

History of the American Geophysical Union Atmospheric and Space Electricity Section

Timothy Lang

Atmospheric and Space Electricity (ASE) has been a part of the American Geophysical Union (AGU) since its initial founding and organization in 1919. John Fleming, who invented the vacuum tube, was the first Secretary of the AGU Terrestrial Magnetism and Atmospheric Electricity Section, and today has an AGU medal named after him. ASE played an important role in the post-World War II era of AGU, as a locus for scientific discussions regarding major ASE-related events, such as the Thunderstorm Project (1946–1949) and the 1969 Apollo 12 lightning incident. By the 1970s and 1980s, the ASE community was represented by the Committee on ASE (CASE) within the Atmospheric Sciences Section. CASE was able to bridge the gap between the fields of aeronomy and atmospheric science by sponsoring its own sessions and nominating AGU Fellow awardees. ASE business meetings at the AGU Fall and Spring Meetings lasted for hours, with anyone from the community presenting scientific ideas, field campaigns, and more - practically turning the business meeting into an ad hoc AGU session!

The late 1980s began an explosion of new interdisciplinary science between atmospheric science and aeronomy. This was largely driven by the first scientific documentation of transient luminous events (TLEs), starting in 1989, followed by the discovery of gamma-ray radiation from thunderstorms in the mid-1990s. CASE was uniquely positioned to lead joint sessions exploring these exciting new areas, in addition to the traditional areas of thunderstorm electrification and lightning physics. CASE also collaborated closely with the International Committee on Atmospheric Electricity (ICAE), including helping to establish a joint newsletter, pre-email. In addition, CASE led an AGU position statement on the standardization of lightning protection systems.

With the growth of scientific areas and meeting sessions within CASE, in 2002 AGU recognized the emergence of this community, and thus converted ASE from a committee to a Focus Group. The late AGU Executive Director Fred Spilhaus, Jr. directed this effort. Focus Groups helped bridge the science gaps between individual AGU Sections, which in ASE's case were between Atmospheric Sciences and Space Physics and Aeronomy. ASE continued to blossom as a Focus Group, with its leadership working to found the Benjamin Franklin Lecture (a biannual lecture by a distinguished member of ASE) in 2004, as well as catalyzing the 2009 AGU Chapman Conference on the Effects of Thunderstorms and Lightning in the Upper Atmosphere. Another key success was The Editor's Choice - Atmospheric Electricity virtual journal, which collected ASE-themed articles within a convenient subscription package during 2001-2012. ASE Focus Group leadership also served on AGU Council.

As a Committee and then a Focus Group, ASE's leadership was appointed via recruitment of volunteers. However, AGU initiated leadership elections starting in 2012, as part of a more general governance overhaul. Then in 2017, AGU designated ASE as a Section. The ASE Early Career Award was founded in 2018 in order to better recognize the next generation of ASE scientists.

These days, due to the commitment of its leadership and volunteers, ASE continues to be represented at AGU Council as well as on several other AGU committees, and its members consistently achieve Fellow as well as other honors. Abstract submissions to ASE sessions fluctuate from year to year, but have grown overall as the decades have passed. Years of effort have even successfully tamed the once-unwieldy ASE business meeting, enabling more socializing and saving the science presentations for actual Fall Meeting sessions.

Despite our small size, we see a bright future for ASE as we enter our second century!

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This is a living document, If you have additional historical info about ASE you would like to share, please contact Timothy Lang (timothy.j.lang@nasa.gov).