



Atmosphere and clouds scientist

Permanent position, 45-60k€ + BSPCE, full remote

Introduction

Miratlas is a start-up established in May 2018 based in the Southeast of France that completed its first fund raising in April 2022. We are developing rapidly and have triple our headcount in 2022. Our main market is Free Space Optical Communication between ground and LEO/MEO/GEO satellites and constellations.

We are a Ph.D and engineers company with a strong focus on R&D and data science. The FSOC application is a pretty new playfield that is developing fast with a strong interest of both academics and space and telecom industry.

We provide complete characterization of optical atmospheric conditions affecting light propagation such as cloud, turbulence, aerosols and absorption through modelling and on-site measurement. Our measurement instrument is designed in house and integrates a comprehensive array of passive optical sensors designed to be easy to deploy and operate continuously without maintenance.

The data is then made readily available online through a comprehensive dashboard and used for short term forecasting and telecom metrics inference.

Context and work description

Each of our Sky Monitor acquires 11 million data per year. That includes multispectral all-sky image set (Visible, SWIR and LWIR) that shows the clouds present in the sky by day and night. Clouds are one of the main issues for FSOC and sky transparency assessment and prediction is of the highest importance.

We need to complete our data scientist team with cloud and atmosphere specialist.

You will work with our data scientists and optical propagation specialist and be responsible of the cloud subject. You will make the image and data analysis for cloud cover, fog, cirrus to infer the optical density and other parameters useful for optical propagation.

You'll adapt the ML forecast models with our data scientists for the specific field of clouds dynamic and integrate useful large scale data (weather model, satellite images).

Aerosol analysis that impacts FSOC performances are also in your scope.

You will collaborate with our partners in the academic field (ONERA, Durham, ATMOS, NTNU...) and in the space agencies and industry.

Your results will be discussed with academics and presented in conferences; you may also publish your results.

Skills

You ideally have a Ph.D in atmospheric science with an experience in clouds dynamic modelization.

You have knowledge in radiative transfer modeling like MODTRAN or MATISSE.

You are fluent in English and will present your work for the scientific community through publications and conferences requiring occasional traveling.

Position description

Although our premises are in Pertuis and your presence might be necessary at times, full remote work is also accepted from France.

You'll be reporting to our CTO.

Salary: 45-60K€.

Contact: info@miratlas.com

Web: <https://miratlas.com/>