# UltraMSK Daily Checks

## Procedure

1. To check that all MSK frequencies of raw data are running:

**$ ps** aux **|** **grep** msk

1. Verify that the daily email has been sent:

**/**home**/**sferix**/**ultramsk**/**ultramsk\_bin.txt

1. Check the .png images attached to the sent email for solar flare activity.

## Troubleshooting

* UltraMSK narrowband software are running and will automatically restart whenever the PC powers up or reboots. After rebooting check that all 14 MSK frequencies are recording data by running this command:

**$ ls** -l **\***YYYYMMDD**\*.**bin

* If there is no email sent from UltraMSK though the script has been automated, then you can run script manual as follows:

**$ cd** **/**home**/**sferix**/**ultramsk**/**\  
**$ ./**report-ultramsk-bin\_mutt.sh

## Useful Commands

* Reboot computer:

**$ /**sbin**/**reboot

* Check NTP server for accuracy:

**$ ntpq** -p

* Check if the Toga process is running:

**$ ps** aux **|** **grep** toga

* Instances of different frequencies running:

**$ ps** aux **|** **grep** msk

* Mail script for adding or removing email address:

**$ vim** **/**home**/**sferix**/**ultramsk**/**report-ultramsk-bin\_mutt.sh

# System Information

### UltraMSK Email Detail

* Host: smtp.gmail.com
* Email Address: [sanae.physics@gmail.com](mailto:sanae.physics@gmail.com)
* Password: whistlers789

### Data Details

* Data Directory: /home/sferics/ultramsk/data/
* Data Type: .bin (binary files)
* Size: 1.8 MB file per frequency per day
* Naming Format: f\_loc\_dir\_YYYYMMDD\_SAN.bin, e.g., 24.00\_SAN\_NS\_20220913.bin
* Notification: Spectrogram report via email. Daily .png: On server PC.
* Transfer: Return to South Africa after each summer voyage.
* Backups: Data is backed up to NAS.

### Software Details

* VT Card: Audio server splitting audio input between WWLLN and UltraMSK.
* On reboot: Both WWLLN and UltraMSK software will restart.

### Contact Details

* NTP: Network time protocol server using the GPS time (GPS\_NMEA).