

```
1 # -----
2 # This software is in the public domain, furnished "as is", without technical
3 # support, and with no warranty, express or implied, as to its usefulness for
4 # any purpose.
5 #
6 # Wind_IntoWind20ft.py
7 #
8 # Copies Wind grids into corresponding Wind20ft grids. Modifies the wind speed
9 # to increase the magnitude slightly. Used by the MakeWind20ft procedure.
10 #
11 # Author: GS
12 # 5/29/2004
13 # 6/12/2004 .. magnitude adjustment added.
14 # 7/8/2012 .. AWIPS-2 port .. GS
15 # 7/11/2013 .. magnitude adjusted from 0.7 to 0.8 as requested by Andy H.
16 # 5/10/2021 .. python2 to python3 conversion .. GS
17 # -----
18
19 ToolType = "numeric"
20 WeatherElementEdited = "Wind20ft"
21 import numpy as np
22
23
24 import SmartScript
25
26 # VariableList = [
27 #     ("Amount to multiply Wind speed to get Wind20ft" , 0.9, "scale", [0.4, 1.2], 0.1),
28 # ]
29
30 class Tool (SmartScript.SmartScript):
31     def __init__(self, dbss):
32         SmartScript.SmartScript.__init__(self, dbss)
33
34     def execute(self, Wind20ft, GridTimeRange, varDict):
35         "Copies Wind into Wind20ft"
36
37
38         Wind20ft = self.getGrids("Fcst","Wind","SFC",GridTimeRange)
39 #         Wind20ft = self.getGrids("UWRF1","Wind","SFC",GridTimeRange)
40         # break out the magnitude and direction components
41         Magnitude = Wind20ft[0]
42         Direction = Wind20ft[1]
43         Multiply = 0.9
44         NewMagnitude = Magnitude * Multiply
45
46         # put the new magnitude back together with the original direction
47         NewWind = (NewMagnitude, Direction)
48
49         # Return the new wind
50         return NewWind
51
52
```