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# MEG in epilepsy : some data from the Marseille MEG center

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## Résumé

MEG allows the recording of cerebral magnetic activities with excellent temporal resolution. Magnetic Source Imaging is a part of the presurgical assessment of pharmacoresistant focal epilepsies in some centers, allowing localization of interictal and more rarely ictal activities. One of our objectives was to compare both modalities : MEG and high resolution EEG, validating the results by intracerebral data. Differences in detection have been documented between these two modalities for both physiological and pathological activities. In some cases, MEG sensitivity is superior to that of the EEG, allowing separating two distinct sources, characterized in SEEG by a time delay of 10 ms. On the contrary, some events can be detected in EEG but not in MEG. Simultaneous SEEG and MEG recordings were developed in the ICM MEG center. Simultaneous SEEG, MEG and scalp-EEG recordings were then developed in Marseille. These simultaneous recordings combining three modalities provide both local and global views on brain activities and should allow a better understanding of MEG and EEG complementarities according to location, spatial extent, frequencies and main orientation of the generators.

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