These utilities convert coordinates from MNI to Talairach space, and vice versa, from Talairach to MNI space.

The user must create a plain text file.

First line must declare the number of points (N).

The following N lines must have three numbers and an optional label separated by space or tab characters. An example without label for the second line in a file is:

**1 -47 19**

An example with label for the second line in a file is:

**1 -47 19 Posterior cingulate**

The contents of an example file with Talairach coordinates is:

**58**

**1 -47 19 Posterior cingulate**

**1 52 23**

**-49 -56 24**

**49 -57 25**

**-18 30 48**

**22 26 49**

**-60 -14 -3**

**59 -14 -6**

**4 -7 7**

**-14 -26 10**

**-40 8 3**

**42 8 1**

**-42 38 23**

**40 40 16**

**-54 12 8**

**55 14 8**

**1 4 42**

**-59 -21 26**

**58 -23 28**

**-22 -65 44**

**19 -67 46**

**-35 -39 42**

**35 -39 43**

**-7 -49 2**

**5 -49 6**

**-1 52 12**

**-40 -59 44**

**45 -48 46**

**-42 27 33**

**45 29 33**

**-3 -67 36**

**-40 51 5**

**42 50 8**

**-33 21 5**

**34 20 5**

**1 -18 11**

**-20 -68 -14**

**23 -68 -13**

**2 -64 -4**

**-46 23 12**

**12 -81 27**

**-42 -67 4**

**42 -68 -4**

**10 -13 9**

**-52 -21 18**

**51 -25 19**

**-55 0 7**

**58 0 5**

**45 39 12**

**0 -14 10**

**-1 -15 52**

**-20 -15 53**

**21 -15 54**

**-29 -36 52**

**29 -34 52**

**5 45 11**

**1 -2 -9**

**2 -71 -21**

In this example, the second line has a label, while the other lines do not. The labels are optional.

These example coordinates, allegedly corresponding to the Talairach space, are taken from the paper (supplementary information):

Mantini D, Perrucci MG, Del Gratta C, Romani GL, Corbetta M (2007) Electrophysiological signatures of resting state networks in the human brain. Proc Natl Acad Sci U S A 104:13170–13175.

[http://www.pnas.org/content/104/32/13170.full]

The converted coordinates will be saved to a text file, with identical structure as the input file contents, in the same folder as the input file, but with extension:

“-MNI.txt” when converting to MNI

“-Talairach.txt” when converting Talairach

Using the example above, upon conversion from Talairach to MNI, the MNI coordinates file produced has extension “-MNI.txt”:

**58**

**1 -49 18 Posterior cingulate**

**1 52 28**

**-49 -59 23**

**49 -60 24**

**-18 28 54**

**22 24 55**

**-61 -14 -4**

**60 -14 -8**

**4 -8 7**

**-14 -27 9**

**-40 8 4**

**42 8 2**

**-42 38 27**

**40 40 20**

**-55 12 9**

**56 14 9**

**1 2 46**

**-60 -23 27**

**59 -25 29**

**-22 -69 44**

**19 -71 46**

**-35 -42 43**

**35 -42 45**

**-7 -51 -1**

**5 -51 4**

**-1 53 16**

**-40 -63 45**

**45 -52 47**

**-42 26 37**

**45 28 37**

**-3 -71 35**

**-40 52 8**

**42 51 11**

**-33 21 7**

**34 20 7**

**1 -19 11**

**-20 -69 -21**

**23 -69 -20**

**2 -66 -9**

**-46 23 14**

**12 -85 25**

**-42 -69 1**

**42 -70 -9**

**10 -14 9**

**-53 -23 18**

**52 -27 19**

**-56 0 8**

**59 0 5**

**45 40 15**

**0 -15 10**

**-1 -18 56**

**-20 -18 57**

**21 -18 58**

**-29 -40 54**

**29 -38 55**

**5 46 14**

**1 -2 -11**

**2 -72 -29**