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Proposal for Conference Support: Dark Side of the Universe

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2 EXECUTIVE SUMMARY

The Dark Side of the Universe series of conferences have been held annually for the past almost 20 years. They bring together a wide range of theorists and experimentalists to discuss current ideas on models of the dark sector of the Universe and to relate them to ongoing and future experiments.

3 SCIENTIFIC DESCRIPTION

3.1 Confirmed Invited speakers

1. Laura Baudis, ETH Zurich
2. Eleonara Di Valentino, Sheffield University
3. Elisa Ferreira, Kavli Institute, University of Sao Paulo
4. Evan McDonough, University of Winnipeg
5. Hitoshi Murayama, UC Berkeley
6. Maxim Pospelov, University of Minnesota
7. Chanda Prescod-Weinstein, University of New Hampshire
8. Tracy Slatyer, MIT
9. Cumrun Vafa, Harvard

3.2 Format and Scientific Topics

The meeting will feature invited plenary talks covering topics of recent interest, as well as a number of parallel sessions to provide an opportunity for junior scientists to present their work.

1. Particle astrophysics
2. Physics beyond the Standard Model
3. Dark matter and dark energy
4. Neutrino physics
5. Cosmic microwave background and large-scale structure
6. Inflation and early universe cosmology
7. Gravity and gravitational waves

4 PUBLICATIONS

We plan to have a Proceedings volume of the conference to be published in the Proceedings of Science series.

5 PARTICIPANTS

We anticipate around 200 participants, including invited speakers, regular speakers, local organizers, session organizers, post-docs and graduate students. We plan to encourage participation from the Asia-Pacific countries. APCTP funding will be specifically used to help bring scientists from the Asia-Pacific region who would not otherwise be able to afford to come.

6 TIMELINE, RELATION WITH OTHER ACTIVITIES

The conference be held July 7th to the 11th, 2025. The conference will last for 5 days.

7 Registration fee:

There will be a registration fee of \$250 (CAD). but we are assuming that we can raise about \$ 50,000 CAD assuming 200 registered participants. The registration fee will of course be much less for students and postdocs.

8 Supporting Institutions:

We intend to ask for funding from two main institutions both in Canada. The Canadian institutes would include:

1. CITA (Canadian Institute for Theoretical Astrophysics)
2. The MacDonald Institute (SNOLAB)

We also intend to request funding from international organizations including:

1. Asia-Pacific Center for Theoretical Physics (APCTP), South Korea

9 PROJECTED BUDGET

9.1 Expected expenses (all CDN):

12 invited speakers (including session organizers) at \$2500.00	\$30,000
20 funded Asia-Pacific scientiists, PDFs and graduate students at \$1500.00	\$30,000
Coffee breaks (two per day, \$ 5.00 per person, 200 participants)	\$10,000
Total	\$70,000

9.2 Expected revenues (all CDN):

1.) Registration fee	\$50,000
2.) CITA	\$2,000
3.) MacDonald Institute	\$2,000
4.) APCTP, Korea	\$10,000
Total	\$64,000

Depending on how many participants register for the meeting and how much funding we are able to raise, the amounts of the reimbursements will be adjusted so that we break even.

The facilities at the Université de Montréal are reserved without cost.