DAΦNE TECHNICAL NOTE

INFN - LNF, Accelerator Division

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Note: **C-20**

DAFNE Server Data Access Facility Update

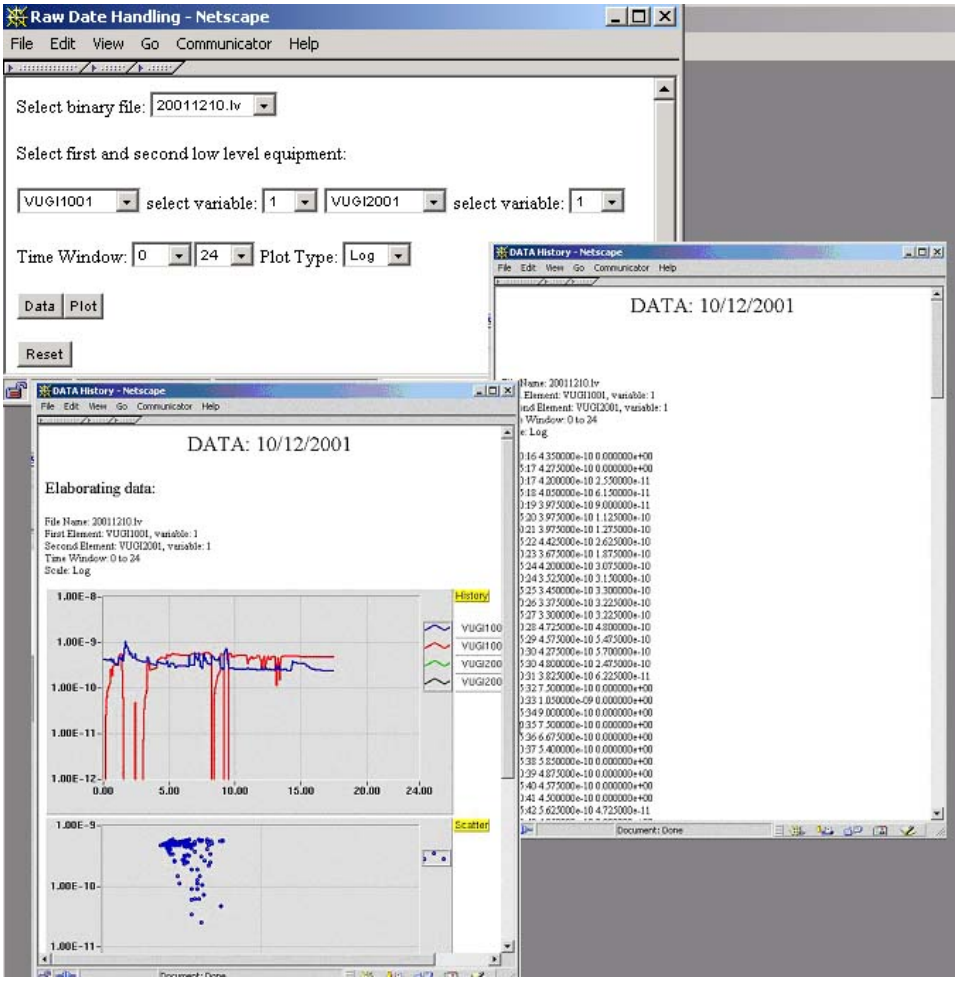
G. Mazzitelli, A. Stella

Introduction

The DAFNE Web Server, http://dafne.lnf.infn.it, has been updated with new tools and further elements are now under data logging[1,2]. The aim of this note is to describe the new tools, and to update the data format reported in the C-19 Technical Note: M.˚Masciarelli, G.˚Mazzitelli: "DAFNE Web Server Data Access Facility".

Data and Plot Analysis Facility

In the C-19 note the possibility to access low element binary accelerator files for downloading and history plotting has been introduced. New elements are now under logging (see next section). A CGI (Common Gateway Interface) has been developed in order to decode data in ASCI format and to correlate information.



The facility is linked to the DAFNE web server in the download page http://dafne.lnf.infn.it/private/.

Data Format Update and Virtual Elements

New elements are under logging in the machine database since October 2001.

Beam position (see next paragraph), as well as radio frequency information are now stored. The variables logged for each control system device in the DAFNE database are summarized in appendix A. In appendix B the list of raw Real Time Data Base (RTDB) equipment under logging, and the scheduled update time, is given.

In appendix C, it is also reported the update of the un-decoded raw data format introduced in the previous report [1] and the format of the daily summary files updated 30 minutes after midnight UTC time.

In order to reduce the information to be logged, some of the DAFNE Control System [3] low level devices have been dumped, in the high level database, in Virtual Elements, where a mix of raw information is done. A Virtual Element is a DAFNE control system equipment where information from different devices in the low level RTDB are merged in a new element only present in the high level database for online correlation and storing. Some examples are the timing information (RUN, STANDBY, BUNCH FILLING, etc not present in the low level RTDB, but only settable by operator controls window), the estimated luminosity and beam position.

Orbit Virtual Elements

Each Virtual Element in the 4PB class, called 4PB0****, includes in its variables the (*x*,*y*) data concerning the transverse beam position with reference to the beam position monitors BPBE**** and BPBP**** installed in the electron and positron rings. In the interaction regions elements such information are duplicated for uniformity.

The scheduled update time for 4PB virtual elements has been set to five minutes except for the following elements: 4PB0L204, 4PB0L205, 4PB0L206, 4PB0L207, which are logged each minute to provide data to DAΦNE-L facility (Ref. Appendix B).

Data are extracted from the high level processor (DEVIL204), dedicated to the main rings orbit acquisition system, and processed to reconstruct the beam position.

To this purpose the following LABVIEW Virtual Instrument

/u2/dcs/source/0classes/GOD/console/dumpOrbit2.0.vi

based on the existing code used in the orbit tools of DAFNE controls, has been adapted to provide, at each execution, the average of the last eight beam positions stored in the DEVIL204 memory buffer for each BPM of the main rings, together with its name and position along the ring.

Data extracted from the orbit processor memory buffer include correction due to the non-linearity of the pickup, gain calibration of the detection electronic and survey offsets. Any further processing to add reference orbit offsets and the rotation of the reference frame in the KLOE interaction region, is performed directly by the *dumpOrbit2.0.vi* itself with the same method adopted in the *orbit_ display* software in the DAFNE consoles.

The static global variable of the DEVIL204, which is initiated at the processor start up or by the high level consoles by loading two configuration files stored in the folder *BibleHD:DANTE:0_classes:GOD:Configuration*, is regarded by the *dumpOrbit2.0.vi* as the source for any information needed to identify BPM and to reconstruct the beam position, namely:

- monitor name (8 bytes)
- position along the ring (“azimuth” [m])
- survey offsets (x,y) (“offsetAll_X” and “offsetAll_Y” [mm])
- reference orbit offset (“offsetMod_X” and “offsetMod_Y” [mm])
- flag to identify bpm for reference frame rotation (“rotationAngle” 0/1)

References

[1] M. Masciarelli, G. Mazzitelli "DAFNE Web Server Data Access Facility" DAFNE Technical Note C-19, April 2001

[2] G. Mazzitelli, F. Murtas, P. Valente. “The KLOE/DAFNE Status Logging, Analysis and Database System”. ICALEPS2001, 27-30 November, 2001. San Jose, California, USA

[3] G. Di Pirro, G. Mazzitelli, I. Sfiligoi, A. Stecchi,. "The Evolution of DAFNE Control System: A History of Liberation from Hardware". ICALEPS2001, 27-30 November, 2001. San Jose, California, USA

Appendix A

DAFNE variable logged for each Control System low-level RTDB or Virtual Element divided by class name. The control system class name identifies the software controlling the specified element.
ClassName:var1:var2:var3:var4:var5:var6:var7

Magnet (low level RTDB element):
MG1:CurrSett:CurrROut:Polarity:Volt:Fault1:Fault2:Status:
MGO:CurrSett:CurrROut:Polarity:Volt:Fault1:-:Status:
CIT:-:-:-:-:Fault1:-:Status: (correctors main unit)
CHV:CurrSett:CurrROut:-:Volt:Fault1:-:Status:
COR:-:-:-:-:Fault1:-:Status: (correctors main unit)
CHN:CurrSett:CurrROut:-:Volt:Fault1:-:Status:

1. CurrSett: Current setting [A]
2. CurrROut: Current read out [A]
3. Polarity: Polarity read [-1, 0, 1]
4. outVolt: Output voltage [V]
5. Fault1: fault word 1
6. Fault2: fault word 2
7. Status: 0 power off, 1 standby, 2 operational, 3 bad

DC current monitor (low level RTDB element):
DCT:<I>:dI/shot:tau:Sum<I>*T:-:-:Status:

1. <I>: average current, last second [mA]
2. dI/shot: increase of current each shot (not used)
3. tau: lifetime (not used)
4. Sum<I>*T: integrated current [Ah] (online process)
5. not used
6. not used
7. Status: error mask word

Vacuum (low level RTDB element):
VUG:Pressure:-:-:-:-:-:Status:

1. Pressure: pressure [torr]
2. not used
3. not used
4. not used
5. not used
6. not used
7. Status: error mask word

Luminosity monitor (low level RTDB element):
DLM:Lum:Lum*s:buckN:buckM:pedestal:SBCrSec:Status:

1. Lum: measured luminosity [cm-2s-1]
2. Lum*s: integrated measured luminosity [cm-2]
3. buckN: rate on main bucket [Hz]
4. buckM: rate on slave bucket [Hz]
5. pedestal: offset value [Hz]
6. SBCrSec: Single Bremsstraulung cross section [cm2]
7. Status: word status: bit 1 (msb) enable measurement
   Bit 2 measurement mode
   Bit 3 valid luminosity
   Bit 4 RF coincidence
   Bit 5 pm HV on
   Bit 6-7 fixed current ratio mode

```
Timing information (Virtual Element):
4TI:bun1-32:bun33-64:bun65-96:bun97-120:TimStatus:ACPulse:Status:
   1. bun1-32: bunch filled [word]
   2. bun33-64: bunch filled [word]
   3. bun65-96: bunch filled [word]
   4. bun97-120: bunch filled [word]
   5. TimStatus: timing status [word]
   6. ACPulse: Accumulator pulse
   7. Status: not used
Estimated luminosity (Virtual Element):
4LM:DLM1L0:DLM1p:DLM1e:DLM2L0:DLM2p:DLM2e:tick:
   1. DLM1L0: start luminosity monitor @IP1 [cm-2s-1]
   2. DLM1p: start positron current [mA]
   3. DLM1e: start electron current [mA]
   4. DLM2L0: start luminosity monitor @IP2 [cm-2s-1]
   5. DLM2p: start positron current [mA]
   6. DLM2e: start electron current [mA]
   7. tick: elapsed time from start [ms]
RF Frequency (low level RTDB element):
RDS:Freq:-:-:-:-:-:Status:
   1. Freq: Cavity frequency [Hz]
   2. not used
   3. not used
   4. not used
   5. not used
   6. not used
   7. Status:
Ion cleaning electrodes (low level RTDB element):
ICE:HVset:HVread:-:-:-:-:Status:
   1. HVset: High Voltage setting [V]
   2. HVread: High Voltage readout [V]
   3. not used
   4. not used
   5. not used
   6. not used
   7. Status: not used
Stepper motors (scrapers, low level RTDB element):
STP:set:read:-:-:-:-:Status:
   1. set: position setting [mm]
   2. read: position readout [mm]
   3. not used
   4. not used
   5. not used
   6. not used
   7. Status: not used
Spiricon (Synchrotron light monitor, low level RTDB element):
SPR:WID:wid:orint:round:-:-:Status
   1. WID: horizontal beam with [mm]
   2. wid: vertical beam with [mm]
   3. orint: beam orientation [degree]
   4. round: beam roundness
   5. not used
   6. not used
   7. Status: not used
```

KLOE Magnet field (low level RTDB element):
GSS:field:-:-:-:-:-:Status
1. field: KLOE magnet field [Gauss]
2. not used
3. not used
4. not used
5. not used
6. not used
7. Status: not used

Beam Position Monitor (Virtual Element):
4PB:Xe-:Ye-:Xe+:Ye+:-:-:Status
1. Xe-: horizontal electron beam position [mm]
2. Ye-: vertical electron beam position [mm]
3. Xe+: horizontal positron beam position [mm]
4. Ye+: vertical positron beam position [mm]
5. Not used
6. Not used
8. Status: word status:
   00 no beam
   01 e- beam stored
   02 e+ beam stored
   03 both beams stored
   04 BPM out of range
   05 BPM not available

Radio Frequency (low level RTDB element):
RFS:RFlevel:forward:reverse:tuner:-:-:Status
1. RFlevel: RF High voltage level [KV]
2. forward: RF power forward [KW]
3. reverse: RF power reverse [KW]
4. tuner: tuner position [micron]
5. not used
6. not used
7. Status: not used

Appendix B

DAFNE .lv binary file elements and variables. Updated every minute, or 5 minutes, in appendix A the variable logged for each element are reported.

List of elements logged each minute:

DCTEL001	DLM00001	4TI00001	RDS42001	SPRP*001	4PB0L204	4PB0L206
DCTPS001	DLM00002	4LM00001	SPRE*001	GSSI1001	4PB0L205	4PB0L207

List of elements logged each 5 minute:

VUGTM001	ICEES204	DHRES201	CDHPL201	WGLES201	QUAEL110	QUAPL110
VUGTS001	ICEES205	DHSES202	CHHPI101	WGLEL201	QUAEL108	QUAPL207
VUGTT001	ICEES206	DHSEL201	CVVPI101	WGLEL101	QUAEL109	QUAPL208
VUGTR001	ICEES207	DHREL202	CVVPI202	WGLES101	QUAEL103	QUAPL203
VUGTL001	ICEES208	CVVPS106	CVVPI201	DH*P*001	QUAEL104	QUAPL202
VUGA3001	ICEES209	CHHPS106	CHHPI201	WGLP*001	QUAEL101	QUAPL201
VUGA2001	ICEES210	CVVPS105	CHHPI202	WGLPS201	QUAEL102	QUAPL205
VUGA1001	ICEI2001	CHHPS105	CHHPI102	WGLPL201	QUAEL209	QUAPL204
VUGTE001	ICEI2002	CVVEL101	CVVPI102	WGLPL101	QUAEL210	QUAPL206
VUGTE002	ICEI2003	CHHEL101	CDVPL201	WGLPS101	QUAEL208	QUAPL105
VUGTP001	ICEI2004	CVVEL102	CDHPL101	SPLP2001	QUAEL207	QUAPL107
VUGPL101	ICEEL201	CHHEL102	CDVPL101	SPLP1002	QUAEL201	QUAPL106
VUGPL102	ICEEL202	CVVEL202	QSKEL106	SPLP2002	QUAEL106	4PB0L101
VUGPL103	ICEEL203	CHHEL202	CHHEL106	SPLP1001	QUAEL107	4PB0L102
VUGPS101	ICEEL204	CVVEL203	CVVEL106	SPLE2001	QUAEL105	4PB0L103
VUGPS102	ICEEL205	CHHEL203	QSKEL103	SPLE1002	QUAEL206	4PB0L104
VUGPS103	ICEEL206	CVVPS204	CHHEL103	SPLE2002	QUAES104	4PB0L10
VUGPS104	ICEEL207	CHHPS204	CVVEL103	SPLE1001	QUAES105	4PB0L106
VUGPS105	ICEEL208	CVVPS203	QSKEL204	QUATE104	QUAES101	4PB0L107
VUGPS201	ICEEL101	CHHPS203	CHHEL204	QUATE105	QUAES102	4PB0L108
VUGPS202	ICEEL102	CHHEL205	CVVEL204	QUAI2001	QUAES204	4PB0I101
VUGPS203	ICEEL103	CVVEL205	QSKEL201	QUAI2002	QUAES106	4PB01K01
VUGPL201	ICEEL104	CVVEL206	CHHEL201	QUAI2003	QUAES205	4PB01K02
VUGPL202	ICEEL105	CHHEL206	CVVEL201	QUAI2005	QUAES206	4PB01K03
VUGPL203	ICEEL106	CVVPS201	QSKES205	QUAI2006	QUAES209	4PB01K04
VUGEL101	ICEEL107	CHHPS201	CHHES205	QUAI2007	QUAES208	4PB01K05
VUGEL102	ICEEL108	CVVPL203	CVVES205	SXPES104	QUAES207	4PB01K06
VUGEL103	ICEEL109	CHHPL203	QSKES202	SXPES201	QUAES203	4PB0I102
VUGES101	CVVEL104	CVVPL202	CHHES202	SXPES204	QUAES109	4PB0S101
VUGES102	CHHEL104	CHHPL202	CVVES202	SXPEL201	QUAES110	4PB0S102
VUGES103	CVVEL105	CVVES204	QSKES104	SXPEL204	QUAES201	4PB0S103
VUGES201	CHHEL105	CHHES204	CHHES104	SXPEL101	QUAES202	4PB0S104
VUGES202	CVVPS102	CVVES203	CVVES104	SXPEL104	QUAES107	4PB0S105
VUGES203	CHHPS102	CHHES203	QSKES101	SXPES101	QUAES108	4PB0S106
VUGEL201	CVVPS103	DHRPS102	CHHES101	SXPES102	QUAES103	4PB0S107
VUGEL202	CHHPS103	DHSPS101	CVVES101	SXPES103	QUAPS203	4PB0S108
VUGEL203	CVVES102	DHSPL102	QSKPS101	SXPES202	QUAPS202	4PB0S201
VUGI1001	CHHES102	DHRPL101	CHHPS101	SXPES203	QUAPS207	4PB0S202
VUGI2001	CVVES103	DHRPL202	CVVPS101	SXPEL202	QUAPS201	4PB0S203
STPEL2U1	CHHES103	DHSPL201	QSKPS104	SXPEL203	QUAPS110	4PB0S204
STPEL2D1	CVVPL105	DHSPS202	CHHPS104	SXPEL103	QUAPS109	4PB0S205
STPPS2I1	CHHPL105	DHRPS201	CVVPS104	SXPEL102	QUAPS103	4PB0S206
STPPS2E1	CVVPL104	CDVES101	QSKPS202	SXPPS101	QUAPS108	4PB0S207
STPPL2U1	CHHPL104	CDVES201	CHHPS202	SXPPS102	QUAPS107	4PB0S208
STPPL2D1	CVVPL101	CDHES201	CVVPS202	SXPPS103	QUAPS209	4PB0S209
STPES2I1	CHHPL101	CDHES101	QSKPS205	SXPPL104	QUAPS208	4PB0I201
STPES2E1	CVVES105	CDVEL201	CHHPS205	SXPPL101	QUAPS206	4PB02002
STPPL1I1	CHHES105	CVVEI201	CVVPS205	SXPPL204	QUAPS205	4PB02003
STPPL1E1	CVVPL102	CVVEI102	QSKPL201	SXPPL201	QUAPS106	4PB02007
STPEL1I1	CHHPL102	CHHEI201	CHHPL201	SXPPS204	QUAPS105	4PB02008
STPEL1E1	CVVPL206	CHHEI102	CVVPL201	SXPPS201	QUAPS104	4PB0I202
ICEES101	CVVES201	CVVEI202	QSKPL204	SXPPS104	QUAPS102	4PB0L201
ICEES102	CHHPL206	CVVEI101	CHHPL204	SXPPL103	QUAPS101	4PB0L202
ICEES103	CHHPL205	CHHEI202	CVVPL204	SXPPL102	QUAPS204	4PB0L203
ICEES104	CVVES106	CHHEI101	QSKPL103	SXPPL203	QUAPL209	4PB0L208
ICEES105	CHHES106	CDHEL201	CHHPL103	SXPPL202	QUAPL210	RFSA1001
ICEES106	CVVPL205	CDVEL101	CVVPL103	SXPPS202	QUAPL102	RFSEL001
ICEES107	CHHES201	CDHEL101	QSKPL106	SXPPS203	QUAPL101	RFSPL001
ICEES108	DHSES101	CDHPS201	CHHPL106	QUAEL204	QUAPL103	
ICEES201	DHRES102	CDHPS101	CVVPL106	QUAEL205	QUAPL104	
ICEES202	DHREL101	CDVPS101	DH*E*001	QUAEL202	QUAPL108	
ICEES203	DHSEL102	CDVPS201	WGLE*001	QUAEL203	QUAPL109	

Appendix C

Updated format (see C-19 internal report for more information)
C.1 DAFNE .raw format. Updated every 15 seconds

1.	time	[UNIX seconds]
2.	e- current	[mA]
3.	e+ current	[mA]
4.	IP1 luminosity	[cm-2s-1]
5.	IP1 lum. Int.	[nbarn-1]
6.	IP2 luminosity	[cm-2s-1]
7.	IP2 lum. Int.	[nbarn-1]
8.	bunch 1-32	word*
9.	bunch 33-64	word
10.	bunch 65-96	word
11.	bunch 97-120	word
12.	timing word	word
13.	Acc. pulse	#
14.	L0 IP1	[cm-2s-1]
15.	I0 e+ IP1 cur	[mA]
16.	I0 e- IP1 cur	[mA]
17.	L0 IP2	[cm-2s-1]
18.	I0 e+ IP2 cur	[mA]
19.	I0 e- IP2 cur	[mA]
20.	ms from start RUN	[msec]
21.	RF frequency	[Hz]
22.	Roundness e-	[σy/σx]
23.	Roundness e+	[σy/σx]
24.	KLOE field	[Gauss]
25.	X BPMEL204	[mm]
26.	Y BPMEL204	[mm]
27.	X BPMEL205	[mm]
28.	Y BPMEL205	[mm]
29.	X BPMEL206	[mm]
30.	Y BPMEL206	[mm]
31.	X BPMEL207	[mm]
32.	Y BPMEL207	[mm]

*) the bunch word in this format as well as in the KLOE fast format is 1 if the bunch is filled. The most significant bit is the first bunch.

C.2 DAFNE .dat format. Updated every 15 seconds

1.	time	[UNIX seconds]
2.	e- current	[mA]
3.	e+ current	[mA]
4.	Lum1 (IP1 or e+) rate	[Hz]
5.	Lum2 (IP2 or e-) rate	[Hz]
6.	linac mode	- 1 electrons +1 positrons
7.	number of e- bunches	#
8.	e- bunch 1-32 word	bit 32-1
9.	e- bunch 33-64 word	bit 32-1
10.	e- bunch 65-96 word	bit 32-1
11.	e- bunch 96-120 word	bit 32-8
12.	number of e+ bunches	#
13.	e+ bunch 1-32 word	bit 32-1
14.	e+ bunch 33-64 word	bit 32-1
15.	e+ bunch 65-96 word	bit 32-1
16.	e+ bunch 96-120 word	bit 32-8
17.	status e-	0 no beam 1 acc inject 2 main ring inject 3 stored beam 4 colliding

18. status e+	0	no beam
	1	acc inject
	2	main ring inject
	3	stored beam
	4	colliding
19. status DAFNE	-3	simulated data
	-2	run off
	-1	unknown
	0	standby
	1	e- inject
	2	e+ inject
	3	e- stored
	4	e+ stored
	5	filled
	6	colliding
20. fill number	#	
21. e- lifetime	[s]	
	-1	not available
	0	unstable
22. e+ lifetime	[s]	
	-1	not available
	0	unstable
23. Lum1 (IP1or e+)	[cm-2 s-1]/1e28	
24. Lum2 (IP1or e-)	[cm-2 s-1]/1e28	
25. interaction flag	0 not colliding	
	1 colliding @ IP1	
	2 colliding @ IP2	
	3 colliding @ IP1-IP2	
26. RF frequency	[Hz]	
27. Roundness e-	[σy/σx]	
28. Roundness e+	[σy/σx]	
29. KLOE field	[Gauss]	

C.3 DAFNE DMCV, daily most common variable, files format

1.	time	[UNIX seconds]		60 seconds
2.	e- current	[mA]	DCTEL001	60 seconds
3.	e+ current	[mA]	DCTPS001	60 seconds
4.	IR1 luminosity e+	[cm-2 s-1]	DLM00001	60 seconds
5.	IR1 rate e+	[Hz]	DLM00001	60 seconds
6.	IR1 luminosity e-	[cm-2 s-1]	DLM00002	60 seconds
7.	IR1 rate e-	[Hz]	DLM00002	60 seconds
8.	e- number of bunch	#		60 seconds
9.	e+ number of bunch	#		60 seconds
10.	MR vacuum IP1	[torr]	VUGI1001	300 seconds
11.	MR vacuum IP2	[torr]	VUGI2001	300 seconds
12.	MR vacuum e+	[torr]	VUGPL101	300 seconds
13.	MR vacuum e+	[torr]	VUGPL102	300 seconds
14.	MR vacuum e+	[torr]	VUGPL103	300 seconds
15.	MR vacuum e+	[torr]	VUGPS101	300 seconds
16.	MR vacuum e+	[torr]	VUGPS102	300 seconds
17.	MR vacuum e+	[torr]	VUGPS103	300 seconds
18.	MR vacuum e+	[torr]	VUGPS104	300 seconds
19.	MR vacuum e+	[torr]	VUGPS105	300 seconds
20.	MR vacuum e+	[torr]	VUGPS201	300 seconds
21.	MR vacuum e+	[torr]	VUGPS202	300 seconds
22.	MR vacuum e+	[torr]	VUGPS203	300 seconds
23.	MR vacuum e+	[torr]	VUGPL201	300 seconds
24.	MR vacuum e+	[torr]	VUGPL202	300 seconds
25.	MR vacuum e+	[torr]	VUGPL203	300 seconds
26.	MR vacuum e-	[torr]	VUGEL101	300 seconds
27.	MR vacuum e-	[torr]	VUGEL102	300 seconds
28.	MR vacuum e-	[torr]	VUGEL103	300 seconds
29.	MR vacuum e-	[torr]	VUGES101	300 seconds
30.	MR vacuum e-	[torr]	VUGES102	300 seconds
31.	MR vacuum e-	[torr]	VUGES103	300 seconds
32.	MR vacuum e-	[torr]	VUGES201	300 seconds
33.	MR vacuum e-	[torr]	VUGES202	300 seconds
34.	MR vacuum e-	[torr]	VUGES203	300 seconds
35.	MR vacuum e-	[torr]	VUGEL201	300 seconds
36.	MR vacuum e-	[torr]	VUGEL202	300 seconds
37.	MR vacuum e-	[torr]	VUGEL203	300 seconds

C.4 KLOE .fast format. Updated every 15-30 seconds
(F. Murtas, P. Valente)

1.	seconds since midnight	[s]
2.	current e-	[mA]
3.	current e+	[mA]
4.	luminosity monitor IP1 counts	[Hz]
5.	luminosity monitor IP2 counts	[Hz]
6.	number of bunch e-	#
7.	number of bunch e+	#
8.	fill number	#
9.	DAFNE status	-3 simulated data -2 run off -1 unknown 0 standby 1 e- inject 2 e+ inject 3 e- stored 4 e+ stored 5 filled 6 colliding
10.	not used	
11.	CAENET (packed)	BIT 0 HVEMC BIT 1 EMC BIT 2 HVDC BIT 3 DC BIT 4 DAQ BIT 5 DC CURRENT
12.	trigger RUN number	#
13.	ECM HV state	-2 = HV UNDEFINED -1 = WORNG READOUT 0 = HV ON 1 = ECA OFF 2 = BAR OFF 3 = ECB OFF 4 = QCAL OFF 5 = HV OFF
14.	ECM LV state	-1 = WRONG READOUT 0 = LV OK 1 = PULSING 2 = BAD THRESHOLDS
15.	trigger luminosity	[/10^28 cm-2s-1]
16.	trigger number of Bhabha	#
17.	DC HV state	-1 = WRONG READOUT 0 = HV ON 1 = STANDBY 2 = HV OFF 3 = RUMPING UP 4 = RUMING DOWN
18.	DC LV state	-1 = WRONG READOUT 0 = LV OK 1 = PULSING 2 = BAD THRESHOLD 3 = BAD WIDTH 4 = BAD DEAD TIME
19.	lifetime e-	[s]
20.	lifetime e+	[s]
21.	daq crates state	-1 = WRONG READOUT 0 = ALL CRATE ON 1 = ONE OR SAME CRATE OFF
22.	L3 run number	#
23.	not used	
24.	L3 luminosity	[/10^28 cm-2s-1]

25.	KLOE run state	-1 NOT RUNNING 0 NOT READY 1 READY 2 PAUSED 3 RUNNING
26.	KLOE RUN number	#
27.	L3 number of Bhabha	#
28.	RUN type	-1 NOT READY 0 NORMAL 1-5 CALIBRATION
29.	RUN on disk	0 TRASH 1 DISK
30.	number of farms	#
31.	DC trigger level 1	[Hz]
32.	DC trigger level 2	[Hz]
33.	QCAL coincidence	[Hz]
34.	QCAL A	[Hz]
35.	QCAL B	[Hz]
36.	T2 yes	[Hz]
37.	T1 free	[Hz]
38.	QCAL coincidence delayed	[Hz]
39.	QCAL Bhabha delayed	[Hz]
40.	QCAL Bhabha	[Hz]
41.	TRG integrated luminosity	[nbarn-1]
42.	L3 integrated luminosity	[nbarn-1]
43.	pe1 e- bunch pattern	word
44.	pe2	word
45.	pe3	word
46.	pe4	word
47.	pp1 e+ bunch pattern	word
48.	pp2	word
49.	pp3	word
50.	pp4	word
51.	Run Size	[GByte]
52.	Event Size	[byte]
53.	ECM1	[Hz]
54.	ECM2	[Hz]
55.	ECM3	[Hz]
56.	ECM4	[Hz]

C.5 KLOE .slow format. Updated every 45 seconds
(F. Murtas, P. Valente)

1.	seconds from midnight	[s]
2.	vacuum at IP 1 (KLOE)	[torr]
3.	vacuum at IP 2 (DEAR/FINUDA)	[torr]
4.	magnet status	0 cold 1 undefined 2 300-77 K 3 77-4 K 4 warm map
5.	magnet current	[A]
6.	magnet Helium percentage in vessel	[%]
7.	magnet coil 1 temperature	[K]
8.	magnet coil 2 temperature	[K]
9.	magnet coil 3 temperature	[K]
10.	magnet coil 4 temperature	[K]
11.	gas status	0 working 1 warning 2 alarm -1 unknown

12.	gas mode	0 standby 1 closed mode 2 calibrate 3 shutdown 4 open mode (standard) 5 zero adjust 6 manual -1 unknown
13.	gas flow	[slm] (standard liters/minute)
14.	atmosferic pressure	[mbar]
15.	gas temperature	[Celsius]
16.	gas isobutane percentage	[%]
17.	gas oxygen content	[ppm]
18.	gas water content	[ppm]
19.	absolute pressure (side A)	[mbar]
20.	absolute pressure (side B)	[mbar]
21.	differential pressure (side A)	[mbar]
22.	differential pressure (side B)	[mbar]
23.	pressure of Helium inlet	[mbar]
24.	pressure of isobutan inlet	[mbar]
25.	pressure of argon inlet	[mbar]
26.	TRKMON run number	#
27.	beam position x	[cm]
28.	beam position y	[cm]
29.	beam position z	[cm]
30.	beam width x	[mm]
31.	beam width y	[mm]
32.	beam width z	[mm]
33.	Φ momentum x	[MeV/c]
34.	Φ momentum y	[MeV/c]
35.	Φ momentum z	[MeV/c]
36.	CALMON run number	#
37.	$\gamma\gamma$ endcap energy	[MeV]
38.	$\gamma\gamma$ barrel energy	[MeV]
39.	Bhabha endcap energy	[MeV]
40.	Bhabha barrel energy	[MeV]
41.	COSMON run number	#
42.	DCNOISE run number	#
43.	not used	
44.	scraper e- LONG IP2 up	[mm]
45.	scraper e- LONG IP2 down	[mm]
46.	small cells average voltage	[V]
47.	big cells average voltage	[V]
48.	number of tripped channels	#
49.	number of overcurrent channels	#
50.	number of channels off	#
51.	current of DC sector 1	[μA]
52.	current of DC sector 2	[μA]
53.	current of DC sector 3	[μA]
54.	current of DC sector 4	[μA]
55.	current of DC sector 5	[μA]
56.	current of DC sector 6	[μA]
57.	current of DC sector 7	[μA]
58.	current of DC sector 8	[μA]
59.	current of DC sector 9	[μA]
60.	current of DC sector 10	[μA]
61.	current of DC sector 11	[μA]
62.	current of DC sector 12	[μA]
63.	current of DC sector 13	[μA]
64.	current of DC sector 14	[μA]
65.	current of DC sector 15	[μA]
66.	current of DC sector 16	[μA]
67.	not used	

68.	acci. clusters >7 MeV WEST endcap	[Hz]
69.	acci. clusters >7 MeV EAST endcap	[Hz]
70.	accidental clusters >7 MeV barrel	[Hz]
71.	t-r/c endcap-endcap	[ns]
72.	t-r/c barrel-barrel	[ns]
73.	t-l/v endcap-endcap	[ns]
74.	t-l/v barrel-barrel	[ns]
75.	scraper e+ SHORT IP2 in	[mm]
76.	scraper e+ SHORT IP2 out	[mm]
77.	scraper e+ LONG IP2 up	[mm]
78.	scraper e+ LONG IP2 down	[mm]
79.	scraper e- SHORT IP2 in	[mm]
80.	scraper e- SHORT IP2 out	[mm]
81.	scraper e+ LONG IP1 in	[mm]
82.	scraper e+ LONG IP1 out	[mm]
83.	scraper e- LONG IP1 in	[mm]
84.	scraper e- LONG IP1 out	[mm]
85.	noise layer 1, sector 1	[Hz]
86.	noise layer 1, sector 2	[Hz]
87.	noise layer 1, sector 3	[Hz]
88.	noise layer 1, sector 4	[Hz]
89.	noise layer 5, sector 1	[Hz]
90.	noise layer 5, sector 2	[Hz]
91.	noise layer 5, sector 3	[Hz]
92.	noise layer 5, sector 4	[Hz]
93.	noise layer 10, sector 1	[Hz]
94.	noise layer 10, sector 2	[Hz]
95.	noise layer 10, sector 3	[Hz]
96.	noise layer 10, sector 4	[Hz]

C.6 *DEAR .dat format. Updated every 2 minutes when DEAR data acquisition is running* (M. Bragardireanu)

1.	time	[Unix seconds]
2.	time	[hh:mm:ss]
3.	daily integrated luminosity	[nbarn-1]
4.	luminosity	[cm-2s-1]
5.	time between luminosity measure	[s]
6.	number of kaons since beginning of RUN	#
7.	elapsed run time	[s]
8.	integrated luminosity since the begin of the RUN	[nbarn-1]
9.	rate of coincidence vetoed by RF/4	[Hz]
10.	rate of coincidence	[Hz]
11.	rate in inner scintillator	[Hz]
12.	rate in outer scintillator	[Hz]

C.7 *DAFNE estimated luminosity(IP1 is e+ lumimometer placed in the KLOE interaction region, IP2 is the e+ luminometer placed in DEAR region, but can be moved at IP1 as e- luminometer)*

1.	time	[Unix seconds]
2.	IP1 luminosity estimated	[cm-2 s-1]
3.	IP2 luminosity estimated	[cm-2 s-1]
4.	colliding flag	0 not colliding 1 colliding @ IP1 2 colliding @ IP2 3 colliding @ IP1 and IP2

C.8 *DAFNE slow elements plain files. The most useful variable of elements logged in binary files every 5 minutes are restored in plain text files.*

1.	time	[Unix seconds]
2.	IP1 vacuum	[torr]
3.	IP2 vacuum	[torr]
4.	Scraper EL201 up	[mm]
5.	Scraper EL201 down	[mm]
6.	Scraper PS201 inner	[mm]
7.	Scraper PS201 outer	[mm]
8.	Scraper PL201 up	[mm]
9.	Scraper PL201 down	[mm]
10.	Scraper ES201 inner	[mm]
11.	Scraper ES201 outer	[mm]
12.	Scraper PL101 inner	[mm]
13.	Scraper PL101 outer	[mm]
14.	Scraper EL201 inner	[mm]
15.	Scraper EL201 outer	[mm]

C.9 DAFNE daily files format. Daily updated

1.	time	[UNIX seconds]
2.	e- integrated current	[Ah]
3.	e+ integrated current	[Ah]
4.	time e- stored (timing status)	[h]
5.	time e+ stored (timing status)	[h]
6.	time standby (timing status)	[h]
7.	time filled (Ip >1 or Ie>1)	[h]
8.	time delivering (Ip>150 and Ie>150)	[h]
9.	daily storing time	[%]

C.10 KLOE daily files format. Daily updated

1.	time	[UNIX seconds]
2.	daily integrated lumi	[nbarn-1]
3.	daily delivered lumi	[nbarn-1]
4.	daily running time (on storing time)	[%]
5.	daily running time (on 24 h)	[%]
6.	daily peak lumi	[cm-1s-1]
7.	daily average lumi	[cm-2s-1]
8.	daily loggin time	[%]
9.	luminosity/counts ratio	[cm-2s-1Hz-1]