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CLICK HERE

- ▶ www.ssp.org/database — update your information in the online database
- ▶ www.sspreunion.com — register your interest in attending the 50th in July.
- ▶ www.ssp.org/donate — send a secure donation through PayPal
- ▶ www.ssp.org/socorro (user Socorro, password NMT) — everything about the 2007 Socorro campus

SSP TURNING 50

Next summer will be the 50th Summer Science Program. Reunion Weekend on **July 18-19** will be an opportunity for alumni and former faculty of all ages to return to Ojai and celebrate our small but unique institution. It will be a concentration of some of the brightest and most interesting people in the world, who share an intense, magical experience that changed their lives.

Fifty years ago this month, the Soviet Union launched Sputnik, the first artificial satellite. The launch shocked Americans into a frenzy of action to improve math and science education and to encourage young people of all ages to consider careers in physical sciences and engineering. Within days, the Headmaster of Thacher School be-

gan contacting leaders in academia and industry about his idea to host a summer program for rising seniors. The Summer Science Program was born.

Only a few of those initiatives still thrive – those that transcended both the Space Race and the Cold War. SSP even survived the withdrawal of federal funding for summer programs in the 1980's, and the loss of Thacher's sponsorship in 1999. Since then SSP has been the only summer enrichment program managed and largely funded by its own alumni.

Volunteers are now working on planning this event. We need to know if you may be able to attend. Please complete the form at www.SSPreunion.com.

Just 18 days after Sputnik's launch shocked the world, Thacher Headmaster Nelson Chase wrote to the President of Stanford, proposing SSP. Here is an excerpt.

I wonder if you have as yet happened to see Howard Brooks, whom I chanced to meet in Boston, and to whom I presented an idea which has been in my mind for some time concerning a summer school project here at Thacher, beginning in 1959, and designed for some 25 gifted boys coming from anywhere and from any background in the State of California. The courses offered would be for 11th and 12th graders, and only in the field of science. My idea would be for these courses to be of an advanced nature, perhaps following the Advanced Placement Program, and to be conducted by both secondary and college teachers working together.

It seems to me that such a project would help to answer some of the pressing needs of today's educational problems, particularly with regard to the opportunities in science, and the offering of such a program to able and ambitious youngsters.

CHAIRMAN'S LETTER

After another successful SSP on two campuses, my thanks go to our dedicated faculty and Executive Director Richard Bowdon '74 for making it happen, and to the Trustees and other volunteers who find time for SSP year-round. Best wishes to the Class of 2007, an amazing group of young people who made all our work this year worthwhile.

Now our attention turns to the 50th Anniversary Celebration weekend next July. We want each and every alumnus

and former faculty to be a part. We range in ages from 17 to 67, but have a special bond in common. Come to see your classmates and to revel in the glow of a program unique in the world for the quality of its alumni, for its longevity, and for the promise in its future. You were a part of the first 50 years, become a part of the next 50 years. See you in Ojai, July 18-19.

Best wishes,
Henry Lichstein '60,
Chairman

2007ERS SAY

I cannot take SSP out of my mind. Nothing else seems good enough now. I changed more in 6 weeks than in 4 years of high school. Can I attend SSP again next year?

—Eda Gjergo

My best SSP experience: lying under the stars at 4 AM with five friends from all over the world, experiencing what we learned during morning lectures, and making sense of all that we see in the night sky.

—Alexander Beltes

SSP is so challenging and fulfilling, in all aspects, that it's a pity school takes up so much time — we could be doing something like this.

—Jayson Lynch

THE STARS OF SSP 2007



Ojai students and faculty



Socorro students and faculty

NEAR-EARTH ASTEROID O.D. IN '08

*By Dr. Tracy Furutani '79
Chair, Curriculum Committee*

Asteroid orbit determination (the OD) has stood the test of time as an ideal central research problem for SSP. Our gifted teenagers can do it from start to finish in six weeks ... just barely. But using analog, film-based images has restricted us to bright, main-belt asteroids first discovered in the 19th century, whose orbital elements are stable and well-known. As one student wrote, "I thought that we would

be doing original research, rather than re-confirming already known information."

With CCD telescopes now available on both campuses, the best way to return scientific relevance and urgency to the OD is to observe Near-Earth Asteroids. Some NEAs have orbits that intersect Earth's, inherently of interest and concern to the entire world. Observations taken by SSP students and submitted to the Minor

(Continued on page 3)

COLLEGE ← SSP '06

Bucharest Conservatory	Andrei Biro
Caltech (10)	Anguel Alexiev '05, Daniil Feldman, Michelle Filiba, Sarah Howell '05, Kirit Karkare, Joy Lin, Erik Madsen, Suzanna Piatt, Hillary Walker, Christopher Wong
Columbia	Luwen Huang
Cooper Union	Hannah Clevenson
Cornell (2)	Andrew Baldinger, Russell Wolf
Dartmouth (2)	Ahra Cho, Berk Öztürk
Duke	Robert Wainblat
George Mason Univ.	Minu Ramanan
Georgetown Univ.	Lambert Wang
Harvard (5)	Levi Dudte, Jonathan Finn-Gamino, Daniel Handlin, Tiziana Smith, Mike Teodorescu
Harvey Mudd	Kevin Chan
Macaulay Honors College, CUNY	Mariana Sant'Anna
MIT (14)	Amelia Arbisser, Anshul Bhagi, Jenna Caldwell, Michelle Chang, Yipeng Huang, Justin Lan, Jennifer Li '05, Sonya Makhni, Mary Masterman '05, Kimberly McManus, Adrian Melia, Daniel Montana '05, Danielle Piskorz, Chris Su
Northwestern (3)	Alexander Chen, Stephanie Oh, Carol Shen
Notre Dame	Brad Cordova
Olin College of Engr.	Jacob Izraelevitz
Princeton (6)	Oguzhan Atay, Ryan Dahn, Ben Knudsen, Anh Nguyen '05, David Tsao, Peck Yang
Rice	James Liu
Stanford (6)	Alan Hshieh, Kimberly Kreitinger, Jenny Kwan '05, Max Libbrecht, Max Murialdo, Matthew Yankowitz
Swarthmore (2)	Ross Greenwood, Dougal Sutherland
UC Berkeley (5)	Sarah Cheon, David Gee, Fakhra Khalid, Andrew Lyon, Jason Tsai
Univ. of Michigan	Heeho Park
Univ. of Nevada at Reno	Zach Johnson
Univ. of Wisconsin	Justin Balantekin
USC	Henry Yuen
Washington Univ.	Emily Podany
Williams College	Aaron Bauer
Yale (3)	Alison Lu, A.J. Riggs, John Scrudato

(Continued from page 2)

Planet Center could improve the predicted orbits of these NEAs.

This past summer, we confirmed that NEAs can be imaged with our equipment. In coming months we will decide exactly how the astrometry will be done, how lectures will need to be modified to accommodate a significantly larger digital image processing emphasis, and how analog equipment can be used to augment the NEA project. We'll keep SSP as "hands-on" as possible.



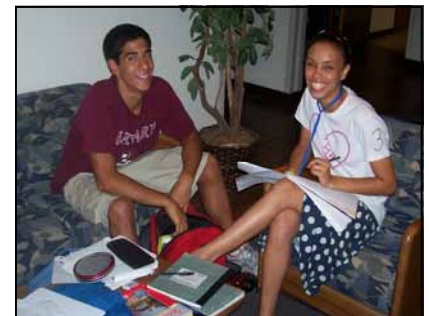
Socorro Head TA Razvan Ungureanu '01 helps a team using The Sky software.



Using "clickers" in Dr. Dubson's lecture in Socorro



Foosball time!



At SSP even doing homework can be fun.



Being a TA can be fun, too!



A UFO visits Ojai (or is it only a Frisbee?)

FINANCIAL SUPPORT

EXTRAORDINARY GIFTS

\$50,000 BP America	1959 Patrick W. Rourke	1959 Thomas Hirsch	1960 David T. Price
\$35,000 New Mexico Tech	1960 Charles Holland, Jr.	Ronald Florence	James E. Perry
\$30,000 New Mexico State Government	1962 Edward C. Kelm	1960 Jerry E. Nelson	1961 Joel S. Kvitky
\$25,000 QUALCOMM Inc. (matching Franklin Antonio '69 2006 gift)	1964 Robert Stellingwerf	Steven D. Hall	E.C. Krupp
\$15,000 Lockheed Martin/Sandia National Lab.	1965 Jeffrey Yen Sue	Michael Joblin	Wahhab (Lawrence) Baldwin
\$12,500 High Tide Fdn.	1966 Julian Krolik	Eric N. Smith	1962 Kenneth Nordsieck
\$10,000 Mitchell Kapor ('66) Foundation	1967 Edward Belove	Dwight J. Baum	1963 Denis A. Elliott
\$10,000 Timothy Ryan '72	1969 Carel Veenhuizen	1961 Jay Dratler, Jr.	1965 Thomas S. Klitzner
\$10,000 Amgen Foundation (matching gift)	Mark R. Brown	Stanley M. Sokolow	Jerry Gechter
\$10,000 Anonymous	1970 Norris Preyer	Dennis Rothhaar	Richard C. Crawford
\$10,000 Anonymous	Roger C. Burk	1963 William Van Snyder	Peter Szolovits
	1971 Terry Johnson	Ronald P. Chestnut	1967 Jonathan E. Press
	Roger Linfield	1965 Kim B. Bruce	Stephen Blumenkranz
	1973 James E. Durkee	1966 Douglas O. Richstone	1968 Lee D. Aurich
	Gordon Stitt	Arthur L. Levine	Bryan Andrews
	David A. Latham	1967 Stephen P. Smith	1969 Brian Tate
	Kevin Miller	1968 Ronald Irving	Mary E. Deyo
		1972 David L. Comis	
		David Blum	
		1974 Richard Bowdon	
		David K. Fullerton	
		1976 Katherine Staton	
		David G. Johnson	
		Robert B. O'Rourke	
		Harold C. Schloss	
		1978 Russell Quong	
		1979 Anna Toy-Palmer	
		1980 Sarah Anne McCabe	
		Jeffrey Saye	
		David M. Cohen	
		1981 Deborah L. Paul	
		Steven J. Pier	
		Jeanine Hoffmann	
		1984 Scott E. Michael	
		Andrei Iancu	
		1988 Ike A. Ikizyan	
		1994 Chris Wyman	
		2002 Frederick Wulff	
		2006 Anshul Bhagi	
		Faculty Tom Steiman-Cameron	
		Friend Millipore Foundation	
		Parent Timothy J Norris	
		Debra & Steven Newman	
		Tchavdar & Petrouchka Alexieva	
		Subhash Karkare	
		Daniel & Manyee Gee	
		Alice & Gregory Greenwood	
		Michelle & Steven Wolf	
		Frederick & Costanza Dopfel	
			1970 J.M. Vrtilek
			James R. Schofield
			Kim C. Thomas
			Victoria Paterno
			1971 Peter O. Shull, Jr.
			1973 Albert Sung Yin Yu
			1974 Steven H. Rappaport
			Jennifer Blankenhorn
			Carlos Valencia, III
			Ricky Balthrop
			1975 Susan Groshong
			Michael Krippendorf
			Diana E. Jendrzej
			1976 Ronald B. David
			Jeffrey A. Katz
			Julia Alexander
			1978 Jonathan Selinger
			R. Sekhar Chivukula
			Andrew Berkin
			Tobias Jaffe
			1979 Michael A. Kutner
			Steven Dickman
			Lincoln Greenhill
			Frank Fujimoto
			1980 Gregory Janee
			1981 Janice L. Bishop
			Mark M. Kataoka
			Joseph P. Ogas
			1982 Patricia Swan Felis

\$1000 TO \$5000

1959 James T. McCarthy	<i>"With a child already in college, the \$3,400 program fee was a potential obstacle. SSP financial aid made it possible for us. We are very grateful!"</i>	1974 Richard Bowdon	Richard Schumacher '74 donated computers through HP's "Gifts in Kind" program. Software Bisque donated The Sky and CCDSOFT.
1960 Stephen L. Cotler		David K. Fullerton	
Henry Lichstein		1976 Katherine Staton	
1964 C. Daniel Gelatt, Jr.		David G. Johnson	
1971 Daniel Seligson		Robert B. O'Rourke	
Chris Cole		Harold C. Schloss	
1976 Eric Korevaar		1978 Russell Quong	
Janine Scancarelli		1979 Anna Toy-Palmer	
1977 Barrie Trinkle		1980 Sarah Anne McCabe	
1978 Richard M. Mathews		Jeffrey Saye	
1978 Michael McKay		David M. Cohen	
Jennine Townsend		1981 Deborah L. Paul	
1979 C. Rand McKinney		Steven J. Pier	
1980 Creighton Asato		Jeanine Hoffmann	
1984 Brian T. Hayes	1984 Scott E. Michael		
1991 Adam Thodey	Andrei Iancu		
Friend Ronald Kirk	1988 Ike A. Ikizyan		
Anonymous (2)	1994 Chris Wyman		
	2002 Frederick Wulff		
	2006 Anshul Bhagi		
	Faculty Tom Steiman-Cameron		
	Friend Millipore Foundation		
	Parent Timothy J Norris		
	Debra & Steven Newman		
	Tchavdar & Petrouchka Alexieva		
	Subhash Karkare		
	Daniel & Manyee Gee		
	Alice & Gregory Greenwood		
	Michelle & Steven Wolf		
	Frederick & Costanza Dopfel		
		1970 J.M. Vrtilek	
		James R. Schofield	
		Kim C. Thomas	
		Victoria Paterno	
		1971 Peter O. Shull, Jr.	
		1973 Albert Sung Yin Yu	
		1974 Steven H. Rappaport	
		Jennifer Blankenhorn	
		Carlos Valencia, III	
		Ricky Balthrop	
		1975 Susan Groshong	
		Michael Krippendorf	
		Diana E. Jendrzej	
		1976 Ronald B. David	
		Jeffrey A. Katz	
		Julia Alexander	
		1978 Jonathan Selinger	
		R. Sekhar Chivukula	
		Andrew Berkin	
		Tobias Jaffe	
		1979 Michael A. Kutner	
		Steven Dickman	
		Lincoln Greenhill	
		Frank Fujimoto	
		1980 Gregory Janee	
		1981 Janice L. Bishop	
		Mark M. Kataoka	
		Joseph P. Ogas	
		1982 Patricia Swan Felis	

2007 FACULTY AND STAFF

Ojai

Academic Director

Dr. Ran Sivron

Associate Academic Dir.

Dr. David Reitzel

Site Directors

Danielle & Morgan Llewelyn

Teaching Assistants

Agnes Kamasi '01

Peter Combs '03

Laura Grupp '03

Gabriel Billings '03

Rachel Paterno-Mahler '02

1983 Judith Lampert
 1984 Bhusan Gupta
 1989 Bonnie Valant-Spaight
 Jaime Chen
 1991 Karen Shell
 1992 Adam Gould
 1998 Anna Heinz
 1999 Nicholas Hoff
 2001 Nora Matell
 2002 Ravi Gupta
 Elvin Wagenblast
 2003 Christina Li
 Russell Spitzer
 2004 Daniel Marks
 Marshall Fox
 2005 Scott Newman
 Benjamin Steele
 2006 Amelia Arbisser
 Jenna Caldwell
 Alison Lu
 Russell Wolf
 Matthew Young
 Faculty Paul M. Routly
 Harland W. Epps
 Friend Kathleen Lewis
 Humboldt Area Fdn.
 Maarten Schmidt
 Parent Bill & Dot Bowdon
 John & Jody Jacobs
 Kalvin & Mary Yim
 Martin Riedel
 Meredith & James Suffoletta
 John & Robin Wilson
 Geraldine & Domingos
 Cecconi
 Ellen & Louis Feldman
 Amy & Bill Dahn
 Natan & Anna Feldman
 Fortune Filiba
 David & Terry Izraelevitz
 Byoung Yoon Park &
 Geum Sook

UP TO \$99

1959 Kenneth B. Hannsgen
 Steven A. Hillyard
 David Holtz
 1961 Edward R. Fiala
 Richard Egan
 1962 Alan M. Gross
 1963 Robert G. Cooper, Jr.
 1964 Robert E. Tarjan
 Michael L. Bennett
 Scott W. Jennings
 1965 John A. Dickinson
 Mark Becker
 Jack Cederquist
 1966 David N. Dobrin
 Jonathan W. Harman
 Stephen R. Dashiell
 Julian Eisner
 1967 Stephen Haber
 Stephen Anderson
 Laurence S. Gillick
 Tad Reynales
 1968 Charles Bryant
 1970 Jean Martin
 Robert W. Crawford
 Seth Stein
 Jon Tischler
 1971 Robert Betz
 Kenneth R. K. Nielsen
 Alan Stolzenberg
 1972 Kathy Roggenkamp
 Norman Hearst
 1973 Philip A. Witman
 Ann Wehrle
 Jon Todd Hoeksema
 David Burke
 1974 Laura Feshbach
 1975 Michael Loewenstein
 1977 Andrea Kress
 Scott Haney
 1978 Lynne Haber
 Laurie Tanenbaum
 Barbara Biagas

Stephanie R. Nichols
 Deborah Hopkins
 1979 James P. Prince
 1980 Elizabeth H. Simmons
 Amy Reibman
 1981 Joel M. Sipress
 William F. Foote
 Edward A. Ajhar, II
 1982 Shalom Flank
 1983 Anton F. Briefer
 Samuel T. Osofsky
 Heidi A. Kuzma
 1984 Bruce B.A. Wang
 1985 Laura A. Tamir
 1986 Steven Kawamoto
 1987 Sayuri Desai Hanna
 Michael Bagalman
 1990 Carrie E. Perlman
 Pedro Melo Perez
 1991 Edward W. Perez
 Lisa Falkson
 1994 Marcelina Santiago
 1995 Tae Min Hong
 1997 Rachel Thessin

Francesca Lettang
 Daniel Jachowski
 Paul Suffoletta
 2005 Anh Nguyen
 Masha Baryakhtar
 Patrick Blaes
 2006 Alexander Chen
 Jason Tsai
 Hannah Clevenson
 Yipeng Huang
 Justin Lan
 Andrew Lyon
 Natalie Milioutina
 Jacob Izraelevitz
 Ben Knudsen
 Maxwell Murialdo
 John Scrudato
 David Tsao
 2007 Natalie Bedard
 Faculty Martin Mason
 Friend Christina Allan
 Michael T. Rafferty
 Graydon Bell
 David Israel
 Parent Bock & Alice Chow
 Bob & Barbara Brown
 Barbara Richardson
 Andrew & Gail Hanson
 Russell & Darlene
 Sampson
 Chris Chai
 Jane & David Johnson
 Robert & Linda Yankowitz
 Mary Knudsen
 Roberto & Jean Muri-
 aldo
 John & Debbie Scrudato
 Jack & Cynthia Walker
 Jon & Akiyo Riggs

“Thank you for providing such generous financial aid to the students who needed it. I will never forget what a great program this was, and I hope to remain an active member of the SSP community as an alumnus.”

Joanne Chang
 1998 Delia Hou
 Eric Switzer
 Elana J. Fertig
 1999 Sam Arons
 2000 A. Meredith Hughes
 Que Anh Nguyen
 Noel M. Bakhtian
 Lisa Fukui
 2001 Tian Xia
 Andrei Nechita
 Francesca Colonnese
 2002 Guadalupe Talavera
 David Dow
 Rachel Paterno-Mahler
 Tracy Li Cheung
 2003 Yvonne Yamanaka
 Austin Oehlerking
 2004 Eric Wilson
 Erik Kuefler
 Josh Dillon

2007-8 BOARD OF TRUSTEES

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 Henry Lichstein '60
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 Charles Holland, Jr. '60
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 Michael McKay '78
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 Richard Mathews '77
 Vice-Chairman:
 Stephen Cotler '60
 Executive Director:
 Richard Bowdon '74

Dr. Amy Barr '94, TA '99-'02
 Dr. Janice Bishop '81,
 TA '86-'87
 Dr. Tracy Furutani '79,
 faculty '99-'03, '05
 Dr. Eric Korevaar '76,
 TA '81-'83
 Dr. David Pierce,
 faculty '74-'86, '93
 Dr. Daniel Seligson '71
 Dr. Elizabeth Simmons '80,
 TA '84-'85
 Barrie Trinkle '77, TA '82
 Carel Veenhuyzen '69,
 TA '75, '77

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 Analytics Operations Engr.
 GlaxoSmithKline Fdn.

OJAI ACADEMIC DIRECTOR'S REPORT

(Continued from page 8)

measuring. Measuring was, as usual, hard – but educational. Despite (and maybe because) of the difficulty of guiding and measuring I still found the astrophotography part of the program pedagogically essential.

Associate AD Dr. David Reitzel of UCLA and I also offered optional projects not directly related to the OD. Students in Ojai and Socorro made simultaneous observations of a Near-Earth Asteroid to calculate its distance by parallax. Others took digital color images, observed the Jovian moons to find Jupiter's mass, or observed Cepheid variables stars. Some students are continuing their research from home.

SSP is much more than academics. As in previous years we planned many extracurricular activities that fascinated our young

and eager students. Among our guest speakers (see p. 7), Drs. Tyrone Hayes and Larry Sverdrup were the favorites (again). Dr. Ed Krupp '63 hosted us on a field trip to the new Griffith Observatory. The students loved Ed, and loved the trip. At Caltech we visited the Laser Interferometer Gravitational -Wave Observatory (LIGO). At JPL we were once again hosted by former AD Dr. Stuart Stephens and Van Snyder '63. Thanks also to Jim Young for hosting us at JPL's Table Mountain Observatory, and to Dr. Tracy Furutani '79 for his ever-popular guided geology tour of Wheeler Gorge. Beach trips were a great joy to all of us as always. TA Laura Grupp organized a field trip to HAAS Automation, a manufacturer of computerized machining centers. Laura and the other exceptional TAs in Ojai – Agnes Kamasi '01, Gabe Billings '03, Rachel Paterno-Mahler '02, and Peter Combs '03 – organized

games, the talent show, movie nights, and QODs.

Last but not least, Site Directors Danielle and Morgan Llewelyn kept our spirits up in innovative ways. For example, they started a new tradition of giving "Friday awards" to students deserving special recognition (for example: the most helpful, best artwork on the board, etc.). We also appreciated good support from the staff of the (recently renamed) Besant Hill School.



Students on Ojai celebrate after defeating the alumni in softball.

SOCORRO ACADEMIC DIRECTOR'S REPORT

(Continued from page 8)

I lectured on calculus and mechanics, electricity and magnetism, special relativity, and quantum mechanics. Dr. Christian Thomas '96, Associate AD, lectured on VPython programming, astronomy, and the OD. The ten homeworks included programming problems, which many students found quite challenging.

Except for occasional tardiness to lecture and a few late homeworks, the students were remarkably well-behaved, mature, and respectful.

All 12 teams successfully acquired a measurable film, although every team needed between 5 and 15 attempts to succeed. The difficulty of acquiring a good film adds to the healthy intensity of the SSP program. Late nights, frustrating struggle, and final success are a recipe for life-long commitment to SSP.

All students completed their OD programs, although two students couldn't quite get their orbital elements to converge. Four of the students reduced their data using the more sophisticated Gaussian method, in addition to the standard Laplacian technique, producing a more accurate orbit.

We enjoyed ten guest speakers and scientific field trips to the National Radio Astronomy Observatory, Sandia National Labs, Apache Point/Sunspot Observatory, and Magdalena Ridge Observatory, plus recreational trips.

There were pool parties, movies on Saturday nights, swing dances, and a talent show. On Reunion Day, visiting Trustees and alumni defeated the students at volleyball. When the new Harry Potter movie came out, the father of one of our students paid for the entire group to see it!

The New Mexico Tech facilities were all well above my expecta-

tions. I am grateful to the NMT staff, especially Prof. David Westpfahl, Chair of the Physics Dept, who provided fine lecture-demonstration equipment. Although the food at the NMT cafeteria was excellent, I did miss the warm ambiance of the Dining Hall at the Thacher School.

We produced an elaborate website, containing photos, HWs, lecture notes, QODs, and much more. It is all still viewable at www.ssp.org/socorro (username socorro, password NMT)

Our highly skilled and dedicated-staff made my job easy. Site Director Leslie Clark deserves much of the credit for creating a warm, welcoming atmosphere and a close-knit working group. She is a gem, completely dedicated to the students' well-being. Thanks also to our superb teaching assistants: Razvan Ungureanu '01, Anna Heinz '98, SONDY Springmann, Addie Dove, and Joey Espejo.

DONATION FORM

Next summer, you can help inspire 72 gifted teenagers to reach their potential. Return this form with your check, or donate online using a credit card at www.ssp.org/donate. Thank you.

\$ _____ \$1000 \$500 \$250 \$100 \$50 \$25

Credit to: _____ alumnus parent faculty friend

Allocate this donation to: general support -or- Abell Scholarship Fund

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SSP c/o Kevin Neal
9228 Ronda Ave.
San Diego, CA 92123

Summer Science Program, Inc. is designated a 501c(3) nonprofit corporation by the Internal Revenue Service. Your donation is tax-deductible as permitted by law.

INSPIRING GUEST SPEAKERS

Socorro Campus	Ojai Campus
Dr. Tom Vestrand, Los Alamos National Laboratory — Transient Astrophysics	Dr. Deborah Fygenson, UC Santa Barbara — Macromolecular Technology
Dr. Agnes Kim, faculty '06, Univ. of Texas at Austin — The Singing Universe	Dr. Gregory A. Lyzenga, Harvey Mudd College — Rocketry
Dr. Marshall Long '71, Yale Univ. — Probing Fire with Light	Dr. Larry Sverdrup, Ophthonix, Inc. — Mad? Science
Dr. Horton Newsome, Univ. of New Mexico, Institute of Meteoritics — Impact Crater Adventures	Dr. Tyrone Hayes, UC Berkeley — From Silent Spring to Silent Night
Dr. Penelope Boston, New Mexico Tech — Caves: Exploring Life Underground from Earth to Mars and Beyond	Dr. Kimberly Turner, UC Santa Barbara — Nanotechnology
E. Bruce Held, Sandia National Lab — Espionage in New Mexico	Dr. Mark Moldwin, UCLA — The Perils of Space: An Introduction to Space Weather
Dr. Eric Davis, faculty '95, Inst. for Advanced Studies at Austin — An Assessment of Faster-Than-Light Spacetimes: Make or Break Issues	Dr. Kevin McKeegan, UCLA — Meteorites
Dr. Larry Sverdrup, Ophthonix, Inc. — Mad? Science	Dr. Henry Roe '91, Lowell Observatory — Methane on Titan
Dr. Eileen Ryan, New Mexico Tech — Asteroid Hazards and the Magdalena Ridge Observatory 2.4m Telescope	Dr. David Pierce, faculty '74-'86, El Cerrito College — Closing Address
Dr. Nicholas Suntzeff, TA '76-'77, Texas A&M Univ. — Cosmology	
Dr. Van Romero, New Mexico Tech — Closing Address	

PARENTS SAY

The genius of the program is an in-depth, no holds barred scientific experience, which is orders of magnitude better than a lab internship. Isaac now understands the process of real science, which many scientists don't really learn until they are in graduate school. Thanks!

—Paul Bleicher,
father of Isaac
Bleicher

Daniel's six-week search for 21-Lutetia's orbit is an apt metaphor for his search for himself. At SSP, he found both. He came back with a renewed sense of purpose, an even stronger work ethic, a group of superb friends, and the inspiration to follow his dreams.

—Ely Dahan, mother
of Daniel Dahan



The Summer Science Program

Business Office:

108 Whiteberry Dr

Cary, NC 27519

2007ERS SAY

I feel infinitely more prepared for college now.

—Deepa Chari

You will never forget SSP because it helps you to discover who you are and what you want.

—Jamie Tayar

Science first, beach second, each other above all.

—Thomas Harris

ACADEMIC DIRECTOR REPORTS

Ojai Campus

by Dr. Ran Sivron

Academically and socially, the 49th SSP in Ojai was very successful. All students completed the orbital determination, and generated an ephemeris to compare their predicted and observed positions. The open source VPython programming language is proving to be a very useful and effective learning tool.

After completing the basic OD, many students went further. Four students completed an error analysis, six included the light travel time correction, seven tried a fourth observation, one did stellar aberration correction, one used the Gaussian (vs. Laplacian) method, and one did a differential correction using extra observations, leading to a 90% improvement in accuracy.

We again had some problems getting both telescopes to work, but our dedicated staff fixed the 6" by the end of first week and the 14" by the end of the second, after which they worked great. All but one team got a well-guided film, and the other team borrowed one for

(Continued on page 6)

Socorro Campus

by Dr. Michael Dubson '73

My experience as Academic Director of SSP was exhilarating. The students, staff, and the facilities were all excellent. I made one substantial change to the lectures: I gave each student a "clicker" (hand-held voting devices). From time to time during lecture I would ask a question for all students to answer, giving me real-time feedback.

Compared to 1973 when I was a student, this group was better-prepared and perceptibly smarter. This was a truly remarkable bunch of 16- and 17-year-olds. Also, compared to 1973, much more is expected of the students academically. There is still a wide spread of abilities and backgrounds, which is healthy for the students, but challenging for the teacher. One student commented wryly that some of my lectures "left half the students bored and the other half lost." The better-prepared students helped those who were struggling. There is no better way to learn than by teaching.

(Continued on page 6)