

# 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                | 25MAY2011 06:55:34   |
| Data source version                      | SCIA/7.04-U  |
| Processing scope for products            | 12MAY2011 00:00:00 to 13MAY2011 00:00:00   |
| Start time of first product within scope | 12MAY2011 00:01:35   |
| Stop time of last product within scope   | 13MAY2011 00:34:18   |
| Total number of level 1 products         | 15   |
| Number of level 1 products with errors   | 0  |
| SCIAL1C executable used in processing    | scial1c-2.1.73-i686-pc-linux-gnu-gcc-3.3.6   |
| SCIAL1C parameters used in processing    | -allcal -type all -cat 1,2,8,10,11,16,19,23 -nadircluster 8,9,15,24,55 -limbcluster 9,15 |

#### 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    | 12MAY2011 00:33:38.546 | 12MAY2011 23:58:53.377 |
| 1    | NADIR | 07    | 09      | N/A    | 12MAY2011 00:33:38.546 | 12MAY2011 23:58:53.377 |
| 2    | NADIR | 07    | 15      | N/A    | 12MAY2011 00:33:38.546 | 12MAY2011 23:58:53.377 |
| 3    | NADIR | 07    | 24      | N/A    | 12MAY2011 00:33:38.546 | 12MAY2011 23:58:53.377 |
| 4    | NADIR | 07    | 55      | N/A    | 12MAY2011 00:33:38.546 | 12MAY2011 23:58:53.377 |
| 5    | LIMB  | 32    | 09      | ~19 km | 12MAY2011 00:20:27.909 | 12MAY2011 23:57:59.190 |
| 6    | LIMB  | 32    | 09      | ~22 km | 12MAY2011 00:20:27.909 | 12MAY2011 23:57:59.190 |
| 7    | LIMB  | 32    | 09      | ~25 km | 12MAY2011 00:20:27.909 | 12MAY2011 23:57:59.190 |
| 8    | LIMB  | 32    | 15      | ~22 km | 12MAY2011 00:20:27.909 | 12MAY2011 23:57:59.190 |
| 9    | LIMB  | 32    | 15      | ~25 km | 12MAY2011 00:20:27.909 | 12MAY2011 23:57:59.190 |
| 10   | LIMB  | 32    | 15      | ~35 km | 12MAY2011 00:20:27.909 | 12MAY2011 23:57:59.190 |

#### 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 | #cmlp_drk | #incmpl_drk | Decont |
|---|--|--------------------|--------------------|---------|--------|-------|------|------|--------|-----------|-------------|--------|
| 0 | <a href="#">SCI_NLC_1CUDPA20110511_235548_000060143102_00232_48091_1311.N1</a> | 12MAY2011 00:01:35 | 12MAY2011 01:11:50 | 0       | 35     | 31    | 0    | 0    | 1      | 0         | 0           |        |
| 1 | <a href="#">SCI_NLC_1CUDPA20110512_013606_000060053102_00233_48092_1312.N1</a> | 12MAY2011 01:41:49 | 12MAY2011 02:52:18 | 0       | 36     | 30    | 0    | 0    | 1      | 0         | 0           |        |
| 2 | <a href="#">SCI_NLC_1CUDPA20110512_031615_000060143102_00234_48093_1314.N1</a> | 12MAY2011 03:22:03 | 12MAY2011 04:32:17 | 0       | 35     | 31    | 0    | 0    | 1      | 0         | 0           |        |
| 3 | <a href="#">SCI_NLC_1CUDPA20110512_045634_000060053102_00235_48094_1319.N1</a> | 12MAY2011 05:02:17 | 12MAY2011 06:12:46 | 0       | 36     | 30    | 0    | 0    | 1      | 0         | 0           |        |
| 4 | <a href="#">SCI_NLC_1CUDPA20110512_063643_000060143102_00236_48095_1320.N1</a> | 12MAY2011 06:42:30 | 12MAY2011 07:52:45 | 0       | 35     | 31    | 0    | 0    | 1      | 0         | 0           |        |
| 5 | <a href="#">SCI_NLC_1CUDPA20110512_081701_000060053102_00237_48096_1321.N1</a> | 12MAY2011 08:22:44 | 12MAY2011 09:33:13 | 0       | 36     | 30    | 0    | 0    | 1      | 0         | 0           |        |

|    |  |                    |                    |   |    |    |   |   |   |   |   |  |
|----|--|--------------------|--------------------|---|----|----|---|---|---|---|---|--|
| 6  | SCI_NLC_1CUDPA20110512_095710_000060143102_00238_48097_1368.N1 | 12MAY2011 10:02:58 | 12MAY2011 11:13:12 | 0 | 35 | 31 | 0 | 0 | 1 | 0 | 0 |  |
| 7  | SCI_NLC_1CUDPA20110512_113728_000060053102_00239_48098_1367.N1 | 12MAY2011 11:43:11 | 12MAY2011 12:53:40 | 0 | 36 | 30 | 0 | 0 | 1 | 0 | 0 |  |
| 8  | SCI_NLC_1CUDPA20110512_131737_000060143102_00240_48099_1365.N1 | 12MAY2011 13:23:25 | 12MAY2011 14:33:40 | 0 | 35 | 31 | 0 | 0 | 1 | 0 | 0 |  |
| 9  | SCI_NLC_1CUDPA20110512_145756_000060053102_00241_48100_1335.N1 | 12MAY2011 15:03:39 | 12MAY2011 16:14:08 | 0 | 36 | 30 | 0 | 0 | 1 | 0 | 0 |  |
| 10 | SCI_NLC_1CUDPA20110512_163805_000060143102_00242_48101_1329.N1 | 12MAY2011 16:43:53 | 12MAY2011 17:53:44 | 0 | 31 | 31 | 0 | 0 | 1 | 0 | 0 |  |
| 11 | SCI_NLC_1CUDPA20110512_181823_000060053102_00243_48102_1331.N1 | 12MAY2011 18:24:06 | 12MAY2011 19:33:10 | 0 | 31 | 31 | 0 | 1 | 1 | 0 | 0 |  |
| 12 | SCI_NLC_1CUDPA20110512_195832_000060143102_00244_48103_1336.N1 | 12MAY2011 20:04:20 | 12MAY2011 21:14:01 | 0 | 31 | 31 | 0 | 1 | 1 | 0 | 0 |  |
| 13 | SCI_NLC_1CUDPA20110512_213850_000060053102_00245_48104_1337.N1 | 12MAY2011 21:44:34 | 12MAY2011 22:54:10 | 0 | 31 | 31 | 0 | 0 | 1 | 0 | 0 |  |
| 14 | SCI_NLC_1CUDPA20110512_231859_000060143102_00246_48105_1341.N1 | 12MAY2011 23:24:48 | 13MAY2011 00:34:18 | 0 | 31 | 31 | 0 | 0 | 1 | 0 | 0 |  |

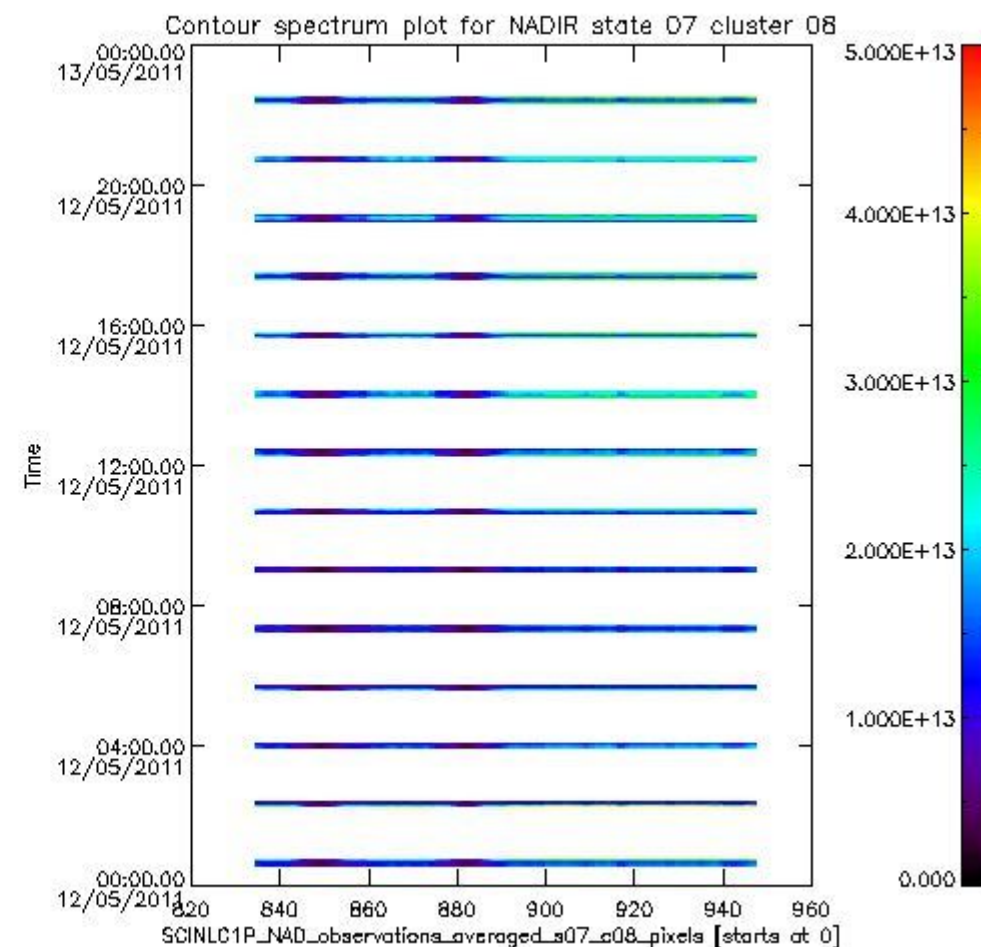
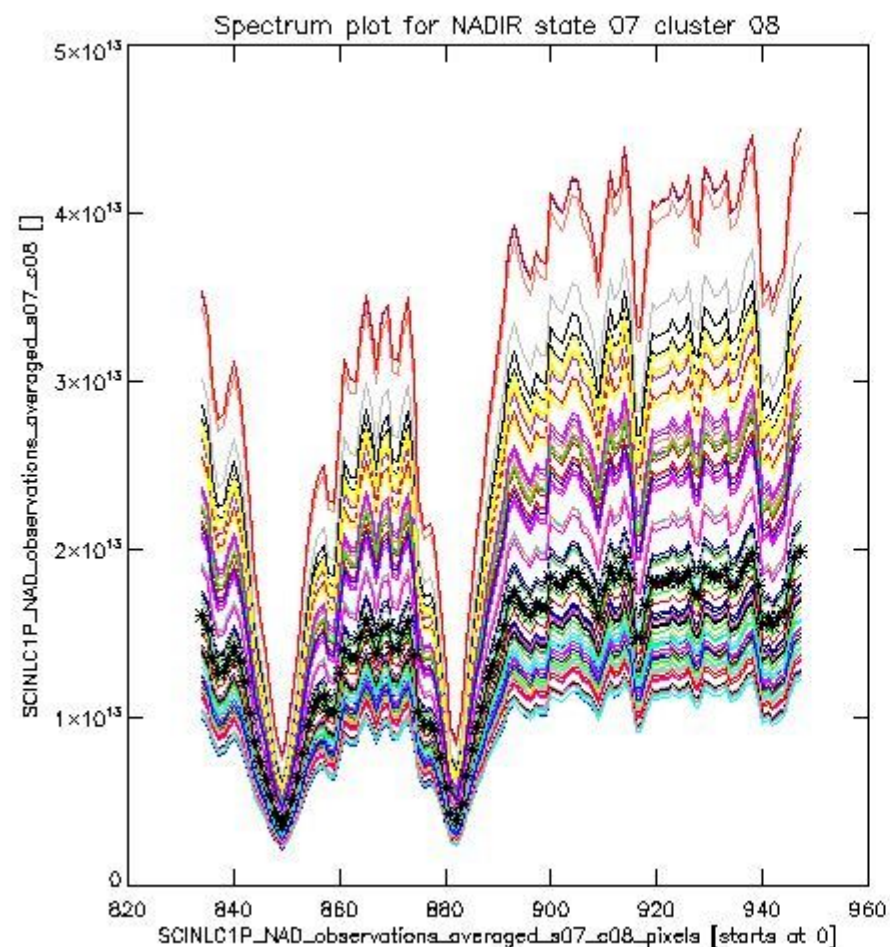
## 1.2 Source packet monitoring

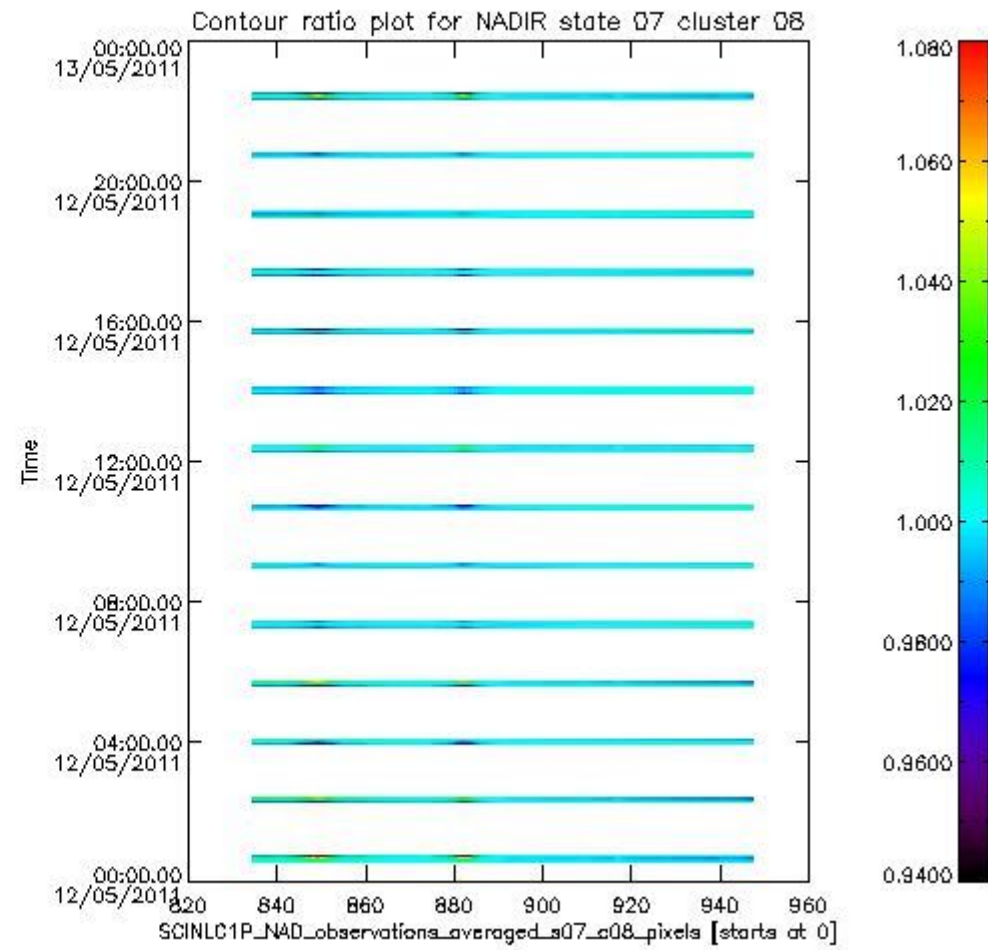
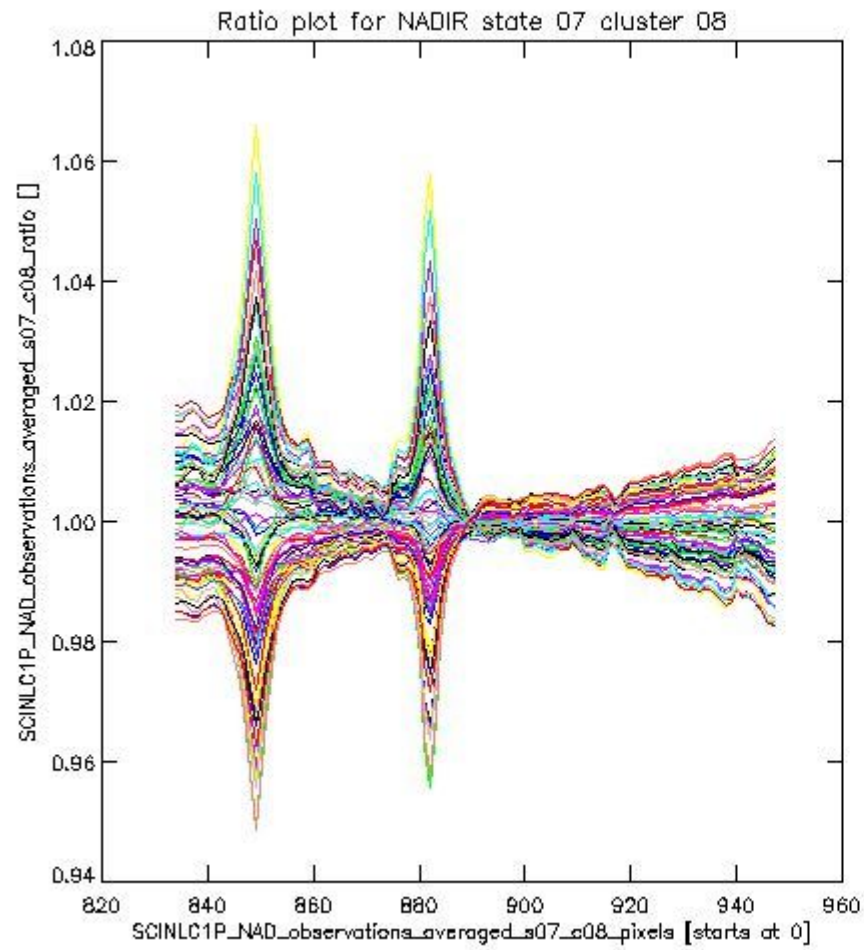
This section shows figures for each of the monitored source packet types listed in the Source Packet Summary section. For each mode-state-cluster(-height) combination the following plots are shown:

- 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:

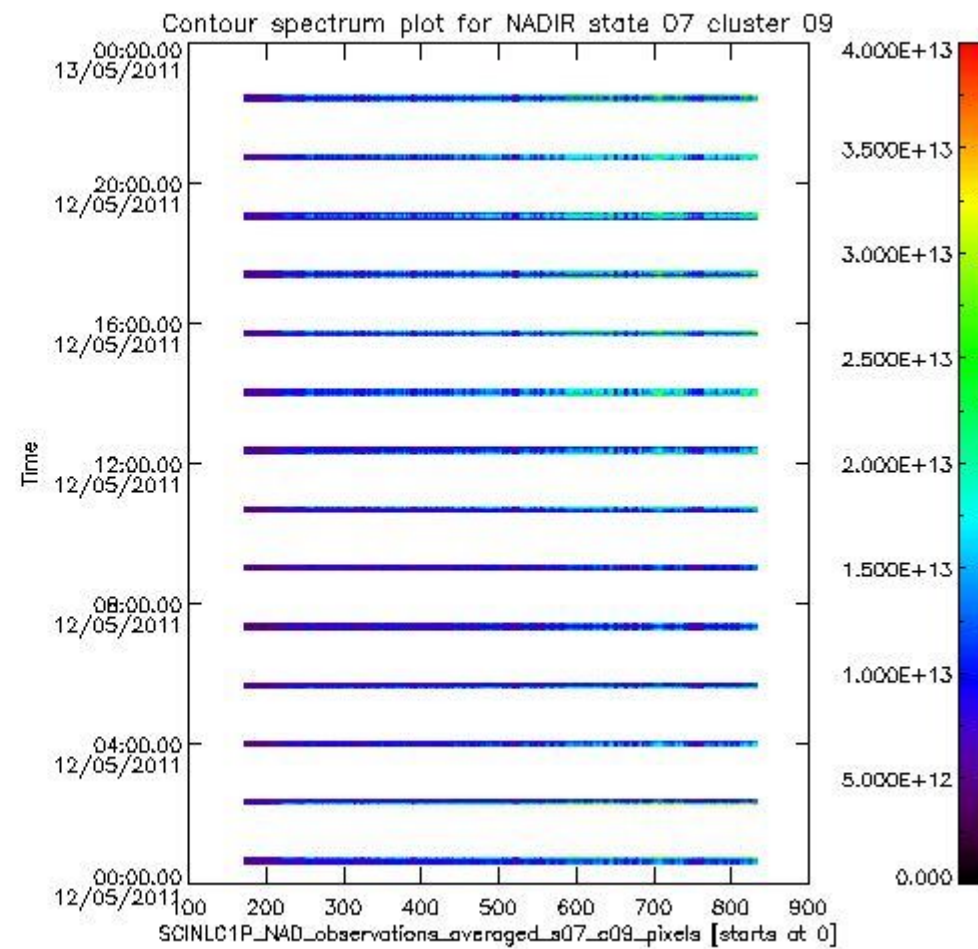
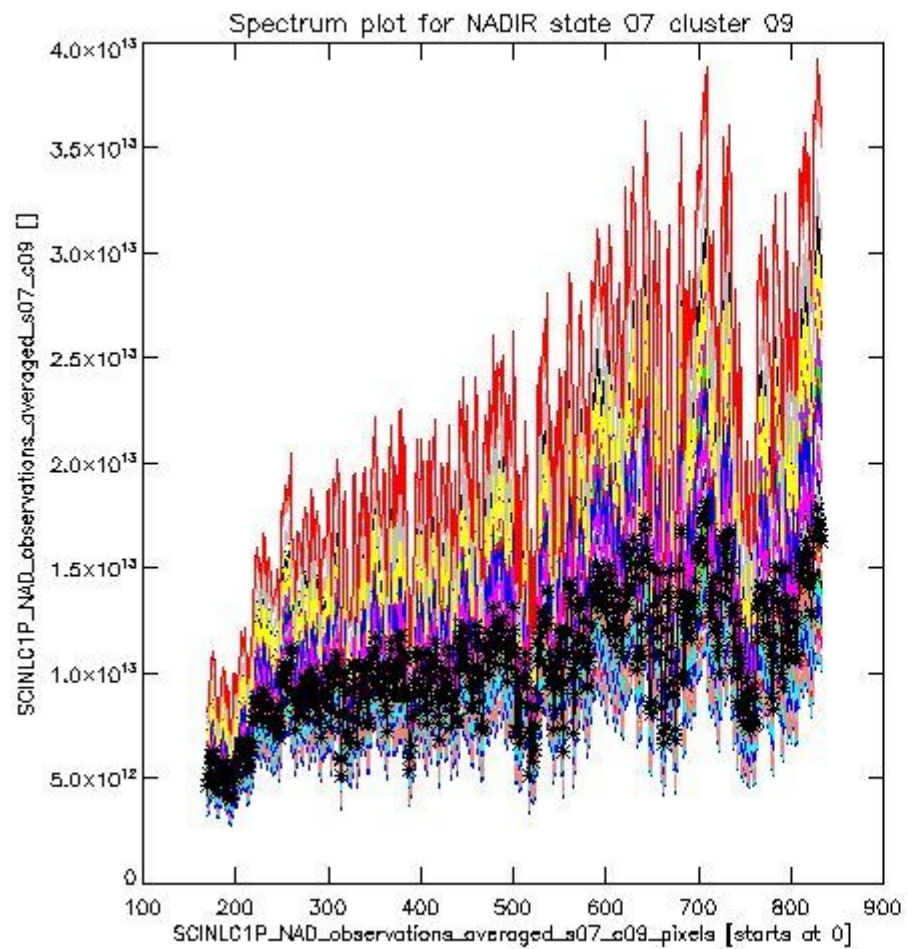
| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 12MAY2011 00:33:38.546 |
| Start time of last sample        | 12MAY2011 23:58:53.377 |
| Reference period start time      | 12APR2011 00:36:41.569 |
| Reference period stop time       | 11MAY2011 23:02:44.405 |
| Channel number                   | 2                      |
| First pixel number (starts at 0) | 834                    |
| Last pixel number (starts at 0)  | 947                    |



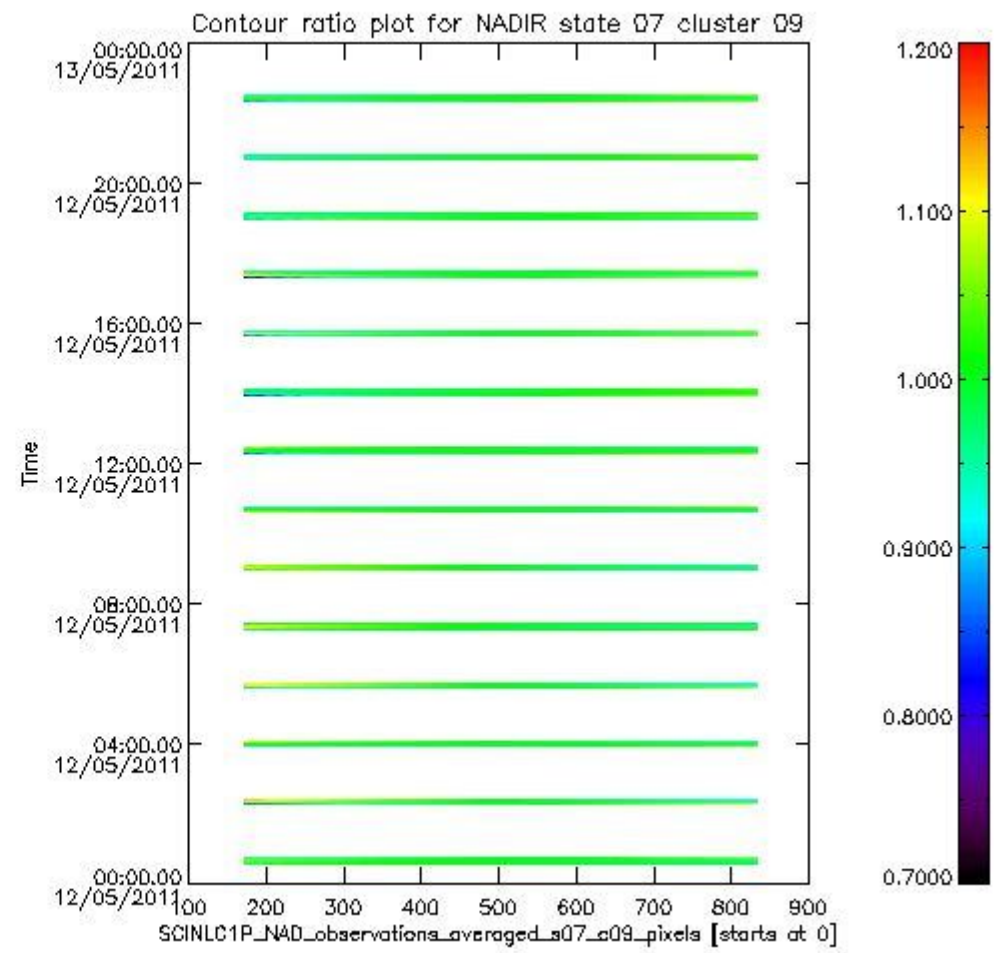
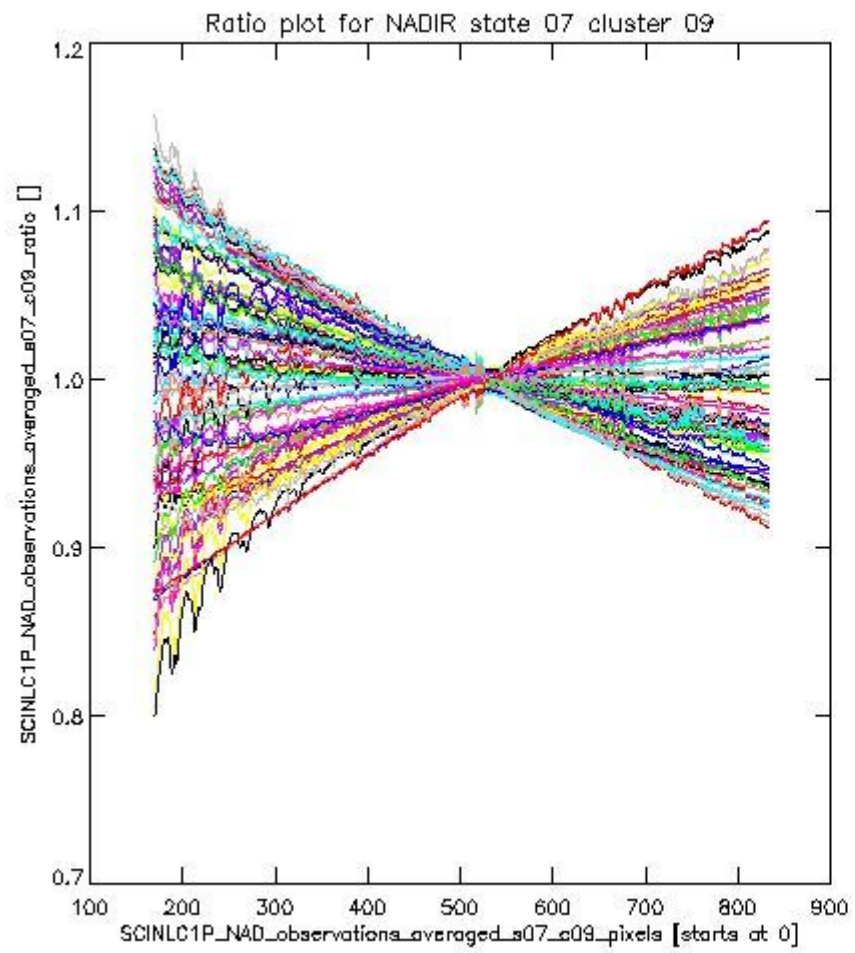


**1.2.2 NADIR state 07 cluster 09** The data for the analysis of NADIR state 07 cluster 09 have the following characteristics:

| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 12MAY2011 00:33:38.546 |
| Start time of last sample        | 12MAY2011 23:58:53.377 |
| Reference period start time      | 12APR2011 00:36:41.569 |
| Reference period stop time       | 11MAY2011 23:02:44.405 |
| Channel number                   | 2                      |
| First pixel number (starts at 0) | 170                    |
| Last pixel number (starts at 0)  | 833                    |



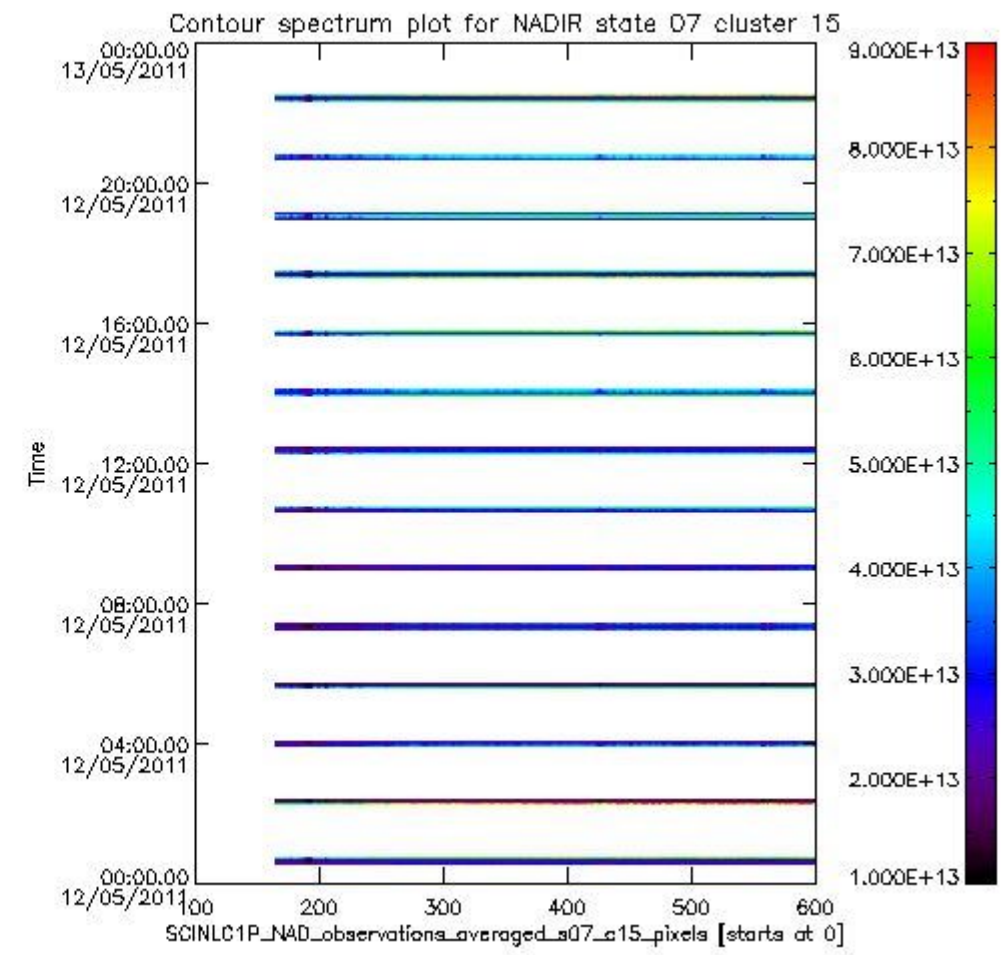
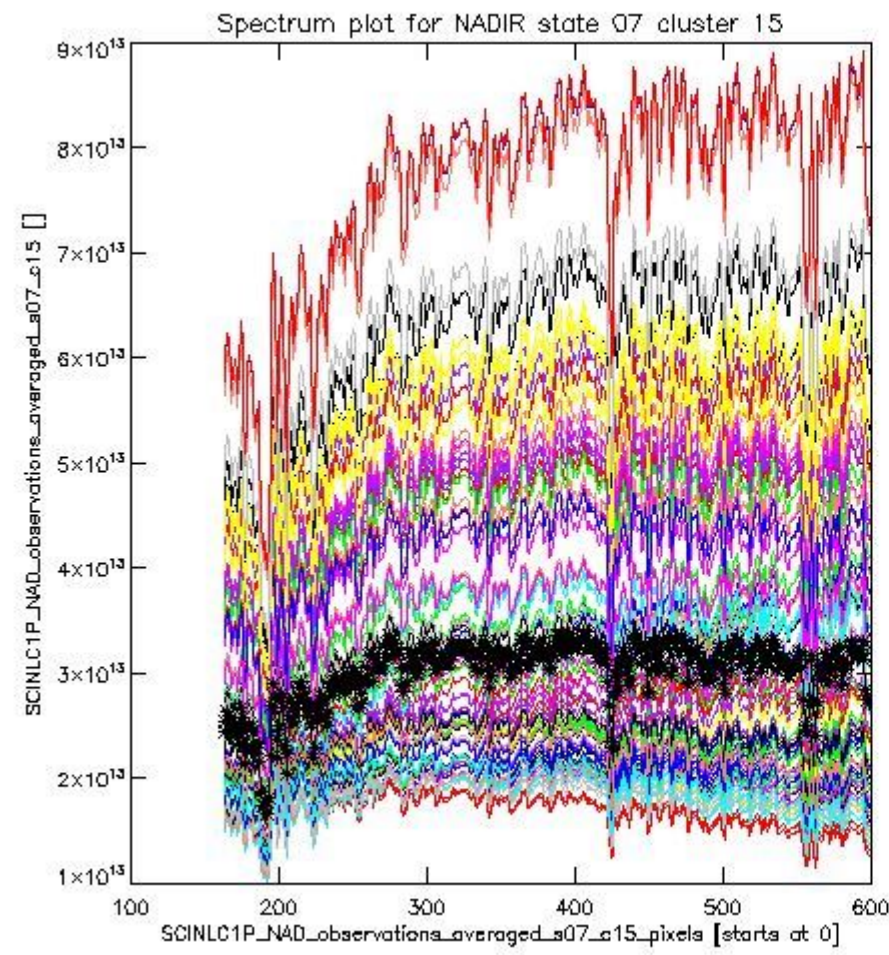
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_2.PNG



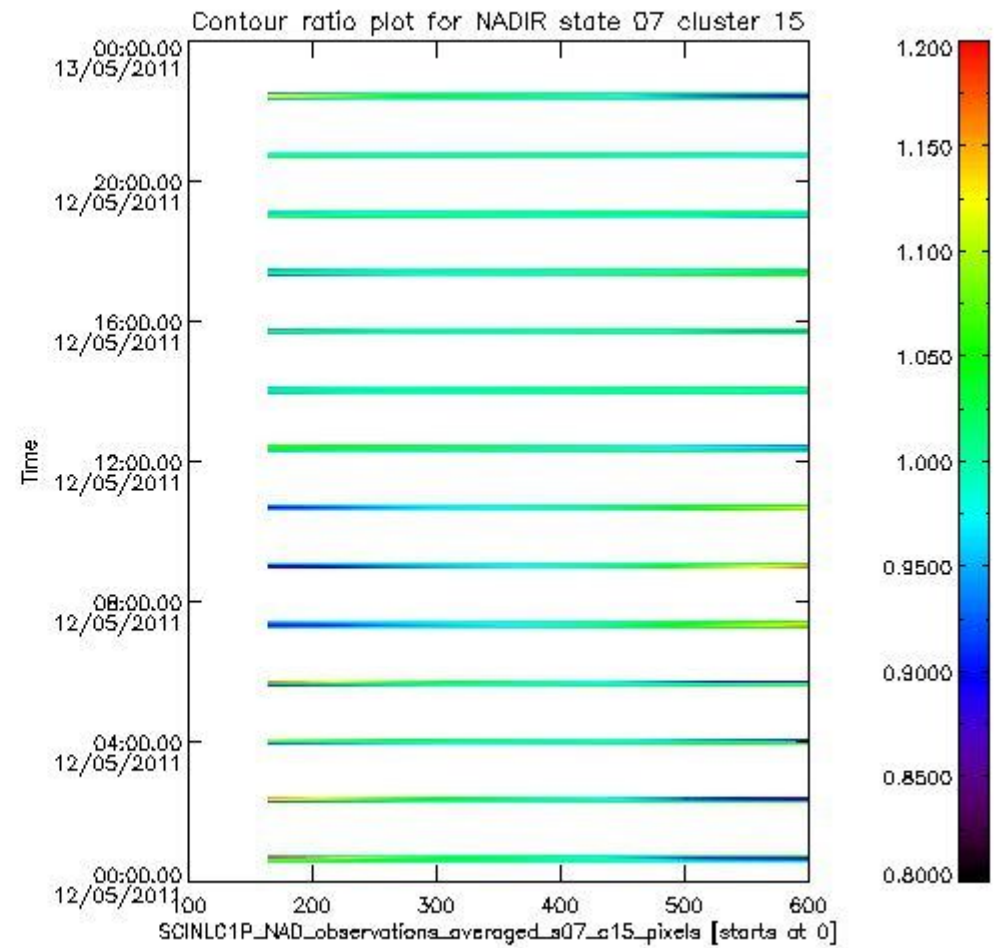
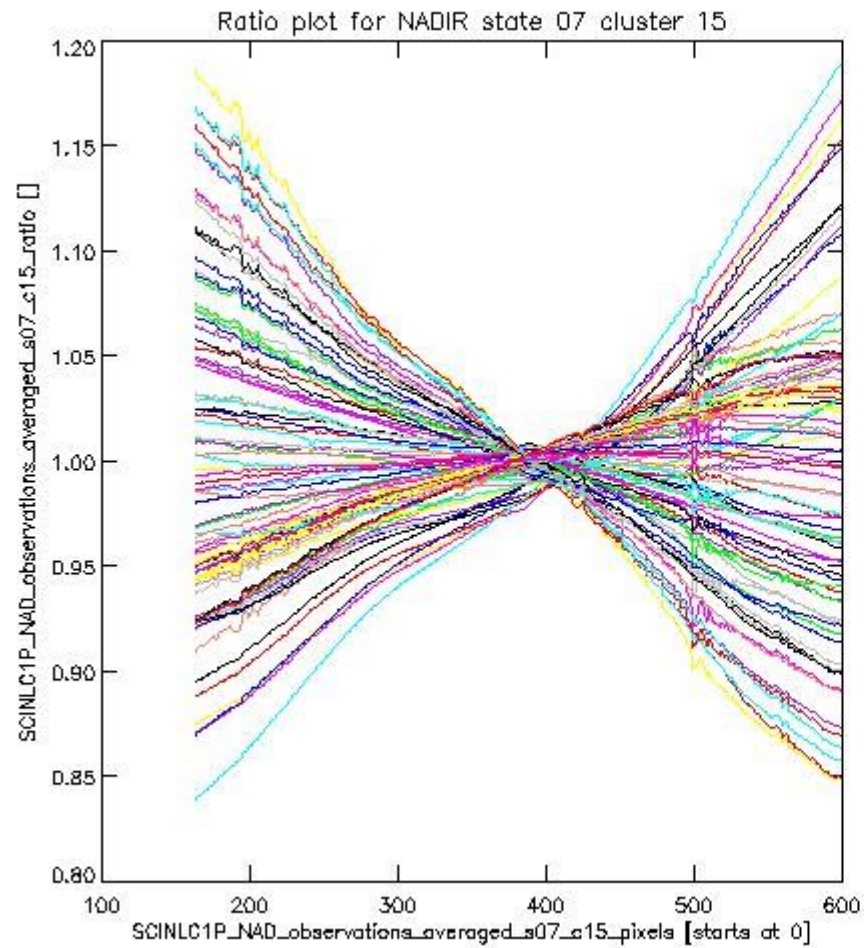
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_3.PNG

**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       | 12MAY2011 00:33:38.546 |
| Start time of last sample        | 12MAY2011 23:58:53.377 |
| Reference period start time      | 12APR2011 00:36:41.569 |
| Reference period stop time       | 11MAY2011 23:02:44.405 |
| Channel number                   | 3                      |
| First pixel number (starts at 0) | 163                    |
| Last pixel number (starts at 0)  | 598                    |



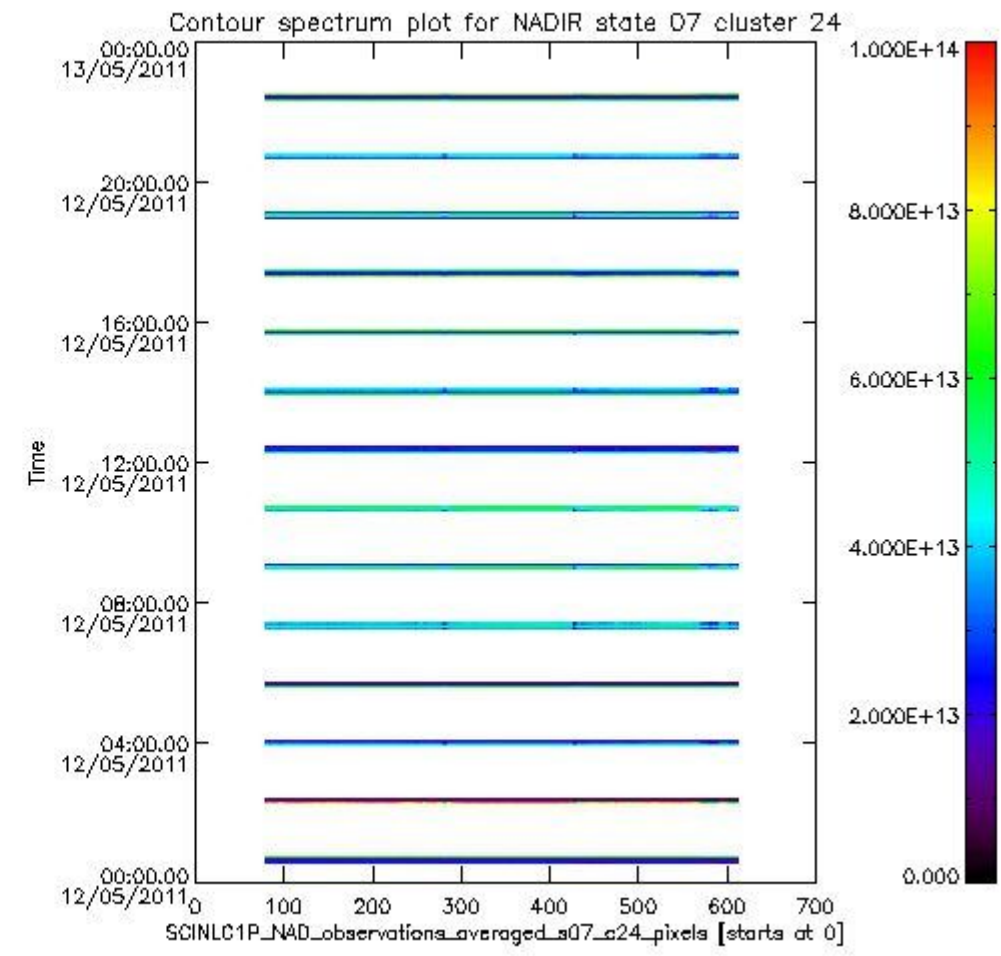
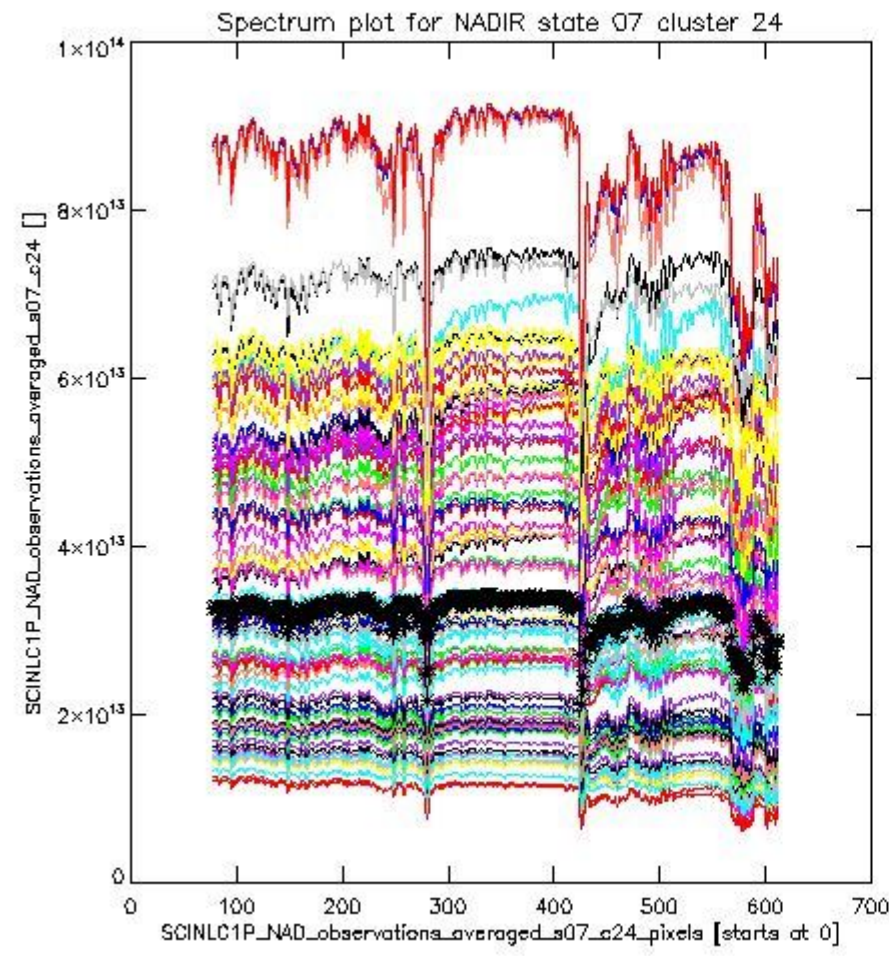
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_4.PNG



sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_5.PNG

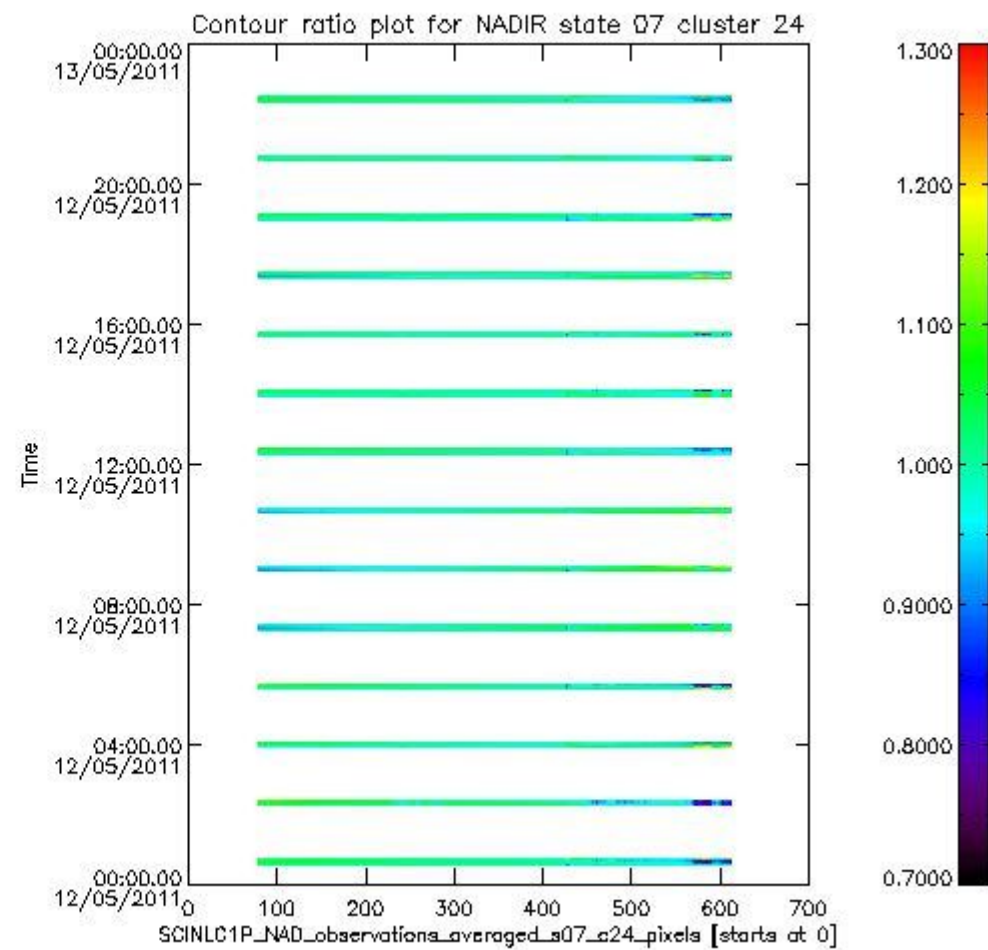
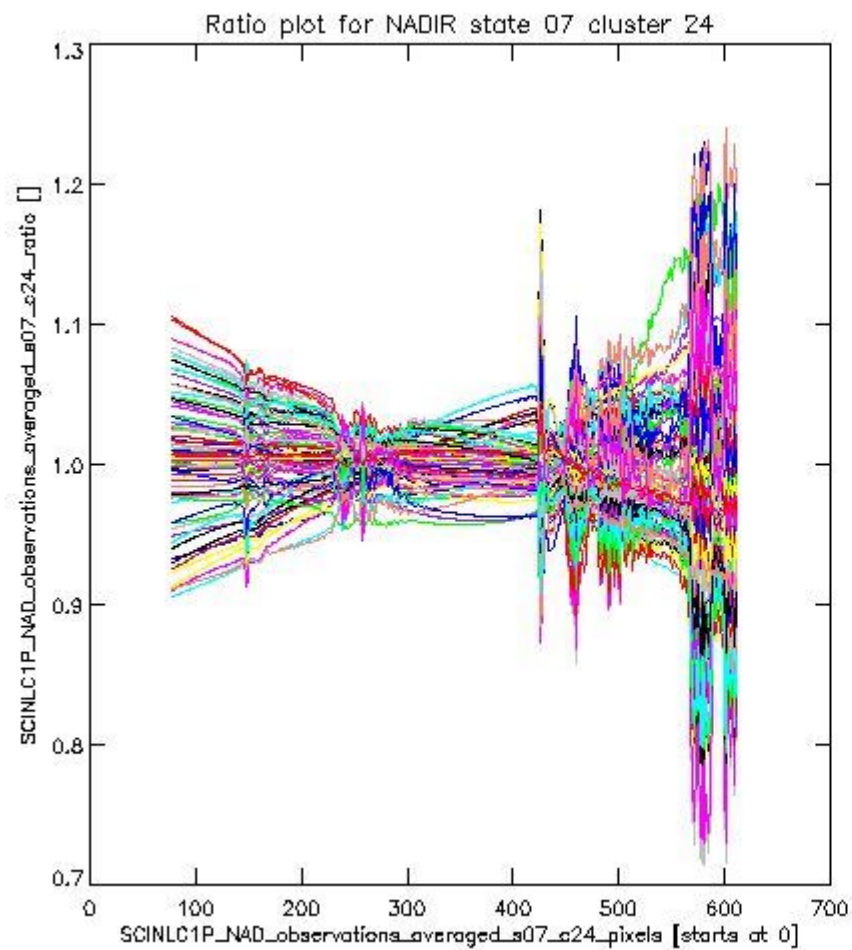
**1.2.4 NADIR state 07 cluster 24** The data for the analysis of NADIR state 07 cluster 24 have the following characteristics:

| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 12MAY2011 00:33:38.546 |
| Start time of last sample        | 12MAY2011 23:58:53.377 |
| Reference period start time      | 12APR2011 00:36:41.569 |
| Reference period stop time       | 11MAY2011 23:02:44.405 |
| 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\_20110512\_6.PNG

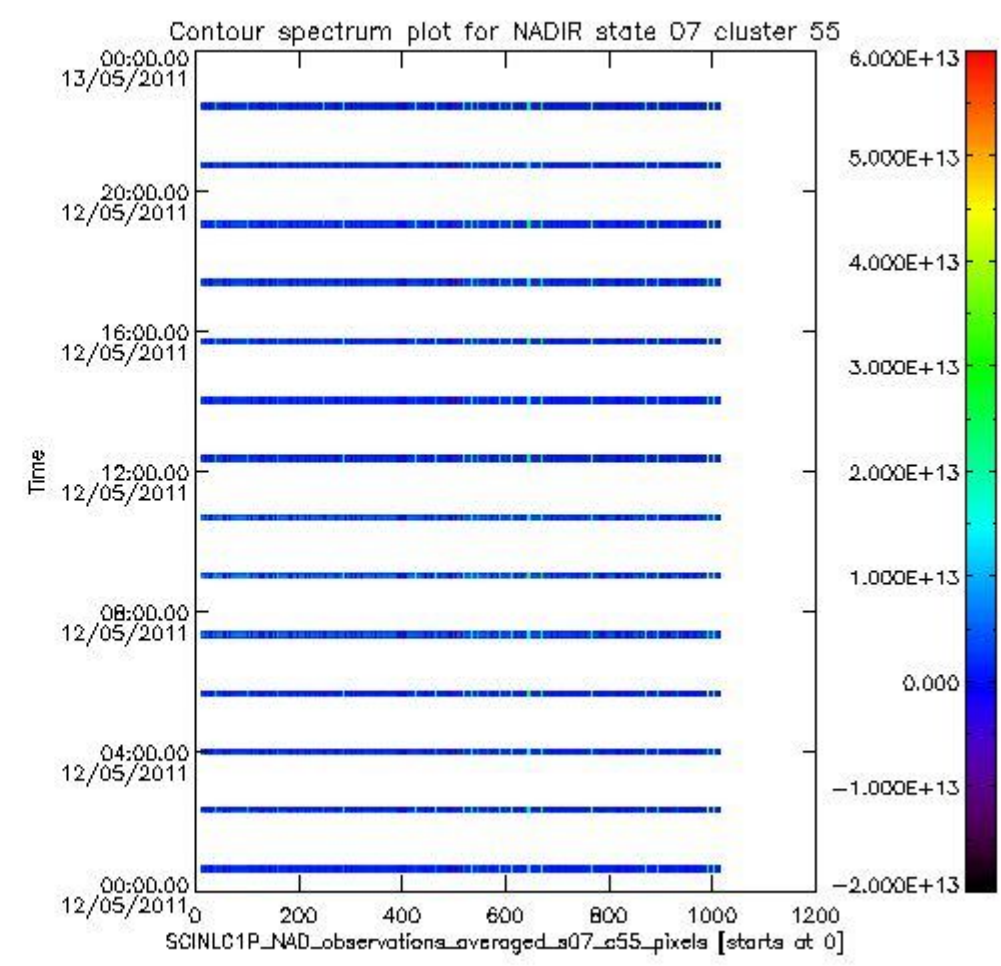
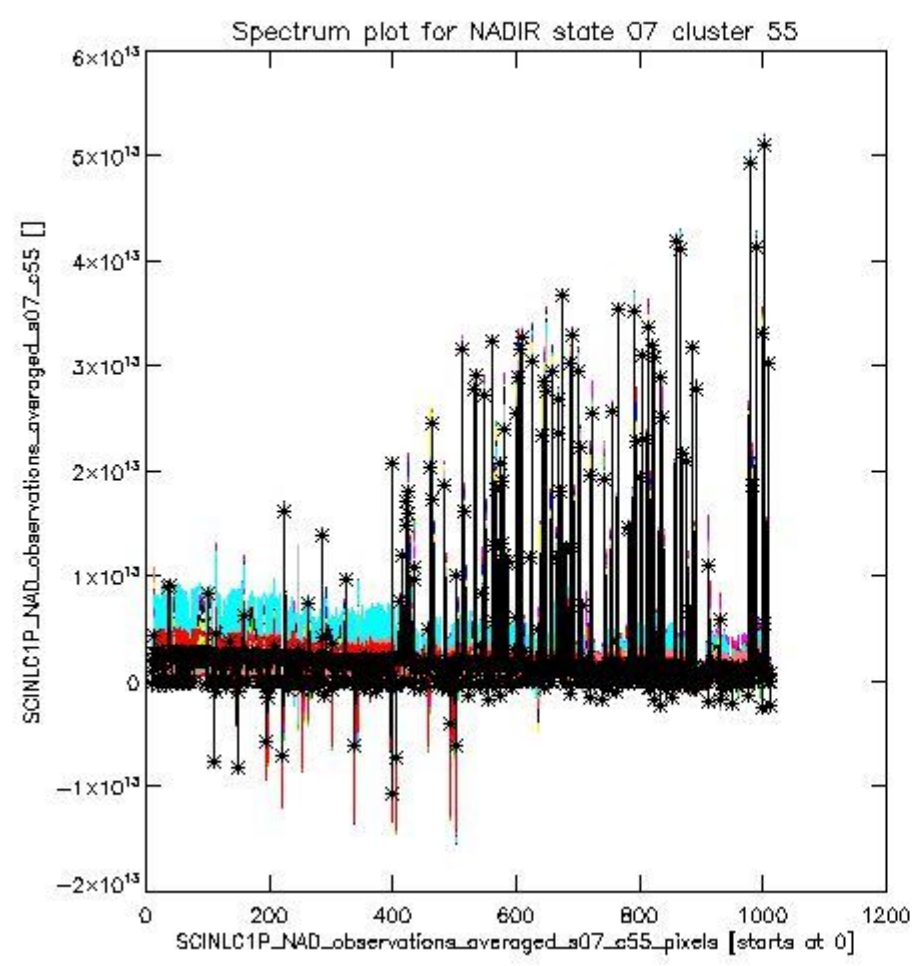




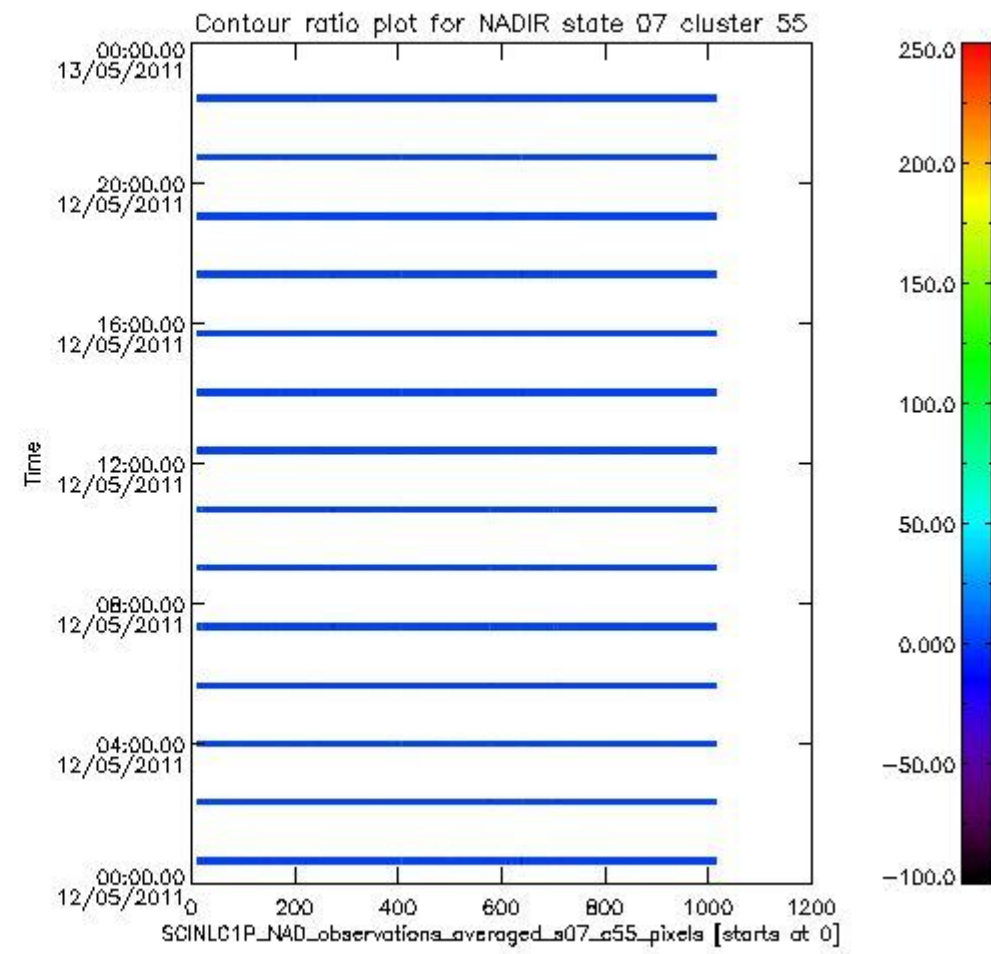
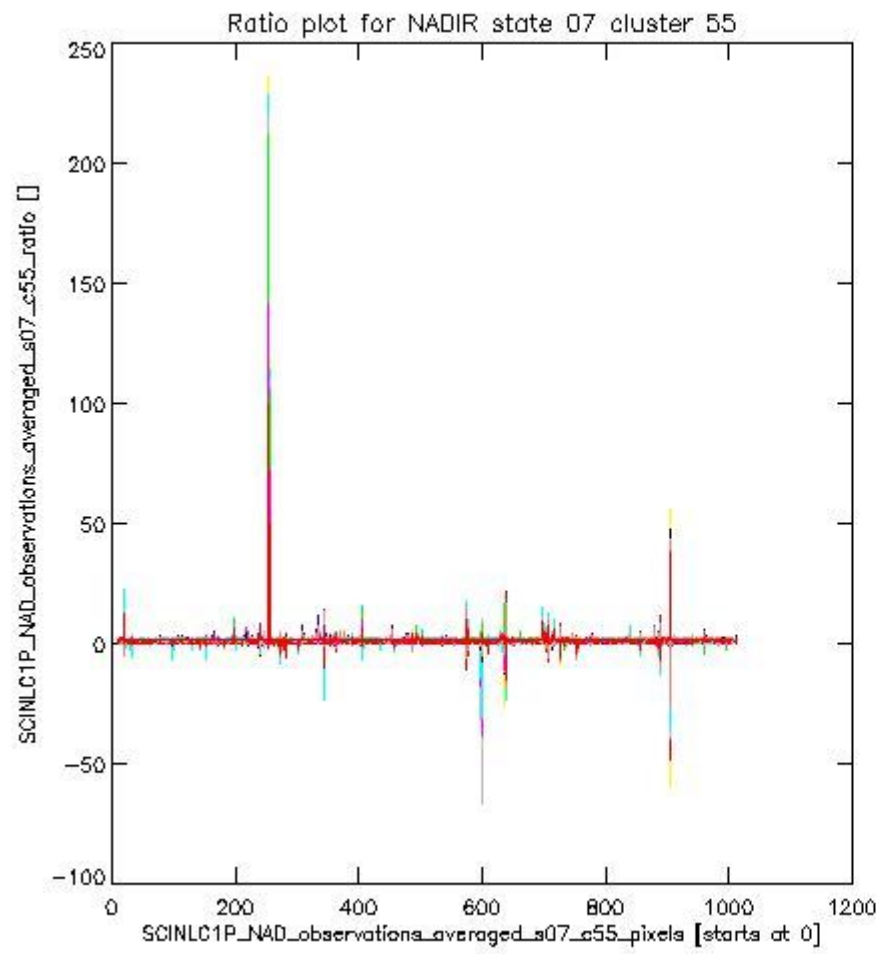
sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_7.PNG

**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       | 12MAY2011 00:33:38.546 |
| Start time of last sample        | 12MAY2011 23:58:53.377 |
| Reference period start time      | 12APR2011 00:36:41.569 |
| Reference period stop time       | 11MAY2011 23:02:44.405 |
| Channel number                   | 8                      |
| First pixel number (starts at 0) | 10                     |
| Last pixel number (starts at 0)  | 1013                   |



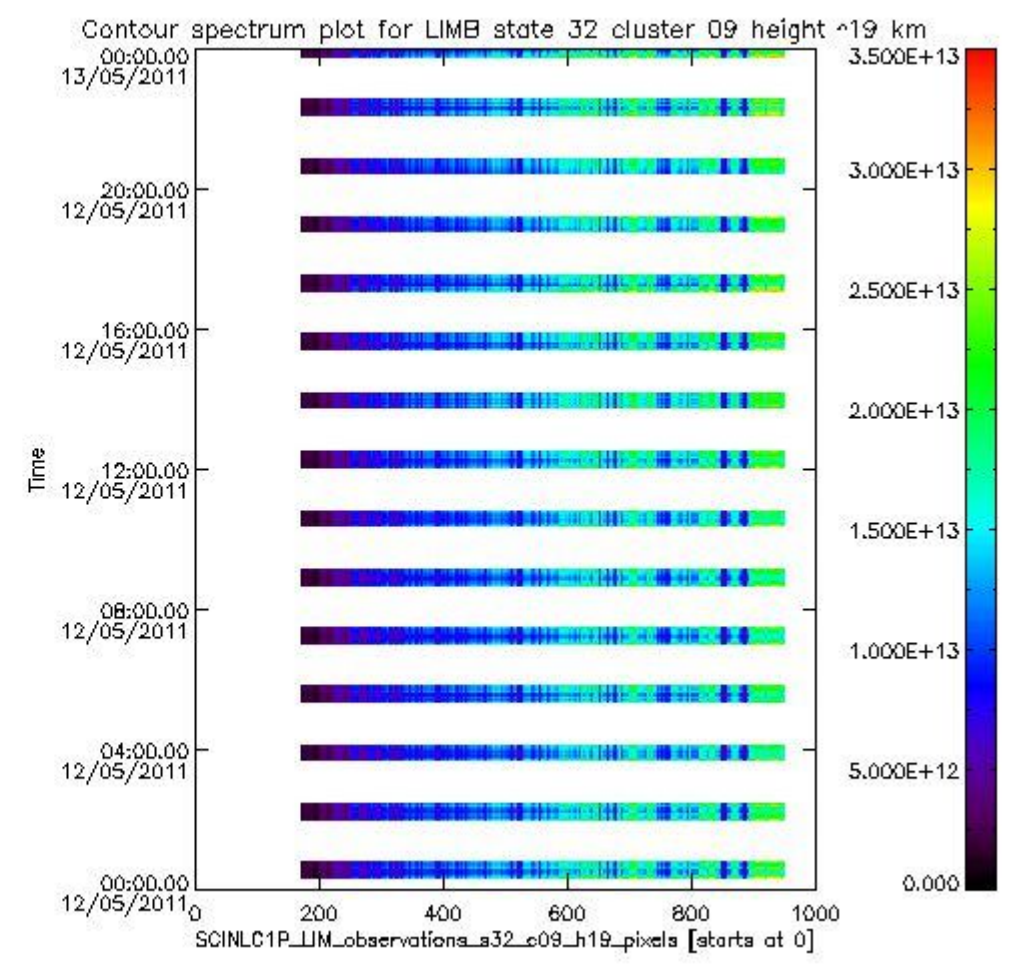
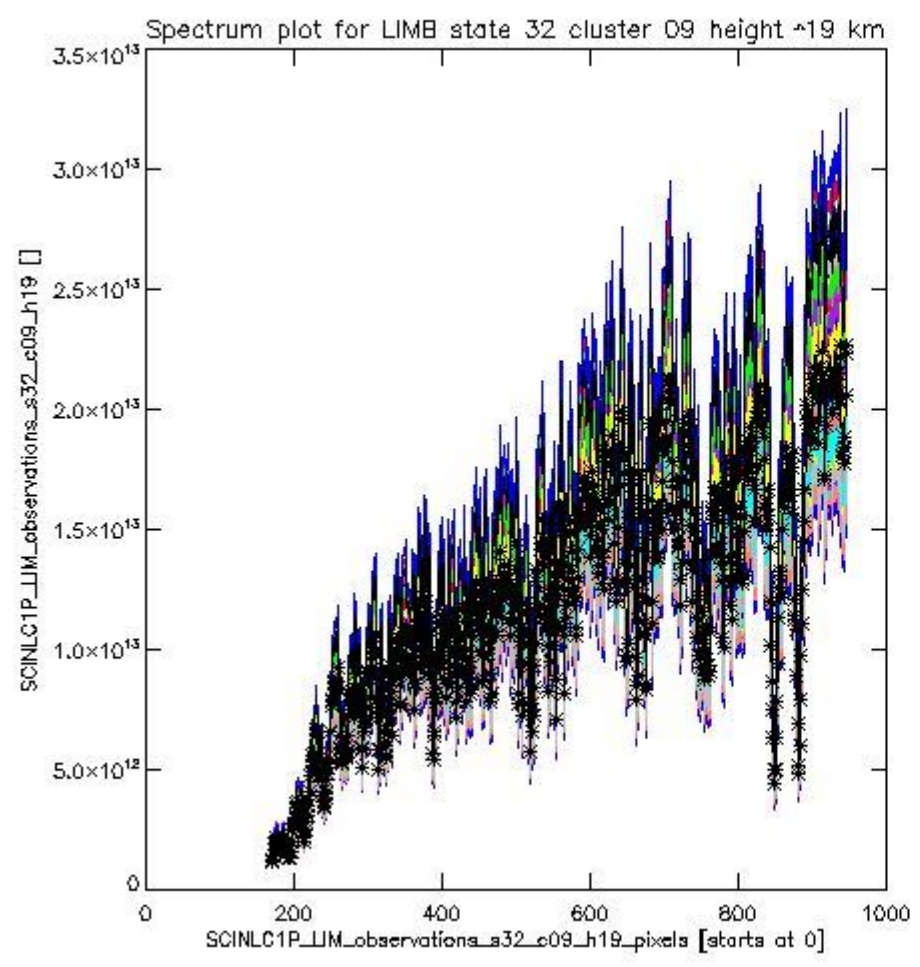
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_8.PNG



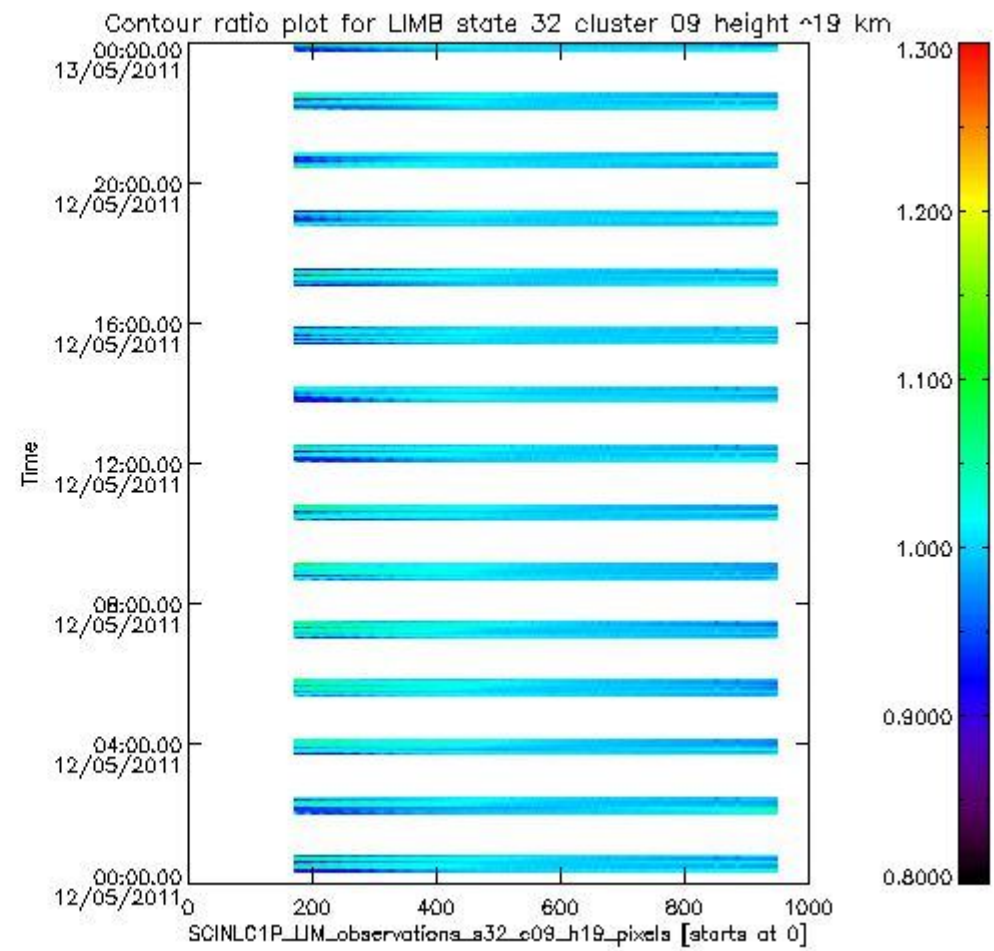
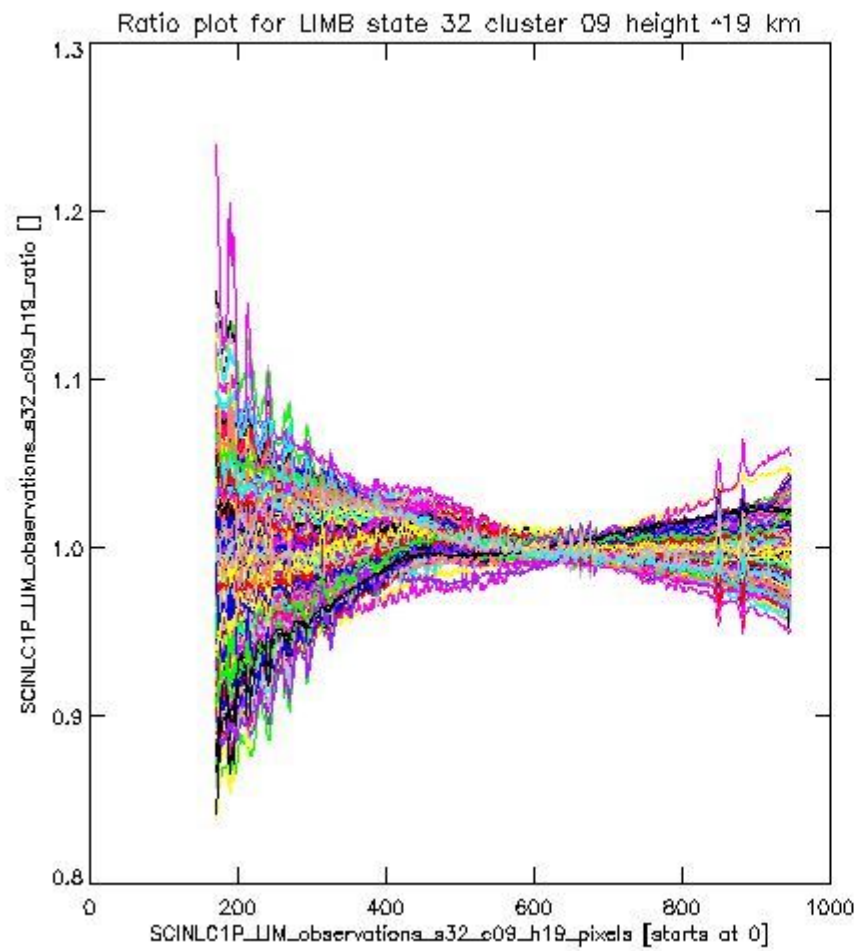
sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_9.PNG

**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       | 12MAY2011 00:20:27.909 |
| Start time of last sample        | 12MAY2011 23:57:59.190 |
| Reference period start time      | 12APR2011 00:21:28.194 |
| Reference period stop time       | 11MAY2011 23:07:58.452 |
| Channel number                   | 2                      |
| First pixel number (starts at 0) | 170                    |
| Last pixel number (starts at 0)  | 947                    |



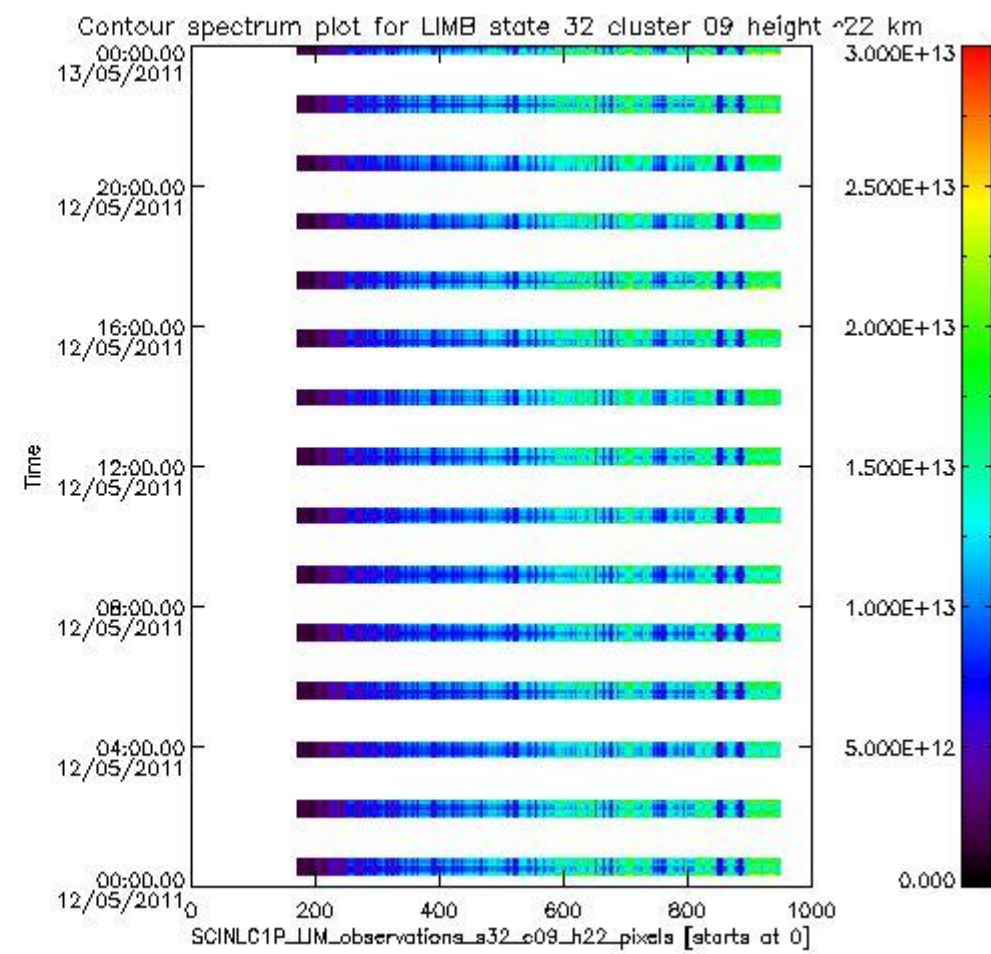
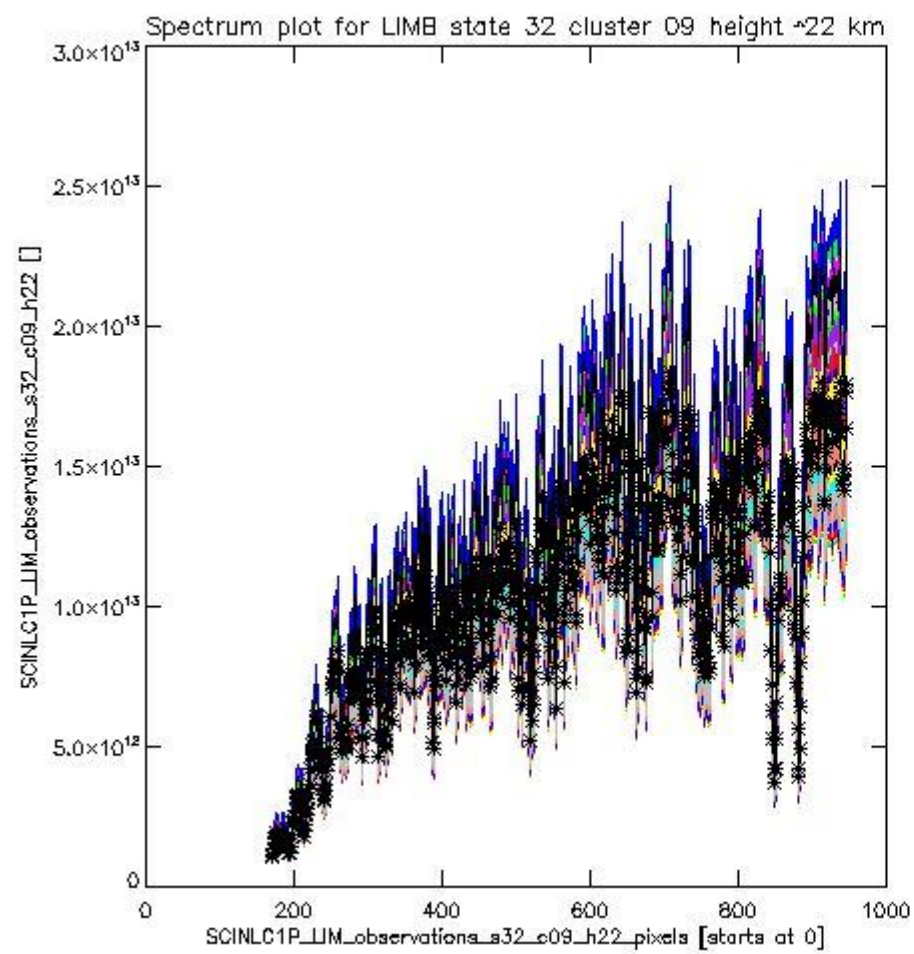
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_10.PNG



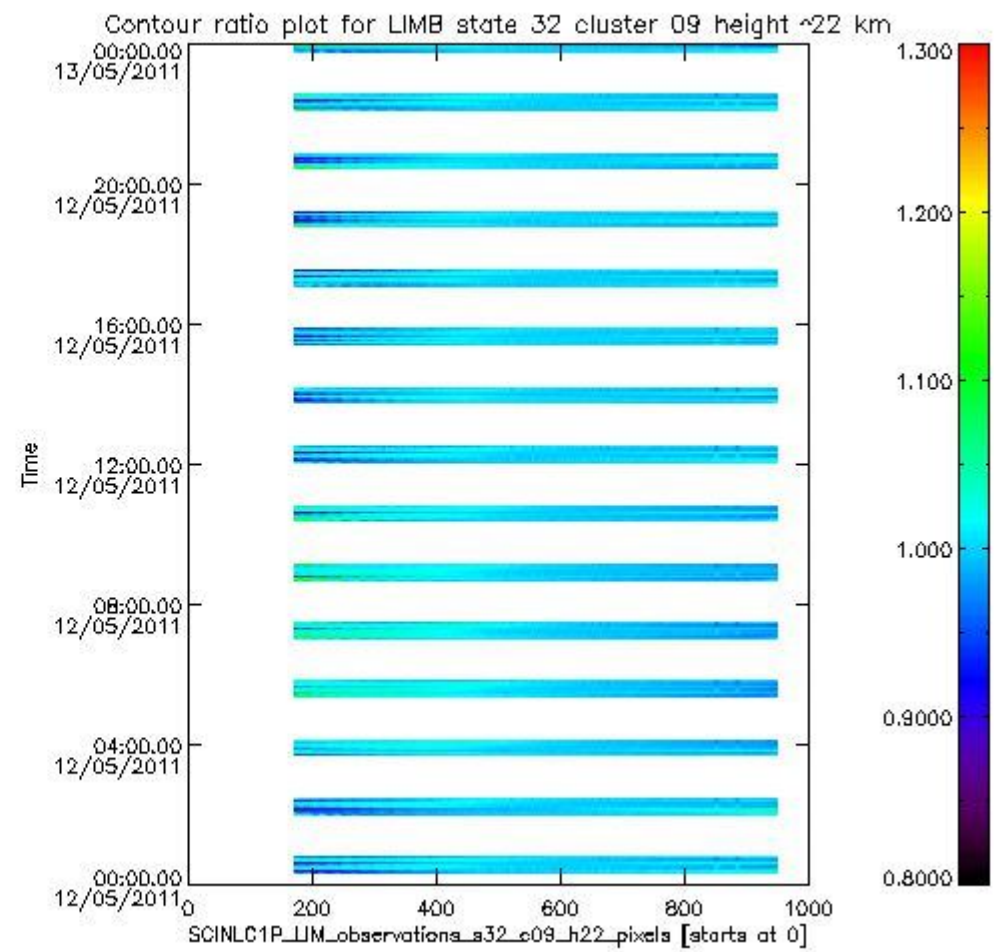
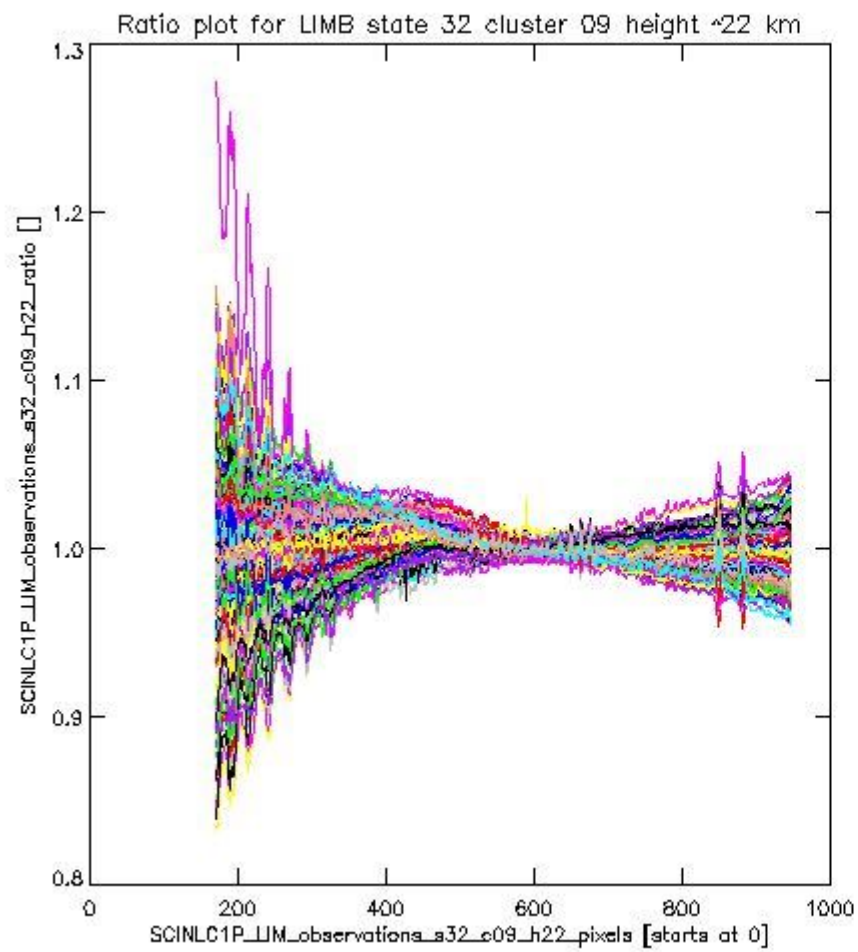
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_11.PNG

**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       | 12MAY2011 00:20:27.909 |
| Start time of last sample        | 12MAY2011 23:57:59.190 |
| Reference period start time      | 12APR2011 00:21:28.194 |
| Reference period stop time       | 11MAY2011 23:07:58.452 |
| Channel number                   | 2                      |
| First pixel number (starts at 0) | 170                    |
| Last pixel number (starts at 0)  | 947                    |



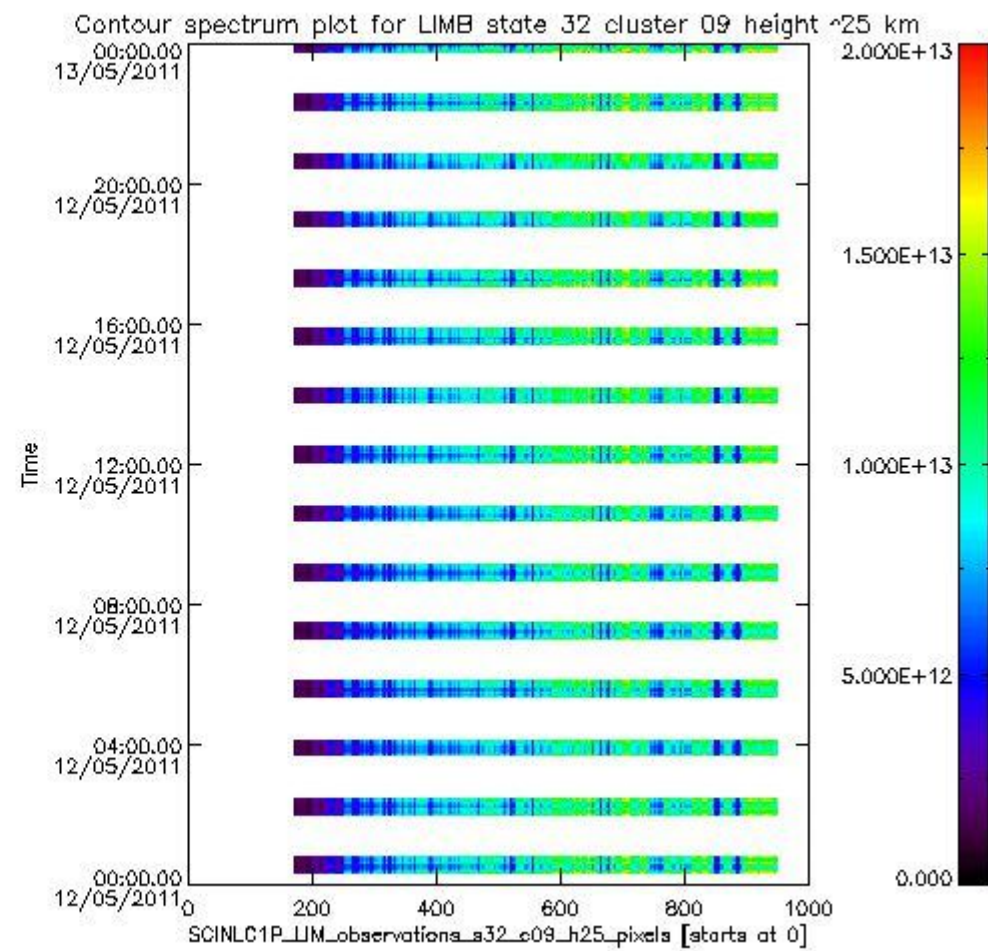
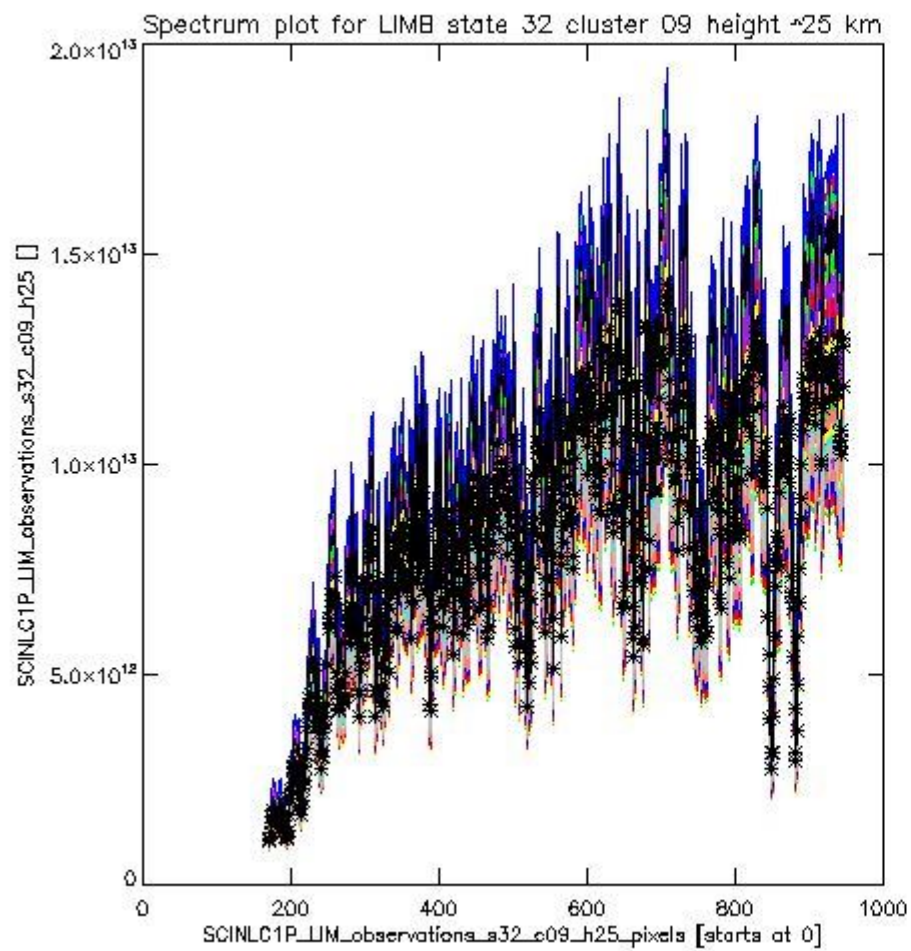
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_12.PNG



sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_13.PNG

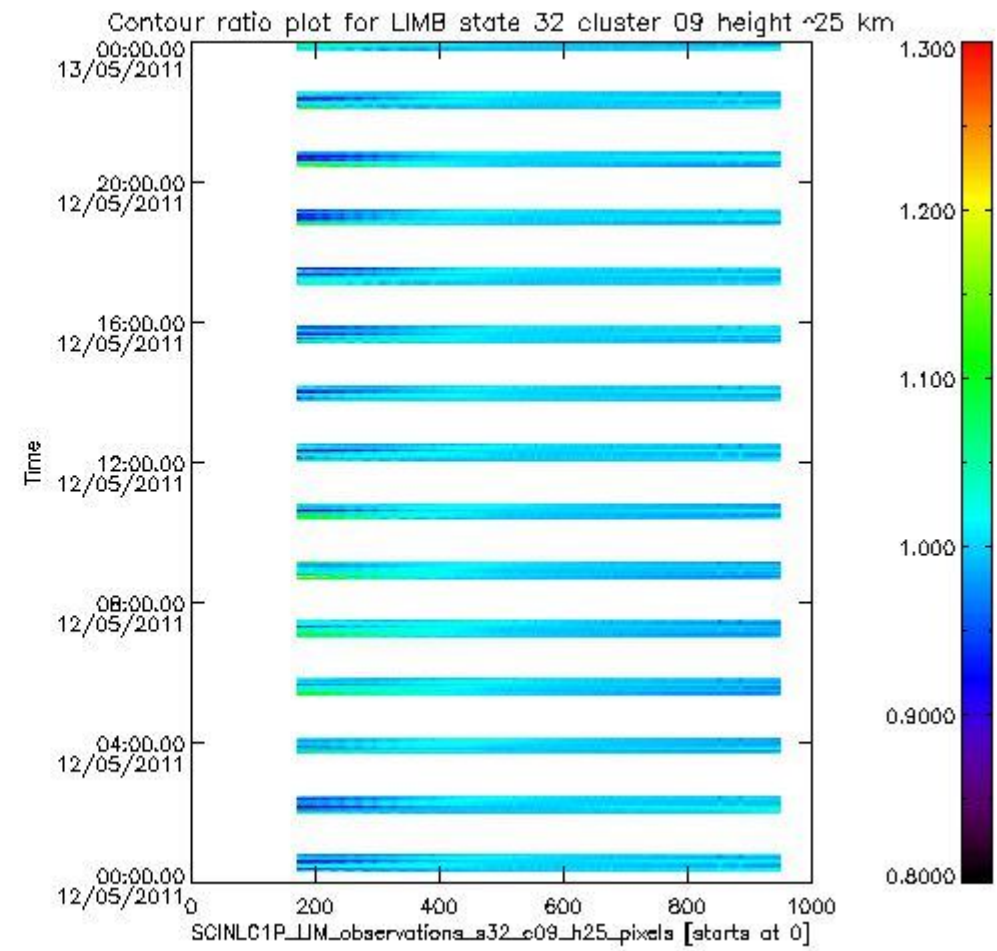
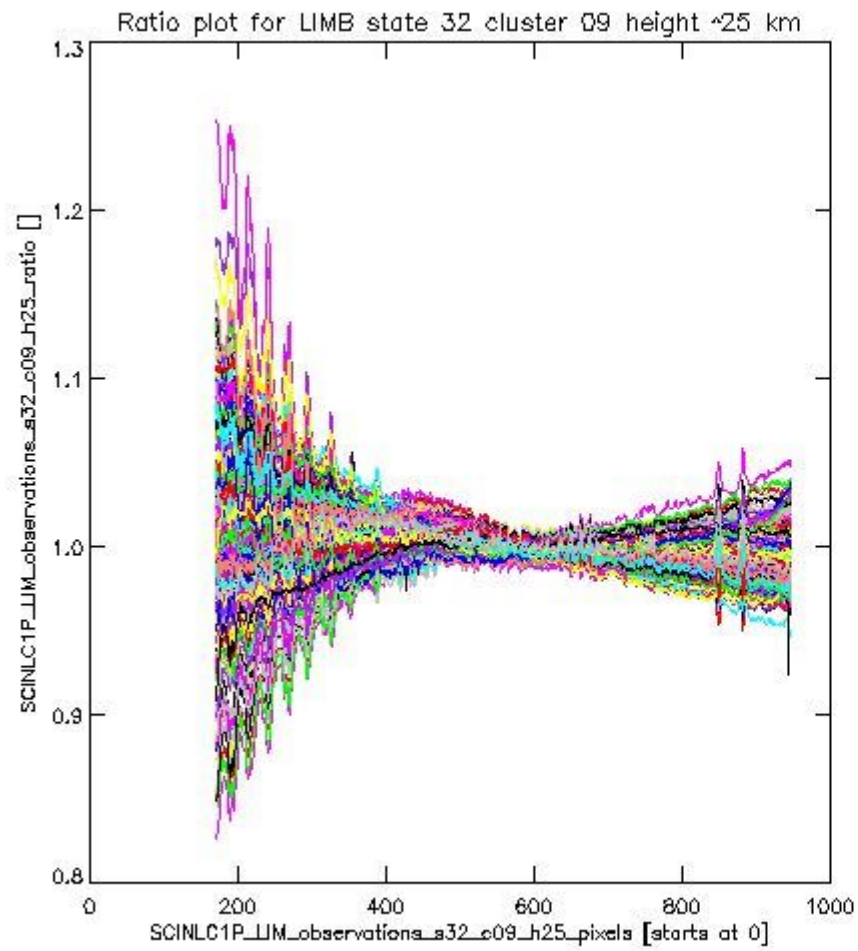
**1.2.8 LIMB state 32 cluster 09 height ~25 km** The data for the analysis of LIMB state 32 cluster 09 height ~25 km have the following characteristics:

| Item                             | Value                  |
|----------------------------------|------------------------|
| Start time of first sample       | 12MAY2011 00:20:27.909 |
| Start time of last sample        | 12MAY2011 23:57:59.190 |
| Reference period start time      | 12APR2011 00:21:28.194 |
| Reference period stop time       | 11MAY2011 23:07:58.452 |
| 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\_20110512\_14.PNG

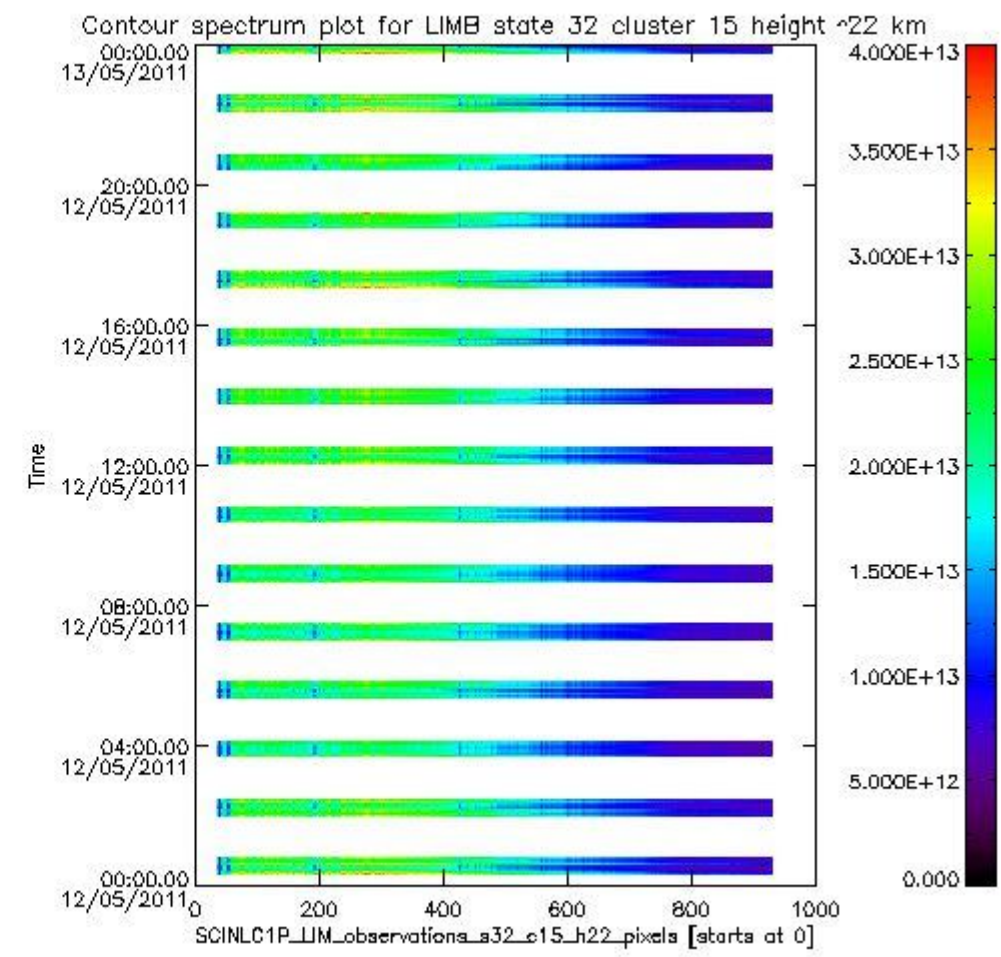
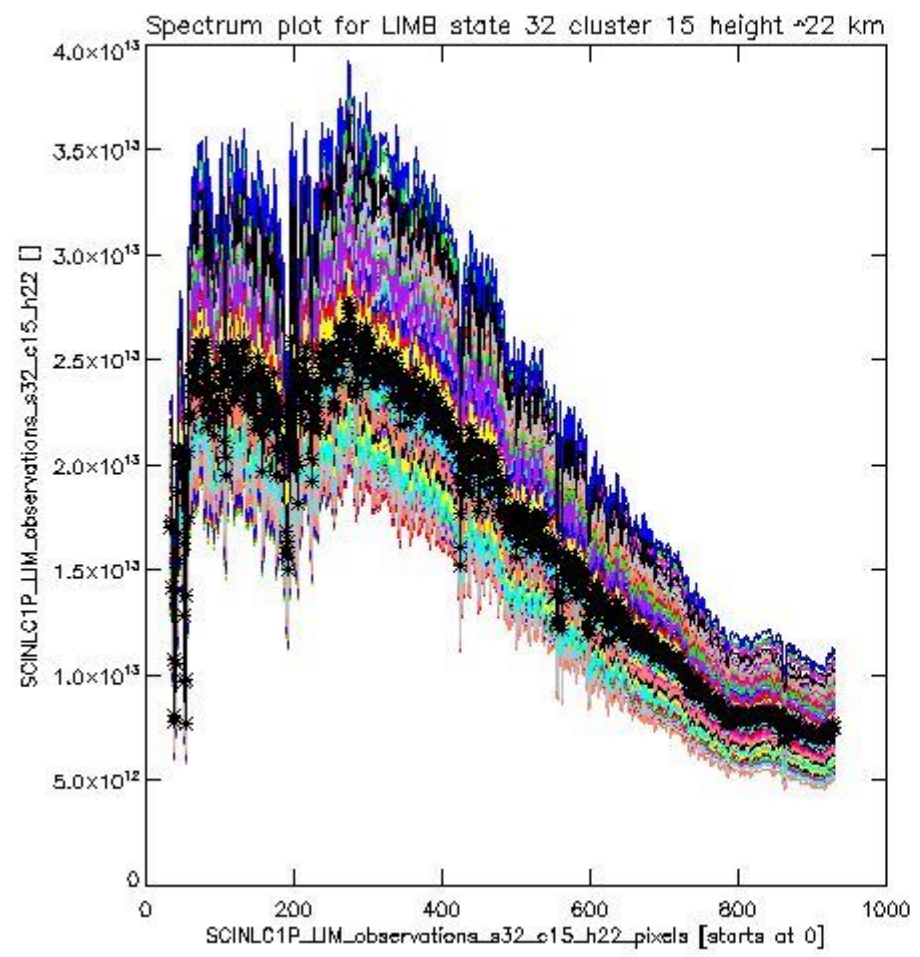




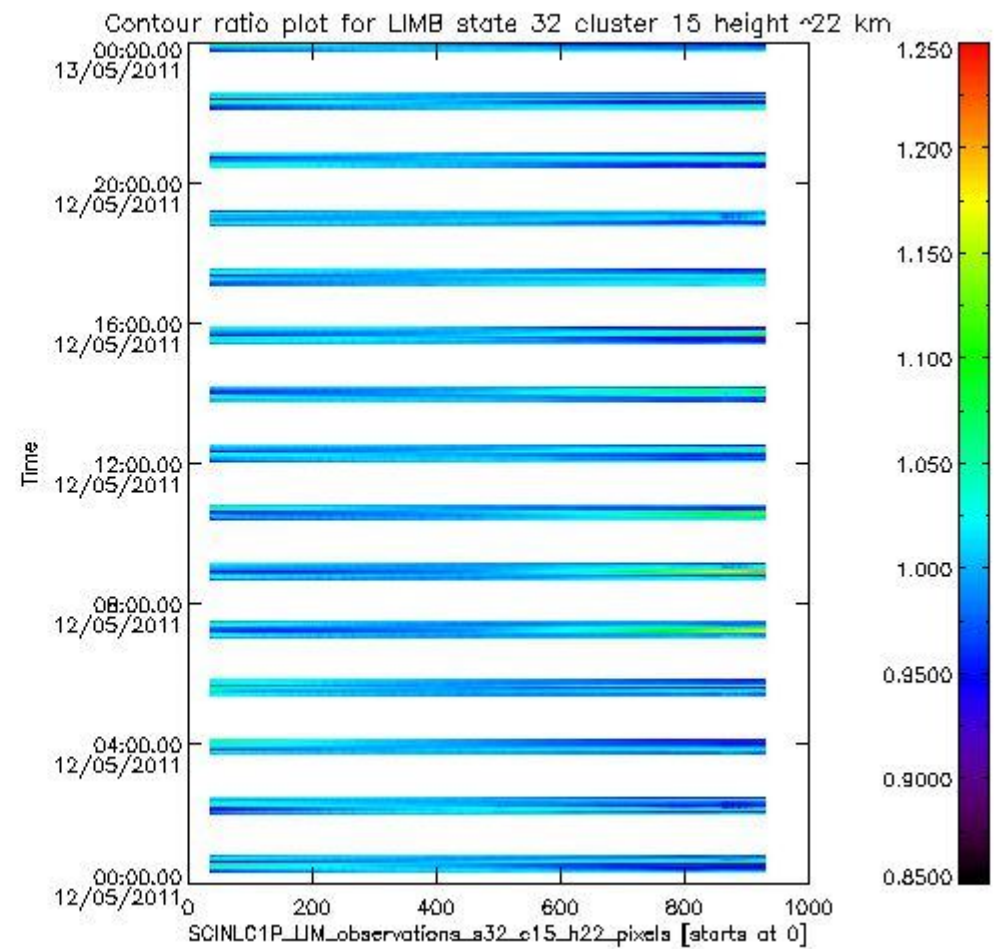
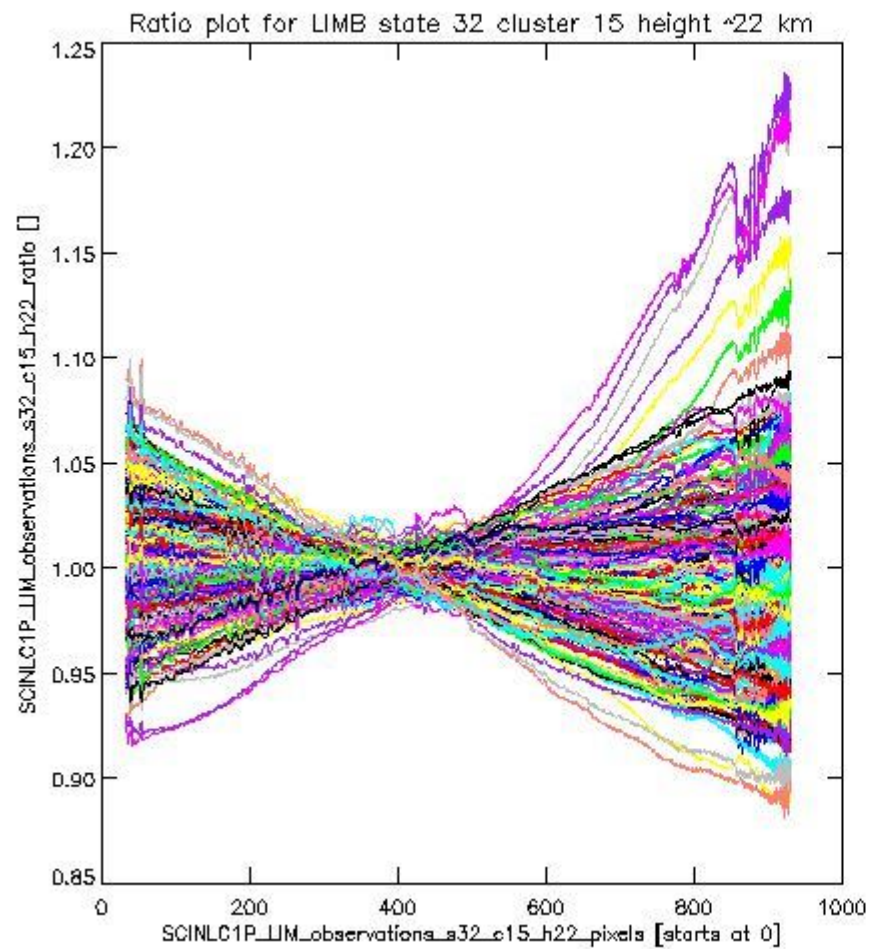
sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_15.PNG

**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       | 12MAY2011 00:20:27.909 |
| Start time of last sample        | 12MAY2011 23:57:59.190 |
| Reference period start time      | 12APR2011 00:21:28.194 |
| Reference period stop time       | 11MAY2011 23:07:58.452 |
| Channel number                   | 3                      |
| First pixel number (starts at 0) | 33                     |
| Last pixel number (starts at 0)  | 929                    |



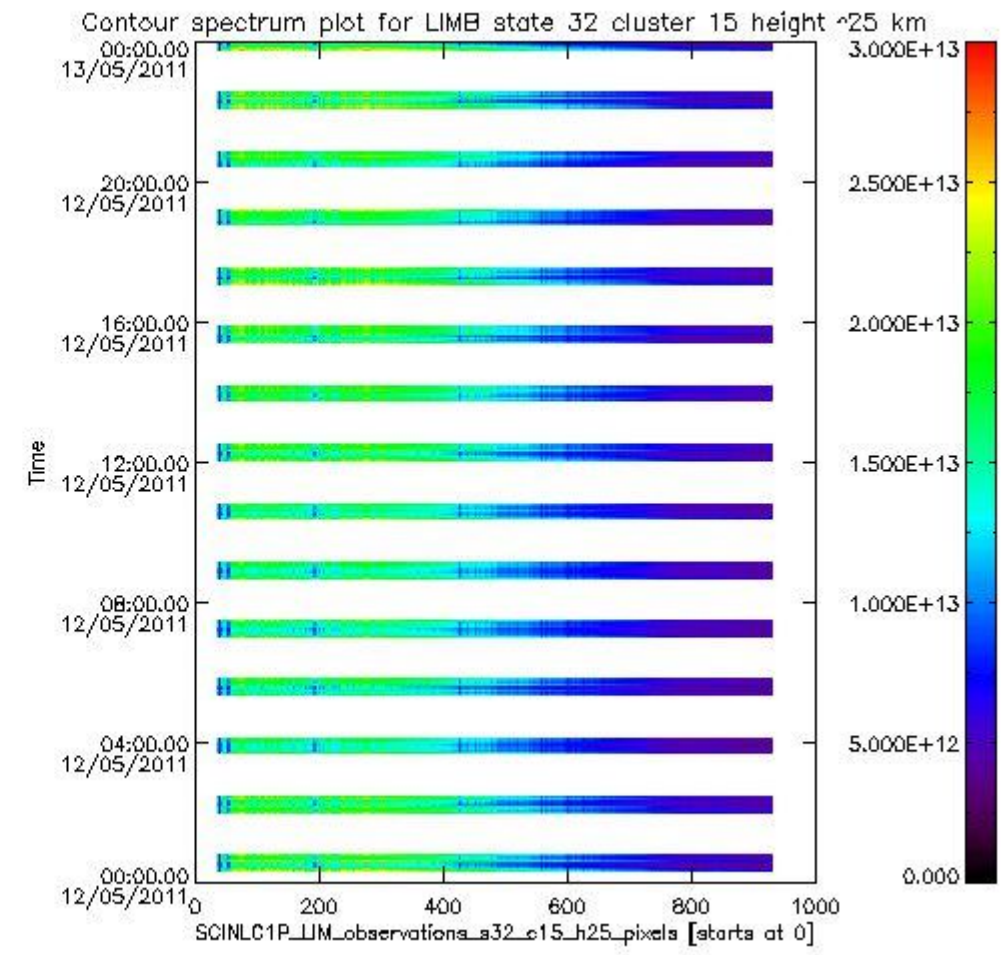
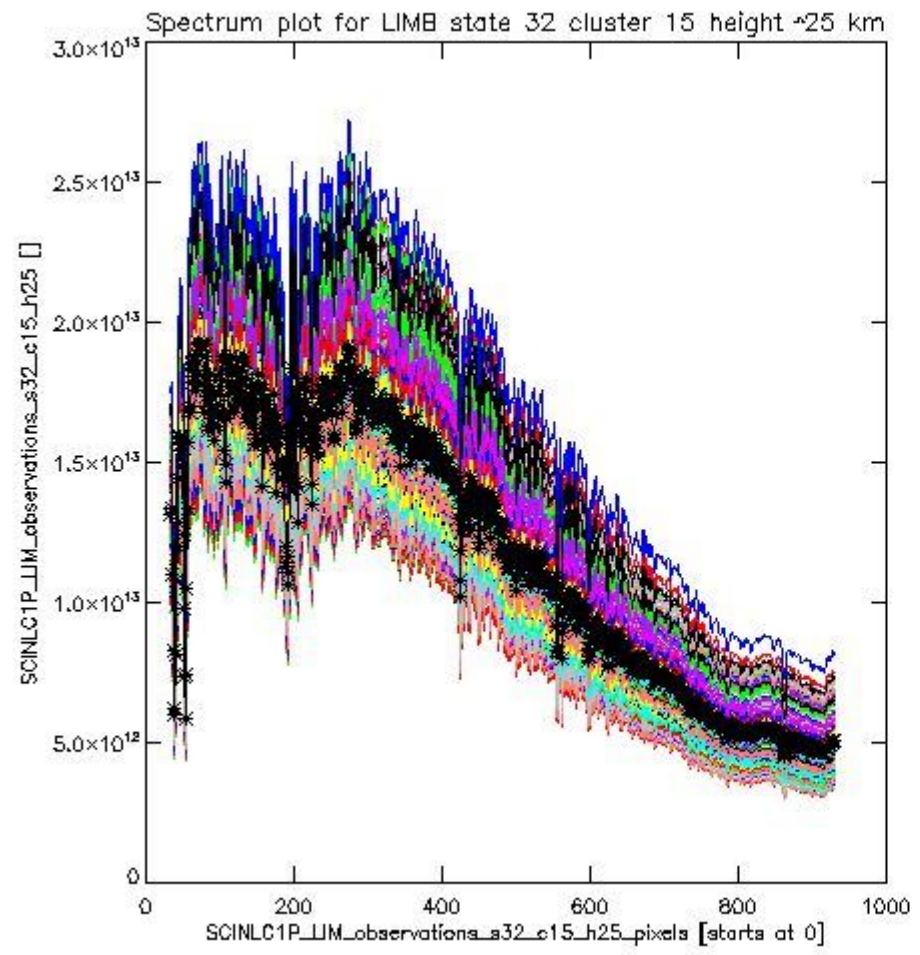
sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_16.PNG



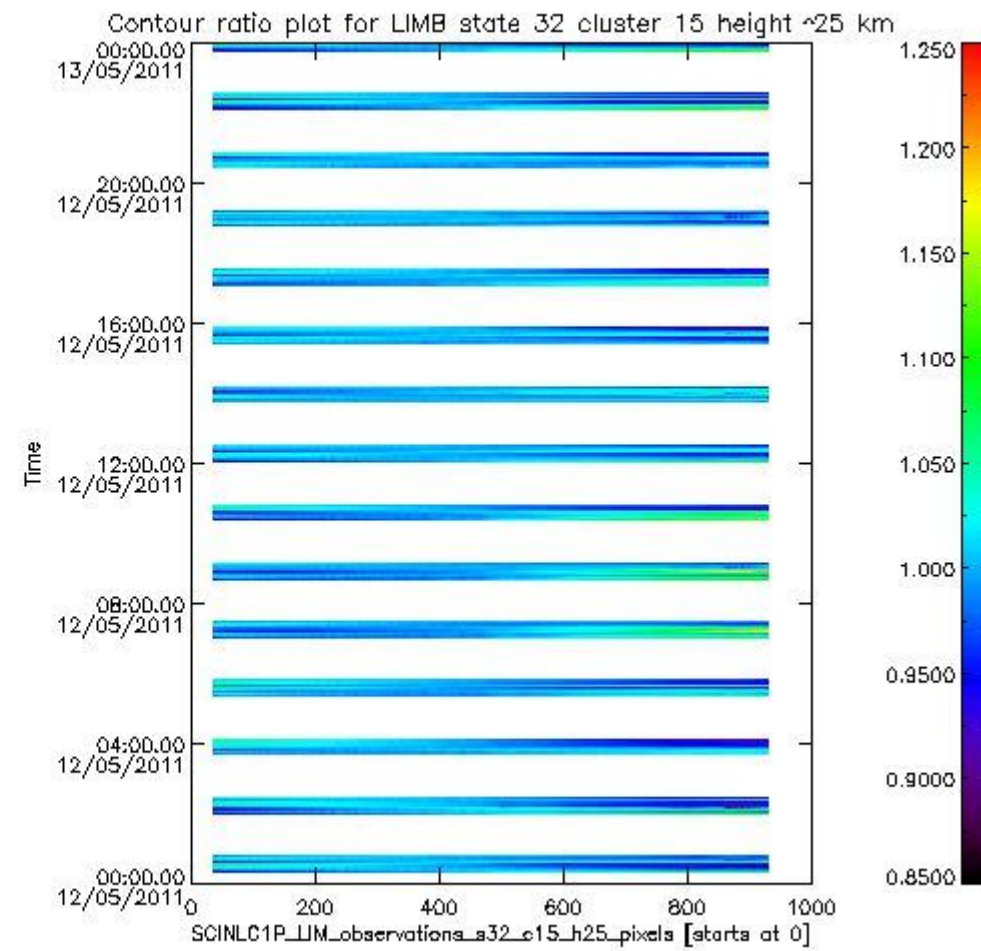
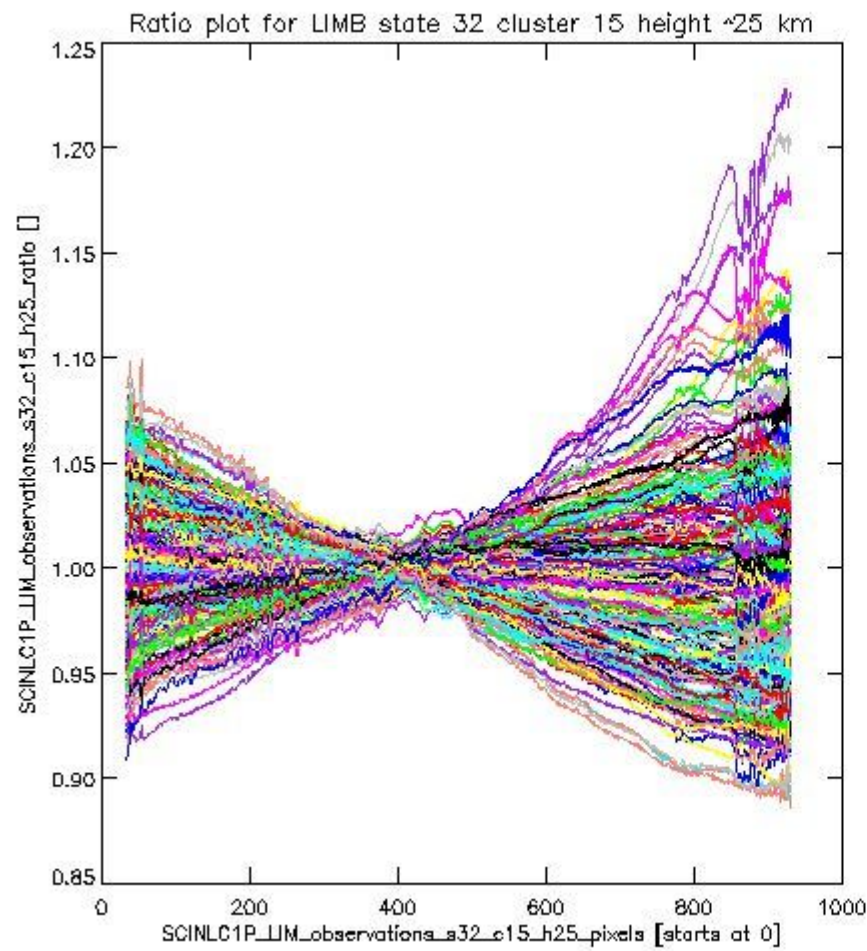
sciamachy\_11b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_17.PNG

**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       | 12MAY2011 00:20:27.909 |
| Start time of last sample        | 12MAY2011 23:57:59.190 |
| Reference period start time      | 12APR2011 00:21:28.194 |
| Reference period stop time       | 11MAY2011 23:07:58.452 |
| Channel number                   | 3                      |
| First pixel number (starts at 0) | 33                     |
| Last pixel number (starts at 0)  | 929                    |



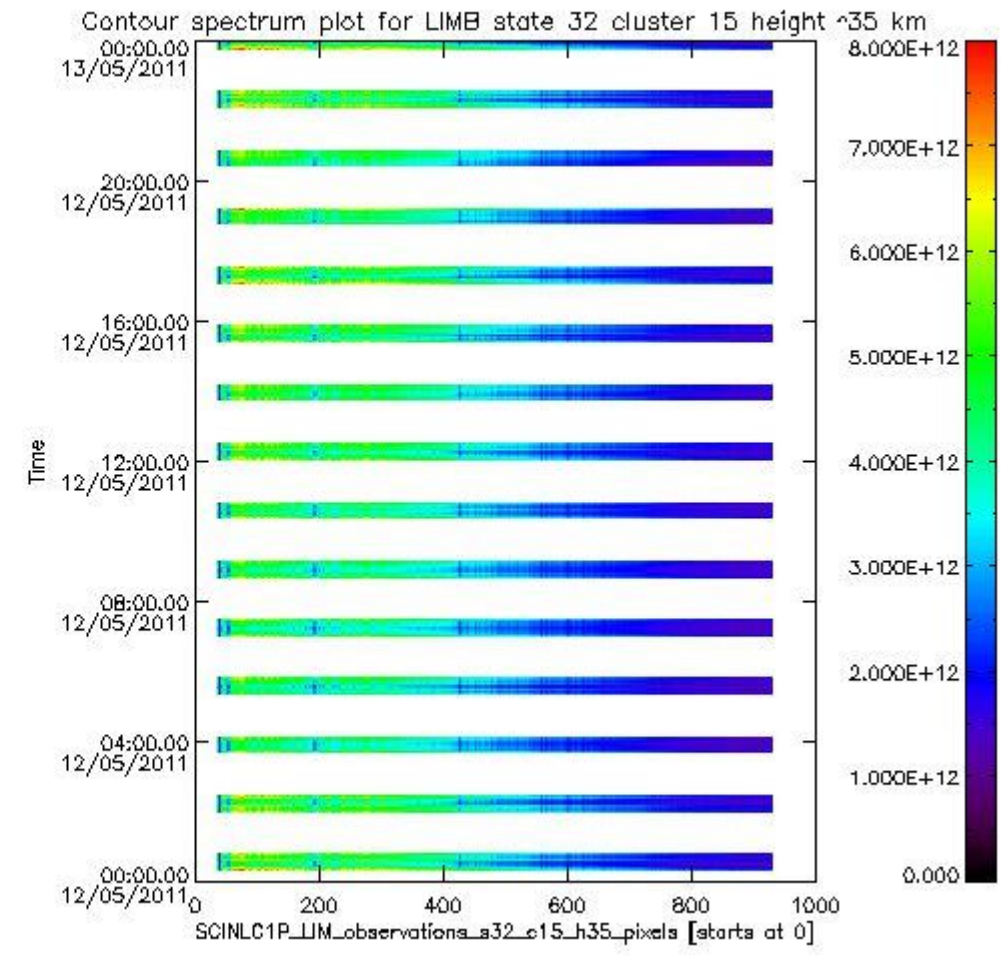
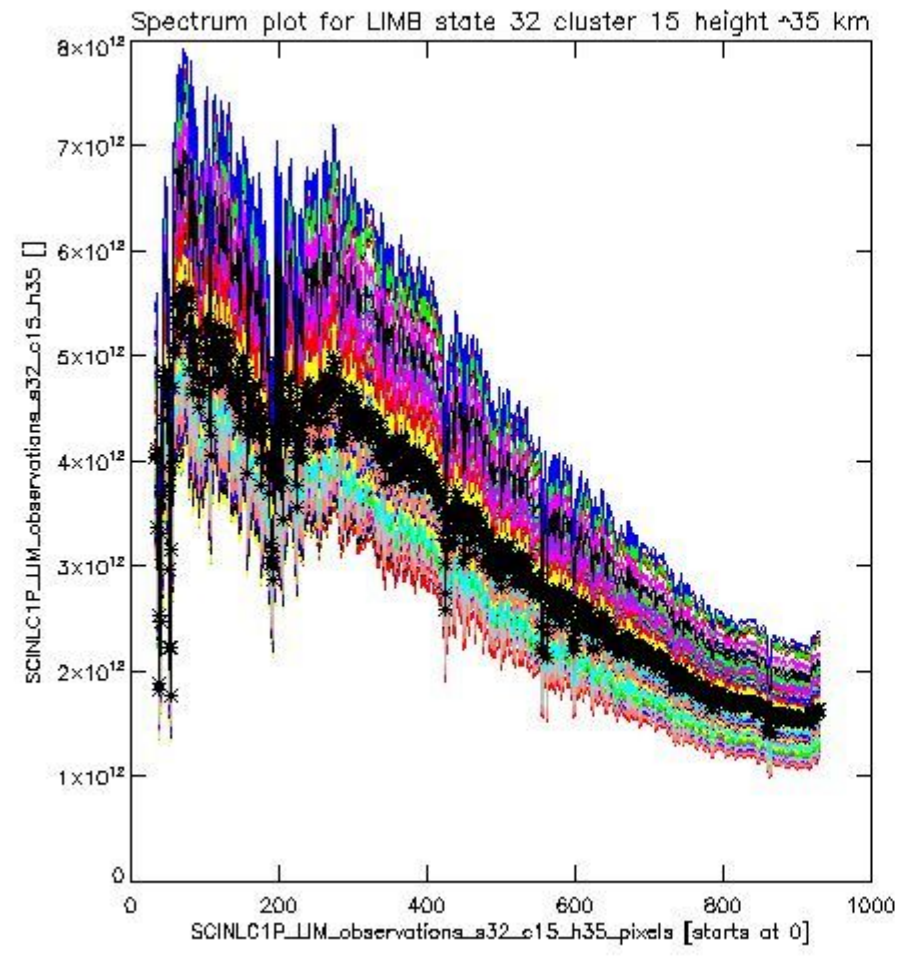
sciamachy\_l1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_18.PNG



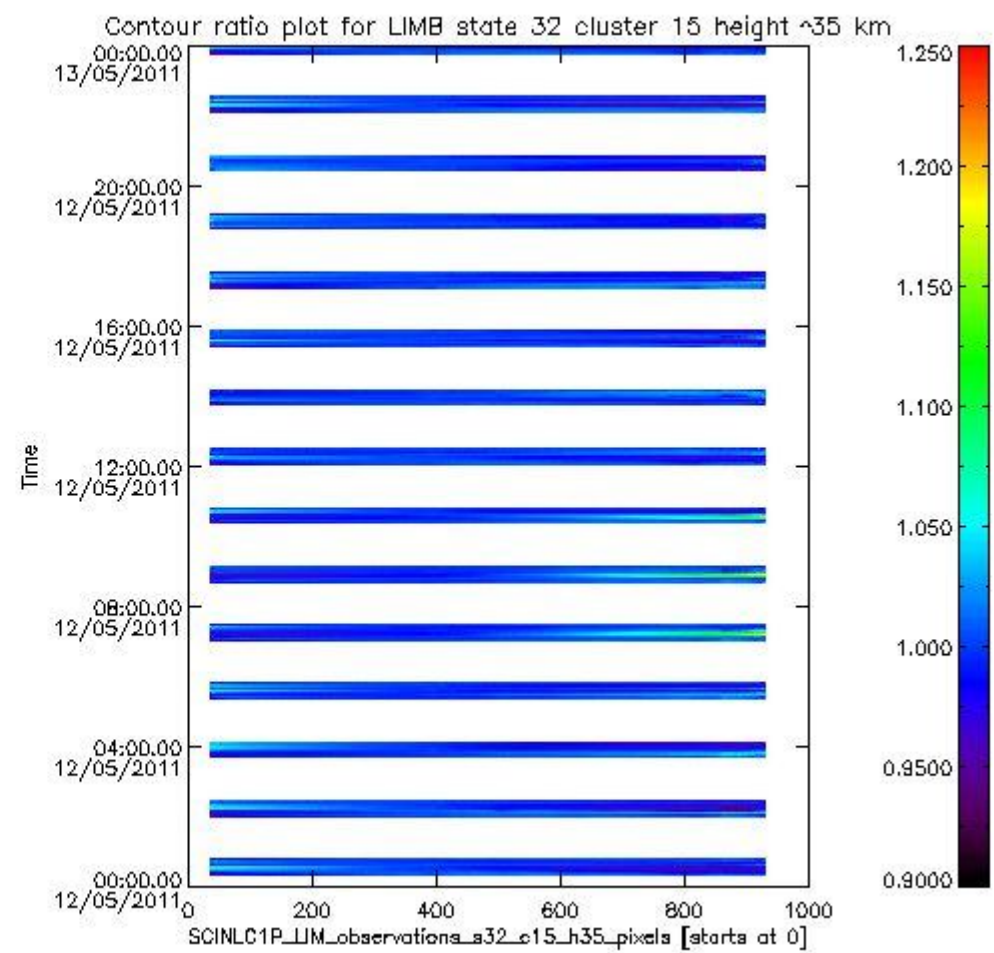
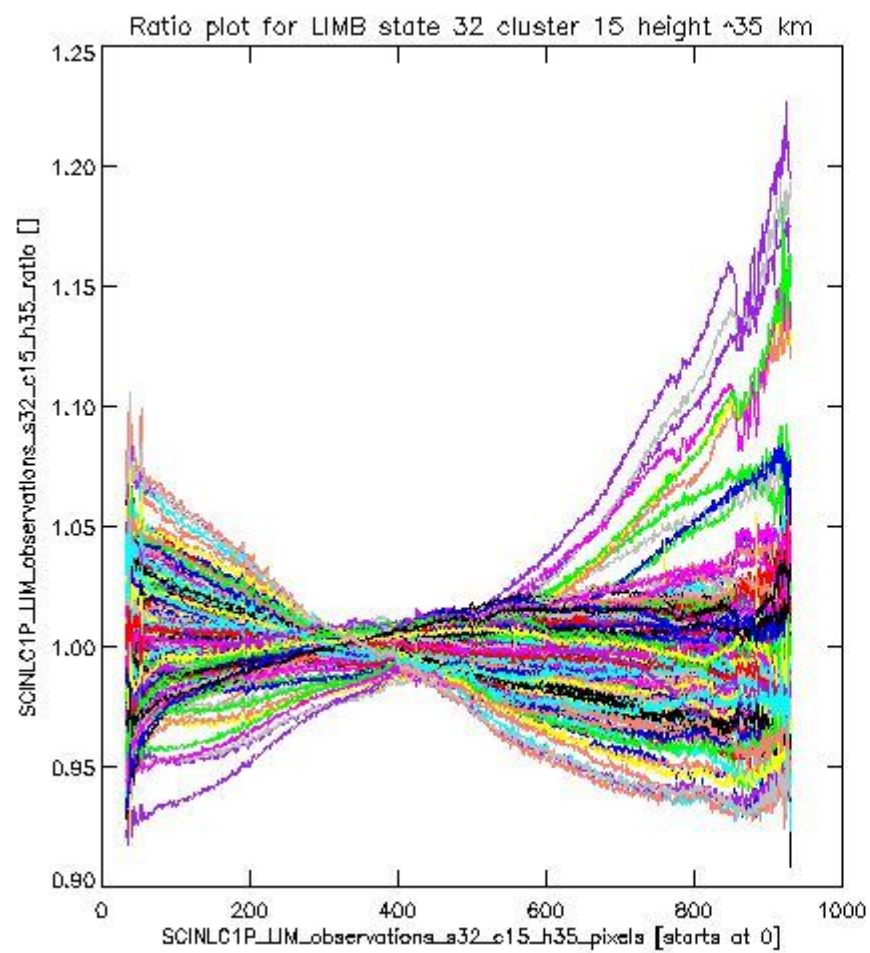
sciamachy\_11b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_19.PNG

**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       | 12MAY2011 00:20:27.909 |
| Start time of last sample        | 12MAY2011 23:57:59.190 |
| Reference period start time      | 12APR2011 00:21:28.194 |
| Reference period stop time       | 11MAY2011 23:07:58.452 |
| 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\_20110512\_20.PNG



sciamachy\_i1b\_source\_packet\_report\_SCIA\_7\_04\_U\_20110512\_21.PNG

