HPSS and Production Management

L.Didenko

Joint ALICE/STAR meeting

9 April, 2000

- **Volume of data processing (last month experience)**

- **Production mySql DataBase**

- **Tools for production operation**

- **Web page retrieving of production summary and operation control plots**
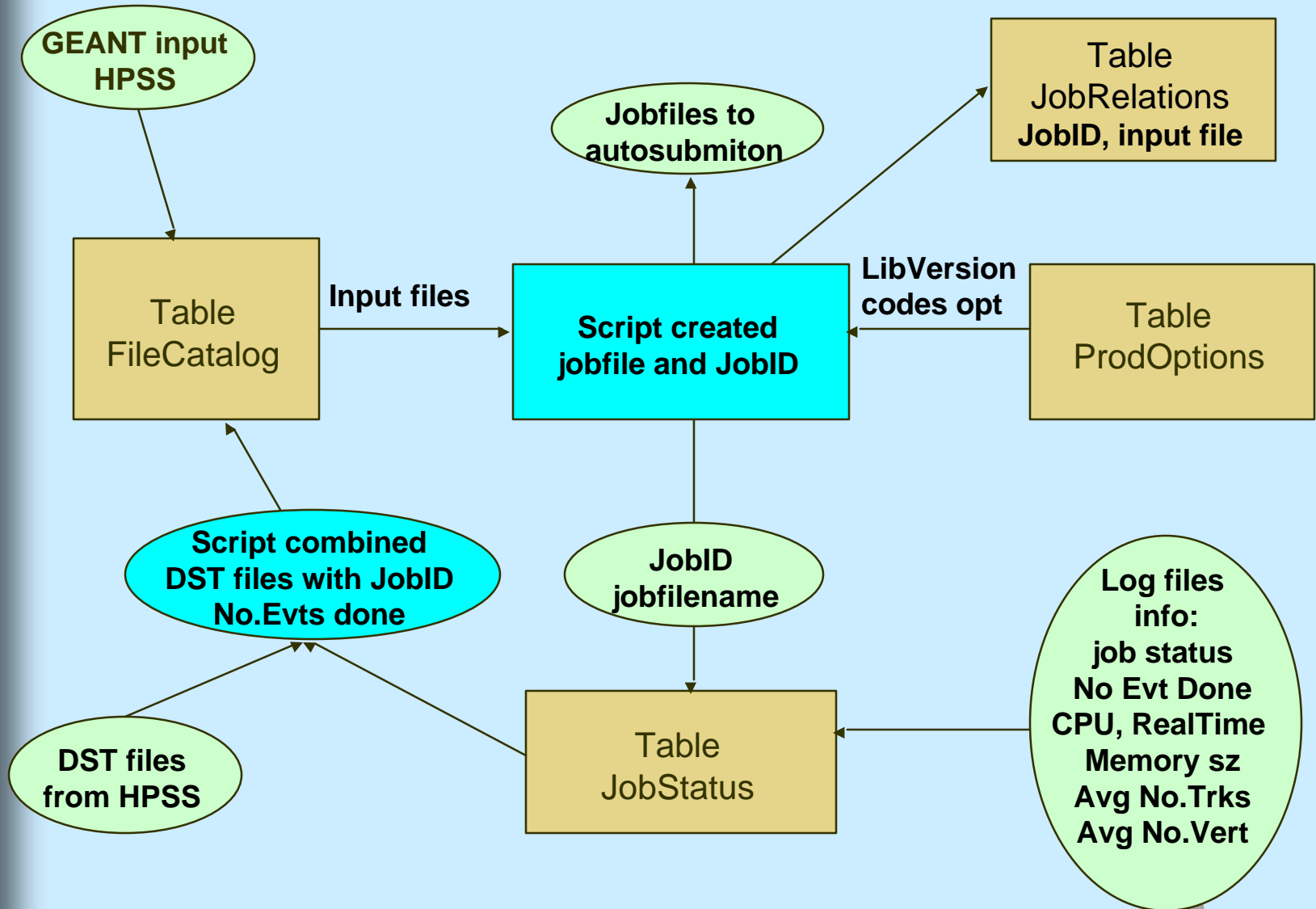
Volume of data processing

- **Reconstruction of GEANT simulated data: total number of events 300000 with number of tracks in average 5478 has been produced for last month**

- **total size of DST branch 800 GB, geant branch 2.7 TB, total production output for last month 3.5 TB has been transferred to HPSS**

- **daily operation : 120 jobs in average processing, 600 output files (5 branches for each job) produced**

- **one event production info (No. of tracks 5624) : CPU = 267 sec, Real Time = 341 sec, DST size = 5.9 MB**

STAR

BROOKHAVEN
NATIONAL LABORATORY

Production MySQL DataBase

GEANT input
HPSS

Jobfiles to
autosubmiton

Table
JobRelations
JobID, input file

Table
FileCatalog

Input files

Script created
jobfile and JobID

**LibVersion
codes opt**

Table
ProdOptions

Script combined
DST files with JobID
No.Evts done

JobID
jobfilename

Log files
info:
job status
No Evt Done
CPU, RealTime
Memory sz
Avg No.Trks
Avg No.Vert

DST files
from HPSS

Table
JobStatus

STAR

BROOKHAVEN
NATIONAL LABORATORY

Input/output relations

Postproduction operation

Input/output relations

input

JobID
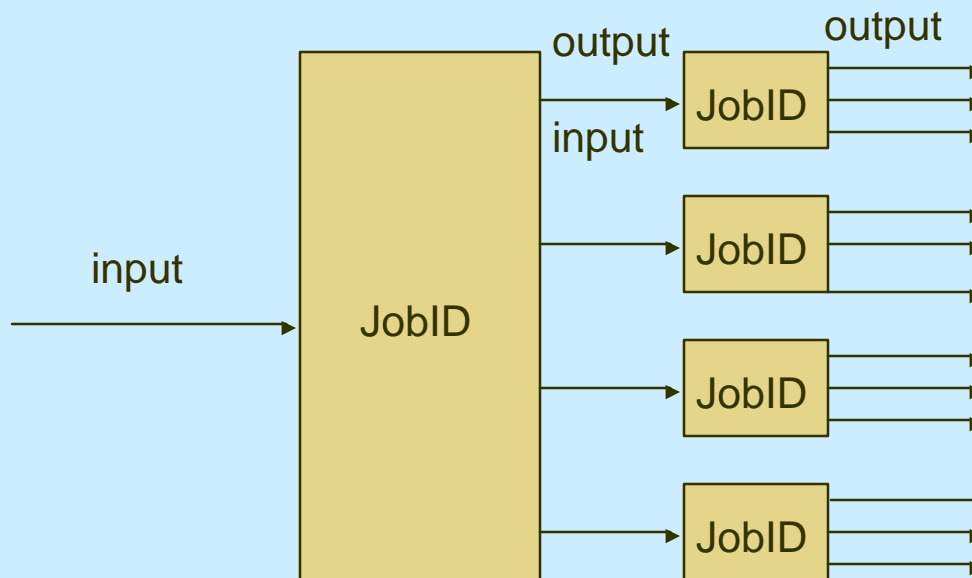
output
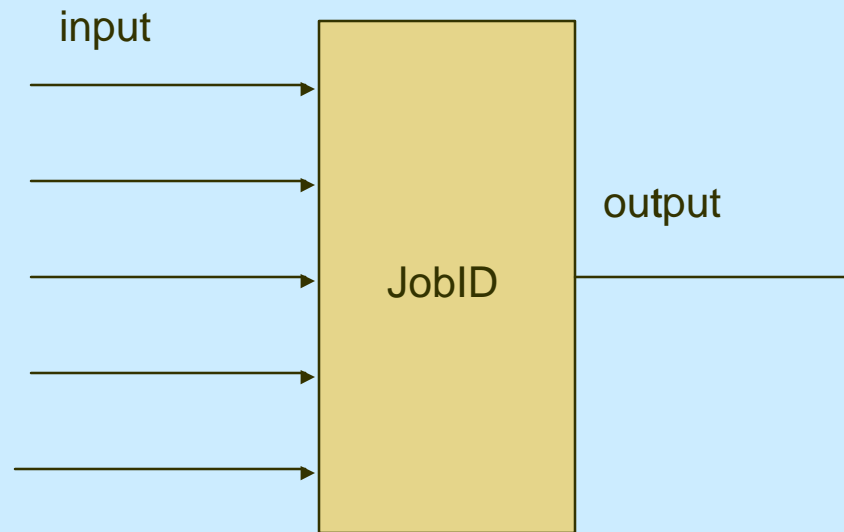
Concatenation of DST files

Web page retrieving production summary

```
          ┌─────────────────────┐
          │       Table         │
          │     FileCatalog     │
          └─────────────────────┘
```


Raw data files size
No. Events

DST files size
No.Events done

Web page
summary Table

FC browser
dataset1

FC browser
dataset2

FC browser
dataset3

FC browser
dataset4

BROOKHAVEN
NATIONAL LABORATORY
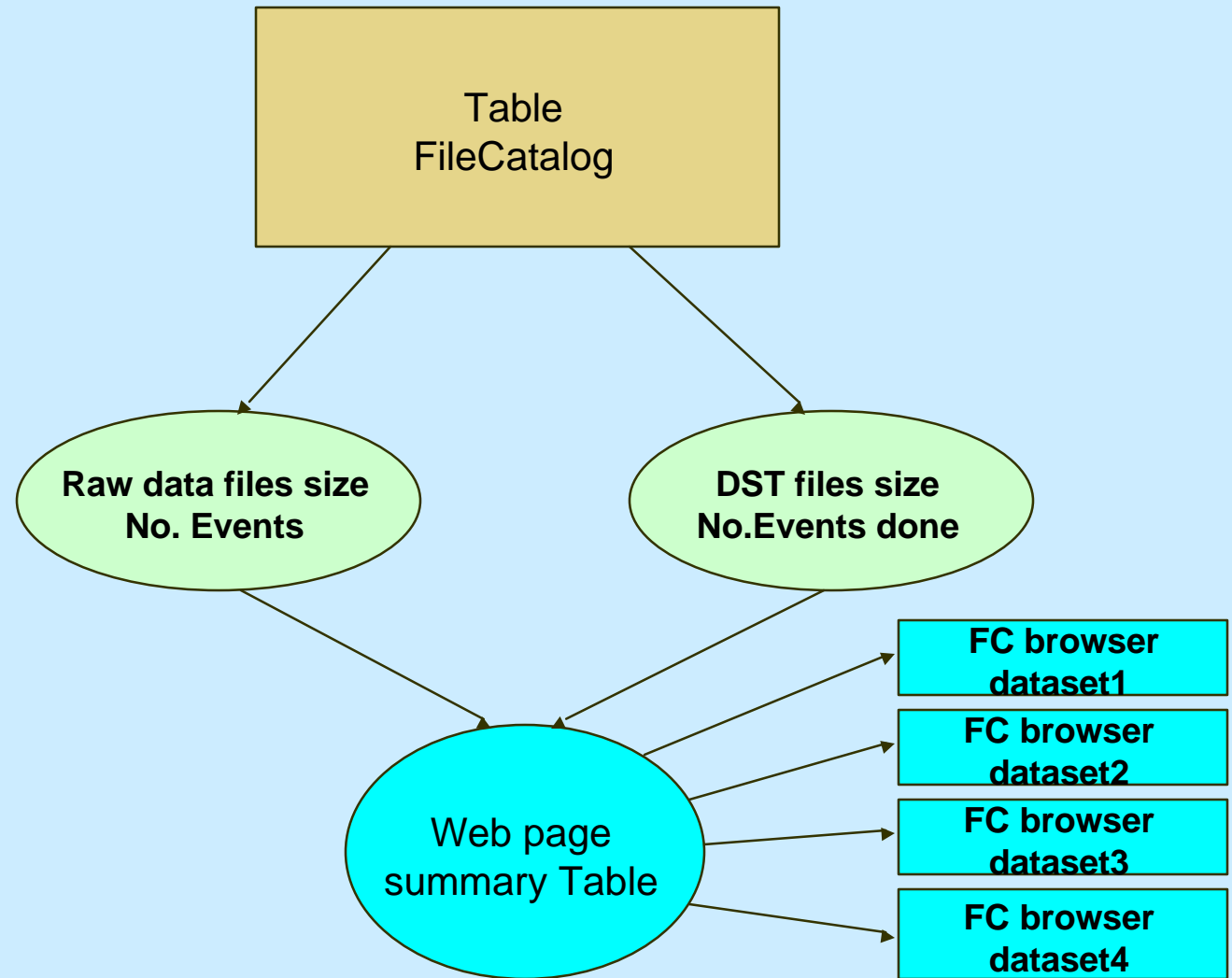
Production operation control plots

```
                    ┌─────────────────┐
                    │     Table       │
                    │   JobStatus     │
                    └─────────────────┘
                              │
                              ▼
   ╭──────────────╮    ╭──────────────────────╮
   │    Query     │    │  CGI script retrieving│
   │ interface box│───▶│      data from        │
   ╰──────────────╯    │  JobStatus Table      │
                       │ and creates GIF plots │
                       ╰──────────────────────╯
                        │    │    │    │    │
                        ▼    ▼    ▼    ▼    ▼
                    ╭────╮ ╭───╮ ╭────╮ ╭─────╮ ╭──────╮
                    │Mem │ │CPU│ │Real│ │No.  │ │No.   │
                    │size│ │   │ │Time│ │Vert │ │Trks  │
                    ╰────╯ ╰───╯ ╰────╯ ╰─────╯ ╰──────╯
```
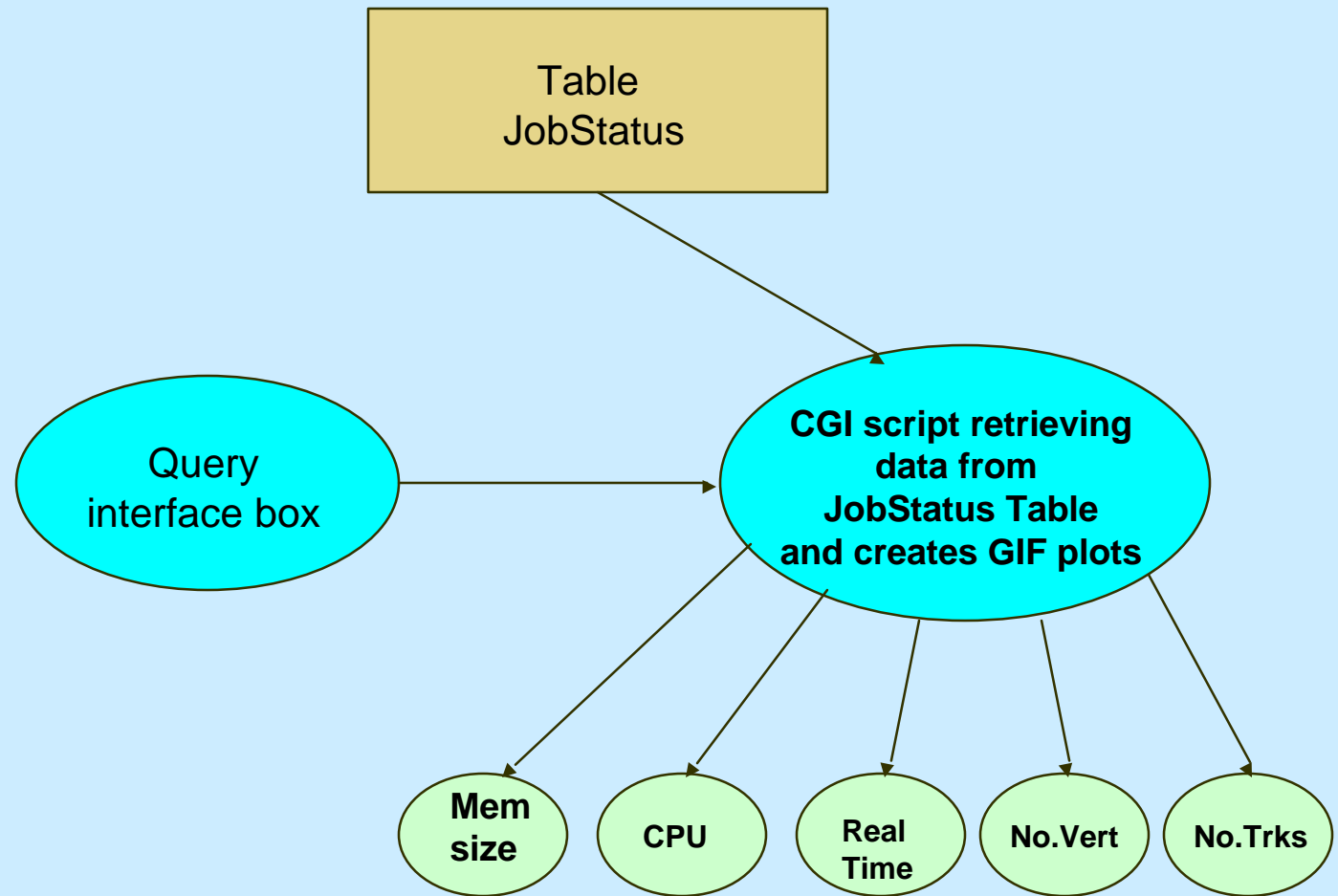
Tools for production operation (more)

- **Tom Throwe's scripts for jobs submission, status control and transfering input/output files from/to HPSS**

- **automated email with info when job done, crashed, aborted or killed**

- **script for automated jobs submission**

- **script which reading email info and resubmit jobfile in case job crashed, aborted or killed for technical reasons**

- **script which which scanning production DB and give information about failed jobs (not yet Web presentation)**

- **People contributed to design and development of production DB and tools**
  Y.Fisyak, T.Wenaus, Wensheng Deng, L.Barnby,S.Vaniashian