

## **Whole-scalp EEG mapping of somatosensory evoked potentials in macaque monkeys**

Gindrat Anne-Dominique<sup>1,\*</sup>, Quairiaux Charles<sup>2,3,\*</sup>, Britz Juliane<sup>3,4</sup>, Brunet Denis<sup>3,4</sup>, Lanz Florian<sup>1</sup>, Michel Christoph M.<sup>3,4,&</sup> and Rouiller Eric M.<sup>1,&</sup>

<sup>1</sup> Domain of Physiology, Department of Medicine, Faculty of Sciences and Fribourg Center for Cognition, University of Fribourg, Chemin du Musée 5, CH-1700 Fribourg, Switzerland.

<sup>2</sup> Faculty of Medicine, Department of Fundamental Neurosciences, University of Geneva, rue Michel-Servet 1, CH-1206 Geneva, Switzerland

<sup>3</sup> Functional Brain Mapping Laboratory, Departments of Clinical and Fundamental Neurosciences, University Medical School, rue Michel-Servet 1, CH-1206 Geneva, Switzerland

<sup>4</sup> EEG Brain Mapping Core, Center for Biomedical Imaging (CIBM), University Hospital and University of Geneva, CH-1211 Geneva, Switzerland

\* Equal first authorship  
& Equal senior authorship

### Correspondence:

Prof. Eric M. Rouiller (same address as above): [eric.rouiller@unifr.ch](mailto:eric.rouiller@unifr.ch), phone:  
+ 41 26 300 86 09

or

Prof. C. Michel (same address as above): [Christoph.Michel@unige.ch](mailto:Christoph.Michel@unige.ch), phone:  
+41 22 379 54 57

**Supplementary Fig. 1 Intraindividual stability of left median nerve SSEPs in Mk-EN.** Colour-scaled voltage maps of each of the 9 individual SSEP recording sessions from different days used to compute the GA shown in Figure 2A, obtained from 7 to 40 msec post-stimulus at 3-msec interval. Same conventions as in Figure 2

**Supplementary Fig. 2 Intraindividual stability of right median nerve SSEPs in Mk-EN.** Colour-scaled voltage maps of each of the 9 individual SSEP recording sessions from different days used to compute the GA shown in Figure 2B, obtained from 7 to 40 msec post-stimulus at 3-msec interval. Same conventions as in Figure 2

**Supplementary Fig. 3 Intraindividual stability of left tibial nerve SSEPs in Mk-EN.** Colour-scaled voltage maps of each of the 9 individual SSEP recording sessions from different days used to compute the GA shown in Figure 4A, obtained from 12 to 45 msec post-stimulus at 3-msec interval. Same conventions as in Figure 2

**Supplementary Fig. 4 Intraindividual stability of right tibial nerve SSEPs in Mk-EN.** Colour-scaled voltage maps of each of the 9 individual SSEP recording sessions from different days used to compute the GA shown in Figure 4B, obtained from 12 to 45 msec post-stimulus at 3-msec interval. Same conventions as in Figure 2

**Supplementary Fig. 5 Interindividual reproducibility of right median nerve SSEPs.** (A) Brainstem component and main cortical component SSEP waveforms after right median nerve stimulation in 5 monkeys: Mk-AT, Mk-BB, Mk-DG, Mk-DI, and Mk-EN, during the first 50 msec following the stimulation. These data were obtained from 1 recording session in each animal. (B) Colour-scaled voltage maps obtained from 7 to 37 msec post-stimulus, at 3-msec interval. Same conventions as in Figures 2 and 5

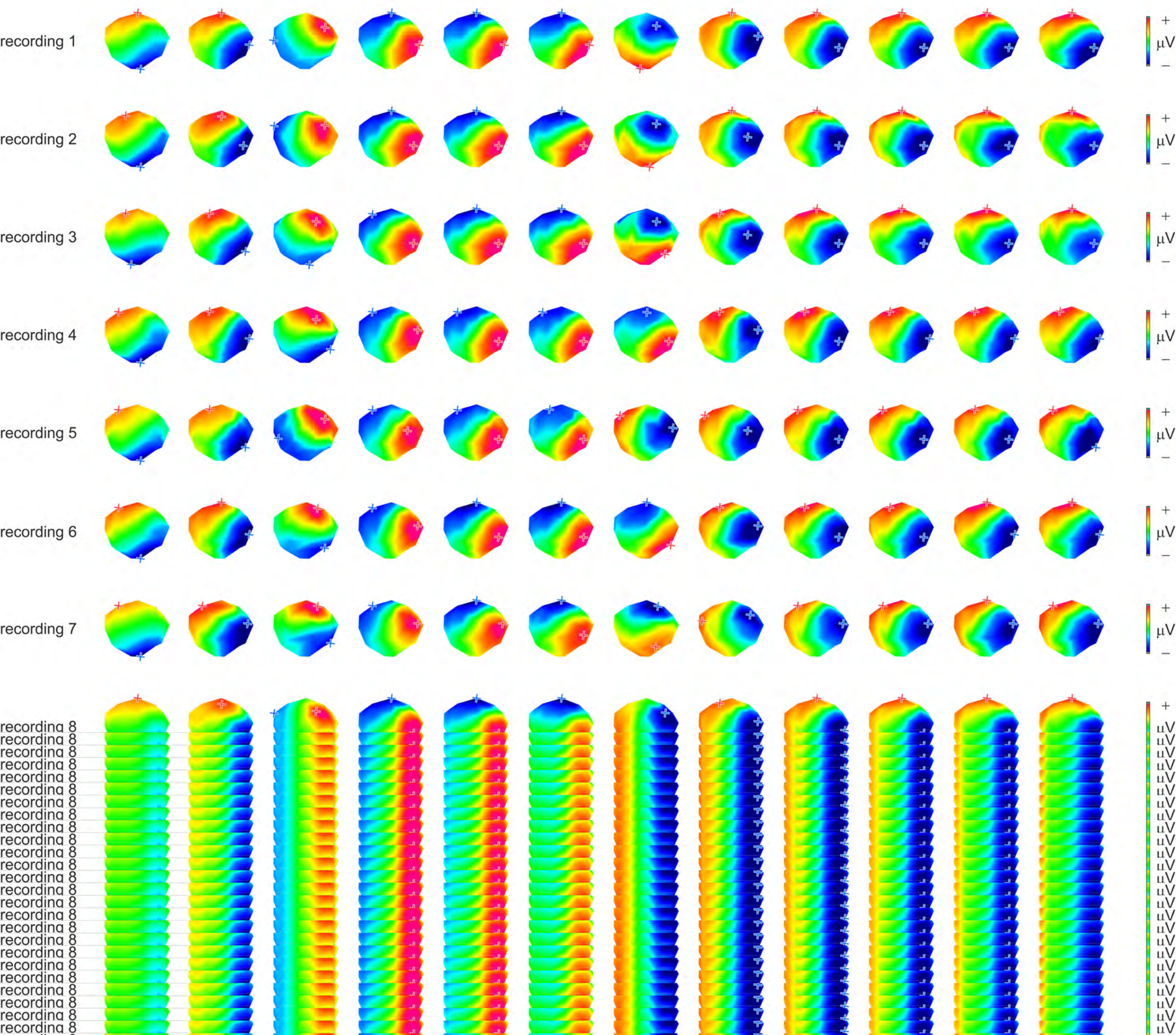
**Supplementary Fig. 6 Interindividual reproducibility of left tibial nerve SSEPs.** (A) Brainstem component and main cortical component SSEP waveforms after left tibial nerve stimulation in 5 monkeys: Mk-AT, Mk-BB, Mk-DG, Mk-DI, and Mk-EN, during the first 60 msec following the stimulation. These data were obtained from 1 recording session in each animal. (B) Colour-scaled voltage maps obtained from 12 to 42 msec post-stimulus, at 3-msec interval. Same conventions as in Figures 2 and 5

**Supplementary Fig. 7 Interindividual reproducibility of right tibial nerve SSEPs.** (A) Brainstem component and main cortical component SSEP waveforms after right tibial nerve stimulation in 5 monkeys: Mk-AT, Mk-BB, Mk-DG, Mk-DI, and Mk-EN, during the first 60 msec following the stimulation. These data were obtained from 1 recording session in each animal. (B) Colour-scaled voltage maps obtained from 12 to 42 msec post-stimulus, at 3-msec interval. Same conventions as in Figures 2 and 5



# Intraindividual stability

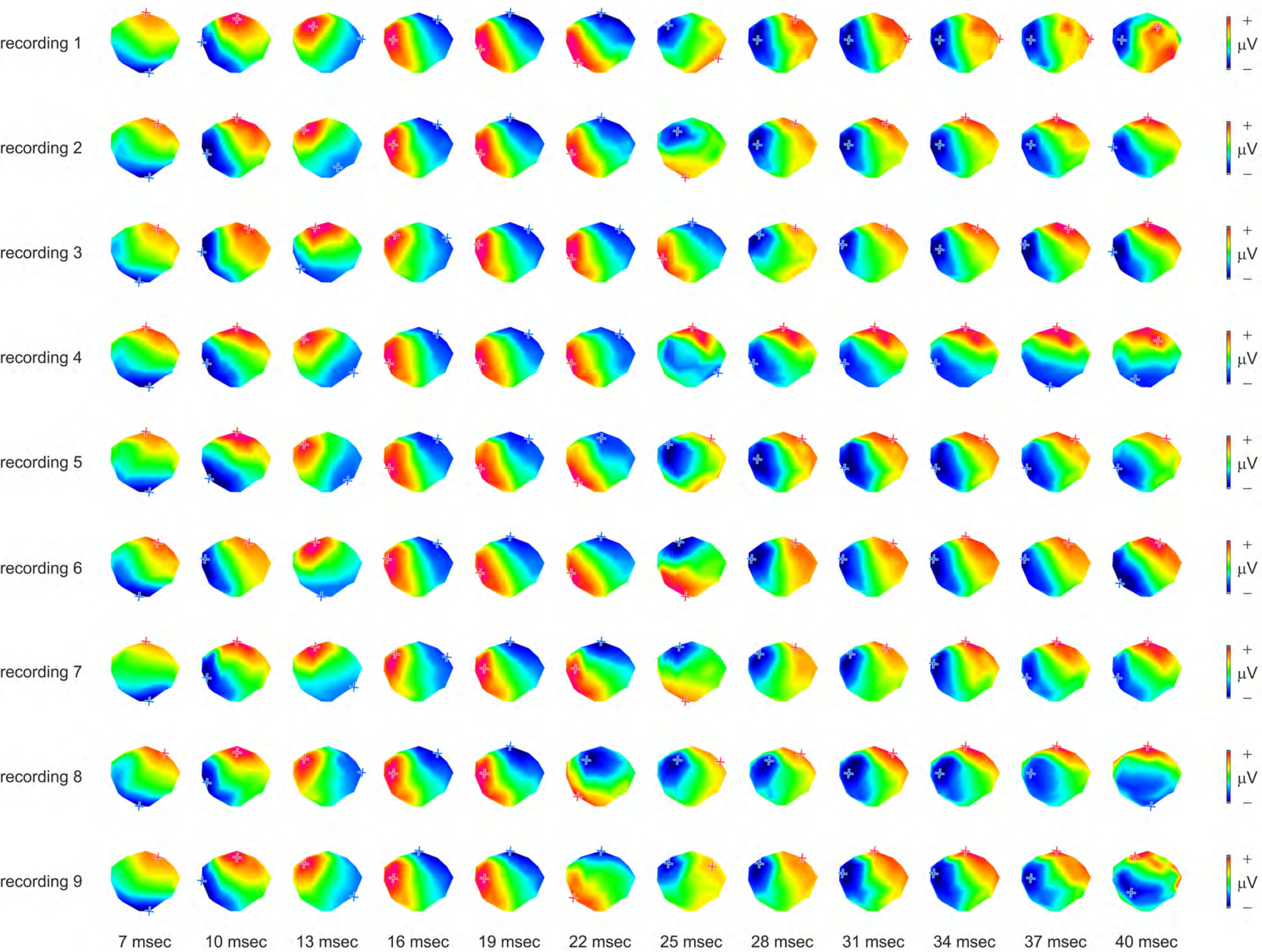
## Left median nerve SSEPs





# Intraindividual stability

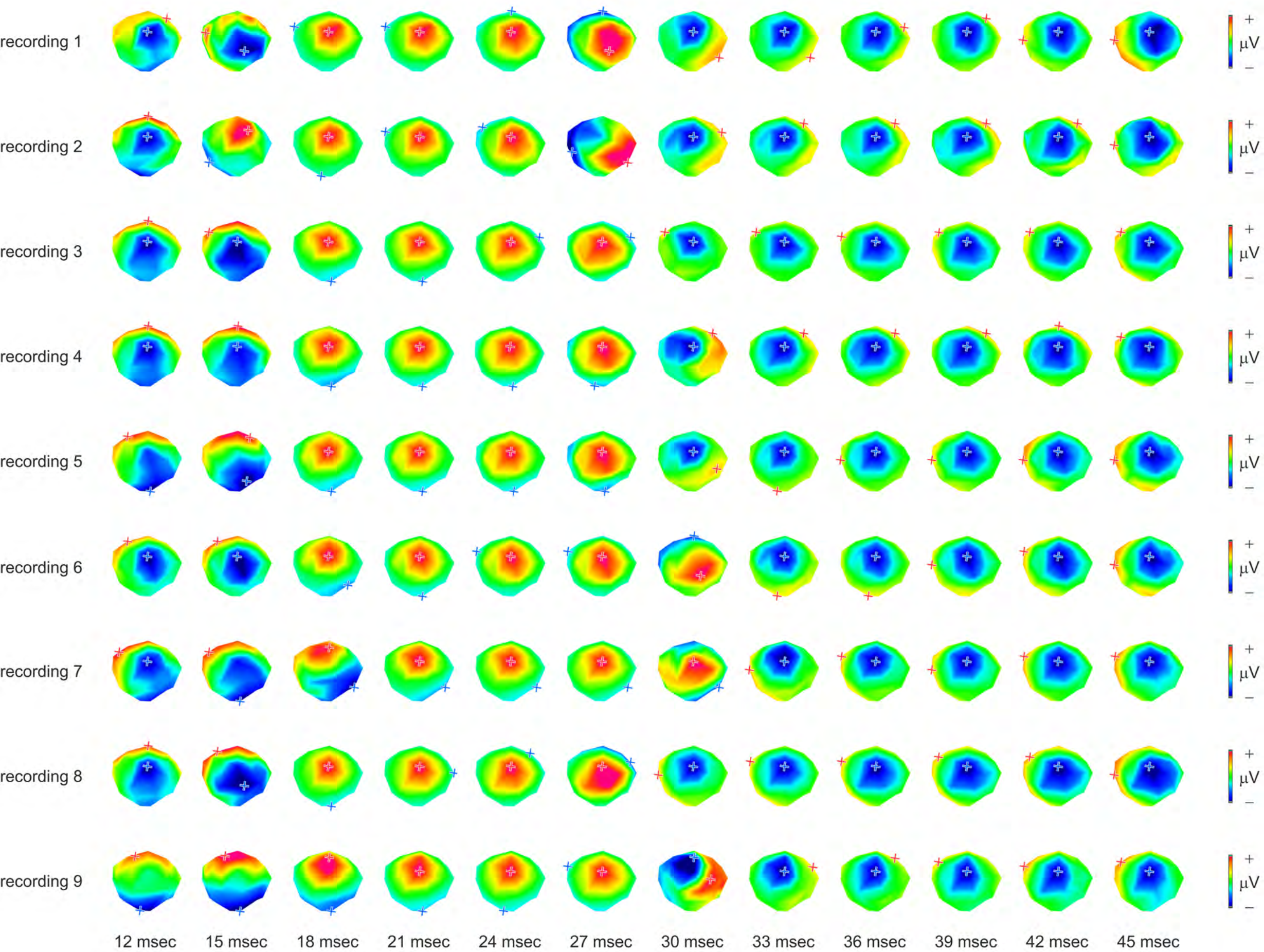
## Right median nerve SSEPs





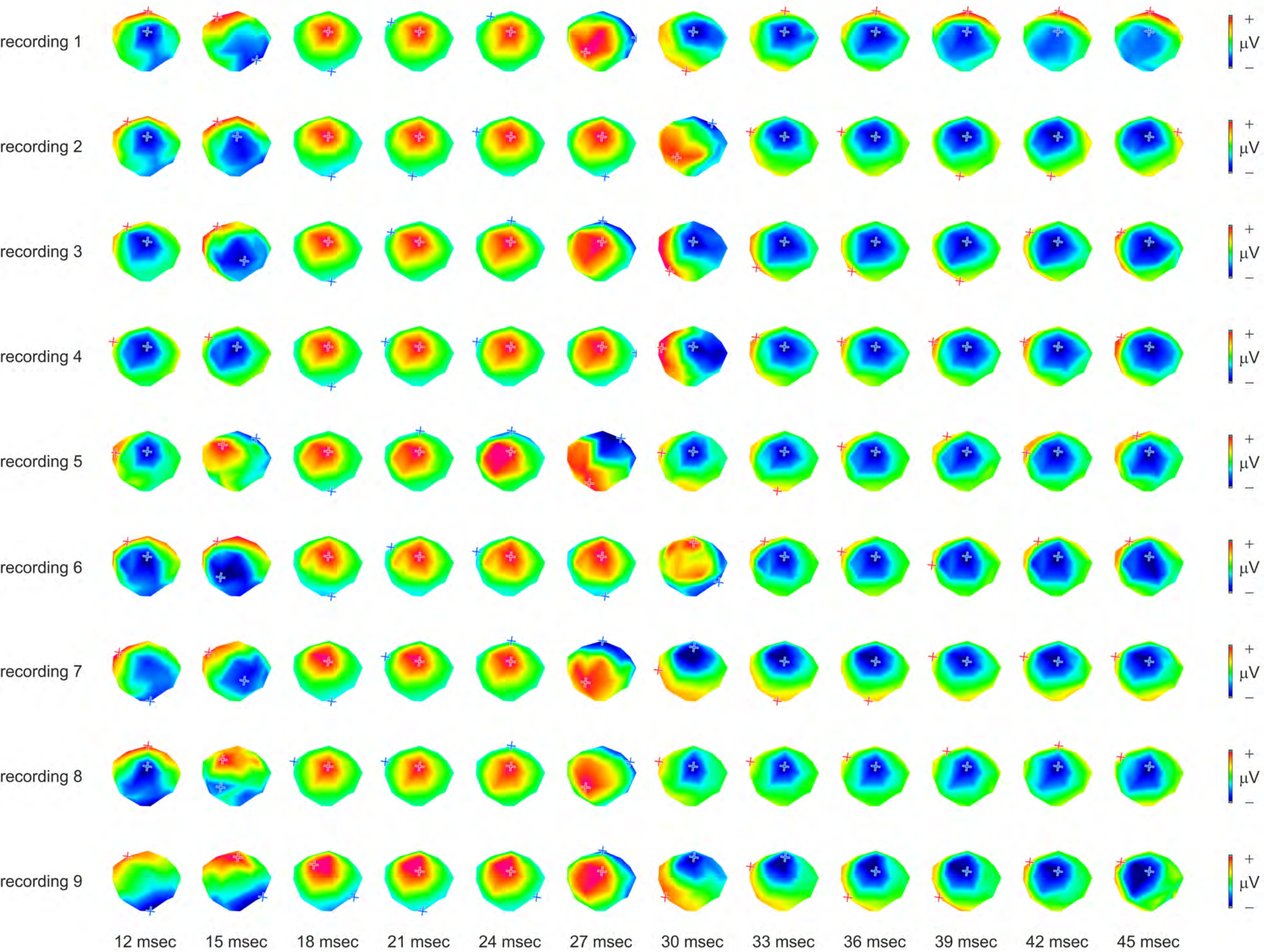
# Intraindividual stability

## Left tibial nerve SSEPs





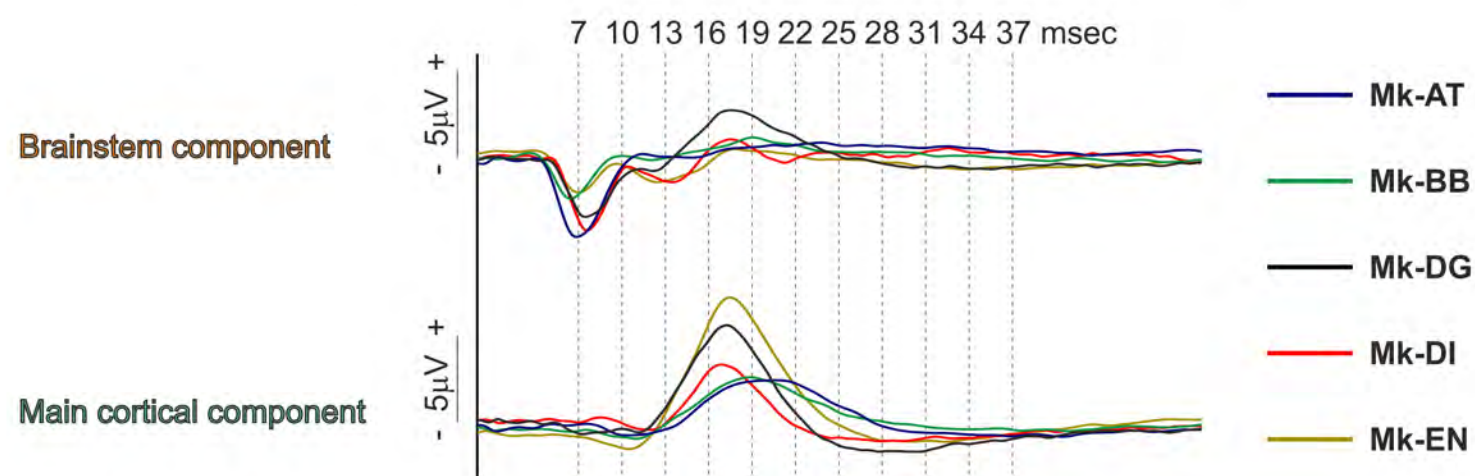
# Intraindividual stability Right tibial nerve SSEPs



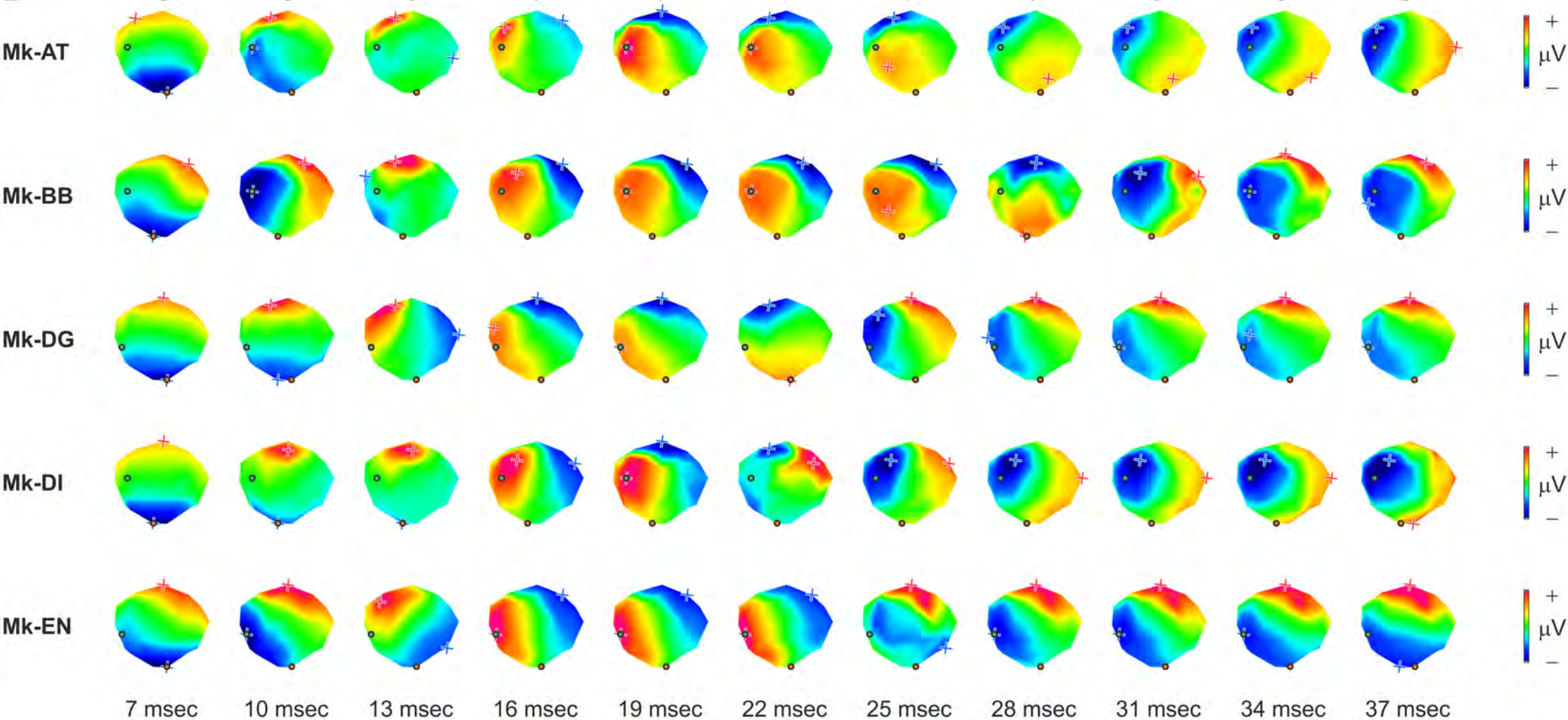


# Interindividual reproducibility Right median nerve SSEPs

**A**

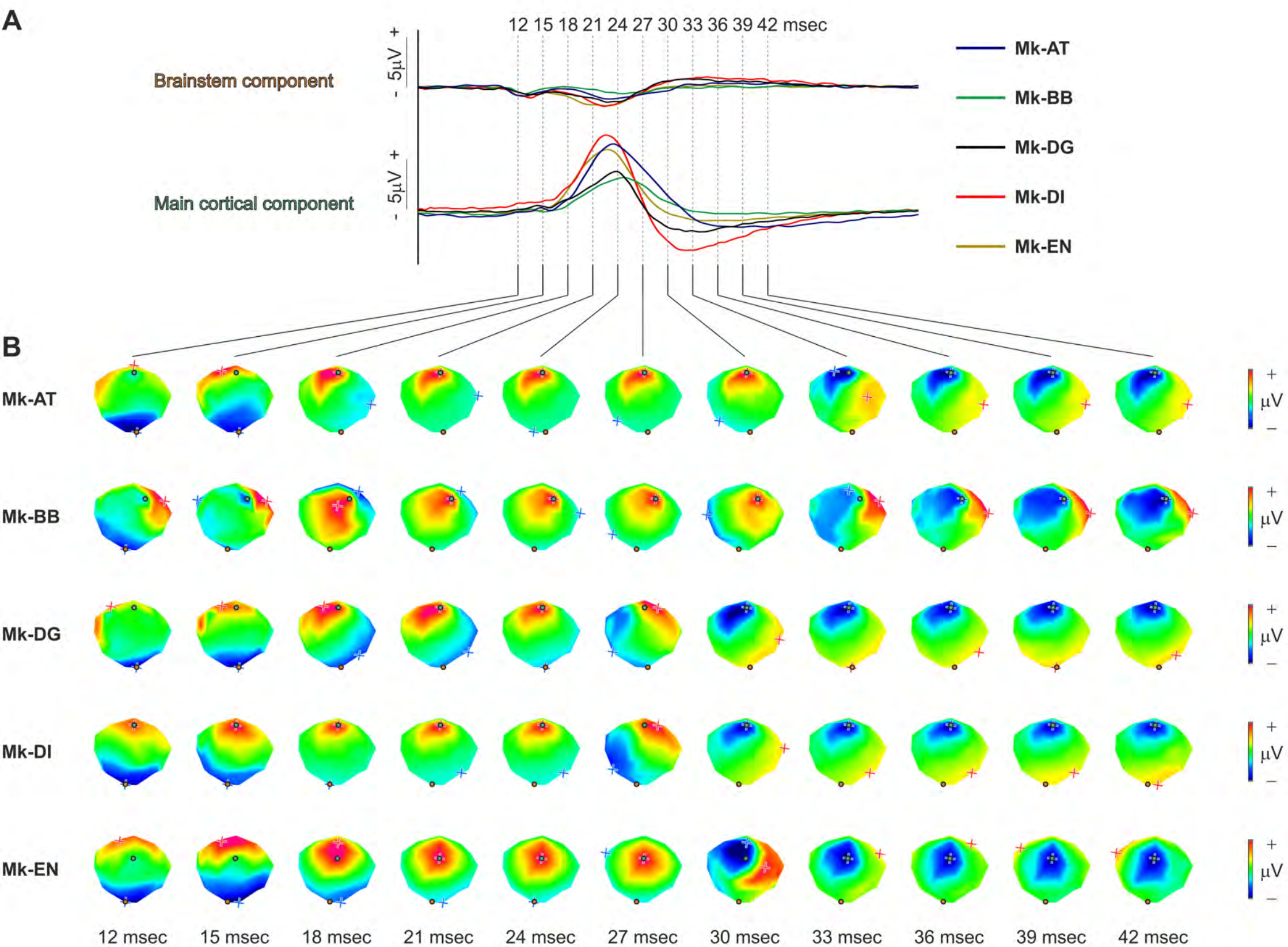


**B**





# Interindividual reproducibility Left tibial nerve SSEPs





# Interindividual reproducibility Right tibial nerve SSEPs

