This repository (https://zenodo.org/uploads/13328099) accompanies the article "The Non-Opponent Nature of Colour Afterimages" (Witzel, 2025, *Communications Psychology*). This repository is linked to a github repository (https://github.com/christophWit/The-Non-Opponent-Nature-of-Colour-Afterimages), where the Matlab files contained in the zip folder here. The explanations about how to use those files are provided in github and provided in the document "How2MatlabCode" here. Additional files provided here:

ANIMATIONS:

The four animations that are part of the article are uploaded here. An explanation about how to use them is provided in the supplementary material of the article.

SLIDES:

(1) Stimulus displays and animations are also provided as ppt-slides (*Slides with Animations.pptx*).

(2) The slides from my talk at ECVP 2025 in Mainz are also provided.

DATA FILES:

Data is available in Matlab (.mat) and Excel (.xlsx) format. In Matlab, the files *rawdata.mat* and *aggdata.mat* contain the raw data and the aggregated data, respectively. They are the same as those provided in Github and in the zip-file. Data from difference experiments and sub-experiments is separated by different variables in Matlab *Structure* format, *Exp1a*, *Exp1b*, etc, and AGG1a, AGG1b, etc. For rawdata.mat, different variables of a structure contain information about participants (pps), stimuli (stimuli), afterimage data (main), and other data (e.g., non-illusory matches in *discrim* and typical colours in *typi* in Exp1a). Data is organised as a list in table-format.

The Excel files provide only the raw data. Each table (Experiment1, Experiment2, Experiment3, and Naming and Munsell chips) contains the data for a whole experiment as described in the main article, including the subversions of that experiment. *Naming* and *Munsell chips* provide the naming data and the Munsell chips described in the article. Apart from this, the data is organised in the same way as the Matlab data.

DATA ORGANISATION

Raw data involves the following main variables in columns:

pp = Participant nr; the participant label can be retrieved from the "pps" table.

ss = Experimental session.

bk = Block within the session (if there are several blocks per session, e.g., in Exp1a); note that the blocks of a participant be distributed across several conditions/experiments.

trial = trial number within the block.

col = inducer colour nr; the coordinates of the inducer may be found in the "stimuli" variable.

adaptLuv or *inducer* = The colour coordinates of the inducer. They provide lightness, hue and chroma in Experiment 1, and lightness, opponent axes (u*, v*), hue and chroma in Experiments 2-3.

pos = refers to the position of the wedge along the ring of comparison colours in Experiment 1; as the position was randomised, it is not relevant for the analyses.

resp and *resp_hue* = refers to the comparison colour chosen in Experiment1; resp gives the number of the selected comparison, resp_hue the corresponding hue of the selected comparison.

rt = response time in seconds.

adj_Luv = These are the coordinates of the adjusted colour in Experiments 2-3 instead of the responses resp and resp_hue in Experiment 1. Coordinates are provided as for the Inducer: (1) Lightness, (2) u*, (3) u*, (4) hue, and (5) chroma.