

Meteorology 455/555

Group Problems - 2

Due 6 March 2006

1. The table below gives the annual average precipitation $\{P\}$ and evaporation $\{E\}$ in mm/yr for North America, Africa and Asia. Also given is $\{P-E\}$

<u>Domain</u>	<u>$\{P\}$</u>	<u>$\{E\}$</u>	<u>$\{P-E\}$</u>
North America	645	403	242
Africa	696	582	114
Asia	696	420	276

- (a) Note that P is approximately the same for all three, but E is not. Why does the location of these continents contribute to this result?
- (b) What must be the annual average runoff from each continent if there is no net storage on land?
- (c) Suppose glacier depletion is occurring in North America, with glaciers contributing a net loss of 20 mm/yr to the continent. What then is the continental runoff from North America?