

Fig. S1. Cerebral field potential during a PTZ seizure at time scales of 200 (top), 100 (middle) and 50 (bottom) seconds per horizontal division. Baseline occurs from -260 to -80 seconds. PTZ is applied from -80 seconds to 100 seconds. A seizure begins at 40 seconds and terminates at 200 seconds.

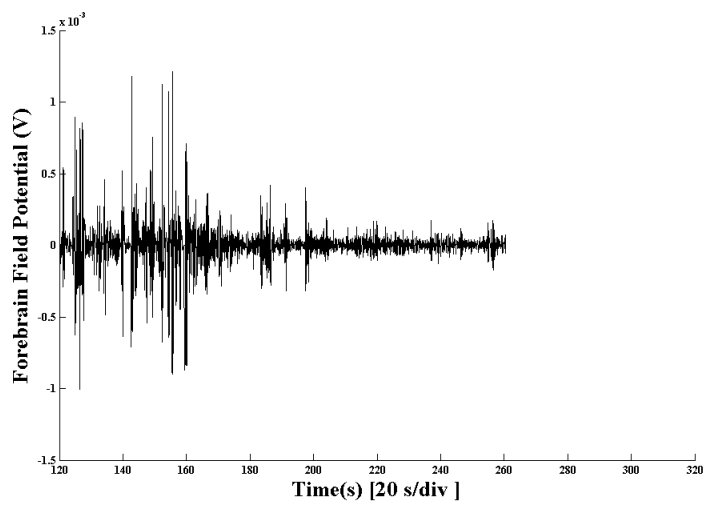
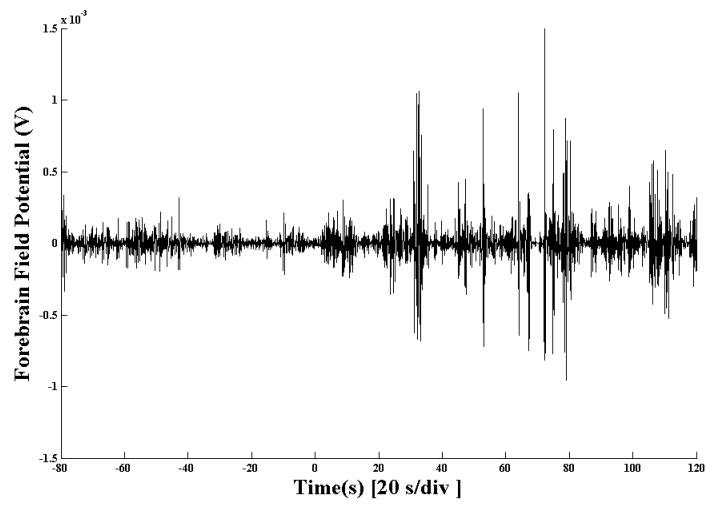
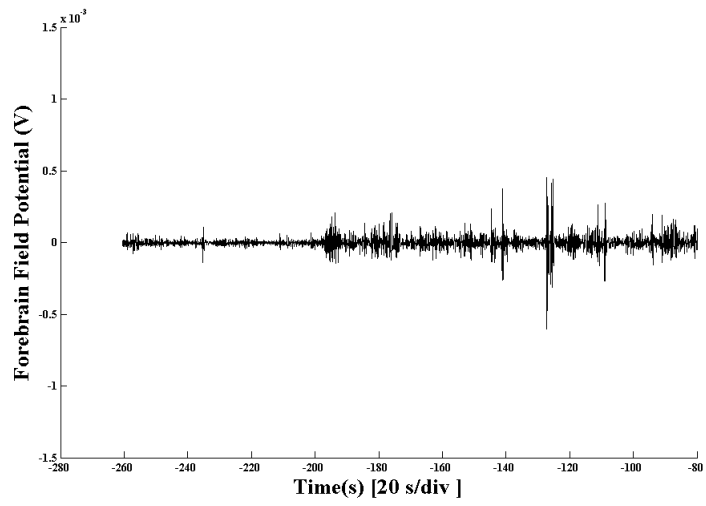


Fig. S2. Cerebral field potential during a PTZ seizure using a horizontal scale of 20 seconds per division.

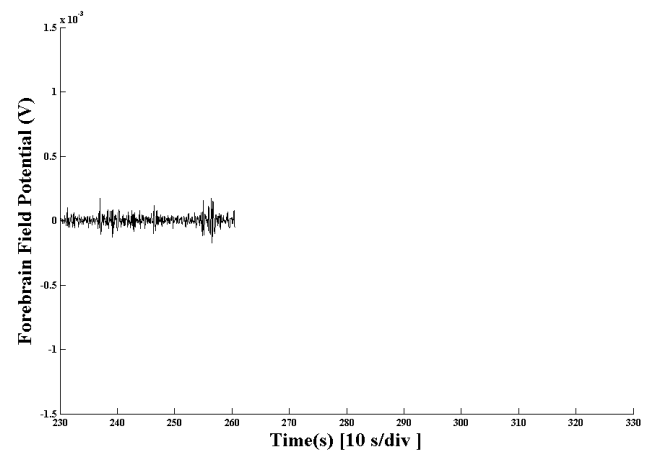
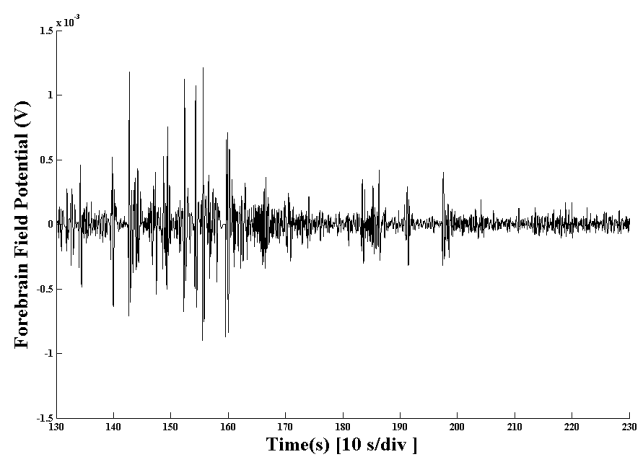
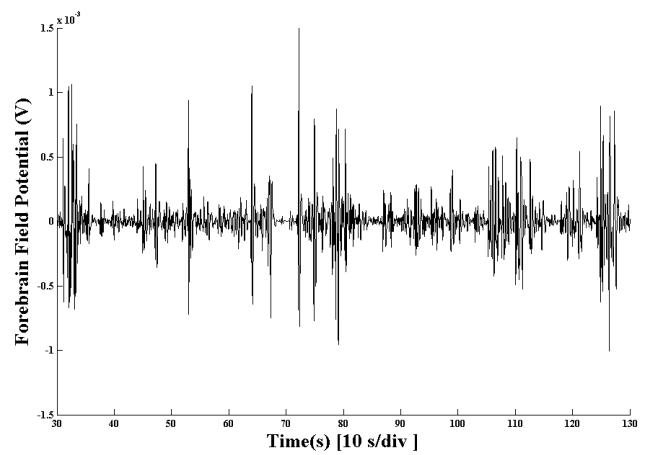
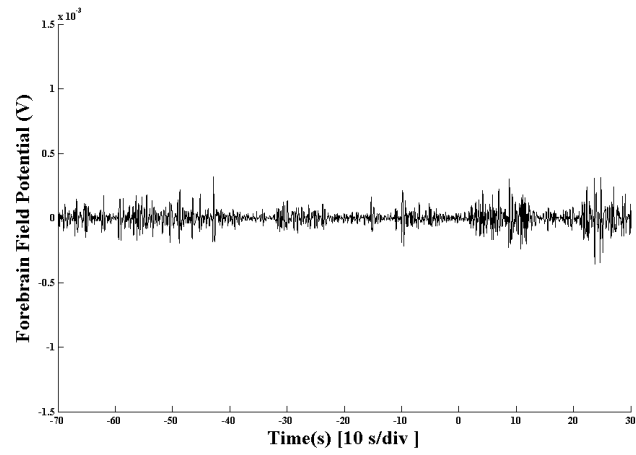
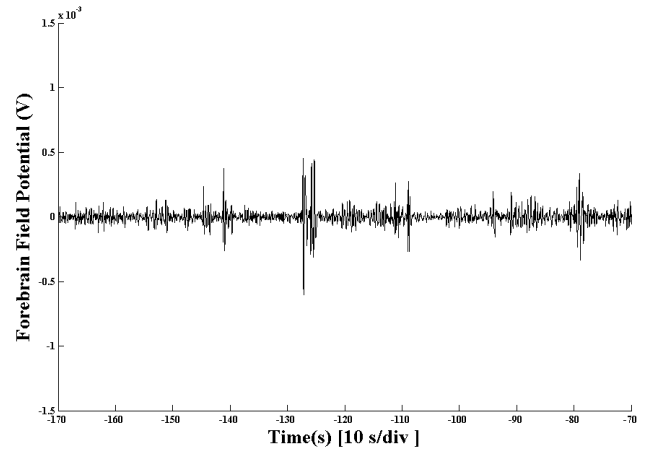
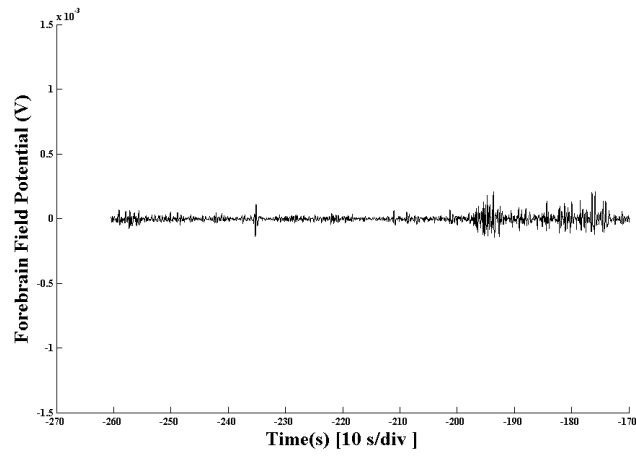


Fig. S3. Cerebral field potential during a PTZ seizure using a horizontal scale of 10 seconds per division.

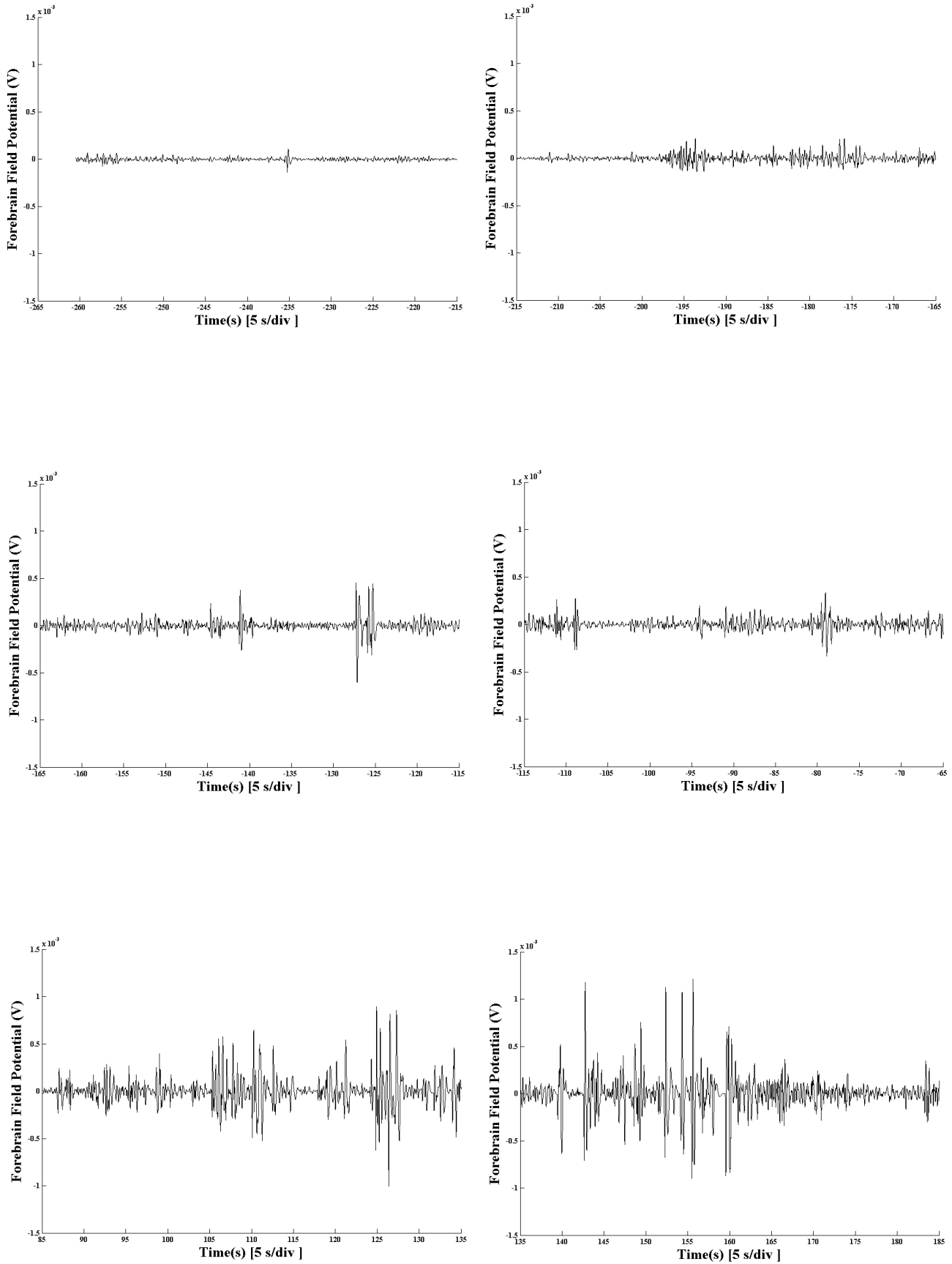


Fig. S4. Representative samples of the cerebral field potential during a PTZ seizure using a horizontal axis scale of 5 seconds per division. The top row represents baseline (pre-PTZ) data. The middle row represents pre-seizure (post-PTZ exposure, pre-seizure) data. The lower row represents seizure data.

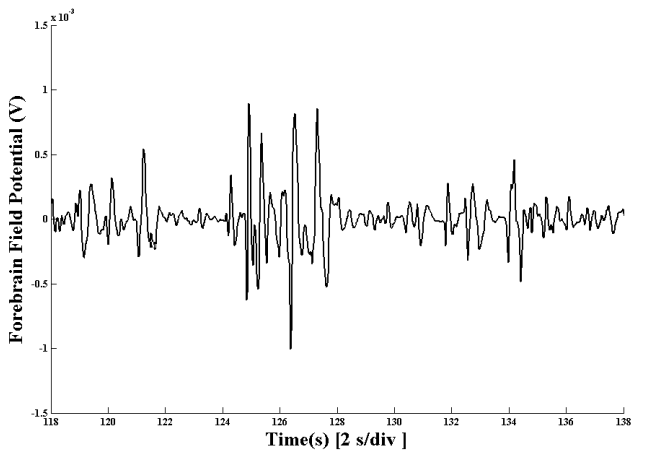
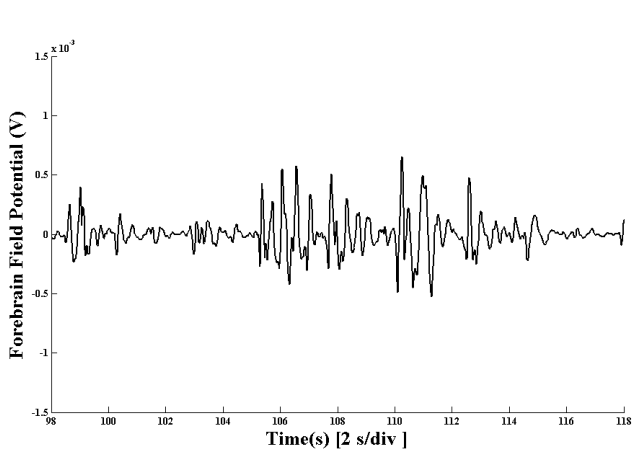
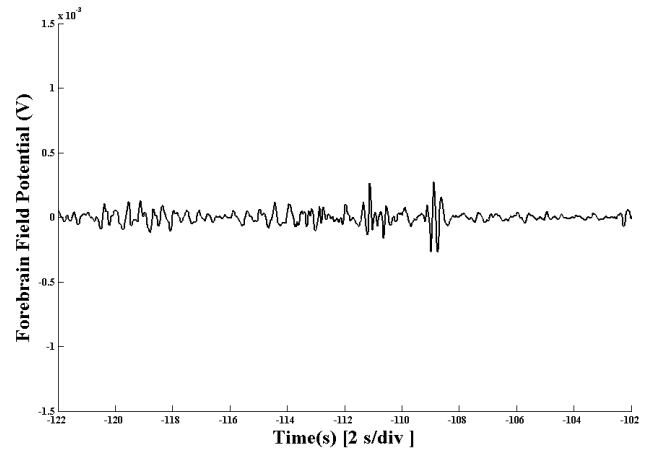
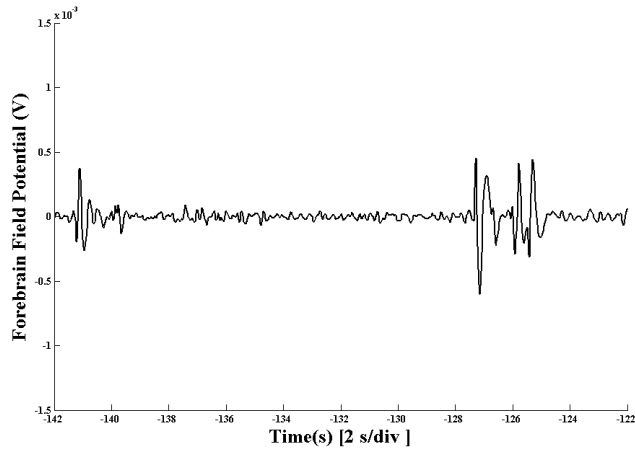
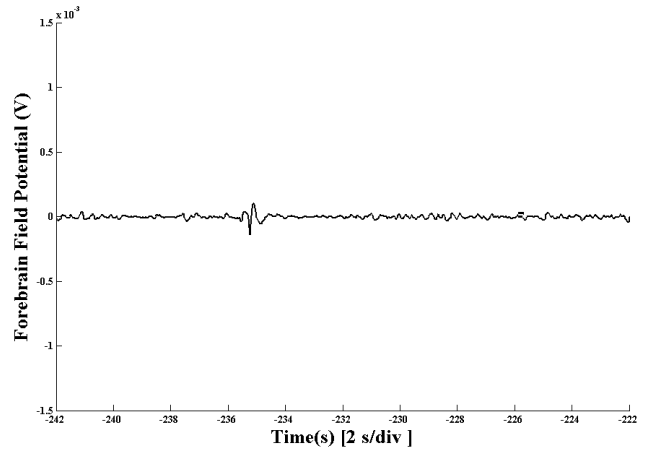
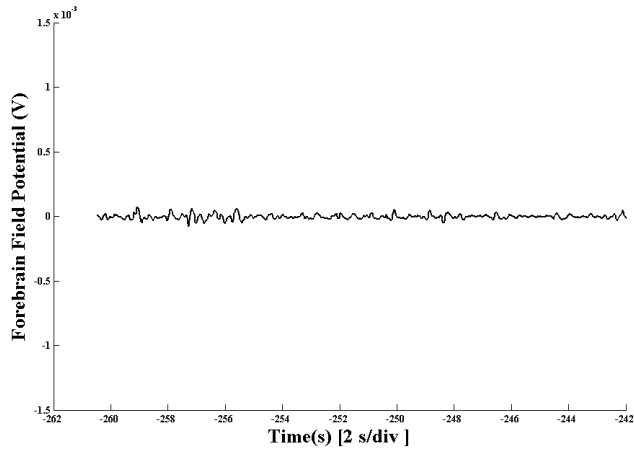


Fig. S5. Representative samples of the cerebral field potential during PTZ seizure using a horizontal axis scale of 2 seconds per division. The top row represents baseline (pre-PTZ) data. The middle row represents pre-seizure (post-PTZ exposure, pre-seizure) data. The lower row represents seizure data.

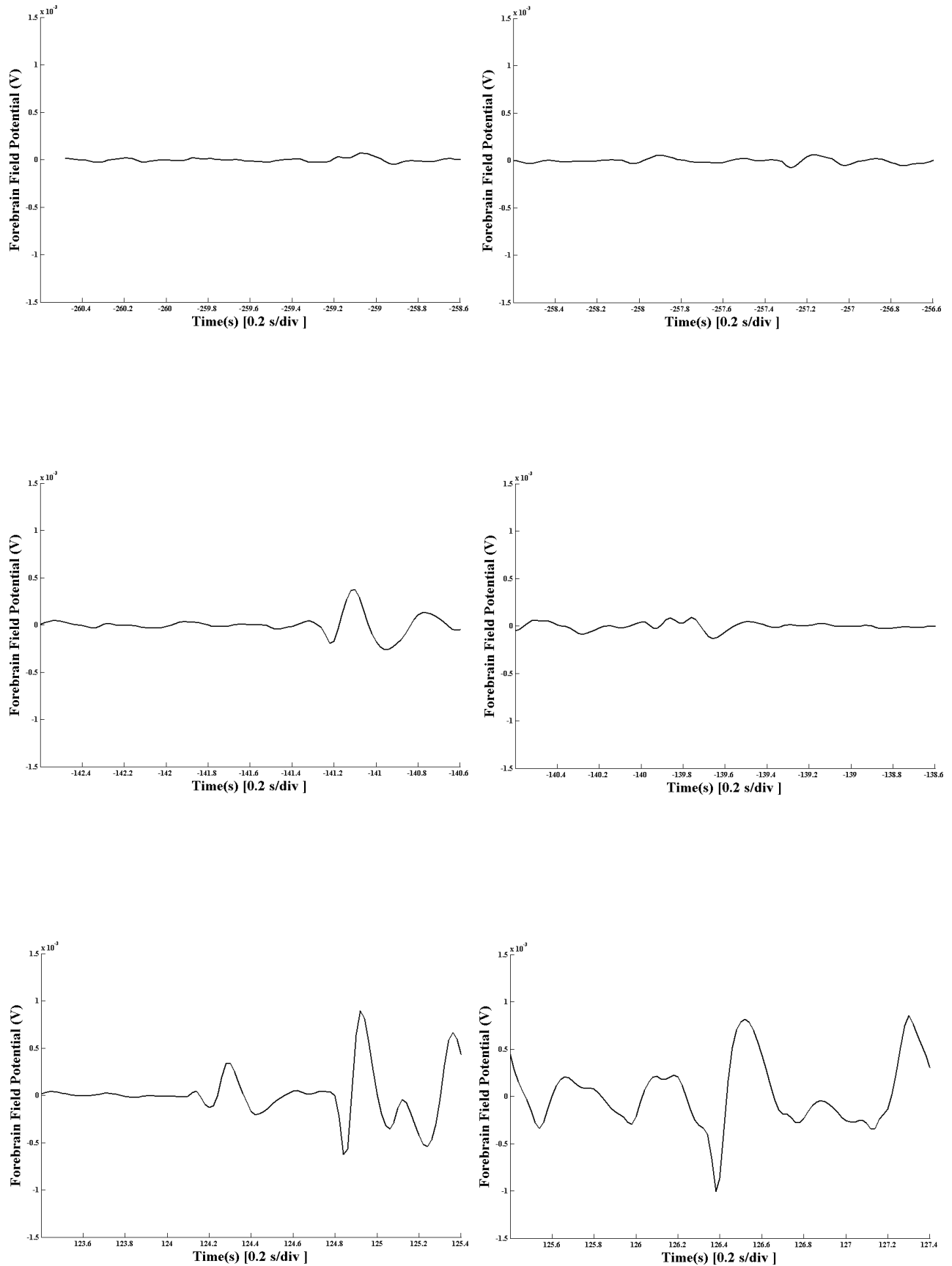
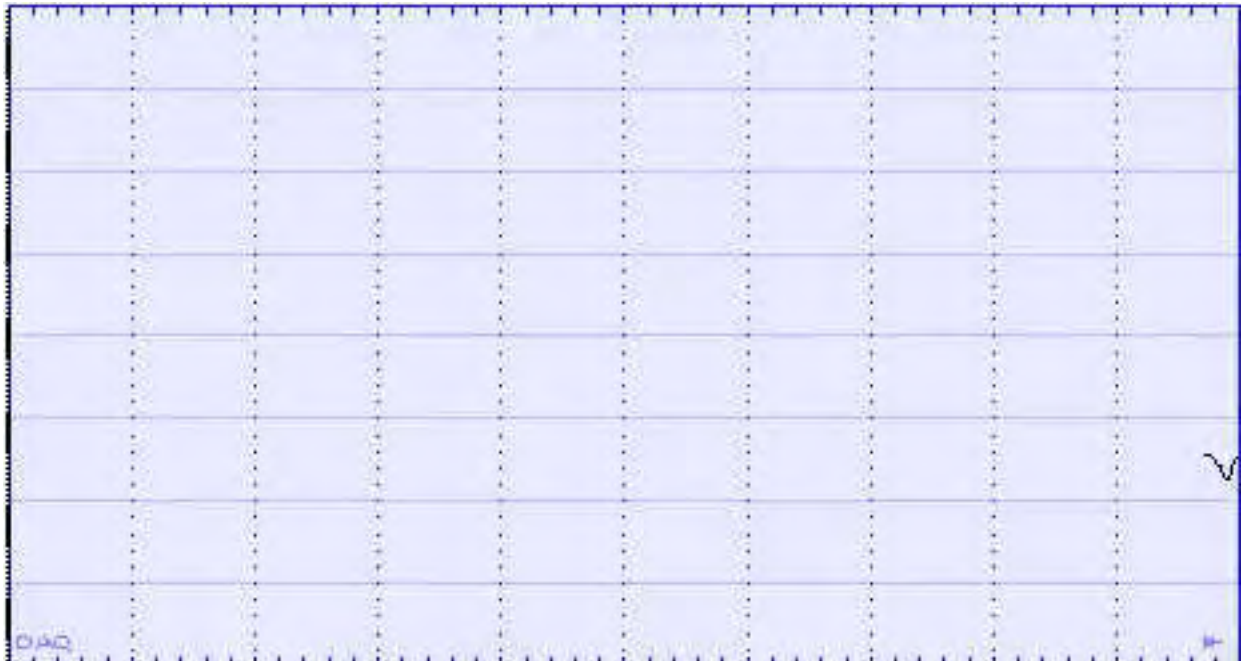


Fig. S6. Representative samples of the cerebral field potential during a PTZ seizure using a horizontal axis scale of 0.2 seconds per division. The top row represents baseline (pre-PTZ) data. The middle row represents pre-seizure (post-PTZ exposure, pre-seizure) data. The lower row represents seizure data.



Movie 1. Two zebrafish freshly immersed in 100 ml of tank water containing 15 mM PTZ. Stage III seizure activity defined as course clonic convulsion with loss of posture as evidenced by rolling to the side occurs at 1:00. The visual determination of the onset of Stage III seizure activity can be made most objectively and so was used to quantify the anticonvulsant effects of hindbrain stimulation.



Movie 2. A truncated cerebral field potential recording in response to PTZ application. The video begins following 2 minutes exposure to PTZ. One vertical division corresponds to a cerebral field potential change of 50 μ V. One horizontal division corresponds to a time of 1 second. At 0:10 we see a dropout in the fluctuation of the cerebral field potential recording which corresponds to a more narrow statistical distribution and a lower entropy. Seizure activity begins at approximately 0:50 as evidenced by the pronounced increase in the field potential amplitude and the fluctuation in frequency.