

GERDA

Summary

Integration / Schedule / Manpowr

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GERDA Collaboration Meeting at IRMM Geel

11 – 13 June 2007

Outline

- Review of results and open points since Ringberg, Feb 13

LNGS, Mar 05 : cryogenic infrastructure

HD , May 14: cleanroom, lock \leftrightarrow cryostat

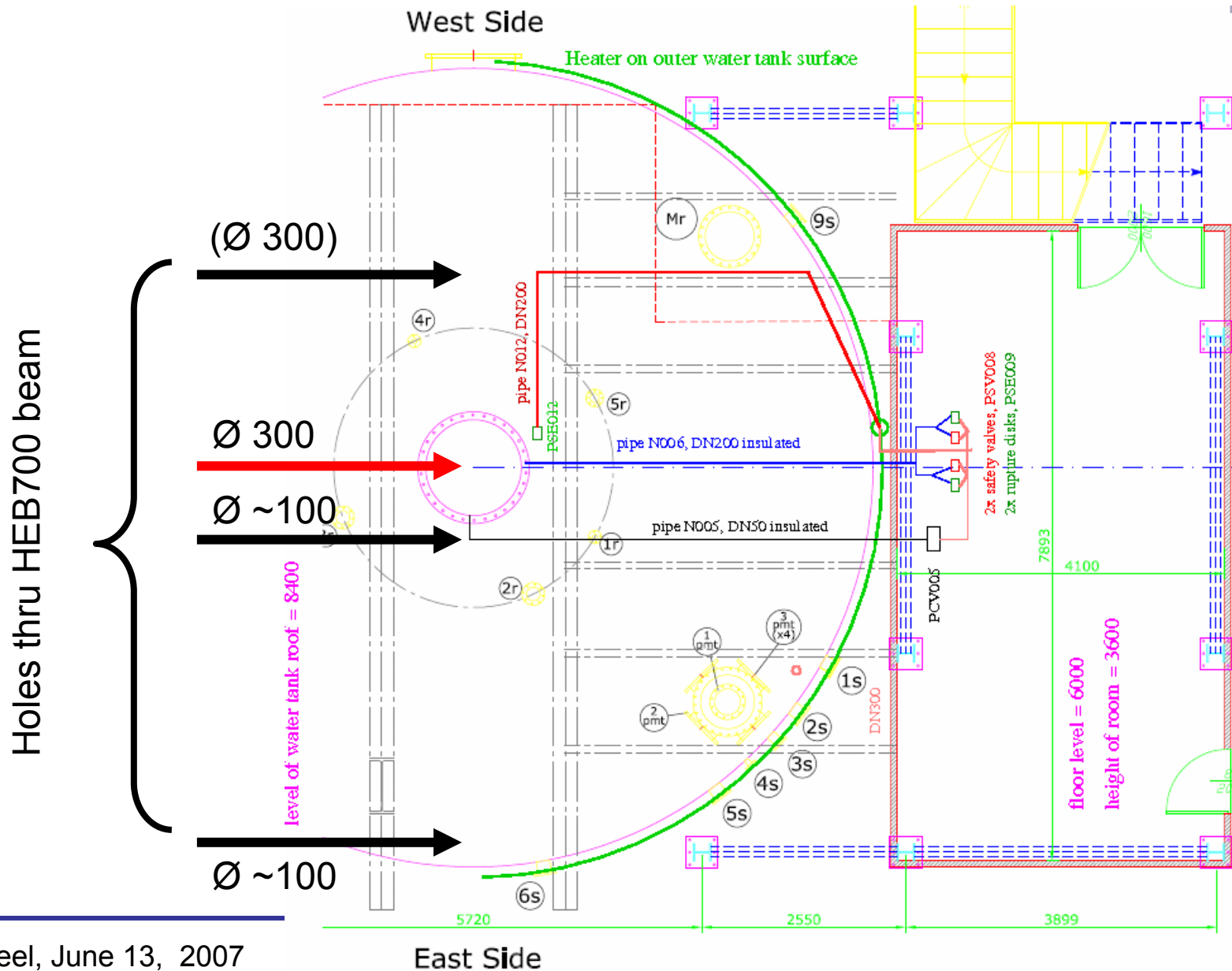
MPI , May 25: infrastructure on top of the platform

Update cryogenic infrastructure

Heater for exhaust gas

- Time Schedule
- Manpower
- New version of Technical Proposal
- Cleanroom w/wo Rn reduction

New layout of cryogenic lines



Heat exchanger

Purpose: to heat exhaust gas fed to the LNGS ventilation system
- up to 10000 m³/h in worst case !

Three options for realization:

- 1) Gas tubes within WT – ‚Ringberg solution‘ – but abandoned
- 2) Gas tubes winding around outer surface of WT
 - + most economic?
 - problematic if WT is being emptied
- 3) Separate conventinal heat exchanger
 - + separate, conventional
 - cost?

How to arrive at a decision?

- ▶ evaluate performance, cost, way of construction, get LNGS opinons

Open points - tbd

e.g.:

Reference for level 0 ► height of cryostat

Do we need to implement oxygen-purification of LAr ? ► major change !

Do we need to electropolish the cryostat's inner surface ? ► cost!

Access to manifold via movable intermediate floor

► plus docking station at west

WT – cryostat connection : detailed drawing of seal to be provided

Seal between lock and cleanroom floor: change proposed solution

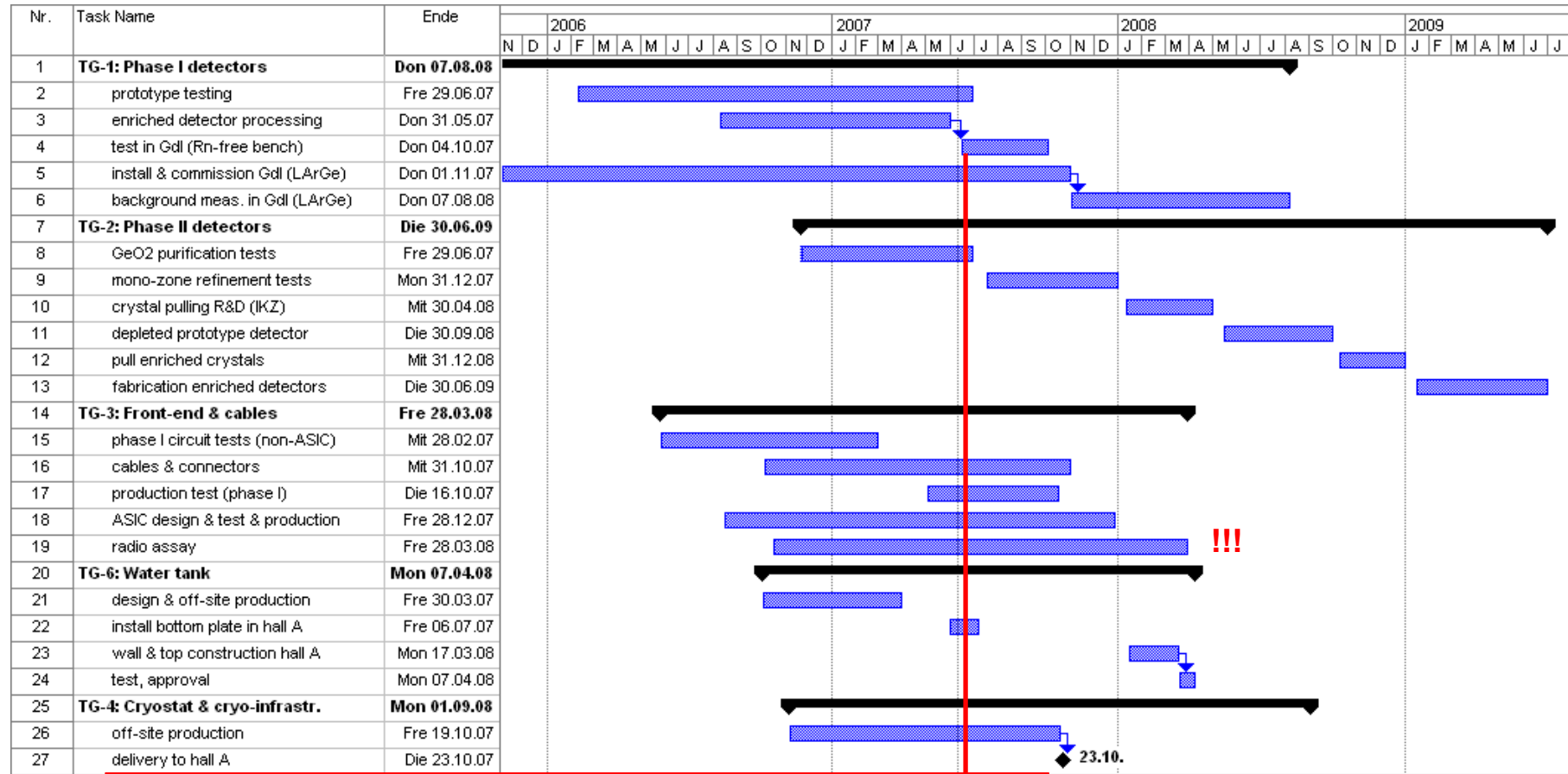
Door of electronic cabinet – sliding / conventional ?

Do we need cleanroom w/wo Rn reduction ?

tbd - Reminders

- Push electronic readout chain & leakage current tests !
 - ▶ take advantage of all available Ge diodes
- Needed: intermediate storage space for Cu shield at LNGS (20+ boxes) !
- Keep possibility to have 10 to 15 cm thick lead layer in WT below cryostat !
- Verify feed-thrus to tolerate high pressure (>2.5 bar) !
- Make sure that WT can be drained with at least 50 l/s !

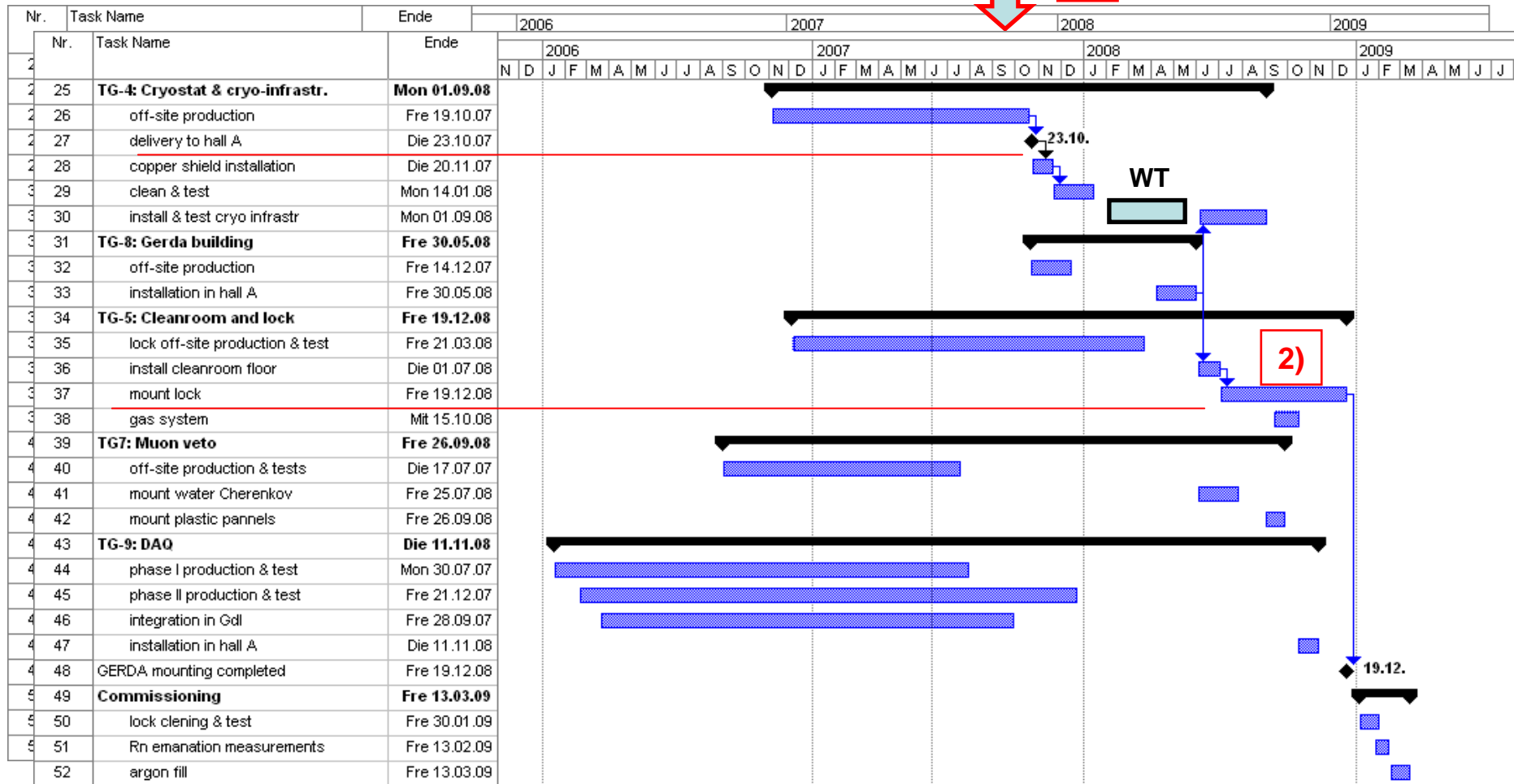
Schedule as of Apr 07 (1)



today ↑
t0

Schedule as of Apr 07 (2)

t0 1)



today

- 1) t0 may shift by ?..?
- 2) nice if shorter !

Manpower(1) – list requested by SC

| | | | | | | | | | |
|---|---------------|------------------------|---|-------------------------|------------|----------------------------------|------------|----------|--|
| TG-1: Phase I detectors | Name | | TG-5: Top of tank | Ackermann | | TG-10: Monte Carlo | Belogurov | | |
| | Barnabe | | | Lenz | | | Denisov | | |
| | Chkvorets | | | Liu.X | | | Jelen | | |
| | Gusev | | | Majorovits | | | Kianovsky | | |
| | Hult | | | Mayer | | | Klimenko | | |
| | Kirpichnikov | | | Schubert | | | Knapp | | |
| | Marissen | | | Stelzer | | | Kroeninger | | |
| | Peiffer | | | Vogt | | | Lenz | | |
| | Schoenert | | | Sum | 5 | | Liu, J | | |
| | Shirchenko | | | TG-6: Water tank | Cattadori | | | Liu, X | |
| | Smolnikov | | | | Bellotti | | | Pandola | |
| | Strecker | | | | Bettini | | | Schubert | |
| | Vasenko | | | Sum | 1,3 | | Sum | 4,5 | |
| Vasiliev | | TG-7: Muon veto | Ritter | | | | | | |
| Sum | 5,6 | | Knapp | | | | | | |
| TG-2: Phase II detectors | Abt | | | Niedermaier | | TG-11: Material screening | Barabanov | | |
| | Caldwell | | | Grabmayr | | | Borger | | |
| | Kroeninger | | Egorov | | Budjas | | | | |
| | Liu | | Katulina | | Divacri | | | | |
| | Newpos | | Sum | 3,1 | Gangapshev | | | | |
| | Schubert | | TG-8: Infrastructure and logistics | Balata | | | Hampel | | |
| Sum | 3,1 | Castagna | | | Heisel | | | | |
| TG-3: Front-end | Bauer | | | Junker | | Heusser | | | |
| | Burkert | | Nisi | | Hult | | | | |
| | Cattadori | | Sum | | Kiko | | | | |
| | Dedeo | | TG-9: DAQ and software | Bauer | | Kornoukov | | | |
| | Hofacker | | | Di Vacri | | Kuzimov | | | |
| | Kiko | | | Grabmayr | | Laubenstein | | | |
| | Pullia | | | Kihm | | Maneschg | | | |
| Trunk | | Ritter | | Nisi | | | | | |
| Zocca | | Schwingerheue | | Oehm | | | | | |
| Sum | 2,4 | Ur | | Schwan | | | | | |
| TG-4: Cryogenic vessel & Infrastr. | Barabanov | | Sum | 1,5 | Simgen | | | | |
| | Bezrukov | | | | Smolnikov | | | | |
| | Inzhezik | | | | Tikhomirov | | | | |
| | Knoeple | | | | Vasiliev | | | | |
| | Kornoukov | | | | Wojcik | | | | |
| | Schwingerheue | | | | Yanovich | | | | |
| | Sum | 2 | | | Zuzel | | | | |
| | | | | Sum | 8 | | | | |

Manpower (2)

Technical director of LNGS, A.S., has left by the end of May.

- ▶ new appointment

Manuela will leave by summer.

- ▶ new appointment(s) pending:

young engineer – full time

senior project engineer – part time, ~50%

Technical Proposal Update

In view of recent progress and the start of the GERDA construction, an update of our Technical Proposal, will be very helpful. A lot of valuable new information is indeed already available.

Please submit your updated chapters to our TC asap – but not later than by the end of September 2007, i.e. in time for the new version to be ready for the SC mid of October!

Conclusions

Thanks to all participants in integration and schedule session !!
We missed very much some of our Italian colleagues...

- Major progress in infrastructure integration & planning – but still considerable work to be done. ► see minutes in GerdaWiki !
- Schedule not yet well predictable, t_0 = cryostat delivery : Oct/Nov?
 - hope that cleanroom / lock installation schedule can compensate for some lost time!
- Hopefully, GERDA will get an on-site project engineer!!
- Please help to update the GERDA Technical Proposal!