

Minutes of the TARA 2021 Annual General Meeting

DRAFT 02

Tuesday, November 9th 2021

14:30 – 17:00

Due to the ongoing COVID-19 pandemic again this year's meeting was held virtually using the Zoom platform with all participants connecting remotely. There was an initial "reception" period from **14:10 – 14:30** to allow TARA members to connect, resolve any connection problems and exchange greetings. There were about 42 people attending, comparable to last year attendance and the proceedings ran very smoothly with no technical issues of note.

The meeting was led by TARA executive Chair, Jean-Michel Poutissou. Executive members present included: Andy Hurst, Corrie Kost, Dana Giasson, Franco Mammarella (appointed recording secretary), Fred Jones, Mike Brigham, Nicole Bienvenu, Roy Moore and Tamara Hurtado. Jean-Michel thanked Dana G. for her assistance throughout the year and for the organization and handling of this AGM Zoom configuration and recording of the meeting. The agenda was adopted as circulated. Jean-Michel informed the audience that the meeting would be recorded. Jean-Michel also welcomed and introduced the new director of TRIUMF, Nigel Smith, who took the helm as director last May/2021. Nigel arrived at TRIUMF from SNO lab in Sudbury, Ontario.

14:30 – 16:00 Presentations

Message from the TRIUMF Director, Nigel Smith

Nigel introduced himself starting from an overview of his early work from the South Pole to SNO lab before arriving to TRIUMF, followed by a state of the Union address.

- The TRIUMF strategic plan (2020 to 2025) includes three core areas:
 - **Science and Technology** – In this area, two platforms are under development:
 - ARIEL includes an electron beamline and a proton beamline and represents an investment of about 100 M\$ from both the Federal and Provincial governments. It is expected to be start producing science in 2026.
 - IAMI, the institute for advanced medical isotopes, when fully complete will house two TR24 cyclotrons and will be used for both isotope productions and for research and development of different medical isotopes for the diagnostics and treatment of cancers. IAMI is in advanced state of construction and is expected to begin operations in 2022-23.
 - **People and Skills** – Critical to TRIUMF success is the ability to attract highly motivated and highly skilled individuals able to drive the science programs. In early state of cooperation with BCIT to develop a more working integrated learning opportunity. Released a new interactive website which hopefully would be good platform for public engagement.



- **Innovations and collaborations:** While the TRIUMF innovation portfolio is diverse, its primary focus is currently on the development of medical isotopes, in particular the development of Actinium-225, which in early work proved extremely effective against certain types of cancers, among which prostate cancer. Formed collaborations with Fusion Pharmaceutical and BWXT to develop ways to maximize production of this very rare medical isotope.
- **Incorporation.** As of June 1, 2021, TRIUMF governance changed from a joint venture into an incorporated not-for profit entity, with the intent of having a more streamlined and agile governance structure. Worth noting that the incorporation does not change the relationship with the funding agencies, NRC and NSERC. To ensure we remain connected with and relevant to the members universities TRIUMF created a Member's Council made of the universities members and a Science Council.
- **20 Year Vision.** Following a recommendation from the Peer Review Committee for a long-range vision, TRIUMF embarked into the development of a 20-year vision of the laboratory with the aim to position TRIUMF nationally and internationally, but also to guide the development of the next 5-Year plans. The target audience is quite broad and includes the University presidents, NRC, government and funding agencies but also the general public. The process started and the release of the document is planned for the Spring 2022. It includes three-phase, during which TRIUMF engages stakeholders of the community to develop a credible, ambitious and realistic vision that will guide TRIUMF programs during the next 20 years. The focus is in the following areas:
 - Research in Science and Technology, Medicine and Industry for the benefit of society
 - TRIUMF multi-disciplinary capabilities as a strategic Canadian asset
 - Positioning TRIUMF for participating internationally in “big science”.

Phase 1 was completed and culminated in last August Science Week with a presentation by the Deputy Director for Science, Reiner Kruecken. Currently in the Convergence phase, followed by finalization and document release. The goal is to have a high-level, concise document of the main topics of the TRIUMF vision capable of positioning TRIUMF in the Canadian and international science communities.

Nigel concluded his talk by indicating that TRIUMF overarching direction is to remain a fundamental research organization with the cyclotron and e-linac as the main drivers, to enhance its isotope production capabilities with both ARIEL and IAMI in support of both physical science and life science, with the additional engagement in climate change. TRIUMF is driving towards sustainability model, with multidisciplinary, multisector collaborations. One example of those collaborations was the Medical Ventilator development.

JMP thanks Nigel for his remarks and introduced Oliver.

Oliver Kester (Associate Lab Director – Accelerators)

Oliver gave a detailed account on the plans and vision for Accelerator Science and Technology at TRIUMF and in Canada and touched on the TRIUMF current and future projects.

He covered a broad portfolio of projects and collaborations. The main points are noted below.

Starting with the big picture:

- Project vision from the point of view of User's community (Canadian and international). ARIEL very important on the future of accelerator science and TRIUMF.
- **Accelerator science** is a discipline which provides the tools for discovery and innovation, but also for applications. Important for training young physicists.
 - The key is to maintain cutting-edge knowledge in this field, which is driven by demands in the ever-increasing complexity of accelerator facilities, among which is TRIUMF.
 - Driven by demand on particle beam performance (energy, intensity, beam quality)
 - Accelerators Beam dynamics still a topic of research despite accelerator physics having been around since the Lawrence's days due to the collective effects of high intensity beams, which were not seen before. Without the theoretical and experimental understanding of those interactions, accelerator facilities would not be able to run.
 - Important to create a culture to attract and retain interested young people. For example, the Canadian demand for well-trained individuals in the various aspects of beam dynamics remains quite high and actually higher than the number of individuals we train.
 - The three main pillars of accelerator science at TRIUMF:
 - Physics and instrumentation
 - production of muon, neutron etc.
 - Exotic isotopes
 - At TRIUMF, focusing on keeping and increasing performance and reliability of the existing accelerator complexes and the new projects, like ARIEL.
- Briefly touched other Canadian accelerator facilities
 - Canadian Light Source (Sask.): the only light source in Canada. It provides radioisotopes for PET scanners and research, like plant growth
 - McMaster's University known for its diverse portfolio of research facilities (reactor, electrostatic accelerator, electron accelerator, 3MeV Van de Graaf, cyclotron, etc.)
 - Mass Spectroscopy in the University of Ottawa.
 - TRIUMF is the main accelerator center in Canada and had the responsibility to organize accelerator development in Canada with links with CLS and other research centers for research and, indirectly, education.
- Touching briefly on accelerator science education in Canada, there is a need for an increased number of highly qualified personnel.



- University of Saskatchewan has a faculty position in accelerator physics
- TRIUMF has adjoint faculty positions in various universities like UVIC, UBC, SFU and Manitoba University.
- Currently 15 bright students attending, yet not meeting demands.
- TRIUMF Projects in current 5 YP:

Besides ARIEL, TRIUMF have an aggressive schedule for the development and refurbishing of existing complexes, for the 520 MeV beam lines, cyclotron, ISAC and Infrastructure (Services, Control Centre and Remote Handling mainly)
- Cyclotron Vertical line and injection system. Control system upgrade, Hi brilliance ion source (I-2 terminal). RF New tube, dummy load, LLRF.
- ISAC has several projects on the books. Target development, South Hot Cells and Conditioning Station. Target Modules (“TM”) for HV development (critical area is the service chase). Good news: the TM is ready to be back into operation in 2022. Laser Ion source development including increased remote operation of the system. Several projects also on Beam delivery (like the Charge State Booster) to improve beam quality and efficiency.
- Dealing with much more complex accelerators. The accelerator Operations group has been studying how to best combine all driver’s operations into a single operation to improve the efficiency and reliability. Given the old cyclotron controls system however, this project is expected to carry well into the next 5-year plan, when TRIUMF expects to phase out the old control systems. Other developments in beam delivery underway include two more automatic tuning systems. One ISAC example is the sequential tuning optimization of the beam for the Off-Line Ion Source to inject RIB beam into the RFQ. The goal is to reduce the time to tune the beam from one shift to 30 minutes.
- On the research side, good progress is being made in the Superconducting RF. For a lab like TRIUMF, having expertise in SFR (cavities, cryo-module technology and research) is critical to make significant advances in SRF technology to improve accelerating gradients under intense RF fields (aiming for 100mV/m). Active collaborations underway with UVIC, Fermilab, etc.
- User’s community project involvement:
 - On the Beam physics front, collaborating with CERN on a world-wide endeavor to increase beam luminosity by working on prototype RF cavities developed by CERN and UK.
 - Electron LINAC. Made significant progress on beam development: reached 30MeV @ 10 kV. There is great interest in the e-LINAC non only for research but also for also for medical applications. One example worth noting is Flash radiotherapy, which holds a huge promise based on clinical trials. It consists of applying ultra-fast hi-dose electron beams in a very short time to treat cancers. Another collaboration worth noting is Dark life (requiring low energy e-linac). A proposal to NSERC for funding an energy upgrade has been submitted (recirculator and the 2nd cryo-module).



- Looking into the future, TRIUMF position in isotope production is significantly strengthened by the addition ARIEL and IAMI, for both physical and life sciences but also for medical isotopes applications.
- Working at improving the beam operation by adopting a “factory model” which will greatly increase the beam production, by serving three beams in parallel to run experiment for much longer.
- Also looking at developing isotope science applications to help building the next generation of machines for the production of medical isotopes.
- Driven by the Neutron Scattering community (led by the University of Windsor) TRIUMF has been asked to build a neutron generator for science studies. Challenging Project. Possibly located in ISAC-I.
- Electron Ion collider, the first major Collider (EIC) to be built in North America and contributions to the International Linear collider (ILC). Probably the most challenging project of all. TRIUMF is well positioned, and we have been asked to contribute our expertise in SRF cavities.

Oliver concludes his remarks stating that TRIUMF’s goal is to remain the center of excellence in accelerator science and technology and build on our strength in accelerator science by participating in both Canadian science projects and international collaborations, where we can leverage our knowledge in beam physics and engage the Canadian industry to develop new machines, and by remaining leaders of the transformation of the knowledge base in accelerator science.

JMP Thanks Oliver for his broad portfolio of initiatives and introduced Jim Hanlon.

Jim Hanlon: on Professional Liability Insurance Coverage for Retired Employees

Jim answered questions regarding professional liability insurance coverage following the transition from a Joint-venture governance structure to an incorporated one. He reported that following the incorporation of TRIUMF, similarly to active professional and engineer employees, professional and engineer retirees are covered under HR Policy # 35 “*Consulting & Professional Services Liability Protection*” for their professional liability for work carried while employed at TRIUMF. That policy was approved more than 10 years ago in response to motion #343 of the Board of Management of TRIUMF Joint-Venture to “*hold any director, officer or employee of TRIUMF harmless, and agrees to indemnify them, or their respective estates, against any liability, costs or expenses they sustain or incur by reason of having acted or acting honestly and in good faith in the course of their assigned duties as directors, officer or employee.*” Jim elaborated that, per Canadian Labour law, under that policy TRIUMF has a legal responsibility to protect and defends his employees (current and retired) and indemnify and hold them harmless in the event that anything went wrong in a project and a claim action would be initiated against an employee. This policy carries forward to the employee respective estate and therefore, Jim reassures the audience, all retired employees are covered under it.

JMP asked about TRIUMF financial commitments in support of the above policy to make sure that any insurance purchased include the professional liability protection.

Jim replied that anyone that works for TRIUMF, including contracting employees, is covered by that policy. TRIUMF put language in its contractual agreements with employees (including agreements with retired employees) that TRIUMF will indemnify them for any errors and omissions on projects the employee works on – unless they are the results of willful act of negligence. That means that TRIUMF guarantees to cover the legal costs associated with defending an employee against a claim, including employed engineers and other professionals. Jim further reported that TRIUMF representatives met three times over the last three months with Insurance brokers and respective insurance companies to work on replacing the previous policy in place which was 20 years old. Typically, E&O policies are quite expensive and hard to get since they are normally put in place to protect consultants but not employees. Engineers and professionals working for TRIUMF are employees, and not independent contractors, however, Jim reported that TRIUMF, under policy # 35, covers the legal costs associated with E&O for all employees. Jim further remarked that currently TRIUMF is self-insured because it says that it will pay the legal costs associated with defending any claims.

Franco asked whether the above Policy No. 35 has been converted into a legal document that binds TRIUMF financially. Jim replied that HR Policy no. 35 is the binding document. TRIUMF Inc. Board of directors approved and took the Joint-venture motion as its own as of June 1, 2021. The Policy has been reviewed by the insurance brokers and therefore it is effective and continues to protect the current as well former employees.

Jim presentation is attached to these minutes as record.

16:00 – 16:40 TARA business

Pacific Blue Cross Report – Lucy Sousa (Dehoney Financial)

JMP introduced Lucy Sousa and mentioned that he had sent her a few questions regarding the type of contract we are going to have. Possibly renegotiate contract we have with PBC. Due to the COVID pandemic, several questions have been raised about the coverage provided by PBC and Lucy has been asked to address them.

Lucy reported that the extended Health Care and dental plan performed quite well last year. From mid-March to mid-June professional medical providers shutdown and several services came to a halt. However, as offices reopened, PBC saw a spike in services rendered as people were catching up on lost services. Similarly to other insurance providers, PBC was looking at an increase of the rates across the board, but we were able to keep the rate unchanged for next year. Going forward, in the current environment several questions came up, especially about Out-of-Country Care as countries reopen to travel. For the coming year, the overall coverage remains the same and the insurance premium remains the same. PBC advised that there is no change to plan coverage for out-of-country emergencies. However, we should be aware of the following change and recommended that individuals travelling to the USA are advised to get supplemental insurance, for the USA is notorious for its high medical costs. As an example to illustrate the change, if an individual gets COVID while out-of-the country and get hospitalized, he/she will be covered 100%.



The plan covers up to \$50,000/annually for up to \$100,000 lifetime coverage. However, if the individual, while travelling abroad, has been exposed to COVID and was simply asked to quarantine, he/she will not be covered for the cost incurred while in quarantine, because quarantine is not seen as an emergency. Additionally, the out of country coverage is for 60days period. If an individual is admitted to a hospital and is required to remain hospitalized past the 60 days, PBC has confirmed that the hospitalized patient will be insured for the full emergency period even if it exceeds 60 days.

With PBC, if your health condition is stable and your doctor says that you are good to go, you may travel knowing that you will be insured.

Lucy reminded the audience that last August there was an administration change: the two age groups under the PCB medical insurance policy were merged into one group (2936).

On behalf of the TARA Executive, JMP asked whether PBC would provide a clear and well- defined policy coverage booklet specific to the TRIUMF retiree's plan. Lucy replied that PBC has a pdf copy available that she will be happy to share with the TRIUMF retirees.

Updates regarding the renewal plan coverage and rates will be communicated in due course directly by Vivian or Ian Doyle who manage the retiree's plan.

Approval of last year's AGM minutes

The minutes of the 2020 AGM were prepared by Fred Jones and were circulated to the membership in early November 2021. JMP asked whether there are any changes to last year AGR minutes. No changes from the floor. Mike Brigham moved to adopt the minutes. Seconded by Franco Mammarella. Motion carried.

Membership Report: Roy Moore

There are 176 active members as of this meeting, including the eleven new members since the last AGM: John Bagger, Jamie Cessford, Bob Chow, Rolf Keitel, Ted Mathie, Roman Tacik, Franco Mammarella, Jill Seeley, John Scott, Rob Watt, Peter Yandon. [Franco proposed addition: Sadly, this past year the TRIUMF retiree community lost the following individuals: Ivan Entchevitch, Ray Bula, Fred Bach, Zdena Koci, Mike Russel, David Ottewell, Robert Riches and Ron Mullen. Our most sincere condolences to their families.]

Report from Jean-Michel Poutissou, Chair of TARA

Held four virtual executive meetings since last AGM (June, September, October and November 2021).

Participated in the February 2021 Symposium for the celebration of the life of Gerardo Dutto. It was well attended by retirees and colleagues of Gerardo in the accelerator's community that benefitted from Gerardo's wisdom, who gave very insightful talks on Gerardo's achievements. It was a good send off for Gerardo.

Participated in the Science Week in August. There was a very important discussion forum especially over the long-term future of TRIUMF and many people contributed wisdom on what that future should be.

The meeting in September for primarily devoted to introducing TARA to the new director of TRIUMF, Nigel Smith. Had a very productive discussion and left with the impression that Nigel walked away with a good feel of who we are, what we have done, how we care for the future of TRIUMF and how to interact with us. It was very good to see that TRIUMF is still acting as a family and thanked Nigel for taking the time to speak to us and for his willing to give us a presentation at this AGR.

The October and November meetings were primarily devoted to planning this AGR and organizing the speakers. We decided to hold the AGR virtually on the interest of health safety due COVID.

No progress to report on the review of the *DRAFT* TRIUMF-TARA agreement document that was circulated.

In the last two meetings, the Executive has also been discussing the idea of having topical presentations of interest to our community every quarter to increase the interaction with the membership. Seeking the feedback of the membership on the idea of having four presentations (virtually until TRIUMF can reopen to the general public) on topics selected by the TARA executive based on suggestions by the membership.

Prospective topics identified

- Driving an Electric Vehicle in BC (Topic leader Corry Kost, tentatively for next February)
- The future of nuclear power in the prospect of electricity production (Jess Brewer?)
- Hydrogen economy
- Hidden travel destination gems in BC
- What would mean to be a green lab at TRIUMF.
- District _heating energy support
- Isotopes of the future that could be developed at TRIUMF

JMP invited member's input for other ideas and comments.

After continuing to lead TARA during this challenging year, Jean-Michel again indicated that he would like to pass on the leadership role to a new person and invited the membership to consider eventual nominations for the Chair position. His idea is to bring fresh ideas and energy and for JMP to step in the role of past-Chair.



JMP concluded by thanking the current executive committee members for their work and their time serving.

Election of the new Executive

All the existing members of the Executive have indicated that they were willing to continue to serve for another term.

A slate was proposed by the Chair, including the current executive members with the addition of Tom Ruth.

JMP called three times for other nominations from the floor. No further nomination was received. Veejay Verma moved to approve the slate as presented. Dave Gurd seconded. Carried with 100% approval.

The meeting agenda being concluded, and no other business raised, the meeting was adjourned at 16:38 hr with motion by Nicole Bienvenu, seconded by Mike Laverty, and approved by a show of hands.

Audio recording of the AGR { <https://www.youtube.com/watch?v=Uf3vcH31oj0> }
Jim Hanlon ([here](#))