

remove_distortion_from_edt

December 23, 2015

1 Remove Distortion from an edi

```
In [37]: %matplotlib inline
import matplotlib.pyplot as plt
plt.rcParams['savefig.dpi'] = 300
```

```
In [19]: import mtpy.core.mt as mt
```

1.1 Input .edi file name

```
In [20]: edi_fn = r"c:\Users\jrpeacock\Documents\GitHub\mtpy\examples\data\edi_files\pb40c.edi"
```

```
In [21]: mt_obj = mt.MT(edi_fn)
```

...nulled all attributes of current MTedi.Edi instance.

reading in Edi file: c:\Users\jrpeacock\Documents\GitHub\mtpy\examples\data\edi_files\pb40c.edi

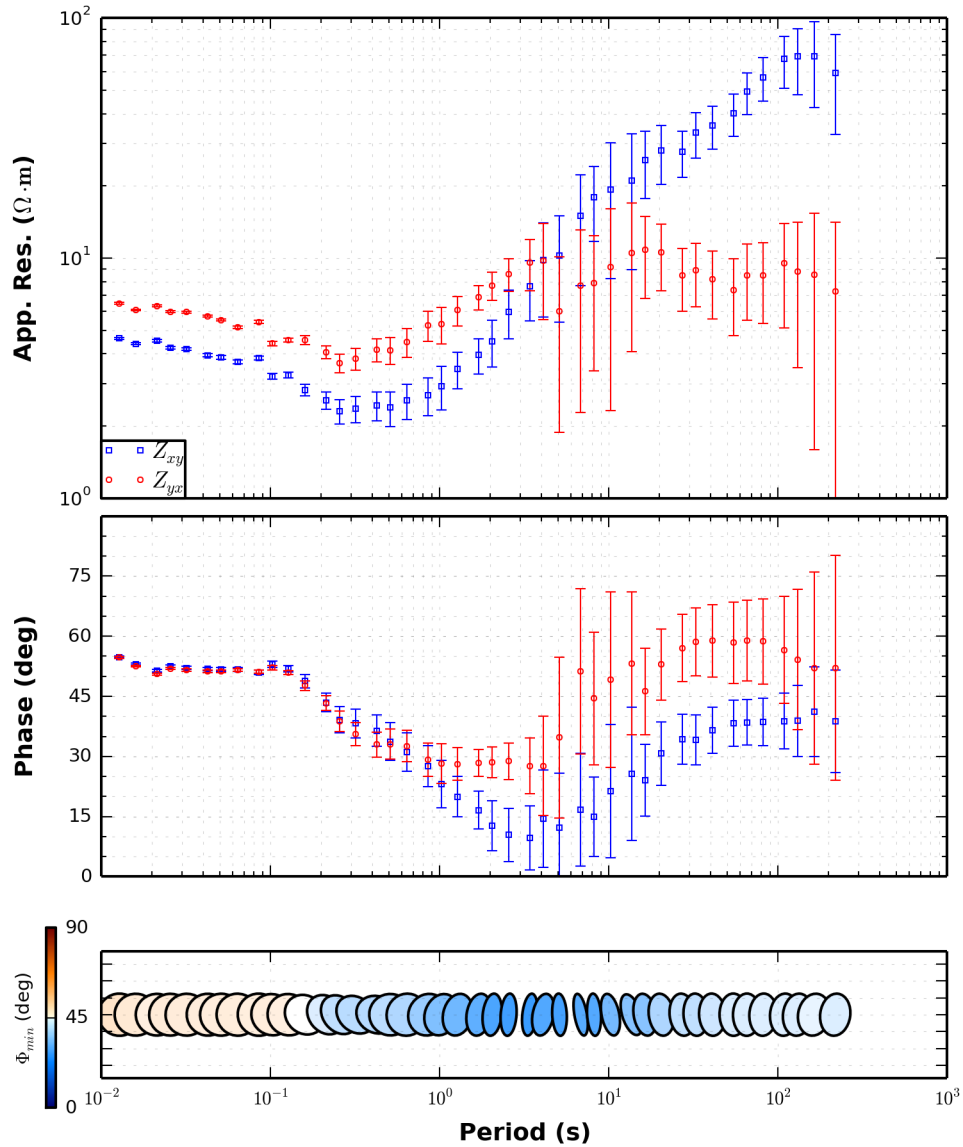
1.2 Plot MT response

```
In [38]: mt_plot = mt_obj.plot_mt_response(plot_pt='y')
```

...nulled all attributes of current MTedi.Edi instance.

reading in Edi file: c:\Users\jrpeacock\Documents\GitHub\mtpy\examples\data\edi_files\pb40c.edi

pb40



In [23]: `help(mt_obj.remove_distortion)`

Help on method `remove_distortion` in module `mtpy.core.mt`:

`remove_distortion(self)` method of `mtpy.core.mt.MT` instance
 remove distortion following Bibby et al. [2005].

if you want to write a new edi file with distortion removed you can do this by:

```
>>> import mtpy.core.mt as mt
>>> mt1 = mt.MT(fn=r"/home/mt/edi_files/mt01.edi")
```

```
>>> D, new_z = mt1.remove_distortion()
>>> mt1.write_edt_file(new_fn=r"/home/mt/edt_files/mt01_dr.edt",
```

1.3 Remove distortion following Bibby et al. (2005)

```
In [24]: distortion, new_z = mt_obj.remove_distortion()
         print distortion
         mt_obj.write_edt_file(new_fn=r"c:\Users\jrpeacock\Documents\GitHub\mtpy\examples\data\edt_files\pb40c_dr.edt",
                               new_Z=new_z)

[[ 0.91775899  0.07133161]
 [-0.01108883  1.08875933]]
```

1.4 Plot new MT response

```
In [25]: mt_obj_dr = mt.MT(r"c:\Users\jrpeacock\Documents\GitHub\mtpy\examples\data\edt_files\pb40c_dr.edt",
                             mt_plot_dr = mt_obj_dr.plot_mt_response(plot_pt='y'))

...nulled all attributes of current MTedi.Edt instance.
reading in Edt file: c:\Users\jrpeacock\Documents\GitHub\mtpy\examples\data\edt_files\pb40c_dr.edt
...nulled all attributes of current MTedi.Edt instance.
reading in Edt file: c:\Users\jrpeacock\Documents\GitHub\mtpy\examples\data\edt_files\pb40c_dr.edt
```

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