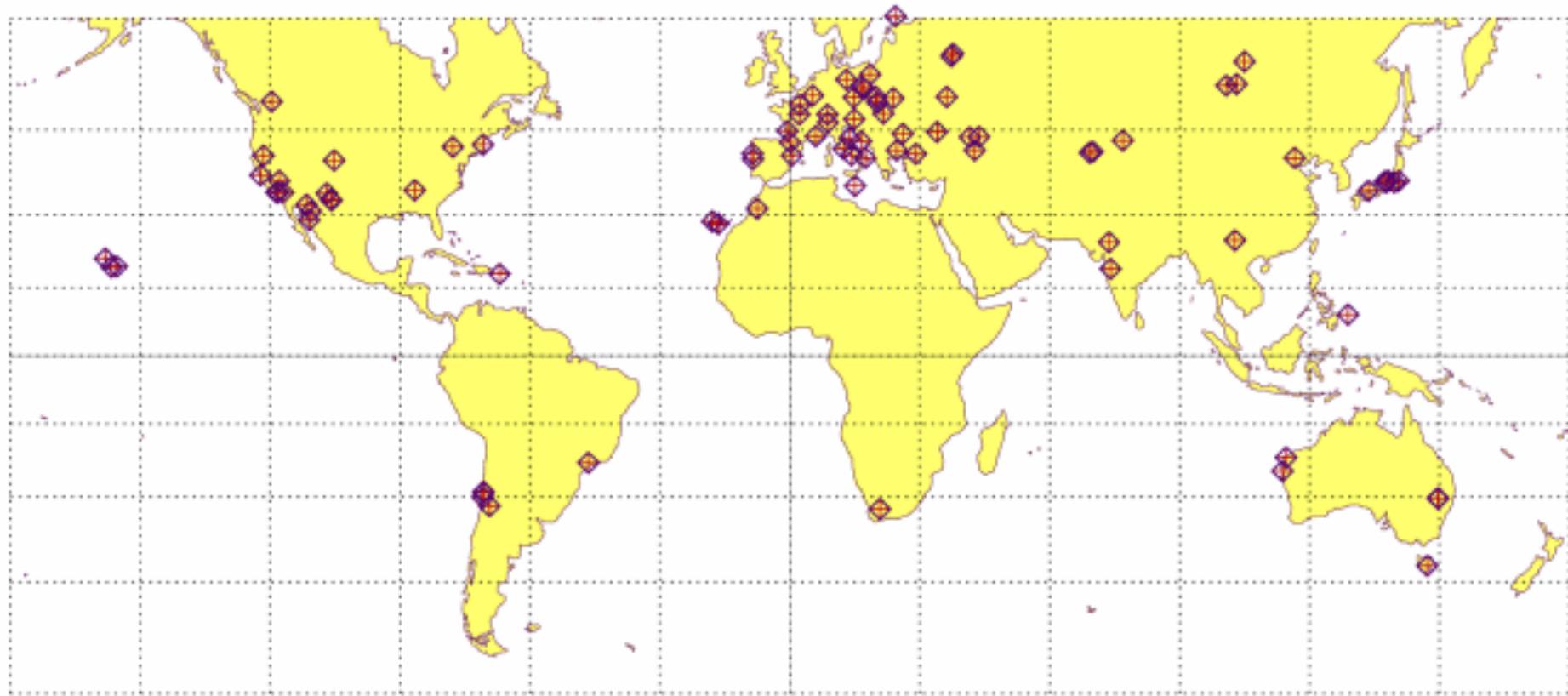


Confirmación de explosiones solares del 2012 en Colombia ... y del 2014

Mauricio Vinasco Téllez

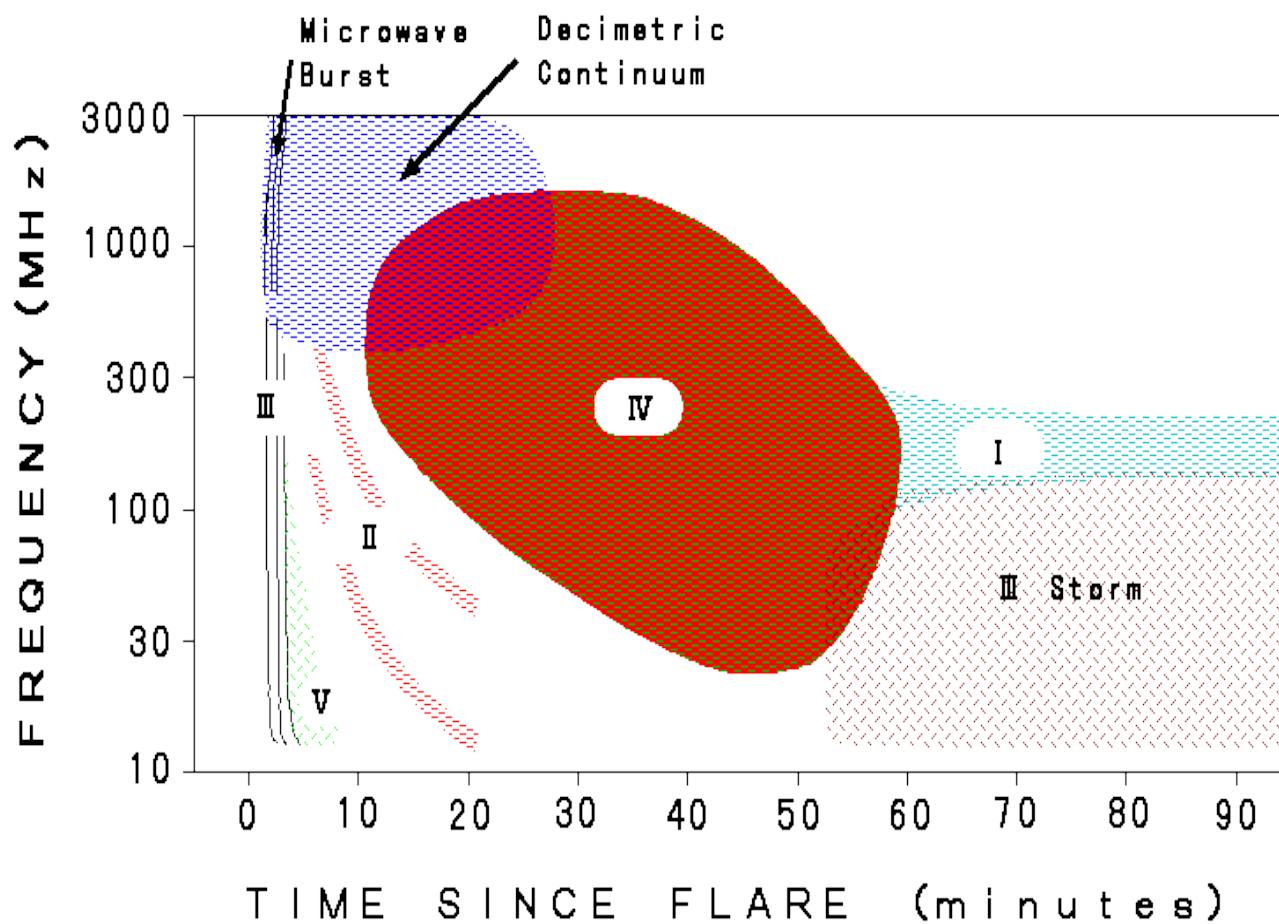




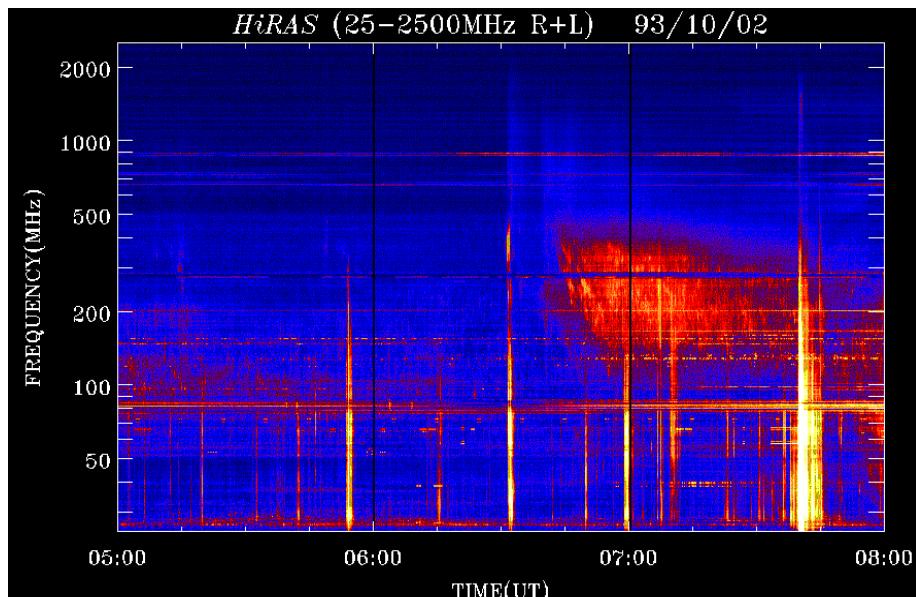
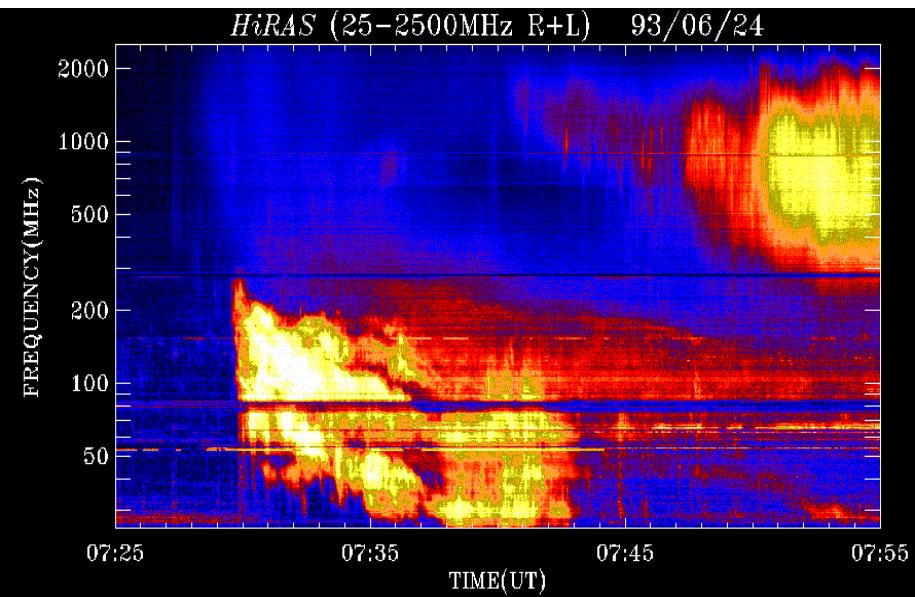
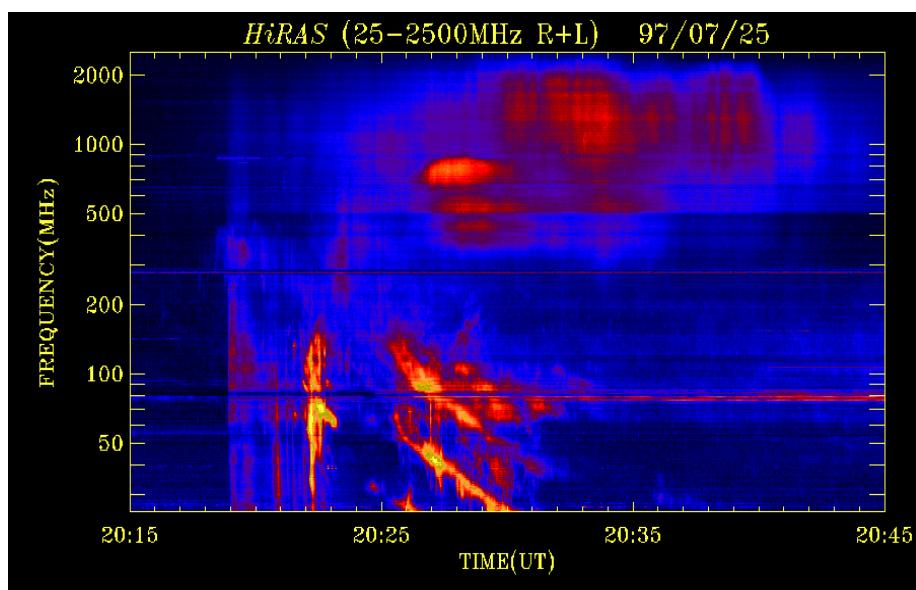
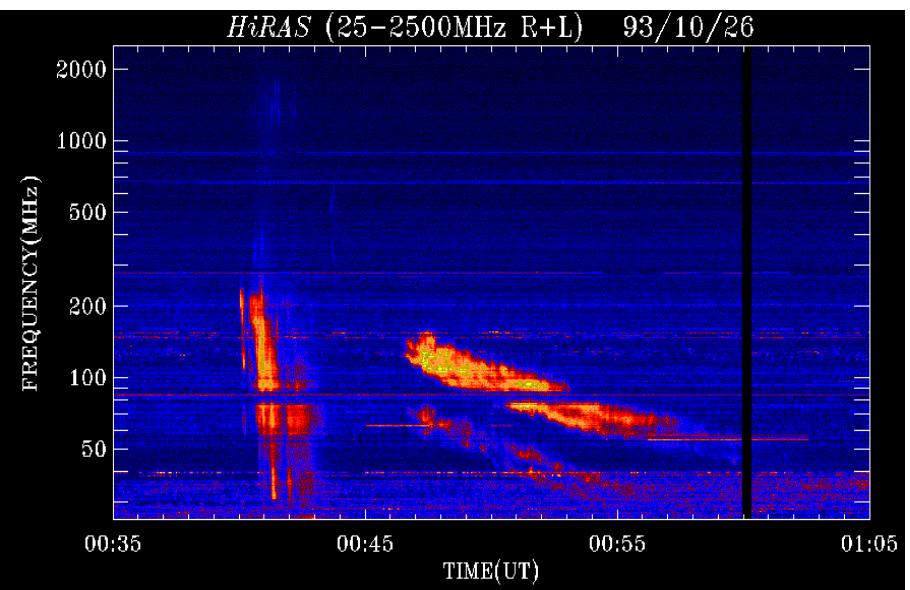


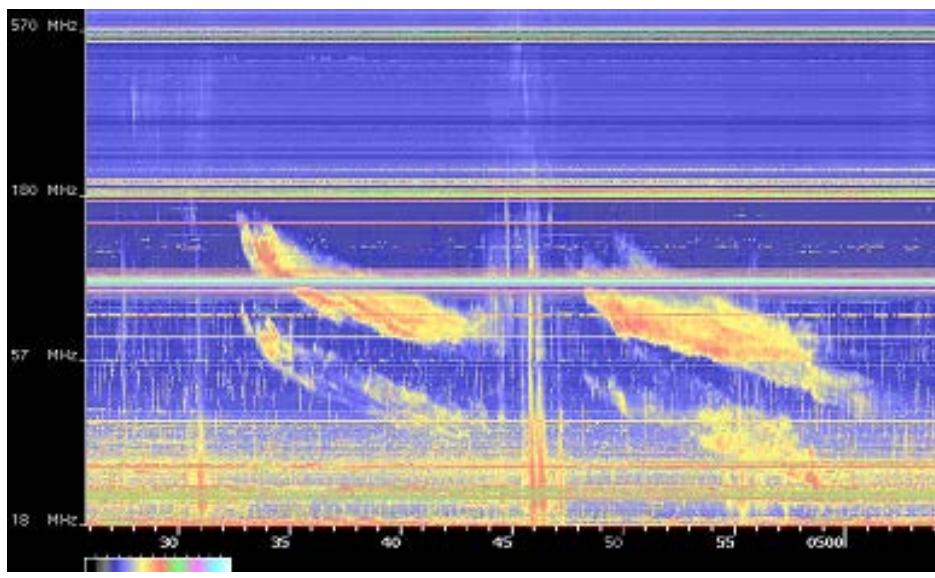
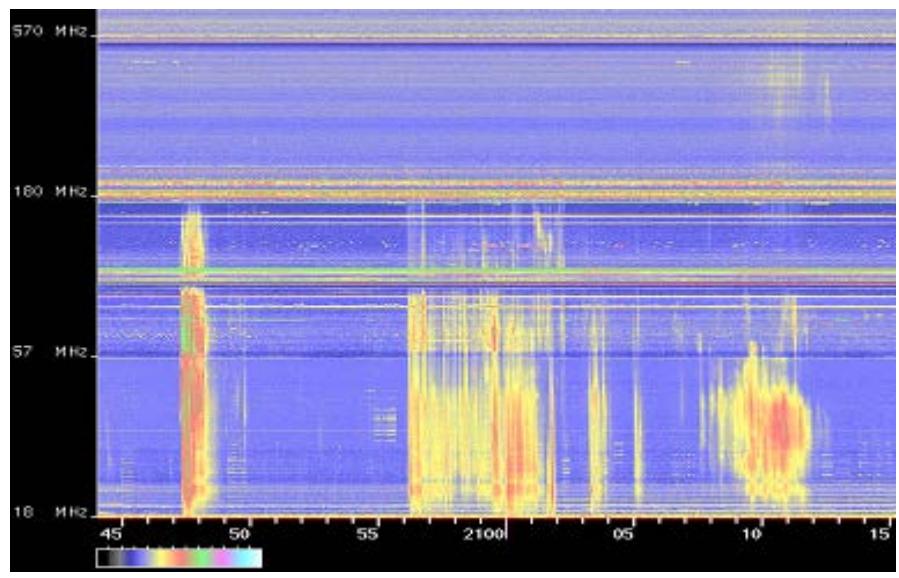


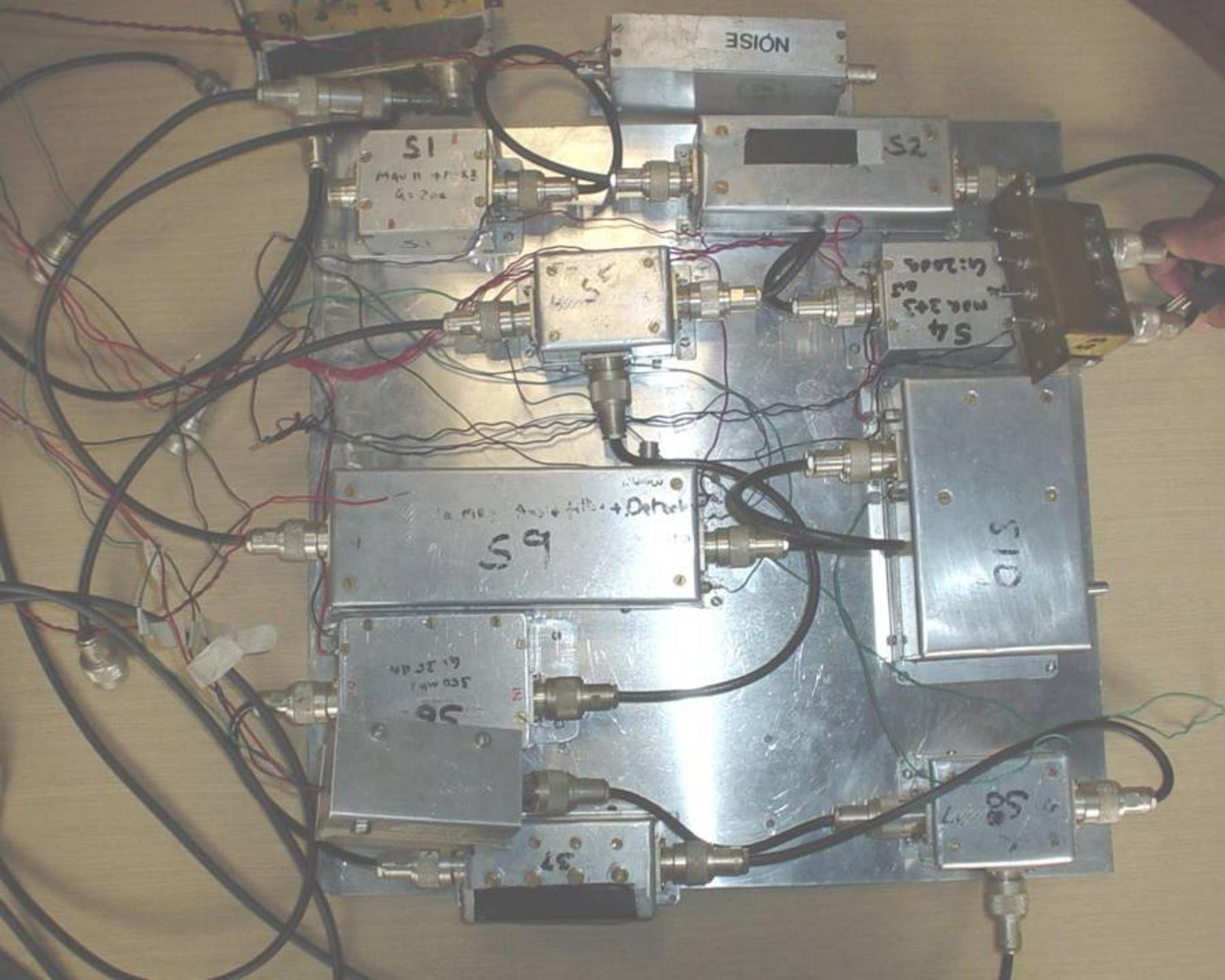


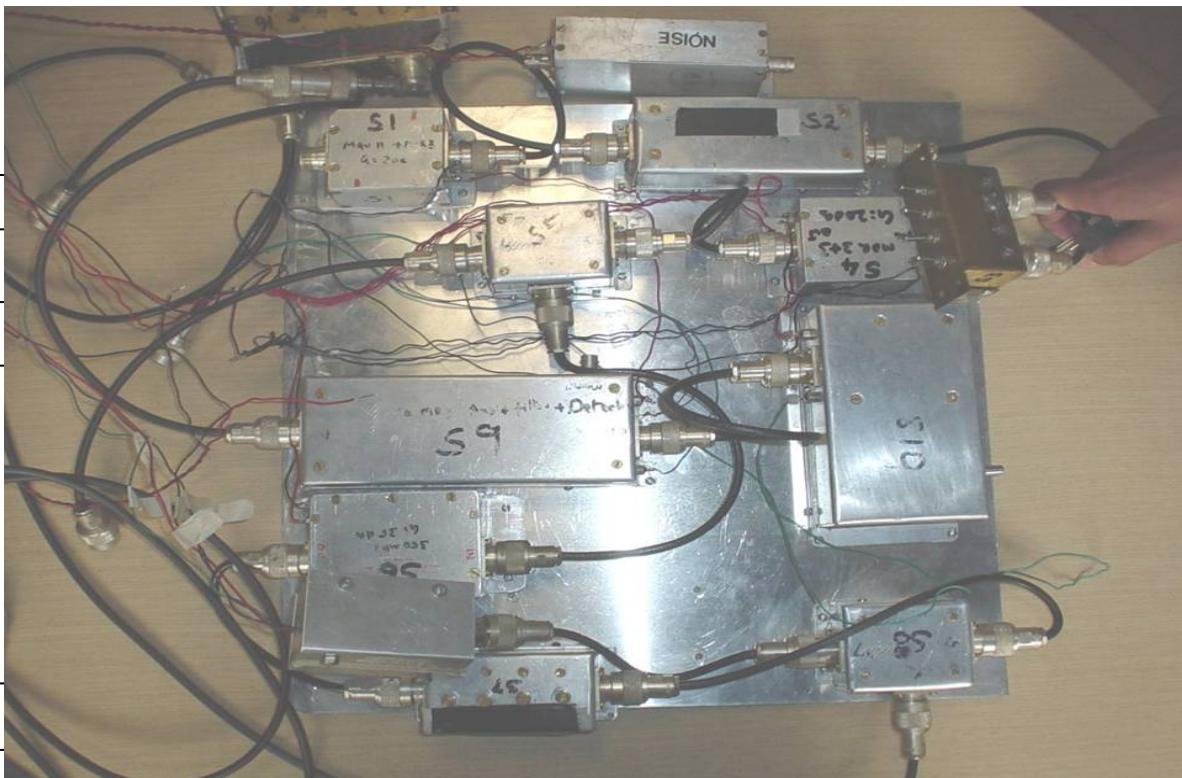
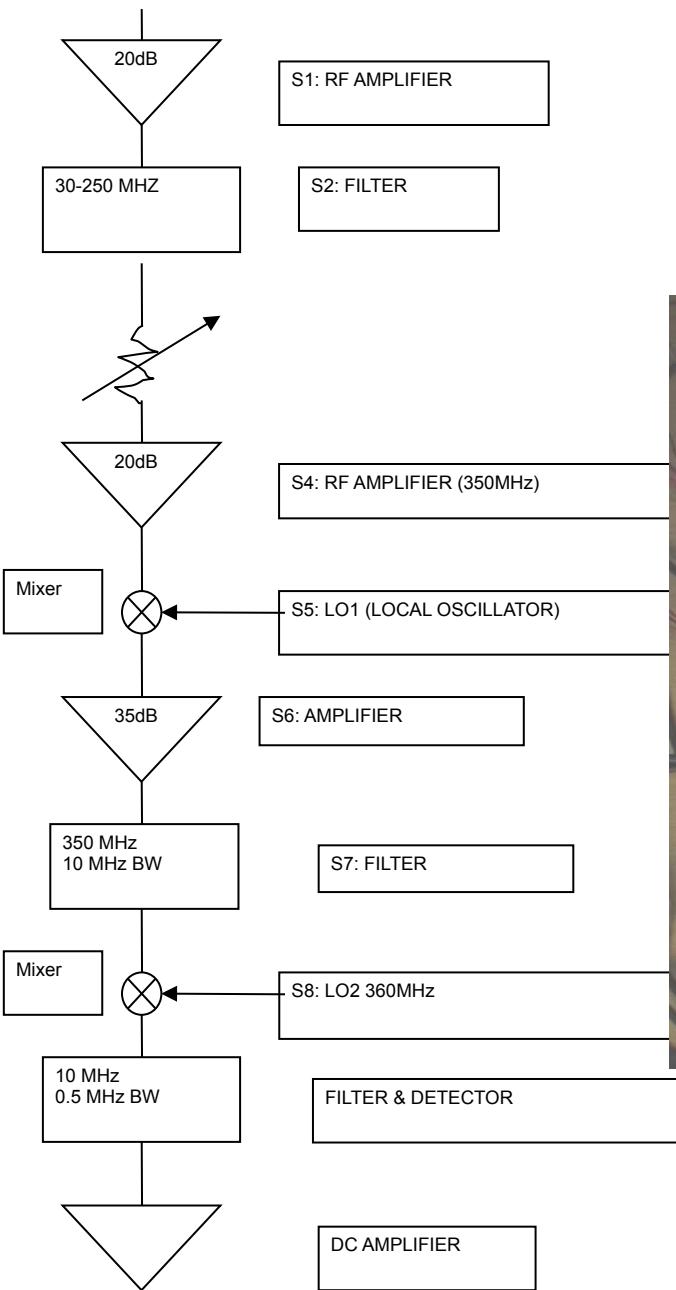


Repartición de los patrones según el tipo de burst. Tomado de [5].





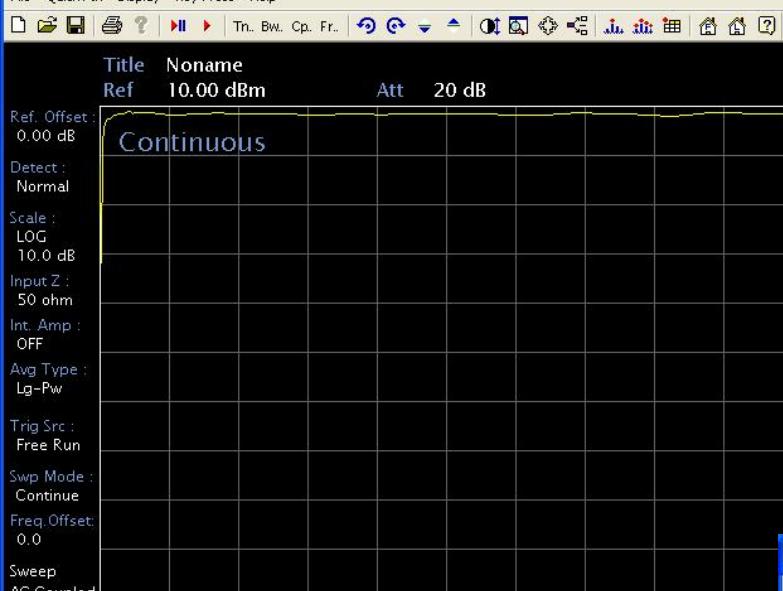






AEROFLEX.Ltd 3281 Spectrum Analyzer Ver2.002

File Quick Ftn Display Key Press Help



Start 1.00 MHz Center 150.50 MHz Stop 300.00 MHz
Span 299.00 MHz RBW/VBW 3 MHz/3 MHz Swp 10.0 ms(551 pts)

Caution! You need PreFilter/Level Cal.. Trc A : Clr&Wrt Trc B : Blank Trc C : Blank

TG

Tracker	OFF	ON
Output Lvl	[0.00 dBm]	
Normal	OFF	ON
Power Swp	OFF	ON



Ready

Trc A : Clr&Wrt

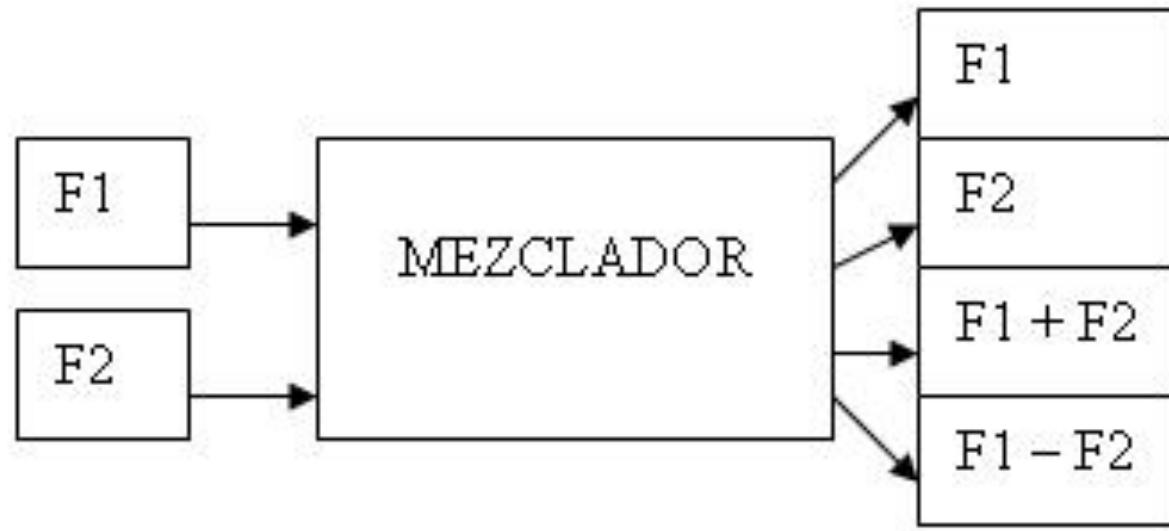
Trc B : Blank

Trc C : Blank

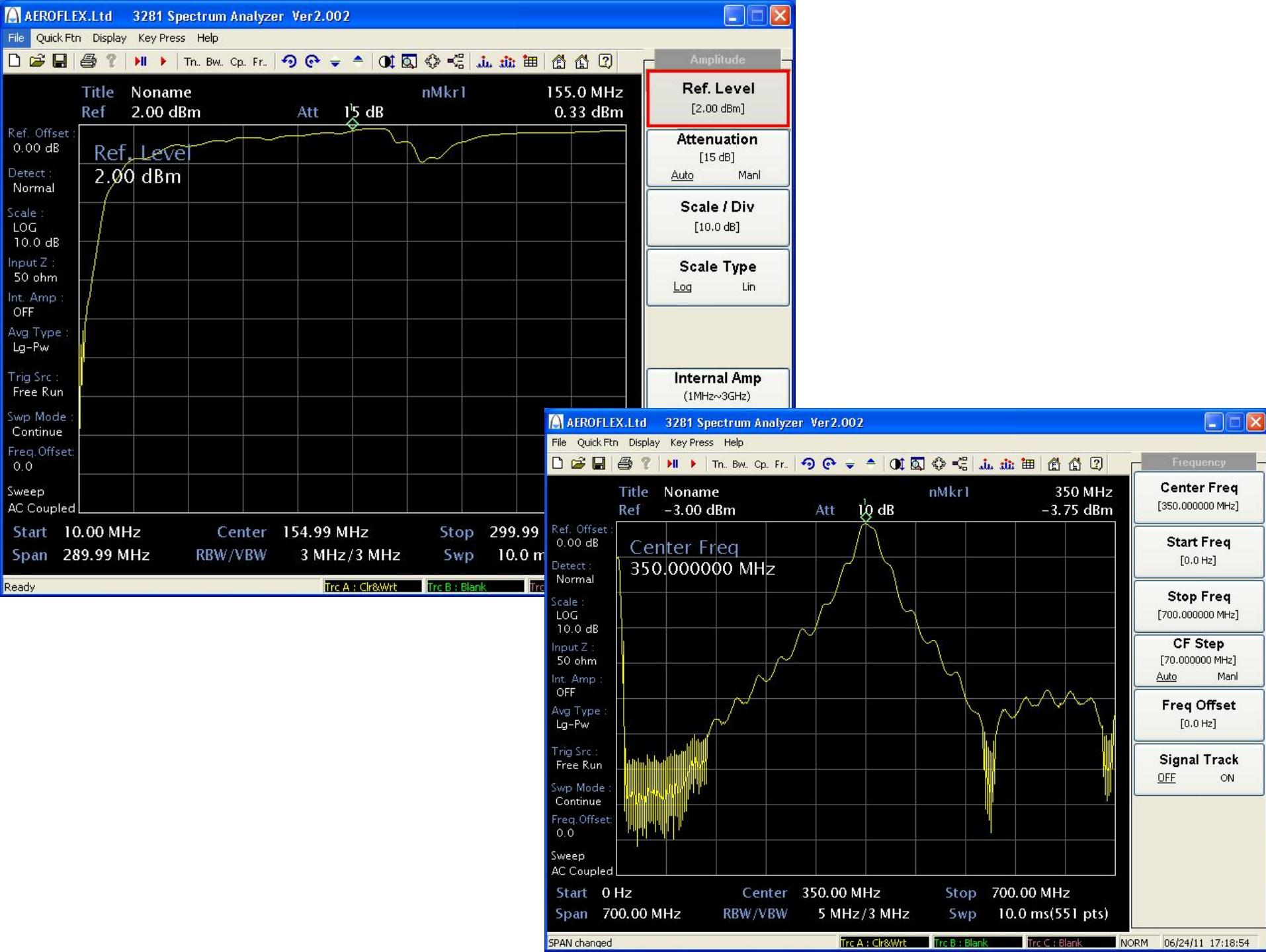
NORM

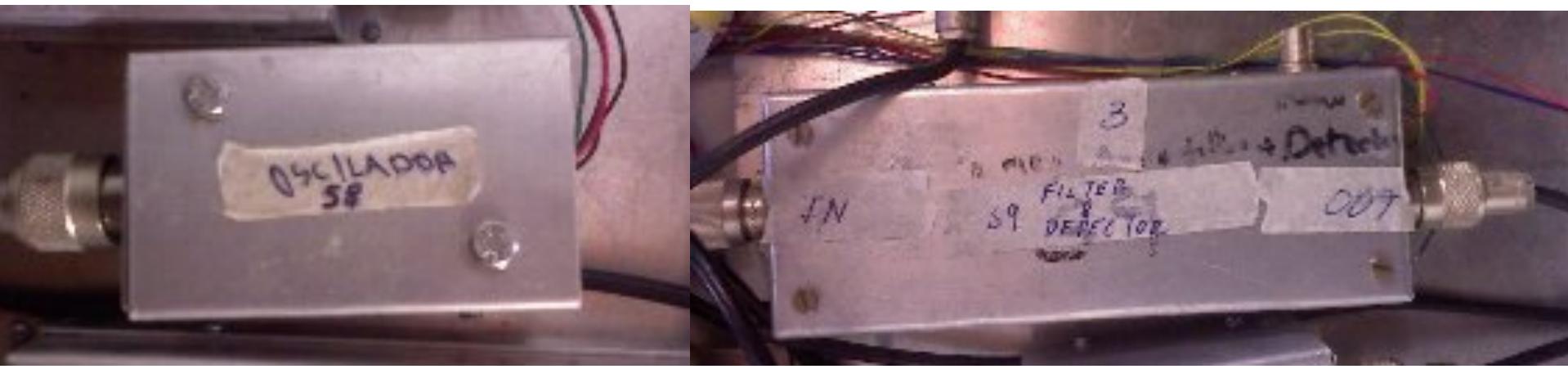
06/24/11 16:32:42

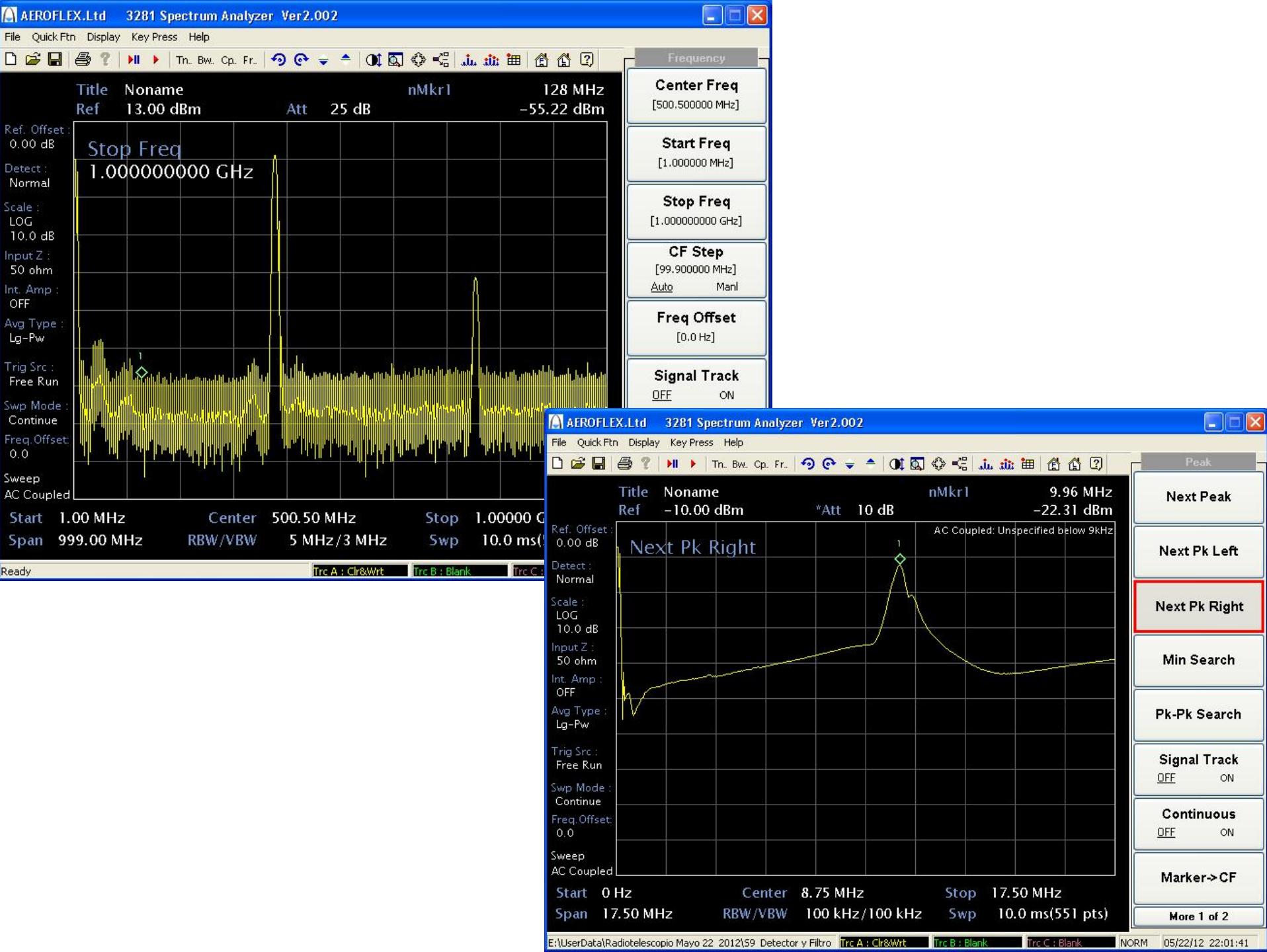


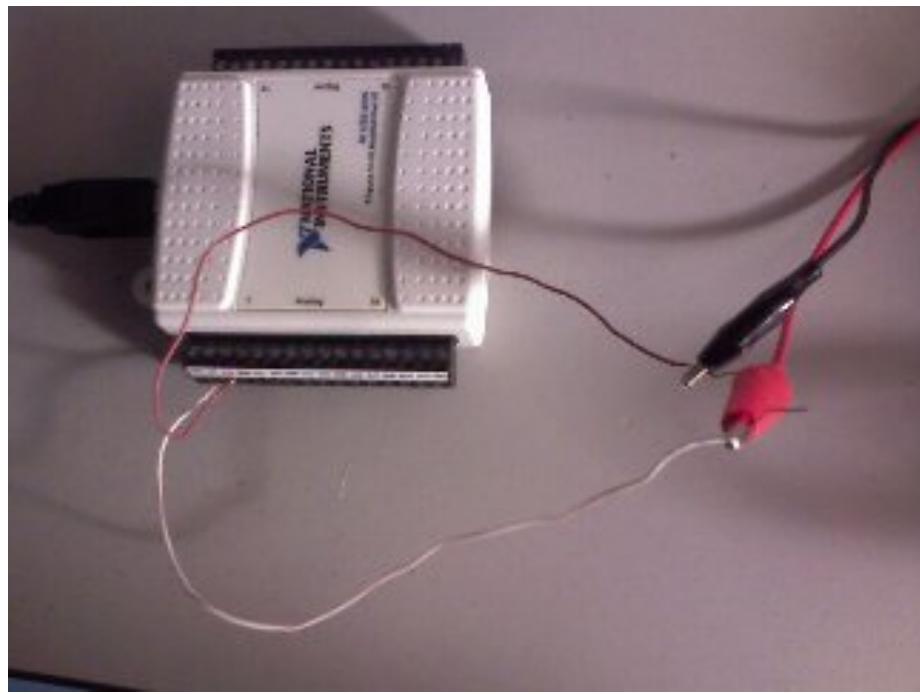
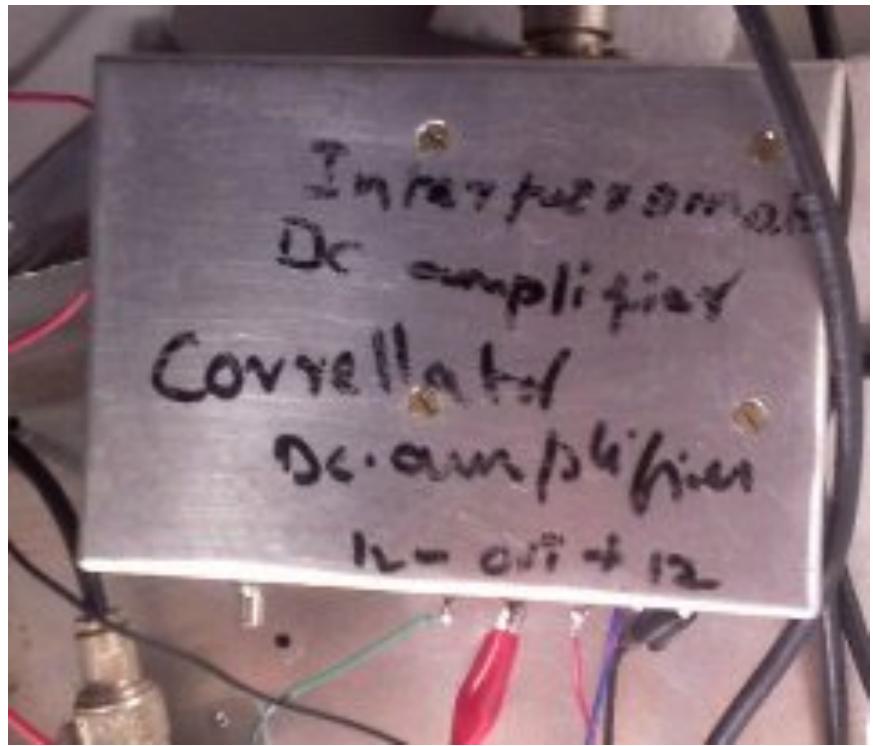












Registro de datos de la actividad solar con la antena LPA

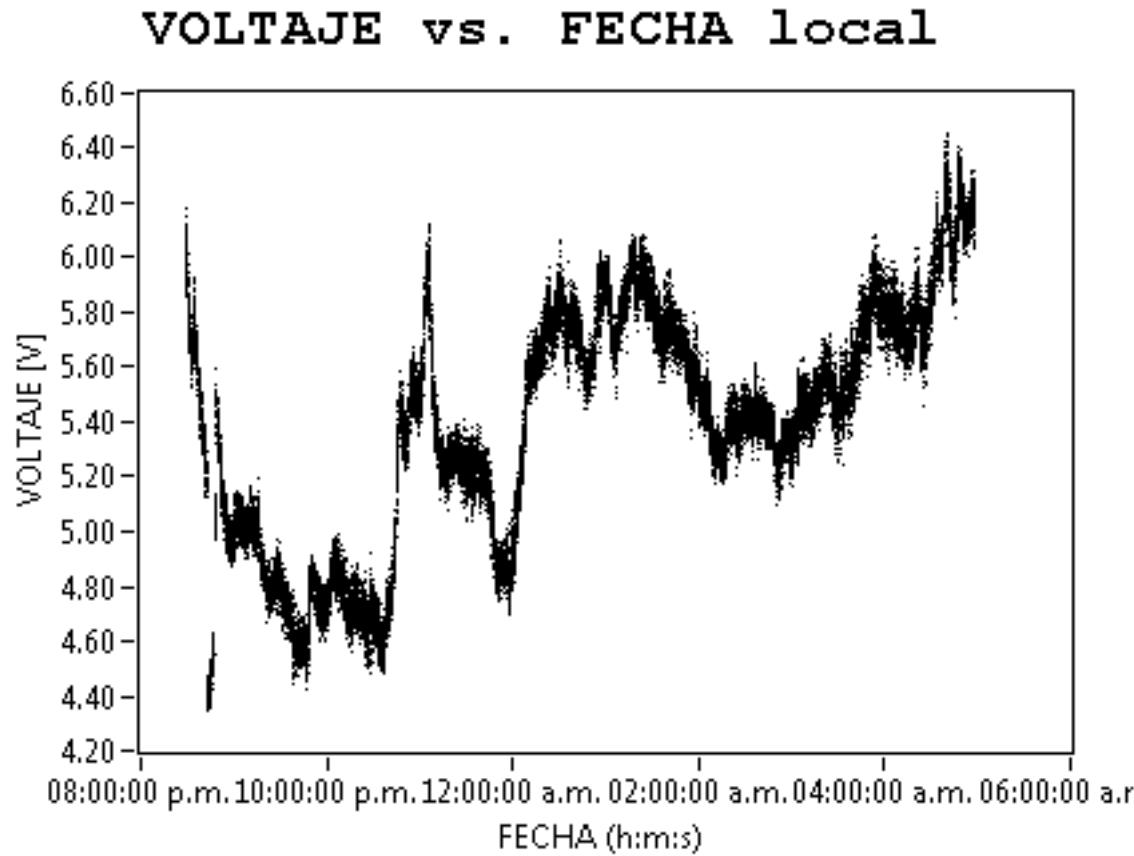
Con esta antena es posible hacer:

- Barridos en frecuencia desde 10 MHz hasta 300 MHz**
- simplemente sintonizar la antena en una frecuencia fija durante el tiempo deseado.**

Registro de datos de la actividad solar con la antena LPA

01/05/2012	14:00:49	28.00	1.149
01/05/2012	14:00:49	30.00	1.108
01/05/2012	14:00:49	32.00	0.999
01/05/2012	14:00:49	34.00	0.966
01/05/2012	14:00:49	36.00	0.902
01/05/2012	14:00:49	38.00	0.833
01/05/2012	14:00:49	40.00	0.800
01/05/2012	14:00:49	42.00	0.770
01/05/2012	14:00:49	44.00	0.706
01/05/2012	14:00:49	46.00	0.694
01/05/2012	14:00:49	48.00	0.668
01/05/2012	14:00:49	50.00	0.640

Registro de datos de la actividad solar con la antena LPA



Medición de intensidad de radiación en 20.1 MHz durante la noche
del 16/08/2012(hora local -5 GMT)

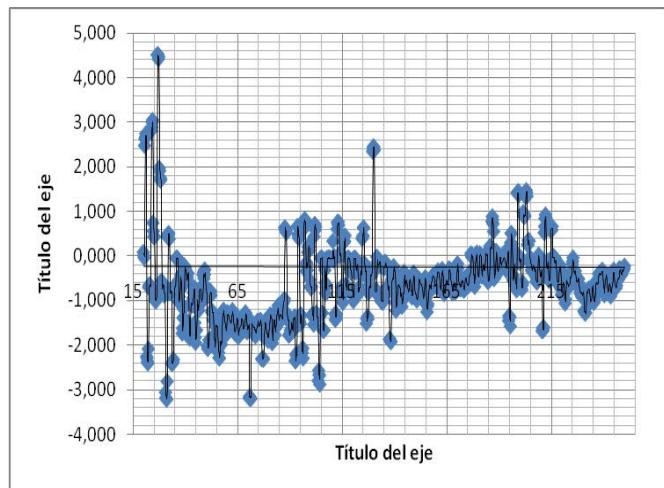
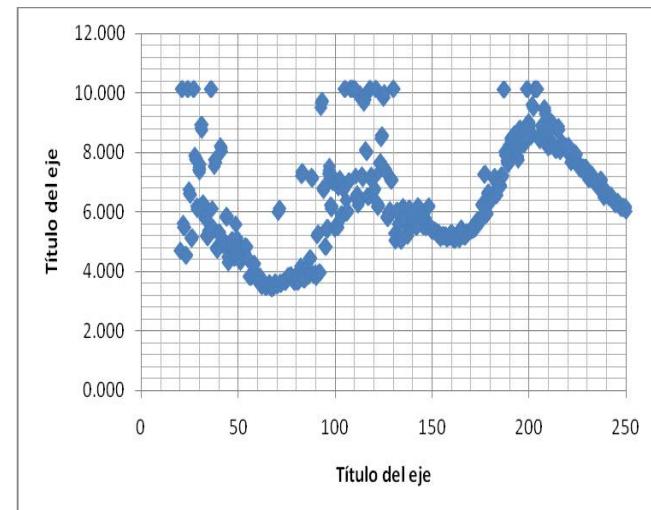
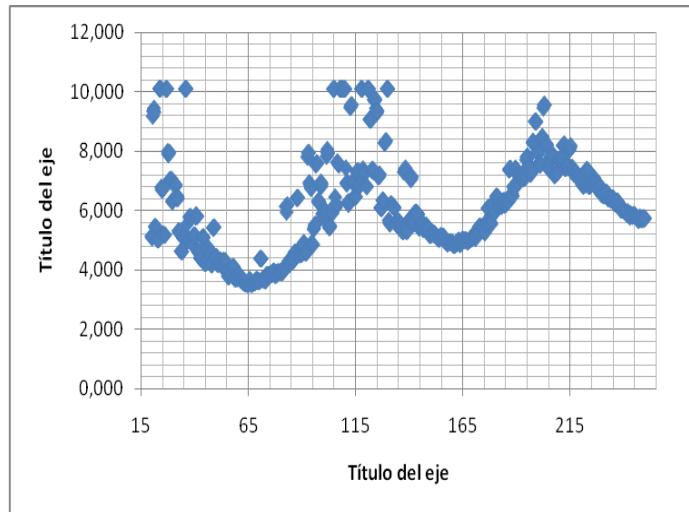


Figura 3. Espectro de intensidad para frecuencias que van desde los 20 a 250 MHz el día 24 de mayo de 2010 a las 8h 28 m. Arriba: con ruido. Abajo: sin ruido.

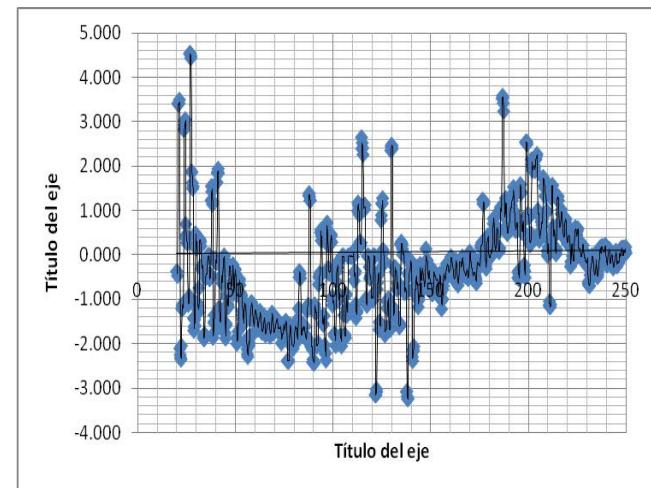


Figura 4. Espectro de intensidad para frecuencias que van desde los 20 a 250 MHz el día 22 de abril de 2010 a las 11h 39 m. Arriba: con ruido. Abajo: sin ruido.

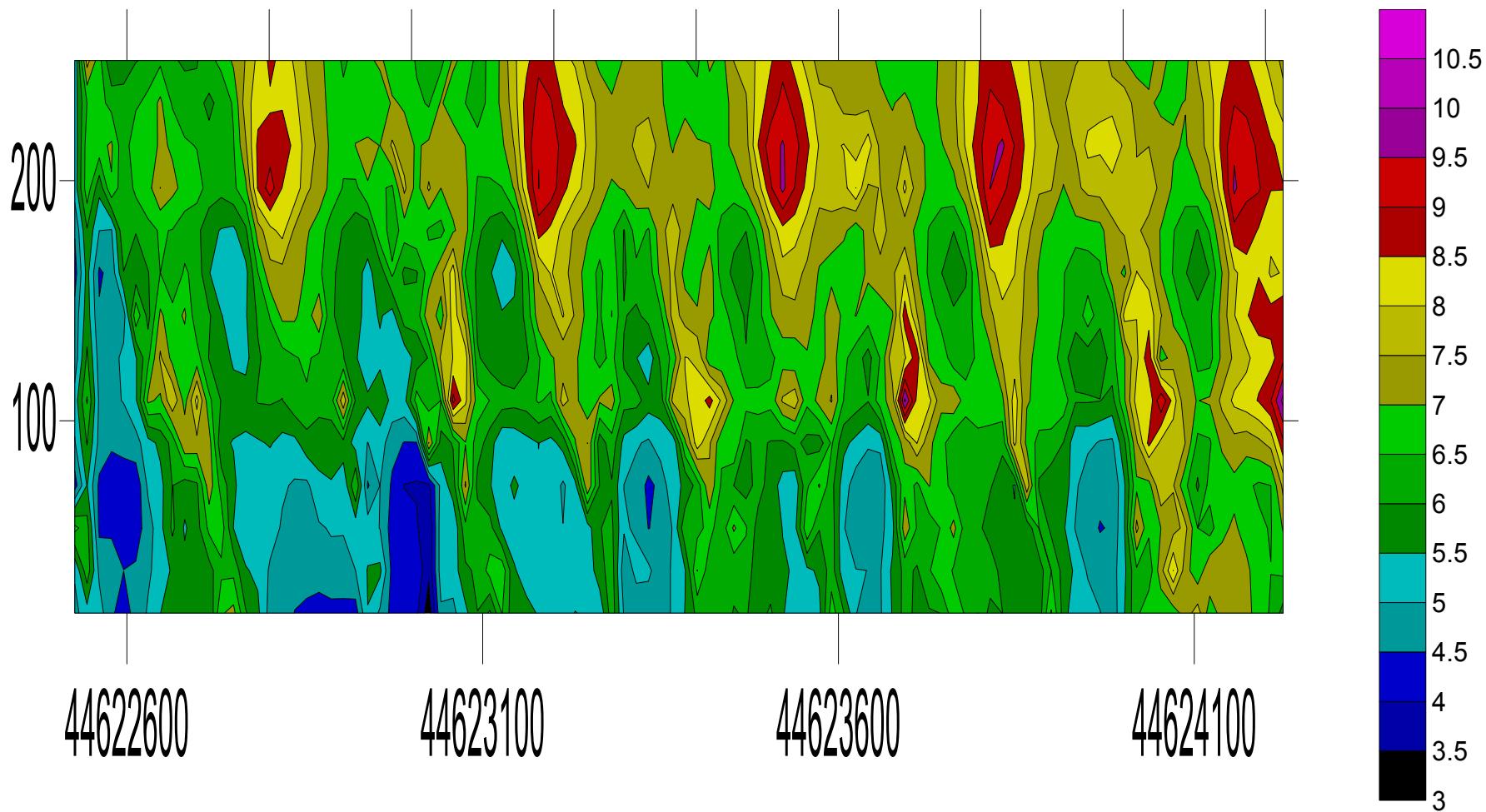
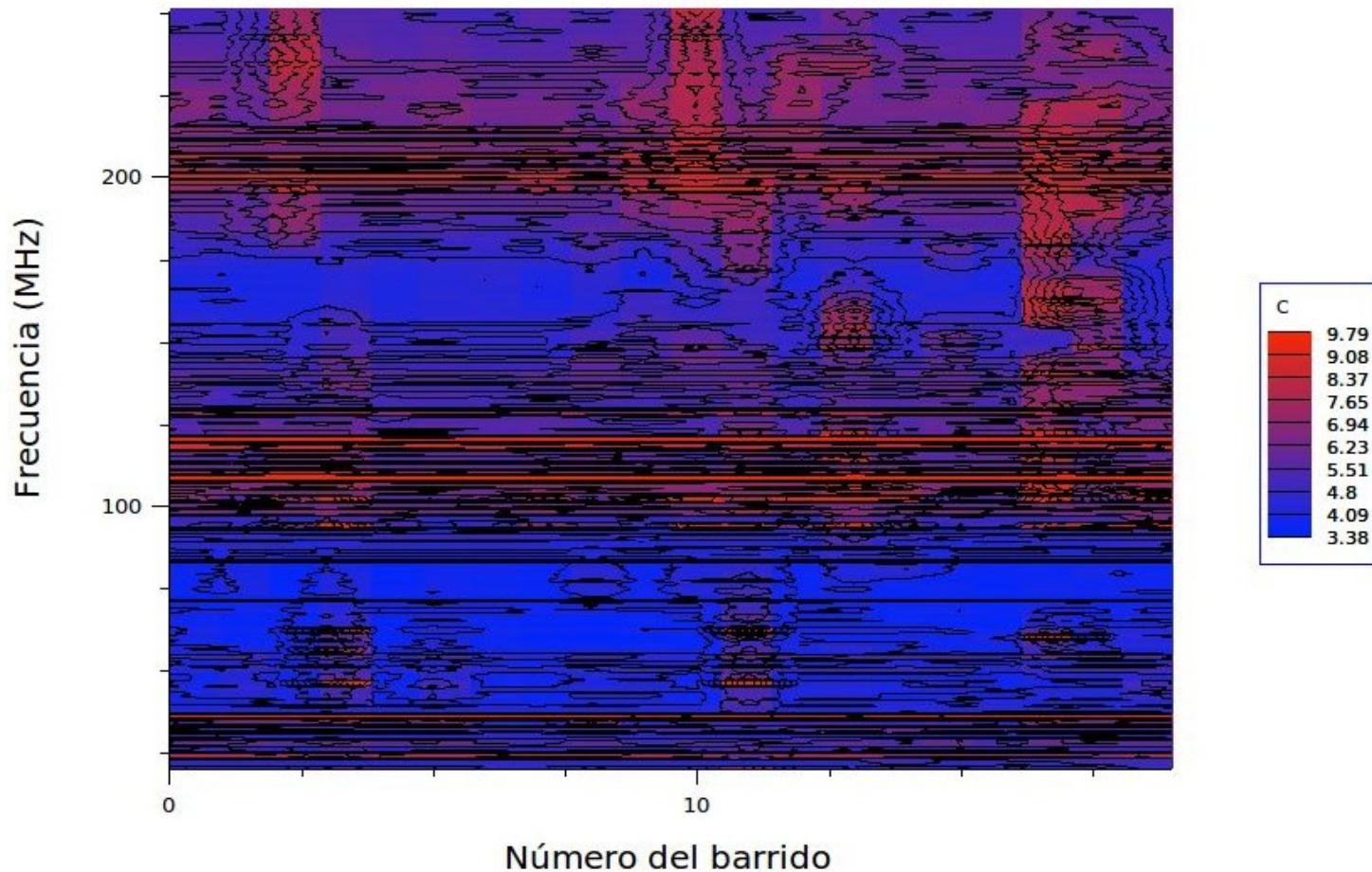


Figura 6 Diagrama de Contorno donde el color indica la intensidad de la señal medida. En el eje de las abscisas está el tiempo (s) y en el eje de las ordenadas la frecuencia. para un dado instante y en una frecuencia dada, a medida que pasa el tiempo. Se hicieron 20 barridos.

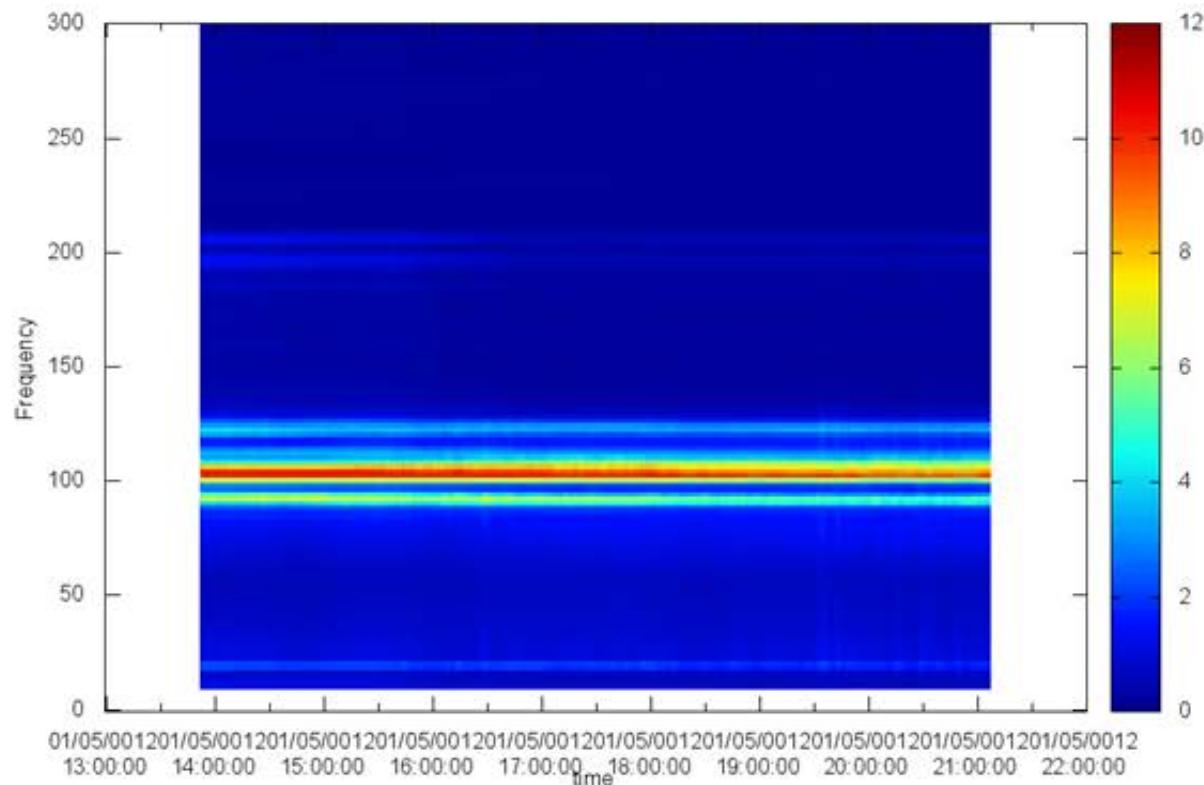
Intensidad vs Frecuencia



jue jul 22 17:32:41 2010

Figura 7 Diagrama de Falso Color donde donde el color indica la intensidad de la señal medida para un dado instante. En el eje de las abcisas está el número del barrido y en el eje de las ordenadas la frecuencia. Se hicieron 20 barridos.

Registro de datos de la actividad solar con la antena LPA



Grafica hecha con los datos de la antena, usando el programa GNUPLOT. No hay presencia de explosiones solares.

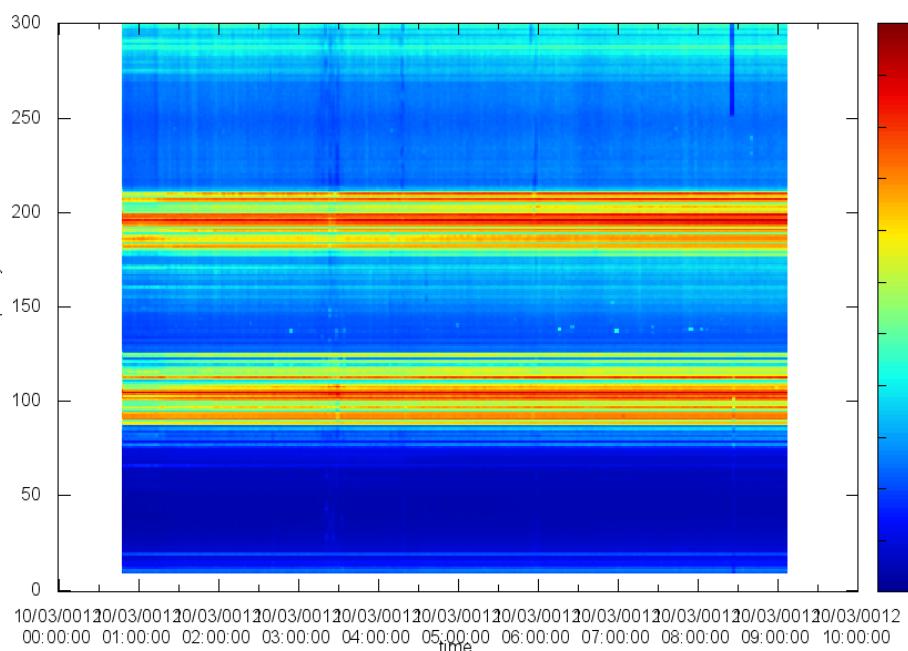


Figura 3. Espectrógrafo 09/03/2012 iniciado a las 00:47 UT noche con luna llena.

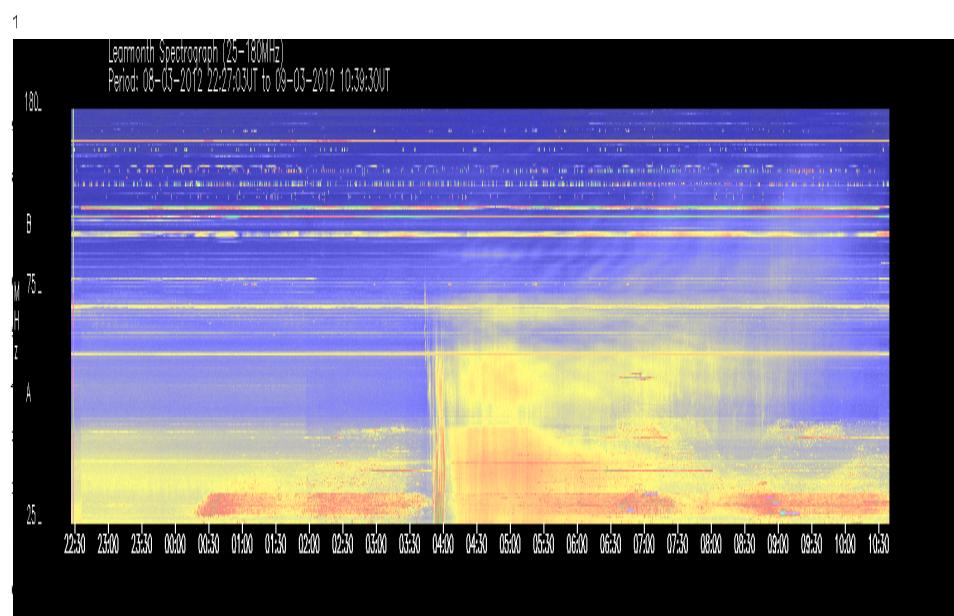


Figura 4. Espectrógrafo tomado por el Radio Observatorio Solar de Culgoora (Australia).

Explosiones solares 2012

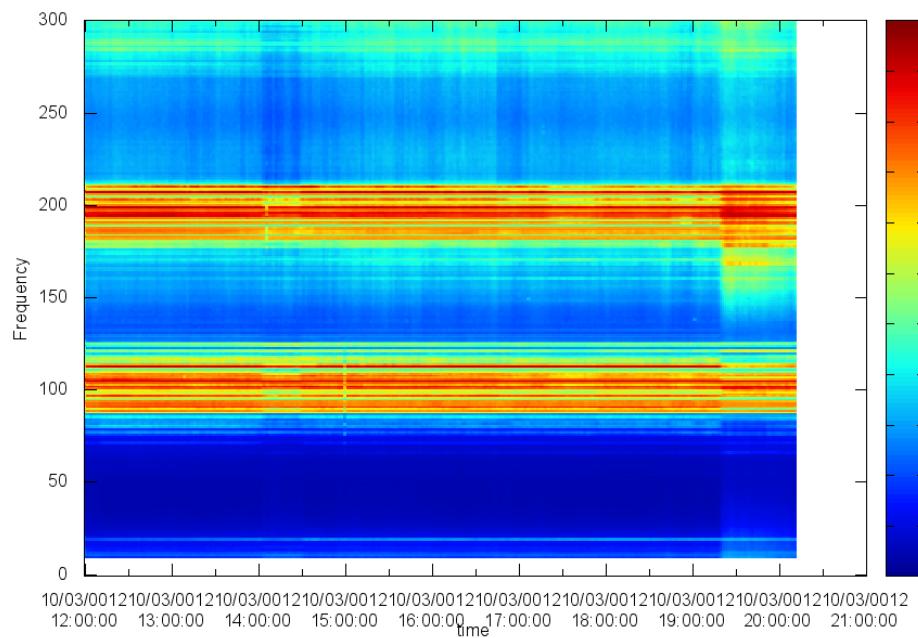


Figura 6. Espectrógrafo 10/03/2012 iniciado a las 12:00 UT noche con luna llena.

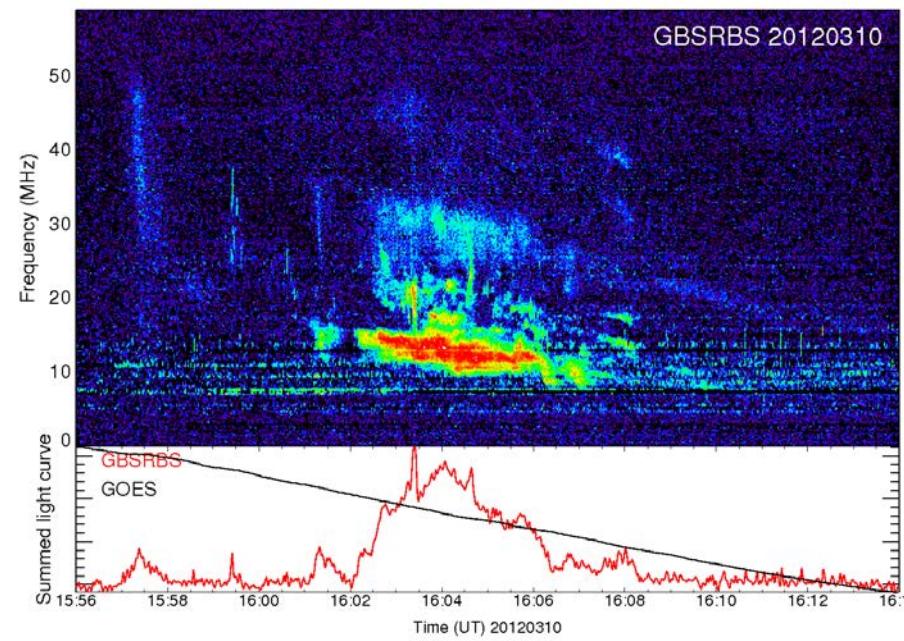
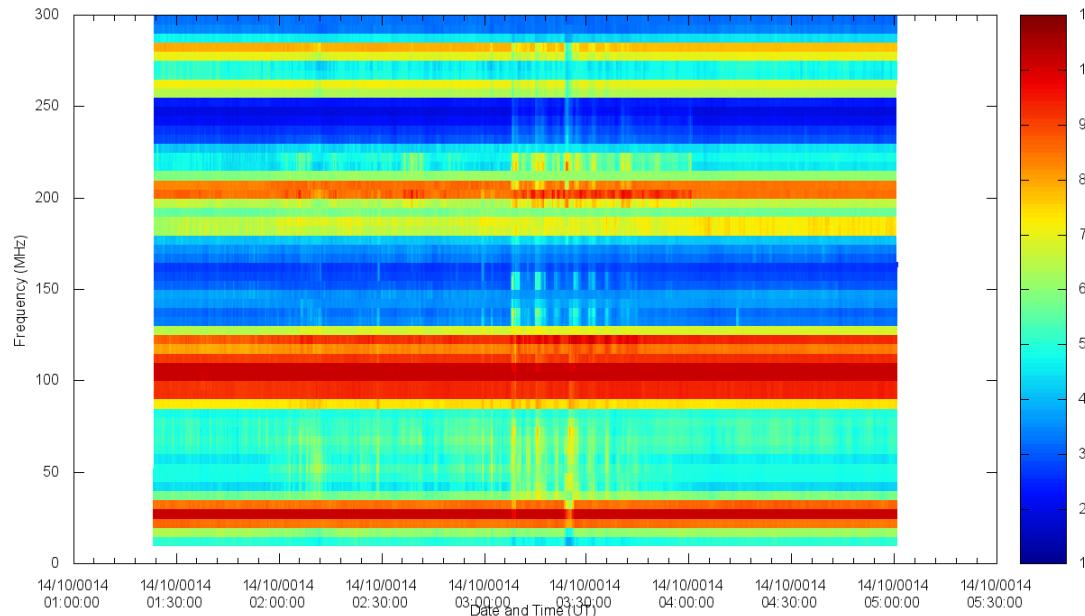
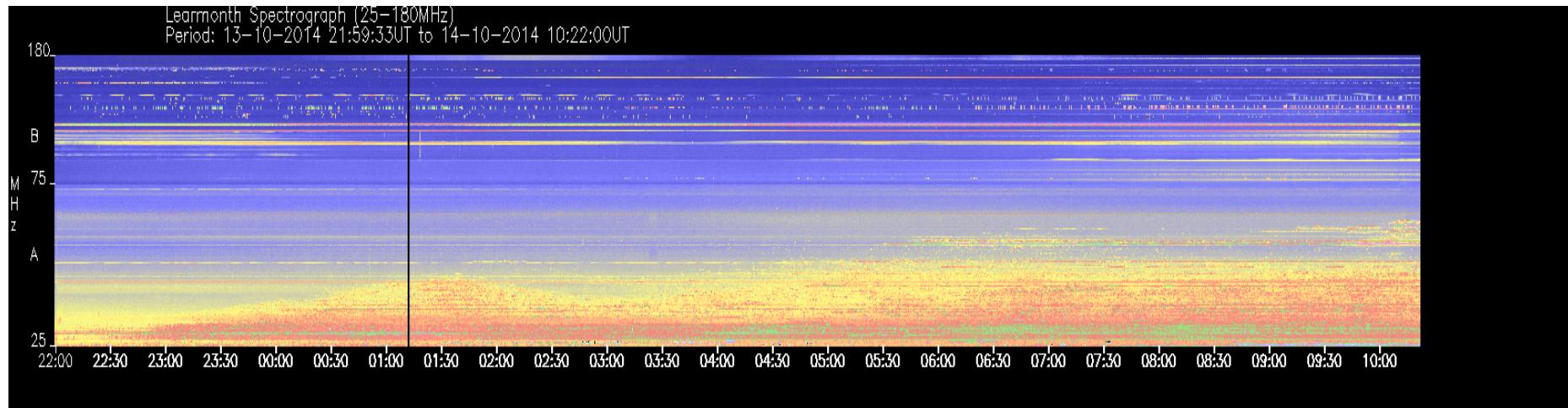


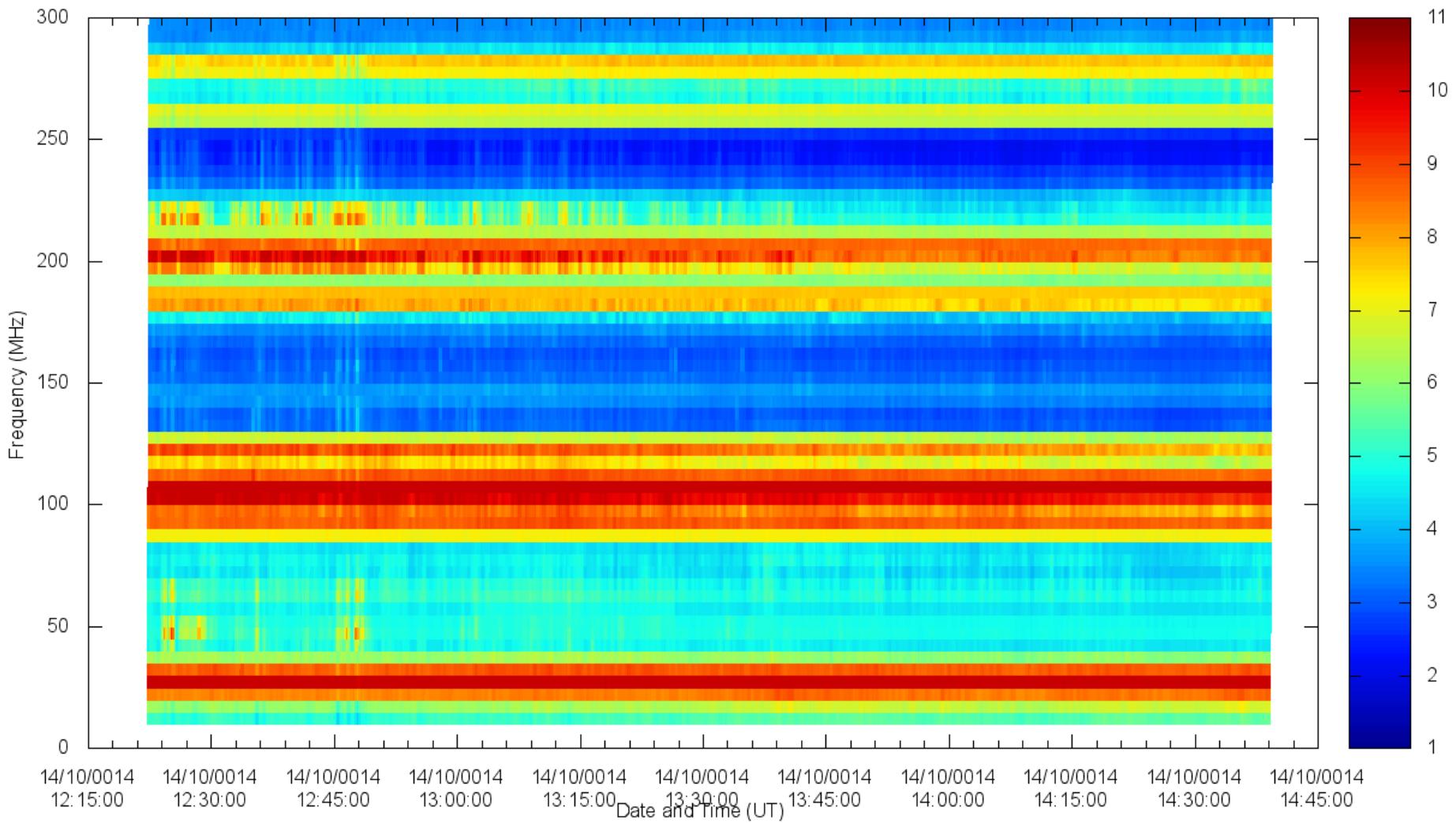
Figura 7. Espectrógrafo tomado por Green Bank Solar Radio Burst Spectrometer (GBSRBS) de un vento tipo II.

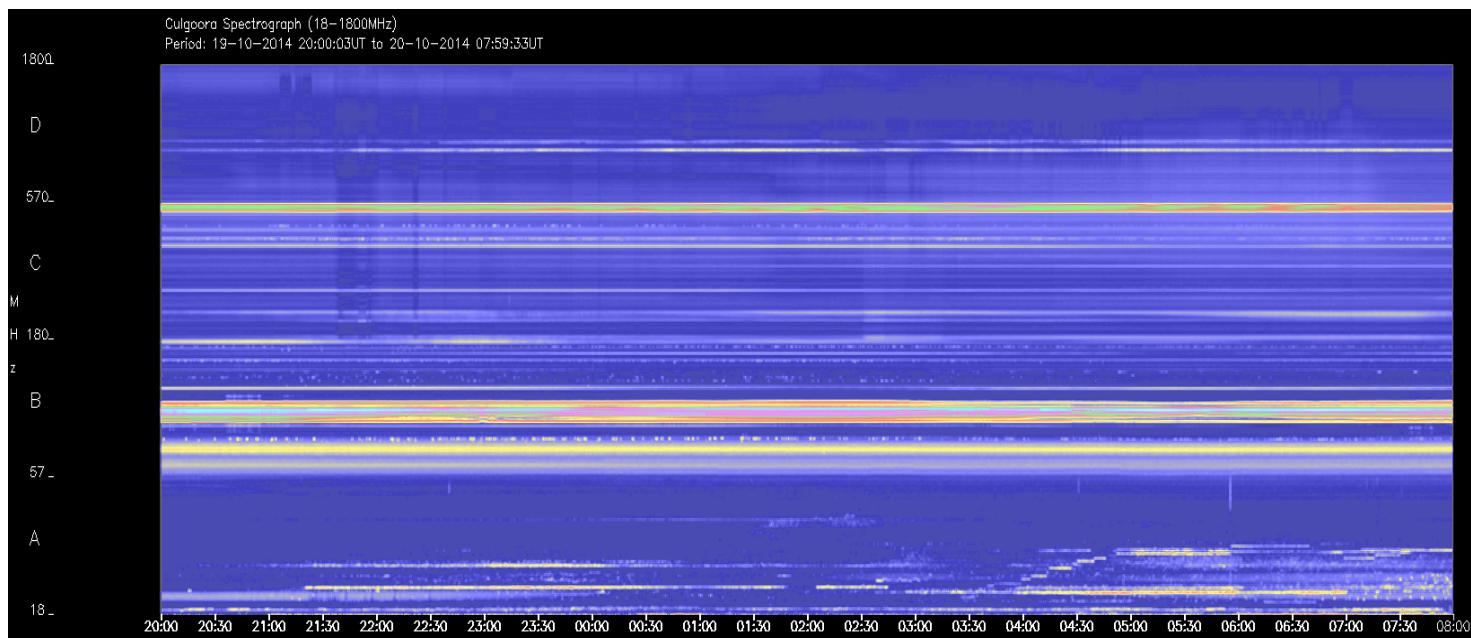
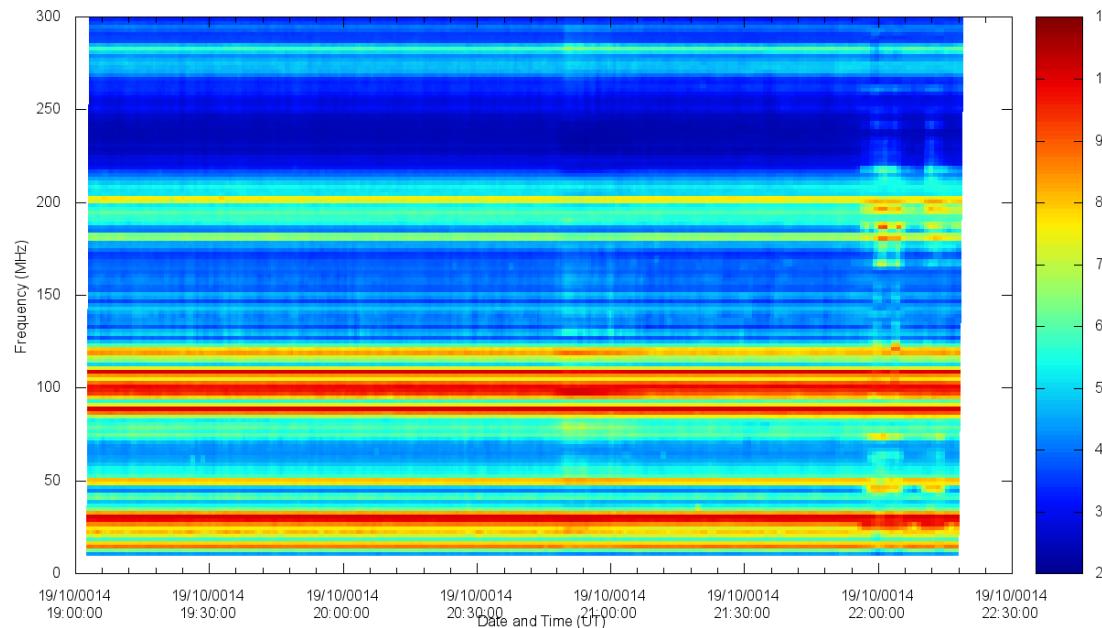
Explosiones solares 2014

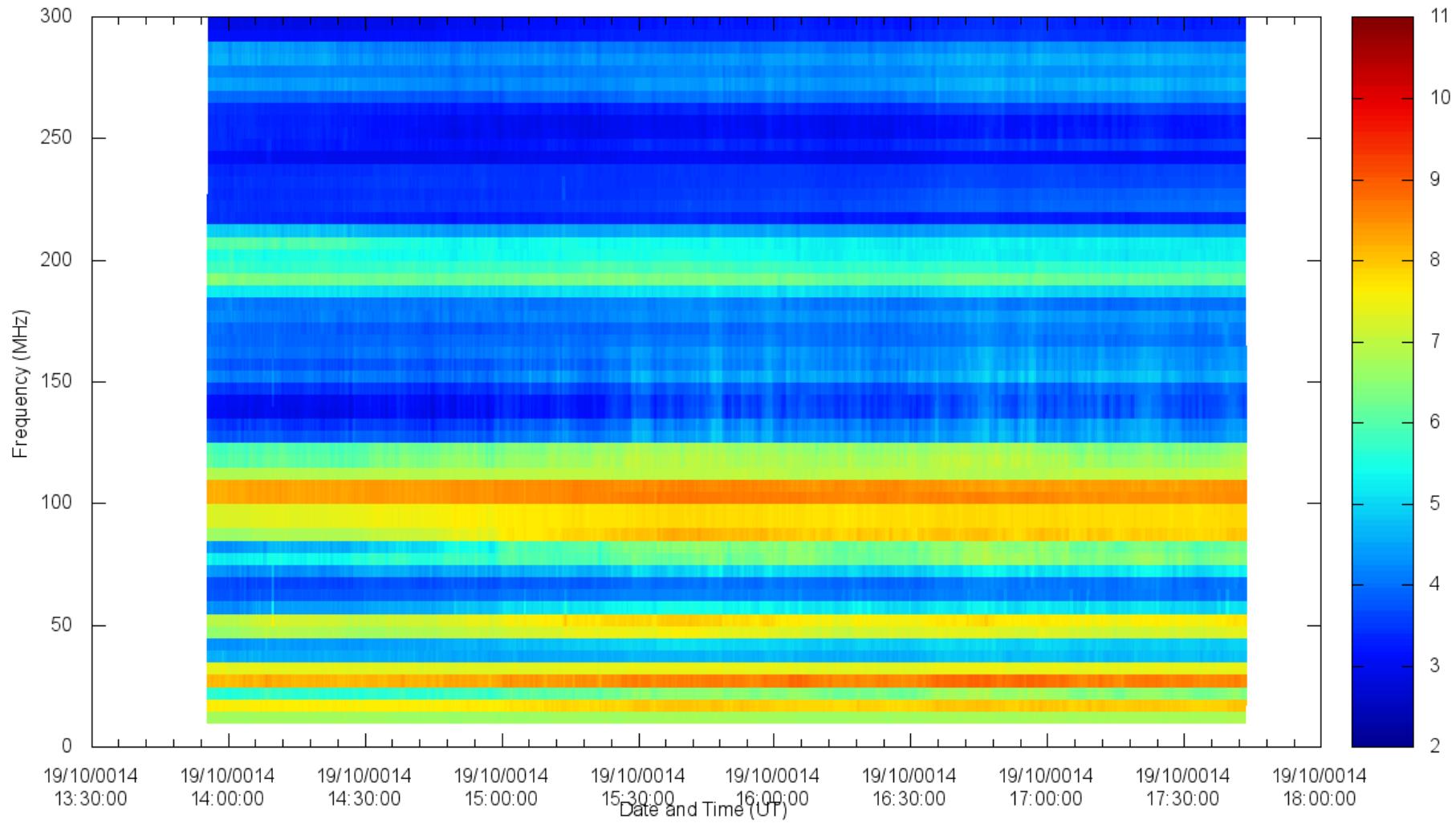


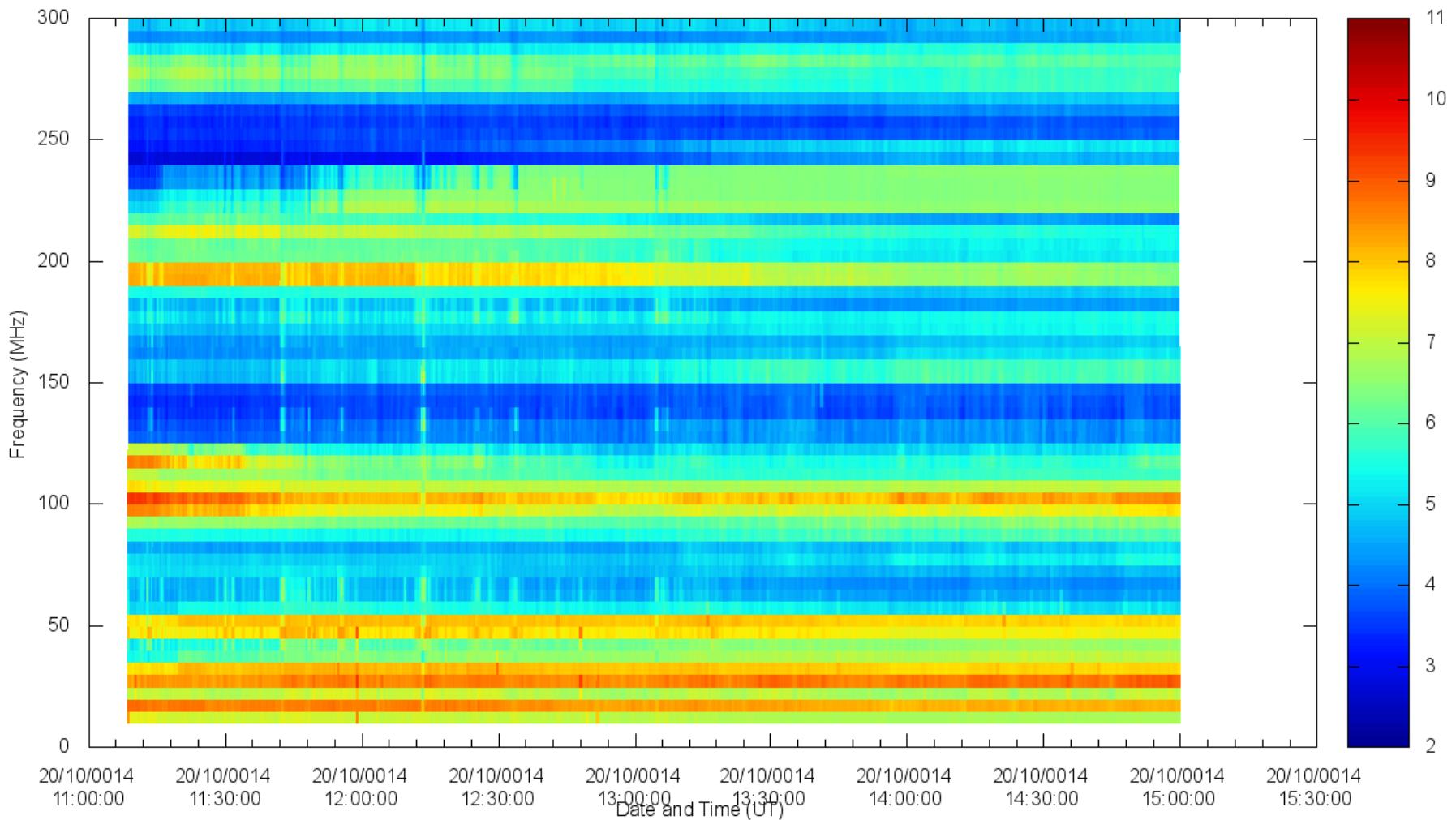
Learmonth Spectrograph (25–180MHz)
Period: 13–10–2014 21:59:33UT to 14–10–2014 10:22:00UT

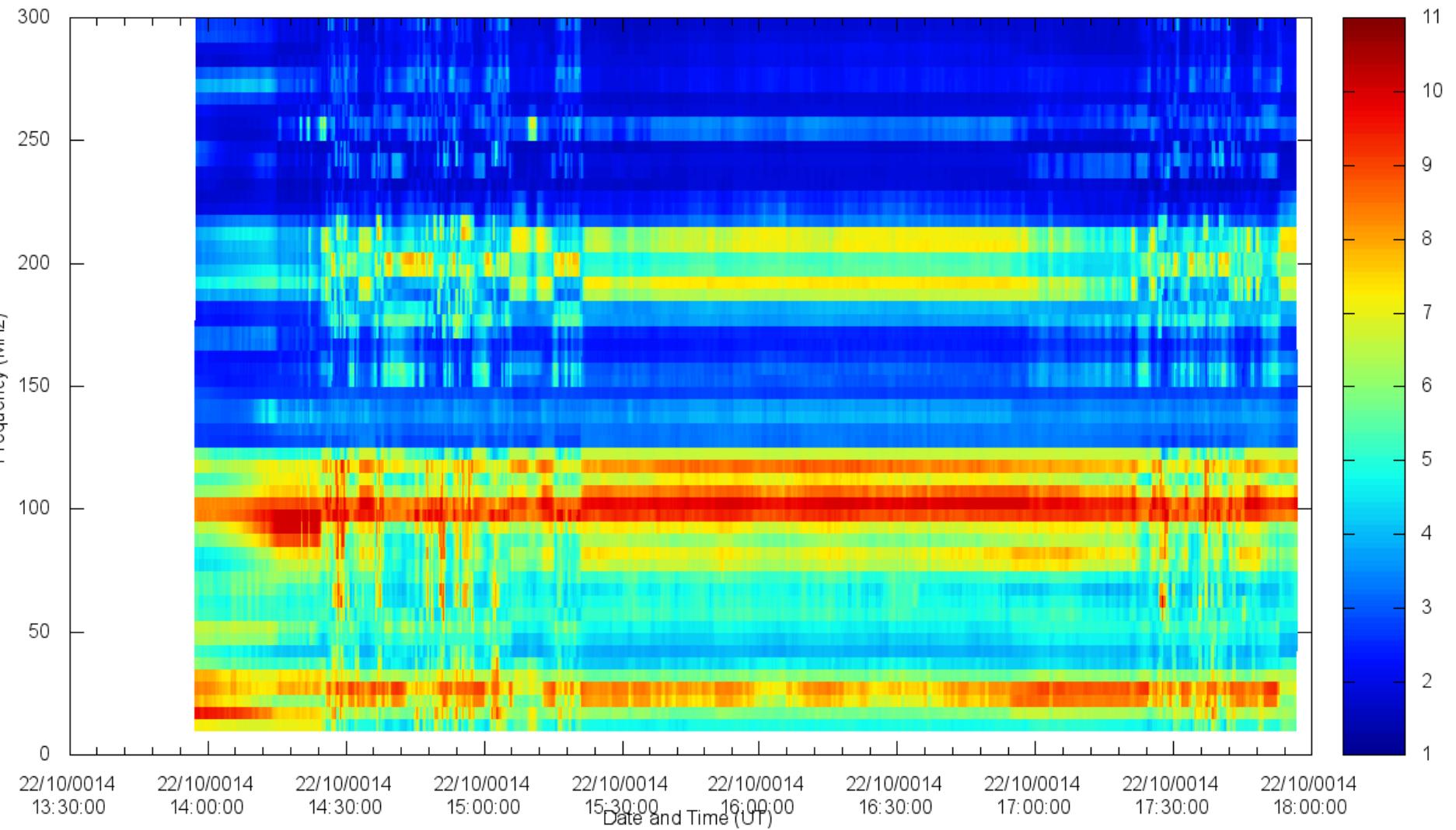


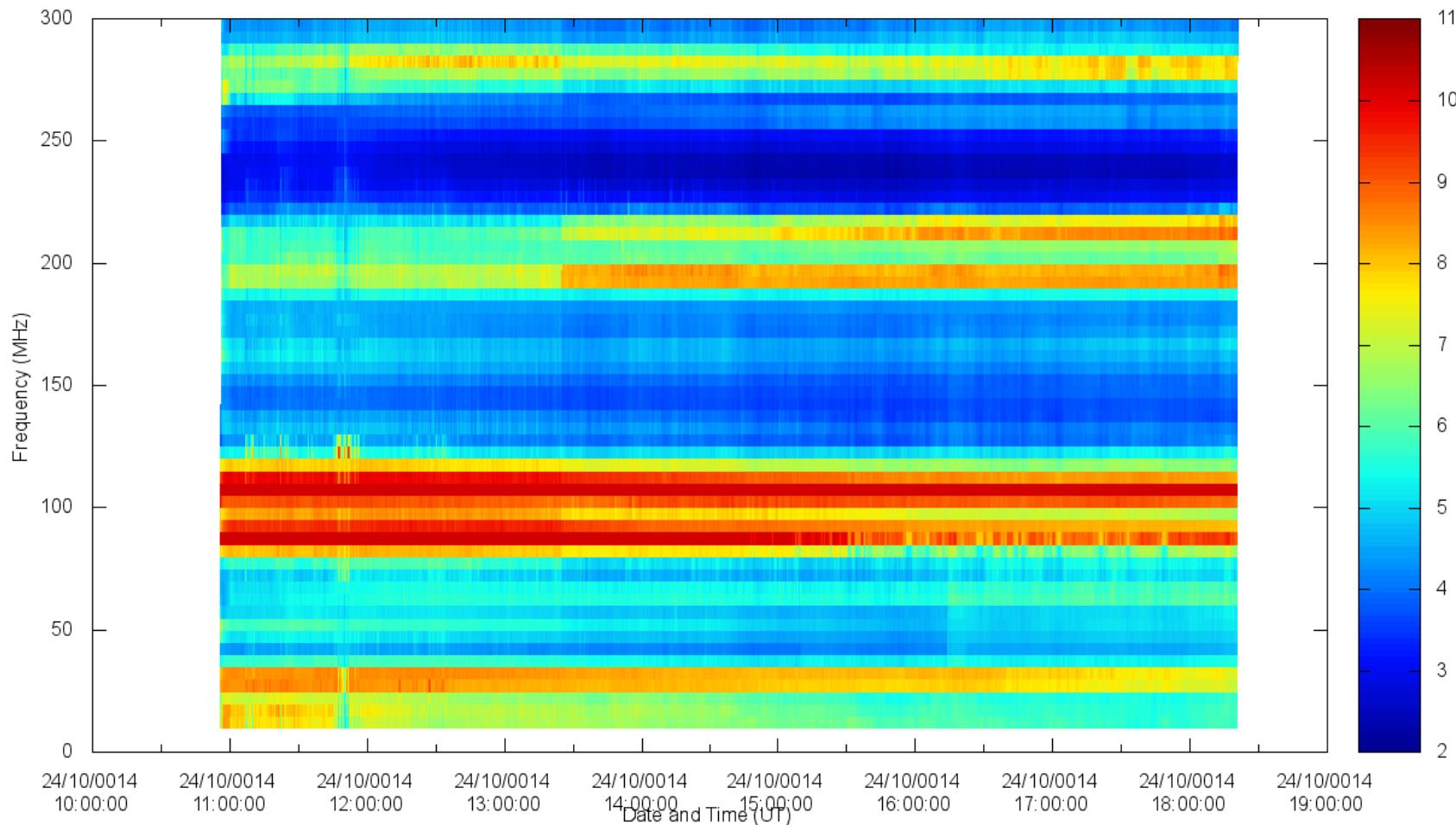


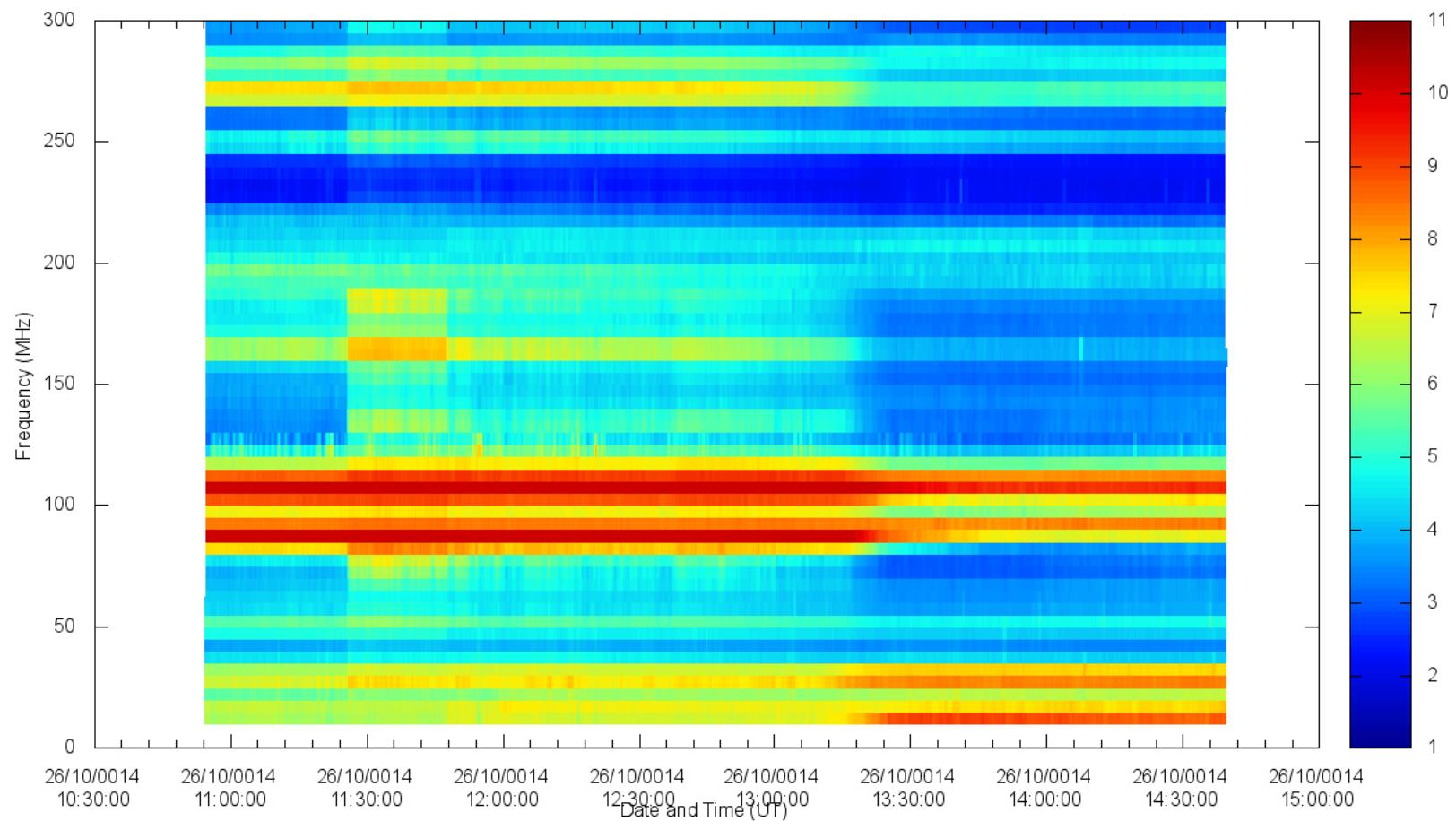


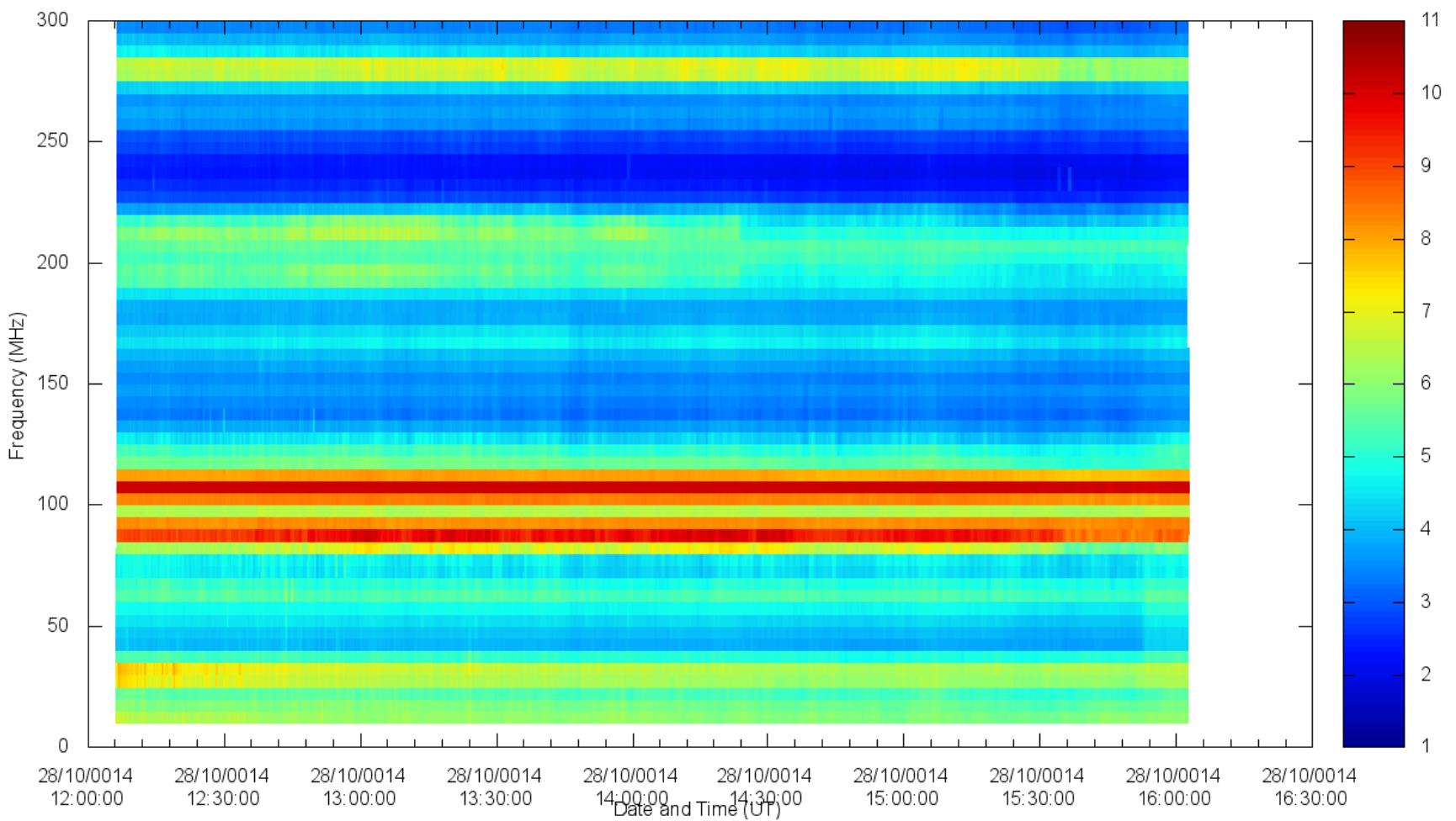


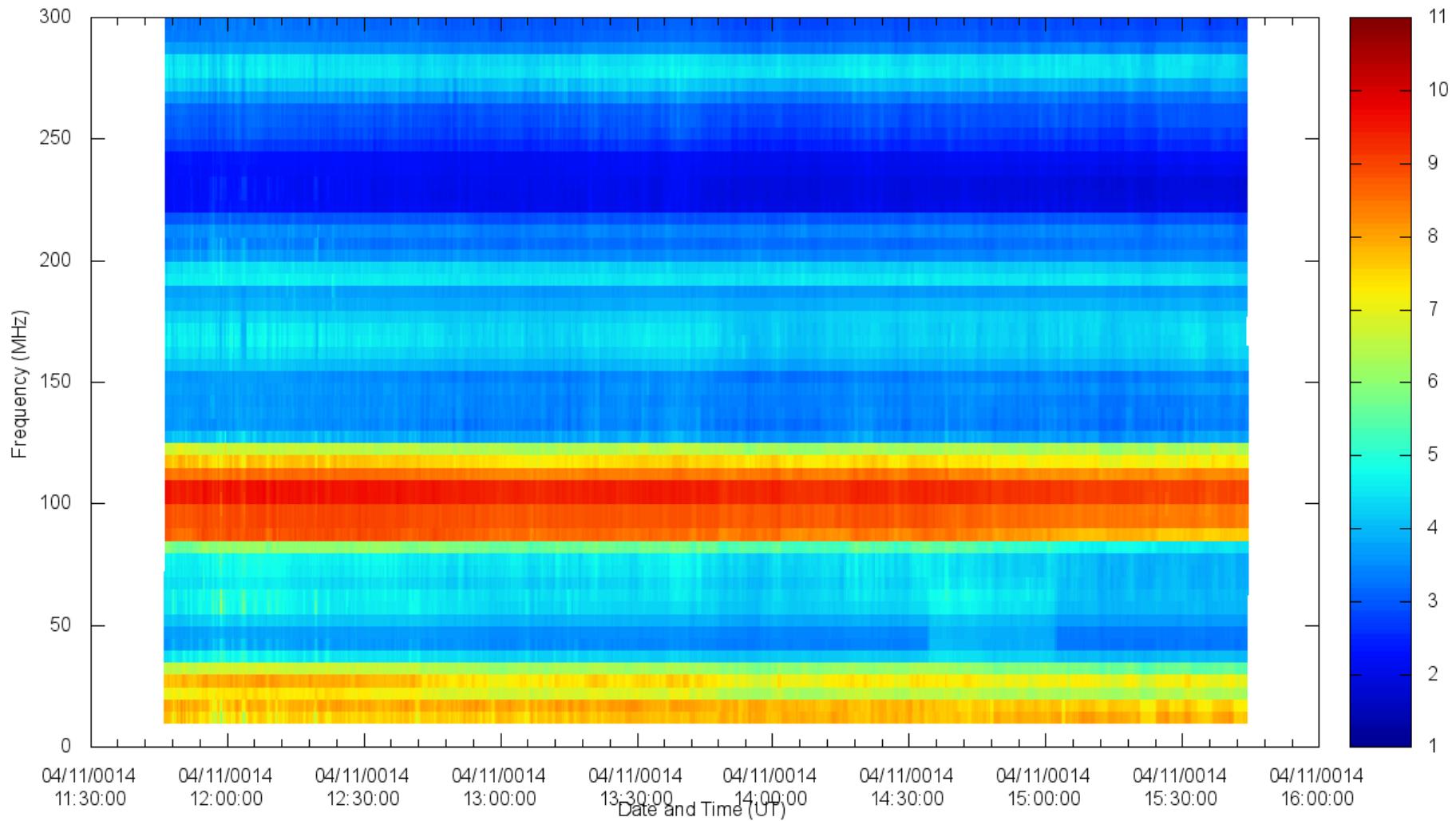


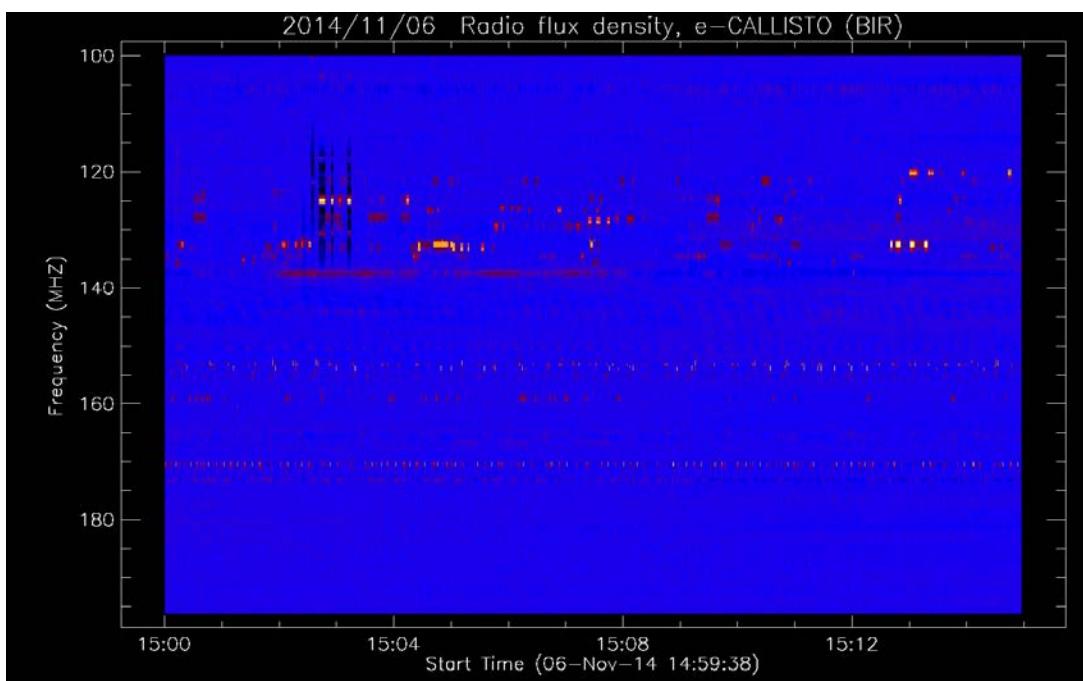
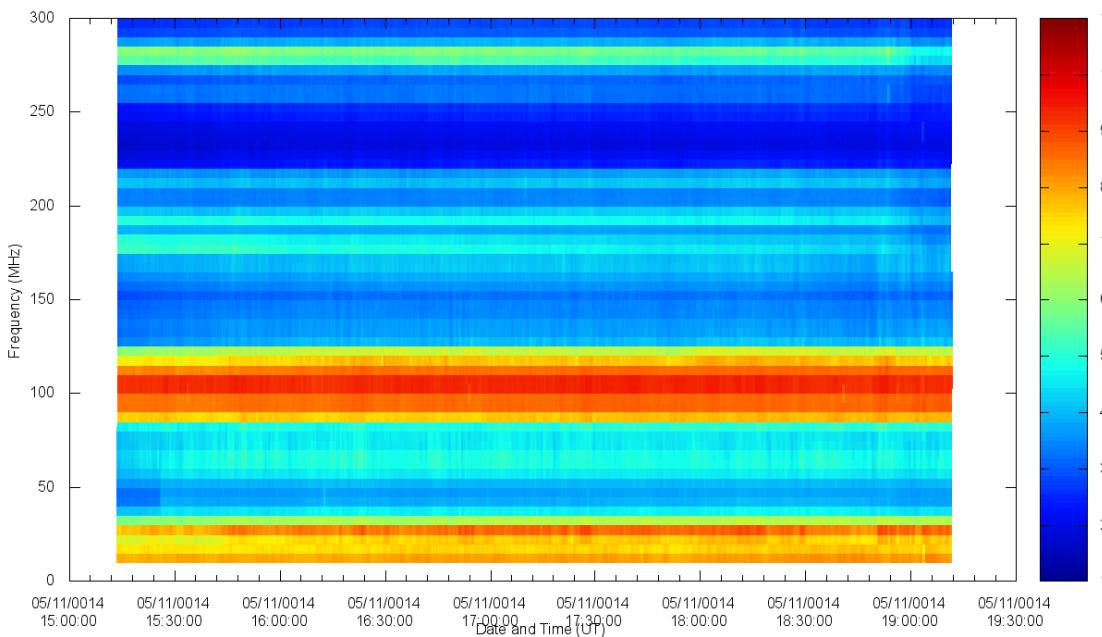


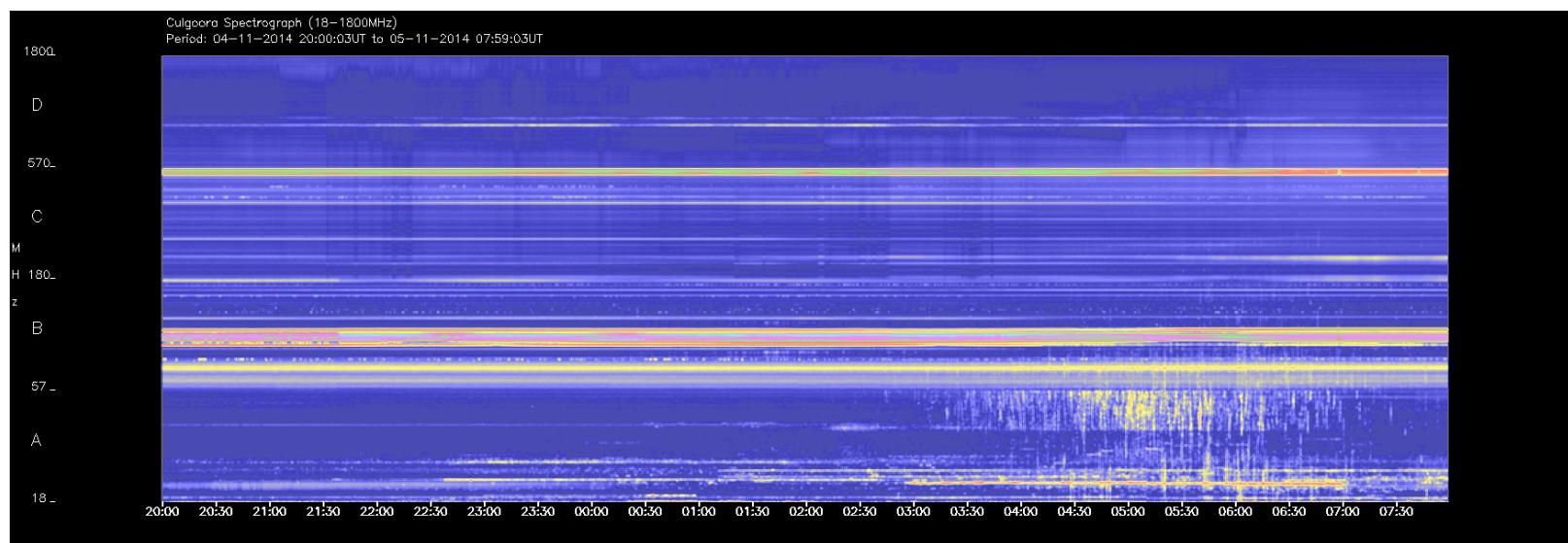
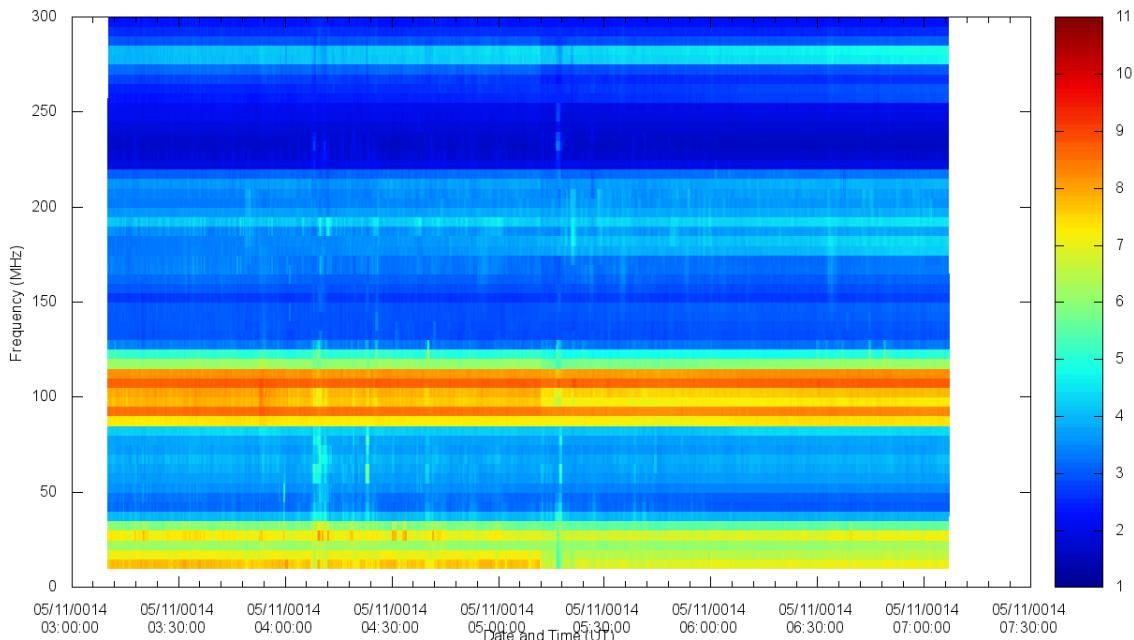


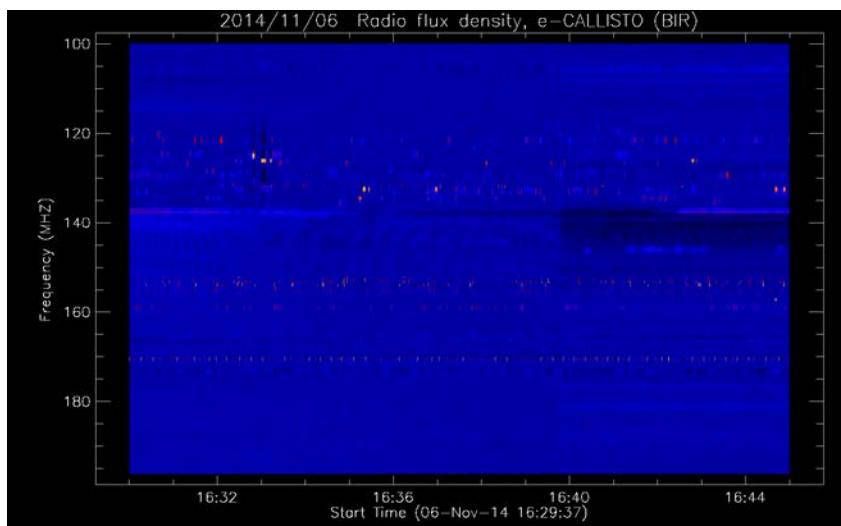
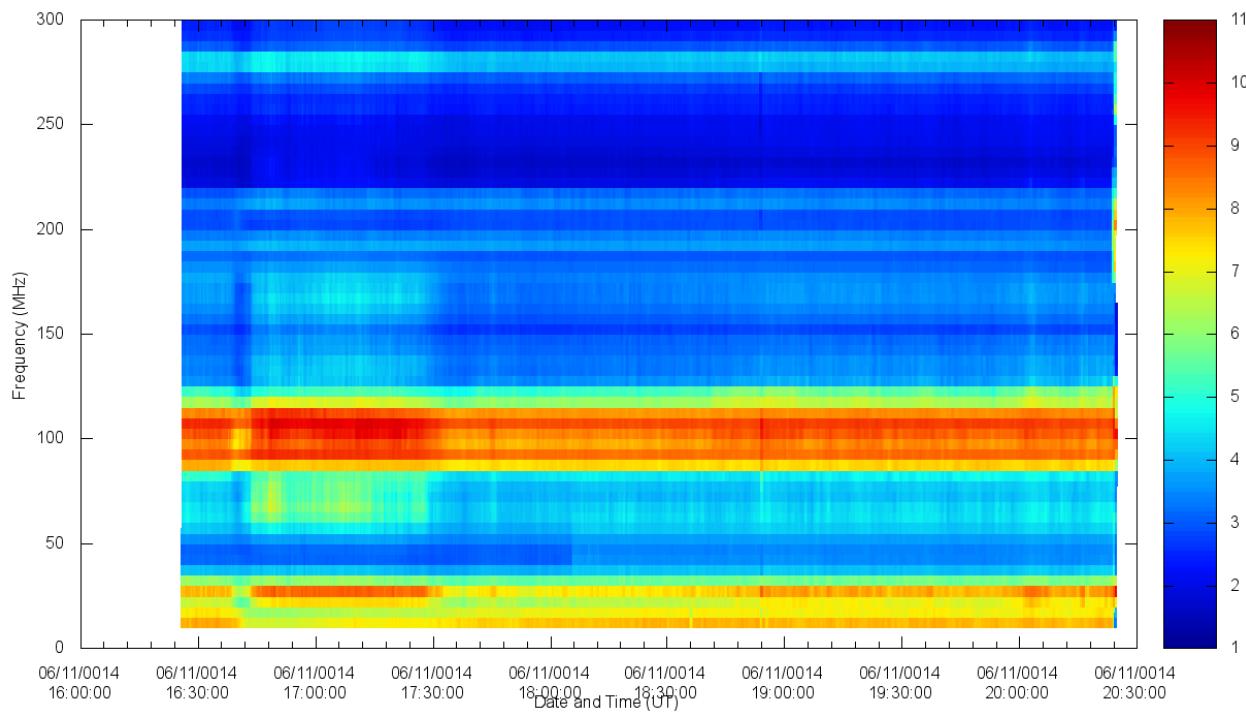


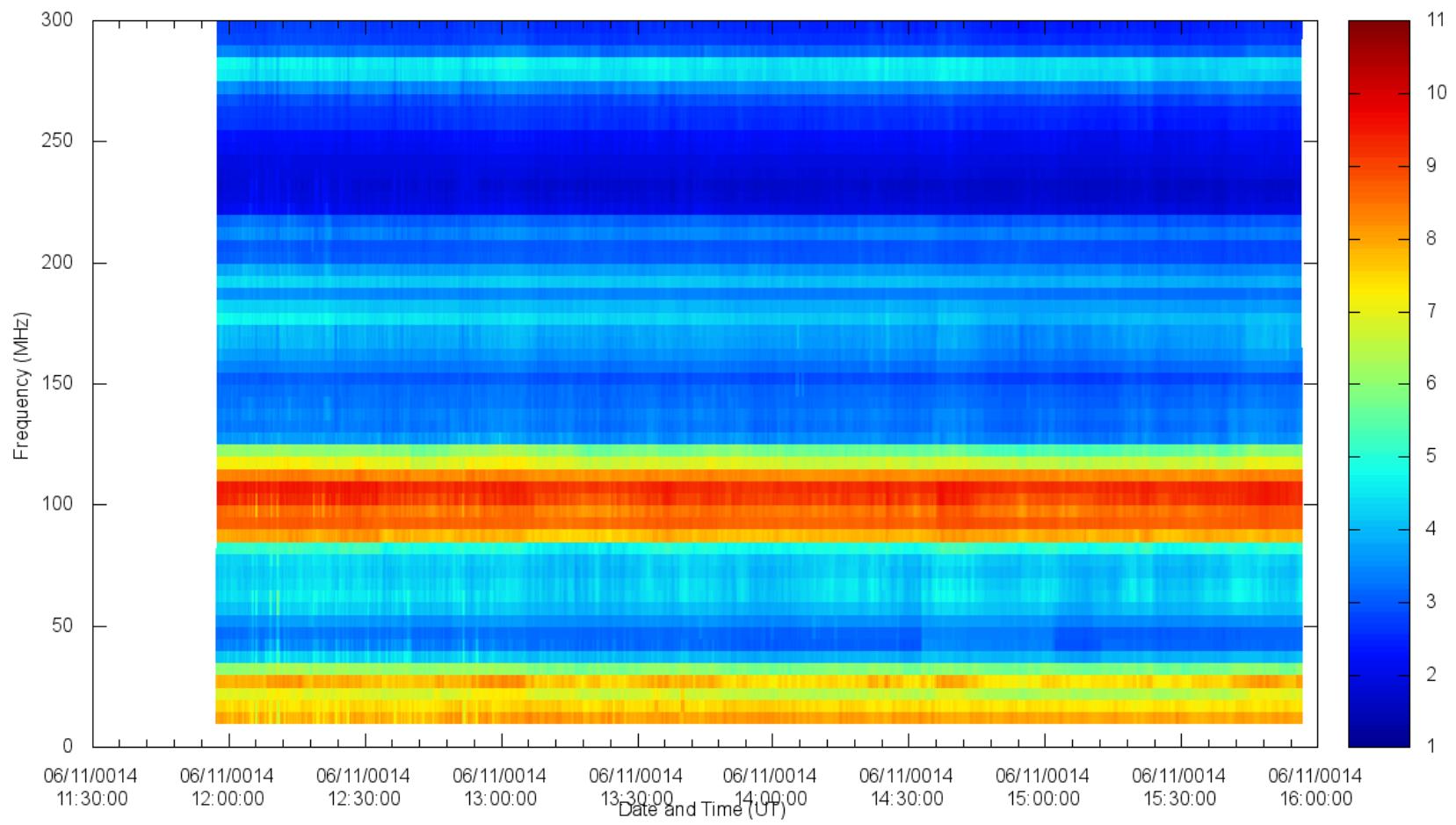












Por hacer

Se desea usar filtros digitales

Se desea implementar receptores digitales

A mediano plazo se espera contar con la colaboración de otras instituciones para hacer interferometría



REVISTA DE CIENCIAS, Vol. 6, No. 1-2 de 2015.



Confirmación de Explosiones Solares desde el 2012 en Colombia

Solar Busts confirmation since 2012 in Colombia

Mauricio Vinasco Téllez^{a*}, José Arturo Celis^b.

^a*Universidad de La Salle.mvinasco@unisalle.edu.co,*

^b*Estudiante PhD Delfy University.solocelis@gmail.com*

Aceptado Diciembre 2014; Publicado en línea Mayo 2015

ISSN 2256-3830

Bibliografía

- First Radiospectrograph in Colombia, Jaime Andrés Convers, 2005
- Convers J., Undergraduate Thesis, *First Solar Radio Spectrograph in Colombia*, Universidad de los Andes, 2005.
- Kraus Jhon D., *Radio Astronomy*, Cygnus-Quasar Books, 2^a Edición,, 1986..
- Shanmugaraju Anamalai. PhD thesis, *The Madurai Solar Radio Spectrograph*, Madurai School of Physics, 2000.
- Shanmugaraju Anamalai. y Umapathy S., Design , Constructional Aspects and First Results of a Solar Radio Spectriograph, *Indian Journal of Pure and Applied Physics*, Vol. 33:220-224, Abril 1995.
- <http://sunbase.nict.go.jp/solar/denpa/hiras/types.html>
- <http://www.arcetri.astro.it/~kreardon/EGSO/gbo/>
- <http://sunbase.nict.go.jp/solar/denpa/index.html>, página web del proyecto HIRAS.
- [http://www.ursi.org/Proceedings/ProcGA05/pdf/J05-P.19\(0764\).pdf](http://www.ursi.org/Proceedings/ProcGA05/pdf/J05-P.19(0764).pdf)
- astrocol_radioastronomia@yahoogroups.com