Review report on the proposal (ID 3020705) entitled “Beyond the “Big-Leaf” model at NOAA: use of novel satellite data and in-canopy processes to improve U.S. air quality predictions” submitted by Dr. Patrick C. Campbell etc. from GMU/ARL.

General comments.

This is a three-year project. In this proposal, the applicants propose to improve the NAQFC over-prediction of O3 by incorporating an in-canopy parameterization or a multi-layer canopy (MLC) into the RRFS-CMAQ inline system. This proposal is highly related to the NOAA program priorities on “NOAA will support new air quality observing and forecasting applications, including better statistical or dynamic forecast model and techniques”. The proposal approach is technically sound, and appropriate. All the applicants possess the necessary education, experience, and close collaboration to ensure the research to transition. The budget is reasonable, realistic and efficient to ensure operation ready level reachable. The proposal provides practicable outreach plan and considers the diversity and inclusion of minority of hiring a funded post-doc.

1. Importance/Relevance and Applicability of Proposed Project to Program Goals (27/30)
2. Technical/Scientific Merit (32/35)
3. Overall qualification of applicants (14/15)
4. Project costs (10/10)
5. Outreach and education (4/5)
6. Diversity and inclusion (5/5)