CHAPTER 5 CONCLUSION

5.1 Conclusion

This study investigates the WRF model simulations with fourteen different microphysics schemes for simulation rainfall over Thailand. We have represented precipitation results from fourteen experiments of microphysics parameterizations scheme covering a domain over Thailand and neighbor covering at 4×4 km^2 resolution. We use correlation to find direction between result of model and observation data, mean error to find result of model higher or lower than observation data, and mean absolute error to find error value between result of model and observation data. To used predict the post-processing of the result from WRF model. The results show rainfall event simulation value given by the microphysics parameterizations experiment on 3 hourly-rainfalls during 0000 UTC 28 March 2011 to 0000 UTC 29 March 2011, 3 hourly-rainfalls during 0000 UTC 10 September 2011 to 0000 UTC 11 September 2011 and 3 hourly-rainfalls during 0000 UTC 23 November 2011 to 0000 UTC 24 November 2011. On 3 hourly-rainfalls during 0000 UTC 28 March 2011 to 0000 UTC 29 March 2011, we found EXP10 (SBU-YLin scheme) the best experiment for rainfall simulation over Thailand. The EXP10 (SBU-YLin scheme) have a good statistic value than thirteen different microphysics schemes from comparison with the observed value given by TRMM data and the value of mean absolute error is 3.148. On 3 hourly-rainfalls during 0000 UTC 10 September 2011 to 0000 UTC 11 September 2011, we found EXP10 (SBU-YLin scheme) the best experiment for rainfall simulation over Thailand. The EXP10 (SBU-YLin scheme) have a good statistic value than thirteen different microphysics schemes from comparison with the observed value given by TRMM data and the value of mean absolute error is 4.157. On 3 hourly-rainfalls from 0000 UTC 23 November 2011 to 0000 UTC 24 November 2011, we found EXP10 (SBU-YLin scheme) the best experiment for rainfall simulation over Thailand. The EXP10 (SBU-YLin scheme) have a good statistic value than thirteen different microphysics schemes from comparison with the observed value given by TRMM data and the value of mean absolute error is 1.447. The SBU-YLin scheme has a four mass mixing ratios, cloud-water, rain, cloud-ice, snow, it can be estimate rainfall simulation to compare with

TRMM observation data and give the best probability rainfall distribution in summer season, rainy season, and winter season over Thailand and neighboring.