

Memorandum of Understanding to Establish a Canadian Square Kilometre Array Consortium

The signatories to this agreement (hereafter “The Signatories”), The Herzberg Institute of Astrophysics (HIA) of the National Research Council of Canada, the Association of Canadian Universities for Research in Astronomy (ACURA), and industry partners, recognizing the priority of Canadian participation in the Square Kilometre Array Project (SKA) and the need for a coherent Canadian SKA program representing the interests of Canadian astronomers, Universities, The National Research Council, and Industry, agree to establish a Canadian Square Kilometre Array Consortium (CSKAC).

The purpose of the CSKAC is to:

- promote and advance Canadian participation in the SKA project,
- develop and coordinate the Canadian national SKA program in a manner that optimizes the scientific and economic return to Canada and represents the interests of Canadian astronomers,
- seek funding for the national plan and for international participation in the SKA,
- foster development of technology for the SKA in Canadian Industry, and
- present a single coherent Canadian interface to the international SKA project.

1 Consortium Board

The Signatories will establish a Consortium Board to be the governing body of the CSKAC. The Consortium Board will:

- 1.1 represent Canada to the International SKA Project,
- 1.2 appoint Canadian representatives to the International SKA Steering Committee (ISSC),
- 1.3 develop the Canadian national program for the SKA in consultation with the Canadian astronomical community,
- 1.4 coordinate the Canadian program for the SKA, including reviewing planned activities by Consortium members and facilitating the establishment of working groups or other internal collaborative initiatives,
- 1.5 facilitate the participation of industrial partners in the development activities of the Canadian SKA program,
- 1.6 promote the SKA to government and industry,

- 1.7 identify potential resources and encourage Consortium members to seek funding for all elements of the Canadian SKA program

2 Membership of the Consortium Board

The Board membership will consist of a minimum of six (6) members.

- 2.1 HIA may appoint up to two members to the Consortium Board.
- 2.2 ACURA may appoint up to two members to the Consortium Board.
- 2.3 The Canadian Astronomical Society may appoint one member to the Consortium Board.
- 2.4 The chair of the Canadian SKA Science Advisory Committee shall be a member of the Consortium Board (as per section 4).
- 2.5 Each industry signatory may appoint one representative to the Consortium Board.
- 2.6 The Chair of the Consortium Board will be appointed by the agreement of the Chair of the ACURA Board of Management and the Director General of HIA. The Chair shall execute authorized actions on behalf of the Consortium. In addition, the Chair will call and preside at meetings of the Board.
- 2.7 Additional members of the Consortium Board may be recommended by the chair of the Consortium Board for approval by the Chair of the ACURA Board of Management and the HIA Director General.
- 2.8 The Board will select from among its members an Executive Secretary who shall be responsible for maintaining and circulating a record of the activities and actions of the Consortium Board.
- 2.9 The Board may select a member to be appointed as Vice-Chair, with authority approved by ACURA and by HIA to act in the absence or incapacity of the Chair.
- 2.10 Industry membership on the Board will be constrained to less than 50% of the total number of members of the Board.

3 Decisions of the Consortium Board

The Consortium Board will normally reach a consensus view on recommended actions to be undertaken by the Consortium members. In cases where a recorded vote on a motion is requested by a Board member or deemed desirable by the Chair; for example, in the case of nominating members to the ISSC, the following rules will apply:

- 3.1 To pass, a motion requires a majority vote, either by a quorum of members present at meetings of the Consortium board, or by electronic written vote.
- 3.2 Each member of the Consortium Board will have one vote.

- 3.3 A quorum of the Consortium Board for taking decisions will be at least one-half of the members and must include at least one member appointed by HIA under section 2.1 and at least one member appointed by ACURA under section 2.2 and at least one member appointed by Industry signatories under section 2.5.

4 Canadian SKA Science Advisory Committee

- 4.1 Scientific advice on the Canadian SKA program and advice on Canadian participation in the International SKA project from the astronomical community shall be provided by the Canadian SKA Science Advisory Committee (CSSAC).
- 4.2 The CSSAC shall report to the Radio Astronomy Committee of the Canadian Astronomical Society (CASCA).
- 4.3 Membership of the CSSAC:
 - 4.3.1 Except for the members referred to in Article 4.3.2, membership of the CSSAC will be appointed by the CASCA Radio Astronomy Committee with the approval of the CASCA Board of Directors.
 - 4.3.2 The Consortium Board may appoint up to two additional members to the CSSAC.
 - 4.3.3 The initial members of the CSSAC shall be the membership of the CASCA SKA Science Steering Committee on the date of the signing of this MOU.

5 Expectations of Industrial Signatories

Signatories representing industrial firms will be full partners in the Consortium and undertake an obligation to support the purposes of the CSKAC as outlined in the preamble. As full partners in the Consortium, firms are expected to share development risks in their respective SKA-related research and development programs.

- 5.1 Industrial partners may appoint members of the Consortium Board as per 2.4.
- 5.2 The partnership of Industrial signatories in the Consortium is for a three-year period.
- 5.3 The partnership of industrial signatories can be renewed after each three-year period as a result of a vote of the Consortium Board.

6 Meetings

- 6.1 The Consortium Board will meet as required, but no less than twice per year, normally in advance of an ISSC meeting. Attendance by electronic means will be acceptable.

- 6.2 With the approval of the Chair, non-members may attend as non-voting participants in meetings of the Board,
- 6.3 Notwithstanding the above, the Chair may declare portions of any meeting to be restricted to Board members only,
- 6.4 If not already members of the Board, the Canadian ISSC representatives shall be invited by the Chair to as non-voting participants in meetings of the Consortium Board.

7 Financial Matters

- 7.1 The Signatories agree to reimburse, in the absence of financial exigencies, travel related expenses to the Consortium meetings incurred by their appointees made under sections 2.1, 2.2, and 2.5. In the absence of prior arrangements, it is anticipated that the CASCA appointee (2.3) will be supported by CASCA. Appointees under section 2.7 will be supported as agreed to by the Signatories at the time of appointment.
- 7.2 A recording secretary for Consortium Board meetings and associated administrative support for Consortium business will be provided by ACURA or by HIA, as required.
- 7.3 The Consortium Board shall instruct the Chair to inform the International Project authority (currently ASTRON), on where to direct invoices for payments due for services provided by that authority and to maintain Canadian membership in the ISSC.

8 Expansion of the Consortium

- 8.1 The Consortium may be expanded to include additional signatories. An individual Consortium member may recommend an additional signatory, and the new signatory will be accepted only by consent of at least 75% of the Consortium Board.

9 Withdrawal from the Agreement

- 9.1 A Signatory may withdraw from this agreement by providing to all other Signatories to the agreement 4 months notice in writing of the intent to withdraw.

Greg. Fahlman
Director General,
Herzberg Institute of Astrophysics

Date

Don Brooks
Chair,
ACURA Board of Management

Date

David Halliday
Vice-President and Director of Special Projects
AMEC Dynamic Structures Ltd.

Date

Trevor Webb
Regional Manager BC and Yukon
Bosch Rexroth Canada

Date

Konrad Lewinski
T/R Module Sales and Product Line Manager
Breconridge Manufacturing Solutions Corporation

Date