



## Questions & Answers Part 2

Please type your questions in the Question Box. We will try our best to get to all your questions. If we don't, feel free to email Pawan Gupta ([pawan.gupta@nasa.gov](mailto:pawan.gupta@nasa.gov)), Melanie Follette-Cook ([melanie.cook@nasa.gov](mailto:melanie.cook@nasa.gov)) or Sarah Strode ([sarah.a.strode@nasa.gov](mailto:sarah.a.strode@nasa.gov)).

**Question 1: Why swath data (for instance MODIS 3km or 10km) are not available in Giovanni? Any Plan to incorporate in it?**

**Answer 1:** Giovanni only offers gridded data. Currently, there are no plans to offer swath data.

**Question 2: Will there be any major major differences in the outcome if I apply bilinear interpolation instead of cubic convolution interpolation to resample the data?**

**Answer 2:** It depends on the specific parameter you are working with and many factors can contribute to interpolation accuracies. For example, the variability in your data. If the variability within your region is small, then the outcome will not be that different, but if there is a large amount of variability, the differences will be more pronounced.

**Question 3: Is there any equation for calculating PM10 and PM1 similar to PM2.5?**

**Answer 3:** Information about how to calculate PM1 and PM10 for MERRA-2 can be found here: (Question 5)

<https://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/FAQ/>

**Question 4: When entering the domain bounds, integers were used; when specifying the point to be analyzed, floats were entered. I wonder if one can use integers/floats interchangeably.**

**Answer 4:** Yes. It should accept both values.

**Question 5: How can we save the image file of air quality so that we can further processed it using GIS software?**

**Answer 5:** If you are downloading the data from one of the sites shown, there is the option to export the data as a GeoTIFF file.



**Question 6: Is regridding same as resampling?**

**Answer 6:** Yes, but it depends on how you are defining them. There is not strict definition of the terms and they are used interchangeably.

**Question 7: 'apt-get' is not recognized as an internal or external command, operable program or batch file.... I think this is because I am not linux user ..is there any alternative code to replace 'apt-get' for window user?**

**Answer 7:** I am not sure about all the options but a simple internet search should be able to help here. One of the option is called 'Choco'

**Question 8: The re-gridded output is a raster, right? If so, then can we save it as a GeoTIFF with the help of the gdal module?**

**Answer 8:** It is gridded data with equal latitude and longitude grid cell size, and you can save it as a GeoTIFF or in other formats.

**Question 9: Hello, is it possible to download multi-temporal geotiff Gldas data for a given location from GES DISC portal? Is there any python code for that?**

**Answer 9:** In part 3, we will demonstrate how to download time series data for MERRA-2 based on a defined location.

**Question 10: Is there any benefit of the re-gridded data from six and eight pixels to four pixels?**

**Answer 10:** It depends on the application, if the purpose is to inter-comparison with other datasets, then re-gridding to coarser resolution can be performed.

**Question 11: Is there any way to interact with the spatial map generated from the jupyter notebook? Say, I want to analyze a point that is not easy to identify the location, can I just use a mouse to locate the maximum value location?**

**Answer 11:** Not sure, but python may have ways to make plots interactive. For example, the django web framework may have an option for interactive maps. Another option for finding the location of the maximum value would be to use the numpy argmax command in your code.