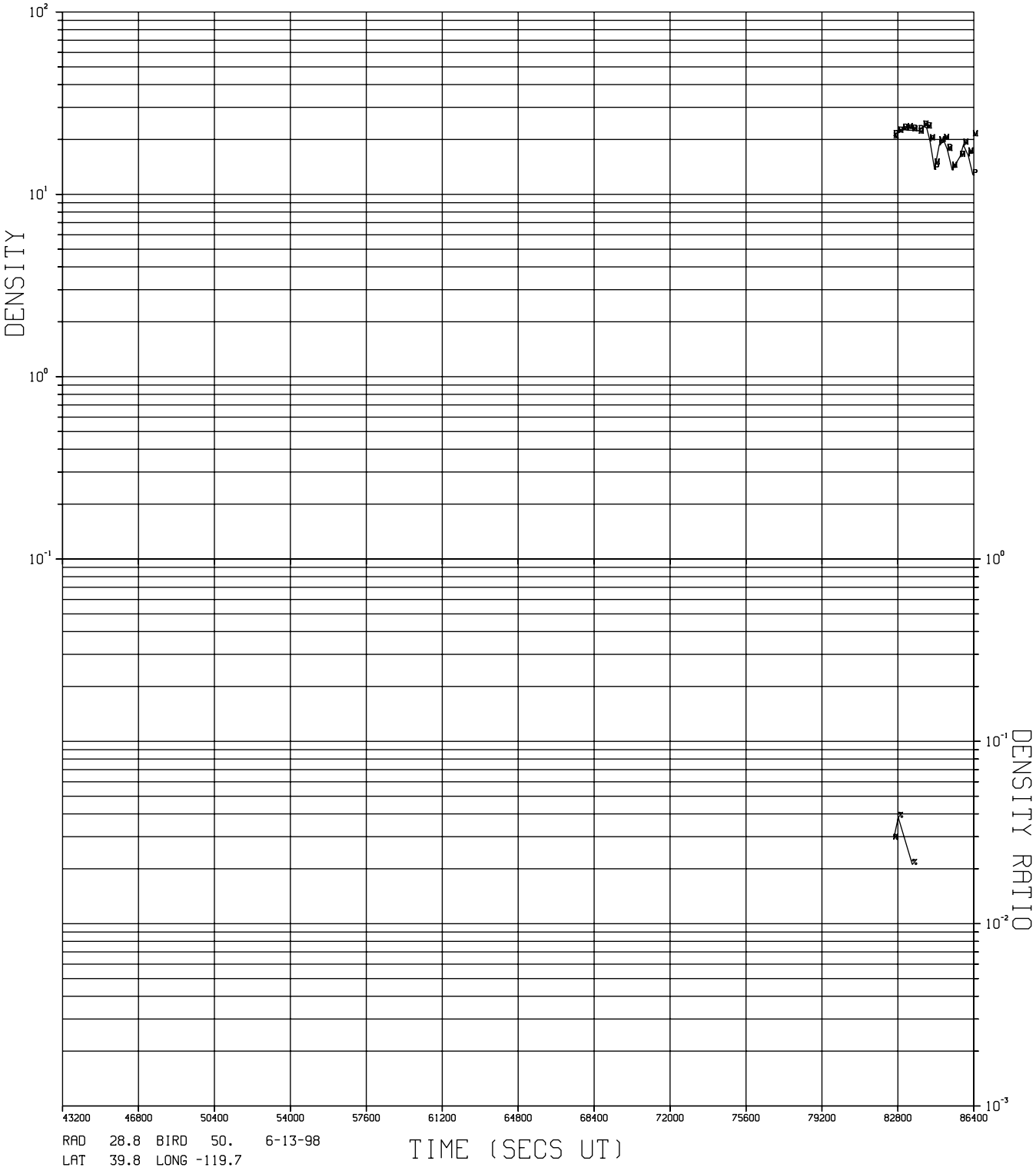
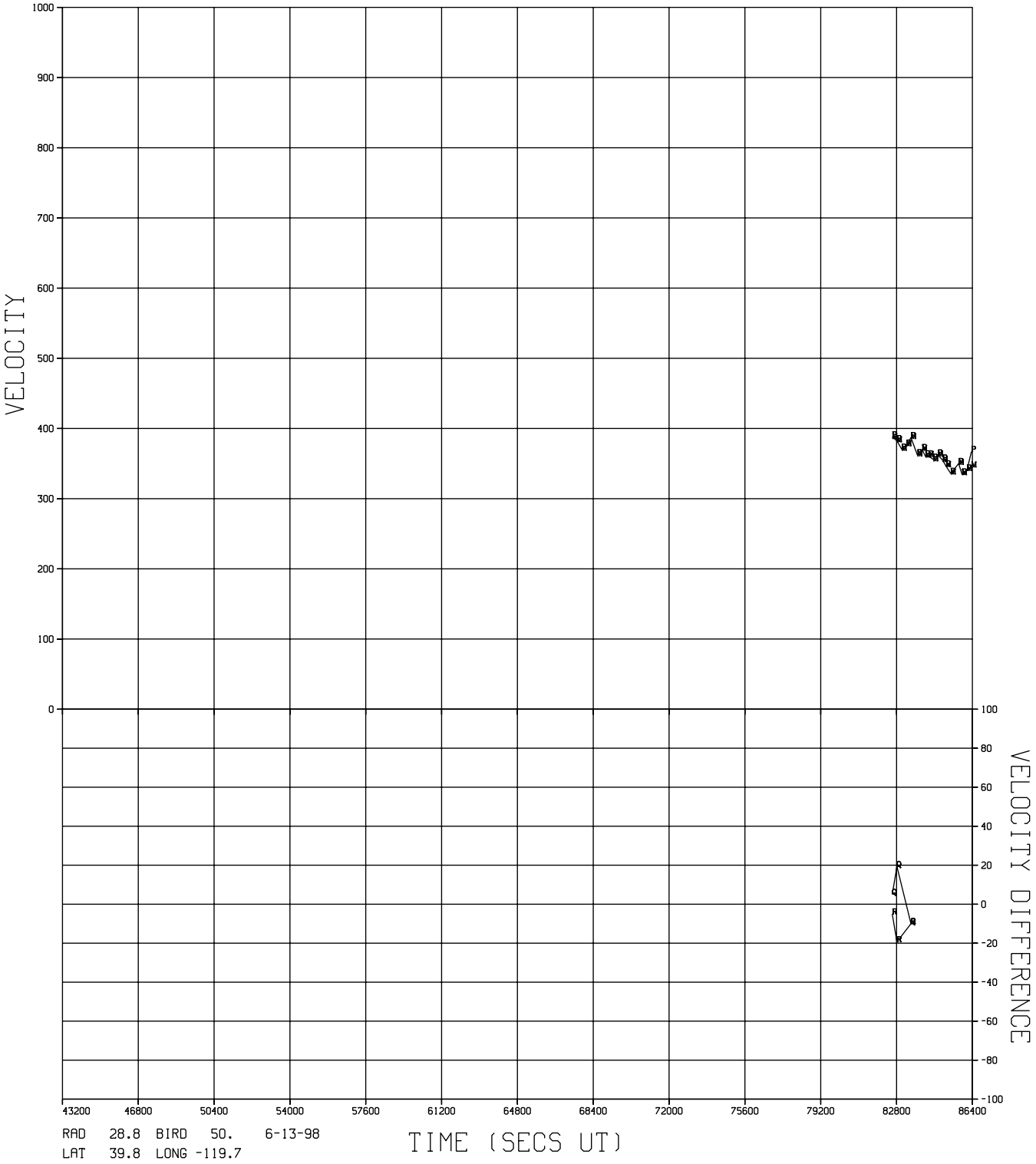
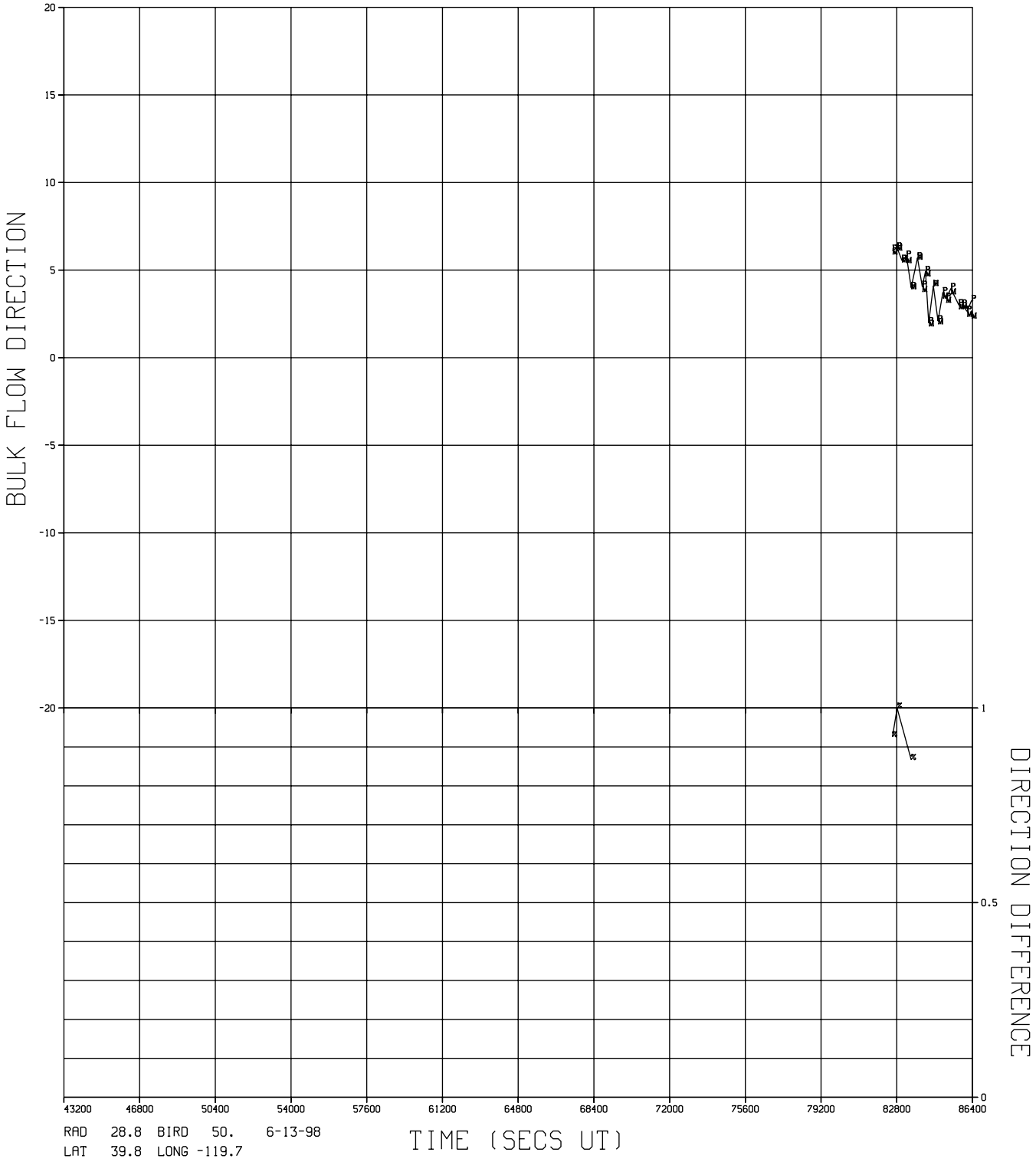
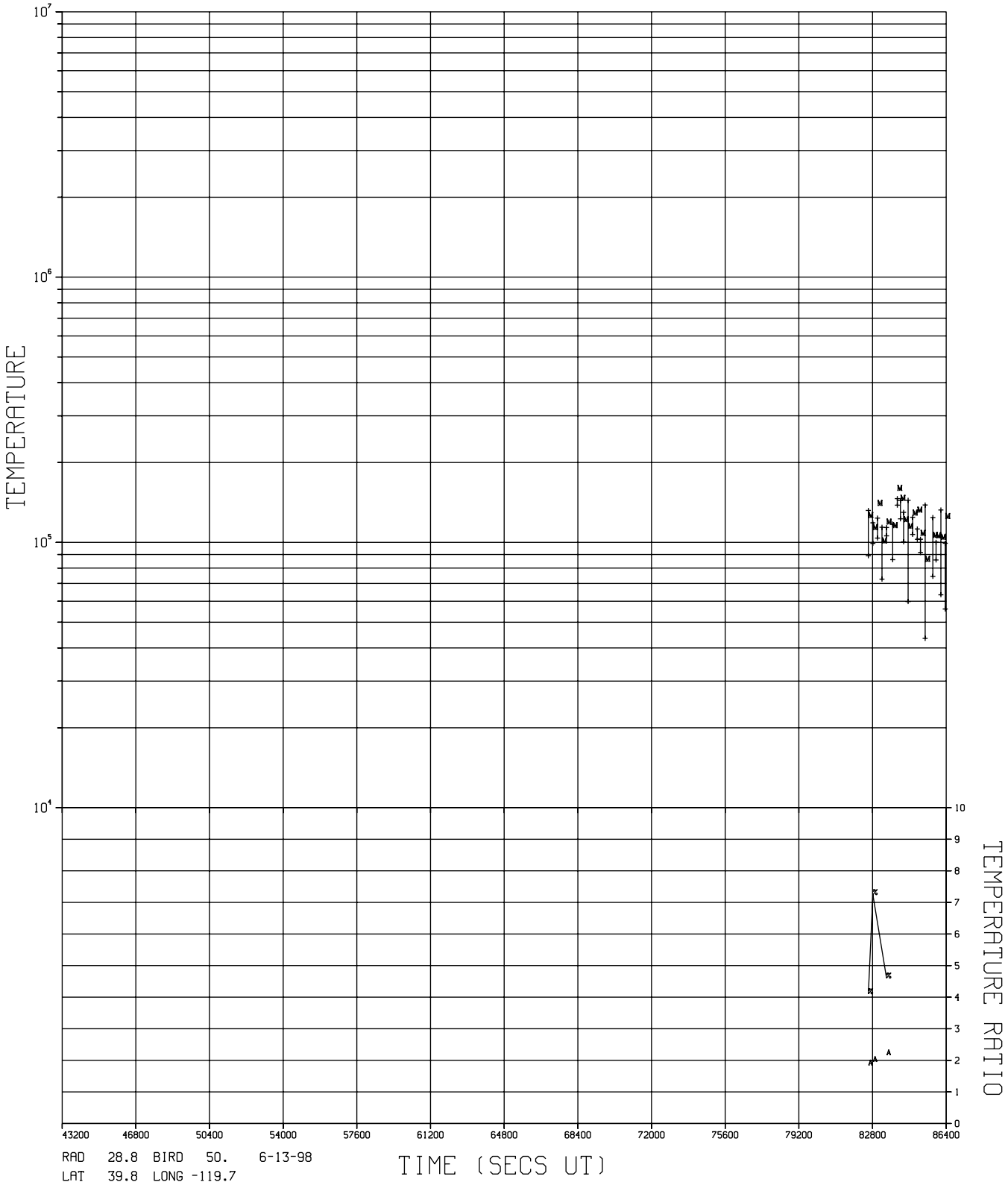
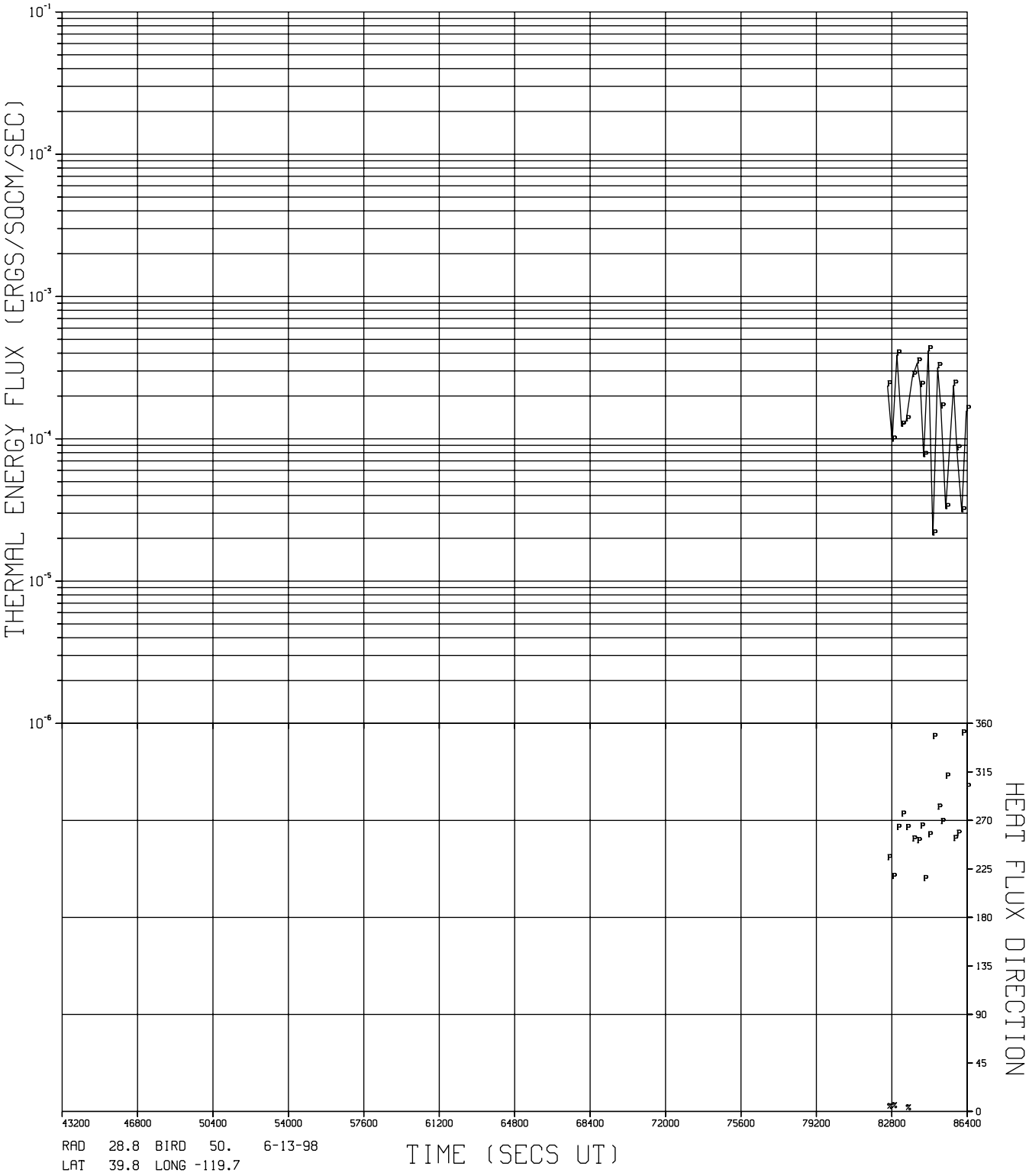
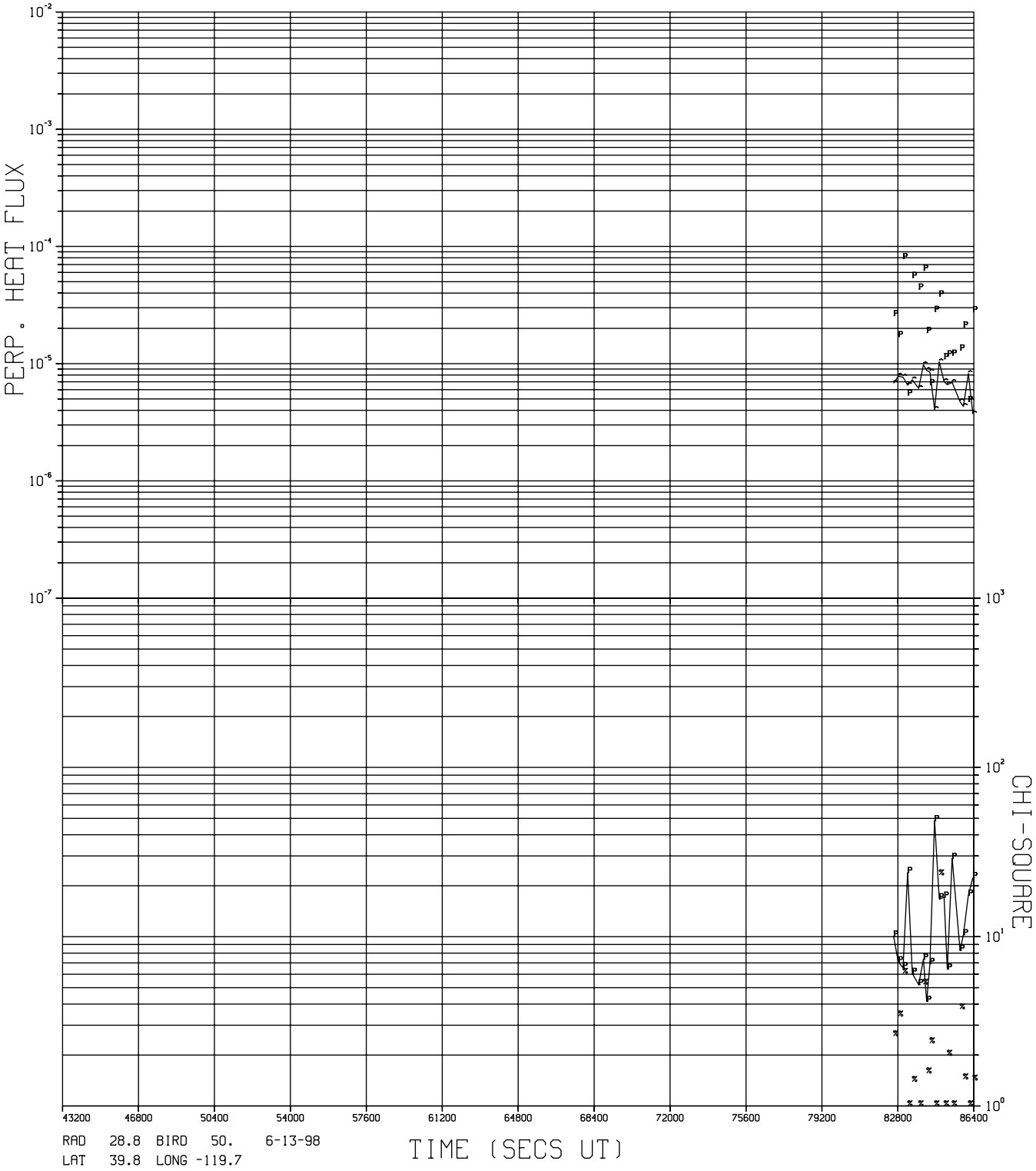

DENSITY
DENSITY RATIO
TIME (SECS UT)
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 28.8 BIRD 50. 6-13-98
LAT 39.8 LONG -119.7

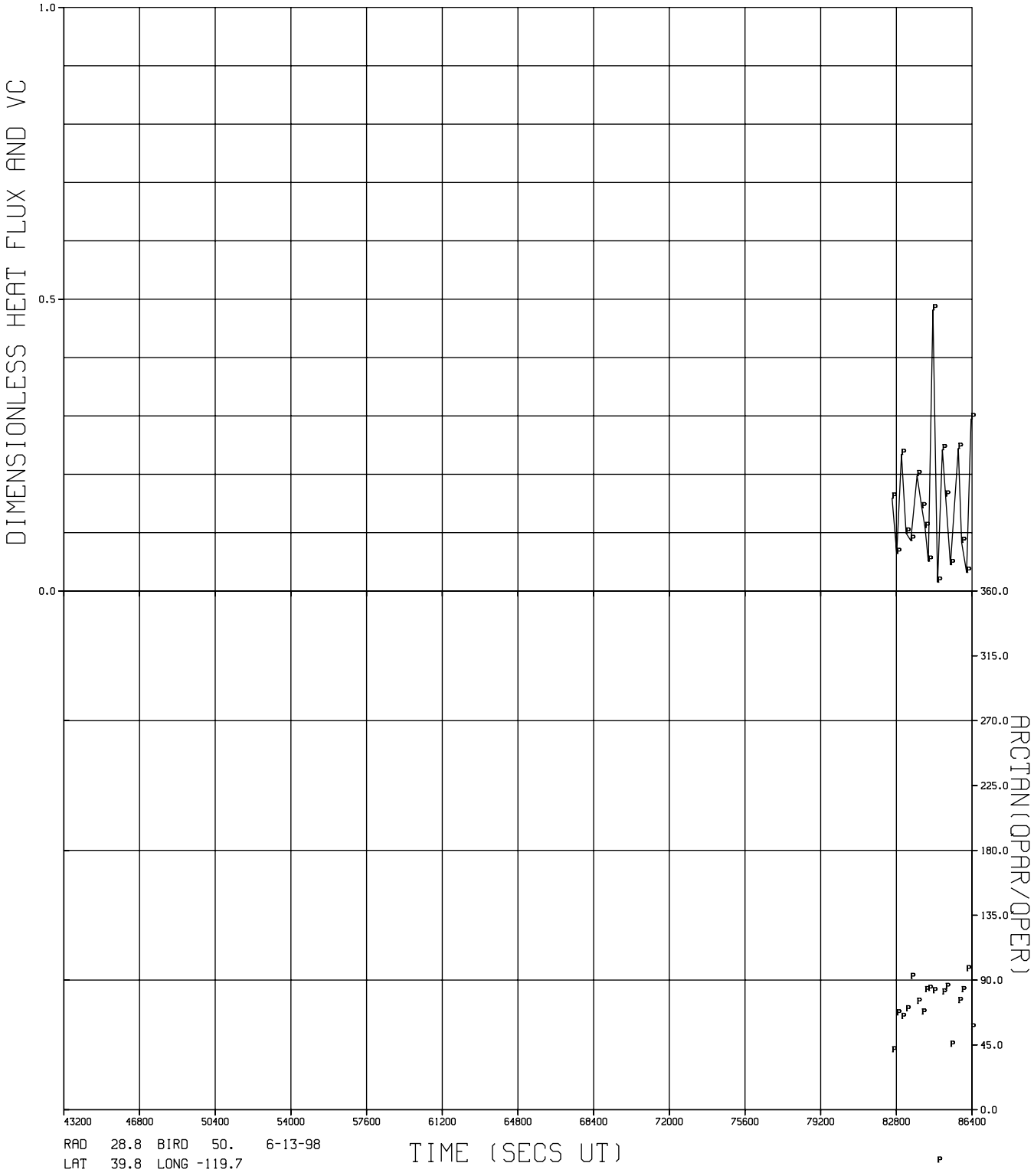

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 28.8 BIRD 50. 6-13-98
LAT 39.8 LONG -119.7
TIME (SECS UT)

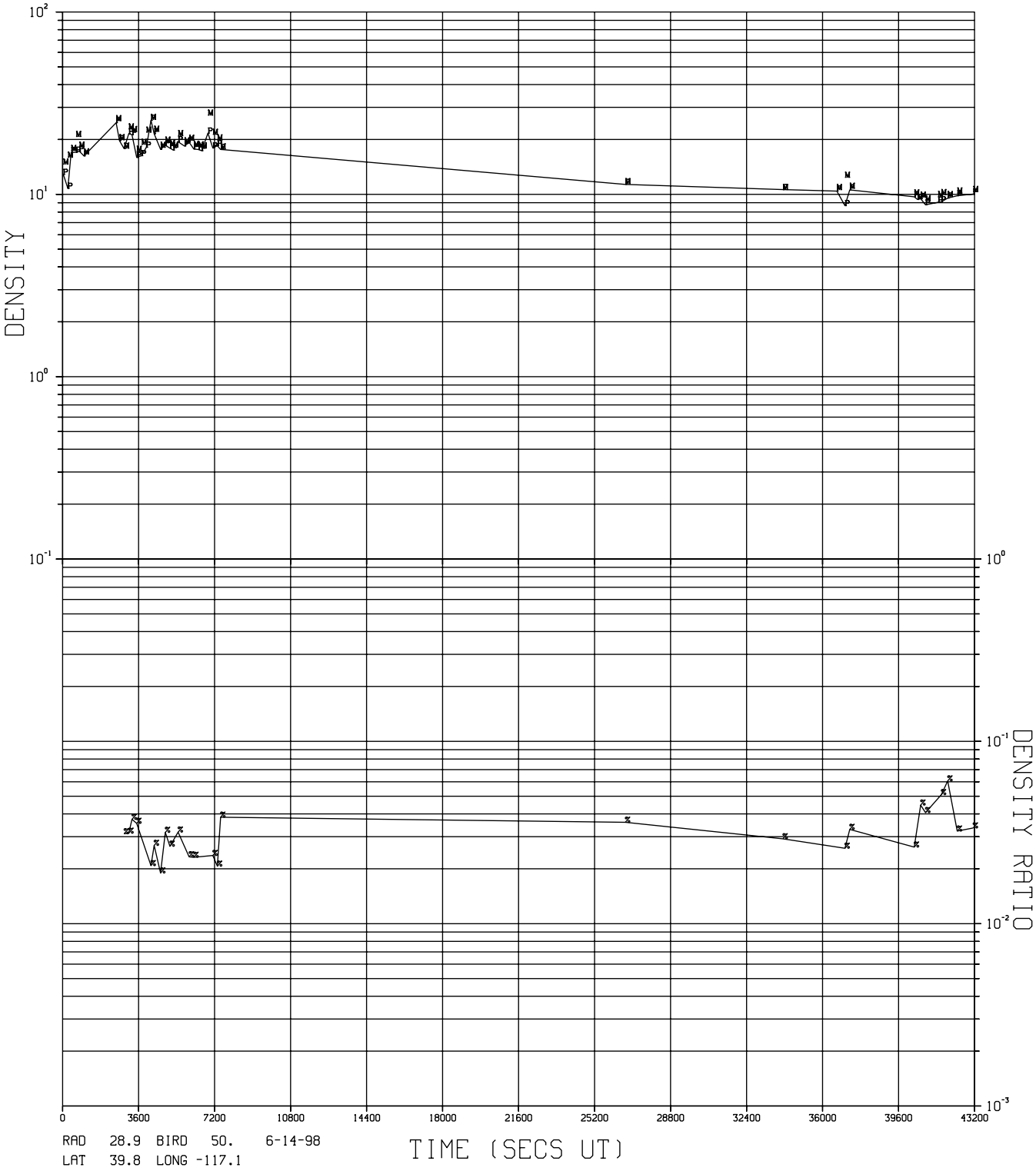

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 28.8 BIRD 50. 6-13-98
LAT 39.8 LONG -119.7

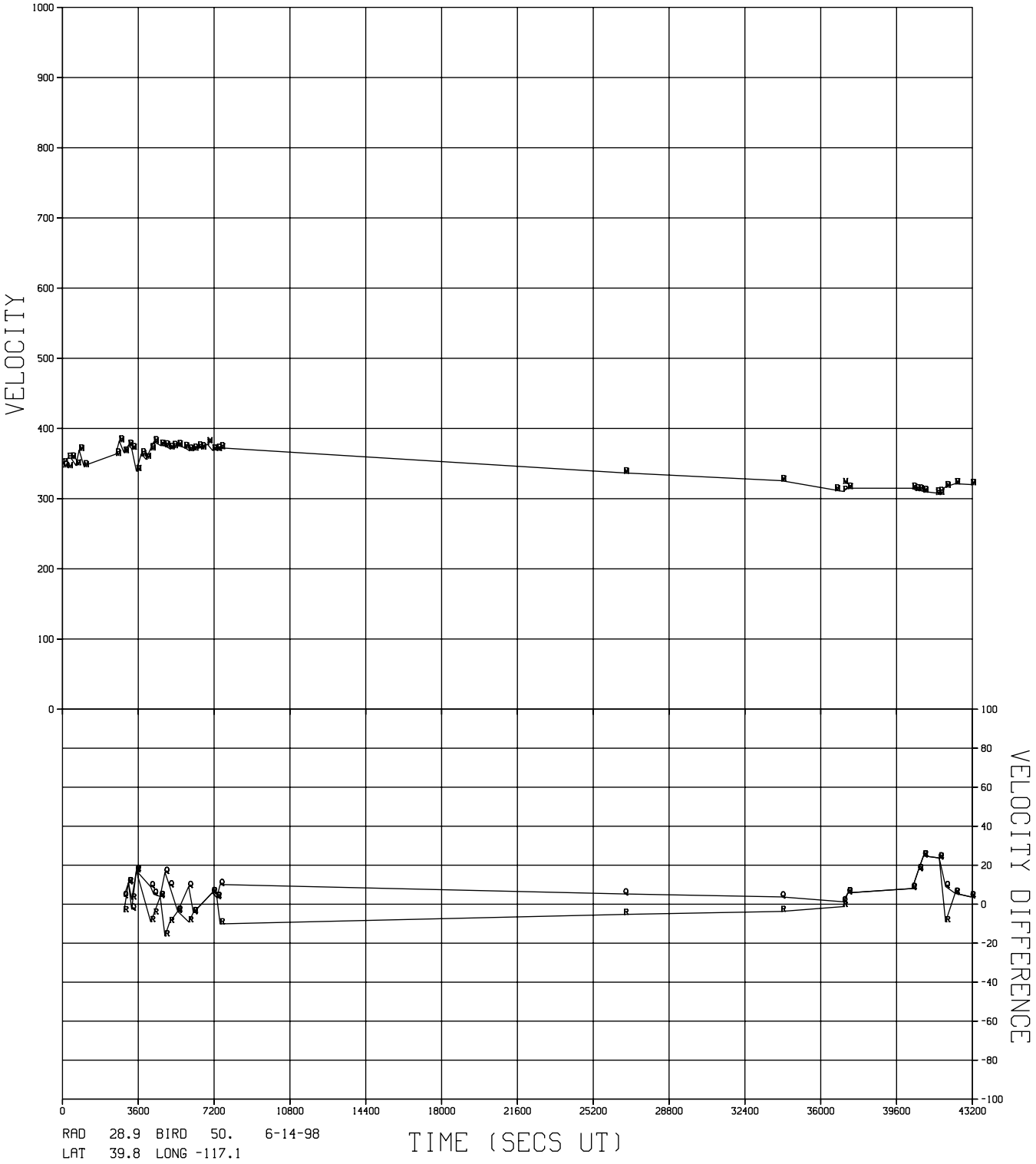

TEMPERATURE
TEMPERATURE RATIO
TIME (SECS UT)
RAD 28.8 BIRD 50. 6-13-98
LAT 39.8 LONG -119.7

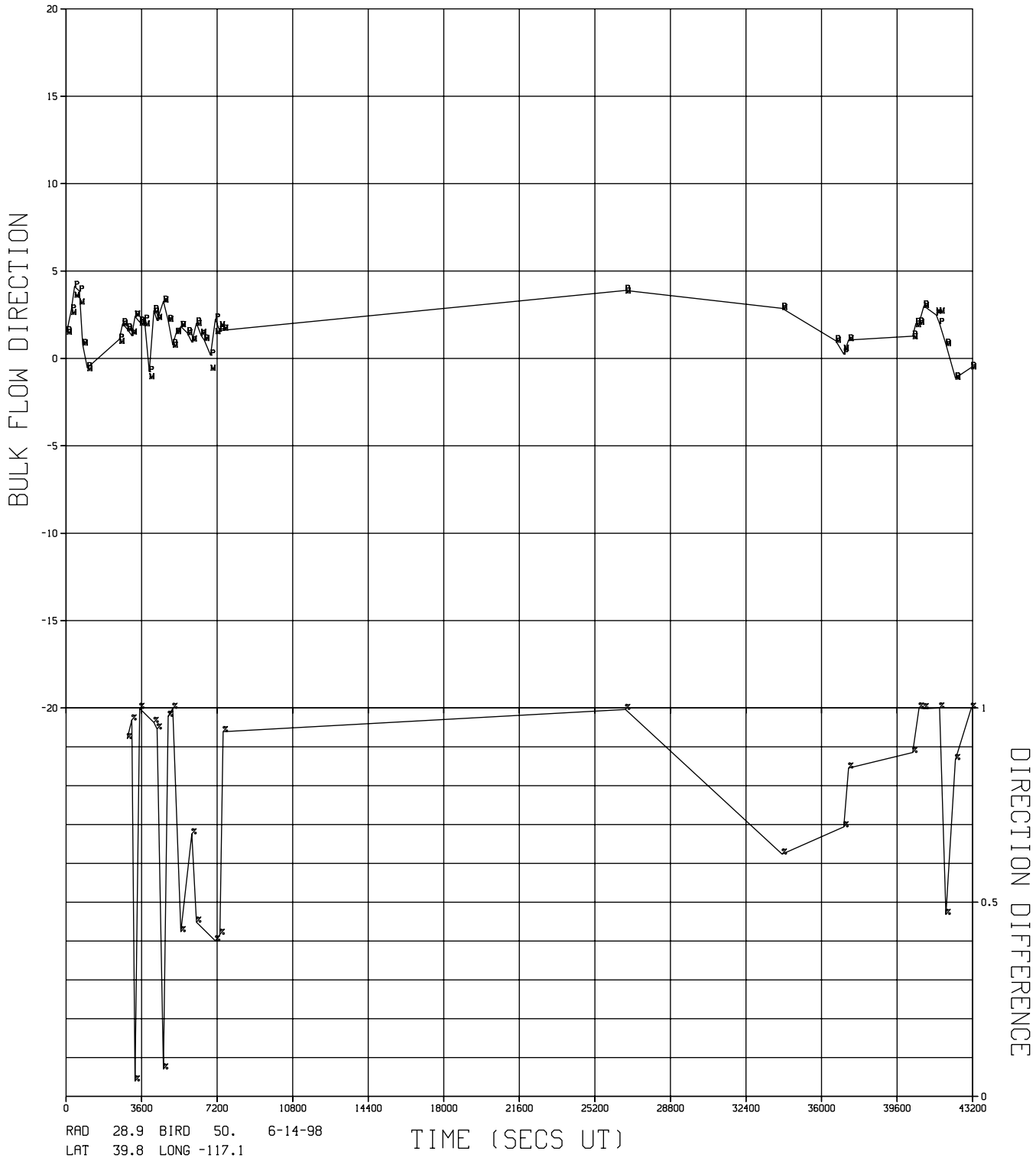

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 28.8 BIRD 50. 6-13-98
LAT 39.8 LONG -119.7

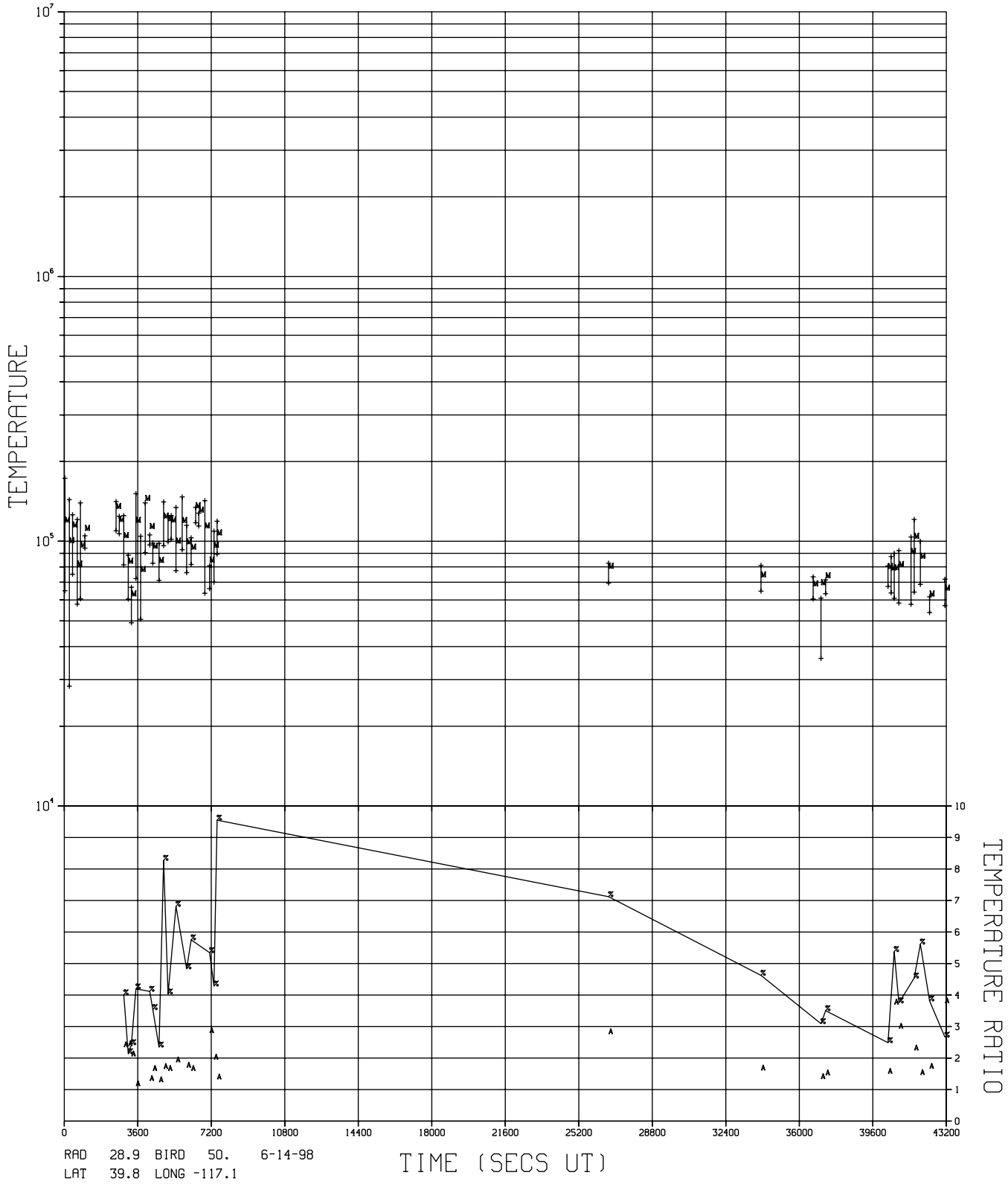

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 28.8 BIRD 50. 6-13-98
LAT 39.8 LONG -119.7

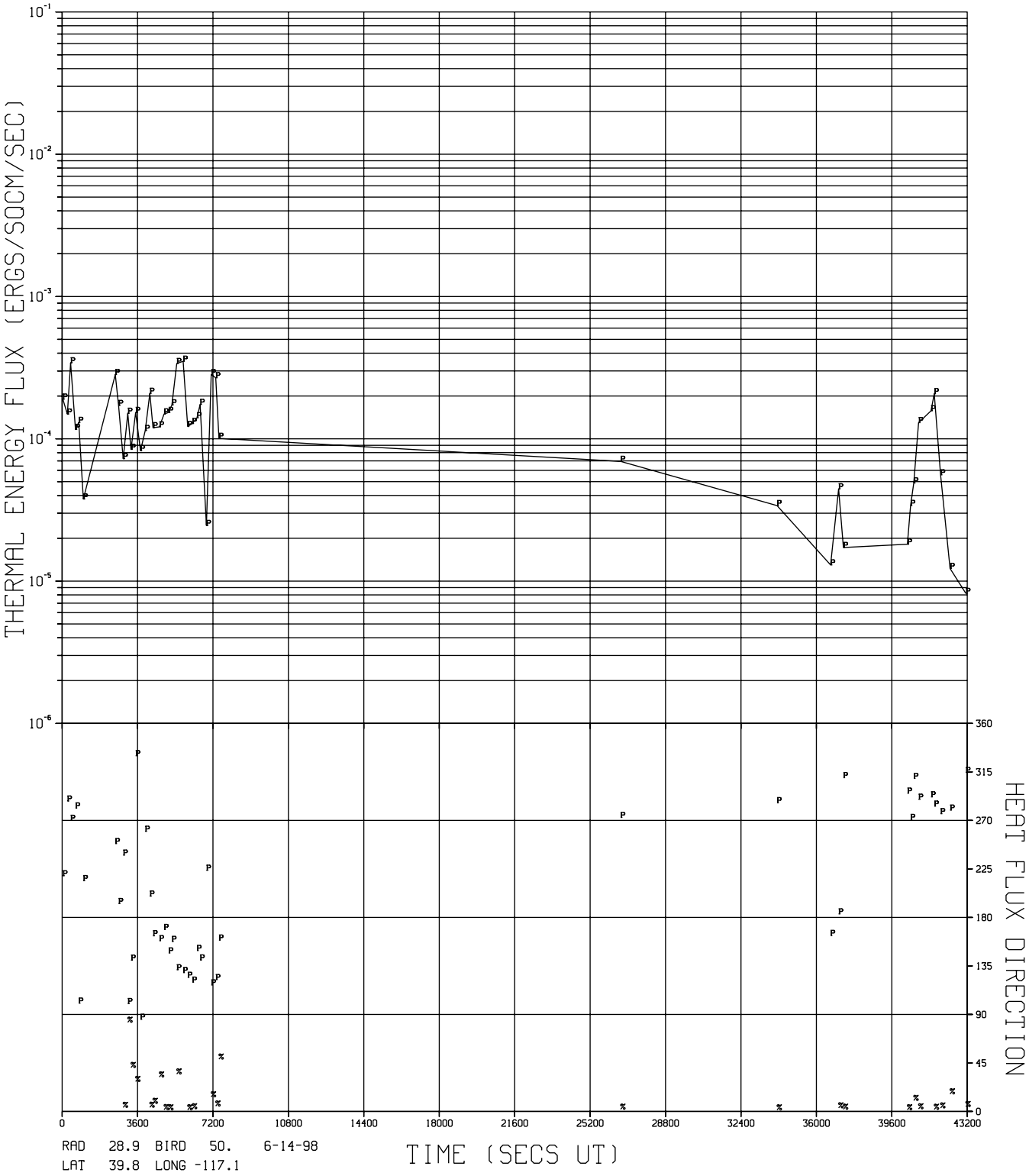

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 28.8 BIRD 50. 6-13-98
LAT 39.8 LONG -119.7

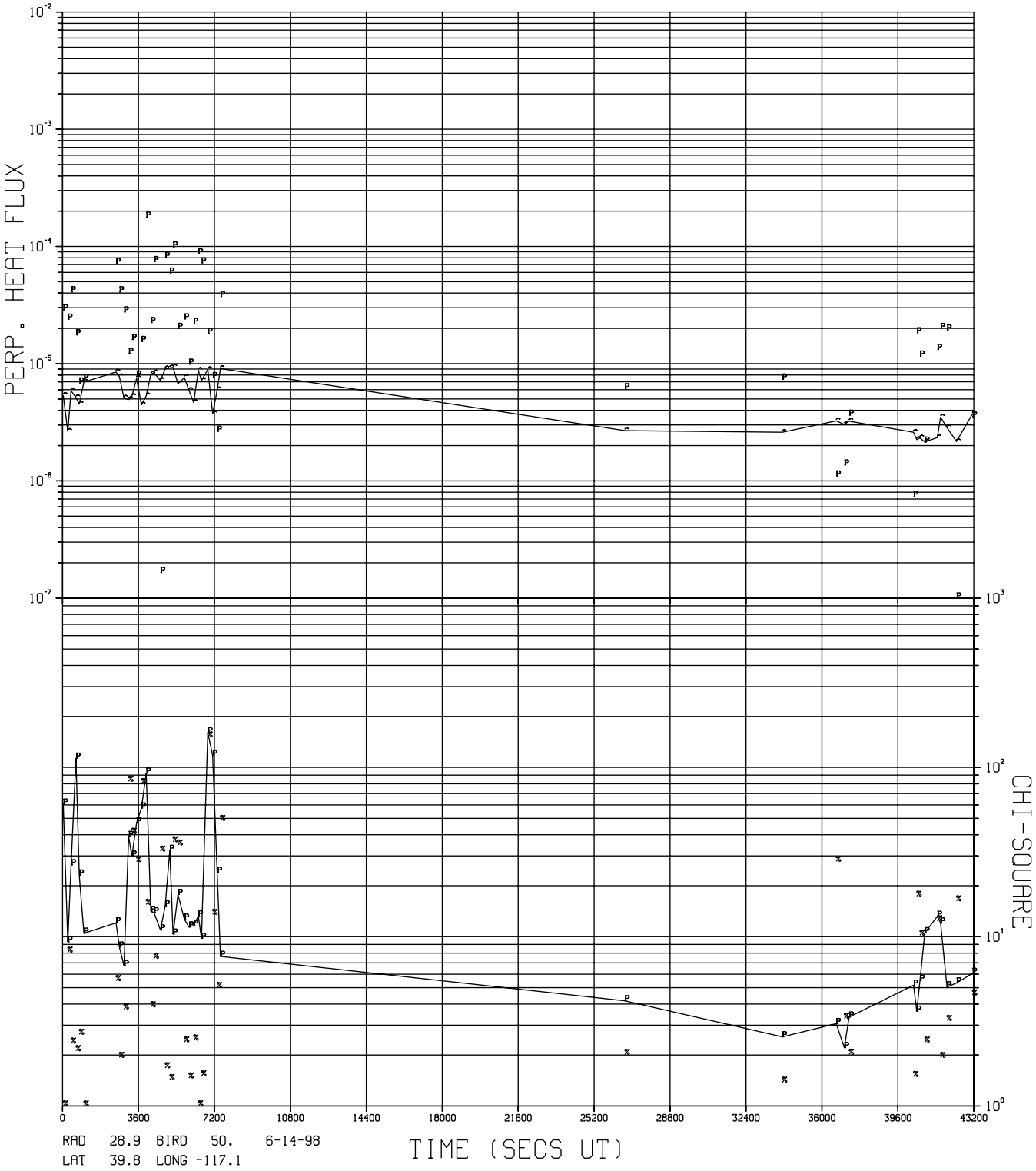

DENSITY
DENSITY RATIO
TIME (SECS UT)
10^2
10^1
10^0
10^{-1}
10^{-2}
10^{-3}
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 28.9 BIRD 50. 6-14-98
LAT 39.8 LONG -117.1

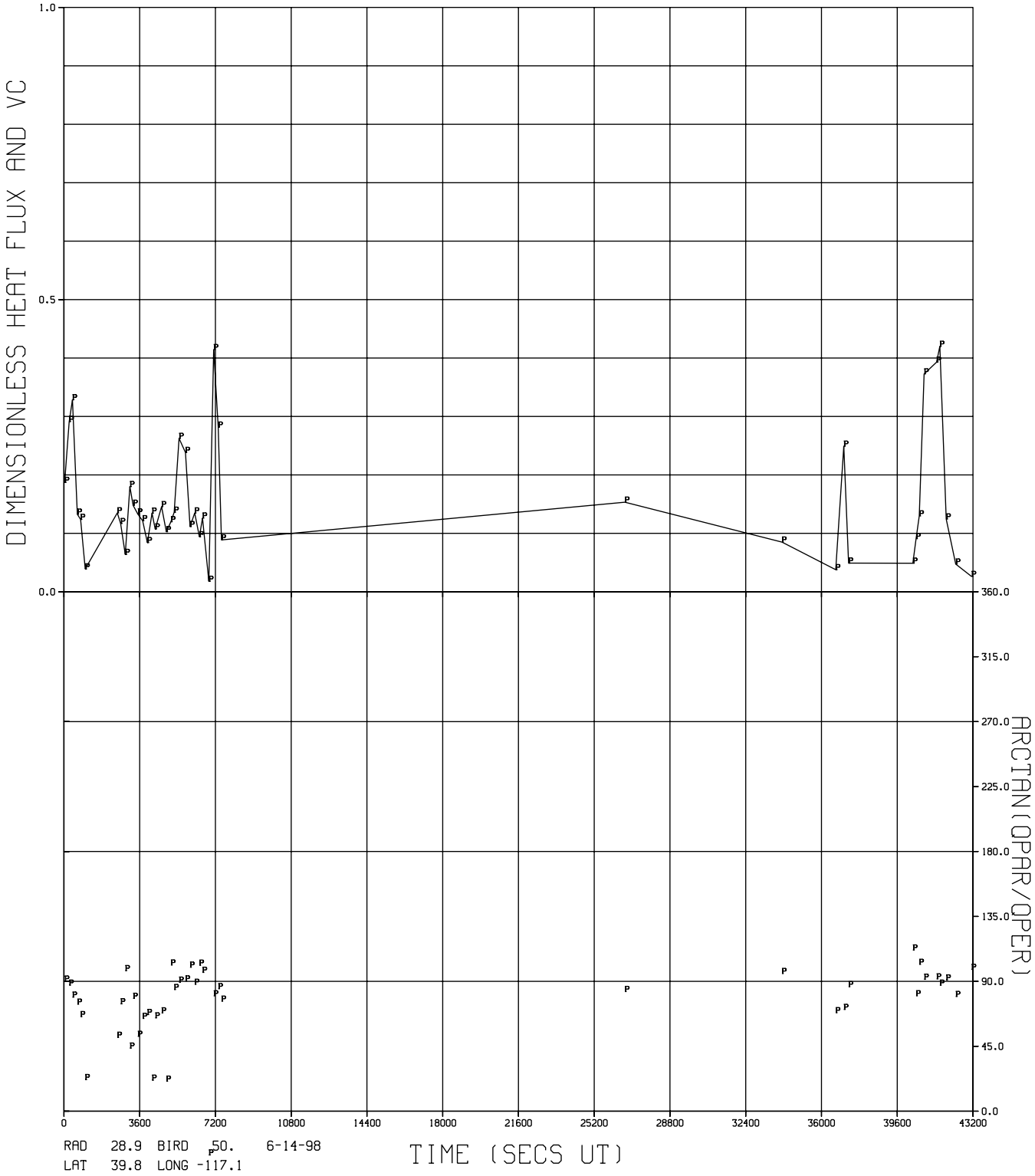

VELOCITY
VELOCITY DIFFERENCE
TIME (SECS UT)
RAD 28.9 BIRD 50. 6-14-98
LAT 39.8 LONG -117.1

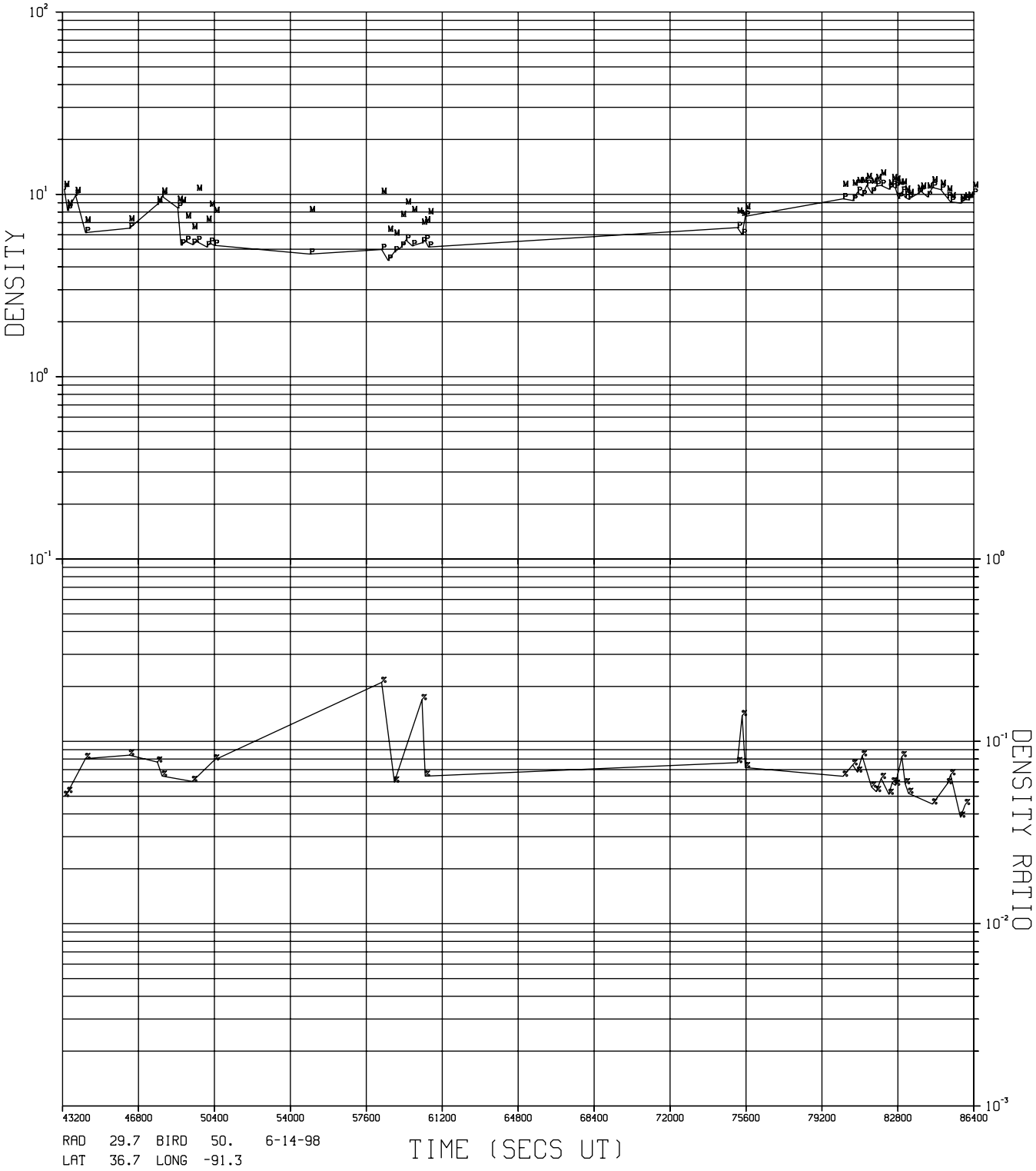

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 28.9 BIRD 50. 6-14-98
LAT 39.8 LONG -117.1

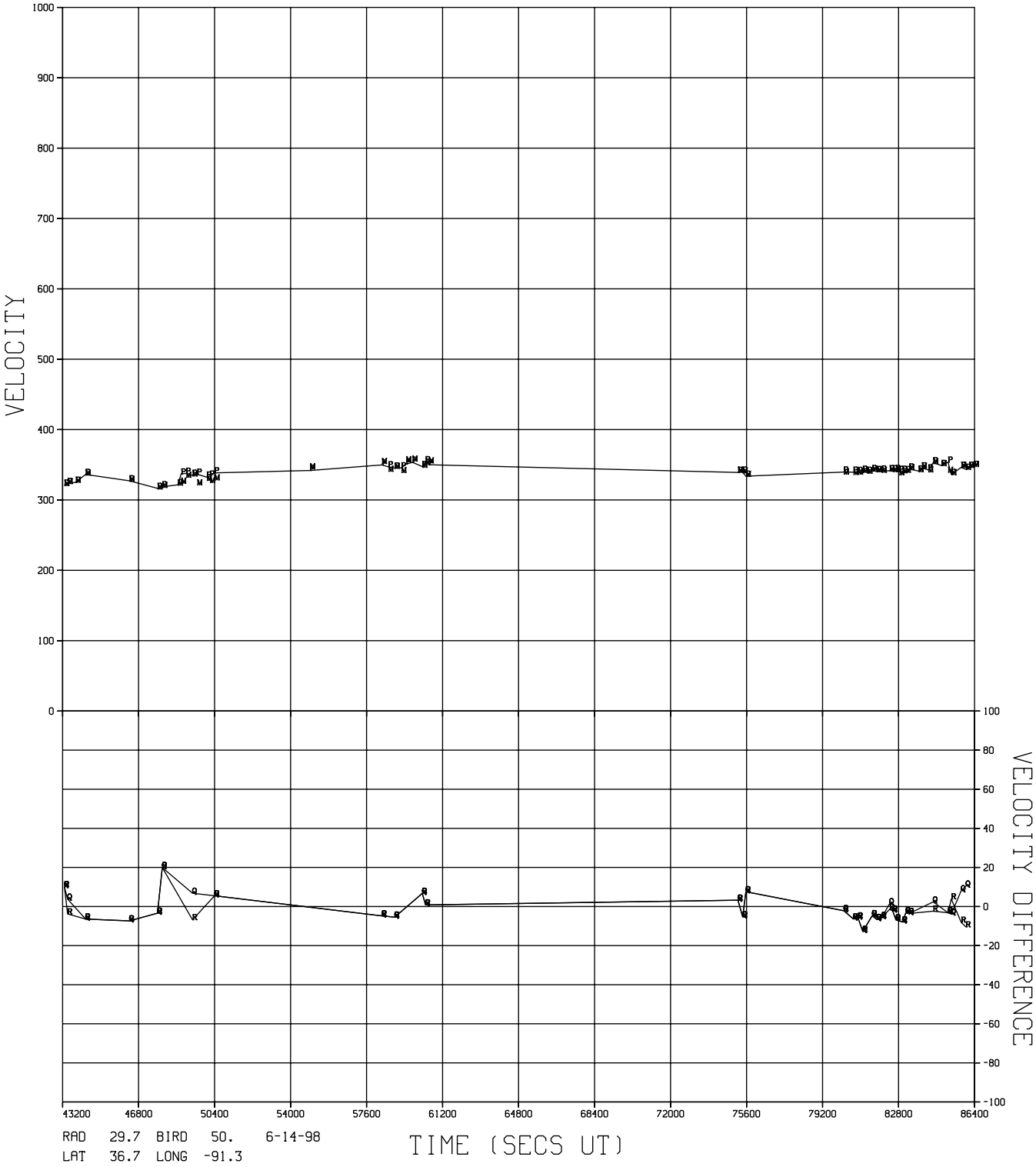

TEMPERATURE
TEMPERATURE RATIO
TIME (SECS UT)
RAD 28.9 BIRD 50. 6-14-98
LAT 39.8 LONG -117.1

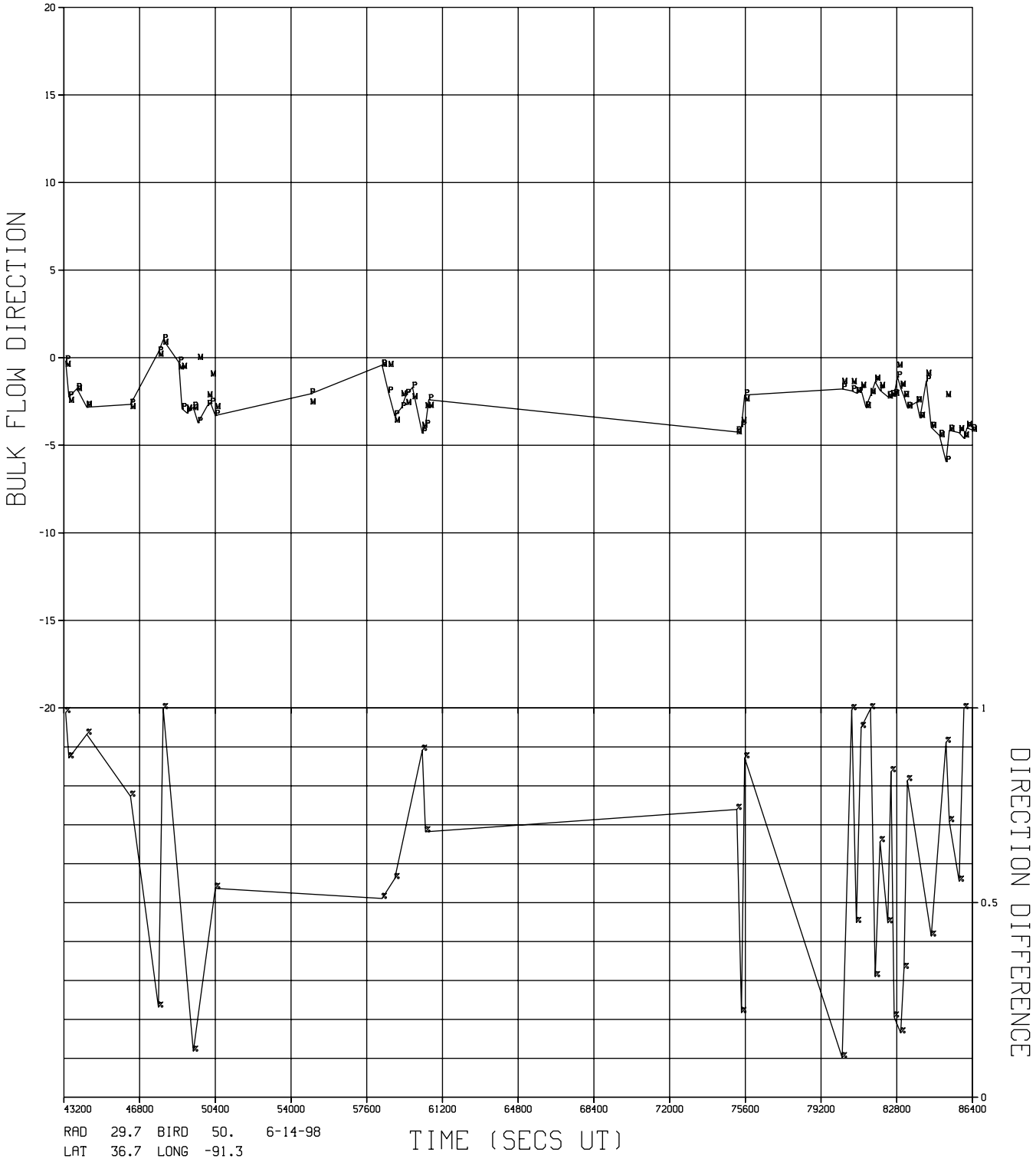

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 28.9 BIRD 50. 6-14-98
LAT 39.8 LONG -117.1

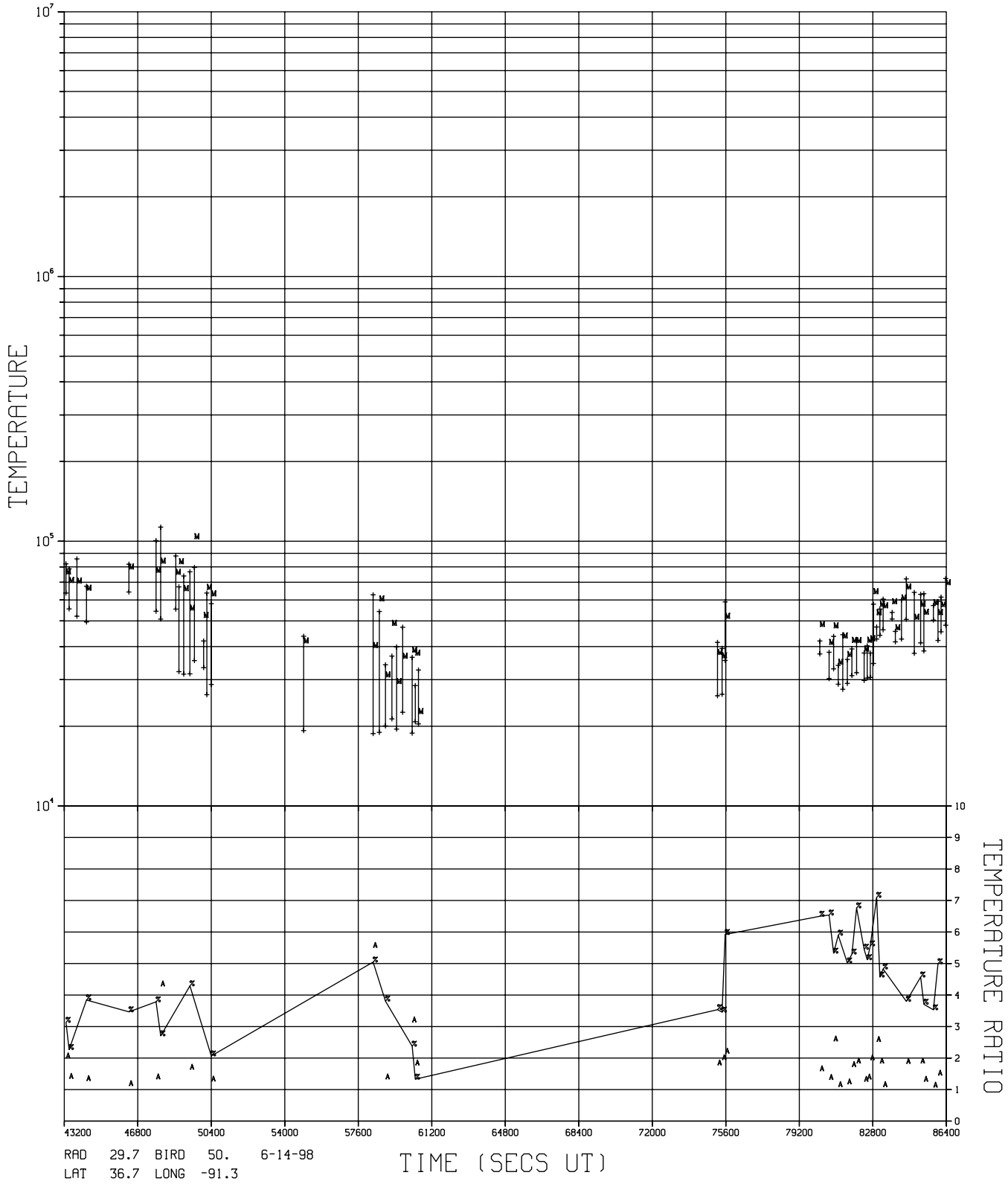

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 28.9 BIRD 50. 6-14-98
LAT 39.8 LONG -117.1

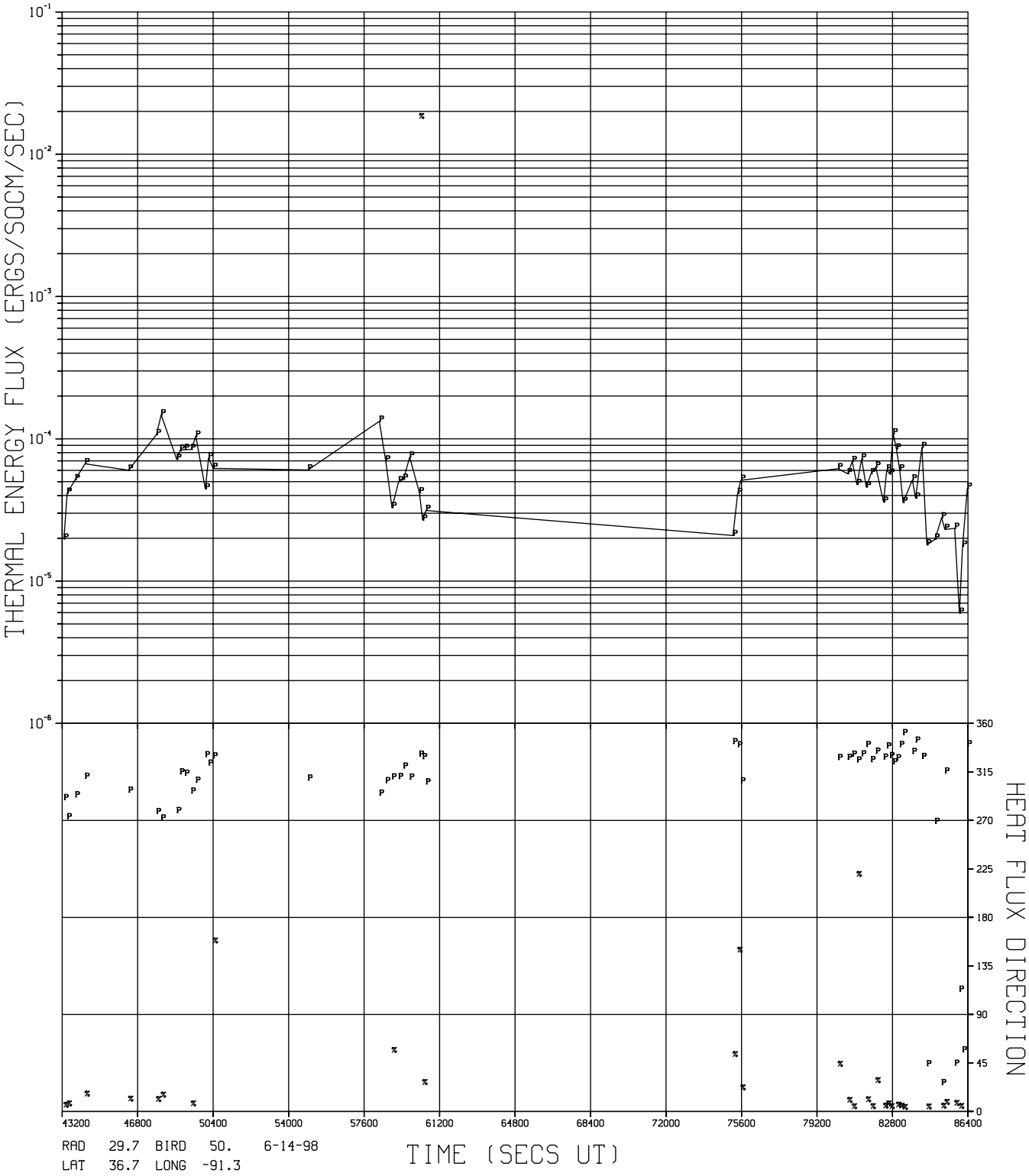

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 28.9 BIRD 50. 6-14-98
LAT 39.8 LONG -117.1

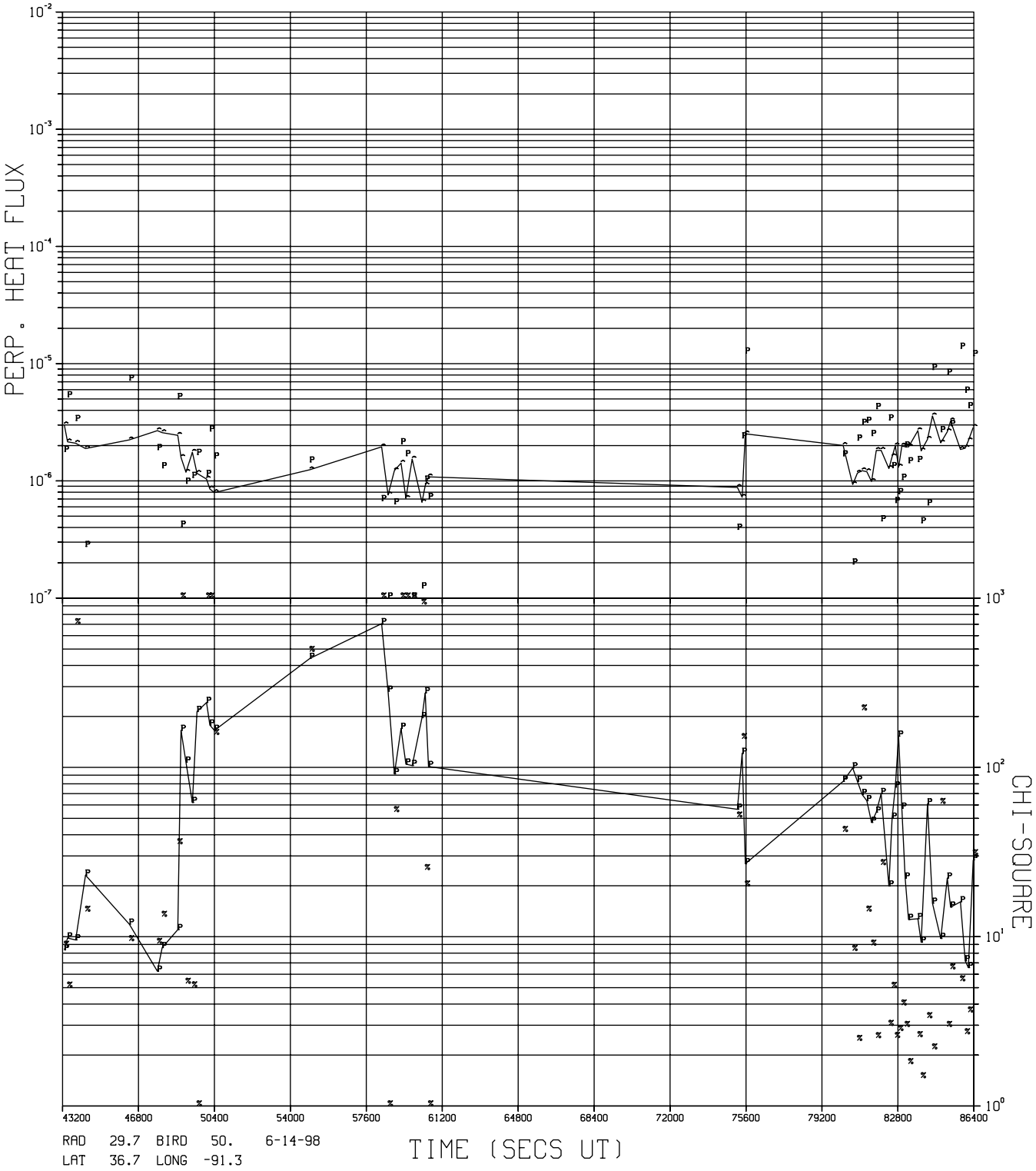

DENSITY
DENSITY RATIO
TIME (SECS UT)
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 29.7 BIRD 50. 6-14-98
LAT 36.7 LONG -91.3

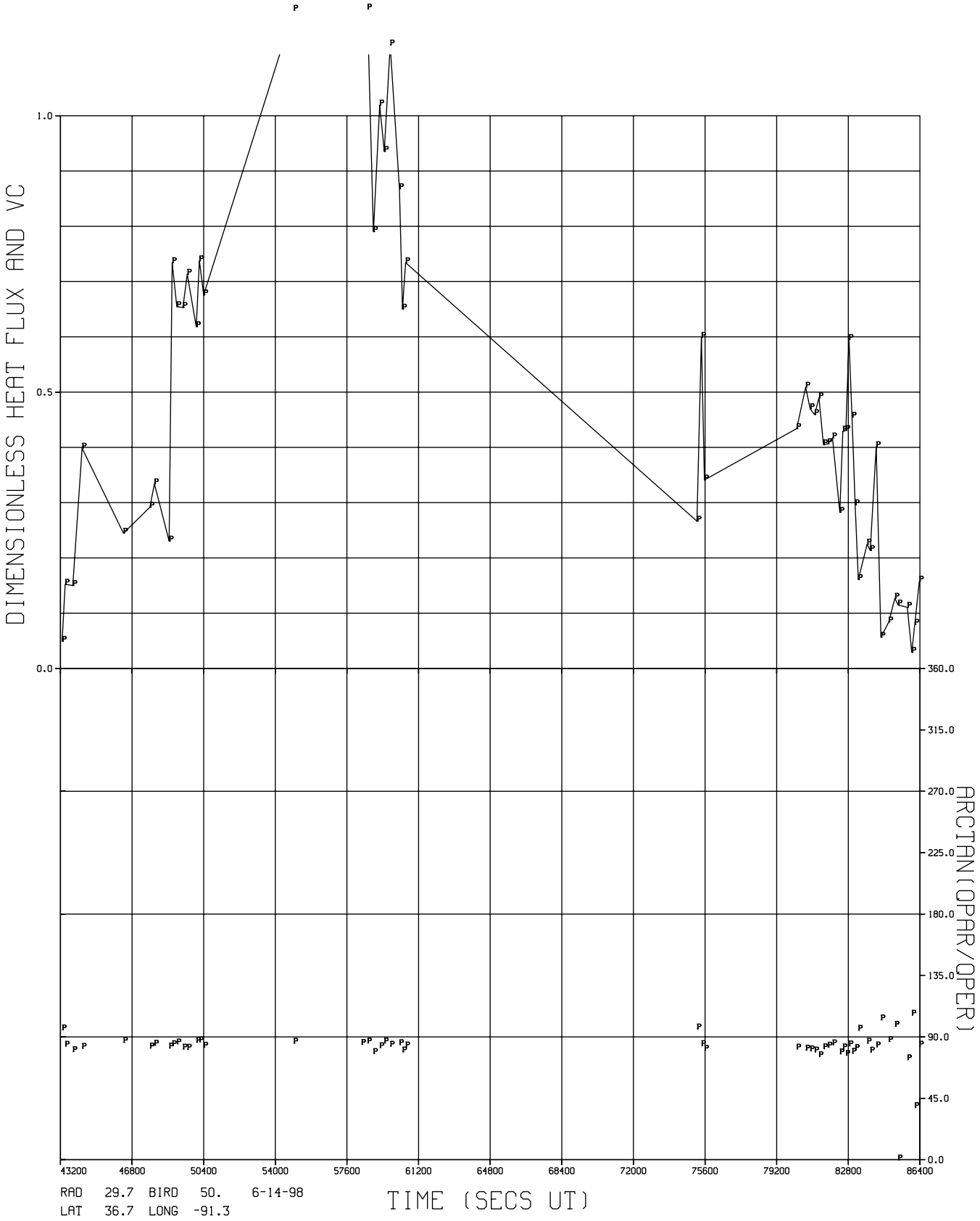

VELOCITY
VELOCITY DIFFERENCE
TIME (SECS UT)
RAD 29.7 BIRD 50. 6-14-98
LAT 36.7 LONG -91.3

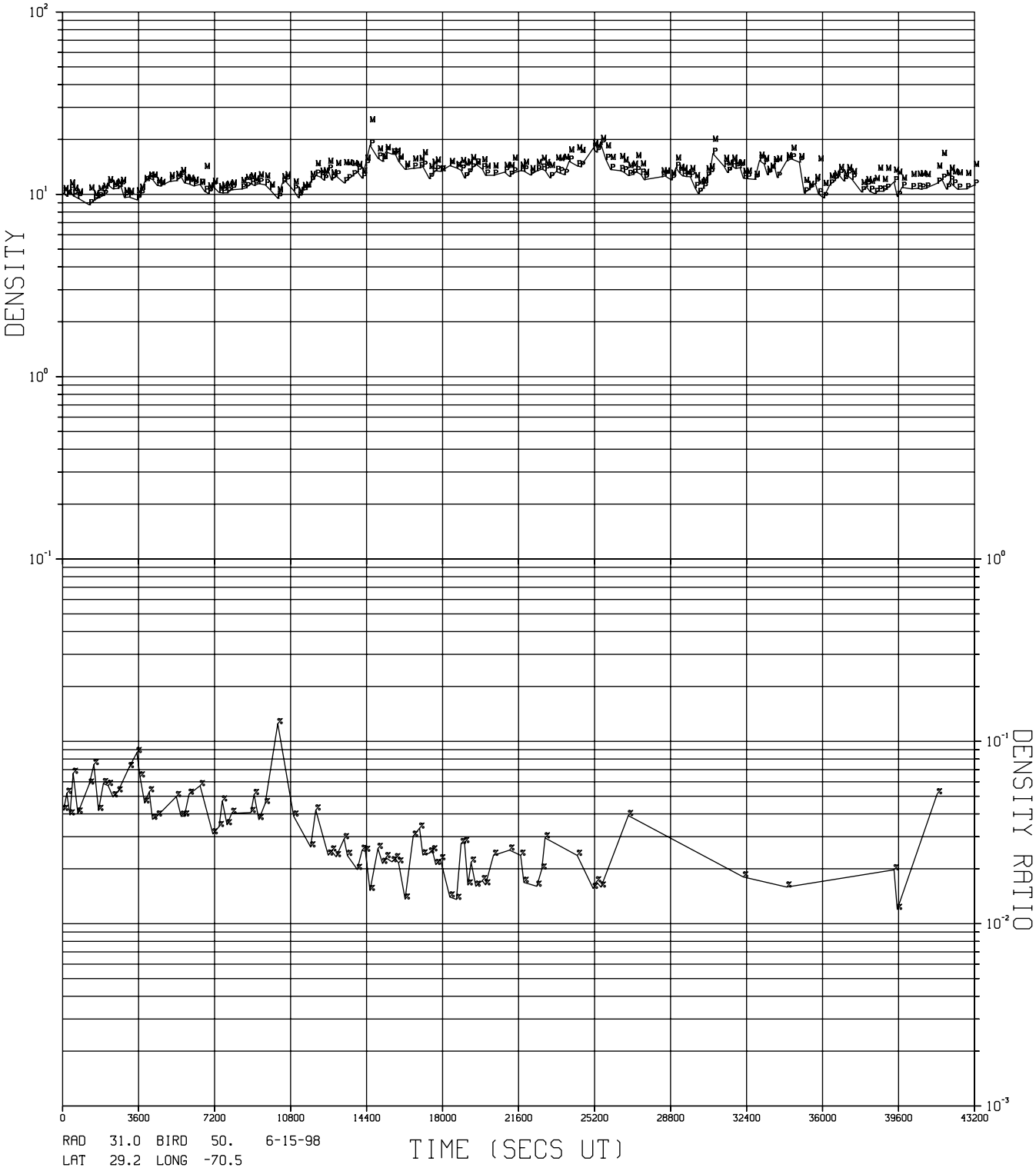

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 29.7 BIRD 50. 6-14-98
LAT 36.7 LONG -91.3

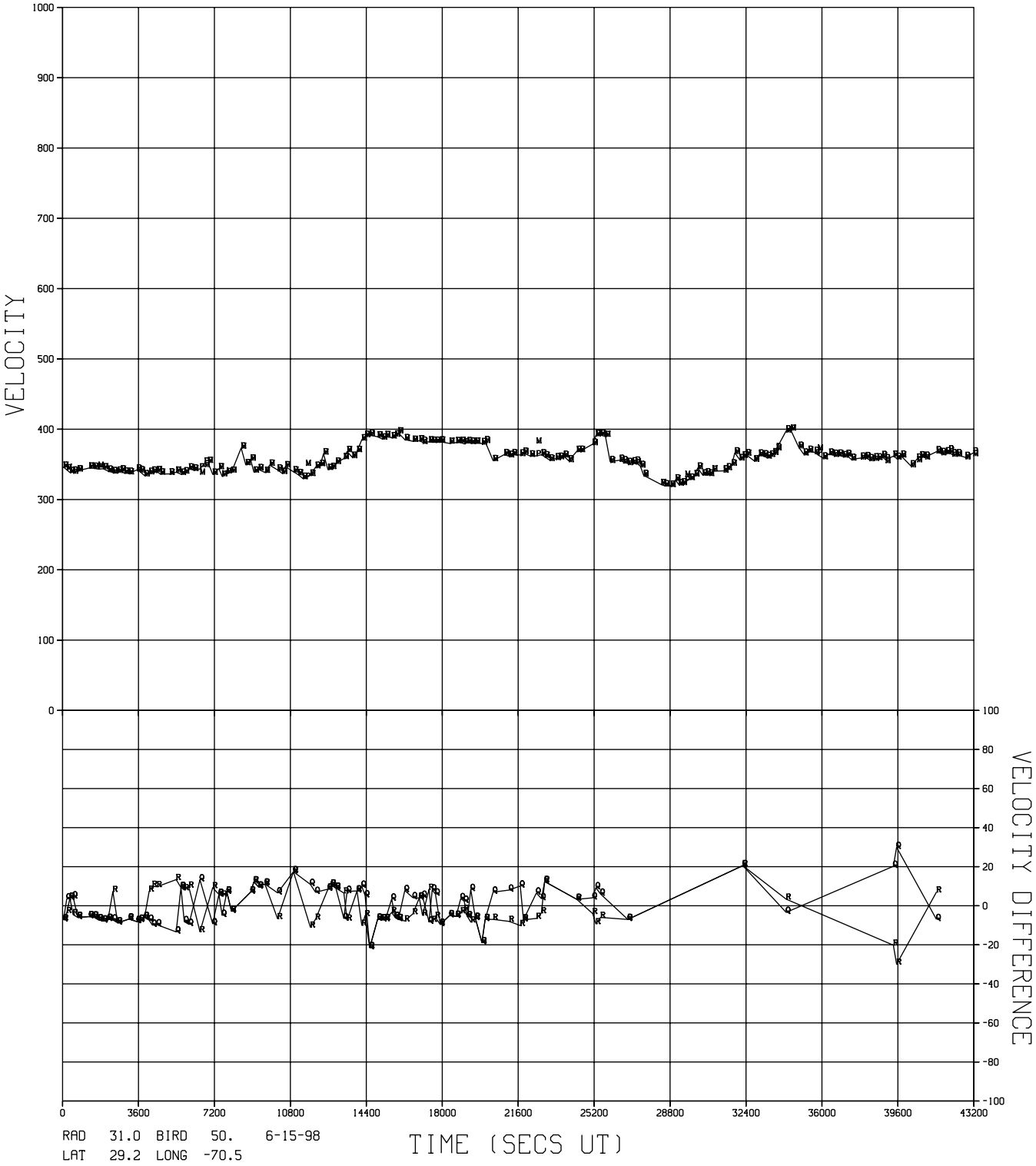

TEMPERATURE
TEMPERATURE RATIO
TIME (SECS UT)
RAD 29.7 BIRD 50. 6-14-98
LAT 36.7 LONG -91.3

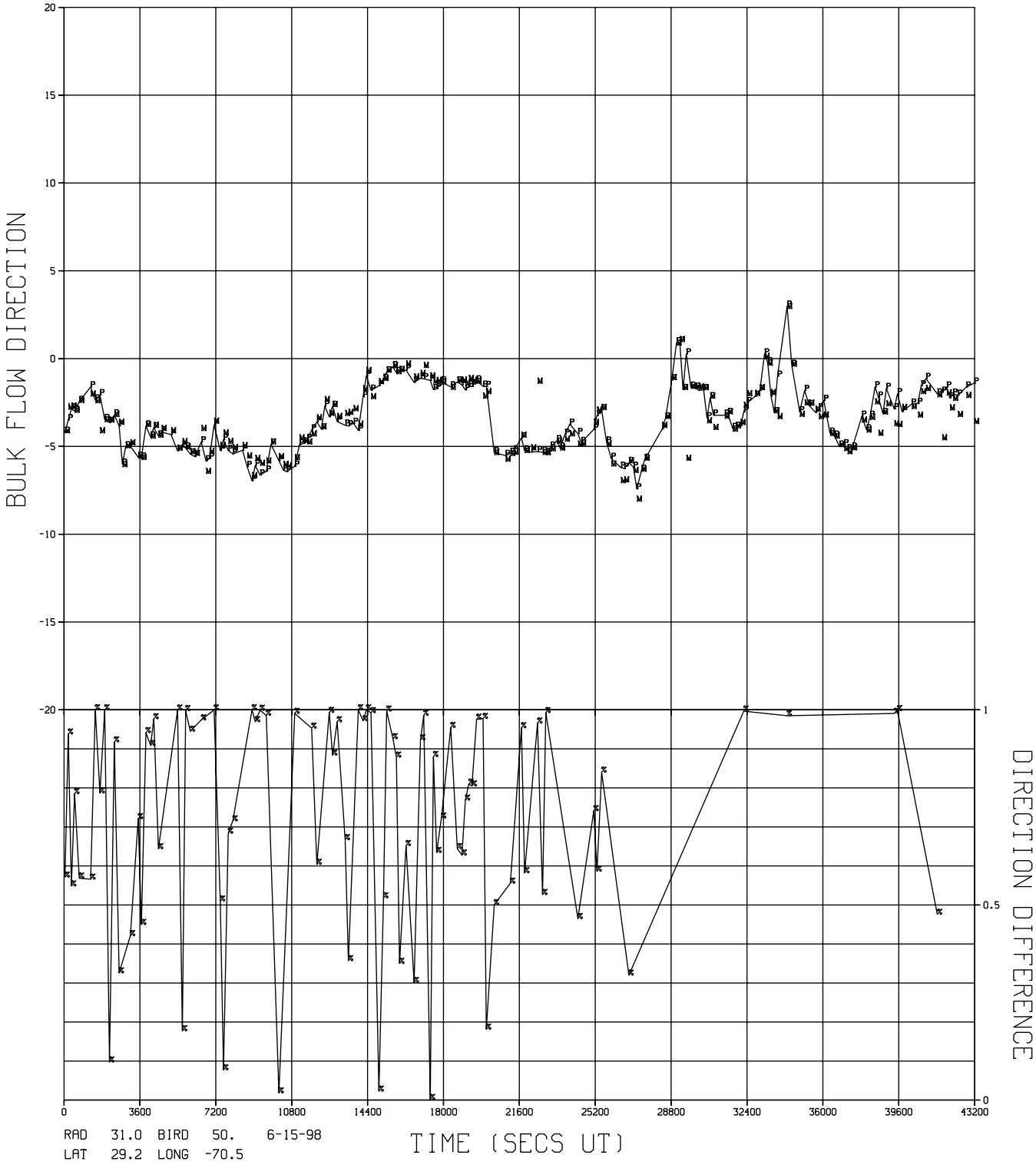

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 29.7 BIRD 50. 6-14-98
LAT 36.7 LONG -91.3

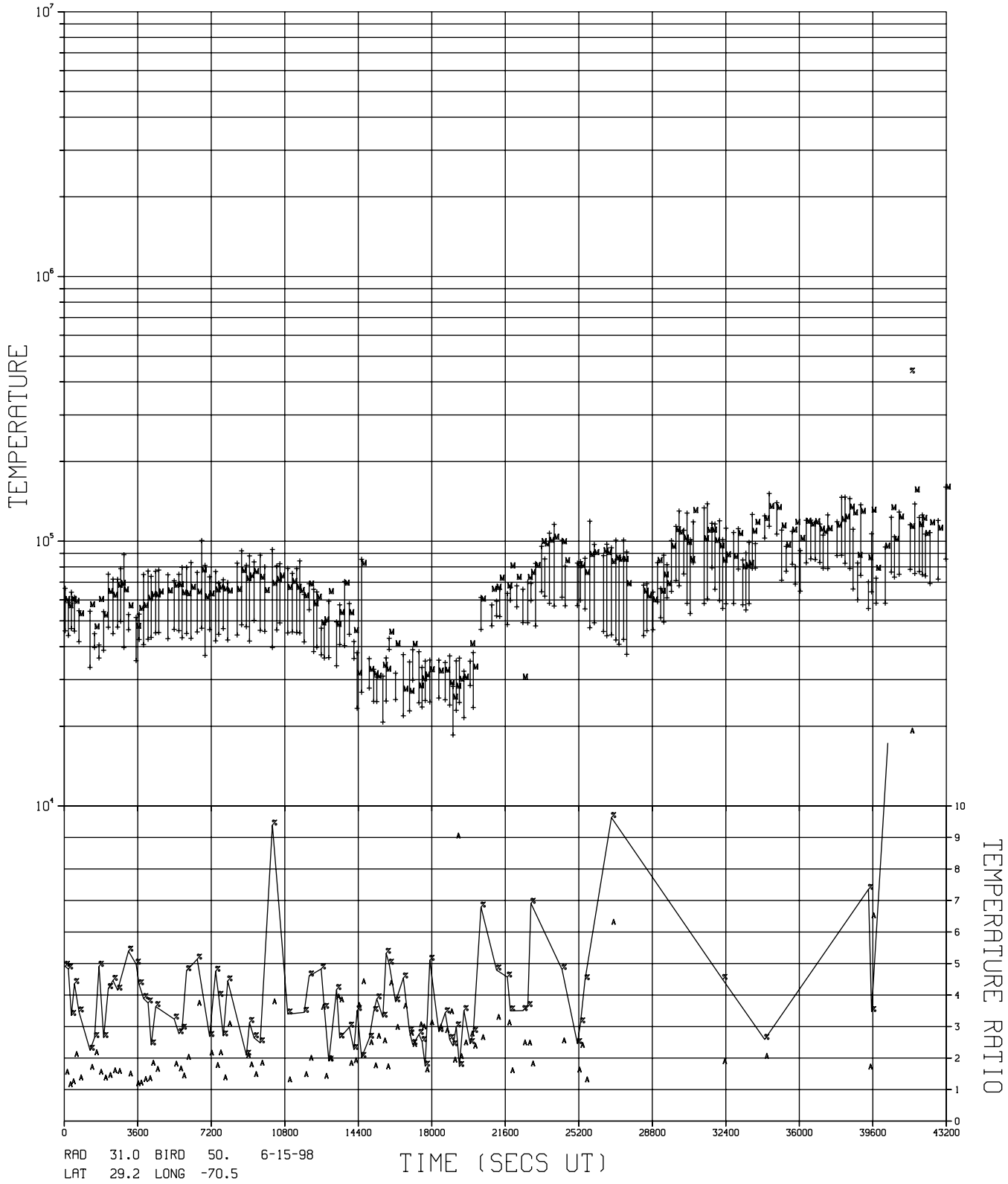

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 29.7 BIRD 50. 6-14-98
LAT 36.7 LONG -91.3

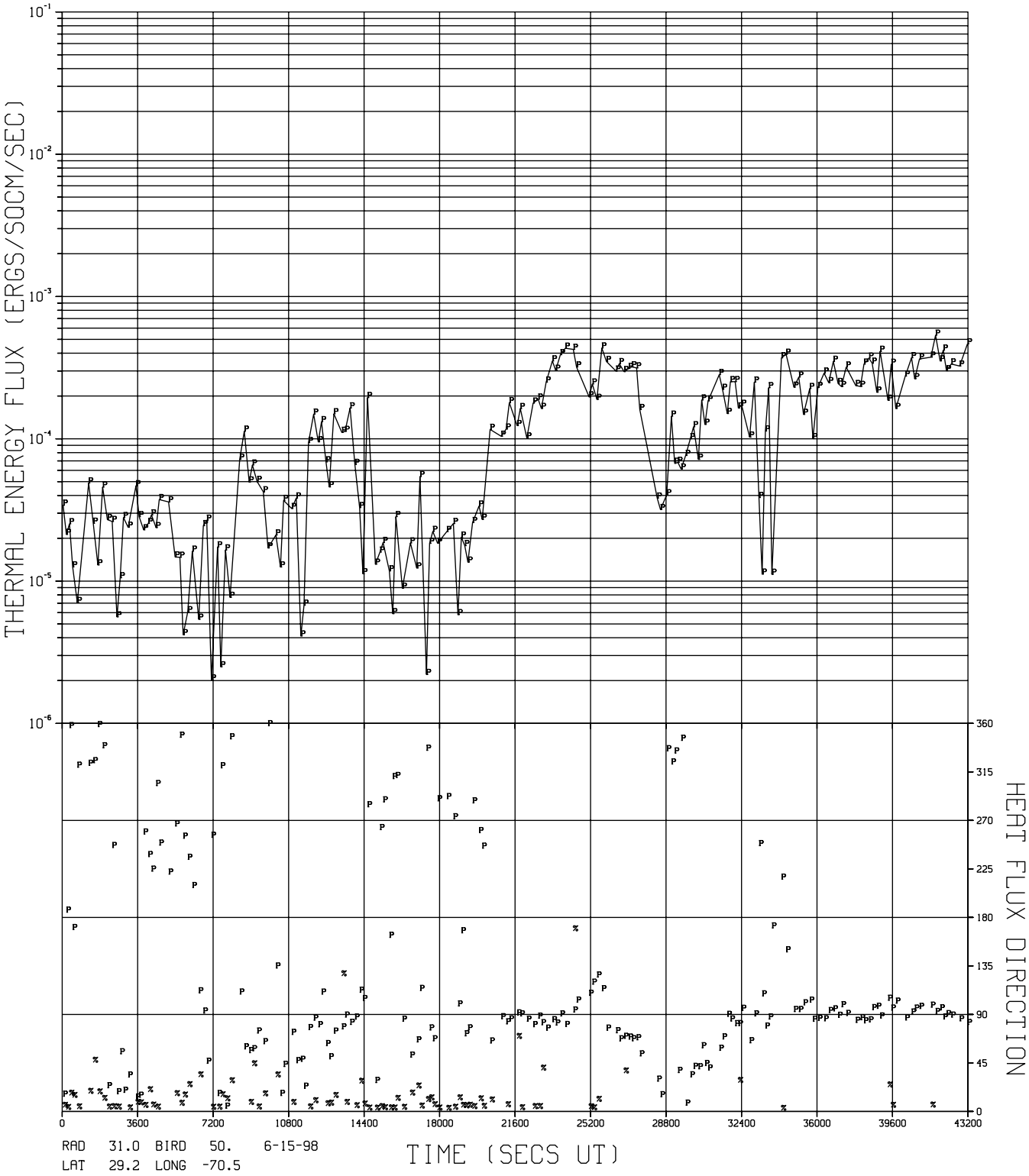

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 29.7 BIRD 50. 6-14-98
LAT 36.7 LONG -91.3

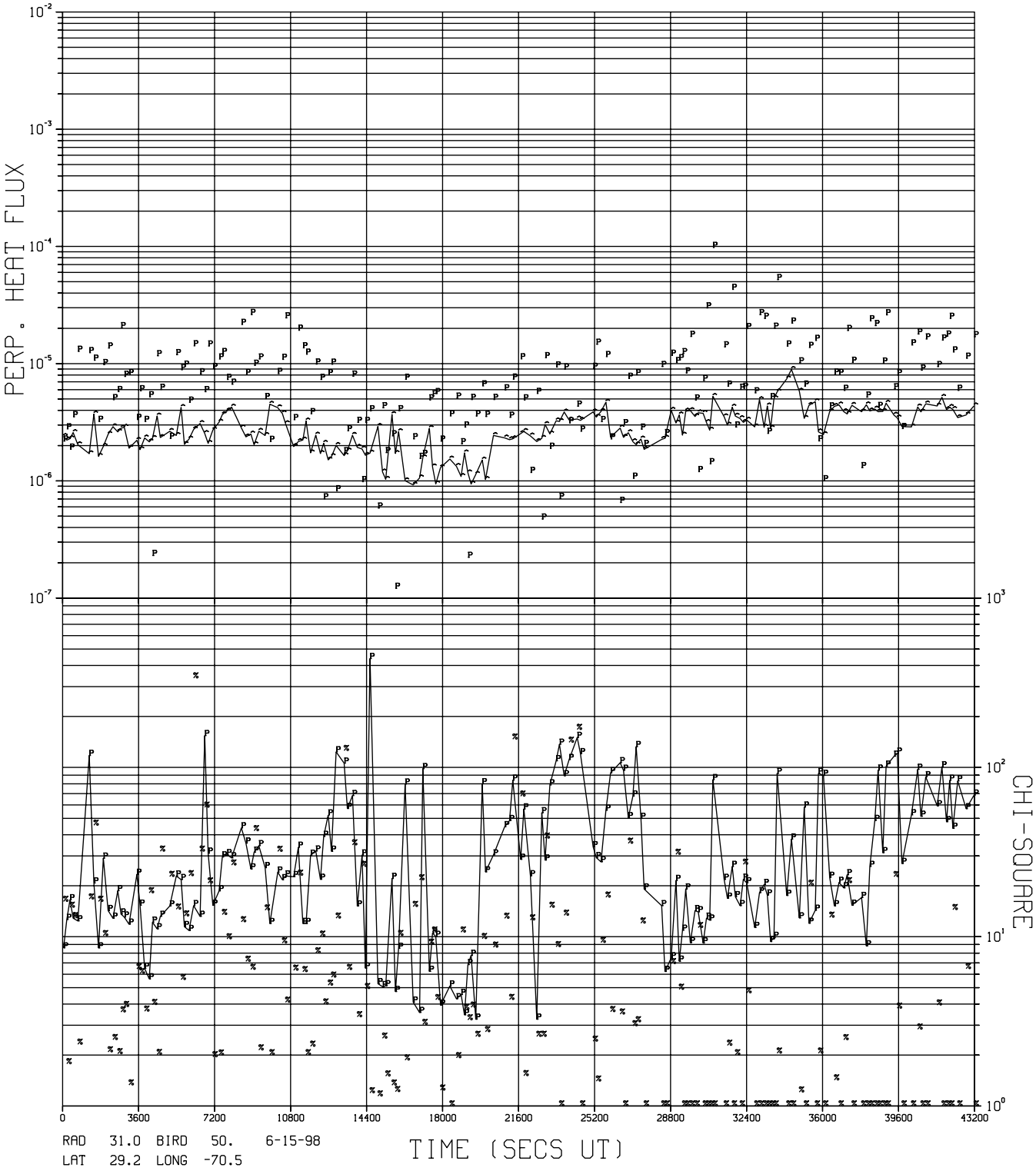

DENSITY
DENSITY RATIO
TIME (SECS UT)
RAD 31.0 BIRD 50. 6-15-98
LAT 29.2 LONG -70.5

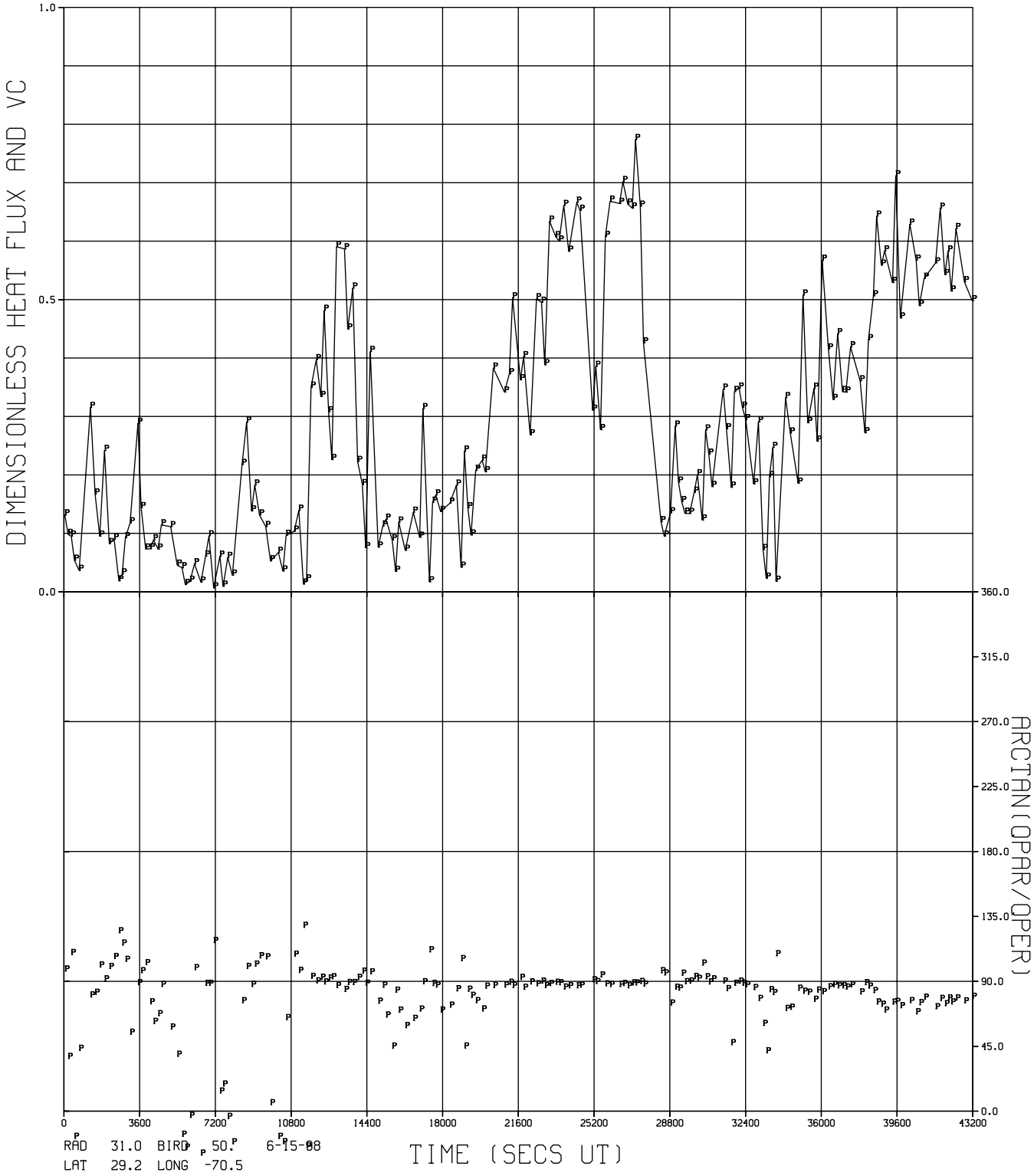

VELOCITY
VELOCITY DIFFERENCE
TIME (SECS UT)
RAD 31.0 BIRD 50. 6-15-98
LAT 29.2 LONG -70.5

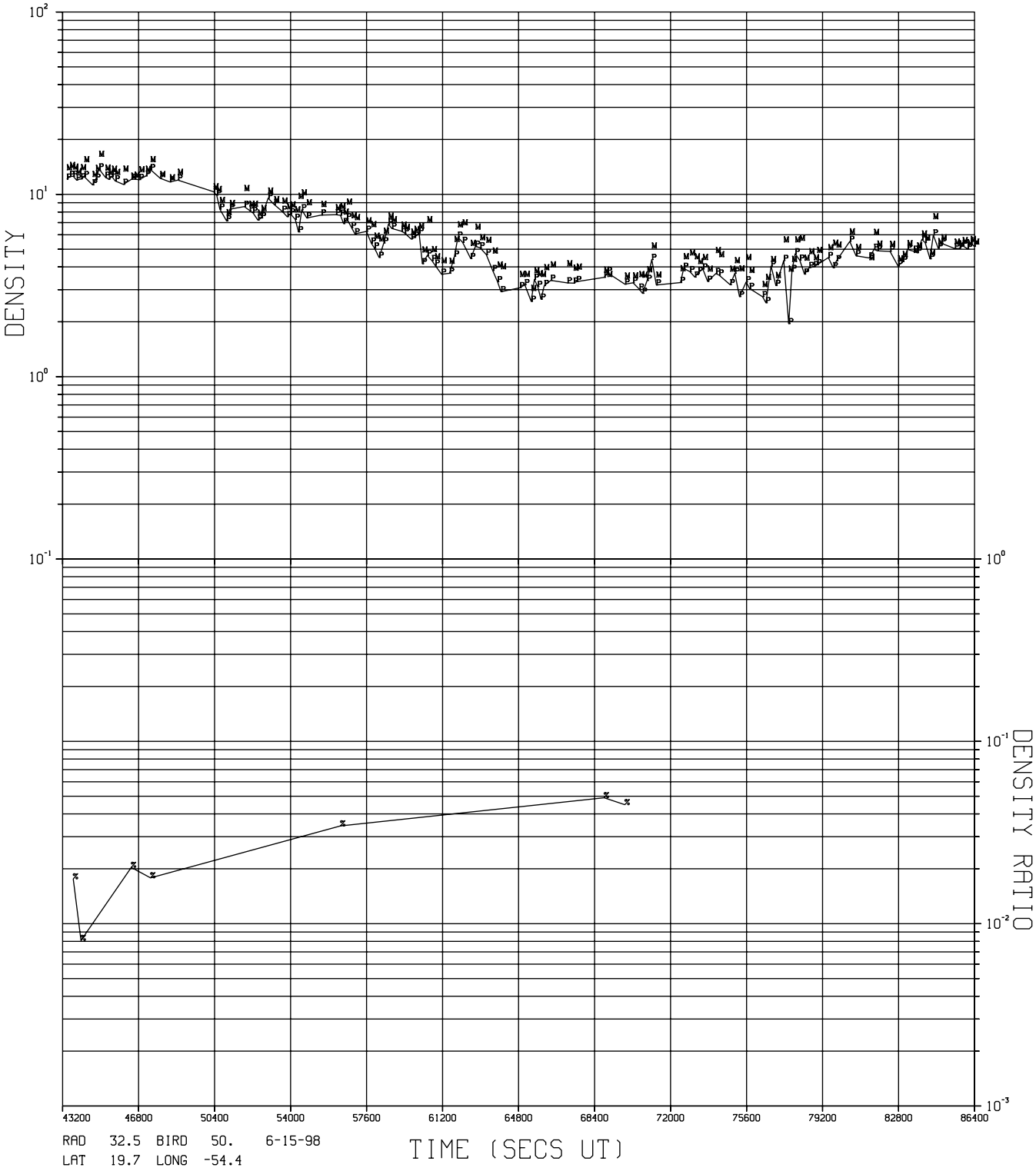

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 31.0 BIRD 50. 6-15-98
LAT 29.2 LONG -70.5

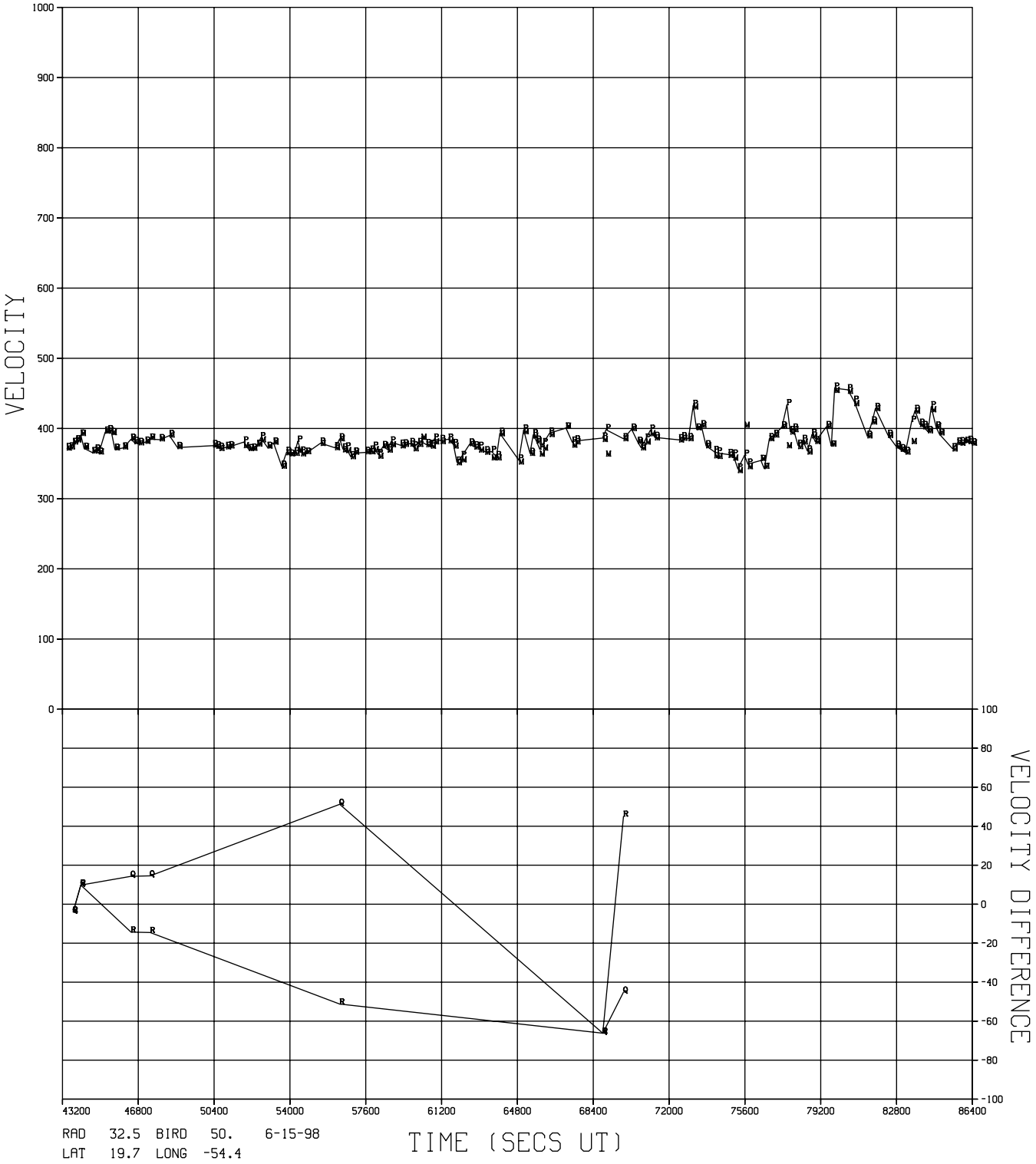

TEMPERATURE
TEMPERATURE RATIO
TIME (SECS UT)
RAD 31.0 BIRD 50. 6-15-98
LAT 29.2 LONG -70.5

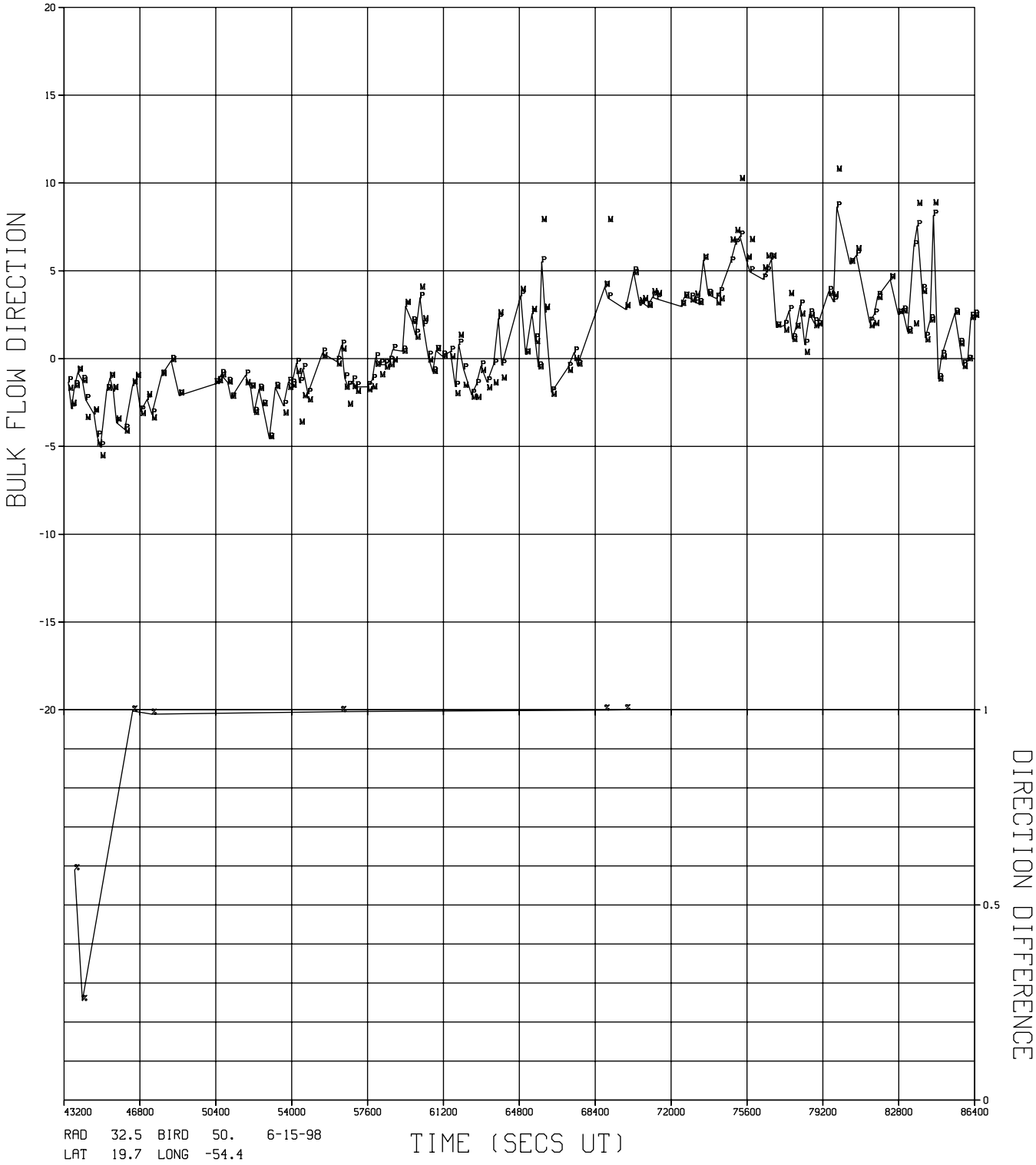

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 31.0 BIRD 50. 6-15-98
LAT 29.2 LONG -70.5

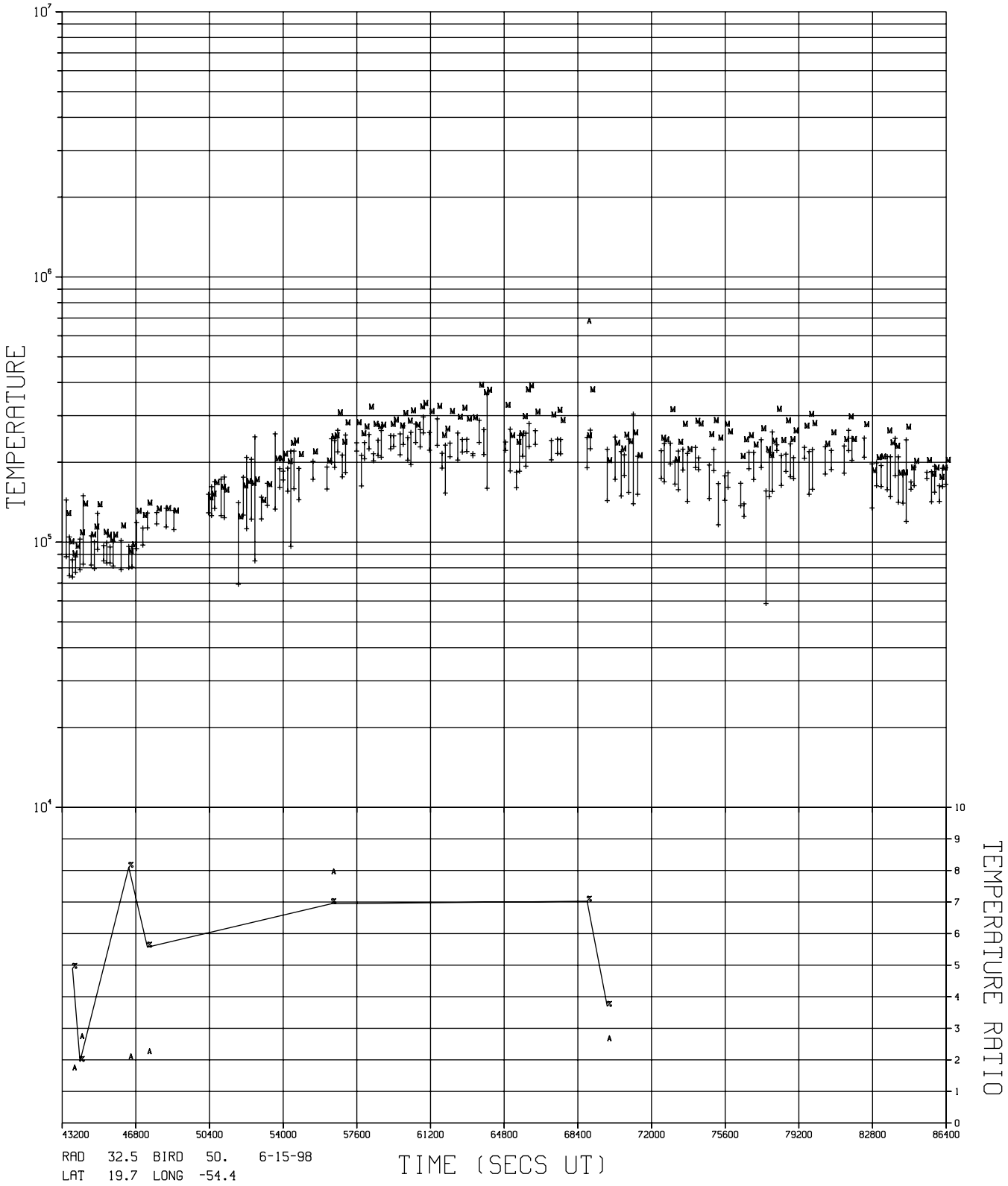

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 31.0 BIRD 50. 6-15-98
LAT 29.2 LONG -70.5

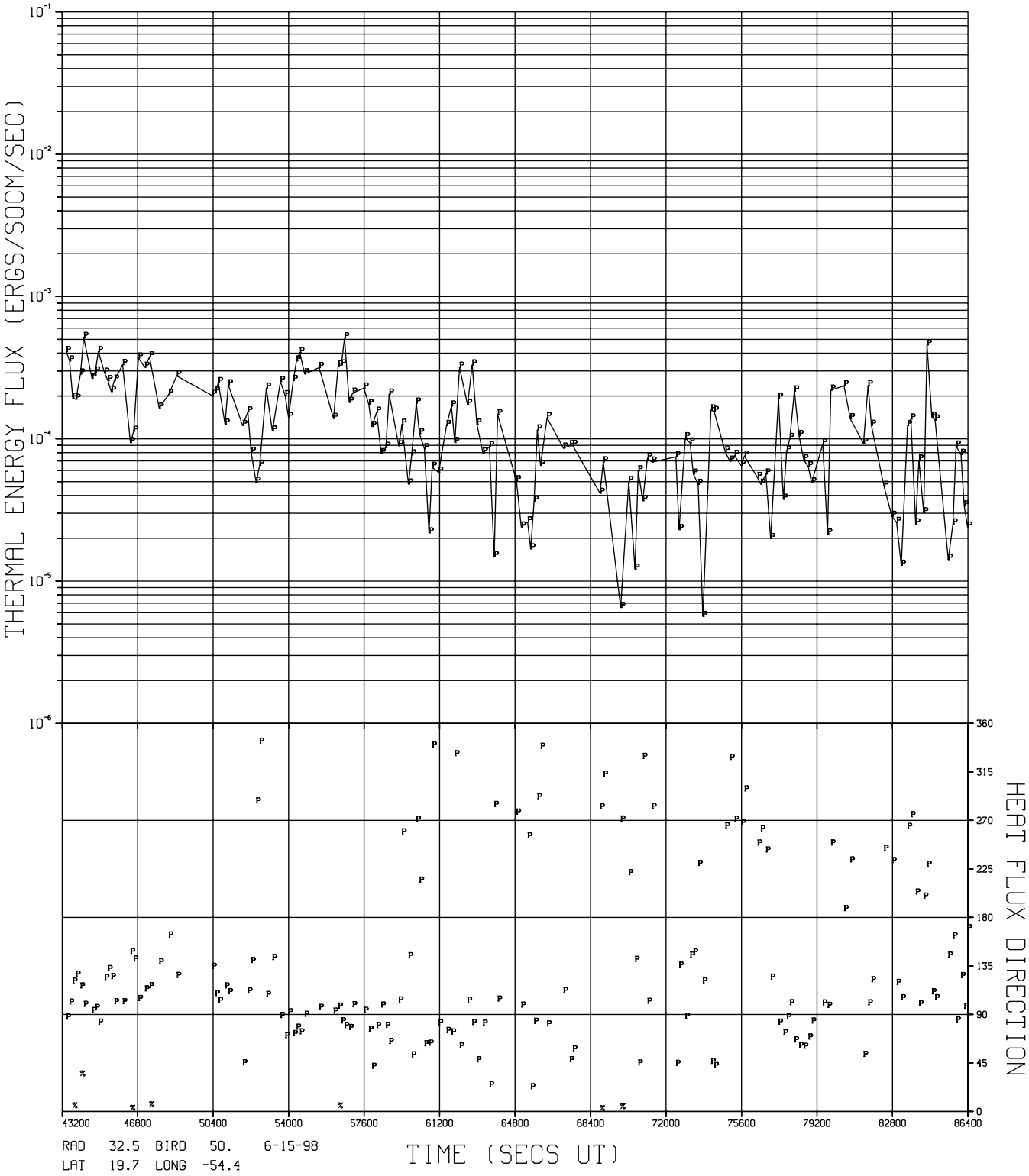

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 31.0 BIRD 50. 6-15-88
LAT 29.2 LONG -70.5

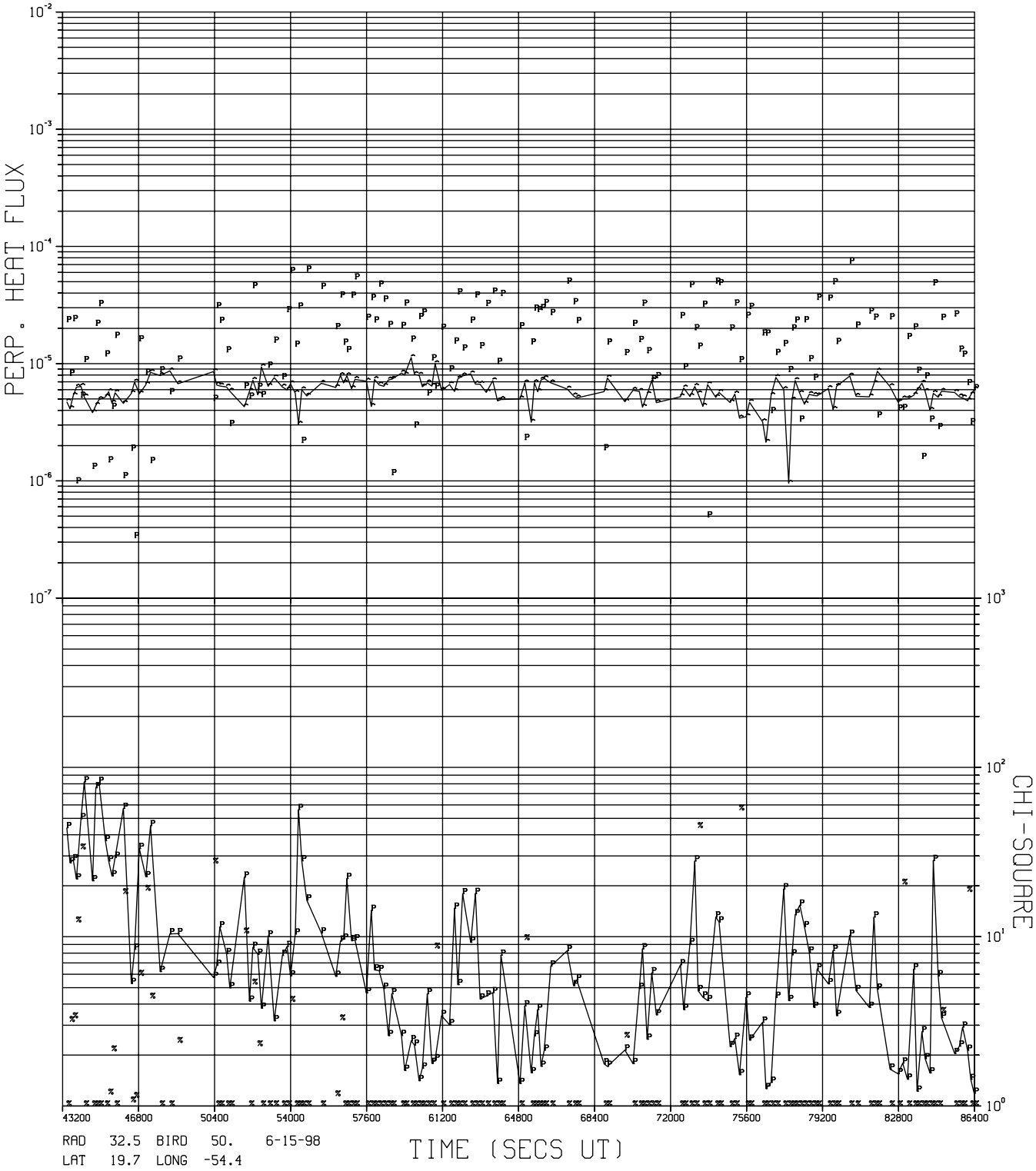

DENSITY
DENSITY RATIO
TIME (SECS UT)
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 32.5 BIRD 50. 6-15-98
LAT 19.7 LONG -54.4

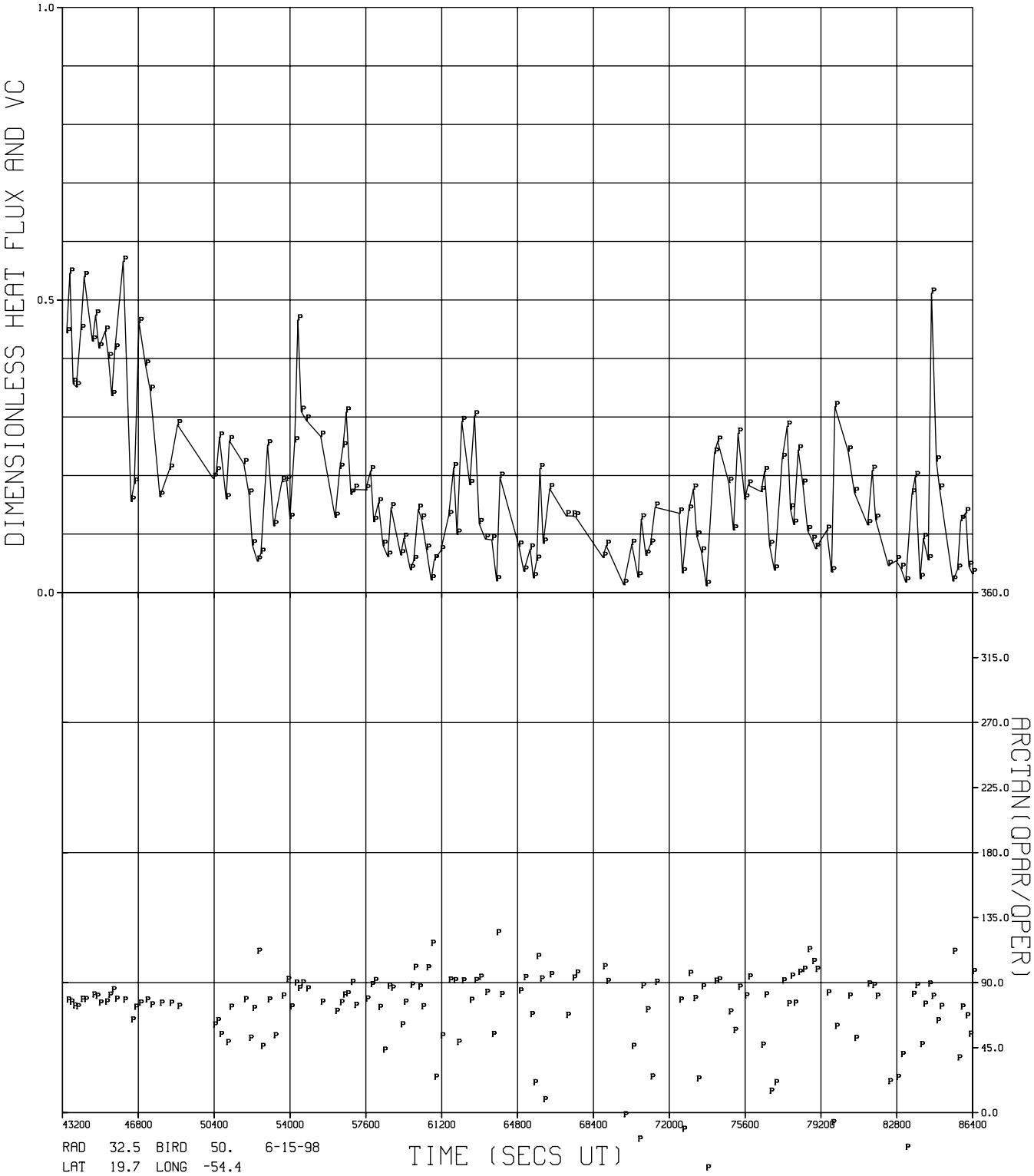

VELOCITY
VELOCITY DIFFERENCE
TIME (SECS UT)
RAD 32.5 BIRD 50. 6-15-98
LAT 19.7 LONG -54.4

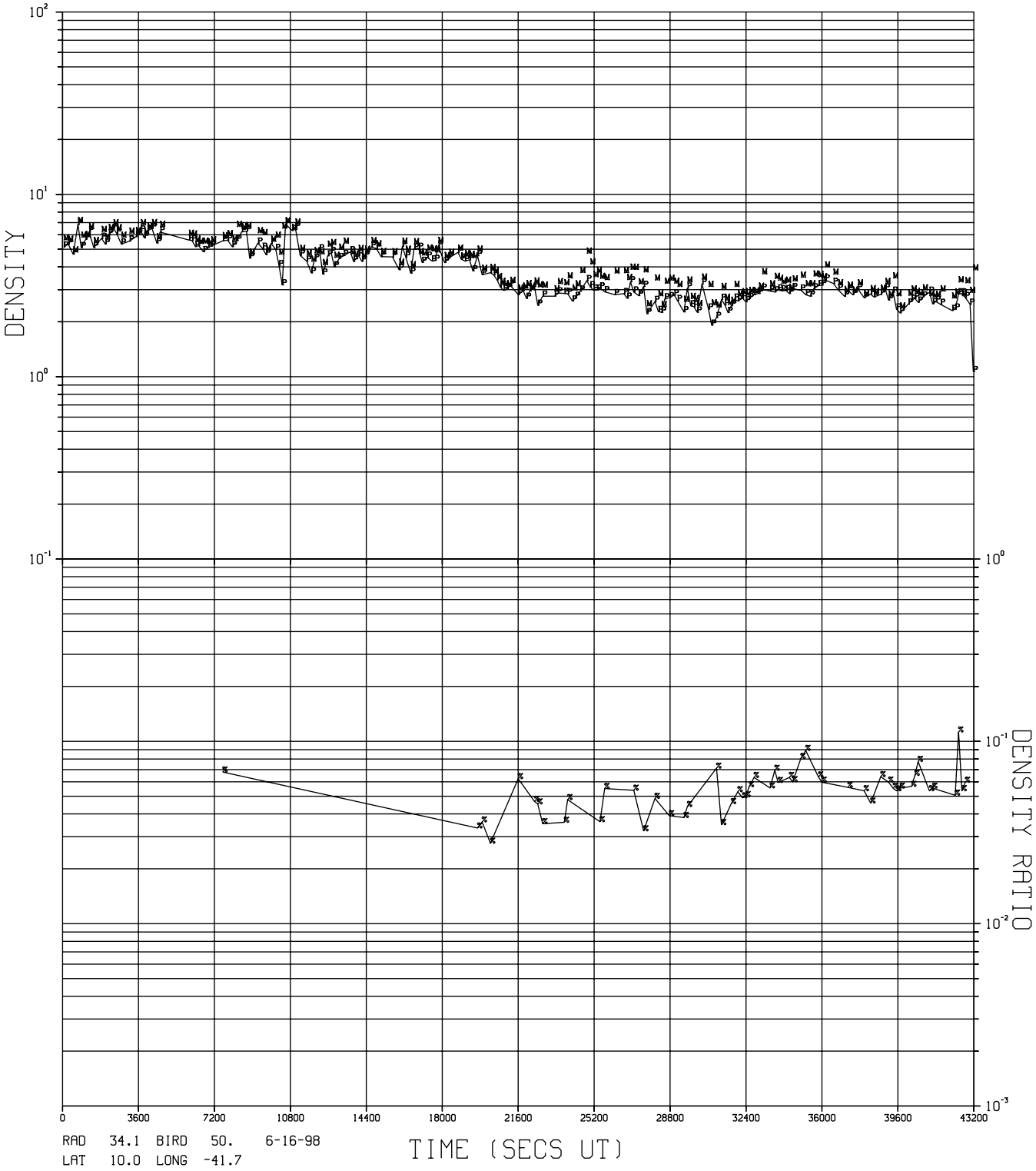

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 32.5 BIRD 50. 6-15-98
LAT 19.7 LONG -54.4

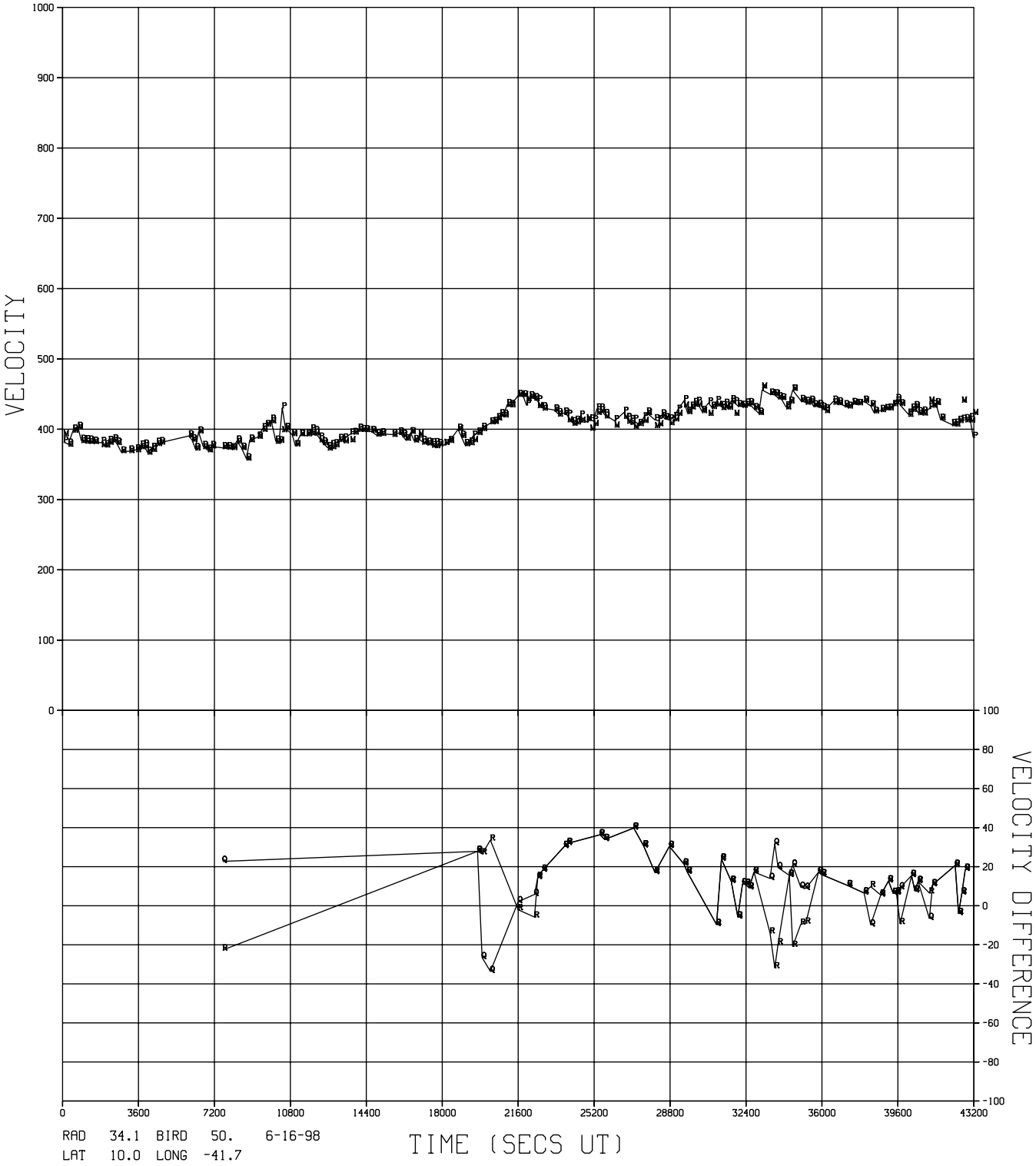

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.5 BIRD 50. 6-15-98
LAT 19.7 LONG -54.4

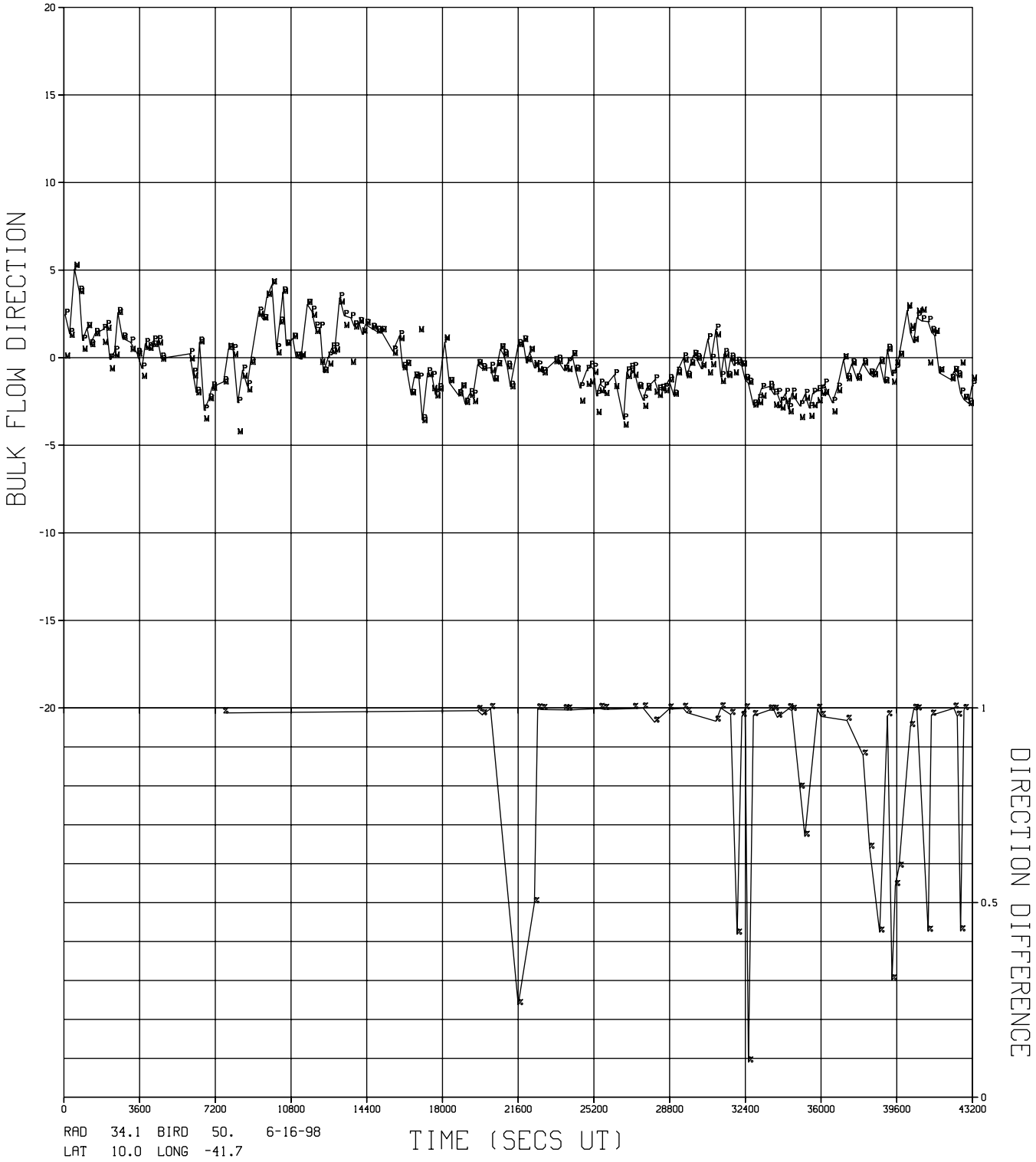

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 32.5 BIRD 50. 6-15-98
LAT 19.7 LONG -54.4

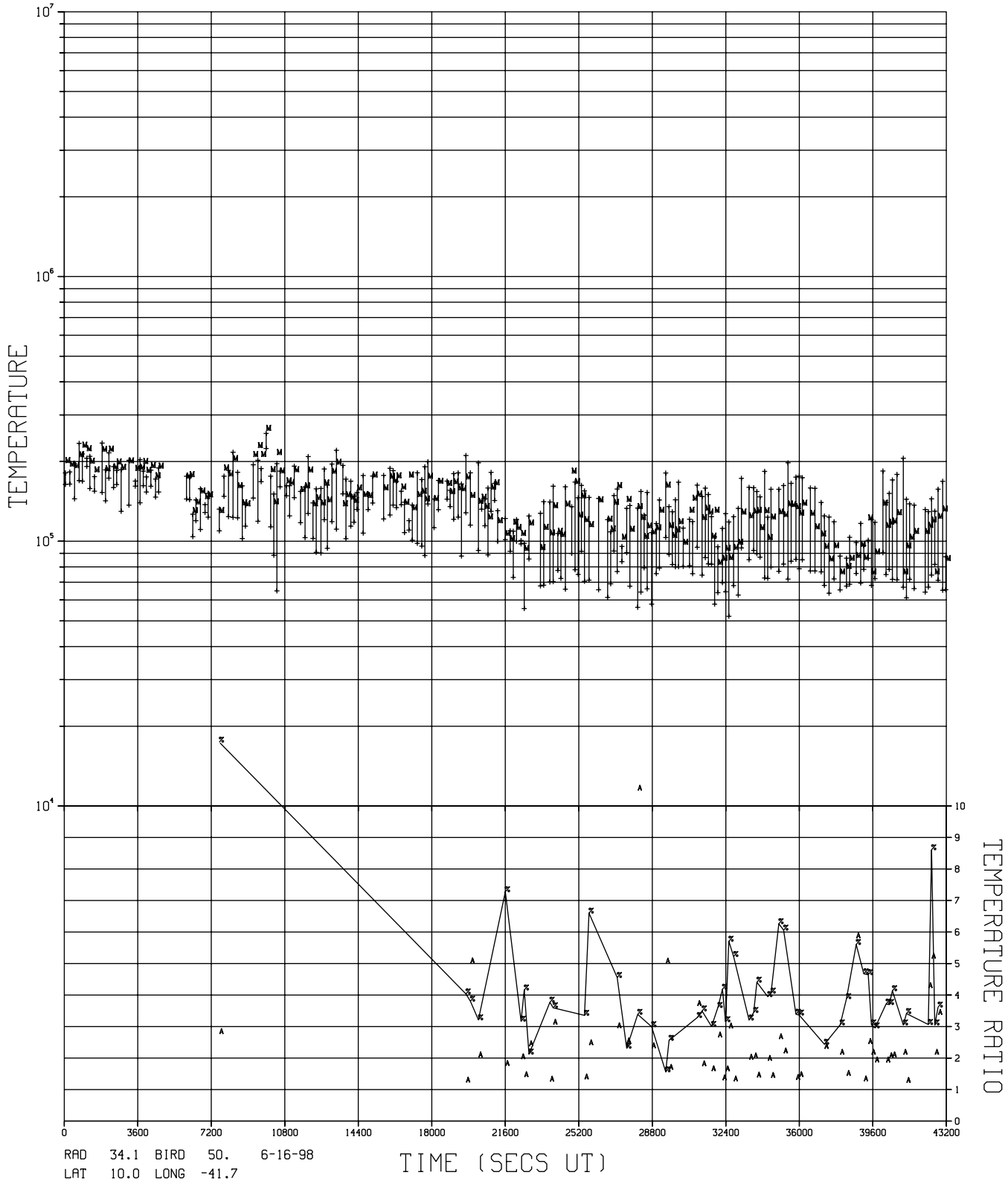

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 32.5 BIRD 50. 6-15-98
LAT 19.7 LONG -54.4

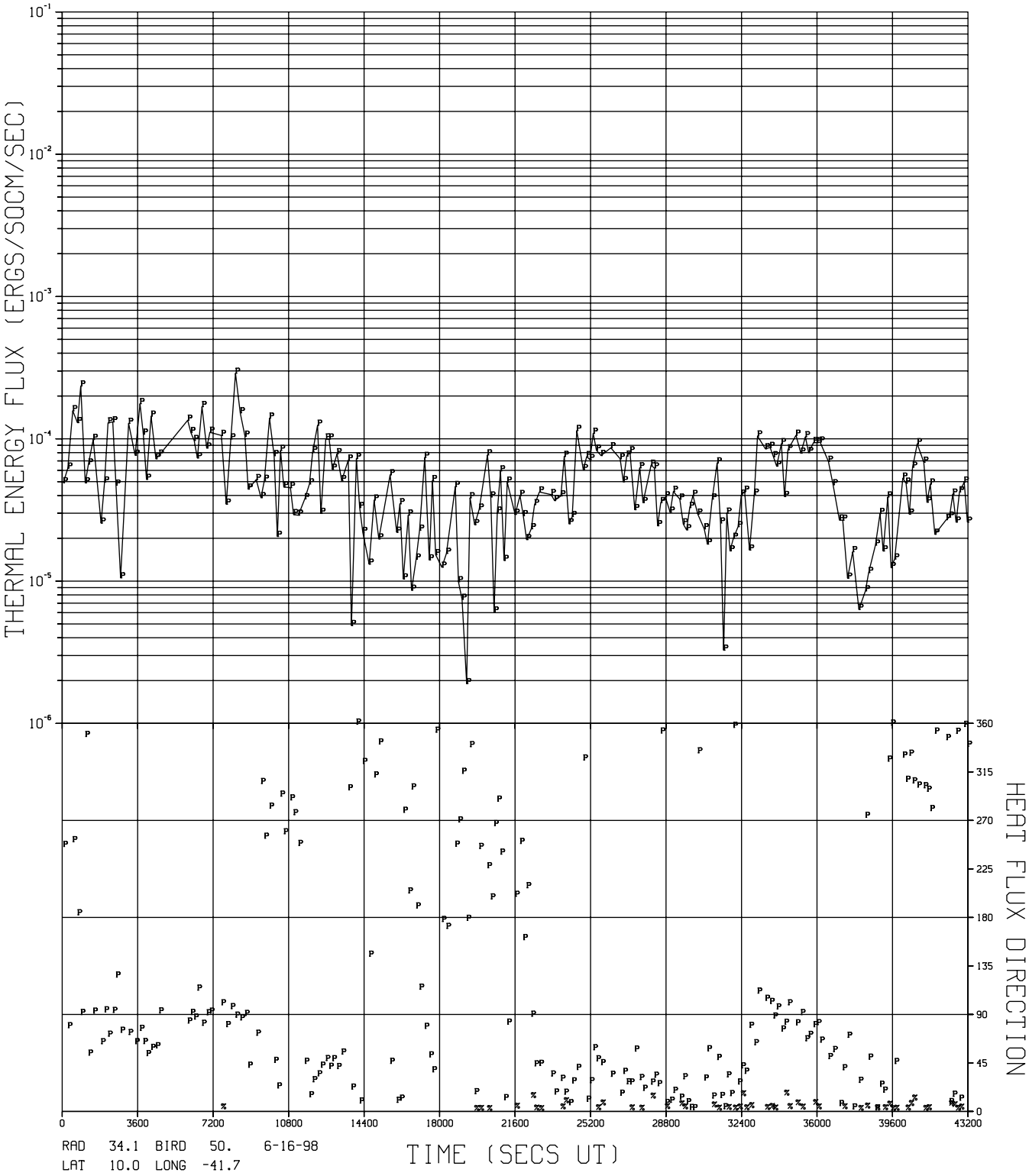

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.5 BIRD 50. 6-15-98
LAT 19.7 LONG -54.4

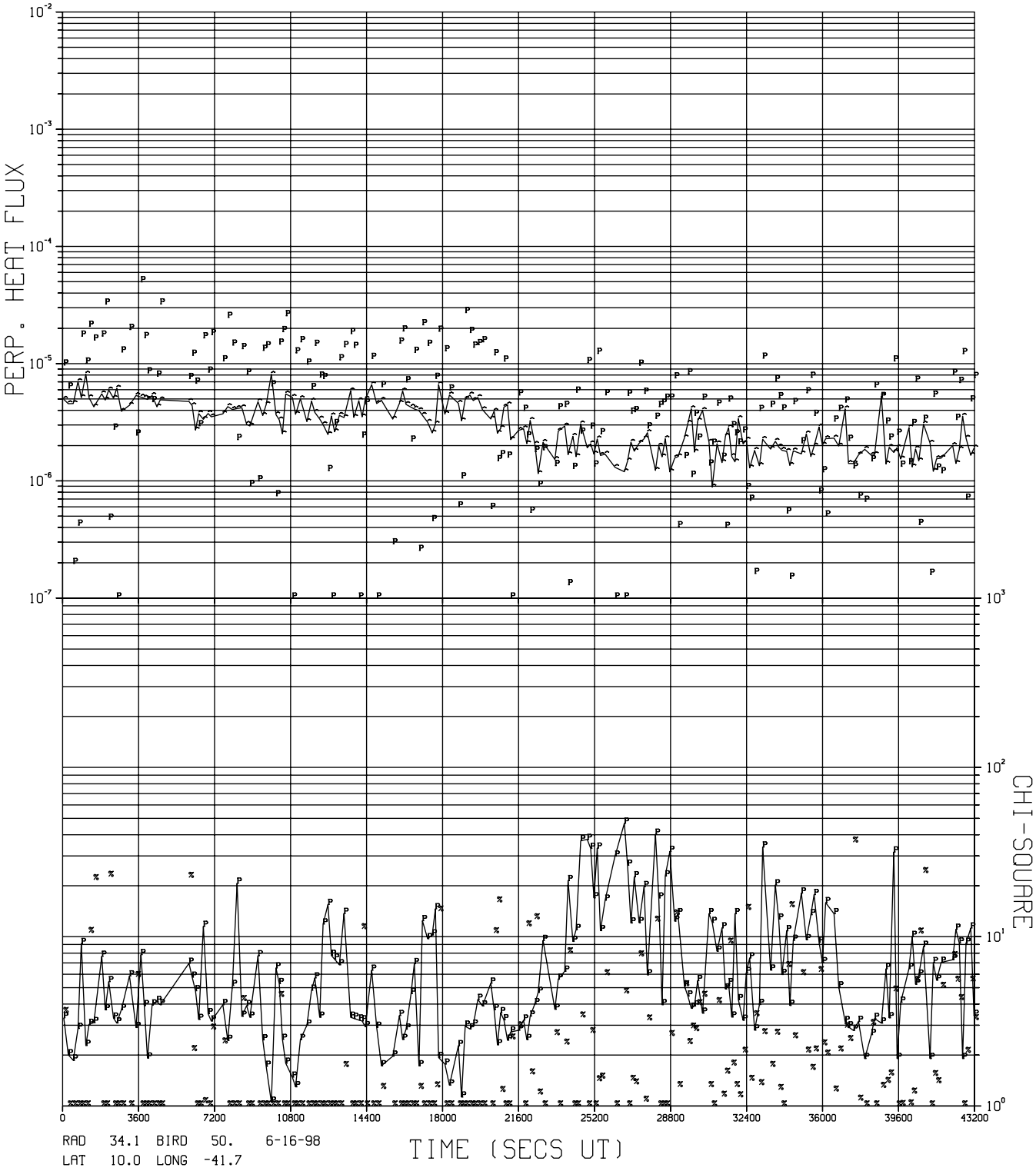

DENSITY
DENSITY RATIO
TIME (SECS UT)
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 34.1 BIRD 50. 6-16-98
LAT 10.0 LONG -41.7

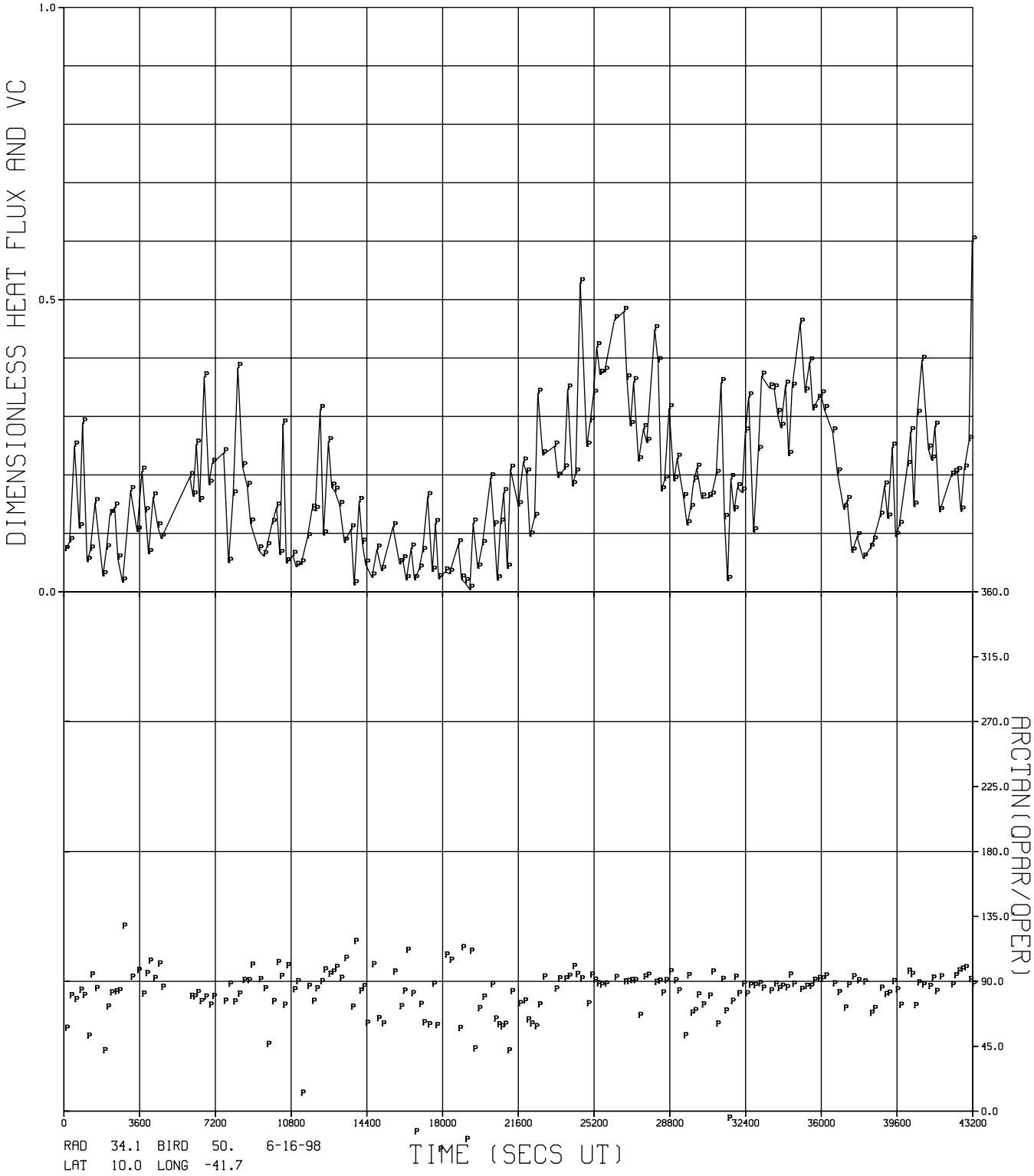

VELOCITY
VELOCITY DIFFERENCE
TIME (SECS UT)
RAD 34.1 BIRD 50. 6-16-98
LAT 10.0 LONG -41.7

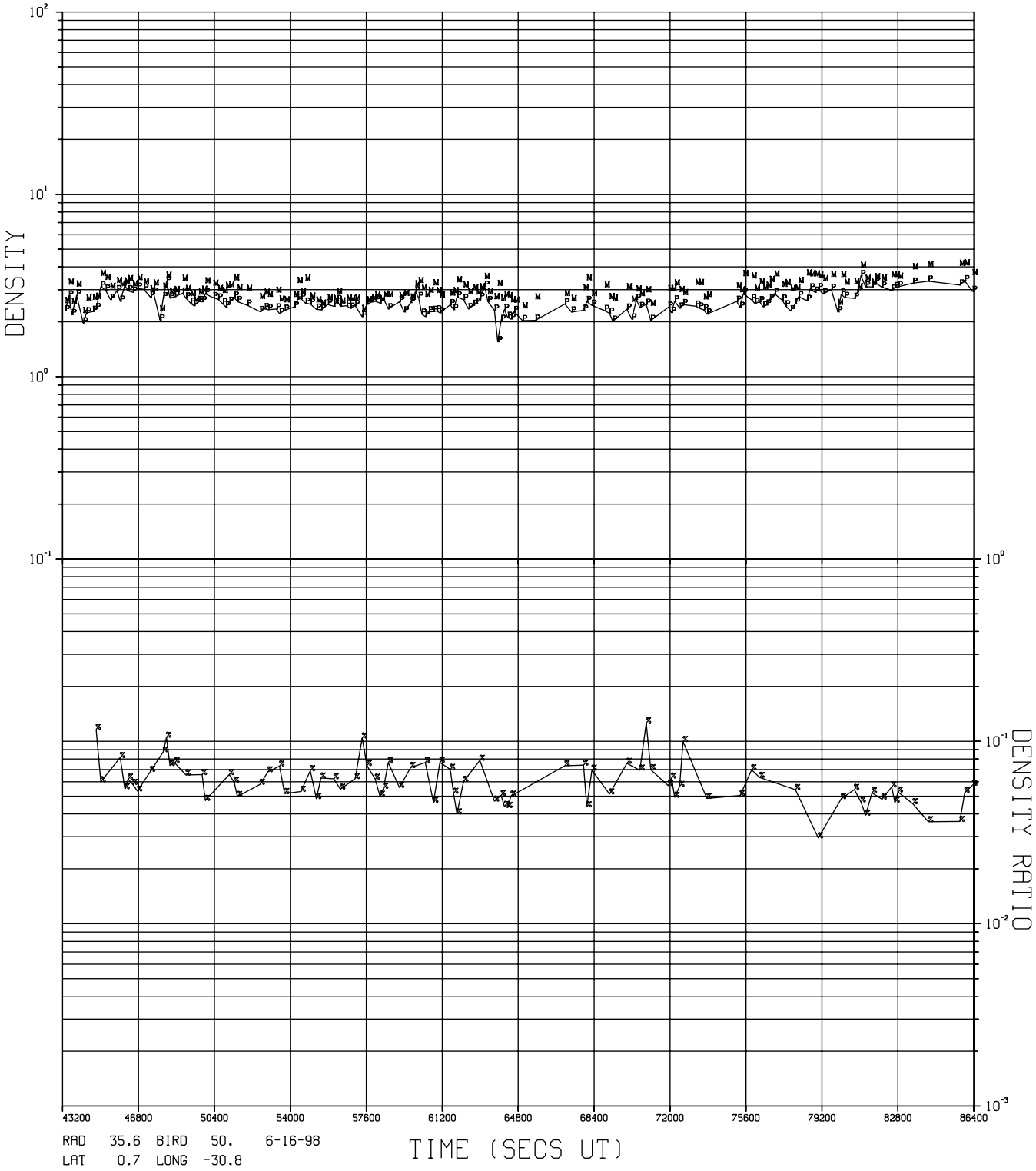

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 34.1 BIRD 50. 6-16-98
LAT 10.0 LONG -41.7

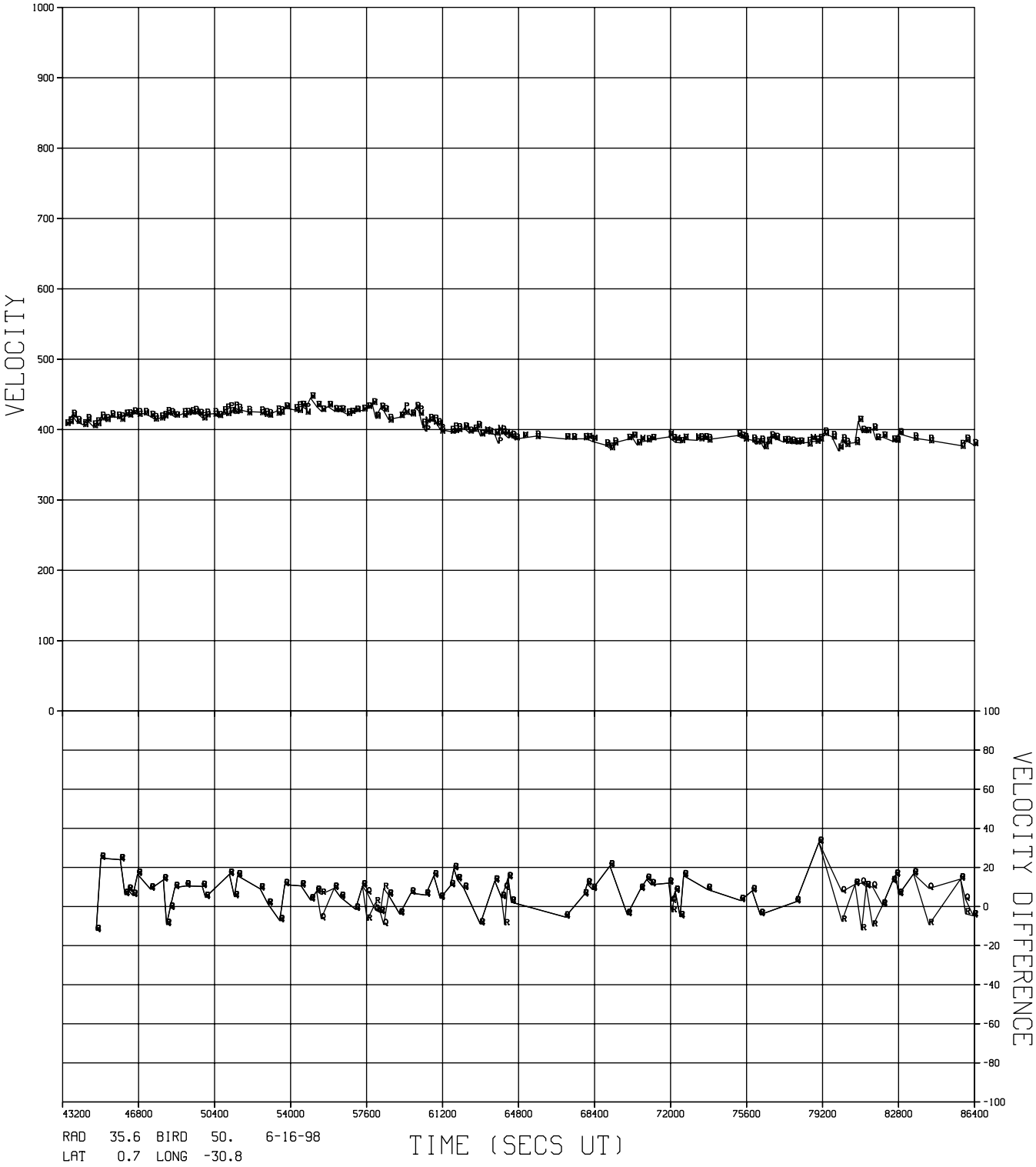

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 34.1 BIRD 50. 6-16-98
LAT 10.0 LONG -41.7

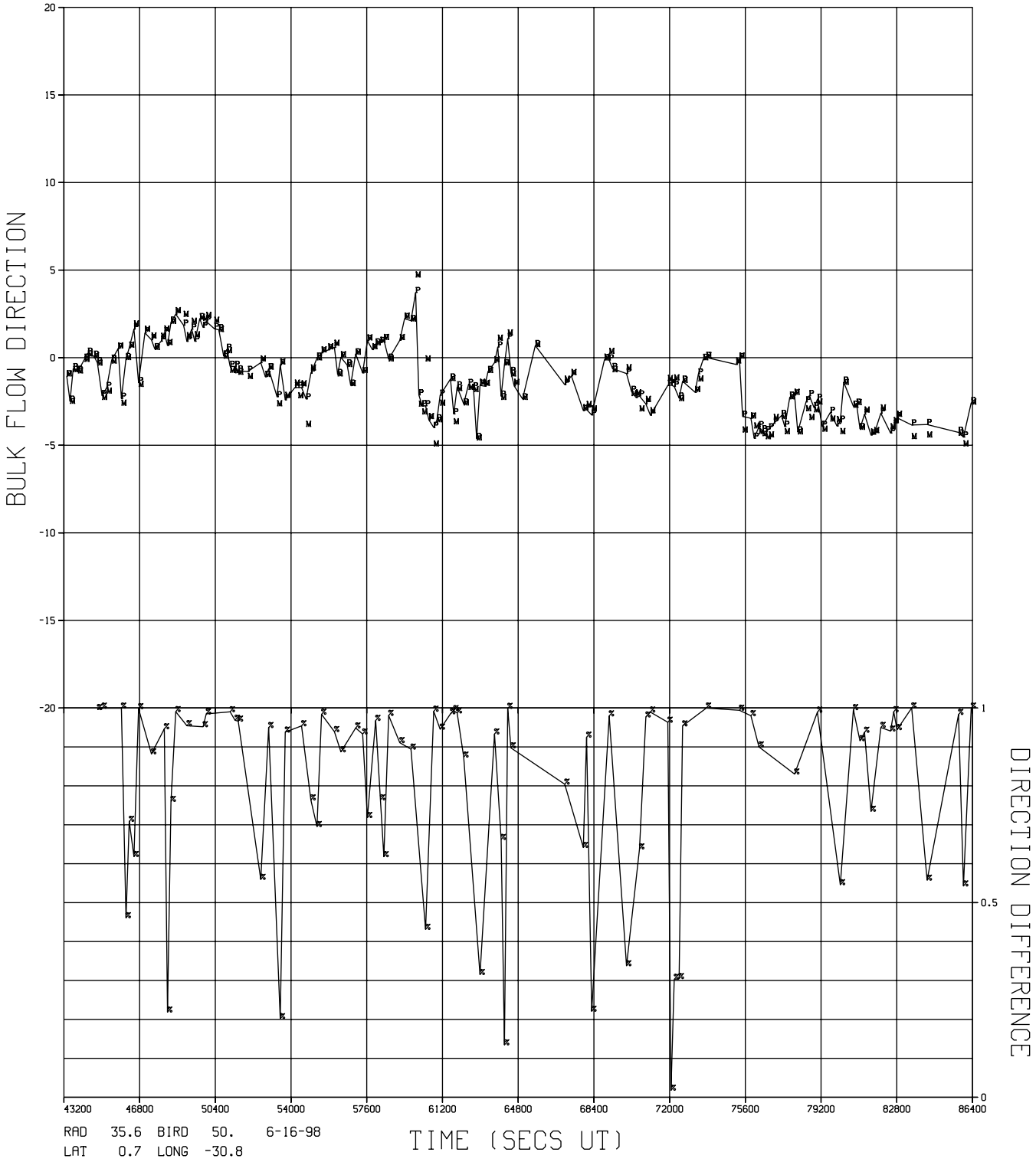

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 34.1 BIRD 50. 6-16-98
LAT 10.0 LONG -41.7

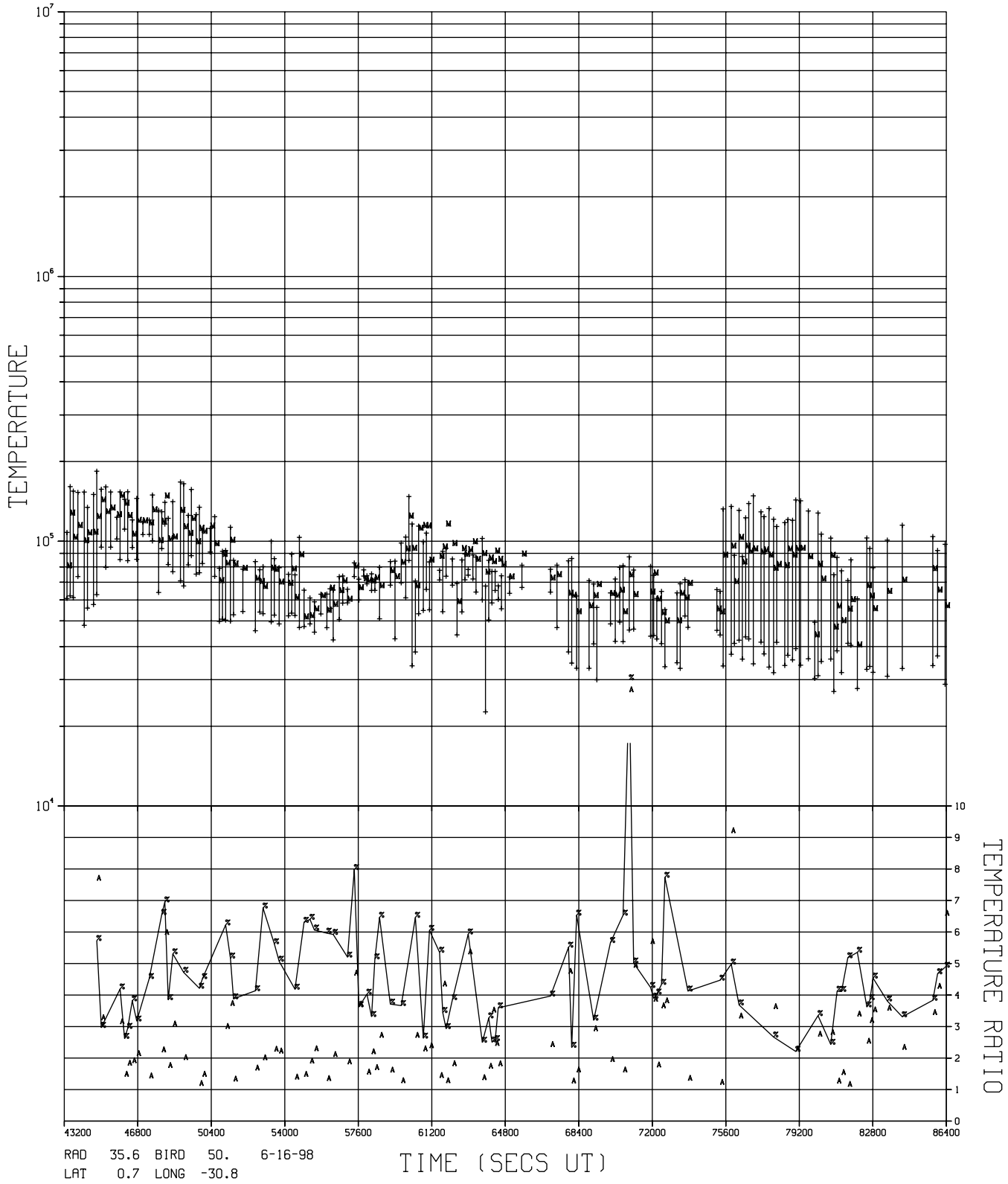

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 34.1 BIRD 50. 6-16-98
LAT 10.0 LONG -41.7

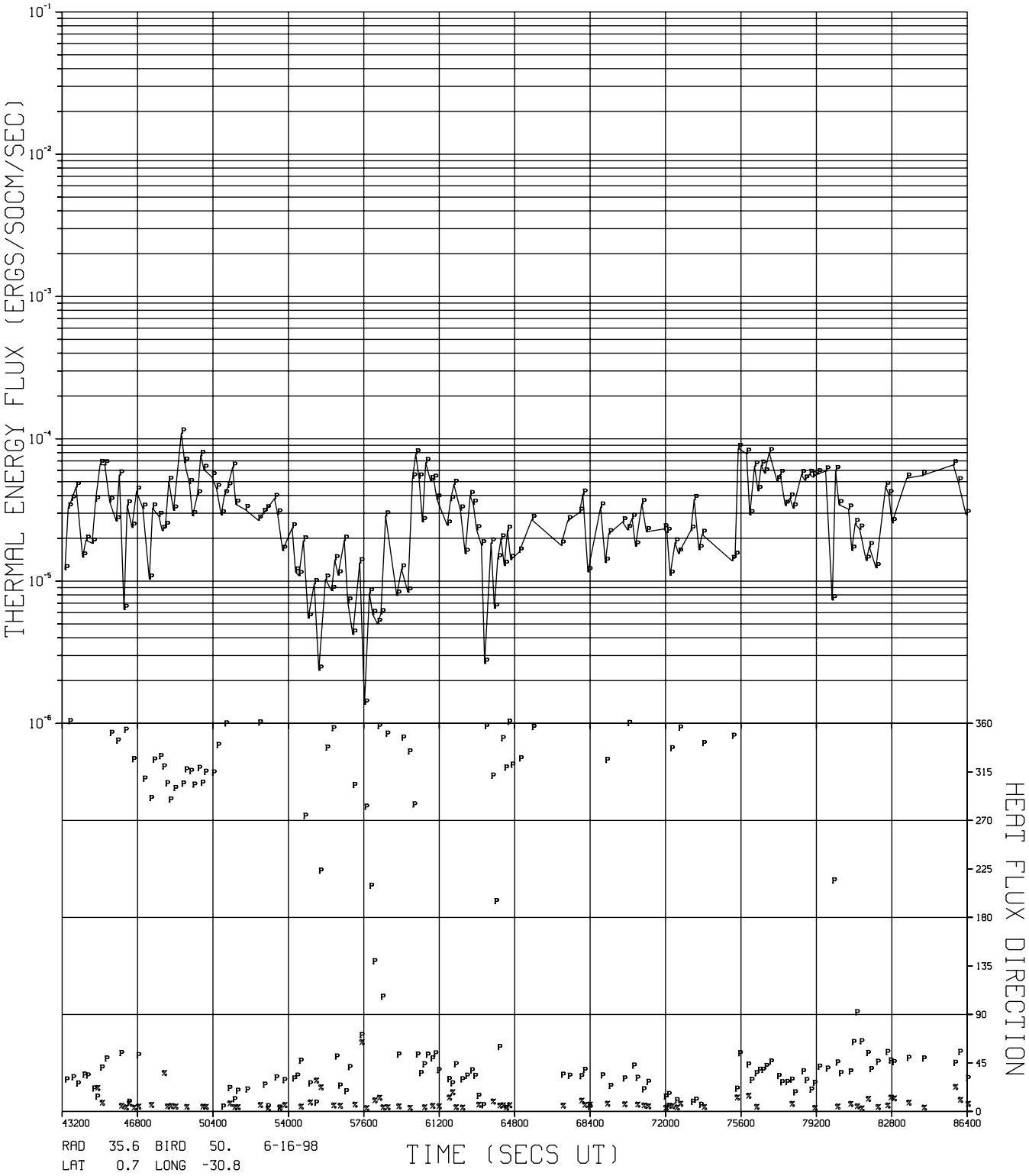

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 34.1 BIRD 50. 6-16-98
LAT 10.0 LONG -41.7

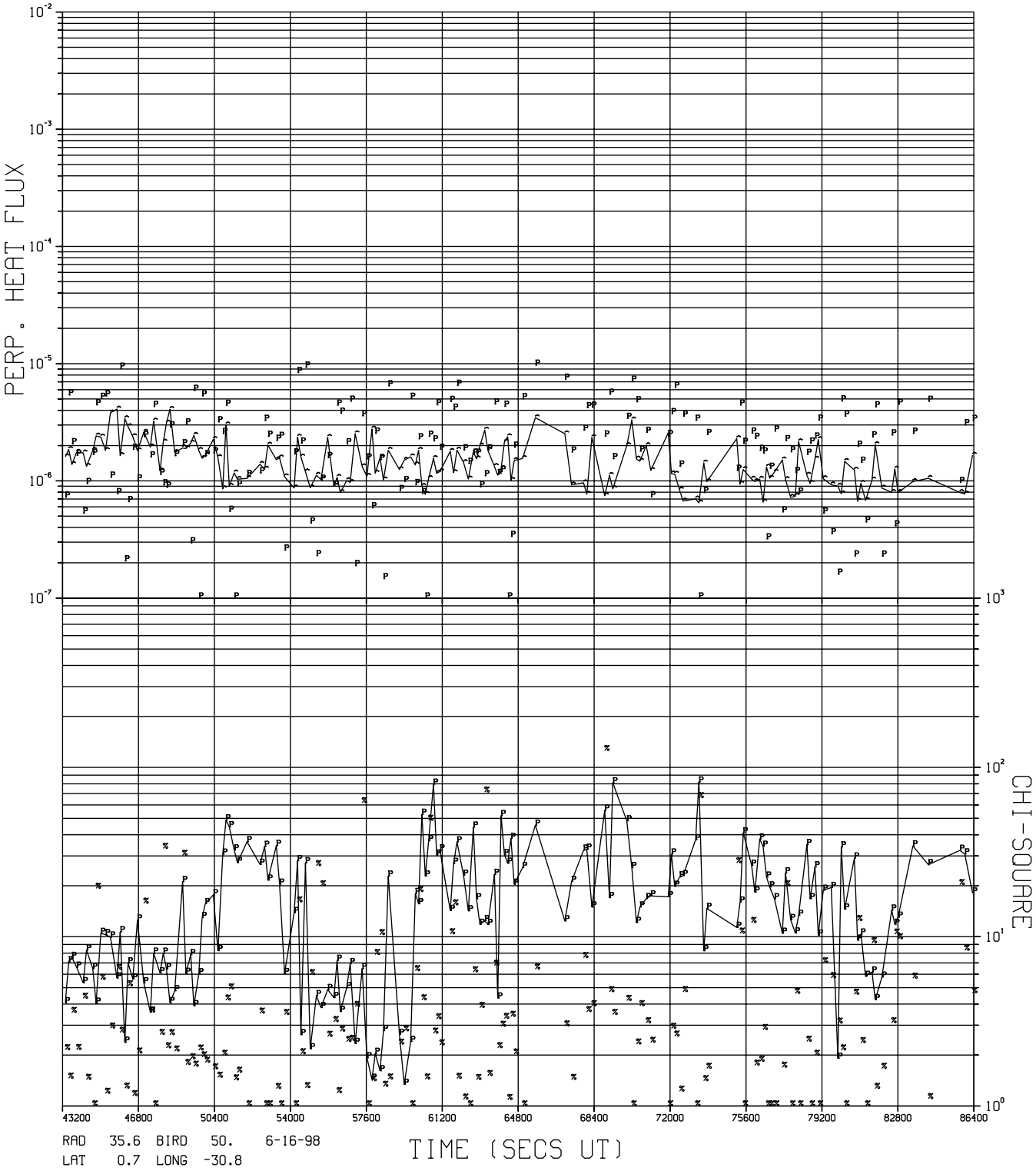

DENSITY
DENSITY RATIO
TIME (SECS UT)
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 35.6 BIRD 50. 6-16-98
LAT 0.7 LONG -30.8

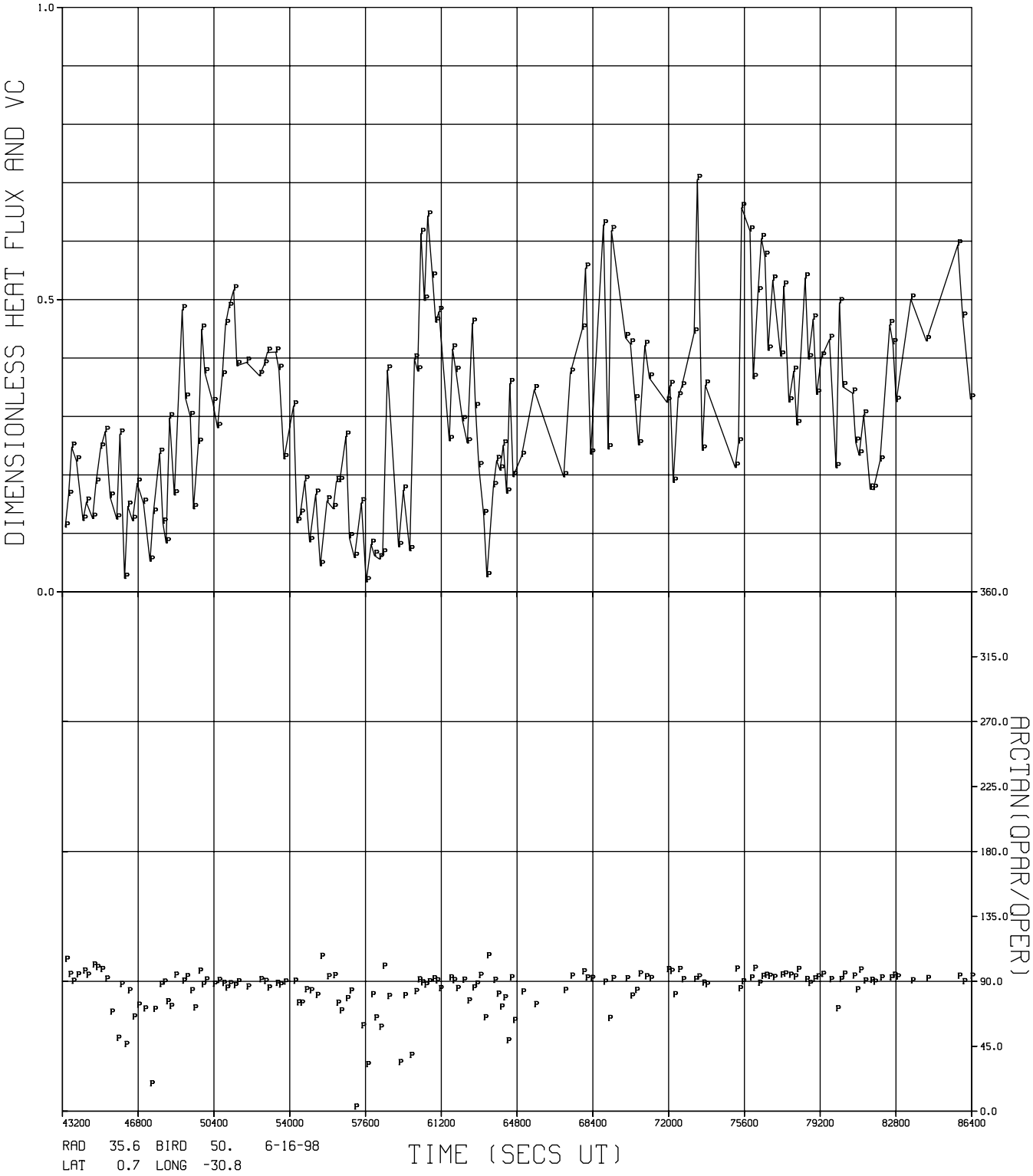

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 35.6 BIRD 50. 6-16-98
LAT 0.7 LONG -30.8
TIME (SECS UT)

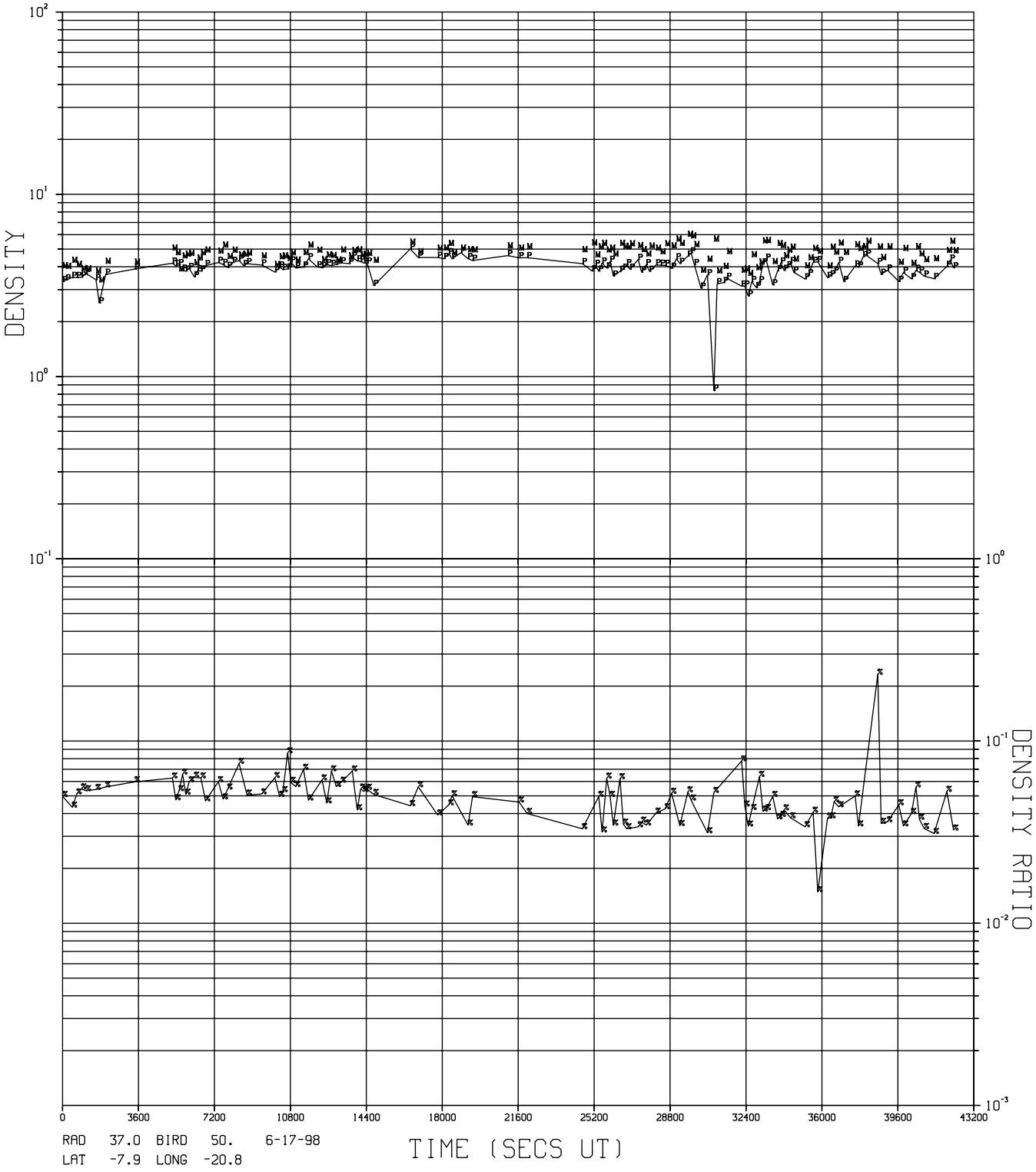

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 35.6 BIRD 50. 6-16-98
LAT 0.7 LONG -30.8

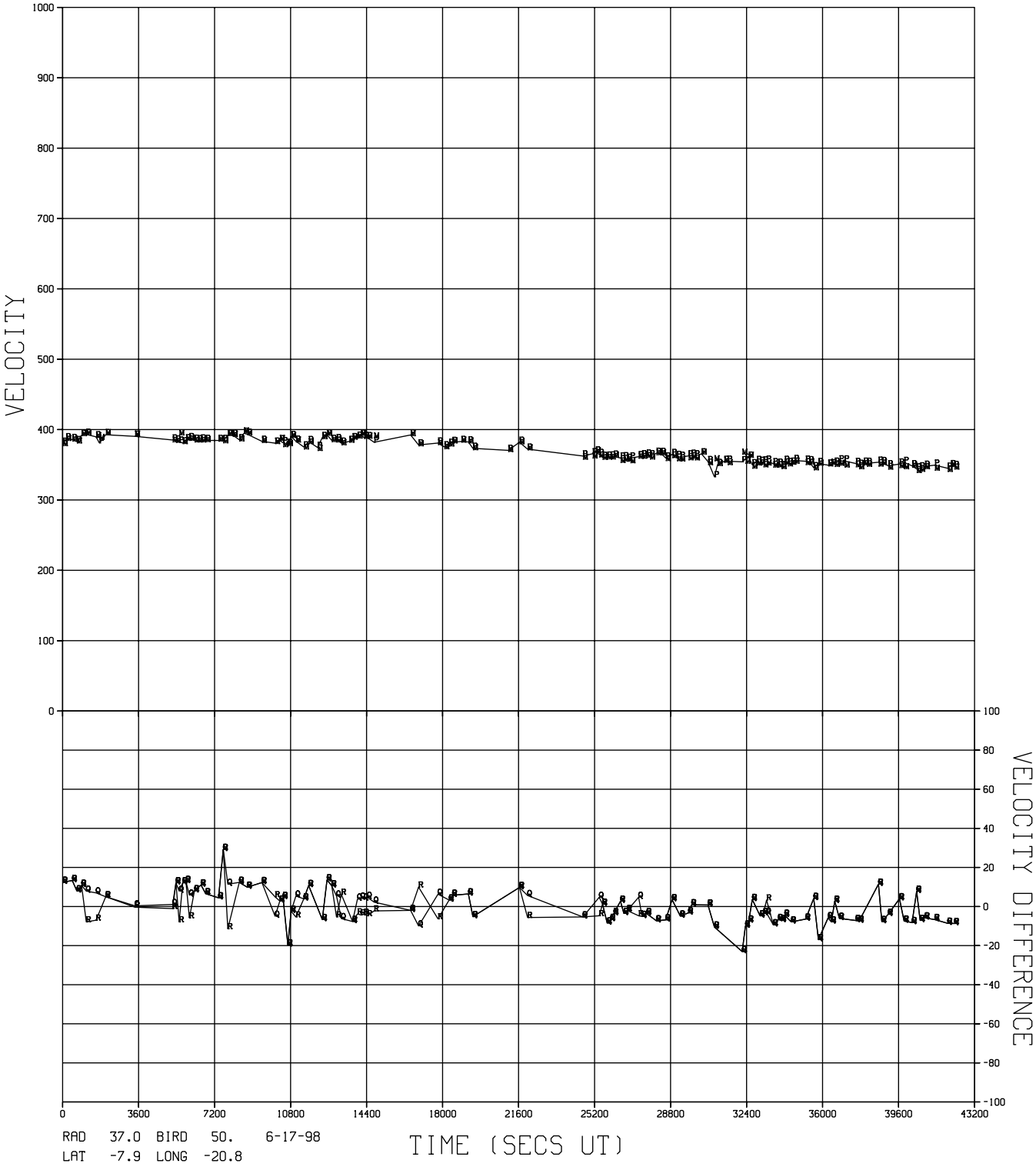

TEMPERATURE
TEMPERATURE RATIO
TIME (SECS UT)
RAD 35.6 BIRD 50. 6-16-98
LAT 0.7 LONG -30.8

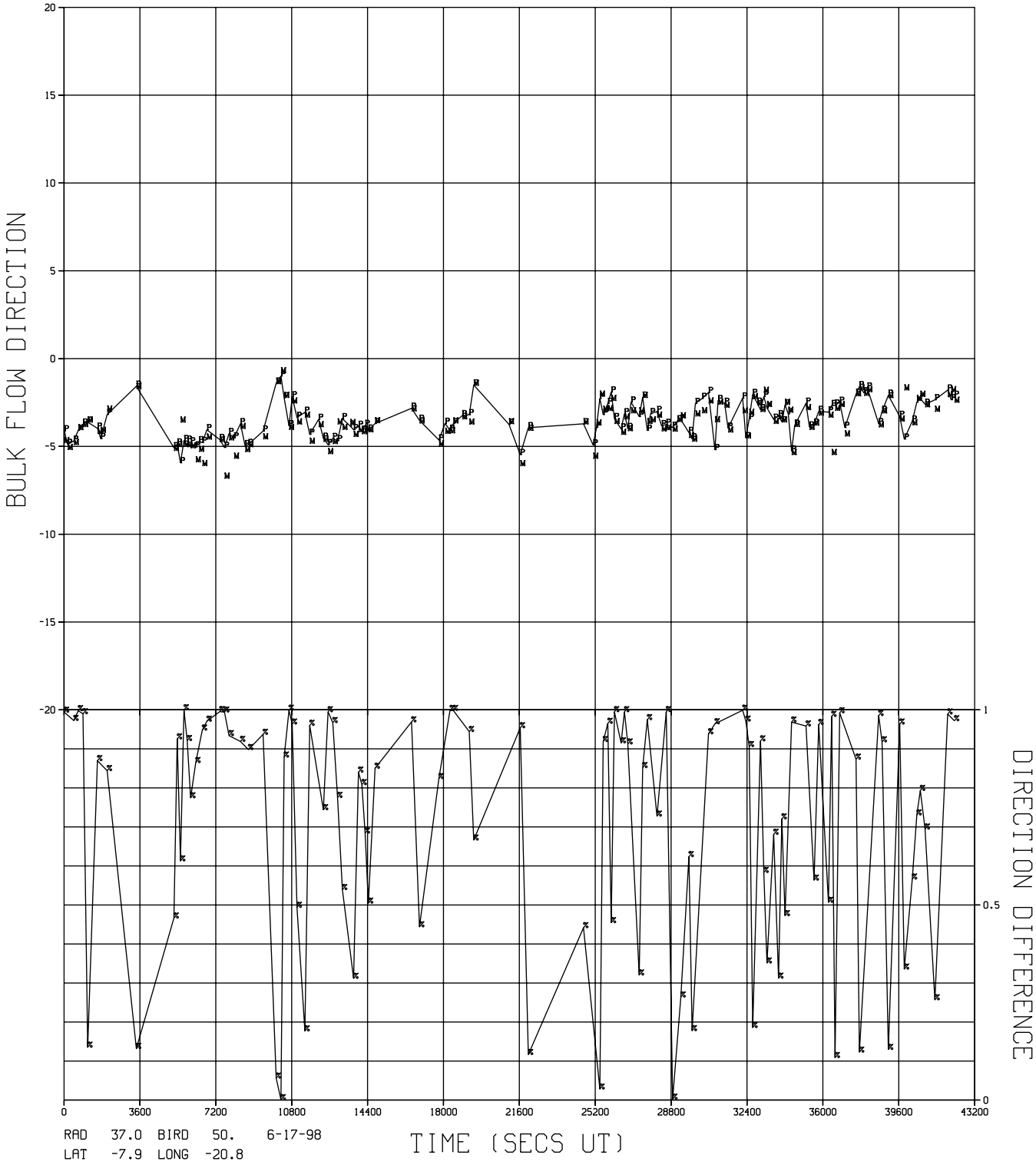

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 35.6 BIRD 50. 6-16-98
LAT 0.7 LONG -30.8

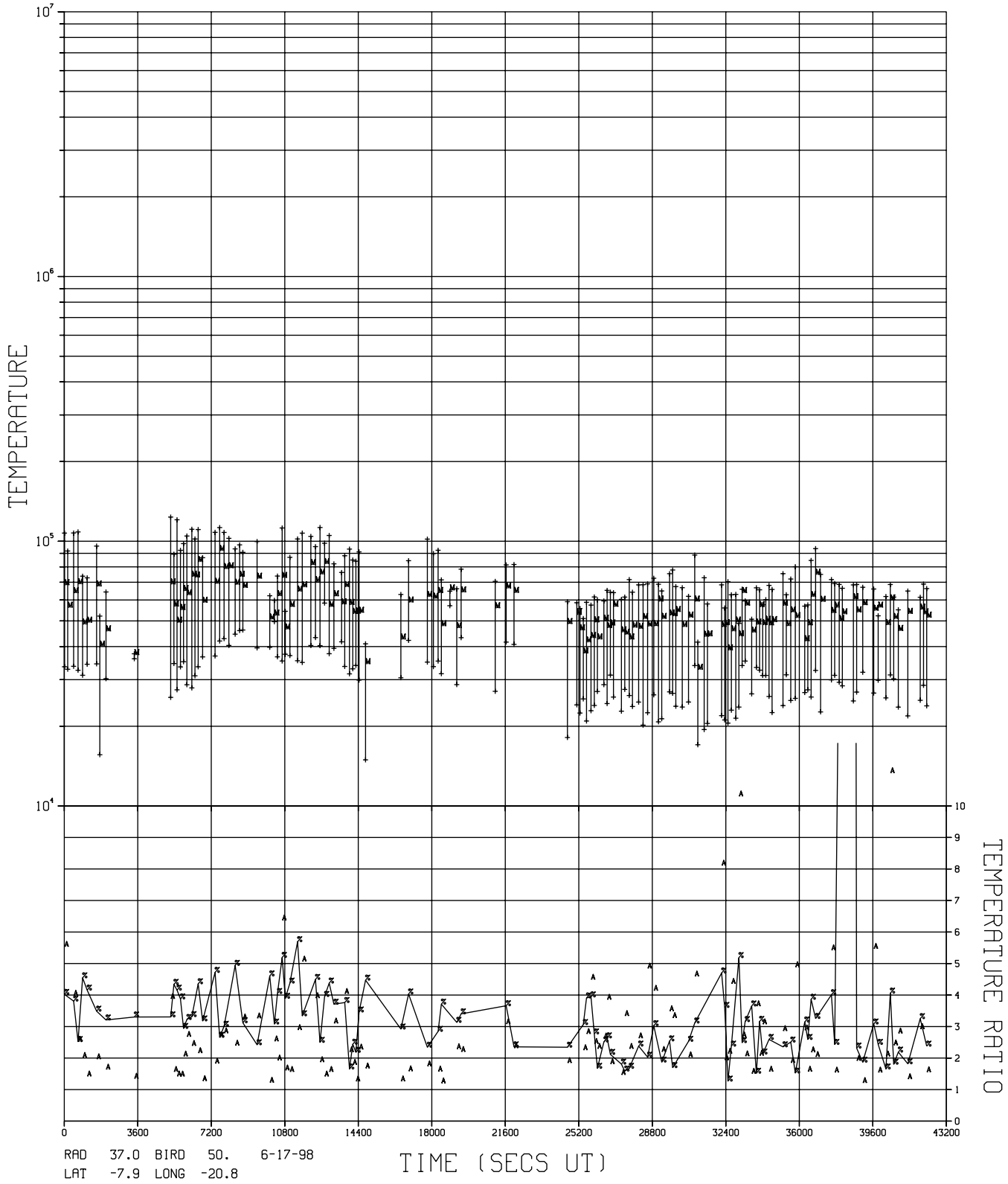

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 35.6 BIRD 50. 6-16-98
LAT 0.7 LONG -30.8

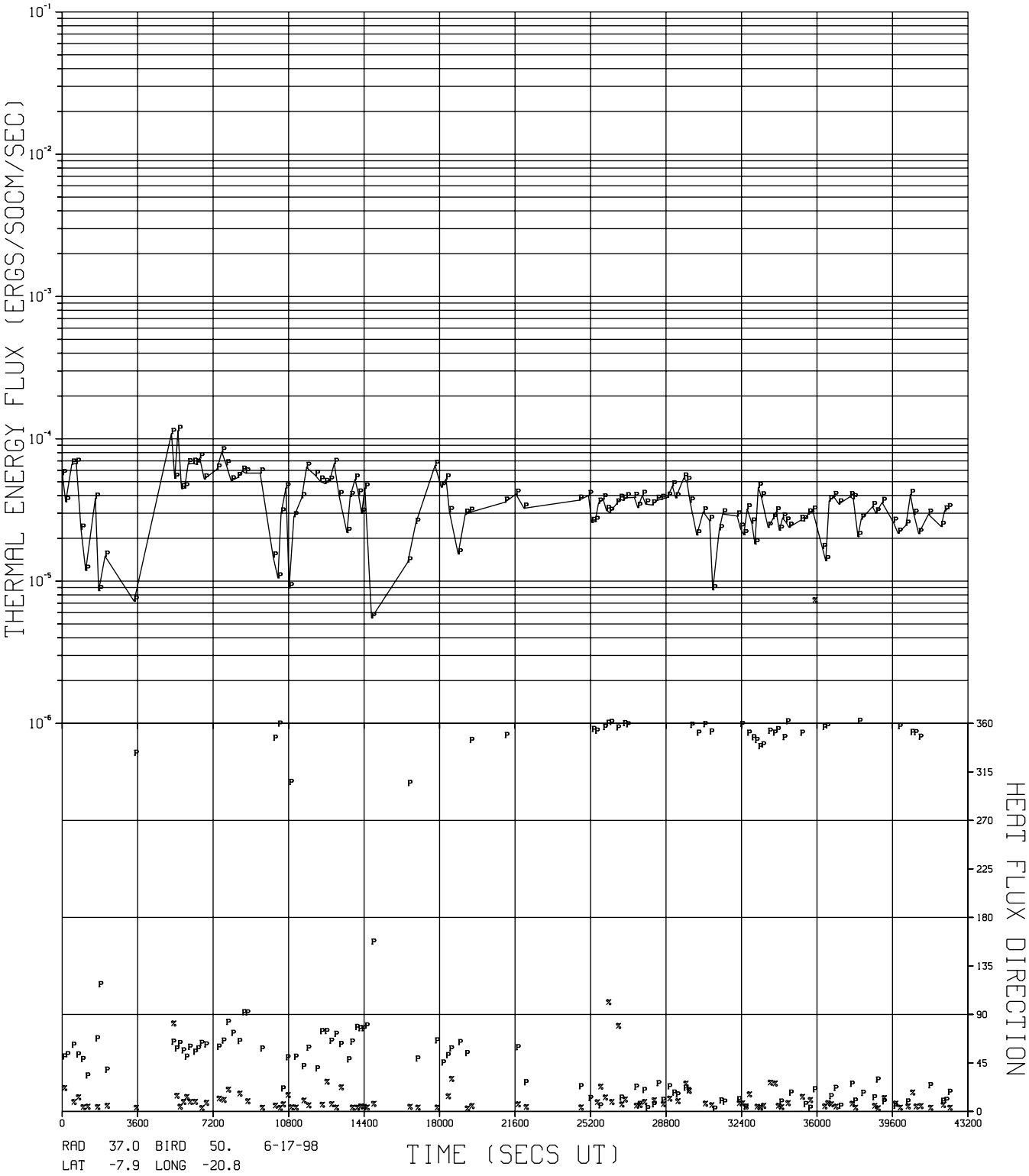

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 35.6 BIRD 50. 6-16-98
LAT 0.7 LONG -30.8

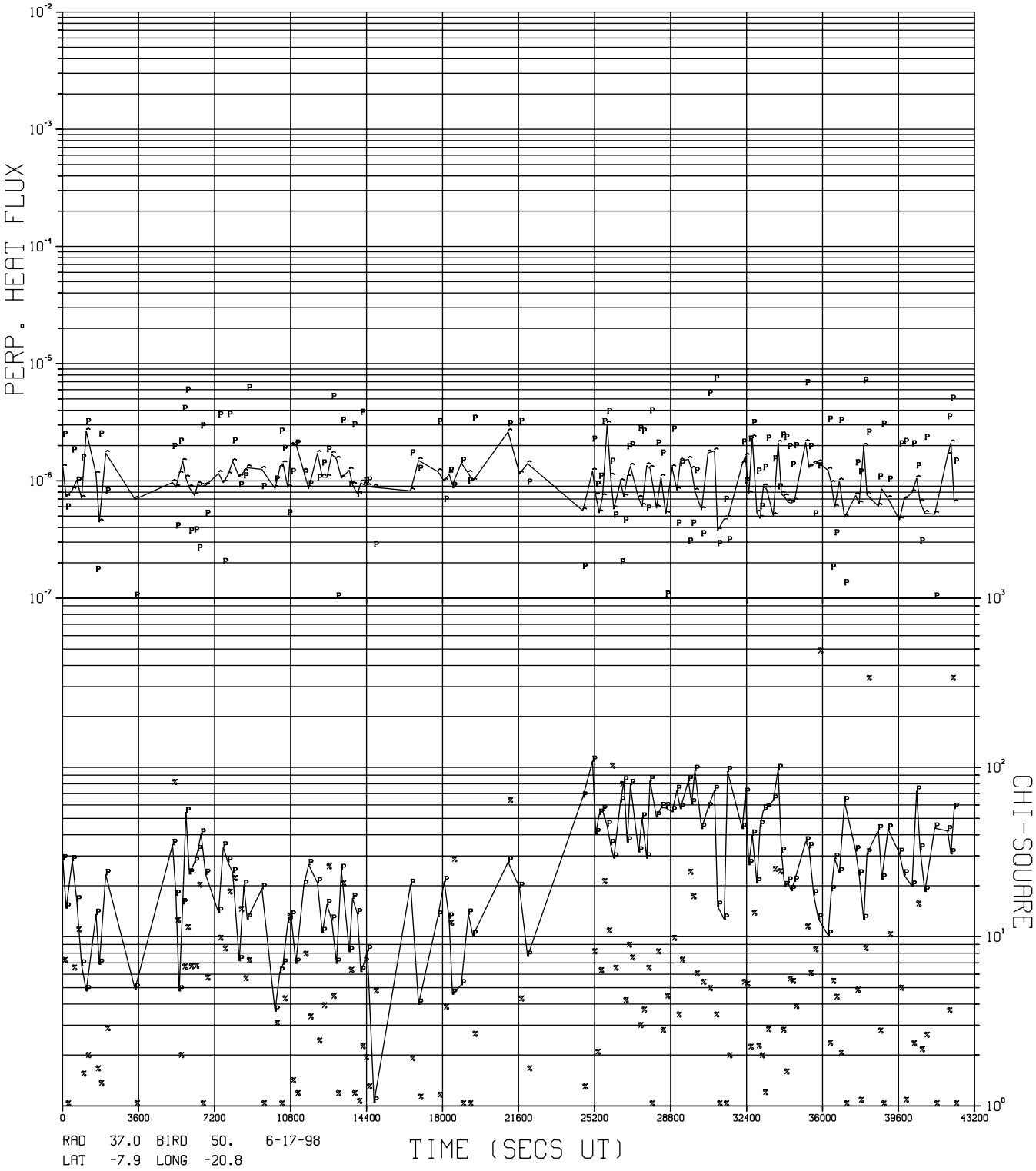

DENSITY
DENSITY RATIO
TIME (SECS UT)
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 37.0 BIRD 50. 6-17-98
LAT -7.9 LONG -20.8

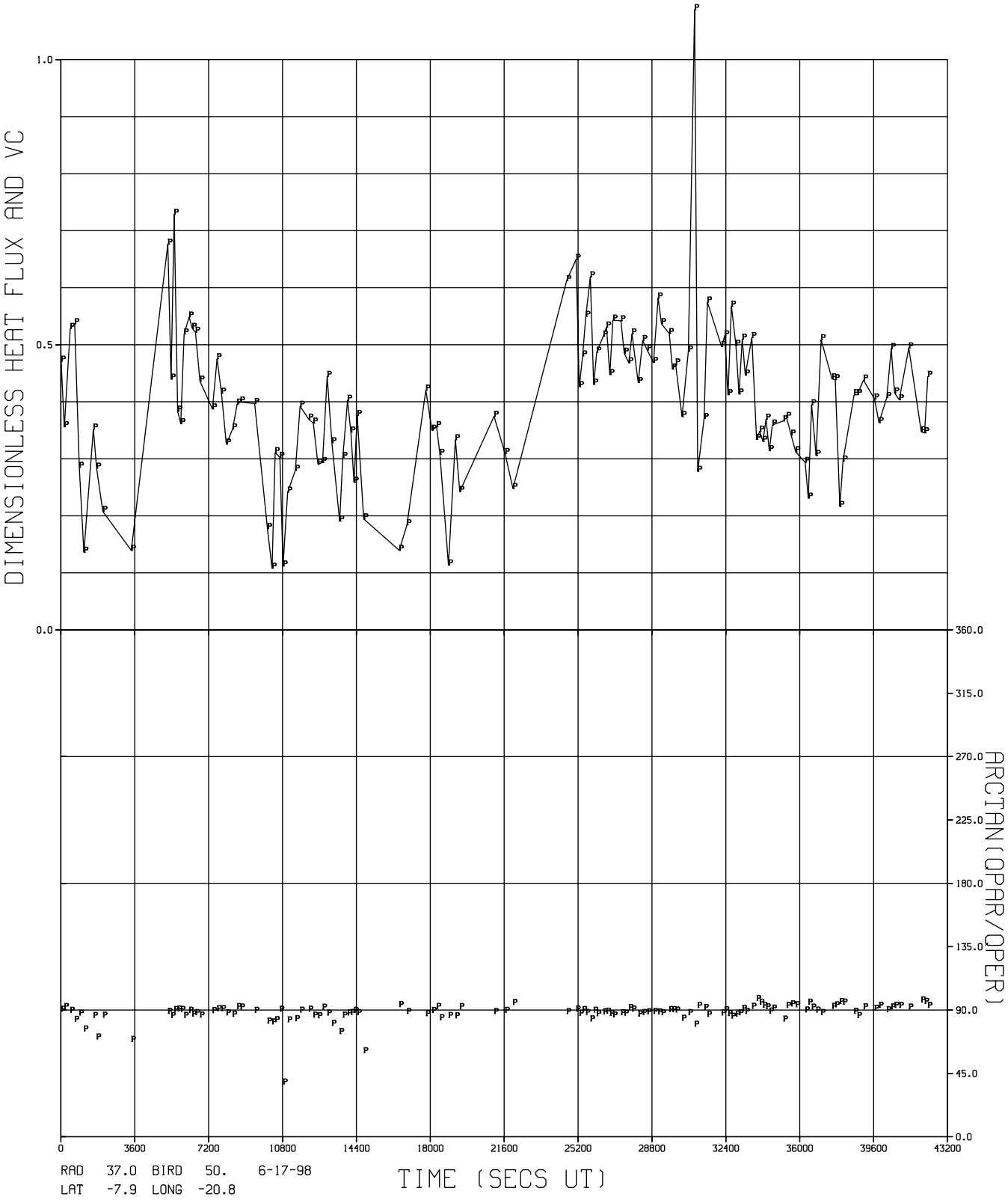

VELOCITY
VELOCITY DIFFERENCE
TIME (SECS UT)
RAD 37.0 BIRD 50. 6-17-98
LAT -7.9 LONG -20.8

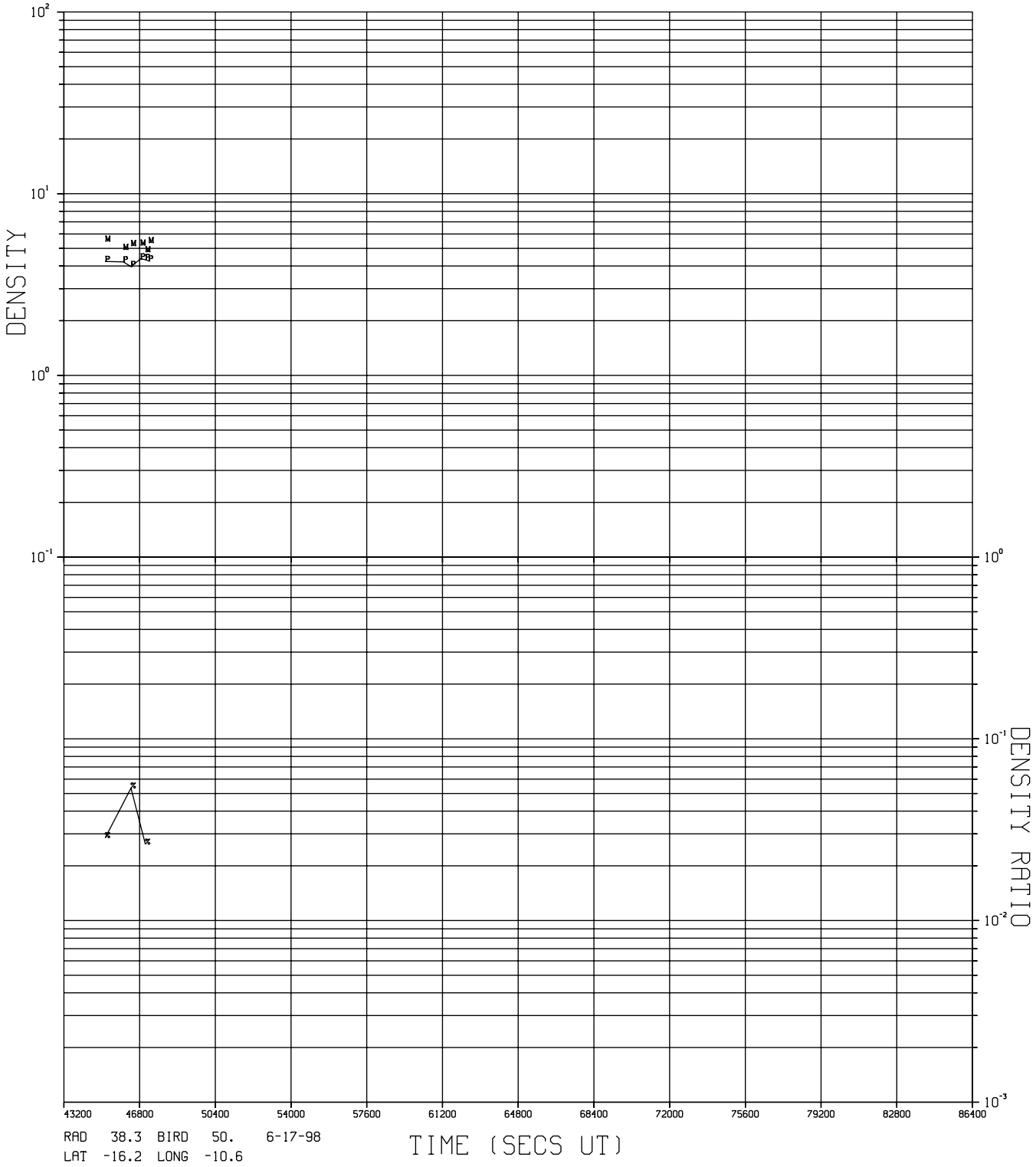

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 37.0 BIRD 50. 6-17-98
LAT -7.9 LONG -20.8

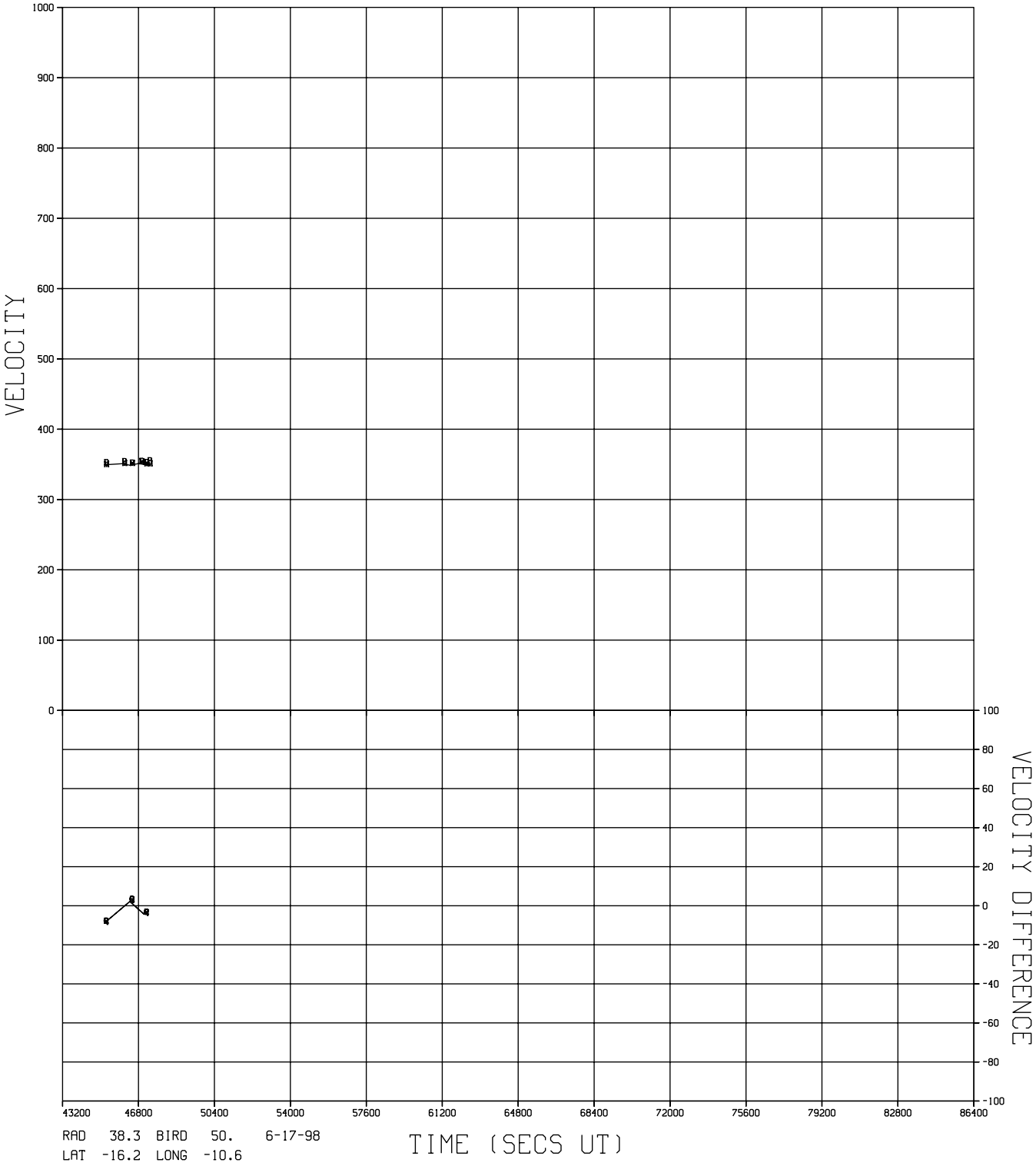

TEMPERATURE
TEMPERATURE RATIO
TIME (SECS UT)
RAD 37.0 BIRD 50. 6-17-98
LAT -7.9 LONG -20.8

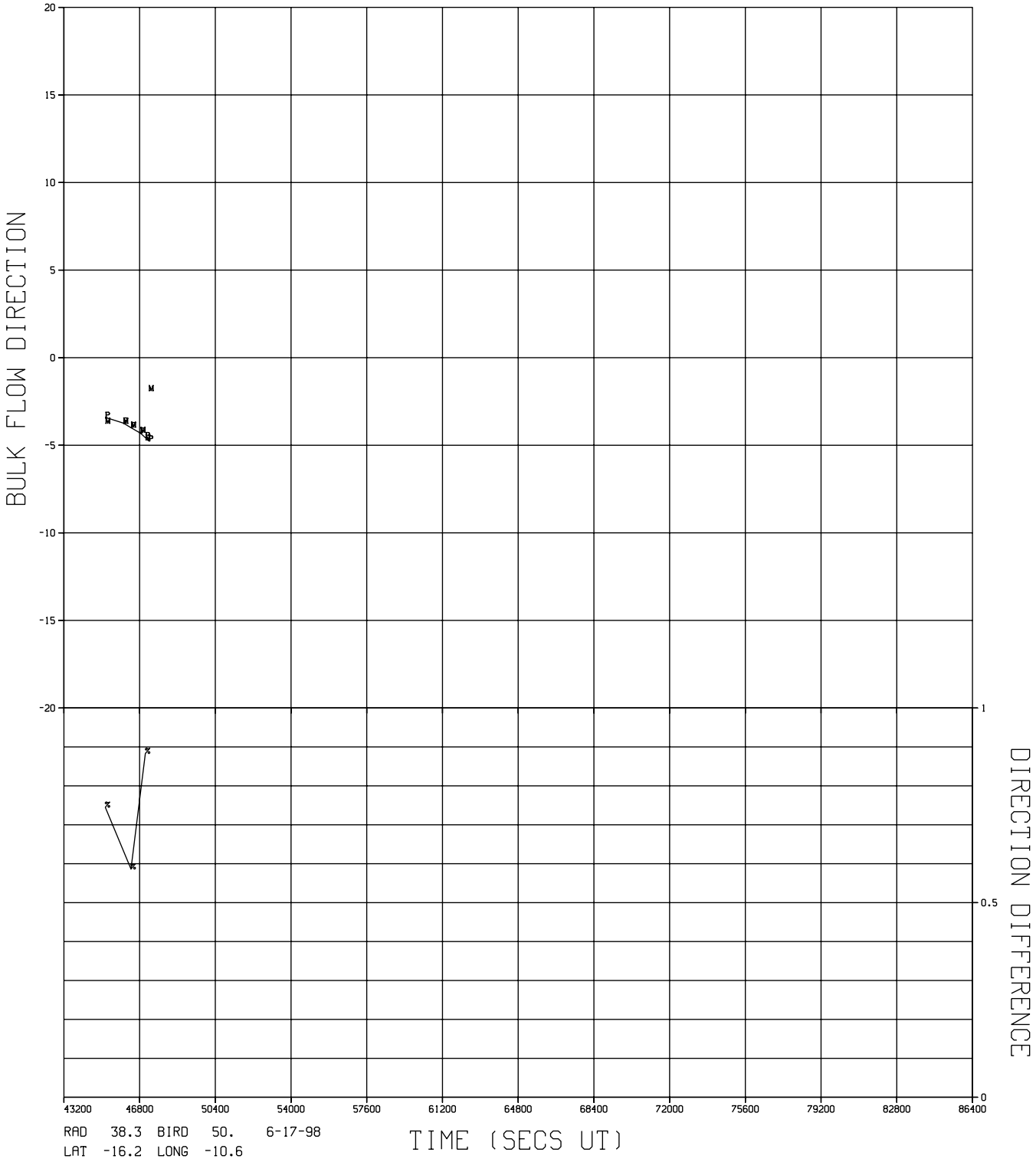

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 37.0 BIRD 50. 6-17-98
LAT -7.9 LONG -20.8

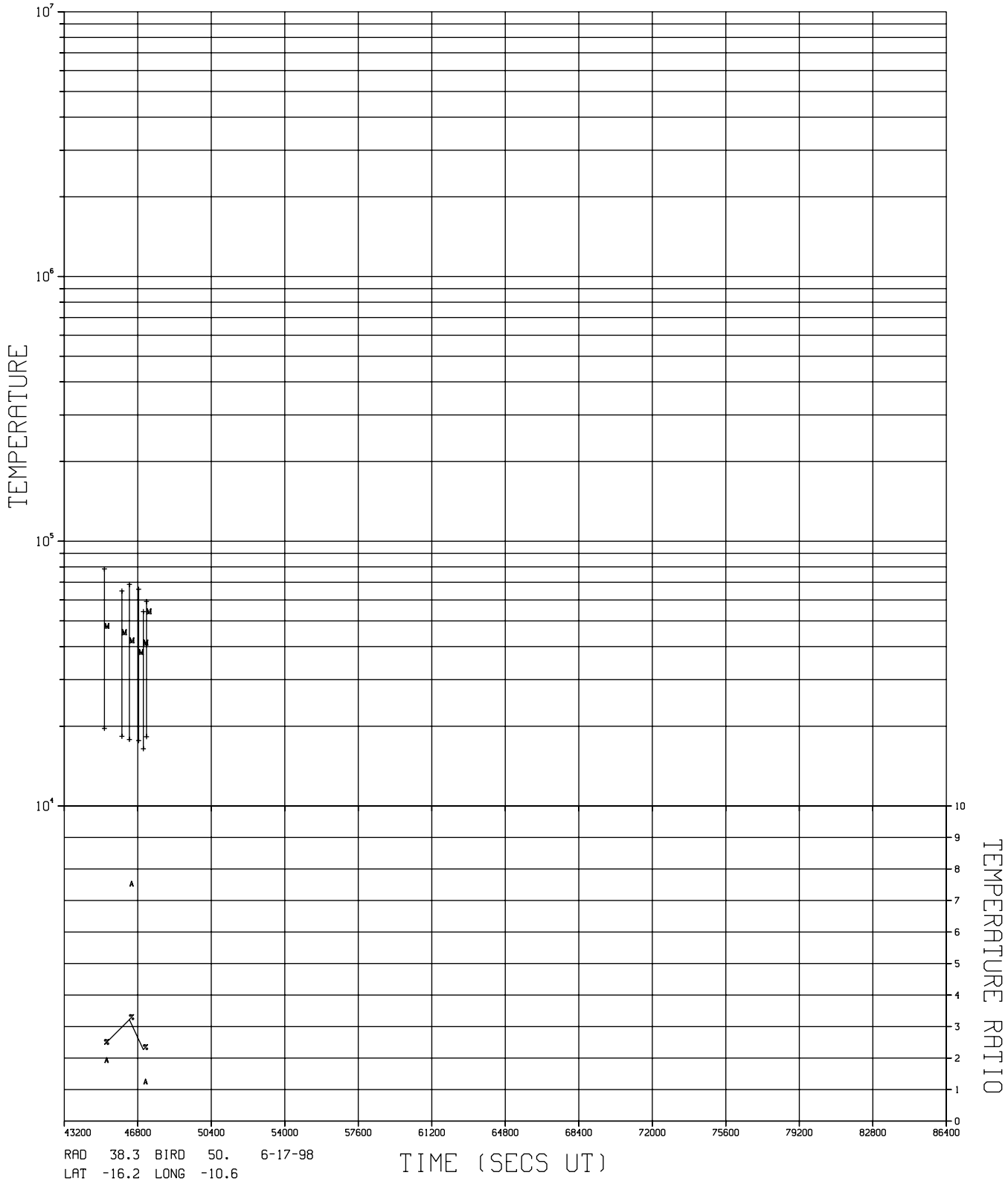

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 37.0 BIRD 50. 6-17-98
LAT -7.9 LONG -20.8

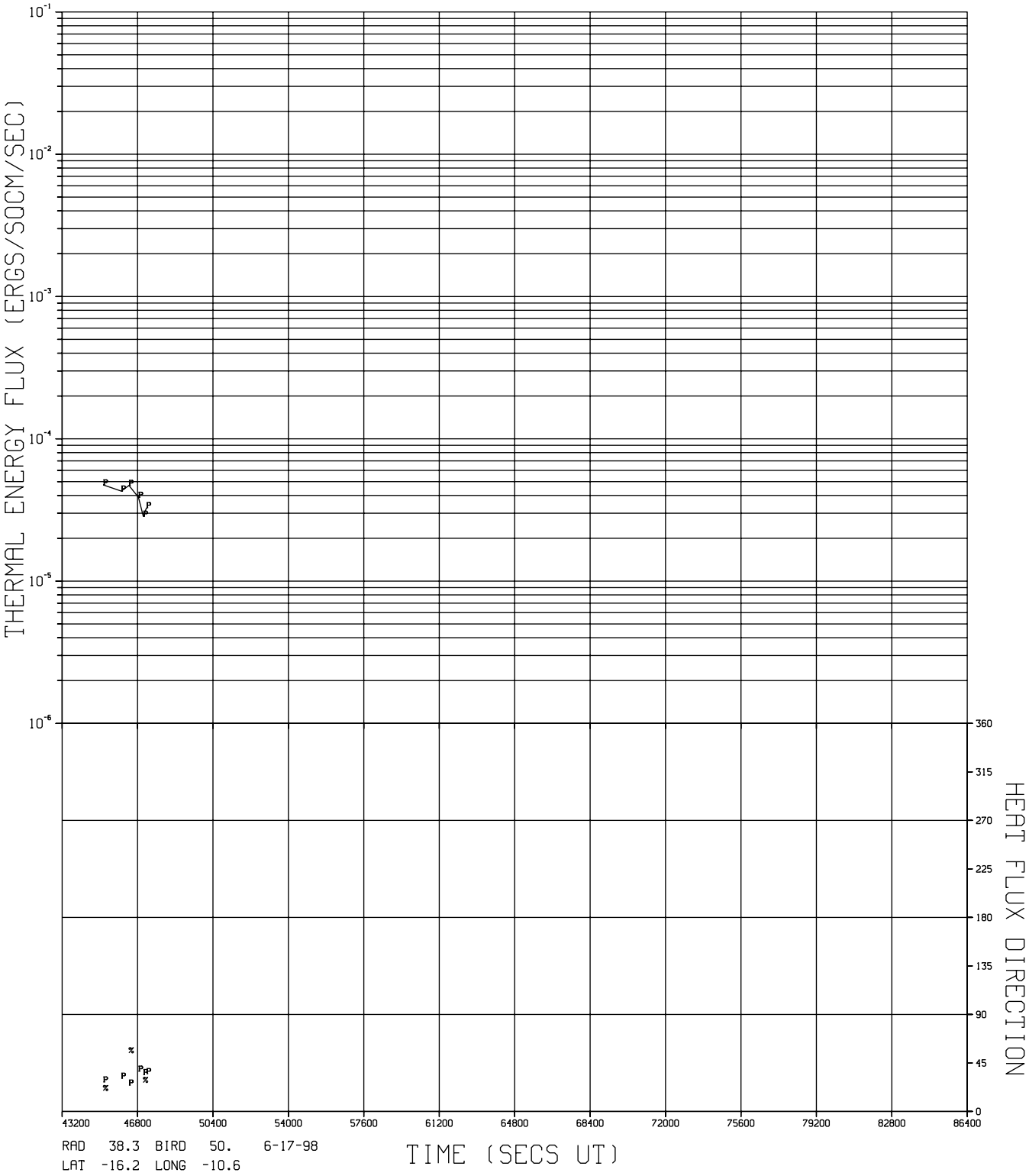

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 37.0 BIRD 50. 6-17-98
LAT -7.9 LONG -20.8

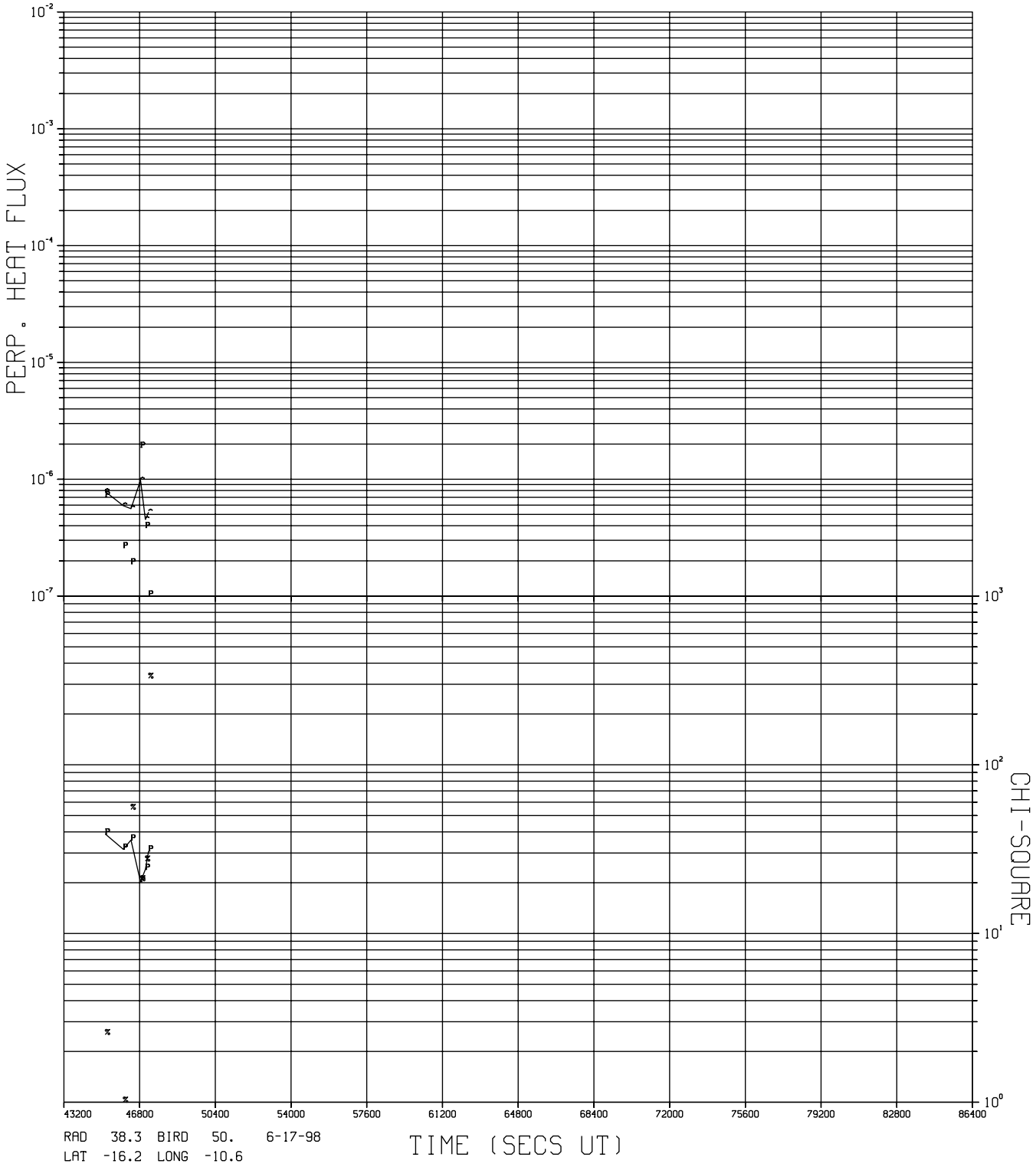

DENSITY
DENSITY RATIO
TIME (SECS UT)
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 38.3 BIRD 50. 6-17-98
LAT -16.2 LONG -10.6

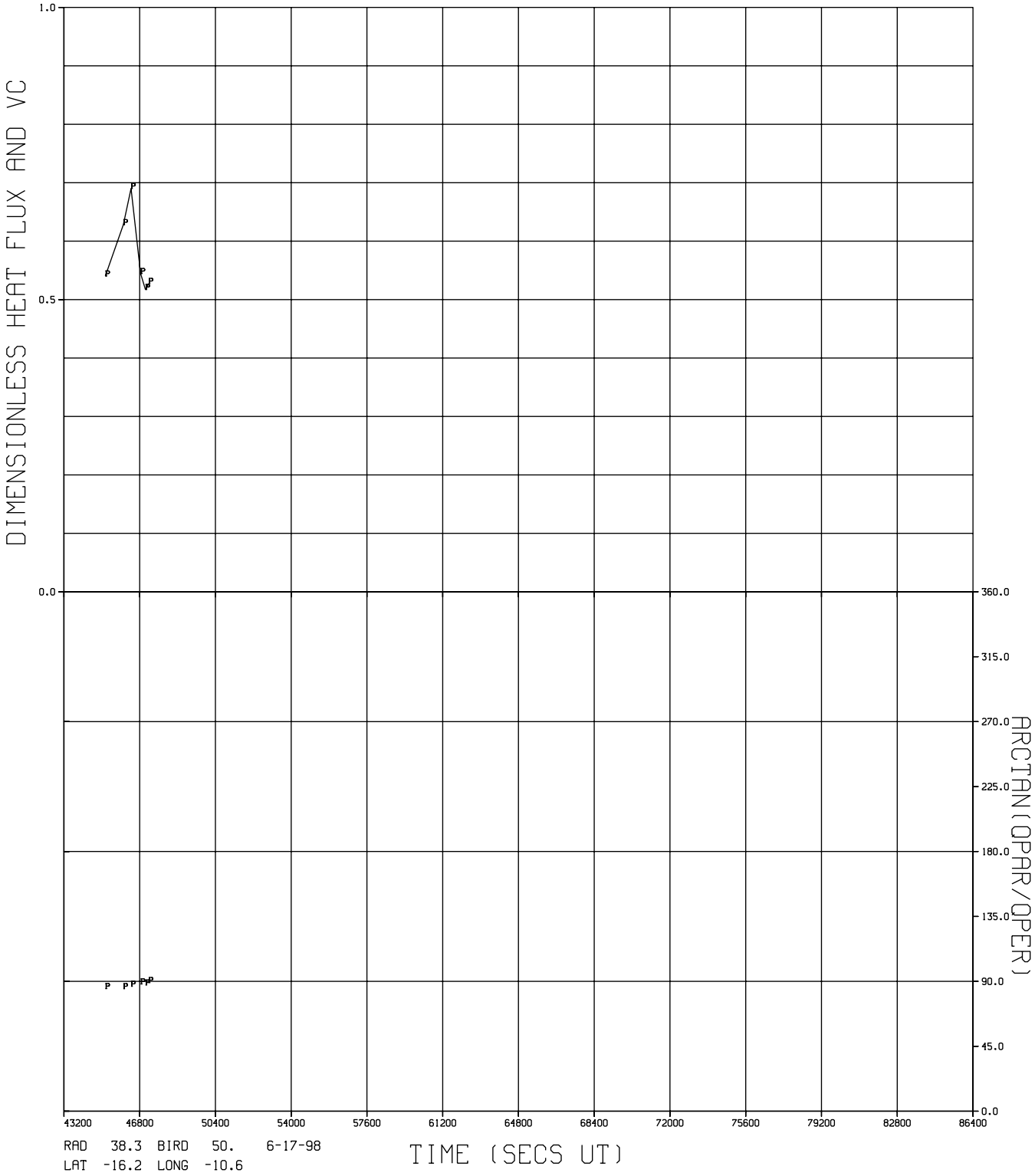

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 38.3 BIRD 50. 6-17-98
LAT -16.2 LONG -10.6


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 38.3 BIRD 50. 6-17-98
LAT -16.2 LONG -10.6


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 38.3 BIRD 50. 6-17-98
LAT -16.2 LONG -10.6


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 38.3 BIRD 50. 6-17-98
LAT -16.2 LONG -10.6


PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 38.3 BIRD 50. 6-17-98
LAT -16.2 LONG -10.6


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 38.3 BIRD 50. 6-17-98
LAT -16.2 LONG -10.6