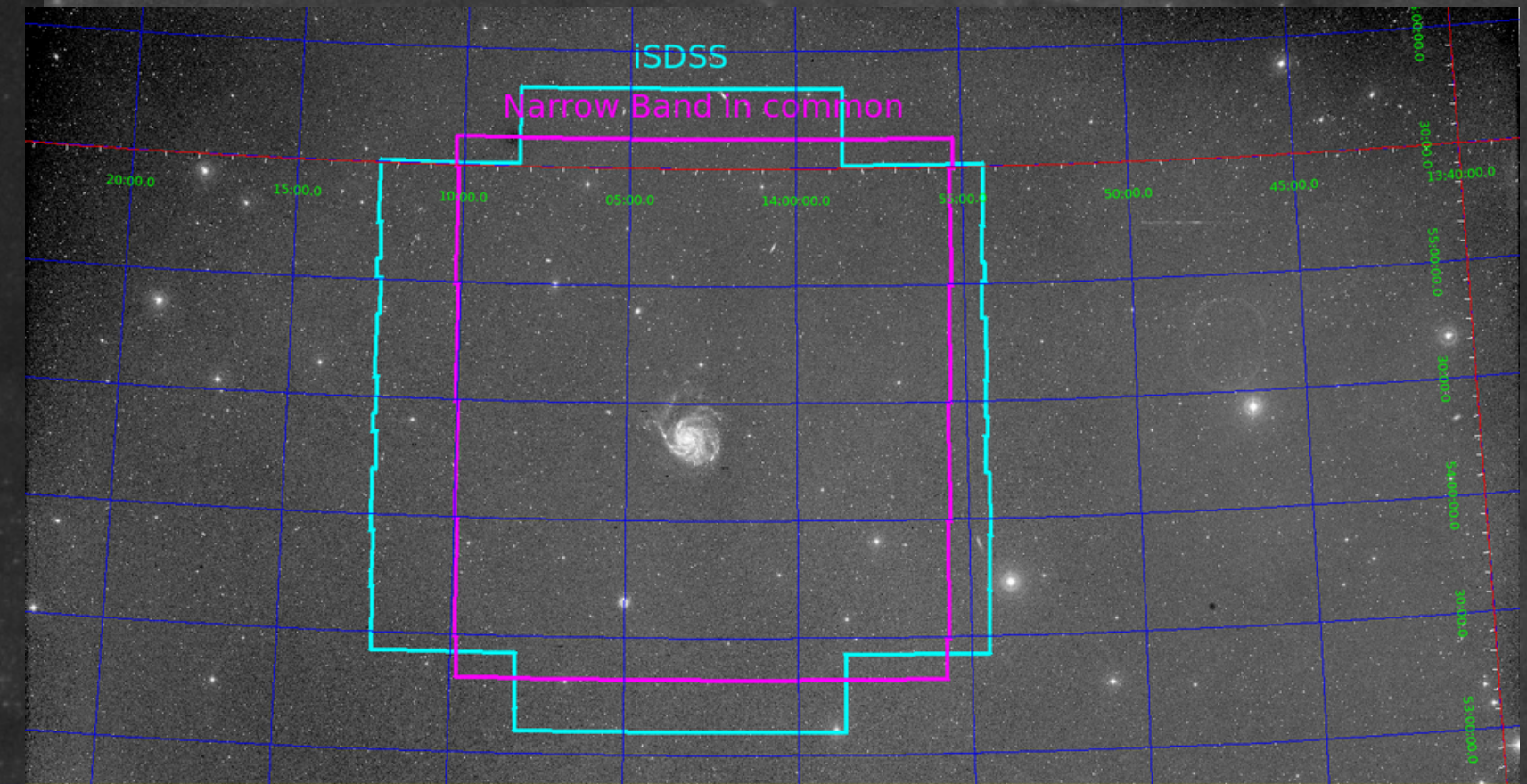
How can I plan a specific observation?

Example Case: Observe M101 with J-PAS strategy

Use of JOP and JETC to obtain the pointings, area covered, exposure times, and total project time.

https://oajweb.cefca.es/observingtime/observing_tools

https://oajweb.cefca.es/doc/tac/observingtools/example_case_v202502.pdf



JPCAM CALL FOR PROPOSALS 2025A-2026B

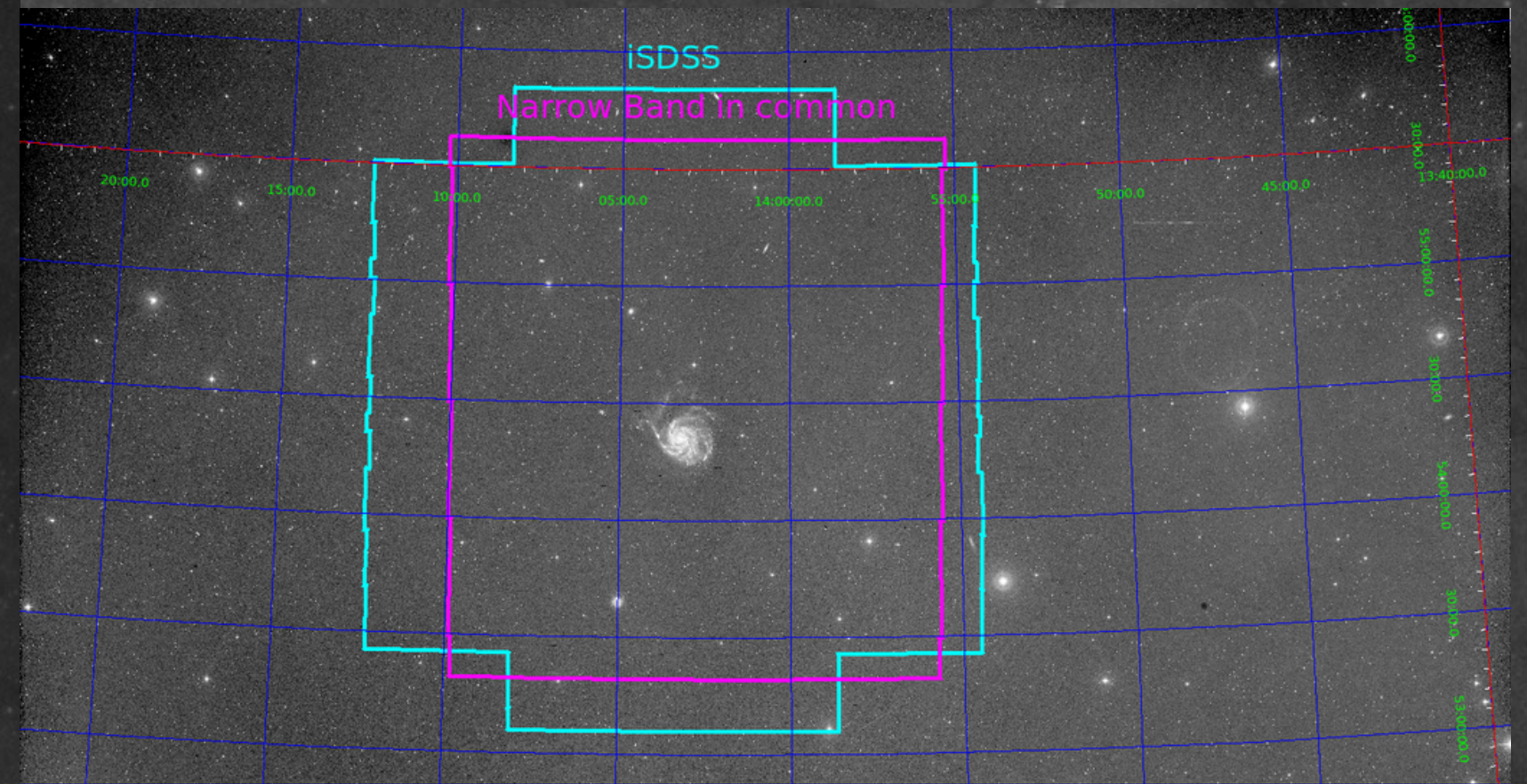
OBSERVING STRATEGIES AND TOOLS

How can I plan my specific observation?

We will see specific example cases based on requests from users

https://oajweb.cefca.es/observingtime/observing_tools

https://oajweb.cefca.es/doc/tac/observingtools/example_case_v202502.pdf



JPCAM CALL FOR PROPOSALS 2025A-2026B

OBSERVING STRATEGIES AND TOOLS

Summary

- Open time call for proposals to observe with JPCam at the JST250.
- JPCam with a FoV of 3.4 sq. deg. (14×) 0.48deg × 0.51deg, combined with the filter system, is unique.
- Observations will be executed during 1 year (2025B-2026A). 200 hours will be dedicated to open time projects.
- Observing tools available: pointing planner (JOP) and exposure time calculator (JETC)
- Default dithering pattern mode and pointings recommended.
- All filters (59) offered.
- More info and submission.
https://oajweb.cefca.es/observingtime/applying_observing_time
- CfP details https://oajweb.cefca.es/doc/tac/cfp/OAJ-Open_Time_2025B2026AJST250JPCam.pdf
- **Deadline for submission: 15 April 2025 at 23:59 CET**
- **Questions? Need Help? Email us to oaj-support@cefca.es**

Examples from users

- HERCULES CLUSTER (ABELL 2151)
 - 16:05:14.89 +17:44:34.5
 - $m=23/\text{arcsec}^2$ and $\text{SNR}=5/\text{pixel}$ in J0390 (extended object). FWHM 1 arcsec. Dark sky brightness. Input Spectrum elliptical galaxy, redshift $z=0.036$
 - Observations with T1, T2, T3, and T4. Therefore binning 2x2. 4 exposures (because at least 4 dithers mandatory).
 - Result in the JETC 402 seconds. So, individual exposures of 100.5 seconds no problem with maximum individual exposure time.
 - 1.5 sq. deg -> 7X7 mosaic -> 49 pointings in JOP
 - 32.99 hours project total time in the JETC

Examples from users

- Galactic Center
 - RA=318 deg, Dec=48.32 deg
 - J-PAS strategy
 - Observations with T1, T2, T3 of 60 seconds each individual exposures with 4 dithers (N.Exp=4, ExpTime=240) during dark time. Binning 2x2.
 - T4. 60 seconds each individual exposures with 4 dithers and repeating each dither x2, (N.Exp=8, ExpTime=480) to observe in Grey time. Binning 2x2
 - T5 (iSDSS). 30 seconds each individual exposures with 4 dithers and repeating each dither x4, (N.Exp=16, ExpTime=480) to observe in Bright time. Binning 2x2.
 - SNR between 3 and 9 (T1234) for magAB=22. SNR 4.7 for T5 for magAB=23.5.
 - ~5 sq. deg -> 9X9 mosaic T1234-> 81 pointings in JOP. 1 pointing T5 in JOP.
 - 48.45 hours project total time in the JETC