

Written Questions handed in at the MRO Pre-Proposal Conference

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**Question C1** – On page 19 of the AO, the Project states that Level 0 (raw data) will be archived by MRO. Presentation at [the] pre-proposal conference stated that packetized telemetry will be archived. Please clarify and define the Level 0 product. Specifically, will it include cleanup of duplicates and transmission errors?

**Answer C1** – To be precise, the MRO Project will archive Level-0 data, defined to be instrument science data, returned by the spacecraft, at full resolution, time ordered, with duplicates and transmission errors removed. These are also sometimes referred to as packetized data records, because they still contain frame headers, etc., produced by the spacecraft telecommunications system in downlinking the science data. The Project will also archive ancillary data files produced to support the science observations. In particular, the flight operations teams will generate—and the MRO Project will archive—a suite of elemental ancillary data sets called SPICE kernels to assist operations planning and analysis of acquired data. SPICE kernels contain spacecraft ephemeris [S], planetary ephemerides and associated planetary constants [P], instrument mounting alignment and field-of-view information [I], orientation of a spacecraft’s primary coordinate systems and associated information [C], and event information, such as instrument sequencing and the experimenter’s notebook comments [E]. JPL’s Navigation and Ancillary Information Facility [NAIF] will provide a toolkit of software modules at the investigator’s institution to generate the data provided by the investigator and to support science data product generation.

**Question C2** – The web-based title page calls for a statement of the total cost to NASA OSS; does this mean through launch plus 30, or through phase E?

**Answer C2** – Cost information requested is for the total cost to NASA OSS extending from Phase A through Phase E. A separate request for the absolute total cost (i.e. including contributions) is also requested.

**Question C3** – The AO gives budgeting guidelines for launch plus 30 days; are there any guidelines for phase E?

**Answer C3** – No.

**Question C4** – How are mass margins being carried, by the project (indicated in the AO)? Does each instrument then carry its own additional mass margin?

**Answer C4** – The MRO PIP states in Section 3.2.1, page 3-2, “... the MRO Project is presently holding 30% mass margin on the science payload elements. Investigators must propose CBE masses with recommended margins consistent with the instrument design maturity. When developing instrument proposals, mass estimates should include all

payload equipment, e.g., electronics, MLI, caging mechanisms, booms, radiation shields, and interconnecting cabling between sensor and payload electronic boxes, as applicable. The orbiter will provide, and hold the mass for, mounting brackets and fasteners, alignment cubes, and engineering temperature sensors.” Thus, each instrument does not need to carry additional mass margin.

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**Question C5** – What is meant by the “2 month Bridge Phase” mentioned at the bottom of Table 3?

**Answer C5** – This refers to the amount of “carry-over” or “carry-forward” dollars from one FY to the next FY, required to continue instrument development when funds may not be available due to year-end accounting activities at NASA.

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**Question C6** – Can you shift E/PO dollars from B, C-D to Phase E?

**Answer C6** – Yes, the guideline of 1-2% of the total investigation cost to be devoted to E/PO provides funds that can be spent with a different profile than the year-by-year (or phase-by-phase) cost of the investigation. However, it is expected that there will be support for E/PO activities in every phase of the investigation.

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**Question C7** – Is it possible that the Context line array camera have a minus blue filter?

**Answer C7** – The context imager right now is panchromatic; that is, its bandpass is not specified in detail. The SDT recommendation was meant to indicate that multiple bandpasses were not required. Investigations proposed through this AO should indicate what specifications are required—and their priority—for context imaging to support their investigation. The Project will refine the specifications for the facility Context Imager, as resources permit.

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**Question C8** – Will it be possible to trigger the context image frame by a command from our instruments sequence?

**Answer C8** – No. The Project has assumed that the context imager is controlled independently of, but coordinated with, other instruments. The Context Imager will be sequenced (as an independent instrument) as part of the targeting coordination activity.

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**Question C9** – Can the review copies of the proposal be in three-ring binders, or spiral bound? The instructions indicate stapled, but for a document this size, staples might be awkward for the reviewers.

**Answer C9** – See also the answer to Question 27. Review copies of proposals may be submitted using spiral/plastic comb type binding, but NOT three ring type binders.

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**Question C10** – In Appendix B, do they want templates (B-D, and E) as stated under 2.7 Appendices, or 3 templates (A-B, C-D, and E) as stated on Tables 3 and 4, or something else?

**Answer C10** – For the cost information requested in Appendix B, section 2.7, three templates (A-B, C-D, and E) are required as indicated in Tables 3 and 4.

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**Question C11** – On page A-14, they mention “Support function.” What does this mean?

**Answer C11** – Costs need to be presented by both major categories (i.e. Direct Labor, Overhead, Materials, Subcontracts, etc.) as indicated by items a-k in Appendix B, pages A-13 to A-15. In addition, Costs also need to be presented by “support function” as outlined in Tables 3 and 4 of Section 2.7 of Appendix B. These “support functions” are defined from the proposers Work Breakdown Structure (see Section 2.5 of Appendix B).

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**Question C12** – I'm interested in knowing if you plan to have a list on your web page of organizations that are interested in teaming. I know some other NASA proposals have provided that on the AO web pages to allow people to list their organizations, if they're interested in teaming.

**Answer C12** – We do not intend to list the teams that are proposing. However, a list of the individuals that attended this Pre-Proposal Conference is now available via the Mars Reconnaissance Orbiter (MRO) Acquisition web page, <http://centauri.larc.nasa.gov/mro/mroppconf.html>