



Title: WiFi at GBEMS

Author: O'Neil

GBT Memo Series

The Potential Effect on GBT Science of WiFi at Green Bank Elementary Middle School

GBT MEMO #309

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VERSION	DATE	REASON
1.0	27 July 2023	Initial Document
2.0	01 Aug 2023	Added in following from comments and changes in the proposed WiFi system: - Effect of scheduling changes to avoid scheduling when school is in session - Added in science impact of the 5 and 6 GHz using the 5 & 6 GHz WiFi bands to document. - Added note in Section 3 regarding the power and frequency use of the WiFi router. - Moved the list of spectral lines for the different WiFi bands to the Appendix, due to the increased bands now in the document
3.0	06 Sep 2023	Added in results from GBEMS WiFi tests
3.1	27 Sept, 2023	Added in editorial comments from review of version 3.0. In addition to minor editorial changes, this included a science section on FRB science in the 5 and 6 GHz range.



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I BACKGROUND

Green Bank Observatory is considering allowing WiFi installation at the Green Bank Elementary Middle School. This memo exists to document the potential effects this installation would have on scientific research at the Green Bank Observatory.

2 SCIENCE IN THE WIFI REGIMES

2.1 2.41 – 2.48 GHz

This section assumes the only wireless system in use at the school is in the 2.41-2.48 GHz regime. That is, there are no effects from 5GHz (or other) WiFi channels and no Bluetooth devices in use. This also assumes that the WiFi signal comes in through the outer sidelobes of the antenna or through sidelobes of the receiver. If it comes in through a near in sidelobe of the antenna – which is possible for sources to the southeast at low elevation, i.e. the Galactic Center when it rises, the signal could be strong enough to cause baseline issues. This issue requires further testing.

2.1.1 Pulsar Science

For pulsar astronomers, the loss here is simply a loss in sensitivity due to the lost channels/frequency. The primary effect will be with UWB, which readily covers this band. This, then is a loss of 0.07 GHz out of a total of 3.3 GHz in bandwidth, providing a decrease in sensitivity by 2.1% or a 4% increase in the time needed to reach the same sensitivity.

2.1.2 Continuum Science

The calculation here is the same is for pulsar observations, but using only the S-band receiver's bandwidth (1.73-2.6 GHz). This, then is a loss in sensitivity of 8% or a 16% increase in the time needed to reach the same sensitivity.



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2.1.3 Spectral Lines

There are 137 spectral lines with rest frequencies that lie within this region. The complete list of spectral lines with rest frequencies in the 2.4 GHz WiFi range, according to Splatalogue¹, is given in Appendix C, below. Note that all lines redshifted into this frequency range will also be affected. Note, too, that we have received past proposals to observe some of these lines, particularly for astrochemistry.

The lines here cover a wide variety of atomic and molecular species, including recombination lines of Carbon, Helium, and Hydrogen and spectral lines from Acetaldehyde, Acetic Acid, Ammonia, Carbon Dioxide (Protonated), Cyanoacetylene, Cyanoallene, Cyanamide, Cyanomethanimine, Cyclopropanone, Ethanol, Ethyl Cyanide, Ethylene Glycol, Formaldehyde, Formic Acid, gauche-Ethanol, Iso-propyl Cyanide, Methoxymethanol, Methyl Formate, Nitric Oxide, Nitric Sulfide, Phosphorus Monoxide, Potassium Cyanide, Potassium Isocyanide, Propargyl Cyanide, Thioformaldehyde, and Vinyl Cyanide.

2.2 5 GHz Channels

2.2.1 Description of the 5 GHz WiFi System

The 5 GHz WiFi system works differently from the 2.4 GHz routers. Here you have a variety of channels which can be separated into separate 20 MHz channels. To be successful, though, it is likely a WiFi system covering all staff and students at GBEMS would likely utilize all channels. For completeness, though, this section includes a listing of the channels available within the United States. Channels can be grouped into 20, 40, 80, and 160 MHz groups.

A complete listing of the channels for 5 GHz can be found in Appendix A.

2.2.2 Pulsar Science

This is not a common band for pulsar searches but is used occasionally for pulsar/transients timing. Here is simply a loss in sensitivity due to the lost channels/frequency. The primary effect will be with C-band, which readily covers these frequencies. Assuming full use of the 5 GHz bands, this is a loss of 0.625 GHz out of a total of 3.8 GHz in bandwidth, providing a decrease in sensitivity by 16.4% or a 32.9% increase in the time needed to reach the same sensitivity. If instead the bandwidth is limited to a 360 MHz set of channels, which should be feasible, the loss in sensitivity is then 8.4% or a 16.8% increase in the time needed to reach the sensitivity achieved without this bandwidth loss.

2.2.3 Fast Radio Bursts²

The 5-7 GHz range is a popular frequency range for observing Fast Radio Bursts (FRBs) with very high rotation measures. At low frequencies, Faraday rotation can actually depolarize the signal within the ~0.1-1 MHz wide channels that need to be used to observe FRBs with high time resolution. The degree of Faraday rotation depends on frequency, though, and so at frequencies > ~few GHz we can often recover

¹ <https://splatalogue.online>

² From R. Lynch, private email on 06 September, 2023.



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the polarized flux and measure the RM. Even higher frequencies are not used because FRBs have not yet been detected at those frequencies.

A secondary reason is that FRB emission tends to be confined to a few hundred MHz, but the center frequency drifts. Having a wide observing band with the GBT at C-Band frequencies is helpful for increasing the chances of finding bursts.

2.2.4 Continuum Science

The calculation here is the same is for pulsar observations. This, then is the same loss in sensitivity of 16.4% or a 32.9% increase in the time needed to reach the same sensitivity.

2.2.5 Spectral Lines

There are 1202 spectral lines with rest frequencies that lies within this region, representing 61 unique species. The table in Appendix D shows all lines lie within this frequency range, according to Splatalogue³. Note that all lines redshifted into this frequency range will also be affected. Note, too, that we have received past proposals to observe some of these lines, particularly for astrochemistry.

The lines here cover a wide variety of atomic and molecular species, including recombination lines of Carbon, Helium, and Hydrogen and spectral lines from Methoxymethanol, Acetaldehyde, Acetic Acid, Ammonia, Benzonitrile, Butadiynyl, , Cyanamide, Cyano, Cyanoacetylene, Cyanoallene, Cyanobutadiynylidene anion, Cyanoformaldehyde, Cyanomethanimine, Cyanomethyl, Cyanotetraacetylene, Cyclopropenone, Cyclopropenylidene, Ethyl Cyanide, Ethylene Glycol, Formaldehyde, Formamide, Formic Acid, gauche-Ethanol, Glycolaldehyde, Heptatriynenitrile, Hexatriynyl, Hydrogen Cyanide, Hydrogen cyanide, Hydroxyl, iso-propyl cyanide, Ketene, Mercapto radical, Methanimine, Methanol, Methyl Acetylene, Methyl Formate, Methylamine, Nitric oxide, Nitric sulfide, Octatetrayn, Phosphorus Monoxide, Potassium cyanide, potassium isocyanide, Propadienylidene, Propadienylidene, Propargyl cyanide, Propenal, Propylene Oxide, Propynal, Silanetetrayl , Sodium Cyanide, Sulfur dioxide, Thioformaldehyde, Thiopentatetraeynlidene, Thioxo, trans-Ethanol, Vinyl Cyanide, and Water.

2.2.6 VLBA/VLBI/HSA Science

The NRAO's VLBA system often observes across the C-band frequencies. As a result, loss of bandwidth from the 5 GHz WiFi systems will result in the inability to observe with the VLBA, VLBI, and HAS networks at these frequencies.

2.3 6 GHz WiFi

2.3.1 Introduction to the 6 GHz WiFi System

The U.S. 6 GHz WiFi bands cover from 5.925-7.125 GHz in 20, 40, 80, 160, and 360 MHz bandwidth channels, depending on the system configuration.

³ <https://splatalogue.online>



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2.3.2 Pulsar Science

This is not a common band for pulsar searches but is used occasionally for pulsar/transients timing. Here is simply a loss in sensitivity due to the lost channels/frequency. The primary effect will be with C-band, which readily covers these frequencies. Assuming full use of the 6 GHz bands, this is a loss of 1.2 GHz out of a total of 3.8 GHz in bandwidth, providing a decrease in sensitivity by 31.6% or a 63.2% increase in the time needed to reach the same sensitivity. If instead the bandwidth is limited to a 360 MHz set of channels, which should be feasible, the loss in sensitivity is then 8.4% or a 16.8% increase in the time needed to reach the sensitivity achieved without this bandwidth loss.

2.3.3 Fast Radio Bursts

See write-up for the 5-6 GHz range.

2.3.4 Continuum Science

The calculation here is the same is for pulsar observations. This, then is the same loss in sensitivity of 31.6% or a 62.3% increase in the time needed to reach the same sensitivity.

2.3.5 Spectral Lines

There are 3,096 spectral lines with rest frequencies that lie within this WiFi band, representing 74 species. The table in Appendix E show which lines lie within this frequency range, according to Splatalogue⁴. Note that all lines redshifted into this frequency range will also be affected. Note, too, that we have received past proposals to observe some of these lines, particularly for astrochemistry.

The lines here cover a wide variety of atomic and molecular species, including recombination lines of Carbon, Helium, and Hydrogen and spectral lines from Acetaldehyde, Acetic Acid, Aminoacetonitrile, Ammonia, Benzonitrile, Butadiynylformyl, Cyanamide, Cyanic acid, Cyanoacetylene, Cyanoallene, Cyanoformaldehyde, Cyanomethanimine, Cyanomethyl, Cyanomethylene, Cyano-propadienylidene, Cyanotetraacetylene, Cyclopropenone, Cyclopropenylidene, Dimethyl ether, Ethyl Cyanide, Ethylene Glycol, Ethylene Oxide, Ethynyl, Formaldehyde, Formamide, Formic Acid, gauche-Ethanol, Glycolaldehyde, Heptatriynenitrile, Heptatriynylidyne, Hexatriynyl, Hexatriynylformyl, Hydrogen Cyanide, Hydrogen Isocyanide, Hydroxyl, Isocyanic Acid, iso-propyl cyanide, Ketene, Ketenimine, Methanol, Methoxymethanol, Methyl Cyanide, Methyl Formate, Methyl Mercaptan, Methylamine, Methylcyanodiacetylene, Methyltriacetylene, Nitric oxide, Nitric sulfide, Nitrosyl hydride, Octatetrayn, Phosphorus Monoxide, Potassium cyanide, potassium isocyanide, Propargyl cyanide, Propenal, Propylene Oxide, Propynal, Silanetetrayl-Propadienylidene, Silicon Carbide, Silicon tetracarbide, Sodium Cyanide, Sulfur Dioxide, Thioformaldehyde, Titanium dioxide, trans-Ethanol, Vinyl Alcohol, Vinyl Cyanide, and Water. This also includes the OH maser emission lines at 6.031 and 6.035 GHz.

2.3.6 VLBA/VLBI/HSA Science

The NRAO's VLBA system often observes across the C-band frequencies. As a result, loss of bandwidth from the 6 GHz WiFi systems will result in the inability to observe with the VLBA, VLBI, and HAS networks at these frequencies. It should be noted that within the potentially lost spectral lines is the Methanol

⁴ <https://splatalogue.online>



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(C₃OH) and OH Maser lines at 6.7 and 6.031/6.035 GHz, respectively. Both of these are common lines to observe with VLB techniques, both near their rest frequencies and at significant redshifts.

3 WIFI AT GBEMS

3.1 Past Use of a 2.4 GHz WiFi Router at GBEMS

In 2019 GBEMS was given an exception to allow a single 2.4 GHz WiFi router in the school due to a student's health needs. This allows us to compare the radio spectrum during times when the router was off and on. Unfortunately, (a) the school often did not follow protocol and the router was left on in the evenings and on weekends, and (b) there is only one RFI scan taken at a time school was in session and the router was definitively turned on. As there is no good record of when the router was on, the best choice is to compare when the router was definitively off (before August, 2019) to when it was definitively on (Sept 27, during school hours).

It should be noted, too, that this system was designed to reach across only one classroom. A school-wide system may need more power and would require additional channels/frequencies and transmission locations to function across the school. Additionally, far more devices would be attached to the system, greatly increasing the average power seen across the band.

In the following figures you can clearly see the effects of the GBEMS router well above any other WiFi servers in the area. This is likely due to the proximity and direct line of sight from the GBEMS router to the GBT. Note, too, that this is the effect of just one router at GBEMS, designed to serve one classroom, and with one device connected to it. The effects of multiple routers, required to serve the entire school, as well as the systems connecting to them, would be significantly greater than what is seen here. For a quick calculation, we can assume the power responds linearly we can if we assume N routers at GBEMS the signal strength would be roughly N times greater than what was measured here. This, then is only for the routers; laptops and other devices would have to be treated similarly.

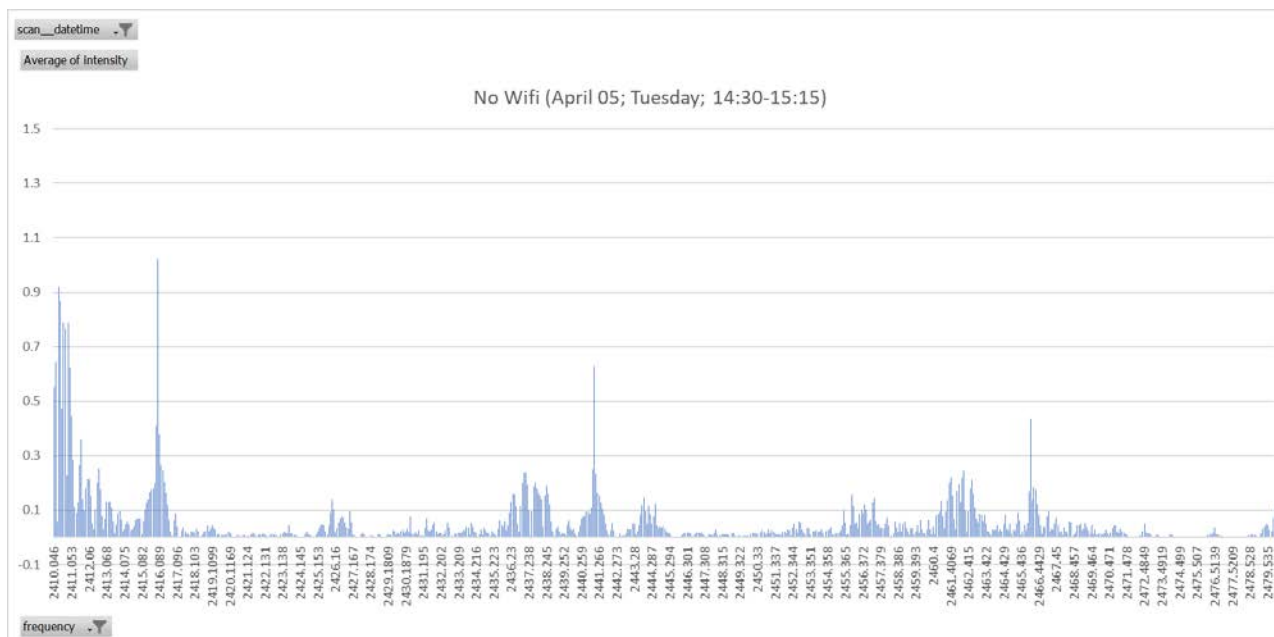


Figure 1. No WiFi: One day comparison (weekday, similar times)

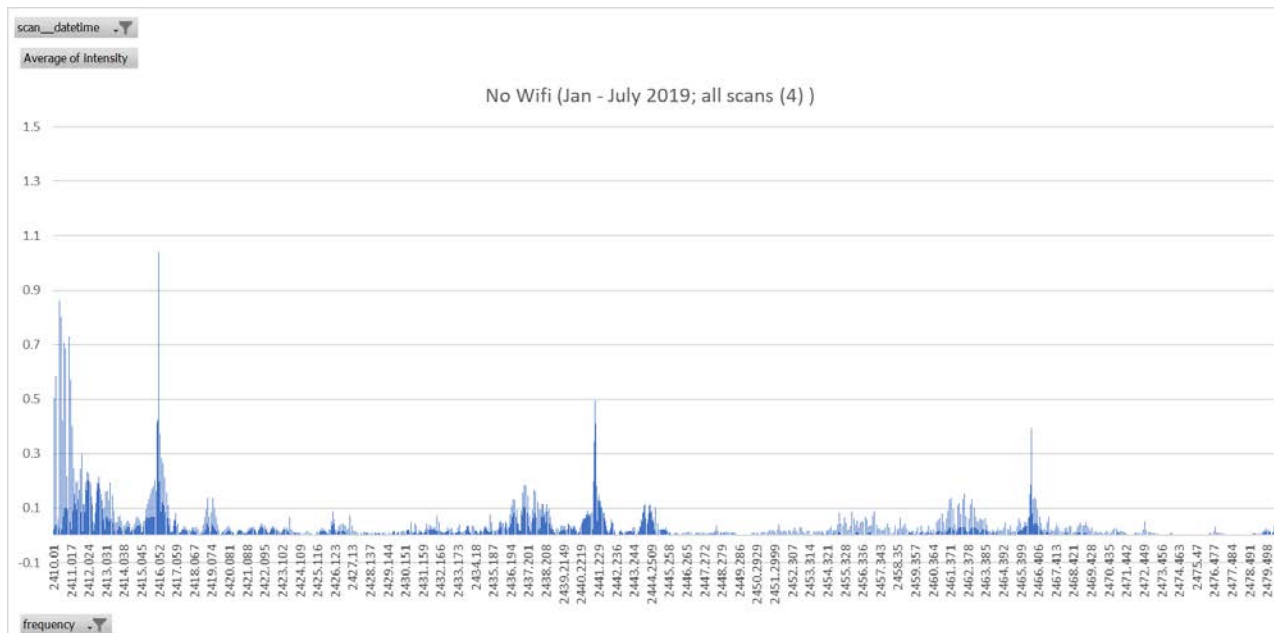


Figure 2. No WiFi: Multi-day comparison (all RFI scans prior to installation of WiFi router)

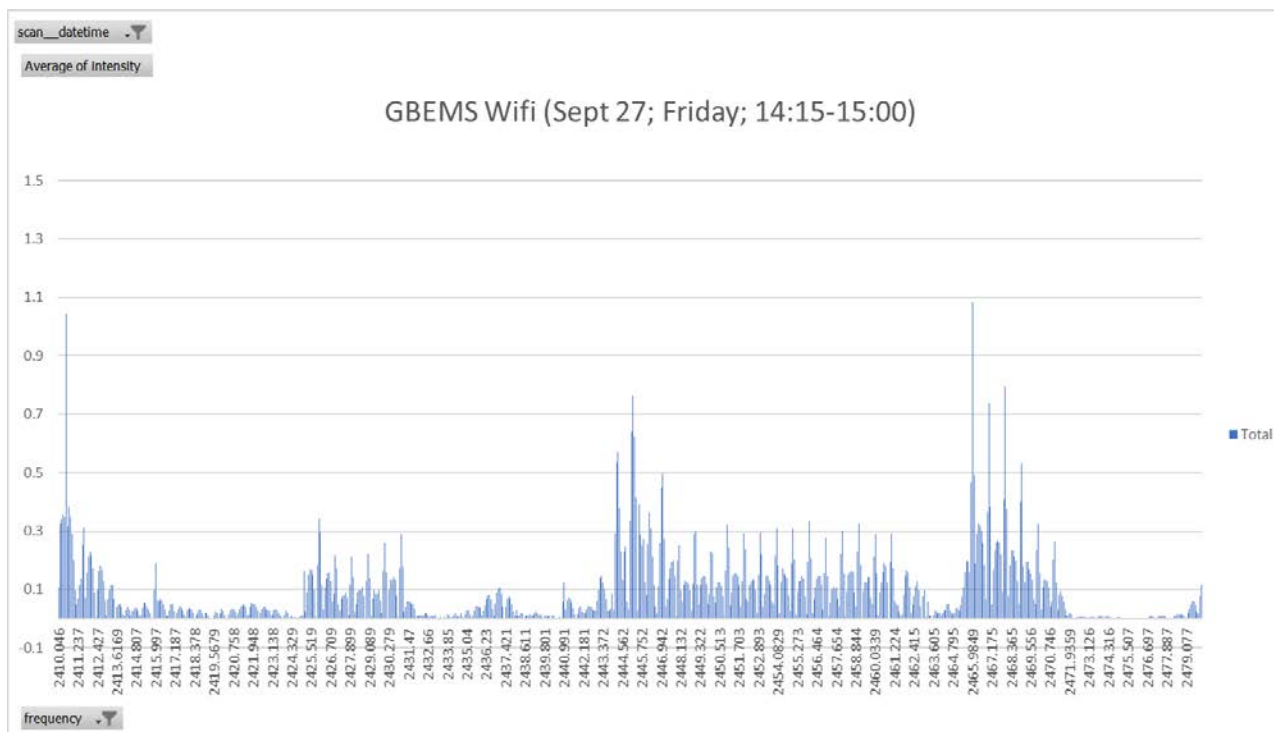


Figure 3. RFI scan on day WiFi at GBEMS was turned on.



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3.2 Testing a 5 GHz router at GBEMS

On August 16, 2023 Extreme Networks brought a 5 and 6 GHz configurable WiFi route to GBEMS to allow for testing of the system on the school network. The day was not ideal for testing with the GBT, as we had only the C-band receiver available, other routine maintenance activities (track work) were taking place, and most importantly, the GBT was fixed to 22.5 degrees in azimuth. Additionally, there were only at best a few devices connected to the various WiFi channels tested. Nonetheless we obtained GBT data across the 5 GHz WiFi spectrum before and during the testing. A brief timeline of the tests, as well as the hardware configuration, are given in Appendix B. (Note that no other monitoring antenna was available at Green Bank during this time.)

It is important to note that any signal seen with the GBT during these tests is a minimum of what would be seen if 5 GHz WiFi is installed at GBEMS. This is because:

- The GBT was turned directly away from the school. We placed the elevation at 60 degrees to increase the probability of catching a signal in the sidelobes, but it is unlikely that occurred. Instead, what signal is seen is likely being scattered off the telescope. As a result, it is difficult to know what the power levels would be if the telescope were in fact facing the school, and further tests would be required to determine that. However, a rough estimate would be the signals seen are going to be a factor of 25 to 30 dB lower in power than if one could point the GBT directly at the source, roughly the sidelobe level -27 dB from sub reflector diffraction (S. White; private comm.)
- There were at most 4 devices connected to the WiFi system and typically just 1 or 2 devices. If this system is deployed it would have of order 300-900 devices attached to it any time⁵. With 20 separate channels available, it can be assumed that each channel will have between 15-60 devices attached to it, on average (assuming 15-20 students for each classroom). This will result in two changes compared with the tests – the total power levels of the detected signals will rise, and the occupation of the band will be completely occupied rather than the small portion of the band in use for this experiment.
- We looked only at the results from a single channel. If this system is deployed in the school, it will use all 20 available 5 GHz channels, which cover from 5.15-5.35 GHz and 5.735-5.895 GHz. It is expected that entire .365 GHz will be fully occupied.

Appendix B show the results across all 5 GHz channels for the tests, while Figure 4 shows the results of the tests for just channel 165 (both XX and YY polarizations). In all cases each row of data is 1 minute (averaged), and the intensity range is kept the same across all plots. It is clear from these tests that a 5 GHz router system for GBEMS would cause a significant increase in RFI across the 5.15-5.35 GHz and 5.735-5.895 GHz bands. The staff from Extreme Networks have stated it is possible to turn the power down “up to” another dB below what was used for these tests. If so, then the best-case scenario is that when the

⁵ Basis for estimate: (1) GBEMS principal stated that every child in the school, from pre-K through 8th grade, would be connected to the network as well as all teachers and staff (224 students in K-8th, 20 students in pre-K, 37 staff, for a total of 281 people daily + another 20% visitors). Additionally, while the school states “most” people would be limited to 1 device per person, their consulting company has stated that in the schools you should assume an average of 3 devices per person. This then leads to the estimate of 300-900 devices connected to the routers.

telescope is facing away from the school, at the same position as it was for the tests, the noise level should be approximately the same as what is seen in the lower power tests, albeit with the entire frequency range fully occupied. If, though, the telescope is facing the school, the detected power will likely increase many fold, as noted above. Finally, it is important to note that the increased noise created by the Wi-Fi system is not Gaussian and cannot be reduced through increased integration time on the telescope. It should instead be considered a noise floor for any observation within those frequency bands. Additionally, we would need to assume full occupancy during all times the system is on, which will disallow any recovery of the uncontaminated data.

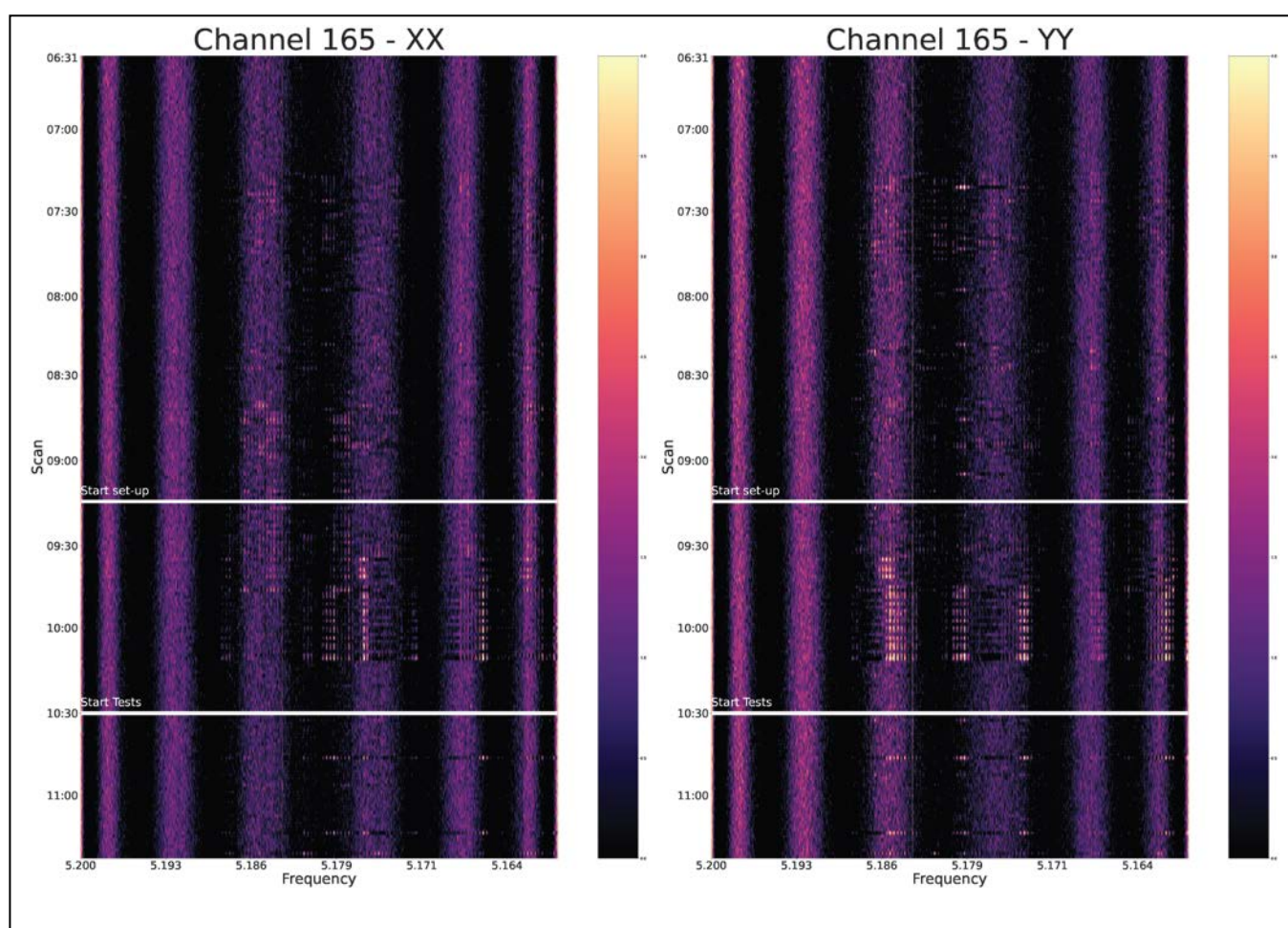


Figure 4. (Top) Waterfall plots showing the spectrum across channel 165. Here you can see the start=up and configuration of the channels, followed by times when there were devices connecting to (and using) the WiFi system.

3.3 Testing a 6 GHz router at GBEMS

The day of the 5 GHz WiFi testing at GBEMS, Extreme Networks also brought and installed a 6 GHz router. Unfortunately, we were unaware that the router would be brought for the tests and did not have the



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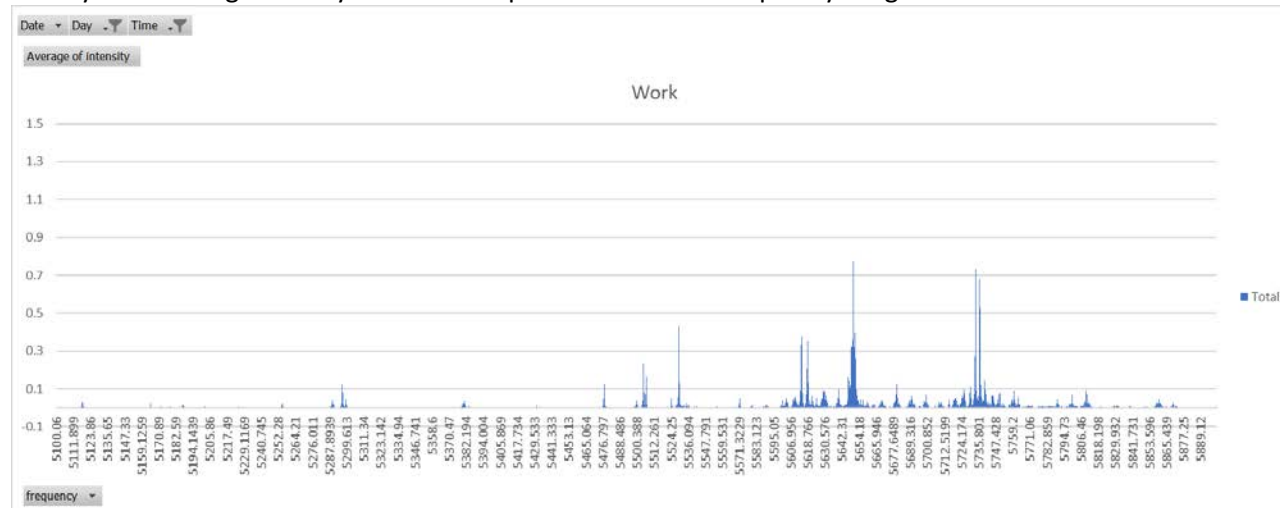
telescope configured to take data with it until near the end of the test period. Additionally, the channel spacing for those tests were insufficient, as the channel spacing effectively oversmoothed the data, removing the carrier signal. As a result, no information was gained from these tests.

4 EXISTING WIFI IN THE 5 AND 6 GHZ BANDS

Using the GBT's RFI GUI we can look at the current state of the 5 and 6 GHz bands, to determine if a new WiFi system would have an effect on the science. Here all data is taken over a 12-month period, from 01 June, 2022 through 30 May, 2023. The vertical axis is kept the same as for the previous section, and Work hours are set to match school hours (8am-3pm, Monday through Friday) while non-work hours are simply the weekends.

4.1 5 GHz Band

The 5 GHz band shows already some use of the spectrum, but that use appears to be very limited and not confined to school hours. Some of these signals are WiFi, and many appear to be simply carrier signals. None of these systems have any exceptions on file, and it is highly likely we could request the systems be turned off with little or no impact on the community. Note, too that it is possible some of what is being seen is signals from the amateur radio band (5.6-5.925 GHz) or other services that also fall within this frequency range. While it is difficult to know the effects of a new system on this spectrum, it is likely a new system will significantly increase the power levels and frequency usage of RFI seen.



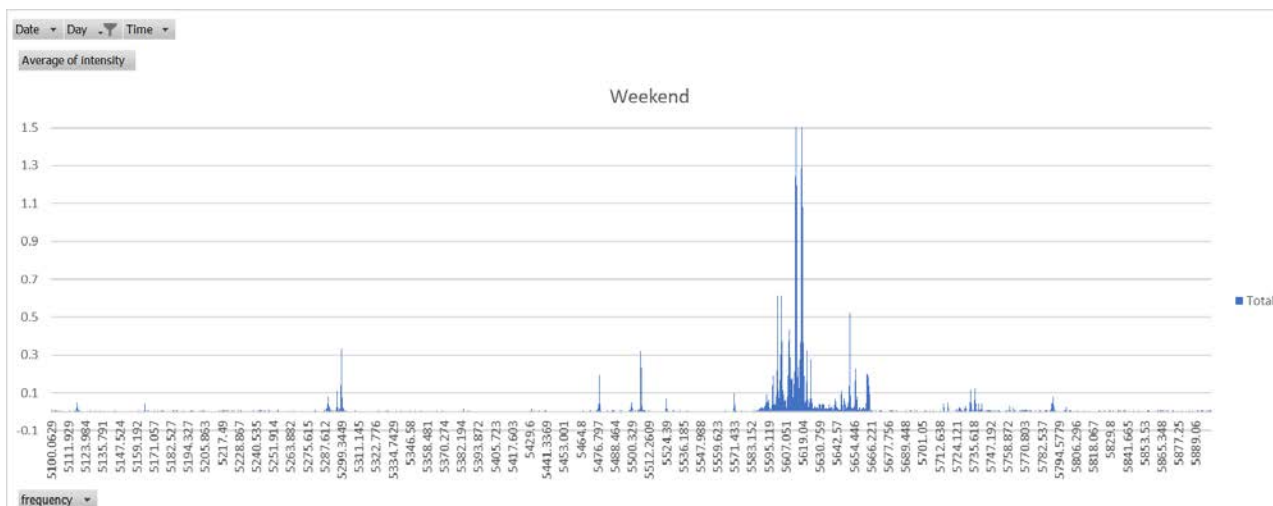
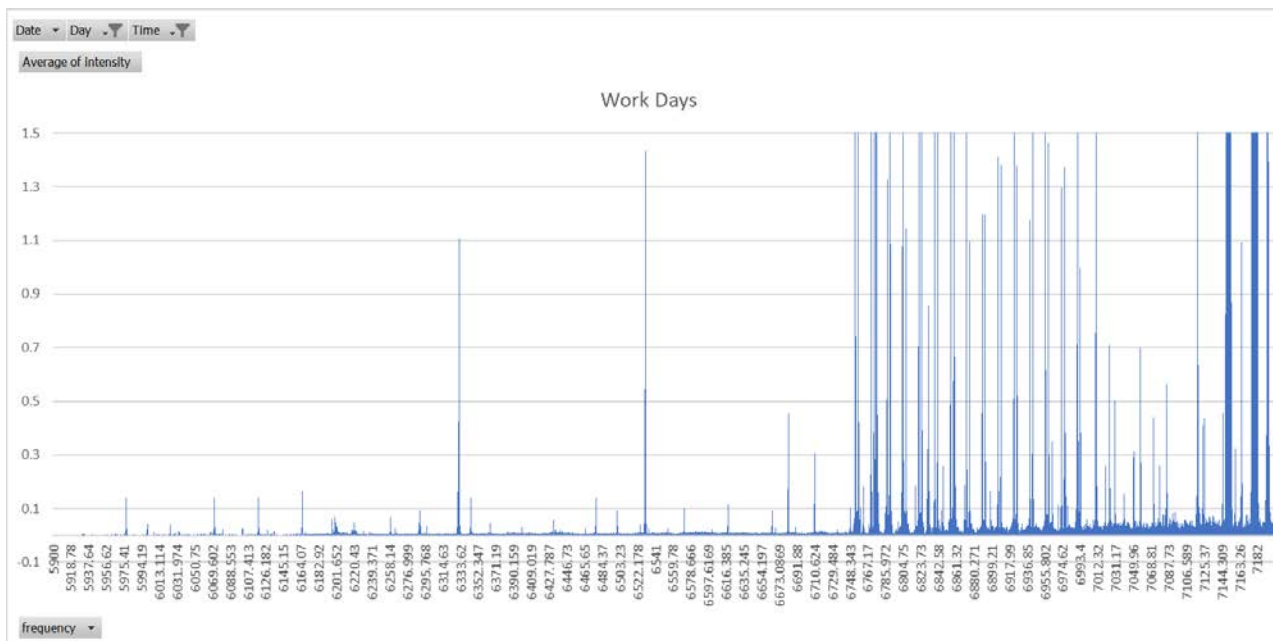


Figure 5. RFI in the 5 GHz WiFi Band from 01 June 2022 through 30 May 2023.

4.2 6 GHz Band

The 6 GHz band shows already some use of the radio spectrum, but that use appears to be very limited and again not confined to school hours, although here there is a light decrease in some usage on the weekends. While it is difficult to know the effects of a new system on this spectrum, it is likely a new system will significantly increase the power levels and frequency usage of RFI seen. Here, too, it is difficult to know what, if any, of the RFI seen is the result of a 6 GHz WiFi system, particularly as there are potential other unlicensed users in this band and this is a common band for satellite communications.



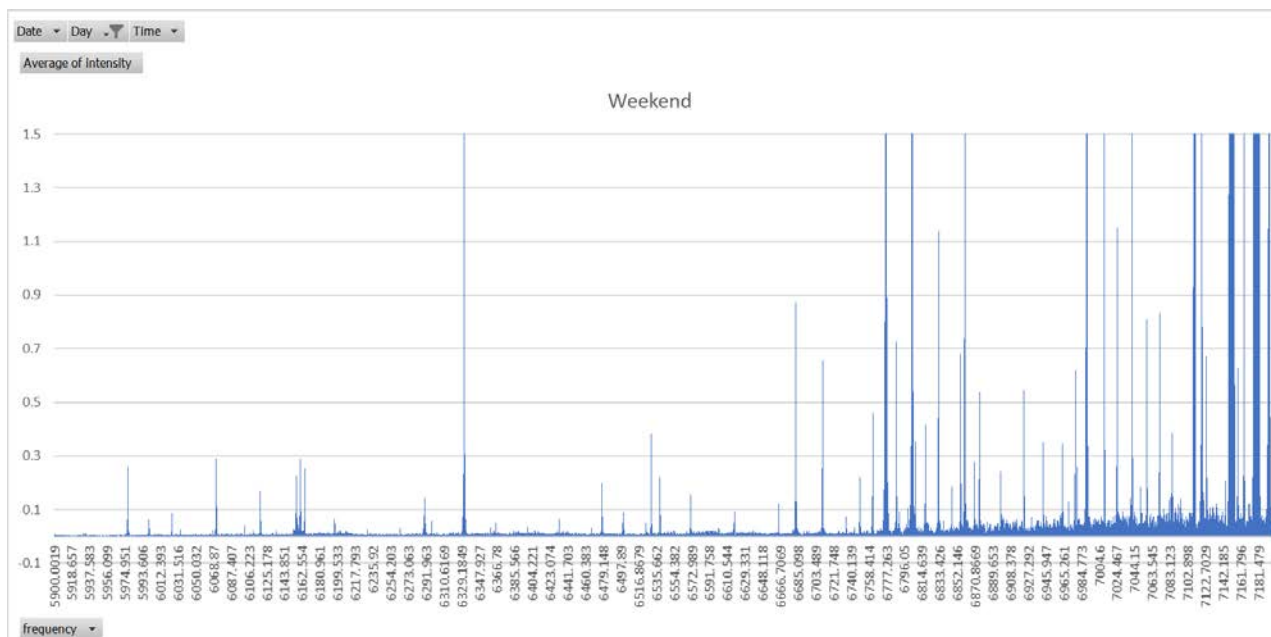


Figure 6. RFI in the 6 GHz WiFi Band from 01 June 2022 through 30 May 2023.

5 OTHER CONSIDERATIONS

The last two sections describe the direct consequences of using a WiFi router at the Green Bank School. Here I describe of number of the other potential consequences that could affect the scientific output of the Green Bank Observatory.

5.1 Reasonable Accommodation

All exemptions so far granted to the WVRAZ and NRQZ have been after an exhaustive search for reasonable accommodation. Green Bank Observatory staff have worked closely with the affected parties to search for reasonable solutions. In most cases, solutions have been found which work for both parties, and the radio quiet zone protections have been maintained. This has not yet taken place with GBEMS. While solutions have been discussed with individual staff, there has been no serious attempt and finding a solution that could work while still protecting the quiet zones. Allowing for a potentially very disruptive system to be put in place with no attempts at first looking for solutions which can meet everyone's needs sets a dangerous precedent for future accommodation requests.

5.2 Non-Emergency Use of the Spectrum

In the few cases where accommodation has not been found which protects the quiet zones, exceptions have only been allowed when not doing so could potentially negatively affect the health and/or safety of



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others. Examples of these exceptions include WiFi at the Green Bank Clinic and the aforementioned temporary WiFi at GBEMS for the safety of an individual student.

Putting WiFi at GBEMS for reasons other than health and safety open for all community organizations and businesses to request such an accommodation for an/all devices that cause potential interference. Any reason given for GBEMS for running their WiFi must be given to all other organizations and individuals with a similar reason, regardless of the frequencies required by that group. As currently the primary reason is ease of operation at the GBEMS, any business or individual could say much the same.

5.3 Difficulty in Ensuring Compliance

While the idea of offering a WiFi system at GBEMS sounds straightforward, there are many considerations in terms of compliance that must be considered.

Most WiFi routers already offer service at more than one frequency, offering both 2.4 GHz and 5 GHz. 6 GHz and tri-band routers are also readily available, and the commercial community is continuously looking to expand into additional frequencies. As equipment laptops, and other personal devices are modernized at GBEMS the school will naturally, and quite possibly unintentionally, expand to use these other frequencies, contaminating an ever-increasing portion of the radio spectrum.

Additionally, most members of the general public do not understand the differences and RFI implications of difference devices. As a result, it is highly likely that staff and students will not understand that use of Bluetooth and other devices would fall outside of any allowed use at the school. Additionally, with students being allowed devices there will be non-compliance issues.

One of the largest challenges for the Observatory's Interference Protection Group is ensuring compliance to the rules and regulations of the WVRAZ and NRQZ. As a result, it is unlikely any of the above violations of our agreement would be known until observers provide notification that their data has been corrupted. Note, too, that past experience with GBEMS has shown that the staff often do not understand the RFI implications of their devices and hardware and often even if they are aware that there is an issue, they lack the proper authority and passwords to fix the issue. As a result, it can take days or even weeks to resolve a problem and allow science to proceed.

5.4 Community Reputation

The current line the Green Bank Observatory states is that devices using radio waves are prohibited in the area unless the device does not cause interference and/or the health and safety of an individual is involved. As a result, many businesses and organizations have spent significant time and money to ensure compliance with the WVRAZ and NRQZ. Allowing one organization to bypass this, particularly an organization as public-facing as GBEMS, will raise open the door for the community members and businesses to feel they, too, have the right to bypass the quiet zone regulations. In the majority of the cases, this will not be done by consultation with the observatory but instead by personal decision. Green



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Bank lacks the personnel to monitor and deal with the current violations of the WVRAZ and NRQZ; this will make the situation significantly worse.

5.5 Future Hardware and Spectrum Use

The use of the radio spectrum is ever increasing and our ability to effectively monitor its use continues to degrade in proportion to this increased use. If granted, the exception being considered for GBEMS will need to adapt and change as technology needs and desires of the school system changes. As a result, this should not be considered only an exception for the 2.4 GHz WiFi system and its associated devices, but also an irreversible license for GBEMS to use whatever new wireless technology emerges, regardless of the frequencies or bandwidth required.

Schools do not choose their devices and technologies. Those are chosen by the county and the state. Currently GBEMS is considered an exception due to the regulations of the WVRAZ. If this regulation is lifted, that exception will also be lifted and our mutual ability to limit the frequency usage by the school will be severely limited or gone altogether.

5.6 Effect on the Legal Standing of the WVRAZ

If GBEMS is going to be given an exception to the WVRAZ regulations due to reasons other than health and safety ("life and limb") in spite of demonstrated interference to observations, legal advice should be sought to determine what impact this could have on the legal standing of the WVRAZ. That is, is allowing one organization to use a frequency for reasons other than health and safety voiding the terms of the WVRAZ? This question should be answered legally, as has been done for other such exceptions (the "life and limb" exception as a good example). Note that Green Bank Observatory no longer has a spectral frequency legal advisor. As a result, one would need to be sought and given the opportunity to learn the legal side and history of the WVRAZ and NRQZ in advance of determining the answer to this issue.

Note, too, that Green Bank Observatory site RFI rules and regulations should also be revisited if this change is made and GBEMS is given an exemption for WiFi.

5.7 Loss of Spectrum for Future Use on the Site

The NRQZ and WVRAZ have been entrusted to Green Bank Observatory to protect and preserve for present and future science. The combined power of the radio quiet zones is why Green Bank Observatory still exists and why scientists still look to this site when considering locations for their antennas. Protection for the quiet zones should be considered across the entire radio spectrum, as the purpose of the quiet zones is to protect for current and future use of the site, not just the impacts on today's science. Once spectrum is lost it is not regained, regardless of the science that might come from that frequency range. Intentional degradation by Green Bank Observatory of the quiet zone protections should simply not take place.



Title: WiFi at GBEMS	Author: O'Neil	GBT Memo Series
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6 SUMMARY RECOMMENDATION

We strongly recommend against allowing for WiFi within the GBEMS school.

Green Bank has worked closely with GBEMS in the past, including wiring the network in the schools 20+ years ago and helping with the network and computing issues, as permitted by school administration. Given time and a willingness to work with Observatory staff it is likely a solution can be found that meets the school's educational needs while causing little to no interference to Green Bank Observatory science. We strongly recommend that a team be put together to work with GBEMS, the Pocahontas County BoE Technology Director, and, if desired by the Board of Education, the West Virginia Technology Officer or his representative to explore the needs of the school and find solutions that do not harm the Observatory.

Additionally, we strongly recommend we work within the community to turn off all 5 GHz WiFi systems in the region. This should be a completely clean band, as there are alternatives to running 5 GHz readily available. We also need to renew our work with GBEMS to turn off the few 2.4 GHz WiFi systems that are currently on and not in use, an activity which used to take place annually.

Finally, Green Bank Observatory has had past requests by community members to get cellular telephone towers in the area, citing the needs for these towers to allow for health monitoring systems to readily make 9-1-1 calls. In a similar vein, many requests have been made stating the need for cell towers, microwave links, and home routers to improve the educational opportunities of students, both home-schooled students and those doing schooling at home due to snow days, family circumstances, illness, and homework. Opening up GBEMS to have WiFi will renew the community calls for all other wireless devices, and make it extremely difficult to preserve the radio spectrum at Green Bank. If GBEMS is allowed a WiFi system, the site RFI policy must be rewritten to both allow for this exception and to make it clear when RFI producing devices are and are not allowed. Before being implemented, the new policy should be run past a legal team with an understanding of the consequences of this change to the radio quiet zone protections.

As a final note, if Green Bank Observatory wishes to continue to pursue the implementation of WiFi at GBEMS, we strongly recommend running a far more accurate and comprehensive series of tests in advance of deployment of the system. For these tests the GBT should be allowed full motion and should have the C-band receiver installed, and a *minimum* of 30 devices should be connected to the WiFi router at a single channel, and all devices should be actively using the network during the entire test period.



Title: WiFi at GBEMS	Author: O'Neil	GBT Memo Series
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APPENDIX A. LIST OF 5 GHZ WIFI CHANNELS

Channel	Center Frequency	Freq Range [MHz]	Available in the US?
32	5160	5150–5170	Yes
36	5180	5170–5190	
40	5200	5190–5210	
44	5220	5210–5230	
48	5240	5230–5250	
52	5260	5250–5270	DFS/TPC ¹
56	5280	5270–5290	
60	5300	5290–5310	
64	5320	5310–5330	
68	5340	5330–5350	
72	5360	5350–5370	No
76	5380	5370–5390	
80	5400	5390–5410	
84	5420	5410–5430	
88	5440	5430–5450	
92	5460	5450–5470	DFS/TPC ¹
96	5480	5470–5490	
100	5500	5490–5510	
104	5520	5510–5530	
108	5540	5530–5550	
112	5560	5550–5570	
116	5580	5570–5590	
120	5600	5590–5610	
124	5620	5610–5630	
128	5640	5630–5650	
132	5660	5650–5670	
136	5680	5670–5690	
140	5700	5690–5710	
144	5720	5710–5730	
		5730–5735	No
149	5745	5735–5755	Yes
153	5765	5755–5775	
157	5785	5775–5795	
161	5805	5795–5815	
165	5825	5815–5835	
169	5845	5835–5855	Yes
173	5865	5855–5875	
177	5885	5875–5895	



Title: WiFi at GBEMS	Author: O'Neil	GBT Memo Series
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APPENDIX B. WIFI TESTS AT GBEMS ON 15 AUGUST, 2023

B.1 Timeline

Below is the approximate timeline for the tests undertaken at GBEMS on 15 August, 2023.

- 06:00 EDT: Scans started with GBT in file AGBT23B_998_04 with GBT set to 60 elevation and 22.5 Azimuth using the initial configuration set-up (below).
- 09:00 EDT: RFI truck parked by basketball court, soccer fields behind GBEMS. No 5 GHz WiFi signals seen
- 09:20 EDT: Set-up on the wireless routers began within GBEMS computer lab
- 10:30 EDT Routers set-up to use channels 36 and 165 on the 5 GHz WiFi system and 197 on the 6 GHz router
- 10:30 EDT: RFI truck moved to gate between GBEMS and GBO; two WiFi signals detected - channels 149+153 at -81 dBm (PROJ4b36c3) and channels 153+157 at -89 dBm (CommCare).
- 10:37 EDT: multiple devices connected to 5 GHz system (4 on 5 GHz, 3 on 6 GHz)
- 10:45 EDT: RFI truck moved back to soccer fields, signal still seen
- 10:45am EDT: switched to just channel 36 on 5 GHz router, with max power with total power 22.54 dBI. At this point we likely lost most devices which were connected. From here onward it is likely we had only 1-2 devices connected, both at 5 GHz.
- 10:53 EDT: Switched to 6 GHz channel 213 at power 32.2 dBI
- 10:55 EDT: RFI truck moved to barn behind school and lost signal
- 10:59 EDT: Lowered power for channel 36 to 15.02 dBI
- 11:00 EDT: Channel 213 (6 GHz) power lowered to 9.3 dBI
- 11:03 EDT: Added channel 64 (5 GHz) at 7.53 dBI
- 11:05 EDT: RFI truck travelled back to GBEMS
- 11:17 EDT: Stopped 5 GHz router, unplugged, moved down the hallway
- 11:20 EDT: RFI truck found two 5 GHz signals, both on channel 36 at -87 dBm – Deer Creek Clinic and unknown.
- 11:22 EDT: Restarted the 5 GHz router down the elementary wing (halfway down the hall). Still running channel 36 at 15.03 dBI
- 11:26 EDT: Switched GBT VEGAS configuration to also look at the 6 GHz WiFi channels; greatly increased the channel spacing
- 11:30 EDT: RFI truck left GBEMS property to look for 5 GHz signals; found additional signal but they were inconsistent with signals seen earlier
- 11:31 EDT: 5 GHz router turned off
- 11:45 EDT (or around then): 6 GHz router turned off. RFI truck stopped monitoring

B.2 VEGAS Configurations



Title: WiFi at GBEMS	Author: O'Neil	GBT Memo Series
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B.2.1 Configuration 1 (before 11:26am EDT):

```

receiver = 'Rcvr4_6'
beam='B1'
obstype = 'Spectroscopy'
backend = 'VEGAS'
nwin = 8
restfreq = 4975, 5125, 5275, 5425, 5575, 5725, 5875, 6025
deltafreq = 0, 0, 0, 0, 0, 0, 0, 0
bandwidth = 187.5
swmode = "tp"
swtype = "none"
swper = 1.0
swfreq = 0,0
tint = 1.0
vlow = 0.0
vhigh = 0.0
vframe = "topo"
vdef = "Radio"
pol = "Linear"
noisecal = "lo"
nchan = "high"

```

B.2.2 Configuration 2 (after 11:26am EDT):

```

receiver = 'Rcvr4_6'
beam='B1'
obstype = 'Spectroscopy'
backend = 'VEGAS'
nwin = 8
restfreq = 5000, 5500, 6000, 6500, 7000, 5750, 6250, 6750
deltafreq = 0, 0, 0, 0, 0, 0, 0, 0
bandwidth = 1080
swmode = "tp"
swtype = "none"
swper = 1.0
swfreq = 0,0
tint = 1.0
vlow = 0.0
vhigh = 0.0
vframe = "topo"
vdef = "Radio"
pol = "Linear"
noisecal = "lo"
nchan = "high"

```



Title: WiFi at GBEMS	Author: O'Neil	GBT Memo Series
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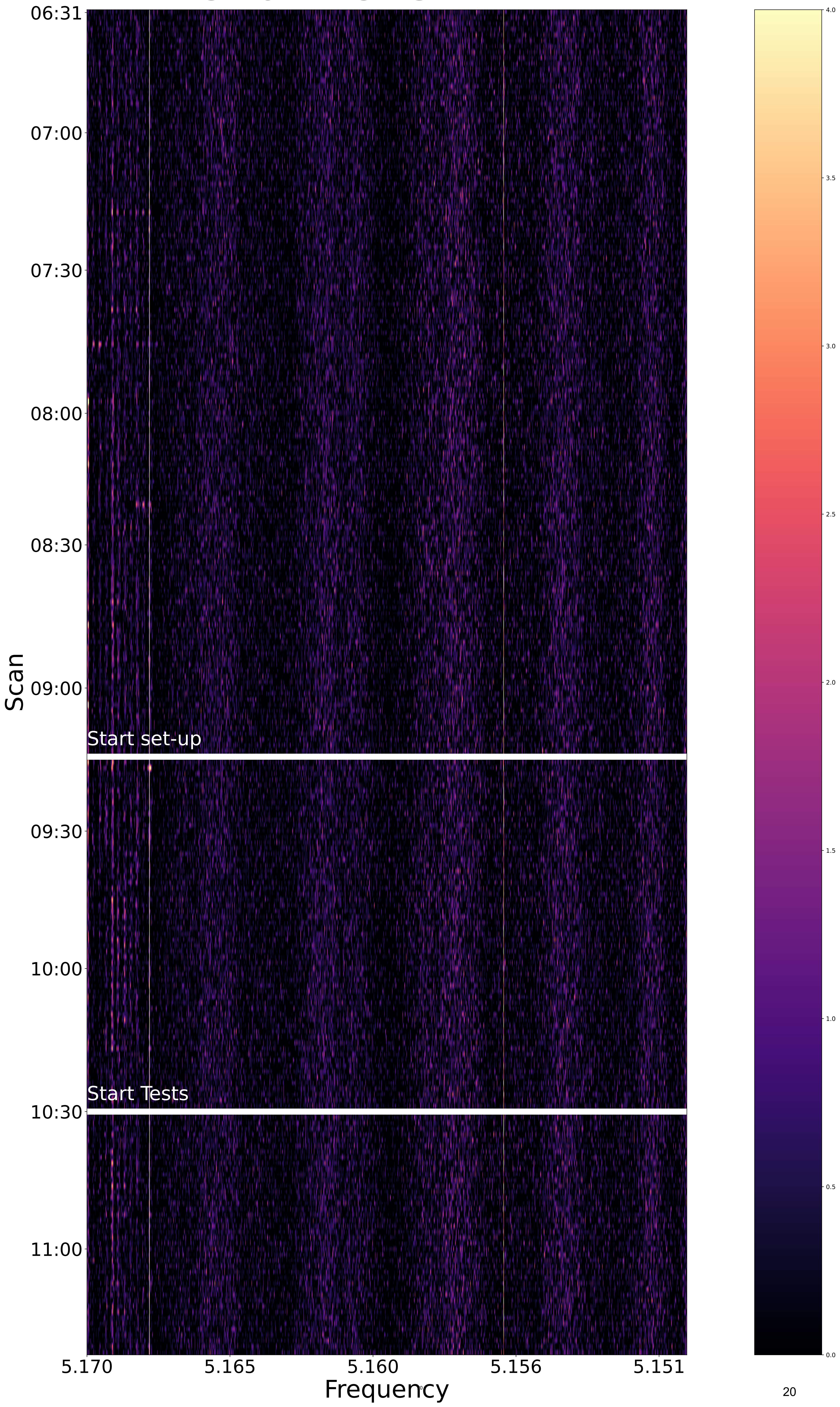
B.3 Results from the tests

The next series of plots show the results from the WiFi tests across all 5 GHz channels. In many of the channels it is clear we have an extremely clean band, and the addition of a 5 GHz WiFi system would be quite disruptive. There are, though, a few channels where there is clear usage of 5 GHz WiFi outside of the tests undertaken. Here we strongly recommend that we work within the community to minimize or even remove all 5 GHz WiFi usage and return the band to a clean spectrum.

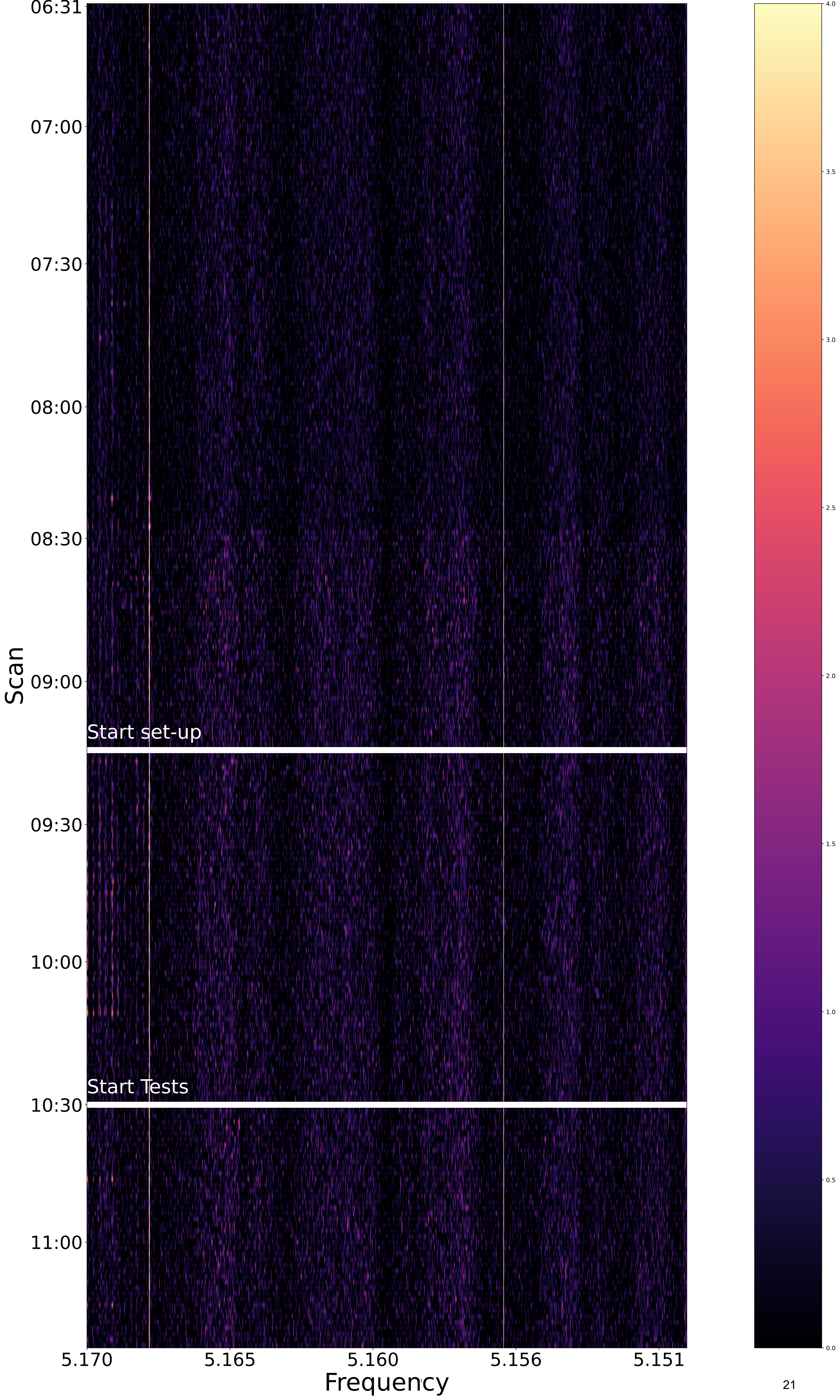
All figures show one minute averaged spectra, and all are on the same scale (of counts).

Description	Channels
Clean Band, no testing in the band	32, 56, 60, 64, 68, 96, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 169, 173, 177
Almost clean band, clear evidence of testing	161, 165
Band usage (partial) from the community, starting at 7 or 8am; Not used for tests	36, 40, 44
Band usage (partial) from the community, clear evidence of tests	149, 153, 157
Band usage (partial) from the community, always on, and quite strong. Major event between 10:30-11:00am (possibly from tests)	48, 52

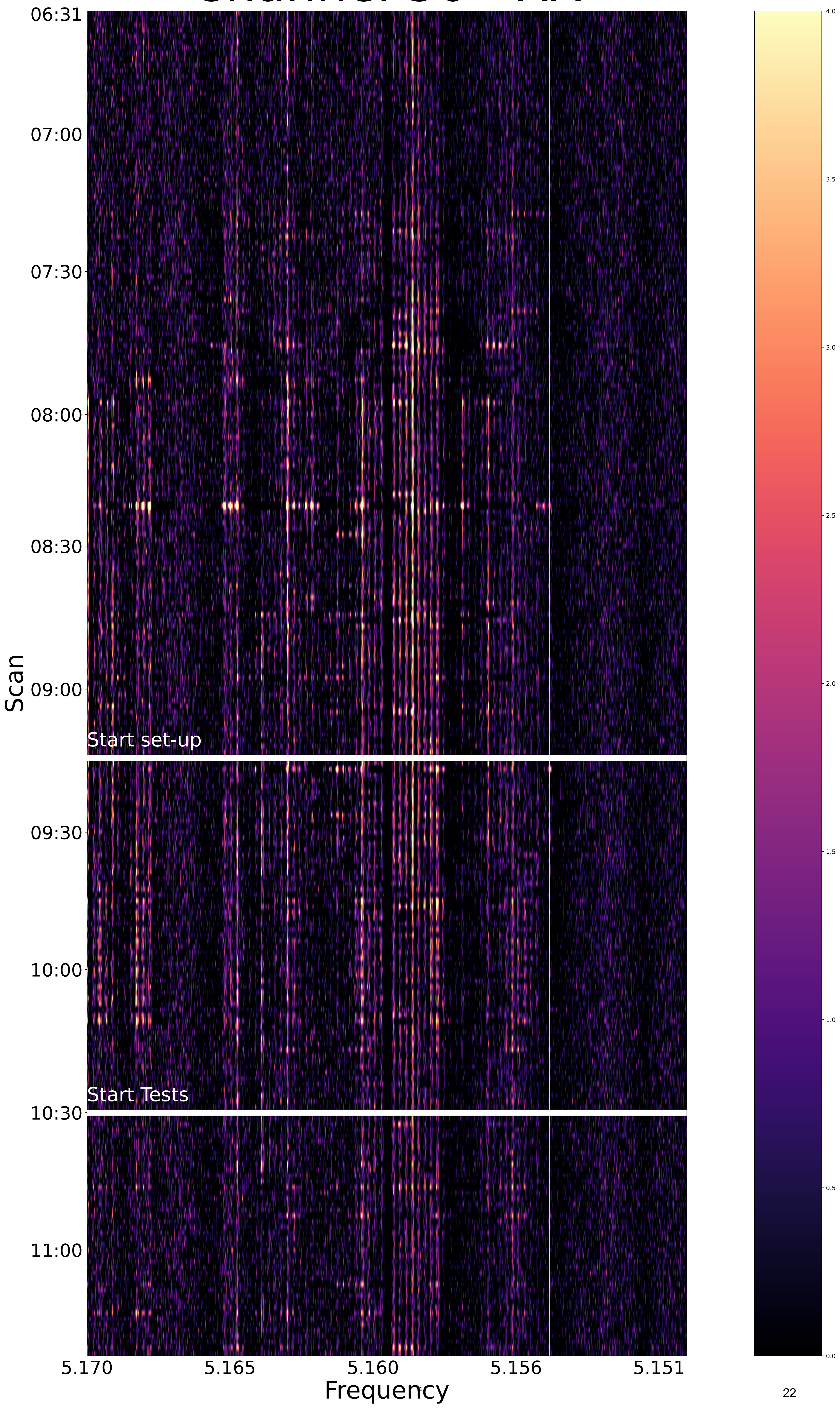
Channel 32 - XX



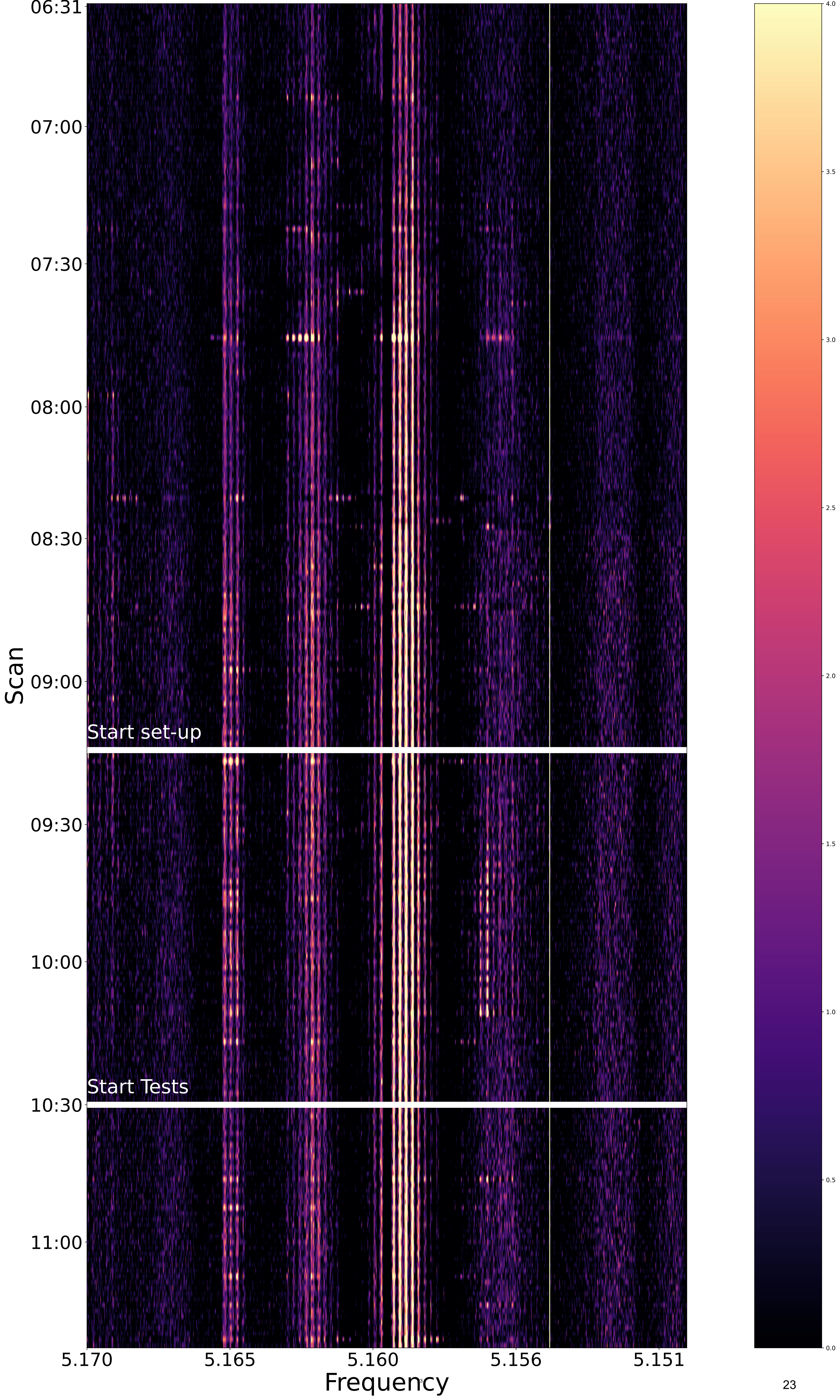
Channel 32 - YY



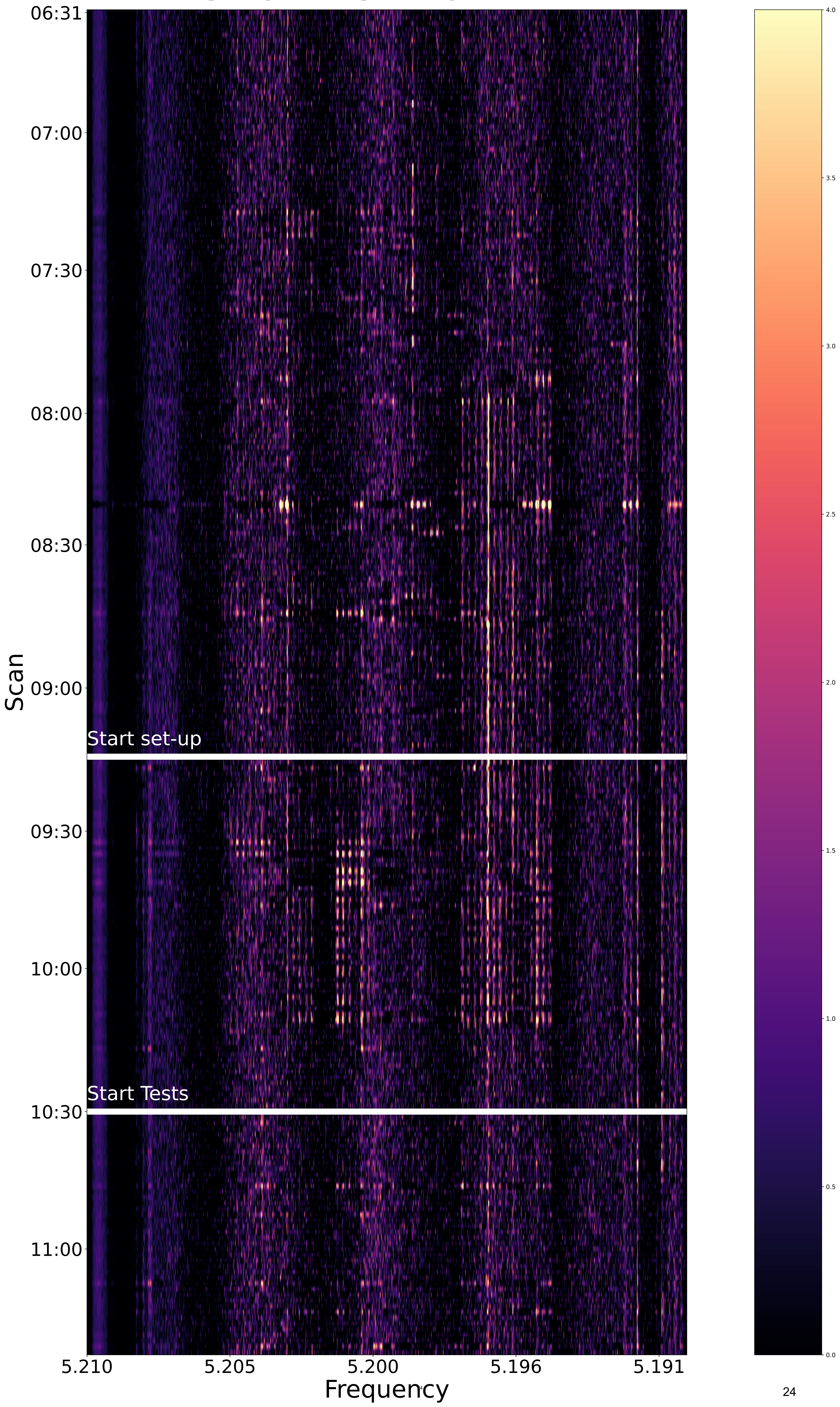
Channel 36 - XX



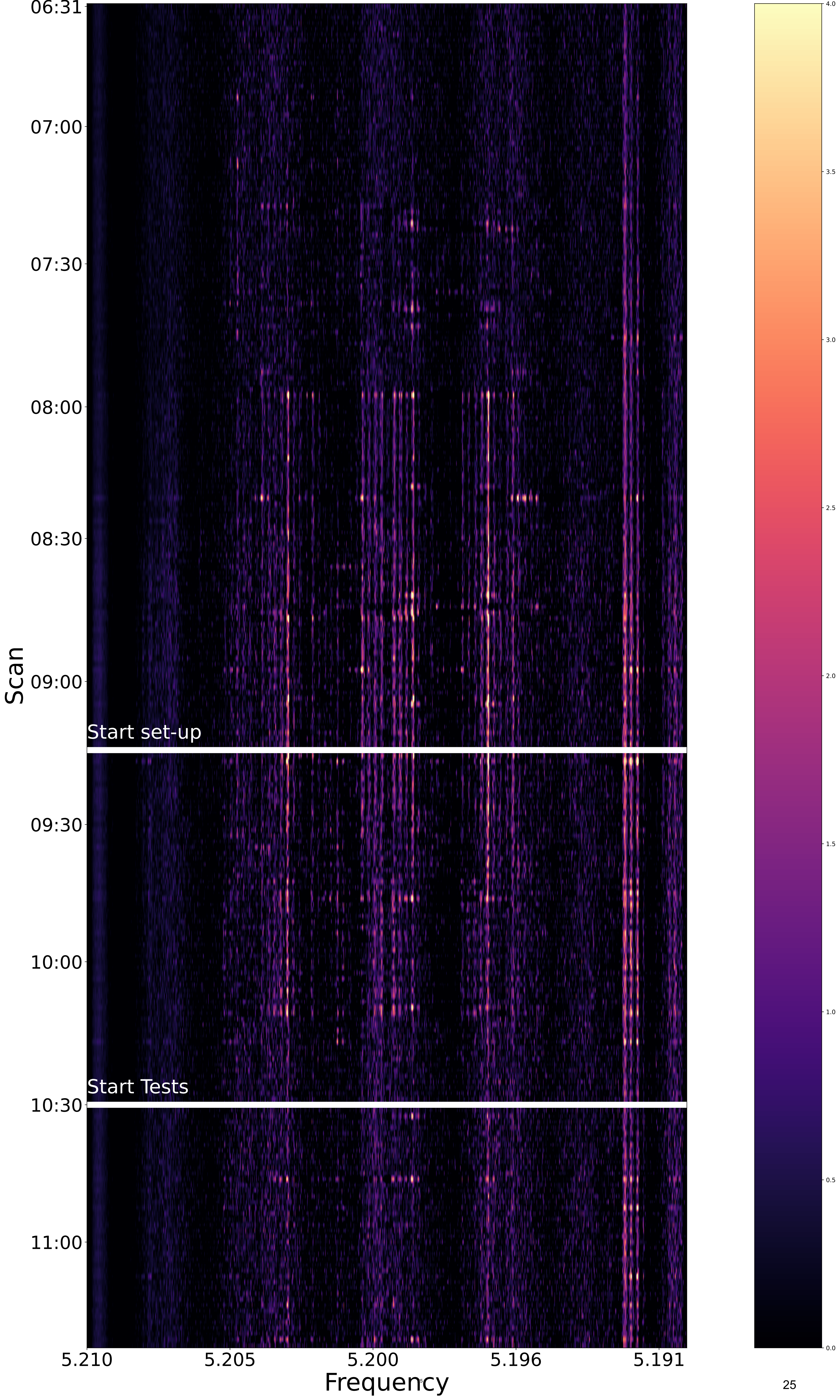
Channel 36 - YY



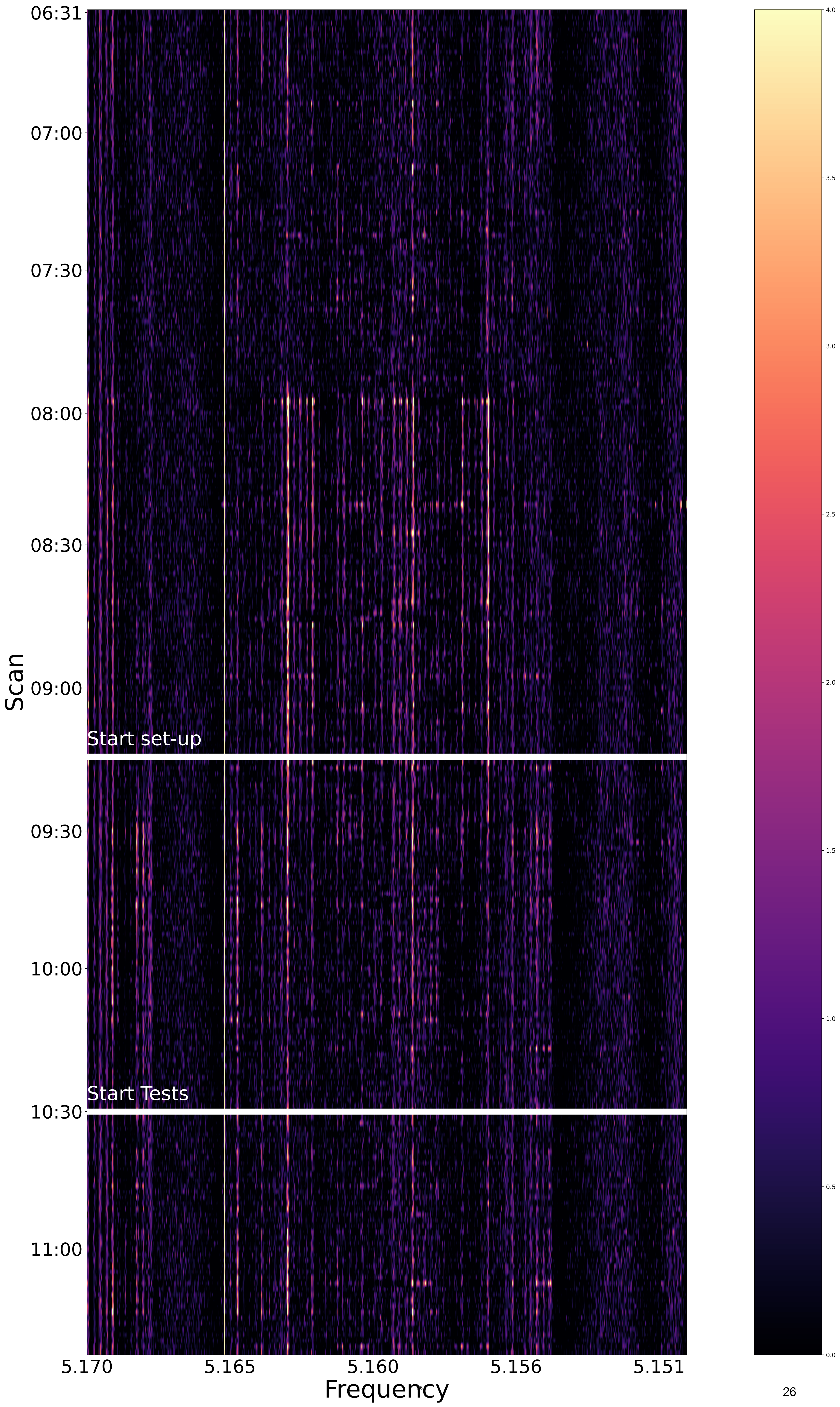
Channel 40 - XX



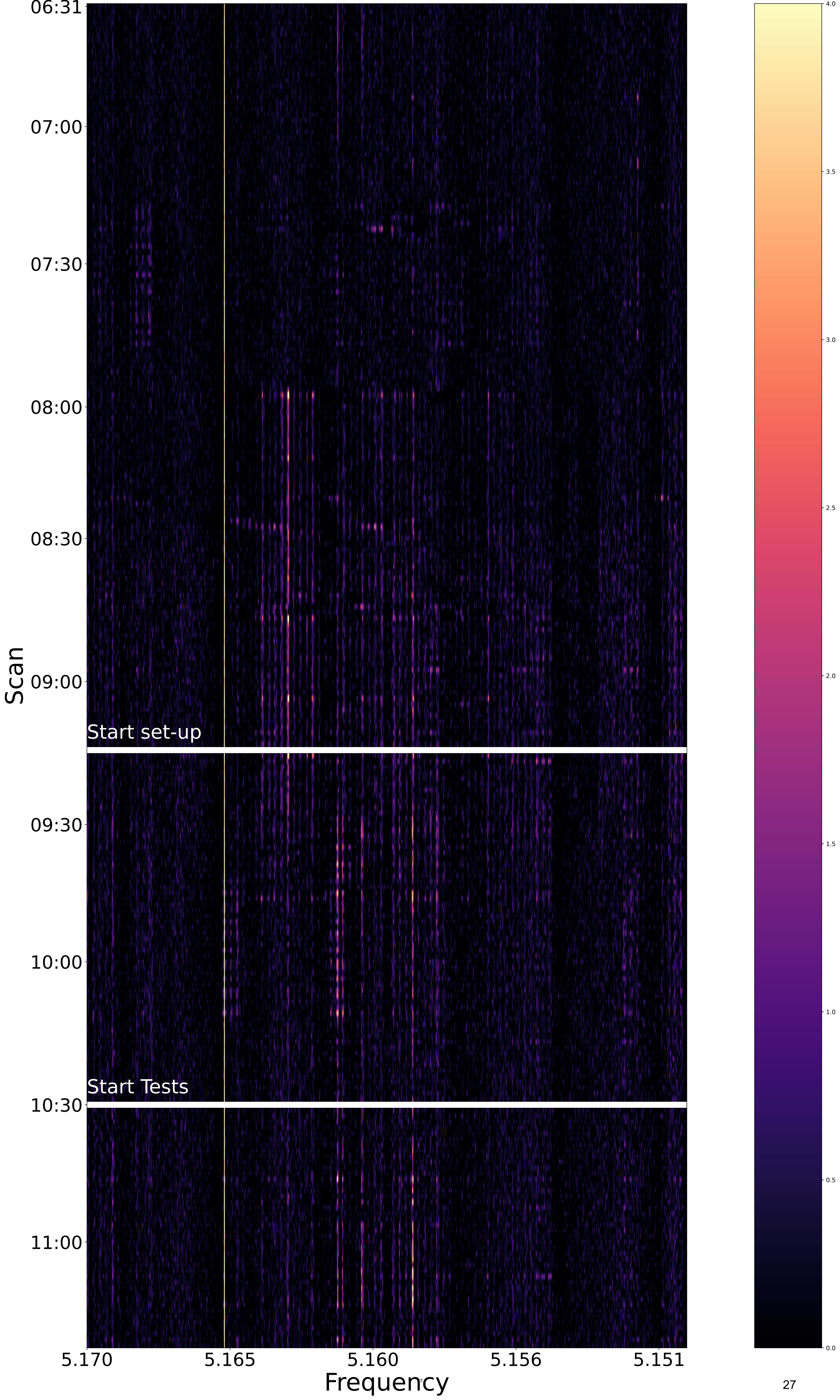
Channel 40 - YY



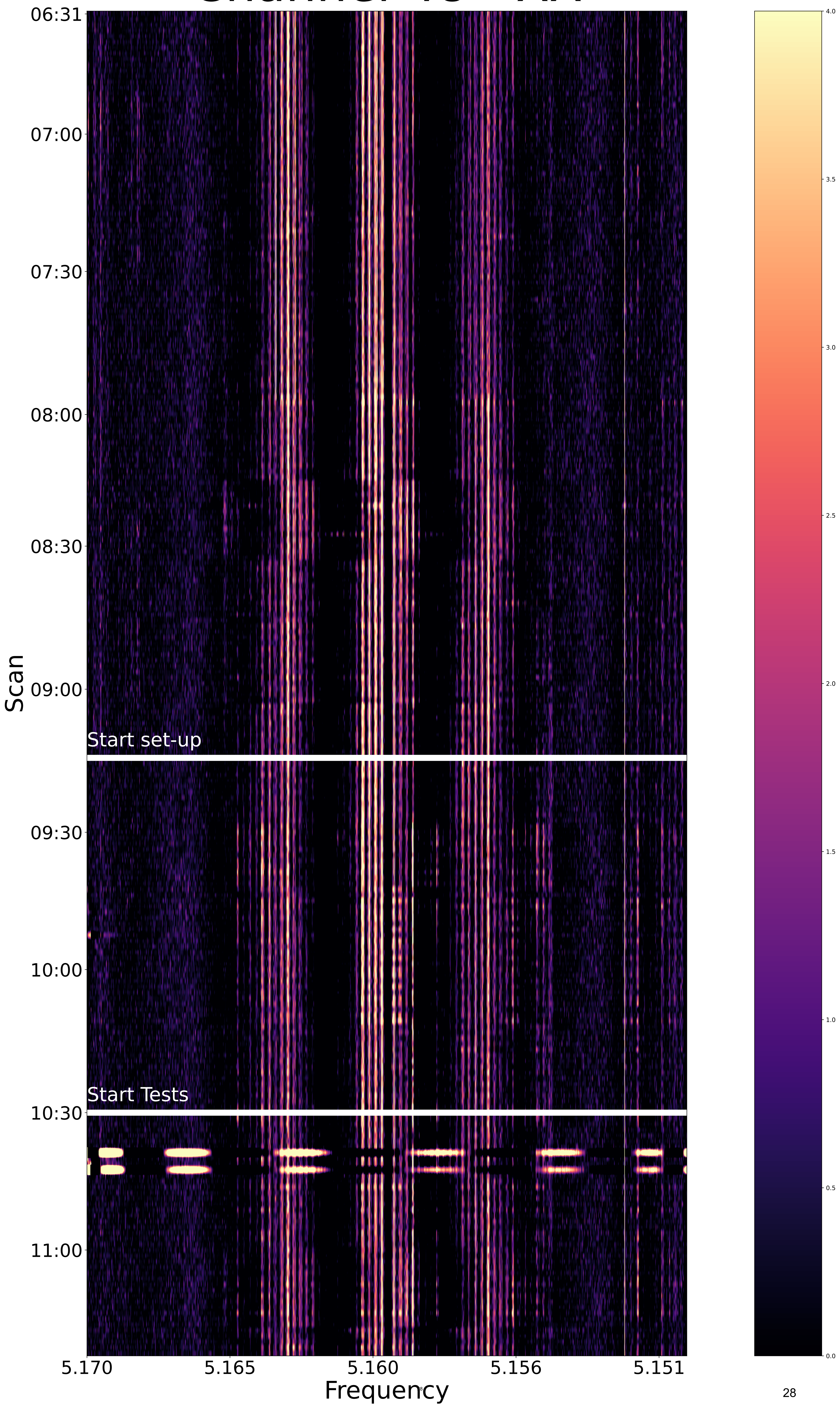
Channel 44 - XX



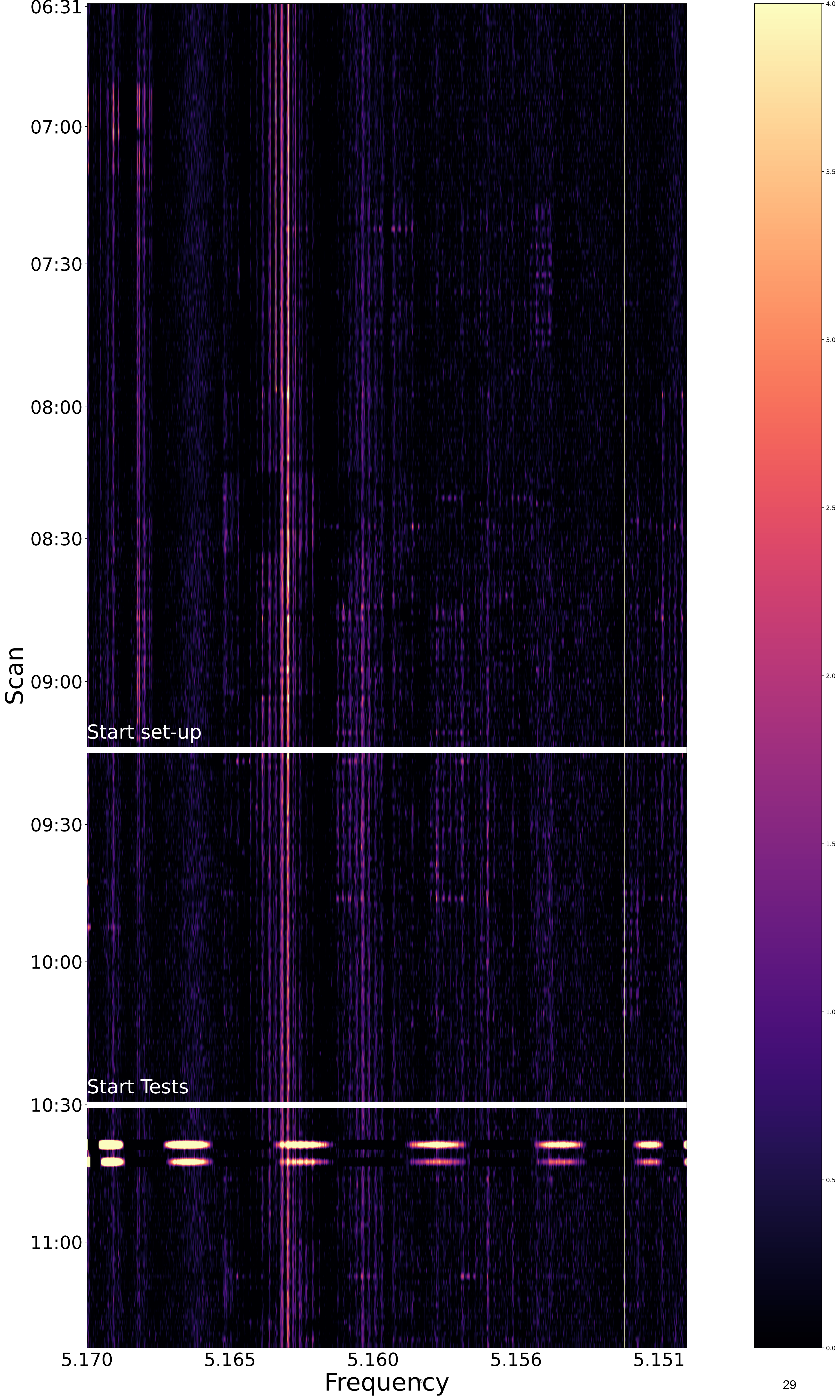
Channel 44 - YY



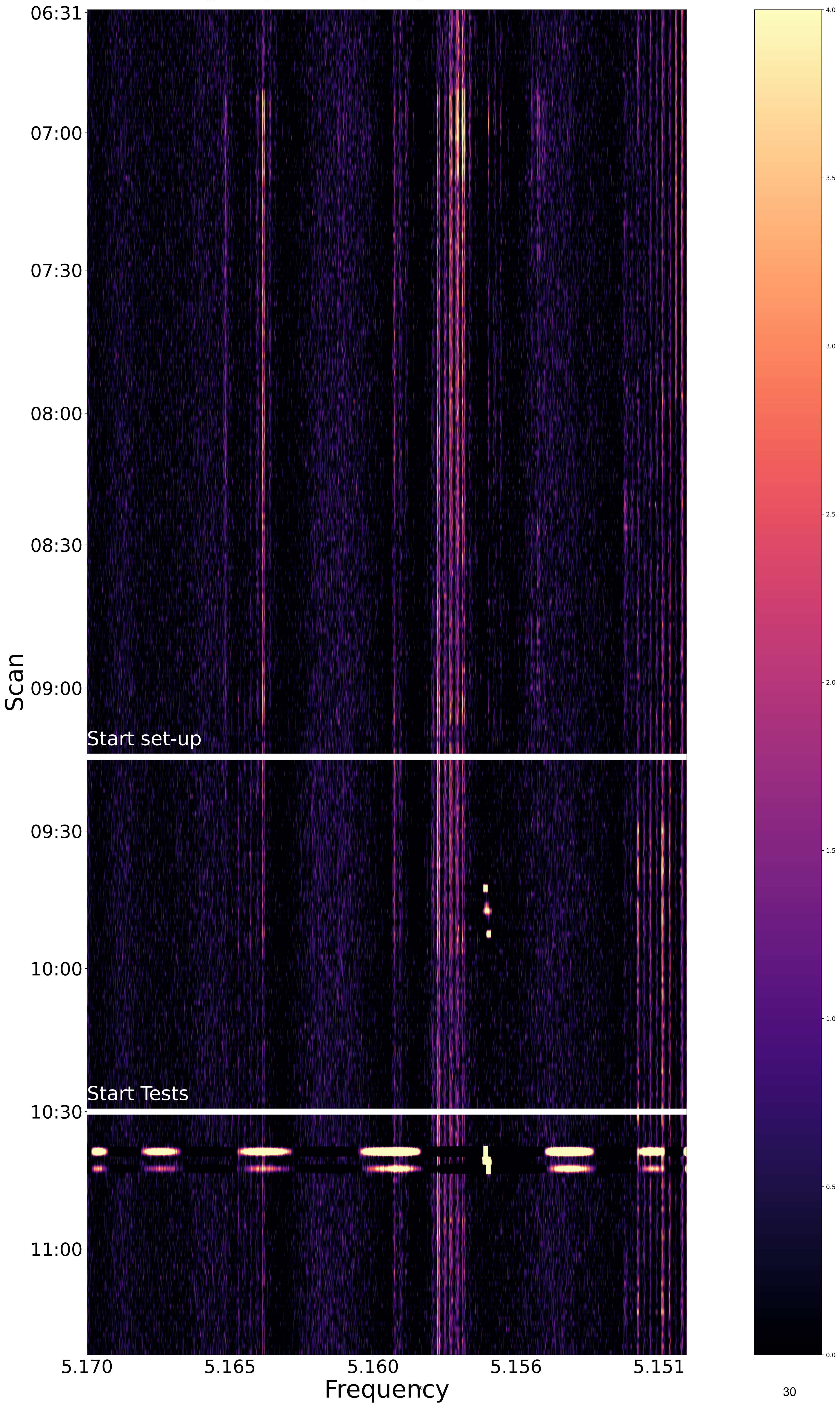
Channel 48 - XX



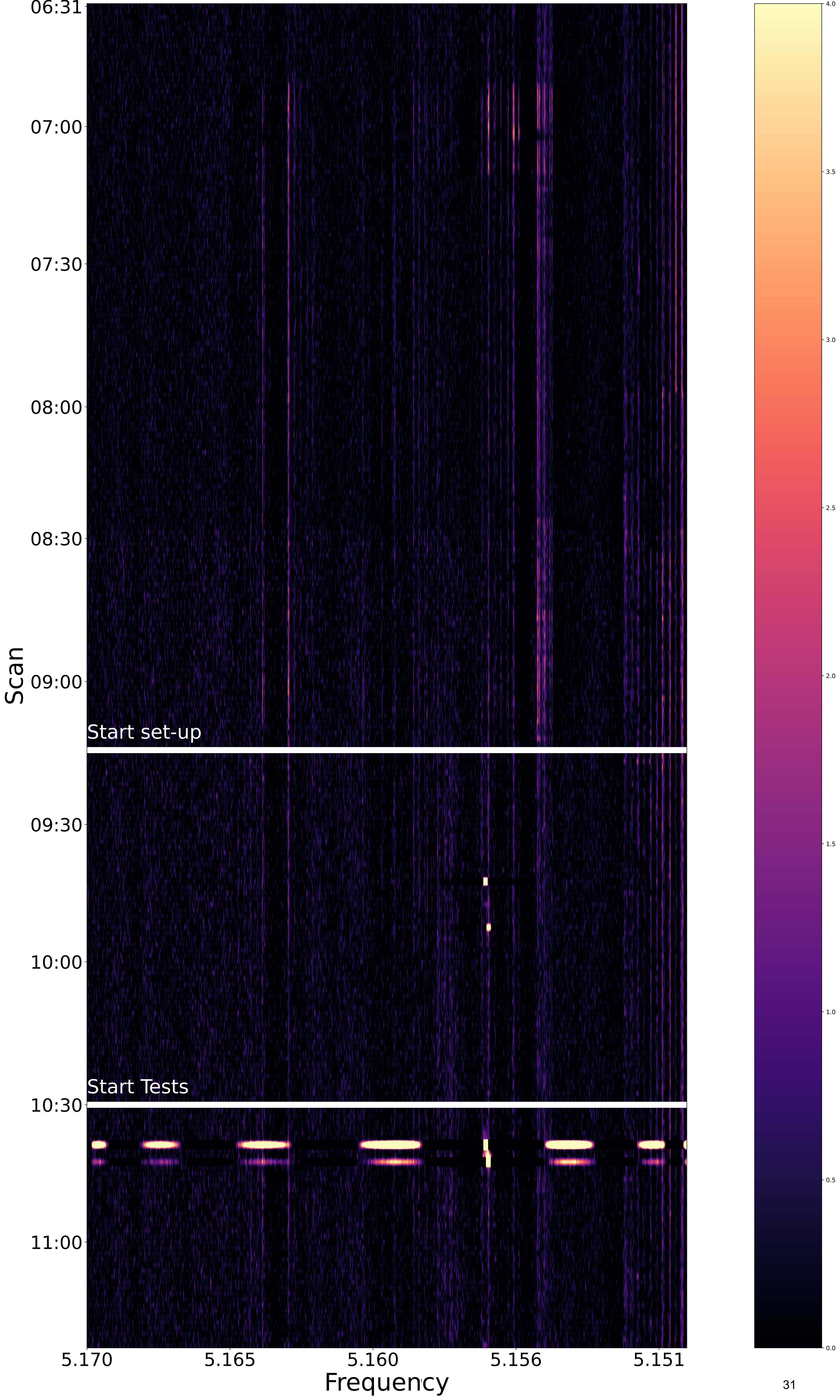
Channel 48 - YY



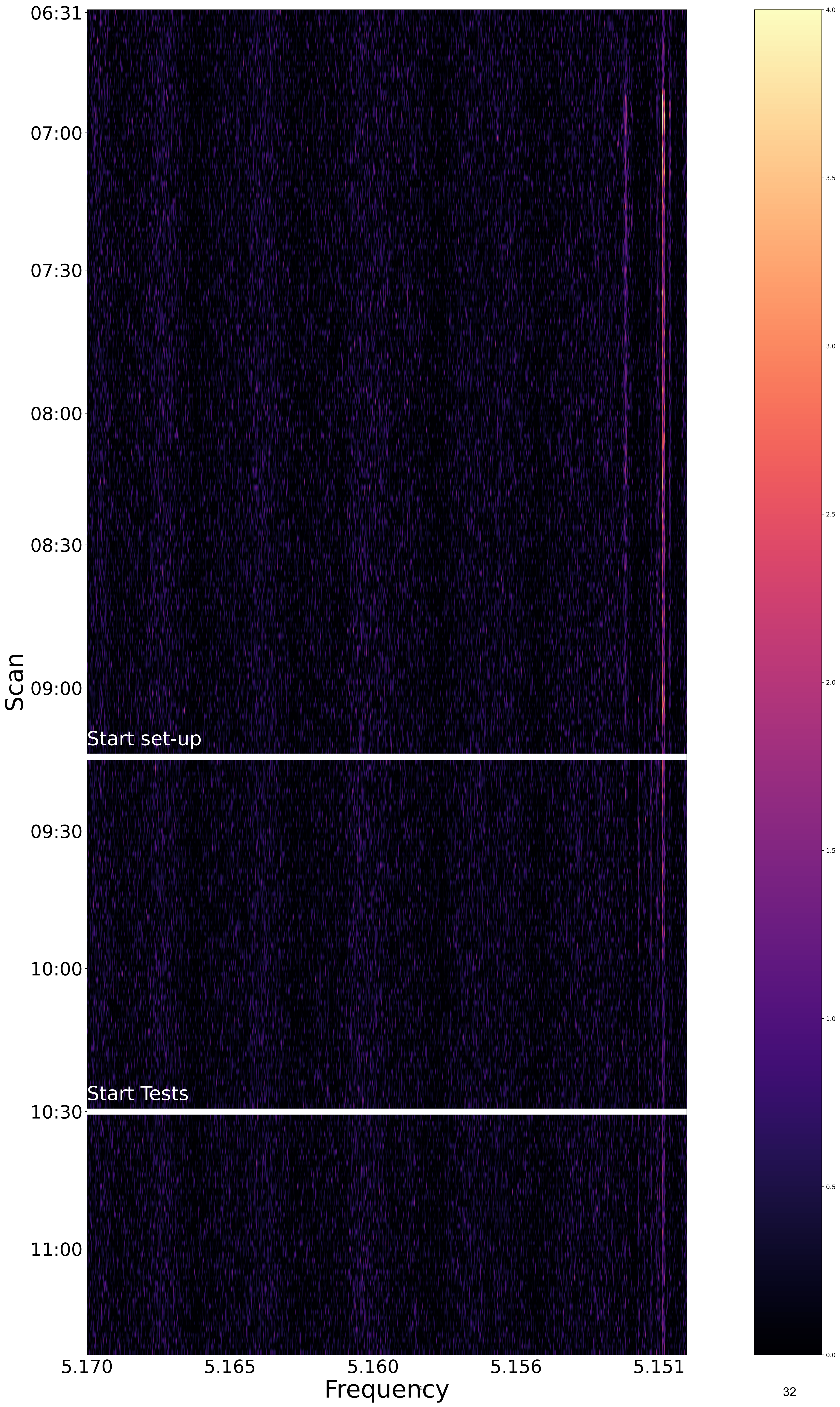
Channel 52 - XX



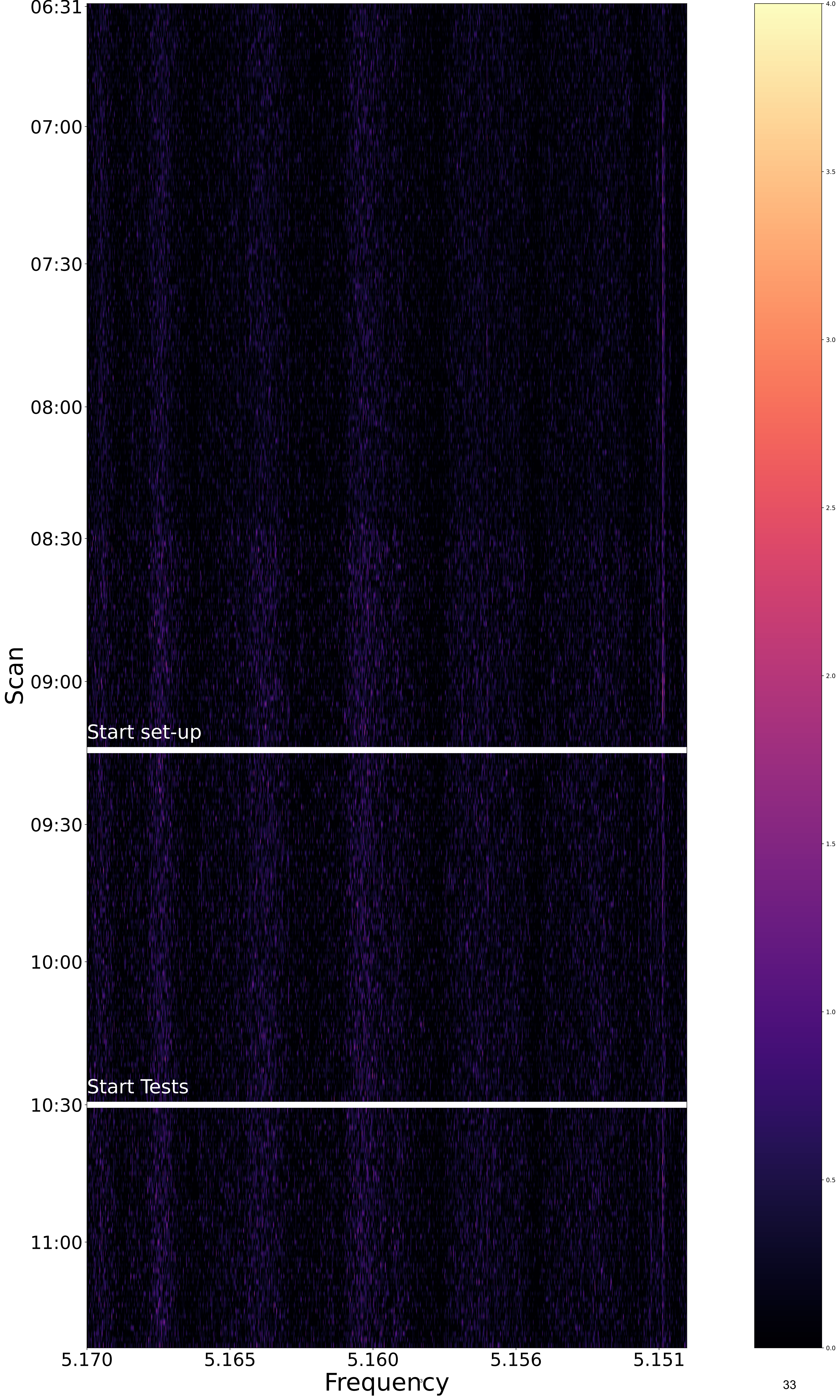
Channel 52 - YY



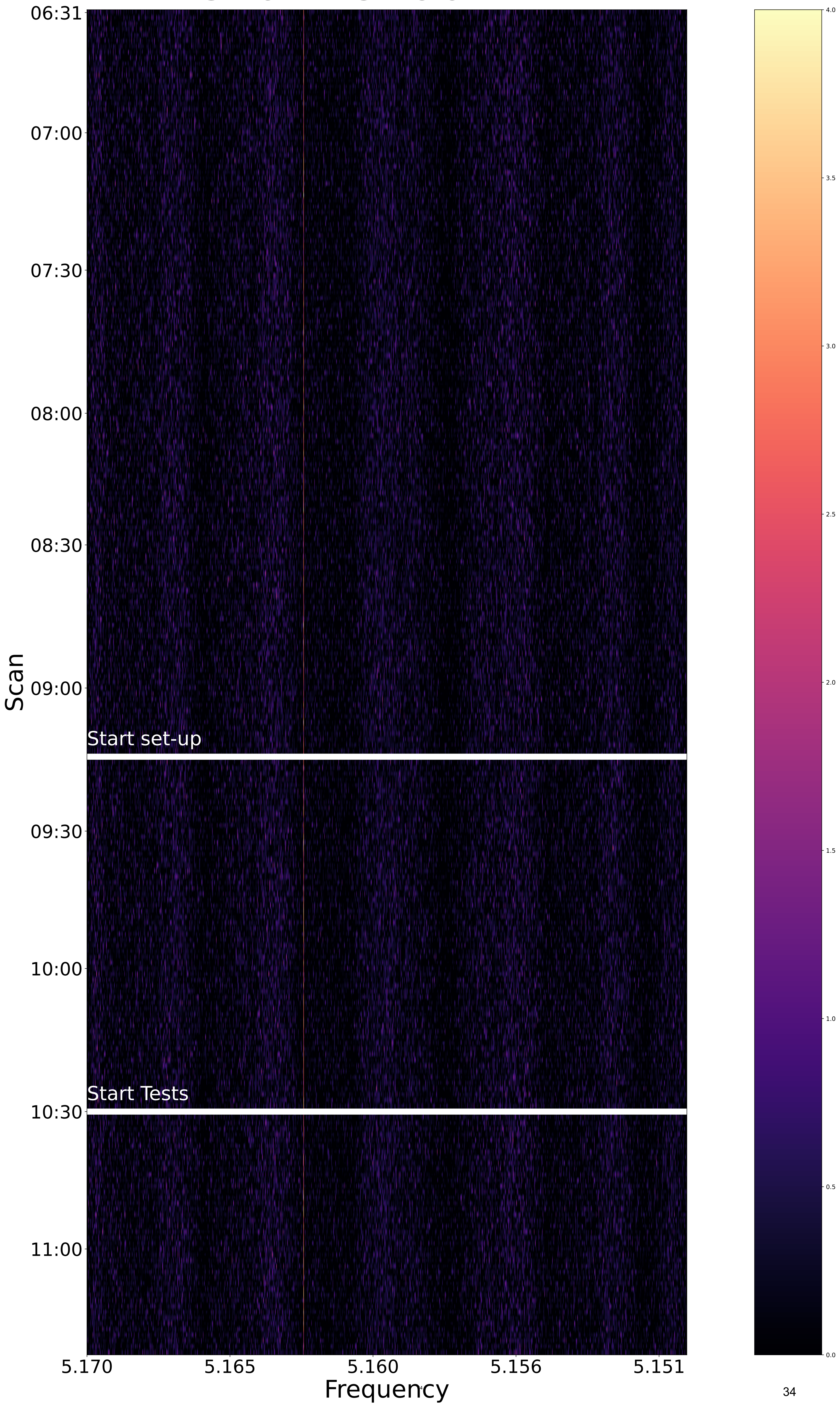
Channel 56 - XX



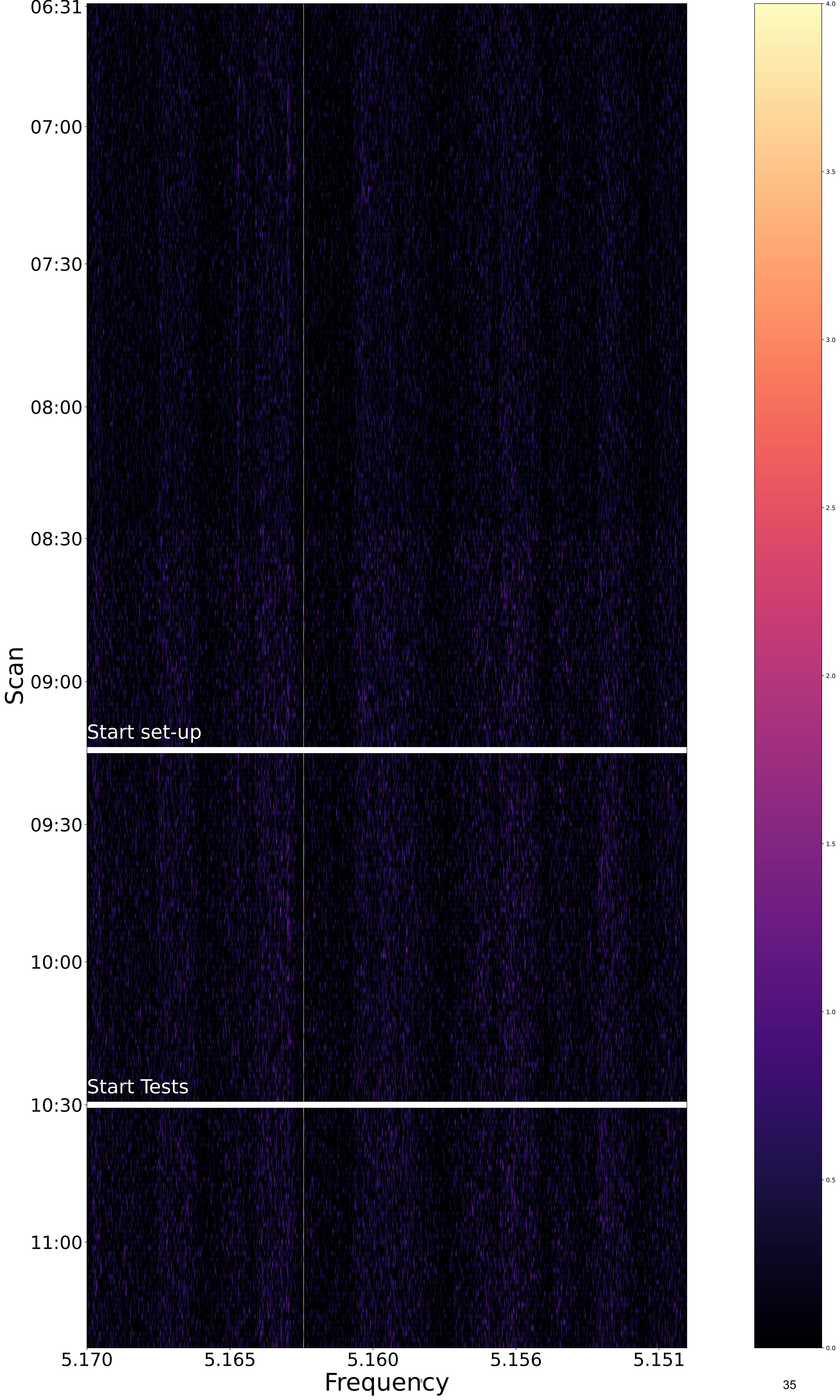
Channel 56 - YY



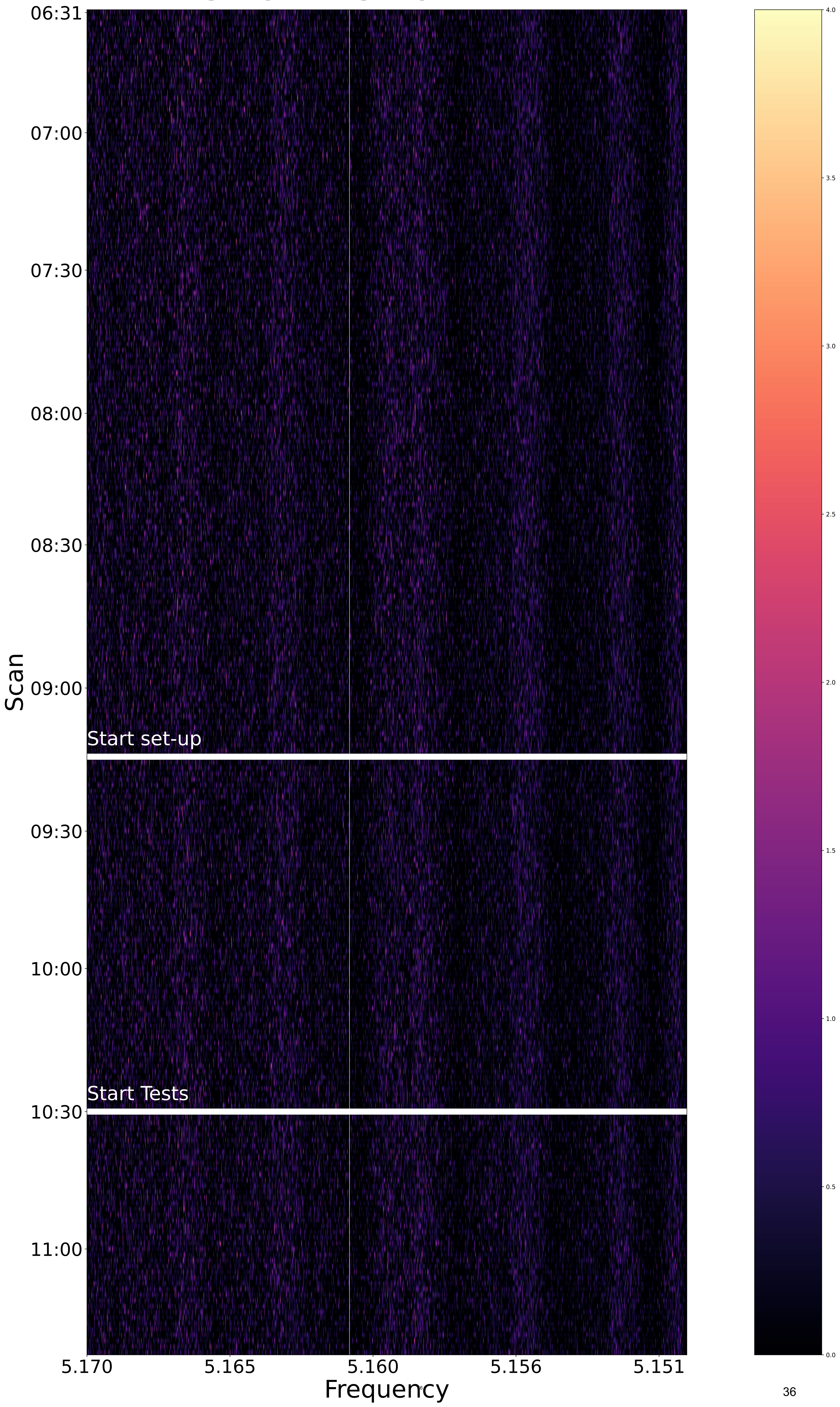
Channel 60 - XX



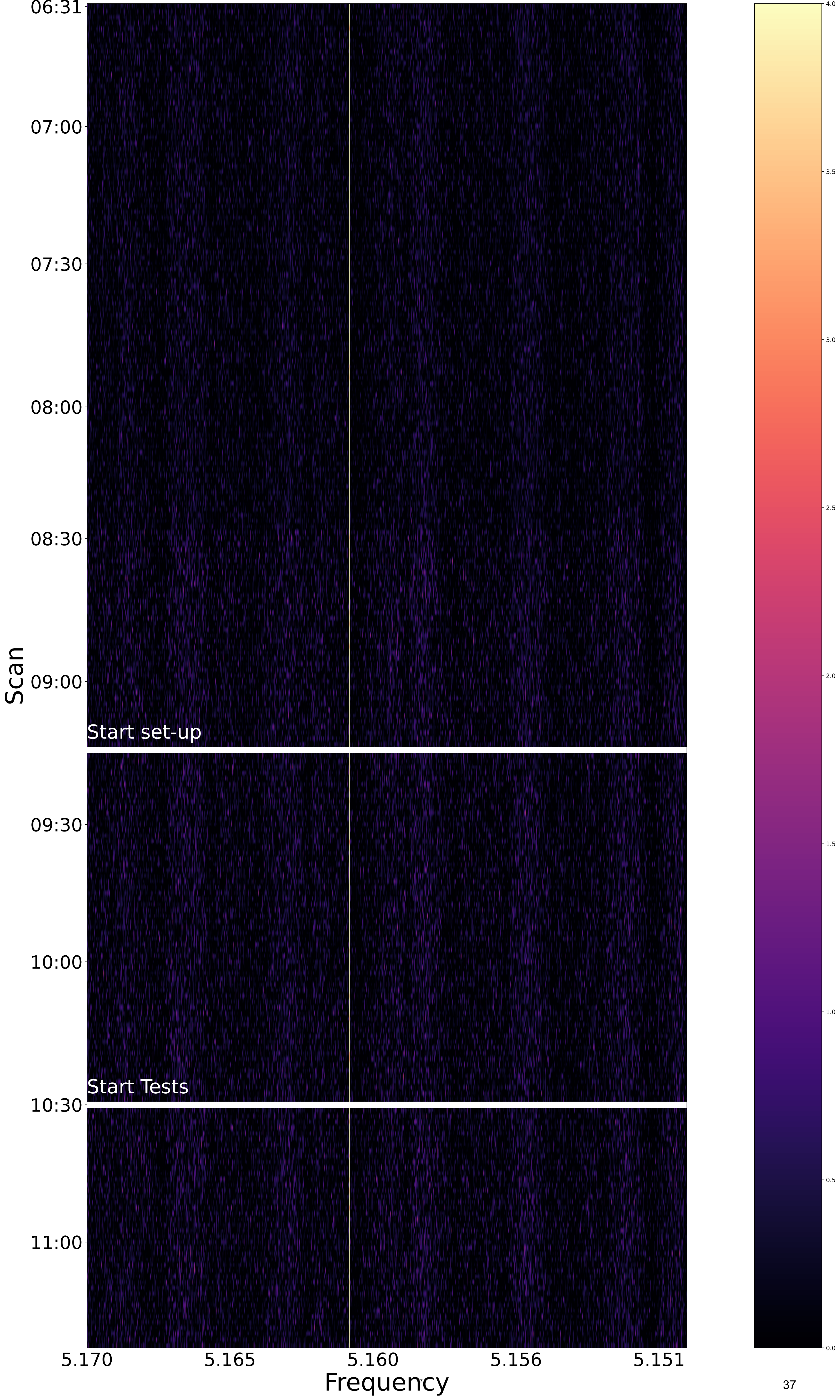
Channel 60 - YY



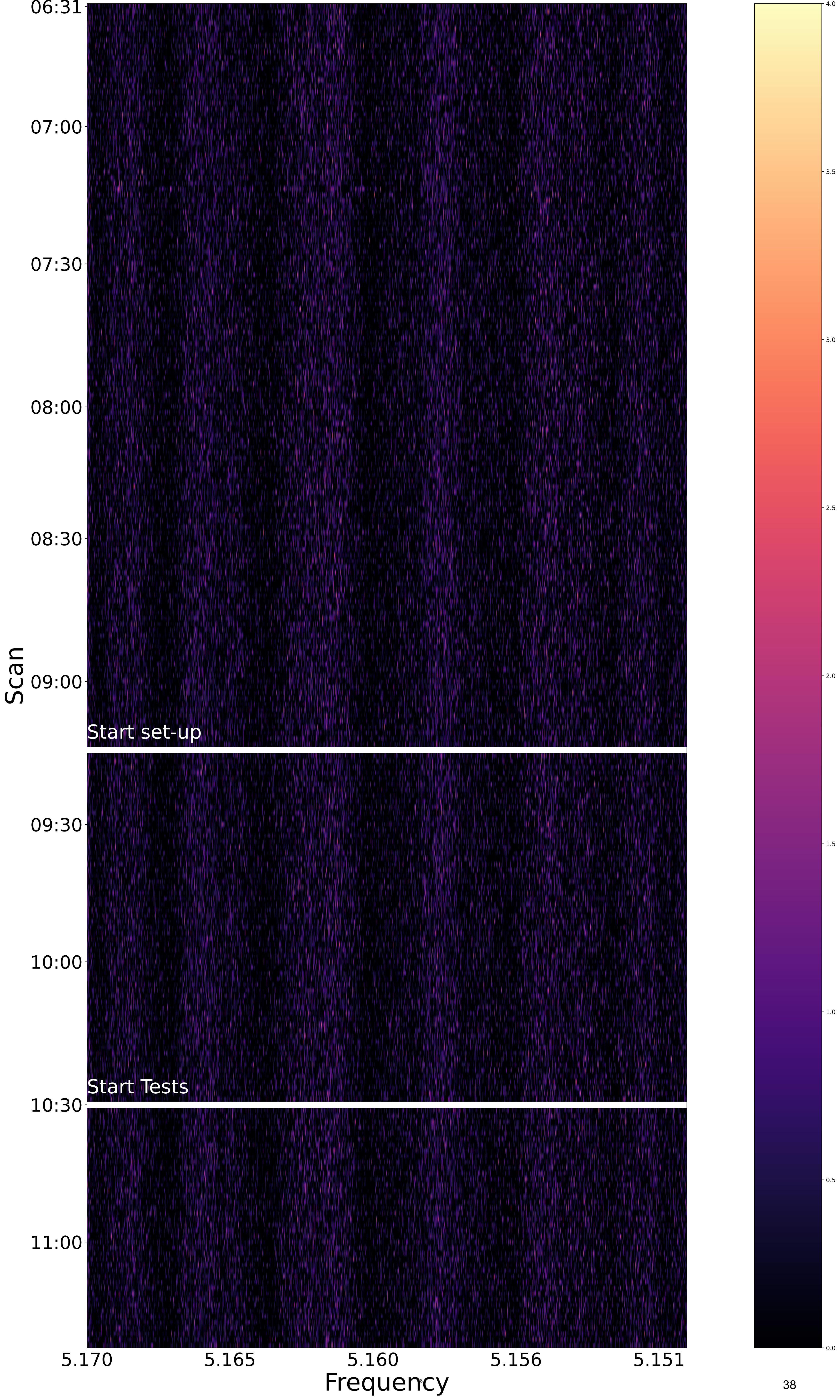
Channel 64 - XX



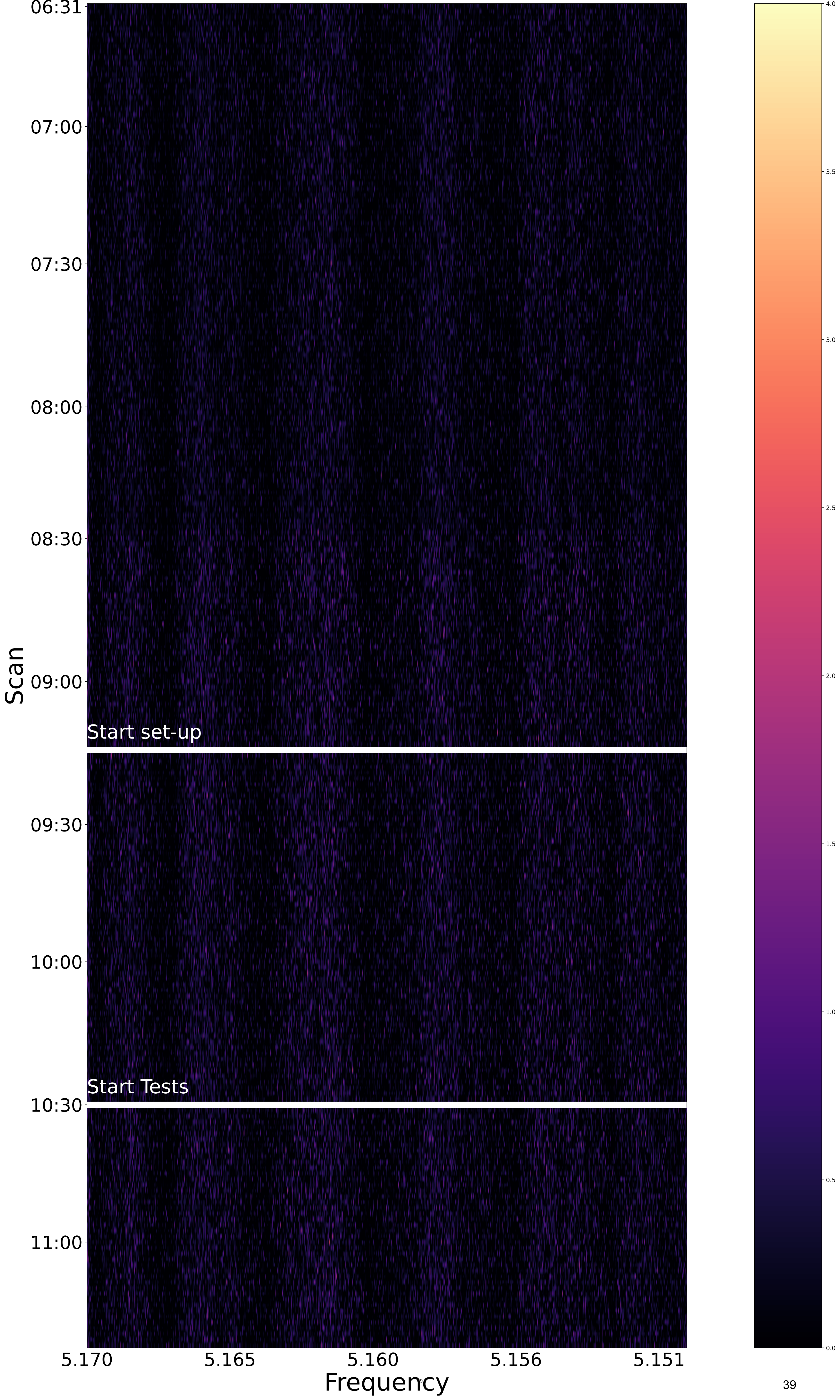
Channel 64 - YY



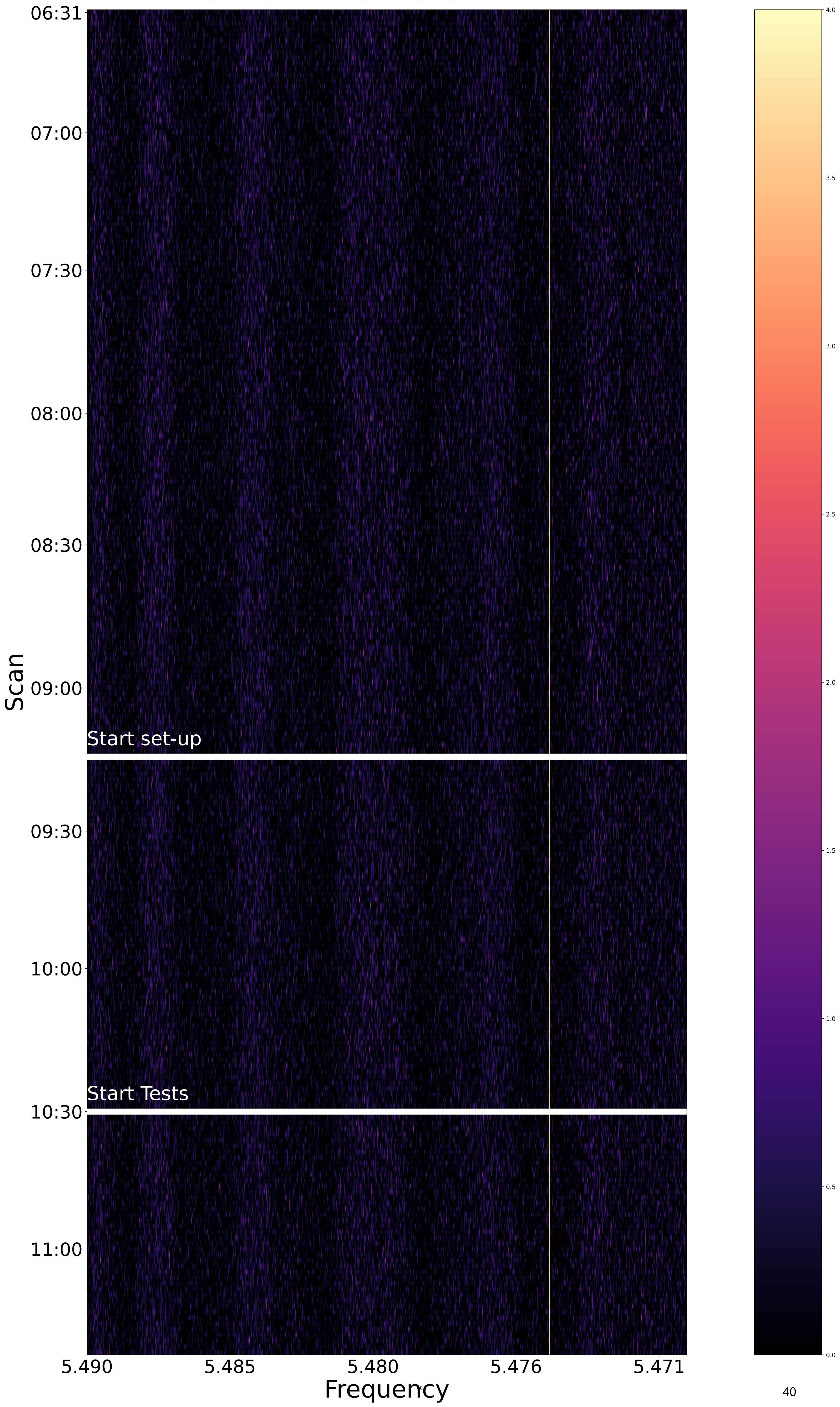
Channel 68 - XX



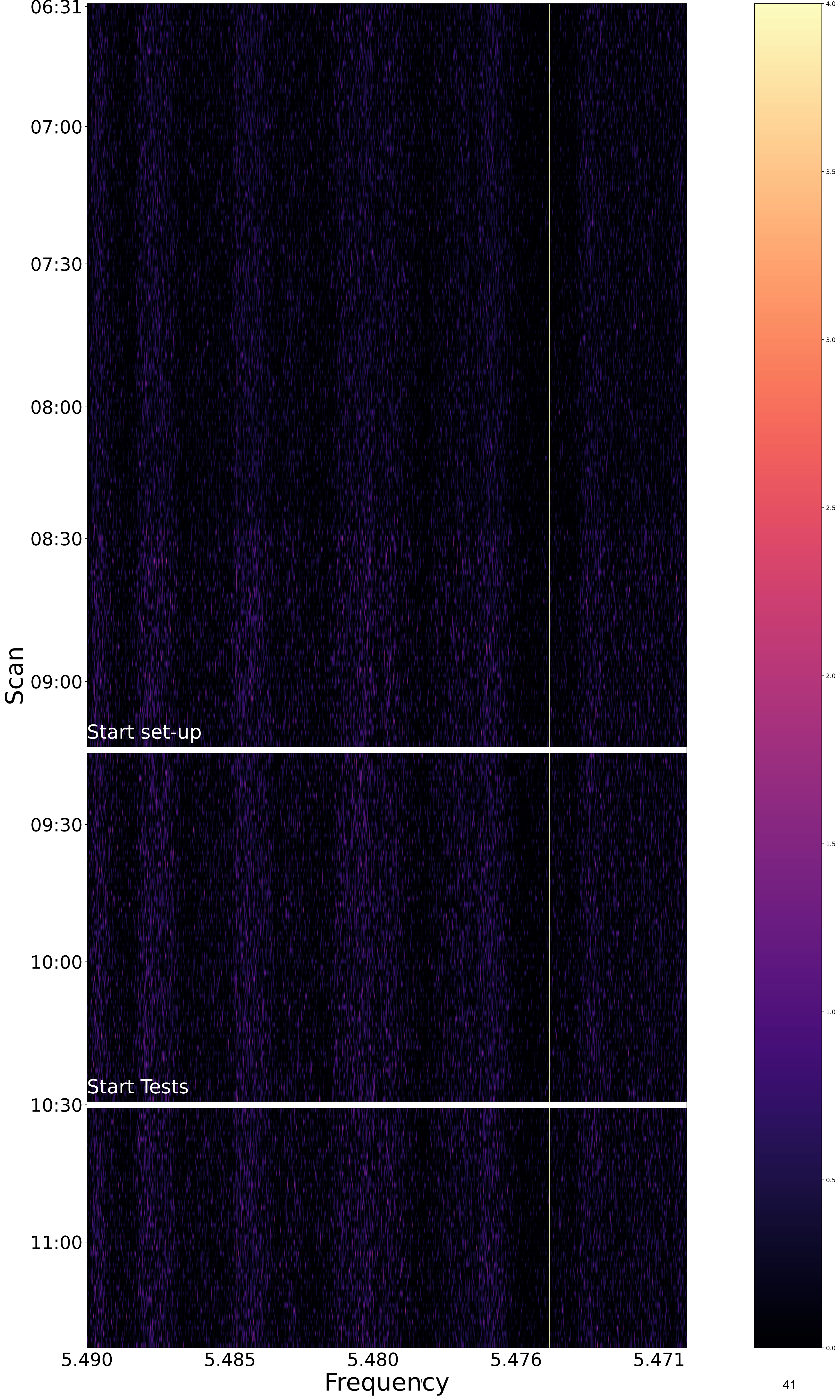
Channel 68 - YY



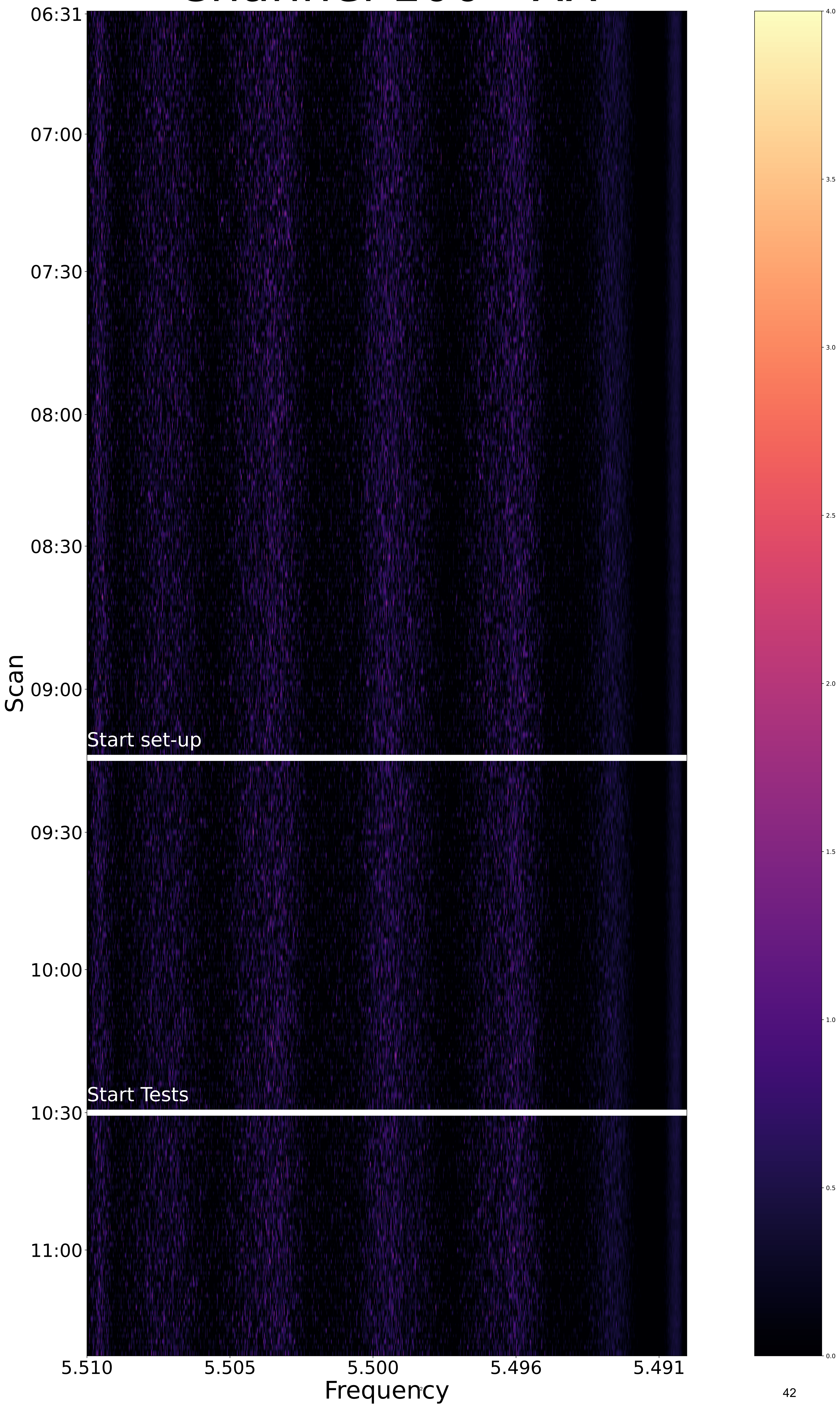
Channel 96 - XX



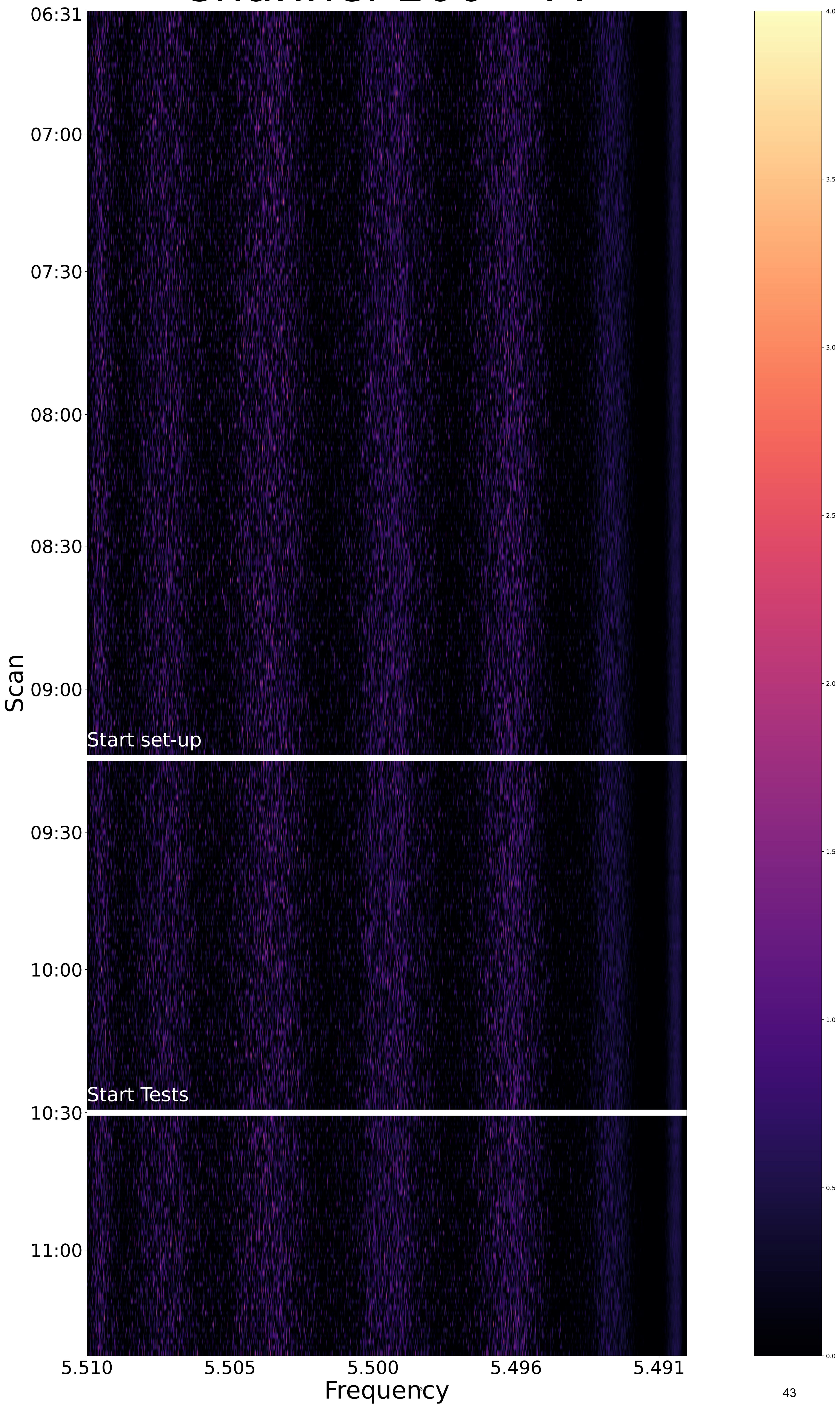
Channel 96 - YY



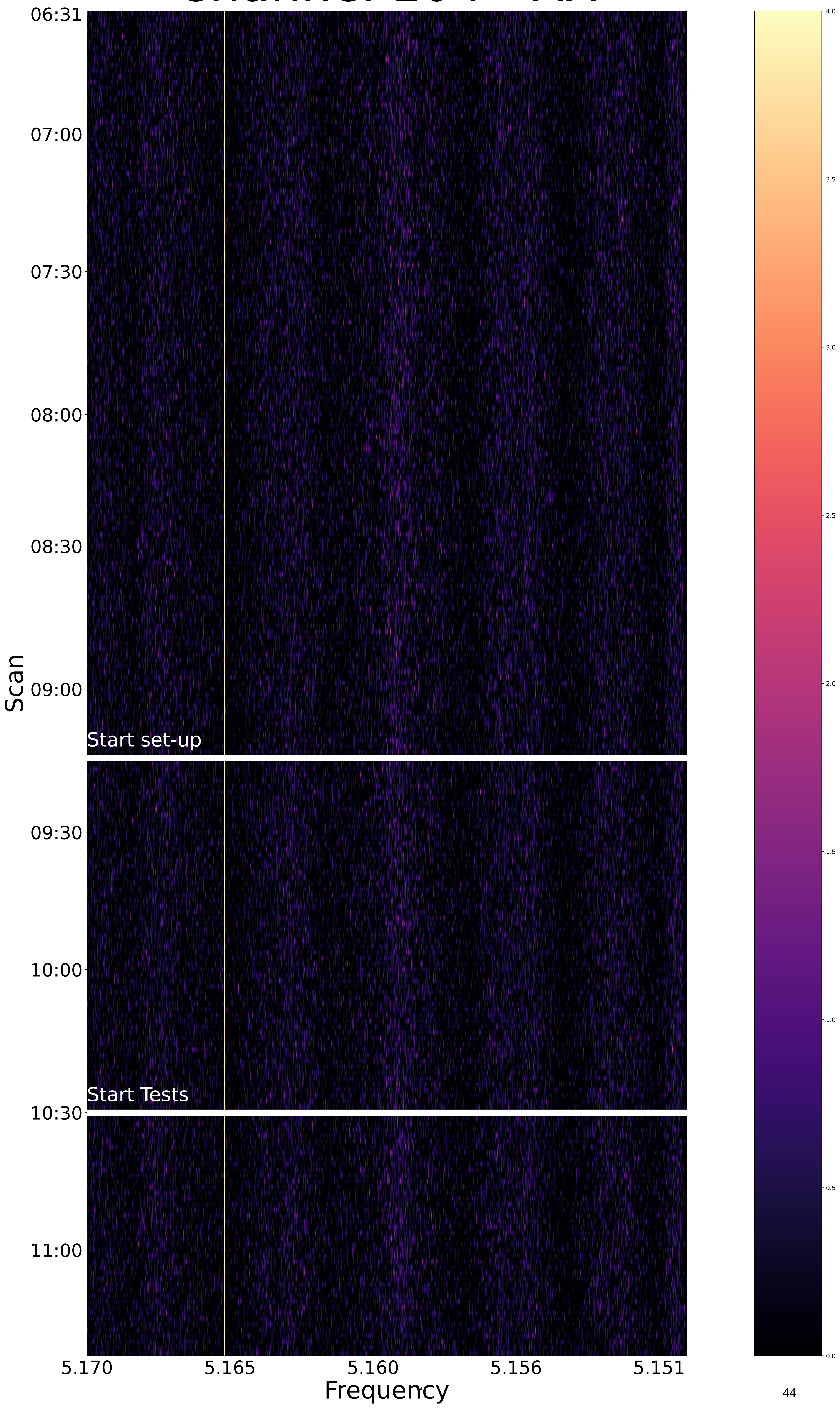
Channel 100 - XX



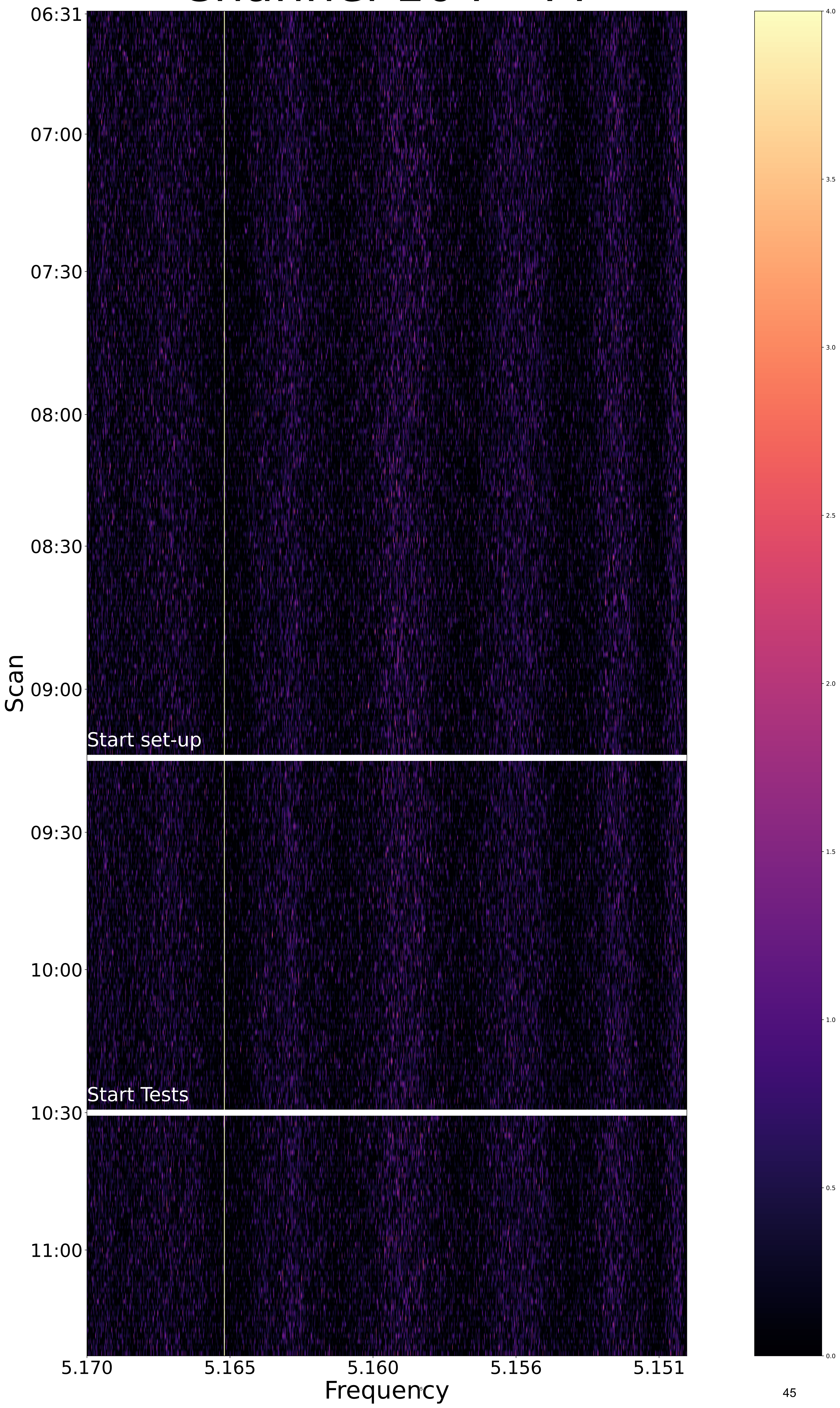
Channel 100 - YY



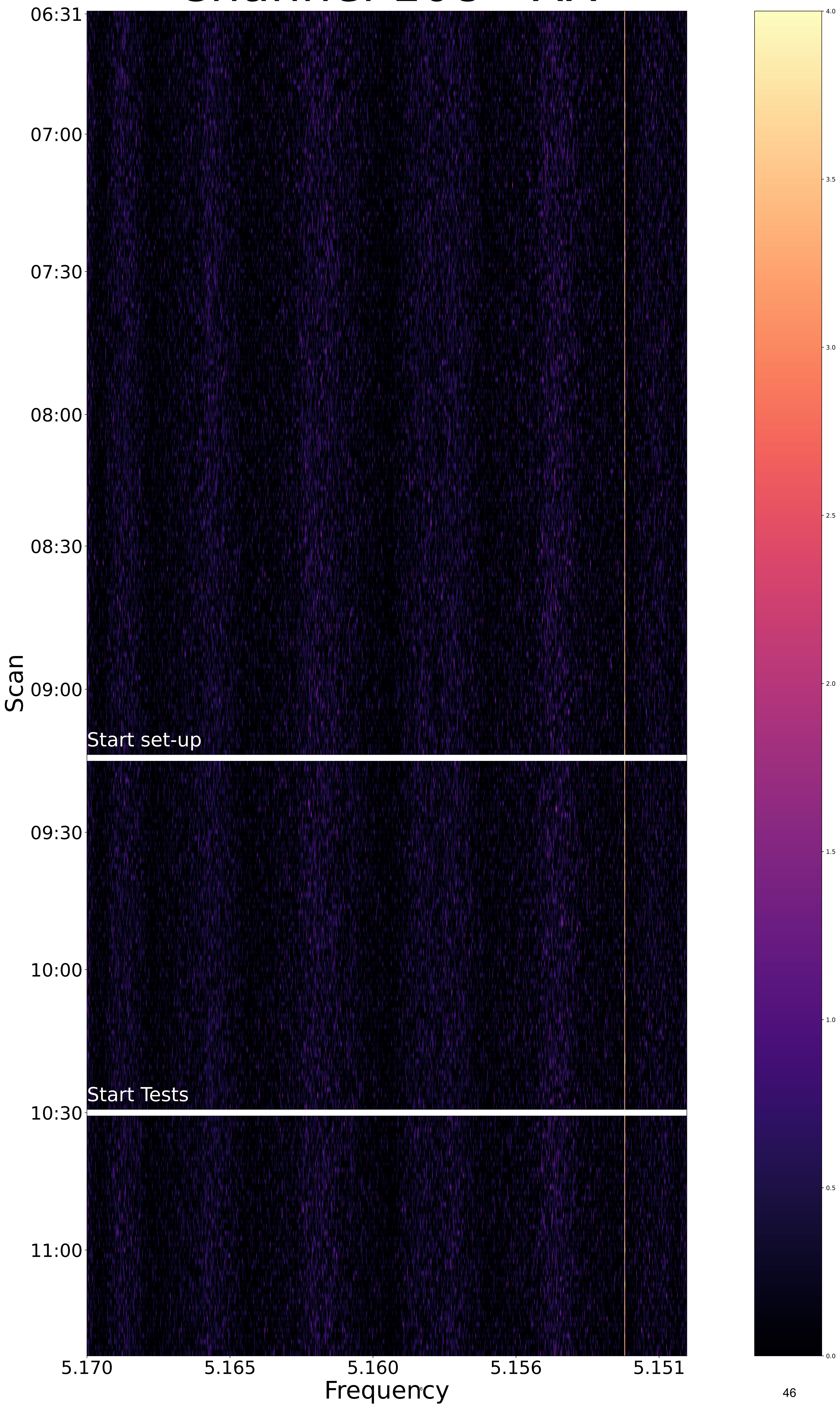
Channel 104 - XX



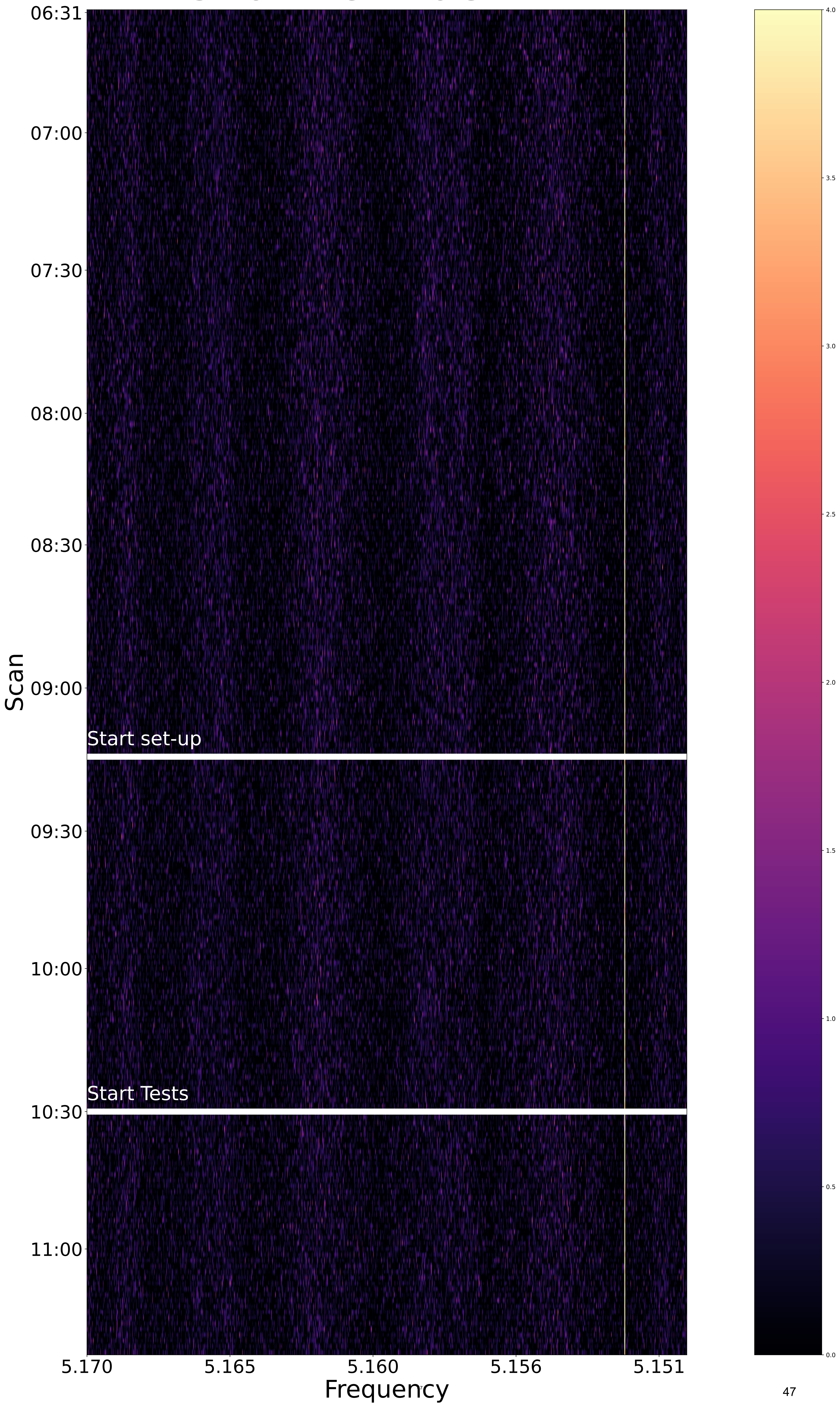
Channel 104 - YY



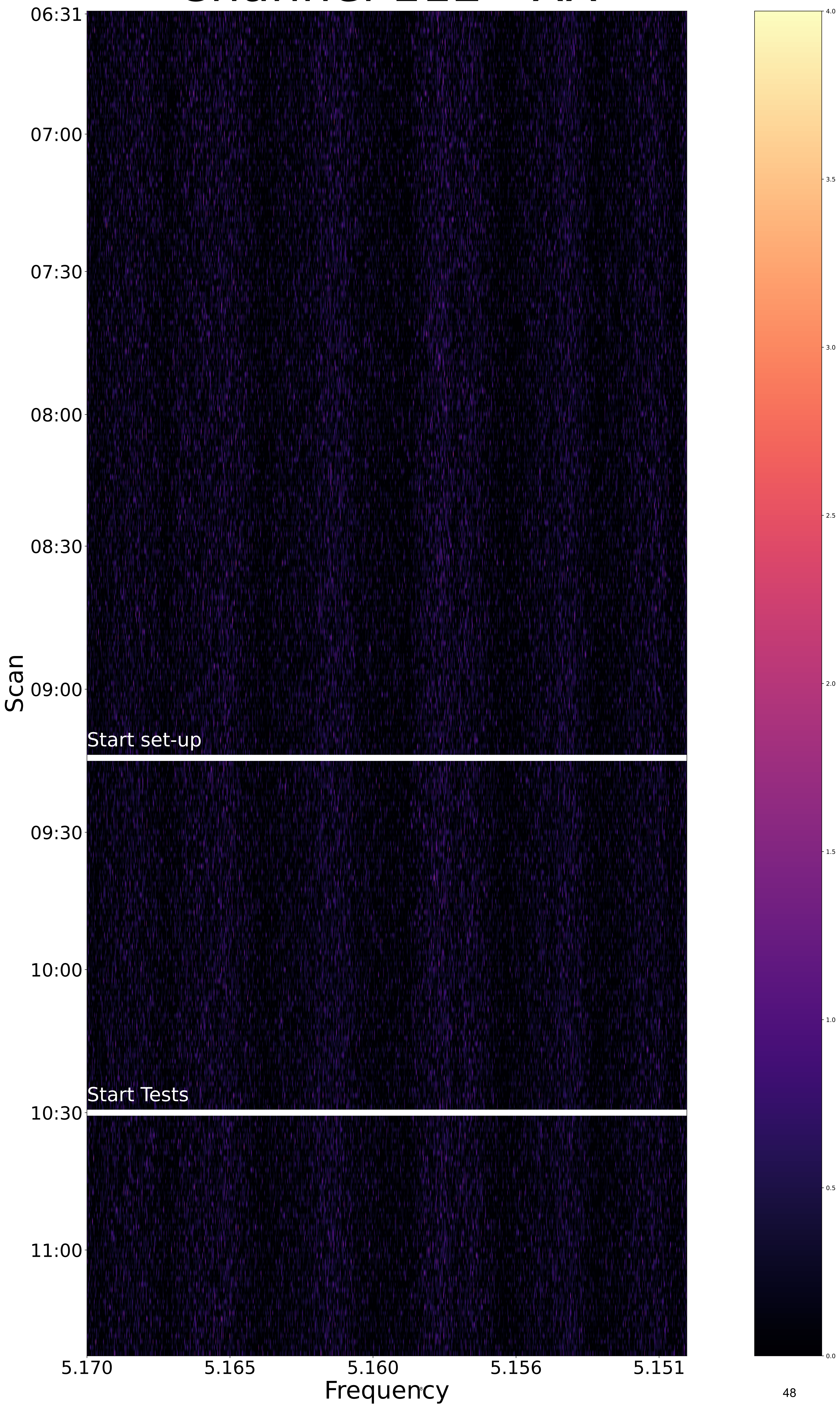
Channel 108 - XX



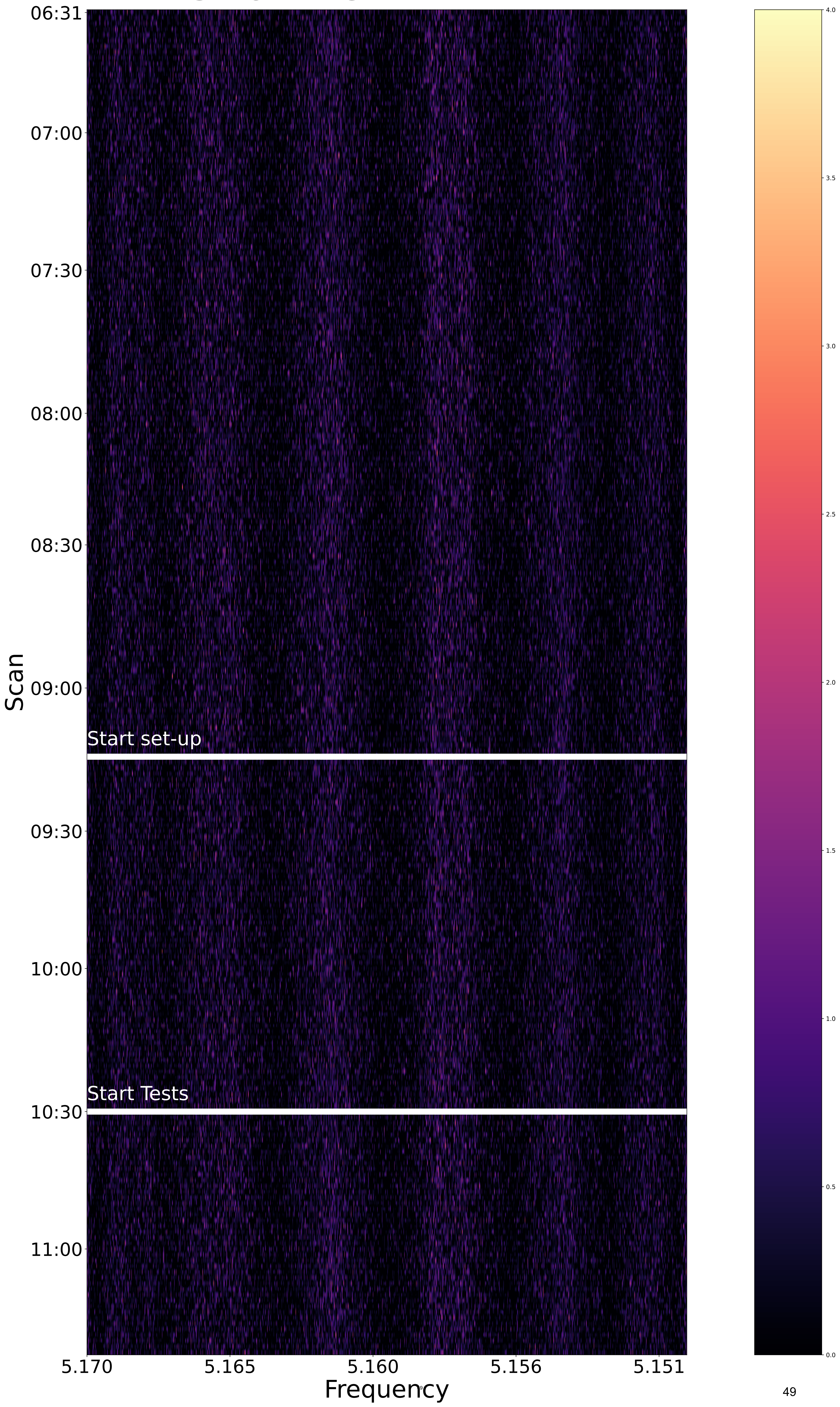
Channel 108 - YY



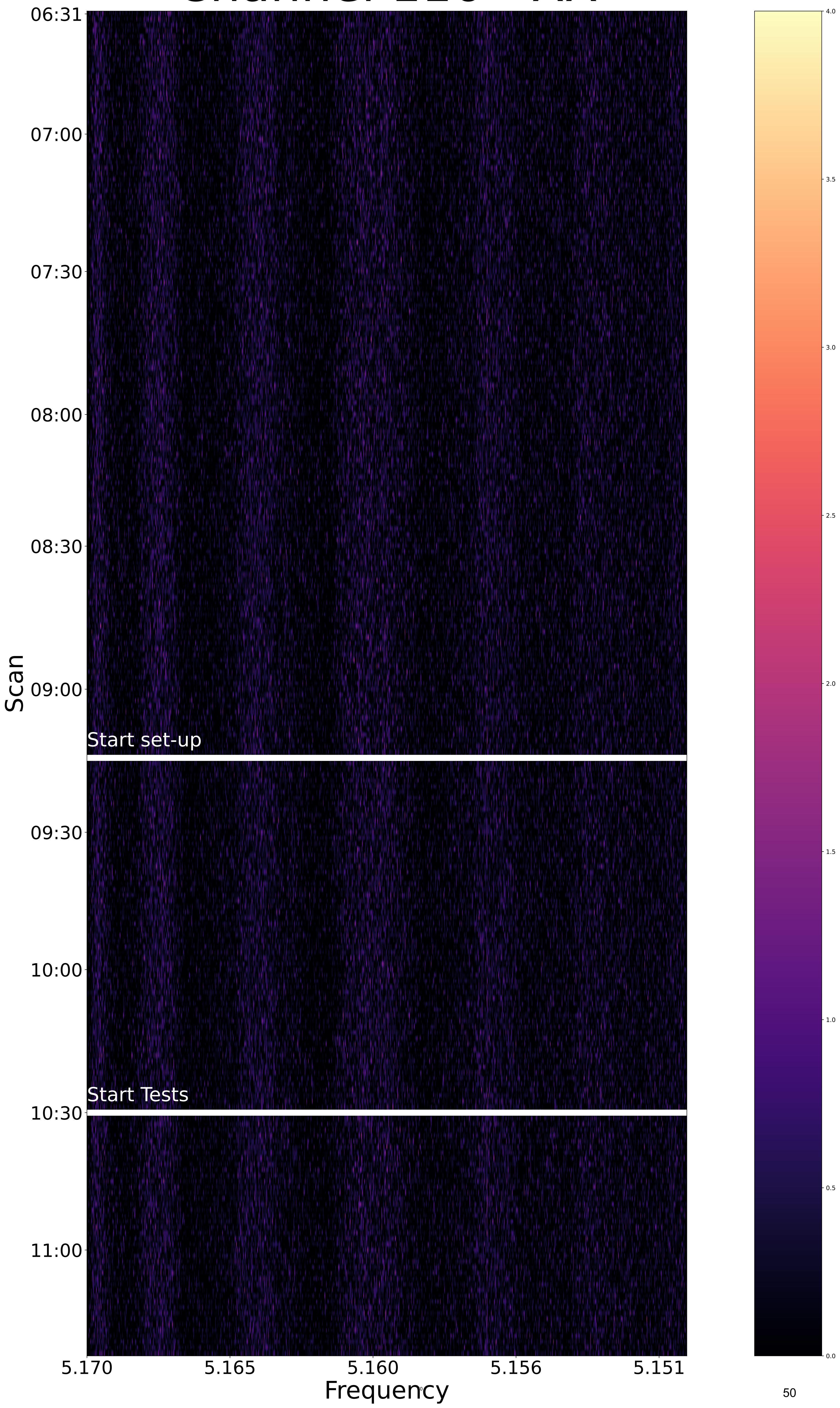
Channel 112 - XX



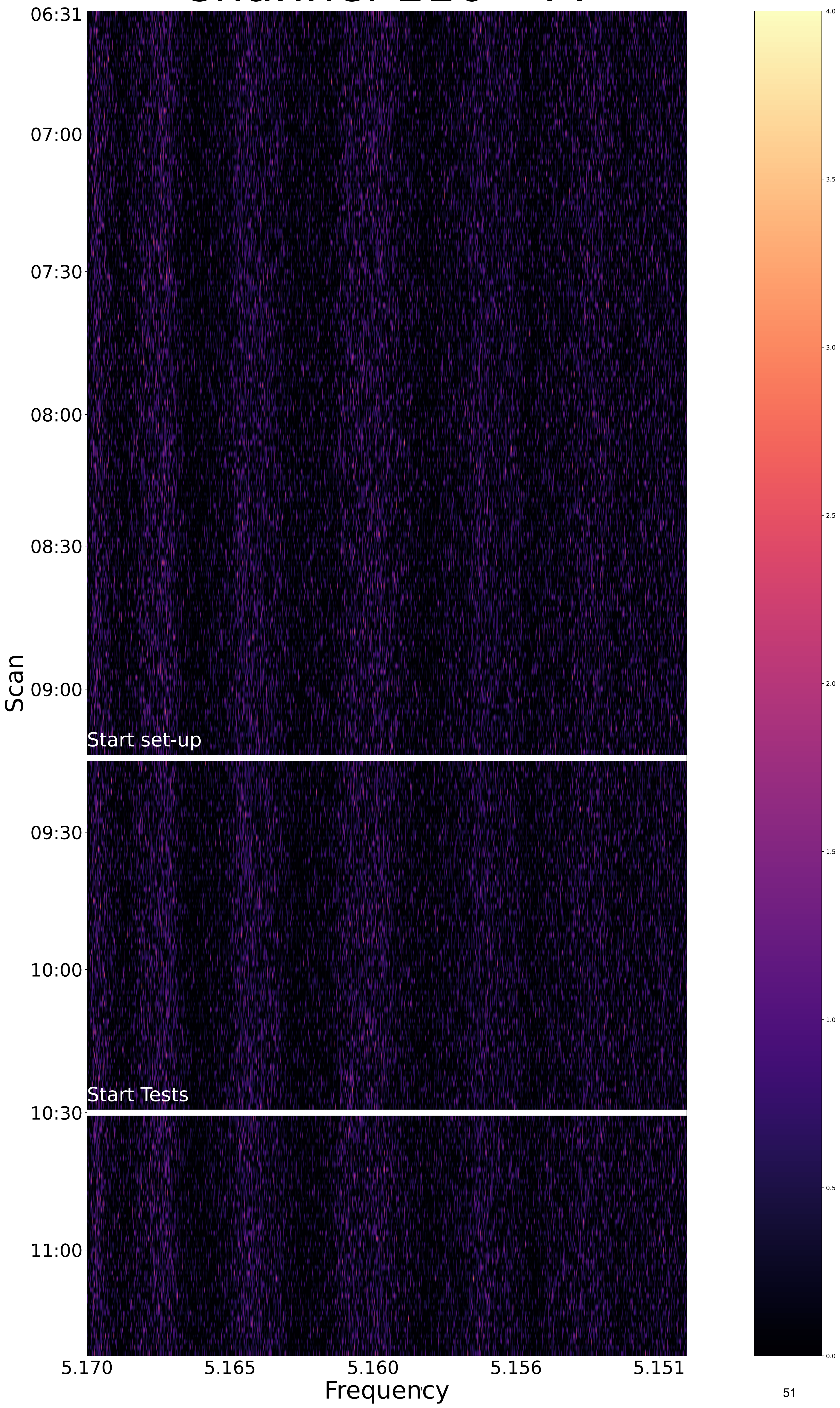
Channel 112 - YY



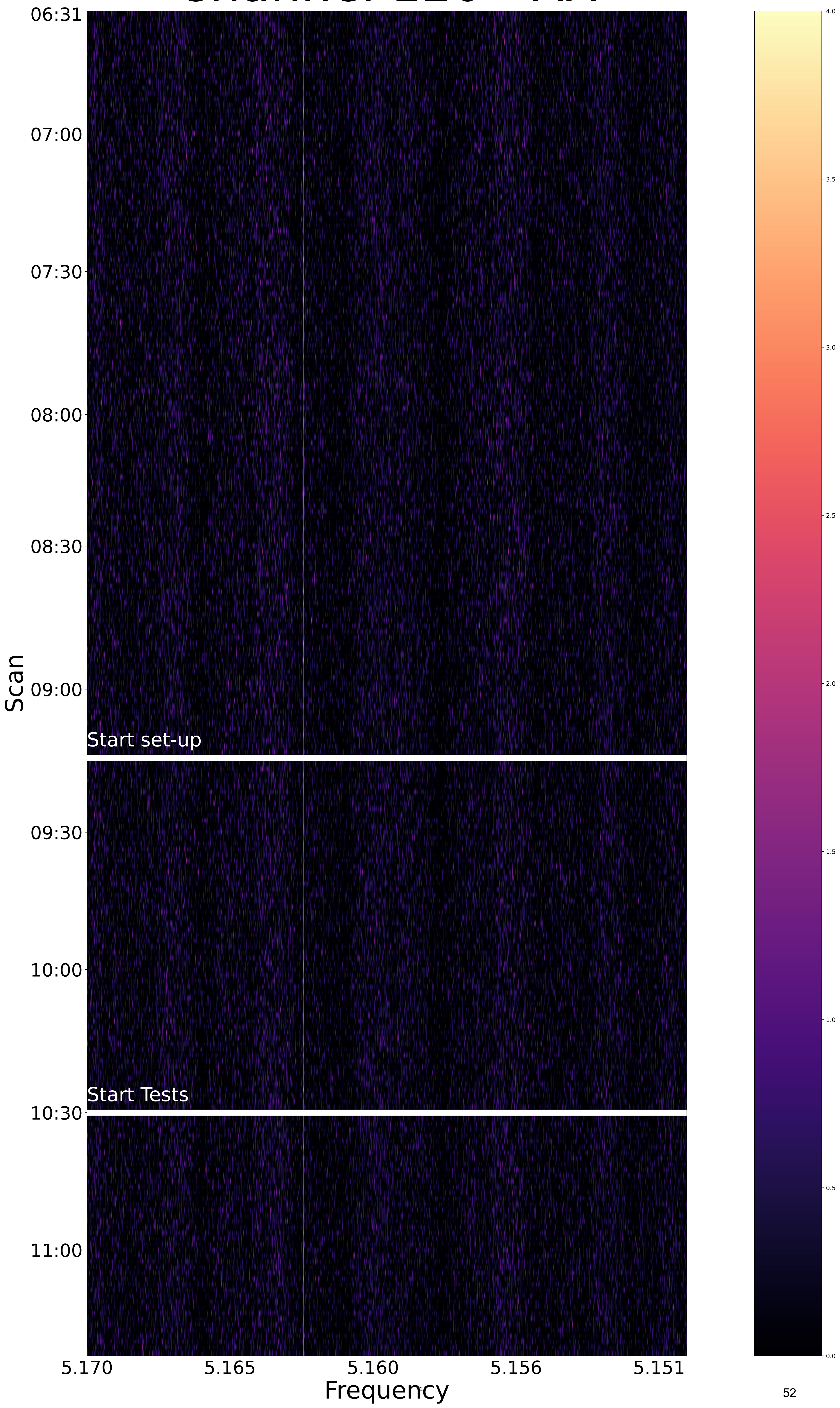
Channel 116 - XX



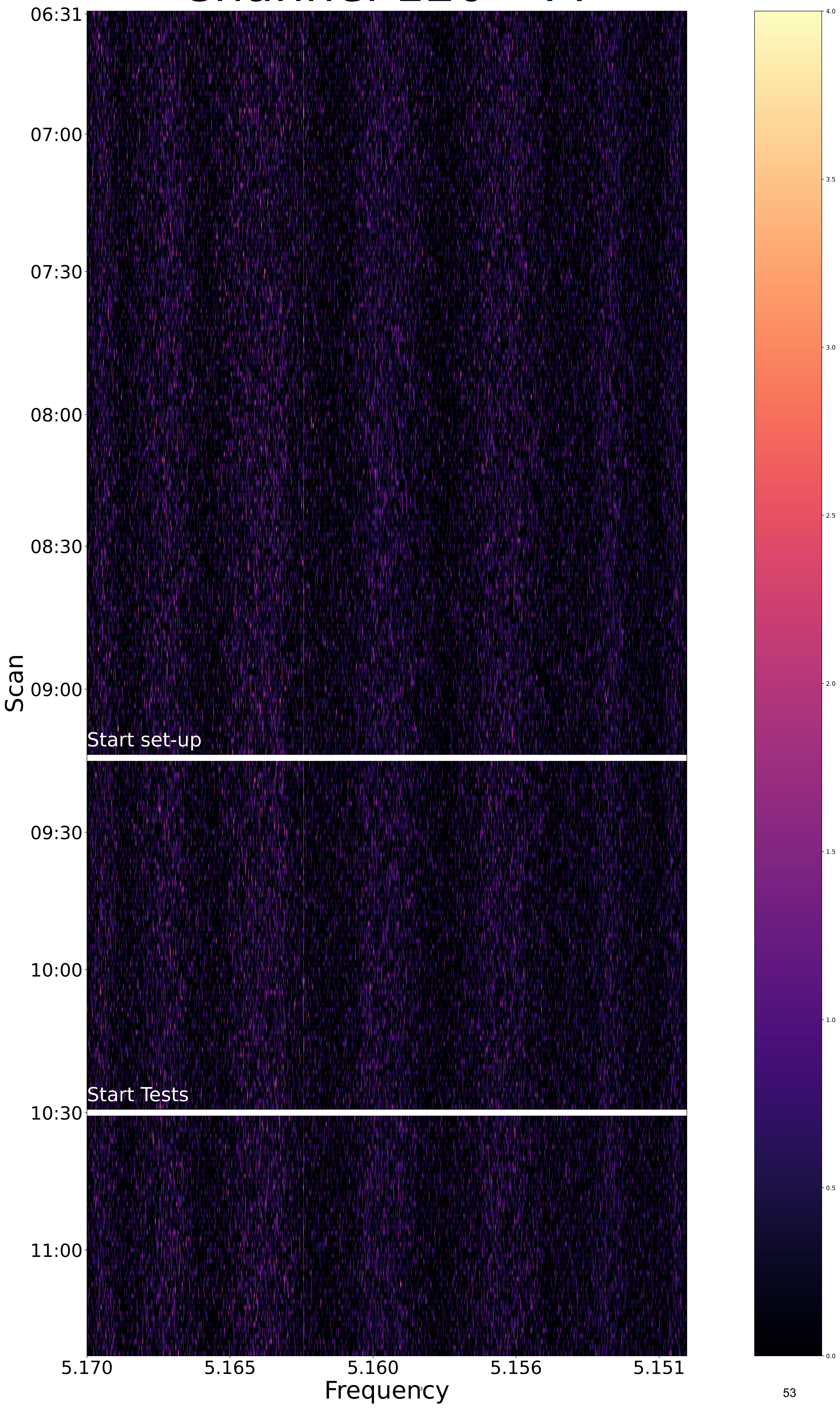
Channel 116 - YY



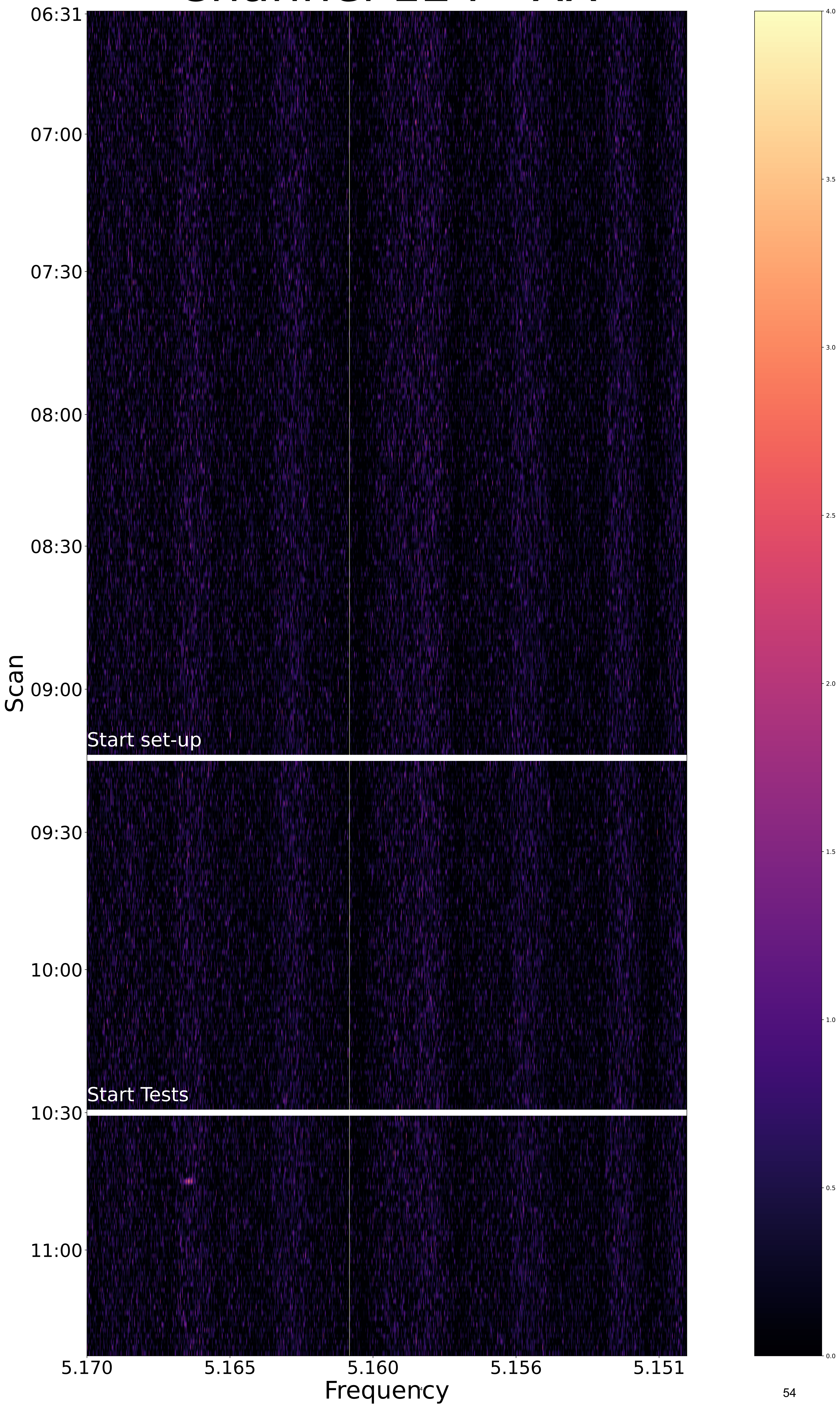
Channel 120 - XX



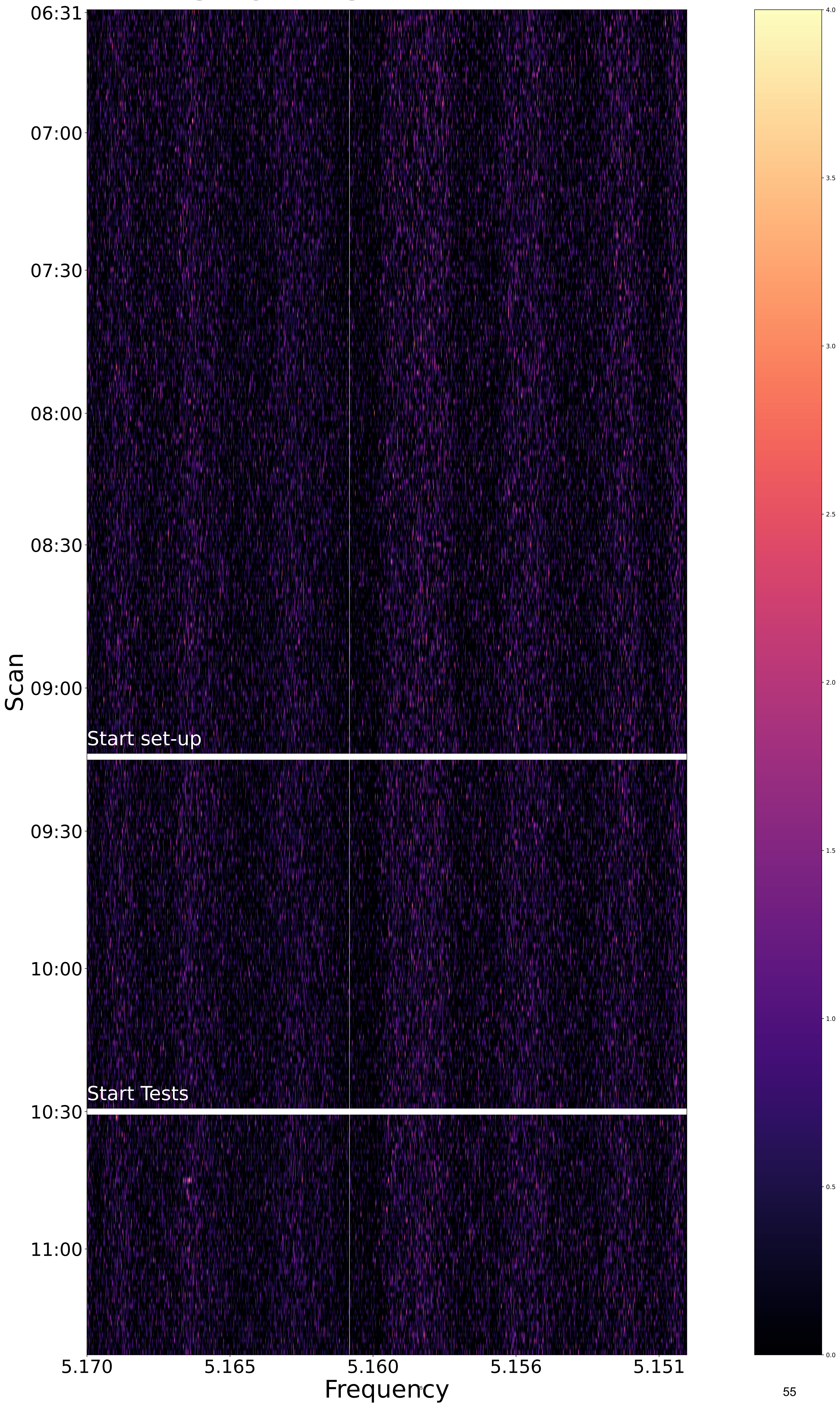
Channel 120 - YY



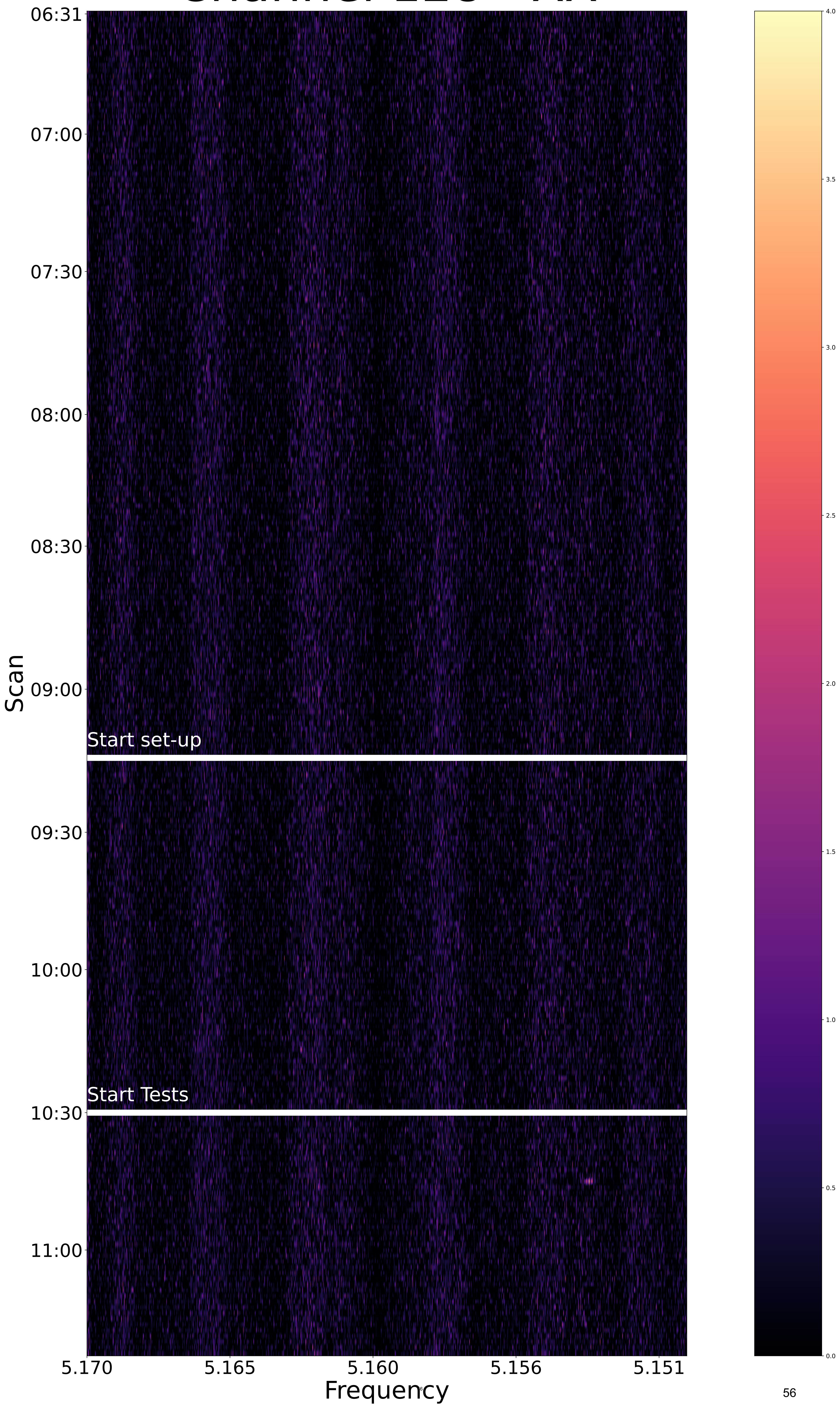
Channel 124 - XX



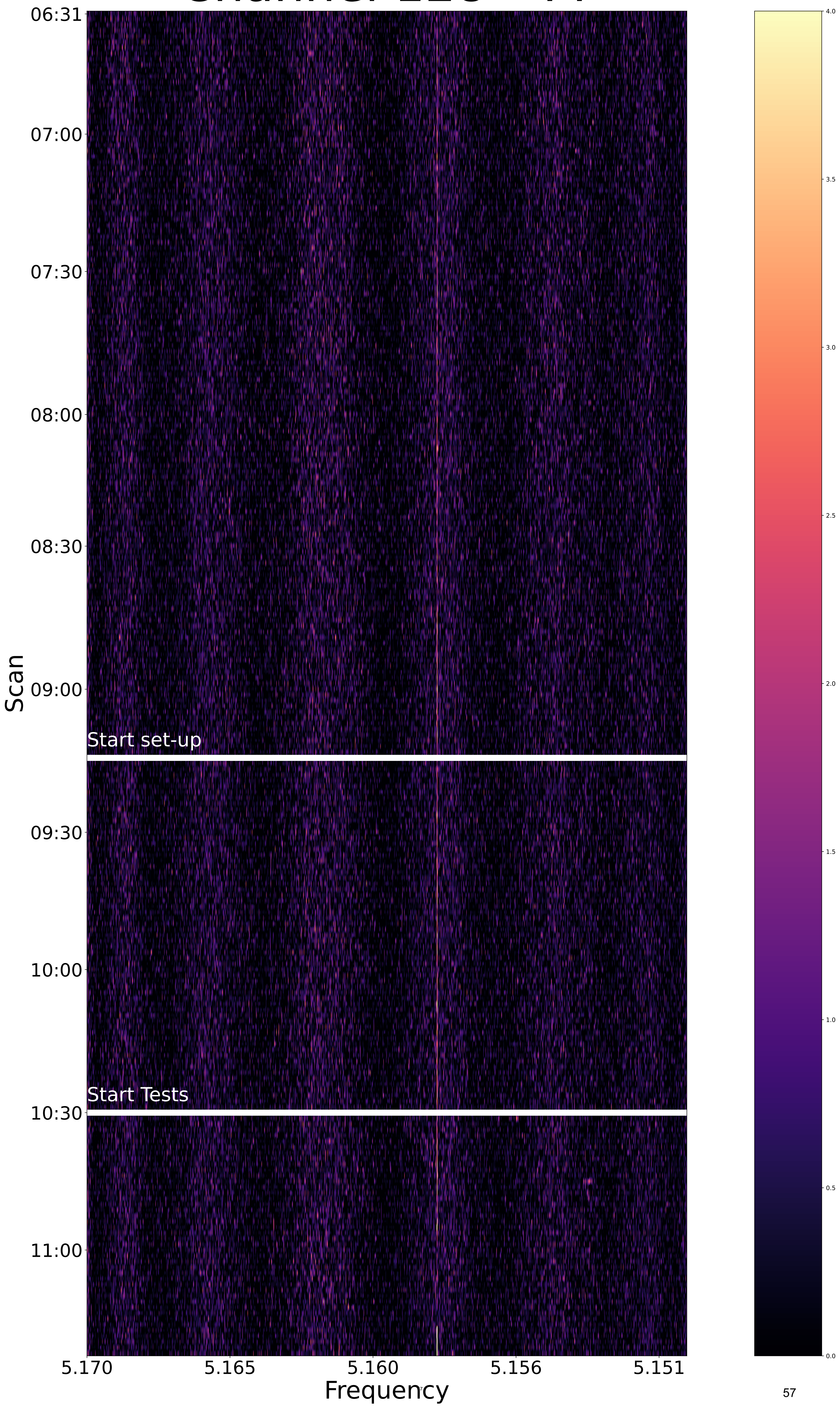
Channel 124 - YY



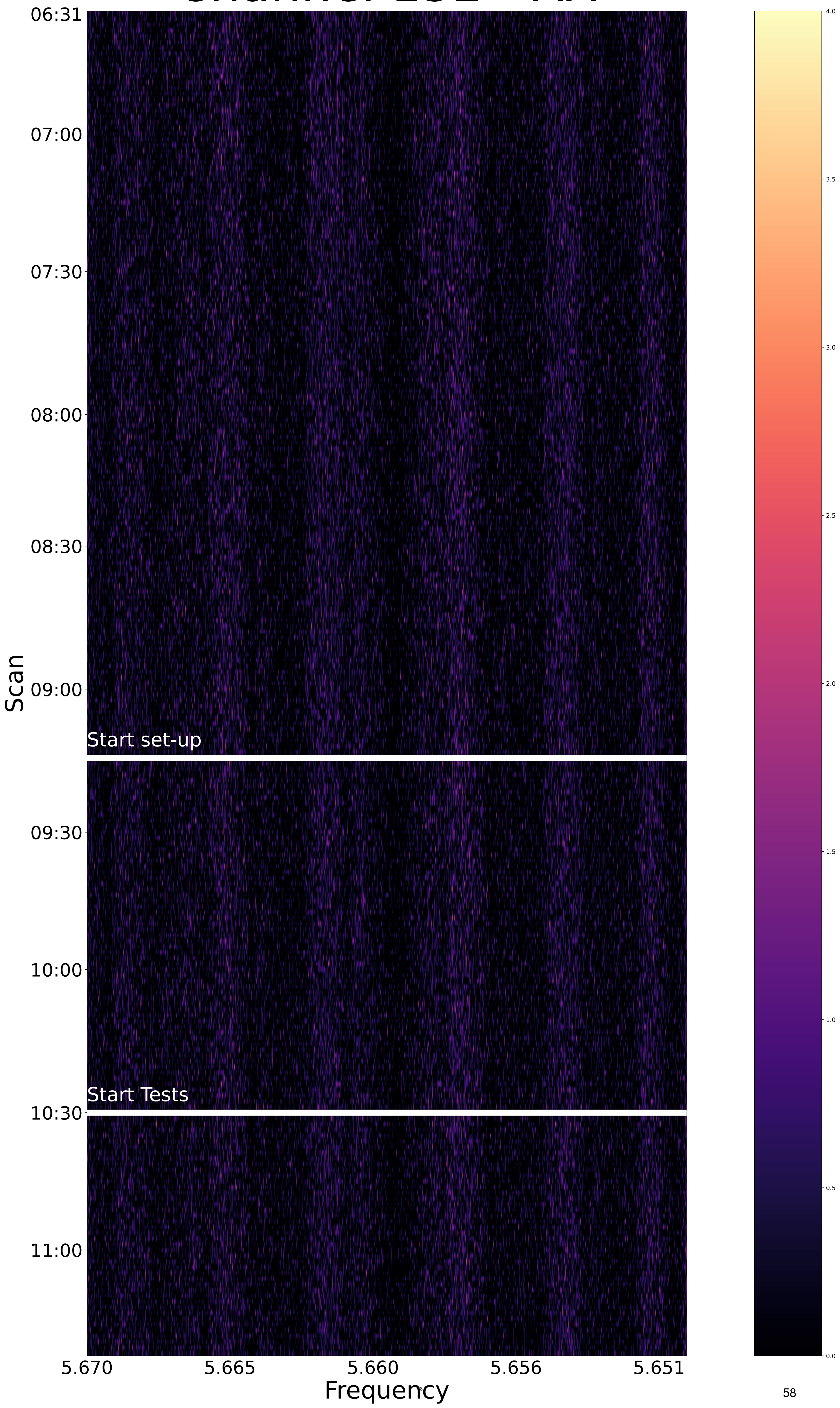
Channel 128 - XX



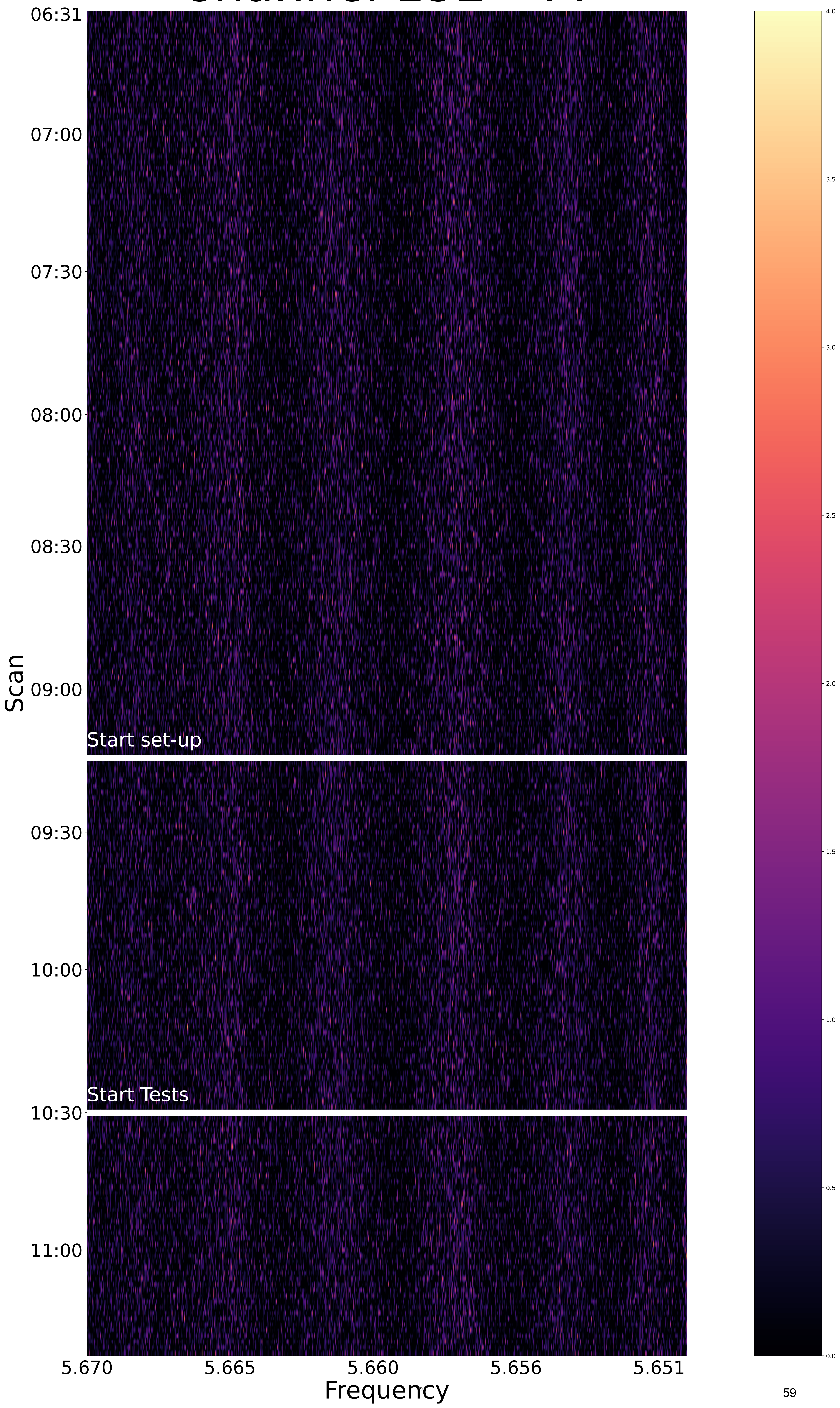
Channel 128 - YY



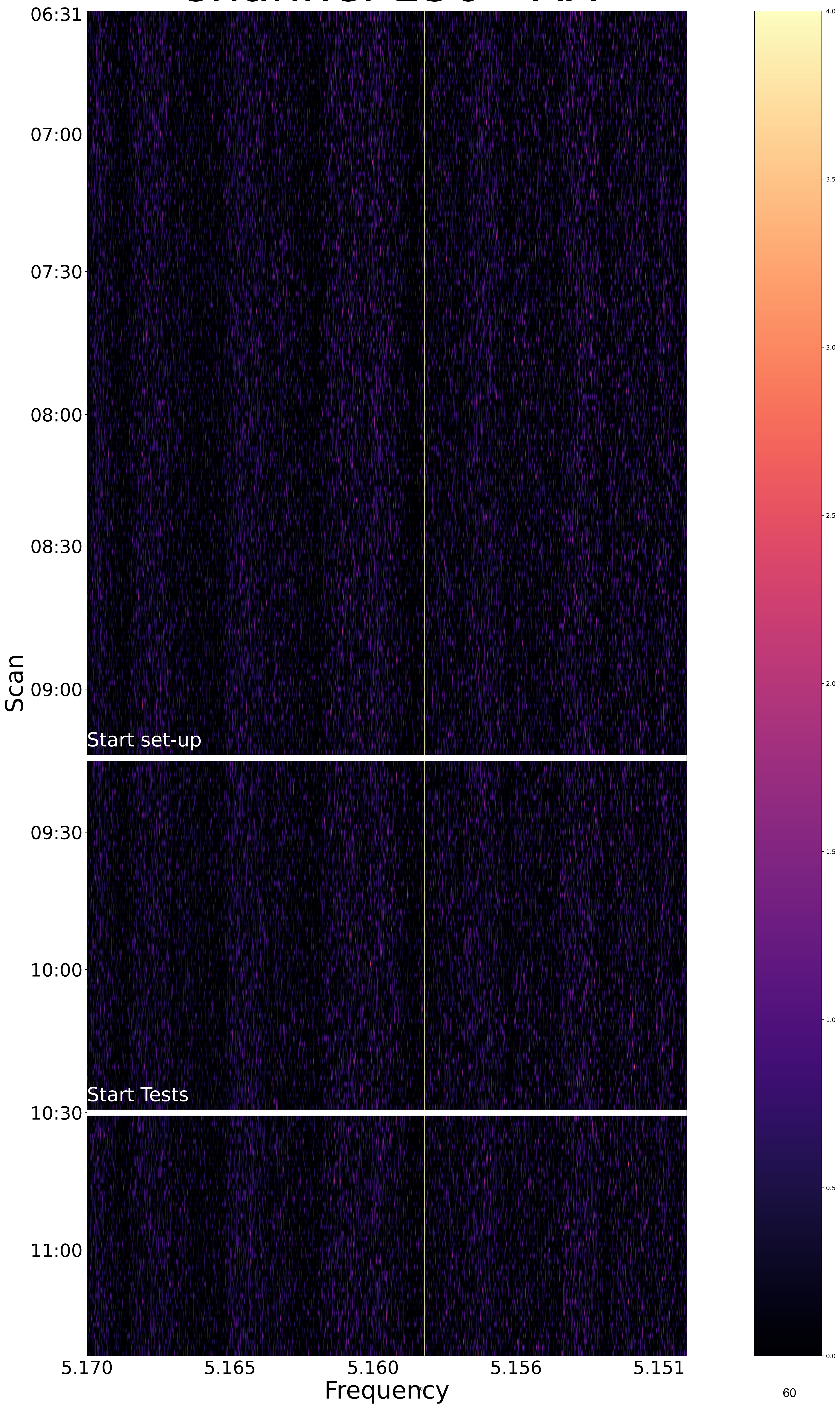
Channel 132 - XX



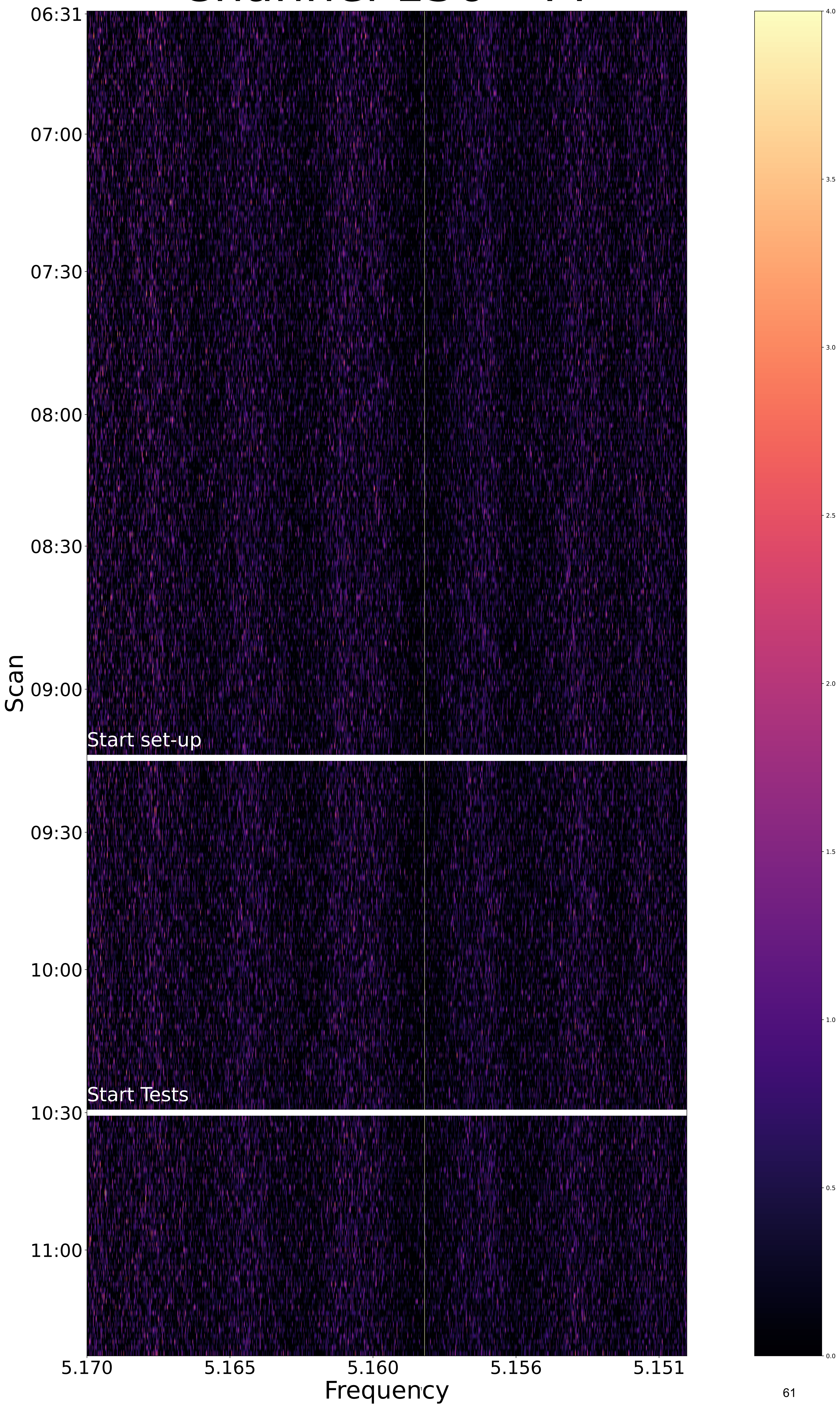
Channel 132 - YY



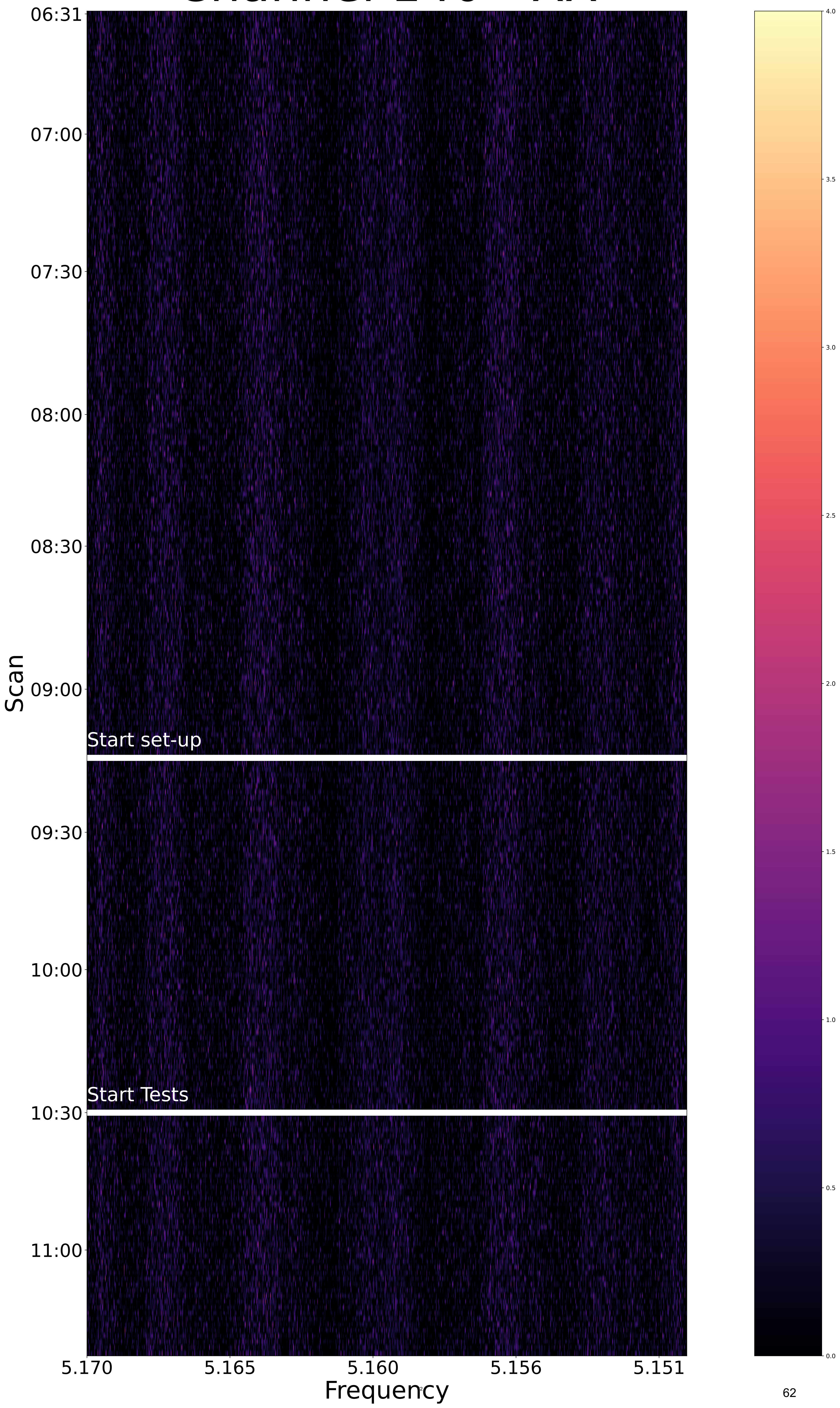
Channel 136 - XX



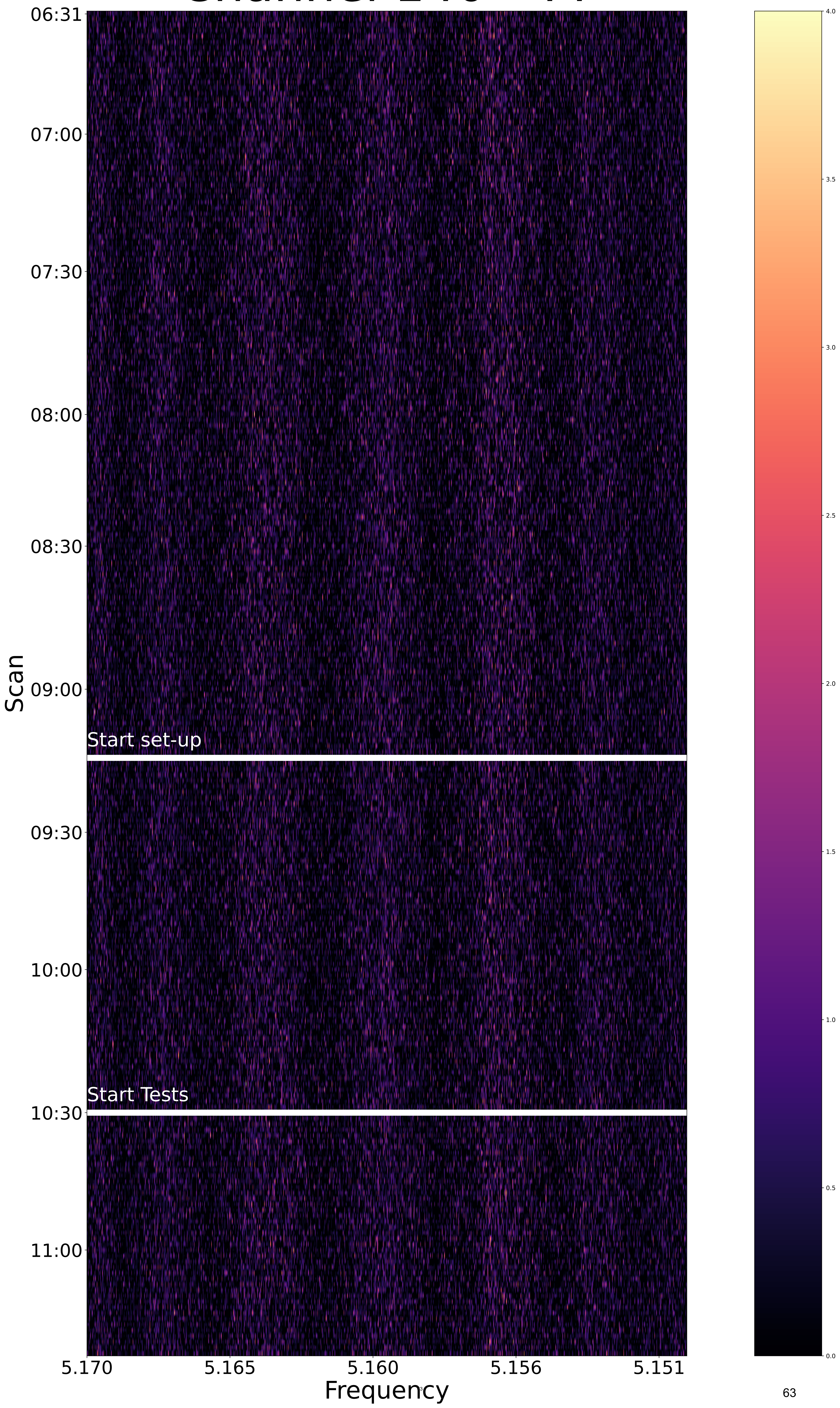
Channel 136 - YY



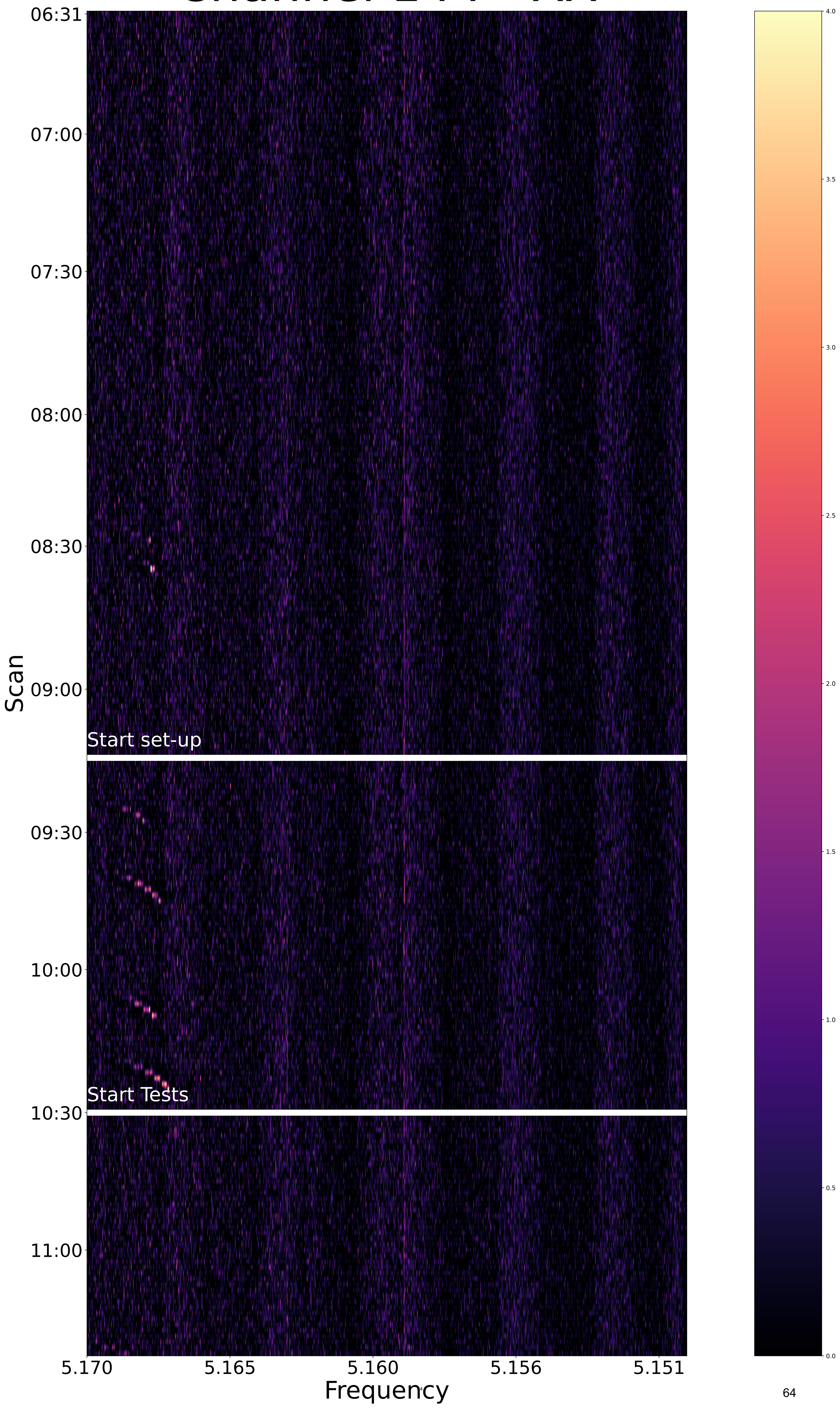
Channel 140 - XX



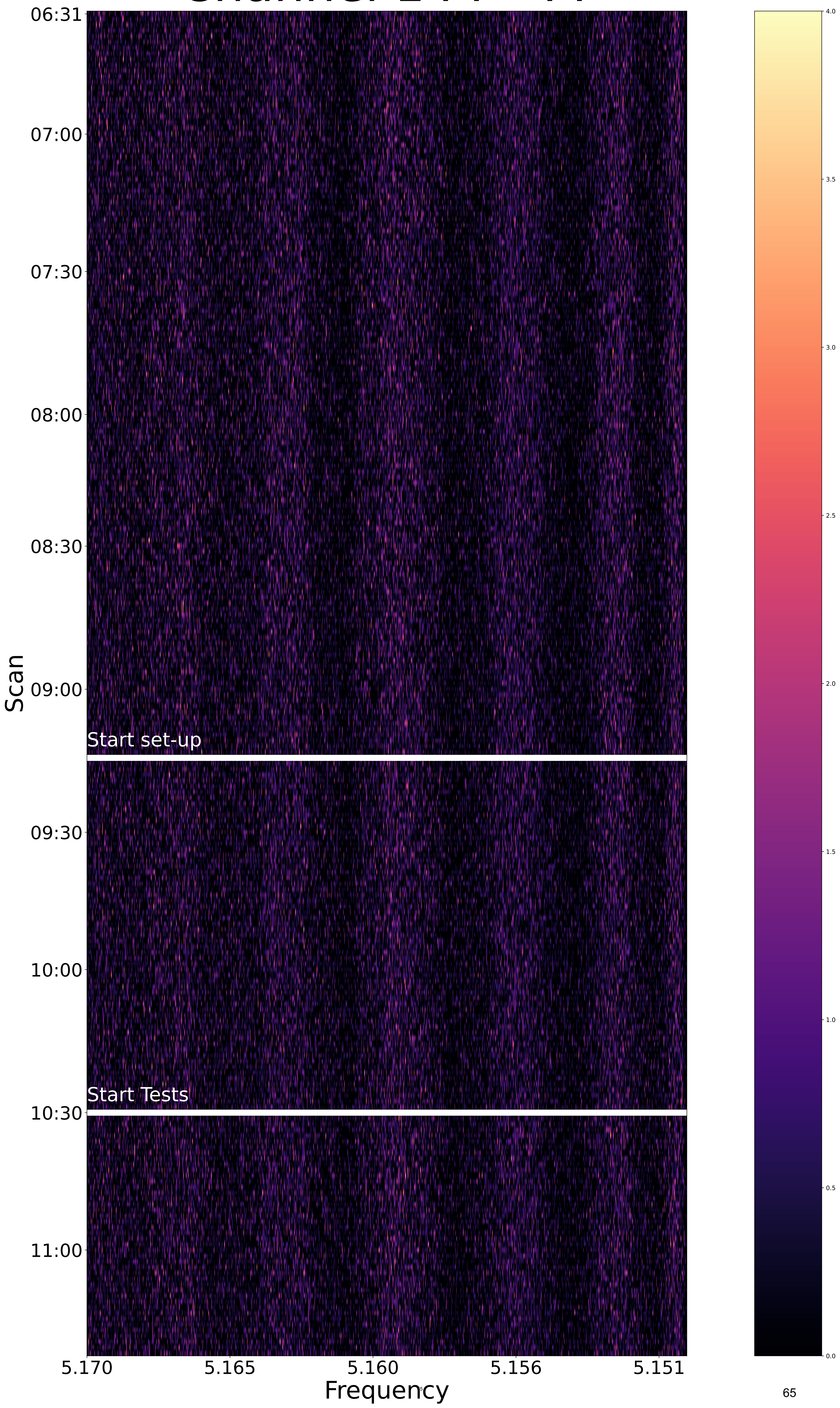
Channel 140 - YY



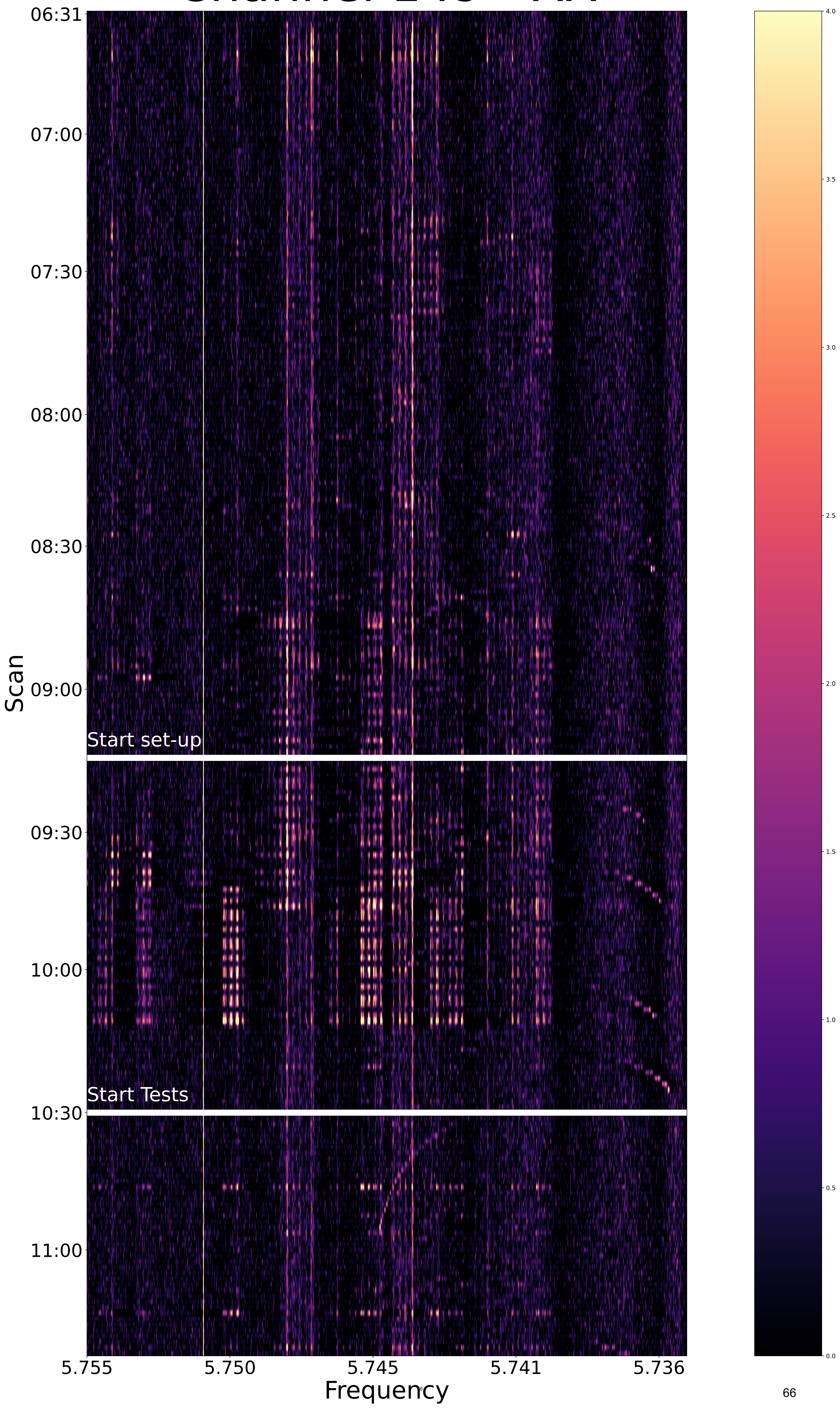
Channel 144 - XX



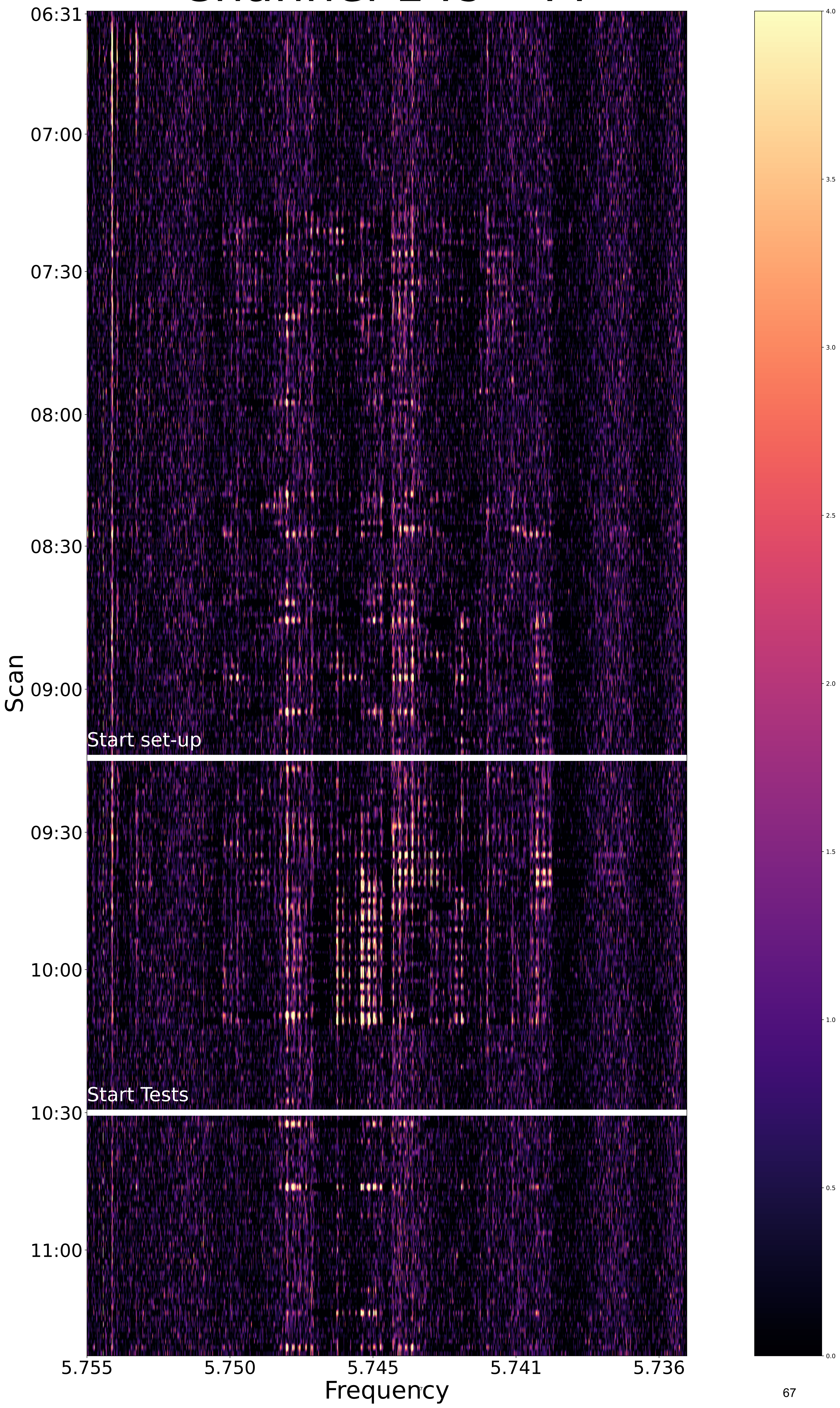
Channel 144 - YY



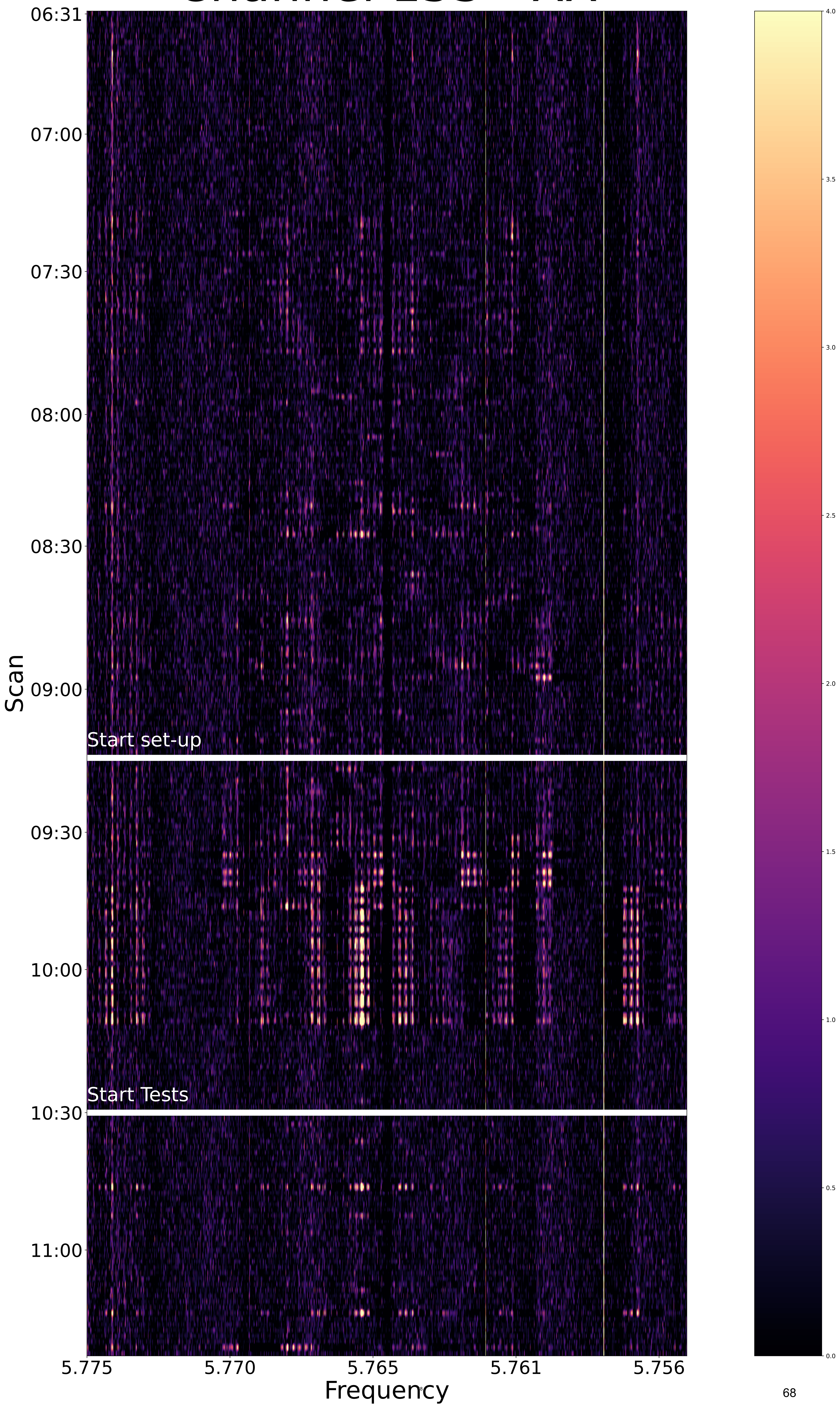
Channel 149 - XX



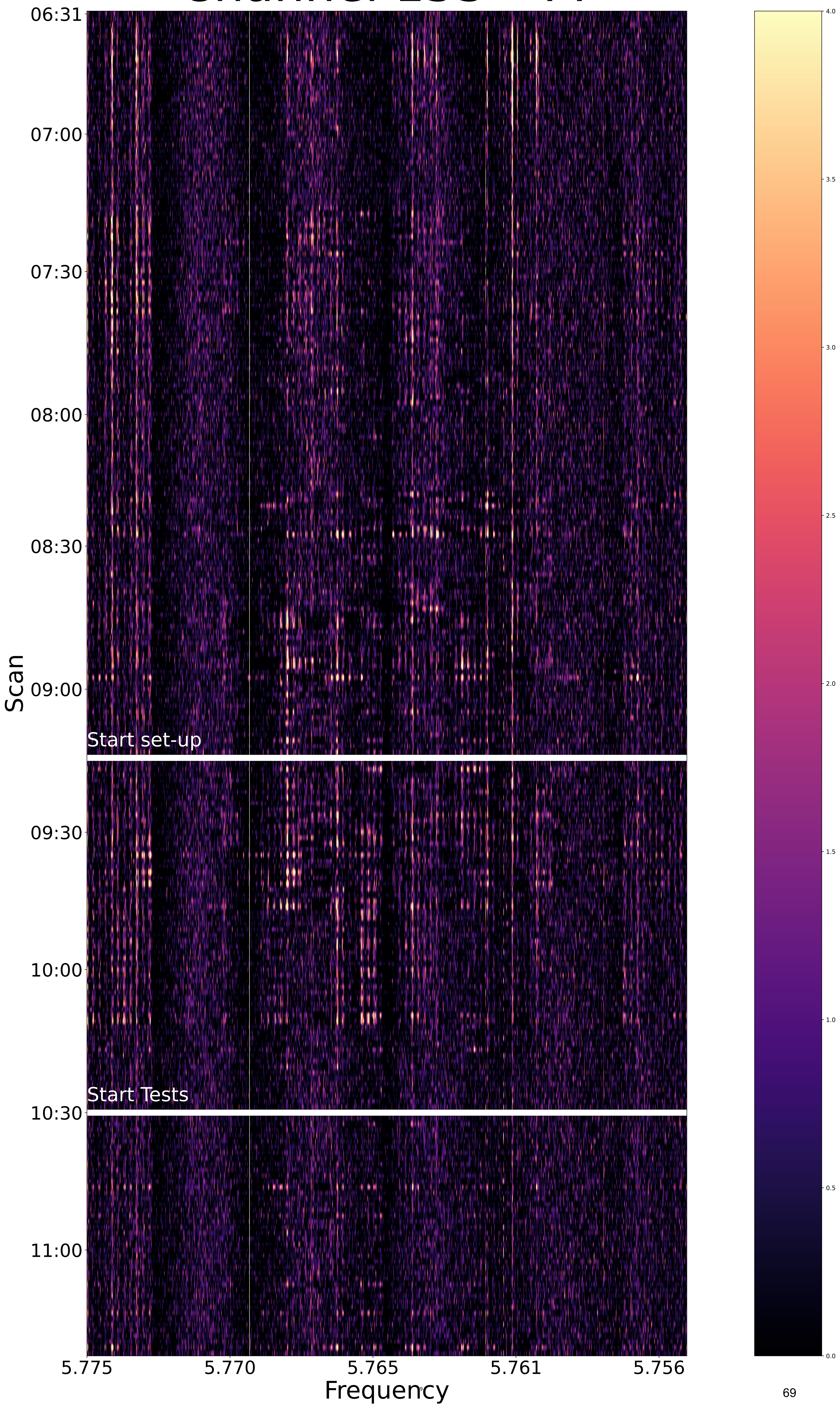
Channel 149 - YY



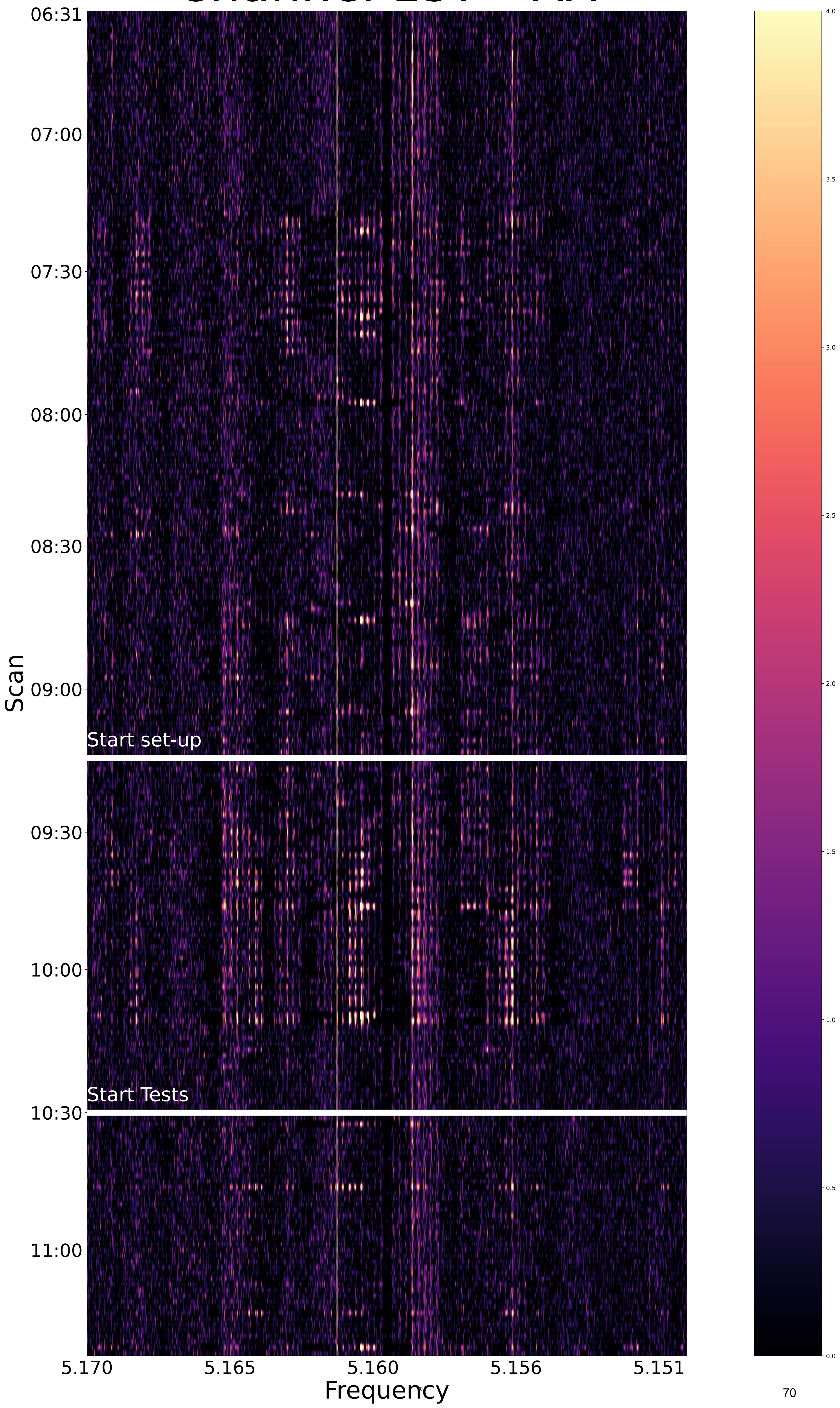
Channel 153 - XX



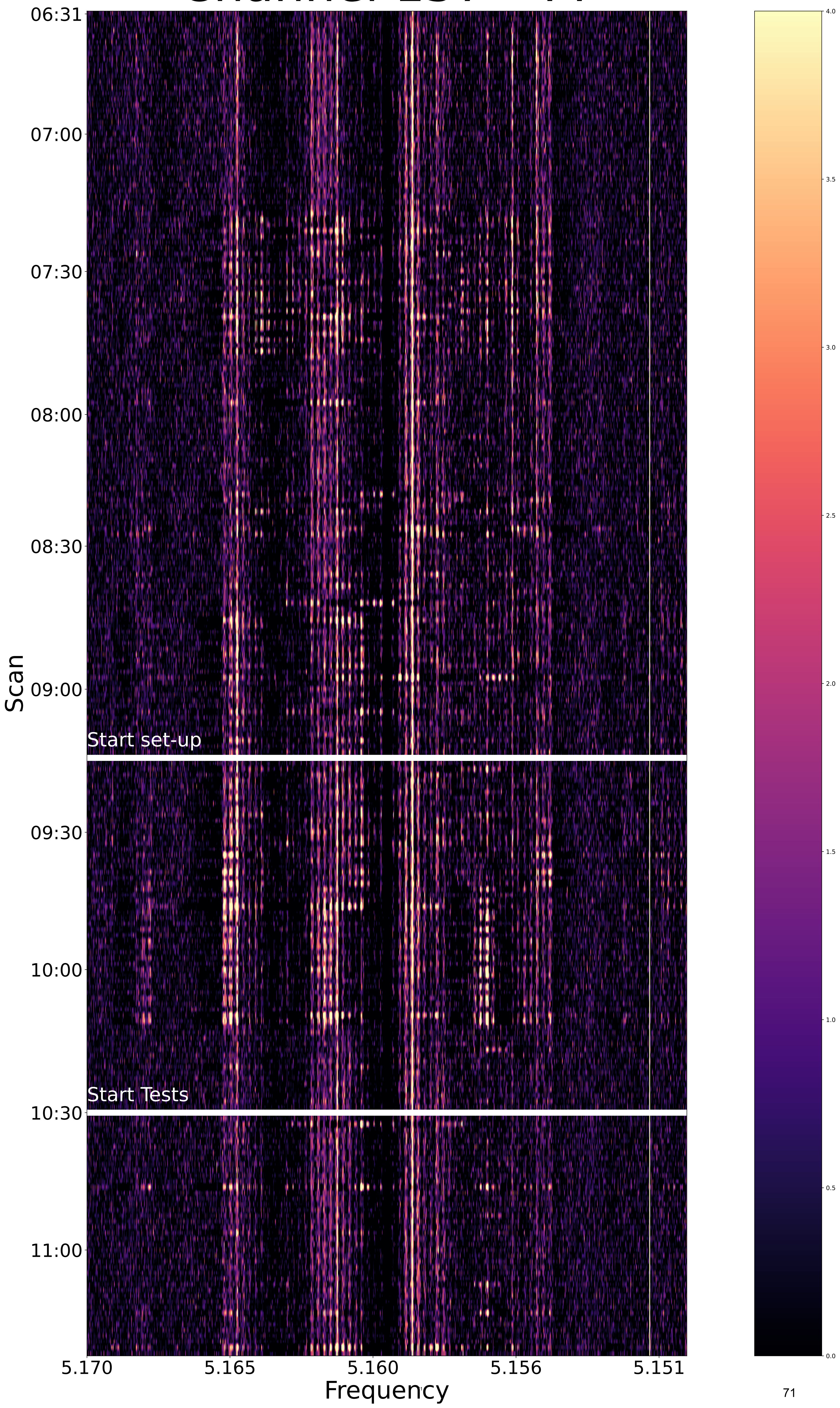
Channel 153 - YY



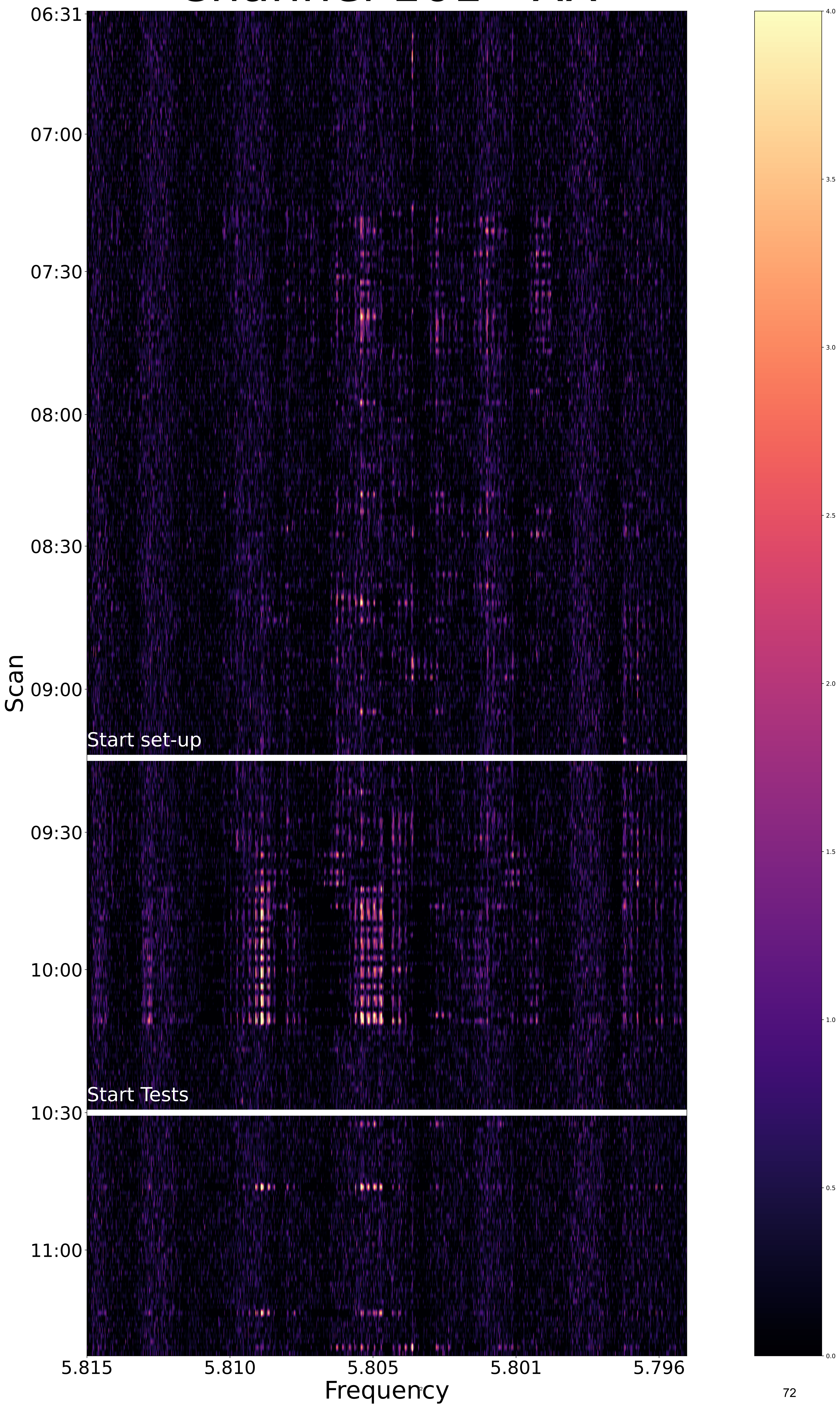
Channel 157 - XX



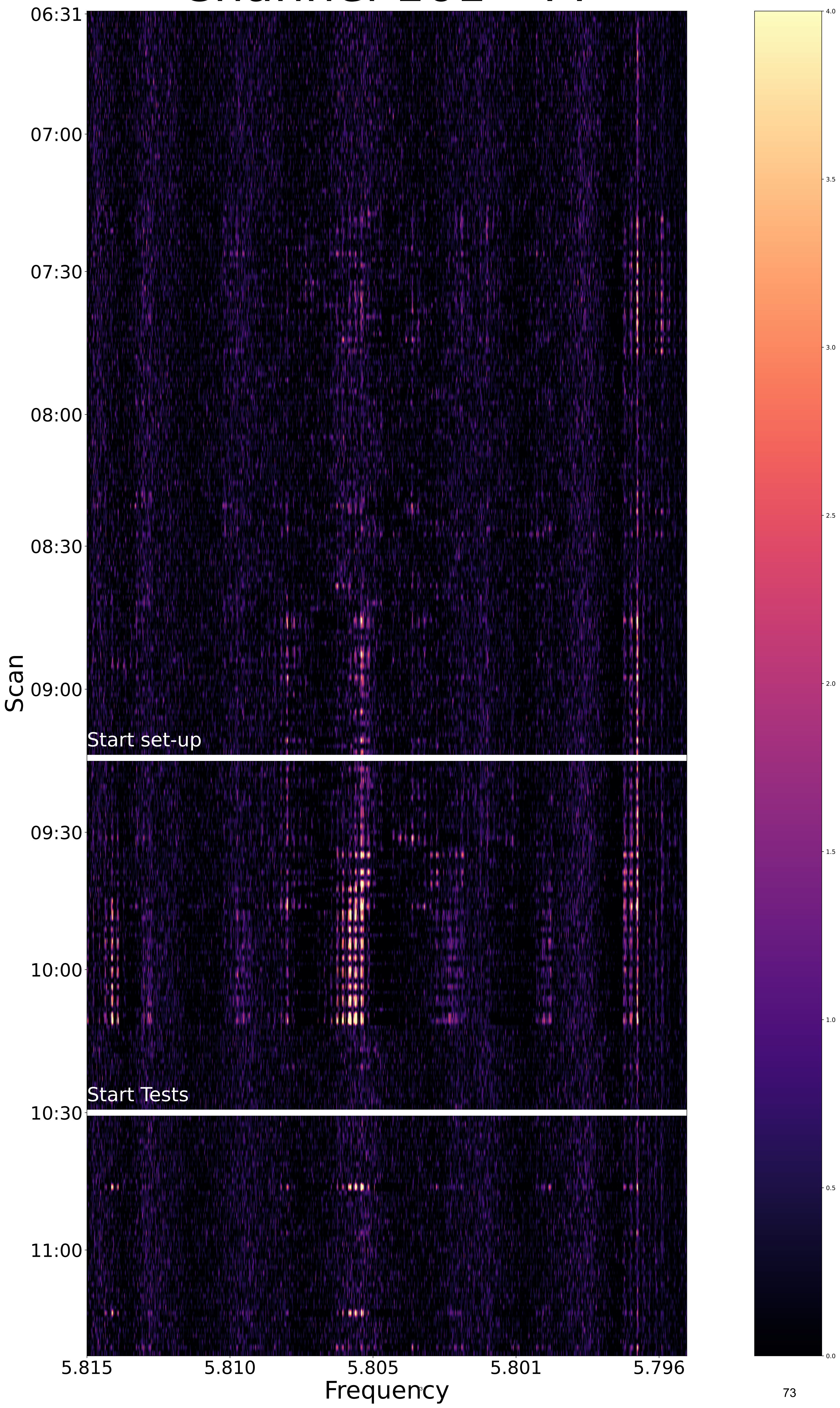
Channel 157 - YY



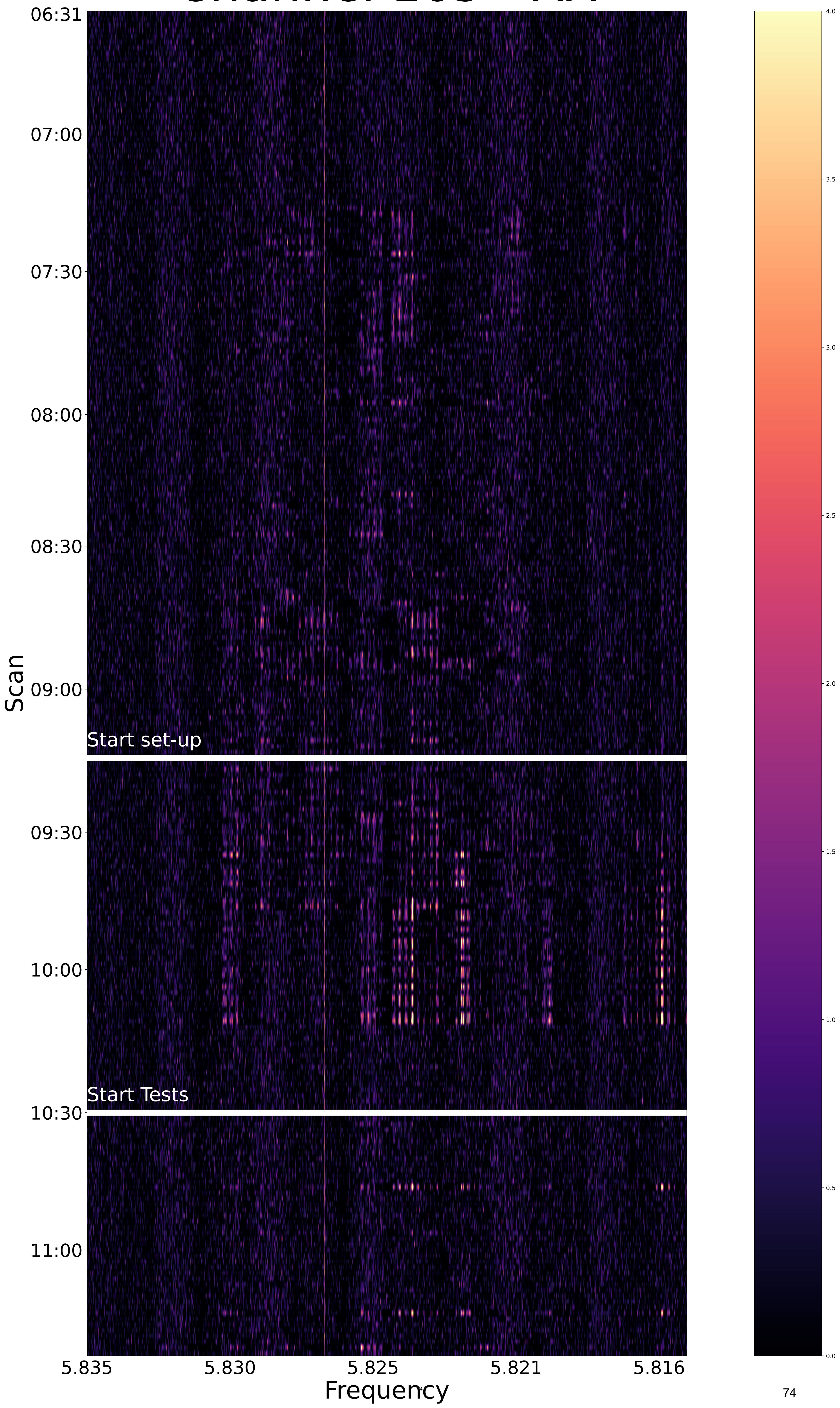
Channel 161 - XX



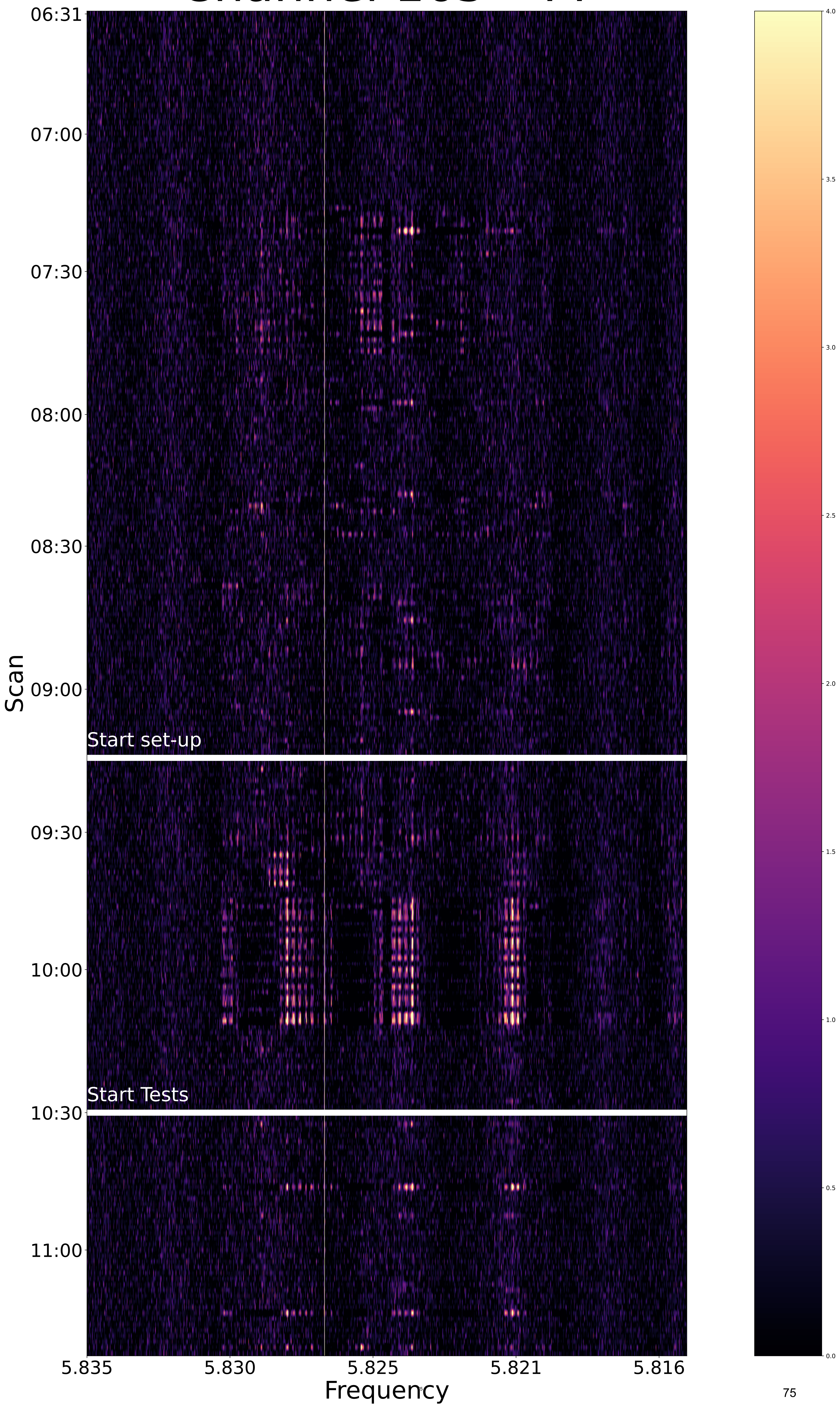
Channel 161 - YY



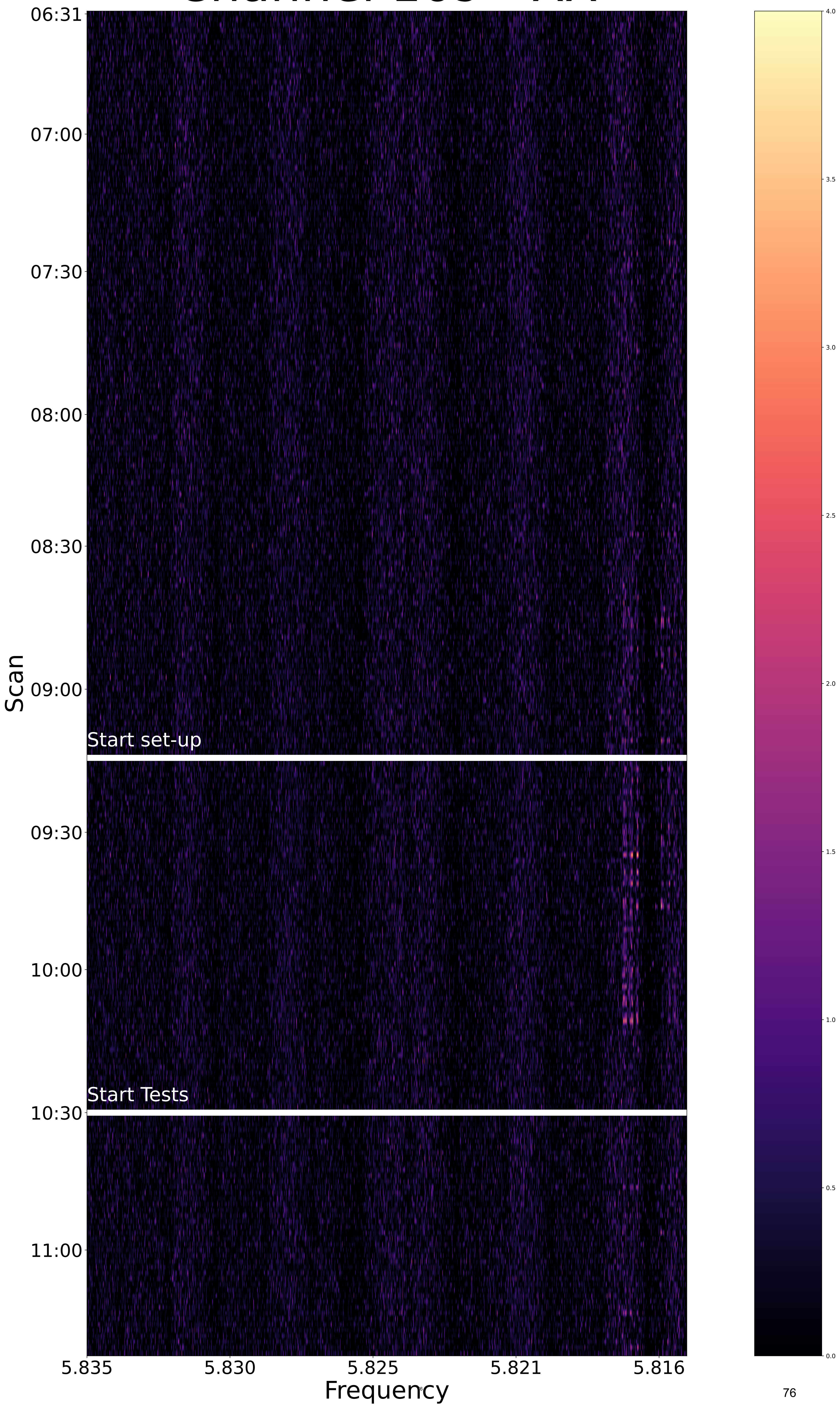
Channel 165 - XX



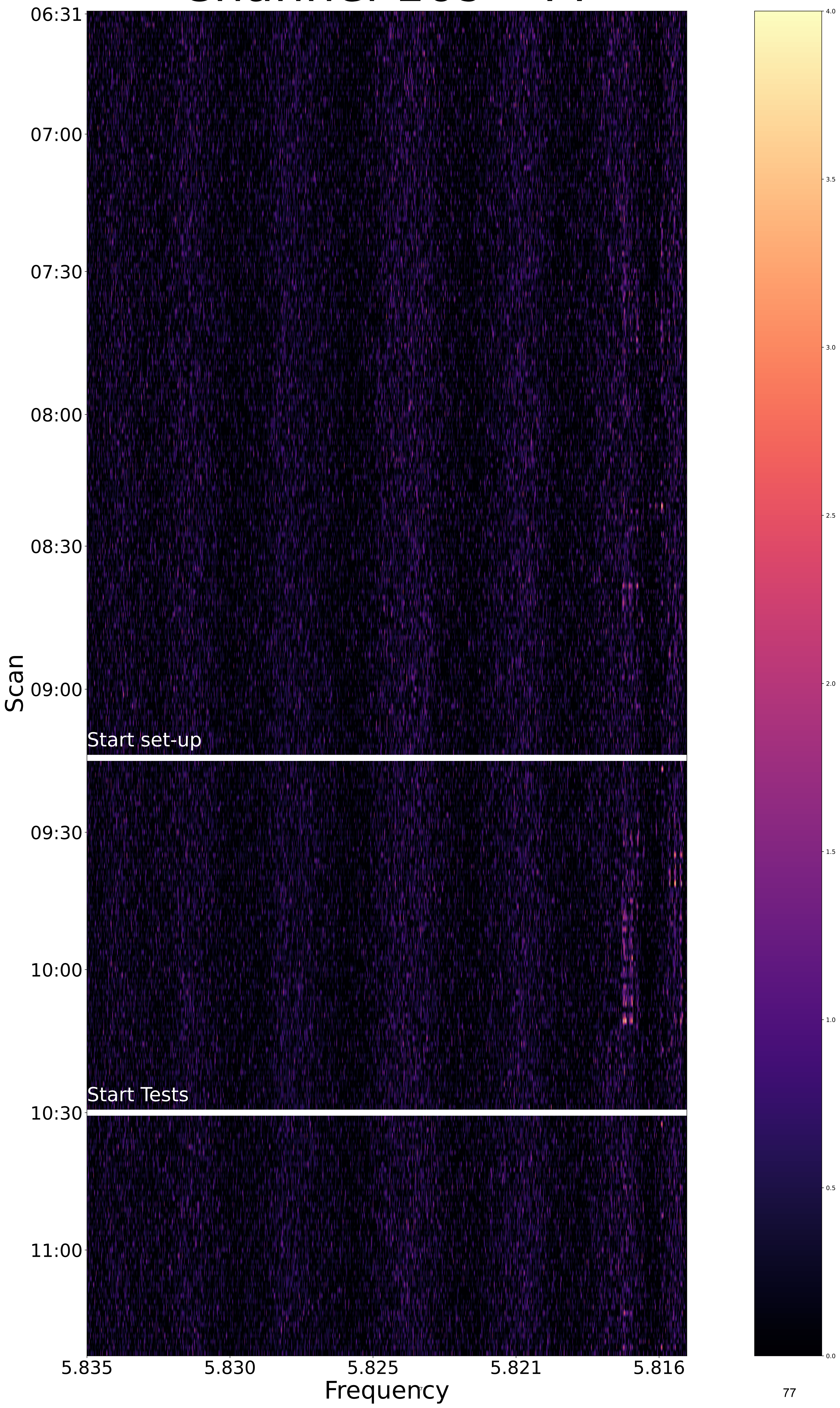
Channel 165 - YY



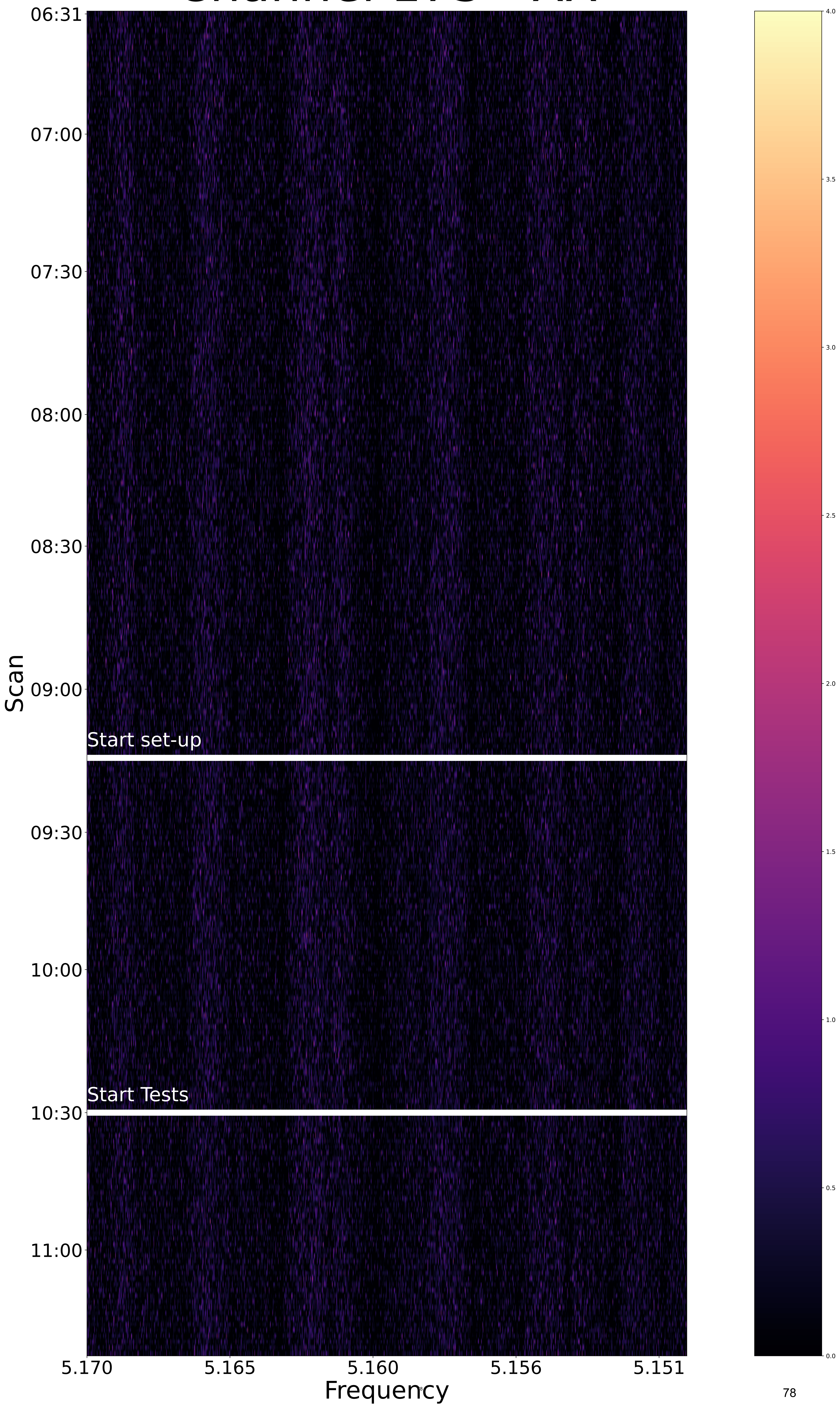
Channel 169 - XX



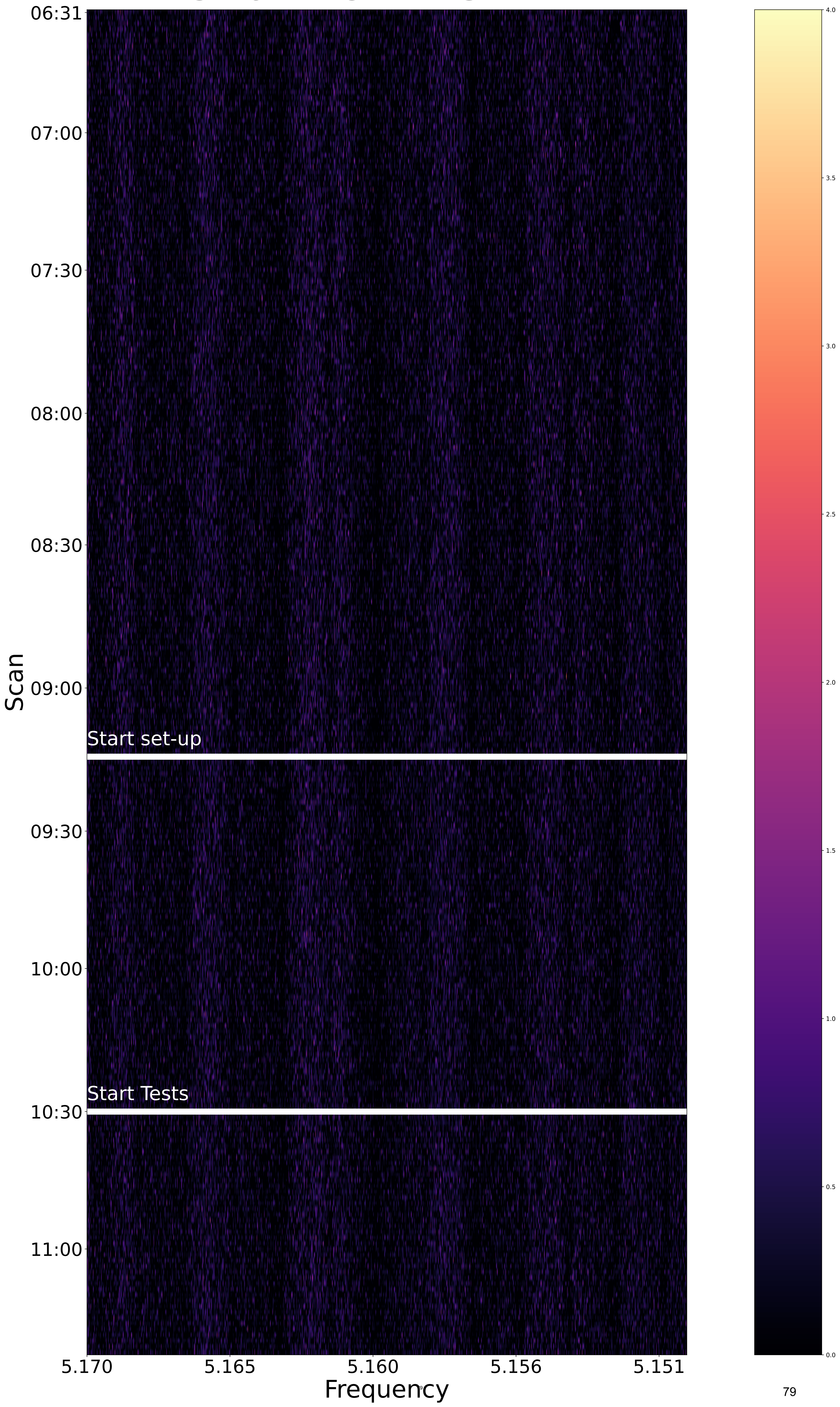
Channel 169 - YY



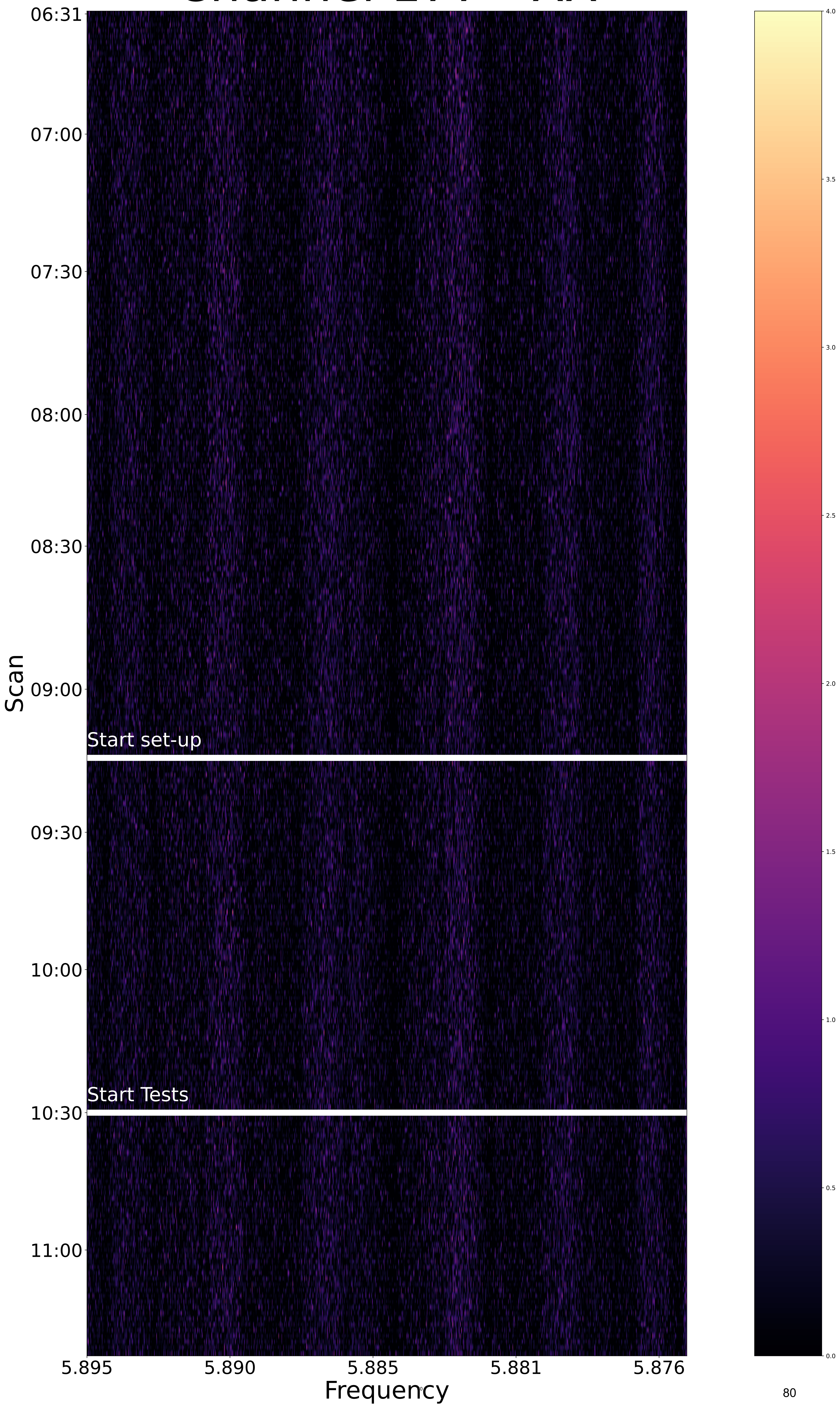
Channel 173 - XX



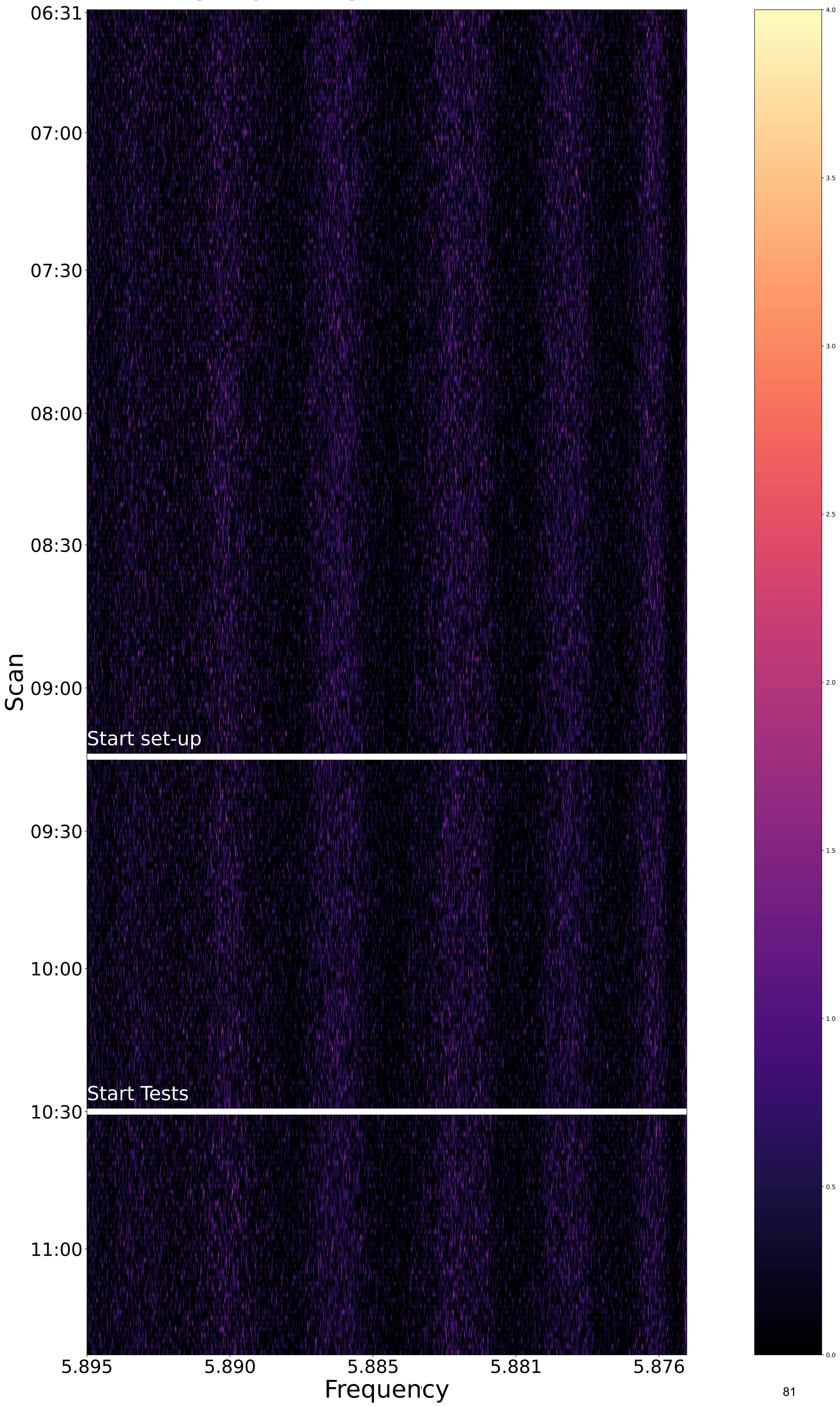
Channel 173 - YY



Channel 177 - XX



Channel 177 - YY



APPENDIX C. SPECTRAL LINES WITH REST FREQUENCIES IN THE 2.4 GHZ WIFI BANDS

Species	Chemical Name	Rest Freq (GHz)
Hδ	Hydrogen Recombination Line	2.40458488
Heδ	Helium Recombination Line	2.40556475
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	2.40695500
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	2.40728400
CH ₃ COOHv=0	Acetic Acid	2.40753120
Hζ	Hydrogen Recombination Line	2.40846213
NS,v=0	Nitric sulfide	2.40867660
CH ₃ COOHv=0	Acetic Acid	2.40879380
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	2.40921400
CH ₂ CHCNv11=2	Vinyl Cyanide	2.41116000
Hγ	Hydrogen Recombination Line	2.41164169
HCCCH ₂ CN	Propargyl cyanide	2.41239950
Hβ	Hydrogen Recombination Line	2.41261808
Heγ	Helium Recombination Line	2.41262444
Cγ	Carbon Recombination Line	2.41284498
Heβ	Helium Recombination Line	2.41360123
Cβ	Carbon Recombination Line	2.41382186
g-CH ₃ CH ₂ OH	gauche-Ethanol	2.41383820
NH ₂ CN	Cyanamide	2.41479430
CH ₂ CH ₁₃ CN	Vinyl Cyanide	2.41600900
PO	Phosphorus Monoxide	2.41709460
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	2.41762300
E-HNCHCN	Cyanomethanimine	2.41789790
E-HNCHCN	Cyanomethanimine	2.41793860
E-HNCHCN	Cyanomethanimine	2.41832030
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	2.41902100
CH ₃ OCH ₂ OH	Methoxymethanol	2.41966740
CH ₃ OCH ₂ OH	Methoxymethanol	2.42017190
HeIIα	Helium Recombination Line	2.42152360
PO	Phosphorus Monoxide	2.42163420
Hα	Hydrogen Recombination Line	2.42246259
N ₃₄ S	Nitric sulfide	2.42256940
KCN,KNC	Potassium cyanide, potassium isocyanide	2.42300000
Heα	Helium Recombination Line	2.42344976
Cα	Carbon Recombination Line	2.42367129

CH₃COOH_{v=0}	Acetic Acid	2.42379100
H&epsilon;	Hydrogen Recombination Line	2.42420220
NS,_{v=0}	Nitric sulfide	2.42430890
NH_{3v=0}	Ammonia	2.42703570
NO	Nitric oxide	2.42770140
CH₂CHCN_{v=0}	Vinyl Cyanide	2.43260930
CH₂CHCN_{v=0}	Vinyl Cyanide	2.43261000
CH₂CHCN_{v=0}	Vinyl Cyanide	2.43261210
13CH₃13CH₂CN	Ethyl cyanide	2.43591880
i-C₃H₇CN	iso-propyl cyanide	2.43632200
CH₃COOH_{v=0}	Acetic Acid	2.43697700
CH₃COOH_{v=0}	Acetic Acid	2.43697860
CH₃O13CHO(TopModel)	Methyl Formate	2.43703000
H&zeta;	Hydrogen Recombination Line	2.43713938
H&delta;	Hydrogen Recombination Line	2.43737781
He&delta;	Helium Recombination Line	2.43837105
CH₃COOH_{v=0}	Acetic Acid	2.43849900
CH₃COOH_{v=0}	Acetic Acid	2.43849900
CH₃COOH_{v=0}	Acetic Acid	2.43849900
CH₃COOH_{v=0}	Acetic Acid	2.43849900
CH₃O13CHO(TopModel)	Methyl Formate	2.44038400
CH₃O13CHO(TopModel)	Methyl Formate	2.44038500
NH_{3v=0}	Ammonia	2.44125470
CH₃CH₂CN_{v=0}	Ethyl Cyanide	2.44224580
13CH₃CH₂CN	Ethyl Cyanide	2.44275320
CH₃OH_{vt=0-2}	Methanol	2.44286500
CH₃O13CHO(TopModel)	Methyl Formate	2.44424600
CH₃O13CHO(TopModel)	Methyl Formate	2.44657700
CH₂13CHCN	Vinyl Cyanide	2.44665420
CH₃COOH_{v=0}	Acetic Acid	2.44674210
HCCCH₂CN	Propargyl cyanide	2.44711320
13CH₃13CH₂CN	Ethyl cyanide	2.44726290
H&gamma;	Hydrogen Recombination Line	2.44790908
t-DCOOH	Formic Acid	2.44804110
t-DCOOH	Formic Acid	2.44805950
c-H₂C₃O	Cyclopropenone	2.44839070
CH₃COOH_{v=0}	Acetic Acid	2.44844940
CH₃COOH_{v=0}	Acetic Acid	2.44845090
He&gamma;	Helium Recombination Line	2.44890662
C&gamma;	Carbon Recombination Line	2.44913048

NO	Nitric oxide	2.45126600
CH3CHO$v=0,1&2$	Acetaldehyde	2.45141460
CH3O13CHO(TopModel)	Methyl Formate	2.45163500
CH2CHCN$v=0$	Vinyl Cyanide	2.45216010
CH2CHCN$v=0$	Vinyl Cyanide	2.45216090
CH2CHCN$v=0$	Vinyl Cyanide	2.45218400
CH3O13CHO(TopModel)	Methyl Formate	2.45268500
H&beta;	Hydrogen Recombination Line	2.45421585
HeII&alpha;	Helium Recombination Line	2.45461940
H&epsilon;	Hydrogen Recombination Line	2.45495737
He&beta;	Helium Recombination Line	2.45521595
C&beta;	Carbon Recombination Line	2.45544039
CH2CH13CN	Vinyl Cyanide	2.45612910
CH2CHCN$v_{11}=2$	Vinyl Cyanide	2.45733900
NO	Nitric oxide	2.45755820
t-HCOOH	Formic Acid	2.45801560
CH3O13CHO(TopModel)	Methyl Formate	2.45990300
NH2CN	Cyanamide	2.46047370
CH3COOH$v=0$	Acetic Acid	2.46349440
NS,$v=0$	Nitric sulfide	2.46392760
HOCO+	Protonated Carbon Dioxide	2.46445900
D2CO	Formaldehyde	2.46588030
H&zeta;	Hydrogen Recombination Line	2.46627375
CH2CHCN$v_{11}=1$	Vinyl Cyanide	2.46683060
CH2CHCN$v_{11}=1$	Vinyl Cyanide	2.46683130
CH2CHCN$v_{11}=1$	Vinyl Cyanide	2.46683440
13CH2CHCN	Vinyl Cyanide	2.46684710
CH3O13CHO(TopModel)	Methyl Formate	2.46820900
CH3COOH$v=0$	Acetic Acid	2.46839420
CH3O13CHO(TopModel)	Methyl Formate	2.46888700
H&delta;	Hydrogen Recombination Line	2.47076978
CH213CHCN	Vinyl Cyanide	2.47127190
H213CO	Formaldehyde	2.47164300
He&delta;	Helium Recombination Line	2.47177662
g-CH3CH2OH	gauche-Ethanol	2.47201240
CH3O13CHO(TopModel)	Methyl Formate	2.47248200
ND3	Ammonia	2.47260140
NO	Nitric oxide	2.47471980
NO	Nitric oxide	2.47502560
CH3CHO$v=0,1&2$	Acetaldehyde	2.47516140



Title: WiFi at GBEMS	Author: O'Neil	GBT Memo Series
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H&alpha;	Hydrogen Recombination Line	2.47531540
H2CCCHCN	Cyanoallene	2.47565770
He&alpha;	Helium Recombination Line	2.47632410
C&alpha;	Carbon Recombination Line	2.47655047
t-DCOOH	Formic Acid	2.48037920
CH3O13CHO(TopModel)	Methyl Formate	2.48052600
CH3O13CHO(TopModel)	Methyl Formate	2.48056000
CH3O13CHO(TopModel)	Methyl Formate	2.48091700
HC3Nv7=1	Cyanoacetylene	2.48233610
H2CO	Formaldehyde	2.48340800
NH2D	Ammonia	2.48374870
CH3CH2C15N	Ethyl Cyanide	2.48421430
H&gamma;	Hydrogen Recombination Line	2.48490737
He&gamma;	Helium Recombination Line	2.48591997
C&gamma;	Carbon Recombination Line	2.48614722
H&epsilon;	Hydrogen Recombination Line	2.48623500
g'Ga-(CH2OH)2	Ethylene Glycol	2.48630340
H2CS	Thioformaldehyde	2.48664080
CH2CHCNv11=1	Vinyl Cyanide	2.48752130
CH2CHCNv11=1	Vinyl Cyanide	2.48752200
CH2CHCNv11=1	Vinyl Cyanide	2.48752410
HeII&alpha;	Helium Recombination Line	2.48832100
CH3COOHv=0	Acetic Acid	2.48873270

APPENDIX D. SPECTRAL LINES WITH REST FREQUENCIES IN THE 5 GHZ WIFI BANDS

Species	Chemical Name	Rest Frequency
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.48068080
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.48077590
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.48092090
$H_2O_{v2,2v2,v1,v3}$	Water	5.48215050
$HCCCH_2CN$	Propargyl cyanide	5.48224300
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.48236220
$g-CH_3CH_2OH$	gauche-Ethanol	5.48244310
$HCCCH_2CN$	Propargyl cyanide	5.48281100
$HCCCH_2CN$	Propargyl cyanide	5.48292510
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.48357710
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.48378600
$HCCCH_2CN$	Propargyl cyanide	5.48393390
$HCCCH_2CN$	Propargyl cyanide	5.48394510
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.48557630
$CH_3O_13CHO(TopModel)$	Methyl Formate	5.48630600
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.48745620
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.48745620
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.48869650
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.48870070
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.48934110
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.49044280
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.49079790
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.49079790
$H\ζ$	Hydrogen Recombination Line	5.49107985
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.49137710
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.49137710
D_2CS	Thioformaldehyde	5.49213720
$CH_3CH_2CN_{v=0}$	Ethyl Cyanide	5.49351840
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.49409840
$g'Ga-(CH_2OH)_2$	Ethylene Glycol	5.49409840
$H_{13}CN_{v2=3}$	Hydrogen cyanide	5.49414970
$CH_3OH_{vt=0-2}$	Methanol	5.49424300
NHD_2	Ammonia	5.49498000
$CH_3COOH_{v=0}$	Acetic Acid	5.49499950

g'Ga-(CH₂OH)₂	Ethylene Glycol	5.49549330
H₂CCCHCN	Cyanoallene	5.49579380
CH₃OH_vt=0-2	Methanol	5.49793200
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.49858250
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.49858250
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.49944840
CH₂CN	Cyanomethyl	5.50038710
HeII&alpha;	Helium Recombination Line	5.50064230
H&epsilon;	Hydrogen Recombination Line	5.50140312
c-C₆H₅CN	Benzonitrile	5.50192090
c-C₆H₅CN	Benzonitrile	5.50212170
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.50224700
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.50290480
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.50290480
c-C₆H₅CN	Benzonitrile	5.50318680
c-C₆H₅CN	Benzonitrile	5.50319250
c-C₆H₅CN	Benzonitrile	5.50327620
NO	Nitric oxide	5.50341520
c-C₆H₅CN	Benzonitrile	5.50529970
CH₃CH₂¹³CN	Ethyl Cyanide	5.50618830
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.50626980
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.50627000
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.50712930
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.50712930
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.50744300
C₆H₅&#150;	1,3,5-Hexatriynyl anion	5.50745090
NHD₂	Ammonia	5.50775000
CH₃¹³CH₂CN	Ethyl Cyanide	5.50889360
D₂CS	Thioformaldehyde	5.50913860
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.51585450
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.51585450
NH₃_v=0	Ammonia	5.51715820
CH₂CN	Cyanomethyl	5.51727540
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.51733000
c-H₂C₃O	Cyclopropenone	5.51735640
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.51750590
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.51750590
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.51826960
CH₂CHCN_v=0	Vinyl Cyanide	5.51827960
CH₂CHCN_v=0	Vinyl Cyanide	5.51828110

CH₂CHCN_{v=0}	Vinyl Cyanide	5.51828960
cis-CH₂OHCHO_{v=0}	Glycolaldehyde	5.52197840
cis-CH₂OHCHO_{v=0}	Glycolaldehyde	5.52197840
CH₃CHO_{v=0,1&2}	Acetaldehyde	5.52241310
OH_{v=0}	Hydroxyl	5.52344140
CH₃COOH_{v=0}	Acetic Acid	5.52515530
CH₃COOH_{v=0}	Acetic Acid	5.52519280
NHD₂	Ammonia	5.52590330
NHD₂	Ammonia	5.52592980
CH₂CN	Cyanomethyl	5.52679350
c-SiC₃	3-Silanetetrayl-1,2-Propadienylidene	5.52746690
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.52785280
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.52785280
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.52968210
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.52968210
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.53000800
CH₃OH_{v=0,1&2}	Methanol	5.53014000
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.53083360
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.53083360
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.53193350
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.53193350
NO	Nitric oxide	5.53392000
CH₃COOH_{v=0}	Acetic Acid	5.53406230
C₅S	Thiopentatetraeynlidene	5.53622200
NS,_{v=0}	Nitric sulfide	5.53773350
NH₂CN	Cyanamide	5.53784370
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.53811480
CH₃OCHO_{v=0}	Methyl Formate	5.53867280
N₃4S	Nitric sulfide	5.53875160
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.53908300
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.53926280
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.53931160
CH₂CHCN_{v=0}	Vinyl Cyanide	5.54119130
CH₂CHCN_{v=0}	Vinyl Cyanide	5.54119280
CH₂CHCN_{v=0}	Vinyl Cyanide	5.54119840
CH₃COOH_{v=0}	Acetic Acid	5.54230210
CH₃COOH_{v=0}	Acetic Acid	5.54230210
CH₃COOH_{v=0}	Acetic Acid	5.54231570
CH₃COOH_{v=0}	Acetic Acid	5.54231570
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	5.54432230

g'Ga-(CH₂OH)₂	Ethylene Glycol	5.54437740
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.54442220
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.54442220
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.54490210
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.54490210
OHv=0	Hydroxyl	5.54703600
CH₃COOHv=0	Acetic Acid	5.54744540
CH₃COOHv=0	Acetic Acid	5.54744540
CH₃COOHv=0	Acetic Acid	5.54744540
CH₃COOHv=0	Acetic Acid	5.54744540
CH₃CHOv=0	Methyl Formate	5.54900320
H&delta;	Hydrogen Recombination Line	5.54911593
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.54930160
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.54966780
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.54966780
KCN,KNC	Potassium cyanide, potassium isocyanide	5.54974030
CH₃CH₂CN	Ethyl Cyanide	5.55083490
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.55103270
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.55103480
He&delta;	Helium Recombination Line	5.55137722
H₃CCHCH₂O	Propylene Oxide	5.55260720
t-HCOOD	Formic Acid	5.55403040
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.55481770
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.55481770
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.55491160
C₅N-	Cyanobutadiynylide anion	5.55543620
CH₃CH₂CNv=0	Ethyl Cyanide	5.55780950
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.55840890
t-CH₃CH₂OH	trans-Ethanol	5.55873550
CH₂CH₁₃CN	Vinyl Cyanide	5.55911510
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56010860
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56010860
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56021360
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56097280
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56097280
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.56148400
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.56312600
t-CH₃CH₂OH	trans-Ethanol	5.56363680
H&gamma;	Hydrogen Recombination Line	5.56370771

g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56374100
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56426100
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56467250
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56467250
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56542890
He&gamma;	Helium Recombination Line	5.56597494
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56623460
t-HCOOD	Formic Acid	5.56643890
C&gamma;	Carbon Recombination Line	5.56648374
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56781110
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.56781110
NH₃v=0	Ammonia	5.56993620
CH₃CH₂CNv=0	Ethyl Cyanide	5.57146470
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.57179560
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.57179560
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.57261840
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.57261840
HC₁₃CC₅N	2,4,6-Heptatriynenitrile	5.57332030
c-C₆H₅CN	Benzonitrile	5.57341820
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.57363560
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.57363560
t-HCOOH	Formic Acid	5.57379140
E-HNCHCN	Cyanomethanimine	5.57402840
E-HNCHCN	Cyanomethanimine	5.57402970
E-HNCHCN	Cyanomethanimine	5.57449270
E-HNCHCN	Cyanomethanimine	5.57460250
E-HNCHCN	Cyanomethanimine	5.57460740
E-HNCHCN	Cyanomethanimine	5.57466760
E-HNCHCN	Cyanomethanimine	5.57509510
CH₃COOHv=0	Acetic Acid	5.57532400
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.57537410
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.57537410
HC₆13CN	2,4,6-Heptatriynenitrile	5.57539190
CH₃O13CHO(TopModel)	Methyl Formate	5.57598700
c-C₆H₅CN	Benzonitrile	5.57600550
t-CH₂CHCHO	Propenal	5.57604610
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.57677490
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.57677490
E-HNCHCN	Cyanomethanimine	5.57722590
H&zeta;	Hydrogen Recombination Line	5.57735376

E-HNCHCN	Cyanomethanimine	5.57737110
E-HNCHCN	Cyanomethanimine	5.57785880
E-HNCHCN	Cyanomethanimine	5.57790890
E-HNCHCN	Cyanomethanimine	5.57797490
CH ₂ CN	Cyanomethyl	5.57801490
13CH ₂ CHCN	Vinyl Cyanide	5.57897070
NHD ₂	Ammonia	5.58108000
c-H ₂ C ₃ O	Cyclopropenone	5.58231960
HCCCHO	2-Propynal	5.58268460
i-C ₃ H ₇ CN	iso-propyl cyanide	5.58308050
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.58370060
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.58370060
DCNv ₂ =1	Hydrogen Cyanide	5.58374090
CH ₃ CH ₂ C ₁₅ N	Ethyl Cyanide	5.58579070
CH ₃ CHO _{v=0,1&2}	Acetaldehyde	5.58741700
g-CH ₃ CH ₂ OH	gauche-Ethanol	5.58783920
CH ₃ OCH ₂ OH	Methoxymethanol	5.58852760
CH ₃ O13CHO(TopModel)	Methyl Formate	5.58928400
18OH	Hydroxyl	5.59051100
CH ₃ OCH ₂ OH	Methoxymethanol	5.59074790
Hβ	Hydrogen Recombination Line	5.59104157
g-CH ₃ CH ₂ OH	gauche-Ethanol	5.59118130
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.59225760
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.59282750
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.59282750
Heβ	Helium Recombination Line	5.59331994
Hε	Hydrogen Recombination Line	5.59337028
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.59343010
Cβ	Carbon Recombination Line	5.59383124
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.59394490
CH ₃ O13CHO(TopModel)	Methyl Formate	5.59439500
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.59445530
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.59445530
CH ₃ CHO _{v=0,1&2}	Acetaldehyde	5.59454260
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.59675290
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.59675290
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.59738950
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.59866270
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.59868730
HeIIα	Helium Recombination Line	5.59975180

g'Ga-(CH₂OH)₂	Ethylene Glycol	5.60023740
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.60023740
H&alpha;	Hydrogen Recombination Line	5.60054995
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.60223400
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.60278950
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.60278950
He&alpha;	Helium Recombination Line	5.60283219
HCCCH₂CN	Propargyl cyanide	5.60299530
C&alpha;	Carbon Recombination Line	5.60334436
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.60378810
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.60378810
C₅N	4-Cyano-1,3-Butadiynyl	5.60424900
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.60530400
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.60631830
C₅N	4-Cyano-1,3-Butadiynyl	5.60703910
C₅N	4-Cyano-1,3-Butadiynyl	5.60705580
C₅N	4-Cyano-1,3-Butadiynyl	5.60713770
C₅N	4-Cyano-1,3-Butadiynyl	5.60772090
¹³CH₃CH₂CN	Ethyl Cyanide	5.61230690
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.61318450
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.61318450
H₂CCO	Ketene	5.61328630
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.61361970
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.61361970
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.61394510
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.61394600
¹⁸OH	Hydroxyl	5.61394750
C₅N	4-Cyano-1,3-Butadiynyl	5.61532310
HC₂¹³CC₄N	2,4,6-Heptatriynenitrile	5.61693300
CH₃CH₂C¹⁵N	Ethyl Cyanide	5.61703340
C₅N	4-Cyano-1,3-Butadiynyl	5.61778200
HC₅¹³CCN	2,4,6-Heptatriynenitrile	5.61826930
C₅N	4-Cyano-1,3-Butadiynyl	5.61842660
t-HCOOD	Formic Acid	5.61853450
C₅N	4-Cyano-1,3-Butadiynyl	5.61873420
CH₃OH_{vt=0-2}	Methanol	5.61923400
CH₂CHCN_{v11=2}	Vinyl Cyanide	5.62167600
C₅N	4-Cyano-1,3-Butadiynyl	5.62183680
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.62212500
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.62212500

CH3O13CHO(TopModel)	Methyl Formate	5.62285700
H218Ov=0	Water	5.62514700
g'Ga-(CH2OH)2	Ethylene Glycol	5.62535010
g'Ga-(CH2OH)2	Ethylene Glycol	5.62535010
NS,v=0	Nitric sulfide	5.62772540
CH3OHvt=0-2	Methanol	5.62920600
HDCO	Formaldehyde	5.62931400
H213CO	Formaldehyde	5.63069110
C5N	4-Cyano-1,3-Butadiynyl	5.63158600
NHD2	Ammonia	5.63197000
C5N	4-Cyano-1,3-Butadiynyl	5.63254830
g'Ga-(CH2OH)2	Ethylene Glycol	5.63299930
g'Ga-(CH2OH)2	Ethylene Glycol	5.63299930
g'Ga-(CH2OH)2	Ethylene Glycol	5.63326920
C5N	4-Cyano-1,3-Butadiynyl	5.63439030
C5N	4-Cyano-1,3-Butadiynyl	5.63463390
NHD2	Ammonia	5.63518000
C5N	4-Cyano-1,3-Butadiynyl	5.63535260
g'Ga-(CH2OH)2	Ethylene Glycol	5.63545770
g'Ga-(CH2OH)2	Ethylene Glycol	5.63545770
g'Ga-(CH2OH)2	Ethylene Glycol	5.63558130
CH3COOHv=0	Acetic Acid	5.63594000
D2CO	Formaldehyde	5.63645550
PO	Phosphorus Monoxide	5.63678440
SO2v2=1	Sulfur dioxide	5.63679730
HC313CC3N	2,4,6-Heptatriynenitrile	5.63682610
CH3O13CHO(TopModel)	Methyl Formate	5.63695800
CH3O13CHO(TopModel)	Methyl Formate	5.63695900
HC413CC2N	2,4,6-Heptatriynenitrile	5.63732150
g'Ga-(CH2OH)2	Ethylene Glycol	5.63770210
g'Ga-(CH2OH)2	Ethylene Glycol	5.63770210
C5N	4-Cyano-1,3-Butadiynyl	5.63772930
g'Ga-(CH2OH)2	Ethylene Glycol	5.63801140
g'Ga-(CH2OH)2	Ethylene Glycol	5.63801140
C5N	4-Cyano-1,3-Butadiynyl	5.63844800
HC7Nv=0	2,4,6-Heptatriynenitrile	5.63855130
E-HNCHCN	Cyanomethanimine	5.63945040
E-HNCHCN	Cyanomethanimine	5.63945220
E-HNCHCN	Cyanomethanimine	5.63946090
E-HNCHCN	Cyanomethanimine	5.63946100

E-HNCHCN	Cyanomethanimine	5.63947820
E-HNCHCN	Cyanomethanimine	5.63948780
E-HNCHCN	Cyanomethanimine	5.63974940
E-HNCHCN	Cyanomethanimine	5.63975030
E-HNCHCN	Cyanomethanimine	5.63977540
HC7Nv=0	2,4,6-Heptatriynenitrile	5.63995810
HC7Nv=0	2,4,6-Heptatriynenitrile	5.64000920
HC7Nv=0	2,4,6-Heptatriynenitrile	5.64000920
HC7Nv=0	2,4,6-Heptatriynenitrile	5.64003180
HC7Nv=0	2,4,6-Heptatriynenitrile	5.64033230
CCC34S	3-Thioxo-1,2-Propadienylidene	5.64073900
NO	Nitric oxide	5.64170000
HC7Nv=0	2,4,6-Heptatriynenitrile	5.64179020
13CH313CH2CN	Ethyl cyanide	5.64265080
CH3CH2C15N	Ethyl Cyanide	5.64280380
CH3O13CHO(TopModel)	Methyl Formate	5.64289000
CH2NH	Methanimine	5.64301990
CH2NH	Methanimine	5.64303360
CH2NH	Methanimine	5.64306450
CH2NH	Methanimine	5.64313880
cis-CH2OHCHOv=0	Glycolaldehyde	5.64364240
cis-CH2OHCHOv=0	Glycolaldehyde	5.64499610
cis-CH2OHCHOv=0	Glycolaldehyde	5.64499610
CH3O13CHO(TopModel)	Methyl Formate	5.64663200
13CH2CHCN	Vinyl Cyanide	5.64773990
g'Ga-(CH2OH)2	Ethylene Glycol	5.64879620
g'Ga-(CH2OH)2	Ethylene Glycol	5.64879620
Hδ	Hydrogen Recombination Line	5.64941799
g'Ga-(CH2OH)2	Ethylene Glycol	5.64962650
g'Ga-(CH2OH)2	Ethylene Glycol	5.64989530
g'Ga-(CH2OH)2	Ethylene Glycol	5.65041130
g'Ga-(CH2OH)2	Ethylene Glycol	5.65163380
g'Ga-(CH2OH)2	Ethylene Glycol	5.65163380
Heδ	Helium Recombination Line	5.65172015
g'Ga-(CH2OH)2	Ethylene Glycol	5.65393850
g'Ga-(CH2OH)2	Ethylene Glycol	5.65393850
g'Ga-(CH2OH)2	Ethylene Glycol	5.65459250
g'Ga-(CH2OH)2	Ethylene Glycol	5.65534420
CH3O13CHO(TopModel)	Methyl Formate	5.65606200
g'Ga-(CH2OH)2	Ethylene Glycol	5.65872680

g'Ga-(CH₂OH)₂	Ethylene Glycol	5.65873890
CH₃COOH_v=0	Acetic Acid	5.65922080
H₂CCO	Ketene	5.66098130
HCCCH₂CN	Propargyl cyanide	5.66098670
CH₃COOH_v=0	Acetic Acid	5.66277040
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.66324900
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.66352360
18OH	Hydroxyl	5.66440970
CH₃CHO_v=0,1&2	Acetaldehyde	5.66491710
H&zeta;	Hydrogen Recombination Line	5.66544468
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.66591480
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.66591480
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.66624730
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.66624730
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.66876460
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.66876460
CH₃NH₂	Methylamine	5.66877200
CH₃NH₂	Methylamine	5.66883700
CH₃NH₂	Methylamine	5.66887300
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.66895420
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.66895420
CH₃NH₂	Methylamine	5.66947700
CH₃NH₂	Methylamine	5.66961300
CH₃NH₂	Methylamine	5.66967800
CH₃NH₂	Methylamine	5.67008000
CH₃COOH_v=0	Acetic Acid	5.67014610
CH₃NH₂	Methylamine	5.67018100
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.67217400
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.67268510
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.67268510
13CH₃CH₂13CN	Ethyl cyanide	5.67411140
H&gamma;	Hydrogen Recombination Line	5.67462349
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.67475200
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.67604460
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.67604460
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.67611800
HC₃N_v7=1	Cyanoacetylene	5.67632920
g-CH₃CH₂OH	gauche-Ethanol	5.67680530
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.67683800
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.67683800

Heγ	Helium Recombination Line	5.67693592
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.67714760
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.67714760
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.67729210
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.67729260
Cγ	Carbon Recombination Line	5.67745487
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	5.67925400
H ₂ CCCHCN	Cyanoallene	5.67975440
CH ₃ NH ₂	Methylamine	5.68107800
CH ₃ NH ₂	Methylamine	5.68120000
CH ₃ NH ₂	Methylamine	5.68134100
CH ₃ NH ₂	Methylamine	5.68171900
g-CH ₃ CH ₂ OH	gauche-Ethanol	5.68172360
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.68188210
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.68188210
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.68237930
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.68237930
CH ₃ ₁₃ CH ₂ ₁₃ CN	Ethyl cyanide	5.68381200
CH ₃ COOHv=0	Acetic Acid	5.68582240
CH ₃ COOHv=0	Acetic Acid	5.68582240
CH ₃ COOHv=0	Acetic Acid	5.68582240
CH ₃ COOHv=0	Acetic Acid	5.68582240
Hε	Hydrogen Recombination Line	5.68739894
¹⁸ OH	Hydroxyl	5.68784610
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.68841530
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.68841530
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.69121580
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.69231240
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	5.69418300
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	5.69433400
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.69528880
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.69528880
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.69722080
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	5.69744600
CH ₃ COOHv=0	Acetic Acid	5.69749690
CH ₃ COOHv=0	Acetic Acid	5.69775250
NHD ₂	Ammonia	5.69794380
NHD ₂	Ammonia	5.69795110
₁₃ CH ₃ CH ₂ ₁₃ CN	Ethyl cyanide	5.69838130
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.69856880

g'Ga-(CH₂OH)₂	Ethylene Glycol	5.69856880
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.69936490
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.69936490
CH₂CH₁₃CN	Vinyl Cyanide	5.70039660
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.70098400
HeII&alpha;	Helium Recombination Line	5.70125670
HDCO	Formaldehyde	5.70260000
HDO	Water	5.70278000
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.70303070
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.70303070
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.70378150
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.70385980
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.70385980
c-H₂C₃O	Cyclopropenone	5.70393920
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.70633590
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.70633590
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.70645920
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.70657390
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.70671170
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.70775300
CH₃CHO_{v=0,1&2}	Acetaldehyde	5.70806830
i-C₃H₇CN	iso-propyl cyanide	5.70885330
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.70921830
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.71167070
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.71167070
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.71187920
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.71322300
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.71414700
i-C₃H₇CN	iso-propyl cyanide	5.71416560
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.71633970
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.71633970
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.71663900
CH₂CHCN_{v15=1}	Vinyl Cyanide	5.71779440
CH₂CHCN_{v15=1}	Vinyl Cyanide	5.71783160
CH₂CHCN_{v15=1}	Vinyl Cyanide	5.71783520
H₂CO	Formaldehyde	5.71824100
H&beta;	Hydrogen Recombination Line	5.71908561
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.71930570
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.71931160
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.72123690

g'Ga-(CH₂OH)₂	Ethylene Glycol	5.72123690
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.72132500
He&beta;	Helium Recombination Line	5.72141616
C&beta;	Carbon Recombination Line	5.72193917
C13CCS	3-Thioxo-1,2-Propadienylidene	5.72274130
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.72276290
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.72395290
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.72395290
NH₃v=0	Ammonia	5.72509000
NHD₂	Ammonia	5.72704210
CH₂CH₁₃CN	Vinyl Cyanide	5.72975720
34SO₂v=0	Sulfur Dioxide	5.73010330
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.73175660
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.73175660
13CH₃CH₂CN	Ethyl Cyanide	5.73176540
13CH₂CHCN	Vinyl Cyanide	5.73188470
CH₃CHOv=0,1&2	Acetaldehyde	5.73453400
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.73522890
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.73522890
CH₃OCHOv=0	Methyl Formate	5.73708710
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.73739430
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.73739430
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.73960960
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.73997600
CH₃OCHOv=0	Methyl Formate	5.74058290
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.74093780
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.74093800
HDCO	Formaldehyde	5.74150500
CH₃CHOv=0,1&2	Acetaldehyde	5.74205300
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.74325630
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.74325630
c-C₆H₅CN	Benzonitrile	5.74510290
NO	Nitric oxide	5.74748000
CH₂CHCNv=0	Vinyl Cyanide	5.74972180
CH₂CHCNv=0	Vinyl Cyanide	5.74972950
CH₂CHCNv=0	Vinyl Cyanide	5.74973070
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.74987090
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.74987090
CH₃COOHv=0	Acetic Acid	5.75083370
HCCCH₂CN	Propargyl cyanide	5.75110030

H&delta;	Hydrogen Recombination Line	5.75215213
N34S	Nitric sulfide	5.75263570
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.75337750
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.75380150
D2CO	Formaldehyde	5.75396860
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.75405220
He&delta;	Helium Recombination Line	5.75449616
CNCHO	Cyanoformaldehyde	5.75468920
13CH₂CHCN	Vinyl Cyanide	5.75482570
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.75527330
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.75527330
H&zeta;	Hydrogen Recombination Line	5.75540069
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.75576220
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.75576220
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.75766350
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.75909070
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.76195370
H&alpha;	Hydrogen Recombination Line	5.76287975
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.76413060
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.76419990
CH₃O13CHO(TopModel)	Methyl Formate	5.76429600
He&alpha;	Helium Recombination Line	5.76522815
C&alpha;	Carbon Recombination Line	5.76575516
NaCN/NaNC	Sodium Cyanide	5.76630690
t-H13COOH	Formic Acid	5.76635690
CH₃NH₂	Methylamine	5.76647400
CH₃NH₂	Methylamine	5.76666500
CH₃NH₂	Methylamine	5.76675000
CH₃NH₂	Methylamine	5.76677300
H₂CCCHCN	Cyanoallene	5.76702610
g-CH₃CH₂OH	gauche-Ethanol	5.76767940
CH₃CHO_{v=0,1&2}	Acetaldehyde	5.76829130
NO	Nitric oxide	5.76876450
OS17O	Sulfur Dioxide	5.76925160
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.76930050
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.76930050
g-CH₃CH₂OH	gauche-Ethanol	5.76954960
I-H₂CCC	Propadienylidene	5.76980510
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.77014360
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.77014360

CH3O13CHO(TopModel)	Methyl Formate	5.77368700
CH3O13CHO(TopModel)	Methyl Formate	5.77368700
CH3CHOv=0,1&2	Acetaldehyde	5.77616800
g'Ga-(CH2OH)2	Ethylene Glycol	5.77651400
g'Ga-(CH2OH)2	Ethylene Glycol	5.77651400
g'Ga-(CH2OH)2	Ethylene Glycol	5.77719320
g'Ga-(CH2OH)2	Ethylene Glycol	5.77719320
g'Ga-(CH2OH)2	Ethylene Glycol	5.77738220
CH3CHOv=0,1&2	Acetaldehyde	5.77787140
13CH3CH213CN	Ethyl cyanide	5.77798690
g'Ga-(CH2OH)2	Ethylene Glycol	5.77803180
g'Ga-(CH2OH)2	Ethylene Glycol	5.78025510
g'Ga-(CH2OH)2	Ethylene Glycol	5.78025790
CCCS	3-Thioxo-1,2-Propadienylidene	5.78075900
g'Ga-(CH2OH)2	Ethylene Glycol	5.78130280
CH2CHCNv15=1	Vinyl Cyanide	5.78141590
CH2CHCNv15=1	Vinyl Cyanide	5.78141750
CH2CHCNv15=1	Vinyl Cyanide	5.78142320
g'Ga-(CH2OH)2	Ethylene Glycol	5.78334700
g'Ga-(CH2OH)2	Ethylene Glycol	5.78334700
Hε	Hydrogen Recombination Line	5.78354719
g'Ga-(CH2OH)2	Ethylene Glycol	5.78359110
g'Ga-(CH2OH)2	Ethylene Glycol	5.78359110
g'Ga-(CH2OH)2	Ethylene Glycol	5.78381270
g'Ga-(CH2OH)2	Ethylene Glycol	5.78381270
g'Ga-(CH2OH)2	Ethylene Glycol	5.78389820
g'Ga-(CH2OH)2	Ethylene Glycol	5.78389820
g'Ga-(CH2OH)2	Ethylene Glycol	5.78450310
g'Ga-(CH2OH)2	Ethylene Glycol	5.78502720
g'Ga-(CH2OH)2	Ethylene Glycol	5.78502720
CH313CH2CN	Ethyl Cyanide	5.78504350
NHD2	Ammonia	5.78644000
g'Ga-(CH2OH)2	Ethylene Glycol	5.78702630
g'Ga-(CH2OH)2	Ethylene Glycol	5.78702630
NHD2	Ammonia	5.78716000
CH3OCH2OH	Methoxymethanol	5.78795070
Hγ	Hydrogen Recombination Line	5.78850731
HCCCH2CN	Propargyl cyanide	5.78889760
CH3OCH2OH	Methoxymethanol	5.78921340
HCCCH2CN	Propargyl cyanide	5.78959970

HCCCH2CN	Propargyl cyanide	5.78970130
HCCCH2CN	Propargyl cyanide	5.78970610
HCCCH2CN	Propargyl cyanide	5.78977550
g'Ga-(CH2OH)2	Ethylene Glycol	5.78984360
g'Ga-(CH2OH)2	Ethylene Glycol	5.78984360
CH3COOHv=0	Acetic Acid	5.79000650
CH3COOHv=0	Acetic Acid	5.79010540
HCCCH2CN	Propargyl cyanide	5.79078050
Heγ	Helium Recombination Line	5.79086615
Cγ	Carbon Recombination Line	5.79139550
CH313CH2CN	Ethyl Cyanide	5.79236630
CH2CHCNv11=1	Vinyl Cyanide	5.79262060
CH2CHCNv11=1	Vinyl Cyanide	5.79264390
CH2CHCNv11=1	Vinyl Cyanide	5.79264560
g'Ga-(CH2OH)2	Ethylene Glycol	5.79351030
g'Ga-(CH2OH)2	Ethylene Glycol	5.79351030
CH3O13CHO(TopModel)	Methyl Formate	5.79521200
g'Ga-(CH2OH)2	Ethylene Glycol	5.79553710
g'Ga-(CH2OH)2	Ethylene Glycol	5.79805540
g'Ga-(CH2OH)2	Ethylene Glycol	5.79805540
g'Ga-(CH2OH)2	Ethylene Glycol	5.79809650
CH3O13CHO(TopModel)	Methyl Formate	5.79812000
g'Ga-(CH2OH)2	Ethylene Glycol	5.79899760
g'Ga-(CH2OH)2	Ethylene Glycol	5.79899760
CH3O13CHO(TopModel)	Methyl Formate	5.79955600
g'Ga-(CH2OH)2	Ethylene Glycol	5.79958290
g'Ga-(CH2OH)2	Ethylene Glycol	5.79958290
CH3O13CHO(TopModel)	Methyl Formate	5.79960400
H2CCO	Ketene	5.80068020
CH3O13CHO(TopModel)	Methyl Formate	5.80109100
g'Ga-(CH2OH)2	Ethylene Glycol	5.80350630
g'Ga-(CH2OH)2	Ethylene Glycol	5.80350630
g'Ga-(CH2OH)2	Ethylene Glycol	5.80475080
g'Ga-(CH2OH)2	Ethylene Glycol	5.80475090
H213CS	Thioformaldehyde	5.80481320
HeIIα	Helium Recombination Line	5.80522970
g'Ga-(CH2OH)2	Ethylene Glycol	5.80600960
g'Ga-(CH2OH)2	Ethylene Glycol	5.80600960
g'Ga-(CH2OH)2	Ethylene Glycol	5.80834750
HCCCH2CN	Propargyl cyanide	5.80841610

NH3v=0	Ammonia	5.80878100
HC9N	Cyanotetraacetylene	5.80883740
g'Ga-(CH2OH)2	Ethylene Glycol	5.80988870
g'Ga-(CH2OH)2	Ethylene Glycol	5.80988870
HC9N	Cyanotetraacetylene	5.81035280
HC9N	Cyanotetraacetylene	5.81036280
HC9N	Cyanotetraacetylene	5.81036280
HC9N	Cyanotetraacetylene	5.81036960
g'Ga-(CH2OH)2	Ethylene Glycol	5.81187670
HC9N	Cyanotetraacetylene	5.81204800
g'Ga-(CH2OH)2	Ethylene Glycol	5.81208260
g'Ga-(CH2OH)2	Ethylene Glycol	5.81282890
CH3COOHv=0	Acetic Acid	5.81558490
g'Ga-(CH2OH)2	Ethylene Glycol	5.81638430
g'Ga-(CH2OH)2	Ethylene Glycol	5.81638430
g'Ga-(CH2OH)2	Ethylene Glycol	5.81722720
g'Ga-(CH2OH)2	Ethylene Glycol	5.81722720
CH313CH213CN	Ethyl cyanide	5.81860460
CH3CHOv=0,1&2	Acetaldehyde	5.81877750
c-HCCCD	Cyclopropenylidene	5.82029360
g'Ga-(CH2OH)2	Ethylene Glycol	5.82166960
g'Ga-(CH2OH)2	Ethylene Glycol	5.82215150
g'Ga-(CH2OH)2	Ethylene Glycol	5.82218560
g'Ga-(CH2OH)2	Ethylene Glycol	5.82277790
g'Ga-(CH2OH)2	Ethylene Glycol	5.82277790
g'Ga-(CH2OH)2	Ethylene Glycol	5.82318670
CH2CHCNv=0	Vinyl Cyanide	5.82335730
CH2CHCNv=0	Vinyl Cyanide	5.82335870
CH2CHCNv=0	Vinyl Cyanide	5.82337420
H13C(O)NH2	Formamide	5.82375210
SHv=0	Mercapto radical	5.82520460
g'Ga-(CH2OH)2	Ethylene Glycol	5.82554540
g'Ga-(CH2OH)2	Ethylene Glycol	5.82554540
HCCCH2CN	Propargyl cyanide	5.82732120
CH318OHvt=0,1&2	Methanol	5.82760500
PO	Phosphorus Monoxide	5.82790350
H2CCCHCN	Cyanoallene	5.82899560
HCCCH2CN	Propargyl cyanide	5.82994440
SHv=0	Mercapto radical	5.83107680
SHv=0	Mercapto radical	5.83187890

g'Ga-(CH₂OH)₂	Ethylene Glycol	5.83218460
C₈H-	1,3,5,7-Octatetraynyl anion	5.83339920
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.83433420
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.83433420
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.83451250
H₂CCCHCN	Cyanoallene	5.83474740
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.83486600
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.83486600
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.83643240
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.83643240
N₃4S	Nitric sulfide	5.83671350
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.83676650
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.83724820
SH_v=0	Mercapto radical	5.83775100
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.84005000
H₂O_v2,2_v2,v₁,v₃	Water	5.84052370
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.84097300
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.84143580
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.84143710
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.84160600
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.84304600
CH₂CHCN_v=0	Vinyl Cyanide	5.84362120
g-CH₃CH₂OH	gauche-Ethanol	5.84362560
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.84426620
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.84460310
CH₂CHCN_v=0	Vinyl Cyanide	5.84496690
CH₂CHCN_v=0	Vinyl Cyanide	5.84499020
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.84521160
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.84521160
CH₂CHCN_v=0	Vinyl Cyanide	5.84524510
CH₂CHCN_v=0	Vinyl Cyanide	5.84626680
HCCCH₂CN	Propargyl cyanide	5.84647820
CH₃COOH_v=0	Acetic Acid	5.84649460
CH₃COOH_v=0	Acetic Acid	5.84649460
CH₃COOH_v=0	Acetic Acid	5.84652140
CH₃COOH_v=0	Acetic Acid	5.84652140
NS,_v=0	Nitric sulfide	5.84662730
H&zeta;	Hydrogen Recombination Line	5.84727141
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.84791860
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.84791860

H3CCHCH2O	Propylene Oxide	5.85098350
Hβ	Hydrogen Recombination Line	5.85106966
CH2CHCNv=0	Vinyl Cyanide	5.85153860
CH2CHCNv=0	Vinyl Cyanide	5.85154000
CH2CHCNv=0	Vinyl Cyanide	5.85154310
Heβ	Helium Recombination Line	5.85345399
g'Ga-(CH2OH)2	Ethylene Glycol	5.85346800
g'Ga-(CH2OH)2	Ethylene Glycol	5.85346800
H3CCHCH2O	Propylene Oxide	5.85372140
c-C6H5CN	Benzonitrile	5.85396490
Cβ	Carbon Recombination Line	5.85398907
c-C6H5CN	Benzonitrile	5.85454880
CH2CHCNv15=1	Vinyl Cyanide	5.85459270
CH2CHCNv15=1	Vinyl Cyanide	5.85459270
CH2CHCNv15=1	Vinyl Cyanide	5.85462810
g'Ga-(CH2OH)2	Ethylene Glycol	5.85463490
c-C6H5CN	Benzonitrile	5.85502380
c-C6H5CN	Benzonitrile	5.85510920
c-C6H5CN	Benzonitrile	5.85528500
t-H13COOH	Formic Acid	5.85607810
c-C6H5CN	Benzonitrile	5.85657060
g'Ga-(CH2OH)2	Ethylene Glycol	5.85660480
g'Ga-(CH2OH)2	Ethylene Glycol	5.85660480
Hδ	Hydrogen Recombination Line	5.85739252
CH2DCCH	Methyl Acetylene	5.85922500
Heδ	Helium Recombination Line	5.85977943
g'Ga-(CH2OH)2	Ethylene Glycol	5.86144350
g'Ga-(CH2OH)2	Ethylene Glycol	5.86168930
13CH2CHCN	Vinyl Cyanide	5.86177020
H2C18O	Formaldehyde	5.86405300
CH3COOHv=0	Acetic Acid	5.86493360
g'Ga-(CH2OH)2	Ethylene Glycol	5.86698380
g'Ga-(CH2OH)2	Ethylene Glycol	5.86736630
g'Ga-(CH2OH)2	Ethylene Glycol	5.86860470
g'Ga-(CH2OH)2	Ethylene Glycol	5.86860470
g'Ga-(CH2OH)2	Ethylene Glycol	5.86870640
g'Ga-(CH2OH)2	Ethylene Glycol	5.86906830
g'Ga-(CH2OH)2	Ethylene Glycol	5.86906830
t-DCOOH	Formic Acid	5.86982500
g'Ga-(CH2OH)2	Ethylene Glycol	5.87382550



Title: WiFi at GBEMS	Author: O'Neil	GBT Memo Series
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g'Ga-(CH₂OH)₂	Ethylene Glycol	5.87382550
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.87449720
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.87449720
HCCCH₂CN	Propargyl cyanide	5.87484470
NO	Nitric oxide	5.87628100
CH₃O₁₃CHO(TopModel)	Methyl Formate	5.87730000
13CH₂CHCN	Vinyl Cyanide	5.87746520
NH₂CHO	Formamide	5.87764890
NH₂CHO	Formamide	5.87784000
NH₂CHO	Formamide	5.87785280
NH₂CHO	Formamide	5.87841740
NH₂CHO	Formamide	5.87883740
NH₂CHO	Formamide	5.87889030
i-C₃H₇CN	iso-propyl cyanide	5.87958610
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.88049180
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.88050820
H&epsilon;	Hydrogen Recombination Line	5.88187510
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.88262580
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.88262580
15NH₃	Ammonia	5.88263200
NHD₂	Ammonia	5.89102780
NHD₂	Ammonia	5.89102980
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.89123230
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.89200930
i-C₃H₇CN	iso-propyl cyanide	5.89327410

APPENDIX E. SPECTRAL LINES WITH REST FREQUENCIES IN THE 6 GHZ WIFI BANDS

Species	Chemical Name	Rest Frequency
HCCCH ₂ CN	Propargyl cyanide	5.92506920
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.92635640
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.92635640
N ₃ 4S	Nitric sulfide	5.92657210
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.92755120
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.93005770
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.93012500
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.93012500
NS, v=0	Nitric sulfide	5.93069450
CH ₃ COOH, v=0	Acetic Acid	5.93131930
Hα	Hydrogen Recombination Line	5.93154413
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	5.93216600
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.93237750
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.93237750
CH ₃ CH ₂ CN, v=0	Ethyl Cyanide	5.93353260
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.93364060
Heα	Helium Recombination Line	5.93396125
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.93449130
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.93449130
Cα	Carbon Recombination Line	5.93450369
¹⁸ OH	Hydroxyl	5.93464400
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	5.93495700
CH ₃ ¹³ CH ₂ ¹³ CN	Ethyl cyanide	5.93612740
c-SiC ₃	3-Silaketetrayl-1,2-Propadienylidene	5.93754570
CH ₃ CHO, v=0, 1&2	Acetaldehyde	5.93832210
¹⁸ OH	Hydroxyl	5.93896700
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.93901000
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.93901780
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.93920090
Hζ	Hydrogen Recombination Line	5.94110807
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.94157860
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	5.94221000
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	5.94231000
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.94274740
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	5.94274740

H2CCCHCN	Cyanoallene	5.94345990
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.94369200
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.94369200
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.94833460
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.94833460
HCCCH₂CN	Propargyl cyanide	5.94861490
HCCCH₂CN	Propargyl cyanide	5.94871350
HCCCH₂CN	Propargyl cyanide	5.94877710
HCCCH₂CN	Propargyl cyanide	5.94911950
HCCCH₂CN	Propargyl cyanide	5.94929420
HCCCH₂CN	Propargyl cyanide	5.94985640
CH₂CHCN_v15=1	Vinyl Cyanide	5.94990700
CH₂CHCN_v15=1	Vinyl Cyanide	5.94990860
CH₂CHCN_v15=1	Vinyl Cyanide	5.94991270
HCCCH₂CN	Propargyl cyanide	5.94992000
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.95229450
18OH	Hydroxyl	5.95311600
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.95397770
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.95397770
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.95449180
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.95499800
13CH₂CHCN	Vinyl Cyanide	5.95711580
13CH₃CH₂13CN	Ethyl cyanide	5.95808420
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.95887170
t-CH₃CH₂OH	trans-Ethanol	5.96075770
CH₃COOH_v=0	Acetic Acid	5.96126790
CH₃COOH_v=0	Acetic Acid	5.96126790
CH₃COOH_v=0	Acetic Acid	5.96126790
CH₃COOH_v=0	Acetic Acid	5.96126790
I-HC₄N	3-Cyano-1,2-propadienylidene	5.96204310
NHD₂	Ammonia	5.96218800
NHD₂	Ammonia	5.96230000
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.96395990
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.96396020
H&delta;	Hydrogen Recombination Line	5.96521606
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.96536820
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.96536820
CH₂CHCN_v=0	Vinyl Cyanide	5.96588920
CH₂CHCN_v=0	Vinyl Cyanide	5.96589070
CH₂CHCN_v=0	Vinyl Cyanide	5.96589490

CH318OH_{v=0,1&2}	Methanol	5.96622900
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.96663340
He&delta;	Helium Recombination Line	5.96764690
HCCCHO	2-Propynal	5.96775410
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.96779350
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.96779350
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.96856180
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.96856180
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.96866590
t-HCOOH	Formic Acid	5.96982520
CH3CHO_{v=0,1&2}	Acetaldehyde	5.97113750
CH3OH_{v=0-2}	Methanol	5.97266900
NH_{3v=0}	Ammonia	5.97393000
13CH3CH2CN	Ethyl Cyanide	5.97515560
CH2CHCN_{v=0}	Vinyl Cyanide	5.97563920
CH2CHCN_{v=0}	Vinyl Cyanide	5.97564020
CH2CHCN_{v=0}	Vinyl Cyanide	5.97564030
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.97781190
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.97788430
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.97788430
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.97790600
13CH313CH2CN	Ethyl cyanide	5.97935200
13CH2CHCN	Vinyl Cyanide	5.97936800
NO	Nitric oxide	5.98116220
H213CO	Formaldehyde	5.98208590
H&epsilon;	Hydrogen Recombination Line	5.98244479
CH3OH_{v=0-2}	Methanol	5.98254500
t-HCOOH	Formic Acid	5.98297250
CH3O13CHO(TopModel)	Methyl Formate	5.98350900
CH3O13CHO(TopModel)	Methyl Formate	5.98601600
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.98658160
H&beta;	Hydrogen Recombination Line	5.98714643
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.98752020
CH3O13CHO(TopModel)	Methyl Formate	5.98808500
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.98854800
g'Ga-(CH₂OH)₂	Ethylene Glycol	5.98854800
NaCN/NaNC	Sodium Cyanide	5.98894680
CH313CH2CN	Ethyl Cyanide	5.98895140
He&beta;	Helium Recombination Line	5.98958621
D2CO	Formaldehyde	5.98975880

C&beta;	Carbon Recombination Line	5.99013374
CH3O13CHO(TopModel)	Methyl Formate	5.99133500
g'Ga-(CH2OH)2	Ethylene Glycol	5.99154870
g'Ga-(CH2OH)2	Ethylene Glycol	5.99154870
g'Ga-(CH2OH)2	Ethylene Glycol	5.99250600
i-C3H7CN	iso-propyl cyanide	5.99280510
g-CH3CH2OH	gauche-Ethanol	5.99299210
CH2CH13CN	Vinyl Cyanide	5.99299600
NO	Nitric oxide	5.99312000
CH3O13CHO(TopModel)	Methyl Formate	5.99390600
g'Ga-(CH2OH)2	Ethylene Glycol	5.99595130
g'Ga-(CH2OH)2	Ethylene Glycol	5.99595130
CH3O13CHO(TopModel)	Methyl Formate	5.99737300
g'Ga-(CH2OH)2	Ethylene Glycol	5.99756910
g'Ga-(CH2OH)2	Ethylene Glycol	5.99757260
H2CCCHCN	Cyanoallene	6.00111330
H2CCCHCN	Cyanoallene	6.00118240
H2CCCHCN	Cyanoallene	6.00132210
H2CCCHCN	Cyanoallene	6.00166150
g'Ga-(CH2OH)2	Ethylene Glycol	6.00402200
g'Ga-(CH2OH)2	Ethylene Glycol	6.00402200
CH313CH2CN	Ethyl Cyanide	6.00429290
g'Ga-(CH2OH)2	Ethylene Glycol	6.00434200
g'Ga-(CH2OH)2	Ethylene Glycol	6.00434200
g'Ga-(CH2OH)2	Ethylene Glycol	6.00469240
g'Ga-(CH2OH)2	Ethylene Glycol	6.00469240
g'Ga-(CH2OH)2	Ethylene Glycol	6.00563290
g'Ga-(CH2OH)2	Ethylene Glycol	6.00563290
g'Ga-(CH2OH)2	Ethylene Glycol	6.00637110
g'Ga-(CH2OH)2	Ethylene Glycol	6.00637110
g'Ga-(CH2OH)2	Ethylene Glycol	6.00638650
g'Ga-(CH2OH)2	Ethylene Glycol	6.00638650
g'Ga-(CH2OH)2	Ethylene Glycol	6.00768270
g'Ga-(CH2OH)2	Ethylene Glycol	6.00787380
g'Ga-(CH2OH)2	Ethylene Glycol	6.00787380
g'Ga-(CH2OH)2	Ethylene Glycol	6.00907540
g'Ga-(CH2OH)2	Ethylene Glycol	6.00907540
34SO2v=0	Sulfur Dioxide	6.01037850
g'Ga-(CH2OH)2	Ethylene Glycol	6.01065380
g'Ga-(CH2OH)2	Ethylene Glycol	6.01065380

CH318OHvt=0,1&2	Methanol	6.01088000
g'Ga-(CH2OH)2	Ethylene Glycol	6.01104190
g'Ga-(CH2OH)2	Ethylene Glycol	6.01104190
CH3COOHv=0	Acetic Acid	6.01134960
CH3COOHv=0	Acetic Acid	6.01134960
CH3COOHv=0	Acetic Acid	6.01134960
CH3COOHv=0	Acetic Acid	6.01134960
g'Ga-(CH2OH)2	Ethylene Glycol	6.01282120
g'Ga-(CH2OH)2	Ethylene Glycol	6.01282120
CH3OCH2OH	Methoxymethanol	6.01286550
CH3OCH2OH	Methoxymethanol	6.01290530
g'Ga-(CH2OH)2	Ethylene Glycol	6.01326130
c-SiC3	3-Silanetetrayl-1,2-Propadienylidene	6.01391120
HCCCH2CN	Propargyl cyanide	6.01457360
g'Ga-(CH2OH)2	Ethylene Glycol	6.01511260
g'Ga-(CH2OH)2	Ethylene Glycol	6.01511260
OHv=0	Hydroxyl	6.01674820
H2CCCHCN	Cyanoallene	6.01712670
g'Ga-(CH2OH)2	Ethylene Glycol	6.01762420
g'Ga-(CH2OH)2	Ethylene Glycol	6.01762420
c-C6H5CN	Benzonitrile	6.01818900
g'Ga-(CH2OH)2	Ethylene Glycol	6.01924630
PO	Phosphorus Monoxide	6.01930200
CH3OCH2OH	Methoxymethanol	6.01990910
g'Ga-(CH2OH)2	Ethylene Glycol	6.02005880
g'Ga-(CH2OH)2	Ethylene Glycol	6.02005880
g'Ga-(CH2OH)2	Ethylene Glycol	6.02028750
NS,v=0	Nitric sulfide	6.02043030
CH3OCH2OH	Methoxymethanol	6.02056610
HeII&alpha;	Helium Recombination Line	6.02088490
g'Ga-(CH2OH)2	Ethylene Glycol	6.02242590
g'Ga-(CH2OH)2	Ethylene Glycol	6.02242590
g'Ga-(CH2OH)2	Ethylene Glycol	6.02264060
g'Ga-(CH2OH)2	Ethylene Glycol	6.02349950
g'Ga-(CH2OH)2	Ethylene Glycol	6.02349950
g'Ga-(CH2OH)2	Ethylene Glycol	6.02505000
g'Ga-(CH2OH)2	Ethylene Glycol	6.02505010
H&gamma;	Hydrogen Recombination Line	6.02558289
CH318OHvt=0,1&2	Methanol	6.02573900
g'Ga-(CH2OH)2	Ethylene Glycol	6.02585110

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.02585110
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.02620400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.02698450
CH₃18OH_vt=0,1&2	Methanol	6.02703700
He&gamma;	Helium Recombination Line	6.02803833
C&gamma;	Carbon Recombination Line	6.02858937
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03046230
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03046230
OH_v=0	Hydroxyl	6.03074830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03245730
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03245730
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03348420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03352940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03417970
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03417970
HC₇O	Hexatriynylformyl	6.03485400
HC₇O	Hexatriynylformyl	6.03501600
OH_v=0	Hydroxyl	6.03509340
HC₇O	Hexatriynylformyl	6.03643800
HC₇O	Hexatriynylformyl	6.03661900
H&zeta;	Hydrogen Recombination Line	6.03696354
CH₃13CH₂13CN	Ethyl cyanide	6.03775660
CH₂CH₁₃CN	Vinyl Cyanide	6.03811530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03852800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03852800
t-HCOOH	Formic Acid	6.03872450
g-CH₃CH₂OH	gauche-Ethanol	6.03931680
g-CH₃CH₂OH	gauche-Ethanol	6.03932200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03969970
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03969970
H₂CCCHCN	Cyanoallene	6.03975100
H₂CCCHCN	Cyanoallene	6.03977410
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.03984230
H₂CCCHCN	Cyanoallene	6.03990810
H₂CCCHCN	Cyanoallene	6.04019780
CH₂CHCN_v15=1	Vinyl Cyanide	6.04062440
CH₂CHCN_v15=1	Vinyl Cyanide	6.04062610
CH₂CHCN_v15=1	Vinyl Cyanide	6.04063500
OS₁₈O	Sulfur Dioxide	6.04092090
CH₃CH₂13CN	Ethyl Cyanide	6.04170940

t-DCOOH	Formic Acid	6.04231650
HCCCH2CN	Propargyl cyanide	6.04248860
CH3O13CHO(TopModel)	Methyl Formate	6.04290500
13CH3OHvt=1	Methanol	6.04333900
HC7O	Hexatriynylformyl	6.04678960
HC7O	Hexatriynylformyl	6.04679200
HC7O	Hexatriynylformyl	6.04680020
HC7O	Hexatriynylformyl	6.04680270
g'Ga-(CH2OH)2	Ethylene Glycol	6.04771250
g'Ga-(CH2OH)2	Ethylene Glycol	6.04771250
g'Ga-(CH2OH)2	Ethylene Glycol	6.04796750
CH3O13CHO(TopModel)	Methyl Formate	6.04857400
OHv=0	Hydroxyl	6.04909350
H213CO	Formaldehyde	6.05192420
D2CO	Formaldehyde	6.05442410
g'Ga-(CH2OH)2	Ethylene Glycol	6.05603640
g'Ga-(CH2OH)2	Ethylene Glycol	6.05603800
KCN,KNC	Potassium cyanide, potassium isocyanide	6.05643570
CH313CH2CN	Ethyl Cyanide	6.05663300
CH3O13CHO(TopModel)	Methyl Formate	6.05800900
g'Ga-(CH2OH)2	Ethylene Glycol	6.05803280
g'Ga-(CH2OH)2	Ethylene Glycol	6.05803280
g'Ga-(CH2OH)2	Ethylene Glycol	6.05824670
g'Ga-(CH2OH)2	Ethylene Glycol	6.05824670
g'Ga-(CH2OH)2	Ethylene Glycol	6.05921240
g'Ga-(CH2OH)2	Ethylene Glycol	6.05921240
g'Ga-(CH2OH)2	Ethylene Glycol	6.06036010
13CH3CH2CN	Ethyl Cyanide	6.06070610
CH2CHCNv15=1	Vinyl Cyanide	6.06132500
CH2CHCNv15=1	Vinyl Cyanide	6.06133170
CH2CHCNv15=1	Vinyl Cyanide	6.06133290
g'Ga-(CH2OH)2	Ethylene Glycol	6.06164810
HC3Nv7=1	Cyanoacetylene	6.06689690
CH3O13CHO(TopModel)	Methyl Formate	6.06769100
CH2CHCNv11=2	Vinyl Cyanide	6.06834200
H2C34S	Thioformaldehyde	6.06914250
g'Ga-(CH2OH)2	Ethylene Glycol	6.06950720
g'Ga-(CH2OH)2	Ethylene Glycol	6.06950720
g'Ga-(CH2OH)2	Ethylene Glycol	6.07071260

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.07103120
CH₃18OH_vt=0,1&2	Methanol	6.07174500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.07193670
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.07245800
CH₃O13CHO(TopModel)	Methyl Formate	6.07439100
CH₃O13CHO(TopModel)	Methyl Formate	6.07478900
H&delta;	Hydrogen Recombination Line	6.07570249
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.07811340
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.07811340
He&delta;	Helium Recombination Line	6.07817836
CH₃CN_v8=1	Methyl Cyanide	6.07936530
CH₃OCHO_v=0	Methyl Formate	6.07989210
CH₃COOH_v=0	Acetic Acid	6.08029960
NH₃_v=0	Ammonia	6.08070660
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.08215620
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.08215620
CH₃OCHO_v=0	Methyl Formate	6.08423450
H&epsilon;	Hydrogen Recombination Line	6.08532053
CH₃NH₂	Methylamine	6.08566600
CH₃NH₂	Methylamine	6.08578700
CH₃NH₂	Methylamine	6.08584400
CH₃NH₂	Methylamine	6.08585200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.08586430
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.08586440
CH₃18OH_vt=0,1&2	Methanol	6.08781600
CH₃COOH_v=0	Acetic Acid	6.08880840
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.08905980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.08914980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.08917080
CH₃OCH₂OH	Methoxymethanol	6.08931360
cis-CH₂OHCHO_v=0	Glycolaldehyde	6.08933740
cis-CH₂OHCHO_v=0	Glycolaldehyde	6.08933780
t-DCOOH	Formic Acid	6.09202150
CH₃OCH₂OH	Methoxymethanol	6.09203580
CH₃O13CHO(TopModel)	Methyl Formate	6.09408700
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.09600300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.09600300
D₂CO	Formaldehyde	6.09606820
HCCCH₂CN	Propargyl cyanide	6.09688080
CH₃COOH_v=0	Acetic Acid	6.09759340

HCCCH ₂ CN	Propargyl cyanide	6.09762150
i-C ₃ H ₇ CN	iso-propyl cyanide	6.09774350
c-C ₆ H ₅ CN	Benzonitrile	6.09879340
c-C ₆ H ₅ CN	Benzonitrile	6.09885630
c-C ₆ H ₅ CN	Benzonitrile	6.09888470
c-C ₆ H ₅ CN	Benzonitrile	6.09889120
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.09935730
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.09935730
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.09983080
NO	Nitric oxide	6.10037000
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10131680
CH ₃ OH _v t=0,1&2	Methanol	6.10265700
NHD ₂	Ammonia	6.10333210
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10441730
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10441730
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10472030
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10472030
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10509190
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10517870
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10517870
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10610010
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10610010
NHD ₂	Ammonia	6.10616310
NHD ₂	Ammonia	6.10616360
Hα	Hydrogen Recombination Line	6.10685511
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10699110
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10699110
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	6.10746500
CH ₃ OH _v t=0-2	Methanol	6.10749300
CH ₃ CHO _v =0,1&2	Acetaldehyde	6.10791780
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	6.10839100
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10856870
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10856870
Heα	Helium Recombination Line	6.10934368
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10984050
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.10984050
Cα	Carbon Recombination Line	6.10990215
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.11107460
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.11107460
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.11158200

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.11213770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.11213770
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.11249400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.11371140
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.11371140
c-H₂C₃O	Cyclopropenone	6.11380460
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.11405240
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.11428460
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.11428530
CH₃COOHv=0	Acetic Acid	6.11570570
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.11681860
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.11681860
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.11701090
C₇H	2,4,6-Heptatriynylidyne	6.11776010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.11858720
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.11858720
C₇H	2,4,6-Heptatriynylidyne	6.12038110
C₇H	2,4,6-Heptatriynylidyne	6.12081930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12205090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12205090
C₇H	2,4,6-Heptatriynylidyne	6.12207910
C₇H	2,4,6-Heptatriynylidyne	6.12226980
C₇H	2,4,6-Heptatriynylidyne	6.12259420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12262330
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12262330
NH₃v=0	Ammonia	6.12337000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12444930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12444930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12464690
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12490160
CH₂CHCNv=0	Vinyl Cyanide	6.12700420
CH₂CHCNv=0	Vinyl Cyanide	6.12700420
CH₂CHCNv=0	Vinyl Cyanide	6.12704050
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12740280
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12740280
H&beta;	Hydrogen Recombination Line	6.12747582
NH₂CN	Cyanamide	6.12753930
HCCCH₂CN	Propargyl cyanide	6.12803240
g-CH₃CH₂OH	gauche-Ethanol	6.12810740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12896920

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12956400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.12956400
He&beta;	Helium Recombination Line	6.12997279
C&beta;	Carbon Recombination Line	6.13053314
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.13127780
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.13127780
CH₂CHCNv11=1	Vinyl Cyanide	6.13156010
CH₂CHCNv11=1	Vinyl Cyanide	6.13156100
CH₂CHCNv11=1	Vinyl Cyanide	6.13157140
CH₃13CH₂CN	Ethyl Cyanide	6.13184220
CH₃OCHOv=0	Methyl Formate	6.13217090
HeII&alpha;	Helium Recombination Line	6.13272660
H&zeta;	Hydrogen Recombination Line	6.13489241
SiC₄	Silicon tetracarbide	6.13508800
C₇H	2,4,6-Heptatriynylidyne	6.13530010
C₇H	2,4,6-Heptatriynylidyne	6.13530120
C₇H	2,4,6-Heptatriynylidyne	6.13535860
C₇H	2,4,6-Heptatriynylidyne	6.13535980
C₇H	2,4,6-Heptatriynylidyne	6.13538130
C₇H	2,4,6-Heptatriynylidyne	6.13538260
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.13578970
CH₃O13CHO(TopModel)	Methyl Formate	6.13610200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.13765400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.13765400
CH₃O13CHO(TopModel)	Methyl Formate	6.13796600
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.13905030
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.13905030
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.13939970
N₃4S	Nitric sulfide	6.14011360
CH₃OCHOv=0	Methyl Formate	6.14239950
CH₃18OHvt=0,1&2	Methanol	6.14252700
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.14275220
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.14467470
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.14468430
cis-CH₂OHCHOv=0	Glycolaldehyde	6.14487830
cis-CH₂OHCHOv=0	Glycolaldehyde	6.14487930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.14502610
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.14502610
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.14628750
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.14628760

cis-CH ₂ OHCHO _{v=0}	Glycolaldehyde	6.14678790
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.14690750
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.14690750
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.14774240
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.14774240
Hγ	Hydrogen Recombination Line	6.14898694
cis-CH ₂ OHCHO _{v=0}	Glycolaldehyde	6.14965720
CH ₃ 18OH _{vt=0,1&2}	Methanol	6.15040600
CH ₂ 13CHCN	Vinyl Cyanide	6.15044710
Heγ	Helium Recombination Line	6.15149267
Cγ	Carbon Recombination Line	6.15205500
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.15346850
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.15402700
¹³ CH ₃ CH ₂ CN	Ethyl Cyanide	6.15436200
CH ₃ SH, _{vt&le;2}	Methyl Mercaptan	6.15624340
CH ₃ NH ₂	Methylamine	6.15636000
CH ₃ NH ₂	Methylamine	6.15636400
CH ₃ NH ₂	Methylamine	6.15640200
CH ₃ COOH _{v=0}	Acetic Acid	6.15644600
CH ₃ NH ₂	Methylamine	6.15648200
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.15732700
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.15732700
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.15734080
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.15734080
t-DCOOH	Formic Acid	6.15788440
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.15826530
D ₂ CO	Formaldehyde	6.15830510
H ₂ CO	Formaldehyde	6.15939070
NHD ₂	Ammonia	6.16186000
NHD ₂	Ammonia	6.16192760
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.16202360
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.16208450
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.16274630
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.16399210
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.16399210
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.16480360
t-CH ₂ CHCHO	Propenal	6.16543610
t-H ₁₃ COOH	Formic Acid	6.16583540
CH ₃ SH, _{vt&le;2}	Methyl Mercaptan	6.16669780
g'-Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.16777440

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.16777440
NaCN/NaNC	Sodium Cyanide	6.16801500
NH₂CHO	Formamide	6.16846630
NH₂CHO	Formamide	6.16847490
NH₂CHO	Formamide	6.16867020
c-C₆H₅CN	Benzonitrile	6.16894950
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.16897240
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.16897240
CH₃SH,vt&le;2	Methyl Mercaptan	6.16921180
CH₃OCH₃	Dimethyl ether	6.17055260
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.17102500
c-H₂C₃O	Cyclopropenone	6.17137350
CH₃OCH₃	Dimethyl ether	6.17165590
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.17172880
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.17194300
CH₃OCH₃	Dimethyl ether	6.17203040
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.17219100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.17219130
HDO	Water	6.17296480
CH₃OCH₃	Dimethyl ether	6.17313010
CH₃OCH₃	Dimethyl ether	6.17313350
g-CH₃CH₂OH	gauche-Ethanol	6.17321790
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.17360080
NH₃v=0	Ammonia	6.17469010
CH₃₁₃CH₂₁₃CN	Ethyl cyanide	6.17484860
CH₃COOHv=0	Acetic Acid	6.17516580
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.17519500
CH₃OCHOv=0	Methyl Formate	6.17538550
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.17552080
CH₃₁₈OHvt=0,1&2	Methanol	6.17610000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.17666880
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.17727950
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.17740070
HCCCH₂CN	Propargyl cyanide	6.17768200
HCCCH₂CN	Propargyl cyanide	6.17783410
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.17905170
CH₃₁₃CH₂CN	Ethyl Cyanide	6.17951430
CH₃OHvt=0-2	Methanol	6.18112800
CH₃₁₃CH₂CN	Ethyl Cyanide	6.18146860
cis-CH₂OHCHOv=0	Glycolaldehyde	6.18158700

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.18182380
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.18182380
cis-CH₂OHCHO_{v=0}	Glycolaldehyde	6.18275250
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.18436050
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.18436050
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.18487870
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.18516610
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.18599060
CH₃COOH_{v=0}	Acetic Acid	6.18676290
CH₃COOH_{v=0}	Acetic Acid	6.18693400
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.18696740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.18758610
CH₂CHCN_{v11=2}	Vinyl Cyanide	6.18799900
H&delta;	Hydrogen Recombination Line	6.18893453
H&epsilon;	Hydrogen Recombination Line	6.19056878
CH₂CHCN_{v11=1}	Vinyl Cyanide	6.19110380
CH₂CHCN_{v11=1}	Vinyl Cyanide	6.19110540
CH₂CHCN_{v11=1}	Vinyl Cyanide	6.19110970
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.19120700
He&delta;	Helium Recombination Line	6.19145654
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.19242220
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.19592090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.19592090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.19750220
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.19900600
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.19900600
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.19909240
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.19909240
HCCCH₂CN	Propargyl cyanide	6.19982950
HCCCH₂CN	Propargyl cyanide	6.19984480
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.19992870
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.19993300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.20004250
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.20004250
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.20030980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.20030980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.20219350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.20219350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.20266620
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.20266620

NO	Nitric oxide	6.20434000
13CH313CH2CN	Ethyl cyanide	6.20476780
OS18O	Sulfur Dioxide	6.20521460
g'Ga-(CH2OH)2	Ethylene Glycol	6.20545020
g'Ga-(CH2OH)2	Ethylene Glycol	6.20545020
g'Ga-(CH2OH)2	Ethylene Glycol	6.20617020
g'Ga-(CH2OH)2	Ethylene Glycol	6.20617020
g'Ga-(CH2OH)2	Ethylene Glycol	6.20620840
g'Ga-(CH2OH)2	Ethylene Glycol	6.20620840
NO	Nitric oxide	6.20690000
CH3NH2	Methylamine	6.20827700
CH3NH2	Methylamine	6.20840000
CH3NH2	Methylamine	6.20845800
CH3NH2	Methylamine	6.20846600
g'Ga-(CH2OH)2	Ethylene Glycol	6.20980320
g'Ga-(CH2OH)2	Ethylene Glycol	6.20980320
g'Ga-(CH2OH)2	Ethylene Glycol	6.21083030
g'Ga-(CH2OH)2	Ethylene Glycol	6.21083030
g'Ga-(CH2OH)2	Ethylene Glycol	6.21129480
g'Ga-(CH2OH)2	Ethylene Glycol	6.21129480
g'Ga-(CH2OH)2	Ethylene Glycol	6.21200820
g'Ga-(CH2OH)2	Ethylene Glycol	6.21339630
CH3O13CHO(TopModel)	Methyl Formate	6.21368000
CH3COOHv=0	Acetic Acid	6.21494120
g'Ga-(CH2OH)2	Ethylene Glycol	6.21524210
g'Ga-(CH2OH)2	Ethylene Glycol	6.21524210
g'Ga-(CH2OH)2	Ethylene Glycol	6.21665620
g'Ga-(CH2OH)2	Ethylene Glycol	6.21665620
g'Ga-(CH2OH)2	Ethylene Glycol	6.21779720
g'Ga-(CH2OH)2	Ethylene Glycol	6.21946090
CH3O13CHO(TopModel)	Methyl Formate	6.21980400
g'Ga-(CH2OH)2	Ethylene Glycol	6.22175570
g'Ga-(CH2OH)2	Ethylene Glycol	6.22175570
CH3C5N	Methylcyanodiacetylene	6.22290650
CH3C5N	Methylcyanodiacetylene	6.22304760
CH3C5N	Methylcyanodiacetylene	6.22311790
H2CCCHCN	Cyanoallene	6.22320240
CH3O13CHO(TopModel)	Methyl Formate	6.22332600
g'Ga-(CH2OH)2	Ethylene Glycol	6.22365840
g'Ga-(CH2OH)2	Ethylene Glycol	6.22365840

CH3C5N	Methylcyanodiacetylene	6.22375180
CH3C5N	Methylcyanodiacetylene	6.22417500
CH3C5N	Methylcyanodiacetylene	6.22422300
CH3C5N	Methylcyanodiacetylene	6.22428740
CH3C5N	Methylcyanodiacetylene	6.22430420
CH3C5N	Methylcyanodiacetylene	6.22431500
CH3C5N	Methylcyanodiacetylene	6.22432810
N34S	Nitric sulfide	6.22433060
CH3C5N	Methylcyanodiacetylene	6.22434250
CH3C5N	Methylcyanodiacetylene	6.22434800
CH3C5N	Methylcyanodiacetylene	6.22447610
t-HCOOH	Formic Acid	6.22461630
CH3C5N	Methylcyanodiacetylene	6.22479120
CH3C6H	Methyltriacetylene	6.22563400
CH3C5N	Methylcyanodiacetylene	6.22571430
CH3CHOv=0,1&2	Acetaldehyde	6.22574600
CH3C6H	Methyltriacetylene	6.22581170
CH3CHOv=0,1&2	Acetaldehyde	6.22582500
CH3C6H	Methyltriacetylene	6.22591830
CH3C6H	Methyltriacetylene	6.22595380
CH3C5N	Methylcyanodiacetylene	6.22612690
CH3O13CHO(TopModel)	Methyl Formate	6.22758700
g'Ga-(CH2OH)2	Ethylene Glycol	6.22798440
g'Ga-(CH2OH)2	Ethylene Glycol	6.22798440
CH3COOHv=0	Acetic Acid	6.22847730
g'Ga-(CH2OH)2	Ethylene Glycol	6.22933140
g'Ga-(CH2OH)2	Ethylene Glycol	6.22933140
CH3CH2CNv=0	Ethyl Cyanide	6.22957890
CH3CH2CNv=0	Ethyl Cyanide	6.22958090
CH313CH213CN	Ethyl cyanide	6.22961270
g'Ga-(CH2OH)2	Ethylene Glycol	6.22963760
g'Ga-(CH2OH)2	Ethylene Glycol	6.22963770
g'Ga-(CH2OH)2	Ethylene Glycol	6.22971770
g'Ga-(CH2OH)2	Ethylene Glycol	6.22977380
g'Ga-(CH2OH)2	Ethylene Glycol	6.23059910
g'Ga-(CH2OH)2	Ethylene Glycol	6.23111030
g'Ga-(CH2OH)2	Ethylene Glycol	6.23184920
g'Ga-(CH2OH)2	Ethylene Glycol	6.23184920
CH318OHvt=0,1&2	Methanol	6.23441900
CH3COOHv=0	Acetic Acid	6.23483730

H&zeta;	Hydrogen Recombination Line	6.23495105
NH₂CN	Cyanamide	6.23610760
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.23677500
CH₃COOH_{v=0}	Acetic Acid	6.23705320
H₂CCCHCN	Cyanoallene	6.23736040
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.23795530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.23795530
NS,_{v=0}	Nitric sulfide	6.23868710
CH₃OCH₃	Dimethyl ether	6.24086230
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.24124270
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.24124270
t-HCOOH	Formic Acid	6.24264380
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.24435180
CH₃OCH₃	Dimethyl ether	6.24508570
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.24603840
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.24603840
CH₃NH₂	Methylamine	6.24625100
CH₃NH₂	Methylamine	6.24627800
CH₃NH₂	Methylamine	6.24629100
CH₃NH₂	Methylamine	6.24629300
NH₂CN	Cyanamide	6.24639330
HeII&alpha;	Helium Recombination Line	6.24735550
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.24761180
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.24761180
CH₃OCH₃	Dimethyl ether	6.24794280
HCCCH₂CN	Propargyl cyanide	6.24981040
CH₃OCH₃	Dimethyl ether	6.25052200
t-CH₂CHCHO	Propenal	6.25120180
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.25185560
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.25185560
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.25478570
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.25478750
i-C₃H₇CN	iso-propyl cyanide	6.25612030
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.25750100
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.25790200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.25828370
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.25828370
HDCO	Formaldehyde	6.25855590
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.25856020
CH₃OH_{v=0,1&2}	Methanol	6.25956800

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.26086120
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.26165180
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.26232660
13CH₃CH₂13CN	Ethyl cyanide	6.26296530
13CH₂CHCN	Vinyl Cyanide	6.26309130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.26370830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.26370830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.26551970
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.26551970
c-C₆H₅CN	Benzonitrile	6.26636980
cis-CH₂OHCHOv=0	Glycolaldehyde	6.26704980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.26802210
CH₂13CHCN	Vinyl Cyanide	6.26809960
CH₃NH₂	Methylamine	6.26965200
CH₃NH₂	Methylamine	6.26965600
CH₃NH₂	Methylamine	6.26968900
CH₃NH₂	Methylamine	6.26975900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.26995130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.26995130
CH₃COOHv=0	Acetic Acid	6.27017990
H₃CCHCH₂O	Propylene Oxide	6.27069040
CH₃OHvt=0-2	Methanol	6.27083000
H₁₃C(O)NH₂	Formamide	6.27113830
CH₃CH₂CNv=0	Ethyl Cyanide	6.27181900
H&beta;	Hydrogen Recombination Line	6.27222526
He&beta;	Helium Recombination Line	6.27478121
C&beta;	Carbon Recombination Line	6.27535480
H&gamma;	Hydrogen Recombination Line	6.27578401
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.27682550
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.27682550
CH₃O13CHO(TopModel)	Methyl Formate	6.27734700
CH₃O13CHO(TopModel)	Methyl Formate	6.27759300
CH₃CH₂C15N	Ethyl Cyanide	6.27768310
He&gamma;	Helium Recombination Line	6.27834141
H₂CS	Thioformaldehyde	6.27865000
C&gamma;	Carbon Recombination Line	6.27891533
CH₃18OHvt=0,1&2	Methanol	6.28045700
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28183710
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28186240
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28259320

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28259320
t-DCOOH	Formic Acid	6.28278120
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28651100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28651100
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.28738100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28791320
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28791320
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28792230
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28792230
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.28865490
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28907770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28907770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28910010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.28910010
H&alpha;	Hydrogen Recombination Line	6.28914337
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29062280
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29123810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29123810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29142130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29142130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29144200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29144200
He&alpha;	Helium Recombination Line	6.29170622
C&alpha;	Carbon Recombination Line	6.29228136
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.29251000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29357600
CH₂CH₁₃CN	Vinyl Cyanide	6.29376160
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29494310
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29494310
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29495010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29495010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29596930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29618490
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29618490
D₂CS	Thioformaldehyde	6.29670260
c-13CC₂HD	Cyclopropenylidene	6.29737290
H&epsilon;	Hydrogen Recombination Line	6.29825835
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29959870
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29959870
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29967110

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.29967110
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.29999700
t-DCOOH	Formic Acid	6.30049660
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.30084950
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.30184200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.30434160
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.30473900
H&delta;	Hydrogen Recombination Line	6.30499801
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.30540350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.30540350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.30559280
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.30559280
H₂CCO	Ketene	6.30635690
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.30698530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.30698530
He&delta;	Helium Recombination Line	6.30756732
TiO₂	Titanium dioxide	6.30850710
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.30912430
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.30912510
t-CH₃CH₂OH	trans-Ethanol	6.30949660
CH₃CH₂C₁₅N	Ethyl Cyanide	6.31038170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.31060420
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.31063300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.31069970
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.31069970
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.31077900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.31095270
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.31127150
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.31235190
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.31235190
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.31272530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.31272530
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.31277200
NO	Nitric oxide	6.31385000
N₃₄S	Nitric sulfide	6.31396430
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.31398400
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.31835850
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.32043740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.32043740
g-CH₃CH₂OH	gauche-Ethanol	6.32051490

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.32108090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.32108090
NS,v=0	Nitric sulfide	6.32289570
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.32411780
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.32411780
CH₃COOHv=0	Acetic Acid	6.32459090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.32610750
SO₂v₂=1	Sulfur dioxide	6.32668860
CH₃COOHv=0	Acetic Acid	6.32692790
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.32702030
CH₂CHCNv₁₁=1	Vinyl Cyanide	6.32736890
CH₂CHCNv₁₁=1	Vinyl Cyanide	6.32737050
CH₂CHCNv₁₁=1	Vinyl Cyanide	6.32738000
CH₂13CHCN	Vinyl Cyanide	6.32807610
H₂Ov₂,2v₂,v₁,v₃	Water	6.32813140
CH₃OHvt=0-2	Methanol	6.32830500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.32965290
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.32965290
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.33067500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.33067500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.33351220
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.33352320
cis-CH₂OHCHOv=0	Glycolaldehyde	6.33357620
cis-CH₂OHCHOv=0	Glycolaldehyde	6.33357620
CH₃OHvt=0-2	Methanol	6.33572700
H&zeta;	Hydrogen Recombination Line	6.33719768
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.33999010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.33999010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.34120270
CH₃COOHv=0	Acetic Acid	6.34128870
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.34152650
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.34152650
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.34270200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.34270200
CH₃O13CHO(TopModel)	Methyl Formate	6.34418000
NHD₂	Ammonia	6.34429440
NHD₂	Ammonia	6.34429450
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.34482370
CH₃13CH₂13CN	Ethyl cyanide	6.34505010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.34713670

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.35143940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.35143940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.35182080
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.35214800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.35365960
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.35365960
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.35424470
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.35611220
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.35723900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.35866090
c-C₆H₅CN	Benzonitrile	6.35920770
i-C₃H₇CN	iso-propyl cyanide	6.35955780
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.35972100
CH₃18OHvt=0,1&2	Methanol	6.35972700
t-DCOOH	Formic Acid	6.35983100
c-C₆H₅CN	Benzonitrile	6.35983810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.35984530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.35999130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.36009300
CH₃CH₂13CN	Ethyl Cyanide	6.36096100
13CH₂CHCN	Vinyl Cyanide	6.36161590
NaCN/NaNC	Sodium Cyanide	6.36180670
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.36282790
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.36282820
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.36398990
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.36398990
CH₂CH₁₃CN	Vinyl Cyanide	6.36450160
HeII&alpha;	Helium Recombination Line	6.36485910
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.36710510
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.36710510
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.36723060
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.36897600
CH₂13CHCN	Vinyl Cyanide	6.36999670
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37004380
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37090740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37124930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37124930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37125720
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37125720
CH₃COOHv=0	Acetic Acid	6.37161920

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37244870
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37244870
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37246950
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37246950
H₂CCCHCN	Cyanoallene	6.37353320
H₂CCCHCN	Cyanoallene	6.37355230
H₂CCCHCN	Cyanoallene	6.37360380
H₂CCCHCN	Cyanoallene	6.37372410
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37485900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37485900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37488420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37488420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37762930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37762930
CH₃COOH_v=0	Acetic Acid	6.37826270
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37848520
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37848520
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37849940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.37849940
t-H₁₃COOH	Formic Acid	6.37860630
CH₃COOH_v=0	Acetic Acid	6.37947690
CH₃COOH_v=0	Acetic Acid	6.37947690
CH₃COOH_v=0	Acetic Acid	6.38043220
i-C₃H₇CN	iso-propyl cyanide	6.38115140
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38190270
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38190270
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38331370
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38331370
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38333380
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38333380
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38461920
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38462380
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38527520
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.38698100
NHD₂	Ammonia	6.38723000
NHD₂	Ammonia	6.38732720
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38780010
CH₃18OH_{vt}=0,1&2	Methanol	6.38898500
CH₃18OH_{vt}=0,1&2	Methanol	6.38898500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38932590

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38932590
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38941290
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38941290
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.38954970
HC₉N	Cyanotetraacetylene	6.38986620
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.38992990
34SO_{2v=0}	Sulfur Dioxide	6.39106190
NH_{3v=0}	Ammonia	6.39108400
HC₉N	Cyanotetraacetylene	6.39139020
HC₉N	Cyanotetraacetylene	6.39139830
HC₉N	Cyanotetraacetylene	6.39139830
HC₉N	Cyanotetraacetylene	6.39140400
t-H₁₃COOH	Formic Acid	6.39147630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.39188890
CH₃OCH₂OH	Methoxymethanol	6.39203260
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.39234310
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.39234310
HC₉N	Cyanotetraacetylene	6.39307540
CH₃OCH₂OH	Methoxymethanol	6.39423290
CH₃COOH_{v=0}	Acetic Acid	6.39507360
H₂CCCHCN	Cyanoallene	6.39526560
E-HNCHCN	Cyanomethanimine	6.39639010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.39648390
E-HNCHCN	Cyanomethanimine	6.39650860
E-HNCHCN	Cyanomethanimine	6.39651090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.39653440
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.39653440
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.39673350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.39673350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.39680730
E-HNCHCN	Cyanomethanimine	6.39747130
E-HNCHCN	Cyanomethanimine	6.39750310
E-HNCHCN	Cyanomethanimine	6.39759400
E-HNCHCN	Cyanomethanimine	6.39759420
E-HNCHCN	Cyanomethanimine	6.39762360
E-HNCHCN	Cyanomethanimine	6.39762800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.39810550
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.39810550
i-C₃H₇CN	iso-propyl cyanide	6.39866450
i-C₃H₇CN	iso-propyl cyanide	6.39895240



Title: WiFi at GBEMS	Author: O'Neil	GBT Memo Series
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g'Ga-(CH₂OH)₂	Ethylene Glycol	6.40221000
CH₃OCH₂OH	Methoxymethanol	6.40221520
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.40261590
E-HNCHCN	Cyanomethanimine	6.40362650
E-HNCHCN	Cyanomethanimine	6.40362720
E-HNCHCN	Cyanomethanimine	6.40363090
E-HNCHCN	Cyanomethanimine	6.40363100
E-HNCHCN	Cyanomethanimine	6.40364420
E-HNCHCN	Cyanomethanimine	6.40364820
E-HNCHCN	Cyanomethanimine	6.40381810
E-HNCHCN	Cyanomethanimine	6.40381850
E-HNCHCN	Cyanomethanimine	6.40383520
CH₃OCH₂OH	Methoxymethanol	6.40389570
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.40493780
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.40493780
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.40530930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.40530930
H&gamma;	Hydrogen Recombination Line	6.40609151
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.40811510
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.40811510
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.40823130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.40829600
H&epsilon;	Hydrogen Recombination Line	6.40846044
He&gamma;	Helium Recombination Line	6.40870202
C&gamma;	Carbon Recombination Line	6.40928785
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.40952900
NO	Nitric oxide	6.41015280
i-C₃H₇CN	iso-propyl cyanide	6.41075230
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.41104470
NS,_{v=0}	Nitric sulfide	6.41240210
i-C₃H₇CN	iso-propyl cyanide	6.41274840
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.41353400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.41453400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.41453400
c-C₆H₅CN	Benzonitrile	6.41488840
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.41515850
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.41515850
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.41578460
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.41578470
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.41648480

NO	Nitric oxide	6.41693000
CH3CHO_{v=0,1&2}	Acetaldehyde	6.41708610
CH3OCH3	Dimethyl ether	6.41874720
CH3OCH3	Dimethyl ether	6.42133460
H&beta;	Hydrogen Recombination Line	6.42157015
CH213CHCN	Vinyl Cyanide	6.42240090
CH3O13CHO(TopModel)	Methyl Formate	6.42329600
CH3OCH3	Dimethyl ether	6.42373500
H&delta;	Hydrogen Recombination Line	6.42398199
He&beta;	Helium Recombination Line	6.42418696
C&beta;	Carbon Recombination Line	6.42477421
g'Ga-(CH2OH)2	Ethylene Glycol	6.42492680
g'Ga-(CH2OH)2	Ethylene Glycol	6.42492680
g'Ga-(CH2OH)2	Ethylene Glycol	6.42532050
g'Ga-(CH2OH)2	Ethylene Glycol	6.42532050
HOCN	Cyanic acid	6.42611900
g'Ga-(CH2OH)2	Ethylene Glycol	6.42630460
g'Ga-(CH2OH)2	Ethylene Glycol	6.42630460
He&delta;	Helium Recombination Line	6.42659979
CH2CH13CN	Vinyl Cyanide	6.42670620
g'Ga-(CH2OH)2	Ethylene Glycol	6.42853430
CH3OH_{vt=0-2}	Methanol	6.42922500
CH3OH_{vt=0-2}	Methanol	6.42962800
g'Ga-(CH2OH)2	Ethylene Glycol	6.42966960
CH3O13CHO(TopModel)	Methyl Formate	6.43021500
g'Ga-(CH2OH)2	Ethylene Glycol	6.43361940
CH3CH2C15N	Ethyl Cyanide	6.43429010
g'Ga-(CH2OH)2	Ethylene Glycol	6.43443790
g'Ga-(CH2OH)2	Ethylene Glycol	6.43503840
g'Ga-(CH2OH)2	Ethylene Glycol	6.43504030
CH2CHCN_{v11=1}	Vinyl Cyanide	6.43525260
CH2CHCN_{v11=1}	Vinyl Cyanide	6.43525410
CH2CHCN_{v11=1}	Vinyl Cyanide	6.43527060
CH3NH2	Methylamine	6.43622500
g'Ga-(CH2OH)2	Ethylene Glycol	6.43729410
g'Ga-(CH2OH)2	Ethylene Glycol	6.43729410
CH3NH2	Methylamine	6.43729800
CH3NH2	Methylamine	6.43730600
CH3NH2	Methylamine	6.43755200
CH3NH2	Methylamine	6.43809300

CH₃NH₂	Methylamine	6.43852200
NH₃v=0	Ammonia	6.43864000
i-C₃H₇CN	iso-propyl cyanide	6.43866000
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.43877820
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.43877820
HDCO	Formaldehyde	6.43891150
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.43950200
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.44088840
H&zeta;	Hydrogen Recombination Line	6.44169244
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.44250500
t-HCOOH	Formic Acid	6.44264960
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.44275720
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.44275720
H₁₃CNv₂=1	Hydrogen Cyanide	6.44293960
t-HCOOD	Formic Acid	6.44424680
HCCCH₂CN	Propargyl cyanide	6.44434080
HC₅O	Butadiynylformyl	6.44849530
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.44854140
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.44906700
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.44906700
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.44913770
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.44913770
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45022870
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45022870
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45044240
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45044240
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45045080
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45045080
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45144180
CH₂CN	Cyanomethyl	6.45192440
HC₅O	Butadiynylformyl	6.45199500
CH₂₁₃CHCN	Vinyl Cyanide	6.45212800
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45262050
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45262050
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45262220
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45262220
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45298400
g'⁺Ga-(CH₂OH)₂	Ethylene Glycol	6.45298400
HC₅O	Butadiynylformyl	6.45305200
C₈H	1,3,5,7-Octatetraynyl	6.45335420

C8H	1,3,5,7-Octatetraynyl	6.45337050
C8H	1,3,5,7-Octatetraynyl	6.45337320
C8H	1,3,5,7-Octatetraynyl	6.45338950
C8H	1,3,5,7-Octatetraynyl	6.45346290
C8H	1,3,5,7-Octatetraynyl	6.45347910
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.45357100
HC5O	Butadiynylformyl	6.45478310
HC5O	Butadiynylformyl	6.45527800
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.45599830
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.45602590
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.45624780
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.45624780
HC5O	Butadiynylformyl	6.45668800
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.45676720
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.45676720
CH ₃ O ₁₃ CHO(TopModel)	Methyl Formate	6.45730600
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.45773790
s-H ₂ CCHOH	Vinyl Alcohol	6.45812170
NHD ₂	Ammonia	6.45880250
NHD ₂	Ammonia	6.45919750
C8H	1,3,5,7-Octatetraynyl	6.45957070
CH ₃ CH ₂ CN,v ₂₀ =1-A	Ethyl Cyanide	6.46016840
CH ₃ CHOv=0,1&2	Acetaldehyde	6.46105990
NHD ₂	Ammonia	6.46109000
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.46110650
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.46110650
NHD ₂	Ammonia	6.46112730
NHD ₂	Ammonia	6.46112890
NHD ₂	Ammonia	6.46113700
C8H	1,3,5,7-Octatetraynyl	6.46119320
C8H	1,3,5,7-Octatetraynyl	6.46148260
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.46158260
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.46179860
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.46179860
NHD ₂	Ammonia	6.46306830
NHD ₂	Ammonia	6.46346170
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.46478540
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.46478540
NH ₃ v=0	Ammonia	6.46668690
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.46697720

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.46719980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.46719980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.46788690
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.46788700
HCCCH₂CN	Propargyl cyanide	6.46803870
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.46808770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.46808770
NH₃v=0	Ammonia	6.46927180
C₈H	1,3,5,7-Octatetraynyl	6.46980640
HC₃Nv₇=1	Cyanoacetylene	6.47036160
C₈H	1,3,5,7-Octatetraynyl	6.47142880
KCN,KNC	Potassium cyanide, potassium isocyanide	6.47161440
C₈H	1,3,5,7-Octatetraynyl	6.47171830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.47452930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.47452930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.47564710
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.47564710
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.47636840
H₂CCCHCN	Cyanoallene	6.47646340
NH₂CHO	Formamide	6.47856520
NH₂CHO	Formamide	6.47868710
NH₂CHO	Formamide	6.47869240
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.47873170
H&alpha;	Hydrogen Recombination Line	6.47875949
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.47910160
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.48029190
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.48029190
H₂CCCHCN	Cyanoallene	6.48054750
H₂CCCHCN	Cyanoallene	6.48065290
H₂CCCHCN	Cyanoallene	6.48069620
H₂CCCHCN	Cyanoallene	6.48071770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.48137620
He&alpha;	Helium Recombination Line	6.48139961
CH₂CN	Cyanomethyl	6.48166120
HC₅O	Butadiynylformyl	6.48198850
C&alpha;	Carbon Recombination Line	6.48199209
HC₅O	Butadiynylformyl	6.48200790
HC₅O	Butadiynylformyl	6.48204130
HC₅O	Butadiynylformyl	6.48206050

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.48309710
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.48309710
NH₃v=0	Ammonia	6.48355160
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.48438300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.48449390
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.48449390
HNCv₂=1	Hydrogen Isocyanide	6.48449790
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.48465450
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.48465520
HeII&alpha;	Helium Recombination Line	6.48532800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.48729090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.48867890
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.48883840
13CH₃CH₂13CN	Ethyl cyanide	6.49194300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.49290510
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.49290510
t-H₁₃COOH	Formic Acid	6.49329030
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.49465100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.49465100
t-DCOOH	Formic Acid	6.49525630
H₂C₁₈O	Formaldehyde	6.49598320
H₂CCCHCN	Cyanoallene	6.49675450
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.49696250
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.49696250
t-DCOOH	Formic Acid	6.49746890
CH₃SH,vt&le;2	Methyl Mercaptan	6.49968220
CH₃NH₂	Methylamine	6.50001800
CH₃NH₂	Methylamine	6.50002000
CH₃NH₂	Methylamine	6.50004500
CH₃NH₂	Methylamine	6.50009600
CH₃COOHv=0	Acetic Acid	6.50084860
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.50187680
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.50224400
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.50297400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.50302900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.50304030
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.50395530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.50395530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.50524710
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.50614960

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.50614960
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.50630850
t-H₁₃COOH	Formic Acid	6.50827790
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.50883650
CH₃CH₂CN_{v=0}	Ethyl Cyanide	6.50908730
OS17O	Sulfur Dioxide	6.50990230
CH₃O13CHO(TopModel)	Methyl Formate	6.51047100
CH₃CH₂13CN	Ethyl Cyanide	6.51135160
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.51294500
HCCCH₂CN	Propargyl cyanide	6.51333140
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.51478820
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.51478820
13CH₃13CH₂CN	Ethyl cyanide	6.51540030
CH₃O13CHO(TopModel)	Methyl Formate	6.51589300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.51624940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.51624940
NO	Nitric oxide	6.51679070
CH₂CHCN_{v15=1}	Vinyl Cyanide	6.51683360
CH₂CHCN_{v15=1}	Vinyl Cyanide	6.51691020
CH₂CHCN_{v15=1}	Vinyl Cyanide	6.51691750
CH₃O13CHO(TopModel)	Methyl Formate	6.51849500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.51903190
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.51903190
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.52042470
H&epsilon;	Hydrogen Recombination Line	6.52124876
CH₂CHCN_{v11=1}	Vinyl Cyanide	6.52132180
CH₂CHCN_{v11=1}	Vinyl Cyanide	6.52132180
CH₂CHCN_{v11=1}	Vinyl Cyanide	6.52135930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52138230
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52138230
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52159410
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52159410
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52242500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52242500
CH₃O13CHO(TopModel)	Methyl Formate	6.52275000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52306170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52306170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52311070
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52327170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52395400

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52472240
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52472240
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.52500620
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52578790
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52578790
t-H₁₃COOH	Formic Acid	6.52594470
CH₃OH_{vt=0,1&2}	Methanol	6.52684000
N₃₄S	Nitric sulfide	6.52714210
g-CH₃CH₂OH	gauche-Ethanol	6.52797770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52827600
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52827600
NH_{3v=0}	Ammonia	6.52926630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52977810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52977810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52978850
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.52978850
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.53001300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53013490
CH₂CH₃CN	Vinyl Cyanide	6.53242160
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53308820
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53308820
NH_{3v=0}	Ammonia	6.53323020
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53335680
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53335710
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53358520
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53375810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53375810
CH₃CH₂CH₃CN	Ethyl Cyanide	6.53442030
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53504020
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53504020
HDCCO	Ketene	6.53830270
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53916250
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53916250
D₂CS	Thioformaldehyde	6.53951050
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53957940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.53977500
H&gamma;	Hydrogen Recombination Line	6.54003179
CH₃COOH_{v=0}	Acetic Acid	6.54028470
CH₃COOH_{v=0}	Acetic Acid	6.54028470
CH₃COOH_{v=0}	Acetic Acid	6.54028470

CH₃COOH_v=0	Acetic Acid	6.54028470
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.54041000
CH₃CH₂13CN	Ethyl Cyanide	6.54109530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54158590
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54158590
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54219770
He&gamma;	Helium Recombination Line	6.54269688
C&gamma;	Carbon Recombination Line	6.54329496
CH₃OH_{vt}=0-2	Methanol	6.54373300
DC₇N	2,4,6-Heptatriynenitrile	6.54377940
CH₃COOH_v=0	Acetic Acid	6.54382330
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54435880
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54457360
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54457360
CH₃CHO_v=0,1&2	Acetaldehyde	6.54544130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54550340
H&delta;	Hydrogen Recombination Line	6.54597893
CH₂CH₁₃CN	Vinyl Cyanide	6.54634980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54640820
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54650260
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54650260
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54667000
CH₂CHCN_v=0	Vinyl Cyanide	6.54669170
CH₂CHCN_v=0	Vinyl Cyanide	6.54669170
CH₂CHCN_v=0	Vinyl Cyanide	6.54670190
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54825230
H&zeta;	Hydrogen Recombination Line	6.54849746
He&delta;	Helium Recombination Line	6.54864643
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54920680
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54921130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54943140
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.54943140
CH₂CH₁₃CN	Vinyl Cyanide	6.54966870
t-H₁₃COOH	Formic Acid	6.55048960
DNCO	Isocyanic Acid	6.55165940
DNCO	Isocyanic Acid	6.55186190
CH₃COOH_v=0	Acetic Acid	6.55186700
CH₃COOH_v=0	Acetic Acid	6.55186700
DNCO	Isocyanic Acid	6.55189110
CH₃COOH_v=0	Acetic Acid	6.55190300

CH₃COOH_v=0	Acetic Acid	6.55190300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.55272770
H₁₃C(O)NH₂	Formamide	6.55302240
g-CH₃CH₂OH	gauche-Ethanol	6.55335070
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.55385930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.55385930
29SiC₂	Silicon Carbide	6.55415310
CH₃CH₂CN_v=0	Ethyl Cyanide	6.55442360
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.55511320
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.55511320
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.55542850
CH₃18OH_{vt}=0,1&2	Methanol	6.55569400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.55720470
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.55854270
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.55859930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.55859930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.55972320
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.56060470
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.56060470
CH₃O13CHO(TopModel)	Methyl Formate	6.56418700
CH₃O13CHO(TopModel)	Methyl Formate	6.56448700
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.56499910
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.56499910
CH₃O13CHO(TopModel)	Methyl Formate	6.56578400
HCCCH₂CN	Propargyl cyanide	6.56646210
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.56667990
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.56674710
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.56841690
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.56912070
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.56912070
CH₃CHO_v=0,1&2	Acetaldehyde	6.56930690
i-C₃H₇CN	iso-propyl cyanide	6.57163490
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.57238510
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.57360870
g-CH₃CH₂OH	gauche-Ethanol	6.57394370
13CH₃CH₂13CN	Ethyl cyanide	6.57447740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.57480500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.57507710
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.57507710
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.57515460

H&beta;	Hydrogen Recombination Line	6.57569433
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.57616540
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.57616540
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.57661550
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.57729220
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.57788130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.57788130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.57823950
He&beta;	Helium Recombination Line	6.57837395
NaCN/NaNC	Sodium Cyanide	6.57880060
C&beta;	Carbon Recombination Line	6.57897529
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58066280
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58103960
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58103970
t-H₁₃COOH	Formic Acid	6.58153890
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58155890
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.58495500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58510680
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58561010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58594050
cis-CH₂OHCHO_{v=0}	Glycolaldehyde	6.58613310
cis-CH₂OHCHO_{v=0}	Glycolaldehyde	6.58613310
CH₂CHCN_{v11=1}	Vinyl Cyanide	6.58645490
CH₂CHCN_{v11=1}	Vinyl Cyanide	6.58645660
CH₂CHCN_{v11=1}	Vinyl Cyanide	6.58646300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58652070
g-CH₃CH₂OH	gauche-Ethanol	6.58733440
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58821650
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58821650
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58861750
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58861750
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58862100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58862100
13CH₂CHCN	Vinyl Cyanide	6.58885610
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58908450
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.58908450
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59029940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59029940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59122520
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59122520

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59231370
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59325570
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59325570
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59441850
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59442020
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59464060
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59464060
NH₂D	Ammonia	6.59585170
NH₂D	Ammonia	6.59610080
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59640170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59640170
NH₂D	Ammonia	6.59702060
NH₂D	Ammonia	6.59703040
NH₂D	Ammonia	6.59705050
NH₂D	Ammonia	6.59709940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59739390
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59739390
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59749670
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59749670
CH₂CHCNv11=1	Vinyl Cyanide	6.59761030
CH₂CHCNv11=1	Vinyl Cyanide	6.59768910
CH₂CHCNv11=1	Vinyl Cyanide	6.59769610
13CH₃CH₂13CN	Ethyl cyanide	6.59791230
NH₃v=0	Ammonia	6.59797420
NH₂D	Ammonia	6.59802890
NH₂D	Ammonia	6.59826820
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59900090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59933400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.59933400
13CH₃CH₂13CN	Ethyl cyanide	6.59990880
13CH₃CH₂CN	Ethyl Cyanide	6.60138970
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.60211960
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.60236080
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.60236080
NO	Nitric oxide	6.60276940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.60303270
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.60303270
CH₃O13CHO(TopModel)	Methyl Formate	6.60331500
CH₃COOHv=0	Acetic Acid	6.60361960
CH₃O13CHO(TopModel)	Methyl Formate	6.60418500

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.60530960
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.60530960
CH₃OCHO_v=0	Methyl Formate	6.60541940
NHD₂	Ammonia	6.60622700
CH₃OCH₂OH	Methoxymethanol	6.60720510
CH₂CHCN_v=0	Vinyl Cyanide	6.60777030
CH₂CHCN_v=0	Vinyl Cyanide	6.60777860
CH₂CHCN_v=0	Vinyl Cyanide	6.60784730
H₂CCCHCN	Cyanoallene	6.60842510
CH₃CH₂¹³CN	Ethyl Cyanide	6.60872150
HeII&alpha;	Helium Recombination Line	6.60885640
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.60933970
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.60936650
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.60987930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.60987930
CH₃OCH₂OH	Methoxymethanol	6.61028710
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61067430
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61120610
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61143250
N₃4S	Nitric sulfide	6.61147690
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61257300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61257300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61263870
HDCS	Thioformaldehyde	6.61278270
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61305950
CH₃OCHO_v=0	Methyl Formate	6.61459480
CH₃NH₂	Methylamine	6.61532200
CH₃NH₂	Methylamine	6.61543700
CH₃NH₂	Methylamine	6.61549100
CH₃NH₂	Methylamine	6.61549800
CH₃¹³CH₂CN	Ethyl Cyanide	6.61604080
CH₃¹³CH₂CN	Ethyl Cyanide	6.61607370
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61616320
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61616320
CH₃¹³CH₂CN	Ethyl Cyanide	6.61619400
CH₃¹³CH₂CN	Ethyl Cyanide	6.61646580
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61662230
CH₃O¹³CHO(TopModel)	Methyl Formate	6.61669600
CH₃COOH_v=0	Acetic Acid	6.61695490
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61740040

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61740040
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61771940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61805840
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.61805840
CH₃13CH₂CN	Ethyl Cyanide	6.61861900
CH₃13CH₂CN	Ethyl Cyanide	6.61865330
HCCCHO	2-Propynal	6.61898440
NO	Nitric oxide	6.61900480
CH₃13CH₂CN	Ethyl Cyanide	6.61905690
CH₃O13CHO(TopModel)	Methyl Formate	6.61971200
CH₂13CHCN	Vinyl Cyanide	6.61972790
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.62078980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.62113010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.62113010
NH₃v=0	Ammonia	6.62115000
CH₃CH₂C¹⁵N	Ethyl Cyanide	6.62143160
CH₃13CH₂13CN	Ethyl cyanide	6.62208350
13CH₂CHCN	Vinyl Cyanide	6.62223970
CH₃COOHv=0	Acetic Acid	6.62372740
H₂CCCHCN	Cyanoallene	6.62402800
t-DCOOH	Formic Acid	6.62444850
CH₃18OHvt=0,1&2	Methanol	6.62468100
CH₃COOHv=0	Acetic Acid	6.62472680
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.62579180
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.62617900
HCCCH₂CN	Propargyl cyanide	6.62698100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.62760180
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.62760180
CH₂CHCNv11=1	Vinyl Cyanide	6.62800710
CH₂CHCNv11=1	Vinyl Cyanide	6.62801720
CH₂CHCNv11=1	Vinyl Cyanide	6.62801730
i-C₃H₇CN	iso-propyl cyanide	6.62956640
NS,v=0	Nitric sulfide	6.62997250
CH₃O13CHO(TopModel)	Methyl Formate	6.63052000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.63098790
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.63098790
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.63143630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.63374140
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.63374140
H&epsilon;	Hydrogen Recombination Line	6.63669962

CH318OHvt=0,1&2	Methanol	6.63714700
g'Ga-(CH2OH)2	Ethylene Glycol	6.63716200
g'Ga-(CH2OH)2	Ethylene Glycol	6.63716200
g'Ga-(CH2OH)2	Ethylene Glycol	6.63759680
g'Ga-(CH2OH)2	Ethylene Glycol	6.63855490
g'Ga-(CH2OH)2	Ethylene Glycol	6.63855550
13CH3CH2CN	Ethyl Cyanide	6.64015120
NH3v=0	Ammonia	6.64023000
NHD2	Ammonia	6.64060170
NHD2	Ammonia	6.64060500
13CH3CH2CN	Ethyl Cyanide	6.64067480
CH313CH2CN	Ethyl Cyanide	6.64099150
CH313CH2CN	Ethyl Cyanide	6.64150080
g'Ga-(CH2OH)2	Ethylene Glycol	6.64206190
g'Ga-(CH2OH)2	Ethylene Glycol	6.64207980
g'Ga-(CH2OH)2	Ethylene Glycol	6.64215370
g'Ga-(CH2OH)2	Ethylene Glycol	6.64215370
CH3COOHv=0	Acetic Acid	6.64396260
CH3COOHv=0	Acetic Acid	6.64396260
CH3COOHv=0	Acetic Acid	6.64397220
CH3COOHv=0	Acetic Acid	6.64397220
c-13CC2HD	Cyclopropenylidene	6.64539590
g'Ga-(CH2OH)2	Ethylene Glycol	6.64604060
g'Ga-(CH2OH)2	Ethylene Glycol	6.64704630
g'Ga-(CH2OH)2	Ethylene Glycol	6.64957310
g'Ga-(CH2OH)2	Ethylene Glycol	6.64957310
CH2CHCNv=0	Vinyl Cyanide	6.64963180
CH2CHCNv=0	Vinyl Cyanide	6.64963350
CH2CHCNv=0	Vinyl Cyanide	6.64963990
g'Ga-(CH2OH)2	Ethylene Glycol	6.65021390
g'Ga-(CH2OH)2	Ethylene Glycol	6.65021390
g'Ga-(CH2OH)2	Ethylene Glycol	6.65021990
g'Ga-(CH2OH)2	Ethylene Glycol	6.65021990
g'Ga-(CH2OH)2	Ethylene Glycol	6.65091910
g'Ga-(CH2OH)2	Ethylene Glycol	6.65098170
g'Ga-(CH2OH)2	Ethylene Glycol	6.65099180
CH3COOHv=0	Acetic Acid	6.65119510
g'Ga-(CH2OH)2	Ethylene Glycol	6.65138860
g'Ga-(CH2OH)2	Ethylene Glycol	6.65138860
H2CCCHCN	Cyanoallene	6.65194610

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65214480
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65214480
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65215410
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65215410
i-C₃H₇CN	iso-propyl cyanide	6.65259980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65378310
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65463560
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65463560
CH₃NH₂	Methylamine	6.65472400
CH₃NH₂	Methylamine	6.65472900
CH₃NH₂	Methylamine	6.65477200
CH₃NH₂	Methylamine	6.65486300
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.65502100
CH₃CH₂CH₂CN	Ethyl cyanide	6.65516090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65537140
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65537140
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65537740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65537740
H₃CCHCH₂O	Propylene Oxide	6.65762600
H&zeta;	Hydrogen Recombination Line	6.65767696
HCCCH₂CN	Propargyl cyanide	6.65843100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65878100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65939240
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65939240
CH₃CH₂CH₂CN	Ethyl Cyanide	6.65987390
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65989330
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65989330
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65990300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.65990300
CH₃CH₂CNv=0	Ethyl Cyanide	6.66045460
CH₃CH₂CNv=0	Ethyl Cyanide	6.66050870
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.66053900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.66290100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.66384910
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.66403800
CH₃COOHv=0	Acetic Acid	6.66459560
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.66477610
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.66492290
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.66507980
NaCN/NaNC	Sodium Cyanide	6.66512420

$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.66570650
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.66570650
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.66575420
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.66575420
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.66619940
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.66676500
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.66844180
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.66844180
$\text{CH}_3\text{CH}_2\text{CNv}=0$	Ethyl Cyanide	6.66849350
$\text{CH}_3\text{OHvt}=0-2$	Methanol	6.66856400
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67018660
$\text{CH}_3\text{CH}_2\text{CNv}=0$	Ethyl Cyanide	6.67034210
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67034630
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67034630
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67080430
$\text{H}\delta$;	Hydrogen Recombination Line	6.67108479
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67110080
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67129030
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67282310
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67282310
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67294650
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67294650
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67302800
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67351660
$\text{NH}_3\text{v}=0$	Ammonia	6.67376070
$\text{He}\delta$;	Helium Recombination Line	6.67380328
$\text{CH}_3\text{COOHv}=0$	Acetic Acid	6.67411480
$\text{CH}_3\text{COOHv}=0$	Acetic Acid	6.67411480
$\text{CH}_3\text{COOHv}=0$	Acetic Acid	6.67411480
$\text{CH}_3\text{COOHv}=0$	Acetic Acid	6.67411480
$\text{CH}_3\text{OHvt}=0-2$	Methanol	6.67444500
t-DCOOH	Formic Acid	6.67547700
$\text{H}\alpha$;	Hydrogen Recombination Line	6.67607544
$\text{CH}_3\text{COOHv}=0$	Acetic Acid	6.67628600
$\text{CH}_3\text{COOHv}=0$	Acetic Acid	6.67631790
$\text{g'Ga}-(\text{CH}_2\text{OH})_2$	Ethylene Glycol	6.67650760
$\text{CH}_3\text{OHvt}=0,1\&2$	Methanol	6.67771300
$\text{CH}_3\text{OHvt}=0,1\&2$	Methanol	6.67771700
$\text{H}\gamma$;	Hydrogen Recombination Line	6.67773233
$\text{He}\alpha$;	Helium Recombination Line	6.67879596

CCHv2=1	Ethynyl	6.67904660
C&alpha;	Carbon Recombination Line	6.67940649
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.67968630
CH₃OCH₃	Dimethyl ether	6.67994260
H₂CCCHCN	Cyanoallene	6.68007120
H₂CCCHCN	Cyanoallene	6.68008060
H₂CCCHCN	Cyanoallene	6.68013390
H₂CCCHCN	Cyanoallene	6.68024950
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68030060
He&gamma;	Helium Recombination Line	6.68045353
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68095040
C&gamma;	Carbon Recombination Line	6.68106420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68125020
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68125020
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68151190
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68151210
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68185340
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68186290
c-C₆H₅CN	Benzonitrile	6.68258580
c-C₆H₅CN	Benzonitrile	6.68263940
c-C₆H₅CN	Benzonitrile	6.68266420
c-C₆H₅CN	Benzonitrile	6.68266830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68270240
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68276410
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68284760
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68284760
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68304280
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68318180
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68358080
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68358080
c-C₆H₅CN	Benzonitrile	6.68370000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68513980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68548910
HCCN	Cyanomethylene	6.68676200
HCCN	Cyanomethylene	6.68683000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68683450
HC₁₃CC₅N	2,4,6-Heptatriyenenitrile	6.68798320
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68863850
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68869630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.68973090

HCCCH ₂ CN	Propargyl cyanide	6.69032970
NH ₃ v=0	Ammonia	6.69045000
HC613CN	2,4,6-Heptatriynenitrile	6.69046930
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.69061820
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.69061820
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.69099590
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.69099590
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.69149670
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.69150040
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.69339520
CH ₃ CHOv=0,1&2	Acetaldehyde	6.69344430
CH ₃ OCH ₂ OH	Methoxymethanol	6.69499300
t-H ₁₃ COOH	Formic Acid	6.69562100
t-H ₁₃ COOH	Formic Acid	6.69585970
HDCO	Formaldehyde	6.69596090
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.69666730
CH ₃ OCH ₂ OH	Methoxymethanol	6.69699110
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.69732050
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.69872300
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.69922950
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70006130
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70006130
N ₃ 4S	Nitric sulfide	6.70090730
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70206920
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70206920
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70295020
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70301040
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70375800
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70466080
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70509100
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70545170
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70545170
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70583760
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70583760
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70636680
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70636680
CH ₃ CH ₂ CNv=0	Ethyl Cyanide	6.70665640
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70751840
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70751840
g' ¹ Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.70752300

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.70752300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.70858720
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.70858720
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.70864300
NO	Nitric oxide	6.70907050
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.70908090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71050920
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71050920
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71170230
CH₃CH₂CN	Ethyl cyanide	6.71174690
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71212100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71212100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71220720
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71220720
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.71295500
CCHv₂=1	Ethynyl	6.71325190
HCCN	Cyanomethylene	6.71371520
HCCN	Cyanomethylene	6.71379100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71417110
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.71418200
NS,v=0	Nitric sulfide	6.71430120
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71447950
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71447950
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71479910
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71479910
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71499510
CH₃CH₂C₁₅N	Ethyl Cyanide	6.71526780
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71563010
CH₂CH₁₃CN	Vinyl Cyanide	6.71644420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71652410
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71698170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71698170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71789210
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71789210
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.71878010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72039760
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72039760
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72206320
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72319020
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72319030

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72324510
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72514230
c-H₂COCH₂	Ethylene Oxide	6.72577220
c-H₂COCH₂	Ethylene Oxide	6.72577220
c-H₂COCH₂	Ethylene Oxide	6.72579240
c-H₂COCH₂	Ethylene Oxide	6.72579240
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.72585500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72612950
CH₂CHCNv₁₅=1	Vinyl Cyanide	6.72722680
CH₂CHCNv₁₅=1	Vinyl Cyanide	6.72722840
CH₂CHCNv₁₅=1	Vinyl Cyanide	6.72724510
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72731080
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72731080
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72823740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72823740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.72912840
c-C₆H₅CN	Benzonitrile	6.72941880
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.72942400
CH₃OCHOv=0	Methyl Formate	6.72995170
HCNv₂=1	Hydrogen Cyanide	6.73014080
HCNv₂=1	Hydrogen Cyanide	6.73032100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73040410
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73077830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73077950
HCNv₂=1	Hydrogen Cyanide	6.73181210
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73189570
HCNv₂=1	Hydrogen Cyanide	6.73191050
HCNv₂=1	Hydrogen Cyanide	6.73194730
HCNv₂=1	Hydrogen Cyanide	6.73197780
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73339410
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73339410
HCNv₂=1	Hydrogen Cyanide	6.73343840
HCNv₂=1	Hydrogen Cyanide	6.73364910
CH₂CHCNv=0	Vinyl Cyanide	6.73399820
CH₂CHCNv=0	Vinyl Cyanide	6.73399990
CH₂CHCNv=0	Vinyl Cyanide	6.73400970
H&beta;	Hydrogen Recombination Line	6.73479052
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73511560
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73511560
HeII&alpha;	Helium Recombination Line	6.73554210

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73554630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73554630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73685350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73692110
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73708200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73708200
He&beta;	Helium Recombination Line	6.73753497
C&beta;	Carbon Recombination Line	6.73815087
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.73831800
HCCN	Cyanomethylene	6.73852520
CH₃OCHOv=0	Methyl Formate	6.73952630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73978720
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.73980890
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.74003550
HC₂₁₃CC₄N	2,4,6-Heptatriynenitrile	6.74031850
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.74051950
CH₃CH₂CNv=0	Ethyl Cyanide	6.74155400
HC₅₁₃CCN	2,4,6-Heptatriynenitrile	6.74192210
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.74335340
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.74335340
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.74511280
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.74511280
CH₃OHvt=0-2	Methanol	6.74512300
CH₃COOHv=0	Acetic Acid	6.74595410
CH₃COOHv=0	Acetic Acid	6.74595410
CH₃COOHv=0	Acetic Acid	6.74595420
CH₃COOHv=0	Acetic Acid	6.74595420
NH₃v=0	Ammonia	6.74595840
HCCN	Cyanomethylene	6.74614400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.74634150
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.74670290
E-HNCHCN	Cyanomethanimine	6.74713370
E-HNCHCN	Cyanomethanimine	6.74714460
E-HNCHCN	Cyanomethanimine	6.74717870
E-HNCHCN	Cyanomethanimine	6.74718100
E-HNCHCN	Cyanomethanimine	6.74720400
E-HNCHCN	Cyanomethanimine	6.74724490
E-HNCHCN	Cyanomethanimine	6.74787120
E-HNCHCN	Cyanomethanimine	6.74787530
E-HNCHCN	Cyanomethanimine	6.74792830

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.74858200
CH₃OCHOv=0	Methyl Formate	6.74994460
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75015520
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75050280
H₂NCH₂CN	Aminoacetonitrile	6.75082250
H₂NCH₂CN	Aminoacetonitrile	6.75099390
CH₃13CH₂13CN	Ethyl cyanide	6.75106040
H₂NCH₂CN	Aminoacetonitrile	6.75113950
CH₃O13CHO(TopModel)	Methyl Formate	6.75116100
H₂NCH₂CN	Aminoacetonitrile	6.75154640
H₂NCH₂CN	Aminoacetonitrile	6.75200150
H₂NCH₂CN	Aminoacetonitrile	6.75202080
H₂NCH₂CN	Aminoacetonitrile	6.75204530
H₂NCH₂CN	Aminoacetonitrile	6.75205980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75206690
H₂NCH₂CN	Aminoacetonitrile	6.75210710
H₂NCH₂CN	Aminoacetonitrile	6.75214780
H₂NCH₂CN	Aminoacetonitrile	6.75224060
H₂NCH₂CN	Aminoacetonitrile	6.75225820
H₂13CO	Formaldehyde	6.75231770
H₂NCH₂CN	Aminoacetonitrile	6.75234140
H₂NCH₂CN	Aminoacetonitrile	6.75296910
H₂NCH₂CN	Aminoacetonitrile	6.75305320
H₂NCH₂CN	Aminoacetonitrile	6.75332420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75338710
H₂NCH₂CN	Aminoacetonitrile	6.75362610
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75373470
CH₃CNv8=1	Methyl Cyanide	6.75393540
H&epsilon;	Hydrogen Recombination Line	6.75489208
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75533160
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75585180
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75585180
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75594170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75594170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75602000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75602000
CH₃OCHOv=0	Methyl Formate	6.75609450
CH₂CHCNv15=1	Vinyl Cyanide	6.75635070
CH₂CHCNv15=1	Vinyl Cyanide	6.75637400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.75662490

CH2CHCNv15=1	Vinyl Cyanide	6.75662840
g'Ga-(CH2OH)2	Ethylene Glycol	6.75676640
g'Ga-(CH2OH)2	Ethylene Glycol	6.75707540
g'Ga-(CH2OH)2	Ethylene Glycol	6.75707540
g'Ga-(CH2OH)2	Ethylene Glycol	6.75734190
g'Ga-(CH2OH)2	Ethylene Glycol	6.75734190
g'Ga-(CH2OH)2	Ethylene Glycol	6.75763960
g'Ga-(CH2OH)2	Ethylene Glycol	6.75763960
H13C(O)NH2	Formamide	6.75833590
CH3OHvt=0-2	Methanol	6.75877200
g'Ga-(CH2OH)2	Ethylene Glycol	6.75934450
g'Ga-(CH2OH)2	Ethylene Glycol	6.75934450
KCN,KNC	Potassium cyanide, potassium isocyanide	6.75936000
g'Ga-(CH2OH)2	Ethylene Glycol	6.75961920
g'Ga-(CH2OH)2	Ethylene Glycol	6.75961920
g'Ga-(CH2OH)2	Ethylene Glycol	6.75983910
g'Ga-(CH2OH)2	Ethylene Glycol	6.75983910
g'Ga-(CH2OH)2	Ethylene Glycol	6.75984470
g'Ga-(CH2OH)2	Ethylene Glycol	6.76004020
g'Ga-(CH2OH)2	Ethylene Glycol	6.76005230
g'Ga-(CH2OH)2	Ethylene Glycol	6.76005230
g'Ga-(CH2OH)2	Ethylene Glycol	6.76046130
g'Ga-(CH2OH)2	Ethylene Glycol	6.76046130
g'Ga-(CH2OH)2	Ethylene Glycol	6.76118460
CH3O13CHO(TopModel)	Methyl Formate	6.76136200
g'Ga-(CH2OH)2	Ethylene Glycol	6.76161440
NH3v=0	Ammonia	6.76236990
g'Ga-(CH2OH)2	Ethylene Glycol	6.76349550
g'Ga-(CH2OH)2	Ethylene Glycol	6.76349550
g'Ga-(CH2OH)2	Ethylene Glycol	6.76407540
g'Ga-(CH2OH)2	Ethylene Glycol	6.76407540
HC313CC3N	2,4,6-Heptatriynenitrile	6.76419020
g'Ga-(CH2OH)2	Ethylene Glycol	6.76453340
g'Ga-(CH2OH)2	Ethylene Glycol	6.76477480
HC413CC2N	2,4,6-Heptatriynenitrile	6.76478470
g'Ga-(CH2OH)2	Ethylene Glycol	6.76498420
HC7Nv=0	2,4,6-Heptatriynenitrile	6.76652950
CH2CHCNv15=1	Vinyl Cyanide	6.76728780
CH2CHCNv15=1	Vinyl Cyanide	6.76731340

CH₂CHCN_v=1	Vinyl Cyanide	6.76745980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.76755840
HC₇N_v=0	2,4,6-Heptatriynenitrile	6.76797740
HC₇N_v=0	2,4,6-Heptatriynenitrile	6.76801000
HC₇N_v=0	2,4,6-Heptatriynenitrile	6.76801000
HC₇N_v=0	2,4,6-Heptatriynenitrile	6.76802660
HC₇N_v=0	2,4,6-Heptatriynenitrile	6.76827800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.76827860
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.76827860
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.76872420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.76872460
H&zeta;	Hydrogen Recombination Line	6.76929729
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.76941540
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.76941540
HCCN	Cyanomethylene	6.76945000
HCCN	Cyanomethylene	6.76953200
15NH₃	Ammonia	6.76967850
HC₇N_v=0	2,4,6-Heptatriynenitrile	6.76975840
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77254060
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77266010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77341840
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77436420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77458300
t-CH₂CHCHO	Propenal	6.77461030
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77533460
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77534190
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77607830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77607830
HCCCH₂CN	Propargyl cyanide	6.77752650
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77770600
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77770600
CH₃CH₂CN_v=0	Ethyl Cyanide	6.77791260
KCN,KNC	Potassium cyanide, potassium isocyanide	6.77868420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77957320
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.77957320
CH₂CH₁₃CN	Vinyl Cyanide	6.78045000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.78079290
HCCN	Cyanomethylene	6.78132500
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.78132700

HCCN	Cyanomethylene	6.78140600
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78188580
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78190010
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78190010
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78239910
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78332650
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78345290
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78353530
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78407160
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78407160
NO	Nitric oxide	6.78479390
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78489370
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78489370
CH ₃ OH _{vt} =0-2	Methanol	6.78530300
CH ₃ OH _{vt} =0-2	Methanol	6.78540500
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78870420
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.78938160
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79003250
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79010110
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79108490
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79199140
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79340410
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79340410
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79394770
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79568380
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79678070
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79689690
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79689690
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79696630
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	6.79696630
E-HNCHCN	Cyanomethanimine	6.79752030
E-HNCHCN	Cyanomethanimine	6.79752230
E-HNCHCN	Cyanomethanimine	6.79753170
E-HNCHCN	Cyanomethanimine	6.79753180
E-HNCHCN	Cyanomethanimine	6.79755150
E-HNCHCN	Cyanomethanimine	6.79756200
CCH _{v2} =1	Ethynyl	6.79781170
E-HNCHCN	Cyanomethanimine	6.79785640
E-HNCHCN	Cyanomethanimine	6.79785740
E-HNCHCN	Cyanomethanimine	6.79788570

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.79804350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.79836350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.79874870
CCHv₂=1	Ethynyl	6.79917550
H&delta;	Hydrogen Recombination Line	6.79939925
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.79949200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.79982270
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.79983300
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80053770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80053770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80077520
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80077520
H₃CCHCH₂O	Propylene Oxide	6.80113450
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80154730
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80162030
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80162030
He&delta;	Helium Recombination Line	6.80217003
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80233820
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80233820
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80289080
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80289080
H₂CCO	Ketene	6.80347120
NS,v=0	Nitric sulfide	6.80359950
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80402130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80402130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80408600
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80408600
CH₂CH₁₃CN	Vinyl Cyanide	6.80438570
CH₃NH₂	Methylamine	6.80490300
CH₃CH₂CNv=0	Ethyl Cyanide	6.80496330
CH₂CHCNv=0	Vinyl Cyanide	6.80511030
CH₂CHCNv=0	Vinyl Cyanide	6.80511110
CH₂CHCNv=0	Vinyl Cyanide	6.80511760
CH₃NH₂	Methylamine	6.80519700
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80523750
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.80523760
CH₃NH₂	Methylamine	6.80532800
CH₃NH₂	Methylamine	6.80536300
CH₂CH₁₃CN	Vinyl Cyanide	6.80559450
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.80567800

CH3O13CHO(TopModel)	Methyl Formate	6.80569900
CH3O13CHO(TopModel)	Methyl Formate	6.80667800
g'Ga-(CH2OH)2	Ethylene Glycol	6.80690400
g'Ga-(CH2OH)2	Ethylene Glycol	6.80733730
g'Ga-(CH2OH)2	Ethylene Glycol	6.80774210
g'Ga-(CH2OH)2	Ethylene Glycol	6.80774210
g'Ga-(CH2OH)2	Ethylene Glycol	6.80777410
g'Ga-(CH2OH)2	Ethylene Glycol	6.80800030
13CH3CH213CN	Ethyl cyanide	6.80800780
g'Ga-(CH2OH)2	Ethylene Glycol	6.80949080
g'Ga-(CH2OH)2	Ethylene Glycol	6.80949310
NO	Nitric oxide	6.81042330
g'Ga-(CH2OH)2	Ethylene Glycol	6.81176200
g'Ga-(CH2OH)2	Ethylene Glycol	6.81176200
g'Ga-(CH2OH)2	Ethylene Glycol	6.81242500
CH3O13CHO(TopModel)	Methyl Formate	6.81259300
g'Ga-(CH2OH)2	Ethylene Glycol	6.81278610
g'Ga-(CH2OH)2	Ethylene Glycol	6.81278610
13CH3CH2CN	Ethyl Cyanide	6.81312950
g'Ga-(CH2OH)2	Ethylene Glycol	6.81328200
g'Ga-(CH2OH)2	Ethylene Glycol	6.81328200
g'Ga-(CH2OH)2	Ethylene Glycol	6.81367720
g'Ga-(CH2OH)2	Ethylene Glycol	6.81511210
g'Ga-(CH2OH)2	Ethylene Glycol	6.81515460
g'Ga-(CH2OH)2	Ethylene Glycol	6.81612840
g'Ga-(CH2OH)2	Ethylene Glycol	6.81612840
CH3OHvt=0-2	Methanol	6.81713500
CCHv2=1	Ethynyl	6.81730670
g'Ga-(CH2OH)2	Ethylene Glycol	6.81741270
g'Ga-(CH2OH)2	Ethylene Glycol	6.81763200
g'Ga-(CH2OH)2	Ethylene Glycol	6.81763200
g'Ga-(CH2OH)2	Ethylene Glycol	6.81763510
g'Ga-(CH2OH)2	Ethylene Glycol	6.81776700
CH3O13CHO(TopModel)	Methyl Formate	6.81844500
CH3O13CHO(TopModel)	Methyl Formate	6.81860700
g'Ga-(CH2OH)2	Ethylene Glycol	6.81915880
g'Ga-(CH2OH)2	Ethylene Glycol	6.81915880
H&gamma;	Hydrogen Recombination Line	6.81932602
CCHv2=1	Ethynyl	6.81959340
g'Ga-(CH2OH)2	Ethylene Glycol	6.82096540

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82153450
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82185790
He&gamma;	Helium Recombination Line	6.82210492
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82257610
C&gamma;	Carbon Recombination Line	6.82272854
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82287800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82551790
g-CH₃CH₂OH	gauche-Ethanol	6.82678520
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82686740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82686740
CH₃CH₂C¹⁵N	Ethyl Cyanide	6.82709580
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82760000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82760000
CH₃O¹³CHO(TopModel)	Methyl Formate	6.82785900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82796050
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82803670
CH₃O¹³CHO(TopModel)	Methyl Formate	6.82852500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82954340
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.82954340
H₂CCCHCN	Cyanoallene	6.82966800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83056380
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83106910
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83106910
i-C₃H₇CN	iso-propyl cyanide	6.83123520
CH₃COOH_{v=0}	Acetic Acid	6.83180250
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83216380
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83430720
¹³CH₃¹³CH₂CN	Ethyl cyanide	6.83448310
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83457420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83586760
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83592050
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83592050
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83609170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83617360
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83641490
¹³CH₃CH₂CN	Ethyl Cyanide	6.83680960
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83739800
SO_{2v=0}	Sulfur dioxide	6.83740500
CH₃O¹³CHO(TopModel)	Methyl Formate	6.83761900
t-HCOOH	Formic Acid	6.83787290

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83875880
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83880230
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83963340
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83963340
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83971550
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83971550
CH₃CH₂13CN	Ethyl Cyanide	6.83978140
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83994640
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.83994640
CH₃OCHO_{v=0}	Methyl Formate	6.84006490
CH₃OCHO_{v=0}	Methyl Formate	6.84016000
t-H₁₃COOH	Formic Acid	6.84021880
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84022630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84022630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84036980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84036980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84039360
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84090530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84186660
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84215700
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84215760
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84243170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84243170
CNCHO	Cyanoformaldehyde	6.84266510
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84434440
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84434440
H₃CCHCH₂O	Propylene Oxide	6.84481910
13CH₂CHCN	Vinyl Cyanide	6.84533930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84543690
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84544990
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84581900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84581900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84588260
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84632810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84632810
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.84765400
SO_{2v=0}	Sulfur dioxide	6.84844410
13CH₃CH₂CN	Ethyl Cyanide	6.84908610
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.84938460
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84949460

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.84999450
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85003560
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85006020
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85023580
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85027240
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85027240
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.85044520
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85053430
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85053430
cis-CH₂OHCHO_{v=0}	Glycolaldehyde	6.85118970
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85248950
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85341140
CH₃OH_{vt=0-2}	Methanol	6.85368200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85370760
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85370760
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85405880
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85424840
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85503320
15NH₃	Ammonia	6.85527980
CH₂CHCN_{v=0}	Vinyl Cyanide	6.85546190
CH₂CHCN_{v=0}	Vinyl Cyanide	6.85546360
CH₂CHCN_{v=0}	Vinyl Cyanide	6.85546710
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85638870
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85658220
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85658220
CH₂CHCN_{v=0}	Vinyl Cyanide	6.85661290
CH₂CHCN_{v=0}	Vinyl Cyanide	6.85685500
CH₃NH₂	Methylamine	6.85685900
CH₃NH₂	Methylamine	6.85703500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85705470
CH₃NH₂	Methylamine	6.85711300
CH₃NH₂	Methylamine	6.85713400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85740140
HCCCHO	2-Propynal	6.85785570
CH₂CHCN_{v=0}	Vinyl Cyanide	6.85794380
CH₂CHCN_{v=0}	Vinyl Cyanide	6.85796940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85810160
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85810160
CH₂CHCN_{v=0}	Vinyl Cyanide	6.85811580
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85817730

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85821220
CH₃OCHOv=0	Methyl Formate	6.85834120
CH₂CHCNv=0	Vinyl Cyanide	6.85923020
CH₂CHCNv=0	Vinyl Cyanide	6.85944670
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.85997000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86054530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86054530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86179490
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86180860
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86322930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86322930
H₃CCHCH₂O	Propylene Oxide	6.86341960
H₃CCHCH₂O	Propylene Oxide	6.86341970
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86396950
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86396950
CH₃CHOv=0,1&2	Acetaldehyde	6.86532600
HeII&alpha;	Helium Recombination Line	6.86548640
CH₃OCHOv=0	Methyl Formate	6.86608470
CH₃CH₂C¹⁵N	Ethyl Cyanide	6.86701730
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86710600
NH₃v=0	Ammonia	6.86760770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86811620
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86817350
i-C₃H₇CN	iso-propyl cyanide	6.86913860
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86944230
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.86944230
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87090680
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87090680
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87119430
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87125320
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87125320
CH₃O¹³CHO(TopModel)	Methyl Formate	6.87171800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87270440
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87270440
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87323890
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87323900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87360420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87360420
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87403920
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87404670

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87420990
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87421350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87484610
CH₃CH₂CN_{v=0}	Ethyl Cyanide	6.87491580
CH₃13CH₂13CN	Ethyl cyanide	6.87513000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87530090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87530090
H&epsilon;	Hydrogen Recombination Line	6.87590799
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87637550
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87650010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87657300
13CH₃13CH₂CN	Ethyl cyanide	6.87661580
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87700780
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87816110
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87816110
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87832730
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87832730
NH₂CN	Cyanamide	6.87872860
CH₃COOH_{v=0}	Acetic Acid	6.87890060
13CH₂CHCN	Vinyl Cyanide	6.87899630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87919900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.87957590
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.88090750
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.88121980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.88121980
H&alpha;	Hydrogen Recombination Line	6.88148605
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.88268500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.88268500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.88279650
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.88279650
CH₃O13CHO(TopModel)	Methyl Formate	6.88331500
H&zeta;	Hydrogen Recombination Line	6.88342704
He&alpha;	Helium Recombination Line	6.88429028
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.88450630
C&alpha;	Carbon Recombination Line	6.88491959
H₂CCCHCN	Cyanoallene	6.88529310
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.88579670
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.88579670
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.88604440
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.88641690

HC3Nv7=1	Cyanoacetylene	6.88671130
CH3NH2	Methylamine	6.88672600
g'Ga-(CH2OH)2	Ethylene Glycol	6.88677060
CH3NH2	Methylamine	6.88702400
CH3NH2	Methylamine	6.88715600
CH3NH2	Methylamine	6.88719200
g'Ga-(CH2OH)2	Ethylene Glycol	6.88818570
g'Ga-(CH2OH)2	Ethylene Glycol	6.88818570
g'Ga-(CH2OH)2	Ethylene Glycol	6.88837780
g'Ga-(CH2OH)2	Ethylene Glycol	6.88837780
g'Ga-(CH2OH)2	Ethylene Glycol	6.88851830
NH2CN	Cyanamide	6.88858250
13CH313CH2CN	Ethyl cyanide	6.88942140
g'Ga-(CH2OH)2	Ethylene Glycol	6.88945250
CH3NH2	Methylamine	6.88947000
CH3NH2	Methylamine	6.88948300
CH3NH2	Methylamine	6.88957300
g'Ga-(CH2OH)2	Ethylene Glycol	6.88964060
CH3NH2	Methylamine	6.88976600
CH3CH2CN,v20=1-A	Ethyl Cyanide	6.89046250
g'Ga-(CH2OH)2	Ethylene Glycol	6.89046260
CH3O13CHO(TopModel)	Methyl Formate	6.89059600
NO	Nitric oxide	6.89074150
g'Ga-(CH2OH)2	Ethylene Glycol	6.89173230
g'Ga-(CH2OH)2	Ethylene Glycol	6.89298730
g'Ga-(CH2OH)2	Ethylene Glycol	6.89298730
g'Ga-(CH2OH)2	Ethylene Glycol	6.89425690
g'Ga-(CH2OH)2	Ethylene Glycol	6.89425690
CH3NH2	Methylamine	6.89509300
CH3NH2	Methylamine	6.89517300
CH3NH2	Methylamine	6.89521000
CH3NH2	Methylamine	6.89521600
g'Ga-(CH2OH)2	Ethylene Glycol	6.89541180
g'Ga-(CH2OH)2	Ethylene Glycol	6.89541180
g'Ga-(CH2OH)2	Ethylene Glycol	6.89561350
g-CH3CH2OH	gauche-Ethanol	6.89572530
g-CH3CH2OH	gauche-Ethanol	6.89572540
g'Ga-(CH2OH)2	Ethylene Glycol	6.89592620
g'Ga-(CH2OH)2	Ethylene Glycol	6.89614920
g'Ga-(CH2OH)2	Ethylene Glycol	6.89636730

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.89678010
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.89720750
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.89720750
13CH₃CH₂13CN	Ethyl cyanide	6.89888110
H&beta;	Hydrogen Recombination Line	6.89906086
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.89999290
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90024320
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90024320
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90133790
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90133880
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90135490
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90137410
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90174650
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90174650
He&beta;	Helium Recombination Line	6.90187225
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90193620
C&beta;	Carbon Recombination Line	6.90250317
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90253940
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90264800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90264800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90293350
CH₃COOHv=0	Acetic Acid	6.90300850
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90379470
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90379470
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90529000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90529000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90553990
H₃CCHCH₂O	Propylene Oxide	6.90594520
H₃CCHCH₂O	Propylene Oxide	6.90594520
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90614130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90671240
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90676770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90683930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90709810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90709810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90788870
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90794510
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90870100
13CH₃CH₂13CN	Ethyl cyanide	6.90886460
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90901840

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90926490
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.90926490
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91014190
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91014190
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91096300
H₁₃CN,v₂=3	Hydrogen cyanide	6.91105560
CH₂CHCNv₁₅=1	Vinyl Cyanide	6.91164020
CH₂CHCNv₁₅=1	Vinyl Cyanide	6.91164200
CH₂CHCNv₁₅=1	Vinyl Cyanide	6.91164850
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91173980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91179530
OS17O	Sulfur Dioxide	6.91217970
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91222160
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91341600
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91353570
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91353570
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.91361700
N₃₄S	Nitric sulfide	6.91370060
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91370140
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91372470
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91457580
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91457580
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91459680
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91459680
CH₃CHOv=0,1&2	Acetaldehyde	6.91480140
CH₃COOHv=0	Acetic Acid	6.91490060
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91492740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91652970
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91652970
H₂CCCHCN	Cyanoallene	6.91664370
HCCCH₂CN	Propargyl cyanide	6.91674140
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91770100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91770100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91774830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91782170
c-C₆H₅CN	Benzonitrile	6.91809830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91911830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91911830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.91964370
CH₃COOHv=0	Acetic Acid	6.92024460

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92028470
HCCCH₂CN	Propargyl cyanide	6.92101450
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92122840
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92122840
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92133340
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92133340
CH₂CHCNv₁₁=2	Vinyl Cyanide	6.92186100
CH₃OHvt=0-2	Methanol	6.92253600
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92299710
c-C₆H₅CN	Benzonitrile	6.92307110
c-C₆H₅CN	Benzonitrile	6.92315180
c-C₆H₅CN	Benzonitrile	6.92318410
c-C₆H₅CN	Benzonitrile	6.92320310
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92353630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92363540
CH₃CH₂CNv=0	Ethyl Cyanide	6.92405750
NHD₂	Ammonia	6.92406260
NHD₂	Ammonia	6.92406350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92417590
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92449040
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92449470
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92464550
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92464550
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92503250
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92509680
c-C₆H₅CN	Benzonitrile	6.92572830
CH₃CH₂C₁₅N	Ethyl Cyanide	6.92651640
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92673100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92673120
t-DCOOH	Formic Acid	6.92677430
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92698640
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92790400
CH₃CHOv=0,1&2	Acetaldehyde	6.92830810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92922960
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92922960
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92926620
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.92930830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93030180
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93030180
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93066180

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93081390
H&delta;	Hydrogen Recombination Line	6.93102584
C₆H	1,3,5-Hexatriynyl	6.93114000
C₆H	1,3,5-Hexatriynyl	6.93130850
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93234040
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93323140
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93353300
He&delta;	Helium Recombination Line	6.93385026
t-DCOOH	Formic Acid	6.93482530
HCCCH₂CN	Propargyl cyanide	6.93493010
CH₃CHO_{v=0,1&2}	Acetaldehyde	6.93496620
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93519980
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93520770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93520770
i-C₃H₇CN	iso-propyl cyanide	6.93531880
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93543890
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.93667100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93697770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93697770
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93713610
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93713610
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93792870
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93792870
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93858830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93858830
CH₂CHCN_{v=0}	Vinyl Cyanide	6.93899680
CH₂CHCN_{v=0}	Vinyl Cyanide	6.93900840
CH₂CHCN_{v=0}	Vinyl Cyanide	6.93900850
c-HCCCD	Cyclopropenylidene	6.93918750
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93965870
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.93965870
CH₃OCH₂OH	Methoxymethanol	6.93986680
NH₂CN	Cyanamide	6.93988750
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.94047810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.94047810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.94061560
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.94108740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.94112330
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.94127220
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.94129620

CH3OCH2OH	Methoxymethanol	6.94138250
g'Ga-(CH2OH)2	Ethylene Glycol	6.94145400
g'Ga-(CH2OH)2	Ethylene Glycol	6.94145400
g'Ga-(CH2OH)2	Ethylene Glycol	6.94154970
g'Ga-(CH2OH)2	Ethylene Glycol	6.94154970
g'Ga-(CH2OH)2	Ethylene Glycol	6.94247460
g'Ga-(CH2OH)2	Ethylene Glycol	6.94247460
g'Ga-(CH2OH)2	Ethylene Glycol	6.94266450
g'Ga-(CH2OH)2	Ethylene Glycol	6.94268440
g'Ga-(CH2OH)2	Ethylene Glycol	6.94315130
g'Ga-(CH2OH)2	Ethylene Glycol	6.94369780
g'Ga-(CH2OH)2	Ethylene Glycol	6.94413520
g'Ga-(CH2OH)2	Ethylene Glycol	6.94425800
g'Ga-(CH2OH)2	Ethylene Glycol	6.94526110
g'Ga-(CH2OH)2	Ethylene Glycol	6.94582360
g'Ga-(CH2OH)2	Ethylene Glycol	6.94582440
H2CCNH	Ketenimine	6.94715180
H2CCNH	Ketenimine	6.94715180
CH3CH2CNv=0	Ethyl Cyanide	6.94744480
H2CCNH	Ketenimine	6.94825350
H2CCNH	Ketenimine	6.94825350
H2CCNH	Ketenimine	6.94839220
g'Ga-(CH2OH)2	Ethylene Glycol	6.94904740
g'Ga-(CH2OH)2	Ethylene Glycol	6.94904740
g'Ga-(CH2OH)2	Ethylene Glycol	6.94931470
g'Ga-(CH2OH)2	Ethylene Glycol	6.94931470
g'Ga-(CH2OH)2	Ethylene Glycol	6.94945850
CNCHO	Cyanoformaldehyde	6.94949000
g'Ga-(CH2OH)2	Ethylene Glycol	6.95030510
g'Ga-(CH2OH)2	Ethylene Glycol	6.95030510
CH3O13CHO(TopModel)	Methyl Formate	6.95087100
g'Ga-(CH2OH)2	Ethylene Glycol	6.95102090
g'Ga-(CH2OH)2	Ethylene Glycol	6.95102090
g'Ga-(CH2OH)2	Ethylene Glycol	6.95197000
g'Ga-(CH2OH)2	Ethylene Glycol	6.95220170
CH213CHCN	Vinyl Cyanide	6.95263080
g'Ga-(CH2OH)2	Ethylene Glycol	6.95312460
g'Ga-(CH2OH)2	Ethylene Glycol	6.95370260
g'Ga-(CH2OH)2	Ethylene Glycol	6.95377070
g'Ga-(CH2OH)2	Ethylene Glycol	6.95378420

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95404670
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95404670
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95412750
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.95418000
HCCCH₂CN	Propargyl cyanide	6.95502490
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95511150
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95564770
CH₃OHvt=0-2	Methanol	6.95574800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95581990
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95583060
13CH₃13CH₂CN	Ethyl cyanide	6.95588780
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95589880
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95612360
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95612360
NO	Nitric oxide	6.95625870
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.95678700
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95724000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95799630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95799630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95819490
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95819490
13CH₃CH₂CN	Ethyl Cyanide	6.95982410
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95989790
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.95990070
13CH₃CH₂CN	Ethyl Cyanide	6.96006480
13CH₃CH₂CN	Ethyl Cyanide	6.96092270
13CH₃CH₂CN	Ethyl Cyanide	6.96097740
13CH₃CH₂CN	Ethyl Cyanide	6.96105540
13CH₃CH₂CN	Ethyl Cyanide	6.96124610
HCCCH₂CN	Propargyl cyanide	6.96128560
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96142030
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96142030
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.96161200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96185230
13CH₃CH₂CN	Ethyl Cyanide	6.96215880
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96227060
13CH₃CH₂CN	Ethyl Cyanide	6.96234480
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96291920
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96305170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96309830

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96309830
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96328630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96328630
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96345600
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96351070
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96360620
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96384860
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96388000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96388000
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.96438900
H&gamma;	Hydrogen Recombination Line	6.96495143
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96527110
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96527110
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96529180
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96572290
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96597440
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96631430
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96631430
CH₃COOHv=0	Acetic Acid	6.96632960
CH₃COOHv=0	Acetic Acid	6.96632960
H₂CCCHCN	Cyanoallene	6.96660350
C₆H	1,3,5-Hexatriynyl	6.96668350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96676500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96677260
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96713520
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96719800
He&gamma;	Helium Recombination Line	6.96778967
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96806330
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96806330
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96831050
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96831050
C&gamma;	Carbon Recombination Line	6.96842662
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96892390
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.96893110
t-CH₂CHCHO	Propenal	6.96914070
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.96947200
HC₉N	Cyanotetraacetylene	6.97089580
CH₂₁₃CHCN	Vinyl Cyanide	6.97177850
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97180130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97180130

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97183070
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97183070
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97198280
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97198280
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97223140
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97223140
HC9N	Cyanotetraacetylene	6.97242690
HC9N	Cyanotetraacetylene	6.97243360
HC9N	Cyanotetraacetylene	6.97243360
HC9N	Cyanotetraacetylene	6.97243840
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97255740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97255740
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97279370
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97283480
t-HCOOD	Formic Acid	6.97325190
HC9N	Cyanotetraacetylene	6.97410390
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97434500
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97454160
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97491800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97491800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97516930
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97516950
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97585130
NHD₂	Ammonia	6.97621120
CH₃13CH₂CN	Ethyl Cyanide	6.97685860
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97745560
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97841540
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97990650
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97993550
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.97993550
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98000090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98000090
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98004270
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98004270
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98025780
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98026190
CH₃O13CHO(TopModel)	Methyl Formate	6.98056800
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98167790
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98167790
CH₃COOHv=0	Acetic Acid	6.98185660

g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98252100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98275530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98275530
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98303200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98303200
c-C₆H₅CN	Benzonitrile	6.98354320
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.98365100
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.98538400
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98564990
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98565480
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98576370
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98736880
i-C₃H₇CN	iso-propyl cyanide	6.98788390
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98803810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98803810
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98804070
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98913470
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98945990
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98945990
H₂C₁₈O	Formaldehyde	6.98981210
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98982200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.98982200
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99013340
NO	Nitric oxide	6.99124700
34SO₂v=0	Sulfur Dioxide	6.99132900
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99162350
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99169390
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99169390
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99252750
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99252750
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99292680
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99292680
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99308000
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99308000
NH₃v=0	Ammonia	6.99371990
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.99392100
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99425130
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99425360
C₆H	1,3,5-Hexatriynyl	6.99459740
CH₃O₁₃CHO(TopModel)	Methyl Formate	6.99483200

t-DCOOH	Formic Acid	6.99485170
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99561480
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99564030
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99608690
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99608690
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99701240
D₂CO	Formaldehyde	6.99724180
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99743950
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99750510
g'Ga-(CH₂OH)₂	Ethylene Glycol	6.99767860
N₃₄S	Nitric sulfide	6.99813500
HeII&alpha;	Helium Recombination Line	6.99879500
H&epsilon;	Hydrogen Recombination Line	6.99983219
C₈H-	1,3,5,7-Octatetraynyl anion	7.00007790
H&zeta;	Hydrogen Recombination Line	7.00013716
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00024430
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00024430
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00094580
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00119100
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00119100
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00124290
H₂CCCHCN	Cyanoallene	7.00143120
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00199450
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00199450
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00219840
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00267600
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00267600
i-C₃H₇CN	iso-propyl cyanide	7.00299540
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00316940
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00316940
c-C₆H₅CN	Benzonitrile	7.00345630
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00359320
c-C₆H₅CN	Benzonitrile	7.00404400
c-C₆H₅CN	Benzonitrile	7.00412200
c-C₆H₅CN	Benzonitrile	7.00415600
c-C₆H₅CN	Benzonitrile	7.00416720
t-H₁₃COOH	Formic Acid	7.00428840
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00471810
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00540350
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00540350

g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00555970
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00555970
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00587150
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00614770
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00614770
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00668650
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00756140
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00756140
CH₃O₁₃CHO(TopModel)	Methyl Formate	7.00787600
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00874770
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00874890
c-C₆H₅CN	Benzonitrile	7.00912520
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00972320
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00976080
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.00979520
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01000350
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01111150
CH₃O₁₃CHO(TopModel)	Methyl Formate	7.01149600
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01161350
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01240730
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01240730
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01366760
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01366760
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01397620
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01397620
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01449700
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01449700
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01650980
¹³CH₃¹³CH₂CN	Ethyl cyanide	7.01657300
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01660410
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01698310
CH₃NH₂	Methylamine	7.01804600
CH₃NH₂	Methylamine	7.01873200
CH₃NH₂	Methylamine	7.01904800
CH₃NH₂	Methylamine	7.01910400
CH₃O₁₃CHO(TopModel)	Methyl Formate	7.01953500
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01958980
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01958980
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.01987420
NS,v=0	Nitric sulfide	7.02044270

CH ₃ COOH _v =0	Acetic Acid	7.02046950
CH ₃ COOH _v =0	Acetic Acid	7.02050140
t-DCOOH	Formic Acid	7.02062280
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02076050
CH ₂ CHCN _v 15=1	Vinyl Cyanide	7.02077450
CH ₂ CHCN _v 15=1	Vinyl Cyanide	7.02077630
CH ₂ CHCN _v 15=1	Vinyl Cyanide	7.02078100
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02080920
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02080920
HCCCH ₂ CN	Propargyl cyanide	7.02082190
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02086100
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02174780
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02250750
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02252890
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02281340
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02346010
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02346010
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02374900
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02374960
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02391160
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02391160
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02464680
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02468000
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02563670
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02563670
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02596130
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02596130
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02664380
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02672490
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02672490
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02758170
CH ₂ CHCN _v 11=1	Vinyl Cyanide	7.02770470
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02773310
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02785540
CH ₃ COOH _v =0	Acetic Acid	7.02785830
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02791660
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02791660
CH ₂ CHCN _v 11=1	Vinyl Cyanide	7.02794680
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02821600
g'Ga-(CH ₂ OH) ₂	Ethylene Glycol	7.02831220

13CH2CHCN	Vinyl Cyanide	7.02855920
CH3CHO_{v=0,1&2}	Acetaldehyde	7.02891550
g'Ga-(CH2OH)₂	Ethylene Glycol	7.02898730
CH2CHCN_{v11=1}	Vinyl Cyanide	7.02903560
g'Ga-(CH2OH)₂	Ethylene Glycol	7.02904540
CH2CHCN_{v11=1}	Vinyl Cyanide	7.02906120
CH2CHCN_{v11=1}	Vinyl Cyanide	7.02920760
CH2CHCN_{v11=1}	Vinyl Cyanide	7.03032200
CH2CHCN_{v11=1}	Vinyl Cyanide	7.03053850
CH3O13CHO(TopModel)	Methyl Formate	7.03074500
CH3O13CHO(TopModel)	Methyl Formate	7.03098700
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03106730
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03194910
HCCCH2CN	Propargyl cyanide	7.03338670
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03362580
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03502120
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03502120
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03503130
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03503130
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03527040
t-CH3CH2OH	trans-Ethanol	7.03552350
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03579710
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03580920
CH3O13CHO(TopModel)	Methyl Formate	7.03587600
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03692320
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03692320
CH3COOH_{v=0}	Acetic Acid	7.03867380
cis-CH2OHCHO_{v=0}	Glycolaldehyde	7.03897120
CH3COOH_{v=0}	Acetic Acid	7.03905560
CH3COOH_{v=0}	Acetic Acid	7.03905560
CH3COOH_{v=0}	Acetic Acid	7.03905570
CH3COOH_{v=0}	Acetic Acid	7.03905570
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03911910
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03925720
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03925750
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03927680
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03999450
g'Ga-(CH2OH)₂	Ethylene Glycol	7.03999450
g'Ga-(CH2OH)₂	Ethylene Glycol	7.04079210
g'Ga-(CH2OH)₂	Ethylene Glycol	7.04079210

g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04091990
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04091990
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04107990
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04110640
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04117920
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04117920
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04190570
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04190570
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04239910
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04249420
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04249420
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04313160
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04313160
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04336480
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04349790
HCCCH₂CN	Propargyl cyanide	7.04435370
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04449790
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04959590
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.04960270
CH₃CHO_{v=0,1&2}	Acetaldehyde	7.05049260
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05114210
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05123250
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05126350
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05189990
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05189990
H₂CS	Thioformaldehyde	7.05207000
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05261880
CH₃O₁₃CHO(TopModel)	Methyl Formate	7.05266100
H₃CCHCH₂O	Propylene Oxide	7.05299750
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05320680
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05376080
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05419780
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05419780
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05527410
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05527420
CH₃₁₃CH₂₁₃CN	Ethyl cyanide	7.05599900
g-CH₃CH₂OH	gauche-Ethanol	7.05668540
g-CH₃CH₂OH	gauche-Ethanol	7.05669710
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05672890
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05672890

g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05704470
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05704470
HCCCH₂CN	Propargyl cyanide	7.05725650
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05729810
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05729810
HCCCH₂CN	Propargyl cyanide	7.05743070
HCCCH₂CN	Propargyl cyanide	7.05775580
HCCCH₂CN	Propargyl cyanide	7.05786430
HCCCH₂CN	Propargyl cyanide	7.05804790
CH₂CHCNv=0	Vinyl Cyanide	7.05831310
CH₂CHCNv=0	Vinyl Cyanide	7.05831490
CH₂CHCNv=0	Vinyl Cyanide	7.05831970
HCCCH₂CN	Propargyl cyanide	7.05850680
HCCCH₂CN	Propargyl cyanide	7.05894040
HCCCH₂CN	Propargyl cyanide	7.05900610
CH₃O₁₃CHO(TopModel)	Methyl Formate	7.05942400
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05957500
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.05957500
HCCCH₂CN	Propargyl cyanide	7.06065940
HNO	Nitrosyl hydride	7.06069140
HNO	Nitrosyl hydride	7.06072250
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06085990
HNO	Nitrosyl hydride	7.06103240
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06131170
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06138930
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06138930
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06170600
NO	Nitric oxide	7.06183870
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06247120
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06366360
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06371520
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06382660
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06382660
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06390710
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06391080
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06443740
CH₃O₁₃CHO(TopModel)	Methyl Formate	7.06449400
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06450070
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06450070
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.06475410

H213CO	Formaldehyde	7.06579130
H&delta;	Hydrogen Recombination Line	7.06607214
HCCCH2CN	Propargyl cyanide	7.06751350
HCCCH2CN	Propargyl cyanide	7.06753790
CH3NH2	Methylamine	7.06757400
CH3NH2	Methylamine	7.06758700
CH3NH2	Methylamine	7.06767700
CH3NH2	Methylamine	7.06787000
H2CCO	Ketene	7.06834470
H&beta;	Hydrogen Recombination Line	7.06871740
g'Ga-(CH2OH)2	Ethylene Glycol	7.06887590
g'Ga-(CH2OH)2	Ethylene Glycol	7.06887590
He&delta;	Helium Recombination Line	7.06895159
g'Ga-(CH2OH)2	Ethylene Glycol	7.07021240
g'Ga-(CH2OH)2	Ethylene Glycol	7.07021240
CH318OHvt=0,1&2	Methanol	7.07053800
He&beta;	Helium Recombination Line	7.07159793
g'Ga-(CH2OH)2	Ethylene Glycol	7.07180170
g'Ga-(CH2OH)2	Ethylene Glycol	7.07180170
g'Ga-(CH2OH)2	Ethylene Glycol	7.07204940
g'Ga-(CH2OH)2	Ethylene Glycol	7.07204940
g'Ga-(CH2OH)2	Ethylene Glycol	7.07205830
C&beta;	Carbon Recombination Line	7.07224436
a-H2CCHOH	Vinyl Alcohol	7.07247380
g'Ga-(CH2OH)2	Ethylene Glycol	7.07253210
g'Ga-(CH2OH)2	Ethylene Glycol	7.07296270
g'Ga-(CH2OH)2	Ethylene Glycol	7.07433670
g'Ga-(CH2OH)2	Ethylene Glycol	7.07433670
g'Ga-(CH2OH)2	Ethylene Glycol	7.07488420
g'Ga-(CH2OH)2	Ethylene Glycol	7.07511210
g'Ga-(CH2OH)2	Ethylene Glycol	7.07511210
CH313CH213CN	Ethyl cyanide	7.07566280
g'Ga-(CH2OH)2	Ethylene Glycol	7.07600280
g'Ga-(CH2OH)2	Ethylene Glycol	7.07600280
g'Ga-(CH2OH)2	Ethylene Glycol	7.07613070
g'Ga-(CH2OH)2	Ethylene Glycol	7.07613890
g'Ga-(CH2OH)2	Ethylene Glycol	7.07631110
CH3O13CHO(TopModel)	Methyl Formate	7.07651700
g'Ga-(CH2OH)2	Ethylene Glycol	7.07669220
g'Ga-(CH2OH)2	Ethylene Glycol	7.07672160

g'Ga-(CH₂OH)₂	Ethylene Glycol	7.07703770
13CH₃CH₂CN	Ethyl Cyanide	7.07719500
CH₂CHCNv11=2	Vinyl Cyanide	7.07730900
15NH₃	Ammonia	7.07749960
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.07873350
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.07873560
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.07982720
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.07982720
CH₃O13CHO(TopModel)	Methyl Formate	7.08114800
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08203420
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08203420
HCCCH₂CN	Propargyl cyanide	7.08246740
CH₃13CH₂CN	Ethyl Cyanide	7.08331150
13CH₃CH₂CN	Ethyl Cyanide	7.08359180
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08379970
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08404120
HDCCO	Ketene	7.08589080
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08601670
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08601670
N₃4S	Nitric sulfide	7.08737970
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08739630
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08739630
CH₃O13CHO(TopModel)	Methyl Formate	7.08745600
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08831100
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08841330
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08861550
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08861550
CH₃CHOv=0,1&2	Acetaldehyde	7.08867920
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08884190
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08884190
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08937960
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08937960
CH₃CH₂13CN	Ethyl Cyanide	7.08989740
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08998690
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.08998690
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.09023440
NH₂D	Ammonia	7.09024240
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.09025100
NH₂CN	Cyanamide	7.09124580
13CH₃CH₂13CN	Ethyl cyanide	7.09199550

g'Ga-(CH₂OH)₂	Ethylene Glycol	7.09307190
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.09307190
CH₂CHCN_v15=1	Vinyl Cyanide	7.09322560
CH₂CHCN_v15=1	Vinyl Cyanide	7.09322980
CH₂CHCN_v15=1	Vinyl Cyanide	7.09325430
CH₃O₁₃CHO(TopModel)	Methyl Formate	7.09352000
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.09407810
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.09407930
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.09424910
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.09437920
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.09437920
H&alpha;	Hydrogen Recombination Line	7.09541072
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.09554320
13CH₃13CH₂CN	Ethyl cyanide	7.09557570
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.09567820
CH₃CH₂13CN	Ethyl Cyanide	7.09672110
He&alpha;	Helium Recombination Line	7.09830212
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.09892090
C&alpha;	Carbon Recombination Line	7.09895100
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10099360
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10105150
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10156850
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10156850
CH₃O₁₃CHO(TopModel)	Methyl Formate	7.10287400
CH₃O₁₃CHO(TopModel)	Methyl Formate	7.10287400
CH₃18OH_{vt}=0,1&2	Methanol	7.10296300
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10318250
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10318250
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10424890
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10424890
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10429500
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10430440
NS,_v=0	Nitric sulfide	7.10487310
HCCCH₂CN	Propargyl cyanide	7.10580640
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10639670
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10639670
NH₂D	Ammonia	7.10640350
CH₃O₁₃CHO(TopModel)	Methyl Formate	7.10729000
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10778370
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10785890

g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10804300
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10866000
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10972320
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10972320
t-CH₃CH₂OH	trans-Ethanol	7.10985150
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10994350
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.10994410
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11124260
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11124260
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11144780
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11144780
OS17O	Sulfur Dioxide	7.11163060
OS17O	Sulfur Dioxide	7.11164690
OS17O	Sulfur Dioxide	7.11183760
OS17O	Sulfur Dioxide	7.11192220
OS17O	Sulfur Dioxide	7.11225510
OS17O	Sulfur Dioxide	7.11253930
OS17O	Sulfur Dioxide	7.11253960
OS17O	Sulfur Dioxide	7.11263830
OS17O	Sulfur Dioxide	7.11266090
CH₂CH₁₃CN	Vinyl Cyanide	7.11302400
OS17O	Sulfur Dioxide	7.11320090
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11326830
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11326830
OS17O	Sulfur Dioxide	7.11327570
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11342470
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11418890
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11422150
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11427220
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11427220
H&gamma;	Hydrogen Recombination Line	7.11475310
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11496690
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11496690
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11511810
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11511810
CH₃₁₃CH₂₁₃CN	Ethyl cyanide	7.11673450
NO	Nitric oxide	7.11721370
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11764730
He&gamma;	Helium Recombination Line	7.11765239
C&gamma;	Carbon Recombination Line	7.11830303

t-HCOOD	Formic Acid	7.11853180
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11887820
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.11888350
H&zeta;	Hydrogen Recombination Line	7.11950098
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.12053440
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.12057620
CH₃OH_vt=0-2	Methanol	7.12072700
CH₃CH₂13CN	Ethyl Cyanide	7.12185640
CH₃CH₂13CN	Ethyl Cyanide	7.12209710
HCCCH₂CN	Propargyl cyanide	7.12282270
CH₃CH₂13CN	Ethyl Cyanide	7.12295510
CH₃CH₂13CN	Ethyl Cyanide	7.12300980
CH₃CH₂13CN	Ethyl Cyanide	7.12308440
CH₃CH₂13CN	Ethyl Cyanide	7.12327850
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.12360470
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.12360470
CH₃CHO_v=0,1&2	Acetaldehyde	7.12393230
CH₃CH₂13CN	Ethyl Cyanide	7.12402390
CH₃CH₂13CN	Ethyl Cyanide	7.12408220
CH₃CH₂13CN	Ethyl Cyanide	7.12419120
CH₃CH₂13CN	Ethyl Cyanide	7.12436850
CH₃CH₂13CN	Ethyl Cyanide	7.12437720
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.12446800
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.12482010
g'Ga-(CH₂OH)₂	Ethylene Glycol	7.12482010