



Figure 1. Generation of ISA dipole interpolations. (A) Cranial head CT maximum intensity projection after right temporo-occipital sEEG electrode implantation (Patient 5). (B, C) 3D-renderings generated from the cranial CT in (A). (D, E) 10 second sEEG pages capturing a seizure from the patient in (A). Conventional filter settings (LFF: 1Hz, HFF: 70Hz, sensitivity 50uV/mm) are applied in (D) while ISA settings (LFF: off, HFF: 0.1Hz, sensitivity 20uV/mm) are used in (E). (F, G) 70 second EEG pages capturing the same seizure with conventional and ISA filter settings, respectively. The red line in (D)–(G) marks seizure onset. (H) Images from a pre-surgical MRI and a post-sEEG implantation CT image were co-registered to the CT image space. A multi-atlas statistical segmentation procedure was then used (to identify the intracranial cavity, grey matter, white matter and CSF) in conjunction with manual segmentation (to identify stereo-EEG electrodes). ISA dipoles were mapped onto pre-surgical MRI (T1) images for volumetric display using a three-dimensional linear interpolation scheme.