



Colorgramme Lab V 4.0

- prerequisite
- Install & setup
- HROFFT image Colorgramme processing



Colorgramme Lab V 4.0

- what is colorgramme used for
- Colorgramme Lab is a « backend » software for radio meteor observers using RMOB data format to display their observations on the web site <https://www.rmob.org>



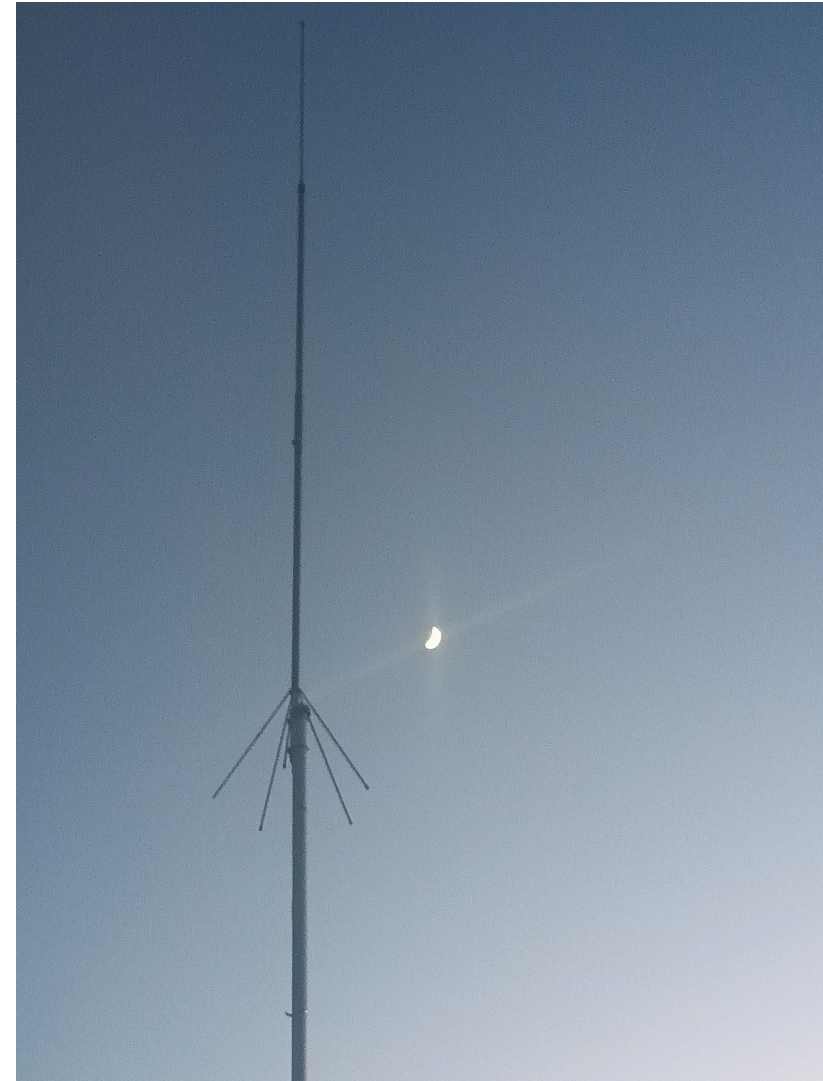
Colorgramme Lab V 4.0

- prerequisite
- Run Colorgramme if our radio meteor setup is OK, that is to say :



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- Prerequisite
- An antenna tuned for the reception of observation frequencies you choose.
- Example here : my antenna for 144 Mhz to observe 143.050 GRAVES radar





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- Prerequisite
- An radio receiver tuned for the reception of observation frequencies you choose.

Sample here: my digital receiver set for GRAVES Radar.
Analog receiver is available.

We analyze the sound coming from the receiver.

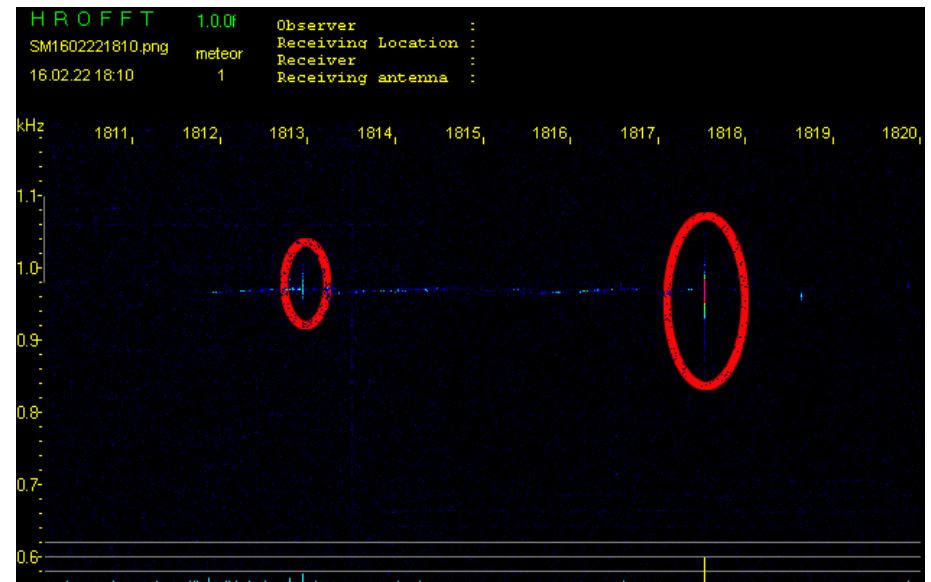
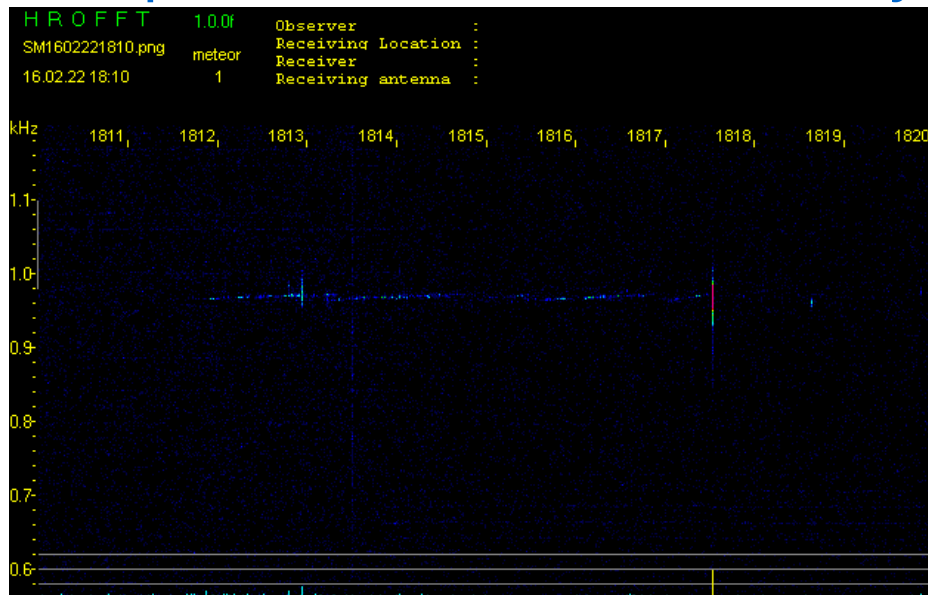
IC-PCR1500





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- Prerequisite
- An audio spectrum software.
- Example by default Colorgramme uses HROFFT. SpectrumLab is also used by observers.





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- **Prerequisite**
- A computer :
Normally we use an old or small computer dedicated only for radio meteor detection.
For example I use an **old laptop** from 2006 under Windows XP and a very small Chinese computer, cheap from Aliexpress **BMAX B1 plus** (only 100\$), with windows 10 embedded with Intel Apollo Lake Processeur N3350.
- Also is available to use Raspberry Pi 4 8G, but with Wine and is difficult to install on ARM processor.
I tested <https://twisteros.com/> distrib and that works fine !



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- **Before installing Colorgramme, please adjust date and time of your computer in UTC.**



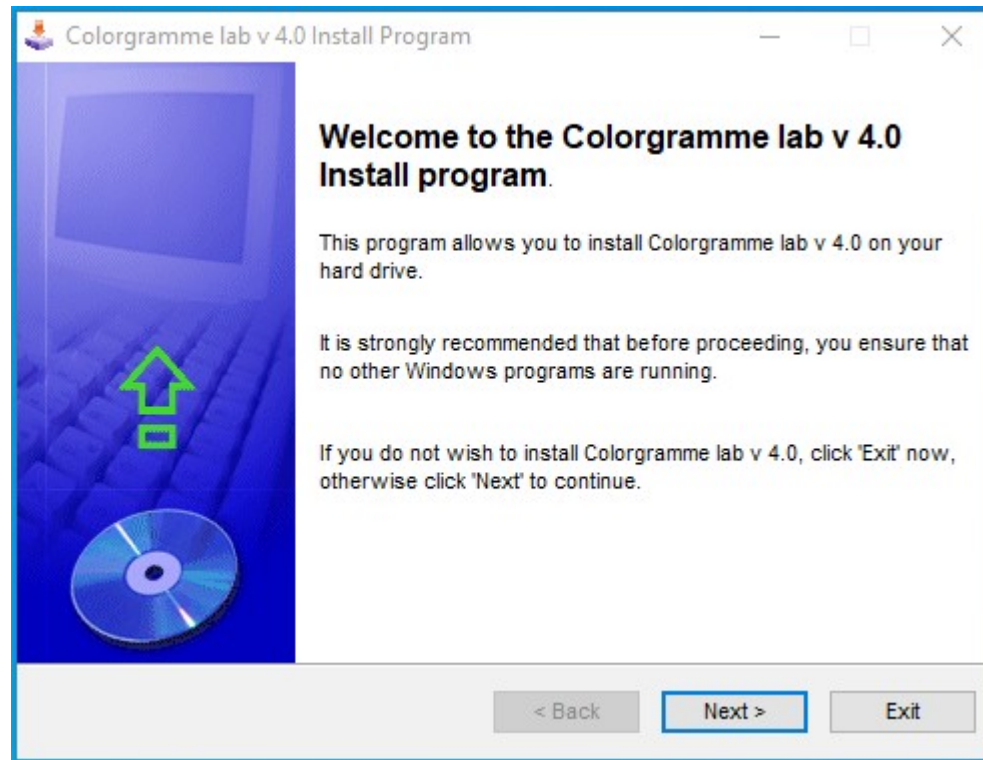
- It is absolutely necessary to coordinate your observations with all others observers.



Colorgramme Lab V 4.0

- Install & setup
- Download Colorgramme from <https://www.rmob.org>

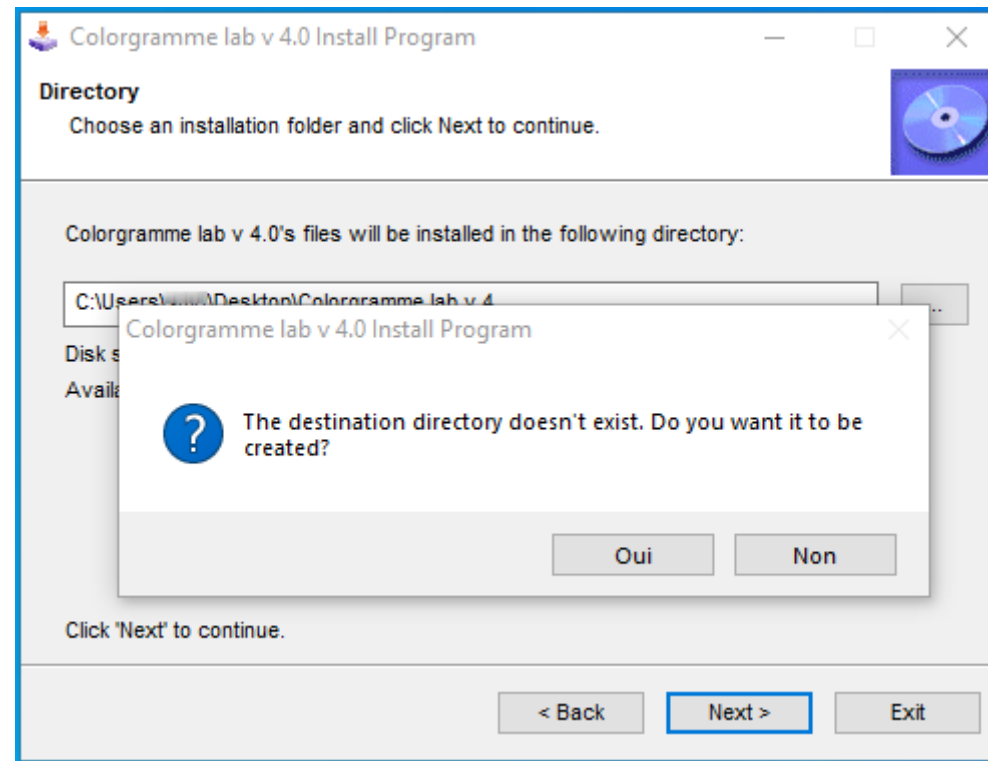
Run and install. The instruction is simple and easy.





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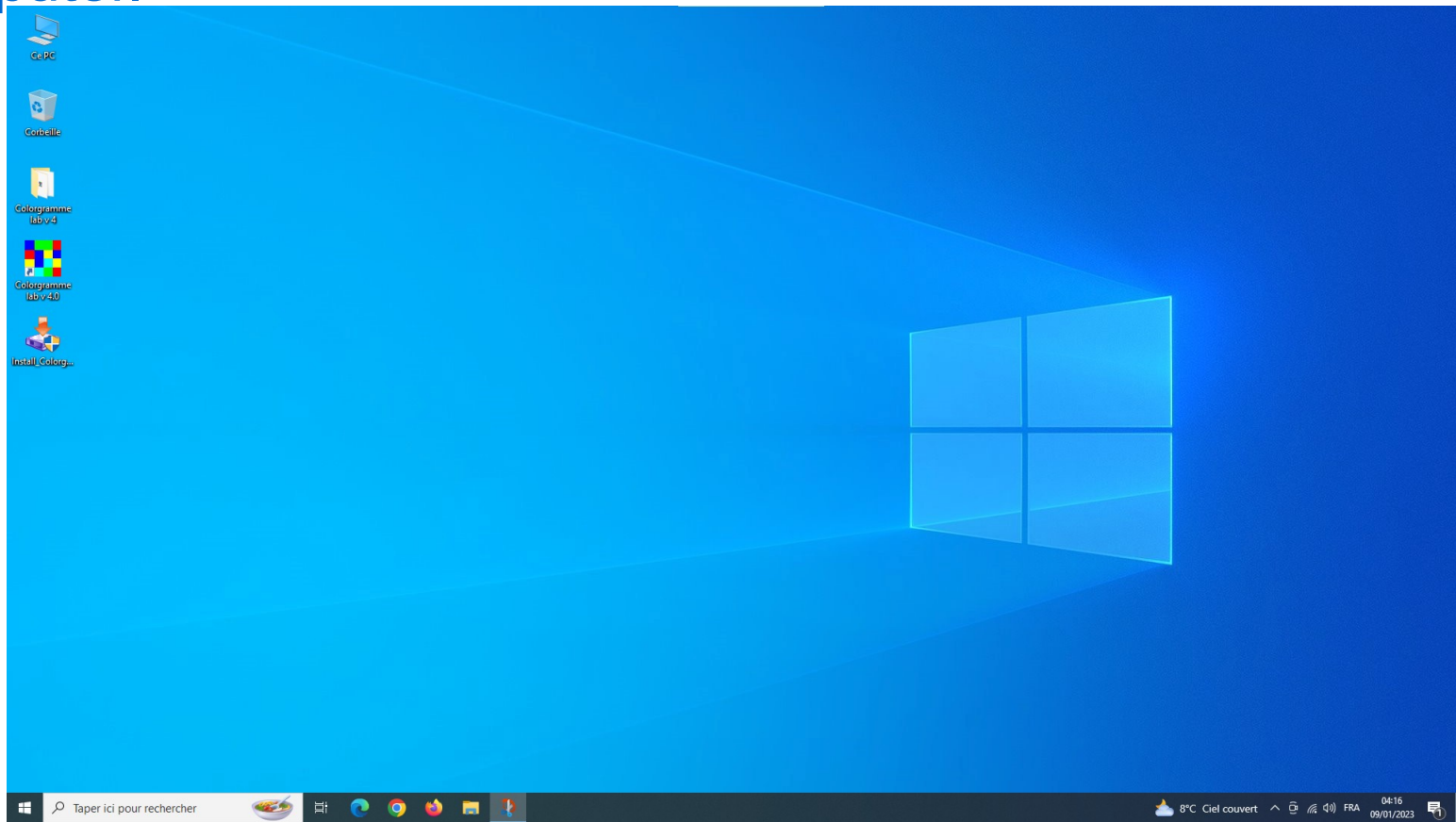
- Install & setup
- Colorgramme is installed in the folder of your choice, but accept the creation of the directory.





Colorgramme Lab V 4.0

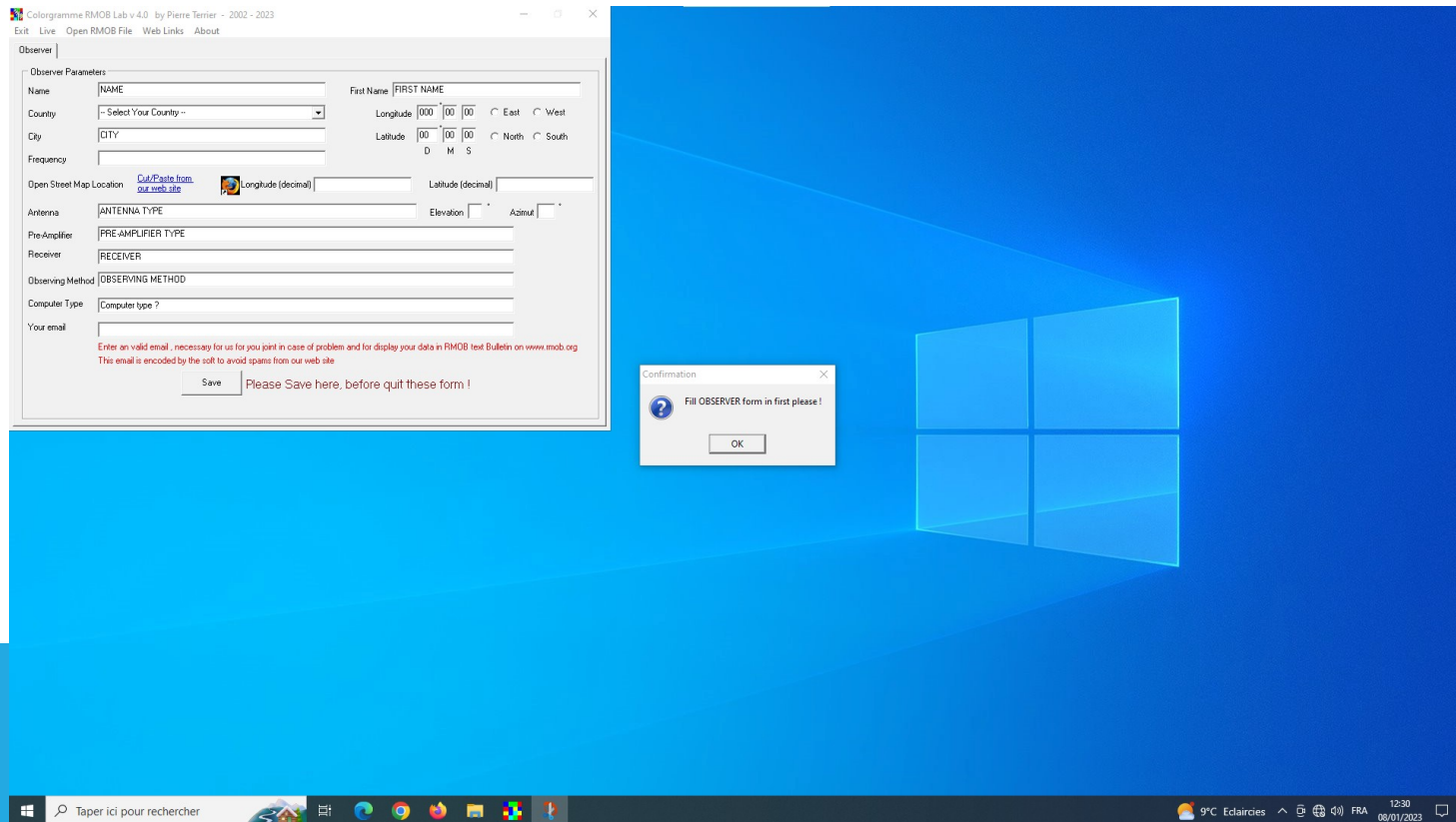
- Install & setup
- For me simply on my Desktop, because it is a dedicated computer.





Colorgramme Lab V 4.0

- Install & setup
- First run ! Fill Observer form entirely.
This is very important otherwise the software does not continue, because these information is displayed on our website in live data, particularly on our Observer's Map.
Use our Map tool for your location !





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- Install & setup

After having completed the Observer form entirely, the menu and the operations process of the software is displayed.

Colorgramme RMOB Lab v 4.0 by Pierre Terrier - 2002 - 2023

Exit Live Open RMOB File Web Links About

Obs HROFFT Internet FTP Transfer Processing data -->

RMOB file

MAnalyzer file

Meteor MSD Soft

Spectrum Lab

Meteor v 8.0

First Name Pierre

Longitude 002 33 07 East West

Latitude 44 41 45 North South

D M S

Frequency 143.050 Mhz

Open Street Map Location [Cut/Paste from our web site](#)

Longitude (decimal) 2.552186 Latitude (decimal) 44.695978

Antenna Colinear vert. 9db 144 Mhz Elevation 90 Azimut 0

Pre-Amplifier no

Receiver IC PCR-1500 SSB

Observing Method HROFFT

Computer Type VAIO XP

Your email terrier.pierre@gmail.com

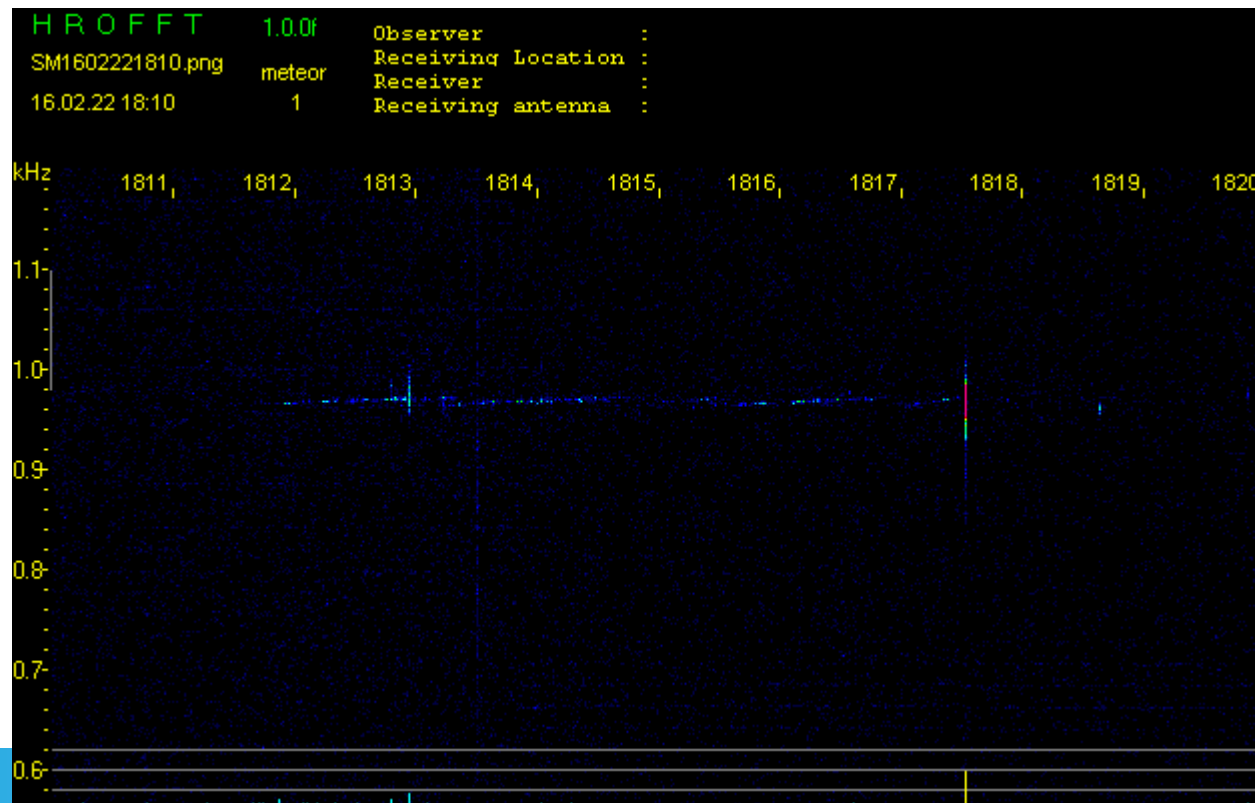
Enter an valid email , necessary for us for you joint in case of problem and for display your data in RMOB text Bulletin on www.rmob.org
This email is encoded by the soft to avoid spams from our web site

Save Please Save here, before quit these form !



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- HROFFT image Colorgramme processing
- HROFFT audio spectrum analyzer is embedded in Colorgramme sub directory /hrofft.
- This software was developed by Mr. Kazuhiko Ohkawa - Japan.



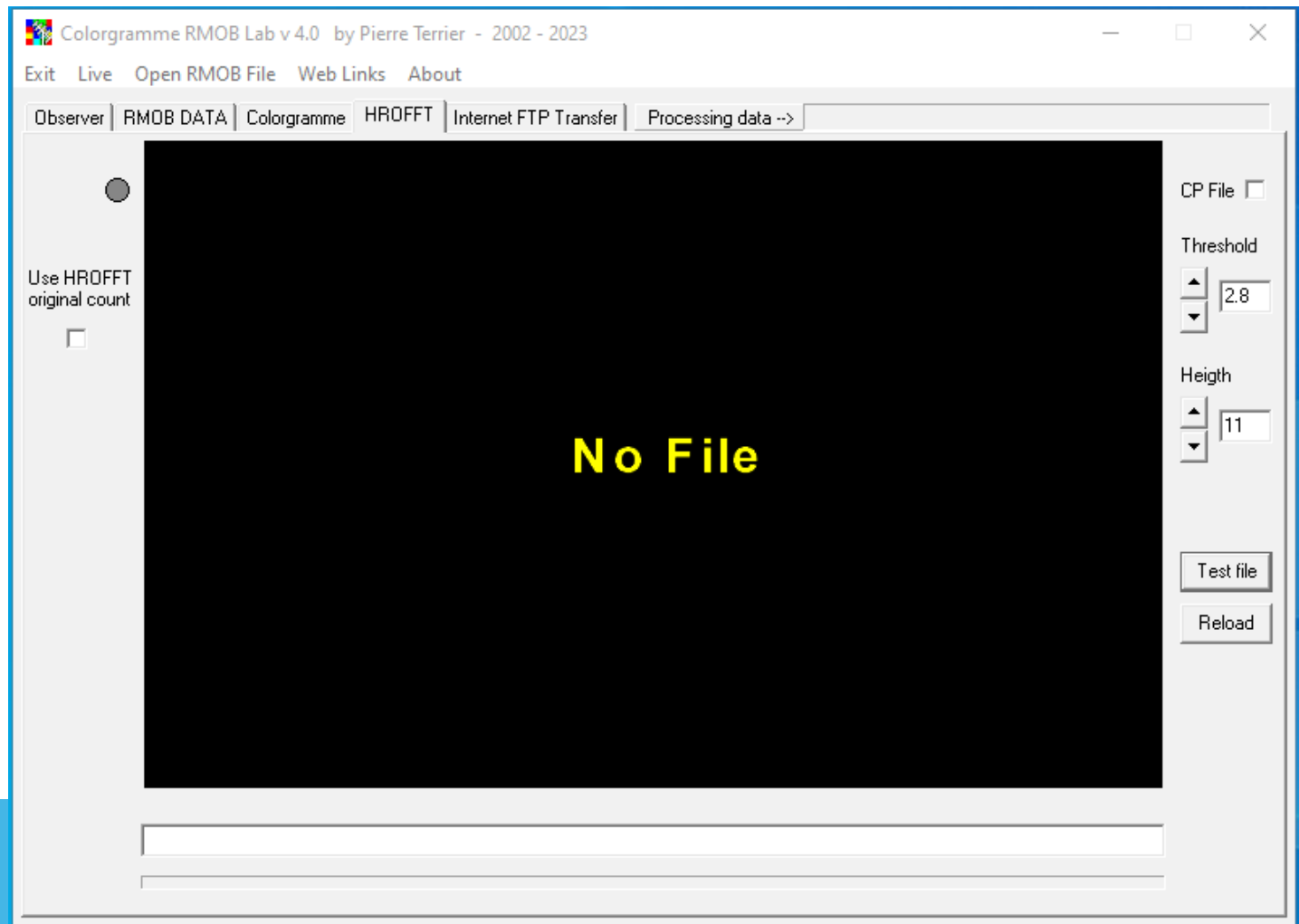


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- HROFFT image Colorgramme processing
- In HROFFT tabsheet of Colorgramme

Left check box to choose HROFFT original counting, if you check and run live HROFFT.

If you uncheck left check box, you see at right Colorgramme Processing parameters like this screenshot



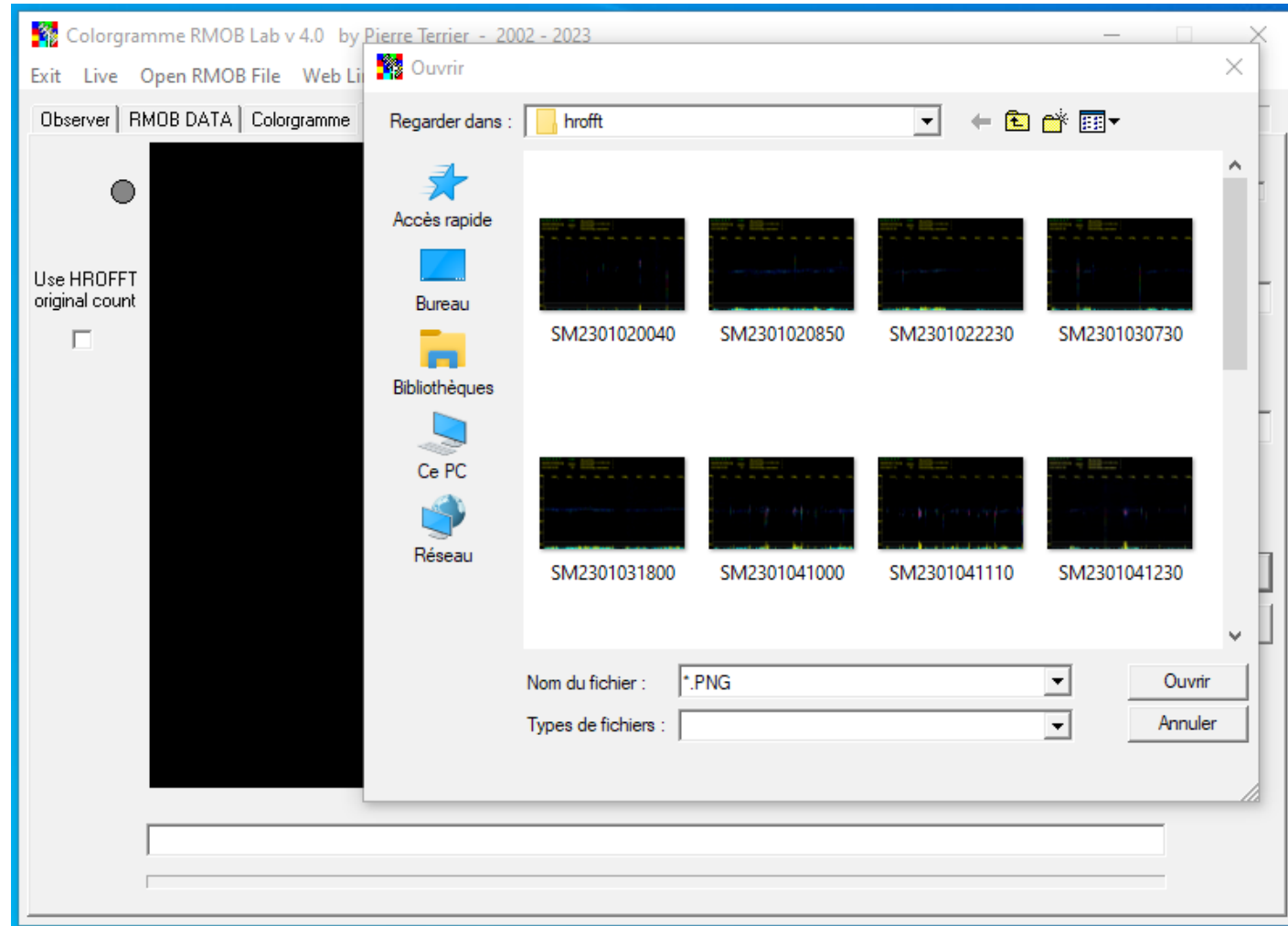


Colorgramme Lab V 4.0

- HROFFT image Colorgramme processing

Press « test file »
button to load an
HROFFT file

available only if you
have run HROFFT
before...





Colorgramme Lab V 4.0

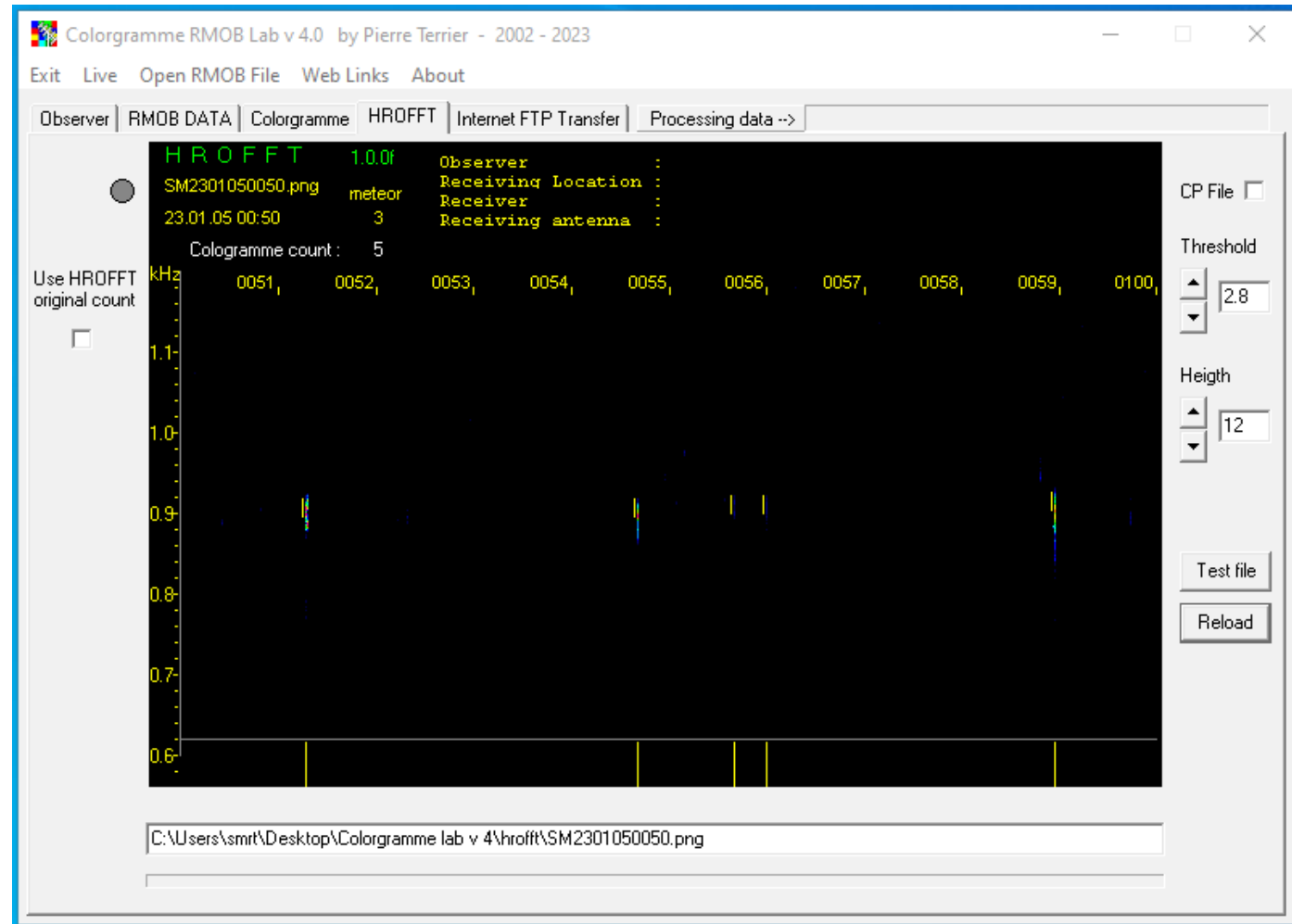
- HROFFT image Colorgramme processing

The file is loaded and Colorgramme processes.

The result is displayed

Vertical yellow lines indicates meteor echoes detected.

The adjustable parameters are Threshold on S/N and echo Height





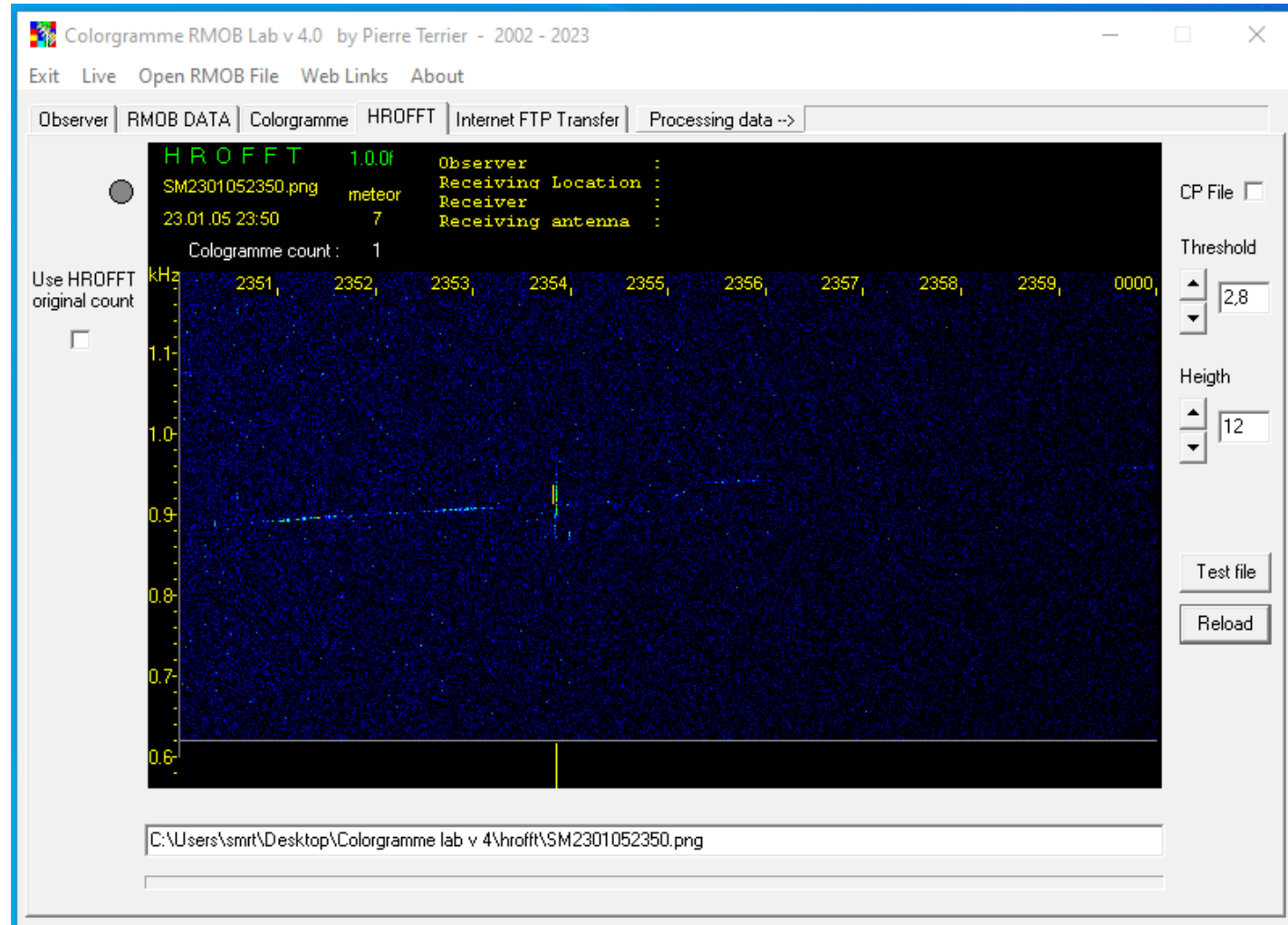
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- HROFFT image Colorgramme processing

The threshold parameter is important on noisy images.

Here threshold detection is a 2.8 mean of noise by column.

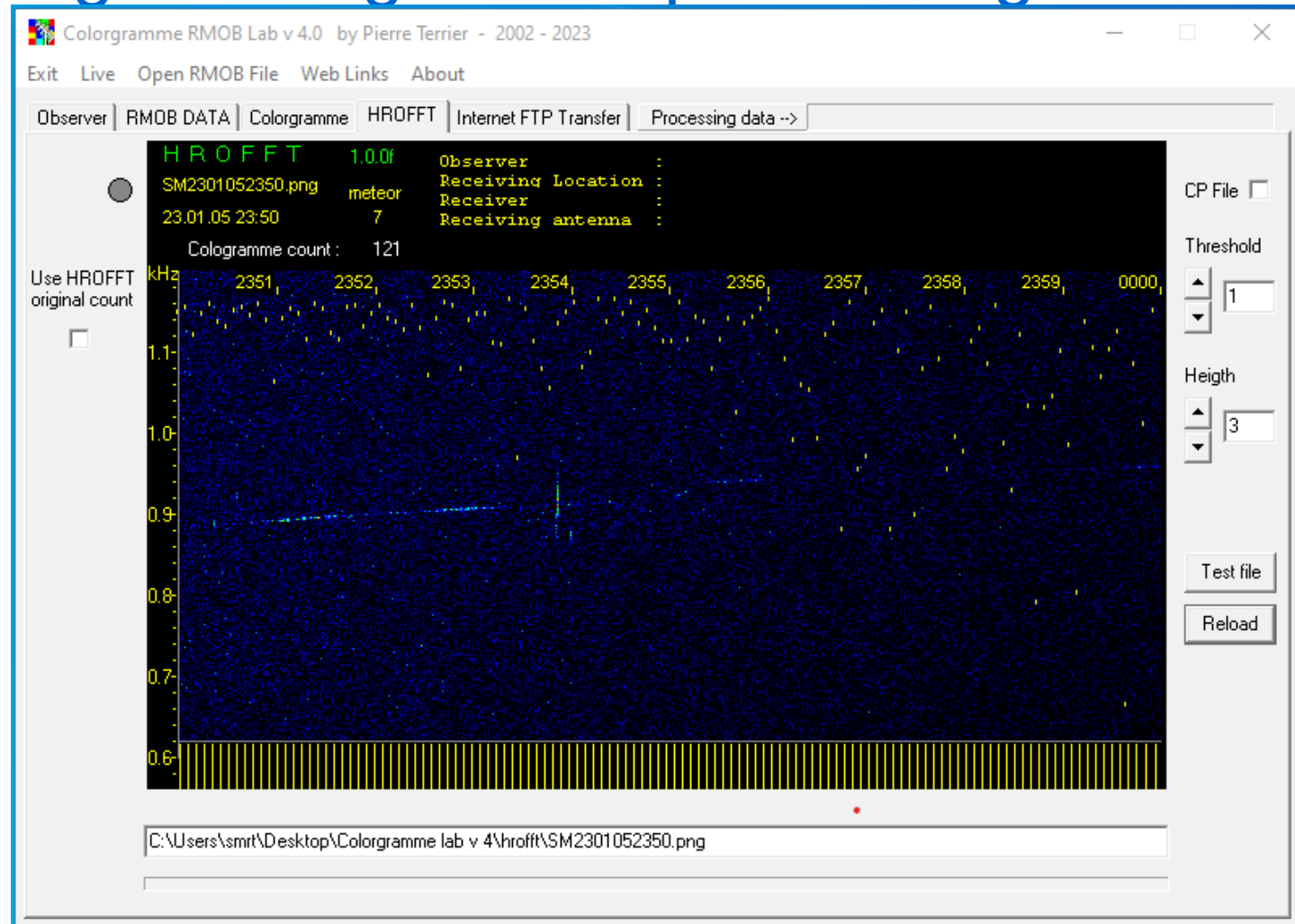
The calculation is pixel by pixel on the complete column of the image (reason why the processing takes long)





Example of bad Threshold setting.

Normal adjust is around 3.0





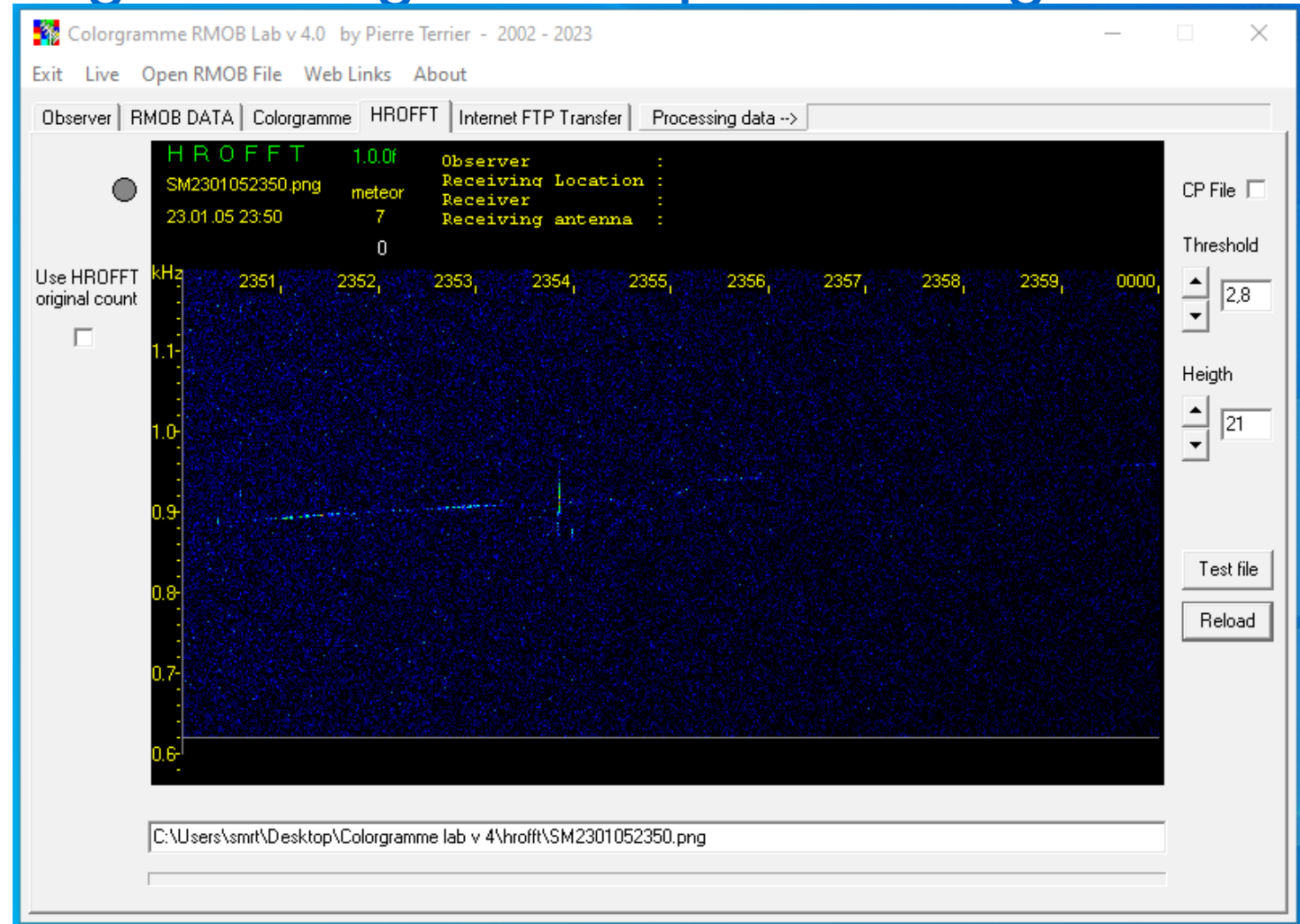
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- HROFFT image Colorgramme processing

Sample of bad height adjust

No meteor detection because the height of trail is too big.

But this image is not a good test for this parameter





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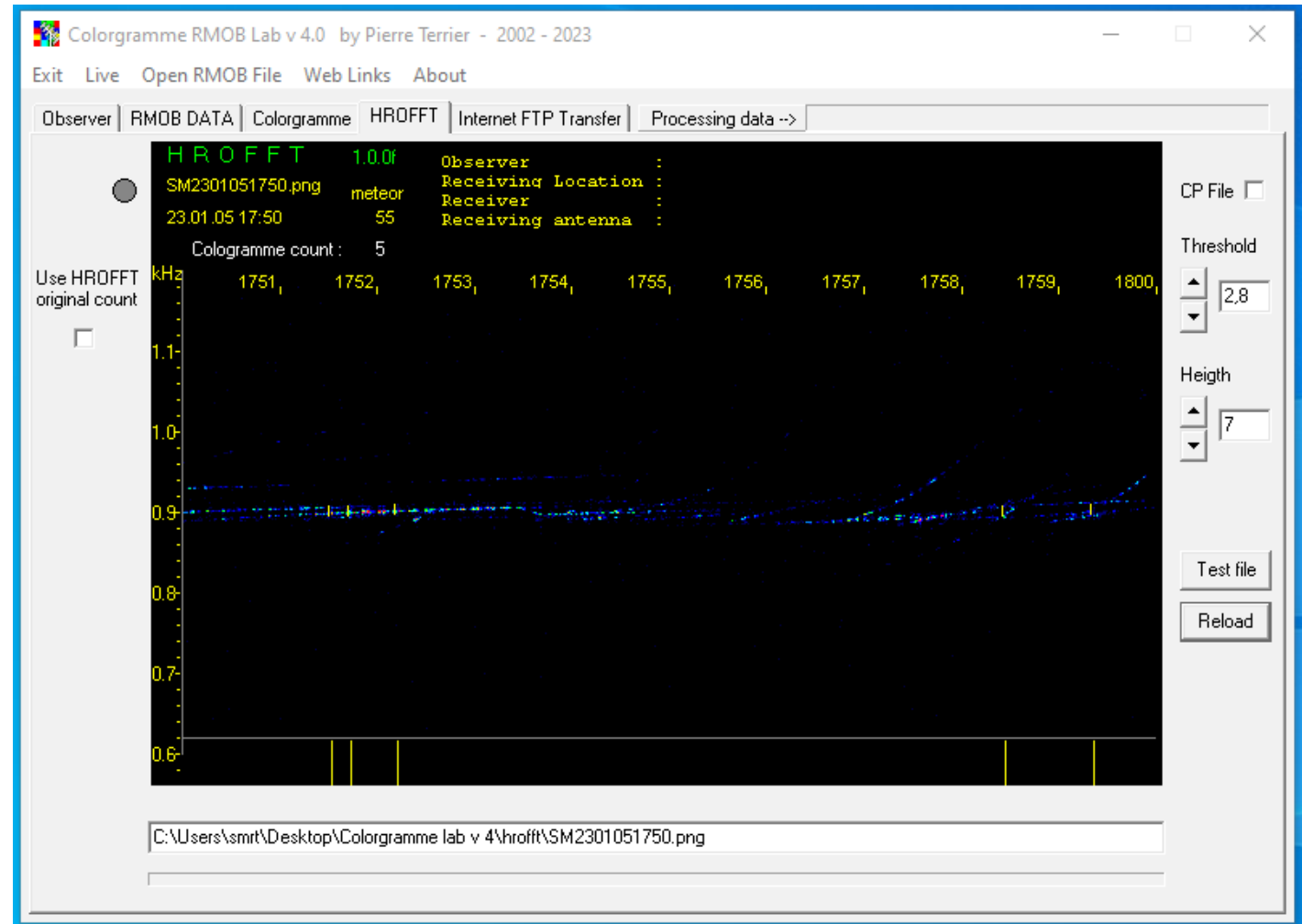
- HROFFT image Colorgramme processing

Sample of bad
height adjust

5 meteor detection
but no meteor
visible !
Only airplane trail !

The Height
parameter is too
small.

A good setting for
me is around 10-12



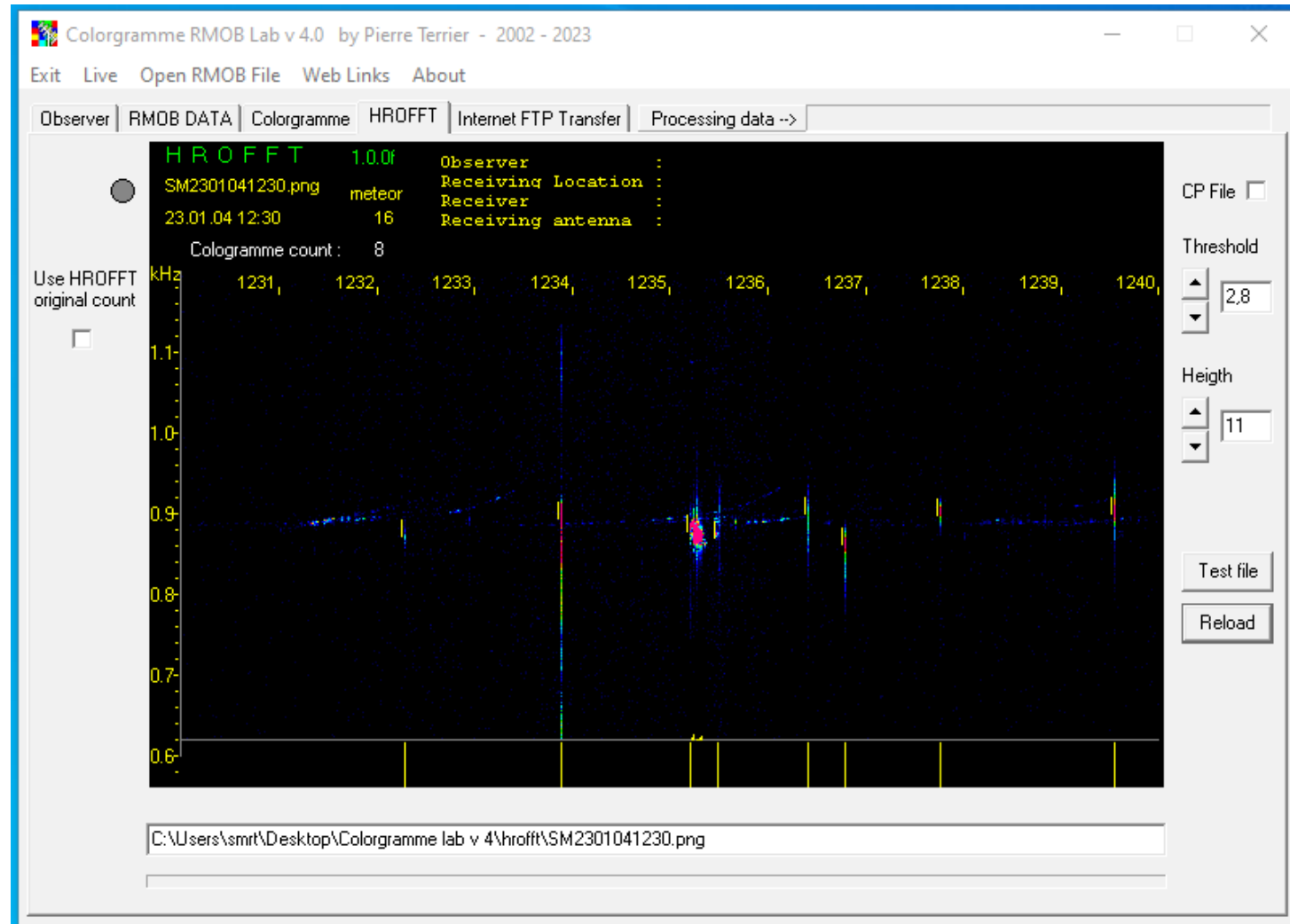


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- HROFFT image Colorgramme processing

Nice sample of many meteor trail height and long (overdense and underdense) and good detection parameters

To find your parameters, load many images, change parameters and use reload button to see detection change.



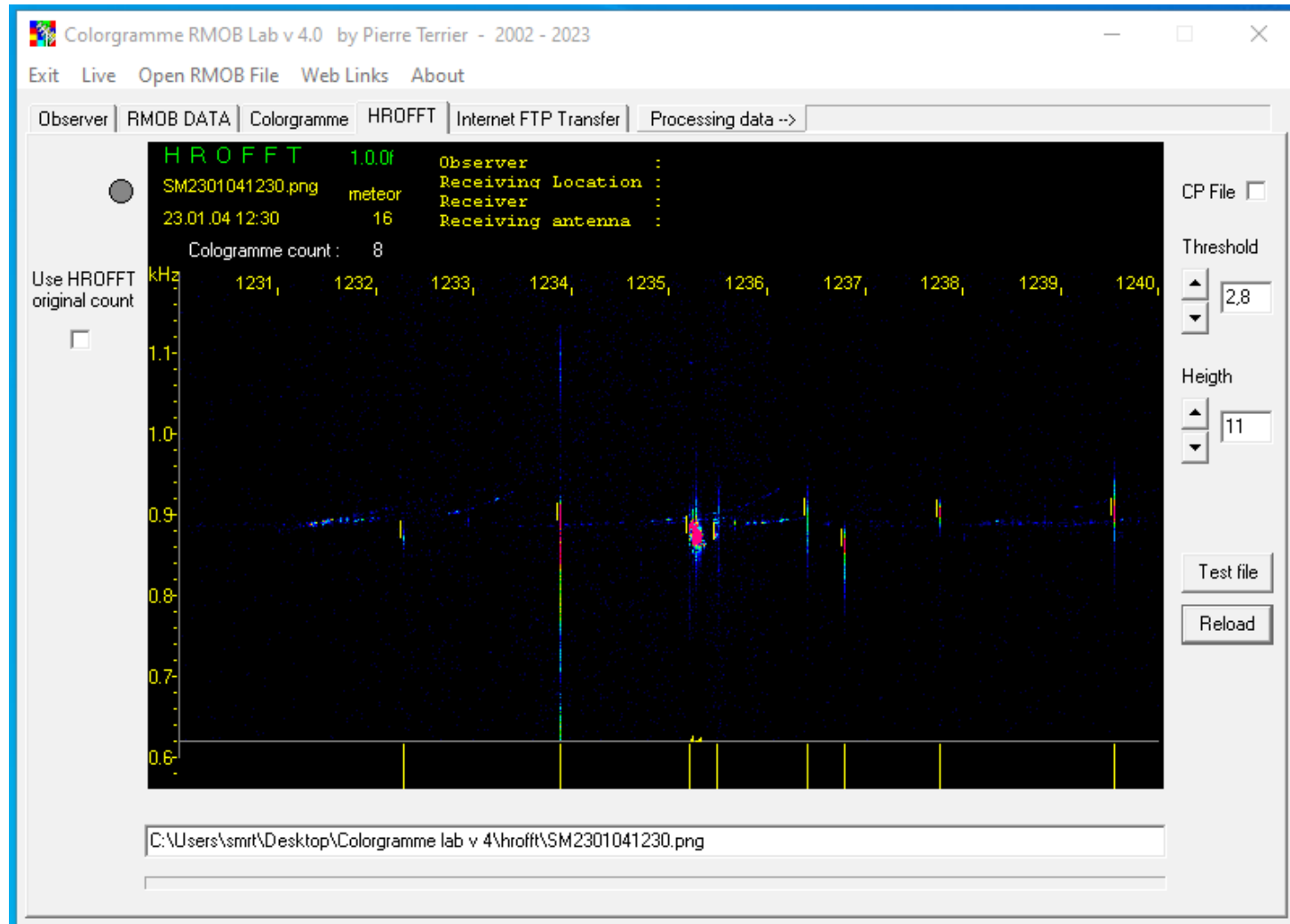


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- HROFFT image Colorgramme processing

To find your parameters, load many images, change parameters and use reload button to see detection change.

CP check box is for saving an copy of the HROFFT with the result of Colorgramme Processing in /hrofft subdir



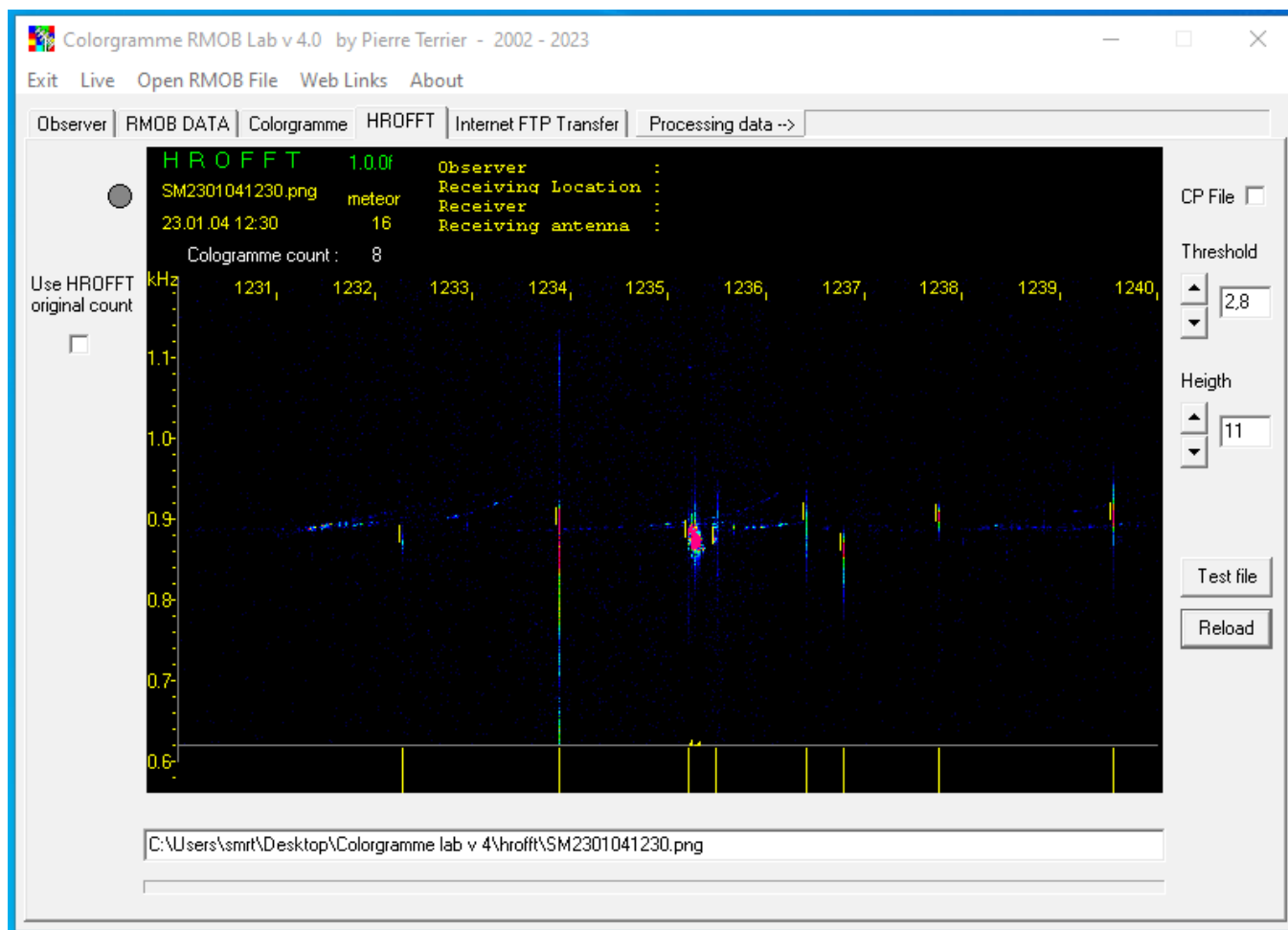


Colorgramme Lab V 4.0

Colorgramme is a Software created by Pierre Terrier since 2002.

RMOB Radio Meteor Observing Bulletin created by Christian Steyaert since 1993.

RMOB is the oldest worldwide observer network in radio meteor scatter.



See <https://www.rmob.org> for Live data and data archives since 1993