## Injection Sequencer Requirements

What do we want to do:

- 1. Get a list of the different Injection Scenarios
- 2. Work out in great detail one of them, as starting point, e.g. Nominal Injection
- 3. When working out this Use Case we want to address things like:

- how and when the injection equipment is switched on/prepared;
- how and when different beams will be requested;
- when different timing tables are loaded;
- when and which equipment (state? Setting?) changes are needed;
- what (beam? equipment?) checks have to be made and with what methods;
- what states and modes are needed;
- what are the (entry, exit) conditions for state and mode changes;
- when and which critical settings need to be loaded;
- the machine protection aspects (SBF, BPF, TDI/TCDI setting-up);
- Abort scenarios and conditions to proceed;
- sets of 'tasks', sub-sequences and sequences;
- and a long etc.

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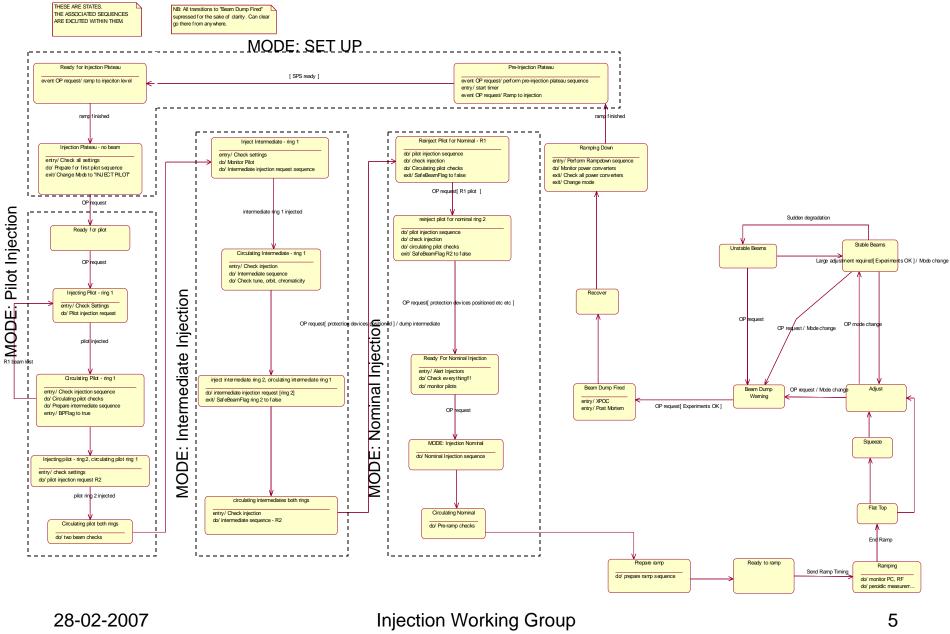
- 4. How do we do this:
  - first compiling all the existing information (which is a lot)
  - we have created wiki pages http://wikis/display/LHCOP/LHC+Injection+Scenarios
  - periodic discussions with the different people
- 5. What is expected to be the final product:
  - UML description of the different scenarios
  - Implement this description in the software, taking into account the requirements document specifications LHC-CQ-ES-0001: LHC SEQUENCER – OPERATIONAL FUNCTIONALITY, INTERFACES

AND REQUIREMENTS

## • LHC (Injection) Sequencer

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## **LHC Nominal Scenario**



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