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Canadian Space
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Canadian Space Agency

Exploration Core (ExCore)

Pool of Experts for the Wide-Field Infrared Survey Telescope (WFIRST) Space Astronomy Mission

Request for Information (RFI)

File number: 9F052-140520/A

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1 Introduction

1.1 Purpose

The Canadian Space Agency (CSA) is seeking individuals in the Canadian astronomical community to join a pool of experts (PoE) to provide scientific and technical expertise to contractors that will be awarded contracts¹ to analyze potential Canadian contributions to NASA's Wide-Field Infrared Survey Telescope- Astrophysics Focused Telescope Assets (WFIRST-AFTA) mission. Selected experts will be assigned to support either one of the contracts or may be asked to join an independent review committee that will provide feedback to the CSA during the course of the studies.

1.2 General Information

This Request for Information (RFI) shall not be construed to be a Request for Proposal (RFP) and/or Announcement of Opportunity (AO), and no agreement/contract will be entered into with/awarded to any vendor based on responses to this RFI. This RFI shall in no way be considered as authorization by the CSA for respondents to undertake any work, which would result in costs to the CSA. The CSA shall not be liable for, nor shall it reimburse any of the respondents, or any third-party, for any costs, fees or expenses, incurred in the preparation or submission of a response to this RFI.

Nothing in this RFI shall be construed as a commitment to issue a RFP or an AO. Response to this RFI will not create any obligation. The CSA shall not be bound by anything stated herein. Respondents shall not be bound by any aspect of their response to this RFI.

Respondents should mark any portions of their response that they consider proprietary or confidential. All responses to this RFI will be held by the CSA on a confidential basis (subject to applicable legislation) and remain the property of the CSA once they have been received. Respondents are advised, however, that information submitted may be used in the development of future RFPs or AOs. Vendors answering this RFI shall specify if the information or comments provided are confidential or exclusive to the company. Not responding to this RFI shall in no way penalize bidders to any future RFP or AO. Canada may, at its discretion, contact any respondents to follow up with additional questions or for clarification of any aspect of a response.

¹ [See](#) RD-6 Section 2.2

2 Documents

2.1 Applicable Documents

There are no Applicable Documents in this RFI.

2.2 Reference Documents

The following documents provide additional information or guidelines that either may clarify the contents or are pertinent to the history of this RFI.

TABLE 2-1 - REFERENCE DOCUMENTS

RD No.	Document Number	Document Title	Rev. No.	Date
RD-1		Canadian Astronomical Society Long Range Plan http://www.casca.ca/lrp2010/11093_AstronomyLRP_V16web.pdf		2010
RD-2		NASA WFIRST mission website http://wfirst.gsfc.nasa.gov/science/		
RD-3		Wide-Field InfraRed Survey Telescope-Astrophysics Focused Telescope Assets WFIRST-AFTA Final Report by the Science Definition Team (SDT) and WFIRST Project http://wfirst.gsfc.nasa.gov/science/sdt_public/WFIRST-AFTA_SDT_Final_Report_Rev1_130523.pdf		May 23, 2013
RD-4		Evaluation of the Implementation of WFIRST/AFTA in the Context of New Worlds, New Horizons in Astronomy and Astrophysics, NRC National Academies http://www.nap.edu/openbook.php?record_id=18712&page=R1		Pre pub 2014
RD-5		WFIRST-AFTA SDT Interim Report April 2014 http://wfirst.gsfc.nasa.gov/science/sdt_public/WFIRST-AFTA_SDT_Interim_Report_April_2014.pdf		April 30, 2014
RD-6		Analysis Study For Canadian Contributions To The NASA Wide-Field Infrared Survey Telescope (WFIRST) (9F052-140344/A) https://buyandsell.gc.ca/procurement-data/tender-notice/PW-14-00649493		August 19, 2014

3 Background

The CSA Exploration Core Program operates in the context of Canadian Space Exploration Plan (CSEP) where CSA's vision for space exploration is stated as "Canada will join in the human and robotic exploration of the solar system and space-based astronomical observation of the Universe beyond. The CSA will maintain a robust and balanced space exploration program to ensure that, as a nation, Canadians share in the discoveries, technological breakthroughs, societal impact and economic benefits stemming from the global exploration endeavour".

As part of its plan for space-based astronomy, CSA explores opportunities for missions that address dark energy, one of the key science priorities identified in the Canadian Long Range Plan for astronomy (LRP). Currently NASA is undertaking pre-formulation studies of the Wide-Field Infrared Survey Telescope (WFIRST) mission addressing dark energy and other key investigations. NASA is exploring possible international partnerships and contributions and has invited CSA to consider potential flight hardware contributions that would allow Canada to join the mission.

The Wide-Field Infrared Survey Telescope (WFIRST) is an observatory designed to perform wide-field imaging and slitless spectroscopic surveys of the near infrared (NIR) sky. The current Astrophysics Focused Telescope Assets (AFTA) design of the mission makes use of an existing 2.4 m telescope. WFIRST-AFTA will settle essential questions in both exoplanet and dark energy research and will advance topics ranging from galaxy evolution to the study of objects within the galaxy and within the solar system. The main instrument is a wide-field multi-filter NIR imager and spectrometer. With the 2.4 m telescope, a coronagraph instrument has been added to the payload for direct imaging of exoplanets and debris disks. More details of the reference missions, science, instruments, spacecraft and the current CSA request for proposals for analysis study for Canadian contributions to the NASA WFIRST (9F052-140344/A) are available in the Reference Documents above.

CSA wants to form a pool of experts that would be eligible to assist the selected contractors should there be a need to complement or add a specific expertise in the selected studies. Interested scientists and technologists, including those that are part of a proposal team, should respond to this RFI as they could [become eligible](#) to join the pool of experts in case the submitted proposal is not selected. Experts not member of a study team will be offered opportunities by CSA to participate in project reviews and provide comments to CSA. Under certain conditions, a member of a selected proposal team may still act as a reviewer of the work produced by the other study team.

CSA is looking for experts in fields of astronomy (dark energy , search of exoplanets using microlensing and other areas of astronomy benefiting from wide-field near-IR surveys) pertinent to WFIRST-AFTA and for the coronagraph instrument (exoplanets direct imaging) as well as experts in astronomical instrumentation relevant to WFIRST (integral field units, near infrared detectors, coronagraph, EMCCD) and experts in astronomical data processing techniques and archiving.

4 Requested Information

Respondents are invited to submit a letter of interest describing the scientific or technical expertise they could contribute to the CSA-sponsored WFIRST studies (1 page) to which is appended a professional curriculum vitae (1 page) and a list of relevant publications (1 page). The letter of interest and additional material should not exceed three pages (letter size, minimum font size 11, PDF or MS Word format). The letter of interest should state to which category of the RFP the respondent could contribute and describe how it would benefit any of the options described in the RFP.

5 Response Protocol

Each response should include sufficient contact information (names, address, e-mail address, telephone number) in order to allow CSA to contact the respondent for further clarification, if required. CSA will proceed to the selection of the pool of experts based on the responses to this RFI and will inform the respondents once the selection process is completed.

Canada will not be responsible and will not reimburse the costs, expenses and fees associated with the preparation and delivery of responses to this RFI.

6 Official Languages

Responses to this RFI may be in one of the official languages of Canada, French or English.

7 Submittal of Responses

Written responses to this RFI shall be transmitted to the CSA by mail or facsimile or e-mail (PDF or Microsoft Office document) no later than 4:30 pm October 17th, 2014 (EDT). Questions and formal written responses to this RFI shall be addressed to:

Robert Kardum
Contracting Officer
Procurement and Contract Administration
Canadian Space Agency
6767 route de l'Aéroport
St-Hubert, Québec J3Y 8Y9 Canada

Telephone: 450-926-4875

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8 Acronyms

AFTA Astrophysics Focused Telescope Assets

AO Announcement of Opportunity

CSA Canadian Space Agency

CSEP Canadian Space Exploration Plan

DE Dark Energy

EDT Eastern Daylight Time

EMCCD Electron Multiplying Charged Coupled Device

EW Element Wheel

ExCore Exploration Core

FGS Fine Guidance Sensor

IFS Integral Field Spectrograph

IFU Integral Field Unit

LRP Long Range Plan

NIR Near Infrared

RFI Request for Information

RFP Request For Proposal

TRL Technology Readiness Level

WFIRST Wide-Field Infrared Survey Telescope