CHONGXING FAN

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EDUCATION

University of Michigan, Ann Arbor *September 2019 - Present*
Ph.D. Precandidate in Climate and Space Sciences and Engineering
GPA: 4.00/4.00 *(as of Summer 2020)*

NanJing University *September 2015 - July 2019*
Bachelor of Science in Atmospheric Sciences
GPA: 3.95/4.00

HONORS AND AWARDS

MICDE Fellowship (UMich) *2019*
Honorable Mention in the Mathematical Contest in Modeling (MCM, COMAP) *2018*
Chow Tai Fook Scholarship (Top 1%, NJU) *2018*
China's National Scholarship (Top 1%, NJU) *2017*
Scholarship of Mr. Liao (Top 1%, NJU) *2016*

PUBLICATIONS

1. **Fan, C.**, & Huang, X. (2020). Satellite-observed changes of surface spectral reflectances due to solar farming and the implication for radiation budget. *Environmental Research Letters*. https://doi.org/10.1088/1748-9326/abbdea
2. **Fan, C.**, Wang, M., Rosenfeld, D., Zhu, Y., Liu, J., & Chen, B. (2020). Strong Precipitation Suppression by Aerosols in Marine Low Clouds. *Geophysical Research Letters*, 47(7), e2019GL086207. https://doi.org/10.1029/2019GL086207.

RESEARCH PROJECTS

Impact of Solar Farming on Local Surface Radiation Budget and Climate from Long-Term NASA Satellite Observations *September 2019 - Present*

- Advisor: Prof. Xianglei Huang (University of Michigan, U.S.)
- This study aims to quantify the climate effects of solar farming using available satellite observations and regional climate models.

Satellite Observation of Aerosol-Precipitation Relationship *September 2018 - July 2019*

- *Dissertation for Bachelor's Degree*
- Advisor: Prof. Minghuai Wang (Nanjing University, China)
- Co-Advisors: Prof. Daniel Rosenfeld, Dr. Yannian Zhu

- This study showed that detectable rain initiates when the drop effective radius at the cloud top exceeds 14 μm. It also showed that precipitation is strongly suppressed with increasing cloud drop concentration (N_d). This study emphasized the importance of binning CGT and using N_d instead of AOD as the proxy of aerosols.

Evaluation of Quantitative Precipitation Estimation from Model, Satellite and Radar *July 2018 - October 2018*

- *Globalink Research Internship*
- Advisor: Prof. Yongsheng Chen (York University, Canada)
- This study showed that compared with the METAR data, all the estimates had a wet bias the total rainfall rate and light rain, GOES satellite estimation had the largest bias, and for medium and heavy rain, all QPEs had dry bias.

Analysis of the Positive Correlation of Precipitation and Aerosol Using Satellite Data *October 2016 - October 2017*

- *National Excellent Research Project*
- Advisor: Prof. Minghuai Wang (Nanjing University, China)
- This study verified the positive correlation of precipitation and aerosol from multiple perspectives after analyzing the observation information of the three sample regions selected in the Pacific Ocean, Atlantic Ocean, and Indian Ocean from 2006 to 2011 of CloudSat satellite. It concluded that the increase in AOD widened the spectrum of radar reflectivity while the increase in CDNC narrowed the spectrum of radar reflectivity from the three-dimensional structure of clouds.

INTERNSHIP EXPERIENCE

Meteorological Bureau of Hunan Province, China *Feburary 2018*
Weather Forecaster, Intern

EXTRA-CURRICULUM ACTIVITIES

Daily Email Group for International Students *October 2019 - Present*

- All group members can write emails to other group members at any frequency they like to share their life, experiences, and stories. Not only can each member practice writing every day, but also they can learn useful expressions from native speakers in the group.
- I, as the organizer of this activity, was named to be the English Language Institute (ELI) Student of the Month in December 2019.
(`https://lsa.umich.edu/eli/news-events/all-news/dec19studentofthemonth.html`)

SKILLS

Programming Languages and Frameworks
C, Fortran, NCAR Command Language (NCL), Python, Visual Basic, SPSS, Linux

Software
Word, Excel, Powerpoint, LaTeX, Git