



Study on Changes of Mean Sea Level at Dagang Tidal Gauge

Fumei Wu, Yingchun Li, and Ziqing Wei

Xi'an Research Institute of Surveying and Mapping, Xi'an, China (wfm8431812@163.com)

“1985 National Height Datum” was defined by the mean sea level at Dagang tidal gauge, which was determined by averaging 10 mean sea levels of 19 year period by using 1952~1979 tidal data. In order to investigate the stability of the 1985 National Height Datum, we have studied the changes of the mean sea level by analyzing 1980~2003 tidal data at Dagang gauge. First the frequencies of main tides are gained by wavelet transform and Fourier transform. Then the amplitude and phase of main tides are obtained by harmonic analysis. Next the changes of the mean sea level during the period of 1980 to 2003 are studied. And at last the height of the mean sea level at Dagang tidal gauge in this period is achieved by lowpass filtering.