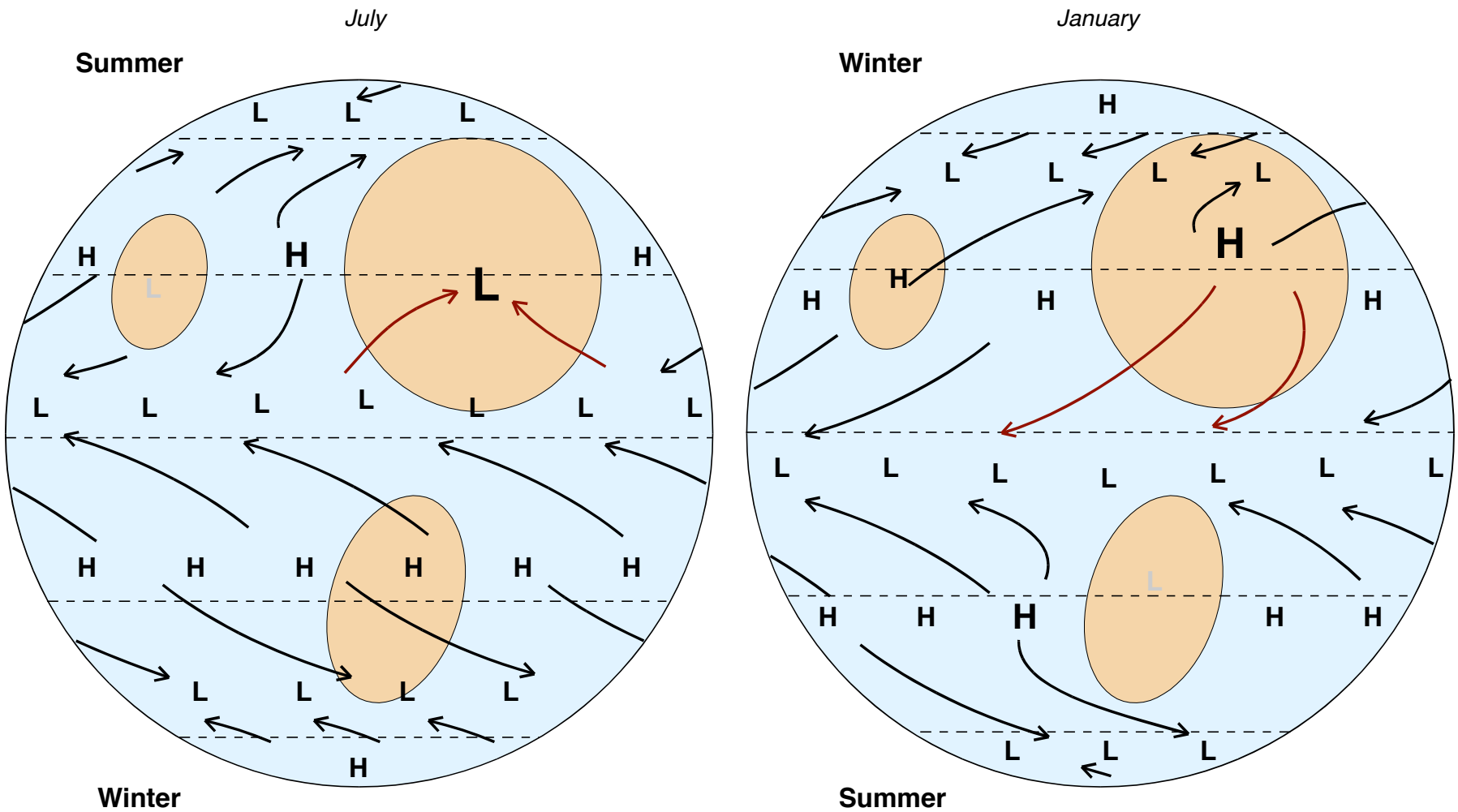
Global climate zones V: an idealized simple view, with seasons and a huge continent



Part IV of this series showed a schematic pattern of atmospheric circulation on an Earth-like planet with moderate-size continents. The point of that page was that, relative to zonal atmospheric pressure, continents develop lower pressure in summer as they warm, and higher pressure in winter as they cool. Those changes lead to comparatively minor changes in wind directions from season to season.

This page consider what happens when an exceptionally large continent lies at mid-latitude. The continental pattern discussed in Part IV is intensified, most notably in summer when a large low-pressure system develops in the region typically characterized by subtropical highs. The result is a reversal of the usual zonal winds shown in Parts I to III. This reversal of pressure relationships and winds is a **monsoonal system**, and the air drawn into the low rises to give the rain associated with monsoonal systems. In winter, the opposite happens: an exceptionally strong high develops to give strong winds and cold dry weather.

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