



Network Manager
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Space Weather in Context of the Aviation Crisis Management in Europe

European Aviation Crisis Coordination Cell (EACCC)

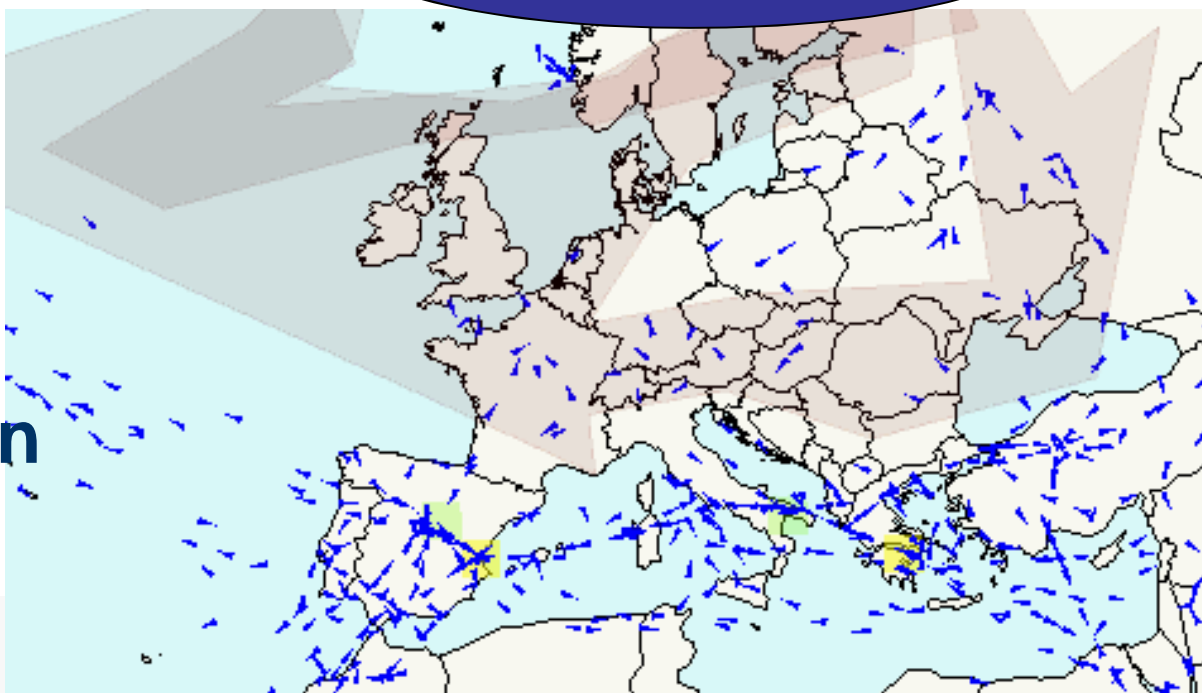
Žarko Sivčev
Advisor to COO

Normal traffic density in Europe in April

16.00 UTC

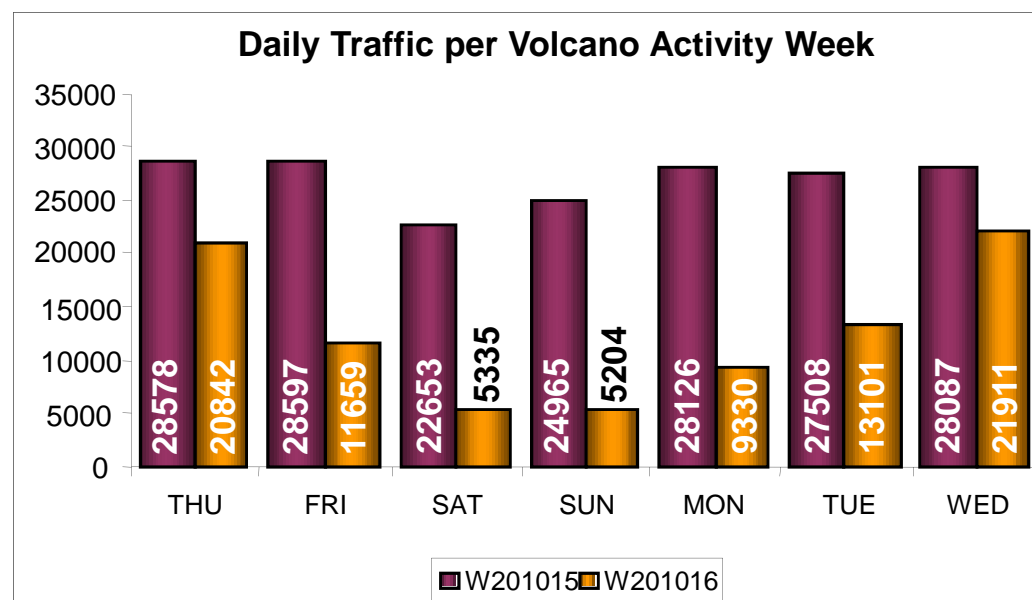
What
happened?

Traffic in Europe on
18 April 2010



Impact on the European traffic

15 April – 21 April 2010



- 54% of flights not operated
- More than 100,000 flights
- 1% of annual traffic

European Aviation Crisis Coordination Cell (EACCC)

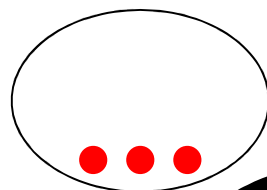
EACCC

Coordinate management of response to the network crisis affecting aviation in Europe

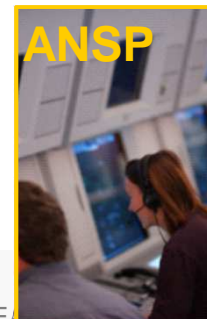
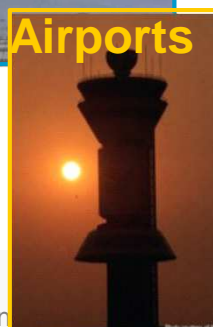
Activated when circumstances beyond normal environment of ops are evident



Members



State focal points



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European Aviation

ment - E

weather

Workshop

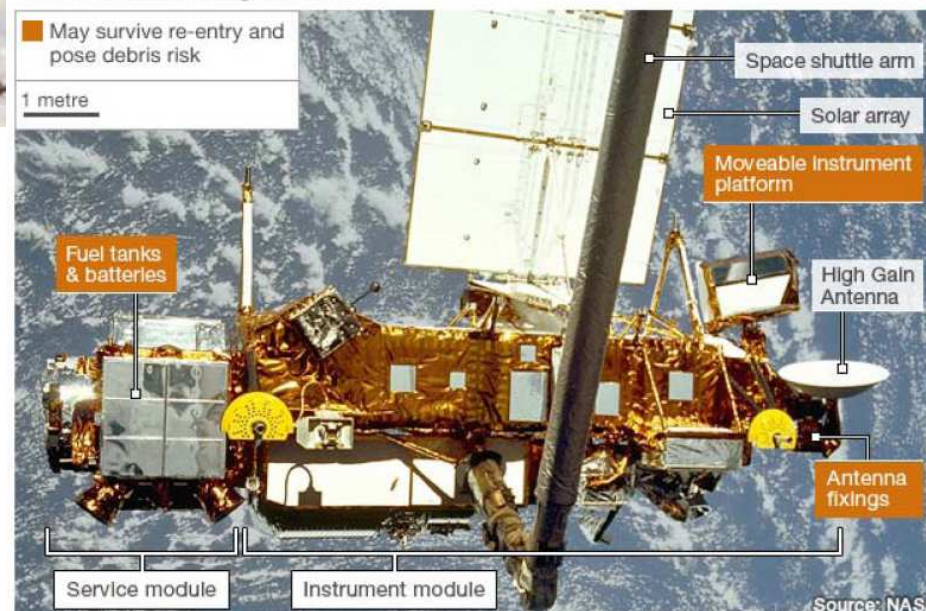
EACCC on Alert



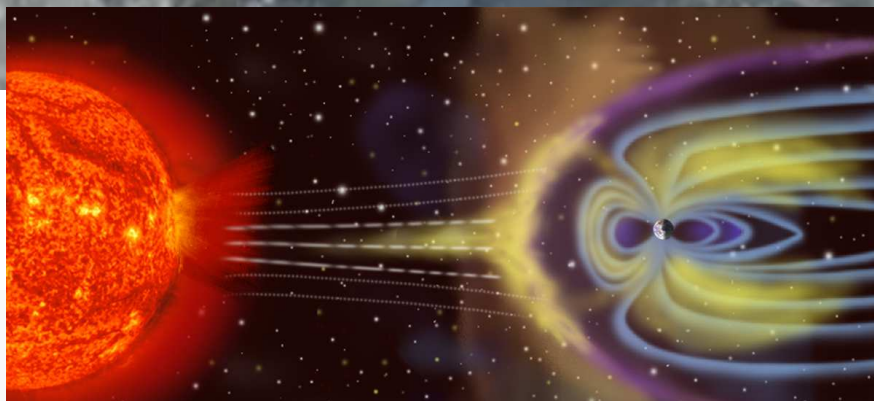
UARS satellite falling to Earth

May survive re-entry and pose debris risk

1 metre



Source: NASA



EACCC activation - Grimsvötn eruption, 2011

- 21 May – 29 May - ash plume up to 20km
- 22 May - EACCC activated
- Impact: Iceland, Scandinavia, UK, Germany
- ~900 flights cancelled

Possible threats



- Volcanic ash dispersion
- Nuclear emissions dispersion
- War
- Hazardous chemicals dispersion
- Fire
- Security threats (terrorism)
- Airborne spread of diseases/Pandemic
- Earthquake
- Flooding
- Major failure of a pan-European function
- Industrial action or unavailability of a major or several ANSPs
- Massive cyber attacks
- Heavy meteorological conditions
- Shortage of fuel in Europe
- Threat from space (e.g. satellite, space weather, etc.)



Key issues!

Early warning ?

Event tracking ?

What if something happens tomorrow ?



Concrete actions - awareness

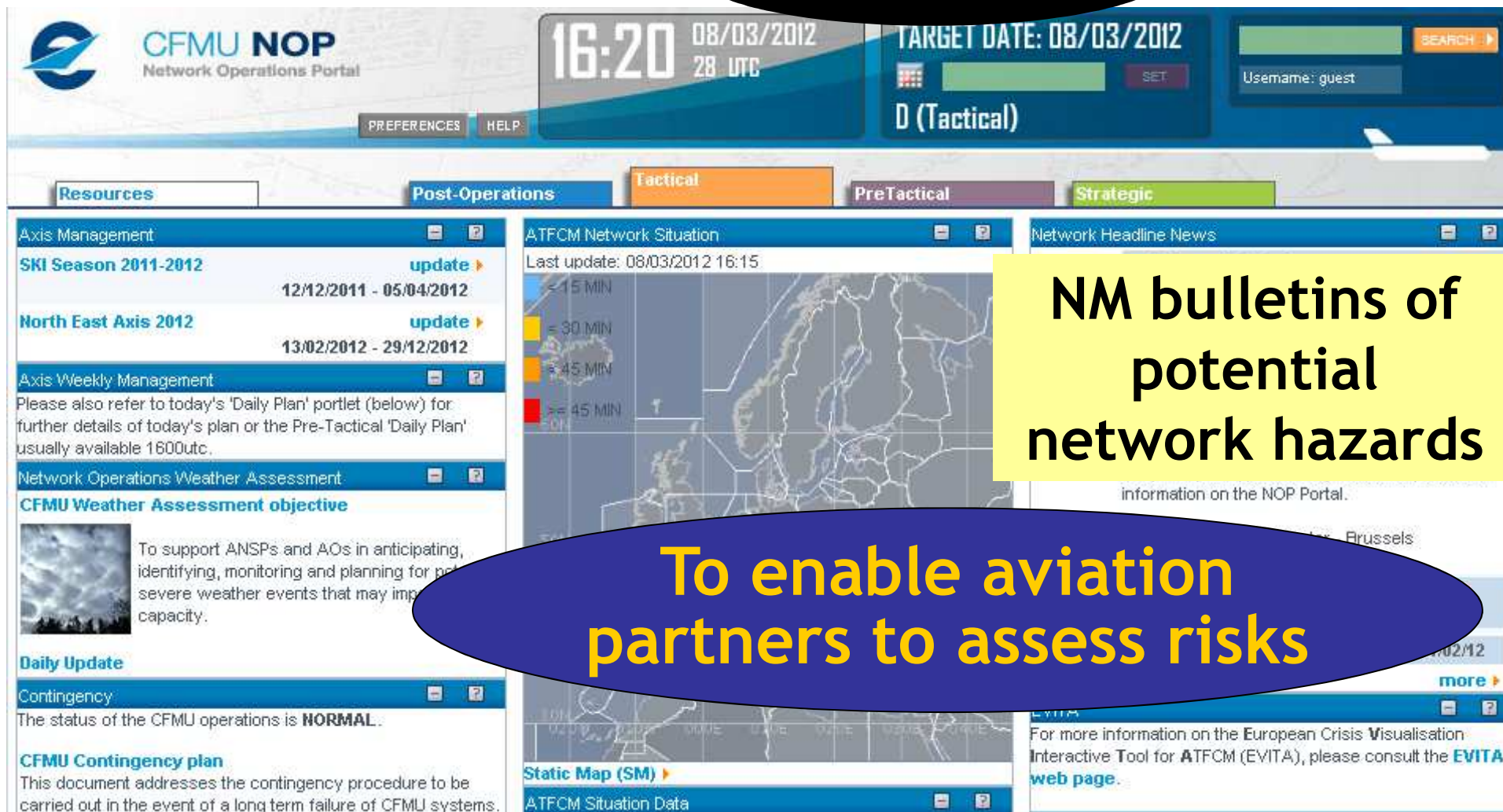
**Building a proportionate
response**

Organised jointly by EASA and Network Manager



Concrete actions – early warning

End 2013



The screenshot shows the CFMU NOP Network Operations Portal interface. At the top, there is a header with the CFMU NOP logo, a clock showing 16:20 on 08/03/2012, and a target date of 08/03/2012. Below the header, there are tabs for Resources, Post-Operations, Tactical, PreTactical, and Strategic. The main content area is divided into several sections: Axis Management (with links for SKI Season 2011-2012 and North East Axis 2012), Network Operations Weather Assessment (with a CFMU Weather Assessment objective), Daily Update, Contingency (stating the status is NORMAL), and CFMU Contingency plan. A central map shows the ATFCM Network Situation with a legend for time intervals: < 15 MIN, 15-30 MIN, 30-45 MIN, and >= 45 MIN. A yellow box on the right contains the text 'NM bulletins of potential network hazards'. A blue oval at the bottom contains the text 'To enable aviation partners to assess risks'.

NM bulletins of potential network hazards

To enable aviation partners to assess risks

Concrete actions – event tracking



CONCEPT OF OPERATIONS (CONOPS)

FOR

SPACE WEATHER INFORMATION

IN

SUPPORT OF INTERNATIONAL AIR
NAVIGATION



**Awaiting
conclusions!**



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What if something happens tomorrow?



Early warning?

Event tracking?

Informal arrangements!



the European Commission

European Aviation C

weather

Solar activity info on NOP Portal



CFMU NOP
Network Operations Portal

16:20 08/03/2012 28 UTC

TARGET DATE: 08/03/2012

Search

Username: guest

PREFERENCES HELP

D (Tactical)

Resources Post-Operations Tactical PreTactical Strategic

Axis Management

SKI Season 2011-2012 update 12/12/2011 - 05/04/2012

North East Axis 2012 update 13/02/2012 - 29/12/2012

Axis Weekly Management

Please also refer to today's 'Daily Plan' portlet (below) for further details of today's plan or the Pre-Tactical 'Daily Plan' usually available 1600utc.

Network Operations Weather Assessment

CFMU Weather Assessment objective

To support ANSPs and AOs in anticipating, identifying, monitoring and planning for potential

ATFCM Network Situation

Last update: 08/03/2012 16:15

< 15 MIN
= 30 MIN
= 45 MIN
= 45 MIN

Network Headline News

08/03/2012 Solar activity info

Due to the increased solar activity and its potential impact on aviation NM has been in contact with expert organisations to ensure that the reliable information may be provided to the aviation community, if events warranted it.

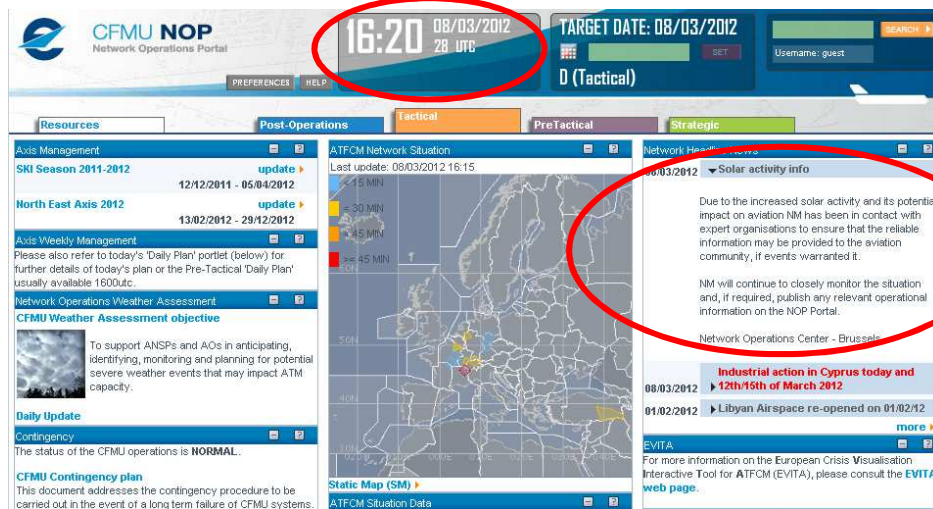
NM will continue to closely monitor the situation and, if required, publish any relevant operational information on the NOP Portal.

Network Operations Center - Brussels

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March 2012 event – airline input



...we monitor HF to a certain extent, but anticipate issues whenever Solar Radiation reaches certain levels (basically at or above S3) for polar operations...

...United did not operate on polar routes (78N) yesterday and today...



THE SPACE WEATHER FORECAST HAS BEEN UPDATED: EXPECT G3 AND S3 LEVEL ACTIVITY TODAY INTO FRIDAY. AVOID POLAR ROUTES.

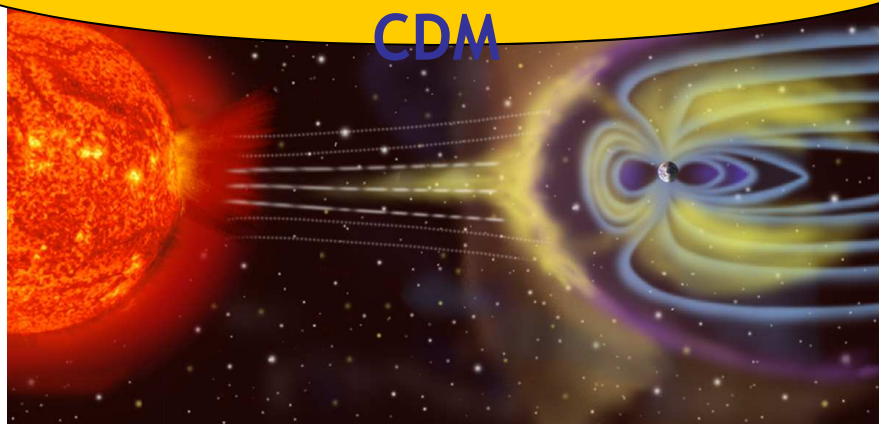
...we are NOT flying polar routes...



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In conclusion...

'Normal' space weather events → CDM



Space weather crisis → EACCC

Coordinate management of response to the network crisis affecting aviation in Europe

EACCC

Activated when circumstances beyond normal environment of ops are evident

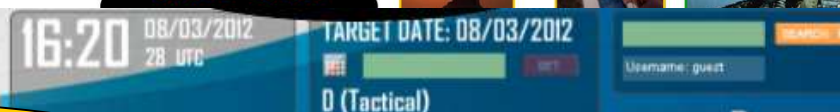


Members



State focal

End 2013 → NM bulletin of network hazards



NM bulletins of potential network hazards



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To enable aviation partners to assess risks



Thank you!

Enter here your presentation title

zarko.sivcev@eurocontrol.int