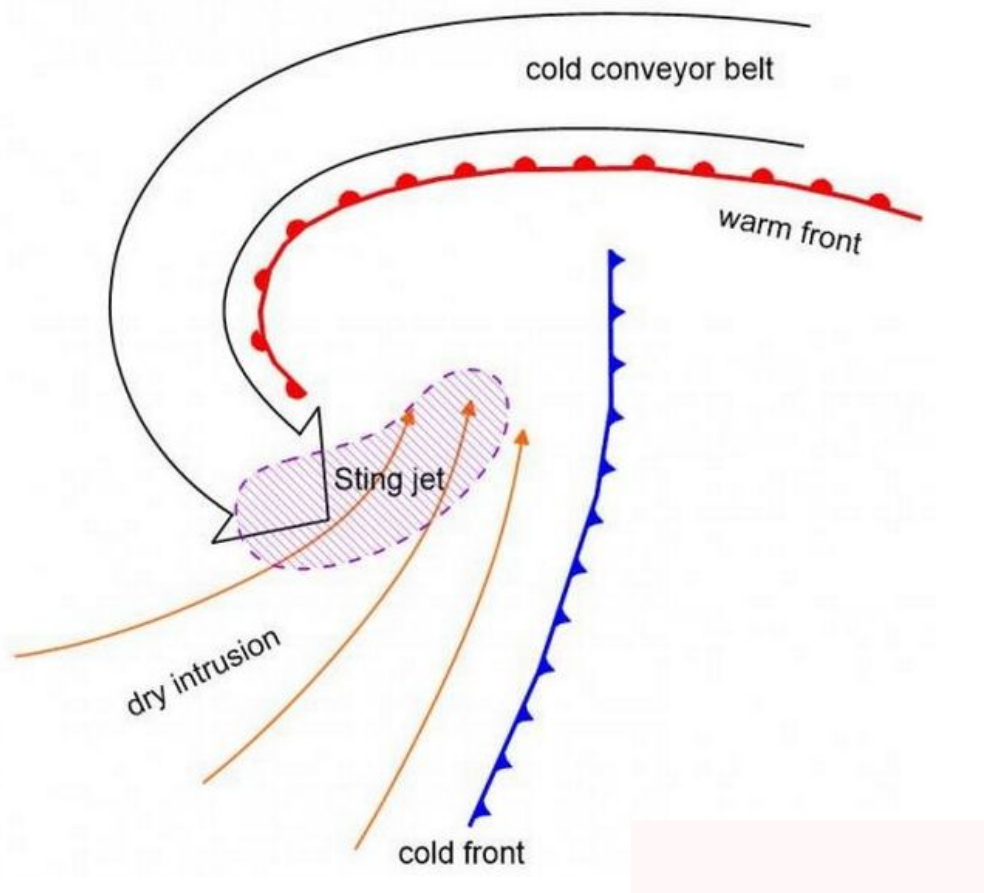


## STING JETS

- A Sting Jet (SJ) is a core of very strong winds, up to 100mph or more.
- Associated with a rapidly deepening depression.
- Associated with a Shapiro-Keyser mid latitude cyclone when frontal fracture occurs.
- Starts in the mid troposphere and can extend to the ground.
- Affects a narrow belt perhaps only 30 miles across and is short lived (lasting 3-4 hours).
- Forms just south (equatorwards) of the low centre near the bent back front, near the tip of the cloud head.
- The UK storm of 1987 is a notable example of a sting jet, when wind speeds touched 134mph. 18 people were killed and 15 million trees were blown down.



- At the fronts the Warm Conveyor Belt (WCB) rises towards the warm front and the Cold Conveyor Belt (CCB) wraps around the system and descends.
- These airstreams encircle the low and feed heat and moisture into the system, which strengthens it further.
- The CCB forms from maritime Polar (mP) air aloft and descends. Evaporation of moisture in the airstream increases the cooling leading to more rapid descent forming the Sting Jet.
- Sting Jets are hard to forecast, but seem to occur most often with an SK depression (cyclone) and frontal fracture.
- Satellite images may show a clear slot of air associated with the cold dry mP air next to a hook shaped cloud mass at the frontal fracture and low centre.