

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving - PWGSC / Réception des
soumissions - TPSGC**
11 Laurier St./ 11 rue, Laurier
Place du Portage, Phase III
Core 0A1 / Noyau 0A1
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet EMCCD Camera	
Solicitation No. - N° de l'invitation W7714-155978/A	Date 2014-07-30
Client Reference No. - N° de référence du client W7714-155978	
GETS Reference No. - N° de référence de SEAG PW-\$\$PV-940-65448	
File No. - N° de dossier pv940.W7714-155978	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-09-09	
Time Zone Fuseau horaire Eastern Daylight Saving Time EDT	
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Hooper, Marlyn	Buyer Id - Id de l'acheteur pv940
Telephone No. - N° de téléphone (819) 956-2702 ()	FAX No. - N° de FAX (819) 956-3814
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATIONAL DEFENCE BLDG 29 RECEIVING 3701 CARLING AVE OTTAWA Ontario K1A0Z4 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Scientific, Medical and Photographic Division / Division de
l'équipement scientifique, des produits photographiques et
pharmaceutiques
11 Laurier St./ 11 rue, Laurier
6B1, Place du Portage
Gatineau, Québec K1A 0S5

Delivery Required - Livraison exigée See Herein	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

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pv940

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CCC No./N° CCC - FMS No/ N° VME

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List of Annexes:

Annex A	Requirement / Basis of Payment
Annex B	Mandatory Specifications
Annex C	Complete List of Affiliates

TITLE Electron Multiplying Charged Couple Device (EMCCD) Camera**PART 1 - GENERAL INFORMATION****1. Security Requirement**

There is no security requirement associated with this bid solicitation.

2. Requirement

The requirement is detailed under the "Annex A".

3. Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

4. Trade Agreements

"The requirement is subject to the provisions of the North American Free Trade Agreement (NAFTA), and the Agreement on Internal Trade (AIT)."

PART 2 - BIDDER INSTRUCTIONS**1. Standard Instructions, Clauses and Conditions**

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual

(<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2014-06-26) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: sixty (60) days

Insert: ninety (90) days

1.1 SACC Manual Clauses

B1000T

Condition of Material

2014-06-26

2. Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary " will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

4. Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in the province of Ontario, Canada.

The Bidder may, at its discretion, substitute the applicable laws of a Canadian province or territory of its choice without affecting the validity of its bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of its choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidder

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (two (2) copies)
 Section II: Financial Bid (one (1) copy)
 Section III: Certifications (one (1) copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement. (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, Offerors should follow the format instructions described below in the preparation of their offer:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content;
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders; and
- 3) use a numbering system that corresponds to that of the Request for Standing Offers.

1.1 Section I: Technical Bid

The following applies to the Requirement and bidders must provide the following information in the bid where applicable:

1.1.1 Product(s) Offered

The Bidder must indicate the make and model number of the products offered (identify specific components which make up the system):

Name of Manufacturer: _____

Model/Part Number: _____

Literature attached: Yes (____) No (____)

1.1.2 Point of Manufacture/Shipping

The Bidder must state the point of manufacture/shipping of goods:

Location: _____

Postal Code: _____

1.1.3 Delivery

While delivery is requested by October 1, 2014 the best delivery that could be offered by the Bidder is _____.

1.1.4 Software Upgrades

The Bidder must provide all software updates and new releases to the purchaser for a period of one year following the acceptance, at no additional cost.

Note: The word "updates" means all enhancements, extensions or other modifications to the software. The word "releases" means enhancements or modifications to the software or new modules or supplementary modules that function in conjunction with the software, that represent the next generation of software, and which the Contractor has decided to make available to its customers usually for an additional charge.

1.1.5 Contacts

Bidders are requested to provide the following: Information pertaining to Article 5.3 Contractor Representatives under Part 6, Resulting Contract Clauses.

1.2 Section II: Financial Bid

The bidder must quote a firm unit price, DDP (Ottawa, Ontario), the total amount of applicable taxes must be shown separately. Freight charges to destination and all applicable Customs duties and Excise taxes must be included.

1.2.1 Exchange Rate Fluctuation

C3011T Exchange Rate Fluctuation

2013-11-06

1.3 Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

1.1 Technical Evaluation

All proposals submitted must be completed in full and provide all of the information requested in the Request for Proposal (RFP) package to enable a full and complete evaluation. If the requirement is not addressed in the bidder's proposal, the proposal will be considered incomplete or non-responsive and will be rejected. The onus is on the bidder to provide all the information necessary to ensure a complete and accurate assessment.

Read: **Yes:** _____

Factors for Evaluation

- 1. PRICING BASIS (MANDATORY): Prices must be firm, DDP Delivered Duty Paid.
- 2. ABILITY TO MEET THE TECHNICAL REQUIREMENT (MANDATORY):

- a) For Items Defined by Specifications:

The bidder is requested to cross reference the mandatory technical criteria contained herein to their supporting technical documentation.

- b) Provision of Supporting Technical Documentation:

Supporting technical documentation for the stores offered must be provided with the bid at time of bid closing.

Technical brochures or technical data **MUST** be provided to verify compliancy to the technical mandatory specifications.

Included: **Yes:** _____

- 3. COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS REQUEST FOR PROPOSAL (MANDATORY)

4. Please note that the requirements of the Federal Contractors Program for Employment Equity may apply - (see Part 5).

1.1.1 Mandatory Technical Criteria

See Annex B

1.2 Financial Evaluation

1. The price of the bid will be evaluated as follows:
 - a. Canadian-based bidders must submit firm prices, Canadian customs duties and excise taxes included, and Applicable Taxes excluded.
 - b. foreign-based bidders must submit firm prices, Canadian customs duties, excise taxes and Applicable Taxes excluded. Canadian customs duties and excise taxes payable by Canada will be added, for evaluation purposes only, to the prices submitted by foreign-based bidders.
2. Unless the bid solicitation specifically requires bids to be submitted in Canadian currency, bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes. The rate given by the Bank of Canada in effect on the bid solicitation closing date, or on another date specified in the bid solicitation, will be applied as a conversion factor to the bids submitted in foreign currency.
3. Although Canada reserves the right to award the Contract either on an FCA Plant Incoterms 2000 or DDP Incoterms 2000, Canada requests that bidders provide prices FCA Plant Incoterms 2000 and DDP Incoterms 2000. Bids will be assessed on a DDP Incoterms 2000 basis.
4. For the purpose of the bid solicitation, bidders with an address in Canada are considered Canadian-based bidders and bidders with an address outside of Canada are considered foreign-based bidders.

2. Basis of Selection

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive.

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and associated information to be awarded a contract.

The certifications provided by bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default in carrying out any of its obligations under the Contract, if any certification made by the Bidder

is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority may render the bid non-responsive or constitute a default under the Contract.

1. Certifications Required Precedent to Contract Award

1.1 Integrity Provisions – Associated Information

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in Section 01 Integrity Provisions - Bid of Standard Instructions 2003. The associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

1.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from Employment and Social Development Canada (ESDC) - Labour's website.

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement applicable to this contract.

2. Requirement

2.1 Requirement

The Contractor must provide the items detailed under the "Annex A".

2.2 Manuals

One complete set of user documentation in English must be supplied.

2.5 Software Upgrades

The contractor must provide all software updates and new releases to the purchaser for a period of one year following the acceptance, at no additional cost.

3. **Standard Clauses and Conditions**

All clauses and conditions identified in the Contract by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2014-06-26) General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

The 2010A (2014-06-26), General Conditions - Goods (Medium Complexity) is appended with Section 31 - Intellectual Property Infringement and Royalties, as follows:

1) The Contractor represents and warrants that, to the best of its knowledge, neither it nor Canada will infringe any third party's intellectual property rights in performing or using the Work, and that Canada will have no obligation to pay royalties of any kind to anyone in connection with the Work.

2) If anyone makes a claim against Canada or the Contractor concerning intellectual property infringement or royalties related to the Work, that Party agrees to notify the other Party in writing immediately. If anyone brings a claim against Canada, according to Department of Justice Act, R.S. 1985, c. J-2, the Attorney General of Canada must have the regulation and conduct of all litigation for or against Canada, but the Attorney General may request that the Contractor defend Canada against the claim. In either case, the Contractor agrees to participate fully in the defence and any settlement negotiations and to pay all costs, damages and legal costs incurred or payable as a result of the claim, including the amount of any settlement. Both Parties agree not to settle any claim unless the other Party first approves the settlement in writing.

3) The Contractor has no obligation regarding claims that were only made because:

(a) Canada modified the Work or part of the Work without the Contractor's consent or used the Work or part of the Work without following a requirement of the Contract; or

(b) Canada used the Work or part of the Work with a product that the Contractor did not supply under the Contract (unless that use is described in the Contract or the manufacturer's specifications); or

(c) the Contractor used equipment, drawings, specifications or other information supplied to the Contractor by Canada (or by someone authorized by Canada); or

(d) the Contractor used a specific item of equipment or software that it obtained because of specific instructions from the Contracting Authority; however, this exception only applies if the Contractor has included the following language in its own contract with the

supplier of that equipment or software: "[Supplier name] acknowledges that the purchased items will be used by the Government of Canada. If a third party *claims* that equipment or software supplied under this contract infringes any intellectual property right, [supplier name], if requested to do so by either [Contractor name] or Canada, will defend both *of* [Contractor name] and Canada against that claim at its own expense and will pay all costs, damages and legal fees payable as a result of that infringement." Obtaining this protection from the supplier is the Contractor's responsibility and, if the Contractor does not do so, it will be responsible to Canada for the claim.

- 4) If anyone claims that, as a result of the Work, the Contractor or Canada is infringing its intellectual property rights, the Contractor must immediately do one of the following:

(a) take whatever steps are necessary to allow Canada to continue to use the allegedly infringing part of the Work; or

(b) modify or replace the Work to avoid intellectual property infringement, while ensuring that the Work continues to meet all the requirements of the Contract; or

(c) take back the Work and refund any part of the Contract Price that Canada has already paid.

If the Contractor determines that none of these alternatives can reasonably be achieved, or if the Contractor fails to take any of these steps within a reasonable amount of time, Canada may choose either to require the Contractor to do (c), or to take whatever steps are necessary to acquire the rights to use the allegedly infringing part(s) of the Work itself, in which case the Contractor must reimburse Canada for all the costs it incurs to do so.

3.2 Supplemental General Conditions

4003 (2010-08-16) Licensed Software, apply to and form part of the Contract.

4004 (2013-04-25) Maintenance and Support Services for Licensed Software, apply to and form part of the Contract

4. Term of Contract

4.1 Delivery Date

All the deliverables must be received on or before _____ (to be filled in only at contract award).

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Marlyn Hooper
Public Works and Government Services Canada
Acquisitions Branch
Commercial Consumer Products Directorate
11 Laurier Street, 6A2, Phase III
Place du Portage, Gatineau, Quebec, K1A 0S5
Telephone: (819) 956-2702
Facsimile: (819) 956-3814
E-mail address: marlyn.hooper@pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

5.2 Technical Authority (to be filled in only at contract award)

The Technical Authority for the Contract is:

Name: _____
Telephone: (____) _____
Facsimile: (____) _____
E-mail address: _____

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be _____ discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

5.3 DND Procurement Authority (to be filled in only at contract award)

The DND Procurement Authority for the Contract is:

Name: _____
Telephone: (____) _____
Facsimile: (____) _____
E-mail address: _____

The DND Procurement Authority is responsible for the DND contract management and for the authorization of all work against this contract.

5.4 Contractor's Representative (**fill in**)

The telephone number of the person responsible for:

General enquiries

Name: _____
 Telephone No. _____
 Facsimile No. _____
 E-mail address: _____

Delivery Follow-up

Name: _____
 Telephone No. _____
 Facsimile No. _____
 E-mail address: _____

6. Payment

6.1 Basis of Payment - Firm Price

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price, as specified in Annex A for a cost of \$ _____ (**to be filled in only at contract award**). Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6. SACC Manual Clauses

C0100C	Discretionary Audit - Commercial Goods and/or Services	2010-01-11
H1000C	Single Payment	2008-05-12

7. Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
 - (a) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
 - (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
 - (c) one (1) copy must be forwarded to the consignee.

8. Certifications

8.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing associated information are conditions of the Contract.

Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to, provide the associated information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

9. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in the province of Ontario.

10. Priority of Documents

If there is a discrepancy between the wordings of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the supplemental general conditions 4003 (2010-08-16) Licensed Software;
- (c) the supplemental general conditions 4004 (2013-04-25) Maintenance and Support Services for Licensed Software
- (c) 2010A (2014-06-26) General Conditions - Goods (Medium Complexity);
- (d) Annex A, Requirement / Basis of Payment;
- (e) Annex B, Mandatory Specification;
- (f) the Contractor's bid dated _____ (*insert date of bid*)

11. SACC Manual clause

B1501C

Electrical Equipment

2006-06-16

12. Shipping Instructions - Delivery at Destination

1. Goods must be consigned to the destination specified in the Contract and delivered:

Delivered Duty Paid (DDP) Ottawa, Ontario Incoterms 2000 for shipments from a commercial contractor.

2. The Contractor will be responsible for all delivery charges, administration, costs and risk of transport and customs clearance, including the payment of customs duties and taxes.

ANNEX A

REQUIREMENT / BASIS OF PAYMENT

The Department of National Defence has a requirement for the supply one (1) Electron Multiplying Charged Couple Device Camera.

Complete detailed specifications are identified in Annex B.

Item #	Description	Qty	Firm Unit Price
1	Electron Multiplying Charged Couple Device (EMCCD) Camera. Including: qty 1 Acquisition software and applicable programing interface SDK, qty 1 C-mount nosepiece, qty 1 Power supply with cables, qty 1 PCI express, Gige or USB 2/USB 3 data interface with cables	1	\$

ANNEX B

MANDATORY SPECIFICATIONS

Commercial Off The Shelf Electron Multiplying CCD (EMCCD) back illuminated camera package and accessories

Vendors must cross reference the mandatory technical criteria in a concise format by using page, paragraph(s) & sub-paragraphs as applicable to their supporting technical documentation.

- 1.0 Detector Array Pixels: Must be 1024 x 1024 (1 megapixel) or larger back illuminated EMCCD

Reference in Contractors Proposal: _____

- 2.0 Detector CCD Grade: Must be Grade 1

Reference in Contractors Proposal: _____

- 3.0 Pixel Size: Must be 13 to 14 micrometers in size maximum

Reference in Contractors Proposal: _____

- 4.0 Detector size: Must be 13 mm minimum

Reference in Contractors Proposal: _____

- 5.0 Frame Rate: Must be 15 frames per second (or higher) for full 1024x1024 array at 1x1 binning

Reference in Contractors Proposal: _____

- 6.0 Camera package overall dimensions: Must have a package size not exceeding 30cm x 30cm x 30cm volume to prevent mechanical interference with other observatory equipment.

Reference in Contractors Proposal: _____

- 7.0 Camera package mass: Camera to weigh less than 25 kg. Cables, power brick and other accessories, excluded

Reference in Contractors Proposal: _____

- 8.0 Camera Cooling: Camera is to be air cooled via embedded thermoelectric cooling device. A liquid cooling systems will not be accepted

Reference in Contractors Proposal: _____

- 9.0 Read noise: Must be less than 1 e-/pix (or better) at operating temperature for exposures less than 1 sec

Reference in Contractors Proposal: _____

- 10.0 Dark Current: Must be < 0.01 e-/pix/sec at operating temperature

Reference in Contractors Proposal: _____

- 11.0 Quantum Efficiency: Must be 400 nm greater than 40%, 550nm greater than 90%

Reference in Contractors Proposal: _____

- 12.0 Spectral Range: Must be between 400-1000 nm

Reference in Contractors Proposal: _____

- 13.0 Digitization: Must be 16 bit

Reference in Contractors Proposal: _____

- 14.0 Exposure Duration: Must be Minimum 1 millisecond or smaller, Maximum of 1 hour

Reference in Contractors Proposal: _____

- 15.0 Timestamp resolution: Must be 1 millisecond (or smaller) resolution must be stamped on image data Flexible Image Transport System (FITS) files

Reference in Contractors Proposal: _____

- 16.0 Timestamp: Must be DD MM YYYY hh:mm:ss.nnn or equivalent metadata arrangement stamped into header of FITS images produced by camera

Reference in Contractors Proposal: _____

- 17.0 Image Data Format: Data acquisition Software must generate FITS format

Reference in Contractors Proposal: _____

- 18.0 Camera Connectivity: Must be USB2, USB3 or PCIe interface or Gige connectivity.

Reference in Contractors Proposal: _____

- 19.0 After Sales Service: Vendor must offer services to reseal vacuum of camera system (if applicable) and after sales camera firmware/software updates

Reference in Contractors Proposal: _____

- 20.0 Shutter: Mechanical camera shutter must be able to be held open during high frame rate acquisition with no shutter open/close cycles. An ability to acquire dark frames (shutter closed) must be provided.

Reference in Contractors Proposal: _____

- 21.0 SPECIAL CONSIDERATIONS

Device is to be integrated into a space surveillance telescope. Time stamping of images is to be achieved by the camera control software referencing the control computer clock. The computer control clock is steered by a separate GPS system in order to ensure accuracy of time.

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pv940

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CCC No./N° CCC - FMS No/ N° VME

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ANNEX C

COMPLETE LIST OF AFFILIATES (As per Standard Instructions, Clauses and Conditions Part 2)

Name

Position
