

2016-2017 Annual Report

Laboratory Astrophysics Division (LAD)

Chair: Farid Salama – NASA Ames Research Center

Vice Chair: Randall Smith – Smithsonian Astrophysical Observatory

Past Chair: Steven R. Federman – University of Toledo

Treasurer: Roberto Mancini – University of Nevada

Secretary: Daniel Wolf Savin – Columbia University

Member at Large (Dust): Crystal Brogan – NRAO

Member at Large (Nuclei): Ed Brown – Michigan State University

Member at Large (Molecules): Jan Cami - University Western Ontario

Member at Large (Planetary Science): Stefanie Milam – NASA GSFC

Member at Large (Ices): Karin Oberg – Harvard University

Member at Large (Plasma): John Raymond – Smithsonian Astrophysical Observatory

Member at Large (Particles): Oswald Siegmund - UC Berkeley

The Laboratory Astrophysics Division (LAD) came into being at the Anchorage AAS meeting in June 2012. The fourth election resulted in new committee members in the areas of dust, planetary and plasma physics; the winners were announced at the LAD business meeting at the San Diego AAS meeting in June 2016. LAD currently has over 170 members, with the majority being full members (123). The LAD listserv has just over 500 subscribers. As of 30 April 2017, \$4,949 in contributions toward the Laboratory Astrophysics Prizes sponsored by LAD and \$15,367 in additional contributions has been received.

Daniel Wolf Savin maintains the distribution list for LAD, and Farid Salama updates the Web page on the AAS server. They are supported in these tasks by the IT office. Otherwise, the various activities for the most part take place through email consultation.

A number of highlights have occurred over the past year.

The officers and committee members have publicized LAD and Laboratory Astrophysics at a number of national and international meetings to encourage the community of users and providers to join LAD (see Chronology below).

A solicitation for input to help advise the JWST project on supporting laboratory initiatives for the analysis and interpretation of JWST data was initiated by Stefanie Milam, LAD Committee Member and JWST Deputy Project Scientist for Planetary Science. This initiative has led to consideration of a small level of support for Guest Observers to include laboratory measurements for a given approved program. This has also been used to draw awareness to NASA on the significance of laboratory efforts to support JWST.

The winner of the 2015 inaugural Laboratory Astrophysics Prize, Dr. Louis Allamandola of NASA Ames Research Center, gave an invited talk at the 2016 Annual LAD meeting in San Diego.

The 2016 Laboratory Astrophysics Prize went to Dr. Peter Beiersdorfer of the Lawrence Livermore National Laboratory and the Inaugural Early Career Award went to Dr. François Lique from University Le Havre (France). They both gave invited talks at the 2016 Annual LAD meeting in San Diego.

The 2017 Laboratory Astrophysics Prize went to Dr. Jim Lawler of the University of Wisconsin, the 2017 Early Career Award went to Dr. Carolyn Kuranz from University of Michigan and the inaugural Dissertation Prize went to Dr. Kyle Walker from the University of Georgia (currently at the University Le Havre, France). They will give invited talks at the 2017 AAS/LAD meeting in Austin.

Nominations are being sought for the next prizes, the Laboratory Astrophysics Prize, the Early Career Award and the Dissertation Prize.

A series of five sessions are planned for the 2017 LAD Annual Meeting: “Bridging Laboratory and Astrophysics” organized by the LAD Committee. The lead organizer for the 2017 meeting is Randall Smith. This year, the sessions will cover the full range of LAD topics with special focus on the interplay between astrophysics with theoretical and experimental studies into the underlying atomic processes that drive our Universe and will include sessions on atoms, molecules, dust and ice, plasmas, planetary science, and nuclear and particle physics. More information can be found at <https://lad.aas.org/meetings/2017>

We have continued to seek connections with other Divisions of the AAS.

Laboratory astrophysics presentations were included in the 2016 DPS meeting, led by the efforts of Nancy Chanover, Murthy Gudipati and Stefanie Milam. The same format including laboratory astrophysics presentations embedded in the DPS topical sessions is planned for the DPS 2017 meeting.

A special session devoted to laboratory astrophysics will be held at the HEAD meeting in August 2017, in Sun Valley, Idaho. The session, entitled "Diagnosing Astrophysics of Collisional Plasmas – A Joint HEAD/LAD Session" is organized by Randall Smith will include three 30-min long presentations.

A LAD recruitment campaign was initiated this year again with the active support of the Memberships Office to help grow the membership of the Division. The LAD recruitment campaign has targeted colleagues with research activities aligned with LAD activities who are not members of either the AAS or LAD or who are AAS members and are not currently affiliated with LAD. For the coming year, the officers and committee members will continue to encourage participation by colleagues, both users and providers of data for astronomy and astrophysics.

A fund-raising campaign was started by Roberto Mancini (LAD treasurer) with the help of the Office of Exhibits and Development. A list of potential sponsors from laboratory instrument companies has been established. Plans for establishing a general endowment to fund the Division's prizes have also been discussed.

LAD Events' Chronology:

- June 2016: LAD 2016 Annual Meeting held during AAS 228th Meeting in San Diego, CA.
- June 2016: LAD 2016 Business Meeting take place during AAS 228th Meeting in San Diego, CA.
- October 2016: Farid Salama and Roberto Mancini attended the AAS Leadership Meeting.
- October 2016: Laboratory astrophysics presentations embedded in DPS/ESPC meeting sessions in Pasadena, CA. Outreach for Planetary Science Community (DPS) for membership and awareness of LAD.
- October 2016: Stefanie Milam attended the Ices Workshop in Preparation for JWST in Noordwijk, The Netherlands and discussed the role of Laboratory astrophysics in support of JWST.
- October 2016: Jan Cami and Farid Salama attended the PAH Workshop in Preparation for JWST in Noordwijk, The Netherlands and discussed the role of Laboratory astrophysics in support of JWST.
- November 2016: Farid Salama attended the European Conference on Laboratory Astrophysics ECLA 2016 in Madrid, Spain and discussed the role of Laboratory astrophysics.
- December 2016: Steve Federman attended the Hydride Toolbox Conference in Paris, France and discussed the role of Laboratory astrophysics.
- January 2017: Announcement of the 2017 Laboratory Astrophysics Prize to Jim Lawler. Release of associated press release with the active support of the Press and Education Office
- January 2017: Announcement of the 2017 Early Career Award to Carolyn Kuranz. Release of associated press release with the active support of the Press and Education Office
- January 2017: Announcement of the 2017 Inaugural Dissertation Prize to Kyle Walker. Release of associated press release with the active support of the Press and Education Office
- March 2017: Farid Salama appointed the Nominating Committee for 2017. The Nominating Committee consisted of Glenn Wahlgren (STScI, Chair), Ed Brown (MSU) and Perry Gerakines (NASA GSFC).
- March 2017: Jan Cami and Farid Salama attended the IAU Astrochemistry Symposium in Puerto Varas, Chili, and discussed the role of Laboratory astrophysics.
- May 2017: Steve Federman is stepping down after serving 9 years as the Laboratory Astrophysics Science Editor for the AAS journals and is succeeded by Daniel Wolf Savin.
- May 2017: Daniel Wolf Savin sent out a call for nominations to fill the vice-chair position and two Member-at-Large positions on the Committee.
- June 2017: LAD 2017 Annual Meeting and the LAD 2017 Business Meeting take place during AAS 230th Meeting in Austin, TX.