

# OCA collection of photographic plates



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Observatoire de la Côte d'Azur, Laboratoire Lagrange<sup>1</sup>

Observatoire de la Côte d'Azur, Laboratoire Galilée<sup>2</sup>

Eros [433]						
1967	Octobre	2,92420 .92826 .93251	6 <sup>h</sup> 13 <sup>m</sup> 28 <sup>s</sup> .700 29.251 30.267	+41° 50'	06".81 07.52 08.54	-0.4 0' 630 - -
1967	Octobre	6,04150 .04636	6 <sup>h</sup> 25 <sup>m</sup> 57 <sup>s</sup> .771 58.880	+42° 03'	27".60 28.60	+0.1 0 636 -
1967	Décembre	3,04124 .04382 .04590	10 <sup>h</sup> 13 <sup>m</sup> 18 <sup>s</sup> .398 18.796 19.242	+29° 25'	05".96 25 01.82 24 58.15	-0.6 -2' 652 - -
1968	Janvier	3,03394 .03582 .03789	11 <sup>h</sup> 34 <sup>m</sup> 10 <sup>s</sup> .652 10.973 11.132	+8° 13'	54".48 48.54 42.20	-0.1 -2' 686 - -
1968	Janvier	6,18787 .18934 .19202	11 <sup>h</sup> 40 <sup>m</sup> 02 <sup>s</sup> .528 02.765 02.976	+5° 37'	54".24 47.64 42.72	+0.2 -9 694 - -
1968	Janvier	11,23490 .23698 .23906	11 <sup>h</sup> 48 <sup>m</sup> 40 <sup>s</sup> .964 41.203 41.468	+1° 15'	03".53 14 58.71 53.17	-0.4 -13 703 - -
1968	Février	2,16342 .16549 .16757	12 <sup>h</sup> 10 <sup>m</sup> 33 <sup>s</sup> .191 33.226 33.250	-18° 10'	33".17 33.62 45.70	0.0 +2' 744 - -

**NAROO CIAS Workshop**  
Atelier CIAS 2019

Observatoire de Paris, Meudon  
2019, April 1-3

# Observatoire de la Côte d'Azur

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Observatoire de la Côte d'Azur



- Founded in 1879
- **Astrometry:** important research
  - Large meridian circle (Brunner brothers, 1887)
  - Zeiss binocular astrograph (1931)

- **CERGA + Observatoire de Nice = OCA** in 1988
- **Collections of plates** taken with the **Zeiss astrograph** and the **Schmidt telescope**
- **Collections from other sites**

Observatoire de Calern



- Founded in 1974
- Administrated by CERGA
- **Astrometry:**
  - Schmidt telescope

# The binocular Zeiss astrograph

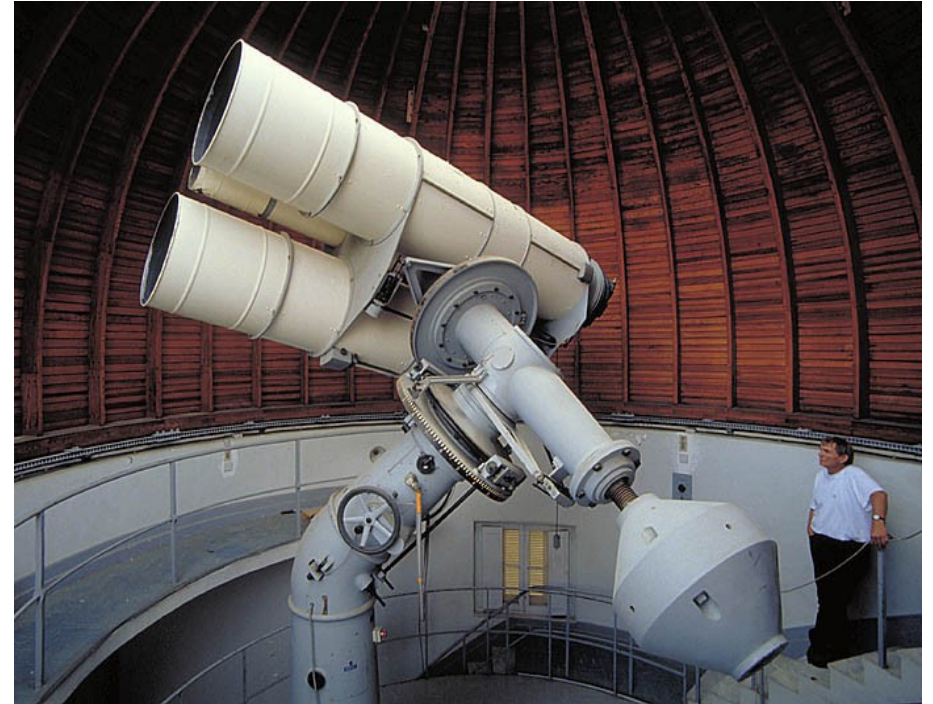
- Provided as war damages by C. Zeiss
- Installed at OCA in 1935

## Characteristics

- **Focal length:** 2 m
- **Aperture ratio:** 40 cm

## Plates

- **8 200 images:**  
9x12 cm, 13x18 cm, 16x16 cm,  
18x24 cm, 24x30 cm, 30x30 cm
- **Two observing teams:**
  - 1935-1961: A. Patry and M. Laugier
  - 1965-1978: B. Milet
- **Solar System Objects**



*The Zeiss binocular astrograph at Observatoire de la Côte d'Azur. (Marc Heller © OCA)*



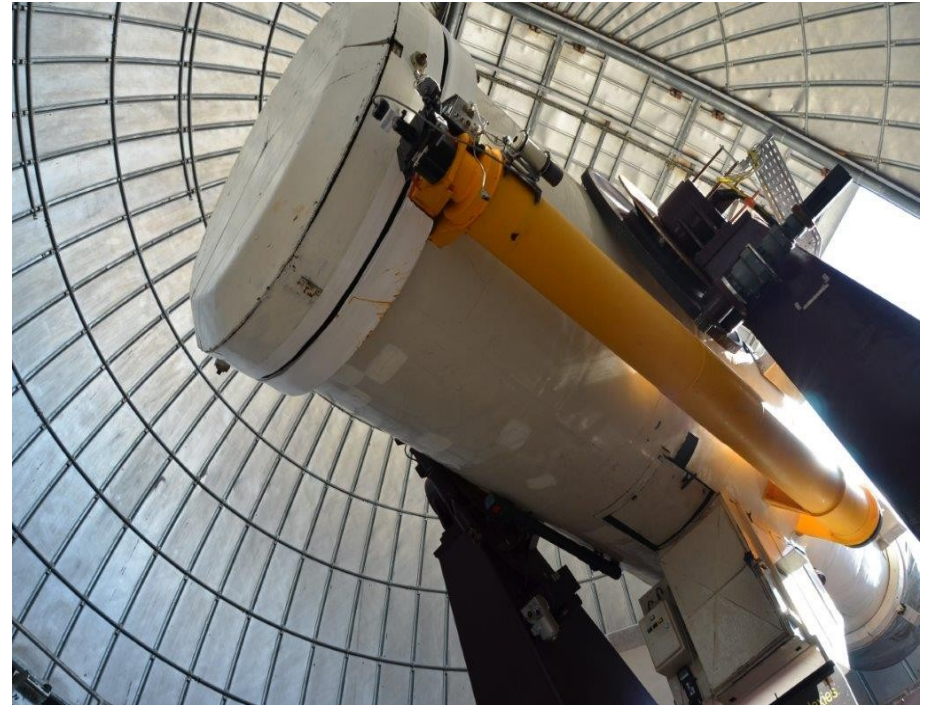
# The Calern Schmidt telescope

## Characteristics

- **Spherical primary mirror:** 1.52 m
- **Focal length:** 3.16 m
- **Schmidt lens:** fused silica
- **Diameter:** 90 cm

## Plates

- **3 600 images:**  
30x30 cm
- **Observing team:**  
1978-1996: J.-L. Heudier, Ch. Pollas, ...



*TESCA: Telescope de Schmidt de CAlern. (© OCA)*

## Topics

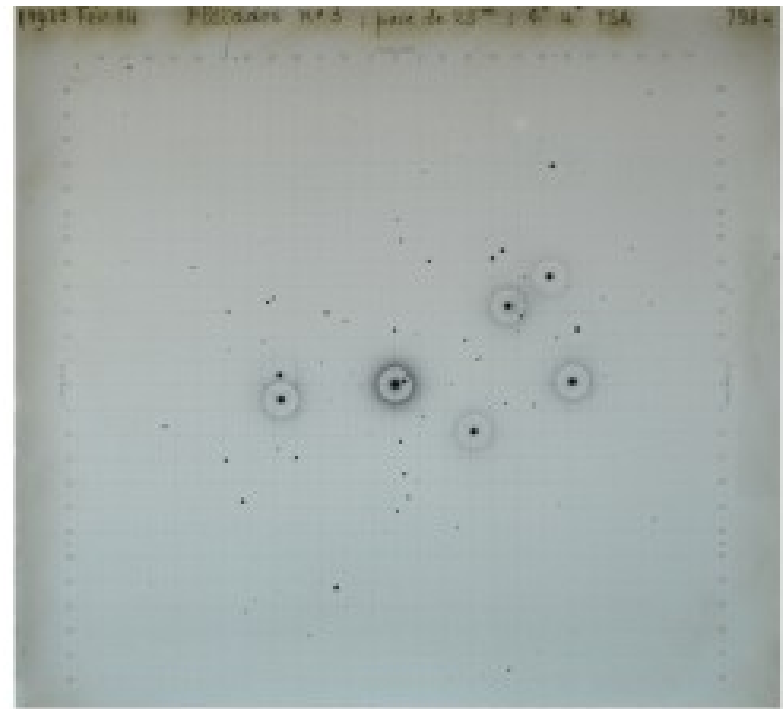
- **Solar System objects**  
(search and characterization of asteroids and comets, satellites, occultations,...)
- **Stellar dynamics in clusters**
- **Supernovæ and variable stars**
- **Quasars, nebulae**
- ...

# Other observing sites

- **Meudon Observatory (1961-1975)**
  - 3 293 images on soft film (D=17.5 cm)
- **“Carte du Ciel”**
  - Various observatories (e. g. Algiers)
- **Pic du Midi (1960s)**
  - 50 glass plates: meridian and solar
- **Various observatories**
  - La Silla, CFHT, OHP, Pic du Midi, Manchester Univ., Zeiss T1.52, ESO, T1 Chiran
  - 450 plates (various formats)

## Objects

- **Solar system planets**  
(Jupiter, Saturn, Uranus, Neptune) + Pluto
- **Nebulæ**
- **Galaxies**
- **Clusters**



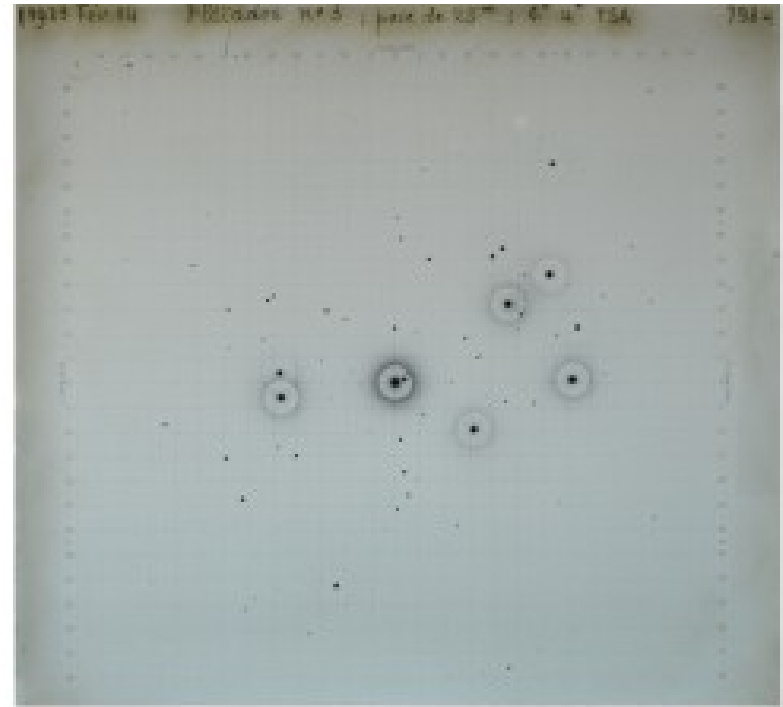
*The M45 open cluster on a plate from the “Carte du Ciel” program, taken on February 14<sup>th</sup>, 1923 at Algiers Observatory. Firmed FG. Format 16x16 cm. (© OCA)*

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**16 000 plates and photographic films covering more than 60 years of observations (1935-1996)**

# Preserving the collection

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- **Autumn 2012:**

**Operation of protection of the plates by the Heritage service of OCA**

- **Secured storage**

- 11 000 plates
- Plates moved and stored in one single room
- Air-drying facility: no thermal shocks
- Special containers



*A new secured storage facility for astronomical Plates at the Calern observatory. The complete OCA's plate collection has been moved there in February 2013. (© OCA)*

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- **Classification and inventory of the plates**

- 8 000 plates before moving



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- Quality control on sample plates (random)
- Dry-cleaned to remove dust
- Inserted in neutral paper folders



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**16 000 plates and films stored in controlled atmosphere**

# General referencing operation: new DB

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## Goal: accurate and accessible referencing system

- **General referencing operation** launched in 2013 and currently in progress
- **Collaborations with several researchers** to gather all the possible information on the plates
- **Zeiss astrograph collection:** no previous inventory (before 2013)
  - Logs digitized and linked with plates
  - 2 500 observing logs
  - 1 500 celestial objects
  - 6 000 plates
- **Calern Schmidt telescope:** inventoried by Ch. Pollas (TESCA) and integrated in the DB
- **Other collections:** work in progress!



*Comet West ("great comet"). Plate n° 4406 taken by B. Millet on March 25.16724 (04:08:17), 1976. Format 16x16 cm. (© OCA)*

# General referencing operation: new DB

## Gestion des archives historiques et collections patrimoniales de l'Observatoire de la Côte d'Azur Service Patrimoine

Accueil Chercher Modifier Importer Exporter Configurer Sortir

Présentation des Plaques et films photographiques conservés à Calern

Aide Imprimer/Enregistrer

28 mars 2019 16h18

- **Accueil** : Choisir quel ensemble de données explorer dans l'environnement PatExplore
- **Chercher** : Faire des recherches dans les données, les visualiser avec leurs fichiers numérisés associés
- **Modifier** : Ajouter / modifier / supprimer des données, en ajouter manuellement d'autres
- **Importer** : Importer des données dans la base à partir d'un fichier de type Word ou Excel
- **Exporter** : Exporter une sélection de données de la base vers un fichier de type Word ou Excel
- **Configurer** : Configurer l'environnement de PatExplore

### Archives observationnelles conservées sur le site du Plateau de Calern de l'Observatoire de la Côte d'Azur (1935-1996)

Environ 16 000 plaques et films photographiques (astrographe de Nice, télescope de Schmidt de Calern, télescope de Schmidt de Meudon...) et leurs fiches d'observation associées



<https://fonds-patrimoine.oca.eu/patexplore/accueil.php>

Service Patrimoine de l'Observatoire de la Côte d'Azur - patrimoine@oca.eu