

## ZP11/Jim Smoot/Weekly Notes

8/19/14

**RTMM SUPPORT FOR UNMANNED ARIAL VEHICLE (UAV) FLIGHTS AT NASA KENNEDY SPACE CENTER** (mail to: [rich.blakeslee@nasa.gov](mailto:rich.blakeslee@nasa.gov) / 256-961-7962): The Real Time Mission Monitor (RTMM), an interactive visualization application developed by Marshall Space Flight Center (MSFC) and University of Alabama in Huntsville to provide situational awareness and strategic decision making during airborne field experiments, is currently being employed to support a technology demonstration using a small UAV to make electric field observations in the vicinity of thunderstorms. The flights are being conducted at the Kennedy Space Center (KSC) in collaboration with and sponsorship from a Defense Advanced Research Projects Agency (DARPA) lightning project from 8/11-21/14. Real time lightning data sets from KSC, including data from the local Lightning Detection and Ranging II (LDAR II) and Lightning Mapping Array (LMA) networks are being ingested and displayed in RTMM to especially enhance the situational awareness capabilities in support of this mission.

**BOOK CHAPTER PUBLISHED (email to: [william.koshak@nasa.gov](mailto:william.koshak@nasa.gov) 256-961-7963):**  
Koshak (ZP11) authored Chapter 19: *Global Lightning Nitrogen Oxides Production* that appears in the just published 2<sup>nd</sup> Edition of the book: *The Lightning Flash*, editor Vernon Cooray, ISBN: 978-1-84919-691-8, pg. 928. The authored chapter gives a historical account of various methodologies for estimating lightning nitrogen oxides (LNOx), as well as a discussion of state-of-the-art estimation techniques, such as provided by the NASA/MSFC Lightning Nitrogen Oxides Model (LNOM). The importance of global LNOx in the broader context of global climate and regional air quality is emphasized.