## ORCAS Field Catalog Introduction

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catalog.eol.ucar.edu/orcas

## The NCAR/EOL Field Catalog



The field catalog is a web-based collaborative service whose mission is to provide facilities for:

- Project Documentation
- Collect supporting prods for context
- Post mission, campaign review
- Mission Planning
- Real-time communications
- Situational Awareness
- Real-time decision-making
- In-field data sharing

79 campaigns supported in 19 years

## The NCAR/EOL Field Catalog

The field catalog is a web-based collaborative service . . .

# **Features:**



### Flight Plan Discussion Edit report

Editing feature is intended for small fixes only. You may change the date/time of the report, but only if another report does not already exist at the new date/time. You must enter a password before adding a link or image in a text box.

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Author*	Lyatt Jaegle		
Date/Time*	2015-03-02	06:00	UTC
	(Form loaded	at 2015-	03-10 22:38 UTC

#### Discussion\*

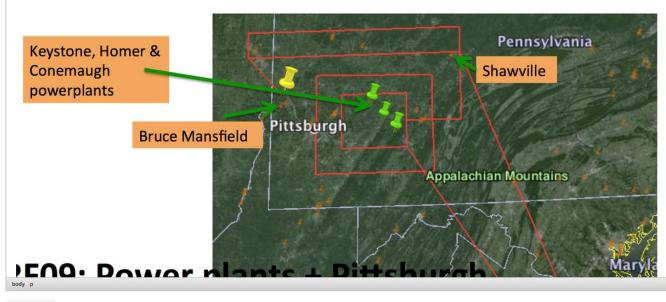
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The editor below allows WYSIWYG and Source-HTML editing with file uploads for both inline images and links to attachments. See the Users Guide for editing help. We suggest you restrict your HTML and styling to be clean and simple. To include images, use the Image or Link button and then the Upload tab. Finally, for security and styling reasons, some advanced HTML and larger headings may be removed or modified.

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The next nightime flight, RF09, is planned to take off at midnight on Tuesday night (Wed 03032015, 5 UTC, 00 EST). The objectives are to sample plumes from some very large power plants in western Pennsylvania and fly in the Pittsburgh outflow. We will fly to the SE corner of the inner box below, do a missed approach and then fly around the inner box counterclockwise twice at two different altitudes. There are 3 large power plants in that inner box: Keystone, Homer City, and Conemaugh. Currently, Keystone is the 2nd largest NOx emitter in the US and Homer City the top SO2 emitter. We would then fly around the outer box clockwise with a missed approach in the SE corner. Finally, we would go up North, downwind of Pittsburgh for another missed approach and then do two legs downwind of Pittsburgh to an e and the power plants. This is expected to be an -8 hour flight.

We expect a high pressure system over the flight region, leading to light northwesterly flow at the beginning of the flight (1am), switching over to South-Southeasterly flow later in the flight (7am).



For documentation: Interactive web forms

Clear editor

## Ops Plan of the Day Weather Discussion Mission Scientist Summary IOP Proposal NSF NCAR GV Staffing Schedule

For documentation: Operations Reports Mission Scientist Report, RICO, King Air Flight January 21st, 2005 UW King Air Flight Scientist: Stevens



Figure 1: Images showing cloud field during flight.

General cloud characteristics: The cloud field was rather suppressed with patches of humulus and patches of clear, with tops rarely developing above 4000°. During the day a magnificent tail developed west of Barbuda. This tail had a tremendous radar projection, but faded by the time we worked it, only to redevelop somewhat after we left. Drop concentrations were generally light, near 50 or 75 cm<sup>-3</sup>.

**General Comments:** The King Air was the only aircraft in the area as the BAE flew well to the north on this day in search of deeper clouds. The intial plan was to fly along and cross wind segments near the ship for estimating momentum fluxes by fields of shallow cumulus, following a line suggested by Peggy LeMone. Winds proved rather light, as did the shear and cloud field. Indeed echoes were so little in evidence we often turned off the radar, and did not fly legs over the top of the cloud field for which the dual Doppler was desired. Later in the flight we flew a tail pattern which sampled a dissipating tail west of Barbuda, and the period before its subsequent redevelopment.

**Overview of Flight Pattern:** The momentum patterns were to consist of stacks of four to five legs, along and across the shear. We attempted to coordinate these with the ships heading, and after some initial adjustment settled on a direction. The patterns generally included two levels in the subcloud layer, one or more in the subcloud layer, and one above the cloud. The latter were cut short for lack of echoes. The cloud legs were not flow straight and level, but rather adjusted slightly, trying to maintain an average heading that followed the subcloud legs, to increase the time in cloud for cloud statistics. The tail pattern consisted of: (1) two subcloud legs starting well north and ending well south of Barbuda, and flown approximately 10km downwind of Barbuda, upwind of the region of significant tail development; (2) along tail cloud and subcloud legs for measuring clouds and precipitation; (3) a repeat of one of the subcloud legs.

**Flight Notes:** 

### For documentation: Instrument Status

NSF NCAR GV AWAS AO2 TOGA AO2 CLS RICE VCSEL OR PRISM GNI Picarro CLH-2 2DC Medusa Flask Sampler

Status reports	Juli	in a y														
Instrument	2013- 12-17	2014-01- 11	2014-01- 14	2014-01- 17	2014-01- 19	2014-01- 22	2014-01- 25	2014-01- 29	2014-02- 01	2014-02- 05	2014-02- 08	2014- 02-14	2014- 02-17	2014- 02-21	2014-02- 25	Instrument
Aircraft and state parameters																
Aircraft, NSF/NCAR GV HIAPER											Aircraft, NSF/NCAR GV HIAPER					
Overall	down	up 🕄	up 🛛	up 🕄	up	up 🕄	up 🕲	up	up 🛛	up	up	up	up	up	up	Overall
ADS - Airborne Data System	down	up	up	up 🙁	up 🙁	up 🛛	up 🛛	up	up	up	up	up	up	up	up	ADS - Airborne Data System
Digital cameras	down	up	up 🛛	up	up	up	up	up	up	up 🕄	up	up	up	up	up	Digital cameras
Mission Coordinator System	down	up 🕄	up	up 🙁	up	up 🙁	up 🕄	up 🛽	up	up 🛽	up	up	up	up	up	Mission Coordinator System
Radome gust probe	down	up	up	up	up	up	up	up	up 🛛	up	up	up	up	up	up	Radome gust probe
Chemistry																
AMAX-DOAS	down	up	up 🛛	up	up	up	up	up	down 🛽	up 🛛	provisional	up	down ©	up	up	AMAX-DOAS
AWAS - Advanced Whole Air Sampler	down	provisional 3	up	provisional 3	provisional	up	up	up	up	up	up	up	up	up	up	AWAS - Advanced Whole Air Sampler
Bromine	down	up	up	up	provisional	up	up	up	up	up	up	up	up	up	provisional	Bromine
CO - Aerolaser	down	down 💿	up	down 💿	provisional	up 🛛	up	up	up	up	up	up	up	up	up	CO - Aerolaser
CO2 - Picarro	down	down 💿	provisional	down 💿	provisional	provisional	down 💿	up	up	up	up	up	up	up	up	CO2 - Picarro
Fast O3	down	up	up	up	up	up	up	up	up	up	up	up	up	up	up	Fast O3
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NO-NO2	down	up	up	up	up	up	up	up	up	up	up	up	up	up	up	NO-NO2
TOGA - Trace Organic Gas Analyzer	down	up	up	up 🙁	up	up	up	up	up	TOGA - Trace Organic Gas Analyzer						

#### Status reports summary

Home Reports Status

Ops Products Model Products Research Products Missi

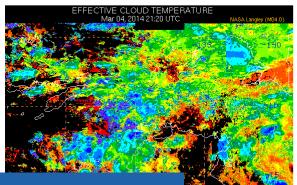
h Products Missions Tools & Links



HAIC-HIWC Field Catalog High Altitude Ice Crystals - High Ice Water Content Project



#### Latest Cloud Temperature



### For documentation/com munications:

Operations Schedule Project Time

UTC	Tues, Mar 4, 22:18 Z	Boulder	Tues, Mar 4, 3:18 PM
Darwin	Wed, Mar 5, 7:48 AM	Melbourne	Wed, Mar 5, 9:18 AM
Paris	Tues, Mar 4, 11:18 PM	Tokyo	Wed, Mar 5, 7:18 AM

#### **Current Reports**

Operations Plan of the Day Weather Discussion

#### Tools

Catalog Maps (GIS Tool)

#### Announcements/Schedule

Help

Communications Coordinator: Tom Ratvasky Phone: 0469 329 163

Updated at 01:30 UTC 02-Mar-2014

#### Announcement:

- No flights 02-March or 04-March the fuel control valve is expected to be in Darwin on Monday. However, a PC board for the fuel control is also required. This board has been ordered, but the delivery date is unknown at the moment. Current best guess is the test flight on 05-March.
- The forecast for the top end has dry air persisting through Wednesday. A tropical cyclone is anticipated to develop in the Coral Sea and move west toward Cairns. Planning is being initiated to deploy the Falcon 20 towards the east coast later this week after functional flight checks are completed.
- Decision on extension will be made on 05-March after gathering terms and conditions of
   extending lease at Pearl hangar and understanding the status of the aircraft

#### Plan for 02-Mar-2014

· no more meetings - enjoy the good weather!

#### Plan for 03-Mar-2014

- 09:00 Wx brief
- 09:30 FOG meeting
- 14:00 McBride presentation, "Australian Monsoon and the MJO (Madden-Julian Oscillation)", NTRO 2nd Floor conference room

#### Plan for 04-Mar-2014

- 09:00 Wx brief
- 09:30 FOG meeting
- Replace fuel valve after receipt

Times posted are local Darwin time, unless otherwise noted.



#### Partner Webpages HAIC Home Page

#### Catalog Resources Field Catalogs



EOL Pages

AMPS Model ASCAT Ship GOES-E GFS Model Soundings MODIS COSMIC Sounding METARs Aircraft products NOAA-18

### Supporting Products: Example - Satellite



### **FRAPPE Field Catalog**

Front Range Air Pollution and Photochemistry Experiment

Home Maps	Reports Status	Products - Missions	Tools & Links Data Access	Help		
		Satellite				
Satellite		Radar Surface				
« 2014/08/25 (UTC)		Surface Upper-Air		Choose Other Date		2014/08/27 (UT
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		Advisory				
Satellite Products	2014/08/26	Aircraft Model				
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# OWLeS Field Catalog Ontario Winter Lake-effect Systems

	Home	Reports	Status Ops	Products Model I	Products Research	Products Missions Tools	s & Links Data Access He	əlp
Mission Sumn	nary	10	End Date/Time	Event	Catalog Products	Flight Track Plot	Summaries	Notes
Table	01	2013-12-07 16:00	2013-12-07 23:00	LLAP band	Ops: Satellite Ops: Radar Ops: Surface Ops: Upper-Air Research: Radar Research: Surface Research: Upper- Air	UWKA Flight Track Plot	Summary Reports	A band-like structure, exhibiting small cellular features, formed early in the day near Oswego and persisted through the afternoon and early evening. The band was oriented approximately 280-290 degrees to the shoreline. Surface assets and soundings targeted this band. More substantial snow occurred with an E-W oriented band near Pulaksi, NY. The WY King Air flew parallel to the long axis of the lake. Upwind soundings were obtained in Ontario, Canada.
	02a	2013-12-10 16:39	2013-12-10 20:18	Downwind band	Ops: Satellite Ops: Radar Ops: Surface Ops: Upper-Air Research: Radar Research: Surface Research: Upper- Air	UWKA Flight Track Plot	King Air Mission Summary Report Millersville Tethersonde Summary Report	Weak mesoscale band oriented E-W off Lake Erie. Two surprising observations were that the Erie band extending east completely across the OWLeS operations area throughout the day (it died at sunset as expected from climatology) and that the cloud tops south of the band were just as high and turreted as those in the band. Indeed, the high reflectivity band seemed to follow a sharp change in depth of the moist convection rather than being assoicated with an isolated band of deeper convection.
	02b	2013-12-10 23:00	2013-12-12 02:00	LLAP band	Ops: Satellite Ops: Radar Ops: Surface Ops: Upper-Air Research: Radar Research: Surface Research: Upper- Air	UWKA Flight Track Plot	Summary Reports	An intense LLAP band was sampled on the east shores of Lake Ontario by ground assets. OWLeS operated through the night with all ground facilities commencing operations at 1800 EST and ending operations at 1900 EST on 11 December.
	03	2013-12-12 21:00	2013-12-13 07:00			t Mission/P gn Review:		An intense LLAP band was sampled on the east shores of Lake Ontario by ground assets. OWLeS operated through the night with all ground facilities commencing operations at 1600 EST and ending operations at 0200 EST on 13 December, although some teams continued data collection until 0900 EST.
	04	2013-12-15 20:40	2013-12-16 07:00	LLAP band	Ops: Satellite Ops: Radar Ops: Surface Ops: Upper-Air Research: Radar Research: Surface Research: Upper- Air	UWKA Flight Track Plot	Summary Reports	A surprise LLAP band was sampled on the east shores of Lake Ontario. The expectation from model guidance was that it would make landfall between Fairhaven and Oswego but instead the band moved Northward. In summary, this is a good case study for LLAP and orographic interests, but the coordination between aircraft and DOW measurements was rather poor, MIPS was nor under the band, and we did not have an east shore radiosonde north of the band.

		(Topic is	
	EOLnet	[21:26]	gvbot Lost touch with ground, holding 1 messages
•••••• AT&T 3G 4:13 PM 🖇 🔳	#GV		schanot_jeffCO JimMoore-Boulder: I'm in my office for teh moment. starting engines n
+ Colloquies Edit	#C130Q		JimMoore-Boulder schanot_jeffCO, OK, just making sure I am in the right place
Freenode	#network		JimMoore-Boulder scha
RDCC	#se		schanot_jeffCO some problems with telemetry data. still going schanot jeffCO key input for real time guidence are OK
avaps	#daq		schanot_jerrco key input for real time guidence are ok JimMoore-Boulder schanot jeffCO, flight plan looks good so far. The leading edge of
Mareike_CHC: first sonde looks o			schanot jeffCO roger that. just fixed our telemetry problem too
Sonja_CHC: !replay 30 minutes			JimMoore-Boulder excellent
C130Q		[21:28]	<pre>* ChrisWebster-pad has quit (Quit: Colloquy for iPad - http://colloquy.mobi)</pre>
SamHall_Smyrna: ads: Galia di sa		[21:29]	schanot jeffCO going out for departure. back when they are up
ads: SamHall_Smyrna, c		[21:29]	JimMoore-Boulder if you look at that lightning site I sent you at Duke U, you will se
GV and			storm. That is waht they are looking for
			schanot jeffCO JimMoore-Boulder: got that. Still a gap to pass through N of Texas bl
Jorgen Jensen_ops: Is Rc mobile!			JimMoore-Boulder Yep looks good to head for BDR and then over to OKC
owles		[21:31]	<pre>* schanot_jeffC0 has quit (Quit: http://www.mibbit.com ajax IRC Client) * Christophater_pad (give_50.152.60.223 had) go gorgant pat) has joined #CV</pre>
Redfield_Utah_sonde: Karen- a se		[21:31] [21:31]	<pre>* ChrisWebster-pad (cjw@c-50-152-60-233.hsdl.co.comcast.net) has joined #GV * ChrisWebster-pad has quit (Quit: Colloquy for iPad - http://colloquy.mobi)</pre>
Swego_sonde: Cap at 514 hPa!		[21:31]	<pre>* schanot_jeffC0 (80755432@ircip3.mibbit.com) has joined #GV</pre>
groundbot			schanot jeffCO JimMoore-Boulder: stuff SW of LBL not that high on IR image.
🗤 💓 At 14:21:16Z saw Steenburgh-Nor			JimMoore-Boulder schanot jeffCO, will the scienitsts come up on this channel?
At 14:32:54Z saw Steenburgh-Nor			schanot_jeffCO Ryan is listed
rdcc.guest.ucar.edu		[21:33]	schanot jeffCO going to ramp for departure
		[21:37]	JimMoore-Boulder Ryan, Are monitoring this channel now?
		[21:37]	Ryan affirmative. engine troubles.
Connections Colloquies		[21:39]	JimMoore-Boulder Ryan, OK, if you head out be aware of very tall cells west ok OKC ab
For Real-time		121.401	isolated but very tall
FOI Redi-time		[21:40] [21:40]	<pre>schanot_jeffCO JimMoore-Boulder: departure delayed. engine start problem. looking a Ryan copy thanks. pilots will see on radar yes?</pre>
		[21:40]	<pre>* schanot_jeffC0 has quit (Quit: http://www.mibbit.com ajax IRC Client)</pre>
Communications:			JimMoore-Boulder Yes they will, MCS is picking up speed so adjustments to the south
			go??
IRC Chat		[21:41]	* schanot_jeffCO (80755432@ircip3.mibbit.com) has joined #GV
			schanot_jeffCO JimMoore-Boulder: departure delayed
•••••• AT&T 3G 4:13 PM *			JimMoore-Boulder schanot_jeffCO, Roger-copy
Colloquies owles			schanot_jeffCO working on sensor in #2. will advise of status shortly
		[21:42]	JimMoore-Boulder OK Ryan yes ready here. i see cells W of OKC.
GregStoss-mobile: !replay 1440			JimMoore-Boulder Ryan, also some good + strokes from Duke
minutes		[21:50]	Ryan yes, i see that west of Davenport IA has lit up a bit.
GregStoss-mobile: Test			JimMoore-Boulder Ryan, The cells west of OKC are ramping up and could be good as well
KAK-CSWR: actually, no. but so is life.		[21:54]	Ryan copy that.
Redfield Utah sonde: Karen- a second			JimMoore-Boulder Any luck on the engine?
tab should have popped up on the top		[21:56]	Ryan negative
of the chat window			JimMoore-Boulder OK, fingers crossed for success
Oswego_sonde: Cap at 514 hPa!			JimMoore-Boulder Ryan, So for the moment, the storm resides in the SW quadrant of the Ryan copy. seems the sw 'tail' is producing + lightning now
You joined the room.		[22:10] [22:11]	Ryan copy. seems the sw tail is producing + lightning now JimMoore-Boulder Yep, system constantly cycling
iou pinou un room.		[22:18]	Ryan if i were to call it now, i'd recommend a north-south track east of OKC nort
		[22:18]	Ryan full shut down and reboot bye
		[22:18]	* Ryan has quit (Quit: Leaving)
		[22:19]	* ads-GV has quit (Quit: Leaving)
		[22:20]	JimMoore-Boulder schanot_jeffCO, Any update at this time?
		[22:26]	<pre>* gvbot has quit (rdcc.guest.ucar.edu hyper.raf-guest.ucar.edu)</pre>
			schanot_jeffCO JimMoore-Boulder: trying a full aircraft reboot. will advise
			JimMoore-Boulder roger
		[22:34]	schanot_jeffCO JimMoore-Boulder: looks like those two systems are merging. Will we have
			blob?

▼ rdcc.guest.u.. 🔒 (Topic is not set)

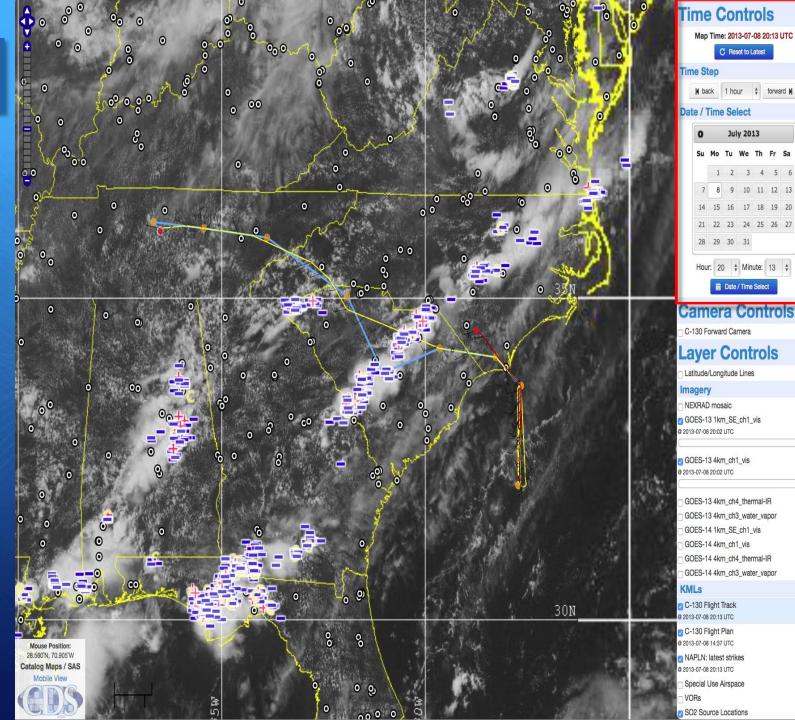
### Catalog Maps Tool:

Situational Awareness

Mission Planning

Flight Tracking

Mission Review



### Next Steps:

• With input from project participants, develop a prioritized list of operational and model products needed in the field.

1. What is needed for real-time decision making/situational awareness?

2. What are the important products/data that need to be captured to document the conditions in which you sampled?

## Potential Product List:

- GOES Imagery
- NOAA Polar Orbiter Mosaics
- MODIS Chlorophyll a, SST, PIC, POC
- ASCAT, WindSat
- AVISO Sea Surface Height?
- COSMIC Soundings
- Surface Met Obs
- Atmospheric Soundings
- AMPS Model
- NCEP GFS Model

- STILT Model
- GEOS-5 Model
- NCAR GV Flight Track
- NCAR GV Camera Images
- NCAR GV quick Look products
- Chat Logs
- LM Gould quick look products?
- Autonomous float quick looks?
- ADCP, Buoy, drifter products?
- PRISM quick looks
- OOI products?

category.platform.YYYYMMDDHHmm.product\_name.ext

Anonymous ftp upload

### Next Steps:

• The Field Catalog will be on-line by mid-December to give you time to become familiar with it before the campaign.

• I'll do a tutorial on how to use the Field Catalog before the campaign starts via a web conference.

• I'll be on-site in Punta Arenas for the first three weeks of the campaign.