



Winter precipitation change in South China in recent decades

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Precipitation change is one of important climate researches in China, but winter precipitation variation in South China has not been studied so frequently. In China, it is rainy when hot; so summer precipitation is usually one focus in research, esp. in South China. However, winter precipitation and its change influence people profoundly in South China, also. The most recent example is what happened over South China in winter 2008. In this winter, millions of people suffered from the unusual cold and snowy winter. It led to huge loss in economy and traffic as well. Roads closed and railway stations were jammed and crowded with people; many planes were grounded for heavy snow and bad weather. Transmission lines faulted in the mountains. The communication signals were affected. Everyday food supply including vegetables and meats had to be delayed or interrupted. In some city even water supply was interrupted. And garbage in the city was piled up. Just in this winter the snow depth and coverage area in many places in South China broke or equaled the historical records. In fact, it isn't the only one unusual winter precipitation event in South China. Since 1950s, several freezing and snowy winters struck the South in China. In this research, winter precipitation change in recent years in South China has been discussed based on the precipitation observations. The associated large scale atmospheric circulation change is also analyzed. It is found that snowy winter in South China hardly comes in most periods of 2000s, but in recent decades this heavy snow in winter has appeared several times as observations shows. This phenomenon could be related to the large scale atmospheric circulation change.