



ADVANTAGES OF CTF MEG SYSTEMS OVER THE COMPETITION

For additional information please visit us at:

www.ctf.com

Or write us an email at:

sales@ctf.com

CTF MEG SYSTEMS ARE THE BEST AVAILABLE

Open Environment Operation

The CTF MEG system is the only MEG system that is able to operate in the open (non-magnetically shielded) environment with the same sensitivity as in a shielded environment. At the 2004 Vancouver Biomag conference, a CTF MEG system was demonstrated to attendees in the open environment of the manufacturing facility. CTF would also be most happy to demonstrate open environment operation of a CTF system in an industrial setting if anyone wishes to come to our warehouse.

The ability of a CTF MEG to operate in an open environment means that when a CTF MEG system is installed inside the shielded environment of a MSR (Magnetically Shielded Room), they are even more robust than the competitor's systems. One is able to bring mobile phones and other magnetic objects into the MSR without fear of trapping flux - (which requires a heating cycle on the SQUIDS to return to normal operating condition) which is definitely not the case for competing systems.

Note that this robust design came about because the designers of the CTF MEG system were originally designing SQUID based systems for unshielded airborne geomagnetic applications.

'Set and Forget' Tuning

The CTF MEG sensor/SQUID/hardware design features a robust SQUID parameter tuning system which means that the CTF MEG sensors only need to be tuned by a CTF service technician following the annual preventative maintenance service. The CTF MEG SQUID tuning parameters do not drift over time. In fact, it has been demonstrated at several CTF MEG systems that the tuning parameters have not changed for a decade after installation.

Conversely, A well-known competitor's system requires daily SQUID heating and tuning. At times, their SQUIDS require heating even during a data collection if any large magnetic field disturbs the collection, such as a moving car, if the MSR door has been opened, etc. The CTF MEG system continues to operate even when exposed to large changing magnetic fields. And, should their range be exceeded, the CTF MEG system SQUIDS recover immediately once the high magnetic fields are removed, while other competitor systems require their SQUIDS to be heated and then re-tuned before the sensors can again be used for signal detection.



ADVANTAGES OF CTF MEG SYSTEMS OVER THE COMPETITION

For additional information please visit us at:

www.ctf.com

Or write us an email at:

sales@ctf.com

CTF MEG's 'set and forget' tuning thereby saves users numerous hours of lost time and frustration in comparison to those with competing systems.

Superior Noise Cancellation

The CTF MEG patented 3rd gradient noise reduction system does not degrade the MEG signal. The competitor's methods (known as SSS and TSSS) substantially reduce the rank of the data from the actual number of sensors (e.g. from 300 to 60). This means the effective number of sensors has been dramatically reduced (i.e. as though one were using a 60 channel MEG) with the resulting degradation in spatial resolution. The CTF MEG higher gradient method effectively removes noise without this compromise.

In addition, epilepsy data using CTF's SAM beamformer technique produces better results using CTF data than competitor's.

Axial Gradiometers

The CTF MEG system uses 151 or 275 axial gradiometer sensors with optimized baseline length at discrete locations over the head while the competitor's place multiple sensors at the same location on only 102 sites. CTF MEG's axial gradiometers will see deeper sources with better signal to noise ratio than the competitors planar gradiometers or magnetometers. Moreover, the data from the axial gradiometer array can be readily transformed to simulate a planar gradiometer response if one wishes to view the results that way (while the converse isn't true).

Ease of Adjustments and Recovery Time

The CTF MEG can be operated to allow any subject position, from fully reclined to supine. The system and subject can be prepared and data collection can commence without delay. Conversely, if the competitor's MEG orientation is moved or the system otherwise disturbed the operator must wait several minutes for the system to 'stabilize' before collections can commence.



ADVANTAGES OF CTF MEG SYSTEMS OVER THE COMPETITION

For additional information please visit us at:

www.ctf.com

Or write us an email at:

sales@ctf.com

Customer Service

CTF prides itself not only on the technical superiority of the CTF MEG but also on its superior technical and product support and services. CTF sincerely and deeply cares for each system, customer and their MEG programs and this is reflected in the dedication and quality of their services. CTF frequently receives praise from its existing customers in this regard.

Leading the way in Research

Only the CTF MEG system can be used simultaneously with TCDS, no other system can make this claim. There is also evidence that CTF MEG systems sense Gamma activity (high frequency oscillations) better than competitor's MEG systems. There is active discussion within the research community about this possible issue.

Commitment to Excellence

The CTF MEG system was originally designed by a highly competent team of engineers, physicists and technicians. Being a small company, they put their heart and soul into the design and construction, unfettered by corporate demands. The fact that some users (who have exposure to various types of MEG systems) still seek replacement of their MEG system with a CTF MEG system speaks to the quality of the work CTF produces and the support and services CTF provides.