used here are 58 and 20 cm longer respectively than the Tp9 lead. The fact that measurable perturbations are produced at all three field strengths means that the interaction is unlikely to be due to a resonant effect, where the lead length matches an integral number of half wavelengths of the RF, since this wavelength changes by a factor of 4.7 between 1.5 and 7 T.

Measurement of the SNR in EPI data acquired from the human brain indicated that that the presence of the conducting material in the caps slightly reduces the SNR (e.g. a 15% reduction was measured with the 64 electrode cap in place at 3 T) and that the 64 electrode cap has a larger effect at all field strengths. However, the SNR measured in the presence of the 64 channel cap at 7 T was still significantly higher than the SNR at 3 T with no cap present. In light of the well known gains in sensitivity to brain activation provided by carrying out fMRI at high field, this finding provides further motivation to perform EEG-fMRI experiments at the highest field strength which is safe and still provides good quality EEG data. Building on this work we have recently shown that by taking correct precautions it is possible to acquire simultaneous EEG-fMRI data at 7 T using Brain Products equipment (6).


New Products
Analyzer 2 – Beta Testing just started
by Dr. Achim Hornecker, Brain Products CEO

In February we made the announcement that beta testers were required for the new Analyzer 2. Because it is a hard job to test software in this phase of development, we didn’t expect a great response. However, nearly 70 highly qualified persons declared that they are prepared to put the new version through its paces in real life conditions. Thanks to all of them, even if we first had the difficult job of selecting about 20 test-pilots, which is the maximum number we can handle in our special beta support.

At the beginning of March the beta testing phase for the Analyzer 2 started and the first feedback reached us: Most of it is related to the new user interface, which is of course the first impression you get upon opening the program. To our beta testers the user interface now looks “cool” and is “intuitive”.

But not only optical features were added: The Ocular Correction was completely redesigned and now uses ICA for better subtraction of artefacts. A new semiautomatic view helps to estimate the effects of disabling components on the results. MR artefact correction has been made faster and better. Easy integration of MATLAB opens new horizons. User definable properties for data, channels and markers provide new methods and opportunities for data analysis. New transformations such as Topographic Interpolation and ERS/ERD complement the already large set of operations.

And this is just a selection of the main improvements. Plenty of details such as Zoom to selection, Tabbed Views, History Node List, View Tools, susendable semiautomatic views, Tools for scaling ranges and lots of other small aids will support your work in future.

So after a few days of testing one of our testers declared “sure there are some bugs in the beta, but I don’t want to be without it anymore.”

Another thing we already learned from the beta is that the final release will not signal the end of development but rather the start of implementation of lots of new wishes coming from our users. So take the last chance to enter this new world with old prices: everyone who buys an Analyzer 1 prior to the release of Analyzer 2 will receive a free upgrade to version 2 – don’t miss this chance!