



The United States Interagency Coordinating Committee for Airborne Geosciences Research and Applications (ICCAGRA)

Jason Tomlinson (PNNL/DOE), Garron Morris (NRL), and
Anthony Guillory (NASA)

SCOAR
Marina, CA
June 23, 2011

ICCAGRA Overview



■ Goals of ICCAGRA

- Improve cooperation amongst US Agencies
- Foster awareness
- Facilitate communication
- Resource for senior level management



■ Has no binding authority

- Agencies voluntarily participate and voluntarily adopt standards at their own pace
- Different from EUFAR



■ Members actively involved in standardizing US and international airborne datasets and instrumentation

- Involved internationally within ISPRS WG I/1: **Standardization of Airborne Platform Interface**



■ Each US Agency has developed their own specialties with slight overlaps



ICCAGRA Overview



Facilities for Atmospheric and Earth Science Research

<http://faesr.ucar.edu>

FAESR
Facilities for Atmospheric and Earth Science Research

CATEGORIES SEARCH ABOUT LOGIN REGISTER

FAESR is the online resource of facilities and instruments used by the atmospheric and earth system research communities.

Getting Started is Easy

Browse By Category OR Search







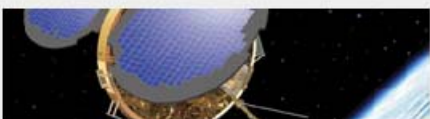


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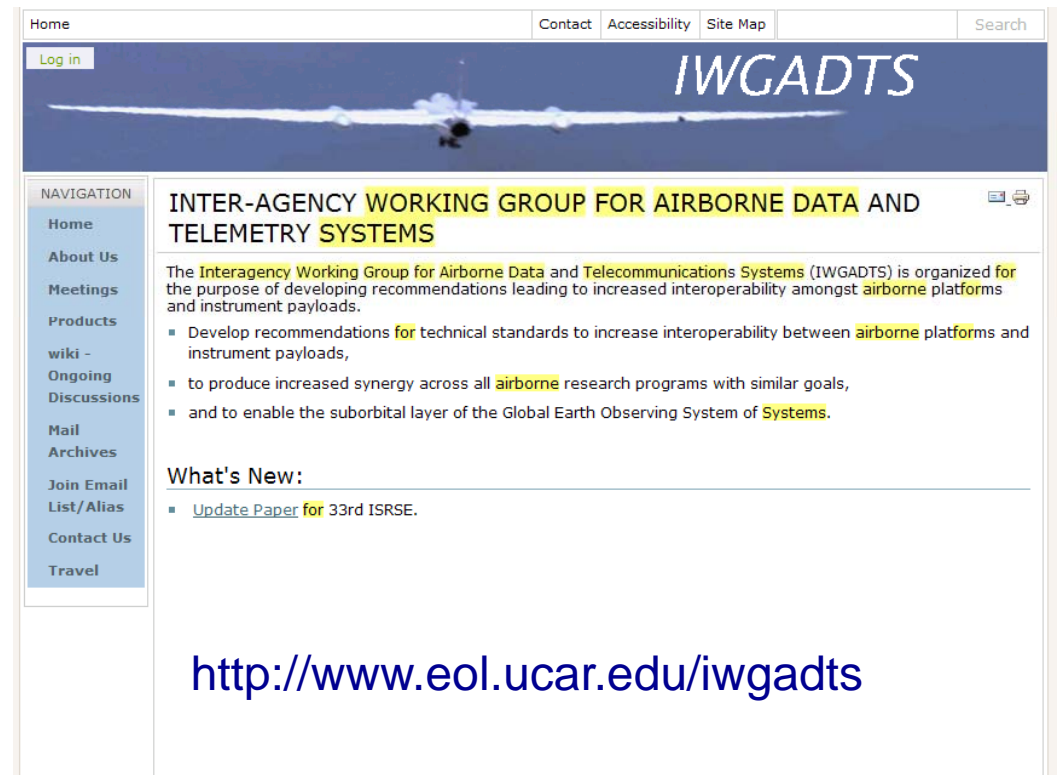
Categories

 <p>Airborne Platforms View All</p>	 <p>Airborne Measurements View All</p>	 <p>Calibration Facilities View All</p>
 <p>Emerging Technology View All</p>	 <p>Surface Remote View All</p>	 <p>Surface In-Situ View Instruments View Networks</p>
 <p>Satellite Instruments View All</p>	 <p>Ships View All</p>	 <p>Solar Instruments View All</p>

ICCAGRA Working Group

■ IWGADTS Working Group

- Commonality in data streams
- Commonality in DAQ systems
- Instrument integration
- Commonality in data formats



The screenshot shows the homepage of the Inter-Agency Working Group for Airborne Data and Telemetry Systems (IWGADTS). The page features a navigation menu on the left with links for Home, About Us, Meetings, Products, wiki - Ongoing Discussions, Mail Archives, Join Email List/Alias, Contact Us, and Travel. The main content area includes a header with the IWGADTS logo and a search bar. Below the header, there is a section titled "INTER-AGENCY WORKING GROUP FOR AIRBORNE DATA AND TELEMETRY SYSTEMS" with a brief description of the group's purpose and a list of goals. A "What's New" section lists an update paper for the 33rd ISRSE. The URL <http://www.eol.ucar.edu/iwgadts> is displayed at the bottom.

WG I/1 - Standardization of Airborne Platform Interface



<http://www.commission1.isprs.org/wg1/>

- International Society for Photogrammetry and Remote Sensing
 - Promote the standardization of instrument interfaces, data formats, and aircraft accommodations
 - Facilitate more efficient, flexible, and cost-effective international science flight operations



- Department of Energy Atmospheric Radiation Measurement (ARM) Aerial Facility (AAF)

- Science dictates the platform
 - Many field campaigns focused around DOE ARM mobile and fixed facilities. This includes the AMF2 which can be installed on a ship
 - Operates a “Virtual Hangar” and a G-1 Aircraft
- Wide range of instrumentation
 - DOE ACRF procured 18 new instruments under the 2009 Recovery Act
 - Can be installed on a multitude of aircraft





■ National Aeronautics and Space Administration

- Provide aircraft systems that further science and advance the use of satellite data
 - Calibration and validation of satellites (A-Train)
 - Test new sensor technologies in space-like environment
 - UAS
- Maintains a catalog of research aircraft



■ National Suborbital Education and Research Center

- Joint Venture between NASA and The University of North Dakota (UND)
- Student Airborne Research Program (SARP)
 - Allows students hands-on training in airborne science using earth-observing instruments aboard the NASA DC-8
- Aircraft is used for other NASA field campaigns throughout the year



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NSF/NCAR



- National Science Foundation/National Center for Atmospheric Research
 - NCAR Research Aviation Facility operates a C-130Q and G-V supported by NSF
- NSF supports other platforms
 - NRL P-3
 - Wyoming King Air





■ Naval Research Lab

- Mostly military related deployments but can be deployed for other USA agency related research
- Primary focus on remote sensing
- Mix of aircraft
 - NP-3D Orion, C-12 (King Air B200), MZ-3A Airship, and UAS



NOAA



- National Oceanic and Atmospheric Administration
 - NOAA's mission is to describe and predict changes in the Earth's environment and to conserve and manage wisely the nation's coastal and marine resource
 - Operate the hurricane hunters
 - Also conduct flights for marine and atmospheric research



ONR/CIRPAS



- Office of Naval Research/Center for Interdisciplinary Remotely-Piloted Aircraft Studies
 - Twin Otter is operated under a cooperative agreement with NSF
 - Primary focus is atmospheric research with some flight operations for the Navy
 - Twin Otter and a Pelican (Cessna 337 Skymaster)
 - UAS research
 - Looking to acquire an A-10 for storm penetration



USFS

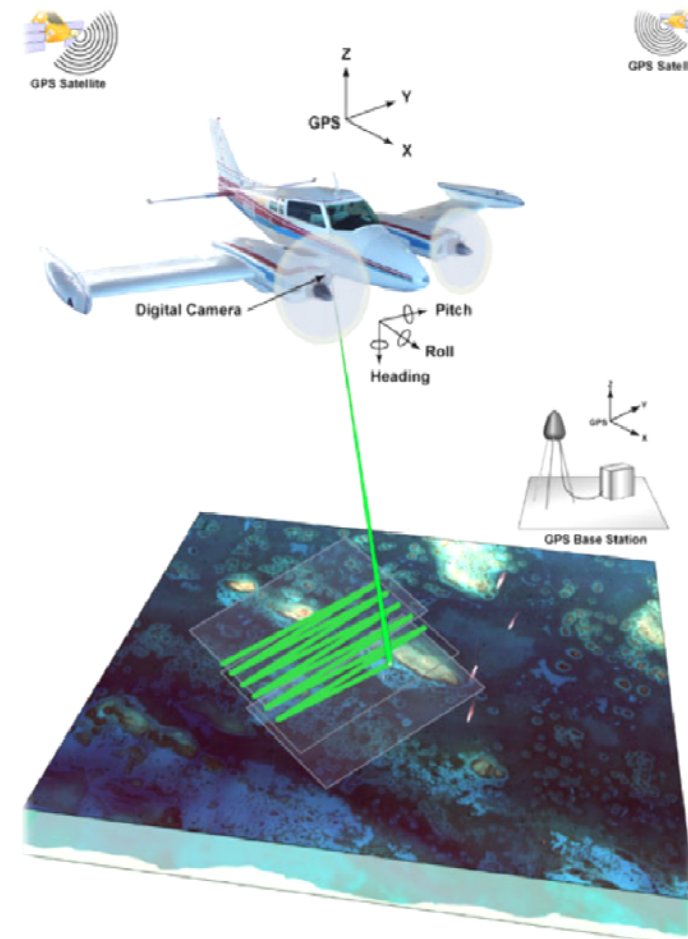


■ U.S. Forest Service

- Owns and operates 27 aircraft and helicopters
- Contracts with over 800 aircraft and helicopters annually
- Missions Include:
 - Fire surveillance
 - Aerial reconnaissance
 - Air Attack
 - Delivery of smokejumpers
 - Firefighter and cargo transport
 - Aerial delivery of retardant and water
 - Natural Resource Management



- U.S. Geological Survey
 - Experimental Advanced Airborne Research Lidar (EAARL)
 - Remote sensing of vegetation canopy structure and submerged topography for use in ecological models and environmental stewardship
 - Recently started to using a version 2 EAARL



ICCAGRA Successes



- ICCAGRA is fostering cooperation and communication amongst US agencies and international counterparts
 - IWGADTS
 - EUFAR and ISPRS WG
- Each agency has unique capabilities
 - Intercomparisons and cooperation during field campaigns
 - DOE/CIRPAS – CALWATER February 2011
 - NOAA/DOE – CALNEX/CARES May and June 2010
 - NOAA/NASA/DOE – ARPAC/ARCTAS/ISDAC April 2008
- Member agencies are pushing forward with the use of UAS for scientific research
 - NOAA and NASA joint work on the Global Hawk

ICCAGRA Additional Information

Interagency Coordinating Committee for Airborne Geoscience Research and Applications (ICCAGRA)

The Interagency Coordinating Committee for Airborne Geoscience Research and Applications (ICCAGRA) was established to improve cooperation, foster awareness, facilitate communication among cooperating agencies having airborne platforms and instruments for research and applications, and serve as a resource in terms of flight management on airborne geoscience issues. The Council on Airborne-Management cooperation on issues as they pertain to the use of airborne platforms and instrument payloads for individual investigators as well as national and international flight campaigns.

ICCAGRA is sponsored by the [United States Department of Energy](#)

Topic Map

- ICCAGRA
- Recent Meetings
- Upcoming Presentations and Missions
- Member Agencies
- Membership
- Subscriptions
- Meetings
- New Business
- Meet Us Here

New Items

August 6, 2016

The 2016/2017 meeting will be held on Oct. 28th at the Météo-France Conference Centre in Toulouse, France during the [International Conference on Remote Sensing for the Environment](#)

Leadership

Chairman: Jason Tomlinson, ORNL / PNNL, USA

User-Chairman: Carol Morris, ORNL

Secretary: Anthony Gailley, NASA

Agencies Involved in ICCAGRA

Member Agency	Web Site	Web
CCC Atmospheric Radiation Measurement Central Facility	ccc	ARM Tools
NASA	nas	ARM Tools
NSERC National Scientific Education and Research Center	nserc	ARM Tools
NSF Earth System Laboratory	esl	ARM Tools
NSF (New Research) Lab	new	ARM Tools
NOAA Aircraft Operations Center	noaa	ARM Tools
OSR (Office of Naval Research) CBRAE Program Office	osr	ARM Tools
USCC (United States Civilian Research)	uscc	ARM Tools

<https://wiki.arm.gov/bin/view/ICCAGRA/WebHome>

Jason Tomlinson

Pacific Northwest National Laboratory
AAF Operations Lead and G1 Scientist
P.O. Box 999, K9-24
Richland, WA 99352
(509) 375-2715
jason.tomlinson@pnnl.gov