SIT040-P09     会場:コンベンションホール     時間: 5月26日17:15-18:45

# 地震トモグラフィーモデルKML化用ウェブアプリケーションの開発

# Improvement of web application of KML generator to visualize seismic tomography on Google Earth

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The visual presentation of the tomography model with other geophysical/geochemical data on a same globe will be a powerful tool to integrate the tomography model and other research results obtained from different fields and provide a new look of the Earth's interior. The layer system of the various virtual globes, e.g. Google Earth and NASA World Wind, easily provides the overlapping image of different kinds of geographical data on the same area. To plot the geographical data on Google Earth, the data should be written by Keyhole Markup Language (KML). Now various research institutes, e.g. USGS and AIST, distribute their research data as KML. So exploiting the layer system of Google Earth and KML files provided by various research institutes, we have developed new system to visualize seismic tomography model with various geophysical/geochemical data at once. We developed a tool to convert the data of seismic tomography into KML. The converter, named "KML generator", produces a KMZ file, which is a compressed format of KML, to visualize horizontal and vertical cross sections of the seismic tomography on Google Earth. The generator is now available as a web application. Here we have improved User Interface (UI) of the web application to set the parameters of the generator intuitively. The Graphical UI (GUI) is provided and the values of the coordinates needed to make a desirable cross section can be directly set through the map displayed on the web browser. Moreover, the visual image of the tomography model on Google Earth will be provided on the web browser by using Google Earth API without the downloading the KMZ file. The web application of the KML generator is now user-friendly and non-expert can easily visualize the tomography model. We have developed other KML generators to visualize the geochemical data of rocks and geomagnetic field model on Google Earth. Using the KML file provided by various research institutes or obtained through the KML generators, the tomography model will be overlaid on the different kinds of the geoscience data.

キーワード:地震トモグラフィーモデル,可視化, Google Earth, KML,ウェブアプリケーション
Keywords: seismic tomography, visualization, Google Earth, KML, web application