Cosmic Origins UV/Visible Astrophysics Mission Concepts Study

Science Objectives and Requirements for the Next NASA UV/Visible Astrophysics Mission Concepts

Frequently Asked Questions (FAQ) List

1. **Question**: *Can non-Cosmic Origins science investigations (for example, exoplanet science) be submitted?*
   Answer: Yes, all types of astrophysics science goals are encouraged; however, it is anticipated that COR science will be most strongly represented.

2. **Question**: *Can non-US parties submit responses to the RFI?*
   Answer: Yes, all the international and domestic scientific community is invited to participate by sending responses to this RFI. However, people should keep in mind that there is no expectation of privacy regarding the scientific ideas or proposals contained in the responses. NASA expects to conduct a workshop on September 18, 2012 in which all the merits of these ideas might be presented and discussed openly.

3. **Question**: *Are members of the COPAG, ApS, or other NASA-related science committees eligible to participate in submissions?*
   Answer: Since there is no funding or other substantive selection directly related to the outcome of this RFI, no conflict-of-interest exists involving the members of science committees and their potential financial concerns. All interested parties are therefore welcome to submit, independently or collaboratively, responses to the RFI regardless of any affiliations or memberships.

4. **Question**: *Why does this RFI not include the IR and Far-IR in its scope?*
   Answer: This RFI is intended to solicit science investigations leading to a future UV/Visible mission concept and the development of the requisite technologies, in direct response to language in the 'New Worlds, New Horizons' Decadal Survey.

5. **Question**: *What are the lower and upper limits of the pass band you have in mind? Could we extend the discussion beyond these bounds [e.g., to the near IR], even if the bulk of the analysis lies outside them?*
   Answer: The RFI explicitly refers to scientific investigations that can be addressed within near-UV and visible wavelengths. We have not defined the actual passband limits in order not to overconstrain the science investigations solicited. It is conceivable that extending to the near IR wavelengths could add substantial understanding to the scientific objectives, provided that this is in addition to rather

than in lieu of the wavelengths included in this RFI. The full set of observables at different wavelengths that gather data to address, advance, or solve these scientific questions are important but they should not be the drivers at this stage.

6. **Question**: *If the mission that will be derived from these scientific objectives is going to be the replacement of Hubble, why are you excluding the near-IR part of the spectrum?*
   Answer: The current UV/Visible RFI is soliciting information regarding science objectives and goals and is *not* soliciting mission or mission concepts. However, the work accomplished through this solicitation could be used to formulate several missions proposed by the community, including missions similar to the wavelength range of Hubble capabilities.

7. **Question**: *If NASA is looking for another UV mission, why NASA is not being part of the World Space Observatory (WSO) mission?*
   Answer: The current UV/Visible RFI is soliciting only science investigations; mission concepts or mission architectures that will address some or all of the proposed scientific objectives are not being solicited. NASA is aware of and continues to follow with interest the development of UV missions, including the WSO, and the results of this RFI process will provide compelling science objectives against which other mission capabilities can be evaluated.

8. **Question**: *With a 2010 Decadal Survey recommendation that was specifically targeted towards a far-UV telescope (reaching at least 1200Å and optimally 900Å), why does the RFI aim at near-UV and visible wavebands?*
   Answer: The RFI does not exclude scientific objectives that require observations around Lyman alpha. The term "near-UV" needs to be interpreted loosely and it focuses attention to the FUV (longward of 900Å) and NUV (longward of 2000Å) bands, however, it certainly does not include EUV wavelengths (shortward of 900Å)

9. **Question**: *How does this RFI differ from the substantial body of work submitted to the Decadal Survey?*
   Answer: The submissions to the Decadal Survey are entirely relevant and we expect to see some commonality between the Decadal Survey white papers and the responses to this RFI. However, NASA is not soliciting any mission concepts, only science investigations. Additionally, unlike the Decadal Survey white papers, this RFI seeks to reveal detailed requirements for the science investigations; responses which do not specify properties of the desired observations (which might include but by no means are limited to: sensitivity, angular resolution, wavelength range,

spectral resolution, etc.) are less readily propagated forward into drivers for technology maturation and mission concepts that will ultimately realize these goals.

10. **Question**: *What type of response is NASA hoping to get with this RFI?*
    Answer: We hope that respondents will submit a large number of focused science investigations, each representing the interests of one individual or a small group. The responses should be brief, specific, and clear in purpose. Ideally, they will represent long-term vision and innovative science.