Overview and Improvement

Virtual Globes are increasingly becoming a popular three-dimensional platform to change the way in which professionals are doing their research related to geo-referenced data. NASA Goddard Earth Science Data and Information Service Center (GES DISC) has done so work to visualize NASA two-dimensional (2D) mapped data and three-dimensional (3D) vertical data in Google Earth. The data can be gridded data or swath data from either satellites or campaign missions respectively. We not only visualized gridded 2D and 3D data, but also we re-projected 2D swath data (2D surface strips data) and make them visualuze together with 3D vertical data in Google Earth. (Most of done work are in operation)

1. The speed of producing KMZ files is greatly improved. For a spatial range of about 3000 kilometers, Producing the KMZ file for one parameter of vertical data takes only 8 seconds while user clicks the “KMZ” button on Giovanni download interface after user visualized the data in web interface.
2. We re-projected swath data and visualized them in Google Earth along with vertical data for the same temporal and spatial range.

A-Train Vertical and Strips Data at NASA GES DISC


Other KMZ-available data products at GES DISC

2D TRMM data (rainfall rate) 2D AIRS data (SO, & Volcanoes) 2D Air Quality (MODIS/Aqua)

Google Earth™ Portal at NASA GES DISC

A web portal describing Google Earth (GE) related scientific research and applications is running at GES DISC (Right figure). The whole procedures of visualizing data in GE are seamlessly integrated into several GES DISC's online systems which serve data and provide data analysis. Both 2D gridded and swath data and 3D vertical data products and their online analysis results are enabled to be visualized in GE. The visualized data include all above mentioned data products. We also process and visualize some model data, e.g. ECMWF model data. Some vertical data from campaign missions such as -VEX, TC3, CLASIC, are also processed and visualized in Google Earth.