Canadian Experiences with Year 1 of Beyond the International Year of Astronomy 2009

Transition: IYA ➔ BIYA took most of 2010

- Reporting, reporting, reporting
  - Bulk by 2010 June, but efforts thru Nov.
  - Final report (& details) on our website
- National executive
  - Represents loose federation of volunteer-run organizations
  - Some burnout following 5 years of IYA preparation implies need for realistic BIYA levels of effort & goals
  - Focus has been on NSERC grant responsibilities towards underserved communities & IYA legacies
Executive Committee – 2 each from RASC, FAAQ, CASCA

- Responsible for national grant, NSERC PromoScience 2009-2011 with its emphasis on underserved communities
- 4 of 6 EC members are new
  - After ~ 1yr on learning curve EC working well!
  - John Percy, Jim Hesser active advisors
  - CASCA, RASC created new web-based reporting—easy to use
  - In this talk: current statistics, Qilak award, some legacy activities, proposed web training of educators
In 2011,
- 13,368 participants

### CASCA Outreach for 2011 - People reached by Activity

<table>
<thead>
<tr>
<th>Activity</th>
<th>People Reached</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astronomy course for non-science majors - (Enrollment number)</td>
<td>4415</td>
</tr>
<tr>
<td>Night-time observing</td>
<td>4053</td>
</tr>
<tr>
<td>Public talk</td>
<td>2769</td>
</tr>
<tr>
<td>School visit (K-3)</td>
<td>861</td>
</tr>
<tr>
<td>School visit (4-8)</td>
<td>677</td>
</tr>
<tr>
<td>Other</td>
<td>283</td>
</tr>
<tr>
<td>Public Exhibition</td>
<td>260</td>
</tr>
<tr>
<td>School visit (9-12)</td>
<td>30</td>
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<tr>
<td>Day-time observing</td>
<td>10</td>
</tr>
</tbody>
</table>

**Web Reporting: CASCA Volunteers**
In 2011:

- 43,299 participants
- 1,615 volunteers
- 15,132 Star Finders

RASC Outreach for 2011 - People reached by Activity:

- Public exhibition or booth: 18001
- Daytime observing session: 7954
- Nighttime observing session: 6311
- Presentation to adult or mixed age group: 2977
- Elementary school visit (grade 8 & below): 2977
- Other (provide details below): 2819
- Youth group visit (Scouts, Guides etc): 1880
- Visit to an observatory: 228
- Secondary school visit (grade 9 above): 152
‘Qilak’ = Inuit word for celestial sphere
- Coordinated nationally, awarded by each society
- Foster cooperation among the sponsoring organizations
Science Centres: Calgary

- Opening 29 Oct 2011 with Digistar planetarium
- Major presence on social media stimulated by IYA experiences
- Partner with Rothney Astrophysical Observatory (U. Calgary), RASC
- Community partnerships (equestrian, symphony, etc.) part of “organizational DNA” post IYA
- Rural Alberta schools – mobile digital planetarium
Science Centres: Montréal

- 2010: ten special activities, ~2,500 participants
- Activity levels higher post IYA

Montréal Planetarium BIYA solar viewing
Astrology stamps: constructive suggestions to Canada Post for a win-win educational approach were unsuccessful.
Our IYA goal: establish long-term relationships to promote awareness of traditional knowledge

Curricula throughout Canada are requiring that more First Nations knowledge be included – teachers welcome astronomy in this context

- Alberta: Siksika stories at Blackfoot Crossing Historical Park
- Manitoba/Ontario: Cree stories
- Nova Scotia/New Brunswick: Mi’kmaq stories
First Nations Partnerships

- **Muin** story launched IYA in Canada
  - Inter-relates astronomical and ecological observations
  - Speaks to environmental concerns
- In both Mi’kmaw & English

First Nations Partnerships

Muin and the Seven Bird Hunters
A Mi’kmaw Night Sky Story

kisa’tutij/by Lillian Marshall, Murdena Marshall, Prune Harris and Cheryl Bartlett
Kíisi Amalwi’kmi’tij/illustrations by Kristy Read and Sana Kavanagh
Preserving Night Skies

- FAAQ, RASC improved national guidelines before IYA
  - Urban Sky Parks, Dark Sky Preserves
  - Efforts intense at local level within guidelines
    - Exp: Victoria sky brightness survey using Unihedron’s Sky Quality Meters
Canadian Dark Sky Preserves

- **DSPs:**
  - 2009: 4
  - 2010: 1
  - 2011: 1

- Parks are increasing emphasis on nighttime activities in their marketing
Kejimkujik National Park Dark Sky Preserve Ceremony (2010)

- Nova Scotia
- Extensive Mi’kmaq (First Nations) programming
- Dedication
  - Activities for kids
  - Music
  - Light pollution presentations
Largest DSP in the world: 11,228km²
- Only preserve in Canada with a town wholly within the preserve.

Jasper Dark Sky Preserve (2011)

Athabasca glacier
3 workshops in 2010 for decision makers, lighting professionals

Created independent not for profit group for greater credibility

FAAQ supported

www.idaquebec.org
Bridges with the arts

- Tafelmusik (Toronto) – world tours of *The Galileo Project*
- Buzz Brass (Montréal) – jazz version of Holst’s *The Planets*
- Vox Humana (Victoria) - *Gloria Patri* by Urmas Sisask (Estonia)
Bridges with the arts: Tafelmusik

- GP adapted to local astronomy cultures (Percy)
  - 2-2010: US tour (3406)
  - 10-2010: Kuala Lumpur, Beijing (2200)
  - 03-2011: Toronto (3434)
  - 02/03-2012: Australia/NZ
  - 10-2012: Europe

© Tafelmusik: Beijing with pipa
Bridges with the arts: Vox Humana

- Victoria a cappella chamber choir
- Partnered with NRC Centre of the Universe at Plaskett Telescope 9-9-2011
Bridges with the arts: Buzz Brass

- Brass quintet
- Holst *The Planets*
- NASA images
- Text by Pierre Chastenay, astronomer at *Planétarium de Montréal*
Focus: underserved communities
- 300,000 Star Finders printed
- Toronto “Multicultural Astronomy Festival” 16-10-2010
  - Ontario Science Centre
  - John Percy
- Vancouver Public Library – 6,000 people, 5 events, diverse ethnic communities (2010, 2011) with NRC
- 31 BC parks 2,700 people
New Online Astronomy Training

- 2011: prototype
- Interactive Web conferencing
- Target Audience: Informal educators (e.g., parks interpreters)
- Julie Bolduc-Duval astronomy educator – 1.5d/wk
Prototype successful
New proposal focus: help teachers in underserved communities become comfortable with basic concepts
PI: Marcin Sawicki, SMU
"I had long been hoping for the sort of training offered by your online class À la découverte de l'univers! I found the online format to be comfortable and accommodating"
- Dave Chapman, RASC Halifax - Cuba
- Donated Galileoscopes, 3 workshops
- Science TV show with Dr. Oscar Alvarez
- 2011: laptop, star atlases, books, donated by members RASC Halifax Centre
- Inaugurated the Cuban version of RASC observing program, ‘Explore the Universe’
- Strong bond formed: RASC+Cuba
Final Remarks

- Rejuvenated Canadian BIYA team has defined a path with great promise for improvement of formal, informal astronomy education – wish us well with grant application!
- BIYA activities are at a significant level, often involving relationships formed in IYA
- Amateur astronomer volunteers are the backbone of BIYA in Canada, as they were for IYA2009 itself!
Canadian Experiences with Year 1 of Beyond the International Year of Astronomy 2009