MICE CM30
Schedule and milestones

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- *Unofficial points from the MPB*
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Andy Nichols, STFC, 6/7/11

Reconstructing the schedule

- *The MICE Project Board (MPB) requested that MICE presents a credible top-level project schedule by 28th June*
- *MICE had a two-day internal schedule review to prepare for this:*
  - *List of major sub-systems prepared and approved*
  - *Subsystem schedules presented*
  - *Resource limitations outlined where possible*
  - *Risks and difficulties identified*
- *Went very well, almost 100% engagement from the project*
- *Used as input to top-level schedule reconstruction*
  - *We were a bit late, but made it for the MPB*
  - *Have to be careful with the phraseology, but here goes:*

Reconstructing the schedule

- *We will be able to present a detailed and confident schedule for Step IV*
- *Steps V will be as accurate as possible, but qualified with statement that they are subject to the Coupling Magnet uncertainties – still a major project risk*
- *One of MICE's problems has been the lack of a hard cut-off point for the project*
- *At the internal review, decided that this should be the moderator change in August 2014 (a six month shutdown). This was strongly supported by the external reviewers (Phil Atkinson, Jim Kerby, Marzio Nessi)*
- *Will aim to achieve a major constructional and scientific goal by then*
- *Our aspiration is to have constructed and have significant run with MICE Step V by then. Until the CC magnet delivery is understood, this cannot be a firm commitment*
- *The top-level schedule will contain a more detailed breakdown of each step configuration*

Present status

- *The traditional 'cartoon' has evolved into the following format:*
  - *Graphic representation of each step*
  - *Table of relevant subsystems, with dates*
  - *Colour coded*
  - *Final date for the MICE Step delivery*

- *Have also made the top-level detailed MPP Gannt chart, courtesy Alan Grant of DL*

- *Too early to state much detail about step VI.*

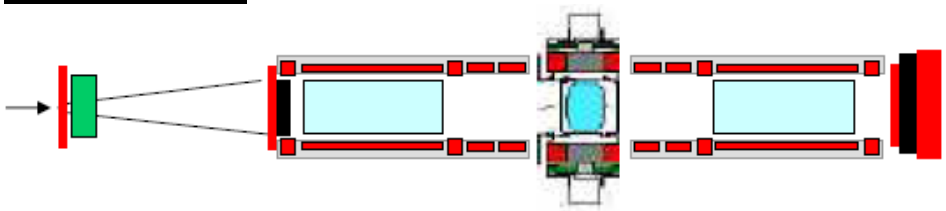
MICE Top-Level Project Schedule

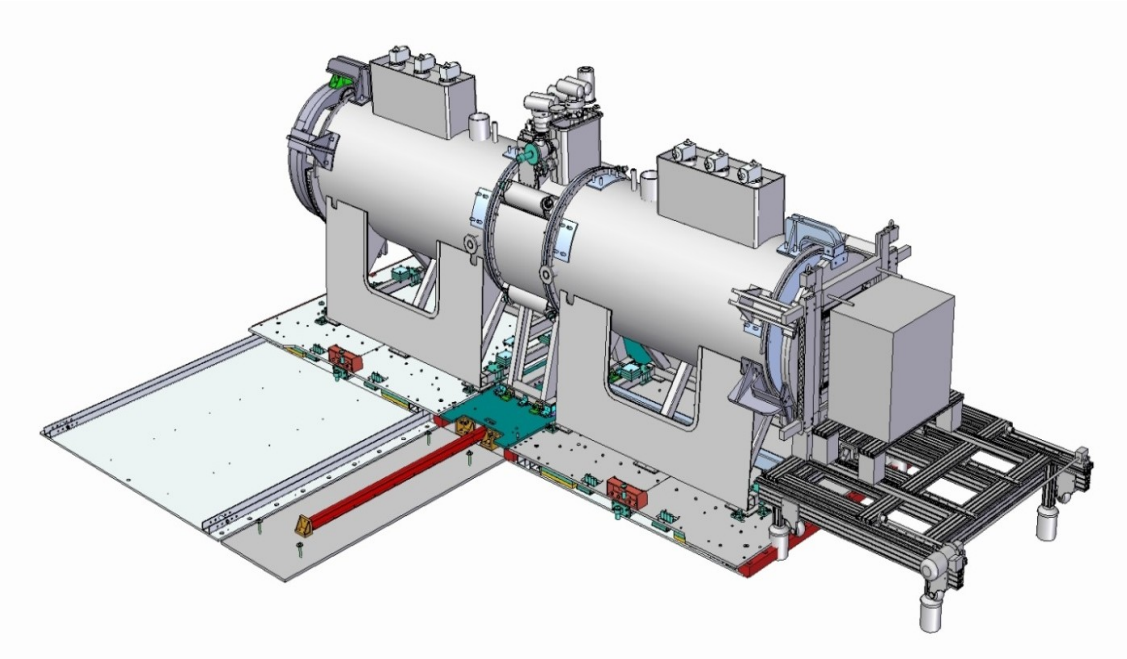
- *Step IV*
- *Step V*

- *Revision date: 17th June, 2011*

- *Note: items in red text are key schedule drivers*
- *Items in orange text are high risk items*
- *Items in Green text are complete*

STEP IV



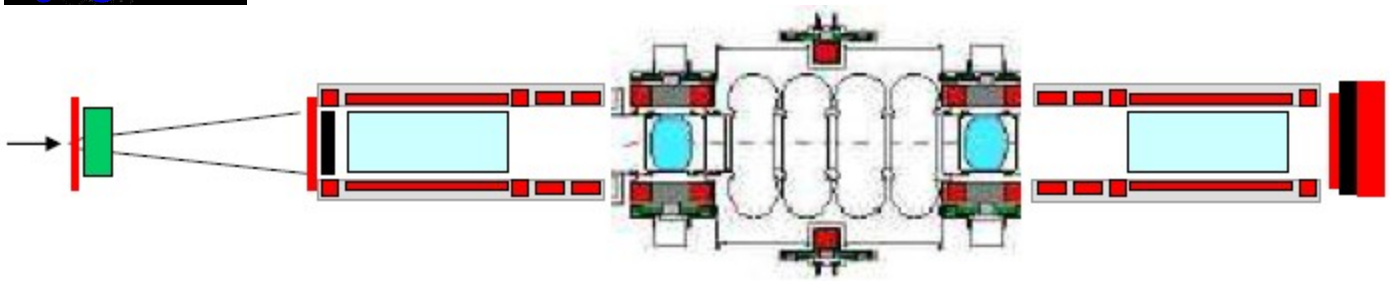


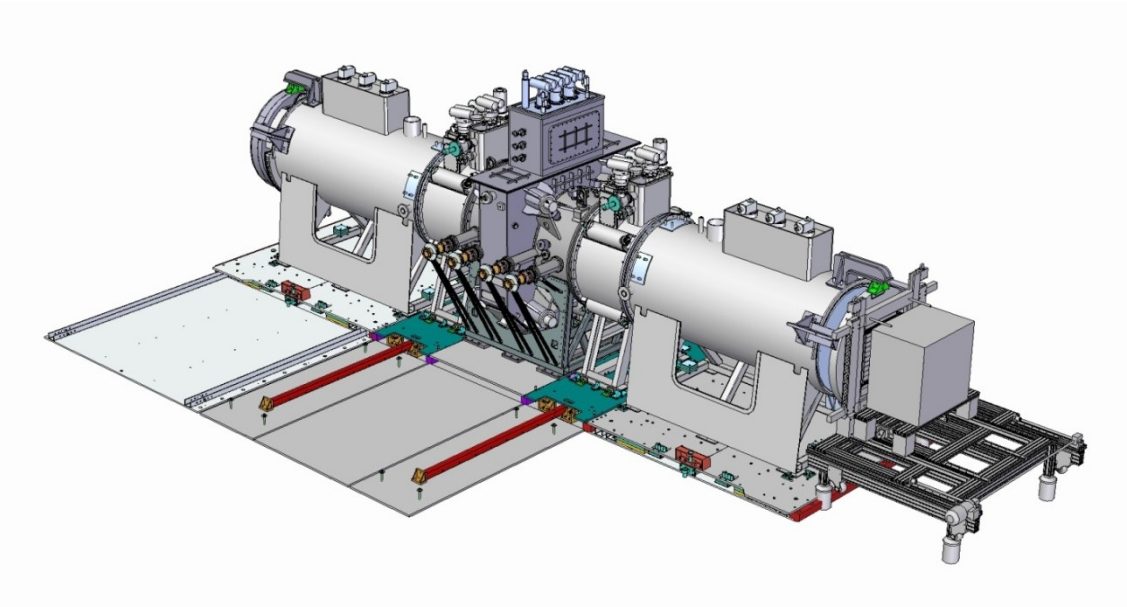
Subsystem	Date
Spectrometer solenoid #1 + #2	June'12
Fibre tracker #1 + #2	Ready
Focus coil #1	Sept'11
LH_2 system A	Dec '11
Solid absorber(s)	June '12
Liquid absorber	Ready
Diffuser	June'11
Virostek plate	Feb. '12
Substation upgrade	Ready
EMR installation	Dec'11
Radiation shutter	June '12
AFC Moving platform #1	Nov'11

Step IV ready...Q3, 2012

Science & Technology Facilities Council

STEP V





Subsystem	Date
Step IV data-taking complete	Q1 2013
Absorber Focus Coil #2	**Q4 2011**
LH2 system B	**Q1 2013**
RF Amplifiers	Q3 2013
RF Infrastructure	**Q3 2013**
Successful test of first CC coil	**Q4 2011**
RFCC #1	**Q1 2013**
AFC Moving platform #2	Q4 2012
RFCC Moving platform #1	Q4 2012
ISIS Long shutdown start	Aug 2014
ISIS Long shutdown end	Feb 2015

Step V ready... Q2, 2014

About step VI

- *If steps are executed in series, Step VI is ~ one year after the end of Step V data taking.*

- *If Step V can be executed before the Aug'14 shutdown: Step VI running could start still in 2015.*

- *If Step V running is not possible before the Aug'14 shutdown, the collaboration will consider executing step V and VI together to run after the August long shutdown to advance schedule. This is more risky and needs to be analysed within the project*

Monitoring and feedback

- *This only works with co-operation from the project*
- *For each subsystem, about six key milestones are being extracted*
- *We track these at weekly MICO (MICE Installation, Commissioning & Operation) meetings)*
- *The key is to engage regularly with Subsystem owners*
- *Gail Hanson has kindly agreed to act as MICE Schedule Co-ordinator*
- *Before each Collaboration meeting, a more comprehensive schedule meeting will be held*
- *Then we review and approve the top-level schedule at the CM as before*

Schedule drivers and concerns

- *The schedule is dominated by the major subsystems, ie RF, superconducting magnets, hydrogen system*
- *Get those right and the rest of the project will fall into place around them*
- *Because of the good work on the spectrometer solenoid, we can now be reasonably confident with step IV*
- *Now have to apply the same methodology to Step V & VI*
- *MICE realises that it will have to advance the overall schedule somehow - for example, this might include working on the major deliverables in a different way in terms of sharing the responsibilities and risks across the Collaboration*

Points from the MPB

- The MICE Project Board (MPB) met with us on 28th June
- Mainly concerned with the schedule and milestones
- Seemed to go OK, these are the schedule-relevant points:
  - Several critical path items need to be assessed carefully
  - Concerned over the 'reality' of the 2011 milestones
  - Will meet again in February 2012 to review key milestones
  - Endorses the August 2014 shutdown as our hard cut-off point
  - Endorses the skipping of Steps II & III
  - Continued involvement of MAP/DOE on magnets and RF is critical
  - Priority between Step IV data-taking and step V construction needs further careful analysis
- An official report will go to the Funding Agency Committee (FAC) on July 15th

What we need to do (in broad terms!)

- *Build and run MICE Step IV*
  - *Once we have done that the project climate will be different*
  - *Our bargaining position will be stronger*
  - *And we'll be better motivated*
- *But in parallel we have to work out how to deliver the RFCC modules within a realistic timescale*
  - *Much work already done – really encouraging*
  - *MICE needs to approve a robust and credible CC delivery schedule*
  - *Work out the key milestones first, for example: testing of first coil, production readiness of vac vessel*
  - *Maybe explore ways of working in parallel and broadening the Collaboration where necessary to help with the above*
- *Work out the implications of combining Steps V & VI*