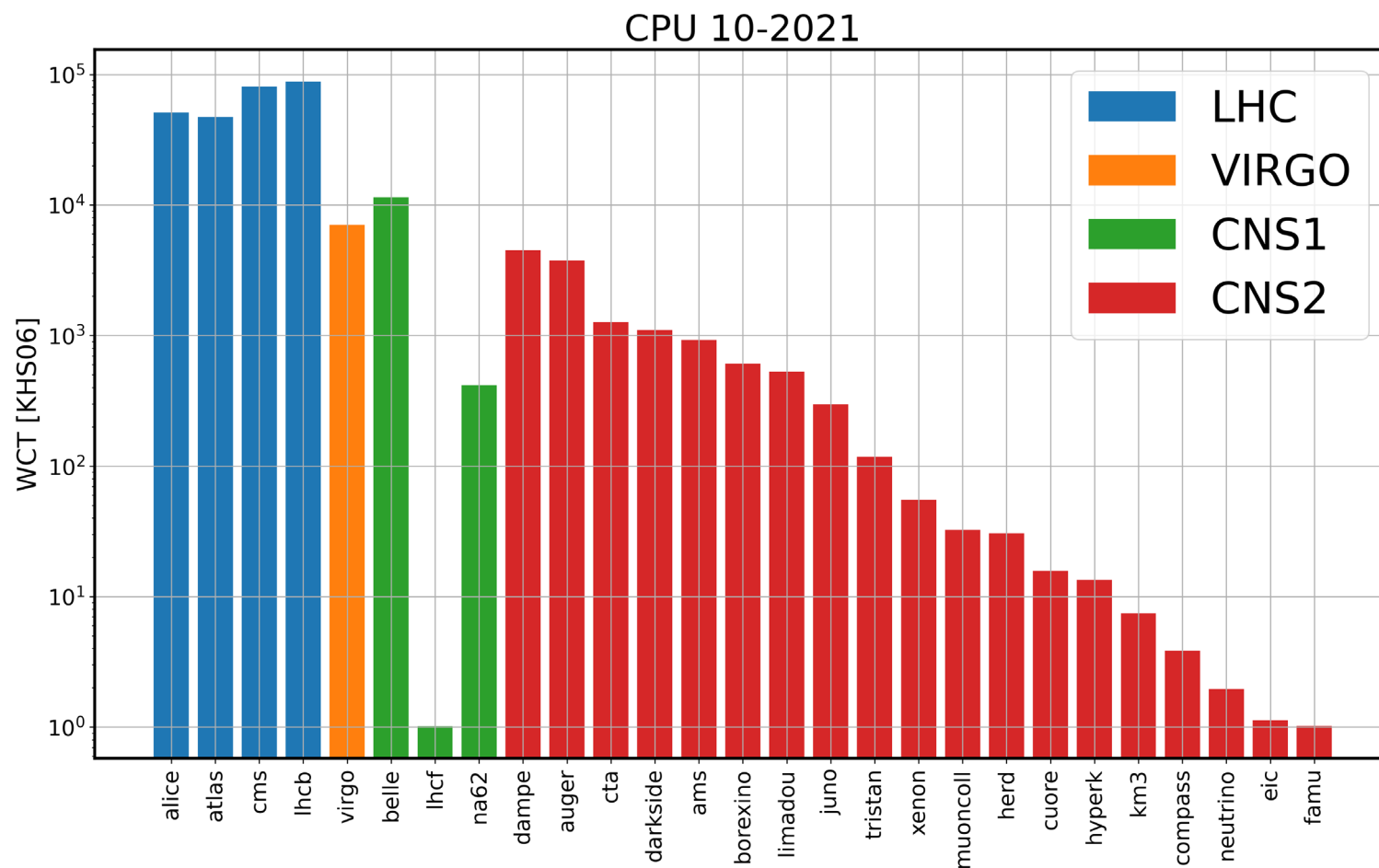


Aggiornamenti da farming

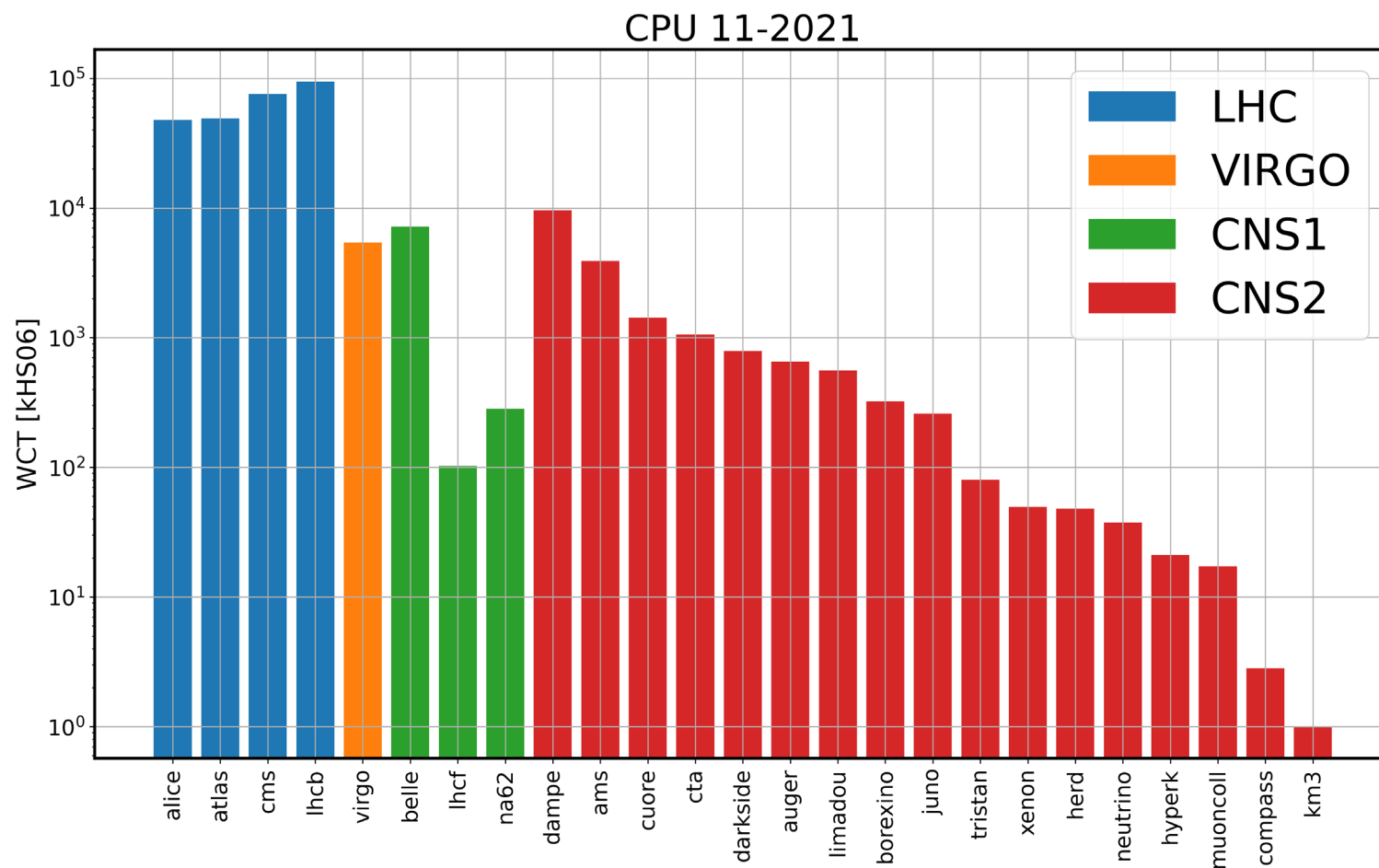
CDG-T1

17 dicembre 2021

Utilizzo risorse



Utilizzo risorse



Nuove risorse

- Consegna nodi CINECA prevista
 - Non prima del 2022 (q1 o q2??)
 - 18/11, Lenovo mandato i documenti richiesti, al vaglio dell'ufficio legale CINECA
 - 26/11 altro giro di documenti da firmare
 - 3/12 CINECA ha inviato il contratto da firmare, ma ancora non l'hanno rispedito.
 - Sollecito a Lenovo

Stato di Linux al CNAF

- CentOS 8 EOL il **31/12/2021**
- CentOS 9 rilasciato il **3/12/2021**
- Primi piccoli problemi con CentOS8-stream
- Gruppo di lavoro HEPiX/WLCG
 - We (WLCG, GDB) agree that the following distributions are treated as equal
 - RHEL N(with whatever license) ... N currently being 8
 - CentOS Stream N
 - Any 100%-clone of RHEL N(Rocky Linux N, AlmaLinux N,...)
 - Scientific applications and middleware software should work on any of these.

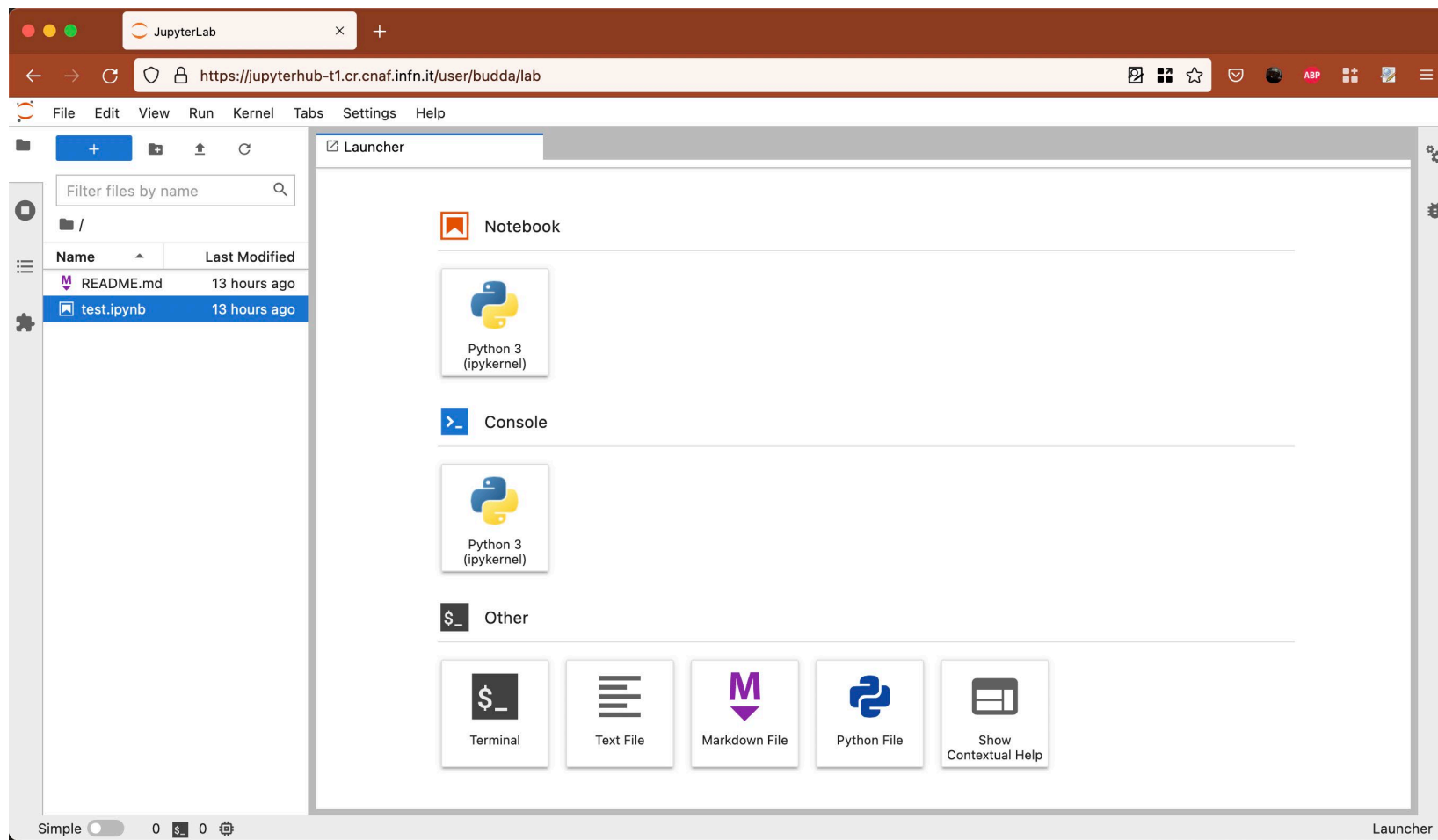
Jupyter @ Tier 1 – stato attuale

- **Pre produzione**
- <https://jupyterhub-t1.cr.cnaf.infn.it> (soltanto su rete CNAF)
- Log-in con credenziali tier1 (attualmente limitato)
- Gira su container singularity sulla farm grazie ad HTCondor
 - Accesso POSIX a GPFS e CVMFS
 - Accounting come un normale job
- Durata massima stabilita in 1 giorno
- Installati sia JupyterNotebook che JupyterLab (default)
- Estensioni JupyterLab disabilitate per motivi di sicurezza
- Python 3.9

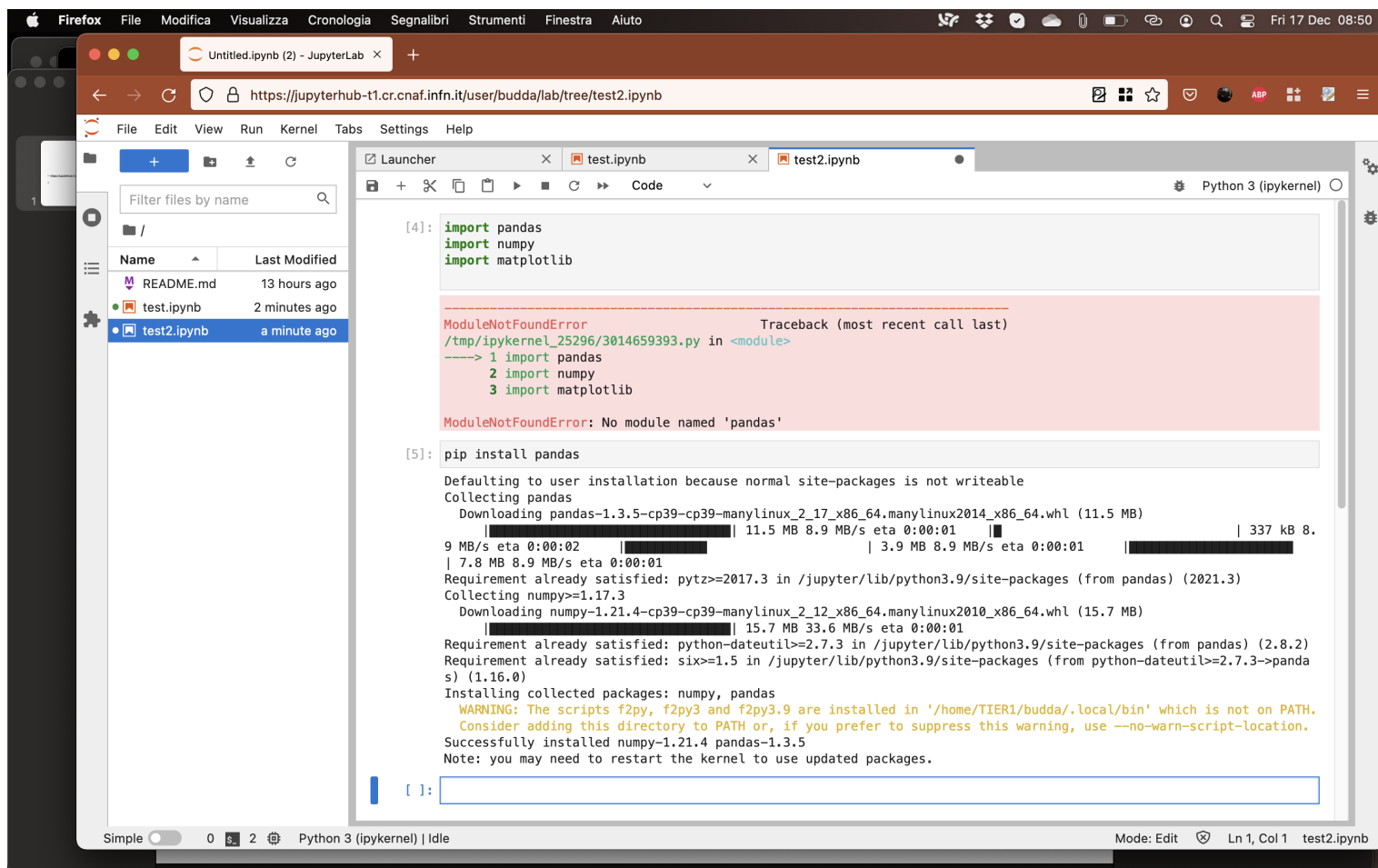
Jupyter @ Tier 1 – produzione

- A partire da gennaio 2022
- <https://jupyterhub-t1.cr.cnaf.infn.it> (open via general internet)
- Log-in con credenziali tier1 (tutti gli utenti locali appartenenti ad un Gruppo con risorse CPU assegnate sul batch system)
- Gira su container singularity sulla farm grazie ad HTCondor
 - Accesso POSIX a GPFS e CVMFS
 - Accounting come un normale job
- Durata massima stabilita in 1 giorno
- Installati sia JupyterNotebook che JupyterLab (default)
- Estensioni JupyterLab disabilitate per motivi di sicurezza
- Kernel aggiuntivi (**si accettano proposte**)

Jupyter @ Tier 1 – Schermata iniziale



Jupyter @ Tier 1 – inst. pacchetti



```
[4]: import pandas
import numpy
import matplotlib

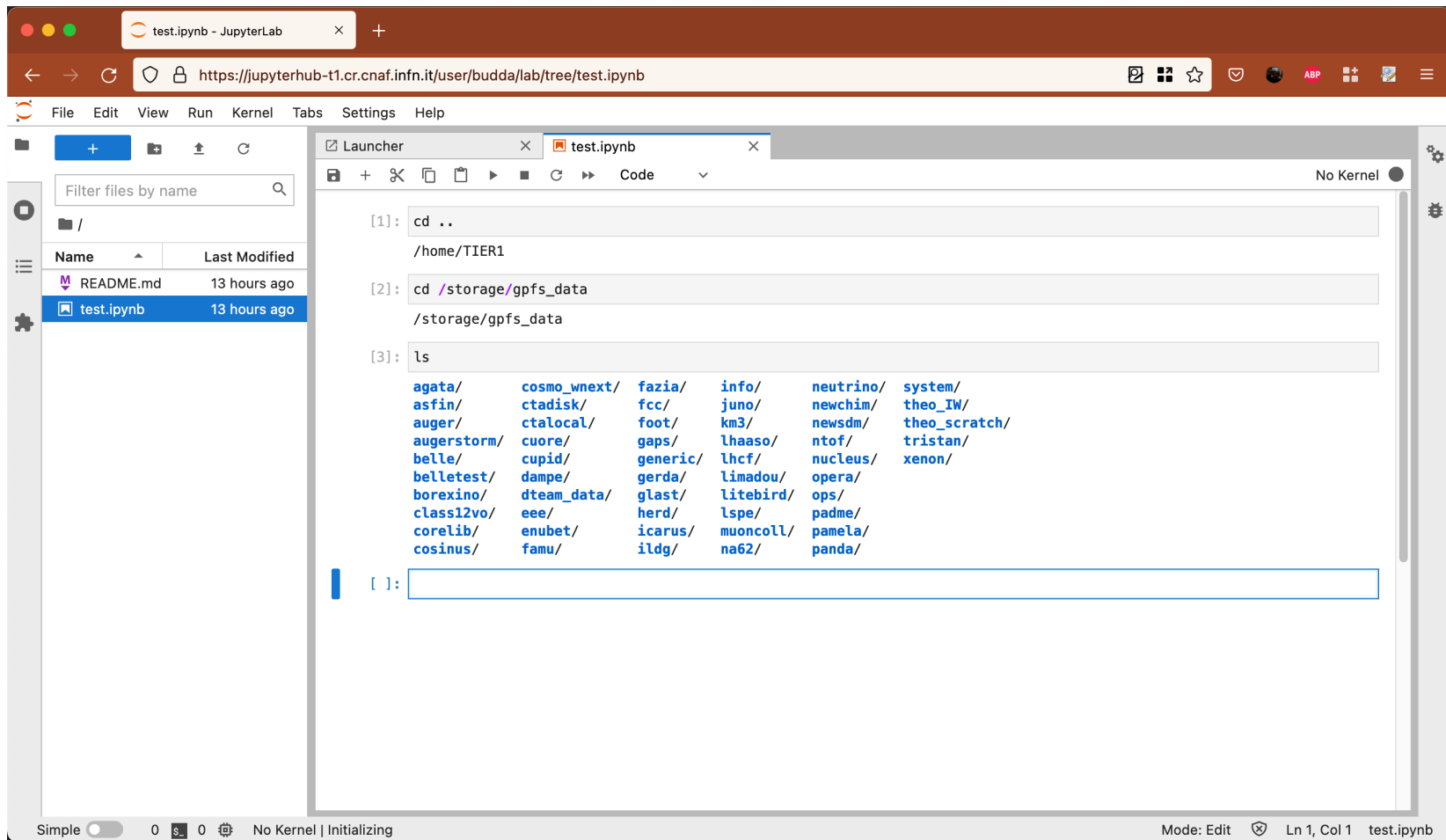
ModuleNotFoundError: Traceback (most recent call last)
/tmp/ipykernel_25296/3014659393.py in <module>
----> 1 import pandas
      2 import numpy
      3 import matplotlib

ModuleNotFoundError: No module named 'pandas'

[5]: pip install pandas

Defaulting to user installation because normal site-packages is not writeable
Collecting pandas
  Downloading pandas-1.3.5-cp39-cp39-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (11.5 MB)
    | 11.5 MB 8.9 MB/s eta 0:00:01 | 337 kB 8.9 MB/s eta 0:00:01 | 3.9 MB 8.9 MB/s eta 0:00:01 |
  9 MB/s eta 0:00:02 | 15.7 MB 33.6 MB/s eta 0:00:01 |
Requirement already satisfied: pytz>=2017.3 in /jupyter/lib/python3.9/site-packages (from pandas) (2021.3)
Collecting numpy>=1.17.3
  Downloading numpy-1.21.4-cp39-cp39-manylinux_2_12_x86_64.manylinux2010_x86_64.whl (15.7 MB)
    | 15.7 MB 33.6 MB/s eta 0:00:01 |
Requirement already satisfied: python-dateutil>=2.7.3 in /jupyter/lib/python3.9/site-packages (from pandas) (2.8.2)
Requirement already satisfied: six>=1.5 in /jupyter/lib/python3.9/site-packages (from python-dateutil>=2.7.3->pandas) (1.16.0)
Installing collected packages: numpy, pandas
  WARNING: The scripts f2py, f2py3 and f2py3.9 are installed in '/home/TIER1/budda/.local/bin' which is not on PATH.
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
Successfully installed numpy-1.21.4 pandas-1.3.5
Note: you may need to restart the kernel to use updated packages.
```

Jupyter @ Tier 1 – accesso storage



The screenshot shows a JupyterLab interface in a web browser. The browser address bar displays the URL: `https://jupyterhub-t1.cr.cnaf.infn.it/user/budda/lab/tree/test.ipynb`. The JupyterLab interface includes a left sidebar with a file browser, a top menu bar (File, Edit, View, Run, Kernel, Tabs, Settings, Help), and a main code editor area.

In the file browser, the file `test.ipynb` is selected. The code editor shows the following code cells:

```
[1]: cd ..
    /home/TIER1

[2]: cd /storage/gpfs_data
    /storage/gpfs_data

[3]: ls
    agata/      cosmo_wnext/  fazia/      info/        neutrino/    system/
    asfin/      ctadisk/      fcc/        juno/        newchim/     theo_IW/
    auger/      ctalocal/     foot/       km3/         newsdm/      theo_scratch/
    augerstorm/ cuore/        gaps/       lhaaso/      ntof/        tristan/
    belle/      cupid/        generic/    lhcf/        nucleus/     xenon/
    belletest/  dampe/       gerda/      limadou/     opera/
    borexino/   dteam_data/  glast/      litebird/    ops/
    class12vo/  eee/         herd/       lspe/        padme/
    corelib/    enubet/      icarus/     muoncoll/    pamela/
    cosinus/    famu/        ildg/       na62/        panda/
```

The status bar at the bottom indicates "Simple" mode, "No Kernel | Initializing", and "Mode: Edit | Ln 1, Col 1 | test.ipynb".