The Community Intercomparison Suite (CIS) is an open-source command-line (and Python) tool which allows the straightforward intercomparison of remote sensing, in-situ and model data.

Community Intercomparison Suite

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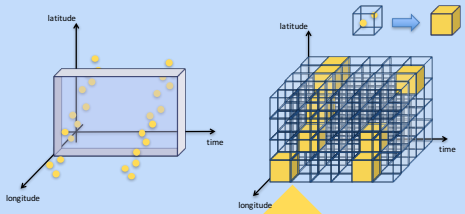
Create

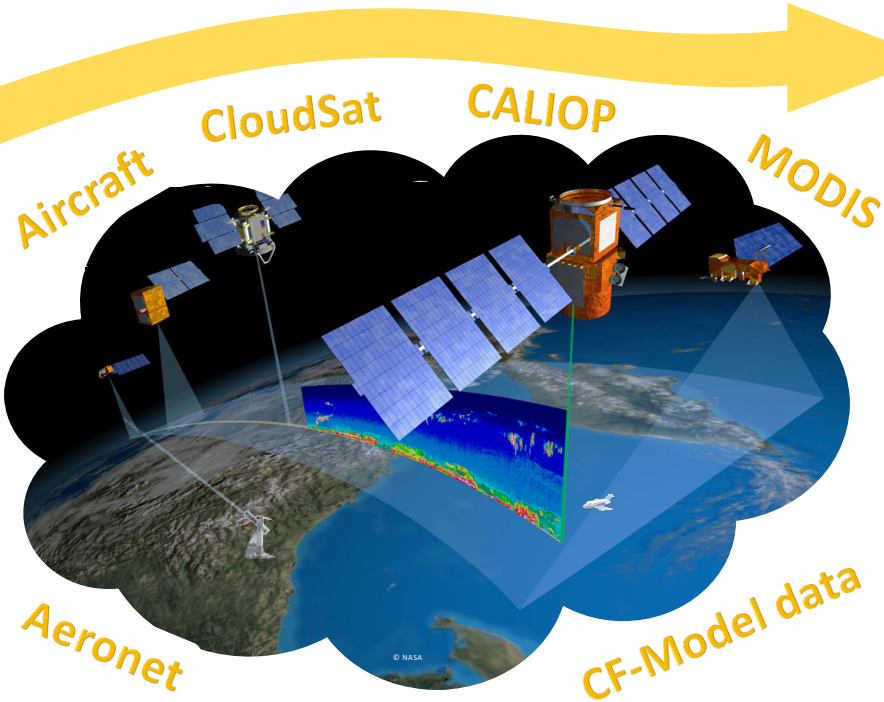
CIS allows you to create bespoke datasets with exactly the spatial and temporal extent, and at the level of aggregation required for your work.

For example with CIS you can: Take a weeks worth of MODIS L2 data and extract all the observations over the UK; you can take two days worth of data from a year long station measurement file; and you can collapse a model output file over latitude to create a zonal mean, all in one command.

All output is written to CF-compliant NetCDF files.

```
$ cis subset AOD:MOD04_L2*.hdf lon=[-11,2],lat=[50,60] -o UK_sub.nc
```





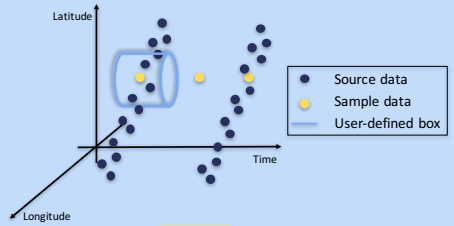
Combine

One of the core tools CIS provides is the fast spatial and temporal collocation of multiple ungridded and/or gridded datasets.

CIS makes it trivial to linearly interpolate model values onto a set of aircraft observations, for example, or aggregate satellite data onto a model field.

The methods and parameters of these different collocations can all be defined by the user.

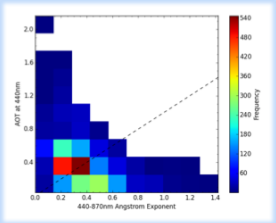
```
$ cis col AOD:model_data.nc aircraft_data_*.nc:collocator=lin
```

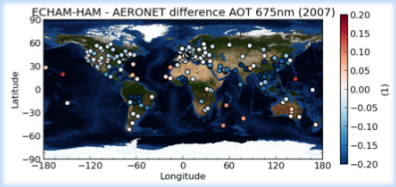


Compare

Easily compare datasets visually using a wide variety of plot types and styles including scatter plots, contour plots, heatmaps, histograms and more - either to screen or straight to file ready for publication.

Quantitative statistical comparisons can also be output for collocated datasets including absolute and relative differences and a number of correlation coefficients.





Find out more

CIS can easily be installed using Anaconda. To find out how and for extensive documentation, the Python API, a getting started guide, user plugins and a community forum go to:

www.cistools.net

Acknowledgements

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