



CISS List of some projects proposed as in kind contribution to SESAME by the Islamic Republic of Iran

December 2018, Paris

There are already some capacity and experience in Iran to build synchrotron related devices and turnkey systems. After discussion by Dr. Riccardo Bartolini, technical director of SESAME, the following projects have been selected to propose as in kind contribution to SESAME by the Islamic Republic of Iran.

Bunch by Bunch feedback system for reduction of longitudinal instability.

This project includes:

- measurement of longitudinal instability at SESAME
- Design and construction of high-Q copper cavity
- Design or purchase of 1KW very high phase-stable and wide band RF amplifier.
- Full digital FPGA based pulse processor.

Estimated time needed to complete the project: **2 years**

1- High power RF connections, waveguides and spare parts and installation of some parts at SESAME

The project will be outsourced to Iranian domestic companies

Estimated time needed to complete the project: **1 years**

2- Support for accelerator physics and for operation.

Estimated time needed to complete the project: **3 years**

3- Upgrade of existing cooling system

This project will be outsourced to an Iranian domestic company

Estimated time needed to complete the project: **1 years**

4- High power 30kW, 500MHz RF amplifier suitable for powering the cavities in the booster ring with capability of ramping power

Estimated time needed to complete the project: **2 years**

5- Beam injection system to storage ring based on multipole nonlinear kicker.