

# NWP WG

## Status of Action Items

ITSC-18, March 2012

[https://groups.ssec.wisc.edu/groups/itwg/nwp/action\\_status\\_tracker](https://groups.ssec.wisc.edu/groups/itwg/nwp/action_status_tracker)

Godelieve Deblonde (Co-chair), Niels Bormann (Co-chair),  
Bjarne Amstrup, Nancy Baker, Sid-Ahmed Boukabara, Bill Campbell, Brett  
Candy, Dave Ector, Vincent Guidard, Wei Han, Fiona Hilton, Heather  
Kilcoyne, Thomas King, Magnus Lindskog, Will McCarthy, Kozo Okamoto,  
Detlef Pingel, Roger Randriamampianina, Marc Schwaerz, Yi Song, Chris  
Tingwell

# NPP/NPOESS

## Action DA/NWP-1:

- Heather Kilcoyne (NOAA) will inform NWP WG (via mailing list) when the IPO **cal/val web site for NPP** instruments will be up.
- **Some websites with cal/val information:**
  - <http://www.star.nesdis.noaa.gov/smcd/spb/icvs/>
  - <http://npp.gsfc.nasa.gov/science/calibration.html>

# Future Systems

## Action DA/NWP-2:

- Wei Han (CMA) will gather information on **FY-3C** and its instruments as well as follow-on missions and distribute this information to the WG members.
- **Status: In progress.**

## Action DA/NWP-3:

- Dave Ector (NOAA) will send the report from the upcoming first meeting of the IROWG (**International Radio-occultation WG**) to the NWP WG members via the mailing list.
- **Status: closed – the report was emailed to the group on 29 June 2011**

# IASI channel selection

## Action DA/NWP-5:

- Vincent Guidard (Meteo France) and Fiona Hilton (Met Office) will **revisit the selection** of the EUMETSAT 314-channel subset of IASI channels. This may lead to a proposal to include further channels.
- **Status: closed**
  - **EUMETSAT has increased the number of selected channels to the 366 used at ECMWF**
  - **A proposal from Meteo France for further channels targeted at cloud microphysics will be discussed at the NWP-WG meeting at ITSC-18.**

# RARS

## Action DA/NWP-7:

- Jerome Lafeuille (WMO) will distribute the RARS user's **questionnaire** to the NWP WG mailing list.
- **Status: closed – questionnaire was emailed to the group on 13 May 2010**

## Action DA/NWP-8:

- Brett Candy (Met Office) will investigate how to inform users of **data anomalies noted in the routine intercomparison** between global and RARS data performed at the MetOffice (including the possibility of an automated warning system).
- **Status: closed**
  - **Met Office will, on a best-effort basis, send email alerts manually to the ITSC NWP WG mailing list and other interested RARS users when significant anomalies in RARS data are detected**
  - **See also RARS monitoring website at Met Office:**  
[http://research.metoffice.gov.uk/research/interproj/nwpsaf/ears\\_report/monitor.html](http://research.metoffice.gov.uk/research/interproj/nwpsaf/ears_report/monitor.html)

# RTTOV User Group

## Action DA/NWP-9:

- A) WG members will consult with their respective organizations to find **prospective members** of the RTTOV user group and will send an email with contact information to Fiona Hilton.
- B) Fiona Hilton will investigate the **technical options** to set up such a forum. She will also prompt CRTM manager, Paul Van Delst, about their experience.
- **Status: closed**
  - **A web-forum for RTTOV has now been established, see <http://nwpsaf.eu/forum/>**

# ATOVS questionnaire

## Action DA/NWP-11:

- Roger R. (met.no) will **convert ITWG ATOVS questionnaire** (in word format) to wiki format and include it in the NWP WG wiki page. WG members will update their information via the wiki page. NWP WG co-chairs will send a reminder to update the information at least once a year. A snapshot of the information will be taken once a year by co-chairs.
- **Status: closed**
  - **Tables of questionnaire have been converted.**
  - **Updates will still be done by the co-chairs by soliciting responses from the NWP WG members via email before ITSC meetings.**

## Action DA/NWP-12:

- Niels Bormann (ECMWF) will obtain a copy of Andrew Collard's ITSC-17 presentation on the **IASI usage survey** and include it on the NWP WG wiki page. He will also include a list of the **18 IASI monitoring channels** selected by Fiona Hilton after ITSC-16.
- **Status: closed**
  - **Information on use of hyperspectral sounders has been added to the "ATOVS" questionnaire.**

# Radiance biases

## Action DA/NWP-13:

- Wei Han (CMA) will put together a proposal for a **radiance bias and bias correction intercomparison exercise**. This should include specification of format to exchange relevant information and the scope of the intercomparison.
- **Status: ongoing**



# Regional Data Assimilation

## Action DA/NWP-14:

- Roger R. (met.no) will create a **regional data assimilation page on the NWP WG wiki page**. Roger will also post the poster (impact of **single AMSU observation** on analyses increments at three NMS's) that he presented at ITSC-17 (Number 7.22) on this page.
- **Status: closed**

## Action DA/NWP-15:

- NWP WG members involved in regional or limited area data assimilation will share their experience (experiment results, reports, papers, etc,..) on **bias correction procedures** on the regional data assimilation web page.
- **Status: closed**

See:

[https://groups.ssec.wisc.edu/groups/itwg/nwp/regional\\_data\\_assimilation](https://groups.ssec.wisc.edu/groups/itwg/nwp/regional_data_assimilation)

# RFI

## Action DA/NWP-16:

- Co-chairs will create a section on the NWP WG wiki page which will contain examples of the existing or potential effects of RFI in NWP. Members are invited to add on this web page any relevant impact assessments or evidence found. Nancy Baker (NRL) will provide examples to start the page.
- **Status: closed**
  - See [https://groups.ssec.wisc.edu/groups/itwg/nwp/rfi\\_and\\_nwp](https://groups.ssec.wisc.edu/groups/itwg/nwp/rfi_and_nwp)
  - Examples for AMSR-E, Windsat, SMOS
  - Further contributions invited.

# 2012 Survey on OPERATIONAL Use of ATOVS, AIRS, and IASI in NWP Systems

ITSC-18

Toulouse

G. Deblonde, N. Bormann, and A. Collard

March 2012

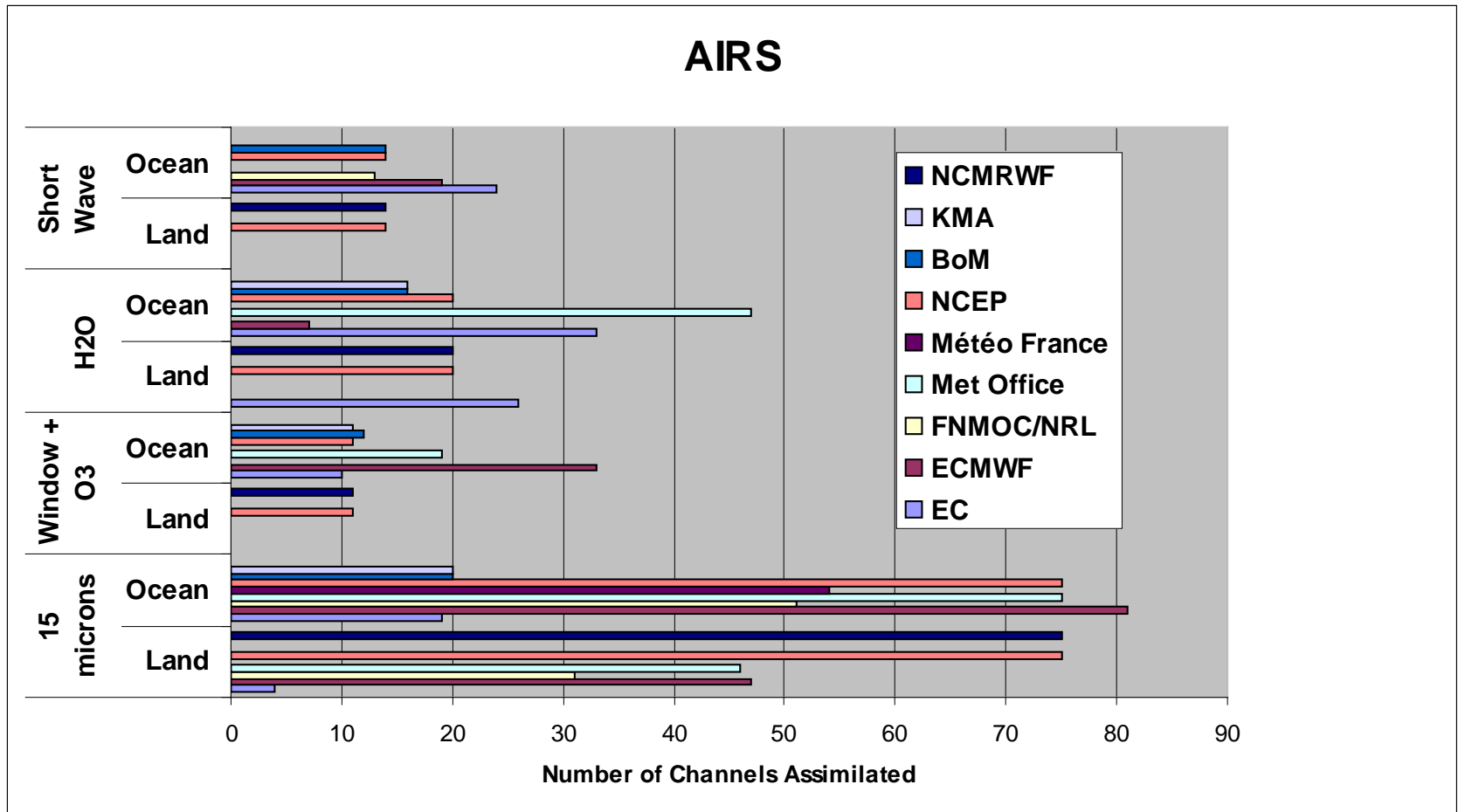
# 2012 Survey

- A survey was sent out on 27 Jan 2012 to ITWG and ITWG NWP WG Distribution Lists (DLs).
- Users were asked to fill out a series of 4 tables based on 2010 survey in an excel file. *Two new tables were added requesting information on use of AIRS and IASI radiances.*
- UPDATES were provided by (10):
  - EC, ECMWF, NMI, FNMOC/NRL, DWD, Met Office, JMA, Météo-France, NCEP, BoM.
- NEW contributions from (4):
  - SMHI (Sweden), CNMCA (Italy), KMA (Korea), and NCMRWF (India).
- Results from Tables 1, 5 and 6 presented here. Survey results will be put on NWP WG wiki page and distributed to NWP WG DL.

# Table 1: Overview

Institute	Data Assimilation System		Radiative Transfer Model	ATOVS assimilated			Bias Correction Scheme	Monitoring Web Page
	Global	Regional or Km Scale		Radiances	Retrievals	RARS		
<b>EC</b>	4DVAR & EnKF	3DVAR	RTTOV8.7	YES	NO	NO	off-line	YES
<b>ECMWF</b>	4DVAR+ Ens		RTTOV10.1	YES	NO	YES	VAR	YES
<b>NMI</b>		3DVAR	RTTOV7	YES	NO	YES	off-line	NO
<b>FNMOC/NRL</b>	4DVAR	3DVAR	CRTM	YES	YES (RD)	YES	off-line	YES
<b>DWD</b>	3DVAR	nudging	RTTOV7	YES	NO	YES	off-line	YES
<b>Met Office</b>	4DVAR	4DVAR	RTTOV7	YES	NO	YES	off-line	YES
<b>DMI</b>		3DVAR	RTTOV8.5	YES	NO	YES	off-line	YES
<b>JMA</b>	4DVAR	4DVAR	RTTOV9.3	YES	NO	YES	VAR	YES
<b>Météo-France</b>	4DVAR +Ens	3DVAR	RTTOV9.2	YES	NO	YES	VAR	YES
<b>NCEP</b>	3DVAR	3DVAR	CRTM	YES	NO	YES	VAR	YES
<b>BoM</b>	4DVAR	4DVAR	RTTOV7	YES	NO	NO	off-line	NO
<b>CPTEC/INPE</b>	LETKF	LETKF	N/A	NO	YES	N/A	N/A	NO
<b>SMHI</b>		4DVAR	RTTOV 7	YES			off-line	NO
<b>CNMCA</b>		LETKF	RTTOV10.2	YES	NO (monitoring)	YES	off-line	NO
<b>KMA</b>	4DVAR	4DVAR	RTTOV7	YES	NO	YES	off-line	NO
<b>NCMRWF</b>	3DVAR		CRTM	YES	NO	NO	VAR	YES

# Table 5a: Number of AIRS Channels Assimilated



# Table 5b: Number of IASI Channels Assimilated

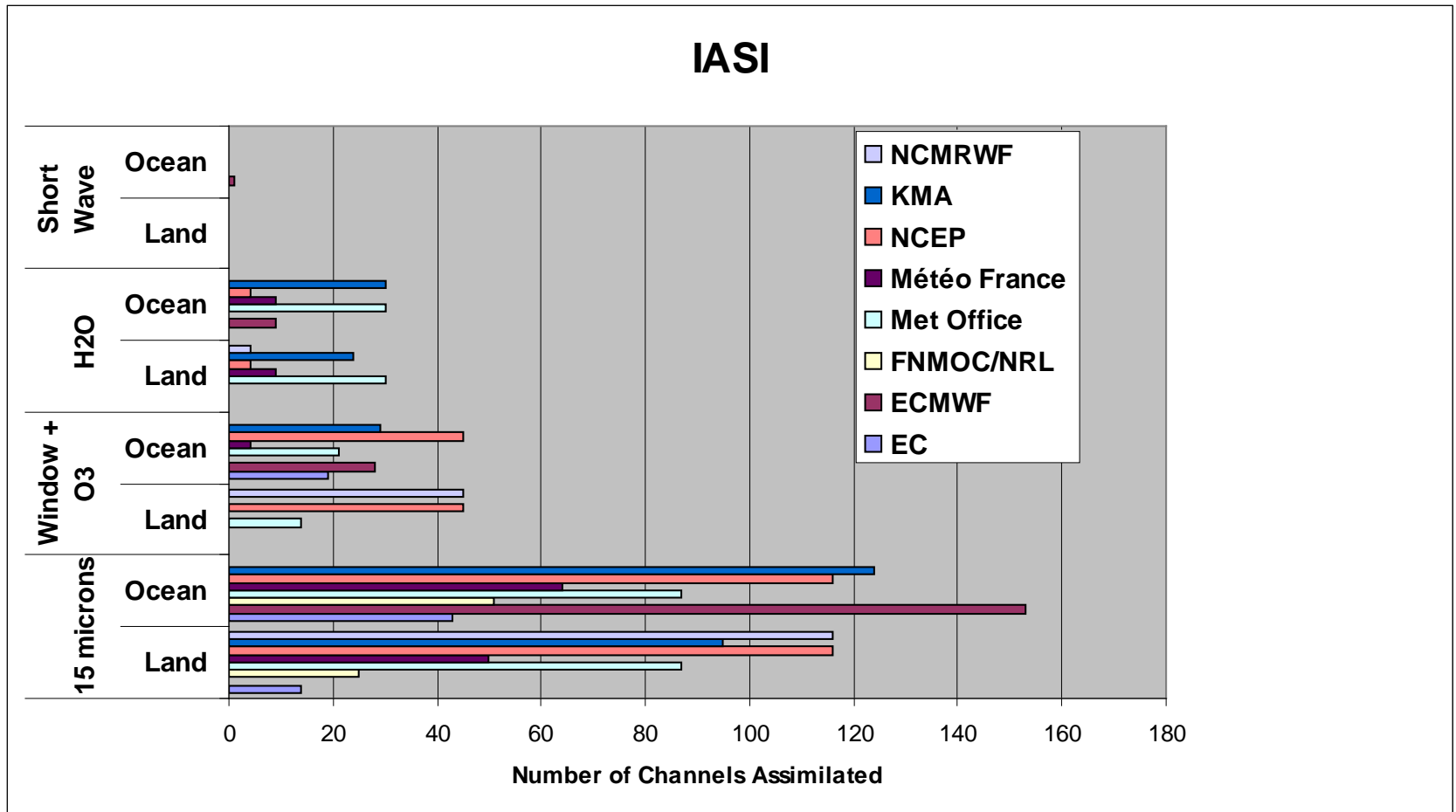


Table 6: ASSIMILATION OF CLOUDY RADIANCES IN NWP

Institute	IASI	AIRS	AMSU-A	AMSU-B / MHS	HIRS
EC	IC	IC	IC	IC	n/a
ECMWF	IC, SV	IC, SV	IC	IC	IC, SV
FNMOC/NRL	IC	IC	HH	HH	n/a
DWD			HH		
Met Office	SV	SV	AC	IC	HH
JMA			IC	IC	
Météo-France	AC*1	AC*1			
NCEP	IC	IC	IC	IC	IC
BoM		HH	IC	IC	HH
KMA	IC	IC			

**IC** = Insensitive Channels, **HH** = Hole Hunting, **AC** = Assimilate Clouds

**SV** = Sink Variable

\*1 Upper channels only