



Nouveau site web de monitoring

Chantal Côté

- [Aircraft](#)
- [AIRS](#)
- [AMVs](#)
- [ATMS](#)
- [ATOVS](#)
- [CrIS](#)
- [GeoRad](#)
- [GPSRO](#)
- [IASI](#)
- [Profiler](#)
- [Scatterometer](#)
- [TEMP & SYNOP](#)
- [Radiosondes](#)
- [GB-GPS](#)
- [SSMIS](#)

Assimilation des données et contrôle de la qualité, Direction de l'élaboration, Centre canadien de prévisions météorologiques et environnementales (CCMEP), Service météorologique du Canada, Environnement et Changement climatique Canada.
chantal.cote@ec.gc.ca

Présentation générale

- Ce site fournit des informations sur la qualité et la disponibilité de divers types de données météorologique observées pour être utilisées dans le système d'assimilation mondial, régional et national du CMC.
- <https://hpfx.collab.science.gc.ca/~smco500/psmon/monitoring/>

Aperçu du nouveau site

EN-VAR ANALYSES COVERAGE MAPS

- G0 En-Var Global Preliminary Analysis
- G1 En-Var Global Early Analysis
- G2 En-Var Global Final Analysis
- E0 En-Var Preliminary Analysis
- E1 En-Var Early Analysis
- E2 En-Var Final Analysis
- N1 En-Var HRDPS Early Analysis
- N2 En-Var HRDPS Final Analysis

Observations Monitoring of the Canadian Centre for Meteorological and Environmental Prediction (CCMEP), Meteorological Service of Canada

Introduction

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- Monthly Means
- Statistics from sections Data Reception, Data Quality Monitoring and/or Data included in the Analysis.

Here is an introduction of the website layout

- [New website](#)
- [Nouveau site web](#)

Here is some information on the processing, selection and quality control of each type of observations.

- [Aircraft](#)
- [AIRS](#)
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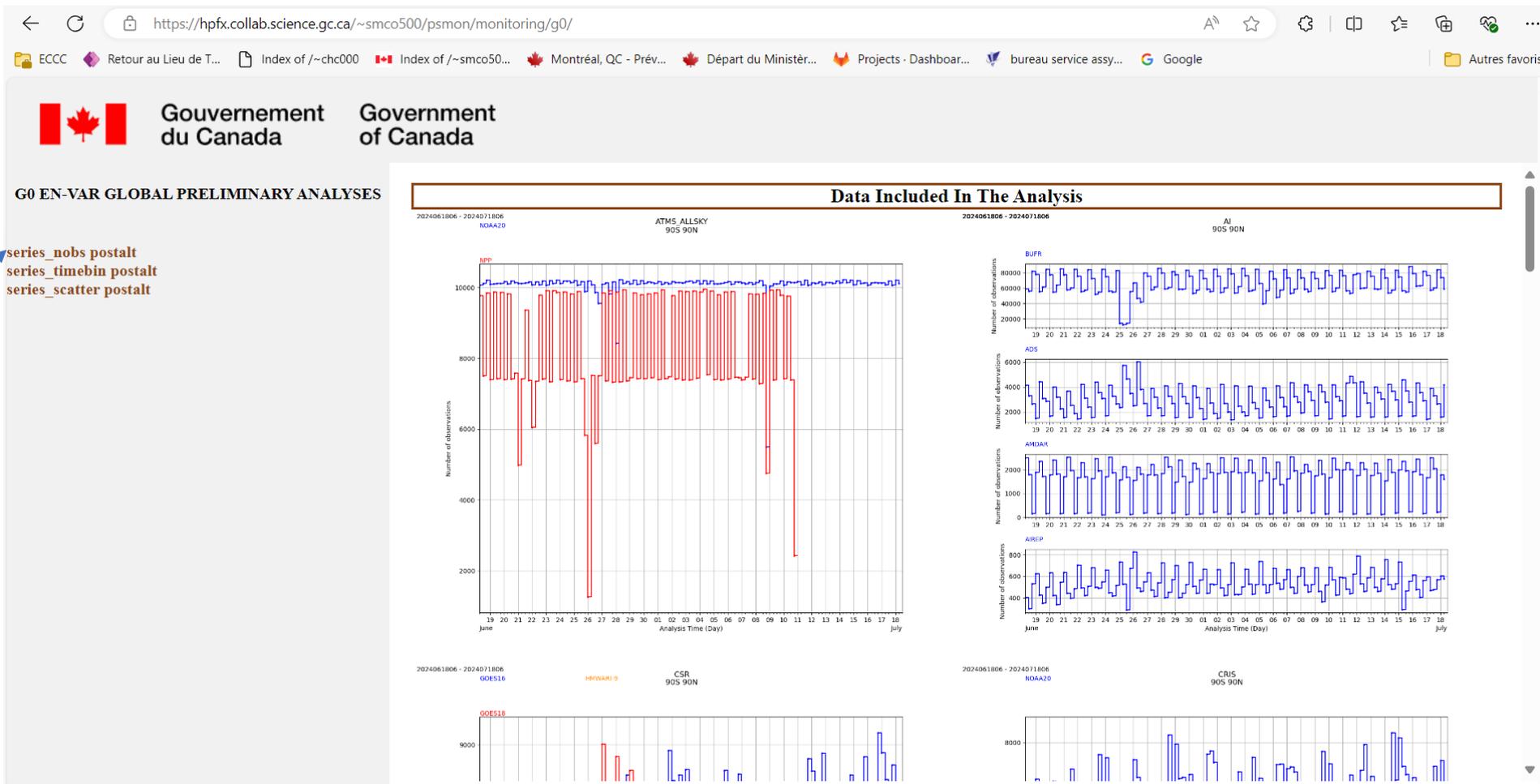
Barre de navigation latérale (Sidenav)

Fenêtre principale (Mainframe)

Exemple pour les passes G0 G1 E0 E1 N1 N2

Séries temporelles du nombre d'observations (series_nobs)

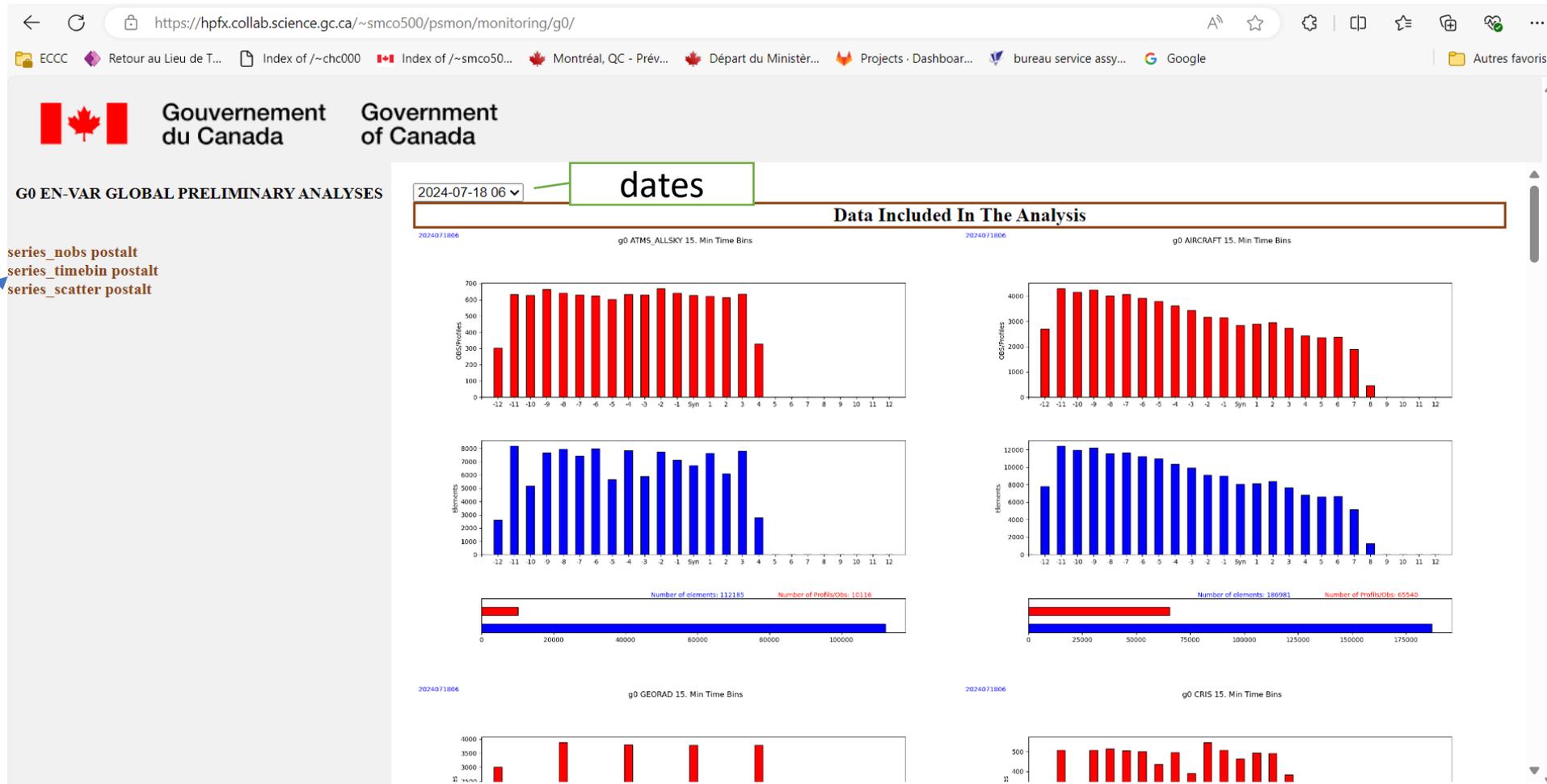
Toutes les familles d'observations sont sur la même page.



Exemple pour les passes G0 G1 E0 E1 N1 N2

Figures du nombre d'observations par bins temporelles (series_timebin)

Toutes les familles d'observations sont sur la même page.



Exemple pour les passes G0 G1 E0 E1 N1 N2 Cartes de distributions géographiques (series_scatter)

Toutes les familles d'observations sont sur la même page.

https://hpfx.collab.science.gc.ca/~smco500/psmon/monitoring/g0/

ECCC Retour au Lieu de T... Index of /~chc000 Index of /~smco50... Montréal, QC - Prév... Départ du Ministèr... Projects - Dashboar... bureau service assy... Google Autres favoris

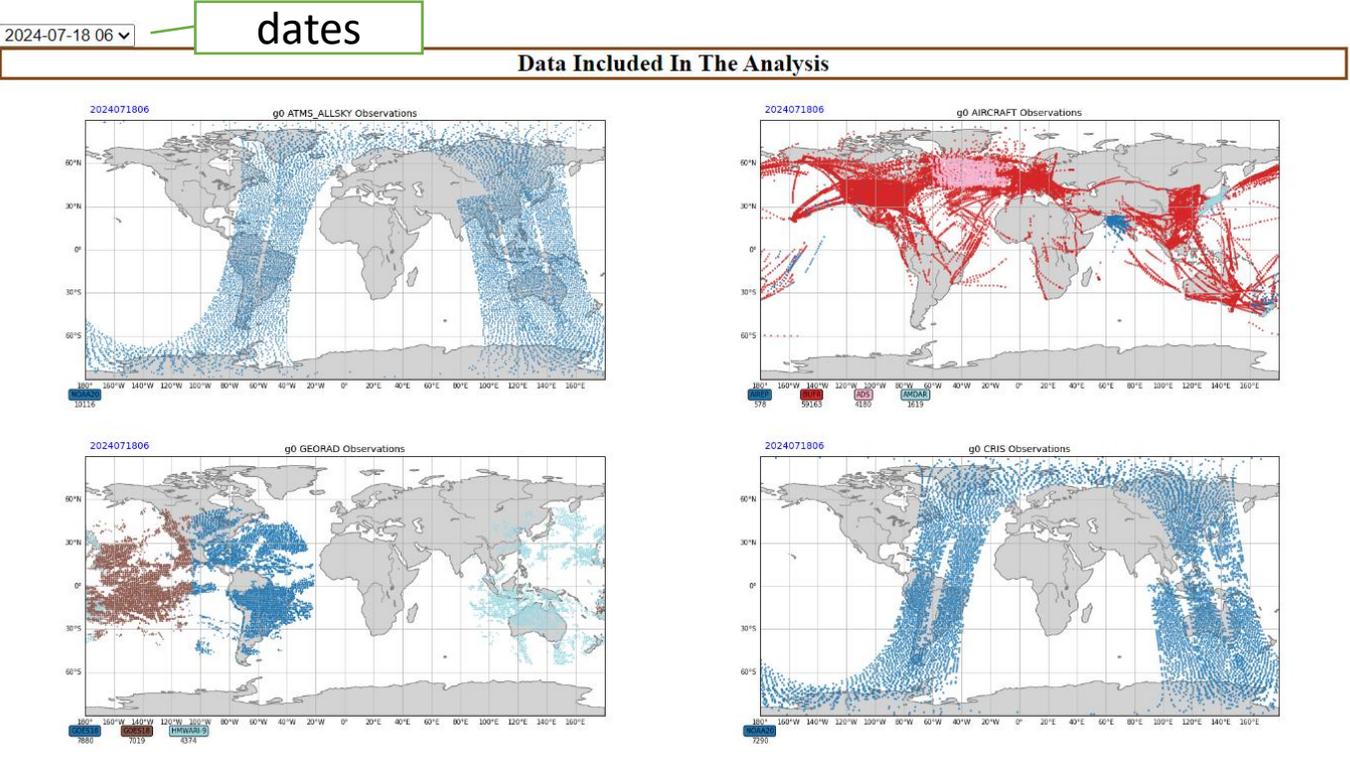
 **Gouvernement du Canada** **Government of Canada**

G0 EN-VAR GLOBAL PRELIMINARY ANALYSES

2024-07-18 06 dates

Data Included In The Analysis

series_nobs postalt
series_timebin postalt
series_scatter postalt



Exemple G2: Page d'accueil

← ↻ 🔒 https://hpfx.collab.science.gc.ca/~smco500/psmon/monitoring/g2/ 🔊 ☆ ⚙️ | 📄 🌟 📁 📌 📧 ...

ECCC 🇨🇦 Retour au Lieu de T... 📄 Index of /~/chc000 🇨🇦 Index of /~/smco50... 🇨🇦 Montréal, QC - Prév... 🇨🇦 Départ du Ministère... 🗨️ Projects · Dashboar... 📧 bureau service assy... 🌐 Google | 📁 Autres favoris

 **Gouvernement du Canada** **Government of Canada**

G2 EN-VAR ANALYSES OBSERVATIONS

- AIRCRAFT
- AMV
- ATMS
- ATOVS
- CRIS
- CSR
- GPSRO
- GROUND-BASED GPS
- IASI
- MWHS2
- OZONE
- SCATTEROMETER
- SURFACE
- SSMIS
- RAOBS

series_nobs postalt } Idem à G0,G1,E0,E1,N1 et N2
series_timebin postalt }
Anomalies postalt }
nobs difference postalt }

series_nobs evalalt }
series_timebin evalalt }

series_nobs cutoff }
series_timebin cutoff }
Anomalies cutoff }
nobs difference cutoff }

Cutoff, evalalt et postalt

Postalt seulement

Observations Monitoring of the Canadian Centre for Meteorological and Environmental Prediction (CCMEP), Meteorological Service of Canada

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Exemple G2: Page d'accueil (suite)

https://hpfx.collab.science.gc.ca/~smco500/psmon/monitoring/g2/

ECCC Retour au Lieu de T... Index of /~chc000 Index of /~smco50... Montréal, QC - Prév... Départ du Ministèr... Projects · Dashboar... bureau service assy... Google

Gouvernement du Canada **Government of Canada**

G2 EN-VAR ANALYSES OBSERVATIONS

Observations Monitoring of the Canadian Centre for Meteorological and Environmental Prediction (CCMEP), Meteorological Service of Canada

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Time Series

Monthly Means

Statistics from sections Data Reception, Data Quality Monitoring and/or Data included in the Analysis.

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Navigation Menu:

- AIRCRAFT
- AMV
- ATMS
- ATOVS
- CRIS
- CSR
- GPSRO
- GROUND-BASED GPS
- IASI
- MWHS2
- OZONE
- SCATTEROMETERS
- SURFACE
- SSMIS
- RAOBS

Annotations:

- Nouveau nom (anciennement georad)
- Famille indépendante (anciennement dans famille surface)
- Vide pour l'instant
- Upper air seulement (sans les données de surface)

Aperçu d'une famille d'observation (avions)

G2 EN-VAR ANALYSES OBSERVATIONS

AIRCRAFT
AIRS
AMV
ATMS
ATOVS
CRIS
CSR
GPSRO
GROUND-BASED GPS
IASI
MWHS2
OZONE
SCATTEROMETER
SURFACE
SSMIS
RAOBS

series_nobs postalt
series_timebin postalt
series_scatter postalt

Sections cutoff et evalalt (postalt est sous evalalt)

Aircraft Data Reception

Number of observations
Plots of the number of records decoded for a [series] (WMO FM94).

2023-04-30 06 - 2023-05-30 06 | AIRCRAFT_DBASE | View

Distribution maps
Distribution maps of observation points

Number of observations per time bin
Plots of the number of observations decoded per time bin (15 min.).

2023-05-30 06 | AIRCRAFT_DBASE | cyl | View

Monthly Means geographic distribution
Plots of the distribution maps of the monthly mean number of the monthly mean values.

April2023 | AIRCRAFT_DBASE | AMDAR | AI | NO ELEM | View

Monthly Number of observations
Trace of the mean number of elements assimilated per 24-hour periods

April2023 | AIRCRAFT_DBASE | View

Number of observations per month
pas de description pour l'instant

April2023 | AIRCRAFT_DBASE | View

Aircraft Data Quality Monitoring

Number of observations

Aperçu d'une famille d'observation (suite)

CMC Monitoring | CMC Data Monitoring G2

https://hpfx.collab.science.gc.ca/~smco500/psmon/monitoring/g2/

ECCC | Retour au Lieu de T... | Index of /~chc000 | Index of /~smco50... | Montréal, QC - Prév... | Départ du Ministèr... | Projects · Dashboar... | Google | Autres favoris

G2 EN-VAR ANALYSES OBSERVATIONS

AIRCRAFT
AIRS
AMV
ATMS
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CRIS
CSR
GPSRO
GROUND-BASED GPS
LASI
MWHS2
OZONE
SCATTEROMETER
SURFACE
SSMIS
RAOBS

series_nobs postalt
series_timebin postalt
series_scatter postalt

Aircraft Data Reception

Number of observations
Plots of the number of records decoded for aircraft reports at CMC in 6-hour periods, divided by format of aircraft report: AIREP/ADS (ICAO), AMDAR (OMM FM42), BUFRS (WMO FM94).

2023-04-30 06 - 2023-05-30 06 | AIRCRAFT_DBASE | View

Distribution maps
Distribution maps of observation points decoded for aircraft reports

2023-05-30 06 | AIRCRAFT_DBASE | cyl | View

Number of observations per time bin
Plots of the number of observations decoded per time bin (15 min.).

2023-05-30 06 | AIRCRAFT_DBASE | cyl | View

Monthly Means geographic distribution
Plots of the distribution maps of the monthly mean number of observations decoded per 24-hour period. The maps shows the 10 X 10 degrees distribution of the monthly mean values.

April2023 | AIRCRAFT_DBASE | AMDAR | AI | NO ELEM | View

Monthly Number of observations
Trace of the mean number of elements assimilated per 24-hour periods

April2023 | AIRCRAFT_DBASE | View

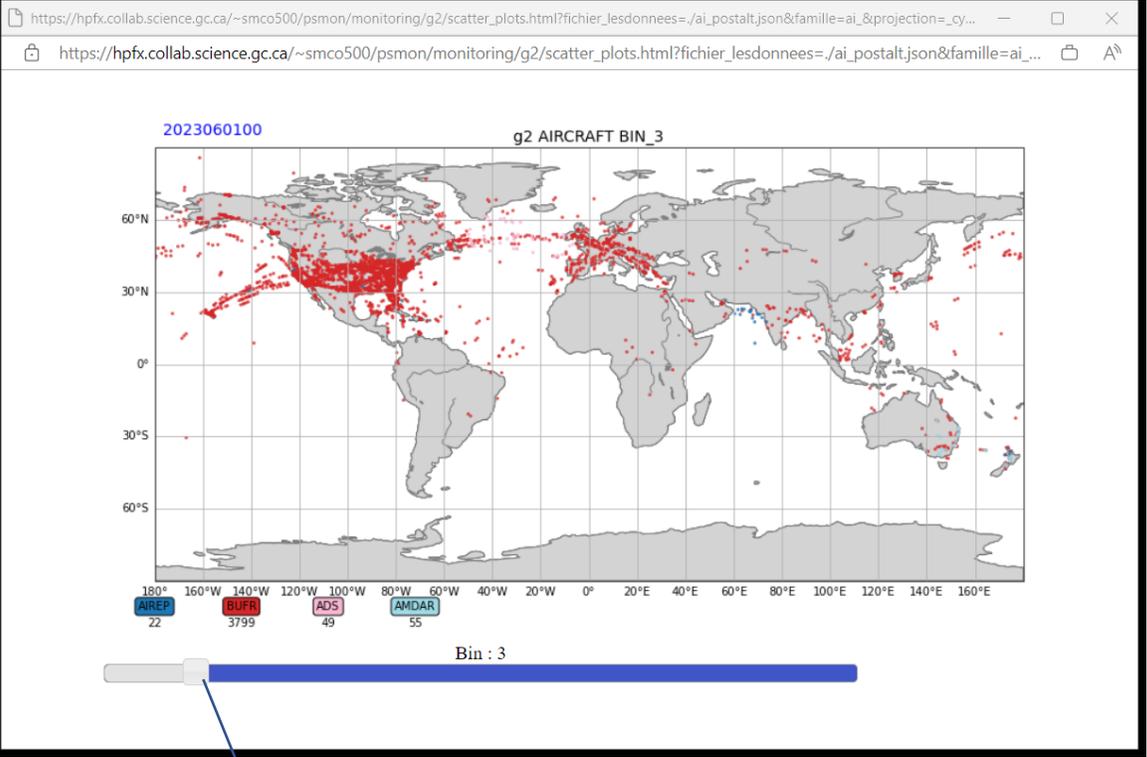
Number of observations per month
pas de description pour l'instant

April2023 | AIRCRAFT_DBASE | View

Aircraft Data Quality Monitoring

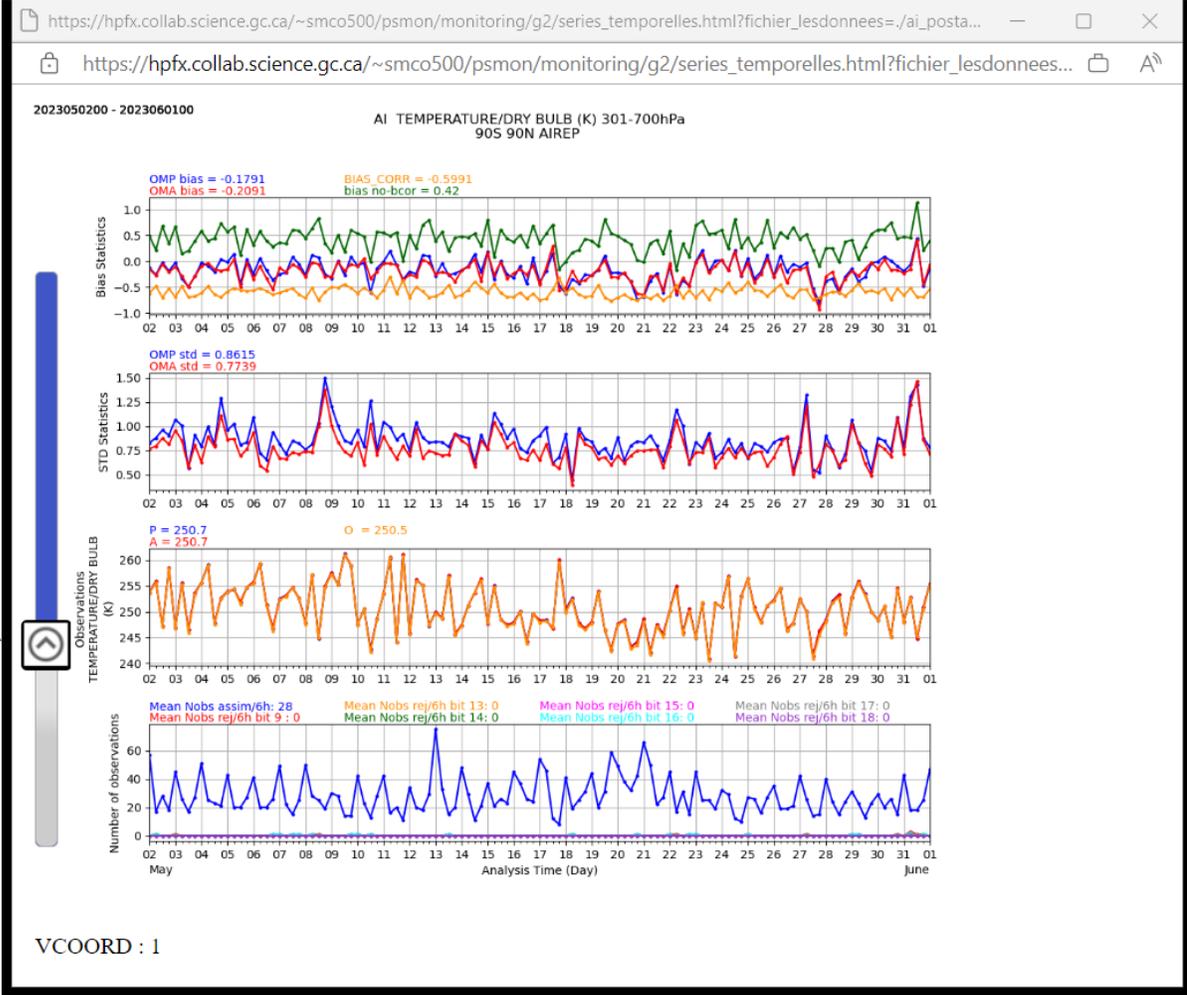
Attention, il n'y a plus de section amdar distincte

Aperçu d'une famille d'observation (suite)



Sélection de la bin temporelle par le curseur horizontal

Sélection du niveau vertical par le curseur vertical



Aperçu d'un tableau html

Canadian Meteorological Centre

List of AIRCRAFT stations with suspect observations.
April2023
WIND codtyp=157
301-700hPa

To be considered as suspect, the number of observations must meet minimal counts (50) and the data statistics versus the guess must exceed at least one criterion:
 $\text{abs}(\text{bias}) \geq 2.5$ or $\text{rms} \geq 8$. or $100 \cdot (\text{NG} \cdot 1.0) / \text{NA} \geq 2$.

NA = Total number of available observations
NT = Number after data thinning for assimilation
NG = Observations differing from the guess by amounts larger than gross check limits (30.)
% Gross = $\text{NG} / \text{NA} \cdot 100$
NR = The number of rejected observations excluding thinning
% NR = $\text{NR} / \text{NA} \cdot 100$
NC = The number of exactly calm winds (obs < 1.) m/s
Wind speed (elem BUFR 11002) used in calculation

STN	ELEM	LEVEL	NA	NT	NG	% GROSS	NR	% NR	NC	RMS	BIAS
CNQMRL	WIND	301-700hPa	686	493	22	3.2	17	2.5	0	4.09	-0.87
D0UYBZRA	WIND	301-700hPa	56	0	0	0.0	0	0.0	0	8.29	4.25

Sélection des niveaux verticaux

Cliquer pour ordonner

Section anomalie (G2 seulement)

The screenshot shows a web browser window with the URL <https://hpfx.collab.science.gc.ca/~smco500/psmon/monitoring/g2/>. The page header includes the Government of Canada logo and the text "Gouvernement du Canada" and "Government of Canada". The main heading is "Observations Monitoring of the Canadian Centre for Meteorological and Environmental Prediction (CCMEP), Meteorological Service of Canada". Below this is an "Introduction" section. The text states: "The next sections contain statistics on the availability and quality of meteorological observations used in CMC final global analyses, such as aircraft, AMVs, ATOVS, GeoRad, IASI and SSMIS radiances, scatterometer and profilers winds, GPSRO, radiosondes and surface observations. Inside each section are the following parts:" followed by a bulleted list: "Data Reception", "Data Quality Monitoring", and "Data Included In Analysis". A color legend is provided, with a purple square for "Figures done every 6h and kept for 30 days", a red square for "Time Series", an orange square for "Monthly Means", and a green square for "Statistics from sections Data Reception, Data Quality Monitoring and/or Data included in the Analysis." Below the legend, there is a link to "New website" and "Nouveau site web". The text "Here is some information on the processing, selection and quality control of each type of observations." is followed by a list of observation types: Aircraft, AMVs, ATMS, ATOVS, CrIS, and GeoRad. On the left side of the page, there is a navigation menu under "G2 EN-VAR ANALYSES OBSERVATIONS" listing various observation types. The "Anomalies postalt" link is highlighted with a yellow box.

G2 EN-VAR ANALYSES OBSERVATIONS

- AIRCRAFT
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series_nobs postalt
series_timebin postalt
Anomalies postalt
nobs difference postalt

series_nobs evalalt
series_timebin evalalt

series_nobs cutoff
series_timebin cutoff
Anomalies cutoff
nobs difference cutoff

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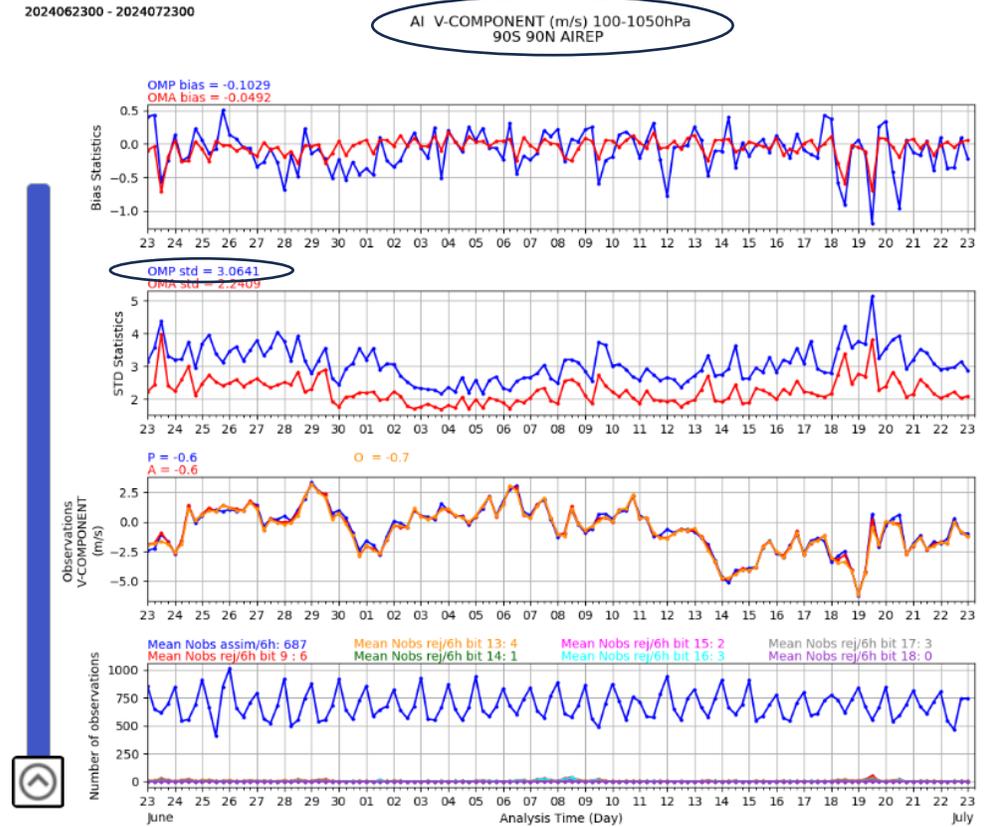
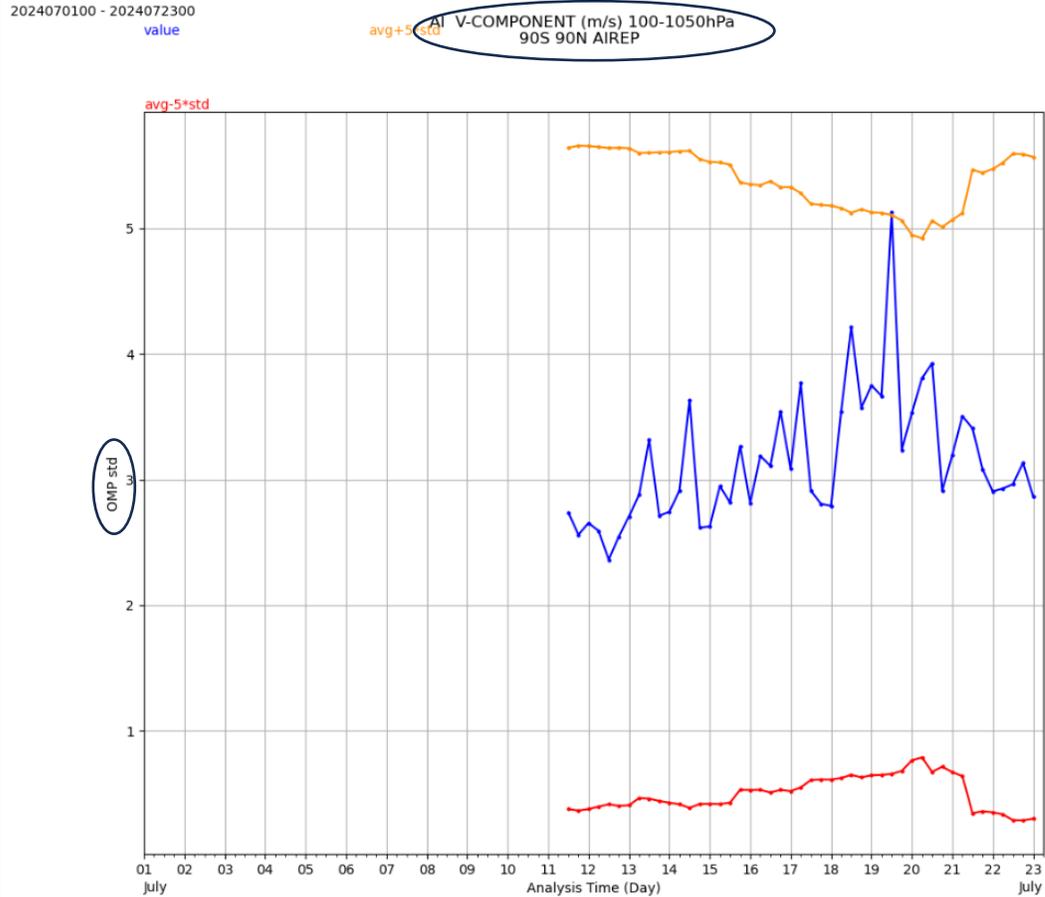
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Figures Anomalies postalt, cutoff

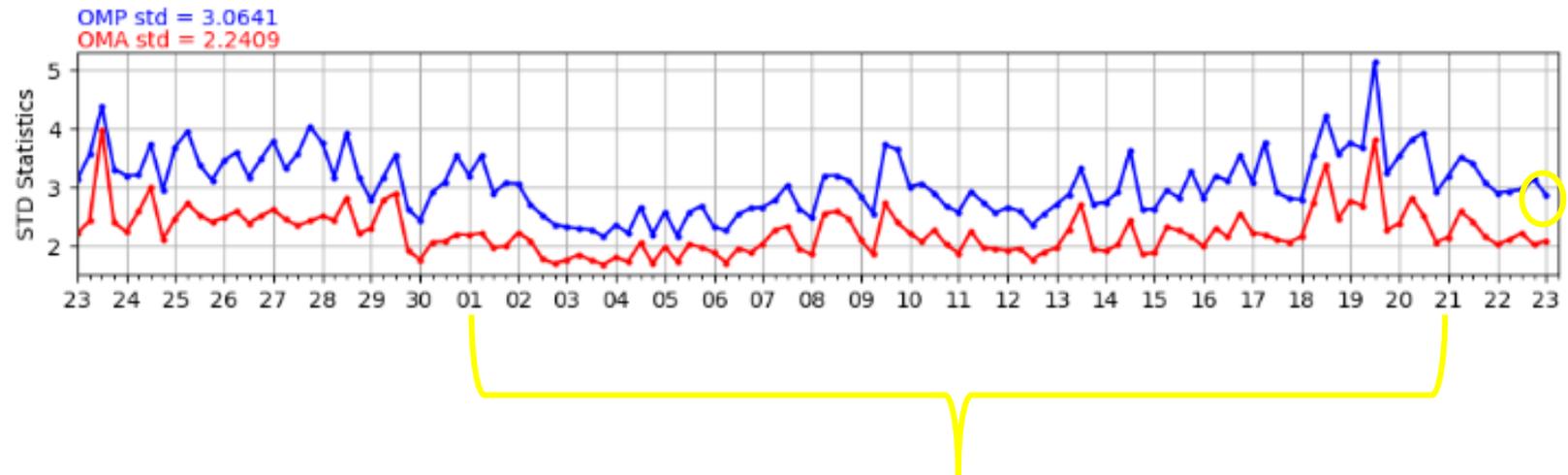
Le calcul des anomalies provient des figures **O-P and O-A Statistics** et **Number of observations**



VCOORD : 100-1050hPa

Les limites sont calculées par la moyenne plus ou moins 5 fois l'écart-type sur une période allant de t-22 jours jusqu'à t-2 jours. Cette méthode provient de <https://www.ecmwf.int/sites/default/files/elibrary/2014/17338-automatic-checking-observations-ecmwf.pdf>

Pour produire la moyenne et l'écart-type, on demande un minimum de 10 données sur les 20 jours utilisés (80 cas) pour le calcul. Pour certaines familles, on ne vérifie pas les données manquantes (ai et ua).



Moyenne et écart type sont calculés sur cette période.
Les courbes orange et rouge sont respectivement
moyenne +/- (5 * écart type)

Zoom de la figure
d'anomalie

Nobs difference postalt et cutoff

Canadian Meteorological Centre

Avg of nobs profiles per 6h
in postalt file.

today= date > 2024072206 and date <= 2024072306

yesterday=date > 2024072006 and date <= 2024072106

this week=date > 2024071606 and date <= 2024072306

last week=date > 2024070806 and date <= 2024071506

Difference 1 day = (Today - Yestertay) / Yesterday * 100

Difference 1 week = (This_week - Last_week) / Last_week * 100

FAMILLY	ID_STN	CODTYP	NB PROFILS TODAY	NB PROFILS YESTERDAY	DIFFERENCE 1 DAY (%)	NB PROFILS THIS WEEK	NB PROFILS LAST WEEK	DIFFERENCE 1 WEEK (%)
AI	AI	AMDAR	1527.50	1547.25	-1.28	1665.71	2170.61	-23.26
AI	AI	AIREP	630.50	696.25	-9.44	677.93	697.18	-2.76
AI	AI	BUFR	84733.25	81494.75	3.97	84213.75	83776.11	0.52
AI	AI	ADS	3325.00	3153.00	5.46	3352.54	3822.50	-12.29
AI	ALL	ALL	90216.25	86891.25	3.83	89909.93	90466.39	-0.62
ATMS_ALLSKY	NOAA20	ALL	15212.50	15183.75	0.19	15197.68	15189.71	0.05
ATMS_ALLSKY	NPP	ALL	3705.50	14919.50	-75.16	8325.64	4838.64	72.07
ATMS_ALLSKY	ALL	ALL	18918.00	30103.25	-37.16	23523.32	20028.36	17.45
CRIS	NOAA20	ALL	11535.75	11588.50	-0.46	11486.14	11510.07	-0.21
CRIS	ALL	ALL	11535.75	11588.50	-0.46	11486.14	11510.07	-0.21
CSR	GOES16	ALL	10346.00	9795.75	5.62	10060.39	9603.68	4.76
CSR	GOES18	ALL	8833.00	7992.50	10.52	8333.75	7326.21	13.75
CSR	HMWARI-9	ALL	9208.25	8973.00	2.62	8203.18	8674.18	-5.43
CSR	ALL	ALL	28387.25	26761.25	6.08	26597.32	25604.07	3.88
--	--	GROUND BASED	--

Autres informations

Le code de la page web se trouve dans les branches des différentes passes à l'adresse [CMDA_MONITORING / monitoringGraphs · GitLab \(science.gc.ca\)](https://gitlab.science.gc.ca/CMDA_MONITORING/monitoringGraphs)

https://gitlab.science.gc.ca/CMDA_MONITORING/monitoringGraphs

Pour toutes demandes de changements, (ex ajout de famille, changement au site web, etc)

svp ouvrir un ticket à [CMDA_MONITORING / monitoringGraphs · GitLab \(science.gc.ca\)](https://gitlab.science.gc.ca/CMDA_MONITORING/monitoringGraphs)

https://gitlab.science.gc.ca/CMDA_MONITORING/monitoringGraphs