













Fig.3-9 The winter average precipitation in Nantong 1951~2010

#### 4 Conclusions

- (1) In the past 60 years, the trend of the average temperature in Nantong is on the rise with the warming rate of  $0.297^{\circ}\text{C} / 10\text{a}$ . The turning point appears in 2008 where the temperature decreased obviously. The mean temperature in recent three years is lower than that in the previous seven years of about  $1^{\circ}\text{C}$ . But the average temperature in recent ten years is  $16.4^{\circ}\text{C}$ , which is higher than that in the 1990s,  $15.8^{\circ}\text{C}$ .
- (2) In the past 60 years, the trends of the average temperature in four seasons are on the rise, where the increasing trend in spring is the most significant and that in summer is the smallest. In recent ten years, the trends of warming have slowed. Except the temperature in summer increasing slightly, the temperatures in other three seasons tend to decrease.
- (3) The trends of the min-mean temperature and the max-mean temperature are on the rise, and the increasing rate of the min-mean temperature ( $0.282^{\circ}\text{C} / 10\text{a}$ ) is slightly higher than the max-mean temperature ( $0.232^{\circ}\text{C} / 10\text{a}$ ).
- (4) There are rapidly rising trend in extreme minimum temperature and extreme maximum temperature. The increasing rate of extreme minimum temperature ( $0.497^{\circ}\text{C} / 10\text{a}$ ) is significantly higher than extreme maximum temperature ( $0.34^{\circ}\text{C} / 10\text{a}$ ), and both of the warming rates are faster than that of the average temperature.
- (5) In the past 60 years, the tendency of precipitation is generally on the rise, but the increasing rate, only  $8.25\text{mm} / 10\text{a}$ , is small. The 60s and 70s are the periods of relatively drought in history.
- (6) The increasing trend of precipitation in summer is the most pronounced, followed by winter. Precipitation in spring and autumn is slightly decreasing. The contribution of the increase in precipitation mainly derives from the addition in summer and winter.