



LEIBNIZ INSTITUT FÜR
ASTROPHYSIK POTSDAM



KIEPENHEUER-INSTITUT
FÜR SONNENPHYSIK



MAX PLANCK INSTITUT
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FORSCHUNG

GREGOR:

Evacuation of the Coude Chamber

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Signatures & Approval

	<u>Name</u>	<u>Signature</u>	<u>Date</u>
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Change Log				
Vers.	Date	Author	Description of Changes	Sect./Para.
1	14.05.2018	M. Esteves	New Document	
2	16.07.2018	M. Esteves	Figures and text added stating that some lids have to be closed.	

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1 Scope

This document describes the procedure to evacuate the Gregor Coude - Train Vacuum Chamber.

This is required every time the chamber is opened, due to maintenance tasks, or whenever the pressure is higher than **1.0 or 2.0 mbar**, which normally occurs once per week.

Note: The gauge located at the chamber valve is not reliable. To know the actual pressure inside the chamber, there is no option but to connect the scroll pump to the chamber valve and to check it with the pump gauge. The vacuum usually lasts one week.

2 Startup procedure

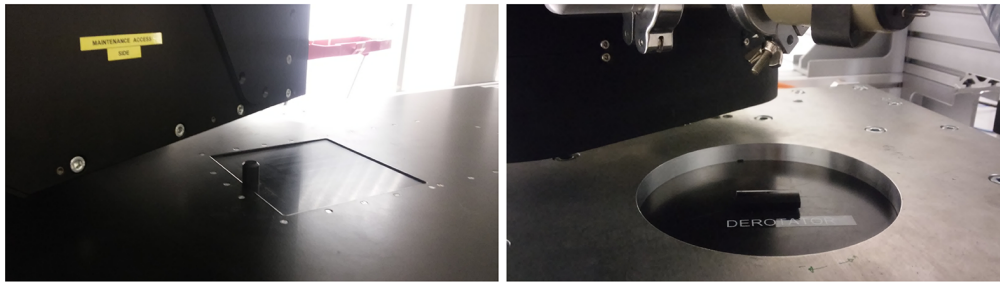
- If necessary, move the telescope in AZ up to a position at which the yellow valve is accessible from the optics lab to allow the connection of the vacuum hosepipe. Parking position is ok to do so.
- Take the manual scroll pump and place it close to the AO rack.



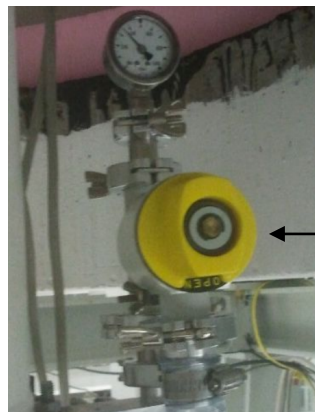
- Take a ladder and place it below the chamber.



- Close the AO cabinet lid (left) and that of the derotator (right). Closing the derotator lid is only necessary if the derotator is inserted. This will avoid damage to the optics in case the KF joint O-Ring falls down. The derotator lid can be found in the cabinet where the other lids are stored.



- Connect the vacuum pipe to the yellow valve and make sure that the valve is closed. There is a text indicating the state of the valve (Open/Closed).



Connect the hosepipe and close the chamber valve if necessary by turning it.

- With the chamber valve still closed, switch on the scroll pump to evacuate the hosepipe and keep it running until the pump gauge reaches its lower limit.



Switch on the scroll pump to evacuate the hosepipe until the pump gauge reaches its lower limit (about 0.1 mbar).

Note: There is no switch to turn on the pump. It is only necessary to connect it to the electricity.

- Once the pump hosepipe is evacuated, (**slowly**) open the yellow valve. The pressure on the pump will immediately increase due to the higher pressure in the chamber, but then it will start dropping.
- Pump until the pressure indicator shows a pressure of 0.1 mbar. To be sure that this value is reached (we cannot read it on the gauge as it is lower than the sensitivity), keep pumping for two hours and this will ensure that we reach it.
- Once finished, close the chamber valve and only then switch the pump off.
- Disconnect the tube slowly.
- Open the AO lid and store the derotator lid.
- Return the pump and the ladder to their initial location and fill in the paper sheet register.

