

A method to directly compare volume time courses in BV

This is not an official Brain Innovation support document. For any comments, remarks or questions, please contact the author via heinecke@brainvoyager.com
BV QX version used: 1.9.10

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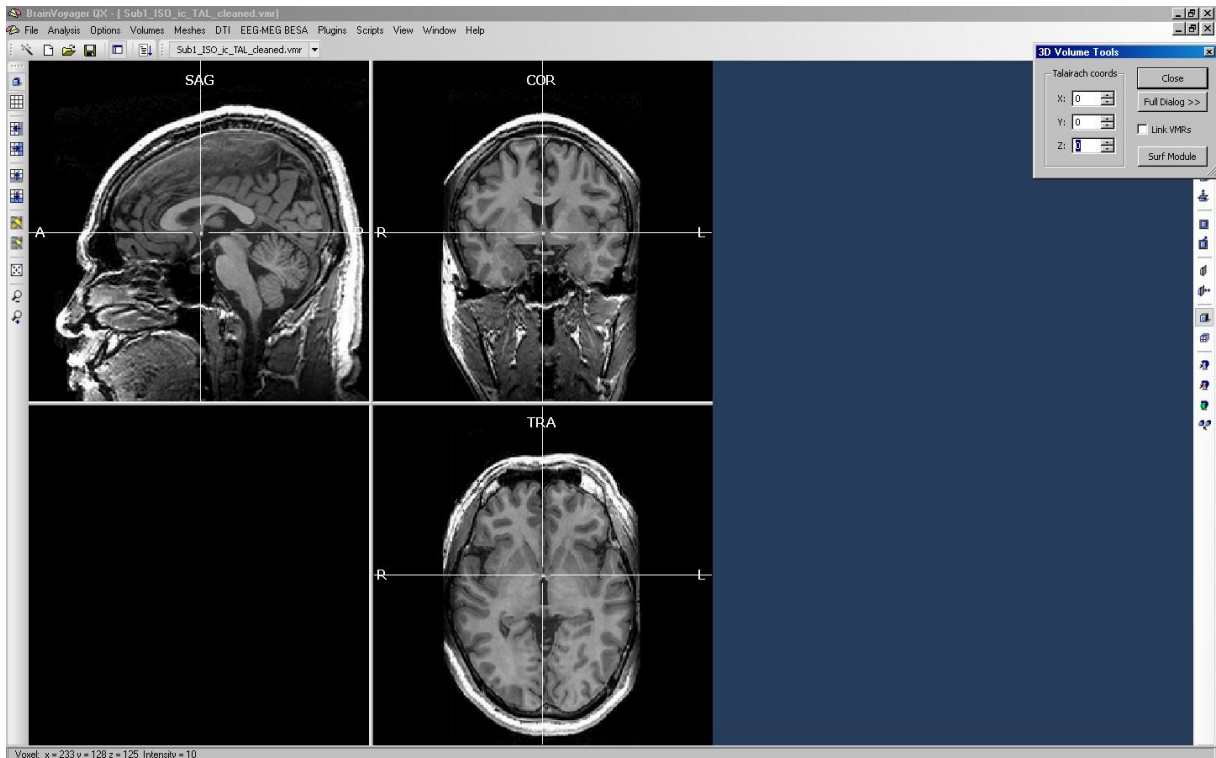
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Introduction

After creating volume time course (VTC) files for different runs (e.g. of the different runs in one functional session) we would like to be able to compare them directly to check if the VTC creation has worked out and it is valid to compare the data in a multi-study analysis. This short document describes an option to do so. For this example, we use four runs of the same measurement session.

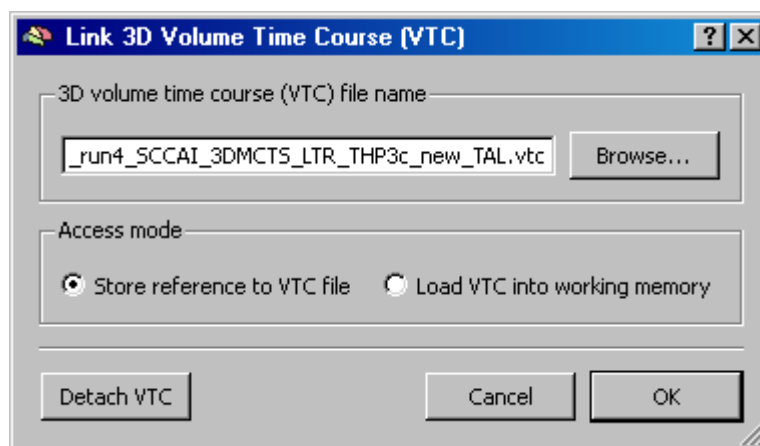
1. Loading the VMR dataset

We load the VMR dataset, in this case, the Talarach dataset of Subject 1.



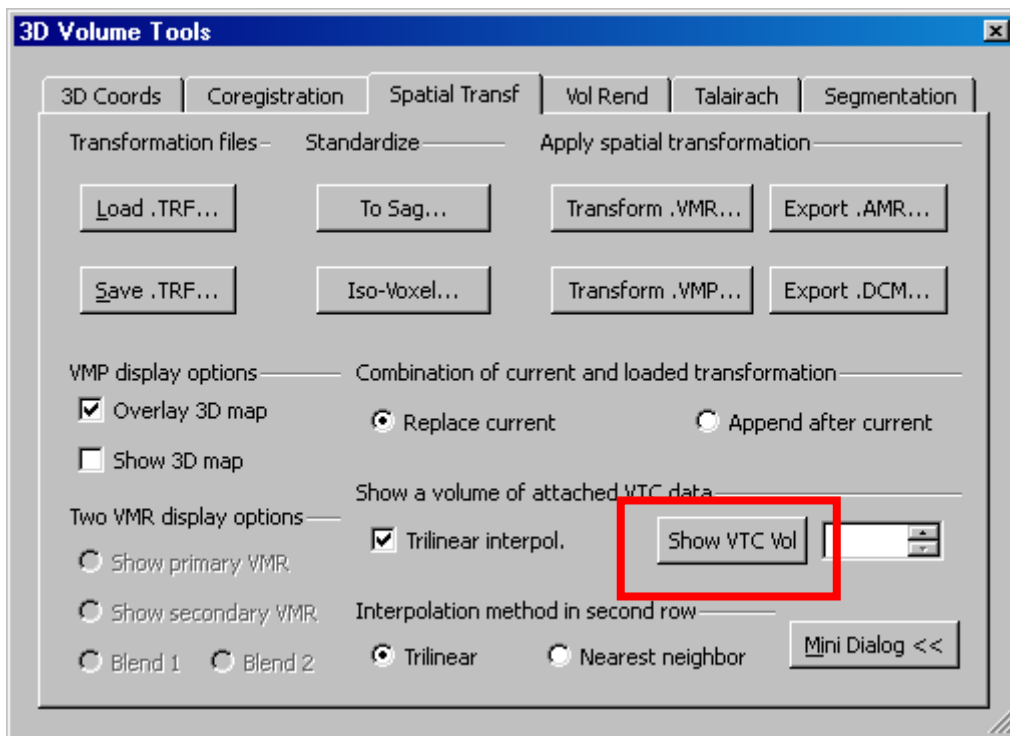
2. Linking a VTC

We link the VTC of the first run via the BrainVoyager QX menu option “Analysis” > “Link 3D Time Course (VTC) File...” or entering CTRL + K via the keyboard.

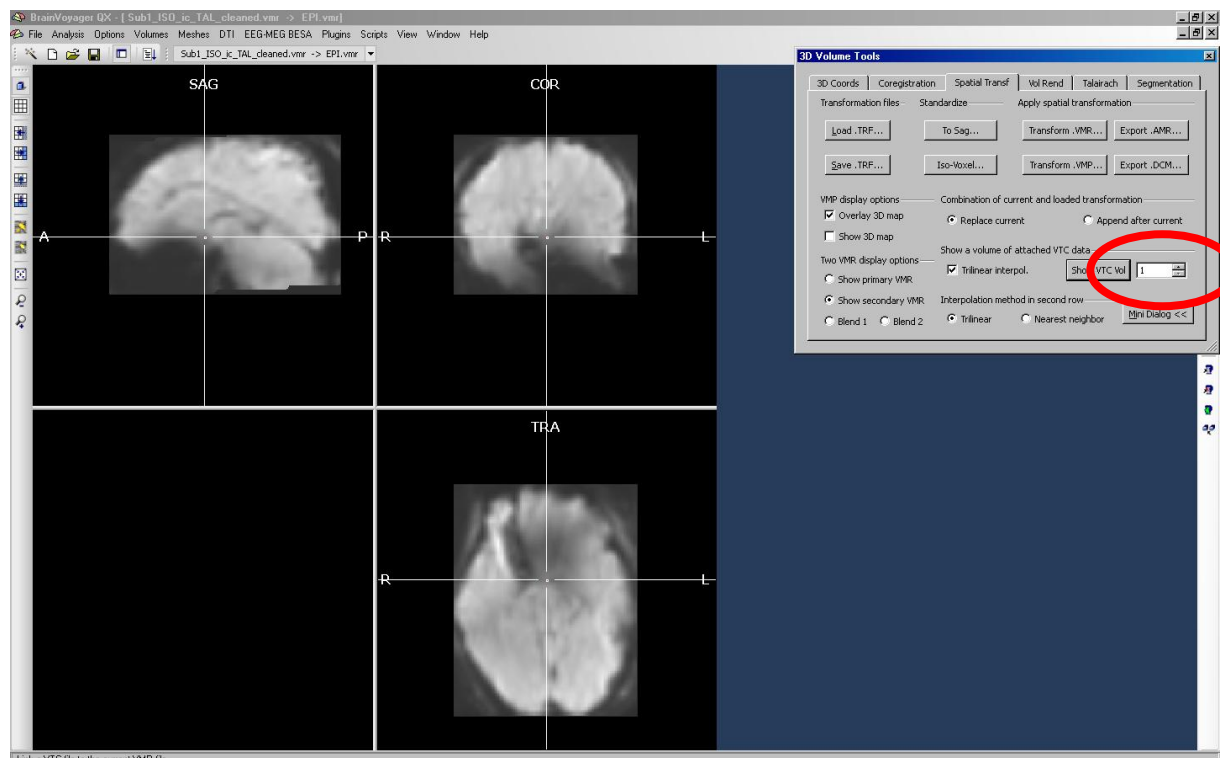


3. Visualisation of VTC

We visualize the VTC as (secondary) EPI.vmr using the “Show VTC Vol” button on the “Spatial Transf” tab of the 3D volume tools (via BrainVoyager QX menu option “Volumes” select “3D Volume Tools”).

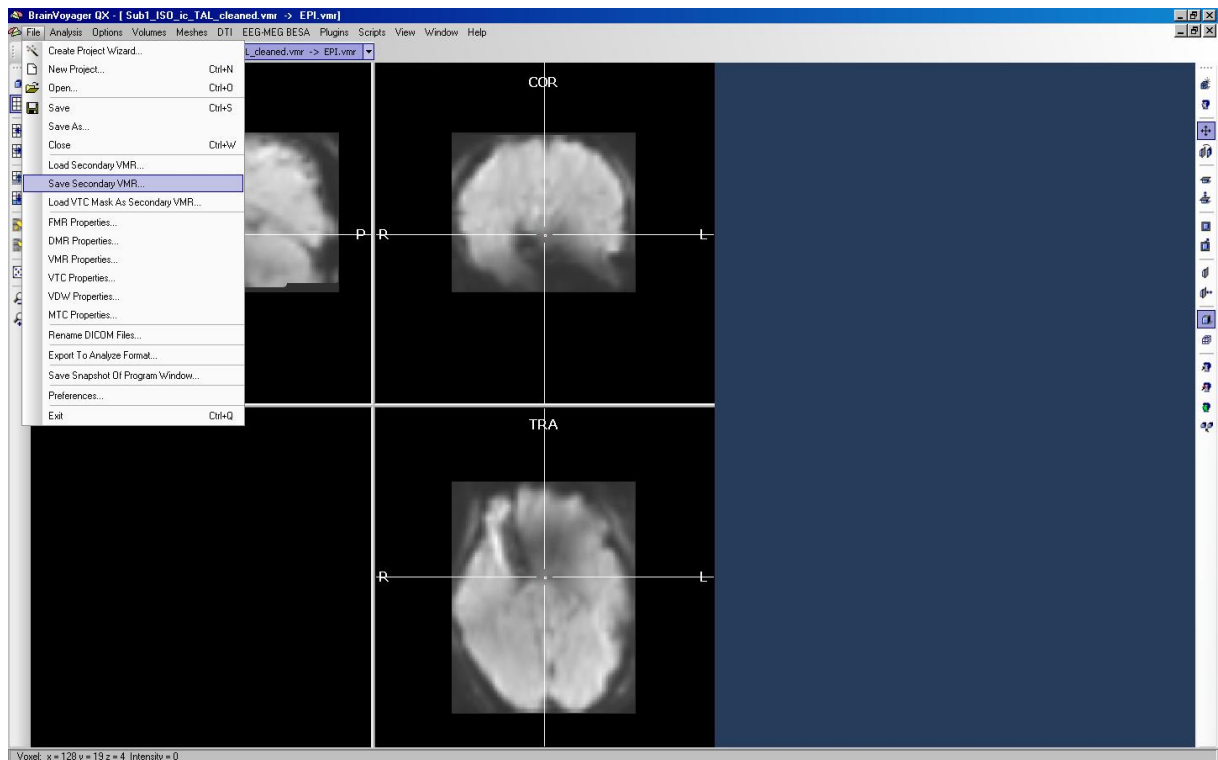


Alternatively, a different volume of the time course may be chosen.



4. Save VTC as VMR

We save the secondary VMR as “Sub1_run1.vmr” (“Save secondary VMR”).

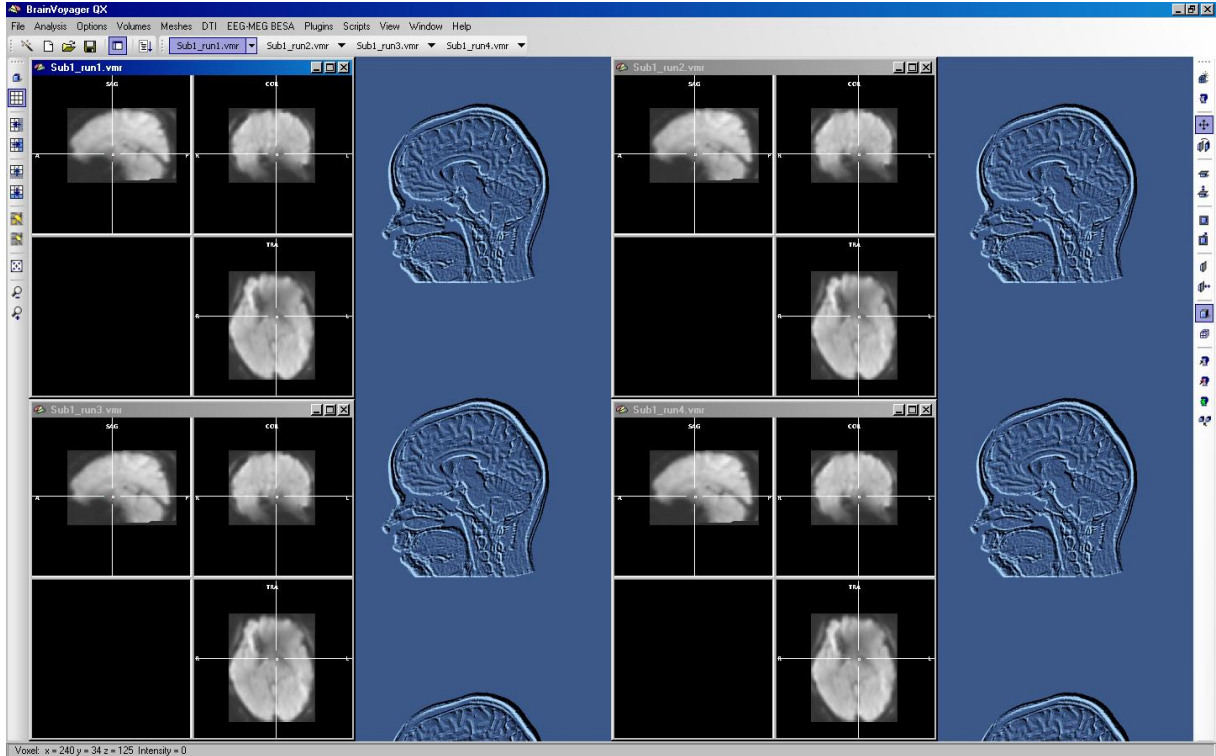


5. Repeat steps 2-4

We redo the same steps for all the other runs we want to compare in the end.

6. Open all EPI vmr projects

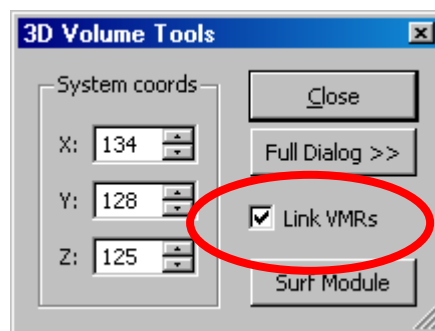
We load all the four EPI vmr projects in parallel (in this case based on four runs of the same subject). For visualisation, we change to the “Window Tile” mode.



7. Comparison options

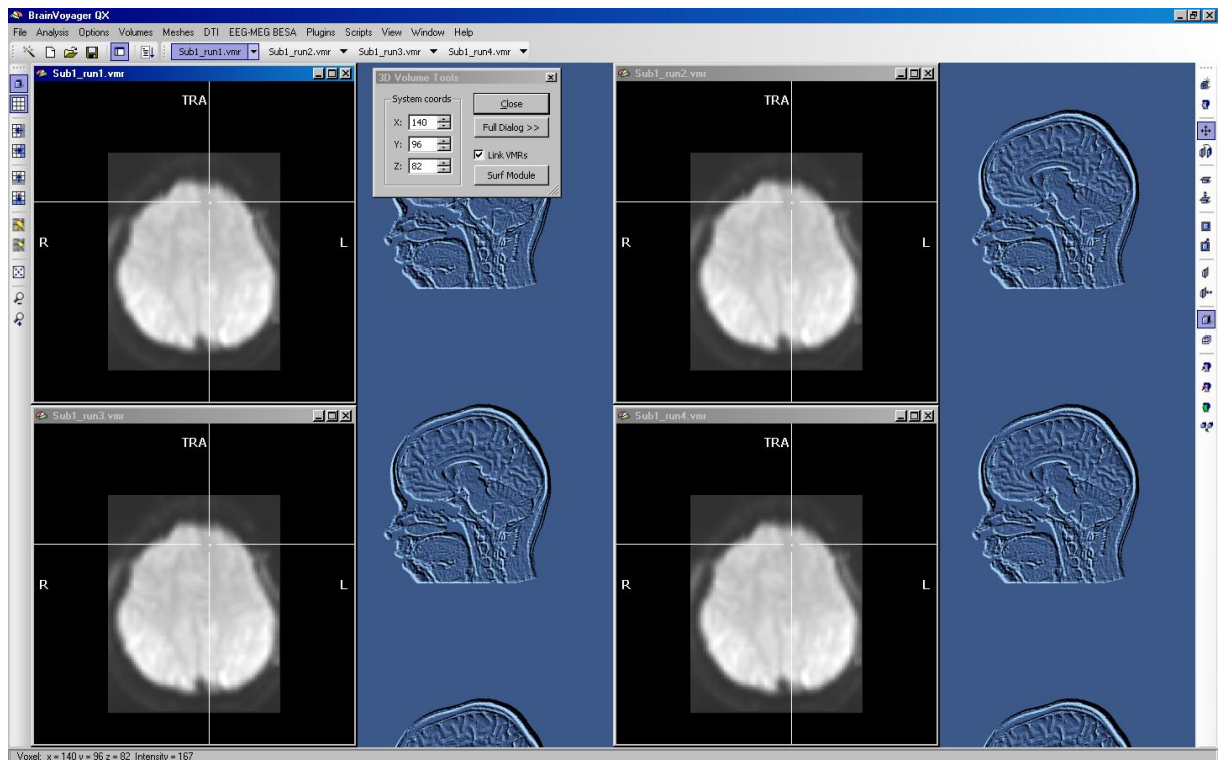
a. Linking the projects

We click the “Link VMRs” checkmark in the 3D Volume tools



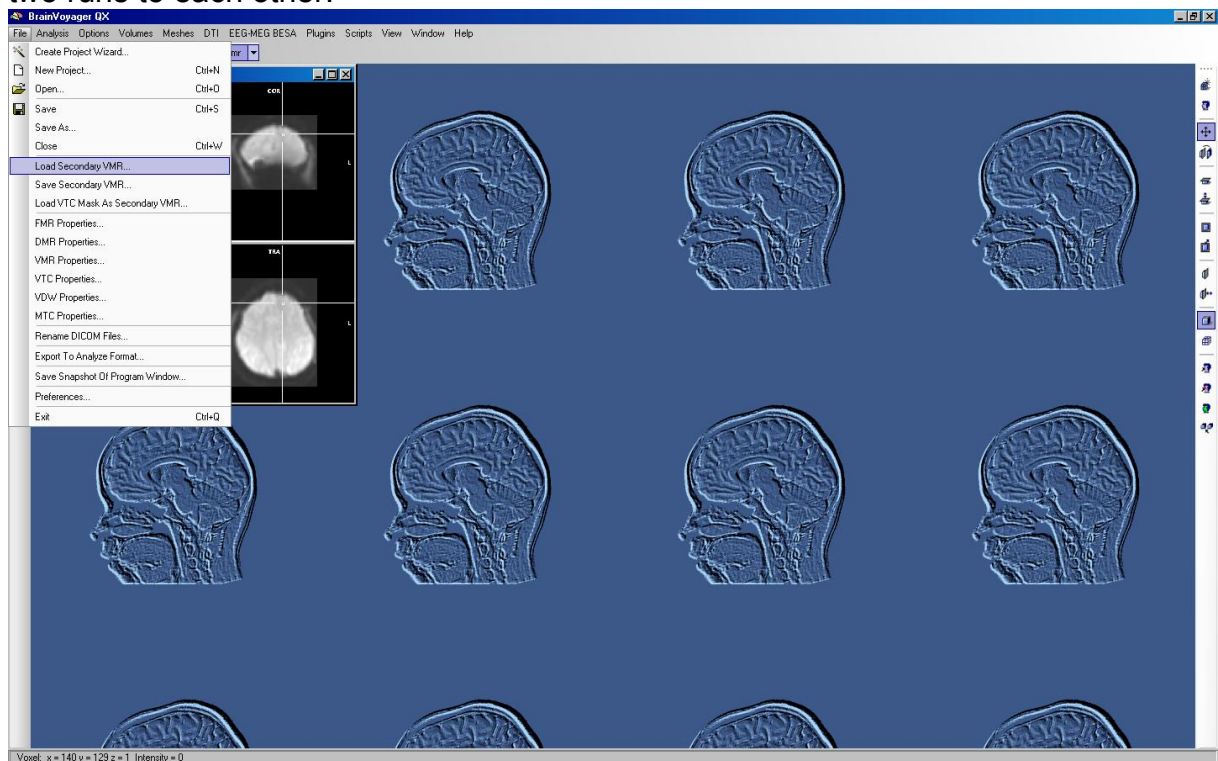
Now, we can browse one VMR and will automatically see the same coordinate visualized in all the VMRs.

Using the “Ctrl+Rightclick” shortcut, we can also increase one of the views of the VMRs (e.g. axial) and compare the representations.

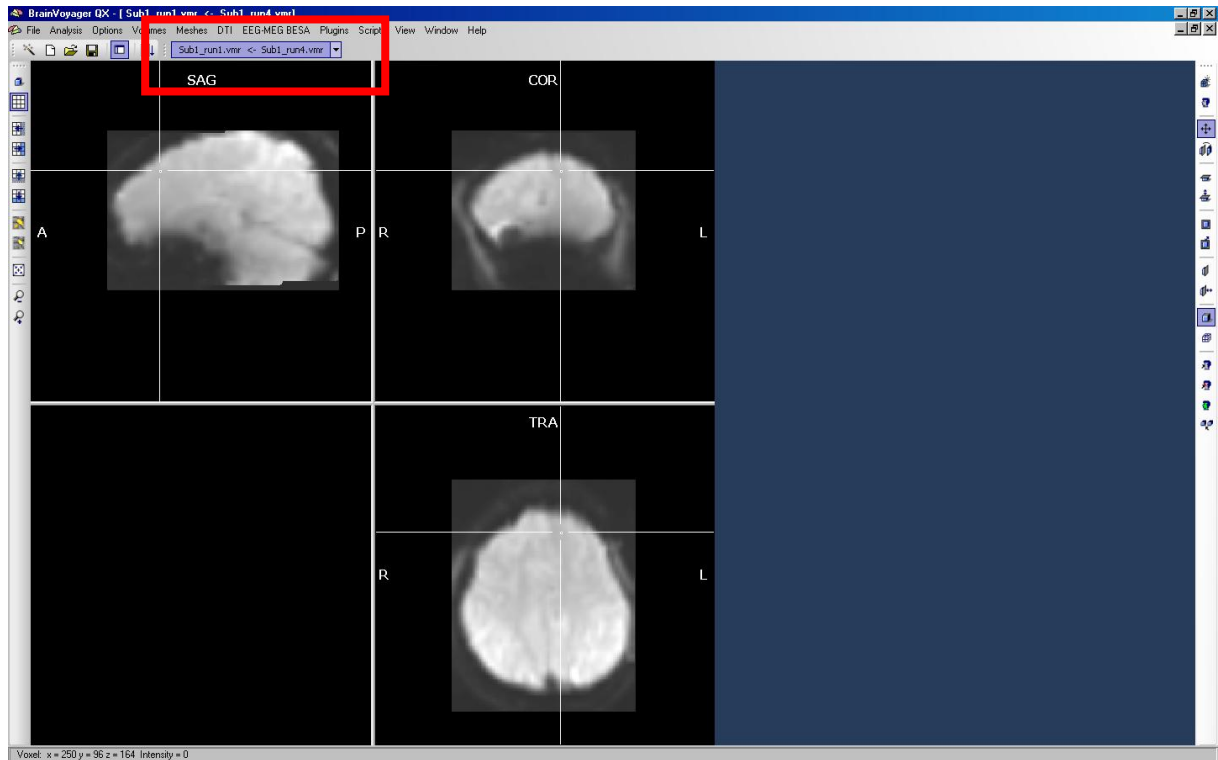


b. Overlay projects

Alternatively, we can load a second EPI.vmr as a “secondary VMR” to directly overlay two runs to each other.



Here, we load the EPI vmr of the fourth run to compare it with the first runs EPI.vmr. The names of the two loaded projects will be displayed, the arrow shows the currently visualized project.



Using the F8 button, we can switch back and forth between the runs and compare them easily.