EsbRootView 4.0.0

Virtual ESSnuSB 13-th WP5 meeting

30 September 2021

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General

EsbRootView vCHEP-2021 paper now published:
https://doi.org/10.1051/epjconf/202125101002

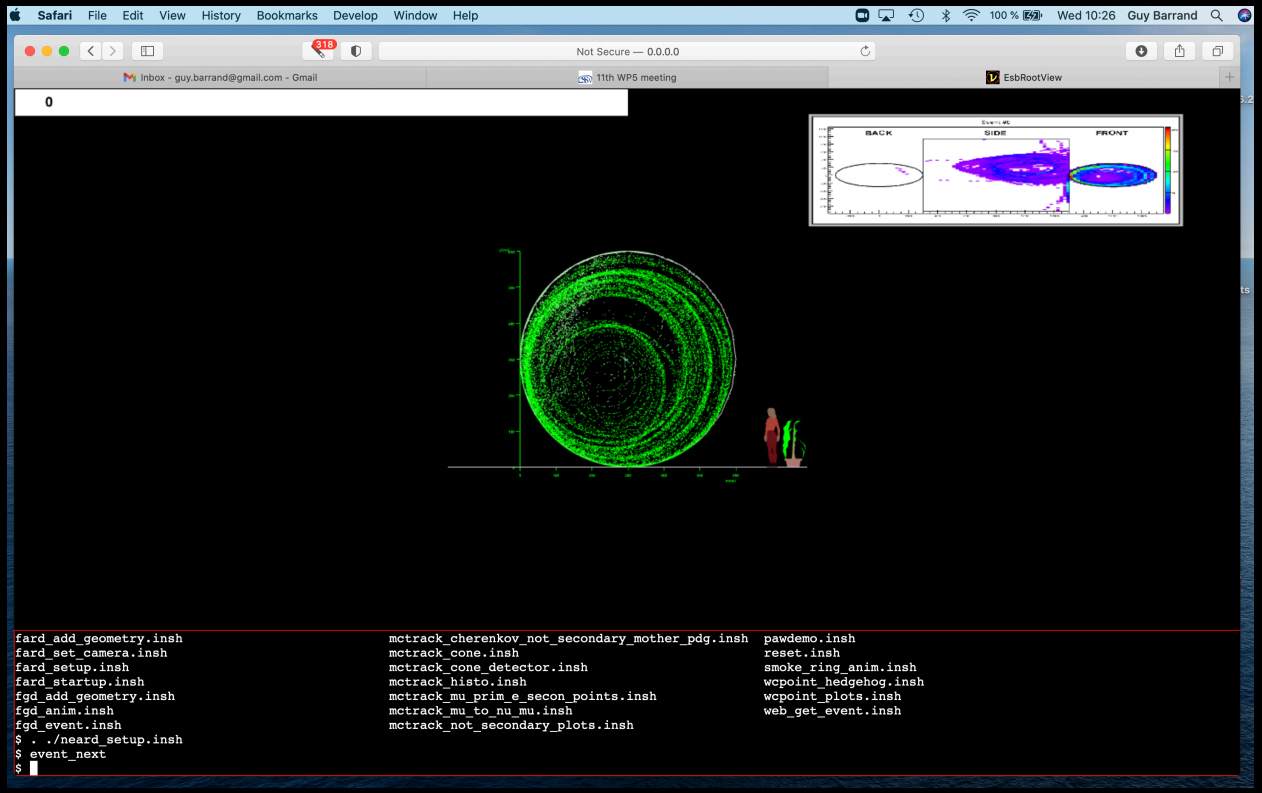
(An info: CHEP-2022 reported to 2023).

In the code: EsbRootView/4.0.0

- 4.0.0 now available on gbarrand/github (with some binaries and the wasm).
- GUI main panel now fully insh scripted. (insh = bash like scripting).
- Code reorganised so that all ESSnuSB related actions are now insh commands found in the EsbRootView/insh directory. The EsbRootView/main contains now mainly only the declaration of (all) commands to insh.
- EsbRootView must be seen then as:
  - an event model (today contained in one event_model file).
  - a (.root) file reader (read_event file).
  - insh commands.
  - vis commands using the inlib/sg scene graph logic to do representations.
  - a logic to open a window, render the scene graphs and have a prompt.
  - .insh scripts (init, startup, event, gui_*, [neard,fard,fgd]_*, event_*,etc…)
- The overall structure is then very simple.

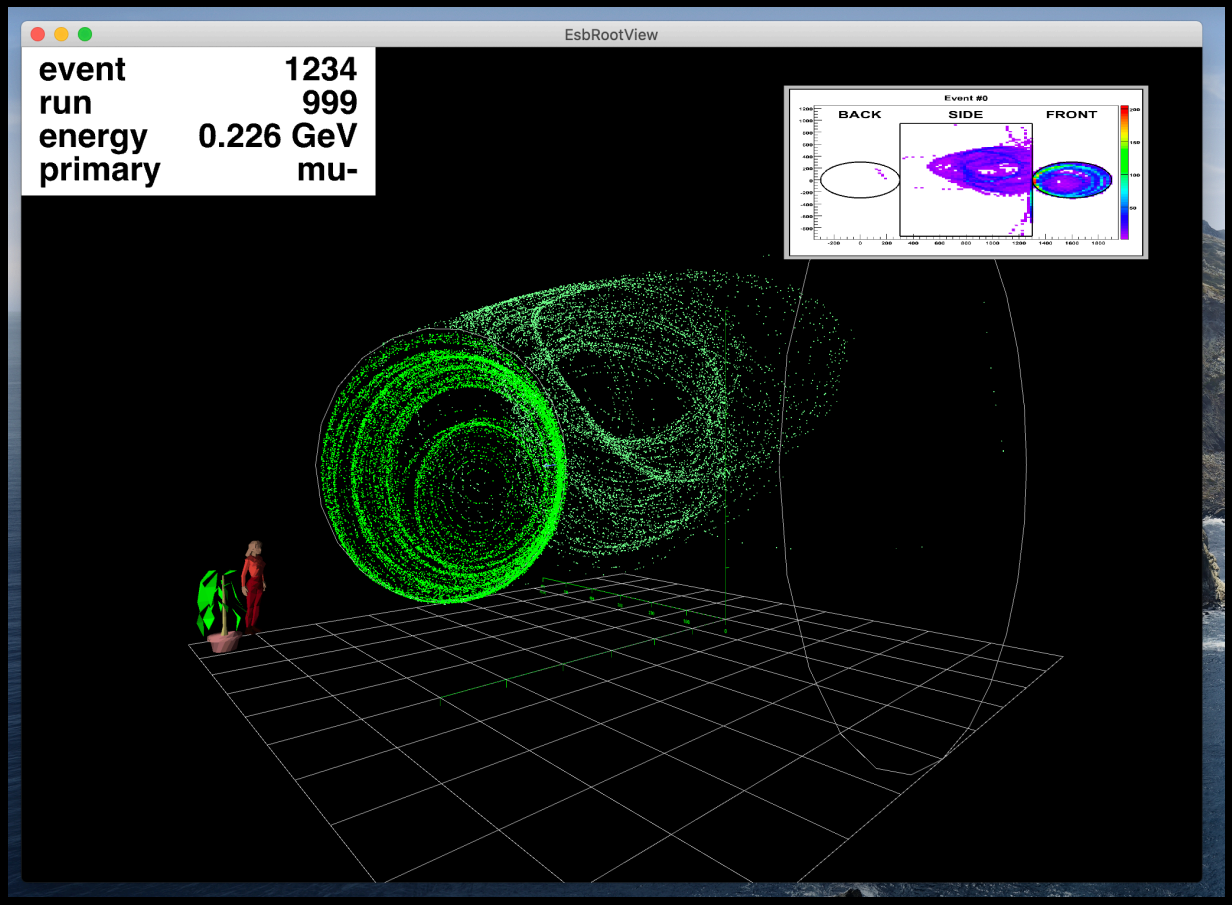
In the code (2)

- 4.0.0 comes with a lot of commands related to “analysis”: histogramming, ntupling, plotting, fitting. (Generic commands shared with other apps as my Geant4 ones).
- WebAssembly: it comes with the terminal mode:



In the code: next

- Roumen request: have an “event info” viewport in the view:



In the code: next?

- Anim: have a “close-up” viewport. (It would be nice).
- With the WebAssembly version; I would like to have a way to get an event file from the tip of a finger from some “web sources” somewhere… (And then see other events than my “forever” 4/5 ones 🙂). This would go, for the group, in thinking on how to distribute/access easily events in the future…
- Read Joakim CAD file? (Would be nice too).

General: Geant4, WebAssembly

- Geant4 collaboration workshop last week. I did slides and a demo of WebAssembly with my g4view app. (g4view organised now in the same way as EsbRootView). (Slides on gbarrand.github.io).
- This one plus my EsbRootView vCHEP demo, then showing “C++ HEP physics” on the web done like that, start to have an impact.
- I would not be surprised to see the “community” doing a lot in this way in some short/mid-range future.
- Geant4-11: new vis drivers using my scene graph technology (and, I hope, with vis plotting (at last in G4!))
- An idea: revived MEMPHYS_vis to have a WebAssembly version done in the same spirit. (In MEMPHYS, I had an embryo of an event model (event/track/hits) to be written in a .root file; it could be interesting to revisit/improve that).

Conclusions

- Things move, things move…