

# **TG04 – Cryogenic Vessel**

## **Status & Schedule Summary**

K.T.Knöpfle  
MPI Kernphysik, Heidelberg  
ktno@mpi-hd.mpg.de

GERDA Collaboration Meeting at LNGS  
26 – 28 June 2006

# TG04 - Status

---

- GOAL: Delivery of GERDA cryostat including cryogenic infrastructure

- ACHIEVED:

2005:

engineering design for copper cryostat, 3<sup>rd</sup> wall, etc – now obsolete

reviews of cryostat design

generic design for cryogenic infrastructure

HAZOP, FMECA safety reviews for Cu cryostat and cryogenic infrastructure

2006:

Feb: order of 70 tons of copper – now on hold

Jun : engineering design for stainless steel cryostat, base for tendering

Jun 07: SIMAP Prior Information Notice 2006/S 106-113359

: first safety review for stainless steel cryostat at LNGS with NIER, GERDA

# TG04 - To Be Done

---

- TO BE ACHIEVED

- Jul 20 : first results from safety review

- determine cryostat cleaning procedure

- provide technical specs for cryostat tender

- Jul 31 : publish tender document for cryostat ( Jun 07 +52 days)

- Aug 21: order cryostat (Jul 31 + 22 days)

- determine steel radioactivity

- design copper shield and installation tools

- order copper

- provide technical specs for cryogenic infrastructure

- design manifold

- tender for cryogenic infrastructure (2-3 weeks?)

- order dto.

- design and order shield for bottom of water tank

- mount / test cryostat, install copper shield & cryogenic infrastructure

# TG04 - Milestones

---

- Milestones:

tender cryostat	Aug 01	ok	
order cryostat	Sep 01	ok	before final safety review!
steel activity known	Oct 01	?	
safety review done	Oct 01	?	
tender cryo-infrastructure	Oct 01	ok	
modify copper order	Nov 01	?	
delivery of copper	Feb 01	ok	

delivery of stainless steel cryostat not earlier than Mar 2007  
could be be much later  
▶ steel problem

▶ No reliable time estimate yet possible !!!

delivery of cryo-infrastructure not really critical

installation cryostat incl. shield 2 months

# TG04 – Cryostat Delivery

---

- Estimates based on company quotes:

steel rolling	10 to 12 weeks	perhaps too optimistic!!
head fabrication	8 to 16 weeks	
vessel fabrication	8 to 24 weeks	
<hr/>		
total	26 to 52 weeks	
	16 to 40 weeks	if steel sheets available

▶ No reliable time estimate yet possible !!!