

Spokesman's update

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UPDATE:

Update:

MICE Hall:

- **South side PRY installed:**
 - **Major milestone**
 - Congratulations to all involved!
- **SSs and FC now back on the line:**
 - **Principal short term issue:**
 - Alignment
- **North side material will be shipped from Keller Tool in very near future**

Preparations:

- **Spectrometer solenoid refurb:**
 - **Planned for end April**
- **Rack Room 2 and ground:**
 - **Excellent progress in RR2:**
 - Moving on to commissioning equipment that has been installed;
 - **Experiment earth installed from RR2 through MICE Hall:**
 - Need now to implement detector-specific solutions to allow instrumentation to perform to specification
- **Vacuum:**
 - **Steady progress on installation of backing vacuum**



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STEP IV:

Construct/commission/operate!

- **First data taking with beam since Jun14:**
 - **Weekend running in March, successful:**
 - All systems to TOF1 operational again, after very long shut-down;
 - Integrate the new trigger system when running with all VME crates;
 - Test synchronization;
 - Take data for a new TOF calibration:
 - Compare performance—Old vs. New Trigger system.
 - » More information in Durga's slides.
 - New momentum scan data for Ckov:
 - To be used to examine the new optimised HV settings of the PMTs.
 - Q123 Scan:
 - Main goal to investigate upstream beamline setting (Q1,Q2,Q3)
 - » In particular settings with lower current in Q1 are investigated.
 - **Weekend running in April:**
 - Goal:
 - Begin optimisation of the MICE Muon Beam
 - Snag:
 - Issue in the decay solenoid power supply
- **Time now to put more flesh on the run plan from Jun15:**
 - **Efficient commissioning:**
 - Magnets and tracker with beam
 - **Efficient calibration:**
 - Data for calibration of TOF2, KL, EMR
 - **(Shift) options analysis to be presented to EB by S. Boyd tomorrow**

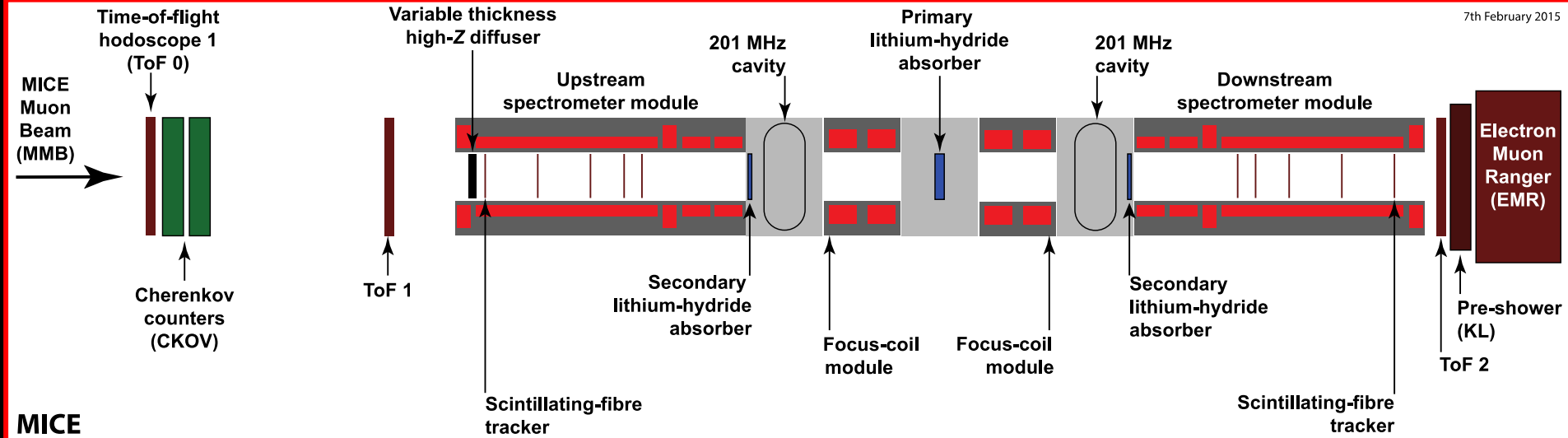
- **Liquid-hydrogen safety:**
 - Recent ISiS-led review of LH2 system included recommendation that as-built relief pipework impedance be re-evaluated;
 - This was done; conclusion is that, in certain failure modes, pressure that must be resisted by the H2 safety window is larger than previously thought;
 - **Actions required:**
 - **Retrofit larger-diameter relief lines:**
 - Planning underway, will be carried out;
 - **Pressure/burst test of H2 safety windows:**
 - Not carried out to date (LH2 windows tested);
 - **Being evaluated ...**
 - **Rock and hard place:**
 - **Need to consider starting with LiH absorber;**
 - **Also need to recognise need to run in “empty” configuration for alignment/systematics etc.**
 - **Decision point is “sooner rather than later”!**
- **Shifts:**
 - **Options analysis for how to maximise the operation of the experiment performed by S. Boyd;**
 - **Will be presented to the EB tomorrow**

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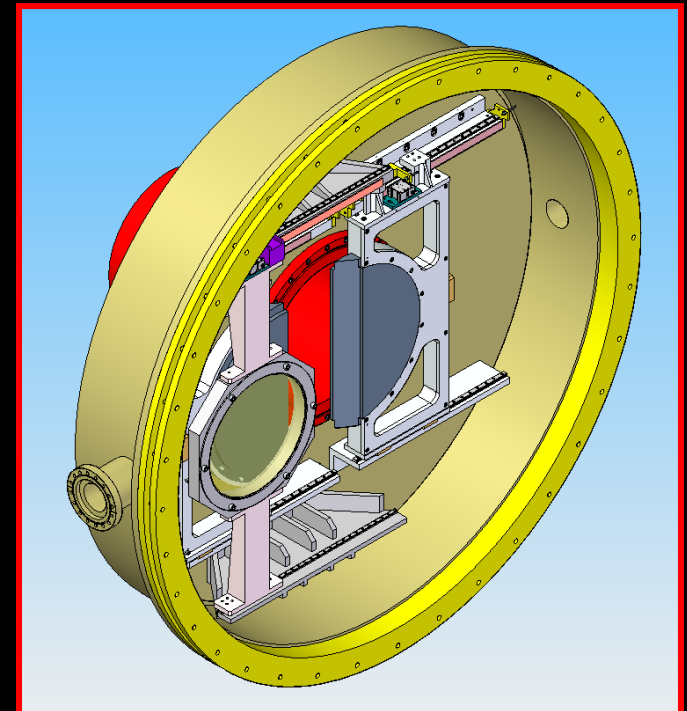
COOLING DEMO

Cooling demo configuration

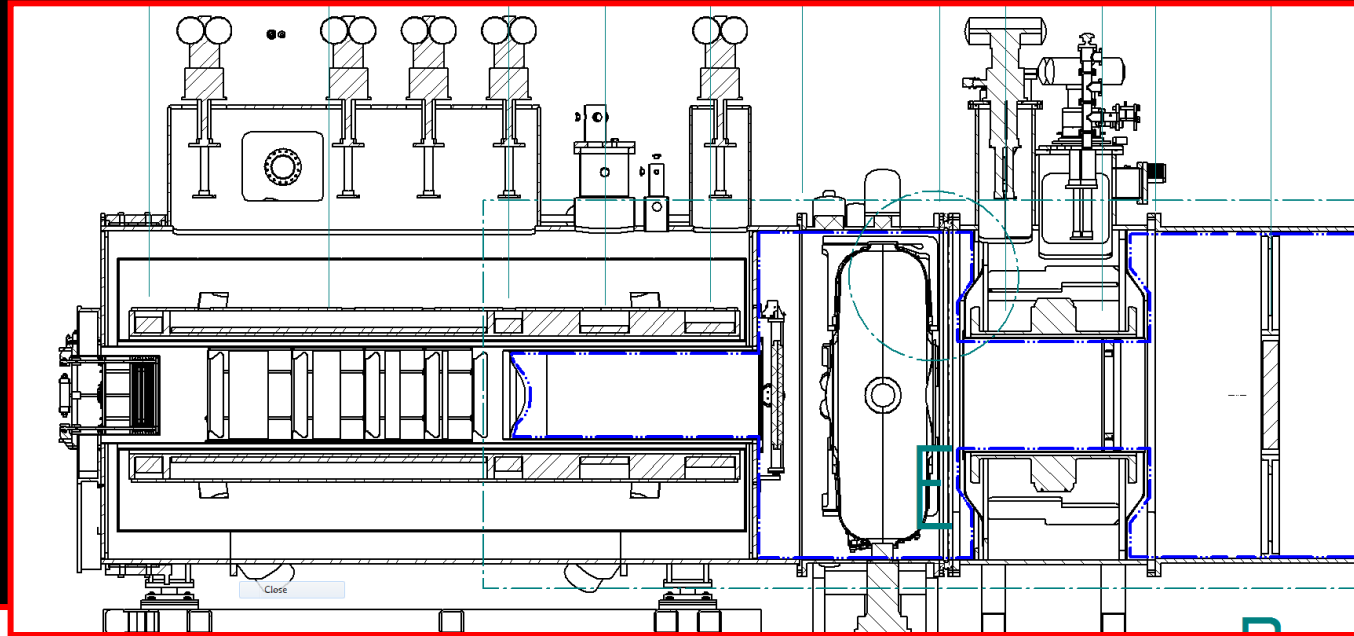
7th February 2015



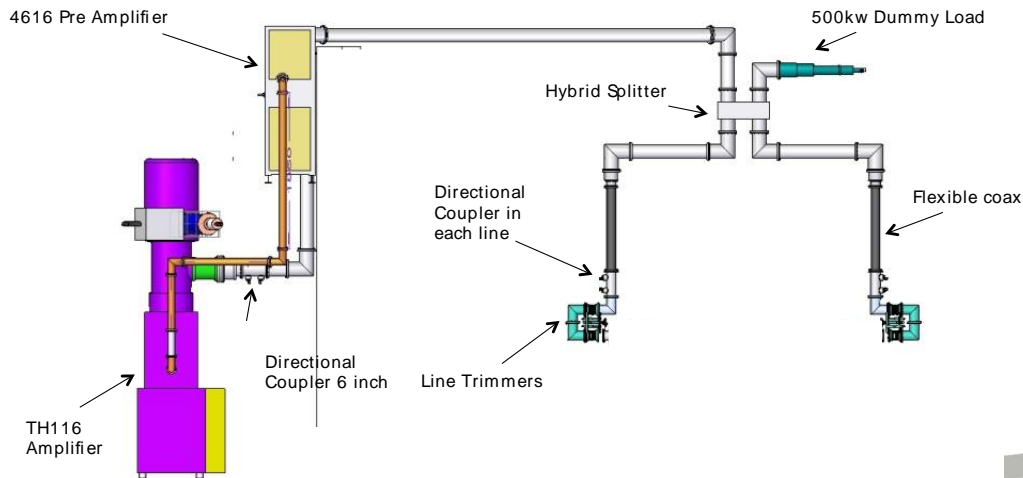
- Secondary absorber position:
 - In the space between the cavity and the spectrometer
 - Initial design: N. Collomb
- Optimum cell length identified:
 - ~ 8 cm shorter than in MICE Note 452;
 - J. Pasternak, J.B. Lagrange investigating minimum
 - Draft paper in preparation (see later)



Cooling demo envelopes



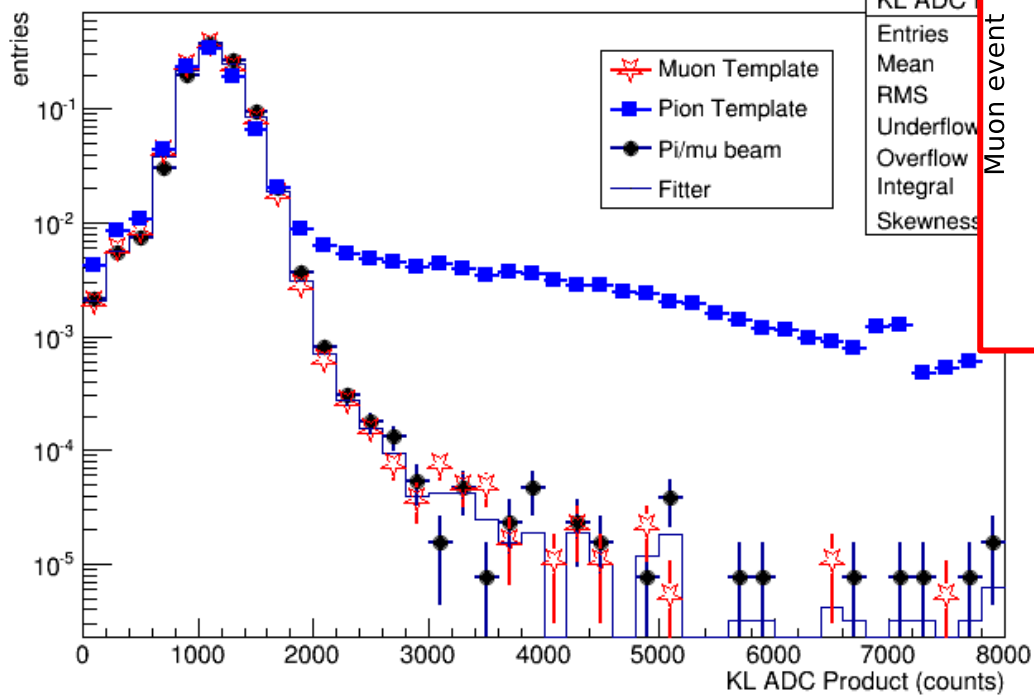
- Output line from amplifier is lower than the PRY, needs to go high to clear PRY to couple to South RF couplers
- Already have the 6" coax to go over the wall
- No advantage in going through the wall



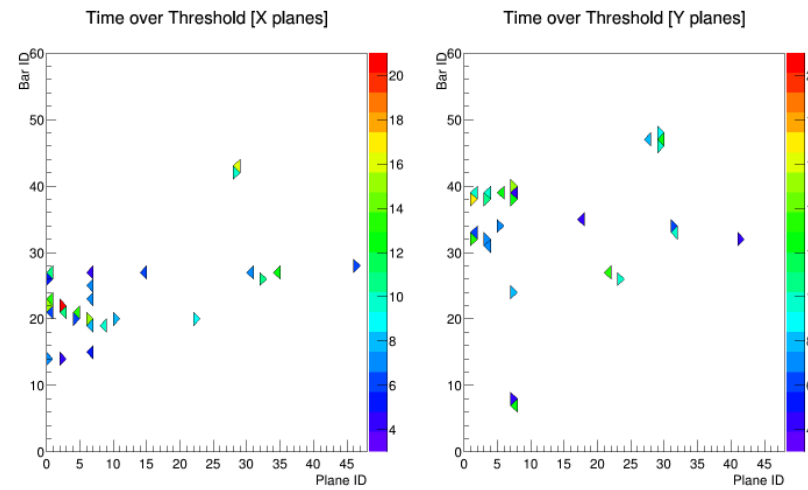
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PAPERS

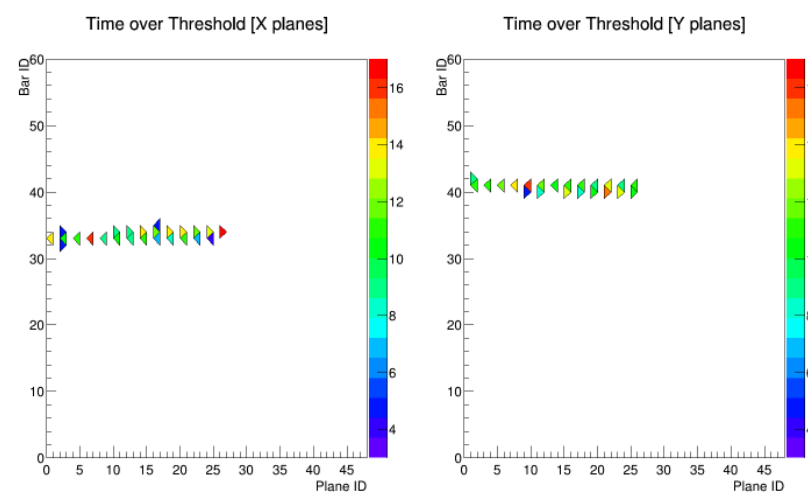
KL ADC Response



Electron event



Muon event



Papers:

Table 2: Physics and technical papers being prepared by the collaboration.

Title	Lead authors
Step I physics	
Electron Muon Ranger: performance in the MICE Muon Beam EMR: draft to be circulated before the MPB review!	A. Blondel, F. Drielsma, R. Asfandiyarov
KL: progress since reprocessing; upper limit on pi-contamination Measurement of the pion contamination in the MICE Muon Beam	D. Orestano, D. Nugent, P. Soler
Step IV physics	
Commissioning of the MICE experiment in the Step IV configuration As last time: work organised; focus on getting experiment off the ground	C. Rogers
Ionization cooling demonstration	
Design and expected performance of the MICE demonstration of ionization cooling Draft to be circulated before MPB review	V. Blackmore, J. Pasternak, C. Rogers
Technical	
The MICE target upgrade Draft being assembled.	C. Booth
The design construction of the MICE Electron Muon Ranger Draft under review in the EMR group	R. Asfandiyarov, A. Blondel, F. Drielsma
The Reconstruction Software for the MICE Scintillating Fibre Trackers Issue in track-fit being debugged	S. Dobbs
The MICE Analysis and User Software framework	D. Ragaram

Need to push on the papers; particularly those marked in red!

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PREPARATION FOR APRIL RLSR/MPB REVIEWS

April 2015 RLSR/MPB reviews

- RLSR/MPB followed by FAC:
 - 16Apr15 and 17Apr15
 - Documentation posted at:
 - <http://micewww.pp.rl.ac.uk/projects/governance/wiki/2015-04-16-Review>
 - Talk rehearsal session Wednesday 15Apr15
- Agenda ...

16 April 2015

09:00-09:45	RLSR closed session – introduction		
09:45-10:15	Project overview	K. Long	20' + 10'
10:15-12:45	RLSR presentations & questions		
	Schedule to completion, project risks and overview of critical interfaces	R. Preece	30' + 10'
	Re-baselined deliverables, critical decision points and status of US deliverables	M. Palmer	30' + 10'
	UK financial plan, risks	A. Grant	20' + 10'
	US financial plan, risks	P. Garbincius	20' + 10'
	Unscheduled	150' - 140'	= 05'
12:45-13:15	Lunch		
13:15-14:00	RLSR closed session – critical findings		
14:00-15:30	Step IV, commissioning, operations and control		
	Step IV commissioning and operations planning; overview	S. Boyd	20' + 5'
	MICE Muon Beam and MICE channel optics and commissioning plan	J. Pasternak	15' + 5'
	Step IV measurements and analysis planning	C. Rogers	15' + 5'
	Controls and monitoring	P. Hanlet	15' + 5'
	Unscheduled	90' - 85'	= 5'
15:30-16:00	Closed session		
16:00-17:30	Reconstruction, simulation and data flow		
	Software, computing and data processing; overview	D. Rajaram	15' + 5'
	Reconstruction; online, offline and batch	A. Dobbs	15' + 5'
	Simulation and configuration management	R. Bayes	10' + 5'
	Data flow: from front-end boards to automatic batch processing	Y. Karadzhov	10' + 5'
	MICE computing infrastructure	P. Franchini	10' + 5'
	Unscheduled	90' - 85'	= 5'
17:30-18:00	Closed session, report writing		
18:00	Adjourn		

17 April 2015

09:00-10:30	Cooling-demonstration integration, SC magnets and RF		
	Focus-coils, absorbers and LH2 system for Step IV	S. Watson	20' + 10'
	Cavity modules and test programme, PRY and spectrometer solenoids	A. Bross	20' + 10'
	RF-power distribution	K. Ronald	20' + 10'
	Unscheduled	90' - 90'	= 0'
10:30-11:30	Closed session, report writing		
11:30-12:00	Close-out with MICE management		