Cockpit Upgrade
The National Institute for Aviation Research (NIAR) will continue development of the software interface and validate the ergonomic design of an Advanced Cockpit Ground Control Station (ACGCS) for UAVs, under contract to the U.S. Air Force and General Atomics Aeronautical Systems. NIAR’s Human Factors Lab is helping to improve the operation of the control station, which features multiple keyboards, input devices, and displays that have increased operator workload, says Alex Chaparro, director of the lab. Predator variants are used heavily by the Air Force, and as capabilities have increased more hardware has been added to the ACGCS, he says. As a result, the Air Force is interested in an improved design that will make operator interface easier. NIAR’s upgrade is scheduled to be completed during the next 19 months. The ACGCS will feature touch-and-wide-screen video presentations to expand visual cues to the pilot and sensor operators, improve situational awareness and reduce overall workload. Upgrades will be retrofitted into UAS control stations used by the Air Force, Navy and the Homeland Security Dept.

Arctic Aerosols
Climatologists at NASA Langley Research Center in Hampton, Va., will deploy the agency’s High Spectral Resolution Lidar (HSRL) system late in June to the Arctic as part of an intensive field campaign to investigate the region’s lower atmosphere and identify how pollution contributes to climate change there. HSRL is designed to study the size, composition, distribution and movement of aerosols and will be deployed on board NASA’s Beechcraft Super King Air 200. HSRL validates measurements taken by the Calipso spaceborne Lidar as well as those retrieved from satellite-based passive sensors. The three-week deployment is part of NASA’s ArcTAS program (Arctic Research of the Composition of the Troposphere from Aircraft and Satellites).

Laser Lights Up
Boeing has fired the Advanced Tactical Laser (ATL) technology demonstrator for the first time on board its C-130H testbed. The ground firing on May 18 at Kirtland AFB, N.M., marked the beginning of tests leading up to inflight firings at “mission-representative ground targets” later this year to evaluate the high-energy chemical laser’s military utility. U.S. Special Operations Command is handing over management of the ATL to the U.S. Air Force, which plans to award Boeing a three-year contract to support an extended user evaluation of the prototype that would involve “flight operations approximately eight times a year,” according to a presolicitation notice.

BLADE SAVERS
An ultra-hard titanium nitride coating on the leading edges is among approaches Sikorsky will investigate under a U.S. Army program to develop more durable helicopter rotor blades able to withstand sand and rain erosion. The goal is a blade life of 1,000 hr. in erosive environments, compared with the 200-300 hr. being achieved in Iraq. Under a 42-month, $11.4-million contract from the Army’s Aviation Applied Technology Directorate, Sikorsky will explore new materials, coatings and other treatments for the blade leading edge and tip cap and deliver a set of four main rotor blades and two tail rotor blades for testing on a UH-60L Black Hawk. The U.K. is also looking at ways of reducing rotor blade wear, though in this case on its Boeing Chinook heavy-lift helicopters. An in-theater trial modification is underway on one of the helicopters deployed in Afghanistan, fitting “tape” to a section of the blade leading edge. The material is intended to wear down but still protect the blade surface it covers.

Trotting the Globe
There has been an interest from some Asia-Pacific and Middle East countries in Boeing’s C-17 Globemaster III, which is designed to fulfill military and humanitarian airlift, according to Michael J. Marshall, senior manager for international business development at Boeing’s Global Mobility Systems. He notes that the C-17 could fulfill the Indian air force requirement for a multimission aerial refueling aircraft. The Seattle-based company has already briefed the air force, and officers flew the plane at Aero India last year. The order for 10-12 aircraft would provide a needed boost to Boeing’s supplier base and help keep the line open for this lucrative aircraft.

Sames South of the Border
The Safran Group has expanded its presence in the Americas with the May 16 opening of a maintenance, repair and overhaul facility in Queretaro, Mexico. The new Sncema Services subsidiary, Sncema America Engine Services (Sames), will be dedicated to CFM56-5A, -5B and -7B aircraft engines.

Vought Wings It for Cessna
Vought Aircraft Industries will build wings and slats for the Model 850 Cessna Citation Columbus business jet, a deal worth a potential $1 billion to the Dallas-based company. The first test article is due in 2010 and the first production shipments in 2011. Engineering and tool design will be conducted at the Dallas site; production is slated to take place in Nashville, Tenn., and marks the first new full-wing contract for that site in 20 years. However, Nashville has a long relationship with Cessna, building upper- and lower-wing panel assemblies for the Citation X, notes site General Manager Dan Tharp.