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DECUS NO.	FOCAL8-114
TITLE	LIQUID SCINTILLATION DATA PROCESSING PROGRAM
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LIQUID SCINTILLATION DATA PROCESSING PROGRAM

DECUS Program Library Write-up

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ROUTINE FOR CALCULATING DPM, LARGEST DPM VALUE AND PLOTTING
DPM DATA GIVEN DATA AS A LIST OF VALUES IN THE FORMAT:

SAMPLE NO.	TIME	COUNTS A	COUNTS B	COUNTS SUM
SN	T	CA	CB	CS

C-8K FOCAL 1969

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01.10 T "          SAM.NO          DPM(A)          DPM(B)",!
01.20 *;
01.21 F P=1,100; D 2
01.22 *; G 3.1

02.10 A SN,T,CA,CB,CS,DU
02.20 S M=(CA-150)/.44*T
02.30 S N=(CB-(.1*CA+170))/.21*T
02.40 T %6," ",SN," ",M," ",N,!
02.50 I (LA-M) 2.6,2.6,2.7
02.60 S LA=M
02.70 I (LB-N) 2.8,2.8,2.9
02.80 S LB=N
02.90 R

03.10 T %6,!!!," LA= ",LA," LB= ",LB,!!!!
03.20 T "LOAD DATA TAPE INTO READER AND TYPE 'DO 4' ",!!
03.30 Q

04.01 *; T !!!
04.10 S C=(FITS(LA/100))*100+100; T %4,"SCALE A O TO ",C,!
04.20 S D=(FITS(LB/100))*100+100; T %4,"SCALE B O TO ",D,!
04.30 S SA=LA/65; S SB=LB/65; T !!
04.40 F L=1,100; D 5
04.50 *; Q
    
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05.10 D 2.1; D 2.2; D 2.3
05.20 S $NA=M/SA$; S $NB=N/SB$
05.30 I $(NA-NB)$ 5.4, 5.4, 5.9
05.40 F $I=1, 1, NA$; T " "
05.50 T "O"
05.60 S $TB=NB-NA$
05.70 F $I=1, 1, TB$; T " "
05.80 T " $*$ ", !; R
05.90 F $I=1, 1, NB$; T " "
05.91 T " $*$ "
05.92 S $TA=NA-NB$
05.93 T "O", !; R

*

SAM. NO	DPM(A)	DPM(B)
1 -	3 -	1
2 -	1 -	11
3	24	5
4	94	75
5	163	118
6	161	136
7	191	118
8	137	83
9	119	65
10	122	71
11	146	80
12	169	105
13	226	105
14	304	154
15	398	196
16	601	269
17	835	353
18	1148	505
19	1664	801
20	2412	1240
21	3096	1658
22	3491	2029
23	4023	2136
24	4335	2177
25	5267	2413
26	5904	2615
27	6822	3486
28	8268	3911
29	8413	4399
30	8548	4349
31	7498	3802
32	7049	3415
33	5694	3142
34	4529	2416
35	3709	1788
36	2821	1288
37	1967	943
38	1467	551
39	941	321
40	571	219
41	420	147
42	306	146
43	293	110
44	303	523
45	327	105

SAM. NO	DPM(A)	DPM(B)
46	415	119
47	524	166
48	668	215
49	873	299
50	1026	339
51	1266	387
52	1352	444
53	1359	426
54	1300	449
55	1241	371
56	1011	303
57	578	200
58	251	95
59	125	53
60	60	34
61	44	19
62	41	17
63	31	33
64	19	40
65	18	54
66	9	62
67	8	35
68	9	39
69	4	44
70 -	1	26
71 -	8	33
72	7	10
73	0	6
74 -	4 -	9
75	5	13
76	2 -	9
77 -	1 -	1
78 -	1 -	10
79 -	6 -	10
80 -	4 -	0
81	2 -	2
82 -	6 -	14
83 -	6 -	8
84 -	5 -	8
85	1 -	7
86 -	0 -	15
87	1 -	5
88 -	6 -	16
89 -	6 -	14
90 -	4 -	19

SAM. NO	DPM(A)	DPM(B)
91	6 -	9
92 -	6 -	18
93	20	18
94	85	62
95	153	125
96	165	105
97	188	117
98	141	85
99	96	65
100	81	80

LA= 8548 LB= 4399

LOAD DPM TAPE INTO READER AND TYPE ' DO 4'

*DO 4

SCALE A 0 TO 8600
SCALE B 0 TO 4400

*0
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