

The observation of the sky is a major human concern. We, living beings, are all immersed in this fluid, the air, and atmospheric phenomena have a decisive impact on our lives. In meteorology, water-related events – including cloudiness, rain, and snow – have traditionally been monitored by trained human eyes. Progressively, however, they have been replaced by automatic instruments interacting with these events in a passive way (rain gauges, cameras, radiometers) or active way (lidars, radars, light emitters, hot plates). These instruments provide us with a measure of the state of the atmosphere and its content.

Opening “Garden the Sky Water” Symposium, the workshop at SIRTA offers **to discover the atmospheric water “observation” through 4 sessions** organized around key questions:

- **What is a “measure”? Is there objectivity in the scientific observation? How does data representation affect our interpretation of natural phenomena?** These questions will be explored from the perspective of the physics behind the instruments, the imperfect sampling of wave signals, and the analysis and representation of observational data.
- **An atmospheric-water-monitoring tour:** Different methods to observe atmospheric water will be presented during a guided visit of the instruments at SIRTA, including a LIDAR demonstrator.
- **Revisiting the water cycle through experiments:** From a physical point of view, but not only, the story of a water droplet will be told through a series of easily reproducible experiments – black body emission, colors in the light, absorption, reflection, evaporation, condensation, convection.
- **Water observation through “others’ eyes:** Case studies illustrating how sense is extracted from observations and how physical interpretations emerge.

The journey will take place in open air, on the SIRTA instrumental platform – surrounded by all its instruments – at École polytechnique’s campus, in front of its lake. Two questions will be explored in the morning, two in the afternoon, with the guidance and support of researcher’s from LMD and technicians from the SIRTA observatory.

After each session, a time for open discussion will allow participants and guides to exchange about the experience and share inspiration.

*\*Depending on the number of people registered, we plan to set up a bus service from Denfert-Rochereau (Paris 14th)*

