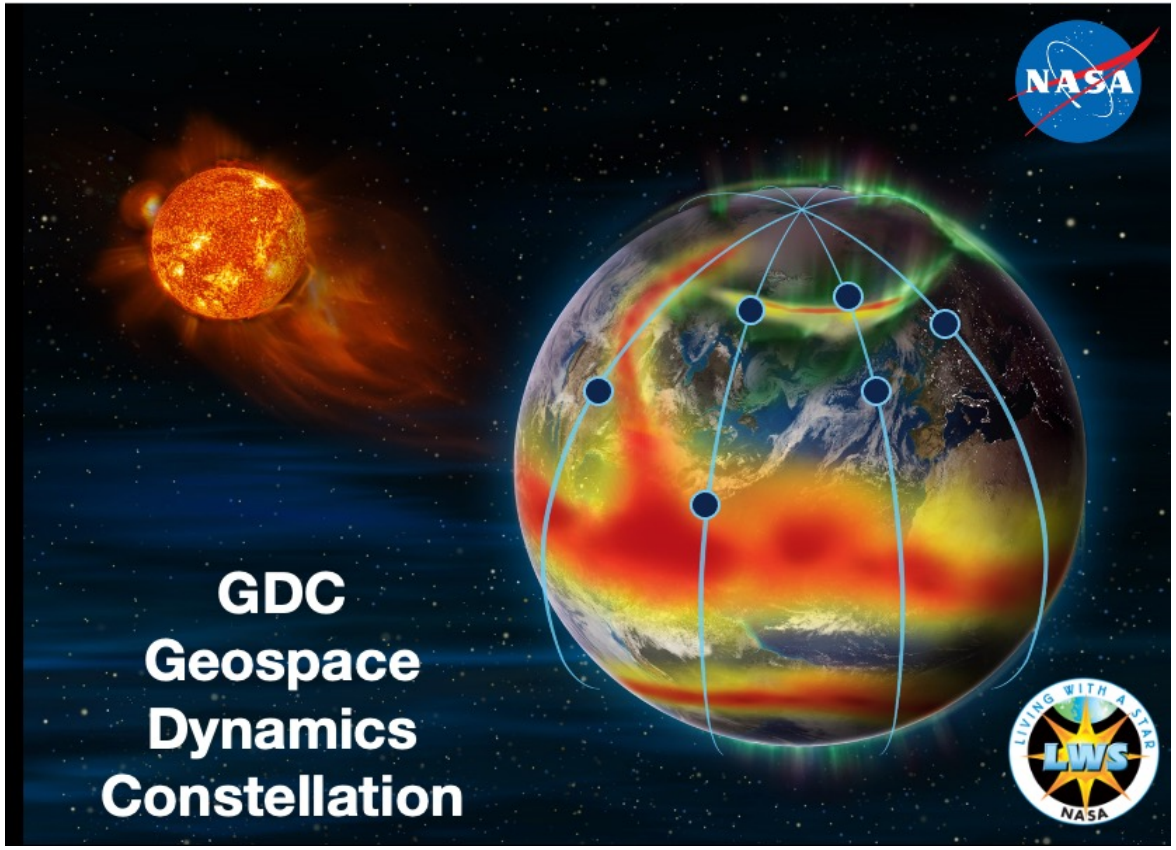
Geospace Dynamics Constellation

Contracting Process for GDC Instrument Investigations

September 8, 2021



Introduction

- This document provides an overview of the contracting process that will be used by NASA for the GDC PEA
  - Contract Options for GDC Instruments
  - Roles and responsibilities of the GDC Project
  - Overview of the Instrument Contracting Process
  - Sample Phase A contracts (available in the Program Library)

- In addition to this document, the GDC PEA and GDC PIP both contain information (and requirements) relevant to selection and contracting. Examples include but are not limited to
  - PEA Sections 7.2, 7.3
  - PIP Section 10

Contract Options for GDC Instruments

- Instrument Contracting Approach:
  - Phase A: Fixed Price (FP)
  - Phase B-F: Cost Reimbursable
- The following charts apply to all instrument provider options:
  - University Instrument
  - Commercial Instrument
  - NASA Instrument
  - FFRDC/UARC
  - Other Government Agencies (OGA)

Instrument PI Role/Responsibilities

- Ensure overall instrument scientific and programmatic success as defined in the governing documents developed during formulation and implementation
- Assemble and lead the science, management, and technical team to formulate, implement, and operate the instrument
- Report detailed cost, schedule and technical status & progress to the Payload Office
- Notify the Instrument Manager, Payload Office or Project Manager in the event of a significant implementation or on-orbit anomaly
- Generate and execute a project plan that meets the requirements of NPR 7120.5F

Project Office Roles/Responsibilities

- Support the Principal Investigator to achieve mission success and ensure that the mission complies with all applicable government and NASA-specific policies and regulations
- Provide comprehensive oversight of the mission development process by conducting ongoing assessments of the mission's cost, schedule and technical progress
- Provide mission status to NASA management through monthly reviews, weekly reporting and timely notification of problems & resolution plans.
- Coordinate the provision of all government-furnished services and equipment, such as space communication support, launch services, etc.
- Provide recommendations for the chair and membership of the instrument's Goddard System Review Team (GSRT)

Instrument Manager Role/Responsibilities

- Serve as the Goddard point of contact and the Contracting Officer's Representative (COR) for the instrument
- Lead the GSFC engineering, mission assurance and business teams in obtaining detailed cost, schedule and technical insight

Contracting Officer Role/Responsibilities

- The GDC procurement strategy is project-unique and is conducted in accordance with NASA and Center procurement processes to ensure cost, schedule, technical, and risk performance with appropriate insight/oversight and the use of appropriate contractual vehicles including fixed price, cost plus, etc.

- The Contracting Officer (CO), as the Government's agent, is the only person that may execute, modify, or terminate a contract. They are responsible for ensuring that:
  - All requirements of law and regulation are met prior to executing an action
  - Sufficient funds are available for obligation
  - Contractors receive impartial, fair, and equitable treatment
  - Both parties comply with terms of the contract
  - The interests of the United States are safeguarded and taxpayer' money is spent wisely

Investigation Contracting, Schedule

- GDC investigations enter Phase A after selection and are expected to lead the GDC project development timeline
  - Schedules refer to investigation Phases, which is understood to start following successful completion of the instrument's associated gate review

- Contracting process begins at selection and continues past ISRR (~10-12 months after selection)
  - Investigation contracts are split between Phase A (fixed price) and Phases B-F (cost reimbursable)
  - Schedules on following slides, for clarity

Investigation Phase A Timeline

Investigation Event	Target Date
[PI] Reviews sample Phase A contract; comments and questions to AO POC	Before SEL
[SMD] Selects GDC instruments, provides selection letters	SEL
[Project Office] Provide Phase A SOW, CDRL, templates & requests detailed proposal	SEL + ~3d
[Proj. Off.] Provide early funding support to PIs (Pre-Contract Cost letter, etc.)	SEL + ~2w
[PI] Submits Phase A technical proposal & detailed price proposal	SEL + ~3w
[Proj. Off.] Provides Phase B-F SOW, CDRLs, cost templates & requests cost proposal	SEL + 1m
[PI] Host investigation kick-off meeting with SMD, Program Office & Project Office	SEL + 1m
[Proj. Off./PI] Negotiate Investigation Phase A study contract/task	SEL + 2m
[Proj. Off.] Begin Instrument Monthly Reviews & Technical Interchange Meetings	SEL + 2m
[PI] Submit Phase B/C/D/E/F proposal	SEL + 4m
[PI] Submit preliminary Phase A documents to Project Office	ISRR - ~45d
[PI] Hosts Instrument System Requirements Review (ISRR)	SEL + ~8m
[Proj. Off./PI] Negotiate Investigation Phase B-F Cost Plus Contract/Task	ISRR + ~2-4m

Instrument Development Schedule

Event	Definition	Date
Kick Off	---	~1 month after selection (1)
Award	---	~2 months after selection
IMRs	Instrument Monthly Reviews	Monthly
TIM	Technical Interchange Meetings	As needed (at a minimum quarterly)
Peer Reviews	---	As required
ISRR	Instrument System Requirements Review	~8 months after selection (2)
IPDR	Instrument Preliminary Design Review	~9 months after ISRR (2)
ICDR	Instrument Critical Design Review	~9 months after IPDR (2)
ITRR	Instrument Test Readiness Review	As needed, prior to planned test
IPER	Instrument Pre-Environmental Review	Prior to instrument level environmental testing (2)
IPSR	Instrument Pre-Ship Review	Prior to instrument delivery (2)

(1) Selected investigations will receive support to attend the kick-off meeting before a full award is in place. Establishing that support will immediately follow selection.

(2) The instrument review dates for selected investigations will be finalized based upon instrument readiness, per on GSFC's Criteria for Flight and Flight Support Systems Lifecycle Reviews (GSFC-1001A) and discussions with the GDC Project Office during the instrument development process.

GDC PIP, Table 10-1: Notional Instrument Review and Meeting Schedule

Sample Instrument Phase A Contracts

- Sample Instrument Phase A contracts are available in the GDC Program Library
  - https://lws.larc.nasa.gov/gdc/programlibrary.html

- Invoked clauses are standard to Goddard investigation contracts, originate in one of three places:
  - Federal Acquisition Regulations (FAR): https://www.acquisition.gov/browse/index/far
  - NASA FAR Supplement (NFS): http://www.hq.nasa.gov/office/procurement/regs/NFS.pdf
  - Goddard-specific clauses (detailed in contract text)