

Figure 1.2.4 The absorption and scattering of insolation.

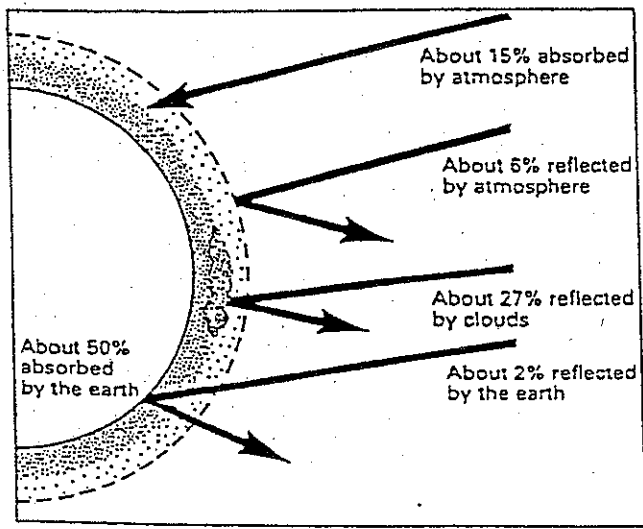


Figure 11.2 Solar radiation budget

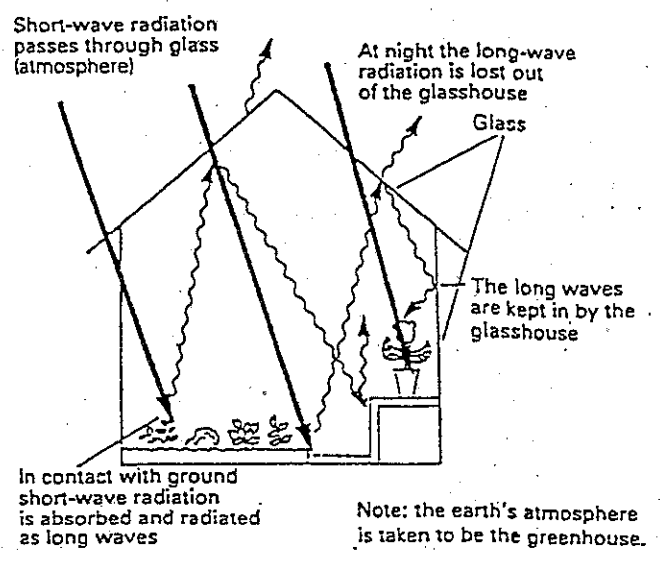


Figure 11.3 The greenhouse effect

Figure 32 Wind direction arrows (below)

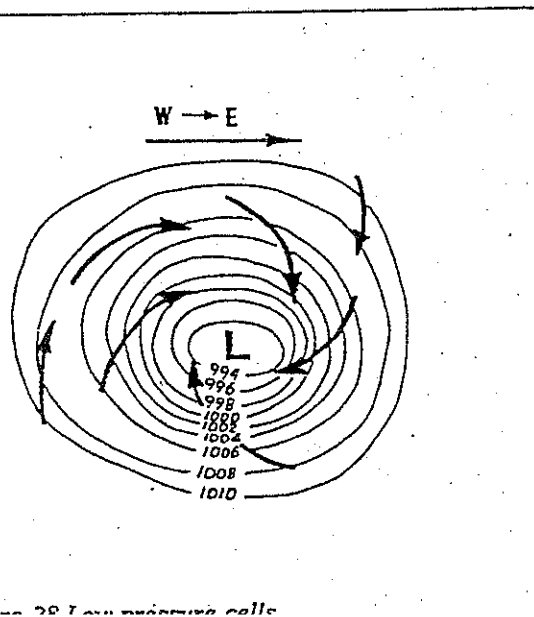
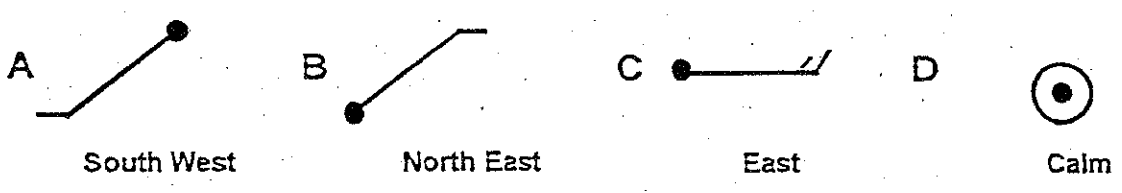


Figure 28 Low pressure cells

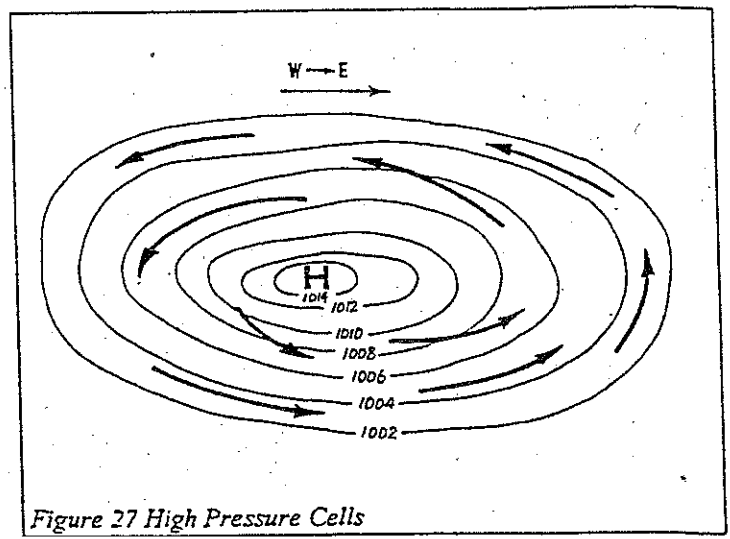


Figure 27 High Pressure Cells

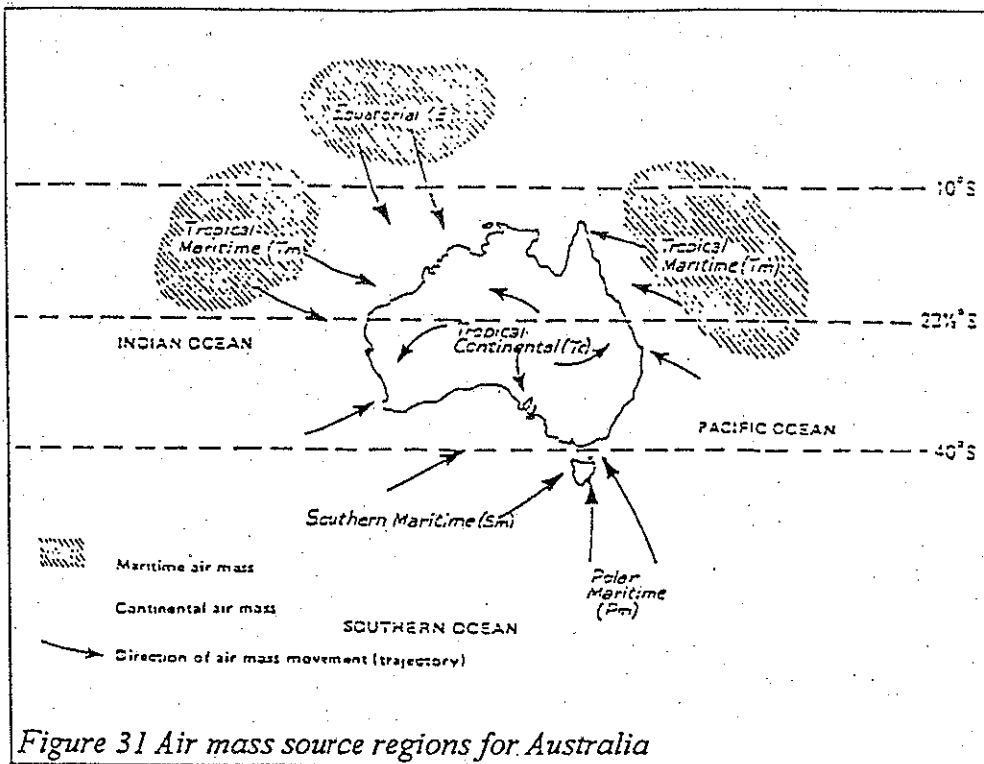


Figure 31 Air mass source regions for Australia

Figure 30 Air masses affecting Australia

Name and symbol	Characteristics	Typical features and Occurrence
Tropical T	hot	• originating in or near the tropics
Polar P	cold	• originating from or near the poles
maritime m	moist	• originating over an ocean
continental c	dry	• developed over land
Equatorial E	very warm and moist	• influences Northern Australia in summer
Tropical maritime Tm	warm and moist	• influences coasts near the Pacific and Indian Oceans. Tm air may bring summer thunderstorms in SA, and Victoria and rainfall along the NSW and Queensland coast
Tropical Continental Tc	Hot and dry	• influences southern Australia in summer with hot, dry, dusty
Southern maritime Sm	Cool and moist	• common in southern Australia all
Polar maritime Pm		• Only occasionally influences southern and eastern Australia. • Brings our coldest winter weather. eg. snow falls in alps.

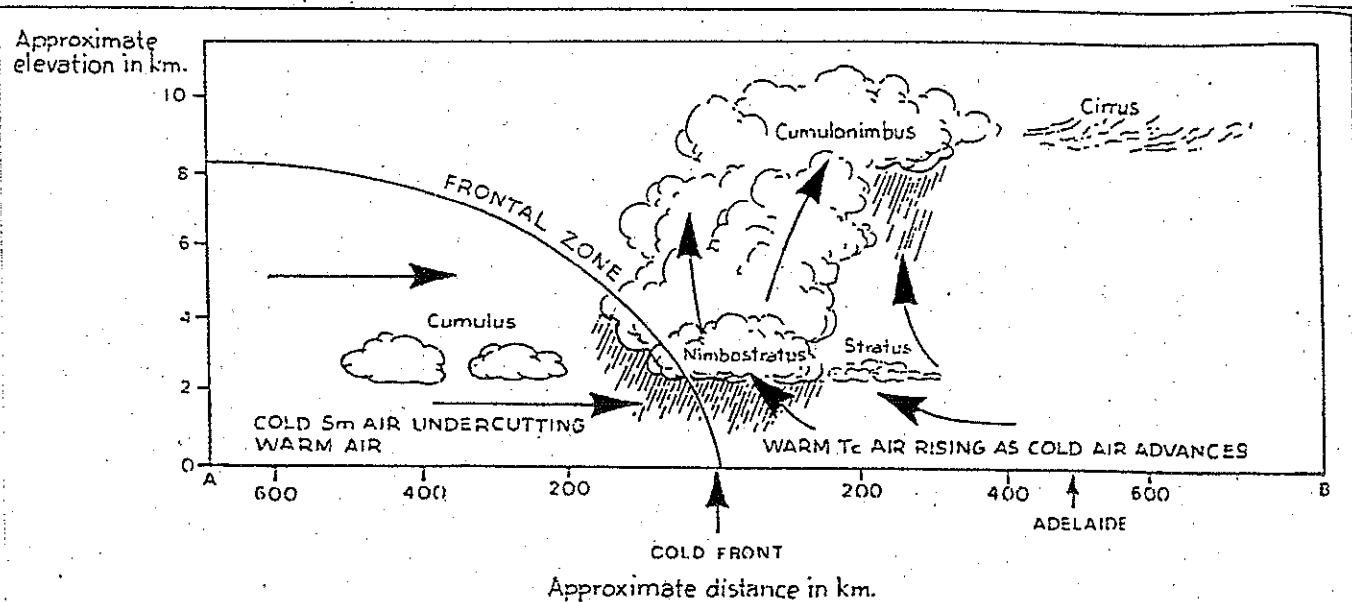
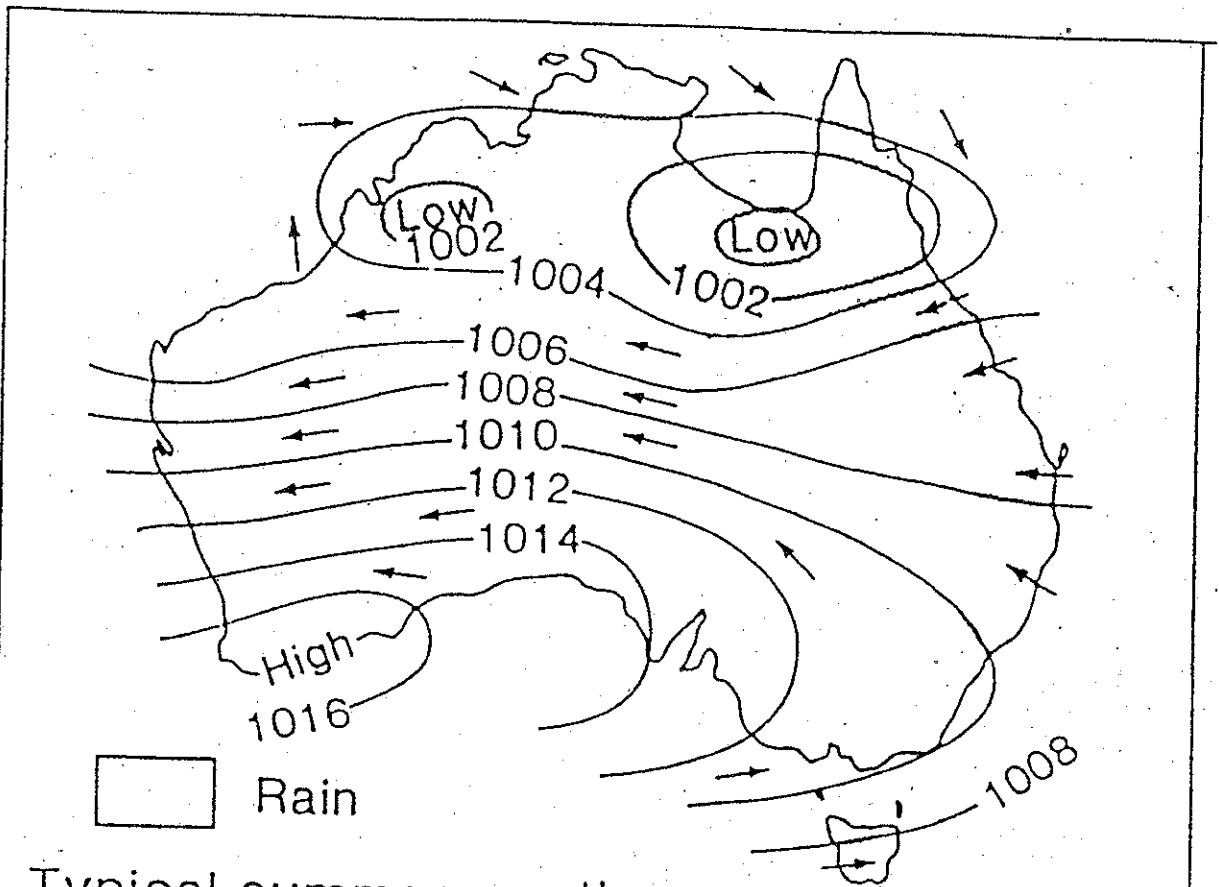


Figure 29 The passage of a cold front over Australia



Typical summer weather map

- 1 Equatorial low pressure systems and north-west monsoon winds (E air masses) bring rain to northern Australia
- 2 Maritime easterly air streams bring rain to east coast and adjacent highlands
- 3 Interior and south-west areas, with cT air masses, are hot and very dry

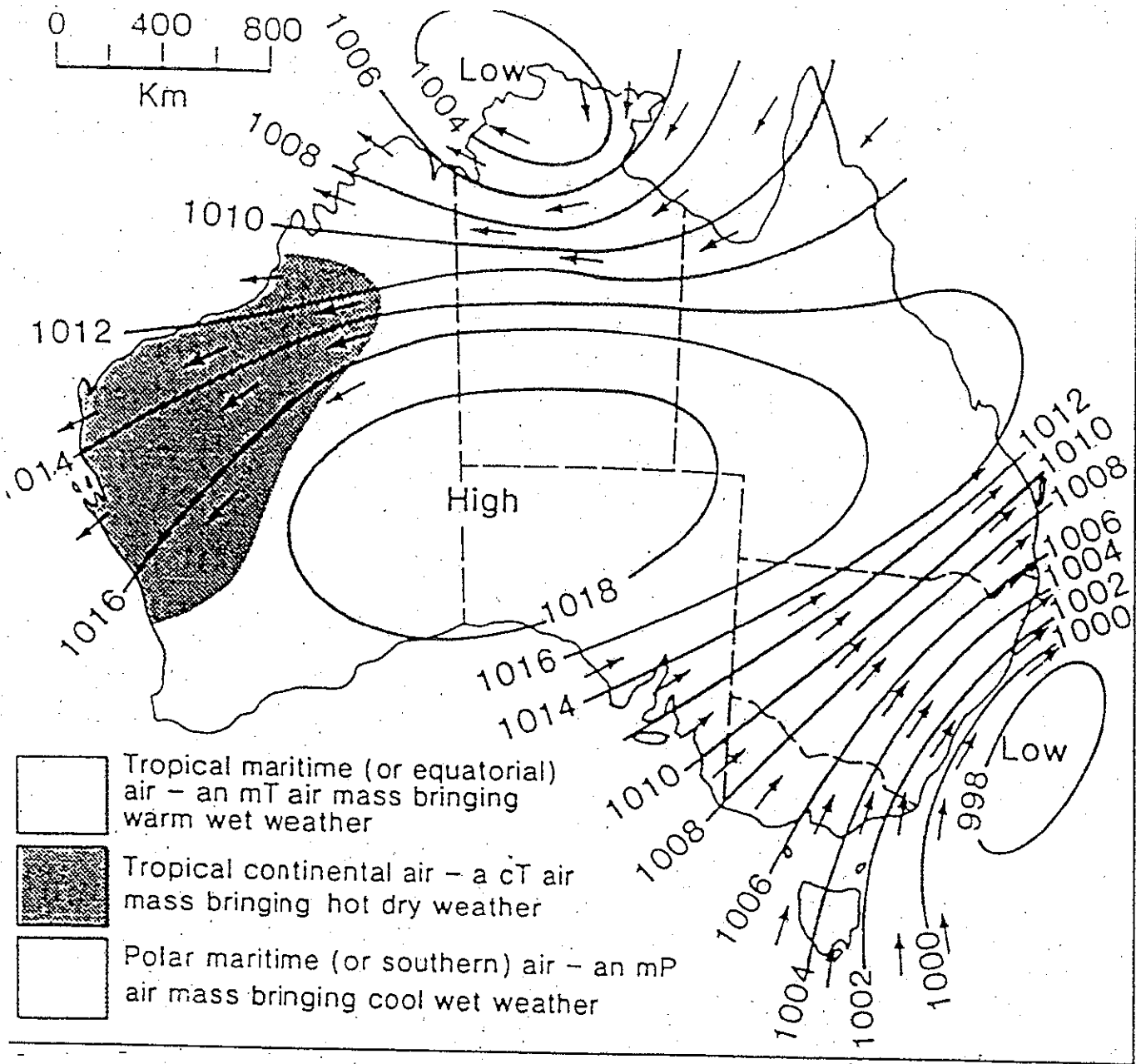
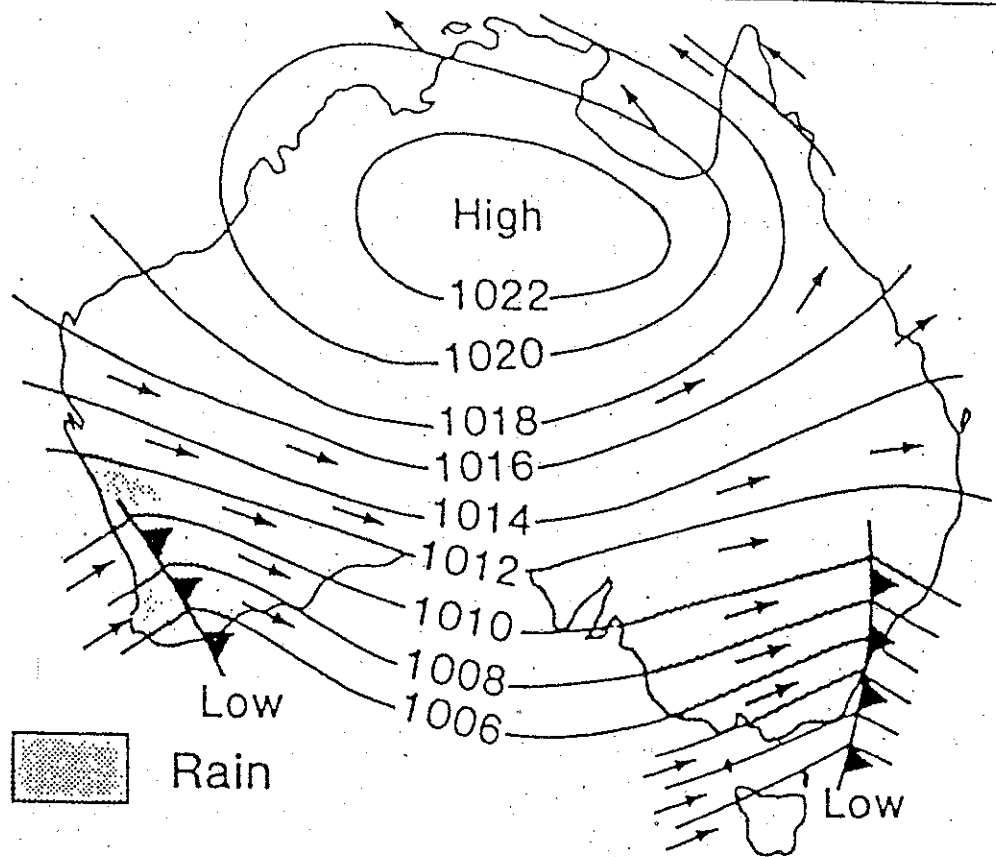


Fig. 2.35 An Australian weather map showing three major air mass systems. Warm moist air in an mT air mass is sweeping cross northern Australia. Cool to cold moist air in an mP air mass is moving over south-eastern Australia. The centre and west are dominated by the warm dry air of a cT air mass.



Typical winter weather map

- 1 Westerly (mP air masses), low pressure systems, and their fronts bring precipitation to southern parts of Australia
- 2 Easterly winds (mP and mT air masses) may bring some rain to the north-east coast
- 3 The high pressure systems result in fine dry weather with dry off-shore winds (cT air masses) in northern Australia