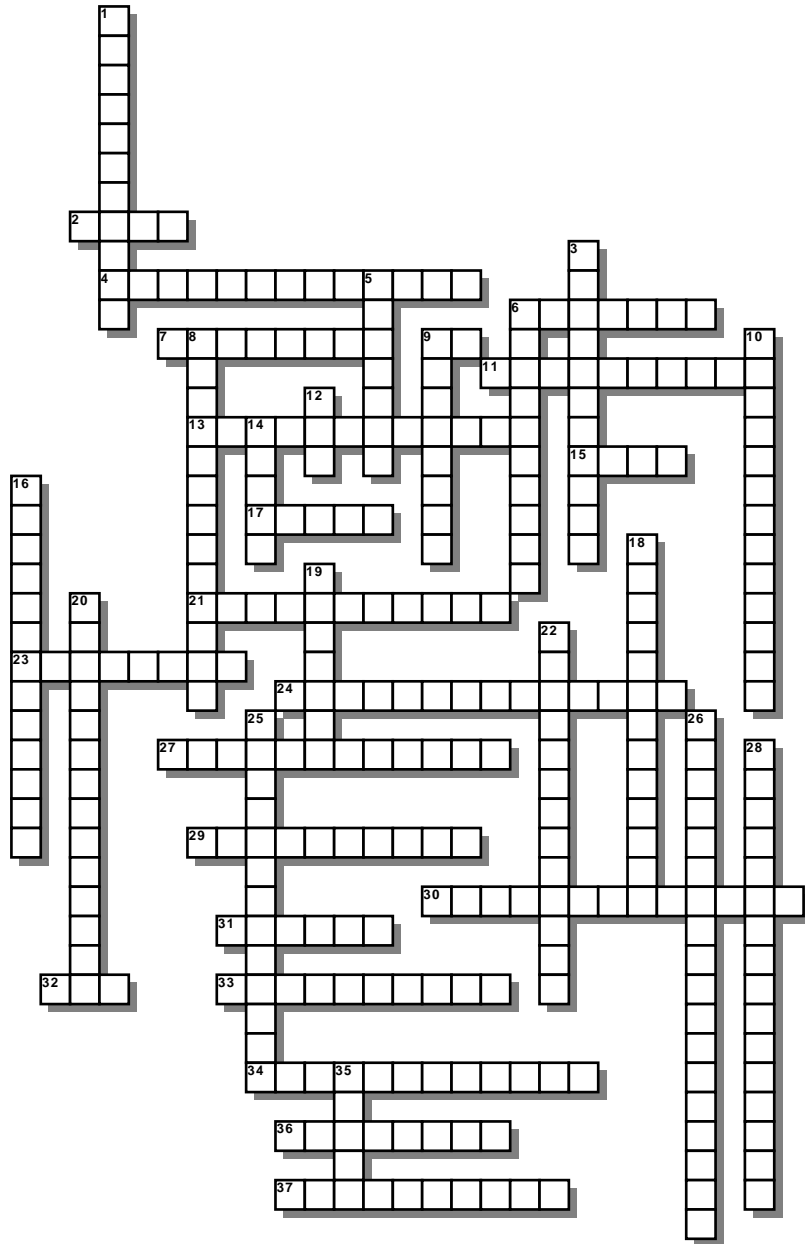


Crossword Puzzle



Across

- 2 one of the major mechanisms leading to long-lived large amplitude mesoscale waves
- 4 The mass momentum imbalance during the collapse of a cold front causes inertia gravity waves and results from cross frontal...
- 9 moist convective point source of large amplitude mesoscale gravity waves

Down

- 1 climatology of inertial instability at 250hPa shows that inertial instable conditions are most frequent in the ... upper troposphere
- 3 layer of gas consisting of small, discrete vortices rotating in the same direction
- 5 gravity waves that travel horizontal and vertically are denotes ... gravity waves
- 6 inertia-gravity waves are waves

Across

- 9 moist convective point source of large amplitude mesoscale gravity waves
- 11 horizontal and vertical scales of a wave are described by the
- 13 vertical shear ... the flow
- 15 waves generated by shear instability have horizontal scales of $O(10\text{km})$ and relative frequencies ($\omega \sim N$)
- 17 mesoscale phenomena of 200 to 1000 km extend belong to the mesoscale ...
- 21 low regime wherein potential energy converts into enough kinetic energy to surmount an obstacle
- 23 in the northern hemisphere a flow is inertially stable if the absolute vorticity of the basic flow is ...
- 24 Way of how the basic wind U advects upstream and downstream propagating waves
- 27 ratio of advection flow speed to shallow water phase speed or ratio of square root of kinetic to potential energy of the undisturbed, upstream basic flow
- 29 direction in which shallow water waves propagate in the atmosphere
- 30 Inertia gravity waves
- 31 if saturation is reached Kelvin-Helmholtz instability becomes visible as ... clouds
- 32 Inertial stability provides a possible mechanism for turbulence development in the vicinity of the ... entrance regions
- 33 gravity waves caused by mesoscale convective systems are very ...
- 34 sound waves are ... waves
- 36 wave that can be generated by latent heat release in a convective storm
- 37 the group velocity vector is parallel to the

Down

- 8 if phase speed and wave number are independent of each other waves are ...
- 9 inertia gravity waves of 200-1000km horizontal wavelength have frequencies near the ...frequency ($\omega \sim f$)
- 10 inertia gravity waves transport energy in the direction of the
- 12 Kelvin-Helmholtz instability may produce large amplitude gravity waves and ...
- 14 Kelvin Helmholtz instability is a ... instability created by buoyancy and vertical wind ...
- 16 property of sound waves
- 18 restoring force for inertia waves
- 19 example for density impulse
- 20 fundamental element of wave motion besides a medium for propagation
- 22 concentration of wave energy propagates with the
- 25 flow regime wherein kinetic energy is large enough to overcome the potential energy barrier
- 26 mechanism that may cause shallow water waves in the atmosphere
- 28 names of the force that drives the oscillations of acoustic waves
- 35 which scale covers 2-200km?