# **Weekly maintenance of the chamber system**

## Acquisition of data

Use a flashdisk or external drive to get data from the laptop.

Go to Data>IDASw>Daten>

Check last date in which data was taken. Most likely data was not taken for a full day, so copy full day’s data from the laptop for the last day of data capture. Data is saved by dates.

Do not cut/delete data from the system.

## Switch off software

On the IDASw display click STOP and close.

To access the maintenance software, go to Drive C>ICPDAS>DCON\_Utility Icon>Run as Admin>

Click start search (play button)

The module will start loading. Wait till it loads completely. In the meantime, go to the Picarro.

## The Picarro

Check for anything alarming-is there any red color indicator on the parameters for example?

Check spectrum especially for CO2. The concentration should be on an increasing trajectory.

If not, there may be an issue.

Connect the USB or external drive onto the UPS.

Go to Documents>Datalog\_user>2023>copy the data listed within the month folders. Data is saved by month ‘number’ folders so make sure you are first in the right month, then in the right date folder before copying the data.

While ejecting, make sure you do not mistakenly eject the Picarro USB.

## Switching the system off

Click shut down on the software window.

Choose ‘Turn off analyzer in current state’. Once the instrument is off, don’t switch off the pump immediately-leave the pump running for around 5-10 minutes. This is to avoid destroying the cavity ring inside the Picarro.

## Valves, clamps and air pressure

Open DCON module on desktop to see the channels that control the above.

As an example, for the clamps on channel 14:

Don’t open from the address, instead open from the module. Click once, a window will open.

* Open block by block by clicking on the respective tab. Ensure you listen to hear the click going on and off and that you check physically on the field.
* Go through all the channels and then press exit at the bottom of the screen.
* Go through all the chamber valves-the pressure clamps close only after the chambers have closed, so skip the first tab.
* For second block of chambers, there are no clamps.
* Do the reverse of the above to open the chambers. This time round, start with opening the clamps and then followed by the chambers.

## Temperature sensors

Asses the temperature channel. 1 temperature sensor serves 2 blocks so there are only 3 sensors. Ensure all are running successfully and none is reading 0.

Toggle the temperature cables at the back of the panel-if need be, as these can be a little tricky.

## Rain sensor

To check this, pour water on the sensor while the system is running. The block that was measuring will open, to indicate that it is working. For maintenance, also clean the equipment regularly.

## To restart the system

Switch on the pump, then the Picarro, connect back the power cable for the laptop. Search IDASw to get the software, double click on it then press START. Check that the output path for the DAT and SQZ files is set.

For the Picarro check that the cavity pressure is at 45-this takes about 30 minutes. Check also that the CO2 values are ok-will confirm exact parameter values.