

Re: Latitude / longitude distance and bearing.

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"Dave (from the UK)" <see-my-signature@xxxxxxxxxxxx> wrote in message news:46d949f2@xxxxxxxxxxxx

I have two locations, call them 'a' and 'b' .

a) Altitude of a and b (call them alt_a and alt_b).

b) Latitude of a and b (call them lat_a and lat_b)

c) Longitude of a and b (call them long_a and long_b)

'a' and 'b' are fairly close together (10 – 20 km) and in line of sight distance. (Two mountain peaks).

I want to find

- 1) The straight line distances from a to b. (*Not* the distance along the circumference of the earth, which I can get from the Haversine formula)
- 2) The bearing of 'a' when viewed from 'b'.
- 3) The vertical angle – i.e how many degrees above the horizon is 'a' when viewed from 'b'. (alt_a > alt_b).

Take a look at INVERS3D/FORWRD3D at http://www.ngs.noaa.gov/PC_PROD/Inv_Fwd/
There is also FORTRAN source code.

Also of interest is the program COMPSYS21 available at <http://www.naco.faa.gov/index.asp?xml=naco/online/compsys>