Archival supplement to Stimulus Dependence of Gamma Oscillations in Human Visual Cortex.
D. Hermes, K.J. Miller, B.A. Wandell, J. Winawer

The documents in this site constitute a permanent, archival supplement to the published paper,

Stimulus Dependence of Gamma Oscillations in Human Visual Cortex
D. Hermes, K.J. Miller, B.A. Wandell, J. Winawer
Cerebral Cortex, 2014 doi:10.1093/cercor/bhu091

The [original publication](#) contains [supplementary material](#) that include [supplementary figures](#), as well as [data and code](#) for reproducing the main figures in the paper.

Please cite this archive publication as

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This site contains additional data and code, and answers to some questions about the paper, specifically:

a) Response_To_Queries_About_HMWW.pdf: This document contains several questions we were asked about our manuscript by a reader, and the answers to these questions, including 8 new figures based on data from the original paper.

b) Data_And_Code_Supplement.zip: Data and code to reproduce Supplementary Figure 3 from the publication, described below.

Looking forward: In the interest of reproducibility of computational methods in neuroscience research, we believe it will be to the advantage of all groups with results on this topic to make their data sets and analysis code publicly available.

NOTES ON DATA AND CODE (after unzipping Data_And_Code_Supplement.zip)

All code in this repository is written in MATLAB (Mathworks) and, together with the included data, can be used to reproduce the ECoG data panels from Supplemental Figure S3.

Code and data are provided as part of the goal of ensuring that computational methods are reproducible by other researchers.

DEPENDENCIES

Matlab toolboxes needed:
- optimization
- statistics
- signal processing

CONTENTS

1. Master script that generates Supplemental Figure S3
   - make_SuppFigure3.m

2. Support functions called by the main scripts, originally from Kendrick Kay's Github repository (https://github.com/kendrickkay/knkutils)
   - choose.m
   - flatten.m
   - makeimagestack.m
   - mod2.m
   - normalizerange.m
   - splitmatrix.m

3. Matlab data file ('*.mat') needed for plots
   - example_V1_electrode_faceshouses.mat, containing 'out' structure with the following fields

```
      spectrum: [72x201 double]      average spectra, 72 images, 201 frequencies
   spectrum_ci: [72x201x2 double]    95% confidence interval, 72 images, 201 frequencies
  spectrum_fit: [72x201 double]      fitted spectrum, 72 images, 201 frequencies
 spectrum_base: [1x201 double]       baseline spectrum, 201 frequencies
             f: [201x1 double]       frequencies
         image: [700x700x72 double]  72 images
     image_prf: [700x700x72 double]  72 images
```

All spectra and images are ordered by increasing estimates in gamma oscillations.