OPERA νe open data

S.Vasina, S.Dmitrievskiy

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Questions to discuss

- Format
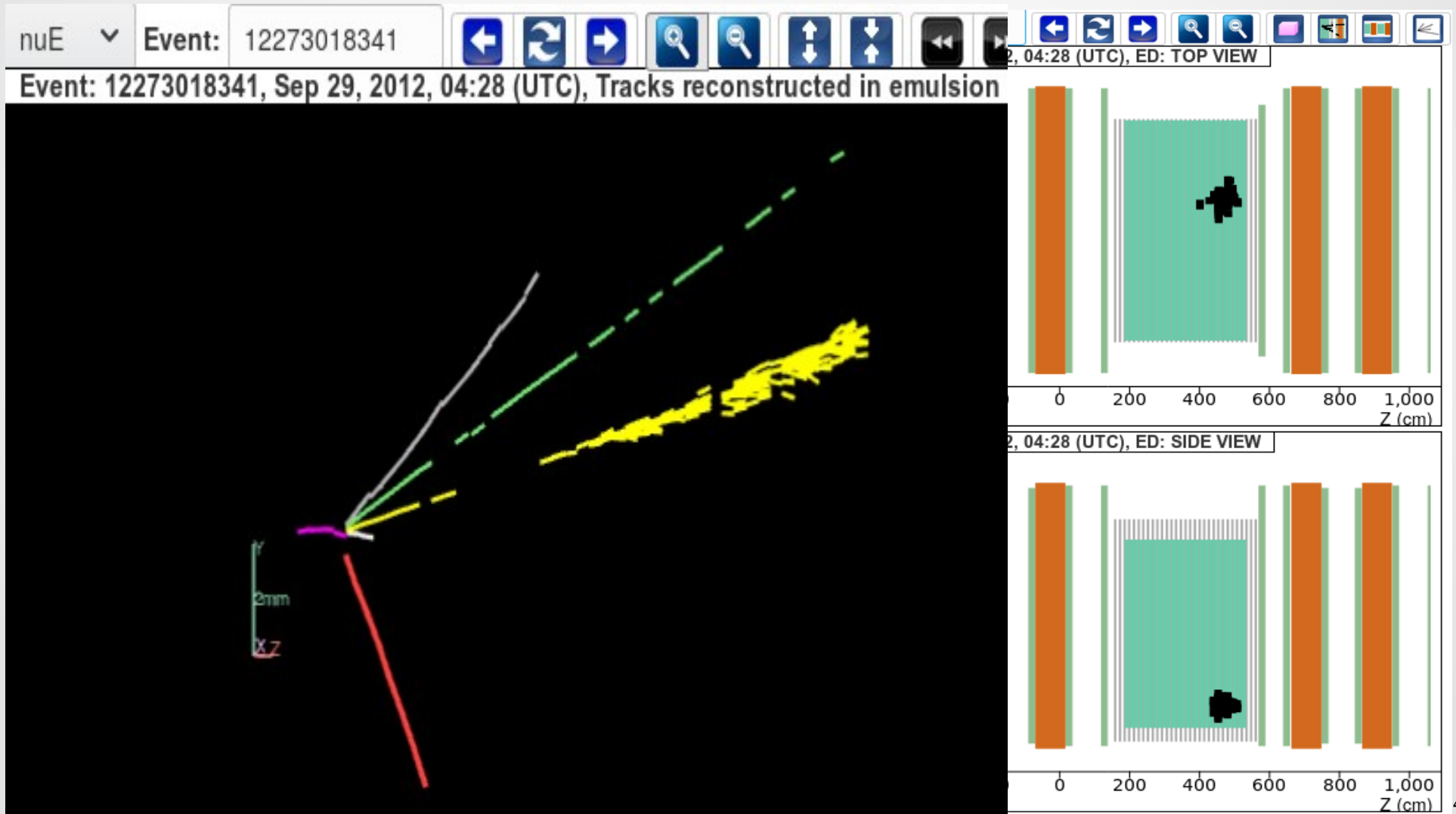- Shower reconstruction standards
- Data availibility

Format

Proposal:

- Sample: 35 events used in the final νe analysis

- ED: hits and reconstructed energy (like for the other samples)

- ECC: all the tracks apart e.m. shower can be presented as a set of BTs or as "smooth tracks" (like for the other samples)

- ECC: the electrons to be shown together with the e.m. shower

- ECC: e.m. shower associated with γ should be presented in the same way as for electrons

Format

Example: Dubna's νe (event 12273018341, brick 1090110)

Shower reconstruction standards

It is better to have the same e.m. shower reconstruction procedure for all the events in the sample to demonstrate shower intensity dependence on electron energy.

Proposal:

To use EDA viewer (implemented in FEDRA by Ariga) with the default parameters for e.m. shower reconstruction. (from OPERA Internal Note: F.Brunet and A. Zghiche, "Electromagnetic Shower Reconstruction in the OPERA Experiment for the $\nu_\mu \to \nu_e$ and $\nu_\mu \to \nu_\tau$ ($\tau \to e$) Oscillation Analysis ", 29 March 2013, Table 1.)

Suggestions are welcome.
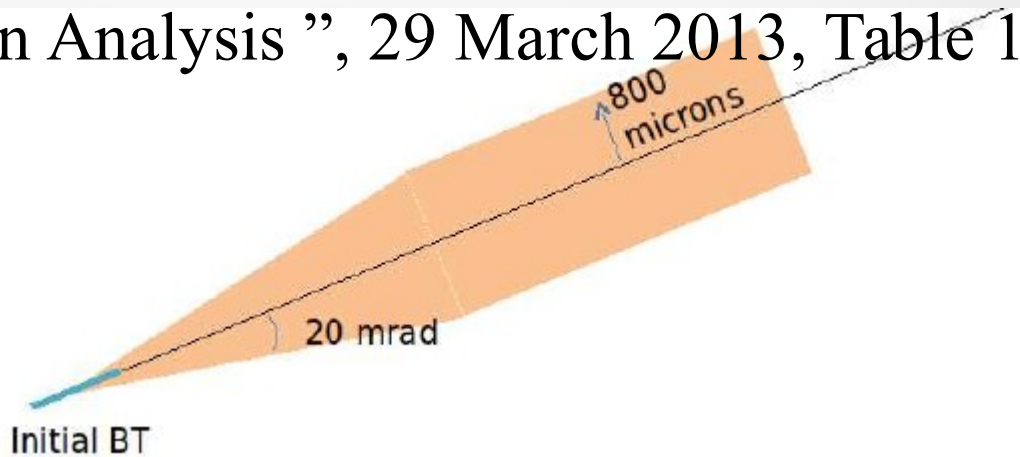
Shower reconstruction standards

EDA viewer default parameters:

ConeRadius 800; ConeAngle 0.02; ConnectionDR 150; ConnectionDT 0.15; Nholes 3

Data availability (apart of e.m. showers)

Lab	Brick	Event	Trk	BTs
Nagoya	1111165	235990918	OK	NO
Nagoya	1121872	9162064902	OK	NO
Nagoya	1057098	9218038732	OK	NO
Nagoya	1106972	9302000526	OK	NO
Nagoya	1090377	9322059646	OK	NO
Nagoya	1026193	10122104972	OK	NO
Nagoya	1039268	10159015262	OK	NO
Nagoya	1150882	10189006350	OK	NO
Nagoya	1109332	10189032298	OK	NO
Nagoya	1031053	10229004848	OK	NO
Nagoya	1045177	10273009778	OK	NO
Nagoya	1145335	10287005238	NO	NO
Nagoya	1070462	10305008082	OK	NO
Nagoya	1134339	11199030144	OK	NO
Nagoya	1094497	12094031920	OK	NO
Nagoya	1029993	12111064158	OK	NO

No BTs most probably meas that the short vestion of feedback-file was uploaded.
If we use "smooth tracks", at least length of the tracks is needed, if we draw BT by BT, full version of feedback-file is needed.

Data availability (apart of e.m. showers)

Lab	Brick	Event	Trk	BTs
Bern	1098472	9177016997	OK	OK
Bern	1096038	9301040593	OK	NO
Bern	1143854	10312027541	OK	OK
Bern	1053166	11136028585	OK	OK
Bern	1085249	11220031747	OK	OK
Bern	1083431	12082052269	OK	OK
Bern	1037011	12162027599	OK	OK
Bern	1033362	12196039785	OK	OK
Dubna	1090110	12273018341	OK	OK

Data availability (apart of e.m. showers)

Lab	Brick	Event	Trk	BTs
Napoli	1048483	226395185	OK	OK
Napoli	1040009	9197043461	OK	OK
Napoli	1084000	9290026555	OK	OK
Napoli	1033983	10257032729	OK	OK
Napoli	1032309	11164031847	OK	OK
Napoli	1064585	12092016479	OK	OK
Bo-Pa	1030202	9263028113	OK	OK
Bo-Pa	1050883	10157017947	OK	OK
Bo-Pa	1105889	12092012487	OK	OK
Salerno	1072911	10299040193	OK	OK

Summary

- The standard procedure for e.m. shower reconstruction to be defined

- Data from the scanning laboratories to be collected

(Nagoya – 16 events; Bern – 8 events, Dubna – 1event, Napoli – 6 events, Bo-Pa – 3 events, Salerno – 1 event):

preferable way – to get feedback-files with all the BTs including e.m. showers (with the uniform selection criterias)