



# Air Force STARBASE® La Luz

"Creating the Possibilities"



Inspiring Future Scientists, Engineers, and Astronauts

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## The Rocket Report

### AFRL TTE Now AF STARBASE® La Luz

This year, the AFRL Technology Transfer for Education (TTE) Program is evolving into AF STARBASE® La Luz, by joining a Department of Defense program called STARBASE®.

STARBASE® has essentially the same goal that AFRL

TTE had: to encourage and foster students' interest in math, science, and engineering. AF STARBASE® La Luz at Kirtland Air Force Base (KAFB) will focus on helping students transition smoothly from elementary-to-middle and middle-to-high school.

The AFRL Mars Missions and AFRL SPACE activities will remain intact. AFRL PETES, the middle school component, will be beefed up to include hands-on math, science, and engineering curriculum days for students during the school year.

### AF STARBASE® La Luz Gets Newsletter

A monthly newsletter has been created especially for the new AF STARBASE® La Luz Academy—the first edition of which you are reading right now.

Over the coming months, we will keep working on

evolving it and improving it.

Let us know what you think of it, or if there's anything you'd like to see in it. Write to us at:

TechTransferforEducation@Kirtland.af.mil.

### AF STARBASE® La Luz Gets New Faces

Two new faces recently joined Mr. Gerald Mora and Ms. Ronda Cole on the AF STARBASE® La Luz team.

Ms. Diana Lee, a contractor from DataCom Sciences, Inc., who moved to New Mexico several months ago from Oregon, joined the team in September as Management Support. She'll work with the program's database and help keep it current.

Mr. Steve Burke, another Datacom contractor, joined the team on October 1 as a Technical Writer. He'll help write and edit such things as manuals, training materials for the Teacher Training sessions, and this newsletter.

Welcome to both of you!

### A Message From the Director...

As you can see, there've been some big changes this year, as we transition from the AFRL TTE Program into AF STARBASE® La Luz.

We're working hard to make this a smooth transition for everyone. We hope the new program is at least as educational and fun as the old one.

We hope this new format will provide you, the participating

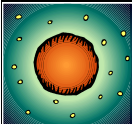


Teachers, with easy access to timely information that will enhance your students' experience in AF STARBASE® La Luz. There's a section for each "Flight" (Mars Missions, PETES, SPACE), one for Teachers, R&R, and more! Take a look!



Happy Thanksgiving!





# Mars Missions Flight

Don't Forget! Turn in your School Participation Form by 01 December 2003. See this month's **Teacher Feature** for more info.

## Who Says You Can't Teach a Teacher?

Over one hundred Teachers from schools all over New Mexico attended the 2003



Teachers create a Life Support System together, as part of their training for the new AF STARBASE® La Luz Mars Missions Flight.

AFRL Mars Missions Teacher Training this year, and the results are in: They loved it!

Teachers at all sessions listened attentively to Ms. Ronda Cole explain the AFRL Mars Missions process, with the aid of PowerPoint slides and videos.

Teachers worked in teams to design Mission Patches, build Mini-Habitats, create Sagas, and complete other fun activities.

This year, the Teachers came up with many creative solutions for the tasks they were assigned. This hands-on ex-



Teachers get a better "angle" on things, as part of their training for the new AF STARBASE® La Luz Mars Missions Flight.

perience, besides being fun, will be invaluable later when they teach their students how to do the same things.

So you *can* teach a Teacher!

## Included with This Newsletter...

1. A Habitat Assignment document, and
2. A Student TEAMS per Teacher listing,

which provides you with the official Life Support System and Habitat CREW assignments for each of your student TEAMS, and indicates schools your student TEAMS will be paired up with on Link-Up Day.

Your **commitment** to this mission is crucial to this mission's success



## The Next Step...

Teachers, please look at page 1 of your *AFRL Mars Missions Teacher Handbook*.

You'll find a suggested timeline for the AFRL Mars On-site Laser Development

(MOLD) Mission. This timeline is a general guideline which can be modified to fit your curriculum.

Remember that all items on the timeline should be completed prior to the Link-Up Day event.

## November/December is a good time to:

- Divide your students into TEAMS (5-7 students per TEAM)
- Have students begin researching Mars and learn-

ing Mars Facts

- Have students work on their Sagas and Mission Patches
- Eat some turkey! MMMM!



# PETES Flight

Providing Engineering and Technology Experiences for Students

Don't Forget! Turn in your School Participation Form by 01 December 2003. See this month's **Teacher Feature** for more info.

## How PETES Flight Fits Into the Big Picture

The scenario for this year's Mars Mission is:

*"In June 2002, Asteroid 2002 MN passed within 115,320 km of the Earth, or one-third the distance from the Earth to the Moon. This was dangerously close, and it wasn't even detected until after it had passed us. It is expected to return in the near future, passing Mars on the way.*

*Scientists and geologists have*

*determined that a colony could and should be established on Mars, equipped with a Starfire Optical Range (SOR) laser telescope, built with resources and materials found on Mars, to observe and deal with this asteroid and others like it."*

This is what is affectionately known as the AFRL Mars On-Site Laser Development (MOLD) Mission. As we like to say, "MOLD—it grows on

you!" (Nyuk, nyuk.)

The Mars Missions Flight is working on establishing the Mars colony.

PETES Flight is working on building the laser, using materials found on Mars.

PETES components for this laser will be assigned on the first AF STARBASE® La Luz Core Curriculum Day on 25 November.

## The Next Step...

During **November**:

1. Start meeting with students and planning for the first AF STARBASE® La Luz Core Curriculum Day on 25 November.
2. Send us a list of dates that would work for you and your students for the remaining four Core Curriculum Days.

## Mark Your Calendars!



- 2 April 2004—AFRL MOLD Mission Link-Up Day
- 27 April 2004—AFRL SPACE Symposium



# SPACE Flight

Students Planning And Conducting Engineering

Don't Forget! Turn in your School Participation Form by 01 December 2003. See this month's **Teacher Feature** for more info.

## AFRL SPACE Project Table

School Name	Teacher Name	Team Mentor(s)	AFRL SPACE Project Name
Albuquerque Academy	Mr Kenneth Zack	2dLt Gregory Theriot 2dLt Nicholas Sawruk 1stLt Adam Smith	Solid State or Chemical Lasers
Highland HS	Mr Tanvir Malik	LtCol Barbara Richardson	Hornet Health Programming III
Moreno Valley HS	Mr Steve Oliver	Mr Rick Baca	Nostradamus Airborne Particle Detector
St Pius X HS	Mr Jim Renshaw Mr Jim Carrie	Mr John Currens Mr Mike Vigil	Hybrid Rocket—Phase III
Santa Rosa HS	Mr Karl Agar	Mr Karl Agar	Solid Waste in Santa Rosa and Guadalupe County
Santa Teresa HS	Mr Rafael Giner		Build a Suit that will Conserve Life of a Subject
West Mesa HS	Mr Chris Baca	Dr Irene Budianto Mr Joseph Traina	LIL—Lunar Ice Locator



SPACE...is not the FINAL frontier...  
**KNOWLEDGE is!**

### The Next Step...

- Schedule your PDR!** The time frame for scheduling your AFRL SPACE Preliminary Design Reviews (PDR) is **10 November-19 December 2003**. Please let us know what dates/time work best for your AFRL SPACE Team's PDR as **soon as possible**. We'll coordinate with our AFRL SPACE Review Mentors and finalize the date.
- You should already be meeting weekly** with your students and Team Mentors to work on your project.
- Let us know** what the complete name of your project is once you've decided on one.
- Review the table** above
- Let us know** if you have any questions or need any assistance implementing AFRL SPACE at your school.
- and notify us of any incorrect or missing information you can fix.



## Teacher Feature

### Teachers! Hurry! Send In Your School Participation Forms!

Mars Missions, PETES, and SPACE Flight Teachers, please:

- Complete** your School Participation Form.
- Have your Principal **sign** the form.
- Return** the completed form to the AFRL Office of Technology Transfer for Education **by:**

**01 December 2003.**

Mail them to:

AFRL/DEFP  
Technology Transfer for Education  
3550 Aberdeen Ave. SE  
Kirtland AFB, NM 87117

Or fax them to:

(505) 846-5034

**Remember:**

Our receipt of this form signifies your **official participation** in the AF STARBASE® La Luz Academy.



### Gulp! Did You Say...Free Money?!

As mentioned in the 2003 Teachers' Training, there are two grant programs available for free money:

- The Aerospace Education Foundation (AEF)**—up to \$250 per academic year. Contact us for information and an application form.
- The American Institute of Aeronautics and Astronautics (AIAA)**—up to \$200 for hands-on science and math supplies. Go to [www.aiaa.com](http://www.aiaa.com). Click on Join/Renew/Update to join (free!). From their home page, click on Precollege Programs to apply.

#### Graduate Credit for Participating in Mars Missions Flight

Teachers can get two (2) special graduate credits for their participation in the Mars Missions Flight through the NM Tech Masters of Science in Teaching Program.

Fill out a Special Student Graduate Application and a Registration form. Go to [www.emt.edu](http://www.emt.edu) and click on Prospective Students>Graduate Students>Admission Requirements>Special Admission.

**Deadline for registration is 30 January 2004.**

Questions? Contact Marisa Wolfe at (505) 835-5470 or [mwolfe@admin.nmt.edu](mailto:mwolfe@admin.nmt.edu).

**E-Pals** Check out [www.epals.com](http://www.epals.com) for secure school e-mail!



### Air Force STARBASE® La Luz

AF STARBASE® La Luz Academy is located at:

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Kirtland Air Force Base, NM  
87117-5776

(505) 846-2677  
TechTransferforEducation@Kirtland.af.mil

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### Important Terms and Acronyms

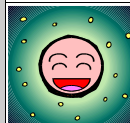
- AF:** Air Force.
- AFRL:** Air Force Research Laboratory
- AFRL/DE:** The Directed Energy directorate of the AFRL
- AFRL/VS:** The Space Vehicles directorate of the AFRL
- DGs:** Distinguished Guests
- KAFB:** Kirtland Air Force Base, Albuquerque, NM
- MM:** Mars Missions (The Elementary School Flight)
- MOLD:** Mars On-site Laser Development mission ("The name *grows* on you")
- NASA:** National Aeronautics and Space Administration
- PETES:** Providing Engineering Technology and Experiences for Students
- R & R:** Rest and Relaxation
- SPACE:** Students Planning and Conducting Engineering (the High School Flight)
- T<sup>2</sup>:** Technology Transfer (from the AFRL to the Private Sector)
- TTE:** Technology Transfer for Education



### Distinguished Guests

*Reserved for Distinguished Guests*

*This space is reserved for comments from distinguished visitors such as the Director of Space Vehicles or Directed Energy, the head of the Air Force Research Lab (AFRL), and so on.*



### R & R Rest and Relaxation

#### Check out these websites!

[www.NASA.com](http://www.NASA.com)      [www.nationalgeographic.com](http://www.nationalgeographic.com)

#### Space Jokes

What do you call an 18-foot-tall, five-hundred-pound, green, furry Martian that can shoot laser beams out of his eyes?

"Sir!"

Where does he sleep?

Anywhere he wants to!

### Coming Next Issue...

- Mission Patch, Life Support System, and Saga information.
- News, Info, Fun...and Holidays!



#### Watch For It!

### This issue is dedicated to:

- All those who perished in the attacks on September 11, 2001
- All our combat troops

