

CALENDAR OF EVENTS 2000

- o **Friday, February 18** -- Robert Loschke, F-117A fly-by-wire control system, Davis-Monthan Air Force Base, noon (details below)
- o **Saturday, February 19** -- Robert Loschke, SR-71 control systems; SR-71 Days -- Pima Air and Space Museum, noon (details below)
- o **March 15, 16** -- AIAA Congressional Visits (a national event)
- o **Saturday, March 25** -- Joint meeting with Phoenix Section at Skydive Arizona in Eloy. Learn about skydiving. Time TBD (midday, done by 3PM).
- o **Saturday, April 8** -- Learn about soaring. Noon at El Tiro Gliderport.
- o **Thursday, April 27** -- Dinner meeting. Jim Harford will talk about Soviet space program. 6PM, details TBA.
- o **Memorial Day Weekend** -- International Space Development Conference in Tucson. Co-sponsored by the Arizona AIAA sections and National Space Society (details TBA).

F-117 Stealth Fighter

by Kevin Kremeyer
Chair, AIAA Tucson Section

On Friday, February 18th, Bob Loschke will be presenting his work on the fly-by-wire control systems of the F-117 stealth fighter. The talk will be held at Davis-Monthan AFB at noon.

Since base access is generally restricted, you will have to RSVP to us so we can arrange to have your name put on the entrance list. If you leave a voicemail at 882-7349 with your name and phone number, we will add you to the list, and contact you to confirm the details.

The current plan is to meet at 11:00 AM at the park on the NW corner of Golf Links and Craycroft. There's a *huge* parking lot there by the softball and soccer fields -- we'll gather at the first shelter house next to the field. You can't miss it. We'll form our little caravan/carpool there, and make our way onto the base.

Everyone entering will need their driver's license or U.S. passport. In addition to this, all drivers will require their current driver's license, proof of insurance, and vehicle registration (see?...we're making it more difficult this time).



Mr. Loschke is planning for an hour-long talk, and brown-bag lunches will be appropriate if you want to eat. At 1:00 PM, everyone will have a chance to disband. However, the talk was originally designed to brief pilots, and Mr. Loschke is willing to go on for as long as the audience would like.

There has been an overwhelming response from the base, which is wonderful for our first contact with them.

F-117A

Photo by MSGT William Baker
KC-135R Boom Operator, USAF Reserves

We will be arriving early because of the security check, and because space will be limited. To RSVP, please call 882-7349, or send email to us at tucson_aiaa@yahoo.com. Please remember to give the full name and phone number of each attendee, and remember that each person has to bring identification. Also, drivers note the required information for you and your vehicle.

Next Meeting

F-117 Stealth Fighter Control System

Date February 18, 2000 (Friday)

Time 11:00 AM

Speaker Bob Loschke

Location Davis-Monthan AFB
Meet at NW corner of Golf Links & Craycroft

For more information tucson_aiaa@yahoo.com
Or call Kevin Kremeyer at 882-7349

Congratulations, Tucson-AIAA!!!

by Kevin Kremeyer

We've set another record...our last meeting was attended by over 50 people, and the ages ranged from about 6 to 60-something. Very impressive! At that meeting, Seth Shostak brought down the house with his very entertaining presentation on the SETI program.



Seth Shostak

Besides describing some of the technical aspects of how they process radio signals from space, he actually showed us some slides of different aliens (one of which looked just like E.T.). Apparently Hollywood has enjoyed the greatest advances in this field.

In this newsletter, we have some more details on the upcoming events, the most pressing one will require some extra effort on your part, if you'd like to attend (and we hope you make it!).

Russia's Space Program

by Jerry Felmley

We have a Section Dinner planned for the evening of Thursday, 27 April -- details TBD, but Social Hour will probably begin about 6:00 pm so mark your calendars NOW.

James Harford, Executive Director Emeritus of AIAA, will be in Tucson to talk with us about Russia's space program -- from their rich past history to current challenges. Jim's 40-plus years involvement with U.S. space efforts provides him an insider's view of the major events since the launch of Sputnik in 1957.

The focus of Jim's remarks will be his lengthy research and extensive interviews during the writing of his unique biography of Sergei Pavlovich Korolev, Russia's space pioneer.

Korolev: How One Man Masterminded the Soviet Drive to Beat America to the Moon is the only English language biography of this "mysterious figure, virtually unknown even in his own country," who survived imprisonment in a Soviet gulag to lead his nation's space program. It's a remarkable story, and the opportunity to hear about it first-hand from the author will provide a very interesting evening.

Working with our Local Military Personnel

by Ed Palanek

One of the initial objectives of the newly reconstituted Tucson Section of the AIAA is to develop an active working relationship with the military personnel in our local area. Toward that end, we have been in contact with the Public Relations Offices at both Davis-Monthan AFB here in Tucson and Fort Huachuca in Sierra Vista in an effort to develop opportunities for mutual support.

Our initial joint effort will be at Davis-Monthan AFB on Friday, 18 February when Bob Loschke will make a presentation on flight control development for the F117A Stealth fighter.

The program will be hosted by the base Education Services Officer, Ron Riggi (details of time and location are listed in the future agenda section of the newsletter). This presentation will precede the SR-71 program, which will take place at the Pima Air Museum on Saturday, 19 February.

We are working toward similar opportunities with Fort Huachuca in areas of mutual interest, but no firm program has been established yet (any suggestions or information on potential contacts are extremely welcome).

Both the AIAA and personnel at the local military facilities have topical subjects of mutual interest in aeronautics and astronautics. We hope to identify some of these selective areas and use them as a springboard for future joint activities.

SR-71 Blackbird

by Kevin Kremeyer

Don't fret if you can't make Friday's brown-bag lunch. The following day, Bob Loschke will be presenting his work on the SR-71 control systems.

The whole weekend will be an SR-71 extravaganza at the Pima Air and Space Museum. At noon, on Saturday February 19th, Mr. Loschke will give us an hour-long presentation in the Challenger Center Classroom of the Pima Air and Space Museum (yes, right where we "blasted off" in December).

If you ask at the entrance, they will give you a map and direct you. We will be paying admission at the desk (remember the discount you get by showing your AIAA membership card), but it will be well worth it.

At 1:45 pm, PASM will host 28 SR-71 pilots who will hold panel discussions and demonstrations that are open to the public. They will also be showing off the inside of the cockpits. I believe there will even be a chance to pay to have your picture taken while sitting in the cockpit. We'll time our meeting so we can attend the panel discussion.

Student Design/Build/Fly competition

by Matt Angiulo
President, UA AIAA Student Branch

The Student Branch has been working very hard to prepare themselves for this year's AIAA Design/Build/Fly competition. With the competition steadily approaching, our team has pulled together and focused at the many jobs still to complete.

Since our three week holiday break, where little to no work was done, we have finalized the design, have ordered the parts we need, and have begun construction. Our current estimates should have the plane flyable and ready to test by the middle of next month. Much of this would not be possible were it not for the generous donations made by your members.

Our efforts to gain equal support from the College of Engineering and the Aerospace and Mechanical Engineering Department so far have failed. We will continue to pursue their involvement but at the moment the Tucson Section is our primary source for support and we greatly appreciate it.

We are very excited about this year's entry and I am positive that this will be the finest year we have ever had. I very much look forward to bringing home a win for our two organizations. Thank you very much for your help.

ASUSat1 Launched

by Frank Manning

The job of a university is not just to educate, but also to inspire.

For many students in aerospace engineering, there are few things more inspiring than to create something new and have it take flight.

On January 27, current and former ASU students got that experience when ASUSat1 was launched successfully. The satellite, designed and built by ASU students, was launched along with several other satellites on an OSP Space Launch Vehicle, which used a decommissioned Minuteman II missile for the first two stages. The launch was from Vandenburg Air Force Base.

Several Tucson Section members (including the author) participated in the ASUSat1 Critical Design Review in March 1995, and were impressed by the program.

Congratulations to ASU on a successful launch!

Late breaking news -- an anonymous donor has tentatively agreed to provide the UA Design/Build/Fly team a propulsion system on a lending basis. Provided would be 2 Aveox motors and planetary gearboxes, as well as a propulsion battery.

Washington, DC

by Kevin Kremeyer

There are two lobbying events scheduled in March. One is sponsored by AIAA and is held March 15th and 16th. At this event, officers of the AIAA and members of its technical committees meet with members of the U.S. House and Senate to educate them on the purpose, utility, and mission of the AIAA.

Any AIAA members are welcome to join the activities, and more details are available on the national website (www.aiaa.org), or by contacting Paul Looney at paull@aiaa.org or 703-264-7500.

Coincidentally, the citizen's lobby "Prospace America" will be descending upon Congress for their annual "March Storm" during this same week. This group apparently advocates public access and commercialization of space. (It seems to me that most of the members

would really like to go into space without having to apply to the NASA astronaut program).

They appear to have a very interesting agenda outlined for the week, including a dinner at the White House. (If they pull that one off, they'll certainly beat the AIAA itinerary.)

If you're interested, you can e-mail Ed Wright at the following address: edwright@earthlink.net. He contacted me to distribute this information to our membership.

Soaring

by Kevin Kremeyer

On Saturday April 8th, we'll finally get our chance to learn more about gliders and the art of flying them. Beginning at noon (yes, noon is a purposeful trend), we will begin to hear several presentations on aerodynamics, atmospheric turbulence, and advanced techniques used in glider design.

Low drag at very low speeds is critical to attain the high glide-ratios which can currently be achieved. Apparently, if one of these amazing gliders is set free one mile up in the air, it can coast for 60 miles before it touches down (trust me, motor aircraft do not share this same luxury).

In the presence of any updrafts, these gliders can easily circle to gain altitude. This has resulted in the growing popularity of all sorts of cross-country competitions.

At about 1pm, we will break off to take a look at the newest purchase of some soaring-club members. It demonstrates most all of the latest advances in glider technology.

At this point, interested parties will also get the chance to go up and fly for \$50. They will be accompanied by a trained pilot, and will be shown how to control the plane. This will allow you to try your hand at soaring under the watchful eye of a trained veteran.

April is the time when thermals really get started, so the soaring club has limited the number of flights that they will offer. We'll therefore ask that preference be given to those most interested in possibly pursuing the sport.

Either way, we'll have an interesting time learning about the sport and the air-currents, seeing a leading-edge glider, and watching some of our members try out their soaring talents.

We'll give directions to the glider-port as the time draws near, and we'll very likely arrange for any interested parties to meet and caravan.

UP, UP, and AWAY!!!

Tucson Section Officer Roster 1999-2000

Chair: Kevin Kremeyer
Secretary/Treasurer: Kelly Sinnock
Membership: Rina Shivashankara
Webmaster: Robert Wagoner
UA Faculty Advisor: Larry Scott
Education Chair: (open)
Military Liaison: Ed Palanek
Newsletter Editor: Frank Manning
Support Staff: Jason Blauert, Roshan Pattni

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