

Task Order Statement of Work (SOW)

Date: 09/04/2020
Task Name: ISIM Systems Engineering Support
Task No. / Mod: 14 / 8
Task Monitor (TM): Julie M. Van Campen
Contract number: NNG15CR66C

SOW Performance requirements for SEAS:

Mod 8: The mod is to extend the task to April 14, 2021 at the current level of support

Mod 7: Admin change to task, not change to SOW.

Mod 6: The mod is to extend the task to October 14, 2020 and reduces ISIM SE Support by 0.15 FTE

Mod 5: The mod is to extend the task to January 31, 2020

Mod 4: This mod reduces NIRCam support from 1 FTE to 0.75 FTE

Mod 3: This mod now includes NIRCam and additional travel

Mod 2: The mod is to extend the task to September 30, 2018 which now covers Observatory testing and Flight. This is noted in bold text below. Less travel is required in this extension.

Mod 1 to this task makes no changes to this SOW. The mod is to extend the task to September 30, 2017.

1. Brief background/Overview of the task:

The ISIM Fault Management Lead coordinates the activities of all functions that are required to support the design, development and testing of the ISIM Fault Management features. This involves the interaction of monitored hardware, the telemetry stream with the monitored values, the electronics controlling the systems and the software responding to various conditions.

ISIM Systems Engineering provides Instrument and subsystem system engineering and I&T systems support for JWST ISIM including ICDH, NIRSpec Detector Subsystem and Instrument level during the ISIM CV3, OTIS testing, Observatory Testing and Flight.

2. Skill set/Knowledge required from the contractor:

The contractor must have detailed technical knowledge of design and architecture of flight hardware control systems, automated management of on-board systems, failure analysis, ICDH design/operation NIRSpec design, NIRCam Design and ISIM I&T/operations. They must be highly capable of managing a large and complex system with competing priorities. The ability to communicate effectively and lead/coordinate a diverse working group which includes members from multiple organizations is required. Must possess excellent organizational skills and documentation skills. Contractor should be a system engineer with electrical systems experience.

3. listings/Outline of the specific task/Jobs to be performed

- A. Maintain Fault Management documentation, Develop and maintain a fault management verification plan, monitor or perform trade studies on system level functions, processes or interactions. Provide support to ISIM Systems engineering team.
- B. Support I&T and Flight activities as Test Director, Test Conductor, Test Operator or Systems Engineering Support analyzing data for trending and problem investigation purposes, leading trade

studies, developing risk assessments, working on incorporating the tools for OTIS into the Test Planning Tool, writing test reports and closing out ISIM, NIRSspec DS and ICDH paperwork.

- C. Integrate and verify the flight, ground system and data science data systems by analyzing the requirements, generating appropriate test approaches, developing test procedures in collaboration with the ISIM team, executing the procedure in the compliance with the systems limitations and constraints, investigating and resolving all non-conformances and generating all delivery, operations and training material for the system.

4. Deliverables/Milestones, along with due dates

Weekly status reports - Due COB Mondays

Monthly progress reports - Due 1st Tuesday of month

Updates to Fault Management documentation - as required

I&T scripts and procedure – as required

5. ODC - e.g., travel, material, equipment (GFE, etc.)

Travel 1-8 weeks per Fiscal Year to attend project level reviews, and support to OTIS preparation and testing.

No materials or other OCDs needed.

6. Travel:

Los Angeles CA or Houston Tx.

7. Applicable document(s) - e.g. performance spec., standards. etc.

N/A

8. Applicable function and title, sub-section/paragraph from the SEAS SOW that this task fall under:

This work falls into the Function 2 (Implementation Phase Services –

Multidisciplinary Services), Category A (Multi-disciplinary Analyses and Design Services).