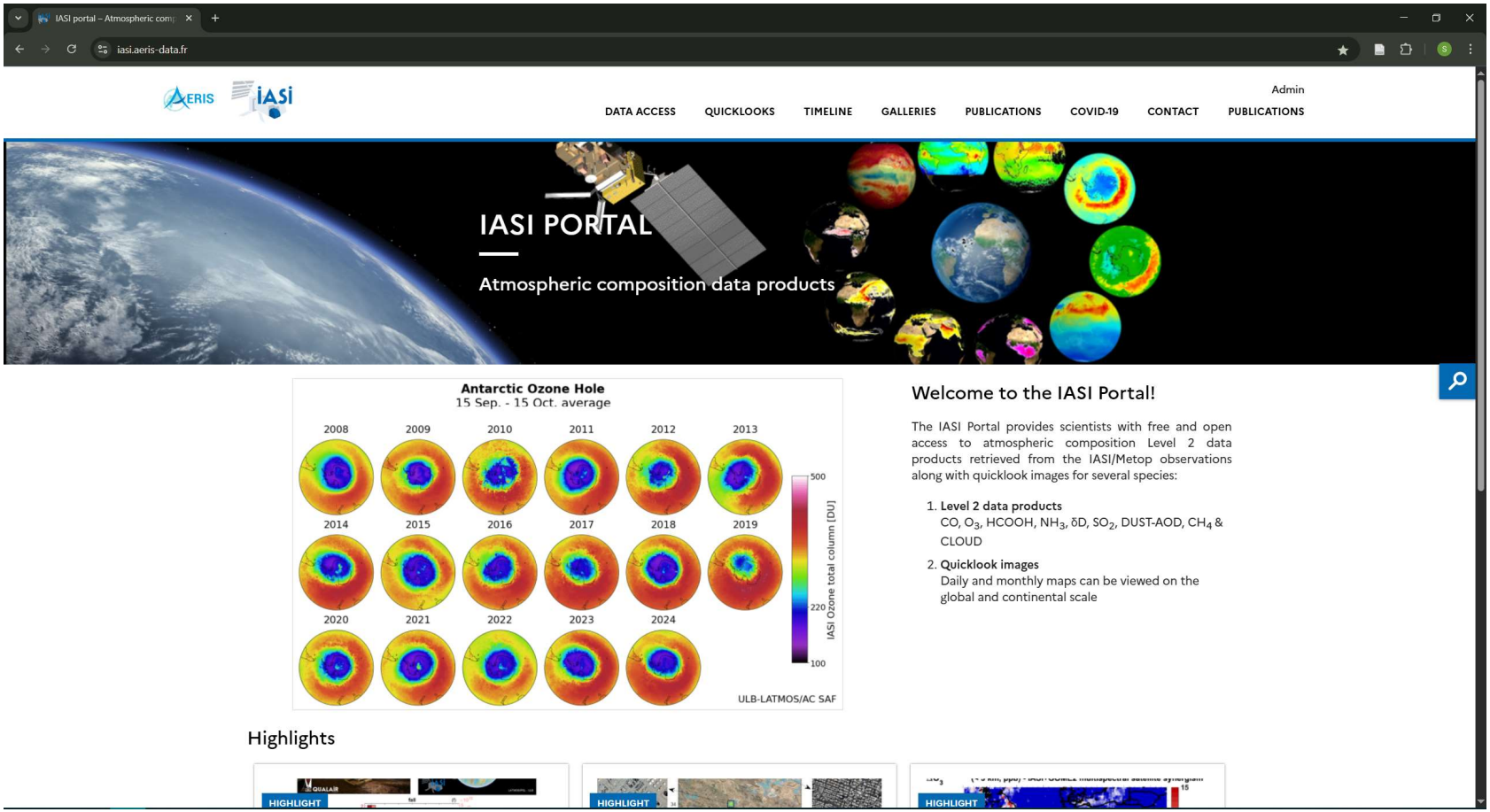
How to download IASI data from AERIS ?

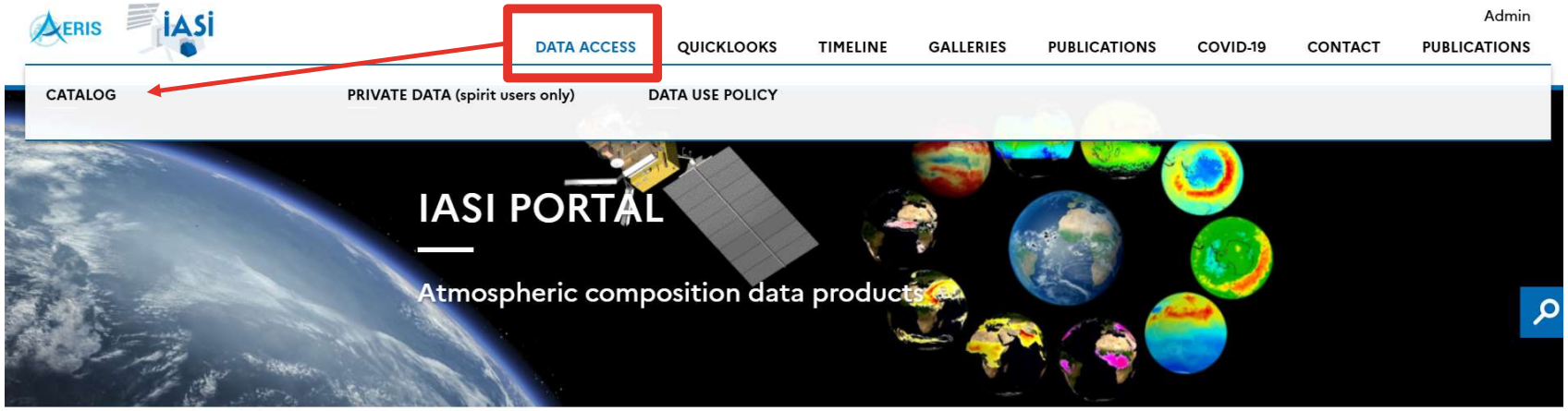
ACAM Training School – June 2025

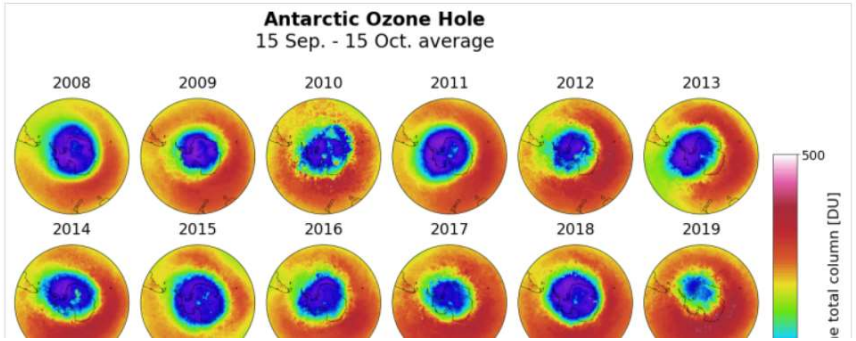
AERIS IASI portal (https://iasi.aeris-data.fr/)



Data access from Catalog page

To get information about all the IASI products available on AERIS





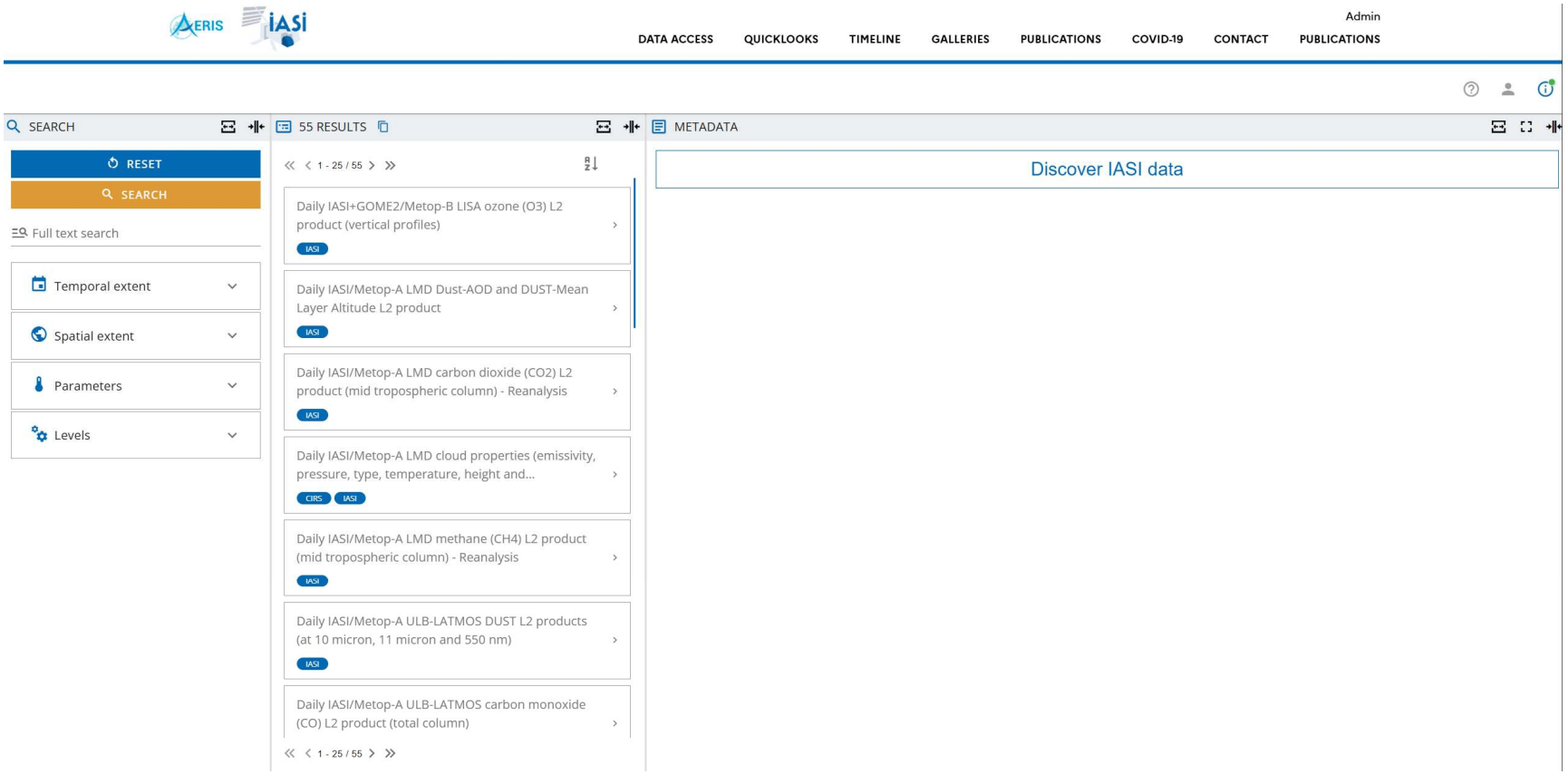
Welcome to the IASI Portal!

The IASI Portal provides scientists with free and open access to atmospheric composition Level 2 data products retrieved from the IASI/Metop observations along with quicklook images for several species:

1. **Level 2 data products**
   CO, O_3, HCOOH, NH_3, δD, SO_2, DUST-AOD, CH_4 & CLOUD
2. **Quicklook images**
   Daily and monthly maps can be viewed on the

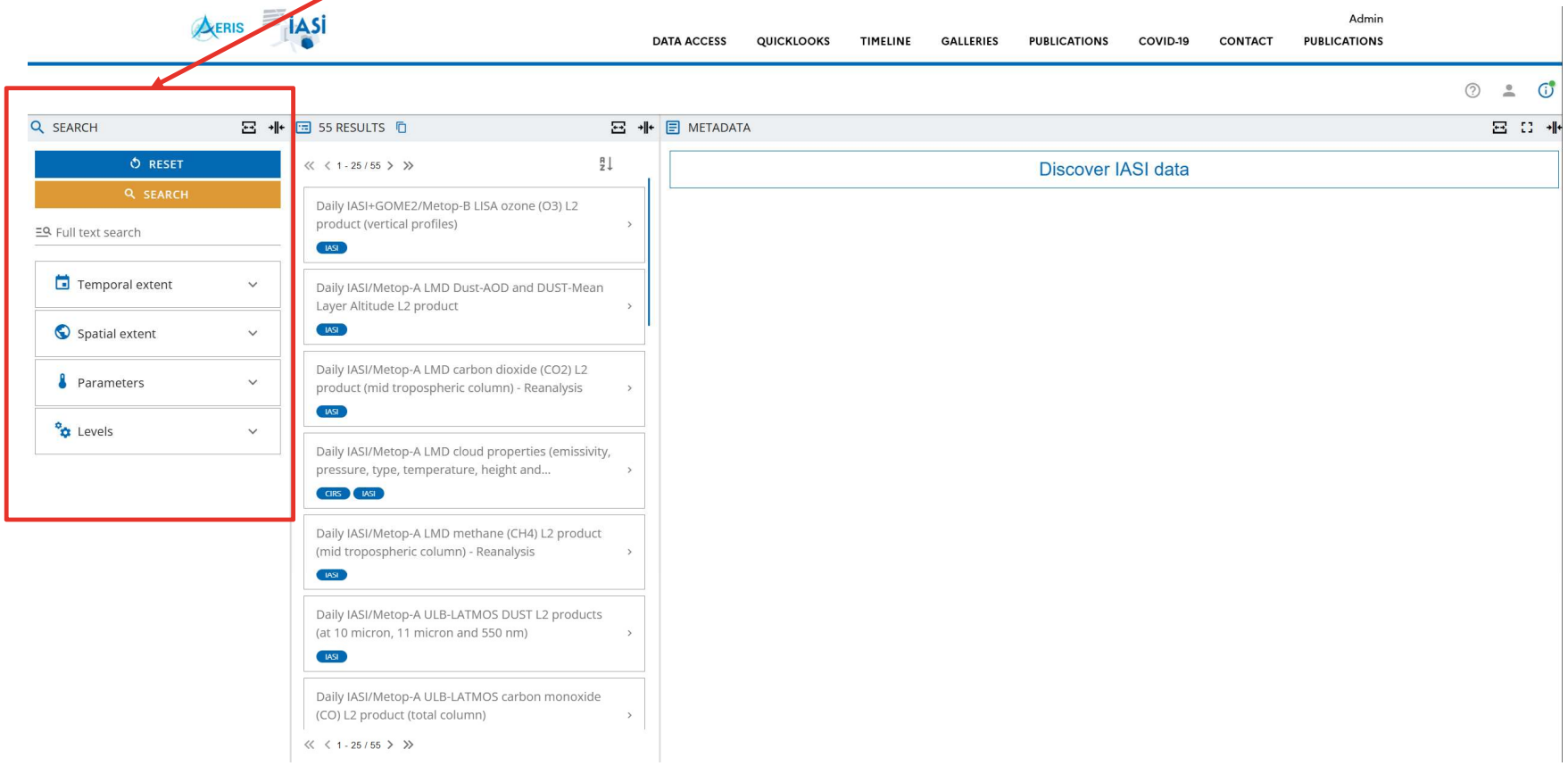
Data access from Catalog page

To get information about all the IASI products available on AERIS



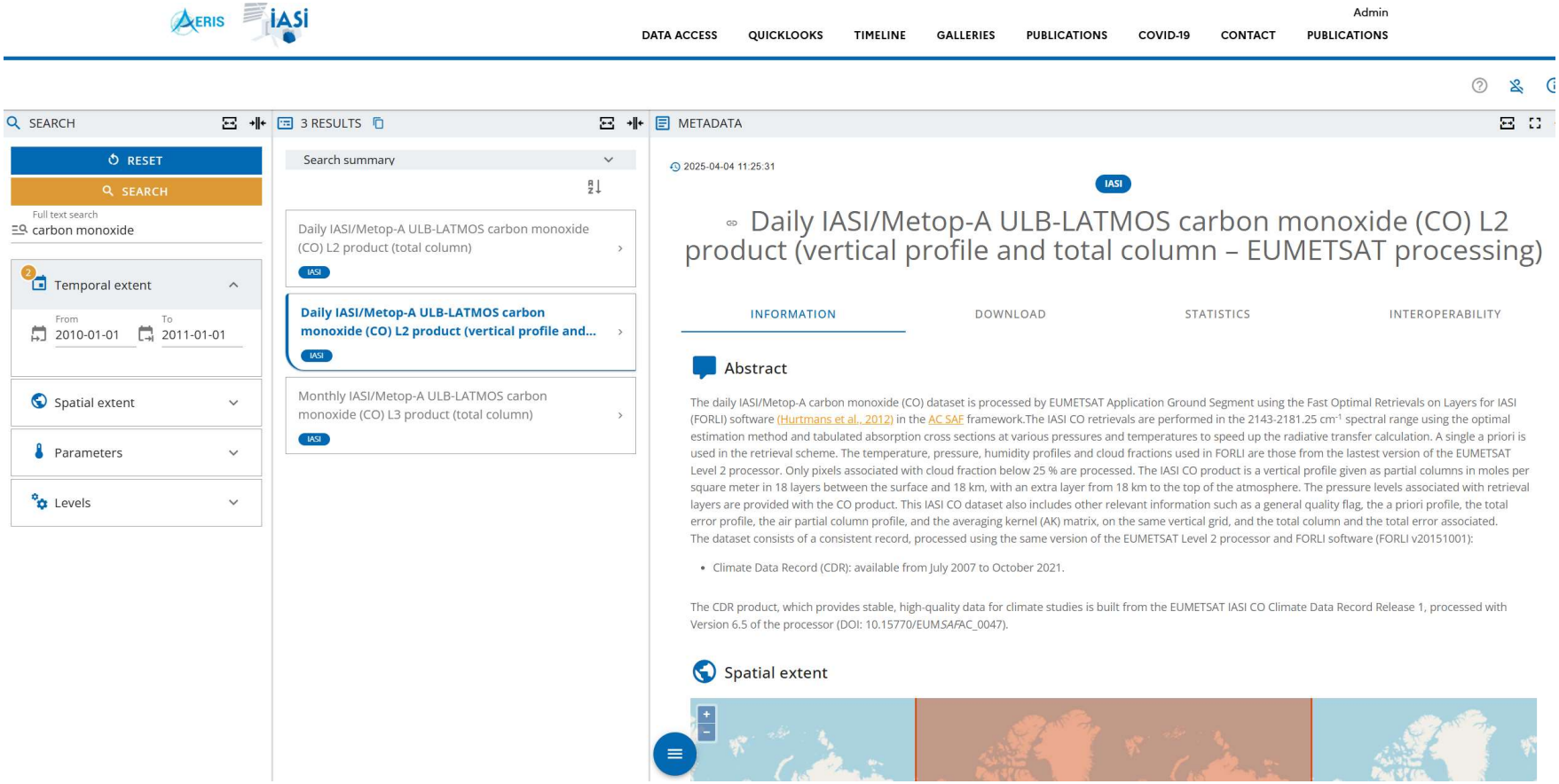
Data access from Catalog page

You can search for the data you need in the « Search » panel



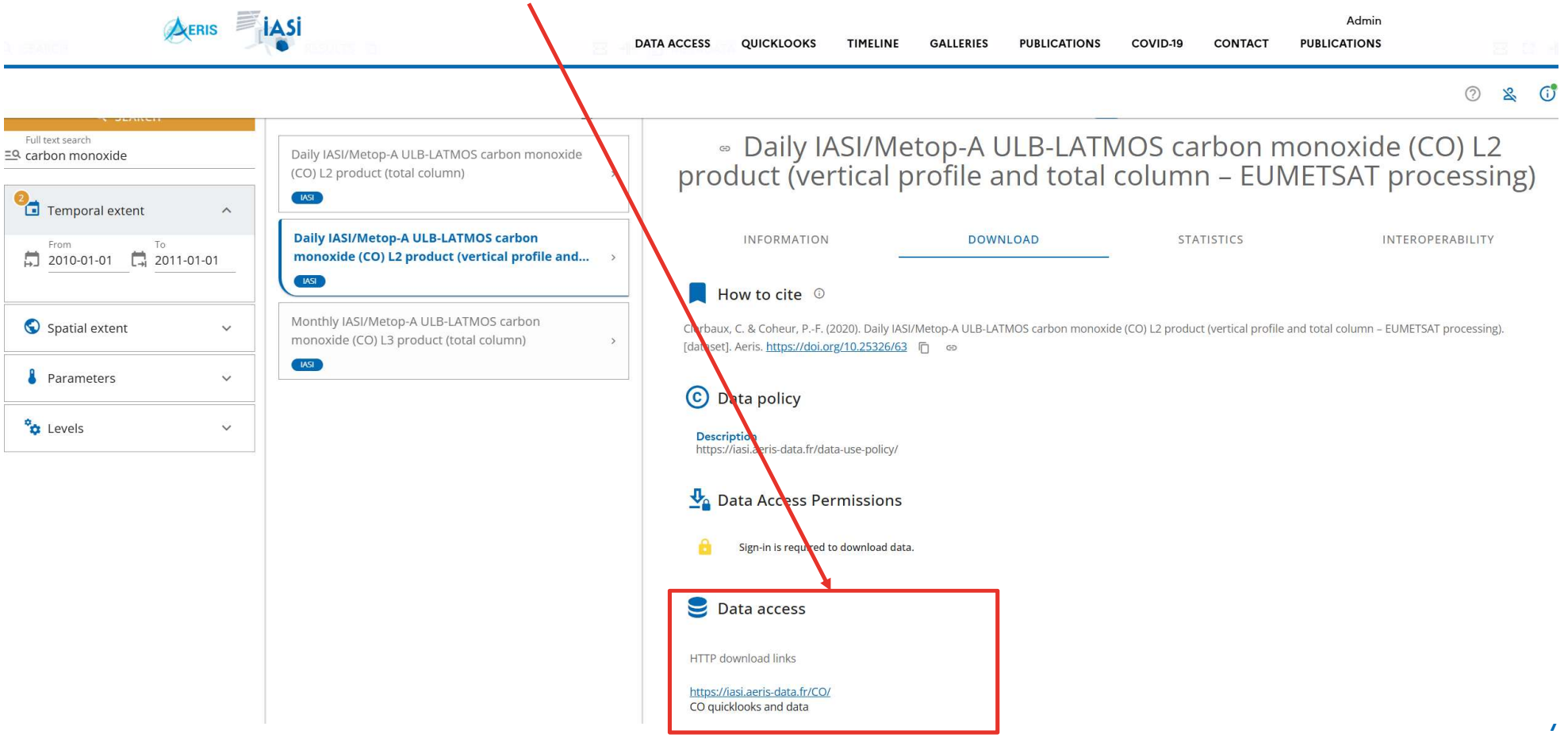
Data access from Catalog (example with CO from IASI/MetopA)

Here’s an example for IASI CO data for 2010. You can have more details by clicking on each result in the « Metadata » panel.



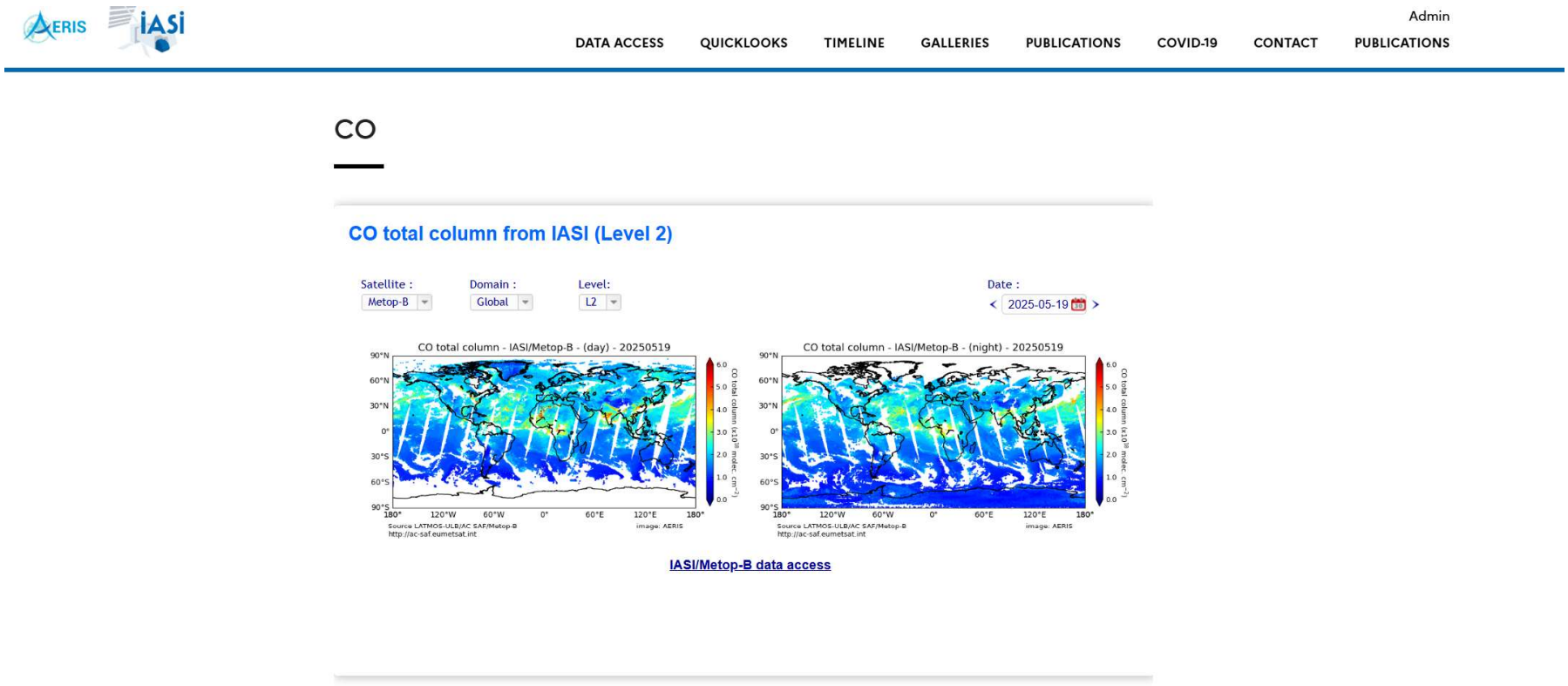
Data access from Catalog (example with CO from IASI/MetopA)

Click on the download link in the « Data access » section.



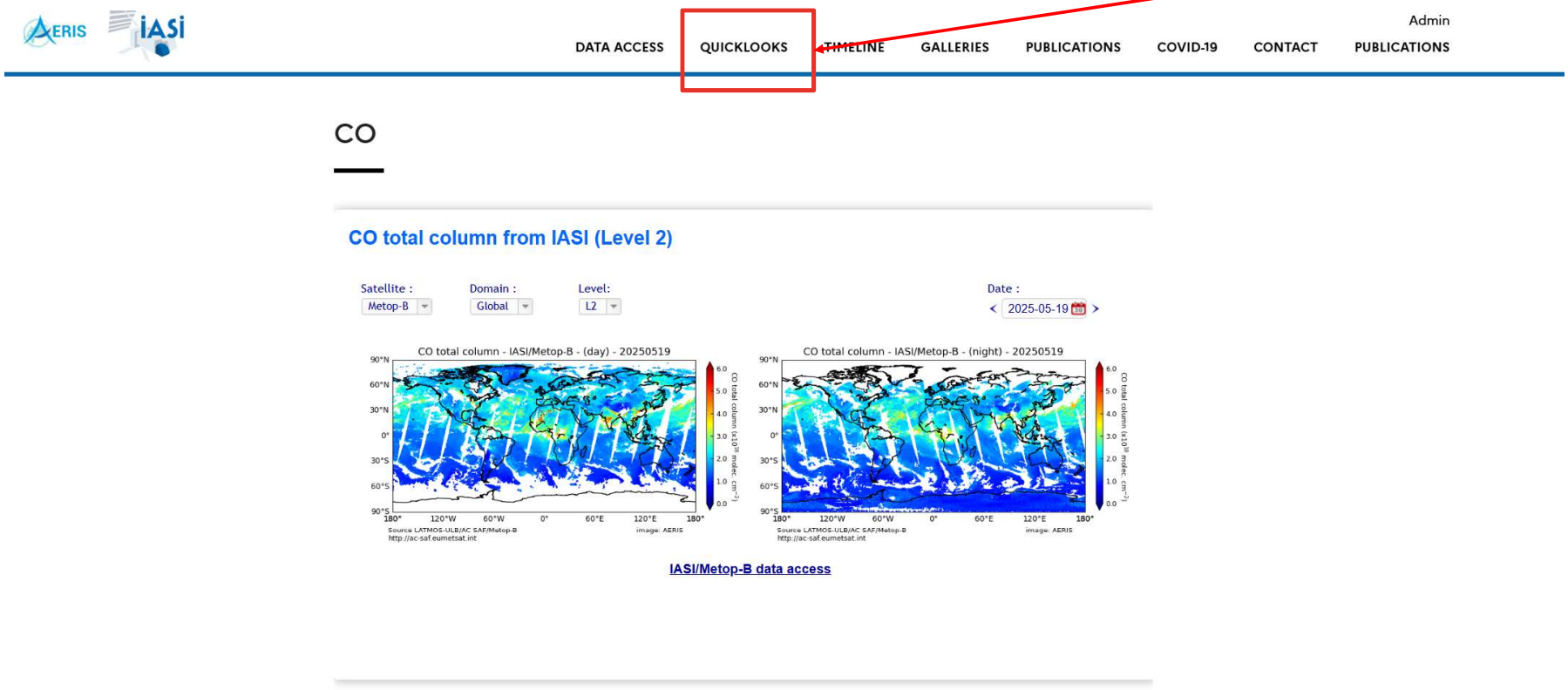
Data access from Quicklooks page

You are now on the Quicklooks page.



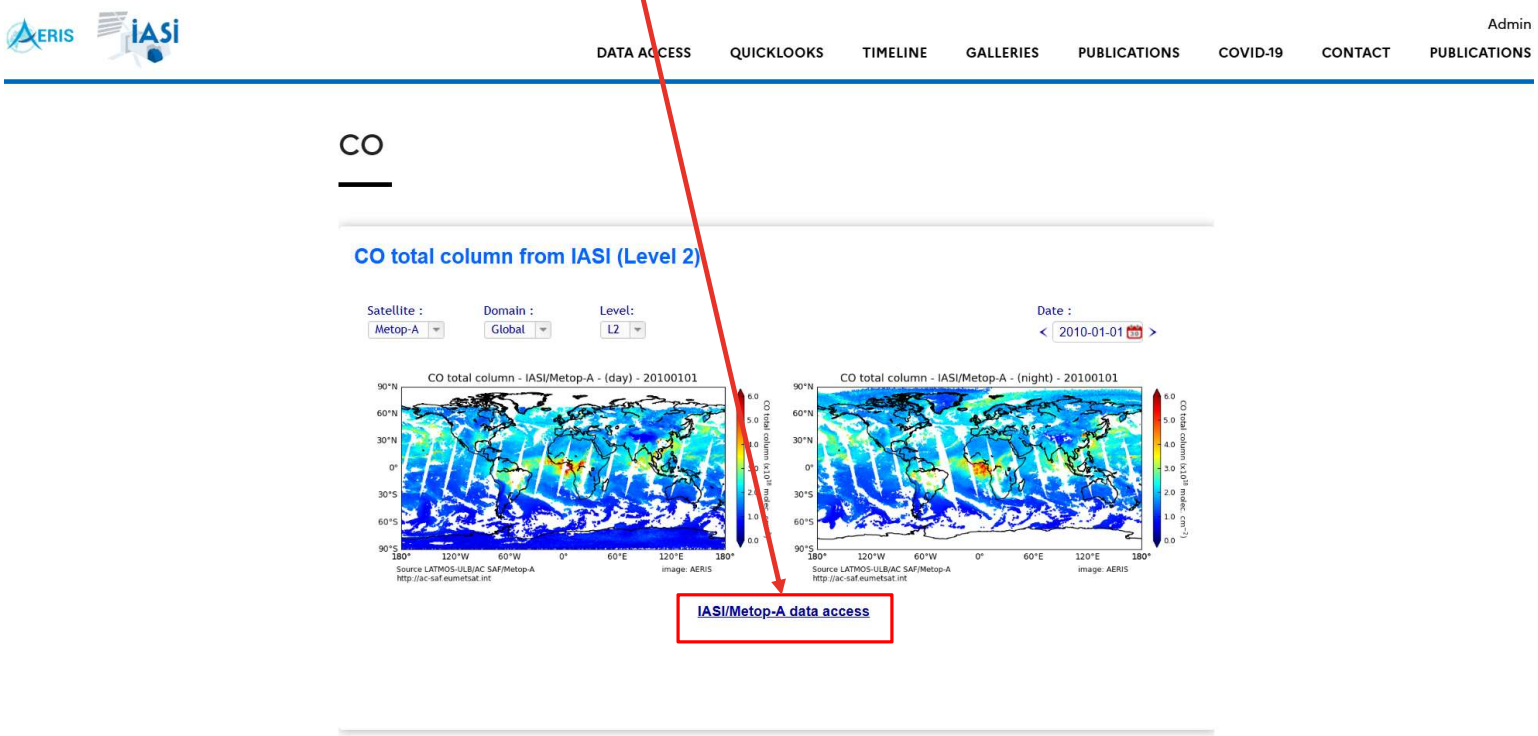
Data access from Quicklooks page

You are now on the Quicklooks page.
If you know in advance which data and periods you need, you can skip the previous steps and click directly on Quicklooks.



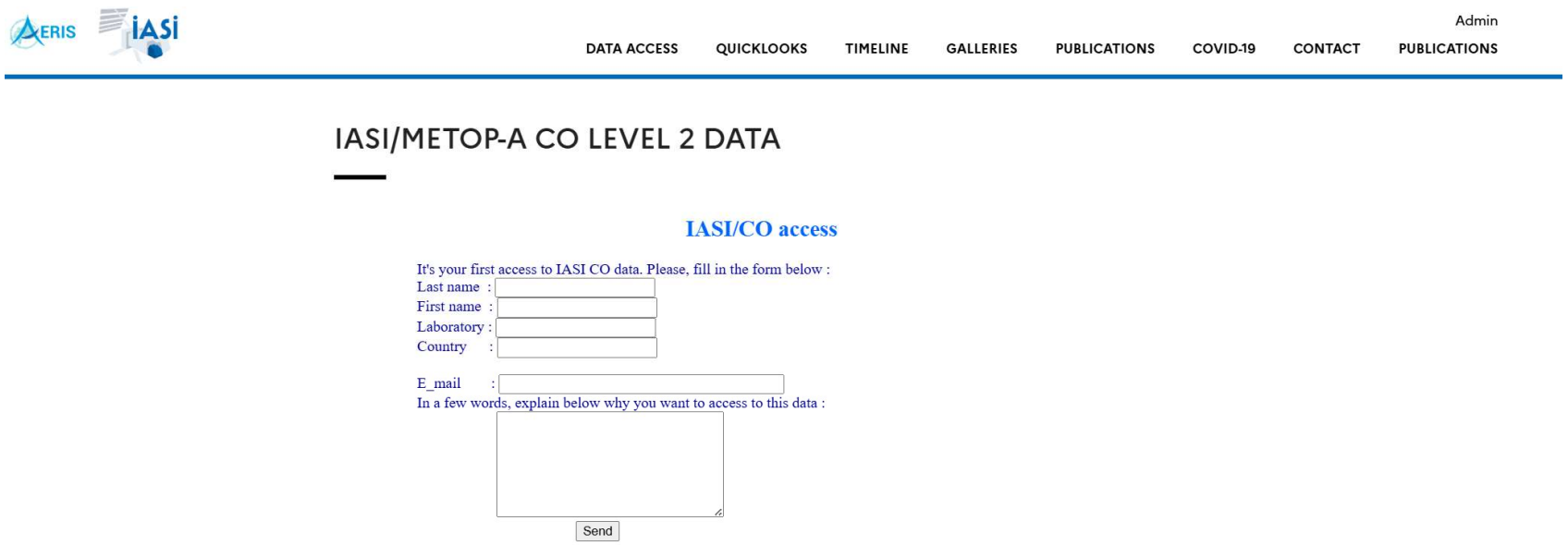
Data access from Quicklooks page

Let’s go back to our example and click on IASI/Metop-A data access.



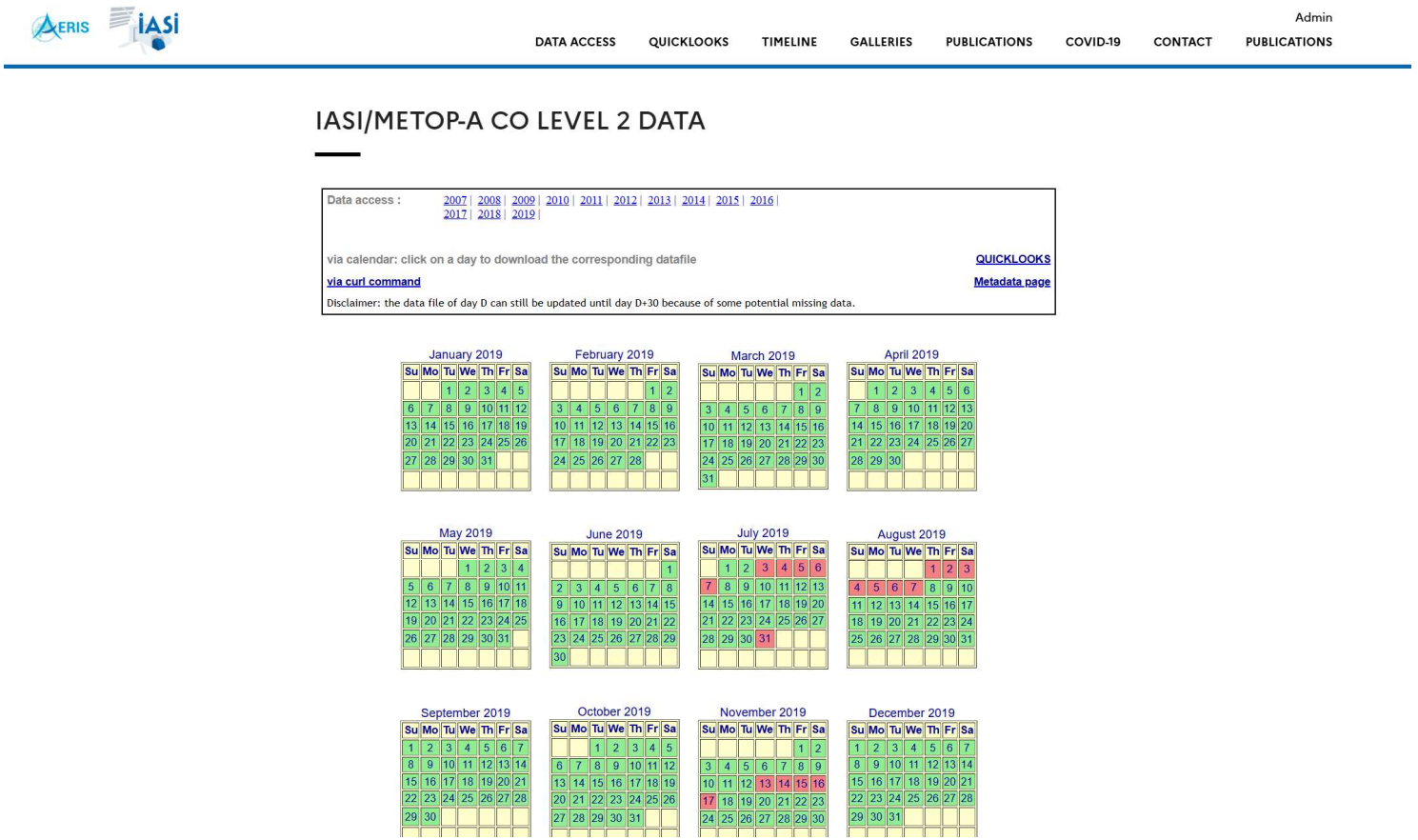
Data access from Quicklooks page

If it’s your first time accessing AERIS, you’ll have to provide your details.



Downloading data for 1 day

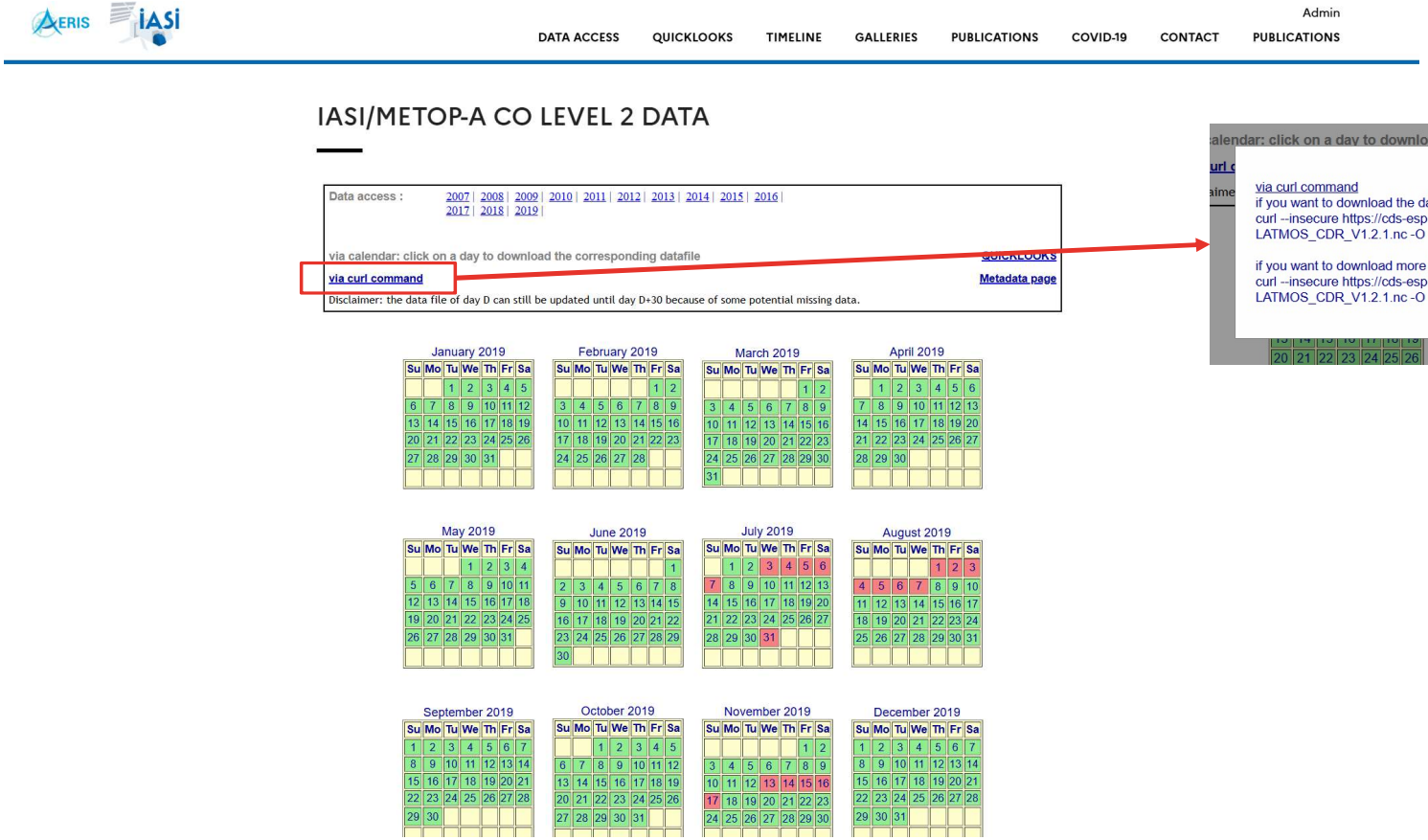
You have 2 ways to download data for a single day :
- by clicking on any date in the calendar

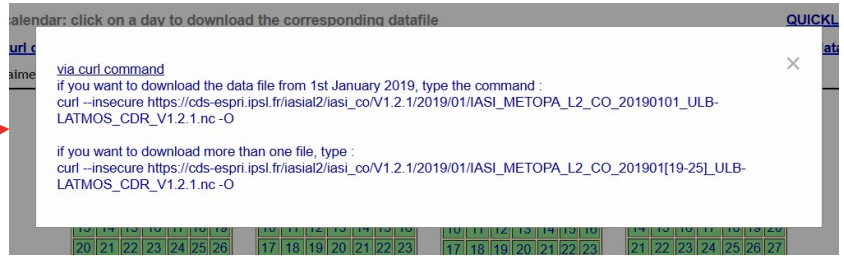


Downloading data for 1 day

You have 2 ways to download data for a single day :

- by clicking on any date in the calendar
- by using the curl command





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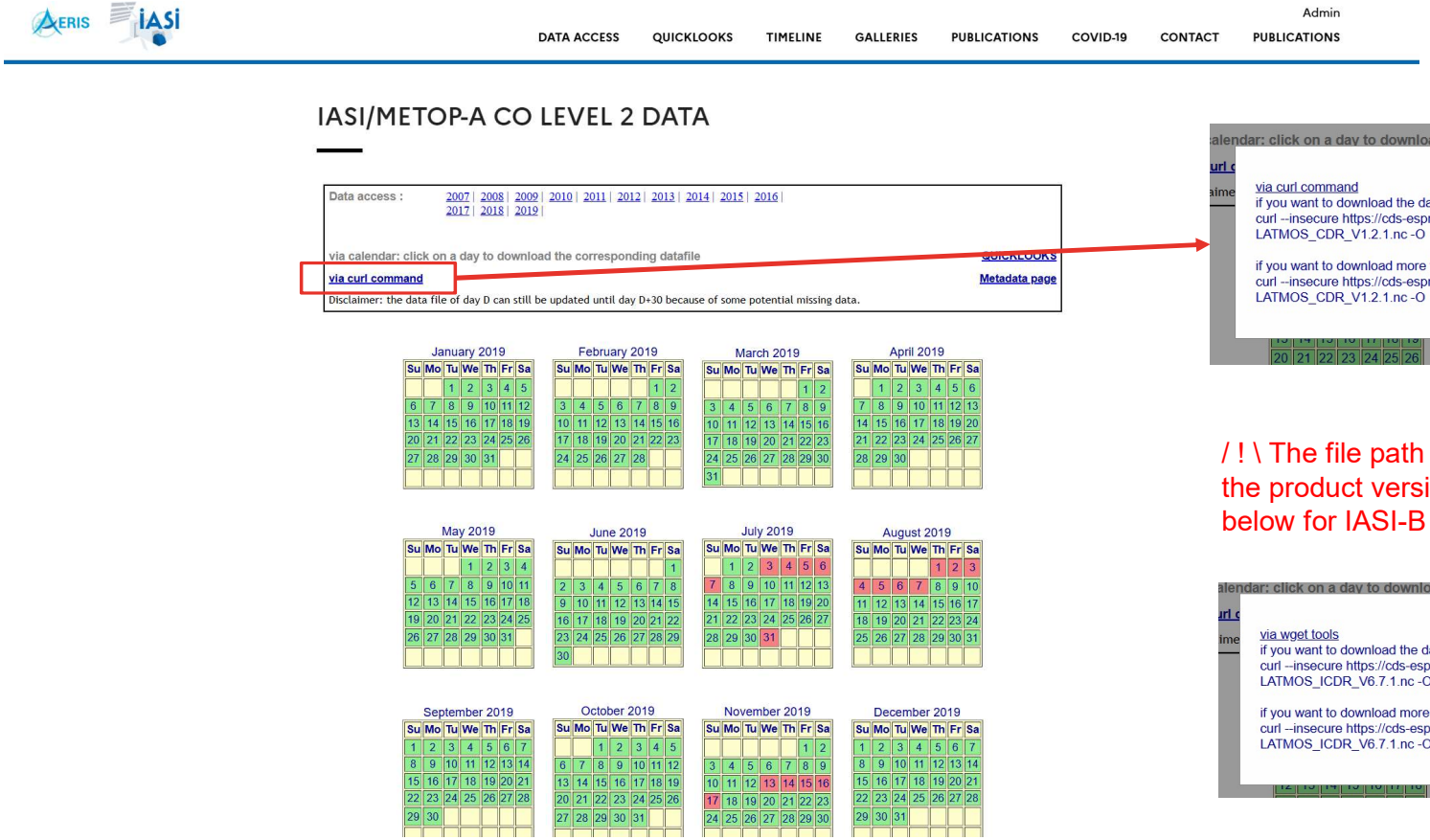
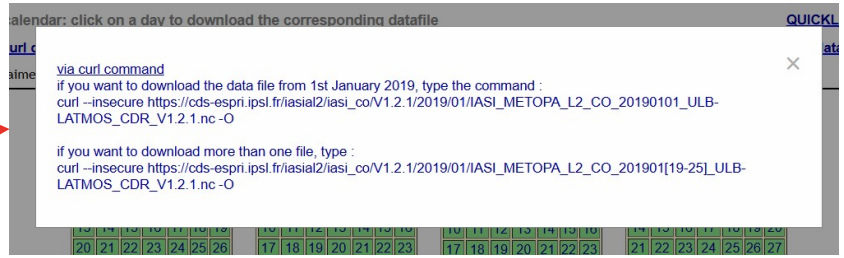
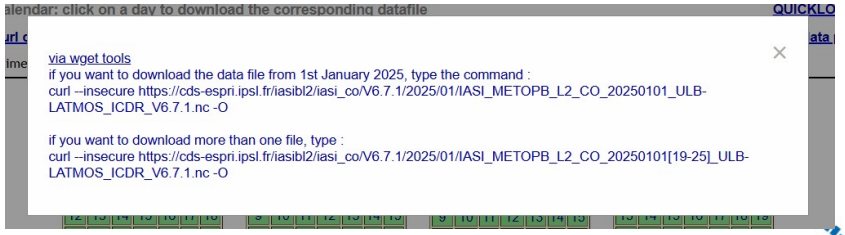




/ ! \ The file path changes depending on the IASI product, the product version and the instrument (see example down below for IASI-B CO).



Downloading data using bash scripts with curl command

Example of a bash script (“download_iasi_data_1day.sh”) to download 1 day of CO data from IASI-MetopC :

```bash
#!/bin/bash

YEAR=2025
MONTH=1
DAY=15
METOP=C

MMONTH=$(printf "%02d" "$MONTH")
DDAY=$(printf "%02d" "$DAY")

echo "${YEAR}${MMONTH}${DDAY}"
echo "IASI/METOP${METOP^}"

curl --insecure https://cds-espri.ipsl.fr/iasi"${METOP,}"l2/iasi_co/V6.7.1/$YEAR/$MMONTH/IASI_METOP"${METOP^}"_L2_CO_"${YEAR}${MMONTH}${DDAY}"_ULB-LATMOS_ICDR_V6.7.1.nc -O

```

Example of a bash script (“download_iasi_data.sh”) to download multiple days of CO data from IASI-MetopC :

```bash
#!/bin/bash

YEAR=2025
MONTHMIN=1
MONTHMAX=2
DAYMIN=10
DAYMAX=15
METOP=C


for ((MONTH=$MONTHMIN; MONTH <=$MONTHMAX ; MONTH++)); do
    MMONTH=$(printf "%02d" "$MONTH")
        NBDAYSINMONTH=$(cal $month $year | awk 'NF {DAYS = $NF}; END {print DAYS}')

    DDAYMIN=$(printf "%02d" "$DAYMIN")
    DDAYMAX=$(printf "%02d" "$DAYMAX")

    FILENAME="IASI_METOP${METOP^}_L2_CO_${YEAR}${MMONTH}[$DDAYMIN-$NBDAYSINMONTH]_ULB-LATMOS_ICDR_V6.7.1.nc"
    echo "Downloading: $FILENAME"

    curl --insecure "https://cds-espri.ipsl.fr/iasi${METOP,}l2/iasi_co/V6.7.1/$YEAR/$MMONTH/$FILENAME" -O

done

```

Downloading data using bash scripts with curl command

To run any of these scripts on Linux :

1. Open a terminal and go to where you script is with `cd`.
2. Write this in the terminal to run the bash script : `bash scriptname.sh`

```
(base) selviga@pc-selviga:~$ cd codes/ACAM/
(base) selviga@pc-selviga:~/codes/ACAM$ ls
download_iasi_data_1day.sh  download_iasi_data.sh
(base) selviga@pc-selviga:~/codes/ACAM$ bash download_iasi_data_1day.sh
20250115
IASI/METOPC
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
 55  859M   55  477M    0     0   109M      0  0:00:07  0:00:04  0:00:03  109M
```

3. Check with `ls` if the file is correctly downloaded.

```
(base) selviga@pc-selviga:~/codes/ACAM$ ls
download_iasi_data_1day.sh  download_iasi_data.sh  IASI_METOPC_L2_CO_20250115_ULB-LATMOS_ICDR_V6.7.1.nc
```

Downloading data using bash scripts with curl command

To run any of these scripts on Windows :

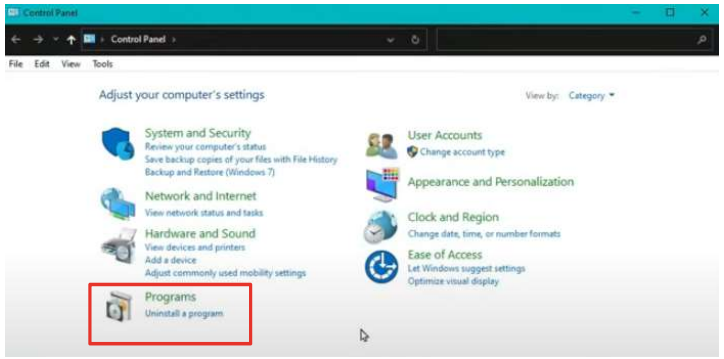
1. Open a PowerShell (Win + X and select Windows PowerShell)
2. Type `bash` and press Enter. This will drop you into a bash shell inside PowerShell, allowing you to run any bash commands. If Git Bash is not installed, see next slides.
3. Go to where the directory where the bash script is located with `cd`.
4. Run the script with `bash scriptname.sh`

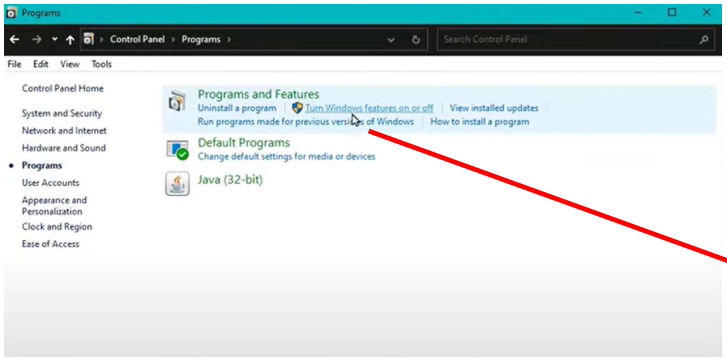
```
selviga@pc-selviga:/mnt/c/Users/selviga/Downloads$ bash download_iasi_data_1day.sh
20250115
IASI/METOPC
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  859M  100  859M    0     0   111M      0  0:00:07  0:00:07 --:--:--  112M
```

5. Check with `ls` if the file is correctly downloaded.

How to configure Windows PowerShell to run bash scripts

1. Go to Control Panel > Programs > Turn Windows features on or off. Turn on the Windows Subsystem for Linux and click on ok.





2. Open PowerShell as an Administrator (Win + X and select Windows PowerShell (Admin))
3. Download WSL with this command : `wsl --install` (more information here: https://learn.microsoft.com/en-us/windows/wsl/install)
4. Install Ubuntu 20.04 with this command : `wsl --install -d Ubuntu20.04` (To get the list of distributors, you can type this command : `wsl --list -online`)
5. Close the current panel and open PowerShell and type `bash` to check everything works. You can now run bash scripts.