

Canada Takes Huge Step to Sustaining International Leadership in Astronomy *Canada announces intention to pursue full membership in the SKA Observatory*

January 24, 2023 (OTTAWA) – The Federal Government's announcement today that Canada will pursue full membership in the Square Kilometer Array Observatory (SKAO) is a generational decision to cement this country's international leadership position in astronomy. It secures a leading Canadian role in one of the largest scientific projects in human history, while delivering hugely impactful benefits for Canadian astronomers, universities and industry.

"The SKAO will be the world's most powerful radio telescope, and Canadians have been involved in its conception and design from day one. Therefore, on behalf of the Coalition for Canadian Astronomy, I want to thank Innovation, Science and Industry Minister François-Philippe Champagne for Canada's decision to pursue full membership in the SKAO. This is a decision that will have impacts for generations," stated Don Brooks, Coalition Co-Chair and Executive Director of the Association of Canadian Universities for Research in Astronomy (ACURA).

The international project includes 16 partner countries, and will combine almost 200 dish-shaped radio telescopes together in South Africa, and connect over 100,000 low-frequency antennas in Australia. SKA construction began in June 2021 and should be complete by 2029, with the earliest science operations beginning mid-way through construction. The SKA will also have data centres around the world, including one in Canada based on today's announcement.

"Canada's global leadership in astronomy is closely tied to our coalition approach, in which scientists, universities and industry work together to identify the projects that will keep Canada at the forefront of this field. The SKA has been at the top of that list for radio astronomy for two decades. For the professional astronomy community, this is an incredibly exciting day. This announcement will deliver enormous scientific discoveries that Canadians will read about for decades to come," stated Christine Wilson, Coalition Co-Chair and President of the Canadian Astronomical Society (CASCA).

"To maintain and attract the top research and student talent, Canadian universities need access to the world's best facilities. For astronomy, this means partnering in multi-country projects like the SKA. With today's announcement, Canadian universities are in an excellent position," added Brooks.

While scientific excellence is the primary factor driving the Coalition's work, Canadian industry has always been a partner, recognizing that next-generation astronomy facilities can only be built with highly skilled expertise in design, engineering and construction - all areas where Canada has enormous strength.

"Canadian industry has a long history of providing the skilled labour and highly specialized, technical engineering required for next-generation global astronomy facilities like the SKA,

which leads to spinoffs across a range of industries. Today is not only a win for Canadian science, but also great news for the economy and the Canadian companies that will supply critical components of the project,” added Guy Nelson, President and CEO of Dynamic Technologies Group and Coalition Co-Chair.

The Coalition looks forward to sharing the discoveries that emerge from the project.

“The SKA will transform our understanding of the history, contents, extreme conditions, and prospects for life in the Universe,” said Kristine Spekkens, Canadian SKA Science Director and Professor at the Royal Military College of Canada and Queen’s University. “The science that the SKA will enable is well-aligned with the expertise of Canadian astronomers, who will be at the forefront of many of its ground-breaking discoveries. This decision marks the beginning of an exciting new era for Canadian astronomy.”

The SKAO shares the Coalition’s goal of advancing equity, diversity and inclusion, while also providing opportunities to nurture the next generation of scientists and engineers. A key part of SKAO’s mission is delivering benefits to society as it constructs and operates its cutting-edge radio telescopes. These include building respectful and positive partnerships with Indigenous and local communities at the remote telescope sites through the lifetime of the facility, a priority shared by the Canadian astronomical community in its 2020-2030 Long-Range Plan.

“Announcements like today’s are generational in terms of their impact. On behalf of all Canadian astronomy stakeholders, we offer thanks to Minister Champagne and everyone else in the Federal Government who worked on this,” concluded Wilson.

About the Coalition for Canadian Astronomy

The Coalition is composed of:

- Academia: represented by the Association of Canadian Universities for Research in Astronomy (ACURA) and its 20 members;
- Professional astronomers: represented by the Canadian Astronomical Society (CASCA);
- Industry: represented by Canadian companies involved in major astronomy projects.

The Coalition is united behind the Long-Range Plan for Astronomy and Astrophysics (LRP), a decadal plan first launched in 2000 and renewed in 2010 and 2020, with a view to sustaining Canada’s international leadership in astronomy. The LRP process, backed by Coalition support, has created a legacy of success, with astronomy consistently ranked as Canada’s top science and Canadians at the forefront of this field globally.

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