

Seamless plot of time series by using Ajax

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Time series are fundamental to the Earth and Planetary Science. A lot of kinds of time series are created and are provided with users from WWW pages. In the field of the space physics, the Coordinated Data Analysis Web (CDAWeb, <http://cdaweb.gsfc.nasa.gov>) is one of the famous pages for satellite data service. The author's institute makes a large amount of geomagnetic field data available from the WWW page (<http://wdc.kugi.kyoto-u.ac.jp>). In most of such WWW pages, to make a plot of time series, users should input necessary information such as time interval, data type, plot scale, and so on; followed by pressing a "submit" button. When users want to change the input values, they need to press the "back" button to return to the initial page and repeat the same procedure until they got a satisfactory plot result. This is a niggling task for users.

In this study we intend to improve the interface of the WWW plot service by adopting Ajax (Asynchronous JavaScript + XML). Ajax is a web development technique to retrieve data from the server asynchronously in the background without interfering with the display and behavior of the existing page. We have developed a WWW page in which geomagnetic field data from Kakioka can be displayed seamlessly. Users can change time interval or plot scale intuitively only by a simple mouse operation. We will introduce how the developed WWW page works.