

## MORE ABOUT THIS MONTH'S COVER IMAGE

On June 14, 1972, a tropical depression formed over the Yucatán Peninsula. By June 18, it had intensified into a hurricane, Agnes, which made landfall near Panama City, Fla. As it crossed Georgia, it weakened into a tropical storm and then marched up the Atlantic Coast, finally weakening over New York.

Along the way, however, Agnes dumped as much as 19 inches of rain on locations in Pennsylvania, causing the Susquehanna River to flood. Those flood waters had a major impact on people and property throughout the state, including an airplane factory in Lock Haven, located next to the river's west branch.

That factory belonged to Piper Aircraft Corp., and was the manufacturing site for the company's Aztec, Navajo and Comanche models. Flood waters destroyed some 100 airplanes and damaged or destroyed tooling for the three types, spelling the end of Comanche production, among other outcomes.

The flood was a major blow to Piper, but the company gave to NASA some 32 airframes for crashworthiness research, including the PA-23 Aztec pictured here and on this issue's cover.

The aircraft were transferred to NASA's Langley Research Center in Virginia, where a rig originally designed for testing lunar modules for landing on the moon was used to simulate various crash scenarios. That facility is known as the Impact Dynamics Research Facility (IDRF).

According to NASA, "Dynamic structural response data were obtained by conducting full-scale crash tests of GA aircraft under a variety of impact conditions. In all, 33 crash tests were performed during the 10-year period from 1974 through 1983." Subsequent testing at the IDRF has included Cessna, Cirrus, Lancair and LearFan aircraft, as well as a Beech Starship.

