Chongxing Fan

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EDUCATION

Nanjing University September2015 - July2019

- Bachelor of Science in Atmospheric Science
- GPA: 4.7/5.0, Ranking: 1/79
- National Scholarship (Top 1%)
- Scholarship of Mr. Liao (Top 1%)
- TOEFL: 109 GRE: 323+4.0

RESEARCH EXPERIENCES

Evaluation of Quantitative Precipitation Estimation from Model, Satellite and Radar

Mitacs Intern, York University, Canada, Advisor: Prof. Yongsheng Chen July - October2018

- Initiated the project, read related literature and manuals of each dataset
- Downloaded HRRR, GOES, StageIV and METAR one hour precipitation variable from corresponding product
- Interpolated the estimations into observation grid and compared these four datasets using various statistical methods
- Achieved the results 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
- Drafted the closing report and gave a 52-slide PPT presentation

Atmospheric Energy Balance and Cyclic Process and Their Physical Mechanisms

Team Leader April - May2018

- Studied fundamental concepts and formula in the energy cycle and the principles of observation of each element
- Figured out the energy balance and circulation, and the physical mechanism of the energy cycle with NCL and filter

Characteristics of Water Vapor Transport, Convergence, Divergence and Seasonal Variation in the Global Atmosphere April - May2018

Team Leader

- Studied basic concepts and knowledge related to vapor and water vapor transportation
- Analyzed characteristics and seasonal variation of vapor flux in global atmosphere
- Figured out characteristics and seasonal variations of vapor flux divergence in global atmosphere with NCL and filter

Radio Wave, Ocean Behave February2018

Team Leader

- Teamed up with 2 partners to run for the Mathematical Contest in Modeling (MCM 2018)
- Established a model describing the transmission of electromagnetic signals on the sea via **MATLAB**, and edited the thesis with **LaTeX**
- Awarded the Honorable Mention

Analysis of the Positive Correlation of Precipitation and Aerosol Using Satellite Data

National Excellent Research Project, Advisor: Prof. Minghuai Wang October2016 - October2017

- Initiated the research project and developed and implemented the research plan
- Consulted related literature, supplemented and discussed background knowledge in group meetings
- Collected **TRMM** and **CloudSat** data set, applied **NCL** in **Linux**, conducted satellite data matching, analyzed data with sensitivity analysis method, realized the implementation of core codes
- 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
- 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
- Drafted the closing report, created a poster and gave a 19-slide PPT presentation

INTERNSHIP EXPERIENCE

Meteorological Bureau of Hunan Province, China February2018

Weather Forecaster, Intern

- Familiarized with forecasting process, and learned forecasting techniques
- Attended daily National and Provincial Weather Consultation to discuss the weather situation and to predict the weather tendency
- Analyzed the daily weather situation in 500hPa, 700hPa, 850hPa at 8 a.m., the surface weather charts and upper weather charts every day
- Analyzed numerical forecast products using **MICAPS** software, drew forecasting conclusions based on weather comprehensive situation, numerical forecast products, ensemble forecast products and experience
- Made forecast products including the city weather forecasts twice a day and warnings if major weather events occurred
- Conducted forecast verification of numerical forecast products result and forecast result, compared them with the actual situation

ESSAYS

- Analysis on the Heavy Pollution Incident of Beijing in December 2016 May2018
- Supposition of the Generative Mechanism of Barrier Layer November2017
- Identification Methods and Forming Causes of Weather Phenomenon in Surface Layer May2017

HONORS & AWARDS

- Honorable Mention in Mathematical Contest in Modeling 2018
- First Prize in Data Processing Contest (Top0.5%) 2017

SKILLS

- Computer Skills: C, Fortran, NCL, Python, Visual Basic, SPSS, Linux
- Certificates: National Computer Rank Examination of C Level Two (Excellent Grade), Jiangsu Computer Rank Examination of VB Level Two (Excellent Grade)