

TECHNICAL PRESCRIPTIONS

PROCUREMENT OF THE SERVICE RELATING TO THE "REPAIR OF CONTROL AND OPTICAL UNIT OF JADE2 LASER SYSTEM" AT ICFO, THROUGH AN OPEN PROCEDURE NOT SUBJECT TO HARMONIZED REGULATION

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CLAUSE 1. Object of the contract

The purpose of this contract is the execution of the service related to the "REPAIR OF CONTROL AND OPTICAL UNIT OF JADE2 LASER SYSTEM" of the ICFO.

CLAUSE 2. Background

The Jade2 laser system is a DPSS laser used as pump laser for the regenerative amplifier of our Ti:Sapphire laser. The laser, acquired in 2014, provides pulses of ~100 ns duration with output power up to 36 W at 525 nm. The system is composed by the laser head, the controller unit and the water chiller. On 13/07/2022 with notice a drop of outpower down to 20 W instead of the nominal 36 W. In addition, on 18/06/2024 the controller shows the error: *Power supply OVP*, indicating that the overvoltage protection has been enable. This indicate that some electronics circuit maybe damage. This fault prevents the operation of the Jade2 laser system, that as component of our in-house develop attosecond beamline, prevents us to perform our research.



Fig: Left) Jade2 control unit. Right) Jade2 laser head.

CLAUSE 3. Technical specifications

Requirements Jade2:

- Repair of control unit
- Repair of optical cavity

It is mandatory that the company awarded is capable of exchange the electronics of the control unit as well the deteriorated optical elements.

CLAUSE 4. Duration of the contract

The tender must include shipping, transportation and installation at the ICFO premises (including customs duties).

Maximum term of execution of the service: 3 months.

CLAUSE 5. Necessity and suitability of recruitment

The Jade2 laser system is a key element to keep the research going on in the Attoscience and Ultrafast Optics laboratory of the ICFO. The capabilities of this device make it a necessary element to ensure the achievement of the research team's objectives. Consequently, this tool becomes essential for the achievement of the object and purpose pursued by the ICFO and the research projects that are being carried out by this entity.

CLAUSE 6. Estimated contract value

Considering the provisions of article 101 LCSP, the estimated value of this procurement will be **€27,300.00**.

Castelldefels, on the date of its digital signature

Prof. Dr. Jens Biegert
Attoscience i Òptica Ultraràpida GL