

	Comparison of 500K <u>GeoidHeights.dat.gz</u> tests for 2 height interpolators <u>GeoidKarney</u> (Karney's C++ class <u>Geoid</u> transcoded to Python) and <u>GeoidPGM</u> (based on <u>scipy/numpy's cubic RectBivariateSpline</u> ) with <u>pygeodesy 22.01.05</u> .			
	<b>pygeodesy.GeoidKarney</b>			
	<b>egm2008-1.pgm</b>	<b>egm96-5.pgm</b>	<b>egm84-15.pgm</b>	
<b>Eps Max*</b>	0.002186	0.002603	0.017281	meter
<b>Eps Mean*</b>	0.000533	0.000539	0.000821	meter
<b>Eps Stdev*</b>	0.000372	0.000377	0.000807	meter
Python 2.7.16	263.259	261.003	278.959	secs**1
Python 3.7.2	148.373	150.067	153.365	secs**1
PyPy 6 / 2.7.13	67.497	67.611	59.374	secs**1
PyPy 6 / 3.5.3	88.427	83.209	70.575	secs**1
Python 3.8.10	48.406	47.955	46.147	secs**2
Python 3.9.6	137.616	82.536	76.668	secs**3
Python 3.10.1	26.411	25.888	24.789	secs**4
<i>Python 3.10.8</i>	<i>21.263</i>	<i>21.008</i>	<i>22.518</i>	secs**5
<i>Python 3.13.11</i>	<i>18.530</i>	<i>18.287</i>	<i>17.662</i>	secs**5
<i>Python 3.14.2</i>	<i>21.203</i>	<i>19.888</i>	<i>19.582</i>	secs**5
<i>Python 3.14.2</i>	<i>12.940</i>	<i>11.655</i>	<i>11.178</i>	secs**6
	<b>pygeodesy.GeoidPGM</b>			
	<b>egm2008-1.pgm</b>	<b>egm96-5.pgm</b>	<b>egm84-15.pgm</b>	
<b>Eps Max*</b>	0.010985	0.017929	0.022971	meter
<b>Eps Mean*</b>	0.000629	0.000631	0.000637	meter
<b>Eps Stdev*</b>	0.000421	0.000425	0.000445	meter
Python 2.7.16	121.390***	49.753	48.561	secs**1
Python 3.7.2	113.012***	40.963	38.983	secs**1
Python 3.8.10	35.922***	15.566	14.373	secs**2
<i>Python 3.10.8</i>	<i>19.921***</i>	<i>7.872</i>	<i>8.231</i>	secs**5
<i>Python 3.13.11</i>	<i>21.981***</i>	<i>7.055</i>	<i>6.268</i>	secs**5
	*) <b>Eps Max, Mean, Stdev</b> are the maximum, mean and standard deviation of the (abs) difference between the pygeodesy and <i>GeoidHeights.dat</i> heights.			
	**1) Run times for Python 2.7.16, 3.7.2 and PyPy 6 on macOS 10.13.6 High Sierra and iMac, 12 GB, 3 GHz Core i3, all in 64-bit only.			
	**2) Run time for Python 3.8.10 on macOS 12.1 Monterey and MacBook Air (M1, 2020), 16 GB, Apple M1 Silicon, Intel emulation in 64-bit.			
	**3) Run time for Python 3.9.6 on macOS 10.16 Big Sur (aka 11.6.1) and MacBook Air (Retina 2020), 16 GB, 1.2 GHz Quad-Core i7 in 64-bit.			
	**4) Run time for Python 3.10.1 on macOS 12.1 Monterey and MacBook Air (M1, 2020), 16 GB, Apple M1 Silicon, 64-bit natively.			
	**5) Run time for Python 3.10.8, 3.13.11 and 3.14.2 on macOS 26.2 Tahoe and MacBook Air (M4, 2025), 16 GB, Apple M4 Silicon, 64-bit natively.			
	**6) As **5) but for pygeodesy 26.02.02 and Python 3.14.2 -OO ...			
	***) About half is needed to load the 466 MB+ <b>egm2008-1.pgm</b> file and convert 233 M+ 2-byte <i>ushorts</i> to 8-byte <i>float64s</i> for <i>scipy/numpy</i> .			