

IUGONETメタデータ・データベース構築の現状

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メタデータDBとは？

- メタデータ・・・観測データそのものではなく、
観測データに付帯した情報。
e.g. 観測開始終了時刻、観測場所、
観測データの所在情報。
→ メタデータを介して
観測データへアクセス。
- メタデータDB・・・これらのメタデータを集めて
検索可能にしたもの。
様々な研究機関にある観測データのメタデータを、
1クエリーで検索可能！
(いつ、どこで、どの物理量が同時観測されたのか？)

- 学術機関リポジトリで広く使用されているフリーソフトウェア「DSpace」をカスタマイズ
- 2011年5月にβ版を公開
(今年度末メインサーバを名大→九大に移行)
- 使用者からのフィードバックを受け、いくつかの改良をおこない、今年度末に正式版を公開予定

<http://search.iugonet.org/iugonet/>



The screenshot shows the IUGONET search interface. The main content area displays the IUGONET logo and a message: "This DB is now in beta testing. We appreciate your feedback. Would you be interested in filling out a survey from here?". Below this, there are three search filter sections:

- Free Word:** A text input field with a placeholder "Free Word" and a sample text "(e.g. magnetometer, SMART, radio wave, imaging riometer)".
- Time:** A range selection section with "from" and "to" date-time pickers, a "UTC" checkbox, and a "Show calendar" link.
- Geographic Range:** A section for selecting latitude and longitude ranges. It includes "Latitude: Southernmost" and "Northernmost" pickers, and "Longitude: Westernmost" and "Easternmost" pickers. Each picker has a "degree" unit indicator. A "Show map" link is also present.

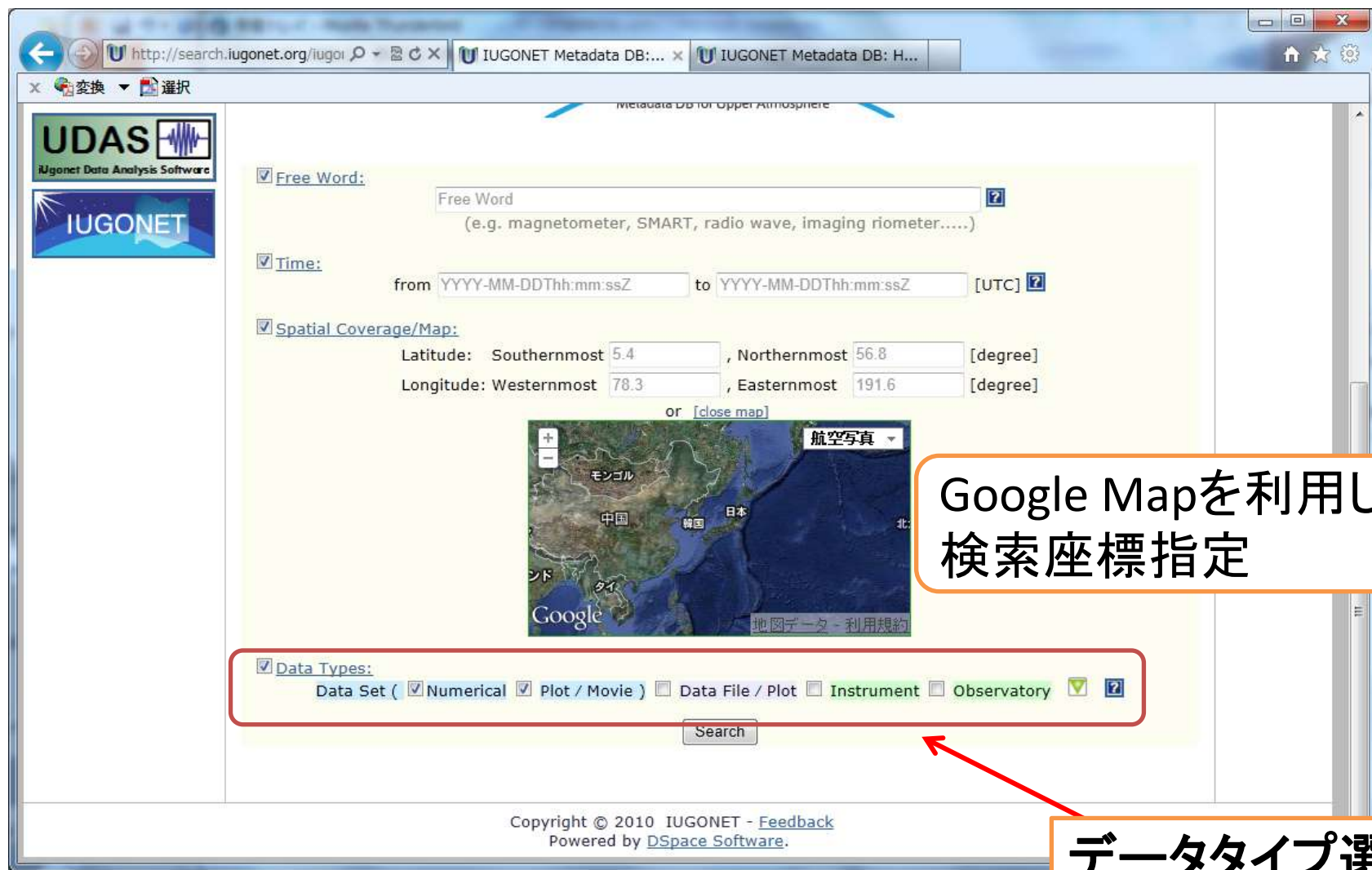
On the right side of the interface, there is an "RSS Feeds" section with a "Latest Update" date of "Nov. 25 16:28:50 JST 2011" and a "W3C XHTML 1.0" validation logo.

フリーワード検索

時間範囲選択

観測範囲選択

β 版の紹介



The screenshot shows the IUGONET search interface with the following sections:

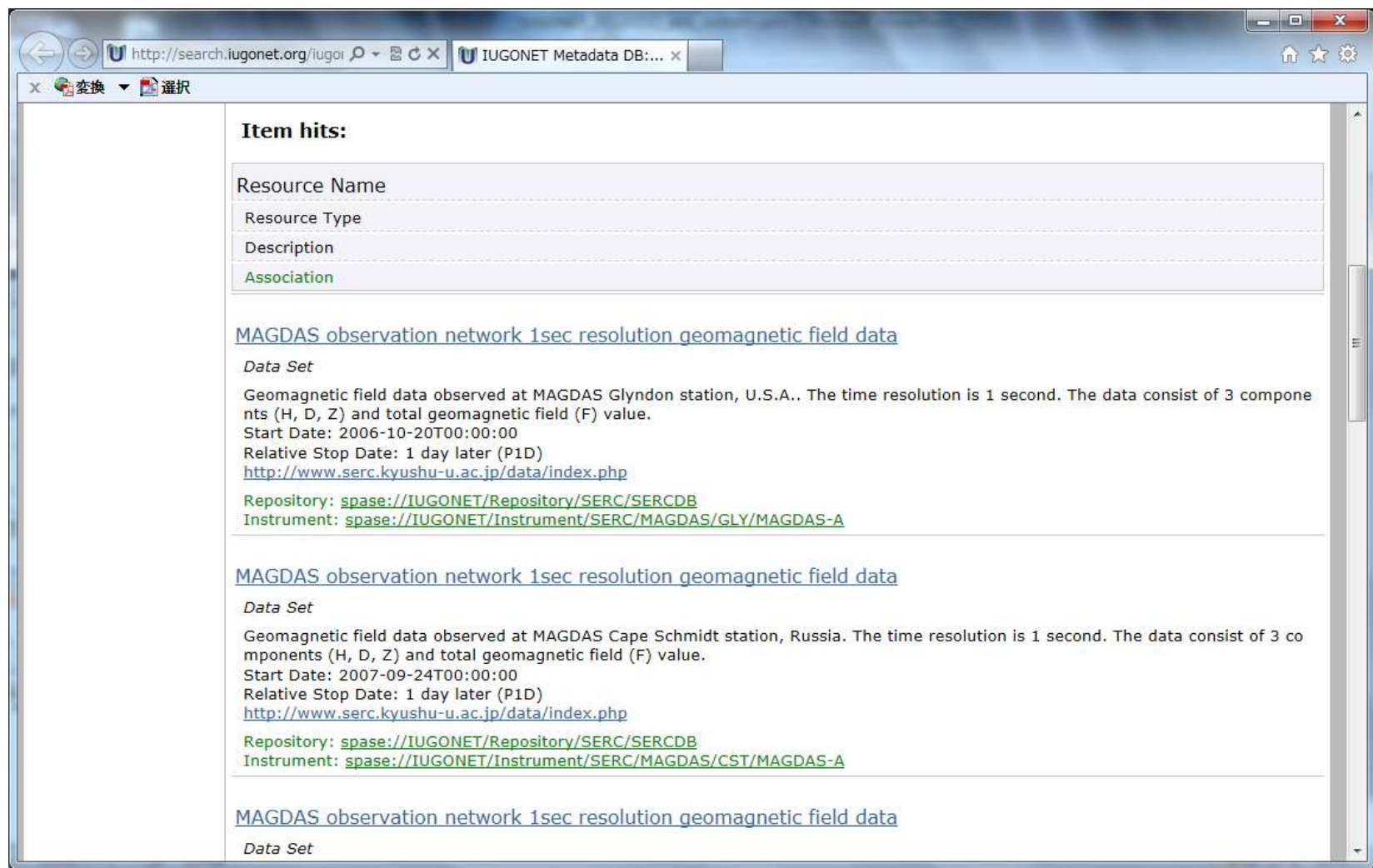
- UDAS iugonet Data Analysis Software** logo on the left sidebar.
- Free Word:** A text input field with a placeholder "Free Word" and a help icon. Below it, an example "(e.g. magnetometer, SMART, radio wave, imaging riometer.....)" is provided.
- Time:** Two date-time input fields labeled "from" and "to" in the format "YYYY-MM-DDThh:mm:ssZ", followed by a "[UTC]" label and a help icon.
- Spatial Coverage/Map:** Latitude and Longitude input fields. Latitude: Southernmost (5.4) and Northernmost (56.8) [degree]. Longitude: Westernmost (78.3) and Easternmost (191.6) [degree]. Below these is a "or [close map]" link.
- Map:** A Google Map showing East Asia (Mongolia, China, Korea, Japan). A dropdown menu "航空写真" (Aerial Photo) is visible. The Google logo and "地図データ - 利用規約" (Map Data - Terms of Use) are at the bottom of the map.
- Data Types:** A section with checkboxes for "Data Set" (checked), "Numerical" (checked), "Plot / Movie" (checked), "Data File / Plot" (unchecked), "Instrument" (unchecked), and "Observatory" (checked). A help icon is also present.
- Search:** A button at the bottom of the form.

Annotations on the screenshot:

- An orange box with the text "Google Mapを利用した 検索座標指定" (Specify search coordinates using Google Map) points to the map area.
- A red box highlights the "Data Types" section.
- An orange box with the text "データタイプ選択" (Data Type Selection) points to the "Data Types" section.

Copyright © 2010 IUGONET - Feedback
Powered by DSpace Software.

見やすい検索結果

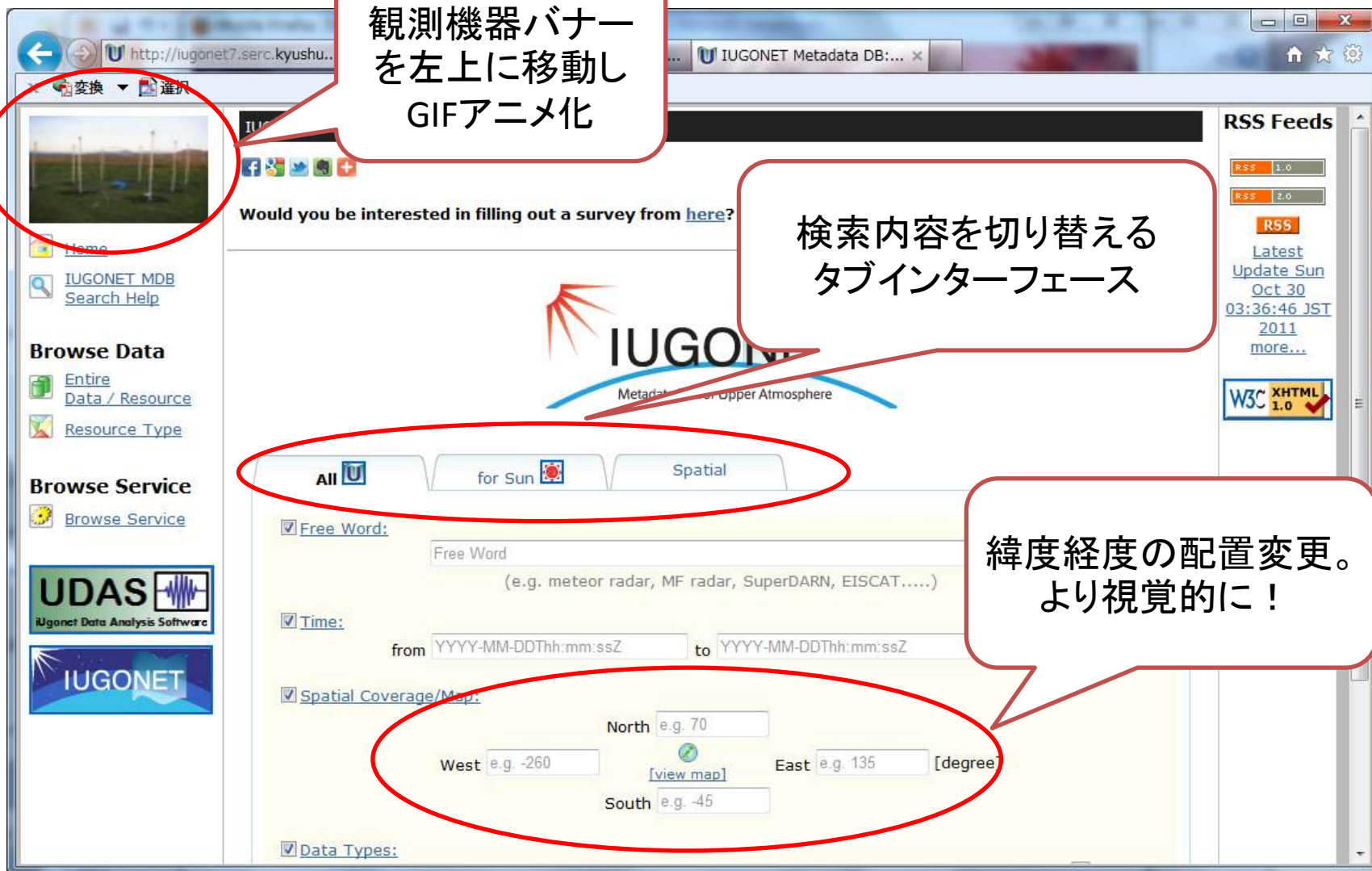


The screenshot shows a web browser window with the URL <http://search.iugonet.org/iugoi>. The page displays search results for "MAGDAS observation network 1sec resolution geomagnetic field data". The results are organized into three identical blocks, each containing the following information:

- Item hits:**
- Resource Name:** MAGDAS observation network 1sec resolution geomagnetic field data
- Resource Type:**
- Description:**
- Association:**
- Data Set:**
 - Geomagnetic field data observed at MAGDAS Glyndon station, U.S.A.. The time resolution is 1 second. The data consist of 3 components (H, D, Z) and total geomagnetic field (F) value.
 - Start Date: 2006-10-20T00:00:00
 - Relative Stop Date: 1 day later (PID)
 - <http://www.serc.kyushu-u.ac.jp/data/index.php>
 - Repository: <spase://IUGONET/Repository/SERC/SERCDDB>
 - Instrument: <spase://IUGONET/Instrument/SERC/MAGDAS/GLY/MAGDAS-A>

The same information is repeated for the second and third entries, which are for the Cape Schmidt station in Russia, with a start date of 2007-09-24T00:00:00 and instrument <spase://IUGONET/Instrument/SERC/MAGDAS/CST/MAGDAS-A>.

公開版の紹介



The screenshot shows the IUGONET website interface with several annotations in red speech bubbles:

- 観測機器バナーを左上に移動し GIFアニメ化** (Move the observation instrument banner to the top left and make it a GIF animation): Points to a banner image of observation equipment in the top left corner.
- 検索内容を切り替える タブインターフェース** (Switch search content using a tab interface): Points to the tabs labeled "All", "for Sun", and "Spatial".
- 緯度経度の配置変更。より視覚的に！** (Change the configuration of latitude and longitude. More visually!): Points to the input fields for North, West, East, and South coordinates.

The website interface includes a left sidebar with navigation links like "Home", "IUGONET MDB Search Help", "Browse Data", and "Browse Service". The main content area features a search form with fields for "Free Word", "Time", and "Spatial Coverage/Map". The right sidebar displays "RSS Feeds" and a "W3C XHTML 1.0" validation logo.

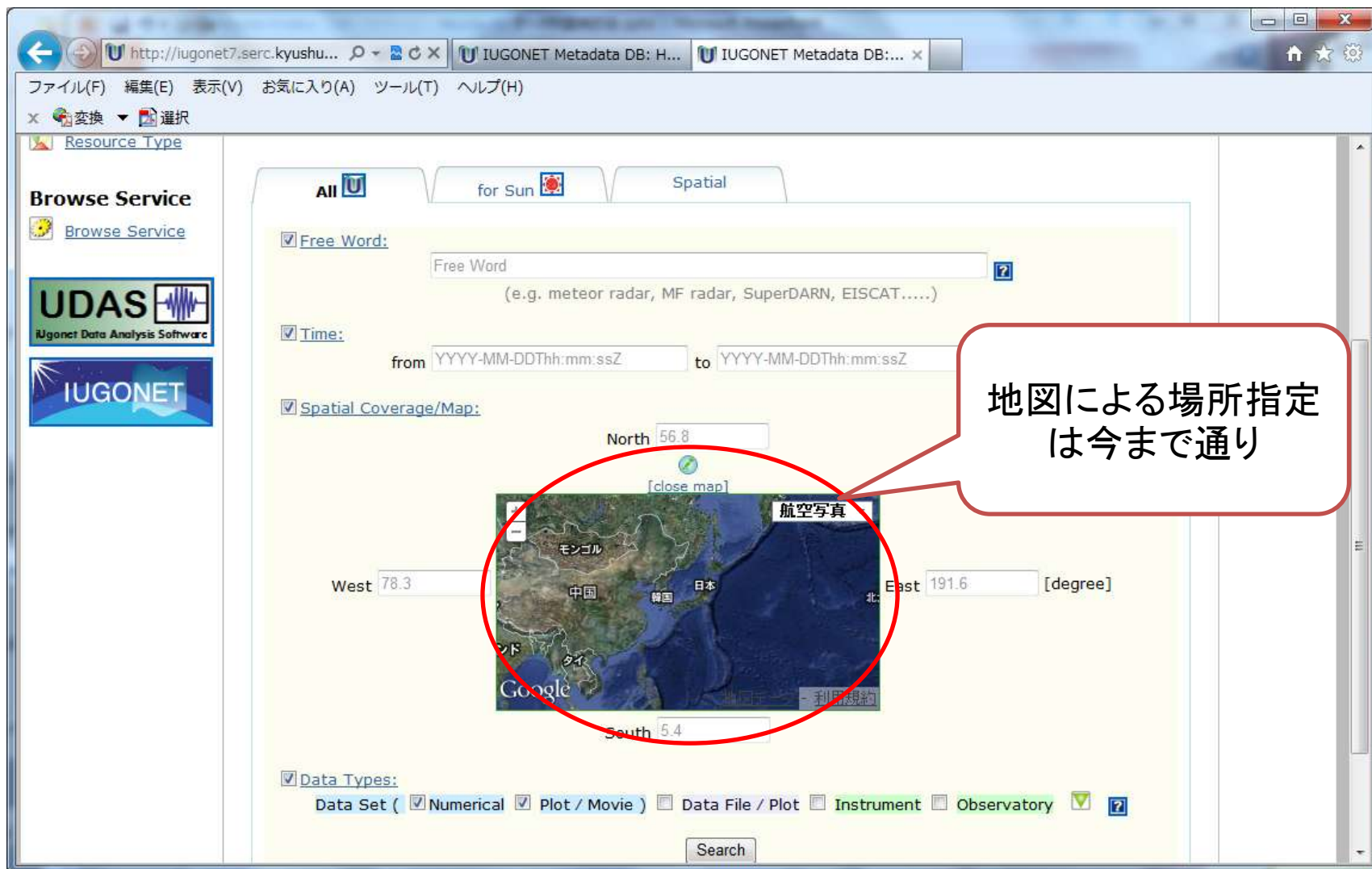


The screenshot shows the IUGONET Metadata DB web interface. The browser address bar displays the URL: <http://iugonet7.serc.kyushu...>. The page features a sidebar on the left with navigation links: Home, IUGONET MDB, Search Help, Browse Data (Entire Data / Resource, Resource Type), and Browse Service (Browse Service). The main content area includes the IUGONET logo and the text "Metadata DB for Upper Atmosphere". Below the logo, there are tabs for "All", "for Sun", and "Spatial". The "All" tab is selected. The search criteria section includes:

- ☒ **Free Word:** A text input field with the placeholder "Free Word" and a help icon. Below it, an example is provided: "(e.g. meteor radar, MF radar, SuperDARN, EISCAT.....)".
- ☒ **Time:** Two date-time input fields labeled "from" and "to", both with the placeholder "YYYY-MM-DDThh:mm:ssZ". A "[UTC]" label and a help icon are to the right.
- ☒ **Spatial Coverage/Map:** Four input fields for "North", "West", "East", and "South". The values are "50.0", "78.3", "78.3", and "56.8" respectively. A "[degree]" label is to the right of the "East" field. A red circle highlights the "view map" button located between the "West" and "East" fields.
- ☒ **Data Types:** A group of checkboxes: "Data Set" (checked), "Numerical" (checked), "Plot / Movie" (checked), "Data File / Plot" (unchecked), "Instrument" (unchecked), and "Observatory" (unchecked). A help icon is to the right.

A "Search" button is located at the bottom of the search criteria section. On the right side of the page, there is a "Latest Update" section showing "Sun Oct 30 03:36:46 JST 2011" and a "more..." link. Below this is a "W3C XHTML 1.0" logo.

全メタデータ



http://iugonet7.serc.kyushu... IUGONET Metadata DB: H... IUGONET Metadata DB:...

ファイル(F) 編集(E) 表示(V) お気に入り(A) ツール(T) ヘルプ(H)

変換 選択

Resource Type

Browse Service

Browse Service

UDAS
iugonet Data Analysis Software

IUGONET

All for Sun Spatial

☒ Free Word:

Free Word (e.g. meteor radar, MF radar, SuperDARN, EISCAT.....)

☒ Time:

from YYYY-MM-DDThh:mm:ssZ to YYYY-MM-DDThh:mm:ssZ

☒ Spatial Coverage/Map:

North 56.8 [close map]

West 78.3 East 191.6 [degree]

South 5.4

航空写真

モンゴル 中国 韓国 日本

Google

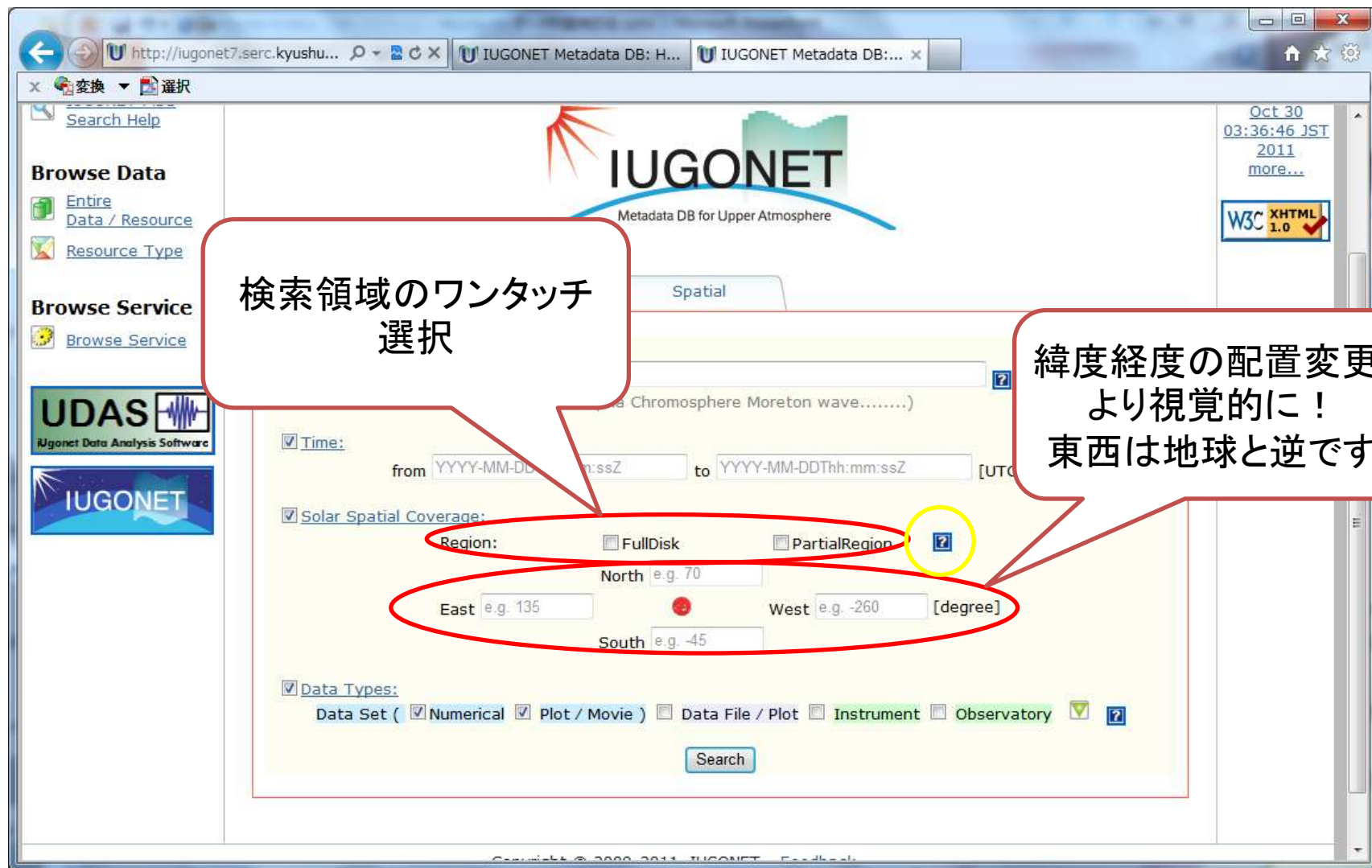
☒ Data Types:

Data Set (☒ Numerical ☒ Plot / Movie) ☐ Data File / Plot ☐ Instrument ☐ Observatory ☒ ?

Search

地図による場所指定は今まで通り

太陽メタデータ



The screenshot shows the IUGONET Metadata DB web interface. The browser address bar displays the URL `http://iugonet7.serc.kyushu...`. The page features a sidebar with navigation links like "Search Help", "Browse Data", and "Browse Service". The main content area includes a search form with various filters. Two red callout boxes highlight specific features:

- 検索領域のワンタッチ選択** (One-touch selection of search area): This callout points to the "Solar Spatial Coverage" section, specifically to the "Region:" dropdown menu which has options for "FullDisk" and "PartialRegion".
- 緯度経度の配置変更。より視覚的に！東西は地球と逆です** (Change latitude/longitude configuration. More visually! East/West are opposite to Earth): This callout points to the "East" and "West" input fields, which are circled in red. The "East" field has a value of "e.g. 135" and the "West" field has a value of "e.g. -260 [degree]".

Other visible elements include a "Time:" filter, a "Data Types:" filter, and a "Search" button at the bottom of the form.

Web ページからのメッセージ



[Detail for Solar Spatial Coverage]

If you want to set Fulldisk/PartialRegion keyword clearly, please check the proper checkbox.

You can input solar latitude and longitude values you are interested in. The Stonyhurst Heliographic Coordinate System is supported in this search. In this coordinate system, left-hemisphere of the solar disk is defined as the eastern hemisphere and right-hemisphere is defined as the western hemisphere.

[Example]

North: N15 or +15

East : E40 or +40

West : W30 or -30

South: S25 or -25

東西南北をEWSNで
置き換えて検索できる
ようにしています

注意:

現在、太陽メタデータの
東西座標は地球と同じよ
うになっています(更新
版を内部テスト中)。

現状については、MDDDB
内で左図のようにヘルプ
で対応しています。

検索結果

Search Results

Time from: to [UTC]

Spatial Coverage

Latitude: Southernmost 21.58 , Northernmost 47.49 [degree]

Longitude: Westernmost 79.10 , Easternmost 135.70 [degree]

Data Set (☒ Numerical ☒ Plot / Movie) ☐ Data File / Plot ☐ Instrument ☐ Observatory

上：全データ検索時、下：太陽データ検索時
 検索元に対応して、Search Result上部の検索窓内容が変わる

Search Results

Time from: to [UTC]

Solar Spatial Coverage

Region: ☐ FullDisk ☐ PartialRegion

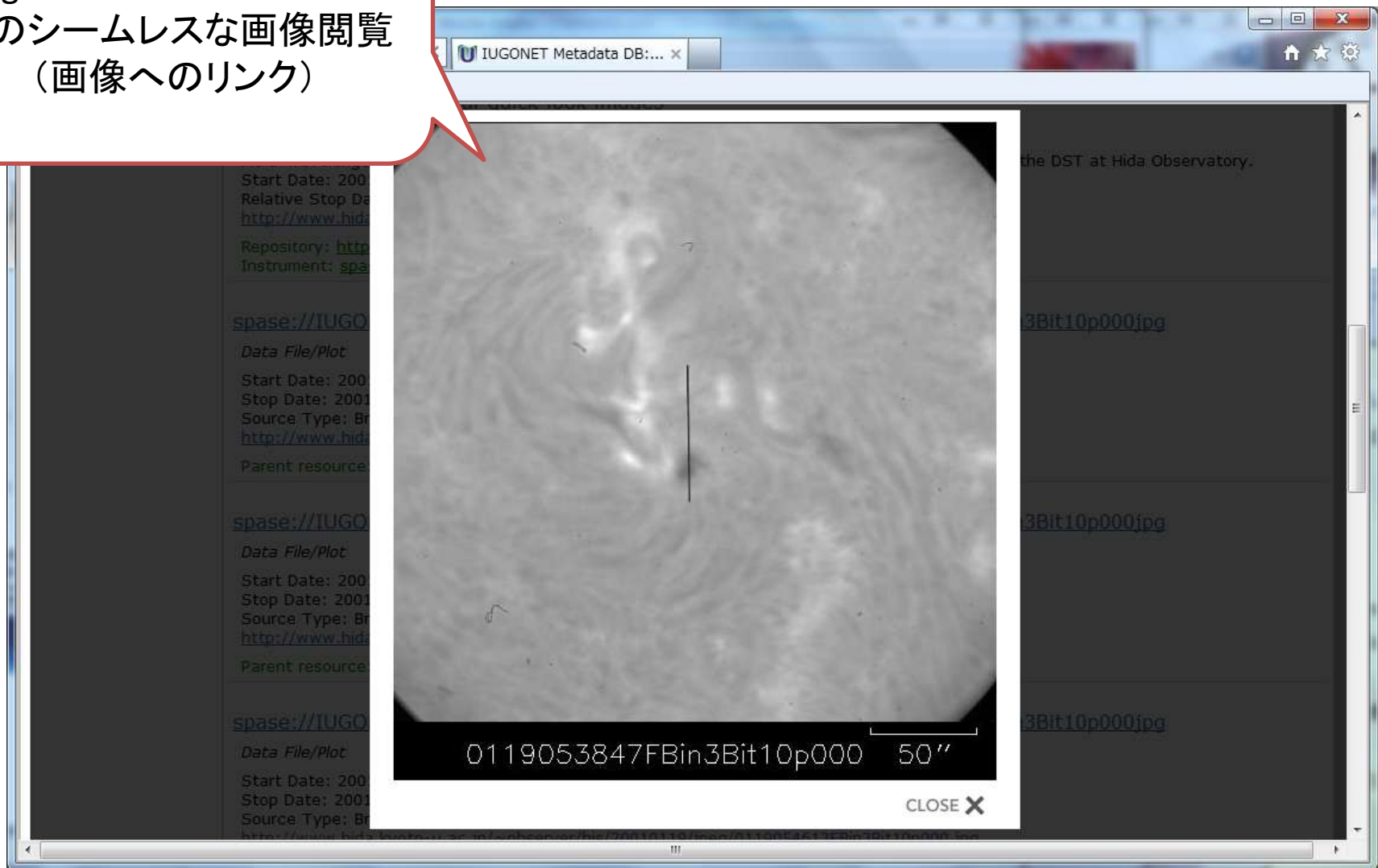
Latitude: Southernmost , Northernmost [degree]

Longitude: Westernmost , Easternmost [degree]

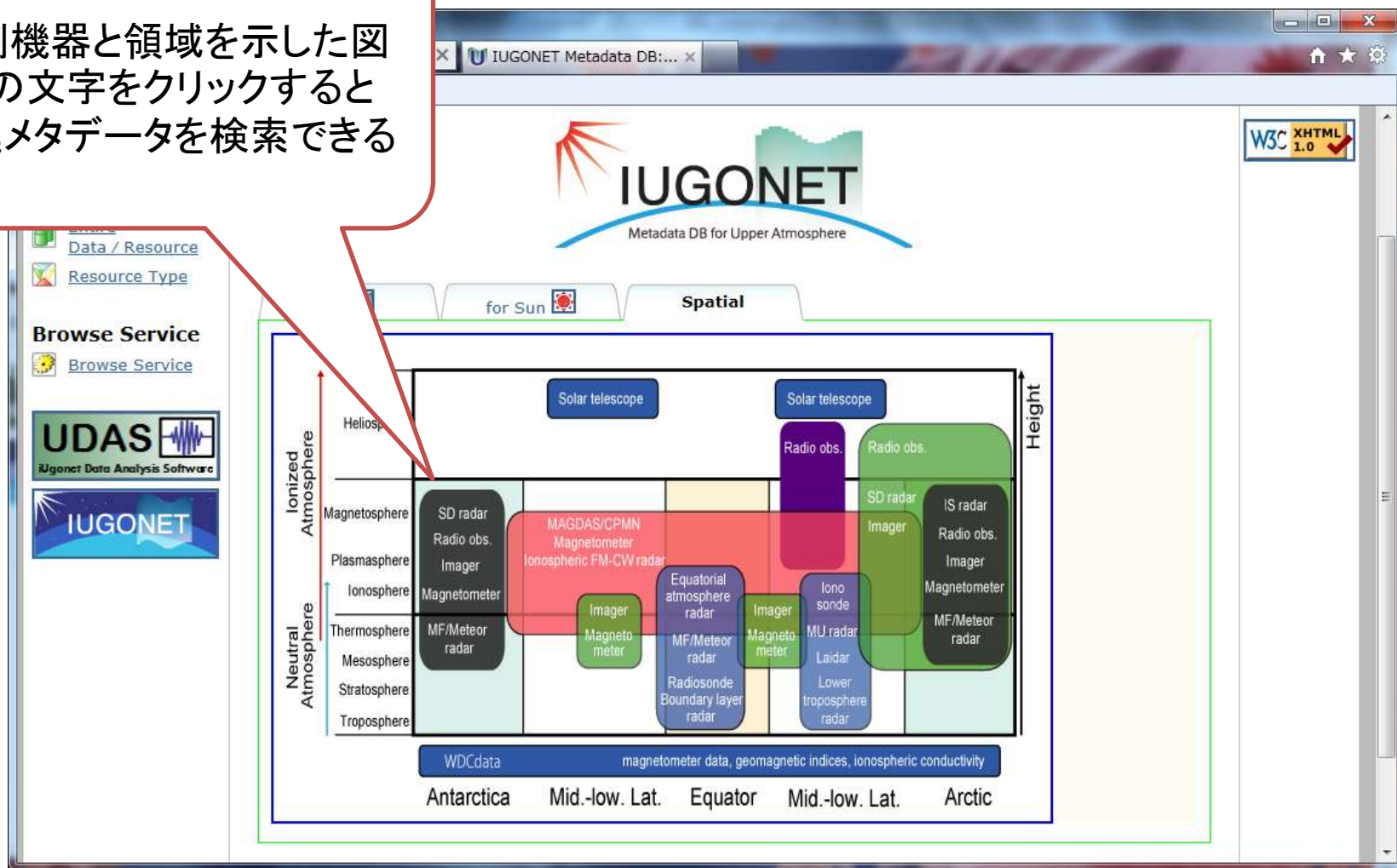
Data Set (☒ Numerical ☒ Plot / Movie) ☒ Data File / Plot ☐ Instrument ☐ Observatory

検索結果

Lightbox2によるMDDDB内
でのシームレスな画像閲覧
(画像へのリンク)



観測機器と領域を示した図中の文字をクリックすると関連メタデータを検索できる



自動でキーワードを挿入して検索結果を表示

The screenshot shows a web browser window with the URL <http://iugonet7.serc.kyushu...> and a tab titled "IUGONET Metadata DB:..." The page is titled "Search Results" and features a search form with the following fields and options:

- Search term:
- Time from: to [UTC]
- Spatial Coverage:
 - Latitude: Southernmost , Northernmost [degree]
 - Longitude: Westernmost , Easternmost [degree]
- Data Set (☒ Numerical ☒ Plot / Movie) ☐ Data File / Plot ☒ Instrument ☒ Observatory
-

Results 1-4 of 4.

Results/Page | Sort items by In order

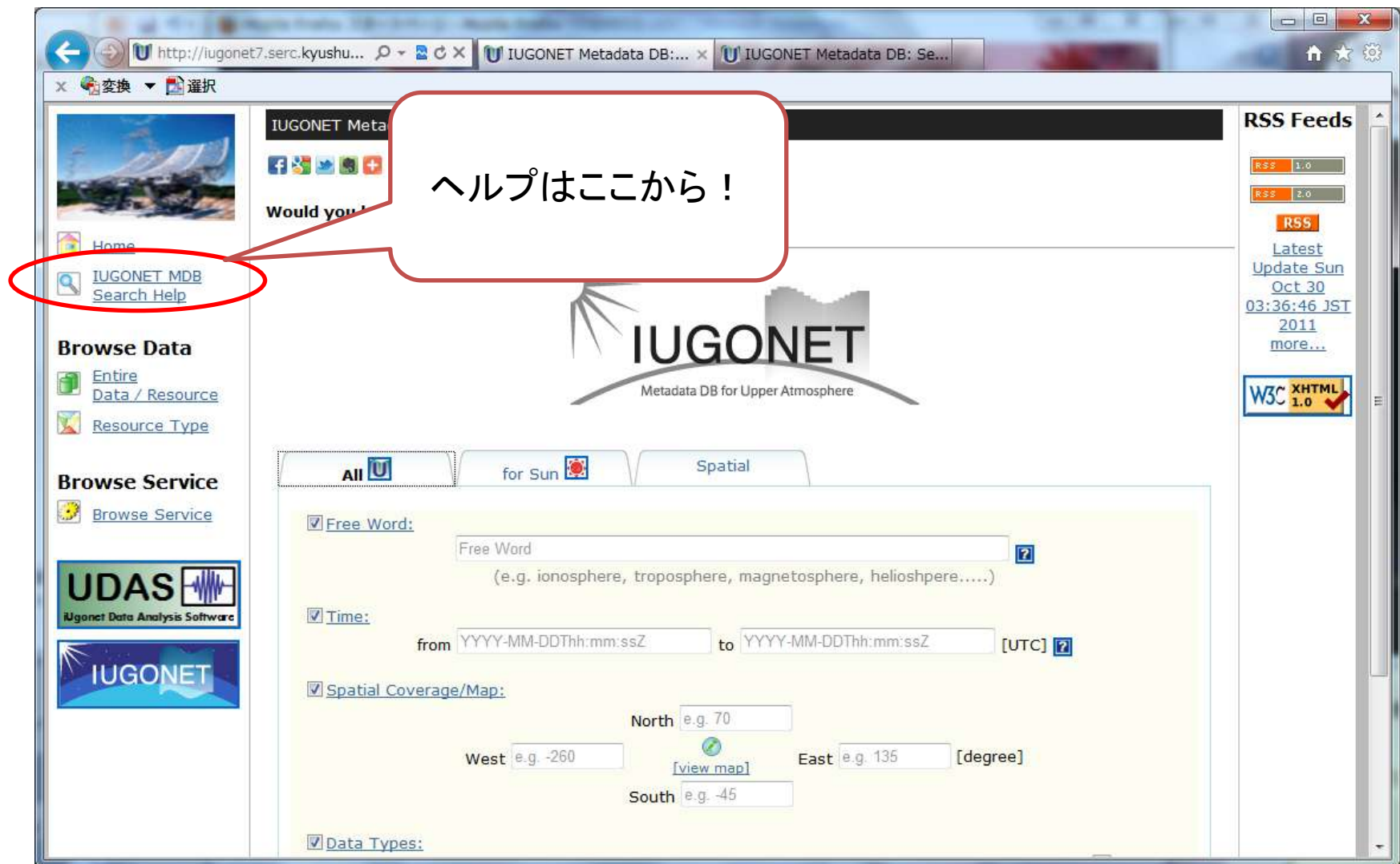
Item hits:

Resource Name
Resource Type
Description
Association

[SENSU SuperDARN Syowa East HF radar.](#)

Instrument

One of the HF coherent radars at Syowa Station, Antarctica. A component of "Syowa South and East HF Radars of NIPR for SuperDARN (SENSU)", as well as a component of Super Dual Auroral Radar Network (SuperDARN) operated by National Institute of Polar Research



ヘルプはここから！

[IUGONET MDB Search Help](#)

Browse Data

- [Entire Data / Resource](#)
- [Resource Type](#)

Browse Service

- [Browse Service](#)

UDAS
Iugonet Data Analysis Software

IUGONET

IUGONET Meta

Would you like to...

RSS Feeds

- [RSS 1.0](#)
- [RSS 2.0](#)
- [RSS](#)
- [Latest Update Sun Oct 30 03:36:46 JST 2011 more...](#)

W3C XHTML 1.0

IUGONET
Metadata DB for Upper Atmosphere

All **for Sun** **Spatial**

☒ **Free Word:**

Free Word [?](#)
(e.g. ionosphere, troposphere, magnetosphere, heliosphere.....)

☒ **Time:**

from to [UTC] [?](#)

☒ **Spatial Coverage/Map:**

North e.g. 70
West e.g. -260 East e.g. 135 [degree]
South e.g. -45
[\[view map\]](#)

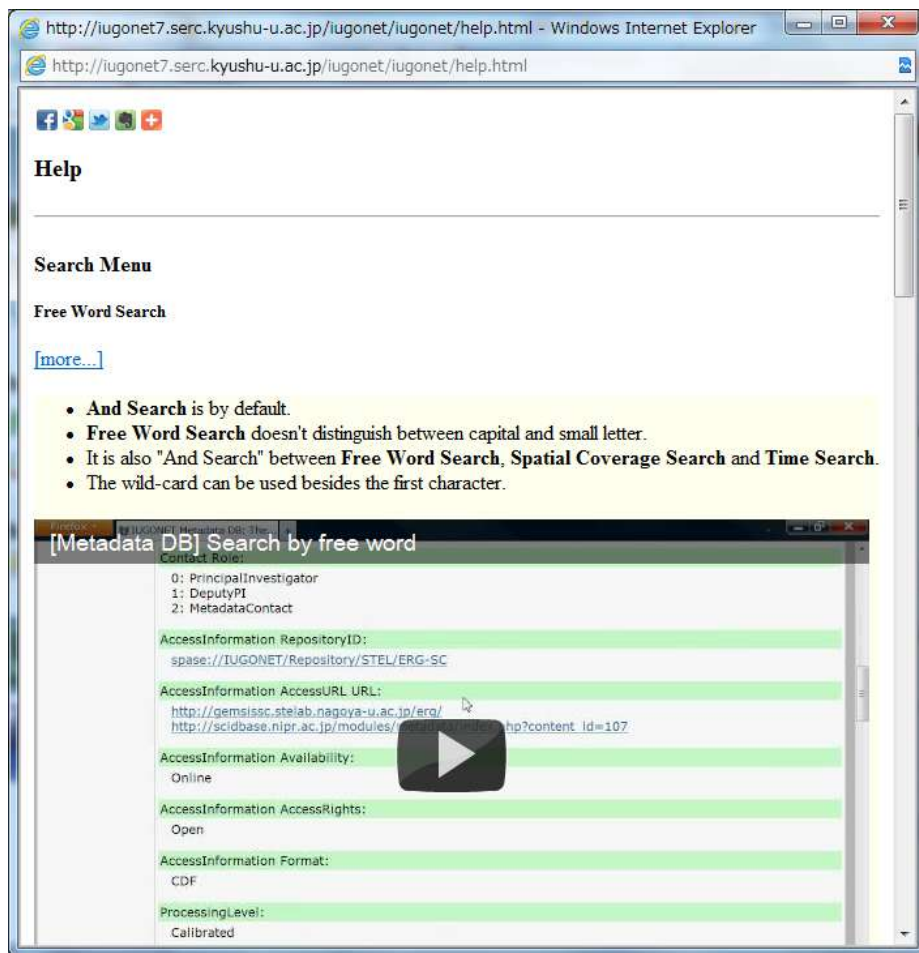
☒ **Data Types:**

ヘルプ動画

- ヘルプ動画を更新
- もっと多くの動画を見たい場合は、



- <http://www.youtube.com/user/iugonet2009>



フィードバック情報の収集

MDDDB利用者からのフィードバック情報を得るために、**2種類**のインターフェースを準備しています。

[Questionnaire](#) [easy feedback or detail survey](#)

フィードバック(簡易)

[IUGONET Metadata DB](#) >



This DB is now in beta testing. We appreciate your [feedback](#).

Would you be interested in filling out a survey from [here](#)?

Feedback Form

Thanks for taking the time to share your feedback about the IUGONET Metadata DB system. Your comments are appreciated!

Your Email Address:

Your Comments:

Send

メールアドレスとコメントだけで良い簡単フィードバック

フィードバック(詳細)

GoogleDocsを利用した 詳細アンケート

Questionnaire for IUGONET Metadata Database

Please take the time to fill out the questionnaire below which will help us to better serve you.

* Required

Specialized field *

- ☐ Space Physics
- ☐ Geophysics
- ☐ Meteorology
- ☐ Geology
- ☐ Chemistry
- ☐ Engineering
- ☐ informatics
- ☐ Other:

Look and feel of search window *

1 2 3 4 5
bad ☐ ☐ ☐ ☐ ☐ good

Addthis widget for sharing metadata information *

1 2 3 4 5
bad ☐ ☐ ☐ ☐ ☐ good

- 専門分野
- 各種インターフェースの使い勝手(五段階評価)
- よく使うデータベース
- 各種コメント

などを収集する

OpenSearch対応

http://search.iugonet.org/iugonet/open-search/request?query=nipr_1sec_fmagg_syo_&ts=2010-01-01&te=2010-01-05&Granule=granule

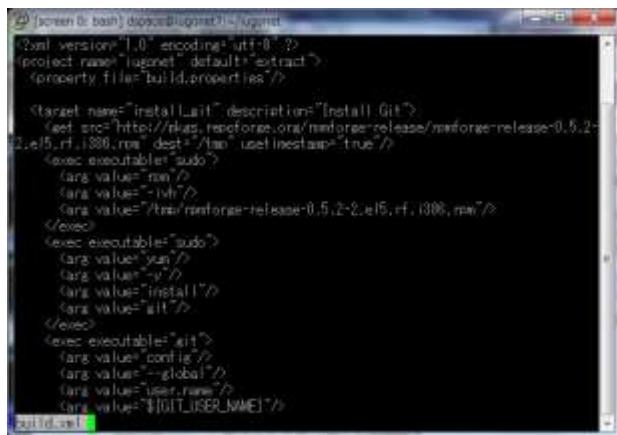


**OpenSearchの例
(ブラウザでの結果表示)**

OpenSearchとは、検索結果を他のサイトから自由に利用できるようにするための仕組み

将来、UDAS連携や検索結果を他サイトから利用する拡張のために実装

build.xmlによるシステムインストール



build.xml

1. Java
2. ant
3. build.xml



IUGONET SYSTEM

build.xmlとは、antで使用するビルドファイル。IUGONETソフトウェアの構築方法を記述したファイルを準備しており、IUGONETシステムを楽にインストールすることが可能。

今後の開発事項

- Look & Feelのカスタマイズ（さらにみやすい詳細表示）
- OpenSearchを用いた、解析ソフトウェア・外部データベースとの連携
- 連想検索（GETAssocを利用したシステムを検討中）
- 冗長化、分散化に向けた準備（handleの同一化含む）