D'LAT AND D'LONG

EXERCISE-2

Note: This module will be understood best if studied along with the video provided for subscription where by same topics have been in large explained by me and hence this transcription is here only to help and enhance your concepts about the basic of D'Lat and D'Long.

This is the second section in this module whereby we will carry the concept learnt in last session forward. Here we will understand the calculation of D'Long in a manner similar to that of D'Lat.

Before moving ahead with the calculation part we must first understand that for D'Long we could have **two reference figures** as shown below, the one in which the observer is **facing the 0° meridian** so as to have the **eastern meridians** running to his **right** while the **western meridians** running to his **left**. In second fig. the observer is **facing the 180° meridian** whereby the **eastern meridians** run to his **left** and the **western** to his **right**.

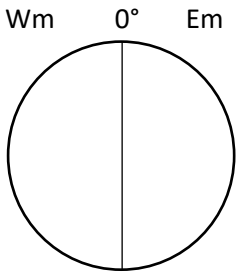


Fig (i)

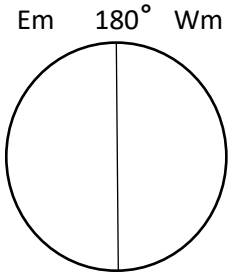


Fig (ii)

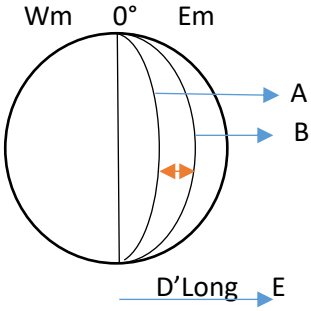
Remember:

1. From the above figures if both Long given for calculation are <100° use fig.(i), else if any one Long or both the Long given are >100° use fig.(ii).

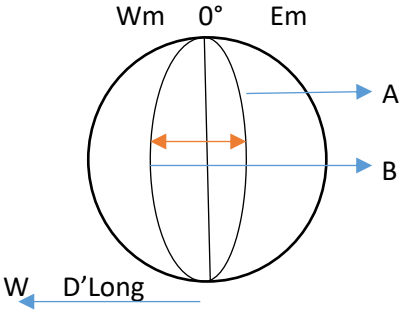
2. In the above figures change in naming of the meridians w.r.t observer's facing is only a visionary change and has nothing to do with the direction of movement represented by **D'Long** i.e in both the figures if your **direction of movement** is **right** then it is **east** and if **left** it is **west**.

In the above regard following are the examples taken up in the related video:

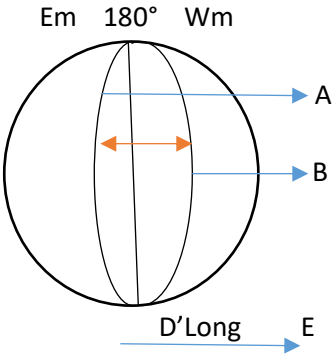
1. Long A- 020°50'E
   Long B- 045°55'E
   D'Long- 025°05'E (Long B – Long A)



2. Long A- 010°20'E
   Long B- 030°50'W
   D'Long- 041°10'W (Long A + Long B)



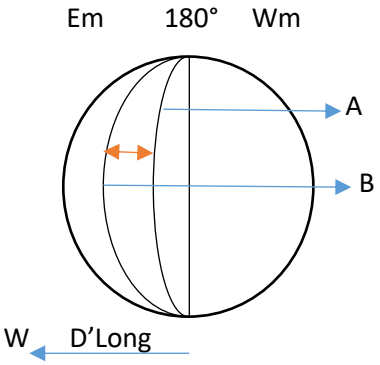
3. Long A- 175°30'E
   Long B- 170°50'W
   D'Long- 013°40'E {360° - (Long A + Long B)}



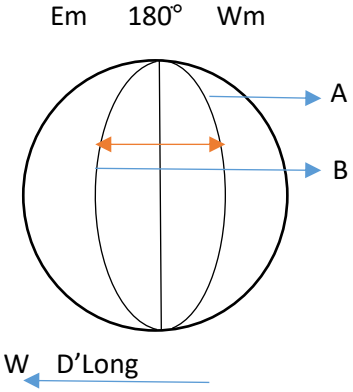
In the above example point no. 2 slated under '**Remember**' section above should be taken care off for indicating the direction of movement for D'Long. For getting the magnitude of D'Long as could be made out of the above figure we have to first add both the longitudes and then subtract the sum obtained from 360° to get the answer.

Some more examples:-

4. Long A- 165°30’E
   <u>Long B- 148°50’E</u>
   D’Long- 016°40’W



5. Long A- 156°45’W
   <u>Long B- 168°30’E</u>
   D’Long- 034°45’W



Practice Exercise:-

1. Long A- 048°35’E
   Long B- 025°20’E

2. Long A- 073°56’W
   Long B- 055°40’W

3. Long A- 179°15’E
   Long B- 175°50’W

4. Long A- 167°30’W
   Long B- 173°25’E

5. Long A- 128°10’W
   Long B- 110°18’W

ANSWERS:

1. 023°15’W 2. 018°16’E 3. 004°55’E 4. 019°05’W 5. 017°52’E