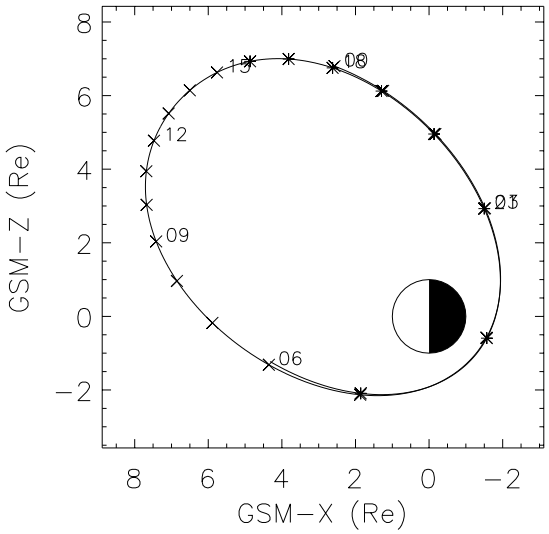
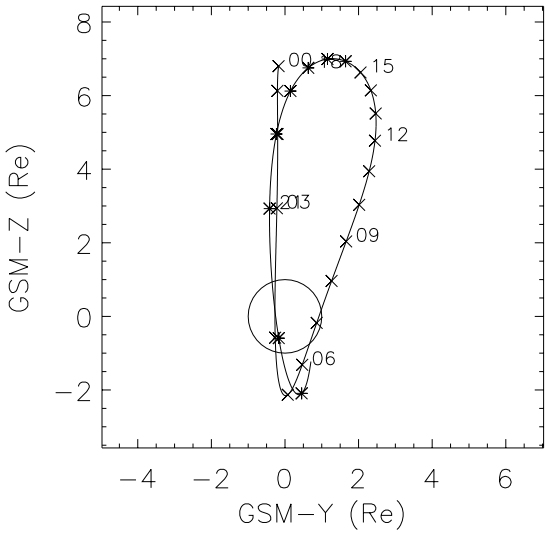
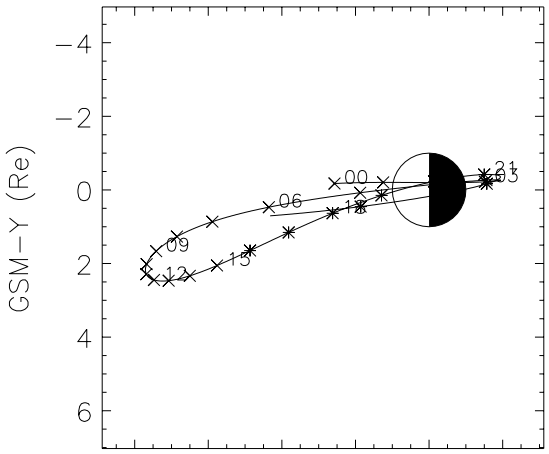


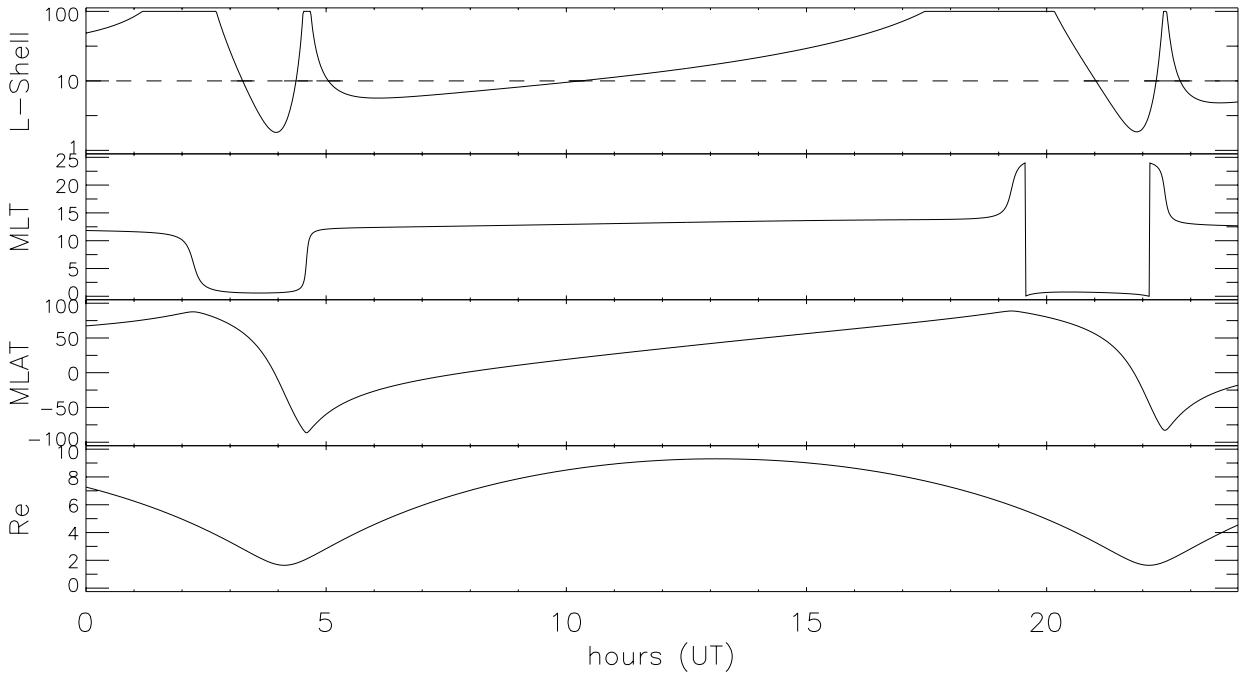




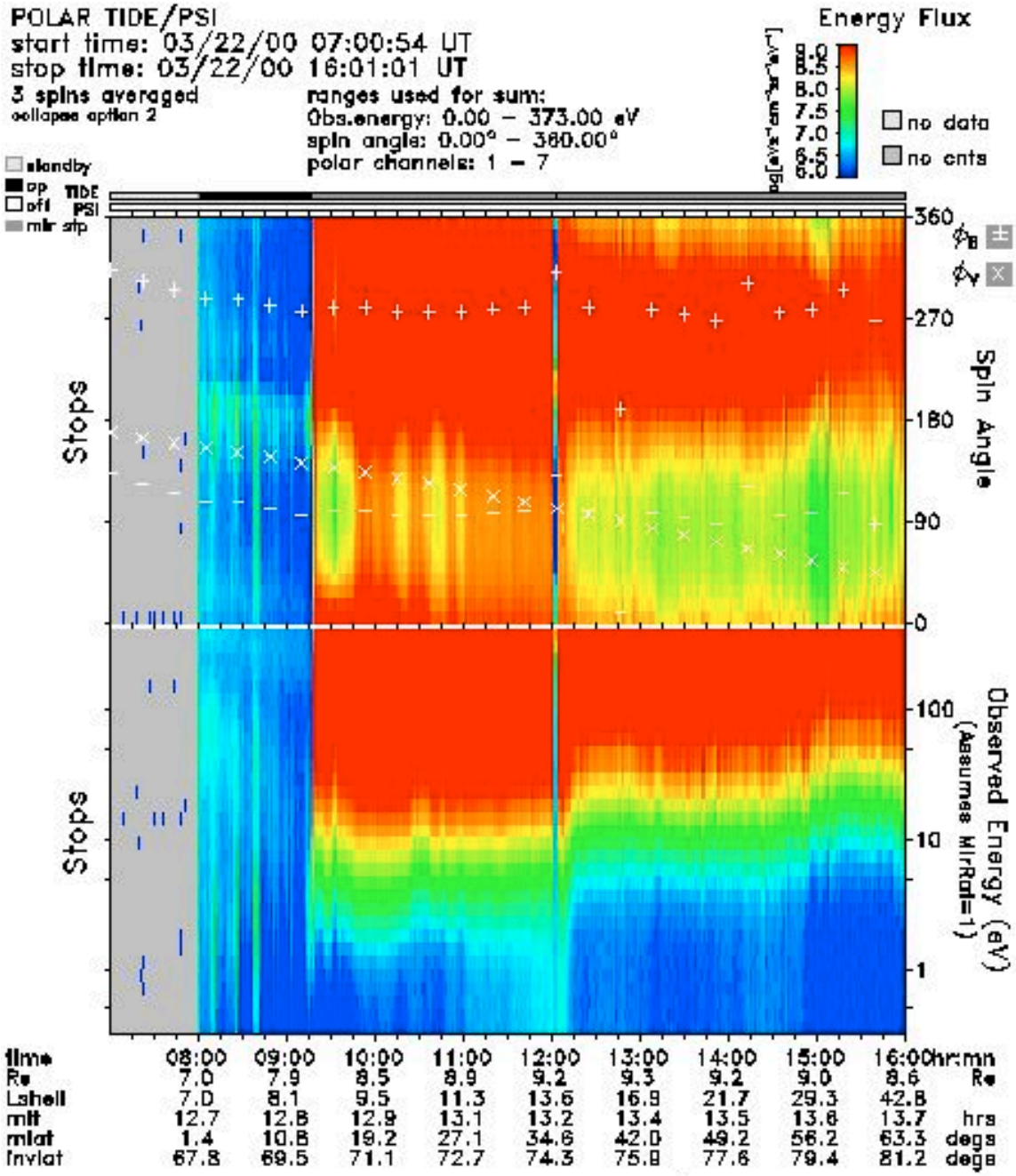
POLAR Orbit 2000/082 (03/22)
L shell of interest = 10.00

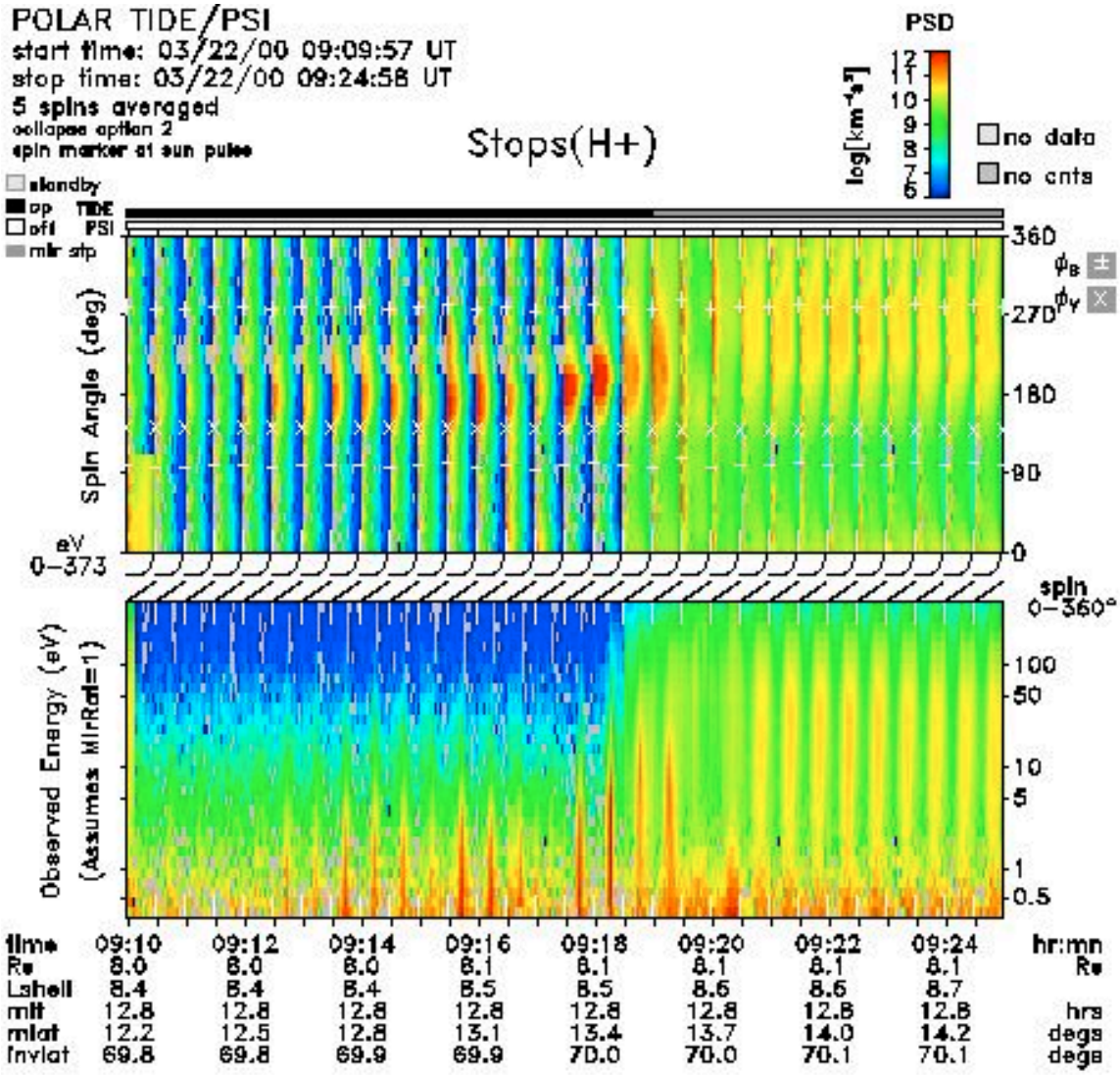
03:15:43	North Pole to Equator =	10.00
04:22:16	Equator to South Pole =	10.00
05:02:47	South Pole to Equator =	10.00
10:17:43	Equator to North Pole =	10.00
21:01:27	North Pole to Equator =	10.00
22:16:47	Equator to South Pole =	10.00
22:46:47	South Pole to Equator =	10.00

07:00:37 Ascending node crossing (2009)



Tue Apr 4 11:06:02 2000
/datafiles/orbit/pre/00032202.cdf
plot_orbit_gsml_v2.0.0

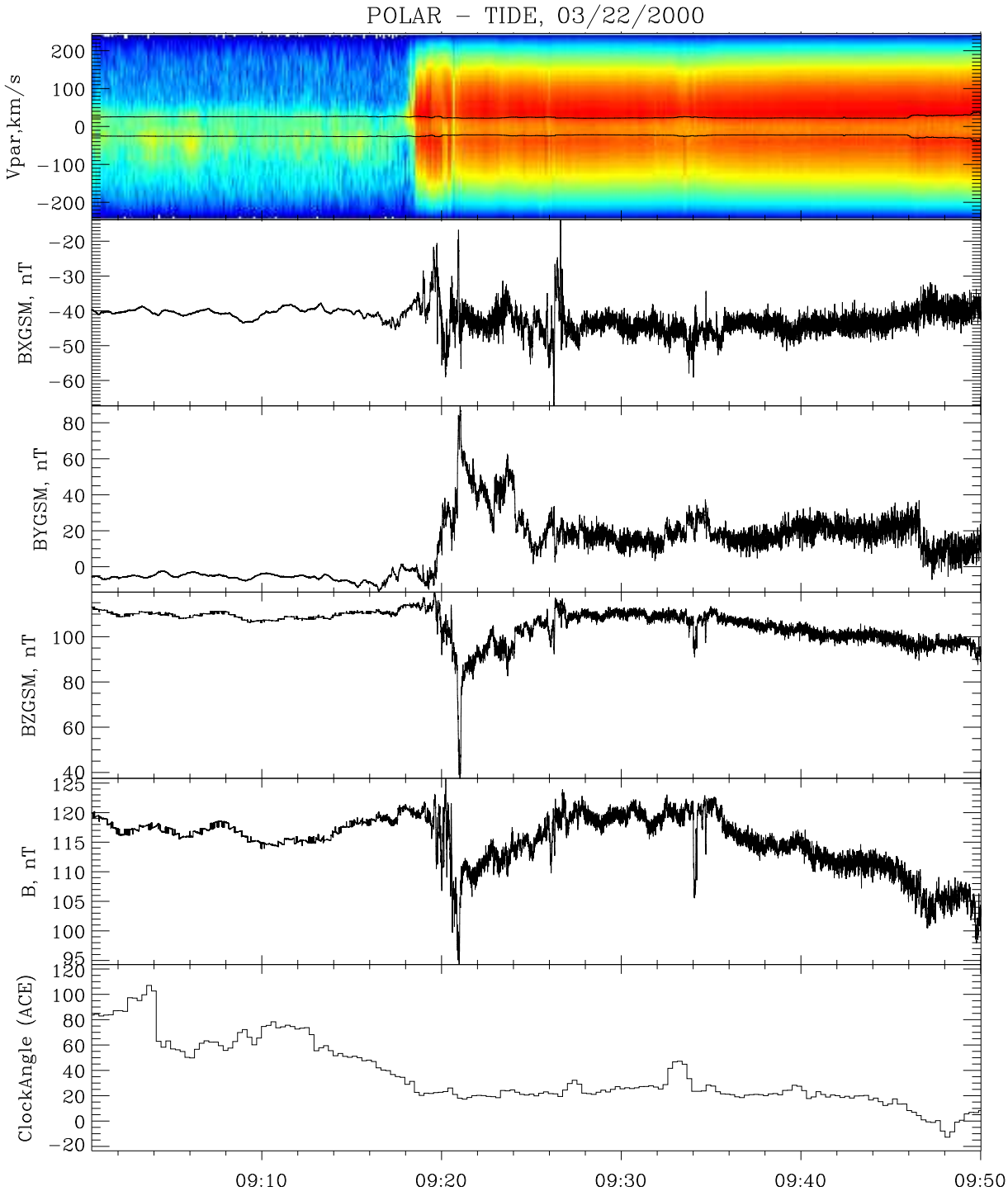

POLAR TIDE/PSI
start time: 03/22/00 07:00:54 UT
stop time: 03/22/00 16:01:01 UT
3 spins averaged
collapse option 2
ranges used for sum:
Obs.energy: 0.00 – 373.00 eV
spin angle: 0.00° – 360.00°
polar channels: 1 – 7
Energy Flux
no data
no cnts
standby
op
off
mir stp
TIDE
PSI
Stops
Spin Angle
Observed Energy (eV)
(Assumes MirRat=1)
time
Re
Lshell
mlt
mlat
invlat
hr:mn
hrs
degs
tide_lz_v5.4.0
Sat Mar 25 04:19:38 2000
no minimum subtracted
sector_sense: no correction
calibration: tide_calib.v6
mass_calibration: mass_calib.v7
ion_mask: t000322_v2.mask
s/c potential = 0.0000
attitude: 00032202.adf
orbit: 00032202.adf
level-zero: 00032200.dat

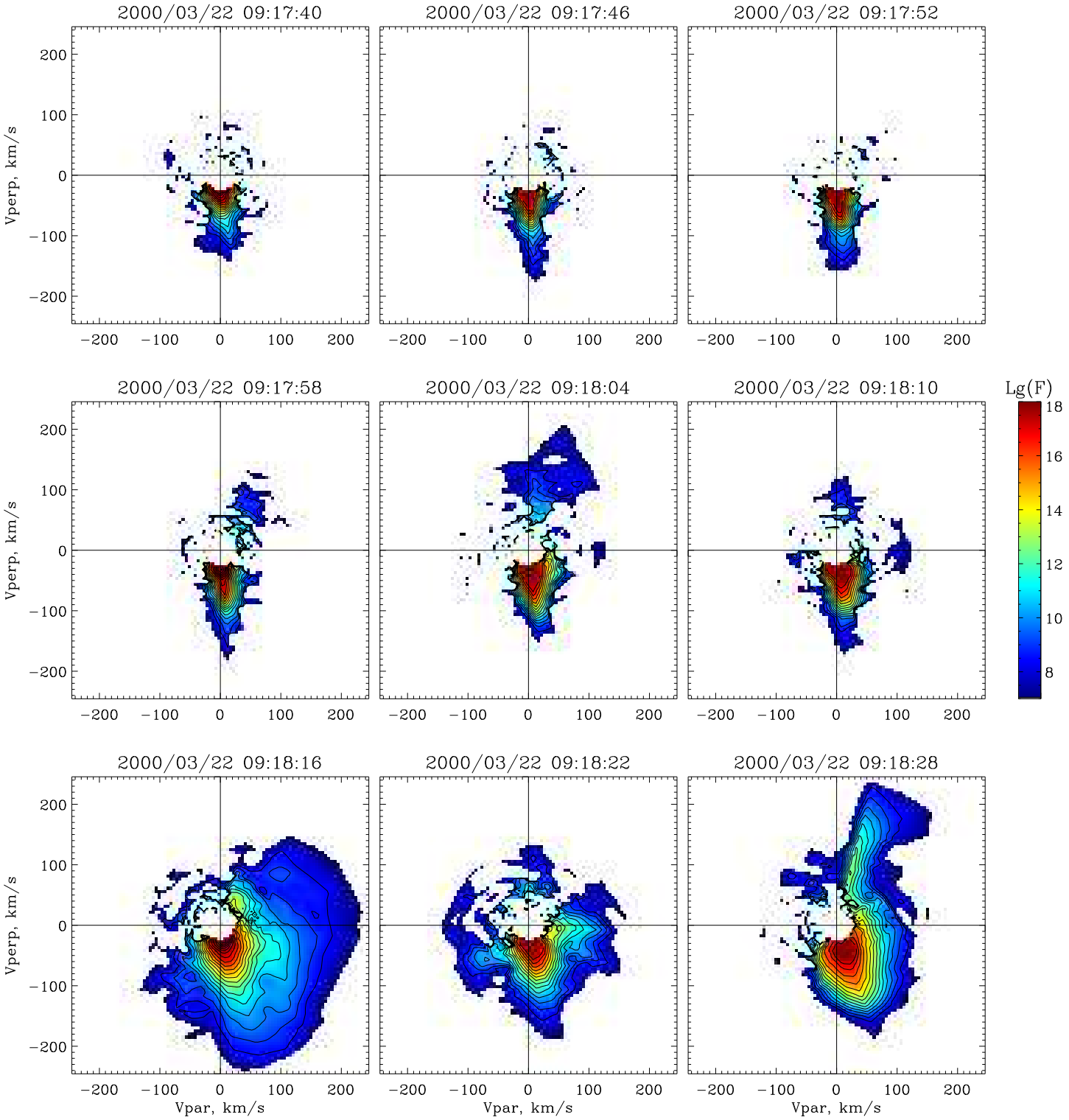


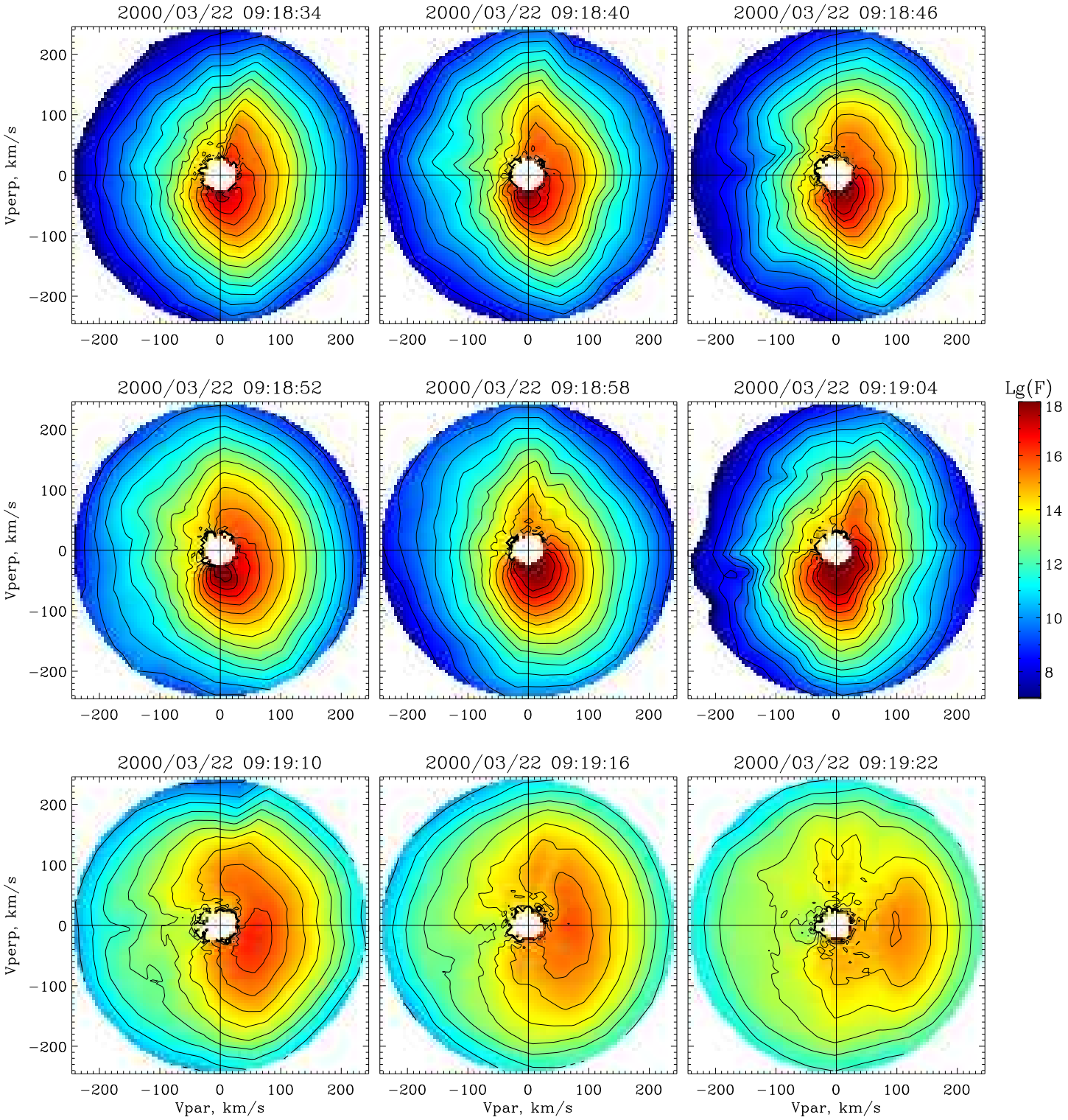
tide_iz_v5.4.0
Thu Apr 13 10:43:07 2000
plot: f0003220909_0924_sp.q9179.esse.glass_calibration: mass_calib.v7
no minimum subtracted

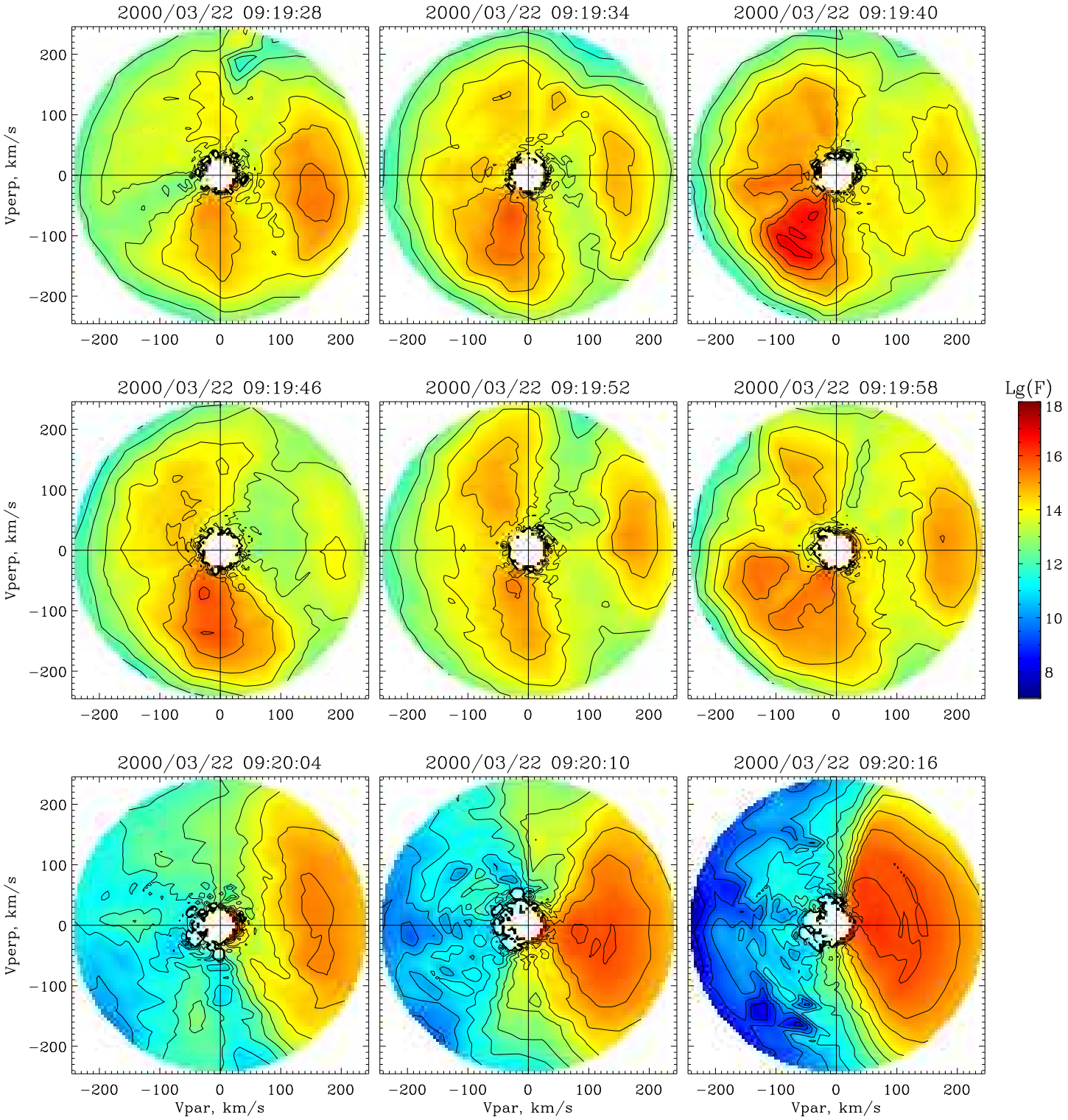
sector_sense: no correction
calibration: tide_calib.v6
fon_mask: f000322_v2.mask

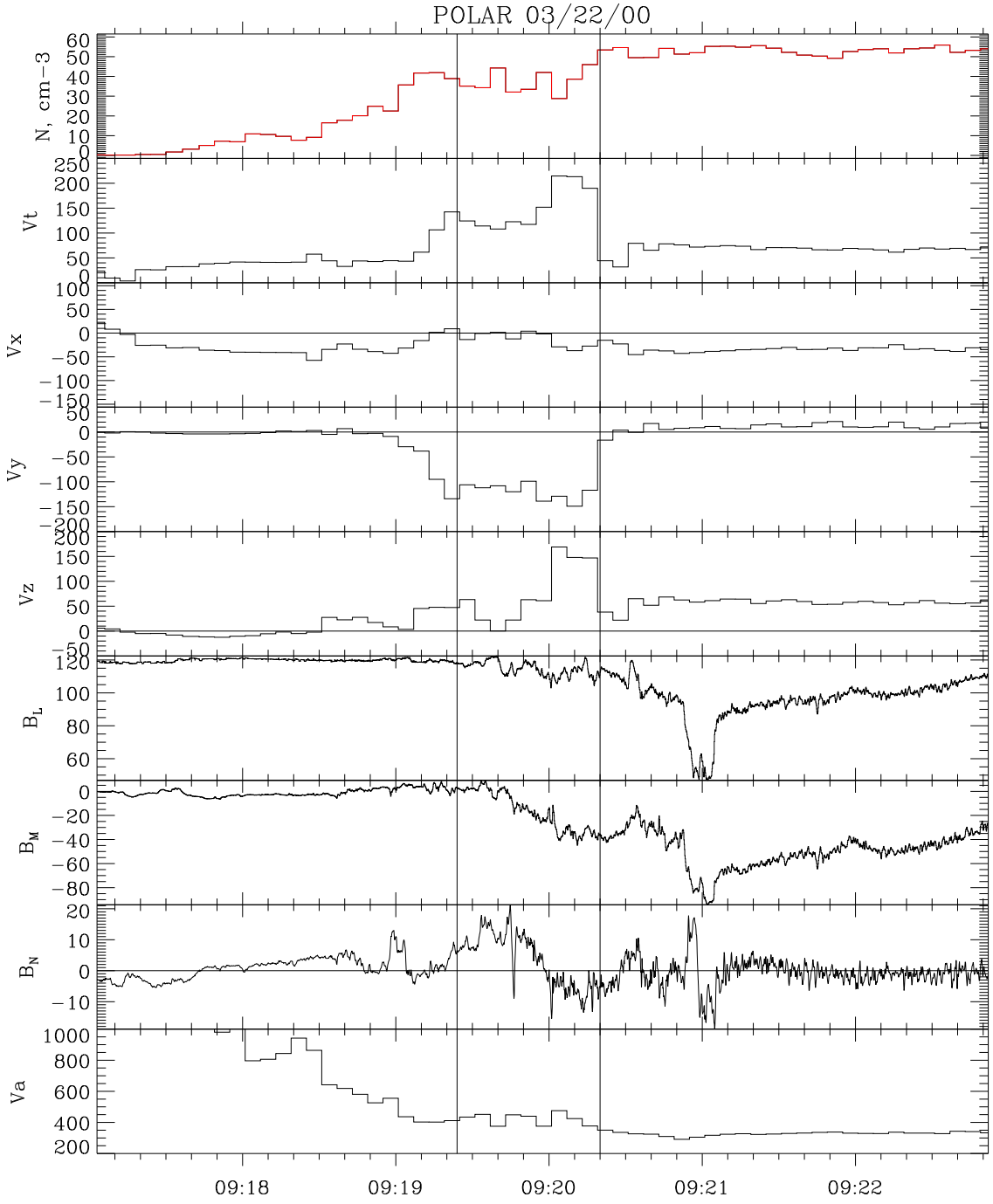
s/c potential = 0.0000
attitude: 00032202.cdf
orbit: 00032202.cdf
level-zero: 000322D0.dat

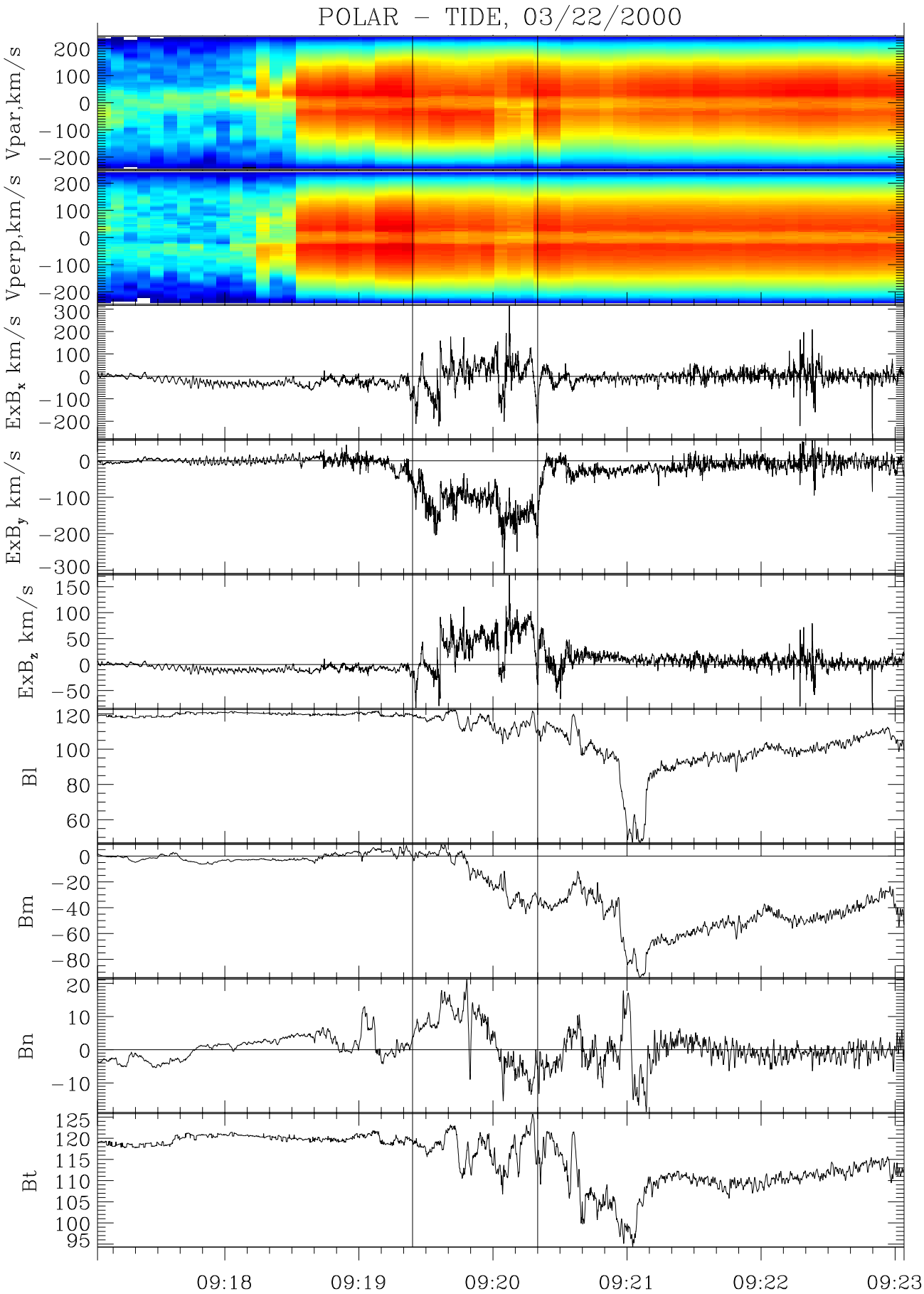

POLAR – TIDE, 03/22/2000
Vpar,km/s
200
100
0
−100
−200
BXGSM, nT
−20
−30
−40
−50
−60
BYGSM, nT
80
60
40
20
0
BZGSM, nT
100
80
60
40
B, nT
125
120
115
110
105
100
95
ClockAngle (ACE)
120
100
80
60
40
20
0
−20
09:10
09:20
09:30
09:40
09:50

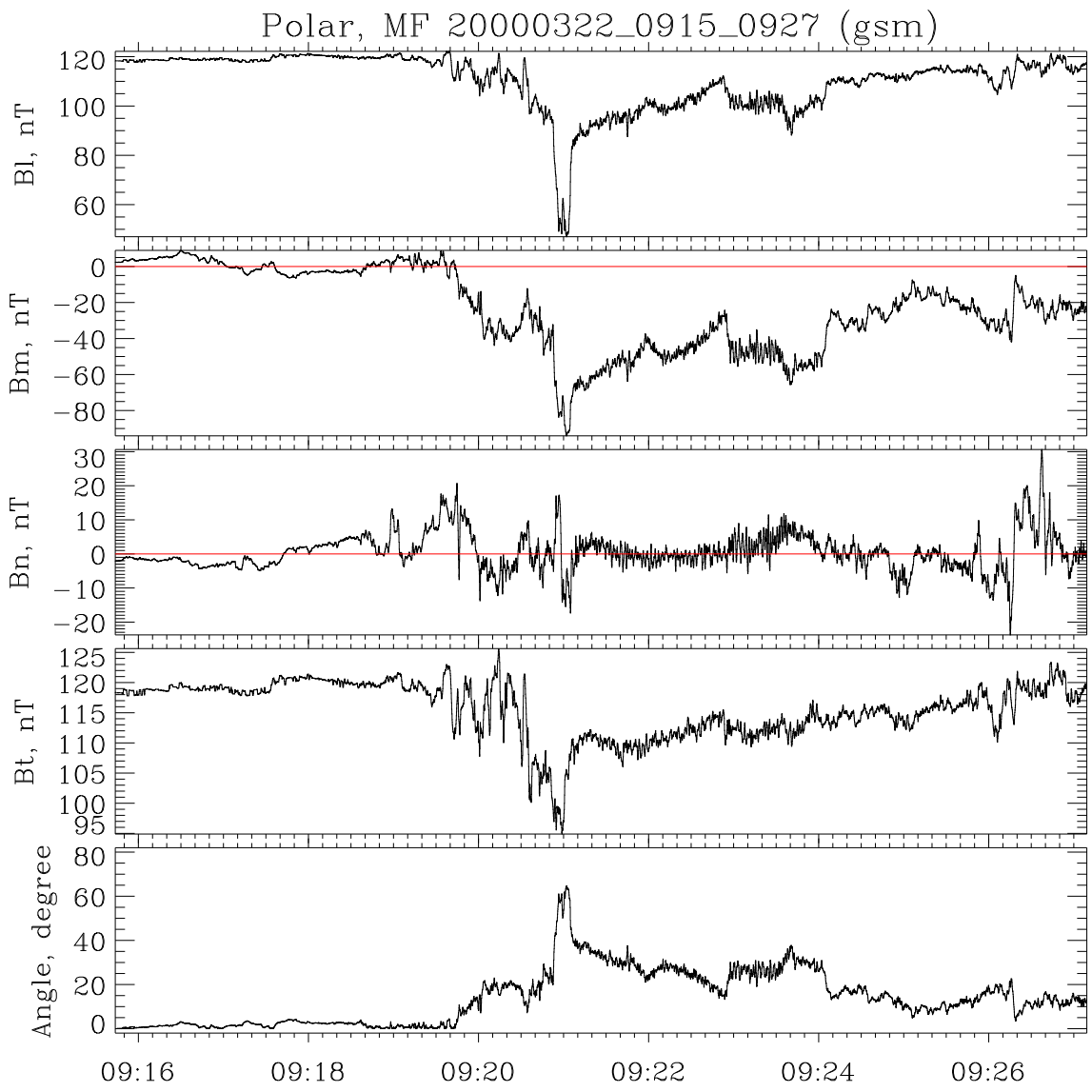

2000/03/22 09:17:40
2000/03/22 09:17:46
2000/03/22 09:17:52
2000/03/22 09:17:58
2000/03/22 09:18:04
2000/03/22 09:18:10
2000/03/22 09:18:16
2000/03/22 09:18:22
2000/03/22 09:18:28
Vperp, km/s
Vpar, km/s
Lg(F)
18
16
14
12
10
8
200
100
0
−100
−200


2000/03/22 09:18:34
2000/03/22 09:18:40
2000/03/22 09:18:46
2000/03/22 09:18:52
2000/03/22 09:18:58
2000/03/22 09:19:04
2000/03/22 09:19:10
2000/03/22 09:19:16
2000/03/22 09:19:22
Vperp, km/s
Vpar, km/s
−200
−100
0
100
200
Lg(F)
18
16
14
12
10
8


2000/03/22 09:19:28
2000/03/22 09:19:34
2000/03/22 09:19:40
2000/03/22 09:19:46
2000/03/22 09:19:52
2000/03/22 09:19:58
2000/03/22 09:20:04
2000/03/22 09:20:10
2000/03/22 09:20:16
Vperp, km/s
Vpar, km/s
Lg(F)
18
16
14
12
10
8
200
100
0
−100
−200

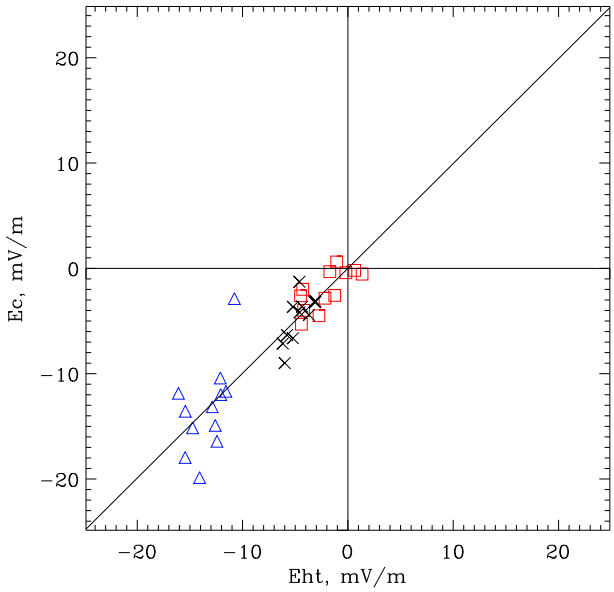

POLAR 03/22/00
N, cm−3
Vt
Vx
Vy
Vz
B_L
B_M
B_N
Va
09:18
09:19
09:20
09:21
09:22

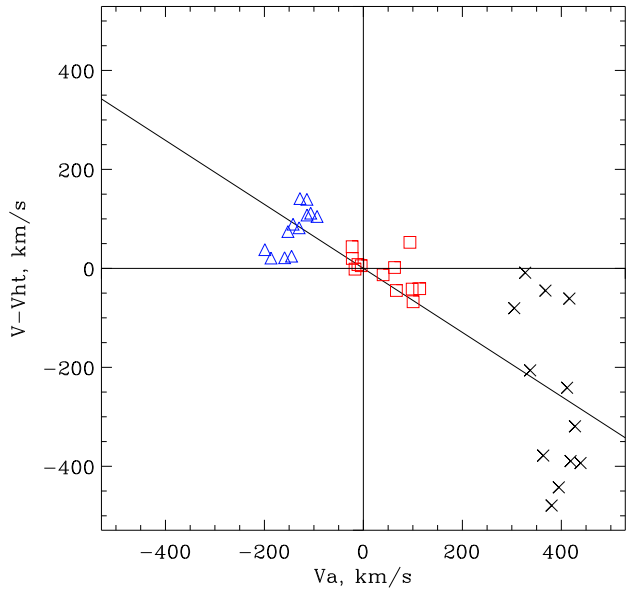

POLAR – TIDE, 03/22/2000
Vpar,km/s
Vperp,km/s
ExB$_x$ km/s
ExB$_y$ km/s
ExB$_z$ km/s
Bl
Bm
Bn
Bt
09:18
09:19
09:20
09:21
09:22
09:23



L=[−0.343; −0.042; 0.939]
M=[0.189; −0.982; 0.026]
N=[0.920; 0.186; 0.344]

2000/03/22 09:19:16−09:20:22 UT





Vht0(x,y,z)=[−139.5,−138.8, 527.0], km/s

Aht=[1.51, 1.06, −6.19], km/s^2

Vht(x,y,z)=[−15.8,−112.4, 95.1]; Vht= 148.1 km/s

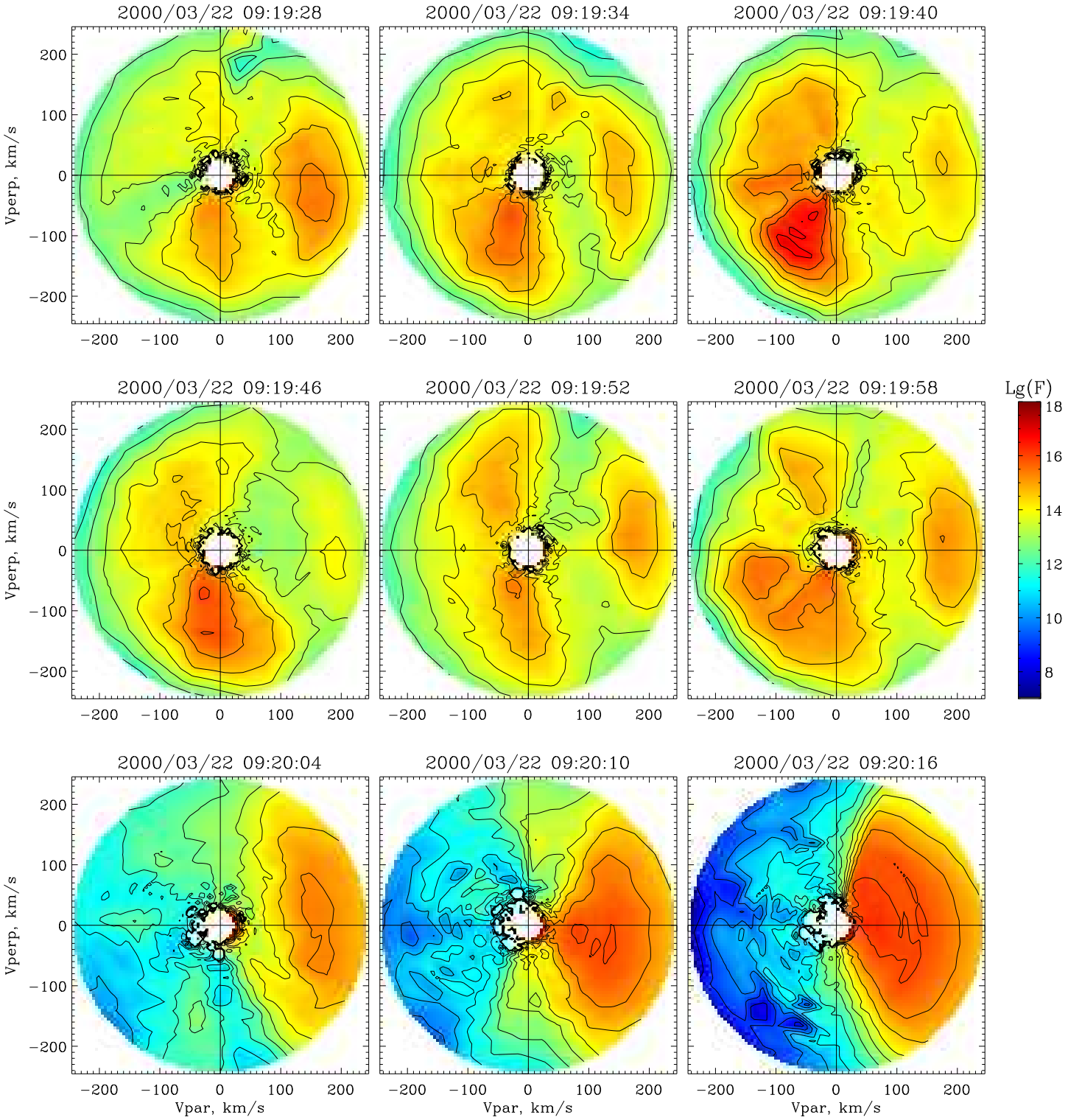
K= 0.997 +/− 0.079; R= 0.908; D/D0= 0.073

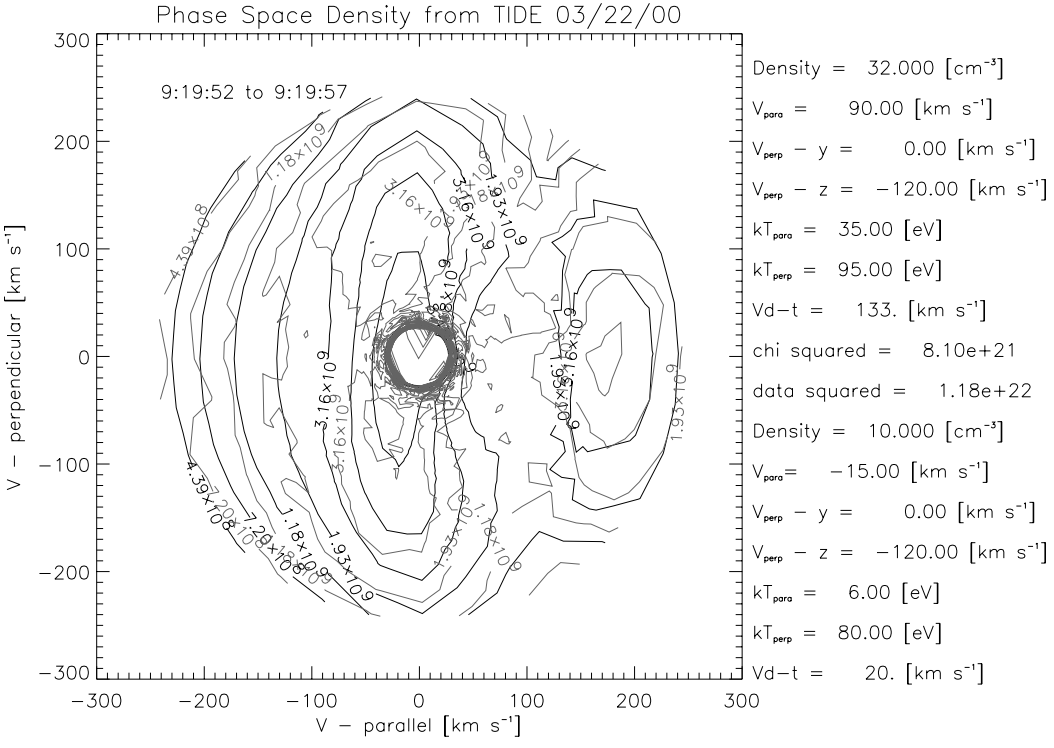
K=−0.650 +/− 0.075; R=−0.830

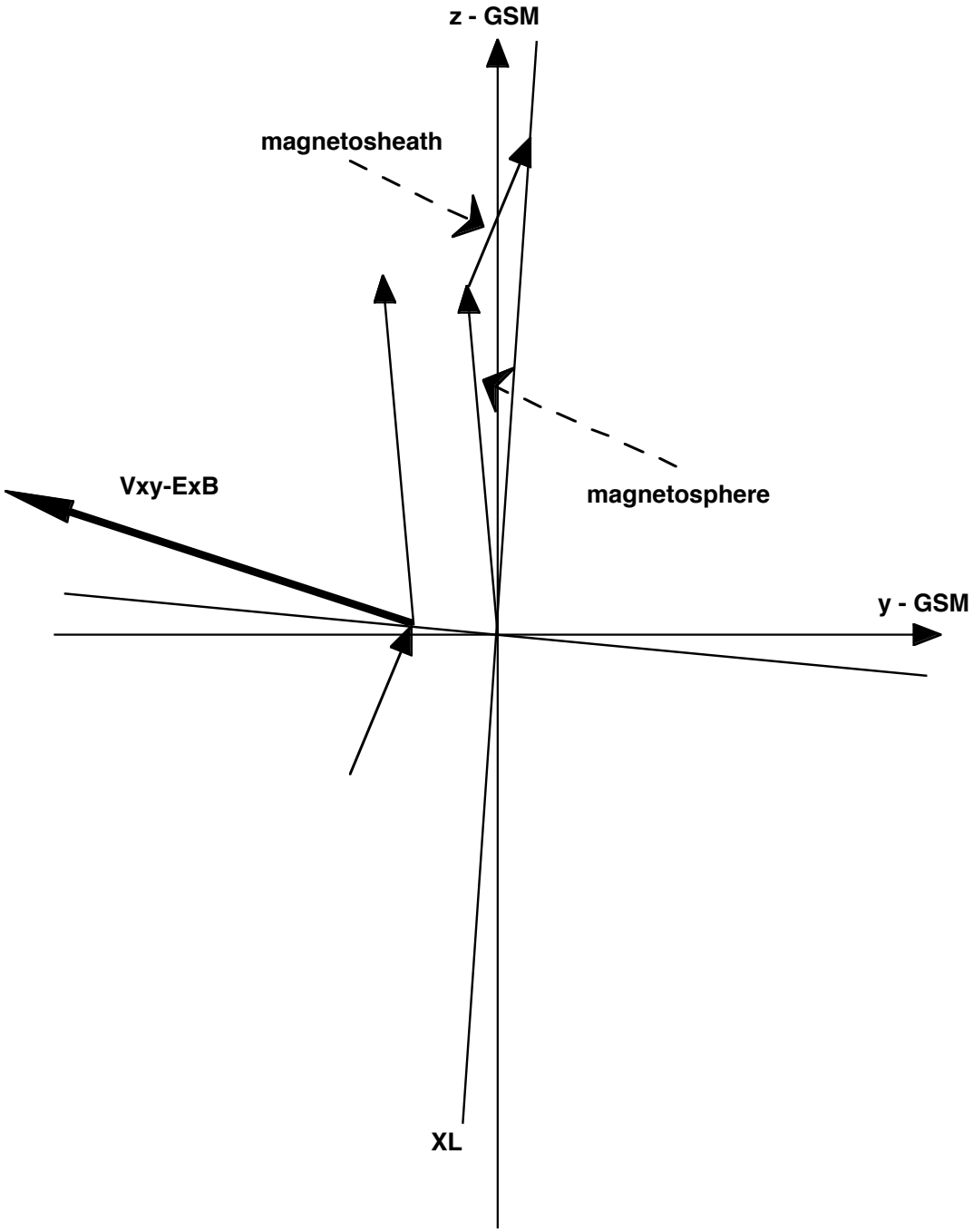
X components

Y components

Z components


2000/03/22 09:19:28
2000/03/22 09:19:34
2000/03/22 09:19:40
2000/03/22 09:19:46
2000/03/22 09:19:52
2000/03/22 09:19:58
2000/03/22 09:20:04
2000/03/22 09:20:10
2000/03/22 09:20:16
Vperp, km/s
Vpar, km/s
Lg(F)
18
16
14
12
10
8
200
100
0
−100
−200


Phase Space Density from TIDE 03/22/00
9:19:52 to 9:19:57
V − perpendicular [km s⁻¹]
V − parallel [km s⁻¹]
Density = 32.000 [cm⁻³]
V_para = 90.00 [km s⁻¹]
V_perp − y = 0.00 [km s⁻¹]
V_perp − z = −120.00 [km s⁻¹]
kT_para = 35.00 [eV]
kT_perp = 95.00 [eV]
Vd−t = 133. [km s⁻¹]
chi squared = 8.10e+21
data squared = 1.18e+22
Density = 10.000 [cm⁻³]
V_para= −15.00 [km s⁻¹]
V_perp − y = 0.00 [km s⁻¹]
V_perp − z = −120.00 [km s⁻¹]
kT_para = 6.00 [eV]
kT_perp = 80.00 [eV]
Vd−t = 20. [km s⁻¹]


z - GSM
magnetosheath
Vxy-ExB
magnetosphere
y - GSM
XL

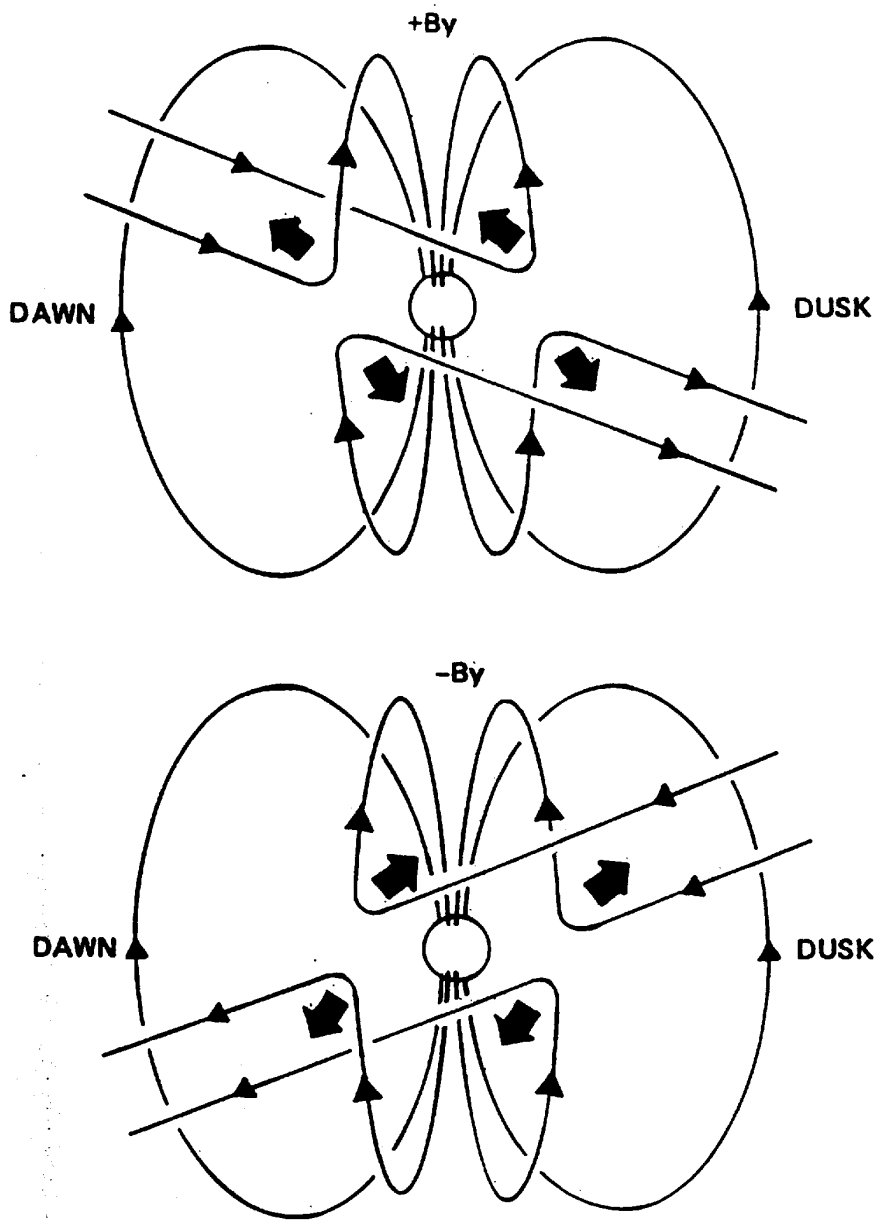
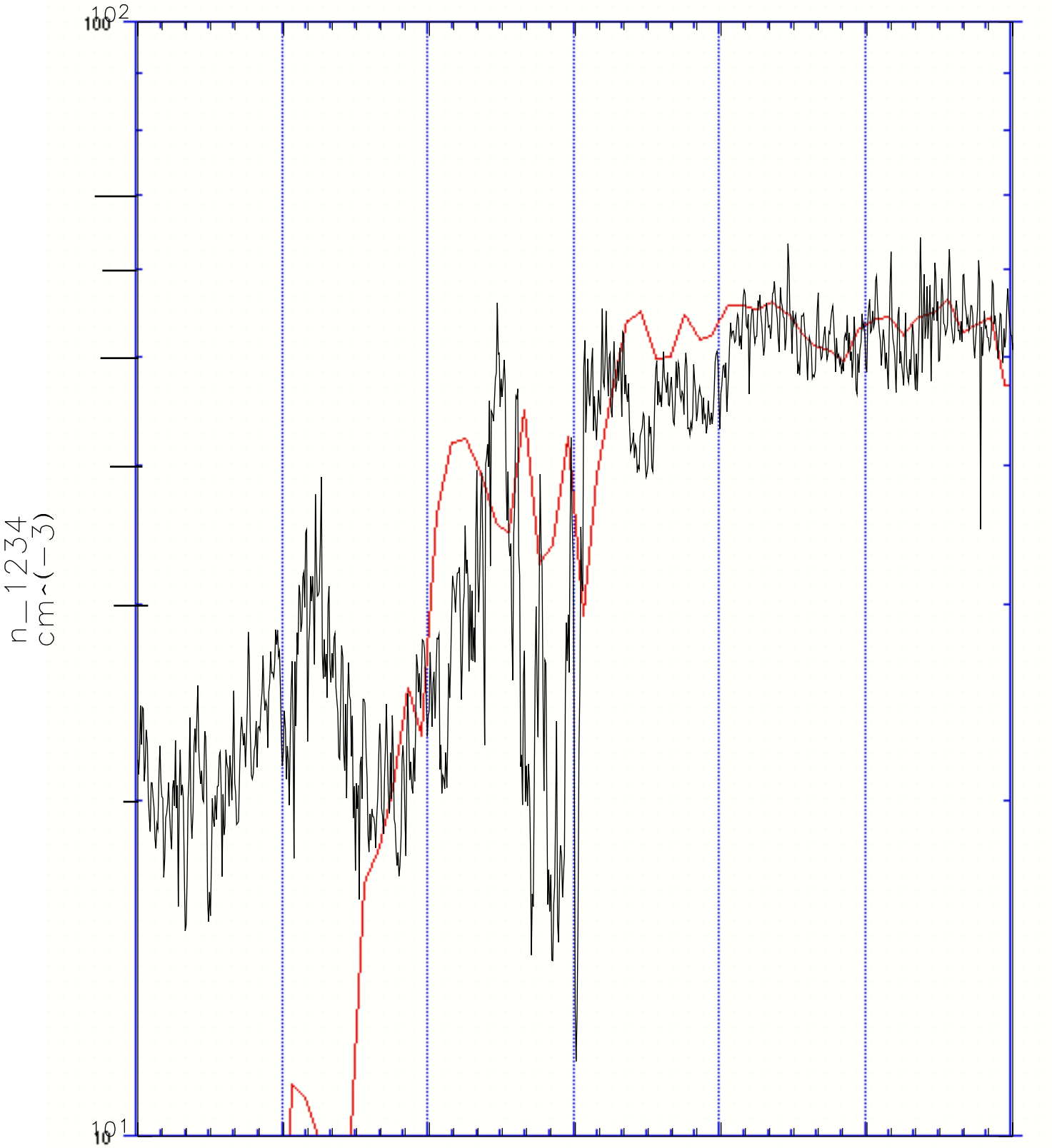


Fig. 1. Schematic drawings of reconnection at the dayside magnetopause as viewed from the Sun. The large arrows indicate the direction of the forces associated with magnetic tension on recently reconnected field lines. When the y component of the interplanetary magnetic field is positive (upper drawing), these forces pull the recently reconnected field lines toward the dawnside of the northern polar cap and the duskside of the southern polar cap as the field lines are dragged tailward by the flow of the solar wind. Similarly, when the interplanetary magnetic field is negative (lower drawing), the reconnected field lines are pulled toward the duskside of the northern polar cap and the dawnside of the southern polar cap. Such effects are believed to be the origin of asymmetric polar cap convection and related phenomena.

t0003220805_1835.mom

POLAR 2000/03/22 (Day 82), 09:17 – 09:23



Time:	0918	0919	0920	0921	0922	0923
Re	8.07	8.08	8.09	8.10	8.11	8.12
MLT	12.83	12.83	12.84	12.84	12.84	12.84
MLat	13.39	13.53	13.67	13.81	13.95	14.09
LShell	8.53	8.55	8.57	8.59	8.61	8.64

P:<SDT>, V:<3.8> T:<Mon Jul 22 09:35:49 2002>; Cfg=polar_03_22_00_msfc