



Editors Comments

The AAPT Ontario Section is alive and well. Events planned for the immediate future in our section are:

1. The AAPT Ontario Physics Prize Contest, Tues. May 7, 1985, coordinated by Don Murphy of Sydenham H.S., Sydenham, Ontario, K0H 2T0 (1-613-376-3612)

2. A Second Newsletter in May. Please send Articles, reviews of conferences and other information you wish to share, to the editor. B. Molloy, at Bayridge S.S., 1059 Taylor Blvd, K7M 6J9. Thank-you.

3. The AAPT Ontario-85 Annual Spring Conference; arrival and registration on the evening of Thurs. June 20, all-day Fri., June 21, until 3:00 PM Sat. June 22; in Hamilton at McMaster University, with programme Planner Dave McKay (Vice President) of 3027 Balmoral Ave; Burlington, Ont., L7N 1E3, (School 1-416-335-5588)

Dave has included in the Conference Programme some new items, such as the poster session (see the next article for information) and has such notables booked as Stuart Smith for our after luncheon speaker on Friday and Dr. Svenson to speak about liquid helium after our Barbecue Friday evening.

Join us, send Dave your ideas for posters and papers, and come to make new acquaintances and renew old ones.

4. Call for Nominations for AAPT Ontario offices of: Vice President, Section Treasurer, and Section Representative,

Please mail all nominations to the editor.

What is a Poster Session

Do you have a favorite demonstration? Do you save physics-related cartoons? Do you have a favorite lecture technique you'd like to let others know about? Consider the "poster session". Bring your own easel. Just put your cartoons, or explanations, or pictures illustrating your ideas on one or several sheets of poster paper. It is helpful to be as complete in your explanations as possible, so you don't have to stand next to your poster the entire session, but can wander around to see others' ideas and exchange thoughts with them. Refreshments are usually available to stimulate this type of discussion.

It is fun and informational -- the more you talk, the more

you learn. Plan to bring one or more posters to this June's AAPT Ontario Conference. Book a spot through Dave McKay, our programme planner.

AAPT ONTARIO ANNUAL CONFERENCE JUNE 1984

The sixth annual conference of the Ontario section was held at the ROYAL MILITARY COLLEGE in KINGSTON ONTARIO. From June 14th to 16th 1984.

The Royal Military College is situated near the picturesque surroundings at the mouth of the St. Lawrence river and adjacent to the historic 'Old Fort Henry'. The college with its mixture of old and new provided a delightful and to date one of the best surroundings for our annual meeting.

The preconference workshop lead by George van der Kuur on making Holograms and doing Cryogenic experiments was a big success. All of the 37 participants went home with a white light hologram that they had personally made. I thought at first that I had "blown" my effort, I could see nothing and was about to throw my glass slide away when some one suggested I look at it in direct sunlight. What a thrill, the creature

lunged at me from the deep dark green depths.

The main conference was opened by Dr. Al Bartlett with his now famous and updated version of "The forgotten fundamentals of the energy crisis" The conviction with which Dr. Bartlett puts his material across and his rapid fire style is already begun to inspire and manifest itself in other physics teachers. The same style was evident in his interesting "Television, Football and Physics: An Experiment in Kinematics. Other papers followed.

Technician Technology Programmes by Mr. Paul Van Nest: Computerized Test on Error Analysis by Dr. John Petri: "Halley's Comet, Light Pressure, and the Lorentz Force" by Dr. Paul Rochon and Dr. Napoleon Gauthier: The use of microcomputers in the teaching of Statistical Mechanics by Dr. John Harrison: The new TV Ontario Physics Series and a card system for efficient use of multiple choice questions by Bill Konrad: Our Science centre by Dr. Tuzo Wilson: Relativity in ten minutes by Dr. Neves Pereira: The nature of Physics by Dr. David Baird: Physics coordinating high schools and community colleges by Dave Hollis. Then came a most welcome break - the Thousand Island cruise: band, cash bar, entertainment sunset and starlight. Need we say more?

Back to work with "The new Ministry

this was followed by the ever popular 'free for all' My favourite Demonstration, where anyone can bring in a piece of apparatus or just stand up and describe how he or she teaches physics, which may also include an addition to what someone else has just presented. This item has become the most popular feature of our meetings. Next came "Microcomputer control of building heating and ventilating by John Trant: Physics and Art by Dr. Reuben Alley: Physics and the Atari, or Why I Adore The 64 by Murray Kucherawy: A one year monitoring of a solar water heater by Peter Shaw: An experiment on statics and errors by Ernie McFarland: Physics and society by Dr. Eknath v. Marathe.

Life memberships and free attendance at all future conferences were presented to Dr. Al Bartlett and to George Van de Kuur for their past services to the Ontario Section.

In the past we have been fortunate enough to have many U.S. physics teachers at our annual conferences and this year was no exception we welcome their participation and invite others to join, what we consider an annual Physics family gathering.

Doug Fox one of the backbones of our sections has moved upwards into administration. He and his brand of physics is going to be sorely missed, and we cannot pretend that he will be easily replaced.

well and thank him for all he has done for our section since its inception. In particular we must mention the grade XI physics contest which was the brain child of Doug and which he nurtured into the flourishing concern that it now is. Thanks Doug we are sure going to miss you. Thanks go to Don Murphy of Sydenham High School near Kingston for taking over Doug's administration of the contest.

Credits go to Brenda Molloy for planning the programme and for overseeing its smooth running and to Dr. Napoleon Gauthier for the superb arrangements at the Royal Military College at Kingston.

Neves Pereira

Section Representative Ontario Section.

STAR GAZING

By Doug Cunningham

"I'm sure what I could have seen today would have changed my entire life... had i seen it!"
Frances Liverance

Grade 11 student EPDS

The principal of Bruce Peninsula District School came out of his office with the good news ... "Doug, the Superintendent's permission for the solar eclipse expedition came through today!" Although the snows of winter still blanketed the Bruce Peninsula my thoughts focused on 4 days around May 30/84 ... what an opportunity for our students! The last solar eclipse to be seen from North America

this century would occur within a good day's driving distance from Lion's Head. At 12:43 PM on May 30 the shadow of an annular eclipse would pass over Petersburg, VA. For many of our students this would be their first time out of Ontario and this expedition would provide an opportunity to visit points of historical, geographic, political, and scientific interest.

Through the efforts of John Hlynialuk and myself the trip itinerary was gradually confirmed. The expedition would involve students from both BPDS and the Wiarton High School. From our base camp at Big Meadows in the Shenendoah Mountains National Park we planned side trips to Washington to view the National Air and Space Museum, to Luray for a guided tour of the Luray Caverns, to the Petersburg National Battlefield for a lecture on the siege of Petersburg followed by the eclipse, to the new Science Centre and Planetarium at Richmond, and finally on our way home to Corning, NY where a tour of the Corning Glass Museum would complete the trip.

This eclipse promised to be a rare breed of annular eclipse; for instance, when the geometry of the earth, moon, and sun are such that the apparent diameter of the moon exceeds that of the sun you have a normal solar eclipse with its attendant views of the corona, chromosphere, and prominences; when the situation is reversed and the moon's apparent diameter is less than the solar disk

one will experience a totality in which the moon is surrounded by a bright ring of sunlight (annulus) which is usually too bright to permit views of the solar corona, chromosphere etc; however, in the rare instance when the moon's apparent diameter is just fractionally smaller than the disk of the sun the previous bright annulus will be broken by the lunar limb mountains into a string of bright beads known as the "diamond necklace" and as the eclipse progresses these beads should fuse into arcs while previous arcs will be broken into beads resulting in a "kinetic eclipse". In addition to the rare opportunity to view the diamond necklace this eclipse offered one other main attraction ... because over 99.8% of the solar disk would be obscured at totality there was the chance of viewing simultaneously the solar corona, chromosphere, and any attendant prominences. It is no wonder that spirits and anticipation were high as the telescope cameras, solar filters, and personal gear were loaded onto the bus.

At our noon hour meetings the expedition was planned in detail ... why eclipses occur, safety viewing procedures, photography, camping regulations, points of interest, and customs regulations all came up for discussion. The chances for good weather at the eclipse broken clouds. I remember saying to the students that we could really hit a string of bad luck and have rain every day we were gone.

Little did I know how close to the truth this statement would come.

Eclipse day dawned cloudy at our Big Meadows campsite; two previous days of rain, combined with a weather forecast that called for clearing only after the eclipse, did little to raise our hopes for seeing the eclipse at Petersburg. We faced a difficult decision, we could drive south into North Carolina in the hopes of catching clear skies or continue to Petersburg. We choose Petersburg, after all, if the weather cleared that would be the ideal location with the best chance of viewing a spectacular diamond necklace; as well, we had arranged for the students to receive a lecture on the Seige of Petersburg at the Petersburg National Historic Park after which we would leave for Richmond with its world class Planetarium and shopping centres. At least if the clouds persisted this part of our expedition would not be a total loss.

Shortly after 12:00 noon on eclipse day, our group of 32 students and 7 adults could be found climbing a small knoll at Fort Stedman (part of the Petersburg National Historic Park) under overcast skies. Ray Koenig, physics and astronomy professor at Wilfrid Laurier University, pointed out the direction from which the moon's shadow would approach. It was already quite dark but at 12:43 it got really dark and noticeably cool... we were beneath the moon's shadow and a few miles of overcast. At the darkest part of

the eclipse one of our supervising teachers, Danah Oliver, opened a poster of the eclipsed sun ... everyone cheered, took pictures, and put on their Solar Skreen glasses... a nice touch of humour. Just as quickly as it came the Moon's shadow moved off to the east and it became noticeably brighter... the birds began to sing.

On a personal note, the overcast which prevented us from seeing, what we later learned was a truly spectacular eclipse, stayed with me as a cloud of disappointment until later that night around the campfire when the students signed an eclipse book I had purchased at the Science Centre in Richmond. As I read their comments concerning the many wonderful memories they would take home from the expedition it placed again the entire trip in perspective. There are many joys to teaching young people!

Clear skies and Good observing

See you in Hamilton
in June 20 to 22 at our
annual conference.

American Association of
Physics Teachers

Ontario Section

NEWSLETTER

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