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NASA's Living with a Star Initiative

Andrew Lawler's News Focus article about NASA's Living With a Star (LWS) program ("Controversy flares up over NASA solar project," 28 July, p. 528) and its associated political turbulence is, on the whole, a balanced account of a complex and evolving situation. The importance of LWS science and the general enthusiasm of the solar-terrestrial community for this timely initiative are accurately conveyed. However, Lawler incorrectly quotes from my letter to the Goddard Space Flight Center ombudsman (1). What I wrote was, "If NASA expertise is bypassed to the extent stated in the CBD announcement [that is, the *Commerce Business Daily* announcement of the impending sole-source contract], the likelihood for success for any mission will be greatly compromised." I did not write, "'the likelihood of success...will be greatly compromised' if APL is given control over the initiative." I never expressed any doubts as to the competence of The Johns Hopkins Applied Physics Laboratory (APL), which has amply demonstrated its ability to build and manage successful space missions [for example, Advanced Composition Explorer (ACE) and Near Earth Asteroid Rendezvous (NEAR)] and would be a strong candidate in any competition for LWS missions.

Despite the side issues raised in the article, the solar physics community is solidly behind the LWS concept and is working hard to make this initiative a success. The officers and committee of the Solar Physics Division committee of the American Astronomical Society have recommended the following: (i) the processes of open competition, peer review, and community input normally used to plan, implement, and perform research with NASA missions should not be circumvented by a sole-source contract with any single institution (whether industry, government, or university); (ii) the collective expertise in managing sun-Earth missions that has been built up at Goddard Space Flight Center should not be abandoned; and (iii) for maximum accountability to the scientific community and the public, NASA should retain primary scientific and financial control over its missions.

Judith T. Karpen*

Naval Research Laboratory, Washington, DC 20375-5352, USA. E-mail: judy.karpen@nrl.navy.mil

*Chair of the Solar Physics Division, American Astronomical Society

References and Notes

1. The full text of my letter is available at <http://www.gong.noao.edu/SolarNews/20000315.html>

Lawler's article about NASA's proposed LWS initiative and related plan for a long-term partnership with APL contains several errors and some statements that might be easily misinterpreted. For example, the statement that the LWS initiative "has become mired in controversy that includes...questions about the propriety of a lucrative contract to manage it" is incorrect. NASA has never considered nor has APL requested the assignment of managerial control of the LWS program to APL. Responsibility for program authority, management, and direction has always resided and remains with NASA Headquarters. For program implementation, responsibility resides with NASA's Goddard Space Flight Center (GSFC). NASA Headquarters retains full responsibility, with no changes in any procedures, for selecting science investigations, instrumentation, science team participation, and mission data analysis. Science and flight instrumentation activities are based on peer-reviewed open competitions under the direct control of NASA Headquarters. Five months ago, NASA Headquarters highlighted these key roles and responsibilities in notices to the Sun Earth Connection (SEC) community (1, 2). (SEC is the NASA program office responsible for the LWS initiative.)

Concerning the sole-source contract and the plan for a new GSFC-APL partnership, the objective is to formalize the long-standing ties between the two institutions and to optimize an implementation strategy for LWS, based on two criteria: (i) low cost and (ii) mission success over a 12-year period of performance. NASA's *Commerce Business Daily* notice of intent to award a sole-source contract to APL states "APL...has heritage and infrastructure capability that is crucial to planning, development, and understanding of the SEC initiative" (3). The goal is to pool the resources and infrastructures of GSFC and APL for the betterment of the LWS initiative (3, 4). As an adjunct to the new partnership, in-house work at APL resulting from this contract would provide limited support to NASA of some "NASA-related essential capabilities" (these were listed in the *Commerce Business Daily* notice). The size of the new APL contract would amount to less than half of all LWS resources, and APL would continue its close partnerships with industry, which historically have included subcontracting 30 to 50% of spacecraft development activities and the competitive procurement of spacecraft (as was done recently for NASA's "FUSE" mission). All LWS spacecraft make/buy decisions would be subject to approval by

NASA Headquarters (1, 2, 4).

We also take exception to Lawler's use of a quote by Judith Karpen, chair of the American Astronomical Society's solar physics division, that "the likelihood for success for any mission will be greatly compromised" to which Lawler added "if APL is given control over the initiative," which suggests that executing an APL contract would somehow harm or impair the LWS initiative. To the contrary, APL has an exceptional record of performance on space missions. Two examples are the NEAR Shoemaker mission, which is the first Discovery mission and the first spacecraft to orbit a small body, and the ACE, which is providing the first continuous, real-time space weather data. APL developed and launched NEAR Shoemaker at ~30% below NASA's cost ceiling and ACE at ~10% below the original cost estimate.

To conclude, NASA understands the formidable challenges presented by LWS and the need to enhance GSFC's resources, infrastructure, and implementation options to ensure that the LWS initiative is successful. It is imperative that the "case for LWS" be presented clearly and accurately so that the public, the space science and technology communities, and others will understand the purpose and benefits of the proposed GSFC-APL partnership.

Stamatios M. Krimigis*

John F. Appleby†

Space Department, The Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099, USA. E-mail: tom.krimigis@jhuapl.edu and john.appleby@jhuapl.edu

*Head, Space Department

†Program Development Manager, Space Department

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2. G. L. Withbroe, *SolarNews* (online) **2000**, No. 6 (16 Mar. 2000). Available at <http://helios.tuc.noao.edu:80/SolarNews/>
3. "Services Under the Sun Earth Connection Theme," *Commerce Business Daily Notice*, RFP5-00000-013 (16 Feb. 2000).
4. W. F. Townsend, letter to J. T. Karpen, Chair of the American Astronomical Society's Solar Physics Division (28 Mar. 2000).

Response

Krimigis and Appleby's discussion of NASA's proposed contract is welcome. However, it should be noted that Krimigis agreed to an interview only after stipulating that he would not discuss the details of the proposed APL contract. As to Karpen's concern, the story addressed APL's potential role in the new program, not its capabilities.

Andrew Lawler