

How to access the Madrigal database using python

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The Madrigal database stores data from a wide variety of upper atmosphere research instruments

Incoherent Scatter Radar



TEC via GPS



MF Radar



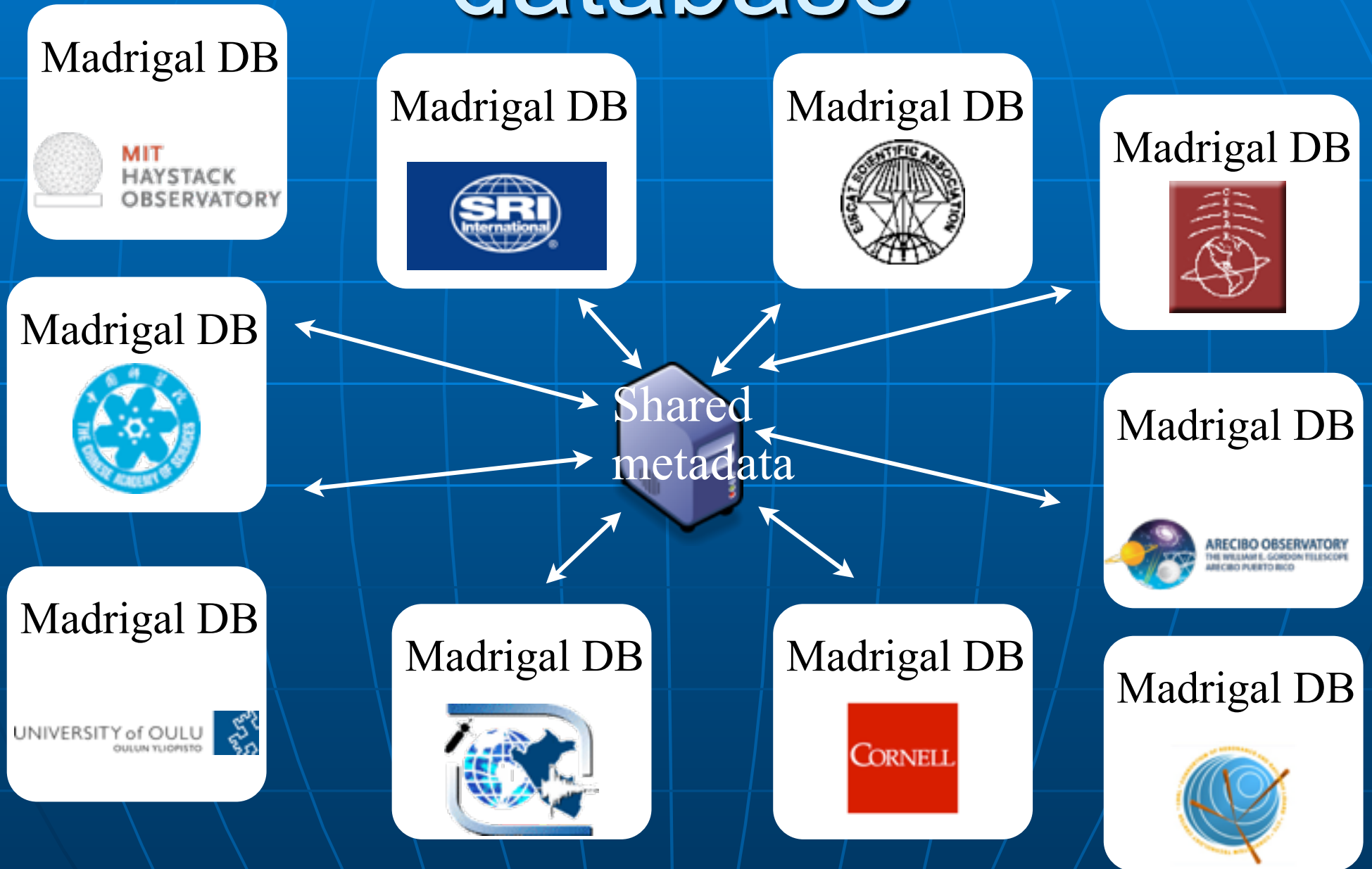
Examples of number of instruments in Madrigal:

- Incoherent scatter radars: 22
- MST radars: 3
- MF radars: 16
- Meteor radars: 11
- FPI: 32
- Michelson Interferometers: 6
- Lidars: 9
- Photometers: 7

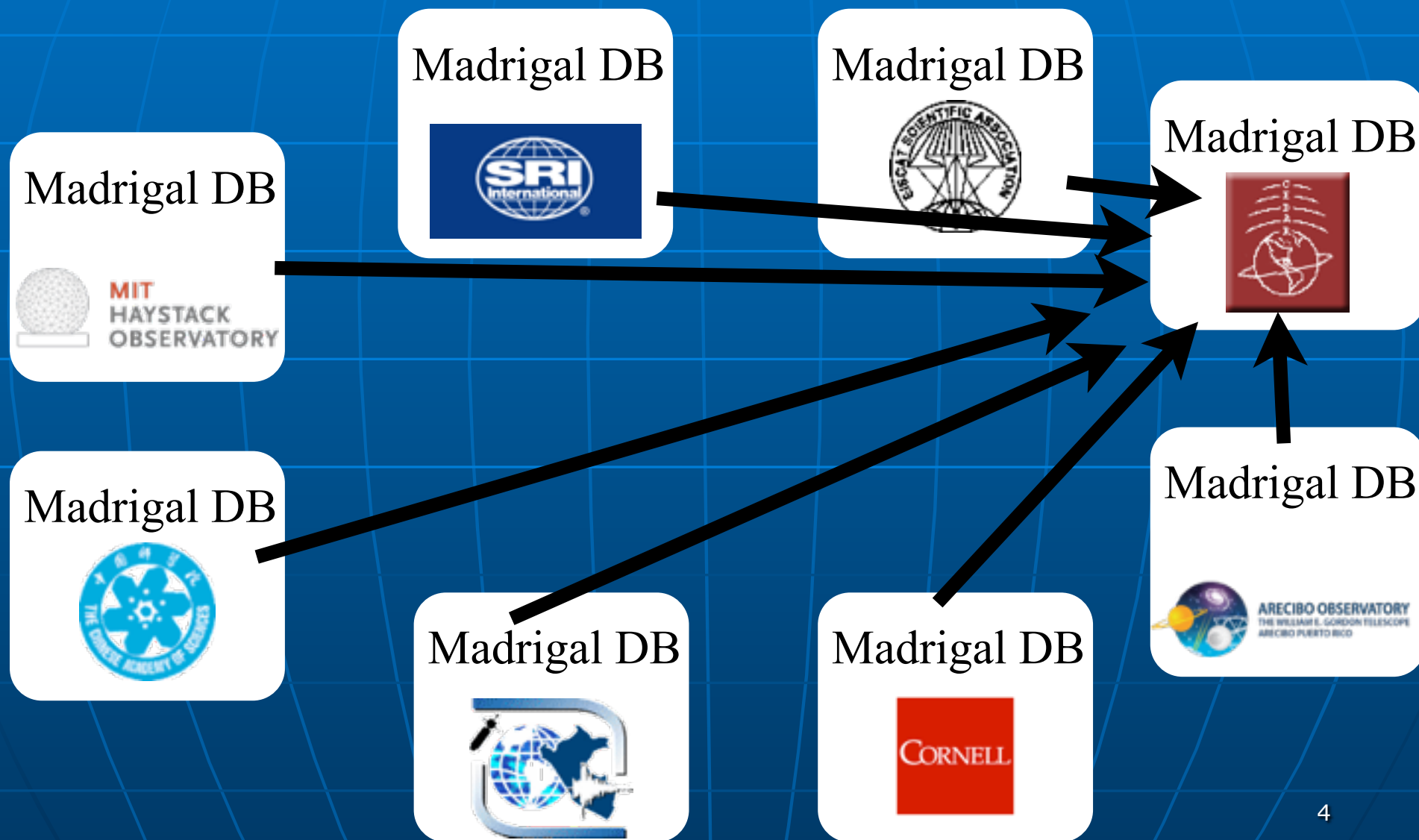
Other examples:

- GPS TEC
- DMSP

Madrigal is a distributed database



Cedar Madrigal archive imports all data weekly



Remote access to Madrigal

- Based on well-defined urls
- API written for python, Matlab, IDL
- python API (2 or 3) installed via pip:
 - pip install madrigalWeb
- Comes with command line scripts that meet most basic needs:
 - globalDownload.py
 - globalIsprint.py
- Jupyter demo
 - available at http://www.haystack.mit.edu/~brideout/Madrigal_python_demo.ipynb