



ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE
EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

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Support Letter for IZEST

CERN has been informed by Prof. Mourou and Prof. Tajima about the intended creation of an International center on Zetta-Exawatt Science and Technology, abbreviated IZEST. This initiative aims at investigating the use of ultra-intense lasers for so-called "(Laser-based) High Field Fundamental Physics", essentially the study of fundamental physics questions in a regime of very high energy (TeV and beyond) but low luminosity. The theoretical IZEST studies are complemented by an experimental program relying on the French LIL laser.

The creation of such high energy events is of strong interest for the development of future high energy physics accelerators with ultra-intense lasers. Lasers have seen a dramatic progress in recent years and they are expected to progress further, not only in peak and average power but also in stability and efficiency.

CERN believes that IZEST will provide useful insights into the feasibility and physics potential of accelerators with high energies and low luminosity. The IZEST activity will feed efficiently into the European work towards novel accelerators with high beam brightness and high luminosity, as recently discussed at the EuroNNAC (European Network on Novel Accelerators) workshop at CERN. IZEST will be able to cover an additional and potentially promising regime of future accelerators.

In summary, CERN believes that the regime addressed by IZEST is very interesting and therefore supports the further studies and discussions towards IZEST.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Rolf Heuer".

Rolf Heuer