CONCLUDING REMARKS

HIGHLIGHTS (0)

MICE HALL is all ready for step II-III

HIGHLIGHTS (I)

Data taking:

Thursday 6-july-2010 first completed Marco's ε,P matrix!

MICE Log Template Test

MICE Logbook Logged in as "MICE" ELOG

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Message ID: **1341** Entry time: **Wed 07-Jul-10 01:59**

Author:	MOM-YT
Type:	Reference
Category:	General
Subject:	Negative beam milestone

We now have at least 2k spills for all 9 elements of the MICE momentum-emittance matrix at the nominal magnet settings with negative polarity beam.

Still need to slice all that cheese (analysis).

Yagmur

Many new and important improvements in operations

(15 minutes to turn on in the morning – thanks Chris!)

Control&Monitoring improving steadily (Hanlet)

DAQ more quiet (JSG)

connection from outside possible (Malcolm, Henry)

C&M→ data base and DAQ imminent

Superb progress on configuration data base (David Forrest)

remains to include target data in DAQ+C&M

comment: should define
informative naming convention for beam-line optics

-- "200 MeV/c muon" is not enough

specify precisely defining parameters:
P1 and P2 (relation is a choice and affects energy distribution greatly)
DS current
proton absorber thickness
emittance aimed at
(later) diffuser thickness
version number

of course info on configuration data base will be more complete.

HIGHLIGHTS (II)

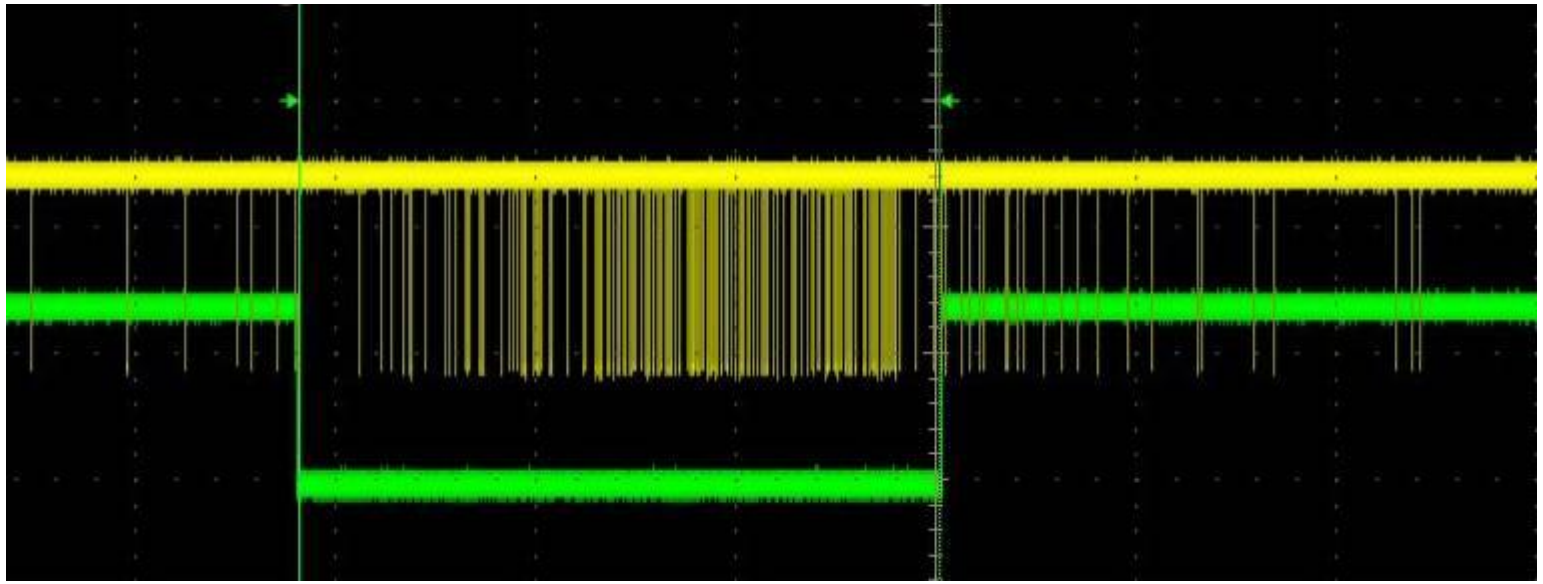
Now running routinely at 2V (sometimes 3V) beam loss!

Luminosity monitor now part of data stream and running smoothly.(Soler)

(use it for normalisation!)

-- Yet, problem with apparent saturation observed at CM26 (with pions) seems gone (Adam Dobbs)

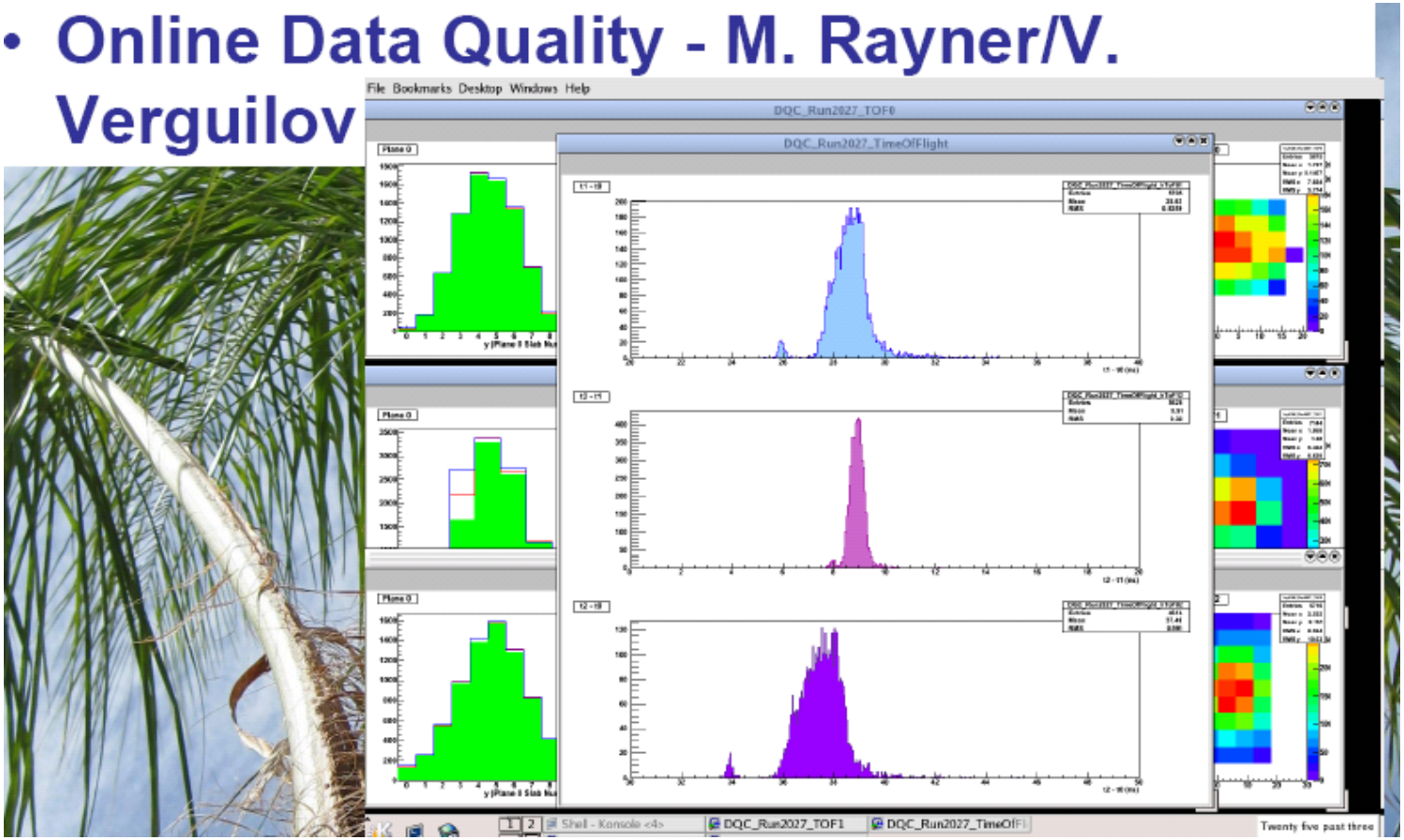
1. **with negative muons (even at 3V) we have ~10μ/V**
2. **➔ we now run with reduced target delay ➔ flatter time distribution**



from logbook (Summer Blot)

Linda Coney

- Online Data Quality - M. Rayner/V. Verguilov



-- aim is to produce a run summary (standard plots and numbers)
-- also need references to compare with:
good runs vs (understood) bad runs

HIGHLIGHTS (III)

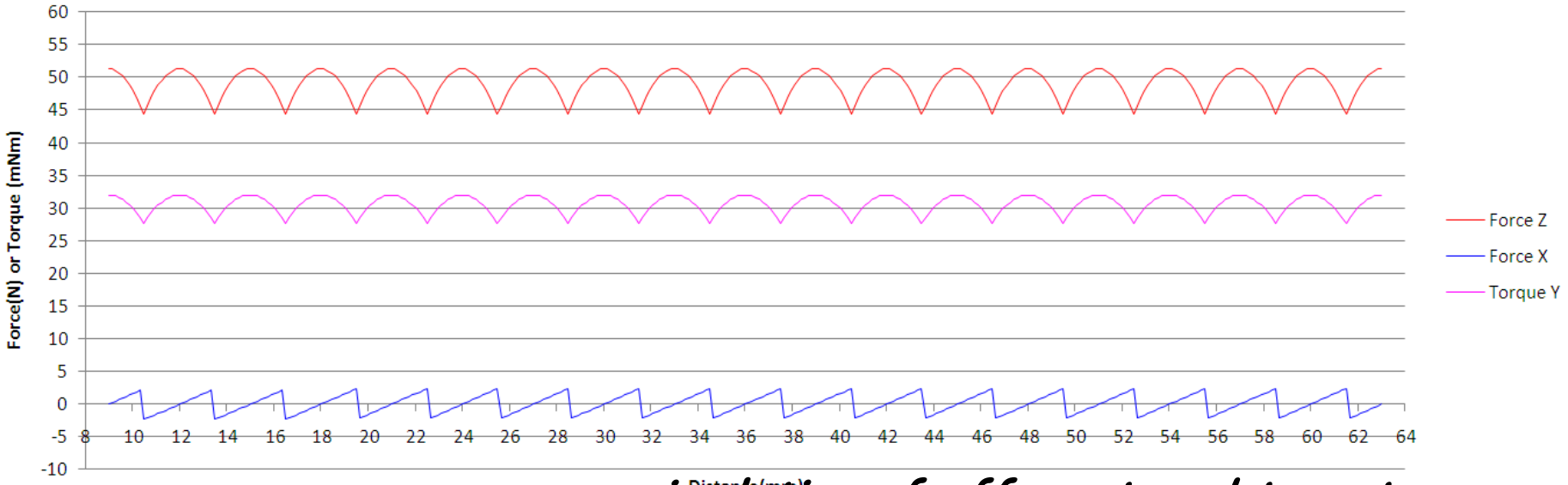
Target (Paul Smith)

T1 has run for now 350000 pulses with no sign of aging

hmmm… still not 2-target situation… but getting close through a systematic program of measurements and simulations.

will take T1 out in August to measure magnetics.

Aim at two targets T3 by fall 2010.



simulation of off-centered target

HIGHLIGHTS (IV)

Data Processing and Analysis
(Henry, Marc, Marco, Yordan, Vassil, Maryan,
Chris Tunnell, Tim Carlisle)
Great activity and good results

-- we are discovering all kinds of 'systematics'!

Misplaced detectors:
ALL GEOMETRY CHANGES SHOULD BE COMMUNICATED TO …
(…?.... a central person to be clarified)

Moving pedestals and "electron reference time".
We should define frequency of 'global' calibrations
(is the ref. run enough?)
Cherenkov needs attention!
-- -- --
rapid analysis effort on ongoing data should be more emphasised

HIGHLIGHTS (V)

Infrastructure projects have been redeployed to take into account delay in spectrometer solenoids (Andy Nichols)

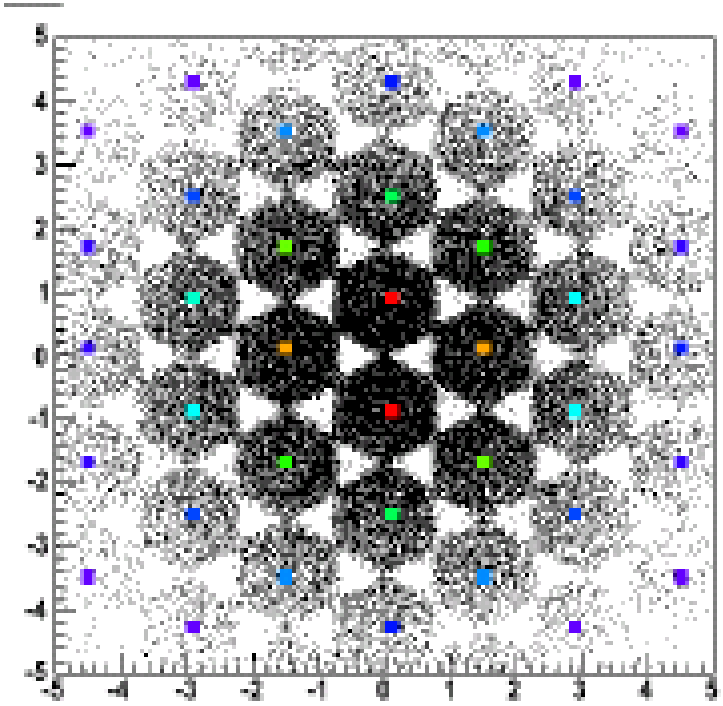
Liquid Hydrogen infrastructure
RF power system

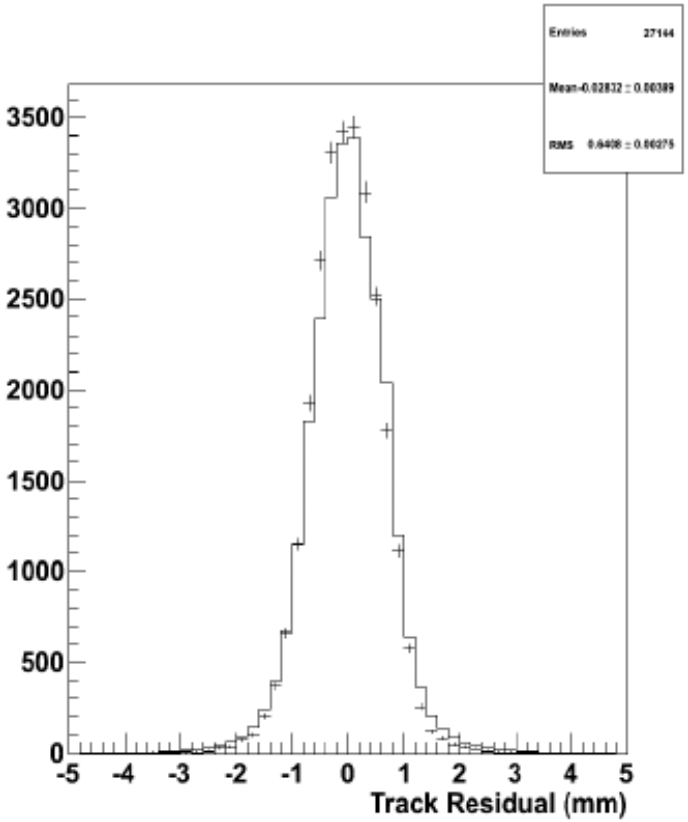
GOOD MOVE!

(these might have become critical later)

HIGHLIGHTS (VI)

Tracker ready to go!
(David Adey)



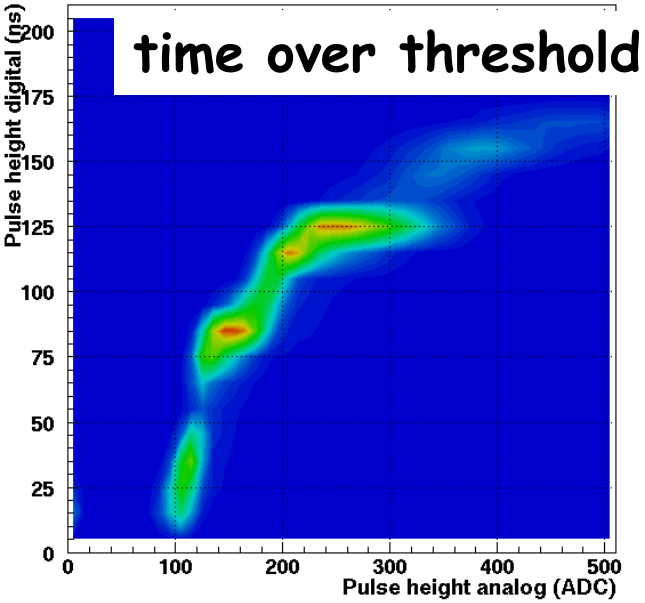


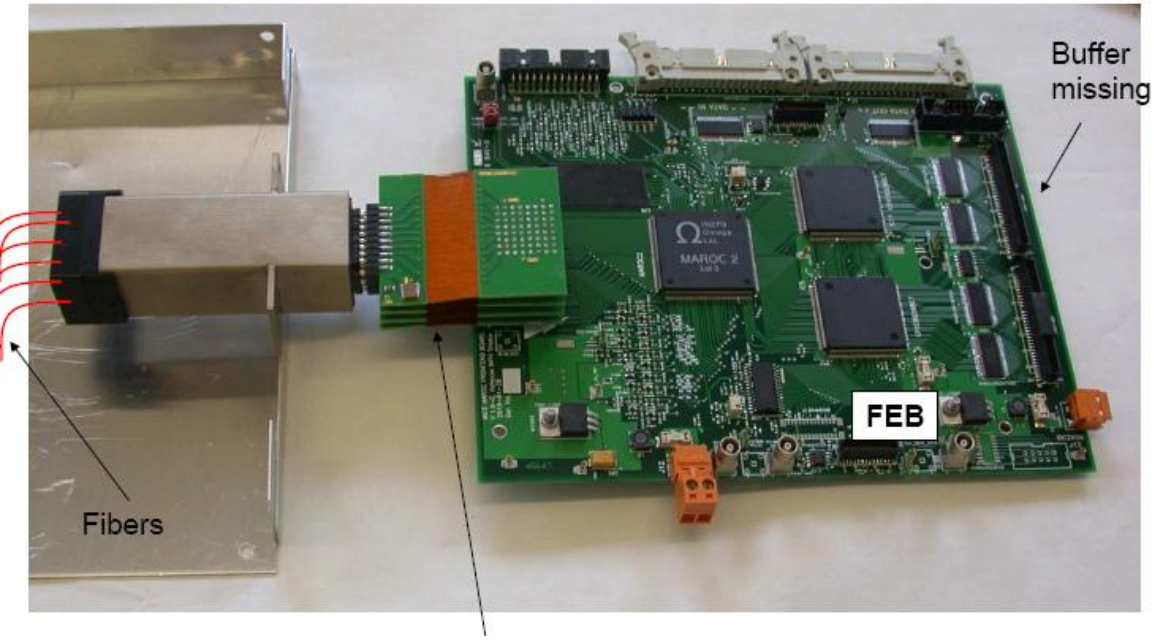
I understood this and liked it

I did NOT understand this, but liked it, too.

HIGHLIGHTS (VII)

EMR FEB towards
final solution (MAROC3)
(could have been finished earlier
but saved factor 3 € by waiting)
(Davide Bolognini)



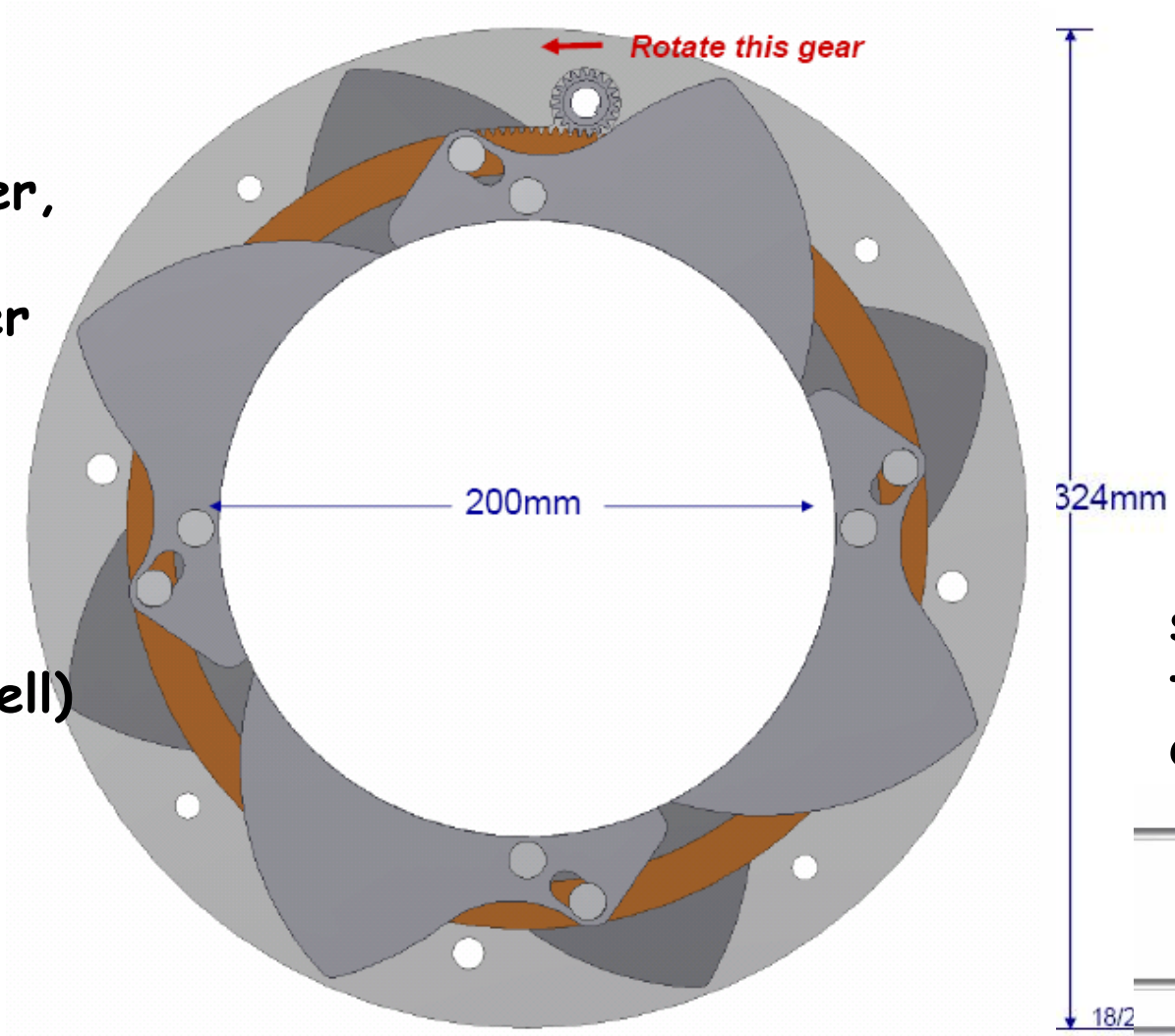


HIGHLIGHTS (VIII)

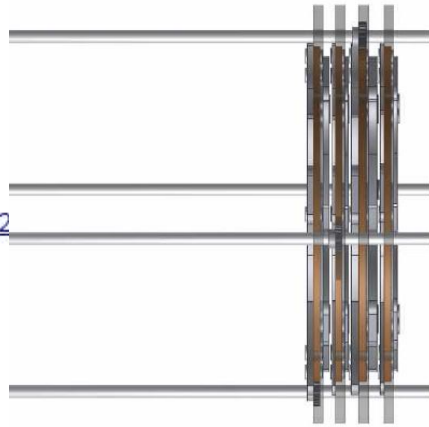
new, simpler,
easier
and cheaper

diffuser
design!

(Cobb,
Tacon&Tunell)



stack four of
these in the
diffuser 'hat'

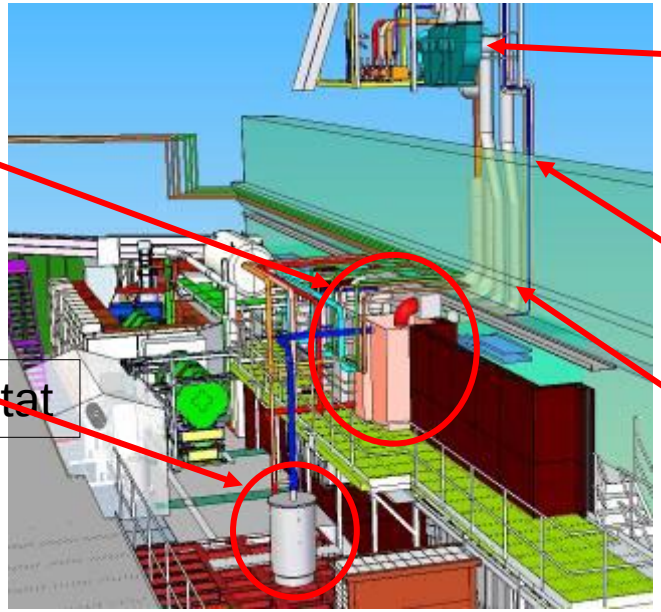


(4 layers needed,
first layer was designed and executed in 4 days!)

LH2 system: much progress

HIGHLIGHTS (IX)

R&D system



LH2 infrastructure in the MICE Hall

absorber 2 in construction in Tsukuba!
(Needs OK for absorber 1!)

Windows

HIGHLIGHTS (X)

Solid absorbers: LiH disc now back to production
Bad news is that LiH wedge is expensive!
➔ negociate
➔in any case should prepare a plastic absorber set
simulation
design
(because it is cheap does not mean its not interesting!)

Magnets

1. spectrometer solenoids (Virostek)

-- MICE's present main hurdle!

-- we are almost there

-- re-state gratitude to LBNL for taking on that responsibility

-- re-state support by collaboration and try to find manpower help

-- proceed carefully and gather information such that

-- we don't run the risk of another 'trial and error' (8 months!)

-- we learn enough to make sure that magnet is not a nightmare once at RAL

-- possibly learn what there is to learn for other magnets.

THANKS to review committees for their time!

2. given that time is now critical, TB recommends to seek help from CERN for magnet measurement (not done yet!) (in situ at RAL – also for FC?)

Focus coils and Coupling coils

Focus coils (Tom Bradshaw, Wing Lau)

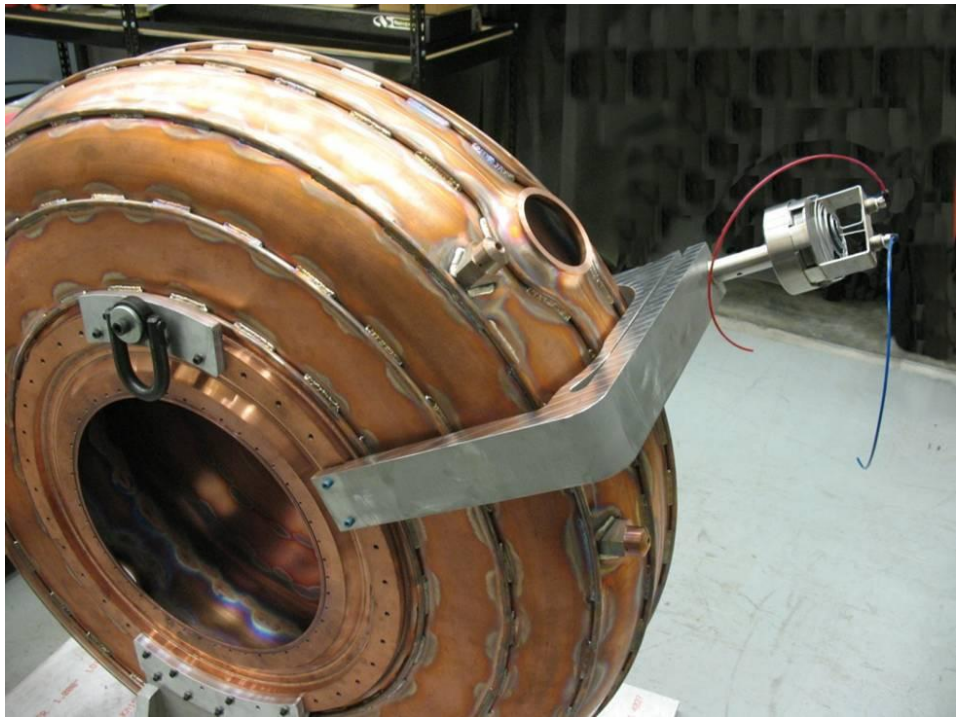
-- construction at Tesla about to start
-- good interface with company
-- solving integration issues with absorber bodies
    -- ☺ also integrate controls and monitoring!

Coupling coils (Steve Virostek and Lixin Li, SINAP/LBNL)
-- firmed up organization LBNL/HIT-ICST/Qi-Huan/SINAP
-- milestone table setup – will be watched!

First MuCOOL CC in Q4 2011

HIGHLIGHTS (XI)

RF cavity production and measurements is progressing very well.
(Derun Li, Steve Virostek)



RF tuner prototyped

First RFCC module at RAL: Oct2012
(most critical item is CC)

Integration

(Nichols, Tarrant)
"Even if we don't do anything else, it is vital that we define an envelope for each subsystem"

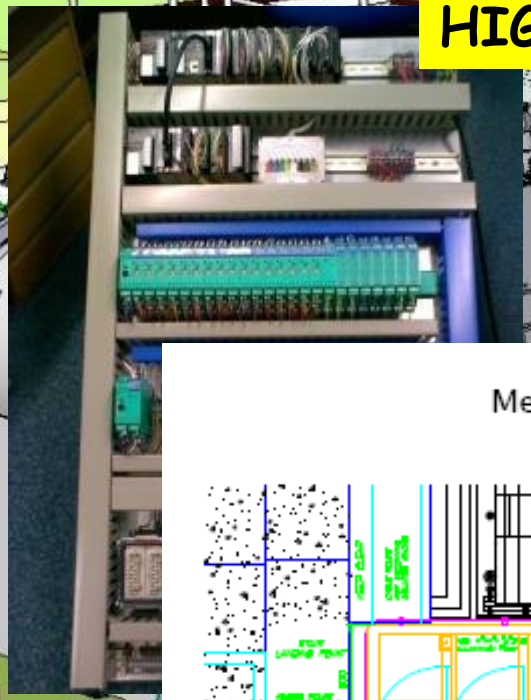
(the best things come in small packages)

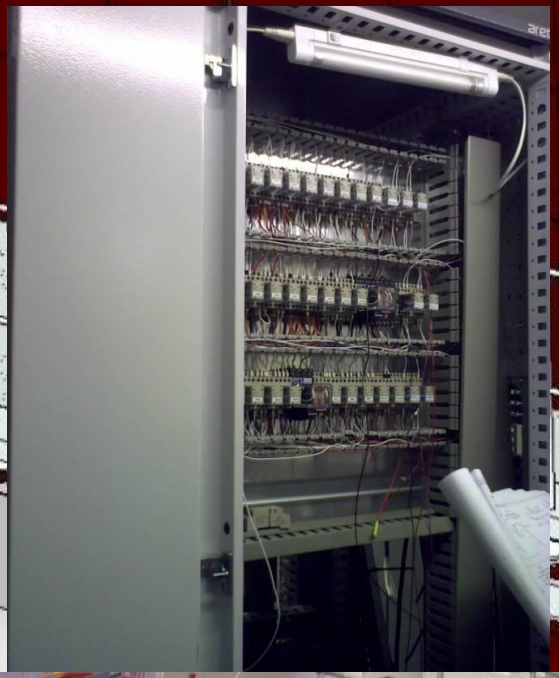
Integration engineer nominated (Jason Tarrant)
-- starts at RAL July 2010

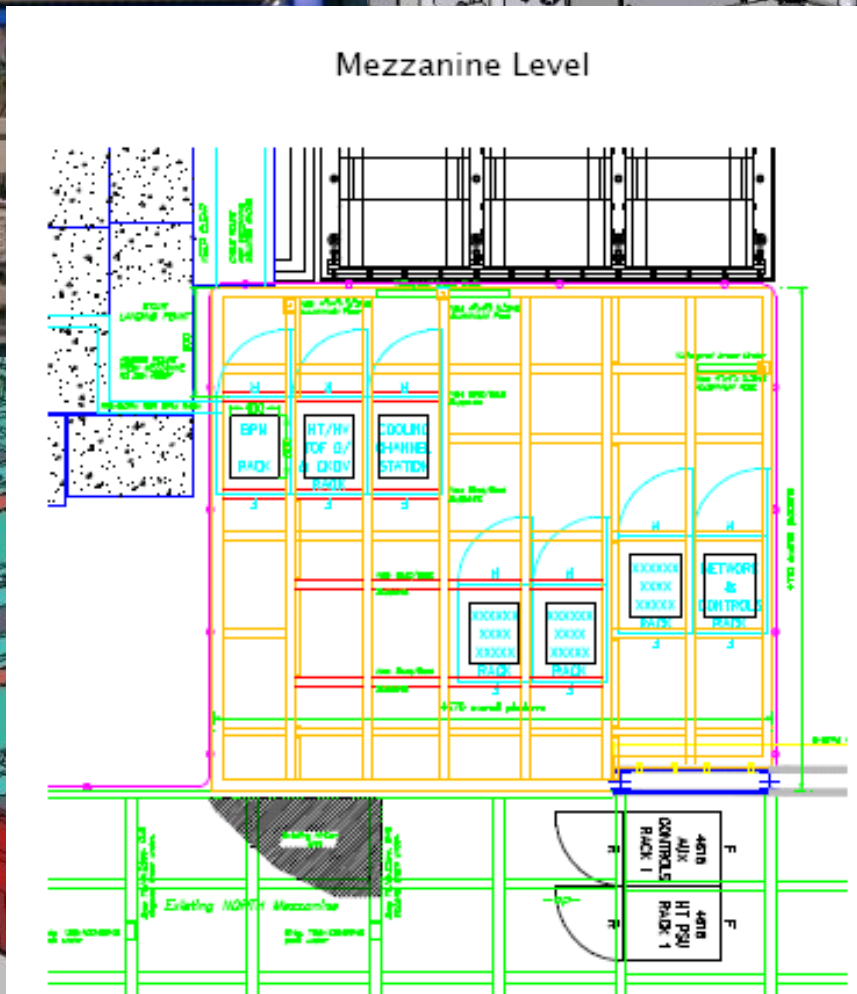
My plea: please have a close interaction with
Integration Physicist (Malcolm → successor to be found)
to make sure that MICE (real)=MICE(analysis)=(G4)MICE

HIGHLIGHTS (XI)

Jason Tarrant
/Chris White

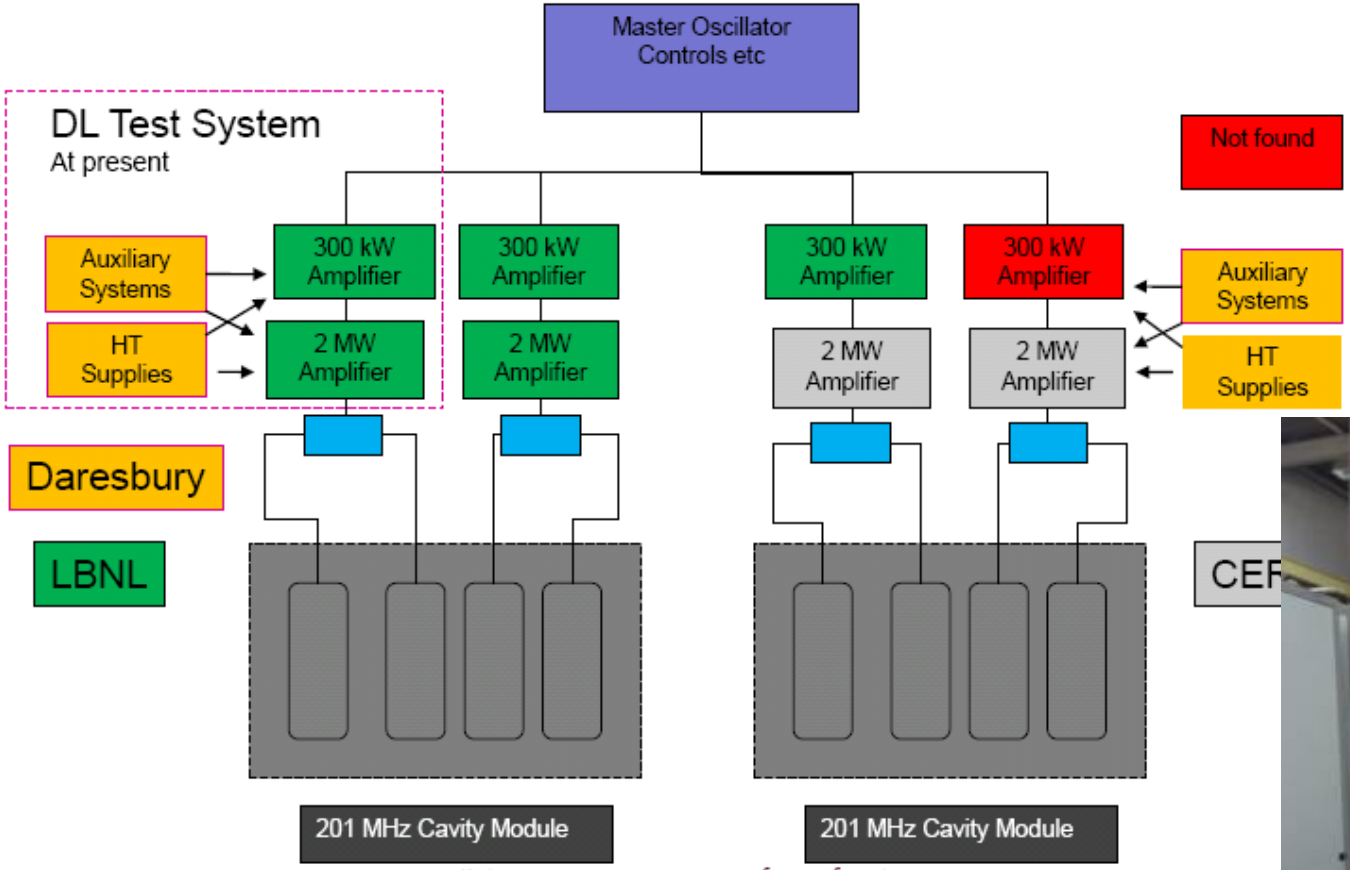






RF system components

HIGHLIGHTS (XII)

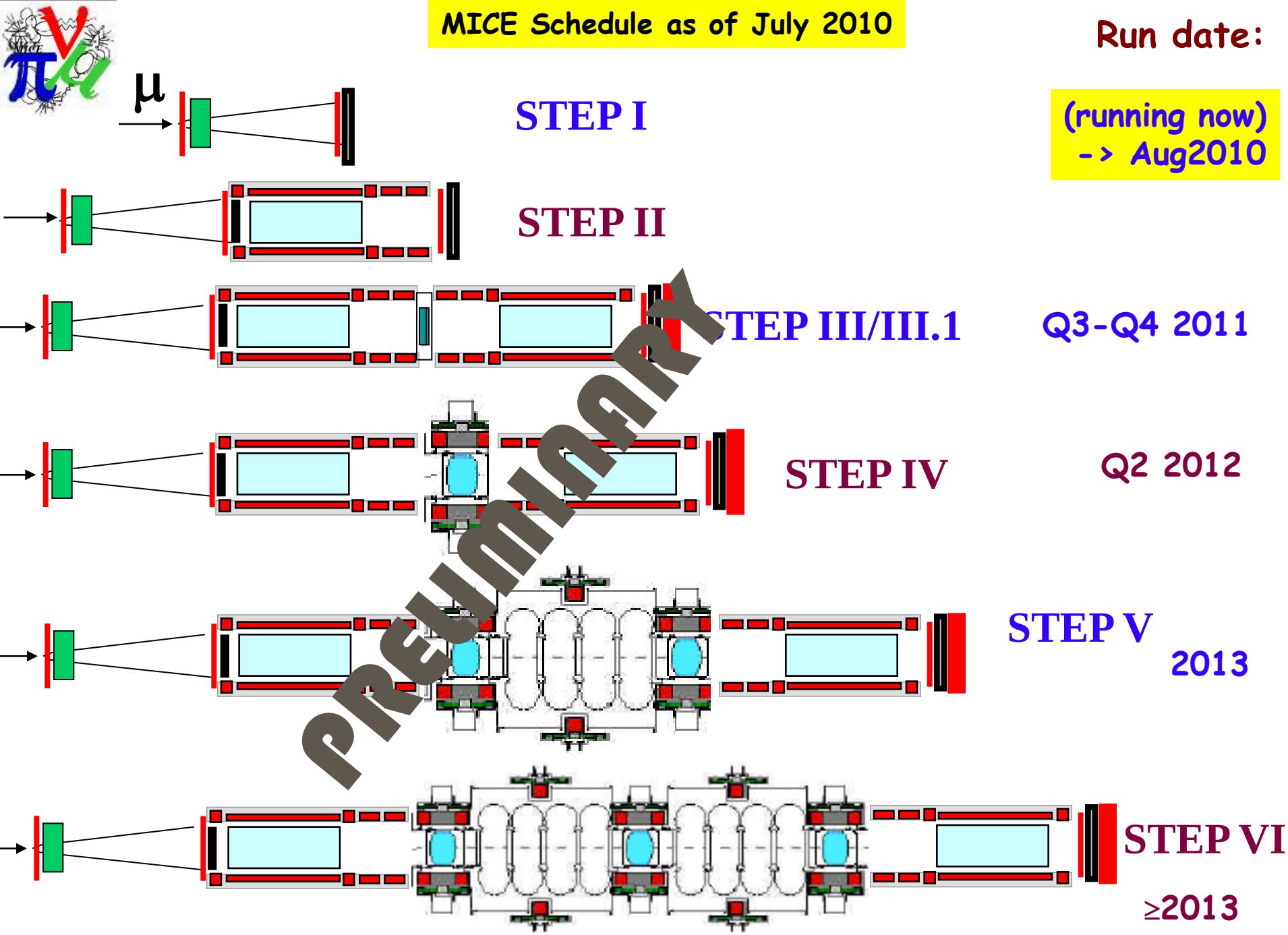


marching on…

First 2MW system will be at RAL by end of 2010 for prototype installation

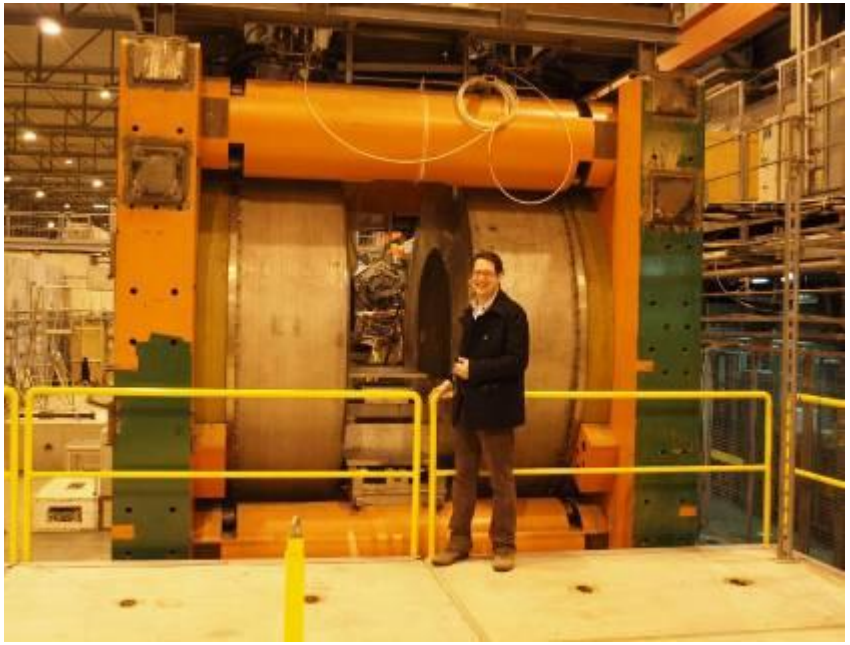
MICE Schedule as of July 2010

Run date:



HIGHLIGHTS (XIII)

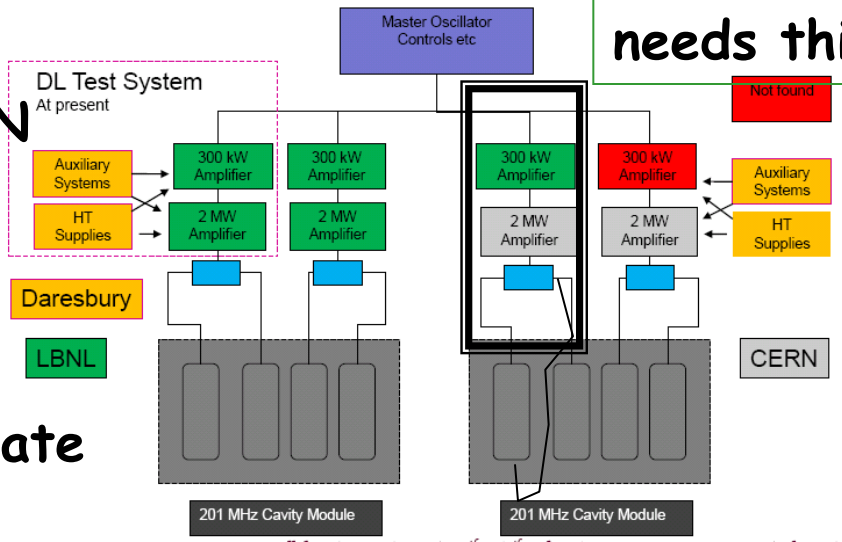
CERN connection (G. Prior)



Gersende found large magnet at CERN
-- needs CERN "Champion"
-- RF in Mag-field tests are so vital to NUFACT that MTA+CERN could be complementary
--CERN preparing budget+time estimate (+list of available RF equipment)

RF system components

needs this




СМ28
Банкя

From RAL to BANKIA (3-8 October)

-- take data, analyse data, scratch our heads
and prepare MICE PAPER I

-- follow solenoid developments and start making recovery plans

-- test new diffuser idea

-- investigate magnetic measurements

-- continue progress on all fronts!

-- go through MAP and MPB reviews (paperwork!)

-- will prepare list of VC agendas with Linda

THANKS

to all MICE for contributions, informative presentations and hard work

John Cobb and Victoria Blackmore for scientific organisation of CM27

Andy Nichols and Rose Hayes for all practicals including

MICE is a great TEAM – we will pull it off!