Solid Hydrogen Target Cooling and Warming Procedure

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1 Introduction

This document contains the instructions for cooling and warming processes when formig the hydrogen target.

2 Setting up the Labview Program

1. Open Labview using SHT program shortcut on Desktop.

2. In Labview, change the logging file path. Define todays date in format yymmdd in place of xxxxxx and hit enter.

3. Click the arrow in the upper left corner of the window to start.

4. Click 'Configure' to send command to instrument, then click 'Run' to start running scan cycle for data logging.

5. In the upper right corner of the Labview window, set the scan interval (default 10 s) and the file-save interval (default 1/30).

The following list contains the labels and their descriptions from the Labview program.

VAC-CC10 Wide range vacuum monitor.

VAC-TM1 Hydrogen line vacuum monitor.

VAC-TM2 High vacuum monitor.

VAC-PM Low vacuum monitor.

PtCo1 Target temperature.

PtCo2 Radiation shield temperature.

TGT-Heater Target heater DC voltage.

H2-Press Hydrogen Pressure.

VAC-CC10 and **VAC-TM2** read the same vacuum using different gauges.

3 Cooling Process

Valve	Initial Condition	Purpose
V_0	closed	Controls flow of H to diffuser.
~~V_1~~	~~closed~~	~~Fine control of H from system to V_0.~~
~~V_2~~	~~closed~~	~~Bypasses V_1 to hydrogen supply line and V_0.~~
V_3	closed	Controls H flow from system to V_2.
V_4	open	Controls flow from small hydrogen cylinder to system.
V_5	closed	Opens system to roughing pump.
V_6	closed	Controls flow of H_2/D_2 from V_7 to system.
V_7	closed	Controls flow from H_2/D_2 bottle to V_6.

Valves removed 2019