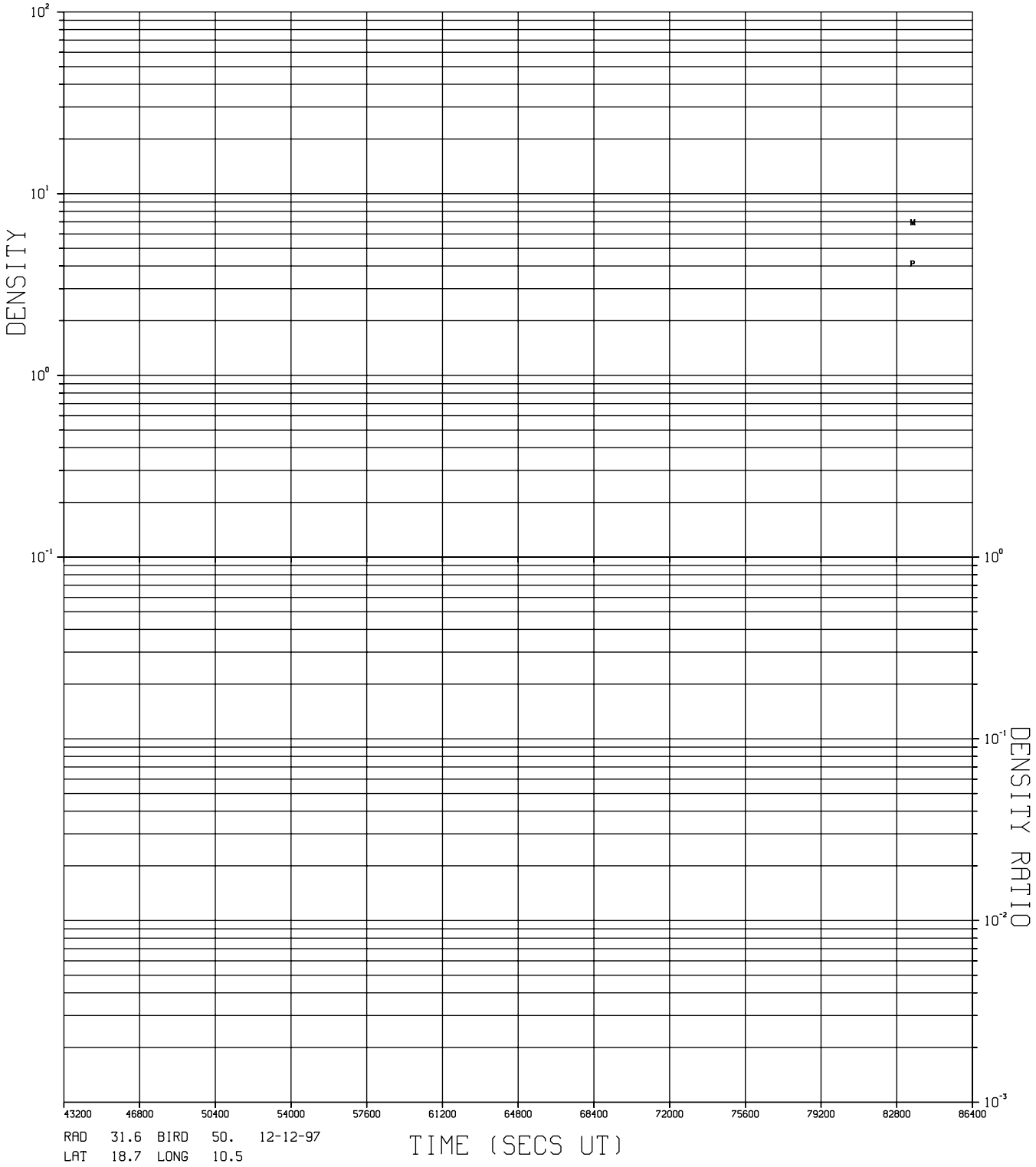
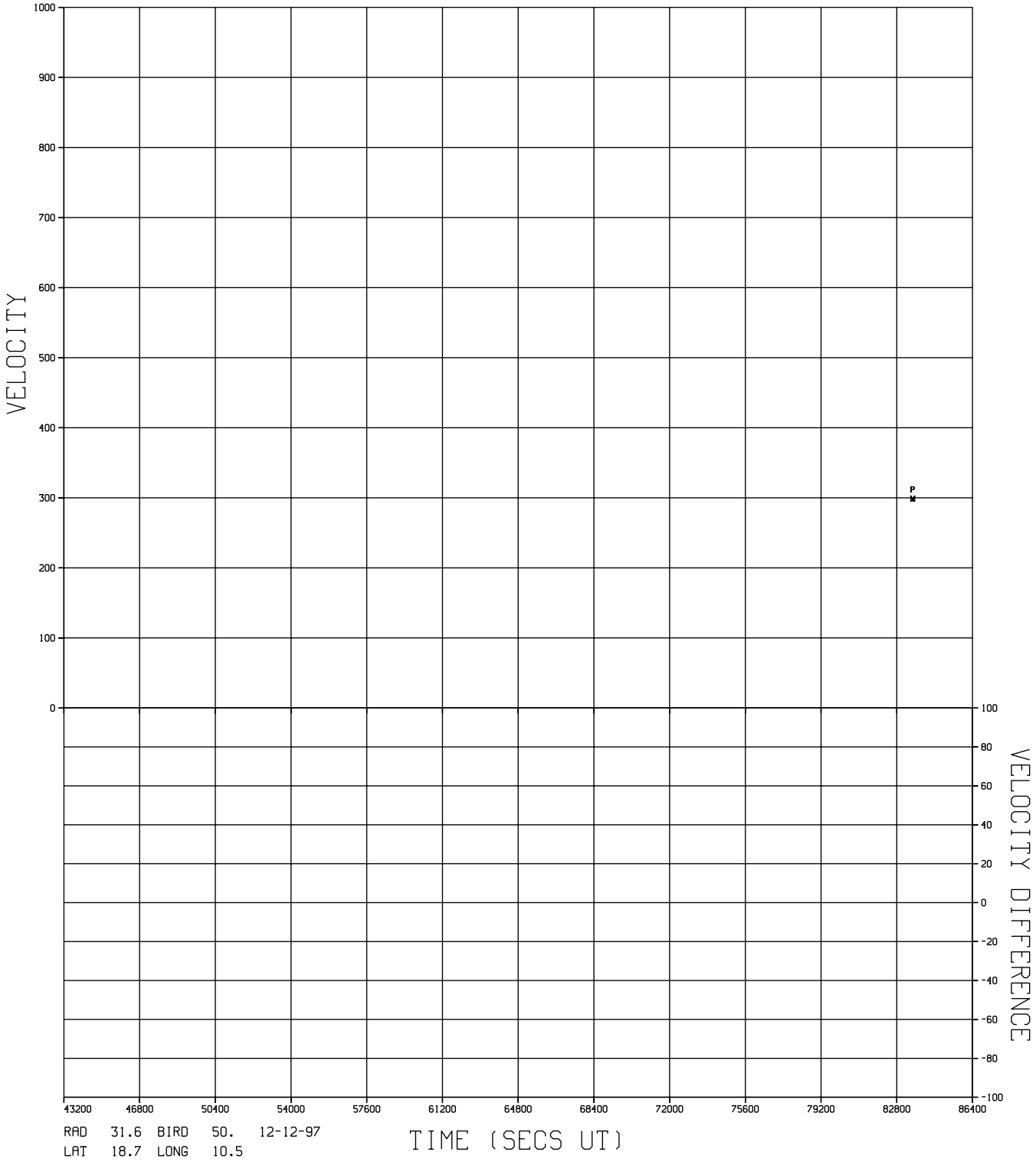
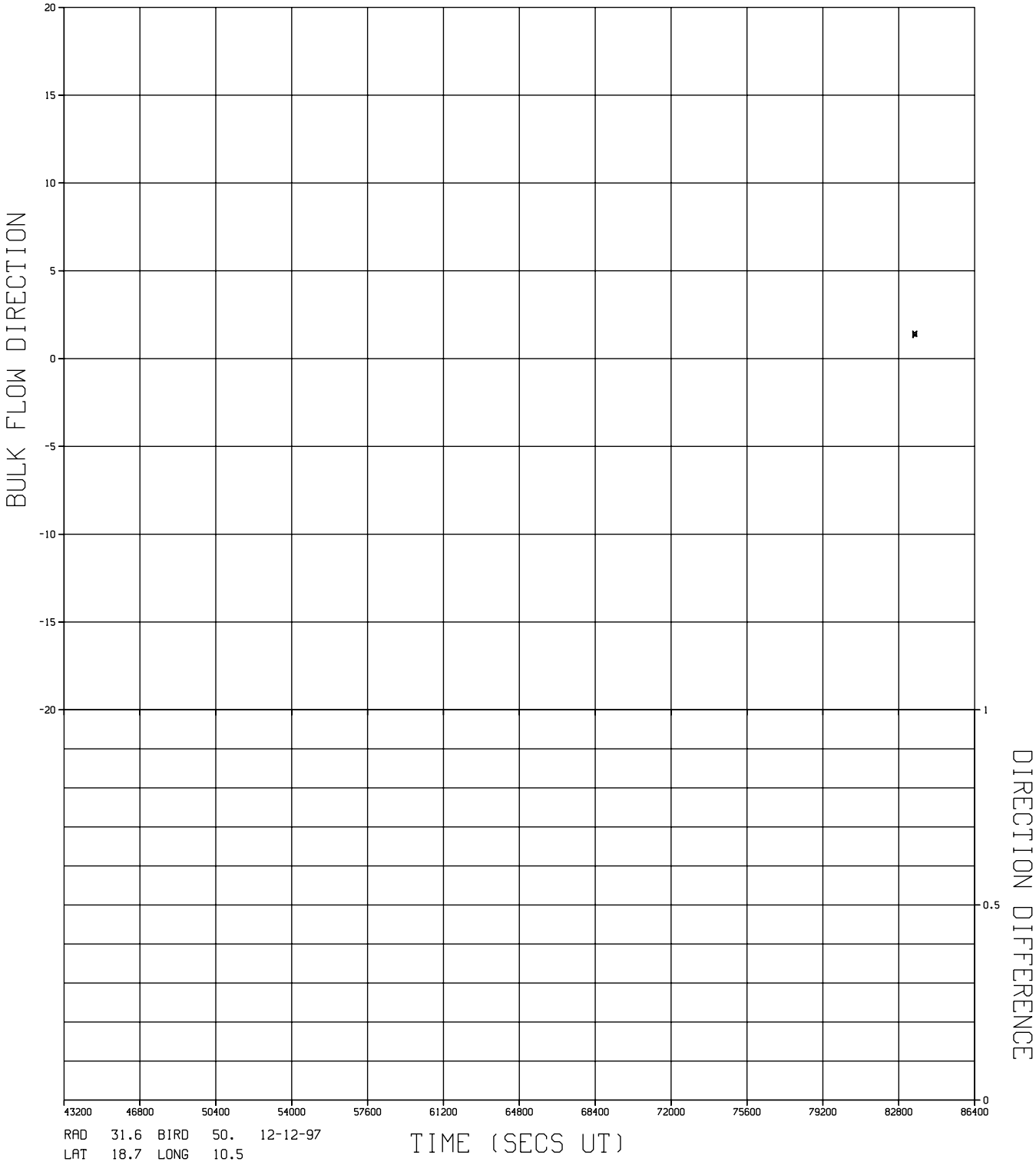
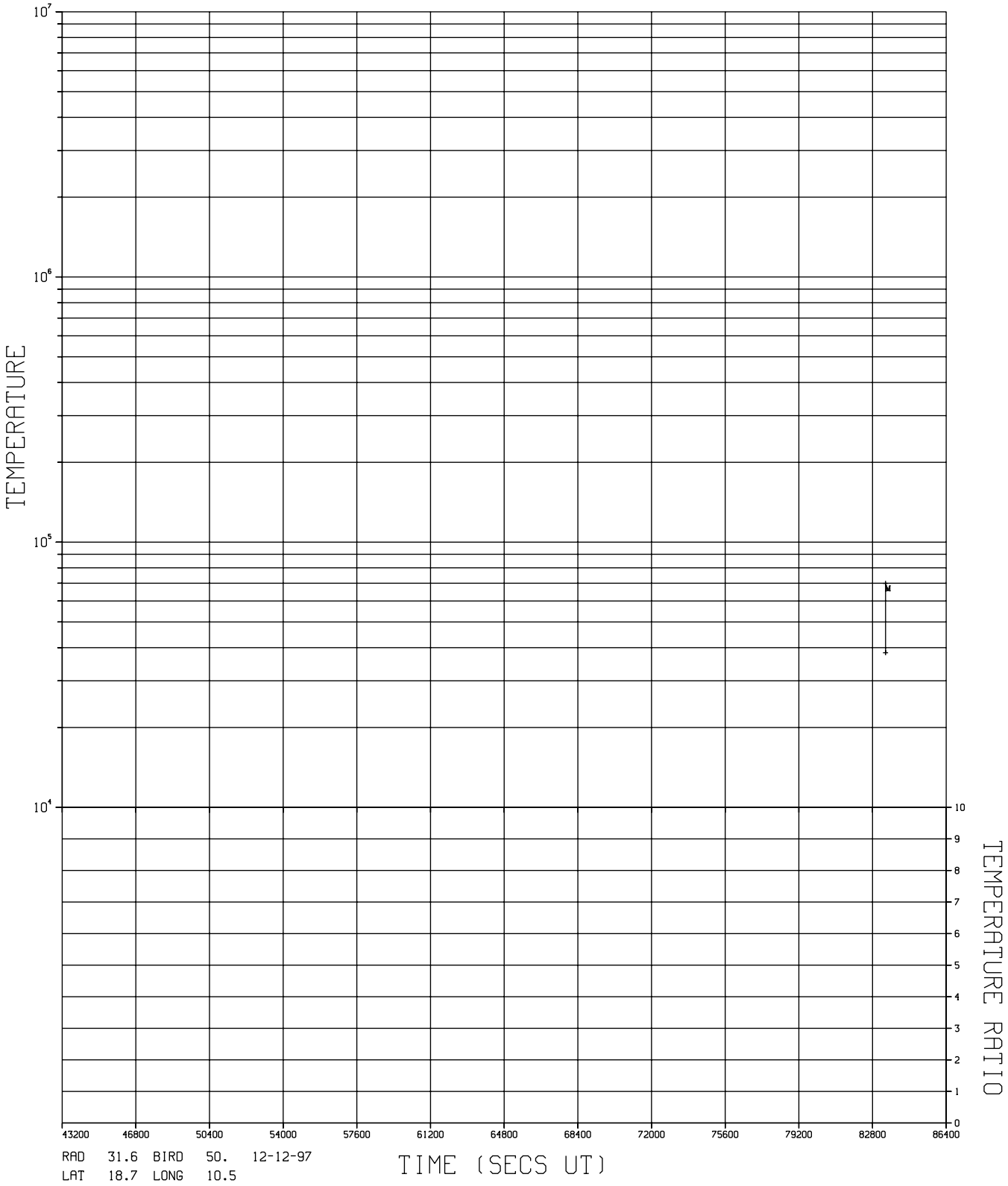
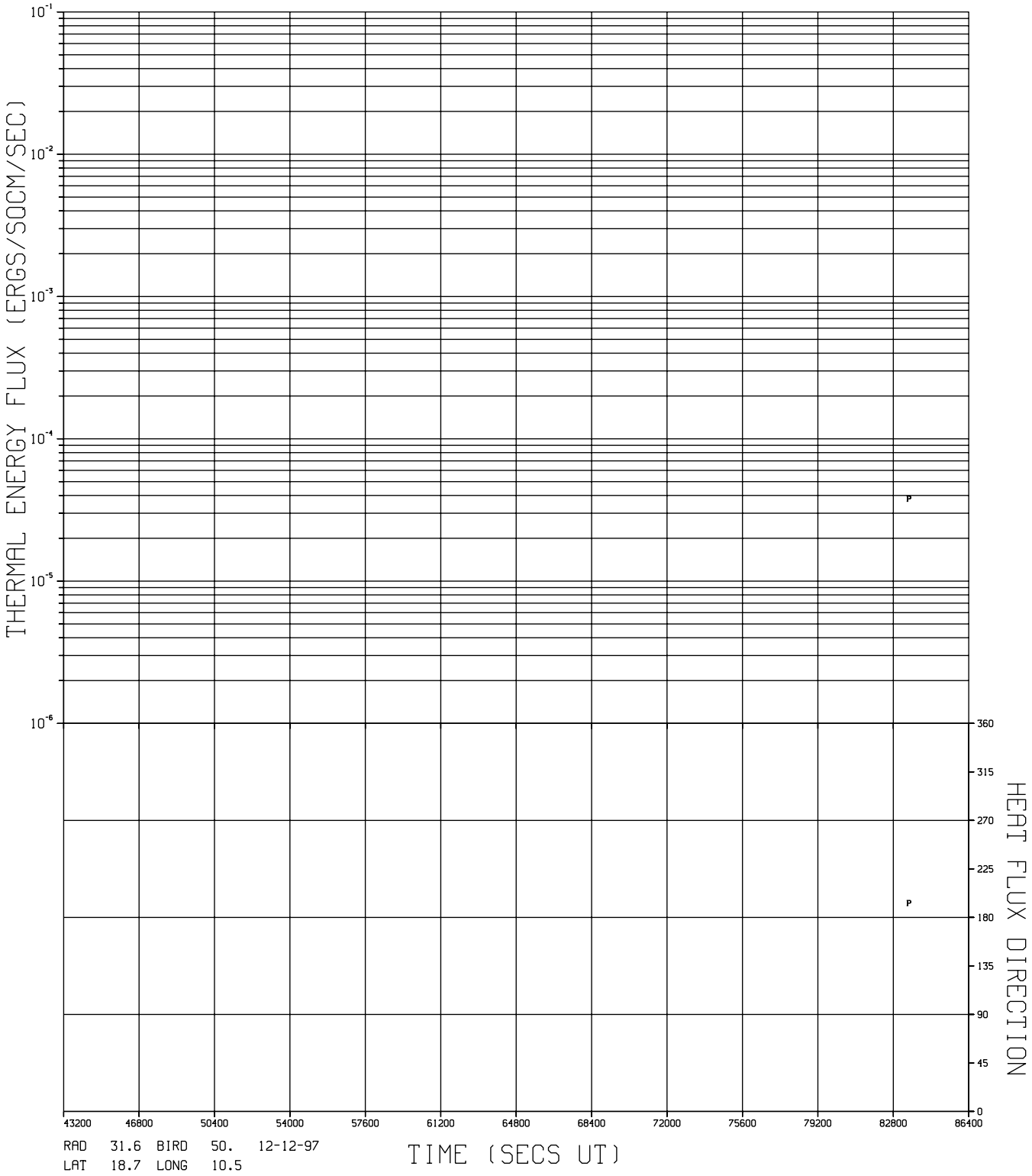


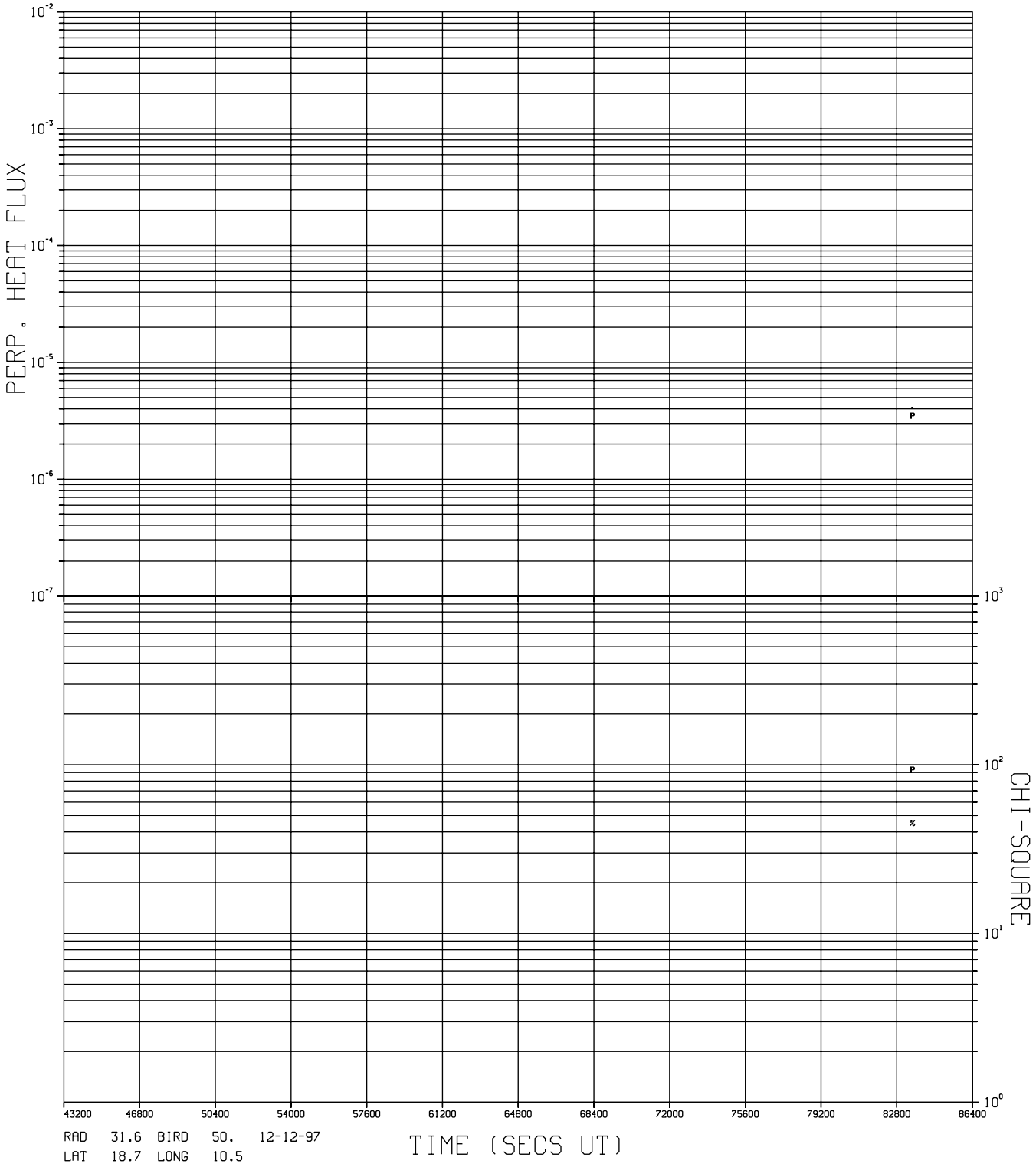
RAD 31.6 BIRD 50. 12-12-97
LAT 18.7 LONG 10.5

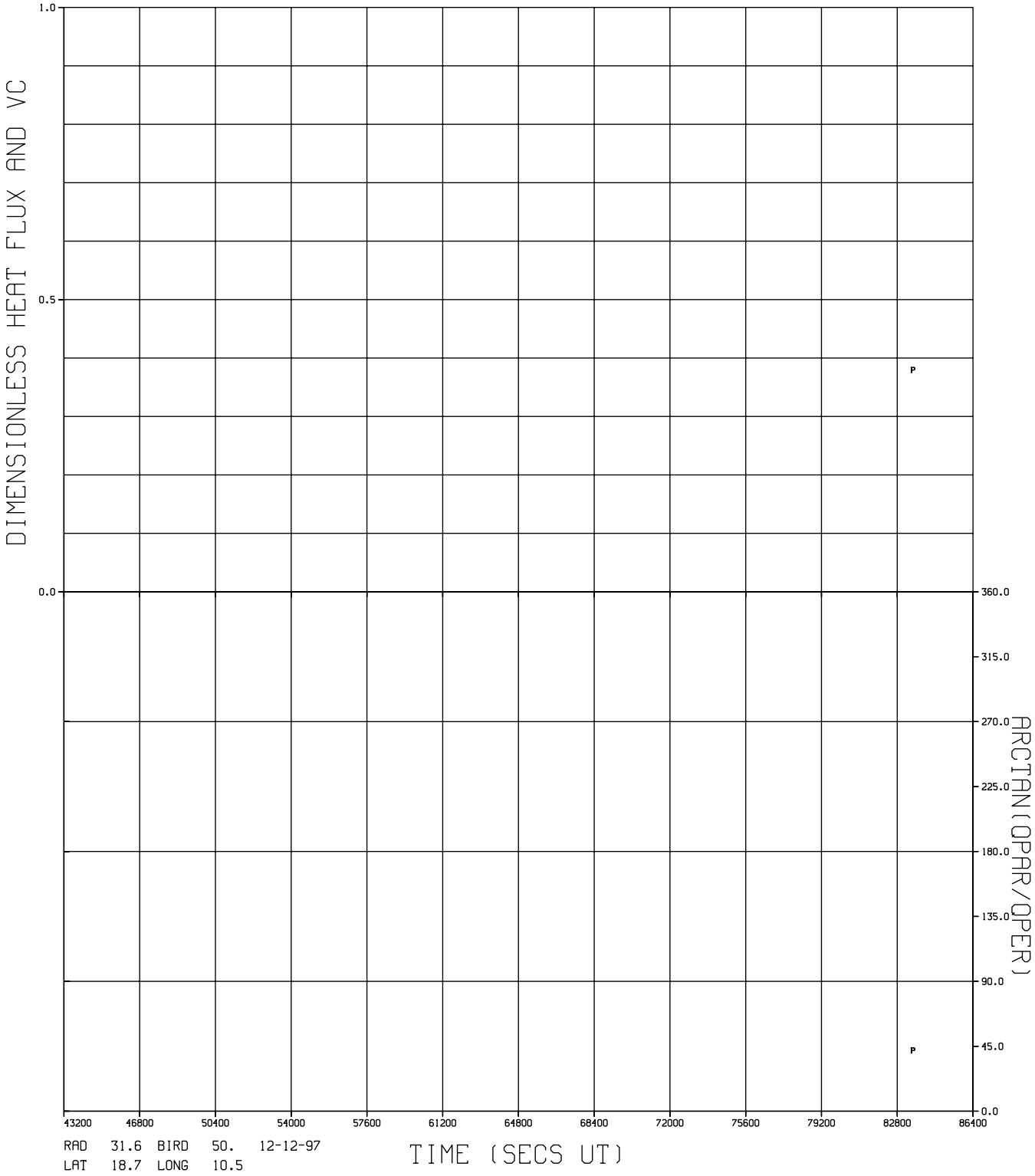

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 31.6 BIRD 50. 12-12-97
LAT 18.7 LONG 10.5

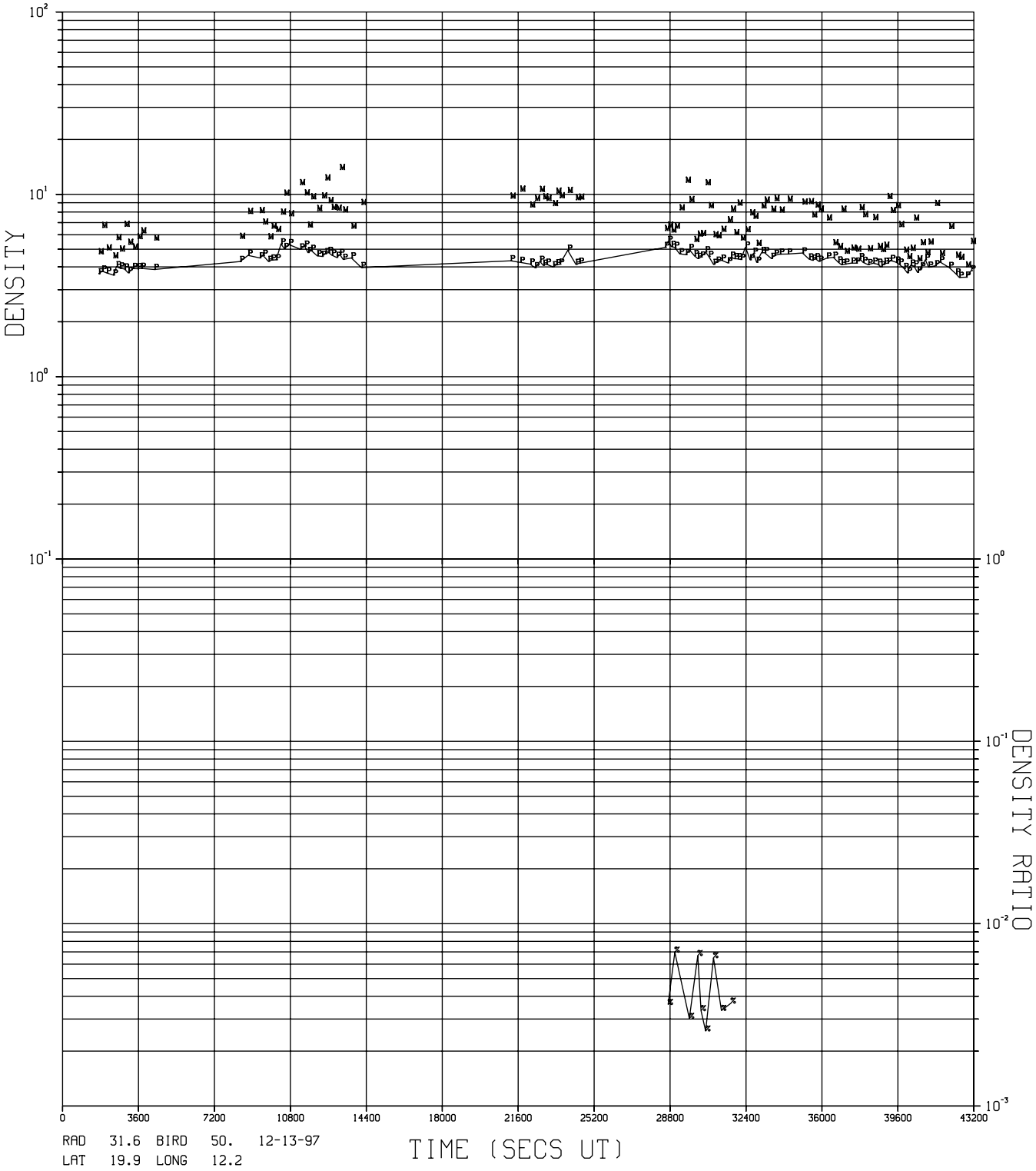

BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 31.6 BIRD 50. 12-12-97
LAT 18.7 LONG 10.5

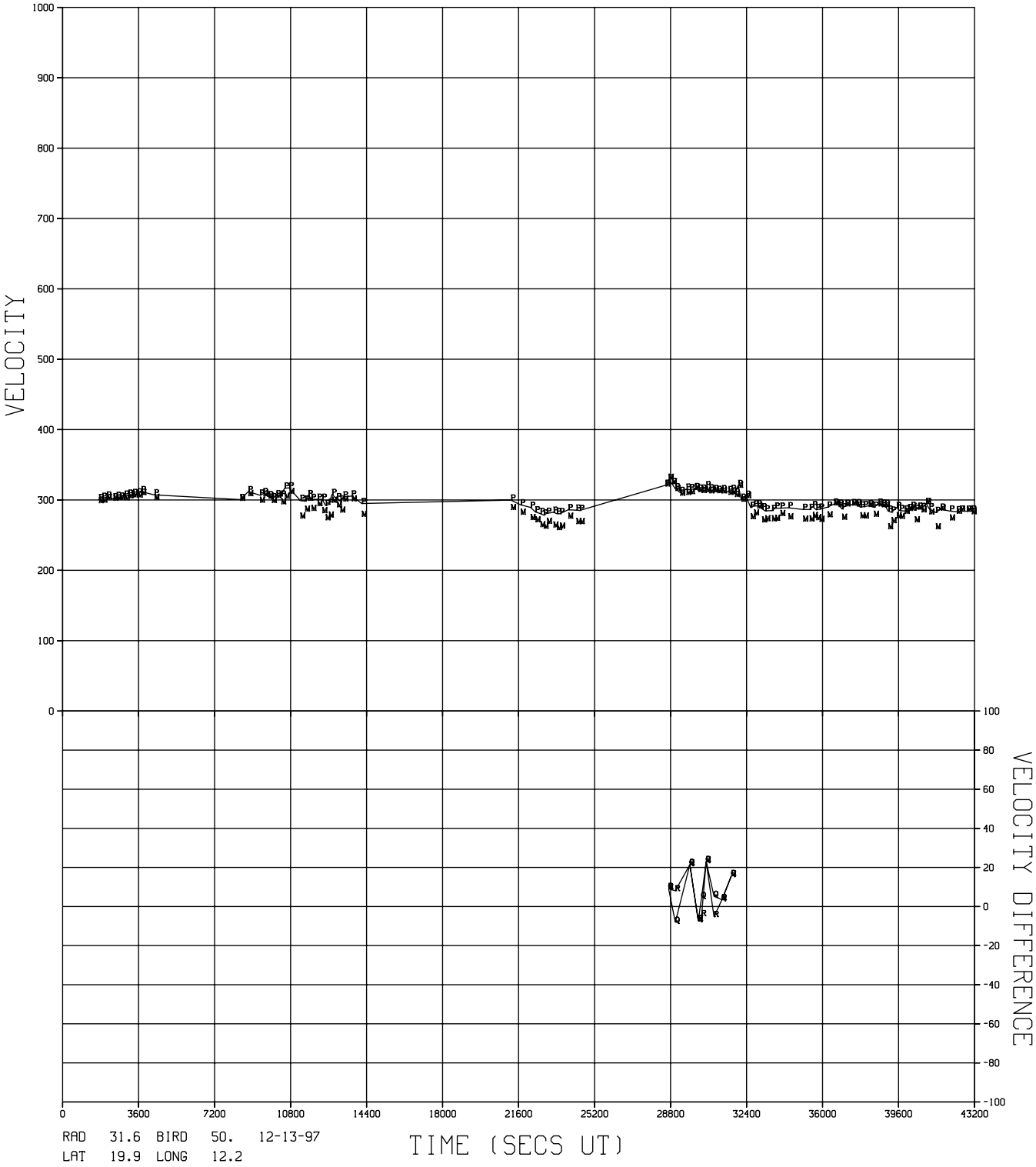

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 31.6 BIRD 50. 12-12-97
LAT 18.7 LONG 10.5

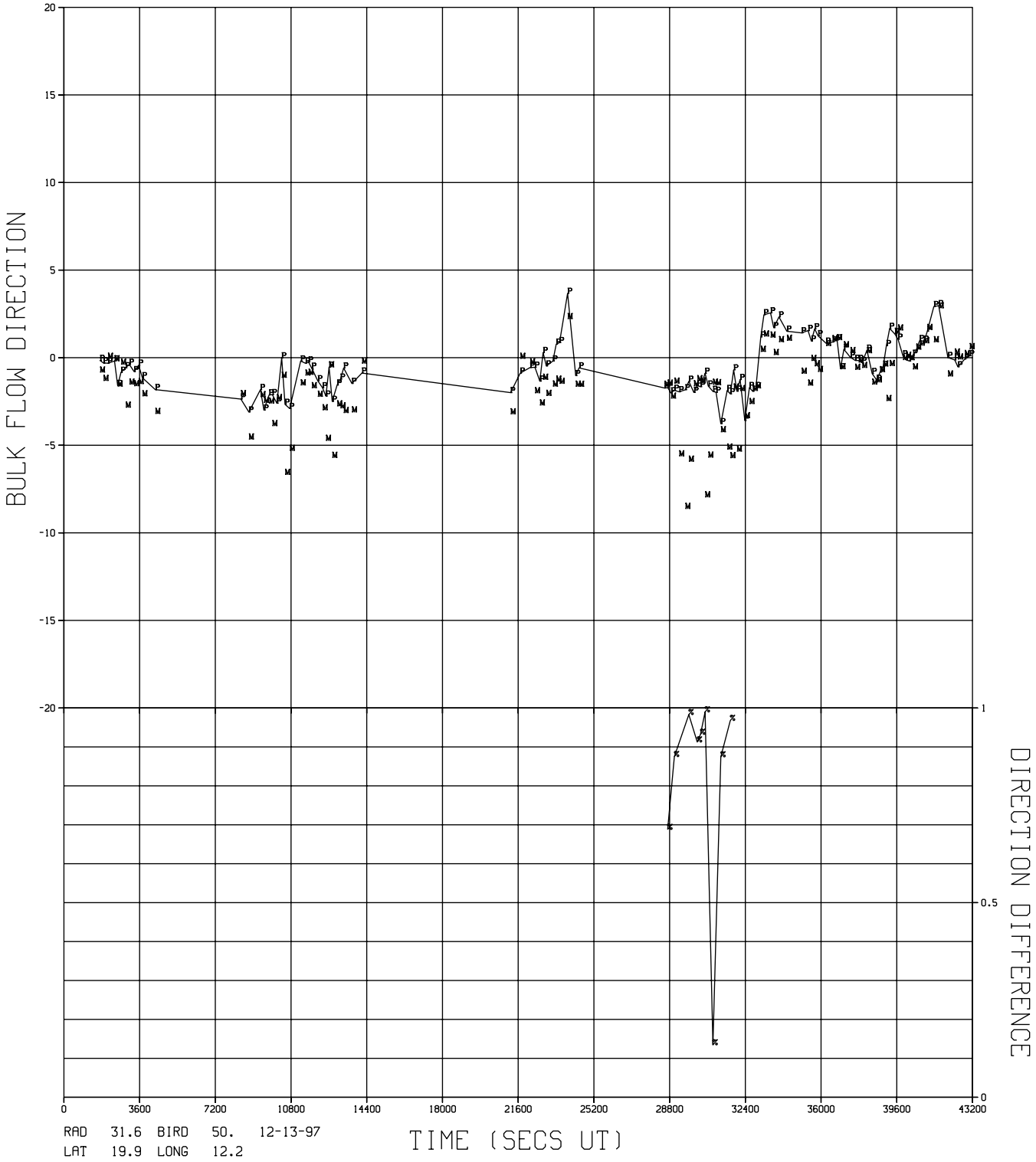

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
P
P
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 31.6 BIRD 50. 12-12-97
LAT 18.7 LONG 10.5

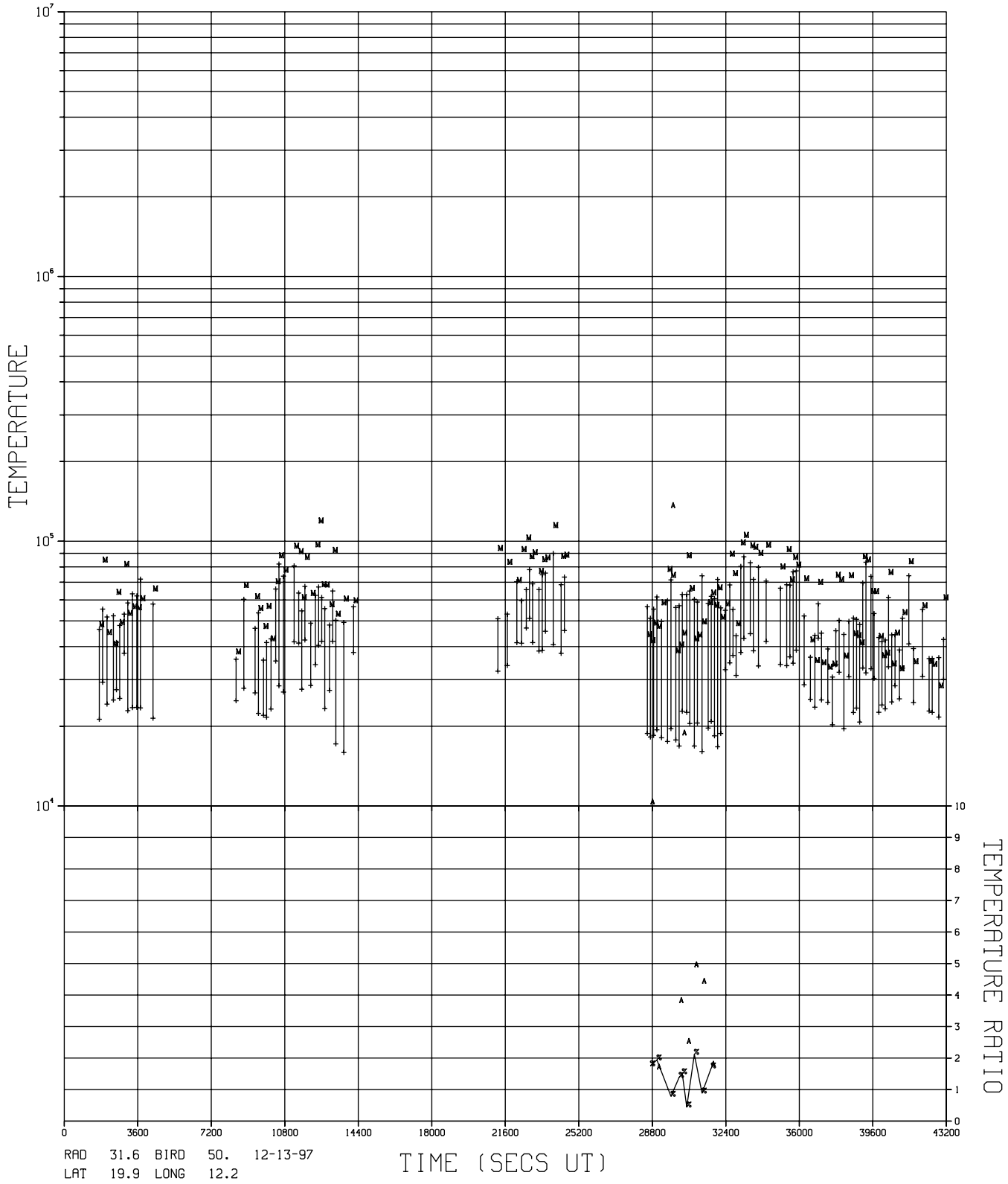

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 31.6 BIRD 50. 12-12-97
LAT 18.7 LONG 10.5

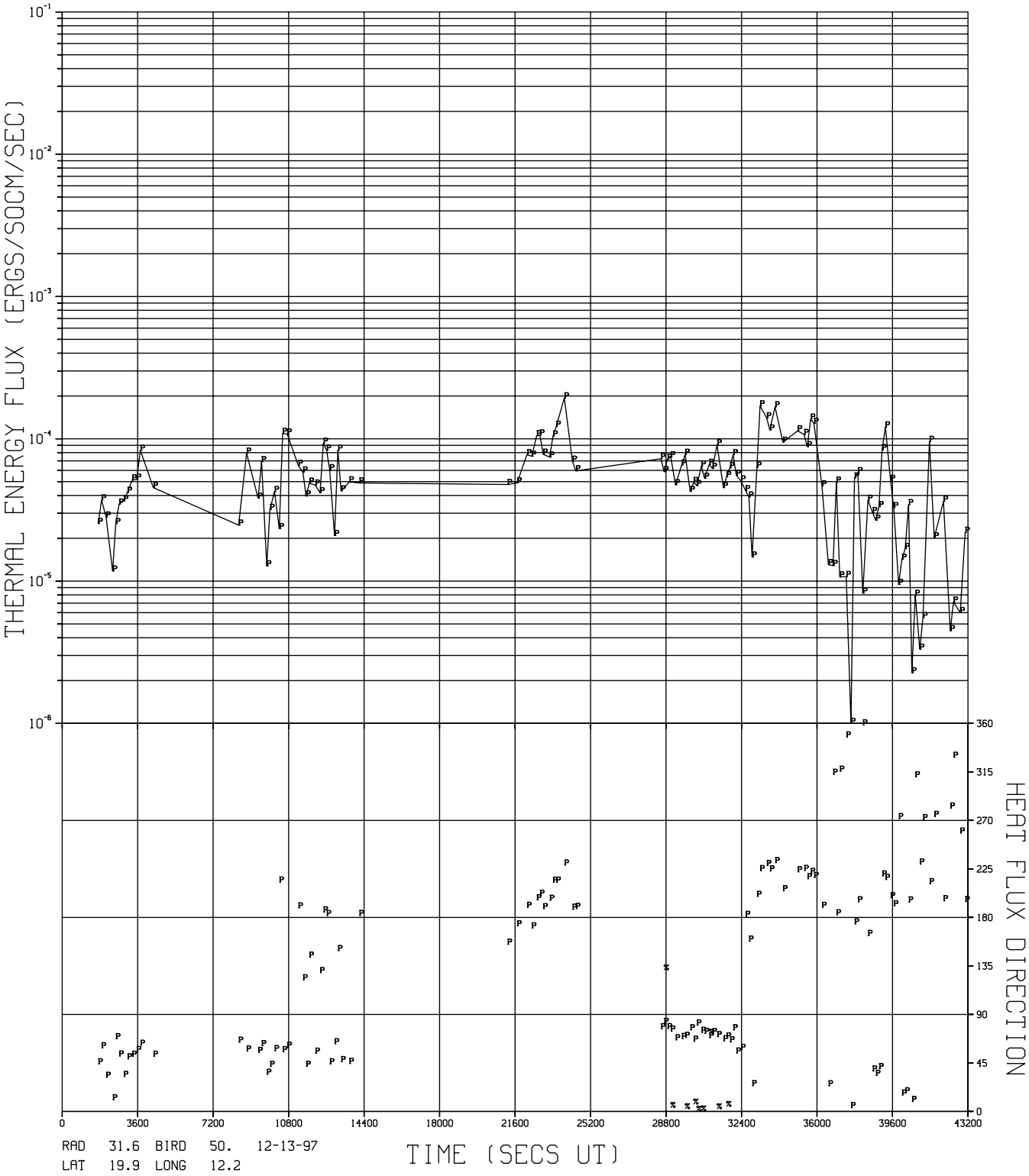

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
P
P
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
ARCTAN(QPAR/QPER)
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 31.6 BIRD 50. 12-12-97
LAT 18.7 LONG 10.5
TIME (SECS UT)

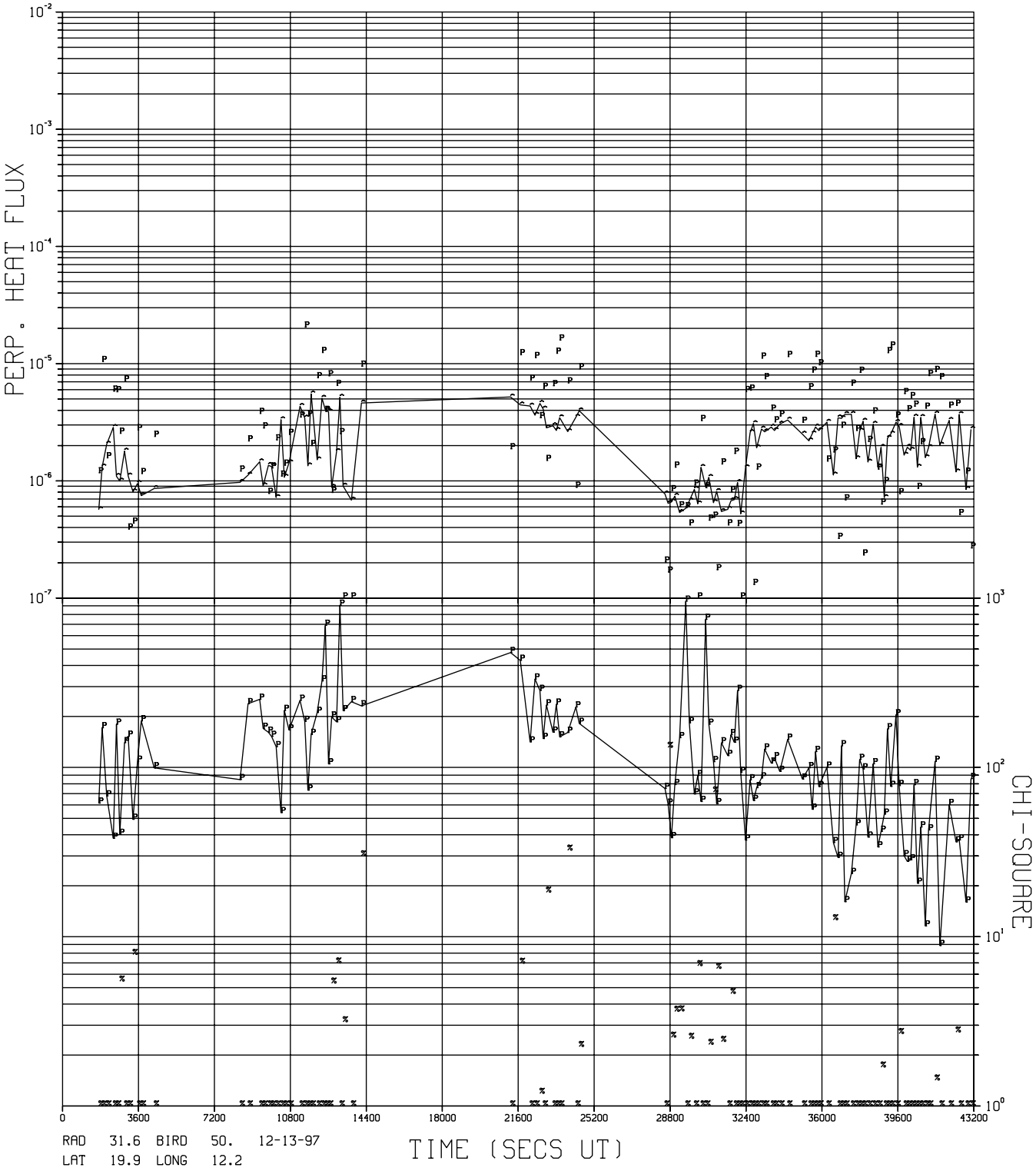

DENSITY
DENSITY RATIO
TIME (SECS UT)
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 31.6 BIRD 50. 12-13-97
LAT 19.9 LONG 12.2

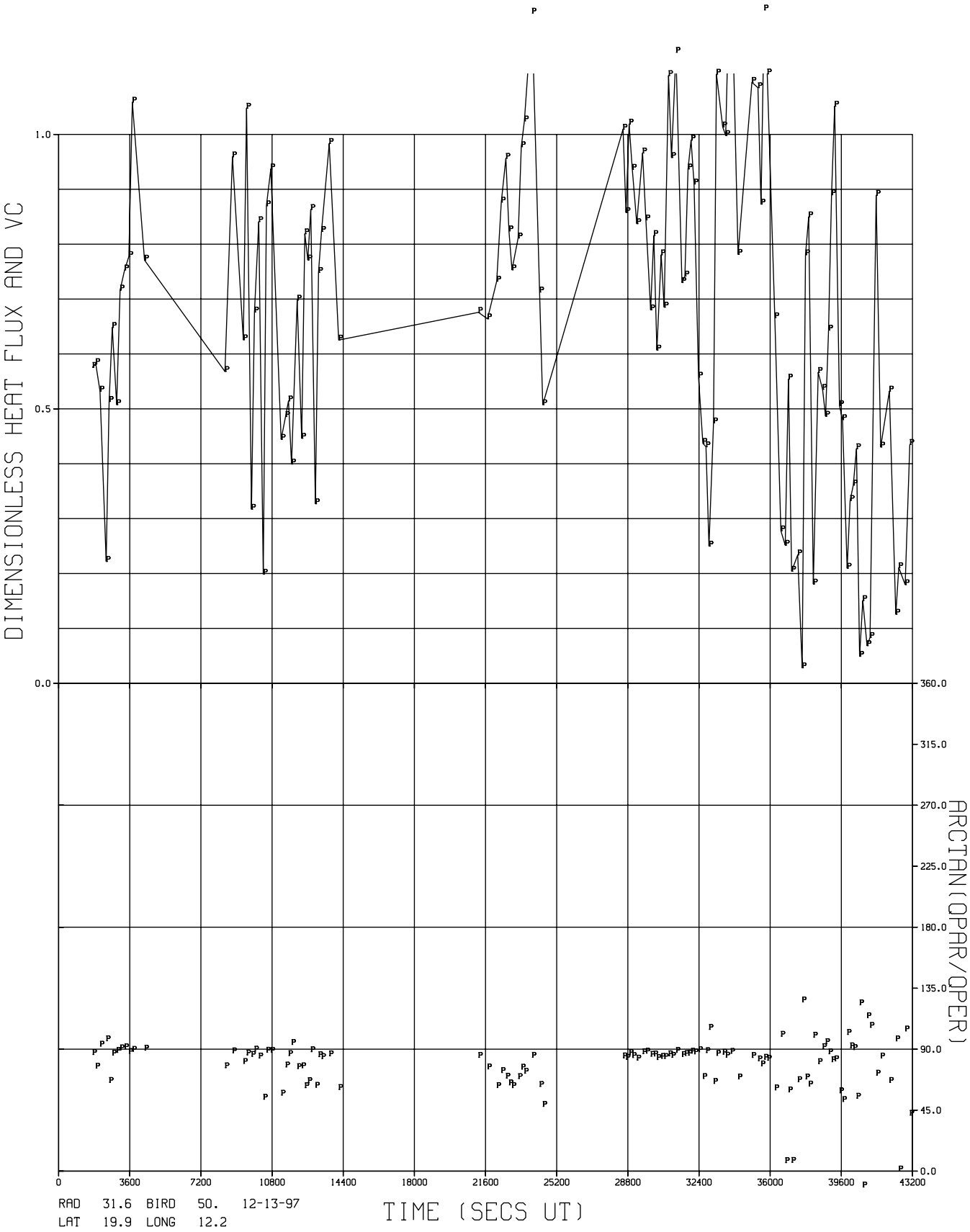

VELOCITY
VELOCITY DIFFERENCE
TIME (SECS UT)
RAD 31.6 BIRD 50. 12-13-97
LAT 19.9 LONG 12.2

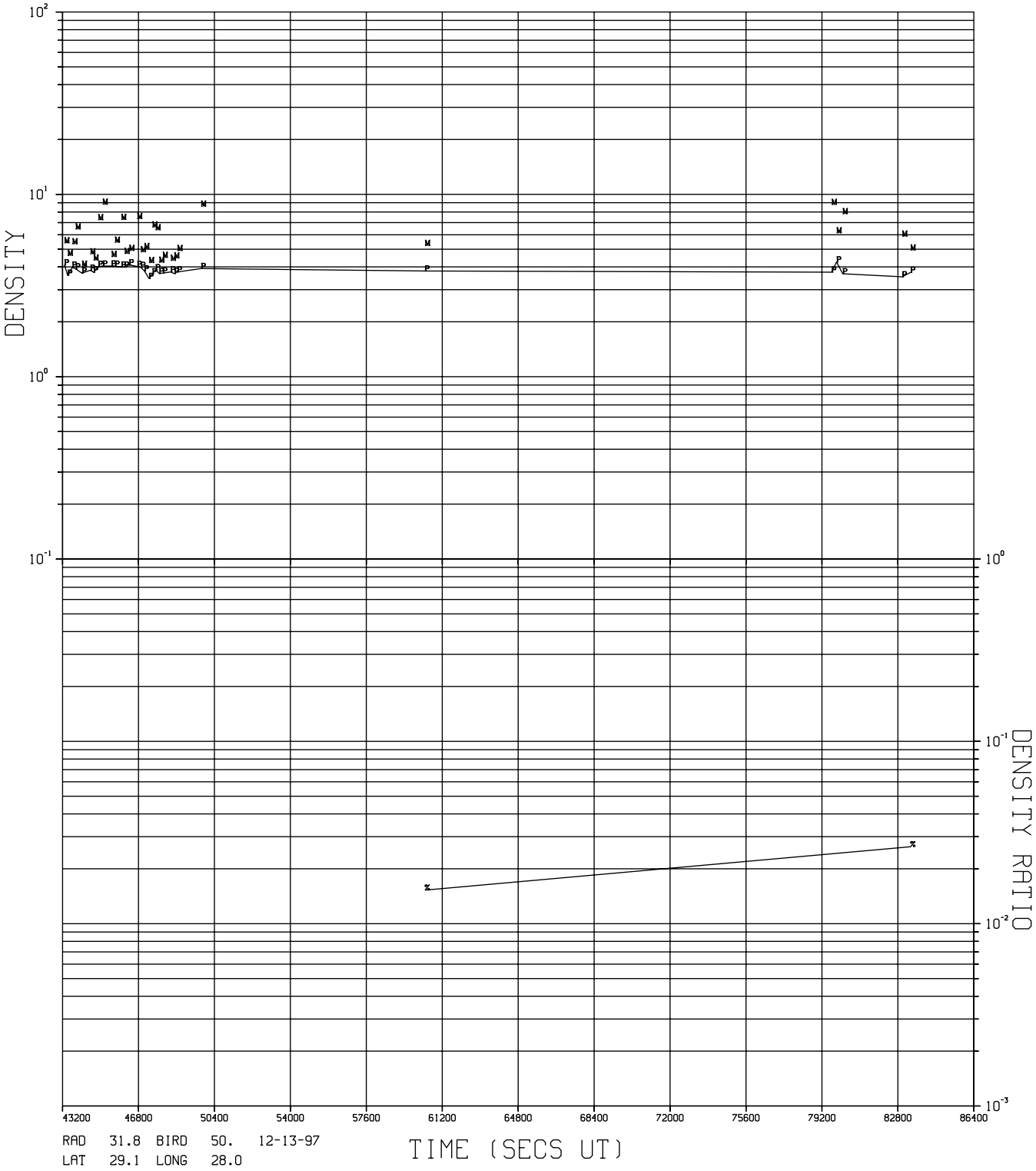

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 31.6 BIRD 50. 12-13-97
LAT 19.9 LONG 12.2

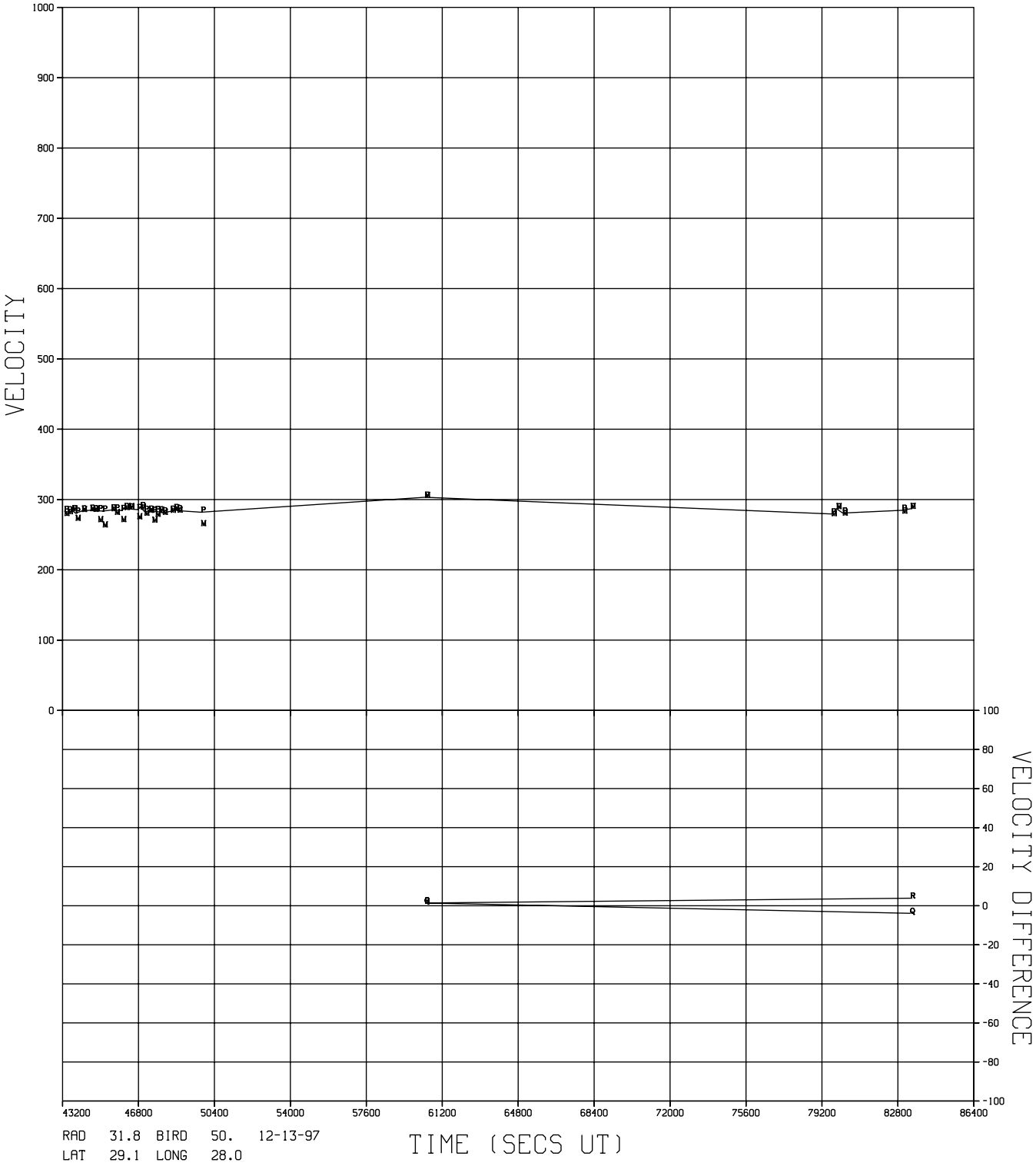

TEMPERATURE
TEMPERATURE RATIO
TIME (SECS UT)
RAD 31.6 BIRD 50. 12-13-97
LAT 19.9 LONG 12.2

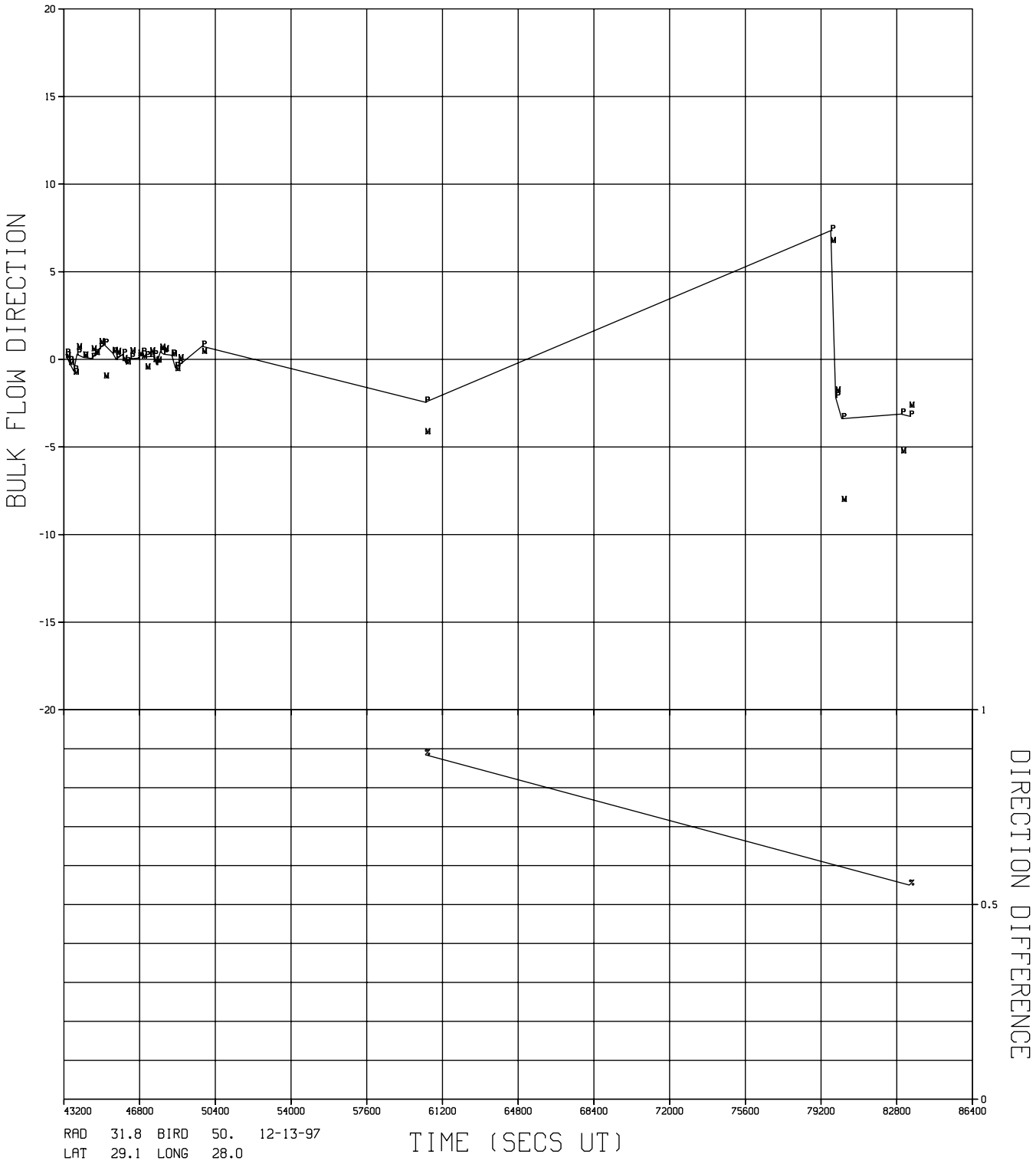

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 31.6 BIRD 50. 12-13-97
LAT 19.9 LONG 12.2

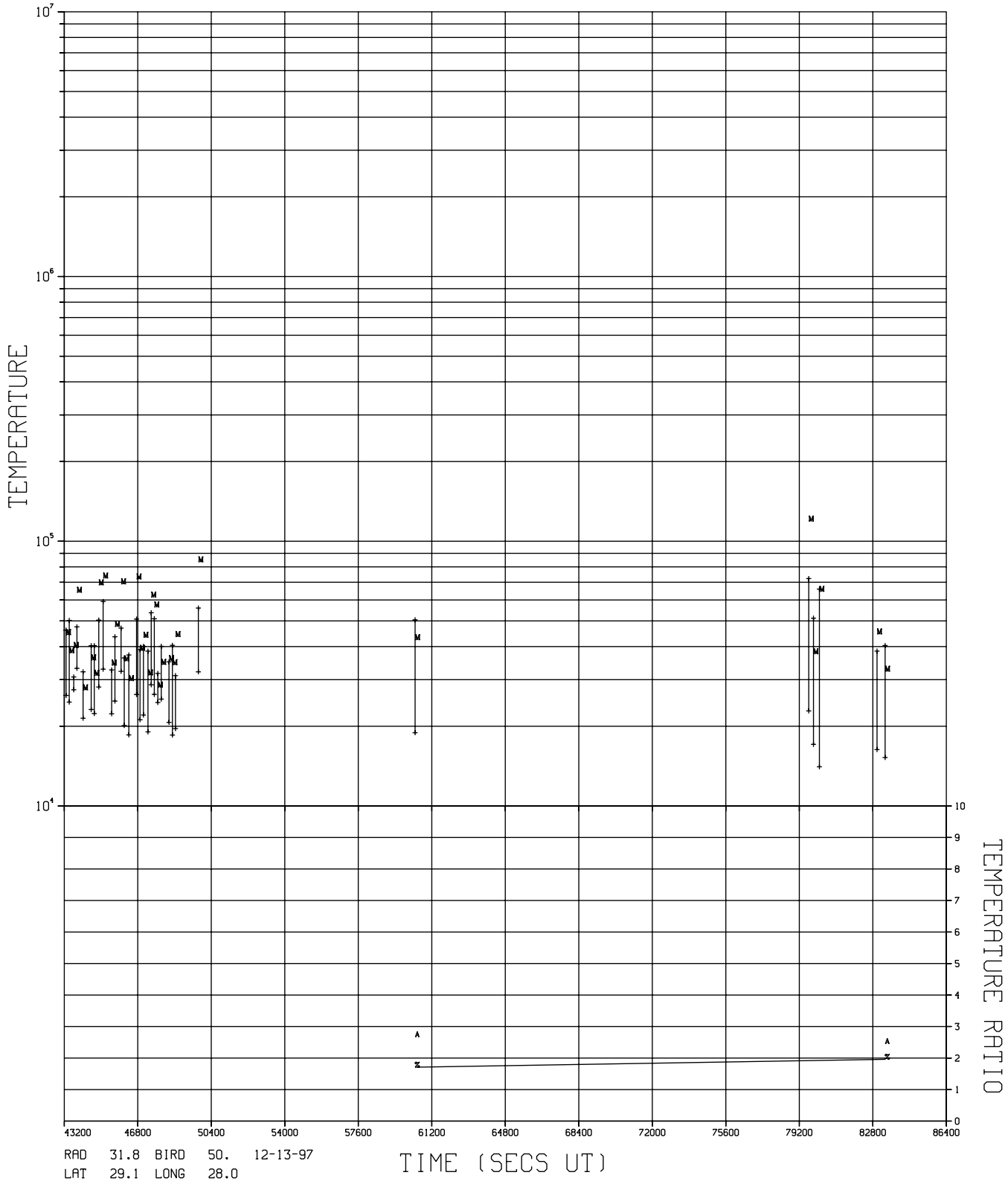

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 31.6 BIRD 50. 12-13-97
LAT 19.9 LONG 12.2

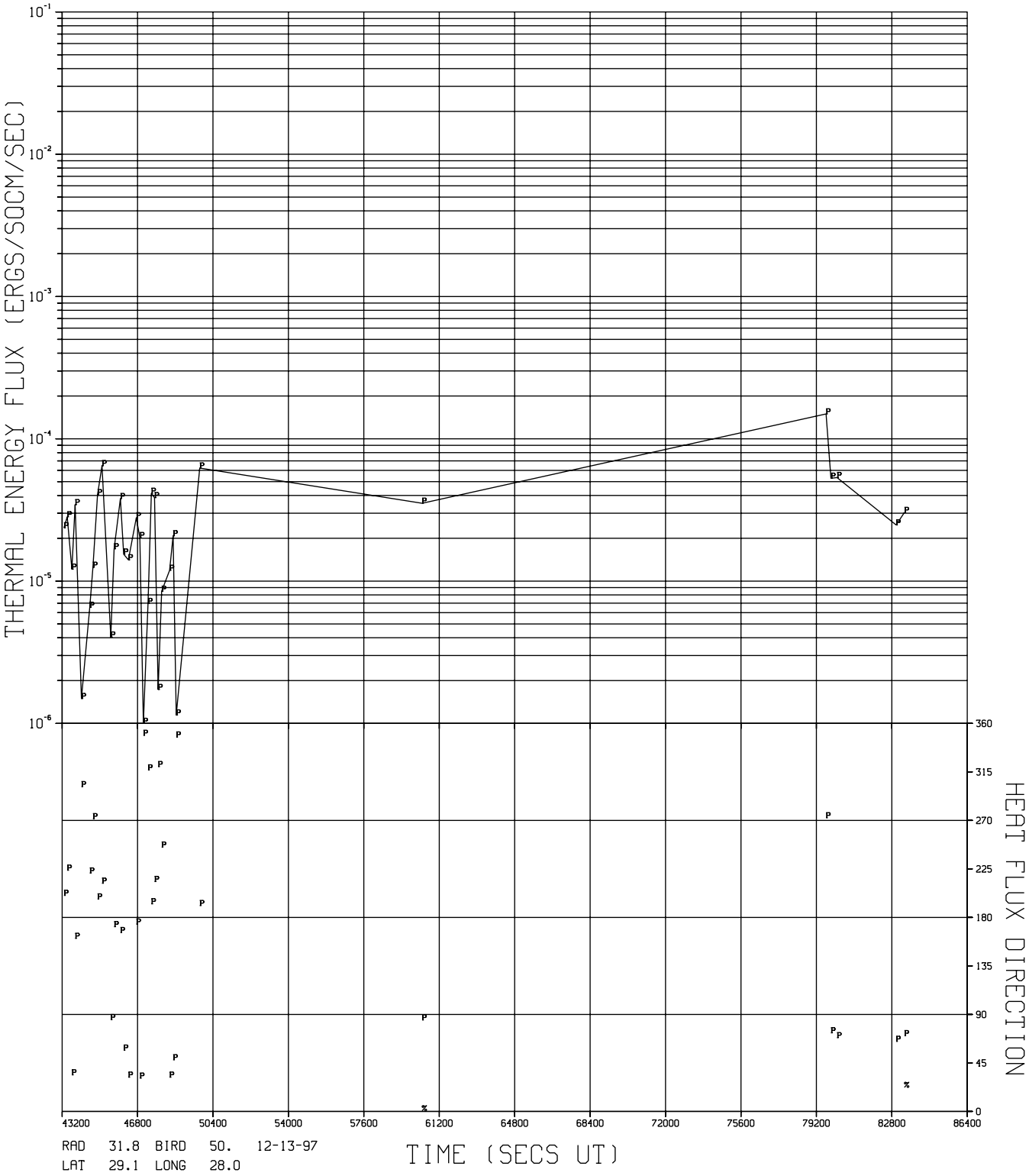

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 31.6 BIRD 50. 12-13-97
LAT 19.9 LONG 12.2

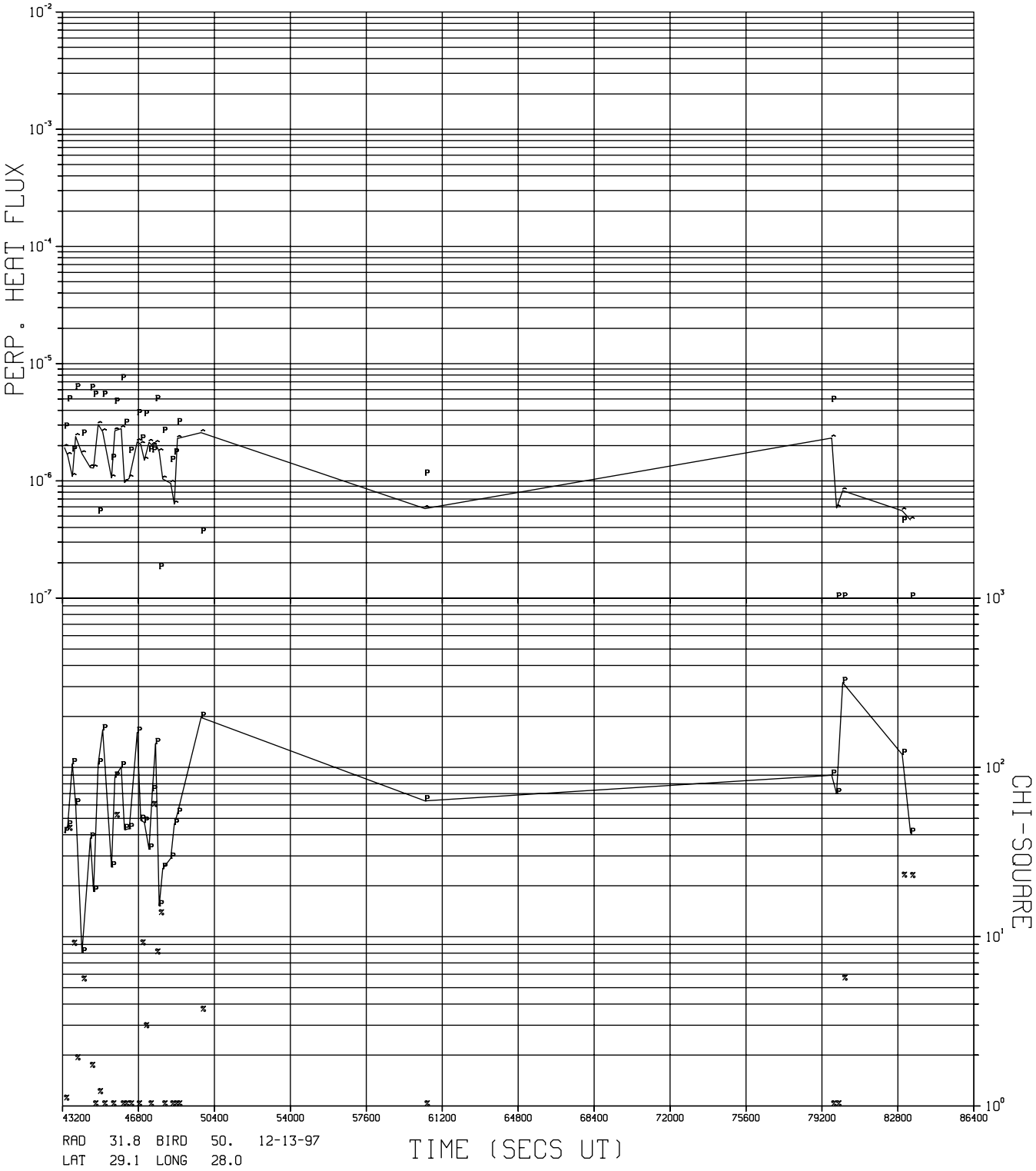

DENSITY
DENSITY RATIO
TIME (SECS UT)
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 31.8 BIRD 50. 12-13-97
LAT 29.1 LONG 28.0

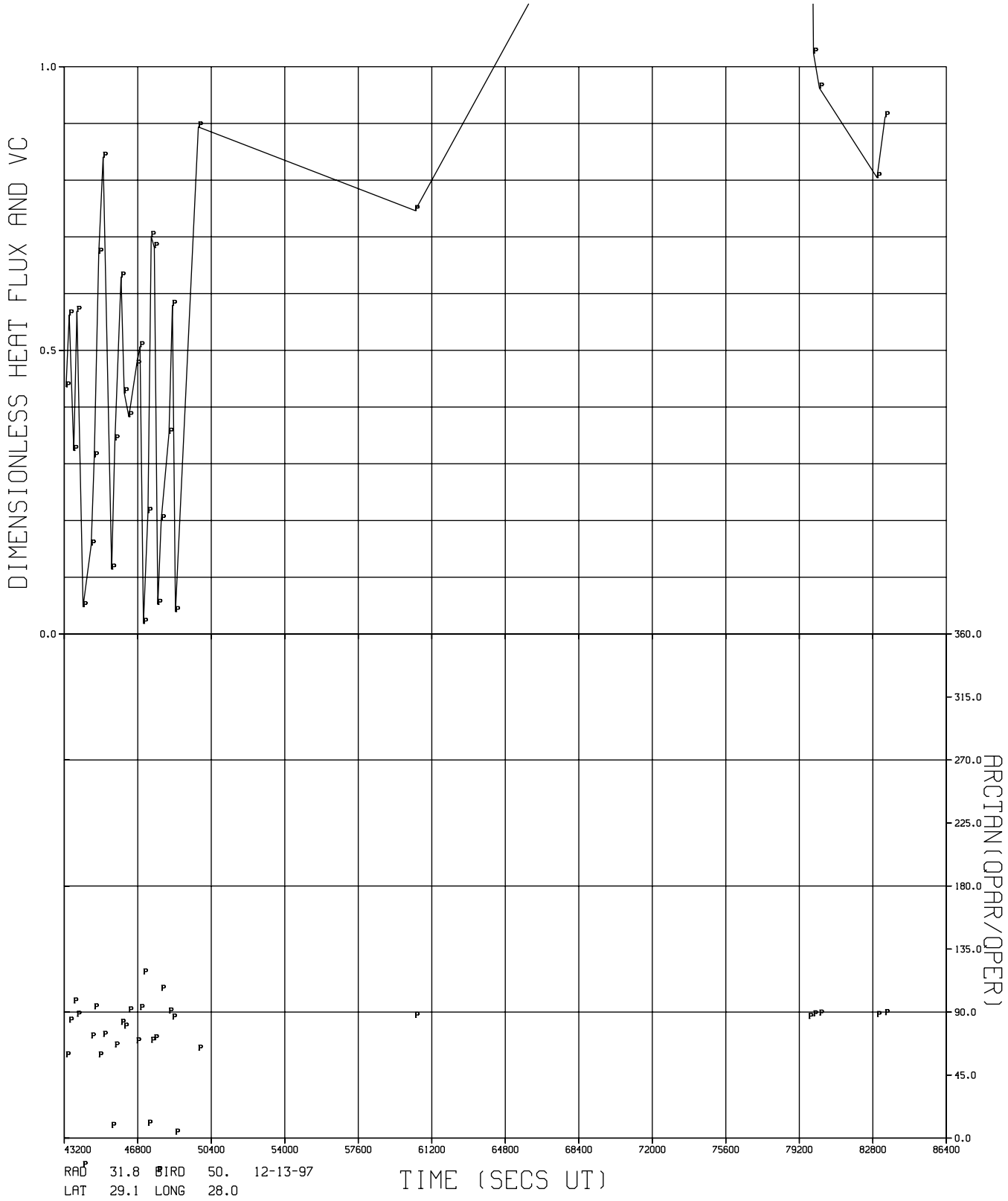

VELOCITY
VELOCITY DIFFERENCE
TIME (SECS UT)
1000
900
800
700
600
500
400
300
200
100
0
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 31.8 BIRD 50. 12-13-97
LAT 29.1 LONG 28.0

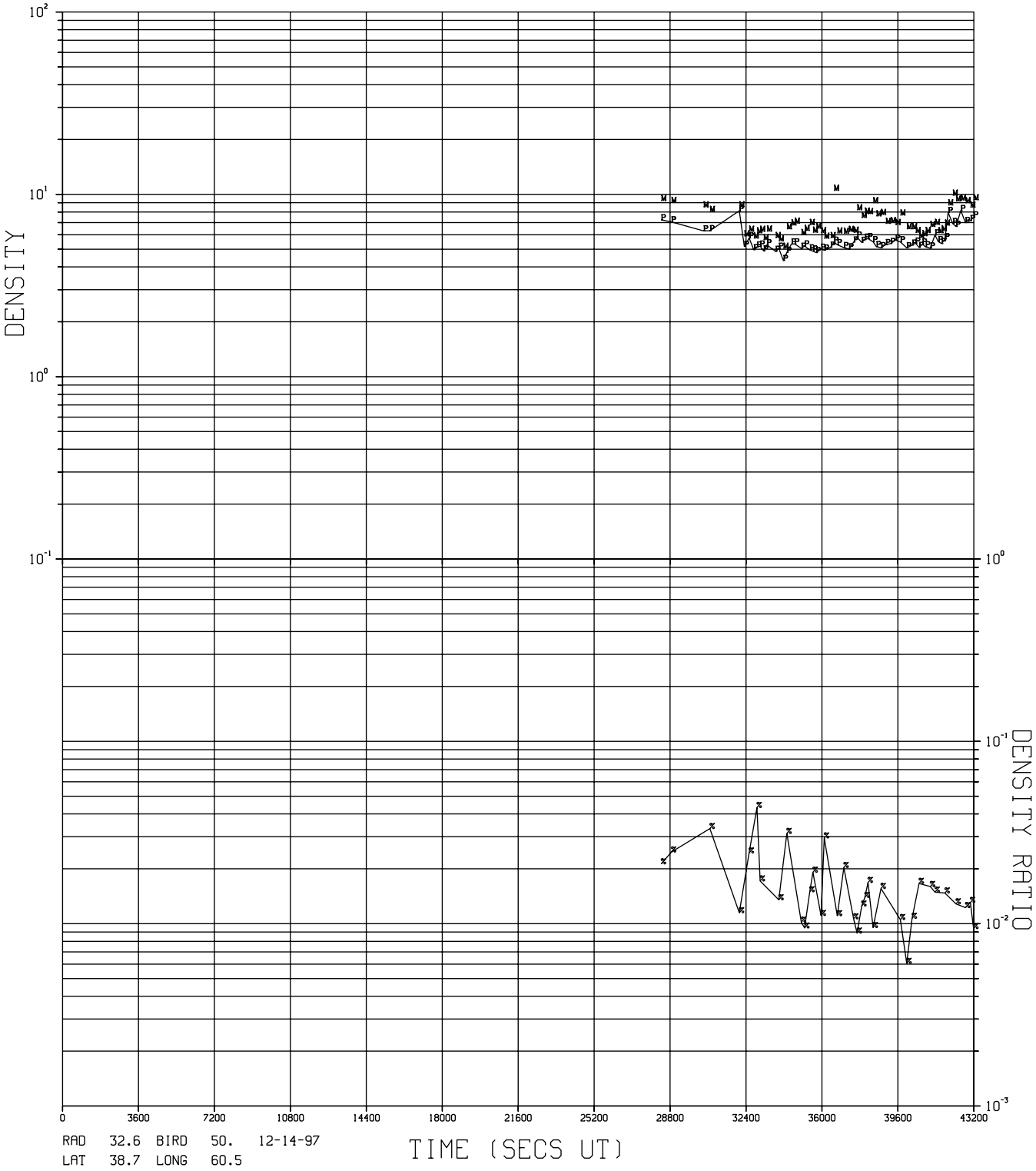

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 31.8 BIRD 50. 12-13-97
LAT 29.1 LONG 28.0

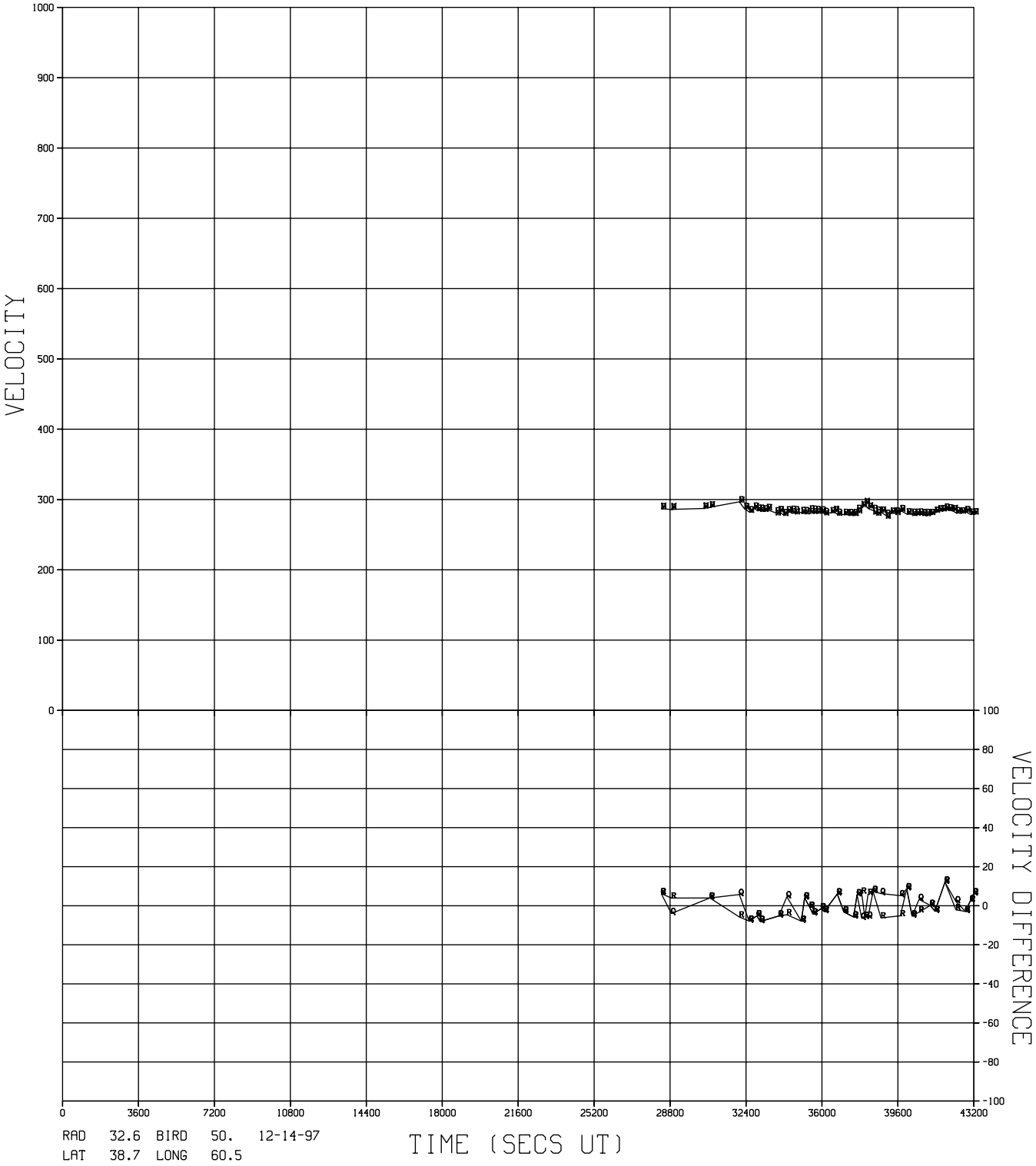

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 31.8 BIRD 50. 12-13-97
LAT 29.1 LONG 28.0

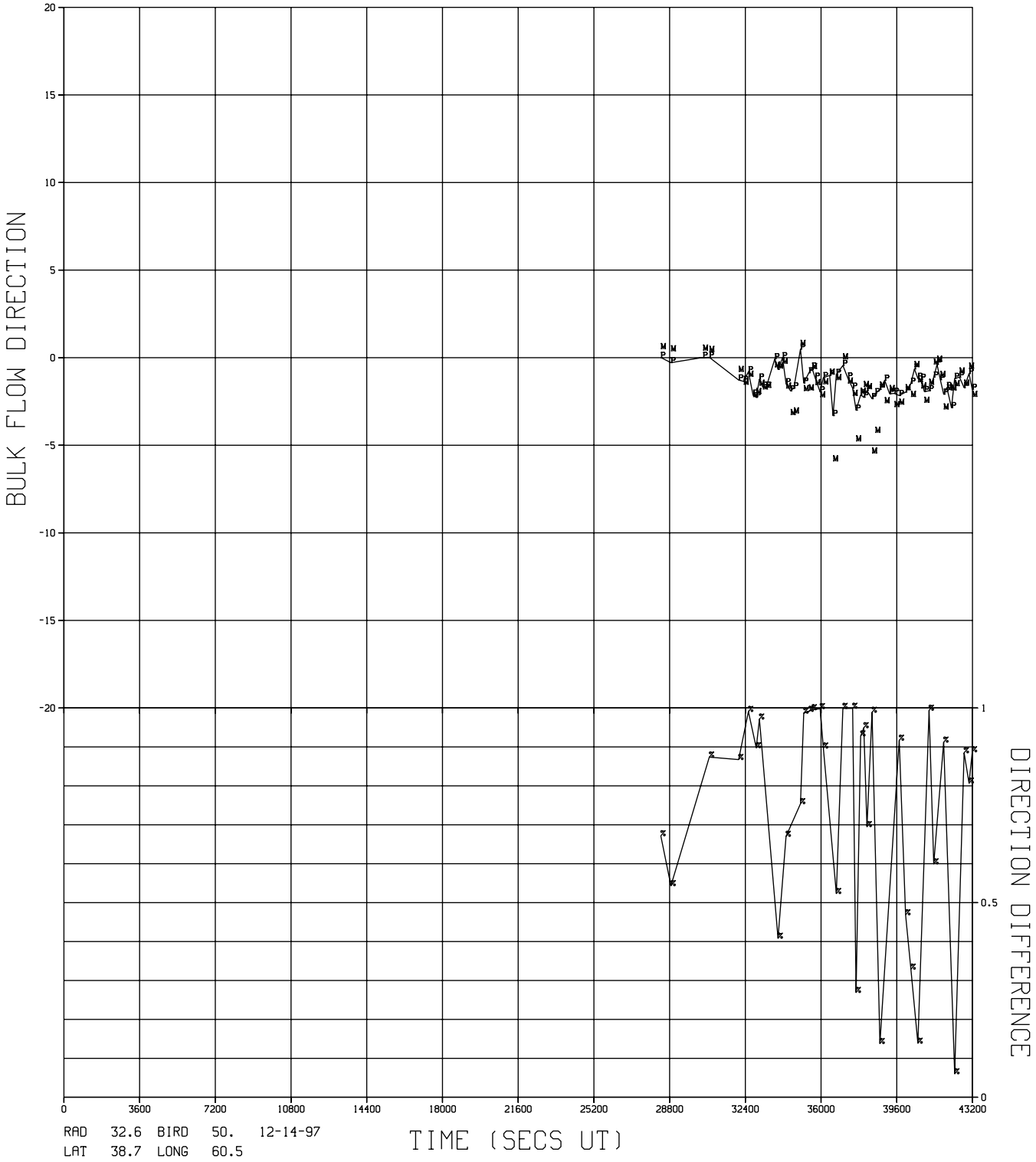

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 31.8 BIRD 50. 12-13-97
LAT 29.1 LONG 28.0

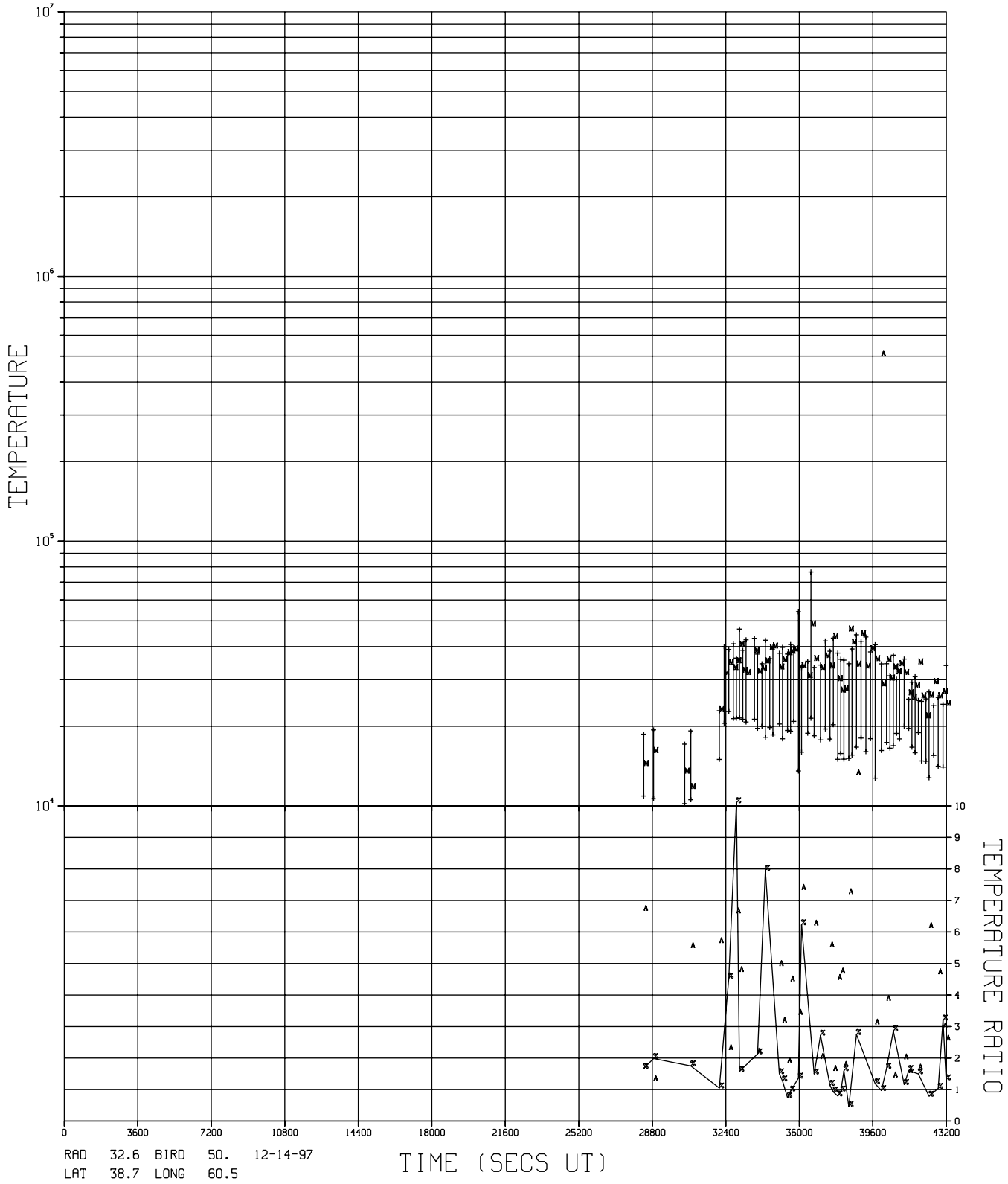

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 31.8 BIRD 50. 12-13-97
LAT 29.1 LONG 28.0

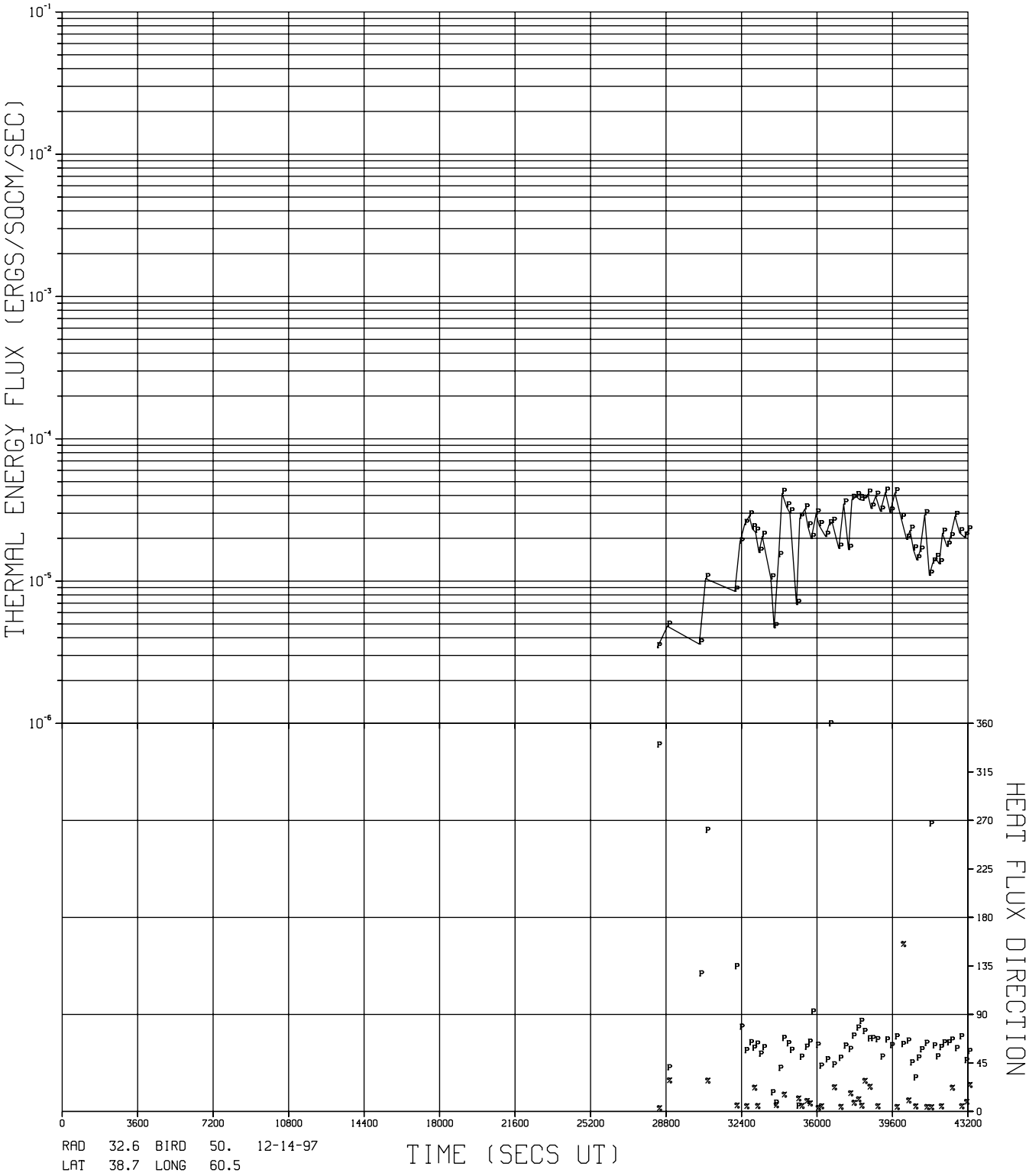

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 31.8 BIRD 50. 12-13-97
LAT 29.1 LONG 28.0

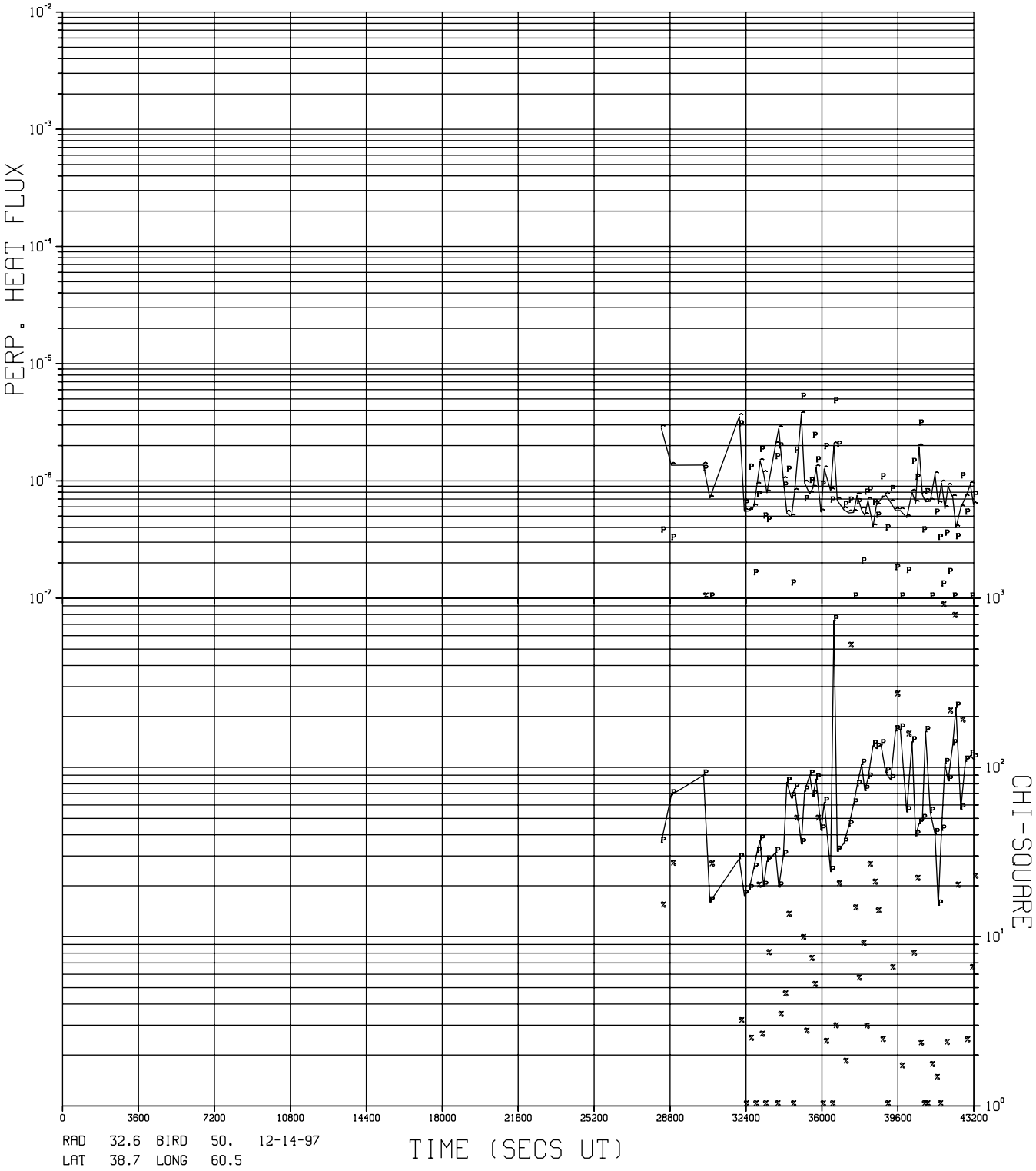

DENSITY
DENSITY RATIO
TIME (SECS UT)
RAD 32.6 BIRD 50. 12-14-97
LAT 38.7 LONG 60.5

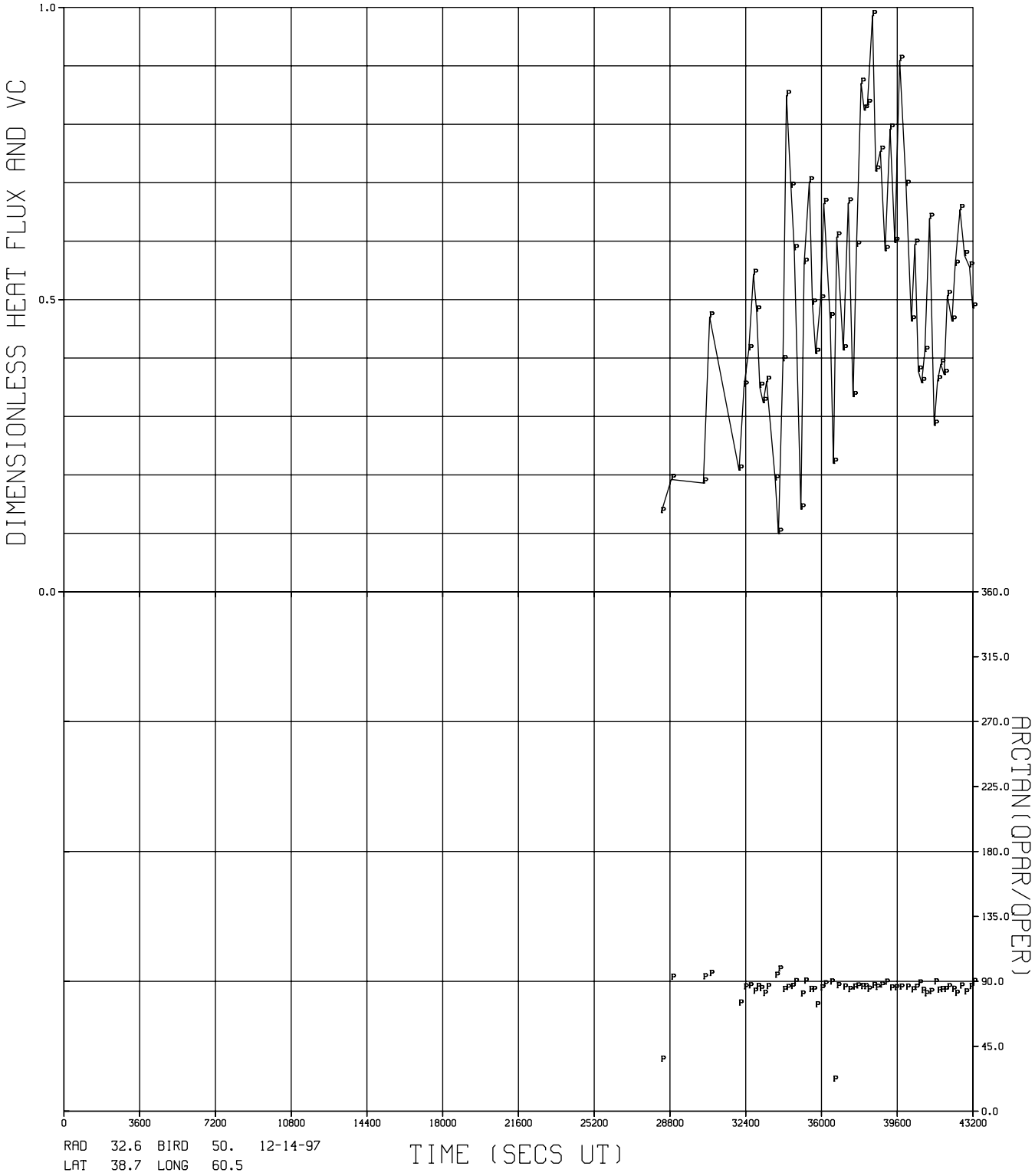

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 32.6 BIRD 50. 12-14-97
LAT 38.7 LONG 60.5

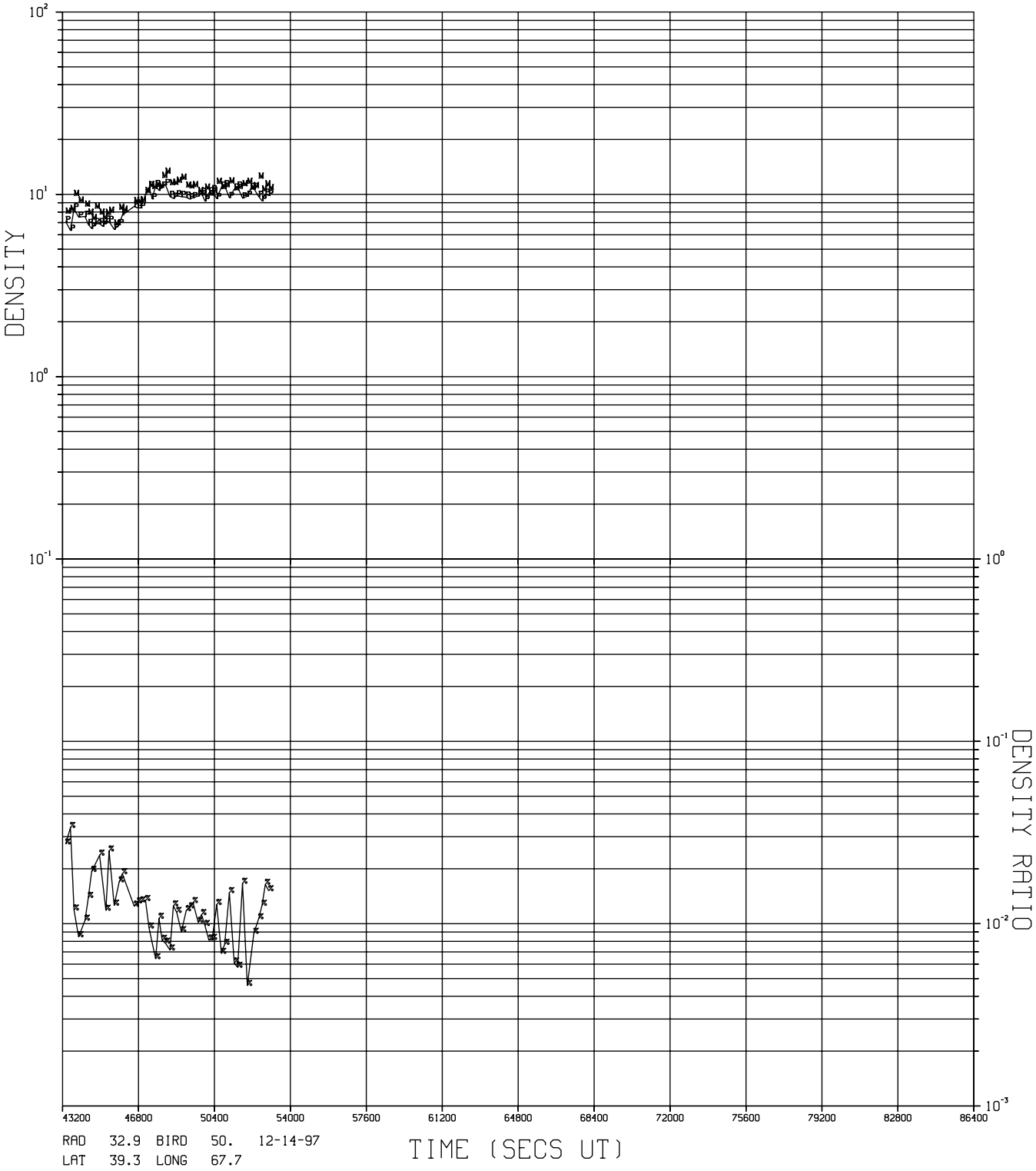

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 32.6 BIRD 50. 12-14-97
LAT 38.7 LONG 60.5

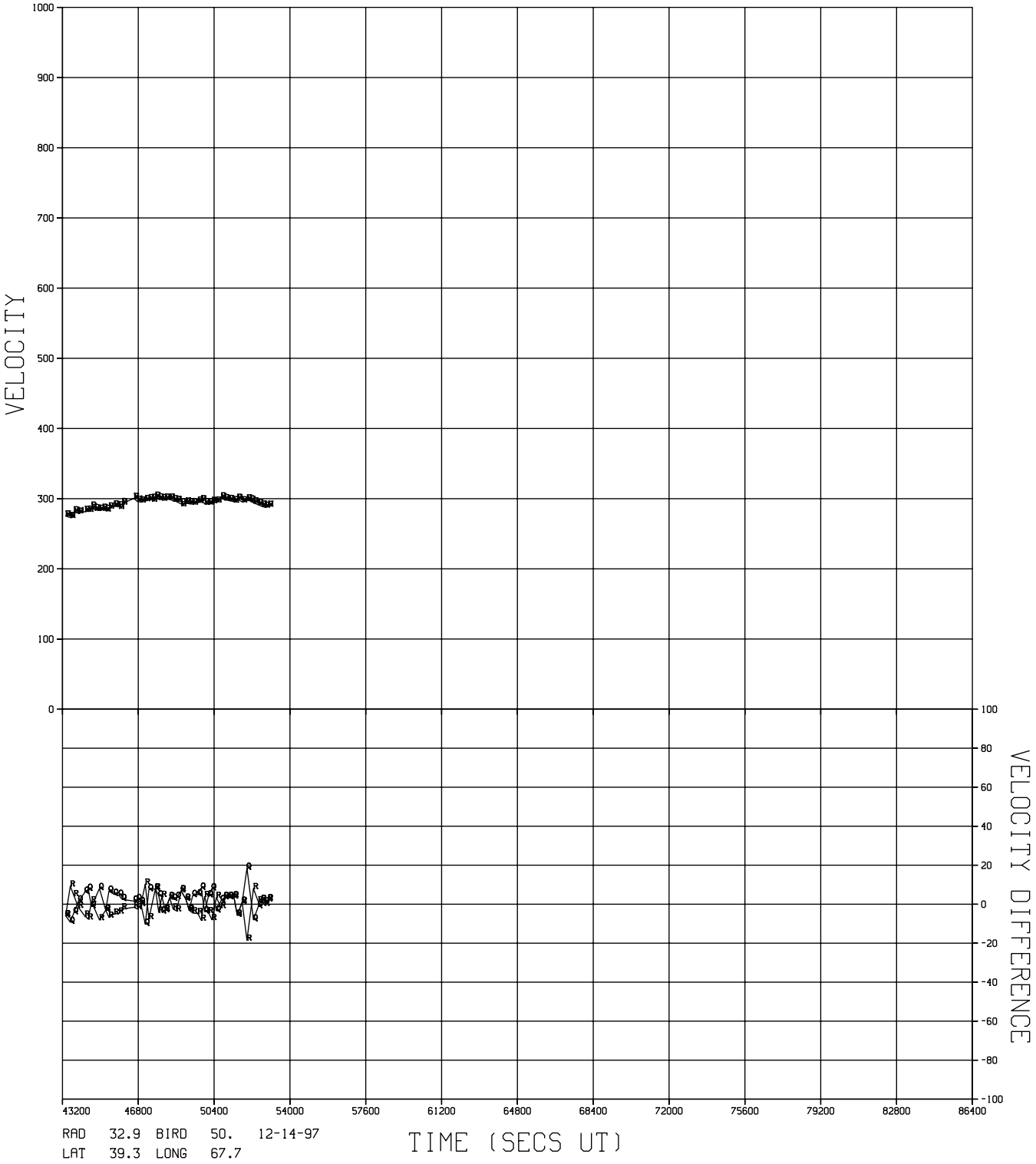

TEMPERATURE
TEMPERATURE RATIO
TIME (SECS UT)
RAD 32.6 BIRD 50. 12-14-97
LAT 38.7 LONG 60.5

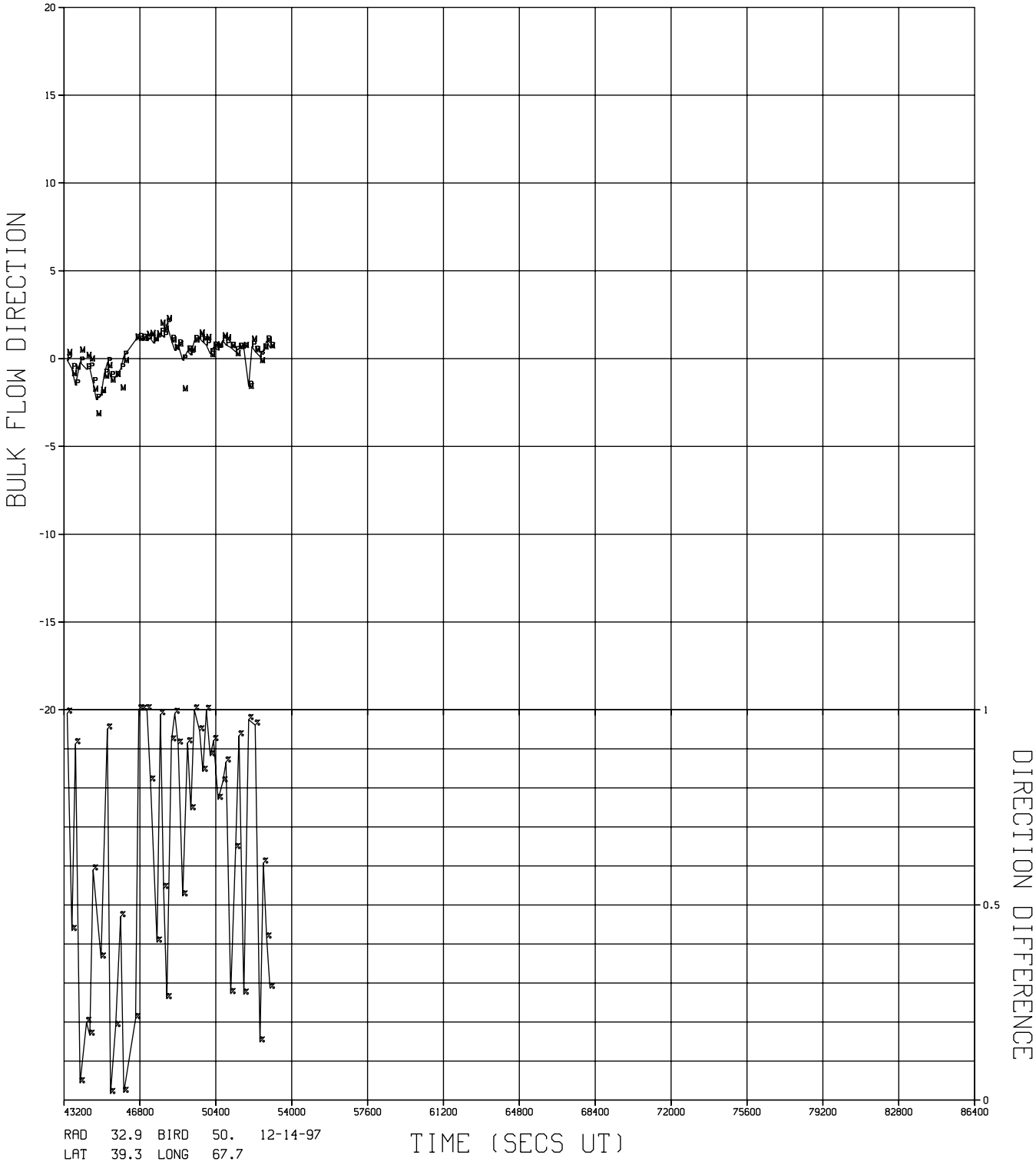

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 32.6 BIRD 50. 12-14-97
LAT 38.7 LONG 60.5

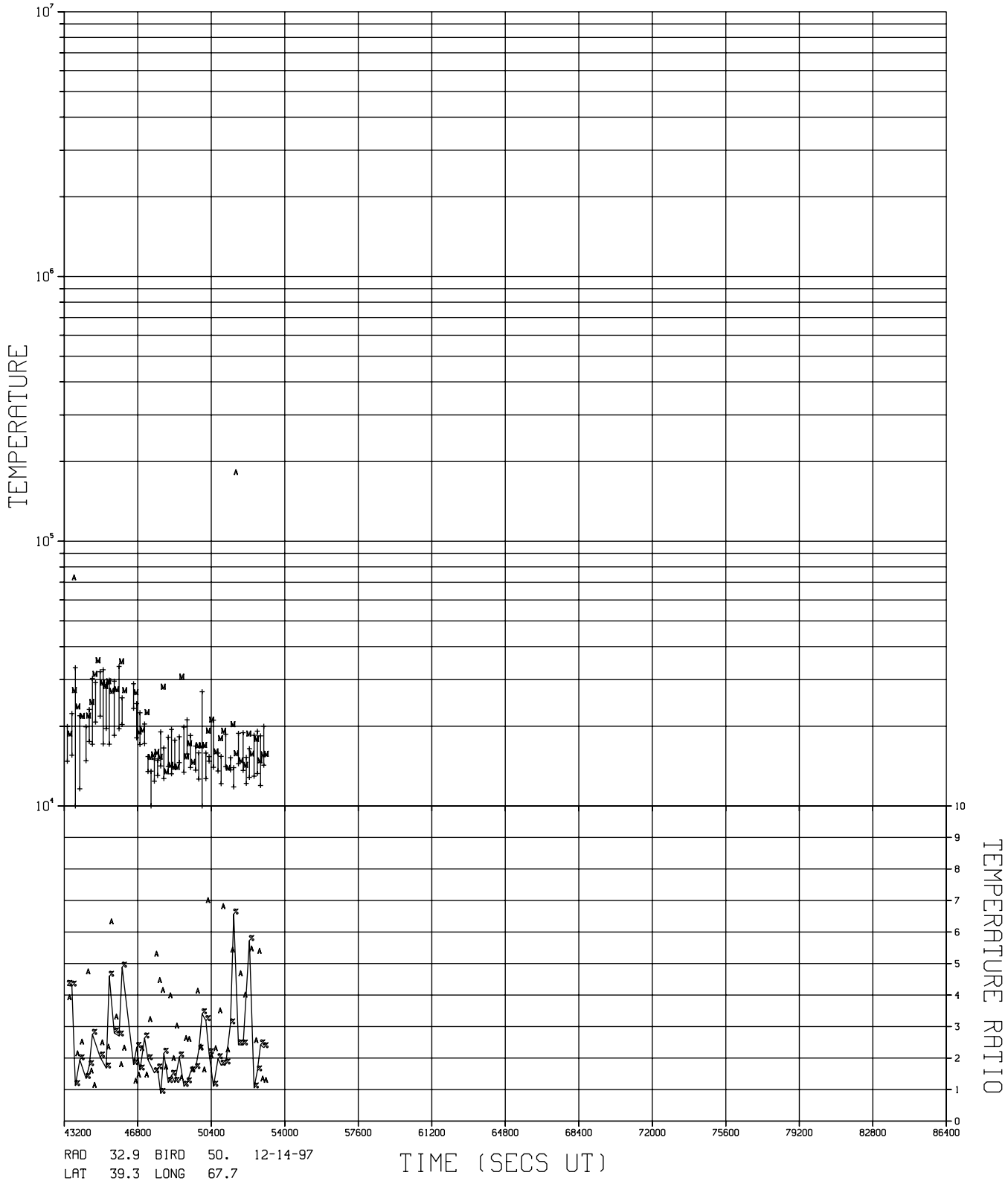

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 32.6 BIRD 50. 12-14-97
LAT 38.7 LONG 60.5

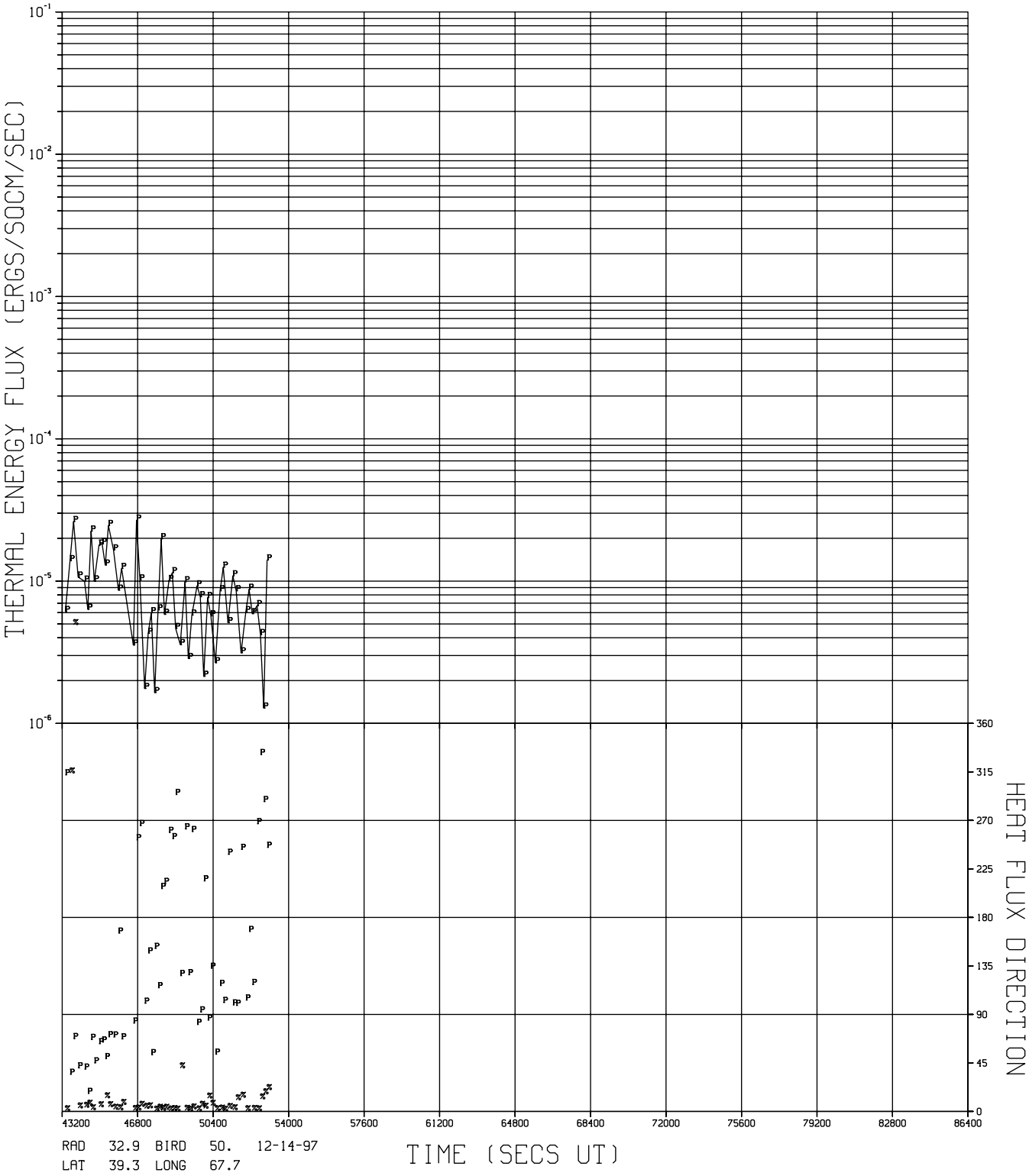

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 32.6 BIRD 50. 12-14-97
LAT 38.7 LONG 60.5

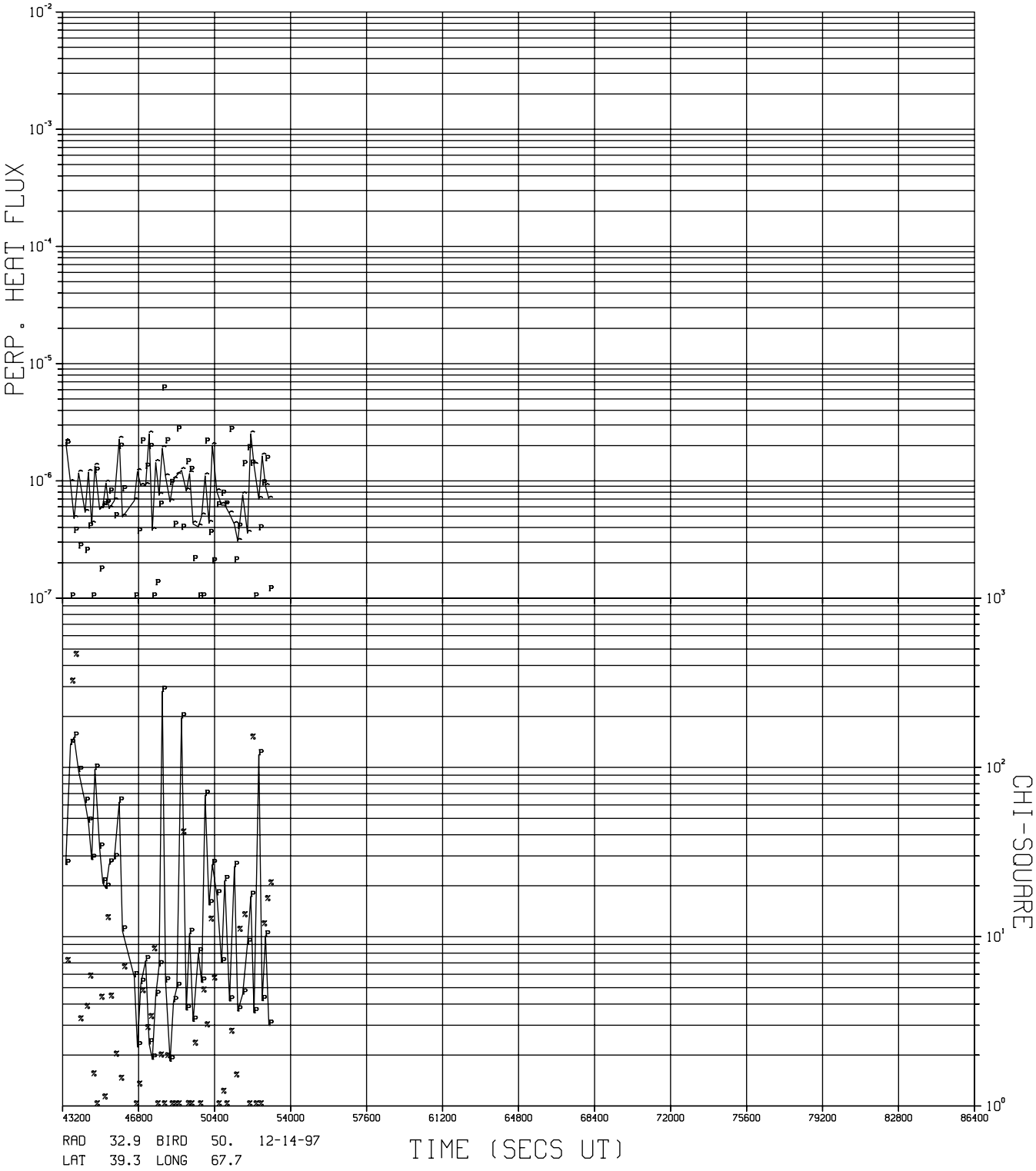

DENSITY
DENSITY RATIO
TIME (SECS UT)
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 32.9 BIRD 50. 12-14-97
LAT 39.3 LONG 67.7

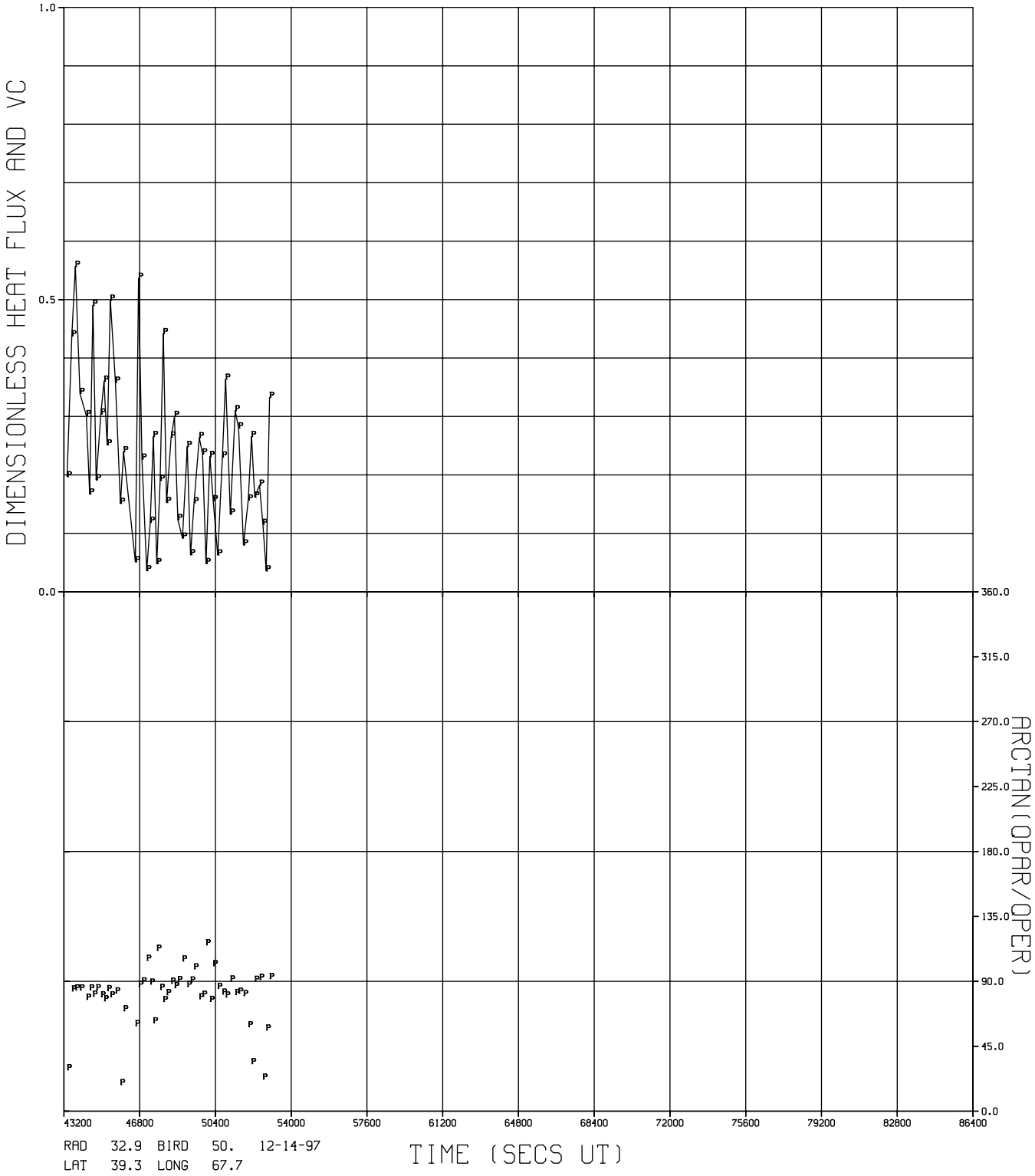

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.9 BIRD 50. 12-14-97
LAT 39.3 LONG 67.7

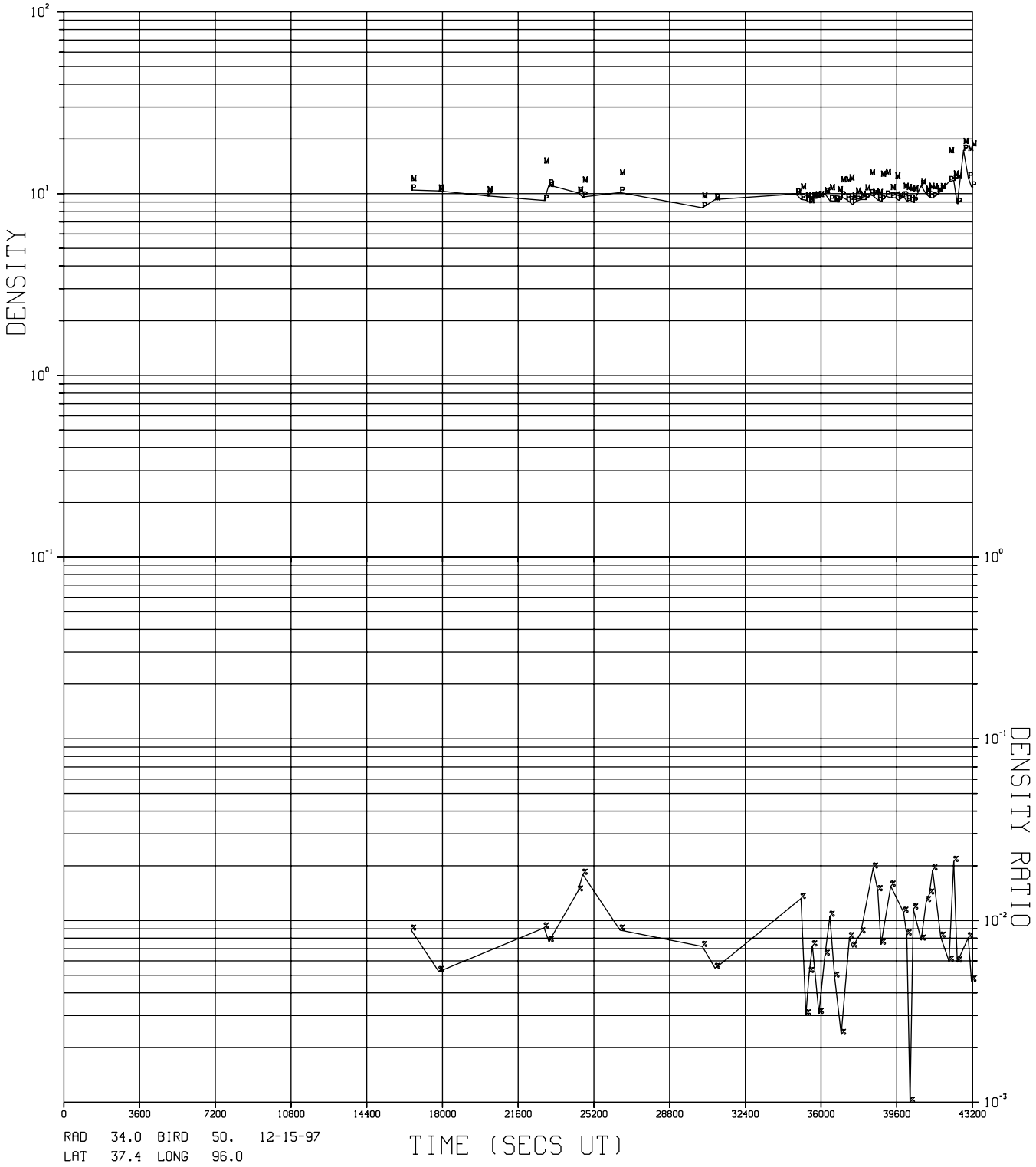

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 32.9 BIRD 50. 12-14-97
LAT 39.3 LONG 67.7

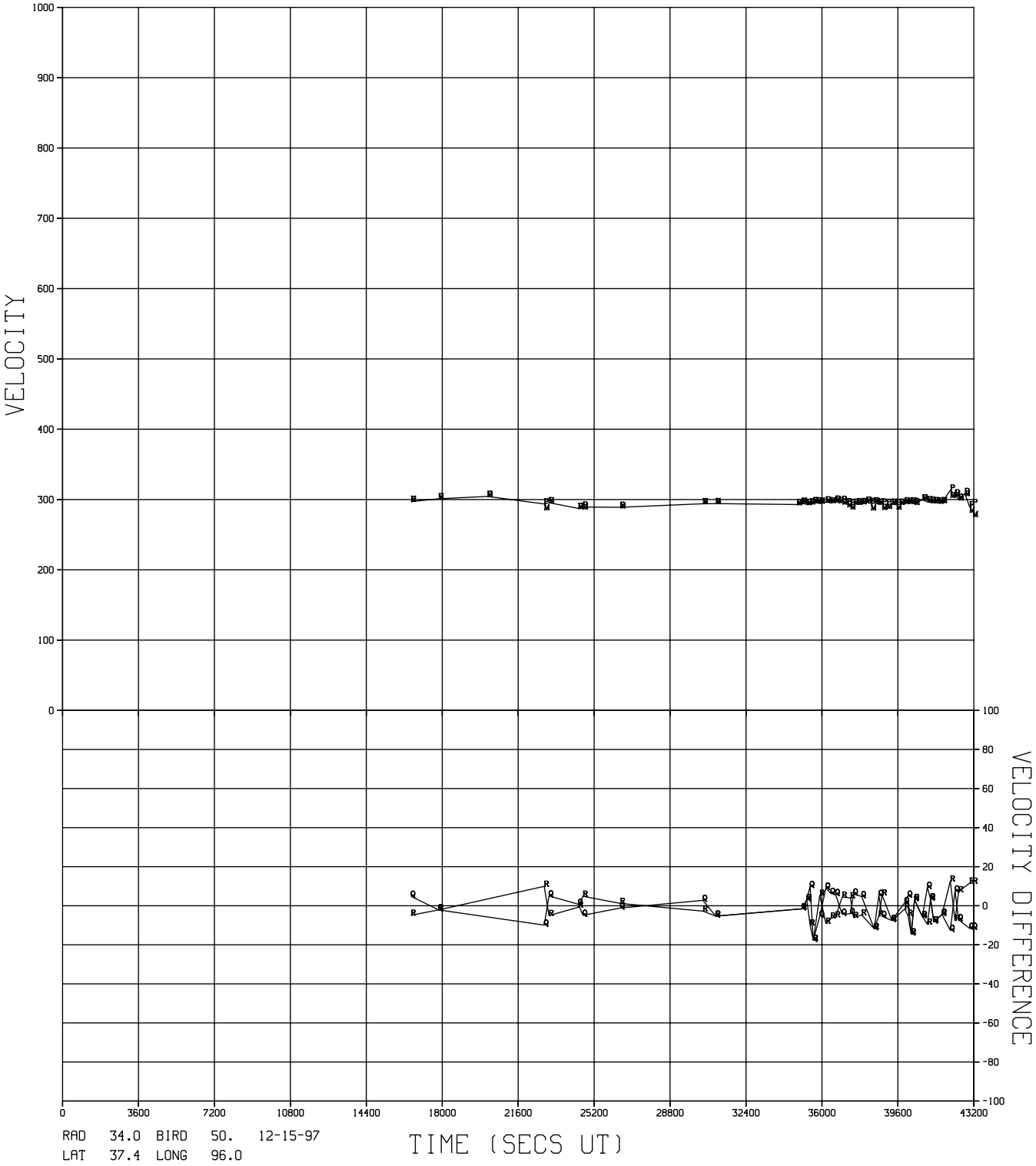

TEMPERATURE
TEMPERATURE RATIO
TIME (SECS UT)
RAD 32.9 BIRD 50. 12-14-97
LAT 39.3 LONG 67.7

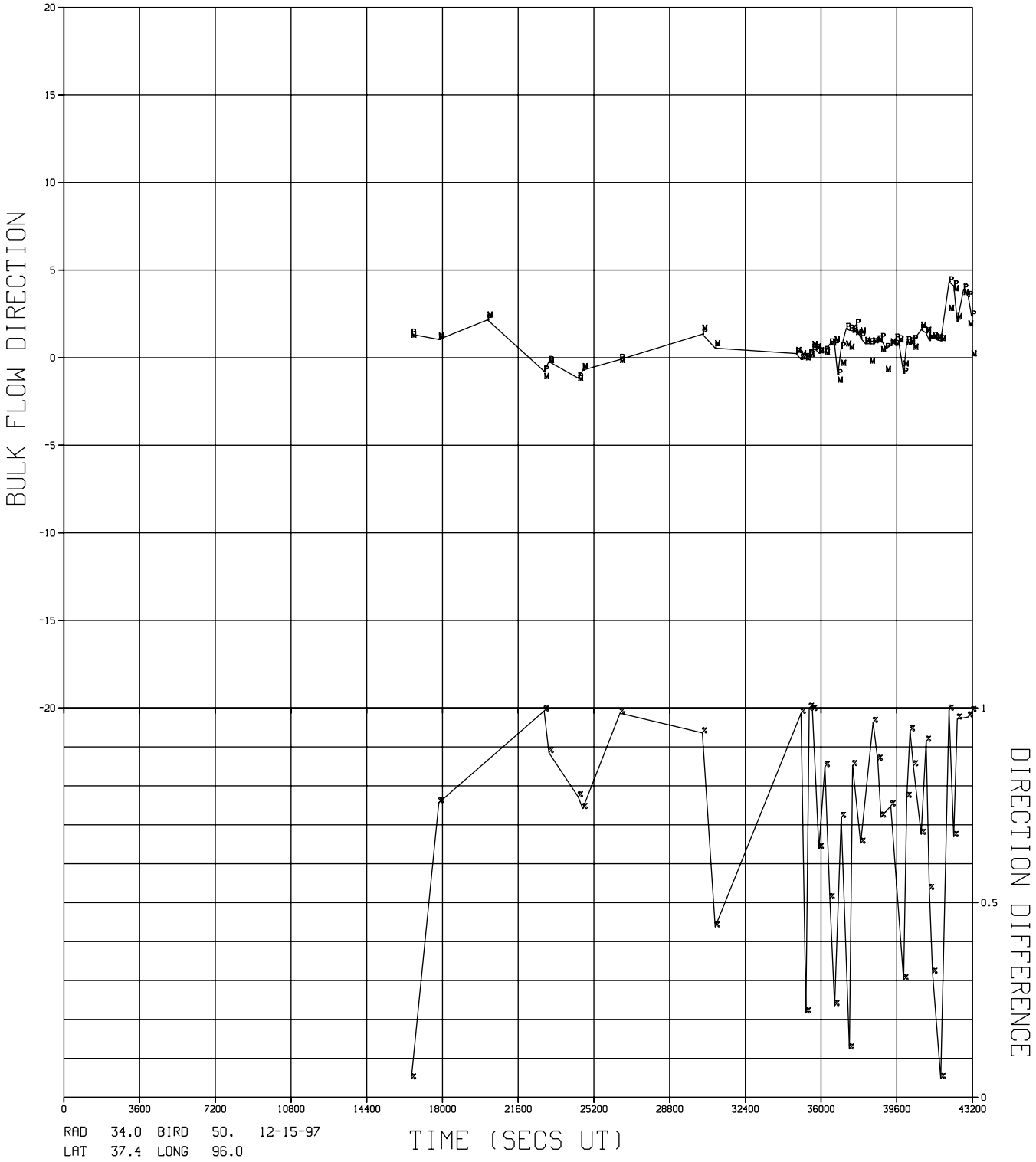

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 32.9 BIRD 50. 12-14-97
LAT 39.3 LONG 67.7

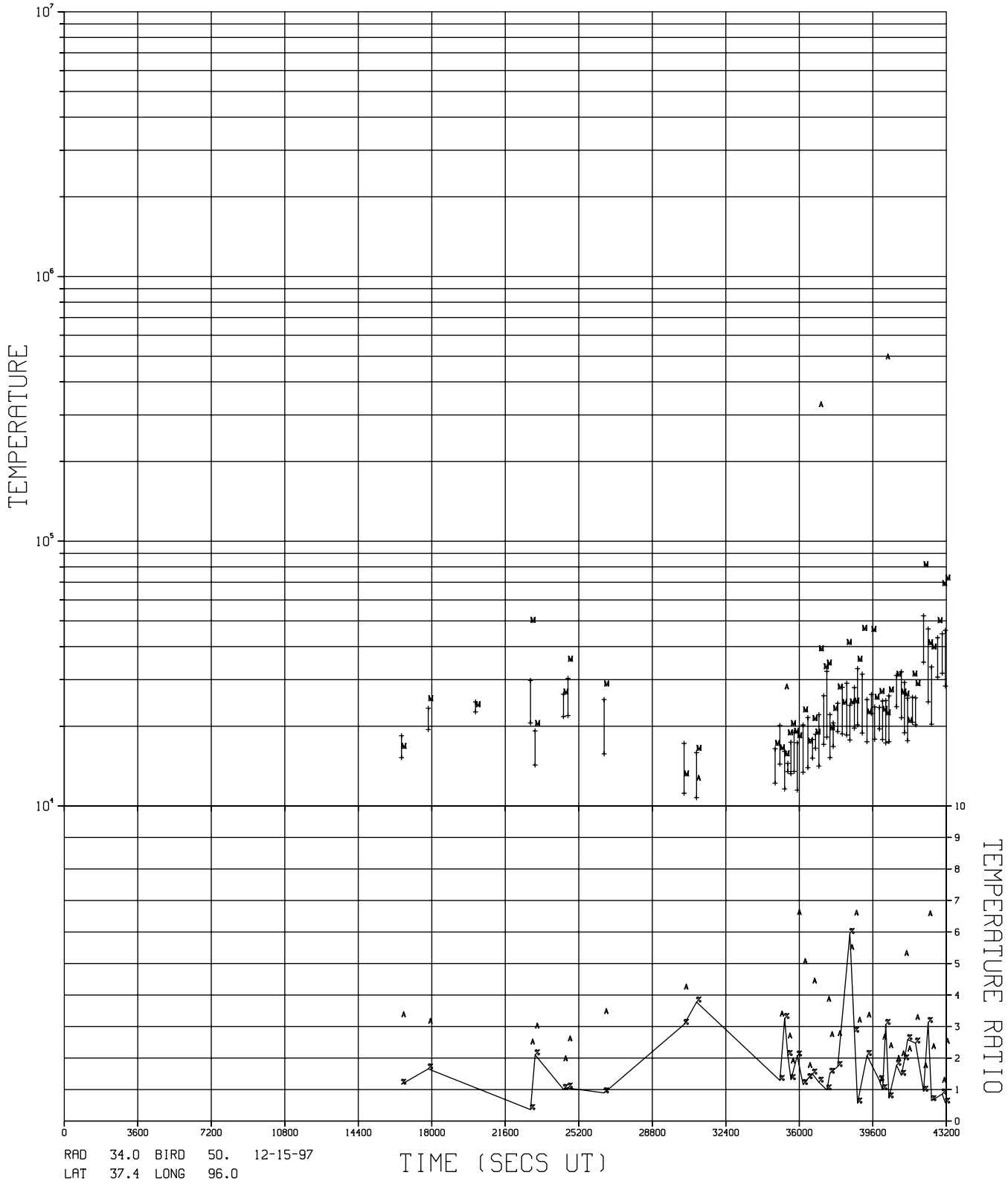

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 32.9 BIRD 50. 12-14-97
LAT 39.3 LONG 67.7

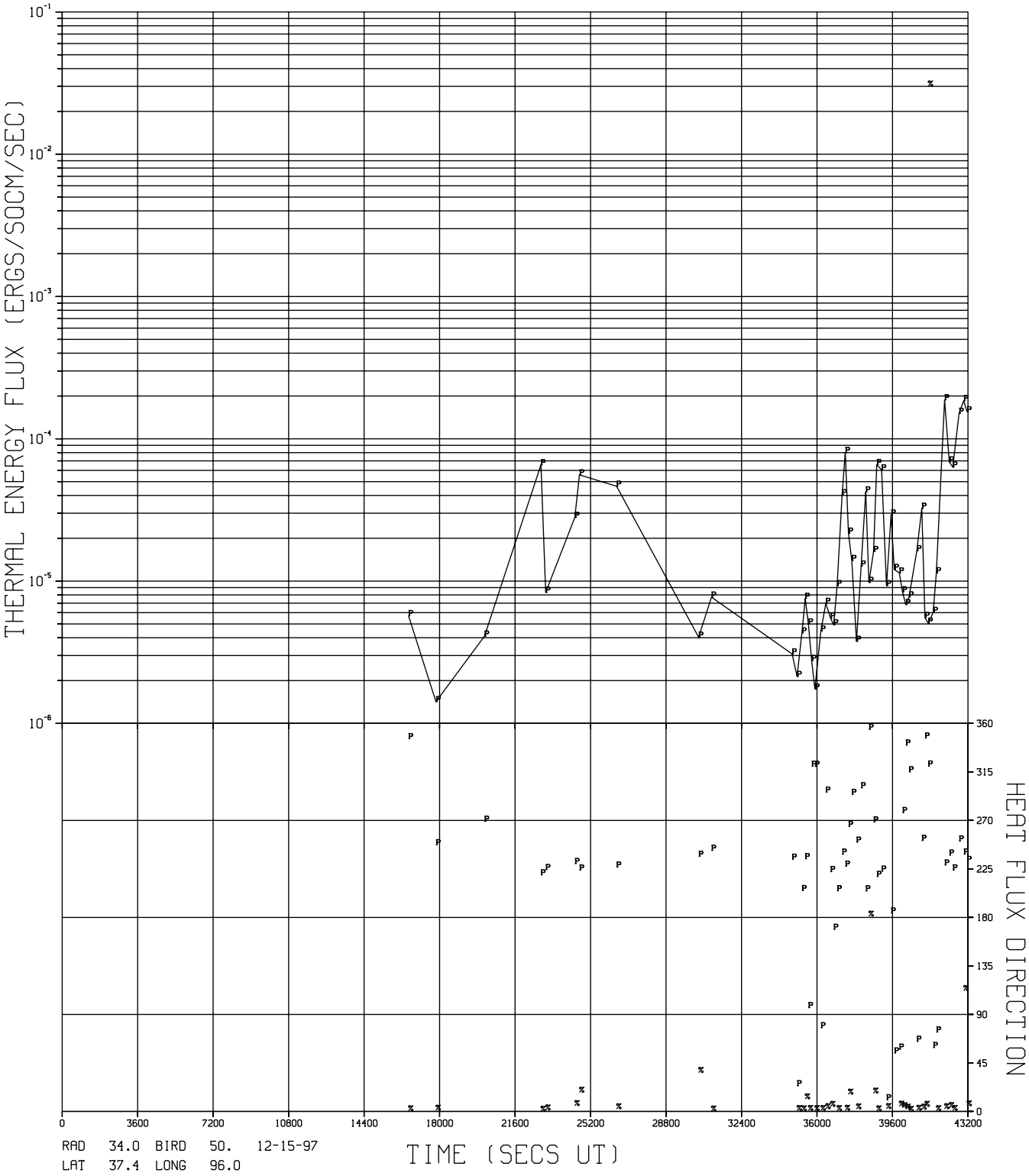

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.9 BIRD 50. 12-14-97
LAT 39.3 LONG 67.7

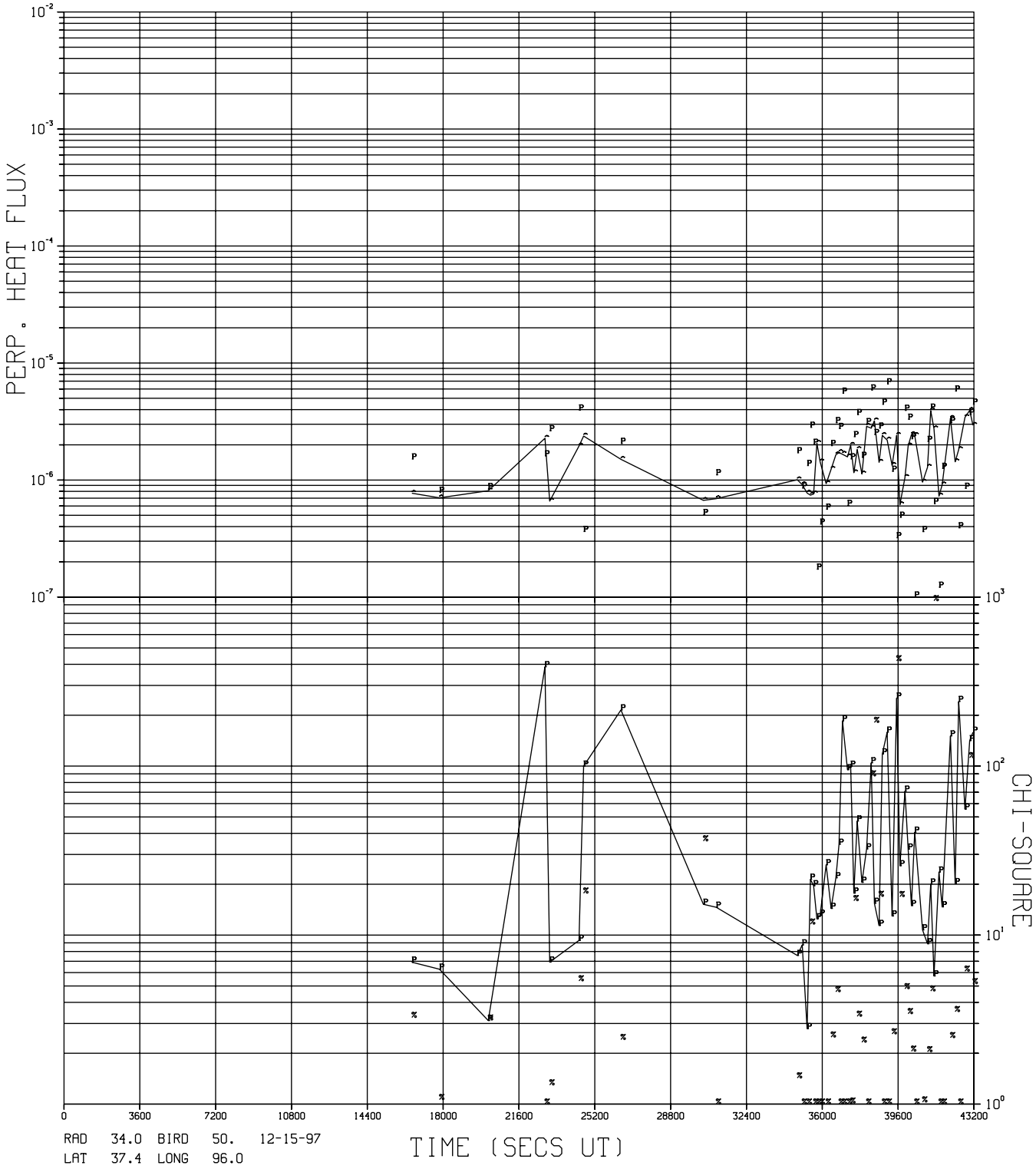

DENSITY
DENSITY RATIO
TIME (SECS UT)
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 34.0 BIRD 50. 12-15-97
LAT 37.4 LONG 96.0

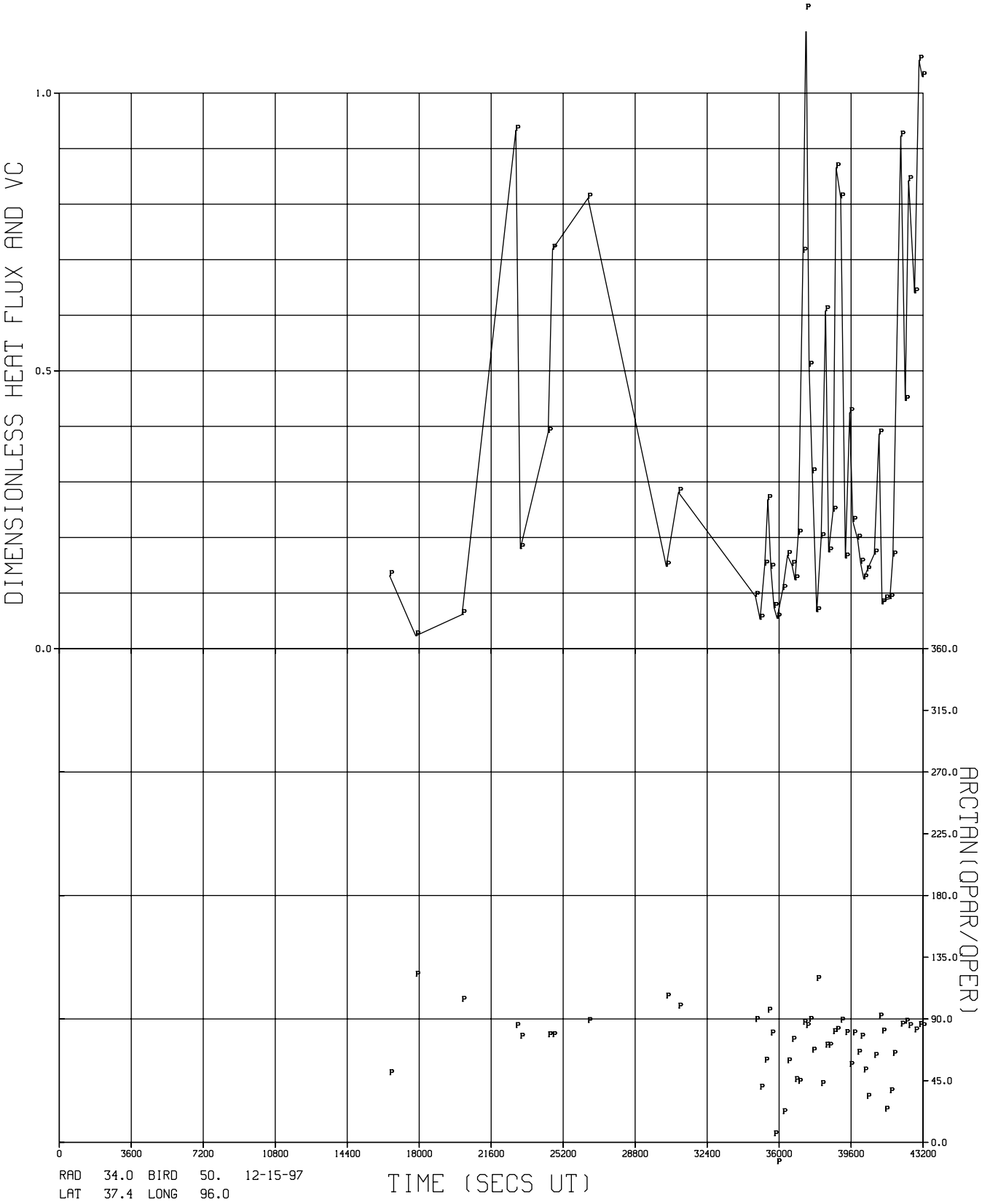

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 34.0 BIRD 50. 12-15-97
LAT 37.4 LONG 96.0

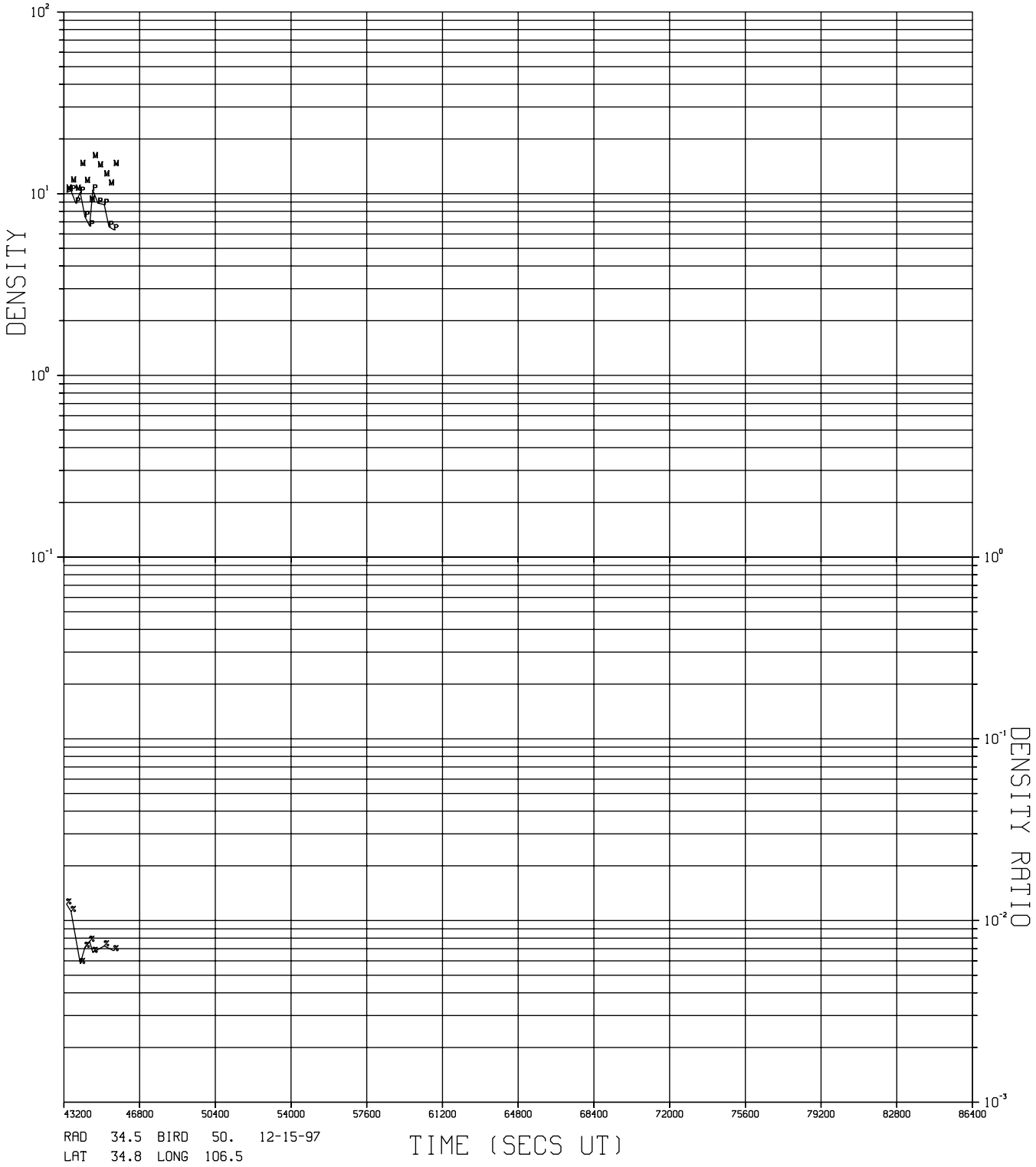

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 34.0 BIRD 50. 12-15-97
LAT 37.4 LONG 96.0

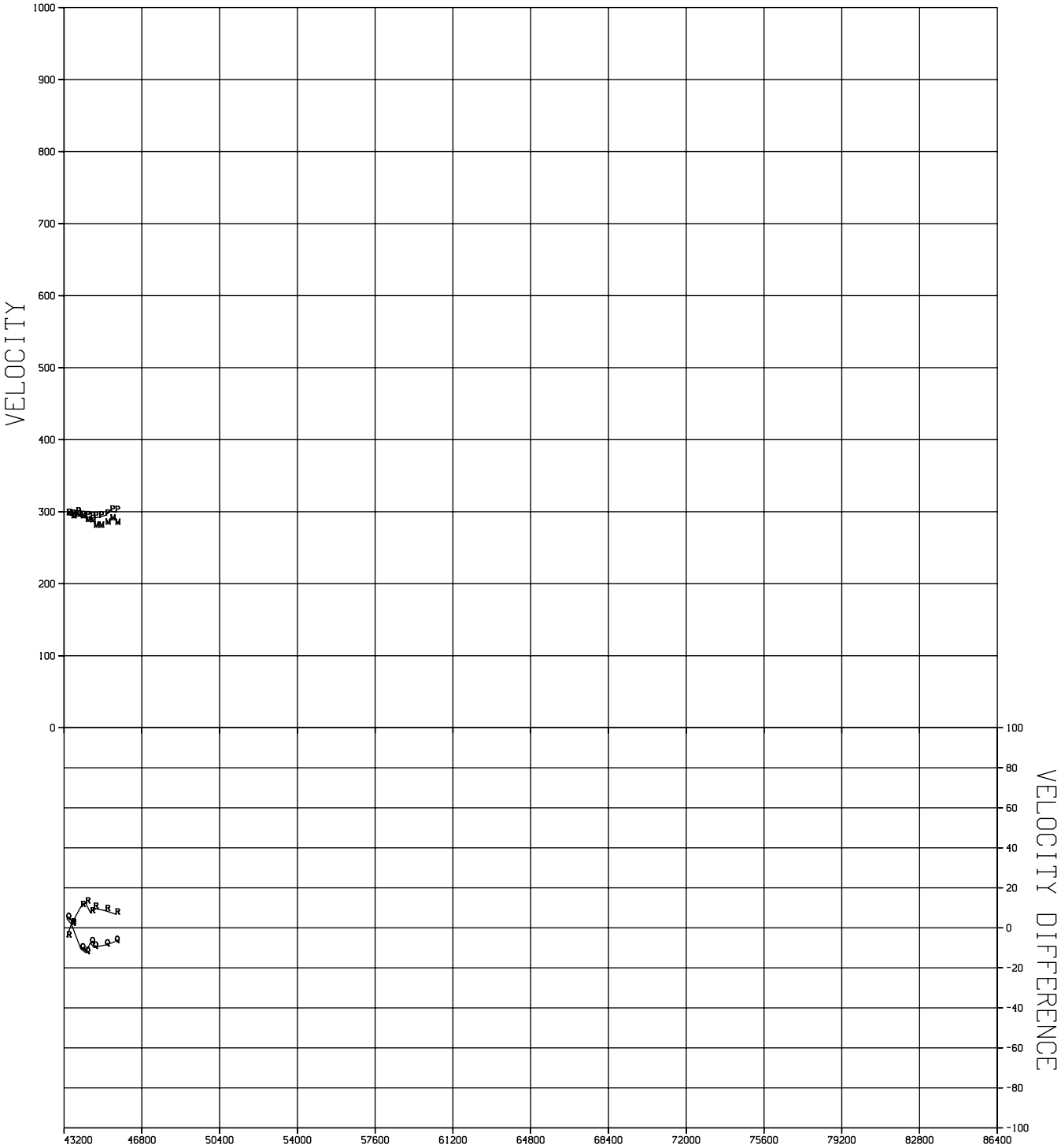

TEMPERATURE
10^7
10^6
10^5
10^4
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 34.0 BIRD 50. 12-15-97
LAT 37.4 LONG 96.0


THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
HEAT FLUX DIRECTION
TIME (SECS UT)
RAD 34.0 BIRD 50. 12-15-97
LAT 37.4 LONG 96.0

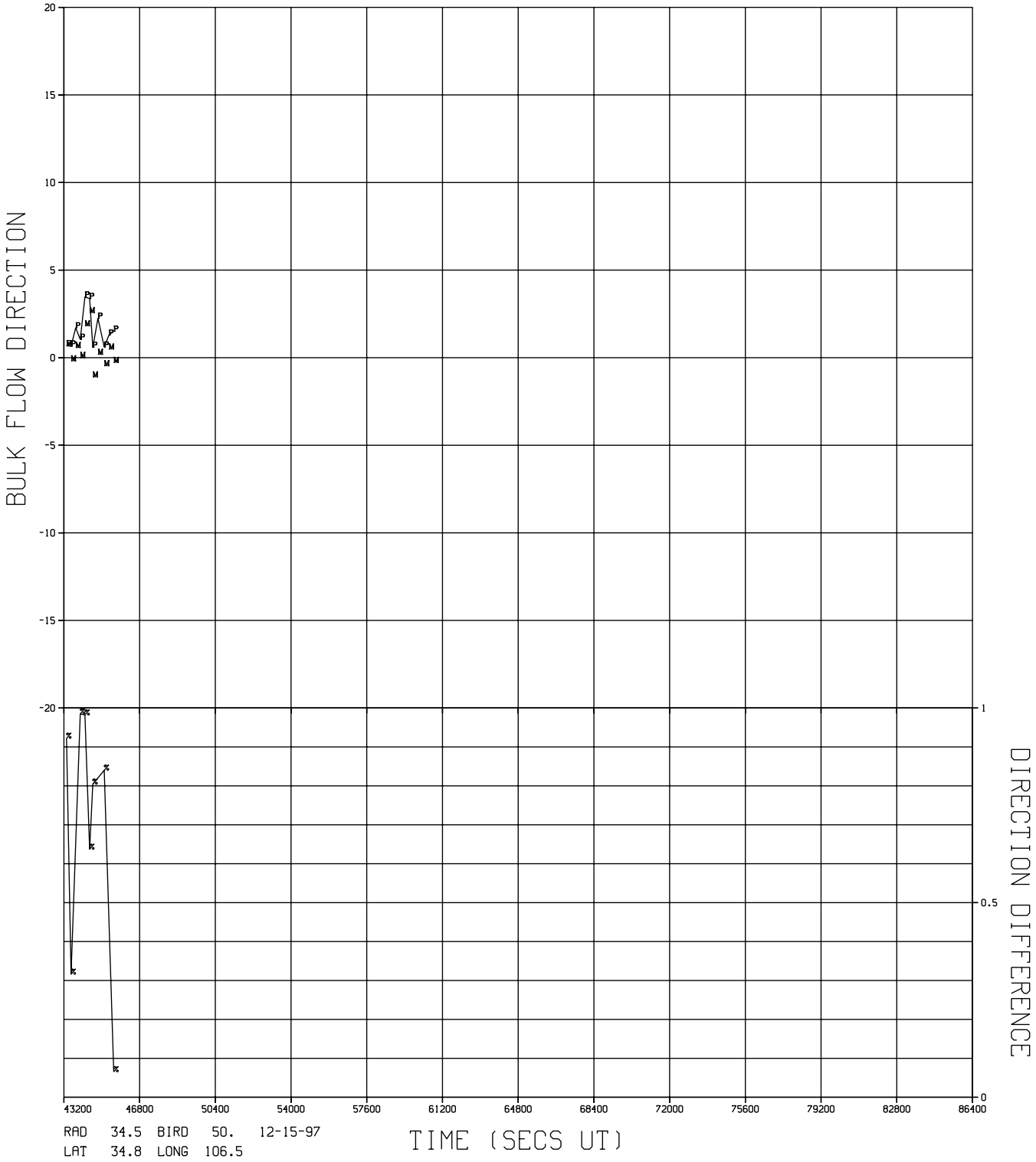

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 34.0 BIRD 50. 12-15-97
LAT 37.4 LONG 96.0

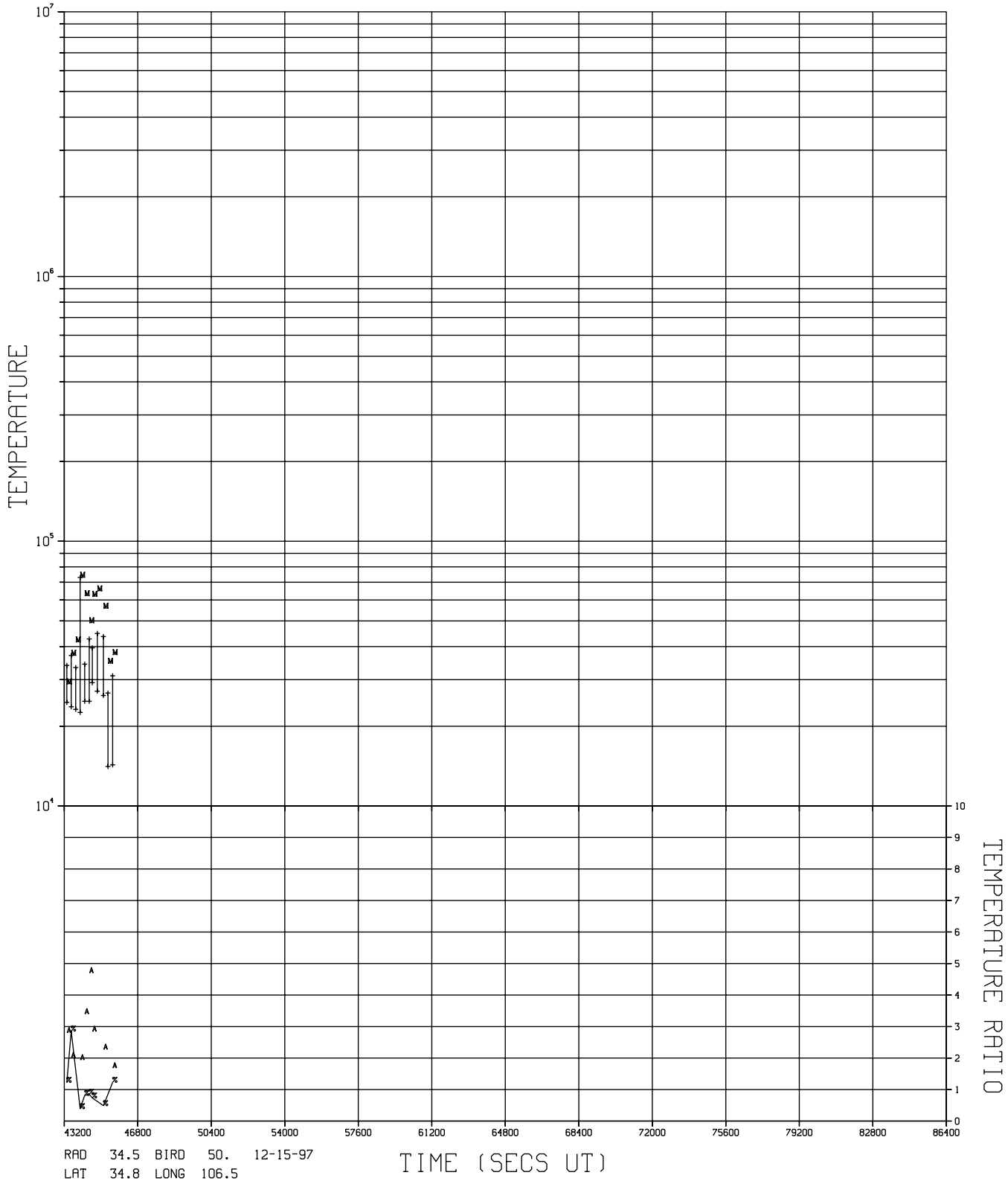

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 34.0 BIRD 50. 12-15-97
LAT 37.4 LONG 96.0

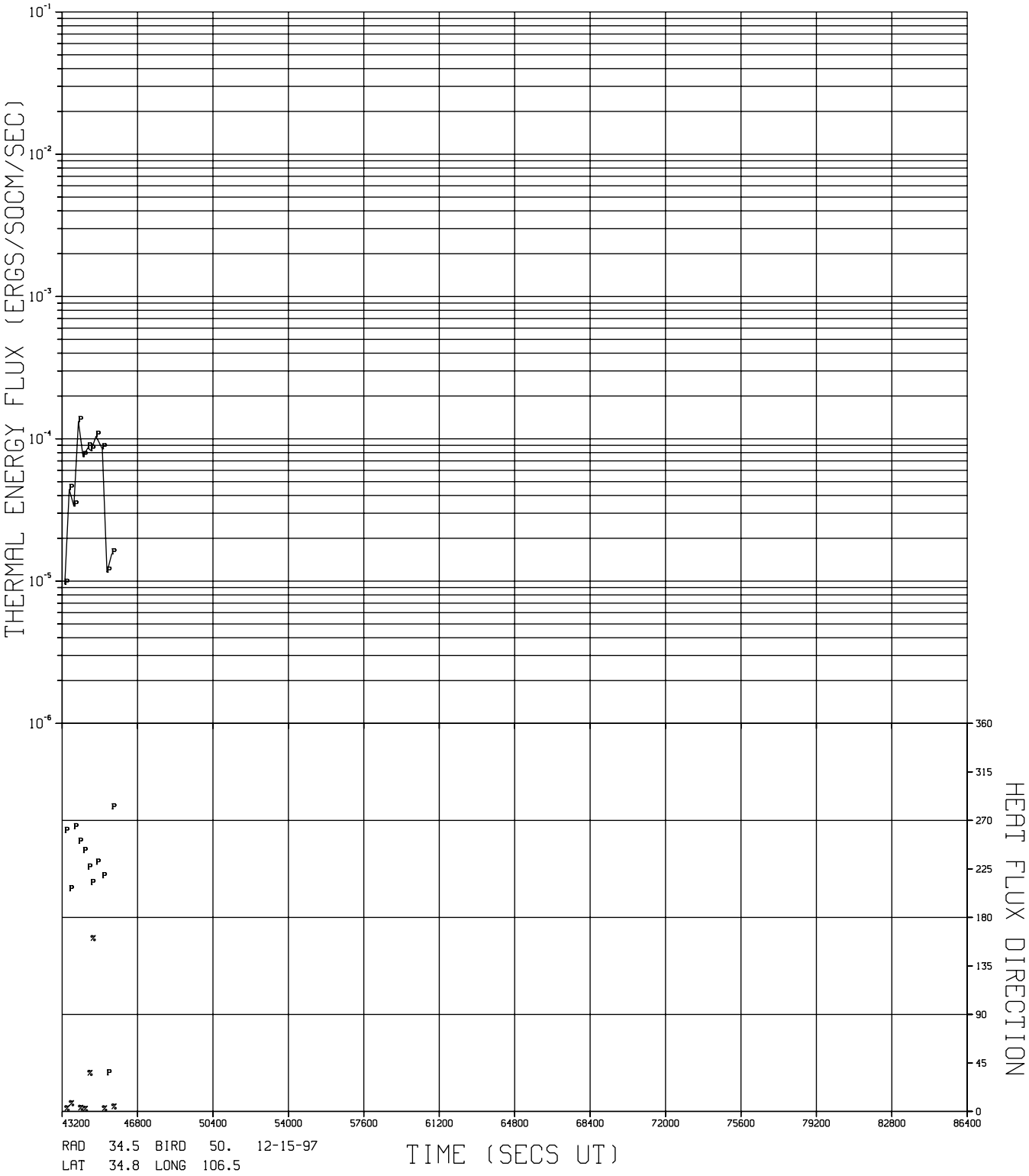

DENSITY
DENSITY RATIO
TIME (SECS UT)
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 34.5 BIRD 50. 12-15-97
LAT 34.8 LONG 106.5

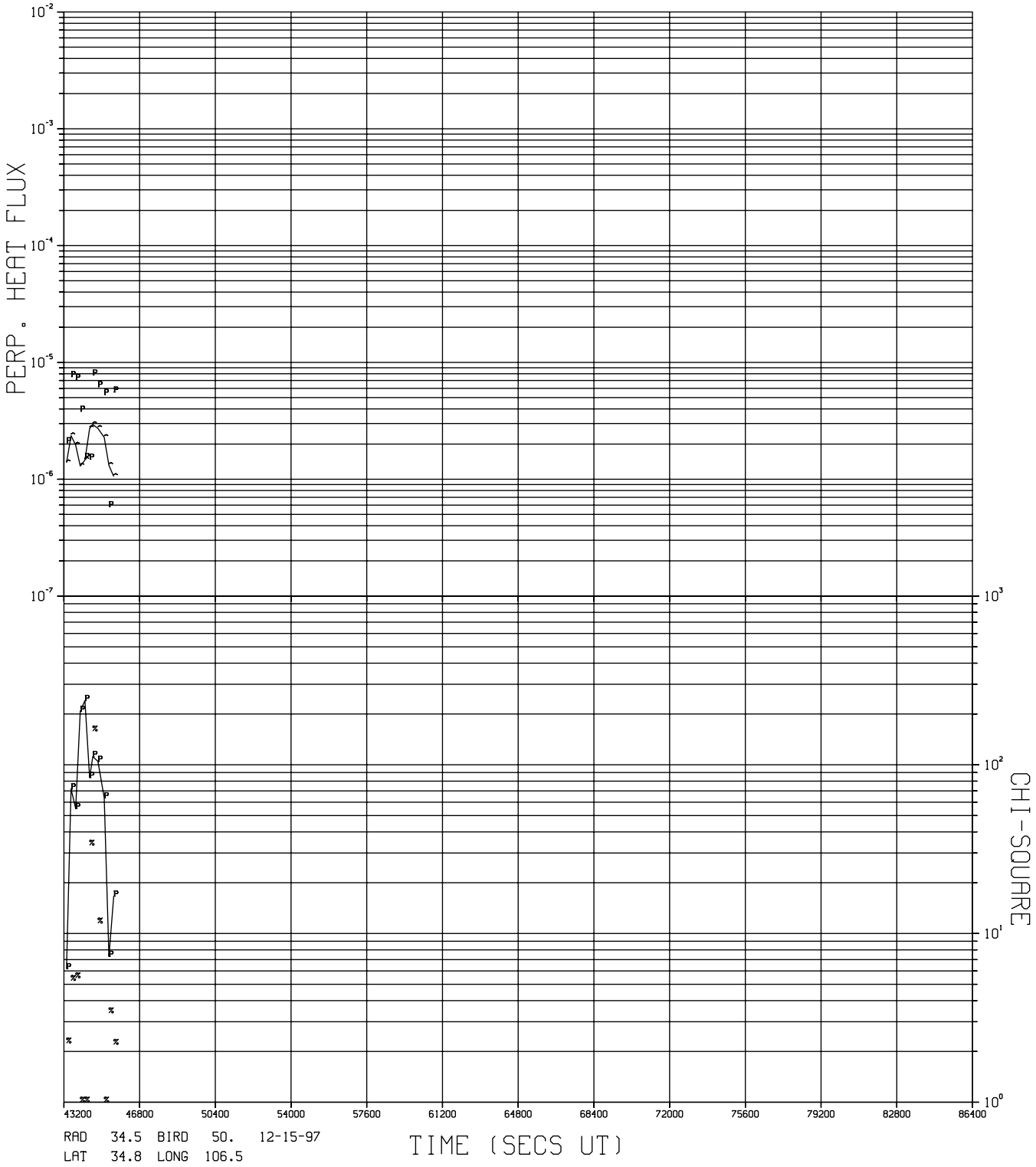


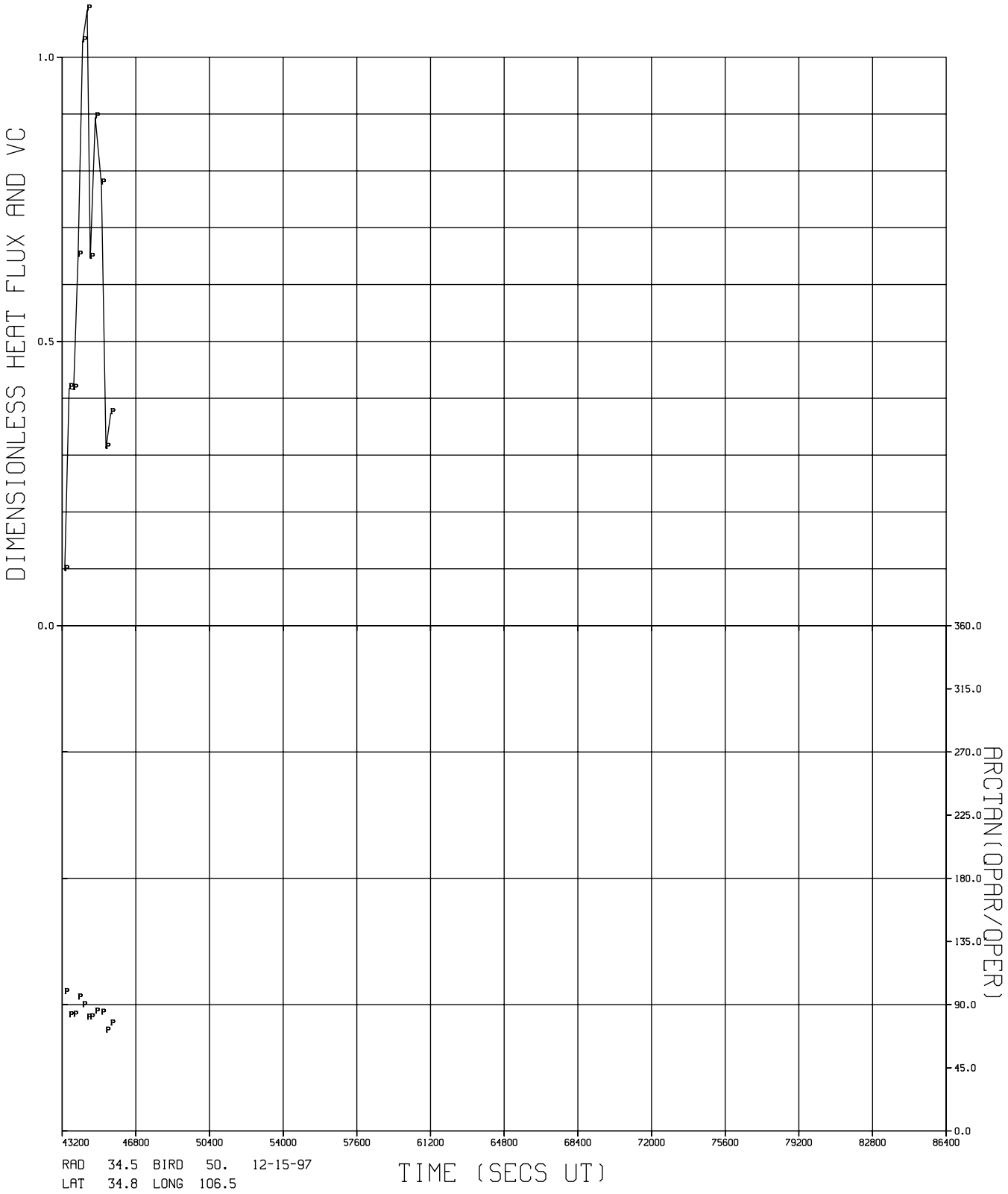
RAD 34.5 BIRD 50. 12-15-97
LAT 34.8 LONG 106.5


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 34.5 BIRD 50. 12-15-97
LAT 34.8 LONG 106.5


TEMPERATURE
TEMPERATURE RATIO
TIME (SECS UT)
10^7
10^6
10^5
10^4
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
0
1
2
3
4
5
6
7
8
9
10
RAD 34.5 BIRD 50. 12-15-97
LAT 34.8 LONG 106.5


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 34.5 BIRD 50. 12-15-97
LAT 34.8 LONG 106.5


PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 34.5 BIRD 50. 12-15-97
LAT 34.8 LONG 106.5


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
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 34.5 BIRD 50. 12-15-97
LAT 34.8 LONG 106.5