

Radio Observations of Lyrids

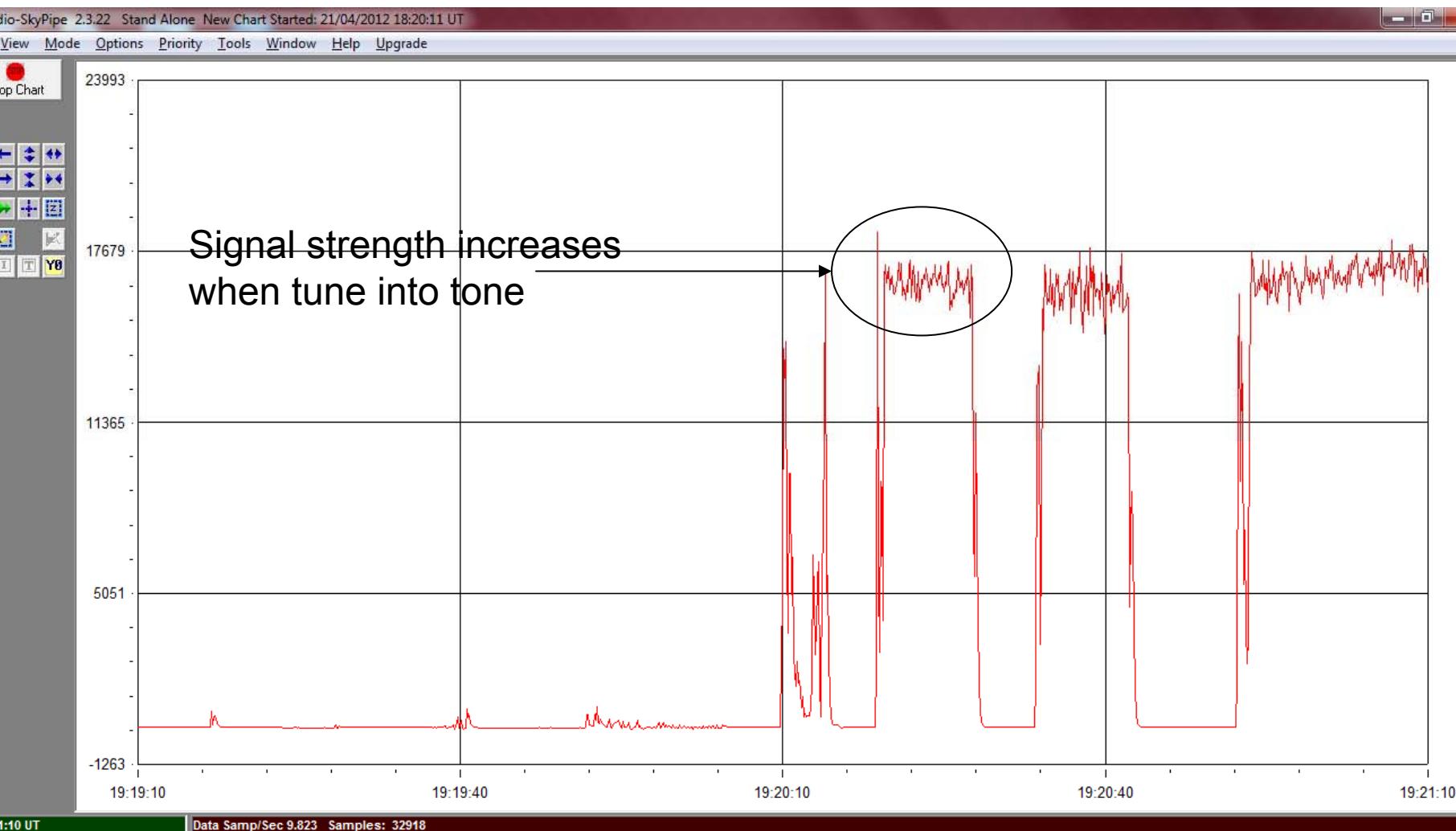
21/4/12

Lichfield Radio Observatory

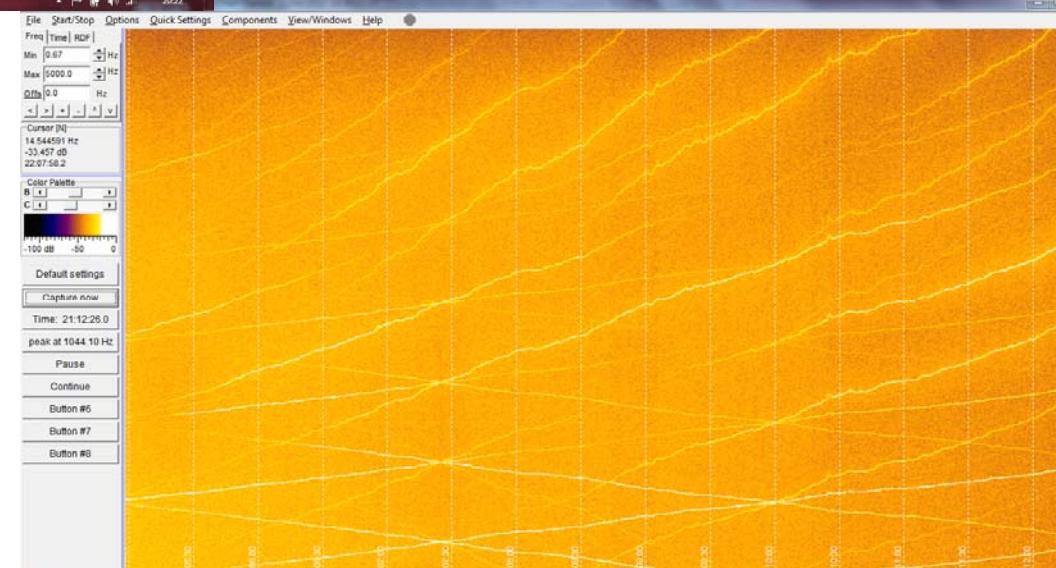
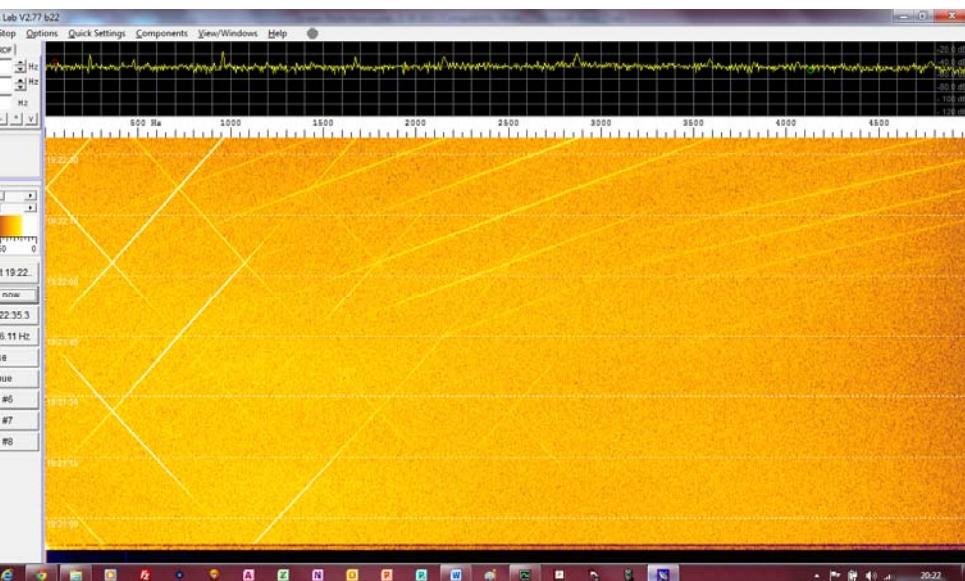


Tuning into Graves Radar

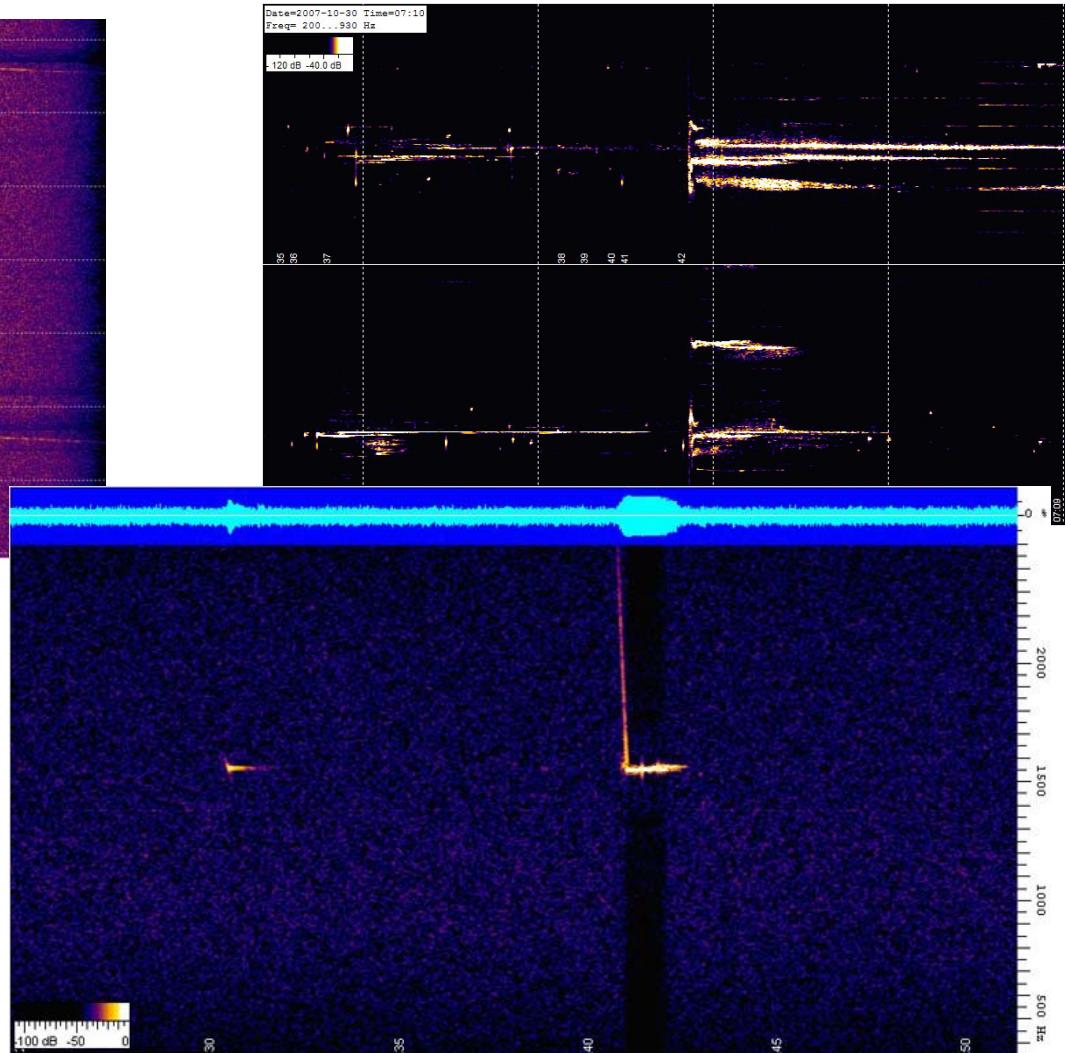
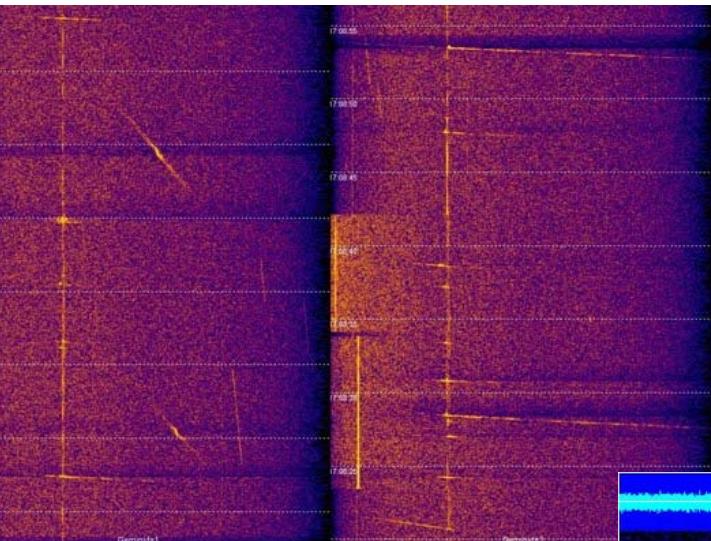
143.050MHz – although tone is picked up below this –
142.975Mhz on 21/4/12 but drifted during evening.



Have I picked up meteors here?



However usually meteors on Spectrum Lab appear as below:



These are not
Chfield Radio Observatory
data but
comparison pictures
from internet

Spectrum lab settings I used

SpecLab Configuration and Display Control

TRX Control | Memory | Filenames | Wave Files | Markers | System | Freq-Resp | **Audio IO** | AD/DA Server

Audio Input Device
-1 (use default WAVE in) Ctrl other sources >>
2 drivers found
timeout [ms] 500

Audio Output Device
-1 (use default WAVE ou) Ctrl other destinations >>
1 drivers found
16 bits/sample Stereo Input minimize latency [I/Q input adjustment...](#)

Audio Processing
Soundcard Sample Rate 11025
Resample... nothing (don't resample)

Sample Rate Calibration Table [Hz]

Nominal	Input calib	Output calib
5512	5512.000	5512.000
8000	8000.000	8000.000
11025	11025.000	11025.000
12000	12000.000	12000.000

resample to nominal output S.R. use different sample rate for output nominal: 11025 S/s Resampling quality medium

Samplerate Calibrator
Correct Frequency
Displayed Frequency
Calibrate Input S.R.
Calibrate Output S.R.
Continuous Calib... [about SR calib](#)

Vertical Frequency Axis
 Amplitude Grid (dB or %) Show : Waterfall only
 double-width waterfall lines
 one pixel per FFT bin
 optimum waterfall average
 triggered Spectrum more...
 non scrolling WF
 peak detecting cursor
 emphasize MIN+MAX values
 show spectrum as bargraph
 long-term average [clr](#)
Maths: none Spectrum graph area (pix) 100
Channels / Connections ...
half life (min): 0

Waterfall Scroll Interval
371 ms sec minutes
 automatic: 75 % overlap smooth scroll, high CPU load

Waterfall Time Grid
 enabled Interval automatic
sec min Source (expr) 60
Style dotted lines user-defined time label format:
Labels hour:min:sec [YYYY-MM-DD hh:mm:ss](#)

[More spectrum display settings on the next >>](#) and on the ["Radio Direction Finder" tab >>](#)

SpecLab Configuration and Display Control

TRX Control | Memory | Filenames | Wave Files | Markers | System | Freq-Resp | **FFT** | **Audio IO** | AD/DA Server

FFT properties, frequency resolution
Decimate input by (divisor) 1 use anti-alias filter for decimation same FFT params for all analyser channels

Effect of FFT settings with fs = 11.0250 kHz:
Width of one FFT-bin: 672.913 mHz
Equiv. noise bandwidth: 1.00937 Hz
Max freq range: 0.00000 Hz .. 5.51250 kHz
FFT window time: 1.486 s
Overlap from scroll interval: 75.0 %

FFT Input (same for all channels)
Type Real FFT, starting at 0 Hz (audio) Sweep [Hz/sec] 0.0 Include F.O. calibrator what's that?
 zero-pad if not enough samples available

FFT Output
Type Normal (amplitude only) use anti-alias filter for decimation same FFT params for all analyser channels
Unit dB (userdef'd reference) use different sample rate for output nominal: 11025 S/s Resampling quality medium

internal average (#FFTs) 0 use different sample rate for output nominal: 11025 S/s Resampling quality medium
smoothing (#bins) 0

SpecLab Configuration and Display Control

Loc, Timezone, Time source | Timer calibration | HR-Timer-Test | ADC input calib | Misc. (1)

Primary "Time"-Source
Current value: 21:06:43.5
 Use audio-sampling clock (requires cal best accuracy, almost no jitter, preferre)
 Use high-resolution timer (jitter someti
 Use the PC's "system" time (worst jitter)

22:06:43.5

Default Receiver Location
(geographic position, used when GPS receiver not available)
00°00'00.0"N 000°00'00.0"E
 Maidenhead deg,min.sec go to GPS config

SpecLab Configuration and Display Control

TRX Control | Memory | Filenames | Wave Files | Markers | System | Freq-Resp | **FFT** | **Audio IO** | AD/DA Server

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Compare with a tracing of human voice picked up with the microphone in the laptop

