

## CALENDAR OF EVENTS 2000

- o **Friday, January 28** -- Seth Shostak, Search for Extra-Terrestrial Intelligence (details below).
- o **Friday, February 18** -- Robert Loshke, F-117A fly-by-wire control system; SR-71 Days -- Pima Air and Space Museum (details TBA)
- o **Saturday, February 19** -- Robert Loshke, SR-71 control systems; SR-71 Days -- Pima Air and Space Museum (details TBA)
- o **Saturday, March 25** -- Joint meeting with Phoenix Section at Skydive Arizona in Eloy. Tour, food and comparison of sport and military parachuting
- o **April (TBA)** -- Soaring day, with the Tucson Soaring Club
- o **Memorial Day Weekend** -- International Space Development Conference in Tucson. Co-sponsored by the Arizona AIAA sections and National Space Society (details TBA).

### Next Meeting

#### ***Search for Extraterrestrial Intelligence***

**Date** January 28, 2000 (Friday)

**Time** 6:30 pm

**Speaker** Seth Shostak

**Location** Chemistry & Biological Sciences Building  
(off UA mall -- look for funny figurines)  
Room 204  
University of Arizona  
Tucson, AZ 85721

**For more information** [tucson\\_aiaa@yahoo.com](mailto:tucson_aiaa@yahoo.com)  
Or call Kevin Kremeyer at 882-7349

### **Happy 2000!!!!**

by Kevin Kremeyer  
Chair, AIAA Tucson Section

What a lovely chronometer-flip it was!

Things have been remarkably busy and active since the last newsletter, so here goes on the reporting -- if you're in a rush, check out the calendar of upcoming events.

### **Search for Extra-Terrestrial Intelligence (SETI)**

by Kevin Kremeyer

Our next event will be upon us in just over a week. So be prepared to come hear about project Phoenix from Seth Shostak. He is a primary investigator in the most comprehensive search for extraterrestrial intelligence ever undertaken. He will describe some of the radio astronomy methods used by the SETI program to pick up and analyze faint signals, and will show some of their results.

His talk will be in a large auditorium just off the University of Arizona mall. It's the only part of the mall left unravaged by the construction. If you head to the Student Union (park in the Cherry Avenue garage or the visitor parking lot near Cherry and 4th Street, and head northwest), you'll see a building across the mall (south) from the Student Union (west of the Science Library).

The building is called the Chemistry and Biological Sciences building. As you approach it from the mall, you'll pass under an "entrance gate" made up of funny little figurines -- it's very interesting.

The meeting will be Friday night at 6:30 pm, January 28th, and it'll be absolutely free. We'll be opening it up to the entire campus, in hopes of drawing some students and researchers from the University. It should be an excellent talk!

### **Stealth and Speed**

by Kevin Kremeyer

On February 18th and 19th, AIAA is joining the PASM's SR-71 days by inviting Robert Loshke to Tucson. He worked on the flight control systems for both the SR-71 and the F-117A (the Stealth Fighter), and will be presenting work on both.

The SR-71 presentation will be appropriate for a general audience, whereas the F-117 talk will be more technical. This F-117 talk will be of great interest to both pilots and missile-control engineers, since it will describe one of the first "fly-by-wire" flight control systems.

This is a revolutionary step away from conventional systems, which give pilots ultimate control over their vehicle. A fly-by-wire system decides the best way to achieve what the pilot wants, and will actually override or limit a command if it is judged to be too dangerous.

Look for the details in our next newsletter, but keep February 18th and 19th open!

### **Pima Air and Space Museum Meeting**

by Kevin Kremeyer

It was very exciting to see so much more of the AIAA membership at the PASM meeting on December 6th. We're really shooting to strengthen the mingling/networking aspects, so we look forward to every opportunity to get people to meet (and talk with) one another.

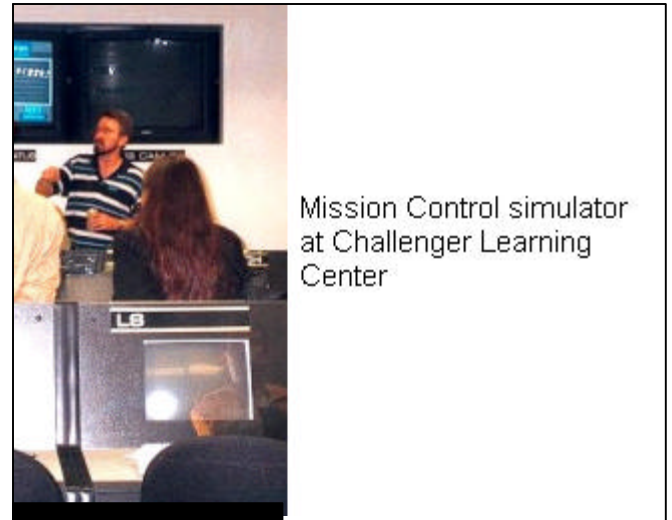
We did experience some glitches in our video schedule (rascally Mars probes) -- but as promised, Elissa Lines gave us the scoop on the Pima Air and Space Museum's new exhibits and educational programs.



**Brian Exton leads tour of Challenger Learning Center**

A good portion of their educational outreach program revolves around their Challenger Learning Center. School teachers are instructed on how to prepare their students to fly the space shuttle and operate a space station. Once the students are ready, they come out and put their knowledge/training to the test. Companies often sponsor such an experience for a class or school.

After our briefing on the center, Brian Exton led us in a blast-off which took us 200 miles above the earth! Unfortunately an oxygen-shortage cut our mission short. (This was actually fortuitous, since it kept us from interfering with the birthday party they had scheduled inside the space station later that day). Despite all of this, it was honestly a relatively safe trip.



**Mission Control simulator at Challenger Learning Center**

After the shuttle mission, we were set loose in the entirely new space/rocketry/satellite hangar, and then given a very detailed tour of several established exhibits (including the Wright Flyer and the SR-71). The tour was very informative, and really primed us for the events coming up on Friday and Saturday of February 18th and 19th. On these days, PASM is going to have 28 SR-71 pilots showing the public around their "Blackbird," and both canopies will be taken off for us to look inside!



**Jason Blauert admires SR-71**



**David Levy, of comet Shoemaker-Levy 9 fame, gave us an inspiring presentation on astronomy and comet hunting**

In addition to reiterating the admission discount for AIAA members, Elissa asked us to advertise PASM's urgent need for girls 14-17 years old who can enter their "women in flight" essay contest. It's urgent, because there are very few entrants and the prizes include a week at Space Camp in Huntsville Alabama (along with lots of special honors at a conference in March).

If you know of any interested young ladies, even if they have no contact with flight, and even if they're out-of-state, please contact Elissa Lines at 520-618-4804. Leave a message on her voicemail, as well as with her secretary's voicemail. It's a wonderful opportunity, and shouldn't be wasted! (I've never wished to be a 14-17 year old girl, but this'd be a great reason!)

## Soaring and Skydiving

by Kevin Kremeyer

On the surveys (keep sending them in!), one of the most common comments is "what the heck is soaring?" (Alas -- this, to the chagrin of Buck-a-roo Bill Rogers of the Tucson Soaring Club.)

To remedy this, I was recruited to find out "what the heck soaring is." Let's see -- the basic idea is: you drive out to a glider port in the desert; sign up to use your glider of choice; ask a companion enthusiast to help you push it to the runway; and pay for the gasoline to have a prop-plane tow you up into the wild blue yonder.

Once you disconnect from the tow, it's just you, gravity, and warm air currents rising from the desert. Yes -- you must use your cunning and intuition to combat the ever-present gravitational pull.

Now you may wonder what it is that drives these folks to hit that remote, dusty strip every weekend; tend to their fleet of gliders; and fly them all over the world, but it definitely has something to do with the surging push that takes you from the hot desert sands, up past 20,000 feet (well...at 18,000 the FAA spoils the fun).

Now, with me behind the stick in the cold month of December, we didn't go quite that high, but the constant coaching and comments from Bill Rogers in the instructor's seat behind me, made me feel like the best darned pilot that side of the Tucson mountains.

It was such an incredible experience to really feel the air under my wings and know that it was the only means available to counter our inevitable descent. The mental image that strikes me is that of surfing on the air.

We're currently waiting to hear if the Tucson Glider Club will be able to organize an early-April event, in which they'll invite our members out and teach us something about gliders and the sport of soaring.

Don't worry, it'll be kind of like an instructional field trip. You'll be able to fly with a trained pilot if you want, but

you'll have to pay to get towed up into the air. The main point will be to go and look at gliders and learn something about the sport.

The technical aspects of soaring really push the limits of aeronautical engineering, and we'd get a chance to see some of the latest cutting-edge gliders on the market. Beyond this, the flying is a wonderful experience.

## Joint Meeting with Phoenix Section

by Kevin Kremeyer

Along the same lines, we've been invited out by Skydive Arizona to visit their facilities in Eloy, AZ (by Casa Grande). We're taking this opportunity to hold a joint meeting with the Phoenix Section, to pay them back for their visit last Fall.

Skydive Arizona is the largest skydiving school in the world, and they have all sorts of special facilities they'll show us. We can also have a nice meal at their diner.

The educational angle will be the comparison of sport-jumping with military-jumping. There are great differences, and it will be interesting to see them contrasted. We're working to coordinate this with some military paratroopers, and we have tentatively selected Saturday, March 25th.

Once again, mark your calendars, and we'll keep you posted. And don't worry, you only jump if you really want to -- *and* if you pay the people with the parachutes.

### 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

### **New web site location !**

<http://www.aiaa.org/sections/ts/>

## Epilog

That takes care of most of the news and developments. If you don't have a calendar to mark, please go get one. Keep those great survey's rolling in, and start/keep showing up to the events.

We need to get a nice dinner program going, and ANYONE interested in educational outreach should please PLEASE contact us. If you know of any educators who would like to sign up for their free AIAA membership with lots of perks, please also ask them to get in touch with us. Let us know what you want, and we'll see you soon!

-- Kevin Kremeyer



American Institute of Aeronautics and Astronautics

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