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Dear Lika,

On 1-2 May 2006, the LWS MOWG met at the Residence Inn Capitol Hotel in Washington DC. This cover letter and attached findings summarize the discussions of the MOWG and sets the stage for what we anticipate will be a productive and useful interaction over the lifetime of our group.

Because many of the MOWG were newly appointed, we had asked for and received useful reports on the LWS program structure (Chris St. Cyr) and on the current relationships of MOWGs and NASA advisory committees (Barbara Giles). In addition, we heard excellent briefings on the status of LWS-specific programs: Dana Brewer on the SET program; Dean Pesnell on the SDO mission; Adam Szabo on the anticipated Sentinels Science Definition Team report; Haydee Maldonado on Solar Probe; and Dave Sibeck and Tamas Gombosi on TR&T. We also appreciated information about the new E/PO strategy for RBM from Eric Christian.

Our May 2006 MOWG meeting was arranged in a relatively short time to occur before meetings of the NASA Advisory Council Science Subcommittees the same week in May. One initial topic of concern to the LWS MOWG was the status of the NASA advisory committees, and specifically the representation and lack thereof of some MOWG chairs on the Heliophysics Subcommittee (HPS). We felt that the relationship between the MOWGs and higher committees, as implemented in the past, was a reasonable means of community input to NASA HQ, and we questioned the means by which our MOWG input could be used in the current structure. We heard an informative summary by Barbara Giles and later from Dick Fisher on some of the recent history of the formation of the current HPS. As a consequence, we recognized that the current status is in “early days” and is not entirely under the control of the managers in the Earth-Sun System Division. We look forward to working with you and others in the Division, to the extent possible, in maximizing the efficiency of our MOWG and ways to feed its input to the HPS.

A persistent background to our discussions was the FY07 budget and its impact on space science in general, and LWS and LWS-related science in particular. A hallmark of LWS is its ability to generate, primarily through the TR&T program, focused and short-term results that use non-LWS missions (indeed, the first LWS mission, SDO, has yet to launch). Hence, any impact on general research and technology must also be considered for LWS. The LWS MOWG found that the approach of slipping future

LWS missions was the best compromise strategy for the short-term, for reasons such as the immediate output of LWS and the streams of data from non-LWS missions anticipated to start in the next year or so, as detailed in our first finding below. While stretch-outs of missions incur a long-term cost, the MOWG saw this approach as a reasonable compromise considering the current budget environment.

We heard from Haydee Maldonado on the current risk-reduction activities for the Solar Probe mission. It is clear from the long history of planning activities for a Solar Probe that the technical risks have proven impressive and formidable, requiring systematic approaches to reducing the risks. We were briefed on the next technology steps, including construction of a prototype heat shield, and how these steps were planned but not funded. The LWS MOWG found that the ongoing risk-reduction was important and supports NASA in its effort to continue the Solar Probe technology activities, as mentioned in our second finding.

The LWS MOWG discussed several upcoming workshops and their relevance to the LWS program. The upcoming Coupling, Energetics and Dynamics of Atmospheric Regions (CEDAR) workshop in June 2006 will in part address the latest assessment of ionosphere-thermosphere research using measurements from space. The topic is relevant as the community continues to discuss the timing of the LWS IT probes mission, which in the FY07 budget is beyond the planning horizon. The LWS MOWG plans to revisit this timing issue in its next meeting and anticipates useful input from the CEDAR workshop.

The upcoming LWS-related workshop on SDO also generated discussion over name recognition. The LWS MOWG felt that clear association of such meetings with the LWS program multiplied the meeting's impact on the community and "outside" users.

The LWS MOWG recognized that the first week of May 2006 was extremely busy with many tight deadlines placed on LWS personnel. I extend my appreciation and thanks to LWS program and other NASA officials for providing the information we requested on relatively short notice.

Finally, when we began our May meeting with a review of past MOWG findings, we were encouraged to see that many of those past findings played a role in shaping the program. I therefore look forward to a close and evolving collaboration of this MOWG with HPS, the Geospace and Solar & Heliospheric MOWGs, and NASA HQ.

Sincerely,

Joseph E. Mazur
Chair, LWS MOWG

LWS MOWG
Finding
on the LWS Budget

The proposed FY07 budget and multi-year run out contain a ~5% cut in the Living With a Star Program. The LWS MOWG recognizes that this cut occurs in the context of severe budgetary constraints agency wide. In adjusting the LWS program plan to account for this decrease in resources, the HQ program managers have determined that the shortfall will be accommodated by slipping future missions, while maintaining the LWS Science program of research grants and TR&T. Although the slippage of missions will delay the eventual future societal and agency benefits from the LWS program, the MOWG believes that the strategy of protecting the grants program is the best compromise, and we commend the HQ management for taking this route. The reasons for this include the following:

- Cutting the grants program would immediately reduce the LWS scientific workforce, and would immediately diminish returns from the program.
- With the launch of SDO and related (non LWS) missions such as Solar-B, STEREO, TWINS, THEMIS and CINDI, the stream of new data and observations coming in the next few years will be unprecedented, and will require the full scientific workforce to properly analyze the data; decreasing this workforce would be precisely the wrong move at this time
- The LWS science program, in addition to helping with the interpretation of new data, is addressing theoretical problems of central importance to realizing the goals of LWS to develop the understanding and eventual prediction/mitigation of Space Weather events affecting systems on Earth and in space.

LWS MOWG
Finding
on
Solar Probe Mission Risk Reduction

Solar Probe will be a historic mission, flying into one of the last unexplored regions of the solar system, the Sun's atmosphere or corona, for the first time. In 2005, the Solar Probe Science and Technology Definition Team (STDT), together with APL, GSFC, and JPL, completed a rigorous scientific and technical engineering study (STDT Report NASA/TM-2005-212786) for a new Solar Probe mission architecture, fully instrumented with in-situ and appropriate remote sensing observations. This combined STDT also performed a broad range of technical trades and risk mitigation activities to reduce overall mission risk, as well as identify the lowest cost approach to carrying out this exciting mission.

The LWS MOWG recognizes and is encouraged by the significant progress that has been made by the STDT, and recommends and supports NASA in its effort to secure the resources (from NASA sources such as SMD ESTO) necessary to continue these technical and risk mitigation activities that are required to undertake this exciting, breakthrough mission.