
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:

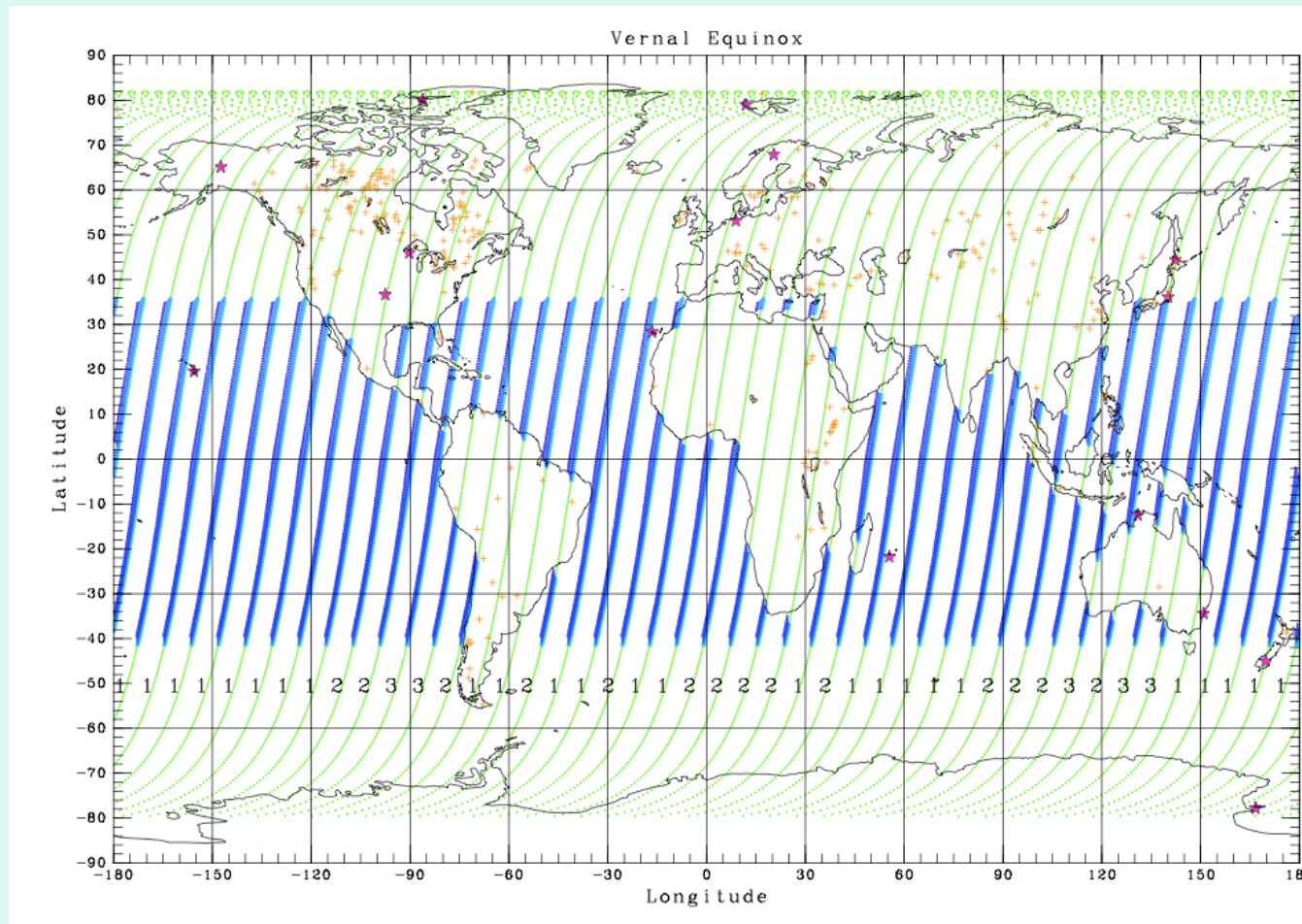
- 1) User Authentication,
- 2) Observation Request Submission,
- 3) Data Search and Product Order.

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

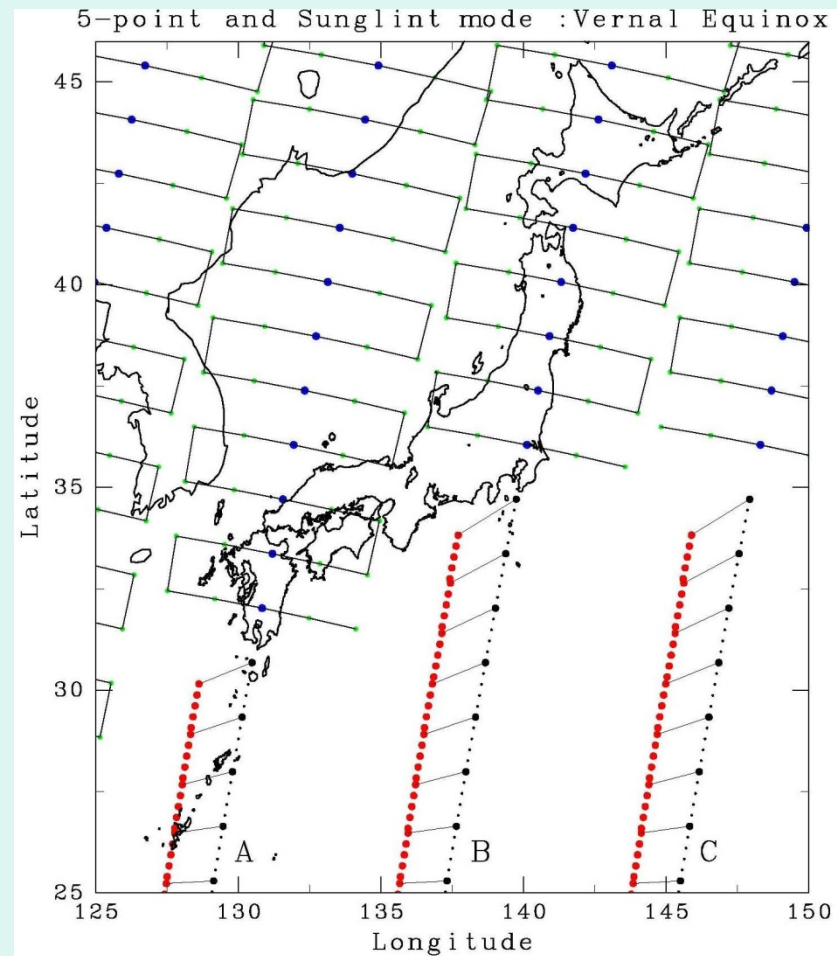
But, registered users have a right to order the Standard Products under the condition that he/she observes the Data Policy that the Three Parties agreed. In addition, the qualified RA users have a right to order the Research Product, Moreover, RA users have a right to submit the observation request, 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

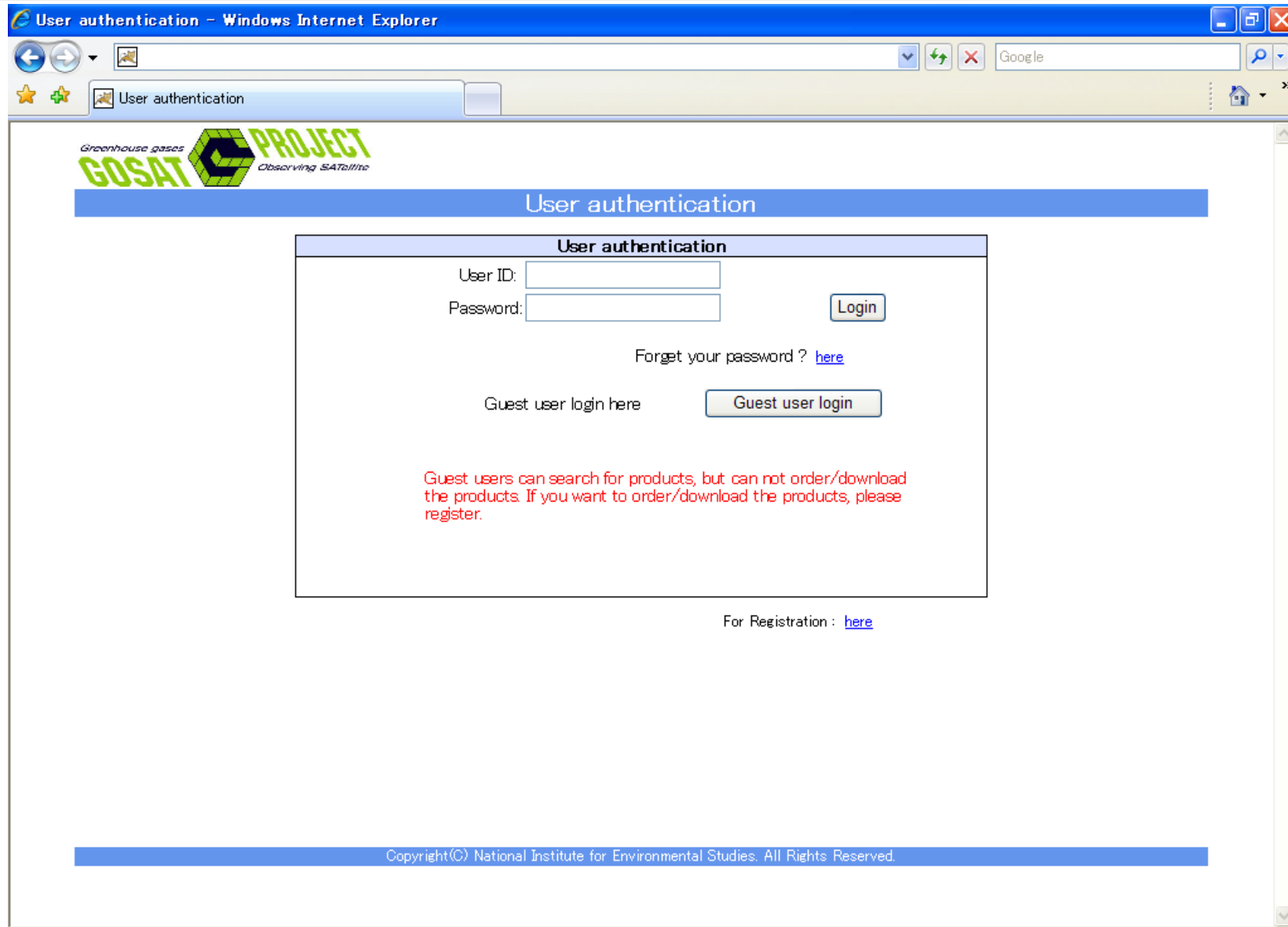


On the other hand, the FTS observation will be conducted, if there is no specific observation request, based on the lattice observation over the land and sun glint observation over the sea. Since the **current default value of the lattice observation in cross track direction is 5** (the distance between 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.

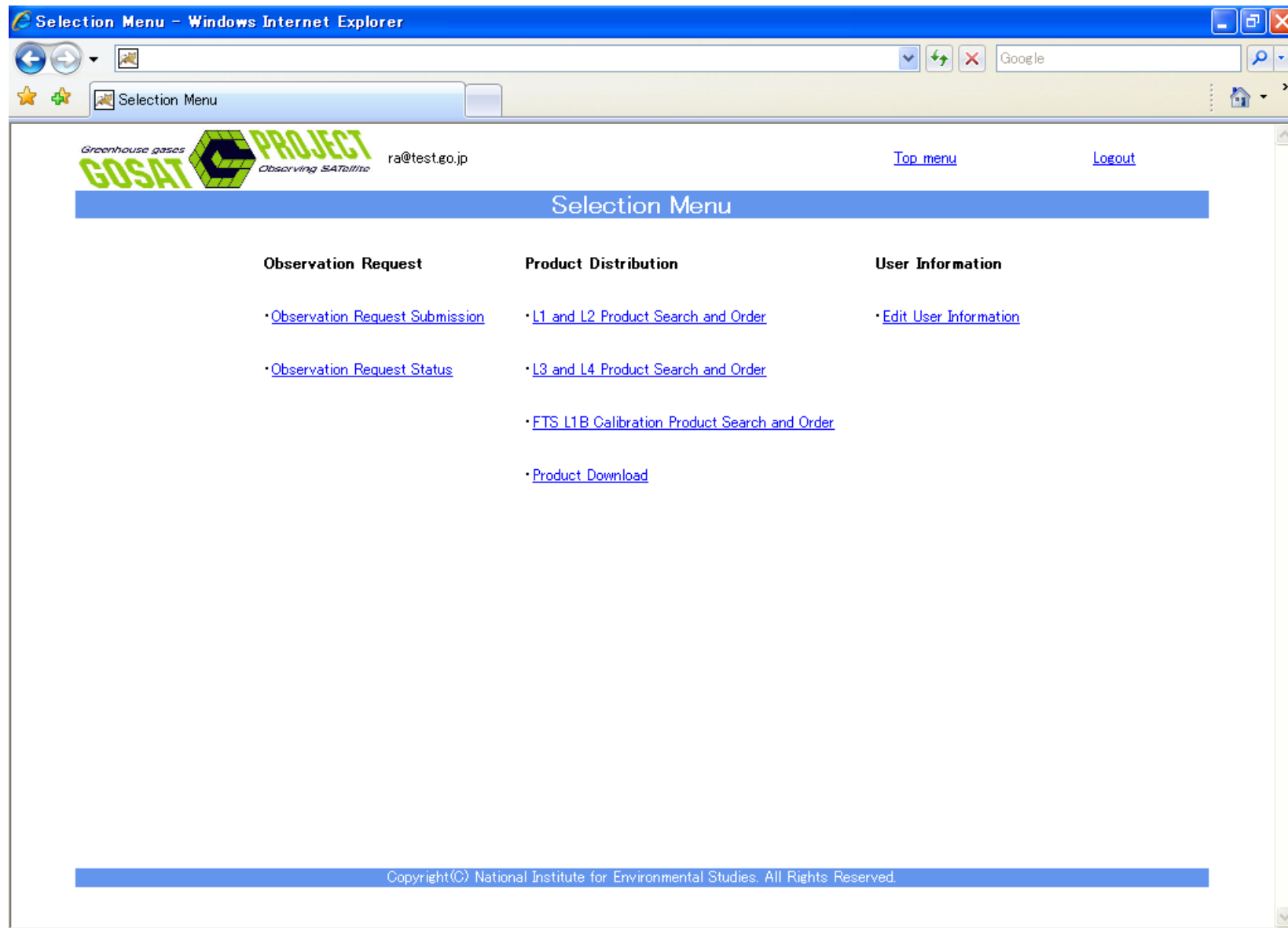
DEMONSTRATION

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

1.1 User Authentication page



1.2 Menu Page



Selection Menu - Windows Internet Explorer

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Selection Menu

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	

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1.3.1 Observation Request Submission

Observation Request Period Selection - Windows Internet Explorer

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Observation Request Period Selection

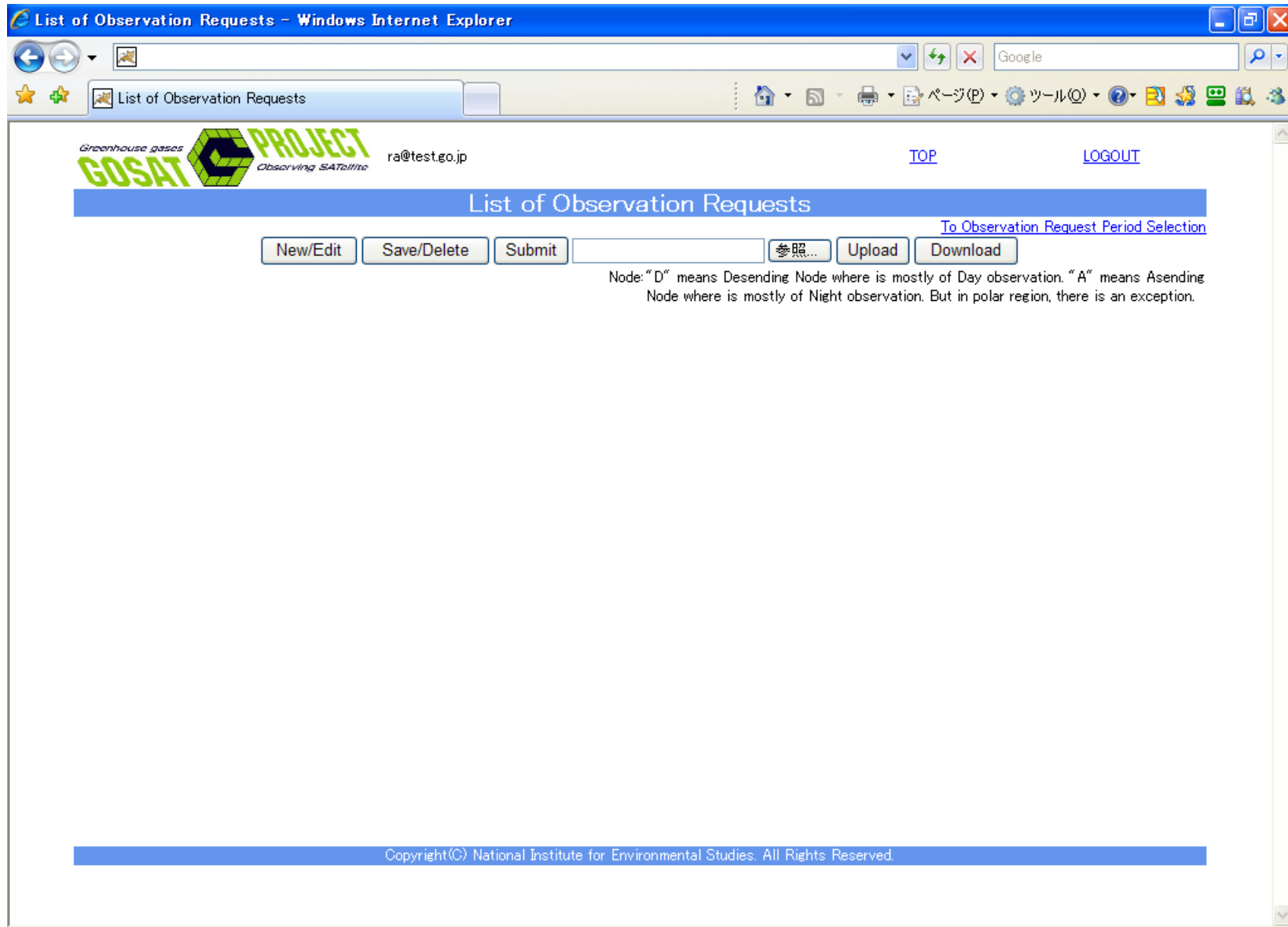
Period that NIES is accepting. 2008/09/01 - 2008/11/30

Period that you want to submit observation request. 2008/11/15 - 2008/11/18
YYYY/MM/DD YYYY/MM/DD

[Next](#)

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1.3.2 Observation Request Submission



1.3.3 Observation Request Submission

The screenshot shows the 'Map Request FTS' application. The main map displays a world map with a grid of observation points. The sidebar on the left contains various controls:

- Coordinates: Lat. -44, Lon. -123
- Map Type: Equidistant cylindrical
- Map Features:
 - Lat. & Lon.
 - Lake
 - River
 - Volcano (Name)
 - Large City (Name)
 - Medium City (Name)
 - Small Town (Name)
 - Major Area (Name)
- Term: 2008, 10, 30, 3 Days
- Path: (Nominal, Asc., Des., Both) with checkboxes for Disp., High, Other, No., and Obs. Range.
- Mesh Point: CT: 5
- Operations: Add, Move, Del., Reset
- File: Shape, CSV, Load, Save

The data table at the bottom right is currently empty:

Del.	No.	Req. Date	Lat.(deg)	Lon.(deg)	Path Dir.	Obs. Date	Path Dir.

1.3.4 Observation Request Submission

Map Request FTS - Windows Internet Explorer

Google

Map Request FTS

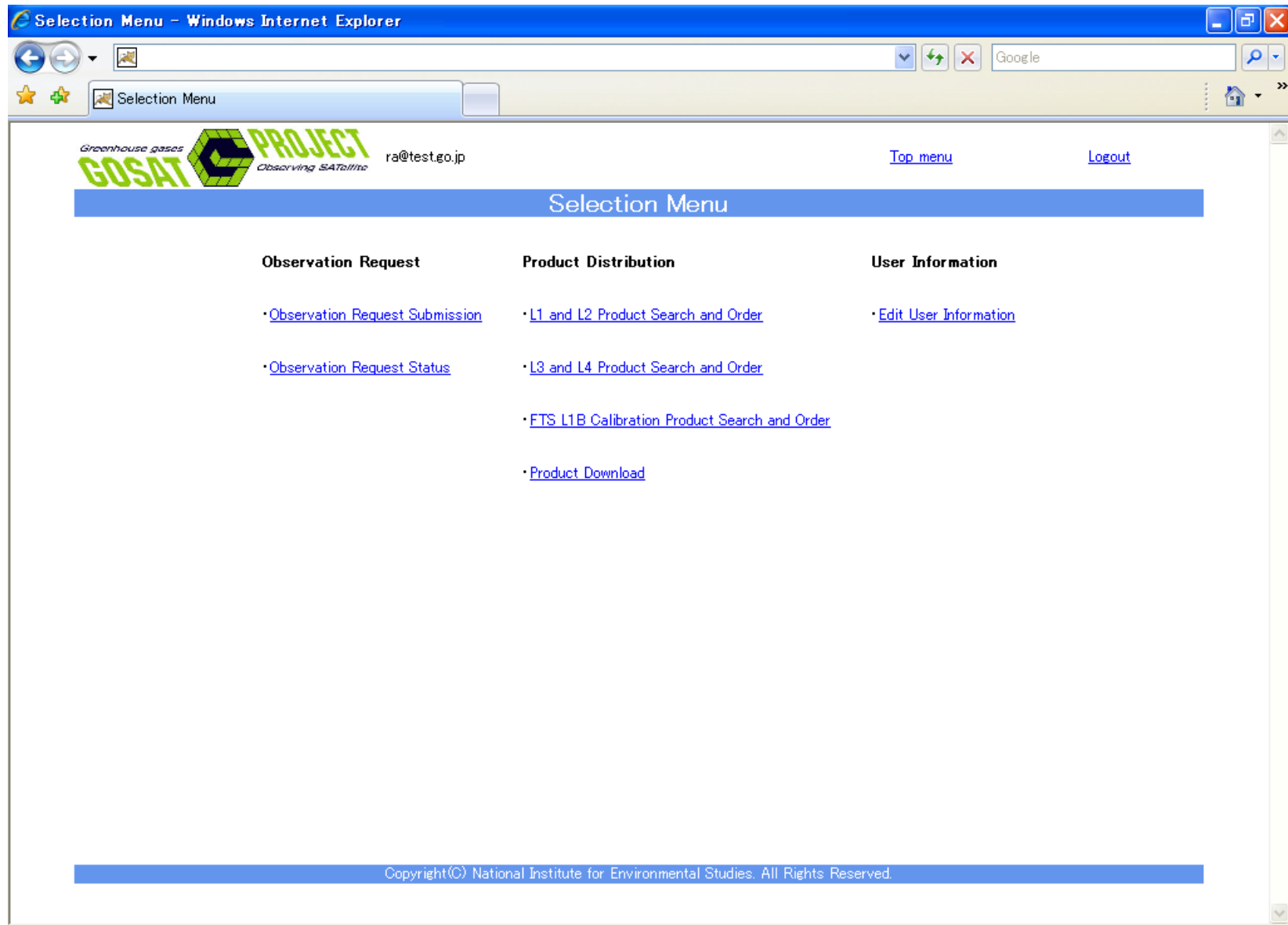
World, Zoom Out, Zoom In #2, U, L, To, R, D, Rectangle, Map: Equidistant cylindrical, Lat. & Lon., Lake, River, Volcano, Large City, Medium City, Small Town, Major Area, Term: 2008 10 30, Path: (Nominal, Auto), Asc., Des., Both, Disp., High, Other, Mesh Point, Ope.: Add, Move, Del., File: Shape, CSV, Load, Save, OK

Del.	No.	Req. Date	Lat.(deg)	Lon.(deg)	PathDir.
<input type="checkbox"/>		2008/09/03 04:01:54	36.8929144	140.4160227	5 D

Obs. Date	PathDir.
2008/09/01 15:3...	27 A
2008/09/03 04:0...	5 D
2008/09/03 15:0...	26 A
2008/09/04 15:3...	27 A
2008/09/06 04:0...	5 D
2008/09/06 15:0...	26 A
2008/09/07 15:3...	27 A
2008/09/09 04:0...	5 D

1.3.5 Observation Request Submission

1.4.1 Observation Request Status



Selection Menu - Windows Internet Explorer

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Selection Menu

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 OrderProduct Download	<ul style="list-style-type: none">Edit User Information

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1.4.3 Observation Request Status

Check Observation Requests - Windows Internet Explorer

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Check Observation Requests

Period: - YYYY/MM/DD

Path: 1 - 44

Area:

Node: Ascending Descending

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
200810240000000	2008/11/05 04:02:07	36.122	140.052	5	D	-								
200810240000001	2008/11/05 04:02:09	36.051	140.064	5	D	-								
200810240000002	2008/11/05 04:02:09	36.022	140.111	5	D	-								
200810240000003	2008/11/11 04:00:12	43.053	142.286	5	D	ok								
200810240000004	2008/11/08 04:02:00	36.613	140.098	5	D	ok								
200810270000011	2008/11/17 04:01:13	39.433	140.842	5	D	ok								

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2.1.1 Menu Page



Selection Menu - Windows Internet Explorer

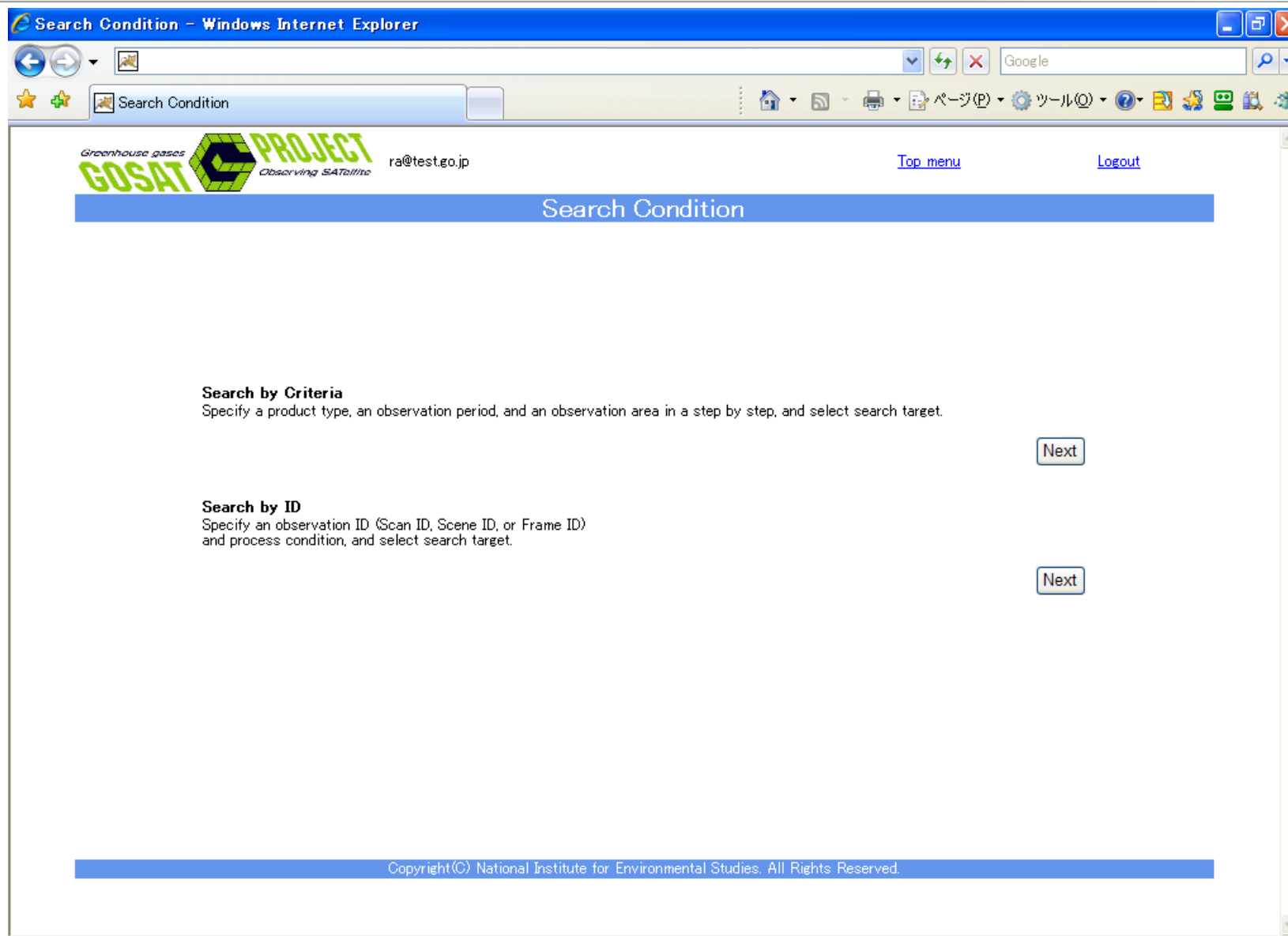
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Selection Menu

Observation Request	Product Distribution	User Information
<ul style="list-style-type: none">• Observation Request Submission• Observation Request Status	<ul style="list-style-type: none">• L1 and L2 Product Search and Order• L3 and L4 Product Search and Order• FTS L1B Calibration Product Search and Order• Product Download	<ul style="list-style-type: none">• Edit User Information

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2.1.2 L1&L2 product search and order



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

FTS L1A FTS L1B CAI L1A CAI L1B CAI L1B+
 FTS SWIR L2 FTS TIR L2 CAI L2

Display Product Type

Prod. Type	Product Version	List of products observed in the same period
<input type="checkbox"/> *L2 CO2 column amount(TIR)	T01.00(C) ▼	List
<input type="checkbox"/> L2 CO2 profile(TIR)	T01.00(C) ▼	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)

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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	<input type="text" value="2008/03/23"/> YYYY/MM/DD	Start Time	<input type="text" value="00:00:00"/> HH:MM:SS
End Date	<input type="text" value="2008/03/24"/> YYYY/MM/DD	End Time	<input type="text" value="23:59:59"/> HH:MM:SS

Specify the same periods (UTC) annually

Start Date	<input type="text"/> MM/DD	Start Time	<input type="text"/> HH:MM:SS
End Date	<input type="text"/> MM/DD	End Time	<input type="text"/> HH:MM:SS

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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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Product Search (Step3)

STEP 1 Select Search Target (Required) → STEP 2 Select Observation Period (Required) → **STEP 3 Select Observation Area (Required)** → STEP 4 Other Settings (Optional)

Specify Area

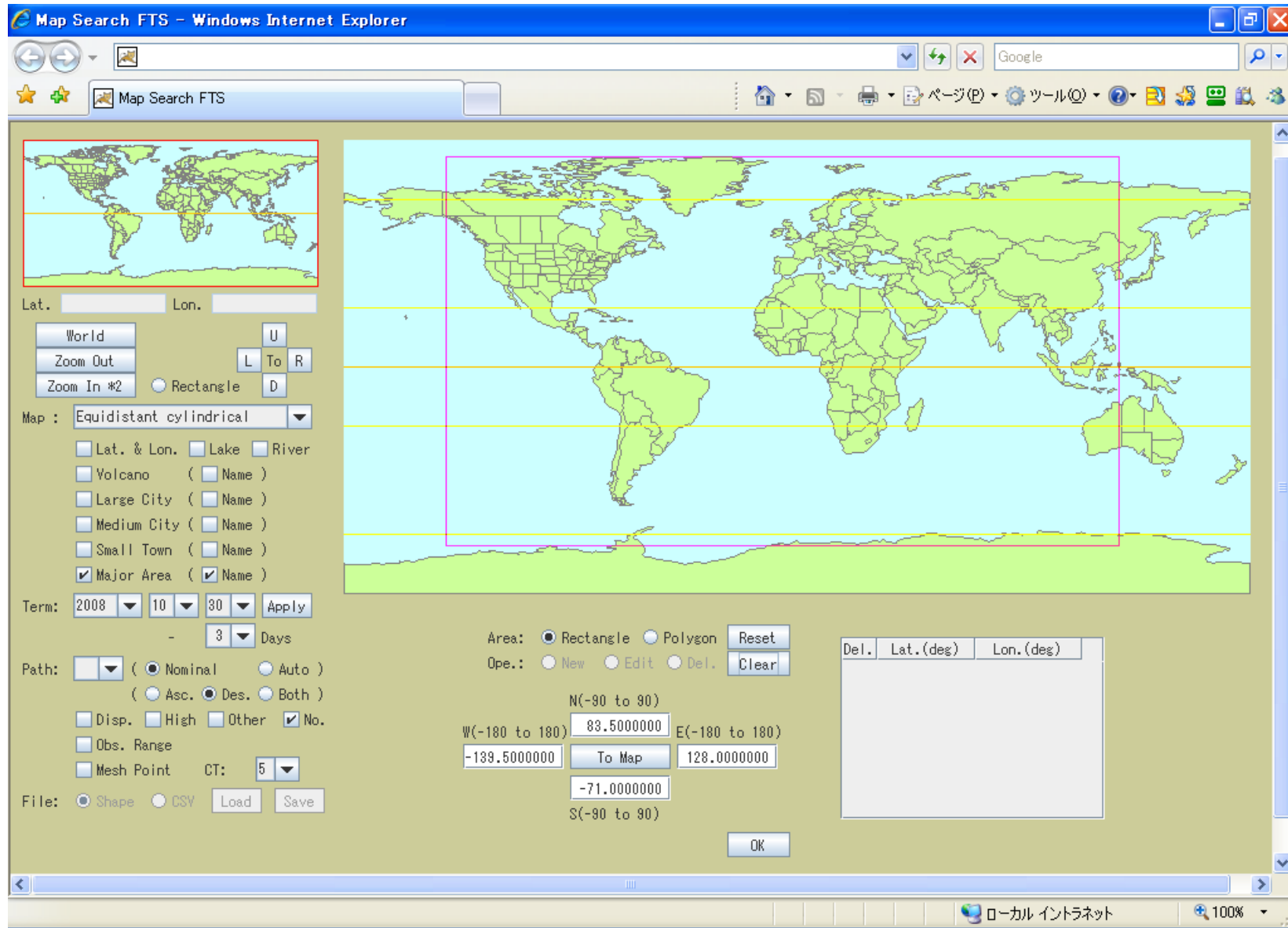
No
 Yes

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

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 Sunlint Observation Mode

Specify the Land/Sea Flag

No
 Yes

Land Sea Land/Sea Mixture

Specify the Quality

No
 Yes Good over

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2.1.9 L1&L2 product search and order

Search Result - Windows Internet Explorer

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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 CO2 column amount(TIR)	T01.00(C)	-42.182	82.623	33	53	OB1N	M	M	G	F080324200640335312	1.1 MB	Display	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	2008-03-24 20:06:58.0	*L2 CO2 column amount(TIR)	T01.00(C)	-41.617	76.48	33	54	OB1N	M	M	G	F080324200658335412	1.1 MB	Display	<input type="checkbox"/>
3	<input checked="" type="checkbox"/>	2008-03-24 20:19:33.0	*L2 CO2 column amount(TIR)	T01.00(C)	81.733	-146.745	36	01	OB1D	M	H	G	F080324201933360112	1.1 MB	Display	<input type="checkbox"/>
4	<input checked="" type="checkbox"/>	2008-03-24 20:34:54.0	*L2 CO2 column amount(TIR)	T01.00(C)	80.331	-144.618	36	11	OB1D	M	M	G	F080324203454361112	1.1 MB	Display	<input type="checkbox"/>
5	<input checked="" type="checkbox"/>	2008-04-01 02:02:02.0	*L2 CO2 column amount(TIR)	T01.00(C)	50.747	112.449	00	00	OB1D	M	M	G	F080401010101000001	1.1 MB	Display	<input type="checkbox"/>
6	<input checked="" type="checkbox"/>	2008-04-01 02:02:03.0	*L2 CO2 column amount(TIR)	T01.00(C)	50.352	114.612	00	00	OB1D	M	M	G	F080401010101000002	1.1 MB	Display	<input type="checkbox"/>
7	<input checked="" type="checkbox"/>	2008-04-01 02:02:04.0	*L2 CO2 column amount(TIR)	T01.00(C)	49.916	116.733	00	00	OB1D	M	M	G	F080401010101000003	1.1 MB	Display	<input type="checkbox"/>
8	<input checked="" type="checkbox"/>	2008-04-01 02:02:05.0	*L2 CO2 column amount(TIR)	T01.00(C)	48.601	116.055	00	00	OB1D	M	M	G	F080401010101000004	1.1 MB	Display	<input type="checkbox"/>
9	<input checked="" type="checkbox"/>	2008-04-01 02:02:06.0	*L2 CO2 column amount(TIR)	T01.00(C)	49.033	113.99	00	00	OB1D	M	M	G	F080401010101000005	1.1 MB	Display	<input type="checkbox"/>
10	<input checked="" type="checkbox"/>	2008-04-01 02:02:07.0	*L2 CO2 column amount(TIR)	T01.00(C)	49.42	111.892	00	00	OB1D	M	M	G	F080401010101000006	1.1 MB	Display	<input type="checkbox"/>

Total file size 0.0MB

[Select All](#) [Deselect](#) [Order Confirmation](#)

2.1.10 L1&L2 product search and order



Map Result FTS - Windows Internet Explorer

Google

Map Result FTS

World

Zoom Out

Zoom In #2

Map : Equidistant cylindrical

Lat. & Lon. Lake River

Volcano (Name)

Large City (Name)

Medium City (Name)

Small Town (Name)

Major Area (Name)

Term: 2008 10 30 Apply

- 3 Days

Path: (Nominal Auto)

(Asc. Des. Both)

Disp. High Other No.

Obs. Range

Mesh Point CT: 5

Area: Rectangle Polygon Reset

Opes.: New Edit Del. Clear

N(-90 to 90)

W(-180 to 180) E(-180 to 180)

To Map

S(-90 to 90)

Del.	Lat. (deg)	Lon. (deg)
------	------------	------------

Read [this information](#) when a map isn't displayed.

Lat: 44 19 19.796 Lon: 120 49 17.075

ローカル イン트라ネット 100%

2.1.11 L1&L2 product search and order



Search Result - Windows Internet Explorer

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Search Result

116 acquired 1/12 Forward

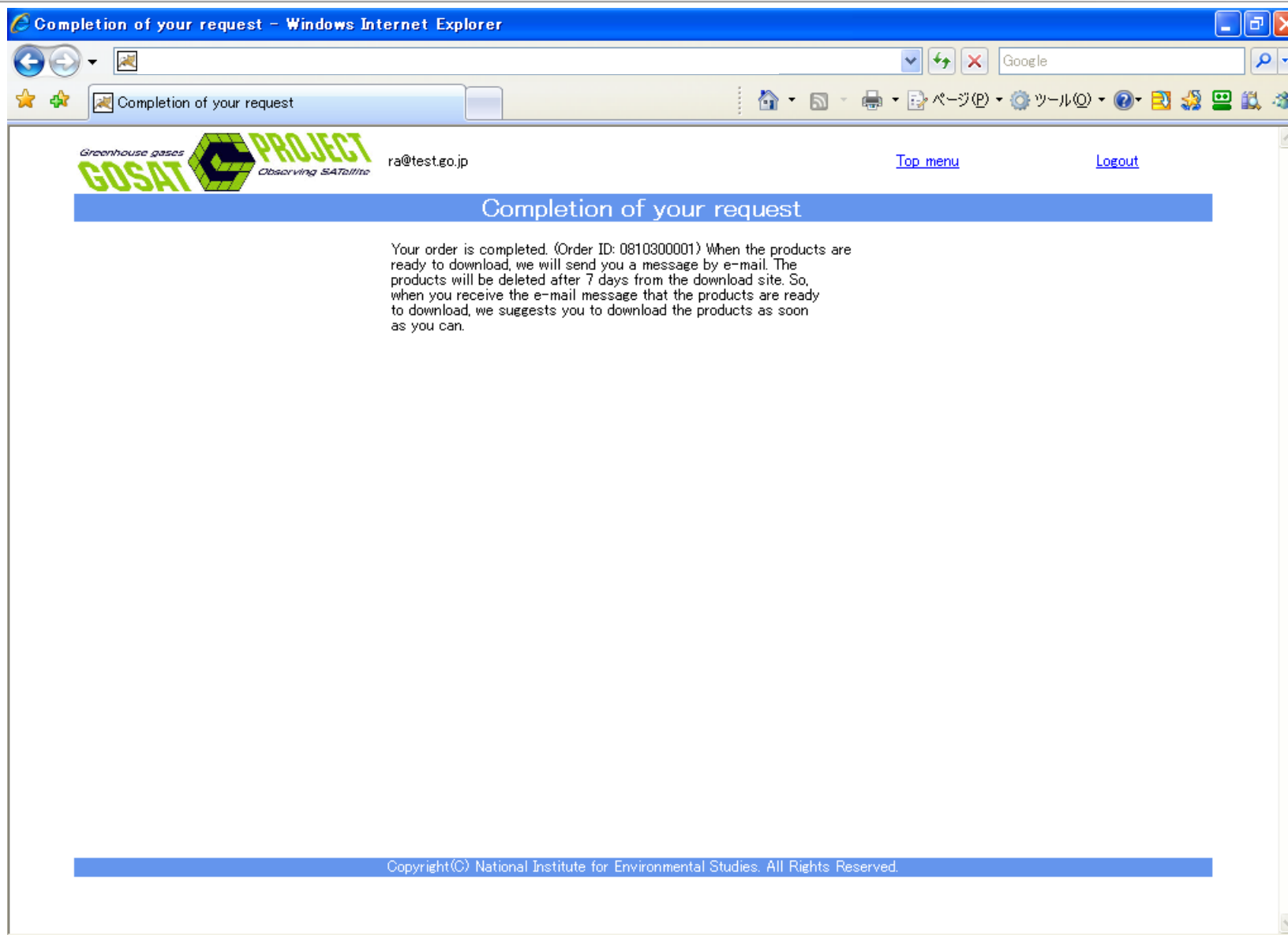
No.	Map Display	Obs. Start Time	Prod. Type	Prod. Ver.	Center Lat. of FOV	Center Lon. of FOV	Path Num.	Scene Num.	Obs. Mode	PS-ASP Gain	SS-ASP Gain	Quality	Obs. ID	File Size	FOV Image	Order
1	<input type="checkbox"/>	2008-03-24 20:06:40.0	*L2 CO2 column amount(TIR)	T01.00(C)	-42.182	82.623	33	53	OB1N	M	M	G	F080324200640335312	1.1MB	<input type="button" value="Display"/>	<input checked="" type="checkbox"/>
2	<input type="checkbox"/>	2008-03-24 20:06:58.0	*L2 CO2 column amount(TIR)	T01.00(C)	-41.617	76.48	33	54	OB1N	M	M	G	F080324200658335412	1.1MB	<input type="button" value="Display"/>	<input checked="" type="checkbox"/>
3	<input type="checkbox"/>	2008-03-24 20:19:33.0	*L2 CO2 column amount(TIR)	T01.00(C)	81.733	-146.745	36	01	OB1D	M	H	G	F080324201933360112	1.1MB	<input type="button" value="Display"/>	<input checked="" type="checkbox"/>
4	<input type="checkbox"/>	2008-03-24 20:34:54.0	*L2 CO2 column amount(TIR)	T01.00(C)	80.331	-144.618	36	11	OB1D	M	M	G	F080324203454361112	1.1MB	<input type="button" value="Display"/>	<input checked="" type="checkbox"/>
5	<input type="checkbox"/>	2008-04-01 02:02:02.0	*L2 CO2 column amount(TIR)	T01.00(C)	50.747	112.449	00	00	OB1D	M	M	G	F080401010101000001	1.1MB	<input type="button" value="Display"/>	<input checked="" type="checkbox"/>
6	<input type="checkbox"/>	2008-04-01 02:02:03.0	*L2 CO2 column amount(TIR)	T01.00(C)	50.352	114.612	00	00	OB1D	M	M	G	F080401010101000002	1.1MB	<input type="button" value="Display"/>	<input checked="" type="checkbox"/>
7	<input type="checkbox"/>	2008-04-01 02:02:04.0	*L2 CO2 column amount(TIR)	T01.00(C)	49.916	116.733	00	00	OB1D	M	M	G	F080401010101000003	1.1MB	<input type="button" value="Display"/>	<input checked="" type="checkbox"/>
8	<input type="checkbox"/>	2008-04-01 02:02:05.0	*L2 CO2 column amount(TIR)	T01.00(C)	48.601	116.055	00	00	OB1D	M	M	G	F080401010101000004	1.1MB	<input type="button" value="Display"/>	<input checked="" type="checkbox"/>
9	<input type="checkbox"/>	2008-04-01 02:02:06.0	*L2 CO2 column amount(TIR)	T01.00(C)	49.033	113.99	00	00	OB1D	M	M	G	F080401010101000005	1.1MB	<input type="button" value="Display"/>	<input checked="" type="checkbox"/>
10	<input type="checkbox"/>	2008-04-01 02:02:07.0	*L2 CO2 column amount(TIR)	T01.00(C)	49.42	111.892	00	00	OB1D	M	M	G	F080401010101000006	1.1MB	<input type="button" value="Display"/>	<input checked="" type="checkbox"/>

Total file size 127.6MB

隠れているイメージを表示します

2.1.12 L1&L2 product search and order

2.1.13 L1&L2 product search and order



2.2.1 Product Download



Selection Menu - Windows Internet Explorer

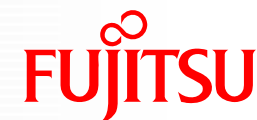
Greenhouse gases **GOSAT PROJECT** Observing SATellite ra@test.go.jp [Top menu](#) [Logout](#)

Selection Menu

Observation Request	Product Distribution	User Information
<ul style="list-style-type: none">• Observation Request Submission• Observation Request Status	<ul style="list-style-type: none">• L1 and L2 Product Search and Order• L3 and L4 Product Search and Order• FTS L1B Calibration Product Search and Order• Product Download	<ul style="list-style-type: none">• Edit User Information

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2.2.2 Product Download



Ordered product list - Windows Internet Explorer

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Ordered product list

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	<input type="button" value="Download"/>
2	0810230002	2008/10/23 06:09:56		4.400	NO	<input type="button" value="Download"/>
3	0810230003	2008/10/23 08:25:04		2.200	NO	<input type="button" value="Download"/>
4	0810230004	2008/10/23 11:09:27		5.500	NO	<input type="button" value="Download"/>
5	0810230005	2008/10/23 11:10:33		8.800	NO	<input type="button" value="Download"/>
6	0810230006	2008/10/23 11:12:22		2.200	NO	<input type="button" value="Download"/>
7	0810230007	2008/10/23 11:15:27		33.000	NO	<input type="button" value="Download"/>
8	0810230008	2008/10/23 11:16:53		2.200	NO	<input type="button" value="Download"/>
9	0810230009	2008/10/23 11:17:46		3.300	NO	<input type="button" value="Download"/>
10	0810230010	2008/10/23 12:03:48		8.800	NO	<input type="button" value="Download"/>
11	0810230011	2008/10/23 12:20:54		6.600	NO	<input type="button" value="Download"/>
12	0810230012	2008/10/23 12:25:03		8.800	NO	<input type="button" value="Download"/>
13	0810280001	2008/10/28 01:32:09		125.400	NO	<input type="button" value="Download"/>
14	0810280002	2008/10/28 03:22:21		127.600	NO	<input type="button" value="Download"/>
15	0810290001	2008/10/29 07:54:48		13.200	NO	<input type="button" value="Download"/>
16	0810300001	2008/10/30 05:07:34		4.400	NO	<input type="button" value="Download"/>