IQmonitor tool

stephan94 Jun 24th 2018

stephan94

[Moderator]

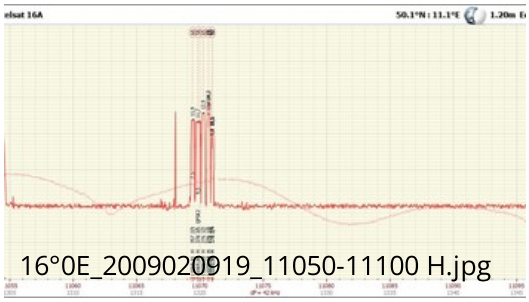
Reactions Received: 623
Posts: 1,057

Sep 3rd 2020

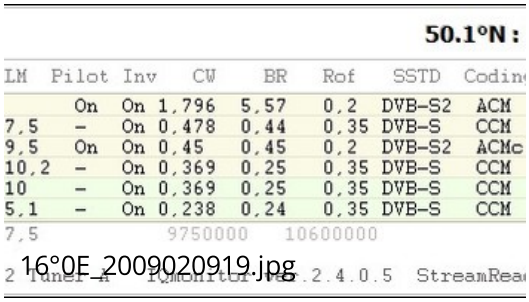
Hallo,
Eine probe mit der Version 2405 auf 16° Ost mit sehr kleinen SR.
Alles ist mit dem BS ohne Problem gefunden , einfach super .

A sample with version 2405 at 16 ° East with very small SR.
Everything is found with the OS without any problem, just great.

Images



197.38 kB 1,284×552 90



88.04 kB 936×199 87

Franzose in Franken
1.80m Ch.Master Revolver 5 LNB
IBU twin , Bulleye 10kHz, Kaonsat 13K, Inverto KaKuband,Kaband (A)
TBS5925+6983; Openbox SX6 ; Edision MIO4K ;GTMedia V8 turbo

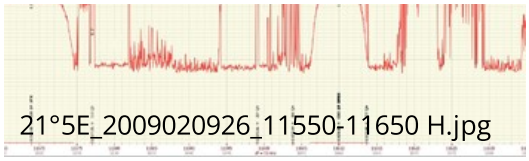
Lambda

Reactions Received: 228
Posts: 180

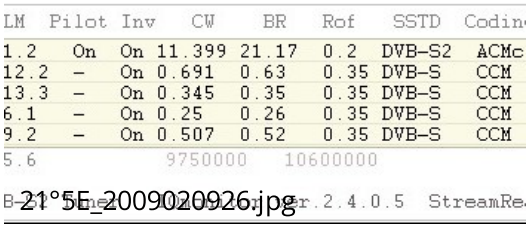
Sep 4th 2020

I managed to capture the frequency of 11604 H, SR 186, LUXE radio on the satellite 21.5E with the beta version 2.4.0.5. It is a very difficult task, although it is an excellent signal.

Images



403.75 kB 2,053×768 91



77.6 kB 936×185 77

Location: Croatia, Kutina

2,7m "Laminas" offset
1.2m Echostar + 36V HH motor (93,5E-58W)
0,75m Kathrain CAS75 offset + Premium X diseqc motor (90E-55,5W)
Multi-Feed "Wave Frontier" Toroidal Antenna T90 (28,5E-0,8W)
TBS5927;TBS5925;Octagon SF8008;DM8000

strannik

[Enlightened]

Reactions Received: 539
Posts: 495

Sep 4th 2020

Quote from stephan94

Hallo,
Eine probe mit der Version 2405 auf 16° Ost mit sehr kleinen SR.
Alles ist mit dem BS ohne Problem gefunden , einfach super .

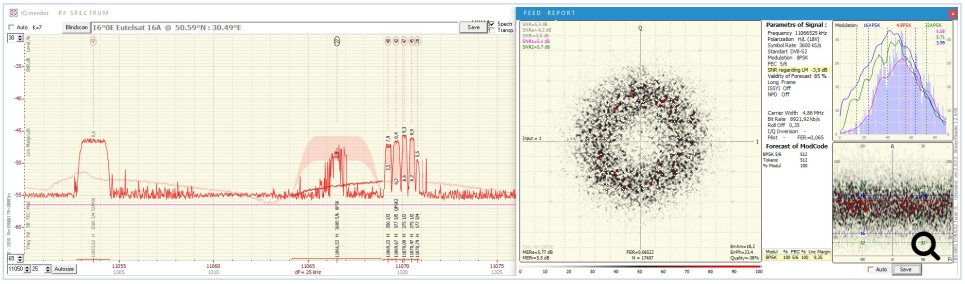
A sample with version 2405 at 16 ° East with very small SR.

Display More

Mein Freund und Gleichgesinnter Stephan94 hat ein wunderbares Talent, IQmonitor zum Testen zu finden
sehr interessant, schwer zu empfangende Objekte.

11067 H tp 83 Europe A		(feeds)		DVB-S2	3600-9/10 8PSK		Jamie A 170509
11069.4 H tp 83 Europe A 47-48				DVB-S	355-2/3	53810-53810 4.4	Onacila 190109
		Radio 10	F S		1010	201 Dut	
		Radio 538	F S		5380	101 Dut	
11069.8 H tp 83 Europe A 47-48				DVB-S2	375-3/5 QPSK	41378-41378 2.2	Onacila 190109
		Sky Radio (Netherlands)	F S		417	161 Dut	
		Radio Veronica	F S		674	162 Dut	
11070.2 H tp 83 Europe A 47-48		Slam!	F S	DVB-S	274-1/2 170	1-17168 2.7 .4 Dut	Onacila 190110
11070.6 H tp 83 Europe A 47-48		100% NL	F S	DVB-S	274-1/2 170	1-17152 2.7 64 Dut	Onacila 190109
11070.9 H tp 83 Europe A 47-48		BNR Nieuwsradio	F S	DVB-S	176-3/4 17629	?-? 5.5 1015 Dut	Jamie A 200314

Ich war von diesem Experiment so beeindruckt, dass ich mich entschied, es zu wiederholen, obwohl meine Antenne die Hälfte der Aperturfläche hat und EIRP = 47 dBW in Kiew 2 dBW weniger ist als in Deutschland.



Trotz der Tatsache, dass der Signalpegel 3-5 dB niedriger war, wurden 6 Transponder im automatischen Modus gesperrt, und die 11067-MHz-Einspeisung wurde im "manuellen" Modus erkannt bei SNR 3,9 dB unter dem Sperrpegel.
Die Zuverlässigkeit der Prognose betrug 85%, die Signalparameter dieses Feeds entsprechen den tabellarischen (außer FEC)

Original in russischer Sprache (https://filatov-yuri.livejournal.com/2020/09/04/)

. Yuri Filatov *(strannik)*
https://filatov-yuri.livejournal.com (https://filatov-yuri.livejournal.com)

strannik

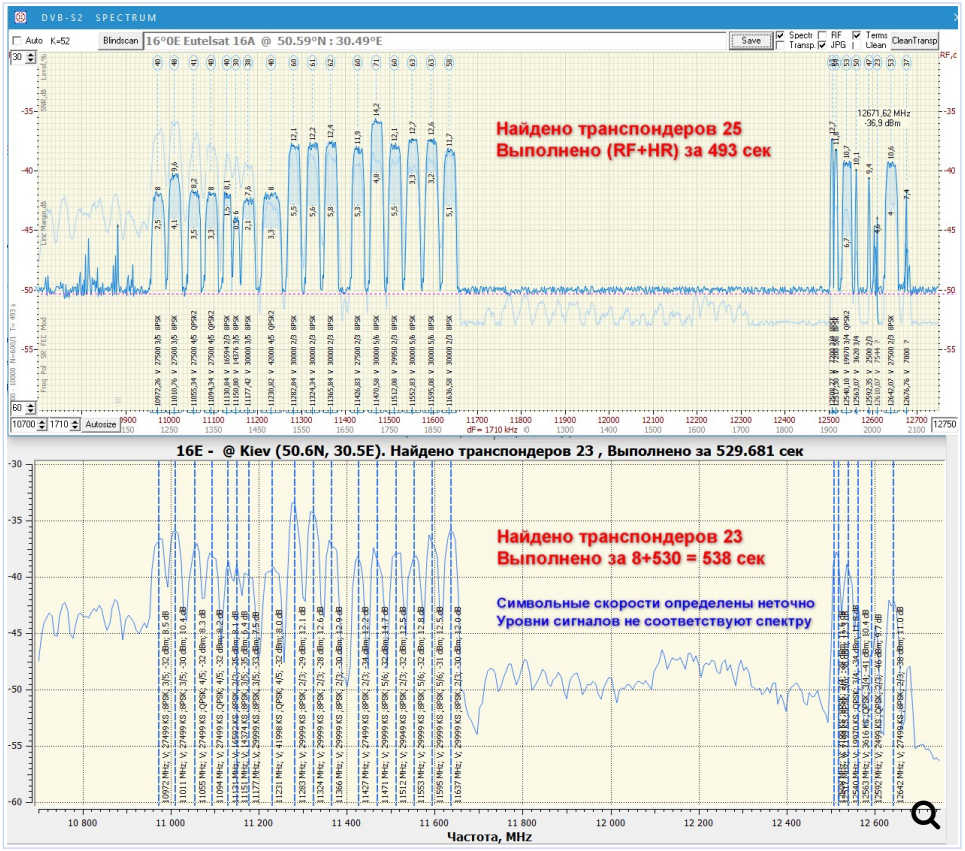
[Enlightened]

Reactions Received: 539
Posts: 495

Sep 5th 2020

I continue to polish the IQmonitor 2405 program

Pre-registration of the RF spectrum, which takes only 10 - 15 seconds, allows you to automatically set the transponder search threshold and significantly reduce the time for forming the HR spectrum.
For example, for the 16°E satellite, the registration time of RF and HR spectra (the operation is performed with one click on "*Spectrum*") was 493 seconds in total, 25 transponders were found with the OMICOM card.
The signal parameters are precisely defined.



For comparison, scanning with the CrazyScan program took a total of 538 seconds (9% slower), only 23 transponders were found (the same 9% less)
About the long-standing "disease" of the program, which underestimates SR and incorrectly signs the levels of all signals on the spectrum, I wrote repeatedly ...
But, apparently, this abnormal situation suits everyone

. Yuri Filatov *(strannik)*
https://filatov-yuri.livejournal.com (https://filatov-yuri.livejournal.com)

Peon

Reactions Received: 218
Posts: 196

Sep 6th 2020

Great job, Yuri. I'm looking forward to testing.

> Quote from strannik
>
> *But, apparently, this abnormal situation suits everyone*

I pointed out this problem years ago. Unfortunately, Mr CrazyCat did not respond.

Geoposition: 48,71N, 21,92E. Promax Ranger Neo 2, TBS5925, TBS6983, TBS6903, TBS6903x, TBS6903x V2, TBS6522, TBS5520SE, TBS5927, TBS5590, Prof7301, PF 250cm, ADE antenna 370cm.

Full band LNBs: S, L, C: NJS8487S PLL ,X PLL, Ku NJR2842S PLL, full Ka band PLL, and other iron for DX reception, 53W - 98E.

Sep 7th 2020

strannik

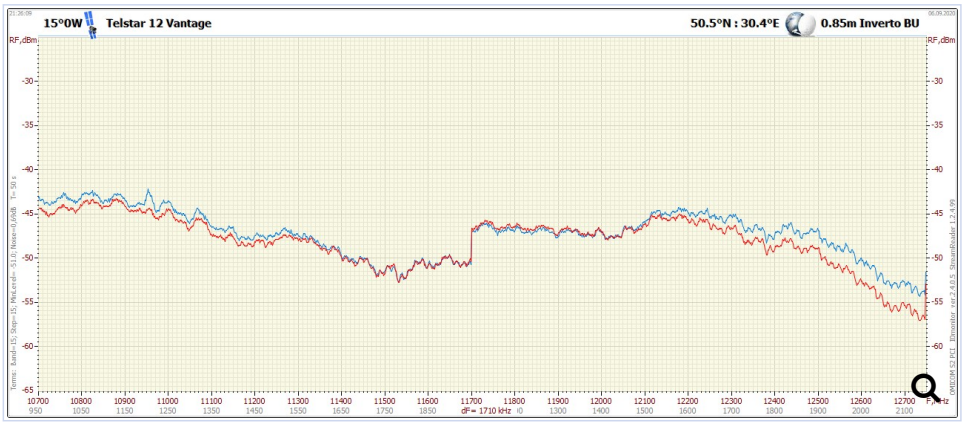
[Enlightened]

Reactions Received: 539

Posts: 495

IQmonitor 2405 - Extreme Subthreshold Reception

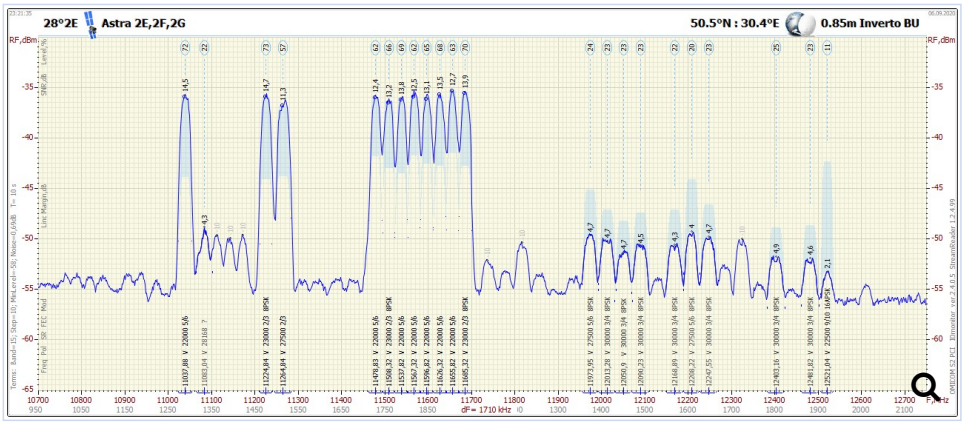
IQmonitor software, like any precision measuring instrument, requires calibration.
Yesterday I calibrated my rotary antenna with 0.85m aperture. West 14 ° W reception is impossible due to the wall.
For calibration, the antenna was moved by the USALS system to the 15 ° W position, and in fact was directed to a blind corner of the balcony.
Then the noise spectra in vertical and horizontal polarizations were recorded with a step of 1 MHz:



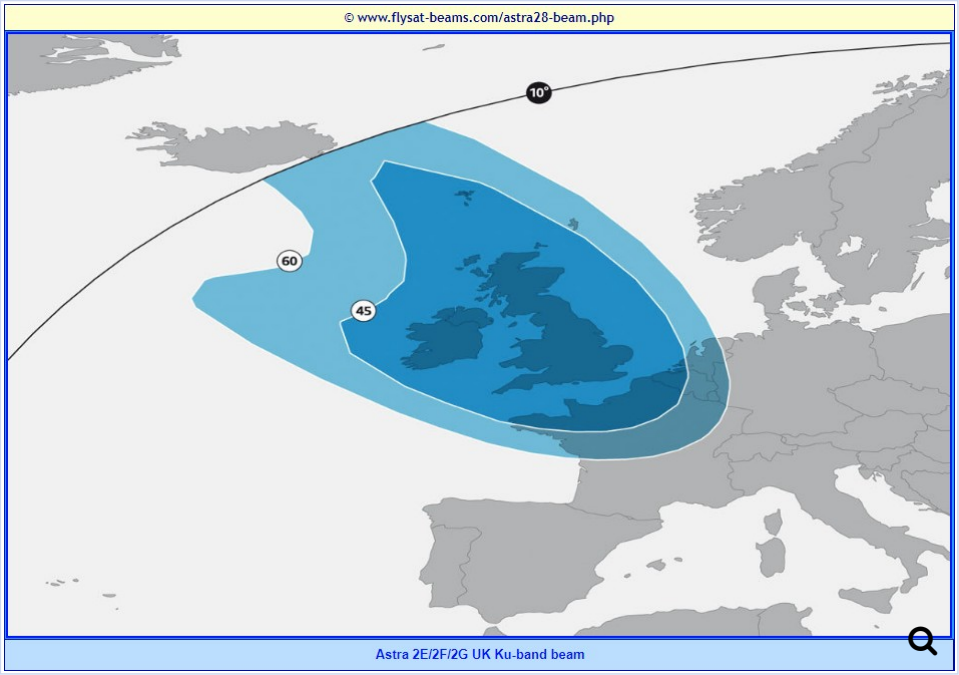
After pressing the "Standard" button, the calibration curve was formed in the program memory, and when it is closed, it is saved in the *ini*-file.
Additionally, the "RF" checkbox was raised and the calibration curve was saved to disk with the "Save" button, from where it can be loaded into the program if necessary press the "Load" button and press the "Standard" button to make the current calibration curve.

The unevenness of the calibration curve reaches 14 dB, standing waves are clearly visible on it:
- between the motor and LNB with an amplitude of about 0.7 dB;
- between the motor and the PCI card with an amplitude of up to 1 dB.
Impedance matching is good only at frequencies around 1500 MHz. The gain jump at the border of the subbands is 4dB.

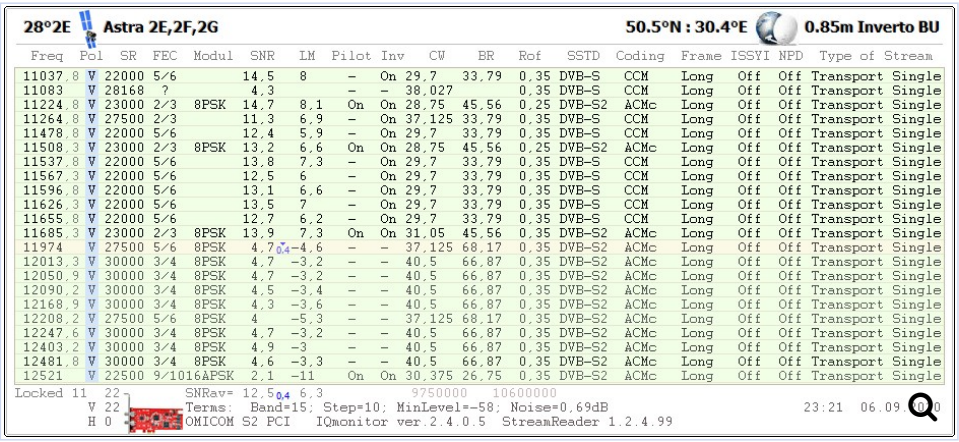
The antenna was positioned to the 28.2 ° E satellite, from which a vertical polarization spectrum was recorded and a search for transponders was performed:



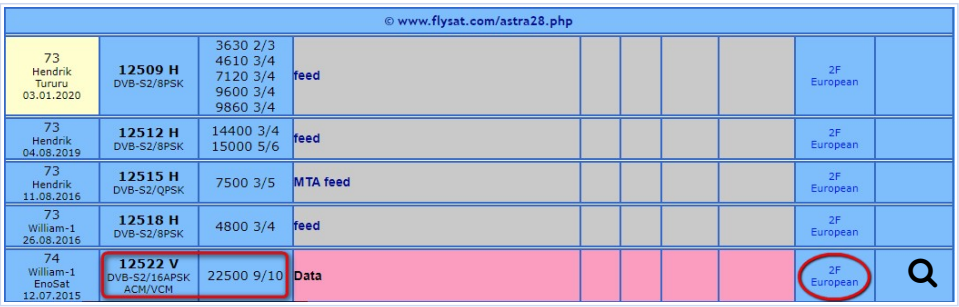
As you can see, after calibrating the program, the nonlinearity of the amplitude-frequency characteristic (AFC) for noise does not exceed 2 dB,
and compensation of standing waves in the cable improved the shape of the peaks, which made it possible to trace transponders with C/No > 1dB.
The spectrum clearly shows the radiation from all three satellites in this ASTRA constellation, even from the English UK beam:



Eleven transponders were found in automatic mode, another 11 - by double-clicking on the peaks of visually selected signals:



It is easy to see that the parameters of transponders with SNR 4 - 4.9 dB are correctly determined at 3 - 5.3 dB below the lock threshold,
but the real "icing on the cake" was the last 16APSK transponder with an SNR of only 2.1 dB, whose parameters correctly defined 11 dB below the lock threshold !!!



Before that, my best achievement was that the IQmonitor program correctly determined the parameters of the 32APSK signal at 9.5 dB below the lock threshold.

A new record of -11 dB is now set

Original (https://filatov-yuri.livejournal.com/2020/09/07/)

. Yuri Filatov *(strannik)*
https://filatov-yuri.livejournal.com (https://filatov-yuri.livejournal.com)

Lambda

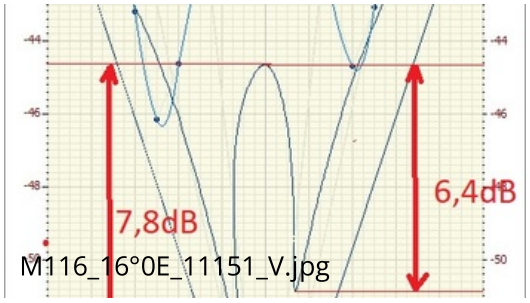
Reactions Received: 228
Posts: 180

Sep 8th 2020

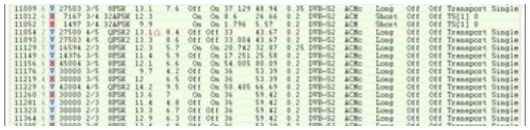
Yesterday I made a comparison of two very similar offset antennas, the NoName 116cm and the Channel Master 120cm .. The smaller antenna gives about 0.3dB better average signal and seems to be of better quality. But when the same antennas are compared with the "beam pattern" function, a completely different result is obtained, the Channel Master reflector has significantly better directivity and efficiency. 2 different Diseqc motors, DM3800 and DM3800S, are used for the test, which is why there is a difference in the number of pulses per stage. An Inverto Black Ultra LNB is mounted on both antennas.

Images

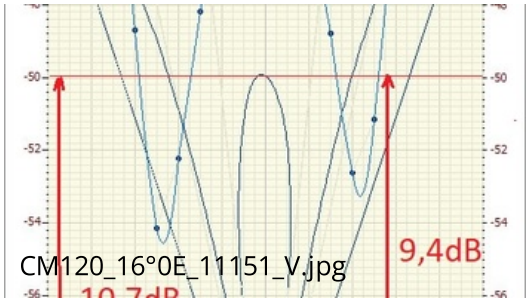
457.22 kB 936×787 70



175.39 kB 480×731 83



506.71 kB 936×871 82



179.14 kB 480×731 79

Location: Croatia, Kutina

2,7m "Laminas" offset
1.2m Echostar + 36V HH motor (93,5E-58W)
0,75m Kathrain CAS75 offset + Premium X diseqc motor (90E-55,5W)
Multi-Feed "Wave Frontier" Toroidal Antenna T90 (28,5E-0,8W)
TBS5927;TBS5925;Octagon SF8008;DM8000

Peon

Reactions Received: 218
Posts: 196

Sep 8th 2020

> Quote from Lambda
>
> *An Inverto Black Ultra LNB is mounted on both antennas.*

Did you use one LNB or two? The LNBs themselves have a fairly large variance of parameters. Therefore, you have different results.

Geoposition: 48,71N, 21,92E. Promax Ranger Neo 2, TBS5925, TBS6983, TBS6903, TBS6903x, TBS6903x V2, TBS6522, TBS5520SE, TBS5927, TBS5590, Prof7301, PF 250cm, ADE antenna 370cm. Full band LNBs: S, L, C: NJS8487S PLL ,X PLL, Ku NJR2842S PLL, full Ka band PLL, and other iron for DX reception, 53W - 98E.

Lambda

Reactions Received: 228
Posts: 180

Sep 8th 2020

I used two different lnbs. It should only have an impact when measuring S / N quality and not when measuring the directionality and efficiency of the antenna. I think that only the size and quality of the antenna reflector is important for the beam pattern test.

Location: Croatia, Kutina

2,7m "Laminas" offset
1.2m Echostar + 36V HH motor (93,5E-58W)
0,75m Kathrain CAS75 offset + Premium X diseqc motor (90E-55,5W)
Multi-Feed "Wave Frontier" Toroidal Antenna T90 (28,5E-0,8W)
TBS5927;TBS5925;Octagon SF8008;DM8000

Peon

Reactions Received: 218
Posts: 196

Sep 8th 2020

OK, same LNB but two different antennas. Are you sure that the Inverto irradiator is equally suitable for both antennas? This must also be taken into account.

Geoposition: 48,71N, 21,92E. Promax Ranger Neo 2, TBS5925, TBS6983, TBS6903, TBS6903x, TBS6903x V2, TBS6522, TBS5520SE, TBS5927, TBS5590, Prof7301, PF 250cm, ADE antenna 370cm. Full band LNBs: S, L, C: NJS8487S PLL ,X PLL, Ku NJR2842S PLL, full Ka band PLL, and other iron for DX reception, 53W - 98E.

strannik

[Enlightened]

Reactions Received: 539
Posts: 495

Sep 8th 2020

> Quote from Lambda
>
> 
>
> *Yesterday I made a comparison of two very similar offset antennas, the NoName 116cm and the Channel Master 120cm .. The smaller antenna gives about 0.3dB better average signal and seems to be of better quality. But when the same antennas are compared with the "beam pattern" function, a completely different result is obtained, the Channel Master reflector has significantly better directivity and efficiency. 2 different Diseqc motors, DM3800 and DM3800S, are used for the test, which is why there is a difference in the number of pulses per stage. An Inverto Black Ultra LNB is mounted on both antennas.*

Lambda,

it is a very interesting experiment.

To give you a valid answer, I need 1MHz calibration curves and spectra from both antennas. In addition, photographs of antennas are needed, it is desirable that there are views in profile with the location of the lens in the plane of the antenna aperture.

. Yuri Filatov *(strannik)*
https://filatov-yuri.livejournal.com (https://filatov-yuri.livejournal.com)

FL

flie

[Expert]

Reactions Received: 480
Posts: 1,245

Sep 8th 2020

> Quote from strannik
>
> 
>
> *A new record of -11 dB is now set*

the Best record I see before and with correct parameters was made by Stephan -8dB !

RE: 24.8°W Alcomsat-1

this new record of -11 dB is extremely exceptional!!!
more success

Ku: 0.90m (Géant perforated dish) 63°West -70.5°East

Ku: 1.80m OS (Testing.....)
C: 1.80m PF
Ku-Band single LNBs: Televes UNI 7475,Inverto Black ultra IDLB-SINL40
Ka-Band LNB:TRIAX twin-ka TKT001
C-Band LNB:Panorama ER861
ku-extended LNBs: Bwei 9Ghz & 12.8Ghz
C-extended LNB: Bwei 5750Mhz
Tuner: TBS5927,TBS5520SE,TBS6903X,Skystar usb HD,GTmedia-V8-finder
Location: 22.8N,5.5E-Algeria

Lambda

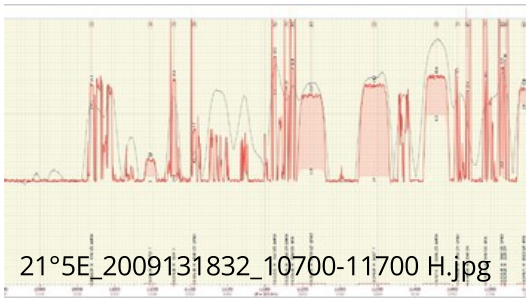
Reactions Received: 228
Posts: 180

Sep 13th 2020

My first test with IQ 2.4.0.5, comparison with the previous beta version ..

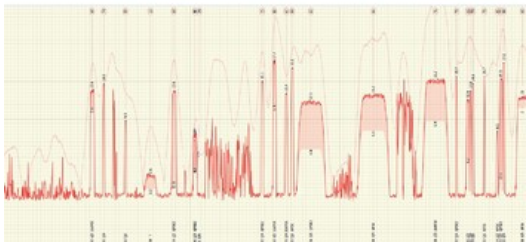
Images

202.58 kB 936×395 77



488.26 kB 2,049×769 75

279.03 kB 936×521 62



508.94 kB 2,050×771 75

Location: Croatia, Kutina

2,7m "Laminas" offset
1.2m Echostar + 36V HH motor (93,5E-58W)
0,75m Kathrain CAS75 offset + Premium X diseqc motor (90E-55,5W)
Multi-Feed "Wave Frontier" Toroidal Antenna T90 (28,5E-0,8W)
TBS5927;TBS5925;Octagon SF8008;DM8000

> Edited once, last by Lambda (Sep 13th 2020).

stephan94

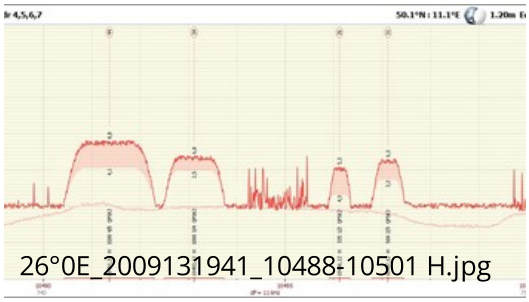
[Moderator]

Reactions Received: 623
Posts: 1,057

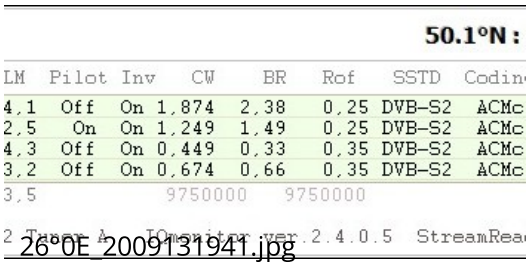
Sep 13th 2020

Hallo ,
Auch mit 26° Ost bei den funkamateuren kann man ganz gut was finden ; mit dem neuen 2405
Even with 26 ° East and the radio amateurs, you can find something quite easily; with the new 2405

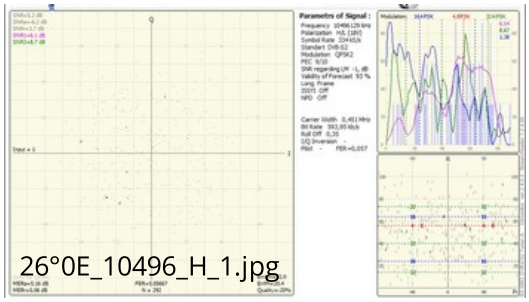
Images



182.71 kB 1,284×552 73



73.1 kB 936×171 78



157.94 kB 940×587 73

128.69 kB 1,280×720 78

Franzose in Franken
1.80m Ch.Master Revolver 5 LNB
IBU twin , Bulleye 10kHz, Kaonsat 13K, Inverto KaKuband,Kaband (A)
TBS5925+6983; Openbox SX6 ; Edision MIO4K ;GTMedia V8 turbo

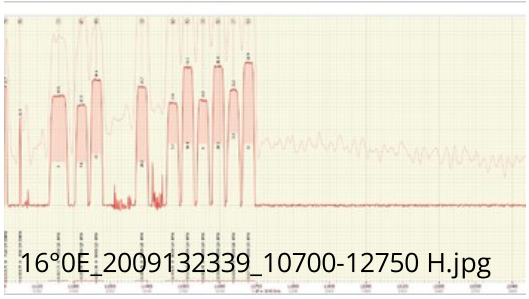
Lambda

Reactions Received:	228
Posts:	180

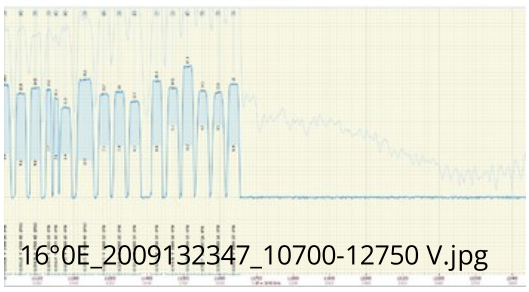
Sep 13th 2020

I cannot set the first classical spectrum and the HR spectrum to the same initial value. What's wrong?

Images



487.93 kB 2,047×769 71



473.98 kB 2,047×769 66

Location: Croatia, Kutina

2,7m "Laminas" offset
1.2m Echostar + 36V HH motor (93,5E-58W)
0,75m Kathrain CAS75 offset + Premium X diseqc motor (90E-55,5W)
Multi-Feed "Wave Frontier" Toroidal Antenna T90 (28,5E-0,8W)
TBS5927;TBS5925;Octagon SF8008;DM8000

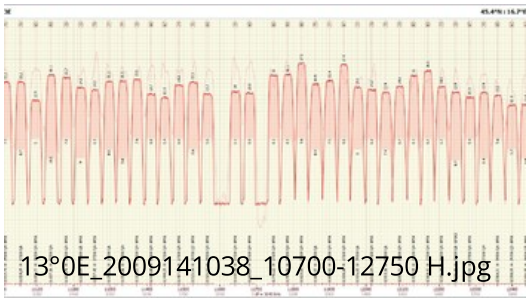
Sep 14th 2020

Lambda

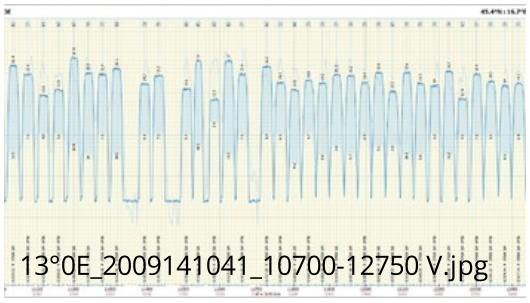
Reactions Received: 228
Posts: 180

I did a little more research on the new version. The test at 13E/19.2E shows a fantastic speed of the HR spectrum. In order for the RF spectrum and HR spectrum to be the correct size as soon as I start the spectrum I have to manually turn on the “Auto” scale function, I think it would be easier if IQ does it automatically. The "Min. Level RF" function is always smaller by 3dB compared to "Noise", I think that for a nicer display these values should be the same

Images

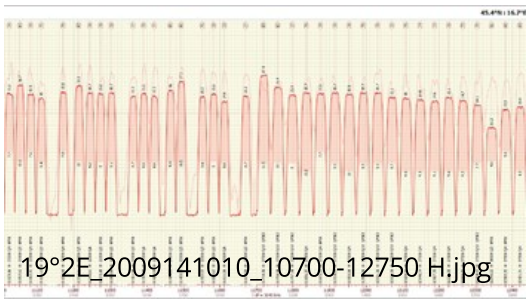


543.81 kB 2,047×769 64

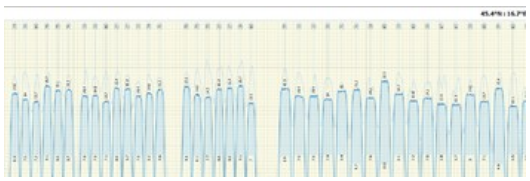


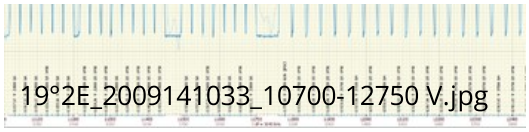
543.9 kB 2,047×769 74

526.09 kB 936×885 75

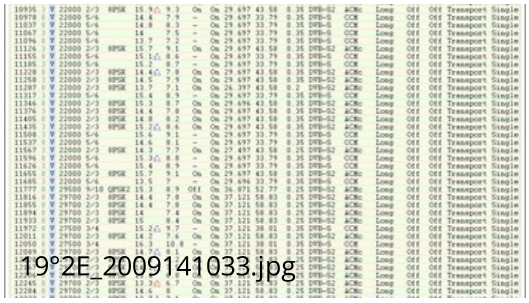


569.44 kB 2,047×769 62

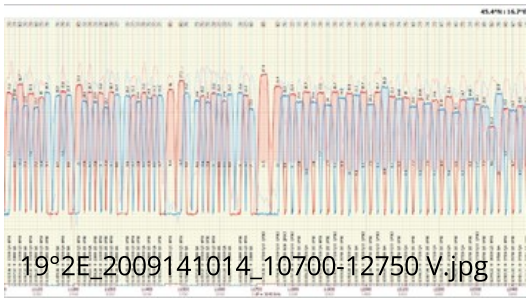




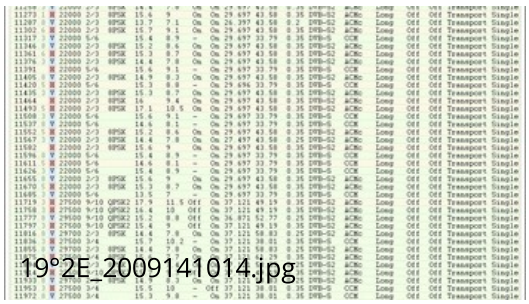
557.18 kB 2,047×769 74



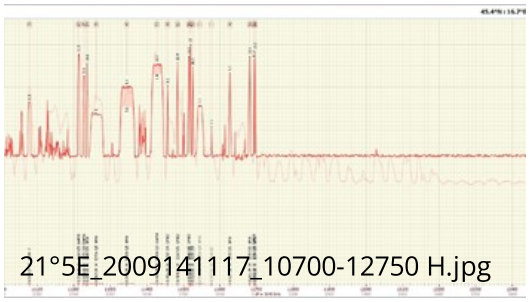
499.59 kB 936×843 69



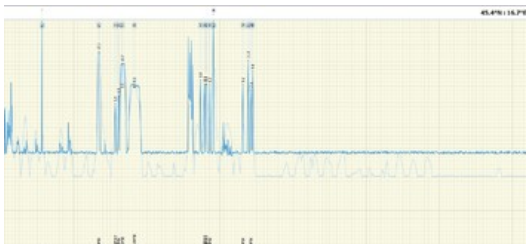
703.28 kB 2,047×769 76



967.69 kB 936×1,585 66



449.38 kB 2,047×769 63



446.93 kB 2,047×769 64

Location: Croatia, Kutina

2,7m "Laminas" offset
1.2m Echostar + 36V HH motor (93,5E-58W)
0,75m Kathrain CAS75 offset + Premium X diseqc motor (90E-55,5W)
Multi-Feed "Wave Frontier" Toroidal Antenna T90 (28,5E-0,8W)
TBS5927;TBS5925;Octagon SF8008;DM8000

Edited 2 times, last by Lambda (Sep 14th 2020).

stephan94

[Moderator]

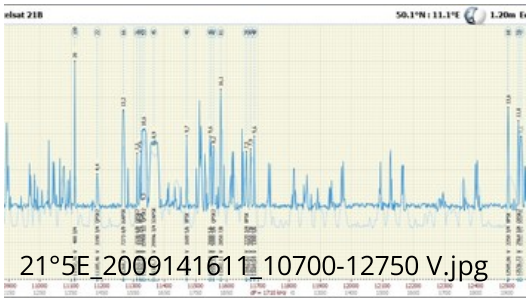
Reactions Received: 623
Posts: 1,057

Sep 14th 2020

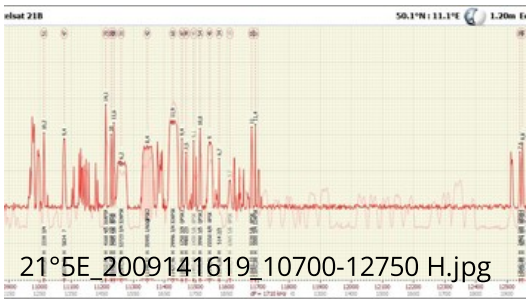
Hallo
Ich habe auch bei dem 21,5 Ost probiert .
Hier sind meine Ergebnis.

I also tried the 21.5 East.
Here are my results.

Images



270.21 kB 1,284×552 65



269.81 kB 1,284×552 62

Franzose in Franken
1.80m Ch.Master Revolver 5 LNB
IBU twin , Bulleye 10kHz, Kaonsat 13K, Inverto KaKuband,Kaband (A)
TBS5925+6983; Openbox SX6 ; Edision MIO4K ;GTMedia V8 turbo

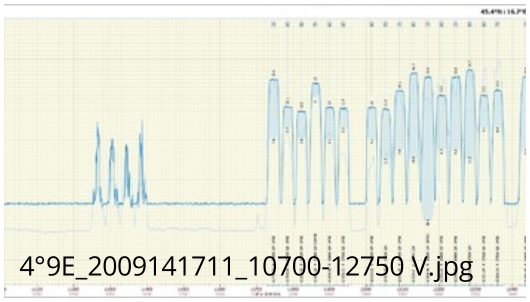
Sep 14th 2020

Lambda

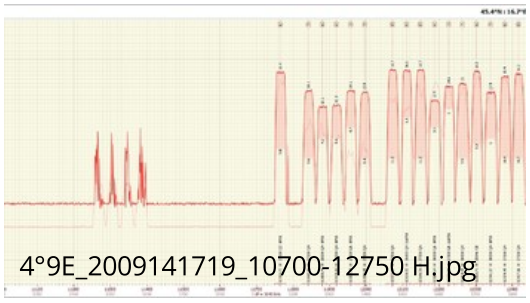
Reactions Received:	228
Posts:	180

Test IQ 2.4.0.5 on satellite 4.8E with 3 different antennas, 116cm, 120cm and 300cm

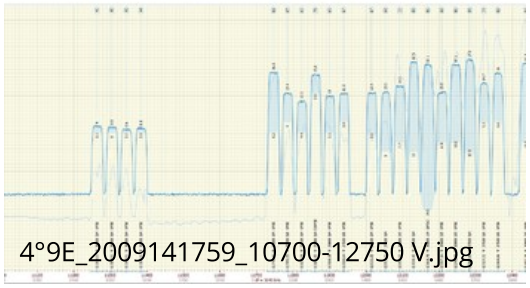
Images



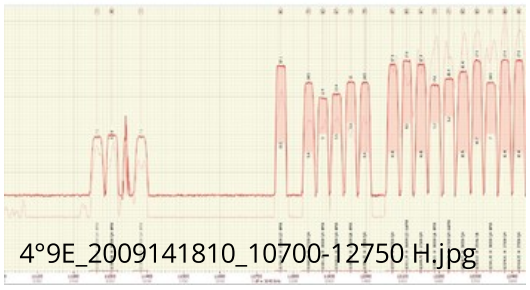
454.66 kB 2,047×769 70



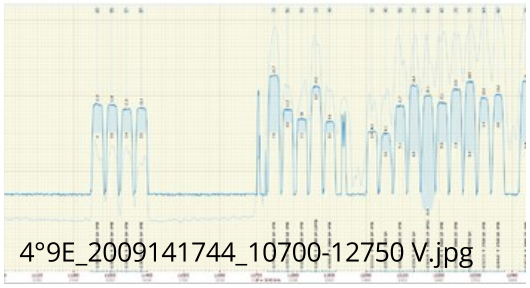
464.75 kB 2,047×769 78



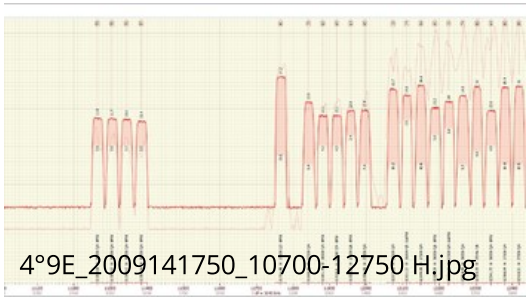
470.04 kB 2,047×769 61



476.29 kB 2,047×769 69



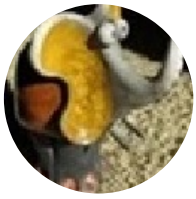
470.31 kB 2,047×769 73



480.76 kB 2,047×769 68

Location: Croatia, Kutina

2,7m "Laminas" offset
1.2m Echostar + 36V HH motor (93,5E-58W)
0,75m Kathrain CAS75 offset + Premium X diseqc motor (90E-55,5W)
Multi-Feed "Wave Frontier" Toroidal Antenna T90 (28,5E-0,8W)
TBS5927;TBS5925;Octagon SF8008;DM8000



stephan94

[Moderator]

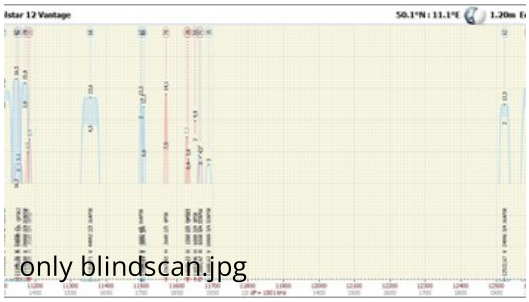
Reactions Received:	623
Posts:	1,057

Sep 17th 2020

Hallo ,
Ein Test auf 15° West mit der Version 2405
in spectrum +IQ Blindscan und auch nur mit dem Blindscan.

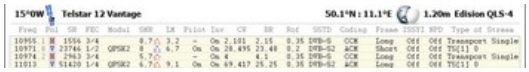
A test on 15 ° West with version 2405
in spectrum + IQ blind scan and also only with the blind scan.

Images

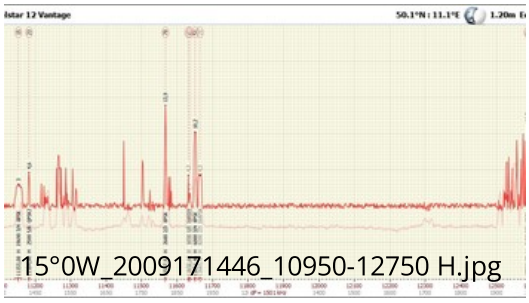


255.73 kB 1,284×552 64

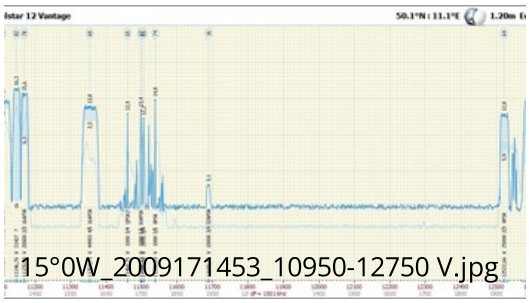
276.51 kB 936×521 60



286.48 kB 936×535 73



249.04 kB 1,284×552 60



251.88 kB 1,284×552 60

Franzose in Franken
1.80m Ch.Master Revolver 5 LNB
IBU twin , Bulleye 10kHz, Kaonsat 13K, Inverto KaKuband,Kaband (A)
TBS5925+6983; Openbox SX6 ; Edision MIO4K ;GTMedia V8 turbo

stephan94

[Moderator]

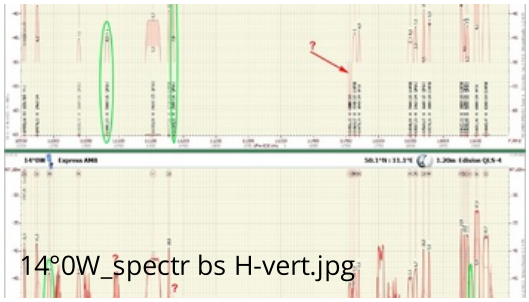
Reactions Received: 623
Posts: 1,057

Sep 17th 2020

Gleiche probe auf 14° West.
Einige kleine Überraschungen mit den Ergebnissen (und auch mit dem Zeichnen einer Frequenz)

Same sample on 14 ° West.
Some little surprises with the results (and also with drawing a frequency)

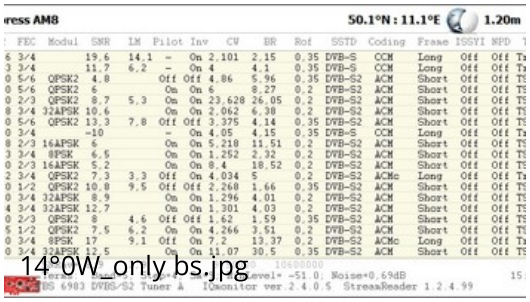
Images



584.27 kB 1,284×1,109 82

14°0W_all.jpg

193.55 kB 936×381 69



14°0W_only bs.jpg

193.02 kB 936×381 62

Franzose in Franken
1.80m Ch.Master Revolver 5 LNB
IBU twin , Bulleye 10kHz, Kaonsat 13K, Inverto KaKuband,Kaband (A)
TBS5925+6983; Openbox SX6 ; Edision MIO4K ;GTMedia V8 turbo

1 ... 41 42 43 ... 101

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