A Year of TPs, 2016 (Data from AJ4CO)

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Twenty four hour spectrograph records from AJ4CO spanning the year 2016 are presented for dates near the beginning and middle of each month.

Local sunrise and sunset times are given for each record with hours of daylight at the observatory shown by the red line on the UTC time axis.

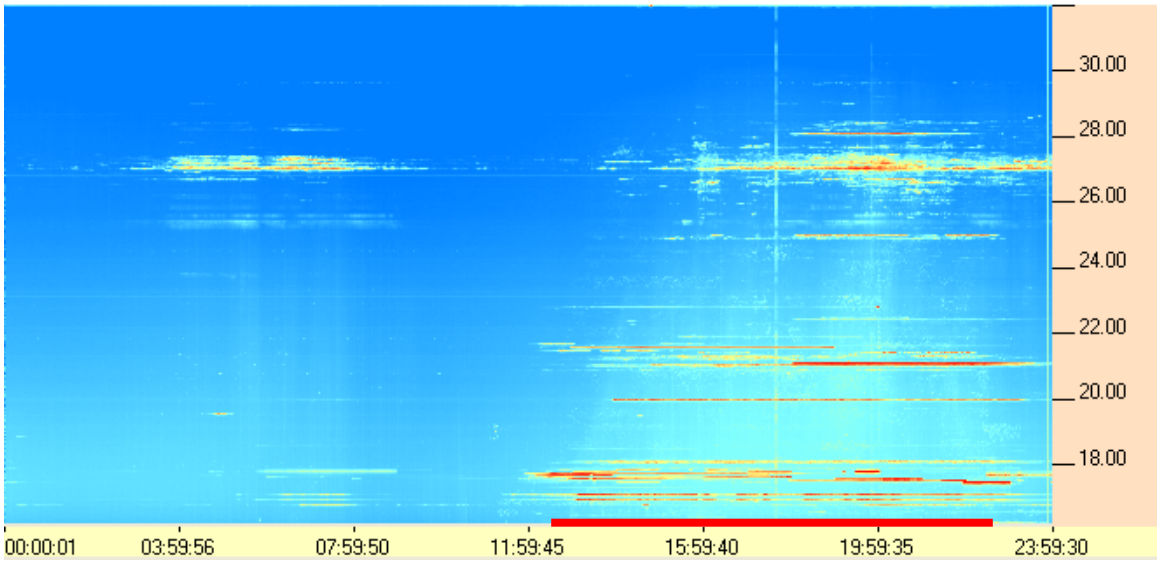
In addition to propagation TPs, the galactic center is clearly seen as a diffuse enhancement several hours wide moving to earlier times as the year progresses. This effect is most clearly seen beginning in April with the peak occurring just before sunrise. In the May thru September time frame the galactic peak is clearly visible during the radio quiet night time hours.

At least one Jupiter storm is visible – an Io-B event on March 2 occurring from about 06-07 UTC.

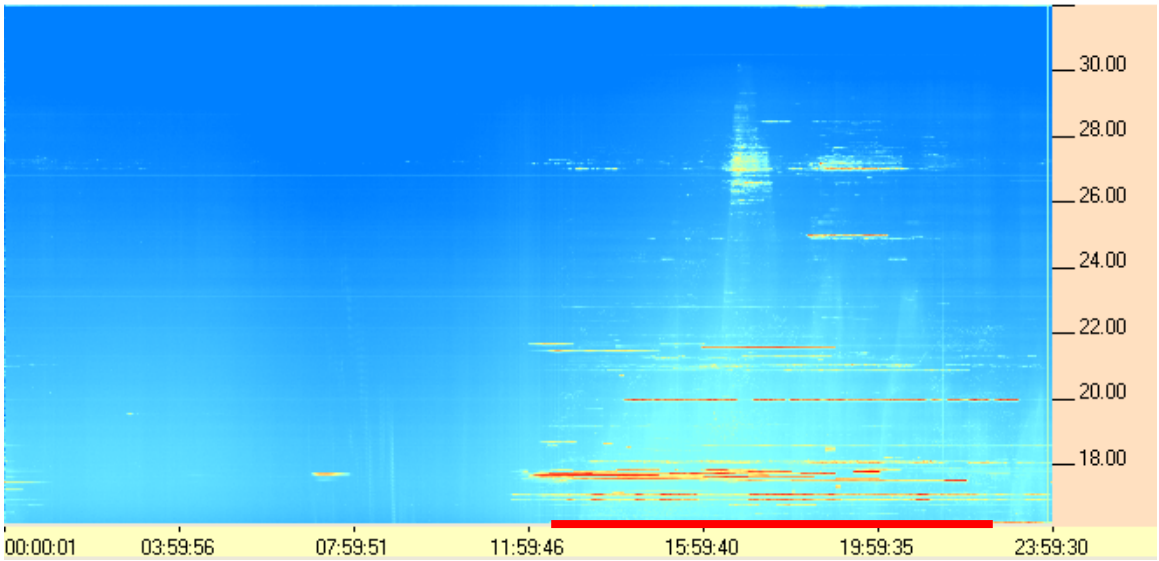
Propagation TPs are visible in most records – sometimes there are as many as half a dozen TPs during a day, sometimes just a single TP. There is often evidence of CB radio activity near 27 MHz at the peak of many TPs.

The galactic center enhancement and TP enhancement appear as about the same brightness increase. Since we know that the galactic background peak represents about a 3 dB increase in antenna temperature we can say that the TP enhancement is on the same order of magnitude.

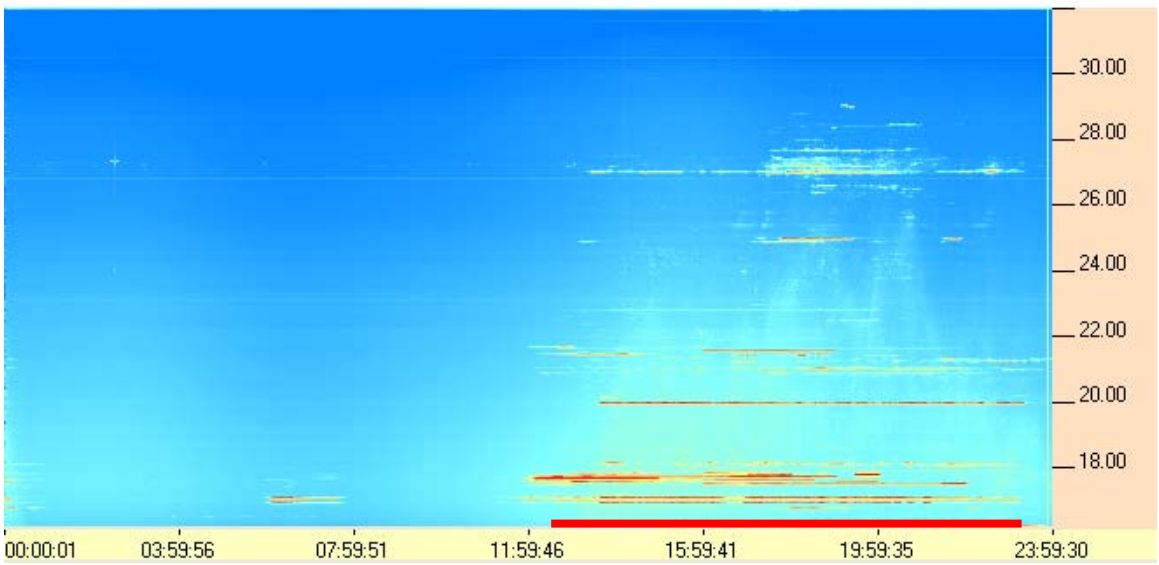
In this set of records no TPs were observed to begin before local sunrise. The trailing edge of the last TP of the day was often visible between 1 and 3 hours after sunset.



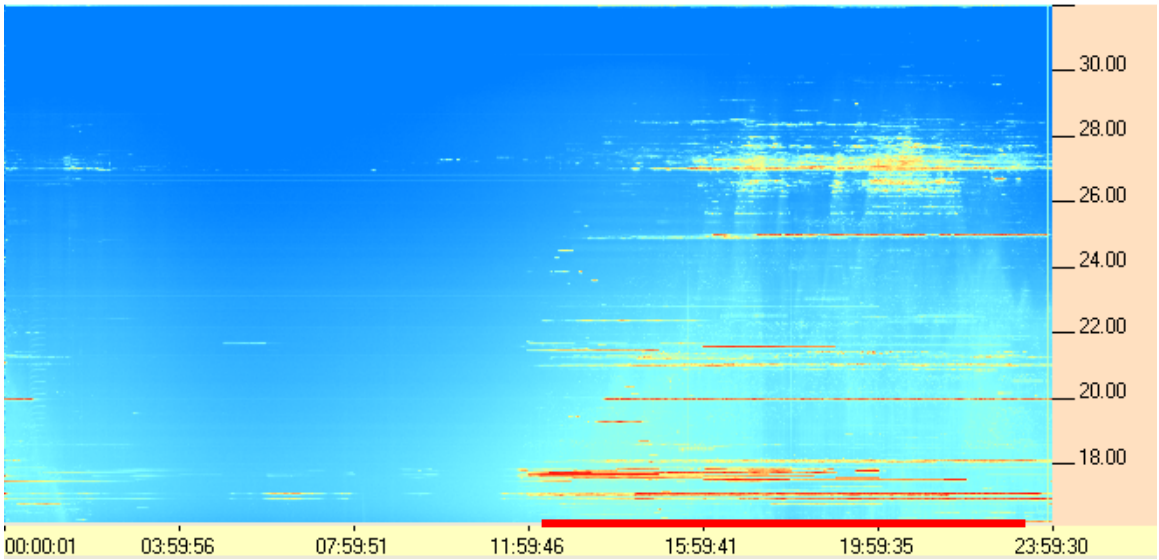
Jan 2, 2016 (Sunrise:1226, Sunset:2242 UTC)



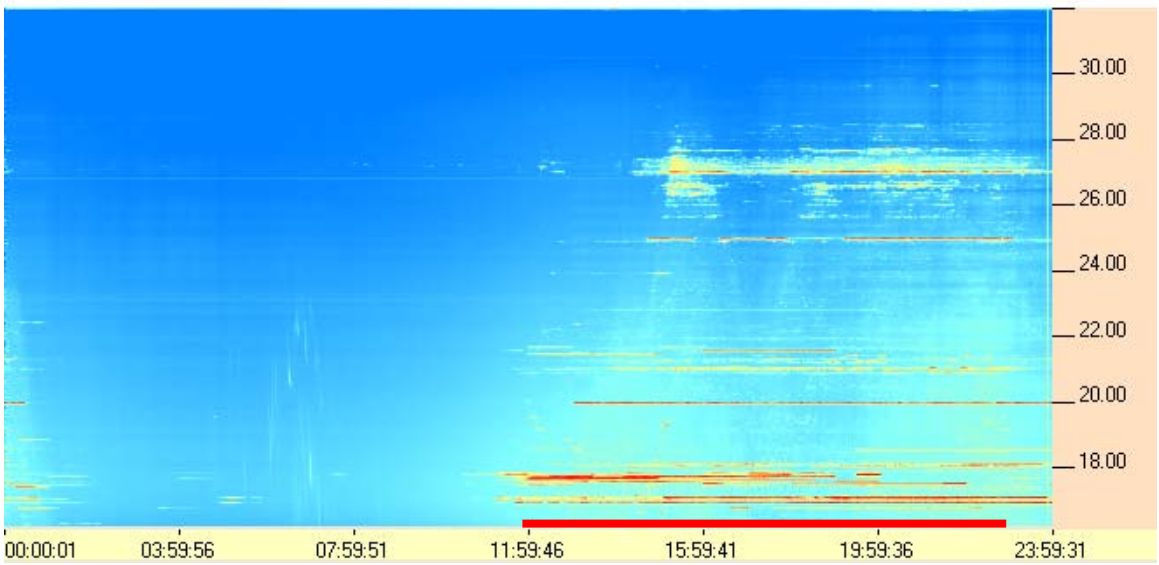
Jan 15, 2016 (Sunrise 1225, Sunset 2251UTC)



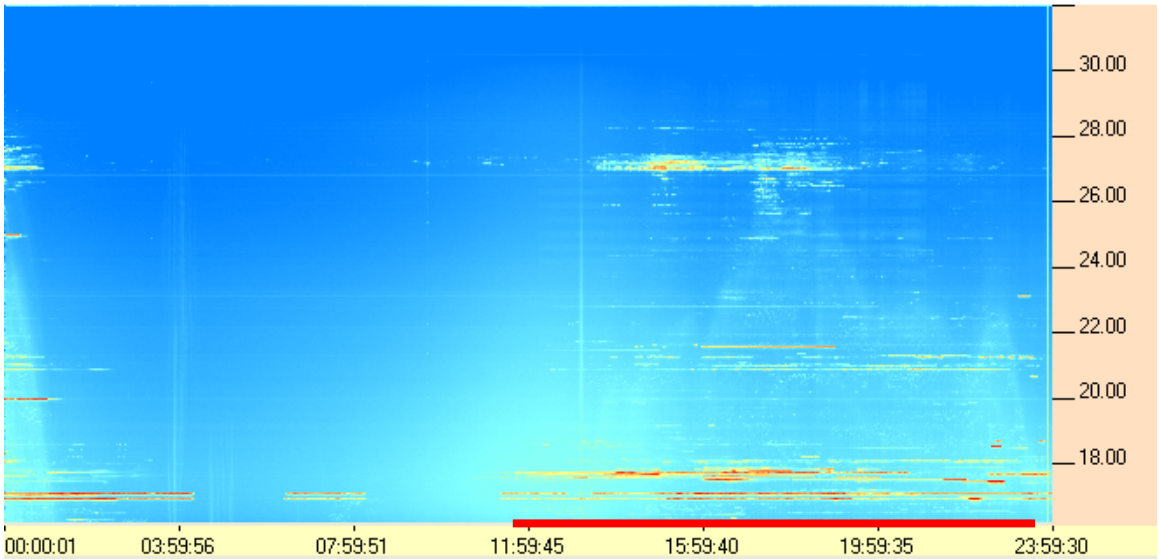
Feb 1, 2016 (Sunrise 1220, Sunset 2306 UTC)



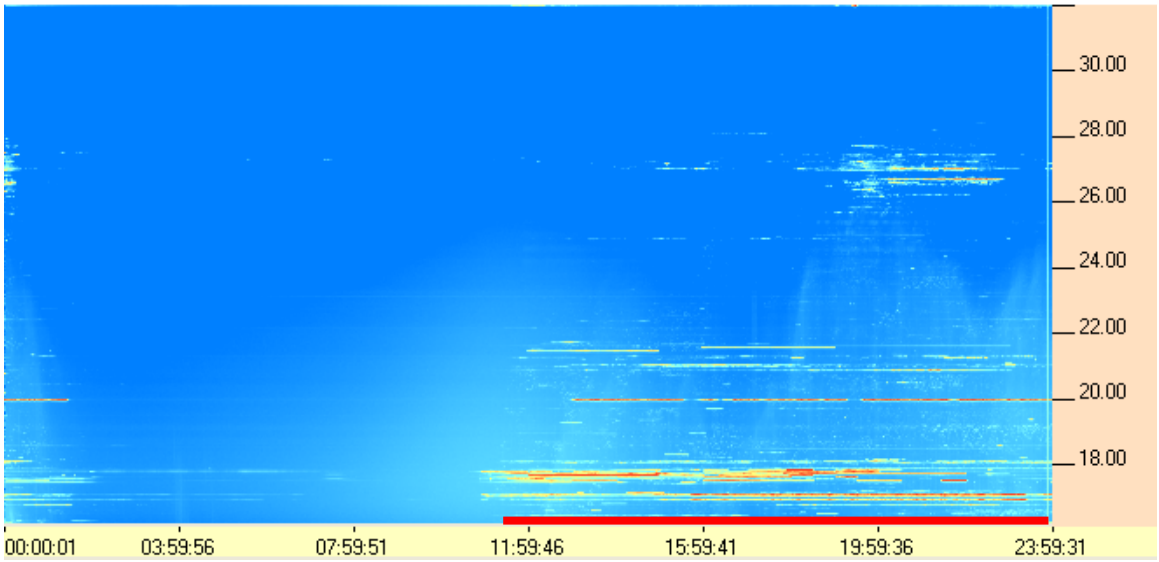
Feb 15, 2016 (Sunrise 1210, Sunset 2317 UTC)



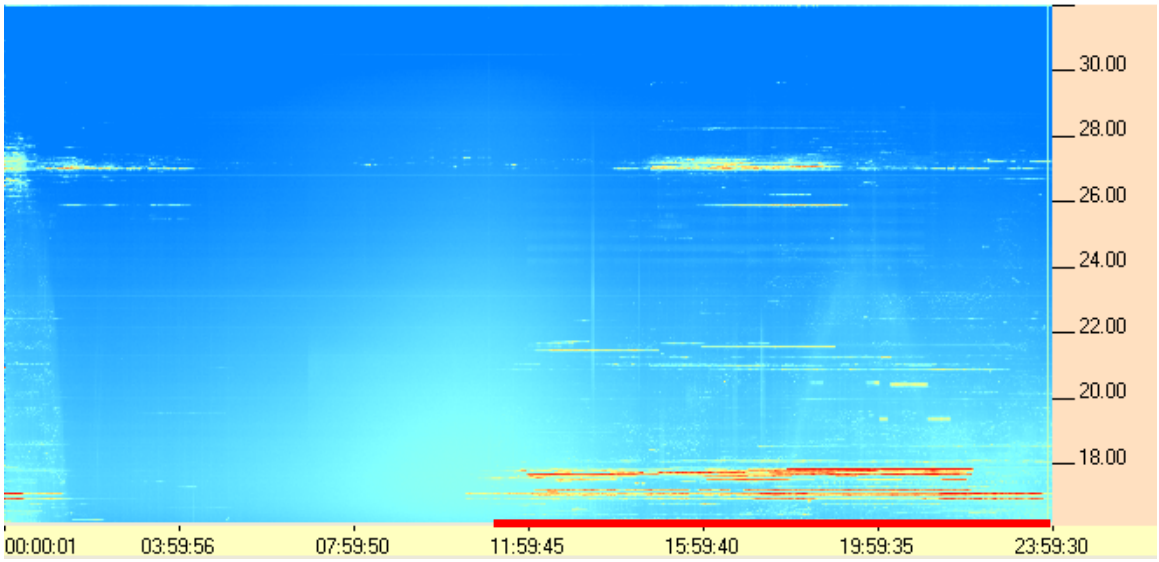
Mar 2, 2016 (Sunrise 1154, Sunset 2329 UTC), Io-B storm 06 -07 UTC



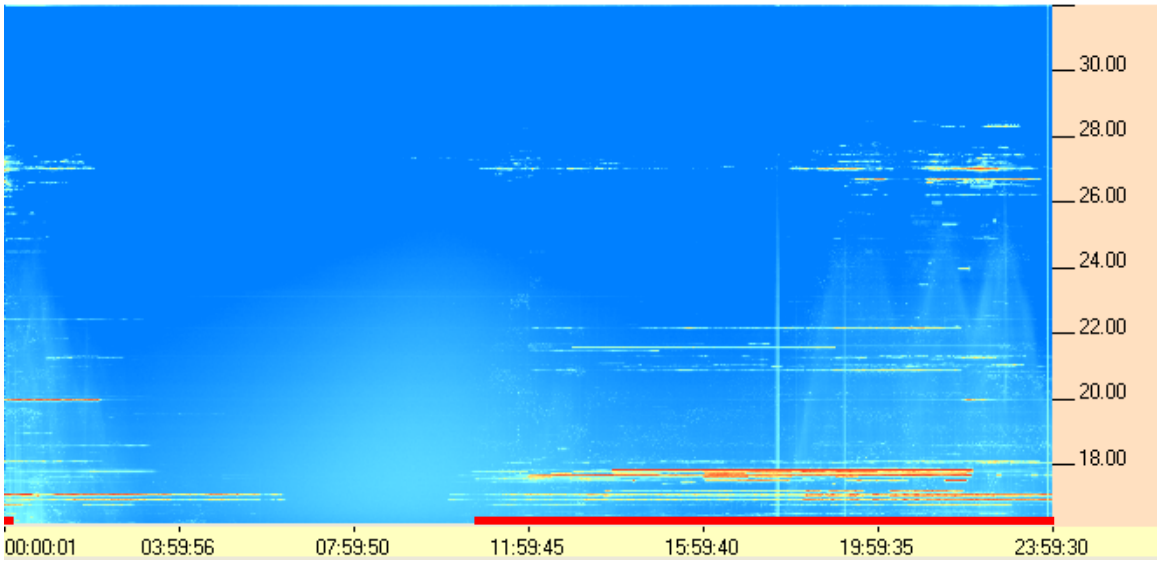
Mar 15, 2016 (Sunrise 1139, Sunset 2337 UTC)



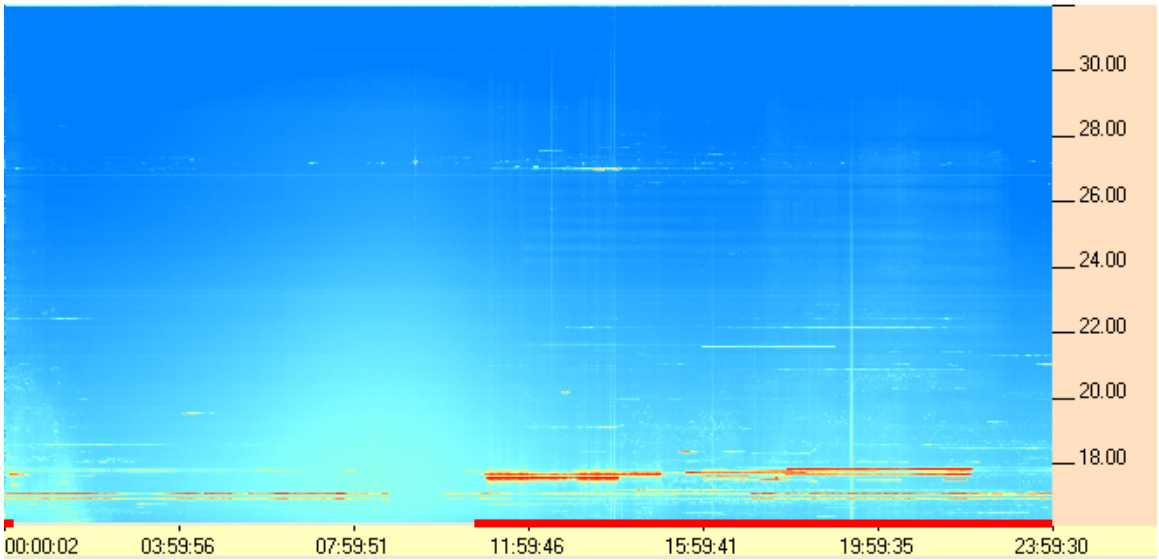
Apr 1, 2016 (Sunrise 1119, Sunset 2348 UTC)



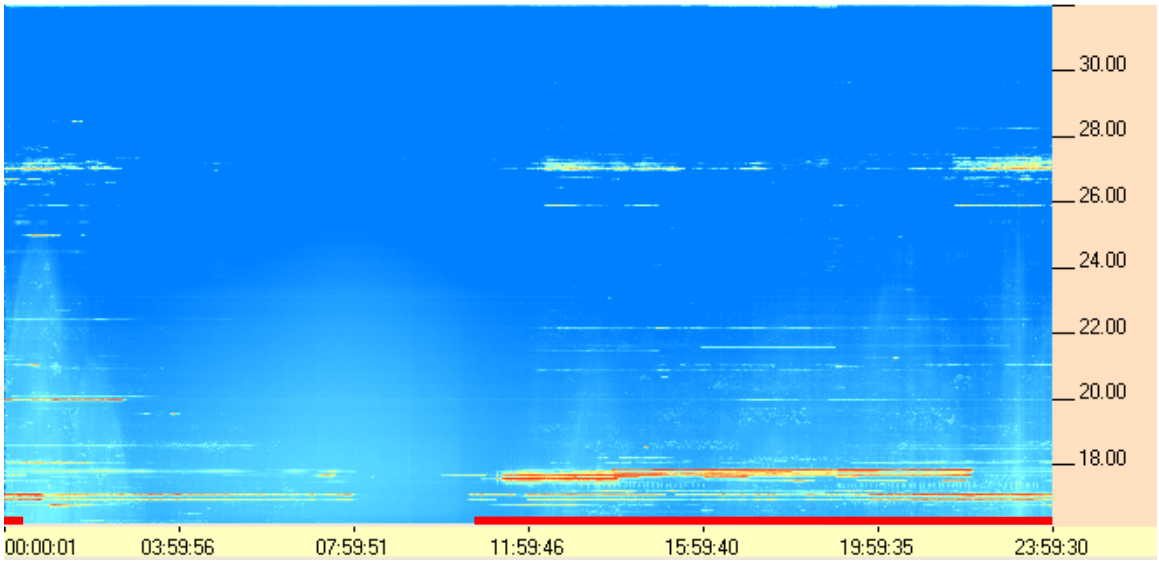
Apr 15, 2016 (Sunrise 1103, Sunset 2356 UTC)



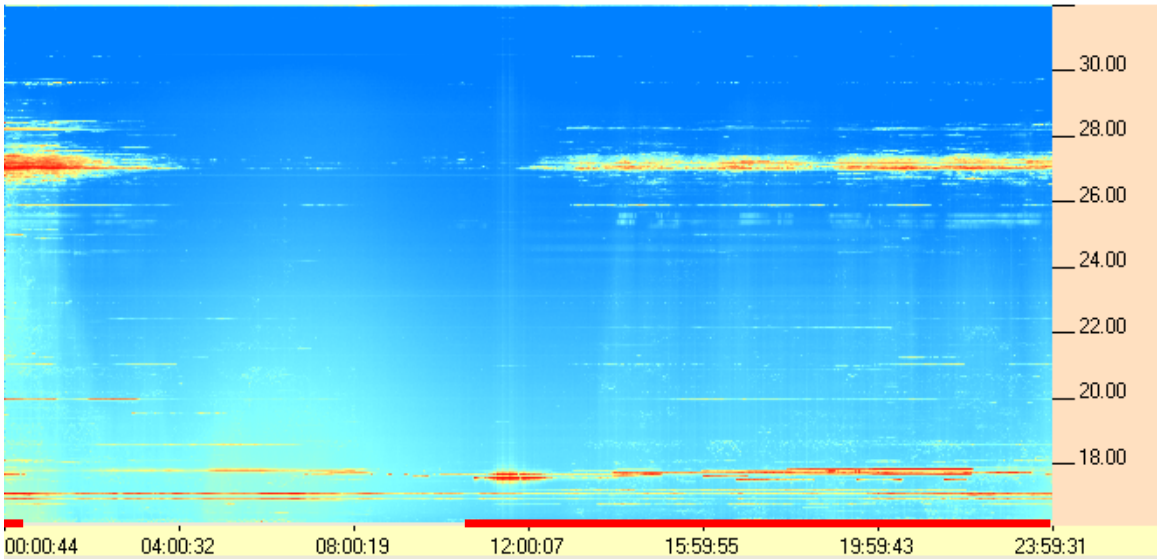
May 1, 2016 (Sunrise 1047, Sunset 0006 UTC next day)



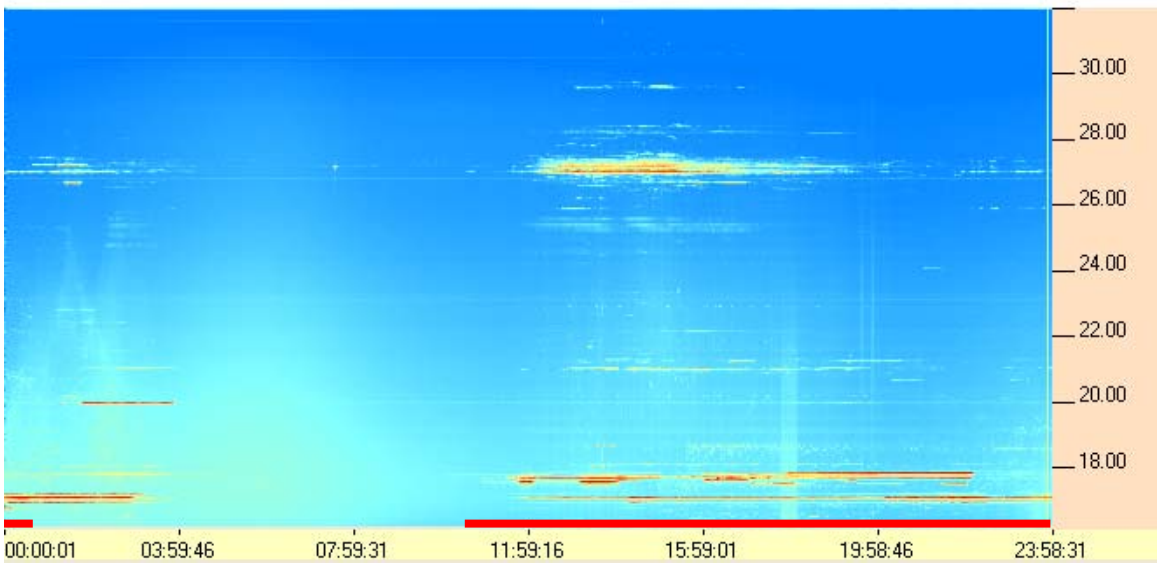
May 16, 2016 (Sunrise 1036, Sunset 0016 UTC next day)



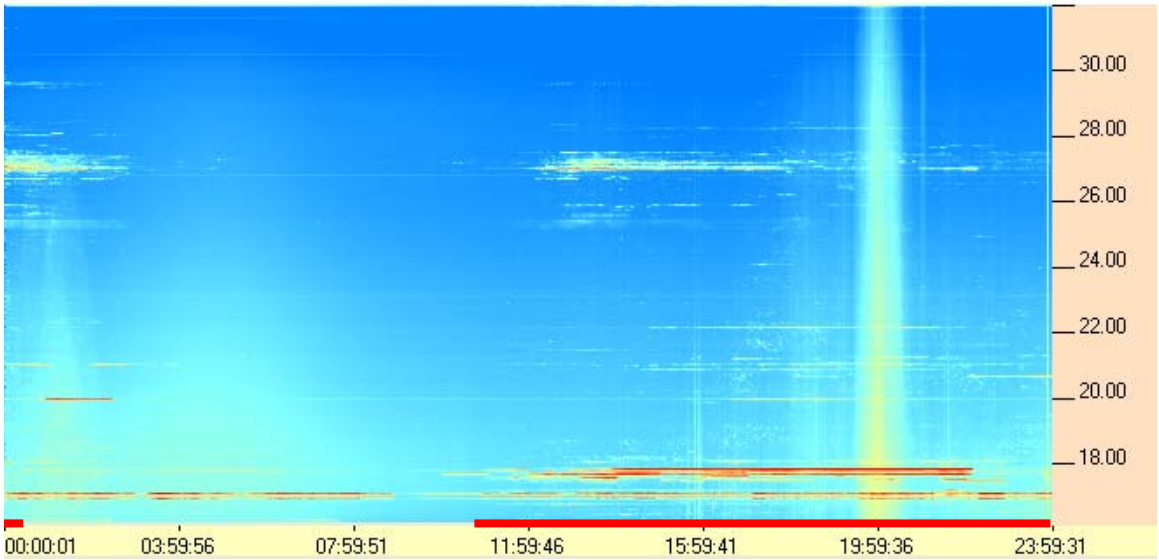
June 1, 2016 (Sunrise 1029, Sunset 0025 UTC next day)



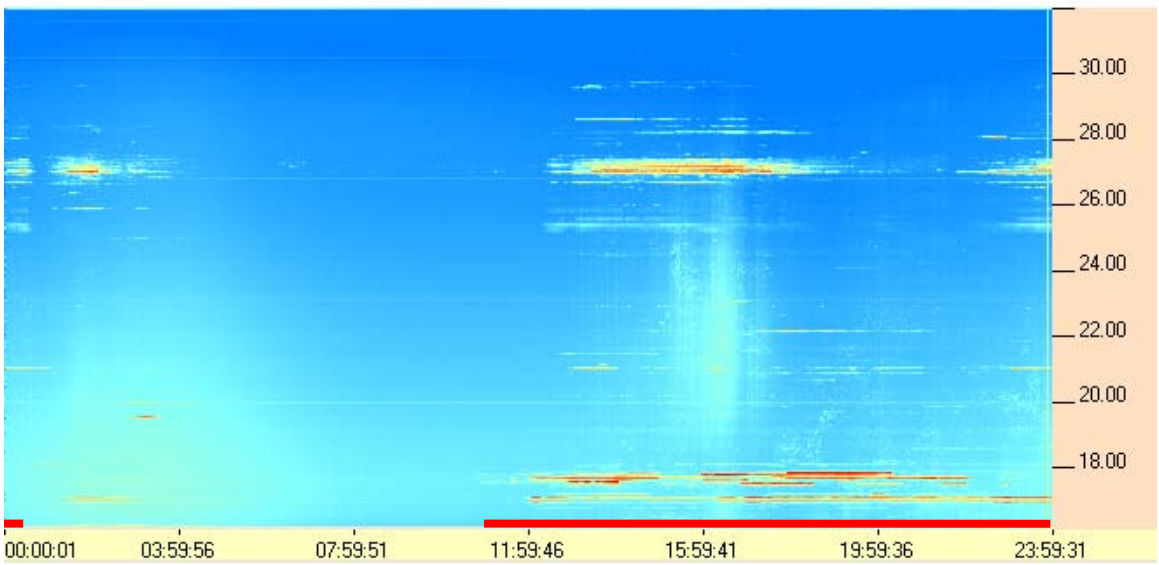
June 15, 2016 (Sunrise 1029, Sunset 0031 UTC next day)



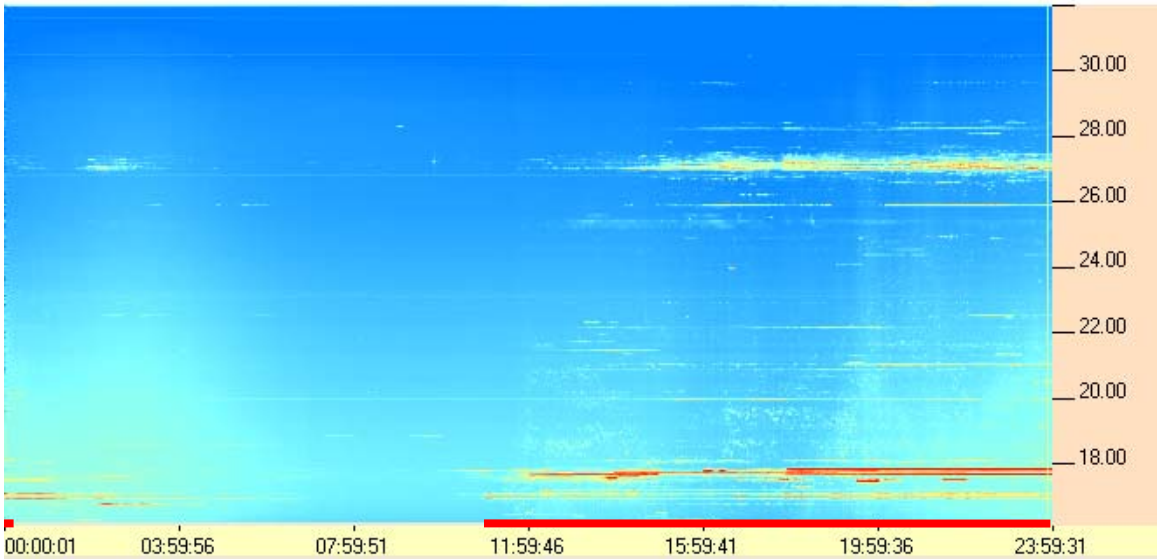
July 1, 2016 (Sunrise 1033, Sunset 0034 UTC next day)



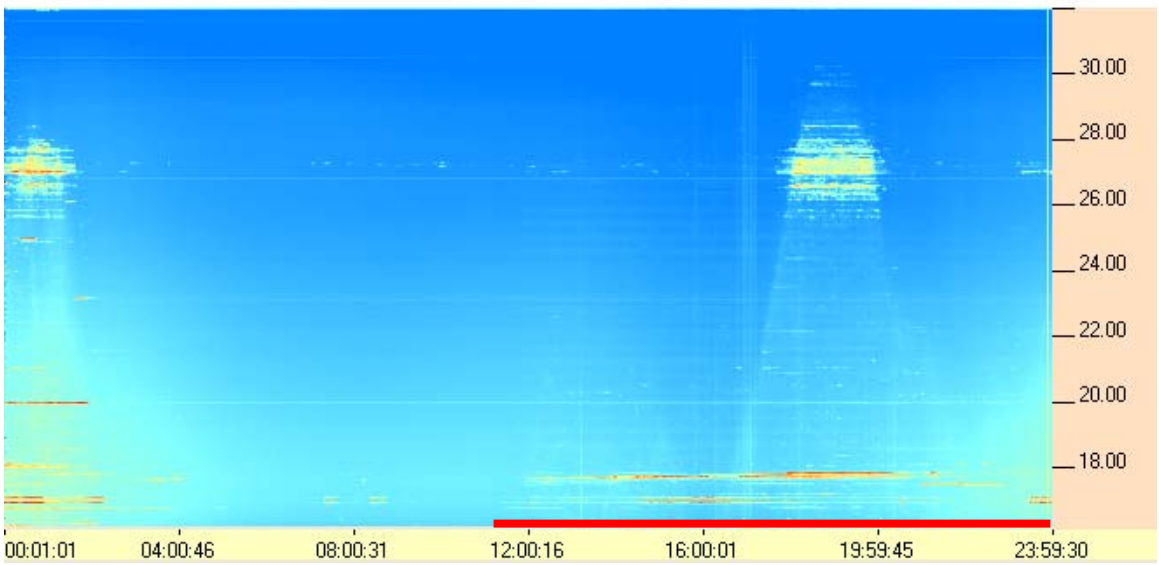
July 16, 2016 (Sunrise 1040, Sunset 0031 UTC next day)



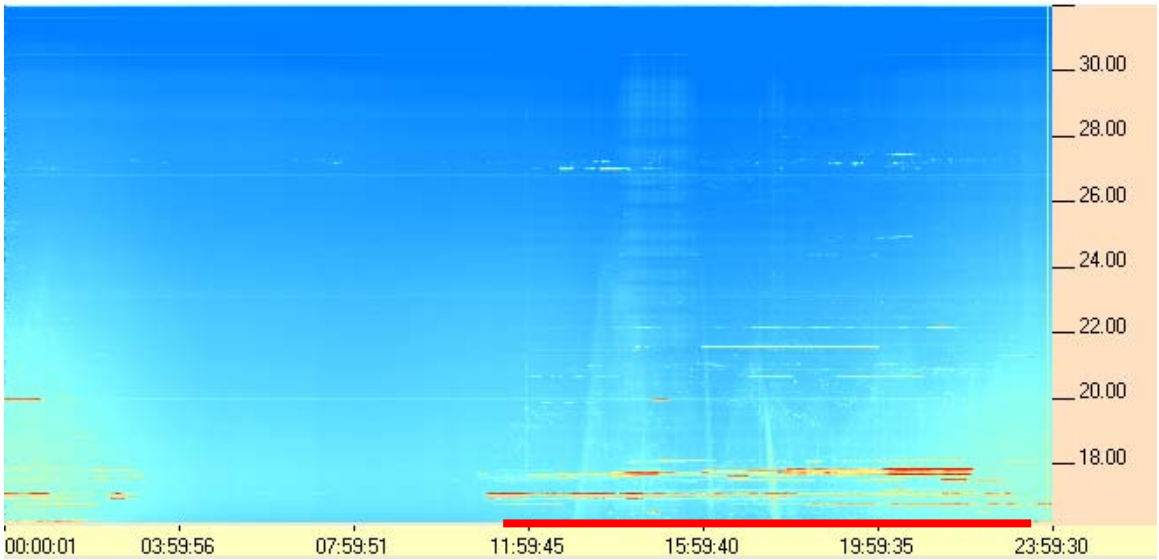
Aug 4, 2016 (Sunrise 1051, Sunset 0020 UTC next day)



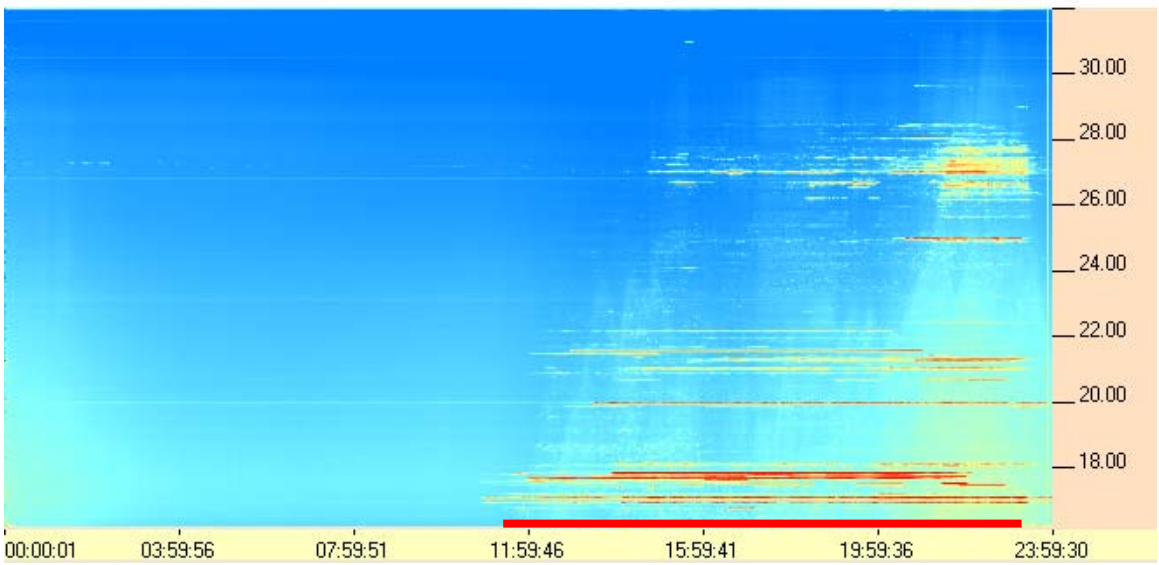
Aug 15, 2016 (Sunrise 1057, Sunset 0010 UTC next day)



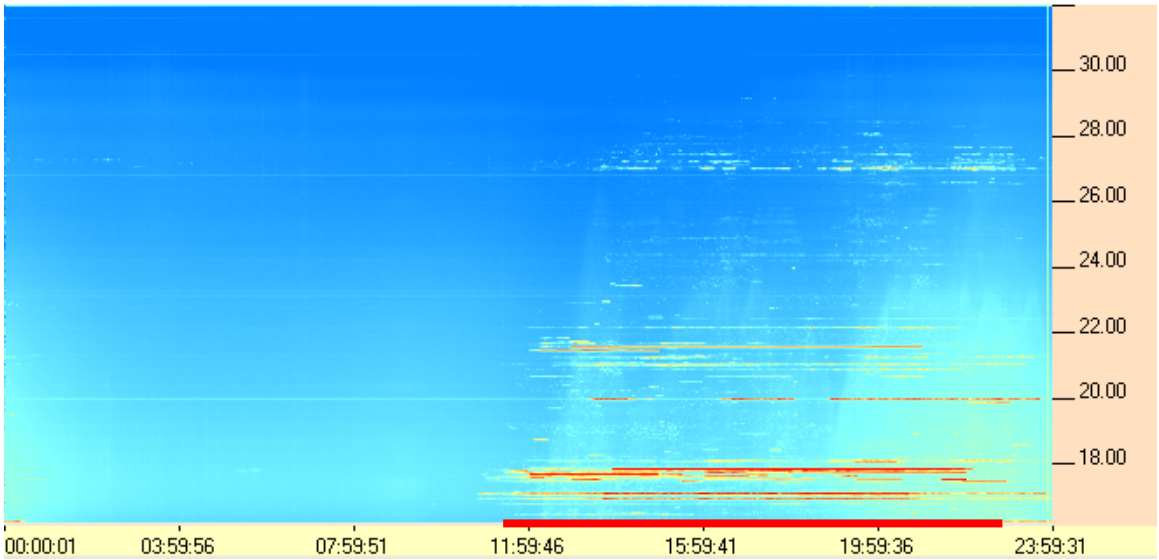
Sept 1, 2016 (Sunrise 1107, Sunset 2352 UTC)



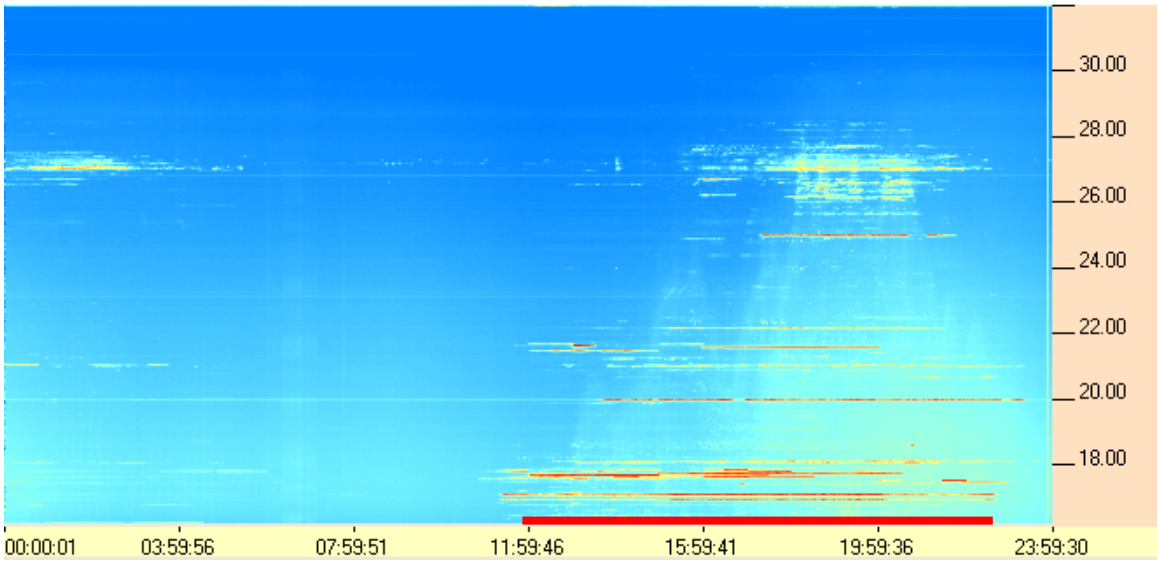
Sept 15, 2016 (Sunrise 1114, Sunset 2335 UTC)



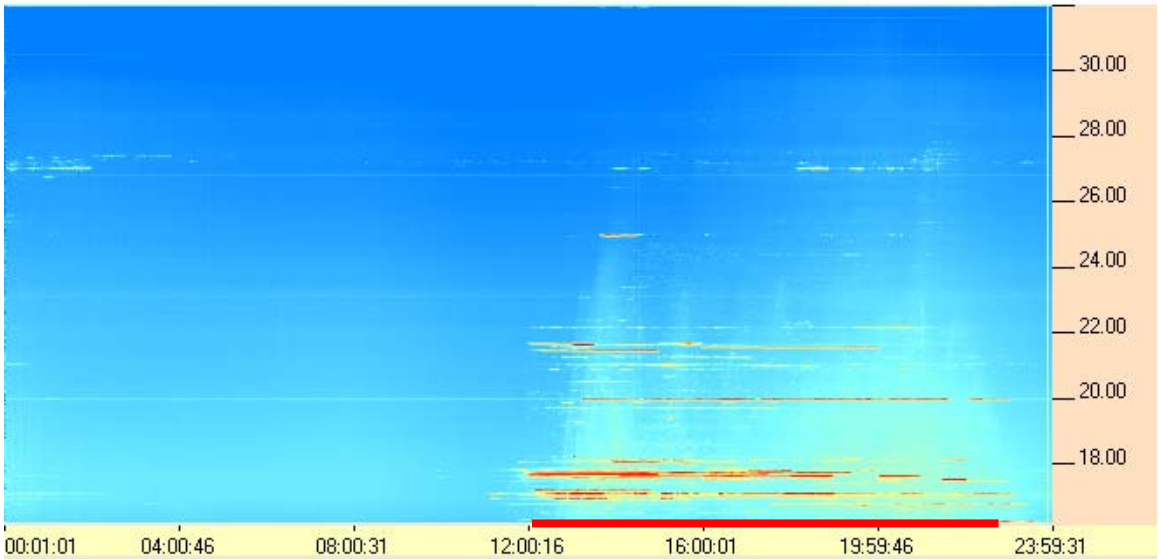
Oct 1, 2016 (Sunrise 1123, Sunset 2315 UTC)



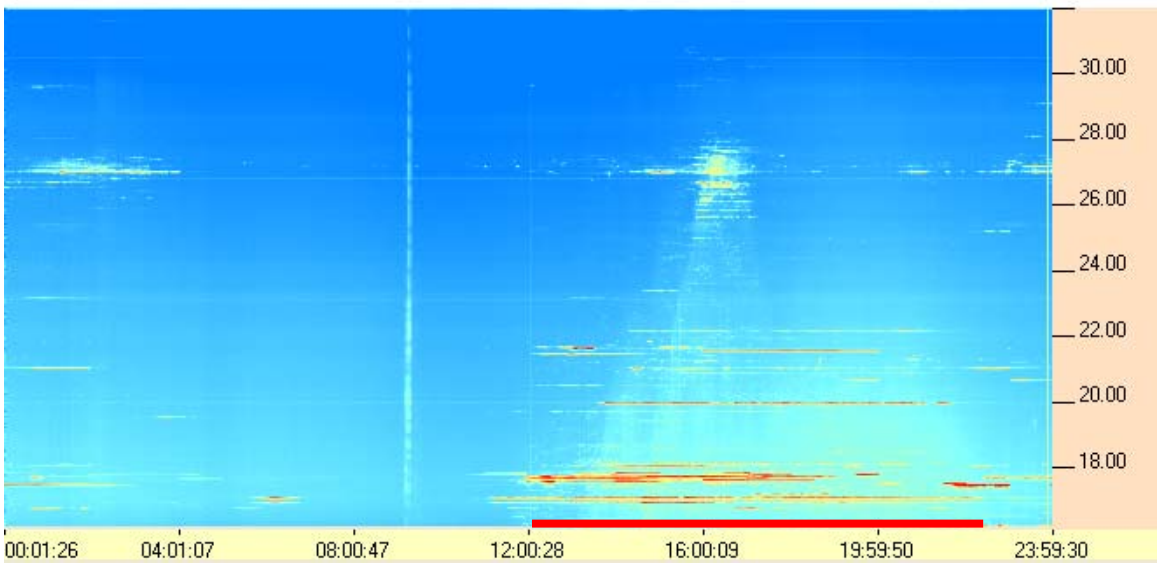
Oct 15, 2016 (Sunrise 1131, Sunset 2259 UTC)



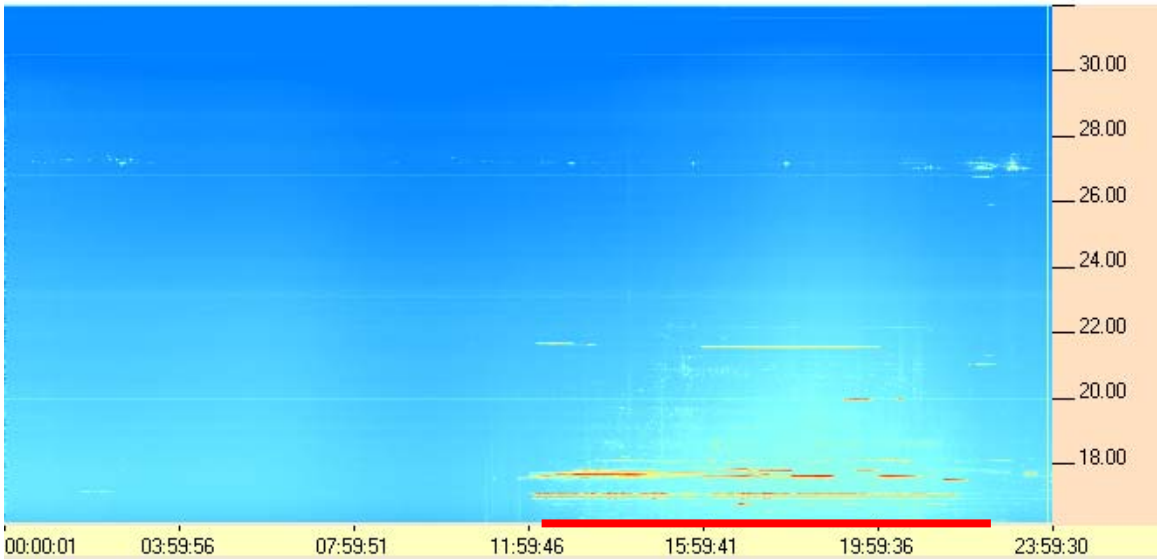
Nov 1, 2016 (Sunrise 1143, Sunset 2243 UTC)



Nov 15, 2016 (Sunrise 1154, Sunset 2234 UTC)



Dec 1, 2016 (Sunrise 1207, Sunset 2230 UTC)



Dec 16, 2016 (Sunrise 1217, Sunset 2232 UTC)