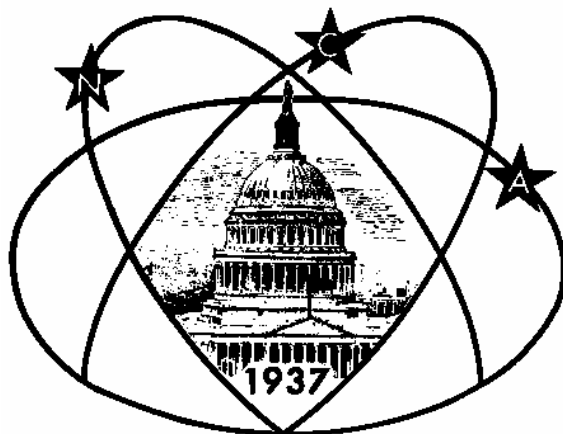


Star



Dust

National Capital Astronomers, Inc.

<http://capitalastronomers.org>

Volume 65, Number 9

May 2007

ISSN 0898-7548

May Speaker: Dr. Mercedes Lopez-Morales - "Amateur Telescopes Can Do Real Science"

Dr. Mercedes Lopez-Morales, Carnegie-NASA Astrobiology Institute Post-Doctoral Fellow, Carnegie Institution of Washington, Department of Terrestrial Magnetism, will present the talk "Amateur Telescopes Can Do Real Science" at the May 12 meeting of the National Capital Astronomers, 7:30 P.M., at the University of Maryland Observatory in College Park, Maryland.

Abstract

It is commonly thought that one needs large ground-based telescopes or telescopes in space to do cutting-edge science. Although this is completely true, 'tiny' telescopes, assembled using off-the-shelf amateur products, are also making significant scientific contributions. In this talk I will show a few of these projects and some

of the scientific results they are providing.

Biography

Dr. Lopez-Morales received a B.Sc. in Physics and Astrophysics from the University of La Laguna, Spain in 1996. She earned an M.Sc. in Astrophysics in 2000 and a Ph.D. in Astrophysics in 2004 from the University of North Carolina-Chapel Hill.

Her many fellowships, grants, and awards, include (to mention just a few):

- 2006-present Lewis & Clark Field Scholar in Astrobiology, American Philosophical Society
- 2004-present Carnegie Fellow, Carnegie Institution of Washington, Department of Terrestrial Magnetism
- 2003-2004 Royster Society Fellow, University of North Carolina at

Chapel Hill

- 2003-2004 Linda Dykstra Science Dissertation Fellowship, University of North Carolina at Chapel Hill
- 2003 Women in Science Fellowship, University of North Carolina at Chapel Hill
- 1991 Young Researchers National Congress Science Award, Madrid, Spain
- 1990 Young Researchers of the Canary Islands Science Award, Tenerife, Spain

Dr. Lopez-Morales has earned several further travel grants, research assistantships, etc. She has succeeded with roughly 30 observing proposals, and a National Science Foundation Mayor Instrumentation proposal.

Elections at June 9 Meeting

Jay H. Miller, Nominating Committee Chairman

The candidates for office in the National Capital Astronomers for next year are:

President: Dr. Walter Faust

Vice President: Dr. John D. Gaffey, Jr.

Secretary: Michael Brabanski

Treasurer: Michael Brabanski

Assistant Treasurer: Jeffrey B. Norman

Trustee: Dr. Wayne H. Warren, Jr.

Dr. Nancy Grace Roman is retiring as secretary after many years of devoted service to NCA. Michael Brabanski has agreed to handle the positions of treasurer

and secretary. This is common in many organizations; since most of both jobs involve membership, it seems reasonable to combine them.

If anyone else wishes to run for any of these positions, contact me or the president, Dr. Harold Williams.

Additional nominations may be made prior to or at the Annual NCA election meeting on June 9.

Science Fair Award Winners to be Honored

We will honor the winners of the NCA Astroscience Awards in the 2007 science fairs at the June NCA meeting. The winners will bring their projects to the meeting, where each will give a three to five-minute summary of his or her project. Each student will be presented with a certificate, a one-year membership in NCA, and a one-year subscription to Sky and Telescope.

Calendar of Monthly Events

NCA Home Page: <http://capitalastronomers.org>

NCA Mirror- and Telescope-making Classes: Fridays, May 4, 11, 18, and 25, 6:30 to 9:30 P.M. at the Chevy Chase Community Center, at the northeast corner of the intersection of McKinley Street and Connecticut Avenue, N.W. Contact instructor Guy Brandenburg at 202-635-1860 or email him at gbrandenburg@yahoo.com.

Open house talks and observing at the University of Maryland Observatory in College Park on the 5th and 20th of every month at 8 P.M. (Nov.-Apr.) or 9 P.M. (May-Oct.). The talks are non-technical. There is telescope viewing afterward if the sky is clear.

Upcoming NCA Meetings—Saturdays May 12, Mercedes Lopez-Morales, Department of Terrestrial Magnetism, Carnegie Institute of Washington, “Amateur Telescopes Can Do Real Science.”

June 9, Dr. Nancy Grace Roman, NASA, Retired, will speak about the Hertzsprung-Russell Diagram.

**The Public is
Welcome!**

Observing with the NCA C-14

Mike McNeal

Schedule is open, generally, Saturdays at 7:30 P.M. Call to set up a time.

In Mike McNeal’s backyard, 5410 Grove St, Chevy Chase, MD, (Friendship Heights Metro).

Please make reservations by 10 p.m. the Friday before. Call Mike at 301-526-2648 or email him at mnealmi@verizon.net.

We need a new volunteer to house NCA’s C-14, make it available for weekly viewing, and transport it to other sites, e.g., Exploring the Sky and star parties.

Come See the Stars! *Exploring the Sky* by Joe Morris

2007 Schedule

Date	Time	Things of interest
5/19	9:00 P.M.	Venus and Moon close; Beehive Cluster
6/16	9:00 P.M.	Venus, Saturn, and Regulus in a line
7/14	9:00 P.M.	Venus bright but low; new Moon
8/18	8:30 P.M.	Perseid meteors; Moon at apogee
9/29	8:00 P.M.	Rock Creek Park day; Moon just past full
10/20	7:30 P.M.	Orionid meteors; Moon past first quarter
11/3	7:00 P.M.	Pleiades; Andromeda near zenith

Exploring the Sky is an informal program that for over fifty years has offered monthly opportunities for anyone in the Washington area to see the stars and planets through telescopes from a location within the District of Columbia.

Sessions are held in Rock Creek Park once each month on a Saturday night from April through November, starting shortly after sunset. We meet in the field just south of the intersection of Military and Glover Roads NW, near the Nature Center. A

parking lot is located next to the field.

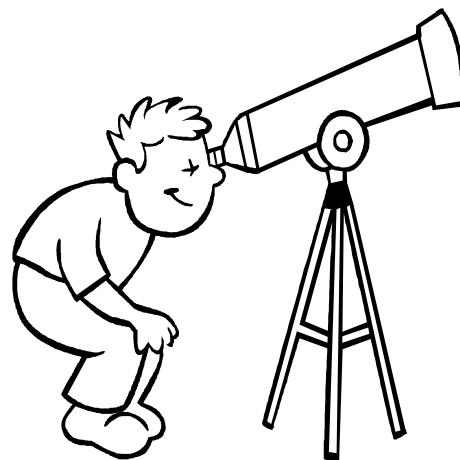
Beginners (including children) and experienced stargazers are all welcome — and it’s free!

Questions? Call the Nature Center at (202) 895-6070 or check the Internet sites: www.nps.gov/rocr/planyourvisit/expsky.htm or www.capitalastronomers.org

A presentation of the National Park Service and National Capital Astronomers.

*The deadline for the June
Star Dust is May 30.
Please send your material
to Elliott Fein by that date
to ensure inclusion. Send
submissions to Elliott Fein
at
elliott.fein@verizon.net.*

*Articles submitted may be
edited to fit the space
available.*



Mid-Atlantic Occultations and Expeditions to Mid-June

by Dr. David Dunham

Asteroidal Occultations

2007					Planet or	dur. Ap.			
Date	Day	EDT	Star	Mag	Asteroid	dmag	s	in.	Location
May 12	Sat	3:17	2UC24378882	13.4	2001 KA77	8.9	13	10	TNO - e.USA?
May 16	Wed	21:57	SAO 99050	9.1	Libya	6.4	8	3	nNY,sNewEnglnd
May 19	Sat	23:05	SAO 78893	8.9	Venus	0.0	435	7	alt.7 dg.at DC
May 22	Tue	21:07	TYC56160586	11.2	Charis	2.8	4	8	NJ,PA,neOH
May 24	Thu	0:00	TYC19650020	11.0	Papagena	1.7	6	7	wNY,PA,eMD,NJ
May 24	Thu	21:54	TYC19340103	10.1	Tabora	2.3	2	5	wNY,nePA,nNJ
May 31	Thu	0:17	TYC14650134	11.4	Brucia	3.6	3	7	OH,nwPA,w&nNY
Jun 2	Sat	22:05	SAO 79605	9.6	Athor	5.2	1	4	KY,wNC,SC
Jun 7	Thu	22:25	TYC14340773	10.9	Backlunda	4.2	2	5	eKY,wNC,neSC

Lunar Grazing Occultations

DATE	Day	EDT	Star	Mag	% alt	CA	Location
May 10	Thu	9:10	delta Cap	2.9	47-	31-18S	Arlngtn,VA;DC;Beltsvl,MD;Sn36
May 18	Fri	21:41	ZC 885	5.6	7+	12 17N	Richmond & Norfolk, VA Sun-15
May 20	Sun	21:59	SAO 79790	8.7	22+	29 15N	Emigsville,PA; Aberdeen,MD
May 23	Wed	23:01	SAO 99138	9.0	52+	36 15N	Massaponax, VA &Somerset, PA
Jun 19	Tue	21:20	Regulus	1.4	26+	35 16N	S. Carolina; Sun alt. -9 deg.

Detailed interactive path maps & other details are at
<http://www.fingerlakessyhetics.com/occultations/GrazeMaps.html> .

Total Lunar Occultations

DATE	Day	EDT	Ph Star	Mag	% alt	CA	Sp.	Notes
May 12	Sat	4:23	R ZC 3437	6.8	26-	11	73S A0	Azimuth 105 deg.
May 18	Fri	20:56	D SAO 77604	7.0	7+	20	33S K0	Sun alt. -8 deg.
May 18	Fri	21:14	D SAO 77621	7.5	7+	17	73S M3	Sun -11; Az. 292 deg.
May 18	Fri	21:20	D SAO 77619	7.1	7+	15	31S F2	Sun -12; Az. 293 deg.
May 18	Fri	22:07	D 136 Tauri	4.6	7+	8	77S A0	close dbl;ZC890;Az299
May 19	Sat	21:24	D SAO 78853	7.7	14+	25	50S A0	
May 20	Sun	21:52	D SAO 79790	8.7	22+	29	30N A5	graze, Aberdeen, MD
May 20	Sun	22:20	D SAO 79804	7.4	23+	24	59S G0	mg2 7.9,sep0.19",PA38
May 20	Sun	22:27	D ZC 1195	6.8	23+	23	45S B8	
May 21	Mon	0:14	D ZC 1200	6.9	23+	3	10S K0	Azimuth 297 deg.
May 21	Mon	0:26	D ZC 1208	6.4	23+	2	37N K1	Azimuth 299 deg.
May 21	Mon	21:11	D SAO 80439	8.2	32+	45	47N K2	Sun -10; NY graze
May 21	Mon	23:55	D SAO 98198	7.6	33+	14	44S K5	Azimuth 284 deg.
May 22	Tue	0:05	D SAO 98212	8.4	33+	12	59N M0	Az286;mg2 12 .9",PA351
May 23	Wed	22:40	D 45 Leonis	6.0	52+	39	66N A0	ZC1531;mg2 11 37",PA132
May 27	Sun	1:26	D chi Vir	4.7	80+	18	47S K2	ZC1815;mg2&3 9, ".1&174"
May 27	Sun	22:14	D SAO 157849	7.3	86+	38	64S F2	
May 28	Mon	21:16	D ZC 2011	6.3	92+	30	75S K2	Sun alt. -9 deg.
May 30	Wed	22:34	D SAO 183731	7.3	99+	21	66S F0	Term.16";mg2 9 6",PA289
May 31	Thu	0:37	D ZC 2250	7.7	99+	26	66N M1	Terminator distance 14"
May 31	Thu	4:10	D 1 Scorpii	4.6	99+	7	60N B1	Az229; ZC2263;spec.bin.
Jun 3	Sun	3:37	R ZC 2702	6.8	95-	22	69S K0	WA 259 deg.
Jun 8	Fri	2:08	R 82 Aquarii	6.2	52-	8	47N M2	ZC 3383; Az. 105 deg.
Jun 8	Fri	2:56	R SAO 146488	7.5	52-	16	57S K0	Azimuth 113 deg.
Jun 9	Sat	3:23	R XZ Piscium	5.8	40-	17	72S M5	ZC 3520; Az. 104 deg.
Jun 10	Sun	4:54	R 62 Piscium	5.9	29-	30	83S G8	ZC 103; Sun alt. -8 dg.
Jun 10	Sun	5:11	R delta Psc	4.4	29-	33	54N K5	ZC 105; Sun alt. -6 dg.

More information is at <http://iota.jhuapl.edu/exped.htm> .
 David Dunham, dunham@starpower.net, phone 301-474-4722

Getting to the NCA Monthly Meeting and the Dinner Before the Meeting

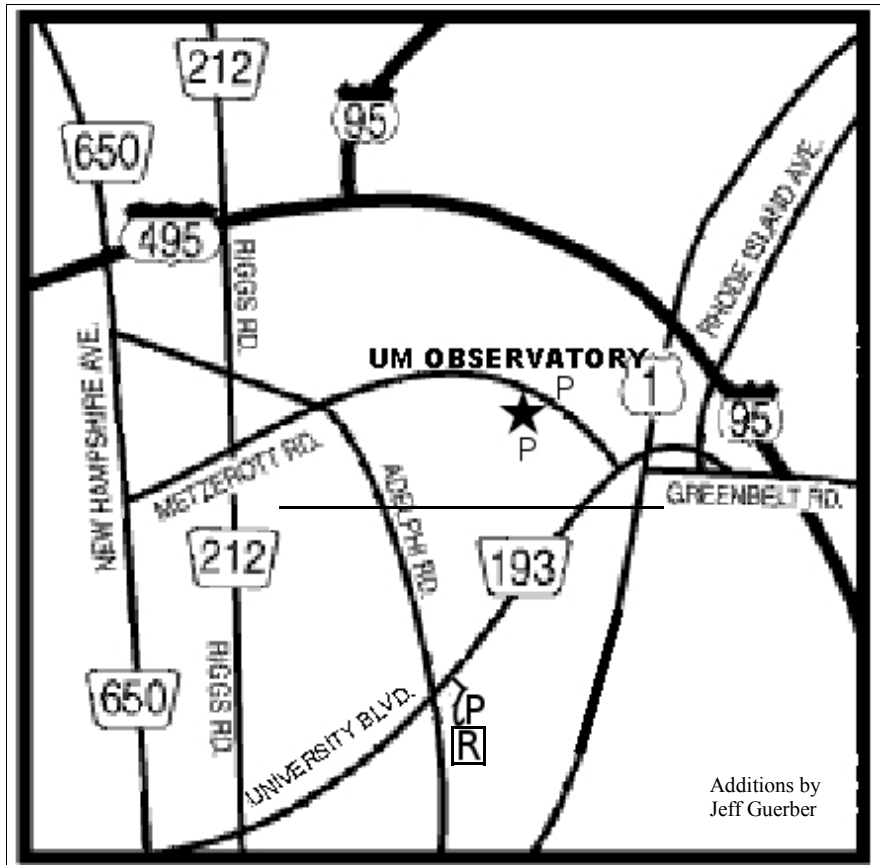
Jeff Guerber

NCA meetings are now held at 7:30 p.m. at the University of Maryland Observatory, in College Park on Metzerott Rd. between University Blvd. (MD-193) and Adelphi Rd. To get there from the Capital Beltway (I-495), either take US Rt. 1 south about a mile, turning right onto MD-193 West, then at the first light turn right onto Metzerott; or, take New Hampshire Ave. (MD-650) south, turn left at the second light onto Adelphi Rd., two more lights, turn left onto Metzerott, and proceed about a mile to the observatory. The observatory is on the south side of Metzerott Rd., directly opposite the UM System Administration building; you can park there if the observatory lot is full, but be careful crossing Metzerott Rd.

At 5:30 p.m., before the meeting, please join us for dinner at the Garden Restaurant in the UMD University College Inn and Conference Center, 3501 University Blvd. East at Adelphi Rd. From the Beltway, either take New Hampshire Ave. south, turn left onto Adelphi, and at the third light (passing Metzerott) turn left onto University then immediately right into the garage; or, take US-1 south, turn right onto University Blvd. west, and take it to the intersection with Adelphi Rd. Park either in the garage (costs), or in Lot 1 nearby (free). To get to the Observatory, exit to the right onto University Blvd. (MD-193) east, and at the second light turn left onto Metzerott Rd.

Do You Want to Get *Star Dust* Electronically?

Any member wishing to receive *Star Dust*, the newsletter of the National Capital Astronomers, via e-mail as a PDF file attachment, instead of hardcopy via U.S. Mail, should contact Nancy Grace Roman, the NCA Secretary, at nancy.roman6@verizon.net or 301-656-6092 (home).



Getting to the NCA Meeting
 Star=Observatory R=Restaurant P=Parking

Observing after the Meeting

Elizabeth Warner

Following the meeting, members and guests are welcome to tour through the Observatory.

Weather permitting, several of the telescopes will also be set up for viewing.

Are You Coming to Dinner?

If you are planning to come to the dinner before the meeting, please tell Benson J. Simon, telephone: 301-776-6721, e-mail bjs32@cornell.edu so that we can make reservations for the right number of people.

Do You Need a Ride?

Please contact Jay Miller, 240-401-8693, if you need a ride from the metro to dinner or to the meeting at the observatory. (Please try to let him know in advance by e-mail at rigell@starpower.net.)

Support the IDA

Join the International Dark-Sky Association
 3225 N. First Avenue Tucson, AZ
 85719-2103
www.darksky.org

Star Dust is published ten times yearly, September through June, by the National Capital Astronomers, Inc. (NCA).
Editor: Elliott Fein, Co-editor: Adele Fein, Editorial Advisors: Nancy Byrd, Walt Faust. Consultant: Jeffrey Norman
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Jeffrey B. Norman, Assistant Treasurer, jeffrey.norman@att.net.
Trustees: Guy Brandenburg (202-635-1860, gfbrenden@earthlink.net), Gary Joaquin, Jeffrey Norman (see info under "Assistant Treas." above), Benson Simon.
NCA Webmaster, Dr. Harold Williams, see info in top line above.
Elliott Fein, NCA *Star Dust* Editor, elliott.fein@verizon.net, 301-762-6261 (home), 5 Carter Ct., Rockville, MD 20852-1005.
Appointed Officers and Committee Heads: Exploring the Sky - Joseph C. Morris; Meeting Facilities - Jay H. Miller; Observing - Michael McNeal, mcnealmi@verizon.net; Telescope Making - Guy Brandenburg; *Star Dust* Editor - Elliott Fein

SERVING SCIENCE & SOCIETY SINCE 1937

NCA is a nonprofit, membership-supported, volunteer-run, public-service corporation dedicated to advancing astronomy, space technology, and related sciences through information, participation, and inspiration, via research, lectures, presentations, publications, expeditions, tours, public interpretation, and education. NCA is the astronomy affiliate of the Washington Academy of Sciences. NCA is an IRS Section 501(c)(3) tax-deductible organization. All are welcome to join NCA.

SERVICES & ACTIVITIES:

Monthly Meetings feature presentations of current work by researchers at the horizons of their fields. All are welcome; there is no charge. See monthly *Star Dust* for time and location.

NCA Volunteers serve in a number of capacities. Many members serve as teachers, clinicians, and science fair judges. Some members observe total or graze occultations of stars occulted by the Moon or asteroids.

Publications received by members include the

monthly newsletter of NCA, *Star Dust*, and an optional discount subscription to *Sky & Telescope* magazine.

Consumer Clinics: Some members serve as clinicians and provide advice for the selection, use, and care of binoculars and telescopes and their accessories. One such clinic is the semi-annual event held at the Smithsonian Institution National Air and Space Museum.

Fighting Light Pollution: NCA is concerned about light pollution and is interested in the technology for reducing or eliminating it. To that purpose, NCA is an Organization Member of the International Dark Sky Association (IDA).

Classes: Some NCA members are available for educational programs for schools and other organizations. The instruction settings include star parties, classroom instruction, and school-teacher training programs that provide techniques for teaching astronomy. NCA sponsors a telescope-making class, which is described in the *Star Dust* "Calendar of Monthly

Events."

Tours: On several occasions, NCA has sponsored tours of astronomical interest, mainly to observatories (such as the National Radio Astronomy Observatory) and to the solar eclipses of 1998 and 1999.

Discounts are available to members on many publications, products, and services, including *Sky & Telescope* magazine.

Public Sky Viewing Programs are offered jointly with the National Park Service, and others. Contact: Joe Morris, joemorris@erols.com or (703) 620-0996.

Members-Only Viewing Programs periodically, at a dark-sky site.

NCA Juniors Program fosters children's and young adults' interest in astronomy, space technology, and related sciences through discounted memberships, mentoring from dedicated members, and NCA's annual Science Fair Awards.

Fine Quality Telescope, 14-inch aperture, see "Calendar of Monthly Events."

Yes, I'd like to join NATIONAL CAPITAL ASTRONOMERS!

Name: _____ Date: ____/____/____

Street address: _____

City/State/ZIP: _____

Telephone: ____-____-____ E-mail: _____

Other family members who should receive a membership card: _____

Would you prefer to get *Star Dust* by e-mail? ____

MEMBERSHIP CATEGORIES AND ANNUAL DUES RATES

All members receive *Star Dust*, the monthly newsletter announcing NCA activities. As an added optional benefit to extend your knowledge of astronomy, you may also choose *Sky and Telescope* magazine at the discounted rate of \$33.

Student Membership: \$5with *Sky and Telescope*...\$38

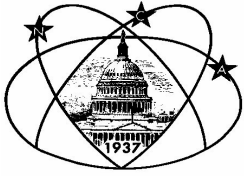
Standard Individual or Family Membership: \$10with *Sky and Telescope*...\$43

You are welcome to make contributions in any amount in addition to the dues shown above.

Contribution amount: _____

Please mail this form with your check payable to National Capital Astronomers, to:

Mr. Michael L. Brabanski, NCA Treasurer; 10610 Bucknell Drive, Silver Spring, MD 20902-4254



National Capital Astronomers, Inc.

If undeliverable, return to
NCA c/o Nancy Roman
4620 N. Park Ave., #306W
Chevy Chase, MD 20815-4551

**FIRST CLASS
DATED MATERIAL**

***NCA Will
Meet on
May 12!***

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