



## Postdoc position on Intensity Interferometry in Nice (France)

The position is to join a collaborative project that gathers physicists, astrophysicists, and specialists of time metrology in the Nice area in order to revive **intensity interferometry with modern photonic technologies**. This technique was initially pioneered by Hanbury Brown and Twiss (HBT) in the 1950s-1970s, then abandoned because of its poor sensitivity. Today, the progress in photon detectors and digital electronics, and the prospects of using this technique with arrays of large collectors, motivates a revival. Many groups are now working on the revival of this technique, especially using large Cherenkov telescopes.

Our approach in Nice is to work with standard optical telescopes and photon-counting detectors. This allowed us to be the first group since HBT to succeed in observing temporal and spatial photon bunching with star light (2017). Other milestones and achievements, including several on-sky observations at the nearby Calern site as well as on telescopes in Chili (SOAR, VLT) can be found on the [project webpage](#).

The postdoc will work on a very important upgrade of the setup, which is to implement **wavelength multiplexing**, i.e. the simultaneous measurement at many neighboring wavelengths. This is the way to significantly gain in sensitivity.

The position will be hosted by the [cold-atom group](#) led by Robin Kaiser at [Institut de Physique de Nice](#), a lab from [Université Côte d'Azur](#), one of the top research Universities in France (Excellence label). Collaboration with researchers from the Observatoire de la Côte d'Azur is expected, with on-sky tests using the telescopes at Calern.

We are looking for an experimentalist with prior experience with astronomical instrumentation and optical/photonic technologies (for example optical fibers, single-photon-counting detectors). The position is initially for one year with possibility of extension depending on the available funding.

Contact persons:

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