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In [1]: import h5py
import rasterio
from rasterio.transform import from_origin

In [2]: # Path to the input .h5 file
h5_file = '/Users/Emirhan/Desktop/Pompano/geo_velocity.h5'

In [3]: # Path to save the output GeoTIFF
output_geotiff = '/Users/Emirhan/Desktop/Pompano/geo_velocity.tif'

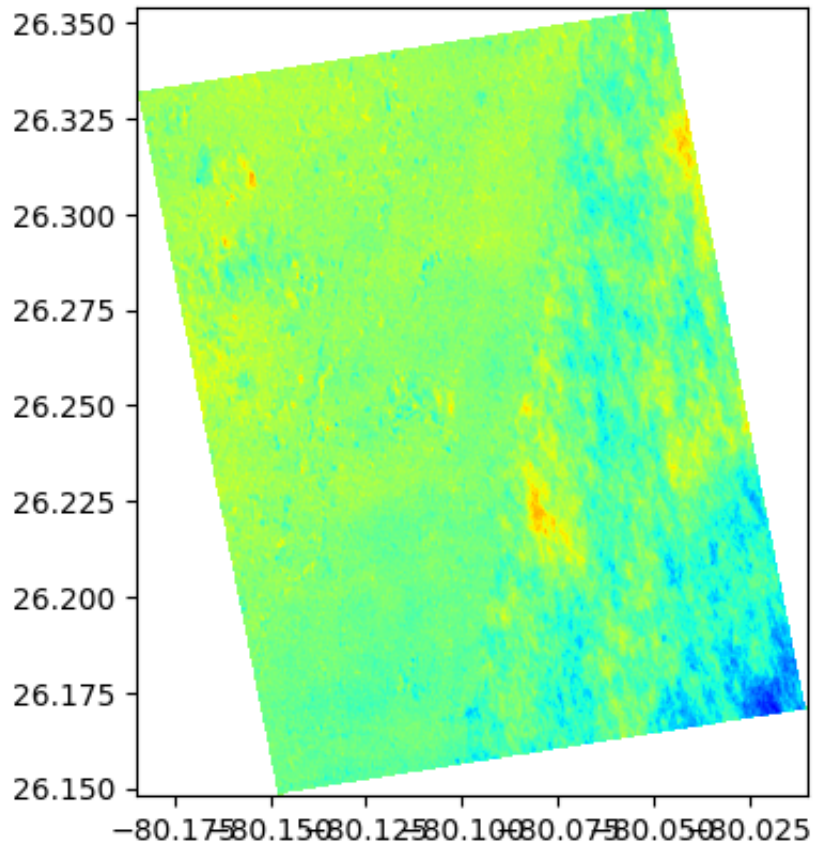
In [4]: # Open the .h5 file
with h5py.File(h5_file, 'r') as hf:
    # Assuming the velocity dataset is stored in the root of the file
    velocity_data = hf['velocity'][:]

    # Get the dimensions of the velocity dataset
    rows, cols = velocity_data.shape

    # Set the georeferencing information
    top_left_lon = -80.18489754140701
    top_left_lat = 26.35415646839858
    pixel_size_lon = (80.18489754140701 - 80.0100473802985) / cols
    pixel_size_lat = (26.35415646839858 - 26.147958354113076) / rows
    transform = from_origin(top_left_lon, top_left_lat, pixel_size_lon, pixel_size_lat)

    # Create a new GeoTIFF file
    with rasterio.open(output_geotiff, 'w', driver='GTiff', height=rows, width=cols,
                       transform=transform) as dst:
        # Write the velocity data to the GeoTIFF file
        for i in range(3):
            dst.write(velocity_data, i+1)

In [5]: from rasterio.plot import show
# Open the GeoTIFF file for visualization
with rasterio.open(output_geotiff) as src:
    # Display the colored velocity map
    show(src, cmap='jet')
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In []: