

MICE CM32

Critical Schedule Items



- *Progress since CM31*
- *Schedule table*
- *Main schedule drivers*
- *Detail planning for Step IV*
- *Comment on Steps V & VI*

Andy Nichols, STFC, 8/2/12



Progress since CM31

- *Schedule slippage has slowed considerably*
- *Progress with the major subsystems is good; they will all be reported on in detail later this week*
- *The schedule is critically dependent on the major deliverables, but it looks more robust and credible, because of:*
 - *Realistic planning*
 - *Sensible expectations*
 - *Injection of suitable manpower*
- *This has certainly been noticed by the UK Oversight Committee and we need to convey the same message to the MPB in March*



MICE Top-Level Project Schedule

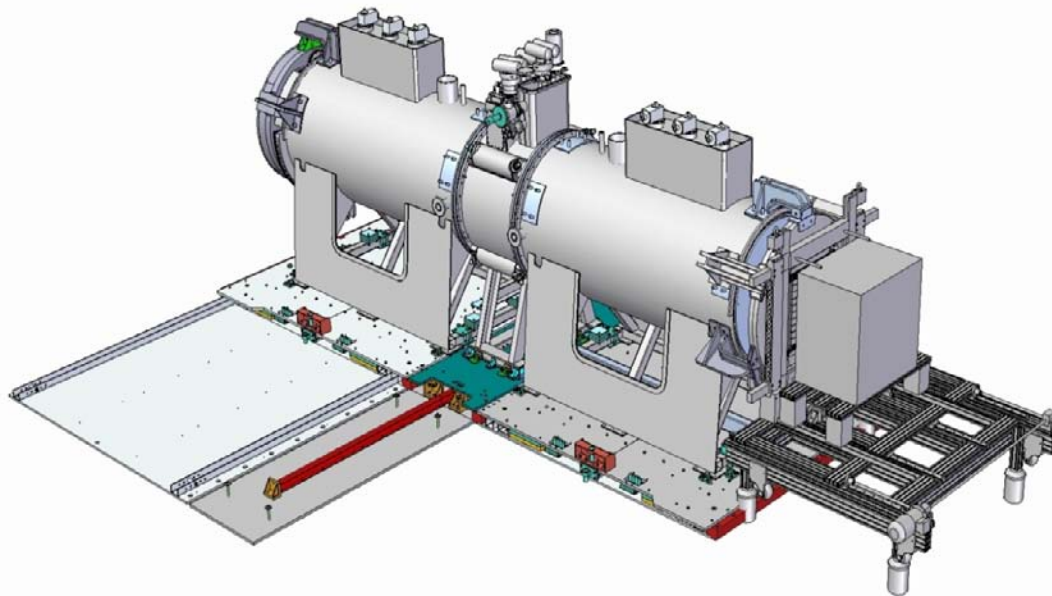
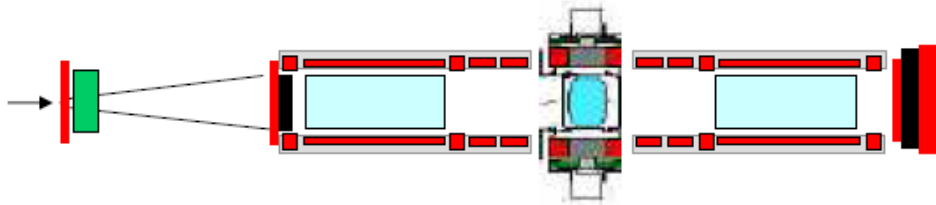
- *Step IV*
- *Step V*

- *Revision date:*

- *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	Sept'12
Fibre tracker #1 + #2	Ready
Focus coil #1	Apr'12
LH ₂ system A	May '12
Solid absorber(s)	June '12
Liquid absorber	Ready
Diffuser	Aug'12
Virostek plate	Feb. '12
Substation upgrade	Ready
EMR installation	May'12
Radiation shutter	June '12
AFC Moving platform #1	Ready
SS platform Installation	June '12

Step IV ready...Q1, 2013

Main schedule drivers

- *Put very simply, for Step IV it is:*
 - *Spectrometer solenoid 1 & 2*
 - *AFC 1*
 - *Liquid hydrogen delivery system*
 - *EMR*
- *These items are all in their final stages of manufacture and are scheduled for this year*
- *Other important items are:*
 - *Diffuser*
 - *Radiation shutter*
 - *Solid absorbers*
 - *Magnetic measurements*
- *Again, much of the work is done....*

Detail planning for Step IV

- *Alan Grant is UK Project Manager – he is responsible for the project schedule in the MICE Hall*
- *Much detail needs to be knitted together, especially as the MICE hall is very small, to make the series of sequential events work*
- *First one-day ‘planning workshop’ was held on 3rd February*
 - *A development of the weekly hall meetings*
 - *Idea is to tie the detail schedule in with the practicalities*
 - *All subsystem responsables invited to take part*
 - *Aim to hold about four meetings per year, certainly before each CM*
 - *Will try to summarise during engineering session this week*

Detail planning



- *Firstly, this is a very nice problem to have.....!*
 - *It's likely that we receive four magnets within a few months of each other (FC*2 and SS*2), between March and October 2012*
 - *MICE phased assembly, steps II & III, might have allowed series integration in the MICE hall*
 - *But given our current step IV plan and the above, we need to work in parallel on integration and have space for storage*
 - *Space is always a contentious issue at RAL, but we managed to get our hands on building R9*
 - *The basic idea is to build a parallel magnet facility*
 - *Immediate plan is for acceptance trials of FC#1 while LH2 tests and floor building is going on in MICE hall*



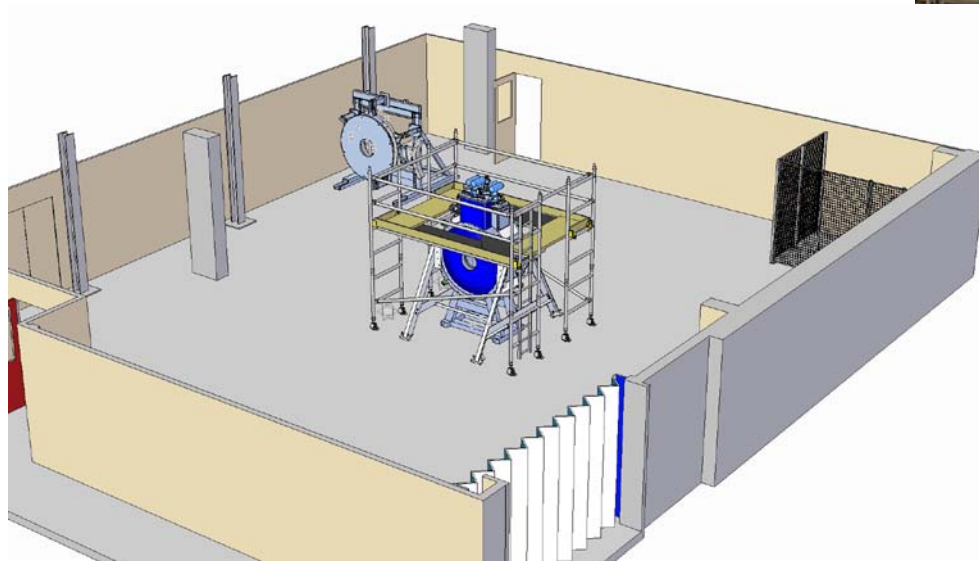
Detail planning



- *This includes:*
 - *Cooling*
 - *Powering*
 - *Absorber integration*
 - *Field mapping*
 - *And general preparation, measurement, etc*
- *Power has been laid into R9*
- *Floor is about to be restored and painted*
- *Field simulation has been made and is OK for surroundings*
- *Presently having asbestos removed from pipe insulation*
- *But, stop press, it's just been discovered in the roof.....*



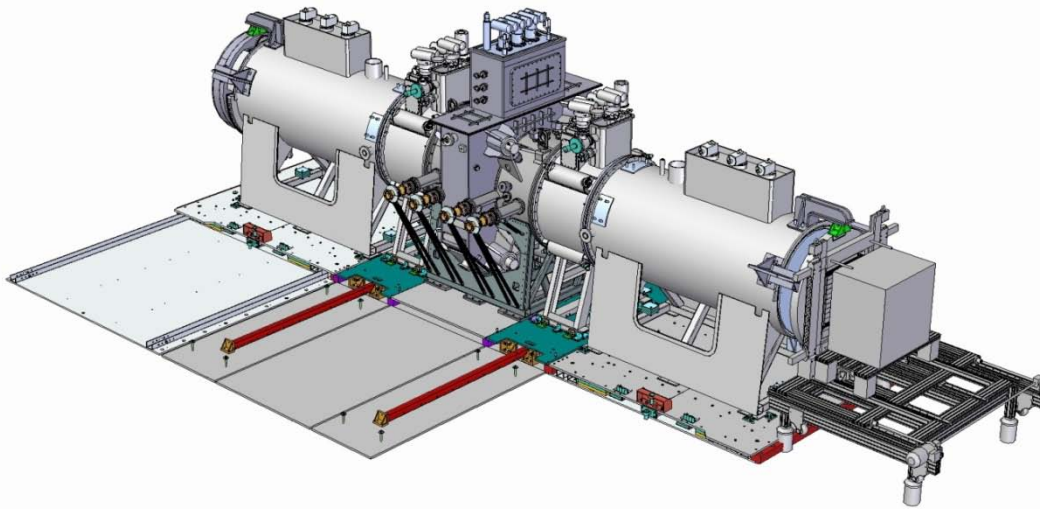
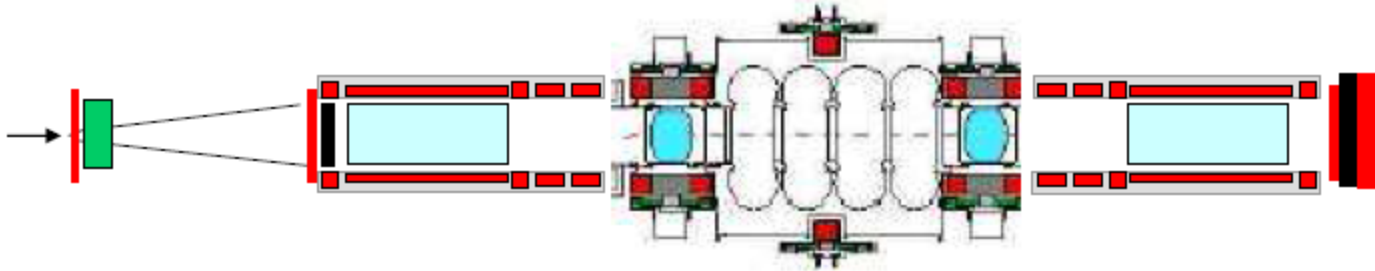
For, example: we can integrate the AFC while the LH2 is being commissioned, or the EMR is being run



Detail planning for Step IV

- *As well as equipment, we also need to plan people....*
- *The schedule only works if each subsystem is supported by its own experts, both during installation and running*
- *This might include:*
 - *Mechanical and electrical integration*
 - *Cryogenic support*
 - *Vacuum technology*
 - *All diagnostic work*
 - *Safety compliance*
 - *Software and computing*
- *For some deliverables, this is understood, some not*
- *Time is getting tight, we must have firm commitments and a list of names*

STEP V



Subsystem	Date
Step IV data-taking complete	Q4 2013
Absorber Focus Coil #2	Q3 2012
LH2 system B	Q1 2013
RF Amplifiers	Q3 2013
RF Infrastructure	Q3 2013
Successful test of first CC coil	Q3 2012
RFCC delivery plan complete	
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.....

Comment on Steps V & VI

- *As before, we still cannot predict a delivery date of Step V until we have a robust delivery plan for the Coupling magnets*
- *But there has been some welcome progress:*
 - *Cryostat review now fixed for Feb 29th*
 - *Much work in progress on coil #1 cold test – more later I'm sure*
 - *Discussions on delivery plan started - CERN large magnet group and DL involved – very early days*
- *We have been asked to submit a major Step V & VI readiness review when Step IV is complete*
- *It will have to contain the above, and much more....*
- *A major opportunity for the project*