Figure 4.1: Greenland ice sheet divided into 10 sectors. The solid red circles correspond to the 12 coastal weather stations.

4.2.2 NAO index

Along with air temperature we also used monthly NAO index data. The NAO data are available from multiple sources such as, NOAA, J. Rogers (OSU, personal communication) and J. Hurrel (NCAR, Boulder http://www.cgd.ucar.edu/cas/jhurrell/indices.data.html#naostatseas). Inter-comparison of NAO index computed from Rogers and Hurrel showed unexpected differences. Figure 4.2 shows the plot of averaged June-July-August NAO indices from Rogers, Hurrell and
Figure 4.4: The mean melt start dates (left), the end dates (center) and the melt duration (right) for 10 sectors of Greenland.(continued)
Figure 4.4: Continued

**Sector 4**

(d)

**Sector 5**

(e)

**Sector 6**

(f)
Figure 4.4: Continued

Sector 7

(g)

Sector 8

(h)

Sector 9

(i)
4.5.3 Analysis of melt date slopes

In section 4.5.2, we presented the absolute mean-start dates, end dates and the melt duration for the past 30 years from 1979-2008. The initial analysis of the melt dates shows that melt starts later in the northern parts of the ice sheet and as we move towards the south, the melt date starts occurring earlier. Likewise, the melt season ends earlier in