Increasing resolution of Cartopy stock background?

Asked 8 months ago Active 8 months ago Viewed 877 times

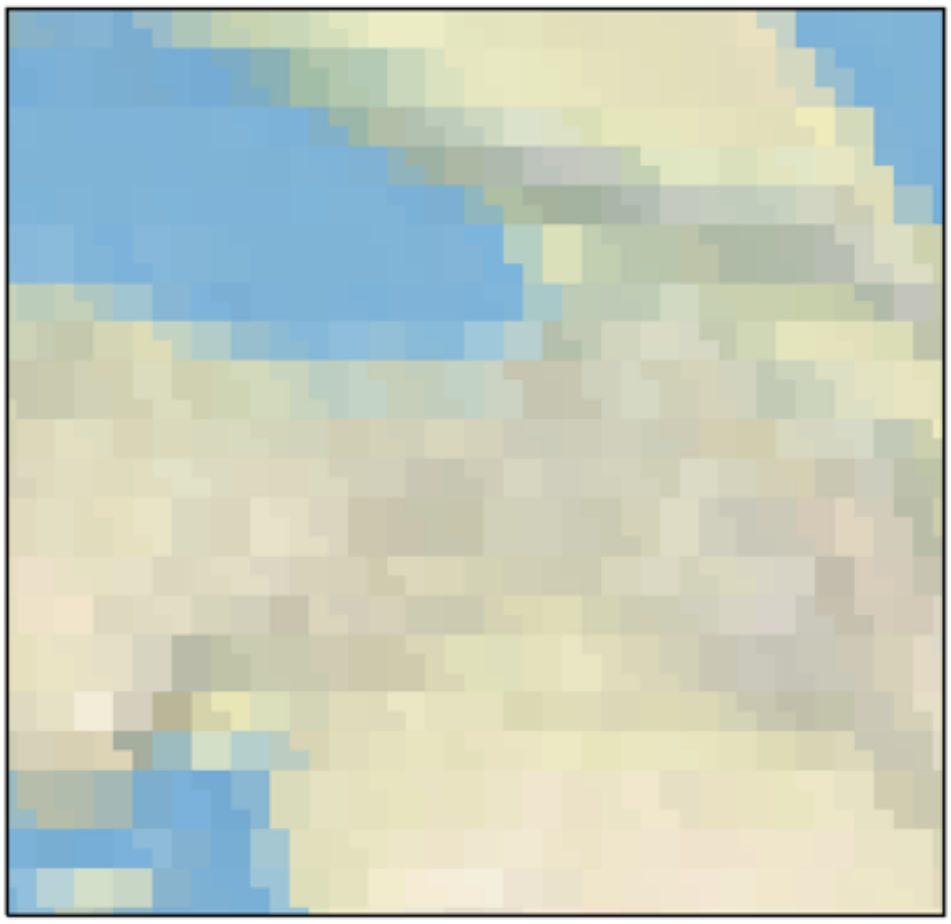
1

I am trying to create a small application that will show zoomed in maps. If possible, I would like to avoid using map tiles.

Going off the example on this page:
https://scitools.org.uk/cartopy/docs/v0.15/matplotlib/intro.html

```
import cartopy.crs as ccrs
import matplotlib.pyplot as plt

ax = plt.axes(projection=ccrs.Mollweide())
ax.stock_img()
ax.set_extent([35,45,35,45])

plt.show()
```

result:



I am just wondering if there is some method I don't know about for showing it in a higher resolution/dpi?

And if not, is there any middle to solution between this and using, say, Open Streetmap tiles?

I think that in order to use a tiled map I would need to run my own server, but I will largely be showing the same few map sections repeatedly, so I would think there must be some way around this.

python matplotlib cartopy

edited Feb 26 at 11:20
PolyGeo ♦
58.4k 17 89 264

asked Feb 25 at 14:59
Dan
11 1

1 Answer

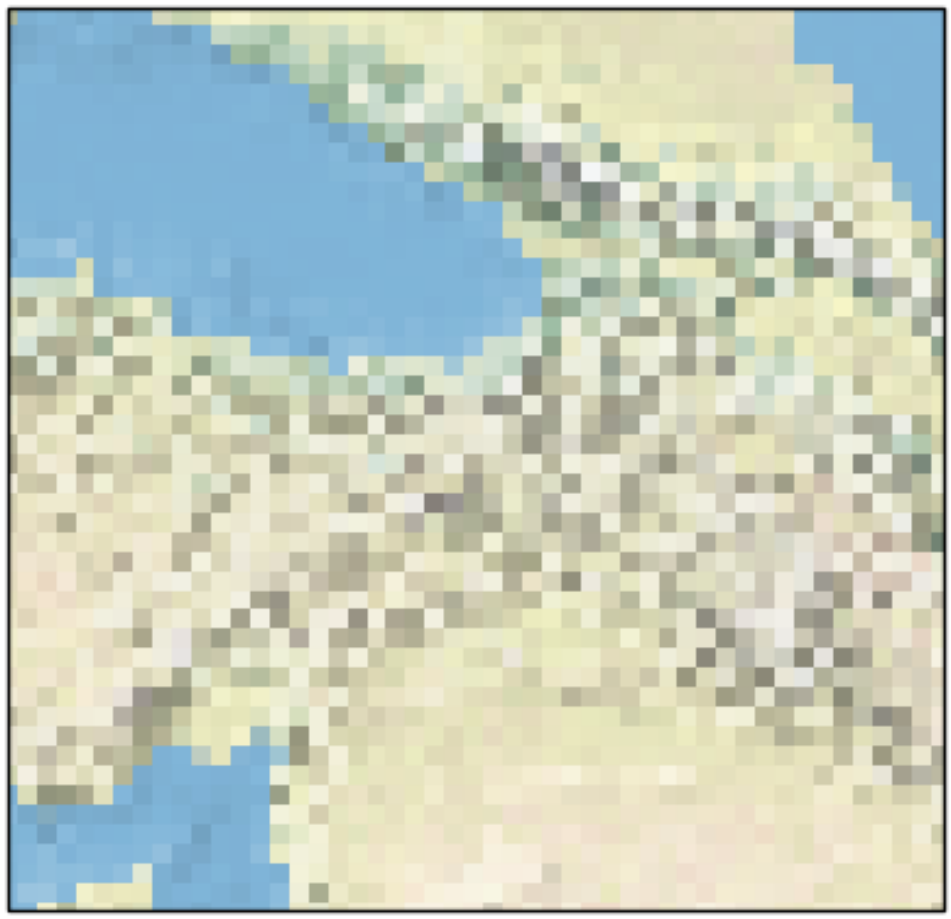
2

It looks like `cartopy` package a downsampled version of the Natural Earth 'shaded relief and water' image as the stock image. You could try the original version (available here) and use `ax.imshow` to load it (following the source for `ax.stock_img` quite closely).

```
import os

import cartopy.crs as ccrs
import matplotlib.pyplot as plt

from matplotlib.image import imread


ax = plt.axes(projection=ccrs.Mollweide())

source_proj = ccrs.PlateCarree()
fname = os.path.join('path_to_natural_earth', 'NE1_50M_SR_W.tif')
ax.imshow(imread(fname), origin='upper', transform=source_proj,
          extent=[-180, 180, -90, 90])

ax.set_extent([35,45,36,46])

plt.show()
```

Unfortunately this only gives a little improvement (see below), depending the size of your area of interest.

with extent [35,45,35,45]:



with extent [35,45,36,46]:

Beyond this, I'd either use vector data for background (Natural Earth have political, physical and cultural vector data), look for a bigger tif, or go with the tiled approach.

Stamen terrain might be suitable, as in this cartopy example. Hope that's helpful!

answered Feb 25 at 16:09

tlrss

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