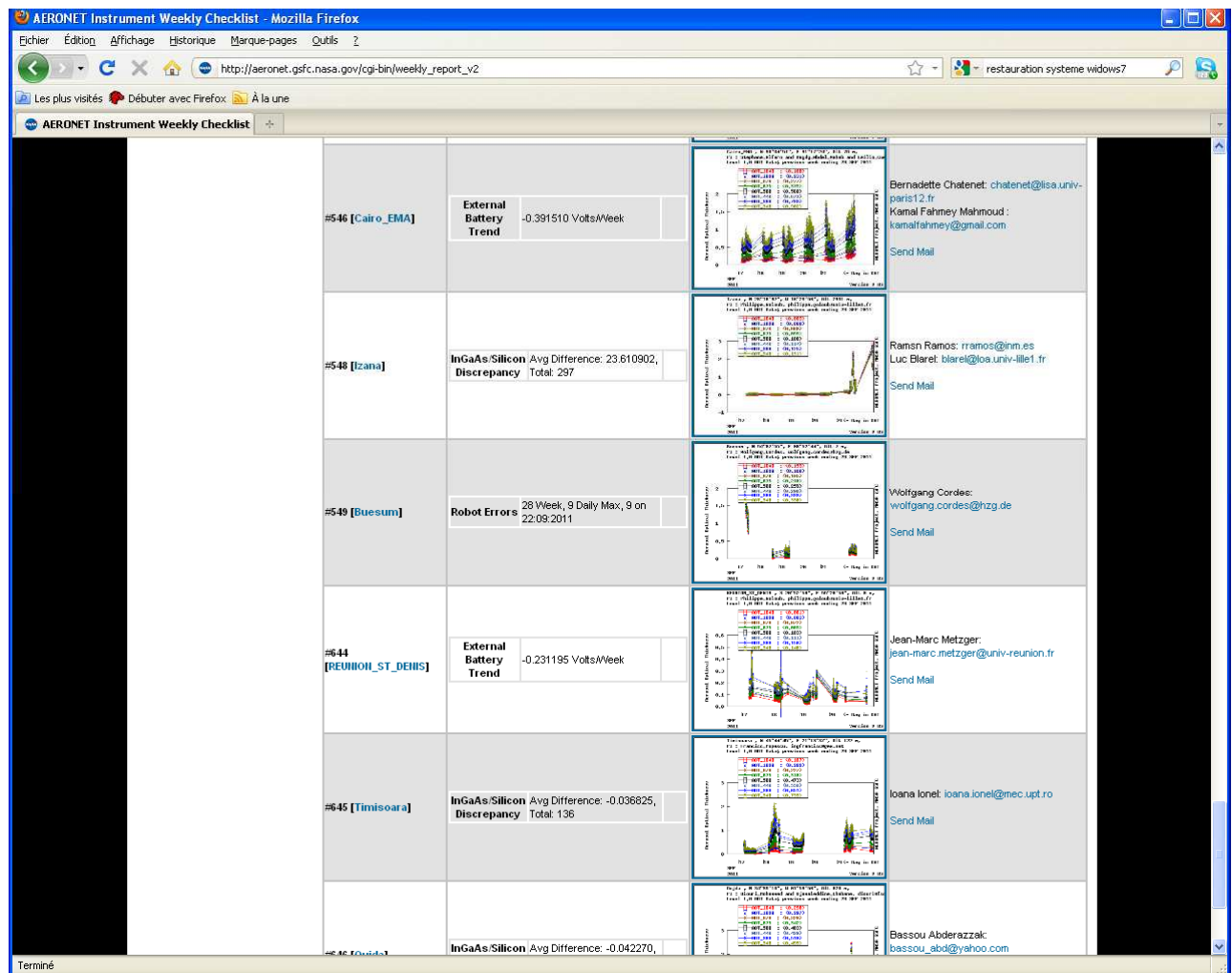


## Check Instruments before to do the Weekly Maintenance

[http://aeronet.gsfc.nasa.gov/cgi-bin/weekly\\_report\\_v2](http://aeronet.gsfc.nasa.gov/cgi-bin/weekly_report_v2) for weekly check and

[http://aeronet.gsfc.nasa.gov/cgi-bin/weekly\\_report\\_v2?list=1&daily=1&site=2](http://aeronet.gsfc.nasa.gov/cgi-bin/weekly_report_v2?list=1&daily=1&site=2) for daily check



If your photometer is in the list of problem, you need to resolve it.

### List of problem and solutions possibles:

#### Low internal battery:

- Transformer or solar panel (SP) is it well connected? Often in this case you have also low external battery.
- Connectors RJ (solar panel or transformer) can be oxidized, clean it or replace it.

### Internal battery Trend:

- It's often due to lack of sun on solar panel during several days if not it could announce a future problem of low internal battery

### Low external battery:

- Could be same pb of **Low internal battery** or pb of connection external battery to measure the external battery remove the charger or SP to see the real value.
- Could be a pb of battery terminals oxidized or bad connection between the two black batteries....
- In last if the pb persists, you need to change the external battery.

### External battery Trend:

- It's often du to lack of sun on solar panel during several days if not it could announce a future problem of low external battery

### Low DCP battery:

- pb regulator or connection or change the batteries...

### DCP Battery trend:

- Often due to lack of sun on the big solar panel during several days.

### Robot errors:

- Due often to the head cable ( stuck, wrapped or takes too much on the head...)
- Or pb of external battery ( too low) see external battery problem
- A lot of wind during a several days can do error robot also

### Filter Wheel Errors:

- Often due to external batteries too low, in this case we have also errors robot
- Could be a bad connection of the big cable head (unconnected and connected again) test to make a Sun then Run if you have "error at starting plot", it means filters wheel errors.

### High dark current:

- Often du to bad ground inside the head cable (you can test it with an ohmmeter between the screw of the top of the head and the pin 13 of the connector box db25 pins) If the value is not stable to 1 ohm or less , it's not normal.

You can see if the pin 13 of the connector Db25 is well connected inside.  
If not see with Aeronet Photons team.

### Constant Humidity status:

- It rains since several days and it's normal
- If not the wet sensor can be cleaned with fresh water (to remove the salt that do contact between the trails), it arrives when the photometer is near the sea.
- The resistance between the 2 contacts must be 100 KOhms

### Temperature jump:

- Bad contacts in the connectors of the head cable, or inside the box

### Bad sun tracking:

- If there is no AOT during several days, it detects bad sun tracking.
- In this case, it can be a bad robot adjust in AZ or ZN, control by a PARK, GO SUN and TRACK when the sun is shining.
- Bad connection cable head  
[http://aeronet.gsfc.nasa.gov/new\\_web/TRACK.html](http://aeronet.gsfc.nasa.gov/new_web/TRACK.html)
- Head mounted in reverse ( connector near the V of robot)  
[http://aeronet.gsfc.nasa.gov/new\\_web/GOSUN.html](http://aeronet.gsfc.nasa.gov/new_web/GOSUN.html)

### A/K discrepancy:

- For old photometer, and N, NP photometer, it means that there is a difference between the Aureol measure and the sky measure at  $6^\circ$  when the photometer does an almucantar or PP1, the reason is always something inside one of the collimators (spider web....) or lot of dust in one of the windows, or collimator mounted in reverse after a maintenance for example.  
You need to remove spider web or to blow dry air on the windows contaminated.

### Incomplete almucantars:

- Often it's due to a problem of incomplete transmission by emitter.  
See battery 12 V , or 3V inside battery.  
[http://aeronet.gsfc.nasa.gov/new\\_web/Chopped.html](http://aeronet.gsfc.nasa.gov/new_web/Chopped.html)

### Asymmetric Almucantars:

- Bad level robot in AZ (round central level)  
Problem of position of the head that prevents cable to rotate the robot during an almucantar. Should be tested an almucantar in simulate it the morning and the evening ( see [http://aeronet.gsfc.nasa.gov/new\\_web/ASYMM.html](http://aeronet.gsfc.nasa.gov/new_web/ASYMM.html))

### Cimel clock shifted

- Set the time the photometer

### InGaAs/Silicon Discrepancy

- Specially for the NE or DP photometer, it means there is a difference between the InGaAs 1020 nm measured with the InGaAs detector ( on collimator) and Si detector ( this other detector), It's often due to something like web spider in one of the collimators or one windows is very dirty In this case you need to remove the spider web of the collimator ( unscrew the collimator before) or blow some dry air on to the window

### Direct Sun Saturation

- It always due to a connection pb : cable, moving card inside the Cimel box...
- Test a Sun to see the count and if there are saturated ( at 65536 or !! on display)

### K7 data Missed

- Perhaps, its normal if the photometer is in calibration but if not assure that the photometer send data on PC

## **The following step concern only the transmitter for those use it**

### DCP clock shifted:

- Set at time the transmitter

### Parity error

- concern the transmitter, pb of decode

### Missing Message

- Concern the transmitter, it can be the big battery 12 V, or the bad orientation of the antenna, or failed transmitter...

### Only Cimel Headers

- This arrive when the photometer is disconnected from the transmitter

### DCP Missed

- Normal if the photometer is in calibration, if not verify the transmitter and connection with photometer

