

1. Main research topics (repeat for every major topic)

Title	JET Gamma camera diagnostic enhancement (DNGG)
Short description (max. 200 words)	The objective is to closure the project activities and delivering it to the operator. For system validation it must acquire during discharges with gammas, which did not occur during c28 campaign. During the c29 campaign, with both ICRH and NBI systems on, is expected to have discharges with gammas, so the system must be checked regularly and data analyzed remotely with the appropriate software running on JAC (guarantee that it works specially during ICRH with ILW sessions). The system must then be validated in a DVCM meeting. After that the new CODAS GAP signals (JPF with RT processed data) must be included and tested. Finally the system must be delivered and explained to the operator.
Specific targets	Project commissioning, data validation and closure.
Milestones	<ul style="list-style-type: none"> · DVCM preparation; · Test the new CODAS GAP signals; · Explain the system to the operator and develop required documentation for project activities closure.
Timeline	March 2012

Title	Jet Fast-Electron-Bremsstrahlung camera enhanced system (FEB)
Short description (max. 200 words)	One of the objectives is to connect the FEB system to the ATM network with the production of real time ATM packets with the 19th line-integrated hard x-ray and gamma-ray events, achieved by a real time spectroscopy algorithm running in the digitizer system FPGAs. The other objective is to study and develop software analysis codes to compute the suprathermal electrons local emission profile resulting from hard X-ray, representative of the lower hybrid power deposition profile, and the fast ion distribution profile resulting from gamma-ray.
Specific targets	Deliver RT packets to ATM network; Study and develop radial inversion codes;

Milestones	<ul style="list-style-type: none"> · Production of software code to build real time ATM packets and connection to the ATM network; · Study and development of codes for distribution profile analyses; · Participation in the C28 JET campaign in a 1 month secondment agreement.
Timeline	Throughout 2012

3. Expected output

	Objectives	Performance indicators
Papers, contributions to conferences, patents, reports, etc	Participation in the 18 th Real-Time Conference, June 11-15, Berkeley, CA. Submission of one manuscript to the conference proceedings	Paper acceptance for publishing in the TNS journal.