



ILANCE Internships Spring / Summer 2024

University of Tokyo

<https://ilance.cnrs.fr/>

The Franco-Japanese laboratory, dedicated to the physics of the two infinities, benefits from an exceptional scientific and cultural environment.

An on-site laboratory in Japan, ILANCE brings together researchers, students, post-docs, engineers and technicians from CNRS and Japanese institutions. The laboratory is made up of French scientists for long-term stays in Japan and Japanese physicists. Individual research grants are awarded for postdoctoral stays or doctoral thesis. The laboratory will also aim to welcome and support French scientists for temporary stays in Japan. Based on the Kashiwa campus in the northeast of the city of Tokyo, the ILANCE laboratory permanently hosts scientists from CNRS laboratories and from four departments of the University of Tokyo namely, ICRR, Kavli IPMU, ICEPP and the School of Science.

High Energy Gamma-Ray Astronomy (neutron stars, black holes)

The proposed project is a deep follow-up study on the gamma-ray binary LS I +61 303 at GeV energies. It is one of the best studied binary systems at high energies showing a very particular behavior: On top of the orbital period of about one month, it shows a super-orbital modulation of about 4 years in several wavelengths.

Since the discovery of this phenomenon at GeV energies, the dataset taken by the satellite Fermi has doubled. We propose to analyze the latest Fermi-LAT dataset on the source, prove or falsify the findings done 10 years ago and perform a deep study on the orbital behavior of the source. These findings will be of great interest for the community.

<https://fermi.gsfc.nasa.gov/>

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ILANCE

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