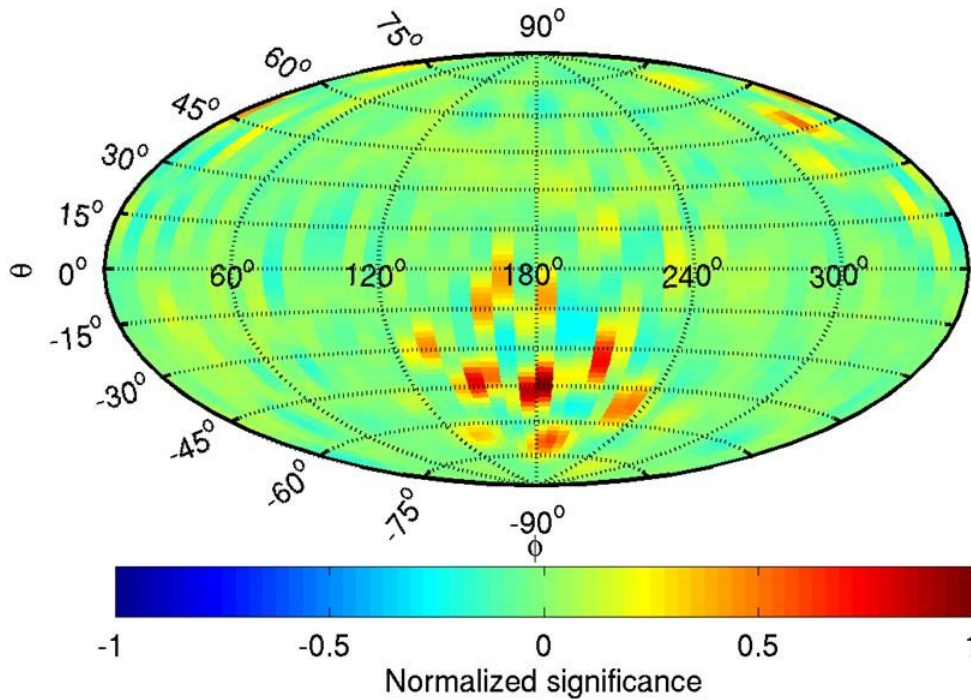# Frequency and Time Average Tests

Noah Bittermann

Test 25

1 source, radiometer, 4 stations

ndets = 4;   detloc=

235.5845 225.6078 255.5607
225.6732 297.7716 134.9524
537.5434 983.3267 439.5840
989.0877   89.1858 175.5073

(theta, phi) = (47.8171, 175.3984);
Broadband source; f_analyse = 5

Constant Parameters for Frequency Band Tests

All tests have the following parameters:

P-wave recovery only

Detector locations (in meters):
235.5845 225.6078 255.5607
225.6732 297.7716 134.9524
537.5434 983.3267 439.5840
989.0877 89.1858 175.5073

(theta, phi) = (47.8171, 175.3984)
Broadband source
Amplitude = 10 m

For the same set of data, recovery was done at many different frequencies. The resulting maps were added together.
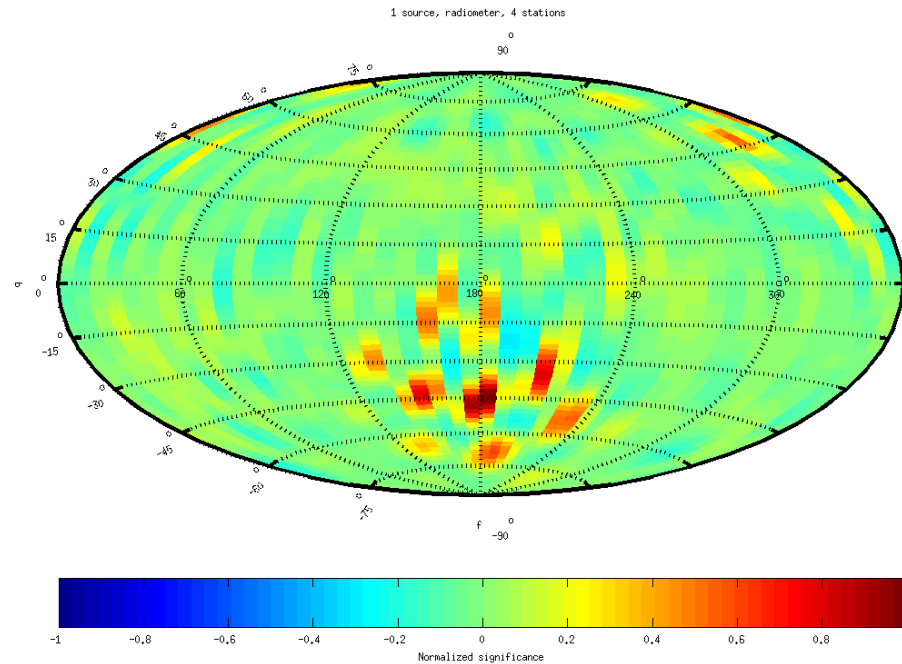
****linspace refers to the matlab command, so linspace(1,5,30) is a list of 30 evenly spaced numbers between 1 and 5 including both of those numbers.
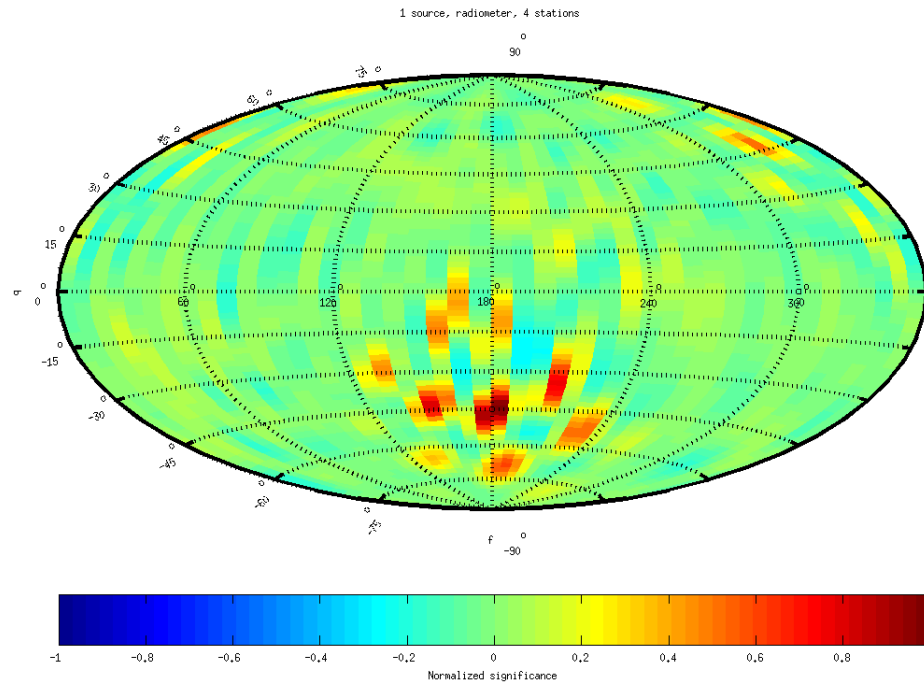
newfreqbandtest1

1 source, radiometer, 4 stations
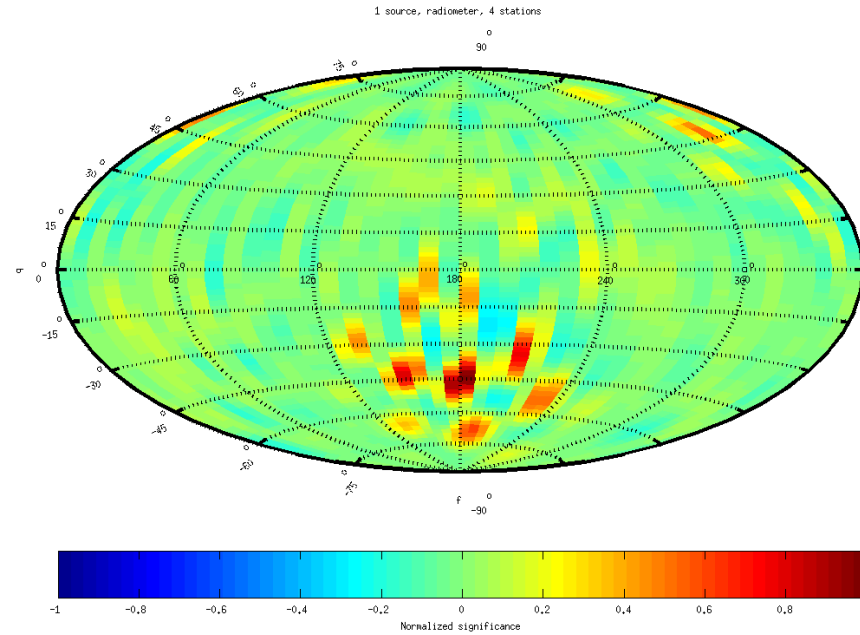
F_analyse = [5, 5.02] Hz

newfreqbandtest2

F_analyse = [5, 5.02, 5.04] Hz

newfreqbandtest3

1 source, radiometer, 4 stations

Normalized significance

F_analyse = linspace(4.95, 5.05, 15) Hz

newfreqbandtest4

1 source, radiometer, 4 stations

Normalized significance
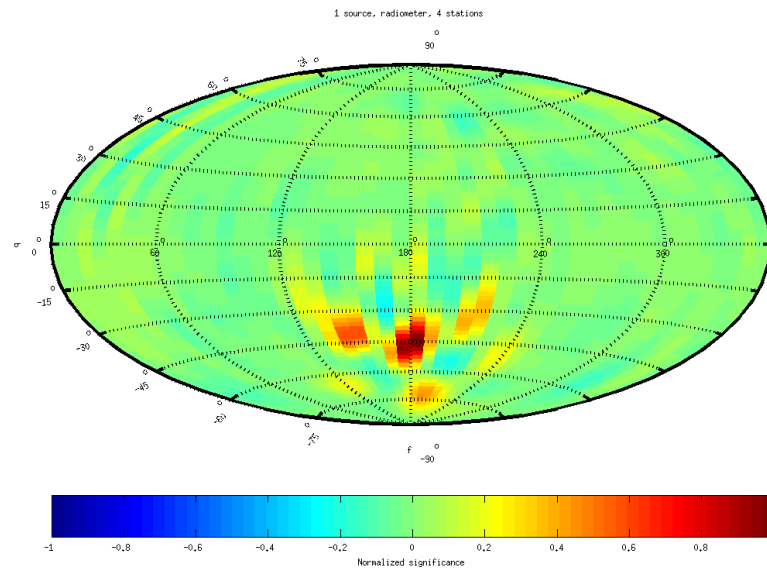
F_analyse = linspace(3, 5, 15) Hz

newfreqbandtest5

1 source, radiometer, 4 stations

Normalized significance
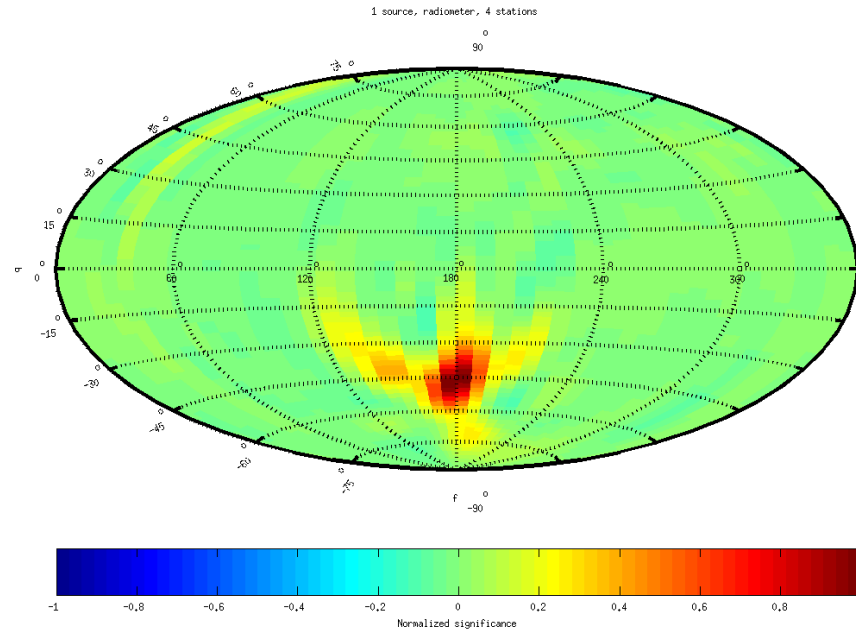
F_analyse = linspace(1, 5, 30) Hz

newfreqbandtest6

1 source, radiometer, 4 stations

Normalized significance
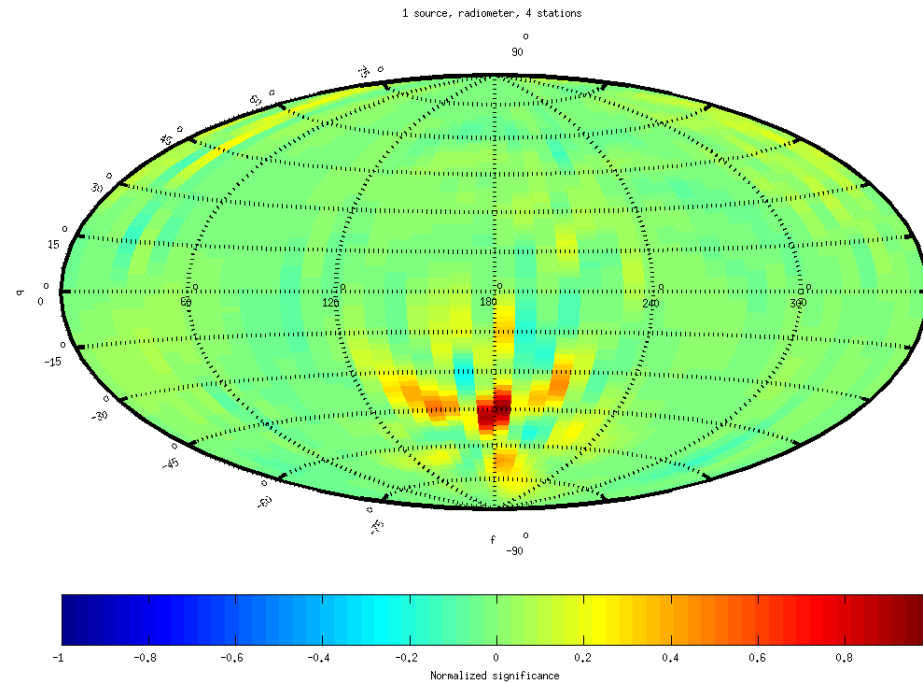
F_analyse = linspace(3, 7, 30) Hz
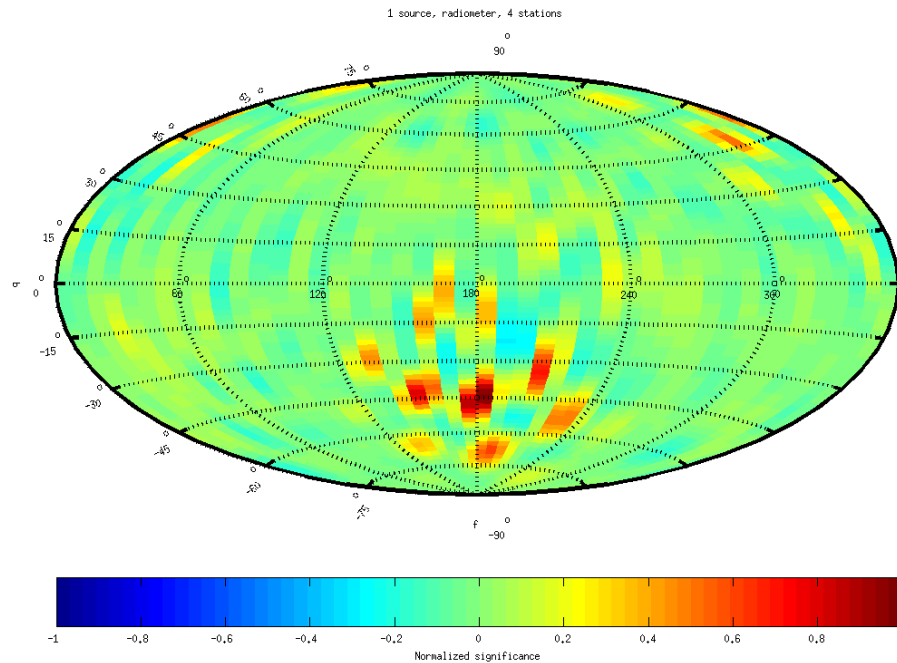
Constant Parameters for Time Average Tests

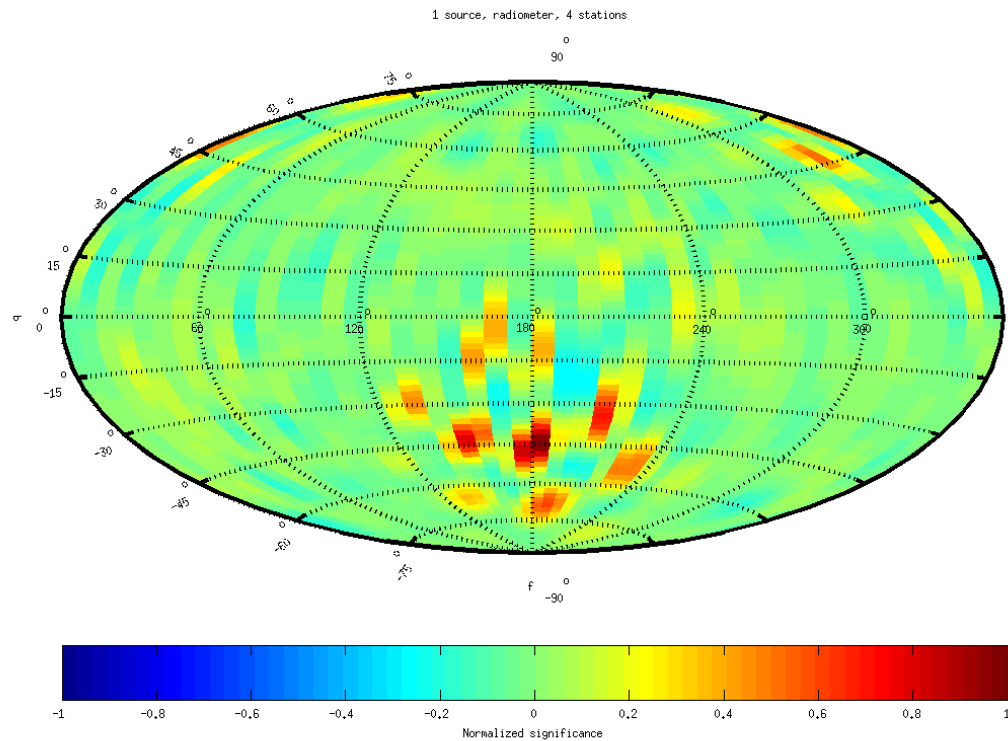Everything is the same as before, except

F_analyse = 5 Hz

Multiple sets of broadband data were generated using the same parameters. Recovery was done at one frequency, and the resulting maps were added together.

newtimeavetest1

1 source, radiometer, 4 stations
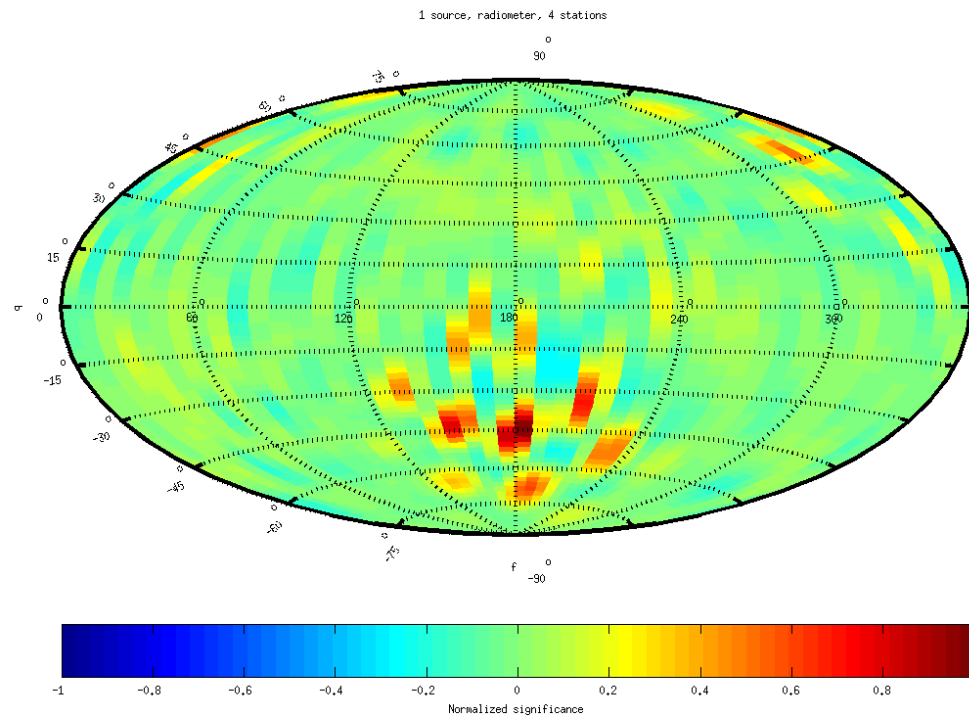
Normalized significance

Number of Trials = 4; time per trial = 128 seconds

newtimeavetest2

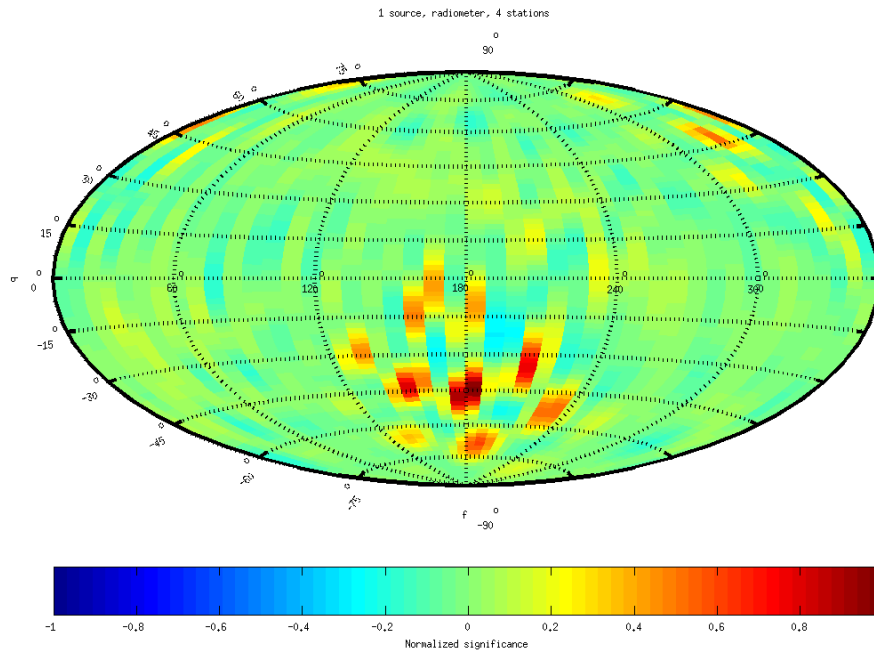Number of Trials = 10; time per trial =
128 seconds

newtimeavetest3

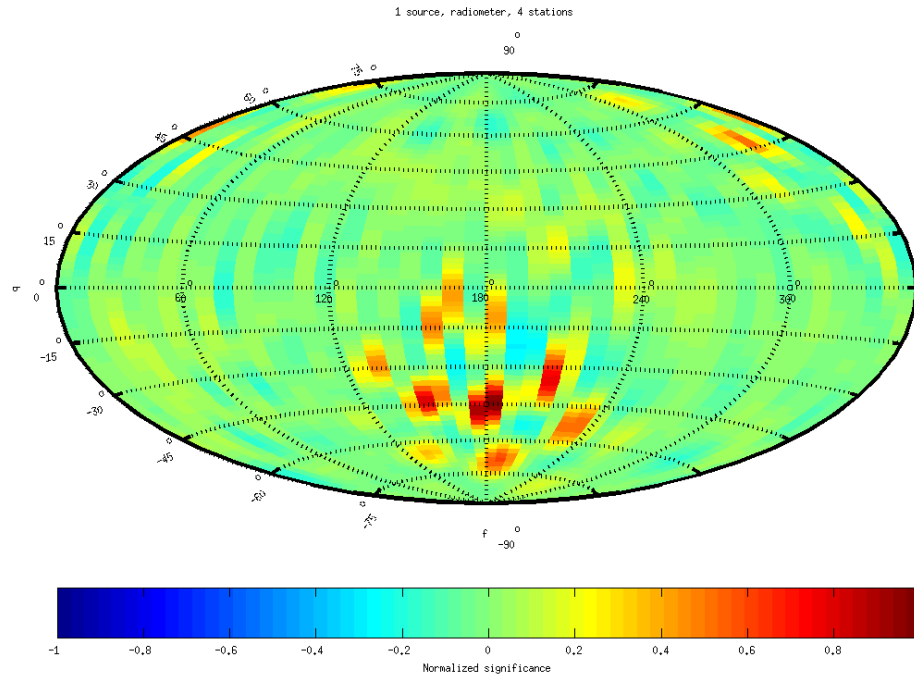Number of Trials = 20; time per trial = 128 seconds

newtimeavetest4

1 source, radiometer, 4 stations

Normalized significance

Number of Trials = 24; time per trial = 1 hour

newtimeavetest5

1 source, radiometer, 4 stations

Number of Trials = 5*24; time per trial = 1 hour