



N3310

Southern Tunisian Observatory

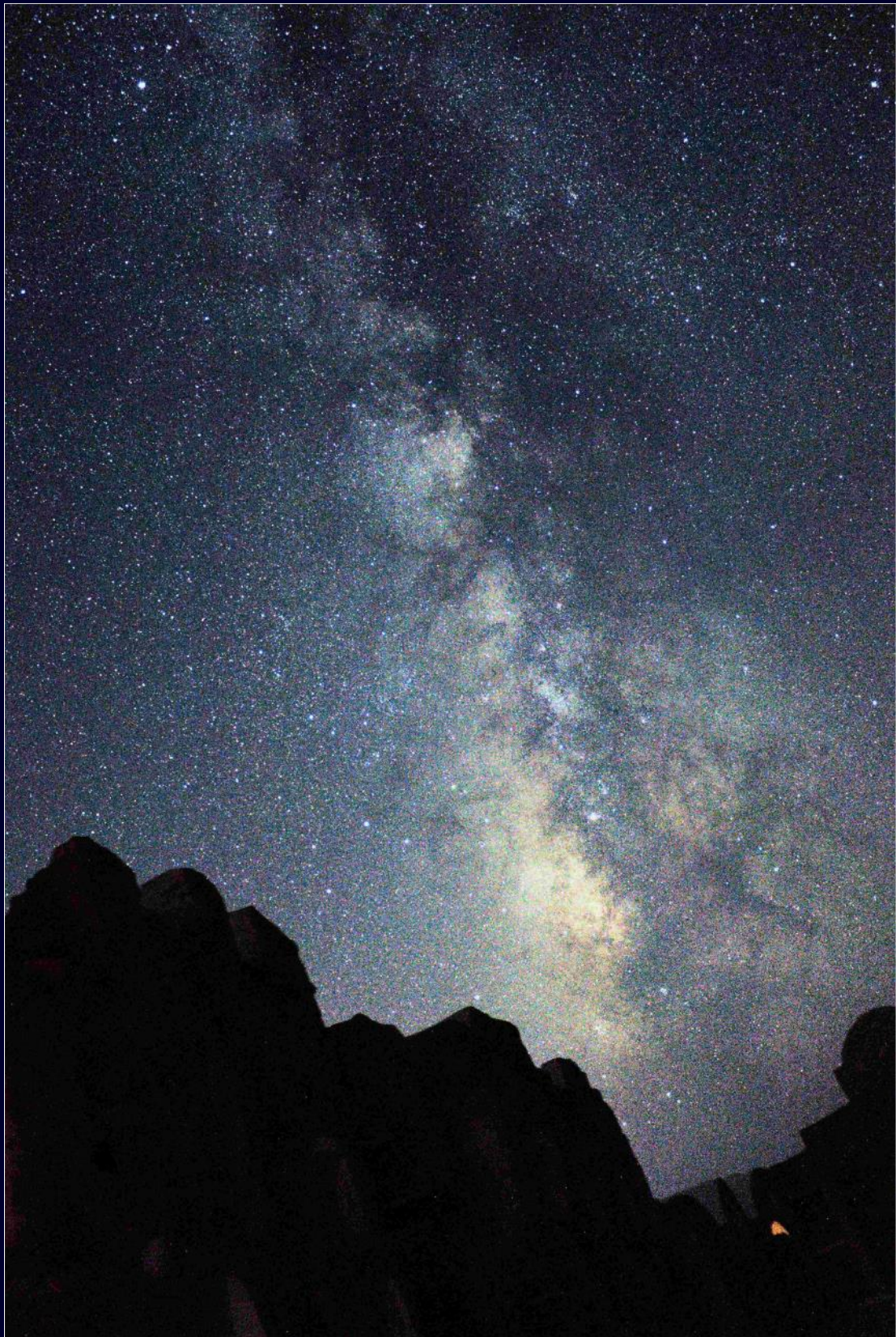
Observatory Farm

Other Instruments
And Telescopes Hosting



TELESCOPE EXPERT TUNISIE

TELESCOPES, LUNETTES, ACCESSOIRES ET FORMATIONS ASTRONOMIQUES



SOUTHERN TUNISIAN SKY

In the tunisian South, there is a heaven that denies impossible. Preserved from the throes of light pollution and cloudy perturbations, there reigns a world of silence, with the perfect alchemy of improbable mountainous reliefs and a fabulous heaven canopy.

Far from traditional tags, our professionnall team proposes to hoste your telescope under a sky forgotten by men, where only the Nature is queen.

Reconnecting with starlights, exploring heaven canopy, to the quest of ultimate photon, we promise you world class observations and works.

By the way [...]



Patrick Antoine
General Manager
Telescope Expert Tunisie

"Whatever their purpose ..., robotized or not, we welcome all project of Astronomers who wish to hoste their intruments under the 33rd paralell."

2016
selection of
N3310
astronomical
reference site

2014
implementation of
the training center by
Telescope Expert Tunisie

Fin 2013
first trainees
in astrophotography

2013
representation &
trademark distribution

Début 2013
launch of
activities

Fin 2012
birth of
Telescope Expert Tunisie

Telescope Expert Tunisie, Tunisian company, is the only one specialized in the import and sale of major brands of astronomical equipment and their accessories.

In the tunisian South, with numerous experiences, Telescope Expert Tunisie is able to accompany any astronomical amateur or international scientific class project.

Since 2014, to meet customers demand, Telescope Expert Tunisie has created a training center, in tunisian South, to the practical use of any astronomical instrument including telescope control, astrophotography, solar observation or high-resolution planetary techniques.

From the exceptional quality of the astronomical observations performed under the southern tunisian sky, was born the idea of designing an "Observatory Farm" for celestial exploration and surveillance from the ground.

So, today, in the quest of ultimate photon, astronomers like amateurs, pro-amateurs and professionals can hoste their instruments under astronomical shelter.

Beyond being located under an impressive and incredible sky, customized, fully tested and operational solutions await your telescope.

In search of professional quality image, world class scientific works, or economical solutions to host your telescope, we invite you to discover the opportunities offered by N3310, our observatory farm, located at 02H30 flight from Paris, under the 33rd parallel.

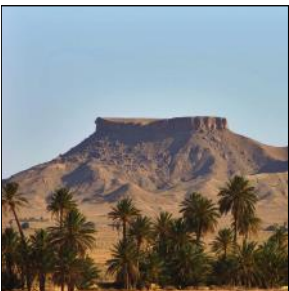
In search of better quality sky, do not hesitate to contact us for an exchange, an information or a proposal.





The N3310 base ground

Sky before the men, ... land of meteorites
And large mass grave of dinosaurs [...]



At the end of a prospecting campaign, initiated by Telescope Expert Tunisie, covering the entire southern tunisian territory, the site was chosen, in 2016, for the implementation of a farm observatory, designed, from the start, to host any instrumentation dedicated to the celestial exploration and surveillance.

The essential qualities of this limestone platform, arid, also a high number of clear nights, are the absence of mists and dusts, an atmosphere not too dry and a laminar air circulation, due, both, to the topography of the places and to the presence of a Mediterranean sea wind that stabilizes turbulences. N3310 is a land, with an area of 4.5 hectares, to the vertical of an astronomical reference sky, opposable to the international. The location of N3310 has been validated by a large number of implantation parameters which, overall, make this site one of the most beautiful in the world. Dedicated to all celestial exploration and surveillance activities, N3310 allows astronomical practice at its highest level of excellence. Located within a future "GeoPark" Unesco, this site is eligible "StarLight"

Some main reasons to choose this site :

1	absence of light pollution and air traffic
2	no urban center near the complex
3	eligible for international certification "starlight"
4	altitude of 500 meters at sea level
5	mineral balcony overlooking the South
6	broad horizon clear on all quadrants
7	excellent seeing
8	difficult and secure access
9	with guard and presence of National Guard
10	technical access and on-site roads, hiking trail
11	comfortable living area and scientific residence
12	medical center nearby
13	International Airport 3:00 comfortable road

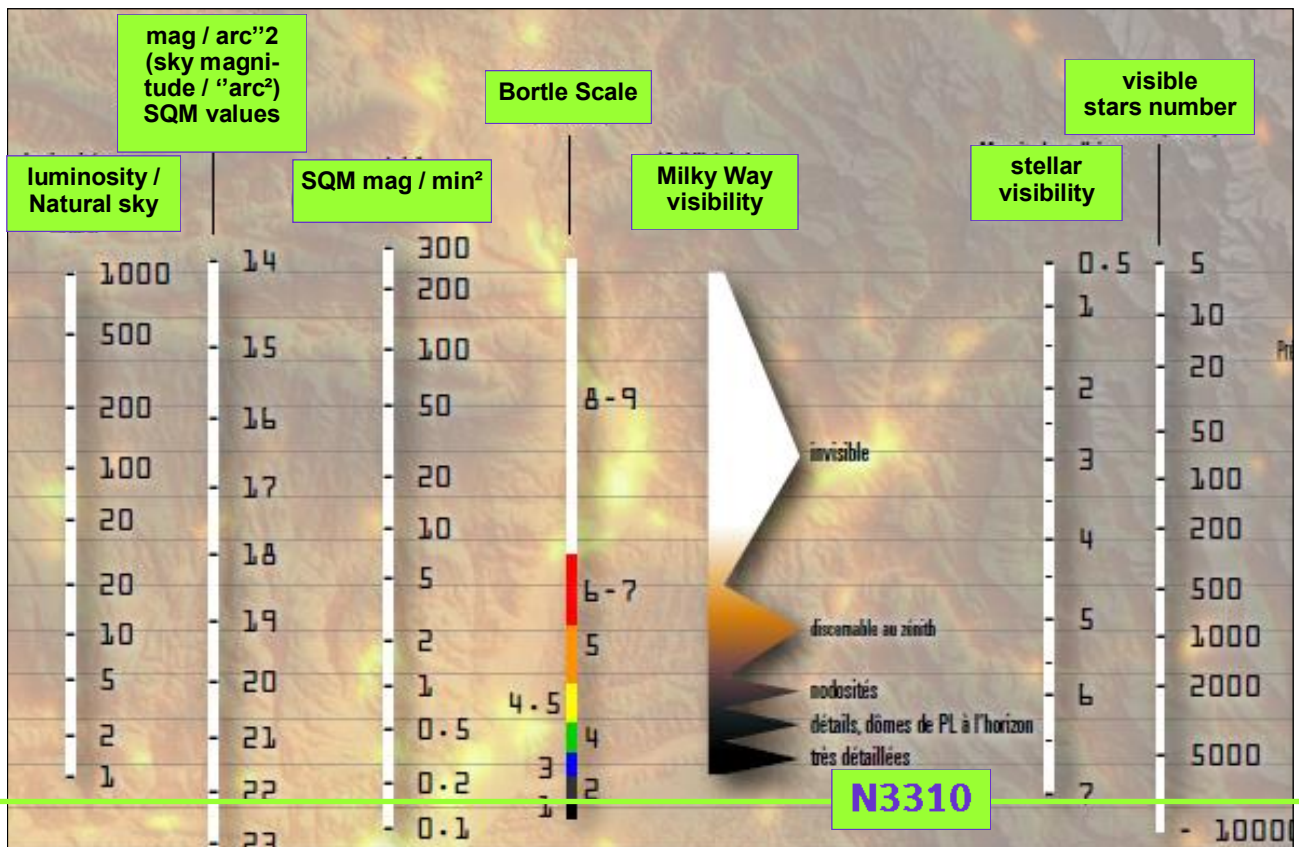


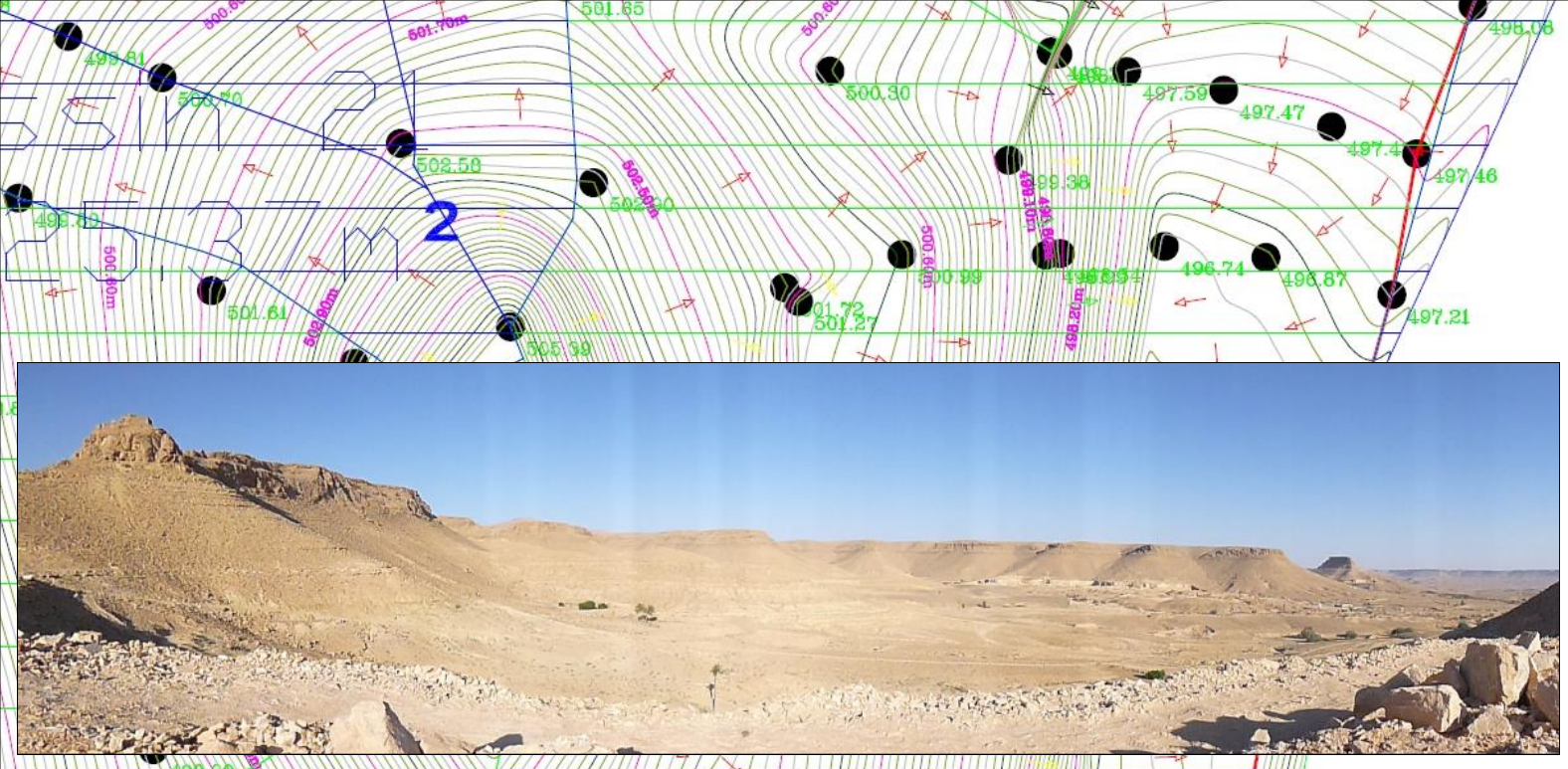
N3310 - When the milky way becomes light pollution

Since 2012, we have not ceased to qualify the sky of our astronomical activities in the South of Tunisia. Beyond our numerous missions of evaluations and measurements, as well as European testimonies collected, we can affirm that a such sky doesn't exist in Europe.

The zodiacal and "gegenschein" lights are perfectly discernible. The milky way, in summer, is ultra structured with its nodosities and black filaments. The meteors' swarms are exceptional in brightness and frequencies. The relief on the horizon is invisible and forms "no silhouette against the sky". The pale green shine of starry sky background is very clearly visible.

Evaluation of Light Pollution, equity values and scales (Sources: Avex)





N3310 Land and Infrastructures

The land, close to the equator, under the 33rd parallel, gives access to a larger part of the southern hemisphere. All the celestial objects, in the North, are 15° higher than in Paris.

In international observatory farm projects, located in environments with severe to very severe conditions, beyond astronomical equipments, it is mainly the infrastructure implementations that weigh in investment schemes.

To date, the site site includes the following infrastructures :

- a residence or "life zone" with all amenities including accommodation, laundry and catering for 36 beds;
- a site of settlement on a ridge line, 400 meters long, leveled and floored with tracks and platform;
- a technical access road made voluntarily difficult and reserved only for the use of off-road service vehicles;
- as well as a hiking trail;
- of ADSL Internet connections in wired or Hertzian networks.

Additional reasons for choosing this land :

1	located under the 33rd parallel / -15° latitude under Paris
2	area of $45,000\text{ m}^2$
3	ridge line of 400 meters oriented North-South
4	altitude of 500 meters at sea level
5	limestone soil of great stability
6	mineral balcony overlooking the great Tunisian south
7	wide horizon clear on all quadrants
8	access difficult and secure by nature
9	technical access road and tracks
10	pedestrian access type hiking trail
11	internet connection 4 G and Gsm
12	scientific residence of 36 beds
13	catering and laundry services



N3310 - Meteorology of the site

The South of Tunisia, is not, as is often thought, a place where there is continual heat. It's characterized not only by its drought but also by its high thermal amplitude.

The Tunisian South is not, however, extremely hot. So, in summer, the temperature approaches 40°C. An omnipresent light breeze refreshes pleasantly the mid-season but makes the air rather very cool during the Winter.

The sun is present, on average, 250 days per year ; it may be cloudy due to the presence of mineral aerosols, occuring generally in March.

- altitude of **500 meters** ;
- estimated average of clear nights : **+ or - 250 nights** ;
- a relative humidity close to **45%** ;
- a majority of "acquisitions autonomous blocks" of **5 to 7 hours** ;
- a seeing between **0.6 " Arc and 1.5 " Arc**.

The area offers very little cloud covers and rare rains, with low ambient humidity. The number of clear nights is important. We are in an ideal environment with a high percentage of clear nights, which guarantees numerous possibilities of exceptional quality observations, often accompanied by « autonomous blocks » of 5 to 7 hours.

Statistics indicate that this region of southern Tunisia offers an ideal combination of weather conditions for astronomical observations. There are nearly 250 exploitable nights for astrophotography.

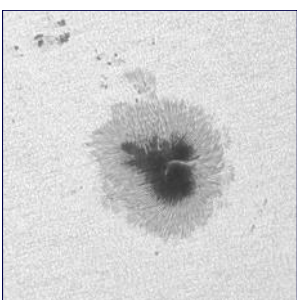
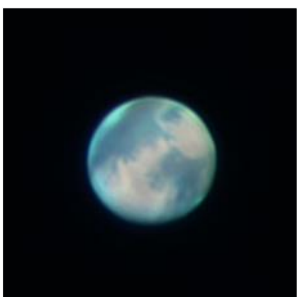
Guaranteeing a good air transparency, the altitude of 500 meters, specific to this region, is required to pass over the layer of the most dense atmospheric impurities. Ideally, we have a large number of clear nights as well as low turbulences.

Good acquisitions can be obtained in a site where daily thermal amplitude is important. For most of the year, we have medium to low but comfortable ambient nocturnal temperatures that are perfect for astrophotography.

	Average Temp. (Mini/Maxi in °C)											
Mois	Jan	Fev	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mini	4	4	10	15	18	21	24	24	19	15	9	2
Maxi	20	20	23	26	29	34	38	38	33	26	23	18



N3310 - Astrophoto, Cmos et Ccd



What is obtained, in astrophotography, in the absence of light pollution, under conditions of "seeing" close to the second of Arc ?

This lack of light pollution, without the effects of turbulence, is decisive for the quality of long acquisitions in search of the ultimate photon. The absence of luminous gradient and the long poses, even very close to the horizon, give remarkable results. Even lowly instruments, both in diameter than in design, deliver amazing results.

The estimated "seeing", on site N3310, between 0.6 and 1.5 "arc, is well below the mechanical or optical resolution of most commercial instruments, so that, the telescopes, pushed into their intrenchments, issue world-class stellar, planetary, lunar and solar images of high scientific interests [Sky Monitoring, High Resolution Astrophotography, Astrometry, Spectrography and Photometry].

The limits of tunisian sky allow, routinely, the celestial exploration and surveillance in the long term and production of scientific works where the big telescopes are just passing through.

We used to note the presence of green or red layers of Air Glow, as well as sometimes, at high altitude, mineral aerosols of type "Calima", analogous to the phenomenon striking the great observatories of the Canary Islands.

1- Light pollution	SQM + or - 22.0
2- Winds	sectors NNE - SSE / wind decreases in night time
3- Cirrus & Cirro-Stratus	present but sometimes difficult to discern
4- Atmosph. absorption	Imaging preferably below 40°
5- Turbulences	0.6" Arc < seeing < 1.5" Arc
6- Heat haze	in summer only
7- Humidity	non-dusty dry air
8- Transparence	sometimes affects very large field images
9- Atmosphere	sometimes "Air Glow" and mineral aerosols type "Calima"
10- Clouds	250 cloudless nights
11- Cloudy periods	autonomous blocks acquisitions from 5 to 7 hours



N3310 - Hosting your Instrument

N3310 offers a wide range of services to relocate and / or acquire your telescope under a sky of exceptional quality. Our professional team accompanies you, step by step, in your project, and proposes global solutions allowing you, H24, to keep your hand on your instrumentation.

2 Possible Options

Option 1- Hosting your robotic telescope under shelter

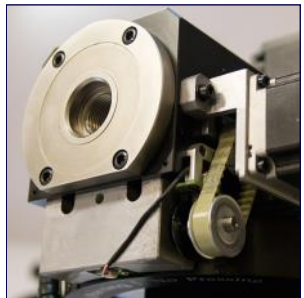
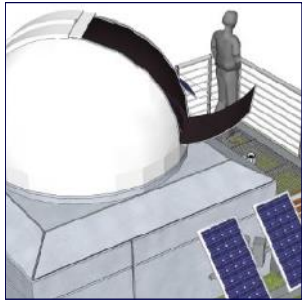
This option welcomes your instrument on site and under an astronomical shelter. You can remotely control or use it on site. You can also entrust it to the lease, through our network, in order to make it profitable and so, amortize it at lower costs.

Option 2- Hosting your instruments

Carefully guarded, you will be able to use it at each of your visits You will have at your disposal a observation platform.

We accept pre-orders for telescopes to be hosted. We offer you a set of solutions to acquire your instrumentation and configure it according to your project.

1	astronomical shelters upon request
2	foundations, slab and column custom
3	internet communication ideally suited for remote use
4	Secure Photovoltaic Power Supply
5	camera all sky with laser pointing
6	individual MTO station with emergency shut-off
7	set of tools for remote use
8	secure system against weather and surges
9	lp cameras
10	human presence H24
11	national guard patrols



Bortle Scale
Light pollution qualification

8/9

Centre ville

7/9

Transition
ville/
sub-urbain

6/9

Ciel
sub-urbain
brillant

5/9

Ciel
sub-urbain

4/9

Transition
sub-urbain/
rural

3/9

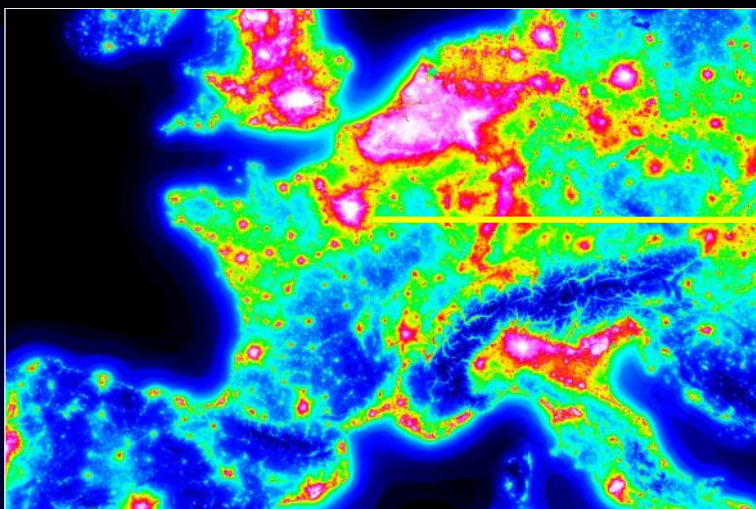
Ciel
rural

2/9

Site
très sombre

1/9

Site
Excellent



A 02:45 flight from PARIS

N3310

+∞

Southern Tunisian Sky
Observatory Farm

Contact us
Or request for informations

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TELESCOPE EXPERT TUNISIE

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