++
++

G0 Cryotarget Offline Test Schedule K. Gustafsson 06/06/2001

++
++

JLab Manpower: An experienced ACCELERATOR Cryo−Technician who is intimately familiar with CTF operations to assist as needed during June 2001 with leak testing and all aspects of cryogenic operations of the G0 cryotarget.

Miscellaneous from JLab: − EPICS CTF screen and Ethernet by JLab/Accelerator

JUNE

WEEK 24 Monday 6/4 5 days
+++

− "warm" surveying of target cell wrt. tooling balls on Service Module, i.e. relating fiducial on target cell to fiducials of tooling balls

A**ccelerator Staff requirements: Alignment group**

− surveying: relating fiducials on target cell to fiducials on Service Module as the system is under vacuum and at cryogenic temperatures.

WEEK 23 Monday 6/11 5 days
++

Manpower @ JLab: Silviu, Kenneth, Bob Carr, Bob McKeown

– 1st cool down
  * target loop filled with gaseous helium

Next: Cryotarget Performance Test (see E. Beise et al. NIM A378 (1996) 383–391 for a reference of goals)

Helium coolant gas available from CTF, Pin=2.5 atm, Tin=4.5 K, mass_flow = 5 g/s

There exist theoretical calculations which the cryotarget design is based upon. However, it should be clear to everybody that an obvious reason for running this G0 cryotarget test is to see the REAL performance. In other words, any promises of exactly how much of the 5 g/s mass flow we need cannot be made in advance. IMMEDIATELY after we have the first experience/data on the heat exchange efficiency etc. we will be able to predict our needs. Therefore effective communication between the G0 cryotarget team and the SNS group at the very beginning of the target test period is called for.

– pressure test target loop as it is cold (cold leaks)

– run target pump at around T=20 K for 1st time (already done at LN2, T=77 K)

Comment   : The exact coolant consumption need is not known in advance.
Cryogen consumption: 5 g/s
Time   : 5 days

++
++

WEEK 24 Monday 6/25 5 days
+++

Manpower @ JLab: Silviu, Kenneth

– determination of mass flow rate in target loop

– target pump speed studies

Comment : The High Power heater of the cryotarget will be maxed out. Expect max. coolant consumption.
Cryogen consumption: 5 g/s
Time : 5 days

JULY

WEEK 25 Monday 7/2 5 days
+++

Manpower @ JLab: Silviu, Kenneth

– target heat exchanger performance study

Comment : Expect high consumption of coolant.

Cryogen consumption: 5 g/s
Time : 5 days

+++

WEEK 26 Monday 7/9 5 days

Manpower @ JLab: Silviu, Kenneth

- removal of aluminum mandrel of heat exchanger
-

Comment : zero
Cryogen consumption: 5 g/s
Time : 5 days

+++

WEEK 27 Monday 7/16   5 days

Manpower @ JLab: Silviu, Kenneth

- target heat exchanger performance study
-

Comment   : The High Power heater of the cryotarget will be maxed out. Expect max. coolant consumption.
  Cryogen consumption: 5 g/s
  Time   : 5 days

++

WEEK 28 Monday 7/23   5 days

Manpower @ JLab: Silviu, Kenneth

- target motion meachanism studies (cold & under vacuum)

These studies will take 2 to 3 weeks.

++