



Status of the McDonald Institute

IPP Meeting at CAP
May 30th 2024

Arthur B. McDonald
Canadian Astroparticle Physics Research Institute



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The role of the McDonald Institute over past 7 years of CFREF funding

A partnership of 8 Universities and 5 institutes, the McDonald Institute was originally funded in 2016 for 63.7 M\$ over an initial 7 years (9.1 M\$ per year on average)

- Hired 15 new faculty with CFREF funds, and an additional 11 were hired subsequently at partner Universities.
- Supported 100's of HQP contributing to hundreds of new publications
- Enabled substantial growth/progress in astroparticle physics experiment and theory



Summary thoughts on current CFREF:

- The McDonald Institute plays a very important role in the SAP ecosystem, with a mandate to connect and support astroparticle physics research.
- Whereas SNOLAB is a facility and is funded to support that infrastructure and the integration of international projects into the lab, the McDonald Institute is providing support for the initial research & development of those projects and for the ongoing science delivery, primarily at the Universities.
- The Institute also provides the community with professional and administrative support with expertise in education/outreach, communications, hqp recruitment, retention and training, EDII best practices etc All important aspects of big science that are difficult to include at the individual project level.
- The intellectual capacity within Canada is being sustained as the Universities have assumed full responsibility for the 15 faculty members hired on the CFREF award.

Period of CFREF grant, nominally Sept 2016 – August 2023.

Original end of grant now passed

But:

- Standard at CFREF - One extra year to spend down funds (including **all** funds at partner Institutions). → Aug 2024.

No significant science spending anticipated thereafter. Aug 2024 is when our funding to the community winds down. We are on track to have completed all of this in the next **3 months**.

- We have also been granted a “no cost extension” until March 2026 as a result of Covid. This will be used to wind down the Institute following the spending at the partners, the spending at Queen’s, and support key positions through the transition from CFREF to the “next iteration”. We will not need all this time. Our current operations plan anticipates all spending complete, and books closed by August 2025.

Annual science budget currently about 8 M\$. On track to complete as described above.



- Brief Summary of efforts towards sustainability:
 - August 31st 2022: Submitted a new CFREF application (renewals not allowed) The main focus of the CFREF application was for the engineering and technical resources required at the Universities to enable Canadian Scientists to take significant leadership roles on major international projects, benefiting from facilities like SNOLAB and ONC. Like a very large, pan-Canadian MRS
 - February 20th, 2023: Learned CFREF was recommended, but not funded. It made it all the way through to the final round, and even though it got great scores, and was recommended for funding, it was not funded. It appears that the last lens applied was the commercialization lens, and this was not our focus.
 - Began working with government to see if there could be another way of funding this outside of CFREF (not a good fit), MSI (we were deemed a thematic institute and hence ineligible), NSERC (we are too big to fit in envelope),....

- Brief Summary of efforts towards sustainability:
 - July 2023: On recommendation of government, submitted a formal request for 60 M\$ over 5 years. (45 M\$ in direct support, 15 M\$ in indirect (overhead) support.
 - Fall Economic Statement: No mention of MI or science for that matter.
 - February 2024. Told that the government was working on an extension of 9.1 M\$/year for 1 – 1.5 years.
 - March 2024. Learned officially that we would be supported for two years at 9.1 M\$/year. This was an important milestone to stem attrition by extending contracts for key positions.
 - Very grateful for 18.2 M\$ but pushed back. Two years is not a long enough runway for a program that is to attract top research talent. Good reception in Ottawa, but every indication this would not be possible.
 - April 16th, 2024: Budget announcement. 9.1 M\$/a for 5 years. 45.5 M\$ total. **A great surprise.**



- First two years (18.2 M\$) approved and given to NSERC who has become the agency providing oversight.
- Next three years (27.3 M\$) part of the April budget still to be voted on by government. Fingers crossed but at the moment with support of NDP one can hope this will pass.
- Working with NSERC on release of 18.2 M\$ beginning in August/September 2024
 - Review underway. They are taking some of the peer review from the original CFREF application (recommended but not funded). Doing own peer review now. We submitted revised budget and proposal on May 23rd. Review results will be known June 24th, 2024. Not clear what all possible outcomes are.
 - Eligibility rules at NSERC more restrictive. With 2-year window, faculty positions could not be supported. (with 5-year window they have said they are open to continuing the conversation)
 - 45.5 M\$ is all comprised of Direct funding, (so very comparable to askof 45 M\$ direct over 5 years)
 - NSERC award will earn the usual RSF (Research Support Fund). For Queen's this is expected to be about 17.7% so a healthy amount, but much less than the CFREF model which was 33%. This will give some challenges in terms of original planned use of indirects.
 - Indirects will follow the work (transfers to partner Universities commensurate with their spending rates)



- **Long term solution** might be through an MRFF (Major Research Facilities Framework).
 - There was some hope this might have been tabled by now, and hints of it appeared in the latest budget.
 - At best it could appear in substantial way in next, (election year) budget. Introduces risk given likelihood of that budget passing.
 - It will take time to get it defined and approved, then operationalized, then competitions launched. This is far into the future.
- We had submitted an LOI for an **NFRF-T transformation** award (aiming at 24 M\$ over 6 years) cross-disciplinary with education focused on supporting the longer-term view of the field with some of the elements of the CFREF combined with advancing STEM education. A bit of an odd fit initially. We were not invited to full proposal stage with very little feedback. Our hope is with the MI extension we could work with education now to have a much more complete and thoughtful proposal to NFRF-T in 2 years. Open to collaboration on that!



Next Steps

- We anticipate continuing to work with NSERC over the next few months to enable the release of the 18.2 M\$ over the first two years, pending their internal review.
- We will also work on the remaining three years, which allows for a full 5-year budget, as soon as this passes the vote and NSERC have been charged with processing it.
- We have started the process of defining the new governance structures that will provide oversight on the use of these funds.
- We will work with the partners to establish a new 5-year Inter-Institutional Agreement to lay out expectations for each institute so that they can plan and budget. For this we will need to have letters of support defining institutional commitments. These were critical in making the case for this new money, and we should not lose sight of that. In 5 years we will be back in the same boat.
- We are hoping we might time an official announcement with the MI National meeting in August, so certainly encourage your participation at that.

Members of the McDonald Institute

Now a partnership of 11 Universities and 6 institutes >



University of Victoria



SIMON FRASER UNIVERSITY



Université de Sherbrooke



CITA | ICAT
Canadian Institute for Theoretical Astrophysics / L'Institut Canadien d'astrophysique théorique

New



CIFAR
CANADIAN INSTITUTE FOR ADVANCED RESEARCH



Carleton UNIVERSITY



INSTITUTE OF PARTICLE PHYSICS



Laurentian University / Université Laurentienne



McGill



PERIMETER INSTITUTE



THE UNIVERSITY OF BRITISH COLUMBIA



UNIVERSITY OF ALBERTA

Université de Montréal



UNIVERSITY OF TORONTO

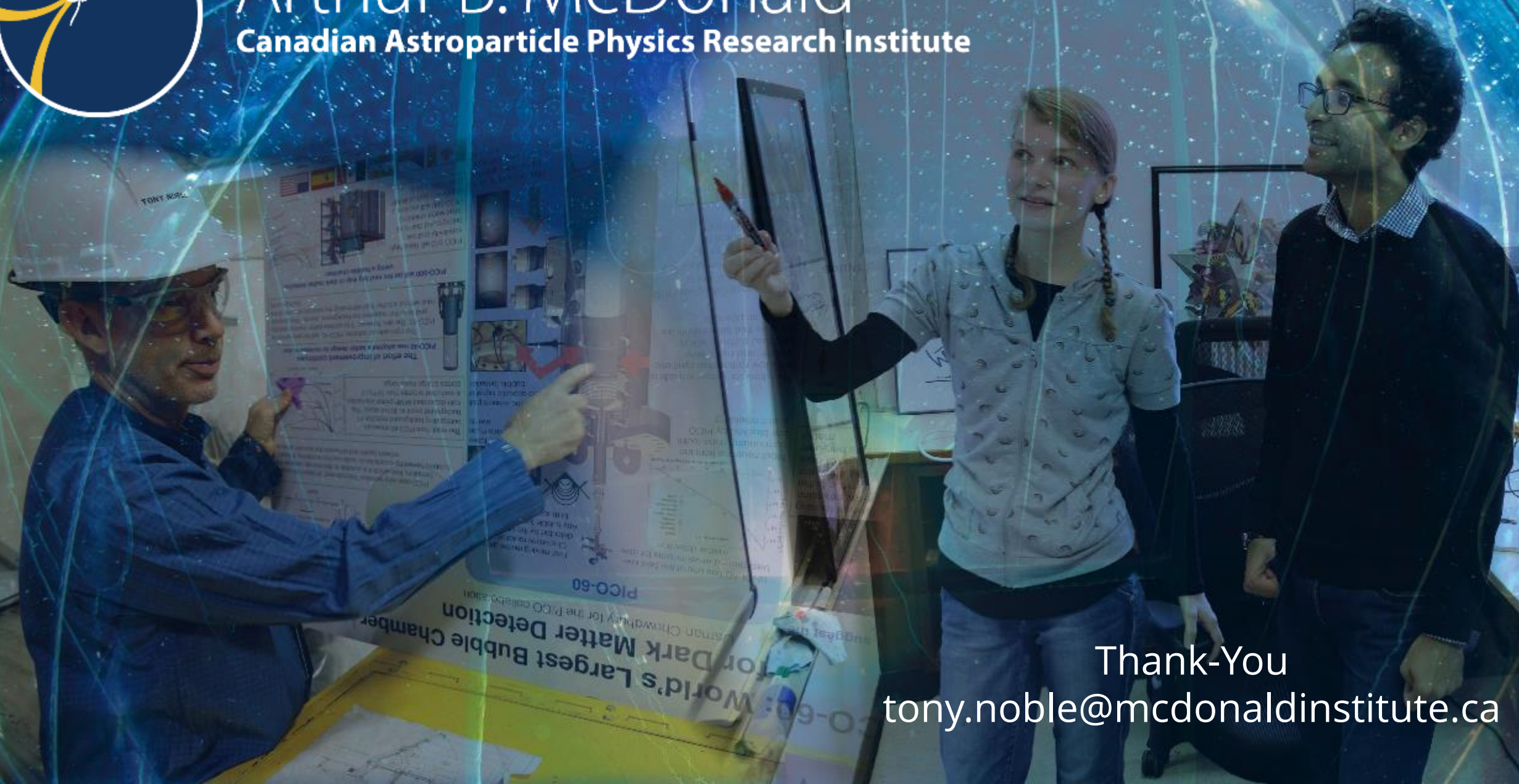


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Arthur B. McDonald

Canadian Astroparticle Physics Research Institute



Thank-You
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