

# Target Monitoring Shifts

## Special Shift on 2023-Apr-12

Currently, only Liquefier A is running and will be automatically switched to "Idle" mode.  
If you see the pressure PT503A goes above 8psi, then call Kenichi/Ishara/Dustin

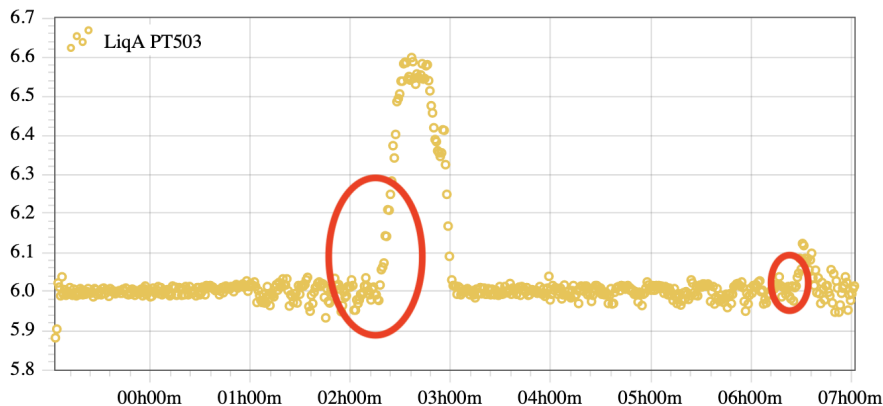
- <https://e906-gat1.fnal.gov/data-summary/e1039/target-par-preset/target-shift-20230409.php>

## Special Shift on 2023-Apr-10

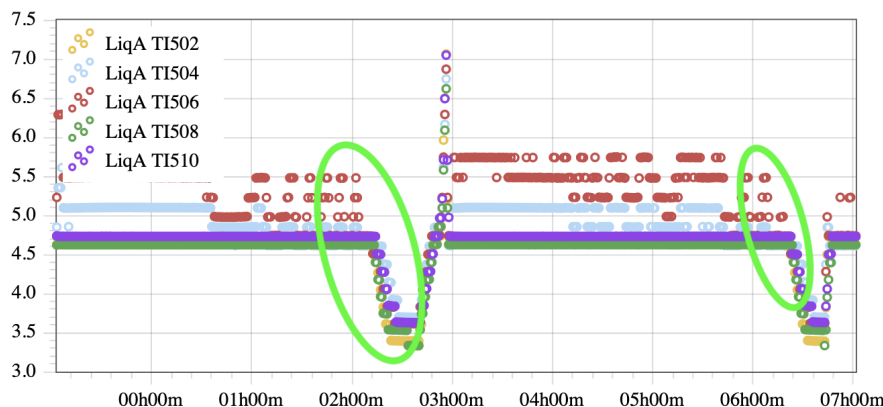
Currently, only Liquefier A is running. So basically, we wanted it to keep producing LHe.

If you see the following behaviors on Dewar pressure (PT503) and cold head temperatures (TI502,504,506,508,510), and make sure the LQ-A produces liquid (level should keep going up).

Last Record	LiqA PT503
2023/04/10 07:02:05 49	6.013871



Last Record	LiqA TI502	LiqA TI504	LiqA TI506	LiqA TI508	LiqA TI510
2023/04/10 07:01:29 69	4.72176	4.611972	4.736961	4.62461	4.730284



then contact Ishara/Kenichi/Dustin as soon as possible.

Use this dedicated page for this monitoring: <https://e906-gat1.fnal.gov/data-summary/e1039/target-par-preset/target-shift-20230409.php>

- The Liq pressure (PT503) changes by >0.5 psi.
- The Liq inflow (FC501I) shows a scattered plot and most of those are **zeros**.
- The Liq outflow (FCI) changes on average by > 5 SLM.
- The cold-head temperatures (TI50\*) go below 4 K or above 5 K.  
Note: TI506A has been showing larger values than 5K, so for that one let's use the upper limit as 7K; but the rest of cold-head temps. have to be in the range of 4K-5K.
- <https://e906-gat1.fnal.gov/data-summary/e1039/target-par-preset/target-shift-20230409.php>

## Special Shift on 2023-Apr-09

The purpose is to make sure that the Liquefiers A & B are producing liquid, avoiding blocking or avoiding higher Dewar pressure.

The person on this special shift monitors the conditions of both Liq A and Liq B. The conditions are checked every 30 minutes at least. The shifter calls the on-call person if

- The Liq pressure (PT503) changes by >0.5 psi.
- The Liq inflow (FC501I) changes on average by > 5 SLM.
- The Liq outflow (FCI) changes on average by > 5 SLM.
- The cold-head temperatures (TI50\*) goes below 4 K or above 5 K.
- <https://e906-gat1.fnal.gov/data-summary/e1039/target-par-preset/target-shift-20230409.php>

## Shift Schedule

Date	09 (Su)			10 (Mo)			11 (Tu)			12 (Wed)		
Time	00-08	08-16	16-24	00-08	08-16	16-24	00-08	08-16	16-24	00-08	08-16	16-24
Monitoring Person	Farooq	Kenichi	Zulkaida	Farooq	Eric	Liliet & Ernesto	Yoshiki	Eric	Jay			
On-Call Person	Kenichi	Kenichi	Kenichi	Ishara	Ishara	Ishara	Kenichi	Kenichi	Kenichi			

If the on-call person does not respond to phone call, try other ways (Discord, e-mail, WhatsApp) or Kenichi/Ishara/Dustin.

## Past Shifts

Tasks are mentioned below:

Monitor the fridge temperatures, IVC, flows (fridge, magnet, separator), magnet LHe level, etc.. the full system in general.

In order to look out for these parameters, use the following links:

- [https://e906-gat1.fnal.gov/data-summary/e1039/target-par-preset/IVC\\_magnet\\_pressure.php](https://e906-gat1.fnal.gov/data-summary/e1039/target-par-preset/IVC_magnet_pressure.php)
- [https://e906-gat1.fnal.gov/data-summary/e1039/target-par-preset/fridge\\_temp\\_level.php](https://e906-gat1.fnal.gov/data-summary/e1039/target-par-preset/fridge_temp_level.php)
- [https://e906-gat1.fnal.gov/data-summary/e1039/target-par-preset/return\\_flow.php](https://e906-gat1.fnal.gov/data-summary/e1039/target-par-preset/return_flow.php)
- Or more under <https://e906-gat1.fnal.gov/data-summary/e1039/target-par-preset.php>

## Shift Schedule

As of 2022-12-22.

Time	06:00-10:00	10:00-14:00	14:00-18:00	18:00-22:00	22:00-02:00	02:00-06:00
Monitoring Person	Ishara	Vibodha	Ernesto	Farooq	Kenichi	Zulkaida
On-Call Person	Vibodha and Farooq					

If anybody is going to shuffle the shift blocks, kindly inform the discord group in advance.

## Discord Passive Alarms

The Cryo Control Panel sends out a Discord message in case any of the following parameters become out of its valid range. The table below was updated manually on 2022-12-23.

Parameter	VI	LO	HI	Unit
IVC Pressure	TPG361	n/a	1e-5	Torr
Nose LHe Level	Fridge Valve	65	85	%
Tank B, Coil T, Coil B	ITM10	n/a	5	K
M1, M2, M3	Roots-Pump LCW	0.3	n/a	GPM
WFS1	Roots-Pump LCW	1.3	n/a	GPM

## Non-Monitoring Tasks

The following tasks have to be done by onsite people.

As of 2022-12-22.

1. Refill LHe to the fridge (up to Heat-Ex Top) and start the standby mode — At 06:00.
2. Refill LHe to the fridge (up to level = 80%) — At 18:00.
3. Refill Magnet space with LHe — At 19:00
4. Refill LN2 to the Purifier & the shield — When the LN2 level becomes reasonably low.