15 years manufacturing observatories !!!

20 years of engineering !!!

ECS

Engineering & Astrophysics

Engineering applied to the design, construction and automation of Astronomical Observatories

2026

Astronomical Observatories“End to end”

1. Study and characterization of the place (Site Testing)
2. Elaboration of own designs and projects
3. Civil Works and Facilities
4. Installation of optical equipment and automation
5. Facility maintenance

Projects

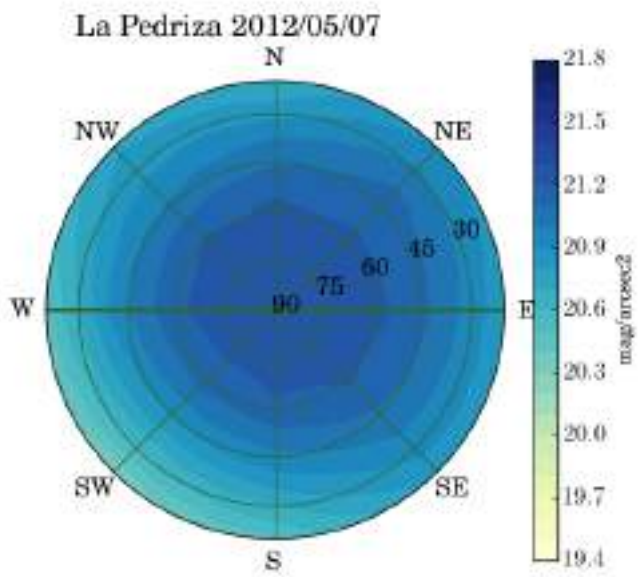
Our products

Sundials

1.- Study and characterization of the place(Site-Testing)

Provide site suitability information

- Seeing
- Climatology
- Sky brightness quality
- Light pollution
- Environmental pollution
- Logistics
- Geopolitical factors



Paraje		Localidad		C.P.	Provincia	Coordenadas Geográficas		Altura
La pedriza		Alcalá la Real		23680	Jaén	37º24´54"N	3º57´12"O	1026
Dia	Mes	Año	Hora (T.U.)	Temp(ºC)	Orientación	Angulo(º)	mags/arcsec2	mags/arcsec2
7	**5**	**2012**	22:00	17ºC		**90**	**21.28**	
					N	80	**21.28**	
					NE	80	**21.27**	
					E	80	**21.27**	
					SE	80	**21.27**	
					S	80	**21.25**	
					SW	80	**21.25**	
					W	80	**21.28**	
					NW	80	**21.30**	
Sin Luna			22:10	17ºC				
					N	60	**21.24**	
					NE	60	**21.22**	
					E	60	**21.24**	
					SE	60	**21.22**	
					S	60	**21.19**	
					SW	60	**21.16**	
					W	60	**21.19**	
					NW	60	**21.22**	
			22:21	15ºC				
					N	40	**21.04**	
					NE	40	**21.13**	
					E	40	**21.08**	
					SE	40	**21.04**	
					S	40	**20.89**	
					SW	40	**20.81**	
					W	40	**20.93**	
					NW	40	**20.95**	
			22:34	14ºC				
					N	20	**20.69**	
					NE	20	**20.91**	
					E	20	**20.82**	
					SE	20	**20.84**	
					S	20	**20.50**	
					SW	20	**20.32**	
					W	20	**20.48**	
					NW	20	**20.78**	

Mediciones realizadas por: Francisco A Espartero Briceño, Juan Alfredo Luque Sanchez y Francisco Simón Montes Moya

Medición de Brillo de fondo de cielo realizada con fotómetro proporcionado por la Sociedad Española de Astronomía (SEA) para el proyecto **NIX-NOX**

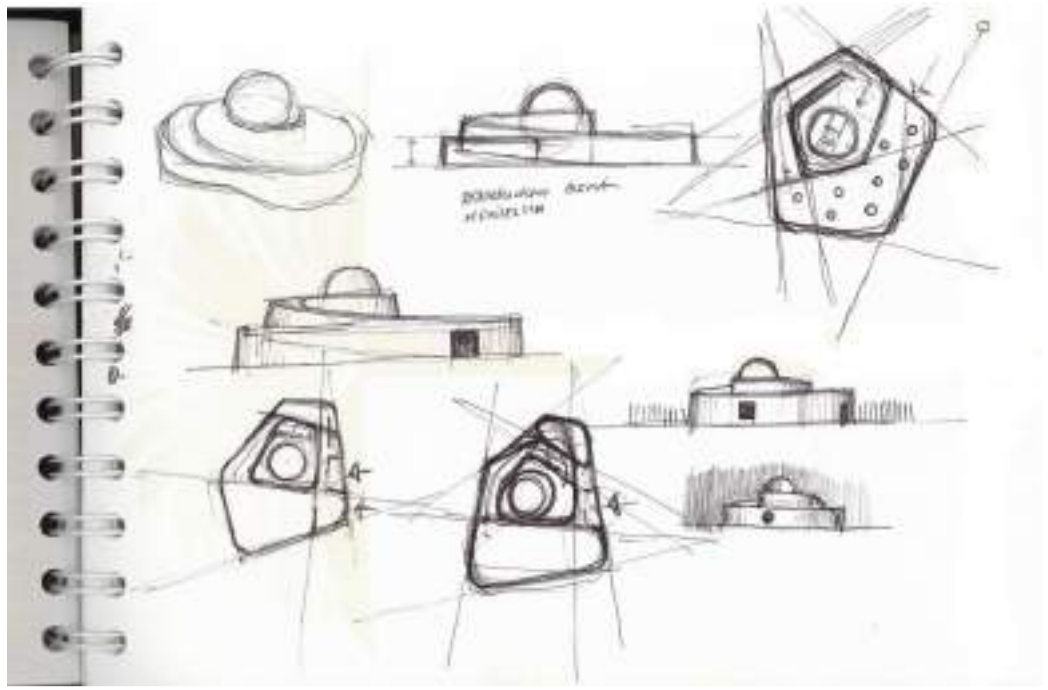
Fotómetetro SQM-L (Sky Quality Meter)

Brillo de fondo de cielo expresado en mags/arcsec

2.- Elaboration of own designs and projects

Elaboration of ideas and new projects

- Development of projects (Architecture and Engineering) and environmental impact study.
- Processing of Licenses and Permits
- Particular solutions depending on the requirements and tastes of the client
- Consideration of Applications and Objectives: Scientific, informative, tourist,...
- Experience in the amateur and professional field
- Original and customized projects



3.- Civil Works and Facilities

Execution of all phases of construction

- Optional management of the project
- Health and safety coordination
- Foundation, slabs and structures
- Plumbing
- Power grid, data and telecommunications
- Metal carpentry and Wood
- Isolates
- Accessibility

4.- Installation of optical equipment and automation

Supply and installation in observatories. Automation

- Supply of optical equipment, frames, etc.
- Installations
- Installation of the electrical network (connections and internal network)
- Data Network, Internet
- Supply and Installation of PCs
- Installation of control software
- Automation telescopes and dome

5.- Facility maintenance

Predictive and corrective preventive maintenance activities

- Maintenance plans with regular revisions and updates
- Breakdown repair
- Spare parts supplies
- Coordination with manufacturers and suppliers for the resolution of complex incidents

Projects

Monfragüe Astronomical Observatory (Cáceres)

Construction of an observatory in an old building

- ✓ Reform on existing Building
- ✓ Installation of 4mt dome on unidirectional slab
- ✓ Independent pillar and installation of S/C 10" telescope
- ✓ Weather station

Zuheros Astronomical Observatory (Córdoba)

Observatory installation and dome

- ✓ Ground leveling and foundation slab
- ✓ Installation of dome of 4 m. in diameter
- ✓ Construction of the pillar and installation of an equatorial wedge

Observatory IES Alcarràs (Lleida)

Construction of a small observatory on the roof of an existing building

- ✓ Adaptation of reticular slab for observatory
- ✓ Base construction and protections of the observatory
- ✓ Dome installation of 3 meters.
- ✓ Reform access to roof terrace with folding scale

Observatory E.P.S. Jaén University

Installation telescope, mount and commissioning

- ✓ Installation mount ME II
- ✓ Installaton tellescope S/C 16”
- ✓ Adjustments and commissioning

Sierra Nevada Observatory T60 (Bootes 4)

Repair observatory and Telescope 24” (IR).

- ✓ Mechanical and electronic repair of the control and guidance systems of the T60.
- ✓ Placement of safety barriers, scales and lifeline for maintenance operations at the observatory.
- ✓ Elimination of leaks. Watertightness.
- ✓ Interior adaptation and electrical installation s / regulations for commissioning of the observatory and T60.

Observatorio Andaluz de Astronomía (Jaén)

Installation Telescope 60 cm. and automation dome

- ✓ Technical Project and and Civil Works
- ✓ Supply and placement of dome of 4 meters.
- ✓ Supply and installation telescope R/C 16@ and Paramount ME II

Aula – Observatory C.O.U. (1)

Building and installation

- ✓ Civil works and electrical installation and data
- ✓ Exterior and interior finishes
- ✓ Dome installation of 4.3 m.
- ✓ Installation S/C 20" Telescope and Paramount ME II Mount

Aula – Observatory C.O.U. (2)

Installation and commissioning of dome and telescope. Automation

- ✓ Construction of the first Classroom-Observatory in Europe in the Montsec Astronomical Park (Spain).

Exclusive and personalised designs

Proam 2.5 Observatory

- Manual or automatic mode
- Simple and customized installation
- Easy self-installation

  (inludes packaging and transportation)

- Dimensions: floor 2.5 x 2.5 m. Height 2 m.
- Made of sandwich sheet and steel
- Includes installation manual

https://www.esparterocs.com/proam

Proam Advanced Observatory

Observatory with Robotic Roll-off Roof + Warm room

- Dimensions: floor 6 x 3 m. Height 2 m.
- Include Warm room (1,5 x 3m)
- Remote and Robotic Control
- **Consult shipping conditions**

(No incl. Assembly & instal.)

Hosting (Observatory)

- Automated Double Roof
- Capacity for two Telescopes
- Dimensions: floor 5 x 4 m (office) + 10 x 4 m (observatory)

  Height 2.0 m.
- Capacity for 10 Telescopes (No incl. Assembly & instal.)

ProAm Dome 3

Observatory with a dome

· Steel roof sheet and interior

· **3 / 4 in diameter**

· Robust and highly reliable design

· Black rubber interior finish

· Traction and zipper movements

Consult shipping conditions

(No incl. Assembly & instal.)

ProAm Dome 4
(Observatory + Warm room + Dome)

· Steel roof sheet and interior

· **3 in diameter**

·**4 m in diameter**

· Robust and highly reliable design

· Black rubber interior finish

· Traction and zipper movements

Consult shipping conditions

(No incl. Assembly & instal.)

ProAm Dome

Dome for observatories

· Steel roof sheet and interior

· **3 in diameter**

·**4 m in diameter**

· Robust and highly reliable design

· Black rubber interior finish

· Traction and zipper movements.

Consult shipping conditions

(No incl. Assembly & instal.)

Pier

· Made of structural Steel

· Double leveling plate

· Indoor electrical pre-installation

incl. Packaging and transportation

Sundials

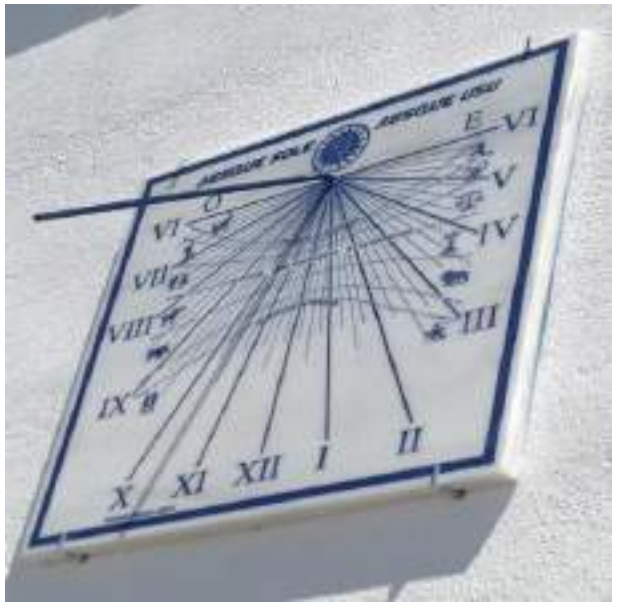
· Made of marble, natural stone, steel.....

· Laser engravings. Colors, Latin phrases, logos.....

· Customized for the latitude of the place

· Dimensions of any kind

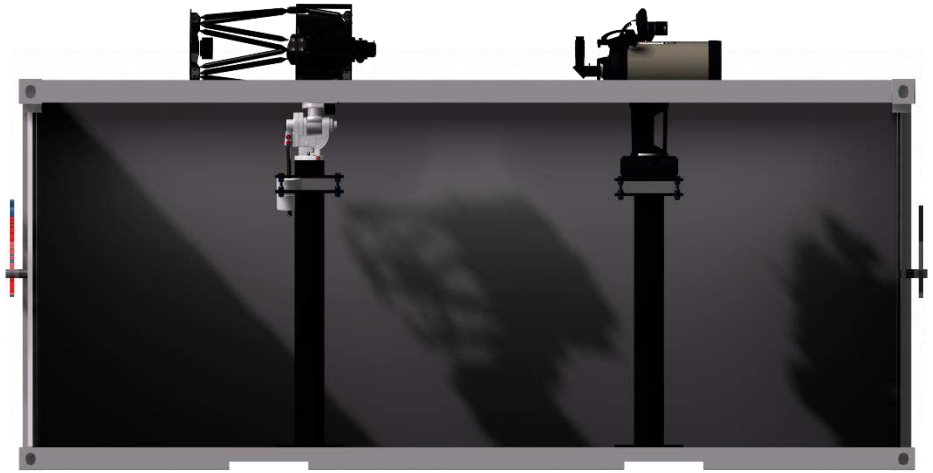
· Easy to install. Includes manual
(inludes packaging and transportation)



New Projects

Astronomy

Space



Military

CLIENTS

PARTNERS

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Antoine de SaintExúpery

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