China Meteorological Administration

National Meteorological Center
Beijing, China

RSMC for Environmental Emergency Response

FAX: (86 10) 68407469, (86 10) 62172909 Tel: (86 10)68408594, (86 10)58993295
Email: RSMC@cma.gov.cn

TO: IAEA,
WMO Secretariat,
RSMC Tokyo,
RSMC Obninsk,
NMHSs in RAII

From: RSMC Beijing
Date: Mar. 12, 2011 Time: 20:50 UTC

Dear Colleagues,

Please find attached the Joint Statement of RA II for Environmental Emergency Response (EER) distributed by RSMC Tokyo, RSMC Obninsk, and RSMC Beijing.

Best regards,
RSMC Beijing

Total No. of pages including this sheet: 3

EE15

JOINT STATEMENT
by: RSMC Tokyo(JP), RSMC Obninsk(RU) and RSMC Beijing(CN)

Emergency notified by the IAEA (Emergency)

Issued: 20:50 **UTC, Mar 12, 2011**

RADIOLOGICAL EVENT DETAILS
Source:
Fukushima Dai-chi, Japan
Location:
37.4206 degrees North latitude, 141.328 degrees East longitude
Release date-time:
From: 06:20 UTC 12 Mar 2011
To: 06:20 UTC 15 Mar 2011
Comments:
Emergency Accident

Weather Situation

Central Japan will be located at the western edge of a migratory high in 24 hours. Strong zonal winds will be predominant at mid-level (500hpa) over central Japan until 72 hours. A low pressure system is expected to be organized around southern coast of Japan within 24 hours and to travel along the coast, and its associated precipitation is predicted over central Japan after 48 hours to 60 hours.

Trajectories

The trajectories forecasts of RSMC Tokyo and RSMC Beijing are similar. Both of their models predict the tracer at 500m is moving toward northeast in the first 40 hours and then go toward east. At 1500m the tracer are moving to east during the first 6 hours and then turns to east-northeast. At 3000m height, the tracer mainly goes toward south-east and will rotate clockwise under influence of a high pressure system after 36 hours.
The RSMC Obninsk model shows that the tracer at 500m moves to east-northeast, and tracer at 1500m moves toward south-east, while the tracer at 3000m mainly moves to east.
These results hardly depend on pollutant (I-131,Cs-137).

Exposure

All of the three models predict the exposure area spreads toward east to north-east as the upper trough approaches.

Depositions

All of simulation results show that deposition areas cover Eastern part of Japan, and mainly influence north-western part of the Pacific Ocean.

Summary

The three models predict that the event would result in contamination of area around the release point. There would be a hazard around Eastern part of Japan and the Northwestern Pacific Ocean.

END

IAEA

INCIDENT AND EMERGENCY CENTRE

FAX: +43 1 26007 29309
email: iec3@iaea.org

Date: **2011-3-12**
17:15 UTC

Pages incl. cover sheet: 1

TO: **RANET contact points**

cc: Permanent Missions

Subject: Query on current capabilities regarding potential provision of specialized assistance through RANET

The IAEA's Incident and Emergency Centre (IEC) are closely following the continuing situation after the strong earthquake off the east coast of Japan and the following tsunami, and more recently the reported explosion in Fukushima-Daiichi Unit 1 Nuclear Power Plant.

Please be aware that if requests for assistance from Japan are made through the Response and Assistance Network (RANET), as facilitated by the IAEA, these requests will be transmitted to collaborating Member States.

Please let us know your current capabilities regarding provision of specialized assistance through RANET.

Regards,

Elena Buglova
Emergency Response Manager
Incident and Emergency Centre
International Atomic Energy Agency

FE/6

From: Pobanz, Brenda M.
To: HOO Hoc
Subject: Forecast winds from WRF model
Date: Saturday, March 12, 2011 10:44:54 PM

As requested -
March 13, 2011

03 UTC	7.4 m/s	271	D
04 UTC	6.2 m/s	276	D
05 UTC	2.8 m/s	312	B
06 UTC	2.5 m/s	288	B
07 UTC	1.8 m/s	286	B
08 UTC	1.2 m/s	262	B
09 UTC	3.3 m/s	240	C
10 UTC	4.0 m/s	242	C
11 UTC	5.0 m/s	250	D
12 UTC	6.4 m/s	253	D
13 UTC	7.0 m/s	251	D
14 UTC	6.8 m/s	247	D
15 UTC	6.5 m/s	243	D

Brenda Pobanz
Lawrence Livermore National Laboratory
925-422-1823

EE17

From: Pobanz, Brenda M.
To: HOO Hoc
Subject: updated wind forecast
Date: Saturday, March 12, 2011 1:52:22 AM

March 12, 2011

06 UTC	265	1 m/s	B
07 UTC	277	1.3 m/s	B
08 UTC	260	2.4 m/s	B
09 UTC	241	1.4 m/s	E
10 UTC	236	2.1 m/s	E
11 UTC	239	2.1 m/s	E
12 UTC	229	3.8 m/s	E
13 UTC	224	5.1 m/s	E
14 UTC	226	3.9 m/s	E
15 UTC	228	4.1 m/s	E
16 UTC	235	2.6 m/s	E
17 UTC	233	3.9 m/s	E

No precip

Brenda Pobanz
Lawrence Livermore National Laboratory
925-422-1823

EE18

From: hoo1
To: HOO Hoc
Subject: Fax from Via Fax
Date: Saturday, March 12, 2011 12:14:01 PM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017675

Notice for: HOO1

Remote ID: Via Fax

Received at: 03/12/2011 12:13

Pages: 6

Routed by:

Routed at: 03/12/2011 12:13

EE19

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 12 16:39 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

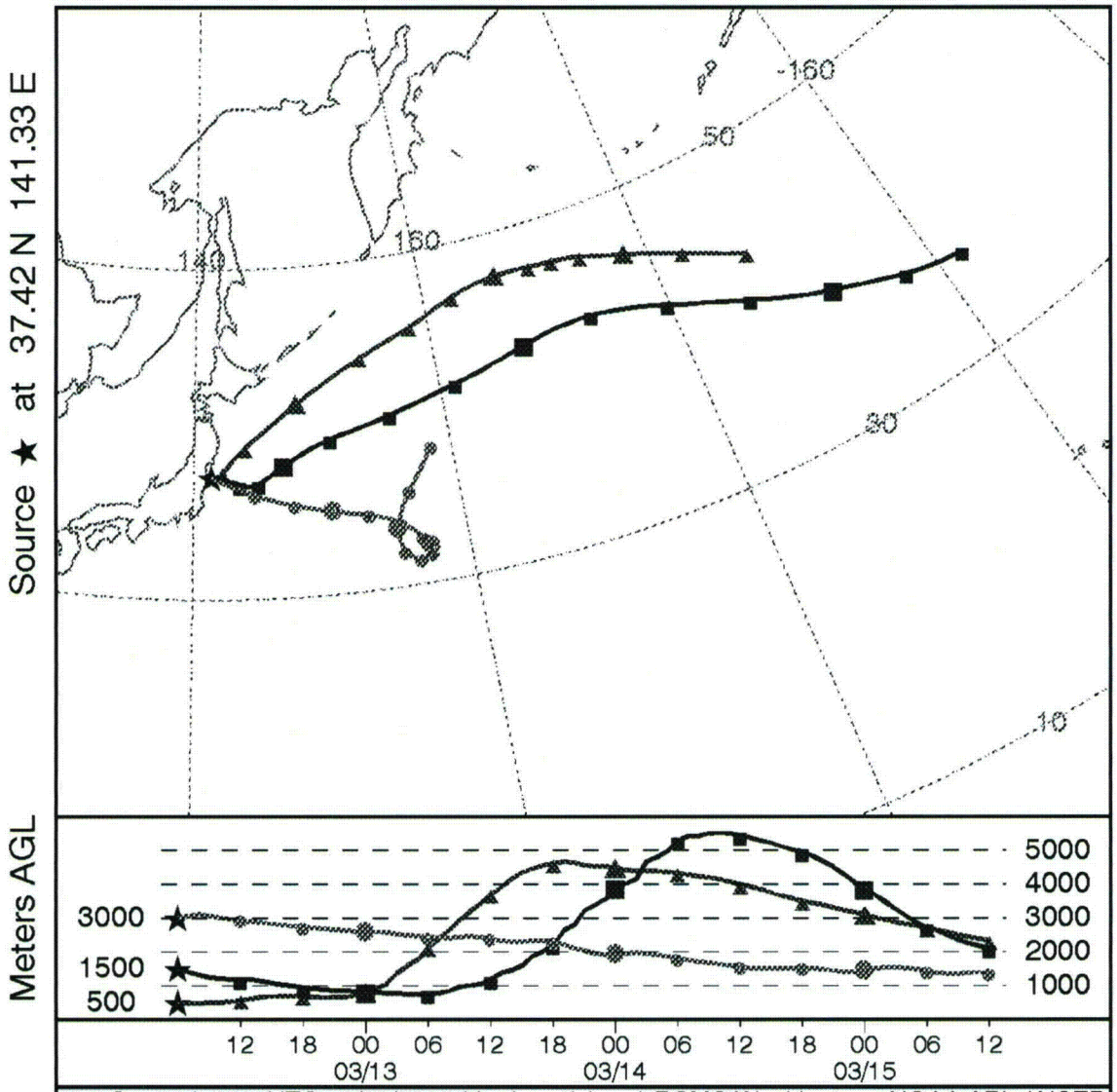
Response: REQUESTED SERVICES

Location:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33
Release Start (YYYY MM DD HH MM):2011 03 12 06 29
Meteorology: GDAS and 1200 UTC 12 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 100 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
Note: RESULTS BASED ON DEFAULT INITIAL VALUES

NOAA HYSPLIT MODEL

Forward trajectories starting at 06 UTC 12 Mar 11

12 UTC 12 Mar GDAS Forecast Initialization



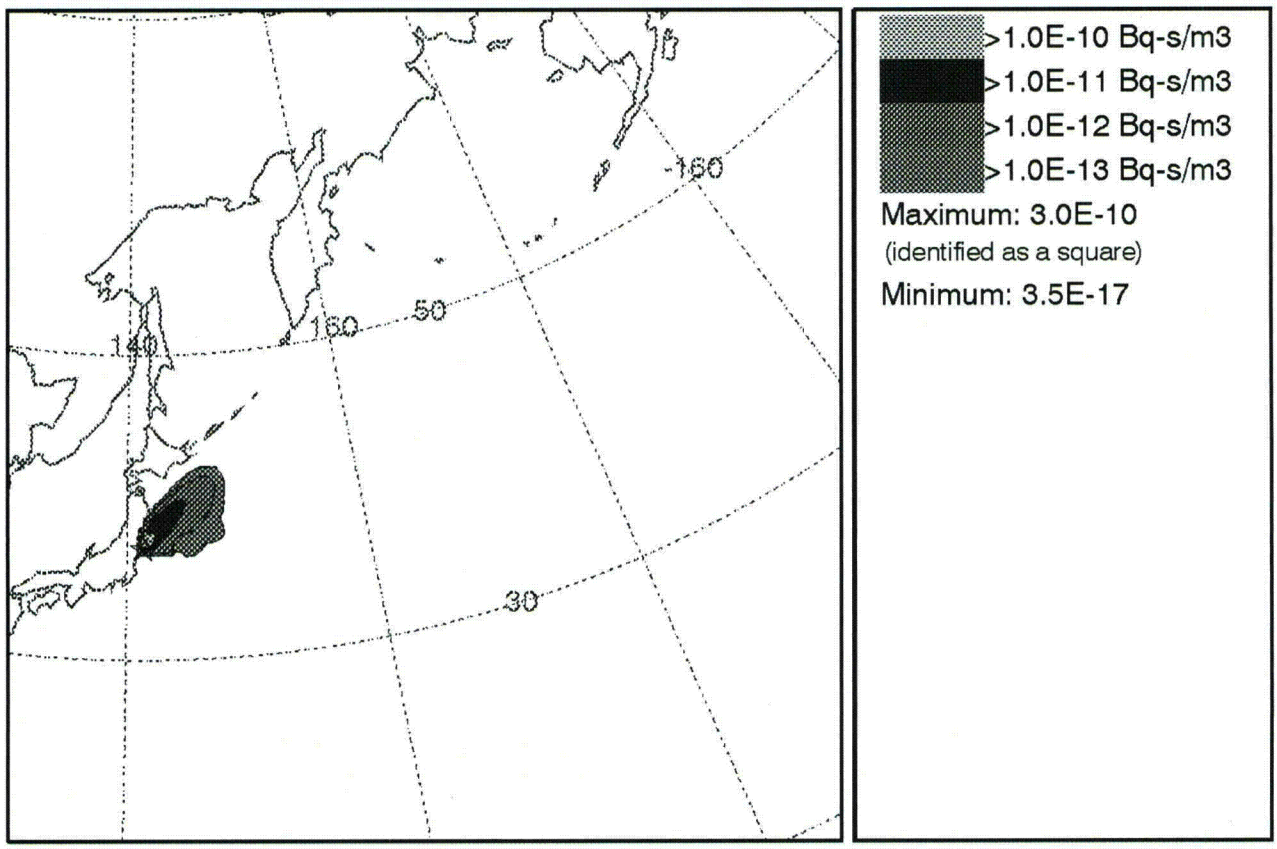
Created: 1639UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 height:500.0 1500.0 3000.0 m

Trajectory Direction:forward Duration:78 hr
Vertical Motion Calculation Method: Model Vertical Velocity
Response: REQUESTED SERVICES

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 12 Mar to 0000 13 Mar 11 (UTC)
I131 Release started at 0629 12 Mar 11 (UTC)

Source☆ 37.420 N 141.330 E 20 m to 100 m



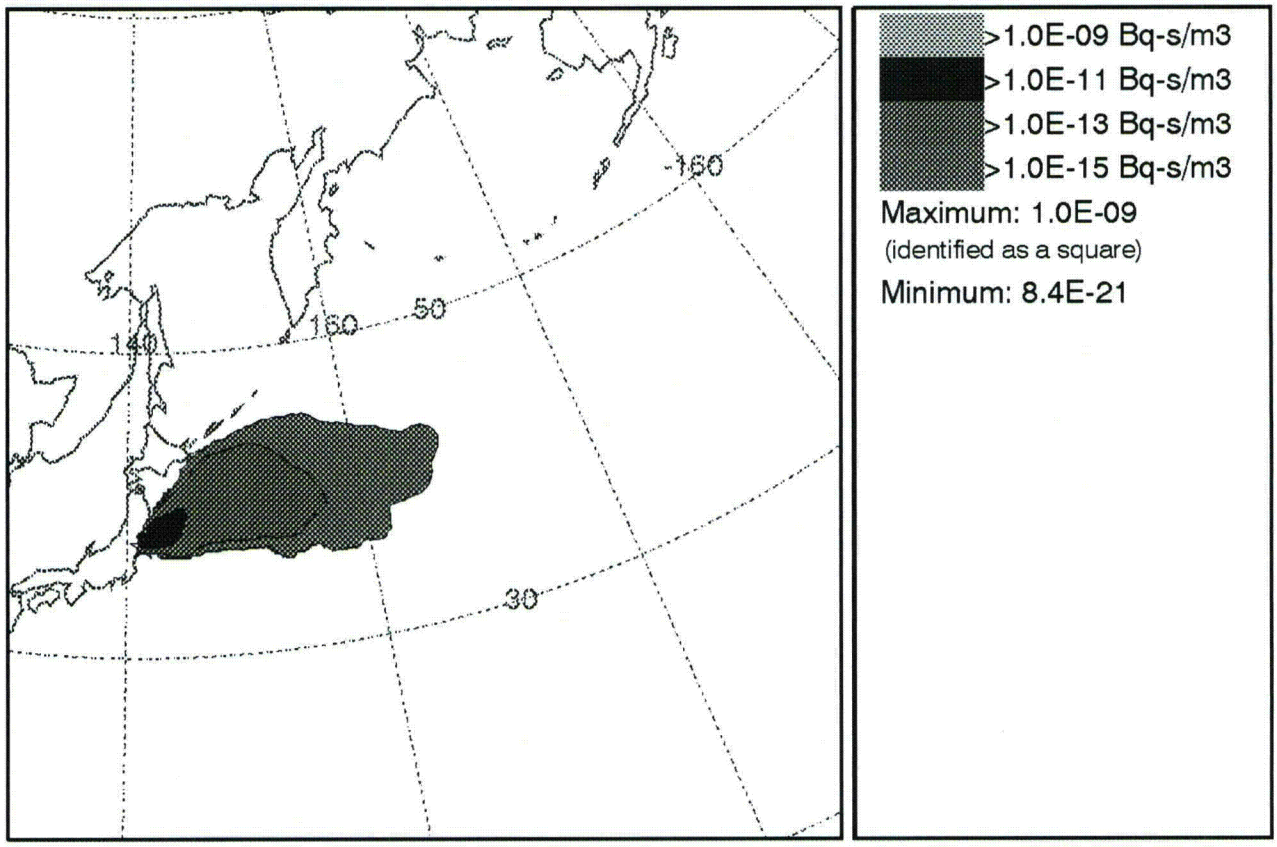
GDAS METEOROLOGICAL DATA

Created: 1639UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 100 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 100 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: GDAS and 1200 UTC 12 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: REQUESTED SERVICES

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 13 Mar to 0000 14 Mar 11 (UTC)
I131 Release started at 0629 12 Mar 11 (UTC)

Source☆ 37.420 N 141.330 E 20 m to 100 m

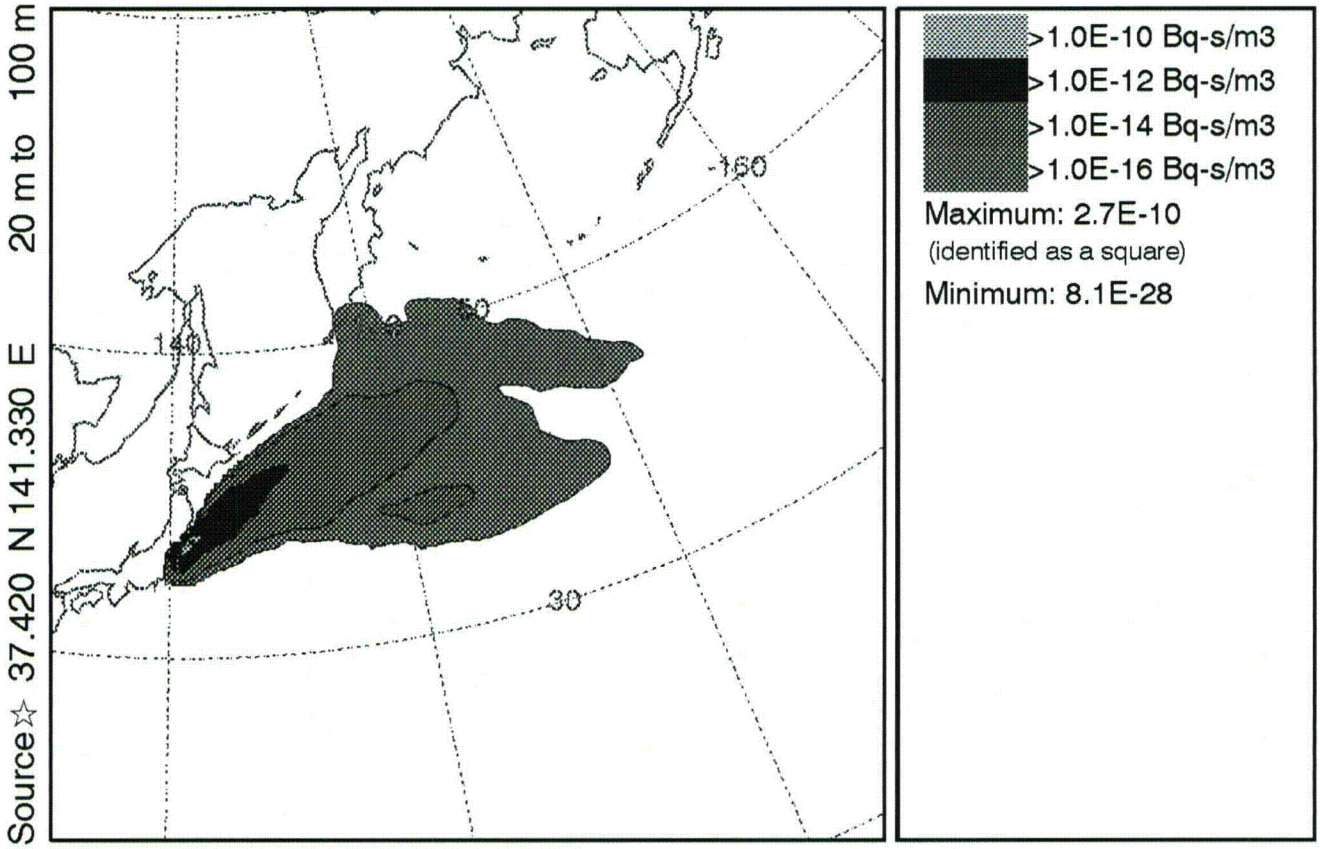


1200 12 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1639UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 100 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 100 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: GDAS and 1200 UTC 12 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: REQUESTED SERVICES

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 14 Mar to 0000 15 Mar 11 (UTC)
I131 Release started at 0629 12 Mar 11 (UTC)



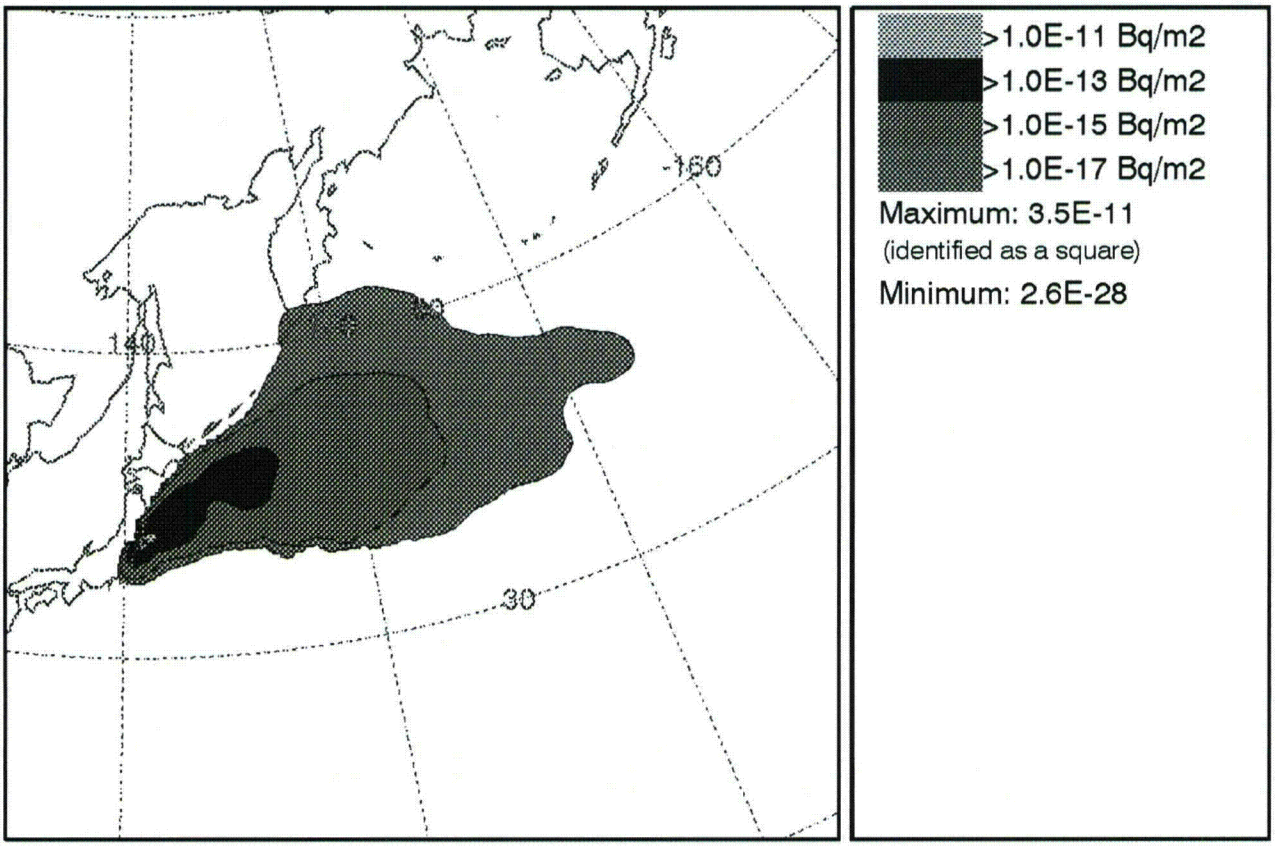
1200 12 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1639UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 100 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 100 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: GDAS and 1200 UTC 12 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: REQUESTED SERVICES

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 0000 12 Mar to 0000 15 Mar 11 (UTC)
I131 Release started at 0629 12 Mar 11 (UTC)

Source☆ 37.420 N 141.330 E 20 m to 100 m



1200 12 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1639UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 100 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 100 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: GDAS and 1200 UTC 12 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: REQUESTED SERVICES

From: hoo1
To: HOO Hoc
Subject: Fax from +61386166600
Date: Saturday, March 12, 2011 6:17:21 PM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017677

Notice for: HOO1

Remote ID: +61386166600

Received at: 03/12/2011 18:16

Pages: 6

Routed by:

Routed at: 03/12/2011 18:16

EE/10

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 : 2256 UTC 12: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 Dai-Chi Japan

Release Location(decimal degrees): 37.4206 N 141.328 E

Release Time/Date: 0630 UTC 12 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

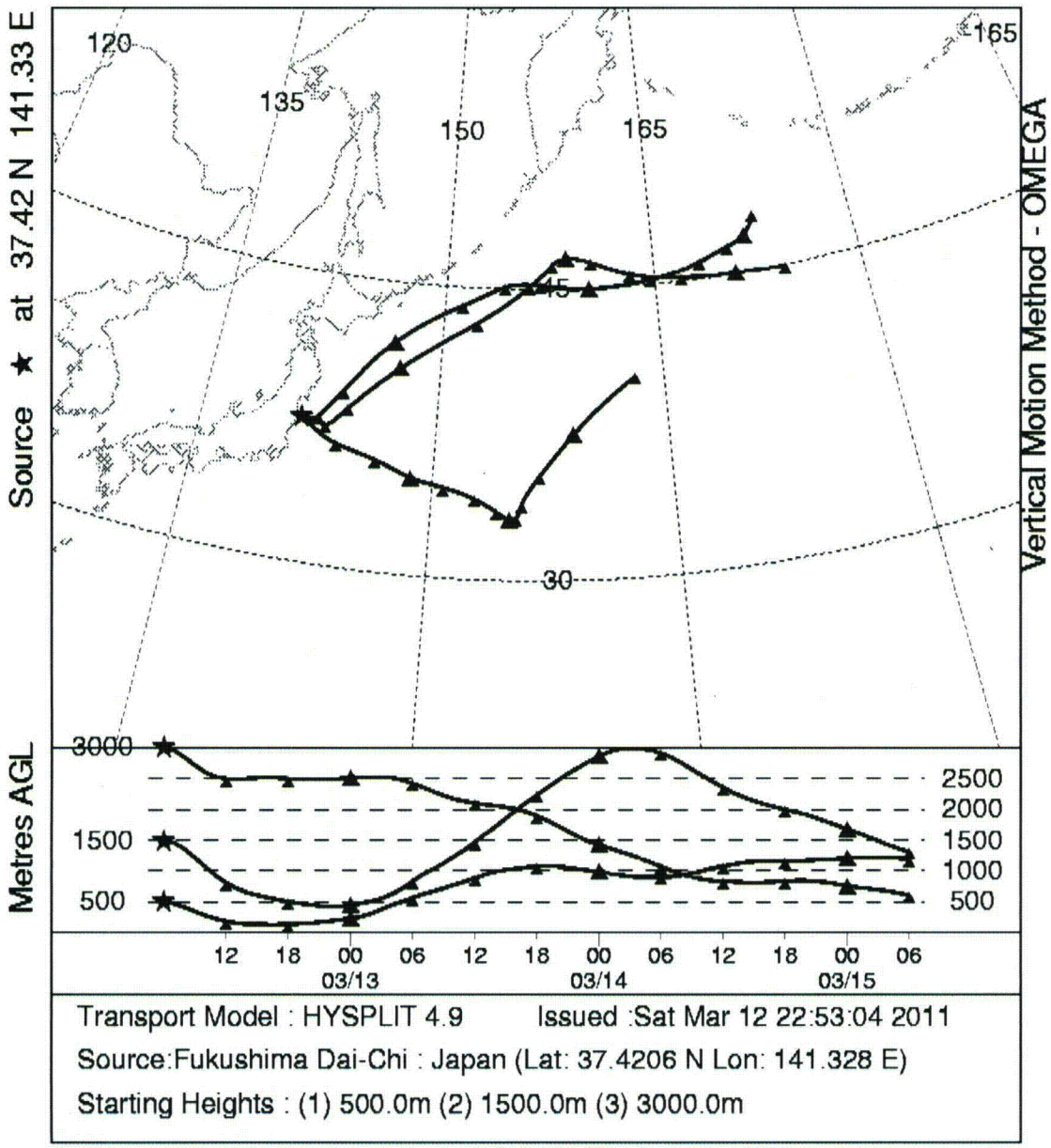
Number of Pages (incl cover sheet) = 6

RSMC Melbourne : Environmental Emergency Response Centre

Forward trajectories starting at 0630 UTC 12 Mar 2011

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

OPERATIONAL EVENT OPERATIONAL EVENT



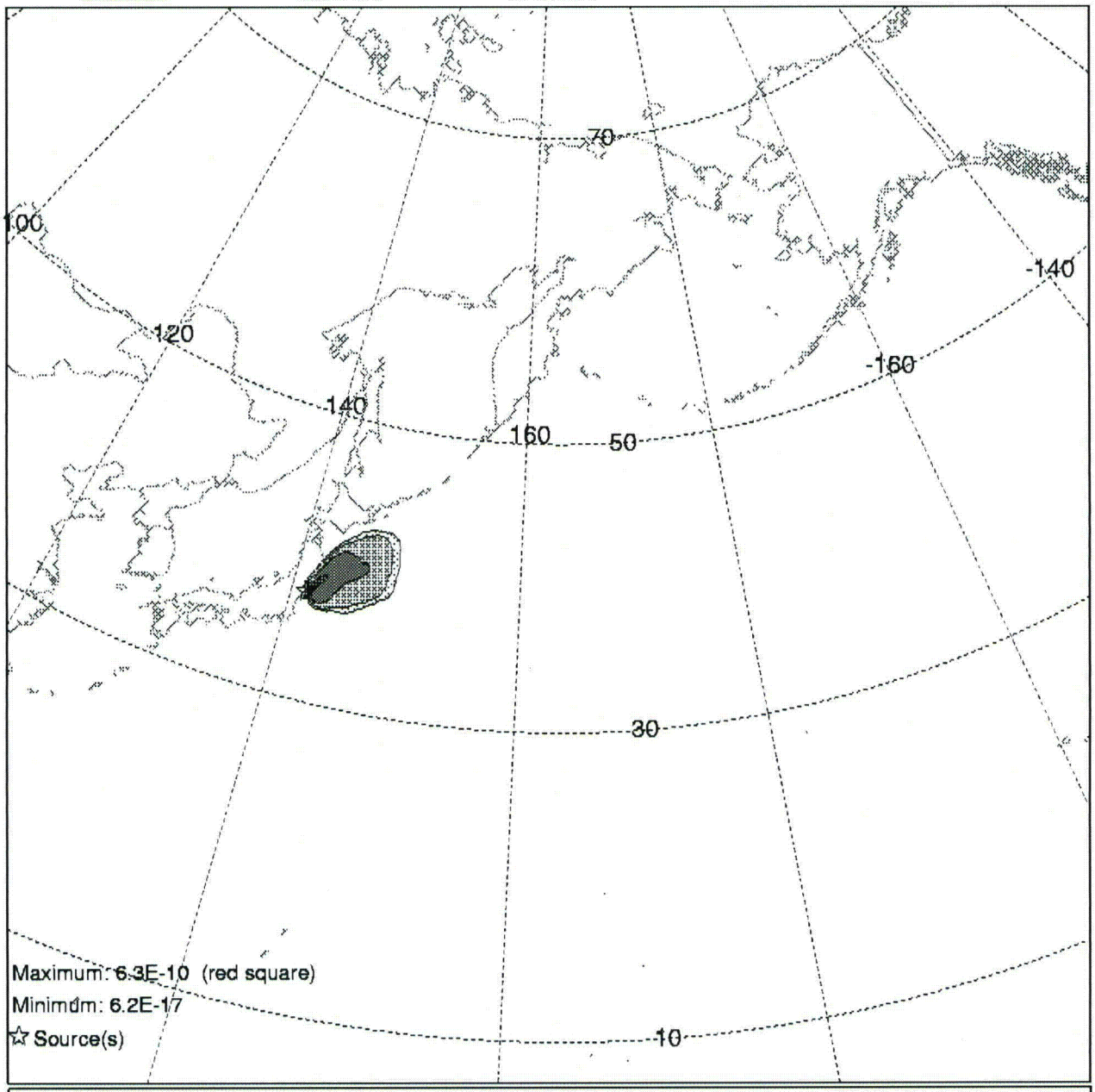
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 12 Mar to 0000 13 Mar 11 (UTC)

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

>1.0E-10 >1.0E-11 >1.0E-12 >1.0E-13



NRAD RELEASE STARTED AT 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 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 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sat Mar 12 22:53:04 2011

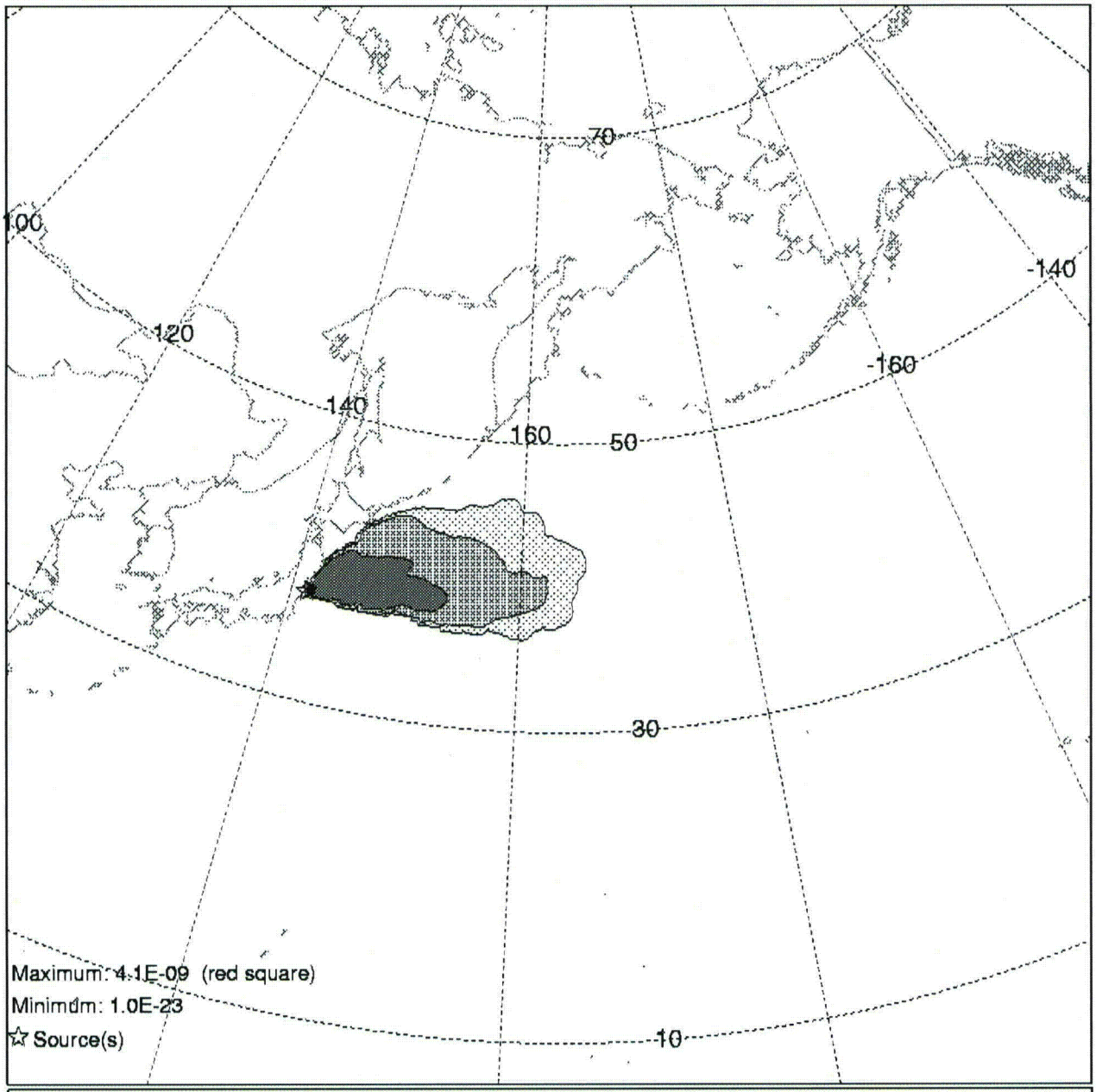
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 13 Mar to 0000 14 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 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 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 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sat Mar 12 22:53:04 2011

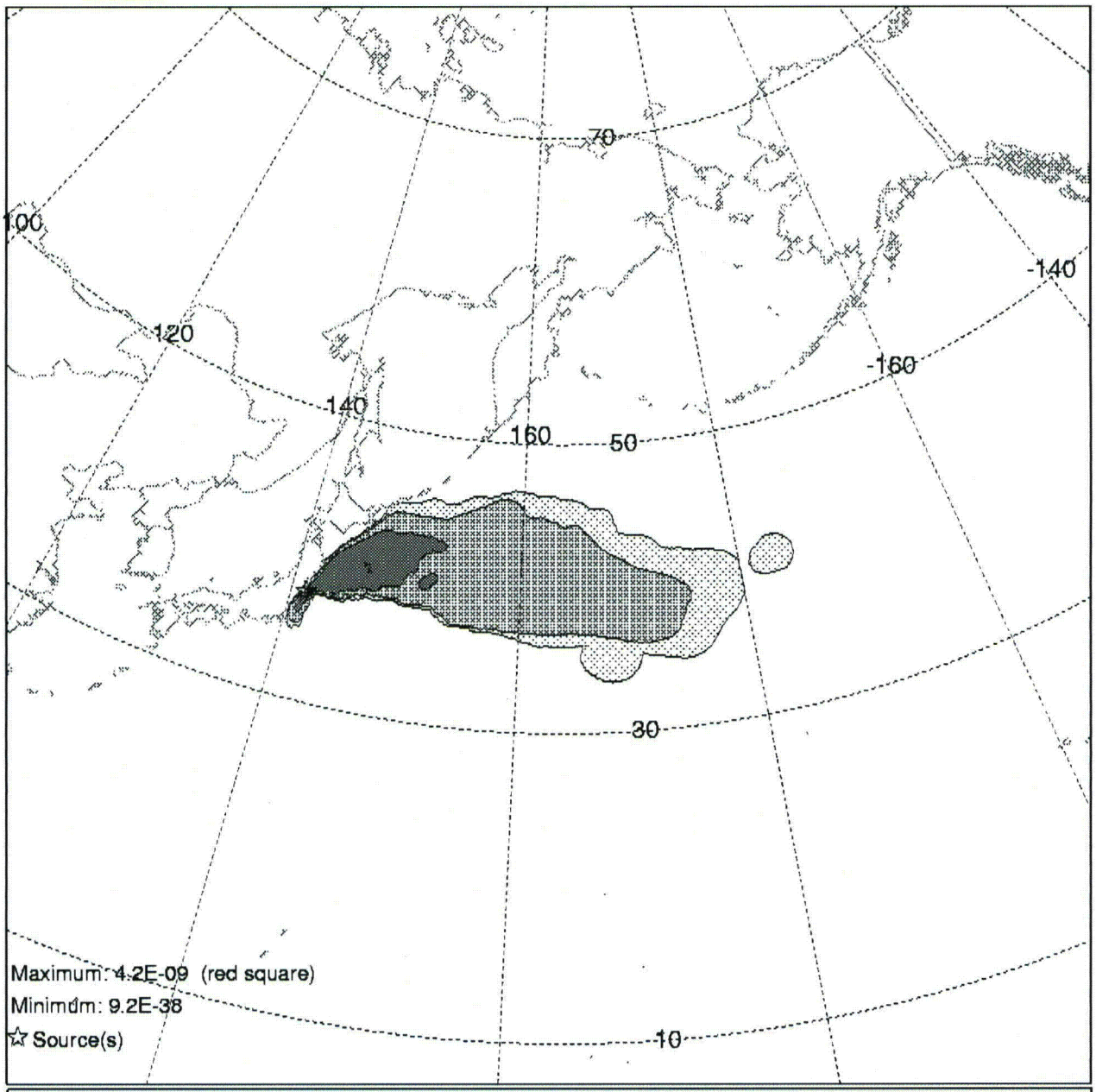
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 14 Mar to 0000 15 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 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 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 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sat Mar 12 22:53:04 2011

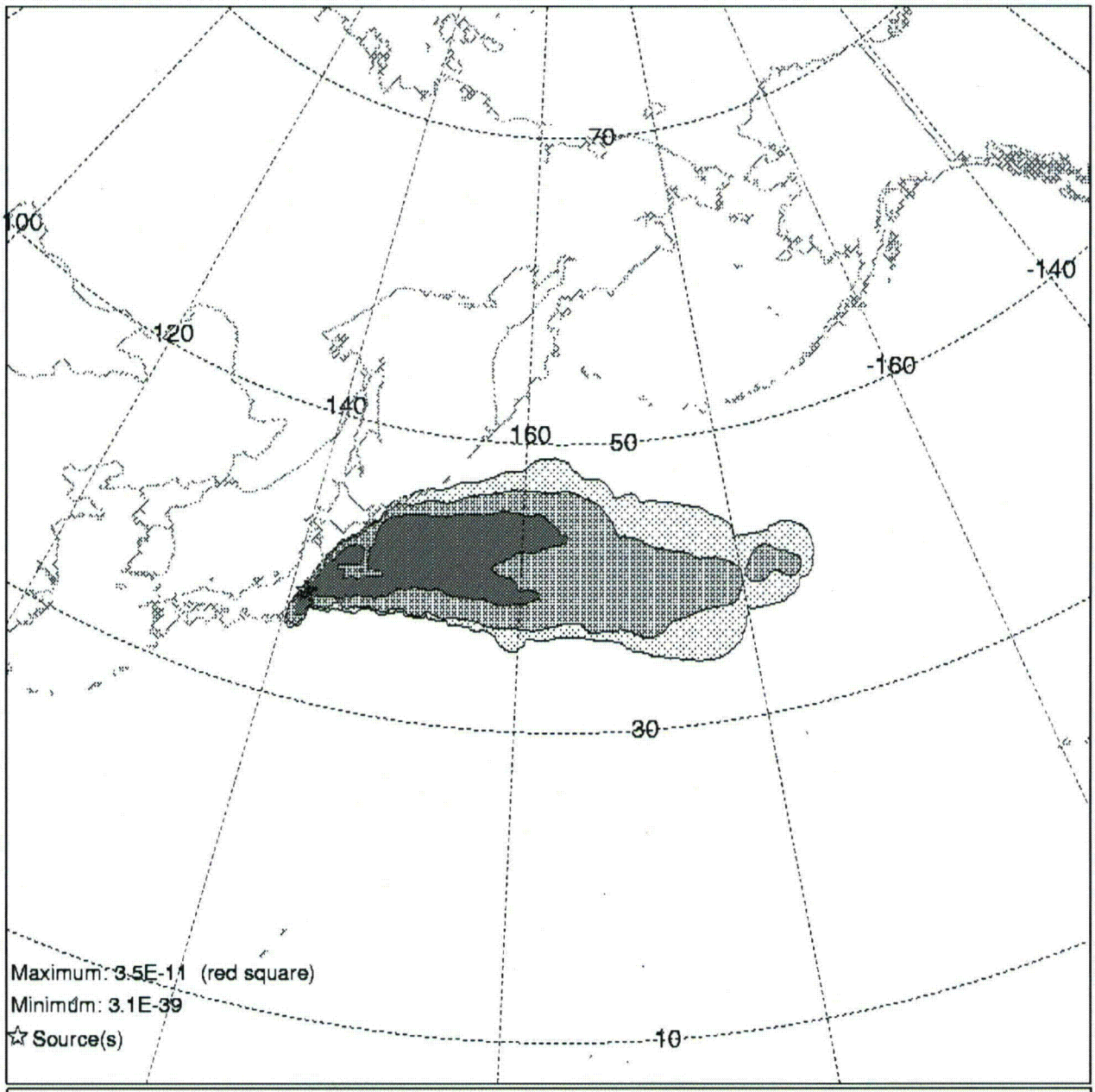
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 12 Mar to 0000 15 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 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 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 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sat Mar 12 22:53:04 2011

From: hoo1
To: HOO Hoc
Subject: Fax from +61386166600
Date: Saturday, March 12, 2011 6:52:59 PM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017678

Notice for: HOO1

Remote ID: +61386166600

Received at: 03/12/2011 18:52

Pages: 6

Routed by:

Routed at: 03/12/2011 18:52

EE/11

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 : 2330 UTC 12: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 Dai-Chi Japan

Release Location(decimal degrees): 37.4206 N 141.328 E

Release Time/Date: 0630 UTC 12 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

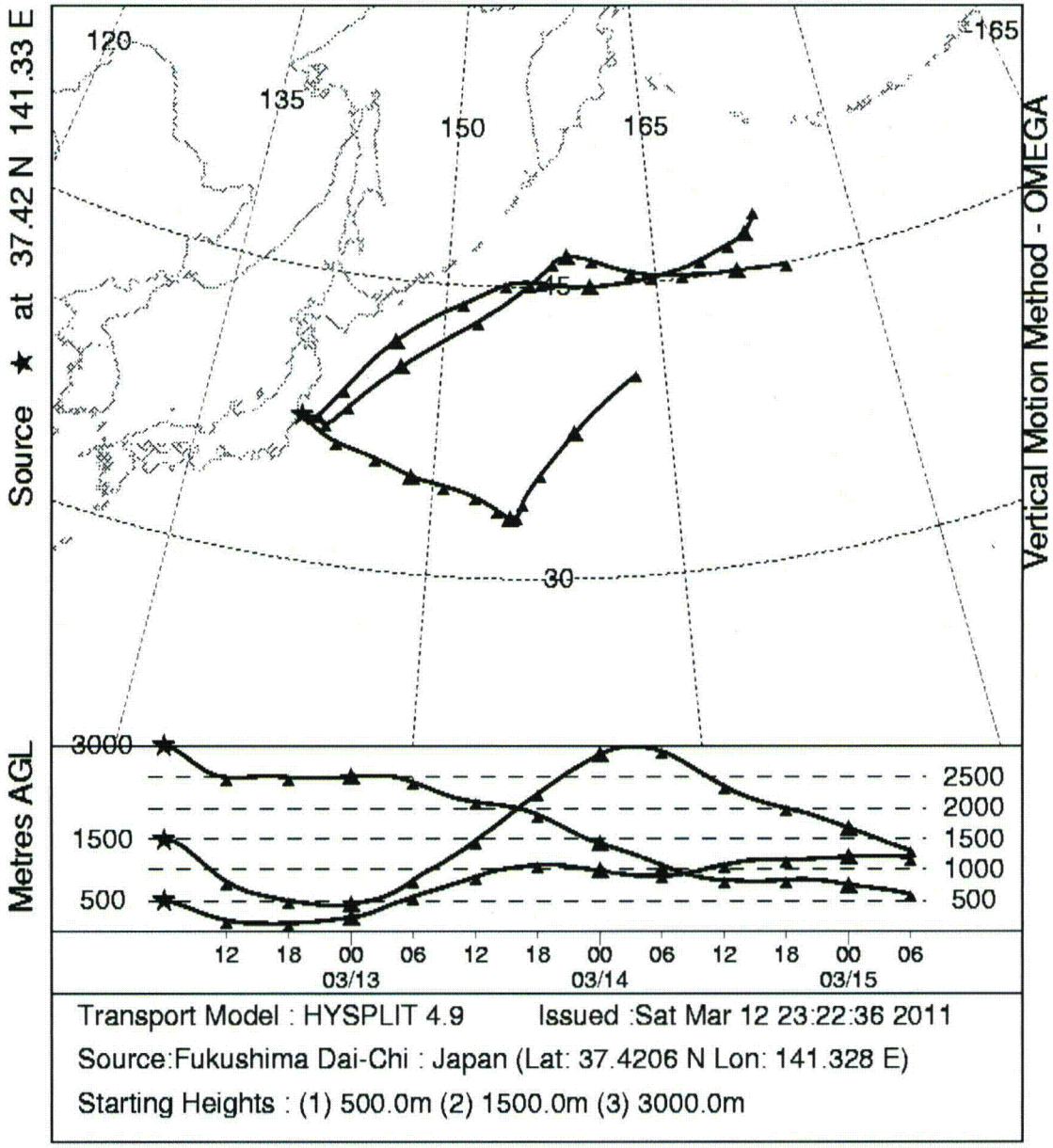
Number of Pages (incl cover sheet) = 6

RSMC Melbourne : Environmental Emergency Response Centre

Forward trajectories starting at 0630 UTC 12 Mar 2011

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

OPERATIONAL EVENT OPERATIONAL EVENT



Transport Model : HYSPLIT 4.9 Issued :Sat Mar 12 23:22:36 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 E)

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

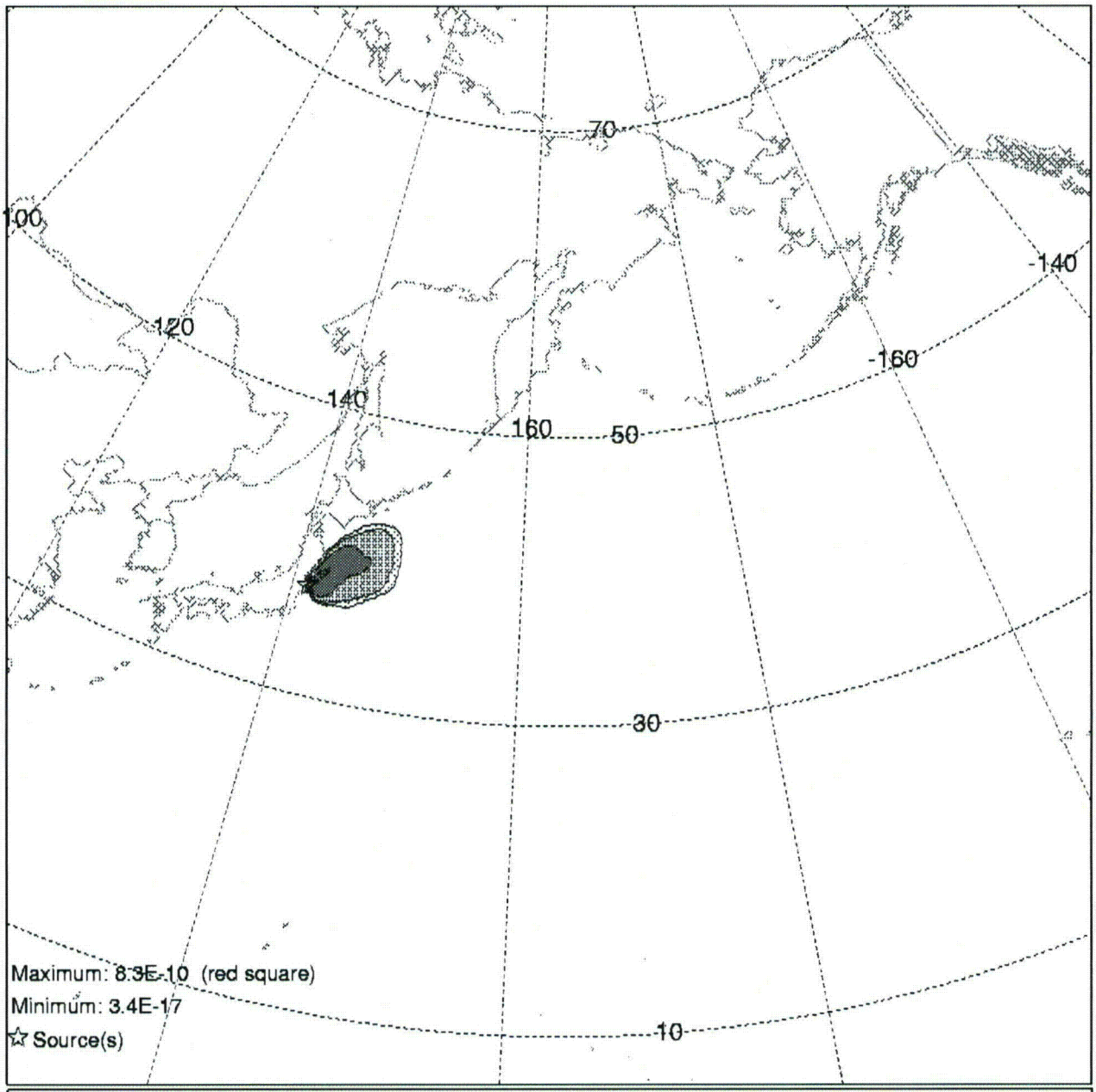
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 12 Mar to 0000 13 Mar 11 (UTC)

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

>1.0E-10 >1.0E-11 >1.0E-12 >1.0E-13



NRAD RELEASE STARTED AT 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 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 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sat Mar 12 23:22:36 2011

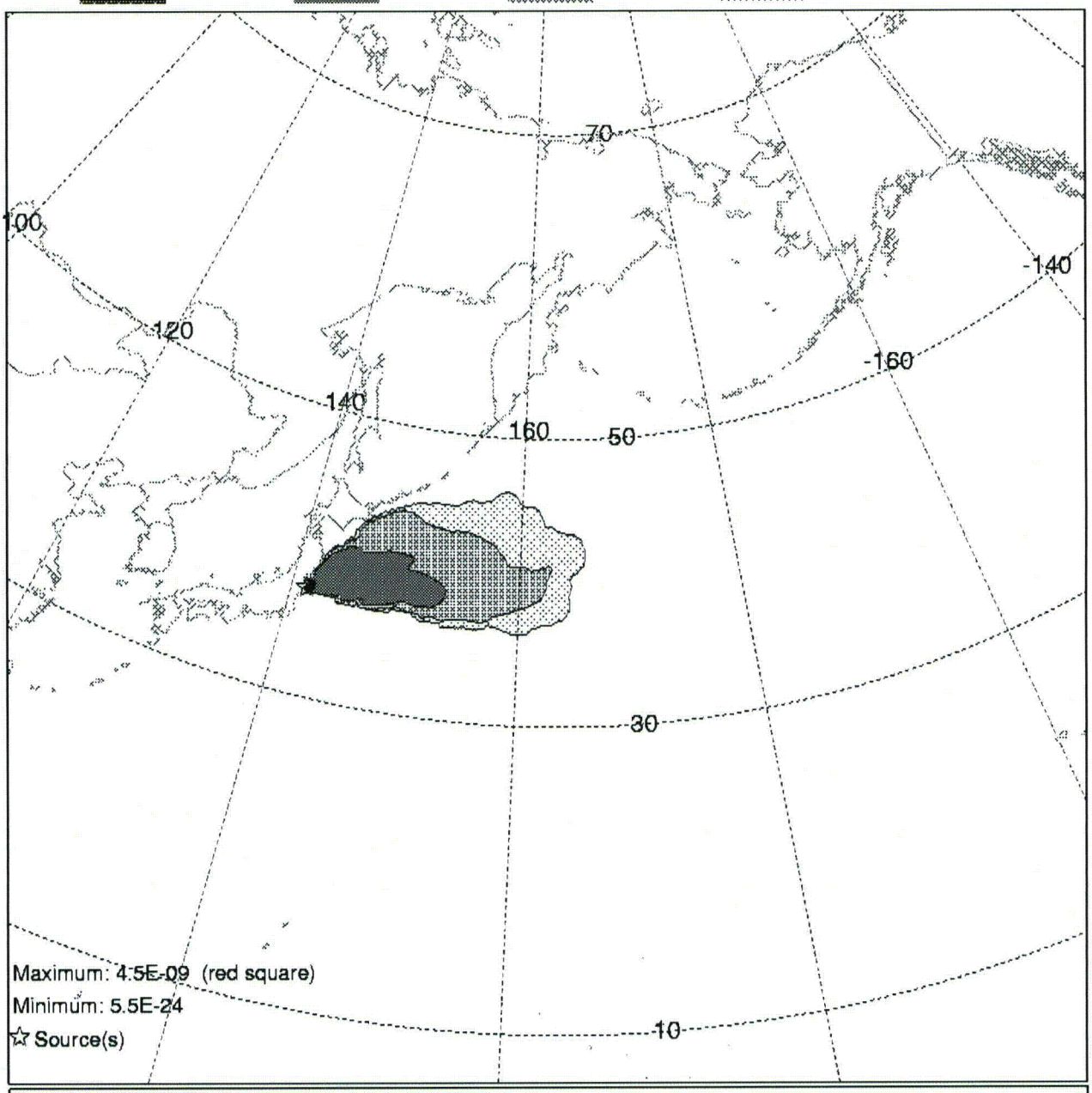
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 13 Mar to 0000 14 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 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 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 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sat Mar 12 23:22:36 2011

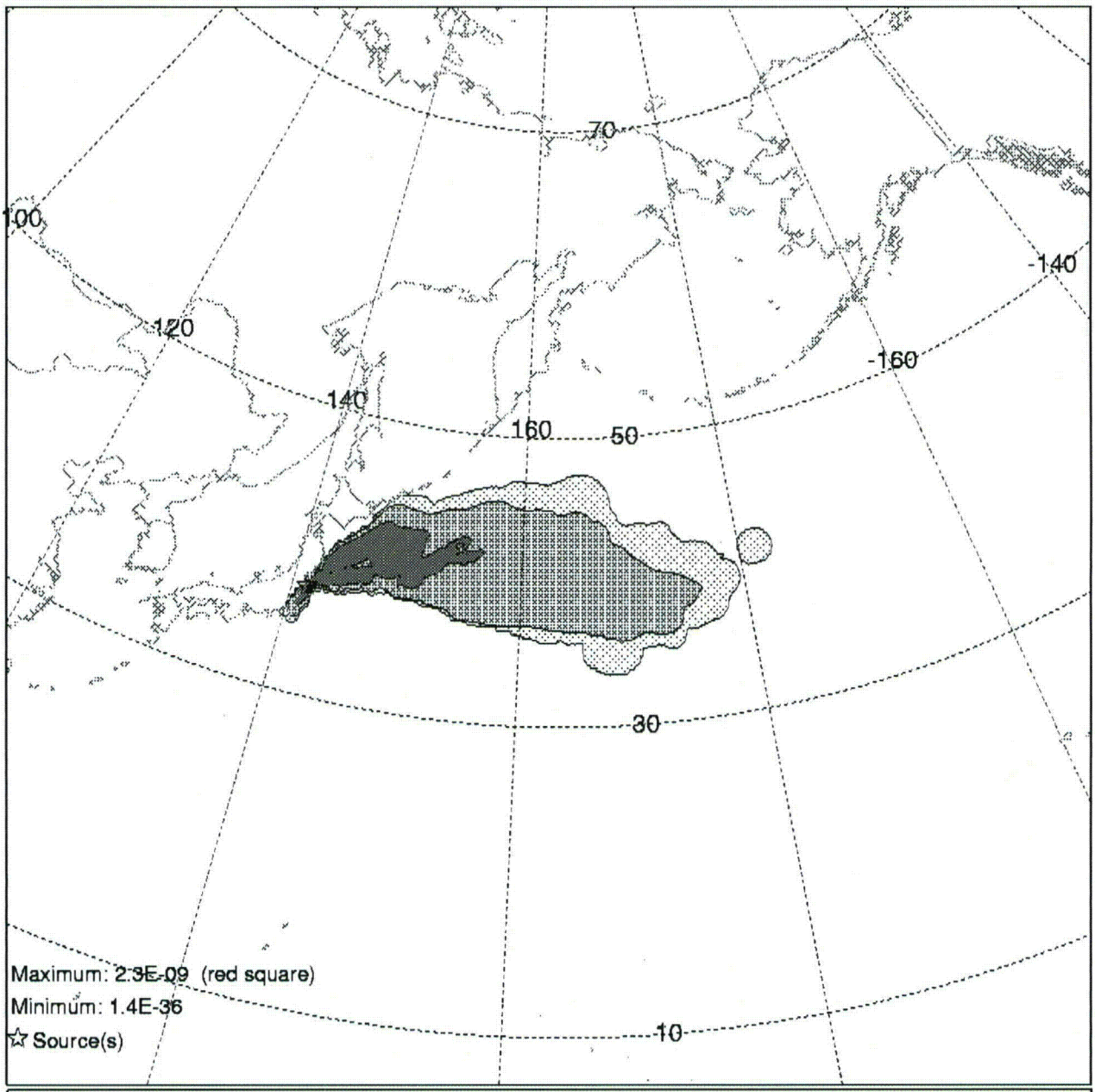
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 14 Mar to 0000 15 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 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 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 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sat Mar 12 23:22:36 2011

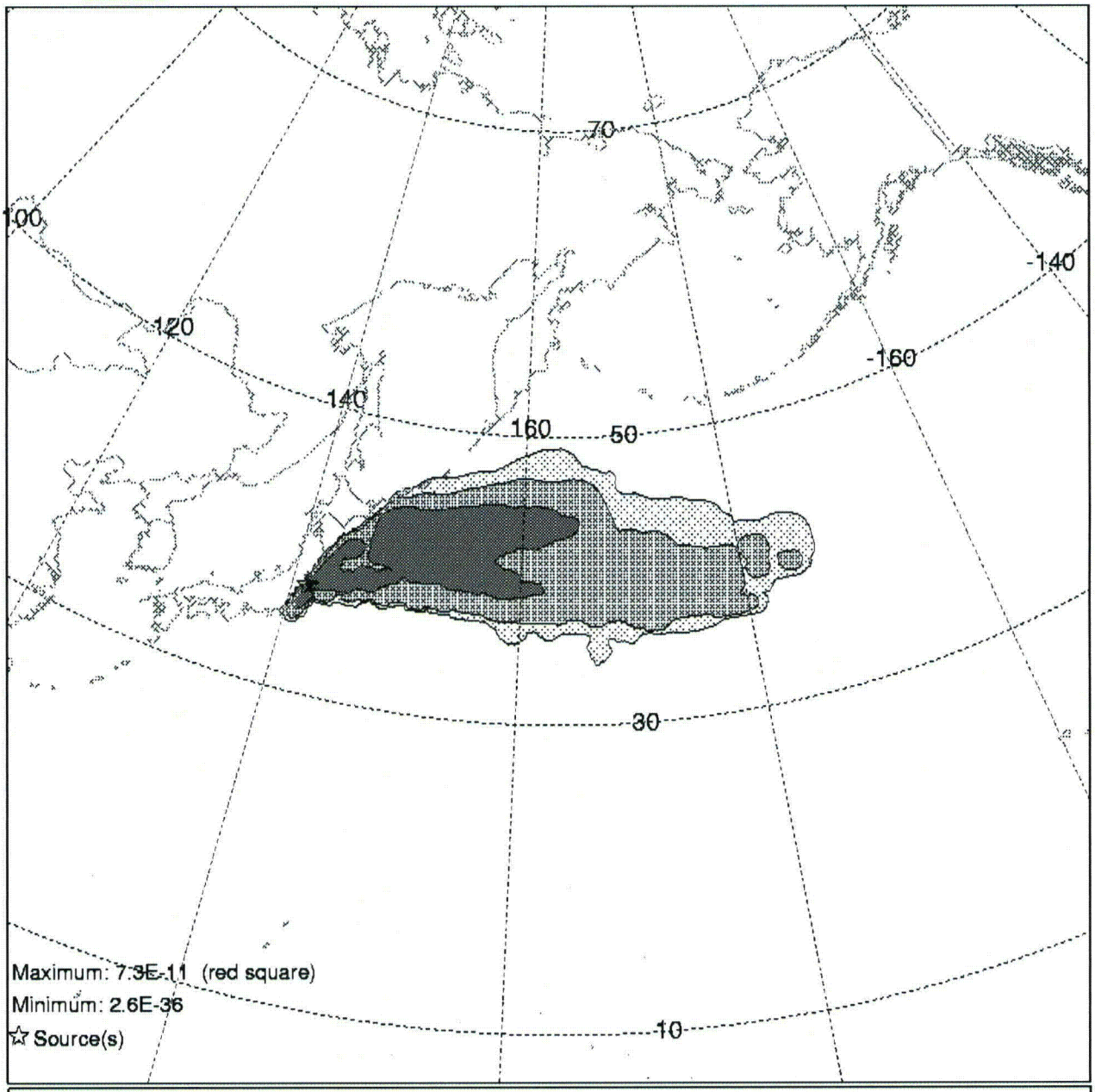
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 12 Mar to 0000 15 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 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 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 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sat Mar 12 23:22:36 2011

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 : 2256 UTC 12: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 Dai-Chi Japan

Release Location(decimal degrees): 37.4206 N 141.328 E

Release Time/Date: 0630 UTC 12 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

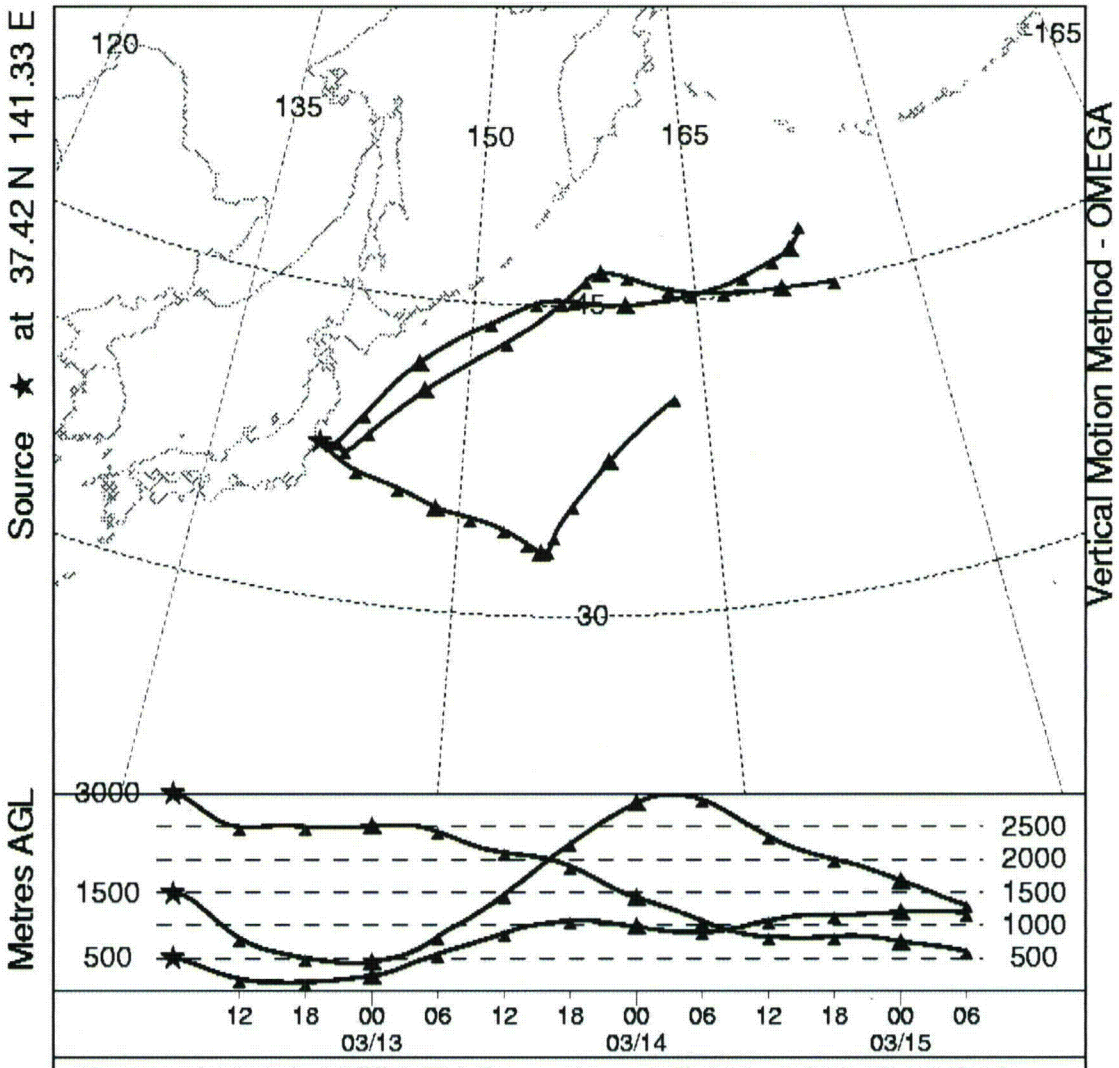
EE/12

RSMC Melbourne : Environmental Emergency Response Centre

Forward trajectories starting at 0630 UTC 12 Mar 2011

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

OPERATIONAL EVENT OPERATIONAL EVENT



Transport Model : HYSPLIT 4.9 Issued :Sat Mar 12 22:53:04 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 E)

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

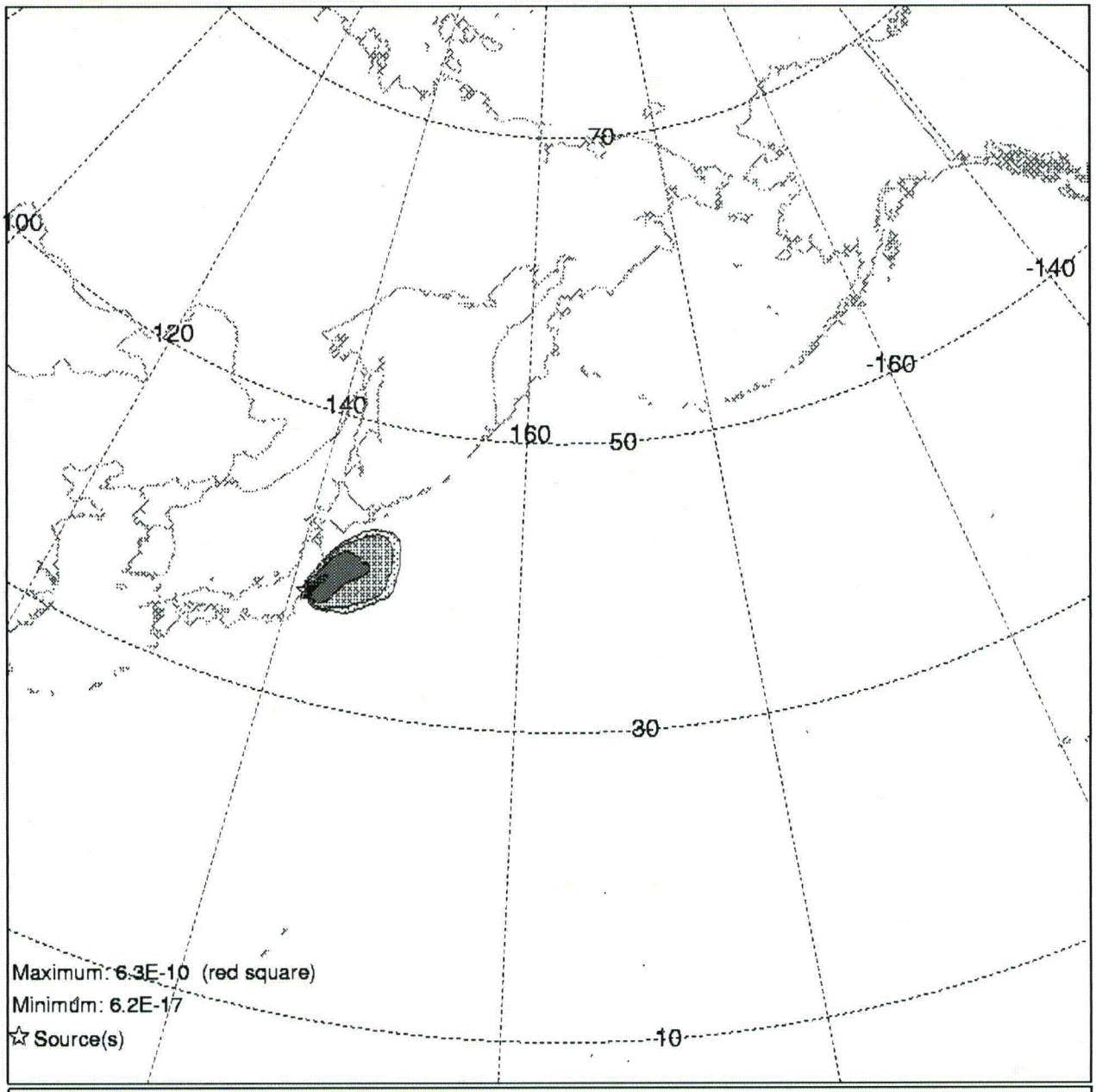
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 12 Mar to 0000 13 Mar 11 (UTC)

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

>1.0E-10 >1.0E-11 >1.0E-12 >1.0E-13



NRAD RELEASE STARTED AT 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 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 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sat Mar 12 22:53:04 2011

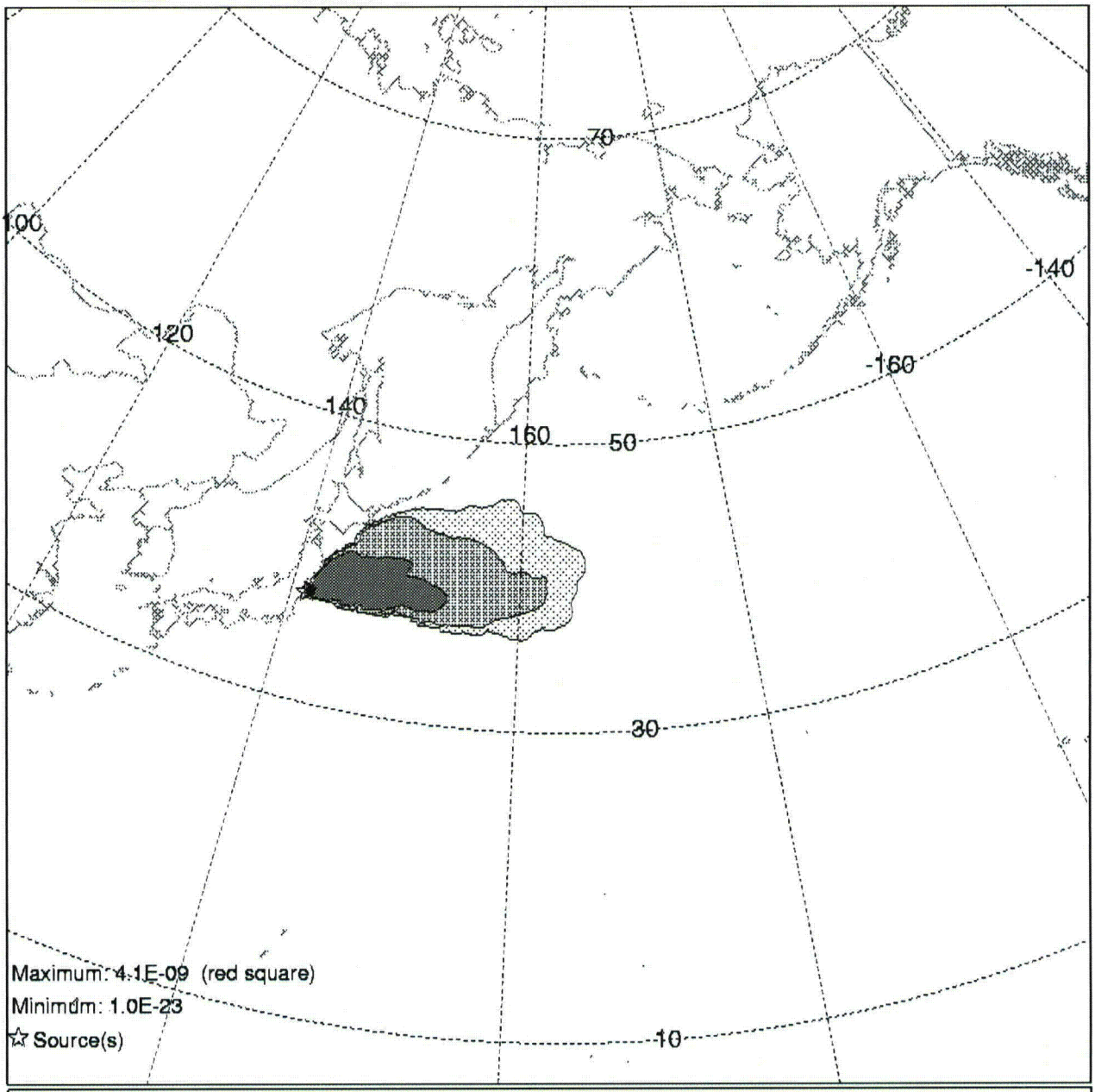
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 13 Mar to 0000 14 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 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 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 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sat Mar 12 22:53:04 2011

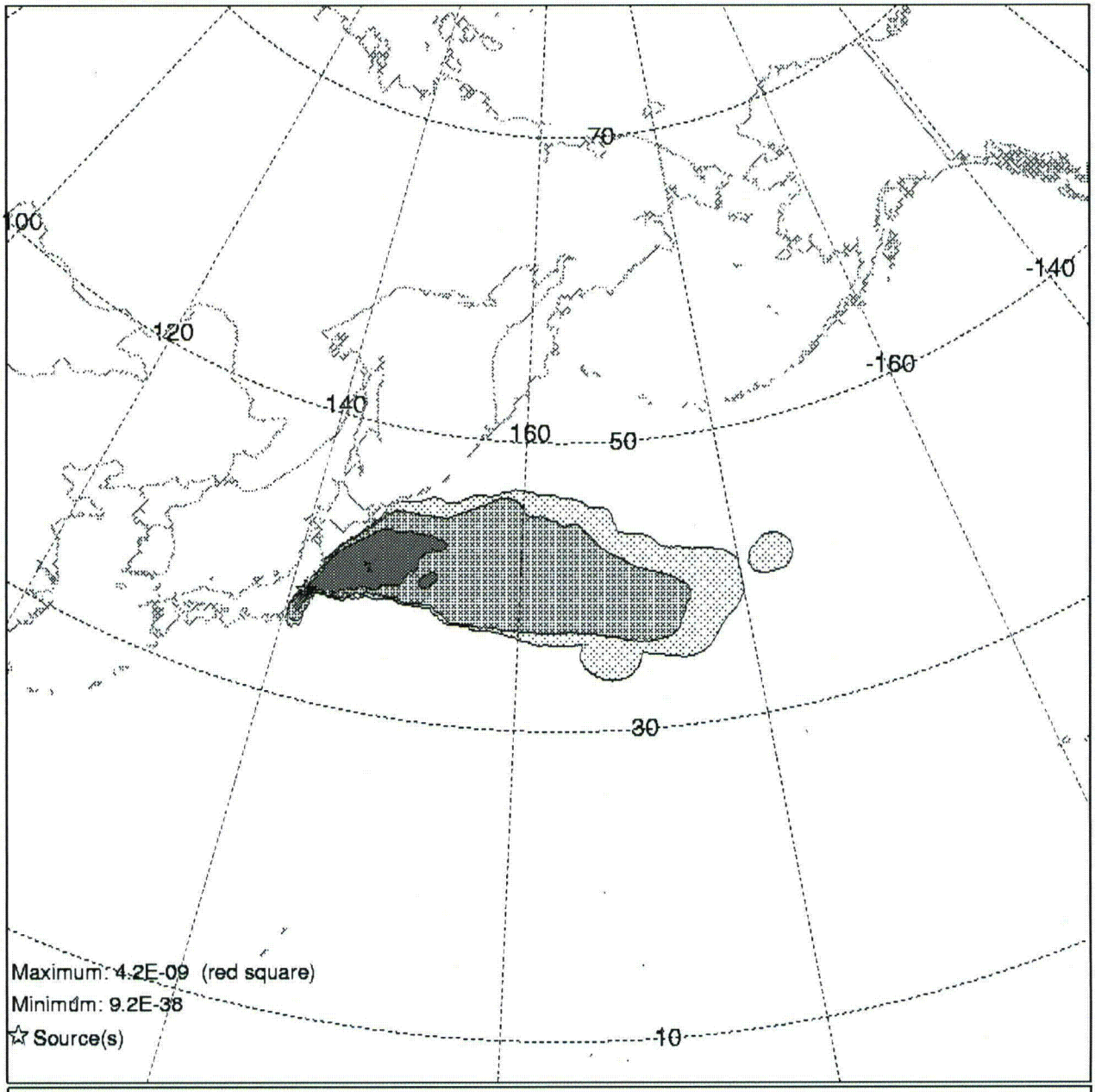
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 14 Mar to 0000 15 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 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 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 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sat Mar 12 22:53:04 2011

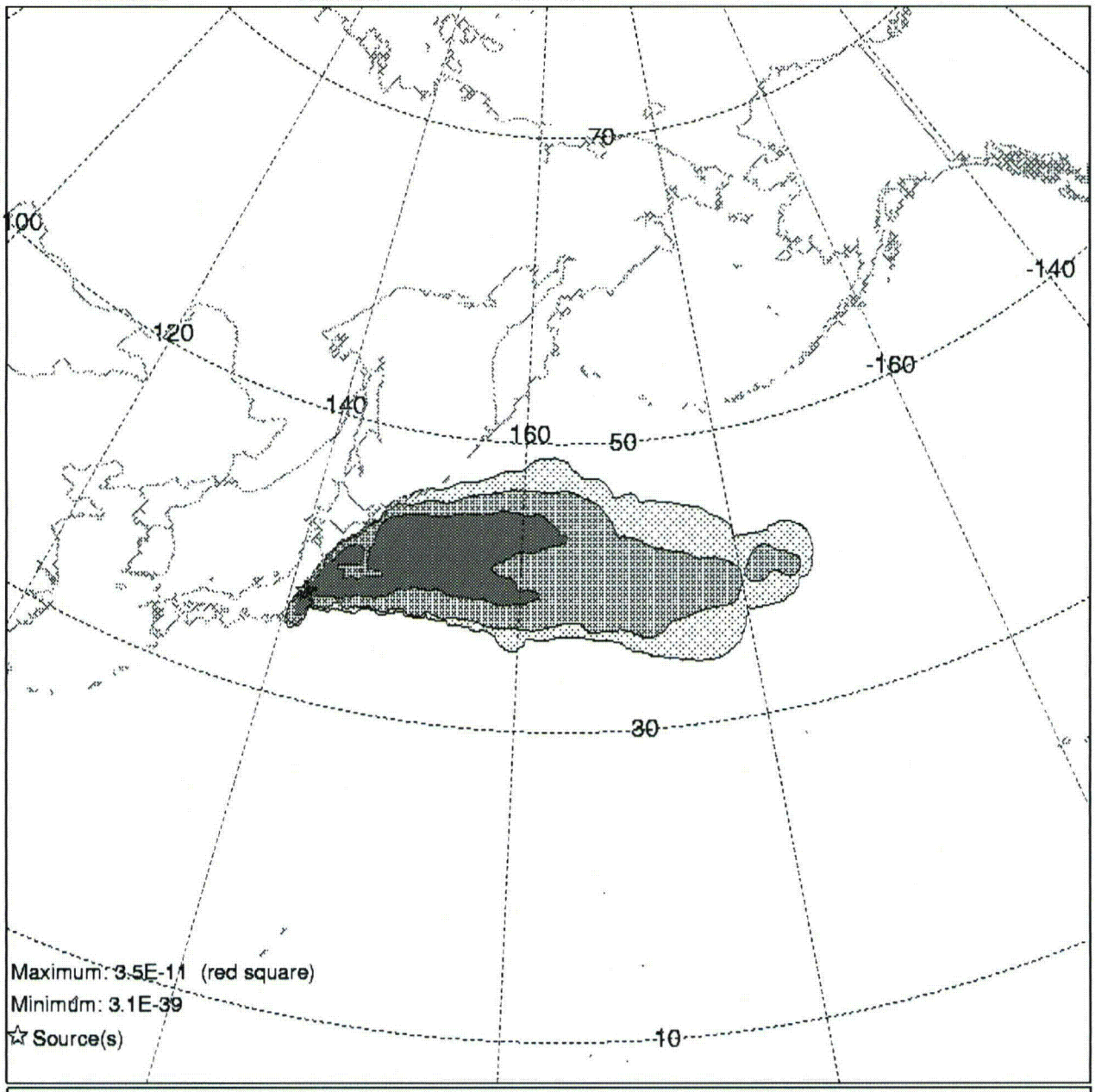
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 12 Mar to 0000 15 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 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 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 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart"

Issued :Sat Mar 12 22:53:04 2011

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 12 16:39 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: REQUESTED SERVICES

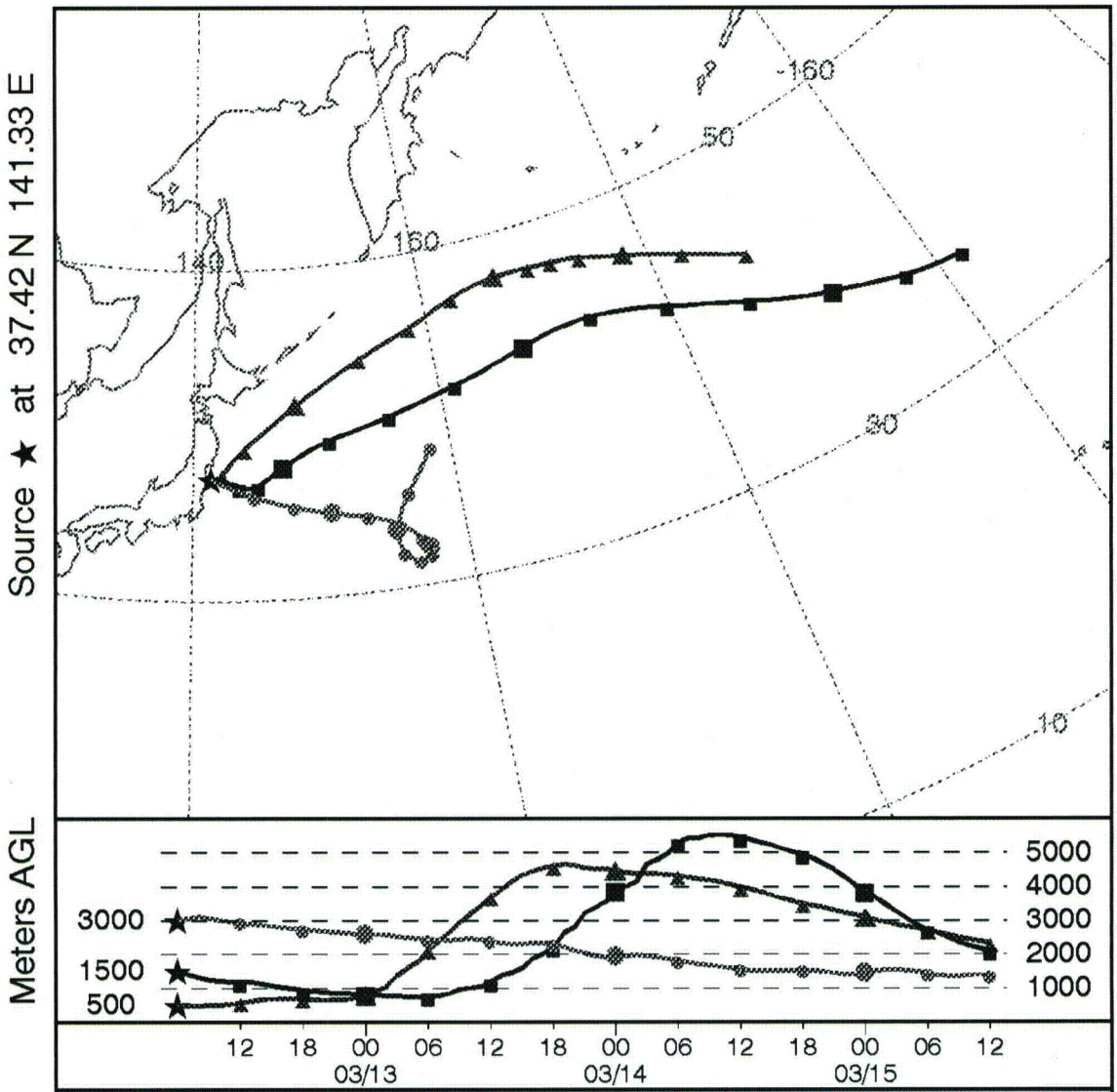
Location:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33
Release Start (YYYY MM DD HH MM):2011 03 12 06 29
Meteorology: GDAS and 1200 UTC 12 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 100 m AGL
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
Note: RESULTS BASED ON DEFAULT INITIAL VALUES

EE/13

NOAA HYSPLIT MODEL

Forward trajectories starting at 06 UTC 12 Mar 11

12 UTC 12 Mar GDAS Forecast Initialization



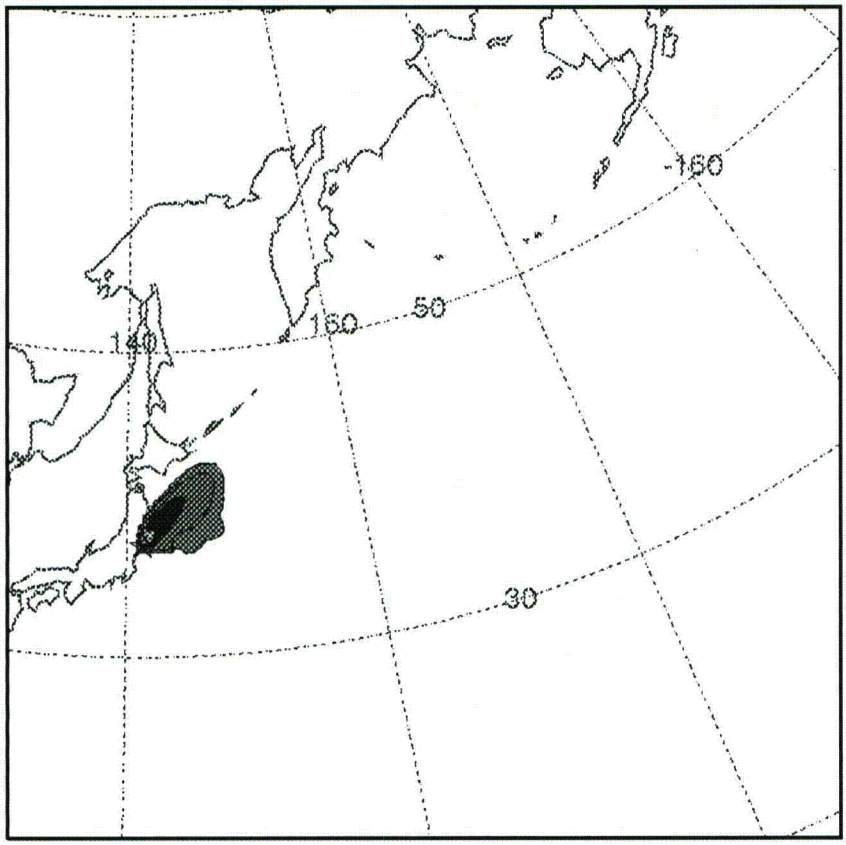
Created: 1639UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 height:500.0 1500.0 3000.0 m

Trajectory Direction:forward Duration:78 hr
Vertical Motion Calculation Method: Model Vertical Velocity
Response: REQUESTED SERVICES

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 12 Mar to 0000 13 Mar 11 (UTC)
I131 Release started at 0629 12 Mar 11 (UTC)

Source☆ 37.420 N 141.330 E 20 m to 100 m



>1.0E-10 Bq-s/m3
>1.0E-11 Bq-s/m3
>1.0E-12 Bq-s/m3
>1.0E-13 Bq-s/m3

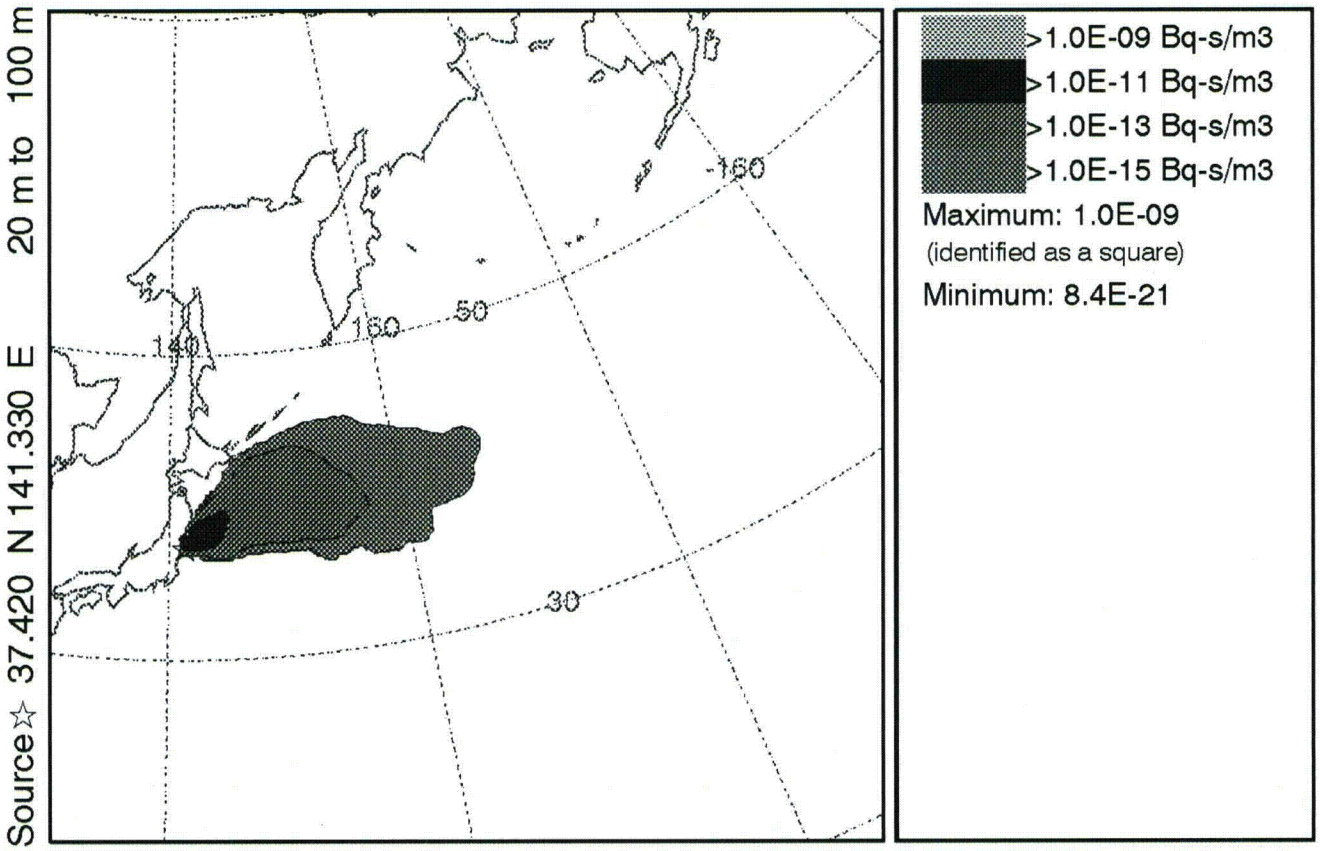
Maximum: 3.0E-10
(identified as a square)

Minimum: 3.5E-17

GDAS METEOROLOGICAL DATA

Created: 1639UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 100 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 100 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: GDAS and 1200 UTC 12 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: REQUESTED SERVICES

NOAA HYSPLIT MODEL
Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 13 Mar to 0000 14 Mar 11 (UTC)
I131 Release started at 0629 12 Mar 11 (UTC)

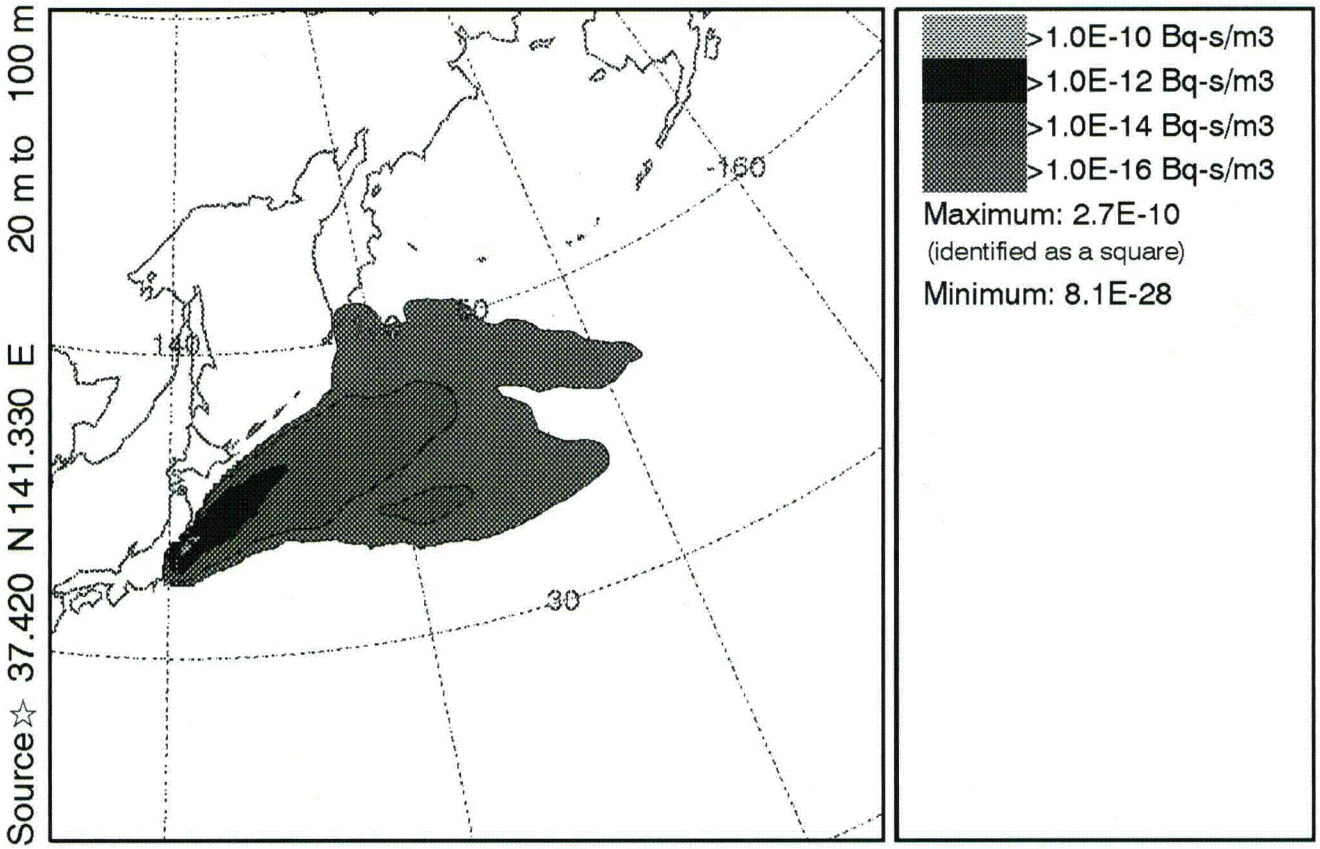


1200 12 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1639UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 100 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 100 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: GDAS and 1200 UTC 12 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: REQUESTED SERVICES

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 14 Mar to 0000 15 Mar 11 (UTC)
I131 Release started at 0629 12 Mar 11 (UTC)



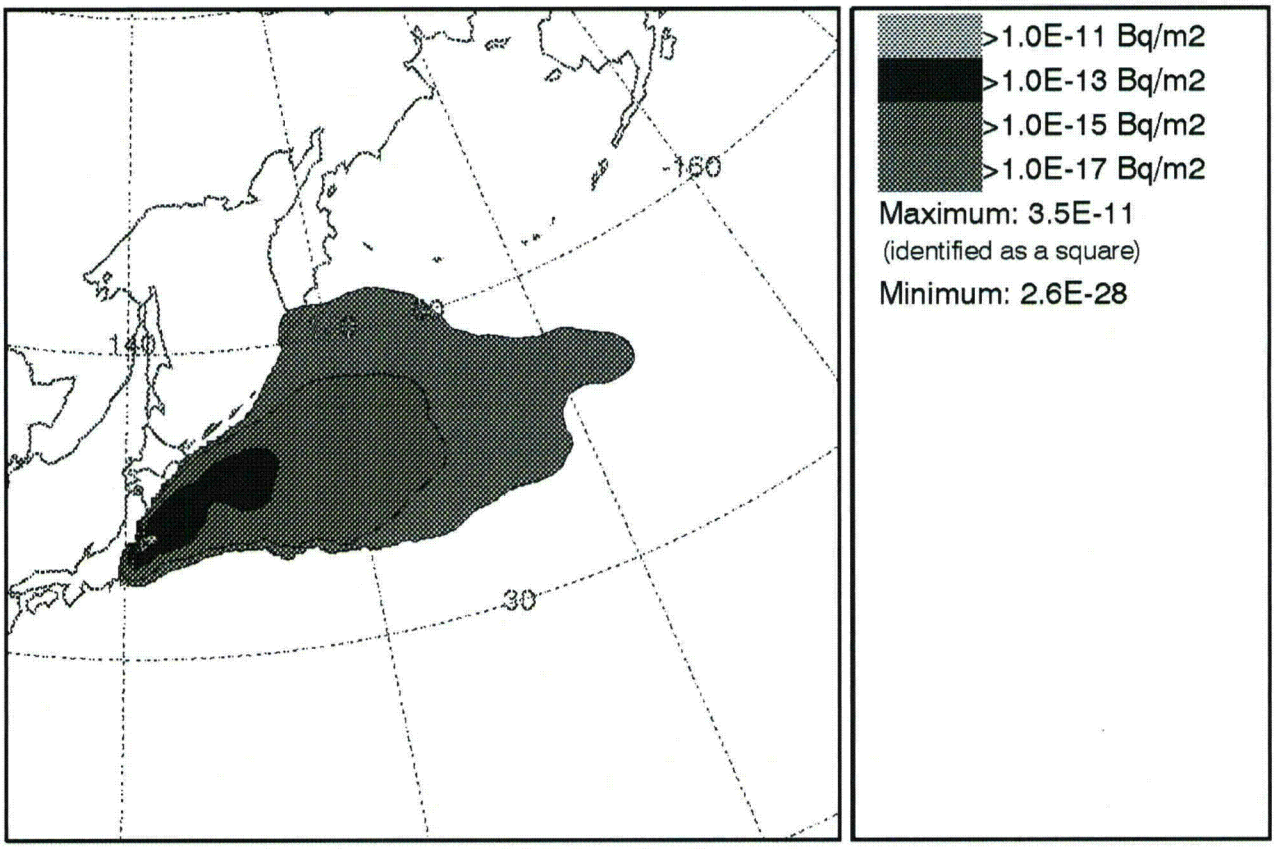
1200 12 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1639UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 100 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 100 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: GDAS and 1200 UTC 12 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: REQUESTED SERVICES

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from 0000 12 Mar to 0000 15 Mar 11 (UTC)
I131 Release started at 0629 12 Mar 11 (UTC)

Source☆ 37.420 N 141.330 E 20 m to 100 m



1200 12 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1639UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 100 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 100 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: GDAS and 1200 UTC 12 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: REQUESTED SERVICES

From:	Vogt, Phil
To:	HOO Hoc
Subject:	FW: Forecast for Fukushima Daiishi 1
Date:	Sunday, March 13, 2011 3:46:54 PM

Message sent to PMT02.

From: Vogt, Phil
Sent: Sunday, March 13, 2011 12:45 PM
To: 'PMT02.HOC@nrc.gov'
Cc: 'narac@llnl.gov'
Subject: Forecast for Fukushima Daiishi 1

Forecast wind speed, direction and estimated stability class:

1. March 13, 2000 UTC: Winds from the southwest at 5 mph, E stability class
2. 2100 UTC: Winds from the southwest at 4 mph, E stab
3. 2200 UTC: Winds from the southwest at 4 mph, E stab
4. 2300 UTC: Winds from the southwest at 4 mph, E stab
5. March 14, 0000 UTC: Winds from the south-southwest at 5 mph, E stability
6. 0100 UTC: Winds from south-southwest at 6 mph, E stability
7. 0200 UTC: Winds from the southwest 6 mph, D stability
8. 0300 UTC: Winds from the west southwest at 7 mph, D stability

NARAC Operations Center
925-422-7627

EE/14

From: hoo1
To: HOO Hoc
Subject: Fax from +61386166600
Date: Monday, March 14, 2011 1:05:42 PM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017694

Notice for: HOO1

Remote ID: +61386166600

Received at: 03/14/2011 13:04

Pages: 6

Routed by:

Routed at: 03/14/2011 13:04

EE/15

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 : 1639 UTC 14: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 141.328 E

Release Time/Date: 1600 UTC 14 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

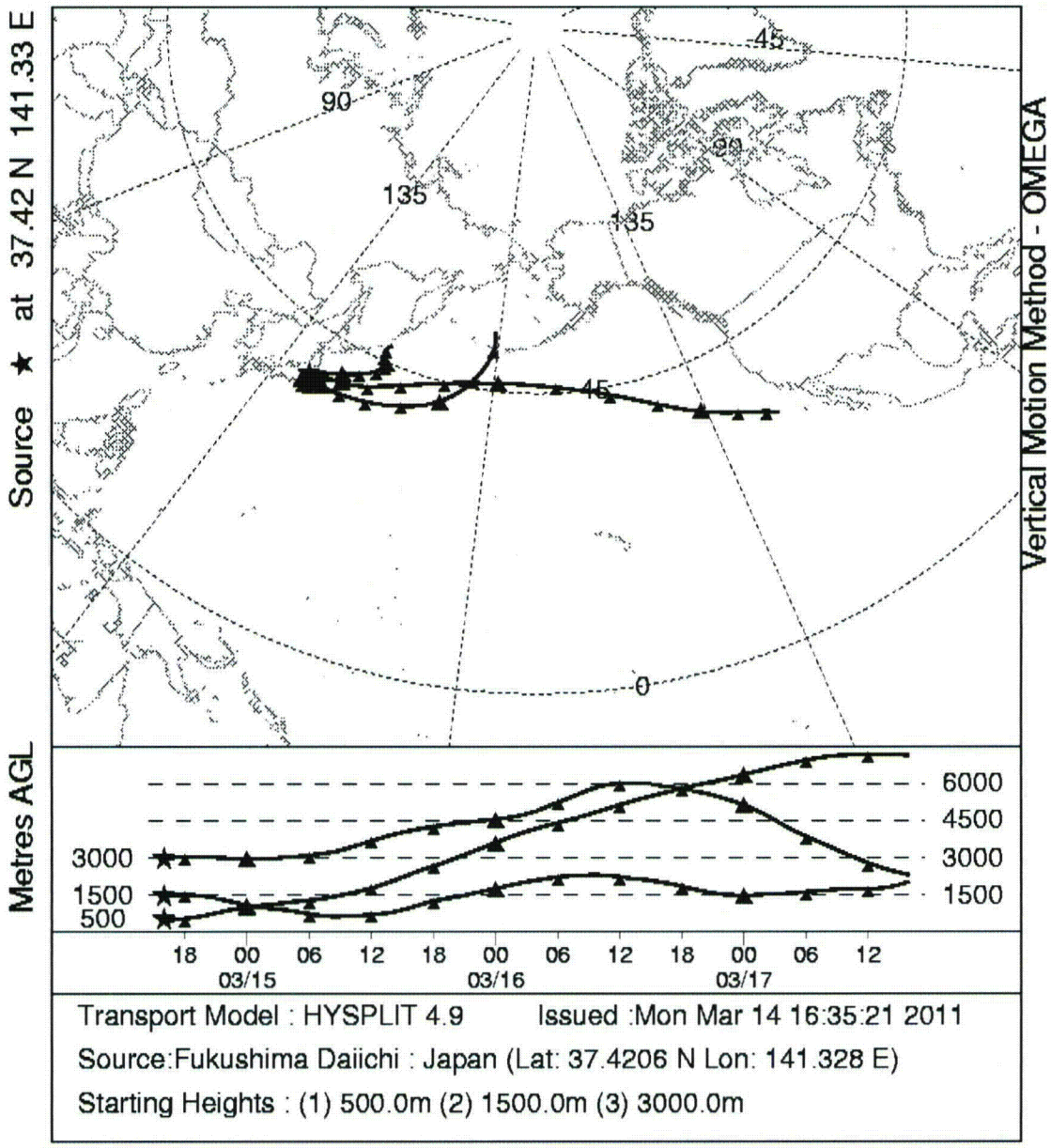
Number of Pages (incl cover sheet) = 6

RSMC Melbourne : Environmental Emergency Response Centre

Forward trajectories starting at 1600 UTC 14 Mar 2011

Meteorological Data : ACCESS-G : base time 0000 UTC 14 Mar

OPERATIONAL EVENT OPERATIONAL EVENT



Transport Model : HYSPLIT 4.9 Issued :Mon Mar 14 16:35:21 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.328 E)

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

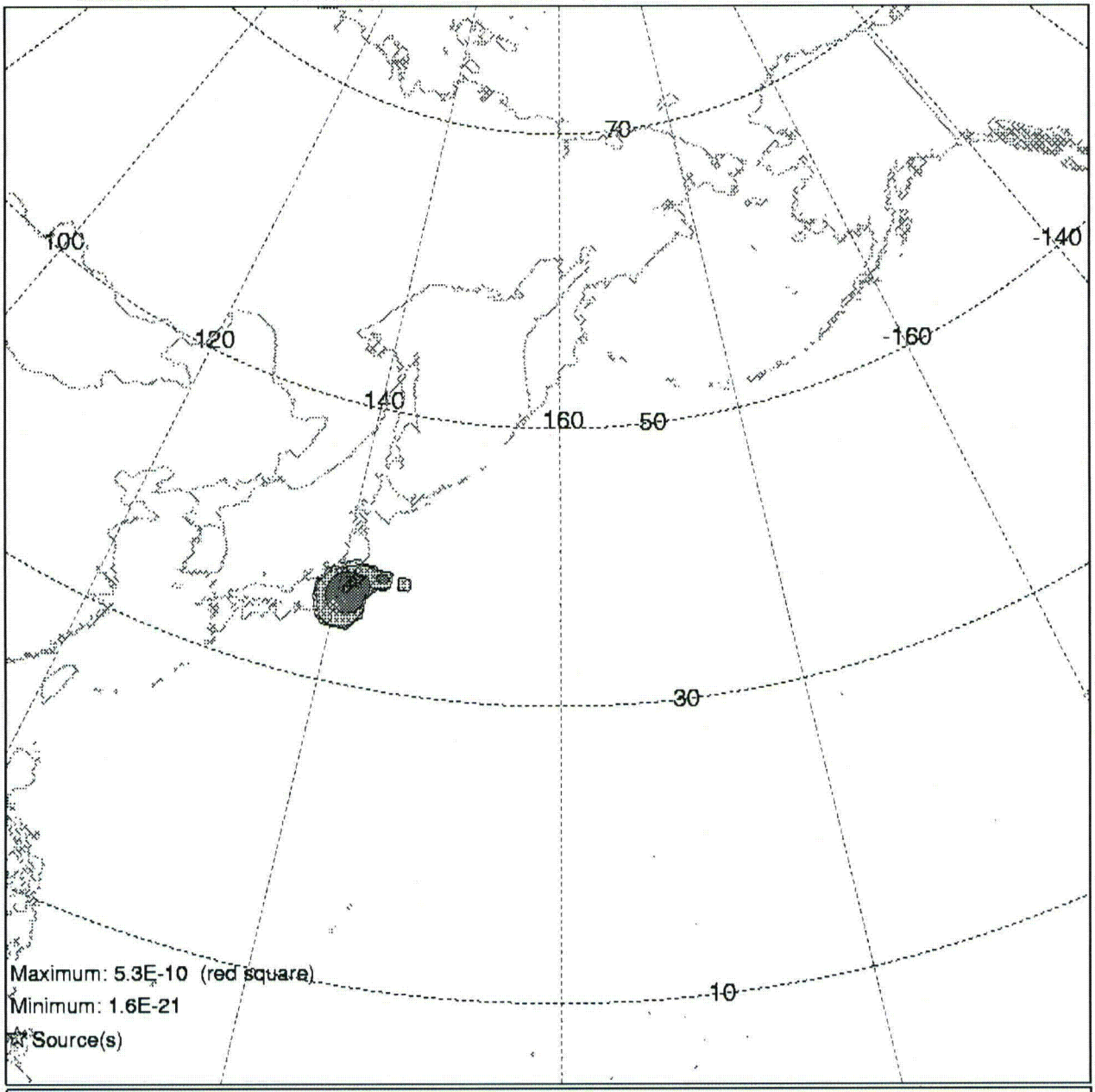
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 14 Mar to 1200 15 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 1600 UTC14 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.328 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 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Mon Mar 14 16:35:21 2011

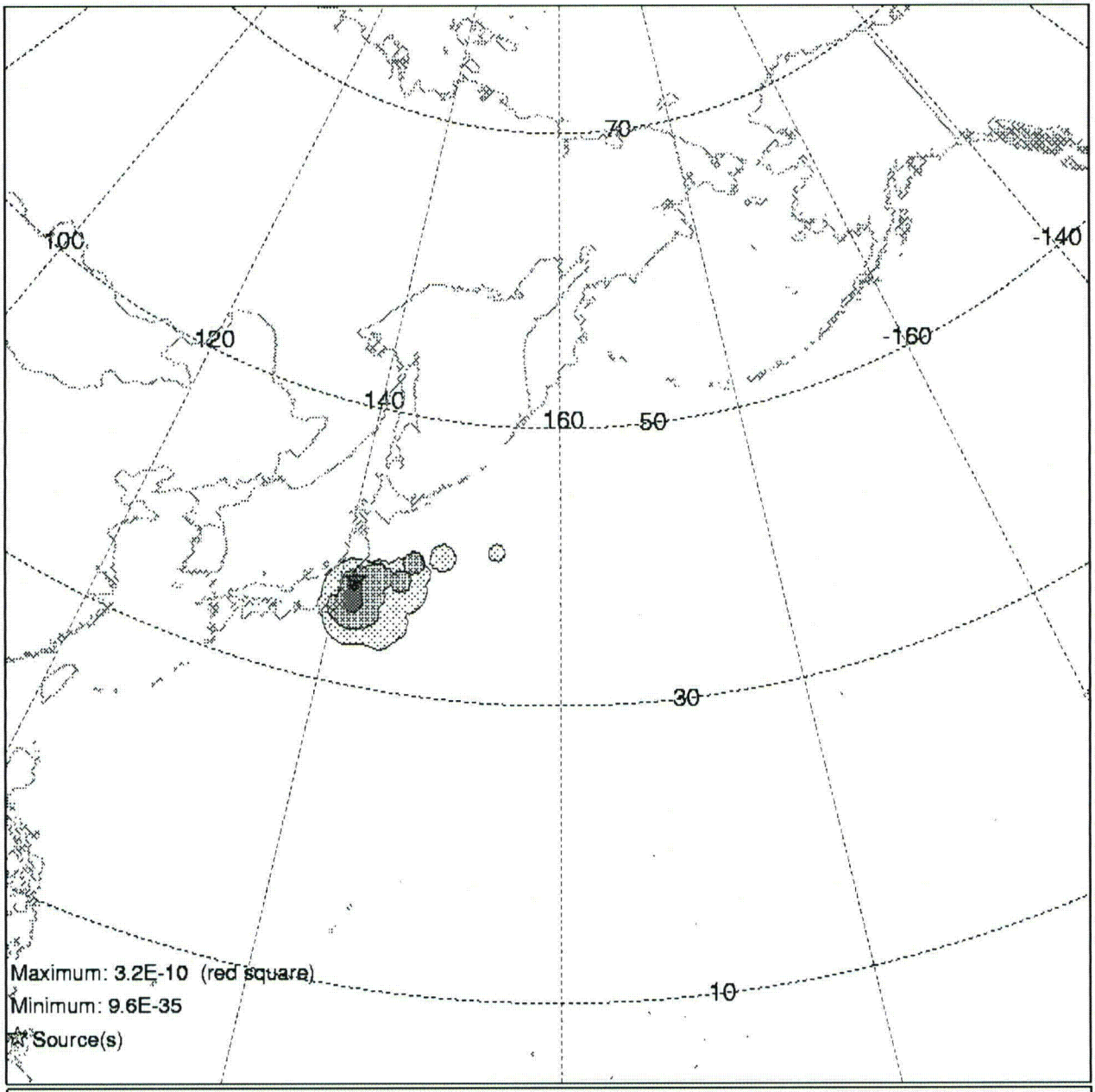
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 15 Mar to 1200 16 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 1600 UTC14 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.328 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 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Mon Mar 14 16:35:21 2011

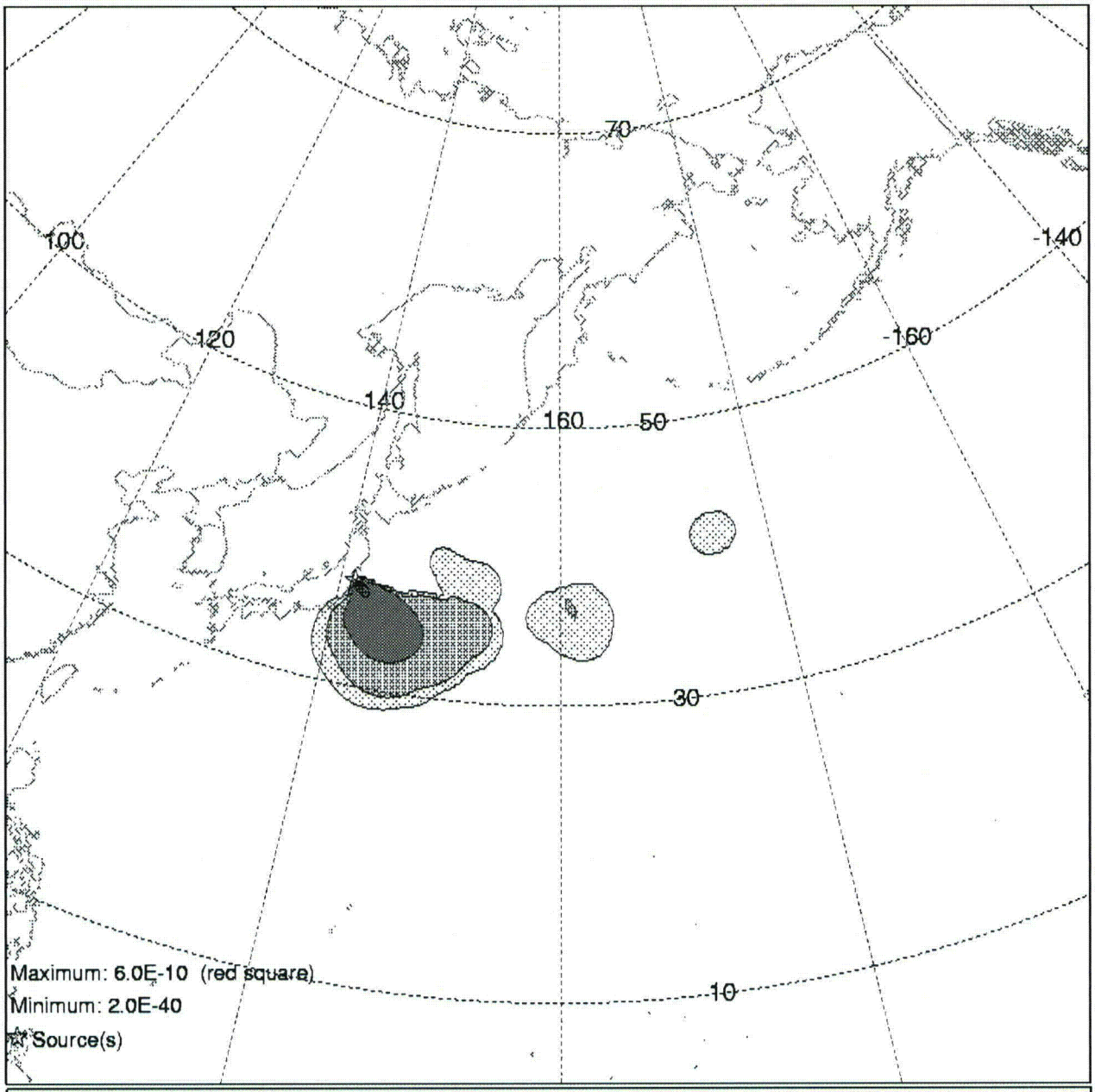
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 16 Mar to 1200 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 1600 UTC14 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.328 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 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 14 Mar

Note: "Contours may change from Chart to Chart" Issued :Mon Mar 14 16:35:21 2011

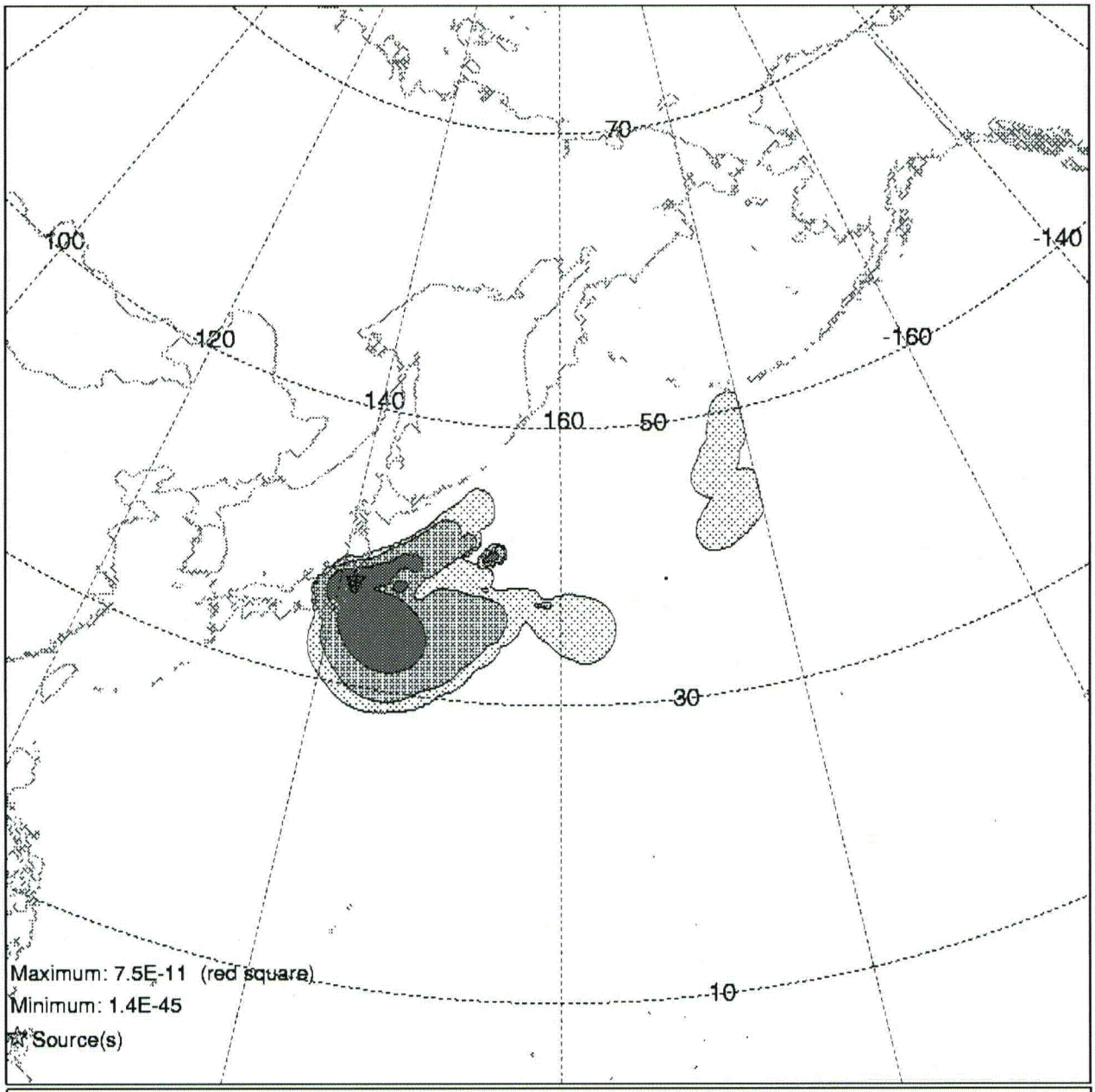
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 14 Mar to 1200 17 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 1600 UTC14 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.328 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 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Mon Mar 14 16:35:21 2011

From: hoo1
To: HOO Hoc
Subject: Fax from Via Fax
Date: Monday, March 14, 2011 1:15:50 PM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017695

Notice for: HOO1

Remote ID: Via Fax

Received at: 03/14/2011 13:15

Pages: 6

Routed by:

Routed at: 03/14/2011 13:15

FE116

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 14 16:44 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

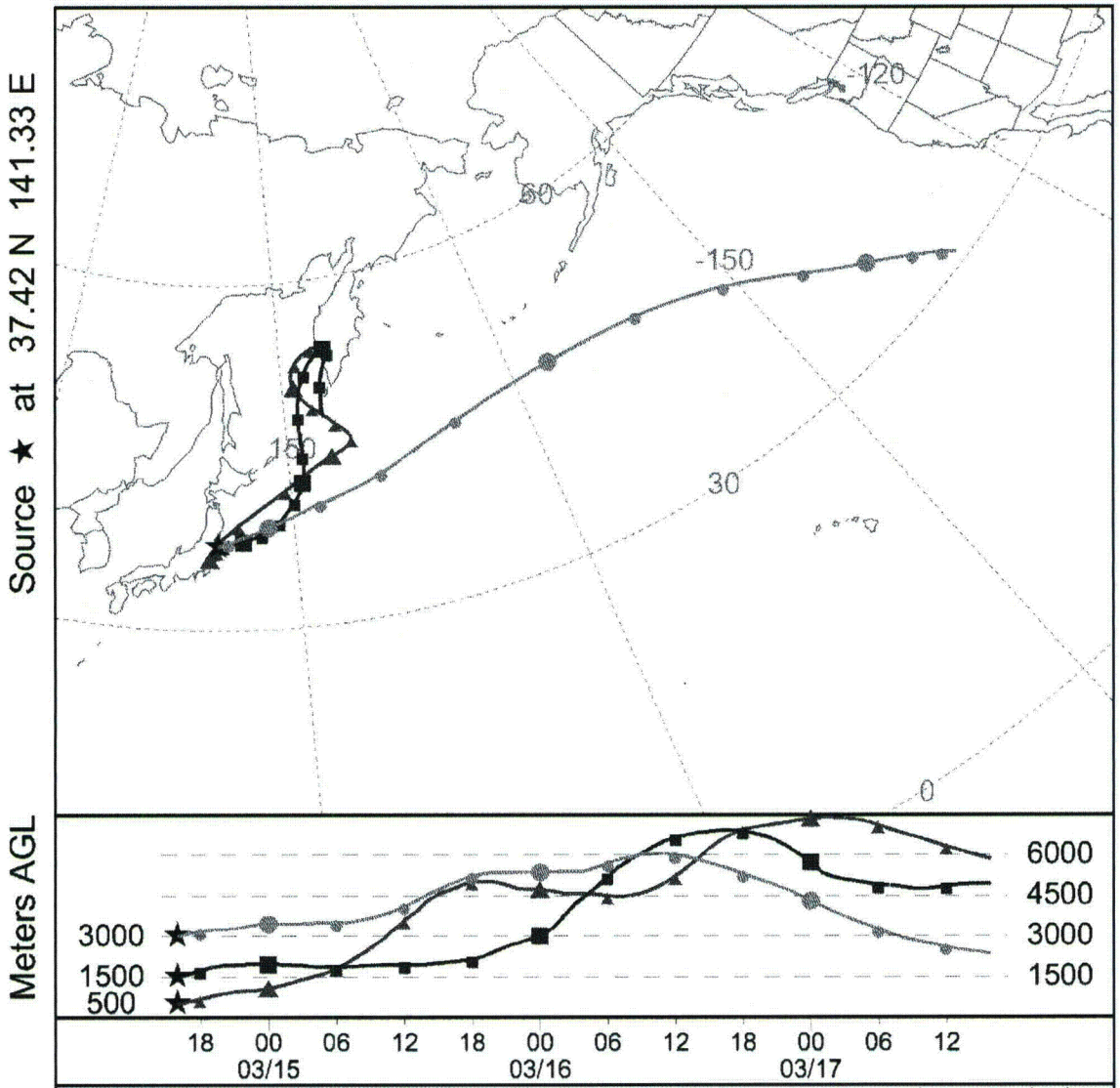
Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33
Release Start (YYYY MM DD HH MM):2011 03 14 16 01
Meteorology: 1200 UTC 14 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:C137 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 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 16 UTC 14 Mar 11

12 UTC 14 Mar GFSG Forecast Initialization

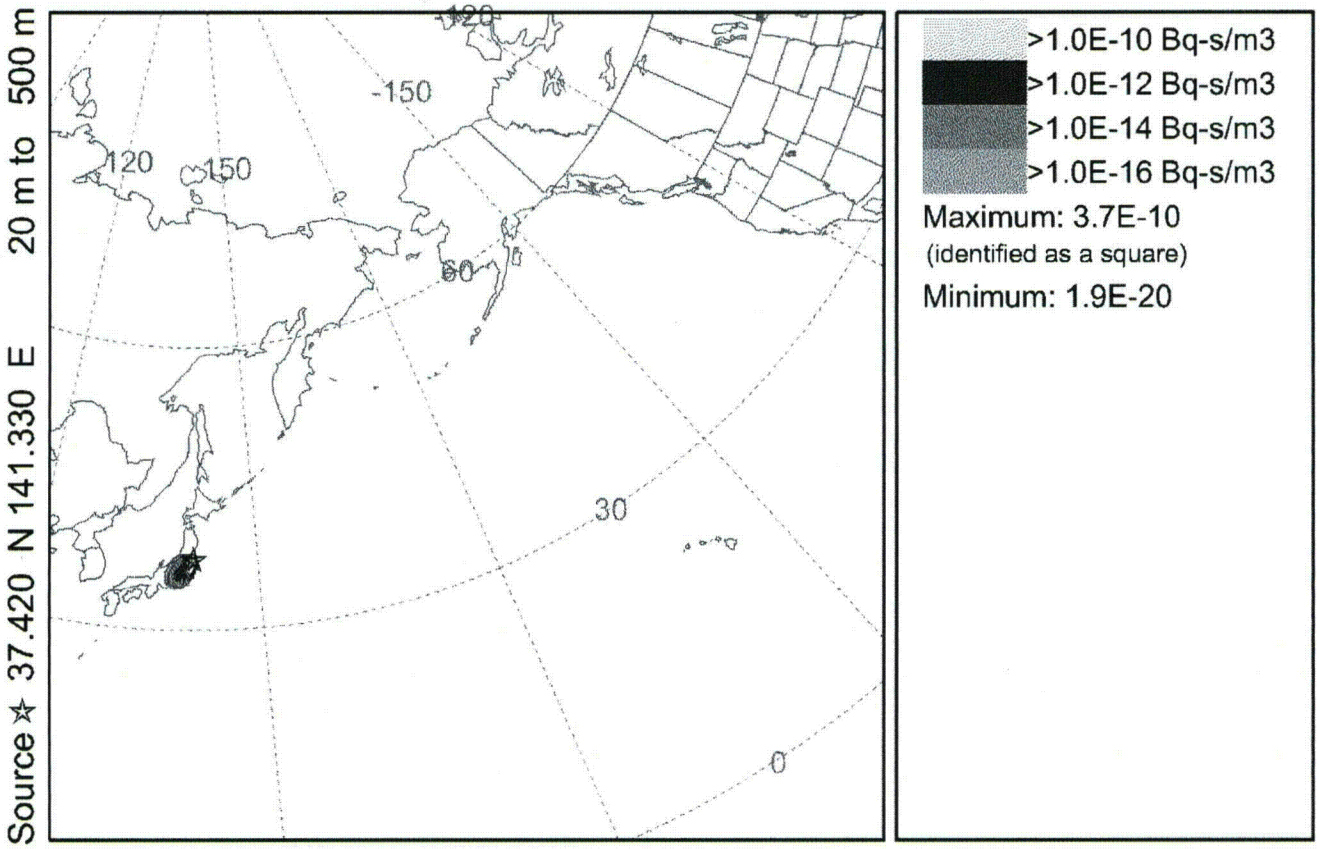


Created: 1644UTC 14/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 height:500.0 1500.0 3000.0 m

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 14 Mar to 1200 15 Mar 11 (UTC)
C137 Release started at 1601 14 Mar 11 (UTC)

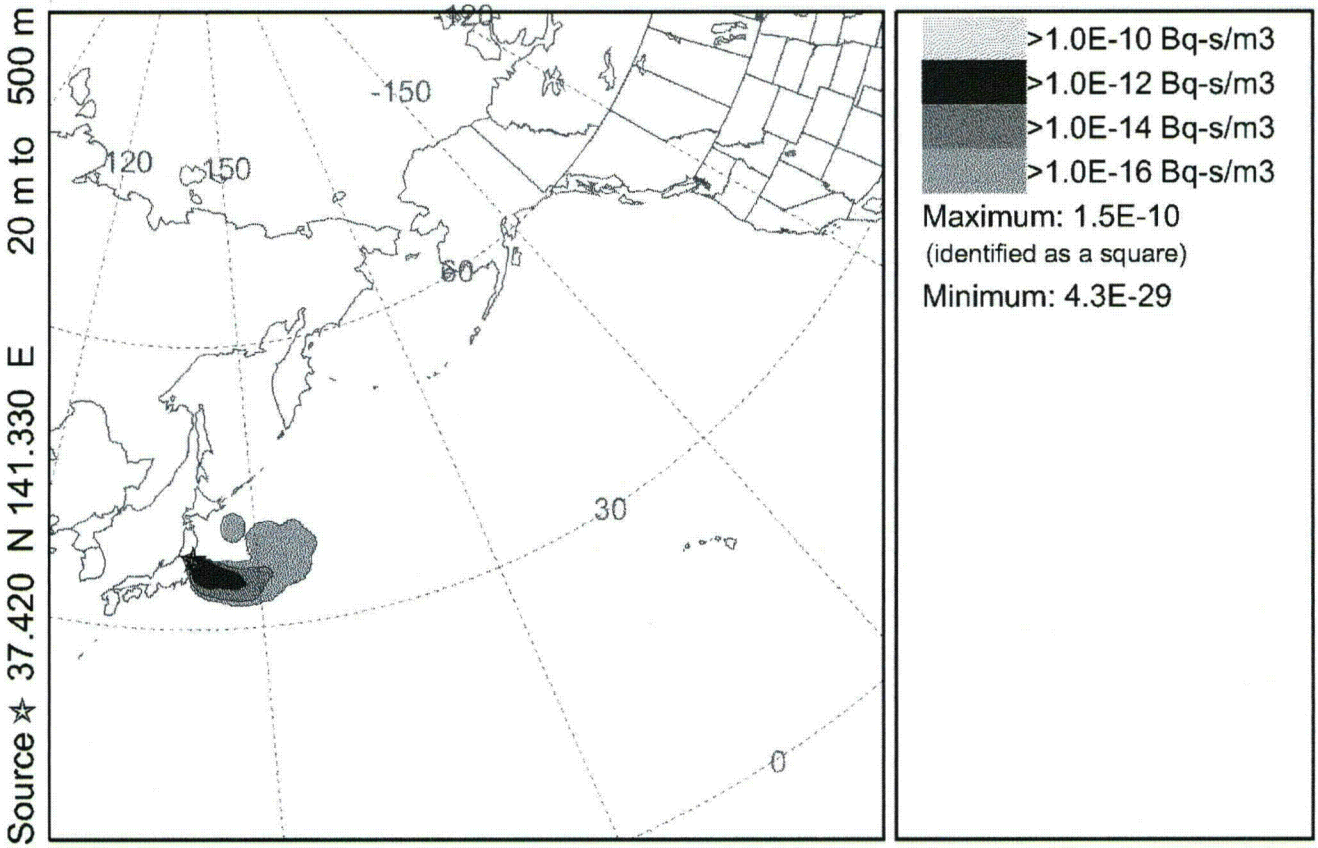


1200 14 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1644UTC 14/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 500 m
Release ID:C137 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 14 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 1200 15 Mar to 1200 16 Mar 11 (UTC)
C137 Release started at 1601 14 Mar 11 (UTC)



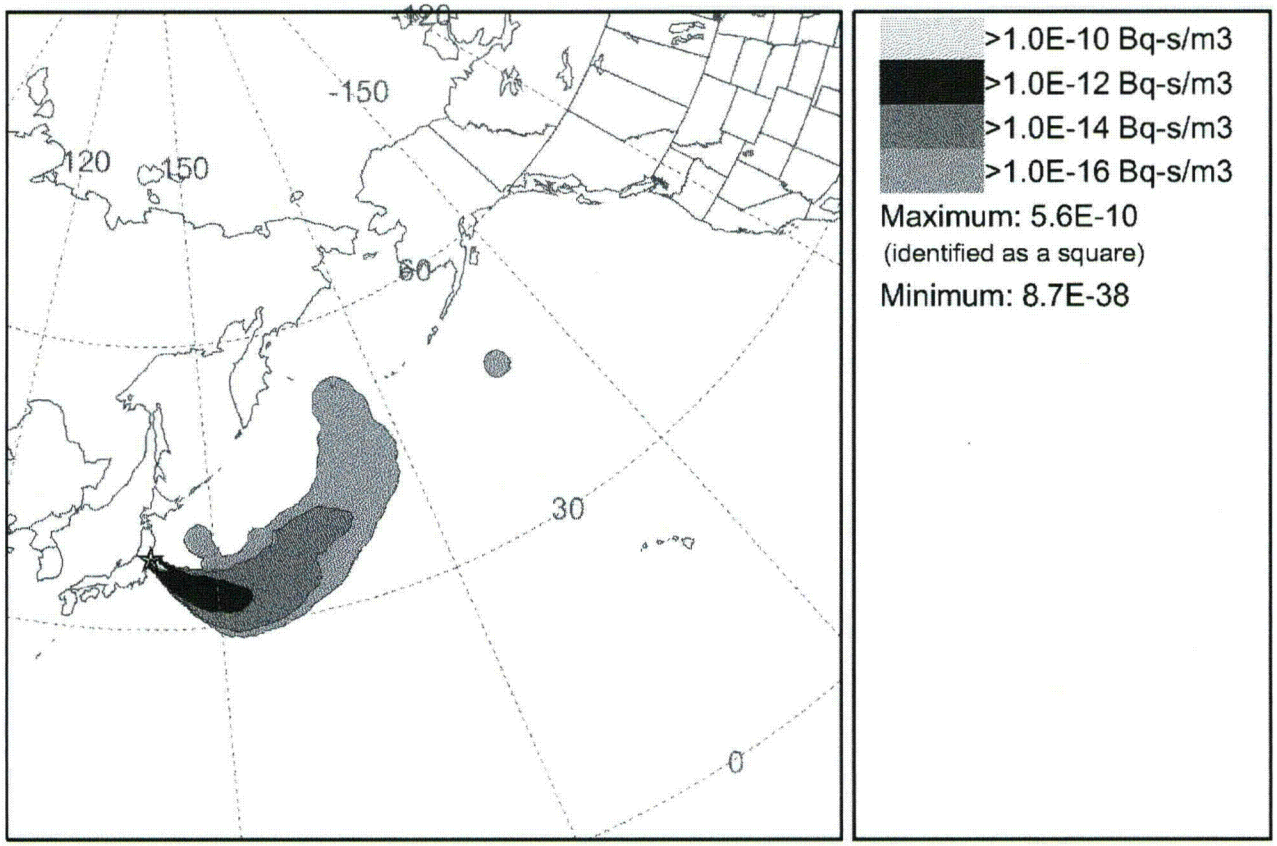
1200 14 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1644UTC 14/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 500 m
Release ID:C137 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 14 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 1200 16 Mar to 1200 17 Mar 11 (UTC)
C137 Release started at 1601 14 Mar 11 (UTC)

Source ✯ 37.420 N 141.330 E 20 m to 500 m



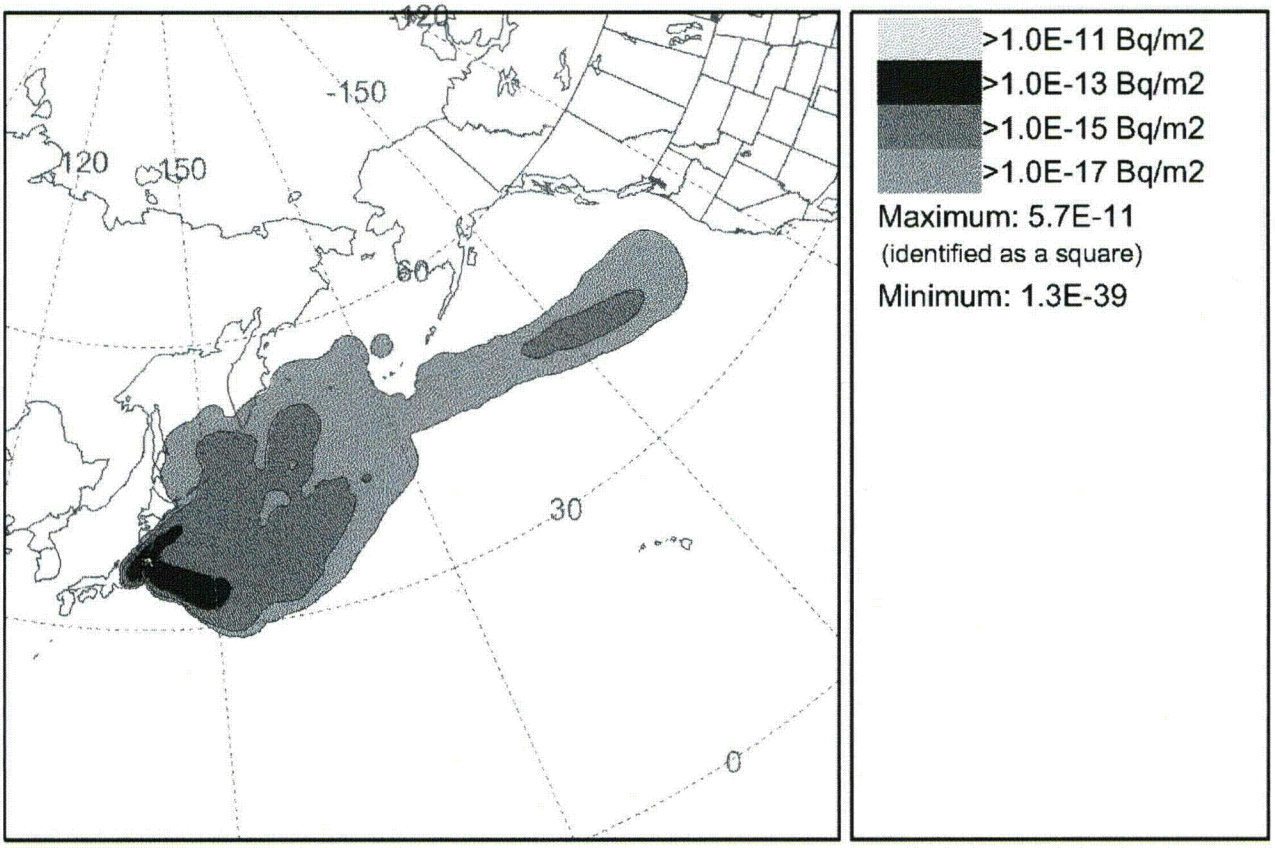
1200 14 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1644UTC 14/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 500 m
Release ID:C137 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 14 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 1200 14 Mar to 1200 17 Mar 11 (UTC)
C137 Release started at 1601 14 Mar 11 (UTC)

Source ✰ 37.420 N 141.330 E 20 m to 500 m



1200 14 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1644UTC 14/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 500 m
Release ID:C137 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1200 UTC 14 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: IAEA NOTIFIED EMERGENCY

From: hoo1
To: HOO Hoc
Subject: Fax from +61386166600
Date: Monday, March 14, 2011 1:31:28 PM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017696

Notice for: HOO1

Remote ID: +61386166600

Received at: 03/14/2011 13:29

Pages: 6

Routed by:

Routed at: 03/14/2011 13:29

EE/17

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 : 1657 UTC 14: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 141.328 E

Release Time/Date: 1600 UTC 14 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

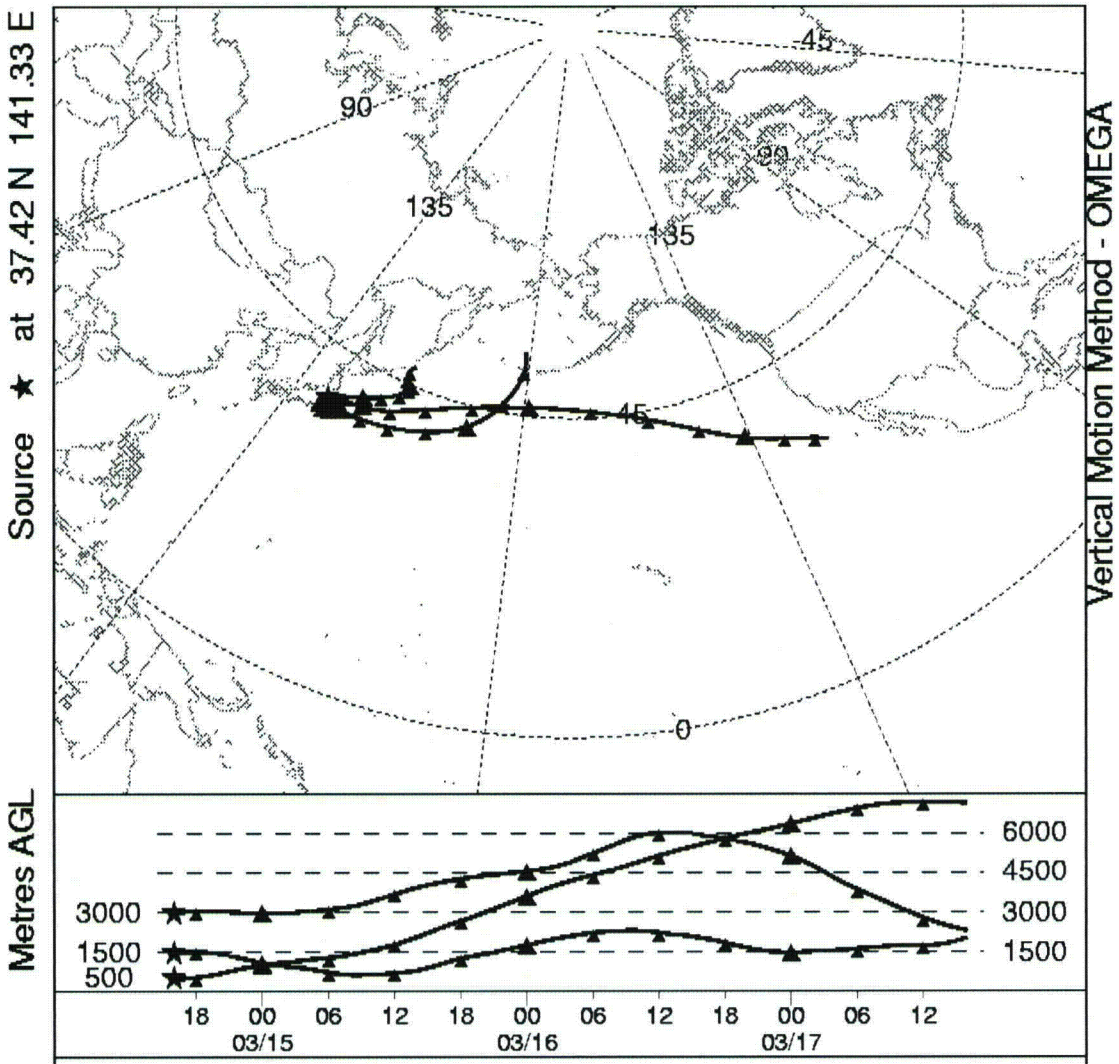
Number of Pages (incl cover sheet) = 6

RSMC Melbourne : Environmental Emergency Response Centre

Forward trajectories starting at 1600 UTC 14 Mar 2011

Meteorological Data : ACCESS-G : base time 0000 UTC 14 Mar

OPERATIONAL EVENT OPERATIONAL EVENT



Transport Model : HYSPLIT 4.9 Issued :Mon Mar 14 16:52:29 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.328 E)

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

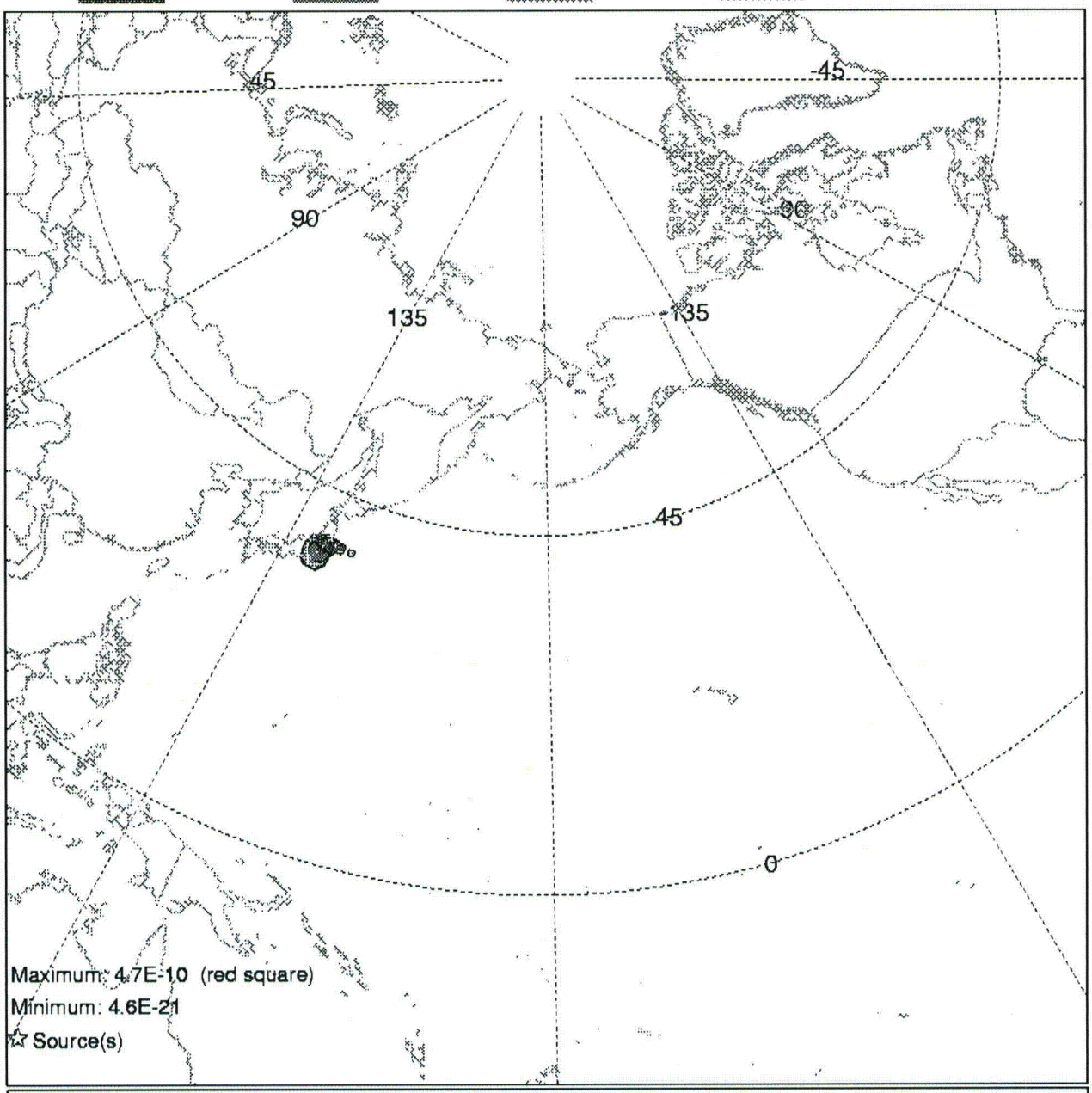
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 14 Mar to 1200 15 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 1600 UTC14 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.328 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 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Mon Mar 14 16:52:29 2011

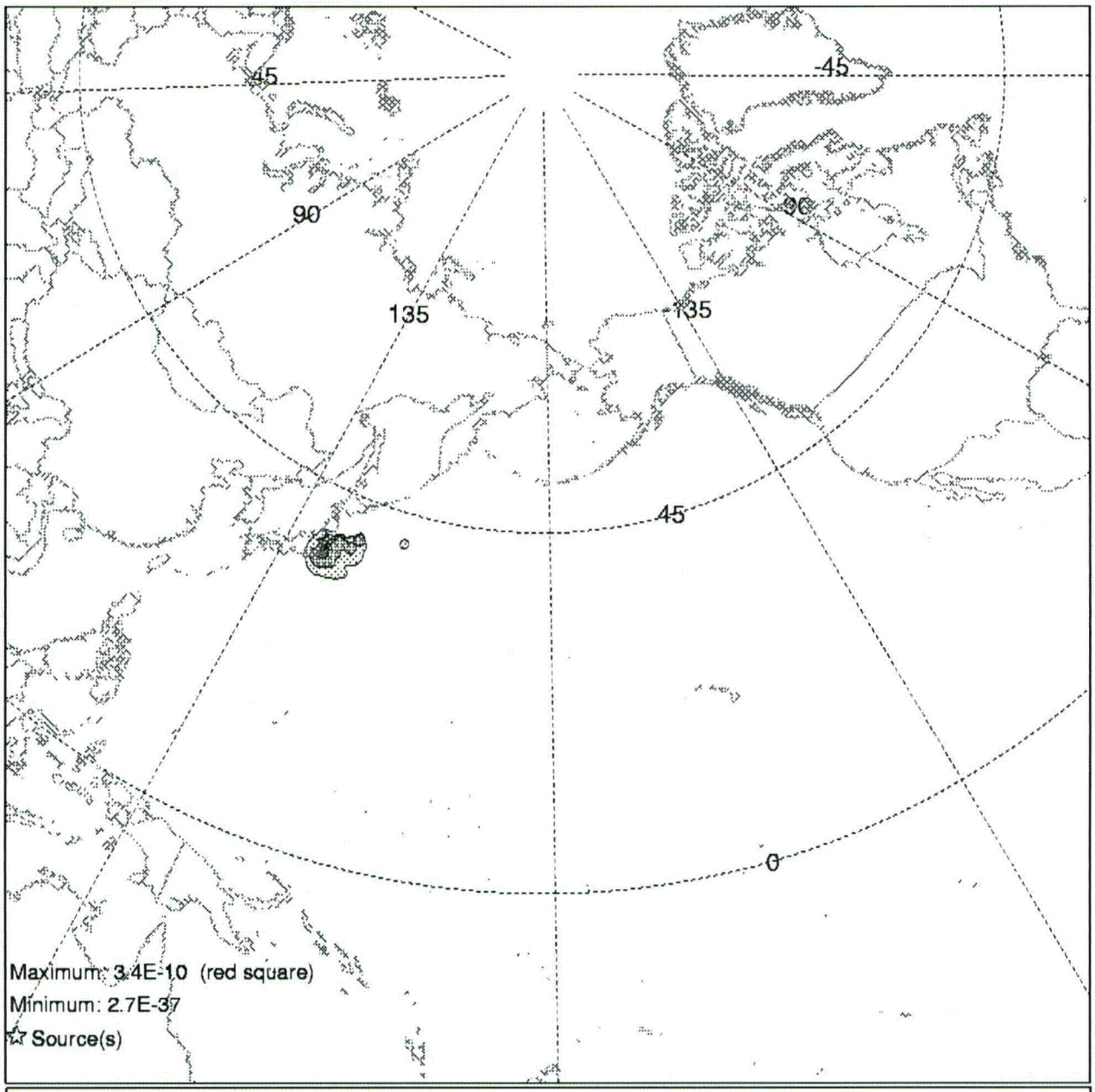
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 15 Mar to 1200 16 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 1600 UTC14 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.328 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 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Mon Mar 14 16:52:29 2011

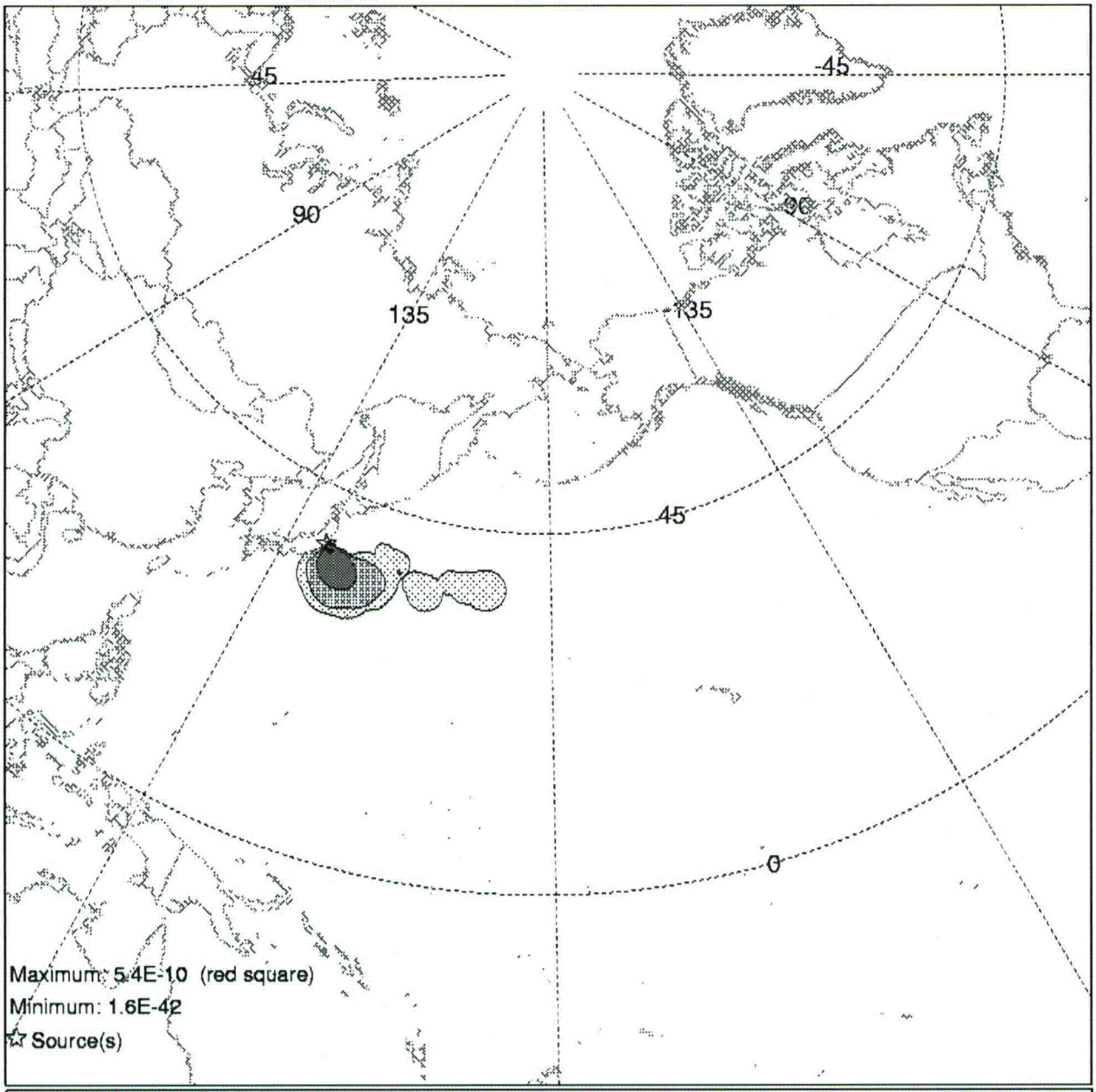
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 16 Mar to 1200 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 1600 UTC14 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.328 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 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Mon Mar 14 16:52:29 2011

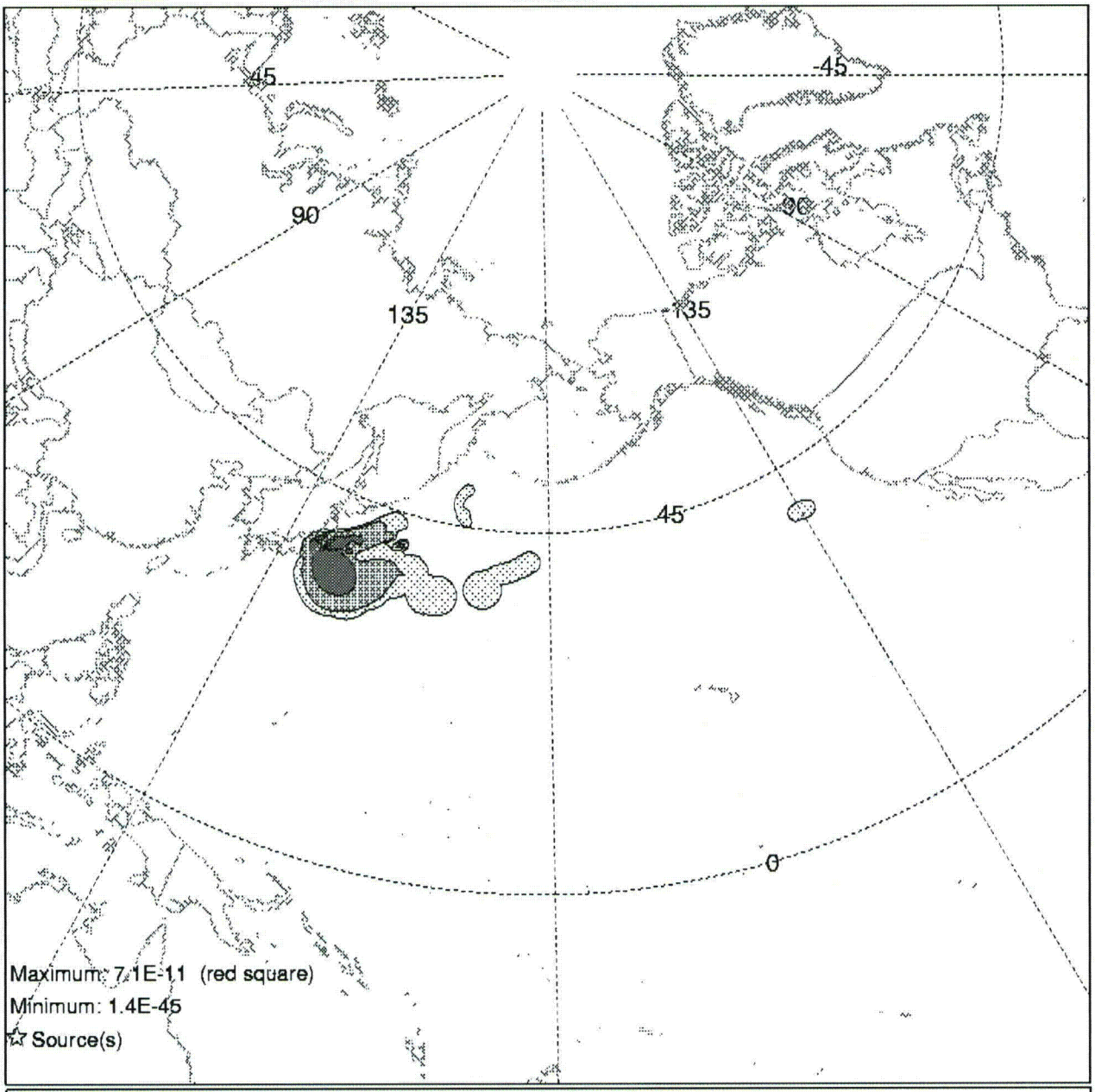
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 14 Mar to 1200 17 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 1600 UTC14 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 37.4206 N Lon: 141.328 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 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Mon Mar 14 16:52:29 2011

From: hoo1
To: HOO Hoc
Subject: Fax from Via Fax
Date: Monday, March 14, 2011 1:33:43 PM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017697

Notice for: HOO1

Remote ID: Via Fax

Received at: 03/14/2011 13:31

Pages: 6

Routed by:

Routed at: 03/14/2011 13:31

EE/18

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 14 17:12 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.

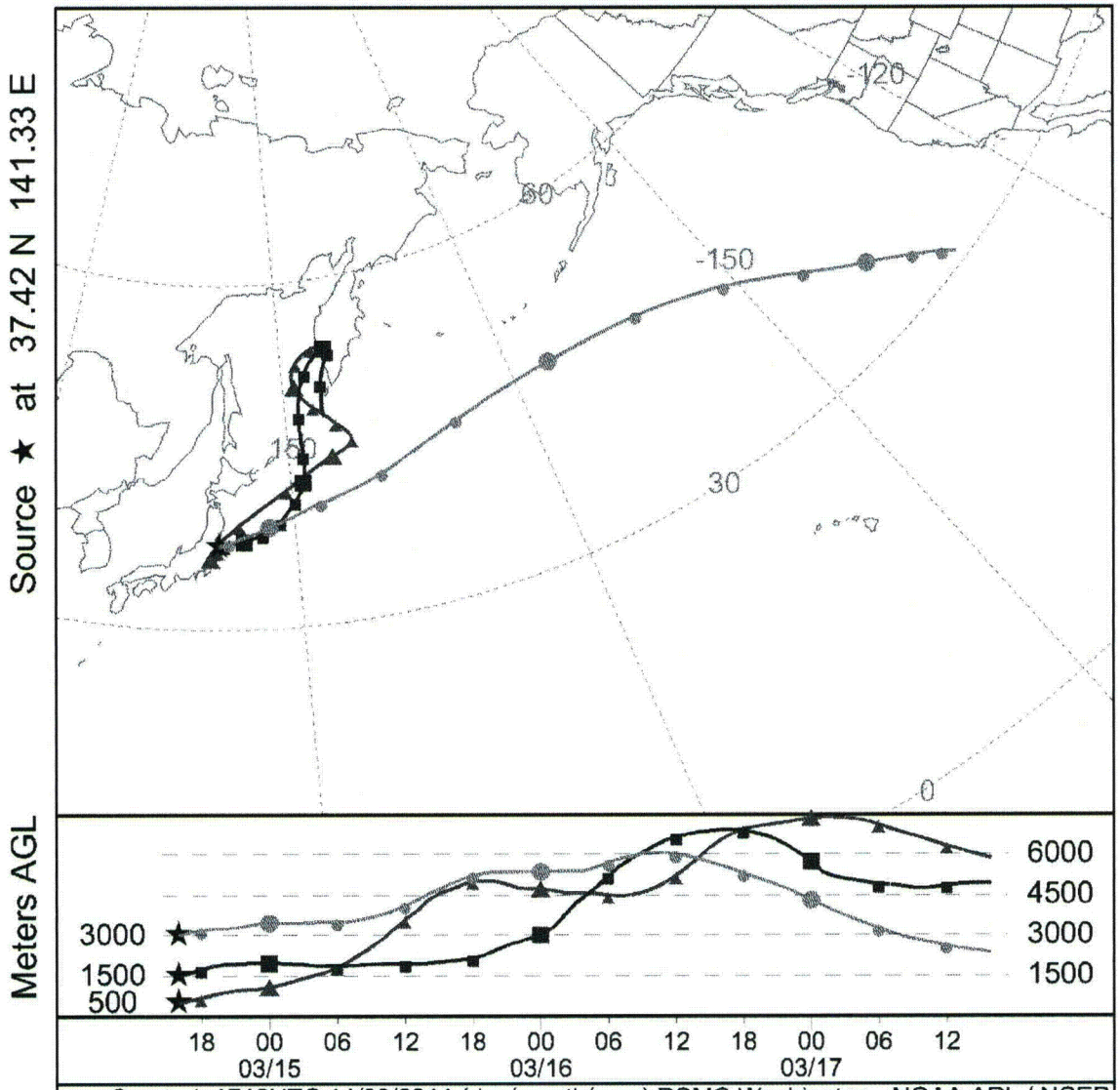
Source term and dispersion model details

RSMC Washington - NOAA ARL / NCEP

Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33
Release Start (YYYY MM DD HH MM):2011 03 14 16 01
Meteorology: 1200 UTC 14 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 500 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
Note: RESULTS BASED ON DEFAULT INITIAL VALUES

NOAA HYSPLIT MODEL
Forward trajectories starting at 16 UTC 14 Mar 11
12 UTC 14 Mar GFSG Forecast Initialization



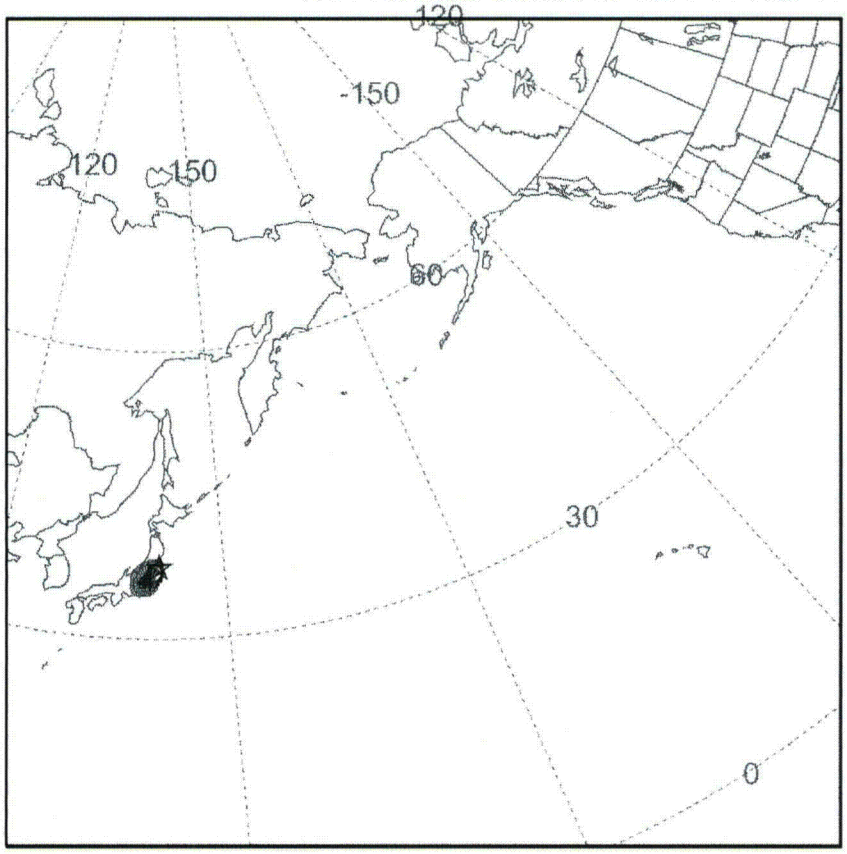
Created: 1712UTC 14/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 height:500.0 1500.0 3000.0 m

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 14 Mar to 1200 15 Mar 11 (UTC)
I131 Release started at 1601 14 Mar 11 (UTC)

Source ✯ 37.420 N 141.330 E 20 m to 500 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: 3.9E-10
(identified as a square)
Minimum: 1.1E-20

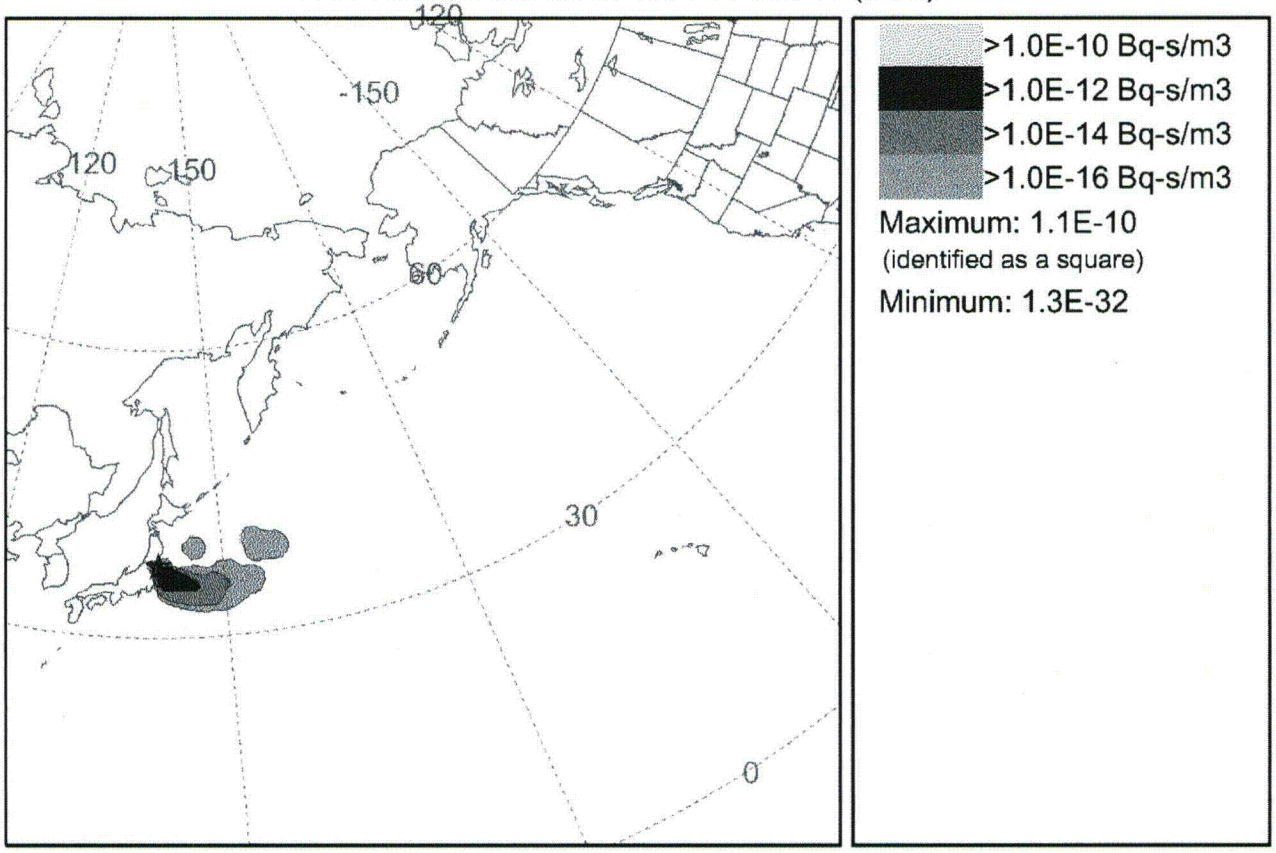
1200 14 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1712UTC 14/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 500 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 14 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 1200 15 Mar to 1200 16 Mar 11 (UTC)
I131 Release started at 1601 14 Mar 11 (UTC)

Source ✯ 37.420 N 141.330 E 20 m to 500 m

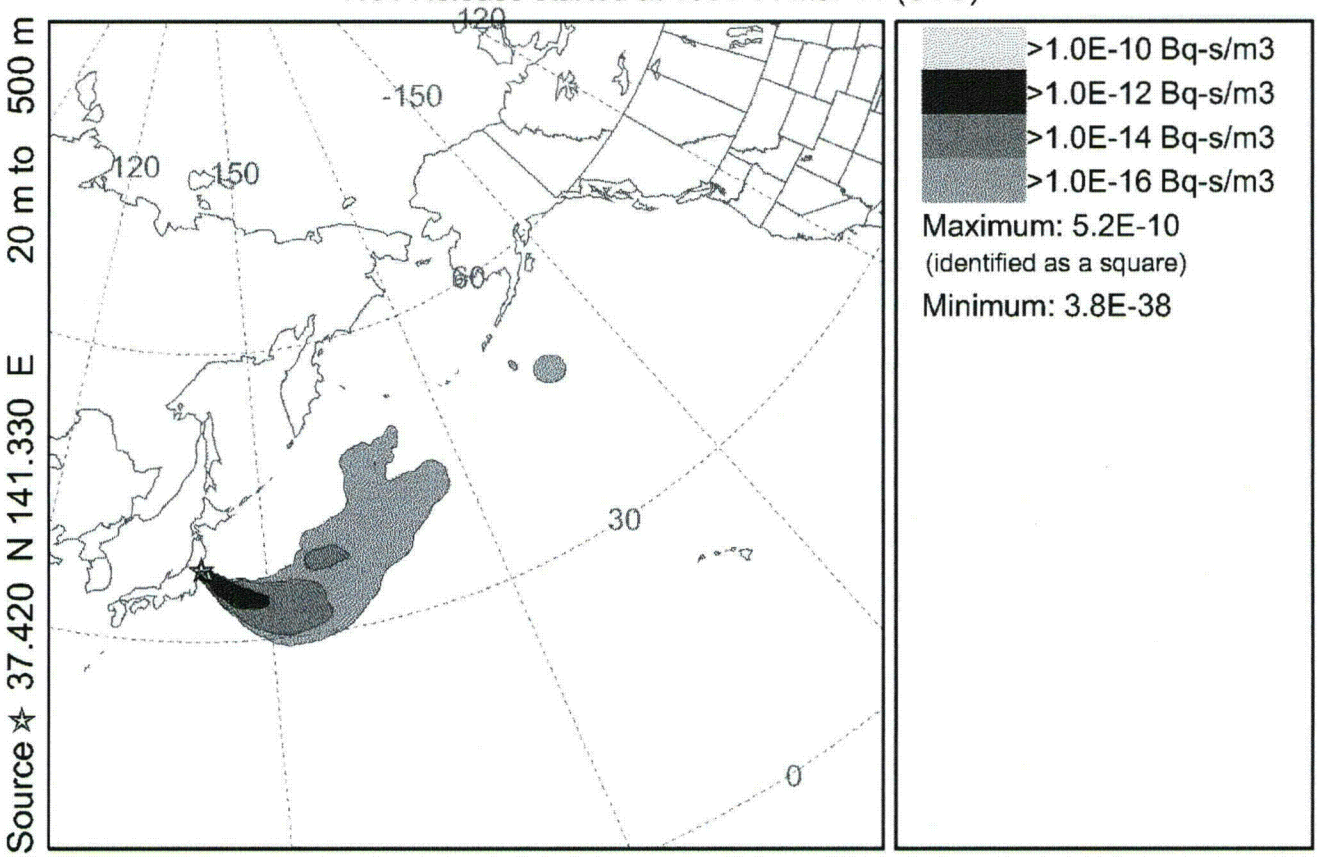


1200 14 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1712UTC 14/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 500 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 14 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 1200 16 Mar to 1200 17 Mar 11 (UTC)
I131 Release started at 1601 14 Mar 11 (UTC)

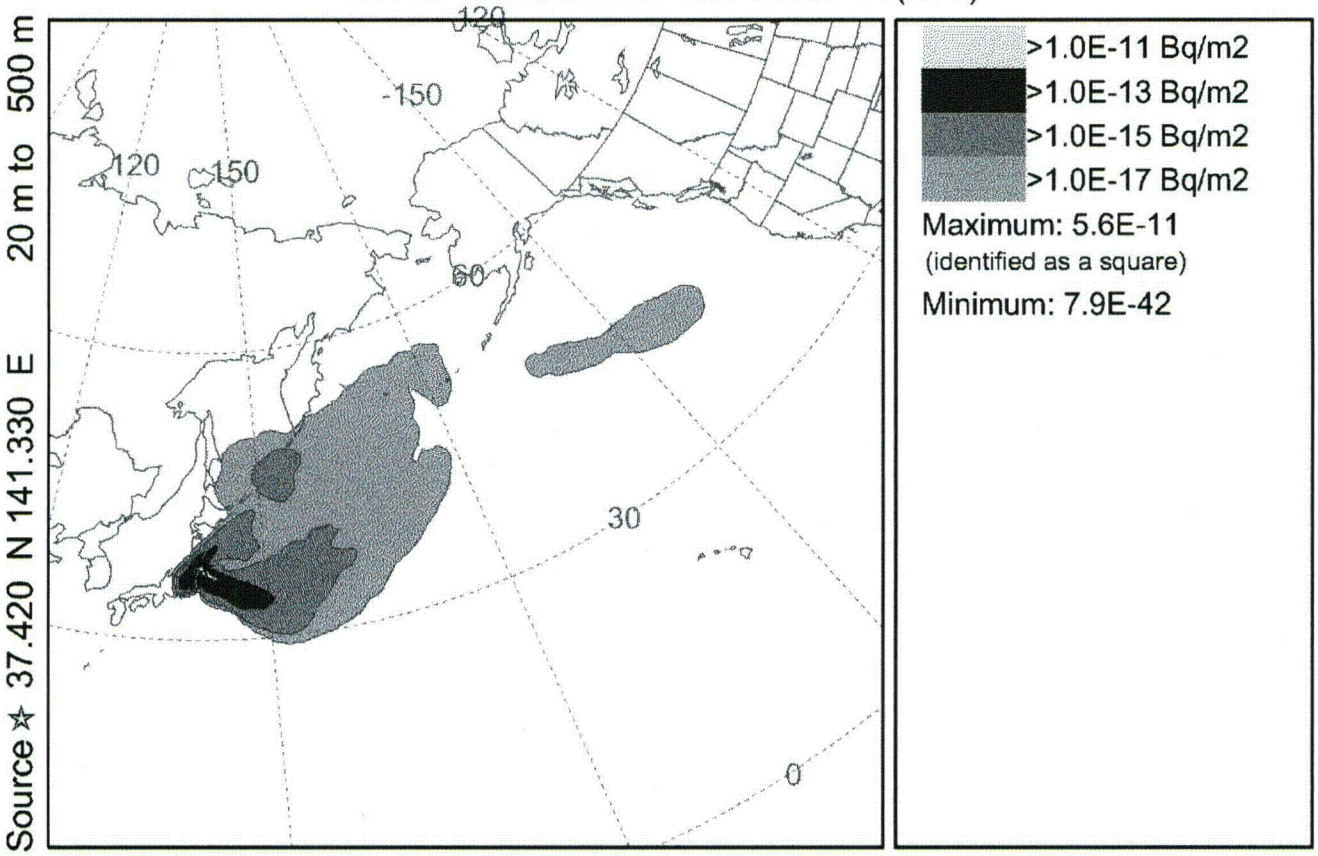


1200 14 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1712UTC 14/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 500 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 14 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 1200 14 Mar to 1200 17 Mar 11 (UTC)
I131 Release started at 1601 14 Mar 11 (UTC)



1200 14 Mar 11 GFSG FORECAST INITIALIZATION

Created: 1712UTC 14/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.33 hgt:20 to 500 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 1200 UTC 14 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: IAEA NOTIFIED EMERGENCY

From: hoo1
To: HOO Hoc
Subject: Fax from +61386166600
Date: Monday, March 14, 2011 2:04:44 PM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017698

Notice for: HOO1

Remote ID: +61386166600

Received at: 03/14/2011 14:03

Pages: 6

Routed by:

Routed at: 03/14/2011 14:03

EE119

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 : 1736 UTC 14: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: 1600 UTC 14 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

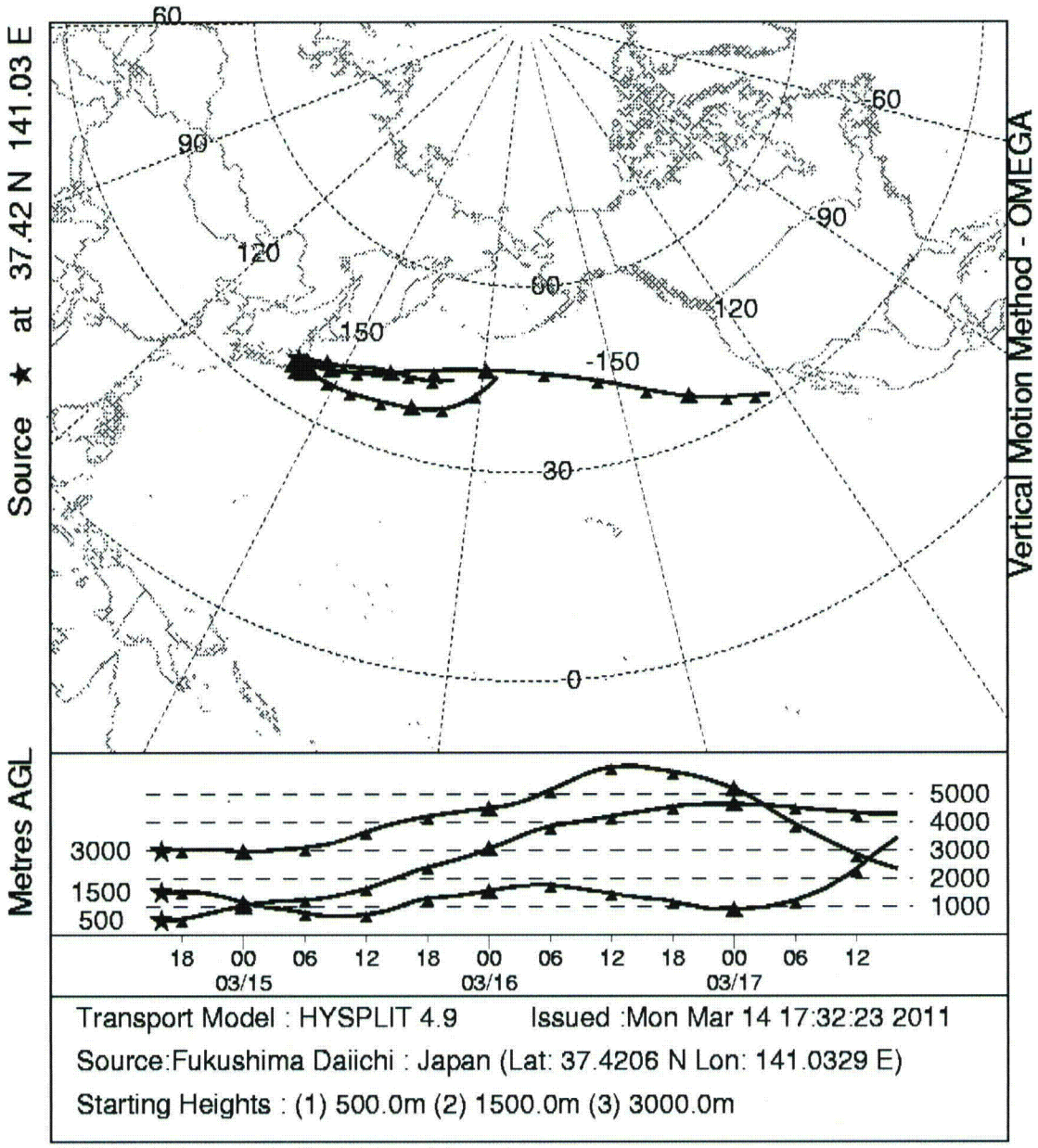
Number of Pages (incl cover sheet) = 6

RSMC Melbourne : Environmental Emergency Response Centre

Forward trajectories starting at 1600 UTC 14 Mar 2011

Meteorological Data : ACCESS-G : base time 0000 UTC 14 Mar

OPERATIONAL EVENT OPERATIONAL EVENT



Transport Model : HYSPLIT 4.9 Issued :Mon Mar 14 17:32:23 2011

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

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

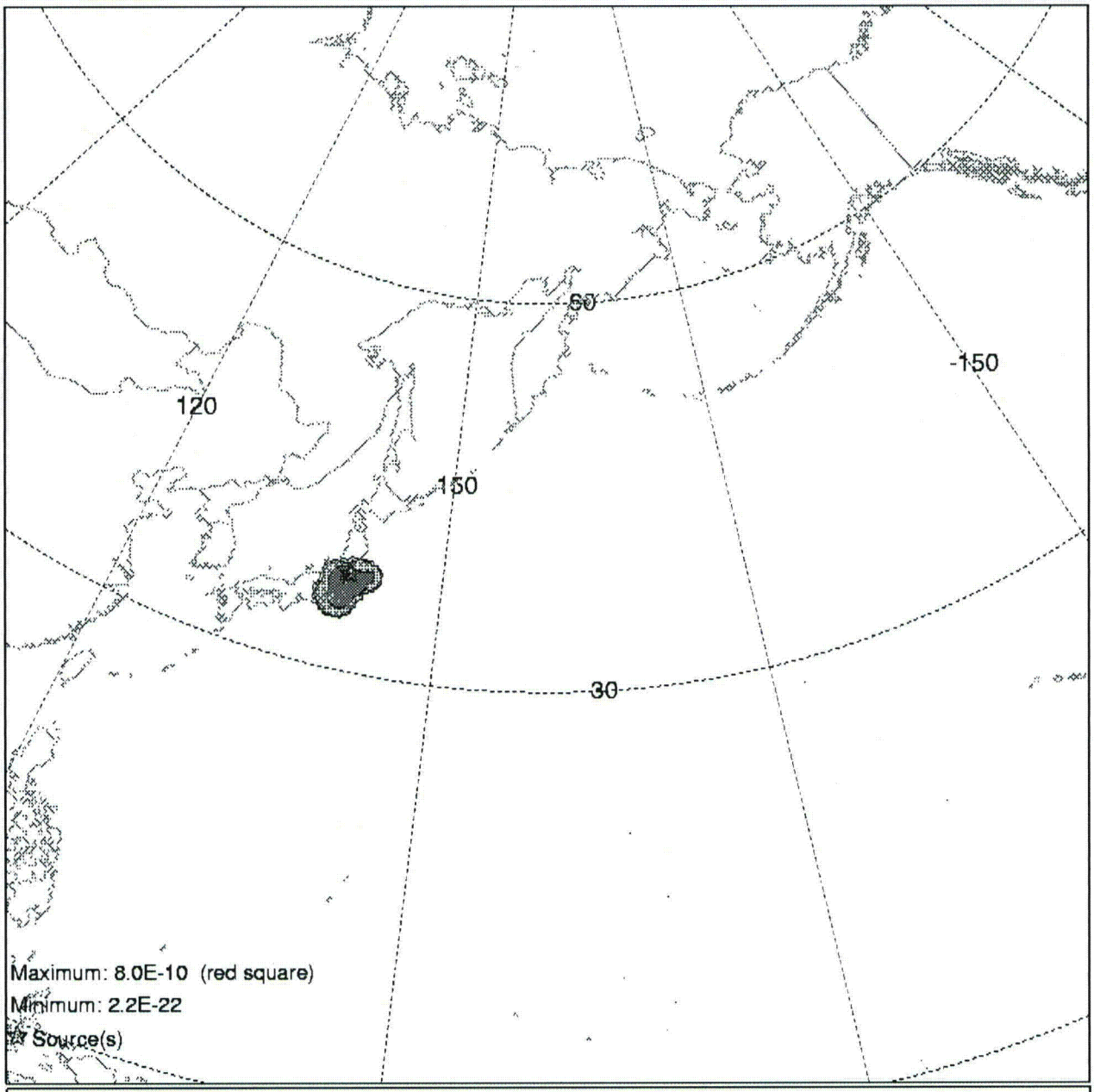
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 14 Mar to 1200 15 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 1600 UTC14 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 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 14 Mar

Note: "Contours may change from Chart to Chart" Issued :Mon Mar 14 17:32:23 2011

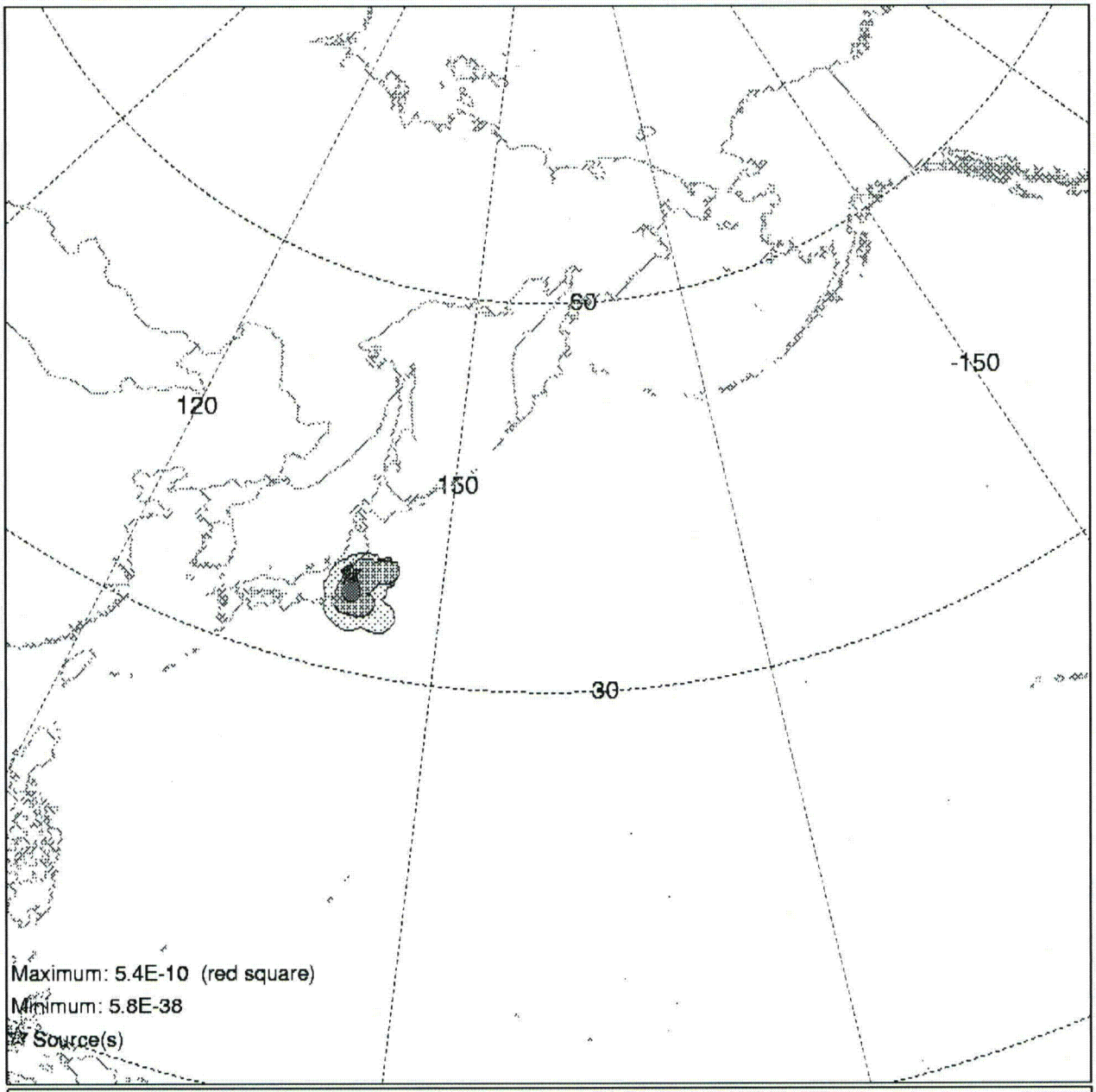
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 15 Mar to 1200 16 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 1600 UTC14 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 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Mon Mar 14 17:32:23 2011

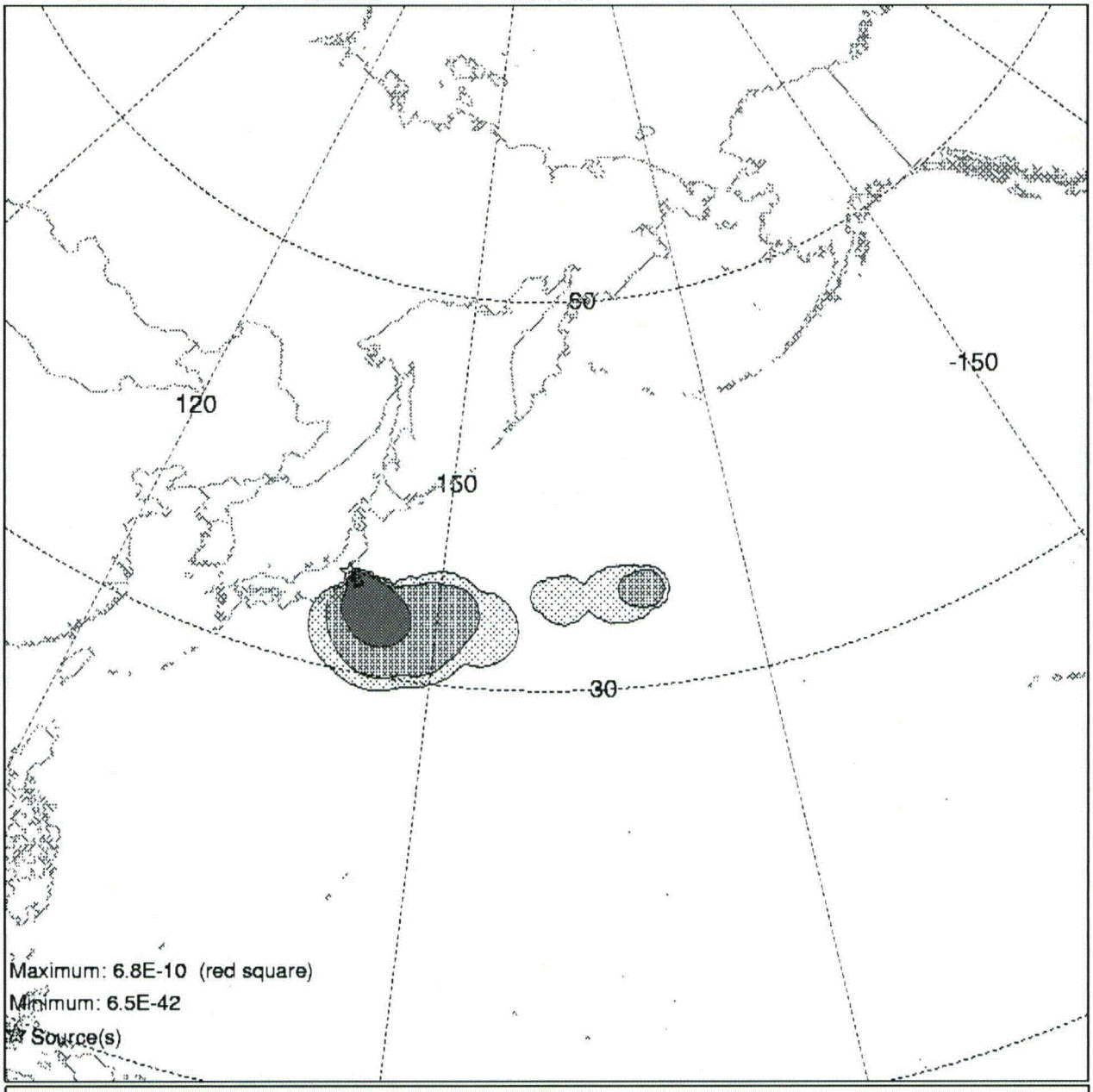
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 16 Mar to 1200 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 1600 UTC14 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 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 14 Mar

Note: "Contours may change from Chart to Chart" Issued :Mon Mar 14 17:32:23 2011

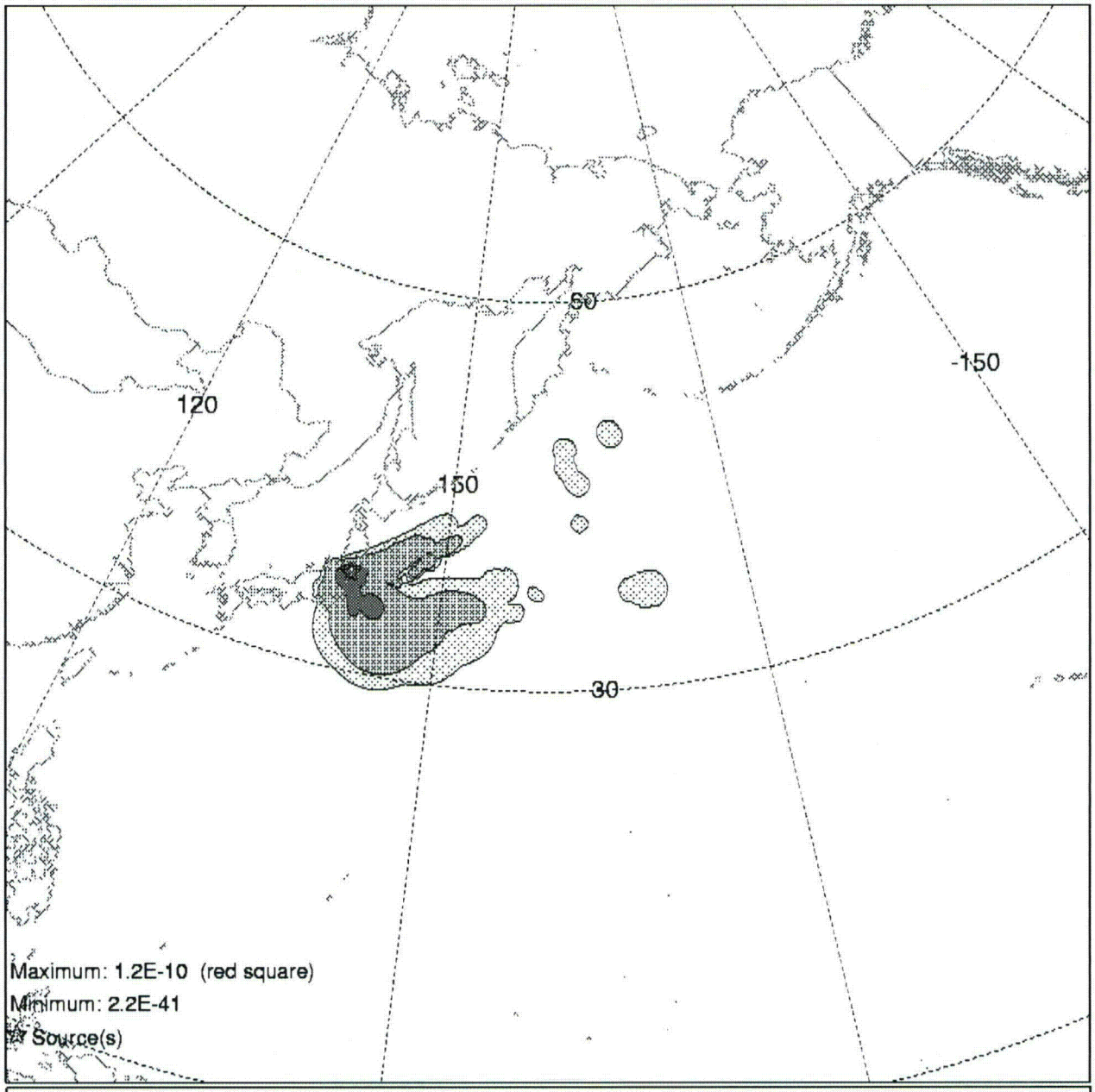
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 14 Mar to 1200 17 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 1600 UTC14 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 500.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 14 Mar

Note: "Contours may change from Chart to Chart" Issued :Mon Mar 14 17:32:23 2011

From: hoo1
To: HOO Hoc
Subject: Fax from +61386166600
Date: Monday, March 14, 2011 2:49:23 PM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017699

Notice for: HOO1

Remote ID: +61386166600

Received at: 03/14/2011 14:47

Pages: 6

Routed by:

Routed at: 03/14/2011 14:47

EE/20

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 : 1813 UTC 14: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: 1600 UTC 14 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

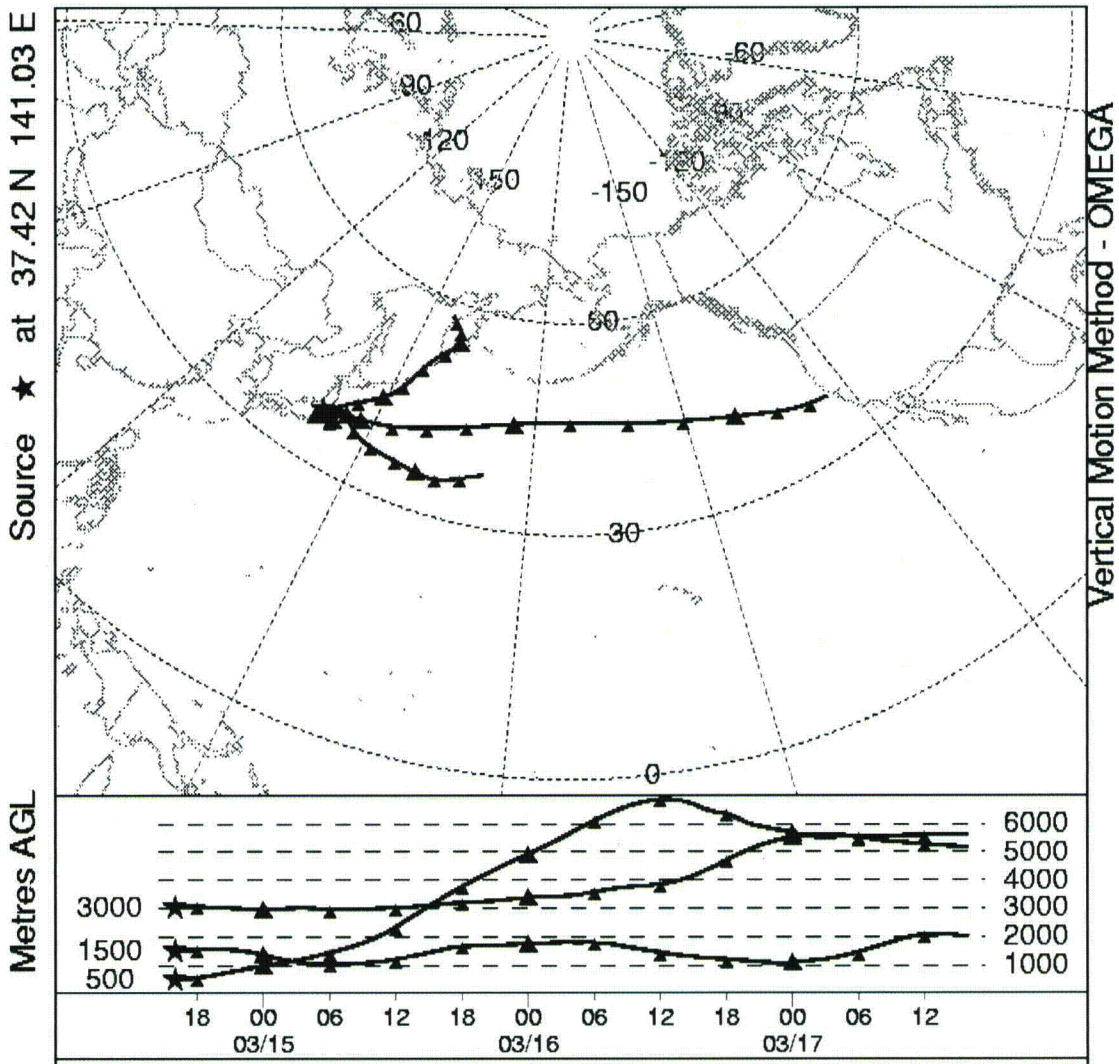
Number of Pages (incl cover sheet) = 6

RSMC Melbourne : Environmental Emergency Response Centre

Forward trajectories starting at 1600 UTC 14 Mar 2011

Meteorological Data : ACCESS-G : base time 1200 UTC 14 Mar

OPERATIONAL EVENT OPERATIONAL EVENT



Transport Model : HYSPLIT 4.9 Issued :Mon Mar 14 18:08:42 2011

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

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

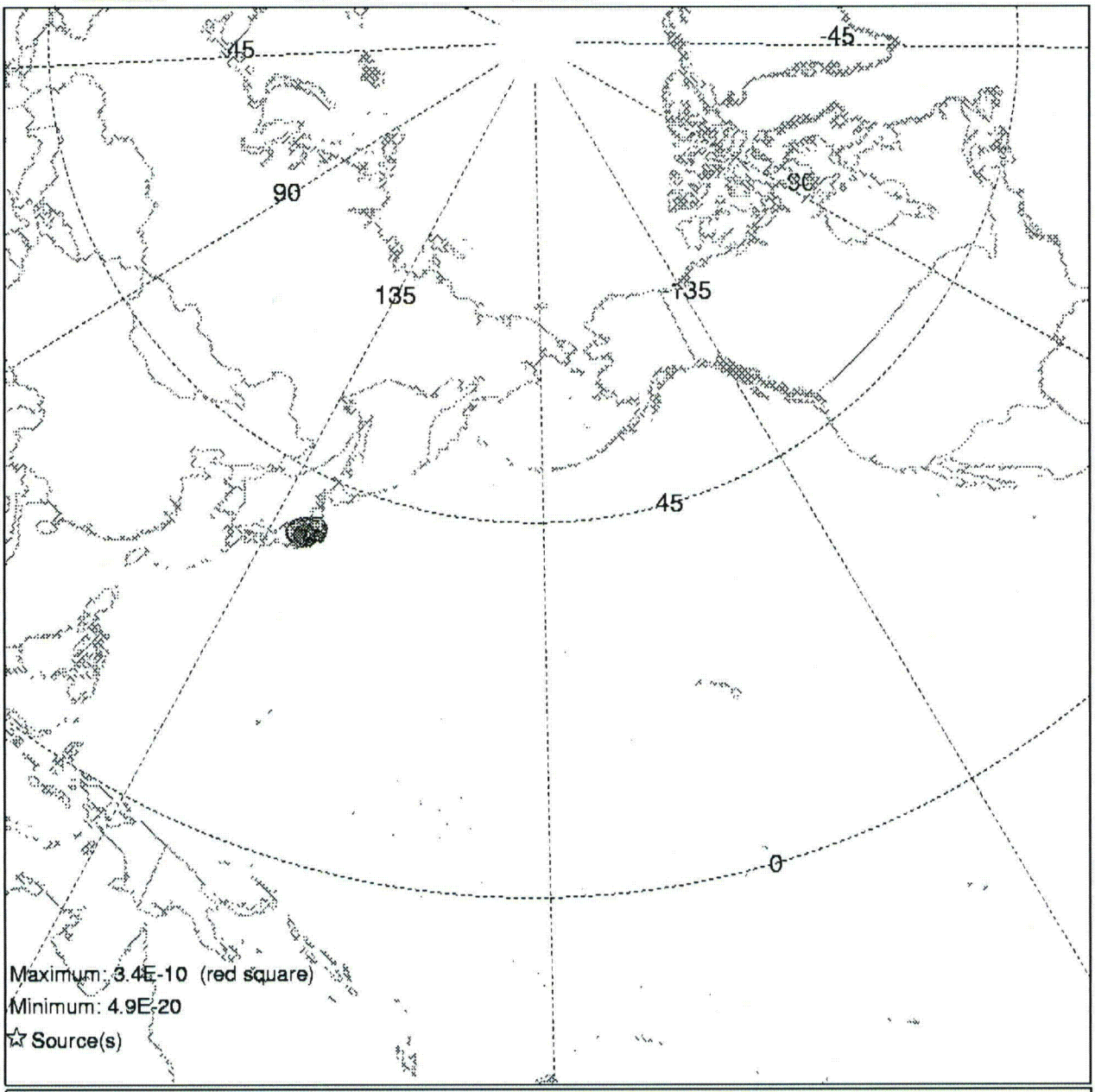
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 14 Mar to 1200 15 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 1600 UTC14 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 1200 UTC 14 Mar

Note: "Contours may change from Chart to Chart" Issued :Mon Mar 14 18:08:42 2011

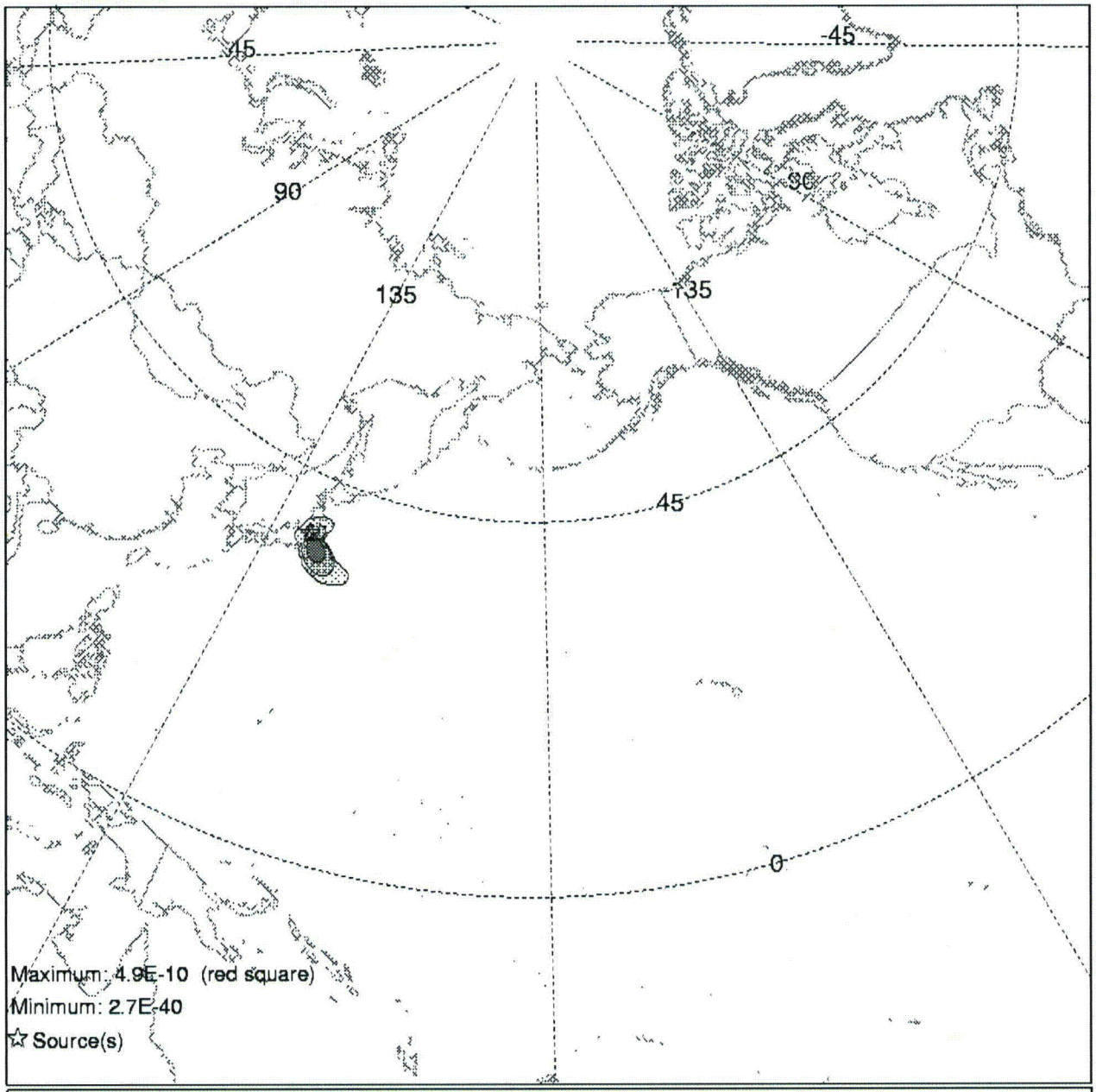
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 15 Mar to 1200 16 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 1600 UTC14 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 1200 UTC 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Mon Mar 14 18:08:42 2011

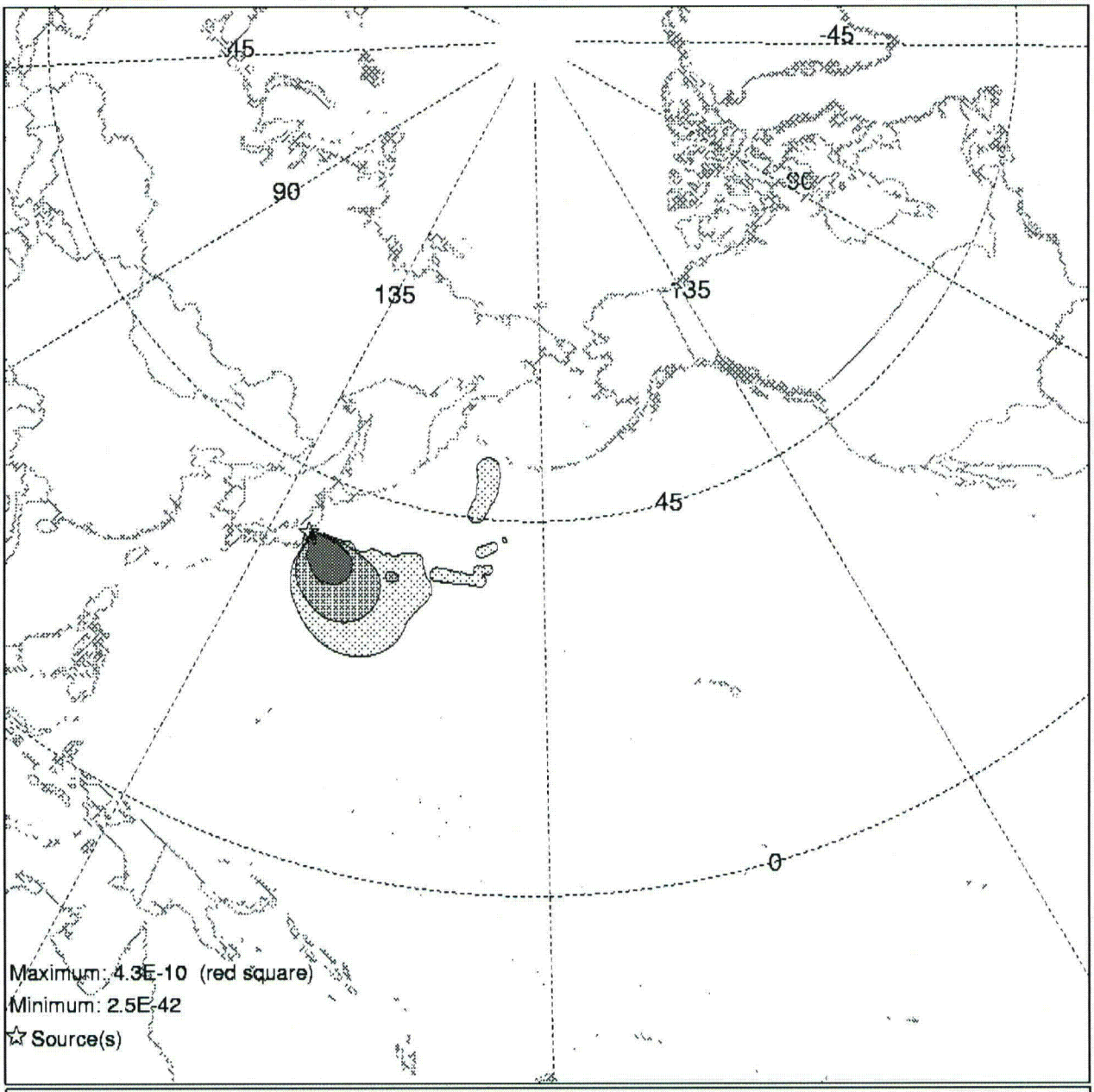
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 16 Mar to 1200 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 1600 UTC14 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 1200 UTC 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Mon Mar 14 18:08:42 2011

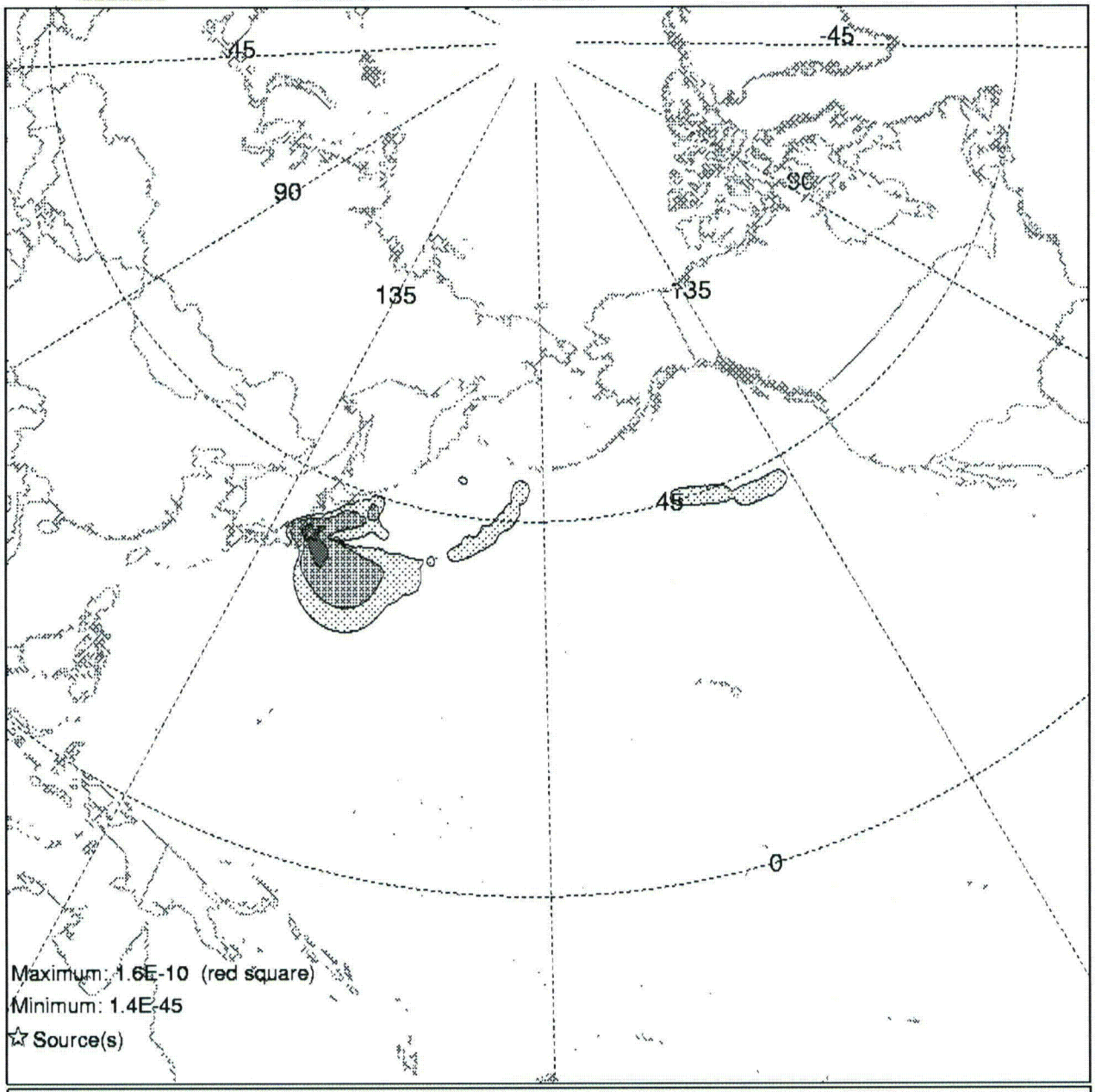
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 1200 14 Mar to 1200 17 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 1600 UTC14 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 1200 UTC 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Mon Mar 14 18:08:42 2011

From: hoo1
To: HOO Hoc
Subject: Fax from +61386166600
Date: Tuesday, March 15, 2011 12:03:39 AM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017706

Notice for: HOO1

Remote ID: +61386166600

Received at: 03/15/2011 00:00

Pages: 6

Routed by:

Routed at: 03/15/2011 00:01

EE|21

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 : 0336 UTC 15: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): 32.4206 N 141.0329 E

Release Time/Date: 0300 UTC 15 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

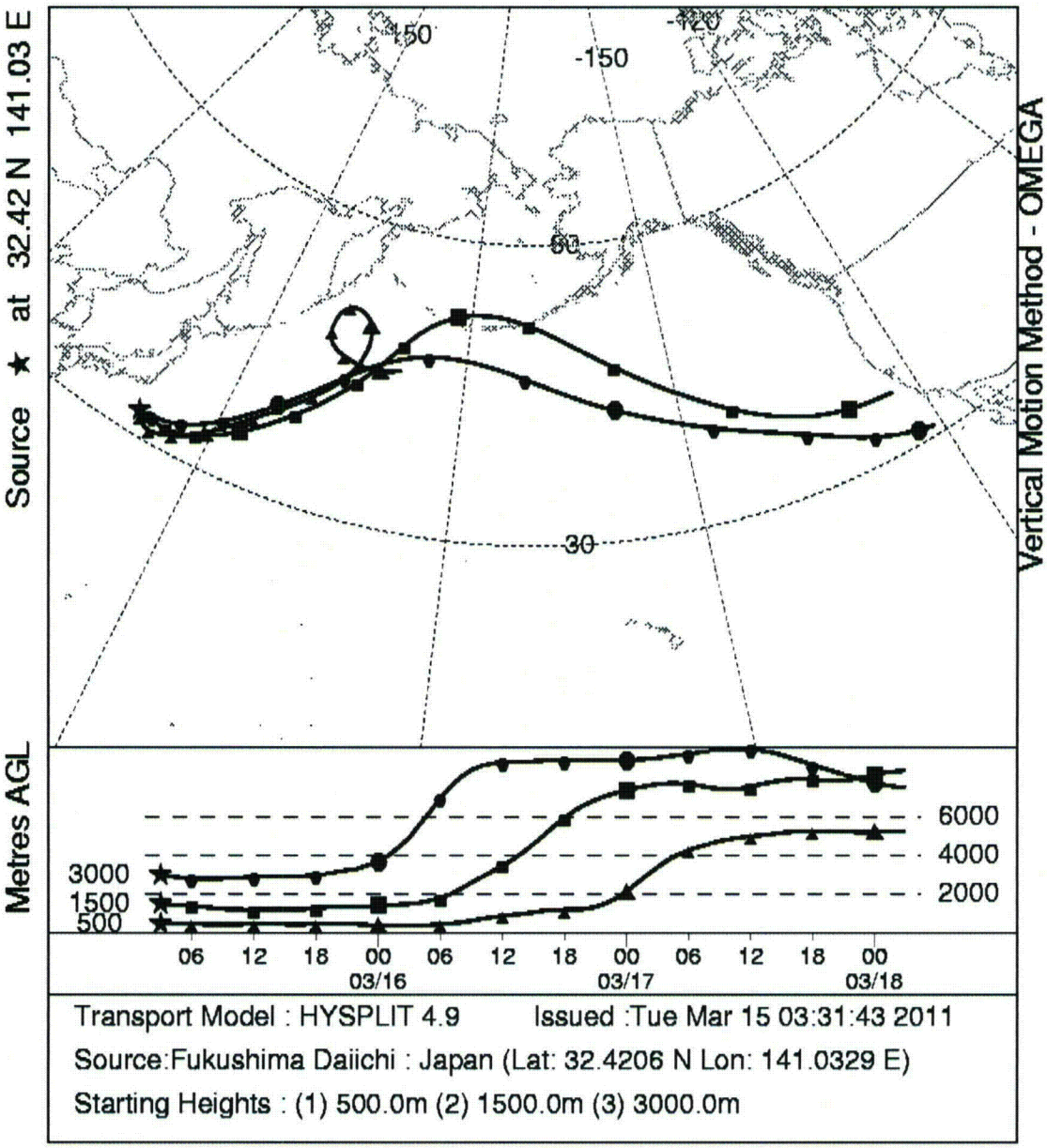
Number of Pages (incl cover sheet) = 6

RSMC Melbourne : Environmental Emergency Response Centre

Forward trajectories starting at 0300 UTC 15 Mar 2011

Meteorological Data : ACCESS-G : base time 1200 UTC 14 Mar

OPERATIONAL EVENT OPERATIONAL EVENT



Transport Model : HYSPLIT 4.9 Issued :Tue Mar 15 03:31:43 2011

Source:Fukushima Daiichi : Japan (Lat: 32.4206 N Lon: 141.0329 E)

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

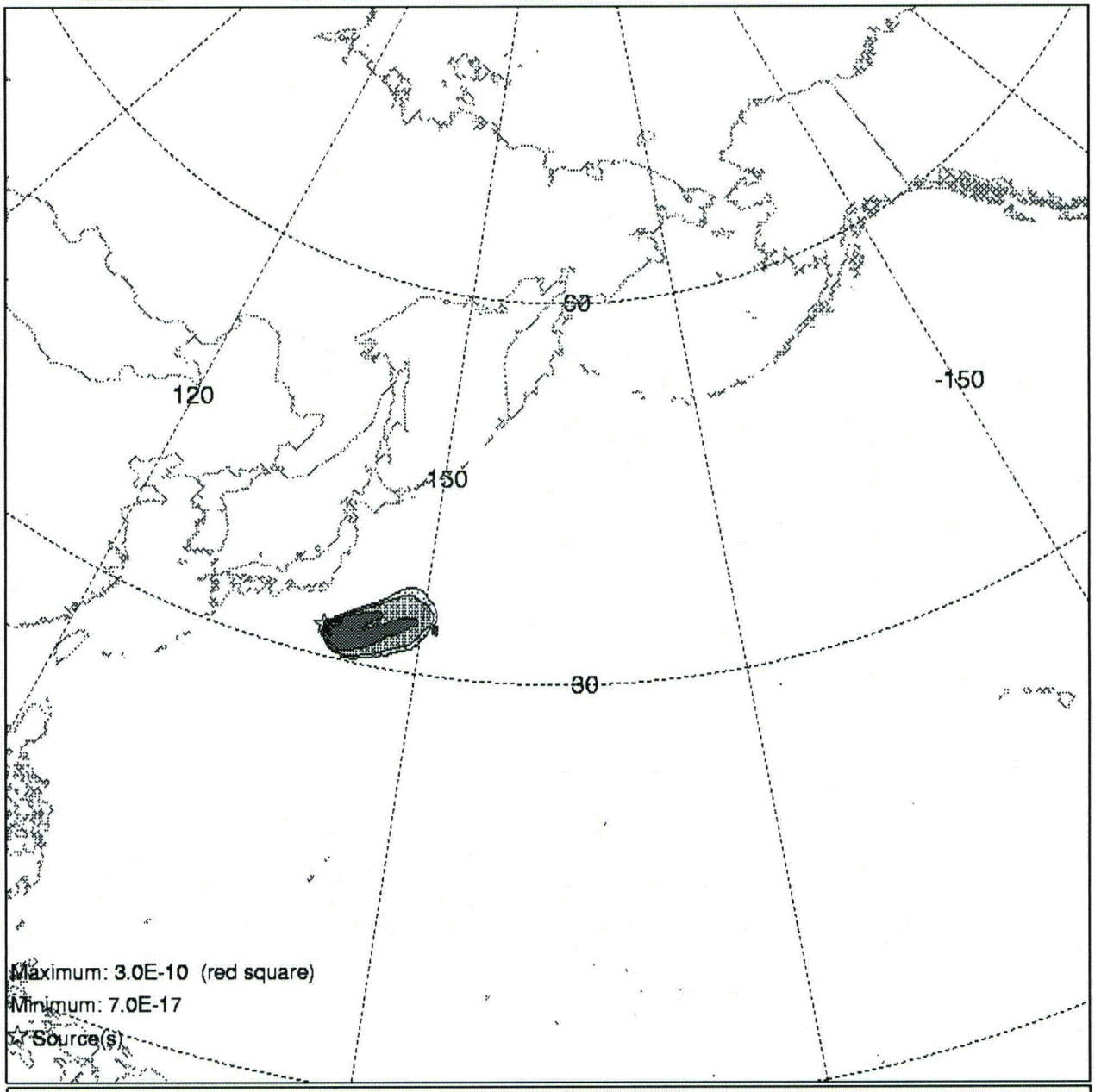
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 15 Mar to 0000 16 Mar 11 (UTC)

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

>1.0E-10 >1.0E-11 >1.0E-12 >1.0E-13



NRAD RELEASE STARTED AT 0300 UTC15 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 32.4206 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 500.0m

Meteorological Data : ACCESS-G : base time 1200 UTC 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Tue Mar 15 03:31:43 2011

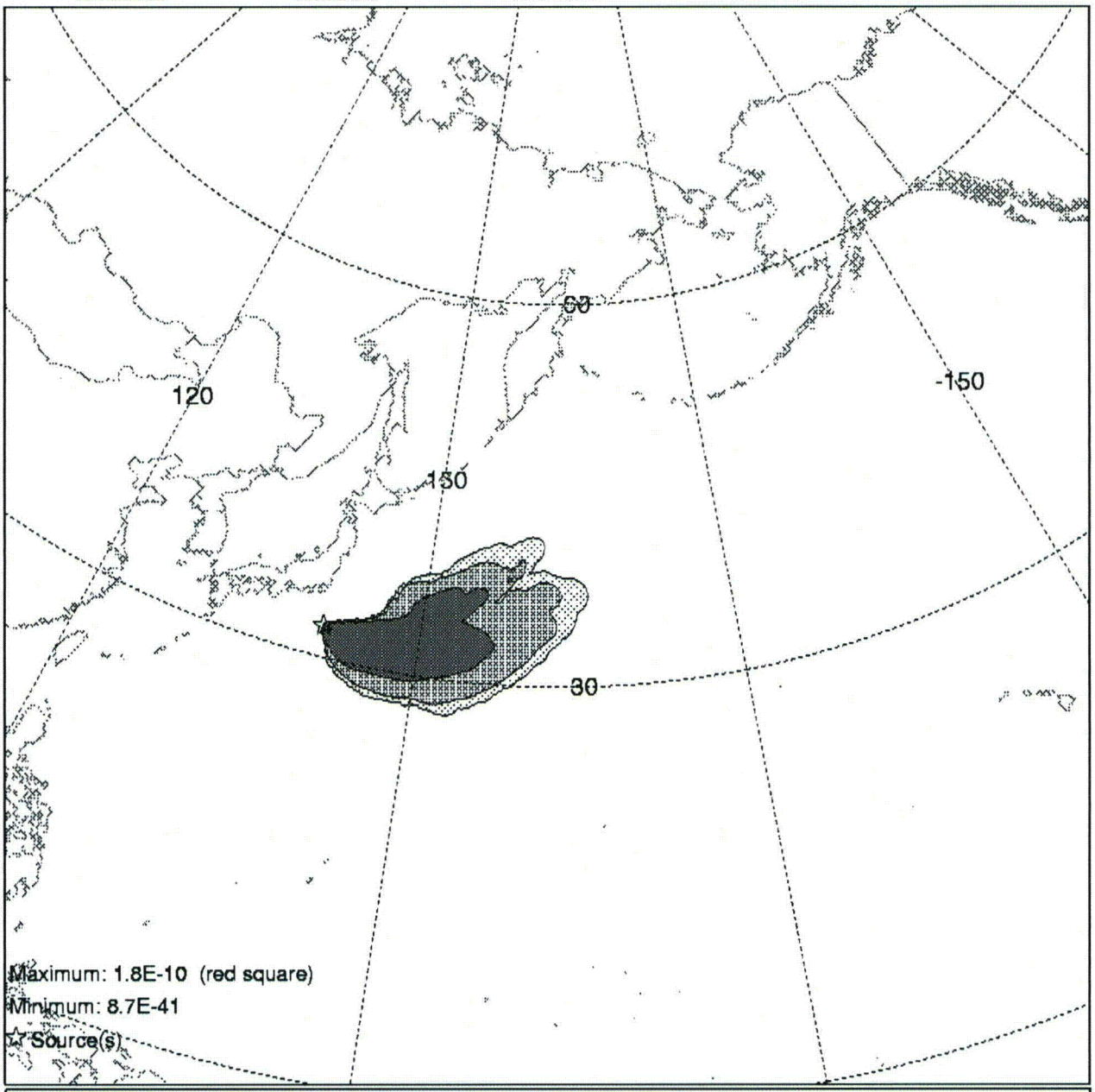
RSMC Melbourne : Environmental Emergency Response Centre

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 0300 UTC15 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 32.4206 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 500.0m

Meteorological Data : ACCESS-G : base time 1200 UTC 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Tue Mar 15 03:31:43 2011

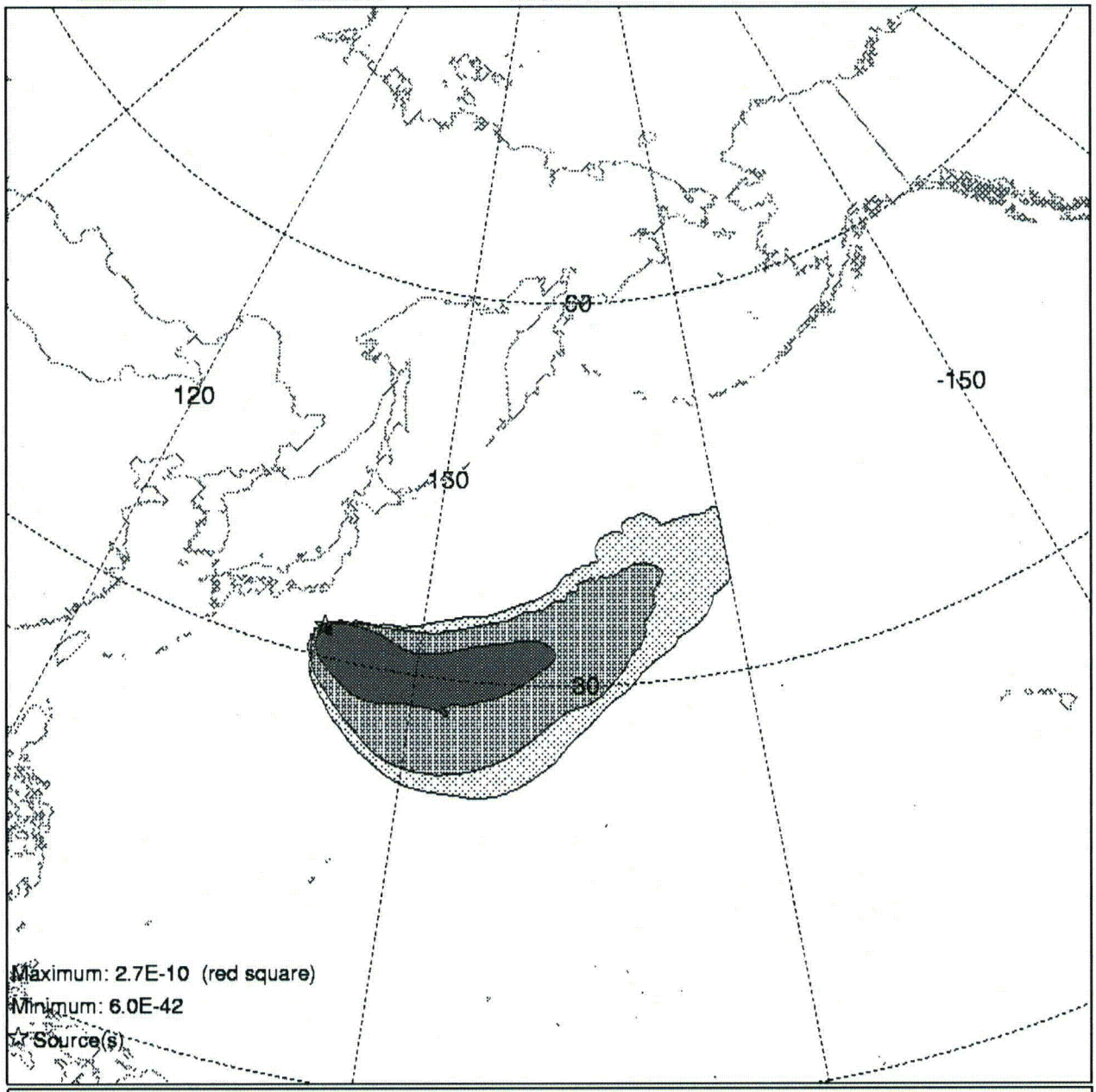
RSMC Melbourne : Environmental Emergency Response Centre

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 0300 UTC15 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 32.4206 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 500.0m

Meteorological Data : ACCESS-G : base time 1200 UTC 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Tue Mar 15 03:31:43 2011

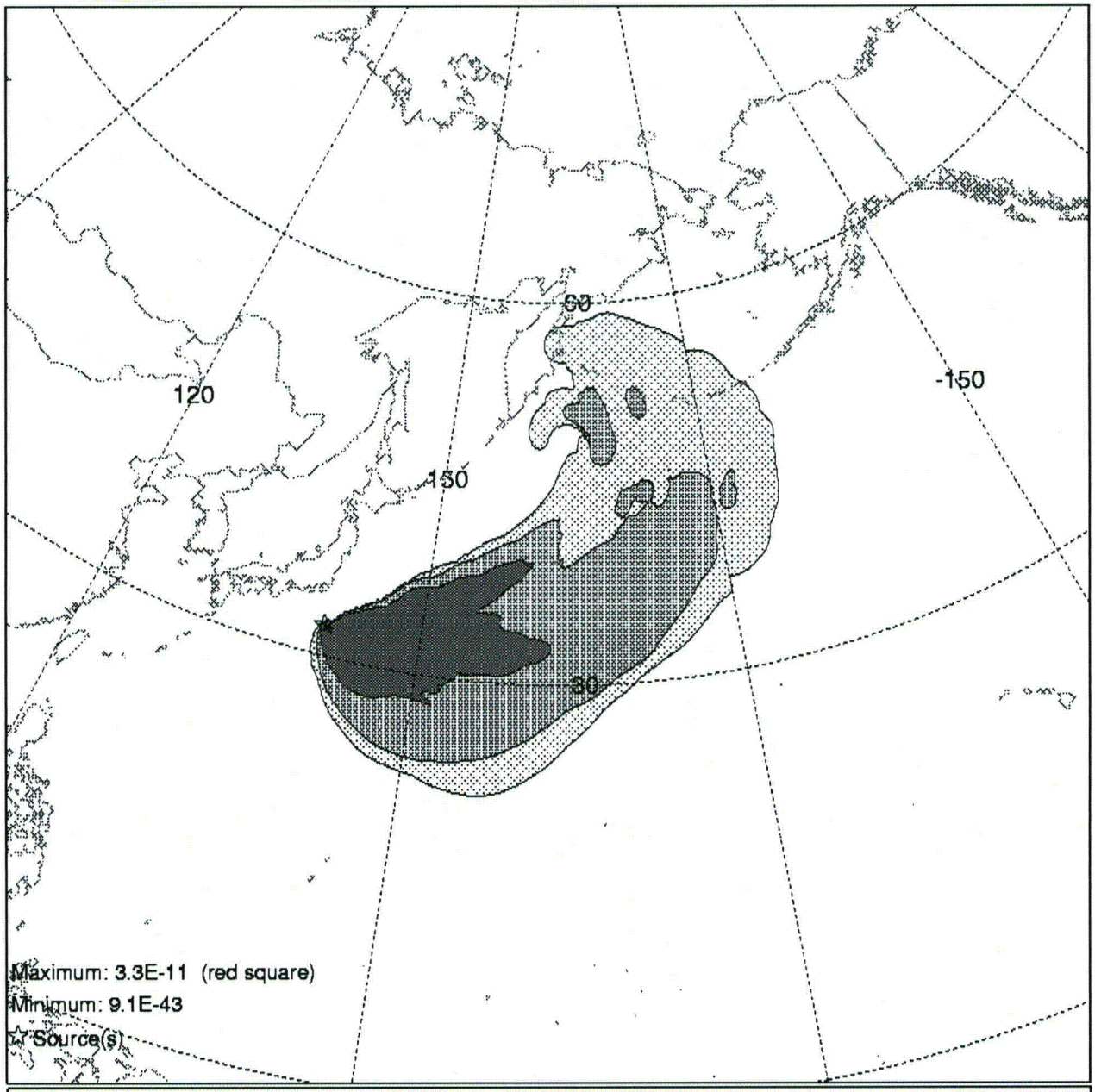
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 15 Mar to 0000 18 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 0300 UTC15 MAR 2011

Source:Fukushima Daiichi : Japan (Lat: 32.4206 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 500.0m

Meteorological Data : ACCESS-G : base time 1200 UTC 14 Mar

Note: "Contours may change from Chart to Chart"

Issued :Tue Mar 15 03:31:43 2011

From: hoo1
To: HOO Hoc
Subject: Fax from Via Fax
Date: Tuesday, March 15, 2011 1:28:17 AM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017709

Notice for: HOO1

Remote ID: Via Fax

Received at: 03/15/2011 01:26

Pages: 6

Routed by:

Routed at: 03/15/2011 01:26

EE/22

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 Tue Mar 15 04:38 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

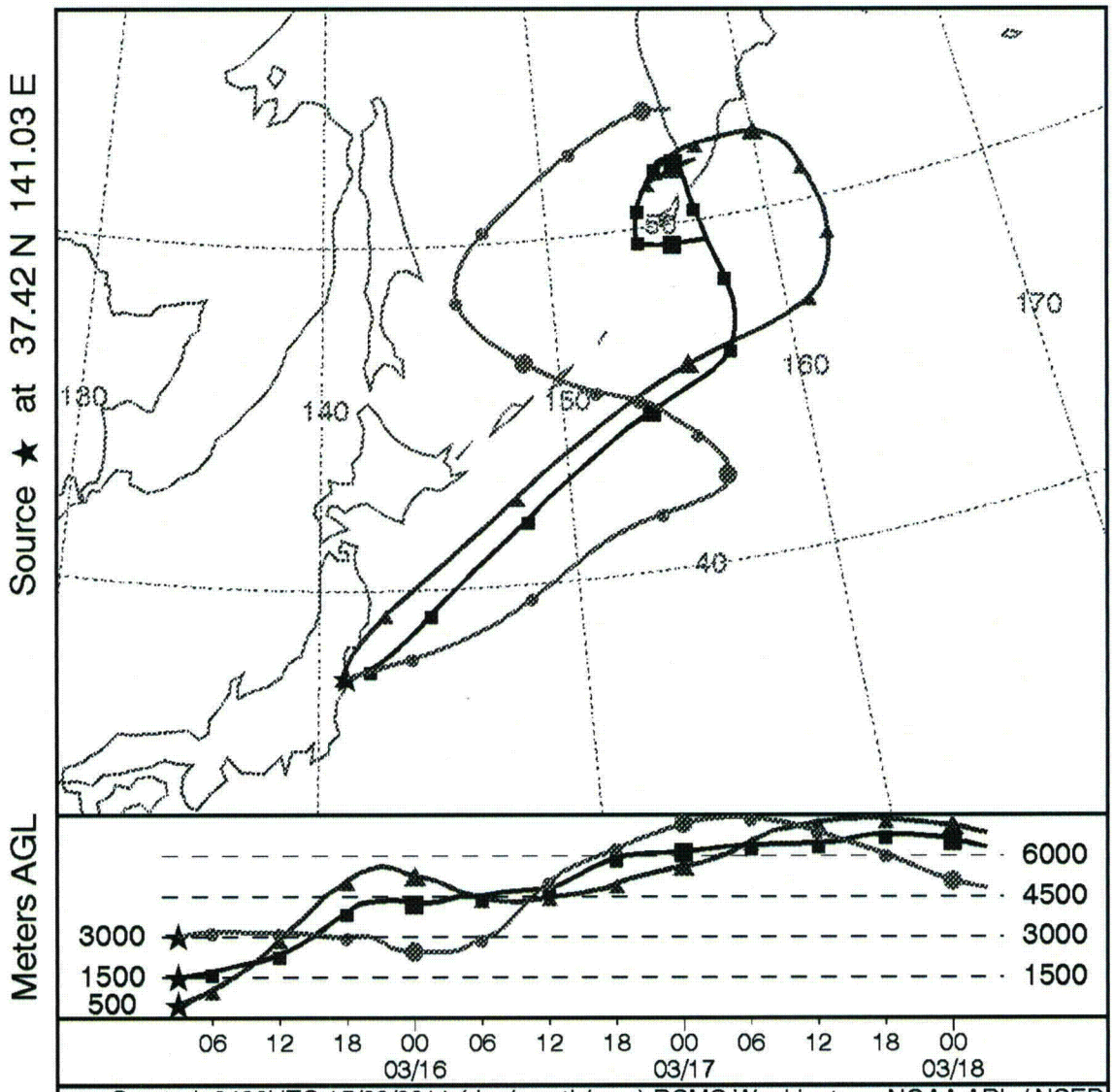
Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.0329
Release Start (YYYY MM DD HH MM):2011 03 15 03 00
Meteorology: 0000 UTC 15 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:C137 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 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 03 UTC 15 Mar 11

00 UTC 15 Mar GFSG Forecast Initialization



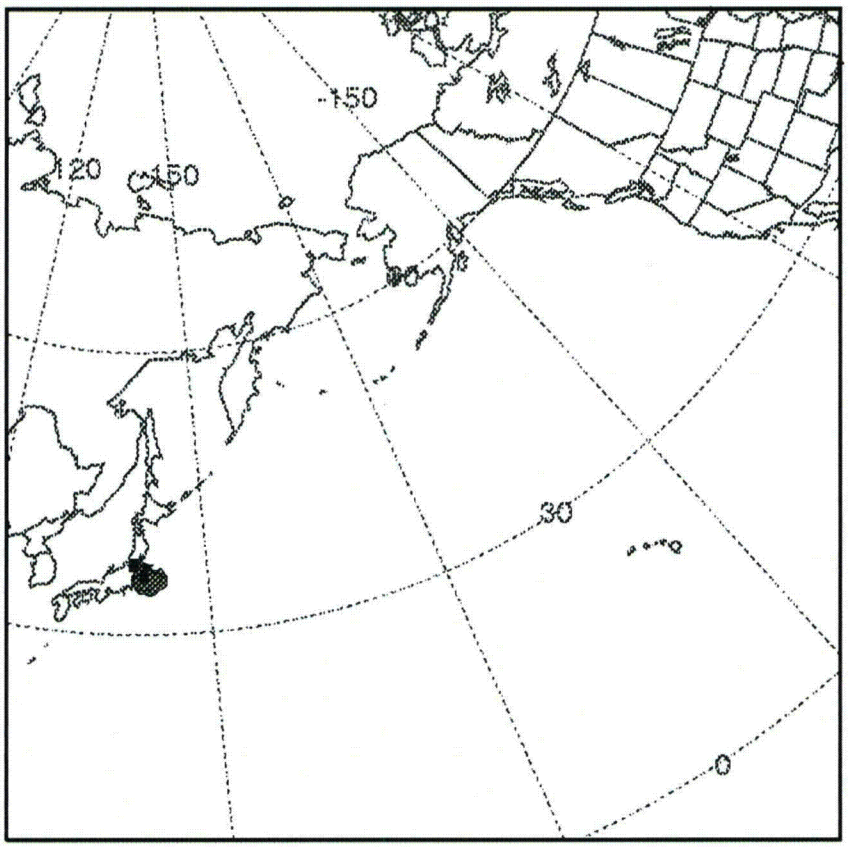
Created: 0438UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.0329 height:500.0 1500.0 3000.0

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 15 Mar to 0000 16 Mar 11 (UTC)
C137 Release started at 0300 15 Mar 11 (UTC)

Source☆ 37.420 N 141.033 E 20 m to 500 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: 1.3E-10
(identified as a square)
Minimum: 2.0E-26

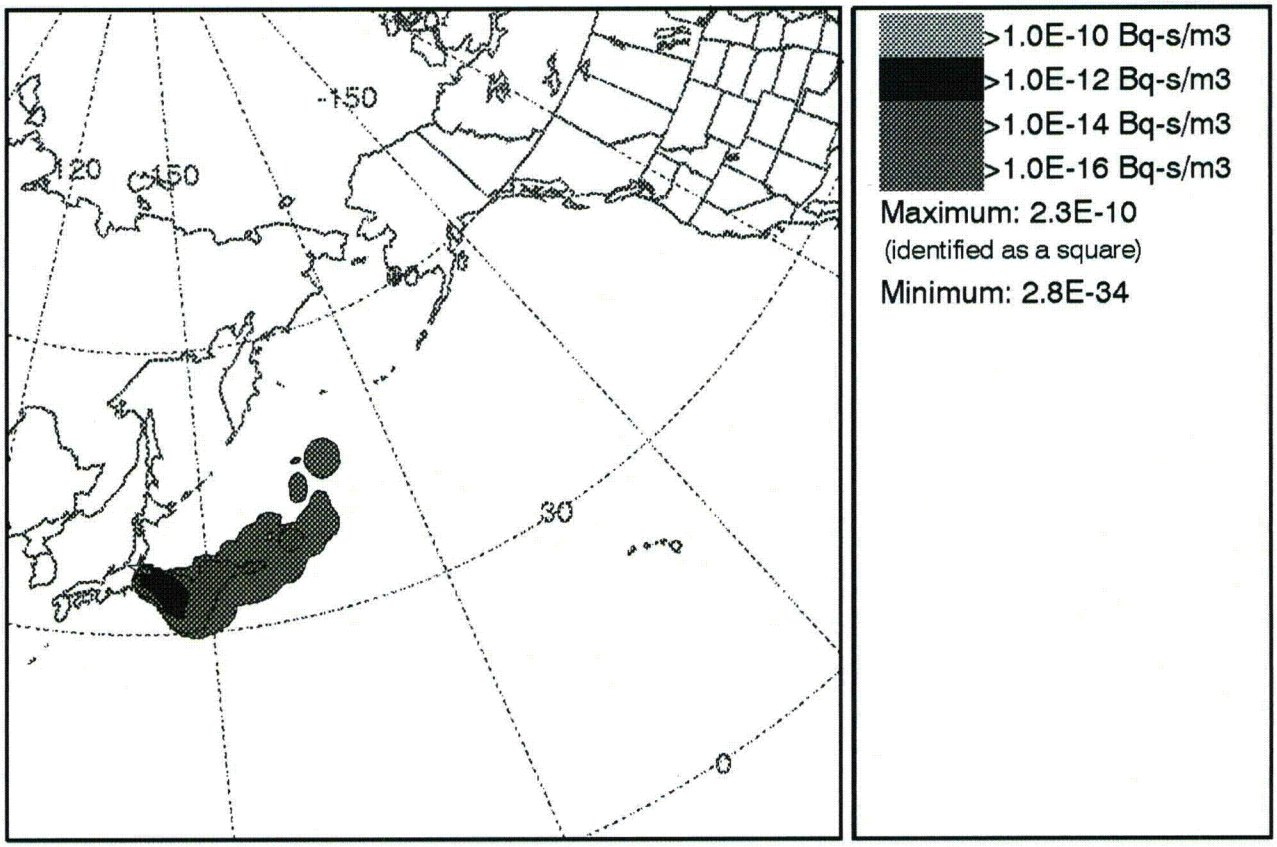
0000 15 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0438UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.0329 hgt:20 to 500 m
Release ID:C137 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 0000 UTC 15 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 16 Mar to 0000 17 Mar 11 (UTC)
C137 Release started at 0300 15 Mar 11 (UTC)

Source☆ 37.420 N 141.033 E 20 m to 500 m

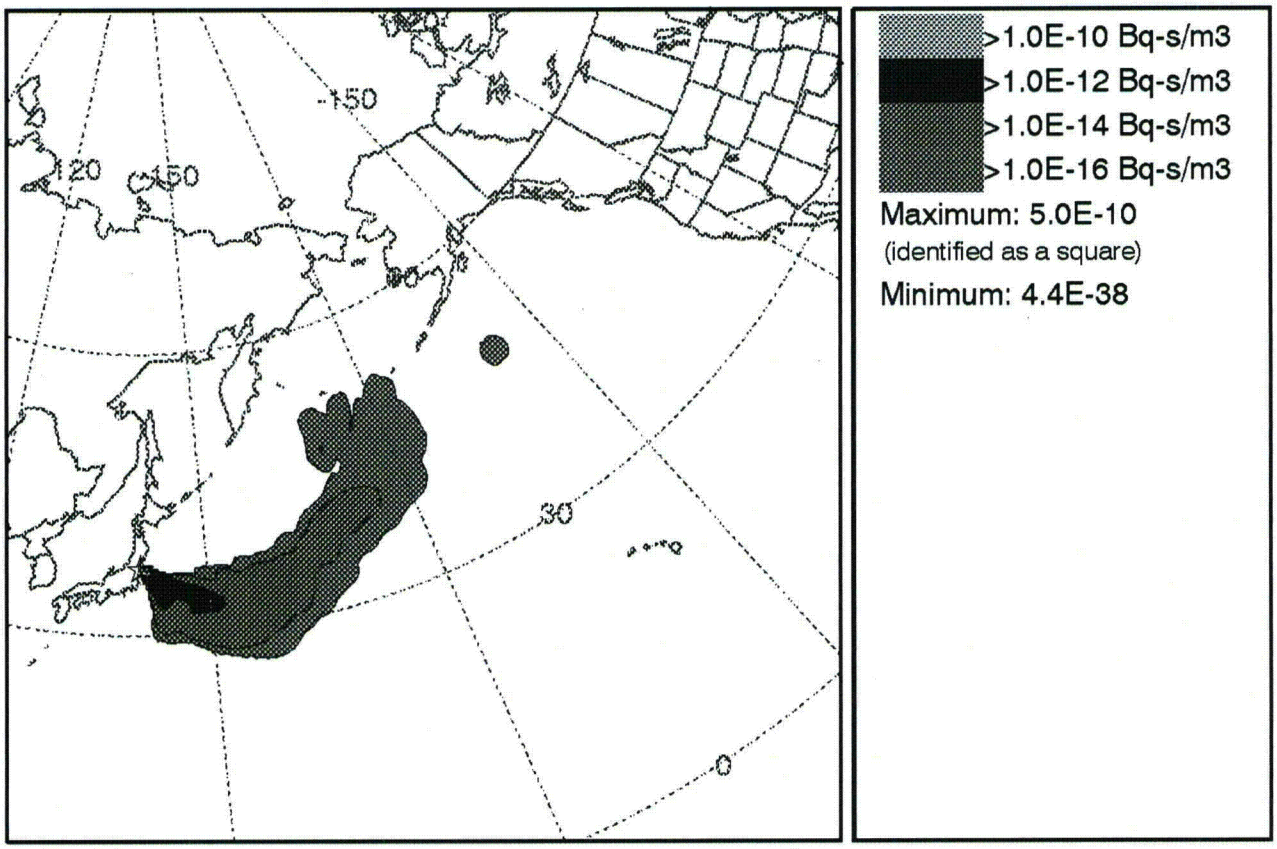


0000 15 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0438UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.0329 hgt:20 to 500 m
Release ID:C137 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 0000 UTC 15 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 0300 15 Mar 11 (UTC)

Source☆ 37.420 N 141.033 E 20 m to 500 m



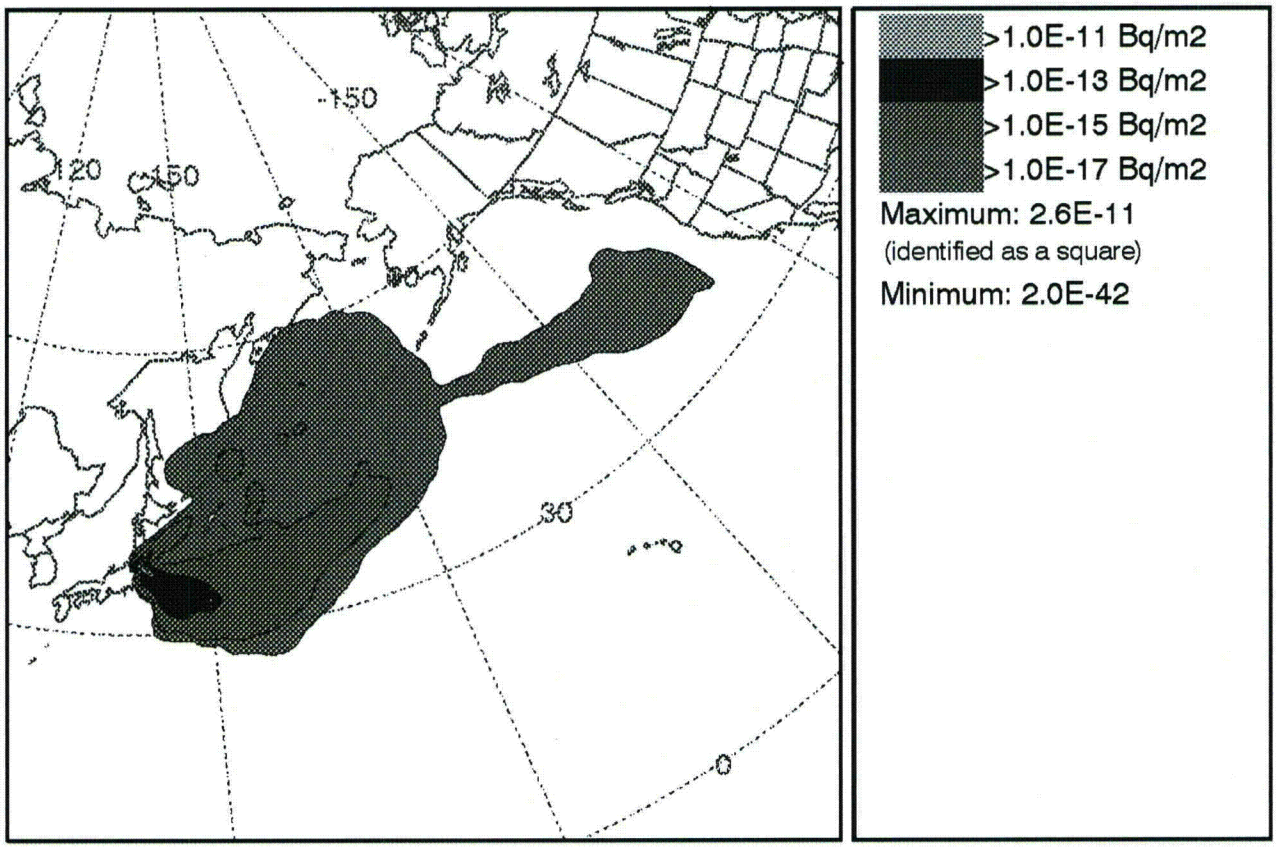
0000 15 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0438UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.0329 hgt:20 to 500 m
Release ID:C137 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 0000 UTC 15 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 15 Mar to 0000 18 Mar 11 (UTC)
C137 Release started at 0300 15 Mar 11 (UTC)

Source☆ 37.420 N 141.033 E 20 m to 500 m



0000 15 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0438UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.0329 hgt:20 to 500 m
Release ID:C137 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 0000 UTC 15 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: IAEA NOTIFIED EMERGENCY

From: hoo1
To: HOO Hoc
Subject: Fax from Via Fax
Date: Tuesday, March 15, 2011 2:12:26 AM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017710

Notice for: HOO1

Remote ID: Via Fax

Received at: 03/15/2011 02:10

Pages: 6

Routed by:

Routed at: 03/15/2011 02:10

EE/23

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 Tue Mar 15 05:22 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

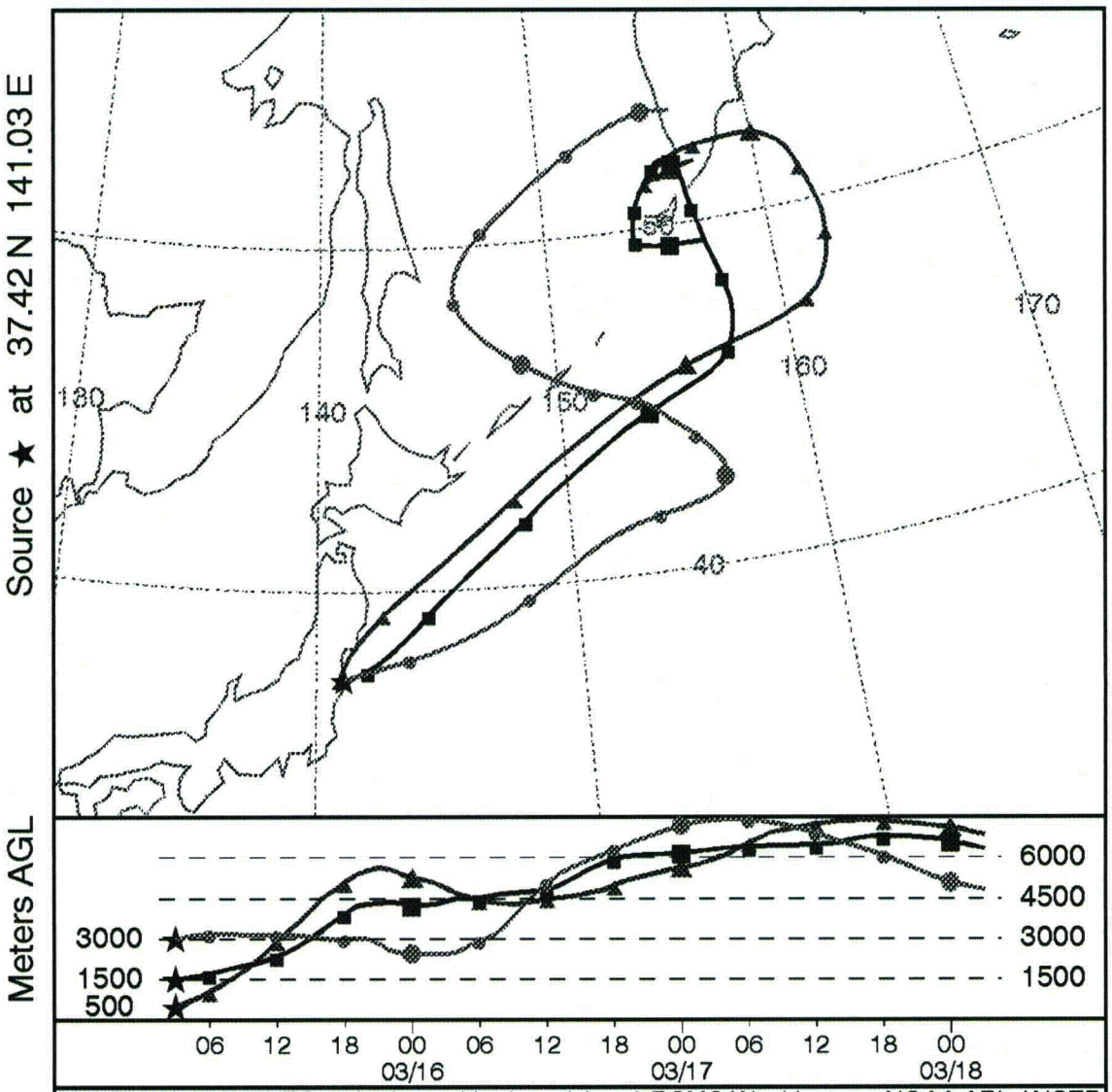
Response: IAEA NOTIFIED EMERGENCY

Location:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.0329
Release Start (YYYY MM DD HH MM):2011 03 15 03 00
Meteorology: 0000 UTC 15 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 500 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
Note: RESULTS BASED ON DEFAULT INITIAL VALUES

NOAA HYSPLIT MODEL

Forward trajectories starting at 03 UTC 15 Mar 11

00 UTC 15 Mar GFSG Forecast Initialization

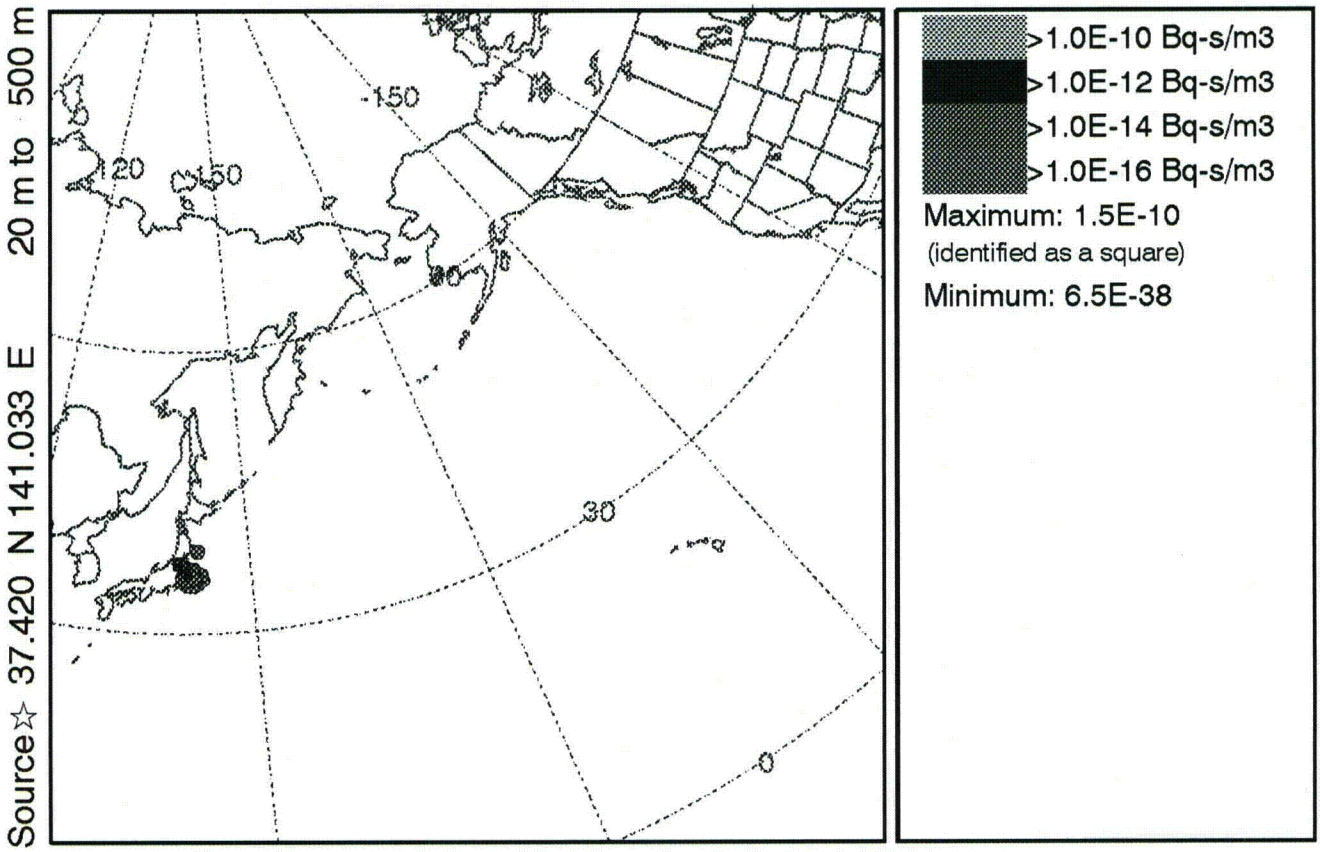


Created: 0522UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.0329 height:500.0 1500.0 3000.0

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 15 Mar to 0000 16 Mar 11 (UTC)
I131 Release started at 0300 15 Mar 11 (UTC)



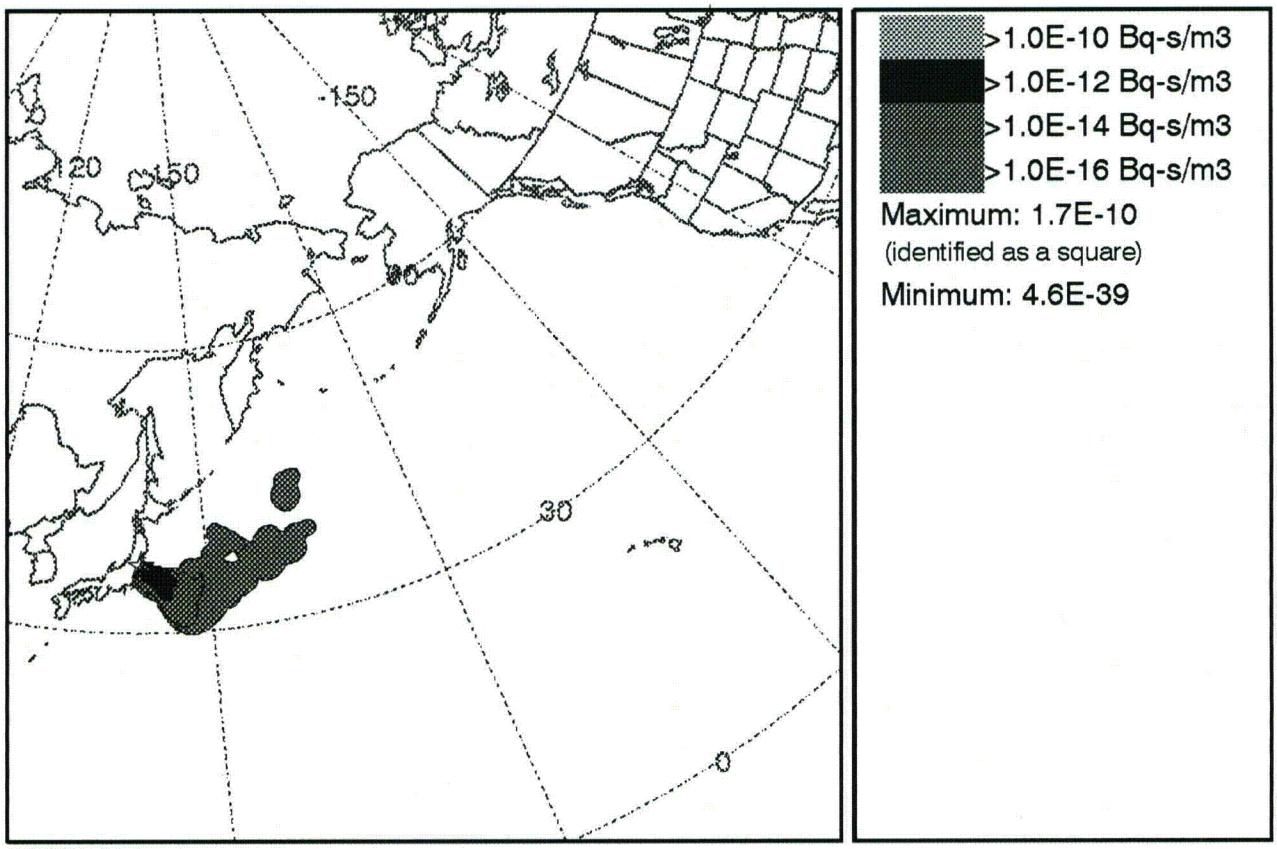
0000 15 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0522UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.0329 hgt:20 to 500 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0000 UTC 15 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 16 Mar to 0000 17 Mar 11 (UTC)
I131 Release started at 0300 15 Mar 11 (UTC)

Source☆ 37.420 N 141.033 E 20 m to 500 m



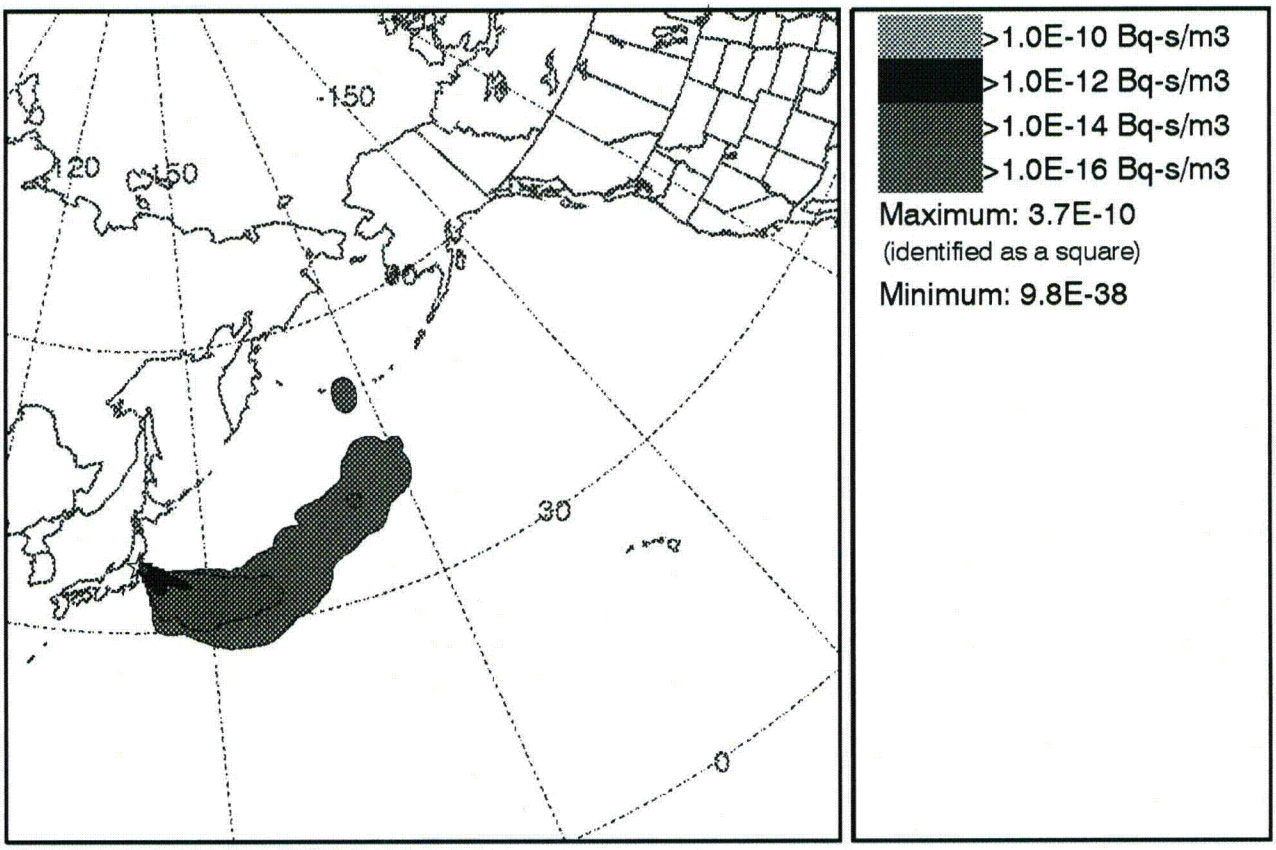
0000 15 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0522UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.0329 hgt:20 to 500 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0000 UTC 15 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)
I131 Release started at 0300 15 Mar 11 (UTC)

Source☆ 37.420 N 141.033 E 20 m to 500 m

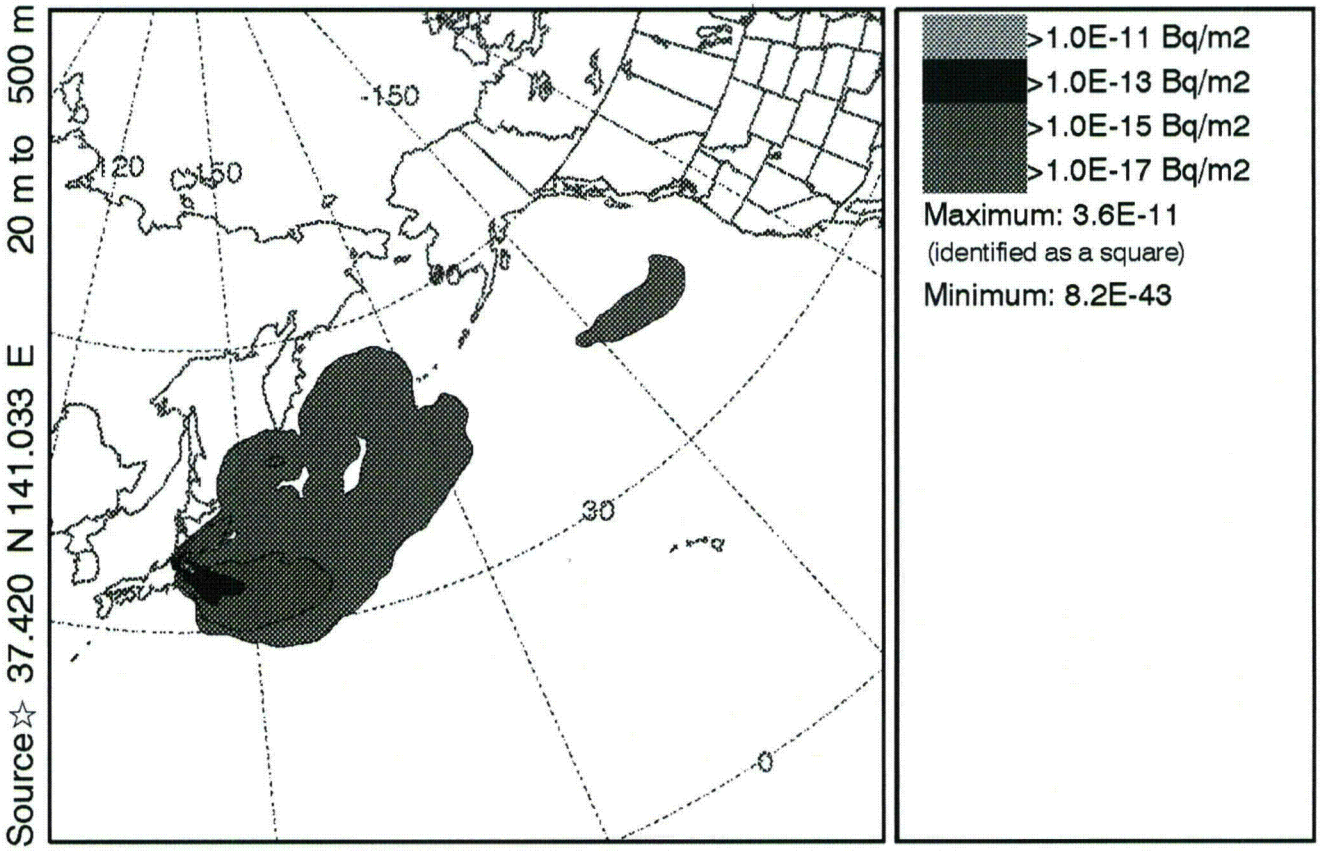


0000 15 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0522UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.0329 hgt:20 to 500 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0000 UTC 15 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 15 Mar to 0000 18 Mar 11 (UTC)
I131 Release started at 0300 15 Mar 11 (UTC)



0000 15 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0522UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.0329 hgt:20 to 500 m
Release ID:I131 Rate: .0138 Bq/hr Duration: 72 hr Particles: 5000
Distribution: Uniform between 20 and 500 m AGL
Dry Deposition Rate:0.02 m/s Wet Removal (below/in-cloud):1.00E-04/3.20E+05
Meteorology: 0000 UTC 15 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: IAEA NOTIFIED EMERGENCY

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 Tue Mar 15 11:11 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

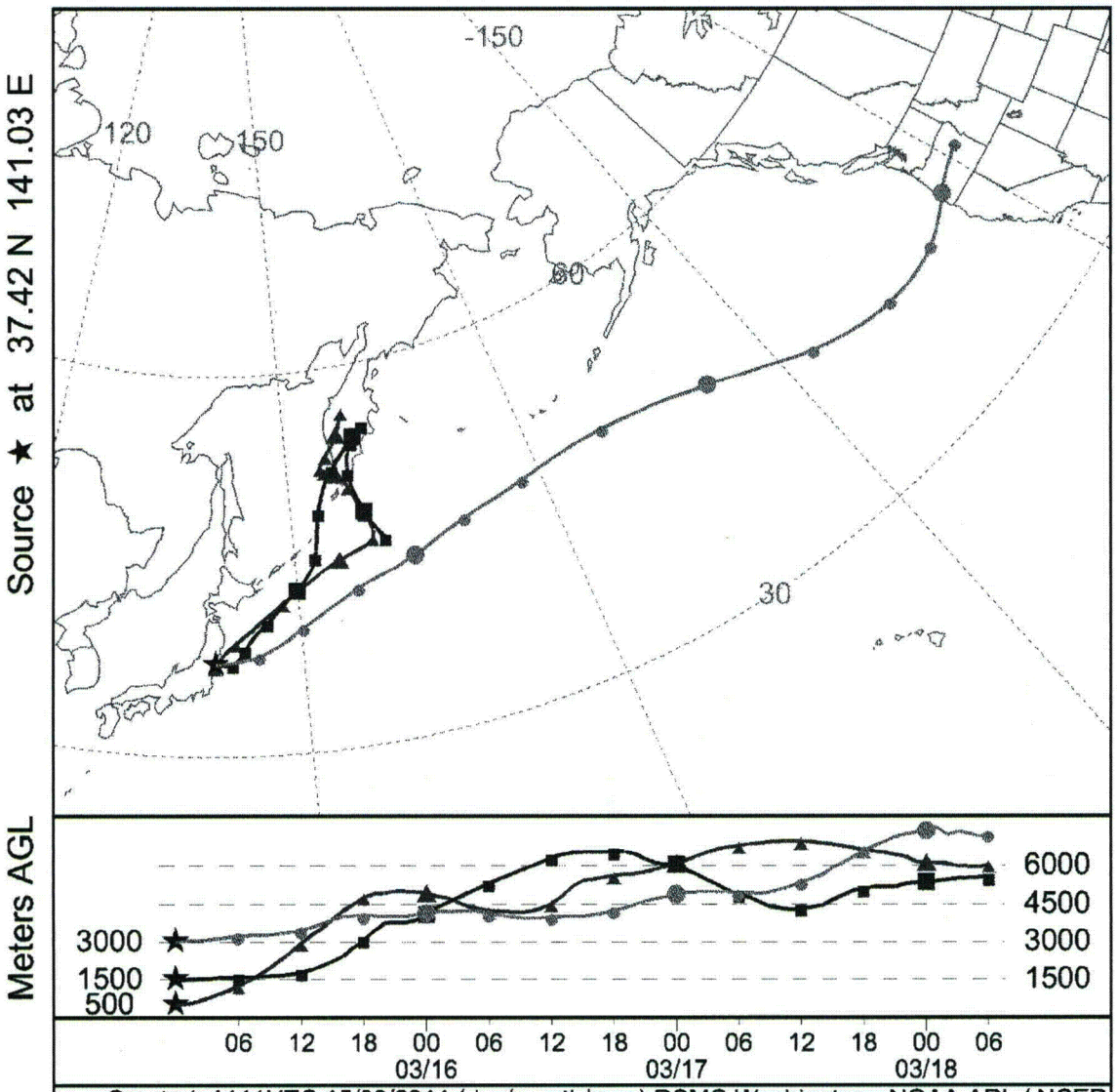
Location:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329
Release Start (YYYY MM DD HH MM):2011 03 15 00 00
Meteorology: GDAS and 0600 UTC 15 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:C137 Rate: .3333 Bq/hr Duration: 3.0 hr Particles: 500
Distribution: Uniform between 20 and 40 m 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

EE/24

NOAA HYSPLIT MODEL

Forward trajectories starting at 00 UTC 15 Mar 11

06 UTC 15 Mar GDAS Forecast Initialization

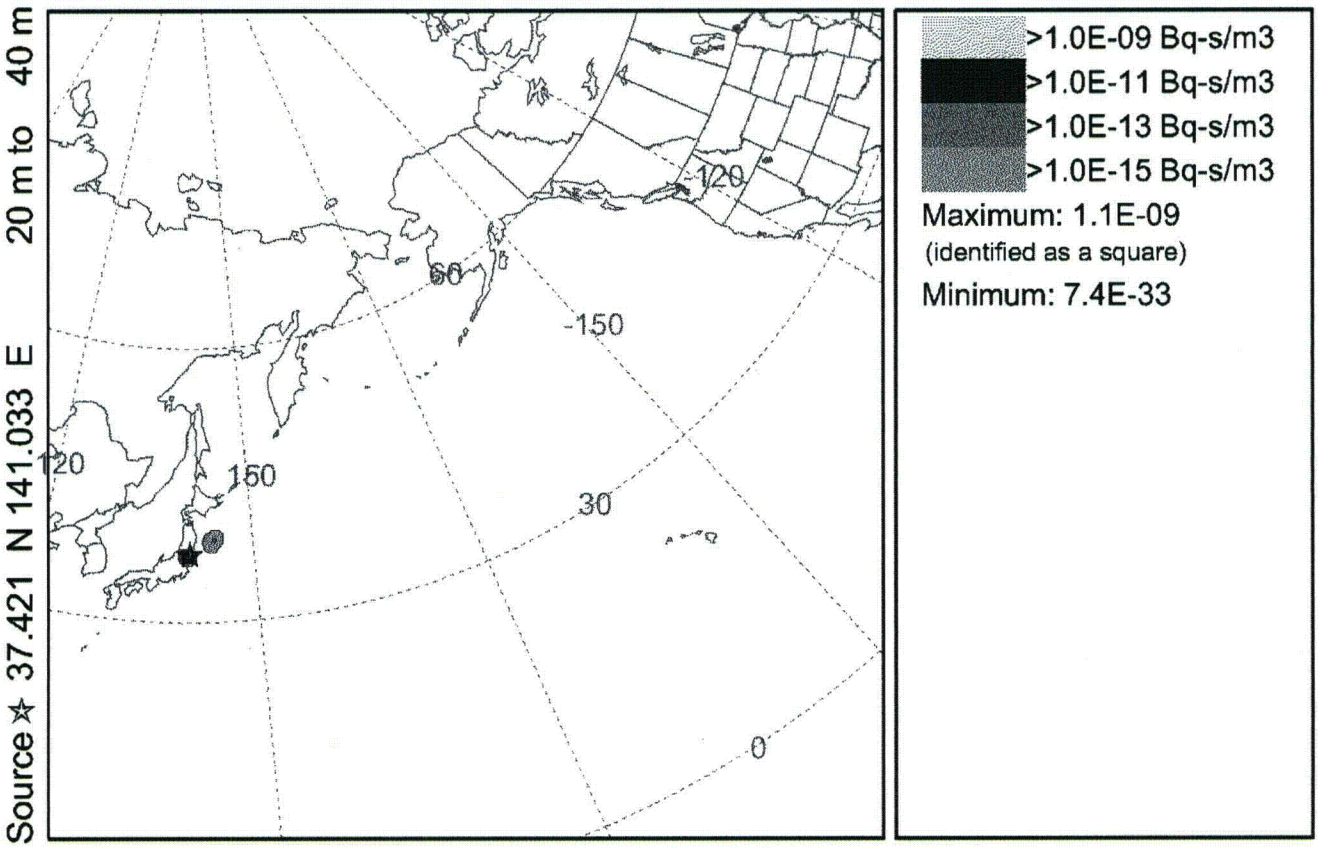


Created: 1111UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 height:500.0 1500.0 3000

Trajectory Direction:forward Duration:78 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 15 Mar to 0000 16 Mar 11 (UTC)
C137 Release started at 0000 15 Mar 11 (UTC)

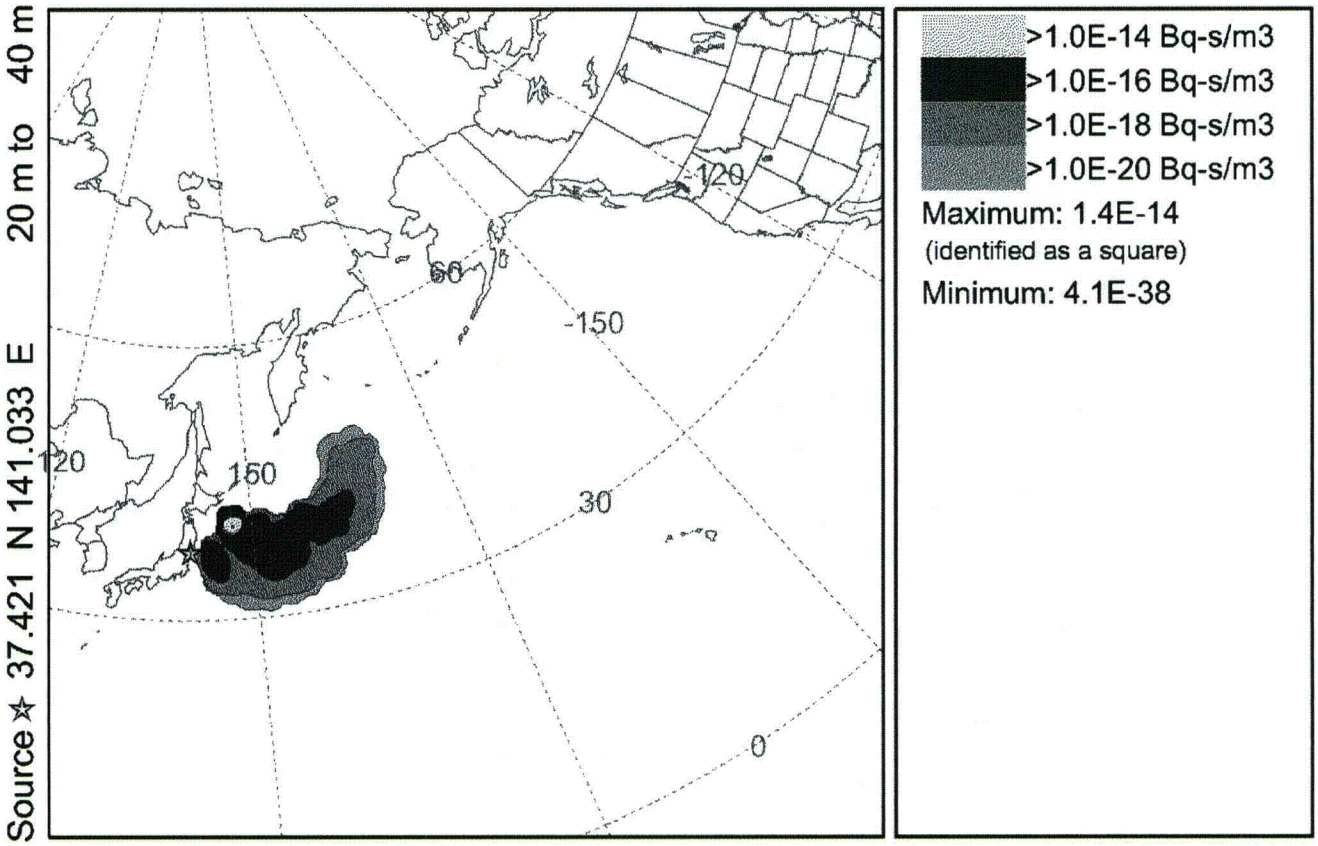


0600 15 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1111UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 40 m
Release ID:C137 Rate: .3333 Bq/hr Duration: 3.0 hr Particles: 500
Distribution: Uniform between 20 and 40 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 15 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 16 Mar to 0000 17 Mar 11 (UTC)
C137 Release started at 0000 15 Mar 11 (UTC)

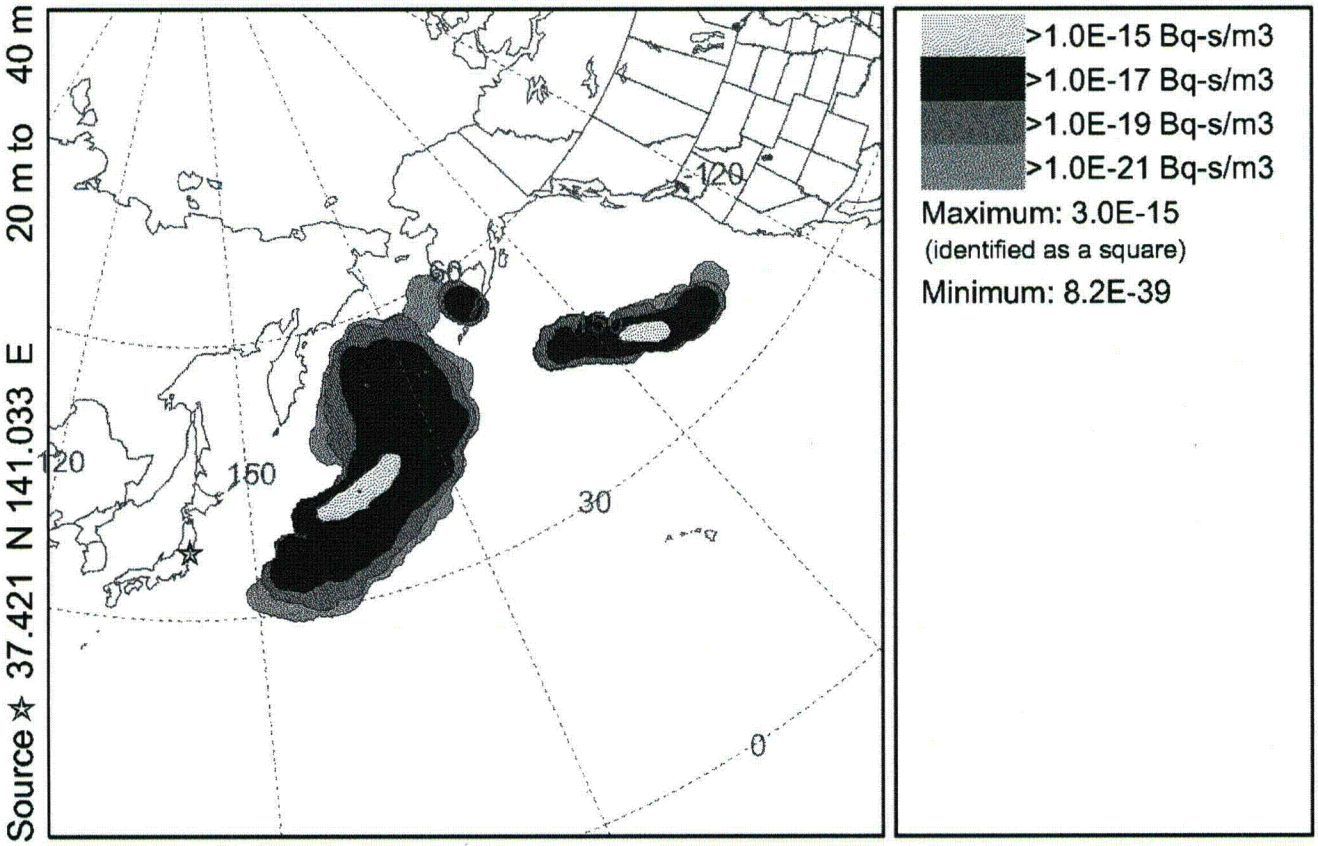


0600 15 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1111UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 40 m
Release ID:C137 Rate: .3333 Bq/hr Duration: 3.0 hr Particles: 500
Distribution: Uniform between 20 and 40 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 15 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 0000 15 Mar 11 (UTC)

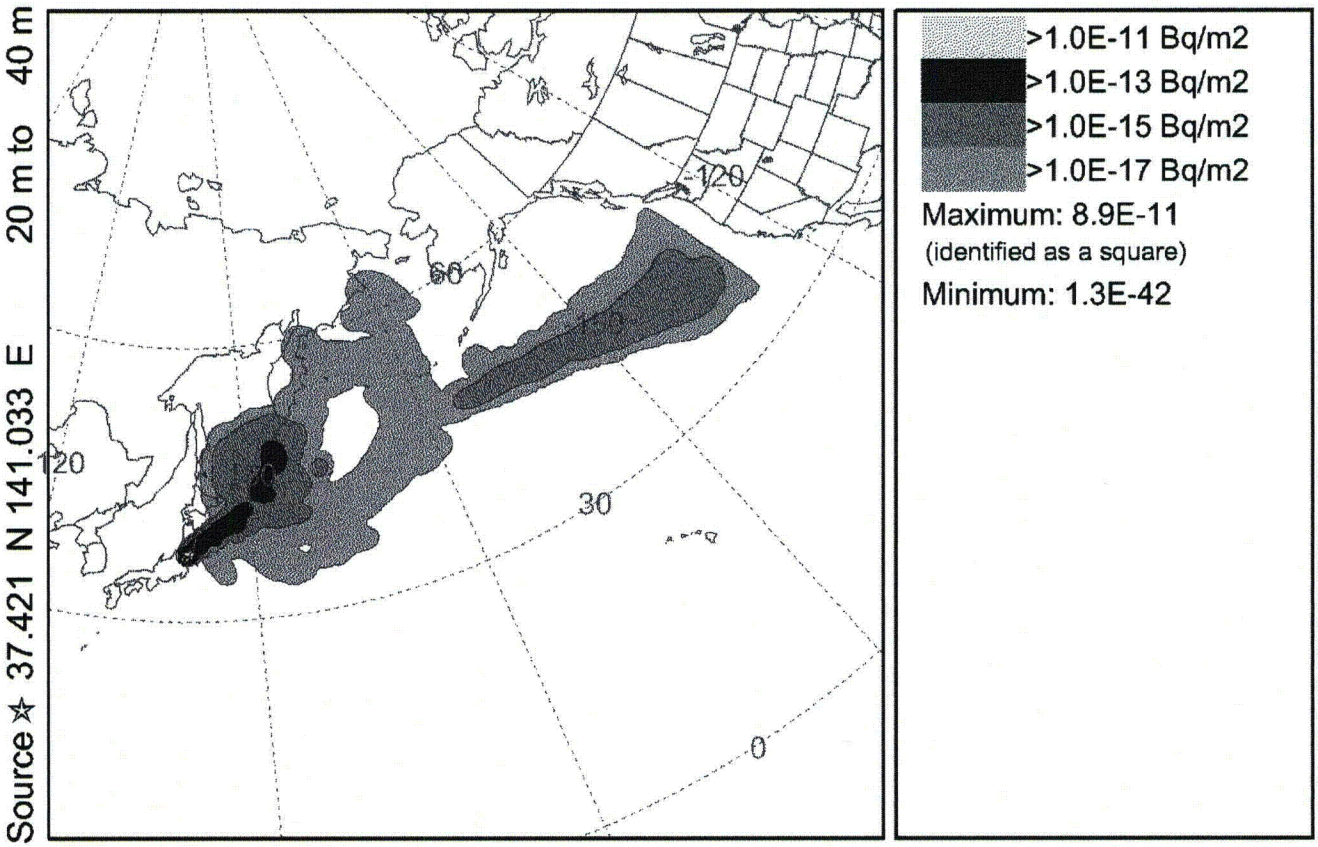


0600 15 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1111UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 40 m
Release ID:C137 Rate: .3333 Bq/hr Duration: 3.0 hr Particles: 500
Distribution: Uniform between 20 and 40 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 15 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 15 Mar to 0000 18 Mar 11 (UTC)
C137 Release started at 0000 15 Mar 11 (UTC)



0600 15 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1111UTC 15/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 40 m
Release ID:C137 Rate: .3333 Bq/hr Duration: 3.0 hr Particles: 500
Distribution: Uniform between 20 and 40 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 15 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: IAEA NOTIFIED EMERGENCY

From: hoo1
To: HOO Hoc
Subject: Fax from Via Fax
Date: Wednesday, March 16, 2011 7:17:10 AM
Attachments: File1.PDF

RECEIVE NOTIFICATION FOR JOB 00017721

Notice for: HOO1

Remote ID: Via Fax

Received at: 03/16/2011 07:15

Pages: 6

Routed by:

Routed at: 03/16/2011 07:15

EE/25

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 Wed Mar 16 10:36 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.

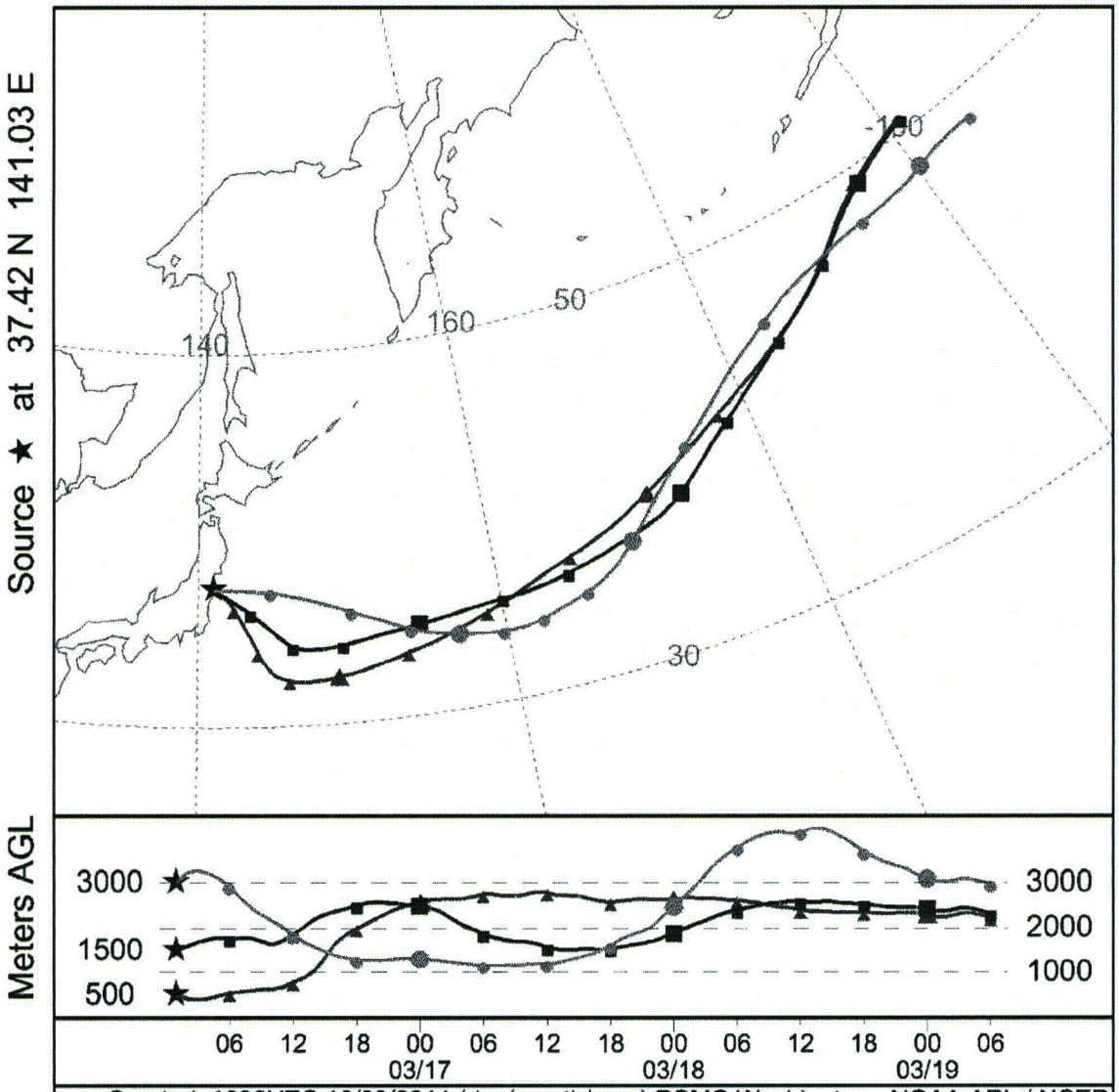
Source term and dispersion model details

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 01 11
Meteorology: GDAS and 0600 UTC 16 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:C137 Rate: .1000 Bq/hr Duration: 10 hr Particles: 500
Distribution: Uniform between 20 and 300 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 01 UTC 16 Mar 11
06 UTC 16 Mar GDAS Forecast Initialization



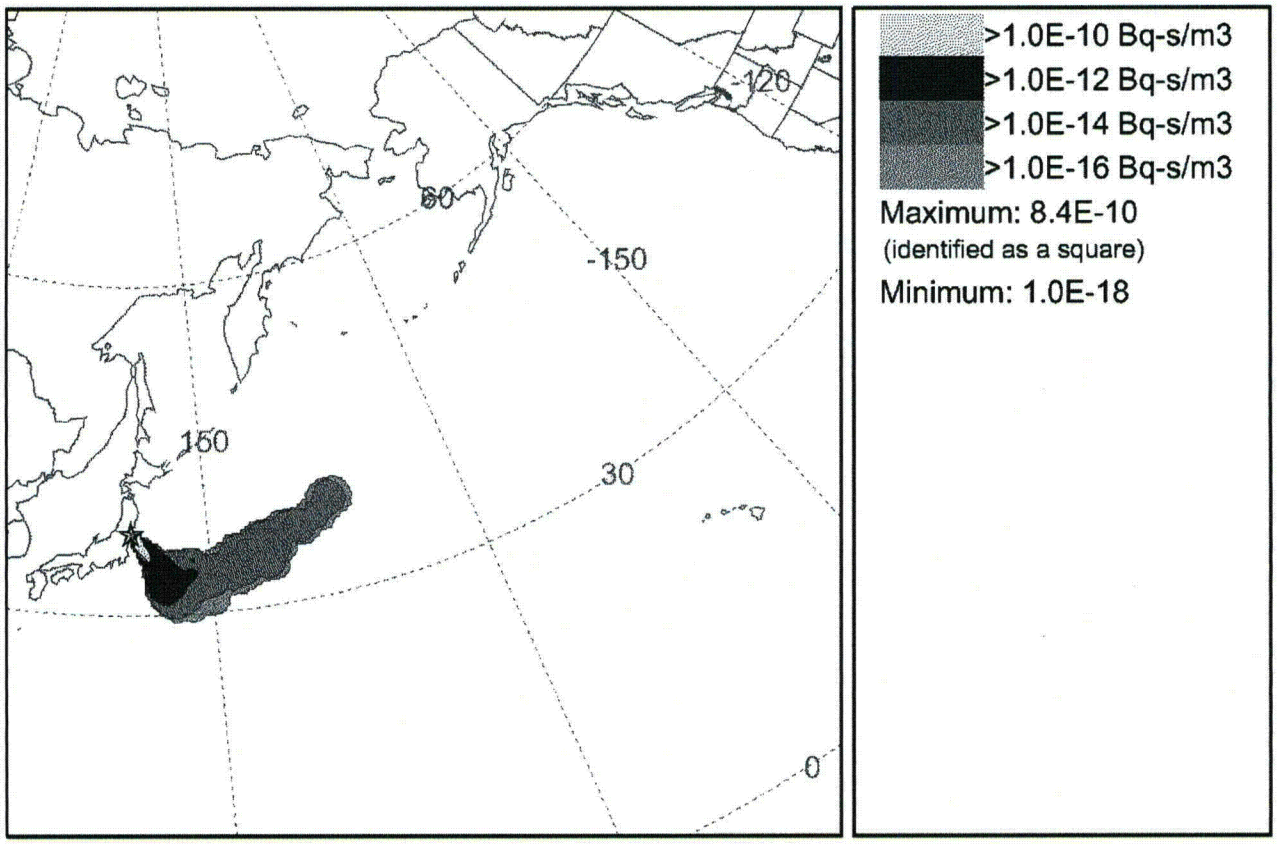
Created: 1036UTC 16/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source: FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 height:500.0 1500.0 3000

Trajectory Direction:forward Duration:77 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 0111 16 Mar 11 (UTC)

Source ✯ 37.421 N 141.033 E 20 m to 300 m



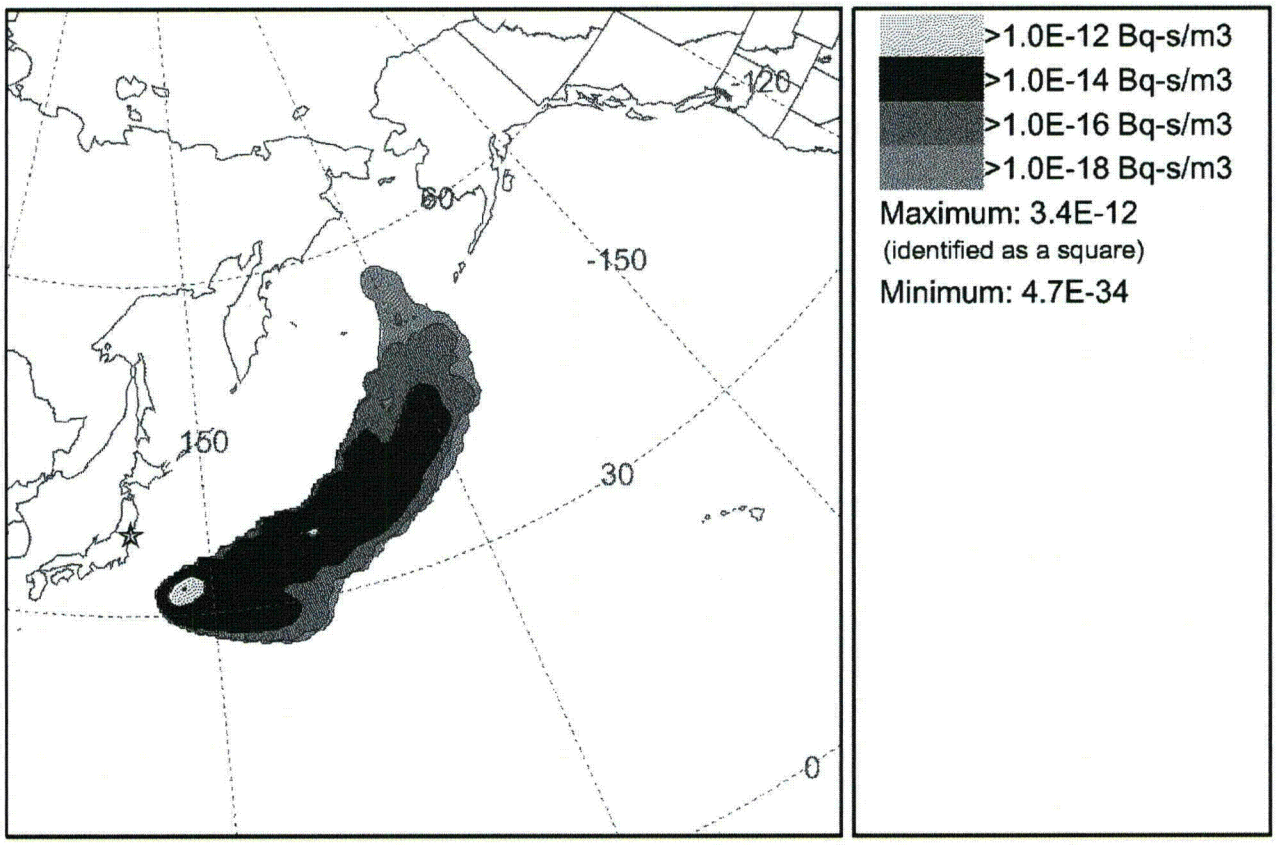
0600 16 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1036UTC 16/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 300 m
Release ID:C137 Rate: .1000 Bq/hr Duration: 10 hr Particles: 500
Distribution: Uniform between 20 and 300 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 16 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 0111 16 Mar 11 (UTC)

Source ✯ 37.421 N 141.033 E 20 m to 300 m

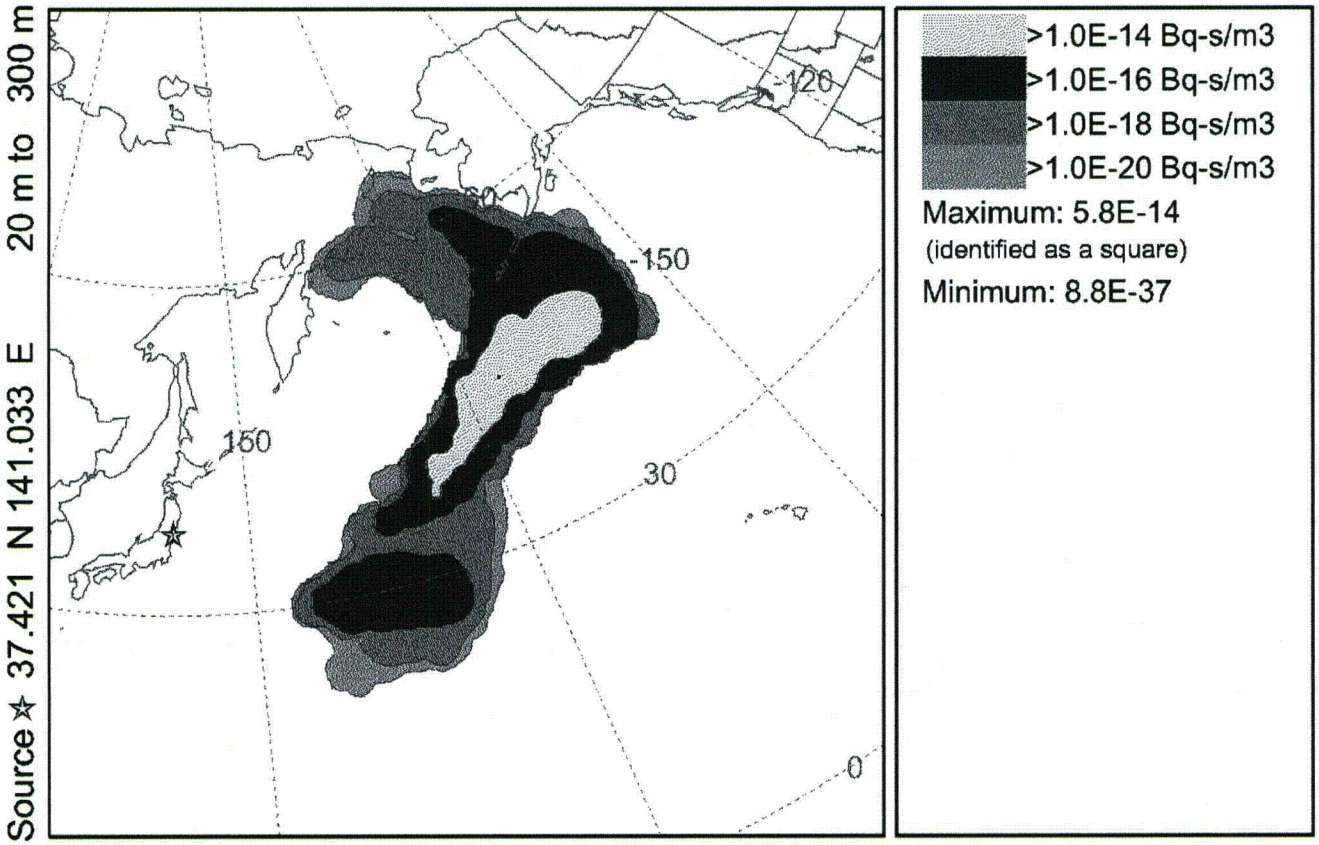


0600 16 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1036UTC 16/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 300 m
Release ID:C137 Rate: .1000 Bq/hr Duration: 10 hr Particles: 500
Distribution: Uniform between 20 and 300 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 16 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 0111 16 Mar 11 (UTC)

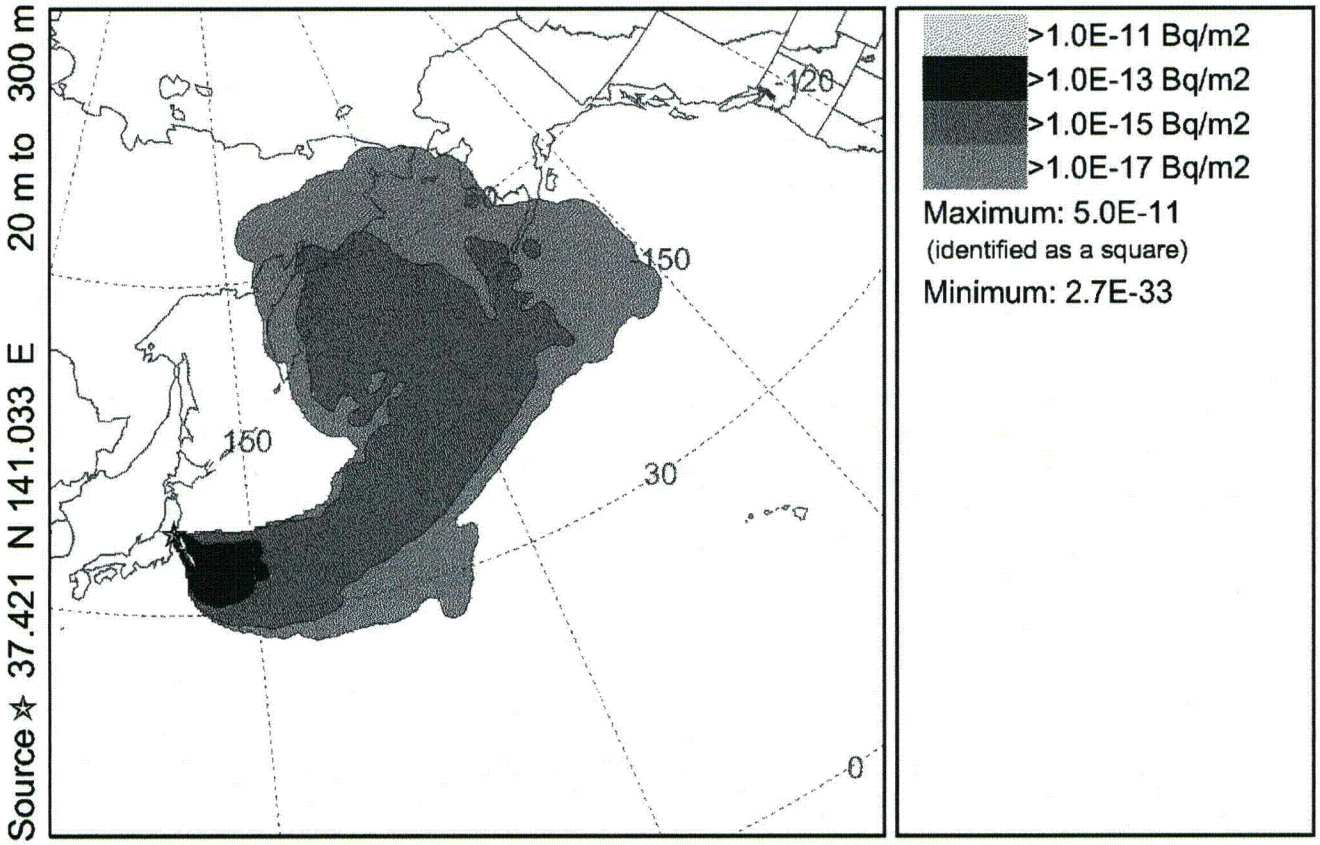


0600 16 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1036UTC 16/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 300 m
Release ID:C137 Rate: .1000 Bq/hr Duration: 10 hr Particles: 500
Distribution: Uniform between 20 and 300 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 16 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 19 Mar 11 (UTC)
C137 Release started at 0111 16 Mar 11 (UTC)



0600 16 Mar 11 GDAS FORECAST INITIALIZATION

Created: 1036UTC 16/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.4206 lon:141.0329 hgt:20 to 300 m
Release ID:C137 Rate: .1000 Bq/hr Duration: 10 hr Particles: 500
Distribution: Uniform between 20 and 300 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: GDAS and 0600 UTC 16 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: IAEA NOTIFIED EMERGENCY