



AAPT - ONTARIO GRADE ELEVEN PRIZE CONTEST

On May 12, 1981 AAPT - Ontario will sponsor the first Grade Eleven Prize Contest. Students currently enrolled in Grade 11 physics are eligible to write (or were enrolled in the immediately previous term in semestered schools)

The Contest will consist of about 30 multiple choice questions based on the grade 11 curriculum guidelines plus some questions on general physics knowledge, history and current events. Certificates will be sent to the top two students in each school by AAPT - Ontario. Each school will reward its top student through the purchase of a book or magazine subscription as prize. AAPT - Ontario will provide prizes for the top ten entries in the province with appropriate certificates. A levy of \$ .50 per student entry will help to defray the costs involved

Further details will be sent to every school in Ontario as the contest date approaches.

AAPT - ONTARIO ACTIVE

Four executive members of AAPT - Ontario will be travelling to New York for the AAPT National Winter Conference, January 25-29, 1981. They will be representing the Ontario Section as well as giving papers, chairing sessions and being active with various committees. Further details will appear in the next issue.

Five hundred and fifty copies of our last newsletter were distributed. Many found their way to the STAO Conference. This issue goes to press in the amount of 1000 copies, many of which will be distributed in New York. They were a popular item at the Summer Meeting in Troy, New York.

Doug Cunningham represented AAPT - Ontario by presenting a session on science clubs at a PA Day for the science teachers of Kent County in November.

Ernie McFarland has been elected Chairman of the Apparatus Committee of the National AAPT.

CONFERENCE

Arrangements have been made for Jearl Walker to be at the AAPT - Ontario Conference on June 12 and 13, 1981 at the University of Toronto. He will be taping some of his 'spots' for the Quirks and Quarks radio show.

A special guest will unveil the first details of the new curriculum guidelines for senior division physics for Ontario.

**AAPT - ONTARIO  
CONFERENCE  
UNIVERSITY OF TORONTO  
JUNE 12/13 1981  
JEARLE WALKER**

**Individualized Physics Project**

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**AAPT - ONTARIO  
GRADE ELEVEN PRIZE CONTEST  
MAY 12, 1981**

COMING EVENTS

- January 25-29, 1981 AAPT National Winter Meeting  
New York City (\*)
- February 6, 1981 McMaster University Physics Contest  
for details Physics Department  
McMaster University  
1280 Main Street West  
Hamilton, Ontario  
L8S 4M1
- May 7, 1981 Sir Isaac Newton Physics Contest  
for details Phil Eastman  
Physics Department  
University of Waterloo  
Waterloo, Ontario  
N2L 3G1
- May 12, 1981 AAPT - Ontario Grade Eleven Prize Contest
- May 10-17, 1981 Canada Wide Science Fair  
Waterloo, Ontario
- June 12, 13, 1981 AAPT Conference  
University of Toronto  
for details contact  
Gordon McKye,  
Etobicoke Board of Education,  
1 Civic Centre Court,  
Etobicoke, Ontario.  
M9C 2B3
- June 17-19, 1981 AAPT National Summer Meeting (\*)  
University of Wisconsin,  
Steven's Point, Wisconsin
- January 25-28, 1982 AAPT National Winter Meeting  
San Francisco (\*)
- June 1982 AAPT National Summer Meeting  
Ashland, Oregon (\*)
- January 24-27, 1983 AAPT National Meeting  
New York City (\*)

(\*) for details contact AAPT Executive Offices  
Graduate Physics Building  
SUNY at Stony Brook  
Stony Brook, NY, 11794

LOST

In our last mailing we seem to have lost one of our comrades.

Ron Conrad  
Tagwi SS  
Cornwall, Ontario

The envelope was returned "unknown". If you know where we can reach Ron please contact AAPT - Ontario

... IN THE NEXT ISSUE

Call for Nominations: AAPT - Ontario will be calling for nominations for the offices of Vice-President (who then progresses through the offices of President and Past-President) and Member-at-Large. If you are interested or if you know of someone who is suitable and willing to serve then resumes should be prepared.

Call for Papers: If you are interested in sharing some of your experiences or ideas or a favourite demonstration you will be asked to submit abstracts. Details in the next issue.

OVERDUE

Did you pay your fees for 80/81? If you did not then there is an enclosure with this newsletter. Please mail this enclosure with your \$ 1.00 to

Doug Cunningham,  
Secretary-Treasurer,  
AAPT - Ontario  
Lion's Head, Ontario  
NOH 1W0

Speakers' Corner

AAPT-Ontario is starting to compile a list of good speakers who are willing to speak about topics in physics (or the teaching of physics) to professional development day groups or to classes of physics students. John Earnshaw, our Executive Member-at-large, is coordinating the compilation of the list. Once completed, the list will be available to anyone interested in receiving it.

If you or a colleague are willing to speak, please send the speaker's name, address, and telephone number along with a brief (2 or 3 sentences) description of the topic to John Earnshaw, Chairman, Dept. of Physics, Trent University, Peterborough, Ontario, K9J 7B8.

PHYSICS NEWS IN 1980

The American Institute of Physics is the sponsor of this little booklet. It becomes available at the end of each year. The editor's copy for 1980 had not arrived and so this review is about the 1979 issue.

The booklet's 90 pages cover topics from acoustics to vacuum physics. Articles average two-thirds of a page and include references. They are written at a level easy enough for a high school teacher but broad enough for a PhD candidate briefing for her comprehensives. It even includes an article on the Nobel Prize winners and a description of their work. The booklet is indexed but not illustrated.

All the topics found to be interesting cannot be listed here but a few of them are:  
Progress in Concert Hall Acoustics  
A Binary Pulsar and Gravitational Waves  
The Shrinking Sun  
Newton and Bohr: Back in the Running  
QCD and Gluons  
Magnetic Fields and the Brain  
Magnetic Fusion: Tokamak Program

Permission is granted to journalists to use the material in the booklet without referencing the source. All of this and the cost is only \$ 1.00 (US and payable in advance). It is a bargain second only to membership in AAPT - Ontario. Order this valuable aid from

Public Information Division  
American Institute of Physics  
335 East 45 Street  
New York, NY, 10017

January Highlights

- Sat. Jan. 3 Quadrantid Meteor Shower (best viewed in the early morning hours.... 40 meteors per hour)
- Sun. Jan. 4 Venus 3 deg. south of the moon in the morning sky
- Mon. Jan. 5 Venus 0.6 deg. south of Neptune
- Tues. Jan. 6 New Moon
- Wed. Jan. 7 Mars 1.6 deg. south of the crescent moon in the west at sunset.
- Tues. Jan. 13 First Quarter Moon
- Wed. Jan. 14 Conjunction of Jupiter with Saturn and Gamma Virgo at 3:00 am EST.
- Fri. Jan. 16 Aldebaran 0.9 deg. south of the Moon
- Tues. Jan. 20 Full Moon  
Penumbral eclipse of the moon beginning at 12:35 EST and max eclipse at 2:40 am EST
- Fri. Jan. 23 Mercury 0.3 deg south of Mars- low in the south west after sunset
- Sun. Jan. 25 Close approach of Jupiter, Saturn and the Moon in the constellation Virgo
- Tues. Jan. 27 Last Quarter Moon

February Highlights

- Sun. Feb. 1 Mercury at Greatest Eastern elongation
- Tues. Feb. 3 Venus 1.6 deg south of the Moon just before sunrise
- Wed. Feb. 4 New Moon
- Thur. Feb. 5 Mars 0.6 deg. south of the Moon in the west at sunset
- Wed. Feb. 11 First Quarter Moon
- Thur. Feb. 12 Aldebaran 0.9 deg. south of the Moon... Grazing Occultation
- Wed. Feb. 18 Full Moon
- Thur. Feb. 19 Conjunction of Jupiter with Saturn and Gamma Virgo 2:00 am EST
- Sat. Feb. 21 Close approach of Jupiter, Saturn, and the Moon
- Thur. Feb. 26 Last Quarter Moon  
Minor Meteor Shower .. Delta Leonids

March Highlights

- Wed. Mar. 4 Mercury 2 deg. north of the waning crescent Moon
- Fri. Mar. 6 New Moon
- Wed. Mar. 11 Aldebaran 1.0 deg. south of the Moon
- Thur. Mar. 12 First Quarter Moon
- Sun. Mar. 15 Mercury at Greatest Western elongation
- Fri. Mar. 20 Full Moon  
Vernal Equinox 12:03 pm EST Spring begins  
Close approach of Jupiter, Saturn, and the Moon
- Sat. Mar. 28 Last Quarter Moon

REVIEWERS WANTED

In issues of this newsletter to follow we wish to publish reviews of publications of the National AAPT. If you are selected we will send you a sample copy of the publication. Return it with your review and we will see that you receive your personal copy of the publication. Choose your title and write to

Doug Fox, President,  
AAPT - Ontario  
Belle River District High School  
Belle River, Ontario  
NOR LAO

Include a brief sketch of your background that would make it appropriate for you to be selected to do that review. The list follows and will be extended in subsequent newsletters.

- Musical Acoustics: Selected Reprints
- Teaching Physics Safely
- Energy and Solar Heating
- Microcomputers in the Classroom
- Teaching Introductory Physics

Star Gazing in Winter!

by Doug Cunningham

The crunch of the crystalline snow breaks the stillness of the January night. As I pass the snow laden cedars at the back of our yard my gaze turns skyward, past the chimney plumes that rise like sentinels from the surrounding homes, and meets the brilliant, sparkling stars of the "Heavenly G". This "Heavenly G" is an asterism, not one of the 88 designated constellations, but a distinctive pattern (G) formed by mentally connecting 9 bright stars from 6 adjacent constellations. These 1st magnitude luminaries are: (listing from the top of the G) Aldebaran (in Taurus), Capella (in Auriga), Castor and Pollux (both in Gemini), Procyon (in Canis Minor), Sirius (in Canis Major), followed by Rigel, Bellatrix and Betelgeuse (all in Orion). Once you have identified the "Heavenly G" (see the following star chart) concentrate on the colour differences of the stars. A real treat is to view these stars through binoculars..... from the dazzling blue white of Sirius and Rigel through the yellow of Capella to the orange of Aldebaran and the red of Betelgeuse.... fine contrasts. No longer do stars continue to be anonymous, dull lights in the sky. The "Heavenly G" is not the only asterism visible ....in fact, of the 27 asterisms listed in Menzel's Field Guide to the Stars no fewer than 18 of them can be viewed in the early winter evenings. Probably the most recognized asterism is the "Big Dipper" but others, such as the "Pleiades", the "Great Square of Pegasus" and the "Belt of Orion" are close seconds. The next night you are out snowmobiling, or snowshoeing, or X-country skiing take a few minutes to enjoy the stars of winter....you won't be disappointed.

During the next three months the celestial sphere will provide, in addition to the usual winter constellations and lunar phases, two meteor showers (one major shower on the morning of Jan. 3 and one minor shower on the morning of Feb. 26), a penumbral eclipse of the moon on the night of Jan. 19-20, and a number of conjunctions of Jupiter with Saturn. On the morning of Jan. 14 at 3:00 EST Jupiter will pass south of Saturn which in turn will be just south of the pretty double star, Gamma Virgo. A rich field telescope will be able to frame both planets and the double star in the same field of view.... a beautiful sight. If bad weather prevents viewing this conjunction then a repeat performance is predicted for Feb. 19 at 2:00 am EST as Jupiter again passes Saturn in retrograde motion. For those interested in the relatively new field of Amateur Astronomy called Grazing Occultations there will be a daylight occultation of Aldebaran on Thur. Feb. 12 at 5:00 pm EST and expeditions are being organized to observe the graze of this occultation just south of Buffalo N.Y. Details of these and other events are given in the table below.

