

The work-flow of the remote session is depicted in the Fig. 1, having these basic steps (assuming there is an opened session, according to negotiations between the participants and GOLEM tokamak supervision<sup>1</sup>):

- i*) **Session preparation phase**, initiating necessary technological processes (evacuating the vessel, starting data diagnostics systems) and eventual vessel conditioning.
- ii*) **Web oriented control room**, where participants set and submit the parameters simultaneously through the web page form via drop-down menus, see the Technology part menu of the Fig. ???. The control system then stores the request into a SQL database with the flag of waiting request. A virtually unlimited (within the very large capacity of the SQL server) number of requests can be submitted at once and/or during the session.
- iii*) **Remote operation daemon**, process regularly checks the queue of submitted discharge set-ups and executes the requests one by one in a "First In, First Out" manner.
- iv*) **Discharge preparation phase**, where capacitors are charged, pre-ionization started and working gas introduced into the vessel.
- v*) **Discharge**, where the thyristors are triggered, delivering current into the appropriate coils and the plasma discharge is performed. During the discharge Data Acquisition Systems (DAS) collect data from various diagnostics.
- vi*) **Post-discharge phase**, where the acquired data are downloaded to the central server and automated scripts create web pages with reports dedicated to individual DAS systems and all diagnostics.

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<sup>1</sup>the GOLEM tokamak is not available 7 day/week and 24 hours/day, the session should be requested

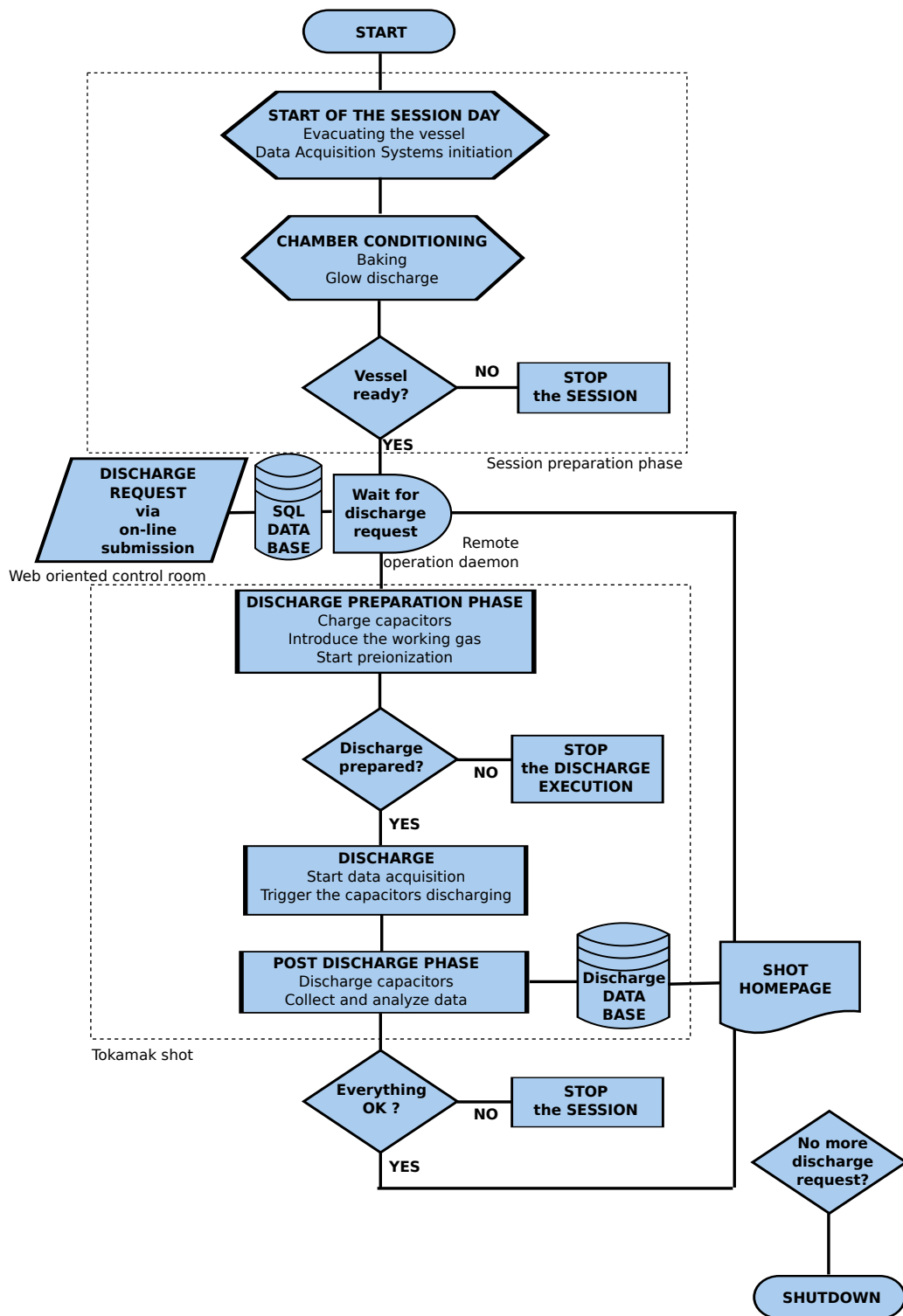


Figure 1: Flowchart diagram of the remote session.