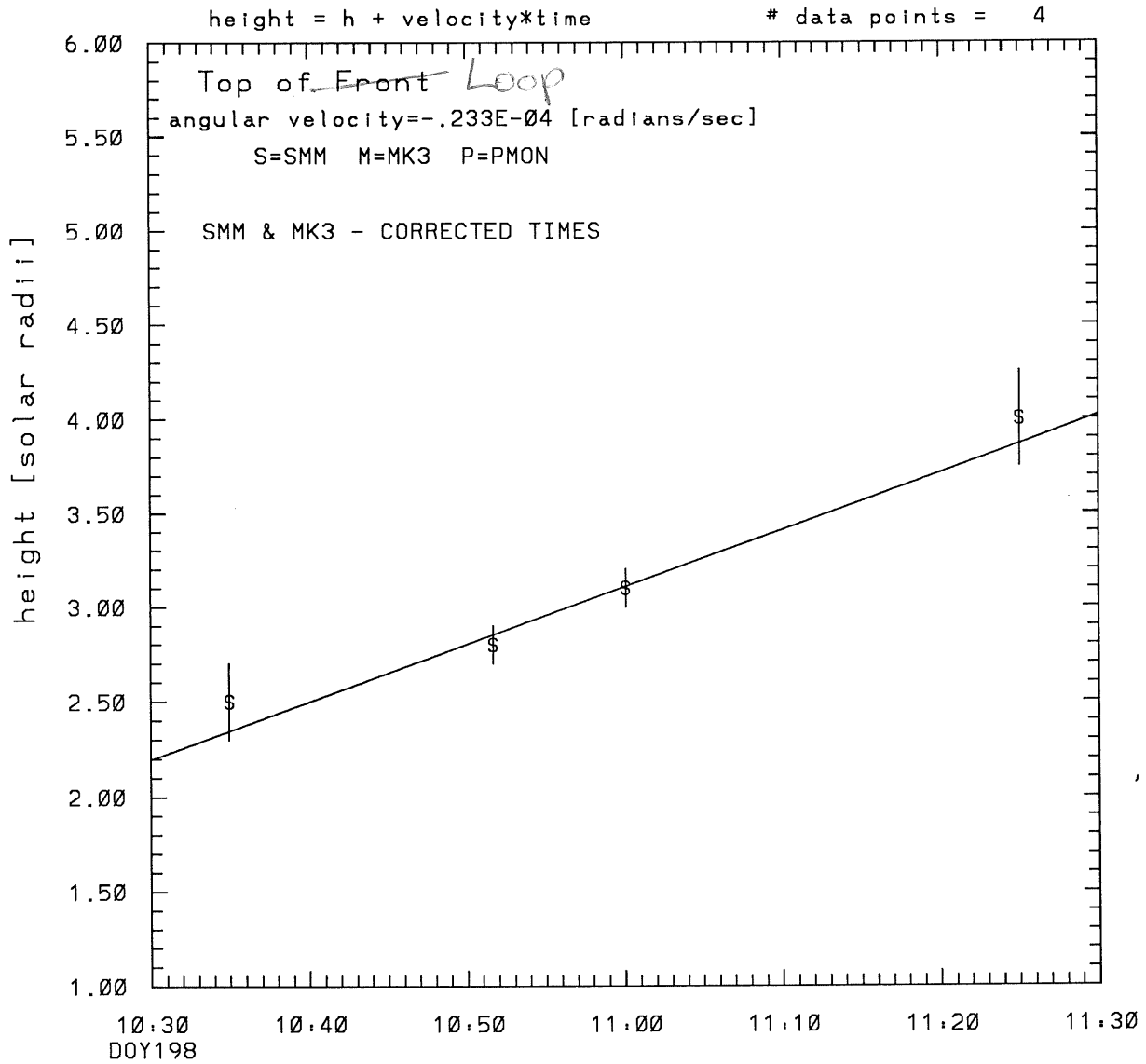
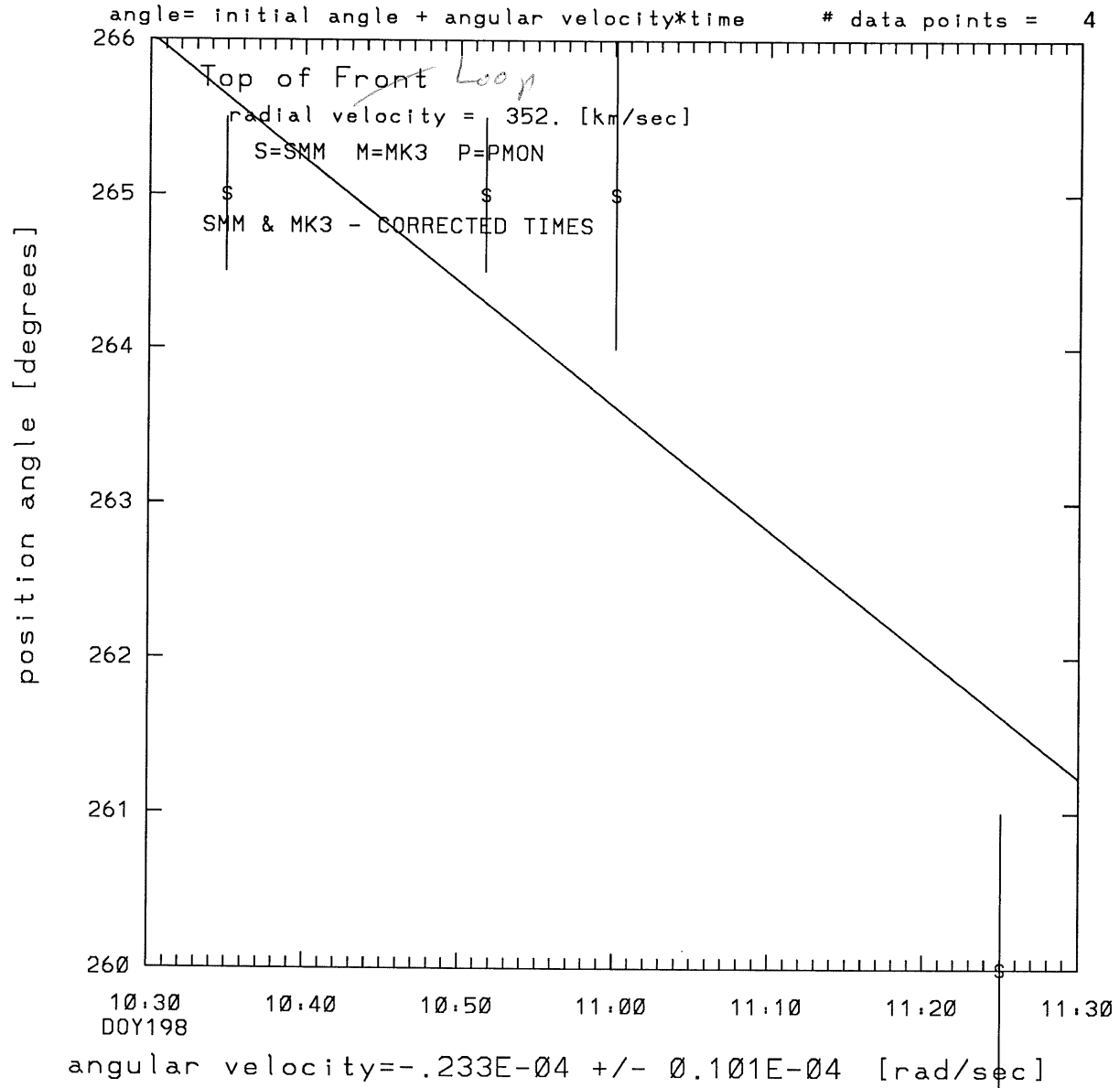


SMM C/P 1988 DOY198 263 +/- 3 degrees

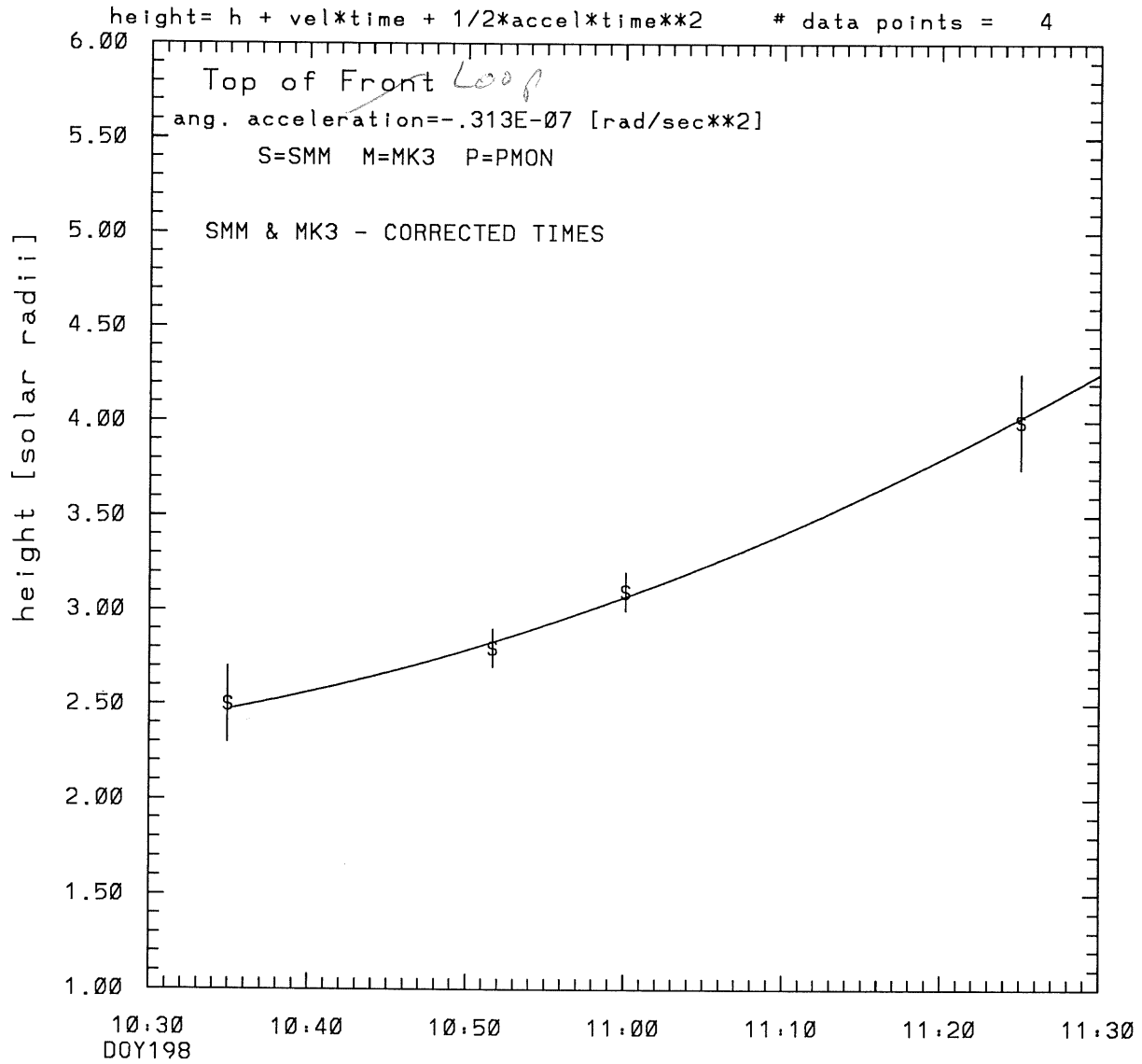


tstart=DOY198 9:51 +/- 3.4 [min.]
radial velocity= 352. +/- 43. [km/sec]

SMM C/P 1988 DOY198 263 +/- 3 degrees



SMM C/P 1988 DOY198 263 +/- 3 degrees



tstart=DOY198 10: 6 from derivative=0

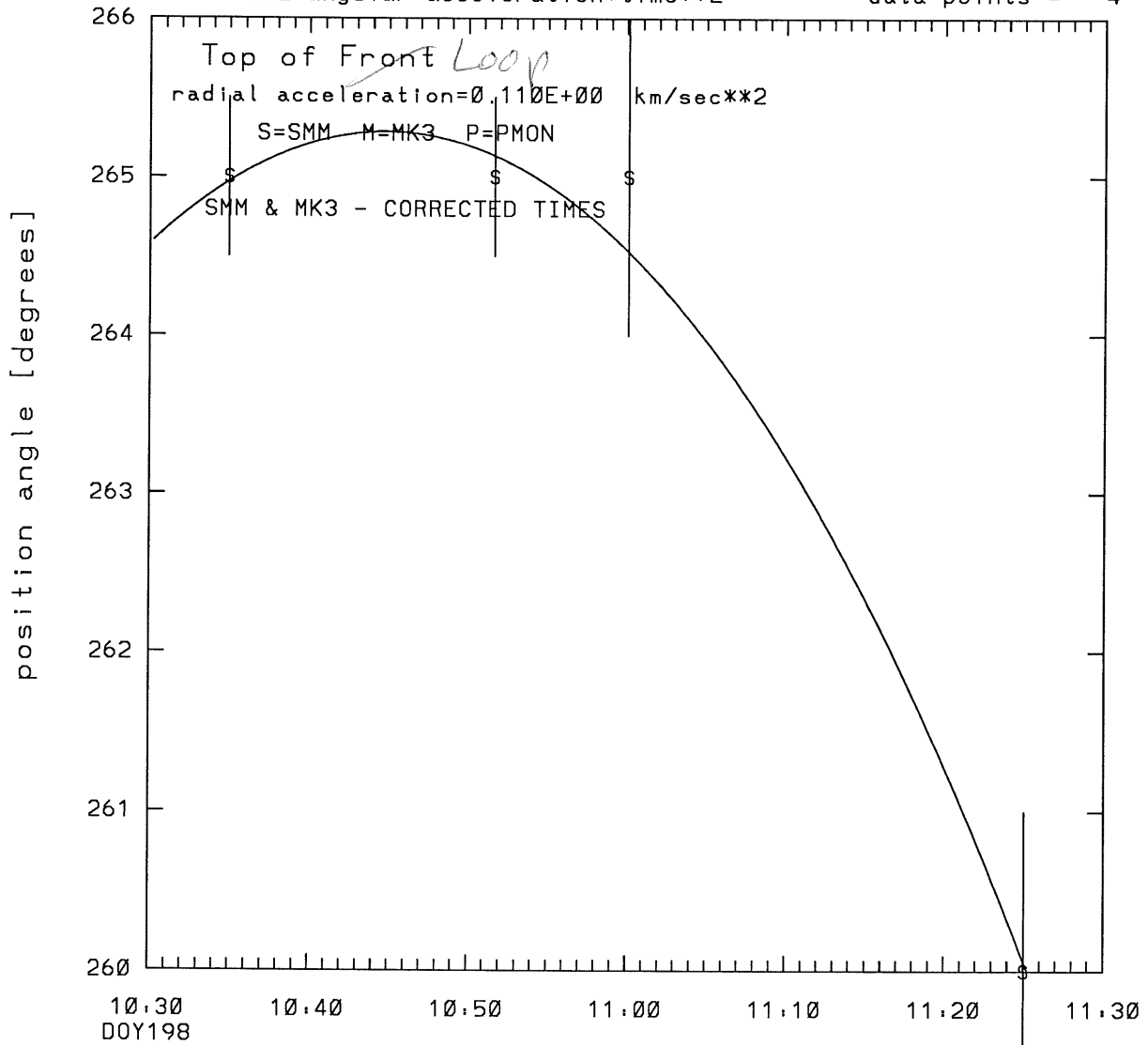
Event begins at 2.22 Solar Radii

radial acceleration = $0.1097 +/- 0.0352$ [km/sec**2]

SMM C/P 1988 DOY198 263 +/- 3 degrees

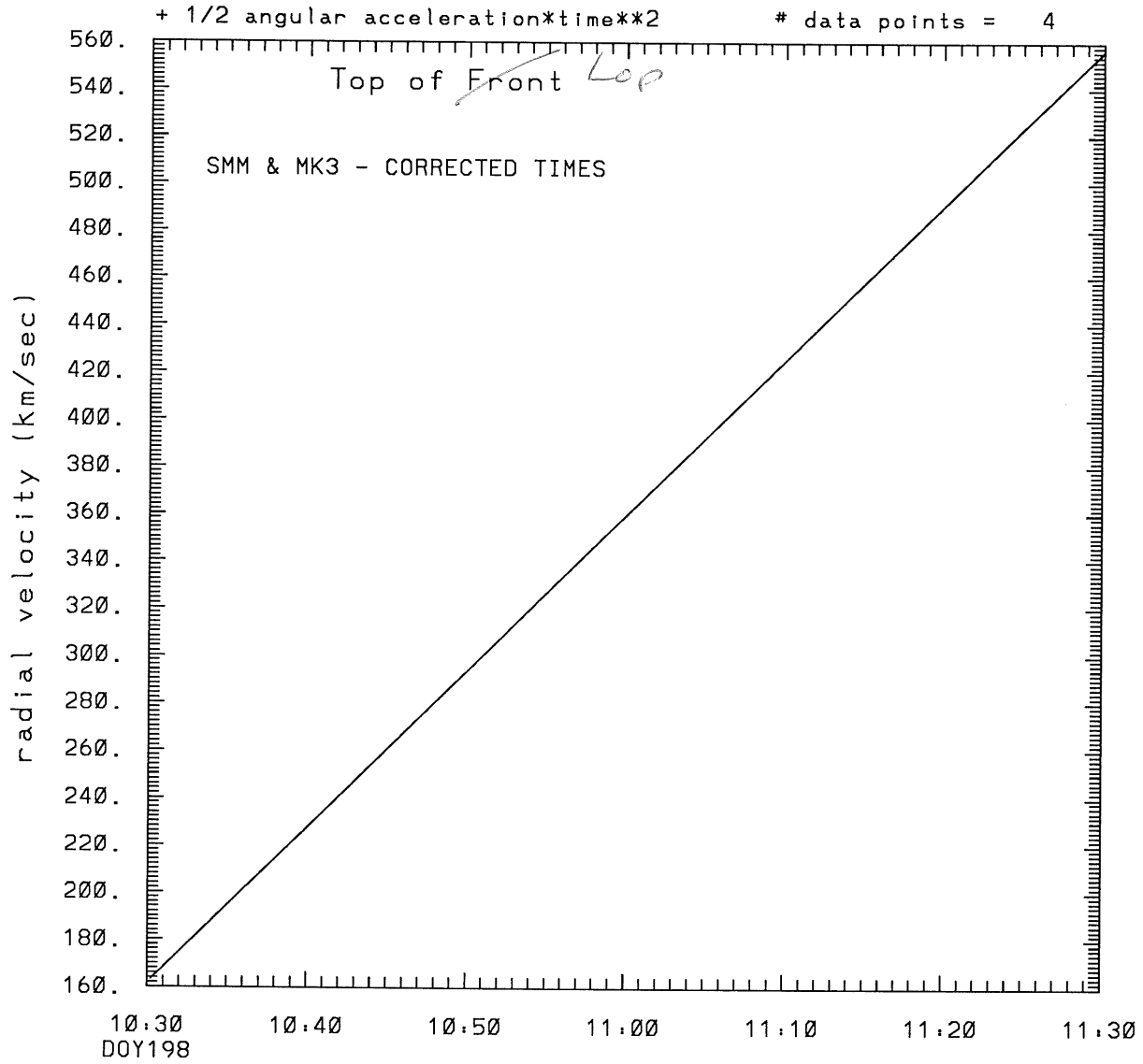
angle = initial angle + angular velocity*time
+ 1/2 angular acceleration*time**2

data points = 4



Event begins at 2.22 Solar Radii
angular acceleration = $-0.313E-07 \pm 0.433E-08$ [rad/sec**2]

SMM C/P 1988 DOY198 263 +/- 3 degrees

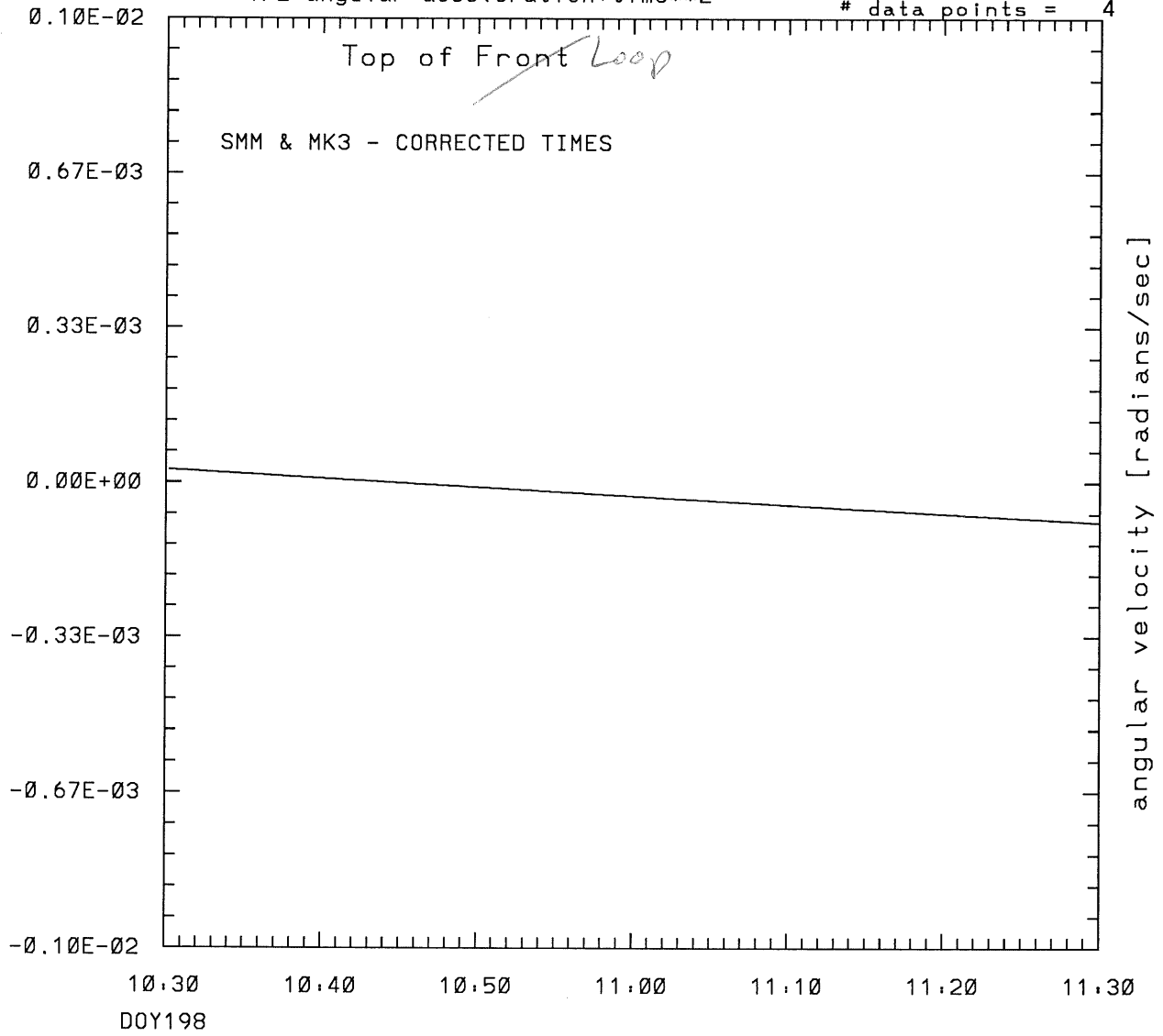


tstart=DOY198 10: 6 from derivative=0
Event begins at 2.22 Solar Radii
radial acceleration=0.110E+00 km/sec**2

SMM C/P 1988 DOY198 263 +/- 3 degrees

$$\text{angle} = \text{initial angle} + \text{angular velocity} * \text{time} + \frac{1}{2} \text{angular acceleration} * \text{time} ** 2$$

data points = 4



angular acceleration = $-.313E-07 \pm 0.433E-08$ [rad/sec**2]

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1988	198	10:34:57	2.50 +/-	0.20	265.0 +/-	0.5	SMM
1988	198	10:51:39	2.80 +/-	0.10	265.0 +/-	0.5	SMM
1988	198	11: 0: 5	3.10 +/-	0.10	265.0 +/-	1.0	SMM
1988	198	11:25: 1	4.00 +/-	0.25	260.0 +/-	1.0	SMM

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

Event began at t = 0 + -0.393E+02 +/- 0.337E+01 [minutes]
In more convenient units:
Event began at DOY 198 9:51 +/- 0.337E+01 [minutes]

Origin defined at DOY198 10:30

RADIAL INFORMATION:

RADIAL VELOCITY = 352. +/- 43. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.219E+01 +/- 0.104E+00 [solar radii]
c(2) = 0.304E-01 +/- 0.373E-02 [radii/min]
c(2) = 0.352E+03 +/- 0.432E+02 [km/sec]
c(3) = 0.000E+00 +/- 0.000E+00 [radii/min**2]
c(3) = 0.000E+00 +/- 0.000E+00 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

error in c(1)= 0.13795E+00 [radii] see Bevington pg. 114
error in c(2)= 0.41477E-02 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = -0.2331E-04 +/- 0.1012E-04 [radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 266. +/- 1. [degrees]
a(2) = -0.801E-01 +/- 0.348E-01 [degrees/min]
a(2) = -0.233E-04 +/- 0.101E-04 [rad/sec]
a(3) = 0.000E+00 +/- 0.000E+00 [degrees/min**2]
a(3) = 0.000E+00 +/- 0.000E+00 [rad/sec**2]

The RADIAL velocity at 10:34 = 352. km/sec

The RADIAL velocity at 10:51 = 352. km/sec

The RADIAL velocity at 11: 0 = 352. km/sec

The RADIAL velocity at 11:25 = 352. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.65
Standard Deviation in start time measurement = 0.181E+02
Error in time = 0.69781E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.647E-02
Reduced Chi Squared = 0.510E-01
Chi Squared = 0.102E+00
The probability for exceeding chi square = 0.994E+00

The correlation coefficient = 0.987E+00
The probability that no LINEAR correlation exists between the variables = 0.1265]
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	day	time	radii	radius	error in angle	error in angle	datatype
1988	198	10:34:57	2.50 +/-	0.20	265.0 +/-	0.5	SMM
1988	198	10:51:39	2.80 +/-	0.10	265.0 +/-	0.5	SMM
1988	198	11: 0: 5	3.10 +/-	0.10	265.0 +/-	1.0	SMM
1988	198	11:25: 1	4.00 +/-	0.25	260.0 +/-	1.0	SMM

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

tstart=DOY198 10: 6 from derivative = 0
Event begins at 2.22 Solar Radii
Origin defined at DOY198 10:30

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.110E+00 +/- 0.352E-01 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.240E+01 +/- 0.833E-01 [solar radii]
c(2) = 0.139E-01 +/- 0.560E-02 [radii/min]
c(2) = 0.162E+03 +/- 0.650E+02 [km/sec]
c(3) = 0.284E-03 +/- 0.910E-04 [radii/min**2]
c(3) = 0.110E+00 +/- 0.352E-01 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.75752E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.38499E-01 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.58856E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.30050E-02 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.92334E-04 [radii/min**2] Bevington pg 154 (8-30)
Exact error in c(3) = 0.46160E-04 [radii/min**2] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

ANGULAR ACCELERATION= -0.3132E-07 +/- 0.4325E-08[radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 265. +/- 0. [degrees]
a(2) = 0.956E-01 +/- 0.256E-01 [degrees/min]
a(2) = 0.278E-04 +/- 0.745E-05 [rad/sec]
a(3) = -0.323E-02 +/- 0.446E-03 [degrees/min**2]
a(3) = -0.313E-07 +/- 0.433E-08 [rad/sec**2]

The RADIAL velocity at 10:34 = 194. km/sec

The RADIAL velocity at 10:51 = 304. km/sec

The RADIAL velocity at 11: 0 = 360. km/sec

The RADIAL velocity at 11:25 = 524. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.65
Standard Deviation in start time measurement = 0.181E+02
Value of reduced Chi Squared returned from nllst2 = 0.166E-02
Reduced Chi Squared = 0.691E-02
Chi Squared = 0.691E-02
The probability for exceeding chi square = 0.968E+00

For a second order fit 3 correlation coefficients are given:

(Using equation of motion: $r = a + bt + at^2$)
The correlation between the data and the term linear in time = 0.5914E+00
The correlation between the data and the time**2 term = 0.6334E+00
The correlation between the data and the complete equation of motion=0.9929E+00
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]