

# Duncan (614) Selected for NASA's Health-Air Quality Applied Sciences Team (H-AQAST)

## **“A Satellite-Based Global Health Air Quality Index (HAQI): Development and Assessment”**

*PI:* Bryan N. Duncan (614)

*Co-Is:* Lok N. Lamsal (614), Amir Sapkota (UMD), Anne M. Thompson (610), Kenneth E. Pickering (614)

*Collaborators:* Pawan Gupta (614; ARSET), Ana I. Prados (614; ARSET), Lesley E. Ott (610.1; GMAO), Aaron van Donkelaar (Dalhousie U.), Randall V. Martin (Dalhousie U.), Robert S. Chen (Columbia U.)

**Objective:** To develop a multi-pollutant health air quality index (HAQI) using inferred “nose-level” NO<sub>2</sub> and PM<sub>2.5</sub> from satellite data and ozone from the NASA GEOS-5 model.

**End-Users:** The team will work with the following end-users (and possibly others) to apply the HAQI to their specific applications:

- Kevin Cromar (NYU): benefit from spatial coverage of satellite data for his new health-based weighting factors for individual pollutants in his multi-pollutant HAQI
- American Public Health Association: want to explore possibility of satellite-based HAQI for their applications
- Global Burden of Disease Project: largest study of its kind – need global coverage of air pollutants
- American Thoracic Society: want to explore possibility of satellite-based HAQI for their applications
- UNICEF: will use the HAQI in their report on “The Impact of Air Quality on Children”

