NEW YORK CITY COLLEGE OF TECHNOLOGY

**ELECTRICAL AND TELECOMMUNICATIONS ENGINEERING TECHNOLOGY DEPARTMENT**

**EET 3132: Remote Sensor Article Summary **

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**Summary page on article on Atmospheric Aerosols**

 **With reference from article Remote Sensing Instruments Used for Measurement and Model Validation of Optical Parameters of Atmospheric Aerosols**

My reflection on the article is remote sensing has become an important tool to study atmospheric aerosols. Ever since the capability of passive radiometers to precisely measure the spectral aerosol optical depth was realized, the topic gained attention worldwide. The geographical coverage of the ground-based networks has expanded considerably in the last two decades. Active sensor (e.g. lidar) was developed to overcome the limitations of the passive sensors to measure the aerosol vertical distribution in clear as well as cloudy condition.

 The advent of new generation satellite sensors made it possible to provide the required global coverage. Growing demand of aerosol products from different platforms for numerous applications (estimation of radiative forcing, air quality, aerosol-cloud interaction to name a few) has led to evolution of new techniques and algorithms. This has resulted in retrieval of new products like aerosol radiative and microphysical properties in addition to the conventional product ‘aerosol optical depth’. In this chapter, a comprehensive review of the existing remote sensing techniques (both ground-based and satellite-based) to study aerosol characteristics is reported.

Finally, the advantages and limitations of various techniques in terms of the applicability of available aerosol products are discussed. The key issues that need future attention are also identified with in the above article prepared by Daniela Viviana Vladutescu, Member, IEEE, Yonghua Wu, Barry M. Gross, Fred Moshary, Member, IEEE, Samir A. Ahmed, Member, IEEE, Reginald A. Blake, and Mohammad Razani, Member, IEEE.