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Key Words

International Year of Astronomy 2009 Arts Music

Summary

When the IYA2009 Canada Committee¹, chaired by Jim Hesser, first came together, it established a vision: "to offer an engaging astronomy experience to every person in Canada, and to cultivate partnerships that sustain public interest in astronomy". We called the engaging astronomy experience a "Galileo Moment". We knew that a Galileo Moment could be a first look through a telescope at the Moon, Jupiter or Saturn. But we especially wanted to connect with new audiences, not just the same people who always came to astronomy events. So we knew that a Galileo Moment could equally well be the intellectual or emotional effect of an astronomy-inspired piece of art or music. So far in 2009, over 10 000 Canadians have experienced a Galileo Moment of the latter kind, thanks to the Tafelmusik Baroque Orchestra's *The Galileo Project*.

The Toronto-based Tafelmusik Baroque Orchestra², or "Tafelmusik" as we familiarly call it, is considered by Gramophone magazine as "one of the world's top baroque orchestras". As well as giving over 50 concerts in Toronto each year, it tours more than any other Canadian orchestra to all parts of North America, and to Europe and Asia. It has made over 75 recordings, many of them award-winning. It is also known for its educational programmes, ranging from elementary school to university and professional level. It is the University of Toronto's baroque orchestra in residence, supports graduate-level diplomas in baroque performance, and hosts an annual Baroque Summer Institute. It's the orchestra in residence for the annual Klang und Raum festival in Europe, and for the renowned Opera Atelier in Toronto. Music Director Jeanne Lamon has won many awards, including two honorary doctorates, the prestigious Molson Prize, and membership in the Order of Canada.

In recent years, Tafelmusik's double-bass player Alison Mackay has created a series of highly effective multimedia concerts which include theatre, dance, and art. These have included *The Four Seasons*: A Cycle of the Sun, which was made into a feature documentary, Sacred Spaces,

Sacred Circles, a celebration of art and architecture, and the *Metamorphosis Festival*, a city-wide event co-organised with her husband David Fallis, including a multimedia Tafelmusik concert around the theme of Ovid's *Metamorphoses*.

From the start, the IYA2009 Canada Committee hoped that every amateur and professional astronomer in Canada would develop or join an IYA2009 project that matched their interests and expertise. As an enthusiastic supporter of Tafelmusik for almost 30 years, and as one of my personal IYA2009 projects, I suggested to Tafelmusik that they might want to create



Figure 1. Lutenist Lucas Harris performs work by Michelangelo Galilei. Credit: Donald Lee.

a special programme, honouring Galileo and IYA2009. Alison Mackay and the Tafelmusik team jumped at the opportunity.

On the Tafelmusik webpage, you can find links to Mackay's extensive programme notes3, and a description of how the programme was put together4 including my role: as well as being the "instigator", I reviewed the script for the concert, and made minor suggestions; I helped to promote the concerts; I gave pre-concert lectures for Tafelmusik supporters; and I put Mackay in touch with other astronomers who could provide images, arrange star parties etc. It required over a year of planning. A large collection of astronomical images was assembled, including ones from ground-based and space telescopes. and a large set of stunning images by eminent Canadian astrophotographer Alan Dyer. These were projected on a 12-foothigh circular screen, mounted in an ornate frame. For the first time in its history, Tafelmusik's musicians memorised all of their music (no mean feat for an orchestra!) so they would be free to move about the stage, and into the audience. The choreography was arranged by Opera Atelier's Marshall Pynkoski. The musical programme was interspersed with narrative by actor Shaun Smyth, including writings by and about Galileo and his contemporaries. But the heart of the programme was the creatively chosen music pieces by Vivaldi, Lully, Monteverdi (a contemporary of Galileo), Purcell, Rameau, Handel, Telemann, Bach, and others including Galileo's brother Michelangelo (Galileo came from a family of lutenists, and was an amateur lutenist himself.) The choice of music and text, and the overall concept, were the work of Alison

Mackay, whose creative genius is rivalled only by her modesty.

Tafelmusik was awarded a nine-day residency at Alberta's Banff Centre for the Arts, a residency that culminated in the premiere performance of The Galileo Project, followed by a "star party" for orchestra, staff, and audience, courtesy of University of Calgary astronomers, and the Calgary branch of the Royal Astronomical Society of Canada. The musicians, including the Director, were able to have their own personal Galileo Moments. Another successful star party was held after their Ottawa concert in March, and another was held at their annual fund-raising gala in Toronto (appropriately named "Gala-Leo" for 2009!).

The orchestra then returned to Toronto, where they played a series of five sold-out concerts to 4000 people. The audiences included a goodly number of local professional and amateur astronomers, but mostly music lovers who would not normally be exposed to astronomy, and to its many links to history, art, and culture.

The concert was outstanding; you need only read the review⁵ in the Toronto Star, Canada's largest-circulation newspaper. It was described as "out of this world", and "simply one of the best, most imaginative shows based on classical music seen here in years". And given that Toronto is a major centre for the arts, that's saying a lot. The reviewer noted that "the biggest wonder of all is how integrated the music, words and images are, like a balanced choir, where the individual parts, men and women, are subsumed into a greater whole". "In the end", he noted, "the audience is left with a true taste of the awe, wonder, and optimism that people felt in the 17th and 18th centuries, as scientists pulled the veils off the myths and mysteries of mediaeval times".

Mackay also created an outstanding Galileo Project concert for school audiences, specifically grade six (age 11 years) level, where the curriculum includes both Baroque music and astronomy, both of which were effectively and engagingly taught in the programme. It included music, images, and choreography, narrated by an actor playing the role of Comet Halley. Through his visits to Earth at 76-year intervals, he could follow the evolution of music and musical instruments. He introduced the audience to his fellow members of the Solar System through models and movements. At the end of the concert, the 600 schoolchildren were rotating and revolving at their seats! The concert also, of course, illustrated the deep connections between astronomy, culture and the arts. This programme has already

been presented to over 4400 students in Toronto, Ottawa, Belleville, and Lindsay, Ontario — that's 4400 Galileo Moments!

The public and school concerts toured Ontario in February-March 2009, the public concert was performed in Mexico in October 2009 and will go to the US later in the year. In the past, Tafelmusik has performed, to great acclaim, in science and nature museums in major cities of Asia, and the orchestra hopes to take the programme there in 2010. The public concert was aired on CBC radio (Canada's national broadcast network), and is available online⁶, unfortunately without the stunning visuals, of course. We hope that there will eventually be a DVD and/or documentary film. If you get a chance to experience this performance, don't miss it. It's an exemplary fusion of arts and sciences by a great orchestra, and exactly what IYA2009 is about.

For me, this project was a dream come true, a highlight of my long astronomical career. But it was also an illustration of the benefits of partnership — part of IYA2009 Canada's vision, and a key to success in so many aspects of life.

Notes

- 1 http://www.astronomy2009.ca
- ² http://www.tafelmusik.org
- ³ http://www.tafelmusik.org/concerts/galileo_programmenotes.htm
- ⁴ http://www.tafelmusik.org/concerts/galileo_creative.htm
- 5 http://www.thestar.com/article/575299
- ⁶ http://www.cbc.ca/radi02/ media/20090109tafel/ all.asx

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Biography

John Percy is Professor Emeritus, Astronomy & Astrophysics, and Science Education, University of Toronto, and a member of the IYA2009 Canada Committee. He is a music-lover, but not a musician.