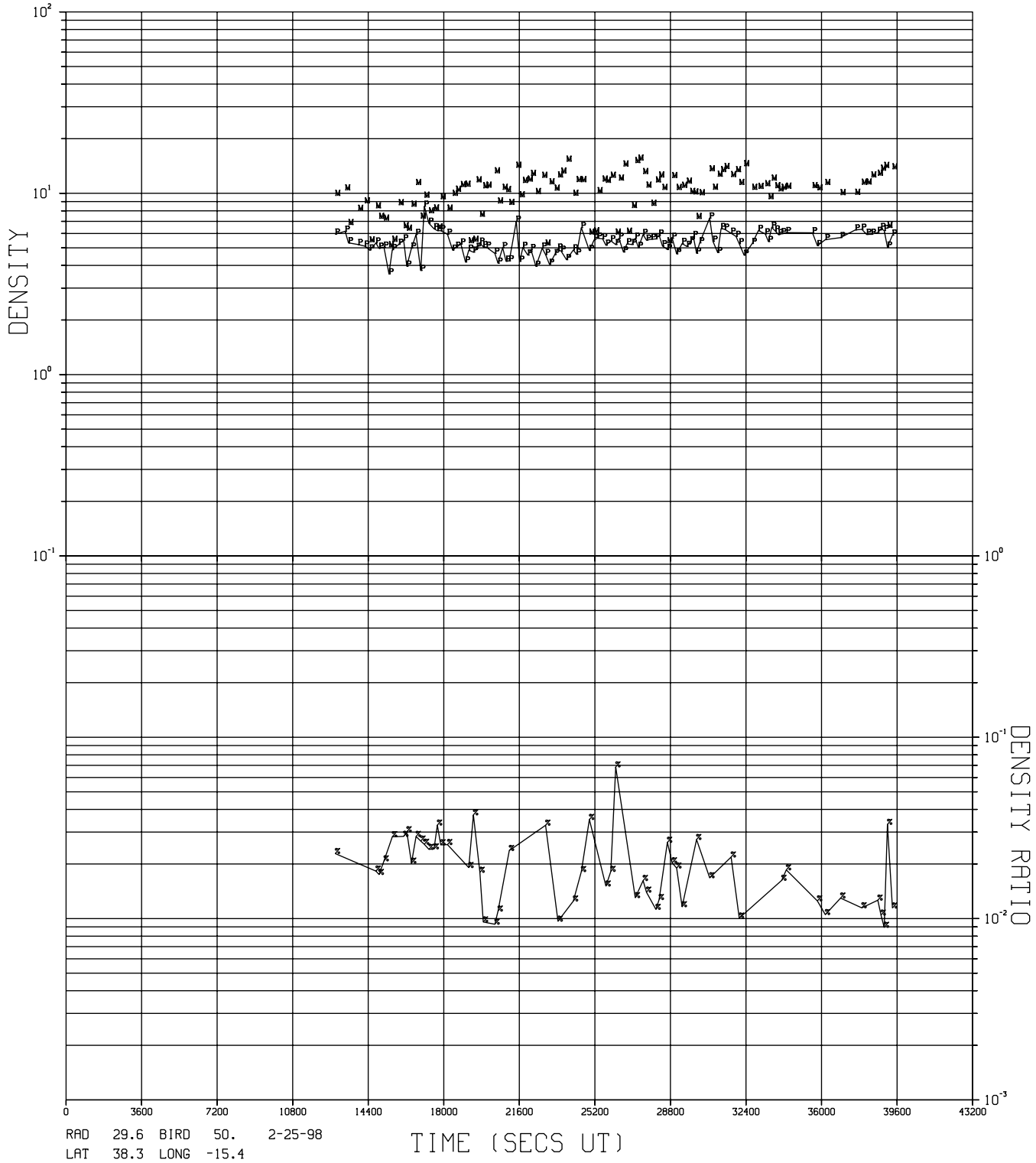
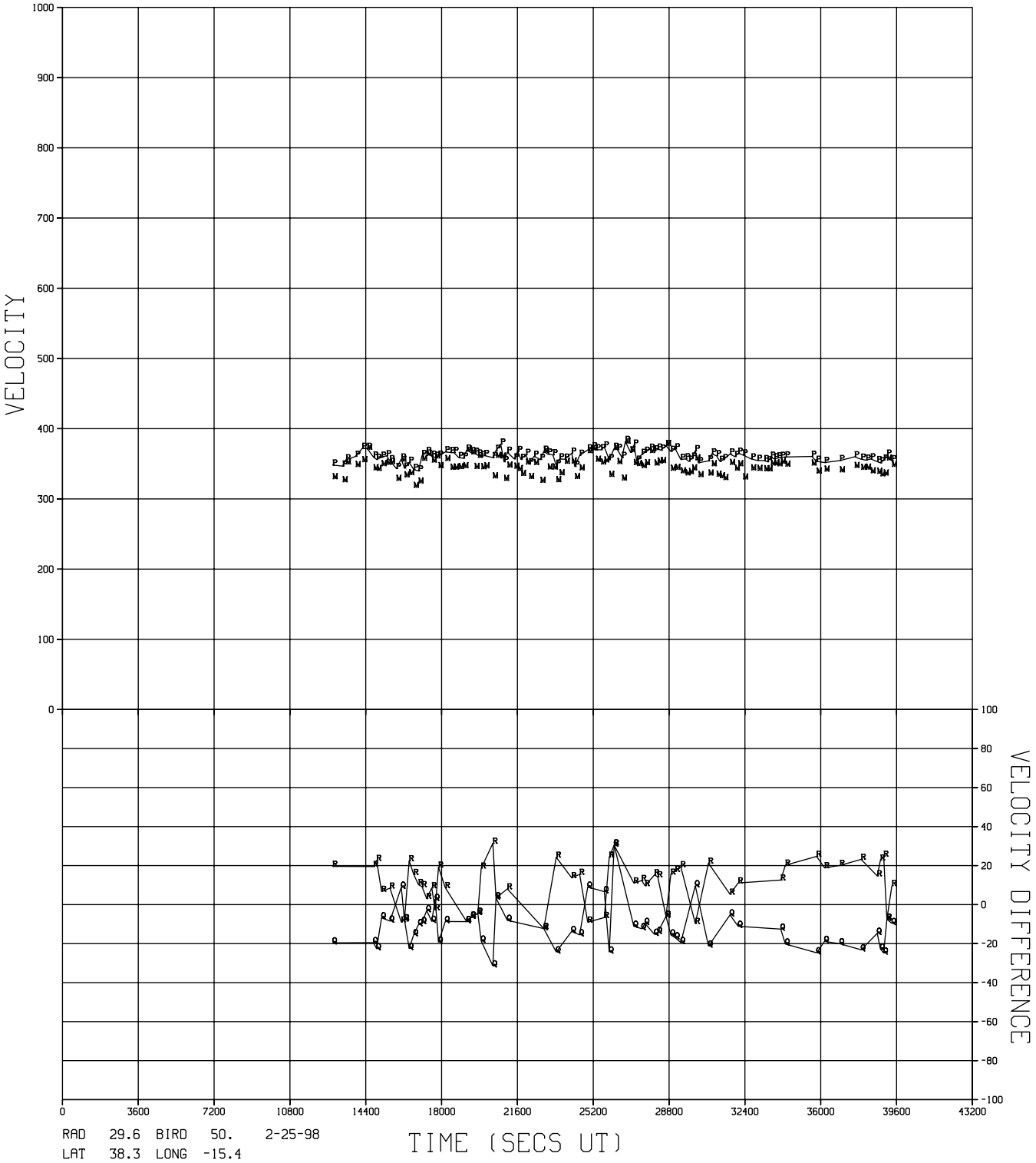
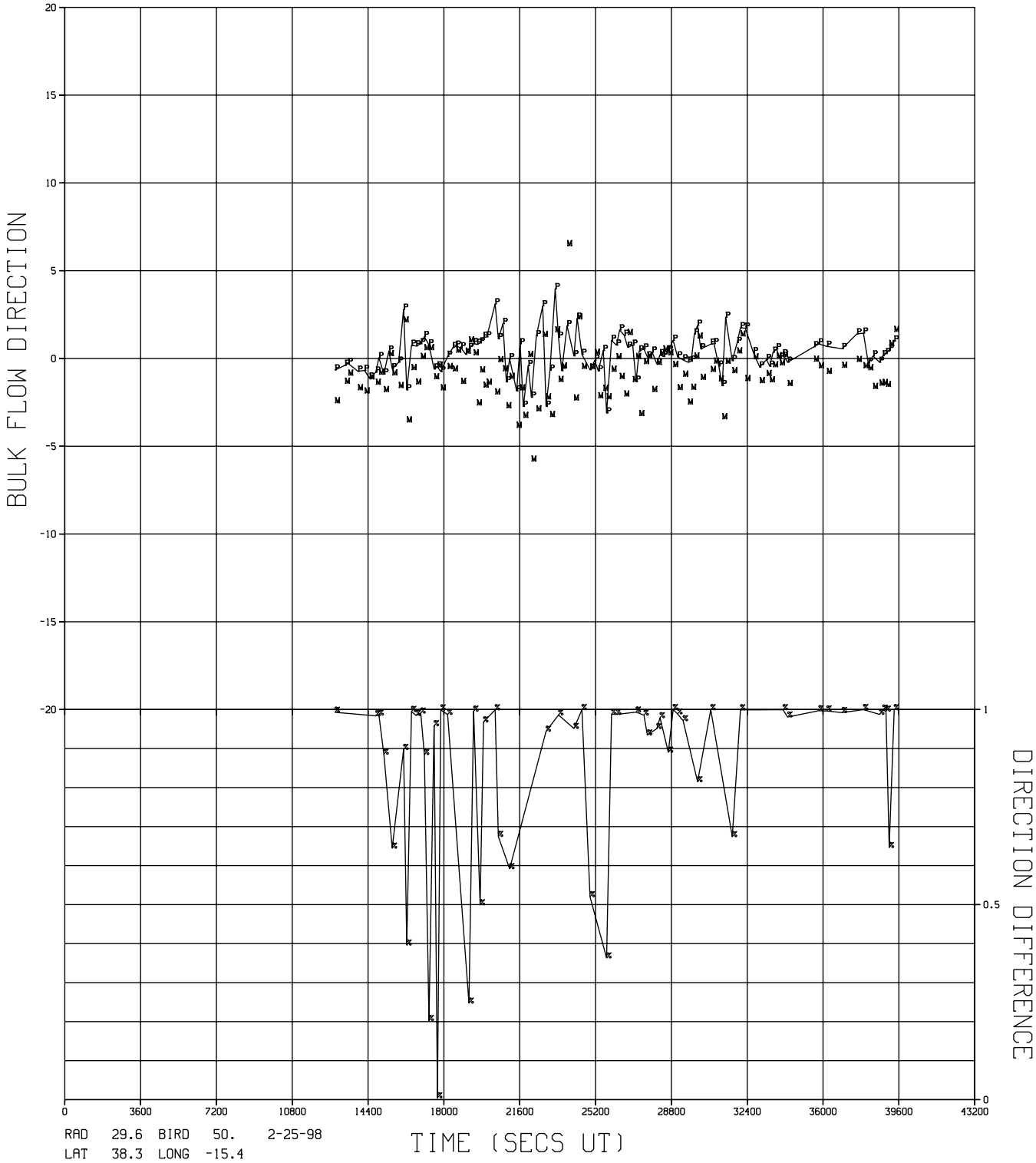
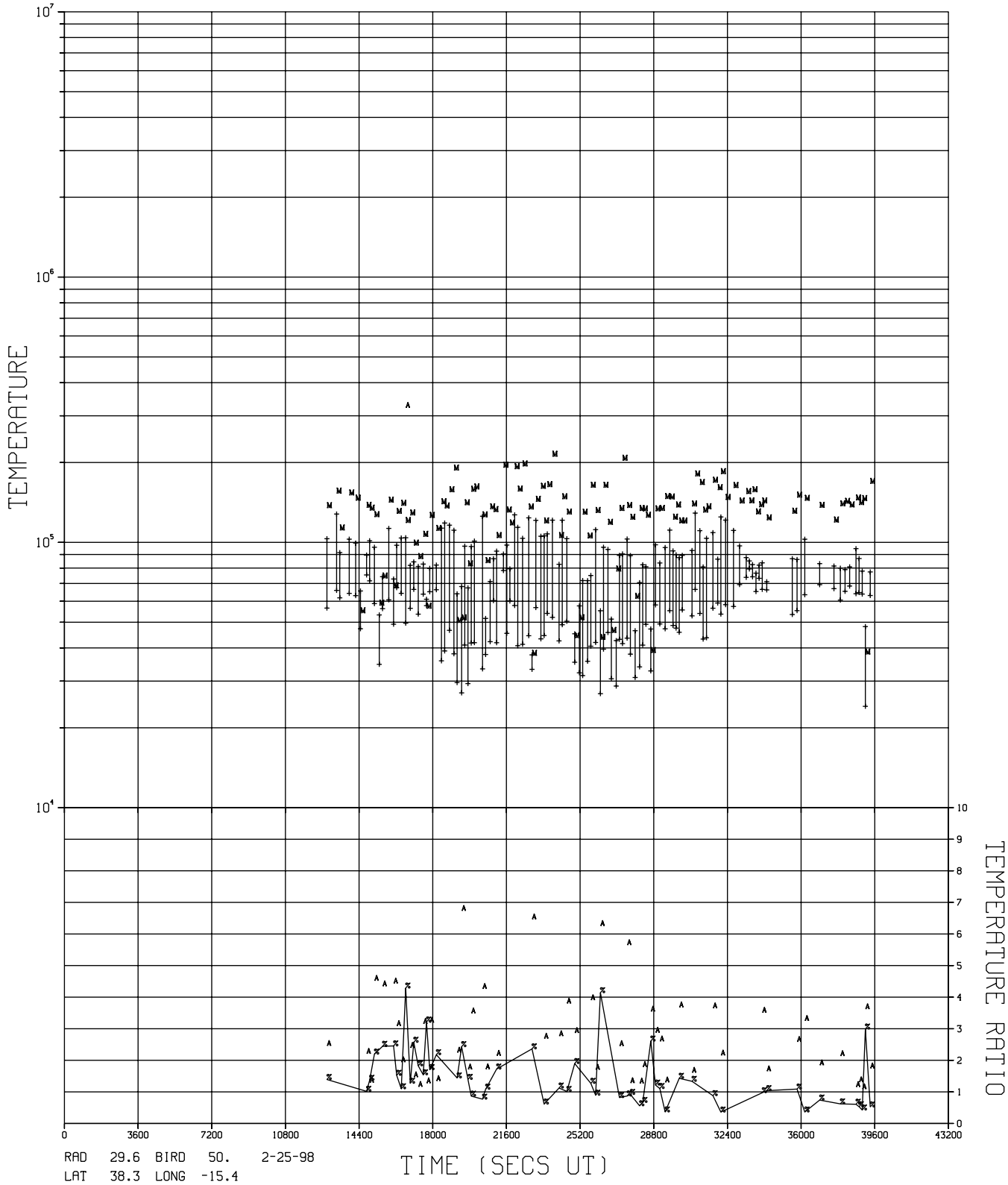
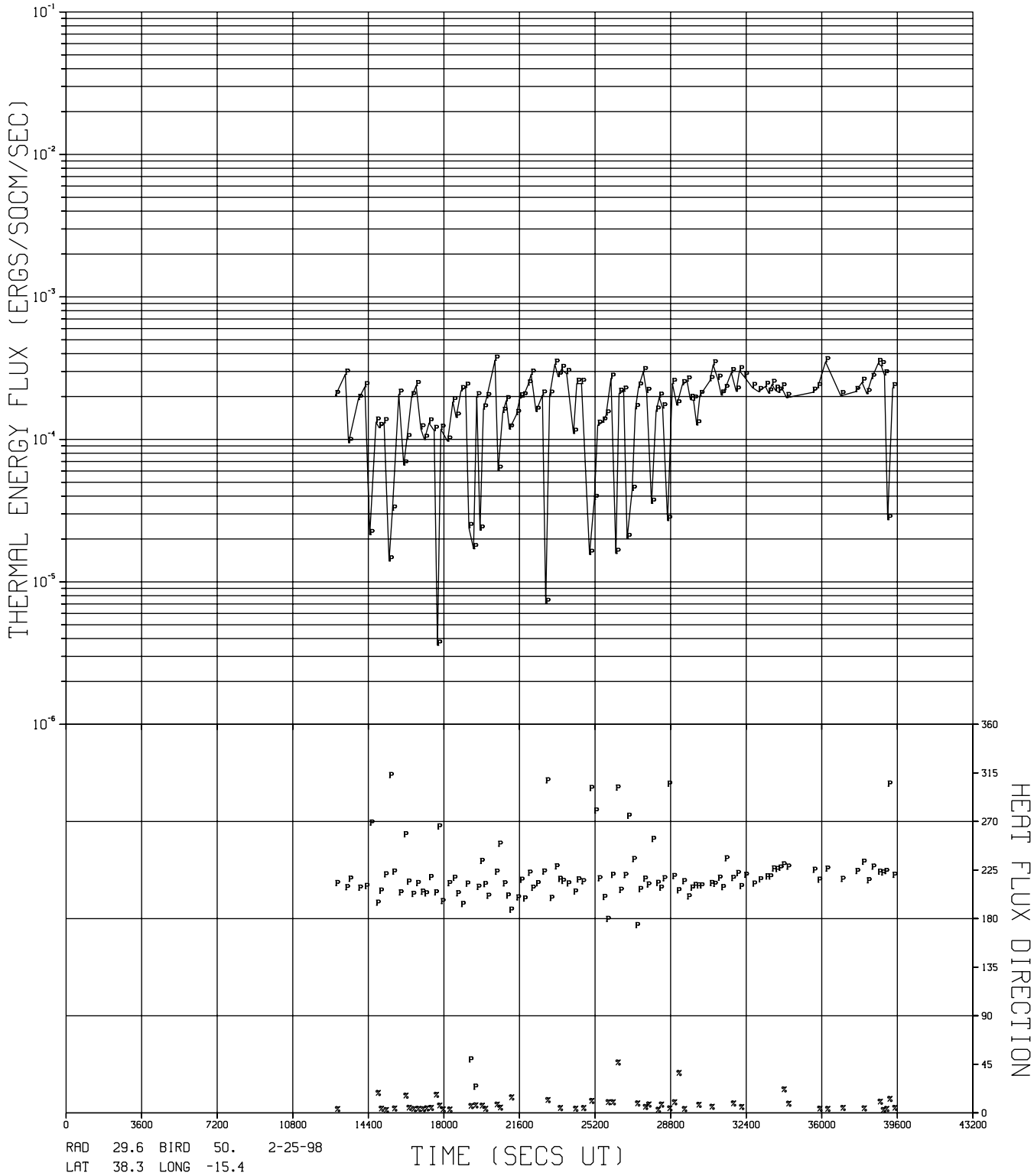
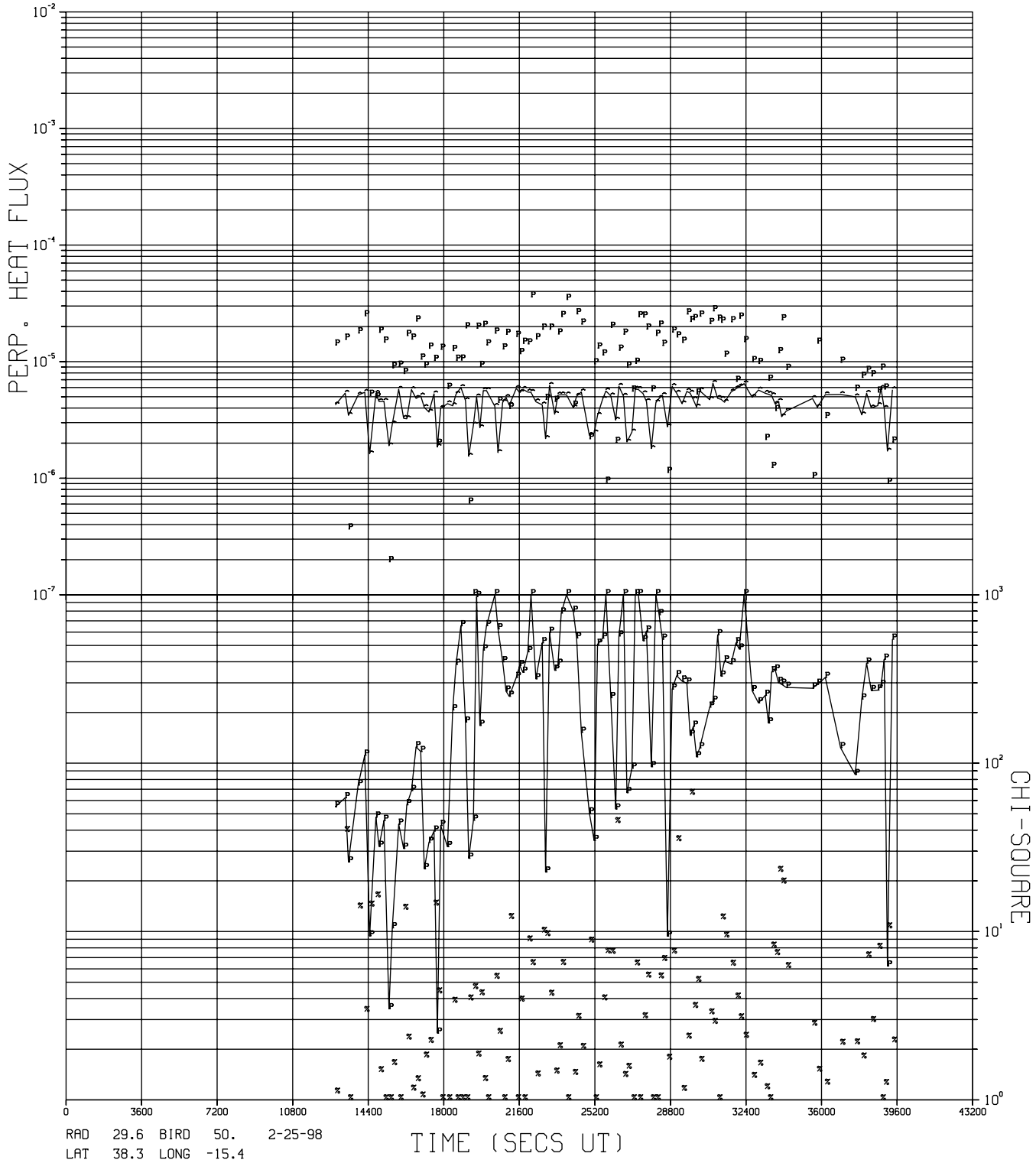

DENSITY
$10^2$
$10^1$
$10^0$
$10^{-1}$
DENSITY RATIO
$10^0$
$10^{-1}$
$10^{-2}$
$10^{-3}$
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 29.6 BIRD 50. 2-25-98
LAT 38.3 LONG -15.4
TIME (SECS UT)

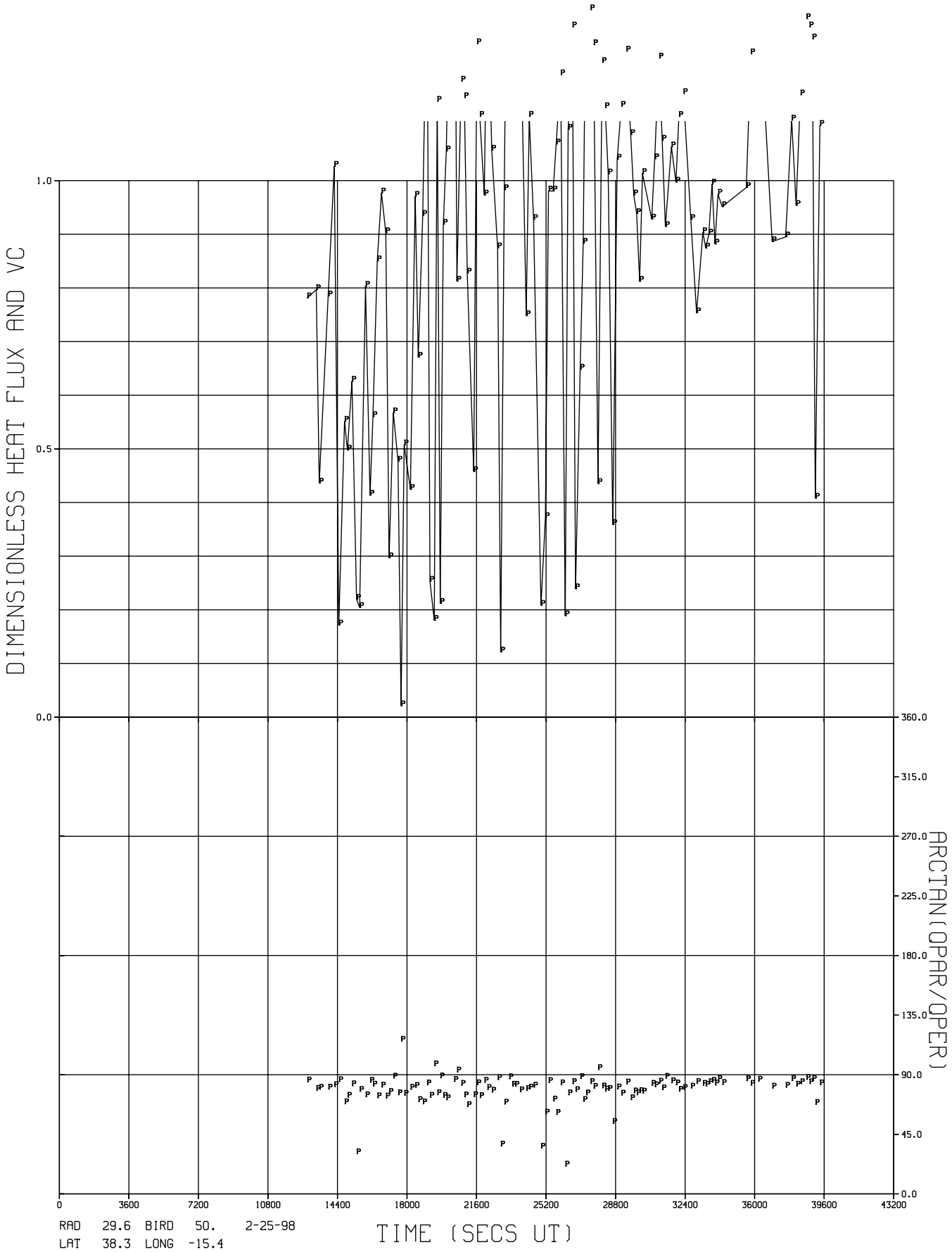

VELOCITY
VELOCITY DIFFERENCE
TIME (SECS UT)
1000
900
800
700
600
500
400
300
200
100
0
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 29.6 BIRD 50. 2-25-98
LAT 38.3 LONG -15.4

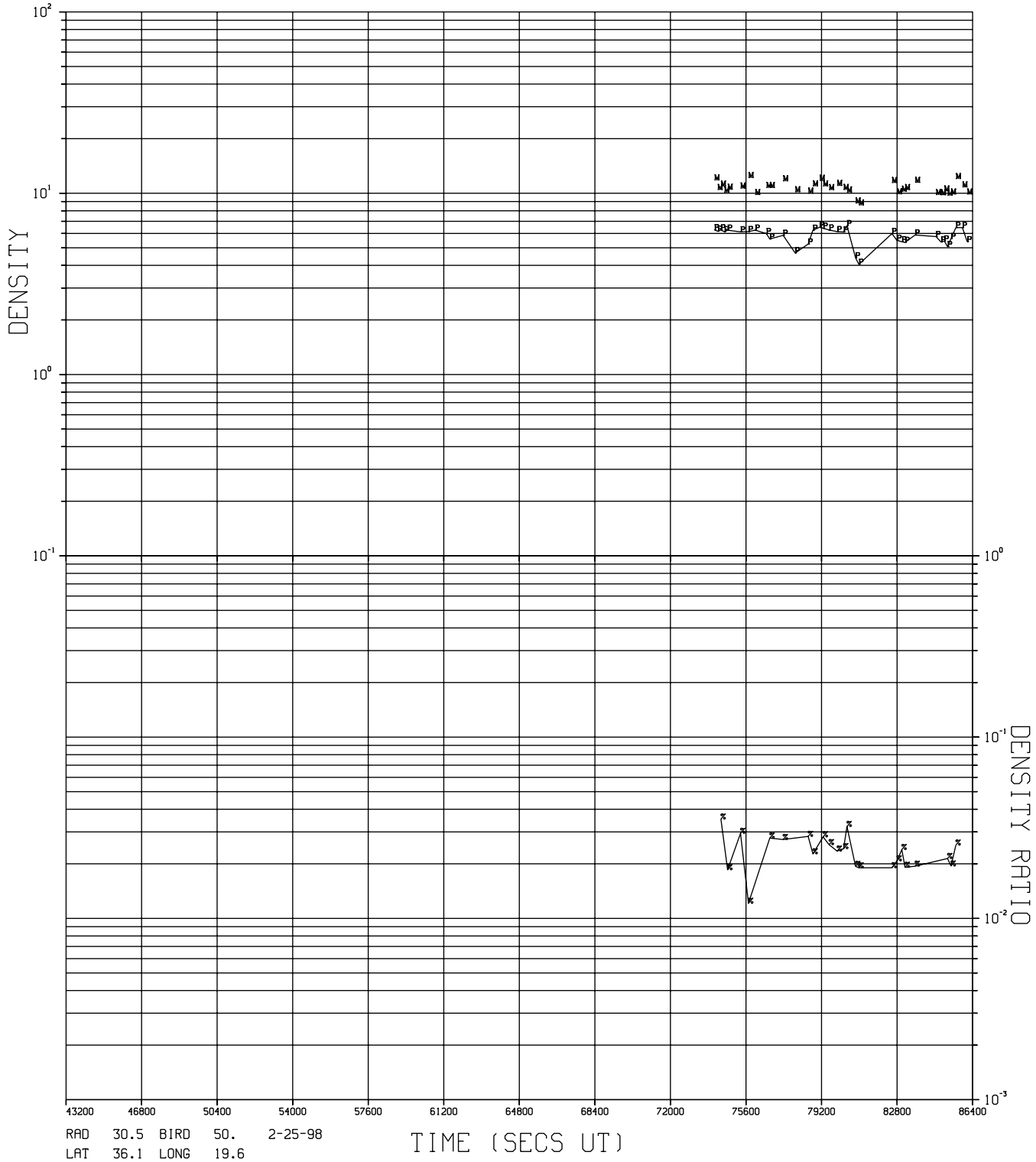

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 29.6 BIRD 50. 2-25-98
LAT 38.3 LONG -15.4

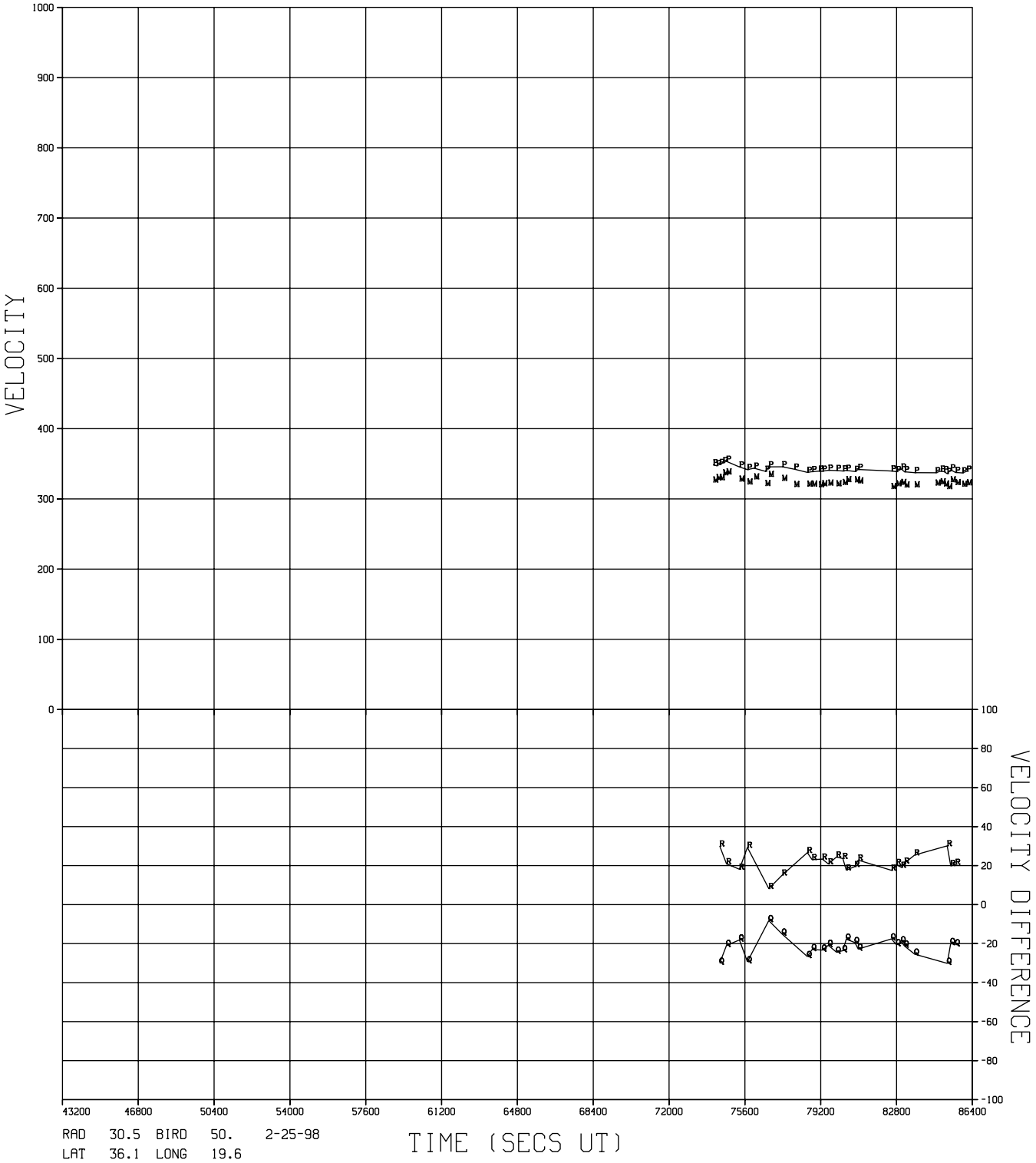

TEMPERATURE
$10^7$
$10^6$
$10^5$
$10^4$
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 29.6 BIRD 50. 2-25-98
LAT 38.3 LONG -15.4

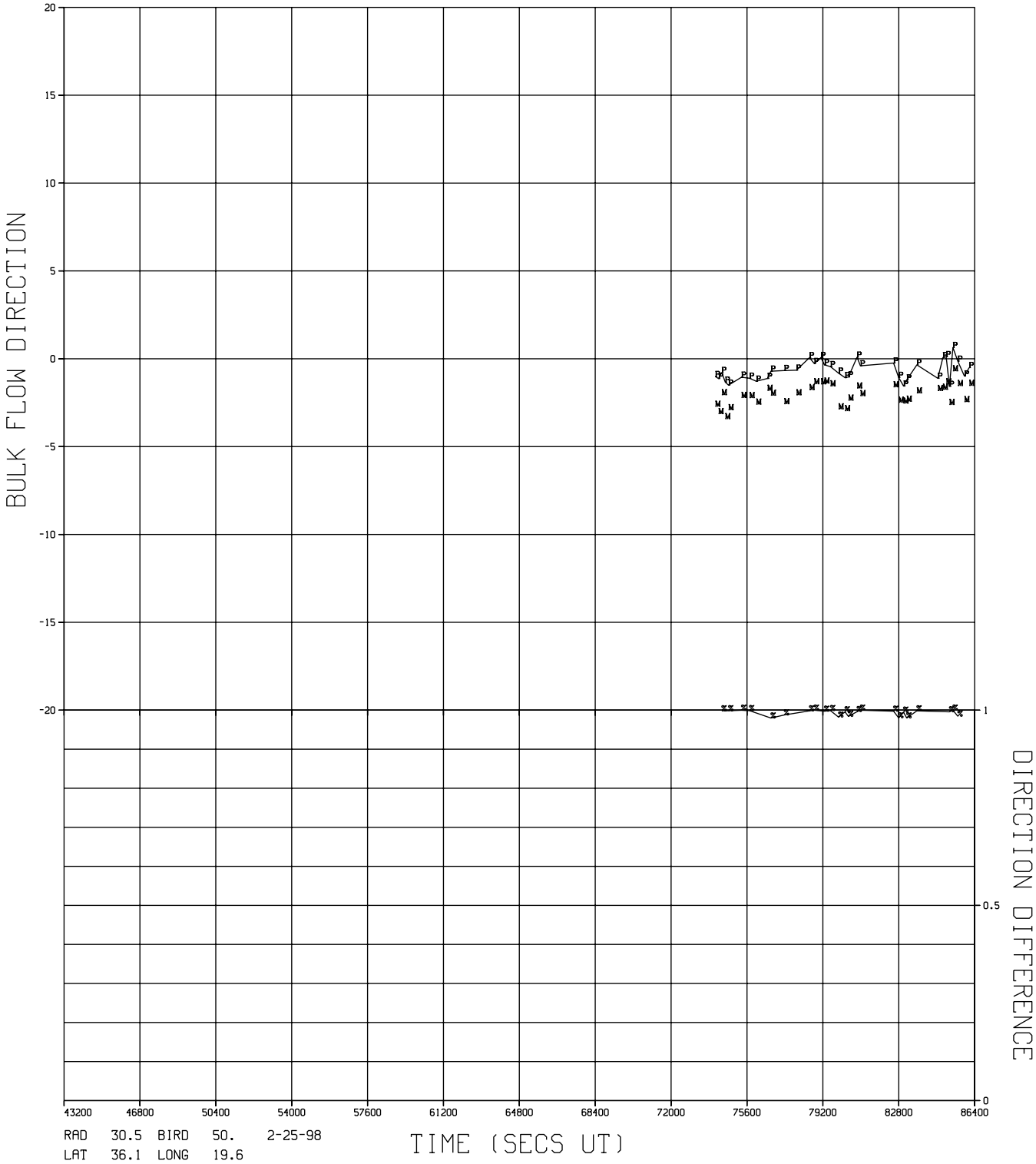

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 29.6 BIRD 50. 2-25-98
LAT 38.3 LONG -15.4

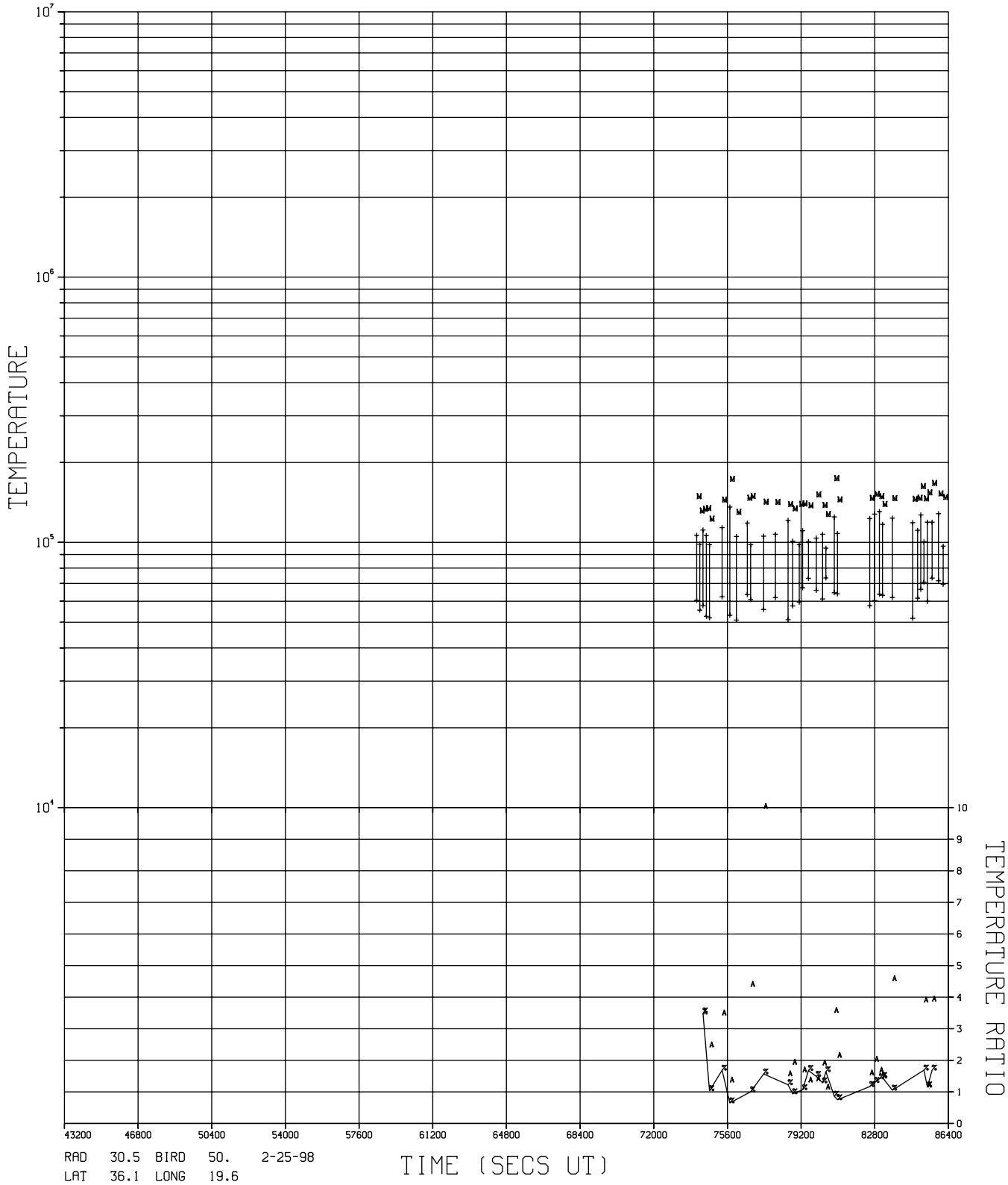

PERP. HEAT FLUX
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
$10^{-7}$
CHI-SQUARE
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 29.6 BIRD 50. 2-25-98
LAT 38.3 LONG -15.4
TIME (SECS UT)

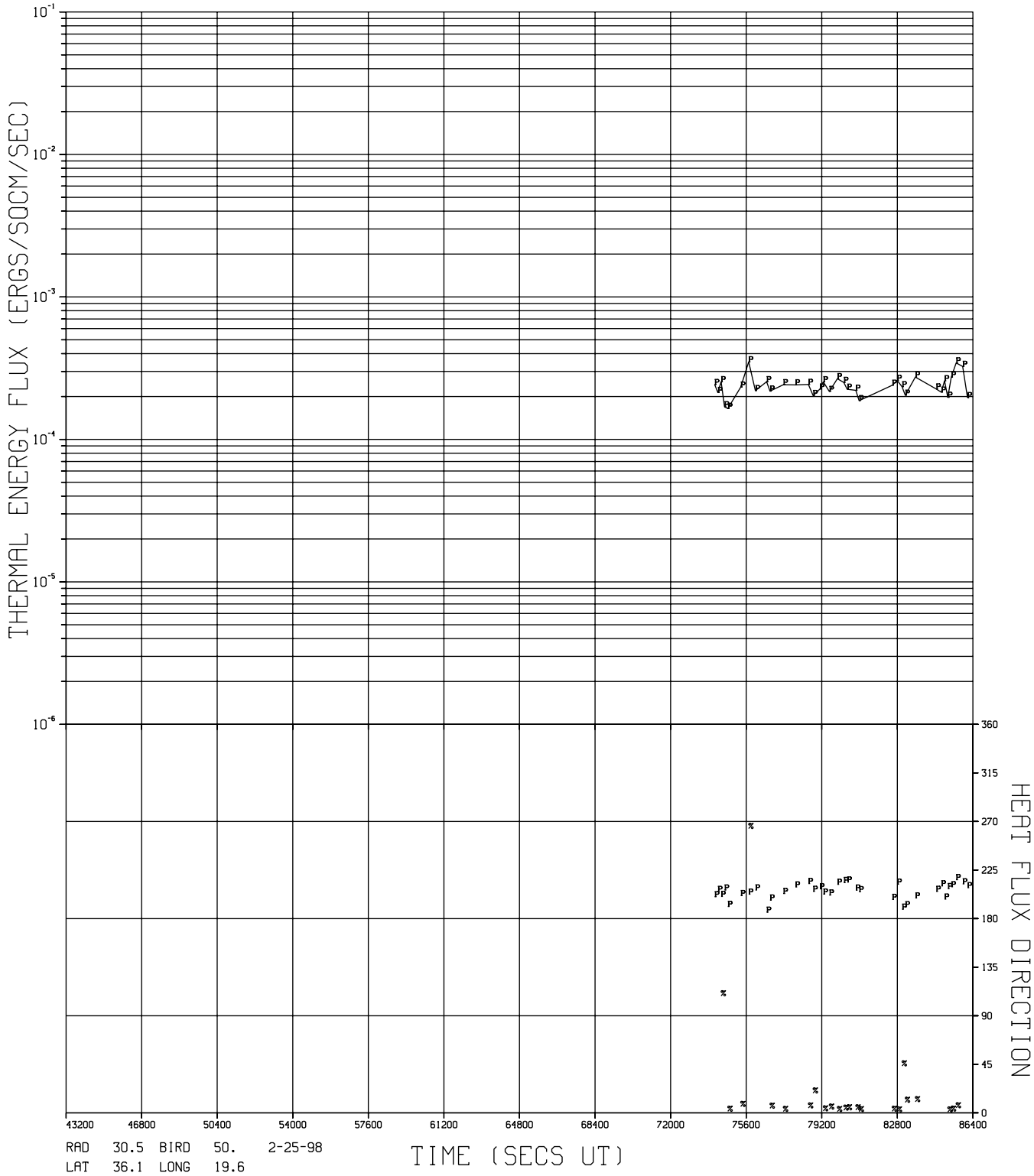

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 29.6 BIRD 50. 2-25-98
LAT 38.3 LONG -15.4

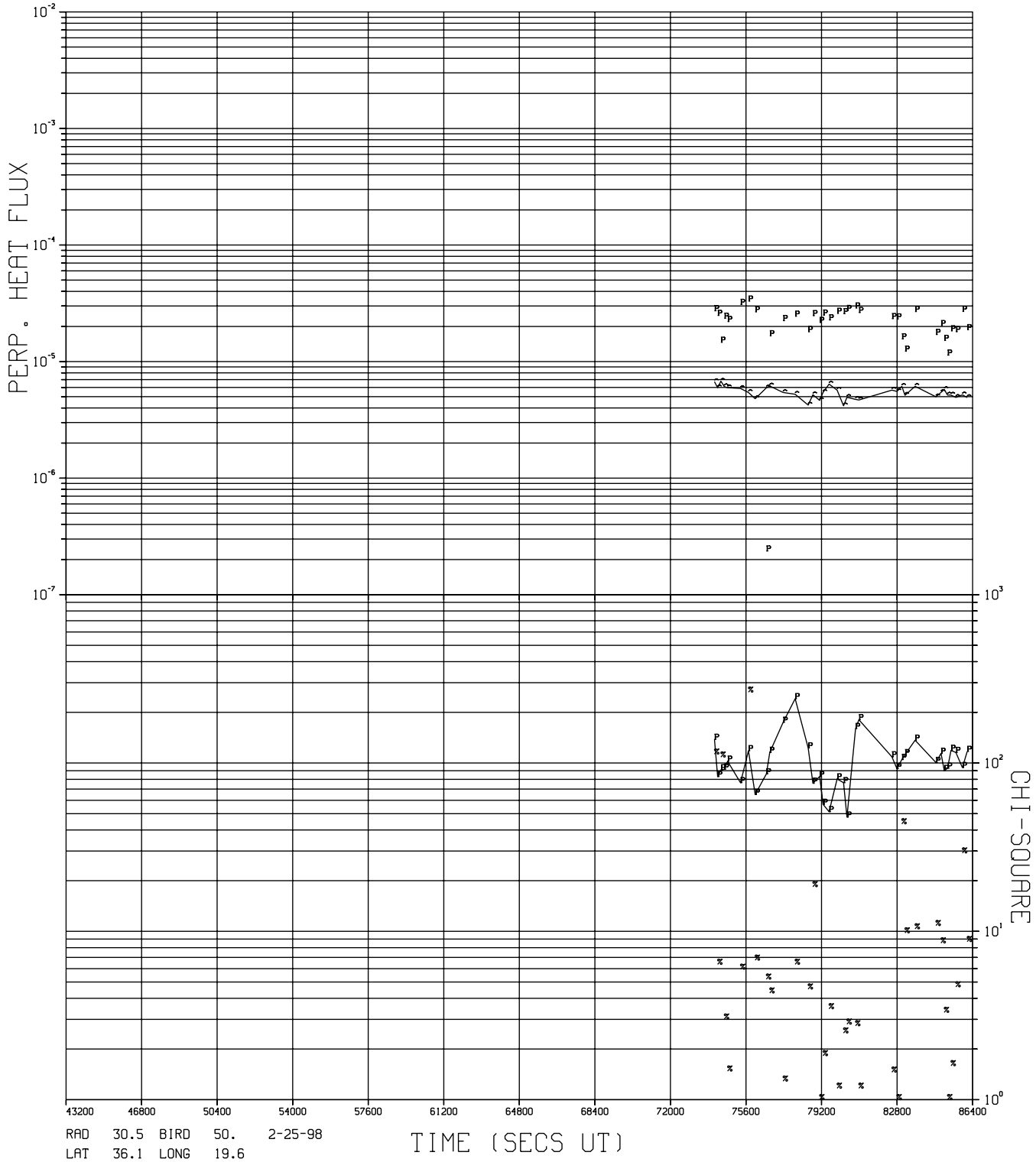

DENSITY
$10^2$
$10^1$
$10^0$
$10^{-1}$
DENSITY RATIO
$10^0$
$10^{-1}$
$10^{-2}$
$10^{-3}$
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 30.5 BIRD 50. 2-25-98
LAT 36.1 LONG 19.6

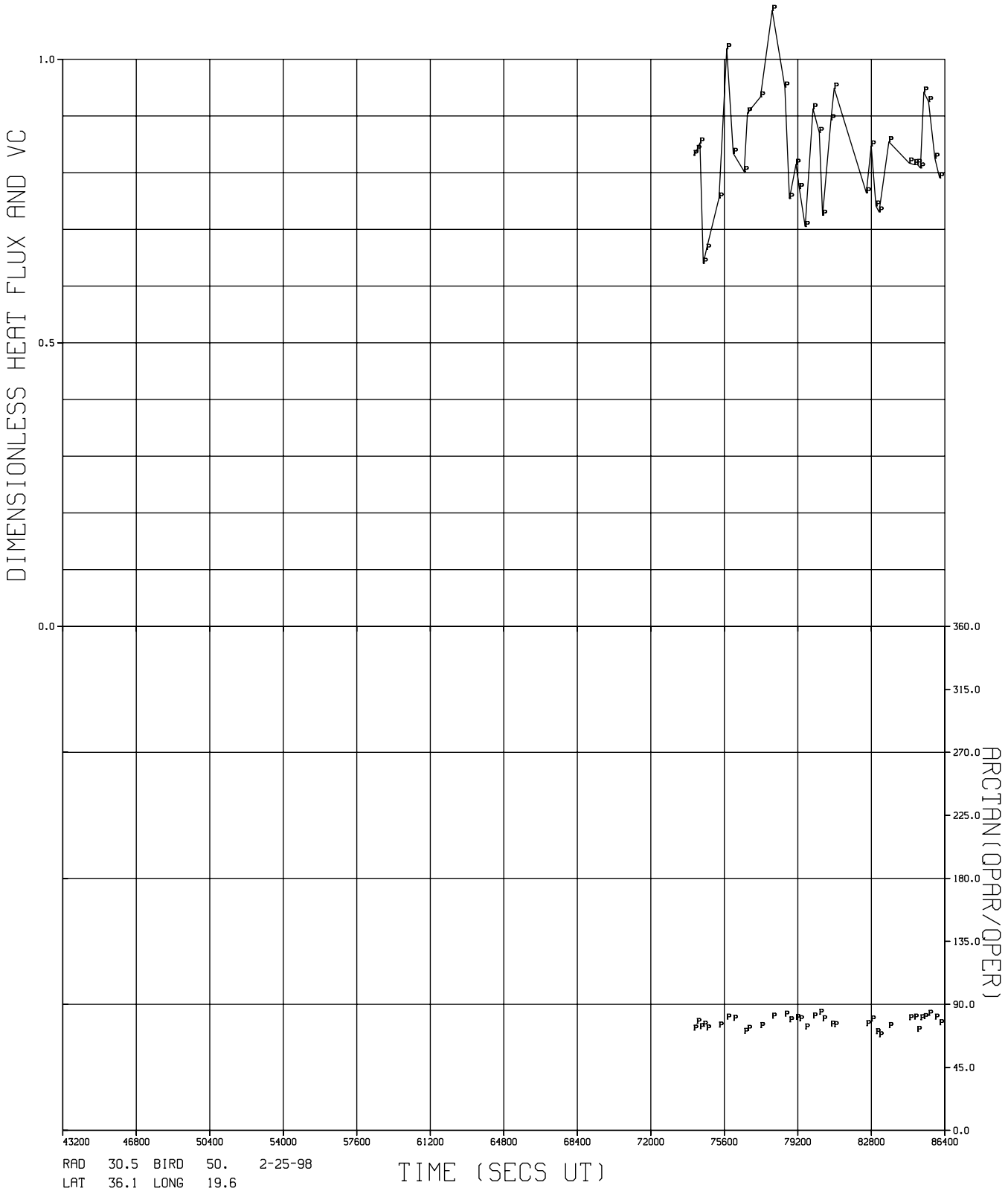

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 30.5 BIRD 50. 2-25-98
LAT 36.1 LONG 19.6

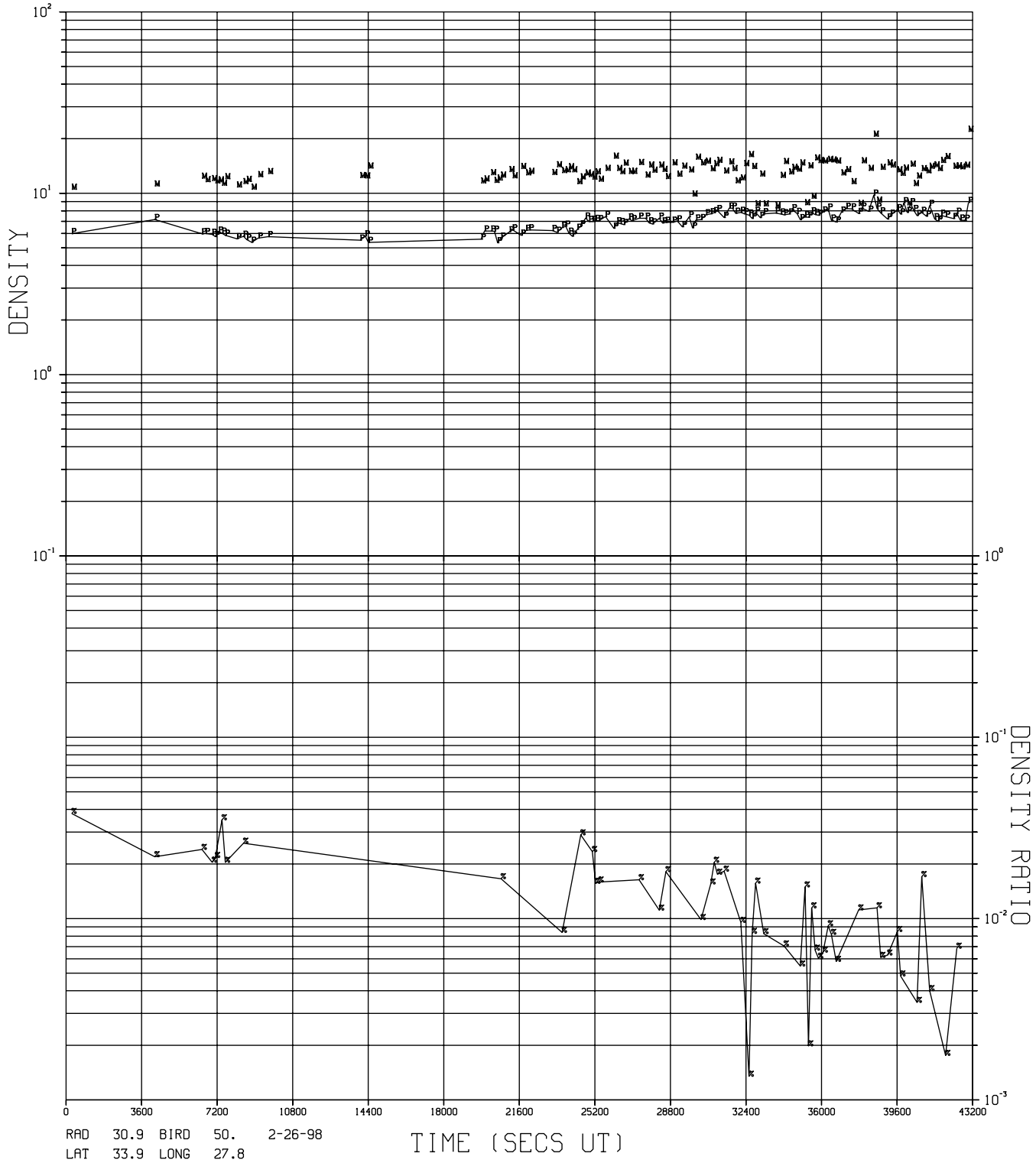

BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 30.5 BIRD 50. 2-25-98
LAT 36.1 LONG 19.6

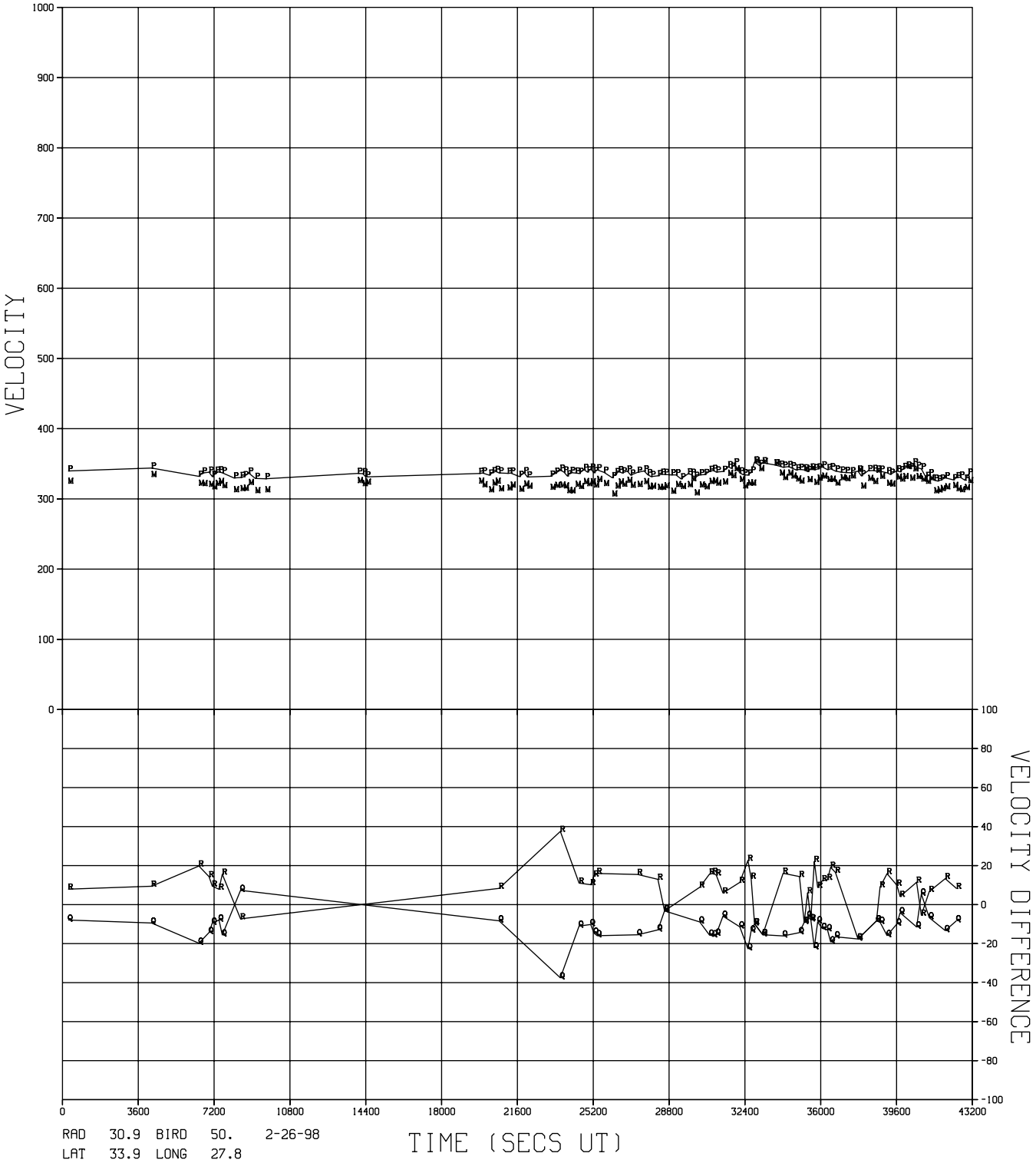

TEMPERATURE
$10^7$
$10^6$
$10^5$
$10^4$
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 30.5 BIRD 50. 2-25-98
LAT 36.1 LONG 19.6

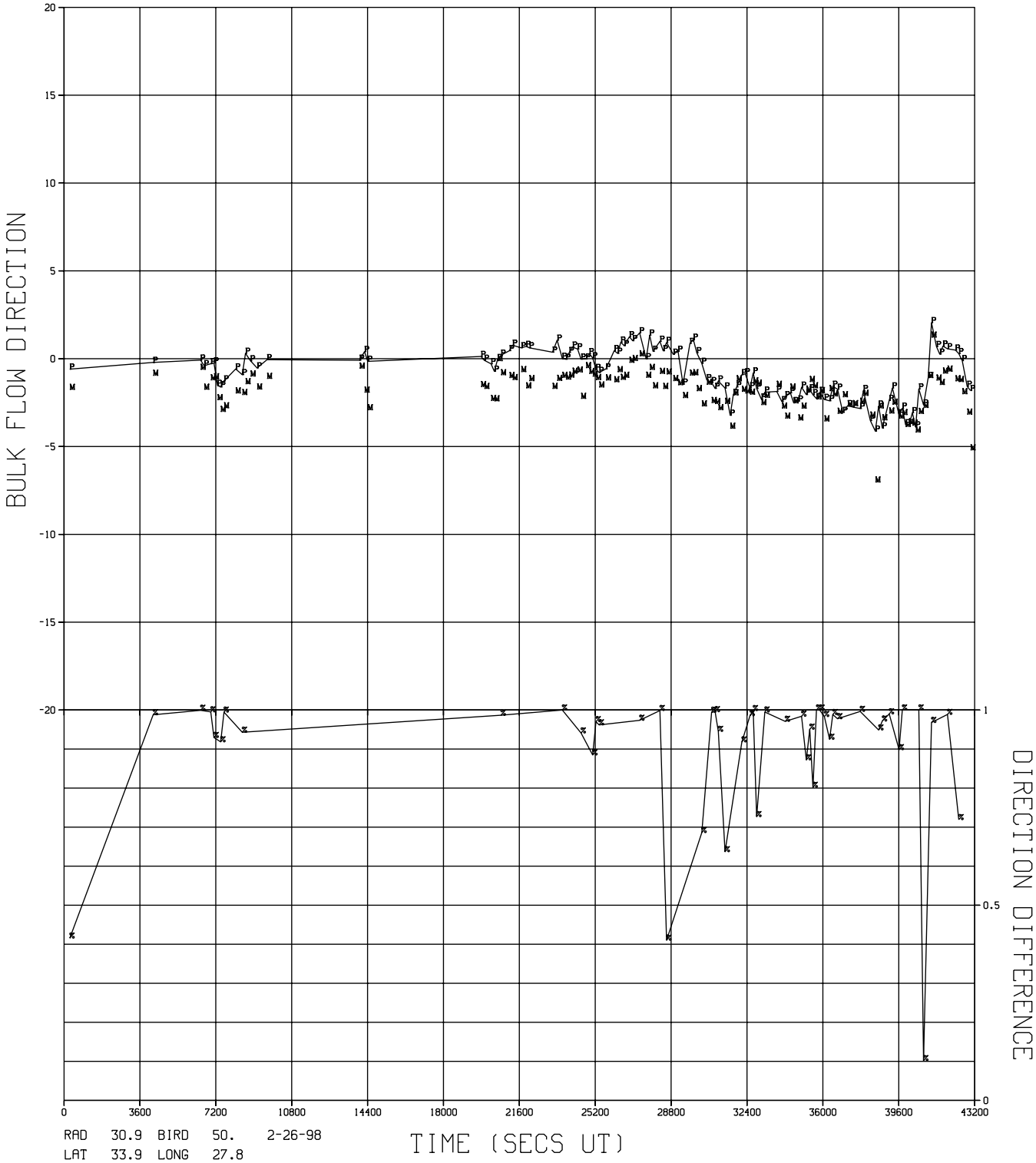

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 30.5 BIRD 50. 2-25-98
LAT 36.1 LONG 19.6

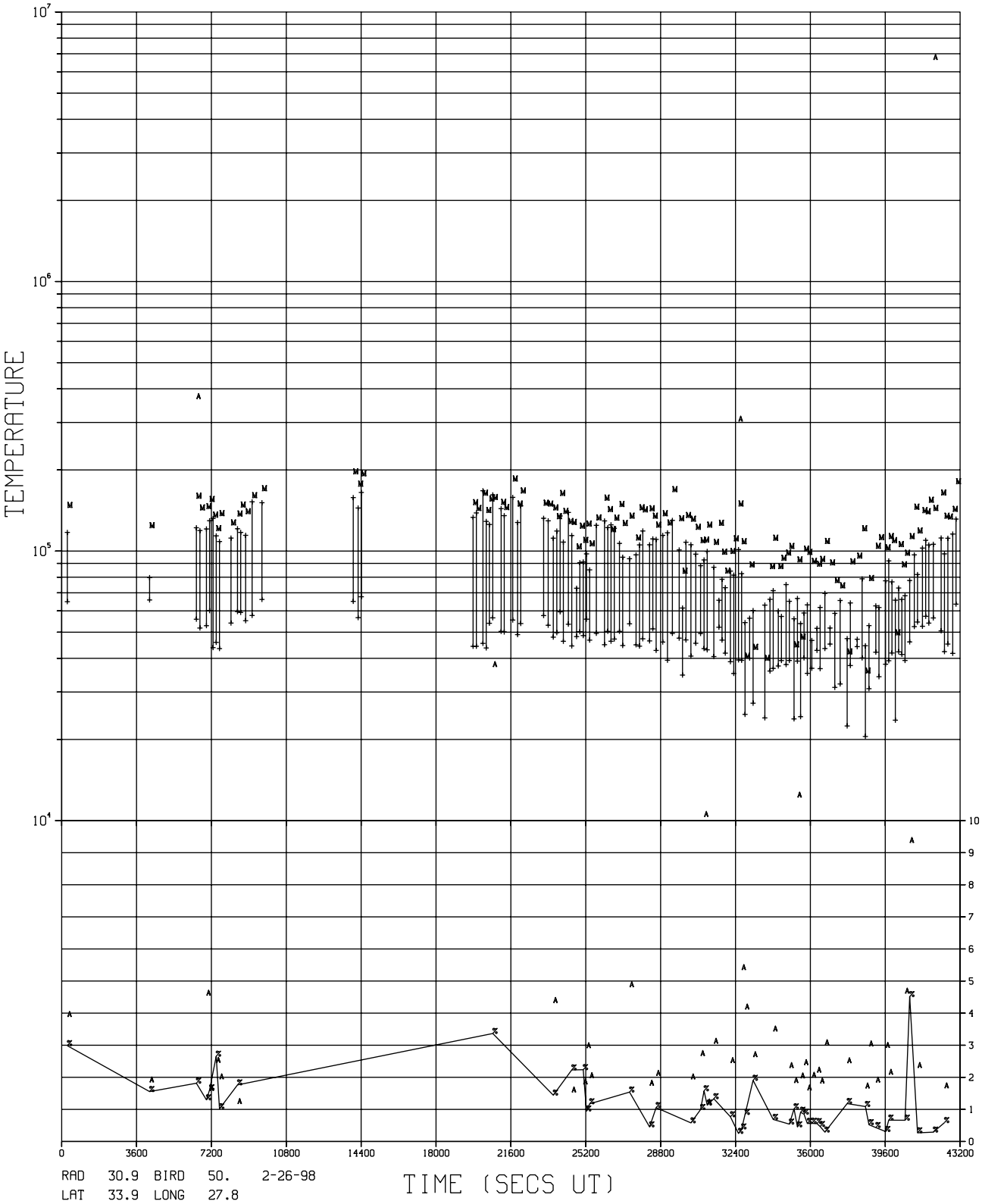

PERP. HEAT FLUX
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
$10^{-7}$
CHI-SQUARE
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 30.5 BIRD 50. 2-25-98
LAT 36.1 LONG 19.6
TIME (SECS UT)

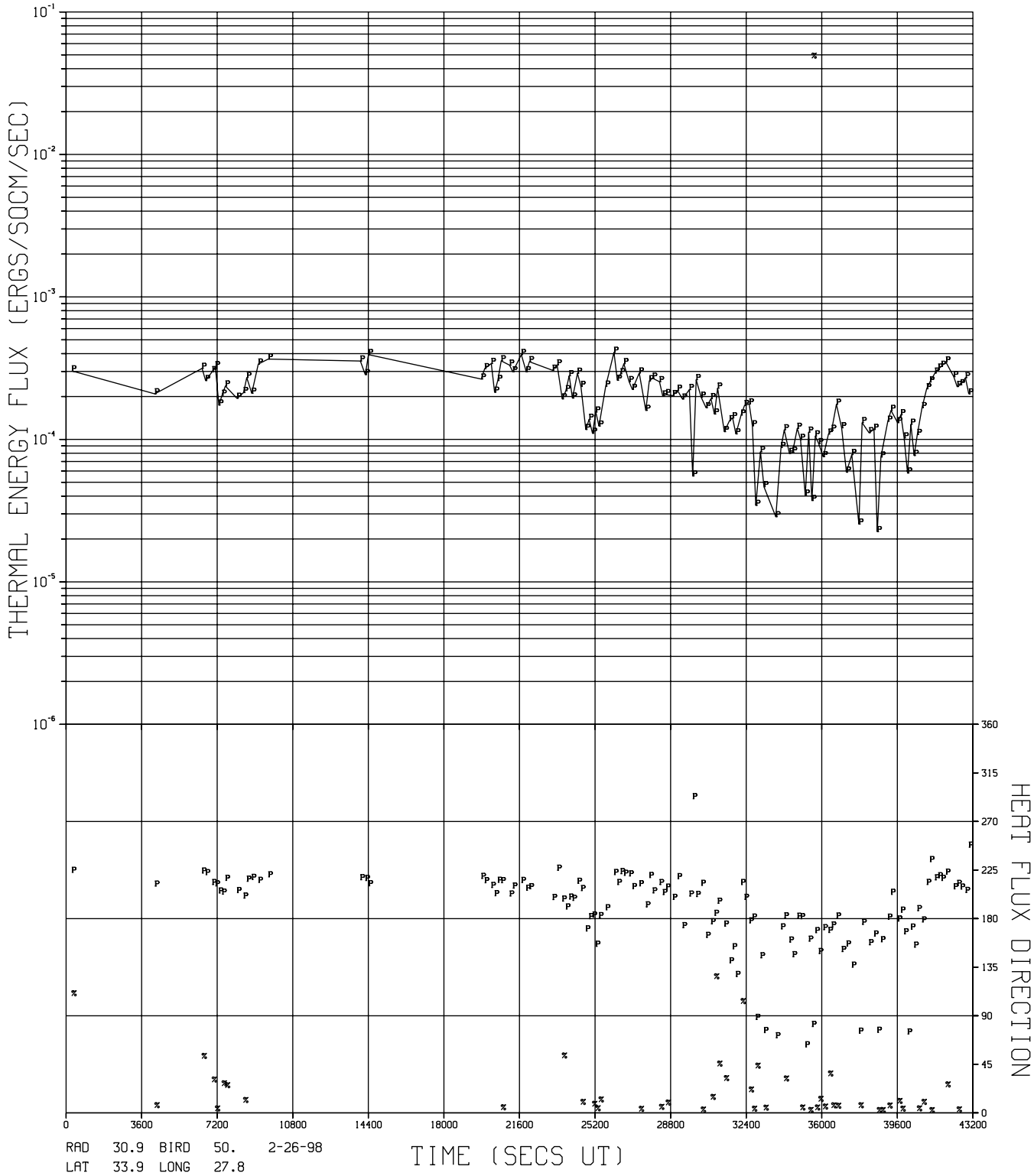

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 30.5 BIRD 50. 2-25-98
LAT 36.1 LONG 19.6

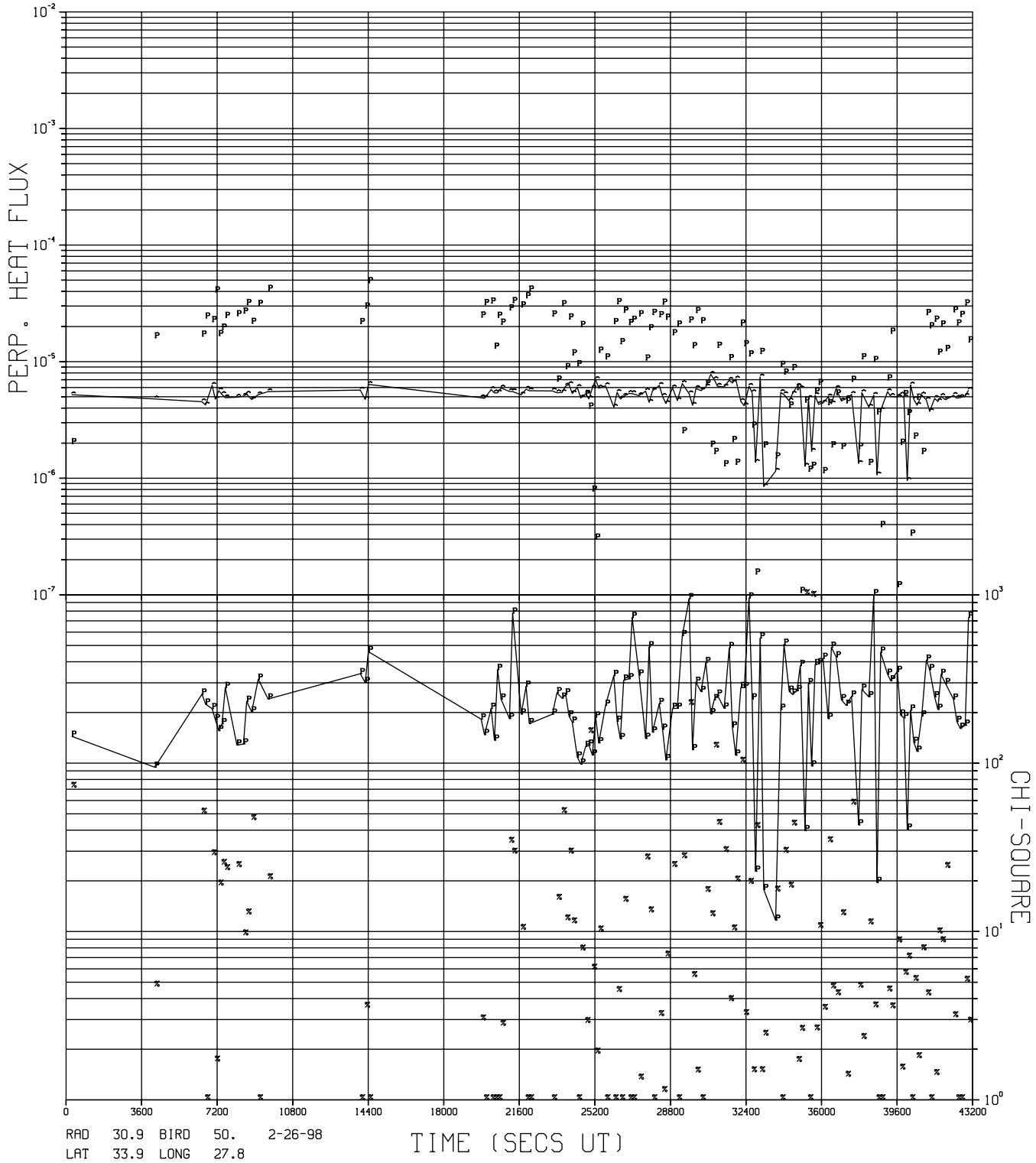

DENSITY
$10^2$
$10^1$
$10^0$
$10^{-1}$
DENSITY RATIO
$10^0$
$10^{-1}$
$10^{-2}$
$10^{-3}$
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 30.9 BIRD 50. 2-26-98
LAT 33.9 LONG 27.8

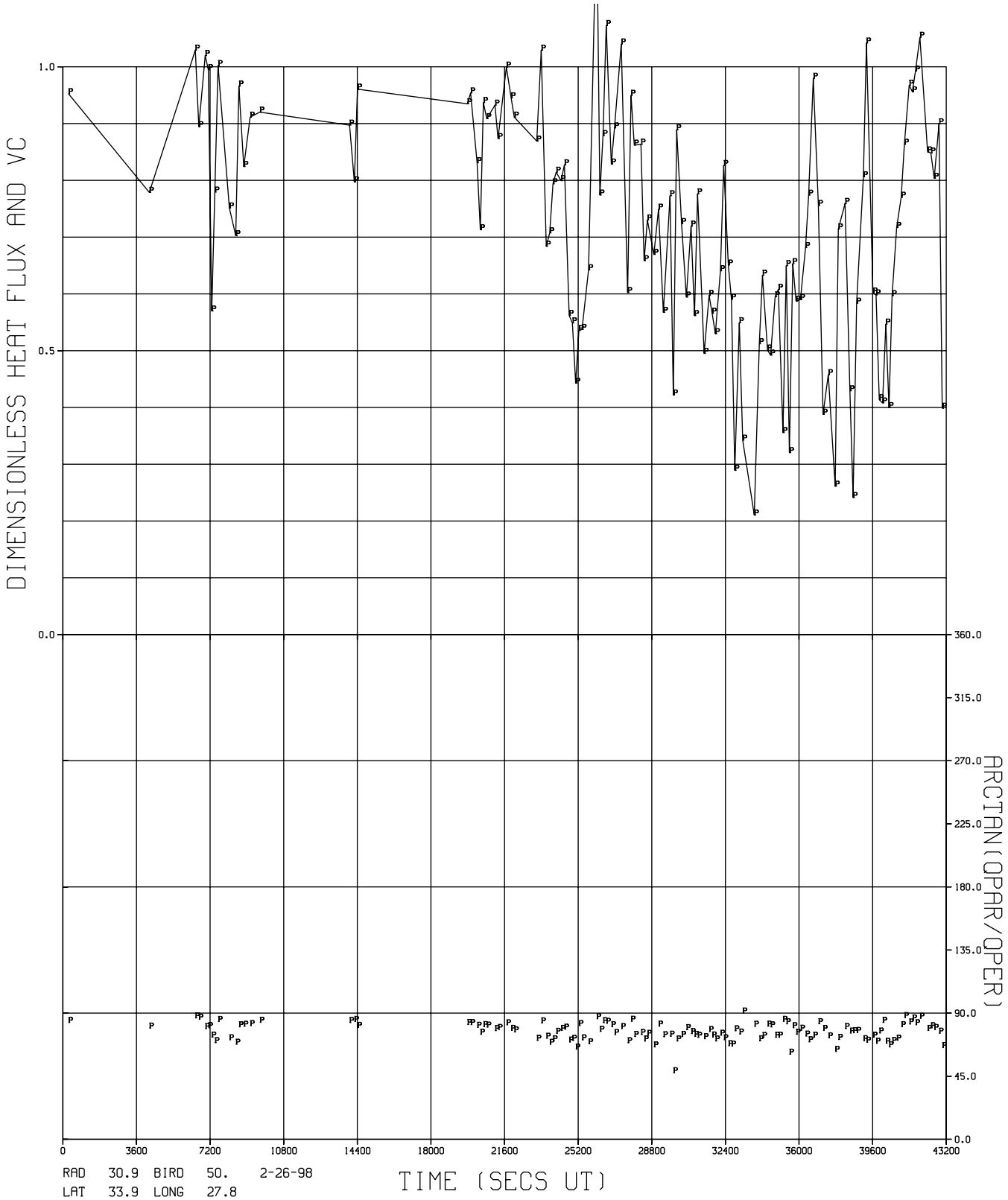

VELOCITY
VELOCITY DIFFERENCE
TIME (SECS UT)
1000
900
800
700
600
500
400
300
200
100
0
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 30.9 BIRD 50. 2-26-98
LAT 33.9 LONG 27.8

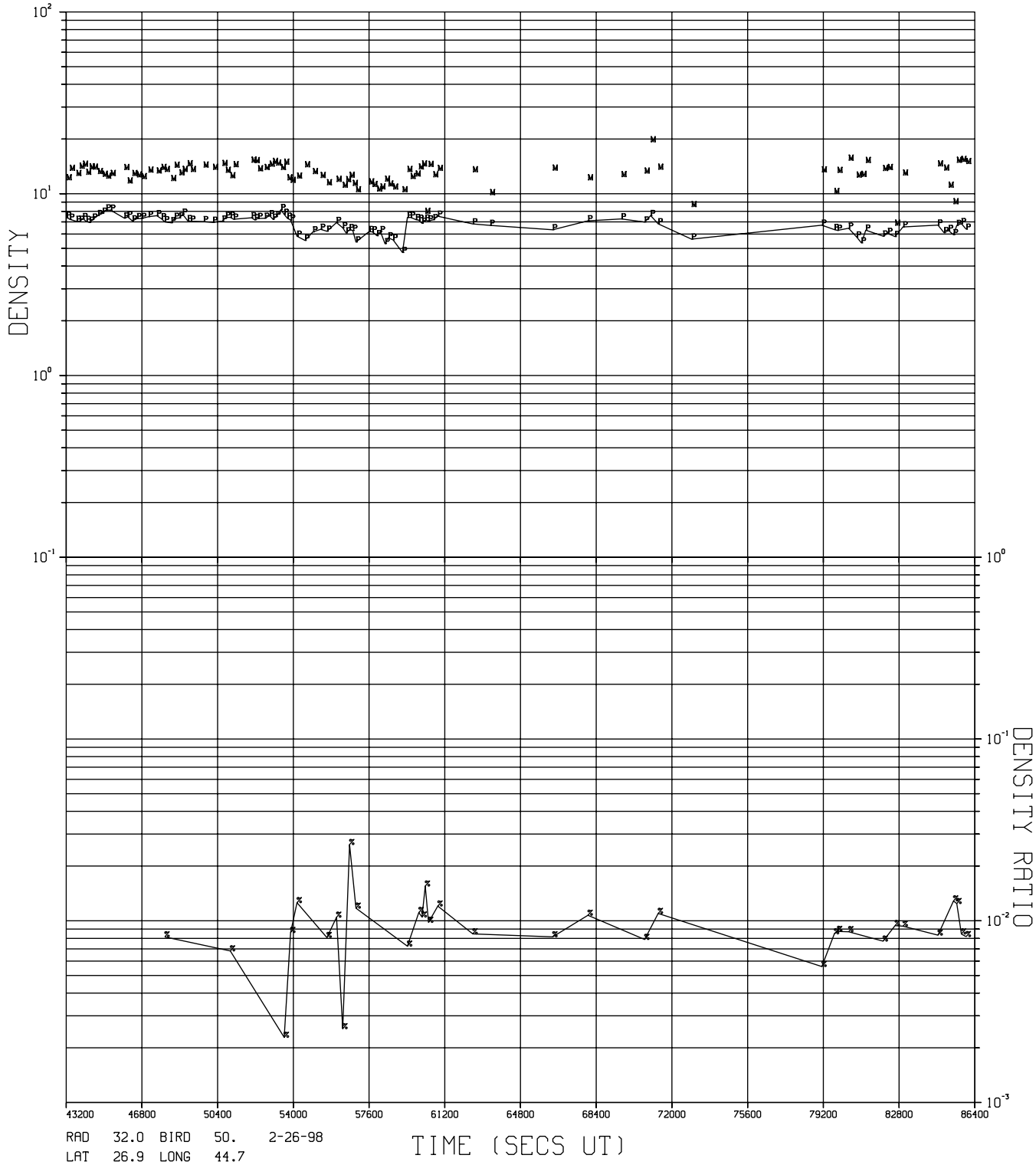

BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
DIRECTION DIFFERENCE
1
0.5
0
RAD 30.9 BIRD 50. 2-26-98
LAT 33.9 LONG 27.8
TIME (SECS UT)

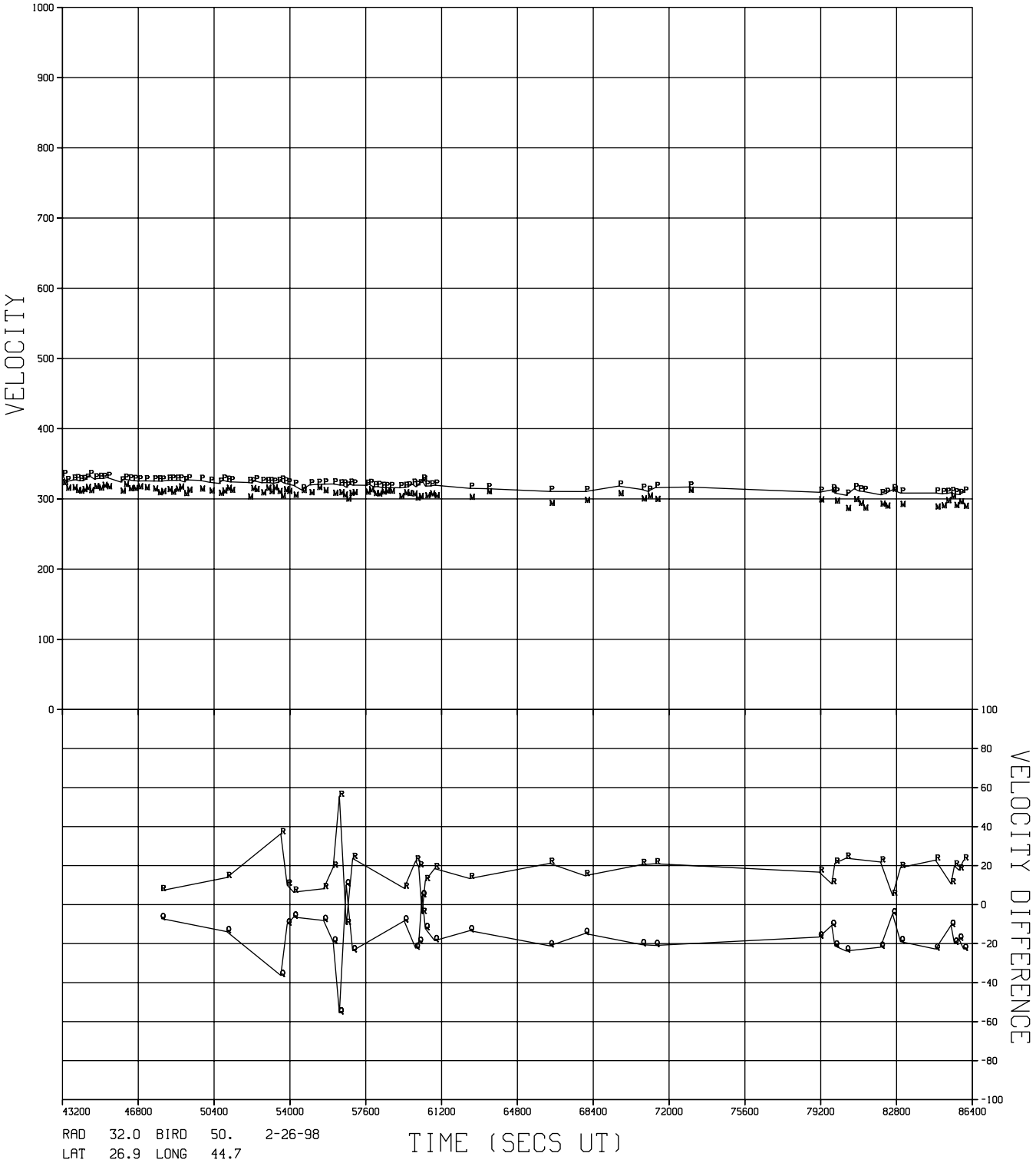

TEMPERATURE
TEMPERATURE RATIO
TIME (SECS UT)
RAD 30.9 BIRD 50. 2-26-98
LAT 33.9 LONG 27.8

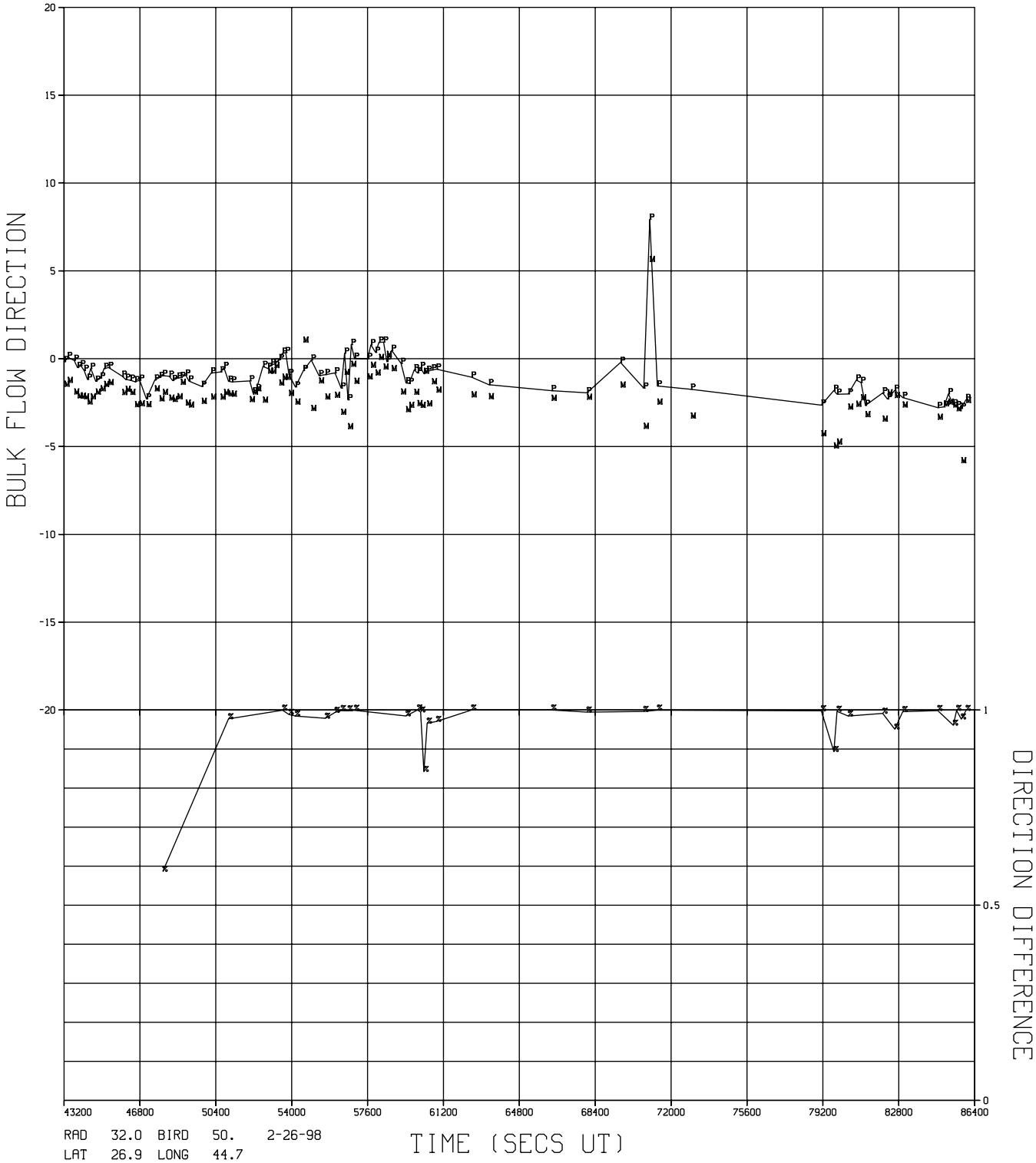

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 30.9 BIRD 50. 2-26-98
LAT 33.9 LONG 27.8

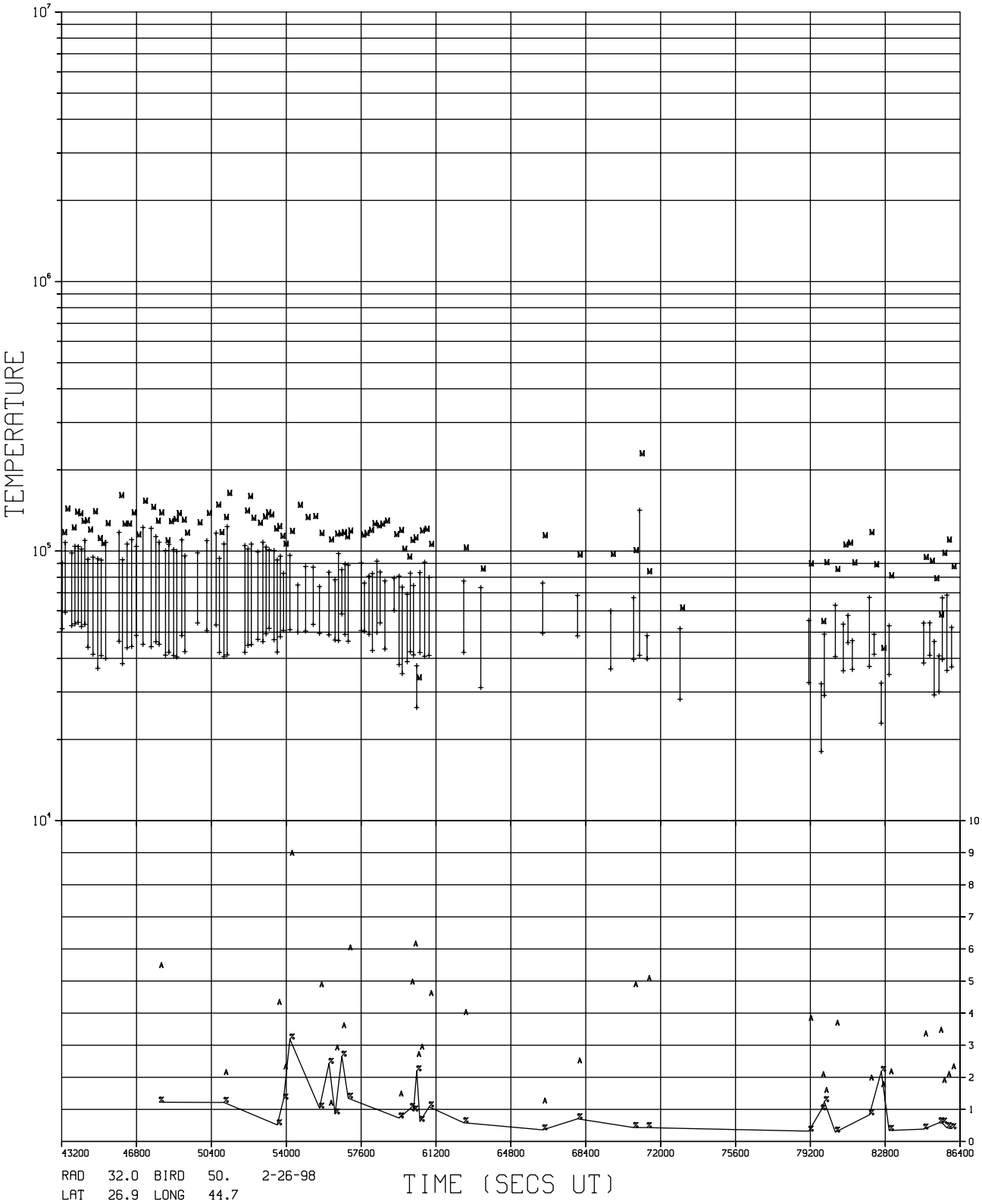

PERP. HEAT FLUX
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
$10^{-7}$
CHI-SQUARE
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 30.9 BIRD 50. 2-26-98
LAT 33.9 LONG 27.8
TIME (SECS UT)

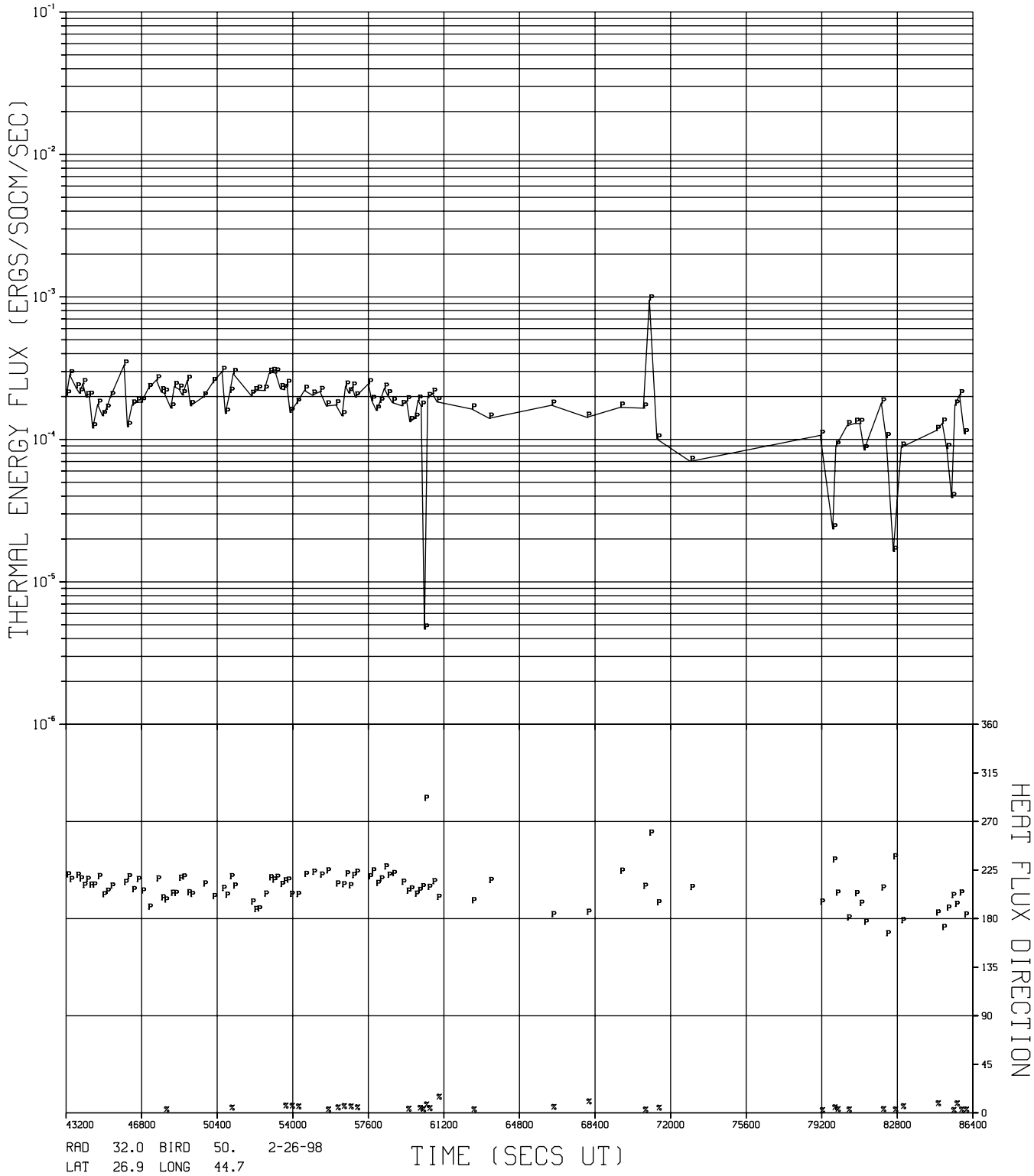

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 30.9 BIRD 50. 2-26-98
LAT 33.9 LONG 27.8

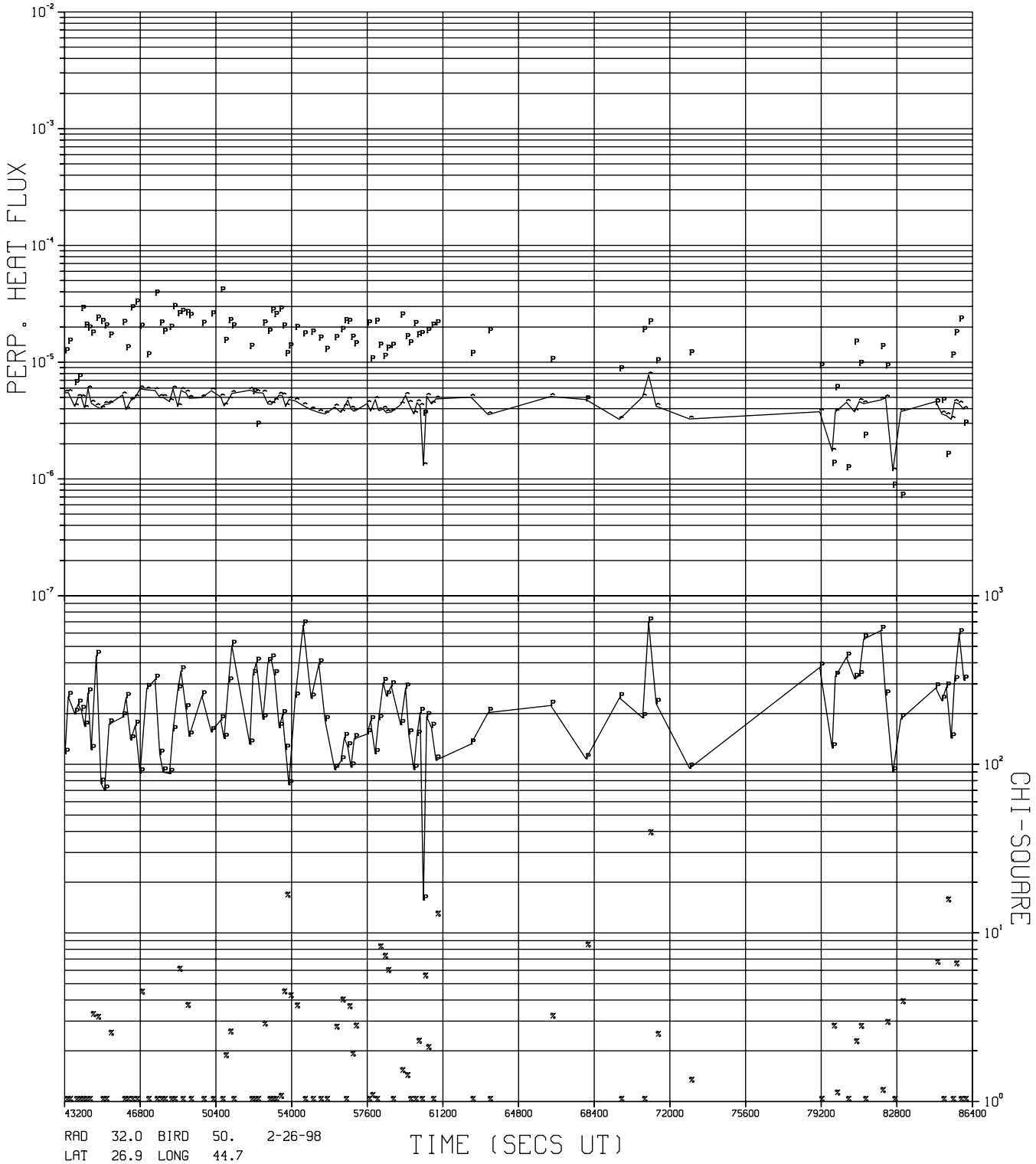

DENSITY
$10^2$
$10^1$
$10^0$
$10^{-1}$
DENSITY RATIO
$10^0$
$10^{-1}$
$10^{-2}$
$10^{-3}$
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.0 BIRD 50. 2-26-98
LAT 26.9 LONG 44.7

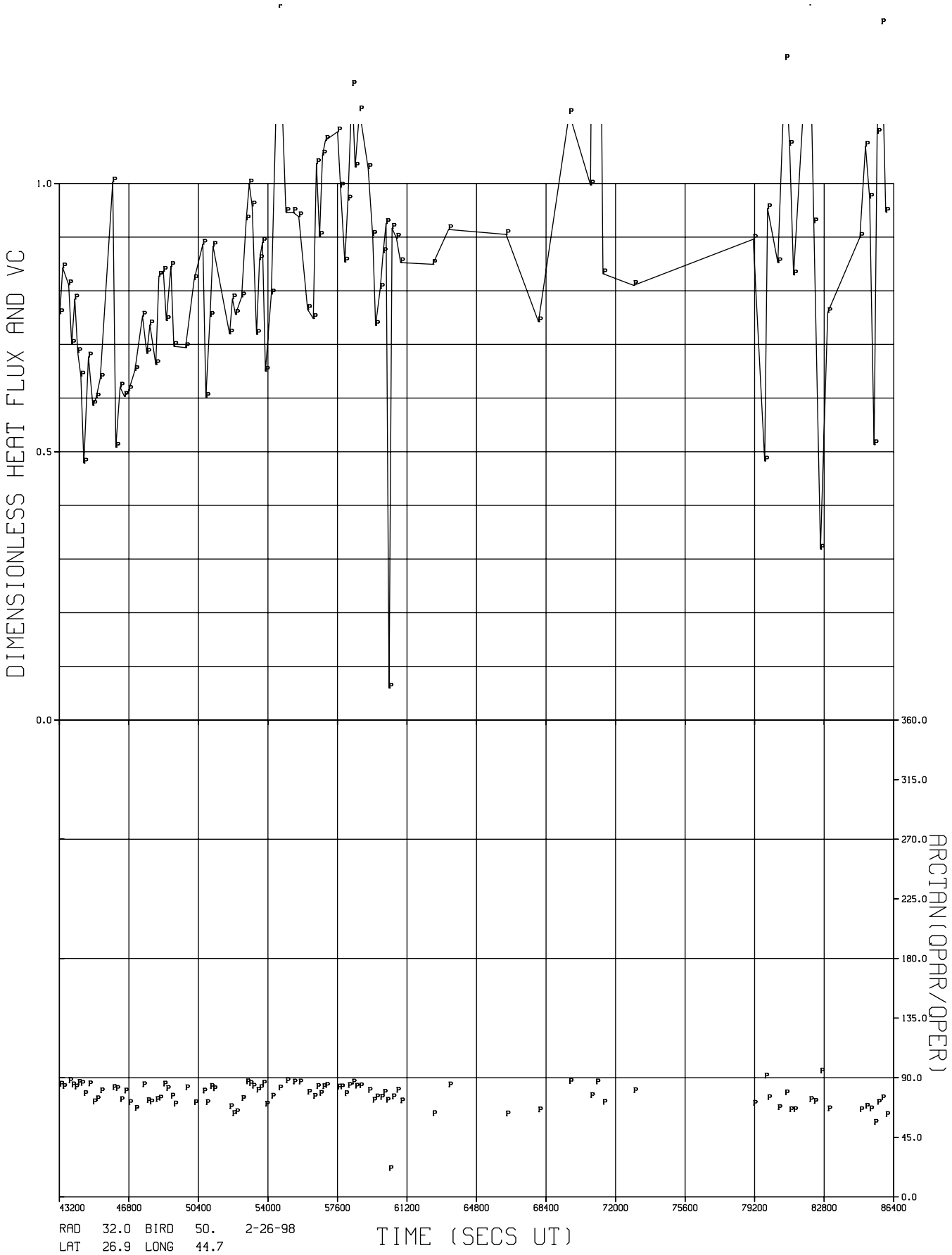

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.0 BIRD 50. 2-26-98
LAT 26.9 LONG 44.7

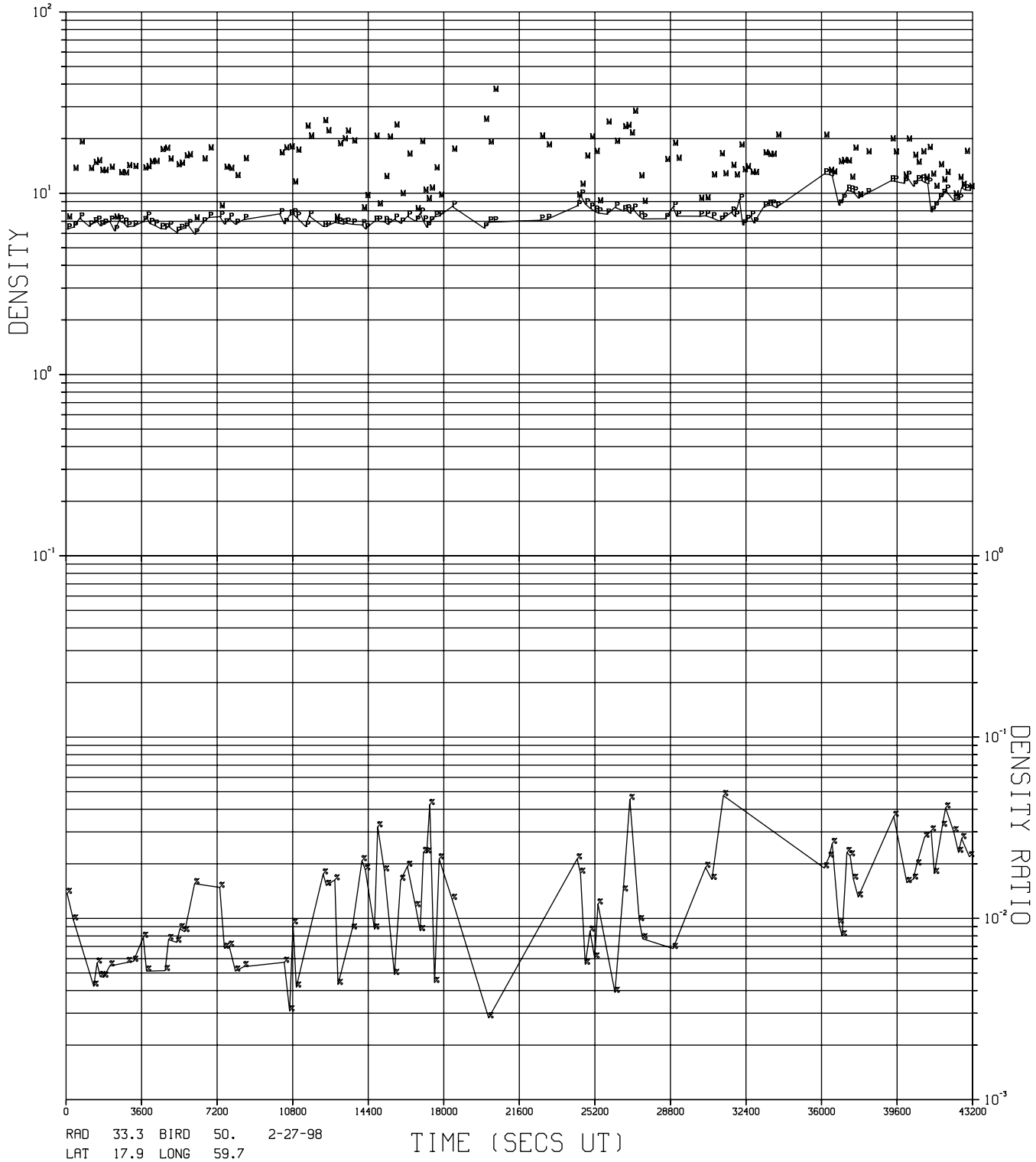

BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.0 BIRD 50. 2-26-98
LAT 26.9 LONG 44.7

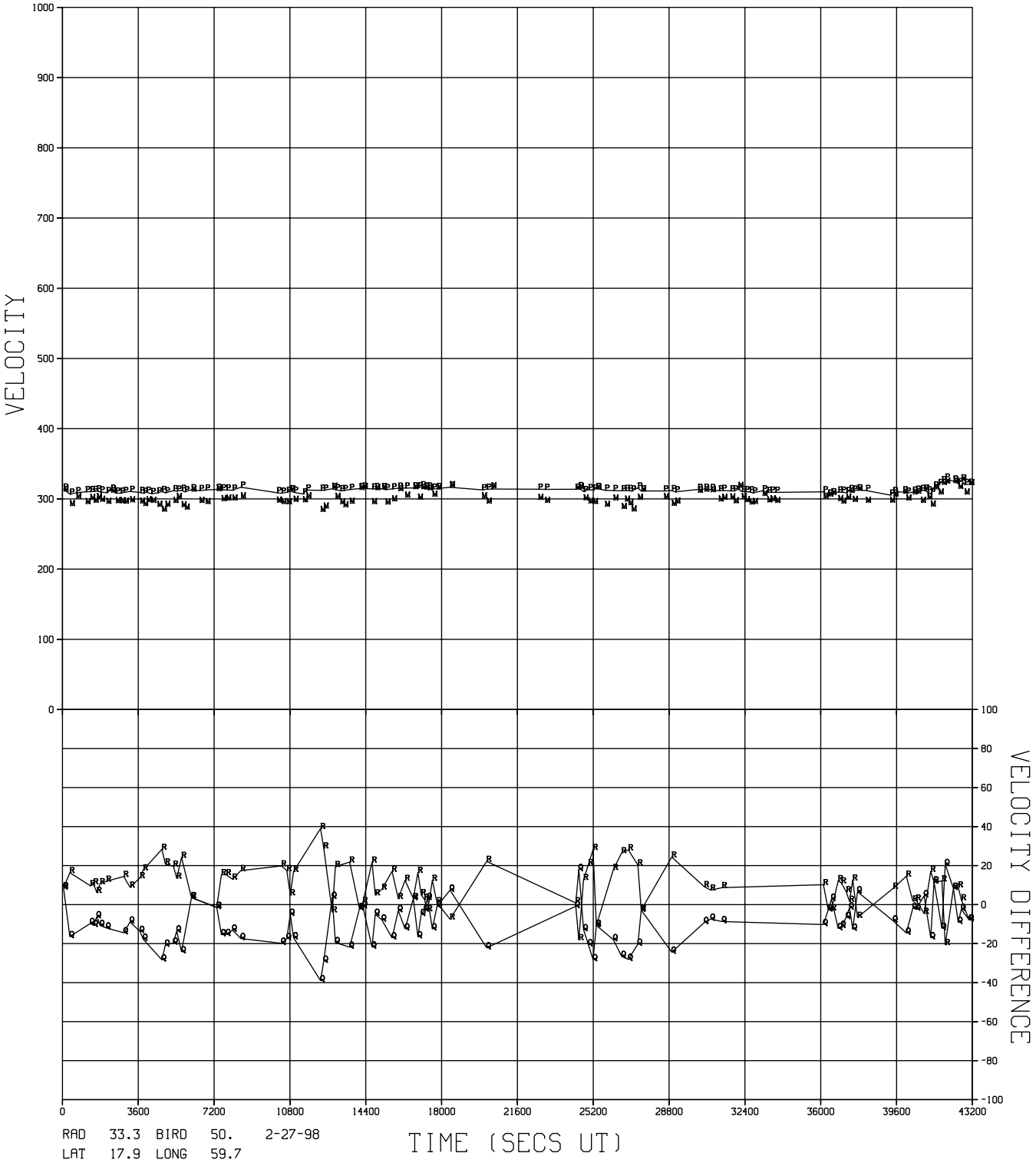

TEMPERATURE
$10^7$
$10^6$
$10^5$
$10^4$
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.0 BIRD 50. 2-26-98
LAT 26.9 LONG 44.7

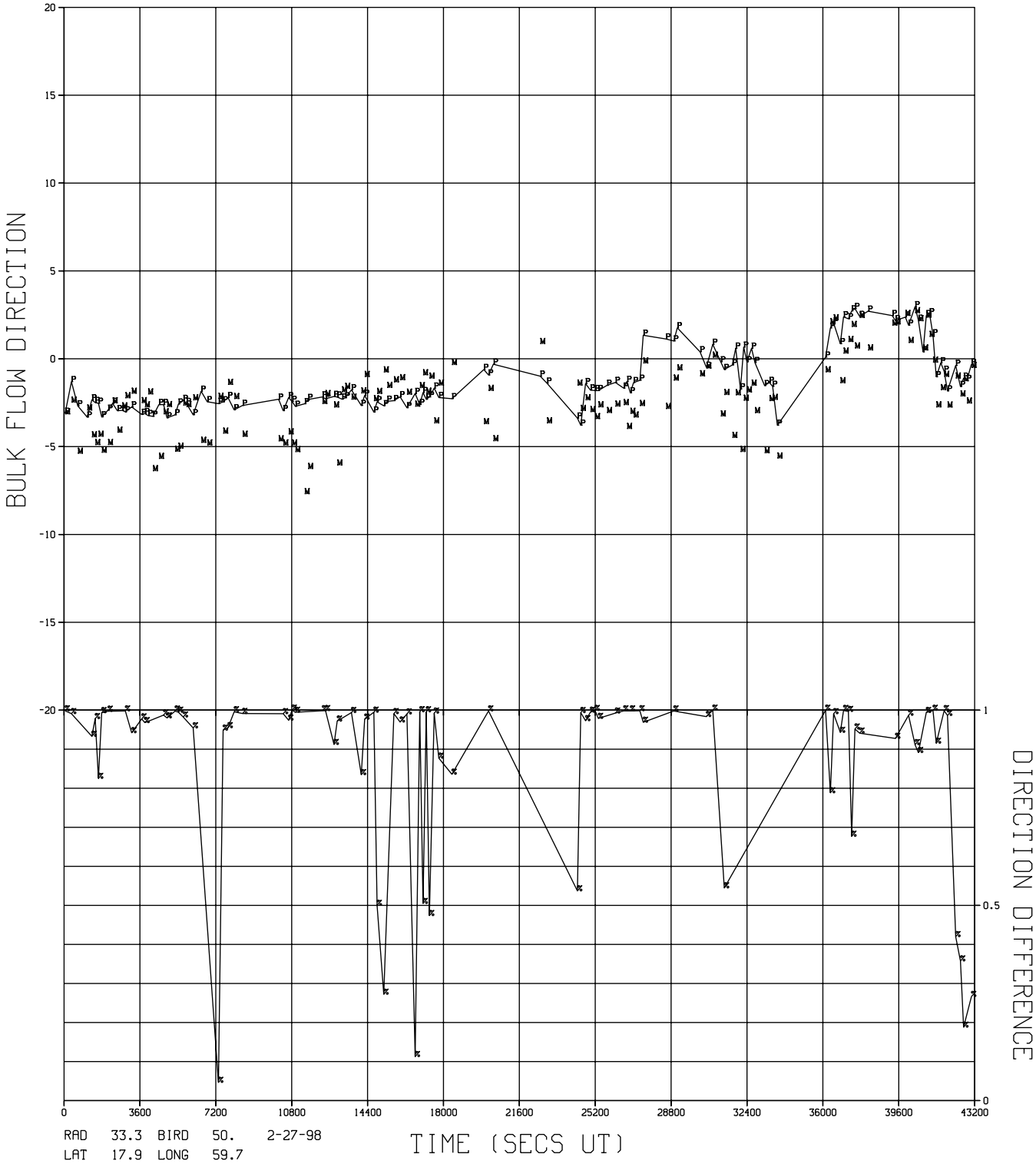

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.0 BIRD 50. 2-26-98
LAT 26.9 LONG 44.7

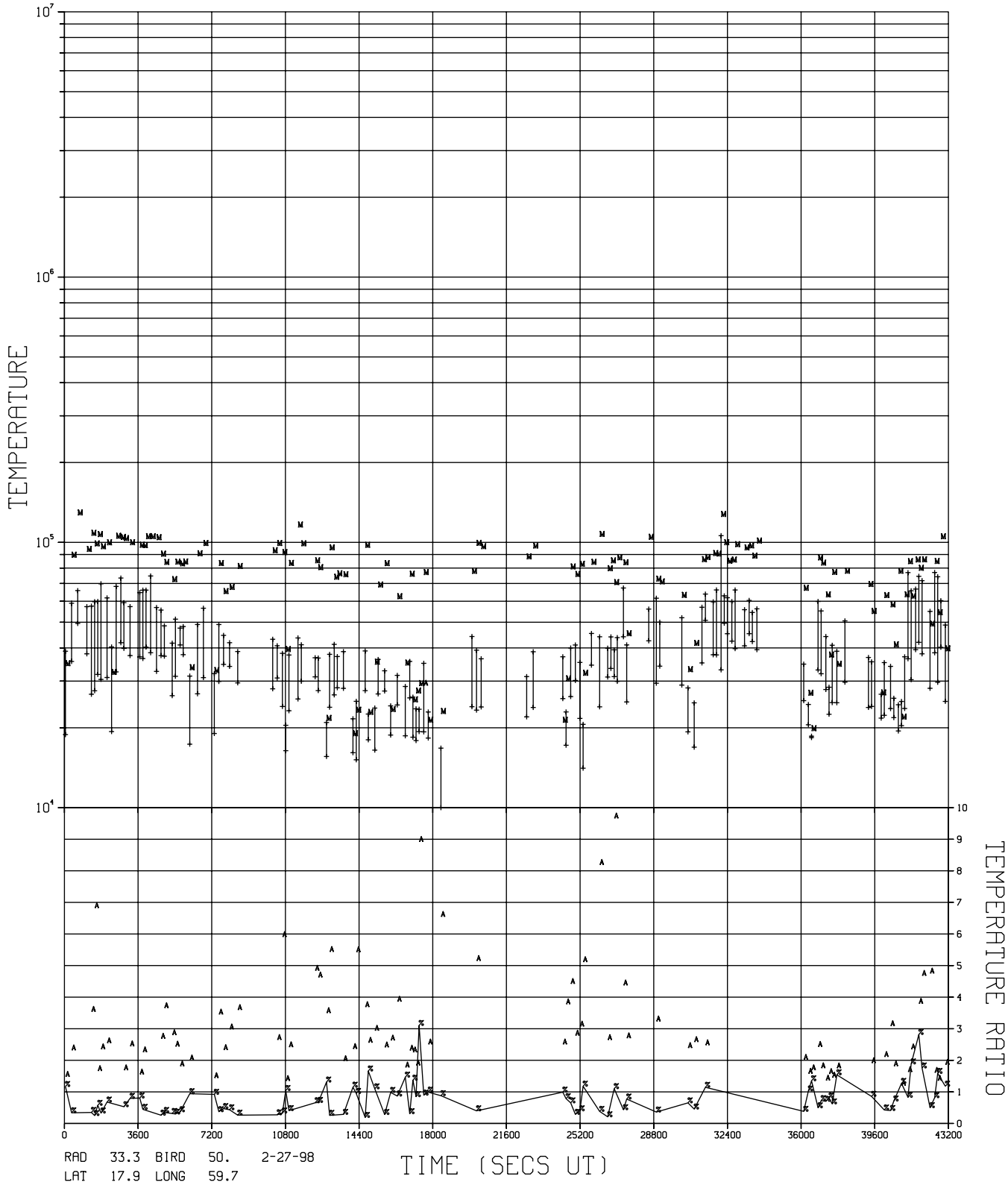

PERP. HEAT FLUX
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
$10^{-7}$
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
CHI-SQUARE
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.0 BIRD 50. 2-26-98
LAT 26.9 LONG 44.7

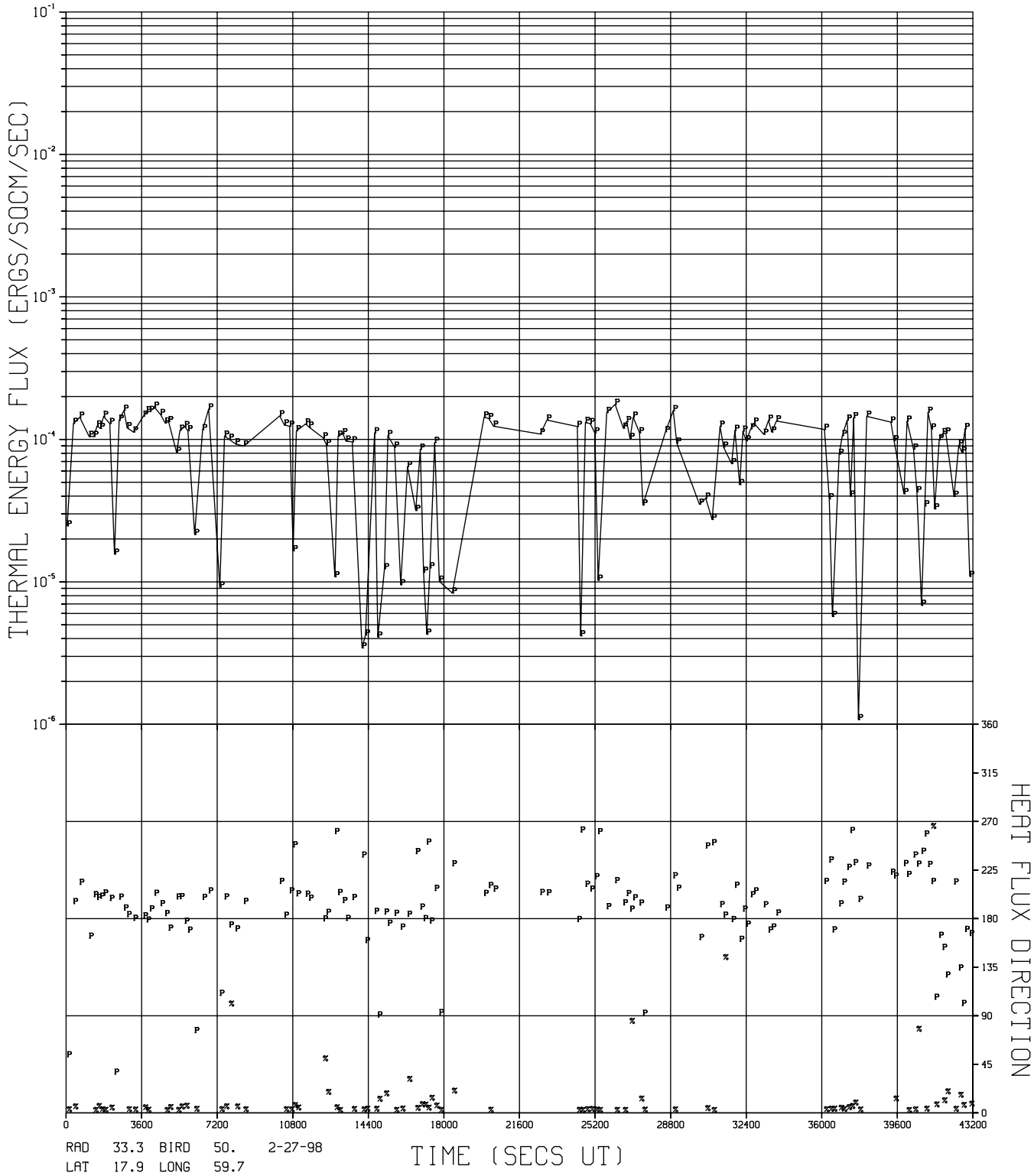

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
ARCTAN(QPAR/QPER)
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.0 BIRD 50. 2-26-98
LAT 26.9 LONG 44.7

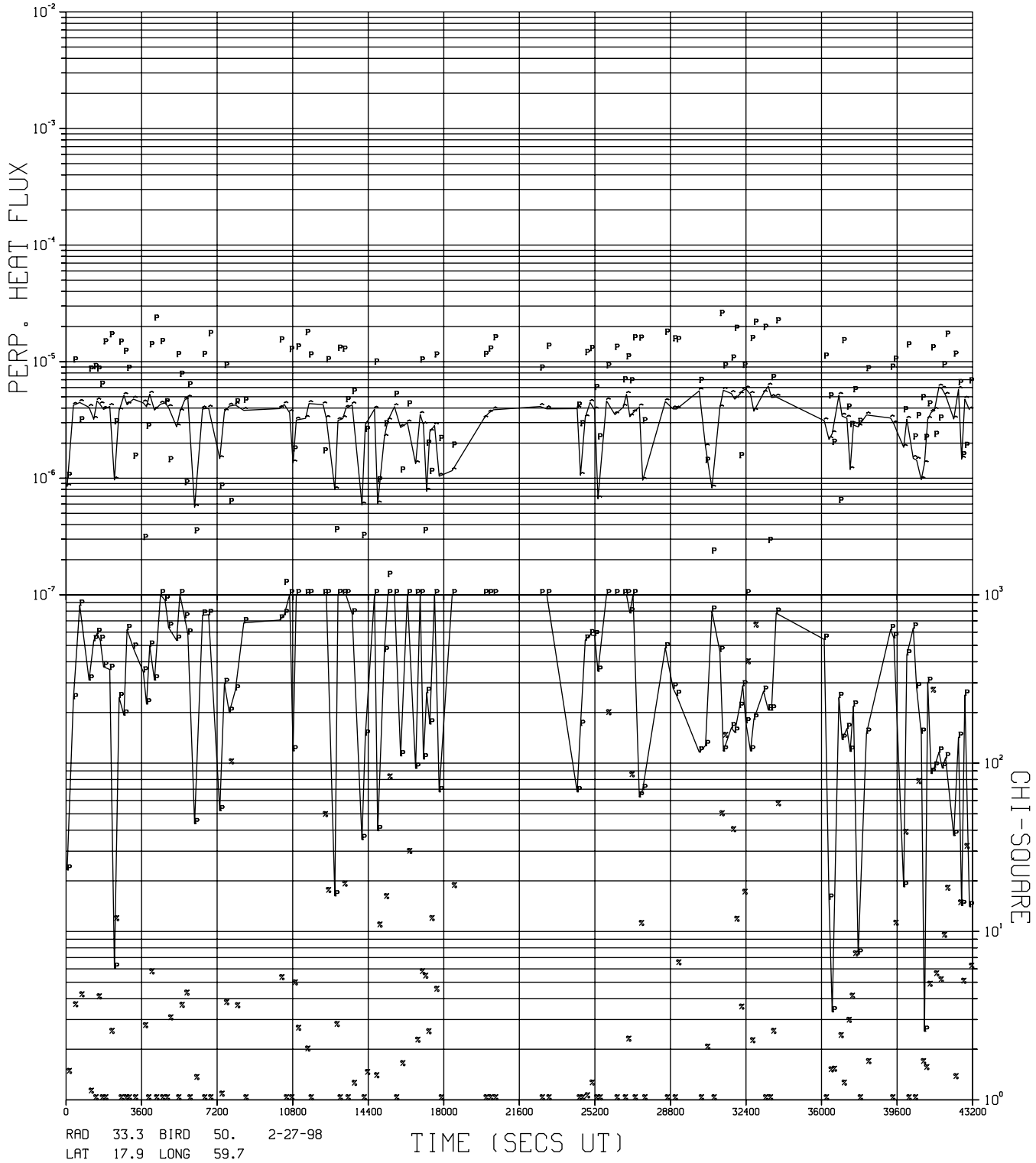

DENSITY
$10^2$
$10^1$
$10^0$
$10^{-1}$
DENSITY RATIO
$10^0$
$10^{-1}$
$10^{-2}$
$10^{-3}$
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 33.3 BIRD 50. 2-27-98
LAT 17.9 LONG 59.7

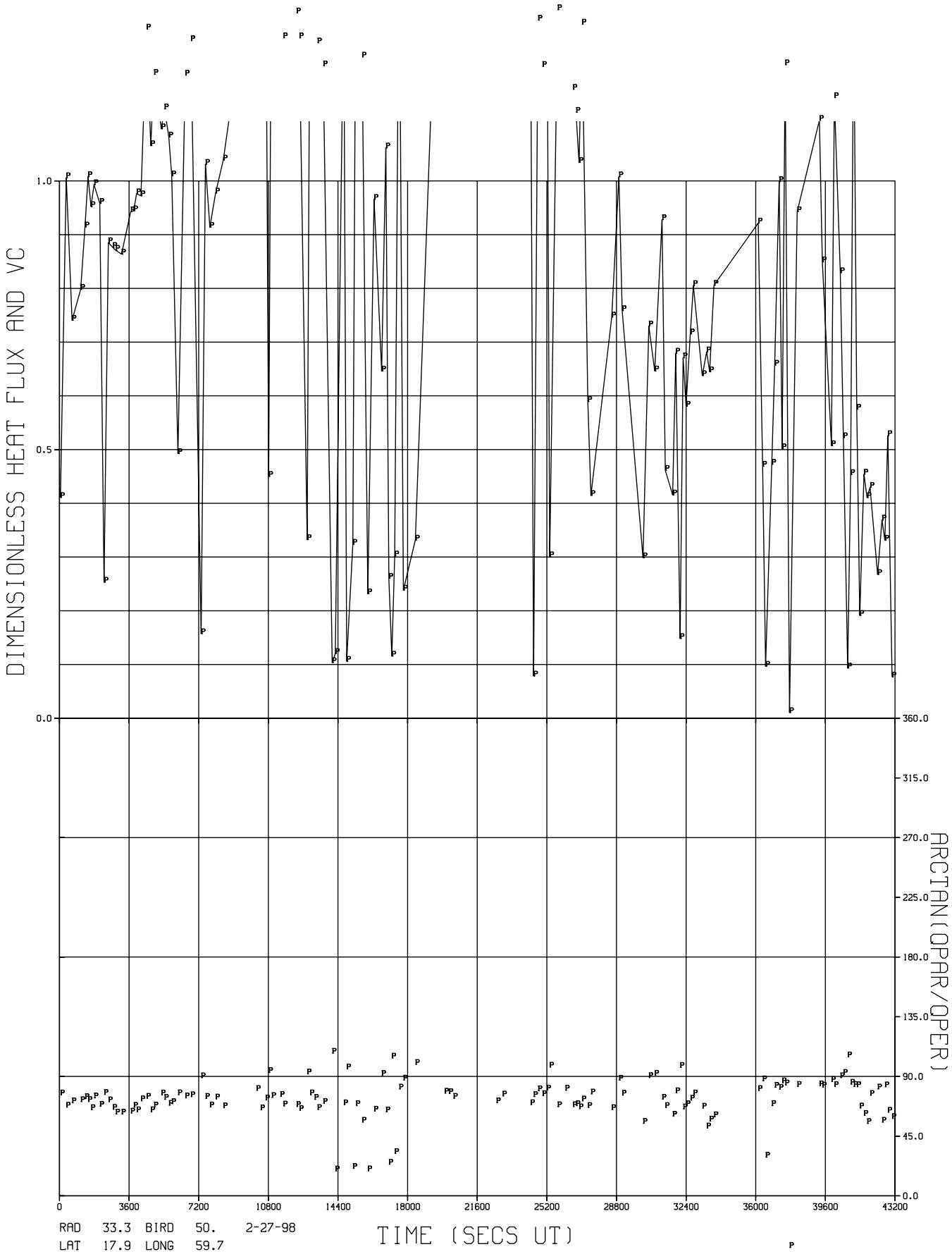

VELOCITY
VELOCITY DIFFERENCE
TIME (SECS UT)
1000
900
800
700
600
500
400
300
200
100
0
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 33.3 BIRD 50. 2-27-98
LAT 17.9 LONG 59.7

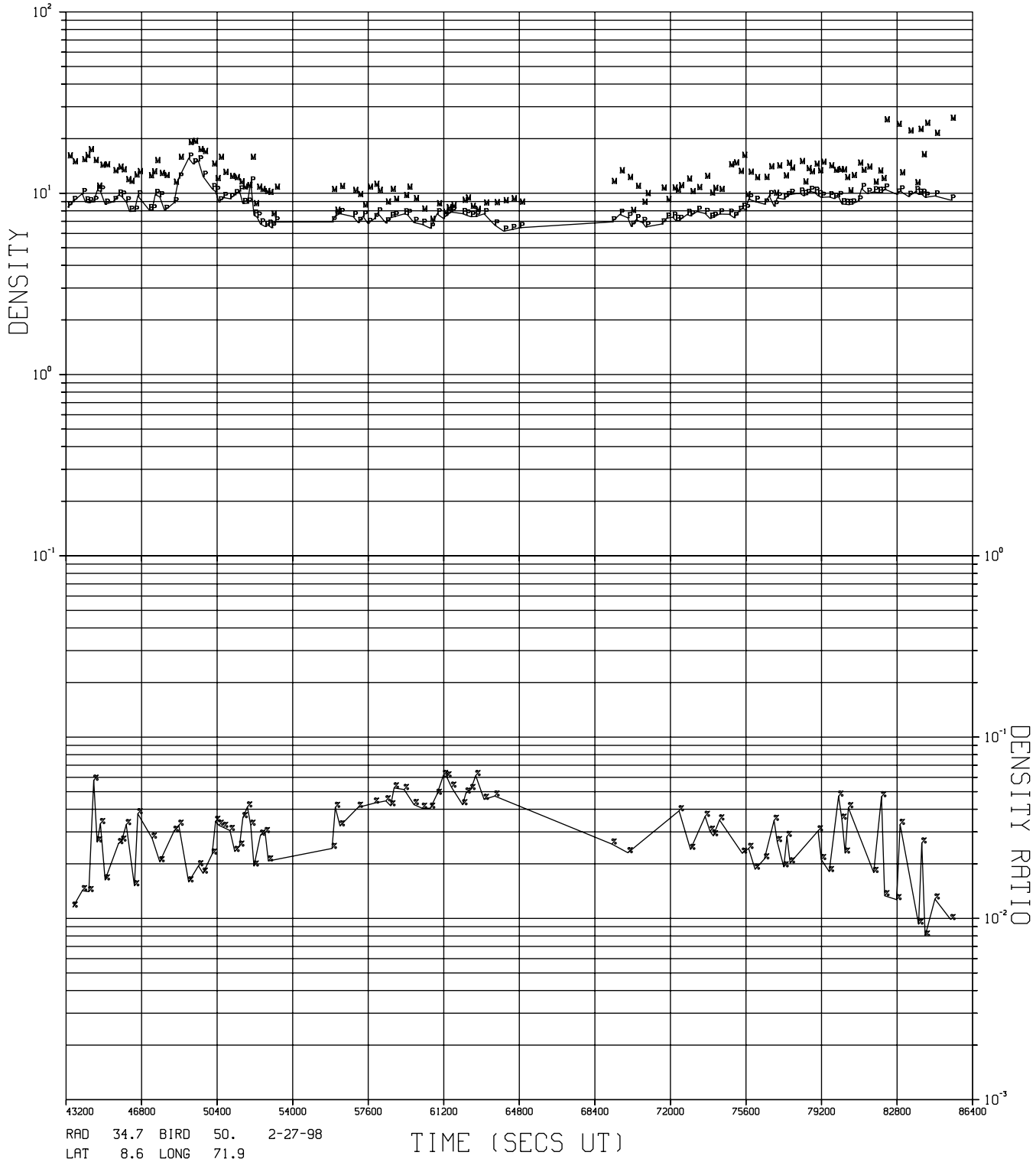

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 33.3 BIRD 50. 2-27-98
LAT 17.9 LONG 59.7

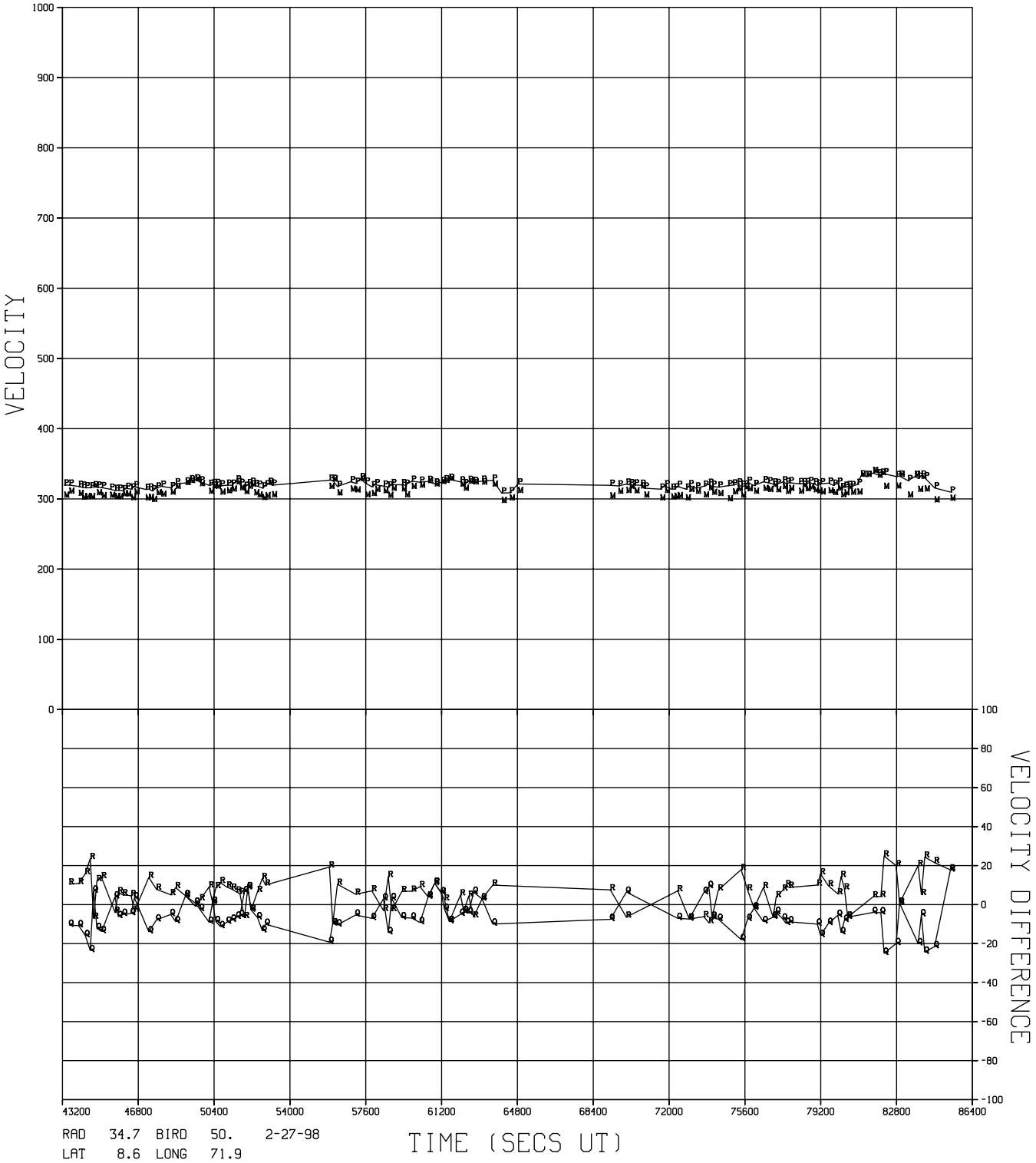

TEMPERATURE
$10^7$
$10^6$
$10^5$
$10^4$
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 33.3 BIRD 50. 2-27-98
LAT 17.9 LONG 59.7

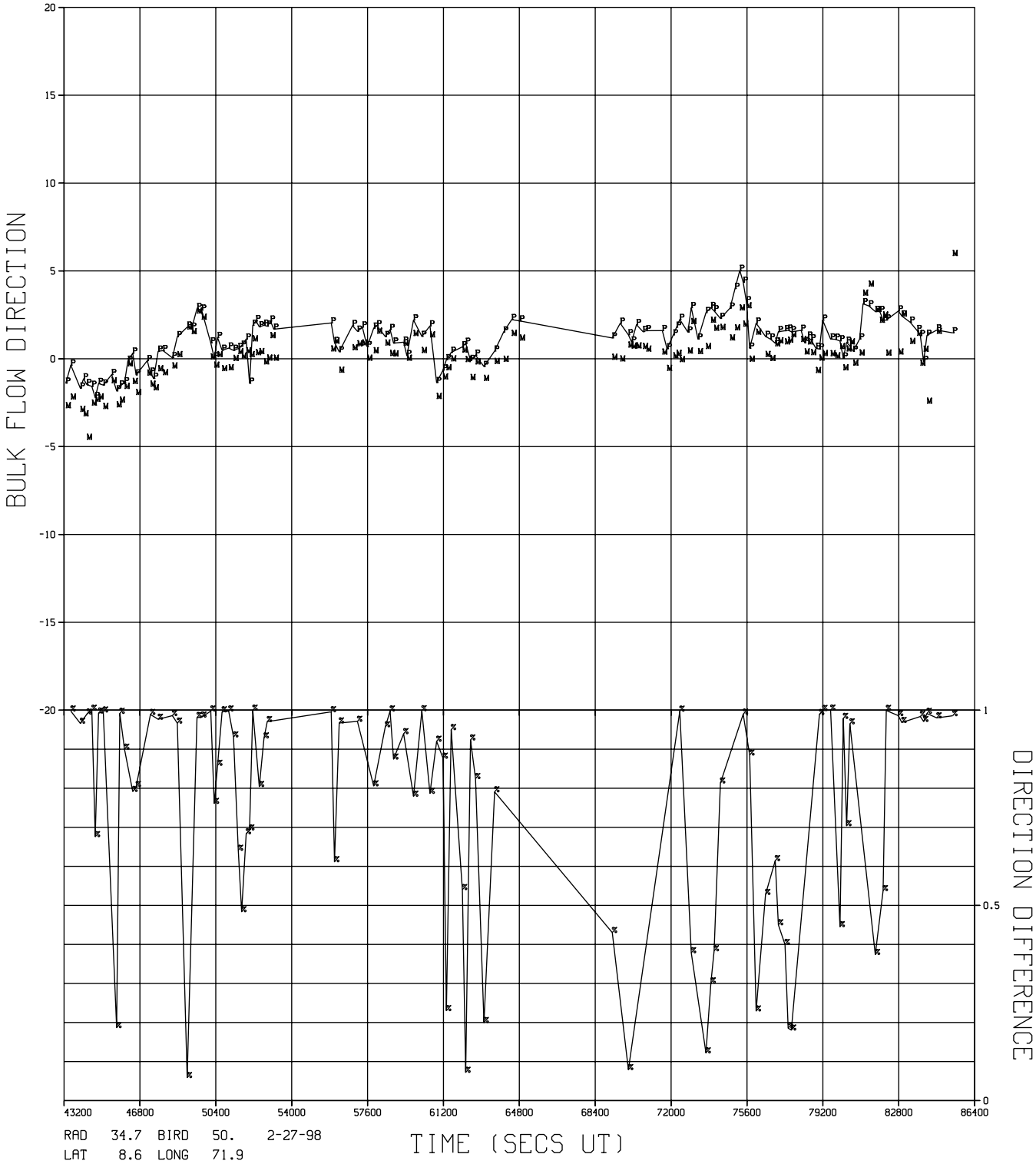

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 33.3 BIRD 50. 2-27-98
LAT 17.9 LONG 59.7

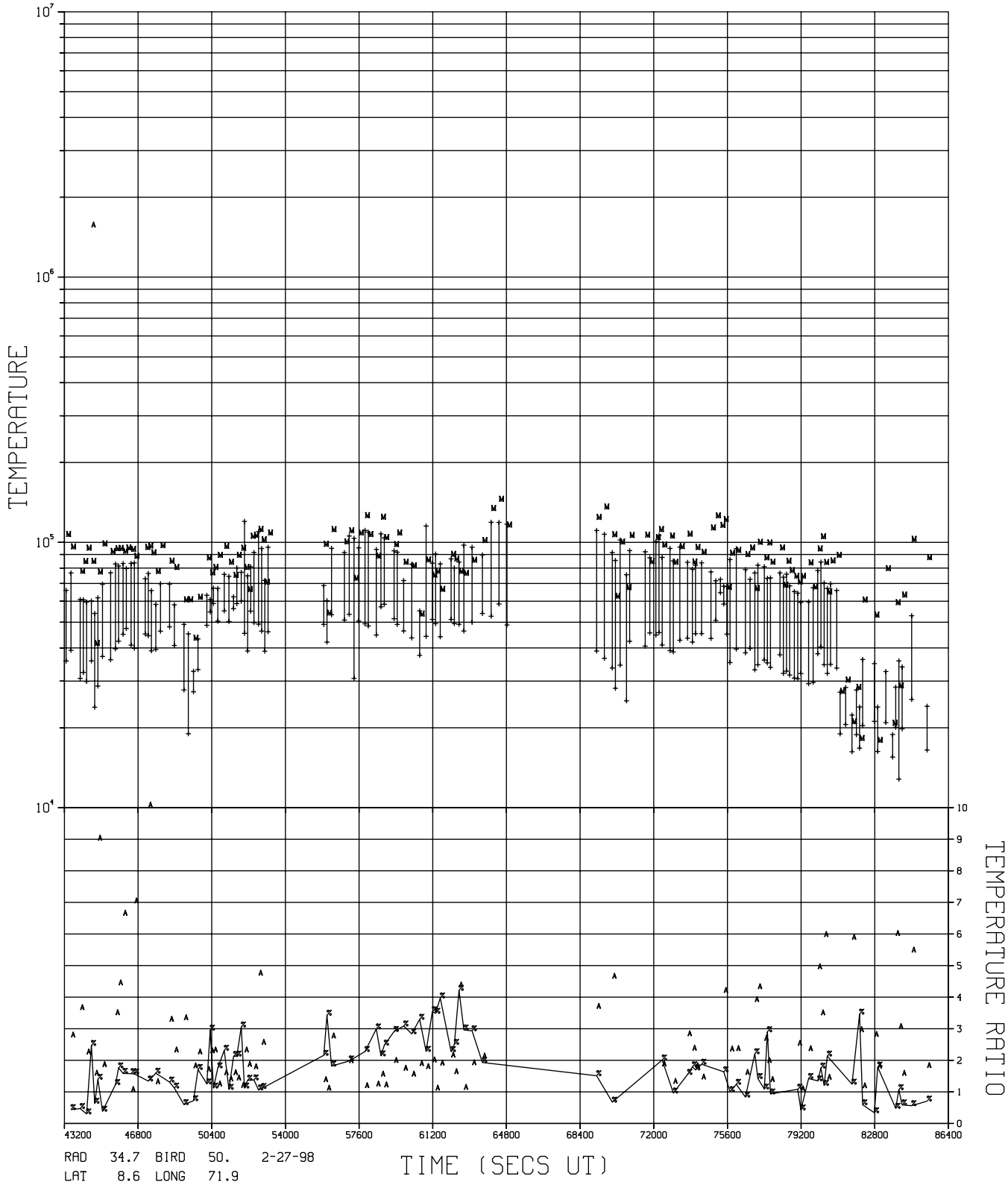

PERP. HEAT FLUX
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
$10^{-7}$
CHI-SQUARE
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 33.3 BIRD 50. 2-27-98
LAT 17.9 LONG 59.7
TIME (SECS UT)

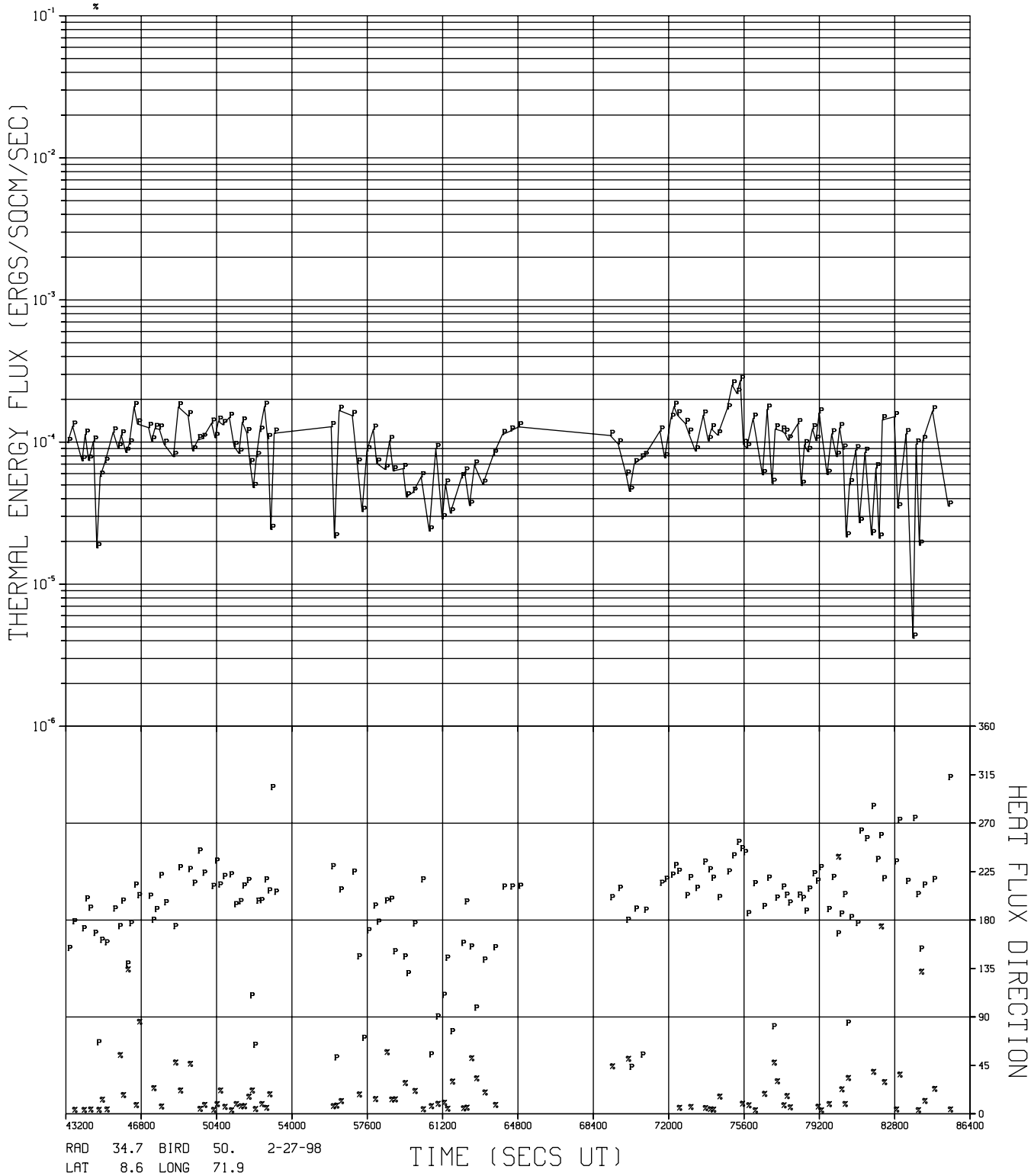

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 33.3 BIRD 50. 2-27-98
LAT 17.9 LONG 59.7
TIME (SECS UT)

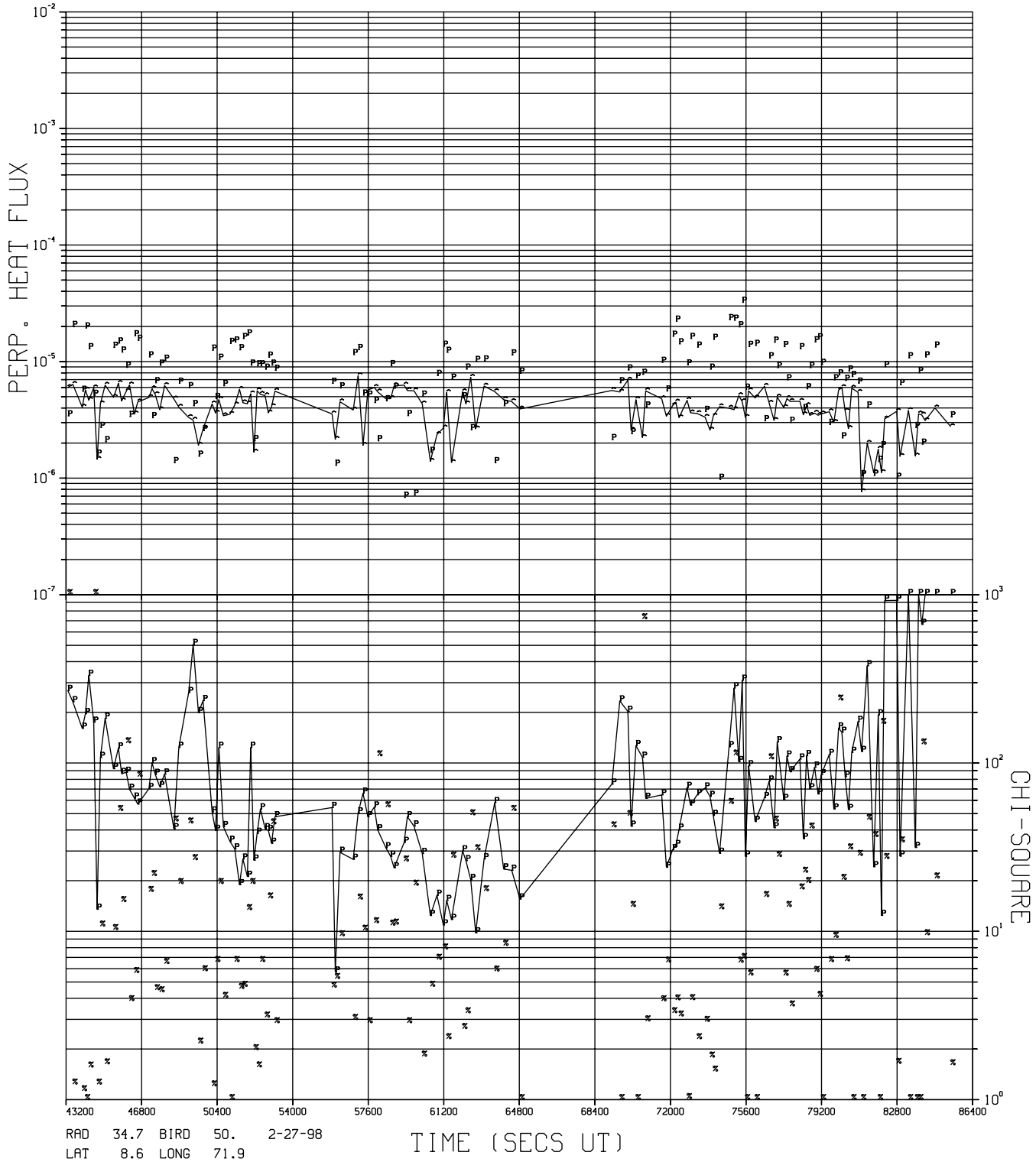

DENSITY
$10^2$
$10^1$
$10^0$
$10^{-1}$
DENSITY RATIO
$10^0$
$10^{-1}$
$10^{-2}$
$10^{-3}$
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 34.7 BIRD 50. 2-27-98
LAT 8.6 LONG 71.9
TIME (SECS UT)

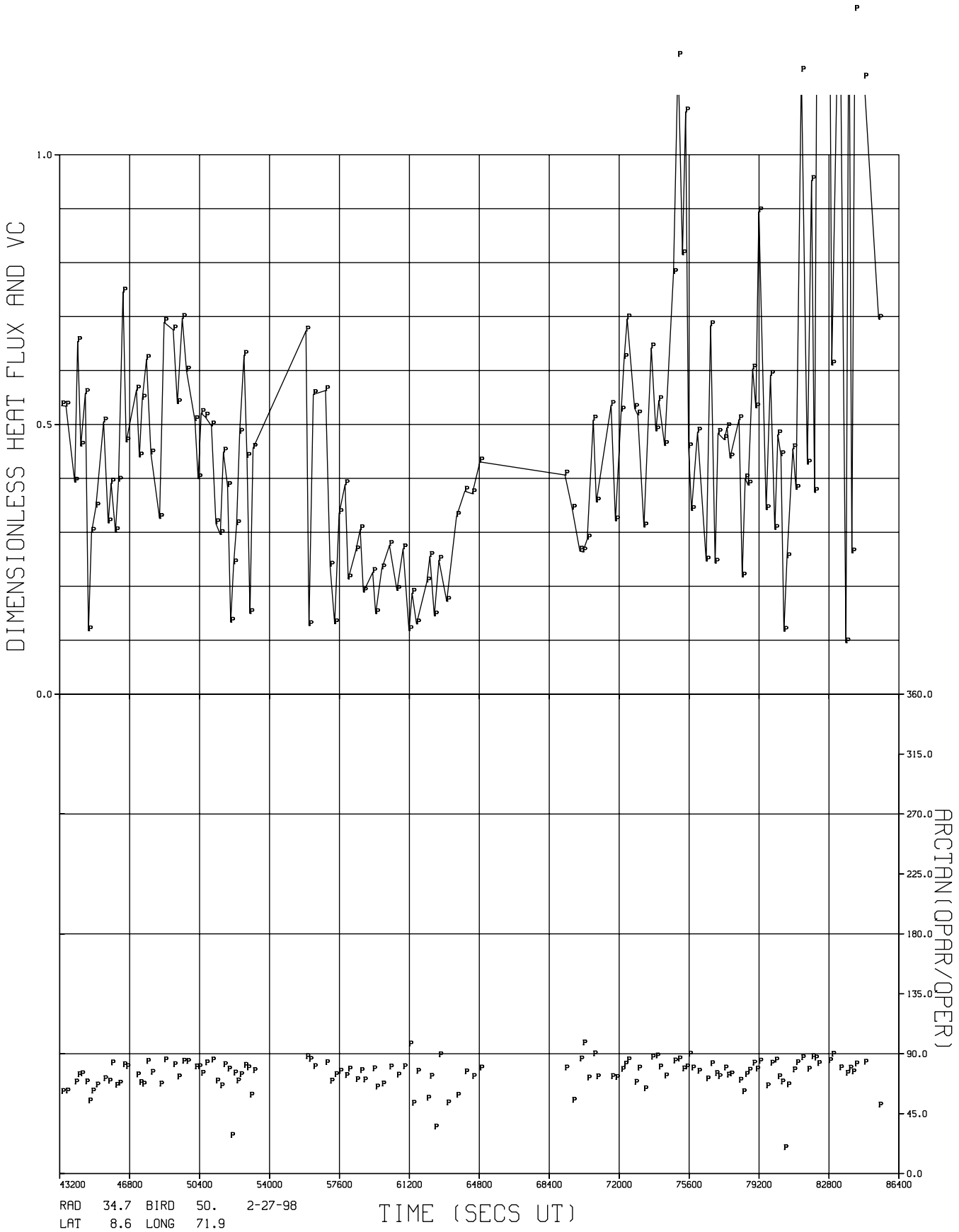

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 34.7 BIRD 50. 2-27-98
LAT 8.6 LONG 71.9

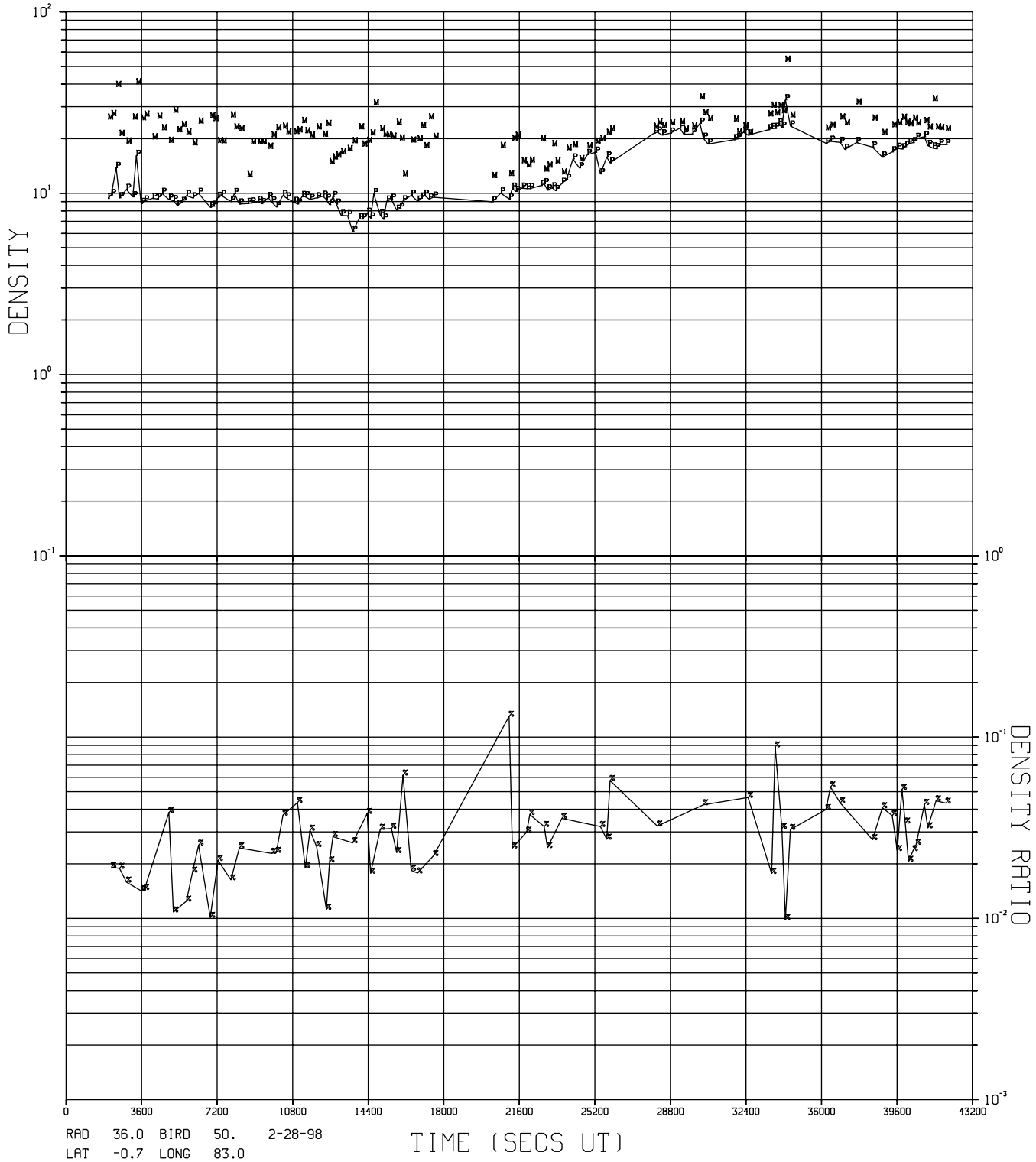

BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 34.7 BIRD 50. 2-27-98
LAT 8.6 LONG 71.9

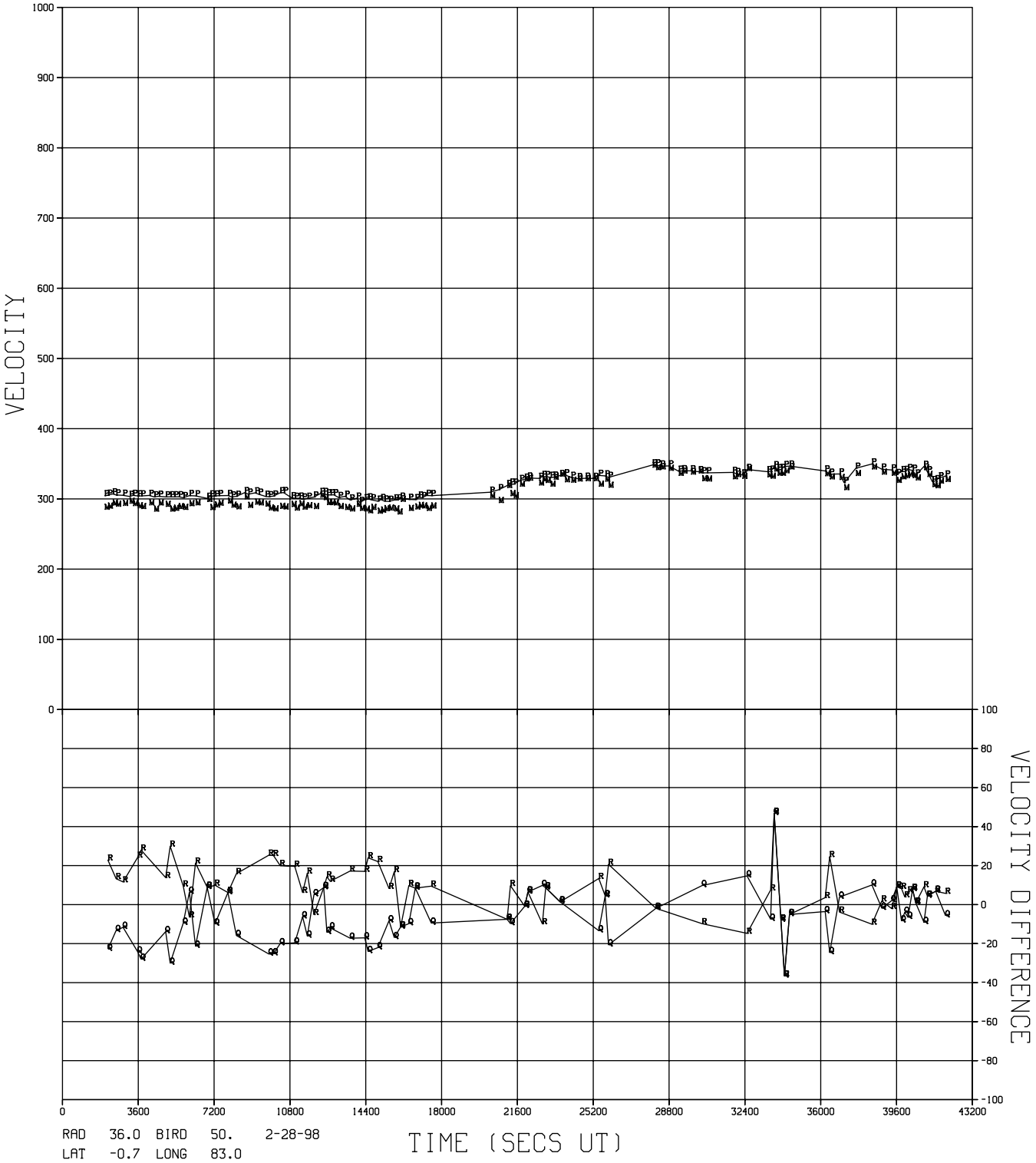

TEMPERATURE
$10^7$
$10^6$
$10^5$
$10^4$
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 34.7 BIRD 50. 2-27-98
LAT 8.6 LONG 71.9

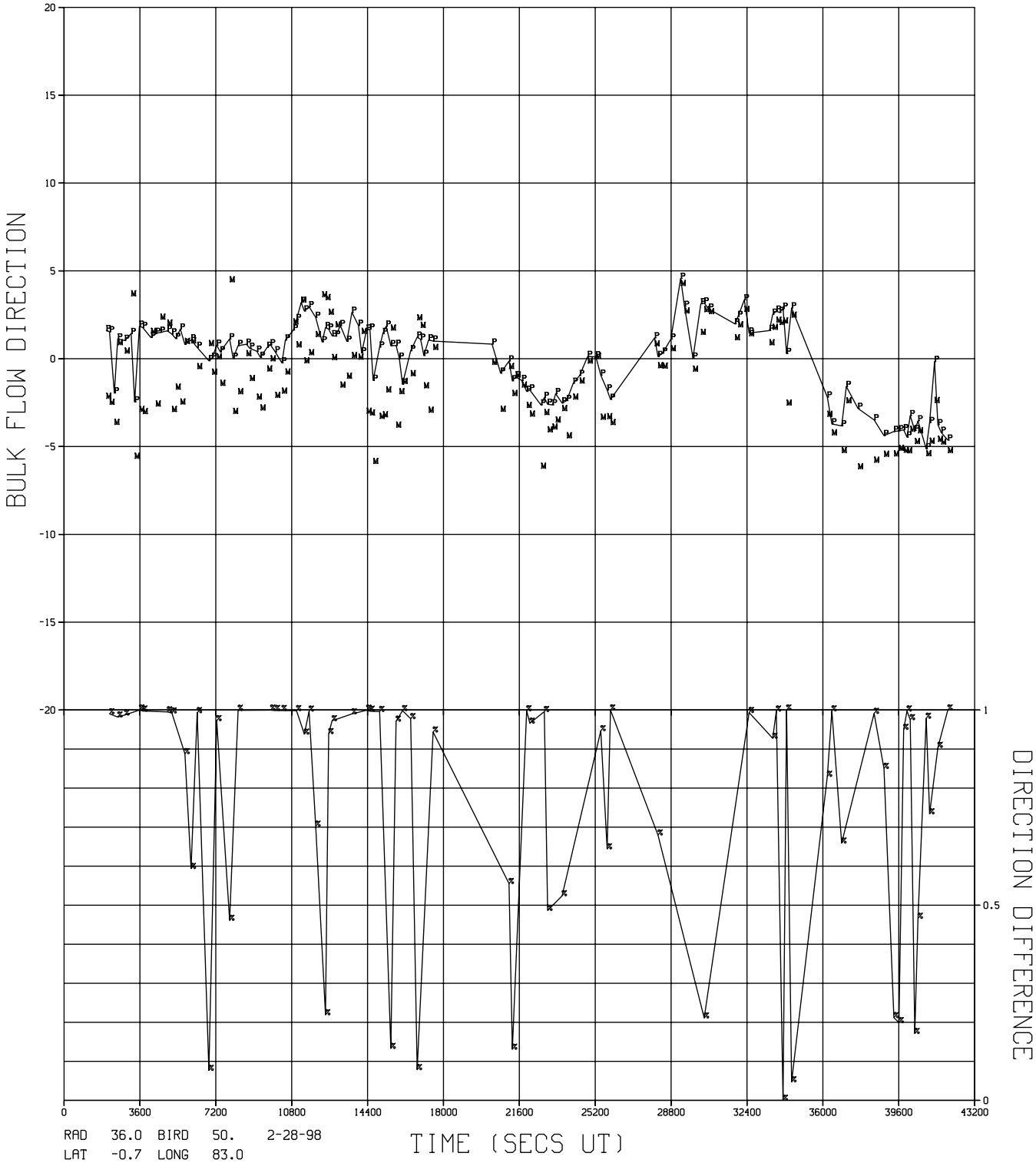

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 34.7 BIRD 50. 2-27-98
LAT 8.6 LONG 71.9

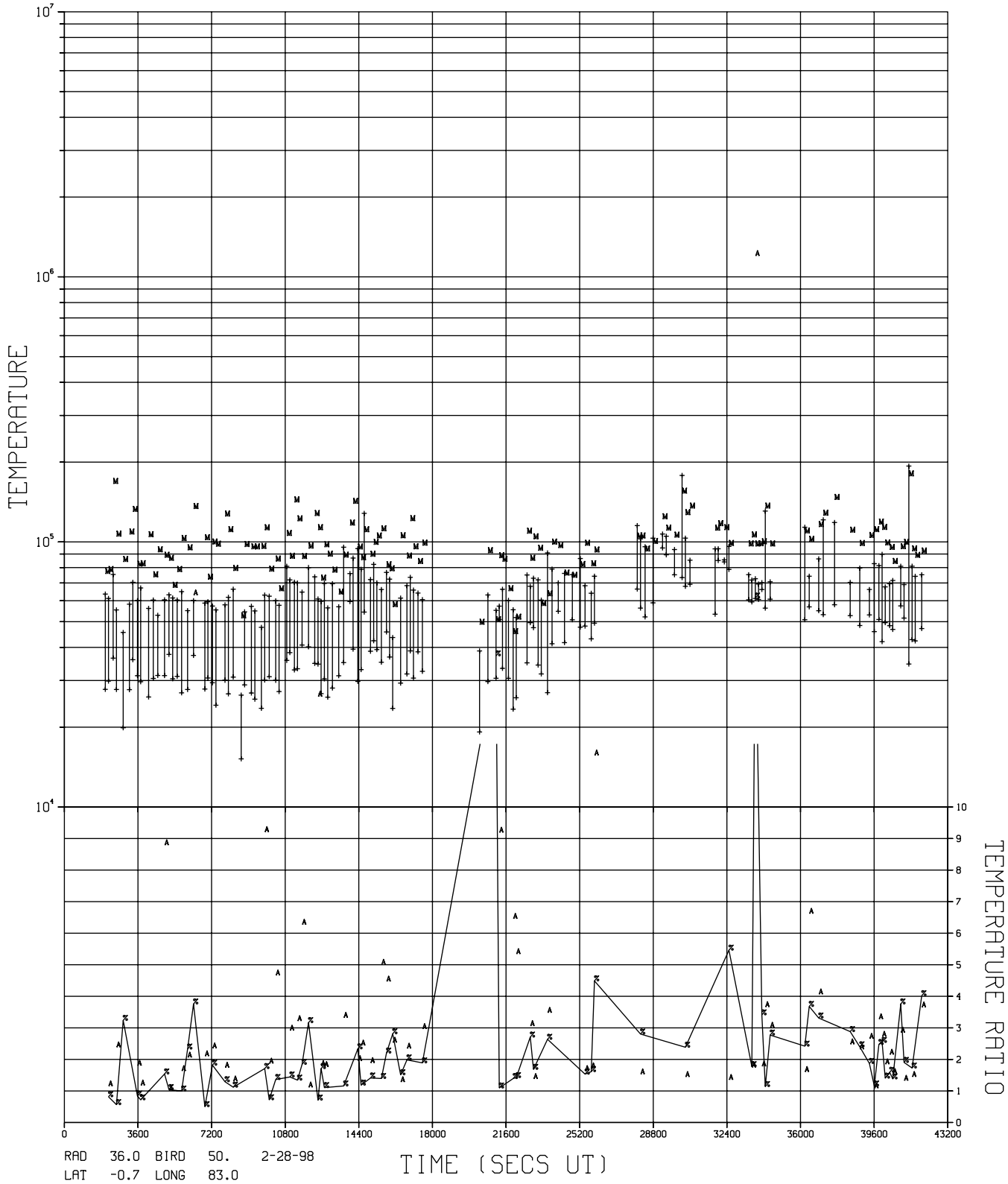

PERP. HEAT FLUX
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
$10^{-7}$
CHI-SQUARE
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 34.7 BIRD 50. 2-27-98
LAT 8.6 LONG 71.9

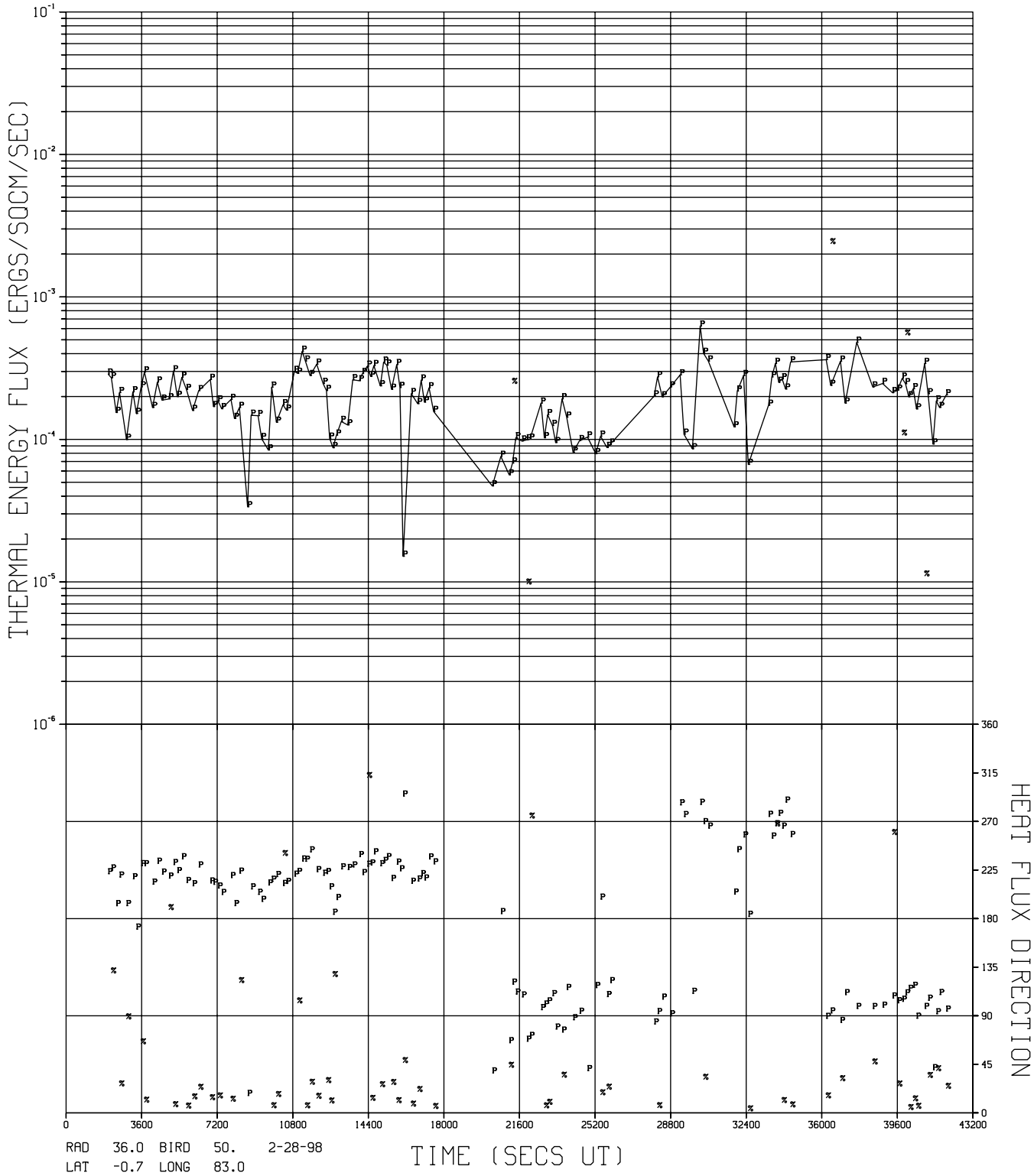

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 34.7 BIRD 50. 2-27-98
LAT 8.6 LONG 71.9
TIME (SECS UT)

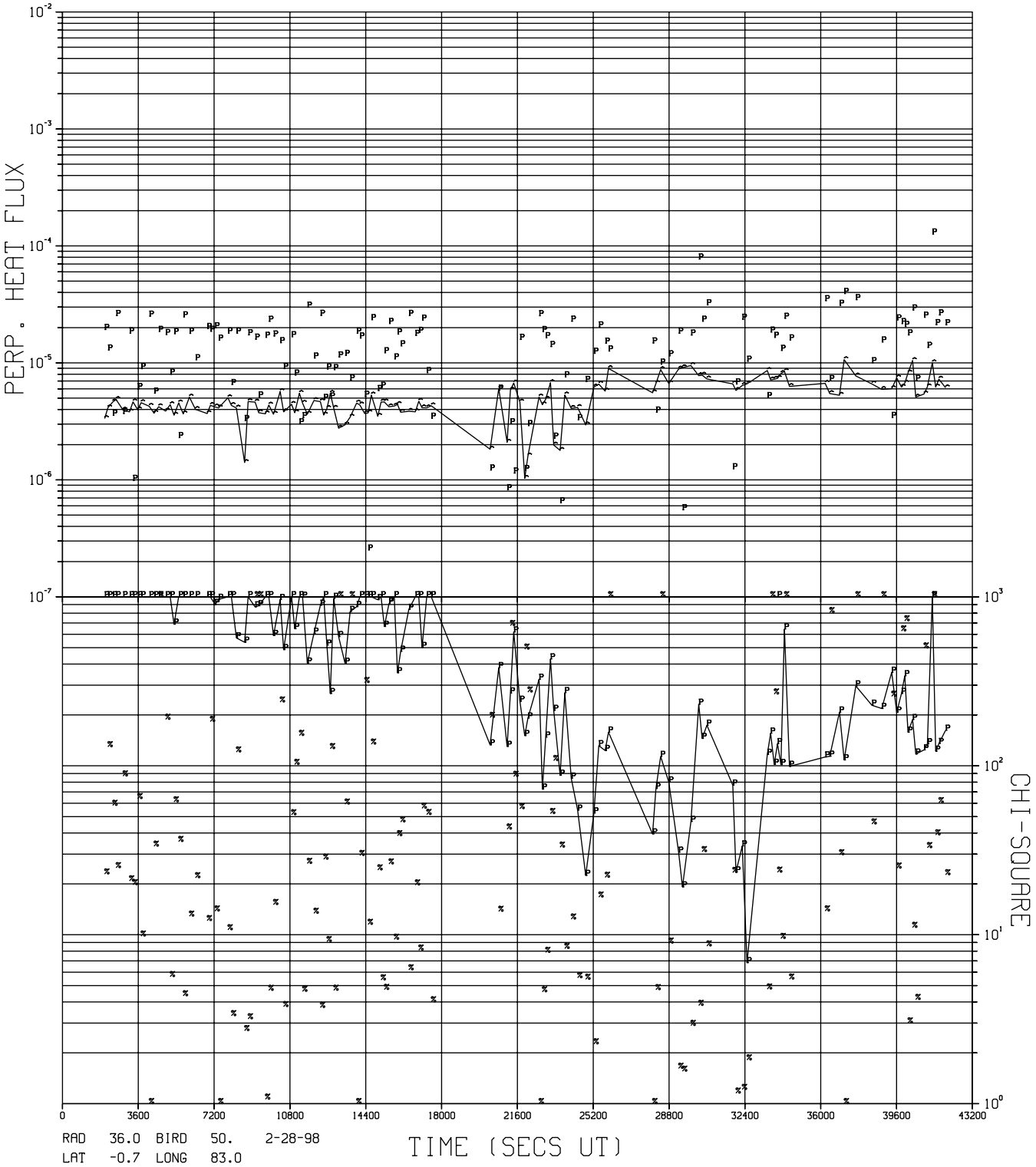

DENSITY
$10^2$
$10^1$
$10^0$
$10^{-1}$
DENSITY RATIO
$10^0$
$10^{-1}$
$10^{-2}$
$10^{-3}$
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 36.0 BIRD 50. 2-28-98
LAT -0.7 LONG 83.0
TIME (SECS UT)

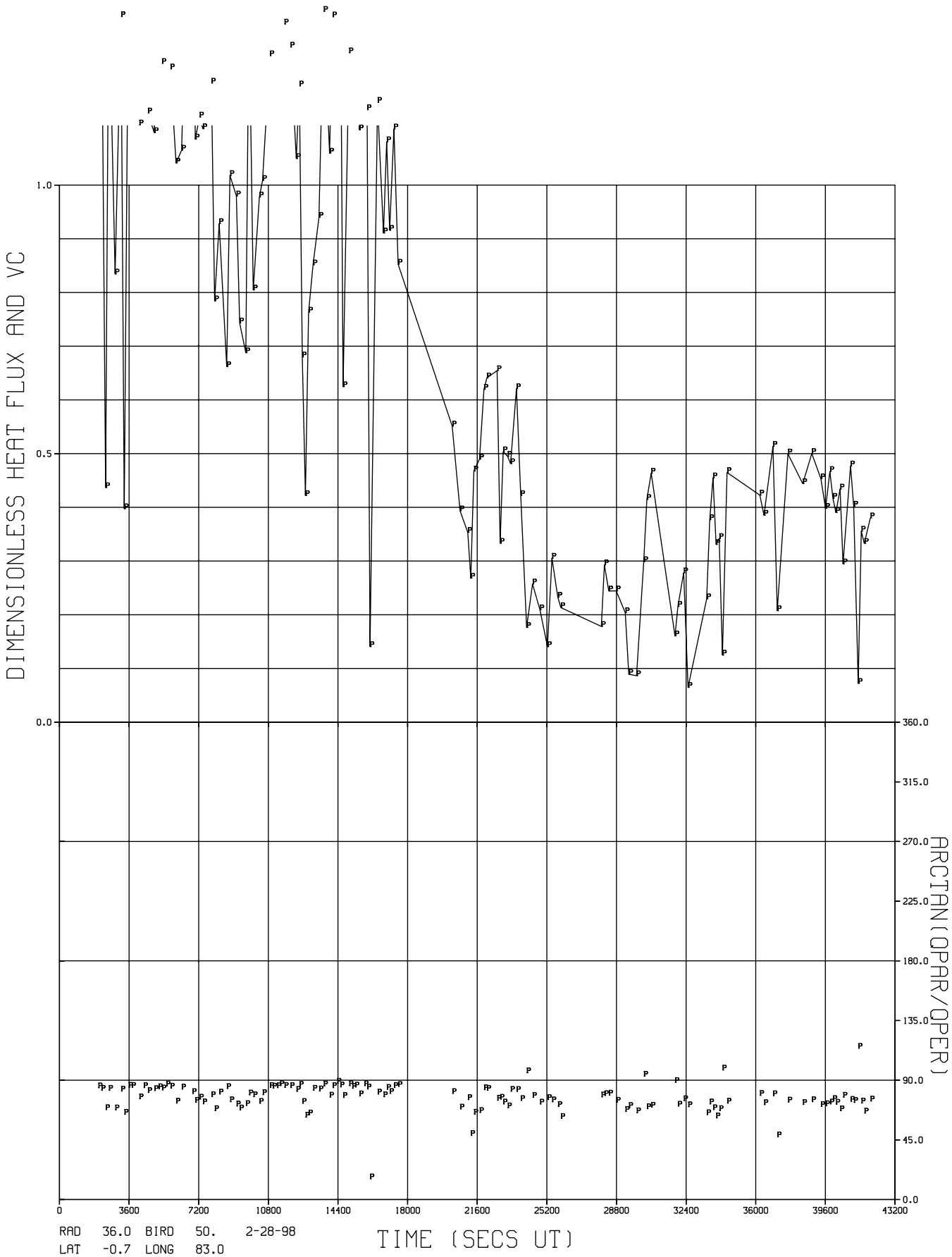

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.0 BIRD 50. 2-28-98
LAT -0.7 LONG 83.0

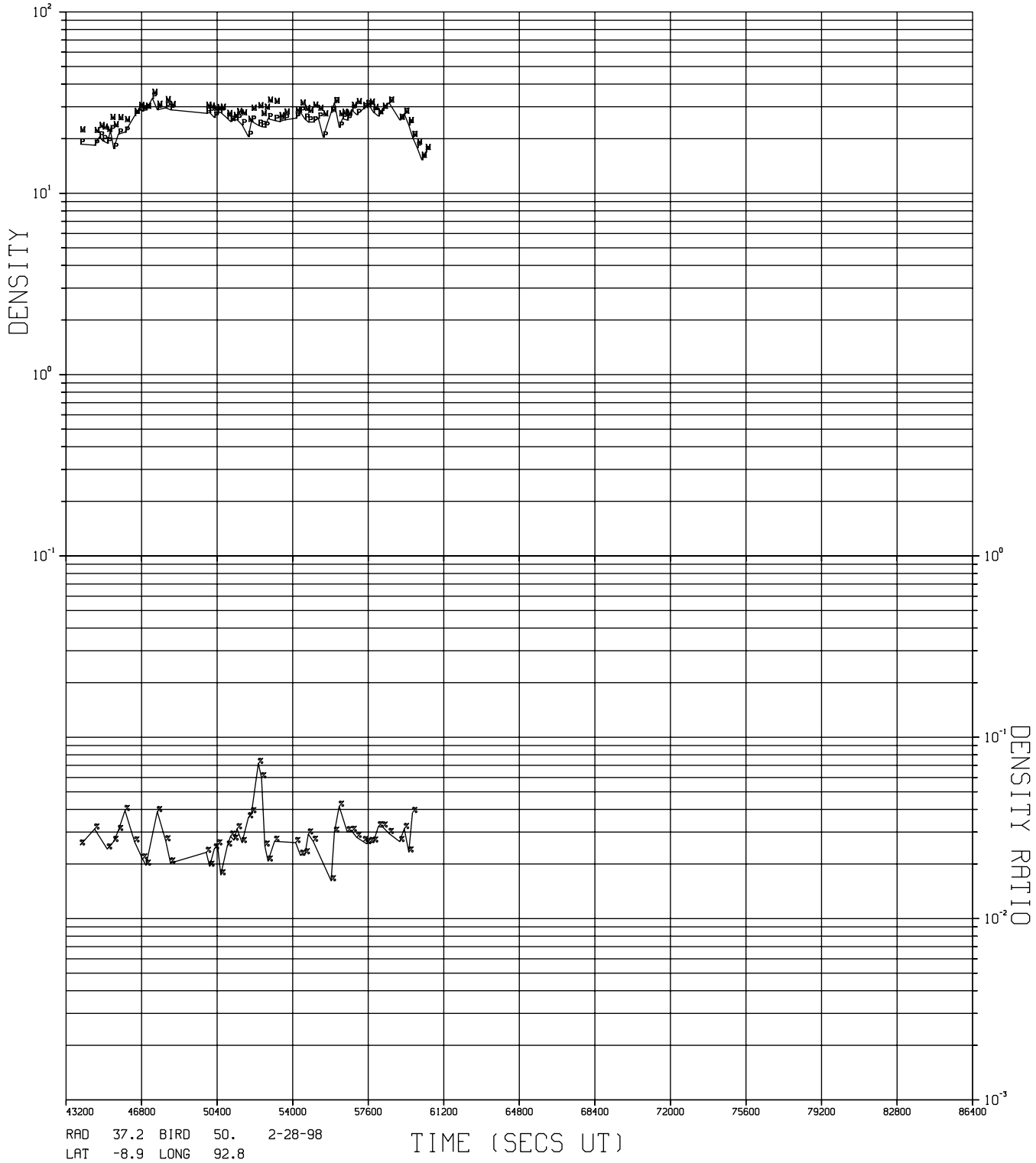

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 36.0 BIRD 50. 2-28-98
LAT -0.7 LONG 83.0

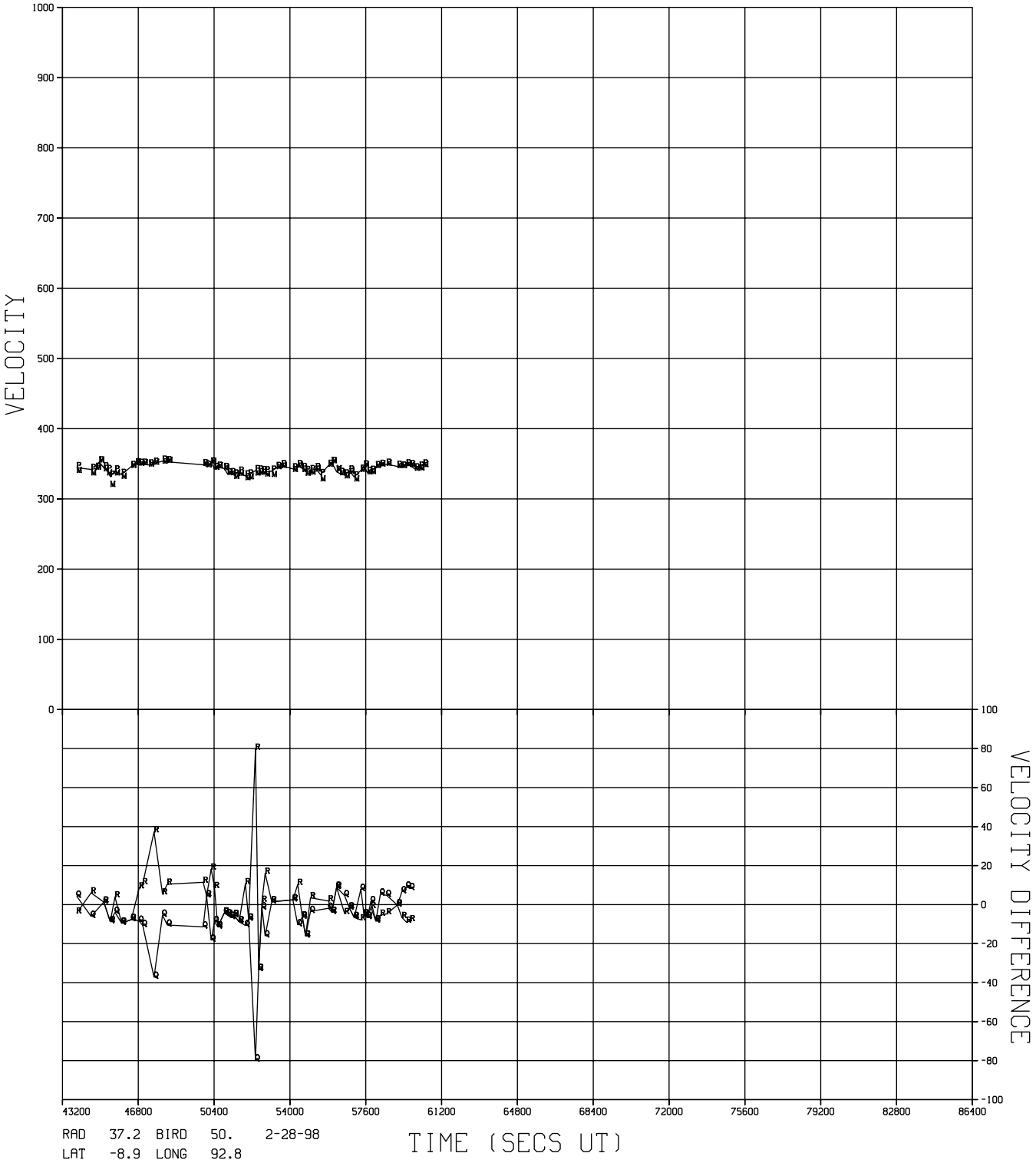

TEMPERATURE
$10^7$
$10^6$
$10^5$
$10^4$
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.0 BIRD 50. 2-28-98
LAT -0.7 LONG 83.0

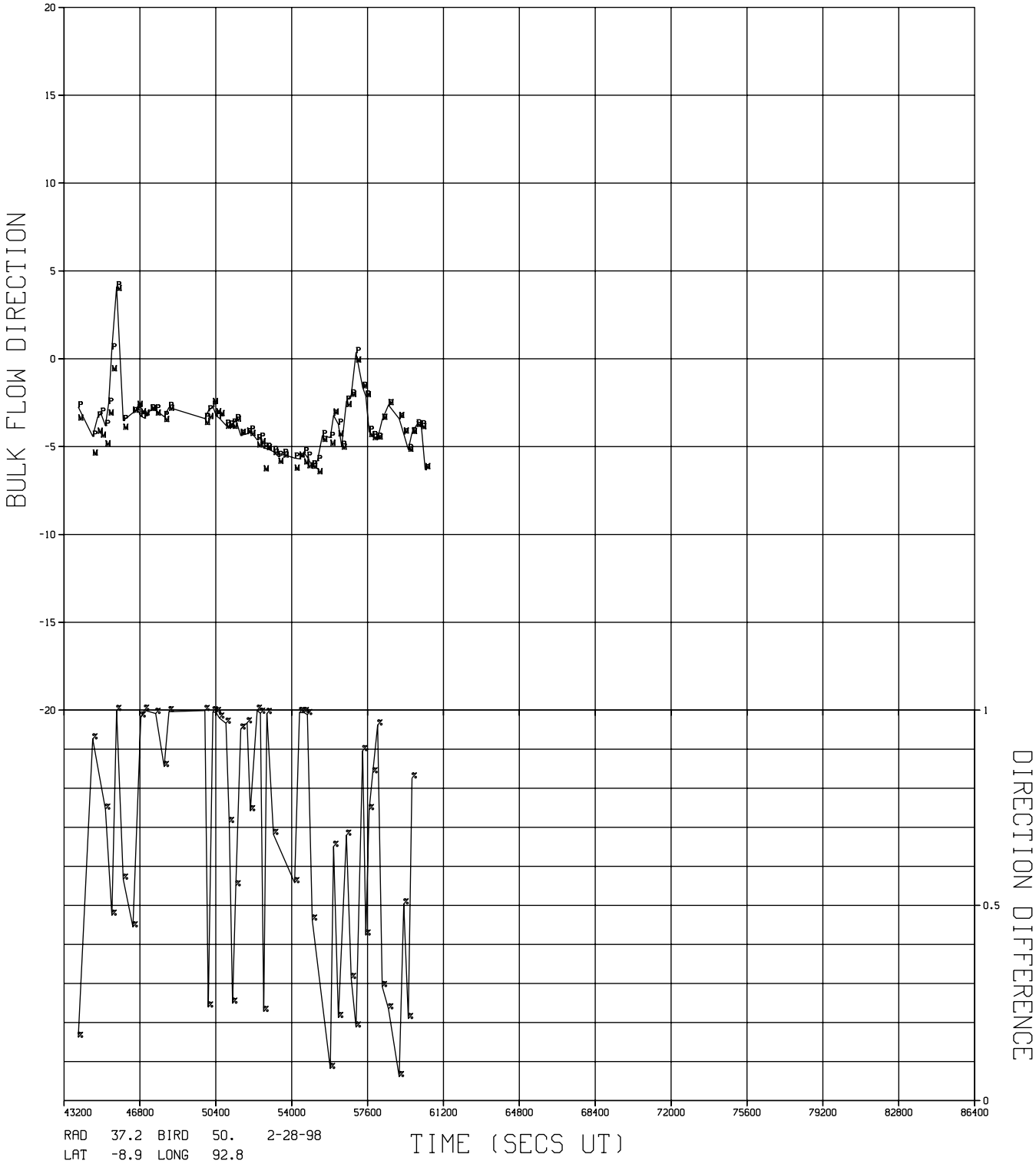

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.0 BIRD 50. 2-28-98
LAT -0.7 LONG 83.0

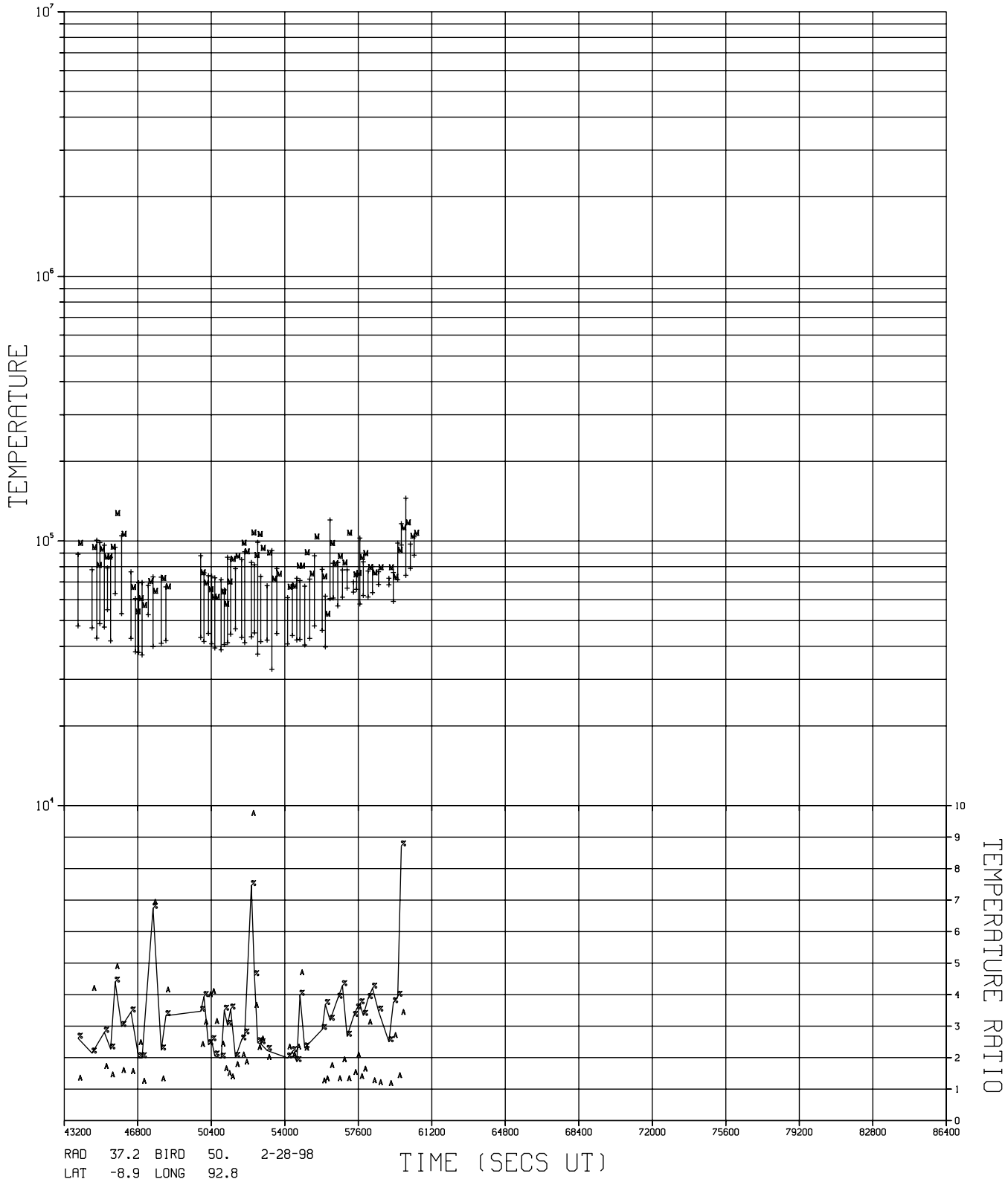

PERP. HEAT FLUX
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
$10^{-7}$
CHI-SQUARE
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.0 BIRD 50. 2-28-98
LAT -0.7 LONG 83.0

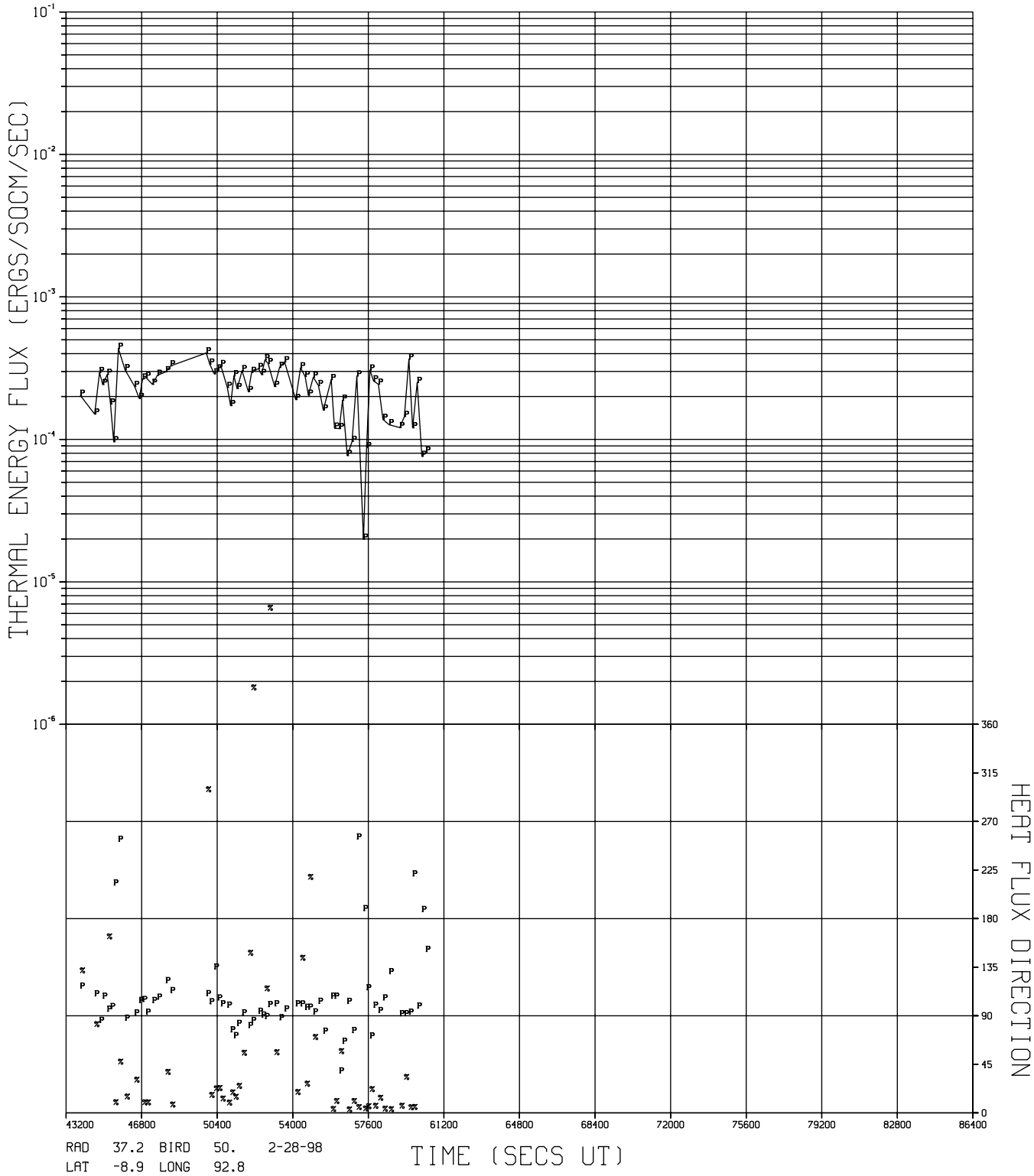

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.0 BIRD 50. 2-28-98
LAT -0.7 LONG 83.0

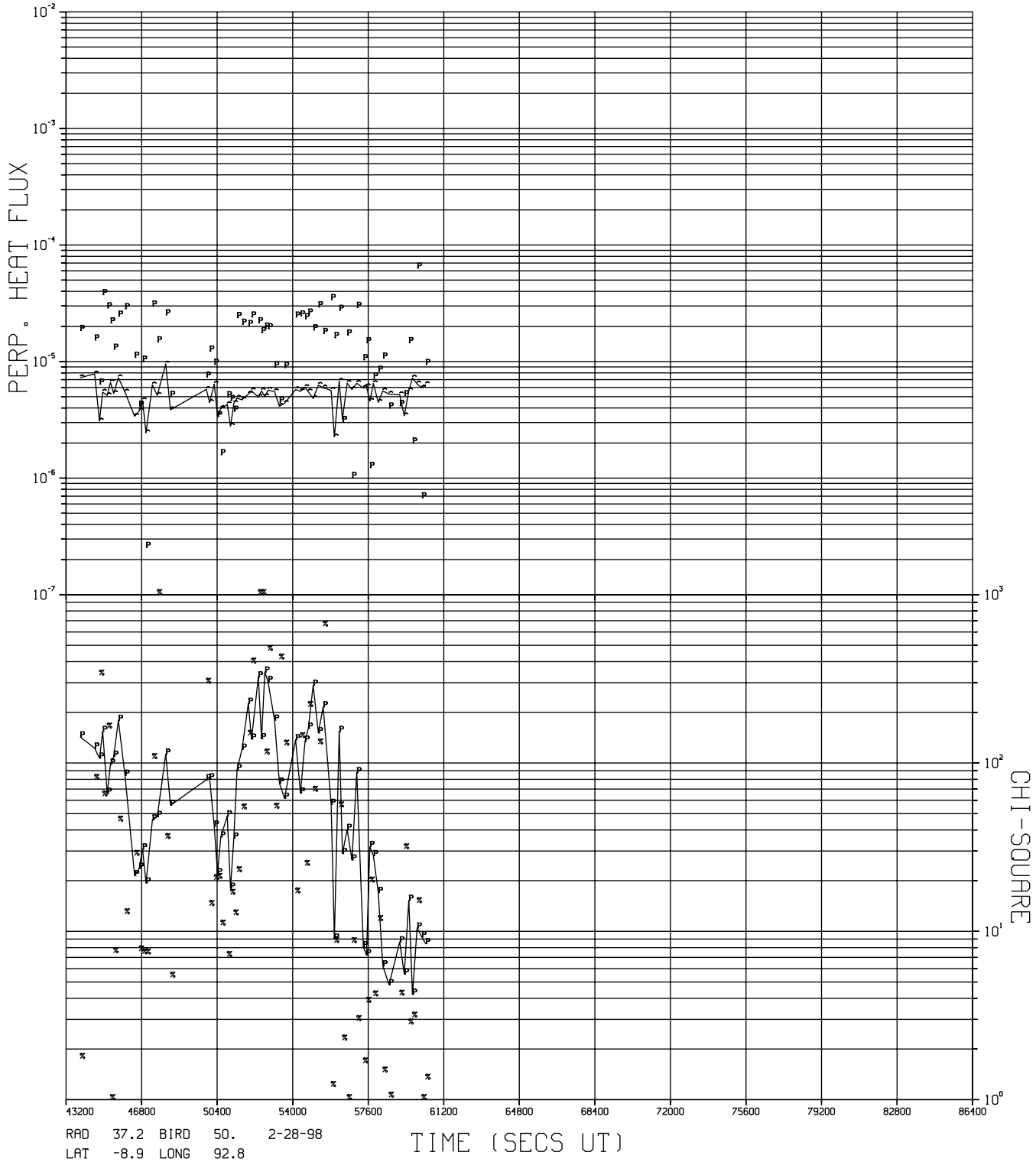

DENSITY
$10^2$
$10^1$
$10^0$
$10^{-1}$
DENSITY RATIO
$10^0$
$10^{-1}$
$10^{-2}$
$10^{-3}$
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.2 BIRD 50. 2-28-98
LAT -8.9 LONG 92.8

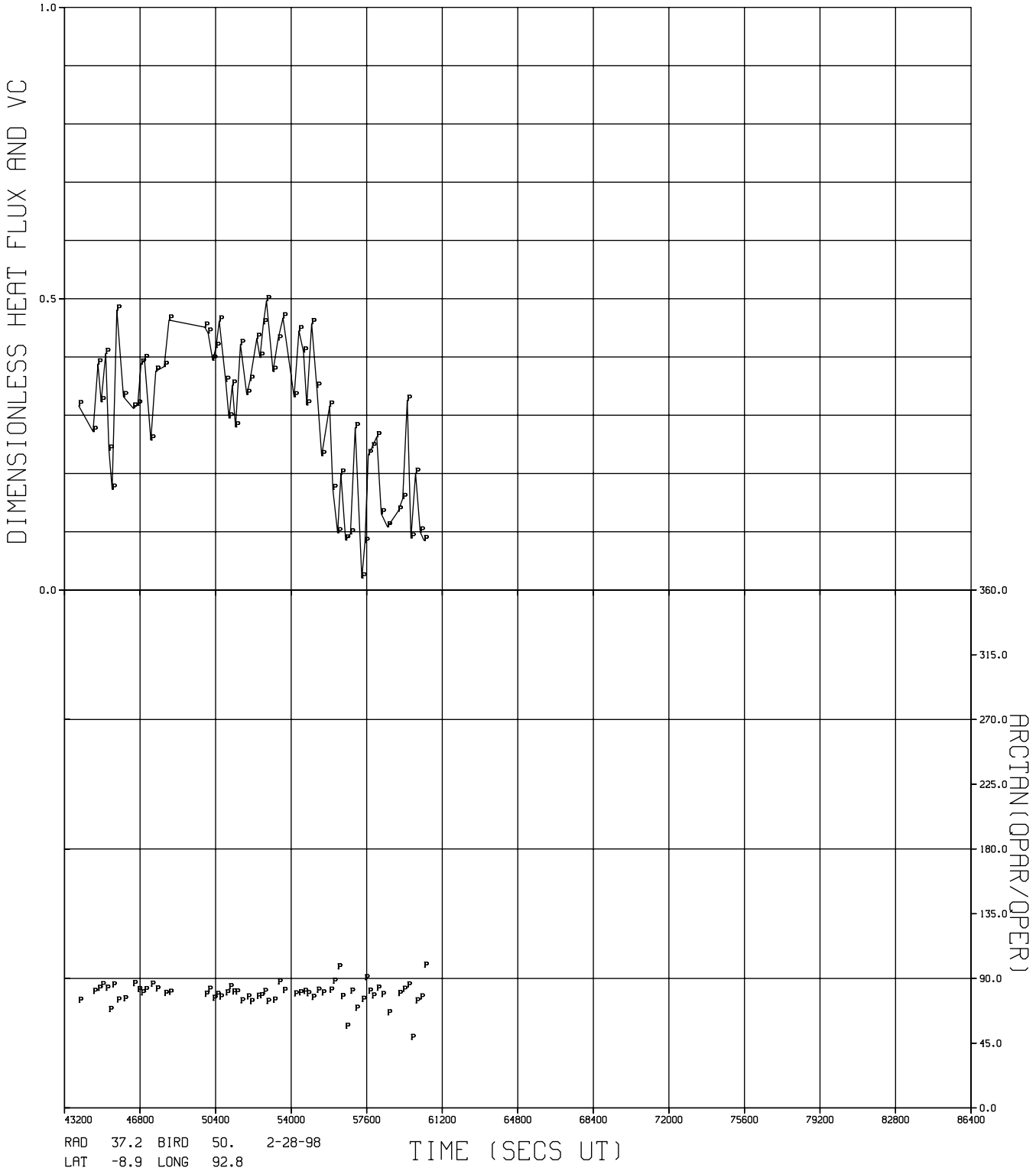

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 37.2 BIRD 50. 2-28-98
LAT -8.9 LONG 92.8


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 37.2 BIRD 50. 2-28-98
LAT -8.9 LONG 92.8


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 37.2 BIRD 50. 2-28-98
LAT -8.9 LONG 92.8


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 37.2 BIRD 50. 2-28-98
LAT -8.9 LONG 92.8


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
TIME (SECS UT)
RAD 37.2 BIRD 50. 2-28-98
LAT -8.9 LONG 92.8


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
RAD 37.2 BIRD 50. 2-28-98
LAT -8.9 LONG 92.8
TIME (SECS UT)