

Kasia Badger

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Private Pilot Research - Navigation (Wind)

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The ground speed of an aircraft is the True Airspeed (TAS) corrected for wind factor. On the other hand, crosswinds specifically affect the heading required for the aircraft to fly straight. In order to combat the effects of crosswinds, pilots will “crab” the aircraft, which means that they will adjust their heading and let the crosswinds push the aircraft to fly in a straight line, even though the longitudinal axis of the aircraft is not pointing in the direction of the aircraft’s movement. The Wind Triangle illustrates this relationship, and is a great way to understand why aircraft “crabbing” is necessary.