

HICRU data format description:

The data format is different for GOME and SCIAMACHY.

a.) GOME:

HICRU data for GOME is available for download from 01/1996 – 06/2003 in packages containing one year of HICRU data each. Each package contains ASCII files compressed with the WINZIP program (about 250 MB). We provide cloud fraction for each GOME measurement of the channels with high spectral resolution, which are used for trace gas evaluation. The spatial resolution of the PMD is higher (20x40km instead of 320x40km); a cloud dataset containing cloud fraction for each PMD is available on request, write to: mgrzegor@iup.uni-heidelberg.de.

The columns contain the following entries:

1. number of the GOME pixel
2. date of measurement (day:month:year)
3. time of measurement (hour:minute:second)
4. milliseconds
5. date of measurement in DLR-UTC format: days since 01.01.1950
6. time of measurement in DLR-UTC format: milliseconds since midnight
7. subpixel of the GOME measurement (0=east, 1=centre, 2=west, 3=backscan)
8. latitude (centre coordinate of the measurement)
9. longitude (centre coordinate of the measurement)
10. solar zenith angle
11. effective cloud fraction (average of 16 PMD cloud fractions, -1 means no cloud data available)
12. variance of the 16 PMD cloud fractions.

b.) SCIAMACHY

HICRU data for SCIAMACHY is available for download from 01/2003 – 11/2004 in packages containing one month of HICRU data each. Note, that not all orbits are available during this period. Each package contains ASCII files compressed with the TAR/GZIP program (about 300-1000 MB). We provide cloud fraction for each SCIAMACHY PMD measurement.

The columns contain the following entries:

1. date of the measurement
2. interpolated time of the measurement (hour:minute:second)
3. interpolated time: milliseconds since midnight.
4. duration of the scan [seconds]
5. ID number of the state
6. number of the geolocation (starts with 0 for each state)
7. number of the PMD (starts with 0 for each geolocation)
8. backscan (0=forescan, 1=backscan)
9. polcrossing (0=regular case, 1=north pole or south pole was crossed)
10. corner coordinate, latitude, top left
11. corner coordinate, longitude, top left
12. corner coordinate, latitude, top right
13. corner coordinate, longitude, top right
14. corner coordinate, latitude, down left
15. corner coordinate, longitude, down left
16. corner coordinate, latitude, down right
17. corner coordinate, longitude, down right
18. solar zenith angle (for the centre of the geolocation)
19. line of sight angle (for the centre of the geolocation)
20. line of sight azimuth angle (for the centre of the geolocation)
21. effective cloud fraction (-1 means no cloud data available)