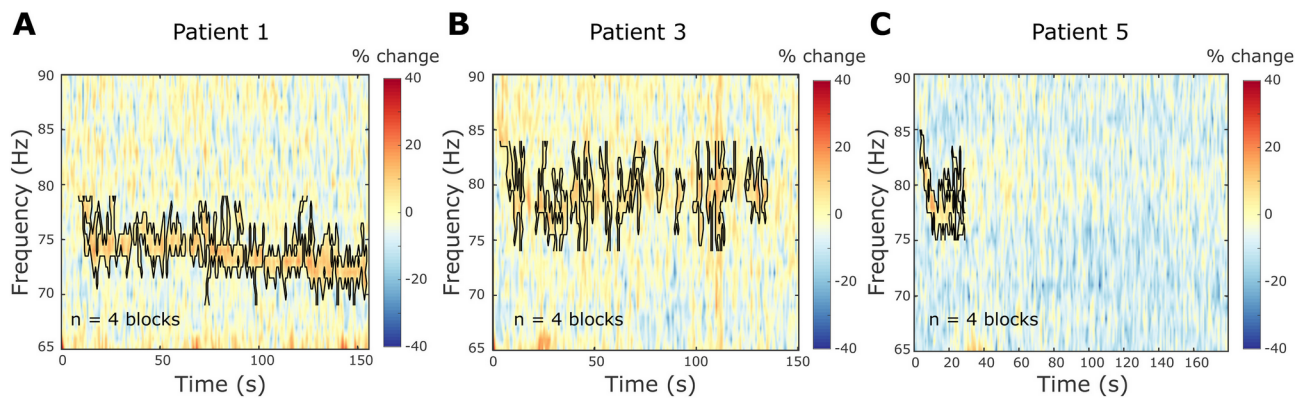


## Supplementary figures



**Supplementary Fig. 1.** Promotion of FTG during DBS is greater than the promotion of broadband gamma activity. Averaged percentage change of power estimates between 65 and 90 Hz during DBS blocks with respect to a 50-s baseline period prior to DBS start. 4 DBS blocks of slightly different durations were recorded in each patient. Power changes were averaged across blocks and spectrograms are shown for the duration of the shortest block. The FTG feature is surrounded by a black contour (see Methods).

**Supplementary Video 1: FTG dynamics during and after DBS.** *Left:* Time-frequency spectrogram of a 180 Hz DBS blocks (see Figure 6A). Dotted vertical lines denote onset and offset of stimulation. Moving black box contains a 10-second window which was used to compute the power spectrum on the right. *Right:* Flattened and z-scored power spectrum of the respective reference box from the left. Black horizontal line denotes the significance level at 2 standard deviations above the mean. Black arrowhead tracks the significant FTG peak.