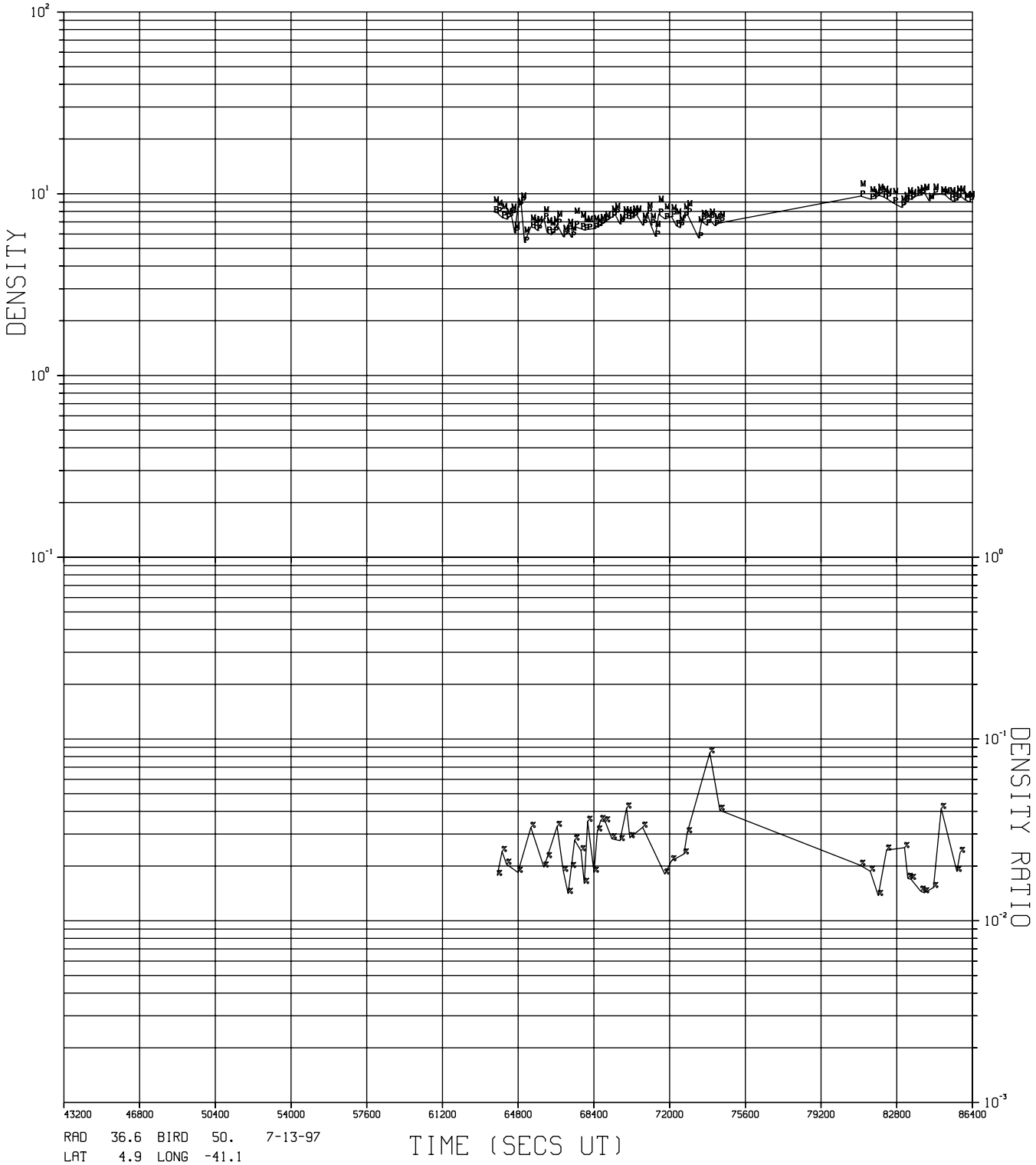
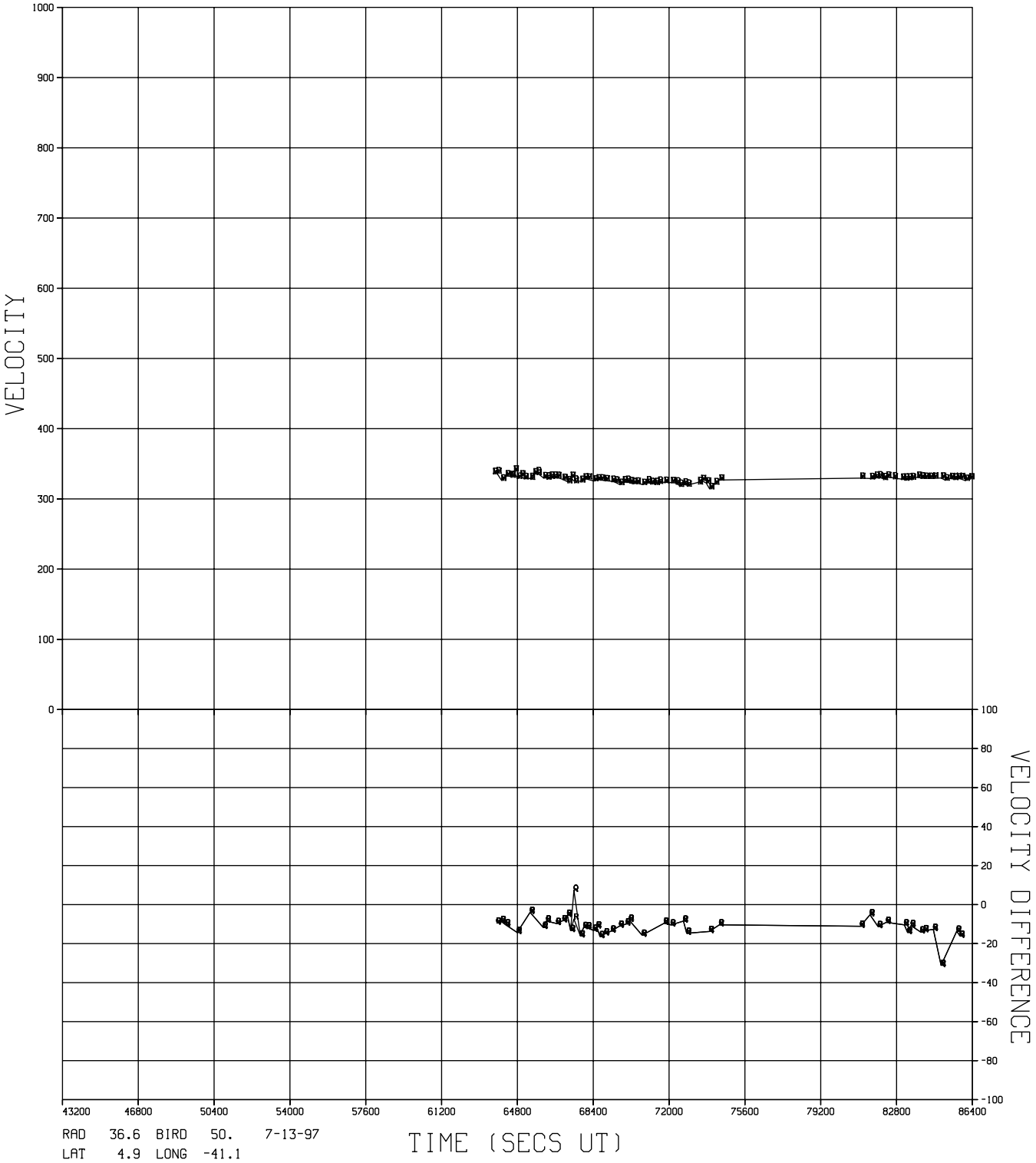
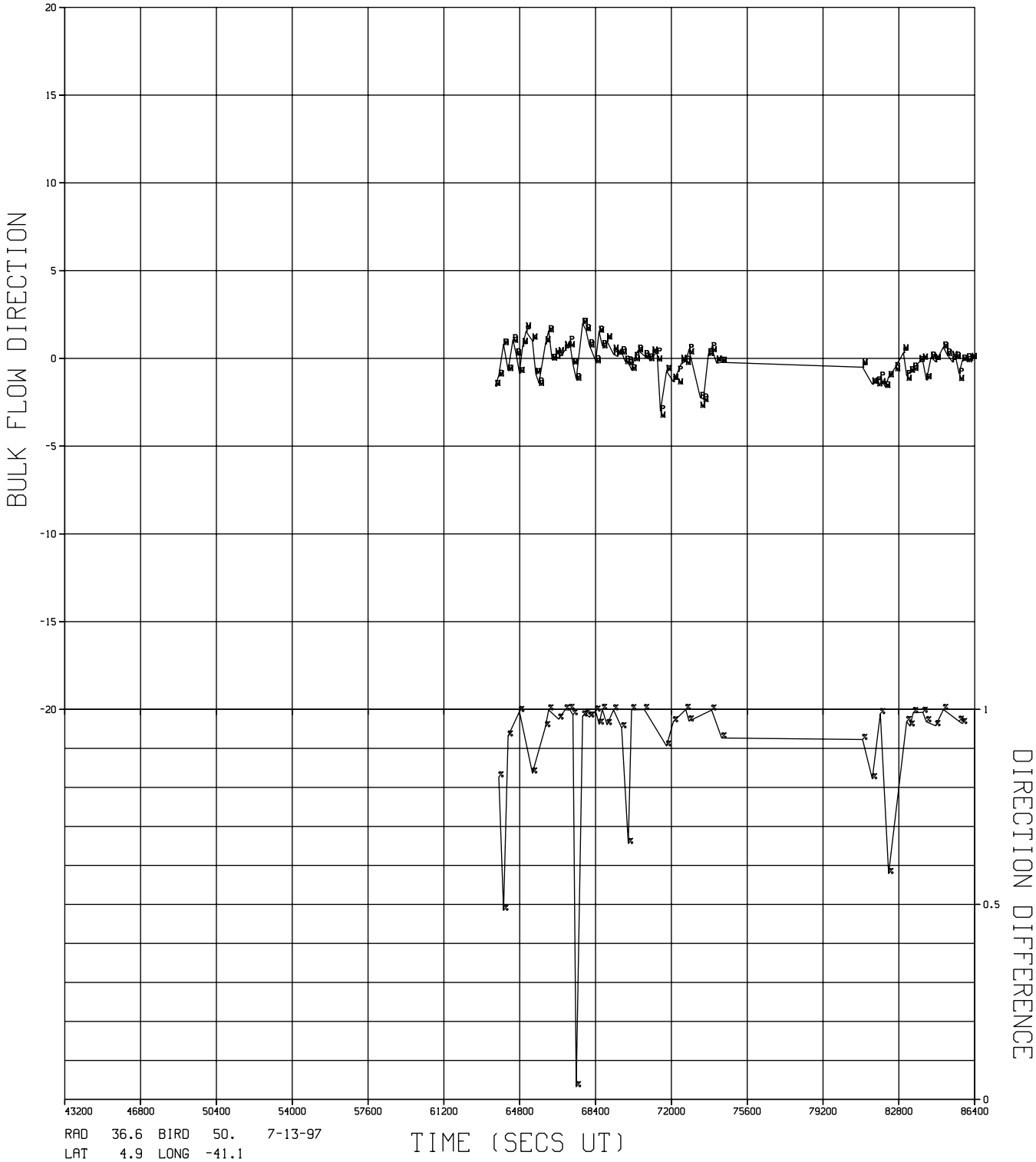
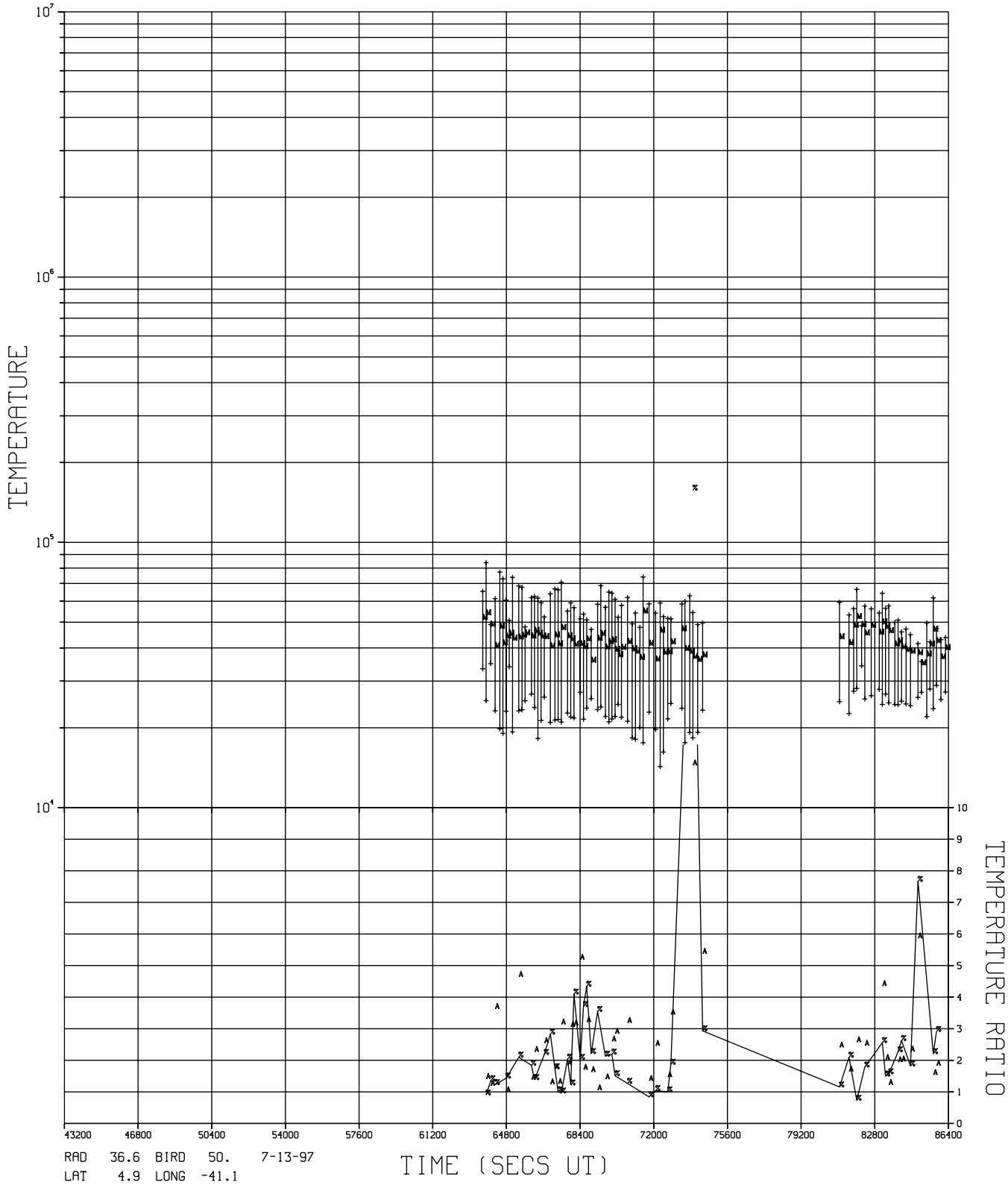
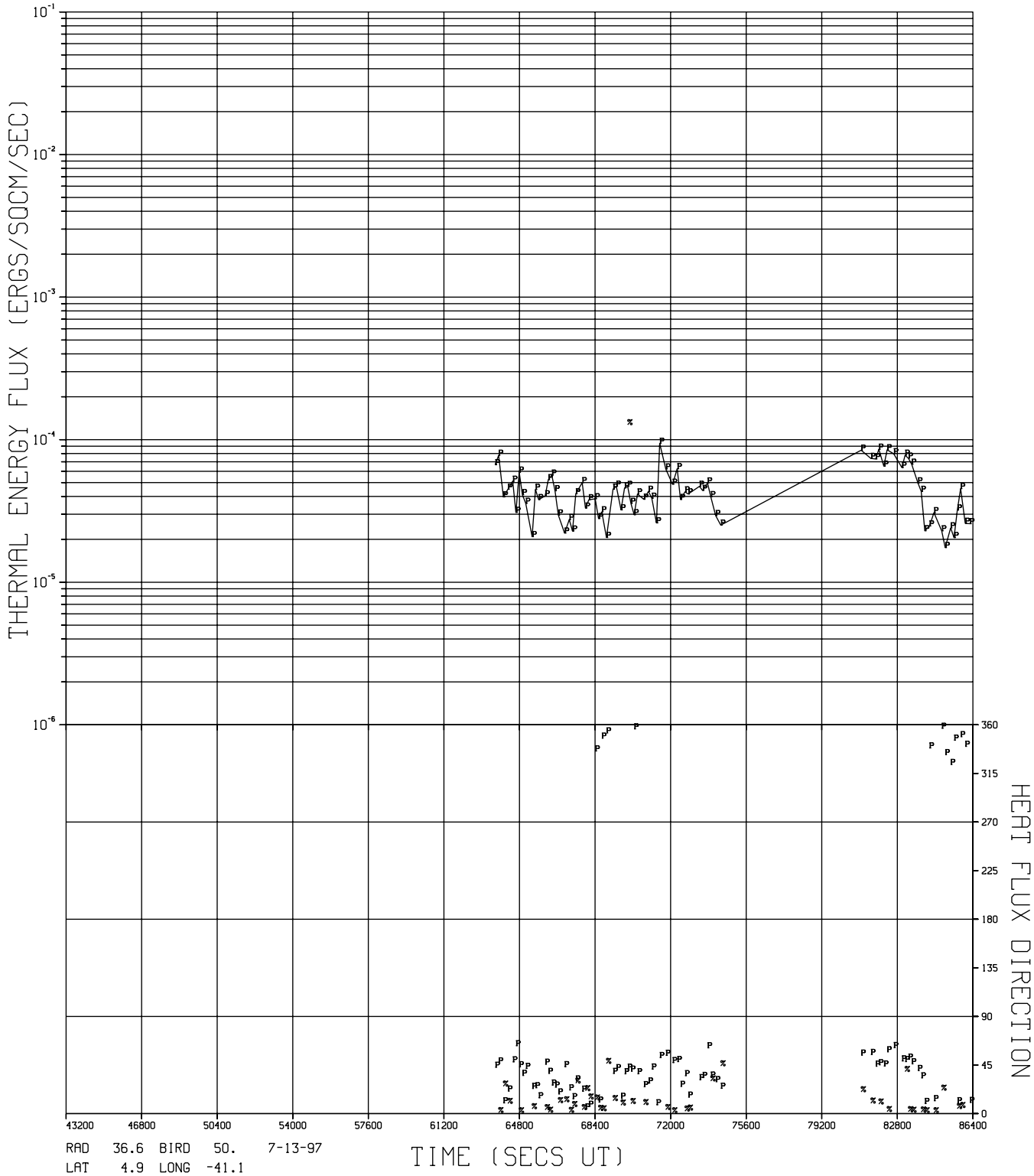
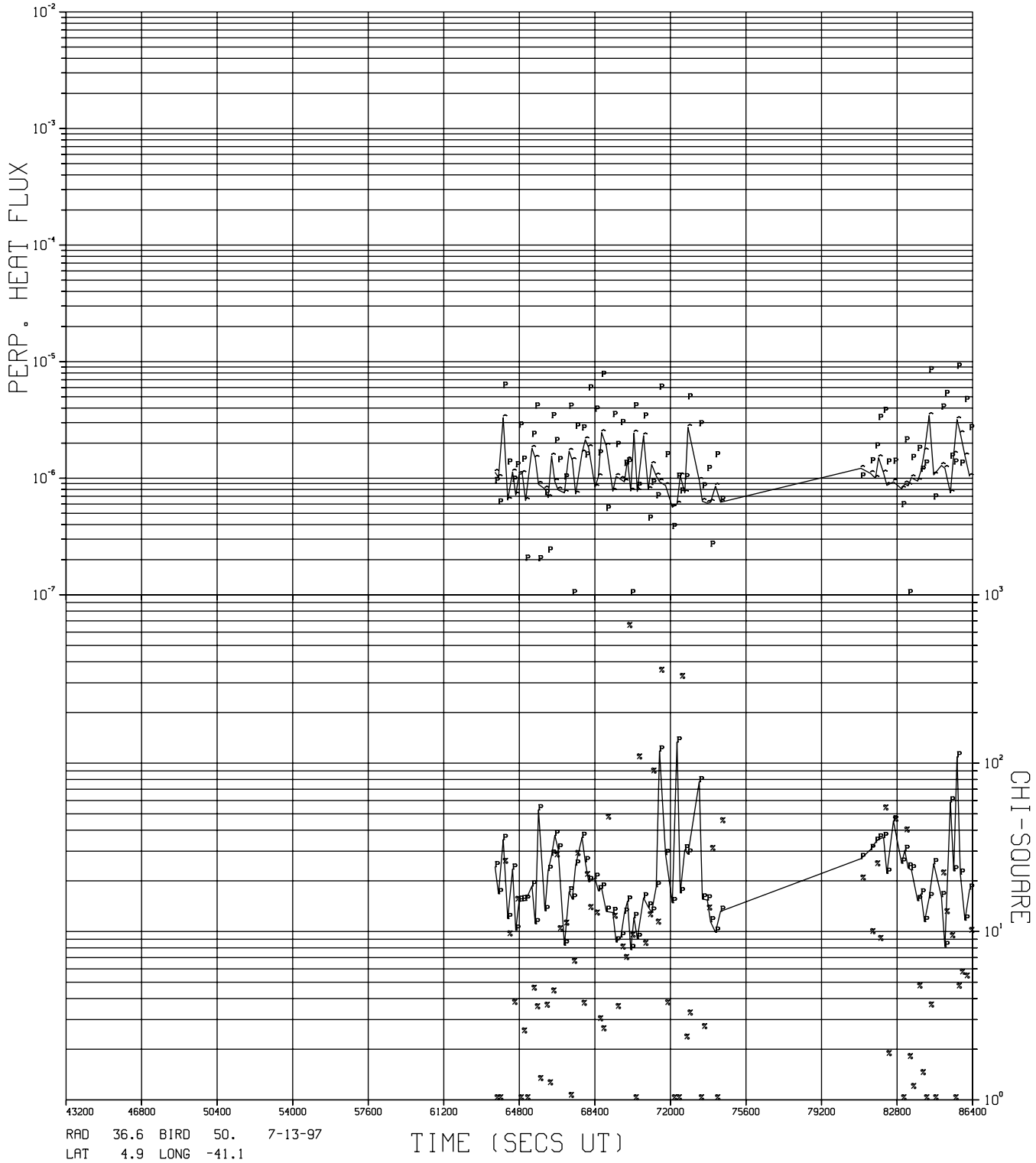

DENSITY
10^2
10^1
10^0
10^{-1}
DENSITY RATIO
10^0
10^{-1}
10^{-2}
10^{-3}
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 36.6 BIRD 50. 7-13-97
LAT 4.9 LONG -41.1
TIME (SECS UT)

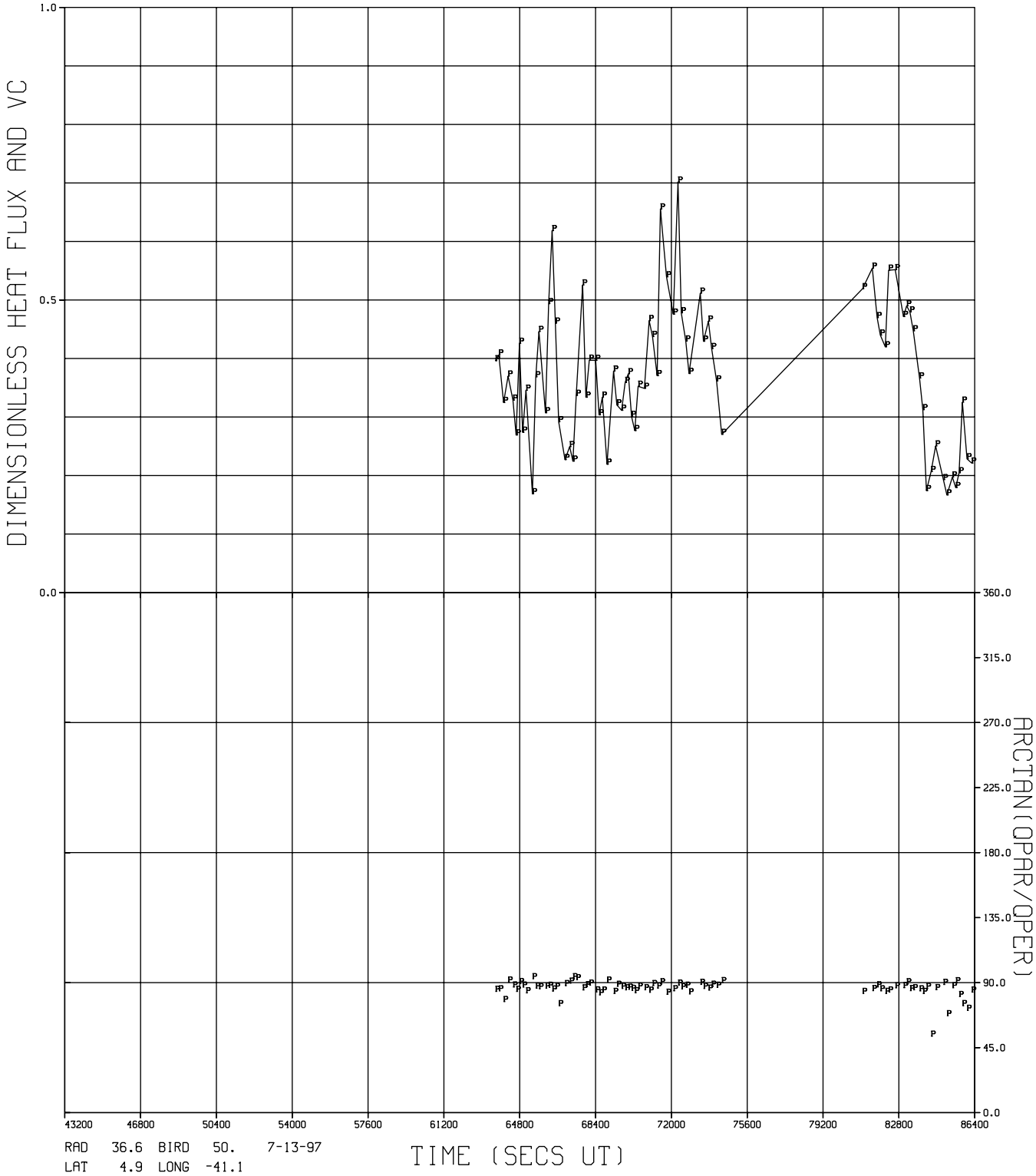

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.6 BIRD 50. 7-13-97
LAT 4.9 LONG -41.1

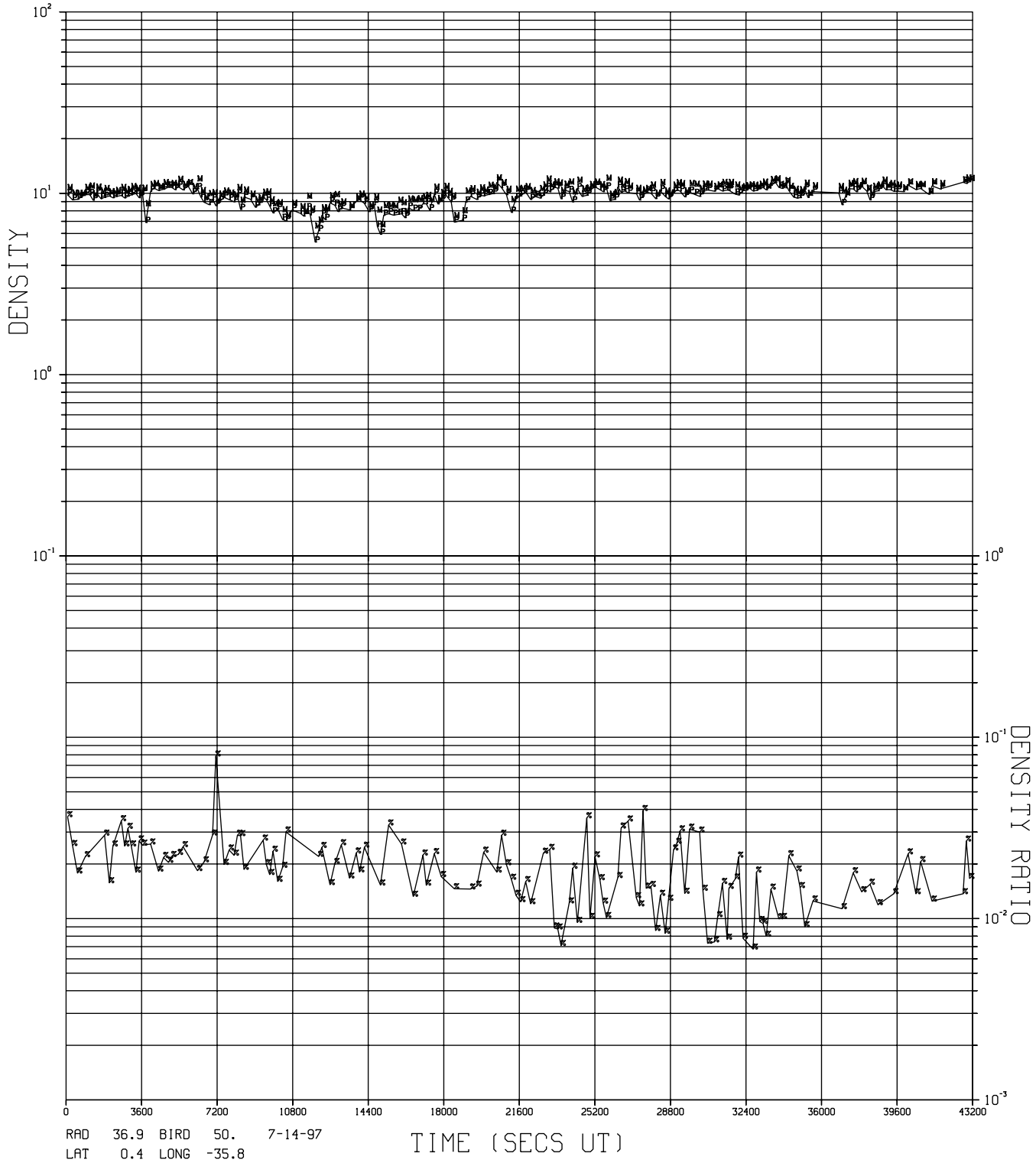

BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.6 BIRD 50. 7-13-97
LAT 4.9 LONG -41.1

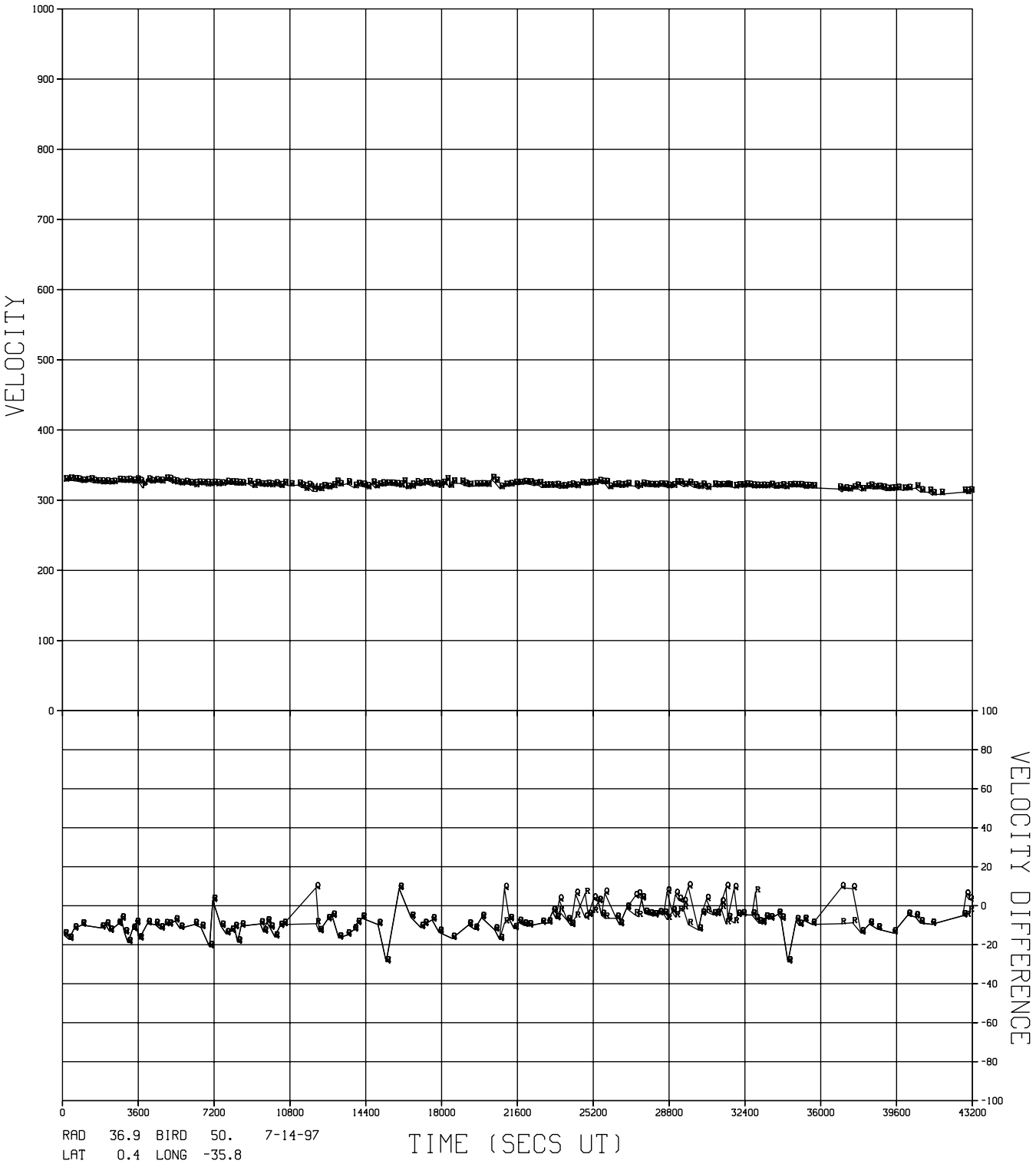

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.6 BIRD 50. 7-13-97
LAT 4.9 LONG -41.1

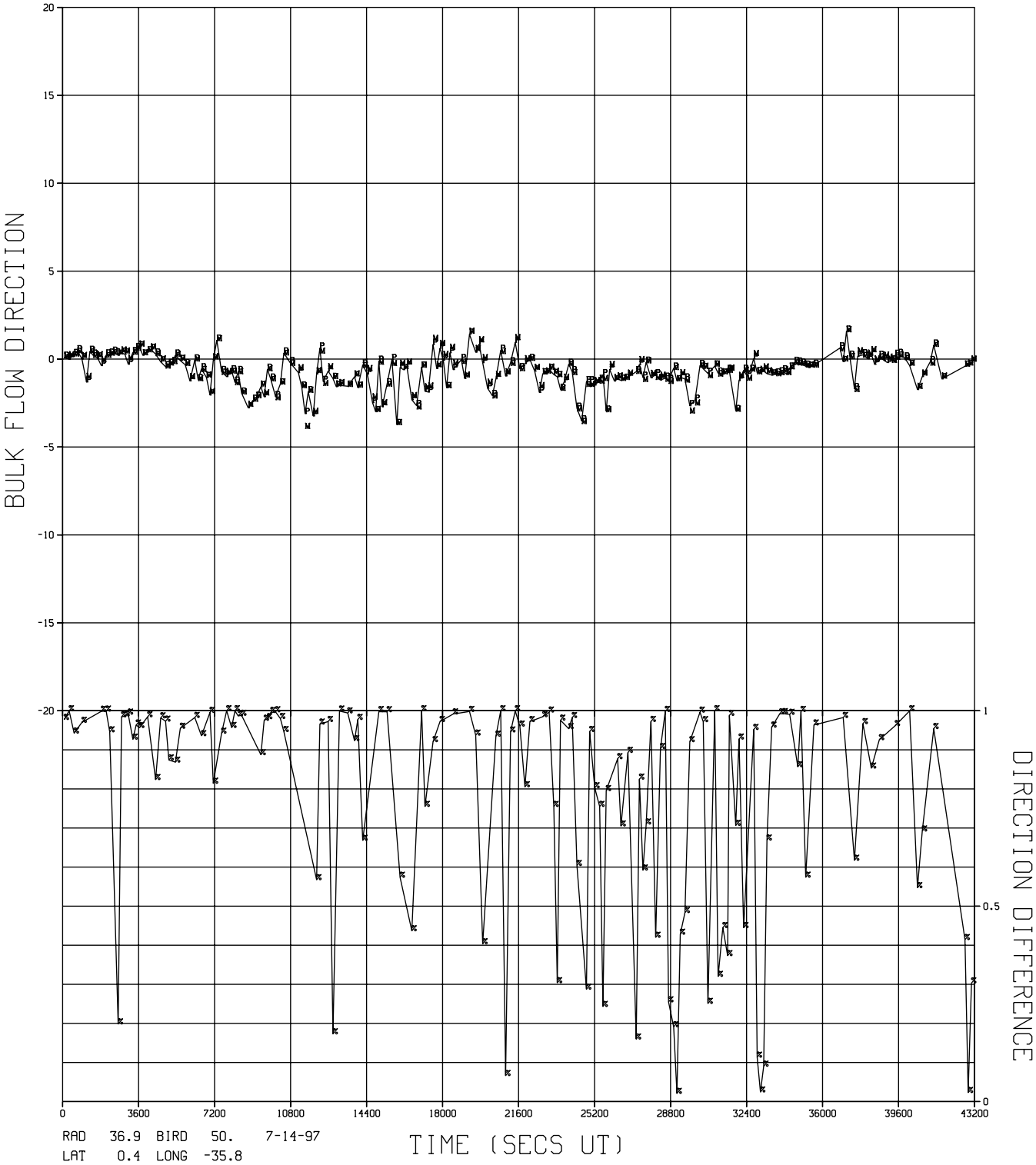

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.6 BIRD 50. 7-13-97
LAT 4.9 LONG -41.1

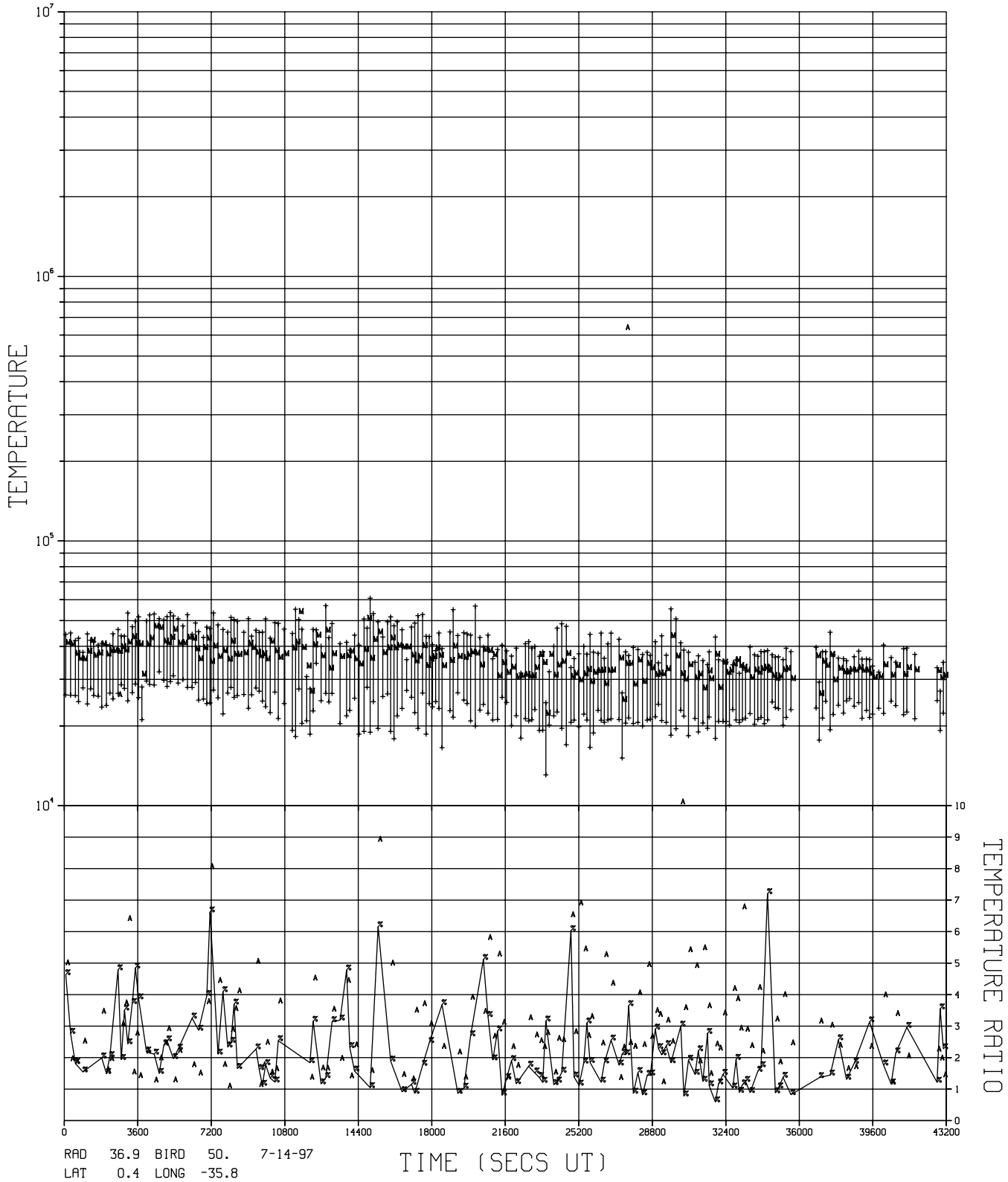

PERP. HEAT FLUX
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
CHI-SQUARE
10^{3}
10^{2}
10^{1}
10^{0}
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 36.6 BIRD 50. 7-13-97
LAT 4.9 LONG -41.1
TIME (SECS UT)

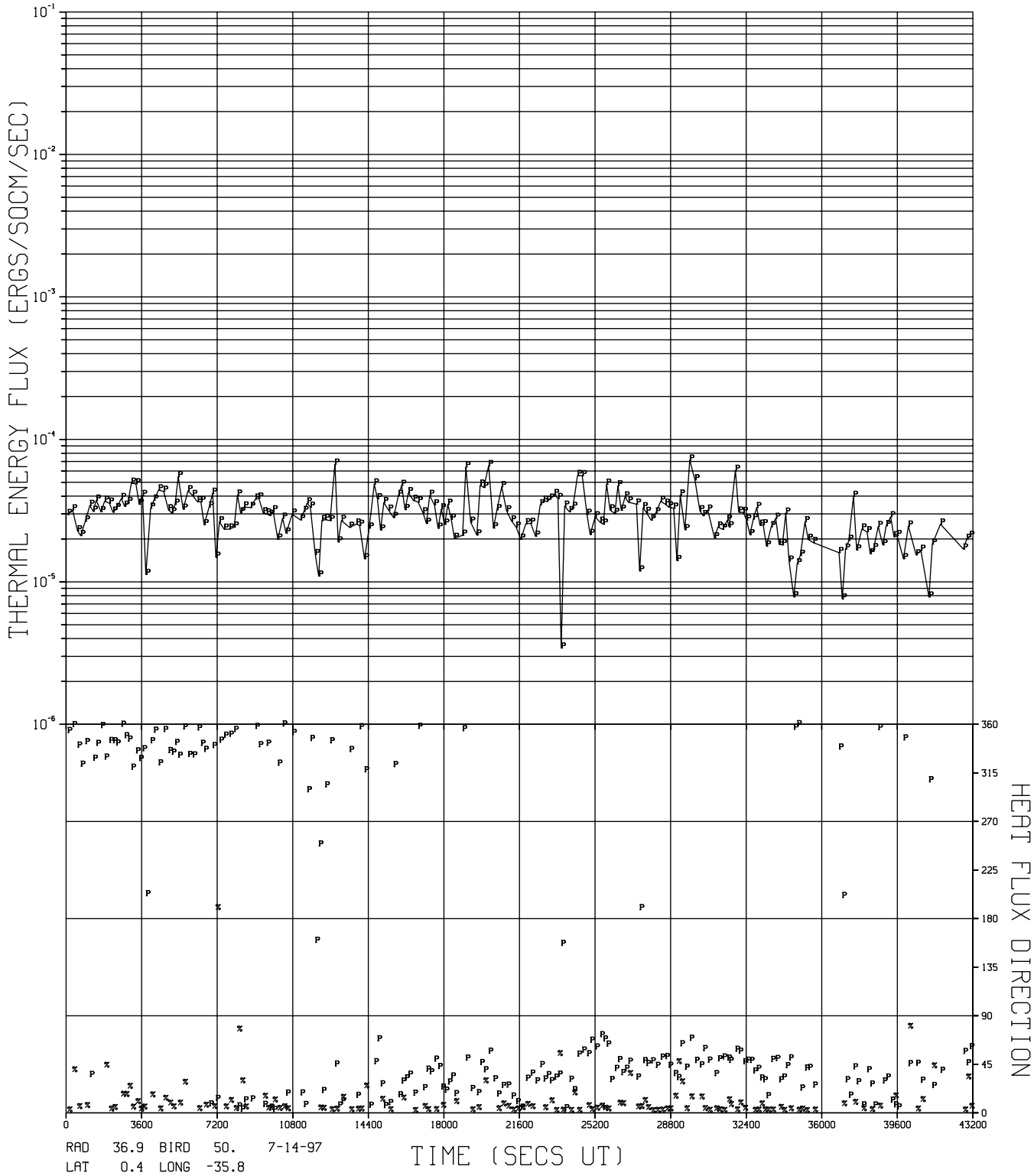

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 36.6 BIRD 50. 7-13-97
LAT 4.9 LONG -41.1
TIME (SECS UT)

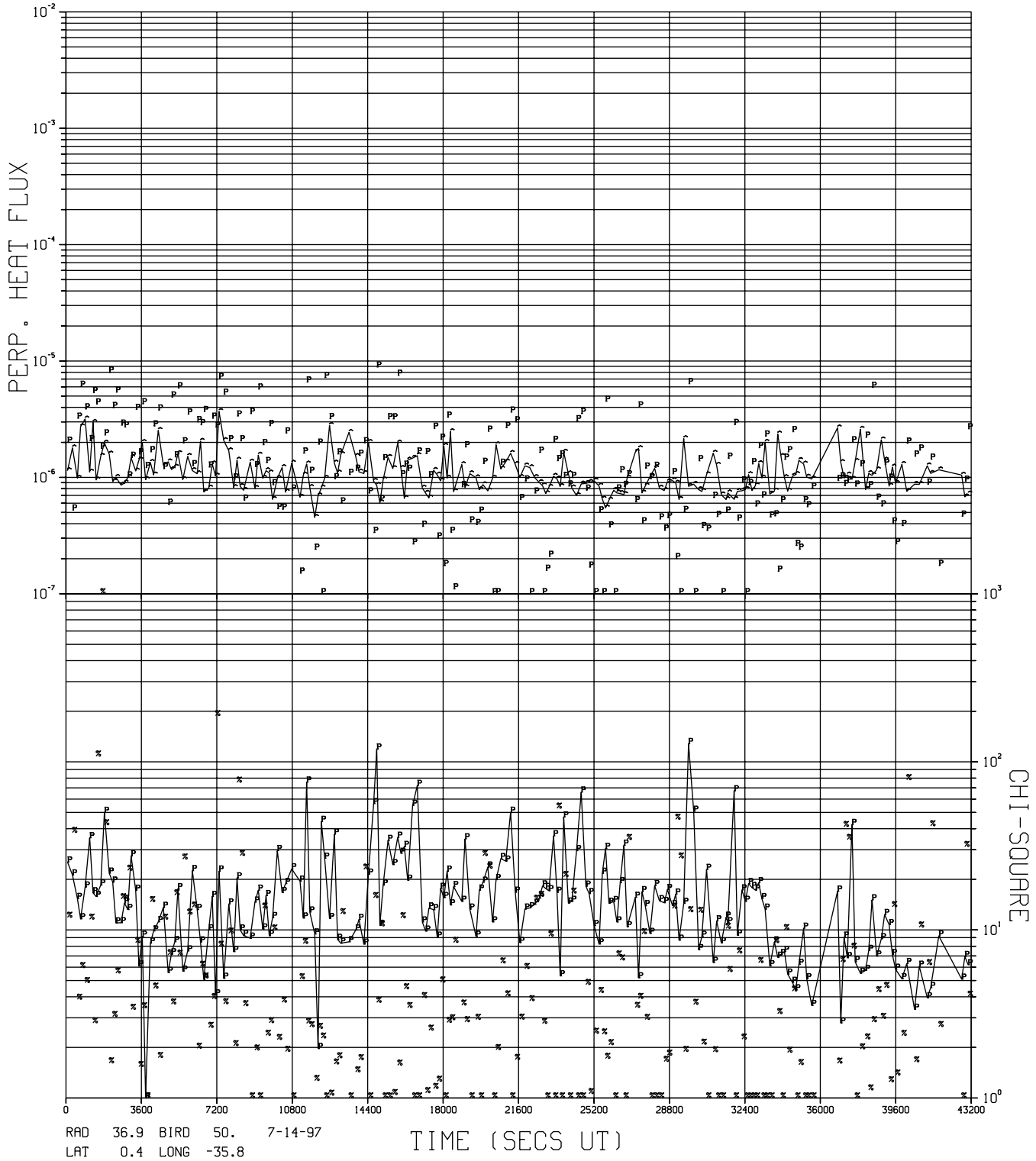

DENSITY
10^2
10^1
10^0
10^{-1}
DENSITY RATIO
10^0
10^{-1}
10^{-2}
10^{-3}
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 36.9 BIRD 50. 7-14-97
LAT 0.4 LONG -35.8
TIME (SECS UT)

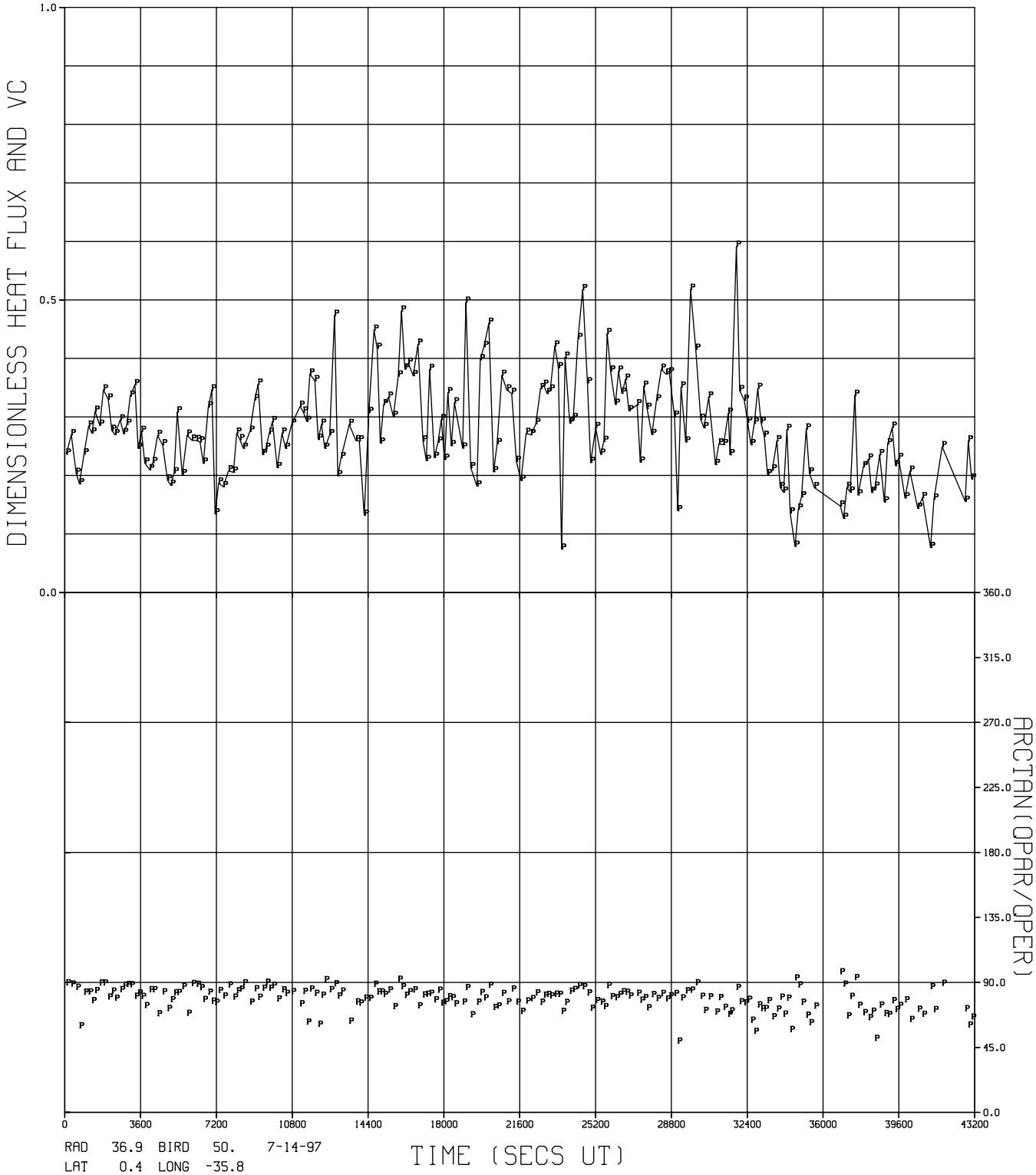

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.9 BIRD 50. 7-14-97
LAT 0.4 LONG -35.8

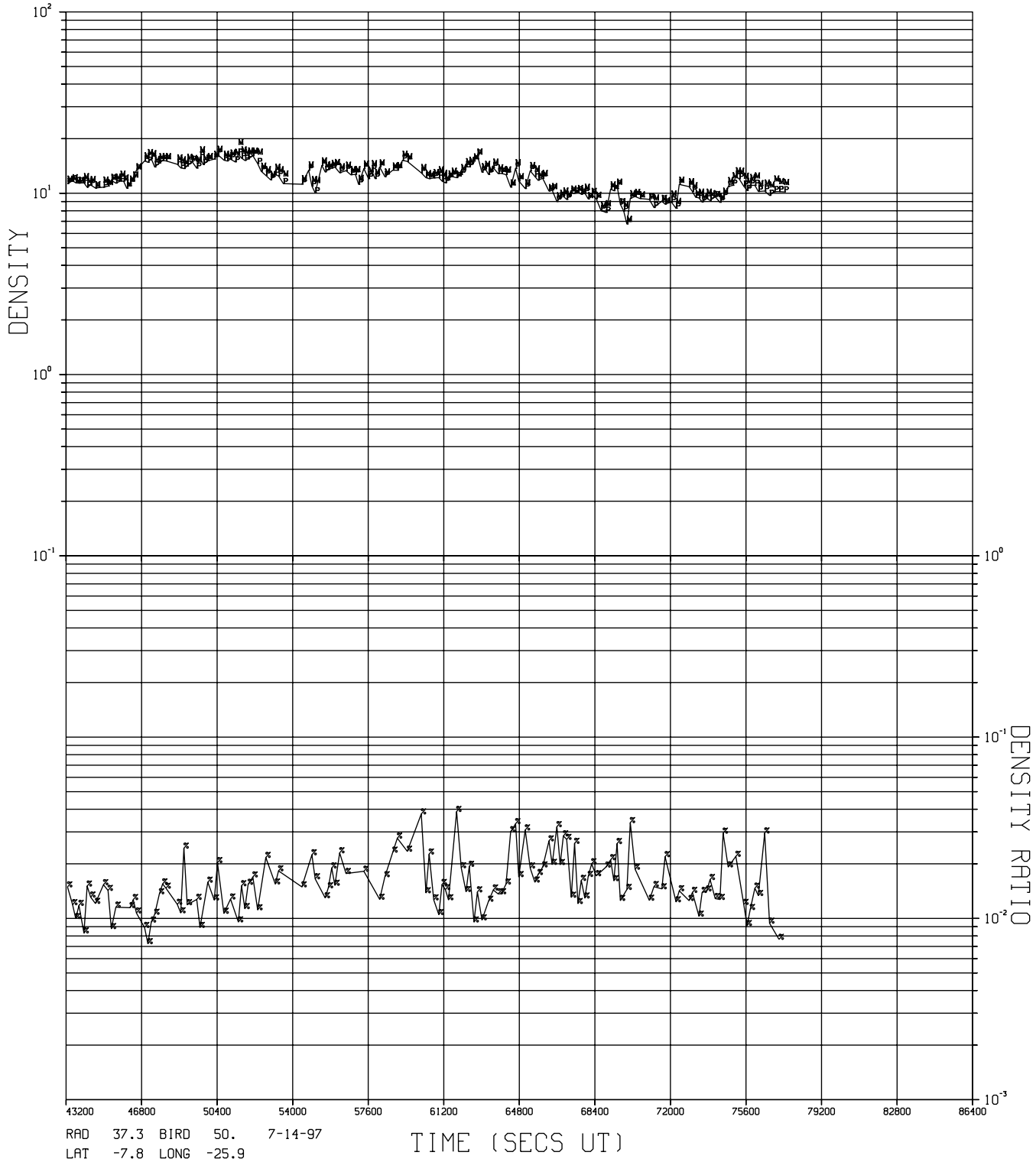

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 36.9 BIRD 50. 7-14-97
LAT 0.4 LONG -35.8

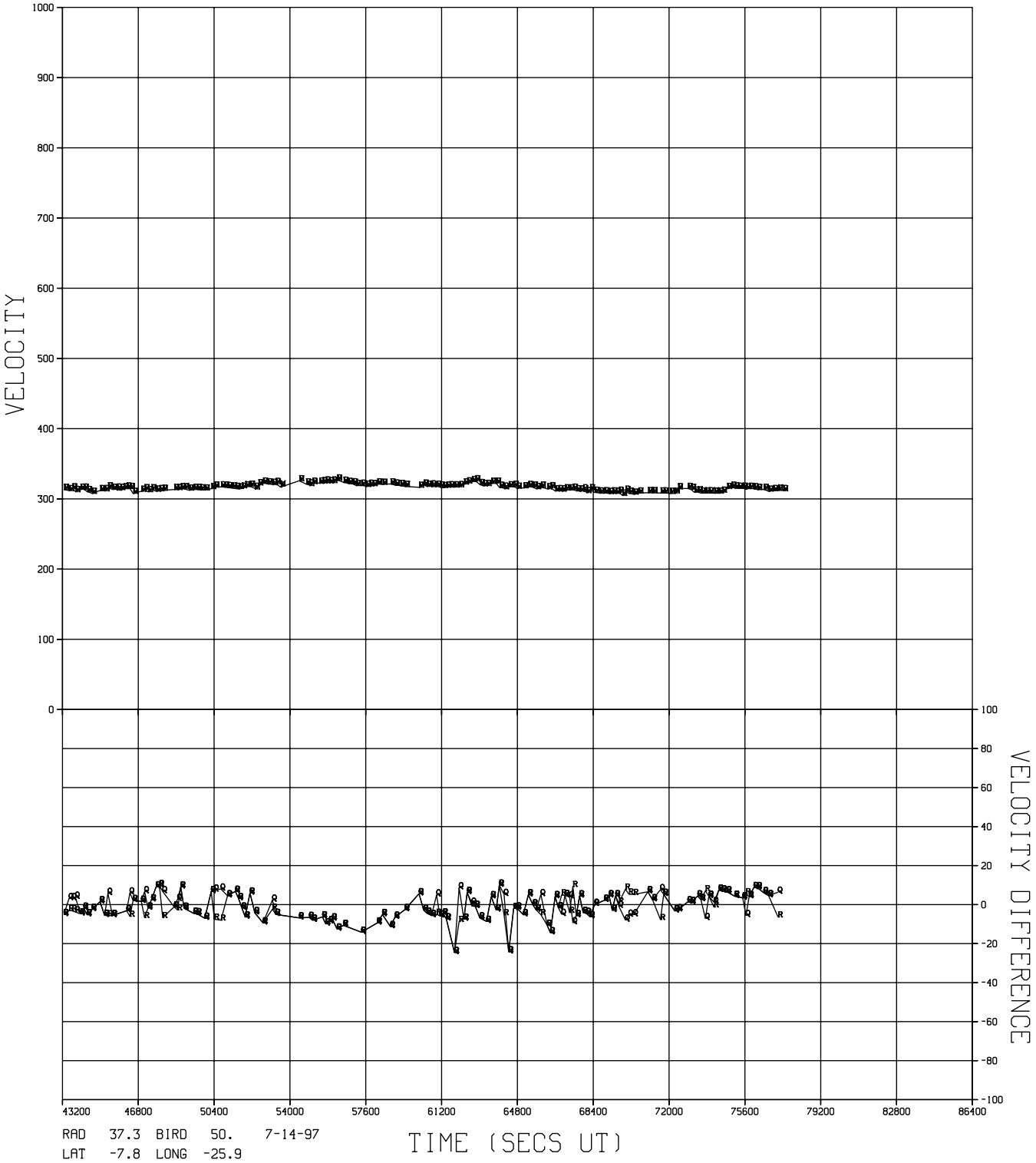

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.9 BIRD 50. 7-14-97
LAT 0.4 LONG -35.8

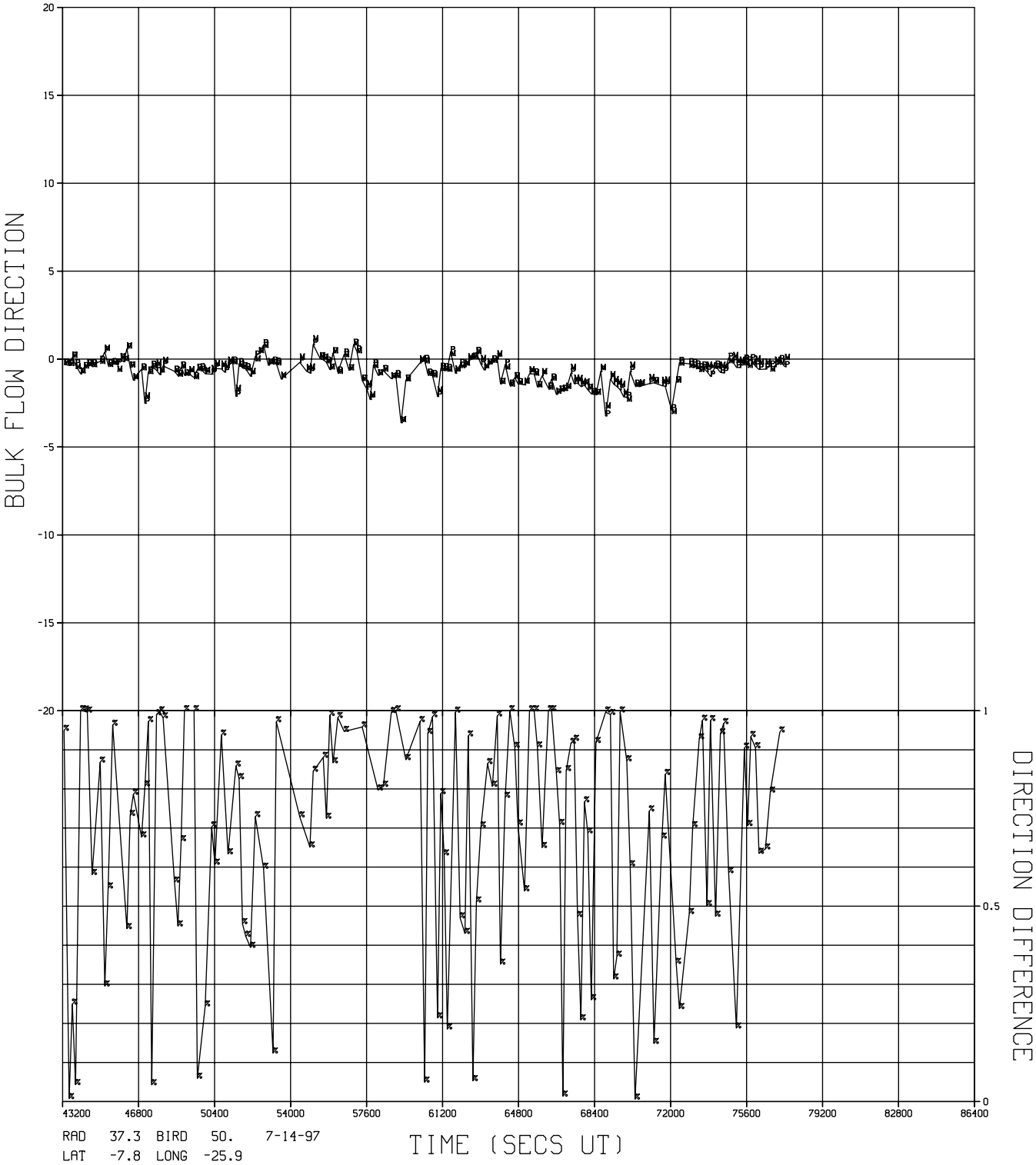

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.9 BIRD 50. 7-14-97
LAT 0.4 LONG -35.8

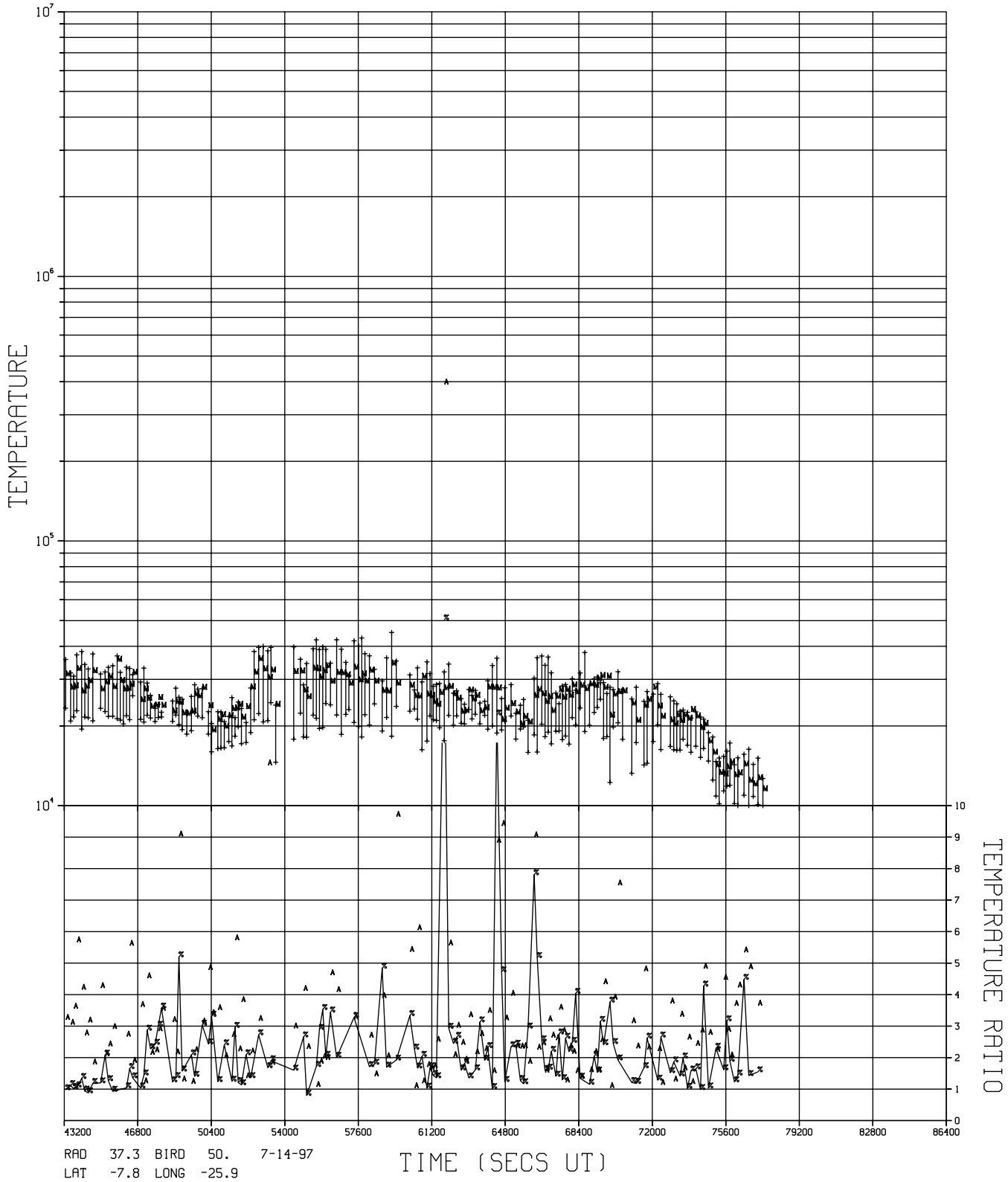

PERP. HEAT FLUX
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
CHI-SQUARE
10^{3}
10^{2}
10^{1}
10^{0}
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.9 BIRD 50. 7-14-97
LAT 0.4 LONG -35.8

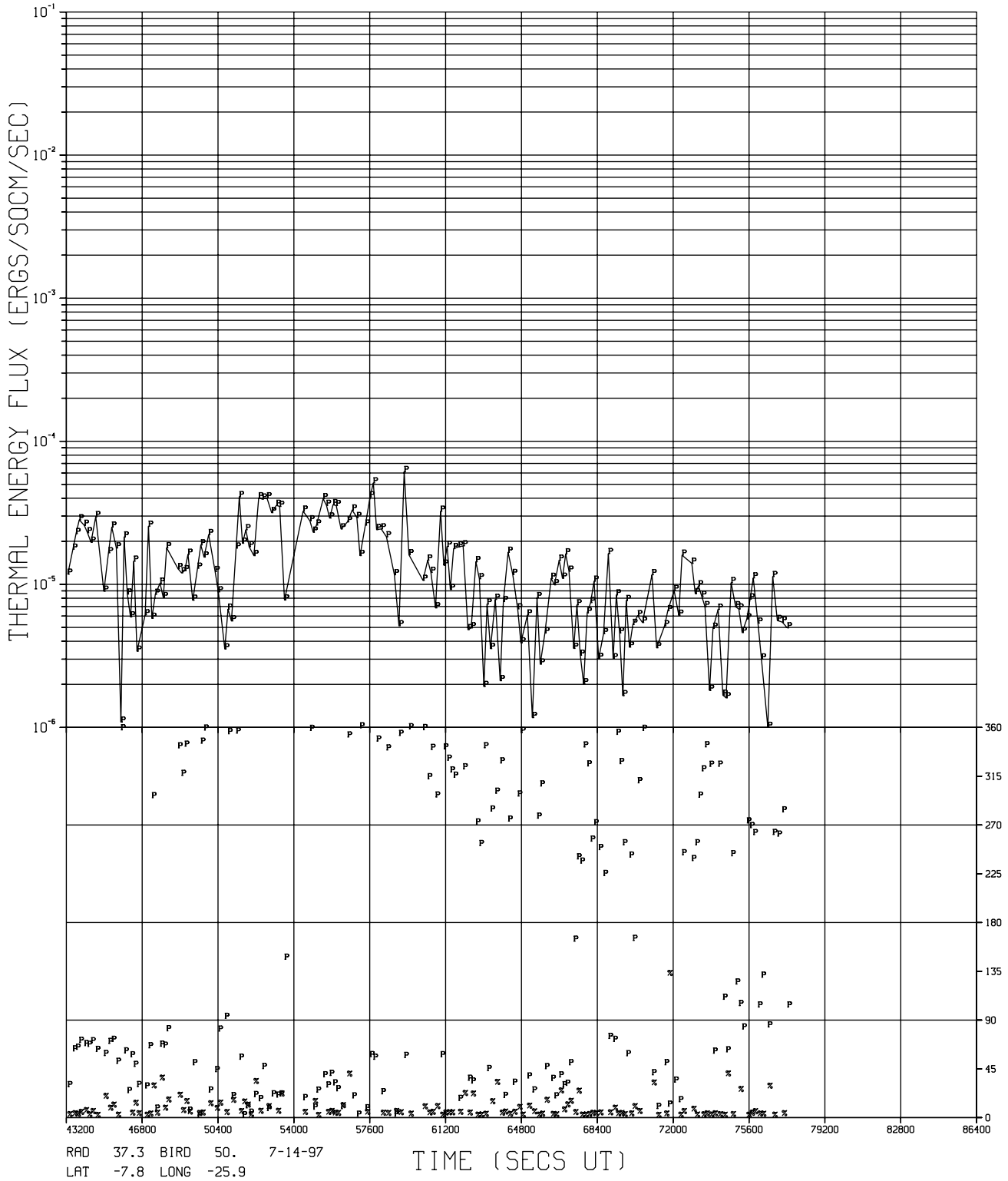

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 36.9 BIRD 50. 7-14-97
LAT 0.4 LONG -35.8
TIME (SECS UT)

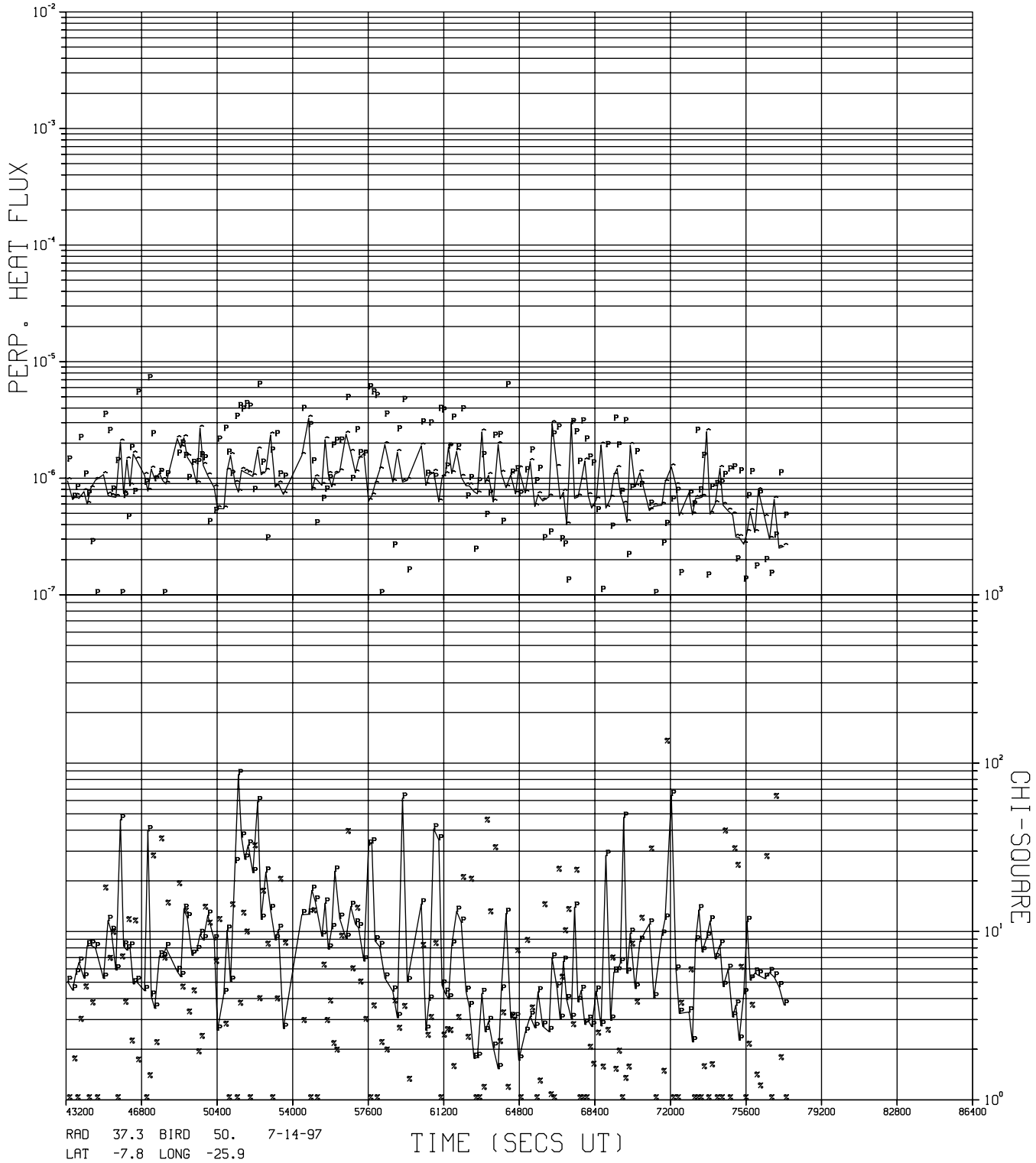

DENSITY
10^2
10^1
10^0
10^{-1}
DENSITY RATIO
10^0
10^{-1}
10^{-2}
10^{-3}
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 37.3 BIRD 50. 7-14-97
LAT -7.8 LONG -25.9
TIME (SECS UT)

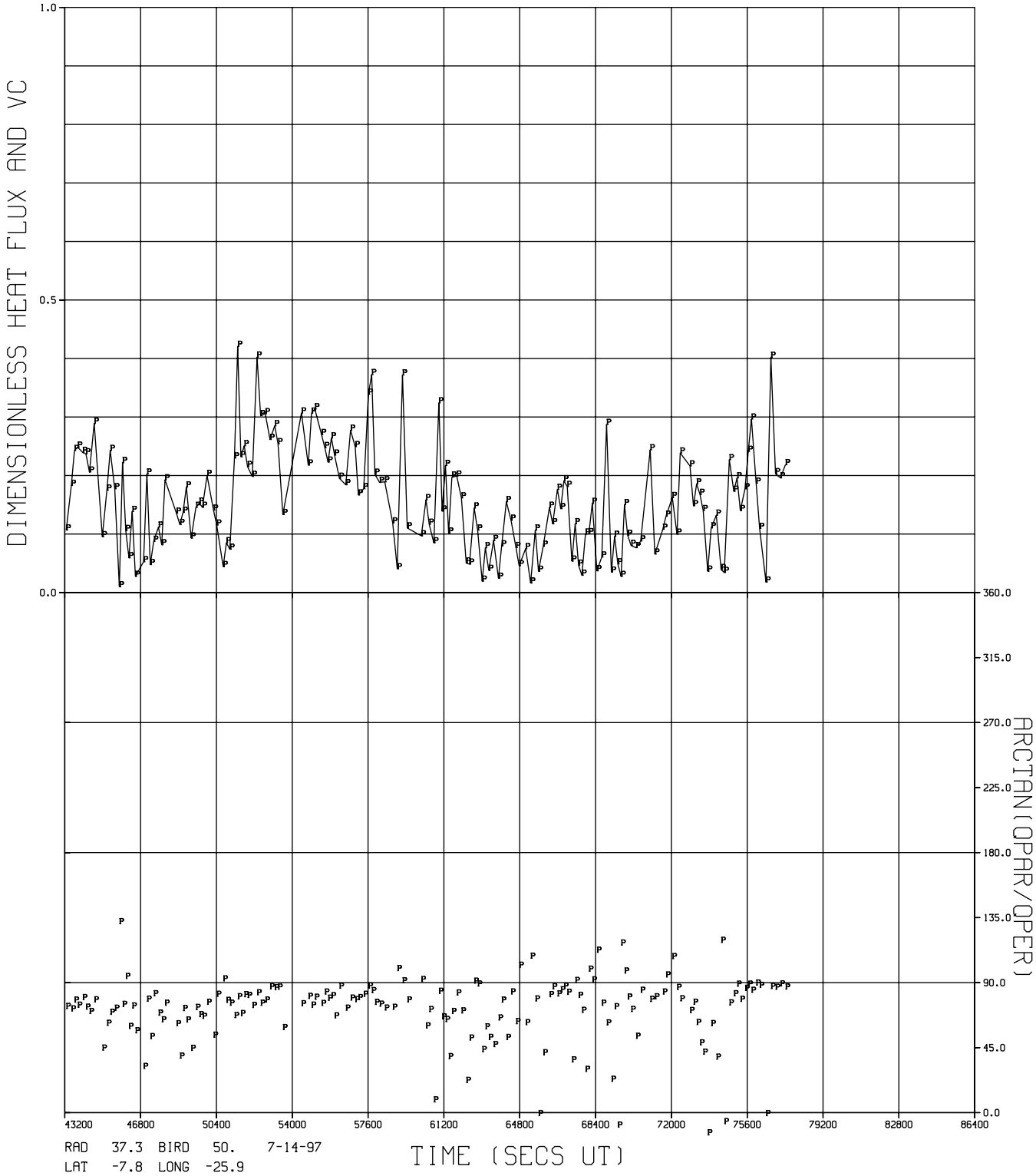

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 37.3 BIRD 50. 7-14-97
LAT -7.8 LONG -25.9
TIME (SECS UT)

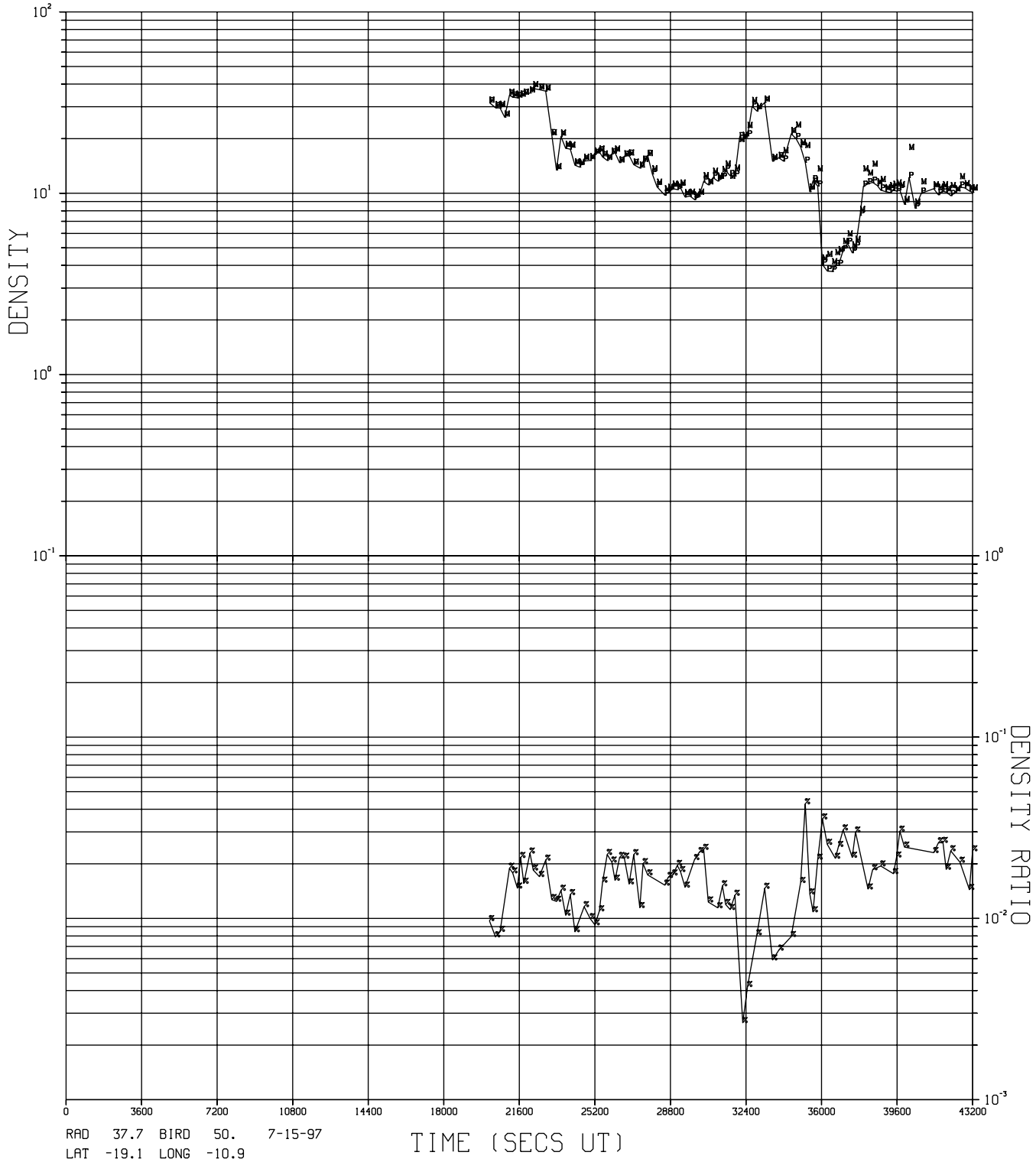

BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.3 BIRD 50. 7-14-97
LAT -7.8 LONG -25.9

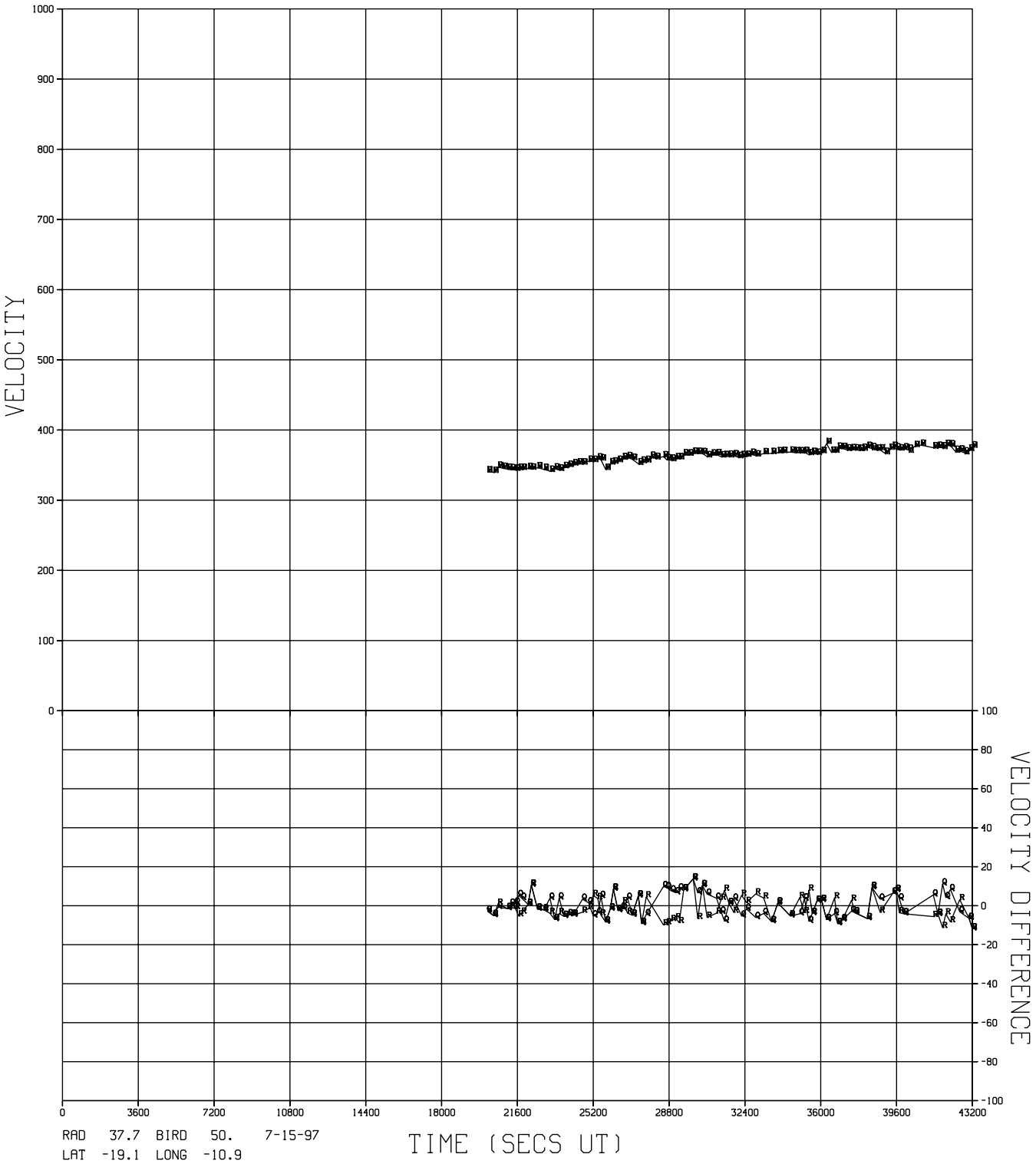

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.3 BIRD 50. 7-14-97
LAT -7.8 LONG -25.9

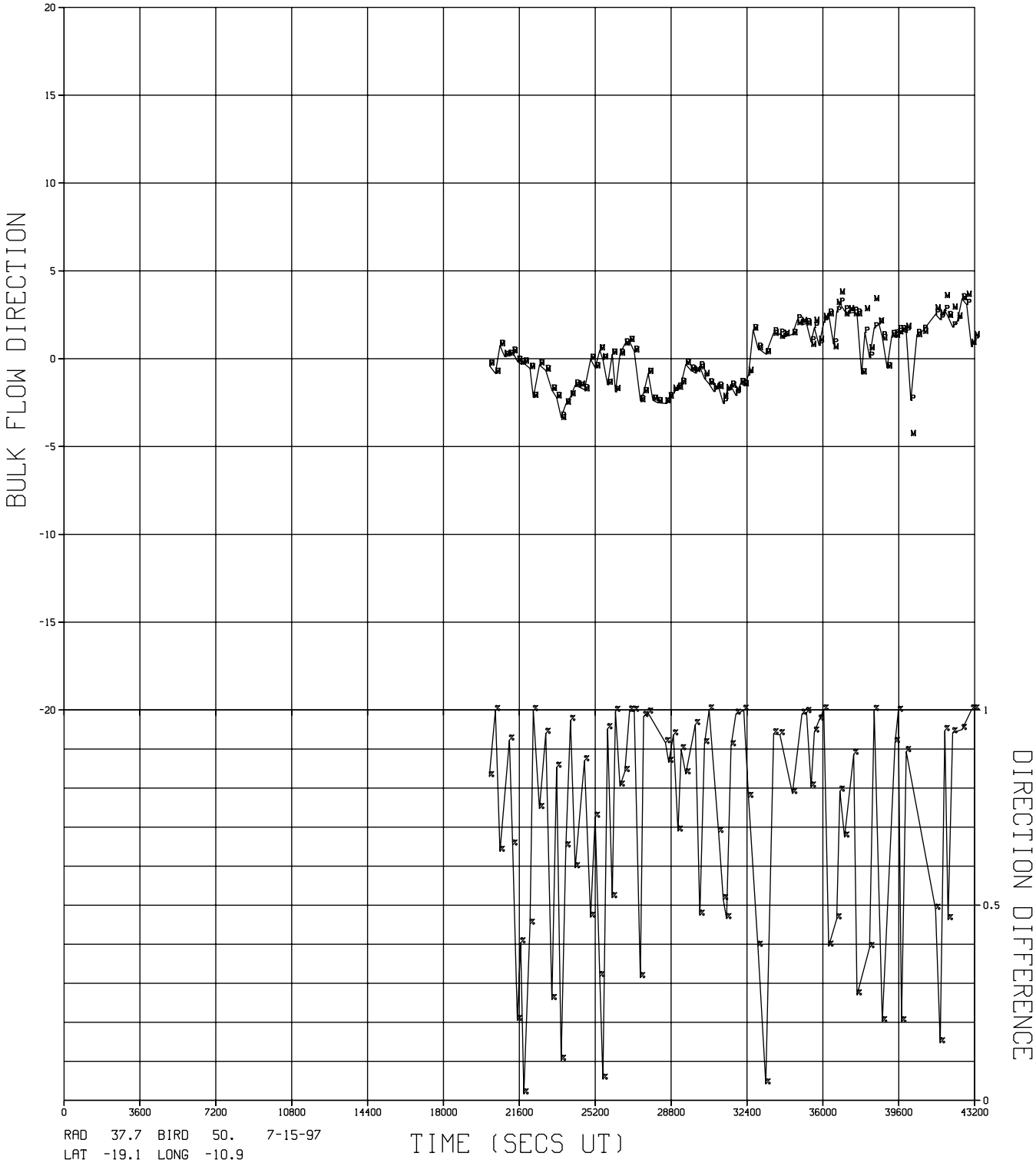

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.3 BIRD 50. 7-14-97
LAT -7.8 LONG -25.9

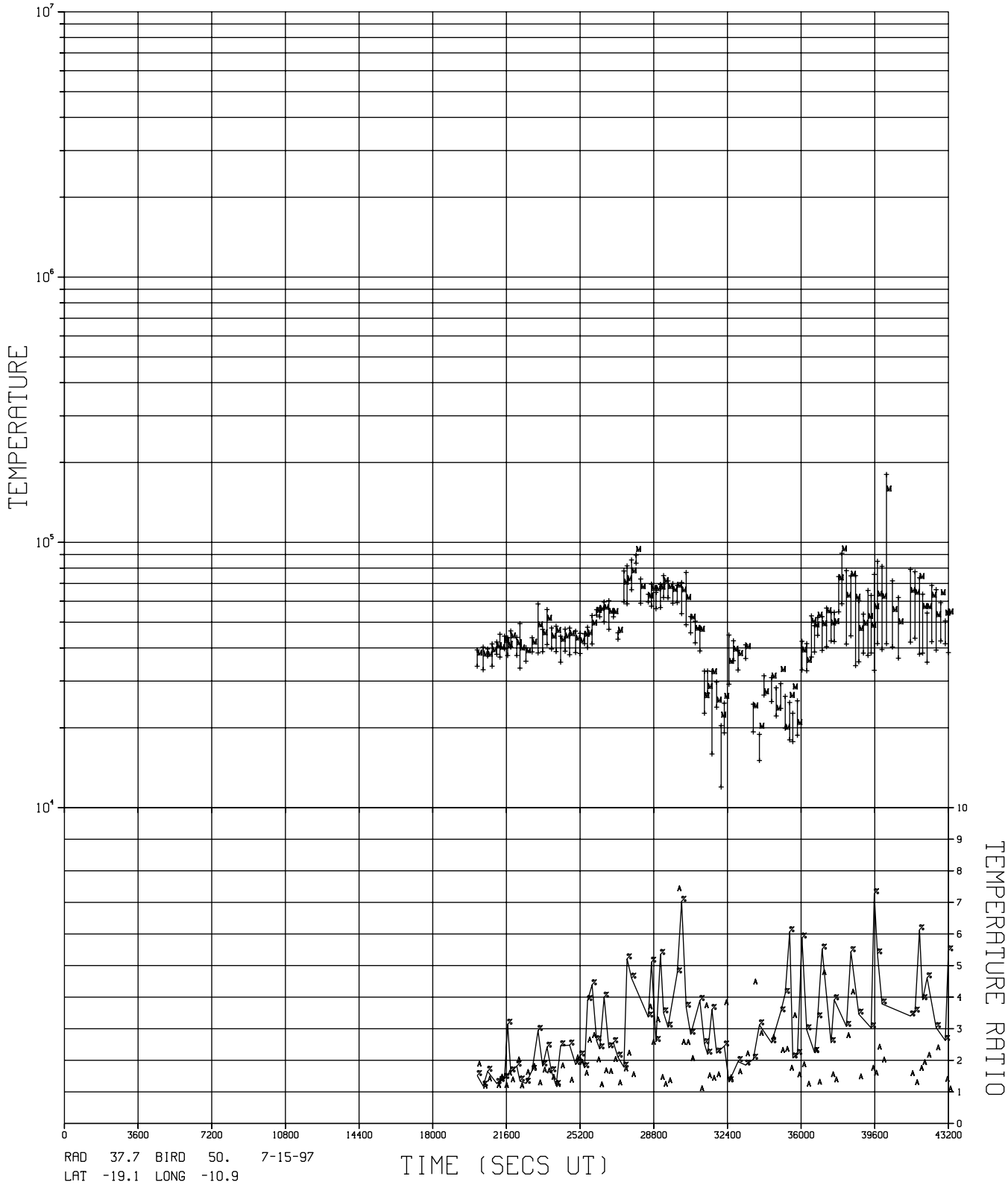

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 37.3 BIRD 50. 7-14-97
LAT -7.8 LONG -25.9

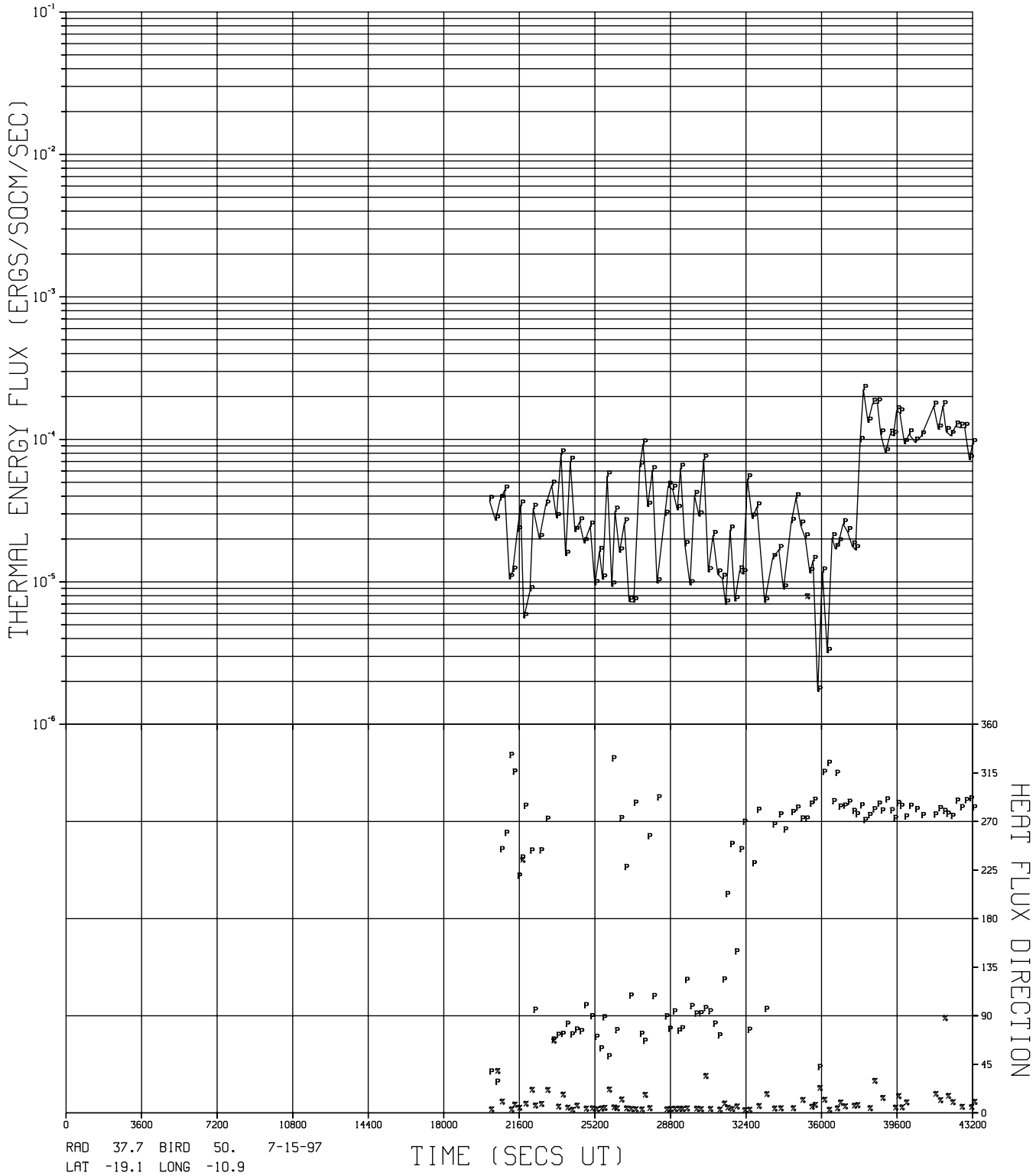

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 37.3 BIRD 50. 7-14-97
LAT -7.8 LONG -25.9
TIME (SECS UT)

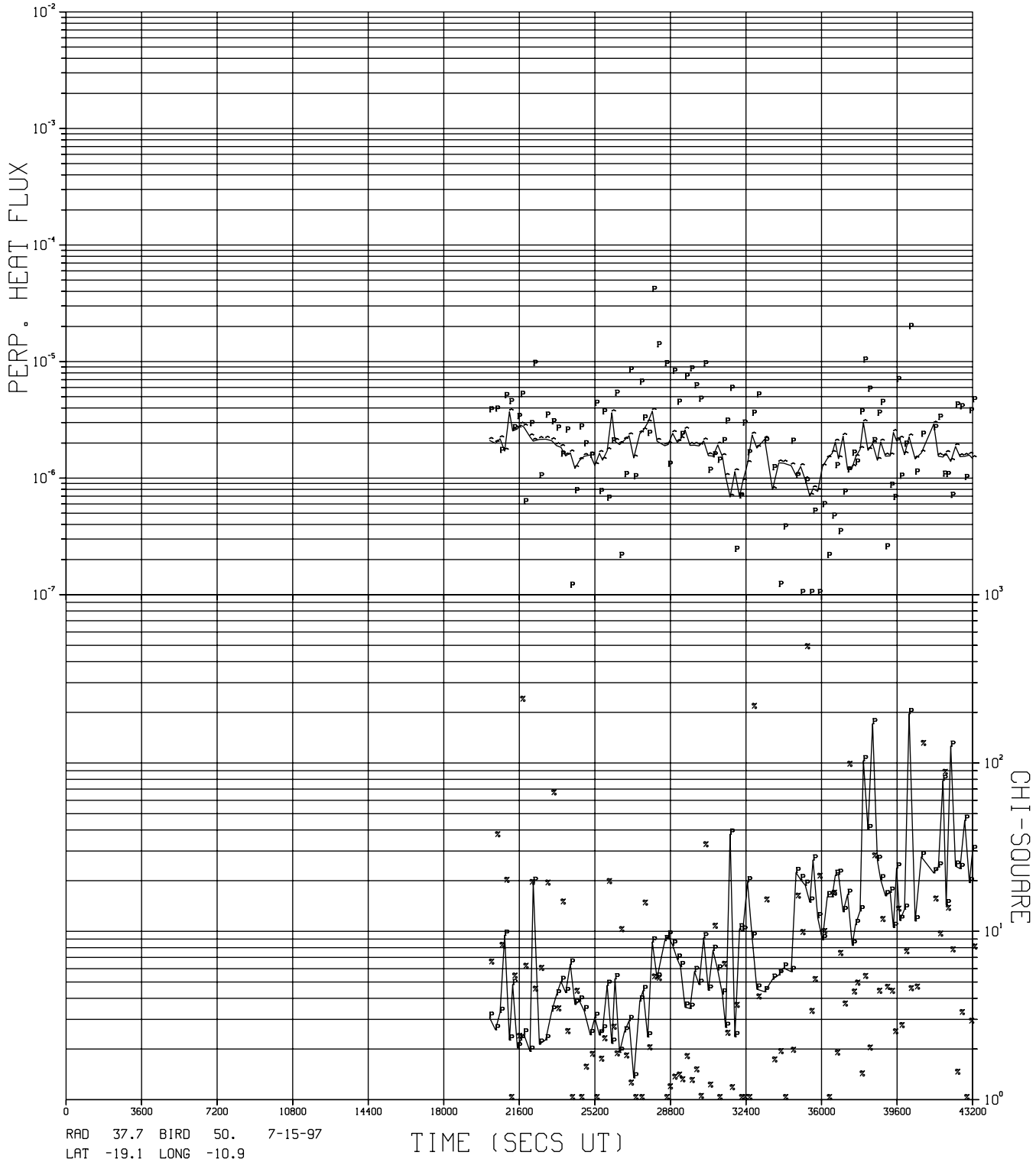

DENSITY
10^2
10^1
10^0
10^{-1}
DENSITY RATIO
10^0
10^{-1}
10^{-2}
10^{-3}
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 37.7 BIRD 50. 7-15-97
LAT -19.1 LONG -10.9
TIME (SECS UT)

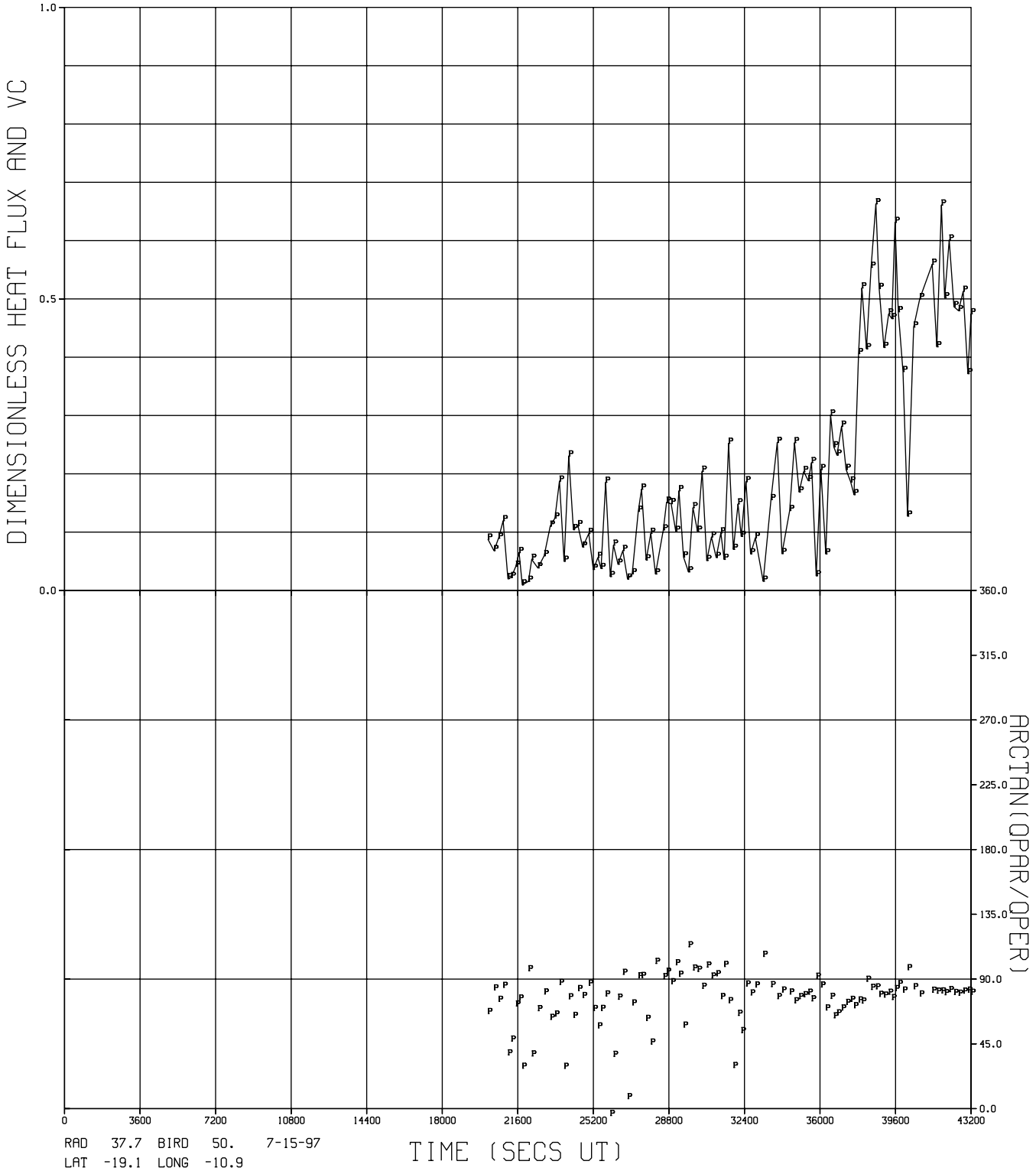

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.7 BIRD 50. 7-15-97
LAT -19.1 LONG -10.9

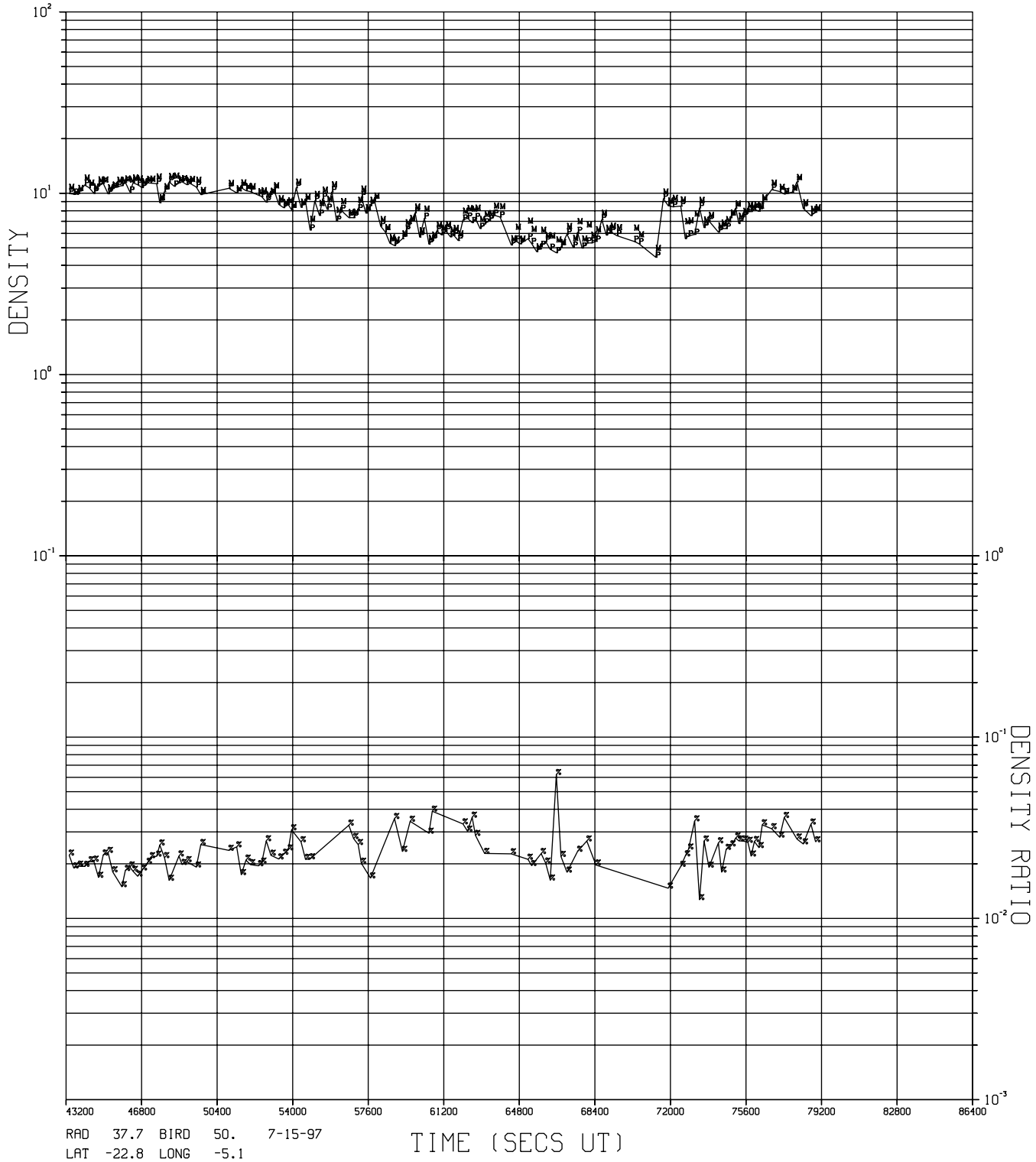

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 37.7 BIRD 50. 7-15-97
LAT -19.1 LONG -10.9

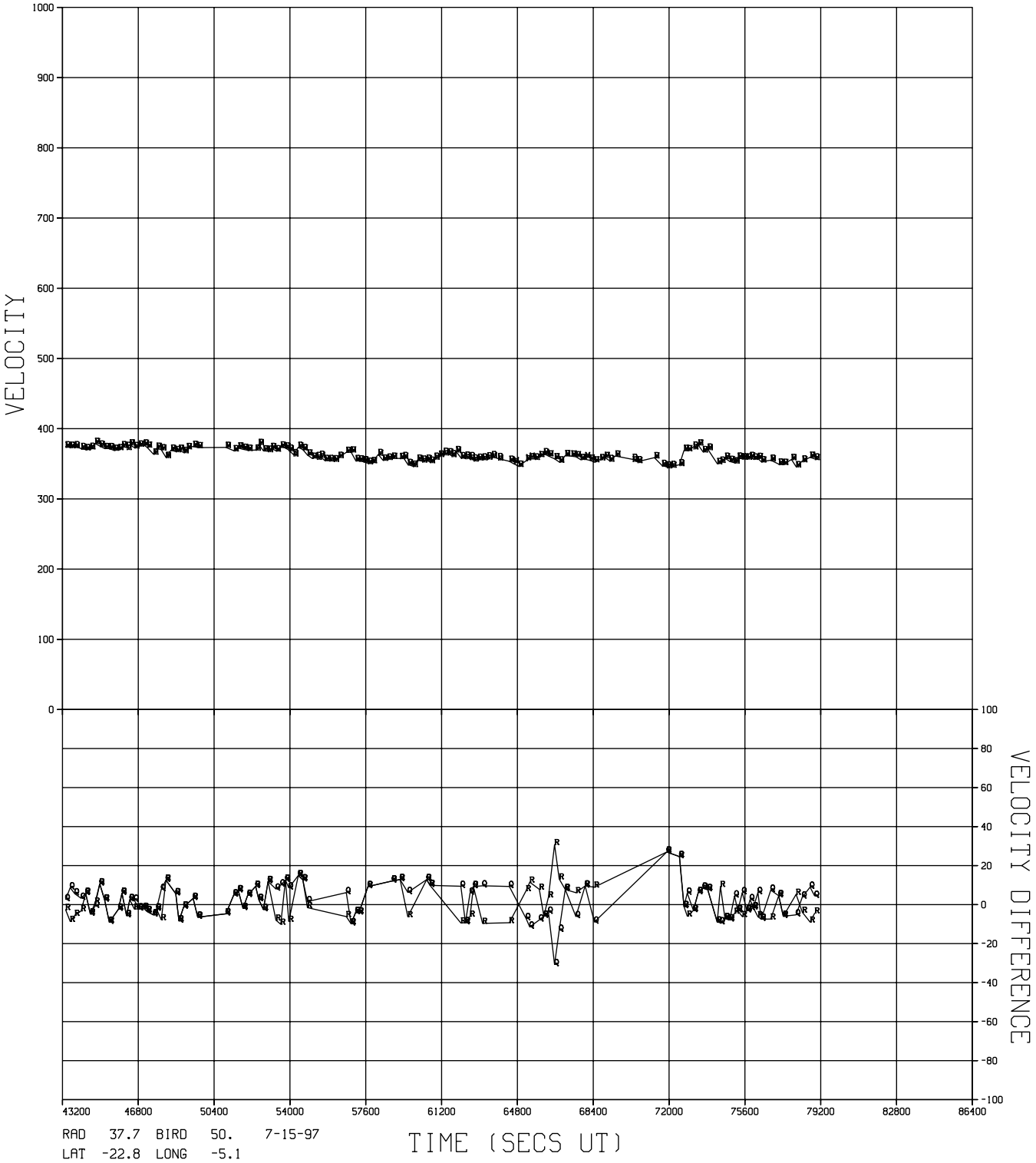

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.7 BIRD 50. 7-15-97
LAT -19.1 LONG -10.9

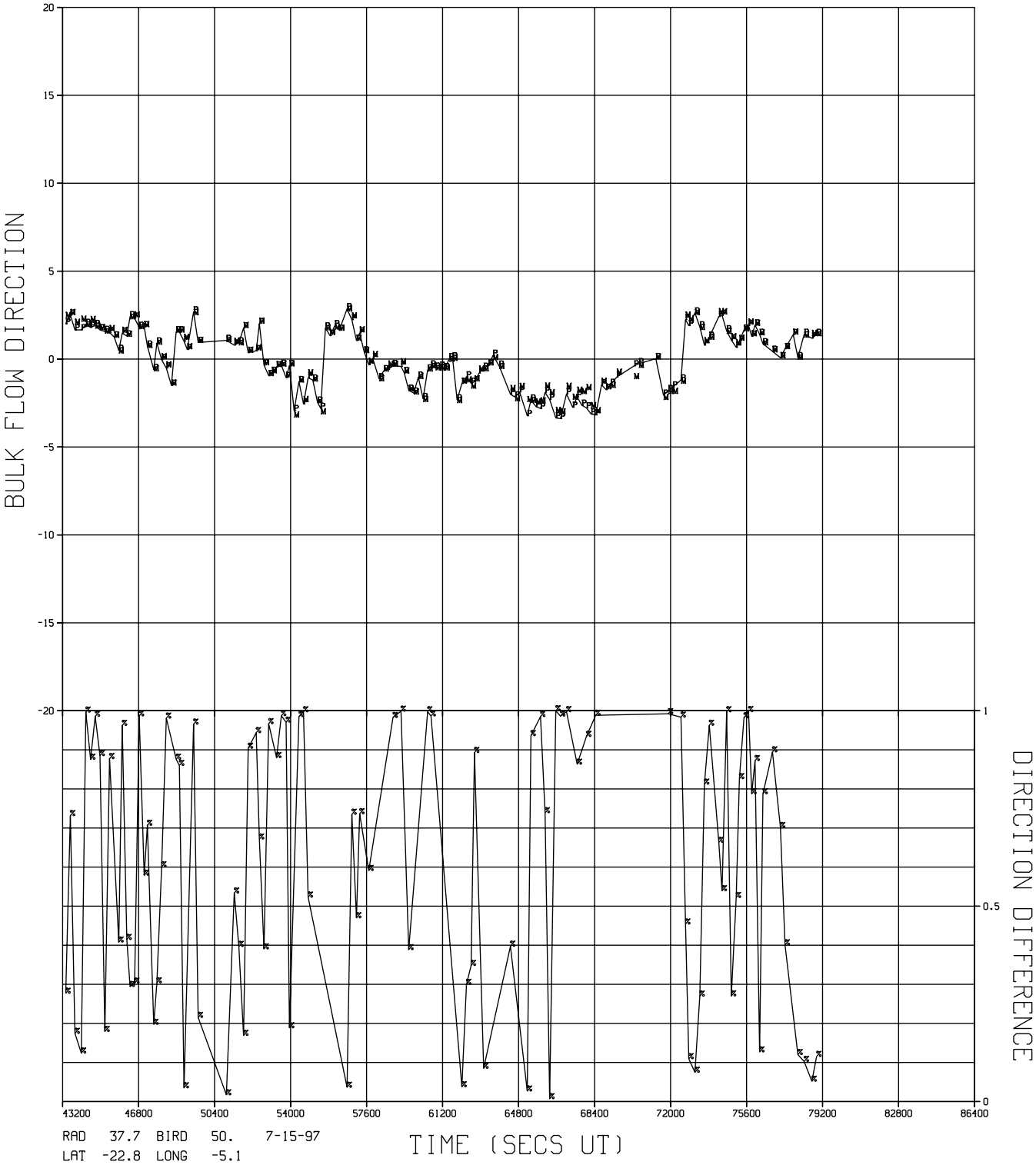

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.7 BIRD 50. 7-15-97
LAT -19.1 LONG -10.9

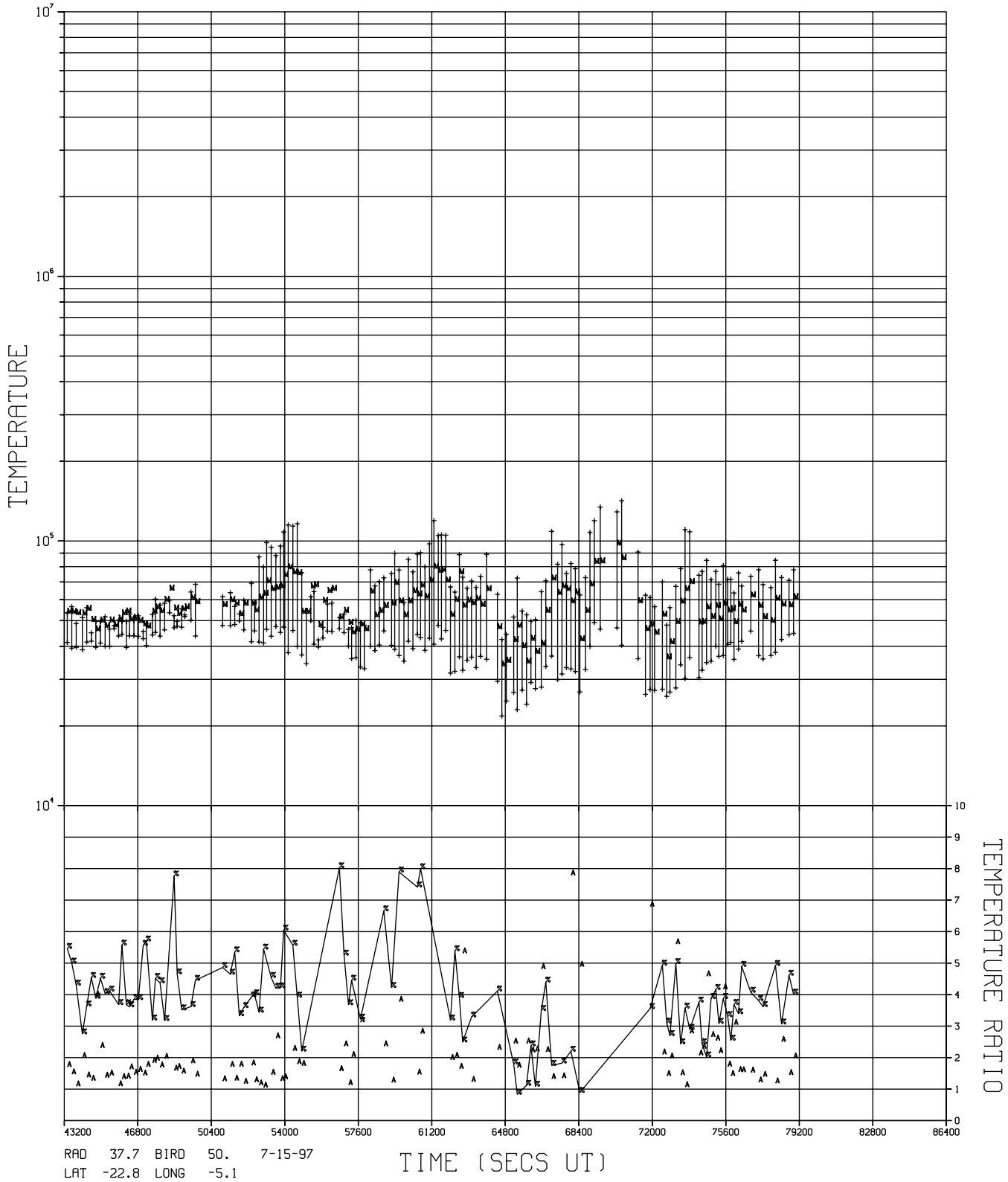

PERP. HEAT FLUX
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
CHI-SQUARE
10^{3}
10^{2}
10^{1}
10^{0}
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.7 BIRD 50. 7-15-97
LAT -19.1 LONG -10.9

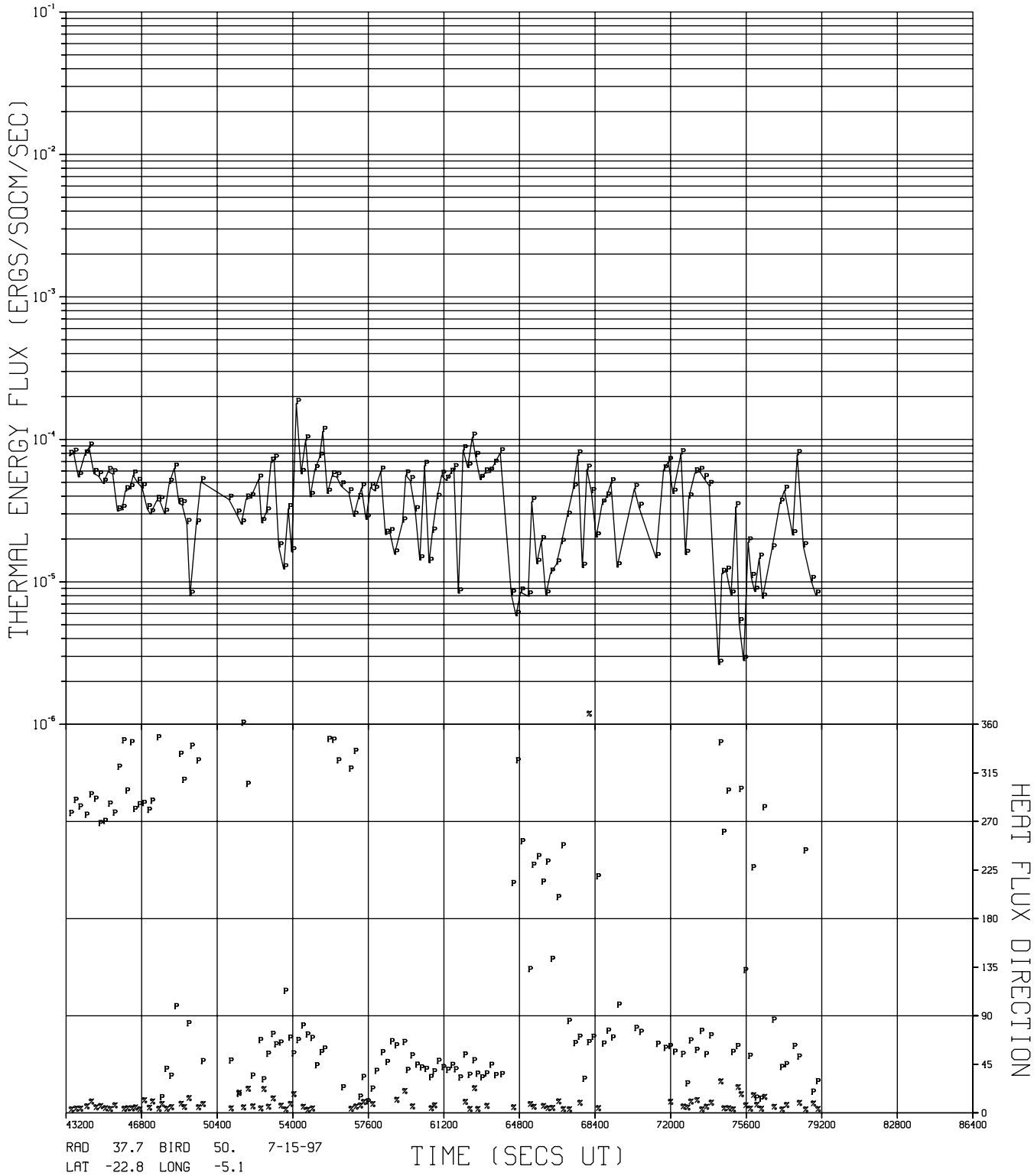

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.7 BIRD 50. 7-15-97
LAT -19.1 LONG -10.9

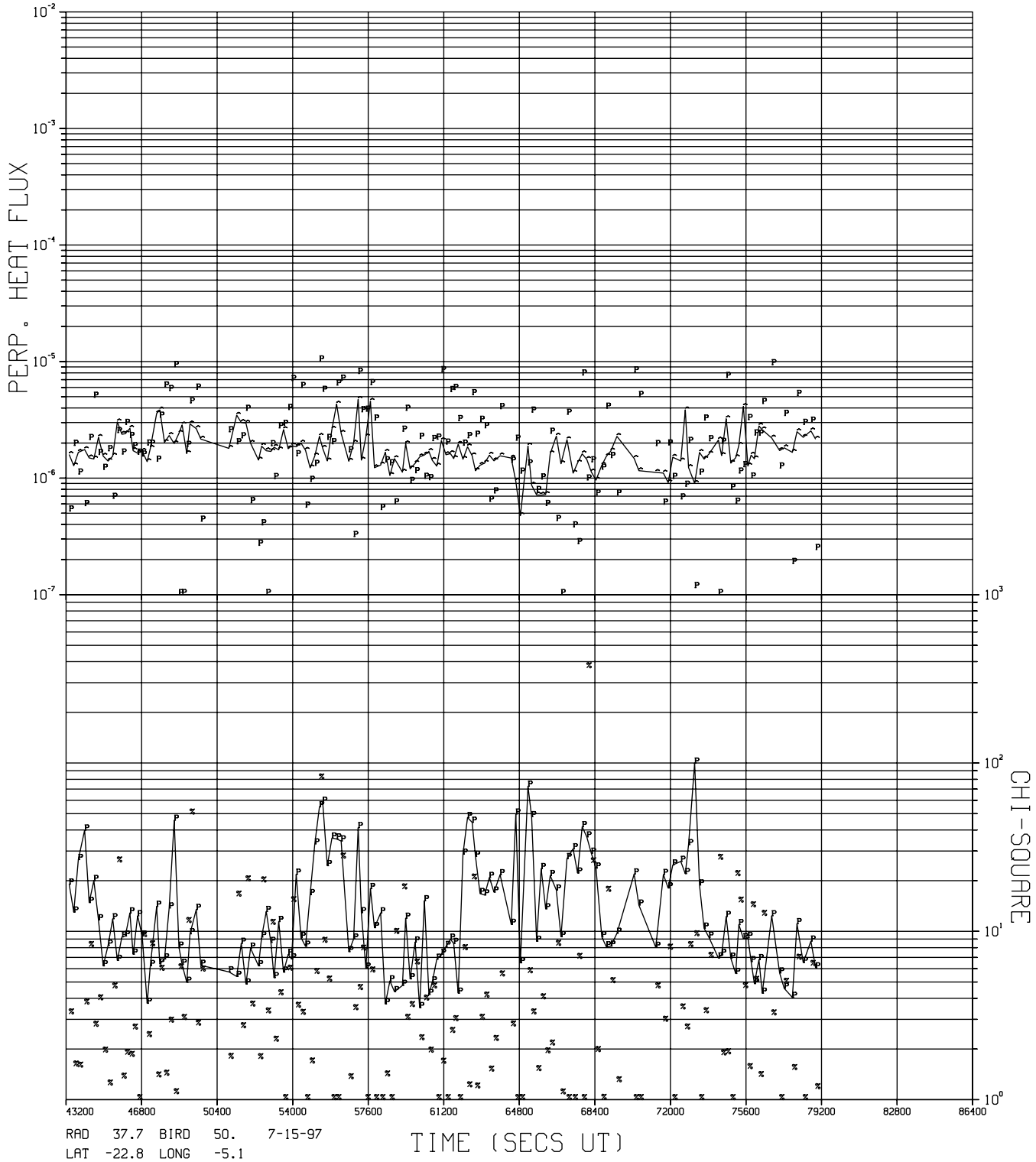

DENSITY
10^2
10^1
10^0
10^{-1}
DENSITY RATIO
10^0
10^{-1}
10^{-2}
10^{-3}
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 37.7 BIRD 50. 7-15-97
LAT -22.8 LONG -5.1
TIME (SECS UT)

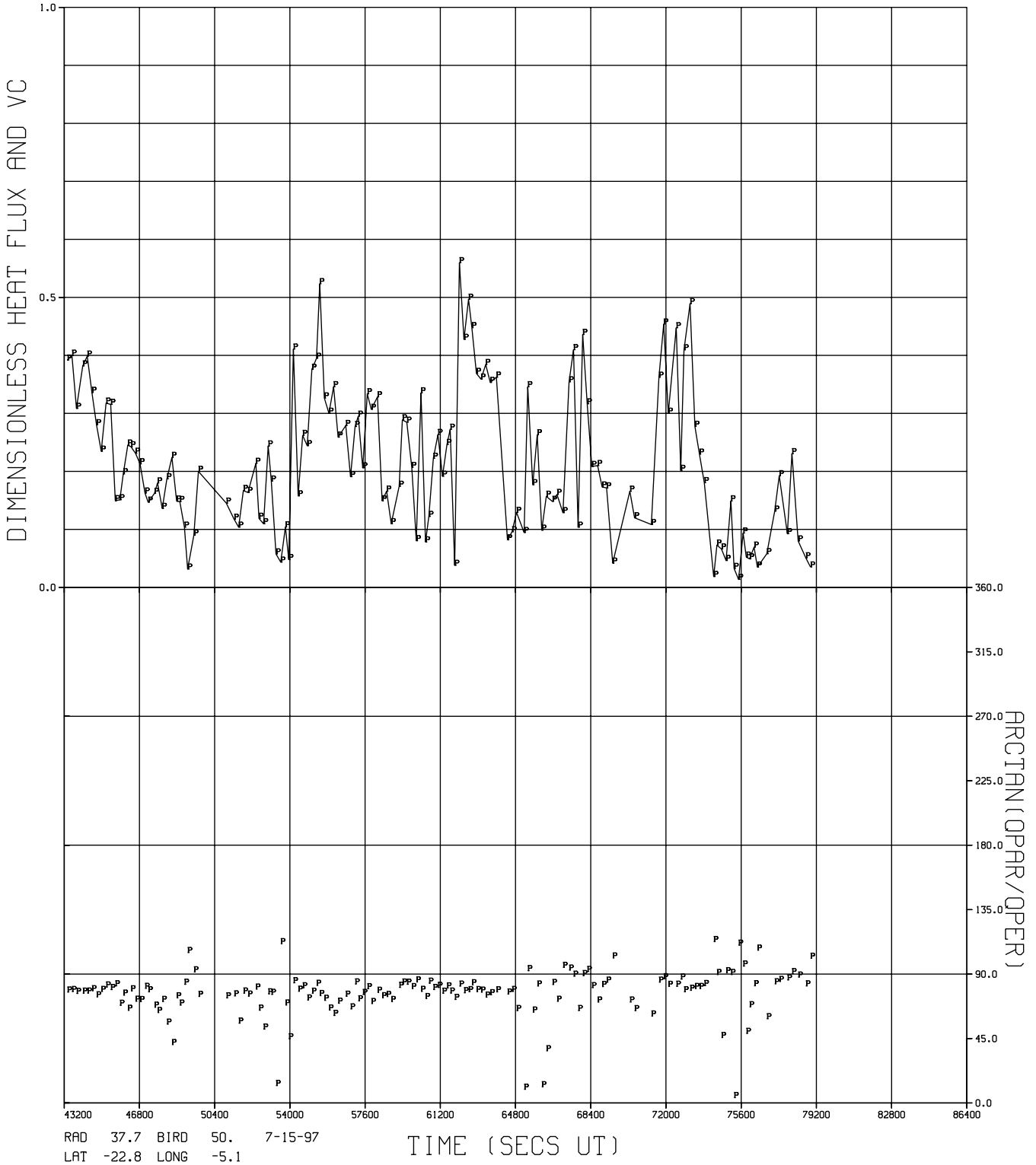

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.7 BIRD 50. 7-15-97
LAT -22.8 LONG -5.1

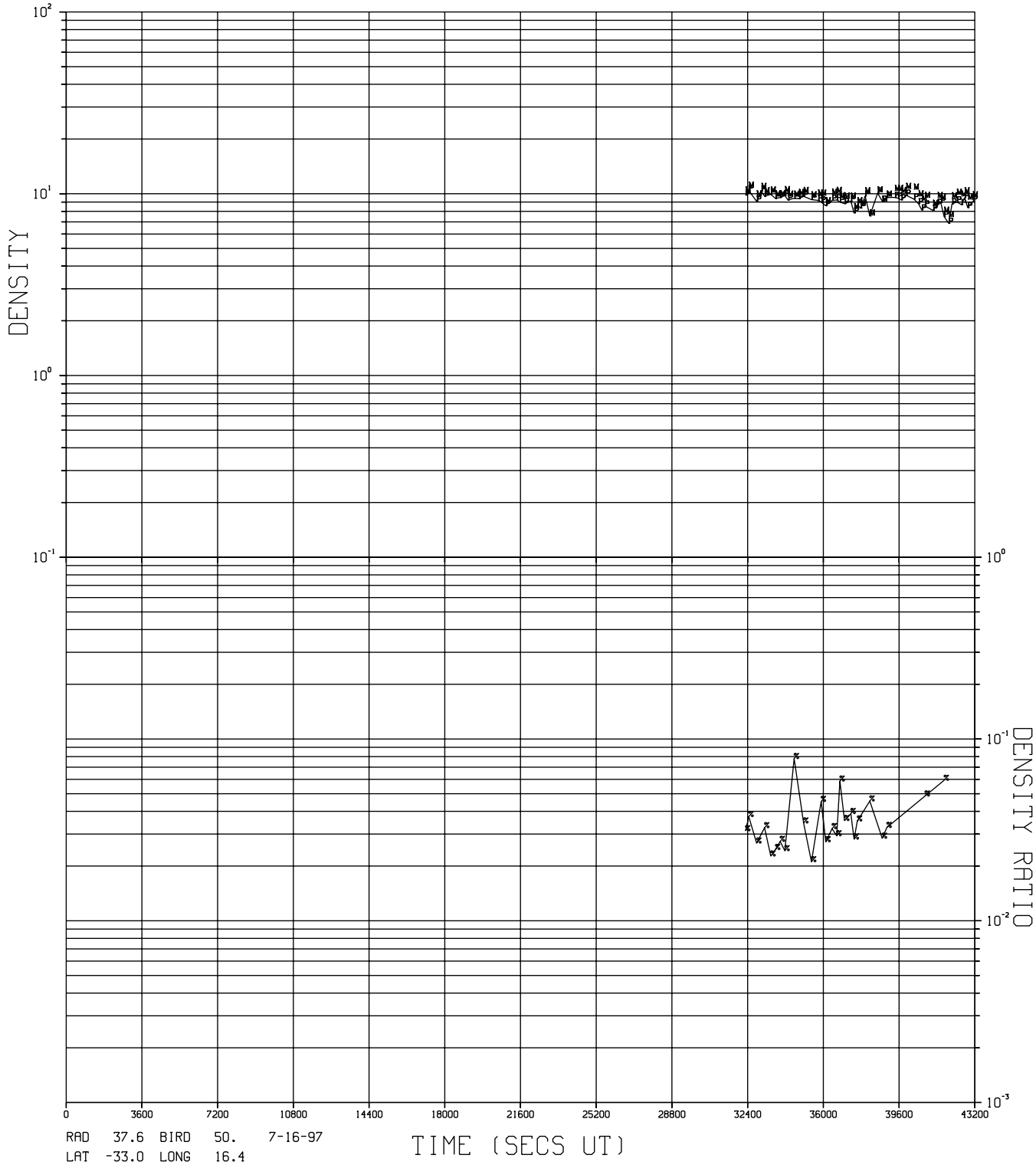

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 37.7 BIRD 50. 7-15-97
LAT -22.8 LONG -5.1

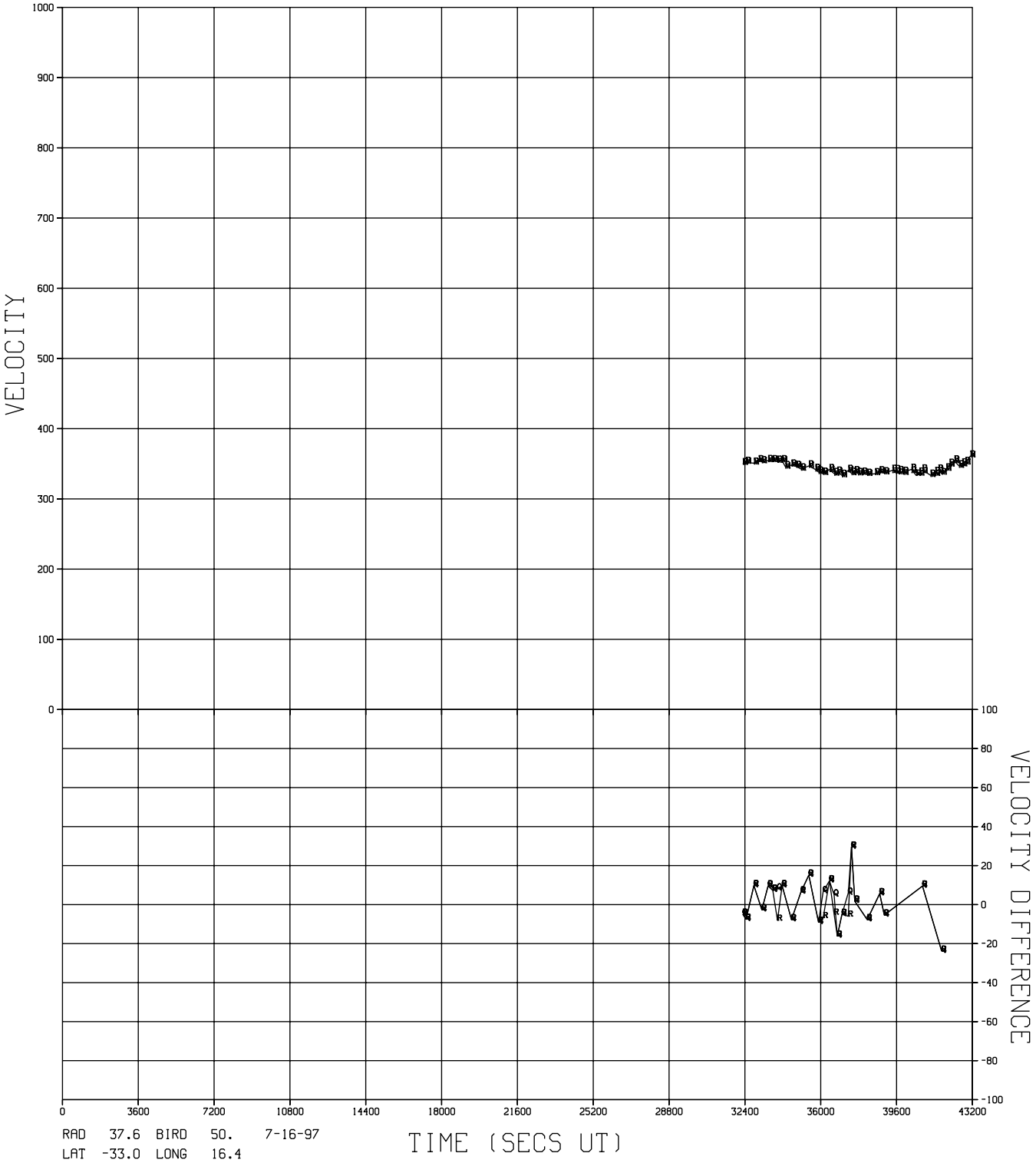

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.7 BIRD 50. 7-15-97
LAT -22.8 LONG -5.1

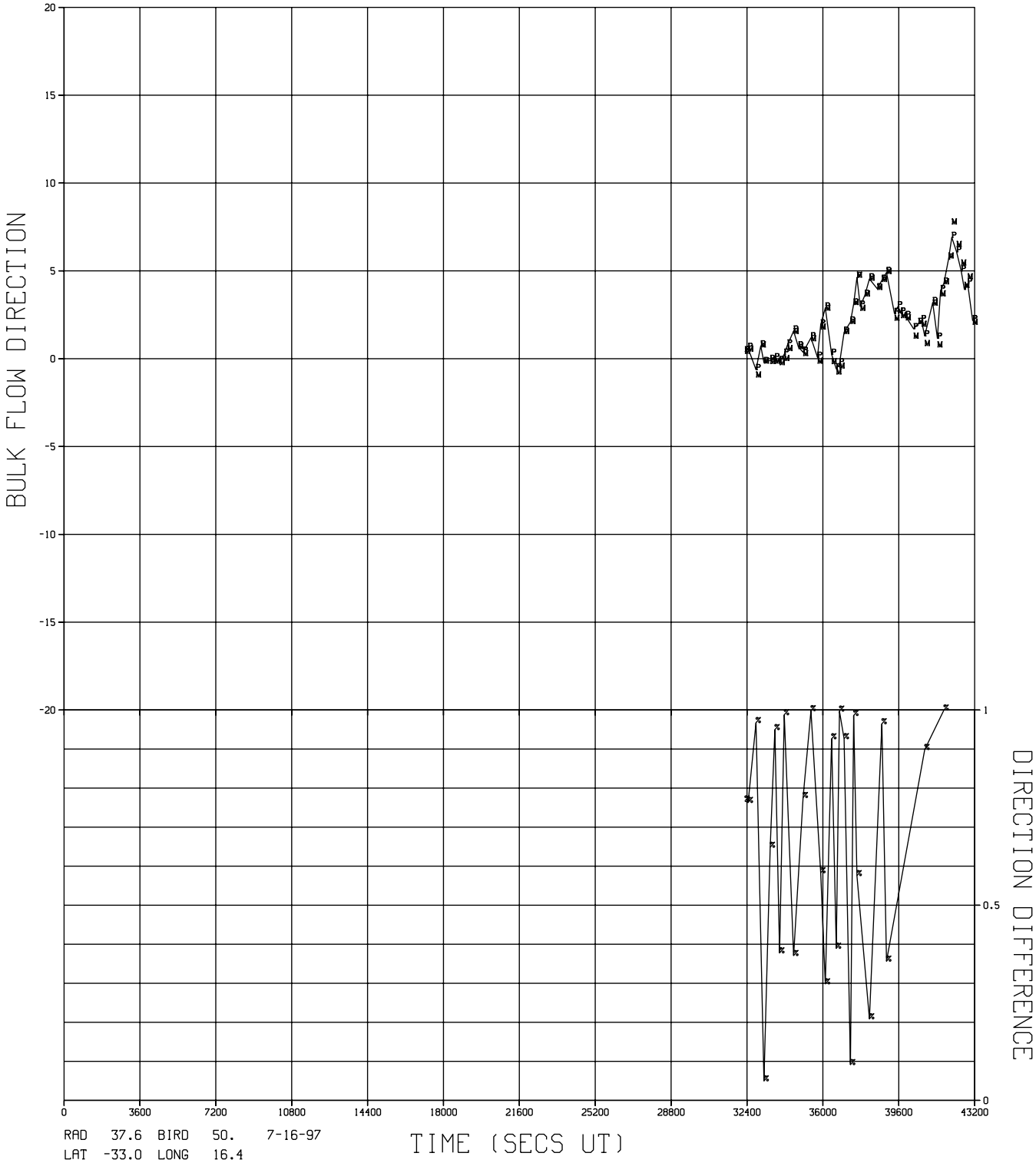

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.7 BIRD 50. 7-15-97
LAT -22.8 LONG -5.1

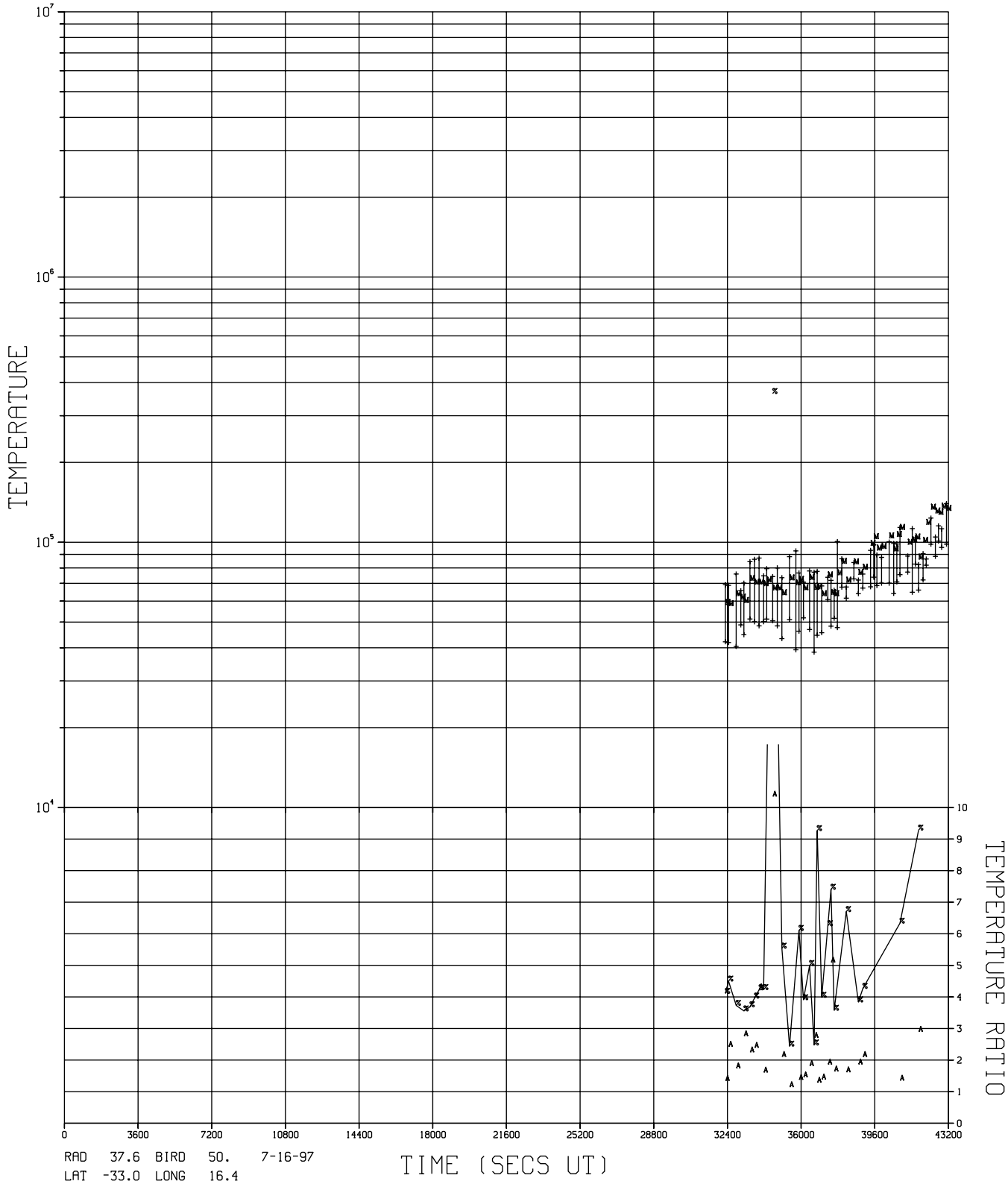

PERP. HEAT FLUX
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
CHI-SQUARE
10^{3}
10^{2}
10^{1}
10^{0}
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.7 BIRD 50. 7-15-97
LAT -22.8 LONG -5.1

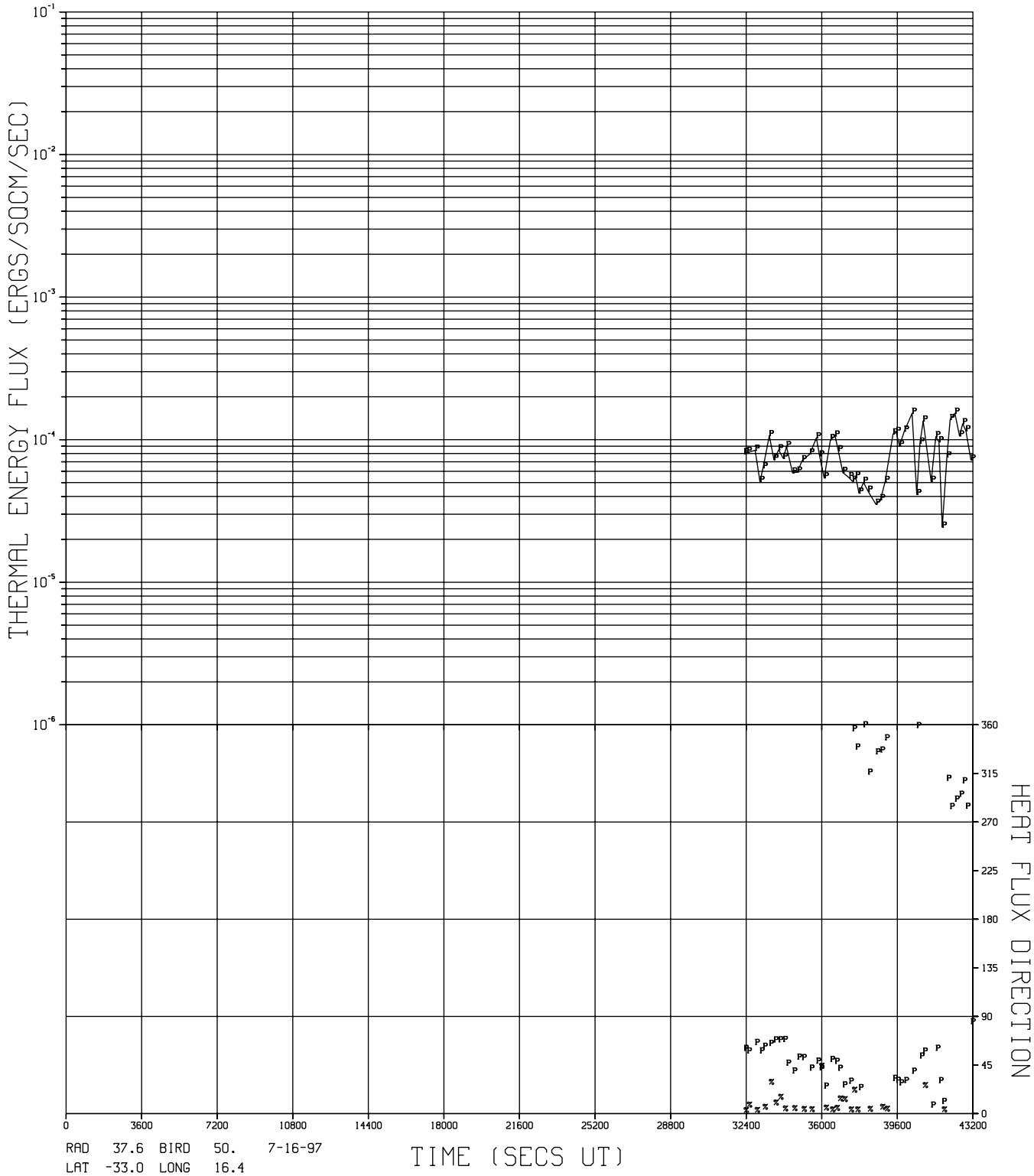

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 37.7 BIRD 50. 7-15-97
LAT -22.8 LONG -5.1
TIME (SECS UT)

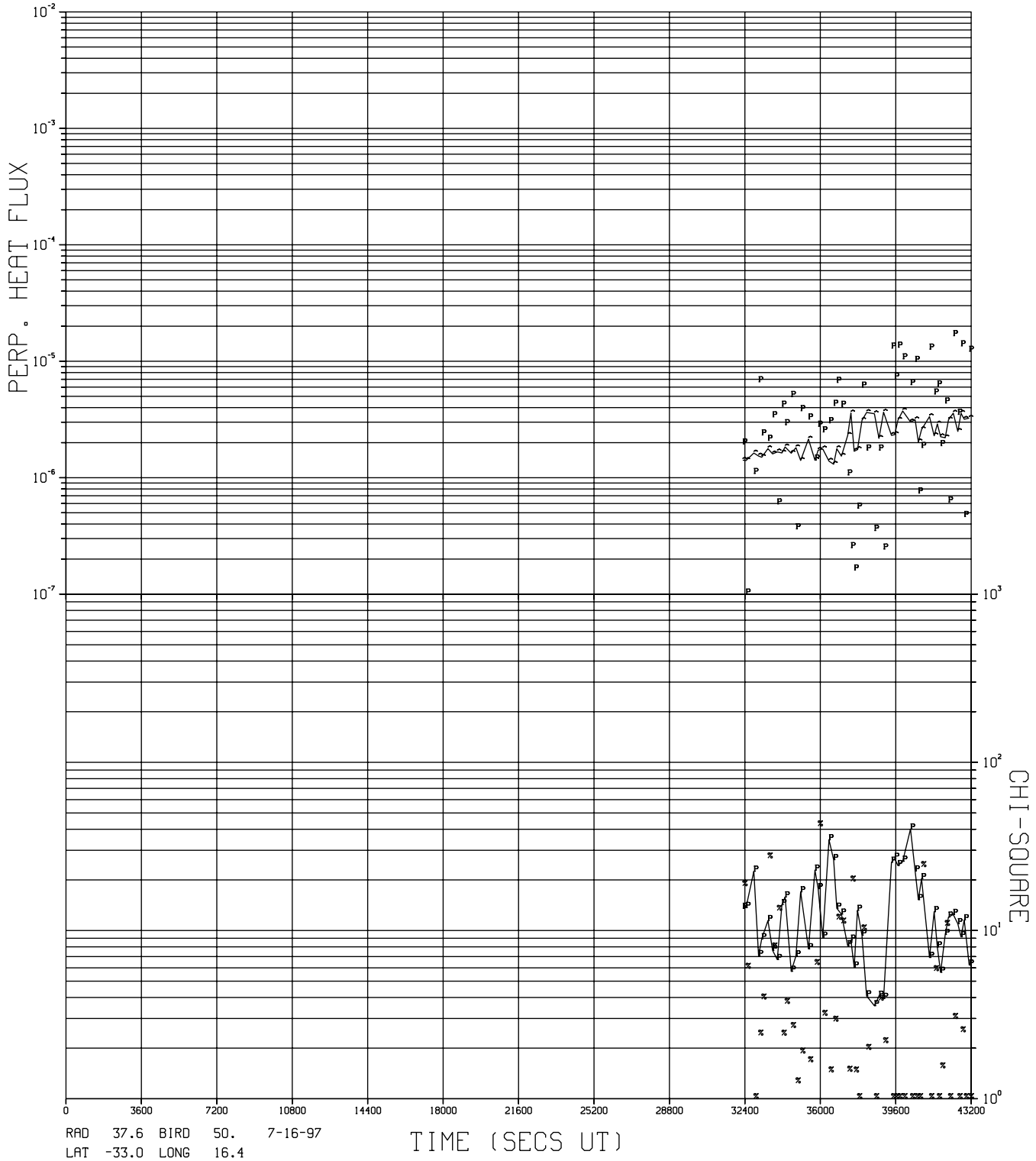

DENSITY
10^{2}
10^{1}
10^{0}
10^{-1}
DENSITY RATIO
10^{0}
10^{-1}
10^{-2}
10^{-3}
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 37.6 BIRD 50. 7-16-97
LAT -33.0 LONG 16.4
TIME (SECS UT)

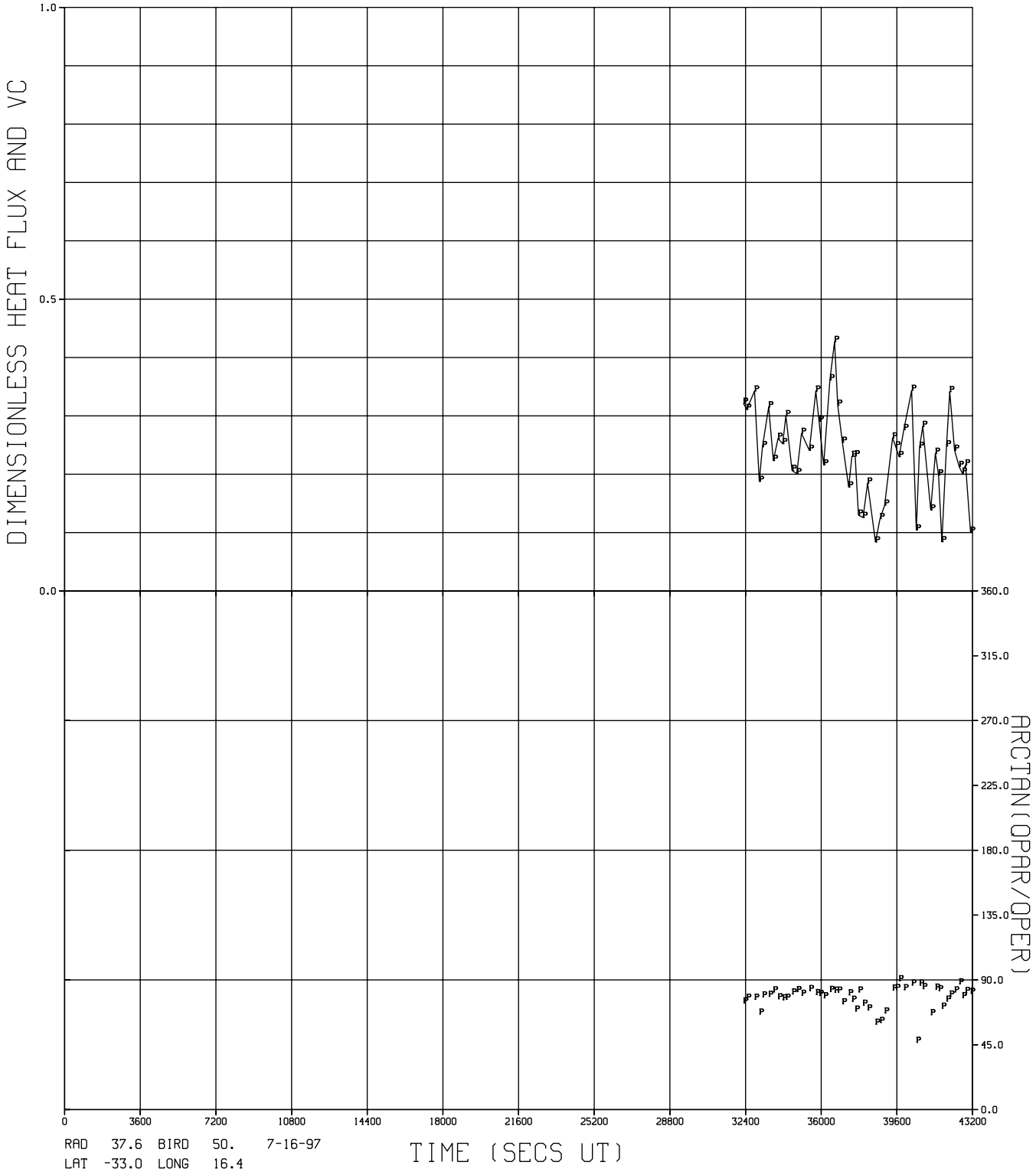

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.6 BIRD 50. 7-16-97
LAT -33.0 LONG 16.4

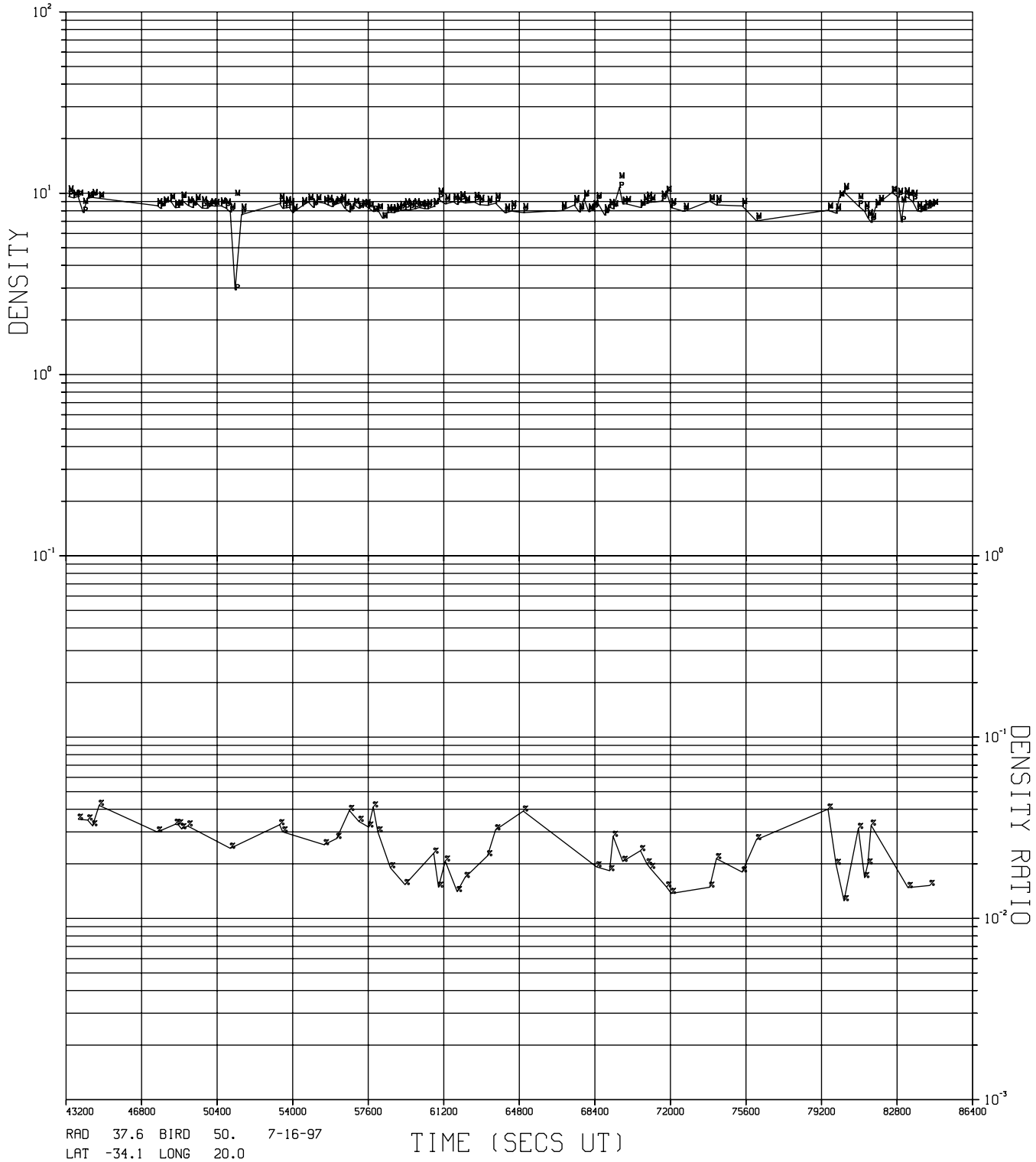

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 37.6 BIRD 50. 7-16-97
LAT -33.0 LONG 16.4

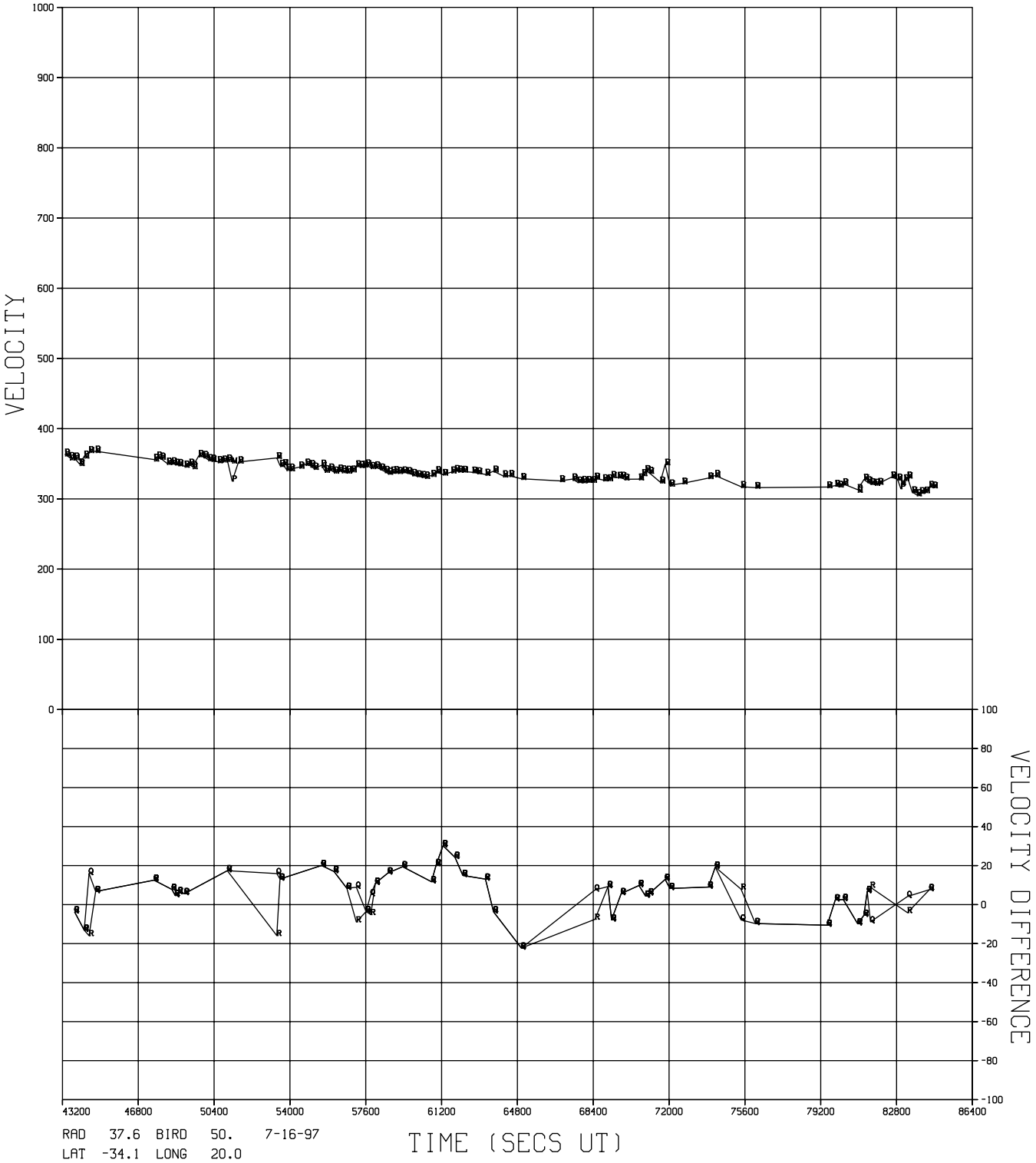

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.6 BIRD 50. 7-16-97
LAT -33.0 LONG 16.4

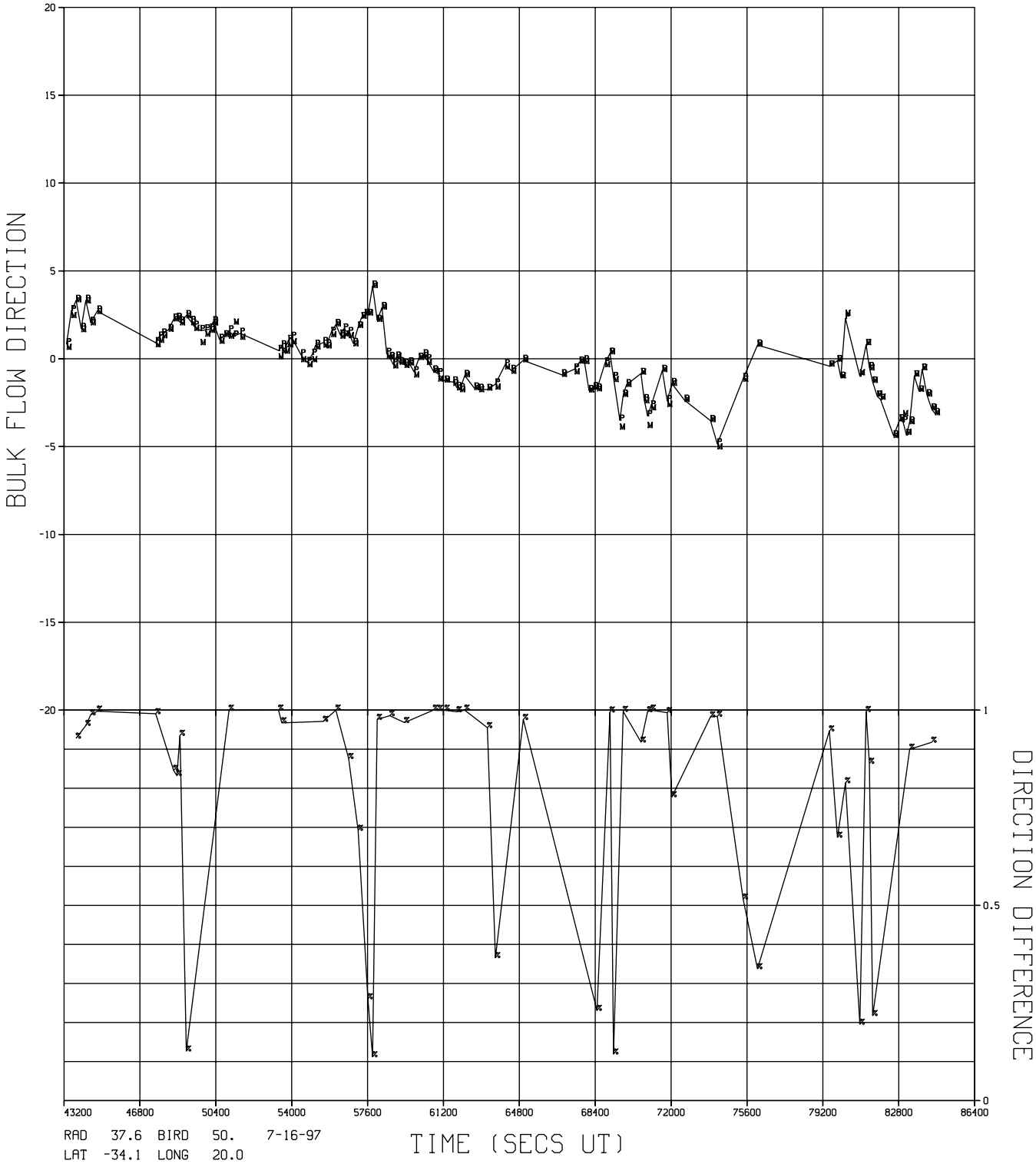

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.6 BIRD 50. 7-16-97
LAT -33.0 LONG 16.4

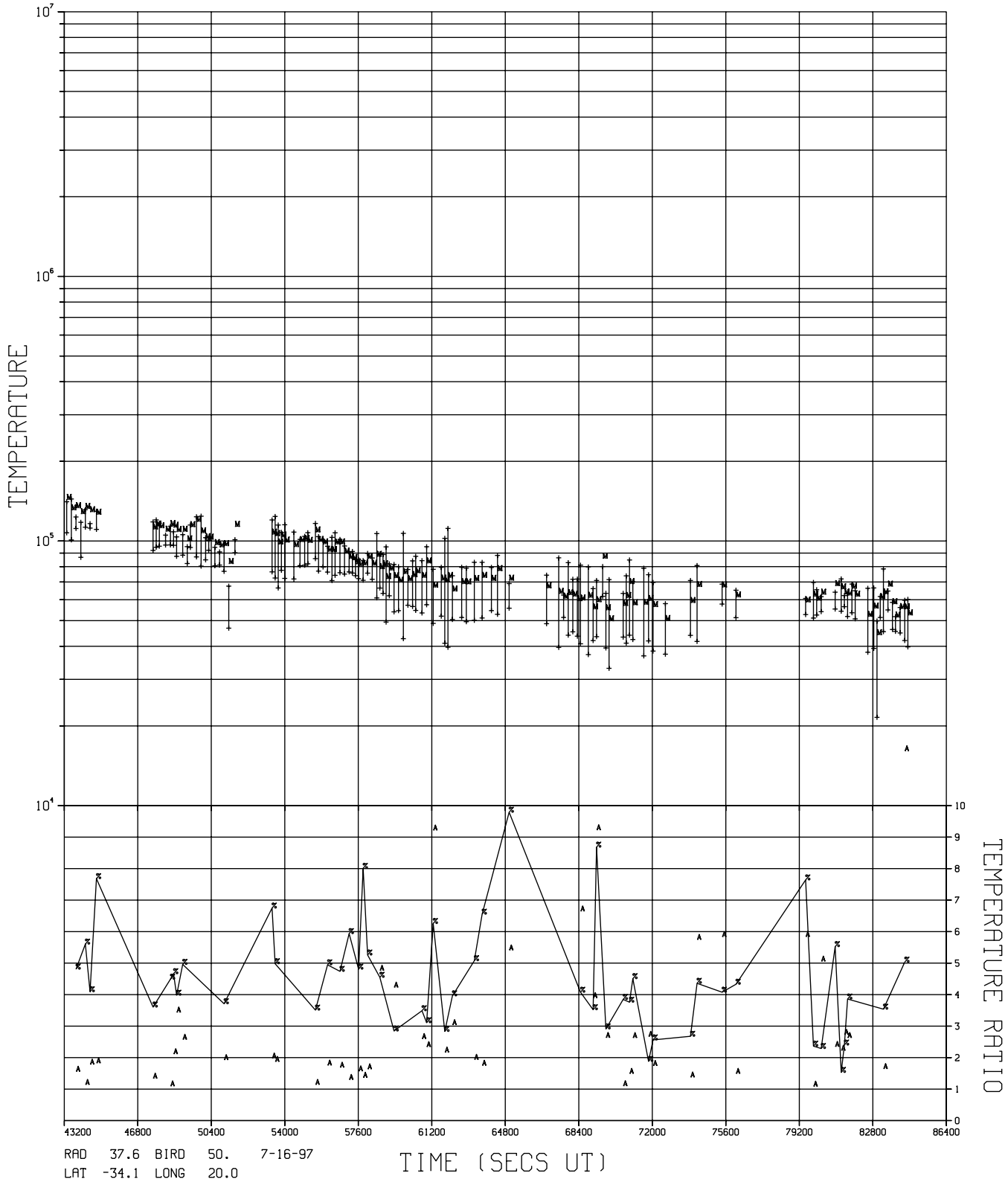

PERP. HEAT FLUX
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
CHI-SQUARE
10^{3}
10^{2}
10^{1}
10^{0}
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.6 BIRD 50. 7-16-97
LAT -33.0 LONG 16.4

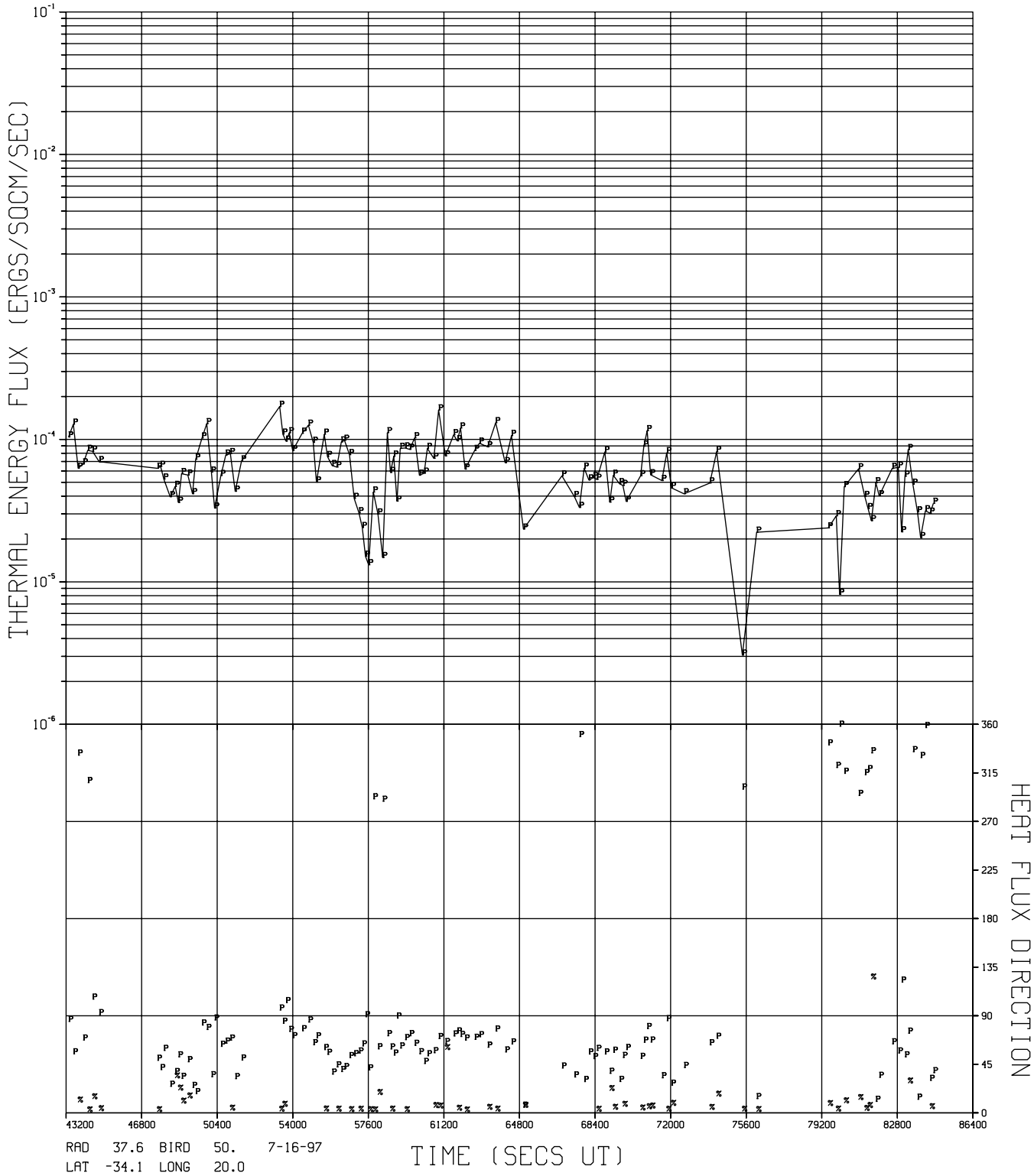

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.6 BIRD 50. 7-16-97
LAT -33.0 LONG 16.4

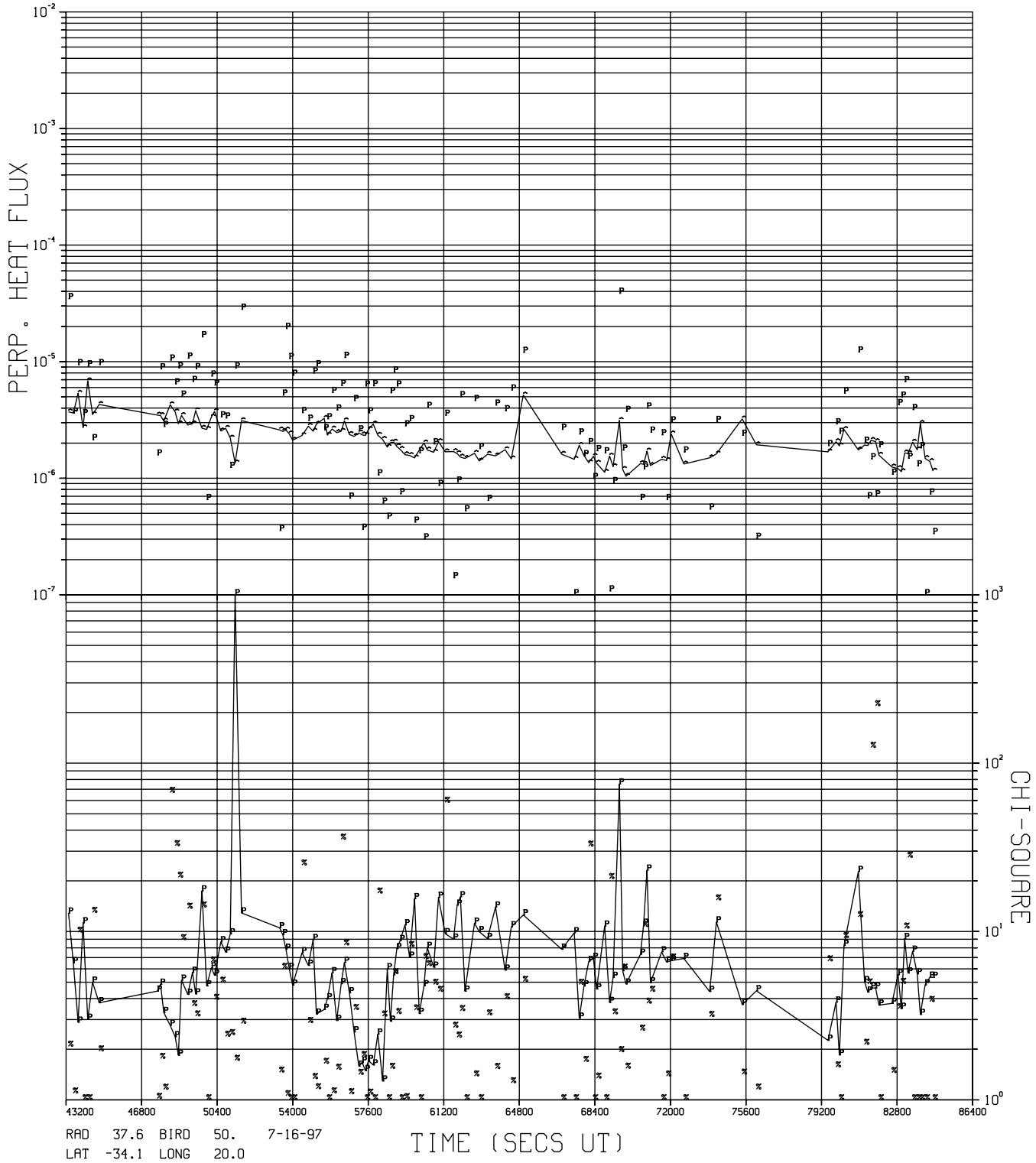

DENSITY
10^2
10^1
10^0
10^{-1}
DENSITY RATIO
10^0
10^{-1}
10^{-2}
10^{-3}
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 37.6 BIRD 50. 7-16-97
LAT -34.1 LONG 20.0
TIME (SECS UT)

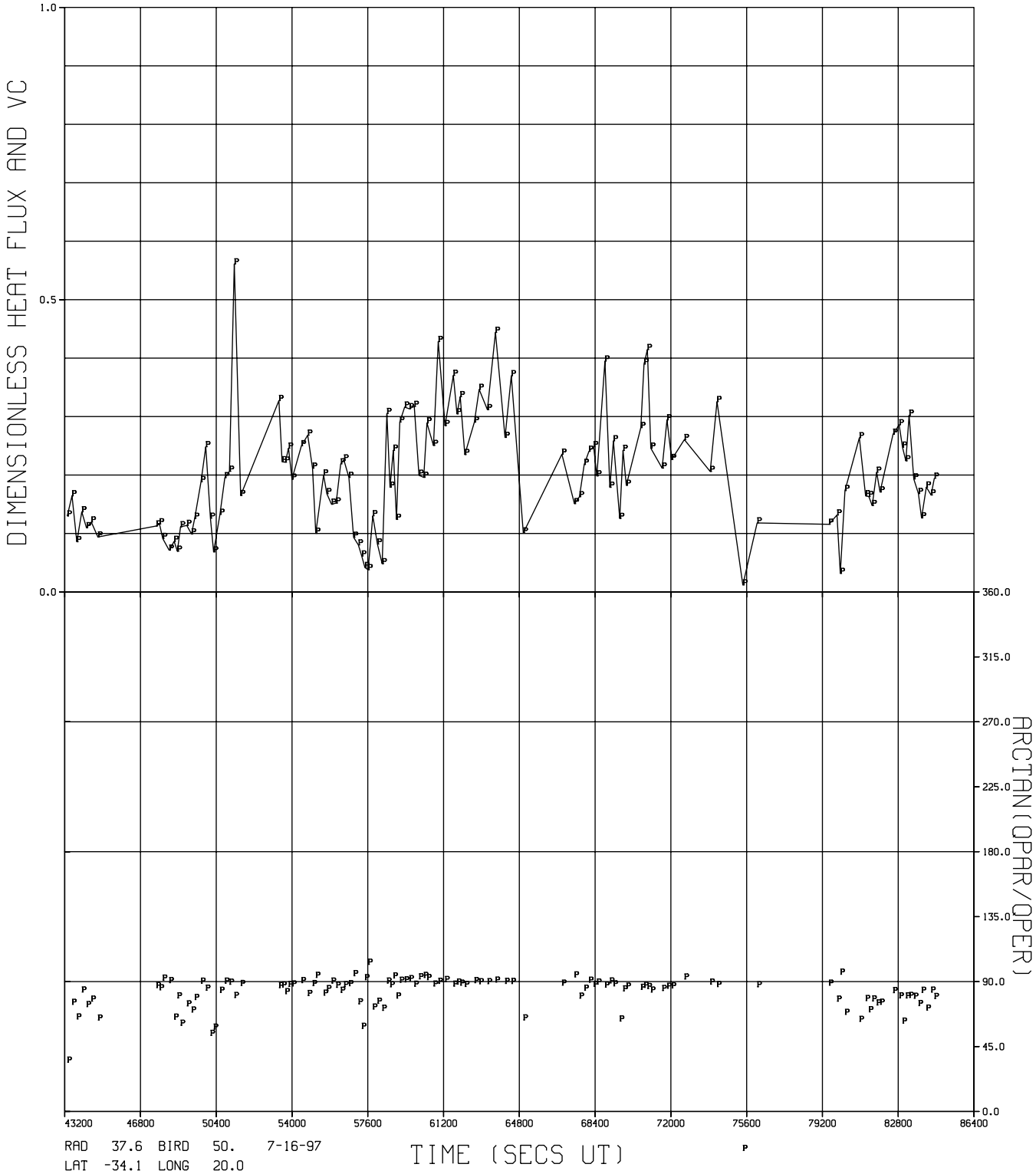

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.6 BIRD 50. 7-16-97
LAT -34.1 LONG 20.0

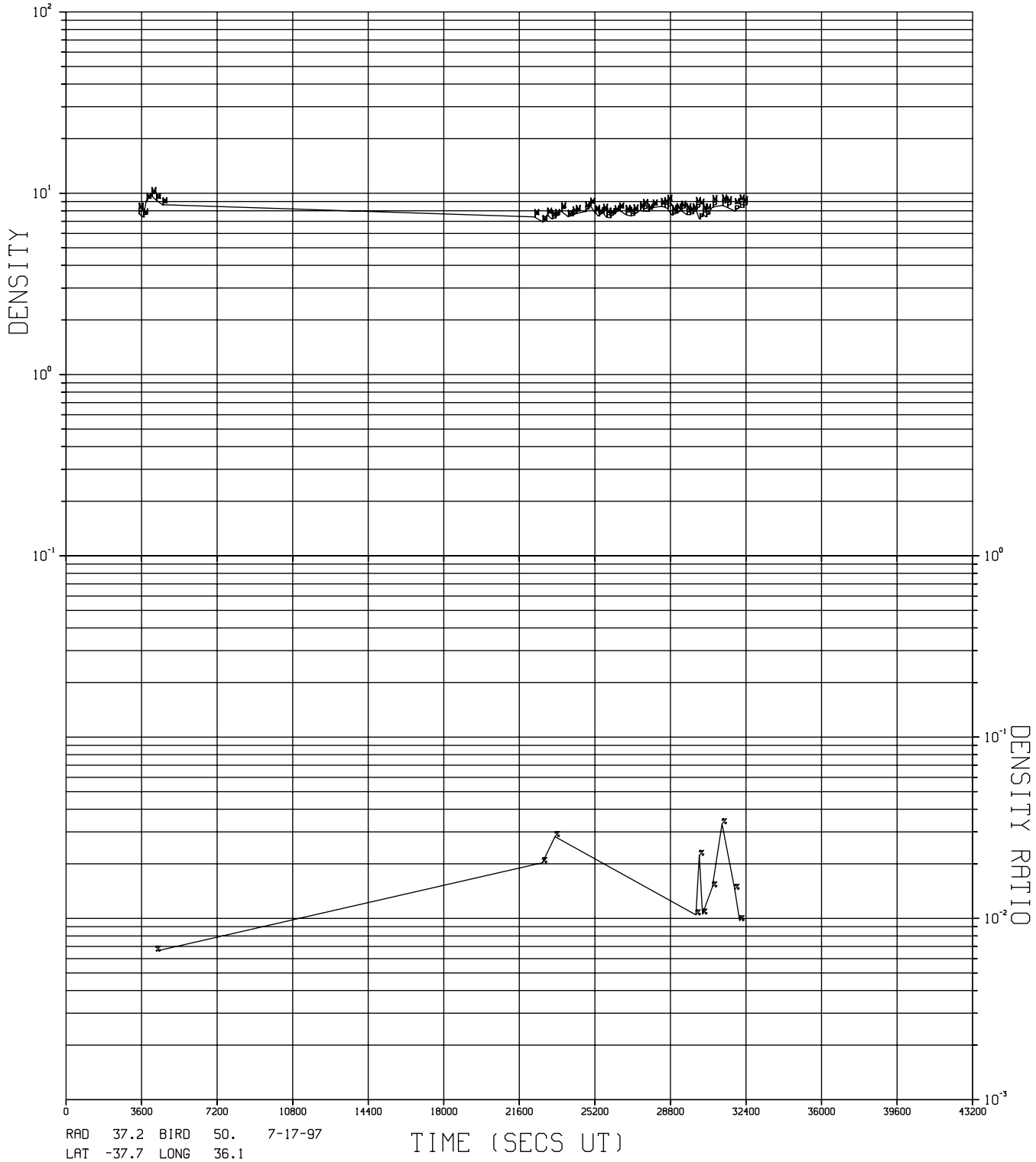

BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.6 BIRD 50. 7-16-97
LAT -34.1 LONG 20.0

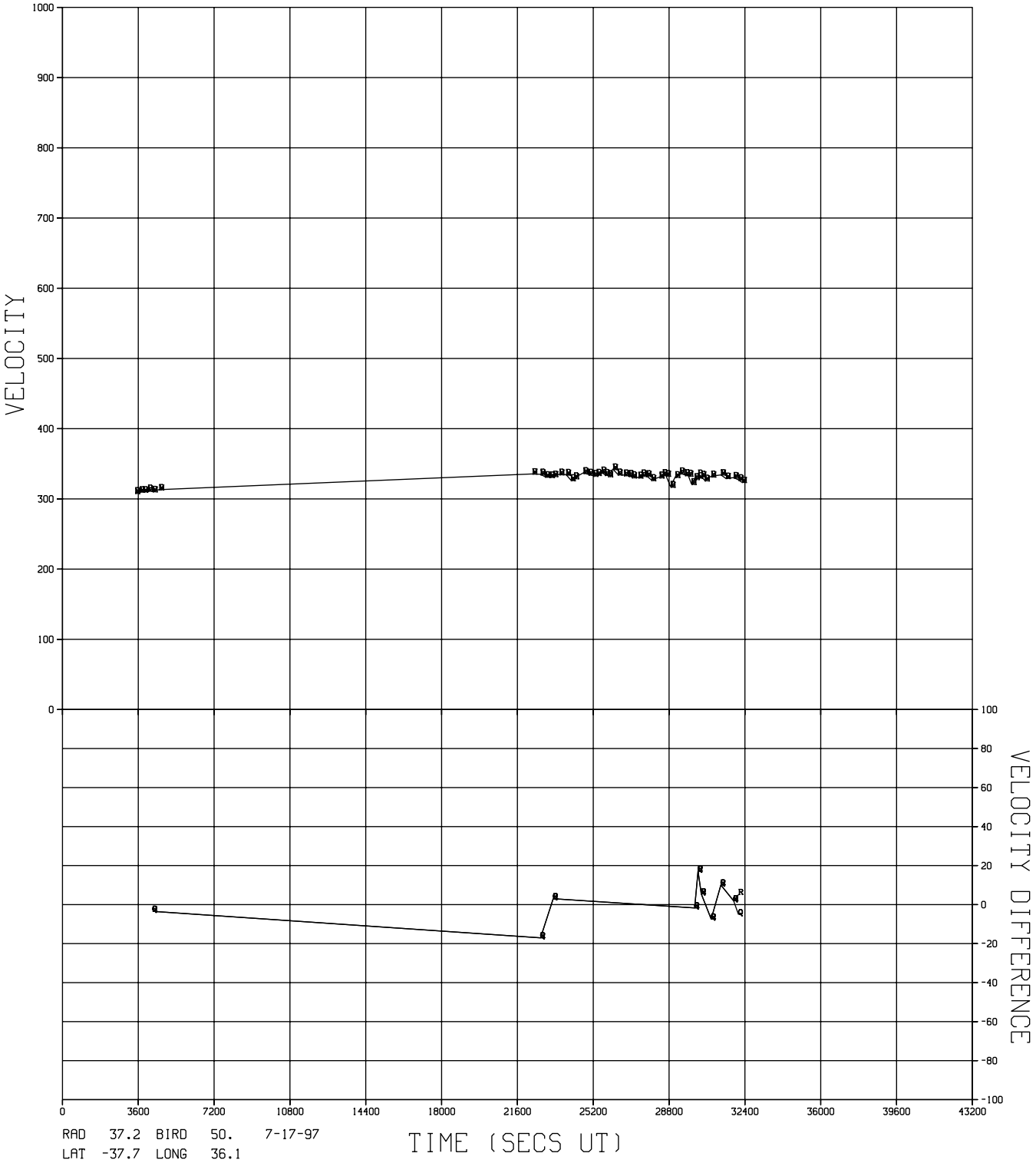

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.6 BIRD 50. 7-16-97
LAT -34.1 LONG 20.0

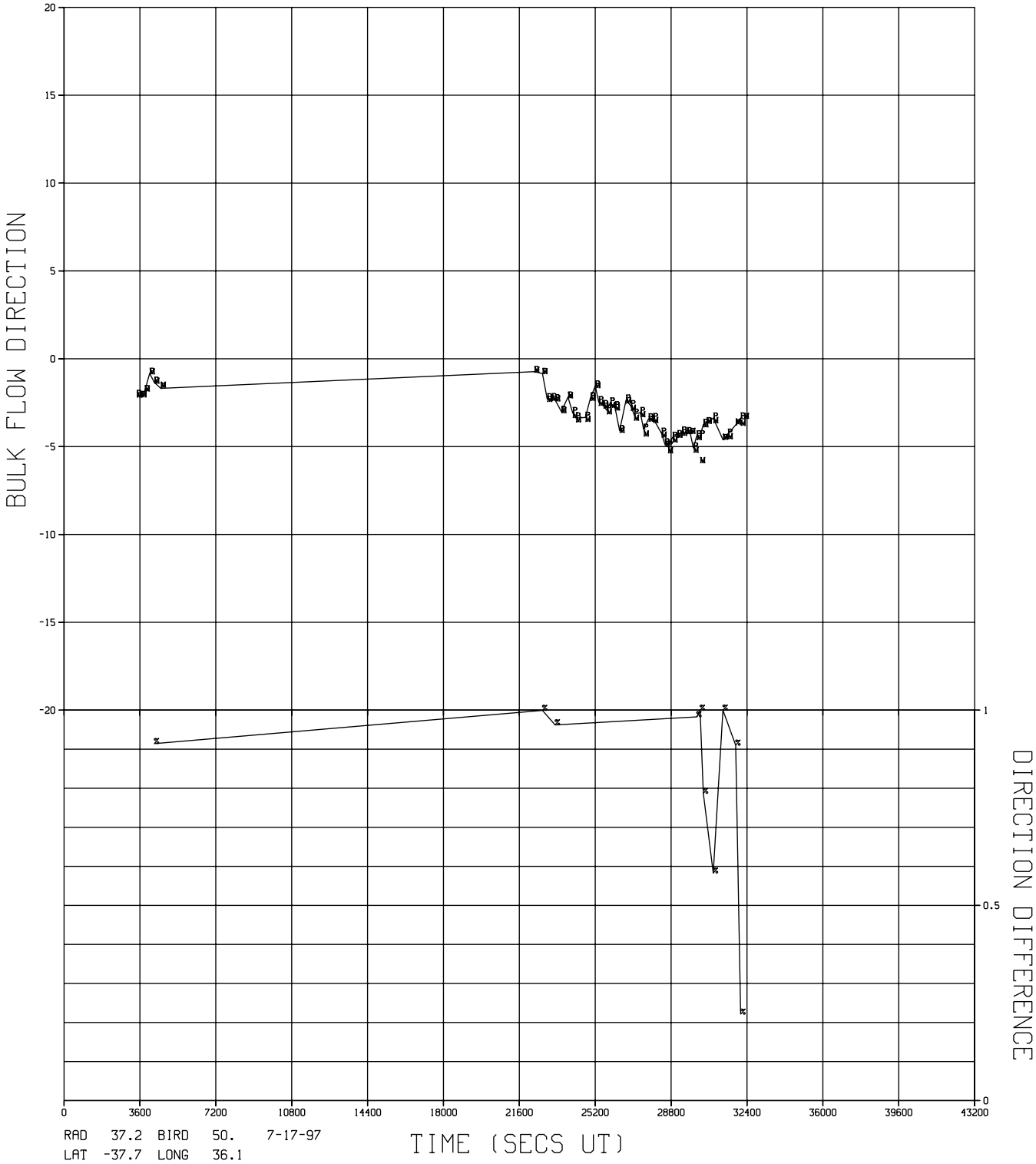

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.6 BIRD 50. 7-16-97
LAT -34.1 LONG 20.0

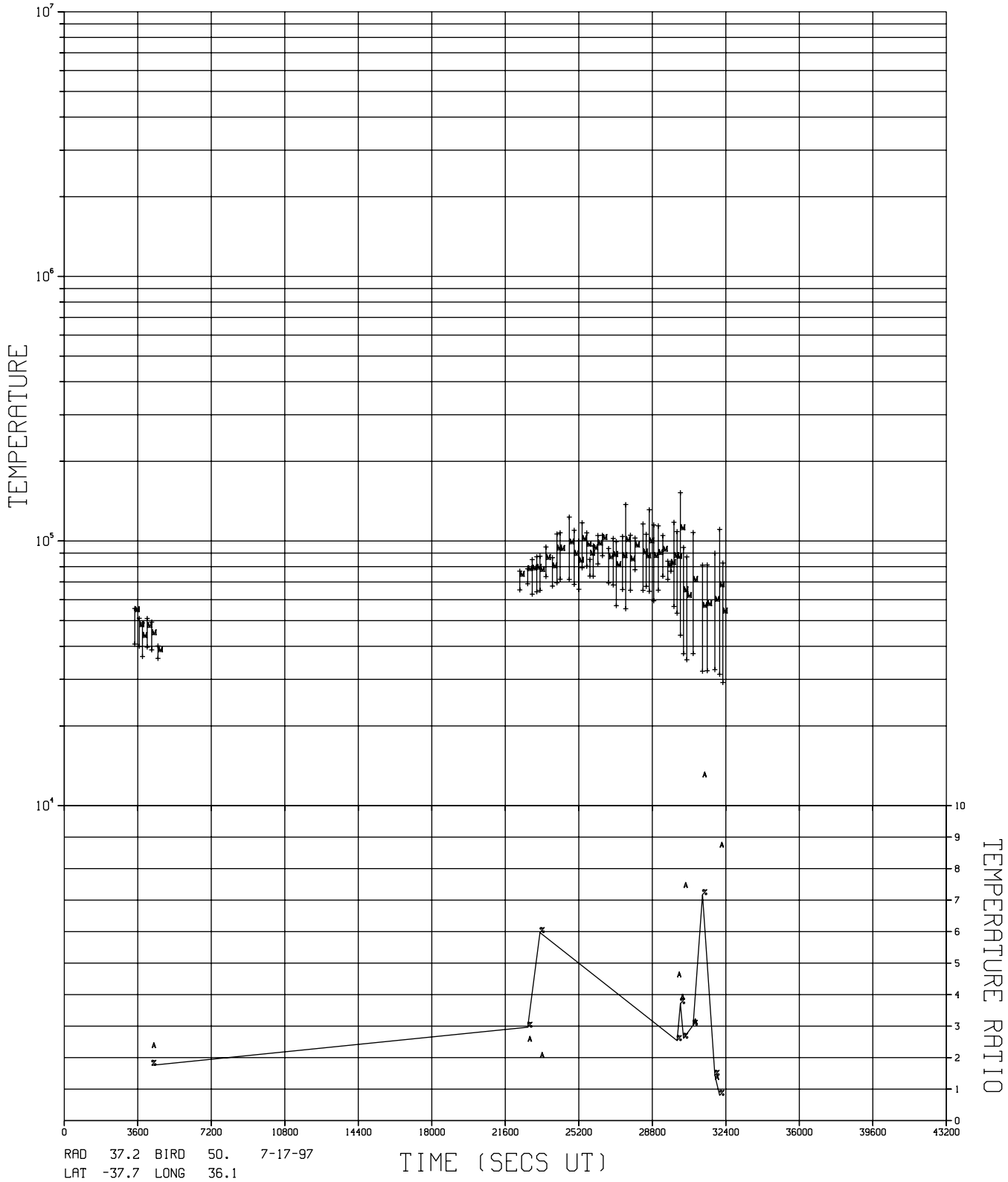

PERP. HEAT FLUX
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
CHI-SQUARE
10^{3}
10^{2}
10^{1}
10^{0}
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 37.6 BIRD 50. 7-16-97
LAT -34.1 LONG 20.0
TIME (SECS UT)

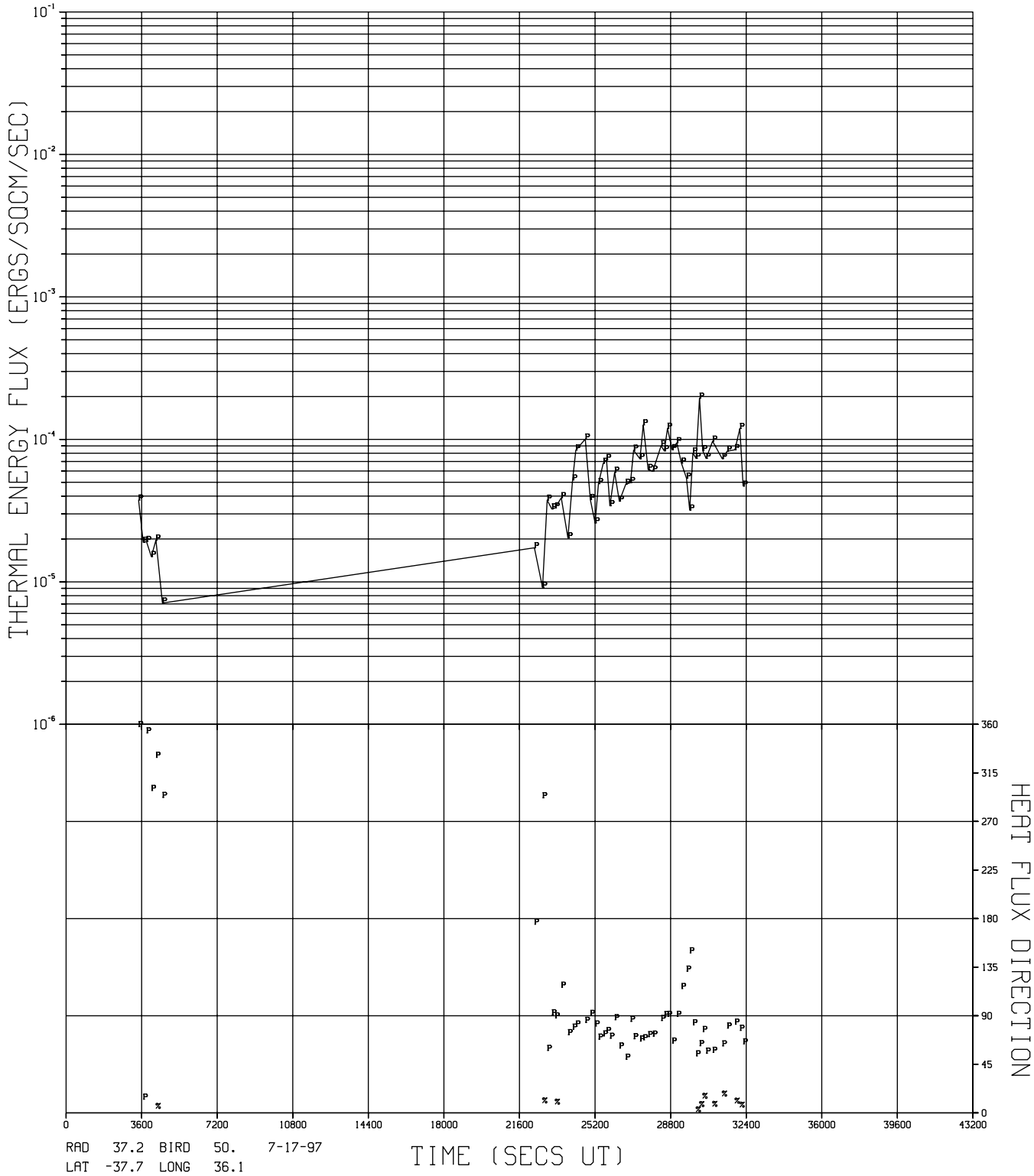

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.6 BIRD 50. 7-16-97
LAT -34.1 LONG 20.0

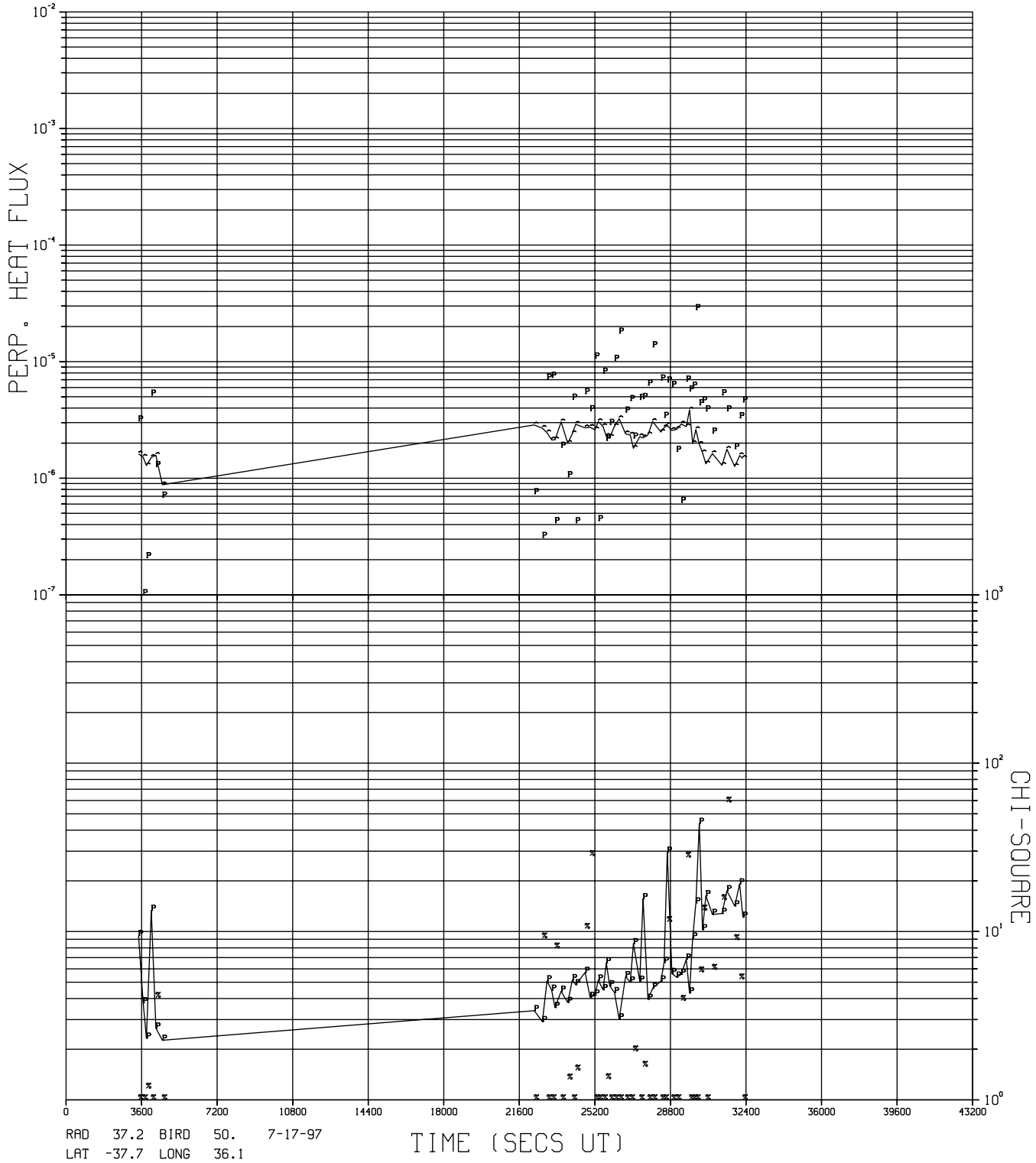

DENSITY
10^2
10^1
10^0
10^{-1}
DENSITY RATIO
10^0
10^{-1}
10^{-2}
10^{-3}
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 37.2 BIRD 50. 7-17-97
LAT -37.7 LONG 36.1
TIME (SECS UT)

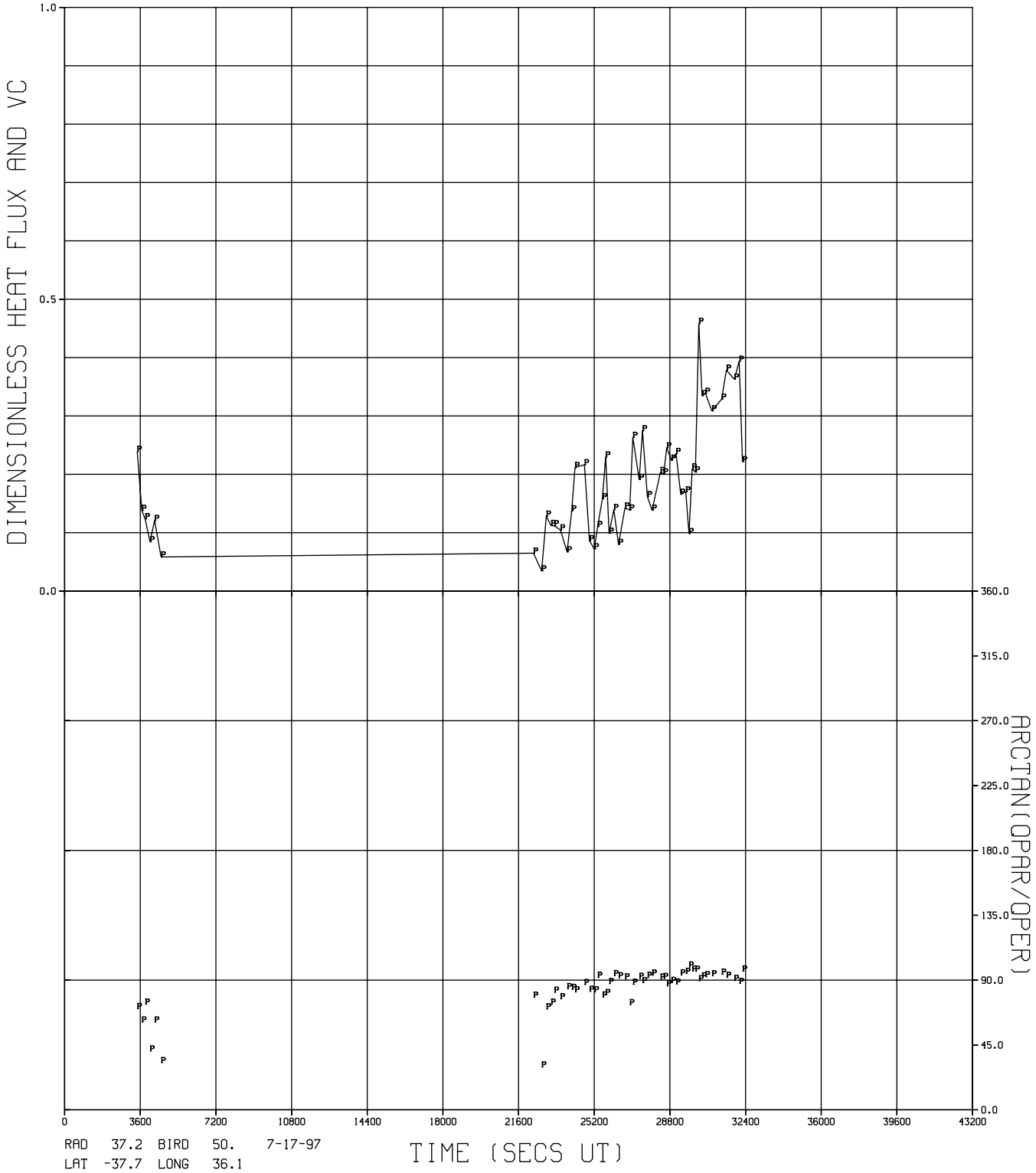

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.2 BIRD 50. 7-17-97
LAT -37.7 LONG 36.1

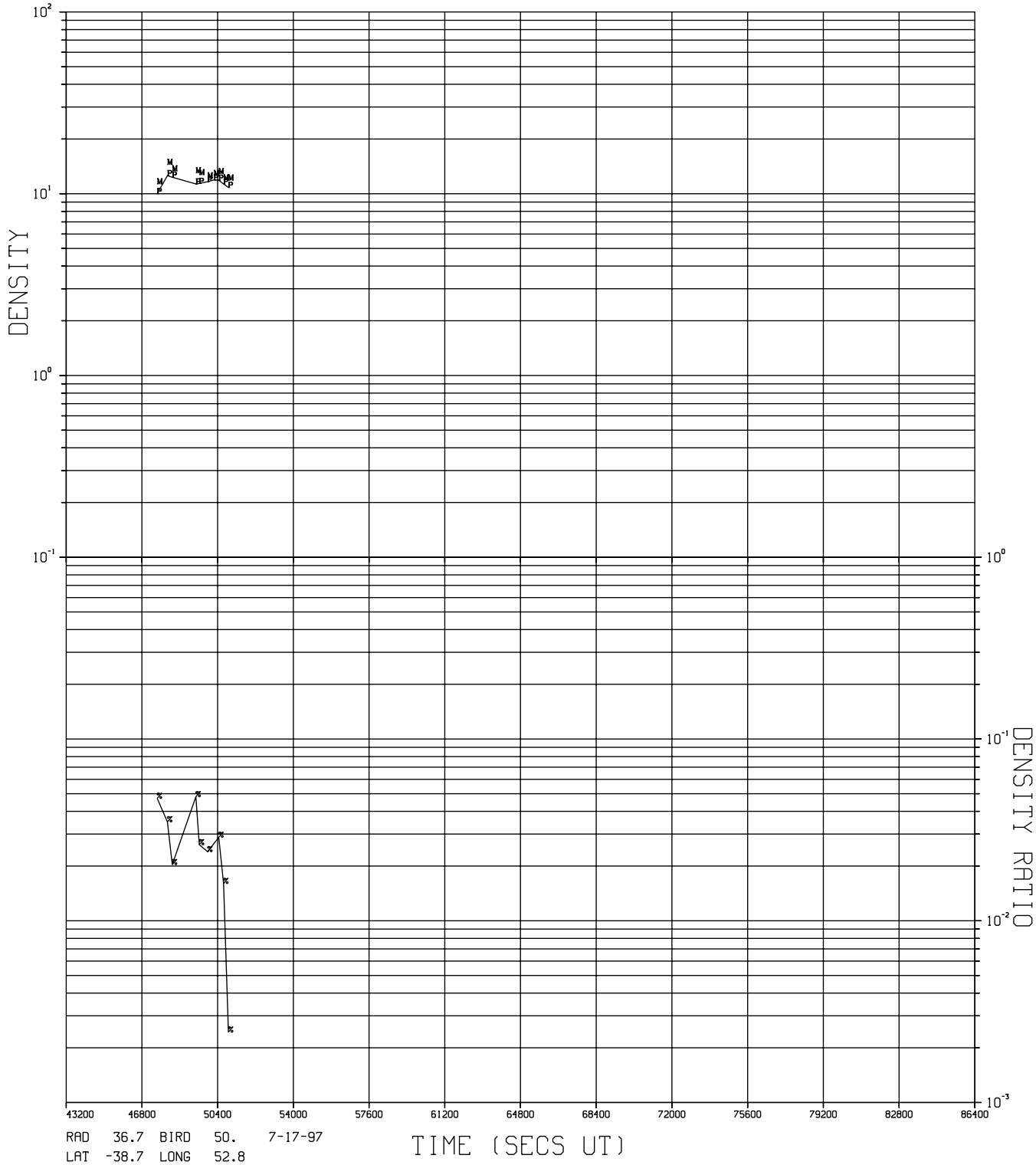

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 37.2 BIRD 50. 7-17-97
LAT -37.7 LONG 36.1

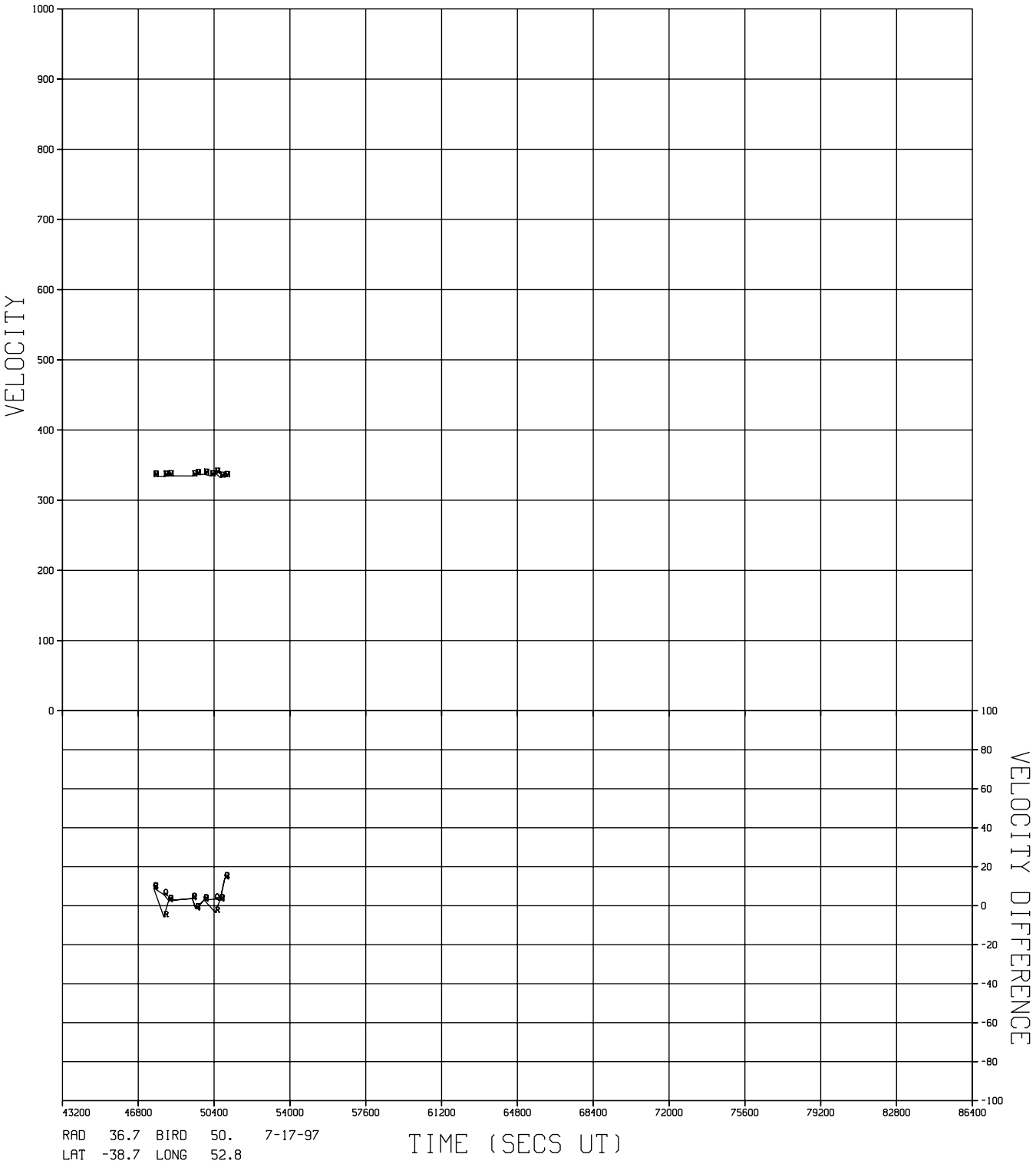

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.2 BIRD 50. 7-17-97
LAT -37.7 LONG 36.1

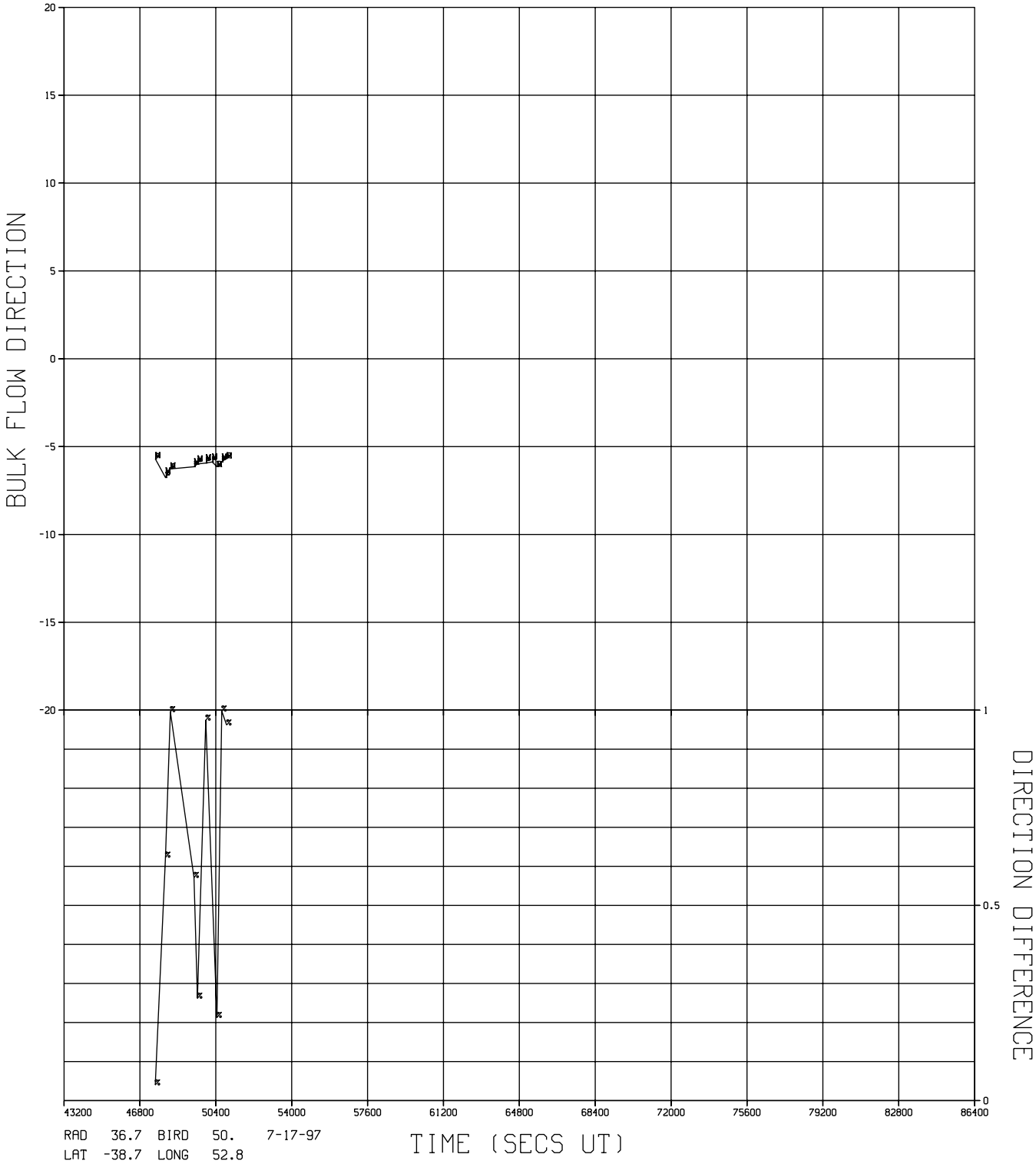

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.2 BIRD 50. 7-17-97
LAT -37.7 LONG 36.1

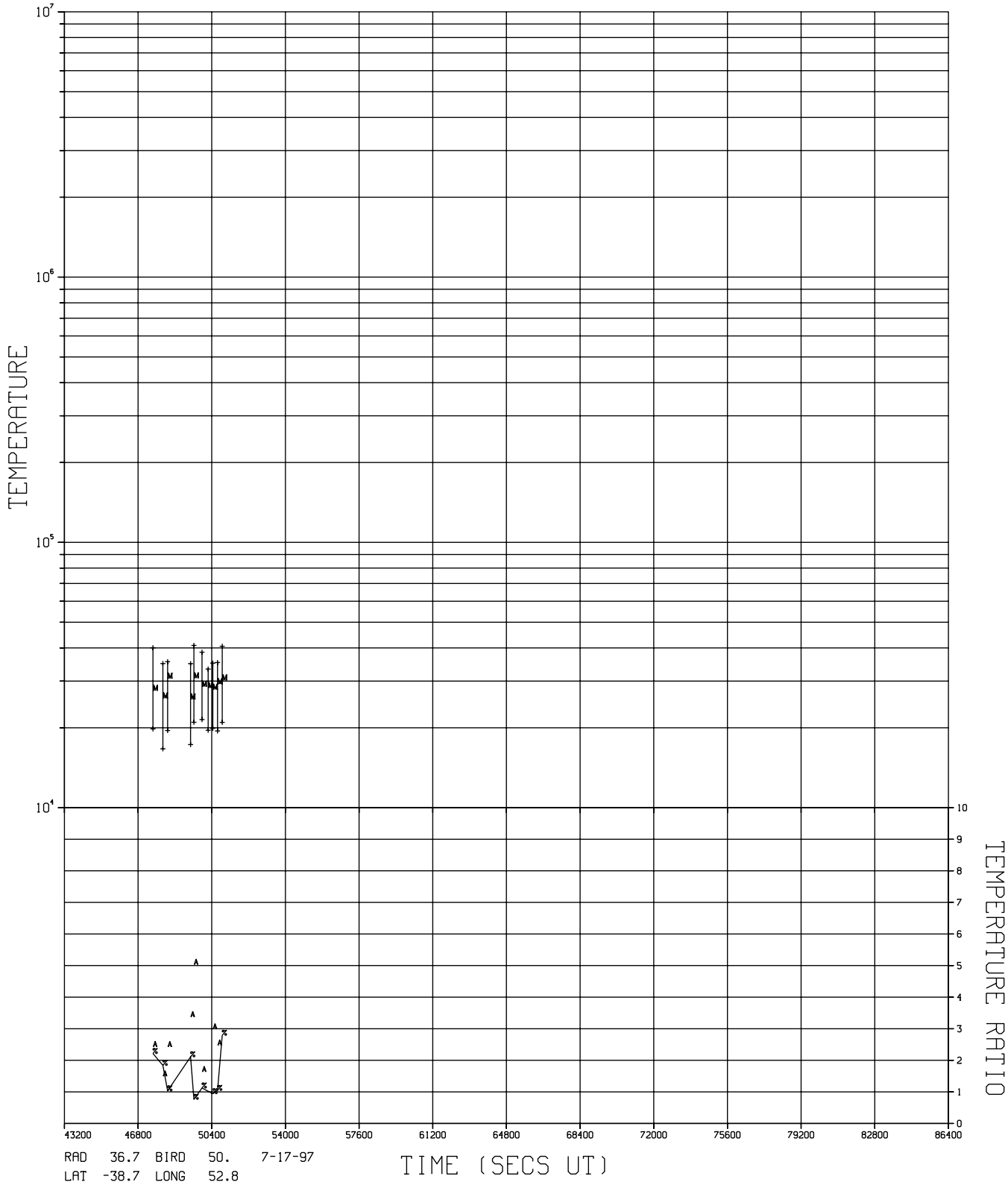

PERP. HEAT FLUX
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
CHI-SQUARE
10^{3}
10^{2}
10^{1}
10^{0}
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 37.2 BIRD 50. 7-17-97
LAT -37.7 LONG 36.1
TIME (SECS UT)

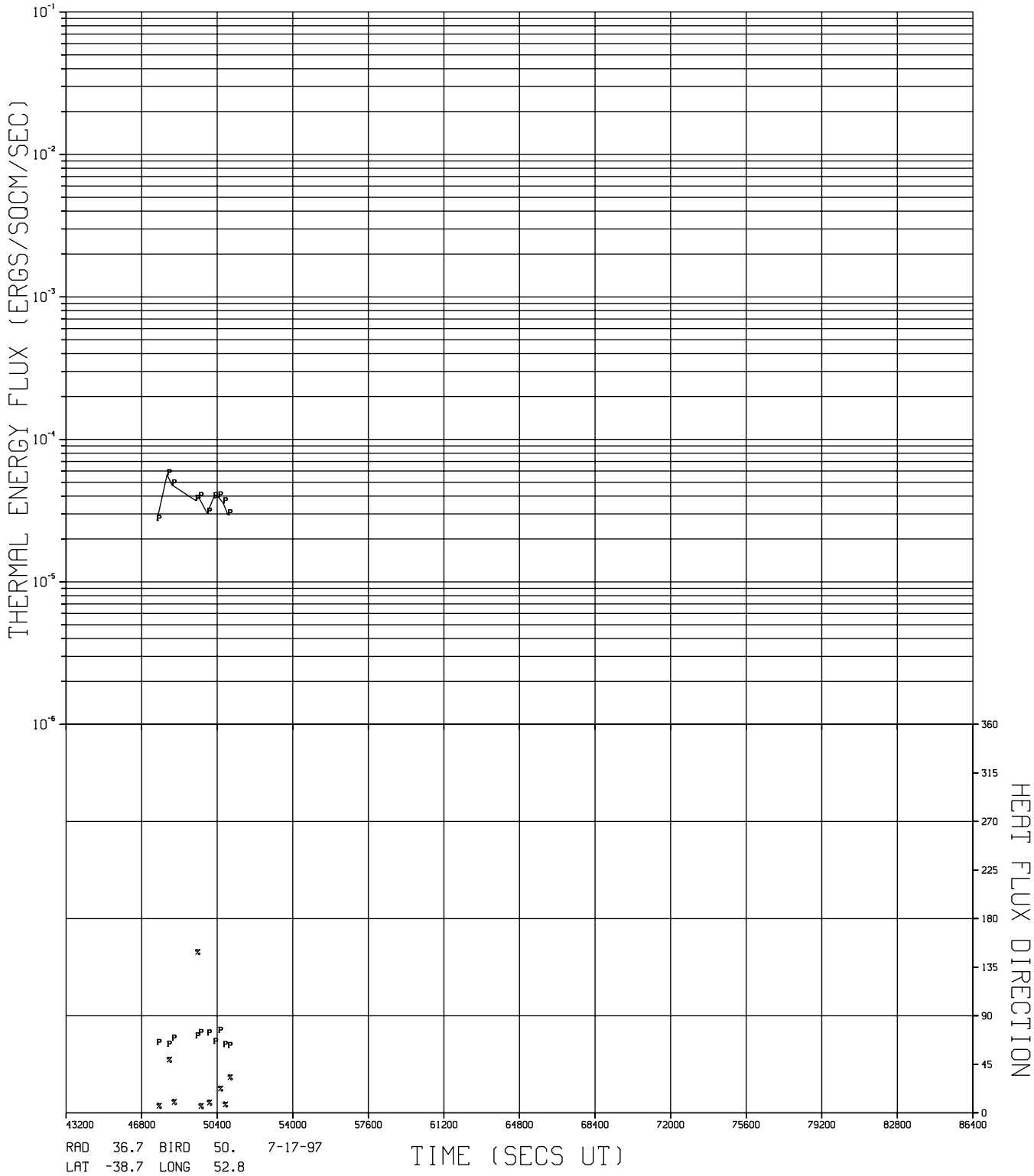

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 37.2 BIRD 50. 7-17-97
LAT -37.7 LONG 36.1
TIME (SECS UT)

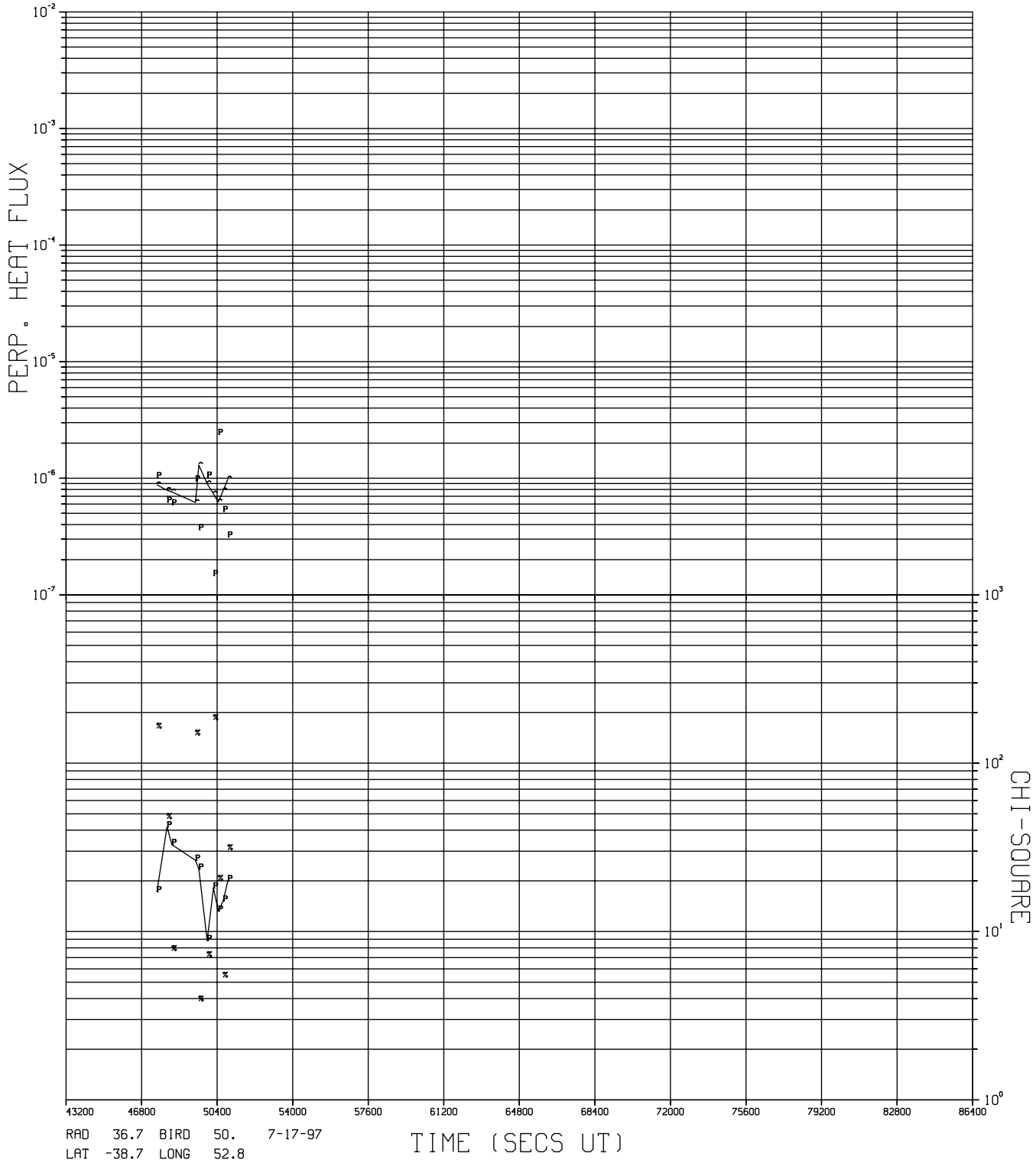

DENSITY
10^{2}
10^{1}
10^{0}
10^{-1}
DENSITY RATIO
10^{0}
10^{-1}
10^{-2}
10^{-3}
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.7 BIRD 50. 7-17-97
LAT -38.7 LONG 52.8

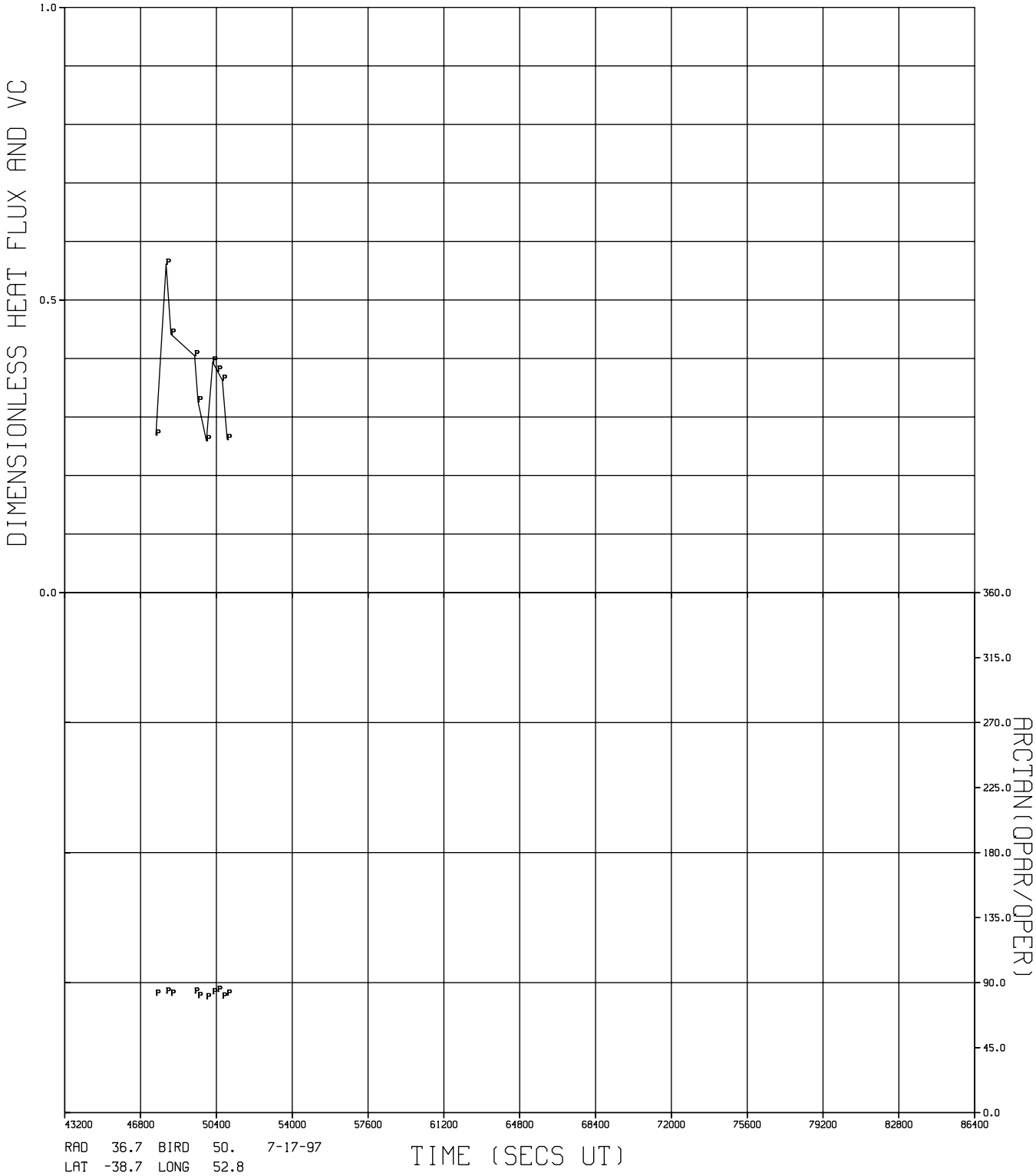

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.7 BIRD 50. 7-17-97
LAT -38.7 LONG 52.8


BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.7 BIRD 50. 7-17-97
LAT -38.7 LONG 52.8


TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.7 BIRD 50. 7-17-97
LAT -38.7 LONG 52.8


THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.7 BIRD 50. 7-17-97
LAT -38.7 LONG 52.8


PERP. HEAT FLUX
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
CHI-SQUARE
10^{3}
10^{2}
10^{1}
10^{0}
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 36.7 BIRD 50. 7-17-97
LAT -38.7 LONG 52.8
TIME (SECS UT)


DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.7 BIRD 50. 7-17-97
LAT -38.7 LONG 52.8