**The Euler Troubleshooting Guide**

This guide is for telescope users trying to recover the system in case of a problem. In preparation for your mission, please read the section ***How to Troubleshoot***.

A quick reminder: **perform preventive maintenance by regularly rebooting "glslogin1" (i.e. the main computer you will use for observations). A reboot every 2-3 days will prevent the sporadic freezing of the system. Rebooting glslogin1 will especially solve process-related problems by cleaning up running processes.**

For the Euler Observers Guide, detailing how to observe every night, refer to [this page](https://plone.unige.ch/EULER/astronomy/the-euler-observer2019s-guide).

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# **How to Troubleshoot**

## 1. **S**ubmit a crash log

Submit a crash log: describe how the error happenned and type the error message. Be descriptive, but refrain from troubleshooting at this point. Check that the hour shown (in LST) is correct.

## 2. **Check the list of common problems (starting next page)**

Check the list of common problems, and apply the corresponding solution, if known.

## 3. Check for a previous occurrence on *gitlab*

Check the gitlab website for a previous occurrence of your problem and its solution:

https://gitlab.unige.ch/euler/t4-problem-report/

If you have a FreeIPA account at Geneva Observatory use it for login. Otherwise login with

* *user*: t4user
* *passwd*: obsge1290

And check for similar tickets (both *Open* and *Closed*). Always submit a new problem report for the issue and write down:

* The local time (LST) when it happened.
* The observation that was being executed, and at what point of the execution sequence the problem happened.
* The status of the system (symptoms, groups of processes active and inactive);
* Previous similar reports you found, if any;
* correction attempts you made, if any.

*If you get a gitlab error 500 when submitting, adjust the input text; some sentences are bing misinterprepted as Markdown.*

**As an observer, you you are not expected to solve the problem, but to report what you see in the best possible way. The problems will be followed up by both local and Geneva staff.**

## 4. If you cannot observe, reboot all the machines

If a problem prevents you from observing and takes you more than 15 min to diagnose and solve, reboot all the machines, as described here:

<https://plone.unige.ch/EULER/technic/modes-demploi/reboot-et-shutdown/standard-reboot-of-the-stations-computers>

## 5. If you still cannot observe, close the telescope safely

If you cannot observe, perform a ‘*Fin de Nuit avec Fermeture de coupole*’ and check the webcam feed to confirm that it was successful. If this option is not available or successful, you will have to contact people in Geneva via t4-support

t4-support@unige.ch

The telescope has a safety system that closes the dome before the sun rises, so telescope integrity is not a concern in this aspect; nevertheless, you should never leave the telescope open and unatended for long periods of time.

# Problems: symptoms, interpretation, action

## XRUNALL panel returns message that the port is being used

**Symptoms:** when starting the main panel with the xrunall command, the command line returns the information that the port is being used.

**Interpretation:** This usually means that an XRUNALL panel was left running on a different session.

**Actions:** The cleanest solution is to reboot the machine. On the command line type “T\_reboot\_servers glslogin1” and wait for the machine’s reboot.

## **The synchro or groups of processes are stuck**

**Symptoms:** A process group in the UIF interface CORALIE/CAMERA is red/blue and stuck. The button ‘Lancer une pose’ is freyed out and not available.

**Interpretation:** A error happenned that left the process group in a status that is not understood or recoverable. It may happen that it was the ‘Synchro’ that was left in such a status.

**Action:** restart this process using the XRUNALL panel ‘*Restart par groupe de process*’. If the system is not recovered and the synchro is still blue, restart also the synchro process group.

If this is not enough, i.e., the processes are not all red or green and the ‘Lancer une pose available’, then you need a full restart. Then follow the sequence:

* Arrêt complet
* T\_kill\_srv
* T\_reboot\_lcu
* T\_reboot\_servers (x2go will die because glslogin1 is rebooting)
* reconnect to the glslogins and redo a "xrunall".

## **PLC / LCU not responsive**

**Symptoms:** A PLC or LCU is not reachable; a ping does not show any response or the LOG of one of the windowns (T120, CORALIE,…) remains indefinitely trying to connect.

**Interpretation:** The PLC / LCU is unresponsive.

**Action:** From the ippower 10.10.132.92 panel (on a web browser) power cycle (OFF, wait 10 sec, ON) the unit that is not responding. Wait 30s and the unit should be back online. Once rebooted, it is ready to work.

## Telescope camera is not **accessible remotely**

**Symptoms:** telescope camera is nor working from your computer, with or without VPN.

**Interpretation:** Not clear; best theory is that ESO limits connections on servers or ports.

**Action:** Simply connect via the x2go panel you started at the beginning of the night.

## The dome is not aligned with the telescope

**Symptoms:** The telescope will ask for guiding confirmation, and you won't see any star. Check the dome camera or go up to the dome, and you’ll see that Euler and the dome are misaligned.

**Interpretation:** This usually means the dome is wrongly positioned due to a software communication issue.

**Actions:**

1. In the “*UIF*” **“Duplicate”** the exposure (to be able to observe it after solving the problem) THEN hit “**Abort pose**”.
2. If the yellow guiding confirmation window is still opened, right-click on the image to abort guiding.
3. On the touchscreen, go to the “*Safety*” tab, and hit “**RESET**”
4. In the “*XRUNALL*” panel, select “**Restart par groupe de process**” -> “**guidage**” and after “**synchro**”.
5. Launch your next exposure (the one you duplicated) via “**Lancer une pose**”.
6. Check the dome camera, the telescope and the dome should be realigned correctly.

## Euler doesn’t manage to start the next exposure

It may happen that the next exposure gets stuck on the first steps of the sequence in the “*UIF*”, before the “*centrage*”.

**Actions**

1. In the “UIF” panel, **“Duplicate”** the exposure (to be able to observe it after solving the problem) THEN hit “**Abort pose**”.
2. In the “*XRUNALL*” panel, select“**Restart par groupe de process**” -> “**guidage**” and eventually “**synchro”**.
3. Try to launch your next exposure (the one you duplicated) via “**Lancer une pose**”.

**If it works**, meaning you get through the steps up to “*guidage*” and the exposure clock starts, GOOD !

**If it doesn’t** work,

1. in “*XRUNALL*” panel, select “**Restart par groupe de process**” -> “**euler**”.
2. Wait for the telescope and the dome to reinitialize (you can see them moving on the dome camera).
3. When the “*euler*” process in the “*UIF*” turns green again, launch your next exposure (the one you duplicated) via “**Lancer une pose**”.

## **Error message that the CORALIE T is too high**

**Symptoms & Interpretation:** you get a popup with the message that CORALIE’s T is too high.

**Action:** if the temperature is higher than the standard but below -10, you should do an emergency filling as explained in

https://plone.unige.ch/EULER/faqs/how-can-i-do-an-emergency-filling-of-coralie

If T is above this threshold a pumping is required and you should not observe and wait for the daytime crew to pump and direct you.

## **R**eboot a computer that is not responding to a ssh

<https://plone.unige.ch/EULER/astronomy/remote-observing/informations-sur-les-composants-connectes>

## **Triangular images**

<https://plone.unige.ch/EULER/faqs/i-have-triangular-images-what-can-i-do>

## **What to do after a power cut**

<https://plone.unige.ch/EULER/faqs/actions-after-a-power-cut>