Status reports

M. Antonelli	ISR and ϕ decay simulation
S. Dell'Agnello	DC geometry review
P. de Simone	DC *s*-*t* relations with new sag model
A. Antonelli	DC response validation
S. Miscetti	EmC response validation
M. Moulson	Bank-reduction code for DST's
S. Miscetti	Background insertion for DST's
F. Bossi	Trigger simulation parameters
S. Giovannella	GEANFI on IBM
C. Bloise	Other MC tuning
I. Sfiligoi	DB modifications for DST's

MC DST's: A/C path

If an identified K_L tag, recalculate t_0 and re-run NVR code:

- `talk kloe_drop DROP VNVO 0 DROP KNVO 0 DROP INVO 0`
- `talk eclsfilt sel kltag yes ret ret`
- `use/path=1 kbkmdd emcdbini dcdbini eclsfilt kloe_drop t0_find/par=2 clufixtim/par=2 eclmod/par=2`
- `filter/path=1 eclsfilt on`

Compress banks (all events, including unclassified events and K_L tags)

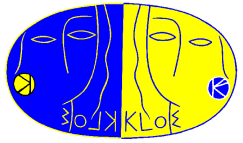
- `use/path=2 mc_dst clu2trig track_dst trig_dst`
- `output select event/path=(1,2)`

Zip output (level 4)

Specify bank list

- `output select drop`
- `output select kept`

MC DST's: banks currently dropped



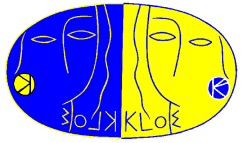
Bank drop is handled with **output select drop ******

Partial list of banks not retained in MC DST's:

Trigger	**TCOE TMON TELE TPIE PZZA TCAF TPAS**
EmC recon.	**MCEL CELE CWRK CPPS CPLS**
DC recon.	**MDTC DTCE DHRE DPRS DHSP DCHD DCHN**
MC run init.	**PART MATE TMED**
MC truth	**DHIT CHIT DTKA DTHA QIHI**

Additionally, all lower-case MC banks compressed with **sqzlib**

MC DST's: banks currently present



Headers, etc.	**LRID HEAD EVCL BRIN RUNG**
MC truth	**KINE VERT**
t_0-related	**T0MC T0GL**
Trigger	**TDST CTRG**
EmC recon.	**CLPS CLLS CSPS**
EmC truth	**CFHI CEKA CEKE**
QCAL	**QCAE QWRK QCKA**
DC recon.	**DTFS DVFS**
DC truth	**MDKI MDTF MDCN**
TCA	**TCLO**
Event class.	**ECLS ECLO VNVO INVO KNVO**

MC DST banks: general considerations

Code for creating new MC DST banks in MCT library

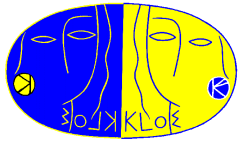
- New offline library, fully incoroporated in KLOE setup
- Also contains background insertion module
- Not worthwhile to move existing code (preserve CVS tags)

Banks defined in standard KLOE style with header files and descriptions in $K_IMCT

Bank structures must accommodate presence of background hits

Existing code in TLS (PROD2NTU) must work out of the box

MC DST summary banks for tracking



MKIN: MC details for KINE tracks

One bank per charged KINE track, 20 words:

- Number of DHIT hits and layers
- **x, p** at first and last DHIT hits
- Path length and TOF

MDTF: MC truth for DTFS tracks

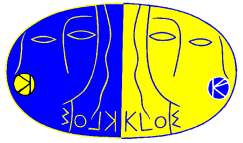
One bank per DTFS track, 28 words:

- Indices of 3 main KINE contributors
- Number of hits and number consecutive hits contributed by each
- Index of KINE at first DTFS hit; layer, **x, p** for first hit
- Index of KINE at last DTFS hit; layer, **x, p** for last hit

PROD2NTU routines to be modified:

getdhitval, tfmctrue, tfmchit, mainkineintrk, getfirstlastdhit

MC DST banks for tracking



MDKI name changed (was MKIN), format revised

Added innermost/outermost layer, number of layer crossings

MDTF format revised

Added

- Layer, **x, p** for first hit from major KINE contributor
- Layer, **x, p** for last hit from major KINE contributor

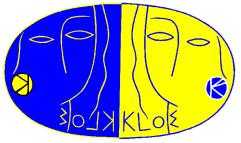
MDCN (MC DC hit count summary bank, new)

Substitutes DCNH for MC DST's

Separate counters for:

- Small/big cells
- Generated/background hits
- DHIT hits, DHRE hits, hits used by PR, hits used by TF

MC DST banks for trigger



Format of TDST bank same for MC/data DST's:

- Torta word — L1 type (EmC/DC/both)
LET/Cosmic multiplicities E/B/W
Cosmic veto
- T1C time
- T1D time
- T2D time
- Injection clock — *Not filled in MC DST's*
- Fiducial — *Not filled in MC DST's*
- Number of L2 DC hits

Other routines modified:

tskt	to extract trigger times into (modified) TCOE
gettrigger	to fill PROD2NTU block

MC DST banks for EmC

MC information for EmC relatively compact as is

Only need to discuss whether to keep/drop **CHIT**

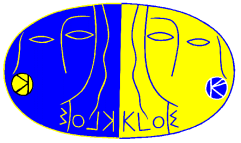
CEKE bank created as possible alternative

Composition and weight of KINE contributions to elements clusters

DC banks give similar composition for tracks

Address/Note	**CEKA**	**CELE**
CELE #1	Number of KINE contributors	Total energy of KINE contributors
	KINE contrib #1	Energy contrib by KINE #1
	KINE contrib #2	Energy contrib by KINE #2
	…	…
CELE #2	Number of KINE contributors	Total energy of KINE contributors

MC DST's: status and size estimate



Output size estimate:

1000 $K_S \rightarrow$ all, $K_L \rightarrow$ all events

Generated and reconstructed on AIX w/ standard path

.mcr **23.9 MB** (*i.e.*, KB/evt)

.dst **4.1 MB**

Very close to a final figure, to compare with 6 KB/evt pessimistically estimated last time

500 pb^{-1} = 500 M evts ≈ 2 TB

Variations:

Standard w/CHIT instead of CEKE	**4.7 MB** (KB/evt)
Standard + QIHI	**4.4 MB**
Standard + QIHI and CEKE → CHIT	**4.9 MB**