

# 1. SCIAMACHY Level 1B source packet monitoring report

## [1.1. General Info](#)

## [1.2 Source packet monitoring](#)

### 1.1 General Info

This report contains results of the analysis on source packets from SCIAMACHY level 1 data (The SCI\_NL\_\_1P product).

#### 1.1.1 Report summary

The table below shows general characteristics of the data that are included into this report.

| Item                                     | Value                                    |
|------------------------------------------|------------------------------------------|
| Report version                           | 1.1 (07-01-2010)                         |
| Time of report generation                | 22JUN2011 06:30:44                       |
| Data source version                      | SCIA/7.04-U                              |
| Processing scope for products            | 09JUN2011 00:00:00 to 10JUN2011 00:00:00 |
| Start time of first product within scope | 08JUN2011 23:33:55                       |
| Stop time of last product within scope   | 10JUN2011 00:07:24                       |
| Total number of level 1 products         | 14                                       |
| Number of level 1 products with errors   | 0                                        |
| SCIAL1C executable used in processing    | Unknown                                  |
| SCIAL1C parameters used in processing    | Unknown                                  |

#### 1.1.2 Source packet summary

The table below shows which source packets have been included into the report.

| Item | Mode  | State | Cluster | Height | First start time       | Last start time        |
|------|-------|-------|---------|--------|------------------------|------------------------|
| 0    | NADIR | 07    | 08      | N/A    | 09JUN2011 00:05:58.513 | 09JUN2011 23:39:26.321 |
| 1    | NADIR | 07    | 09      | N/A    | 09JUN2011 00:05:58.513 | 09JUN2011 23:39:26.321 |
| 2    | NADIR | 07    | 15      | N/A    | 09JUN2011 00:05:58.513 | 09JUN2011 23:39:26.321 |
| 3    | NADIR | 07    | 24      | N/A    | 09JUN2011 00:05:58.513 | 09JUN2011 23:39:26.321 |
| 4    | NADIR | 07    | 55      | N/A    | 09JUN2011 00:05:58.513 | 09JUN2011 23:39:26.321 |
| 5    | LIMB  | 32    | 09      | ~19 km | 09JUN2011 00:00:58.849 | 09JUN2011 23:42:37.626 |
| 6    | LIMB  | 32    | 09      | ~22 km | 09JUN2011 00:00:58.849 | 09JUN2011 23:42:37.626 |
| 7    | LIMB  | 32    | 09      | ~25 km | 09JUN2011 00:00:58.849 | 09JUN2011 23:42:37.626 |
| 8    | LIMB  | 32    | 15      | ~22 km | 09JUN2011 00:00:58.849 | 09JUN2011 23:42:37.626 |
| 9    | LIMB  | 32    | 15      | ~25 km | 09JUN2011 00:00:58.849 | 09JUN2011 23:42:37.626 |
| 10   | LIMB  | 32    | 15      | ~35 km | 09JUN2011 00:00:58.849 | 09JUN2011 23:42:37.626 |

#### 1.1.3 Summary per product

The following table shows a summary for each product used in this report.

Products are linked to a corresponding server directory for view/download. Note: Link access may be restricted by security settings of your internet browser or firewall.

| # | Product name                                                                   | Start time         | Stop time          | ProdErr | #nadir | #limb | #occ | #mon | #nopro | #cml_drk | #incmpl_drk | Decont |
|---|--------------------------------------------------------------------------------|--------------------|--------------------|---------|--------|-------|------|------|--------|----------|-------------|--------|
| 0 | <a href="#">SCI_NLC_1CUDPA20110608_233355_000057403103_00203_48493_2053.N1</a> | 08JUN2011 23:33:55 | 09JUN2011 00:44:10 | 0       | 35     | 31    | 0    | 0    | 1      | 0        | 0           |        |
| 1 | <a href="#">SCI_NLC_1CUDPA20110609_025423_000057413103_00205_48495_2056.N1</a> | 09JUN2011 02:54:23 | 09JUN2011 04:04:38 | 0       | 35     | 31    | 0    | 0    | 1      | 0        | 0           |        |
| 2 | <a href="#">SCI_NLC_1CUDPA20110609_043437_000057403103_00206_48496_2059.N1</a> | 09JUN2011 04:34:37 | 09JUN2011 05:45:06 | 0       | 36     | 30    | 0    | 0    | 1      | 0        | 0           |        |
| 3 | <a href="#">SCI_NLC_1CUDPA20110609_061451_000057403103_00207_48497_2060.N1</a> | 09JUN2011 06:14:51 | 09JUN2011 07:25:06 | 0       | 35     | 31    | 0    | 0    | 1      | 0        | 0           |        |
| 4 | <a href="#">SCI_NLC_1CUDPA20110609_075505_000057403103_00208_48498_2062.N1</a> | 09JUN2011 07:55:05 | 09JUN2011 09:05:34 | 0       | 36     | 30    | 0    | 0    | 1      | 0        | 0           |        |
| 5 | <a href="#">SCI_NLC_1CUDPA20110609_093519_000057403103_00209_48499_2065.N1</a> | 09JUN2011 09:35:19 | 09JUN2011 10:45:33 | 0       | 34     | 31    | 0    | 0    | 2      | 0        | 0           |        |

|    |                                                                |                    |                    |   |    |    |   |   |   |   |   |  |
|----|----------------------------------------------------------------|--------------------|--------------------|---|----|----|---|---|---|---|---|--|
| 6  | SCI_NLC_1CUDPA20110609_111532_000057403103_00210_48500_2066.N1 | 09JUN2011 11:15:32 | 09JUN2011 12:26:01 | 0 | 36 | 30 | 0 | 0 | 1 | 0 | 0 |  |
| 7  | SCI_NLC_1CUDPA20110609_125546_000057403103_00211_48501_2069.N1 | 09JUN2011 12:55:46 | 09JUN2011 14:06:01 | 0 | 35 | 31 | 0 | 0 | 1 | 0 | 0 |  |
| 8  | SCI_NLC_1CUDPA20110609_143600_000057403103_00212_48502_2072.N1 | 09JUN2011 14:36:00 | 09JUN2011 15:46:29 | 0 | 36 | 30 | 0 | 0 | 1 | 0 | 0 |  |
| 9  | SCI_NLC_1CUDPA20110609_161614_000057413103_00213_48503_2075.N1 | 09JUN2011 16:16:14 | 09JUN2011 17:26:29 | 0 | 35 | 31 | 0 | 0 | 1 | 0 | 0 |  |
| 10 | SCI_NLC_1CUDPA20110609_175628_000057413103_00214_48504_2077.N1 | 09JUN2011 17:56:28 | 09JUN2011 19:06:34 | 0 | 34 | 30 | 0 | 1 | 1 | 0 | 0 |  |
| 11 | SCI_NLC_1CUDPA20110609_193642_000057403103_00215_48505_2081.N1 | 09JUN2011 19:36:42 | 09JUN2011 20:47:05 | 0 | 35 | 31 | 0 | 1 | 1 | 0 | 0 |  |
| 12 | SCI_NLC_1CUDPA20110609_211656_000057403103_00216_48506_2083.N1 | 09JUN2011 21:16:56 | 09JUN2011 22:27:25 | 0 | 36 | 30 | 0 | 0 | 1 | 0 | 0 |  |
| 13 | SCI_NLC_1CUDPA20110609_225710_000057403103_00217_48507_2085.N1 | 09JUN2011 22:57:10 | 10JUN2011 00:07:24 | 0 | 35 | 31 | 0 | 0 | 1 | 0 | 0 |  |

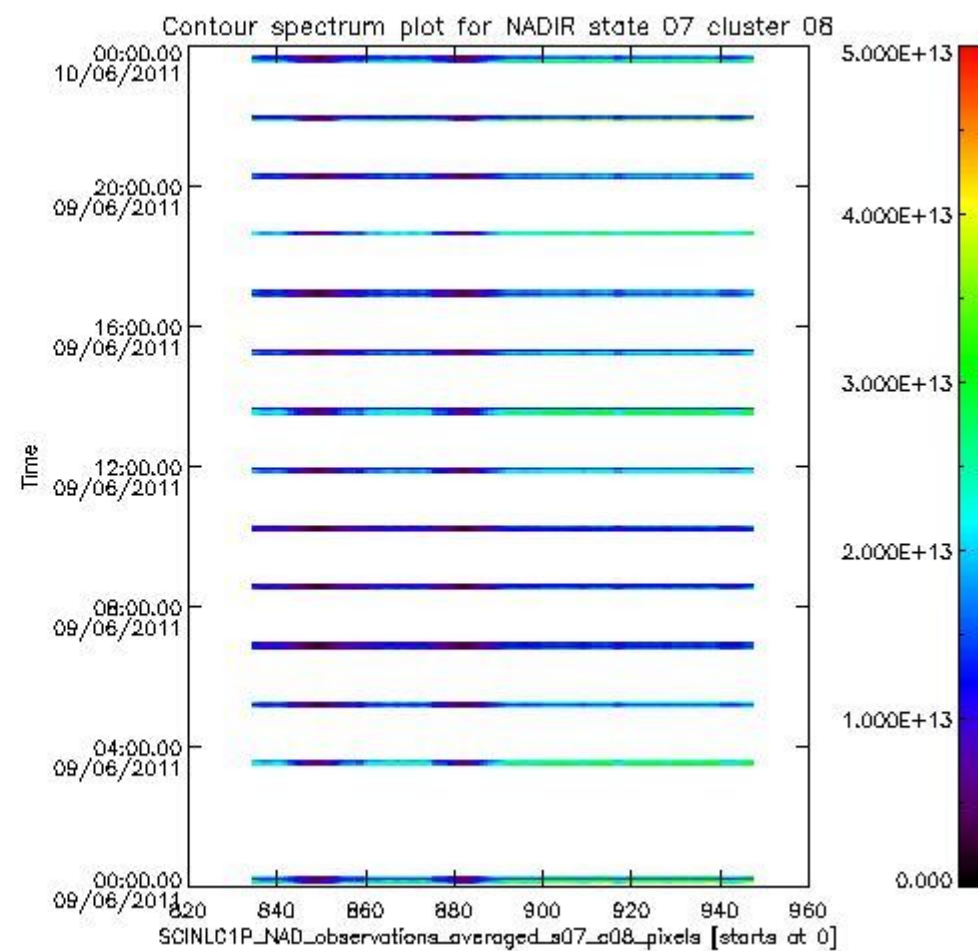
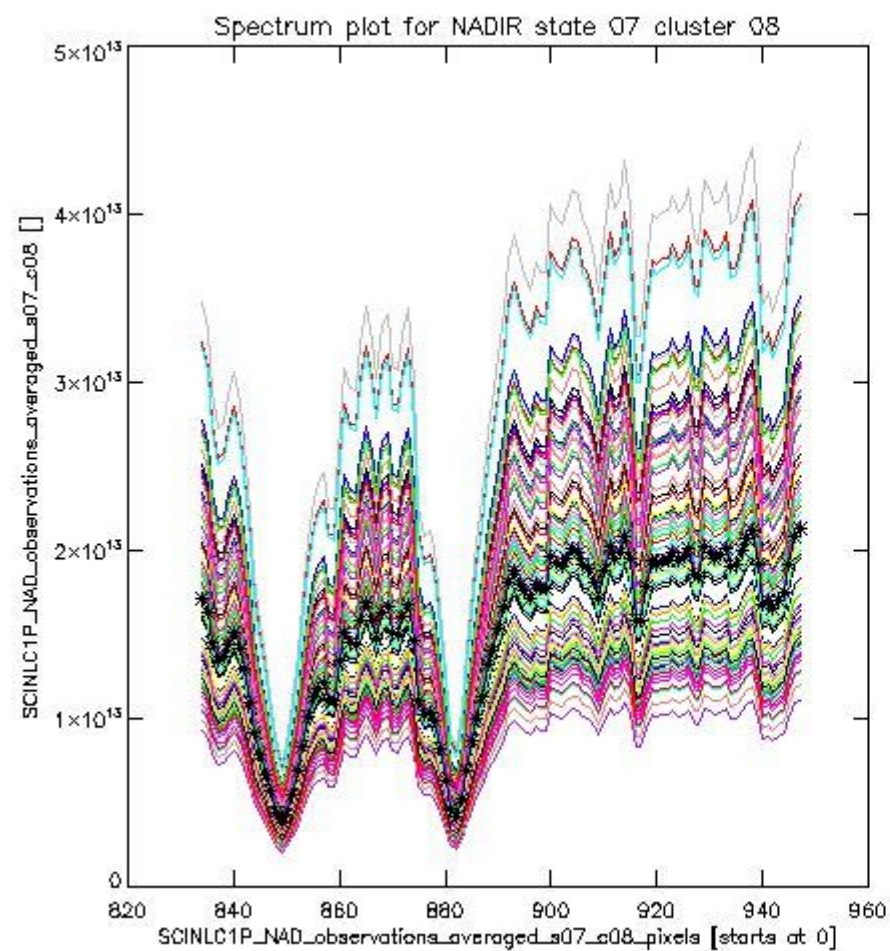
## 1.2 Source packet monitoring

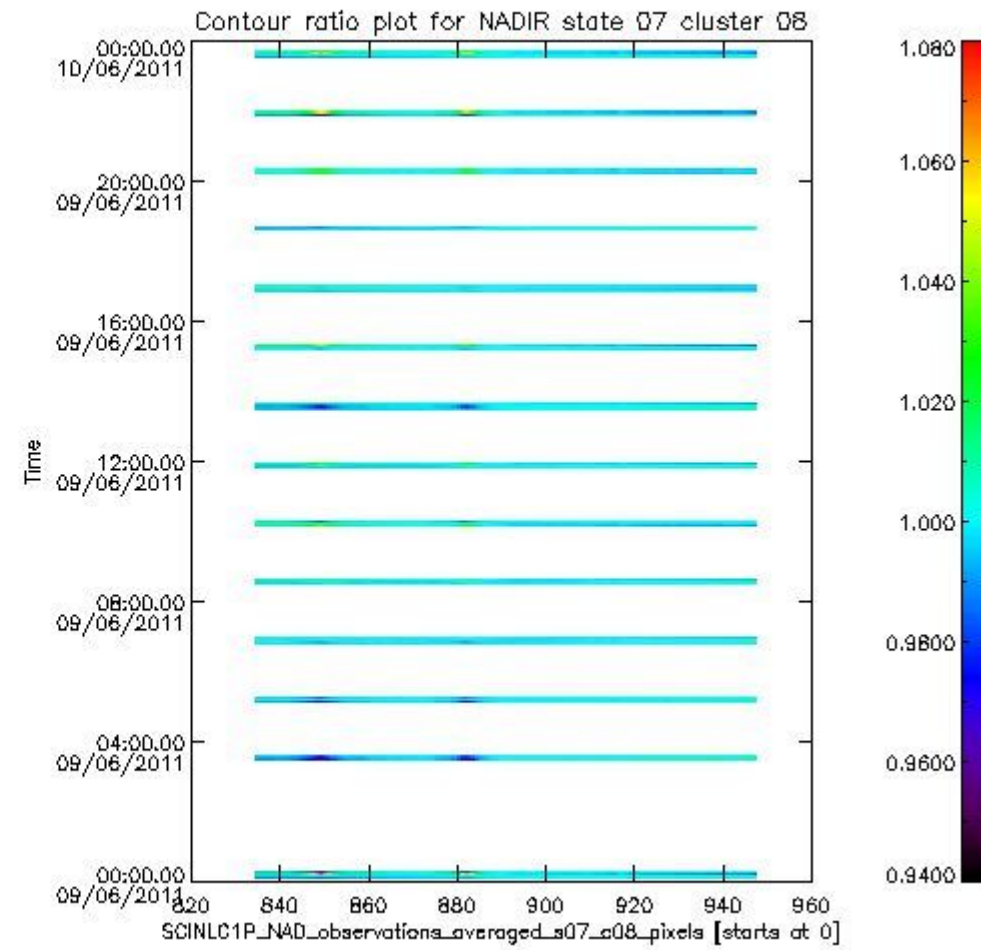
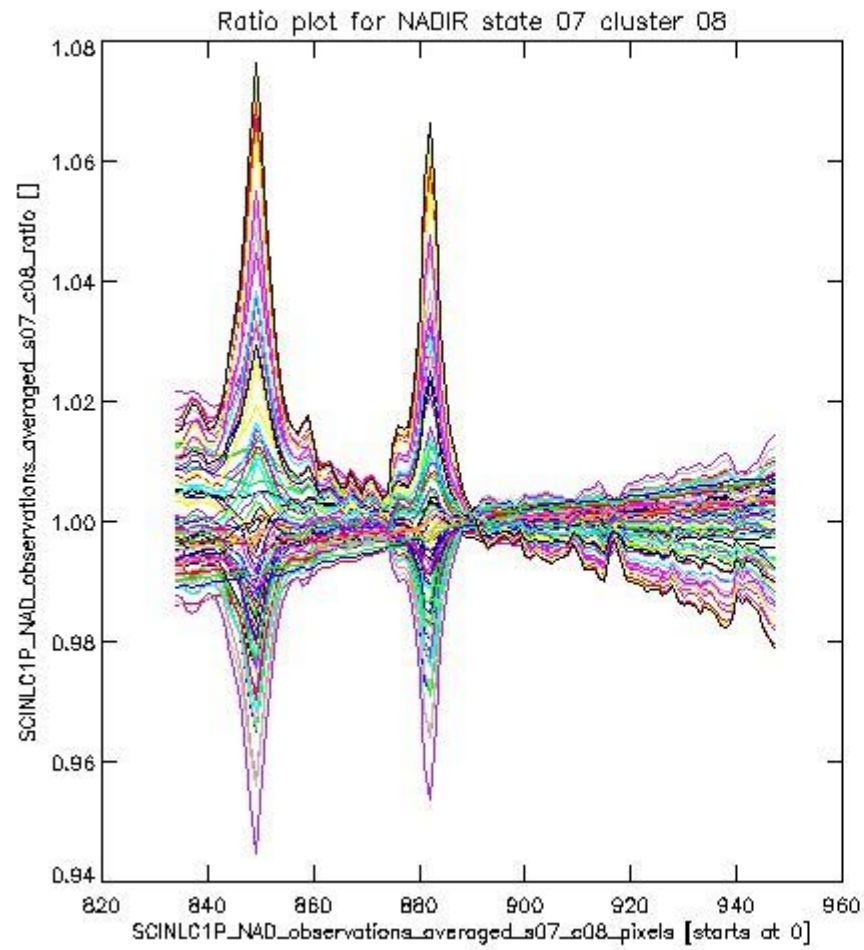
This section shows figures for each of the monitored source packet types listed in the Source Packet Summary section. For each mode-state-cluster(-height) combination the following plots are shown:

- A plot that shows all calibrated averaged spectra vs. pixel number as 2D-profiles. Each line is an average spectrum for a single state occurrence. For Limb modes, the average is performed on spectra recorded at a specific height. The reference spectrum that is used for comparison is also shown as a black line with \* markers.
- A plot that shows all calibrated averaged spectra vs. pixel number and time using a coloured contour plot. The colours indicate the intensity.
- A plot that shows ratios of all calibrated averaged spectra and the reference spectrum vs. pixel number. Each line is the ratio of a calibrated averaged spectrum and the reference spectrum, where both spectra have been intensity corrected (the spectrum has been divided by the average pixel intensity) prior to division.
- A plot that shows ratios of all calibrated averaged spectra and the reference spectrum vs. pixel number and time using a coloured contour plot.

### 1.2.1 NADIR state 07 cluster 08 The data for the analysis of NADIR state 07 cluster 08 have the following characteristics:

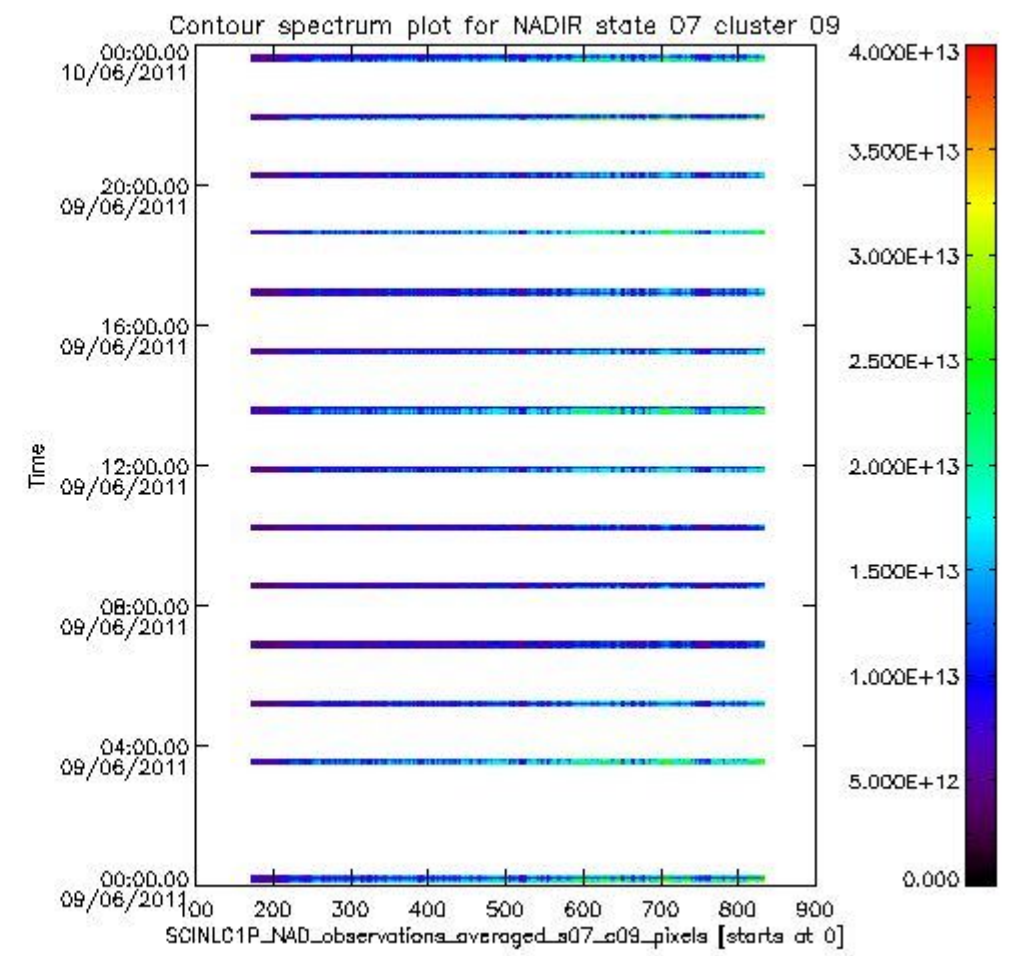
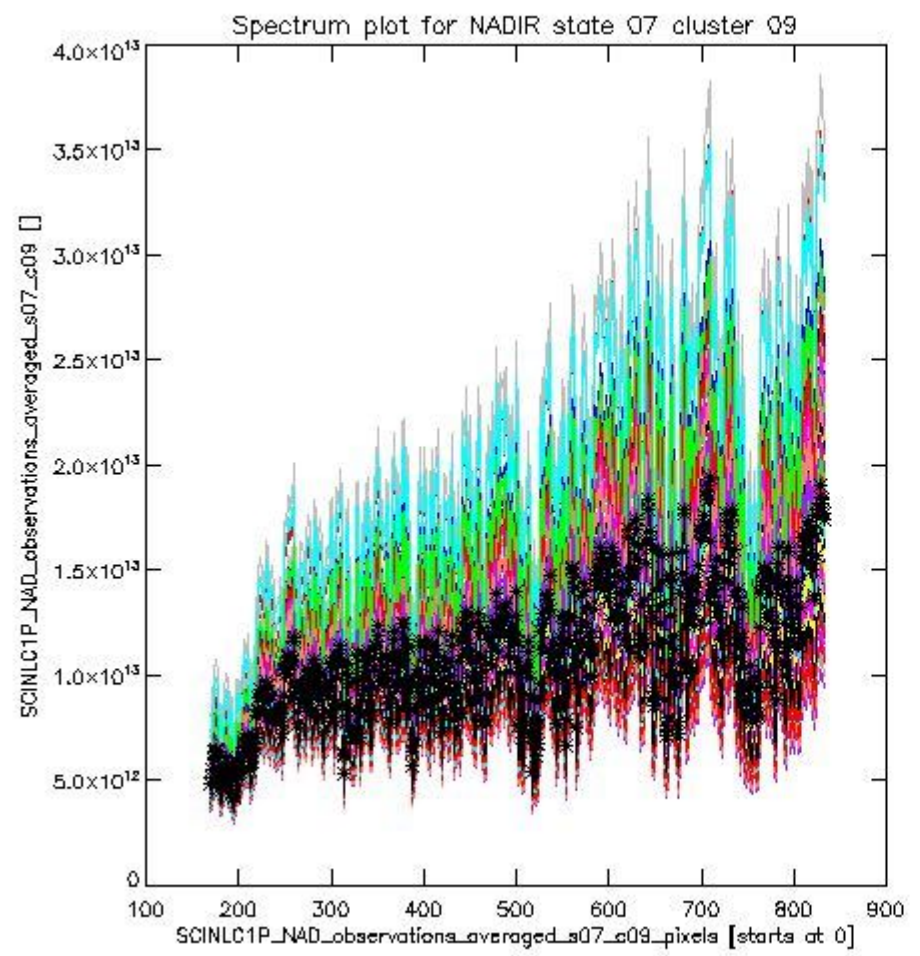
| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 09JUN2011 00:05:58.513 |
| Start time of last sample        | 09JUN2011 23:39:26.321 |
| Reference period start time      | 10MAY2011 00:08:09.414 |
| Reference period stop time       | 08JUN2011 22:35:04.239 |
| Channel number                   | 2                      |
| First pixel number (starts at 0) | 834                    |
| Last pixel number (starts at 0)  | 947                    |



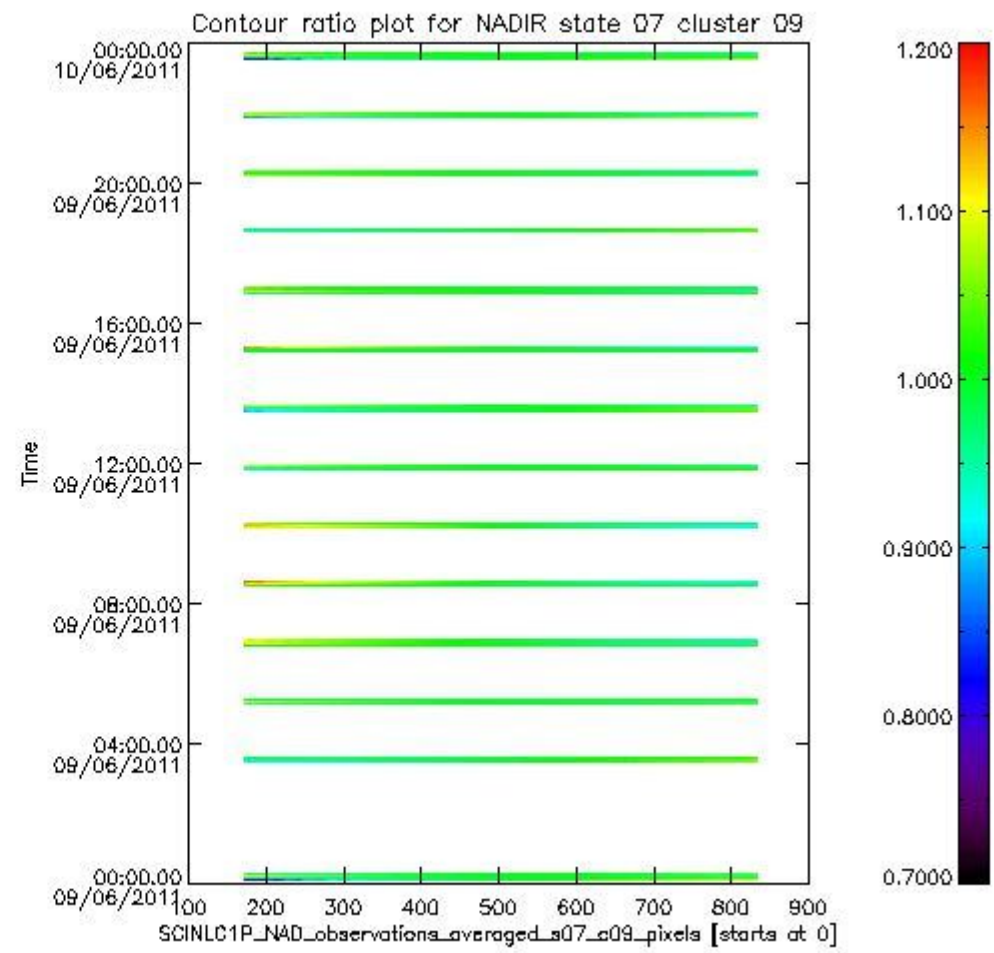
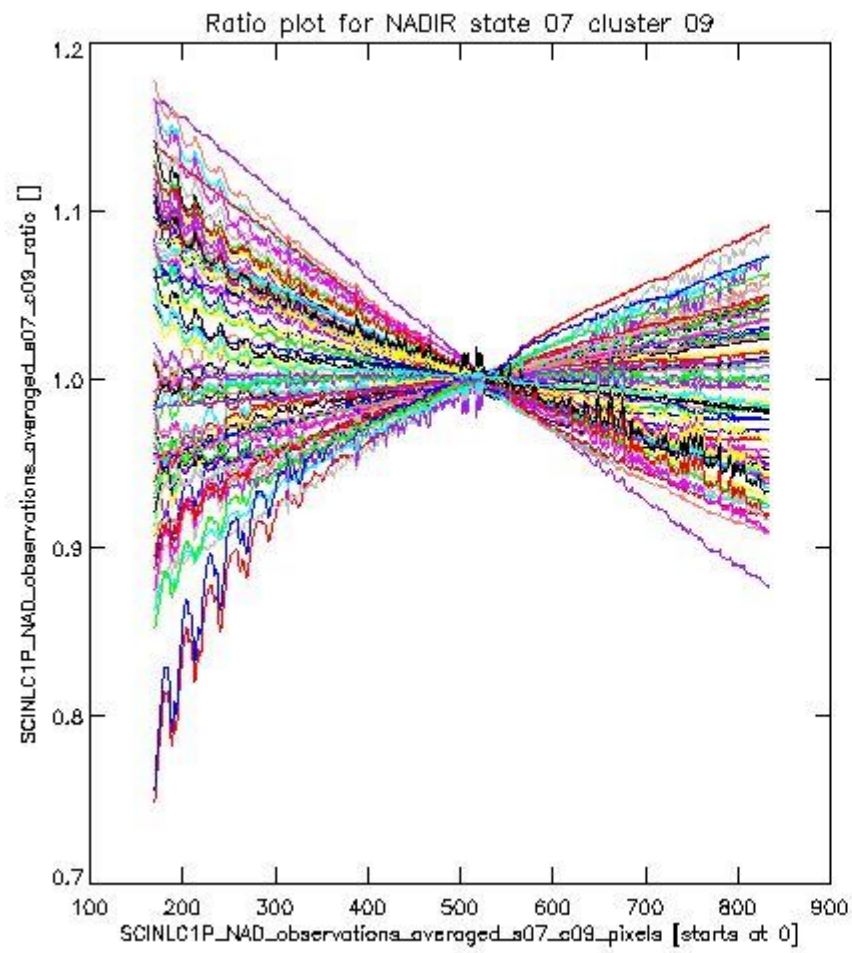


**1.2.2 NADIR state 07 cluster 09** The data for the analysis of NADIR state 07 cluster 09 have the following characteristics:

| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 09JUN2011 00:05:58.513 |
| Start time of last sample        | 09JUN2011 23:39:26.321 |
| Reference period start time      | 10MAY2011 00:08:09.414 |
| Reference period stop time       | 08JUN2011 22:35:04.239 |
| Channel number                   | 2                      |
| First pixel number (starts at 0) | 170                    |
| Last pixel number (starts at 0)  | 833                    |



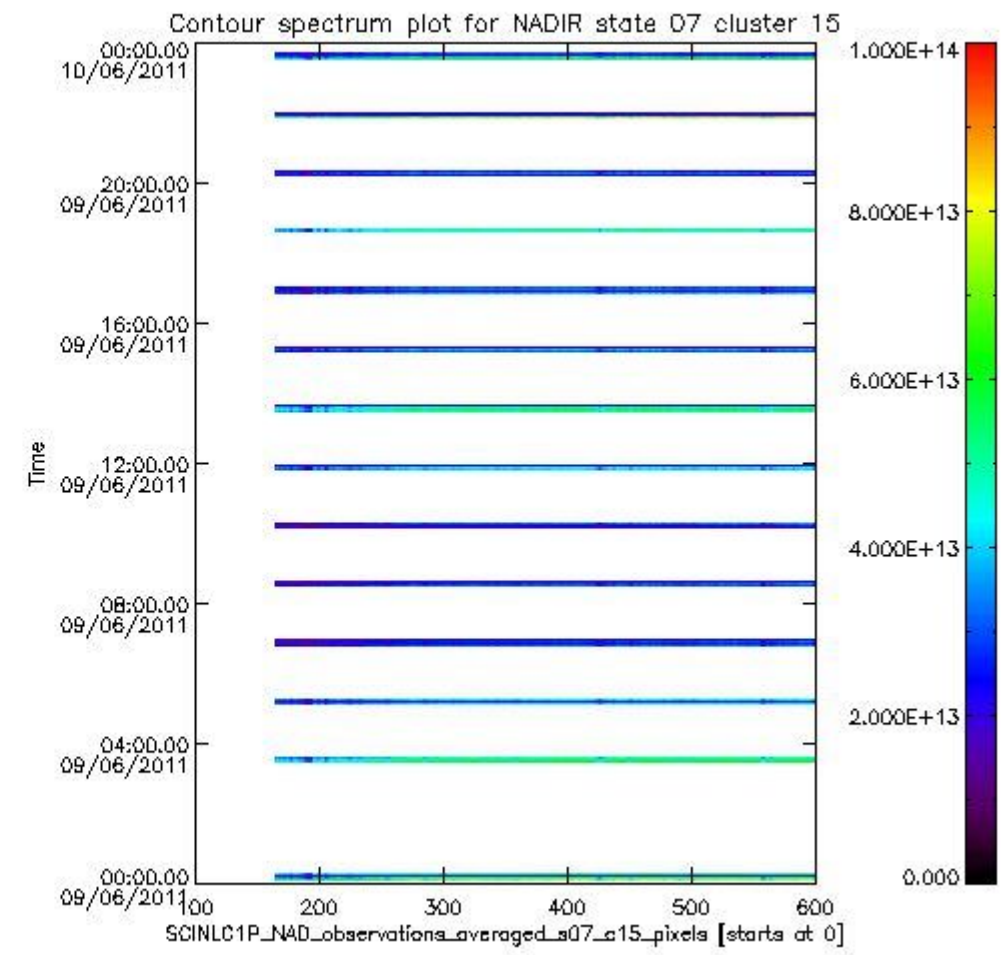
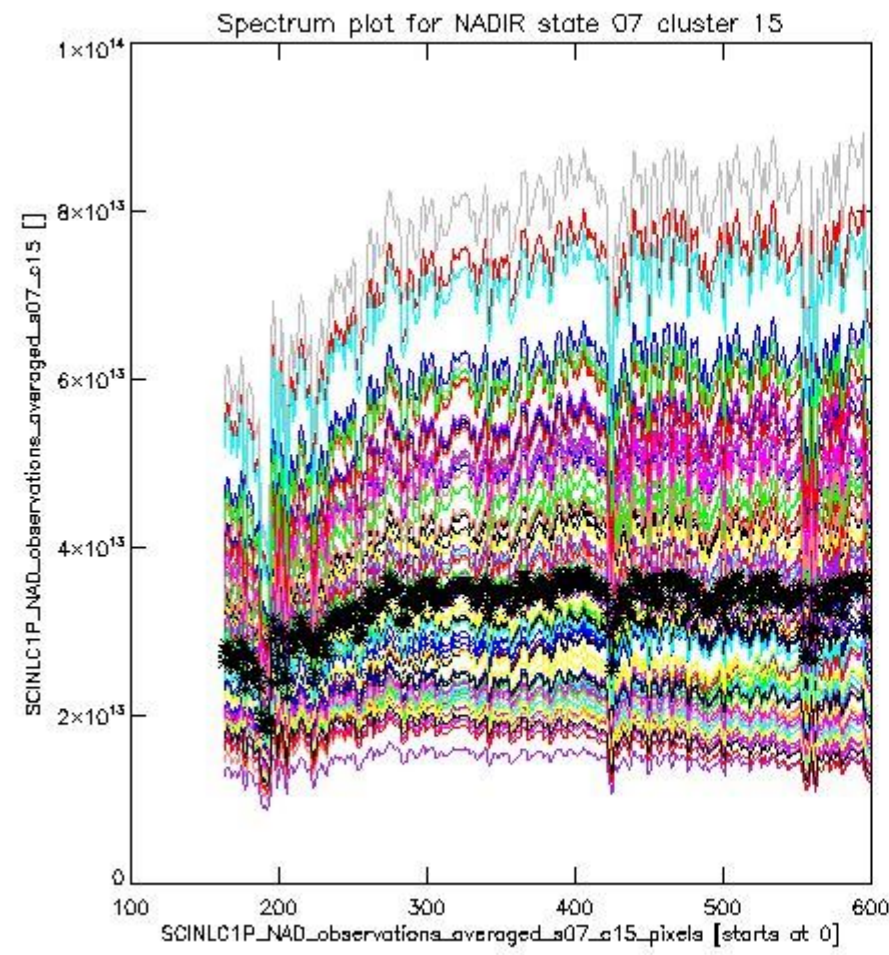
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_2.PNG



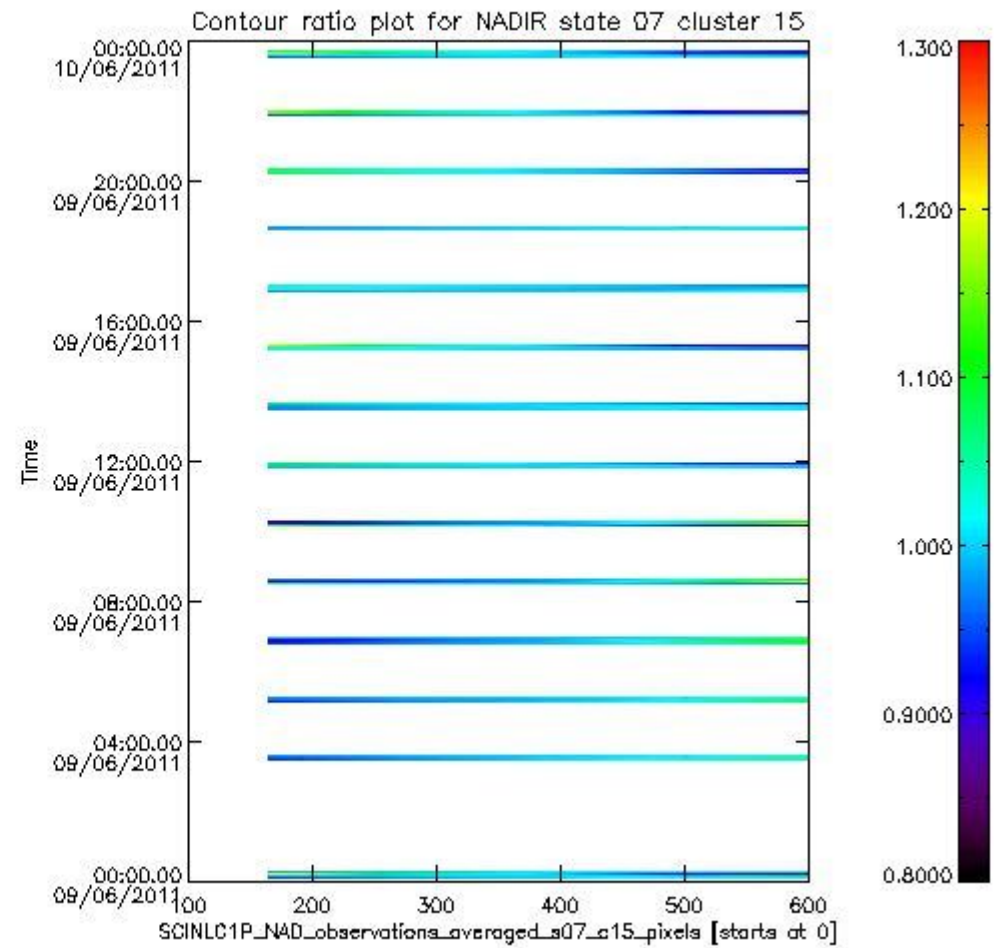
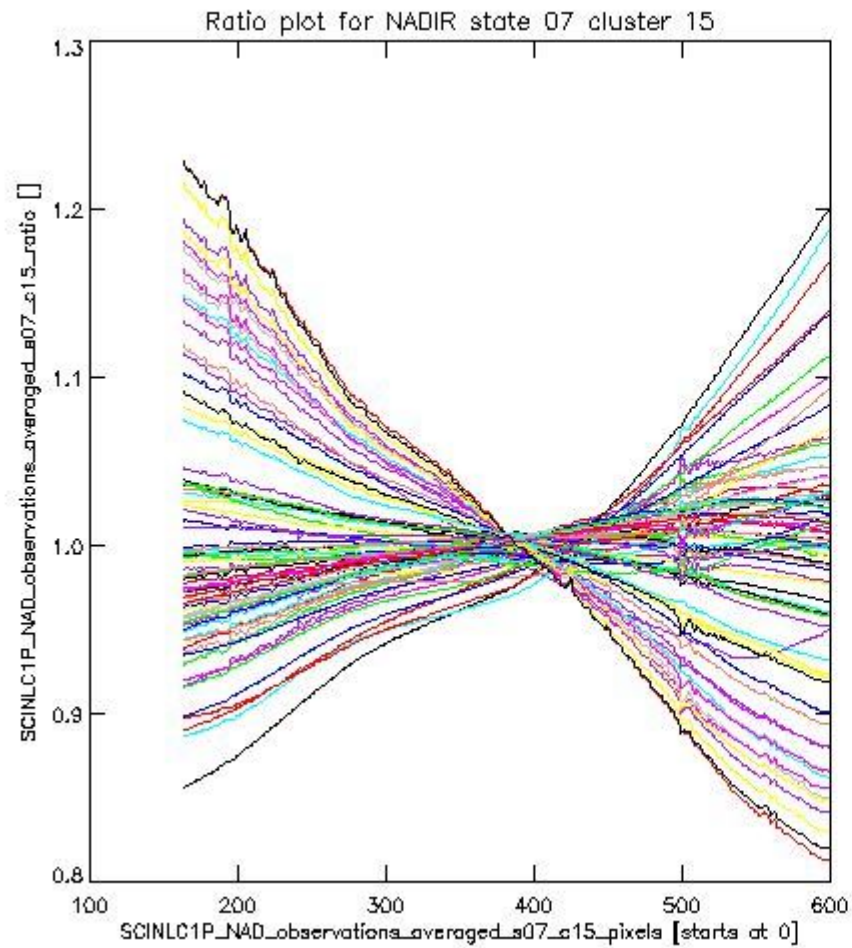
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_3.PNG

**1.2.3 NADIR state 07 cluster 15** The data for the analysis of NADIR state 07 cluster 15 have the following characteristics:

| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 09JUN2011 00:05:58.513 |
| Start time of last sample        | 09JUN2011 23:39:26.321 |
| Reference period start time      | 10MAY2011 00:08:09.414 |
| Reference period stop time       | 08JUN2011 22:35:04.239 |
| Channel number                   | 3                      |
| First pixel number (starts at 0) | 163                    |
| Last pixel number (starts at 0)  | 598                    |



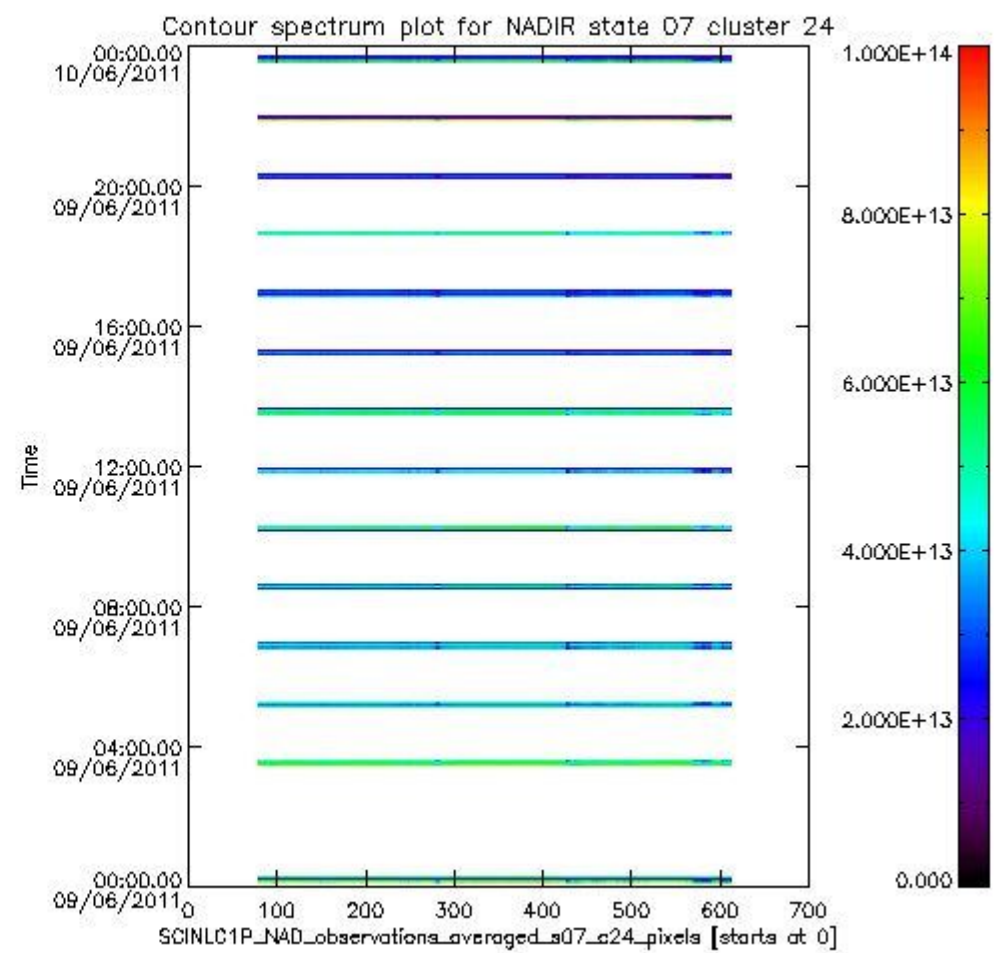
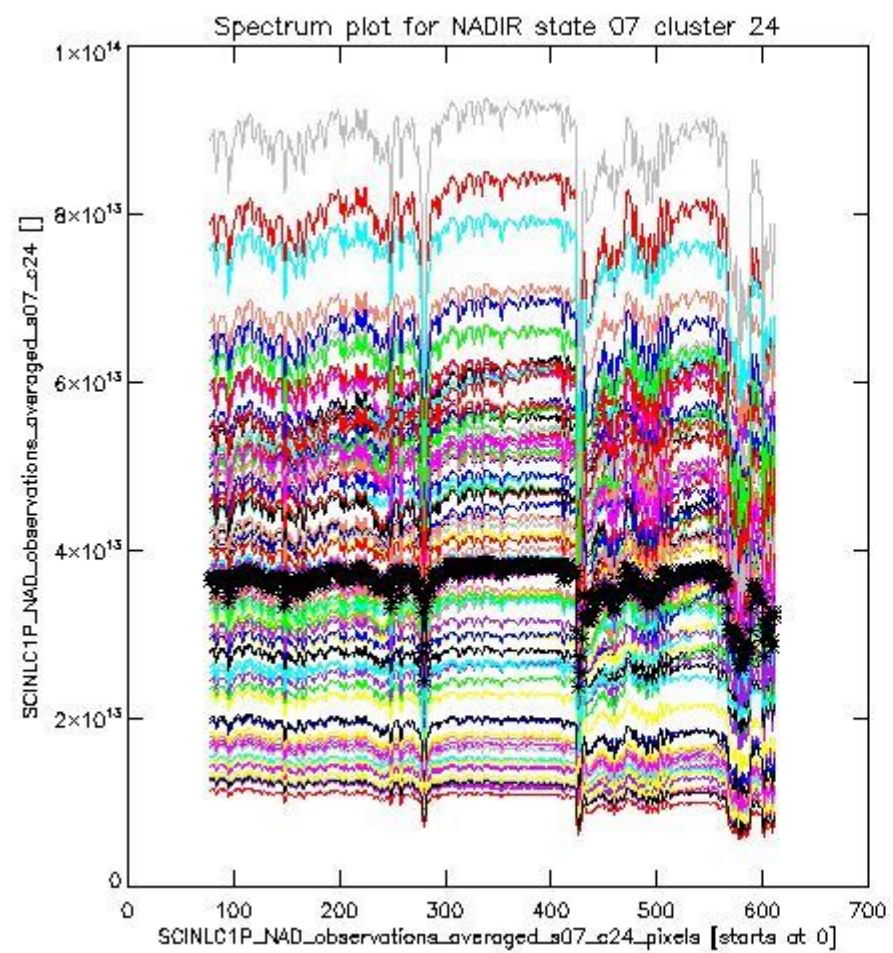
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_4.PNG



sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_5.PNG

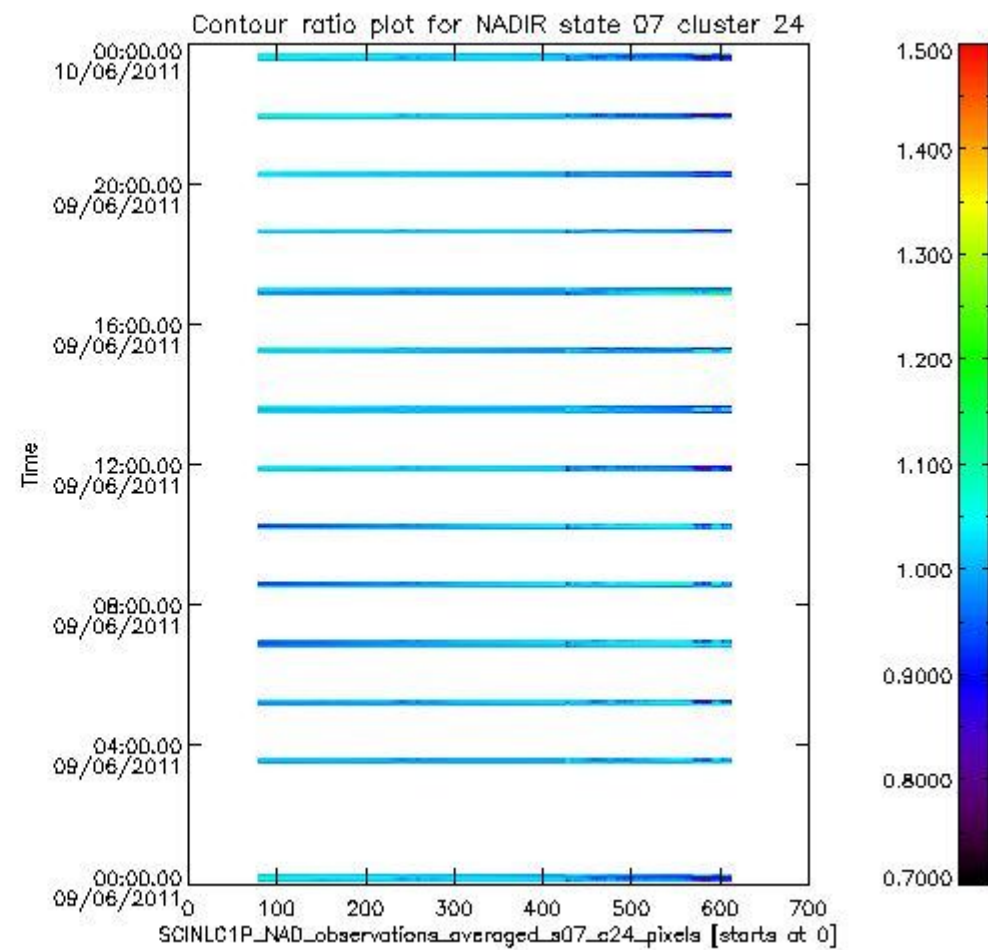
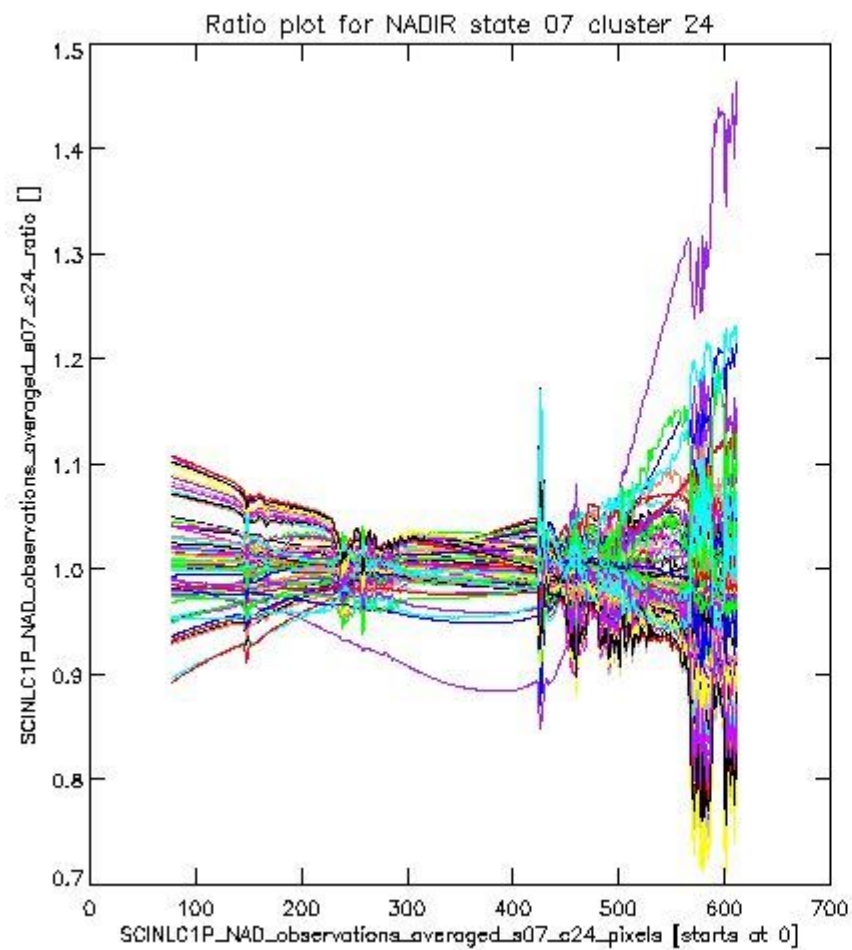
**1.2.4 NADIR state 07 cluster 24** The data for the analysis of NADIR state 07 cluster 24 have the following characteristics:

| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 09JUN2011 00:05:58.513 |
| Start time of last sample        | 09JUN2011 23:39:26.321 |
| Reference period start time      | 10MAY2011 00:08:09.414 |
| Reference period stop time       | 08JUN2011 22:35:04.239 |
| Channel number                   | 4                      |
| First pixel number (starts at 0) | 78                     |
| Last pixel number (starts at 0)  | 612                    |



sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_6.PNG

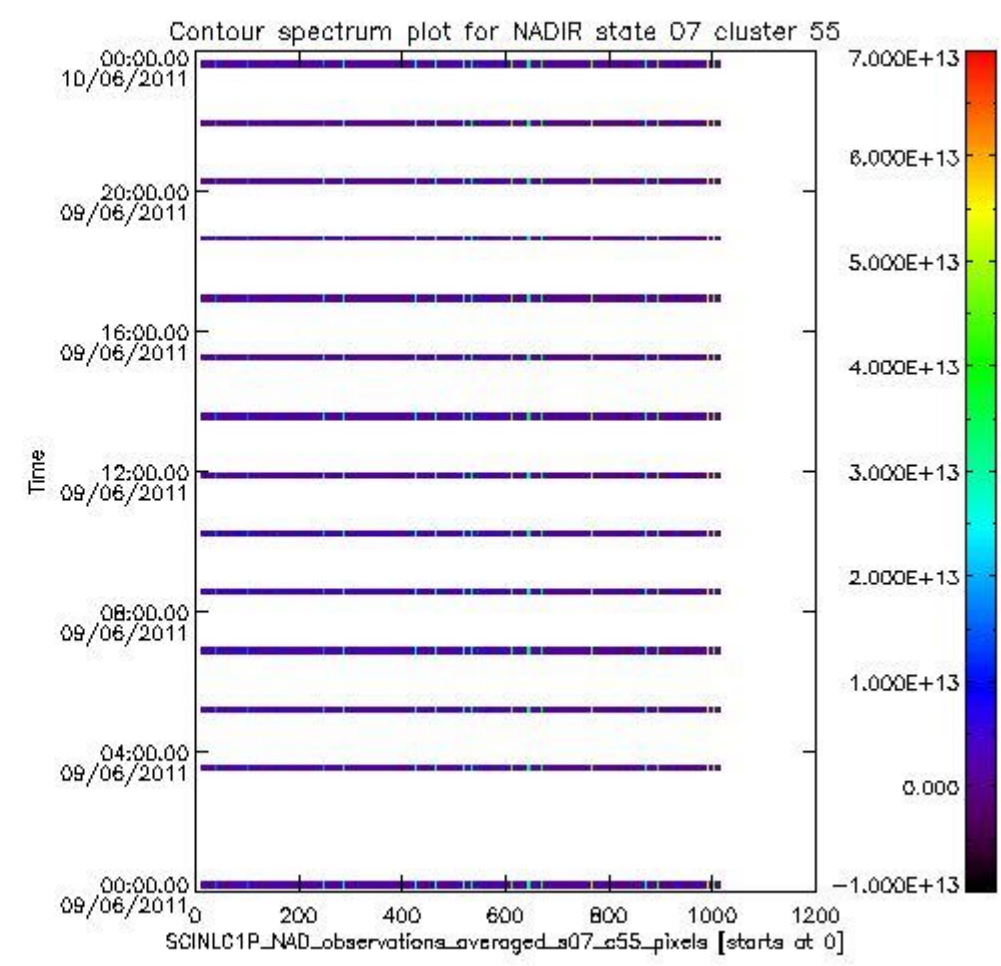
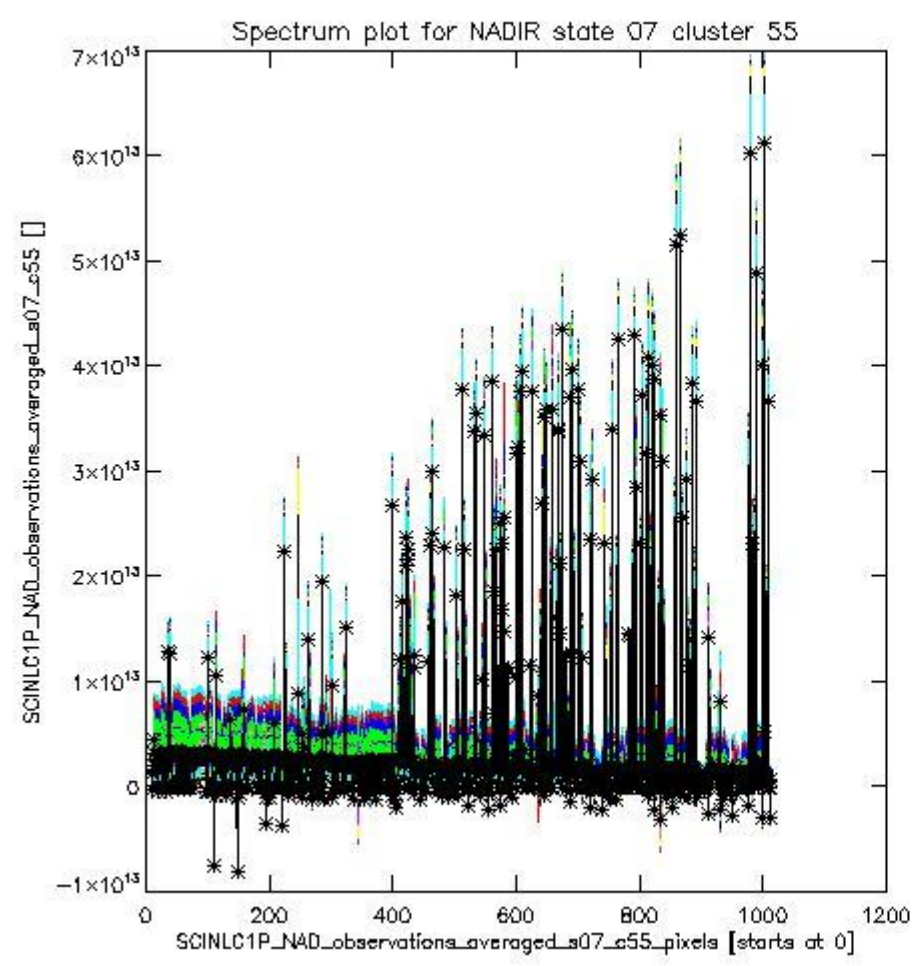




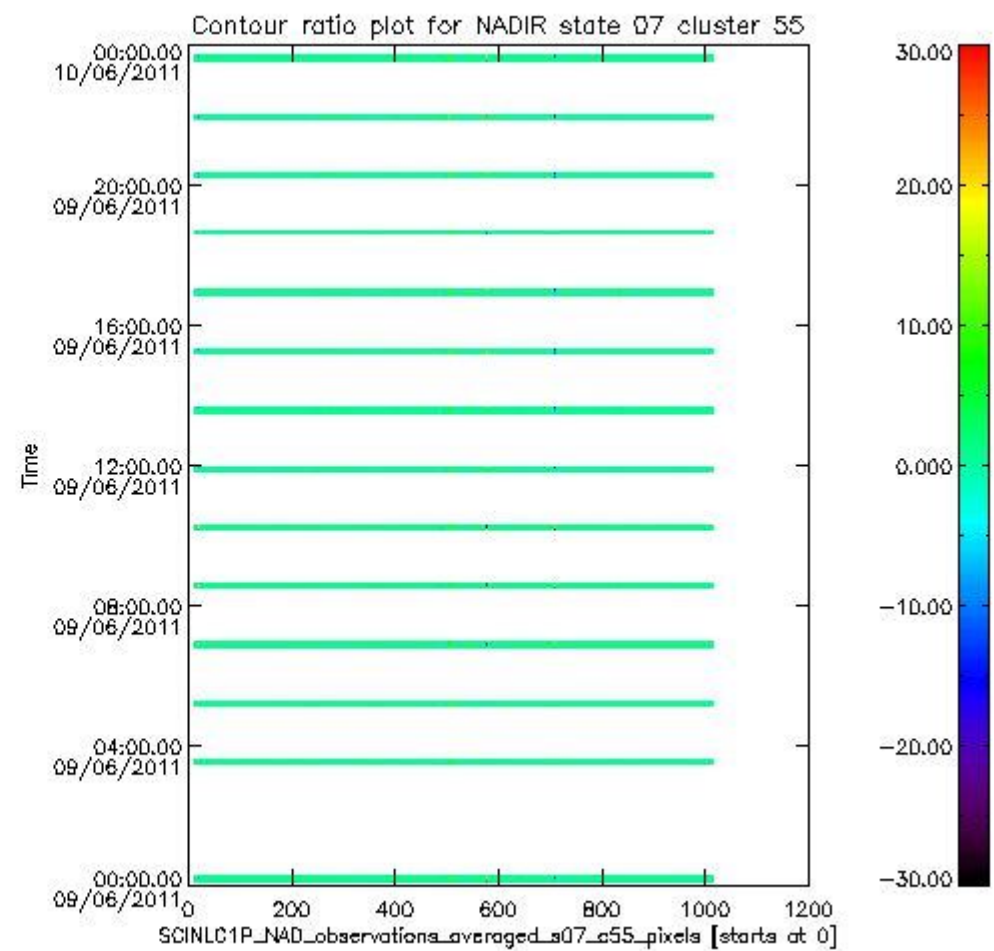
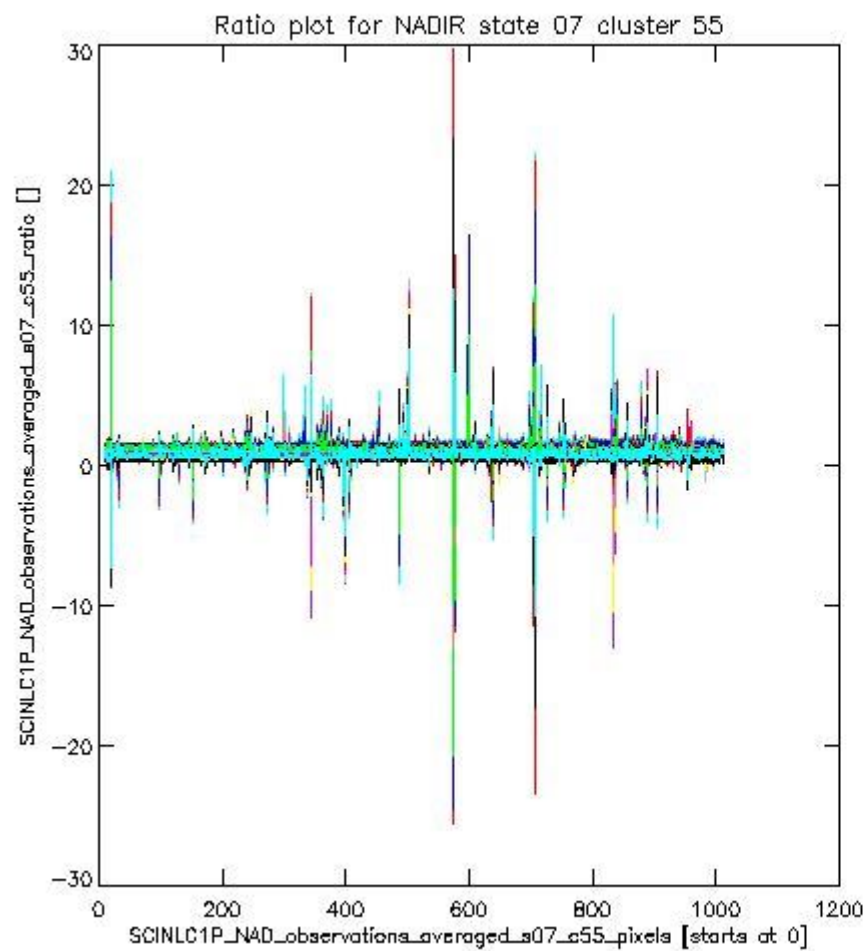
sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_7.PNG

**1.2.5 NADIR state 07 cluster 55** The data for the analysis of NADIR state 07 cluster 55 have the following characteristics:

| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 09JUN2011 00:05:58.513 |
| Start time of last sample        | 09JUN2011 23:39:26.321 |
| Reference period start time      | 10MAY2011 00:08:09.414 |
| Reference period stop time       | 08JUN2011 22:35:04.239 |
| Channel number                   | 8                      |
| First pixel number (starts at 0) | 10                     |
| Last pixel number (starts at 0)  | 1013                   |



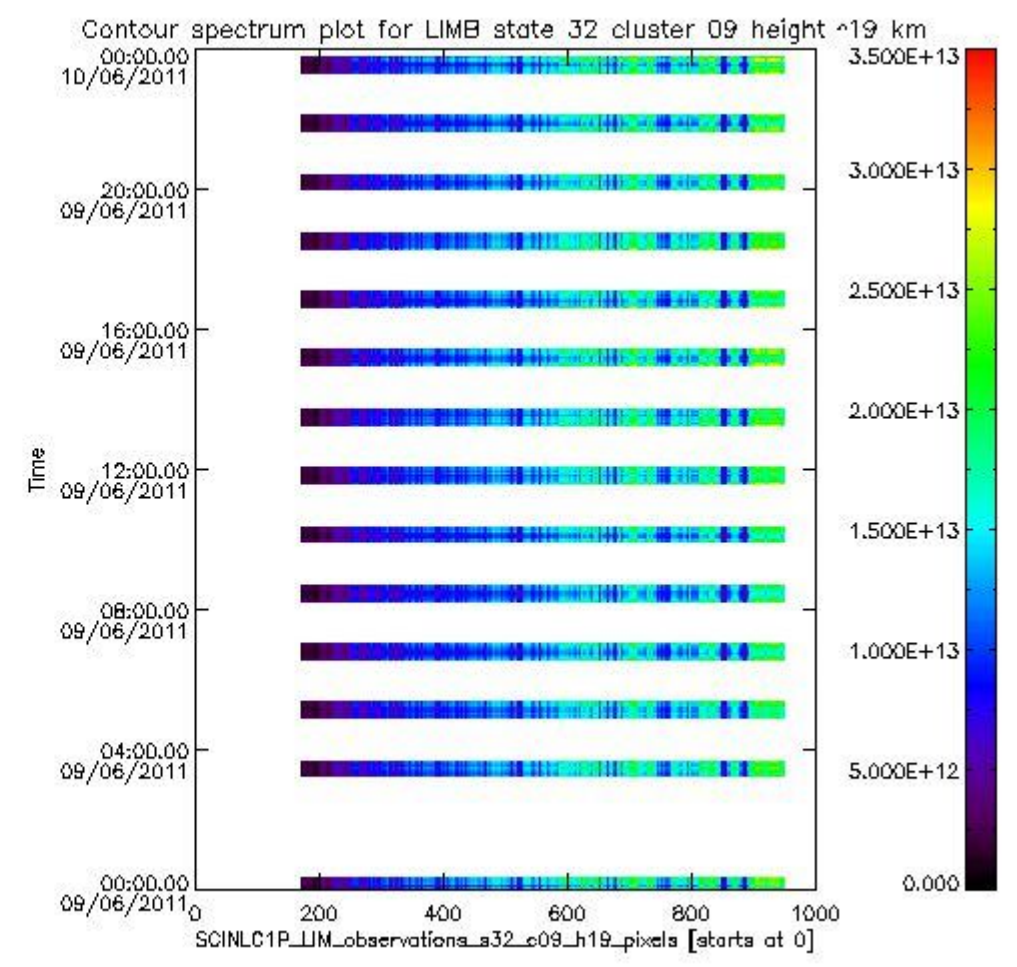
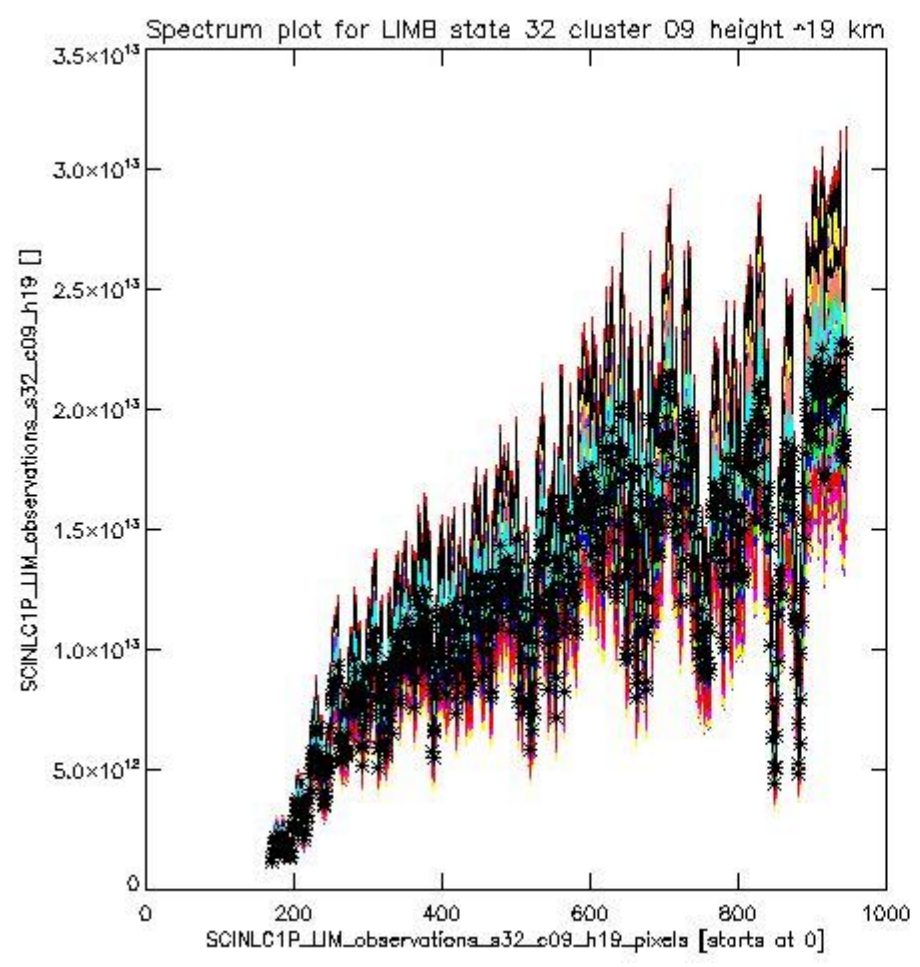
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_8.PNG



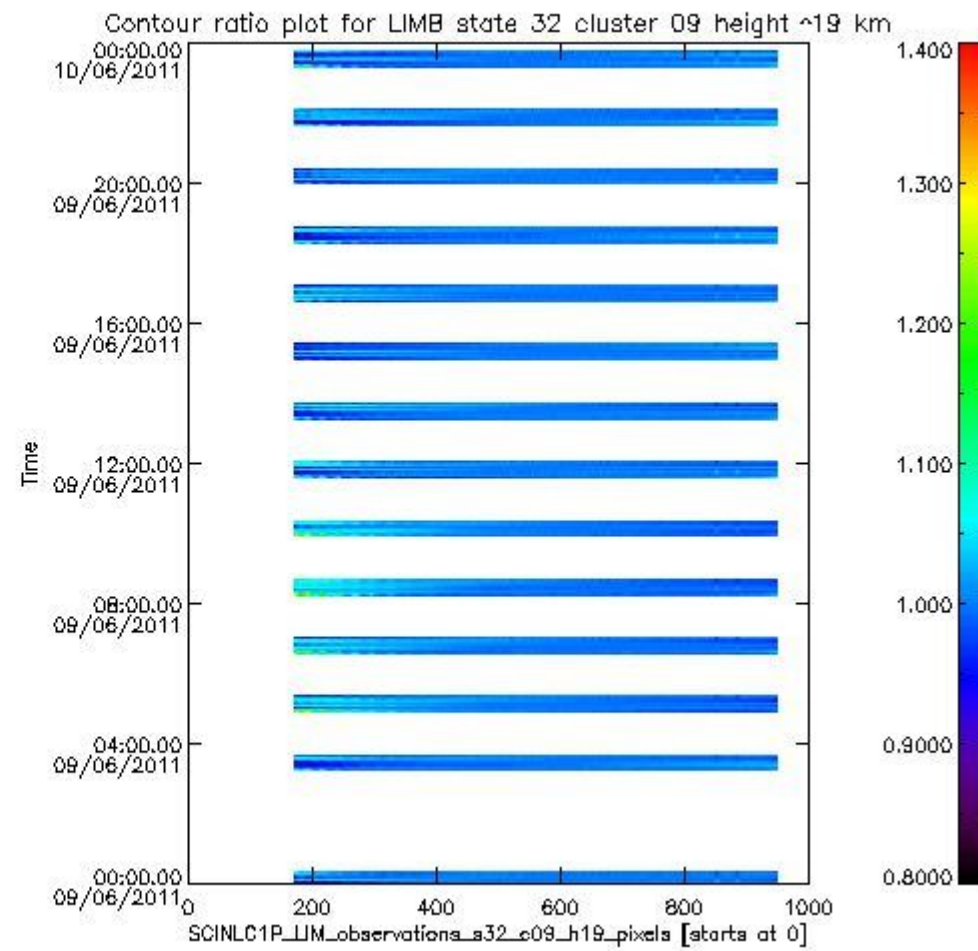
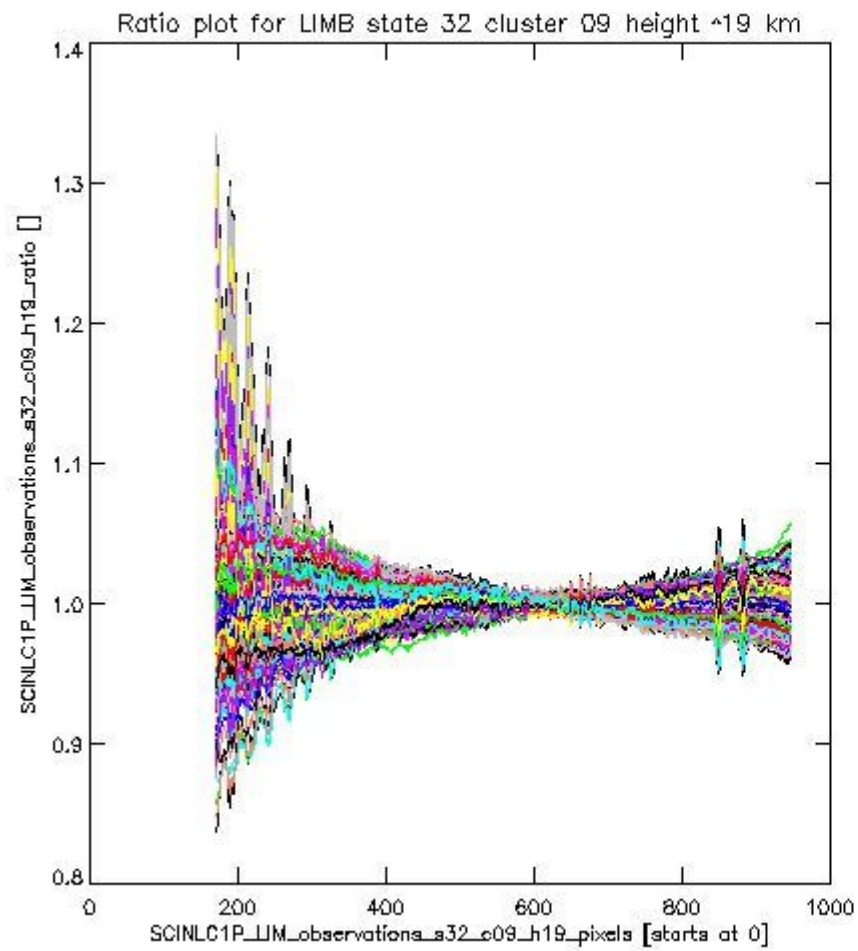
sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_9.PNG

**1.2.6 LIMB state 32 cluster 09 height ~19 km** The data for the analysis of LIMB state 32 cluster 09 height ~19 km have the following characteristics:

| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 09JUN2011 00:00:58.849 |
| Start time of last sample        | 09JUN2011 23:42:37.626 |
| Reference period start time      | 10MAY2011 00:01:07.004 |
| Reference period stop time       | 08JUN2011 23:58:56.103 |
| Channel number                   | 2                      |
| First pixel number (starts at 0) | 170                    |
| Last pixel number (starts at 0)  | 947                    |



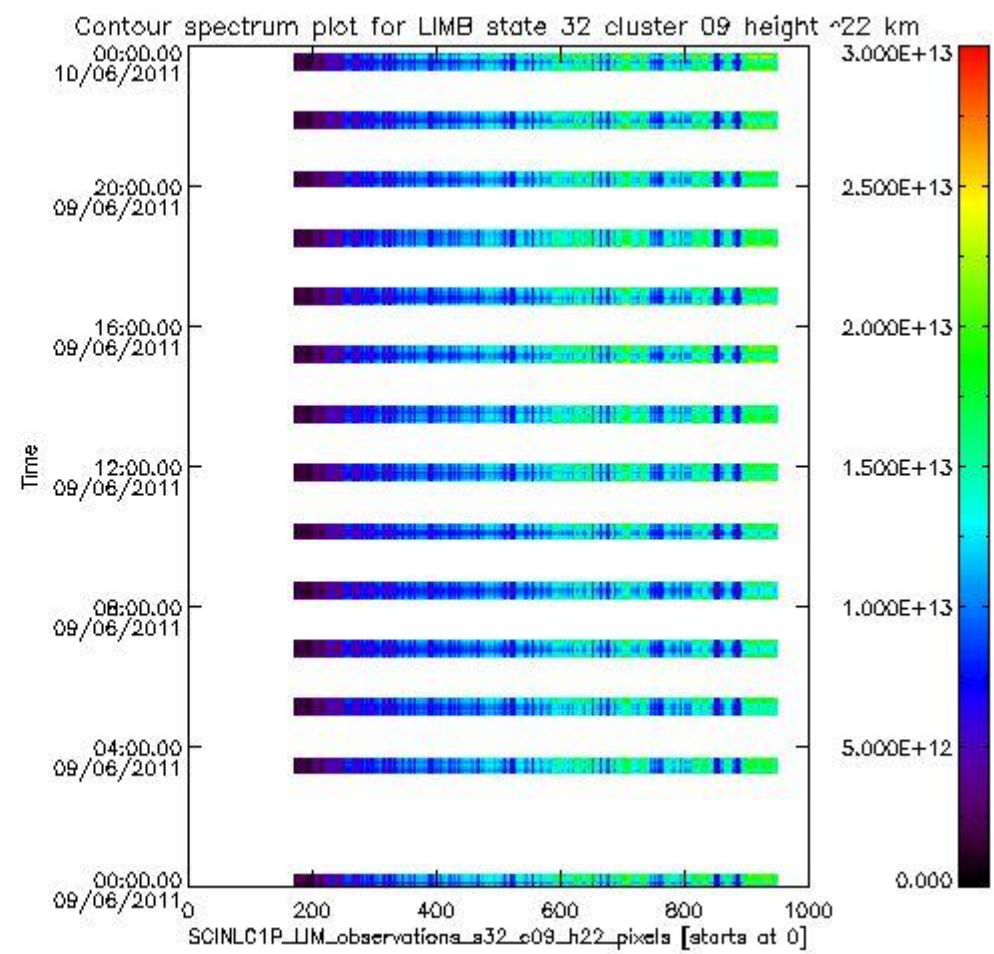
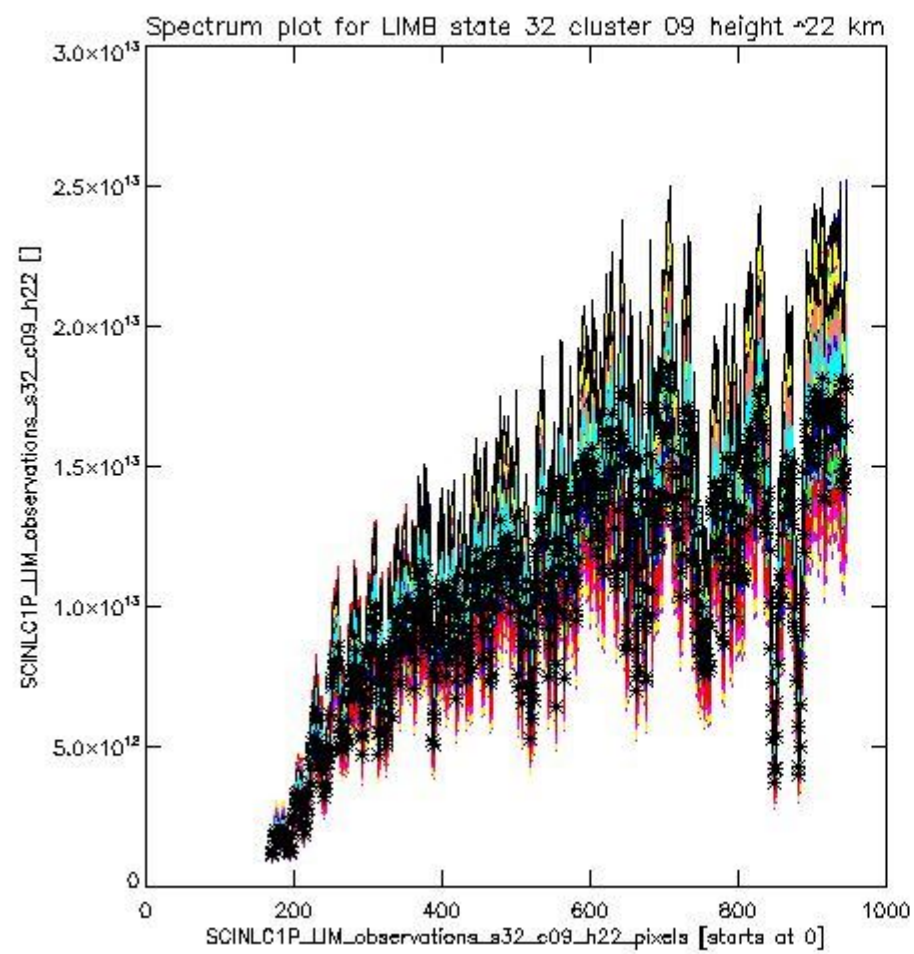
sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_10.PNG



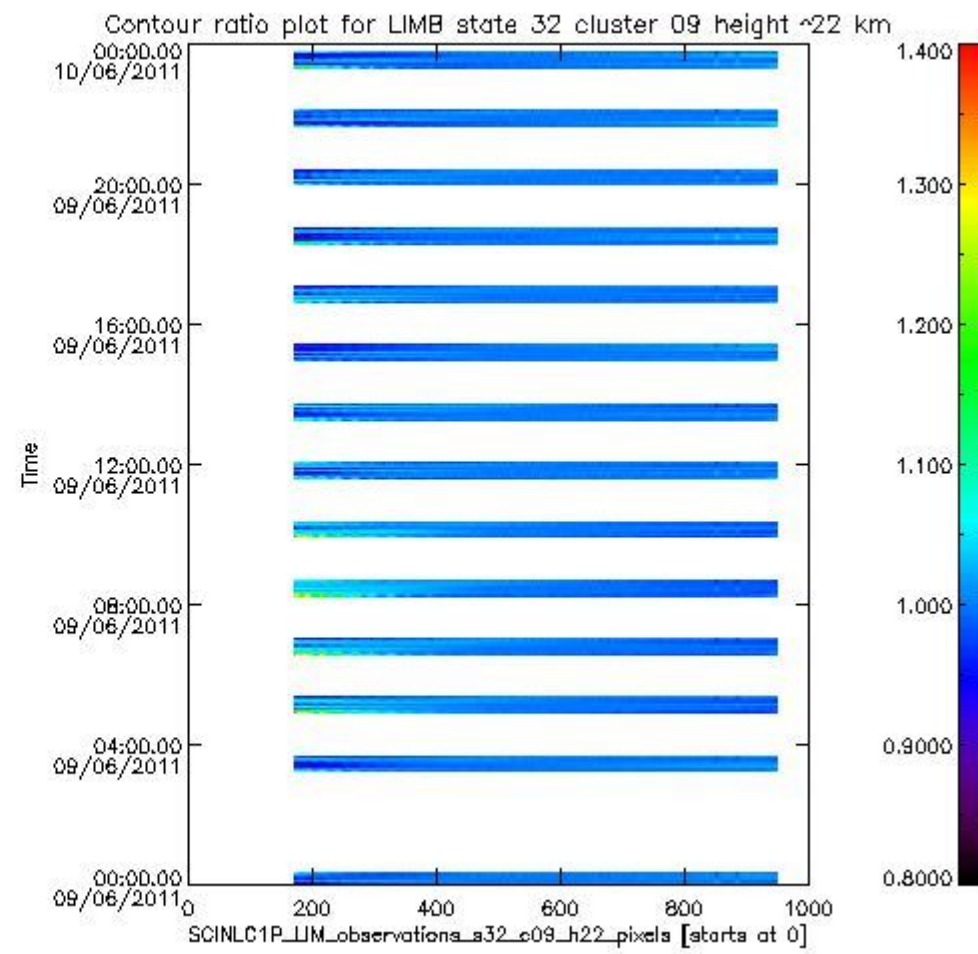
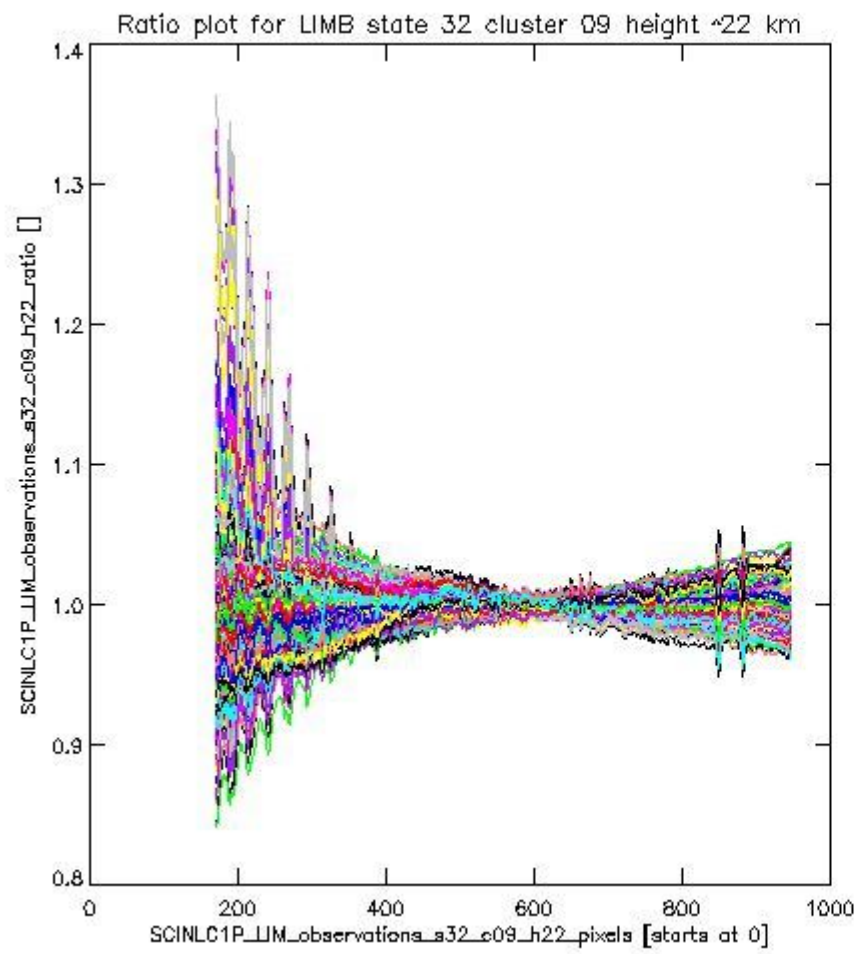
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_11.PNG

**1.2.7 LIMB state 32 cluster 09 height ~22 km** The data for the analysis of LIMB state 32 cluster 09 height ~22 km have the following characteristics:

| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 09JUN2011 00:00:58.849 |
| Start time of last sample        | 09JUN2011 23:42:37.626 |
| Reference period start time      | 10MAY2011 00:01:07.004 |
| Reference period stop time       | 08JUN2011 23:58:56.103 |
| Channel number                   | 2                      |
| First pixel number (starts at 0) | 170                    |
| Last pixel number (starts at 0)  | 947                    |



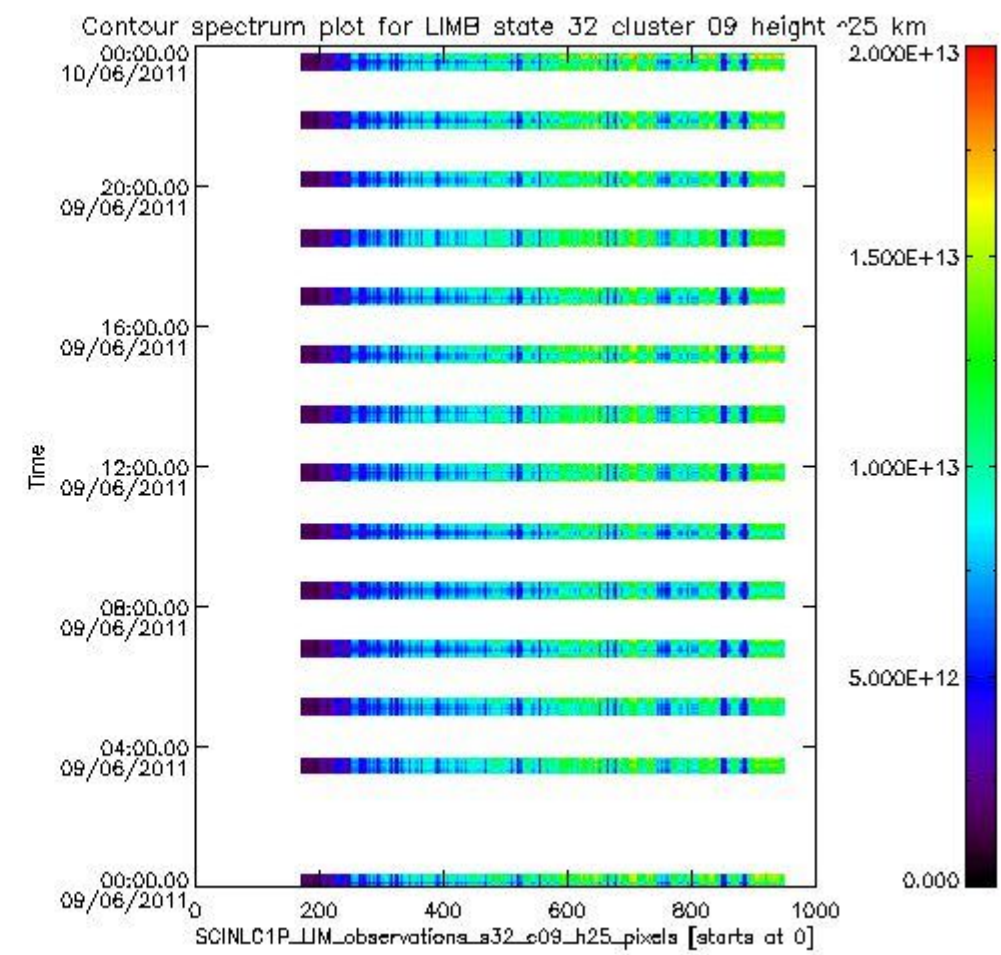
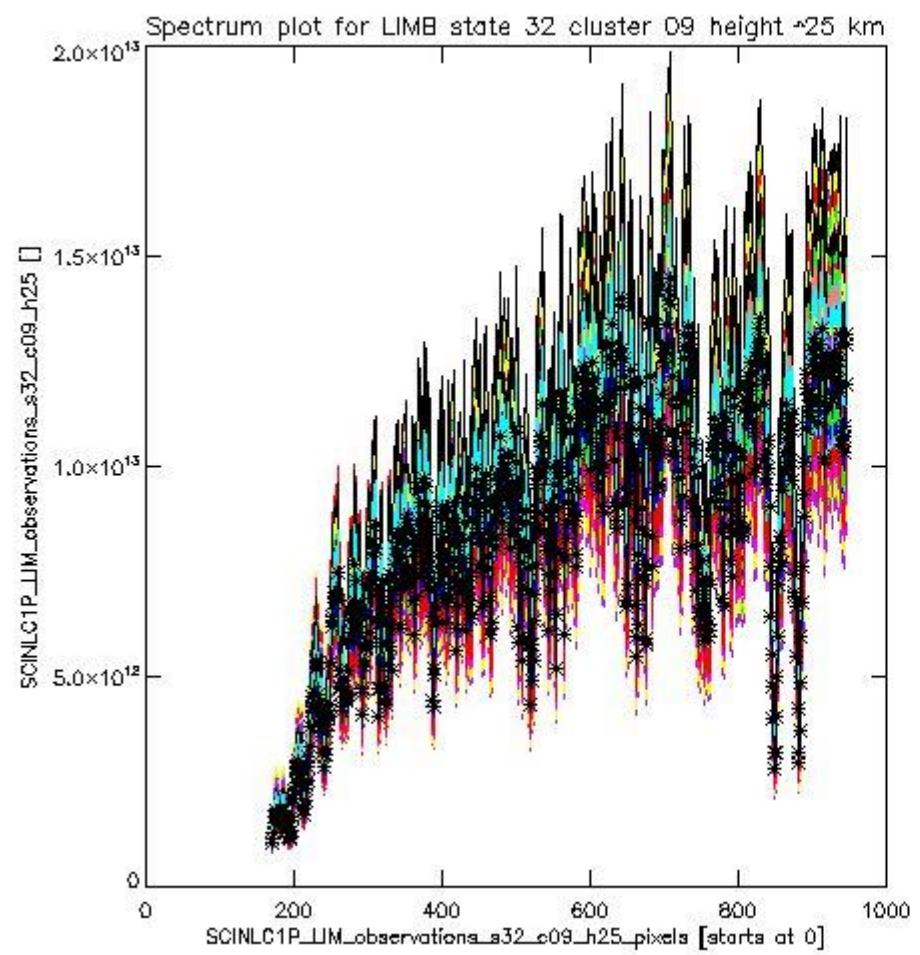
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_12.PNG



sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_13.PNG

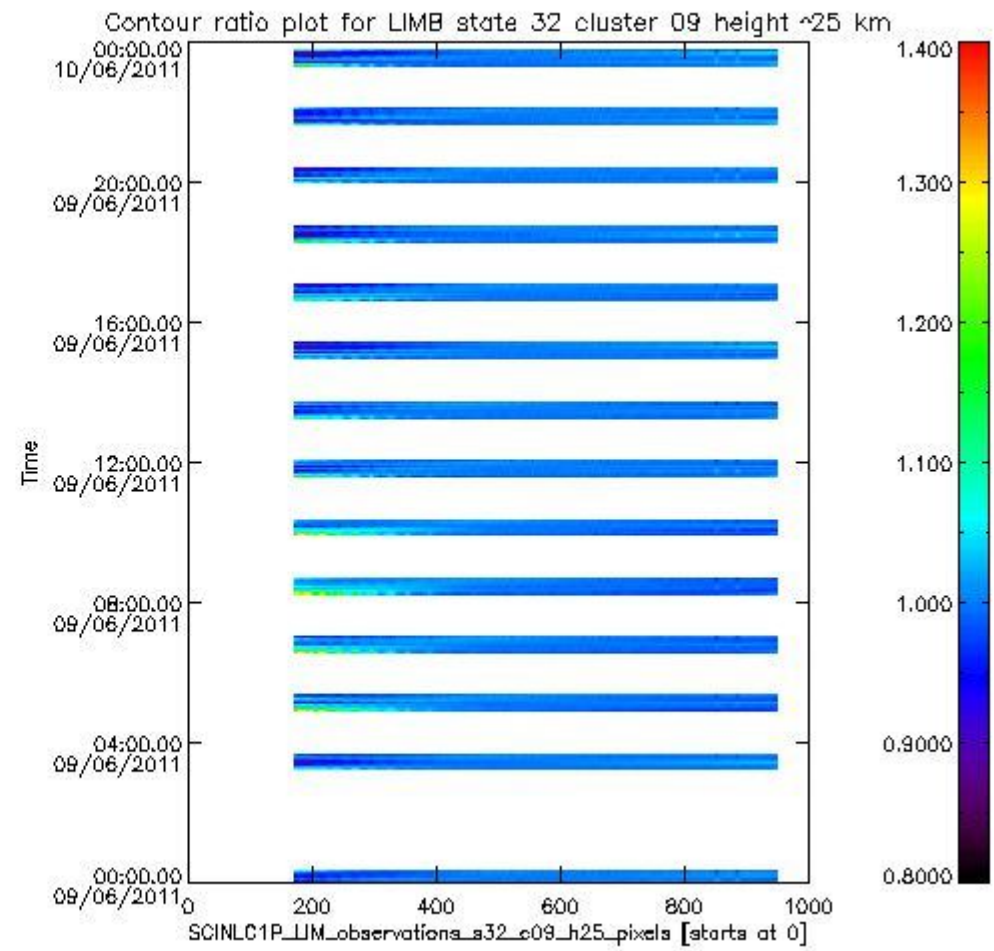
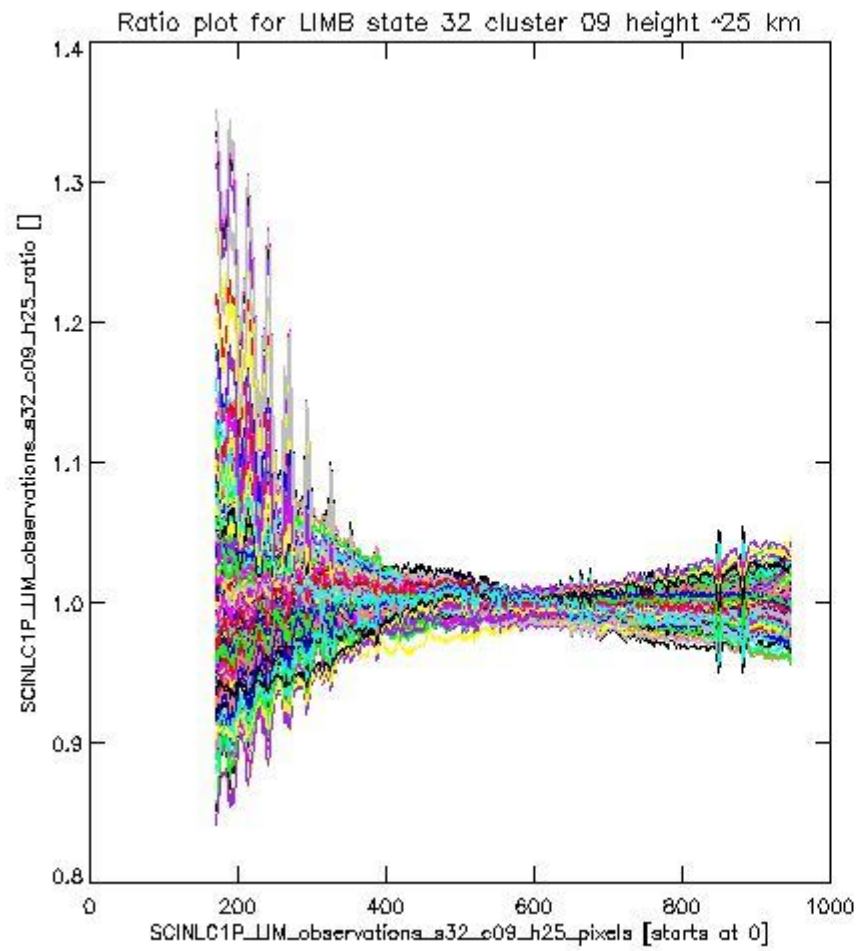
**1.2.8 LIMB state 32 cluster 09 height ~25 km** The data for the analysis of LIMB state 32 cluster 09 height ~25 km have the following characteristics:

| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 09JUN2011 00:00:58.849 |
| Start time of last sample        | 09JUN2011 23:42:37.626 |
| Reference period start time      | 10MAY2011 00:01:07.004 |
| Reference period stop time       | 08JUN2011 23:58:56.103 |
| Channel number                   | 2                      |
| First pixel number (starts at 0) | 170                    |
| Last pixel number (starts at 0)  | 947                    |



sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_14.PNG

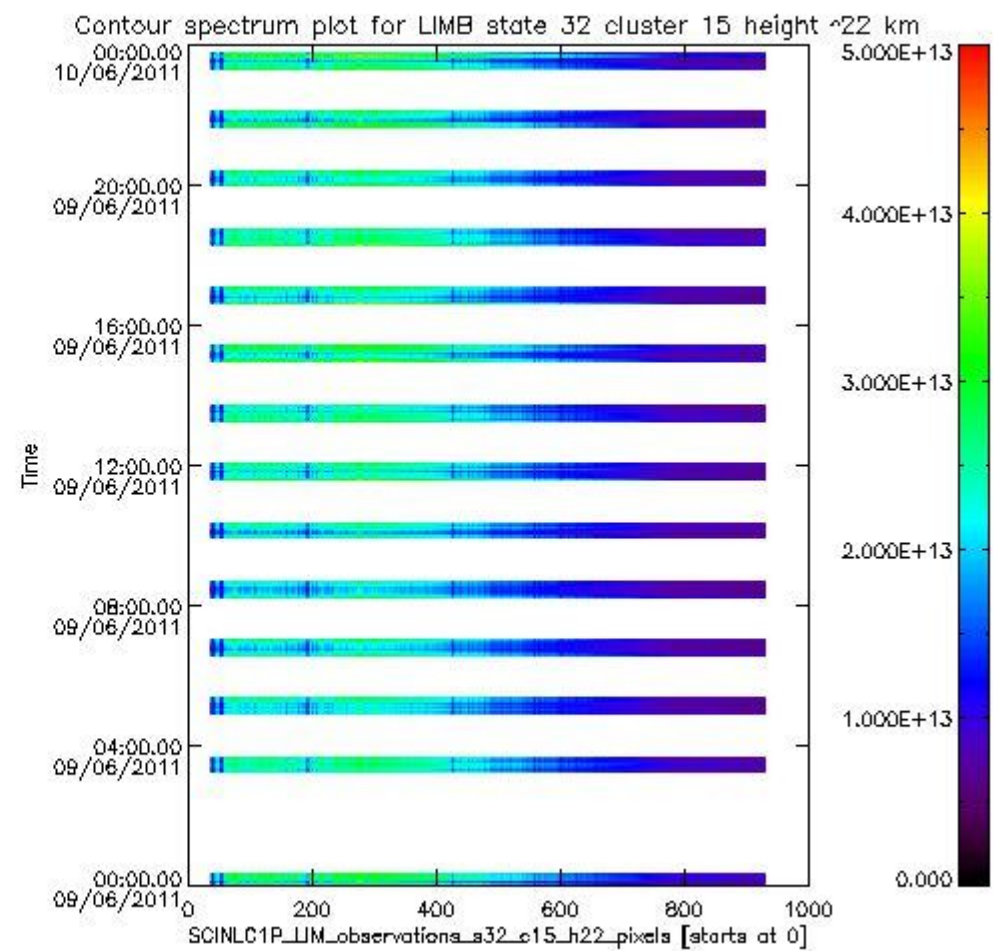
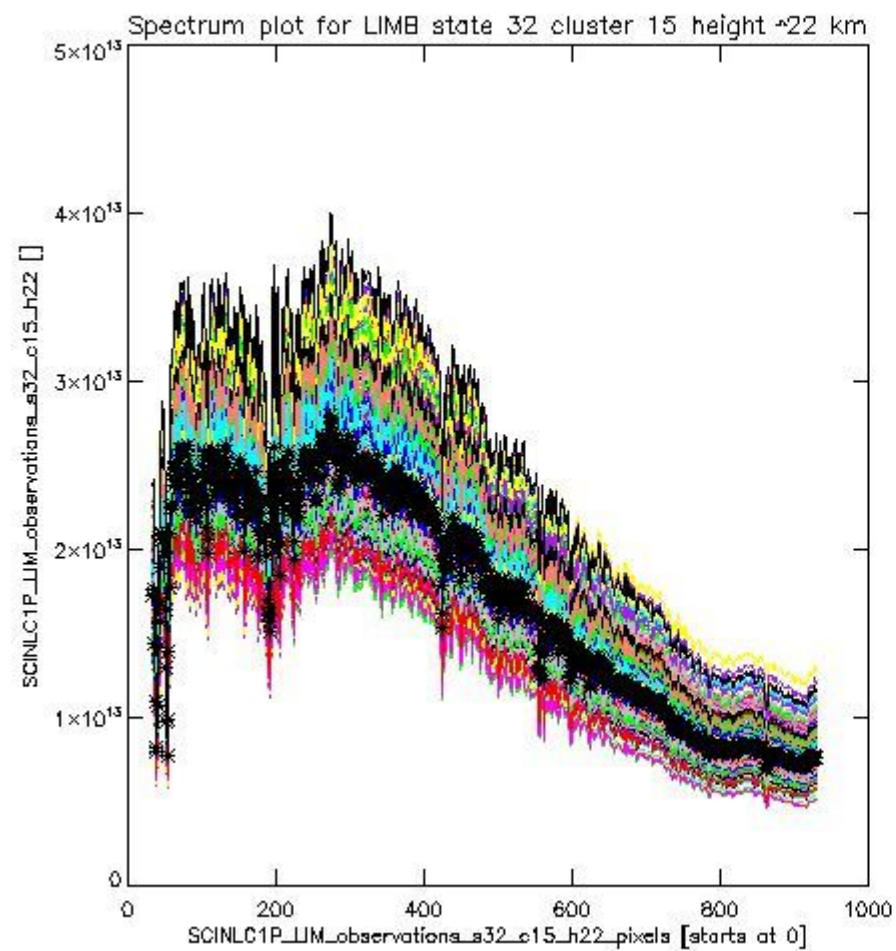




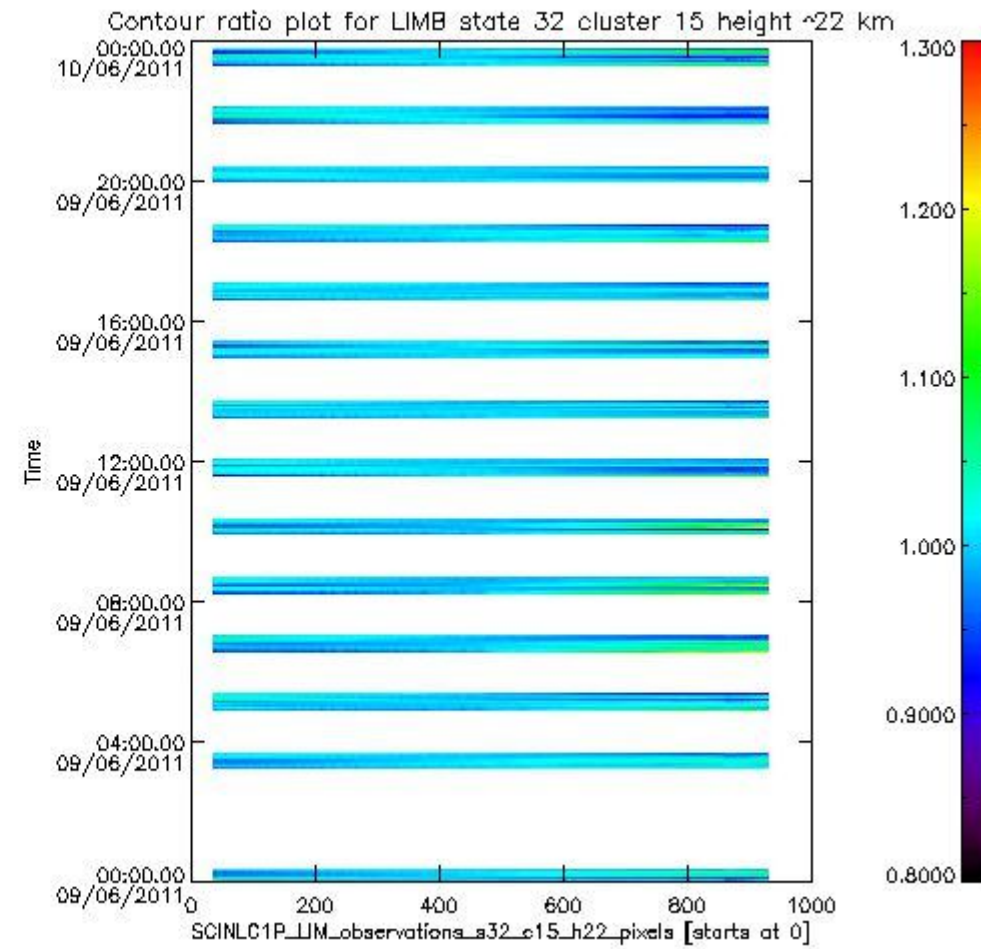
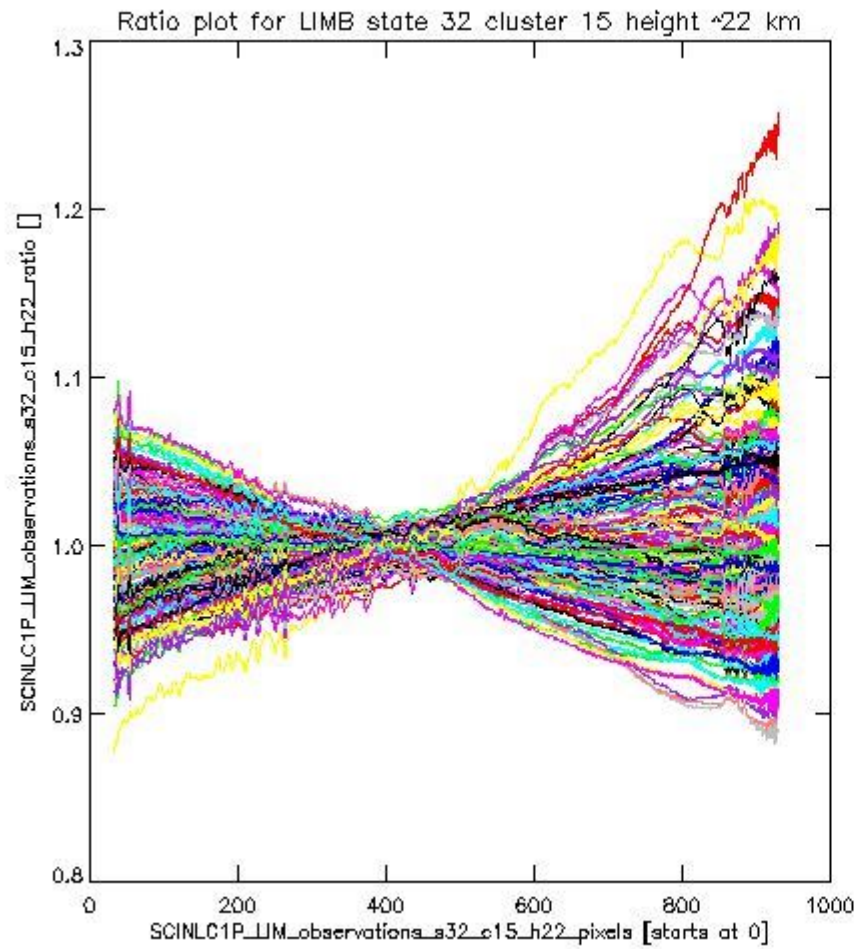
sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_15.PNG

**1.2.9 LIMB state 32 cluster 15 height ~22 km** The data for the analysis of LIMB state 32 cluster 15 height ~22 km have the following characteristics:

| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 09JUN2011 00:00:58.849 |
| Start time of last sample        | 09JUN2011 23:42:37.626 |
| Reference period start time      | 10MAY2011 00:01:07.004 |
| Reference period stop time       | 08JUN2011 23:58:56.103 |
| Channel number                   | 3                      |
| First pixel number (starts at 0) | 33                     |
| Last pixel number (starts at 0)  | 929                    |



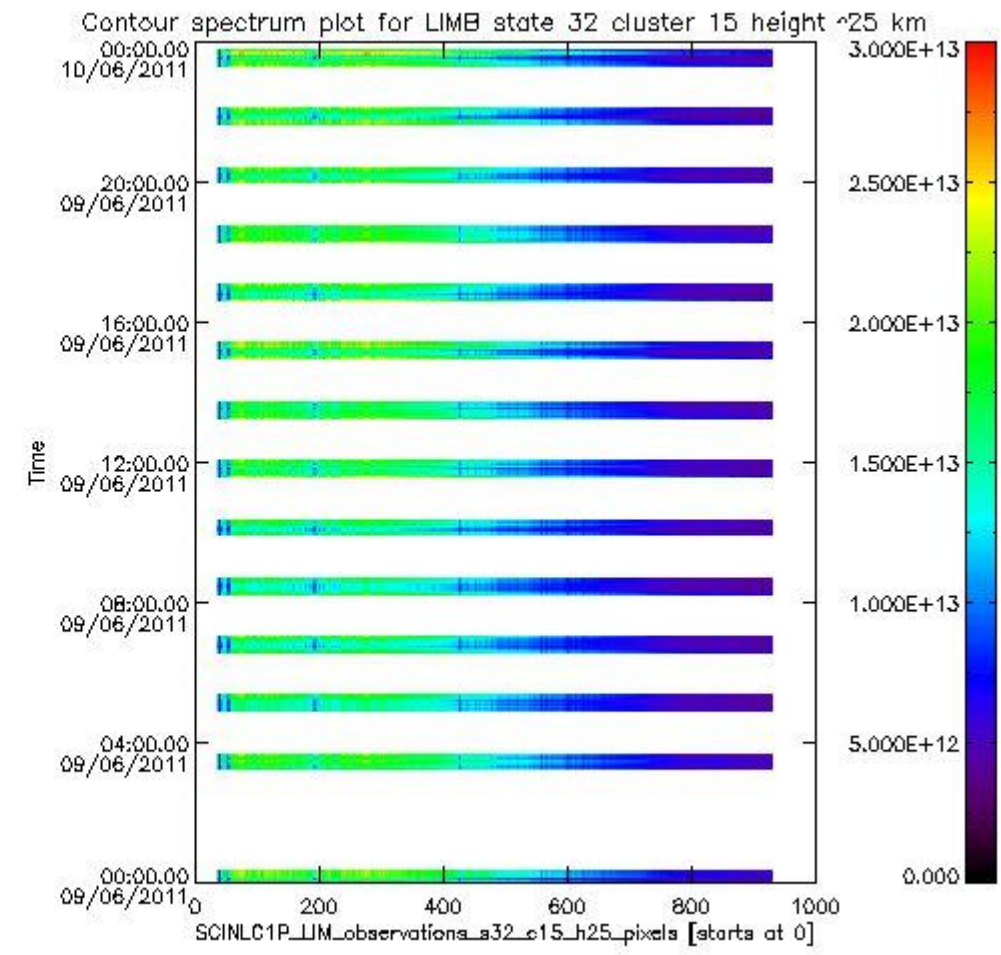
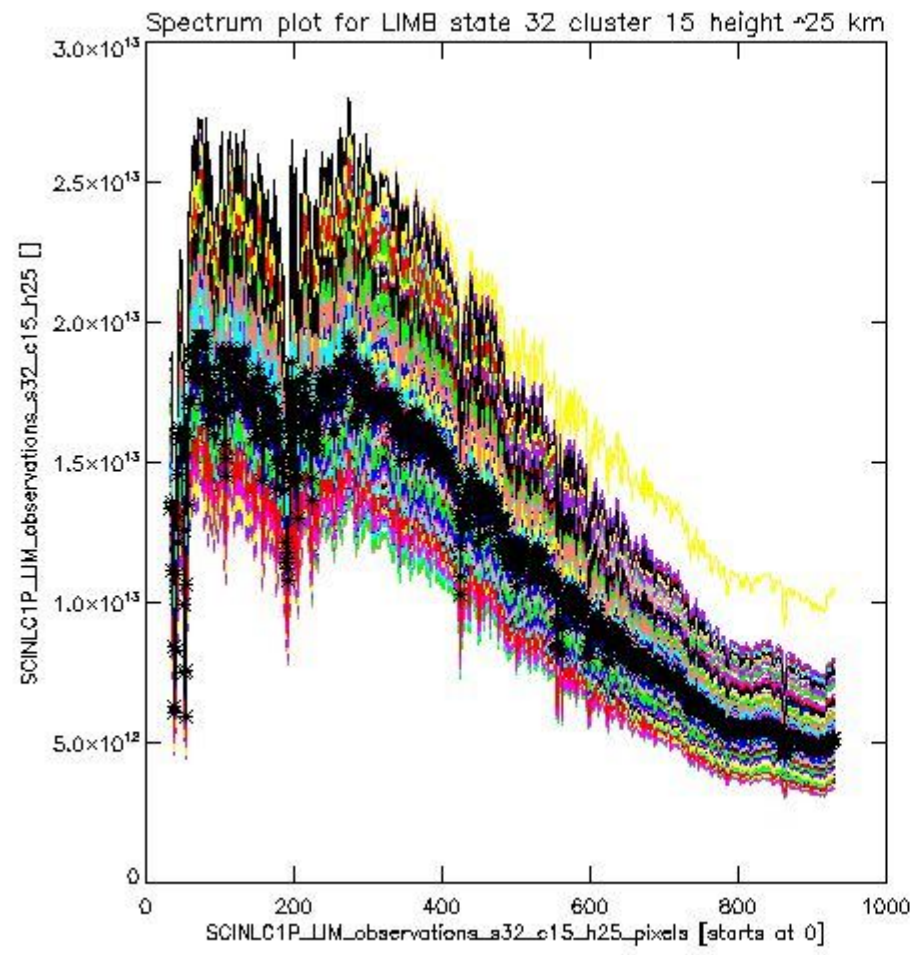
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_16.PNG



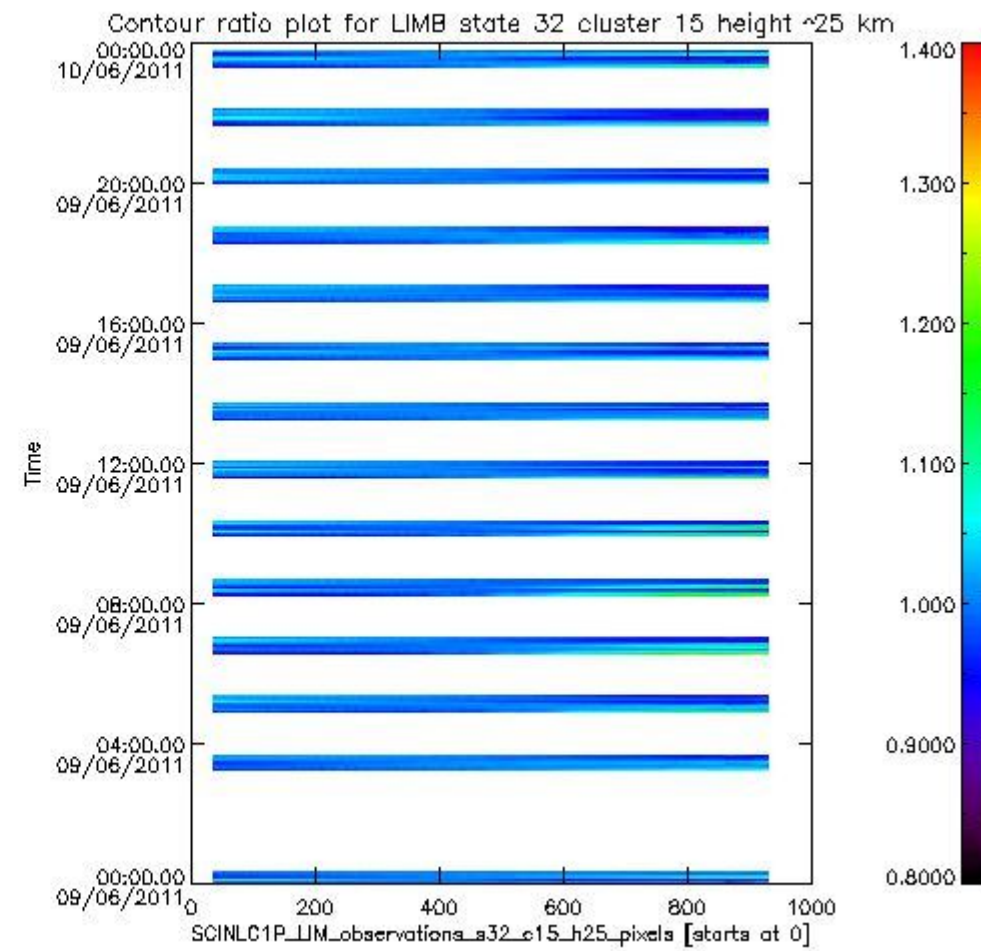
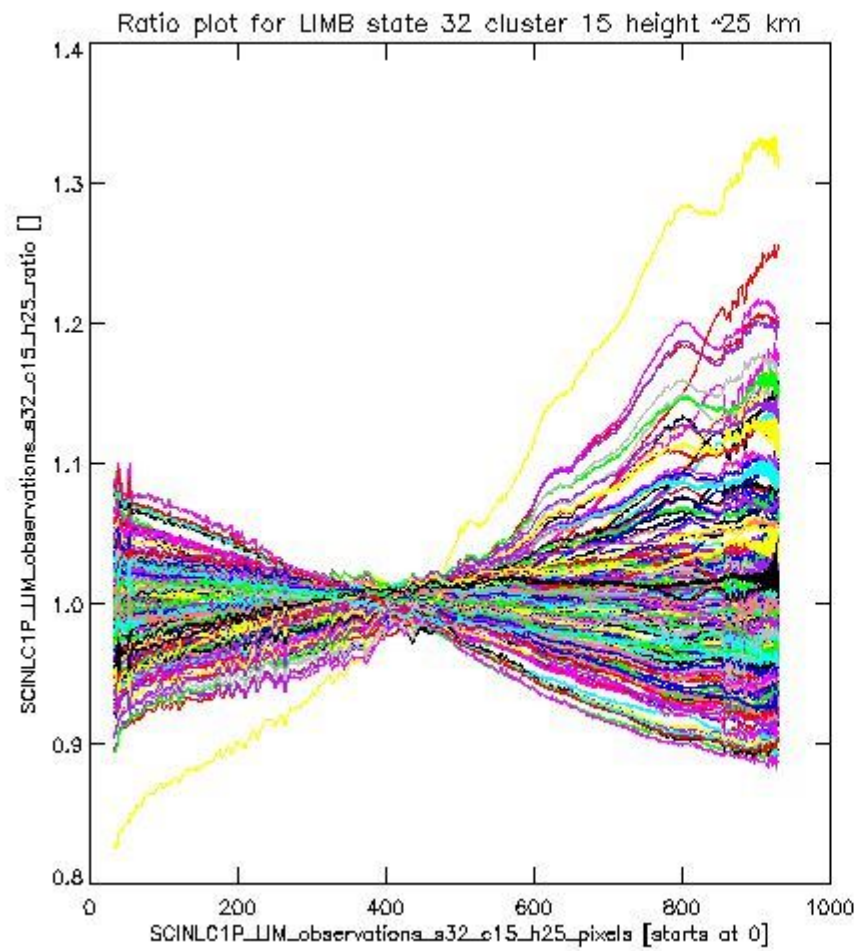
sciamachy\_11b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_17.PNG

**1.2.10 LIMB state 32 cluster 15 height ~25 km** The data for the analysis of LIMB state 32 cluster 15 height ~25 km have the following characteristics:

| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 09JUN2011 00:00:58.849 |
| Start time of last sample        | 09JUN2011 23:42:37.626 |
| Reference period start time      | 10MAY2011 00:01:07.004 |
| Reference period stop time       | 08JUN2011 23:58:56.103 |
| Channel number                   | 3                      |
| First pixel number (starts at 0) | 33                     |
| Last pixel number (starts at 0)  | 929                    |



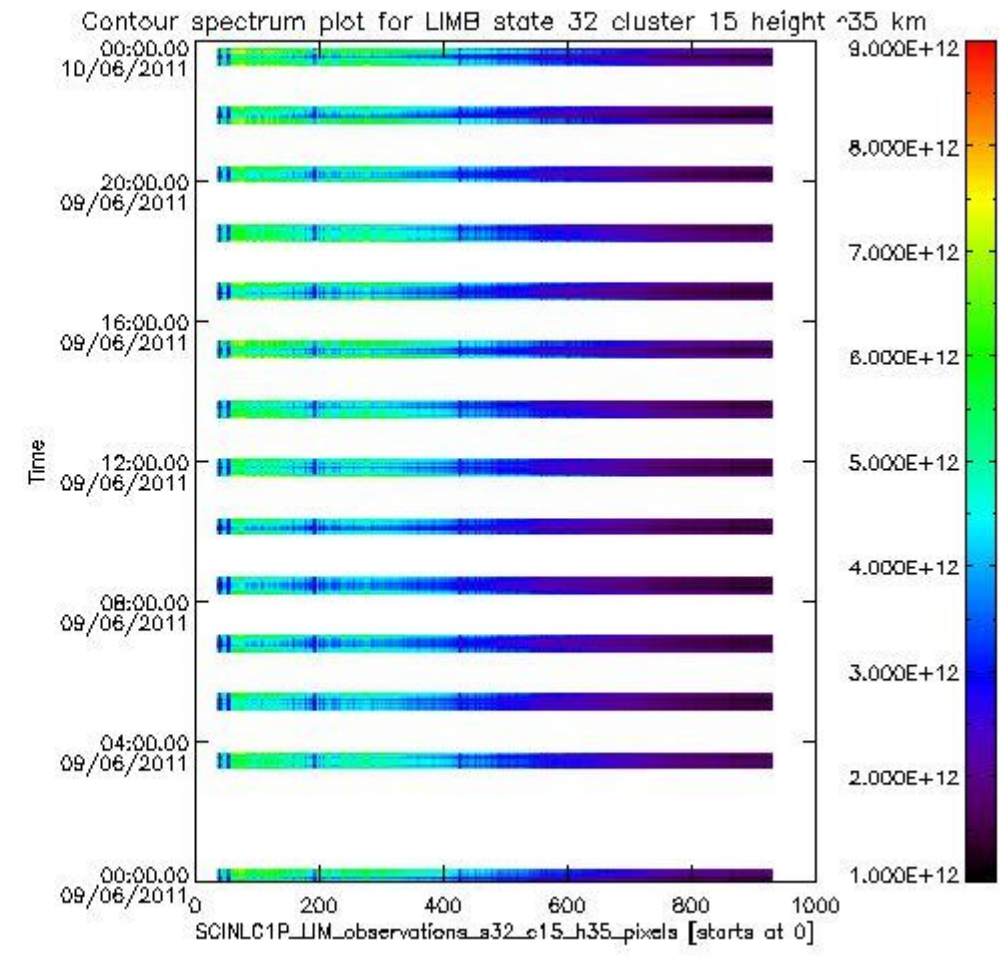
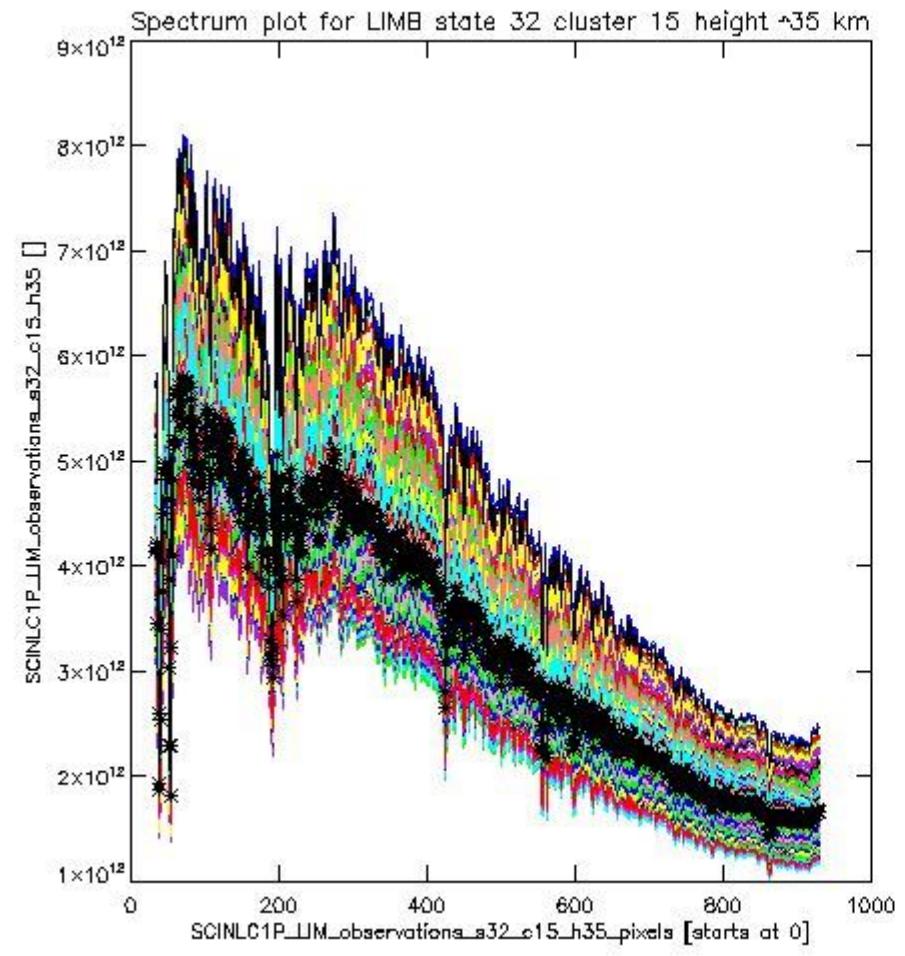
sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_18.PNG



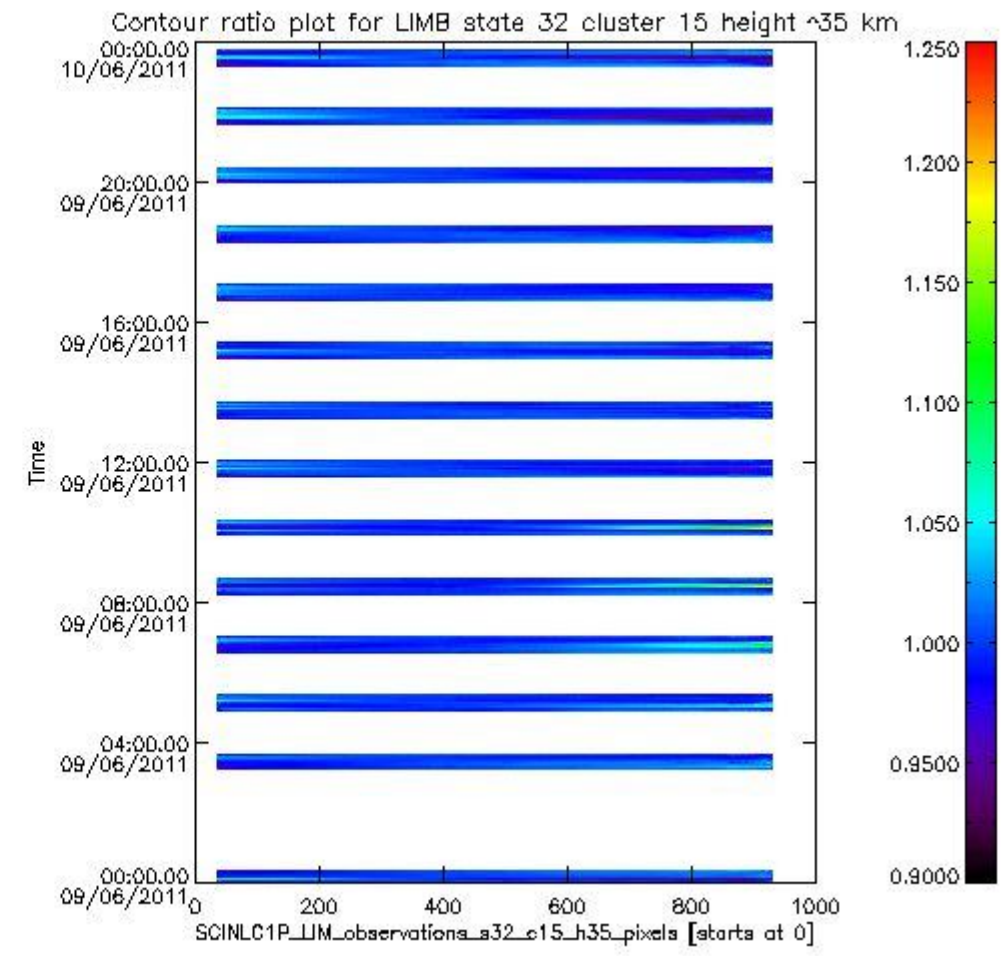
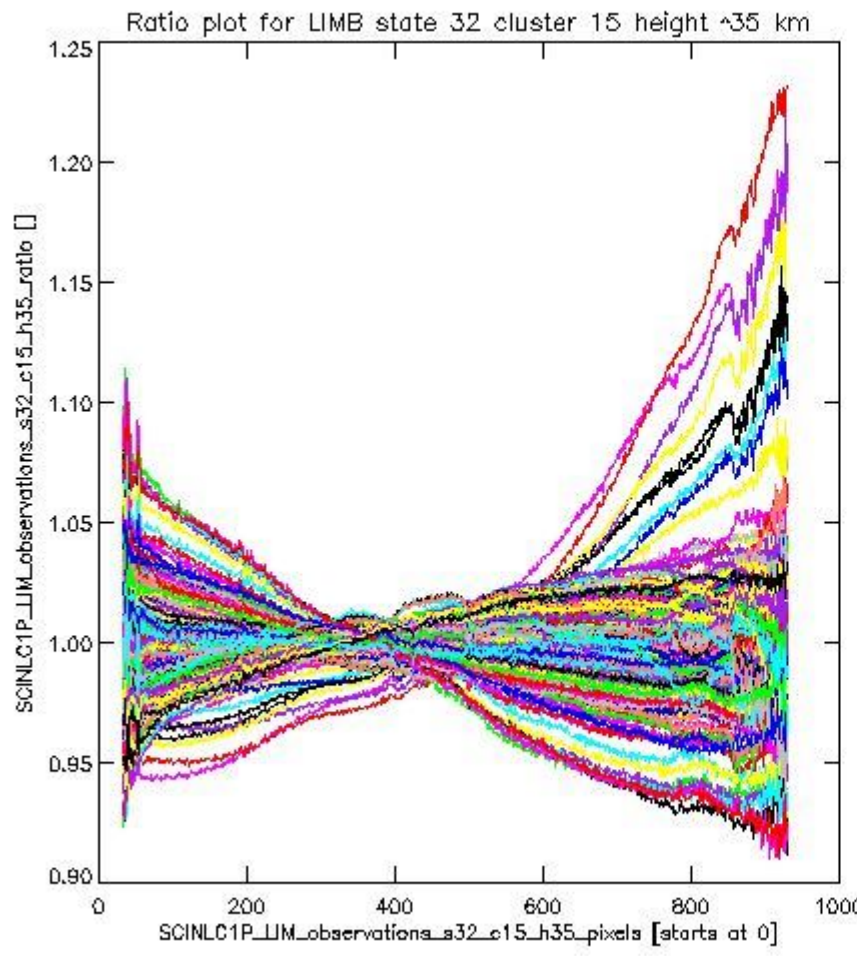
sciamachy\_11b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_19.PNG

**1.2.11 LIMB state 32 cluster 15 height ~35 km** The data for the analysis of LIMB state 32 cluster 15 height ~35 km have the following characteristics:

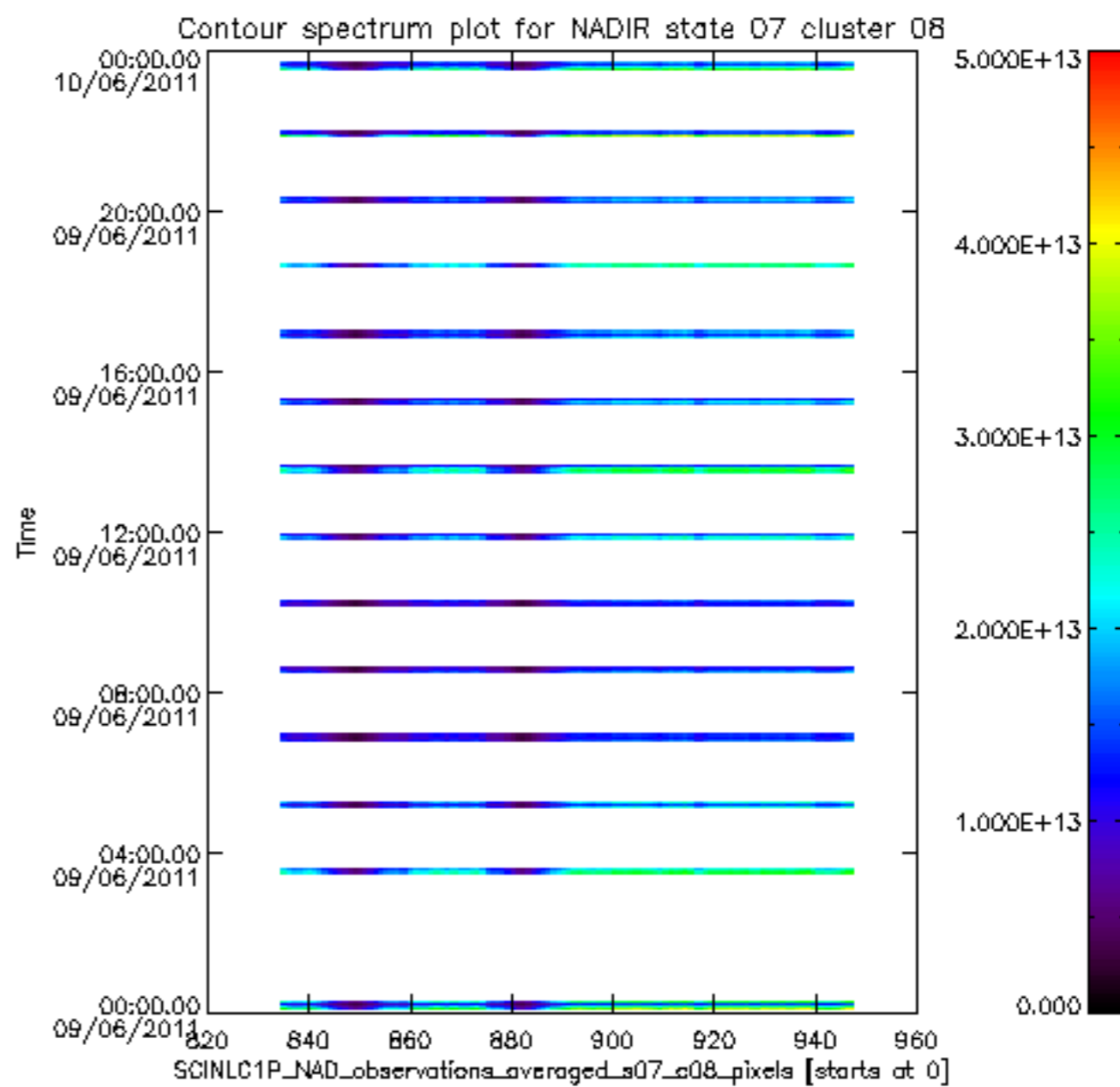
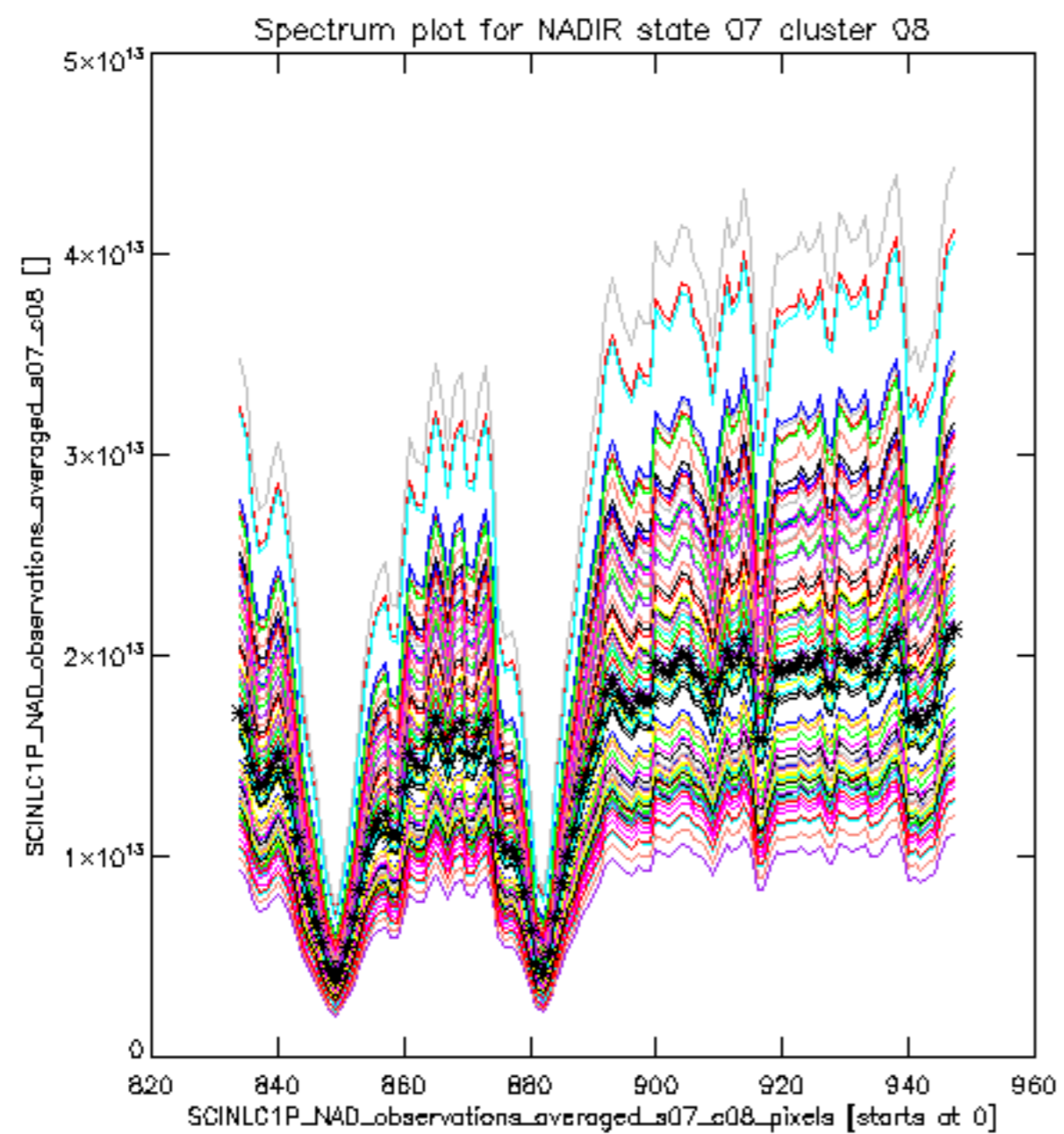
| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 09JUN2011 00:00:58.849 |
| Start time of last sample        | 09JUN2011 23:42:37.626 |
| Reference period start time      | 10MAY2011 00:01:07.004 |
| Reference period stop time       | 08JUN2011 23:58:56.103 |
| Channel number                   | 3                      |
| First pixel number (starts at 0) | 33                     |
| Last pixel number (starts at 0)  | 929                    |



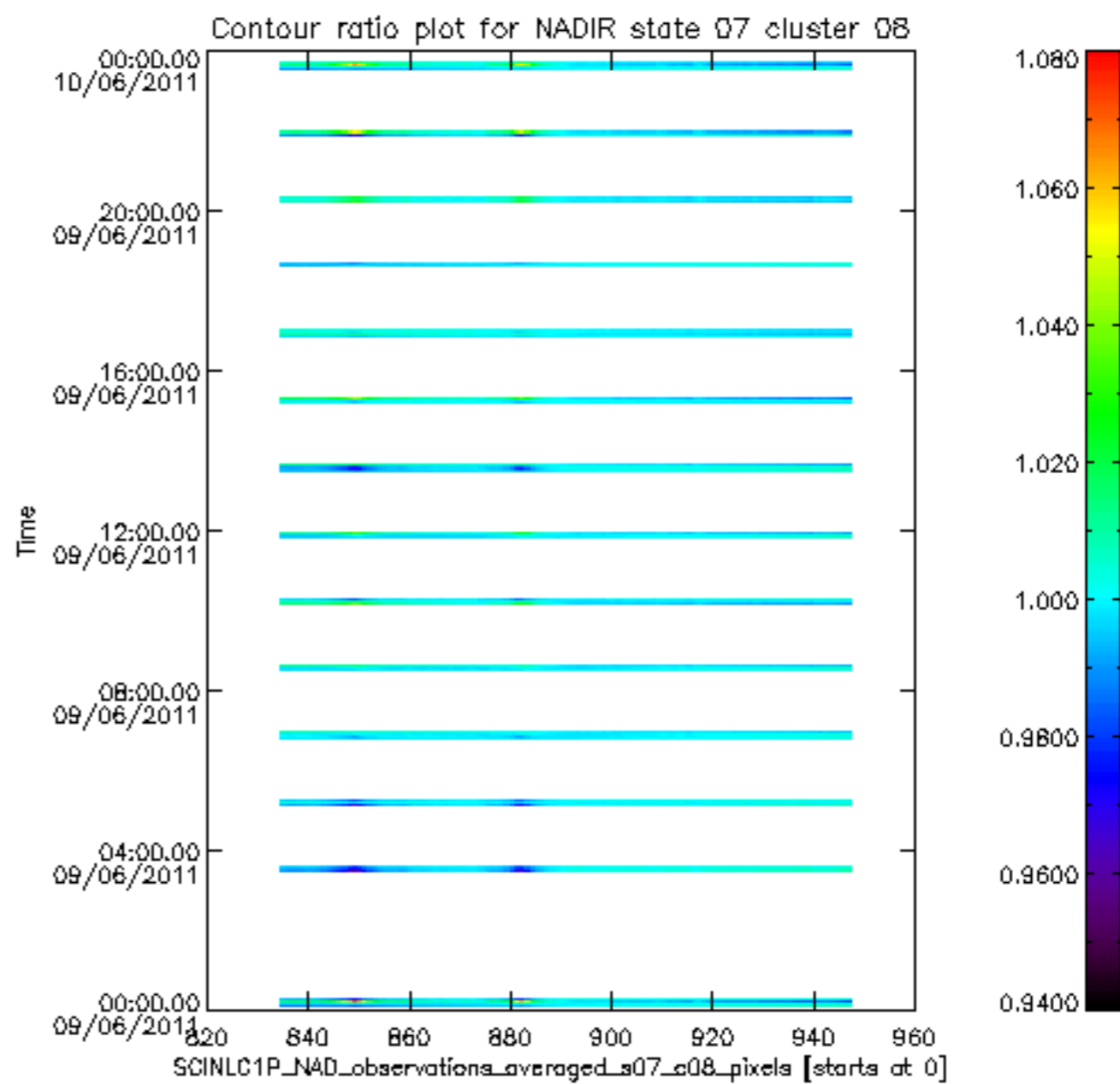
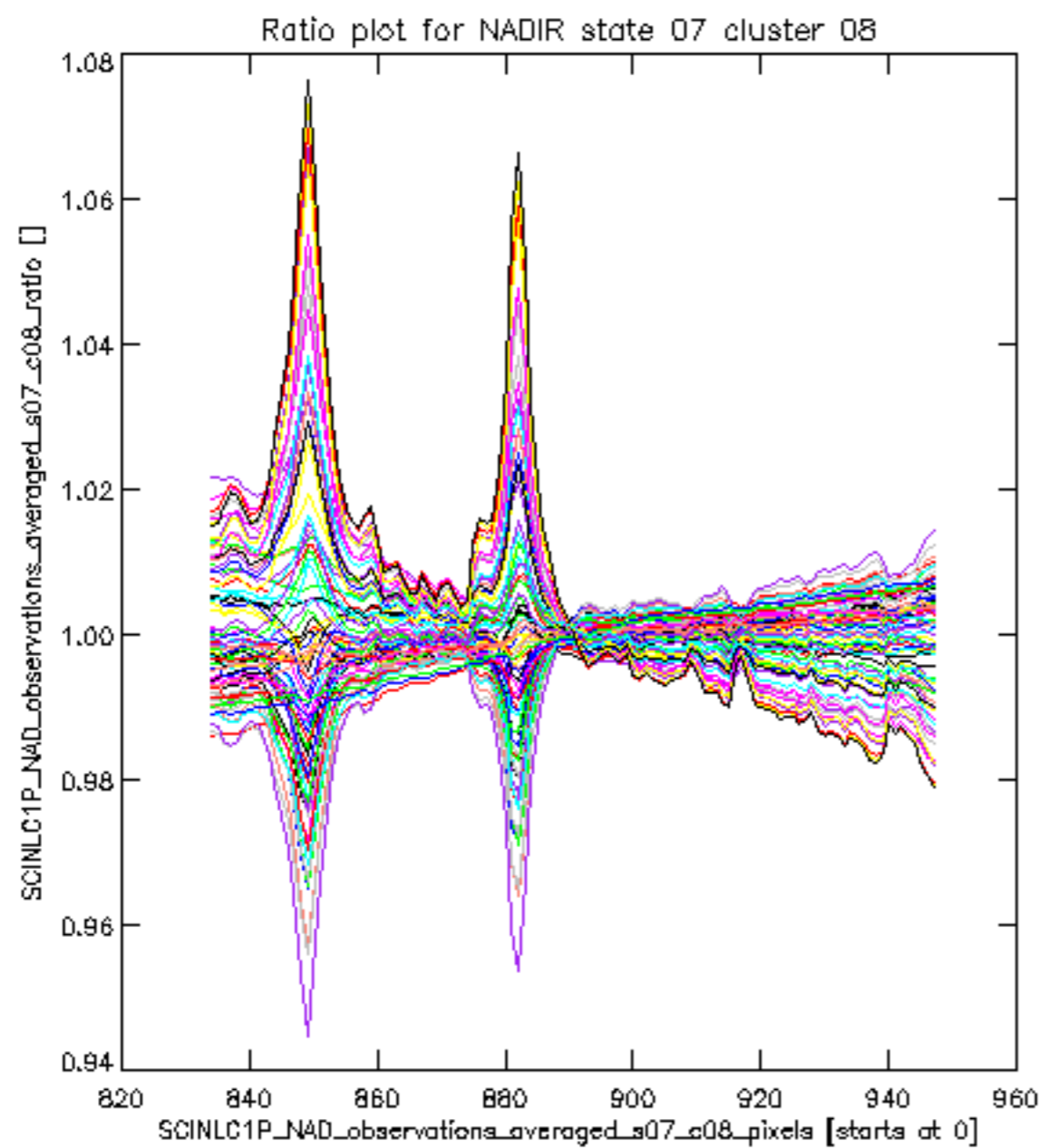
sciamachy\_11b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110609\_20.PNG

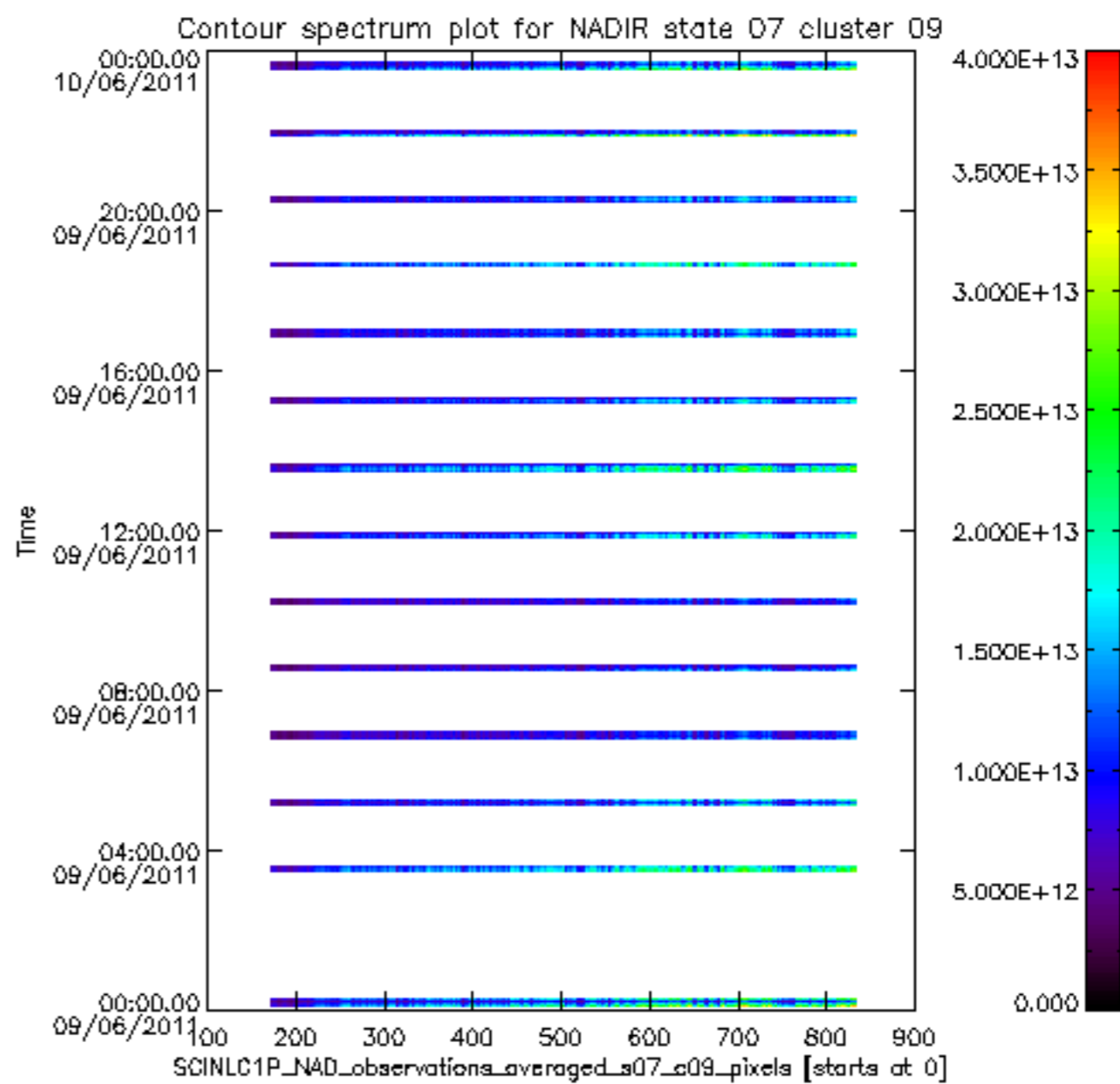
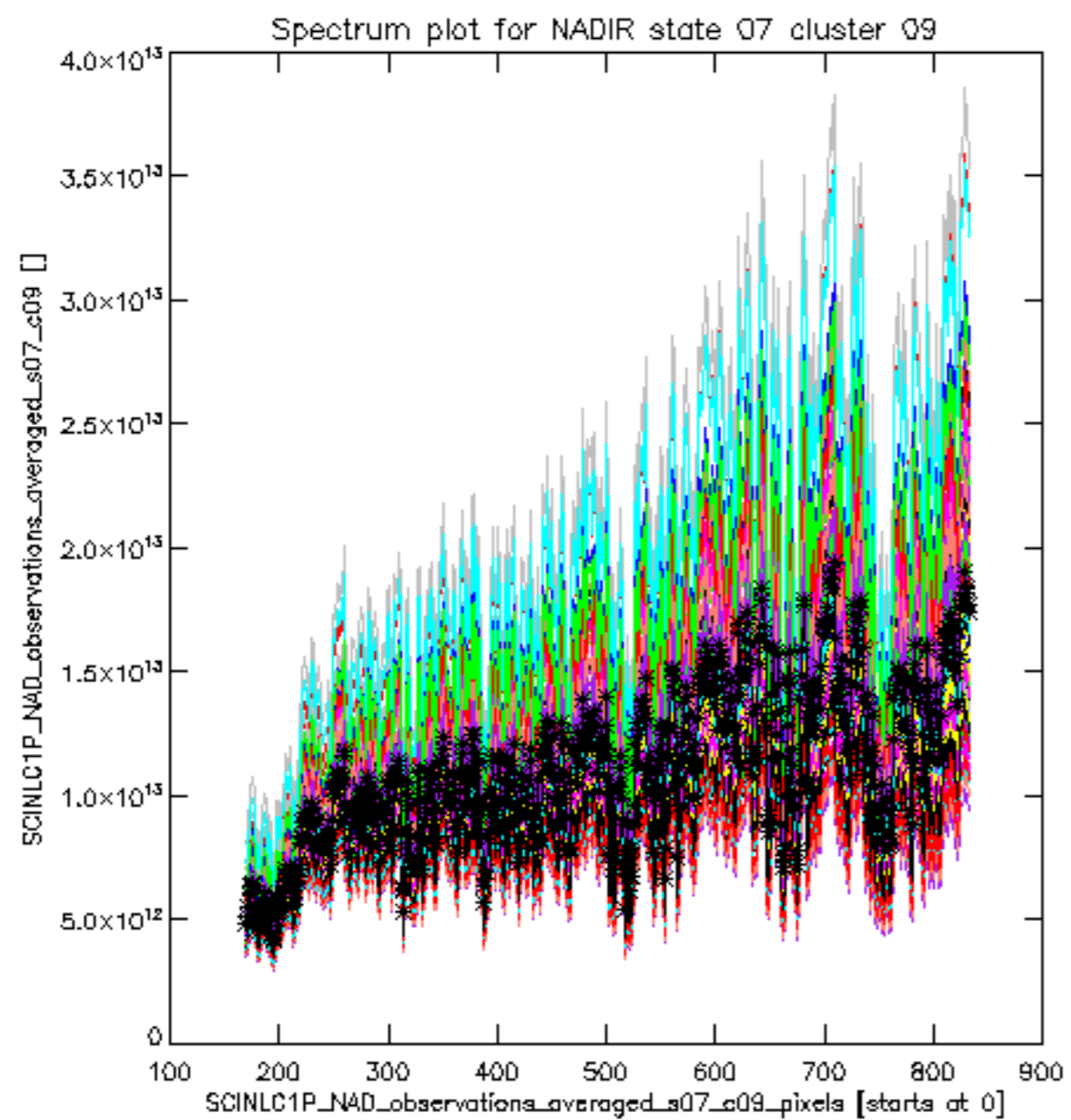


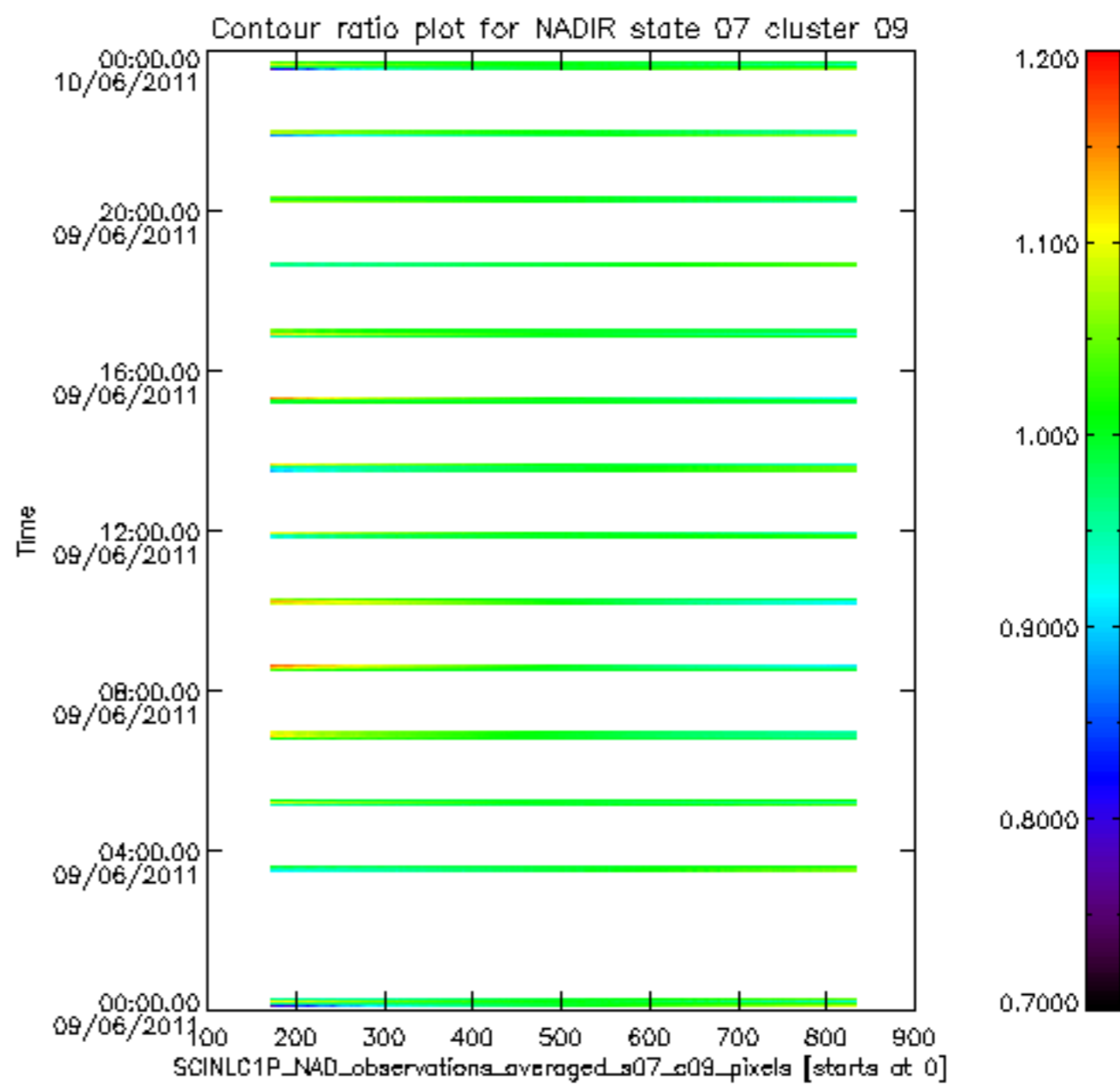
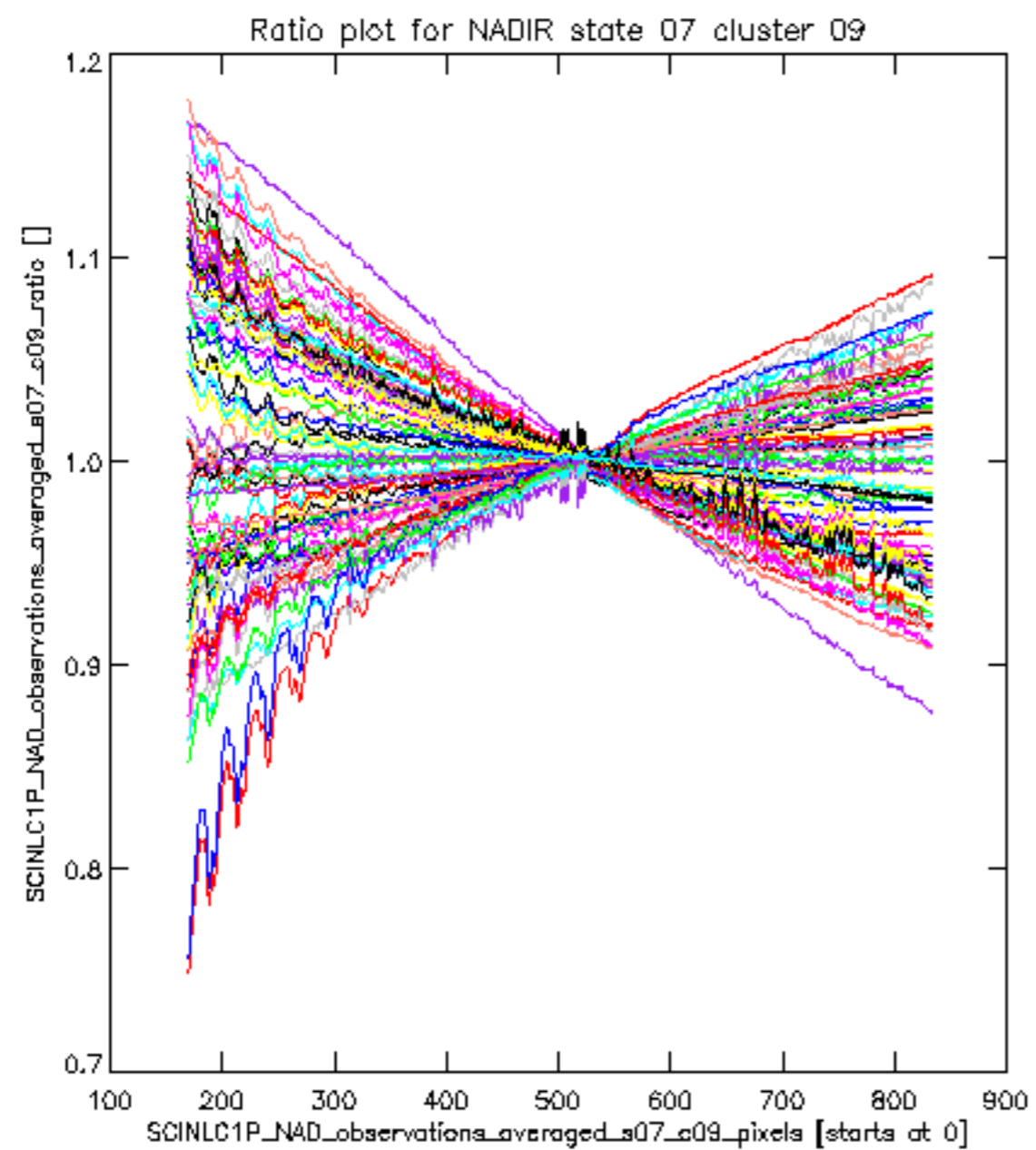
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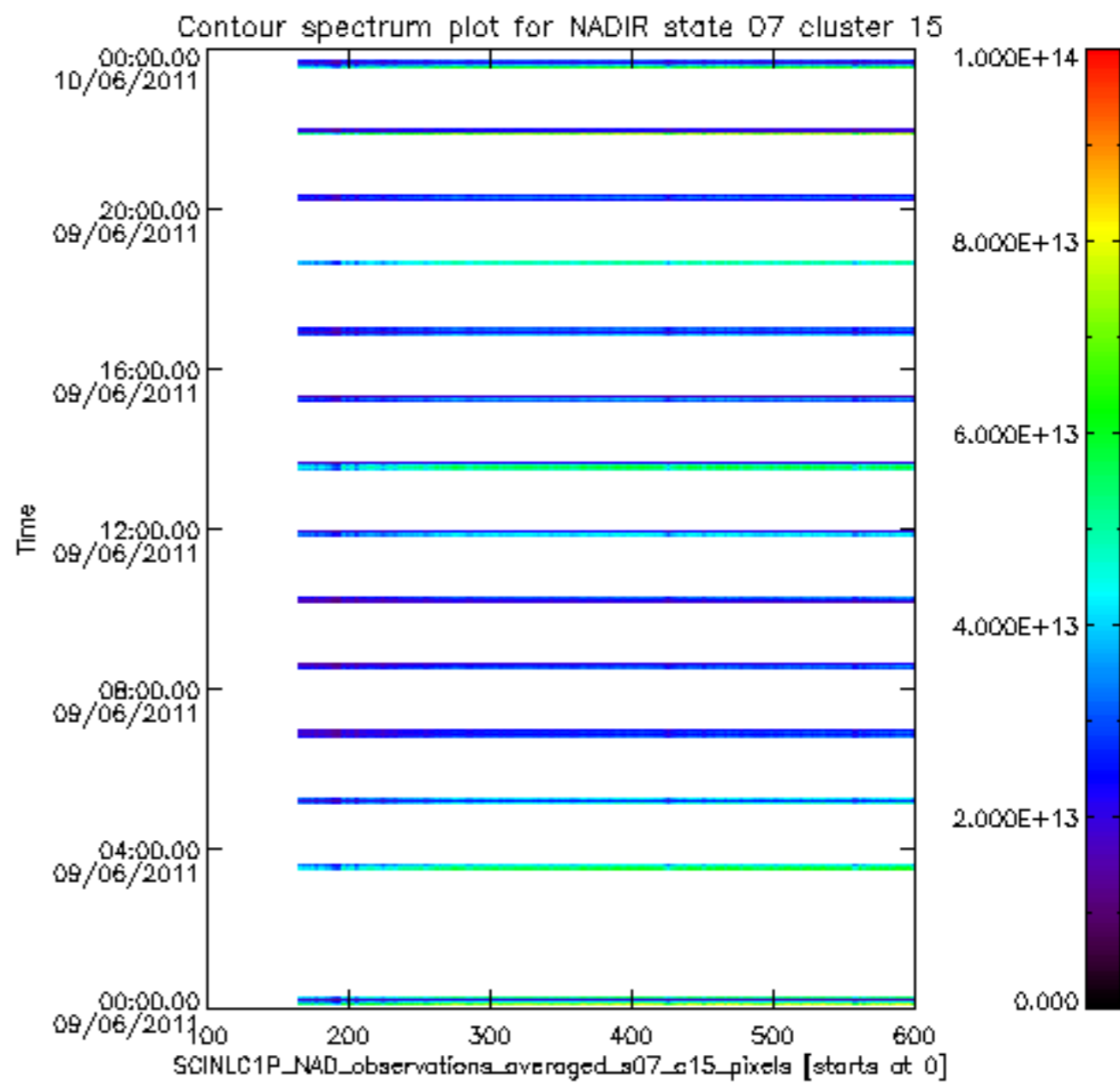
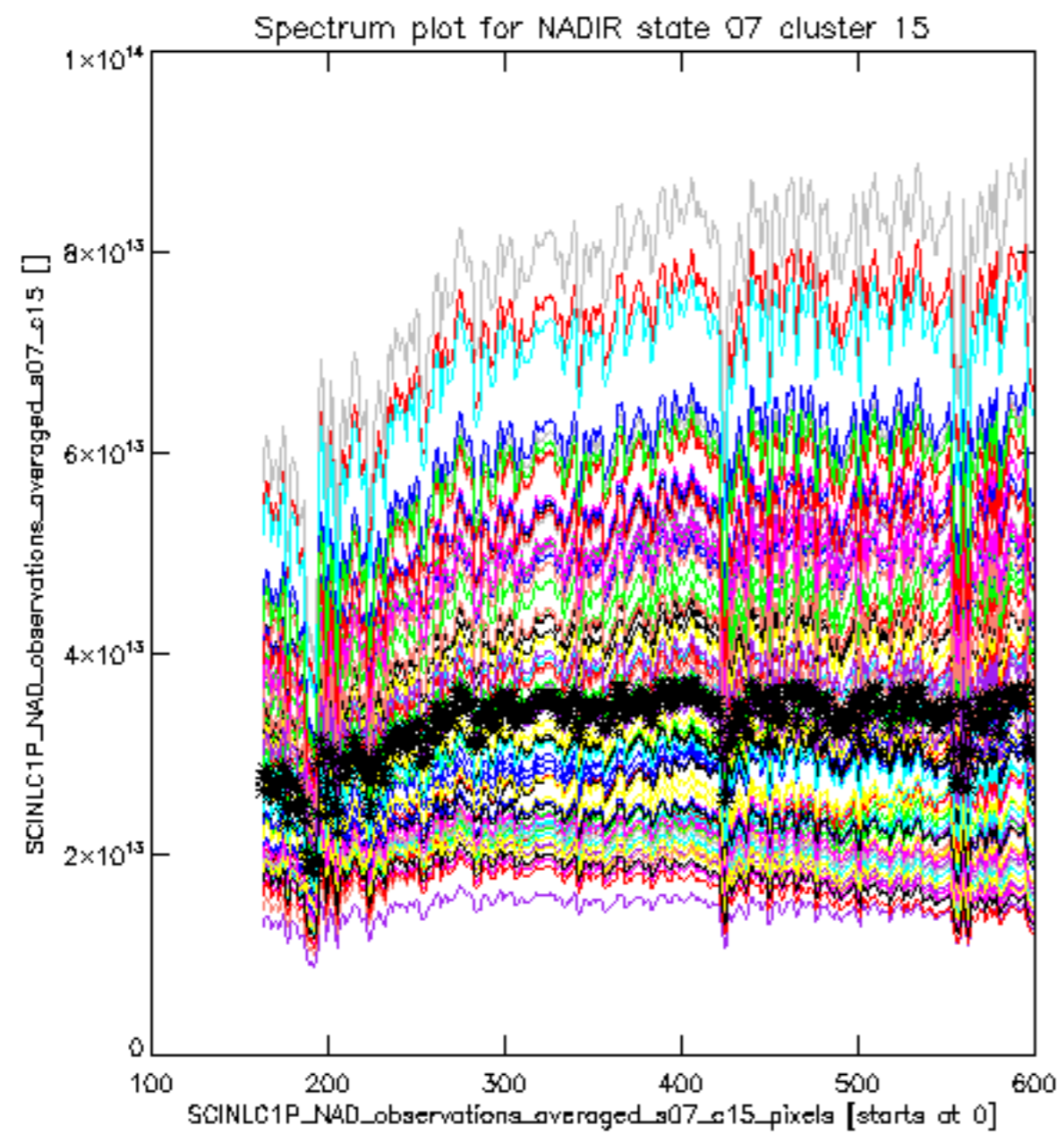


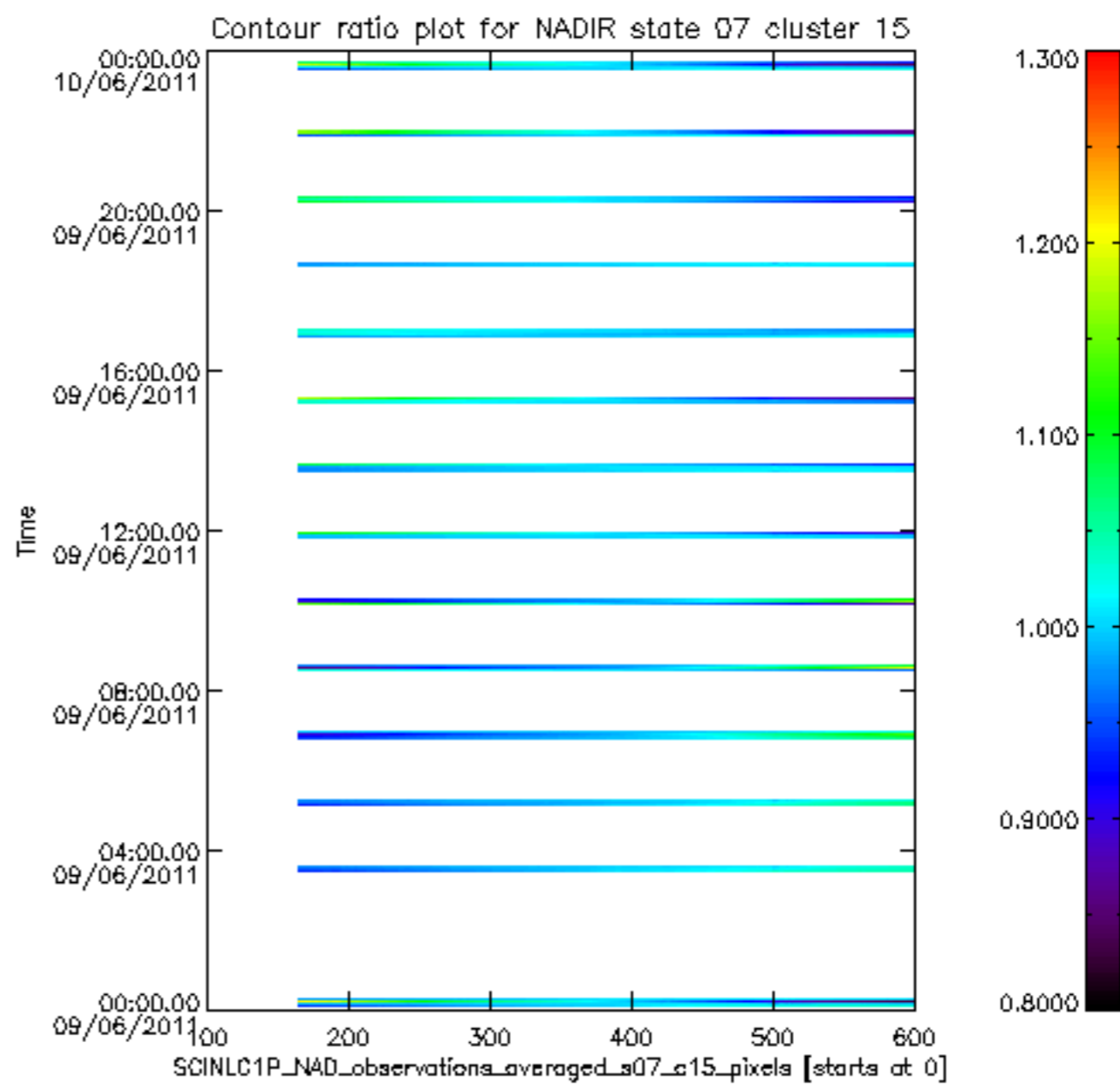
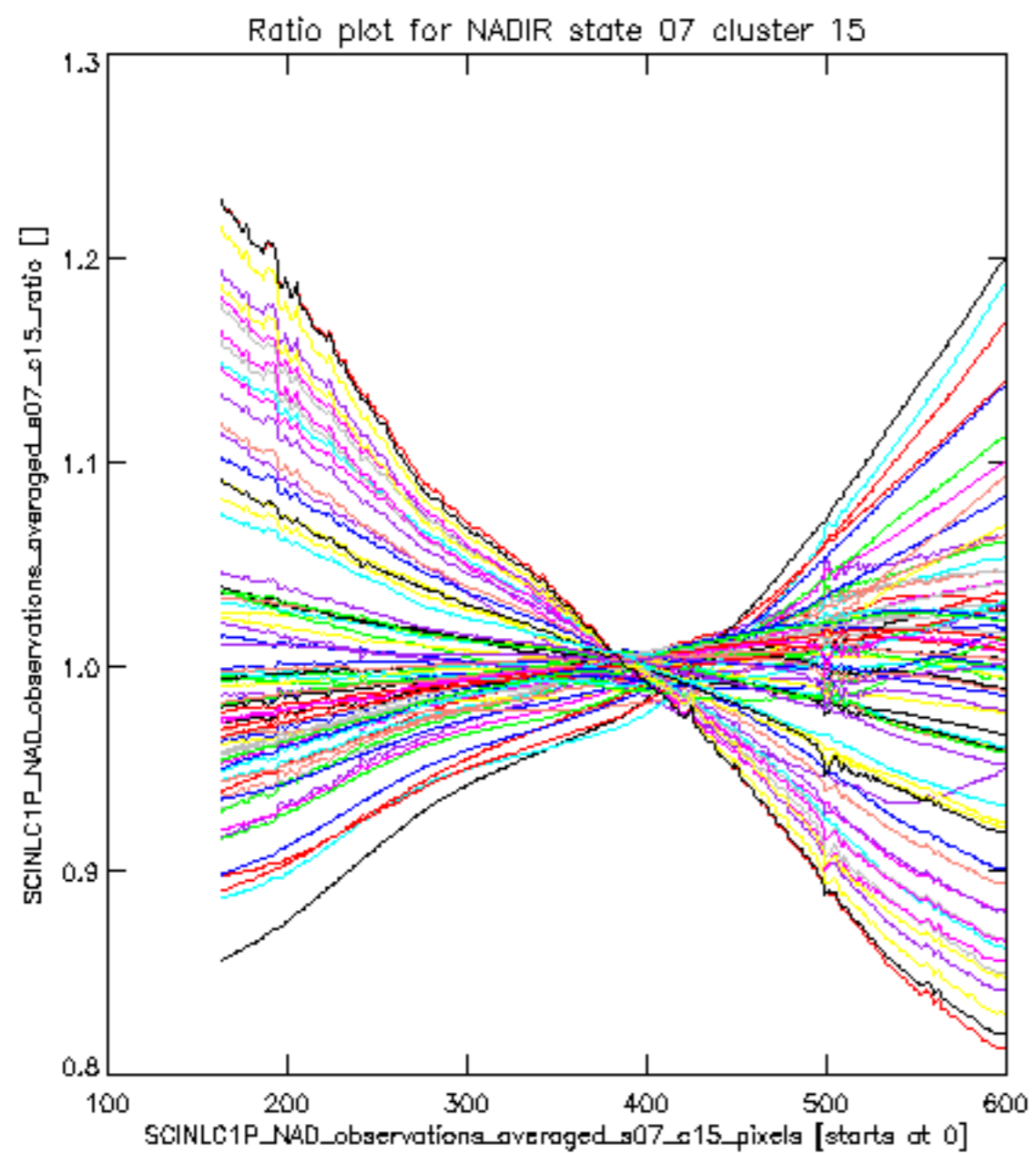


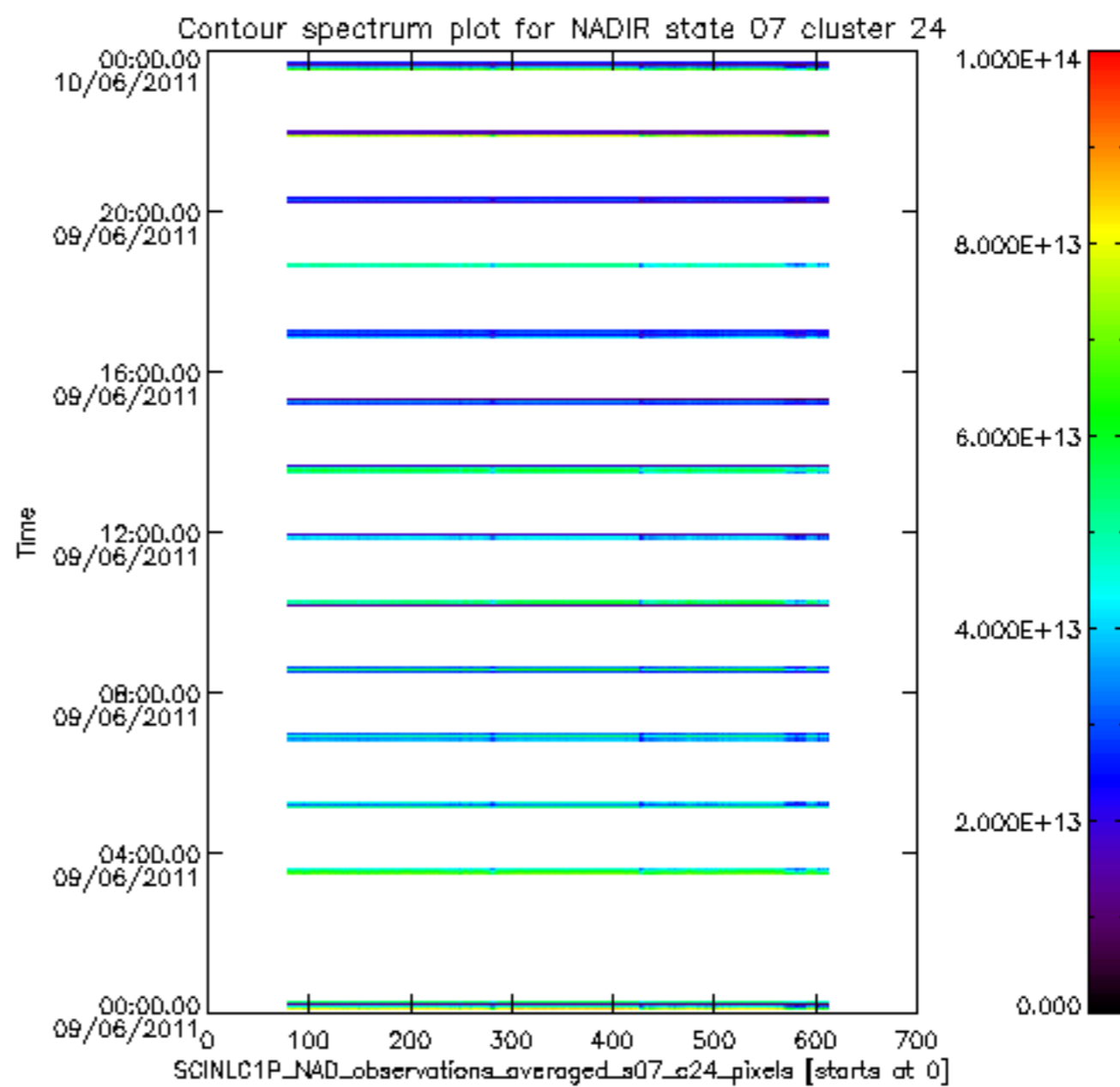
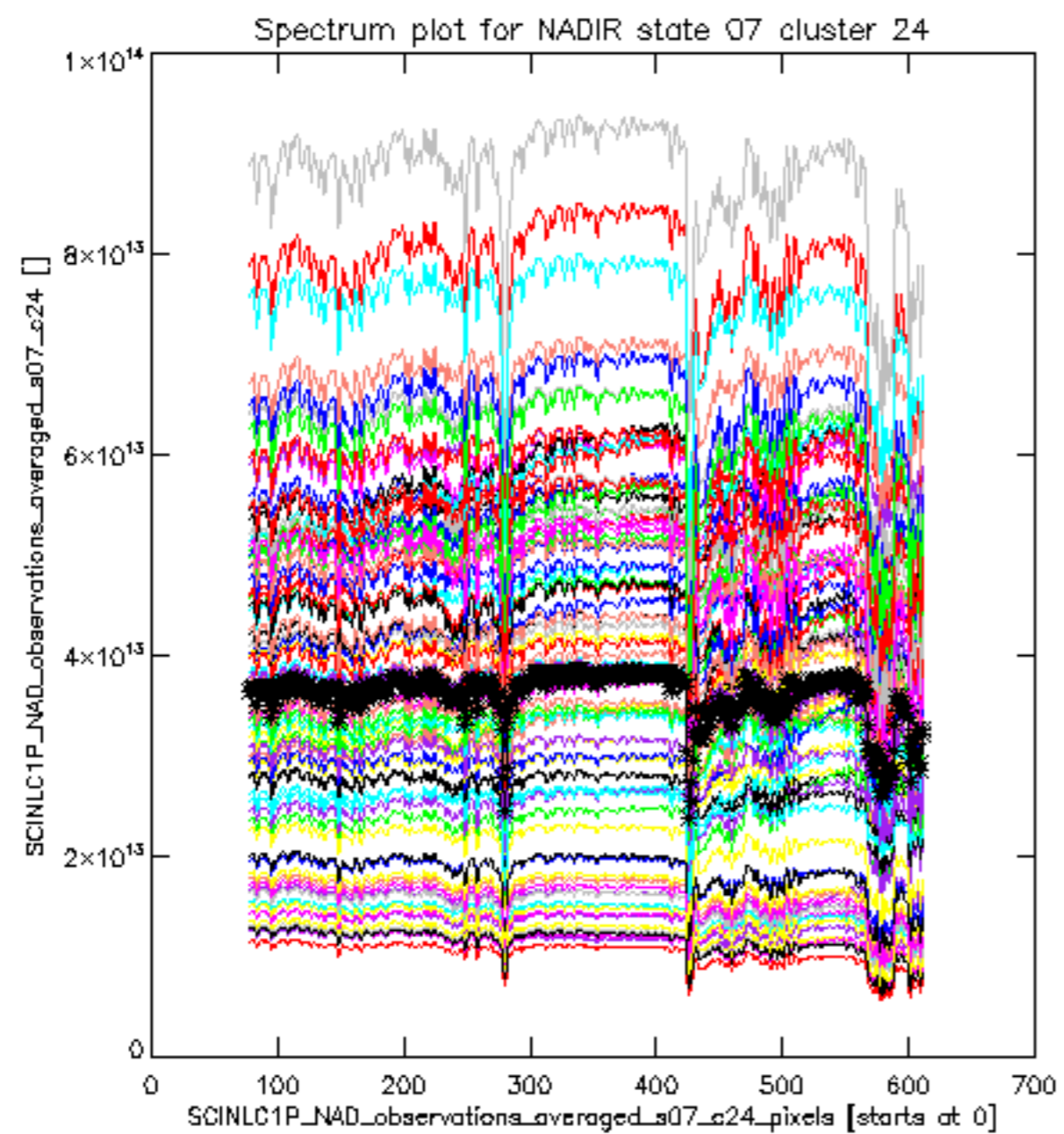


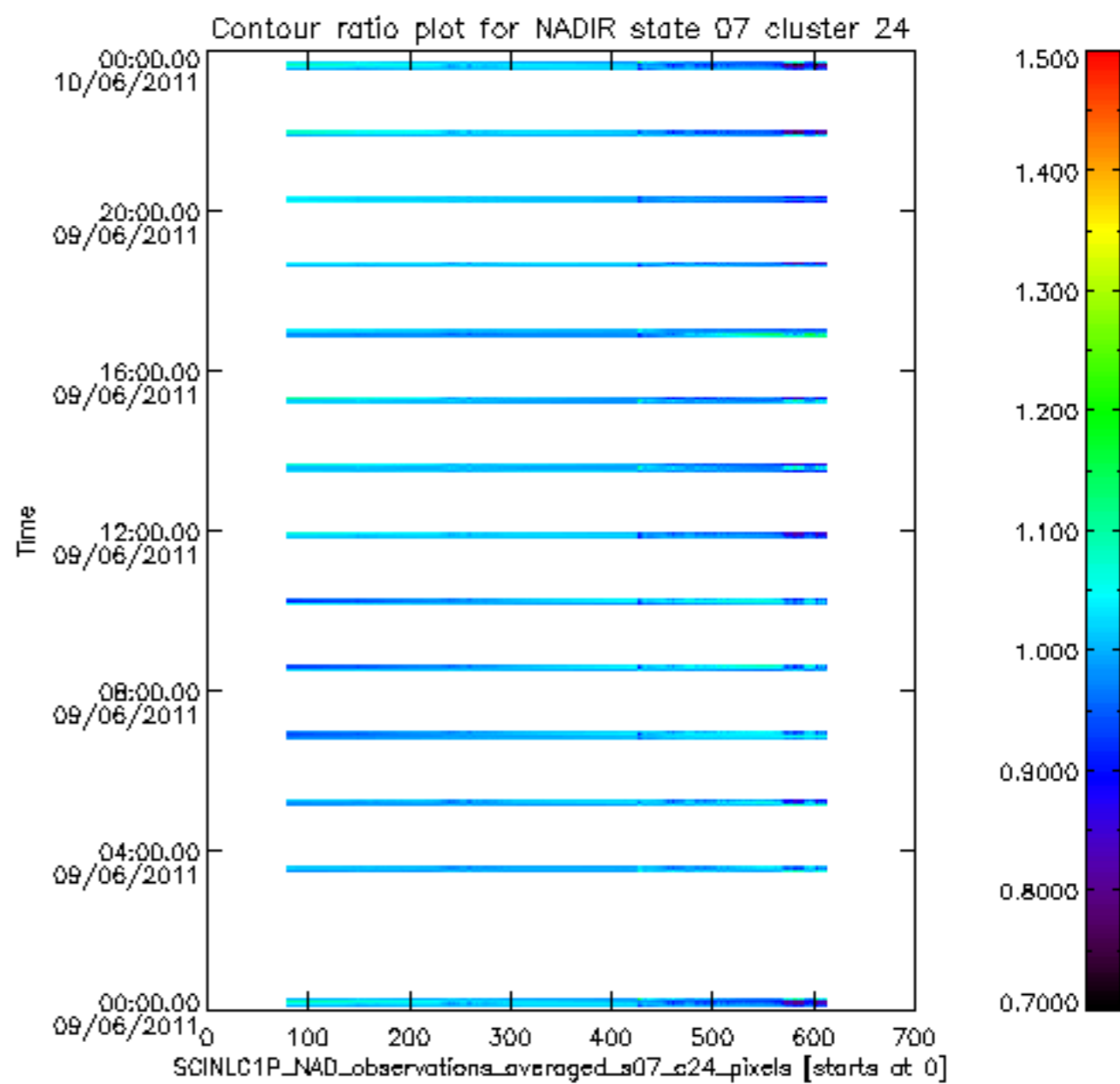
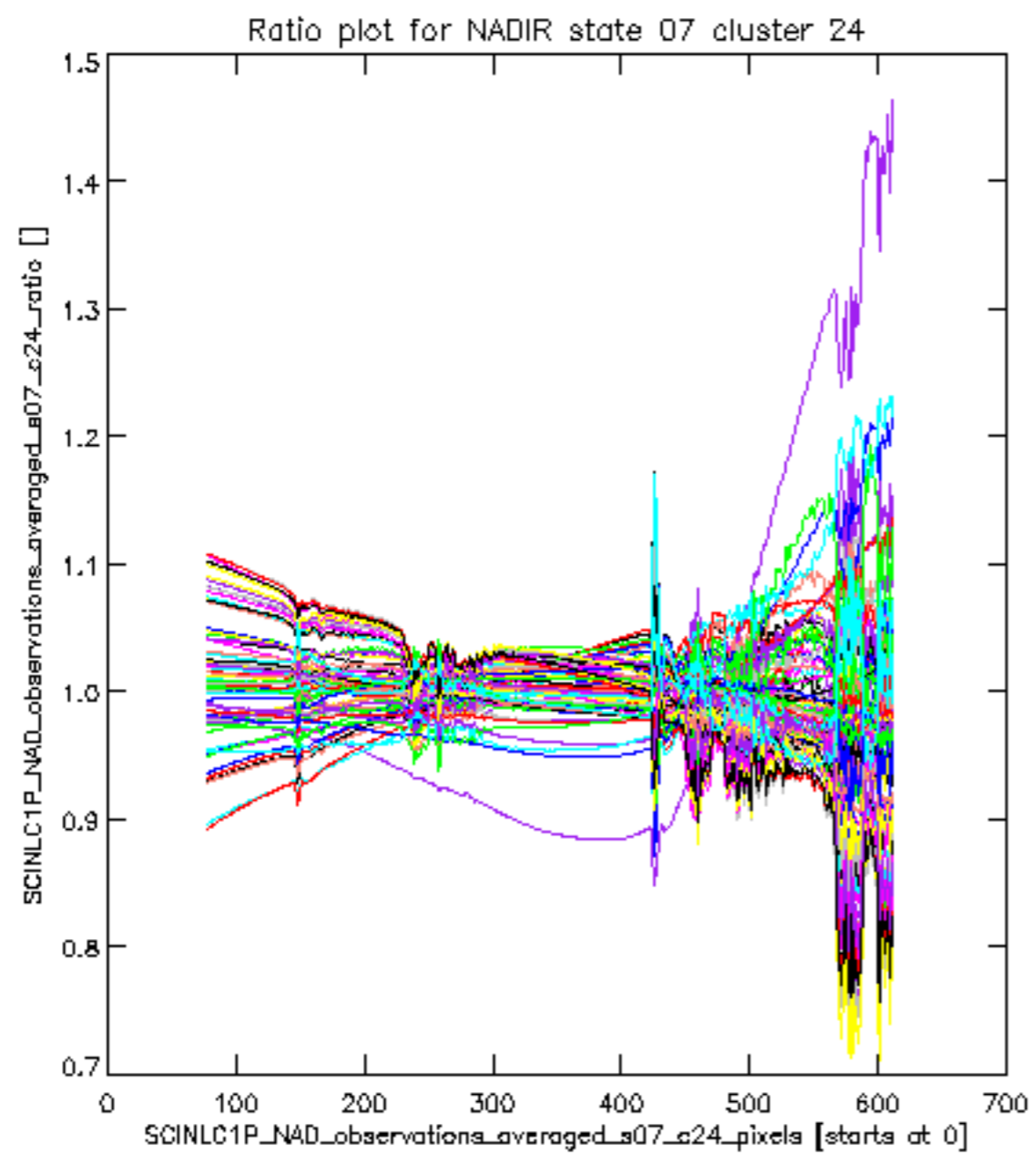




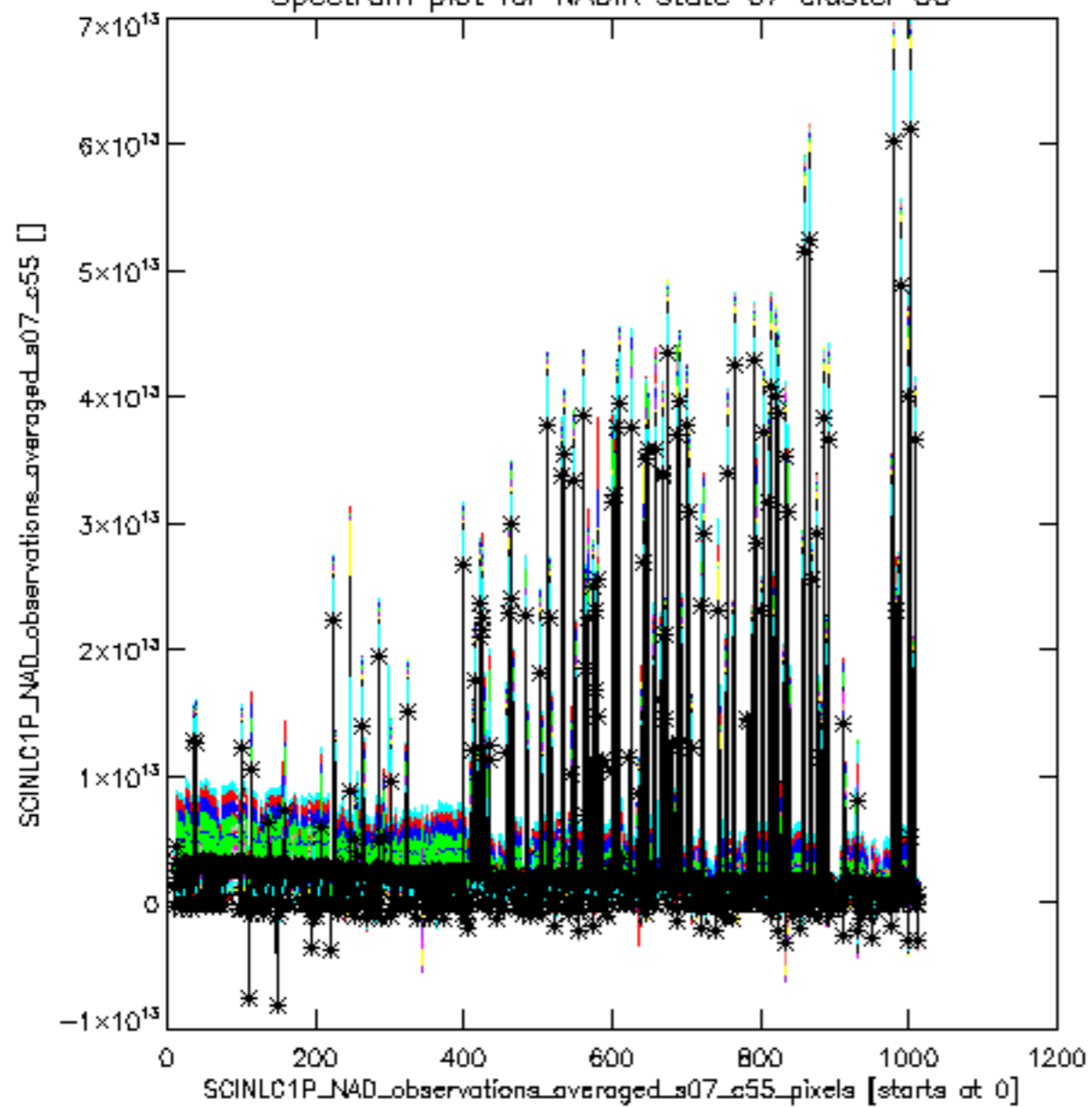








Spectrum plot for NADIR state 07 cluster 55



Contour spectrum plot for NADIR state 07 cluster 55

