Subject: Is there a better way?
Posted by Kelly Dean on Tue, 10 Jun 1997 07:00:00 GMT
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Is there a better way to locate a value in a table (or array)? I would like to come in with an array of radaince values and convert them to temperatures. The method below only takes the one number (rad) then search for the best match in the table (or array).

If you can thing of a better method, send me a note.

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FUNCTION IS_THERE_A_BETTER_WAY, rad

WVTEMParr = FINDGEN(200) + 170.

WVRADarr = FLTarr(200)
WVRADarr(0:9)     = [ 0.015,  0.016,  0.018,  0.019,  0.020,  0.022,
0.024,  0.025,  0.027,  0.029 ]
WVRADarr(10:19)   = [ 0.031,  0.034,  0.036,  0.039,  0.041,  0.044,
0.047,  0.050,  0.053,  0.057 ]
WVRADarr(20:29)   = [ 0.061,  0.064,  0.069,  0.073,  0.077,  0.082,
0.087,  0.092,  0.098,  0.104 ]
WVRADarr(30:39)   = [ 0.110,  0.116,  0.122,  0.129,  0.137,  0.144,
0.152,  0.160,  0.169,  0.178 ]
WVRADarr(40:49)   = [ 0.187,  0.197,  0.207,  0.218,  0.229,  0.241,
0.253,  0.265,  0.278,  0.292 ]
WVRADarr(50:59)   = [ 0.306,  0.320,  0.335,  0.351,  0.367,  0.384,
0.401,  0.420,  0.438,  0.458 ]
WVRADarr(60:69)   = [ 0.478,  0.499,  0.520,  0.542,  0.565,  0.589,
0.614,  0.639,  0.665,  0.692 ]
WVRADarr(70:79)   = [ 0.720,  0.749,  0.779,  0.809,  0.841,  0.873,
0.907,  0.941,  0.977,  1.013 ]
WVRADarr(80:89)   = [ 1.051,  1.090,  1.129,  1.170,  1.212,  1.256,
1.300,  1.346,  1.393,  1.441 ]
WVRADarr(90:99)   = [ 1.490,  1.541,  1.593,  1.647,  1.701,  1.758,
1.815,  1.874,  1.935,  1.997 ]
WVRADarr(100:109) = [ 2.060,  2.125,  2.192,  2.260,  2.330,  2.401,
2.474,  2.549,  2.626,  2.704 ]
WVRADarr(110:119) = [ 2.784,  2.866,  2.949,  3.034,  3.122,  3.211,
3.302,  3.395,  3.490,  3.586 ]
WVRADarr(120:129) = [ 3.685,  3.786,  3.889,  3.994,  4.101,  4.210,
4.322,  4.435,  4.551,  4.669 ]
WVRADarr(130:139) = [ 4.790,  4.912,  5.037,  5.164,  5.294,  5.426,
5.560,  5.697,  5.836,  5.978 ]
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WVRADarr(140:149) = [ 6.122,  6.269,  6.418,  6.570,  6.724,  6.881,
7.041,  7.203,  7.369,  7.536 ]
WVRADarr(150:159) = [ 7.707,  7.880,  8.057,  8.236,  8.418,  8.602,
8.790,  8.981,  9.174,  9.371 ]
WVRADarr(160:169) = [ 9.570,  9.773,  9.978, 10.187, 10.399, 10.614,
10.832, 11.053, 11.277, 11.505 ]
WVRADarr(170:179) = [11.736, 11.970, 12.207, 12.448, 12.692, 12.939,
13.190, 13.444, 13.701, 13.962 ]
WVRADarr(180:189) = [14.226, 14.494, 14.766, 15.040, 15.319, 15.601,
15.886, 16.176, 16.468, 16.765 ]
WVRADarr(190:199) = [17.065, 17.369, 17.676, 17.988, 18.303, 18.622,
18.944, 19.271, 19.601, 19.935 ]

FOR i = 0 ,198 DO BEGIN
 IF ( rad GT WVRADarr(i) AND rad LE WVRADarr(i+1) ) THEN BEGIN
   TempK = WVTEMParr(i)
 ENDIF
ENDFOR

RETURN, TempK
END
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