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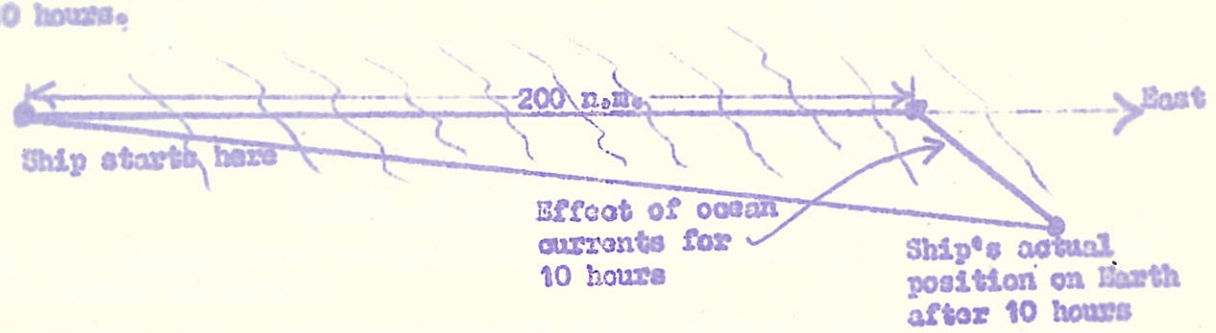
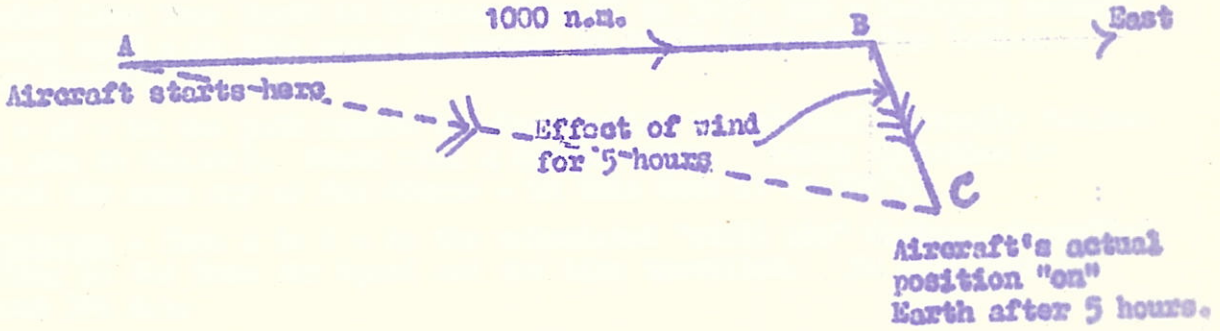
1. Introduction. A ship sails in an ocean of water in which there are currents. The ship can record its progress through the water as to speed and direction. After going East for 10 hours at 20 knots its position on the Earth will not be exactly 200 nautical miles East of where it started, but some place near there depending on the ocean-current effect for those 10 hours.



An aircraft flies in an ocean of AIR in which there are currents (called winds). The aircraft can record its progress through the air as to speed and direction. After going East for 5 hours at 200 knots its position "on" the Earth will not be exactly 1000 nautical miles East of where it started, but some place near there depending on the wind effect for those 5 hours.



The aircraft's course (or heading) is East, in the direction AB.
Its position relative to "still air" after 5 hours is at B, and is called its air position.
Its "real" position "on" the Earth after 5 hours is at C, and this is called its ground position, or, perhaps, a fix (meaning a fixed or known position on the Earth).
The dotted line AC is called the Track Made Good, or its Track.
Although the aircraft really travels along the track AC, it is pointing its nose due East all the time; it is drifting sideways to the right (Starboard) due to the wind.
Notice also that the distance covered from A to C in the 5 hours is more than 1000 nautical miles, so that the ground speed (actual speed across the face of the Earth) can be different from the air speed - in this case it is somewhat greater, perhaps 215 knots.

2. Terms. Study the diagram carefully (on the next page) and learn the basic terms.

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