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Beamline Logbook

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Message ID: **423** Entry time: **Mon Jan 30 13:27:38 2006**

Author: Eric Dufresne

Type: Maintenance

Category: Construction

Subject: Summary of monochromator work up to today

Hi all,

here is a summary of what has been accomplished to date on the monochromator maintenance and upgrades.

A few weeks ago, Harold, Bernhard and I put the new cryogenic lines through the new labyrinth. <http://hydra.mhatt.aps.anl.gov:8080/beamline/413>. Since then Bernhard and I designed a new Compton shield for the 2nd crystal cage and last Friday we installed two shields inside the mono after doing some useful calculations. One shield covers the inboard side of the first crystal and is mounted right on top of the first crystal. The other shield is between the two crystals, just in front of the second crystal cage. The pictures will be coming soon.

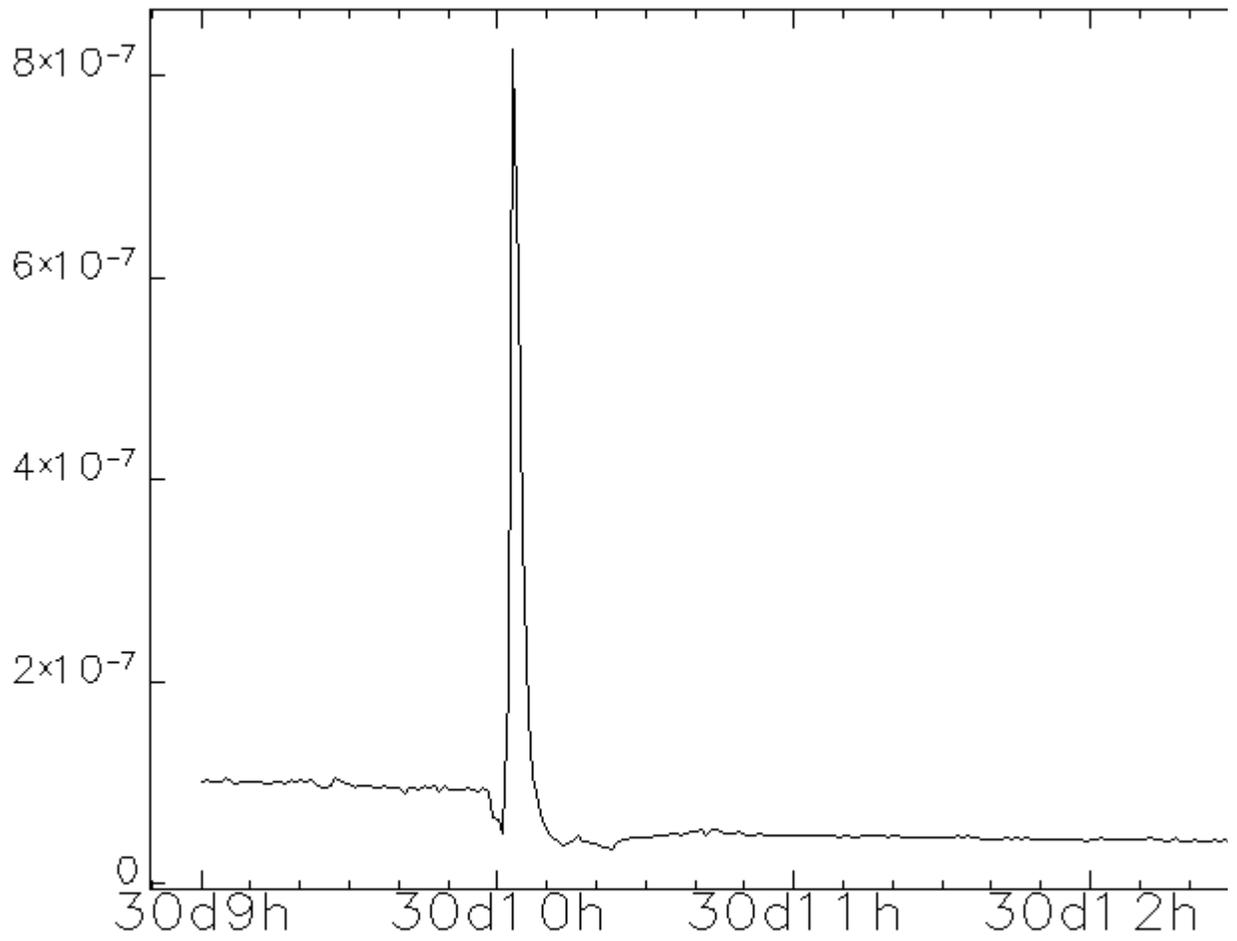
Friday night I started to turbopump the chamber, then Saturday night, I came in to fill up the cryocooler vessel level and I started the ion pumps on the monochromator. This morning I cooled successfully the monochromator. My preliminary impression on the lines is that they work well. No sign of condensation thus leaks yet. The buffer level is also stationary at 59 %.

I attach two plots from OAG data. Att. 1 shows a pressure burp that occurred while cooling. I think it correlates to an over pressurization of the closed loop (pressure climbed up to > 26 PSI momentarily). When cooling the first crystal, I try to keep the closed loop pressure below 20 PSI. Note that the first crystal is a good cryopump since the base pressure has dropped to mid  $10^{-8}$  Torr. The second attachment shows the temperature of the first crystal.

This morning I also walthrough all the new red signs with Bruno. Everything looked good. It was quite instructive.

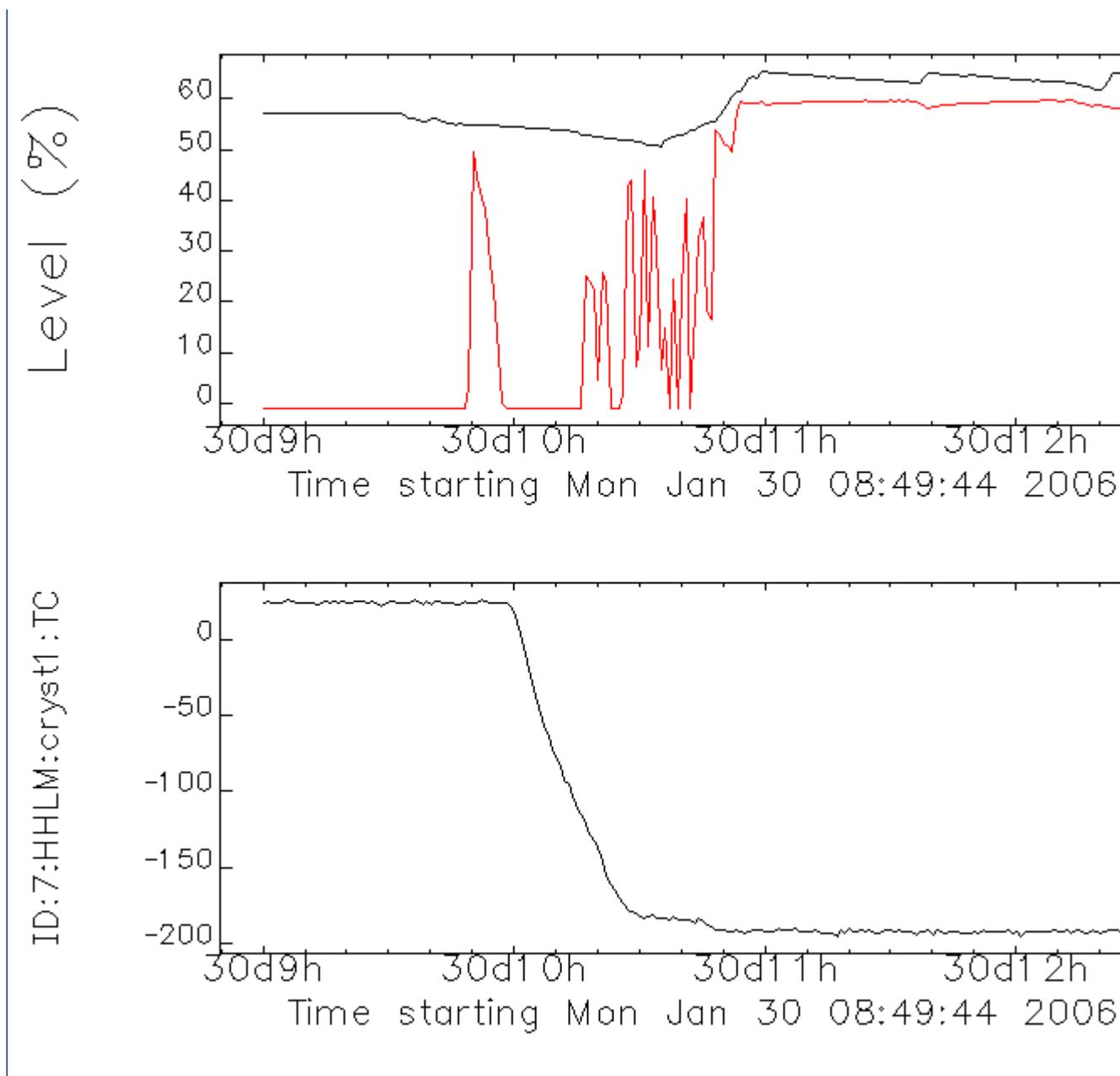
ED

Attachment 1: [mono-cooling-pressure.png](#) 6 kB | [Hide](#) | [Hide all](#)



Time starting Mon Jan 30 08:49:41 200

Attachment 2: [mono-cooling.png](#) 10 kB | [Hide](#) | [Hide all](#)



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