

NIES GOSAT Data Handling System and User Interface (with Demonstration)

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The GOSAT Data Handling Facility (GOSAT DHF) has following 3 user interface for users outside of GOSAT DHF:

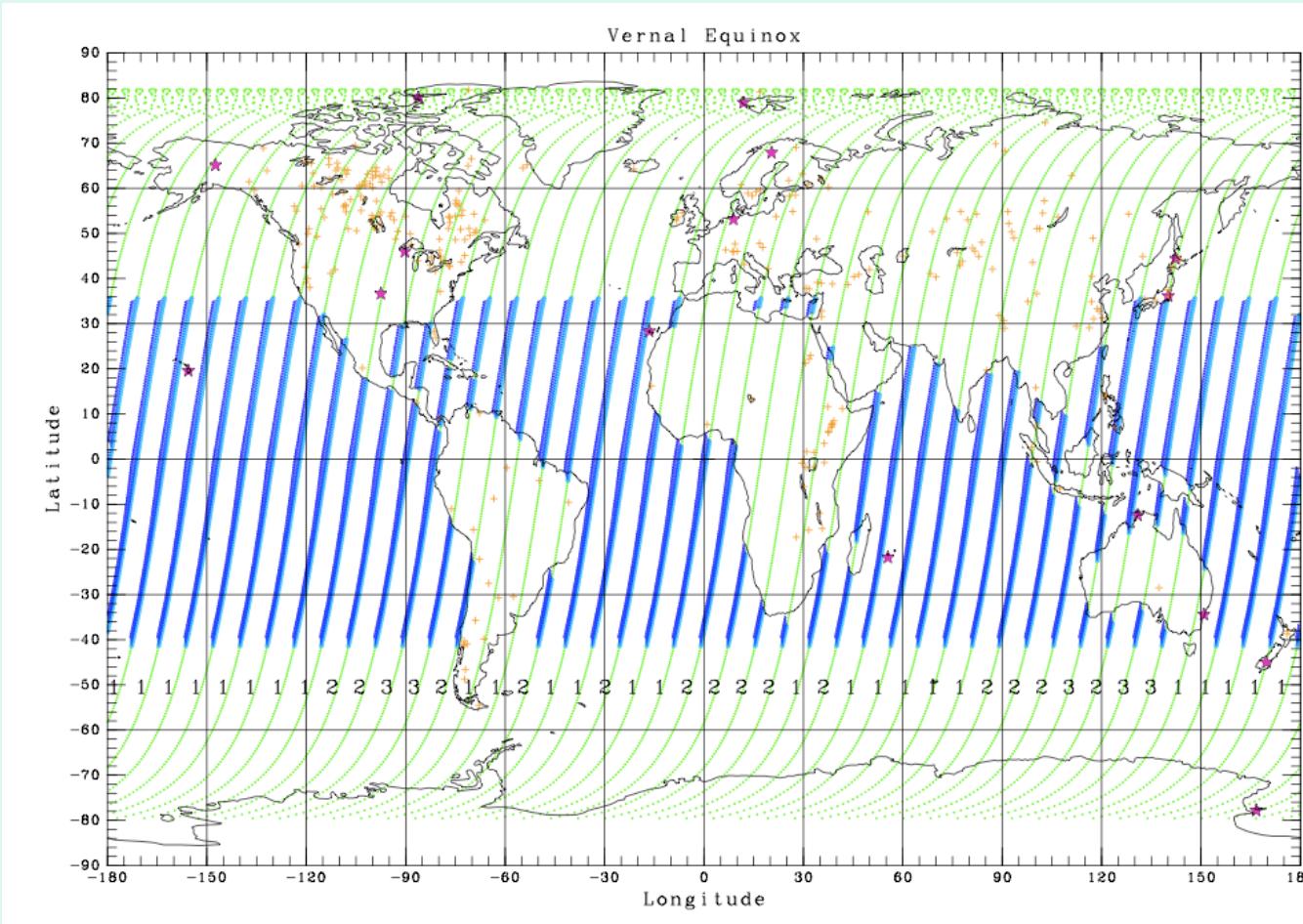
- 1)User Authentication,
- 2)Observation Request Submission,
- 3)Data Search and Product Order.

Data Search is available to any general users even if he/she has not registered yet.

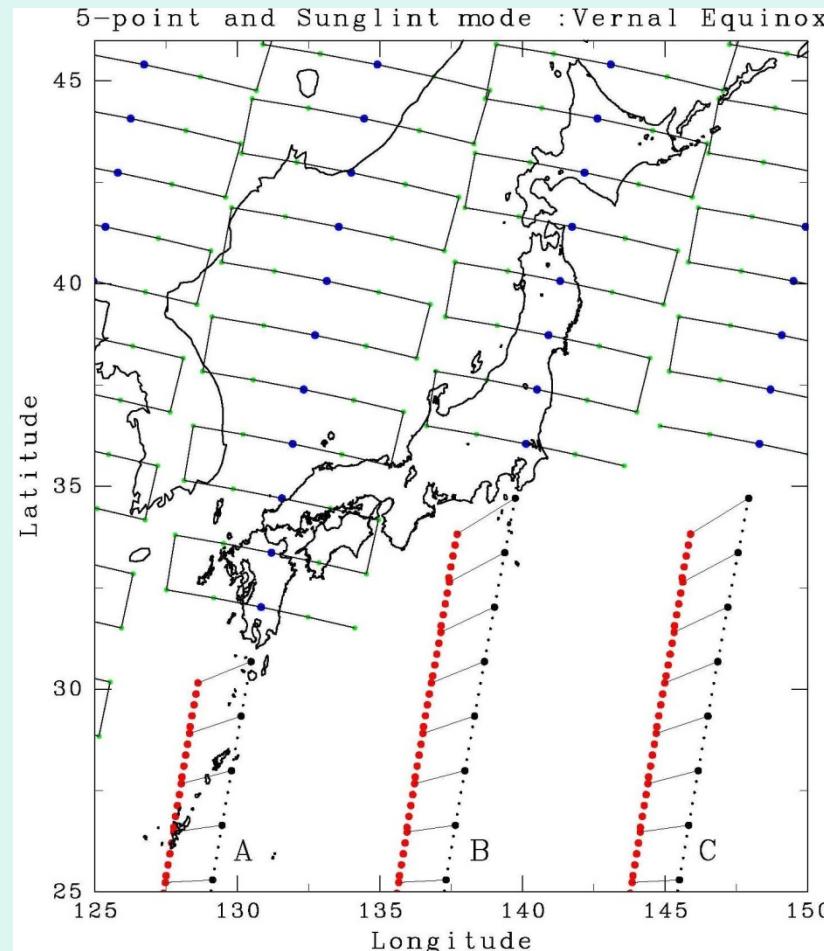
But, registered users have a right to order the Standard Products under the condition that he/she observes the Data Policy that the Three Parties agreed. In addition, the qualified RA users have a right to order the Research Product, Moreover, RA users have a right to submit the observation request, as long as the observation request is considered to be necessary for their research plan.

We will introduce you two features with demonstration, and those are the function of **observation request** and the function of **product search and order**. The function of observation request will provide the observation request submission and the observation request status. These functions will be provided only for RA researchers or researchers who has right to send the observation request. RA investigators are able to send observation requests, but NIES cannot guarantee to accept all of the observation requests. In the function of product search and order, we will provide product search and order for a start.

Typical Observation Pattern of GOSAT FTS



Observation in the neighborhood of Japan



On the other hand, the FTS observation will be conducted, if there is no specific observation request, based on the lattice observation over the land and sun glint observation over the sea. Since the **current default value of the lattice observation in cross track direction is 5** (the distance between two adjacent observations is about **150 km**), note that most of the land area will be covered without any specific observation request. Currently, candidates of the specific observation will be planned for calibration/validation targets, emergency observation for pipeline leakage/forest fires, simultaneous observation with other satellites, etc.



THE POSSIBILITIES ARE INFINITE

DEMONSTRATION

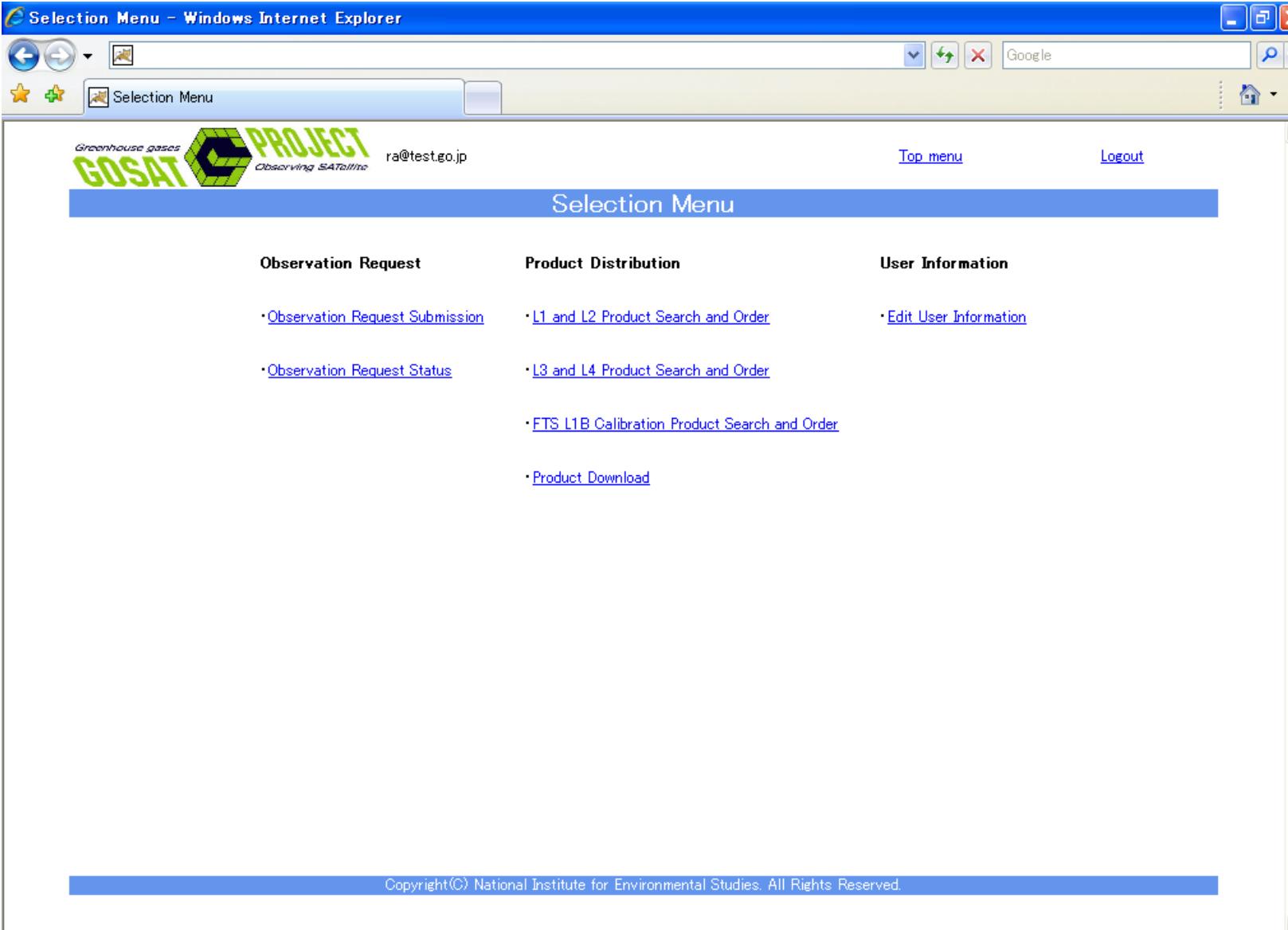
1. Login – Menu
2. Observation Request
3. Product Distribution

1.1 User Authentication page



The screenshot shows a user authentication page for the GOSAT PROJECT. The page is titled "User authentication" and features a login form with fields for "User ID" and "Password", and a "Login" button. Below the form is a link to "Forgot your password? [here](#)". There are also links for "Guest user login here" and "Guest user login". A note in red text states: "Guest users can search for products, but can not order/download the products. If you want to order/download the products, please register." At the bottom, there is a copyright notice: "Copyright(C) National Institute for Environmental Studies. All Rights Reserved." The browser window title is "User authentication - Windows Internet Explorer".

1.2 Menu Page



The screenshot shows a web browser window titled "Selection Menu - Windows Internet Explorer". The address bar displays "Selection Menu" and "ra@test.go.jp". The page itself is titled "Selection Menu" and features the "GOSAT PROJECT" logo. The interface is divided into three main sections: "Observation Request", "Product Distribution", and "User Information".

- Observation Request:**
 - [Observation Request Submission](#)
 - [Observation Request Status](#)
- Product Distribution:**
 - [L1 and L2 Product Search and Order](#)
 - [L3 and L4 Product Search and Order](#)
 - [FTS L1B Calibration Product Search and Order](#)
 - [Product Download](#)
- User Information:**
 - [Edit User Information](#)

At the bottom of the page, a blue footer bar contains the text "Copyright(C) National Institute for Environmental Studies All Rights Reserved."

1.3.1 Observation Request Submission

Observation Request Period Selection – Windows Internet Explorer

Observation Request Period Selection

Greenhouse gases
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TOP

LOGOUT

Observation Request Period Selection

Period that NIES is accepting. -
YYYY/MM/DD

Period that you want to submit observation request. -
YYYY/MM/DD

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1.3.2 Observation Request Submission

List of Observation Requests – Windows Internet Explorer

List of Observation Requests

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Observing SAtellite

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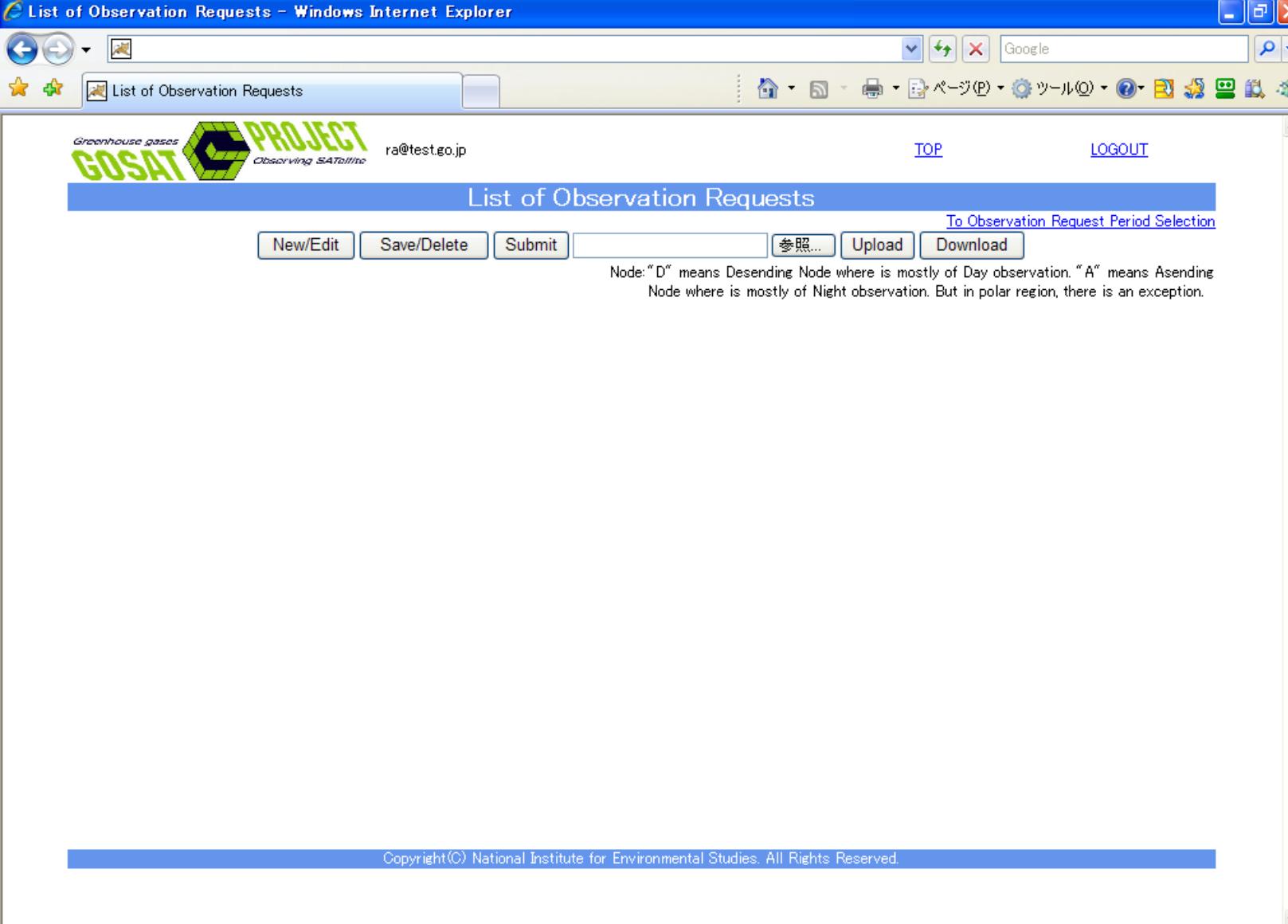
TOP LOGOUT

List of Observation Requests

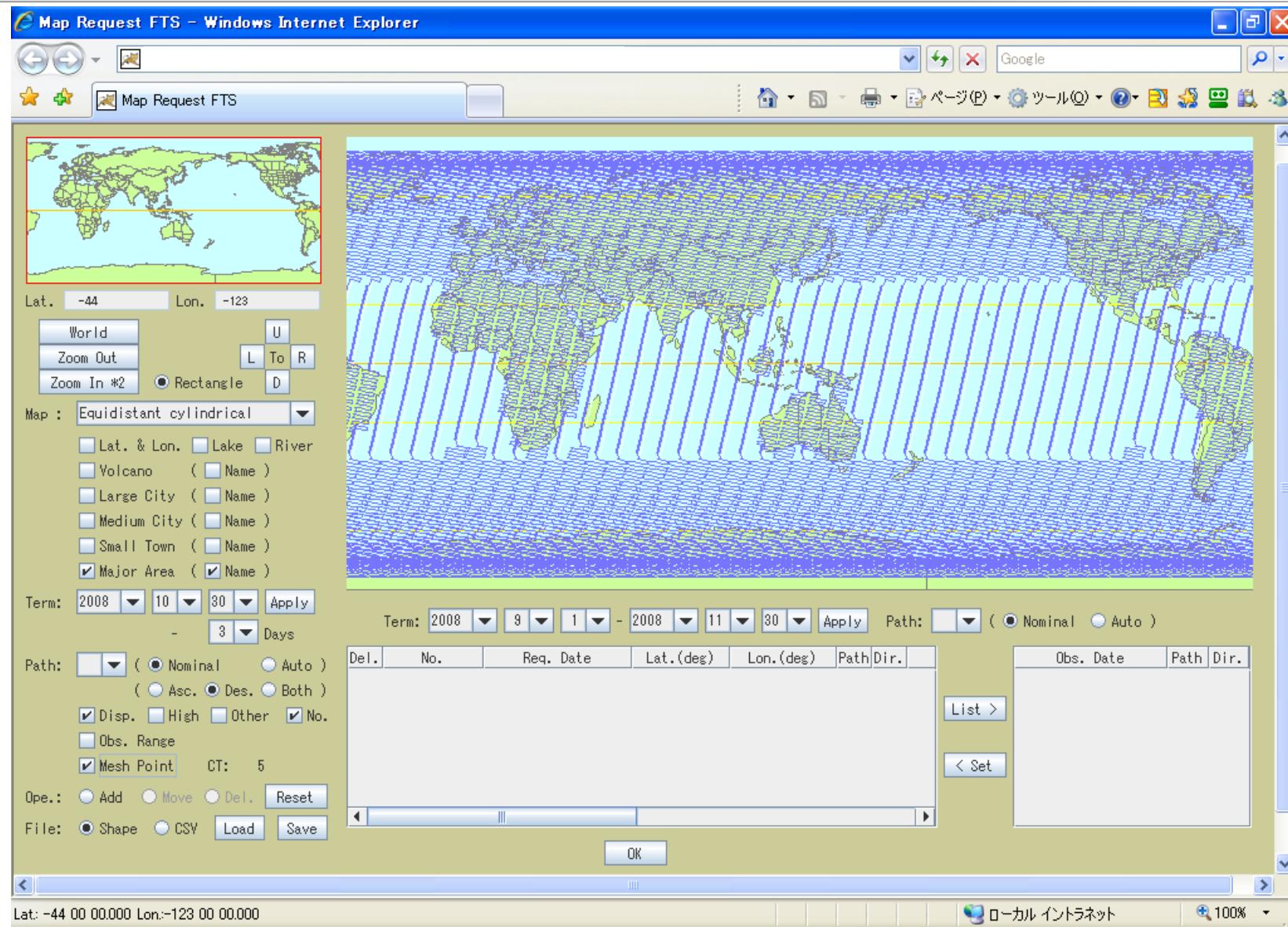
New/Edit Save/Delete Submit [] 参照... Upload Download To Observation Request Period Selection

Note: "D" means Descending Node where is mostly of Day observation. "A" means Asending Node where is mostly of Night observation. But in polar region, there is an exception.

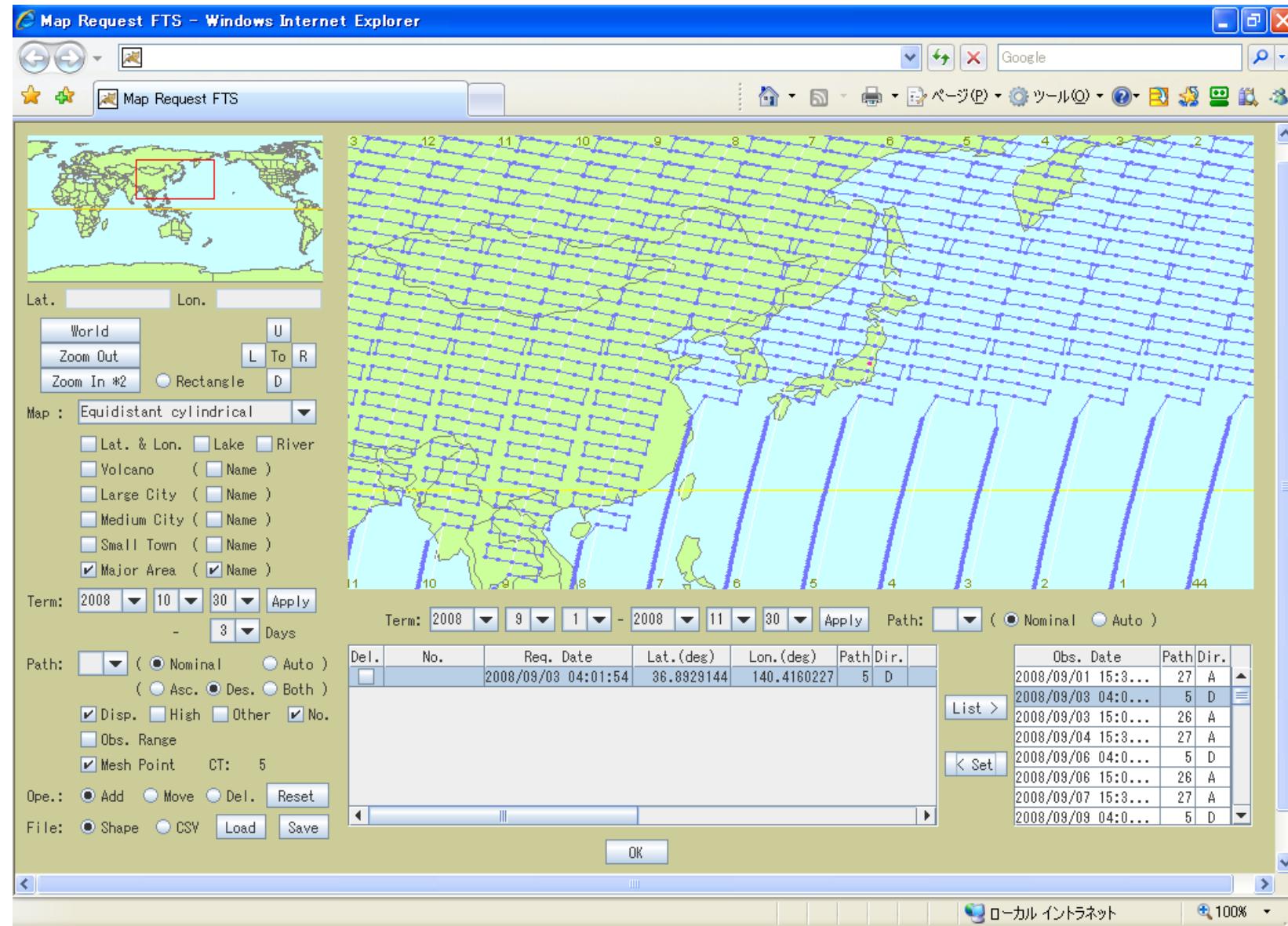
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1.3.3 Observation Request Submission



1.3.4 Observation Request Submission



1.3.5 Observation Request Submission

List of Observation Requests – Windows Internet Explorer

List of Observation Requests

GOSAT PROJECT Observing SAtellite ra@test.go.jp TOP LOGOUT

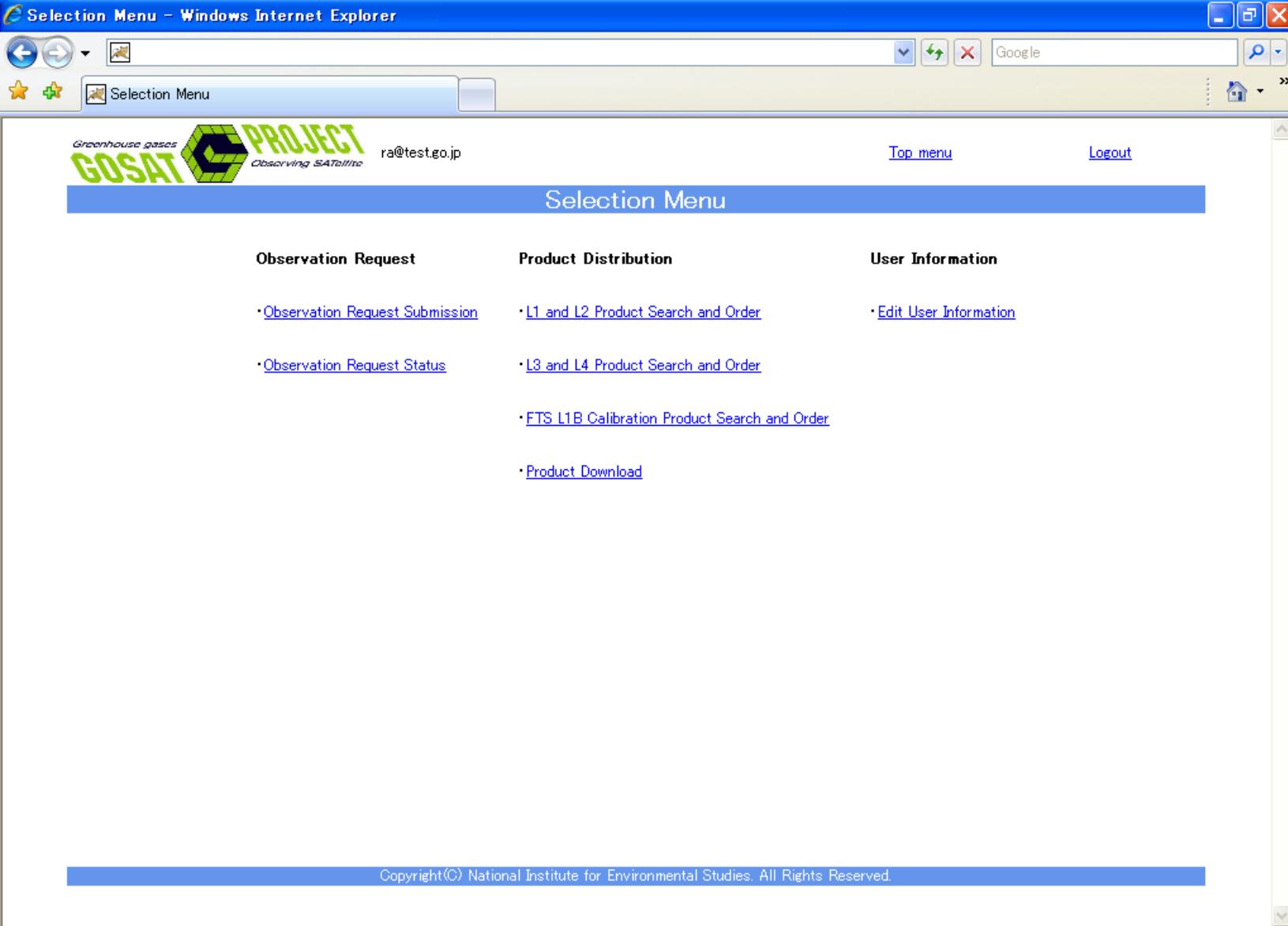
New/Edit Save/Delete Submit 参照... Upload Download To Observation Request Period Selection

Note: "D" means Desending Node where is mostly of Day observation. "A" means Asending Node where is mostly of Night observation. But in polar region, there is an exception.

Delete	No	Observation Date (UT)	Lat	Lon	Path	Node	AT Min	AT Max	SP-ASP Gain	SS-ASP Gain	Warning	Impact on the Default Observations	
<input type="checkbox"/>		2008/09/03 04:01:54	36.892	140.416	5	D	-20	20	H	H		Detail	

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1.4.1 Observation Request Status



The screenshot shows a web browser window titled "Selection Menu – Windows Internet Explorer". The main content area displays the "GOSAT PROJECT" logo and navigation links. The "Selection Menu" header includes links for "Top menu" and "Logout". The main menu categories are "Observation Request", "Product Distribution", and "User Information". Under "Observation Request", there are links for "Observation Request Submission" and "Observation Request Status". Under "Product Distribution", there are links for "L1 and L2 Product Search and Order", "L3 and L4 Product Search and Order", and "FTS L1B Calibration Product Search and Order". Under "User Information", there is a link for "Edit User Information". At the bottom, a copyright notice reads "Copyright(C) National Institute for Environmental Studies. All Rights Reserved."

Observation Request	Product Distribution	User Information
Observation Request Submission	L1 and L2 Product Search and Order	Edit User Information
Observation Request Status	L3 and L4 Product Search and Order	
	FTS L1B Calibration Product Search and Order	
	Product Download	

1.4.2 Observation Request Status

Check Observation Requests – Windows Internet Explorer

Check Observation Requests

Greenhouse gases
GOSAT PROJECT
Observing SATellite

ra@test.go.jp

TOP LOGOUT

Check Observation Requests

Period: [] - [] YYYY/MM/DD

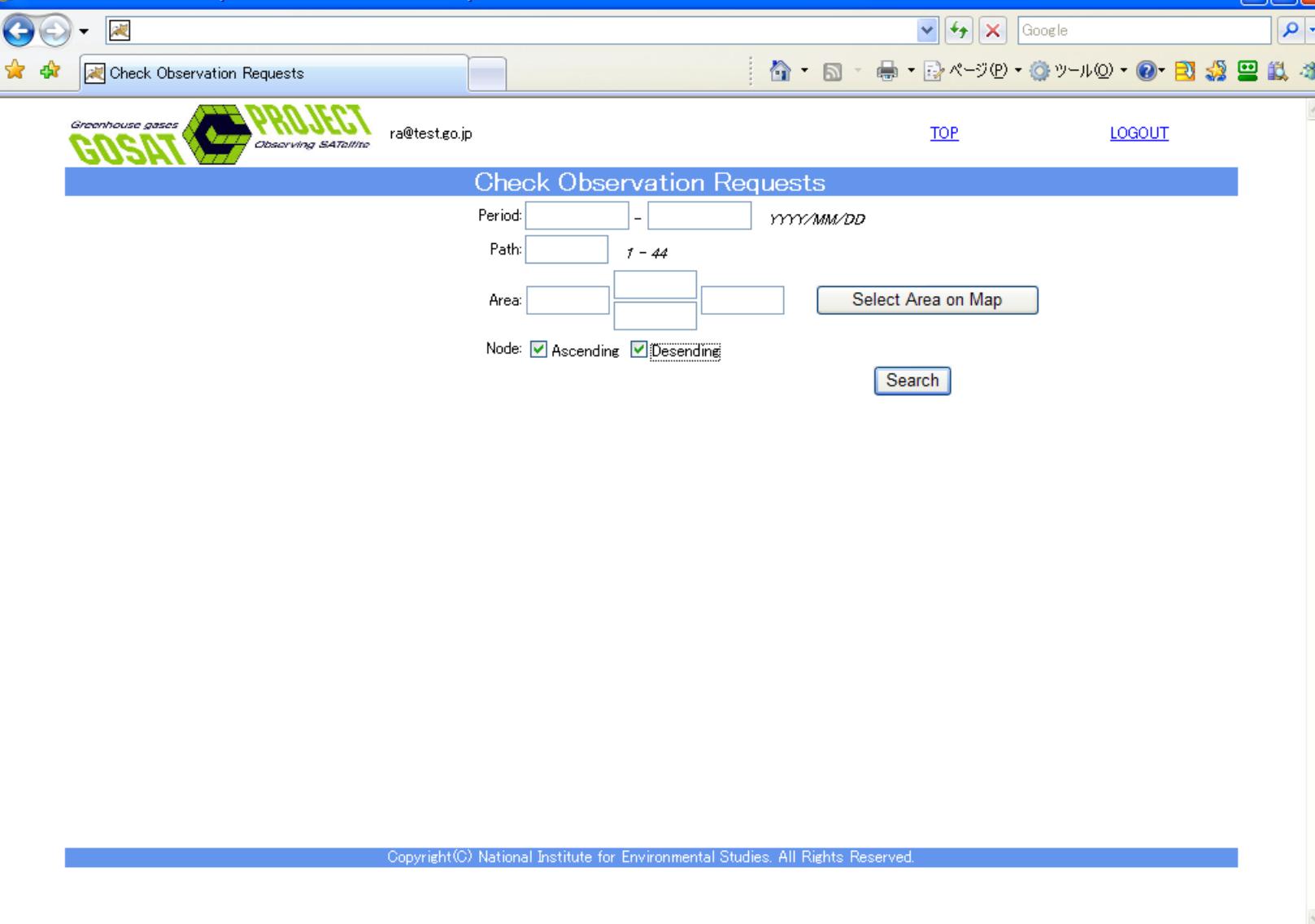
Path: [] 1 - 44

Area: [] [] [] Select Area on Map

Node: Ascending Descending

Search

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1.4.3 Observation Request Status

Check Observation Requests – Windows Internet Explorer

Check Observation Requests

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[TOP](#) [LOGOUT](#)

Check Observation Requests

Period: - YYYY/MM/DD

Path: 1 - 44

Area: [Select Area on Map](#)

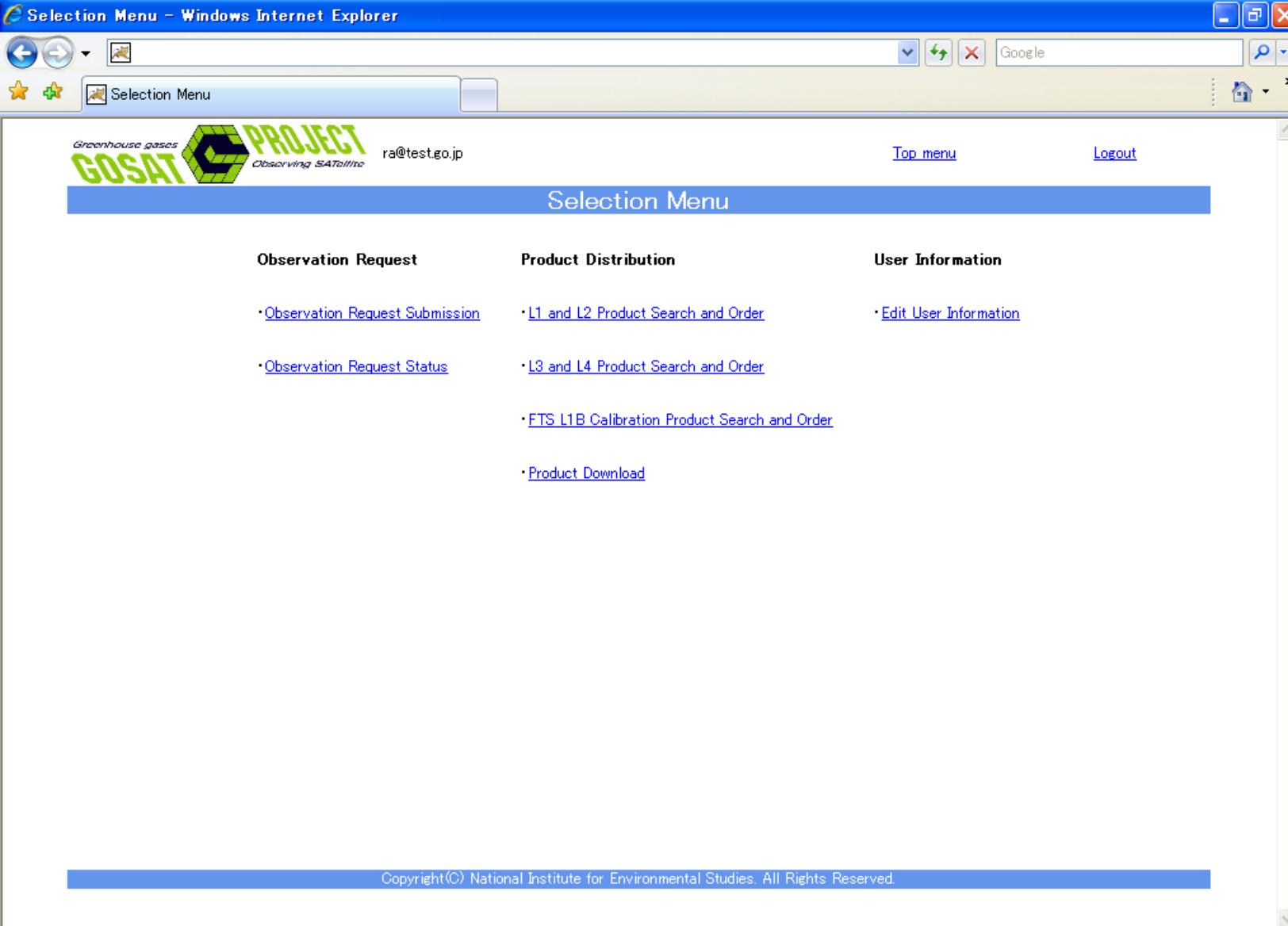
Node: Ascending Desending

[Search](#)

No▲	Request Date	Lat	Lon	Path No	Node Type	NIES Received	1st Obs. Plan	2nd Obs. Plan	3rd Obs. Plan	4th Obs. Plan	Op. Start Date	Op. End Date	Obs. Scene ID	Obs. Scan ID
20081024 00000000	2008/11/05 04:02:07	36.122	140.052	5	D	-								
20081024 00000001	2008/11/05 04:02:09	36.051	140.064	5	D	-								
20081024 00000002	2008/11/05 04:02:09	36.022	140.111	5	D	-								
20081024 00000003	2008/11/11 04:00:12	43.053	142.286	5	D	ok								
20081024 00000004	2008/11/08 04:02:00	36.613	140.098	5	D	ok								
20081027 00000011	2008/11/17 04:01:13	39.433	140.842	5	D	ok								

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2.1.1 Menu Page

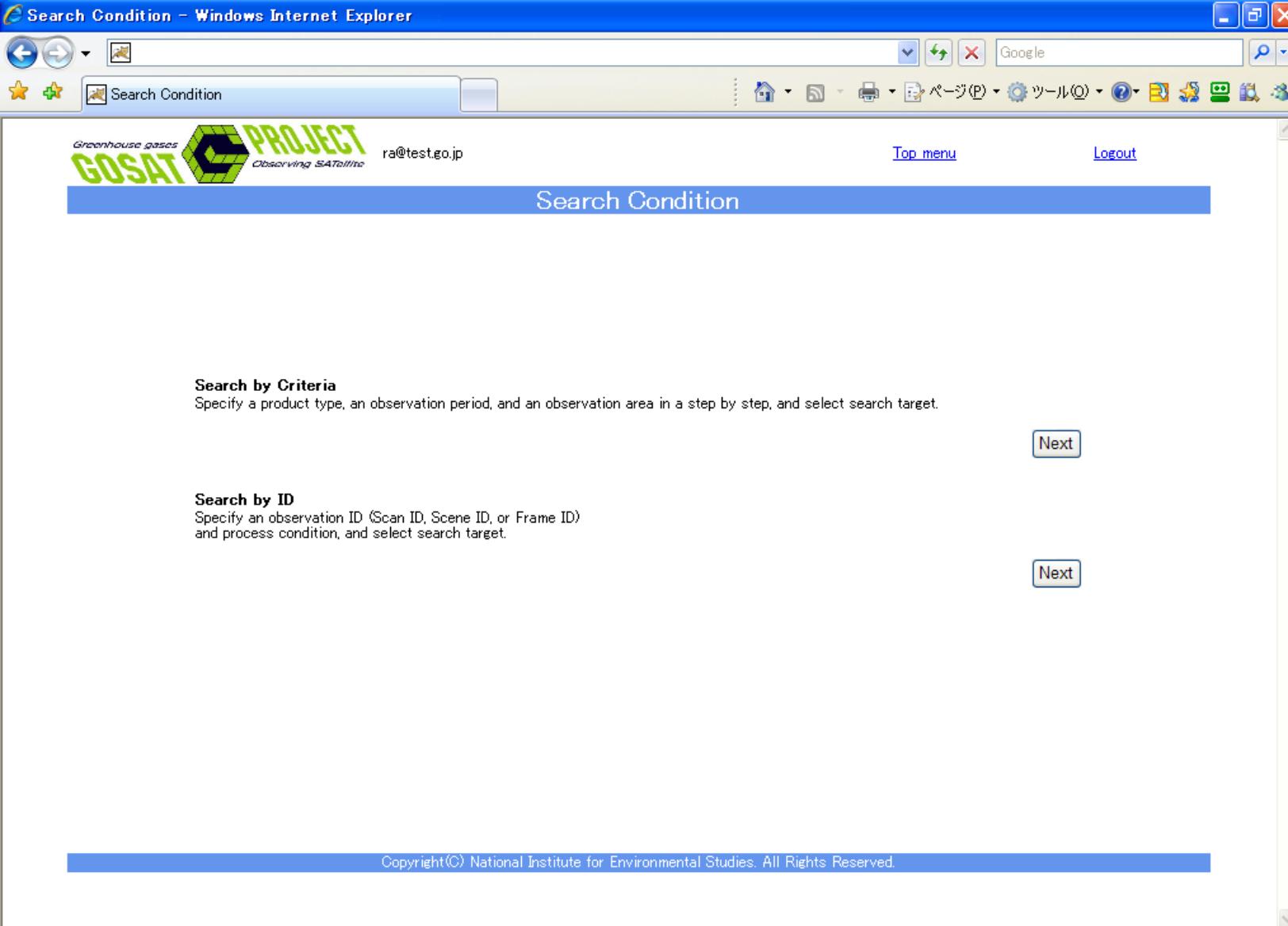


The screenshot shows a web browser window titled "Selection Menu – Windows Internet Explorer". The address bar displays "Selection Menu". The main content area features the "GOSAT PROJECT" logo and navigation links. The "Selection Menu" header includes "Top menu" and "Logout" links. The menu categories are "Observation Request", "Product Distribution", and "User Information".

Observation Request	Product Distribution	User Information
· Observation Request Submission	· L1 and L2 Product Search and Order	· Edit User Information
· Observation Request Status	· L3 and L4 Product Search and Order	
	· FTS L1B Calibration Product Search and Order	
	· Product Download	

At the bottom, a blue bar contains the copyright notice: "Copyright(C) National Institute for Environmental Studies. All Rights Reserved."

2.1.2 L1&L2 product search and order



The screenshot shows a web browser window titled "Search Condition - Windows Internet Explorer". The address bar contains "Search Condition". The page header includes the "GOSAT PROJECT" logo, the email "ra@test.go.jp", and links for "Top menu" and "Logout". A blue header bar at the top of the page says "Search Condition".

Search by Criteria
Specify a product type, an observation period, and an observation area in a step by step, and select search target.

Next

Search by ID
Specify an observation ID (Scan ID, Scene ID, or Frame ID) and process condition, and select search target.

Next

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2.1.3 L1&L2 product search and order

Product Search (Step1) – Windows Internet Explorer

Product Search (Step1)

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Product Search (Step1)

STEP 1 → STEP 2 → STEP 3 → STEP 4

Select Search Target (Required) Select Observation Period (Required) Select Observation Area (Required) Other Settings (Optional)

Product Level

<input type="radio"/> FTS L1A	<input type="radio"/> FTS L1B	<input type="radio"/> CAI L1A	<input type="radio"/> CAI L1B	<input type="radio"/> CAI L1B+
<input type="radio"/> FTS SWIR L2	<input checked="" type="radio"/> FTS TIR L2	<input type="radio"/> CAI L2		

Display Product Type

Prod. Type	Product Version	List of products observed in the same period
<input type="checkbox"/> *L2 CO ₂ column amount(TIR)	T01.00(C) <input type="button" value="▼"/>	List
<input type="checkbox"/> L2 CO ₂ profile(TIR)	T01.00(C) <input type="button" value="▼"/>	List

The letter in the parenthesis indicates a validation stage.

Specify Search Group

Search by Scan
 Search by Day

[Back to Search Condition](#) [Next](#)

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2.1.4 L1&L2 product search and order

Product Search (Step2) – Windows Internet Explorer

Product Search (Step2)

Project

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Top menu Logout

Product Search (Step2)

STEP 1 → STEP 2 → STEP 3 → STEP 4

Select Search Target (Required) Select Observation Period (Required) Select Observation Area (Required) Other Settings (Optional)

Specify an Observation Period (UTC) (Available Periods between 2008/03/22 and 2010/04/08.

Start Date: 2008/03/23 YYYY/MM/DD Start Time: 00:00:00 HH:MM:SS
 End Date: 2008/03/24 YYYY/MM/DD End Time: 23:59:59 HH:MM:SS

Specify the same periods (UTC) annually

Start Date: MM/DD Start Time: HH:MM:SS
 End Date: MM/DD End Time: HH:MM:SS

Back to Search Condition Back Next

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2.1.5 L1&L2 product search and order

Product Search (Step3) – Windows Internet Explorer

Product Search (Step3)

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Top menu Logout

Product Search (Step3)

STEP 1 → STEP 2 → STEP 3 → STEP 4

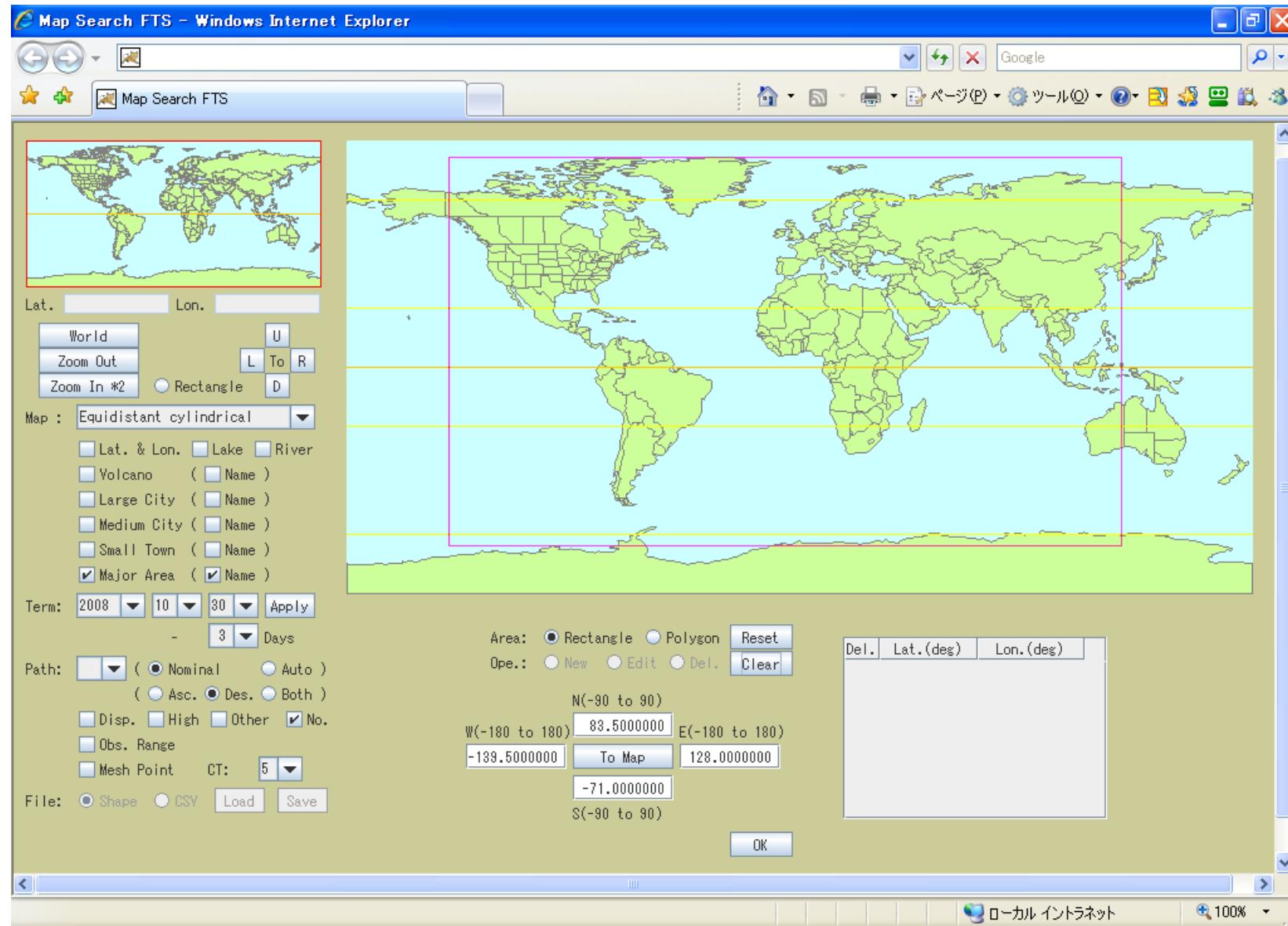
Select Search Target (Required)
Select Observation Period (Required)
Select Observation Area (Required)
Other Settings (Optional)

Specify Area
 No
 Yes
[Map](#)

[Back to Search Condition](#) [Back](#) [Next](#)

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2.1.6 L1&L2 product search and order



2.1.7 L1&L2 product search and order

Product Search (Step3) – Windows Internet Explorer

Product Search (Step3)

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Top menu Logout

Product Search (Step3)

STEP 1 → STEP 2 → STEP 3 → STEP 4

Select Search Target (Required) Select Observation Period (Required) Select Observation Area (Required) Other Settings (Optional)

Specify Area

No
 Yes

Map

Area Specification Category: Rectangle

North End Latitude	83.5
South End Latitude	-71.0
East End Longitude	128.0
West End Longitude	-139.5

Back to Search Condition Back Next

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2.1.8 L1&L2 product search and order

Product Search (Step4) – Windows Internet Explorer

Product Search (Step4)

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Product Search (Step4)

STEP 1 → STEP 2 → STEP 3 → STEP 4

Select Search Target (Required) Select Observation Period (Required) Select Observation Area (Required) Other Settings (Optional)

Specify the Observation Condition

No Yes

Solar Zenith Angle: 0 degree from 90 degree Azimuthal Angle: 0 degree from 360 degree
 Satellite Zenith Angle: 0 degree from 90 degree Azimuthal Angle: 0 degree from 360 degree

Specify the Observation Mode

No Yes

Observation Mode I: Daytime Observation Observation Mode I: Nighttime Observation Observation Mode II
 Specific Observation Mode: Daytime Observation Specific Observation Mode: Nighttime Observation Sunglint Observation Mode

Specify the Land/Sea Flag

No Yes

Land Sea Land/Sea Mixture

Specify the Quality

No Yes Good over

[Back to Search Condition](#) [Back](#) [Search](#)

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2.1.9 L1&L2 product search and order

Search Result – Windows Internet Explorer

Search Result

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Top menu Logout

Search Result

Show Map

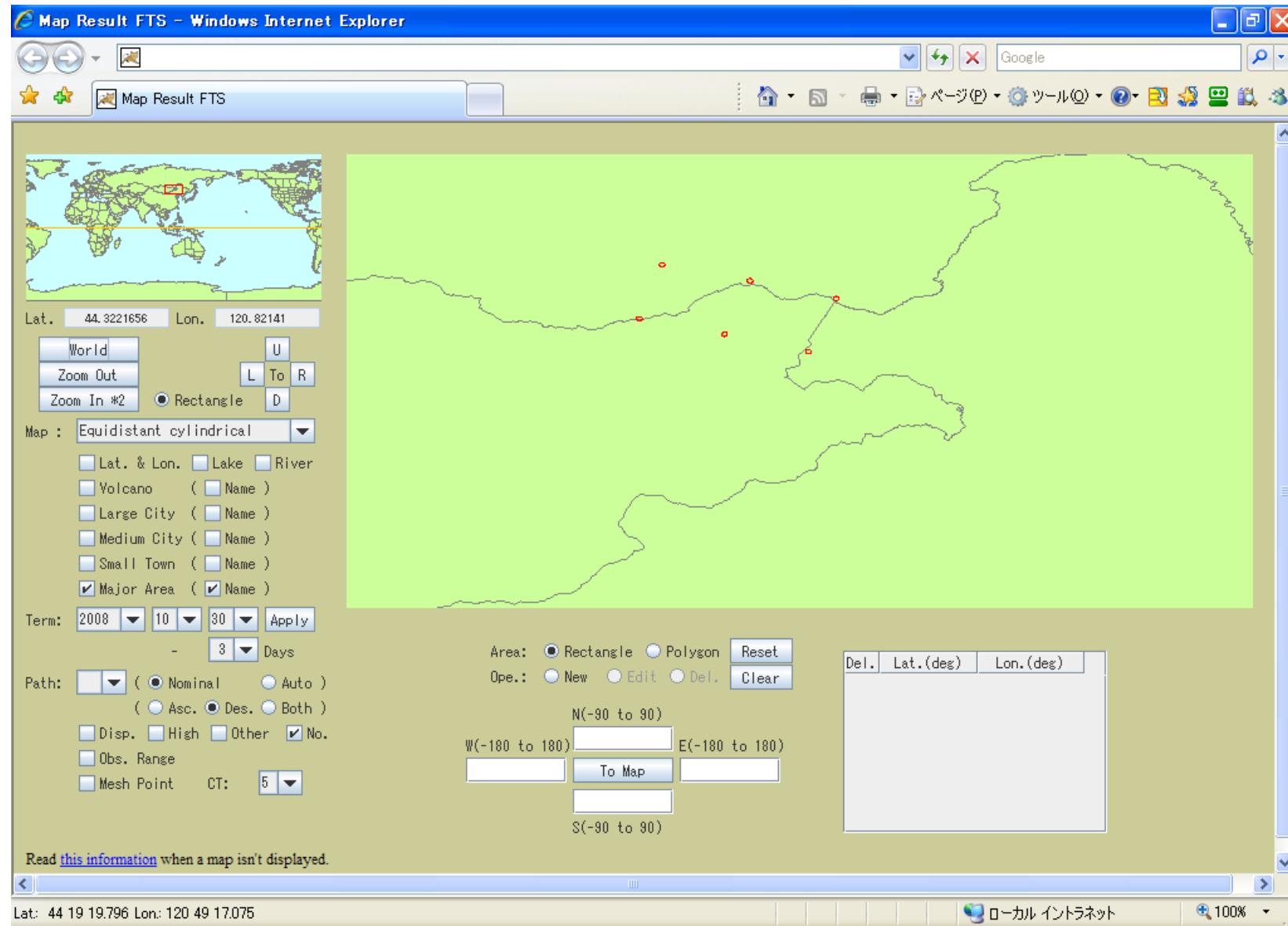
116 acquired 1/12 Forward

No.	Map Display	Obs Start Time	Prod Type	Prod Ver.	Center Lat. of FOV	Center Lon. of FOV	Path Num.	Scene Num.	Obs. Mode	PS-ASP Gain	SS-ASP Gain	Quality	Obs. ID	File Size	FOV Image	Order
1	<input checked="" type="checkbox"/>	2008-03-24 20:06:40.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	-42.182	82.623	33	53	OB1N	M	M	G	F080324200640335312	1.1MB	Display	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	2008-03-24 20:06:58.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	-41.617	76.48	33	54	OB1N	M	M	G	F080324200658335412	1.1MB	Display	<input type="checkbox"/>
3	<input checked="" type="checkbox"/>	2008-03-24 20:19:33.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	81.733	-146.745	36	01	OB1D	M	H	G	F080324201933360112	1.1MB	Display	<input type="checkbox"/>
4	<input checked="" type="checkbox"/>	2008-03-24 20:34:54.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	80.331	-144.618	36	11	OB1D	M	M	G	F080324203454361112	1.1MB	Display	<input type="checkbox"/>
5	<input checked="" type="checkbox"/>	2008-04-01 02:02:02.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	50.747	112.449	00	00	OB1D	M	M	G	F080401010101000001	1.1MB	Display	<input type="checkbox"/>
6	<input checked="" type="checkbox"/>	2008-04-01 02:02:03.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	50.352	114.612	00	00	OB1D	M	M	G	F080401010101000002	1.1MB	Display	<input type="checkbox"/>
7	<input checked="" type="checkbox"/>	2008-04-01 02:02:04.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	49.916	116.733	00	00	OB1D	M	M	G	F080401010101000003	1.1MB	Display	<input type="checkbox"/>
8	<input checked="" type="checkbox"/>	2008-04-01 02:02:05.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	48.601	116.055	00	00	OB1D	M	M	G	F080401010101000004	1.1MB	Display	<input type="checkbox"/>
9	<input checked="" type="checkbox"/>	2008-04-01 02:02:06.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	49.033	113.99	00	00	OB1D	M	M	G	F080401010101000005	1.1MB	Display	<input type="checkbox"/>
10	<input checked="" type="checkbox"/>	2008-04-01 02:02:07.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	49.42	111.892	00	00	OB1D	M	M	G	F080401010101000006	1.1MB	Display	<input type="checkbox"/>

Total file size 0.0MB

Select All Deselect Order Confirmation

2.1.10 L1&L2 product search and order



2.1.11 L1&L2 product search and order

Search Result – Windows Internet Explorer

Search Result

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GOSAT
Observing SAtellite PROJECT

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Top menu Logout

Search Result

Show Map

116 acquired 1/12 Forward

No.	Map Display	Obs. Start Time	Prod. Type	Prod. Ver.	Center Lat. of FOV	Center Lon. of FOV	Path Num.	Scene Num.	Obs. Mode	PS-ASP Gain	SS-ASP Gain	Quality	Obs. ID	File Size	FOV Image	Order
1	<input type="checkbox"/>	2008-03-24 20:06:40.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	-42.182	82.623	33	53	OB1N	M	M	G	F080324200640335312	1.1MB	Display	<input checked="" type="checkbox"/>
2	<input type="checkbox"/>	2008-03-24 20:06:58.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	-41.617	76.48	33	54	OB1N	M	M	G	F080324200658335412	1.1MB	Display	<input checked="" type="checkbox"/>
3	<input type="checkbox"/>	2008-03-24 20:19:33.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	81.733	-146.745	36	01	OB1D	M	H	G	F080324201933360112	1.1MB	Display	<input checked="" type="checkbox"/>
4	<input type="checkbox"/>	2008-03-24 20:34:54.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	80.331	-144.618	36	11	OB1D	M	M	G	F080324203454361112	1.1MB	Display	<input checked="" type="checkbox"/>
5	<input type="checkbox"/>	2008-04-01 02:02:02.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	50.747	112.449	00	00	OB1D	M	M	G	F080401010101000001	1.1MB	Display	<input checked="" type="checkbox"/>
6	<input type="checkbox"/>	2008-04-01 02:02:03.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	50.352	114.612	00	00	OB1D	M	M	G	F080401010101000002	1.1MB	Display	<input checked="" type="checkbox"/>
7	<input type="checkbox"/>	2008-04-01 02:02:04.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	49.916	116.733	00	00	OB1D	M	M	G	F080401010101000003	1.1MB	Display	<input checked="" type="checkbox"/>
8	<input type="checkbox"/>	2008-04-01 02:02:05.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	48.601	116.055	00	00	OB1D	M	M	G	F080401010101000004	1.1MB	Display	<input checked="" type="checkbox"/>
9	<input type="checkbox"/>	2008-04-01 02:02:06.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	49.038	113.99	00	00	OB1D	M	M	G	F080401010101000005	1.1MB	Display	<input checked="" type="checkbox"/>
10	<input type="checkbox"/>	2008-04-01 02:02:07.0	*L2 CO ₂ column amount(TIR)	T01.00(C)	49.42	111.892	00	00	OB1D	M	M	G	F080401010101000006	1.1MB	Display	<input checked="" type="checkbox"/>

Total file size 127.6MB

Select All Deselect

Order Confirmation

選択しているイメージを表示します

2.1.12 L1&L2 product search and order

Order Confirmation – Windows Internet Explorer

Order Confirmation

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[Top menu](#) [Logout](#)

Order Confirmation

Do you want to order the following products?

No.	Obs. ID	Prod. Type	Product Version	File Size
1	F080324200640335312	*L2 CO ₂ column amount(TIR)	T01.00(C)	1.1MB
2	F080324200658335412	*L2 CO ₂ column amount(TIR)	T01.00(C)	1.1MB
3	F080324201933360112	*L2 CO ₂ column amount(TIR)	T01.00(C)	1.1MB
4	F080324203454361112	*L2 CO ₂ column amount(TIR)	T01.00(C)	1.1MB

4 acquired 1/1

Total file size 4.4MB

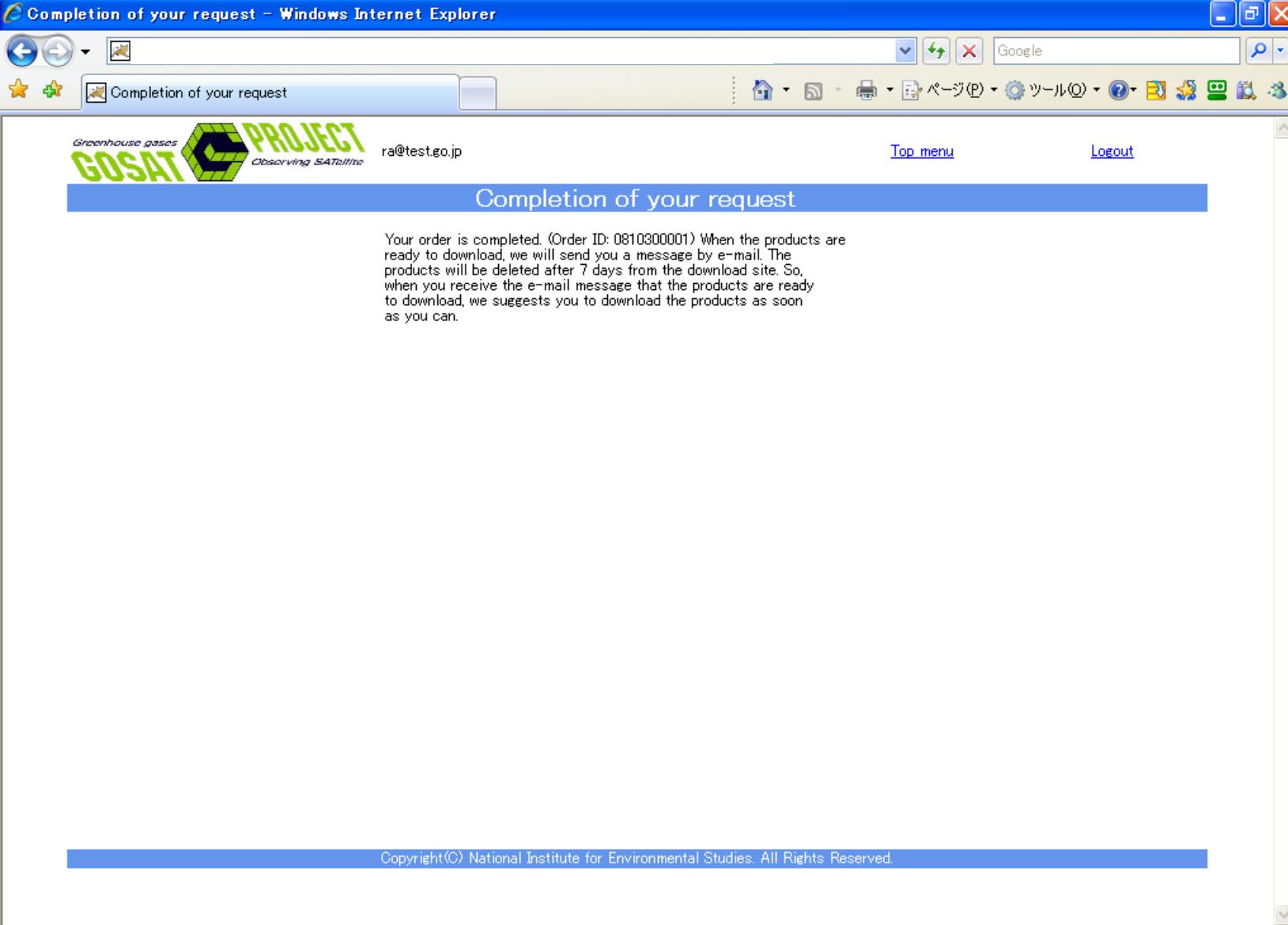
Do you want to order FTS FOV image?

No Yes

[Cancel](#) [Submit](#)

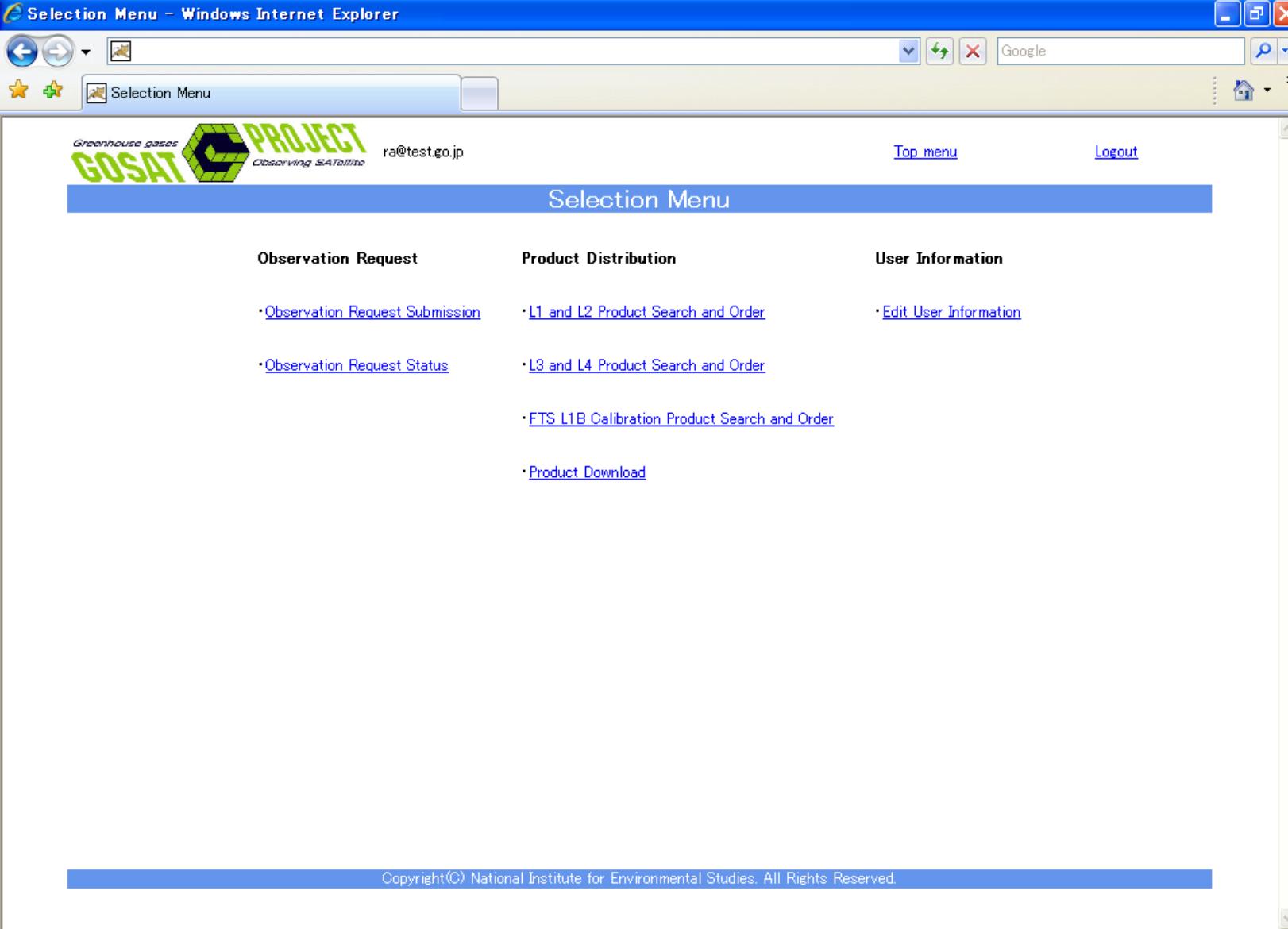
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2.1.13 L1&L2 product search and order



The screenshot shows a Windows Internet Explorer browser window with the title "Completion of your request - Windows Internet Explorer". The address bar displays "Completion of your request". The main content area shows the GOSAT PROJECT logo and navigation links for "Top menu" and "Logout". A blue header bar reads "Completion of your request". Below it, a message states: "Your order is completed. (Order ID: 0810300001) When the products are ready to download, we will send you a message by e-mail. The products will be deleted after 7 days from the download site. So, when you receive the e-mail message that the products are ready to download, we suggest you to download the products as soon as you can." At the bottom, a copyright notice reads "Copyright(C) National Institute for Environmental Studies All Rights Reserved."

2.2.1 Product Download



The screenshot shows a web browser window titled "Selection Menu – Windows Internet Explorer". The address bar displays "Selection Menu". The page header includes the "GOSAT PROJECT" logo, the email "ra@test.go.jp", and links for "Top menu" and "Logout". A blue navigation bar at the top is labeled "Selection Menu". Below it, three main sections are listed:

Observation Request	Product Distribution	User Information
<ul style="list-style-type: none">Observation Request SubmissionObservation Request Status	<ul style="list-style-type: none">L1 and L2 Product Search and OrderL3 and L4 Product Search and OrderFTS L1B Calibration Product Search and Order	<ul style="list-style-type: none">Edit User Information
	<ul style="list-style-type: none">Product Download	

At the bottom of the page, a blue footer bar contains the text "Copyright(C) National Institute for Environmental Studies. All Rights Reserved."

2.2.2 Product Download

Ordered product list – Windows Internet Explorer

Ordered product list

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Observing SATellite

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Ordered product list

After creating the products, these ordered products will be automatically removed in 7 days.
Therefore, please download them ahead of time.

No	Order ID	Order Time (UTC)	Generate complete Time (UTC)	Data size (MB)	Product generate status	Download
1	0810230001	2008/10/23 05:38:15		4.400	NO	Download
2	0810230002	2008/10/23 06:09:56		4.400	NO	Download
3	0810230003	2008/10/23 08:25:04		2.200	NO	Download
4	0810230004	2008/10/23 11:09:27		5.500	NO	Download
5	0810230005	2008/10/23 11:10:33		8.800	NO	Download
6	0810230006	2008/10/23 11:12:22		2.200	NO	Download
7	0810230007	2008/10/23 11:15:27		33.000	NO	Download
8	0810230008	2008/10/23 11:16:53		2.200	NO	Download
9	0810230009	2008/10/23 11:17:46		3.300	NO	Download
10	0810230010	2008/10/23 12:03:48		8.800	NO	Download
11	0810230011	2008/10/23 12:20:54		6.600	NO	Download
12	0810230012	2008/10/23 12:25:03		8.800	NO	Download
13	0810280001	2008/10/28 01:32:09		125.400	NO	Download
14	0810280002	2008/10/28 03:22:21		127.600	NO	Download
15	0810290001	2008/10/29 07:54:48		13.200	NO	Download
16	0810300001	2008/10/30 05:07:34		4.400	NO	Download