

T2 Warm Up Options:

Previous Warm-Up:

4/22/2015 - 4/23/2015

T2 was stopped and purged with warm gas to "clean" the T2 piping circuit.

Loads at the time:

Hall A: 22 g/s

Hall B: 0 g/s

Hall C: 10 g/s

Dewar Depletion: 34%

Duration: 23 hours

Dewar Depletion Rate: 1.5% per hour

1 Tatm/hr

19 kg/hr

6 g/s

T2 initial Temp:

CTD6616: 6.15K

CTD6615: 8.27K

T2 final Temp:

CTD6616: 271.82

CTD6615: 279.62

2017 Conditions:

Hall A: 22 g/s

Hall B: 5 g/s

Hall C: 15 g/s (maximum of instrumentation)

Anticipated Dewar depletion rate:

8 g/s

2.3%/hour

Assuming a 24-hour warm-up period:

Option 1: Fill dewar to ~80% and trip T2.

Pros: transfer line is not needed, less variables that could go wrong, been done before

Cons: not sufficient inventory, will take time to fill.

Option 2: Use transfer line to maintain dewar level

Pros: inventory management is easier, CHL has available capacity, dewar fill rate can be adjusted if there's a miscalculation of anticipated load, this is the typical use of the TL

Cons: adds new valves and other controls to the system that have been problematic lately, some capacity is usually wasted with the TL operational, a problem could also trip CHL

Option 3: Use transfer line to supply halls

Pros: inventory management is easier, CHL has available capacity, supply to the halls can be adjusted as necessary (control loop), could still fill/maintain dewar, still operational should ESR CBX trip.

Cons: adds new valves and other controls to the system that have been problematic lately, some capacity is usually wasted with the TL operational, a problem could also trip CHL, hasn't been done in a while, there would be mixing of 4K and 14K somewhere between the T2 bypass valve and valve box (not sure this is a possible option)