From: hoo1
To: HOO Hoc
Subject: Fax from +61386166600
Date: Friday, March 18, 2011 6:25:48 AM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017748

Notice for: HOO1

Remote ID: +61386166600

Received at: 03/18/2011 06:24

Pages: 6

Routed by:

Routed at: 03/18/2011 06:24

EE133

Bureau of Meteorology
National Meteorological and Oceanographic Centre
Melbourne Australia
RSMC for Environmental Emergency Response
FAX: 61 3 9662 1222 or 61 3 9662 1223
Telephone (24 hours) Shift Supervisor 61 3 9669 4035
Email: rto@bom.gov.au

EMERGENCY EMERGENCY

RSMC Melbourne EER Products

Issued at : 0918 UTC 18:Mar:2011

The following charts will follow:
- trajectory map
- several time-integrated concentration map
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

Source term and dispersion model details

Location name: Fukushima Daiichi Japan

Release Location(decimal degrees): 37.4206 N 141.0329 E

Release Time/Date: 0430 UTC 16 MAR 2011

Emissision duration: 72

Emission (per hour): 1.39E-02

Substance released: Cs137 (1.09259E+04)

Vertical distribution: UNIFORM

Meteorological Model: Access G (~80km/29 sigma lvls)

Dispersion Model: HYSPLIT 4.9

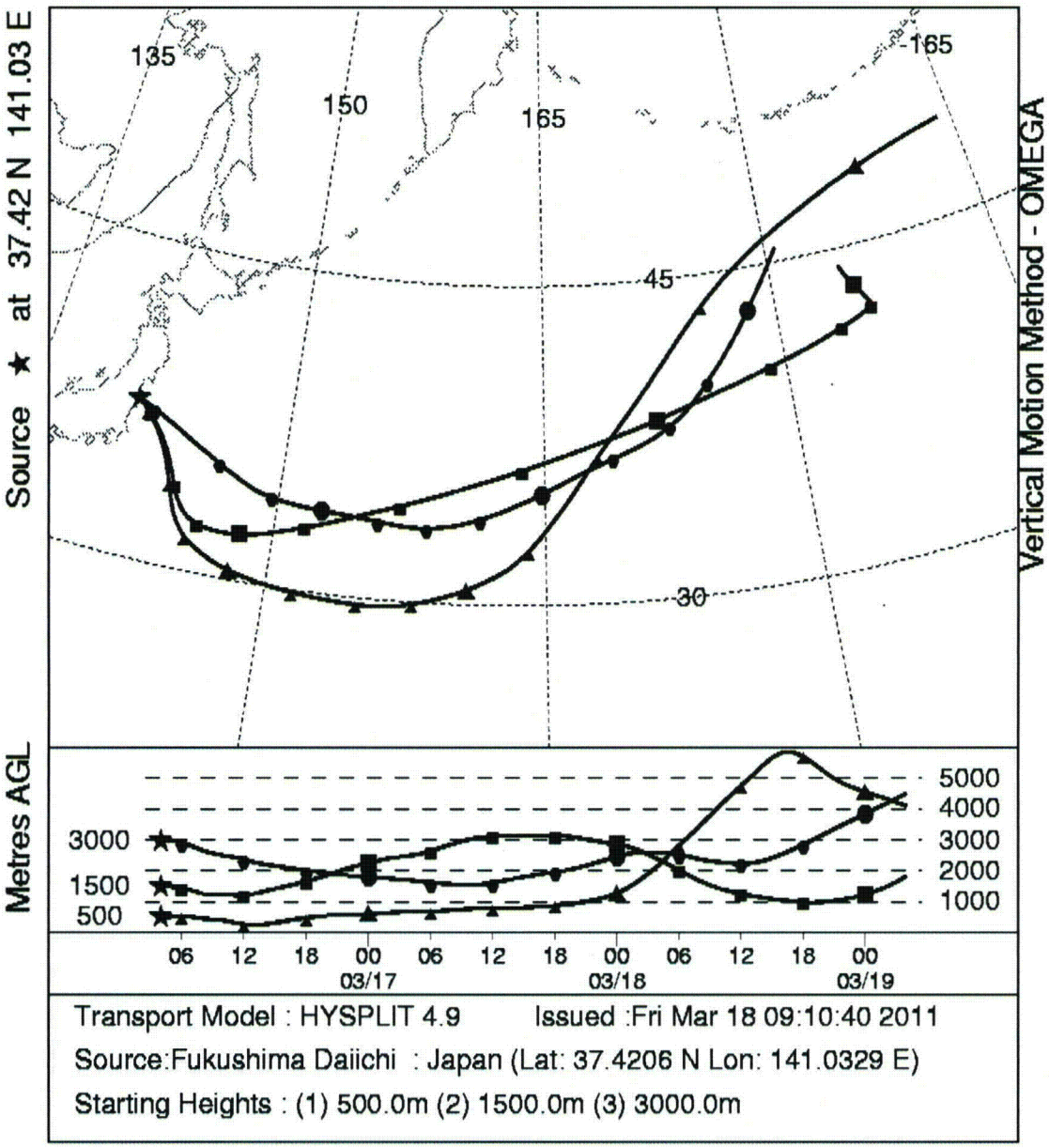
Number of Pages (incl cover sheet) = 6

RSMC Melbourne : Environmental Emergency Response Centre

Forward trajectories starting at 0430 UTC 16 Mar 2011

Meteorological Data : ACCESS-G : base time 0000 UTC 18 Mar

OPERATIONAL EVENT OPERATIONAL EVENT



Transport Model : HYSPLIT 4.9 Issued :Fri Mar 18 09:10:40 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.0329 E)

Starting Heights : (1) 500.0m (2) 1500.0m (3) 3000.0m

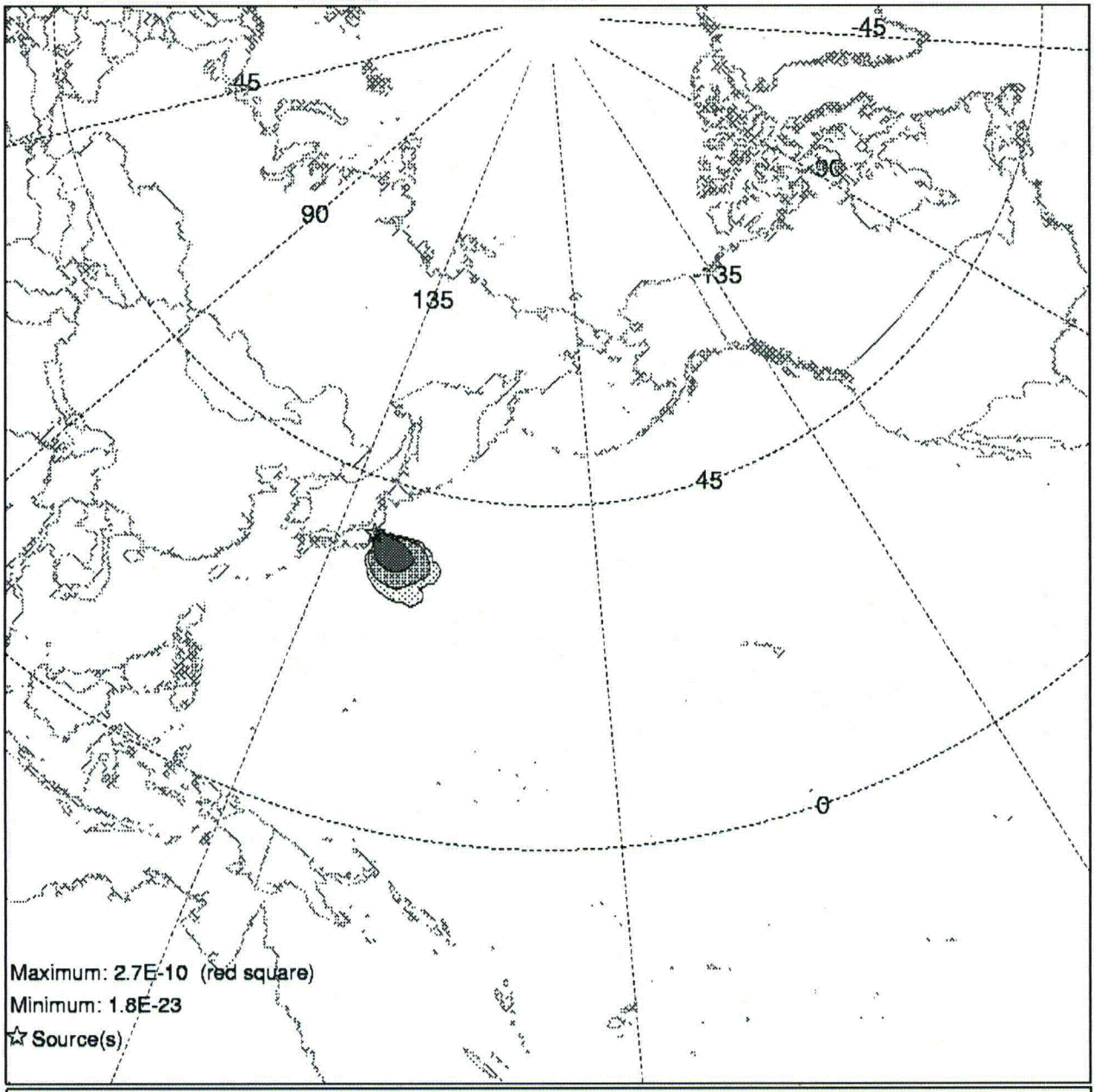
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 16 Mar to 0000 17 Mar 11 (UTC)

Exposure (Bq-s/m3) averaged between 0 m and 500 m

>1.0E-10 >1.0E-12 >1.0E-14 >1.0E-16



NRAD RELEASE STARTED AT 0400 UTC16 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.0329 E)

Isotope : Cs137 (Halflife: 1.09259E+04 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 50.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 18 Mar

Note: "Contours may change from Chart to Chart"

Issued :Fri Mar 18 09:10:40 2011

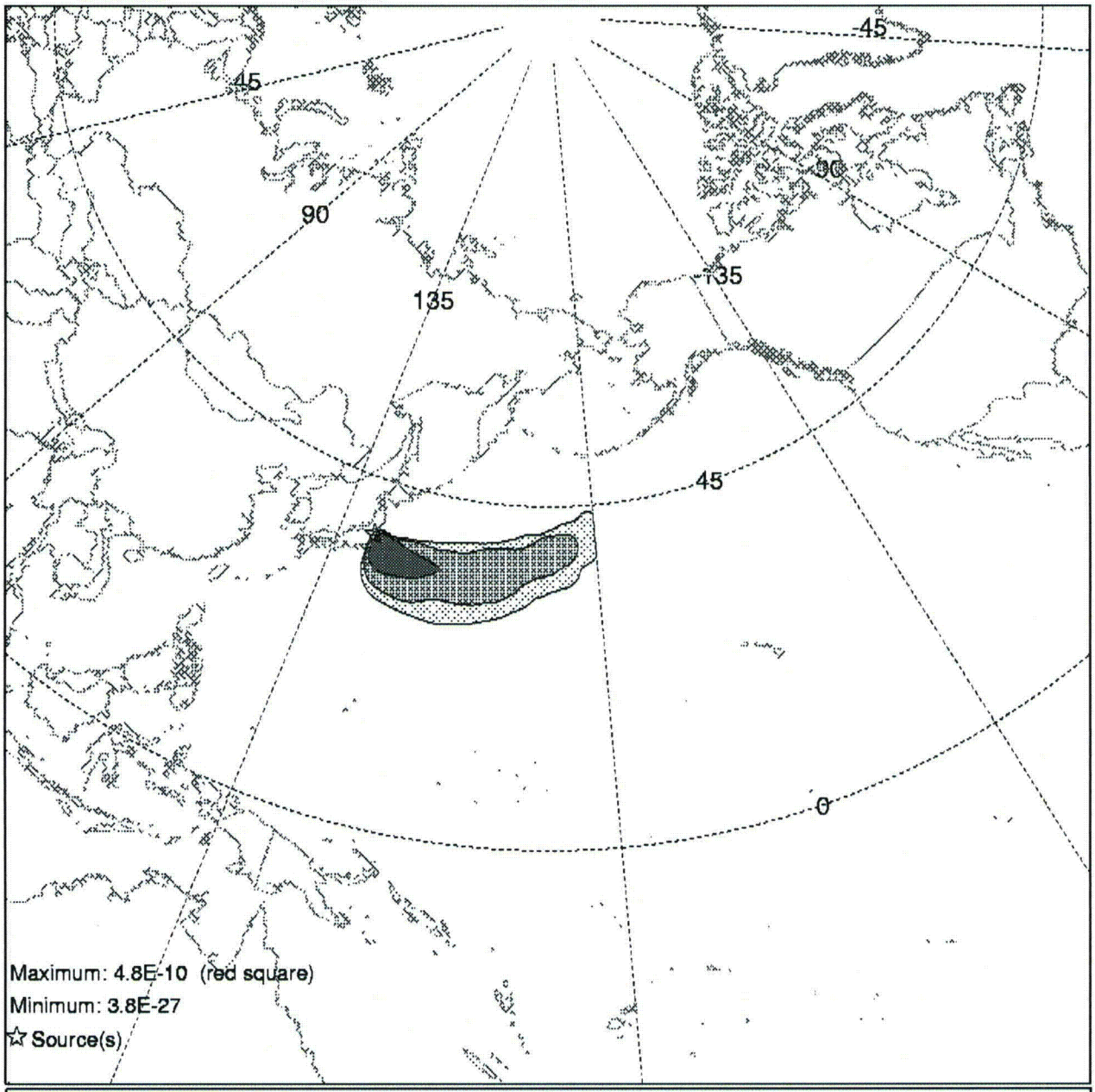
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 17 Mar to 0000 18 Mar 11 (UTC)

Exposure (Bq-s/m3) averaged between 0 m and 500 m

>1.0E-10 >1.0E-12 >1.0E-14 >1.0E-16



NRAD RELEASE STARTED AT 0400 UTC16 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.0329 E)

Isotope : Cs137 (Halflife: 1.09259E+04 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 50.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 18 Mar

Note: "Contours may change from Chart to Chart"

Issued :Fri Mar 18 09:10:40 2011

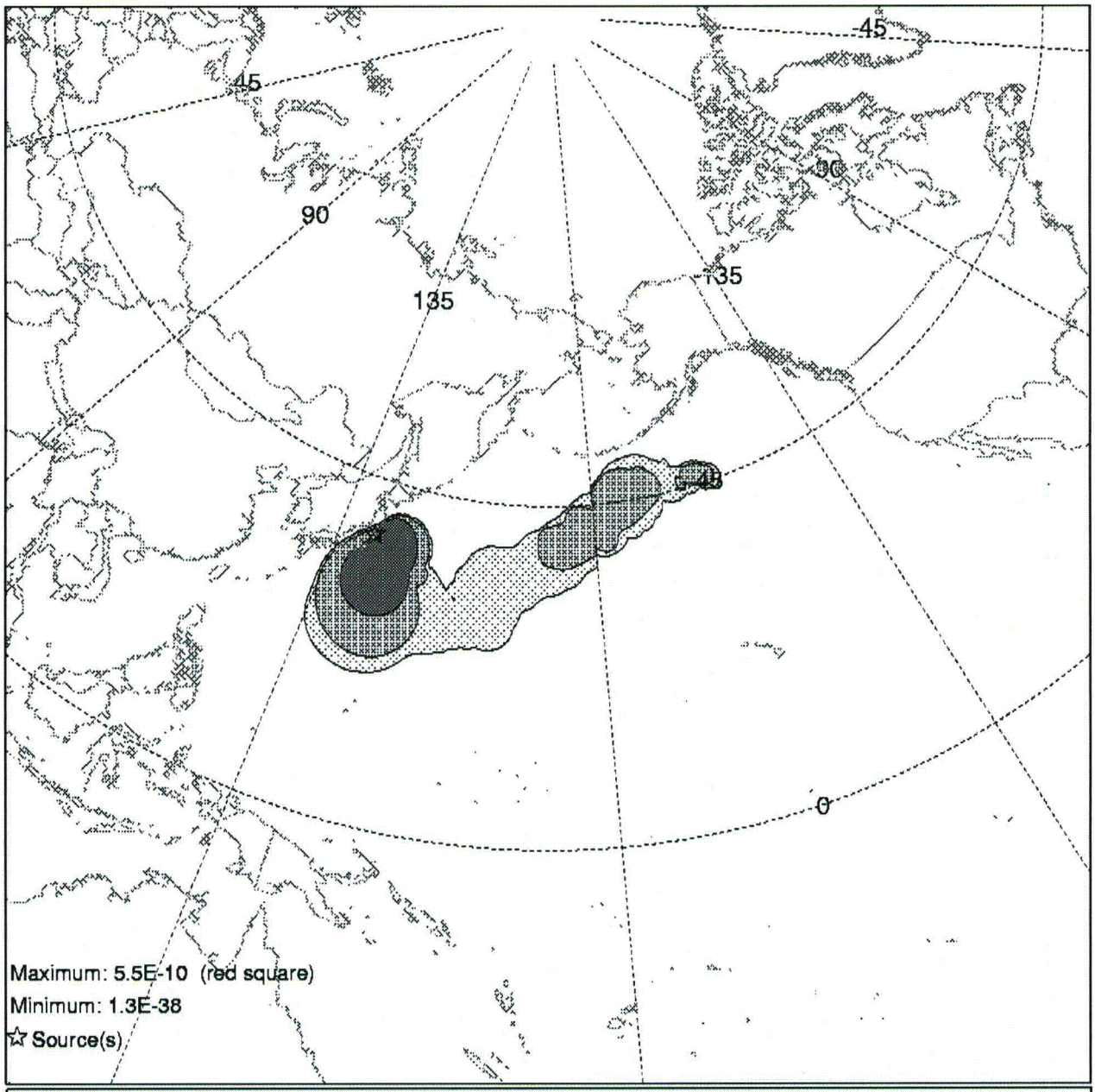
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 18 Mar to 0000 19 Mar 11 (UTC)

Exposure (Bq-s/m3) averaged between 0 m and 500 m

>1.0E-10 >1.0E-12 >1.0E-14 >1.0E-16



NRAD RELEASE STARTED AT 0400 UTC16 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.0329 E)

Isotope : Cs137 (Halflife: 1.09259E+04 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 50.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 18 Mar

Note: "Contours may change from Chart to Chart"

Issued :Fri Mar 18 09:10:40 2011

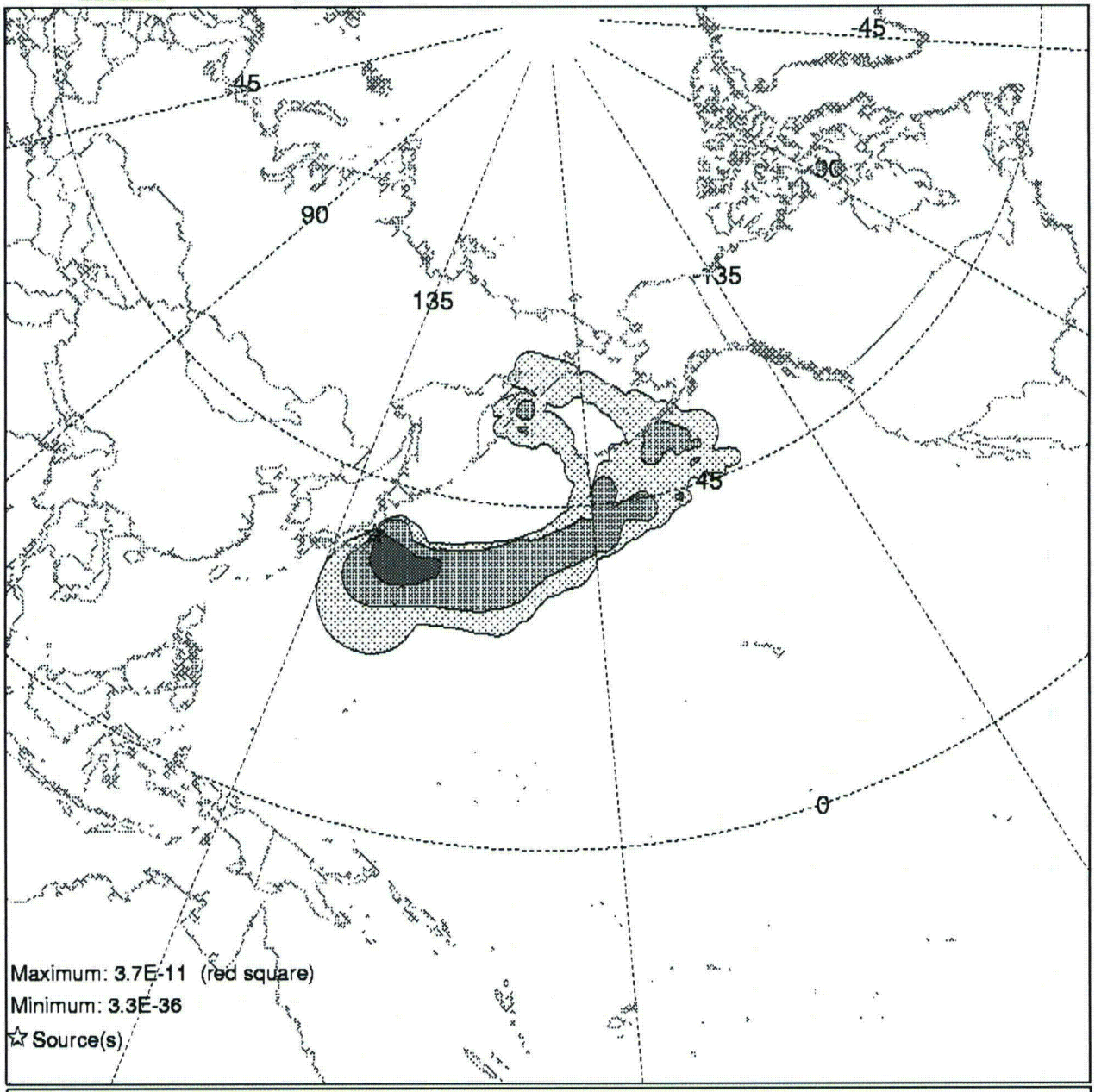
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 16 Mar to 0000 19 Mar 11 (UTC)

Deposition (Bq/m2) at ground-level

>1.0E-11 >1.0E-13 >1.0E-15 >1.0E-17



NRAD RELEASE STARTED AT 0400 UTC16 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.0329 E)

Isotope : Cs137 (Halflife: 1.09259E+04 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 50.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 18 Mar

Note: "Contours may change from Chart to Chart"

Issued :Fri Mar 18 09:10:40 2011

From: hoo1
To: HOO Hoc
Subject: Fax from National Weather Ser
Date: Friday, March 18, 2011 7:43:58 AM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017749

Notice for: HOO1

Remote ID: National Weather Ser

Received at: 03/18/2011 07:42

Pages: 8

Routed by:

Routed at: 03/18/2011 07:42

EE/34

U.S. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

RSMC Washington (NOAA ARL, NOAA NCEP)

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Camp Springs, Maryland USA

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Tel (Backup - ARL): 301-713-2614

Fax (24 hrs - NCEP): 301-763-8592
Fax (Backup - ARL): 301-713-4592

RSMC products created Fri Mar 18 10:33 UTC 2011

The following charts will follow:
- trajectory map
- several time-itegrated concentration maps
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

Source term and dispersion model details

RSMC Washington - NOAA ARL / NCEP

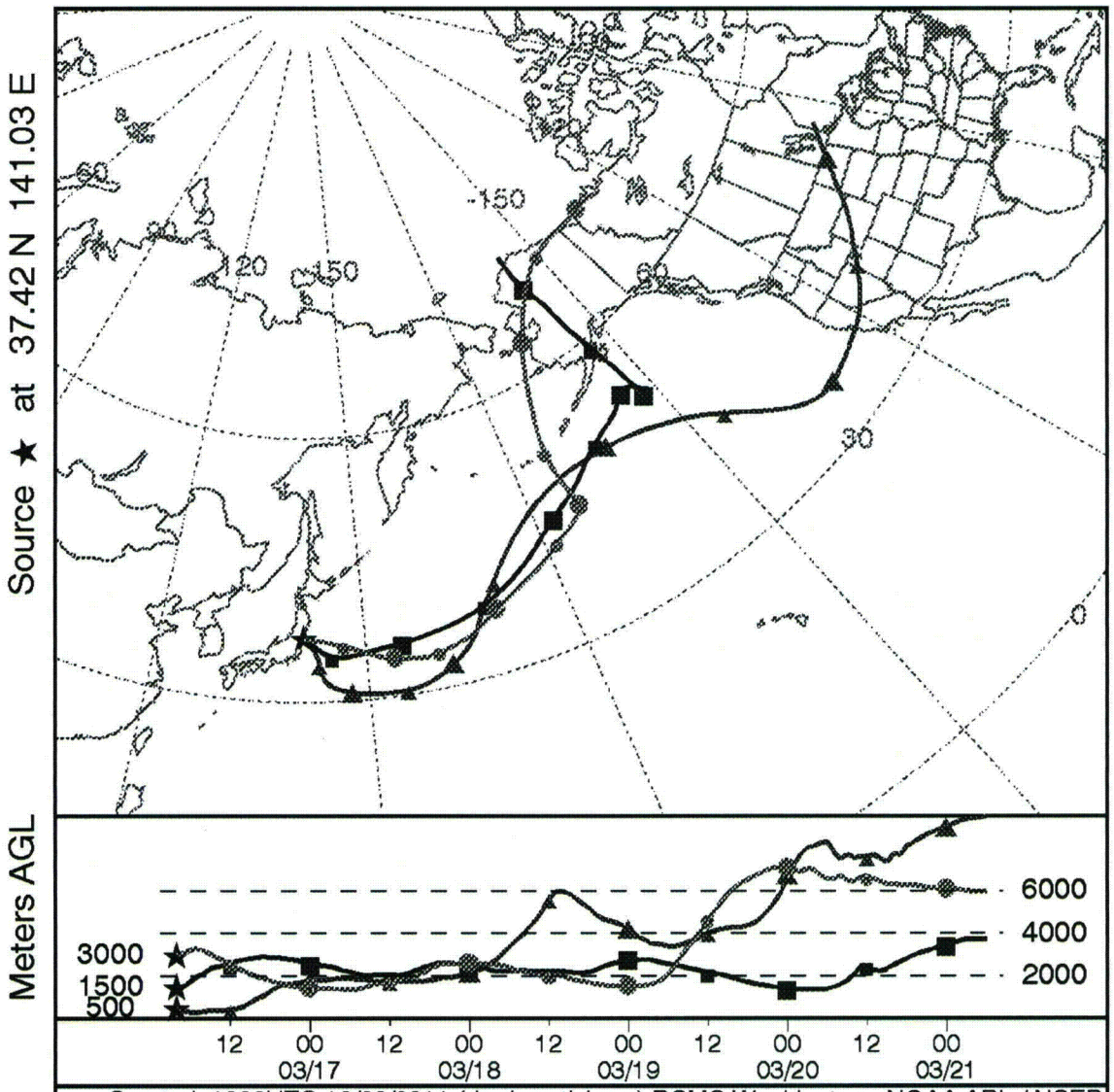
Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329
Release Start (YYYY MM DD HH MM):2011 03 16 04 30
Meteorology: GDAS and 0600 UTC 18 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES

NOAA HYSPLIT MODEL

Forward trajectories starting at 04 UTC 16 Mar 11

06 UTC 18 Mar GDAS Forecast Initialization



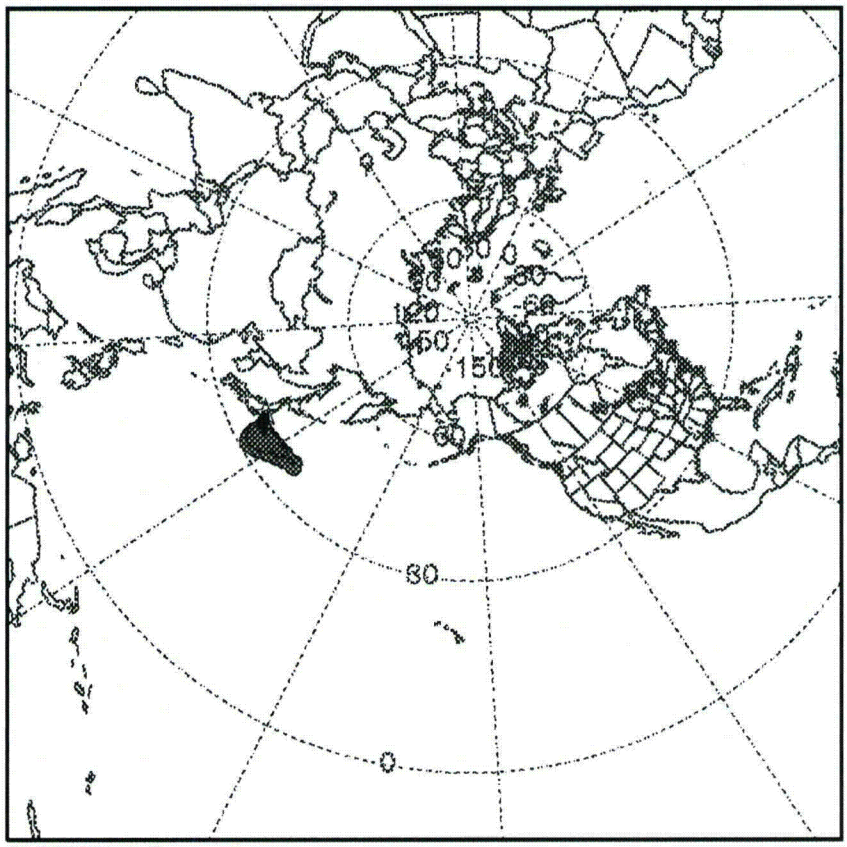
Created: 1033UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 height:500.0 1500.0 3000

Trajectory Direction:forward Duration:122 hr
Vertical Motion Calculation Method: Model Vertical Velocity
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 16 Mar to 0000 17 Mar 11 (UTC)
C137 Release started at 0430 16 Mar 11 (UTC)

Source☆ 37.421 N 141.033 E 20 m to 50 m



>1.0E-09 Bq-s/m3
>1.0E-11 Bq-s/m3
>1.0E-13 Bq-s/m3
>1.0E-15 Bq-s/m3

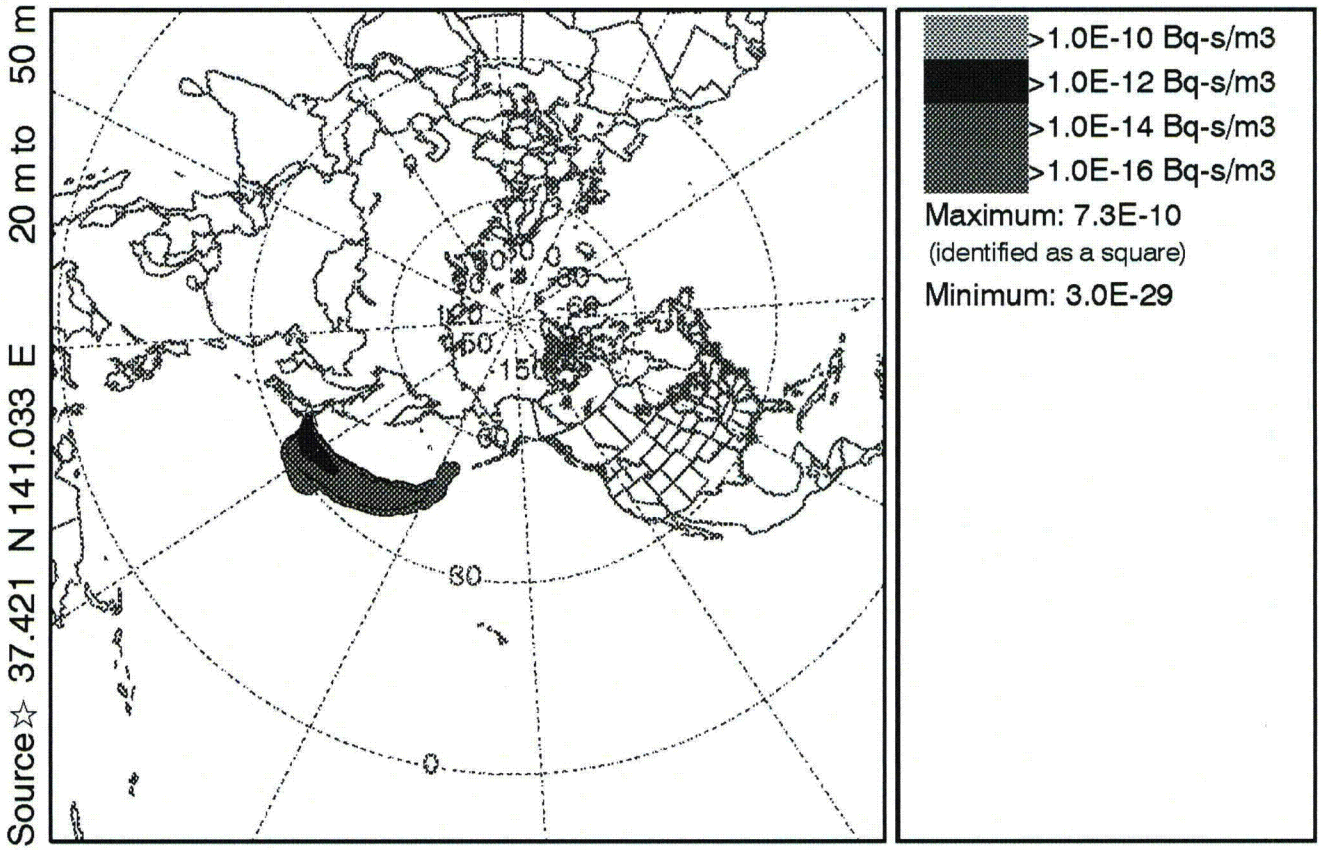
Maximum: 1.5E-09
(identified as a square)

Minimum: 6.6E-19

GDAS METEOROLOGICAL DATA

Created: 1033UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 18 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL
Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 17 Mar to 0000 18 Mar 11 (UTC)
C137 Release started at 0430 16 Mar 11 (UTC)

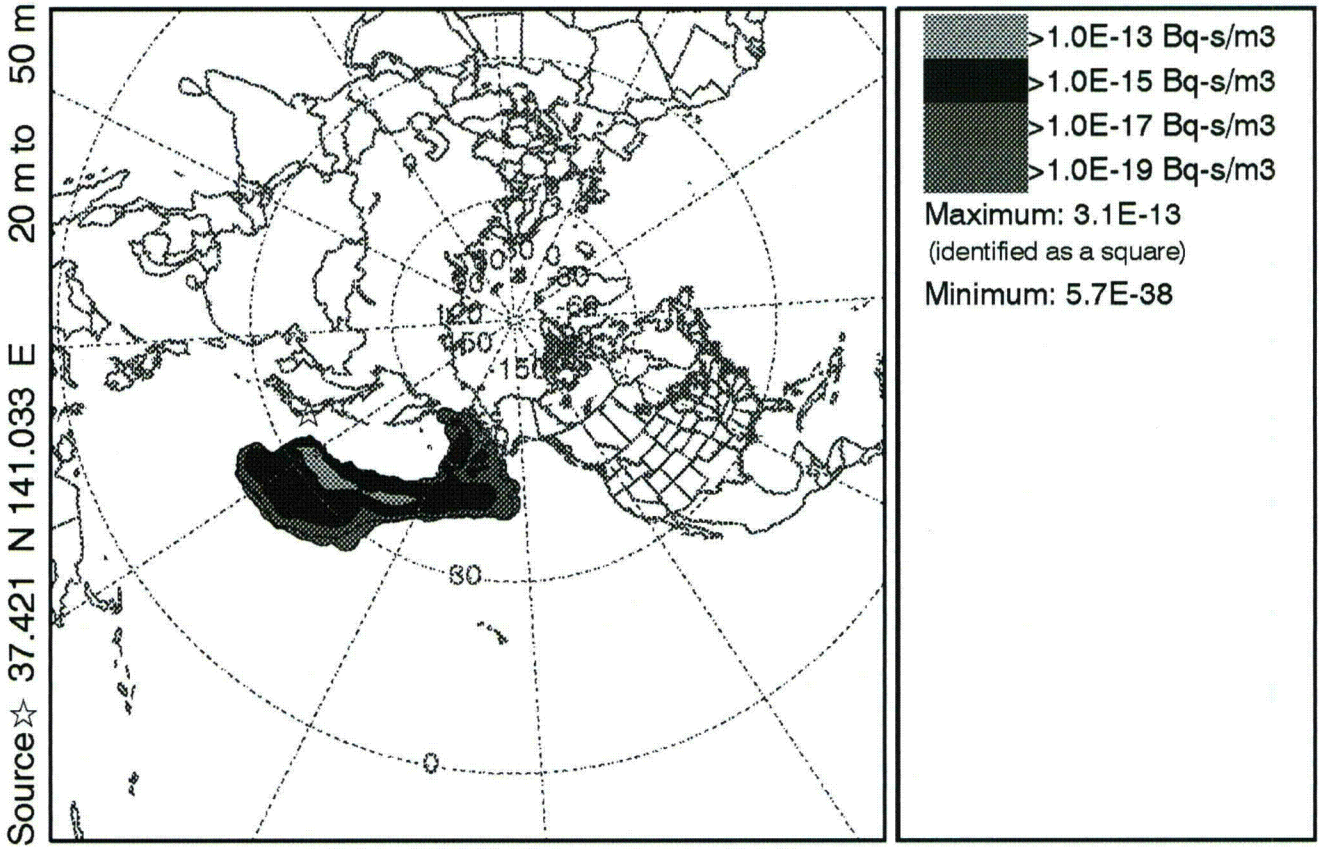


GDAS METEOROLOGICAL DATA

Created: 1033UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 18 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 18 Mar to 0000 19 Mar 11 (UTC)
C137 Release started at 0430 16 Mar 11 (UTC)

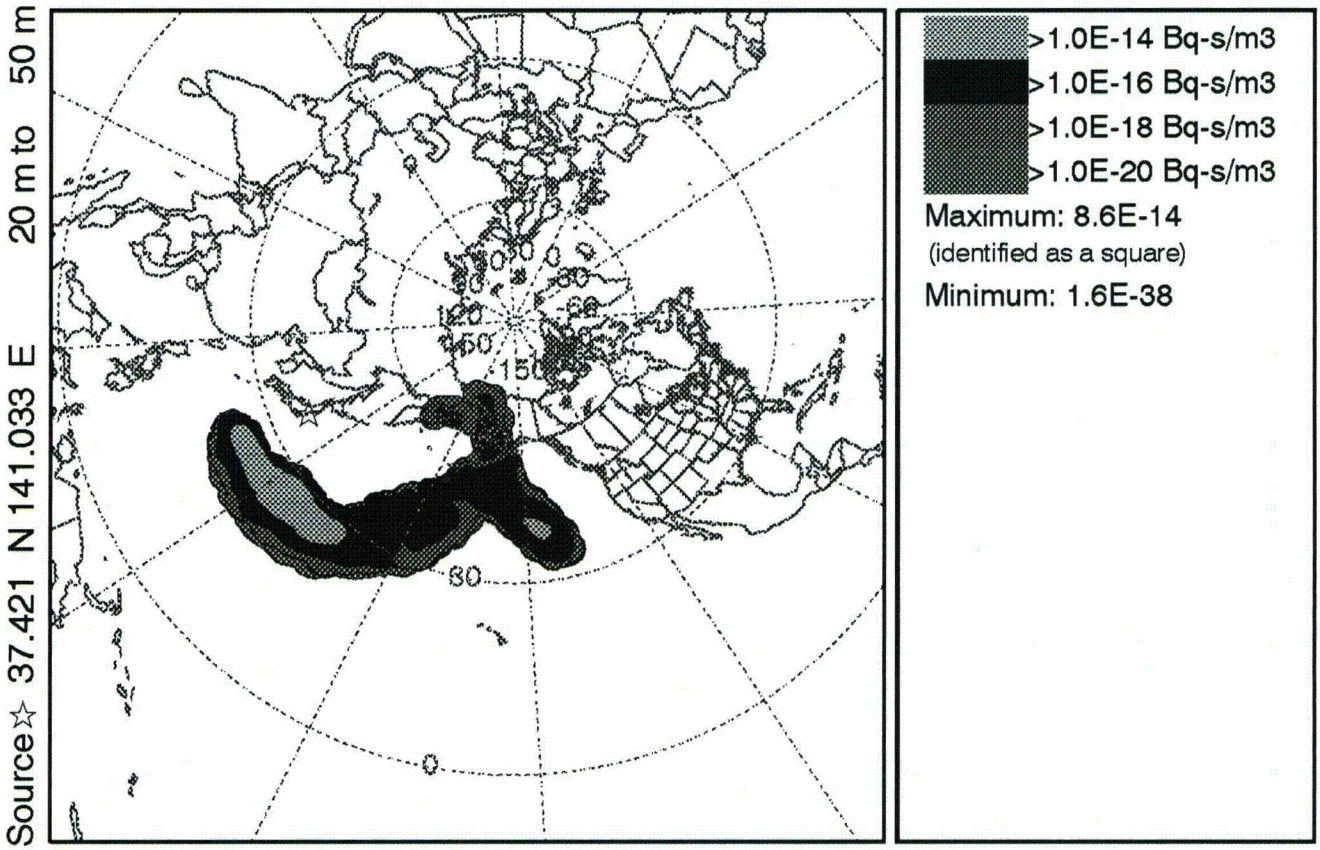


GDAS METEOROLOGICAL DATA

Created: 1033UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 18 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 19 Mar to 0000 20 Mar 11 (UTC)
C137 Release started at 0430 16 Mar 11 (UTC)



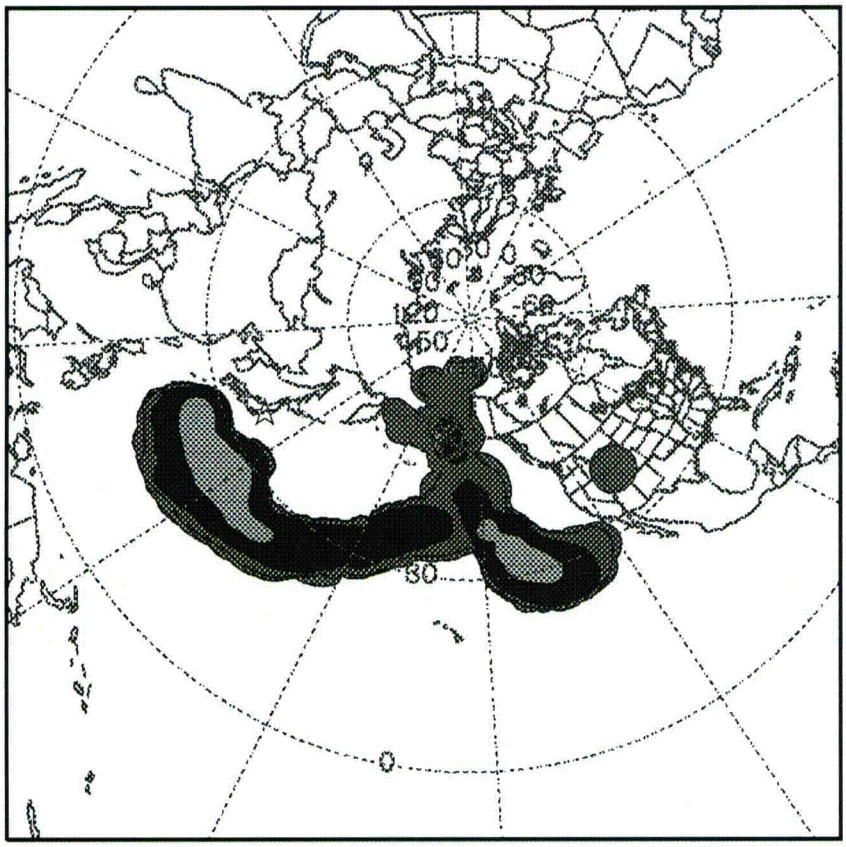
0600 18 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1033UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 18 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 20 Mar to 0000 21 Mar 11 (UTC)
C137 Release started at 0430 16 Mar 11 (UTC)

Source☆ 37.421 N 141.033 E 20 m to 50 m



>1.0E-14 Bq-s/m3
>1.0E-16 Bq-s/m3
>1.0E-18 Bq-s/m3
>1.0E-20 Bq-s/m3

Maximum: 5.9E-14
(identified as a square)

Minimum: 4.6E-39

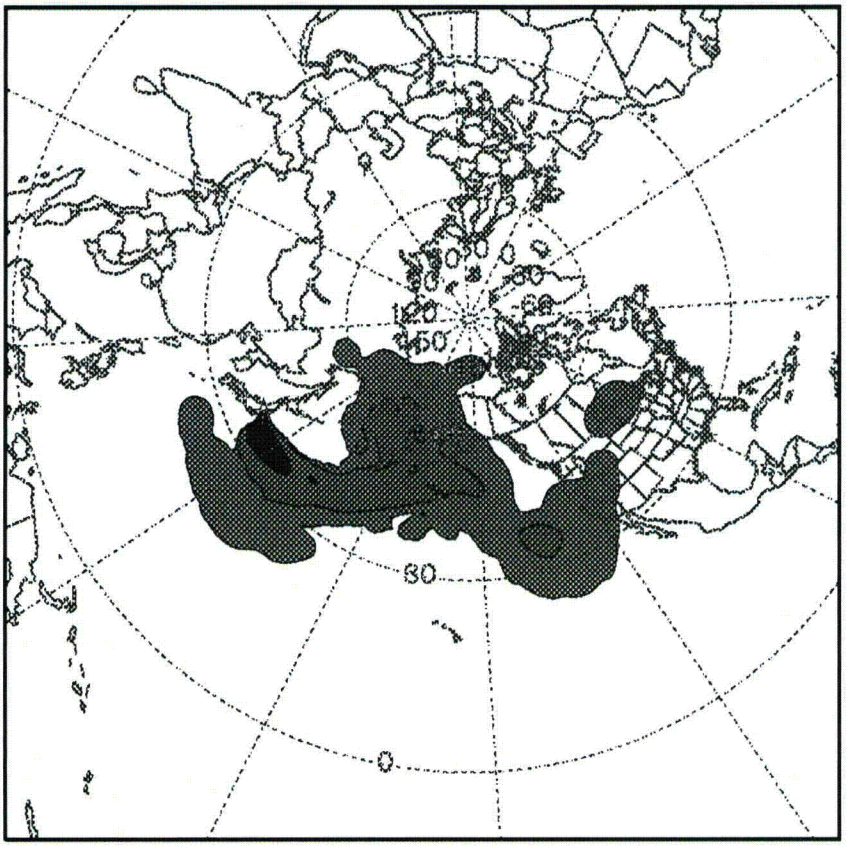
0600 18 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1033UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 18 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 0000 16 Mar to 0000 21 Mar 11 (UTC)
C137 Release started at 0430 16 Mar 11 (UTC)

Source☆ 37.421 N 141.033 E 20 m to 50 m



0600 18 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1033UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 18 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: IAEA NOTIFIED EMERGENCY

From:	NITOPS
To:	"hoo.hoc@nrc.gov"; "PMT02.Hoc@nrc.gov"; "pmt01.hoc@nrc.gov"; CMHT; "narac@llnl.gov"
Subject:	FW: Fukushima Hysplit Output - 03/18/2011 18Z Model Run
Date:	Friday, March 18, 2011 4:25:28 PM
Attachments:	2011031818.FUKUSHIMA-DAIICHI-1.rsmc13.pdf

FYI

-----Original Message-----
From: SDM [mailto:Sdm@noaa.gov]
Sent: Friday, March 18, 2011 4:23 PM
To: oar.jp.iaea.results@noaa.gov
Subject: Fukushima Hysplit Output - 03/18/2011 18Z Model Run

Attached is the latest NOAA Hysplit dispersion model run with a simulated release time of 03/18/2011 1940Z, release duration of 30 hours, and model run duration of 72 hours using the 18Z NCEP GFS.

This simulation was not an official request from the IAEA. This output reflects trajectories and dispersion of simulated current and future releases and does not reflect potential previous releases.

SDM Rob Handel

EE/35

U.S. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

RSMC Washington (NOAA ARL, NOAA NCEP)

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Tel (Backup - ARL): 301-713-2614

Fax (24 hrs - NCEP): 301-763-8592
Fax (Backup - ARL): 301-713-4592

RSMC products created Fri Mar 18 19:43 UTC 2011

The following charts will follow:
- trajectory map
- several time-itegrated concentration maps
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

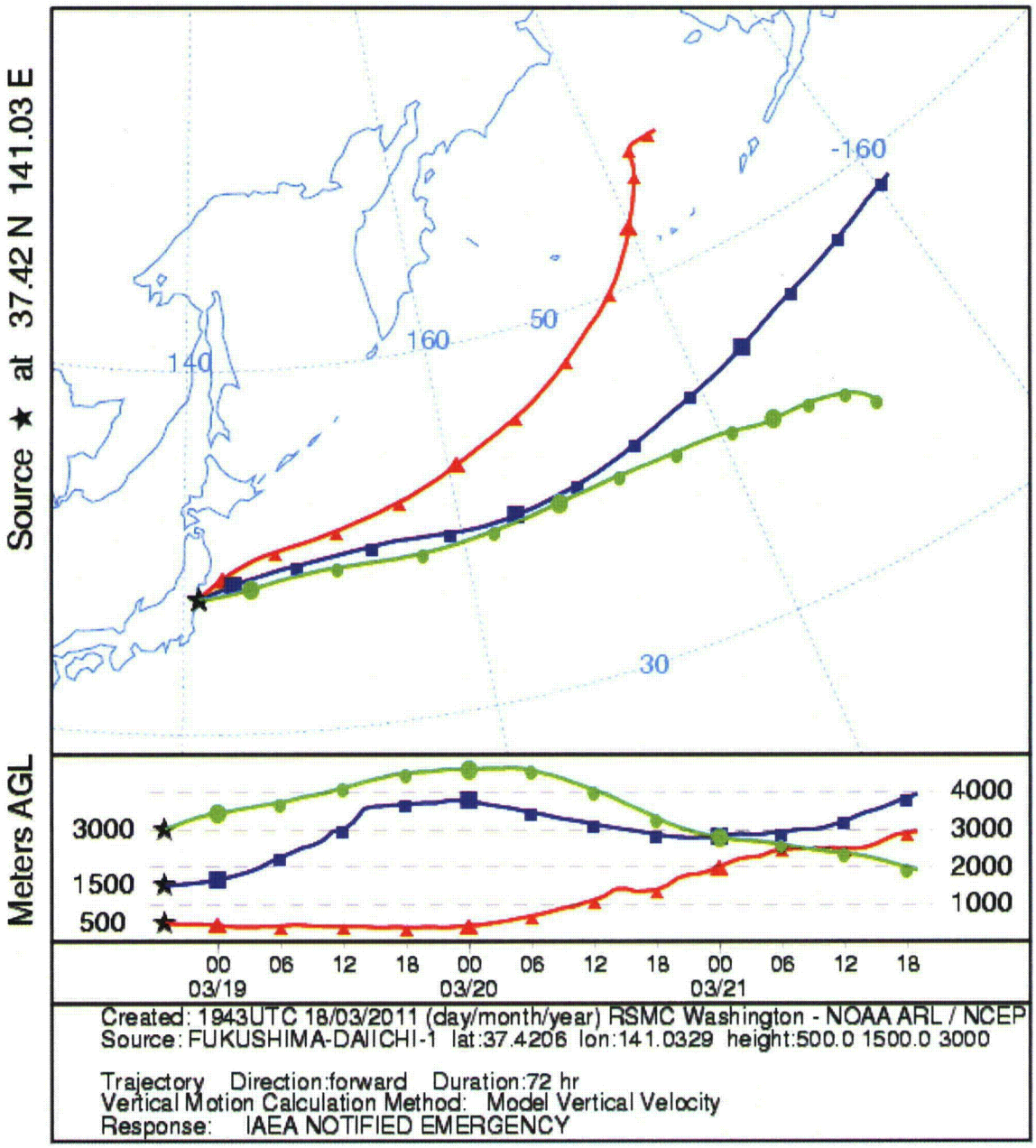
Source term and dispersion model details

RSMC Washington - NOAA ARL / NCEP

Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329
Release Start (YYYY MM DD HH MM):2011 03 18 19 40
Meteorology: 1200 UTC 18 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Note: Contour values may change from chart to chart

NOAA HYSPLIT MODEL
Forward trajectories starting at 19 UTC 18 Mar 11
12 UTC 18 Mar GFSG Forecast Initialization



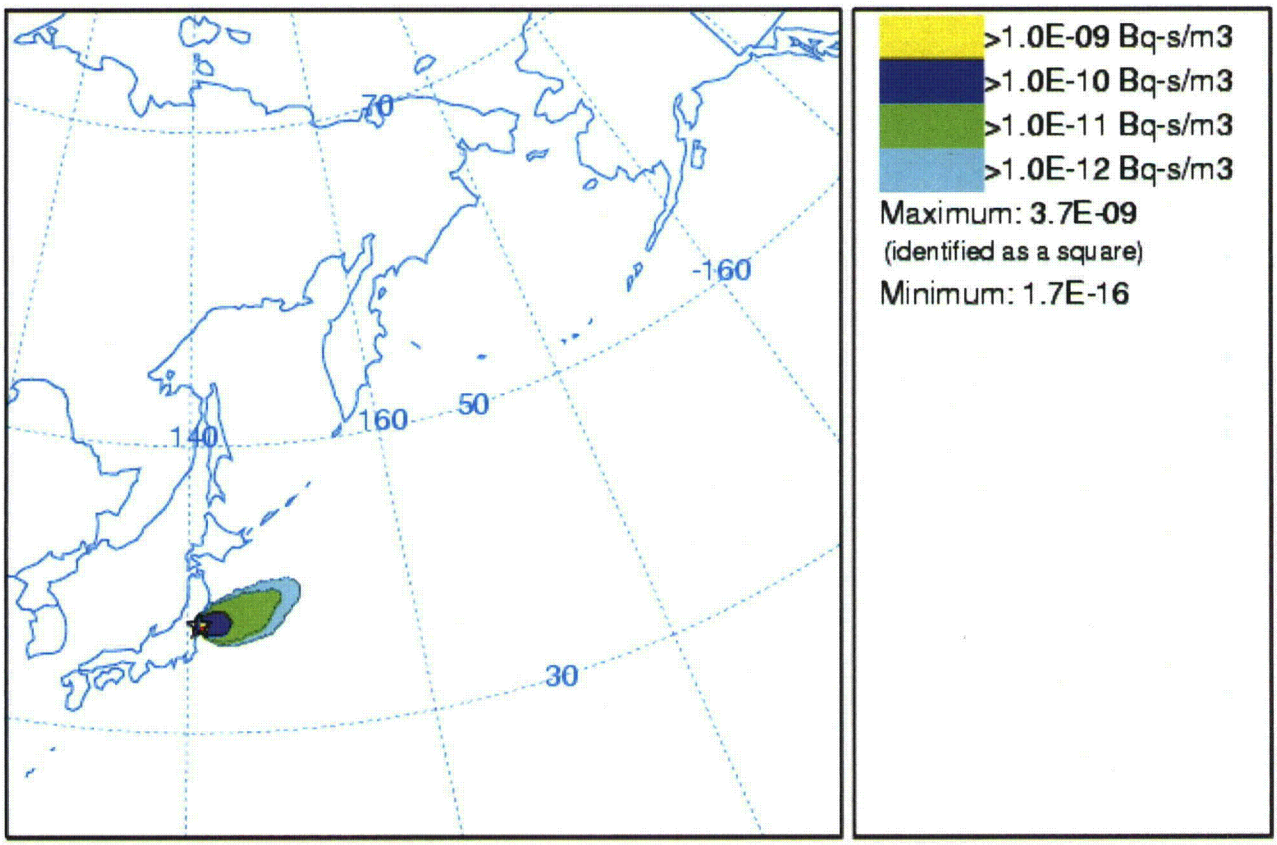
Created: 1943UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 height:500.0 1500.0 3000

Trajectory Direction:forward Duration:72 hr
Vertical Motion Calculation Method: Model Vertical Velocity
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 18 Mar to 1200 19 Mar 11 (UTC)
C137 Release started at 1940 18 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



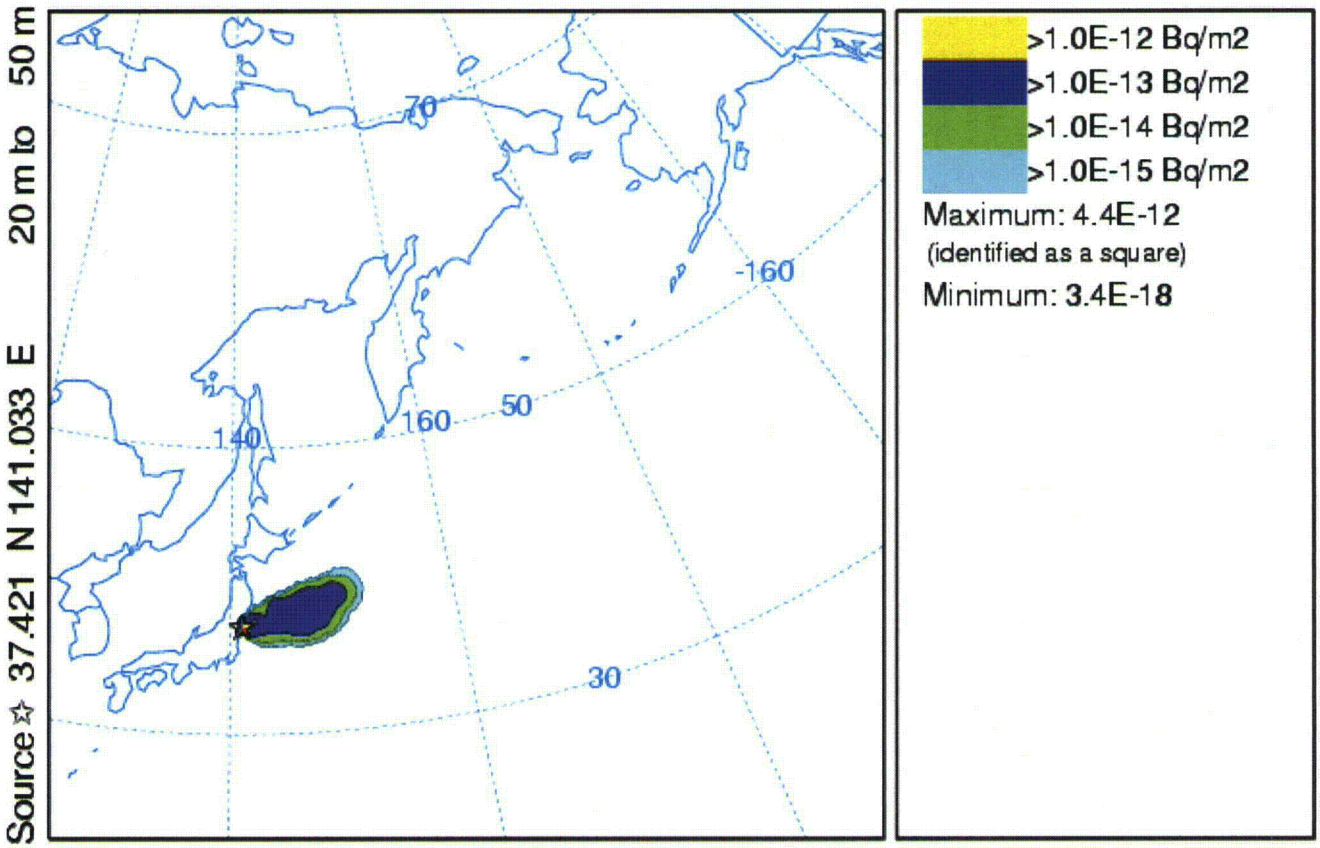
1200 18 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1943UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 18 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 18 Mar to 1200 19 Mar 11 (UTC)
C137 Release started at 1940 18 Mar 11 (UTC)



1200 18 Mar 11 GFSG FORECAST INITIALIZATION

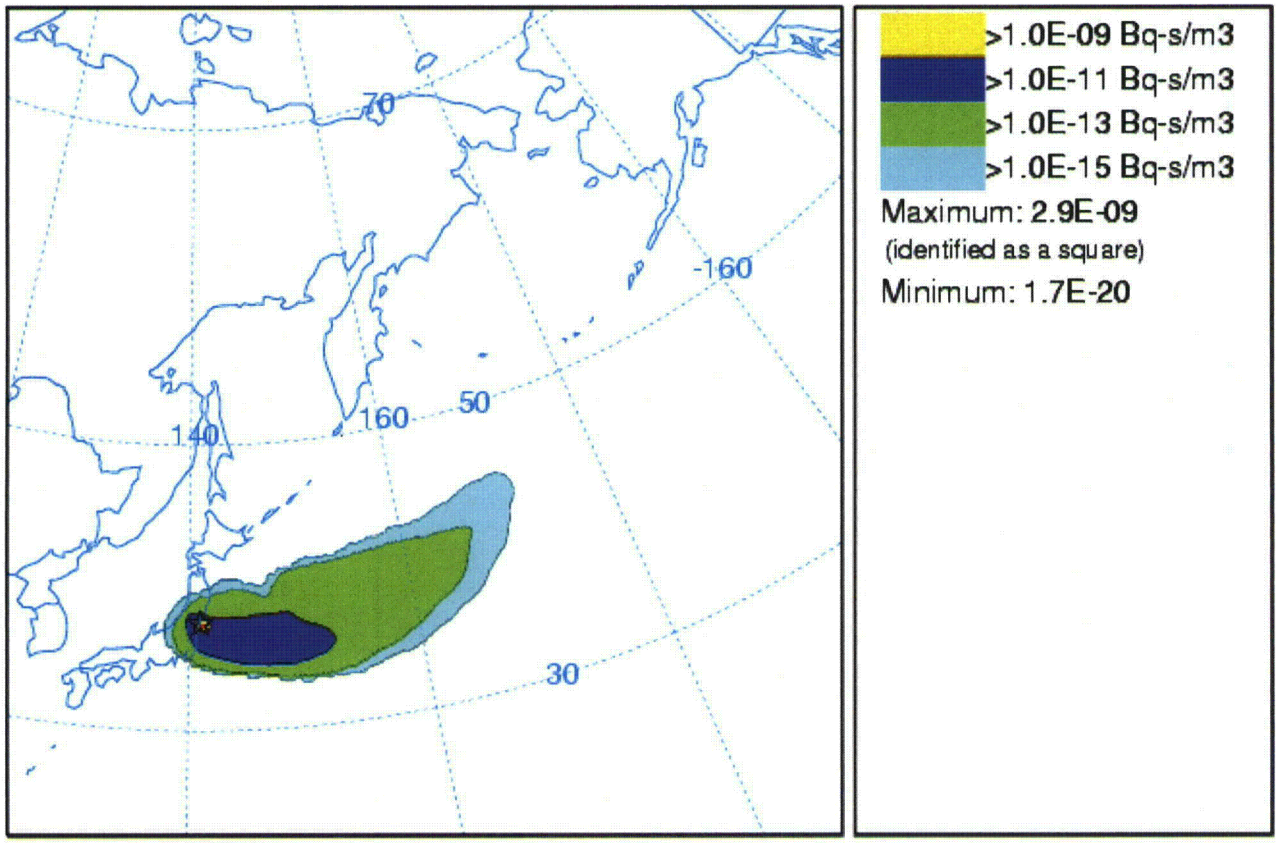
Created: 1943UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 18 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 19 Mar to 1200 20 Mar 11 (UTC)
C137 Release started at 1940 18 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



1200 18 Mar 11 GFSG FORECAST INITIALIZATION

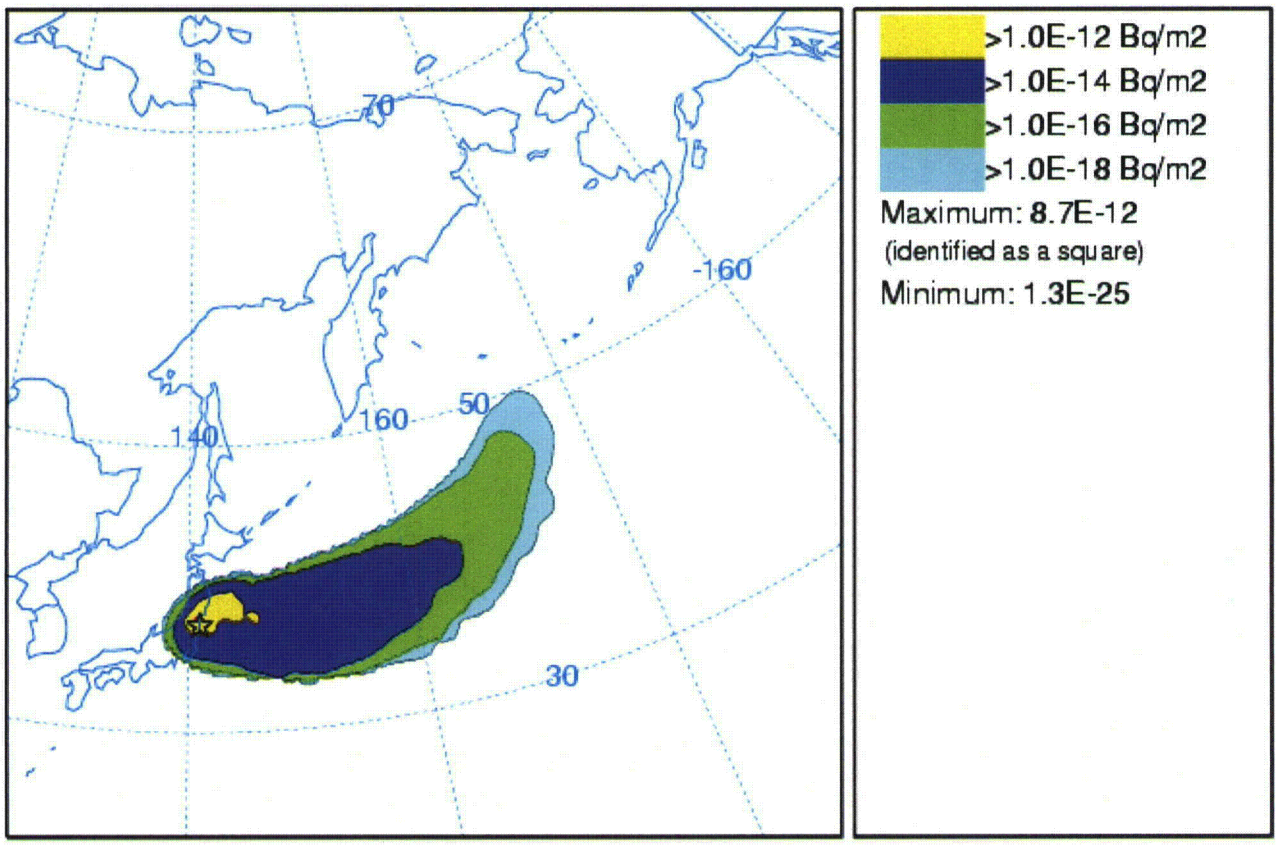
Created: 1943UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 18 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 18 Mar to 1200 20 Mar 11 (UTC)
C137 Release started at 1940 18 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



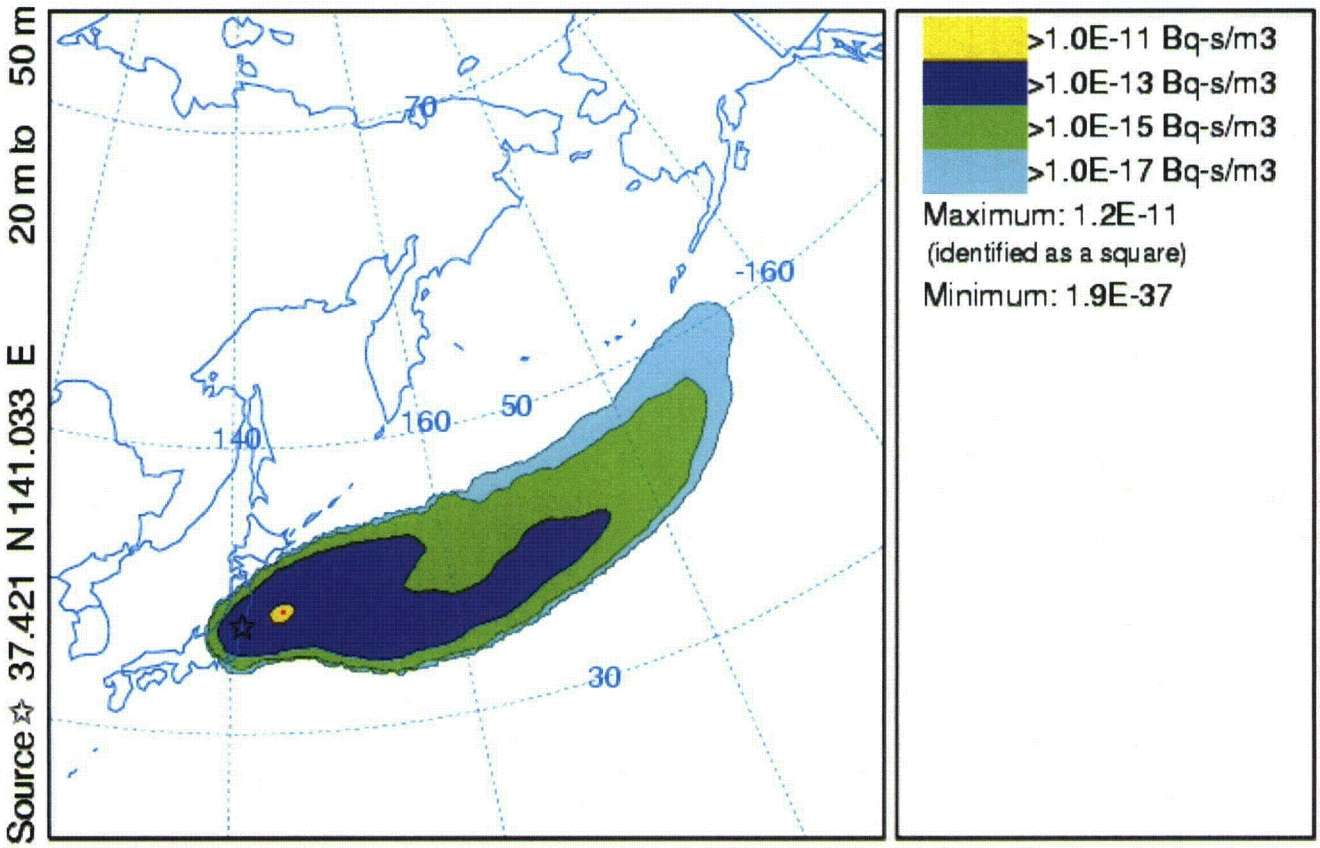
1200 18 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1943UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 18 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 20 Mar to 1200 21 Mar 11 (UTC)
C137 Release started at 1940 18 Mar 11 (UTC)



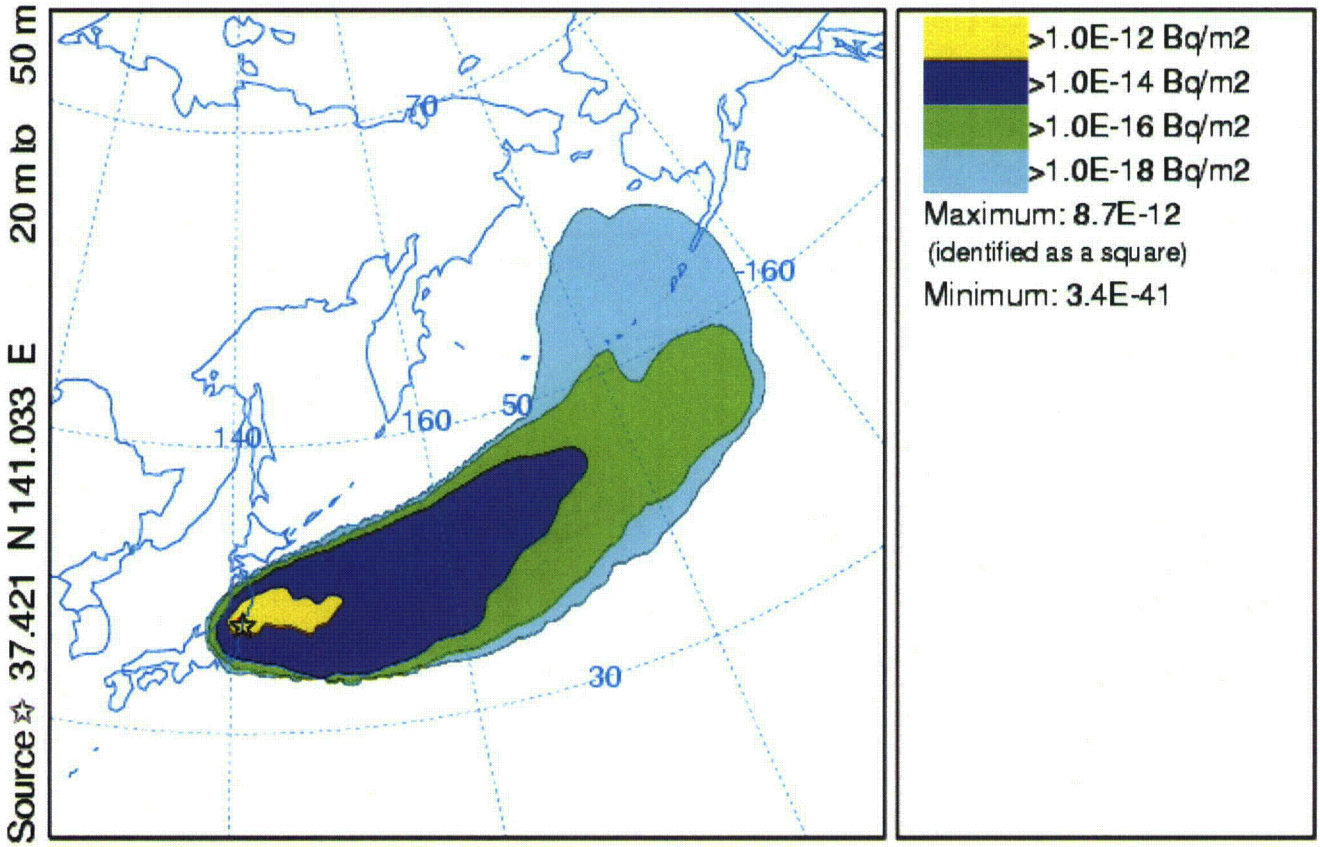
1200 18 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1943UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 18 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 18 Mar to 1200 21 Mar 11 (UTC)
C137 Release started at 1940 18 Mar 11 (UTC)



1200 18 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1943UTC 18/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 18 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

From:	HOO Hoc
To:	HOO Hoc
Subject:	FW: Fukushima Hysplit Output - 03/19/2011 06Z Model Run
Date:	Saturday, March 19, 2011 9:34:35 AM
Attachments:	2011031912.FUKUSHIMA-DAIICHI-1.rsmc16.pdf

-----Original Message-----
From: NITOPS [mailto:NITOPS@nnsa.doe.gov]
Sent: Saturday, March 19, 2011 9:33 AM
To: CMHT; HOO Hoc; NARAC; PMT01 Hoc; PMT02 Hoc
Cc: NITOPS
Subject: FW: Fukushima Hysplit Output - 03/19/2011 06Z Model Run

Nuclear Incident Team (NIT)
Office of Emergency Response (NA-42)
National Nuclear Security Administration U.S. Department of Energy nitops@nnsa.doe.gov
nit@doe.sgov.gov 202-586-8100

-----Original Message-----
From: sdm [mailto:Sdm@noaa.gov]
Sent: Saturday, March 19, 2011 9:32 AM
To: oar.jp.iaea.results@noaa.gov
Subject: Fukushima Hysplit Output - 03/19/2011 06Z Model Run

Attached is the latest NOAA Hysplit dispersion model run with a simulated release time of 03/19/2011 1306Z, release duration of 30 hours, and model run duration of 72 hours using the 06Z NCEP GFS.

This simulation was not an official request from the IAEA. This output reflects trajectories and dispersion of simulated current and future releases and does not reflect potential previous releases.

SDM Randal Shruell

EE136

U.S. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
RSMC Washington (NOAA ARL, NOAA NCEP)

Room 410 - W/NMC33
World Weather Building
5200 Auth Road
Camp Springs, Maryland USA

Tel (24 hrs - NCEP): 301-763-8298
Tel (Backup - ARL): 301-713-2614
Fax (24 hrs - NCEP): 301-763-8592
Fax (Backup - ARL): 301-713-4592

RSMC products created Sat Mar 19 13:09 UTC 2011

The following charts will follow:
- trajectory map
- several time-itegrated concentration maps
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

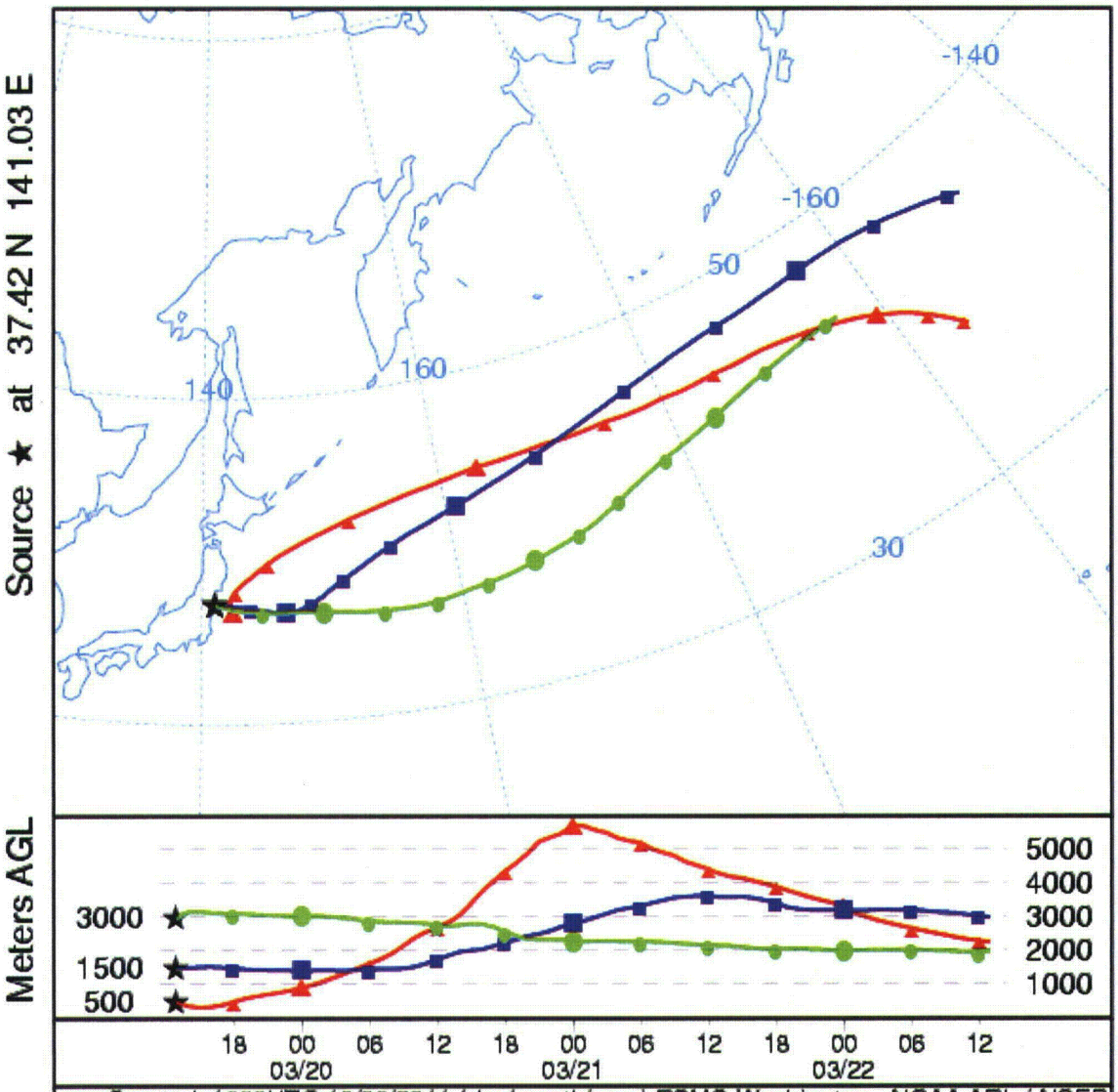
Source term and dispersion model details

RSMC Washington - NOAA ARL / NCEP

Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329
Release Start (YYYY MM DD HH MM):2011 03 19 13 06
Meteorology: 0600 UTC 19 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Note: Contour values may change from chart to chart

NOAA HYSPLIT MODEL
Forward trajectories starting at 13 UTC 19 Mar 11
06 UTC 19 Mar GFSG Forecast Initialization

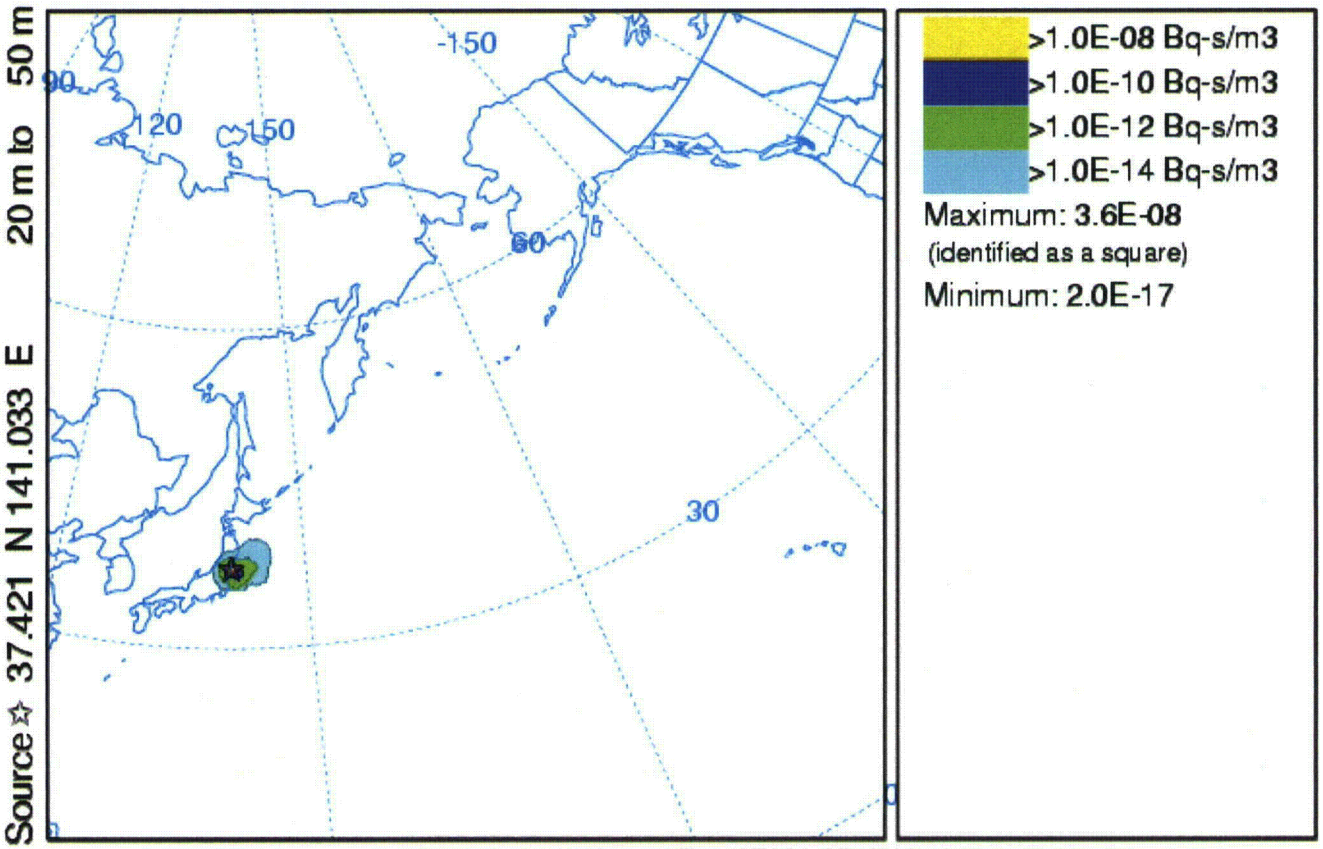


Created: 1309UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 height:500.0 1500.0 3000

Trajectory Direction:forward Duration:72 hr
Vertical Motion Calculation Method: Model Vertical Velocity
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 19 Mar to 1200 20 Mar 11 (UTC)
C137 Release started at 1306 19 Mar 11 (UTC)



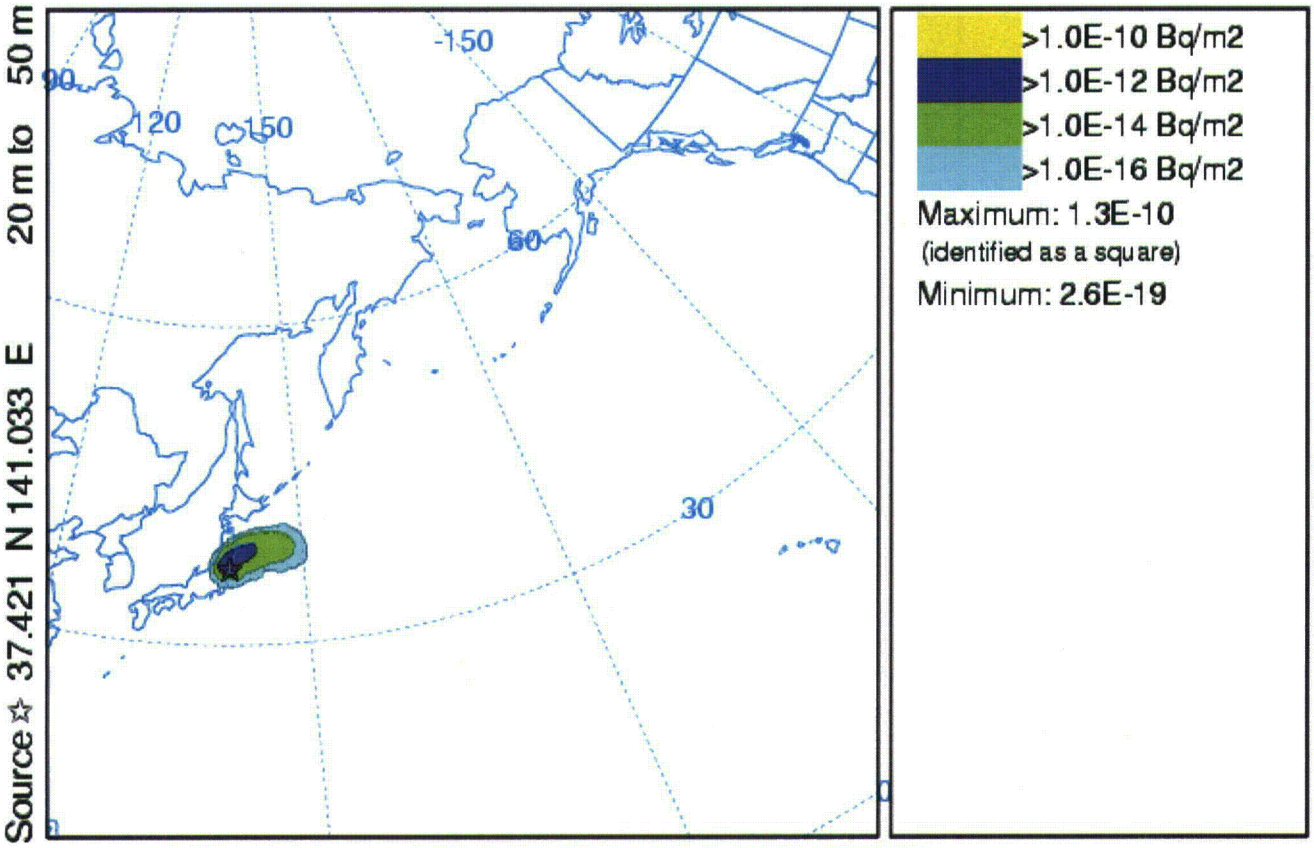
0600 19 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1309UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 0600 UTC 19 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 19 Mar to 1200 20 Mar 11 (UTC)
C137 Release started at 1306 19 Mar 11 (UTC)



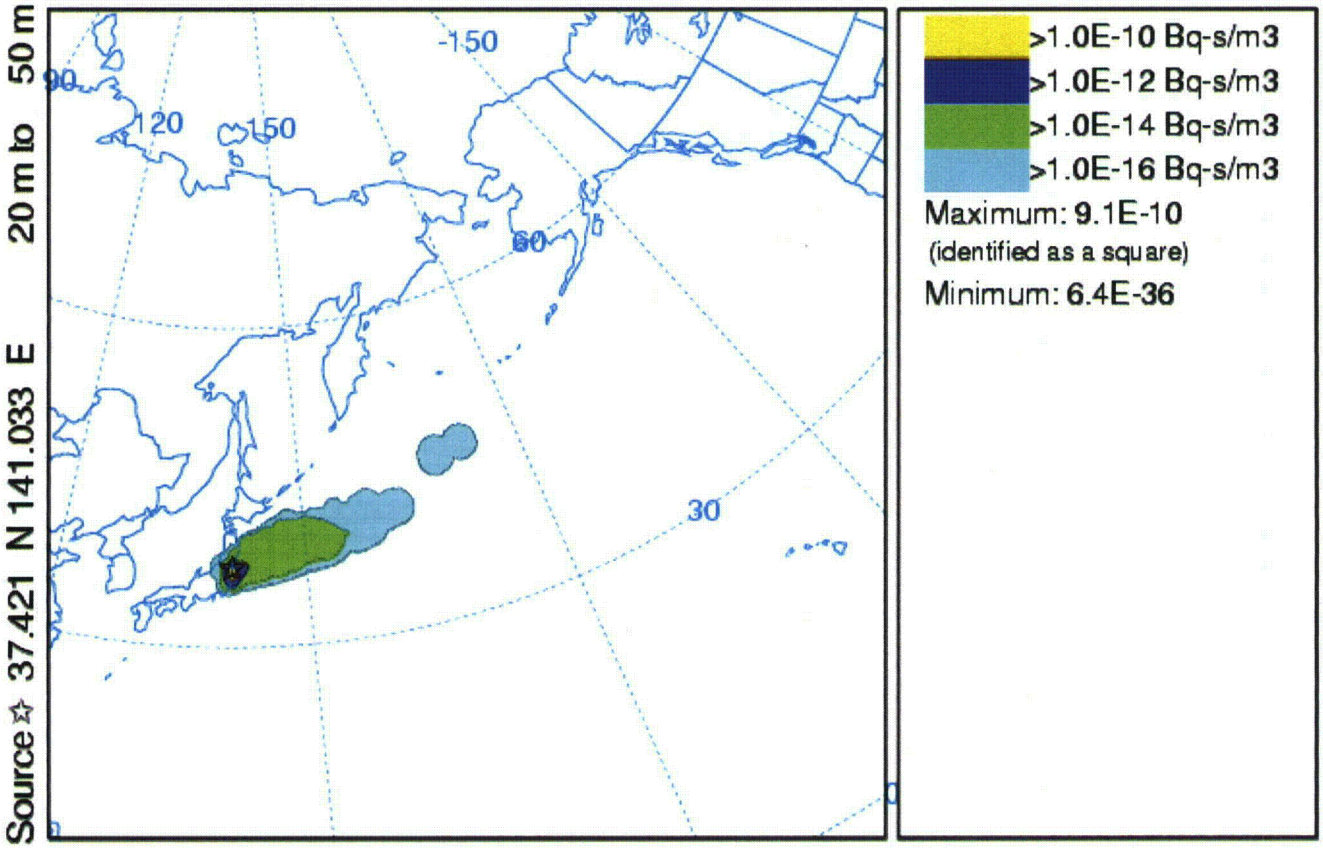
0600 19 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1309UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 0600 UTC 19 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 20 Mar to 1200 21 Mar 11 (UTC)
C137 Release started at 1306 19 Mar 11 (UTC)



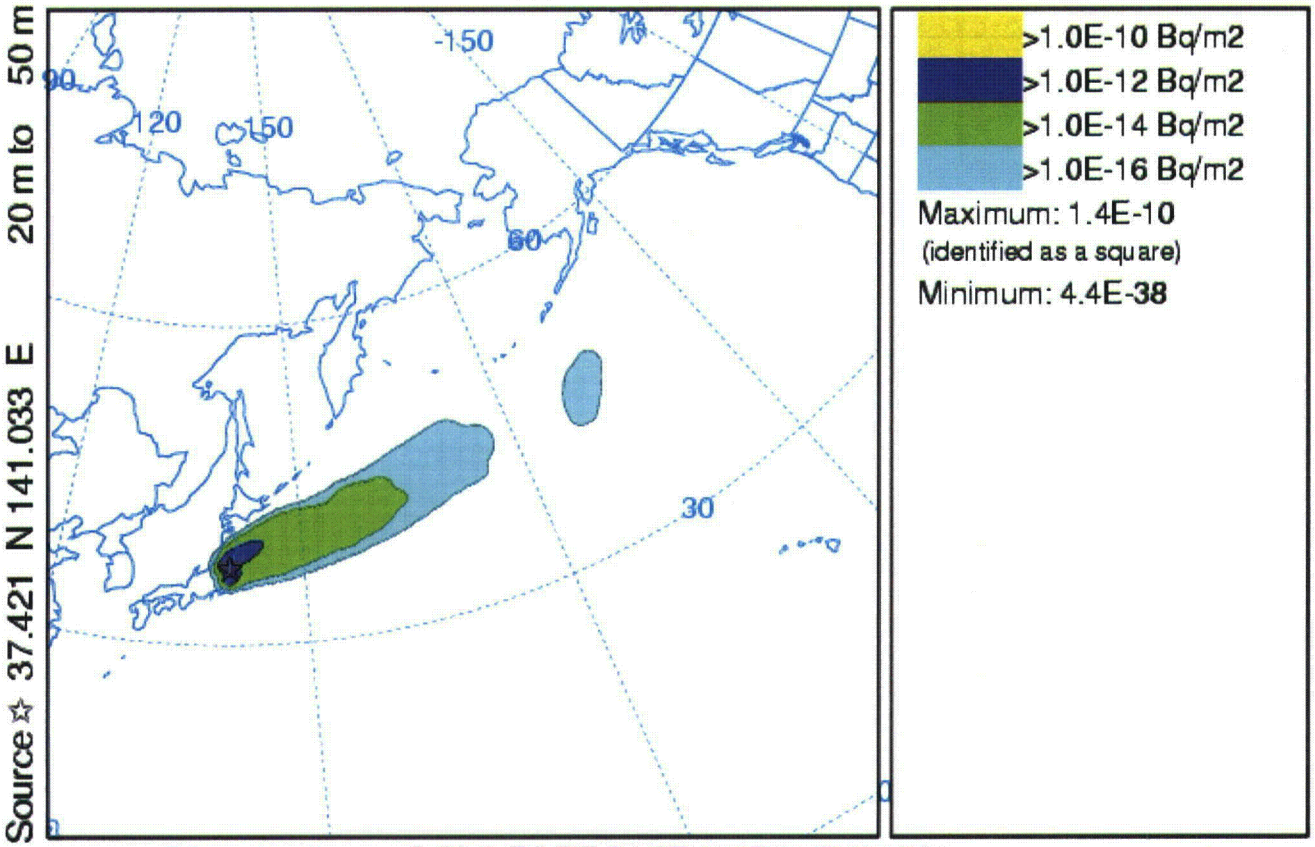
0600 19 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1309UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 0600 UTC 19 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 19 Mar to 1200 21 Mar 11 (UTC)
C137 Release started at 1306 19 Mar 11 (UTC)



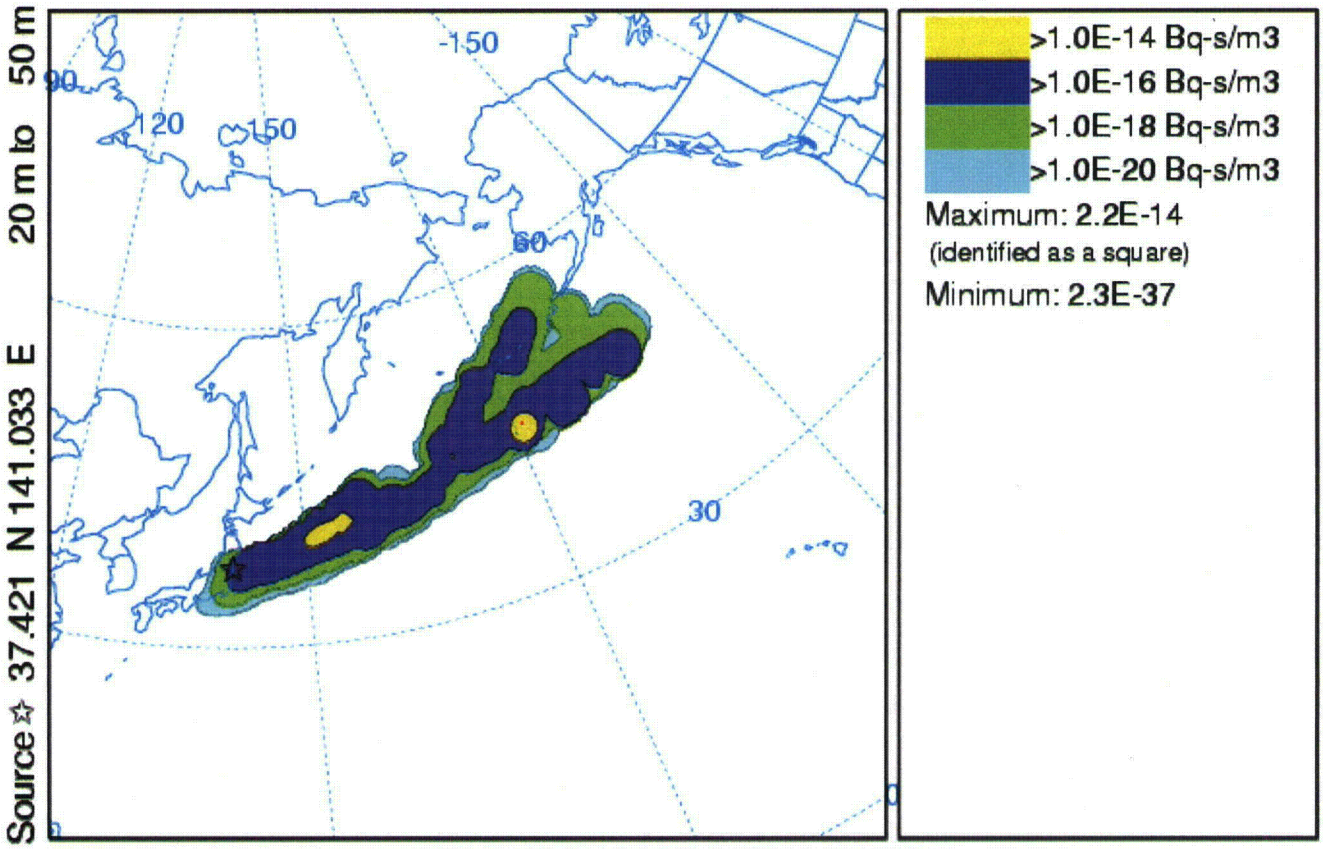
0600 19 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1309UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 0600 UTC 19 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 21 Mar to 1200 22 Mar 11 (UTC)
C137 Release started at 1306 19 Mar 11 (UTC)



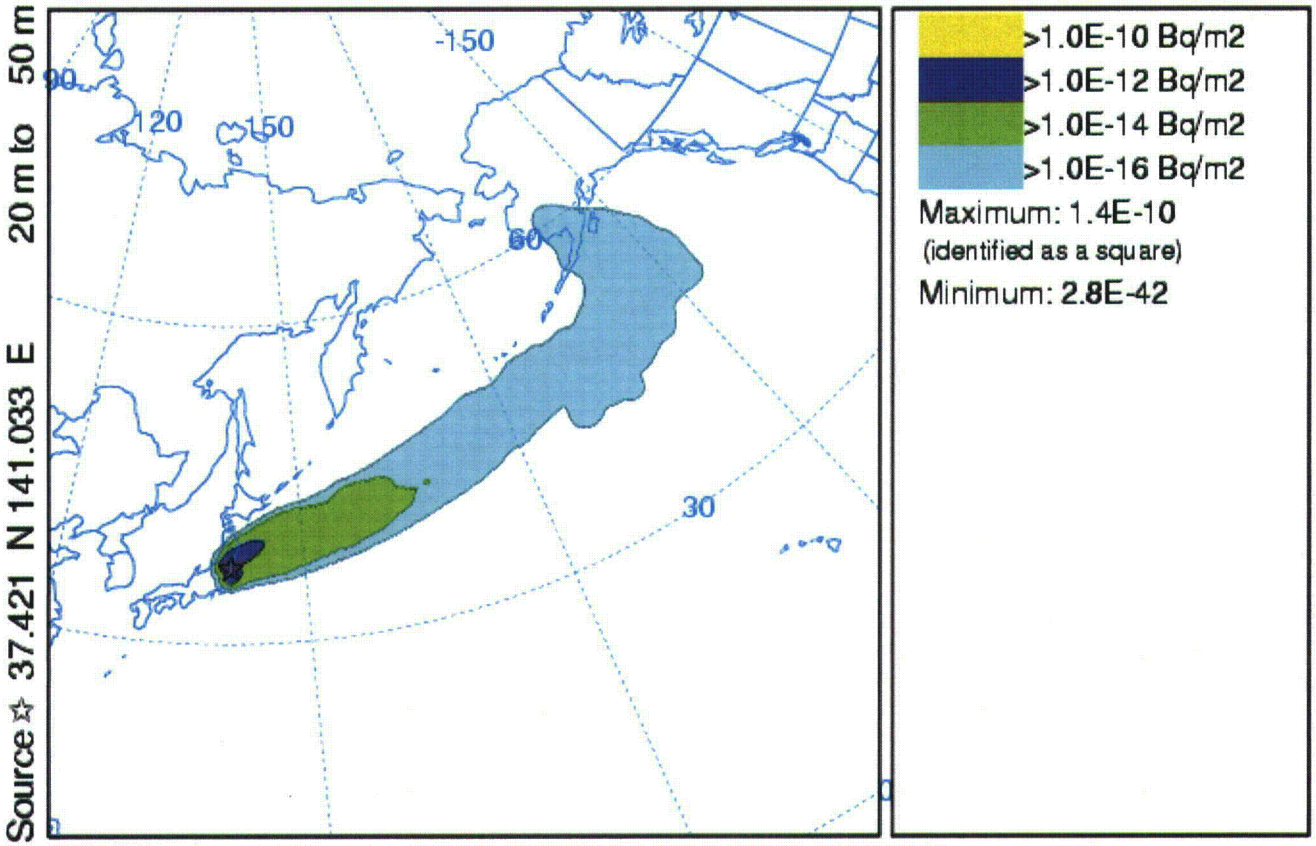
0600 19 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1309UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 0600 UTC 19 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 19 Mar to 1200 22 Mar 11 (UTC)
C137 Release started at 1306 19 Mar 11 (UTC)



0600 19 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1309UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 0600 UTC 19 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

From:	NITOPS
To:	CMHT; HOO Hoc; NARAC; PMT01 Hoc; PMT02 Hoc
Subject:	FW: Fukushima Hysplit Output - 03/19/2011 12Z Model Run
Date:	Saturday, March 19, 2011 2:18:01 PM
Attachments:	2011031912.FUKUSHIMA-DAIICHI-1.rsmc17.pdf

-----Original Message-----
From: sdm [mailto:Sdm@noaa.gov]
Sent: Saturday, March 19, 2011 2:13 PM
To: oar.jp.iaea.results@noaa.gov
Subject: Fukushima Hysplit Output - 03/19/2011 12Z Model Run

Attached is the latest NOAA Hysplit dispersion model run with a simulated release time of 03/19/2011 1757Z, release duration of 30 hours, and model run duration of 72 hours using the 12Z NCEP GFS.

This simulation was not an official request from the IAEA. This output reflects trajectories and dispersion of simulated current and future releases and does not reflect potential previous releases.

SDM Randal Shruell

EE137

U.S. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
RSMC Washington (NOAA ARL, NOAA NCEP)

Room 410 - W/NMC33
World Weather Building
5200 Auth Road
Camp Springs, Maryland USA

Tel (24 hrs - NCEP): 301-763-8298
Tel (Backup - ARL): 301-713-2614

Fax (24 hrs - NCEP): 301-763-8592
Fax (Backup - ARL): 301-713-4592

RSMC products created Sat Mar 19 17:59 UTC 2011

The following charts will follow:
- trajectory map
- several time-itegrated concentration maps
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

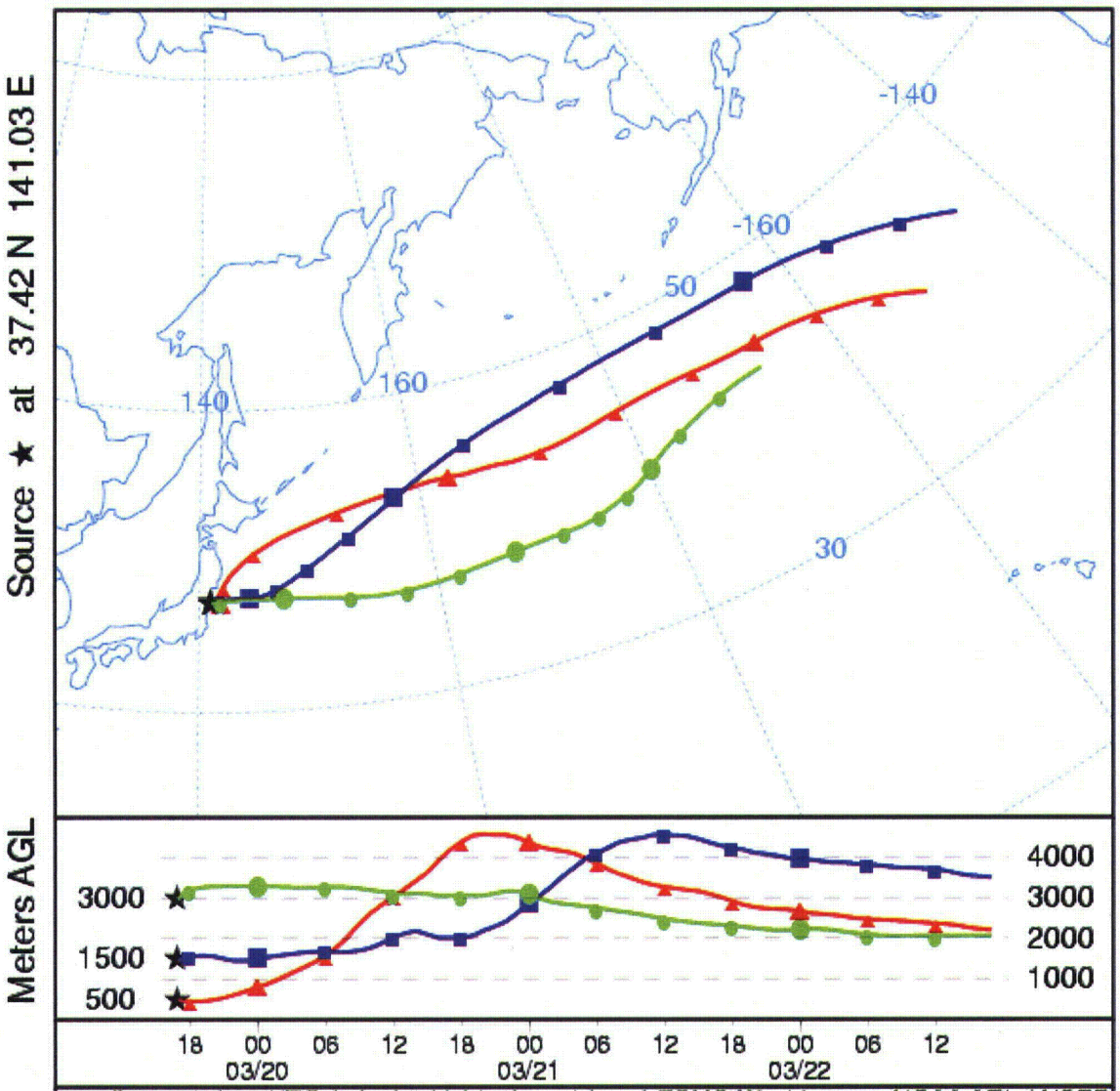
Source term and dispersion model details

RSMC Washington - NOAA ARL / NCEP

Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329
Release Start (YYYY MM DD HH MM):2011 03 19 17 57
Meteorology: 1200 UTC 19 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Note: Contour values may change from chart to chart

NOAA HYSPLIT MODEL
Forward trajectories starting at 17 UTC 19 Mar 11
12 UTC 19 Mar GFSG Forecast Initialization



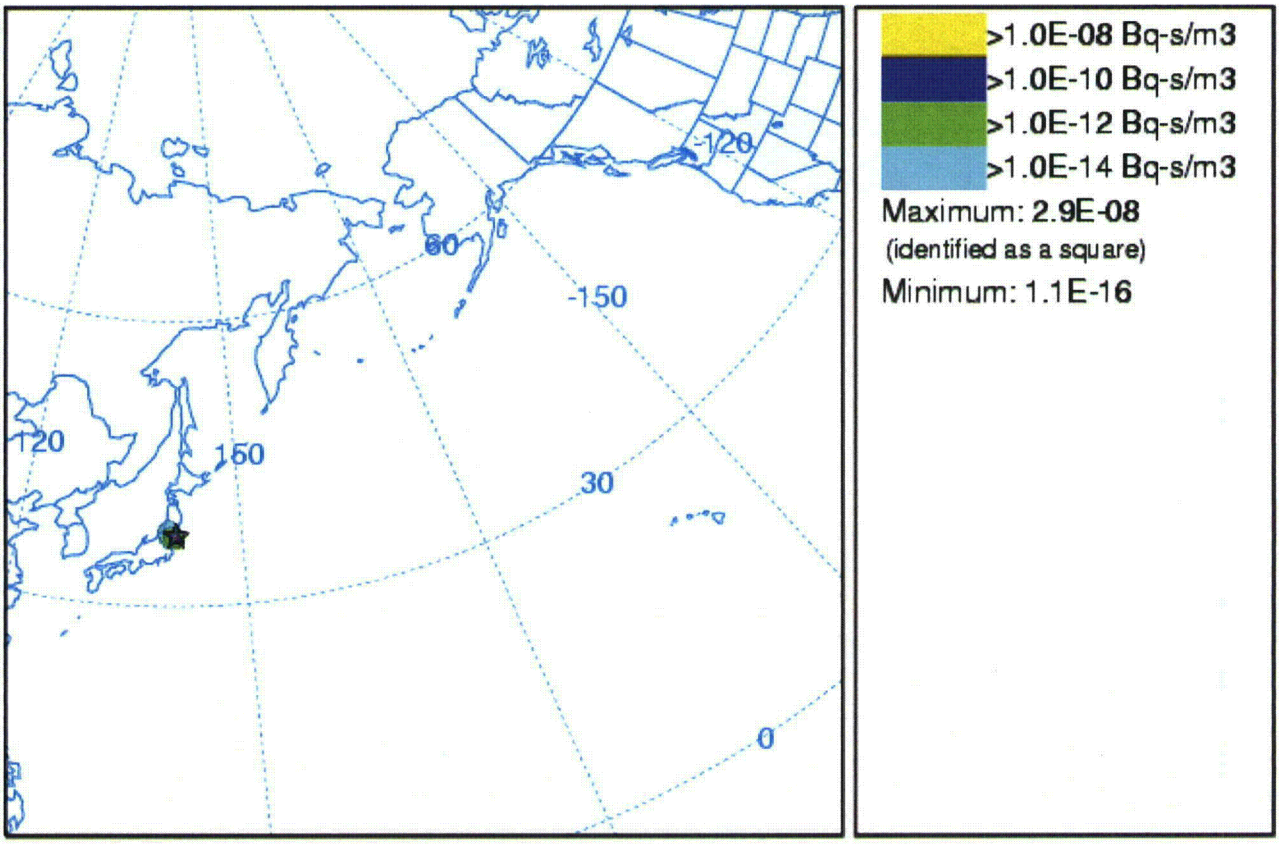
Created: 1759UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 height:500.0 1500.0 3000

Trajectory Direction:forward Duration:72 hr
Vertical Motion Calculation Method: Model Vertical Velocity
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 19 Mar to 1200 20 Mar 11 (UTC)
C137 Release started at 1757 19 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



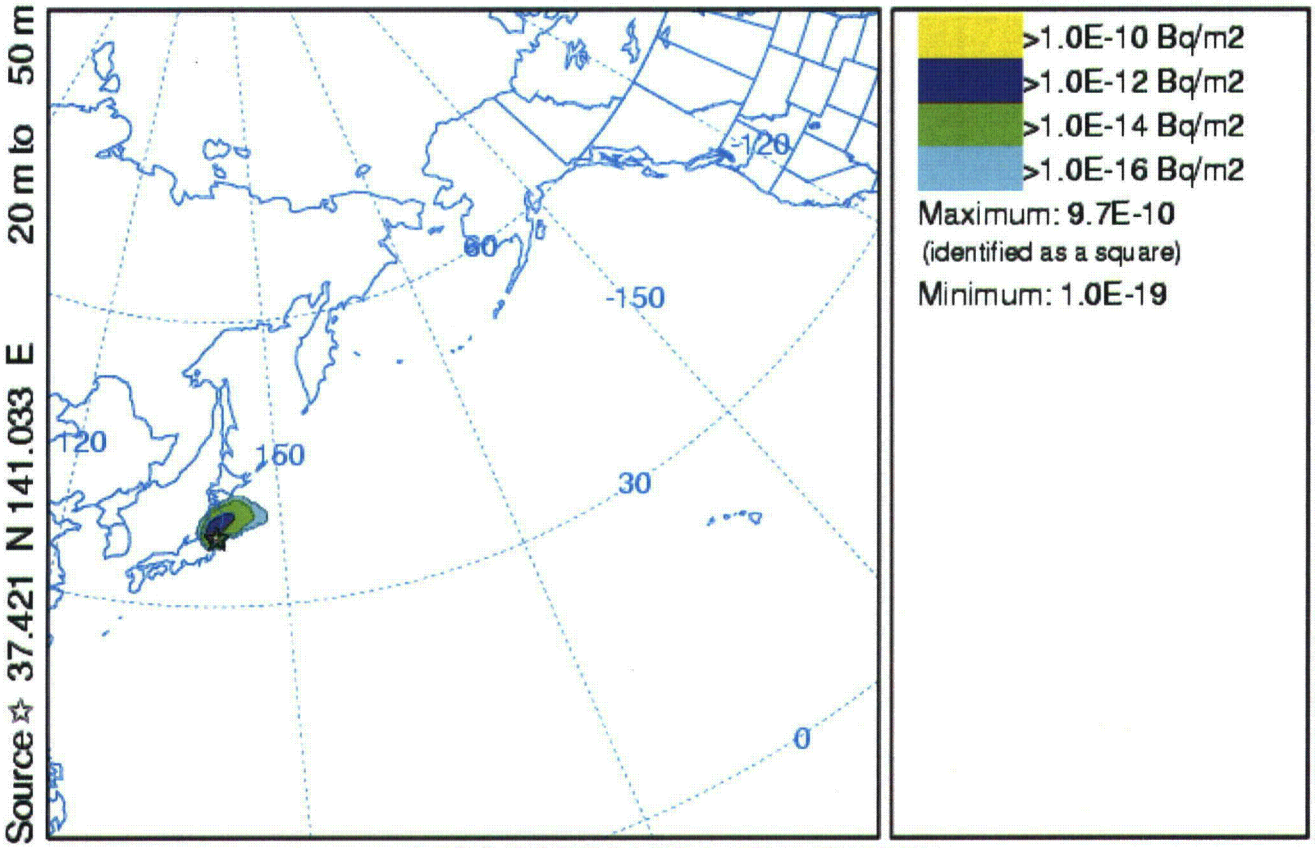
1200 19 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1759UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 19 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 19 Mar to 1200 20 Mar 11 (UTC)
C137 Release started at 1757 19 Mar 11 (UTC)



1200 19 Mar 11 GFSG FORECAST INITIALIZATION

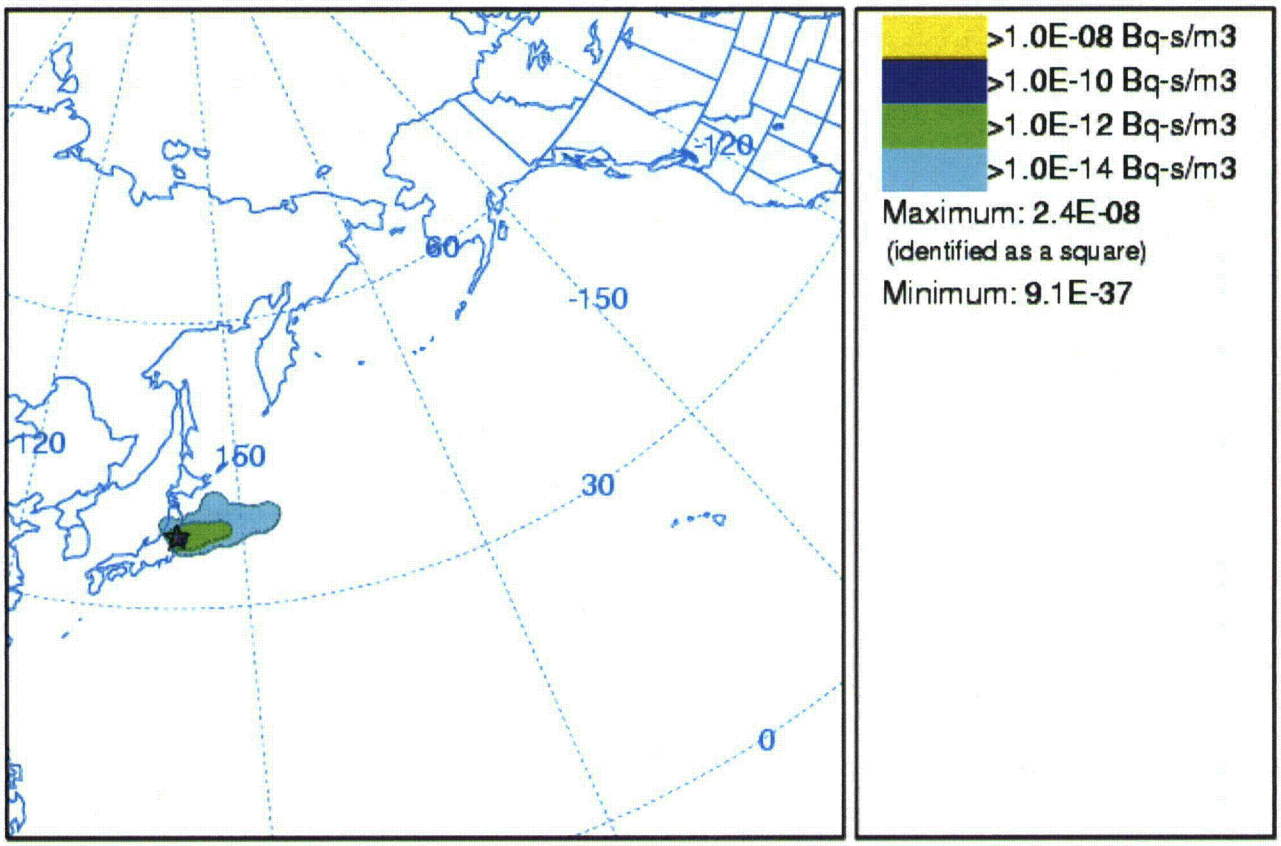
Created: 1759UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 19 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 20 Mar to 1200 21 Mar 11 (UTC)
C137 Release started at 1757 19 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



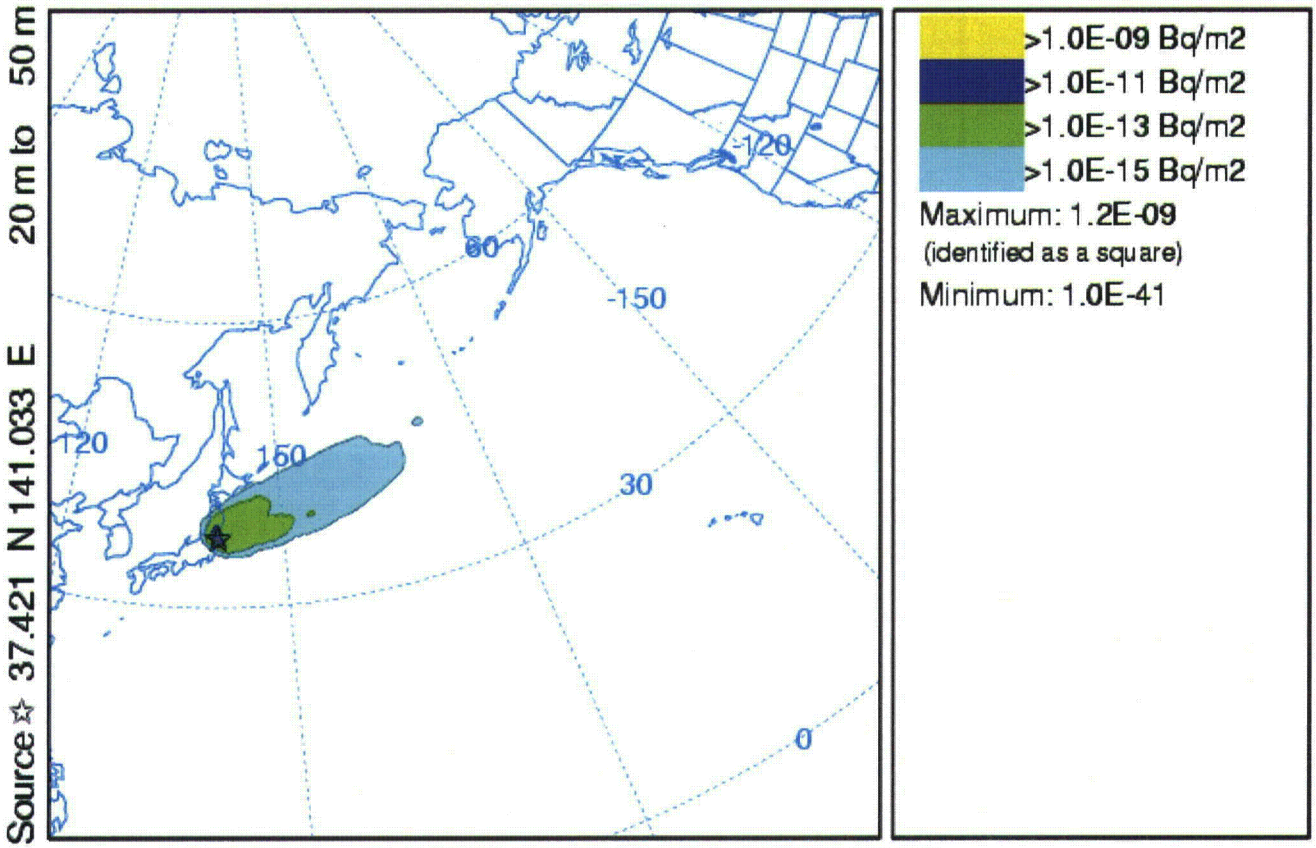
1200 19 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1759UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 19 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 19 Mar to 1200 21 Mar 11 (UTC)
C137 Release started at 1757 19 Mar 11 (UTC)



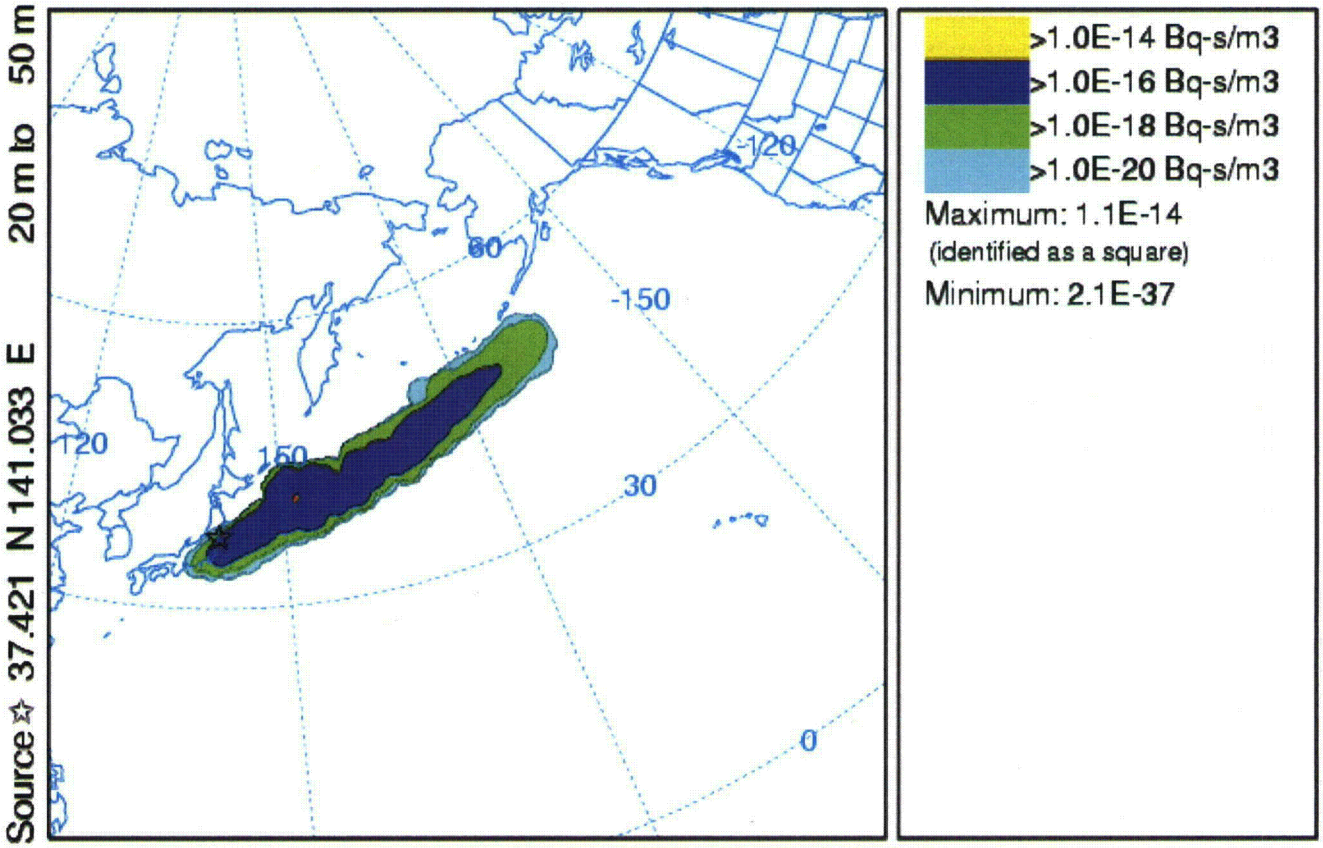
1200 19 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1759UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 19 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 21 Mar to 1200 22 Mar 11 (UTC)
C137 Release started at 1757 19 Mar 11 (UTC)



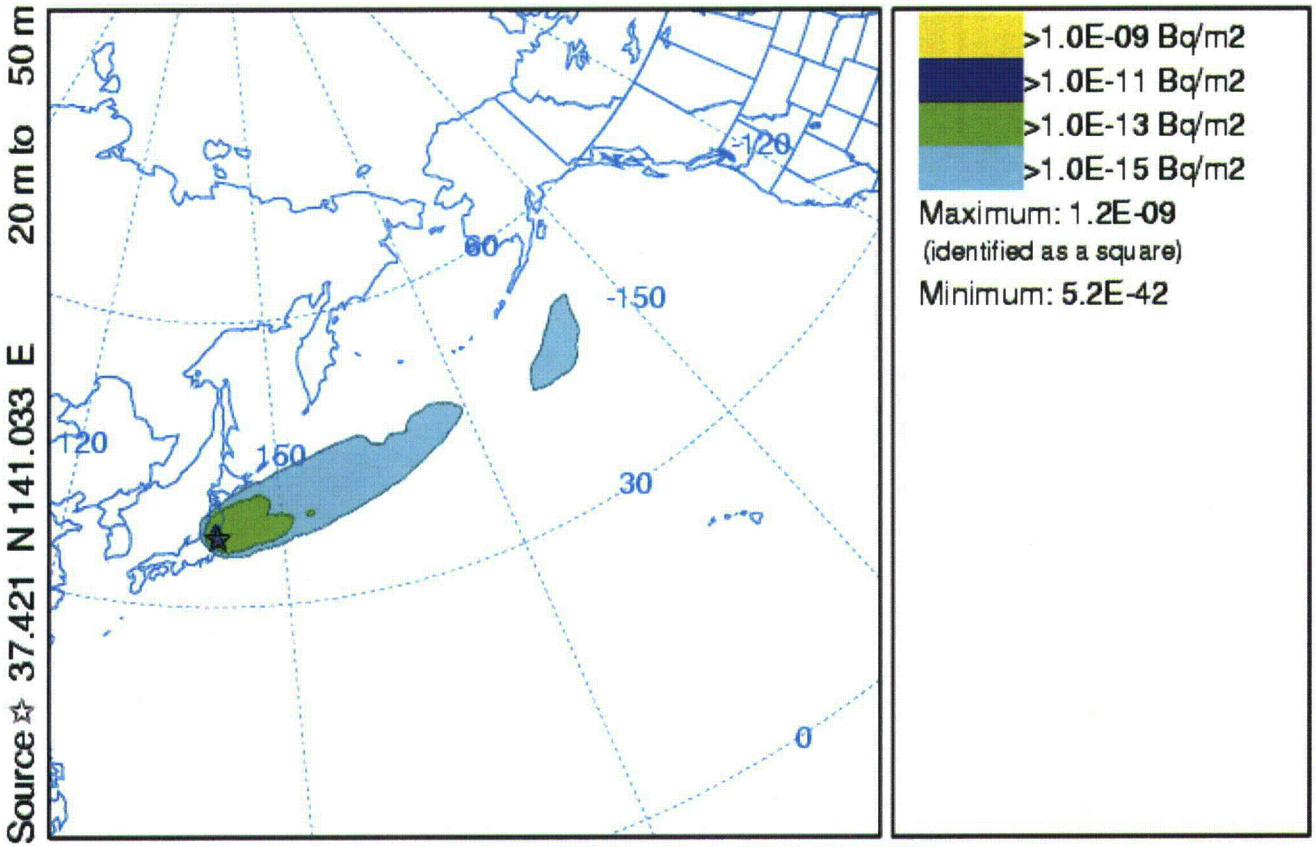
1200 19 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1759UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 19 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 19 Mar to 1200 22 Mar 11 (UTC)
C137 Release started at 1757 19 Mar 11 (UTC)



1200 19 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1759UTC 19/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:C137 Rate: .0333 Bq/hr Duration: 30 hr Particles: 2500
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 19 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

IAEA

Atoms for Peace

الوكالة الدولية للطاقة الذرية
国际原子能机构
International Atomic Energy Agency
Agence Internationale de l'énergie atomique
Международное агентство по атомной энергии
Organismo Internacional de Energía Atómica

Vienna International Centre, PO Box 100, 1400 Vienna, Austria
Phone: (+43 1) 2600 • Fax: (+43 1) 26007
Email: Official.Mail@iaea.org • Internet: http://www.iaea.org

In reply please refer to:
Dial directly to extension: (+431) 2600-

Nuclear Regulatory Commission,
Headquarters Operations Centre,
T-4B 9,
11 555 Rockville Pike,
Rockville,
UNITED STATES OF AMERICA

2011-03-19

Following interest expressed by some Member States in receiving from the Secretariat a summary of data relevant to the Fukushima accident, and in order to increase data sharing and transparency between Member States and the Secretariat, I would be grateful if your country could make available to the Agency the following data (even if the result is below the detection limit):

- Gamma dose rates;
- Activity of fission products in the air (Bq/m3);
- Activity of fission products in environmental media (e.g. surface water, soil, foodstuffs, feedstuffs, vegetation samples) in Bq/kg or Bq/Liter; and
- Surface deposition (Bq/m2).

This data will be processed by the Secretariat and presented in a summary form at the technical briefings organized by the Secretariat for the Member States.

Please direct your response to the IAEA's Incident and Emergency Centre (IEC), email: IEC1@iaea.org

Yours sincerely,

Denis Flory
Deputy Director General
Department of Nuclear Safety and Secuirty

cc: Permanent Mission of the United States of America to the IAEA

M-12/Rev. 8 (Sept 09)

EE/38

From: hoo1
To: HOO Hoc
Subject: Fax from +61386166600
Date: Sunday, March 20, 2011 4:56:03 AM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017770

Notice for: HOO1

Remote ID: +61386166600

Received at: 03/20/2011 04:55

Pages: 6

Routed by:

Routed at: 03/20/2011 04:55

EE139

Bureau of Meteorology
National Meteorological and Oceanographic Centre
Melbourne Australia
RSMC for Environmental Emergency Response
FAX: 61 3 9662 1222 or 61 3 9662 1223
Telephone (24 hours) Shift Supervisor 61 3 9669 4035
Email: rto@bom.gov.au

EMERGENCY EMERGENCY

RSMC Melbourne EER Products

Issued at : 0827 UTC 20:Mar:2011

The following charts will follow:
- trajectory map
- several time-integrated concentration map
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

Source term and dispersion model details

Location name: Fukushima Daiichi Japan

Release Location(decimal degrees): 37.4206 N 141.329 E

Release Time/Date: 0730 UTC 20 MAR 2011

Emissision duration: 72

Emission (per hour): 1.39E-02

Substance released: I131 (8.04398E+00)

Vertical distribution: UNIFORM

Meteorological Model: Access G (~80km/29 sigma lvls)

Dispersion Model: HYSPLIT 4.9

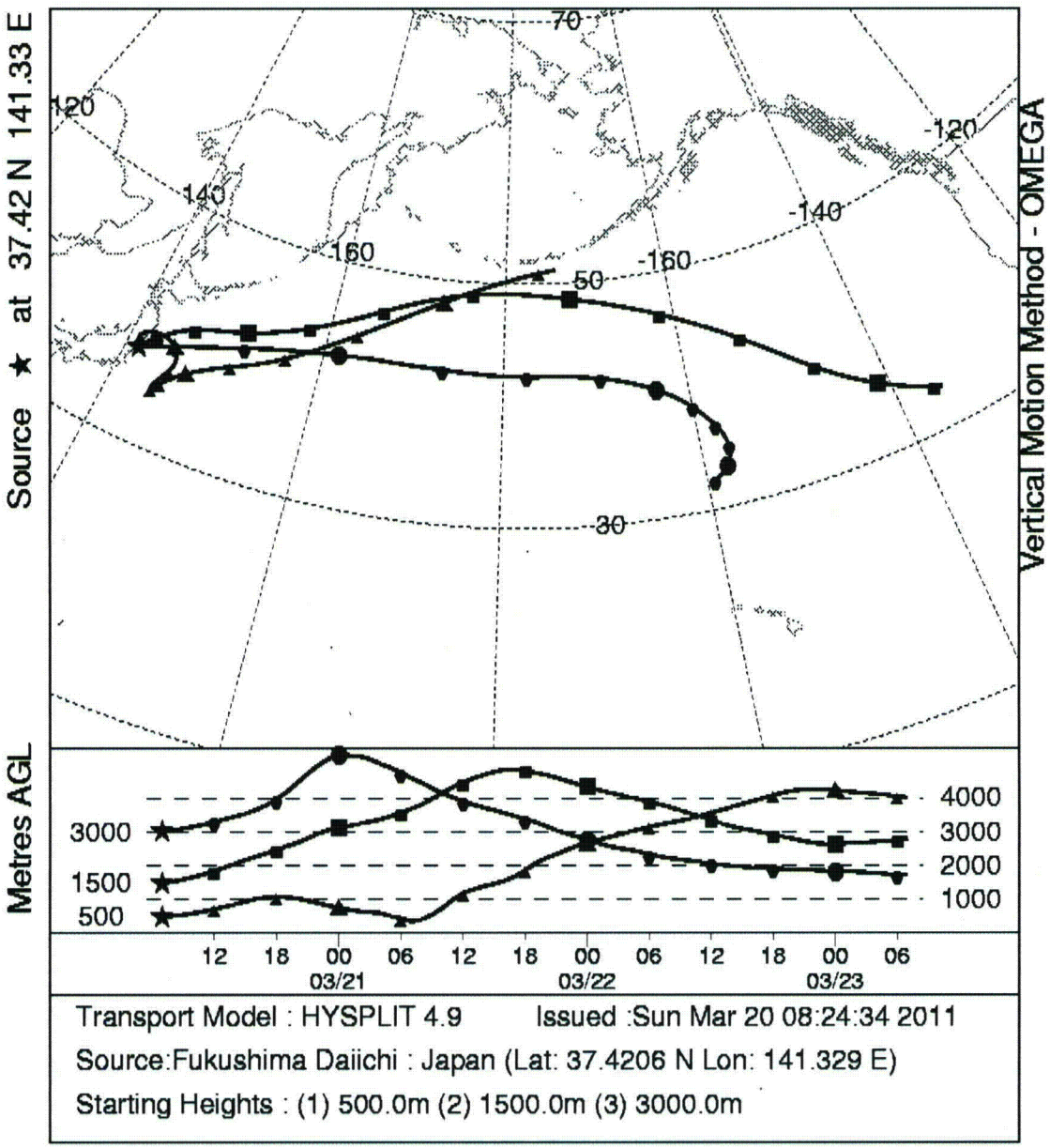
Number of Pages (incl cover sheet) = 6

RSMC Melbourne : Environmental Emergency Response Centre

Forward trajectories starting at 0730 UTC 20 Mar 2011

Meteorological Data : ACCESS-G : base time 0000 UTC 20 Mar

OPERATIONAL EVENT OPERATIONAL EVENT



Transport Model : HYSPLIT 4.9 Issued :Sun Mar 20 08:24:34 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.329 E)

Starting Heights : (1) 500.0m (2) 1500.0m (3) 3000.0m

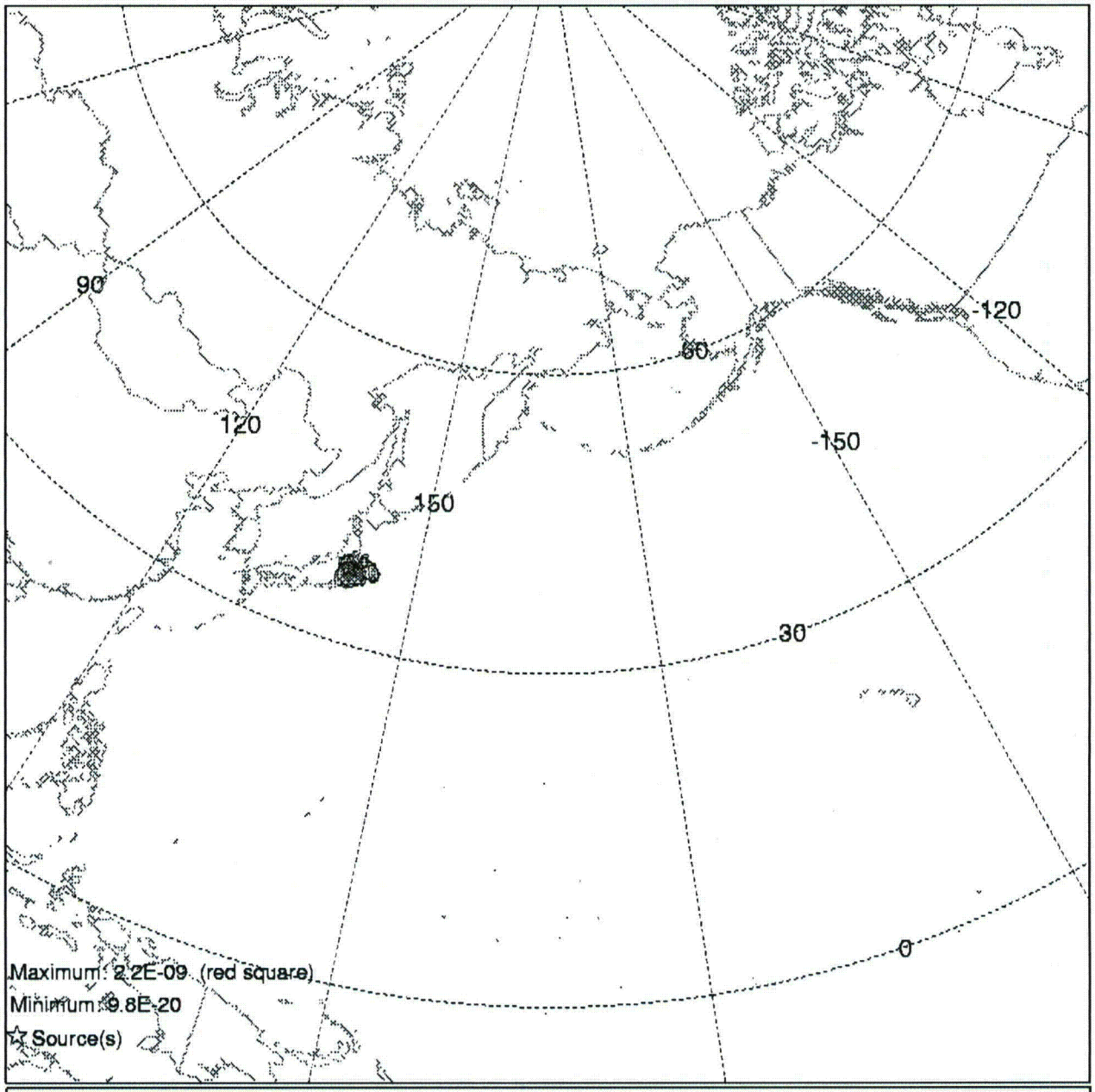
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 20 Mar to 0000 21 Mar 11 (UTC)

Exposure (Bq-s/m3) averaged between 0 m and 500 m

>1.0E-09 >1.0E-11 >1.0E-13 >1.0E-15



NRAD RELEASE STARTED AT 0700 UTC20 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.329 E)

Isotope : I131 (Halflife: 8.04398E+00 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 20 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sun Mar 20 08:24:34 2011

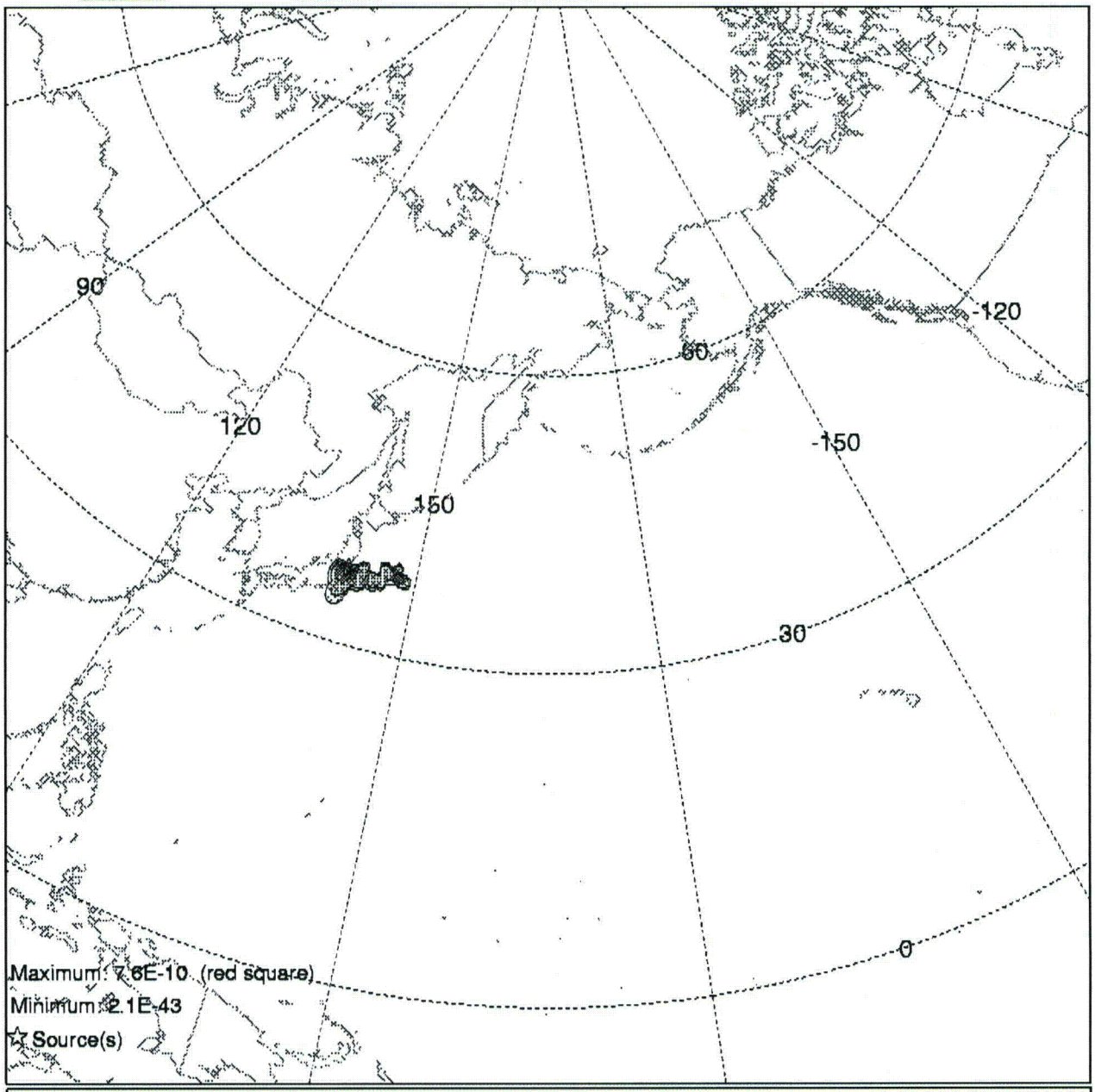
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 21 Mar to 0000 22 Mar 11 (UTC)

Exposure (Bq-s/m3) averaged between 0 m and 500 m

>1.0E-10 >1.0E-12 >1.0E-14 >1.0E-16



NRAD RELEASE STARTED AT 0700 UTC20 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.329 E)

Isotope : I131 (Halflife: 8.04398E+00 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 20 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sun Mar 20 08:24:34 2011

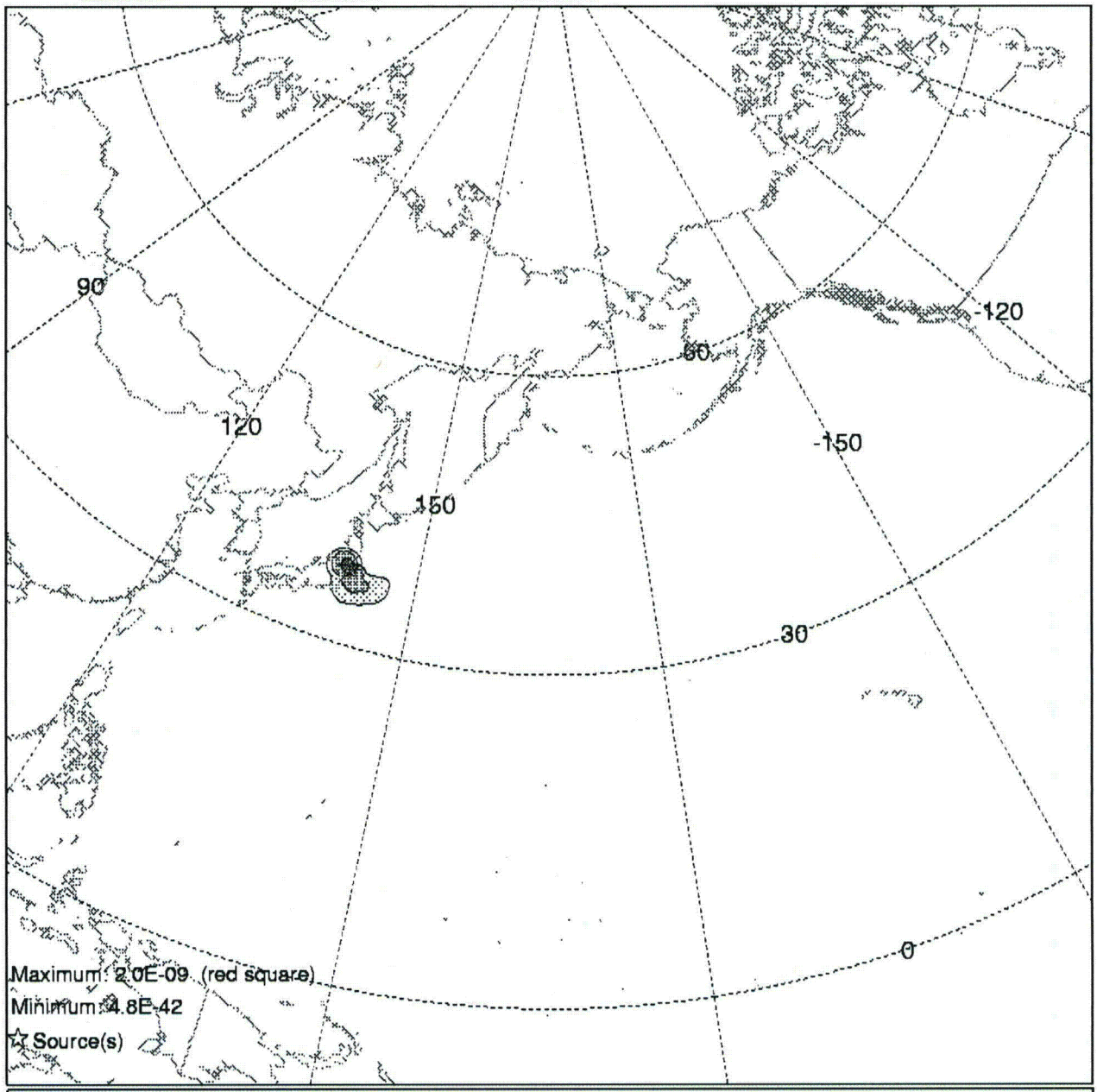
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 22 Mar to 0000 23 Mar 11 (UTC)

Exposure (Bq-s/m3) averaged between 0 m and 500 m

>1.0E-09 >1.0E-11 >1.0E-13 >1.0E-15



NRAD RELEASE STARTED AT 0700 UTC20 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.329 E)

Isotope : I131 (Halflife: 8.04398E+00 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 20 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sun Mar 20 08:24:34 2011

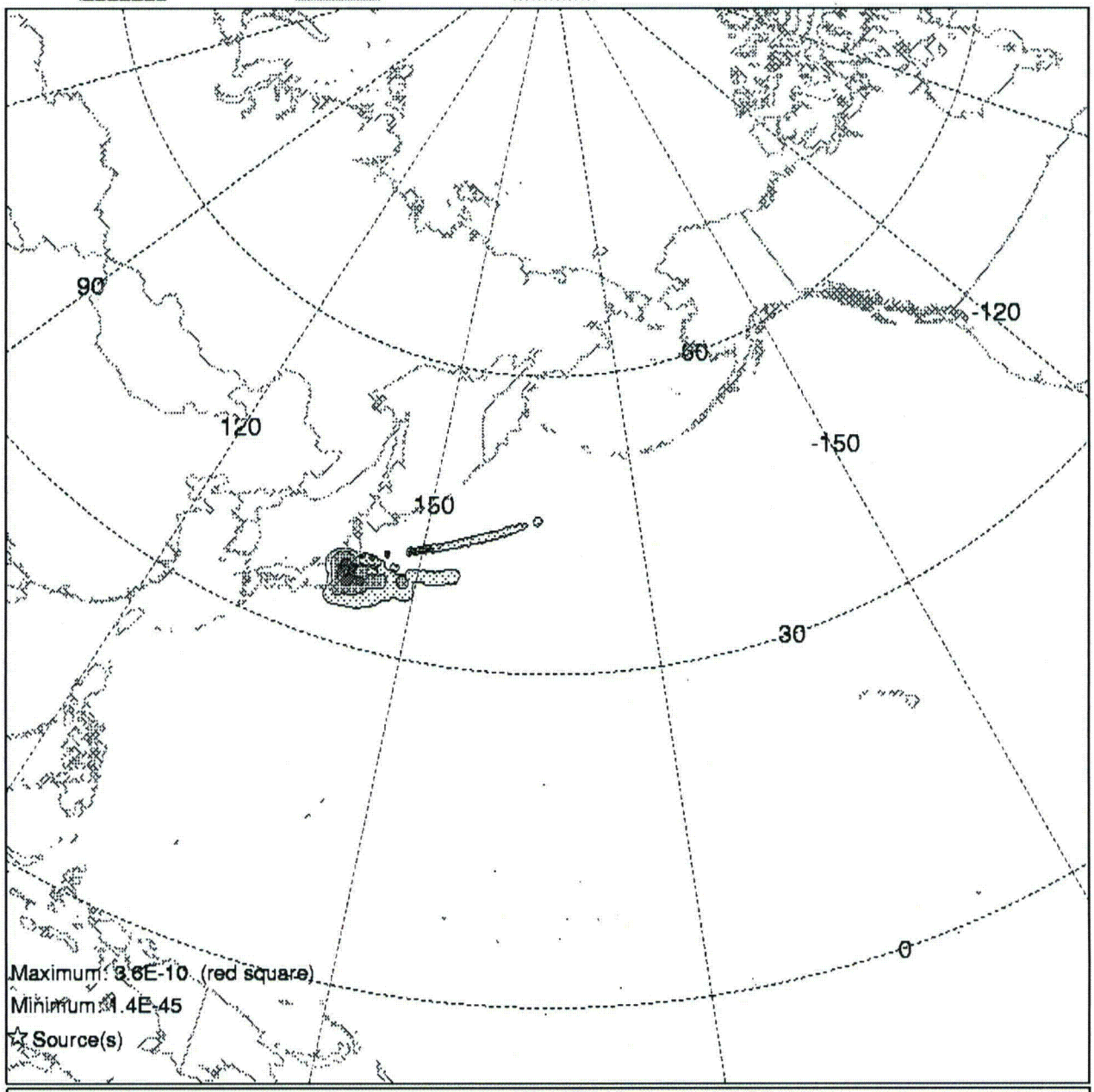
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 20 Mar to 0000 23 Mar 11 (UTC)

Deposition (Bq/m2) at ground-level

>1.0E-10 >1.0E-12 >1.0E-14 >1.0E-16



NRAD RELEASE STARTED AT 0700 UTC20 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.329 E)

Isotope : I131 (Halflife: 8.04398E+00 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 20 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sun Mar 20 08:24:34 2011

From:	NITOPS
To:	CMHT; HQO Hoc; NARAC; PMT01 Hoc; PMT02 Hoc; Hoc. PMT12
Subject:	FW: Fukushima Hysplit Output - 03/21/2011 06Z Model Run
Date:	Monday, March 21, 2011 9:43:10 AM
Attachments:	2011032112.FUKUSHIMA-DAIICHI-1.rsmc26.pdf

-----Original Message-----
From: sdm [mailto:Sdm@noaa.gov]
Sent: Monday, March 21, 2011 9:06 AM
To: oar.jp.iaea.results@noaa.gov
Cc: Sdm@noaa.gov
Subject: Fukushima Hysplit Output - 03/21/2011 06Z Model Run

Attached is the latest NOAA Hysplit dispersion model run with a simulated release time of 03/21/2011 1245Z, release duration of 72 hours, and model run duration of 72 hours using the 3/21/06Z NCEP GFS.

This simulation was not an official request from the IAEA. This output reflects trajectories and dispersion of simulated current and future releases and does not reflect potential previous releases.

SDM Grant Newby

EE/40

U.S. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

RSMC Washington (NOAA ARL, NOAA NCEP)

Room 410 - W/NMC33
World Weather Building
5200 Auth Road
Camp Springs, Maryland USA

Tel (24 hrs - NCEP): 301-763-8298
Tel (Backup - ARL): 301-713-2614

Fax (24 hrs - NCEP): 301-763-8592
Fax (Backup - ARL): 301-713-4592

RSMC products created Mon Mar 21 12:45 UTC 2011

The following charts will follow:
- trajectory map
- several time-itegrated concentration maps
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

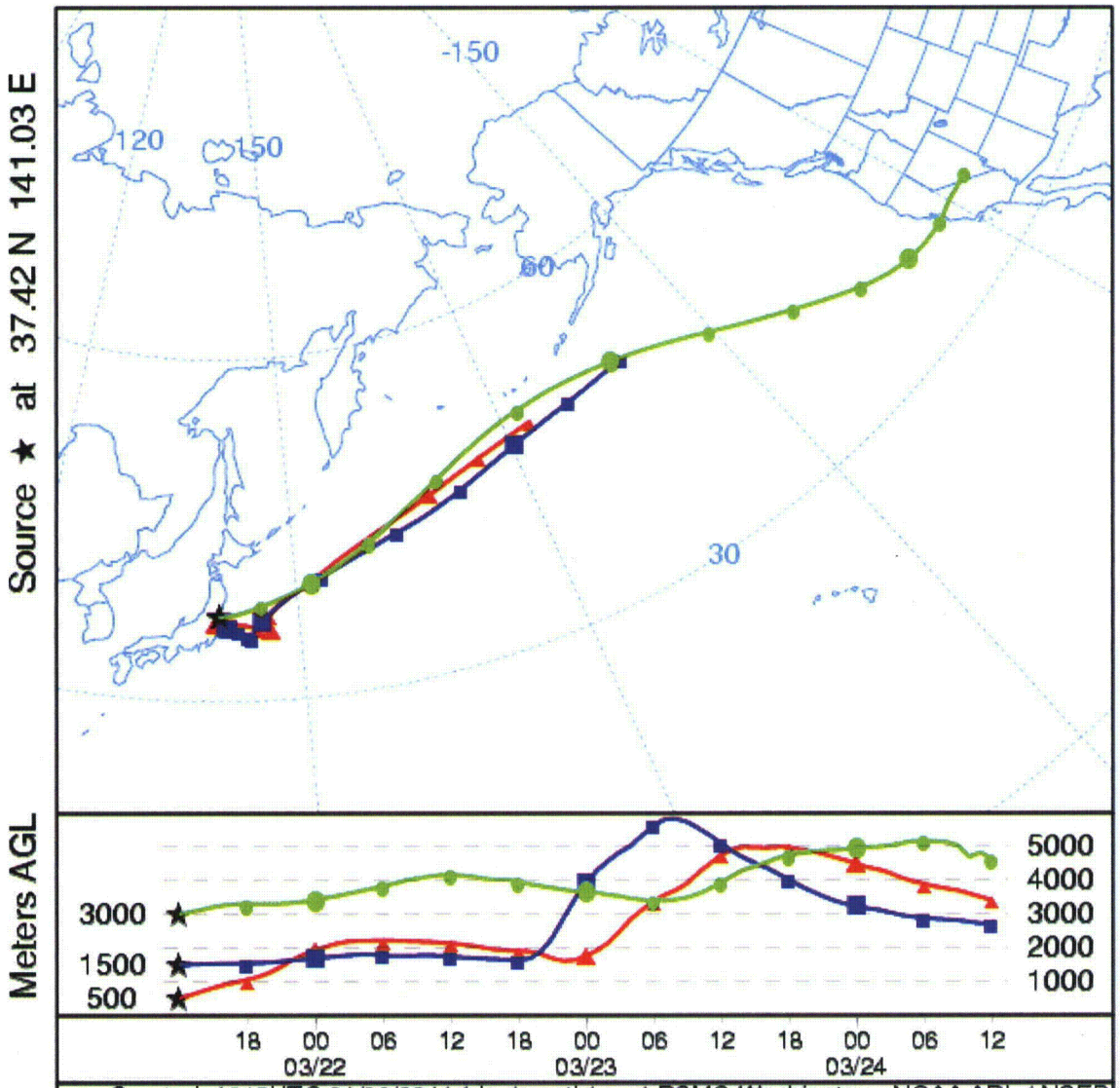
Source term and dispersion model details

RSMC Washington - NOAA ARL / NCEP

Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329
Release Start (YYYY MM DD HH MM):2011 03 21 12 45
Meteorology: 0600 UTC 21 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20
Note: Contour values may change from chart to chart

NOAA HYSPLIT MODEL
Forward trajectories starting at 12 UTC 21 Mar 11
06 UTC 21 Mar GFSG Forecast Initialization



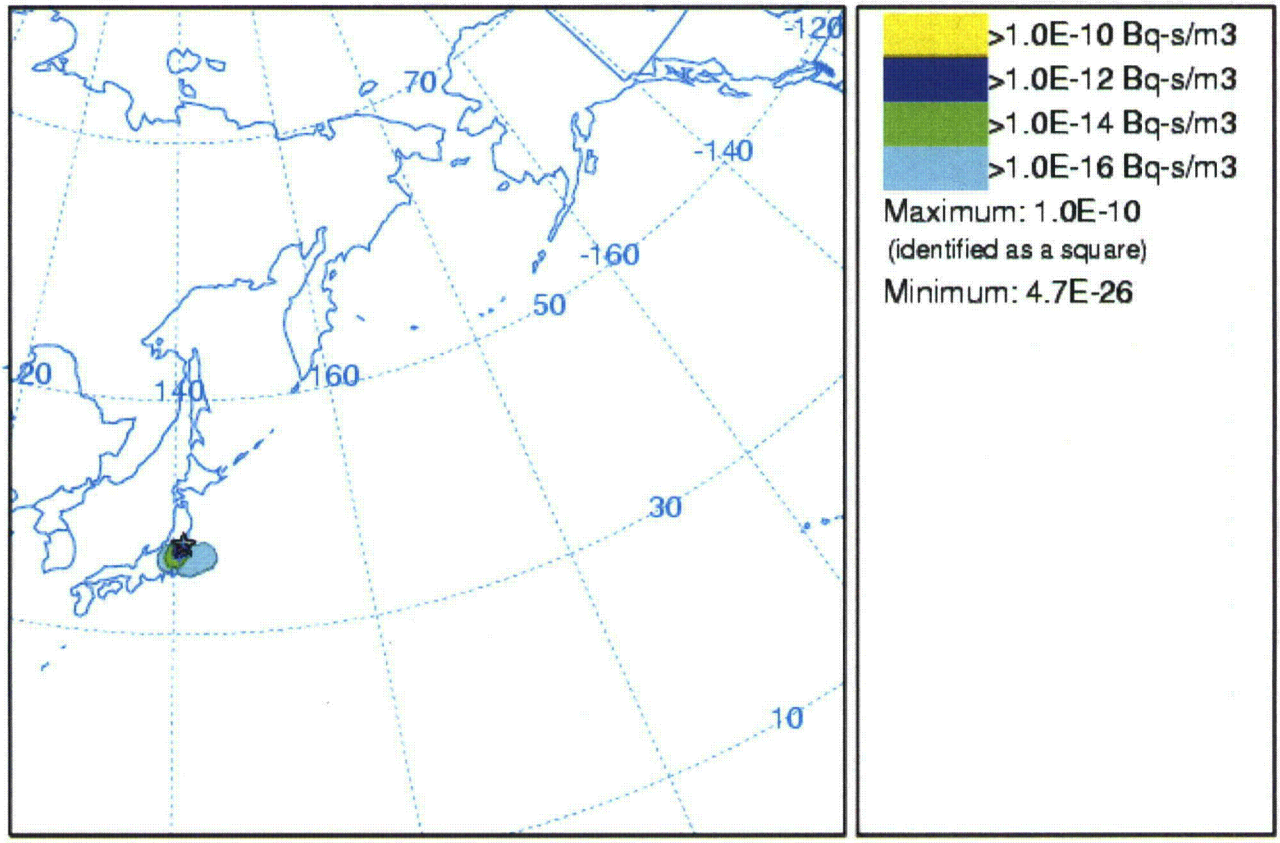
Created: 1245UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 height:500.0 1500.0 3000

Trajectory Direction:forward Duration:72 hr
Vertical Motion Calculation Method: Model Vertical Velocity
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 21 Mar to 1200 22 Mar 11 (UTC)
I131 Release started at 1245 21 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



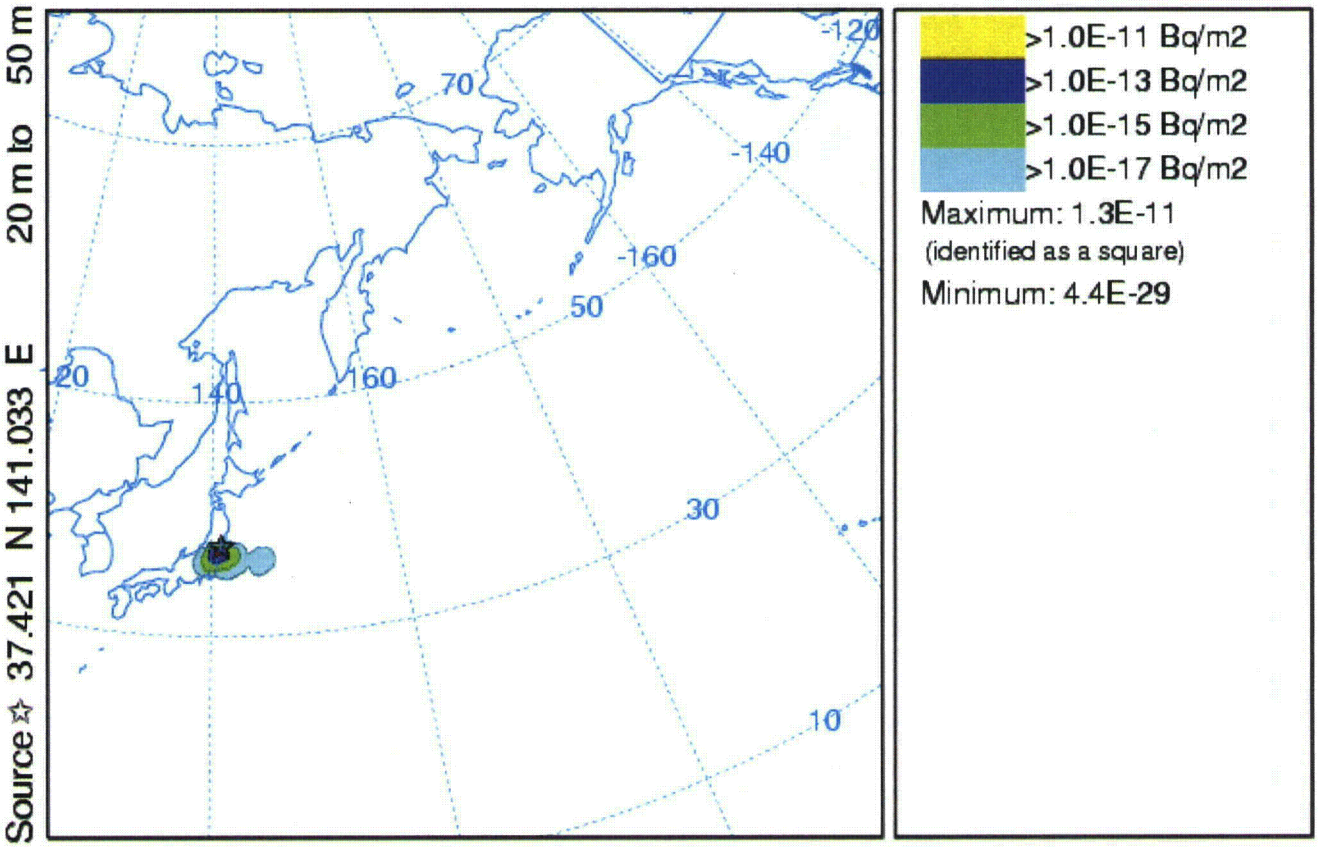
0600 21 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1245UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0600 UTC 21 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 21 Mar to 1200 22 Mar 11 (UTC)
I131 Release started at 1245 21 Mar 11 (UTC)



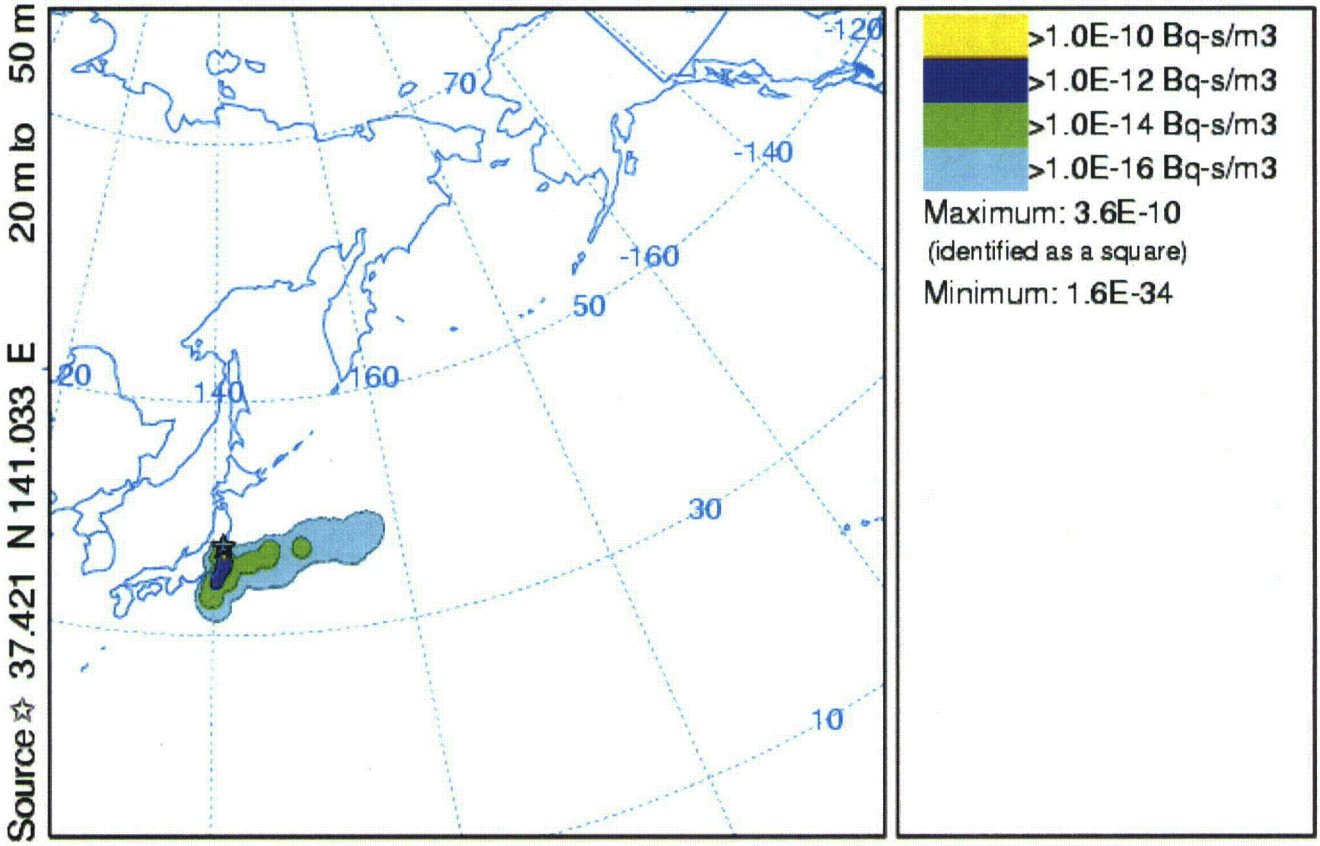
0600 21 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1245UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0600 UTC 21 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 22 Mar to 1200 23 Mar 11 (UTC)
I131 Release started at 1245 21 Mar 11 (UTC)



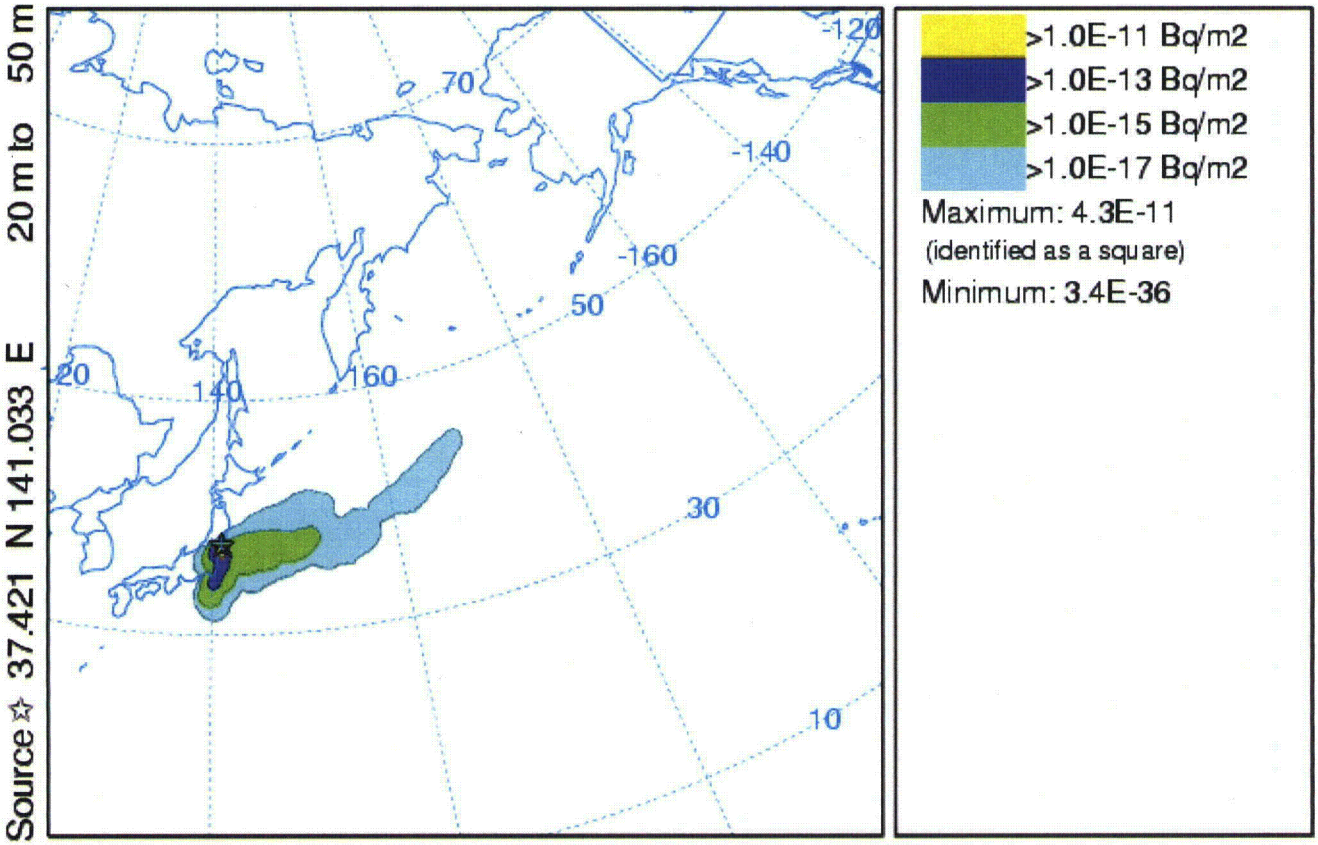
0600 21 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1245UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0600 UTC 21 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 21 Mar to 1200 23 Mar 11 (UTC)
I131 Release started at 1245 21 Mar 11 (UTC)



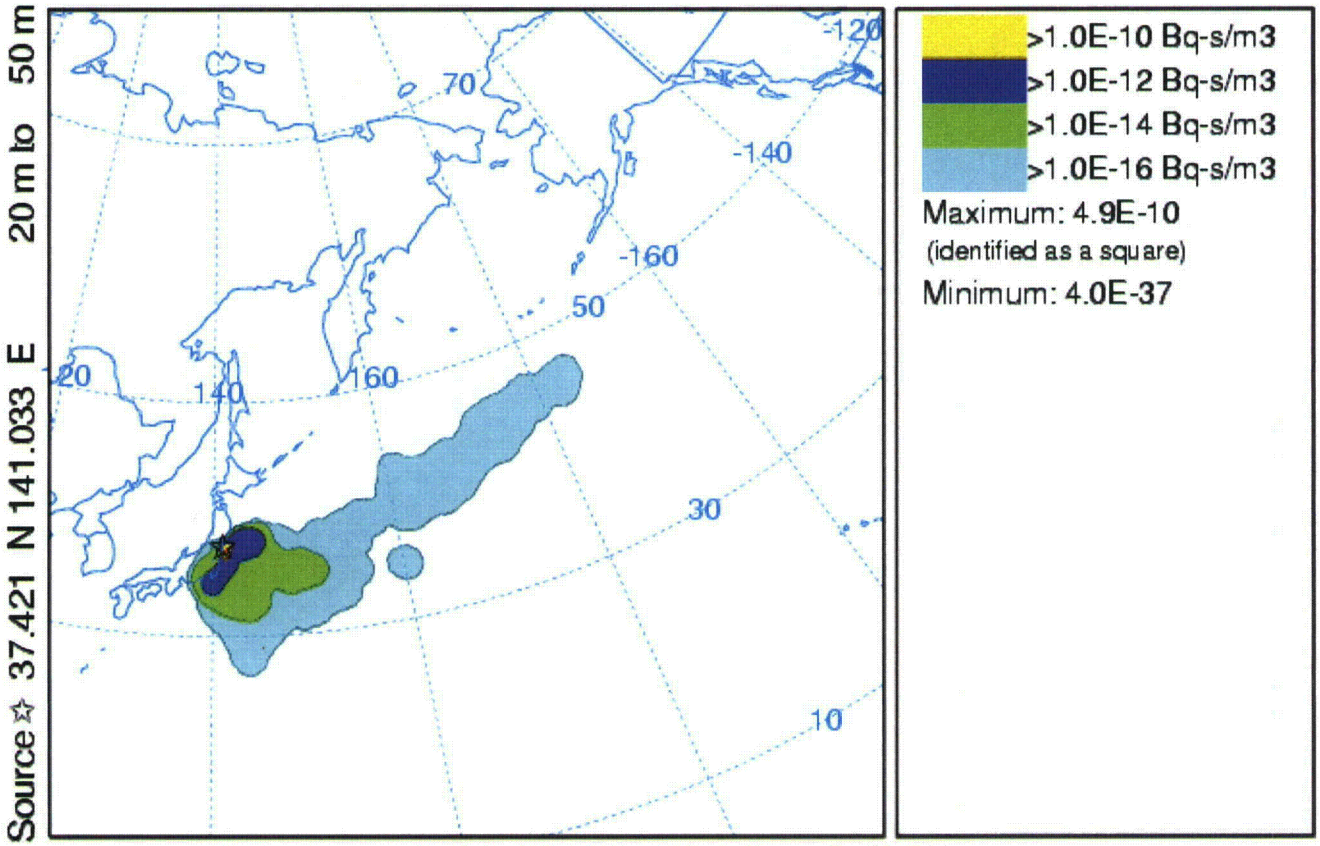
0600 21 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1245UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0600 UTC 21 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 23 Mar to 1200 24 Mar 11 (UTC)
I131 Release started at 1245 21 Mar 11 (UTC)



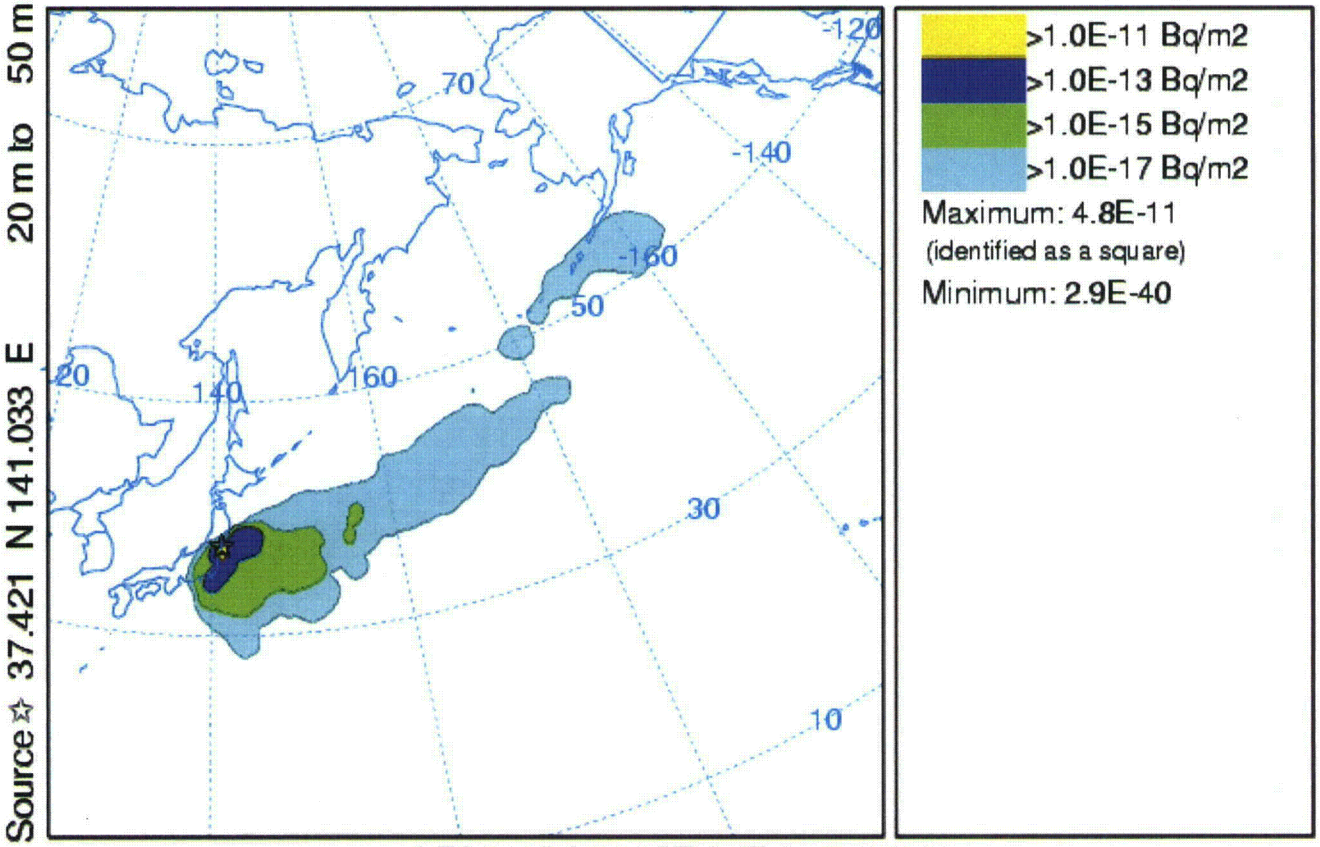
0600 21 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1245UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0600 UTC 21 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 21 Mar to 1200 24 Mar 11 (UTC)
I131 Release started at 1245 21 Mar 11 (UTC)



0600 21 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1245UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0600 UTC 21 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

From:	NITOPS
To:	CMHT; HOO Hoc; NARAC; PMT01 Hoc; PMT02 Hoc; Hoc, PMT12
Subject:	FW: Fukushima Hysplit Output - 03/21/2011 12Z Model Run
Date:	Monday, March 21, 2011 3:50:24 PM
Attachments:	2011032118.FUKUSHIMA-DAIICHI-1.rsmc27.pdf

-----Original Message-----
From: sdm [mailto:Sdm@noaa.gov]
Sent: Monday, March 21, 2011 3:50 PM
To: oar.jp.iaea.results@noaa.gov
Subject: Fukushima Hysplit Output - 03/21/2011 12Z Model Run

Attached is the latest NOAA Hysplit dispersion model run with a simulated release time of 03/21/2011 1927Z, release duration of 72 hours, and model run duration of 72 hours using the 3/21/12Z NCEP GFS.

This simulation was not an official request from the IAEA. This output reflects trajectories and dispersion of simulated current and future releases and does not reflect potential previous releases.

SDM Patrick O'Reilly

EE141

U.S. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
RSMC Washington (NOAA ARL, NOAA NCEP)

Room 410 - W/NMC33
World Weather Building
5200 Auth Road
Camp Springs, Maryland USA

Tel (24 hrs - NCEP): 301-763-8298
Tel (Backup - ARL): 301-713-2614
Fax (24 hrs - NCEP): 301-763-8592
Fax (Backup - ARL): 301-713-4592

RSMC products created Mon Mar 21 19:31 UTC 2011

The following charts will follow:
- trajectory map
- several time-itegrated concentration maps
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

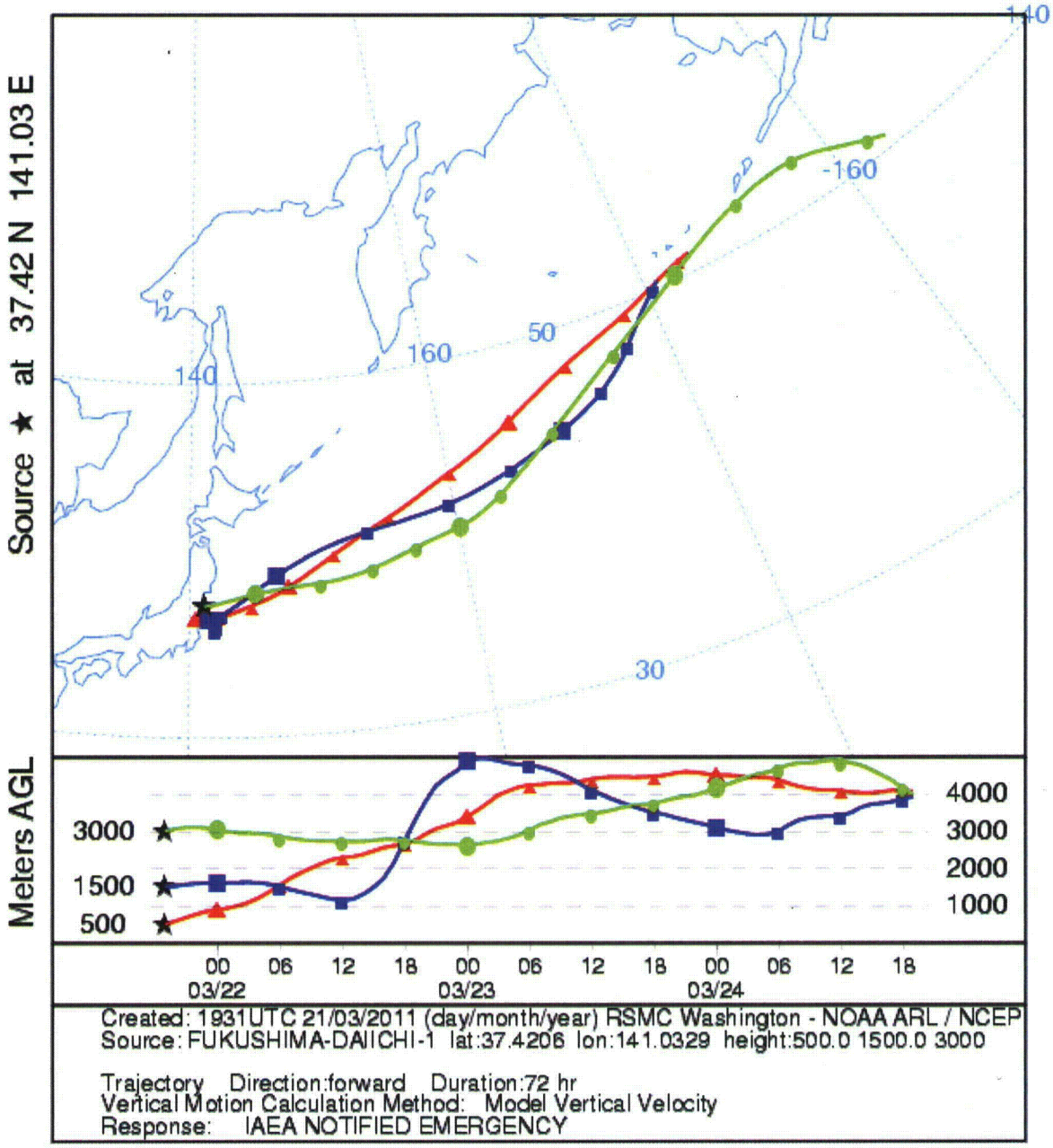
Source term and dispersion model details

RSMC Washington - NOAA ARL / NCEP

Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329
Release Start (YYYY MM DD HH MM):2011 03 21 19 27
Meteorology: 1200 UTC 21 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20
Note: Contour values may change from chart to chart

NOAA HYSPLIT MODEL
Forward trajectories starting at 19 UTC 21 Mar 11
12 UTC 21 Mar GFSG Forecast Initialization



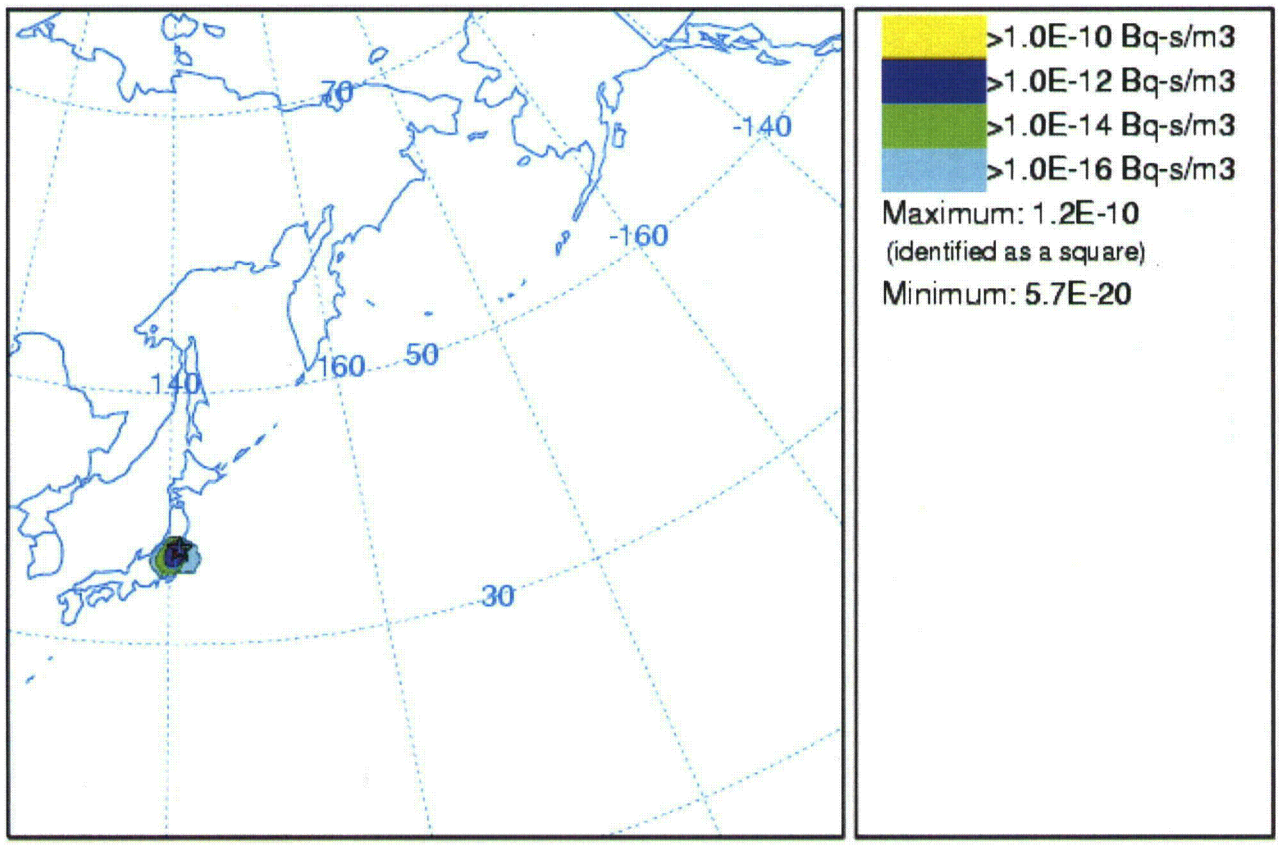
Created: 1931UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 height:500.0 1500.0 3000

Trajectory Direction:forward Duration:72 hr
Vertical Motion Calculation Method: Model Vertical Velocity
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 21 Mar to 1200 22 Mar 11 (UTC)
I131 Release started at 1927 21 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



1200 21 Mar 11 GFSG FORECAST INITIALIZATION

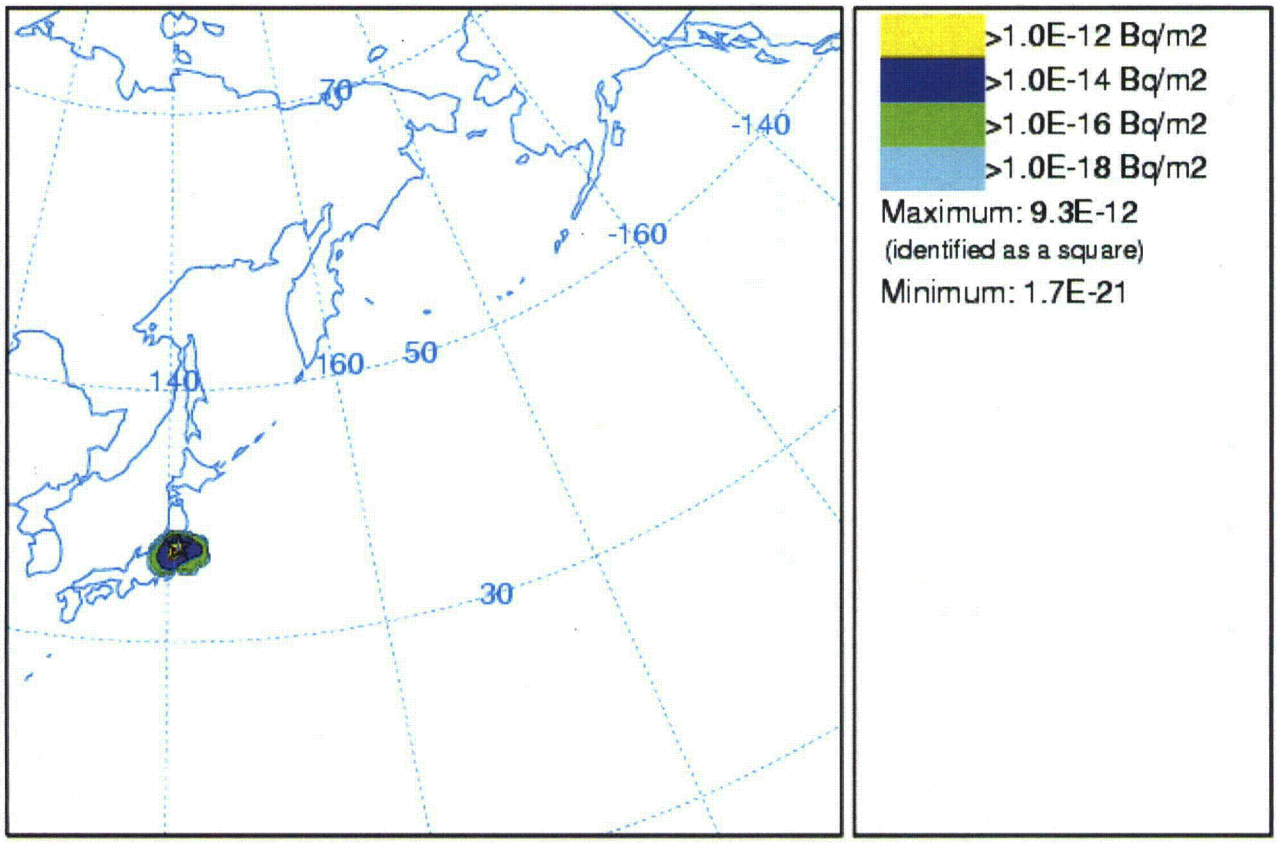
Created: 1931UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 21 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 21 Mar to 1200 22 Mar 11 (UTC)
I131 Release started at 1927 21 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



1200 21 Mar 11 GFSG FORECAST INITIALIZATION

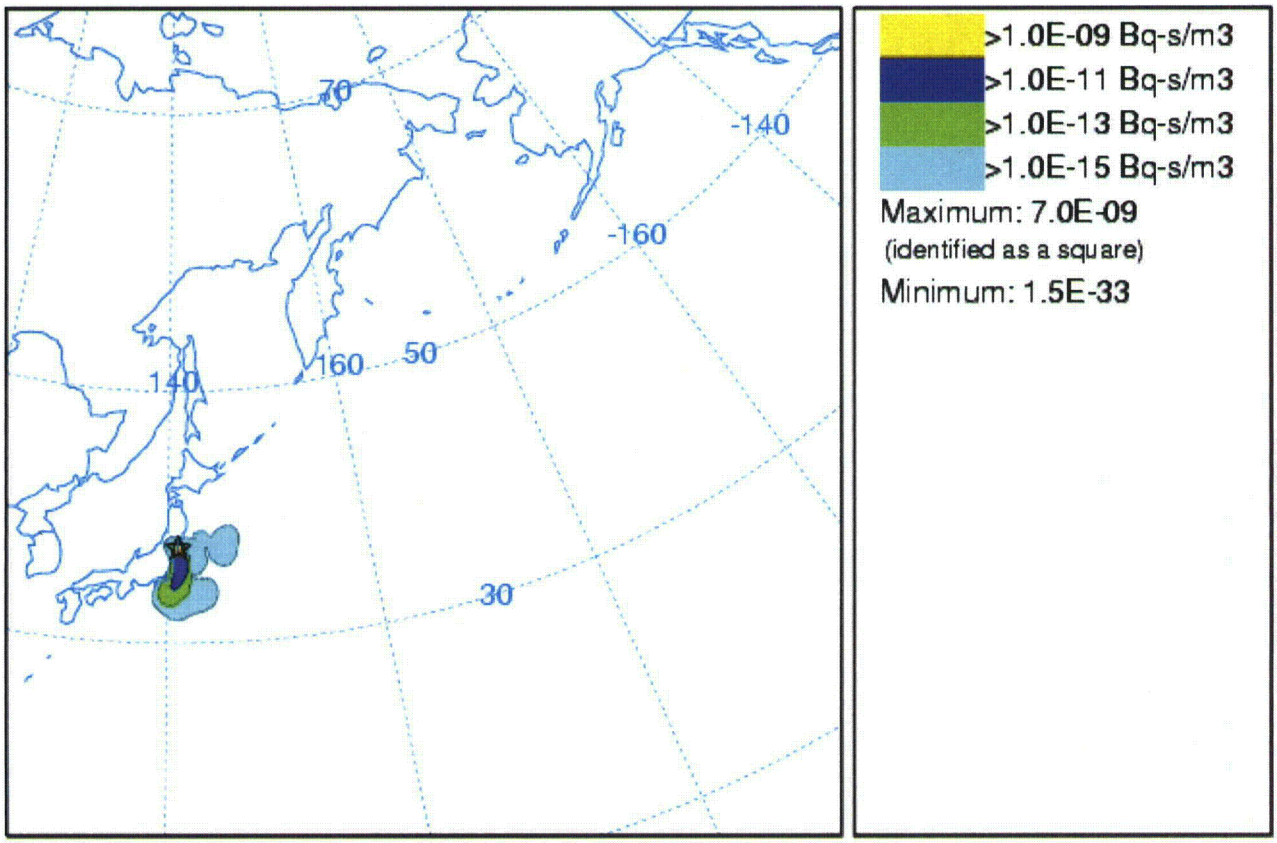
Created: 1931UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 21 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 22 Mar to 1200 23 Mar 11 (UTC)
I131 Release started at 1927 21 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



1200 21 Mar 11 GFSG FORECAST INITIALIZATION

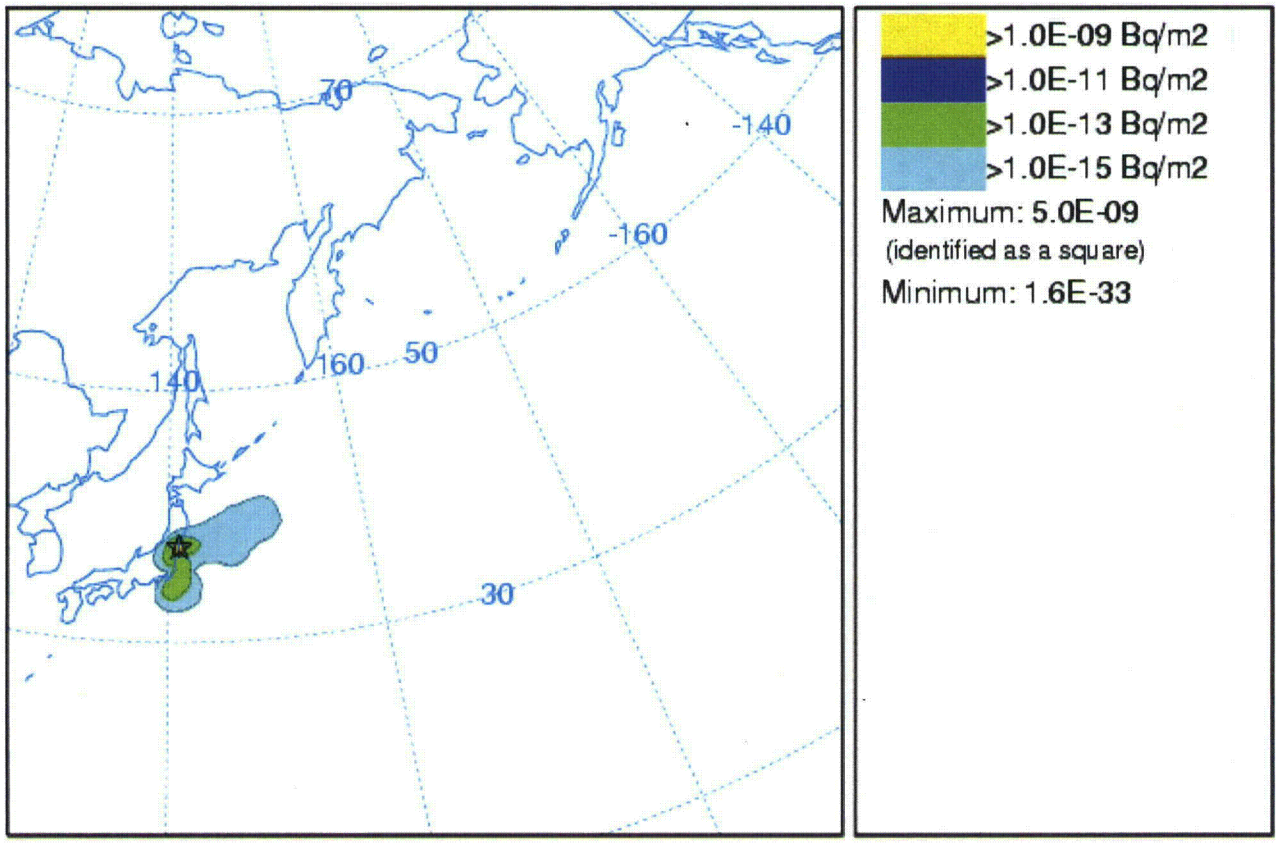
Created: 1931UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 21 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 21 Mar to 1200 23 Mar 11 (UTC)
I131 Release started at 1927 21 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



1200 21 Mar 11 GFSG FORECAST INITIALIZATION

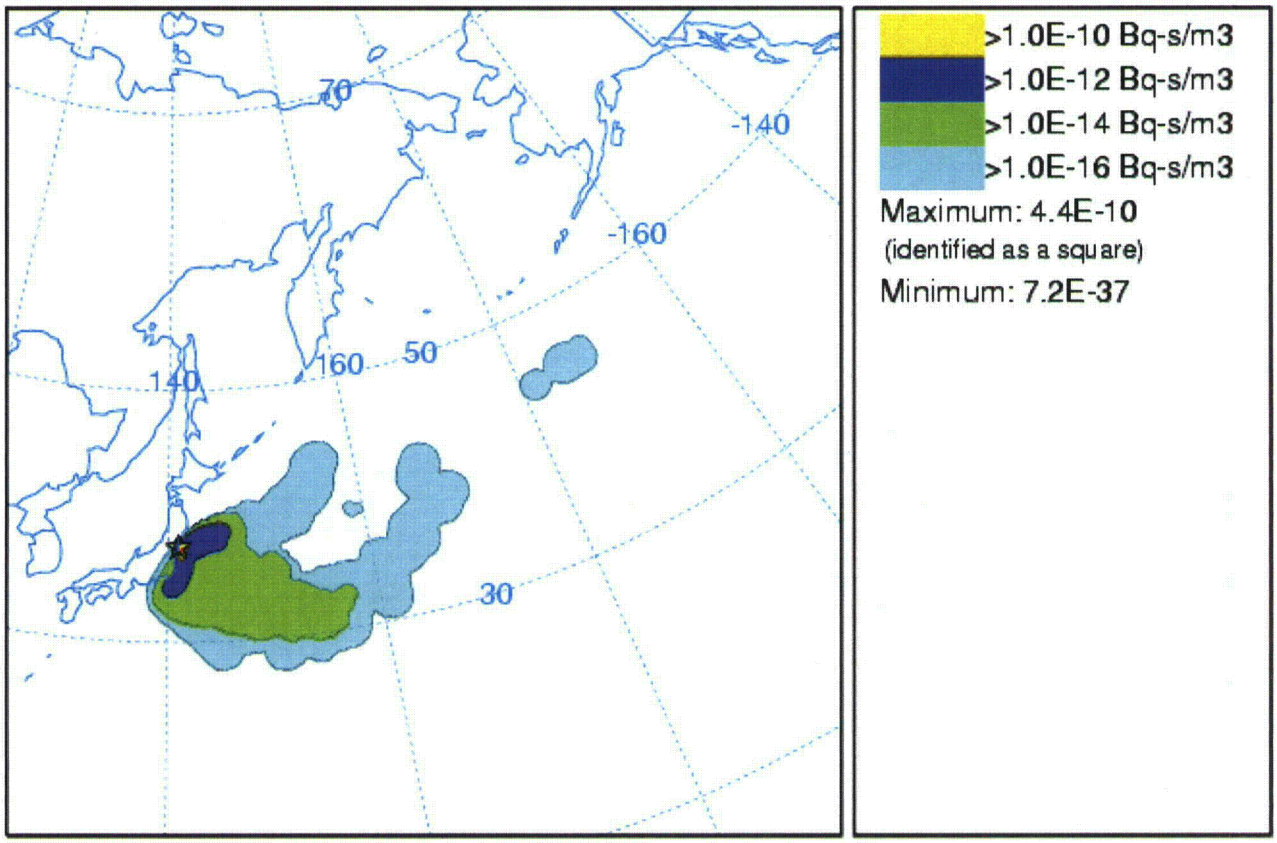
Created: 1931UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 21 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 23 Mar to 1200 24 Mar 11 (UTC)
I131 Release started at 1927 21 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



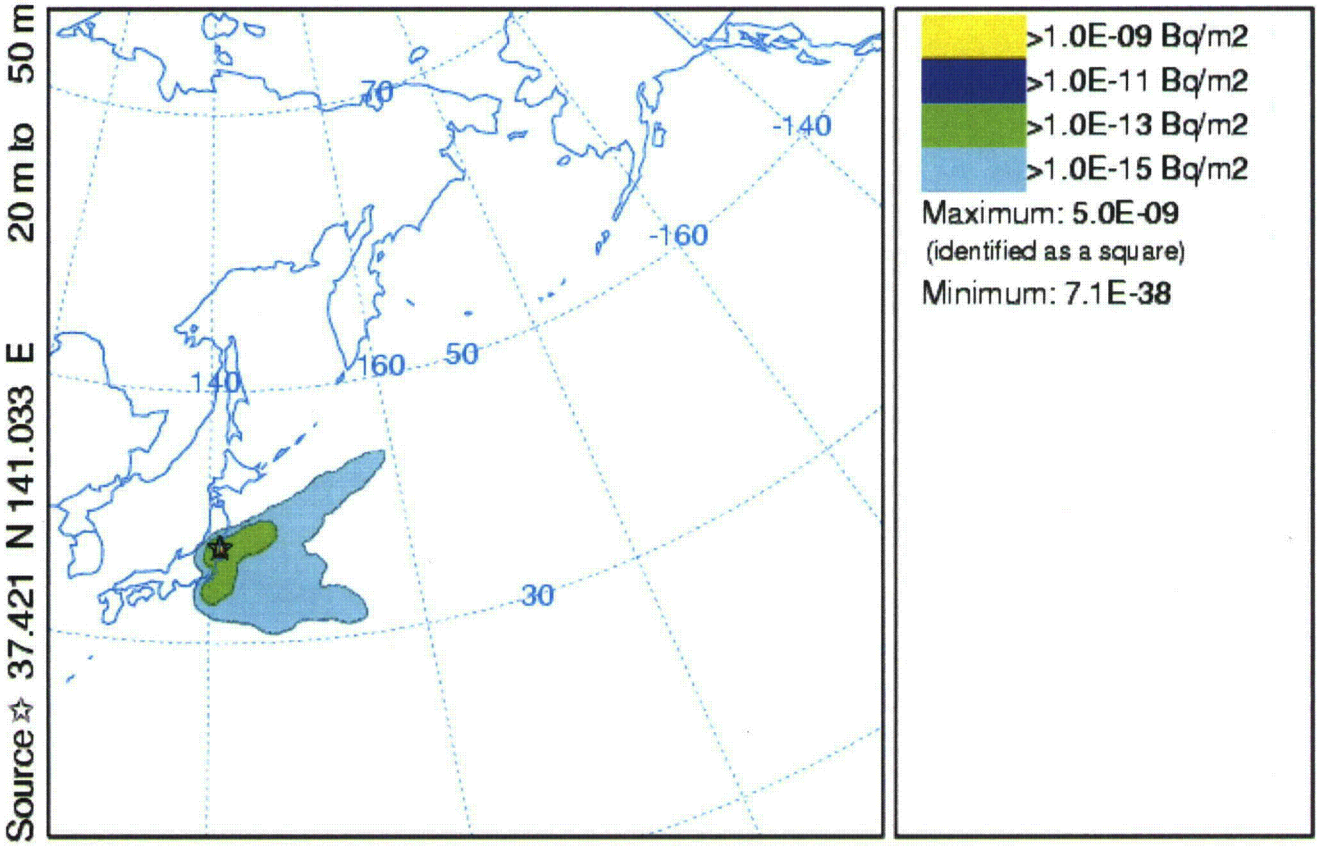
1200 21 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1931UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 21 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 21 Mar to 1200 24 Mar 11 (UTC)
I131 Release started at 1927 21 Mar 11 (UTC)



1200 21 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1931UTC 21/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 21 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

福島第一及び第二原子力発電所緊急事態に関わる
除染スクリーニング及び避難等の実施状況について

原子力災害現地対策本部
平成２３年３月１３日

１．除染スクリーニング及び除染作業の実施状況

本日、必要な資機材と要員を確保するとともに、「除染スクリーニングの基準値」（現地対策本部長指示）を設定し、作業を開始したところです。本日は、約１００人に対する除染スクリーニング及び除染作業を実施中です。

緊急時モニタリングの結果、現時点における環境中の放射性物質は、健康への有意な影響は無いものと考えますが、避難した人を対象に除染スクリーニング等を実施しているものです。

２．避難等の状況

福島第一関係の20km圏内に指示拡大した地域、福島第二関係の10km圏内の地域について、本日の避難及び広報の実施状況は別表のとおりであり、避難は概ね終了しています。

EE142

<別表>　◆避難及び広報状況

NO. 1

平成２３年３月１３日　１７：００現在

避難等の内容	町　名	人　口	避　難　先	避難手段	避難状況・広報状況
避難（10km 圏） ２Ｆ	広野町	5，387 人	平田村公民館 磐城高等専門学校	バス等	・避難対象者は、５つの地区の３００人程度であるが町内全域の避難予定。避難対象者は概ね避難を終了している。 ・広報は、防災行政無線や広報車等
避難 １Ｆ（20km 圏） ２Ｆ（10km 圏）	楢葉町	7，851 人	草野中学校 平第六小学校 いわき中央台南中学校	バス等	・避難は、ほぼ終了している。 ・広報は、防災行政無線や広報車の他、原則として消防団による全戸訪問を実施。
避難 １Ｆ（20km 圏） ２Ｆ（10km 圏）	富岡町	15，786 人	川内村役場 二本松男女共生センター	バス 自衛隊等	・病院の寝たきり患者等６０名程度について、自衛隊ヘリで二本松市へ搬送している。 ・広報は、防災行政無線や広報車の他、原則として消防団による全戸訪問を実施。
避難 １Ｆ（20km 圏） ２Ｆ（10km 圏）	大熊町	11，186 人	都路中学校 常葉中学校 田村市総合体育館	バス等	・福祉施設及び病院の寝たきり患者等、１８０名程度について、バスで搬送を予定。 ・広報は、防災行政無線や広報車の他、原則として消防団による全戸訪問を実施。
避難 １Ｆ（20km 圏）	双葉町	6，936 人	川俣小学校 二本松男女共生センター	バス 自衛隊等	・避難は、ほぼ終了している。 ・広報は、防災行政無線や広報車等により実施。
避難 １Ｆ（20km 圏）	浪江町	20，695 人	津島活性化センター 津島支所 津島小中学校 苅野公民館 苅野多目的研修センター 苅野集会所 室原公民館	バス等	・10km 圏内の避難はほぼ終了している。 ・10km 圏内～ 20km 圏内の福祉施設等の避難者４００名程度について、避難を予定。 ・広報は、防災行政無線や広報車等により実施。

※人口は、平成２１年６月１日現在

◆避難及び広報状況

NO. 2

平成２３年３月１３日　１７：００現在

避難等の内容	町　名	人　口	避　難　先	避難手段	避難状況・広報状況
避難 １Ｆ（20km 圏）	田村市	41，428 人	－	－	・避難は、ほぼ終了している。
避難 １Ｆ（20km 圏）	南相馬市	70，975 人	－	－	・避難は、ほぼ終了している。
避難 １Ｆ（20km 圏）	川内村	2，944 人	－	－	・避難は、ほぼ終了している。
避難 １Ｆ（20km 圏）	葛尾村	1，482 人	－	－	・避難は、ほぼ終了している。

※人口は、平成２１年６月１日現在

2011/3/13 20:53

現地モニタリング情報(1枚目) フォーマットを変更(2回目)

福島第一(1F) MP-1北側(敷地最北敷地境界:サーベイメーター変更(鉛遮蔽式))

	3月13日(終日)																					
	9:00	9:10	9:20	9:30	9:40	9:50	10:00	10:10	10:20	10:30	10:40	10:50	11:00	11:10	11:20	11:30	11:40	11:50	12:00	12:10	12:20	12:30
測定値(μSv/h)	37	30	27	25	25	23	23	20	20	19	19	19.0	18.0	18.0	18.0	17.0	17.0	17.0	17.0	18.0	18.0	17

	3月13日(終日)																					
	12:40	12:50	13:00	13:10	13:20	13:30	13:40	13:50	14:00	14:10	14:20	14:30	14:40	14:50	15:00	15:20	15:20	15:30	15:40	15:50	16:00	16:10
測定値(μSv/h)	17	17	17	17	17	16	16	24	25	21	21	32	52	35	52	100	24	34	24	39	31	45

	3月13日(終日)																					
	16:20	16:30	16:40	16:50	17:00	17:10	17:20	17:30	17:40	17:50	18:00	18:10	18:20	18:30								
測定値(μSv/h)	150	46	60	30	120	62	45	36	40	35	35	30	27	26								

福島第一(1F) MP-6(正門/モニタリングカー:固定)

	3月13日(終日)																					
モニタリングカー	9:10	9:20	9:30	10:00	10:10	10:20	10:30	10:40	10:50	11:00	11:10	11:20	11:30	11:40	11:50	12:00	12:10	12:20	12:30	12:40	12:50	13:00
測定値(μSv/h)	175	281.7	26.0	6.5	6.4	8.3	6.8	6.0	6.0	5.8	5.6	6.0	7.9	6.8	6.6	5.5	5.4	5.3	5.5	5.3	5.4	5.0

	3月13日(終日)																					
モニタリングカー	13:10	13:20	13:30	13:40	13:50	14:00	14:10	14:20	14:30	14:40	14:50	15:00	15:10	15:20	15:30	15:40	15:50	16:00	16:10	16:20	16:30	16:40
測定値(μSv/h)	4.8	4.9	4.9	4.9	5.0	21.9	39.0	57.6	17.6	10.1	10.9	8.3	5.7	5.0	4.5	4.4	5.5	5.2	4.6	4.3	4.3	4.2

	3月13日(終日)																					
モニタリングカー	16:50	17:00	17:10	17:20	17:30	17:40	17:50	18:00	18:10	18:20	18:30	18:40	18:50	19:00								
測定値(μSv/h)	4.2	4.3	4.2	4.6	5.2	5.9	6	5.4	5.2	5.3	4.9	5	4.8	5.2								

2011/3/13 20:3[illegible]

現地モニタリング情報(2枚目) フォーマットを変更(2回目)

福島第一(1F) MP-4(1号機北西敷地境界: モニタリングカー(柏崎刈羽))

3月13日(続き)

	8:25	8:27	8:29	8:31	8:33	8:35	8:37	8:39	8:41	8:43	8:45	8:47	8:49	8:51	8:58	9:00	9:02	9:04	9:06	9:08	9:10	9:12
測定値(μSv/h)	864.2	1124.3	1038.2	1144.1	1204.2	1153.6	717.7	554.1	307.8	197.7	186.2	261.2	473.1	679.8	221.3	143.5	108.5	97.4	88.7	101.8	138.8	193.2
風向	-	-	-	-	-	-	-	-	-	-	北西	-	-	-	-	-	-	-	-	-	-	-
風速(m/s)	-	-	-	-	-	-	-	-	-	-	1.8	-	-	-	-	-	-	-	-	-	-	-

SRV開
FPまンプ注入

3月13日(続き)

	9:14	9:16	9:18	9:20	9:22	9:24	9:26	9:28	9:30	9:32	9:34	9:36	9:38	9:40	9:42	9:44	9:46	9:48	9:50	9:52	9:54	9:56
測定値(μSv/h)	199.5	187.3	124.5	76.9	75.3	73.8	72.3	71.2	70.3	69.4	68.6	69.5	68.3	66.8	66.3	65.8	65.4	65.0	64.7	64.3	63.9	63.5
風向	-	-	-	-	-	-	-	-	-	-	北西	-	-	-	-	-	-	-	-	-	-	-
風速(m/s)	-	-	-	-	-	-	-	-	-	-	1.8	-	-	-	-	-	-	-	-	-	-	-

PCVベントスタート

3月13日(続き)

	9:58	10:00	10:02	10:04	10:06	10:08	10:10	10:12	10:14	10:16
測定値(μSv/h)	63.2	62.8	62.5	62.1	61.8	61.4	61.1	60.8	60.6	60.3
風向	-	-	-	-	-	-	-	-	-	北西
風速(m/s)	-	-	-	-	-	-	-	-	-	2.5

3月13日(続き)

	10:20	10:30	10:40	10:50	11:00	11:10	11:18	11:20	11:30	11:40	11:50	12:00	12:10	12:20	13:42	13:44	13:46	13:48	13:50	13:52	13:54	13:56
測定値(μSv/h)	61.8	58.0	66.8	55.6	54.3	53.3	52.8	63.7	51.3	50.0	49.4	48.6	47.8	47.1	50.2	82.6	97.9	251.8	905.1	1557.5	829.7	595.5
風向	-	-	-	-	-	-	北西	-	-	-	-	-	-	北西				北東	東北東	東		
風速(m/s)	-	-	-	-	-	-	2.6	-	-	-	-	-	-	2.6				1.5	1.5	1.3		

3月13日(続き)

	13:58	14:00	14:02	14:04	14:06	14:08	14:10	14:12	14:14	14:16	14:18	14:20	14:30	14:38	14:40	14:42	14:44	14:50	15:00	15:10	15:20	15:30
測定値(μSv/h)	531.8	499.3	602.6	490.9	599.1	595.3	646	547.3	289.7	170.6	154.3	135.4	129.9	112.2	133	184.1	179.8	169.8	58.8	54.3	53	51.8
風向		南					東南東					南	南南東		南南東							
風速(m/s)		0.6					0.7					0.6	0.5		0.7							

3月13日(続き)

	15:36	15:38	15:40	15:42	15:44	15:46	15:48	15:50	15:52	15:54	15:56	15:58	16:00	16:02	16:04	16:06	16:08	16:10	16:12	16:14	16:16	16:18
測定値(μSv/h)	51.6	52.1	56.5	85	135.8	116.6	100.7	70.1	773.4	80.6	82.8	90	107	83.8	71.1	64.7	61.4	58	56.6	55.1	54.2	55.6
風向															南							
風速(m/s)															0.5							

2011/3/13 20:53

現地モニタリング情報(3枚目) フォーマットを変更(2回目)

福島第一(1F) MP-4(1号機北西敷地境界: モニタリングカー(柏崎刈羽))
続き

3月13日(続き)

	16:20	16:22	16:24	16:26	16:28	16:30	16:32	16:34	16:36	16:38	16:40	16:42	16:44	16:46	16:48	16:50	16:52	16:54	16:56	16:58	17:00	17:02
測定値(μSv/h)	57.6	57.6	60.7	67.1	72.8	71.5	6.7	63.5	60.0	57.9	57.2	61.9	78.5	16.4	13.6	100.1	68.7	63.9	6.2	72.1	79.4	72.1
風向																						
風速(m/s)																						

3月13日(続き)

	17:04	17:06	17:08	17:10	17:12	17:14	17:16	17:18	17:20	17:22	17:24	17:26	17:28	17:30	17:32	17:34	17:36	17:38	17:40	17:42	17:44	17:46
測定値(μSv/h)	64.8	63.0	62.4	60.8	58.6	56.5	55.4	56.4	67	56.1	55.1	54.1	54.6	55.3	56.1	56.6	57.4	56.8	56.8	56.3	53.8	53
風向							西南西															
風速(m/s)							0.4															

3月13日(続き)

	17:48	17:50	17:52	17:54	17:56	17:58	18:00	18:02	18:04	18:06	18:08	18:10	18:12	18:14	18:16	18:18	18:20	18:22	18:24	18:26	18:28	18:30
測定値(μSv/h)	52.7	52.3	51.8	52.3	53.3	51.2	50.1	50	49.8	49.7	49.5	49.4	49.2	49.1	48.9	48.8	48.6	48.4	48.4	48.2	48.1	47.9
風向			北北西																			北北西
風速(m/s)			0.5																			0.3

3月13日(続き)

	18:32	18:34	18:36	18:38	18:40	18:42	18:44	18:46	18:48	18:50	18:52	18:54	18:56	18:58	19:00	19:02	19:04	19:06	19:08	19:10	19:12	19:14
測定値(μSv/h)	47.9	47.8	47.6	47.4	47.3	47.2	47.0	46.8	46.8	46.7	46.6	46.5	46.4	46.3	46.1	46	46.3	47.3	47.1	46.9	46.8	46.6
風向																						
風速(m/s)																						

3月13日(続き)

	19:16	19:23	19:25	19:27	19:29	19:31	19:33
測定値(μSv/h)	46.4	44.8	44.8	44.6	44.5	44.4	44.3
風向						西北西	
風速(m/s)						0.4	

現地モニタリング情報(4枚目) フォーマットを変更(2回目)

福島第二(2F)(事業者のモニタリングポスト)

	3月13日(続き)																					
モニタリングポスト	-	-	1:00	-	-	-	3:00	-	4:00	-	-	-	6:00	-	13:20	-	14:00	-	15:00	-	16:00	-
MP1(μSv/h)	-	-	0.037	-	-	-	0.037	-	0.037	-	-	-	0.033	-	0.036	-	0.004	-	0.036	-	0.036	-
MP2(μSv/h)	-	-	欠測	-	-	-	欠測	-	欠測	-	-	-	欠測	-	欠測	-	欠測	-	欠測	-	欠測	-
MP3(μSv/h)	-	-	0.035	-	-	-	0.036	-	0.036	-	-	-	0.038	-	0.037	-	0.039	-	0.036	-	0.037	-
MP4(μSv/h)	-	-	0.038	-	-	-	0.036	-	0.036	-	-	-	0.037	-	0.038	-	0.037	-	0.037	-	0.038	-
MP5(μSv/h)	-	-	0.042	-	-	-	0.041	-	0.044	-	-	-	0.042	-	0.042	-	0.043	-	0.04	-	0.039	-
MP6(μSv/h)	-	-	0.035	-	-	-	0.034	-	0.032	-	-	-	0.034	-	欠測	-	欠測	-	欠測	-	欠測	-
MP7(μSv/h)	-	-	欠測	-	-	-	欠測	-	欠測	-	-	-	欠測	-	欠測	-	欠測	-	欠測	-	欠測	-
風向	-	-	-	-	-	-	南南西	-	西南西	-	-	-	南西	-		-	南	-	南	-	南	-
風速(m/s)	-	-	-	-	-	-	3.6	-	2.2	-	-	-	6.4	-		-	5.9	-	6.2	-	5.5	-

	3月13日(続き)																					
モニタリングポスト	17:00	-	18:00	-	19:00	-	20:00															
MP1(μSv/h)	0.036	-	0.037	-	0.036	-	0.037															
MP2(μSv/h)	欠測	-	欠測	-	欠測	-	欠測															
MP3(μSv/h)	0.037	-	0.036	-	0.038	-	0.036															
MP4(μSv/h)	0.037	-	0.037	-	0.036	-	0.037															
MP5(μSv/h)	0.040	-	0.041	-	0.040	-	0.042															
MP6(μSv/h)	欠測	-	欠測	-	欠測	-	欠測															
MP7(μSv/h)	欠測	-	欠測	-	欠測	-	欠測															
風向	南	-	西	-	西	-	北西															
風速(m/s)	4.1	-	3.2	-	4.0	-	1.2															

	3月13日(続き)																					
モニタリングポスト																						
MP1(μSv/h)																						
MP2(μSv/h)																						
MP3(μSv/h)																						
MP4(μSv/h)																						
MP5(μSv/h)																						
MP6(μSv/h)																						
MP7(μSv/h)																						
風向																						
風速(m/s)																						

現地モニタリング情報(5枚目) フォーマットを変更(2回目)

県モニタリングポスト (1F側13か所(1か所のみ確認できている。))

	3月13日(続き)																				
	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30					
大野局(μSv/h)1	0.143	0.888	0.119	0.081	0.08	0.145	0.156	0.159	0.26	0.171	0.232	0.611	1.335	1.324	1.315	2.397					
風向	西北西	西	西南西	西	西	西	西	西南西	西	西北西	西北西	西北西	西南西	西南西	北	西北西					
風速(m/s)	2.4	2.0	3.5	5.2	3.7	9.3	6.4	5.7	3.1	4.9	3.3	2.5	4.1	5.4	3.8	1.6					

	3月13日(続き)																				
大野局(μSv/h)1																					
風向																					
風速(m/s)																					

	3月13日(続き)																				
大野局(μSv/h)1																					
風向																					
風速(m/s)																					

From: hoo1
To: HOO Hoc
Subject: Fax from National Weather Ser
Date: Sunday, March 20, 2011 5:03:11 AM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017771

Notice for: HOO1

Remote ID: National Weather Ser

Received at: 03/20/2011 05:02

Pages: 6

Routed by:

Routed at: 03/20/2011 05:02

EE143

U.S. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
RSMC Washington (NOAA ARL, NOAA NCEP)

Room 410 - W/NMC33
World Weather Building
5200 Auth Road
Camp Springs, Maryland USA

Tel (24 hrs - NCEP): 301-763-8298
Tel (Backup - ARL): 301-713-2614

Fax (24 hrs - NCEP): 301-763-8592
Fax (Backup - ARL): 301-713-4592

RSMC products created Sun Mar 20 08:45 UTC 2011

The following charts will follow:
- trajectory map
- several time-itegrated concentration maps
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

Source term and dispersion model details

RSMC Washington - NOAA ARL / NCEP

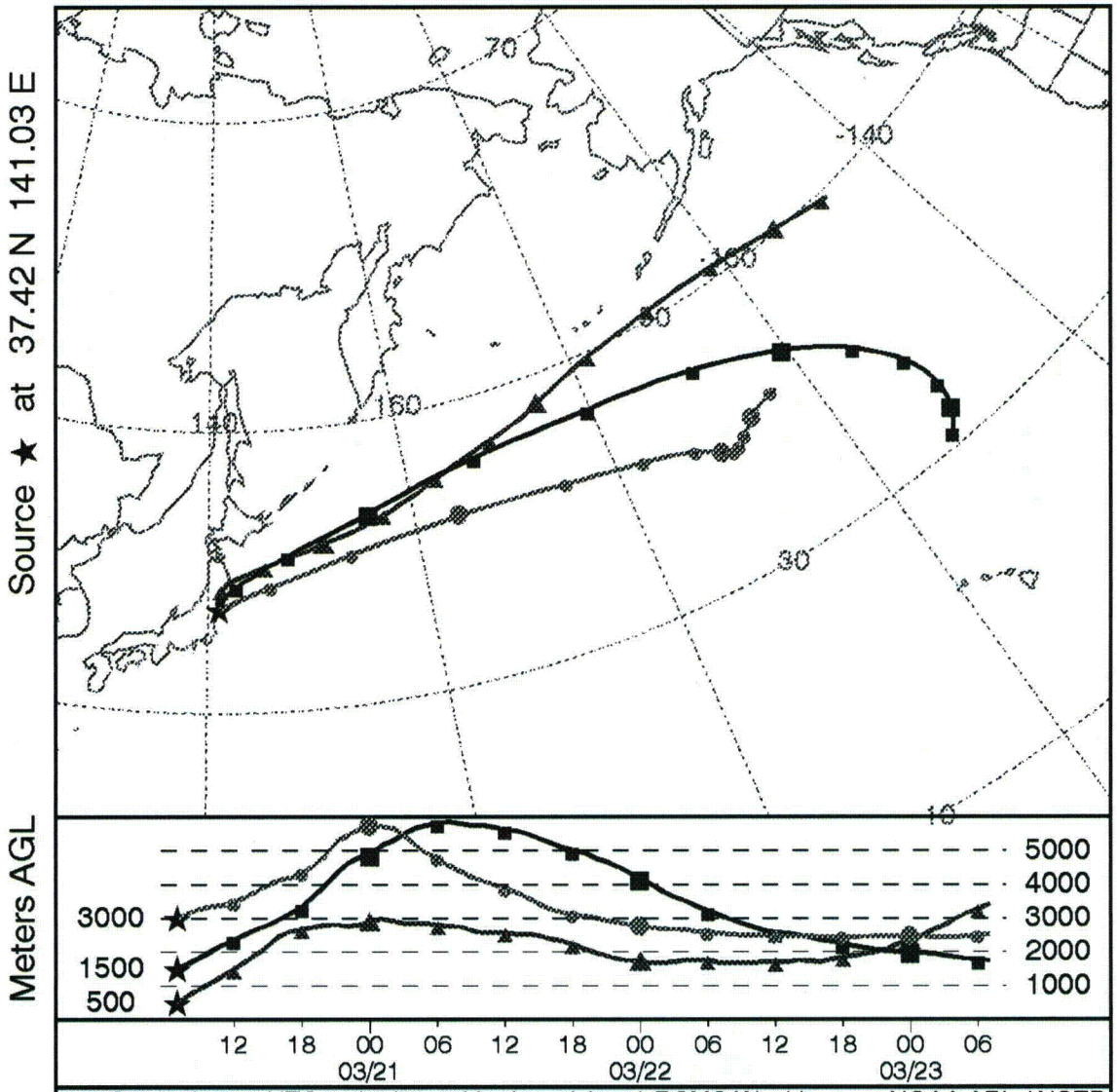
Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329
Release Start (YYYY MM DD HH MM):2011 03 20 07 30
Meteorology: 0000 UTC 20 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20
Note: Contour values may change from chart to chart

NOAA HYSPLIT MODEL

Forward trajectories starting at 07 UTC 20 Mar 11

00 UTC 20 Mar GFSG Forecast Initialization

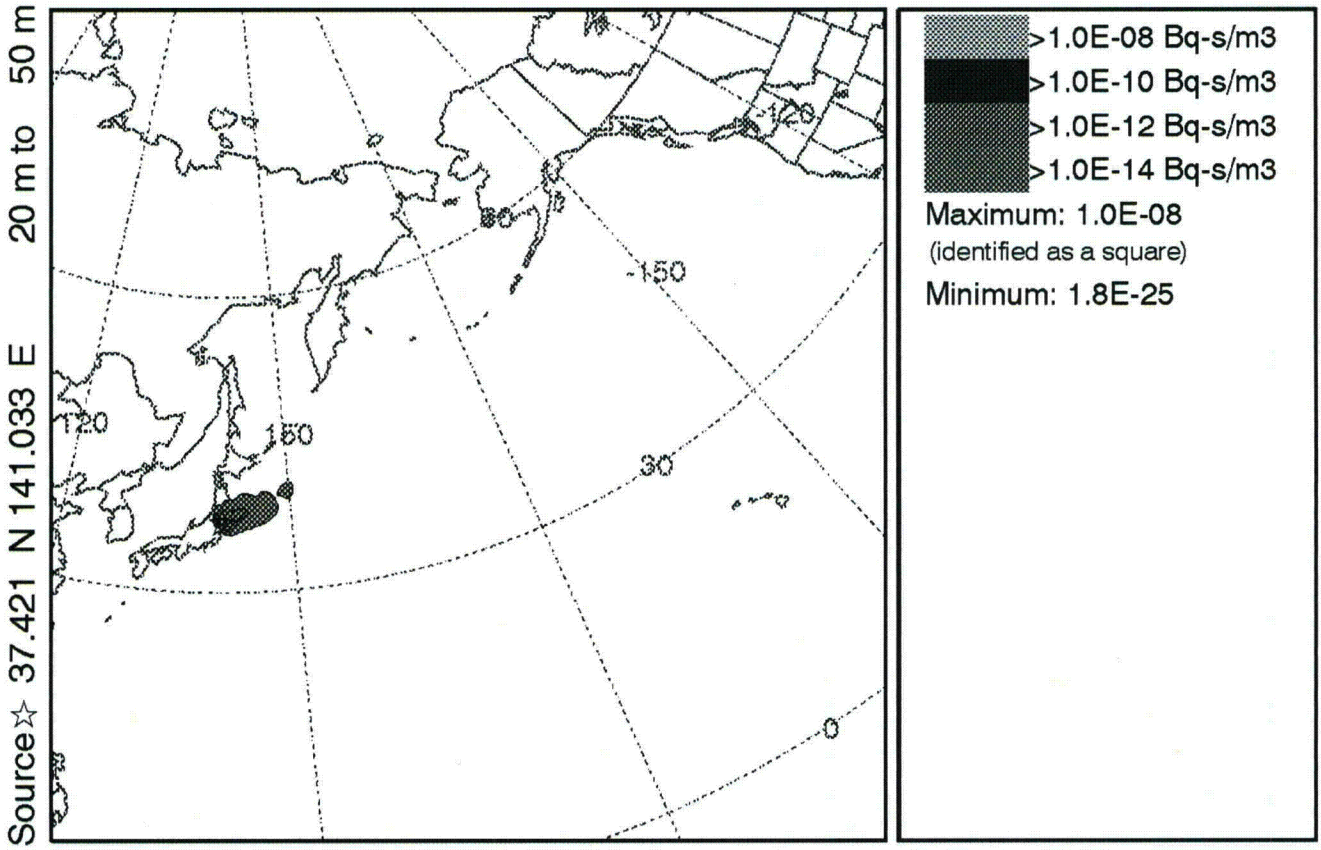


Created: 0845UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 height:500.0 1500.0 3000

Trajectory Direction:forward Duration:72 hr
Vertical Motion Calculation Method: Model Vertical Velocity
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 20 Mar to 0000 21 Mar 11 (UTC)
I131 Release started at 0730 20 Mar 11 (UTC)

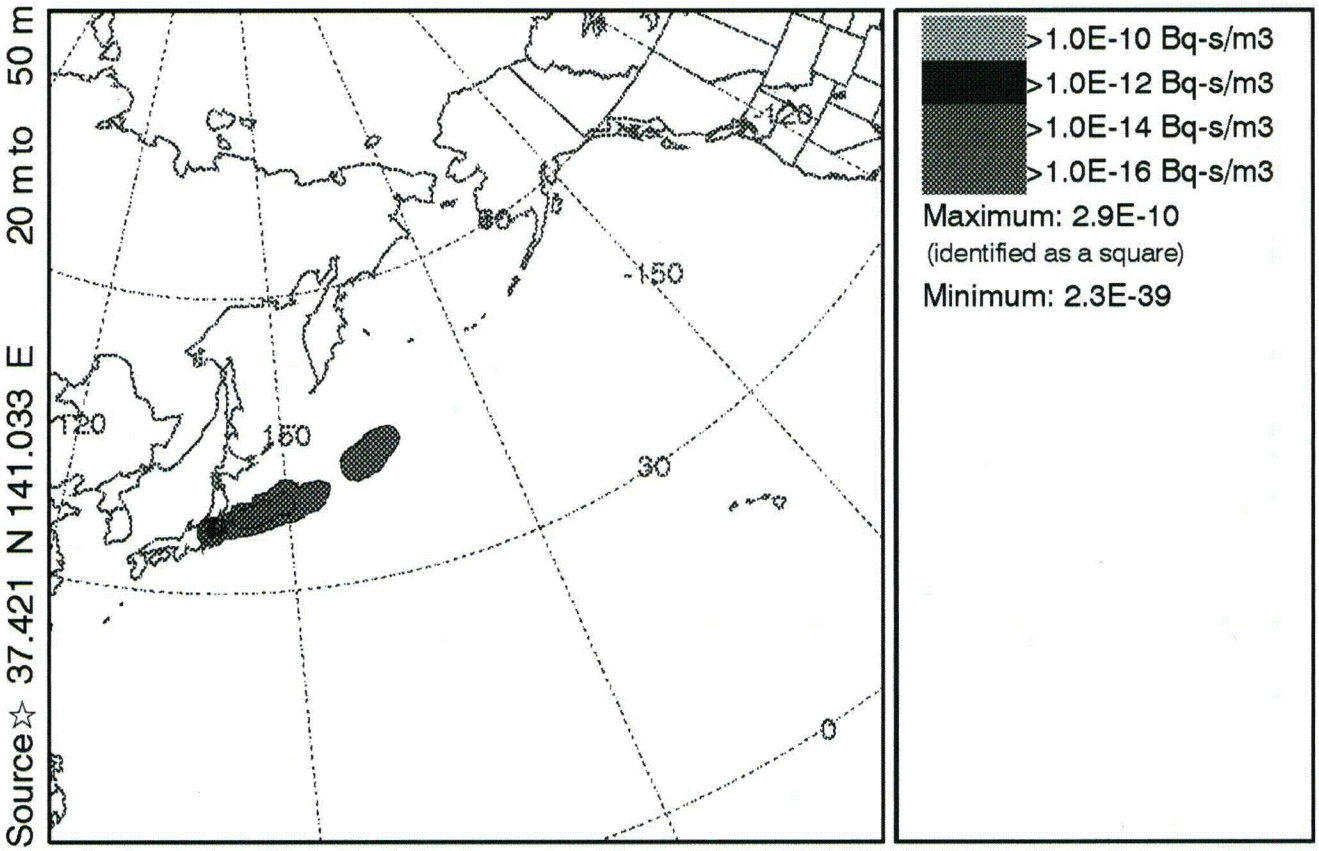


0000 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0845UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0000 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL
Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 21 Mar to 0000 22 Mar 11 (UTC)
I131 Release started at 0730 20 Mar 11 (UTC)



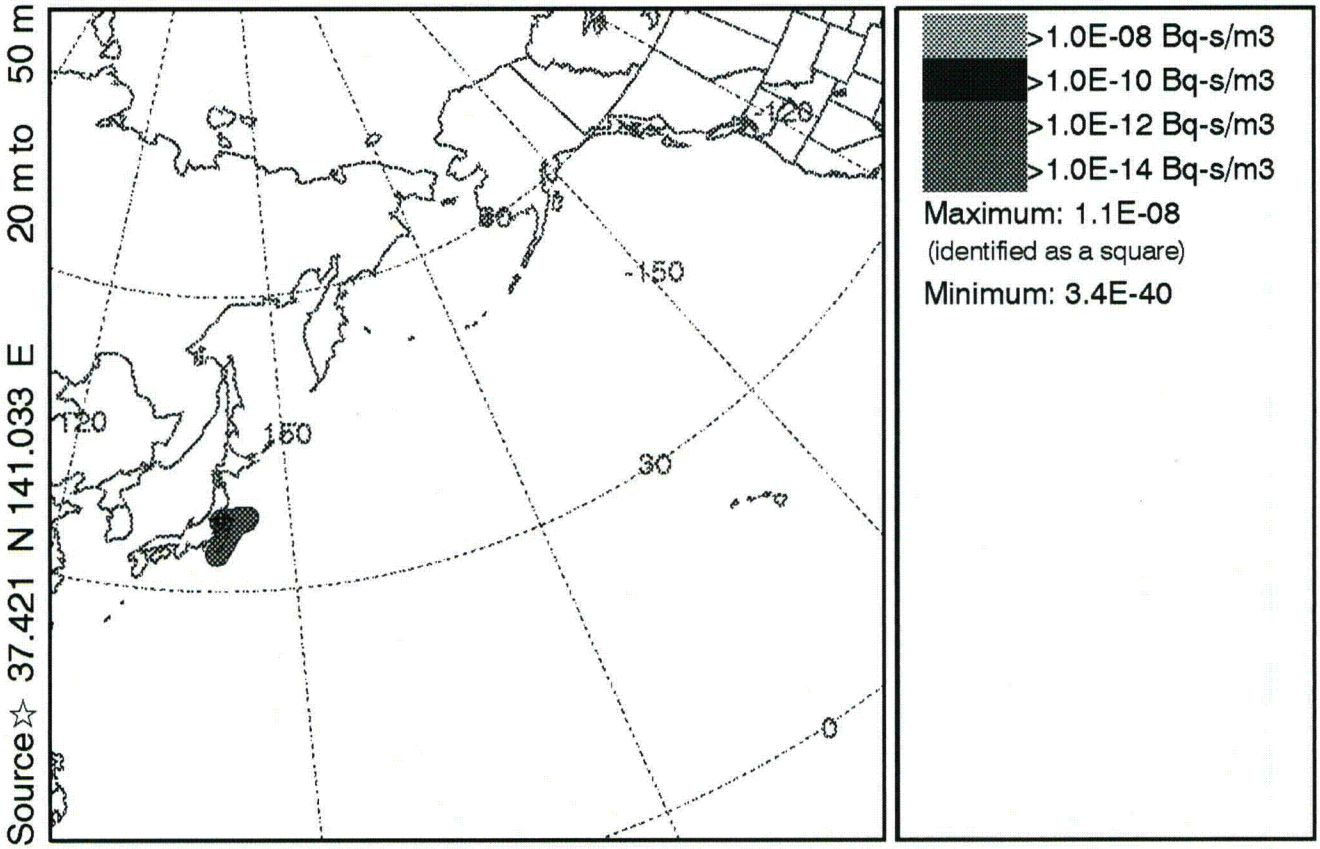
0000 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0845UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0000 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 22 Mar to 0000 23 Mar 11 (UTC)
I131 Release started at 0730 20 Mar 11 (UTC)



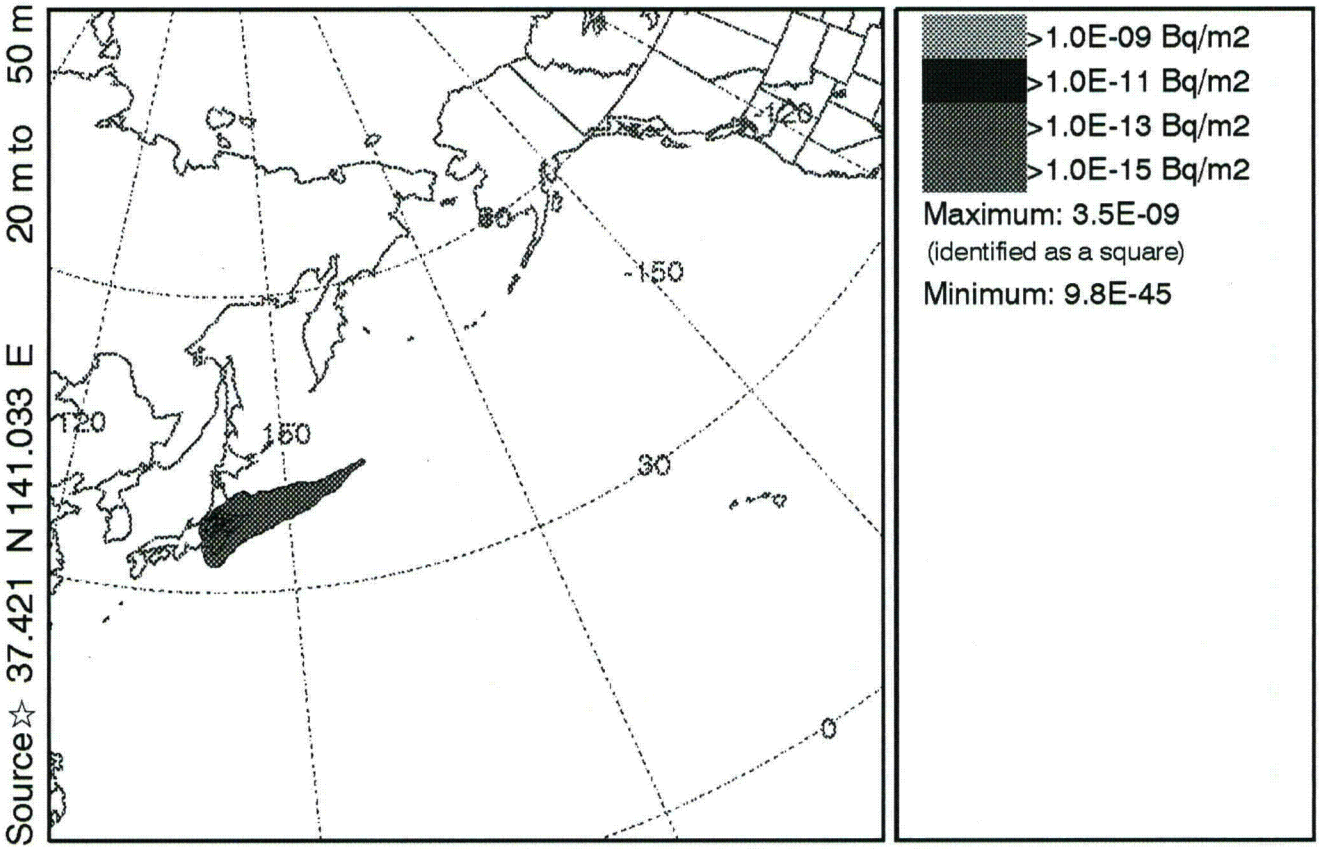
0000 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0845UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0000 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 0000 20 Mar to 0000 23 Mar 11 (UTC)
I131 Release started at 0730 20 Mar 11 (UTC)



0000 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0845UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0000 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

From: hoo1
To: HOO Hoc
Subject: Fax from +61386166600
Date: Sunday, March 20, 2011 6:01:50 AM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017772

Notice for: HOO1

Remote ID: +61386166600

Received at: 03/20/2011 06:00

Pages: 6

Routed by:

Routed at: 03/20/2011 06:00

EE/44

Bureau of Meteorology
National Meteorological and Oceanographic Centre
Melbourne Australia
RSMC for Environmental Emergency Response
FAX: 61 3 9662 1222 or 61 3 9662 1223
Telephone (24 hours) Shift Supervisor 61 3 9669 4035
Email: rto@bom.gov.au

EMERGENCY EMERGENCY

RSMC Melbourne EER Products

Issued at : 0931 UTC 20:Mar:2011

The following charts will follow:
- trajectory map
- several time-integrated concentration map
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

Source term and dispersion model details

Location name: Fukushima Daiichi Japan

Release Location(decimal degrees): 37.4206 N 141.0329 E

Release Time/Date: 0730 UTC 20 MAR 2011

Emissision duration: 72

Emission (per hour): 1.39E-02

Substance released: I131 (8.04398E+00)

Vertical distribution: UNIFORM

Meteorological Model: Access G (~80km/29 sigma lvls)

Dispersion Model: HYSPLIT 4.9

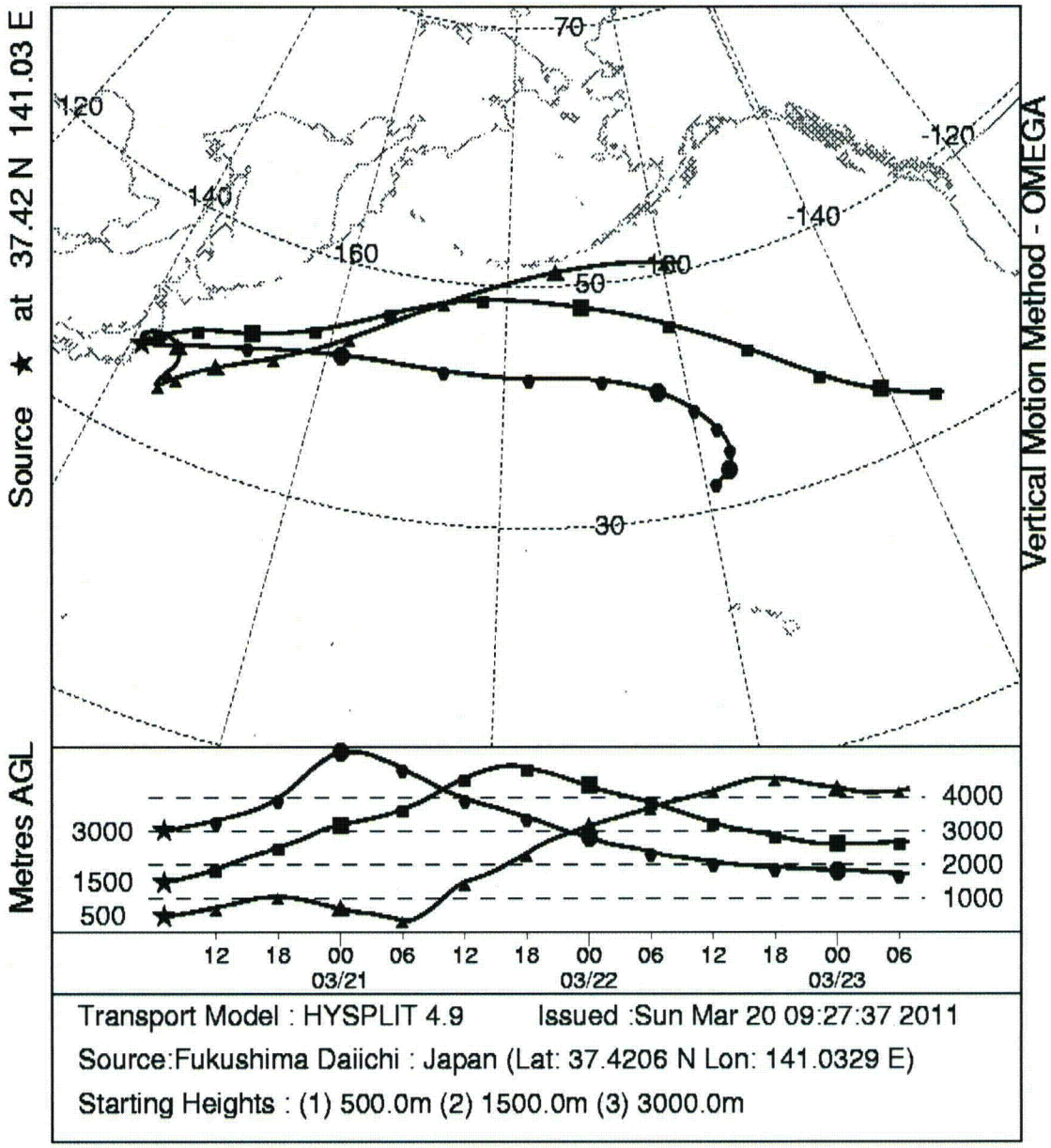
Number of Pages (incl cover sheet) = 6

RSMC Melbourne : Environmental Emergency Response Centre

Forward trajectories starting at 0730 UTC 20 Mar 2011

Meteorological Data : ACCESS-G : base time 0000 UTC 20 Mar

OPERATIONAL EVENT OPERATIONAL EVENT



Transport Model : HYSPLIT 4.9 Issued :Sun Mar 20 09:27:37 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.0329 E)

Starting Heights : (1) 500.0m (2) 1500.0m (3) 3000.0m

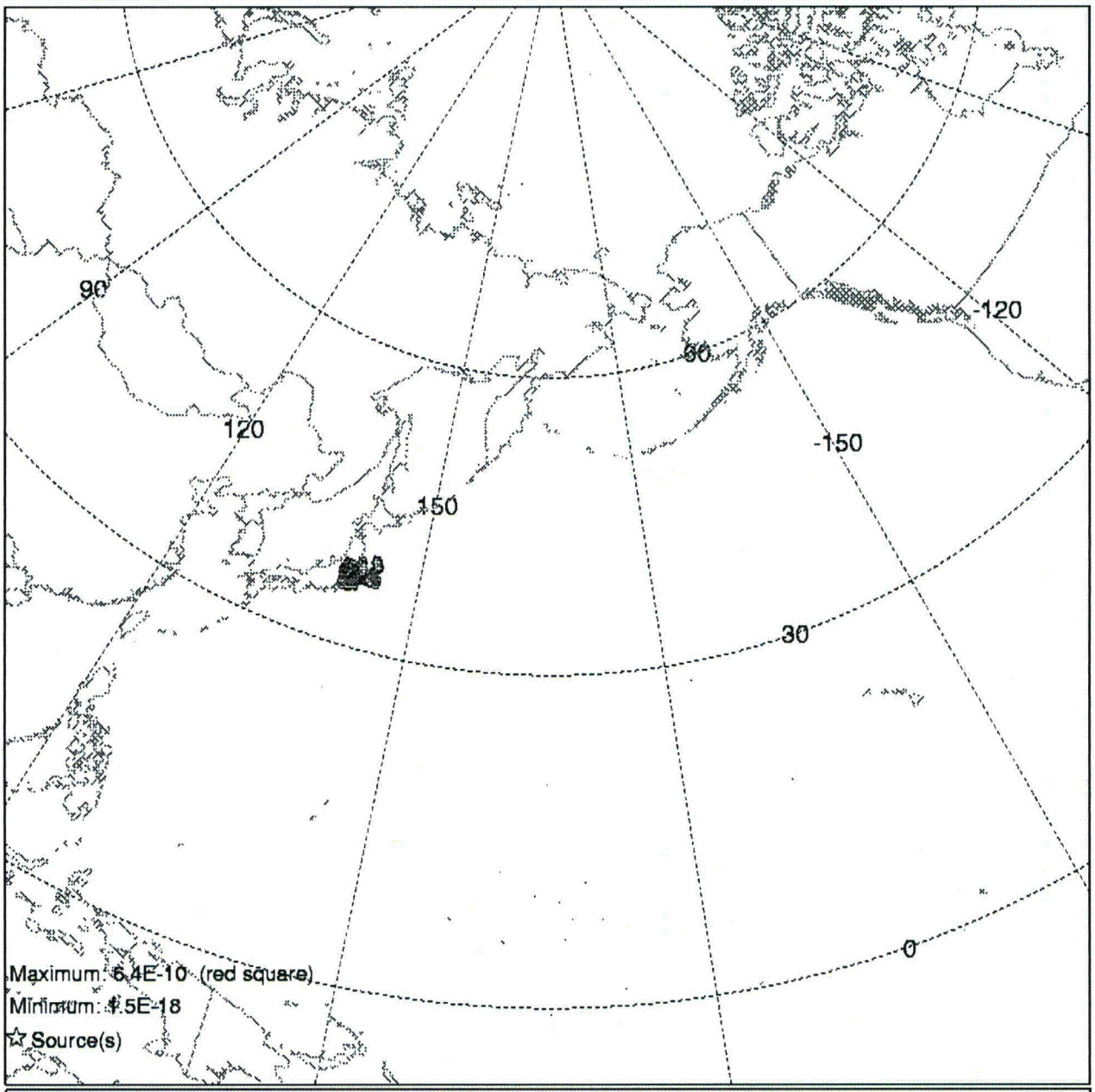
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 20 Mar to 0000 21 Mar 11 (UTC)

Exposure (Bq-s/m3) averaged between 0 m and 500 m

>1.0E-10 >1.0E-12 >1.0E-14 >1.0E-16



NRAD RELEASE STARTED AT 0700 UTC20 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.0329 E)

Isotope : I131 (Halflife: 8.04398E+00 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 20 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sun Mar 20 09:27:37 2011

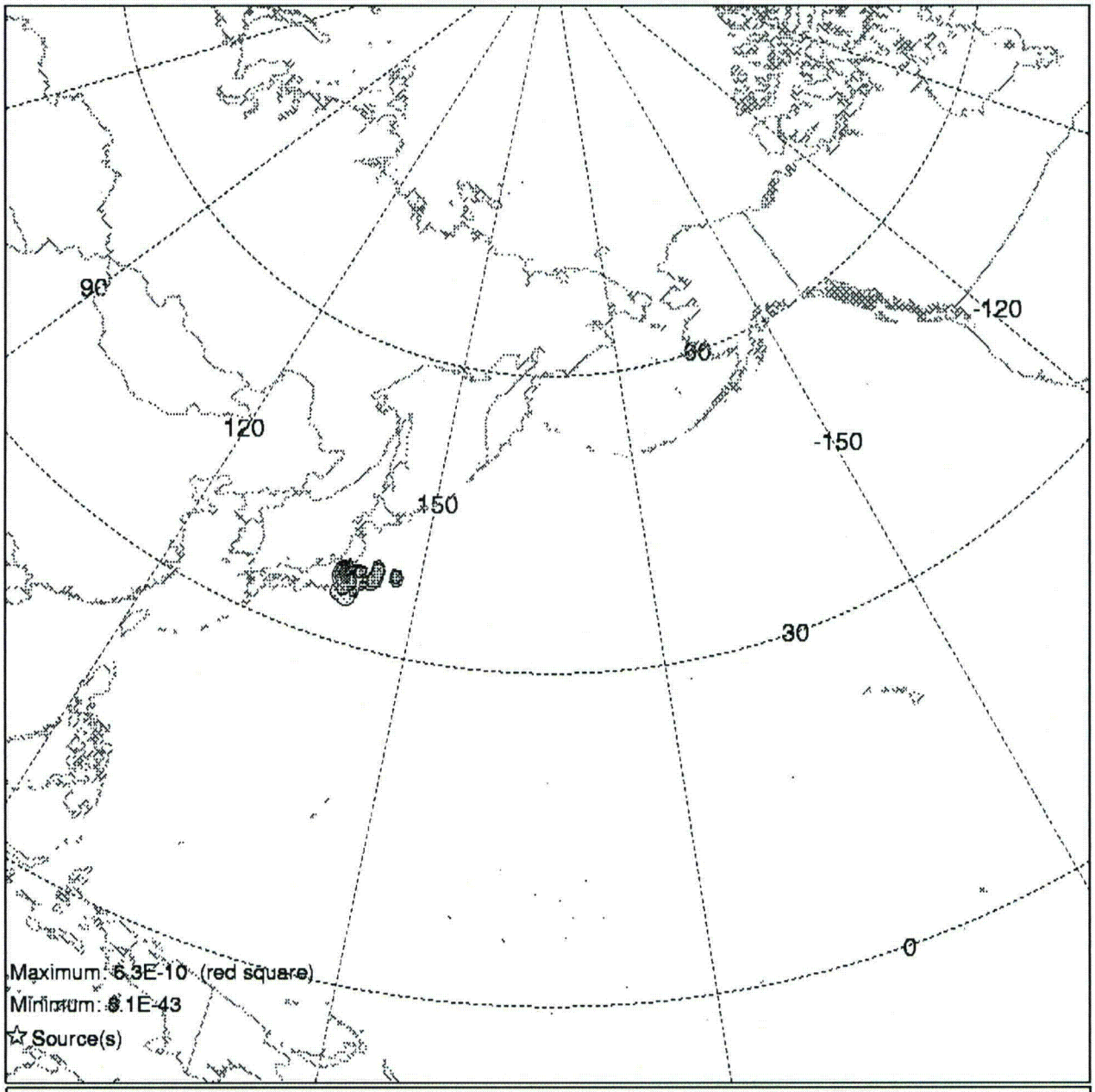
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 21 Mar to 0000 22 Mar 11 (UTC)

Exposure (Bq-s/m3) averaged between 0 m and 500 m

>1.0E-10 >1.0E-12 >1.0E-14 >1.0E-16



NRAD RELEASE STARTED AT 0700 UTC20 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.0329 E)

Isotope : I131 (Halflife: 8.04398E+00 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 20 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sun Mar 20 09:27:37 2011

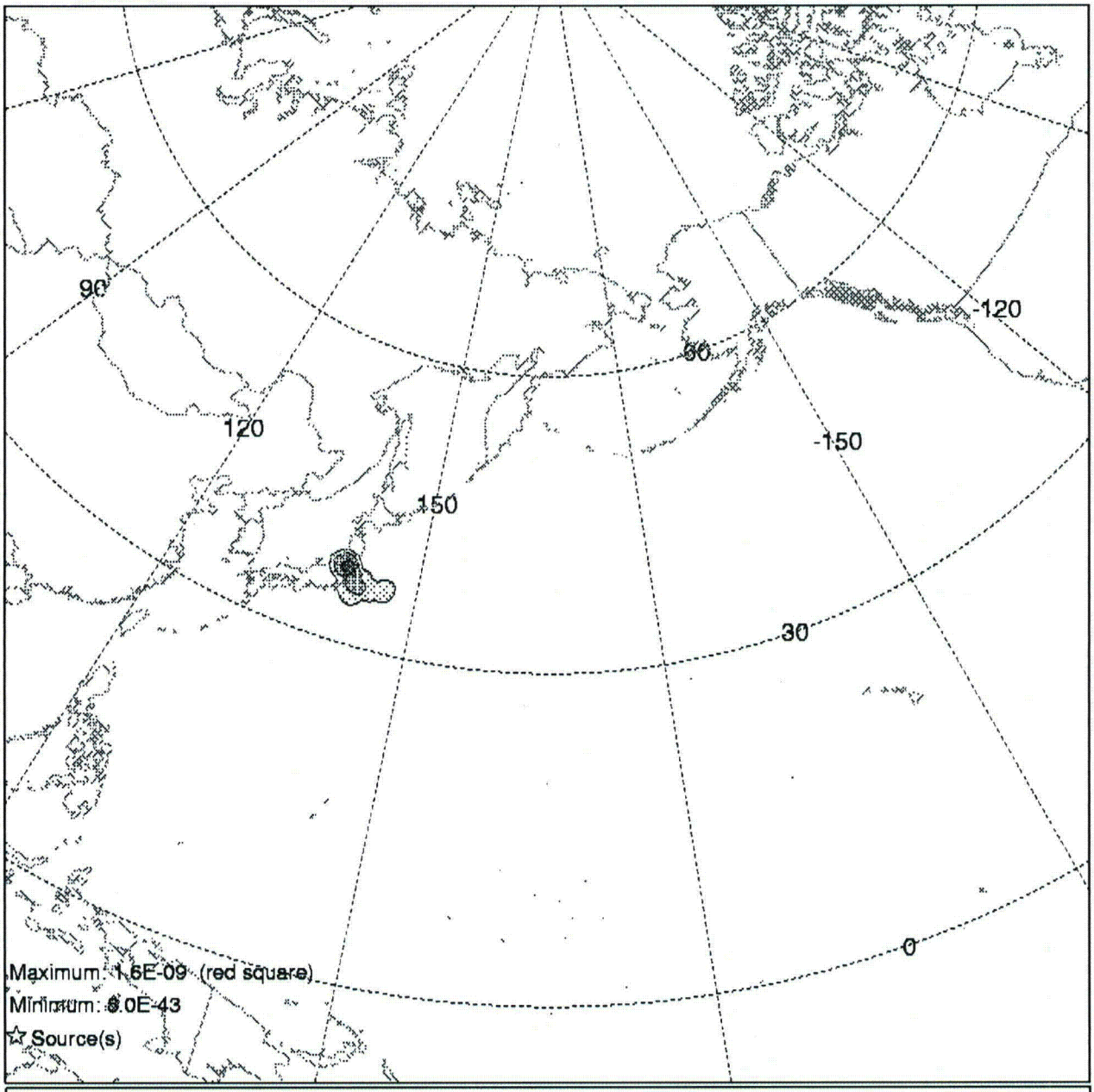
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 22 Mar to 0000 23 Mar 11 (UTC)

Exposure (Bq-s/m3) averaged between 0 m and 500 m

>1.0E-09 >1.0E-11 >1.0E-13 >1.0E-15



NRAD RELEASE STARTED AT 0700 UTC20 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.0329 E)

Isotope : I131 (Halflife: 8.04398E+00 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 20 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sun Mar 20 09:27:37 2011

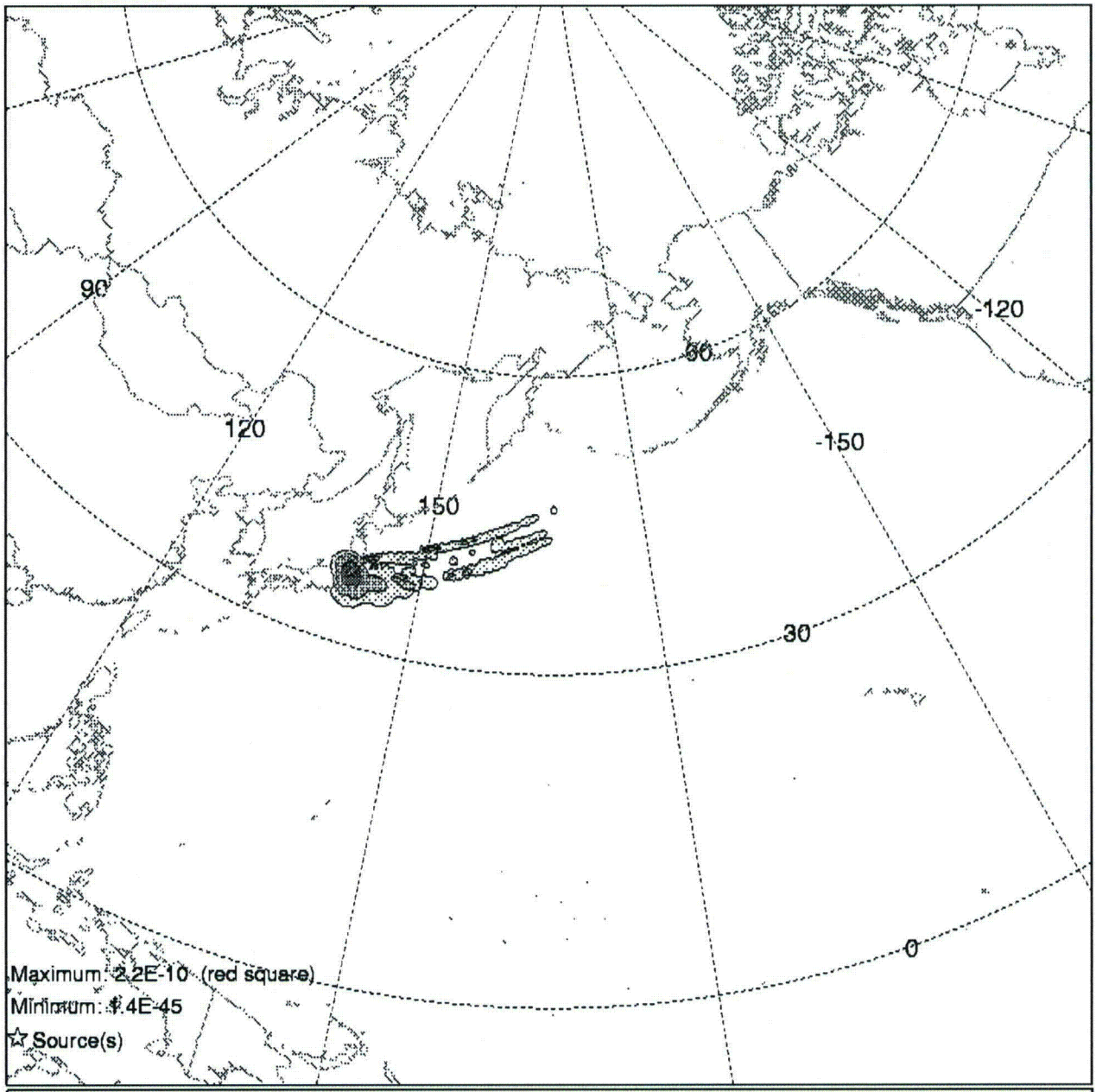
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 20 Mar to 0000 23 Mar 11 (UTC)

Deposition (Bq/m2) at ground-level

>1.0E-10 >1.0E-12 >1.0E-14 >1.0E-16



NRAD RELEASE STARTED AT 0700 UTC20 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.0329 E)

Isotope : I131 (Halflife: 8.04398E+00 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 20 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sun Mar 20 09:27:37 2011

From:	NITOPS
To:	CMHT; HOO Hoc; NARAC; PMT01 Hoc; PMT02 Hoc; Hoc, PMT12
Subject:	FW: Fukushima Hysplit Output - 03/19/2011 06Z Model Run... Date Correction - 03/20/2011 with attachment
Date:	Sunday, March 20, 2011 11:15:02 AM
Attachments:	2011032012.FUKUSHIMA-DAIICHI-1.rsmc21.pdf

-----Original Message-----
From: sdm [mailto:Sdm@noaa.gov]
Sent: Sunday, March 20, 2011 10:28 AM
Cc: oar.jp.iaea.results@noaa.gov
Subject: Re: Fukushima Hysplit Output - 03/19/2011 06Z Model Run... Date Correction - 03/20/2011 with attachment

On 3/20/2011 10:19 AM, sdm wrote:
> Attached is the latest NOAA Hysplit dispersion model run with a
> simulated release time of 03/20/2011 1450Z, release duration of 72
> hours, and model run duration of 72 hours using the 06Z NCEP GFS.
>
> This simulation was not an official request from the IAEA. This output
> reflects trajectories and dispersion of simulated current and future
> releases and does not reflect potential previous releases.
>
> SDM Randal Shruell
>
>
>
>

EE/45

From:	NITOPS
To:	CMHT; HOO Hoc; NARAC; PMT01 Hoc; PMT02 Hoc; Hoc. PMT12
Subject:	FW: Fukushima Hysplit Output - 03/19/2011 06Z Model Run
Date:	Sunday, March 20, 2011 11:04:02 AM
Attachments:	2011032012.FUKUSHIMA-DAIICHI-1.rsmc21.pdf

-----Original Message-----
From: sdm [mailto:Sdm@noaa.gov]
Sent: Sunday, March 20, 2011 10:19 AM
To: oar.jp.iaea.results@noaa.gov
Subject: Fukushima Hysplit Output - 03/19/2011 06Z Model Run

Attached is the latest NOAA Hysplit dispersion model run with a simulated release time of 03/19/2011 1450Z, release duration of 72 hours, and model run duration of 72 hours using the 06Z NCEP GFS.

This simulation was not an official request from the IAEA. This output reflects trajectories and dispersion of simulated current and future releases and does not reflect potential previous releases.

SDM Randal Shruell

U.S. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
RSMC Washington (NOAA ARL, NOAA NCEP)

Room 410 - W/NMC33
World Weather Building
5200 Auth Road
Camp Springs, Maryland USA

Tel (24 hrs - NCEP): 301-763-8298
Tel (Backup - ARL): 301-713-2614
Fax (24 hrs - NCEP): 301-763-8592
Fax (Backup - ARL): 301-713-4592

RSMC products created Sun Mar 20 13:52 UTC 2011

The following charts will follow:
- trajectory map
- several time-itegrated concentration maps
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

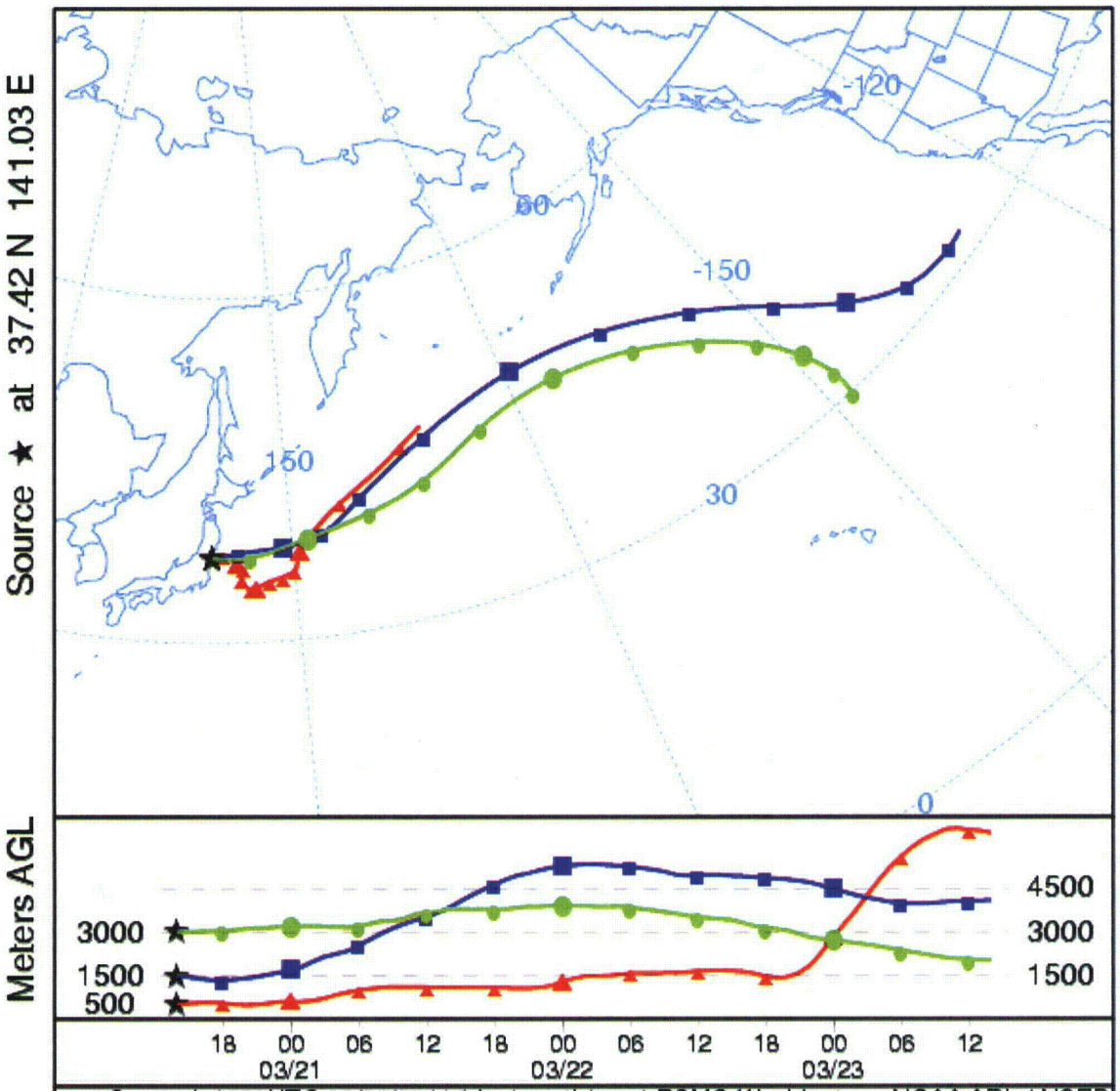
Source term and dispersion model details

RSMC Washington - NOAA ARL / NCEP

Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329
Release Start (YYYY MM DD HH MM):2011 03 20 14 50
Meteorology: 0600 UTC 20 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20
Note: Contour values may change from chart to chart

NOAA HYSPLIT MODEL
Forward trajectories starting at 14 UTC 20 Mar 11
06 UTC 20 Mar GFSG Forecast Initialization



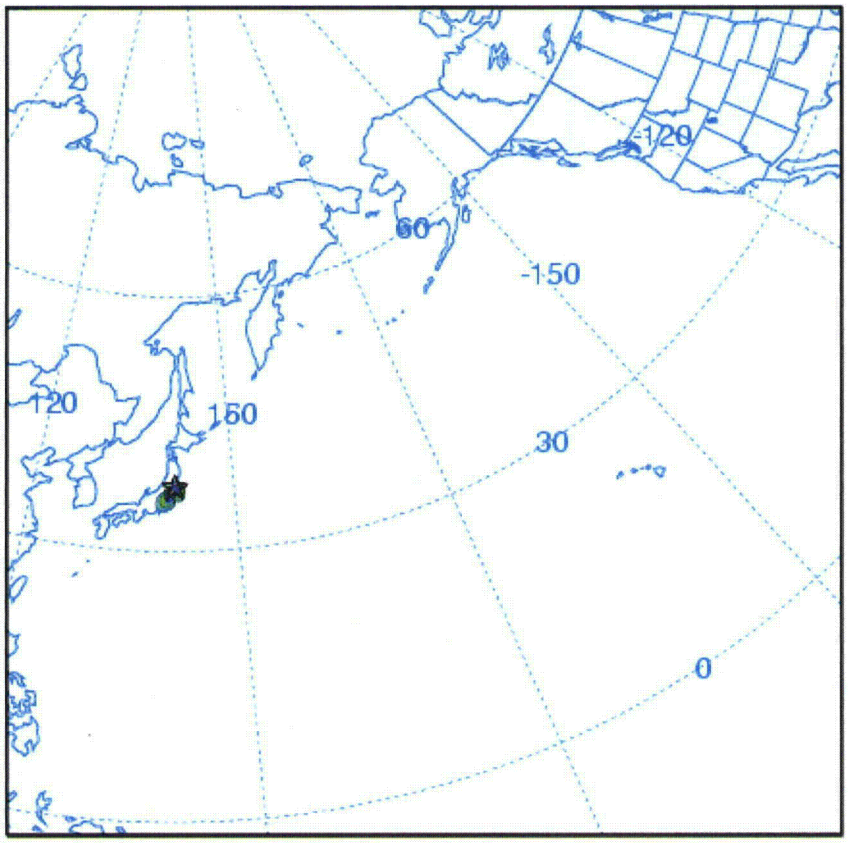
Created: 1352UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 height:500.0 1500.0 3000

Trajectory Direction:forward Duration:72 hr
Vertical Motion Calculation Method: Model Vertical Velocity
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 20 Mar to 1200 21 Mar 11 (UTC)
I131 Release started at 1450 20 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



>1.0E-10 Bq-s/m3
>1.0E-12 Bq-s/m3
>1.0E-14 Bq-s/m3
>1.0E-16 Bq-s/m3

Maximum: 2.4E-10
(identified as a square)
Minimum: 8.5E-37

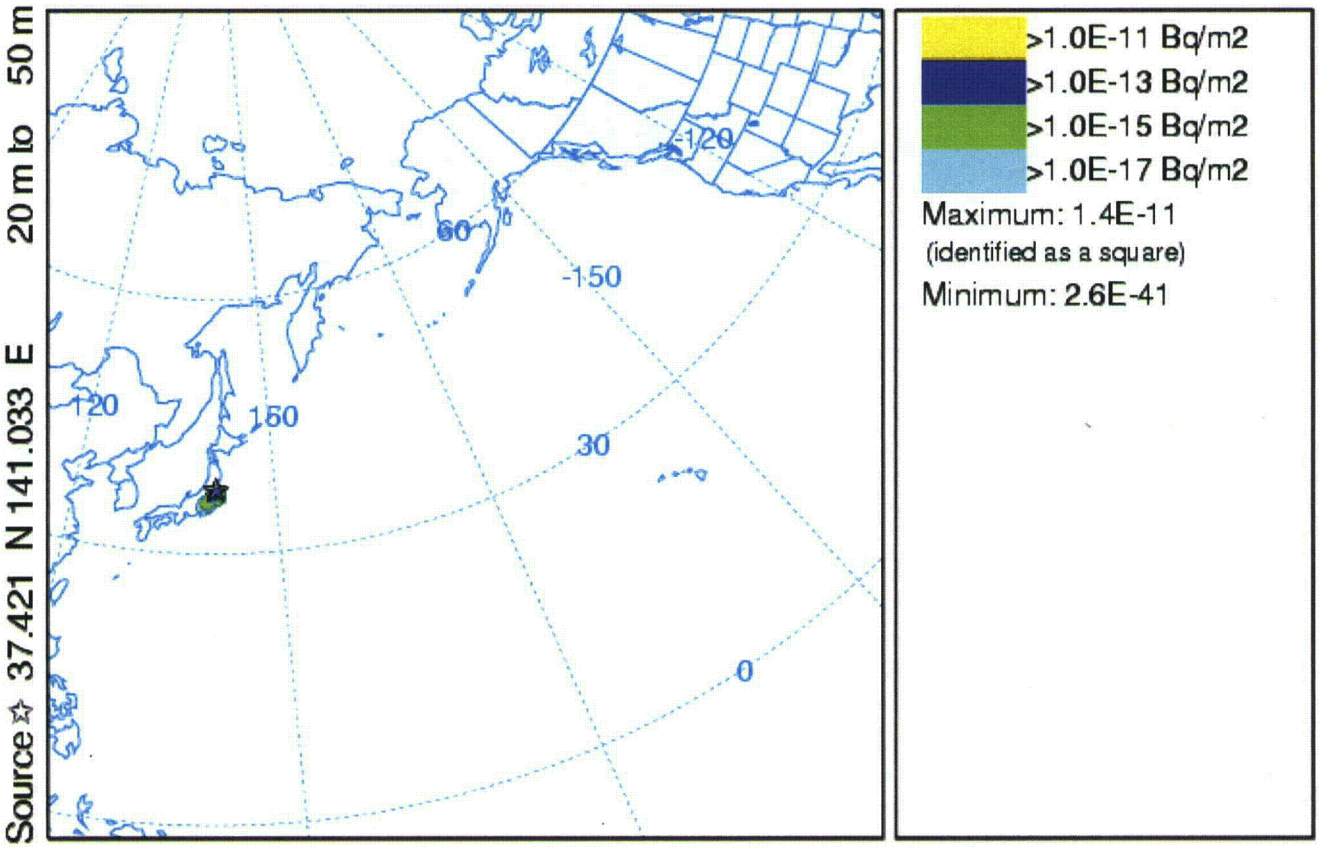
0600 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1352UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0600 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 20 Mar to 1200 21 Mar 11 (UTC)
I131 Release started at 1450 20 Mar 11 (UTC)



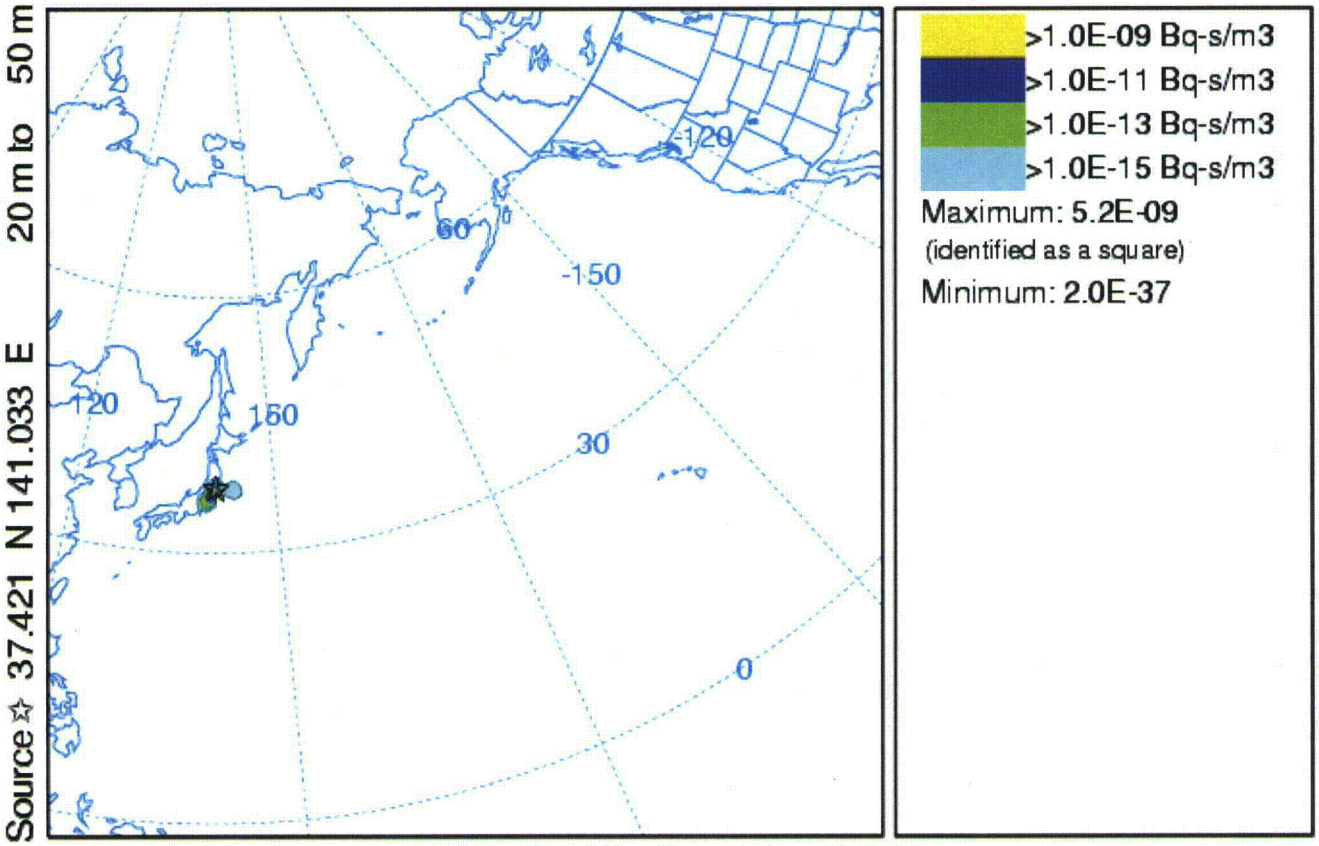
0600 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1352UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0600 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 21 Mar to 1200 22 Mar 11 (UTC)
I131 Release started at 1450 20 Mar 11 (UTC)



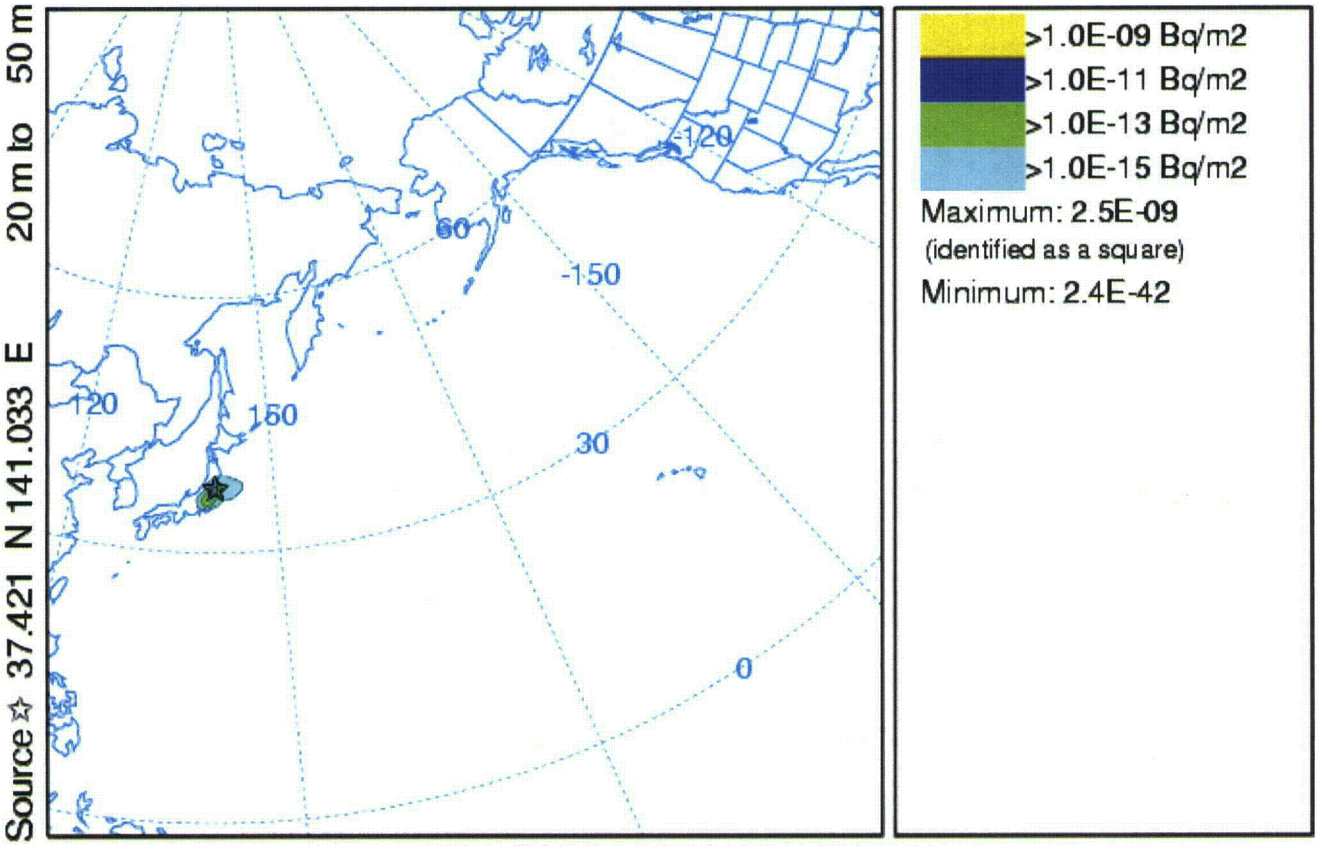
0600 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1352UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0600 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 20 Mar to 1200 22 Mar 11 (UTC)
I131 Release started at 1450 20 Mar 11 (UTC)



0600 20 Mar 11 GFSG FORECAST INITIALIZATION

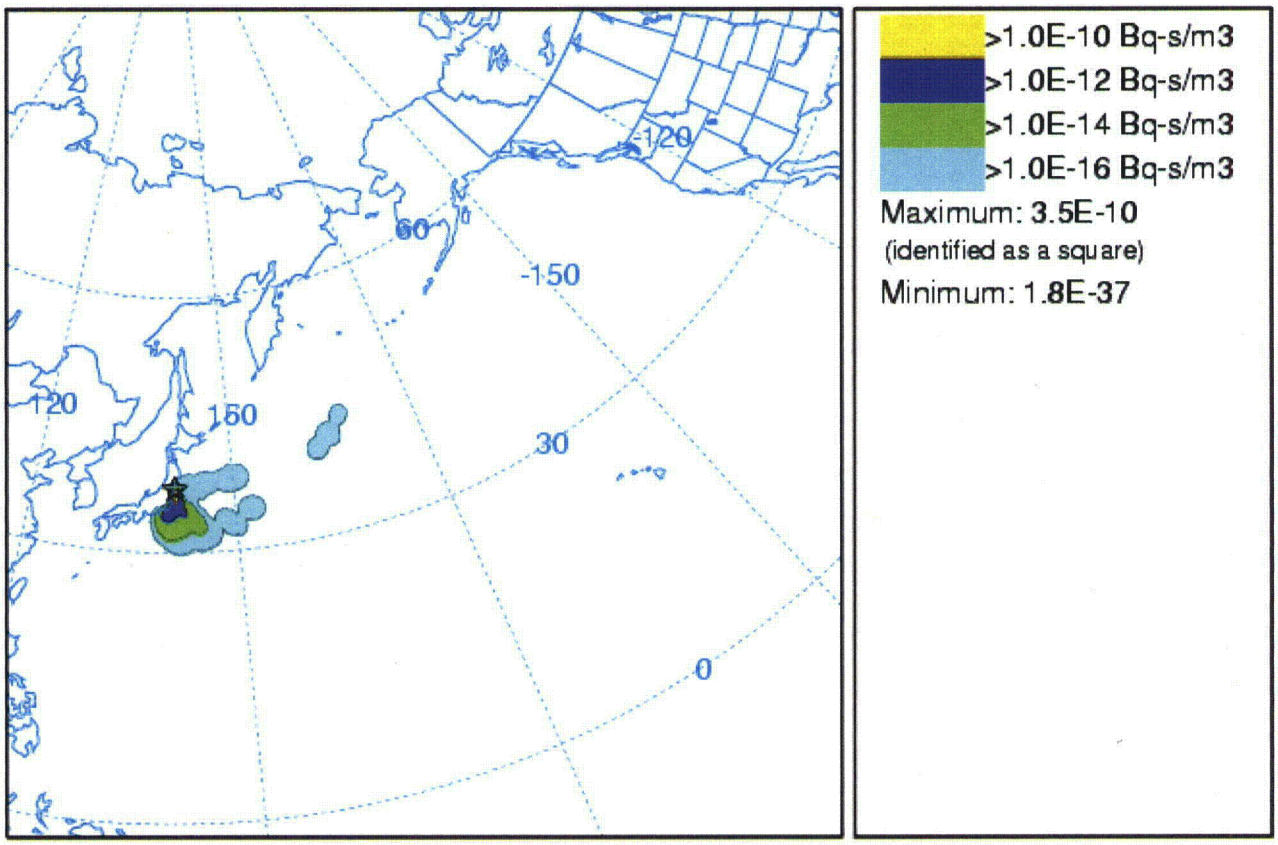
Created: 1352UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0600 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 22 Mar to 1200 23 Mar 11 (UTC)
I131 Release started at 1450 20 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



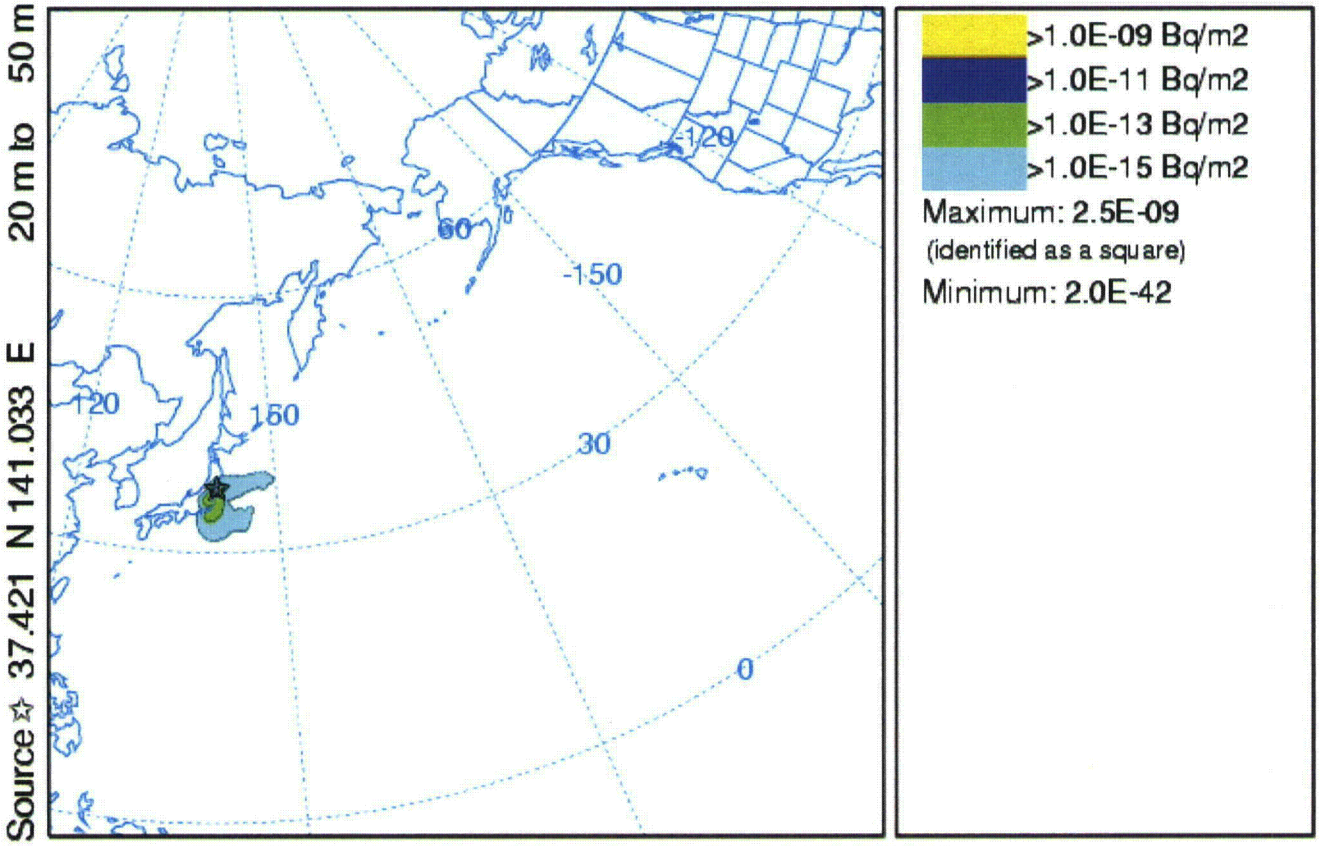
0600 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1352UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0600 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 20 Mar to 1200 23 Mar 11 (UTC)
I131 Release started at 1450 20 Mar 11 (UTC)



0600 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1352UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0600 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

From:	NITOPS
To:	CMHT; HOO Hoc; NARAC; PMT01 Hoc; PMT02 Hoc; Hoc, PMT12
Subject:	FW: Fukushima Hysplit Output - 03/20/2011 12Z Model Run
Date:	Sunday, March 20, 2011 1:58:50 PM
Attachments:	2011032012.FUKUSHIMA-DAIICHI-1.rsmc23.pdf

-----Original Message-----
From: sdm [mailto:Sdm@noaa.gov]
Sent: Sunday, March 20, 2011 1:58 PM
To: oar.jp.iaea.results@noaa.gov
Subject: Fukushima Hysplit Output - 03/20/2011 12Z Model Run

Attached is the latest NOAA Hysplit dispersion model run with a simulated release time of 03/20/2011 1741Z, release duration of 72 hours, and model run duration of 72 hours using the 12Z NCEP GFS.

This simulation was not an official request from the IAEA. This output reflects trajectories and dispersion of simulated current and future releases and does not reflect potential previous releases.

SDM Randal Shruell

EE/46

U.S. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

RSMC Washington (NOAA ARL, NOAA NCEP)

Room 410 - W/NMC33
World Weather Building
5200 Auth Road
Camp Springs, Maryland USA

Tel (24 hrs - NCEP): 301-763-8298
Tel (Backup - ARL): 301-713-2614

Fax (24 hrs - NCEP): 301-763-8592
Fax (Backup - ARL): 301-713-4592

RSMC products created Sun Mar 20 17:43 UTC 2011

The following charts will follow:
- trajectory map
- several time-itegrated concentration maps
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

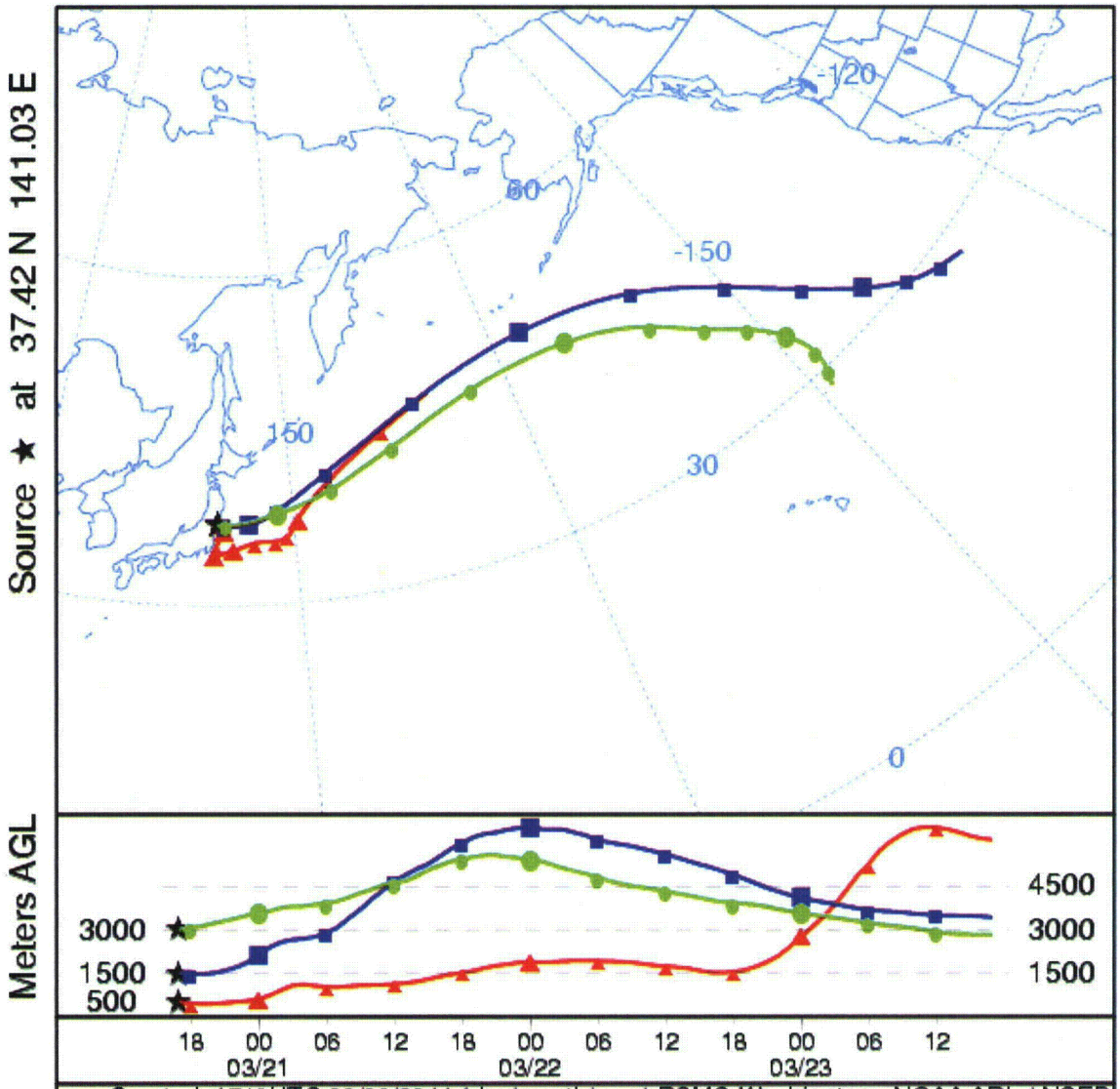
Source term and dispersion model details

RSMC Washington - NOAA ARL / NCEP

Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329
Release Start (YYYY MM DD HH MM):2011 03 20 17 41
Meteorology: 1200 UTC 20 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20
Note: Contour values may change from chart to chart

NOAA HYSPLIT MODEL
Forward trajectories starting at 17 UTC 20 Mar 11
12 UTC 20 Mar GFSG Forecast Initialization

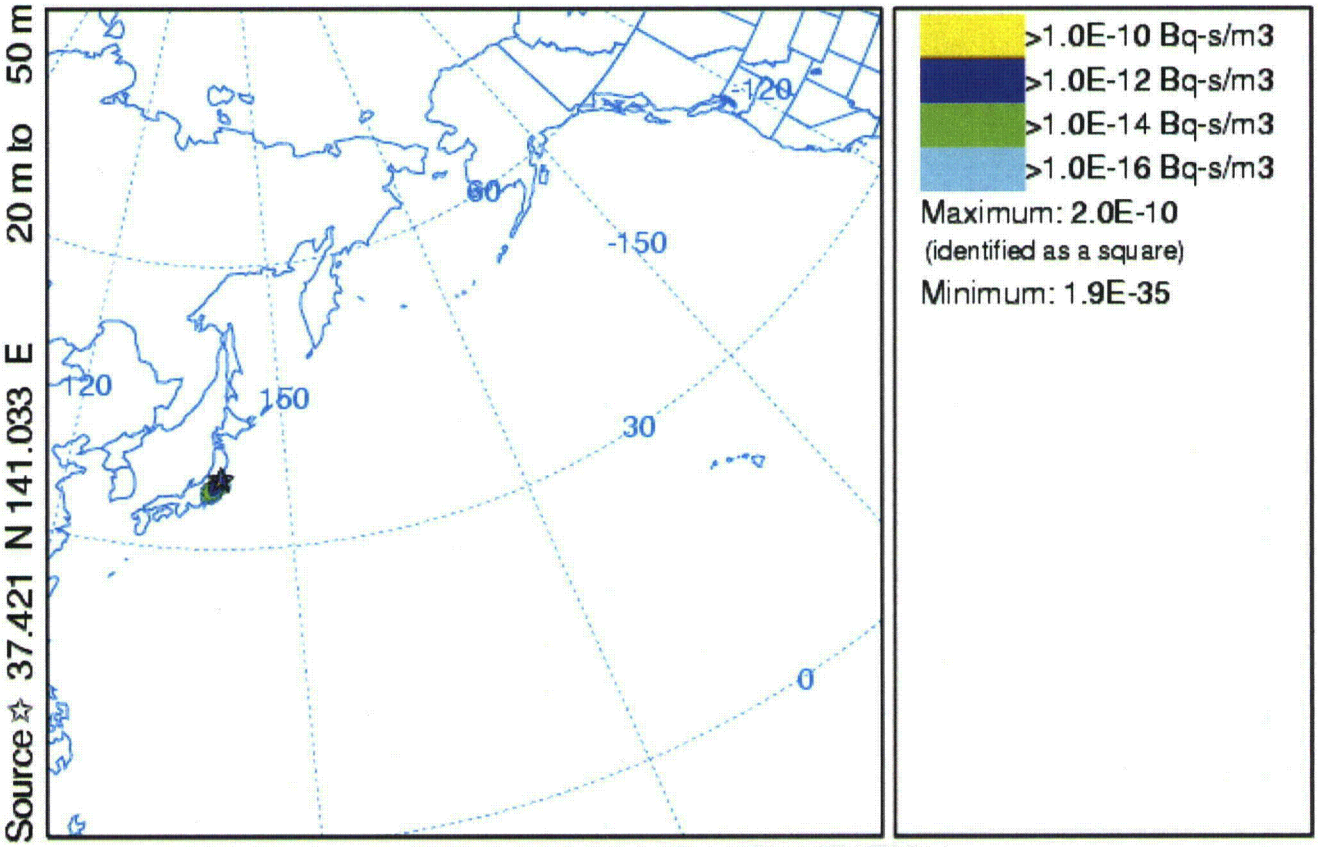


Created: 1743UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 height:500.0 1500.0 3000

Trajectory Direction:forward Duration:72 hr
Vertical Motion Calculation Method: Model Vertical Velocity
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 20 Mar to 1200 21 Mar 11 (UTC)
I131 Release started at 1741 20 Mar 11 (UTC)



1200 20 Mar 11 GFSG FORECAST INITIALIZATION

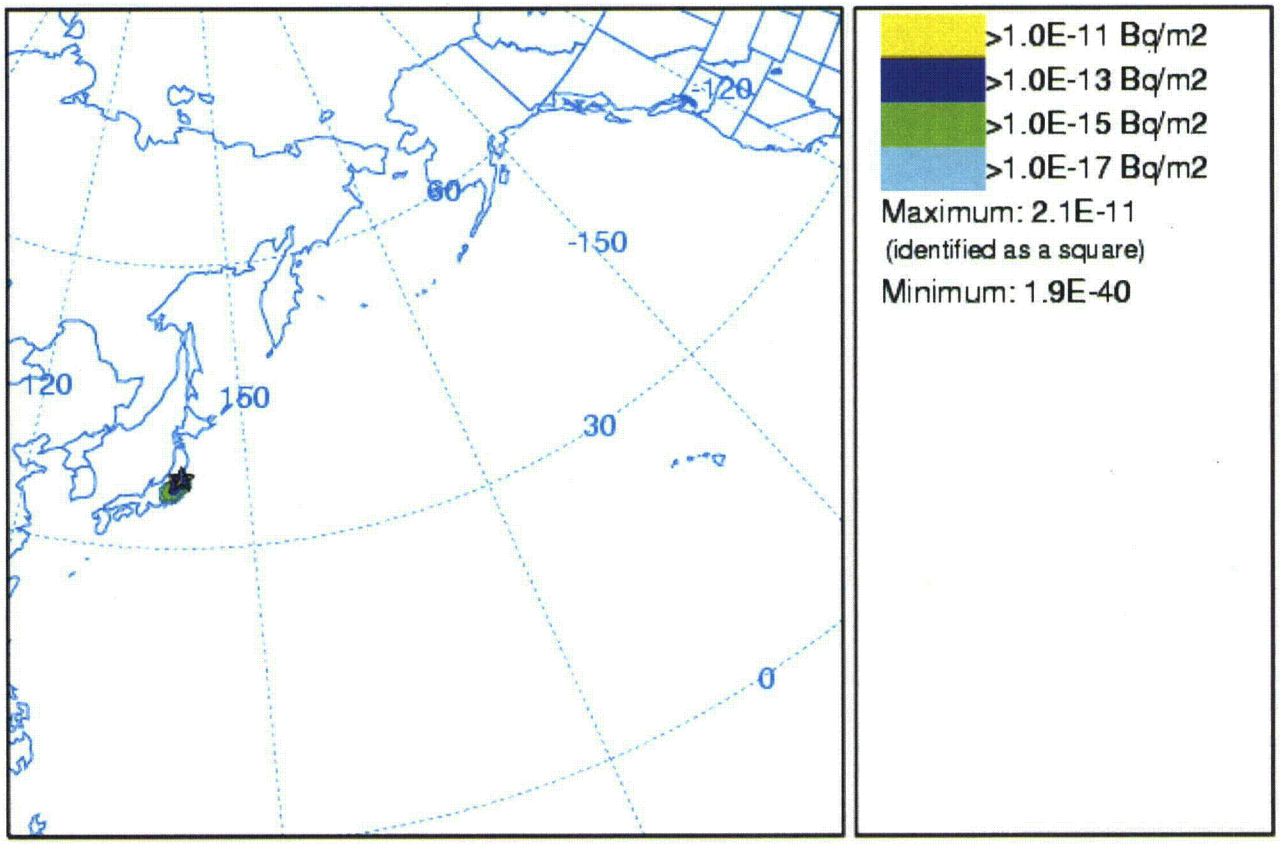
Created: 1743UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 20 Mar to 1200 21 Mar 11 (UTC)
I131 Release started at 1741 20 Mar 11 (UTC)

Source ☆ 37.421 N 141.033 E 20 m to 50 m



1200 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1743UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
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NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 21 Mar to 1200 22 Mar 11 (UTC)
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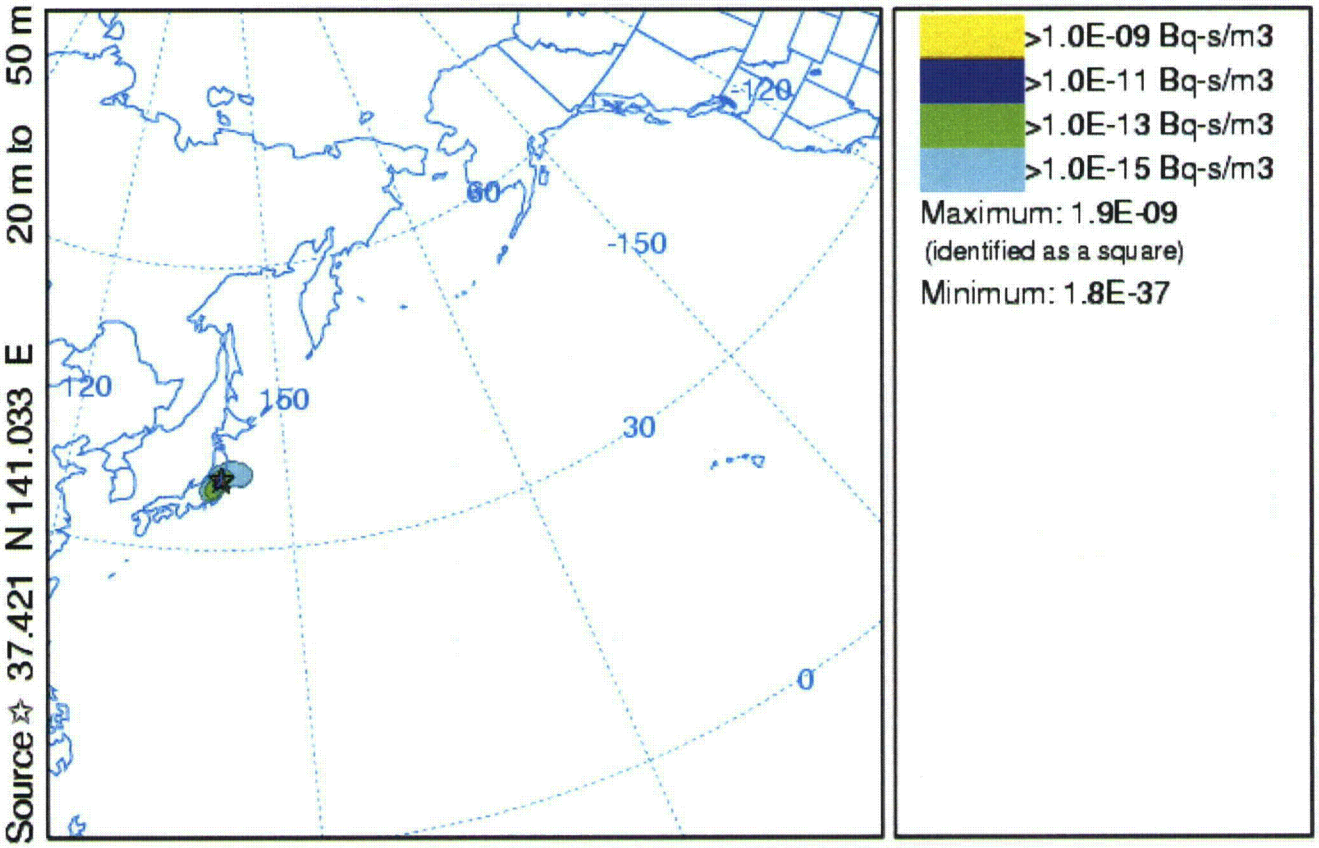

1200 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1743UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
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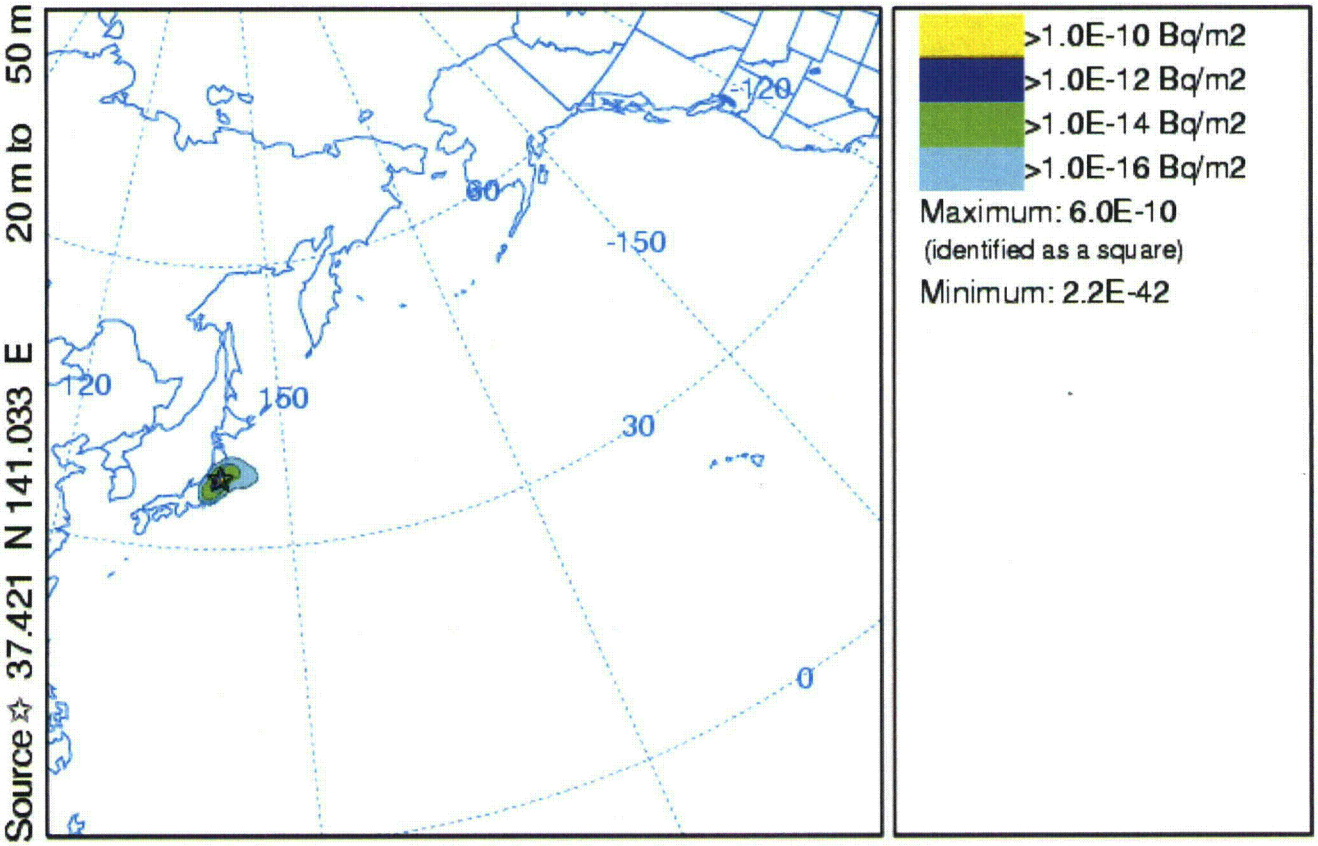
Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 20 Mar to 1200 22 Mar 11 (UTC)
I131 Release started at 1741 20 Mar 11 (UTC)



1200 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1743UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
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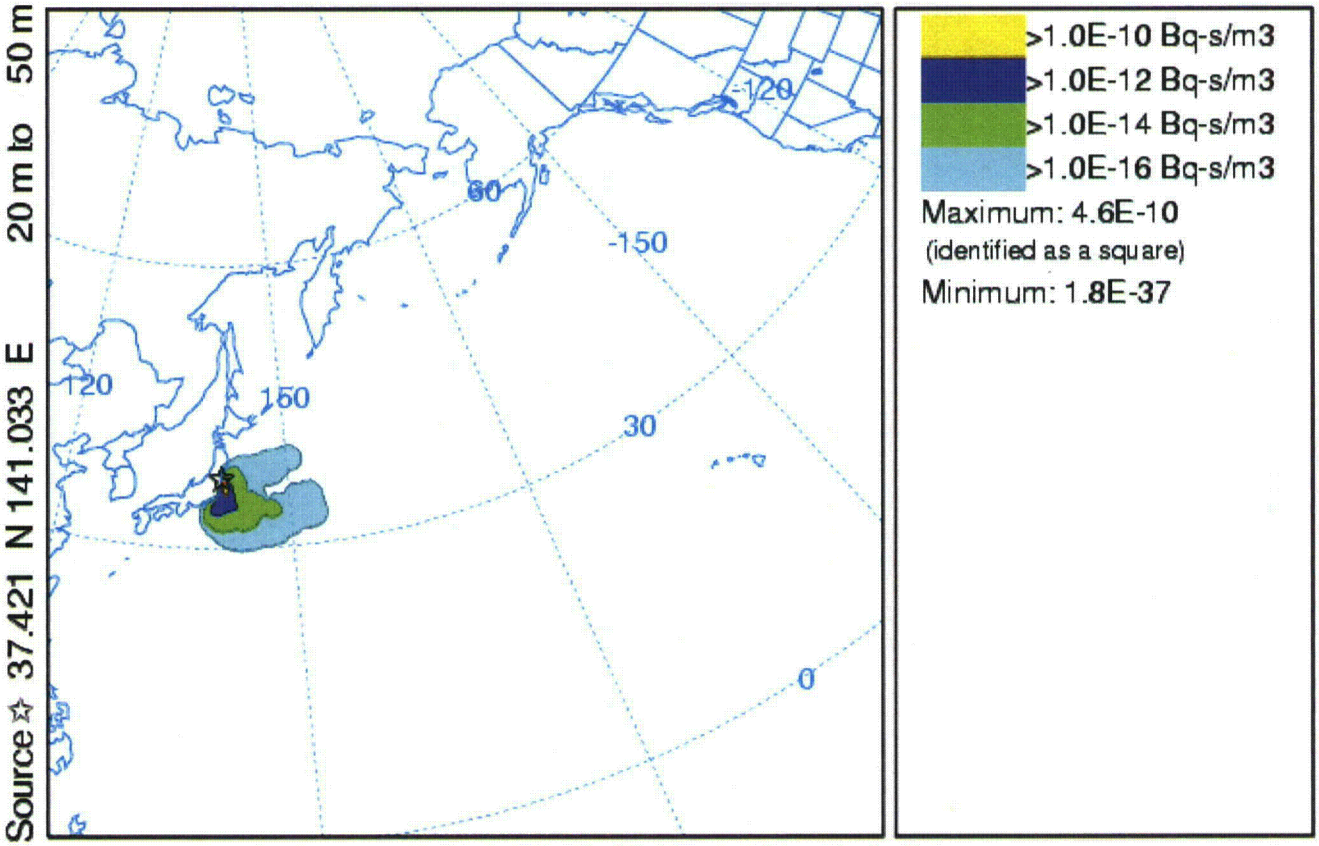
NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 1200 22 Mar to 1200 23 Mar 11 (UTC)
I131 Release started at 1741 20 Mar 11 (UTC)



1200 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1743UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
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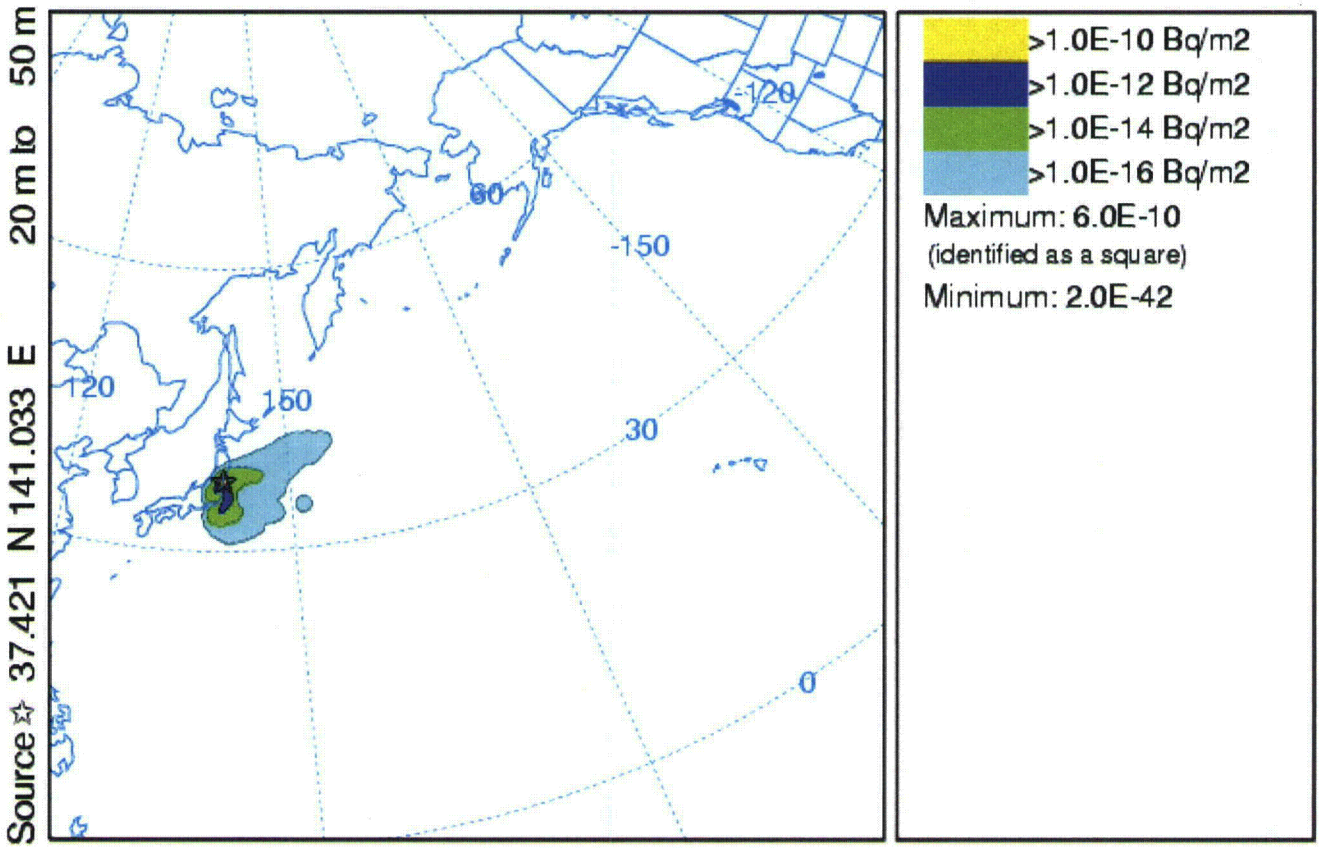
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 1200 20 Mar to 1200 23 Mar 11 (UTC)
I131 Release started at 1741 20 Mar 11 (UTC)



1200 20 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1743UTC 20/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 50 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 50 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 20 Mar 2011 GFS
Note: Contour values may change from chart to chart

Response: IAEA NOTIFIED EMERGENCY

From: NITOPS
To: CMHT; HOO Hoc; NARAC; PMT01 Hoc; PMT02 Hoc; Hoc. PMT12
Subject: FW: Updated weather forecst for Fukushima Daiichi 1
Date: Sunday, March 20, 2011 11:07:32 AM
Attachments: Fukushima_Forecast_20March06Z.xlsx

From: Vogt, Phil [mailto:vogt4@llnl.gov]
Sent: Sunday, March 20, 2011 10:28 AM
To: CMHT; NITOPS; hoo.hoc@nrc.gov; PMT02 Hoc; pmt01.hoc@nrc.gov; Remick, Alan; na30ecc@nr.doe.gov; 'McMichael, Lukas C CIV SEA 08 NR'
Cc: narac@llnl.gov
Subject: Updated weather forecst for Fukushima Daiichi 1

The forecast below is based on our 0600 UTC WRF run (also attached as an excel file)

Date	Hour (UTC)	Speed (m/s)	Dir	Stability	Precip
--	--	----	---	----	----
20-Mar	15	1.6	348	F	0
	16	1.2	349	F	0
	17	1.7	203	F	0
	18	3.1	214	E	0
	19	3.1	251	F	0
	20	2.9	353	F	0
	21	2.7	8	F	0
	22	3.4	11	D	0
	23	4.1	341	C	0
21-Mar	0	3.7	338	C	0
	1	4.3	2	C	0.05
	2	5.8	12	C	0.04
	3	6.7	9	C	0.04
	4	6.6	17	C	0.01
	5	5.9	16	C	0
	6	5.5	17	C	0
	7	4.3	5	D	0
	8	2.9	1	D	0
	9	2.6	331	C	0
	10	3.4	314	D	0
	11	3.8	308	D	0
	12	4.1	306	E	0
	13	3.8	297	E	0
	14	3.7	303	E	0
	15	3	325	E	0
	16	4.2	326	D	0
	17	4.6	311	E	0

EE147

	18	4.7	318	E	0
	19	4.8	325	E	0
	20	5.3	327	D	0
	21	5.6	327	D	0
	22	5.7	328	D	0
	23	5.3	332	D	0
22-Mar	0	4.7	350	C	0
	1	4.9	6	C	0
	2	4.8	18	C	0
	3	4.5	32	C	0
	4	4.1	51	C	0
	5	3.8	67	C	0
	6	3.2	70	C	0

NARAC Operations
925-422-7627
narac@llnl.gov

Date	Hour (UTC)	Speed (m/s)	Dir	Stability	Precip
20-Mar	15	1.6	348	F	0
	16	1.2	349	F	0
	17	1.7	203	F	0
	18	3.1	214	E	0
	19	3.1	251	F	0
	20	2.9	353	F	0
	21	2.7	8	F	0
	22	3.4	11	D	0
	23	4.1	341	C	0
21-Mar	0	3.7	338	C	0
	1	4.3	2	C	0.05
	2	5.8	12	C	0.04
	3	6.7	9	C	0.04
	4	6.6	17	C	0.01
	5	5.9	16	C	0
	6	5.5	17	C	0
	7	4.3	5	D	0
	8	2.9	1	D	0
	9	2.6	331	C	0
	10	3.4	314	D	0
	11	3.8	308	D	0
	12	4.1	306	E	0
	13	3.8	297	E	0
	14	3.7	303	E	0
	15	3	325	E	0
	16	4.2	326	D	0
	17	4.6	311	E	0
	18	4.7	318	E	0
	19	4.8	325	E	0
	20	5.3	327	D	0
	21	5.6	327	D	0
	22	5.7	328	D	0
	23	5.3	332	D	0
22-Mar	0	4.7	350	C	0
	1	4.9	6	C	0
	2	4.8	18	C	0
	3	4.5	32	C	0
	4	4.1	51	C	0
	5	3.8	67	C	0
	6	3.2	70	C	0

From: Vogt, Phil
To: CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; HQQ Hoc; PMT02 Hoc; PMT01 Hoc; alan.remick@nnsa.doe.gov; na30ecc@nr.doe.gov; "McMichael, Lukas C CIV SEA 08 NR"
Cc: narac@llnl.gov
Subject: Updated weather forecst for Fukushima Daiichi 1
Date: Sunday, March 20, 2011 10:27:48 AM
Attachments: Fukushima_Forecast_20March06Z.xlsx

The forecast below is based on our 0600 UTC WRF run (also attached as an excel file)

Date	Hour (UTC)	Speed (m/s)	Dir	Stability	Precip
--	--	----	---	----	----
20-Mar	15	1.6	348	F	0
	16	1.2	349	F	0
	17	1.7	203	F	0
	18	3.1	214	E	0
	19	3.1	251	F	0
	20	2.9	353	F	0
	21	2.7	8	F	0
	22	3.4	11	D	0
	23	4.1	341	C	0
21-Mar	0	3.7	338	C	0
	1	4.3	2	C	0.05
	2	5.8	12	C	0.04
	3	6.7	9	C	0.04
	4	6.6	17	C	0.01
	5	5.9	16	C	0
	6	5.5	17	C	0
	7	4.3	5	D	0
	8	2.9	1	D	0
	9	2.6	331	C	0
	10	3.4	314	D	0
	11	3.8	308	D	0
	12	4.1	306	E	0
	13	3.8	297	E	0
	14	3.7	303	E	0
	15	3	325	E	0
	16	4.2	326	D	0
	17	4.6	311	E	0
	18	4.7	318	E	0
	19	4.8	325	E	0
	20	5.3	327	D	0
	21	5.6	327	D	0
	22	5.7	328	D	0
	23	5.3	332	D	0
22-Mar	0	4.7	350	C	0

EE148

1	4.9	6	C	0
2	4.8	18	C	0
3	4.5	32	C	0
4	4.1	51	C	0
5	3.8	67	C	0
6	3.2	70	C	0

NARAC Operations
925-422-7627
narac@llnl.gov

Date	Hour (UTC)	Speed (m/s)	Dir	Stability	Precip
20-Mar	15	1.6	348	F	0
	16	1.2	349	F	0
	17	1.7	203	F	0
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	21	2.7	8	F	0
	22	3.4	11	D	0
	23	4.1	341	C	0
21-Mar	0	3.7	338	C	0
	1	4.3	2	C	0.05
	2	5.8	12	C	0.04
	3	6.7	9	C	0.04
	4	6.6	17	C	0.01
	5	5.9	16	C	0
	6	5.5	17	C	0
	7	4.3	5	D	0
	8	2.9	1	D	0
	9	2.6	331	C	0
	10	3.4	314	D	0
	11	3.8	308	D	0
	12	4.1	306	E	0
	13	3.8	297	E	0
	14	3.7	303	E	0
	15	3	325	E	0
	16	4.2	326	D	0
	17	4.6	311	E	0
	18	4.7	318	E	0
	19	4.8	325	E	0
	20	5.3	327	D	0
	21	5.6	327	D	0
	22	5.7	328	D	0
	23	5.3	332	D	0
22-Mar	0	4.7	350	C	0
	1	4.9	6	C	0
	2	4.8	18	C	0
	3	4.5	32	C	0
	4	4.1	51	C	0
	5	3.8	67	C	0
	6	3.2	70	C	0