The formula used to adjust the wind direction reported considering the actual alignment as well as true vs. magnetic north is as follows:

Correction (c) = a – b

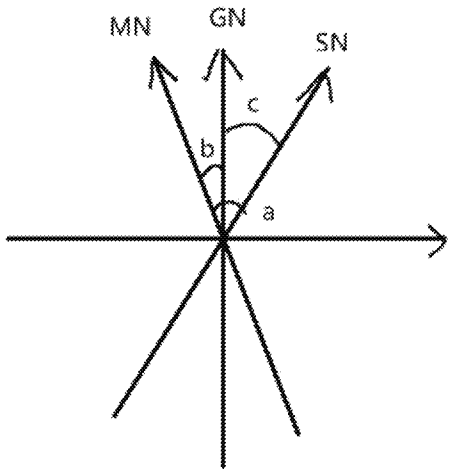
Where,

a = 55.7 degrees
b = 7.75 degrees

Thus,

c = 47.95 degrees

Please see the below illustration:



Here's a summary from the software:

```
'Wind direction correction angle (Magnetic declination 7.75 degree to west + Sensor declination 55.7
degree to east) (47.95)
Const Wdir_corr = 47.95
'Wind Direction Correction: add x degree offset to the wind direction
WindDir = WindDir + Wdir_corr
If WindDir > 360.0 Then
        WindDir = WindDir - 360.0
ElseIf WindDir < 0.0 Then
        WindDir = WindDir + 360.0
EndIf
```