

Airborne Research Consultants

THE PRINCIPALS

➤ **Robert J H. Eatwell**
Partner & General Manager

Engineering coordinator for the research modifications, with over 40 years' experience in aviation worldwide including 16 years working with atmospheric research platforms.

➤ **Dr Lawrence F. Radke**
Partner & Chief Scientist

35 years' experience in atmospheric research and published in excess of 100 papers in the scientific literature, mostly the results of using instrumented aircraft to study geophysical phenomena.



Volcanoes are a major natural source of pollution and climate change.

ARC Scientists have a successful history of safe airborne sampling and characterizing erupting

volcanoes from Alaska to Antarctica.

➤ **Charles Smeltzer – Associate Scientist**
Responsible for data analysis and software interfaces. Remote sensing applications and analysis a specialty. Graduate of the University of Washington, Atmospheric Sciences. Currently also at Georgia Tech completing an MSc.

➤ **Gary Bendall - Engineering**

Responsible for the company's logistics and maintenance in UK. He also has 30 years' experience in aviation.

➤ **Alex Dunn – Chief Pilot**

Has over 25,000 flight hours in aircraft ranging from Piper J-3's to Boeing 747's, and flying boats to single engine fast jets. Retired from United Airlines after 32 years of worldwide pilot experience as Captain and check pilot.



Cessna Super Skymaster T 337C Wyoming May 2009

EUFAR Member

Airborne Research Consultants LLC

Our Mission

Verification Through Experiment and Observation



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Robert J H Eatwell

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THE BEGINNING

For more than 30 years, the University of Washington conducted atmospheric research using various aircraft, pilots to fly them, engineers to care for them, and scientists to utilize them. Over those years, the scientists, pilots, engineers, and support staff gained an enormous wealth of experience, which is now available under the umbrella of the Airborne Research Consultants.

ARC LLC continues in that tradition to offer both innovative airborne services, research and analysis. We offer a seasoned team of aircraft operators, a technical support group, and an international scientific staff with both pole-to-pole and dateline-to-dateline operations experience and solid research accomplishments. These accumulated years of experience have culminated in a diverse, experienced team with the capability of meeting the research needs for science, government agencies, universities, and industry.

RECENT ACCOMPLISHMENTS

Biomass fire is a large source of Greenhouse Gases and pollution. We hypothesized that these fires would be a major source of toxic mercury pollution. ARC LLC laboratory and airborne measurements confirm this hypothesis! Subterranean coal fires are a known source of global pollution, but there are few actual quantitative measures of the total amount of this valuable fossil fuel wasted in these fires.

THE SCIENTIFIC EQUIPMENT

We are able to either fit your instruments onto the aircraft per your requirements and within airworthiness parameters or utilize our own. Which includes a Lidar. Once the needs of each mission are determined, our engineers, pilots and scientists will work with you to ensure that the process of data collection will meet the project requirements.

Custom instrumentation and system integration is also an option as ARC LLC is forging cooperative agreements with several R&D companies for this purpose.

ENGINEERING

The engineering team is led by the Engineering coordinator who has 40 years' experience in international aviation engineering.

The Scientific Team:

A consortium of scientists with affiliations to national laboratories, major universities, and industry has joined to form a flexible core of experienced field researchers. Expertise includes atmospheric physics, remote sensing (Lidar, infrared, and microwave), cloud physics, atmospheric chemistry, meteorology, instrumentation development, numerical fluid dynamics, safety and flight hazard analysis and nearly three hundred peer reviewed research publications.

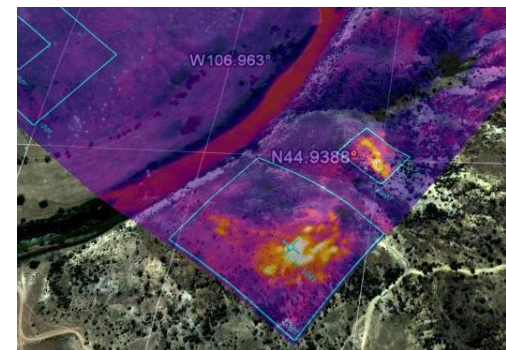
This team can provide a completely integrated research effort designed to required specifications and executed to contractual terms including publication of key results, alternatively, the science team and ARC LLC can play a support role to users who would rather create their own payload and lead the field experiment.

THE AIRCRAFT

The company is focused on providing its services to the underserved community that need small to moderate sized aircraft anywhere in the world either next week or all next year! Consult with us to match our fleet of owned and leased aircraft to your mission and budget.

FLIGHT OPERATIONS in the ARCTIC and REMOTE LOCATIONS

The team, with its international basing and extensive Arctic and Alaskan experience can be a turnkey solution for airborne researchers needing support in truly remote locations.



Coal fires in the Powder River Basin. Airborne Thermal Infrared image (ARC®) overlain on photograph. (2009)

THE TEAM

The Flight Operations Team:

Consists of a cadre of experienced research aviators led by a Chief pilot with many years of experience in all theatres of the world assisted by the maintenance engineer who also has many years of aircraft structural modifications to accommodate scientific instrumentation, while preserving standard airworthiness.

Instrumentation and Technical Staff:

This is the group that makes a payload of instruments fly in formation and do science. Led by former members and consultants to the various Universities, NASA, NOAA, NCAR DoE and EPRI, this staff of professionals has decades of experience in research instrumentation and computer integration.