



## Barn Gang Report

The year 1998 is off to a good start, thanks to John Coleman, John Bosch, Skip Pratt and Bill Blake. The first program, following a luncheon at the Club, was a tour of the Science Center of the Museum of Natural History (now changing its name to "The Museum of Discovery").

On January 13, Col. Mike Jackson gave an exciting presentation about the large new addition at the U.S. Air Force Museum facility at WPAFB (for the National Aviation Hall of Fame headquarters). Opening this summer, the 17,250

square foot addition will contain an interactive learning center, and will include complete biographies of all the major contributors to the history of flight. On the 20th, Skip Pratt presentation on the U2 aircraft and its flights in Iraq was fascinating, and Bill Blake gave us valuable information on Laser technology on the 27th.

Summaries of the last two programs, plus John Bosch's February 3 "2003 Celebration of 100 Years of Flight," and the tour of DP&L's Energy Dispatch Center on the 10th, arranged by John

Calhoun, will be reported in March.

All Club members are urged to call the Club if they want to attend any of the Barn Gang Tuesday luncheon programs; or if they have any suggestions for programs that could be of interest to the group.



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## I WAS THERE!

*By John Bosch*

As you board or leave a commercial airliner, and you glance into the cockpit, you can see a vast array of instruments. In the center console are the suite of engine instruments. In today's airplanes, the engine instruments all look alike, whether they display RPM, fuel flow, exhaust gas temperature, or engine pressure ratio. In fact, they are all made by the same manufacturer, making them easy to read. That wasn't always the case. Before the Boeing 747, each indicator was made by the manufacturer that made the corresponding sensor or signal conditioning unit. This was confusing to the pilots, a nightmare for the maintenance personnel, and a logistics problem for the purchasing function of the airlines.

Captain Scott Flower, Chief Test Pilot for Pan Am, wanted the situation

changed. Captain Flower was the type of person who got his way. As a young Engineering Manager with GE's Aircraft Instrument business, I made a call on Scott at his office in NYC. He told me what he wanted. I told him the reasons it couldn't be done. He showed me the door and said not to come back unless I had some ideas as to how to achieve his concepts. With much chagrin, I started developing ideas with my very capable engineers. I then made a point of visiting Scott every month—first with sketches, then with paper models, and finally with prototypes and specifications. There were enormous hurdles to overcome, not only from the viewpoint of design, but also to work out the technical interface with the competitor's sensors.

With much help from Scott, we held a

two-day seminar for all the airlines that had ordered or were about to order the 747 from throughout the world. They all came, as well as representatives of Boeing. We built two complete cockpit simulators, one with conventional instrumentation and the other with our proposed concepts. Boeing saw the positive impression the new instruments made on the airlines and decided to provide them. To be fair to all their suppliers, Boeing used our technical information to prepare a procurement specification, and went out for bids. After a pricing battle, GE won the contract and went on to win the L1011, DC8, Airbus 300, and the B1. The basic concepts of engine instrumentation were changed forever.

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## Over 300 Attend Technology Gatherings

The first in a planned continuing series of "Technology Gatherings" took place in the Engineers Club on Friday, January 30, 1998. Three-hundred+ materials and manufacturing enthusiasts met in the auditorium to hear Professor Steven Chu, Stanford University, talk about his work on laser cooling and trapping of atoms and biomolecules, for which he was awarded the Nobel Prize in Physics in December 1997 in Stockholm. The event

was preceded and followed by interaction time, with refreshments, as well as a special discussion session for 30 high-school teachers and students. Sponsored by the Air Force Research Laboratory's Materials and Manufacturing Directorate at WPAFB, along with other organizations, this series is planned for six gatherings each year. They will be held at various sites around the Dayton area, and will include the Club at least once each year. Speakers

will be prominent in the fields of materials and manufacturing, and the events will be open to the public, as well as the target audience of technologists. Upcoming sessions will be February 27, April 24, July 30, September 25, and October 30, with speakers and sites to be announced soon. Check the Web site at [www.ml.wpafb.af.mil/mmts](http://www.ml.wpafb.af.mil/mmts) for continuing information, or you may call 937-426-2808.