

# *D I S T A N T* **L I G H T**

Rockland Astronomy Club Journal ~ January 2007

HUBBLE  
SEES  
INFANT  
STARS  
IN  
SMALL  
MEGALLANIC  
CLOUD

DETAILS ON PAGE 2

SAVE THE DATE  
SATURN  
SPECTACULAR  
JAN 20TH  
9 PM — MIDNIGHT  
RCC CAMPUS

DETAILS ON PAGE 4



**DISTANT LIGHT**

is published 10 times a year by the Rockland Astronomy Club, 225 Route 59, Suffern, NY 10901-5203. Subscriptions are included with annual RAC membership dues. Send address changes to Bill Thys at the address above. Contributions to and inquiries about this journal can be emailed to the Editor/Design Director Mies Hora: Editor@rocklandastronomy.com

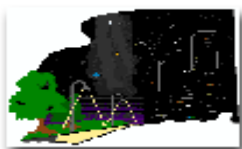
©2007 Rockland Astronomy Club. All rights reserved.

**RAC MEMBERS ONLY:  
GET DISTANT LIGHT VIA EMAIL**

(requires Adobe Acrobat): send an email to Memberships@RocklandAstronomy.com

**BECOME A RAC MEMBER**

Complete and mail the Membership



International Dark Sky Association



**PLEASE NOTE OUR NEW ADDRESS:**

Rockland Astronomy Club,  
225 Route 59, Suffern, NY 10901-5203

[CLICK HERE FOR MONTHLY SKYDATA: P. 3](#)

[CLICK HERE FOR RAC MEETINGS SCHEDULE AND ADVISORY COMMITTEE: P. 4](#)

**COVER PHOTO**

**HUBBLE OBSERVES INFANT STARS IN NEARBY GALAXY**

This new image on the cover taken with NASA's Hubble Space Telescope depicts bright, blue, newly formed stars that are blowing a cavity in the center of a star-forming region in the Small Magellanic Cloud.

At the heart of the star-forming region, lies star cluster NGC 602. The high-energy radiation blazing out from the hot young stars is sculpting the inner edge of the outer portions of the nebula, slowly eroding it away and eating into the material beyond. The diffuse outer reaches of the nebula prevent the energetic outflows from streaming away from the cluster.

Ridges of dust and gaseous filaments are seen towards the northwest (in the upper-left part of the image) and towards the southeast (in the lower right-



hand corner). Elephant trunk-like dust pillars point towards the hot blue stars and are tell-tale signs of their eroding effect. In this region it is possible with Hubble to trace how the star formation started at the center of the cluster and propagated outward, with the youngest stars still forming today along the dust ridges.

The Small Magellanic Cloud, in the constellation Tucana, is roughly 200,000 light-years from the Earth. Its proximity to us makes it an exceptional laboratory to perform in-depth studies of star formation processes and their evolution in an environment slightly different from our Milky Way.

Credit: NASA, ESA, and the Hubble Heritage Team (STScI/AURA) - ESA/Hubble Collaboration ★

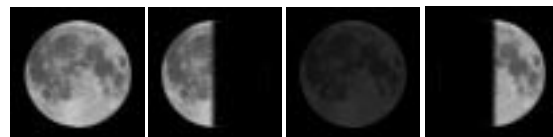
**RAC MEMBERSHIP APPLICATION**

Club members receive this journal, enjoy special prices for annual subscriptions to S&T and ASTRONOMY magazines, discounts to club events and much more. Make checks payable to RAC and mail with this form to: Rockland Astronomy Club, Attn: Memberships, 225 Route 59, Suffern, New York 10901-5203.

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Home Phone (      ) \_\_\_\_\_  
 Email \_\_\_\_\_

*Note: The Journal is sent to Members via email. For mailed hard copies, add \$18/year.*

Membership Type	1 Year	2 Year (Save \$2)	3 Year (Save \$5)	5 Year (Save \$10)	Hard Copy (by US Mail)	Total
Family	\$30	\$58	\$85	\$140	+\$18/yr.	_____
Individual	\$20	\$38	\$55	\$90	+\$18/yr.	_____
Senior Citizen (65+)	\$15	\$28	\$40	\$65	+\$18/yr.	_____
High School Student	\$10	\$18	\$25	\$40	+\$18/yr.	_____
<b>Grand Total</b>						<b>_____</b>



Full Jan 3      Last Qtr Jan 10      New Jan 18      First Qtr Jan 25

## JANUARY SKYDATA

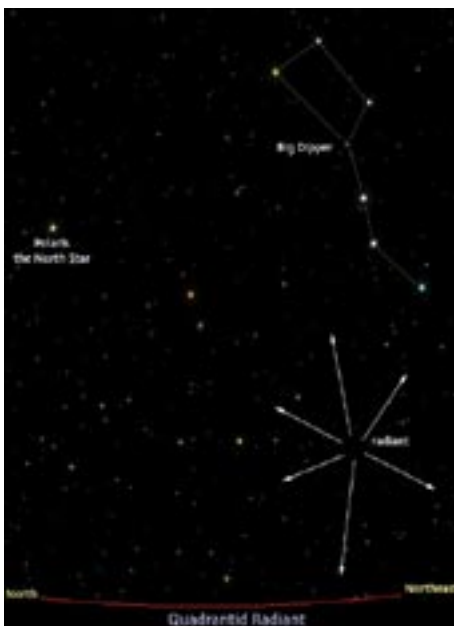
### Highlights

- Jan 3 **Quadrantid meteors**
- Jan 4 Jupiter 5° north of Antares
- Jan 6 Saturn 0.9° south of Moon
- Jan 7 Mercury in superior conjunction
- Jan 11 Spica 1.1° north of Moon
- Jan 15 Antares 0.5° north of Moon
- Jan 15 Jupiter 6° north of Moon
- Jan 16 Mars 5° north of Moon
- Jan 18 Venus 1.4° south of Neptune
- Jan 20 Neptune 2° north of Moon
- Jan 20 Venus 0.8° north of Moon

### Quadrantid Meteor Shower

The peak of the Quadrantid Meteor Shower can surprisingly rival the rates of the Perseids and Geminids. However, the shower has a very sharp and variable maximum (possibly several hours later or earlier than the predicted time), and the rates can be unpredictable. Early January also features unforgiving weather making this a difficult shower to catch at its best.

Dark sky observers may catch as many as 15-45 Quads per hour on the



morning of January 3, along with bright sporadic meteors. The morning of January 4 may also be productive for observing additional bursts especially on the east coast.

On either date, the best time to watch should be roughly 2:30am local standard time until morning twilight gets too bright (roughly 6:00am local standard time at 40 degrees N). These are the hours when the radiant is highest in the sky.

Quadrantids are medium-velocity meteors, and some bright ones are often visible at maximum activity. The radiant is in a rather blank area surrounded by the constellation figures of Boötes, Hercules, Draco and Ursa Major. Off-maximum nights only produce a few shower members; the shower has a very short duration from about January 1-5.

The first observation of the Quadrantids seems to have occurred on the morning of January 2, 1825, when Antonio Brucalassi (Italy) remarked that “the atmosphere was traversed by a multitude of the luminous bodies known by the name of falling stars.” Other observations were made on January 2, 1835, by Louis Francois Wartmann (Switzerland), and on January 2, 1838, by M. Reynier (Switzerland).

First mention that early January activity might be annual came in 1839, when Adolphe Quetelet (Brussels Observatory) and Edward C. Herrick (Connecticut) independently made the suggestion. The meteor shower became known as the Quadrantids because of its emanation from a now obsolete constellation called Quadrans Muralis (the Mural Quadrant) located on some 19th-century star atlases near the point of meeting between Hercules, Boötes and Draco. ★

### Prime Observing Window

Saturday Jan 13 through Monday Jan 22

### Sun & Moon Rise & Set Times

Date	Sunrise	Set	Moonrise	Set	Phase
Jan 3	07:21	16:41	16:38	07:45	Full
Jan 10	00:00	10:51	0:00	10:51	Last Qtr
Jan 18	07:17	16:56	07:15	16:18	New
Jan 25	07:13	17:05	10:35	00:00	First Qtr

### Planetary

#### Visible Planets in the Night Sky

##### January 1

	Rise	Transit	Set	Mag
Mercury	07:15	11:45	16:16	-1.0
Venus	08:27	13:09	17:51	-3.9
Mars	05:48	10:24	15:00	1.5
Jupiter	04:54	09:39	14:24	-1.8
Saturn	20:04	15:00	09:56	0.2

##### January 15

	Rise	Transit	Set	Mag
Mercury	07:48	12:30	17:13	-1.1
Venus	08:28	13:26	18:25	-3.9
Mars	05:40	10:13	14:47	1.4
Jupiter	04:12	08:56	13:40	-1.8
Saturn	19:05	14:02	08:59	0.1

##### January 31

	Rise	Transit	Set	Mag
Mercury	07:57	13:14	18:31	-0.9
Venus	08:18	13:42	19:06	-3.9
Mars	05:27	10:01	14:36	1.4
Jupiter	03:23	08:05	12:47	-1.9
Saturn	17:56	12:54	07:53	0.0

All data calculated for Suffern, New York, Eastern Time:  
Latitude: 41:06:48 N; Longitude: 74:08:38 W

# The RAC Essentials

## MONTHLY CALENDAR

**201-768-2238  
or 845-47STARS**

### Prime Observing

Tues, Jan 9, 8pm

Fri/Sat, Jan 12 & 13

### Sat, Jan 20

9 pm – midnight

Sat, Jan 20

Sat, Feb 10

**Message Hotline: The latest information or last minute changes to club events.**

### January 13 thru 22

Advisory Board Committee Meeting  
LHVCC, Airmont, N.Y.

Observing at Wawayanda  
(members night)\*

**Saturn Spectacular** Come and view Saturn at it's best! Rockland Community College Observing Field (south of Field House parking lot)

Up all night Observing at Taghkanic State Park (members night)\*

'Getting Started Beginners Telescope Workshop Part 2' with Dr. Sokoloski;  
Lower Hudson Valley Challenger Center  
Route 59 Airmont Rd: FREE Admission

## LOCATIONS

### North Rockland

#### High School Planetarium

Hammond Road, Thiells, NY

#### Rockland Community College

College Road, Suffern, NY

#### Lower Hudson Valley

#### Challenger Center

Rt. 59, Suffern, NY

#### Anthony Wayne

#### Recreation Area\*

Exit 17, P.I.P., NY

#### Silvermine Ski Area\*

Exit 18, P.I.P., NY

#### Wawayanda State Park\*

973-853-4462,  
Highland Lakes, NJ

#### Taghkanic State Park\*

Taconic State Parkway,  
Ancram, NY

## ADVISORY CMTE.

Jose Alvira

Frank Bifulco

Jim Burnell

Mark Hettinger

Mies Hora

Rob Lyons

Keith Murdock

Al Nagler

Dr. Jack Rosen

Audry Salvatore

Len Salvatore

Ed Siemenn, *Chair*

Bernie Sokolowski

Bill Thys

Alan Traino

### Life & Honorary Members

Tom Massey (L)

Al Nagler (L)

Don Urban (L)

Dr. Saeed Safaie (H)

Andrew Warrington (H)

## KEY PERSONNEL

Contact any person on this list for advice on a specific topic:

### Membership Services

Bill Thys, 201-773-4067

Memberships@RocklandAstronomy.com

### Journal Editor & Design Director

Mies Hora, 845-429-0923

Editor@RocklandAstronomy.com

### Special Events & Observing

Frank Bifulco, 914-523-6548

Observing@RocklandAstronomy.com

### Northeast Astronomy Forum

Alan Traino, 973-427-2020

NEAF@RocklandAstronomy.com

### Summer Star Party

Jose Alvira, 845-446-4336

SummerStarParty@RocklandAstronomy.com

### Media Services & Lecture Series

Keith Murdock, 845-786-5645

Media@RocklandAstronomy.com

### Accounting

Mark Hettinger, 201-768-5720

MarkHettinger@RocklandAstronomy.com

### Program Director

Jose Alvira, 845-446-4336

JoseAlvira@RocklandAstronomy.com

### Club Library

Audrey Salvatore, 845-928-6697

Library@RocklandAstronomy.com

### Webmaster

Rob Lyons, 201-679-7404

Webmaster@RocklandAstronomy.com

### Educational & Children's Programs

Ed Siemenn, 845-461-4799

EdSiemenn@RocklandAstronomy.com

### Astrophotography

Bill Thys, 201-773-4067

BillThys@RocklandAstronomy.com

### CCD Imaging

James Burnell, 845-986-3332

JimBurnell@RocklandAstronomy.com

### Senior Advisor

Al Nagler

\*Special permits required to observe at these locations. Contact Frank Bifulco for permit info.