

The image is a composite of two photographs. The left photograph shows a large, industrial-scale cylindrical tank, likely a cryostat, supported by a complex metal lattice structure. The tank is situated in a large hall with a high ceiling and other industrial equipment visible in the background. The right photograph is a close-up of a copper detector component, showing a circular copper plate suspended by ropes, with a copper structure below it, all within a precision-machined metal housing.

# Construction & Integration summary / outlook

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GERDA Collaboration Meeting at LNGS  
10 - 12 November 2008

### BIG PROGRESS since last meeting

- ▶ water tank constructed
- ▶ dto. GERDA bldg & platform
- ▶ all phase I diodes refurbished, tested, mounted = READY

### STILL MANY OPEN TOPICS

Most urgent ones discussed in topical sessions:

Topic	convenor
Slow control (interfaces)	R. Brugnera
Tests of FE & detector string	C. Cattadori
Installation procedure for phase I detectors	S. Schönert
Test of commissioning lock with diodes	B. Majorovits
Works in water tank	P. Grabmayr
Remaining works: list, schedule	K.T. Knöpfle



- **FE :**
  - ◆ 2 NIM Crates ⇒ CANbus ✗
  - ◆ LabView ⇒ OPC
  - ◆ pulser ⇒ ?
  - ◆ picoA ⇒ ?
  - ◆ LV ⇒ ?
- **DAQ-Phase I :**
  - ◆ 2 NIM Crates ⇒ CANbus ✗
  - ◆ Some monitoring from computer programs ✗
- **Cherenkov-Muon-Veto**
  - ◆ VME crates ⇒ CANbus ✗
  - ◆ HV ⇒ Ethernet ✗
- **Plastic-Muon-Veto**
  - ◆ ????

R. Brugnera LNGS-GERDA General Meeting

Basic system available for control & monitoring of e.g. VME/NIM crates, HV, ...  
lacking: Windows world integration  
integ. of some more devices

Only few answers to questionnaire

▶ **input needed for further progress**

Data base candidate selected – feed back!

**Some conclusions:**

- Schedule needed: when what to be avail.
- ▶ network, firewall, etc. by Jan 09  
all FE devices by Feb09
- Each group to provide its web-based display.

??? continued:

- Rn monitor • clean room / lock • water plant

# test of FE & detector string

3-channel fpcb for PZ0 late - still many details to be optimized, eg.: mount, shielding box, cable connections, HV filter, relative location w.r.t. diode/pp matrix.....

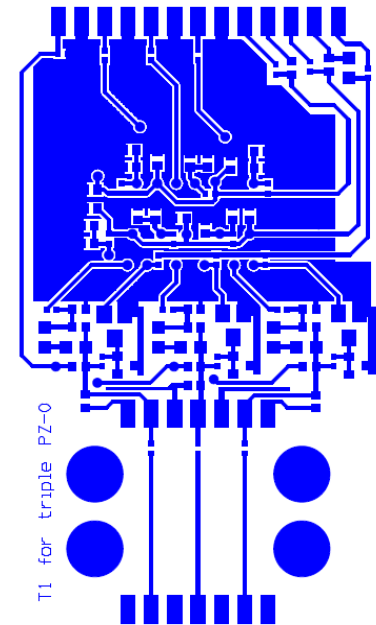
**Decision:** Fabricate present layout immediately!

Build mounting frame!

Next steps: bench test at Milano (2-3 weeks),  
test with SUB at Milano (1 week), 2008  
test with string at Munich with 2009  
commissioning lock.

Detailed drawings for mechanical & and electr(on)ic integration needed!

Optimize fpcb layout and produce new version by Feb 09.



# installation procedure for phase I detectors



Stefan's recommendation:

**Adopt proven procedures of GDL!**

i.e.:

Handle diodes in clean bench under nitrogen atmosphere!

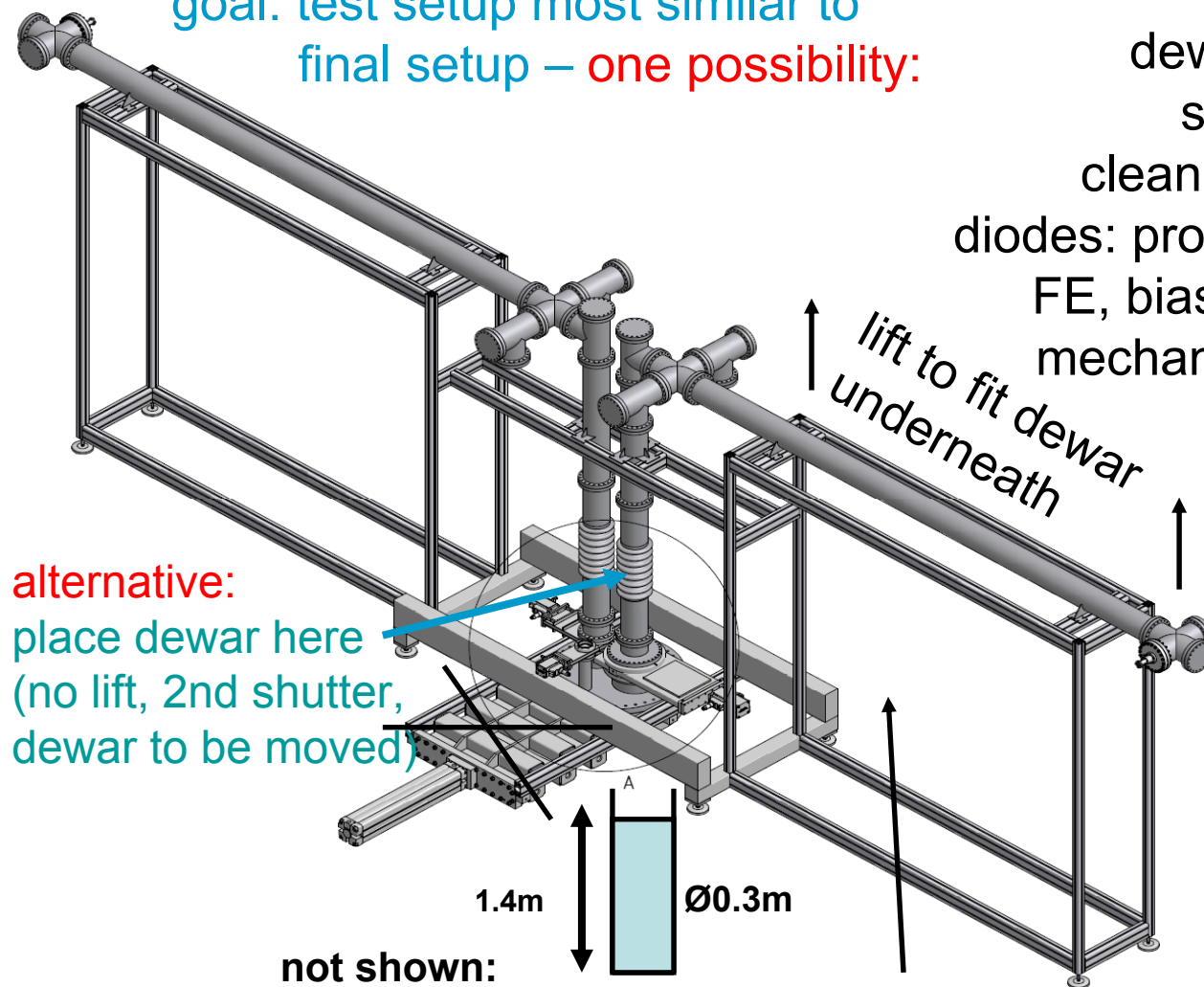
Warm-up in warm methanol bath!

**Conclusion:**

Build corresponding system around commissioning lock!

# test of commissioning lock & detector strings

goal: test setup most similar to final setup – one possibility:



alternative:  
place dewar here  
(no lift, 2nd shutter,  
dewar to be moved)

not shown:  
bellow, scale

dewar

use this volume for clean bench

needed:  
dewar, flange, cryo : MPI-K  
support structure: MPP ?  
clean bench, glove box: MPI-K  
diodes: prototype GDL, p-type MPP  
FE, bias, FADC: Carla et Milano  
mechanics p-type, and more....

Start next week:  
solve open issues,  
design lacking parts!

plan:  
lock ready end of 2008  
test 3ch-PZ0 in Jan 09  
string test from Feb to  
Feb+?months

## works in water tank

	nov	dec	jan	feb	mar	apr	may
close gap cryostat-WT							
hydrostatic test							
WT cleaning		●					
cryostat insulation*			●				
muon veto installation**				—	—		
water distribution line***						●	
water plant commissioning							
fill water tank						▶	

- \* Check for potential problems with XPS as insulation material!
- \*\* Detailed procedure and schedule available
- \*\*\* Design such that it can be installed by GERDA – cleanliness!

# remaining works & possible schedule

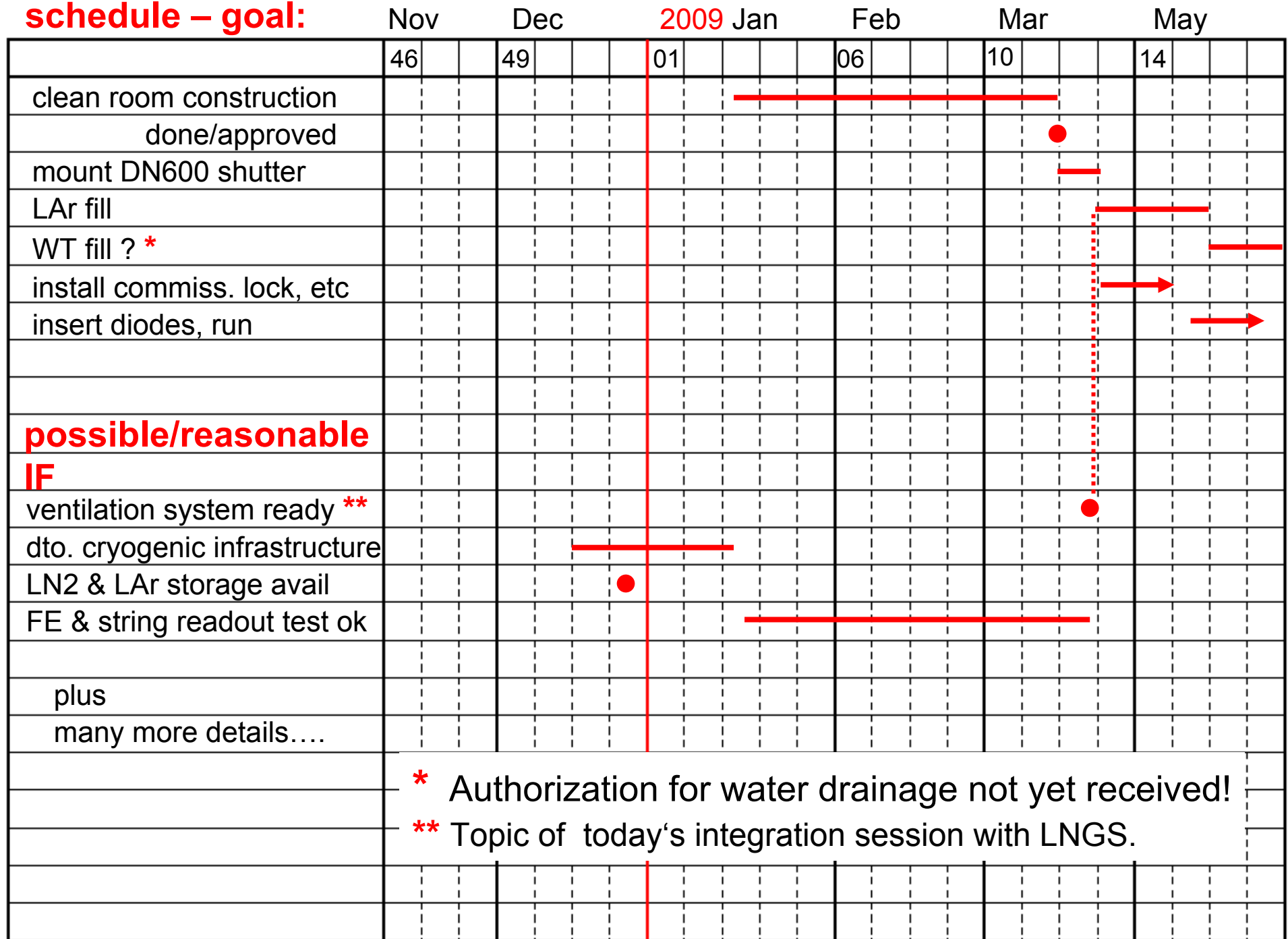
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Please see slides of topical session!

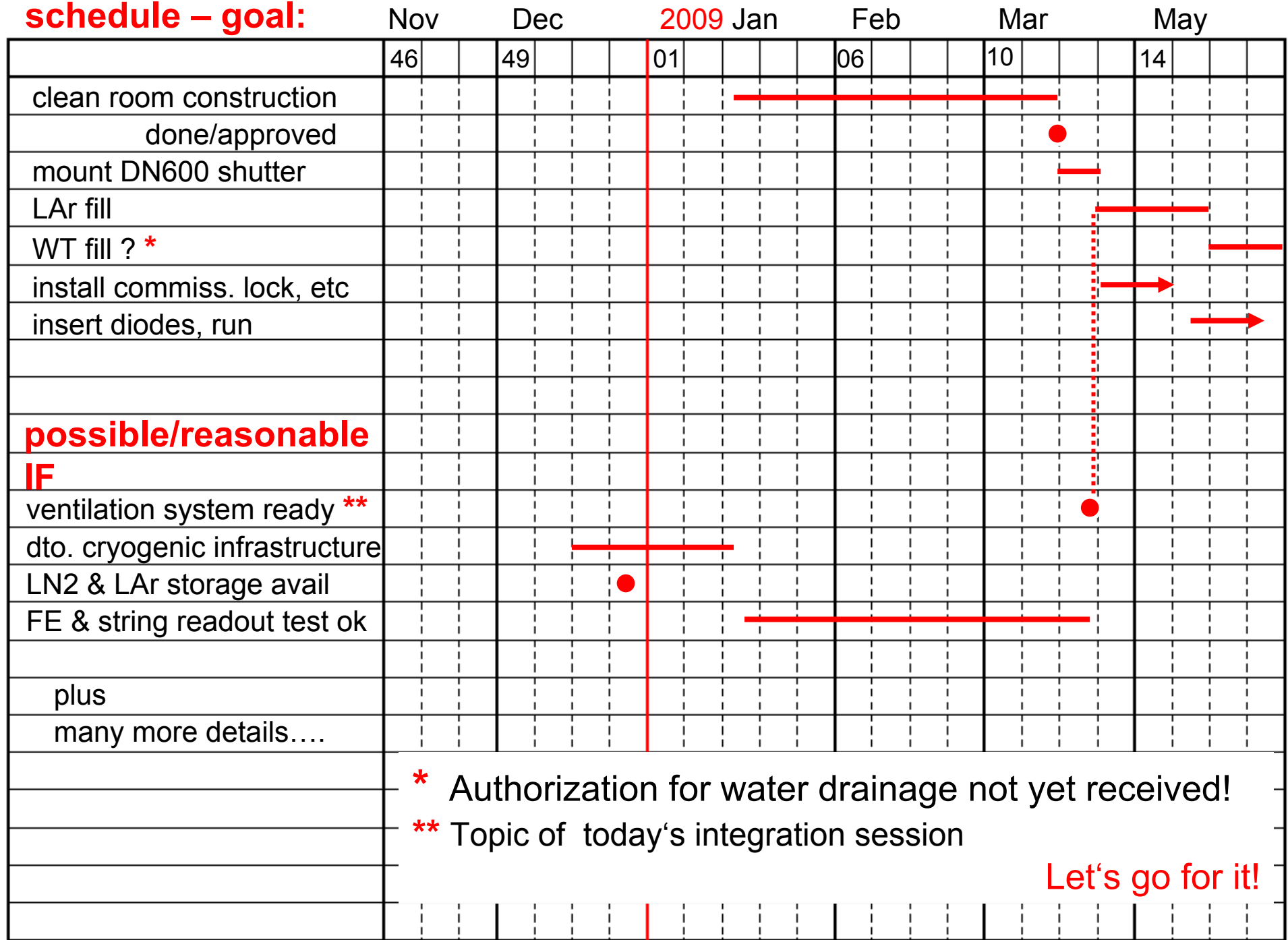
▶ next / last slide!



**schedule – goal:**



**schedule – goal:**



The END

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