

A Year to Remember

THE events, the thoughts, the facts, the successes, the failures, and the joys to be remembered depend on the mind doing the recalling. The merit of recounting the events, the thoughts, the facts, et cetera, depends on who will be exposed to the recollection. The members of the American Institute of Aeronautics and Astronautics, the editors, and especially the subscribers to the *Journal of Aircraft* share a strong common interest in things aeronautical. With that prelude, let's recall some of the events of the past year.

The passing of Howard Hughes occurred in 1976. His legacy includes many contributions to aviation stretching from the early 1930's through World War II. Remember the "Spruce Goose"; that was an aircraft using nature's composite materials.

Supersonic travel was initiated across the Atlantic in 1976. Circumstances for the inaugural flight were much different than envisioned when work was started on the Concorde about a decade ago. Fuel prices, specifications for noise and engine emissions, and the general state of airline economics were unknown factors. Being an aviation enthusiast, the Editor wishes much success to the Concorde. A case can be made for an advanced SST; see, for example, the Dryden Lecture (*Journal of Aircraft*, December, 1975) presented by the late Professor Antonio Ferri.

In 1976 the Boeing 747SP established some impressive records for range and speed. One record is the round-the-world time for a transport; the flight was a PanAm 747SP. In another flight, a Boeing 747SP was delivered to South African Airways by a nonstop flight Seattle to South Africa. Look at your globe in your den and be impressed.

Another event during the past year was the first hijacking of an aircraft within the United States of America in several years. Security checks are a nuisance; however, the recent hijacking reaffirms the necessity for inspection. New talents and new skills have evolved for armed services and/or police departments to master. The new task is recovery of hostages and aircraft. It can be done as was demonstrated in 1976.

The jet age began in 1957-1958. When you board a commercial airliner, you can glimpse the certificate. This gives the date of manufacture. There are aircraft in service that are 10, 15, going on 20 years old. This means three things: First, a 15-year-old aircraft has flown many thousands of hours and transported many thousands of passengers safely to their destinations; second, the aircraft is flying with outdated engine and airframe technology; and third, the aircraft needs replacement more severely with each passing year. There will be a market for replacement transport aircraft. The technical papers in the *Journal of Aircraft* will contribute to the design of the new transports. The big question yet unresolved in 1976 is the specifications for the new aircraft.

In 1976, the nation's Aerospace Museum opened. For many years there was a vacant spot on the Mall dedicated to the Museum. Construction began and progressed. For many months before the official opening, the windows were smudged with handprints and noseprints of tourists and aviation enthusiasts who wanted to see inside. At one time your editor's handprint was spaced about every 20 feet along the expanse of windows. When you go to Washington, D. C., the Aerospace Museum is well worth a visit.

For military aviation, 1976 contributed many interesting and significant events. The MIG-25, Foxbat, landed in Japan. The F-14 went over the side in the North Atlantic. Although there were few rollouts of new aircraft, testing continued for several important aircraft, such as the B-1. 1976 could be called the year of the cruise missile. Attention has been focused on cruise missiles by the SALT talks. Numerous technical milestones were achieved by cruise missiles in 1976.

Within Naval aviation the foundations for VTOL attack and fighter aircraft are being developed. The Marine Corps is operating the Harrier today. The aim of the Navy's emphasis on VTOL is to develop subsonic attack aircraft with performance comparable to CTOL. Later supersonic VTOL fighters will become operational when performance is competitive. VTOL aircraft can be dispersed throughout the fleet. In 30 years the big carriers *may* be gone, and Naval aviation may have VTOL, VA, and VF aircraft on many ships. So 1976 is another year in the life of the big carriers.

When you look at sales figures for aircraft for general aviation, the fact that strikes your interest and imagination is the numbers. Although not quite in the same league as automobile production, general aviation does sell many aircraft. Many more general aviation units are sold than commercial. 1976 was another good sales year. Trends in general aviation are to more turbine-powered aircraft. Efficient airfoils and heavier wing loading are new trends.

The year 1976 was one of perturbation for Associate Editors for General Aviation. Dr. Roy Reichenbach had moved to Europe and was replaced by Professor Melvin Snyder. Because of the pressure of other activities, Professor Snyder resigned. We express thanks to Professor Snyder for his help during his brief editorial career. Upon the recommendation of the AIAA General Aviation Technical Committee, Professor Allen Ormsbee was appointed as Associate Editor with responsibility for General Aviation.

James Dougherty, who was Associate Editor for Aircraft Operations, Aircraft Design, and similar topics became interested in city government. He is a new councilman in his city. So that he could devote time to his duties as councilman, Jim resigned as Associate Editor. Mr. Dougherty served as Editor-in-Chief of the *Journal of Aircraft* after the death of Carl Schmidt. We will miss his counsel based on long experience and his consistent performance as Associate Editor. James Dougherty's replacement is Dr. Joseph Tymczyszyn. Dr. Tymczyszyn is a graduate of both California Institute of Technology and Massachusetts Institute of Technology; he has several hundred hours as pilot of a variety of aircraft. Soon he will qualify as a transport pilot, having checked out in a DC-9. Joe is the youngest member of the Associate Editor team; he has an excellent background. John Povolny completed a long tour of duty as Associate Editor of the *Journal of Aircraft*. He was mainly responsible for propulsion papers. As you may or may not know, John retired from NASA Lewis, which allowed him to spend many weeks at his cabin on a remote lake. While at the lake, he edited papers, along with fishing, boating, and other activities. He did an excellent job as Associate Editor. Thanks, John, for your help.

Toshi Kubota, Edwin B. Stear, and E. Carson Yates continue as Associate Editors, having worked earnestly to make the *Journal of Aircraft* a quality journal in 1976. Thank you, Toshi, Ed, and Carson for your help.

The *Journal of Aircraft* is growing. To ease the backlog of papers, the AIAA Board of Directors authorized more pages per volume. To better serve the authors of papers involving helicopters, rotary wings, and similar topics, David Clark was appointed as Associate Editor for that technical area.

Production of the *Journal of Aircraft* using AIAA in-house equipment and staff became routine during 1976. You were alerted that the *Journal of Aircraft* was on a catch-up schedule. In June, 1976, the June issue was in your mailbox. The long hours and dedicated service of the New York staff, and especially David Staiger and Ruth Bryans, deserve your "Thank you."

It has been a rewarding experience to work with Ralph R. Ragan, Vice President-Publications. He is a man of action;

when you need a prompt decision, call Ralph. Almost daily, Mrs. Anne Huth and your editor are talking by telephone about manuscripts, reviews, etc. Mrs. Huth is a valuable member of the *Journal of Aircraft* team.

Without authors and their papers, there would not be a *Journal of Aircraft*. We thank the authors for selecting the *Journal of Aircraft* as their journal for publication. Without

reviewers, the technical quality of the *Journal of Aircraft* would slip. Reviewers are the anonymous, unsung team members who help to produce the *Journal of Aircraft*. Once a year we express our gratitude to the reviewers for their time and talent. Their names are listed below.

Allen E. Fuhs
Editor-in-Chief

Reviewers for *Journal of Aircraft*, September 1, 1975–August 31, 1976*

Abla, Mike H.	Decher, Reiner	Jackson, Charlie M., Jr.	Meister, Frederick A.	Soosar, Keto
Adams, Michael	Deets, Dwain A.	Jagowski, Joseph J.	Mellberg, L. E.	Starnes, James H., Jr.
Adams, William M., Jr.	DeJarnette, F. R.	James, R. H.	Menke, James A.	Stava, Donald
Adee, Thomas C.	DeNeeve, Pieter	Jeffrie, Howard L.	Meyer, Robert	Steenken, William G.
Allen, James M.	Dennaut, J.	Jenney, David	Mook, Dean T.	Stevens, C. E.
Almroth, B. O.	Desmarais, Robert N.	Jewel, J. W.	Morse, H. Andrew	Stockham, Leo W.
Alpaugh, Richard T.	Dirian, Donald	Johnson, Bruce V.	Motycka, Dave	Stone, James
Antonatos, Philip P.	Dixon, C. J.	Johnson, Norman S.	Murphy, Charles H., Jr.	Stone, Melvin
Appa, Kari	Doggett, Robert V., Jr.	Jordan, Peter F.	Nebiker, Fred R.	Stone, Richard
Arnoldi, Robert A.	Donovan, Allen F.	Kamber, Peter W.	O'Brien, Walter F., Jr.	Stout, C. L.
Asseo, S. J.	Doolittle, Donald B.	Kancke, Theodore W.	Ojalvo, I. U.	Strahle, Warren C.
Bach, Ralph E.	Drinkwater, Fred	Kaza, K. R.	Opt, Preston	Straub, William L.
Bailey, Cecil D.	Dusterberry, John C.	Kazin, Stephen B.	Orminston, Robert A.	Stroud, W. Jefferson
Baird, Eugene F.	Eisenhuth, Joseph J.	Kelleher, Mathew	Ormsbee, A. I.	Stubbs, Sandy M.
Balke, Rod	Ekval, J. C.	Kelley, Henry J.	Ortwerth, P. Jim	Sturgeon, D. L. G.
Barker, Steve	Ericsson, Lars E.	Kimsey, William F.	Paul, Donald B.	Sullivan, Philip A.
Barksdale, Gerald	Fairbanks, David R.	Klimas, Paul	Pavelka, Jerry	Summerson, T. M.
Baron, Sheldon	Fink, Martin R.	Knip, Gerald, Jr.	Payne, Peter R.	Surber, Lewis E.
Batill, Stephen M.	Firebaugh, John M.	Konar, Ferit	Perkins, Jeff	Szalai, Kenneth
Beamish, Edward A.	Flanagan, Steve	Korn, James A.	Pifko, Allan B.	Tabakoff, Widen
Beckwith, W. B.	Flax, Alexander H.	Krause, L. N.	Pirani, A. G.	Tai, Tsze Cheng
Beitch, L.	Fletcher, Leroy S.	Kreider, Kenneth G.	Pittman, Claud	Talay, Theodore A.
Belanger, Raymond G.	Fornberg, B.	Kulthan, Alden R.	Poe, Clarence C., Jr.	Taylor, Robert B.
Belsley, Steven E.	Foye, R. L.	Kuo, Ching	Polhamus, Edward C.	Thomas, R. M.
Beneze, Daniel	Friedmann, Peretz	Kurosaka, Mitsuru	Poyneer, R. D.	Thompson, J. D.
Bennett, Robert	Fuller, James R.	Kvaternik, Raymond G.	Pratt-Barlow, Charles R.	Thompson, W. Blake
Bert, Charles W.	Giesing, Joseph P.	Lamar, John E.	Pride, Richard A.	Thomson, Robert G.
Besuner, P. M.	Goebel, Thomas P.	Lammers, Ramsey A., III	Quinn, Brian	Tiffany, Charles F.
Bettes, W. H.	Goldhammer, Mark I.	Lan, C. T.	Radocyich, N. A.	Tigner, Glen D.
Beverage, Allan D.	Graber, Edwin J.	Lassiter, L. W.	Rediess, Herman A.	Ting, Lu
Bezbatchenko, John W.	Gregory, Thomas J.	Laufer, John	Reeves, Jerry B.	Tombak, I. H.
Bihrie, William, Jr.	Grosser, William F.	Laughrey, James A.	Regan, Frank J.	Tramm, Peter C.
Blake, Neal A.	Haggenmacher, Gernot W.	Law, C. E.	Rekos, Nelson F.	Traybar, Joseph J.
Bland, Samuel R.	Hall, G. W.	Lelong, L. G.	Reuter, James	Tumlinson, Richard M.
Block, David L.	Hall, W. Earl, Jr.	Lenoe, E. M.	Richter, Heinz	Van Dyke, Milton
Bobbitt, Percy J.	Hallock, James N.	Leonides, Cornelius T.	Riddell, Fred	Varisco, V.
Brown, Clinton E.	Halpin, John C.	Levine, Arnold M.	Rodden, William P.	Vaughn, Harold R.
Brown, Glen J.	Hammond, Charles E.	Levison, William H.	Rodier, Robert W.	Viets, Hermann
Browning, C. E.	Hanagud, Sathya	Lewolt, John G.	Roger, Kenneth L.	Viswanathan, A. V.
Bruckner, J.	Harris, Franklin D.	Lichtenstein, Jacob H.	Rosenthal, Jenny E.	Walker, Charles D.
Bryson, Arthur E., Jr.	Harris, Hollis L.	Liebeck, Robert H.	Roskam, Jan	Wallace, Richard E.
Burnham, David C.	Harrison, Allyn W.	Linder, Douglas W.	Ross, Robert	Walton, William C.
Cantin, G.	Hartmann, Gary	Lo, Ching-Fang	Saintsbury, J. A.	Wan, Frederic Y. M.
Carson, Bernard H.	Hassig, Hermann J.	Lugatch, I. D.	Sakata, I. Frank	Waszczk, J. P.
Carver, Dale R.	Havill, C. Dewey	McAllister, Jack D.	Sattar, S. A.	Waterman, Hugh
Casper, D. R.	Hayduk, Robert	McAvoy, J. M., Jr.	Savaro, Jay	Wehofer, S.
Cavage, Robert L.	Hayes, Daniel E.	McBain, Don C.	Schmidt, Louis V.	Wennerstrom, Art
Chalk, Charles R.	Heard, Walter L., Jr.	McCarty, John E.	Schmit, Lucien A., Jr.	Wentz, W. H.
Chaplin, Harvey R., Jr.	Hedrick, J. Karl	McCord, Thomas	Schwind, R. G.	Whitaker, H. Philip
Chevalier, Howard L.	Heinrich, Helmut G.	McCullers, L. A.	Seckel, Edward	White, Frank M.
Clark, Bruce J.	Heller, R. A.	McDonald, J. F.	Seebass, A. Richard, III	Whitfield, Jack D.
Clark, D. R.	Hertz, Julius	McIntosh, Samuel C.	Sendeckyj, George P.	Widnall, Sheila
Clark, John W., Jr.	Hess, Ronald	McMahon, Howard M.	Sheldon, Duncan	Williams, Darrell D.
Connolly, John	Hewett, Marle	McRuer, Duane T.	Sheridan, T.	Williams, J. G.
Cooper, Thomas	Hoak, Donald E.	MacBain, James C.	Sherman, Pauline M.	Wilson, O. B.
Corsiglia, Victor	Hofmann, L. G.	Mager, Arthur	Shirk, Michael H.	Winston, Matthew M.
Cunningham, Atlee, M., Jr.	Hoh, Roger	Magruder, William M.	Shollenberger, Carl	Winterfeld, Gert
Curran, Edward T.	Holladay, Will L.	Maine, Richard E.	Sidwell, Kenneth	Witmer, Emmett A.
Curtis, Frederick A.	Horn, Kenneth P.	Majumdar, Saurindranath	Simpson, Ernest C.	Wolfhard, H. G.
Danforth, C. E.	Huttsell, L. J.	Marcus, Henry S.	Smetana, F. O.	Wolfster, W.
Davenport, Franklyn J.	Ibrahim, Shukry K.	Marshall, Francis J.	Smyth, Richard K.	Woodall, James F.
Davidson, Kenneth	Iliff, Kenneth W.	Martin, Paul	Snedeker, Richard S.	Woodcock, Robert J.
Davis, Sanford S.	Illg, Walter	Mazza, Carmen J.	Snyder, Melvin H., Jr.	Woodward, Donald E.
Debruge, L. L.	Iversen, James D.	Meador, Bernal M.	Soderlind, P. A.	Wooley, J. H.
			Soderman, Paul T.	Yue, Alfred S.

*Because it is difficult to include the reviewers from September, October, November, and December 1976 in this issue of the Journal, they will be listed with the reviewers for 1977, in the January 1978 issue.