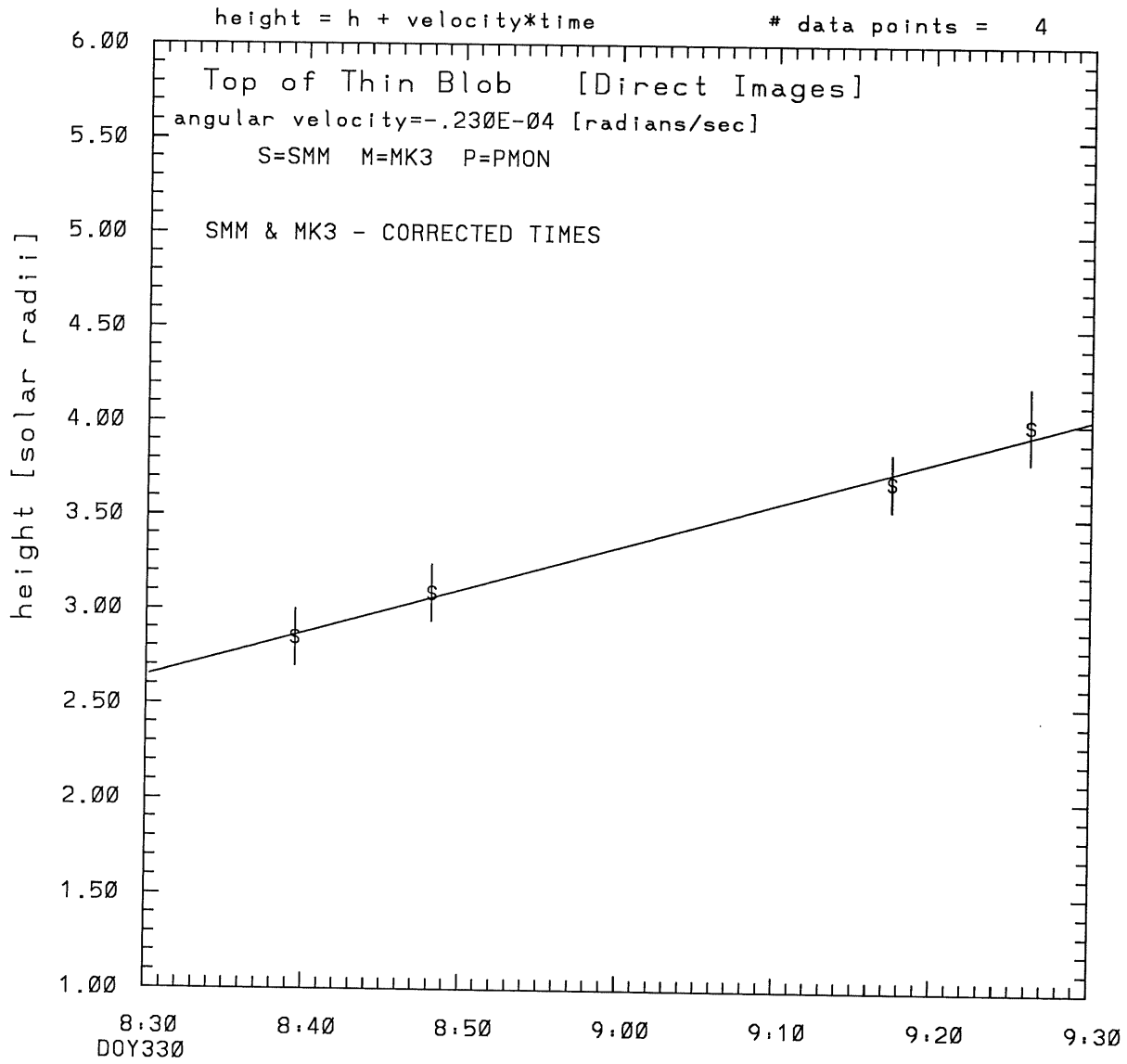


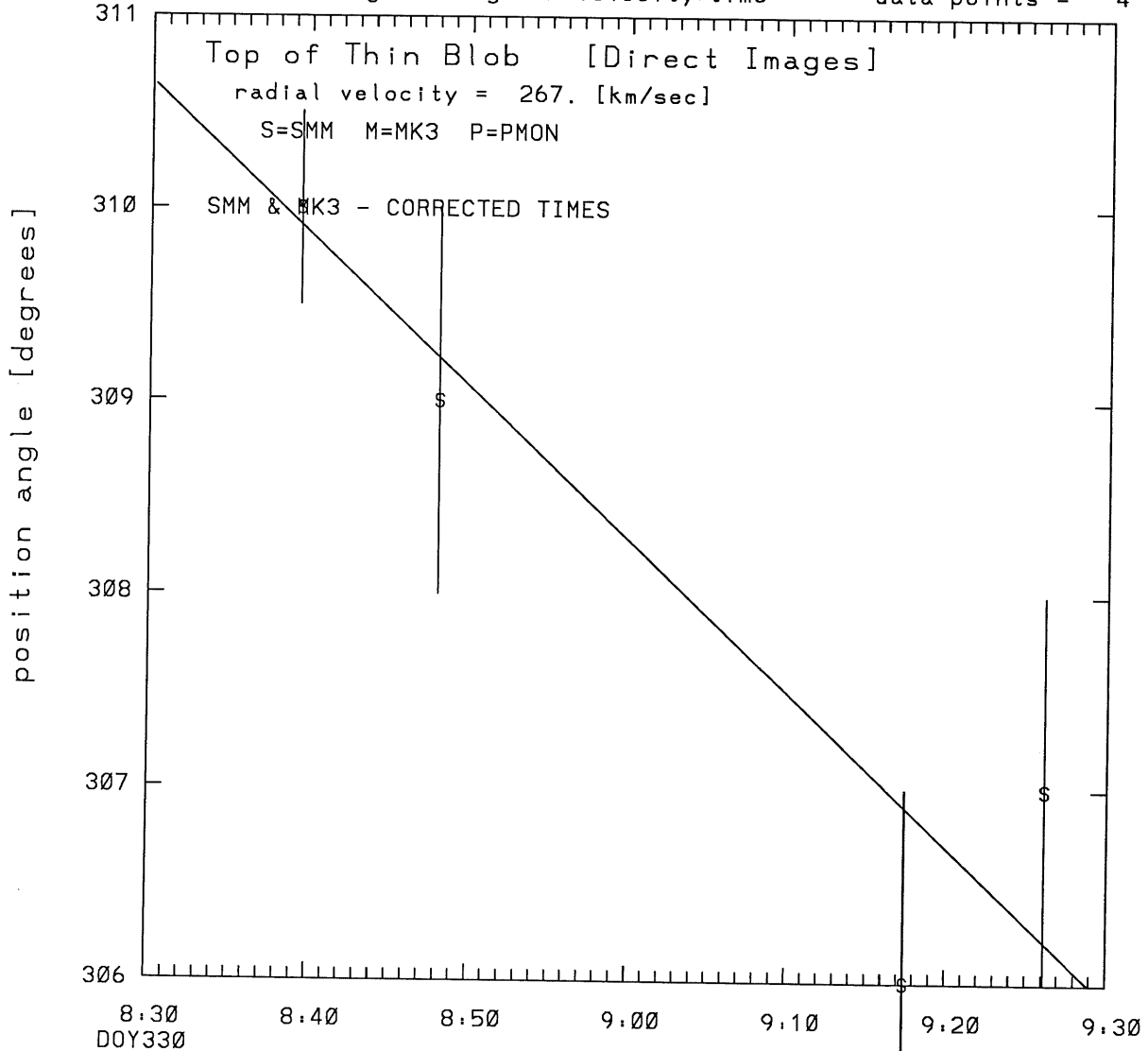
SMM C/P 1984 DOY330 308 +/- 2 degrees



tstart=DOY330 7:19 +/- 2.1 [min.]
radial velocity= 267. +/- 14. [km/sec]

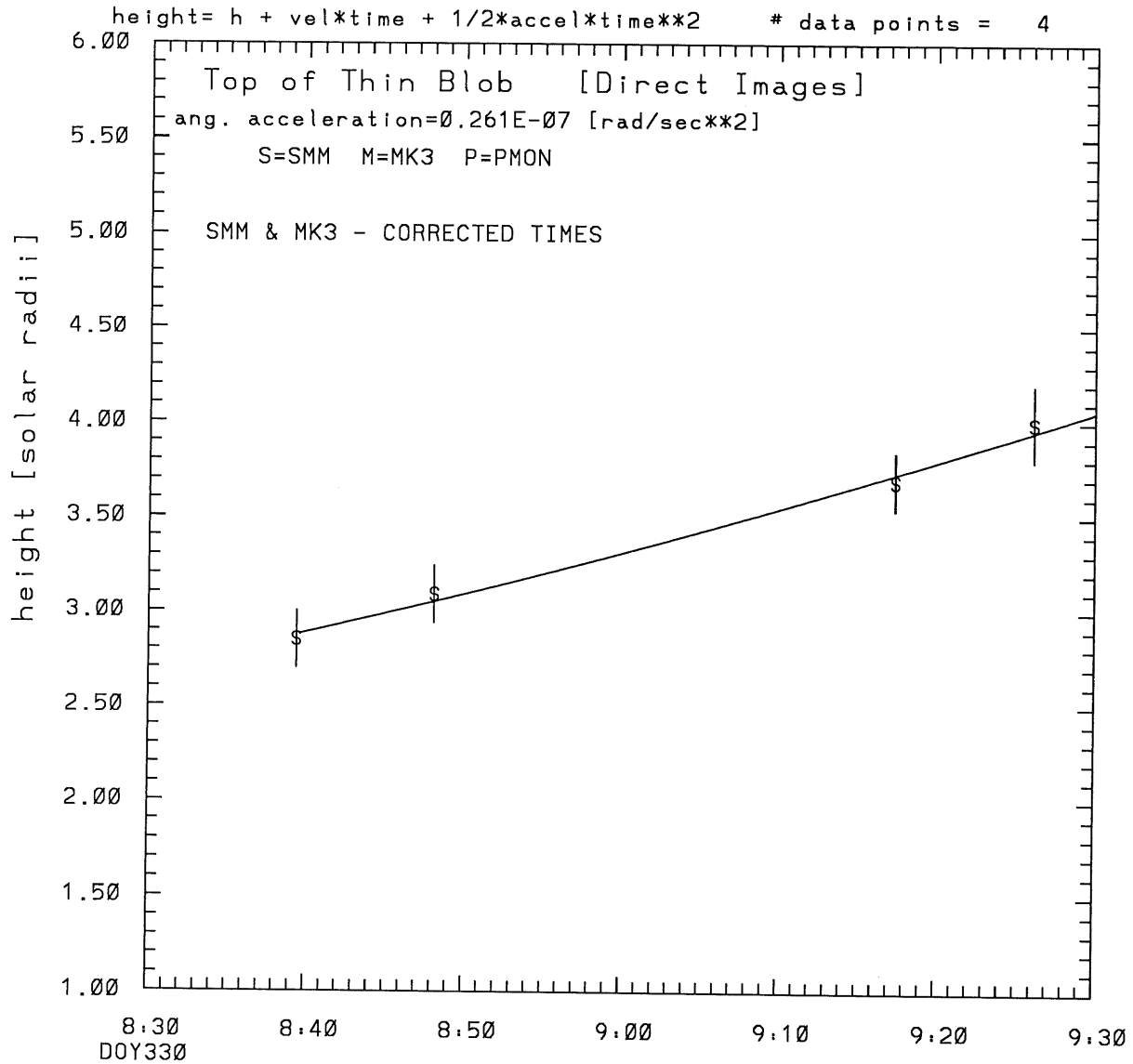
SMM C/P 1984 DOY330 308 +/- 2 degrees

angle = initial angle + angular velocity * time # data points = 4



tstart=DOY330 7.19 +/- 2.1 [min.]
angular velocity=-.230E-04 +/- 0.417E-05 [rad/sec]

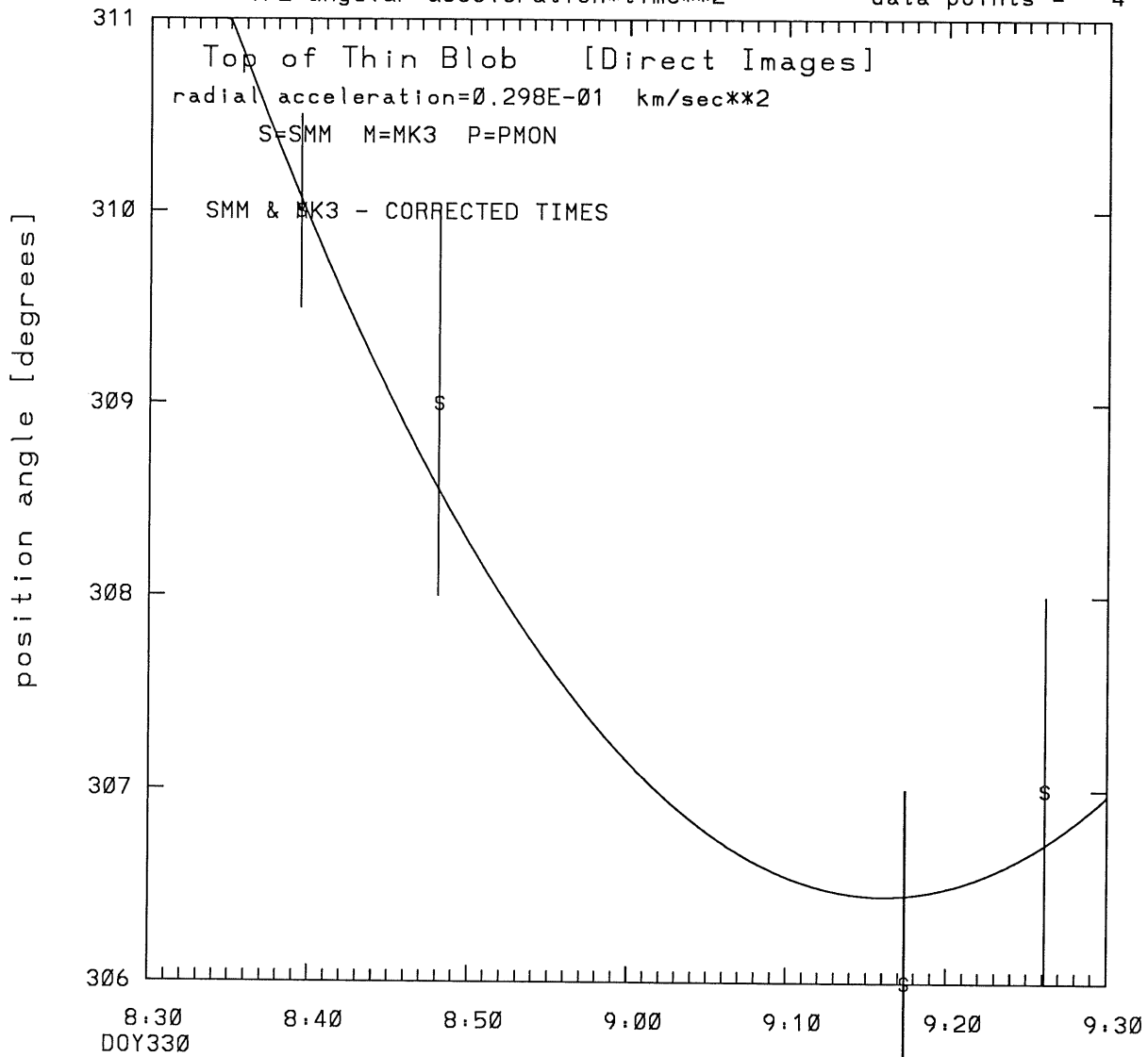
SMM C/P 1984 DOY330 308 +/- 2 degrees



tstart=DOY330 6:33 from derivative=0
Event begins at 1.63 Solar Radii
radial acceleration = $0.0298 +/- 0.0611$ [km/sec**2]

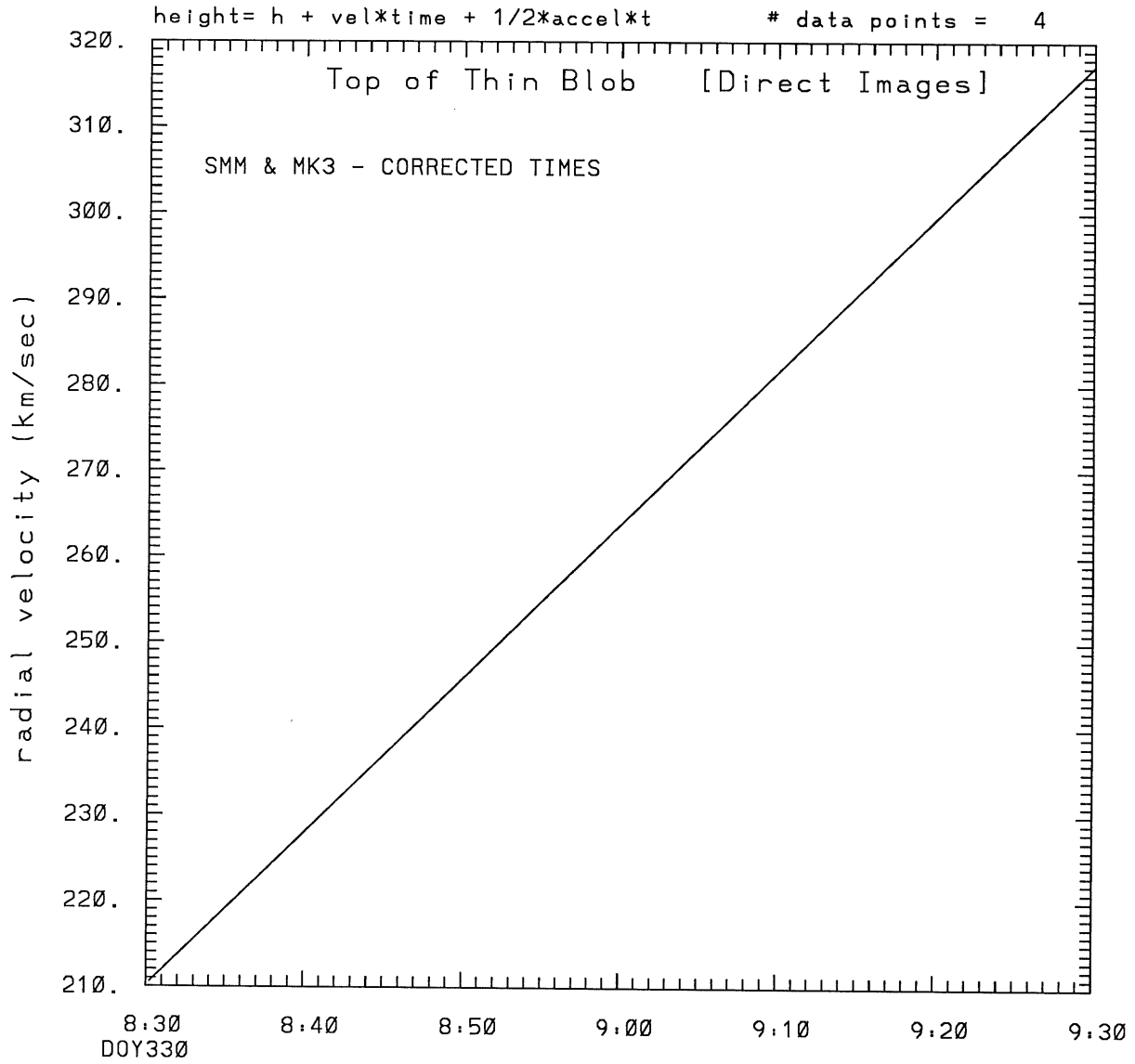
SMM C/P 1984 DOY330 308 +/- 2 degrees

angle = initial angle + angular velocity*time
+ 1/2 angular acceleration*time**2 # data points = 4



tstart = DOY330 6.33 from derivative = 0
angular acceleration = 0.261E-07 +/- 0.131E-07 [rad/sec**2]

SMM C/P 1984 DOY330 308 +/- 2 degrees

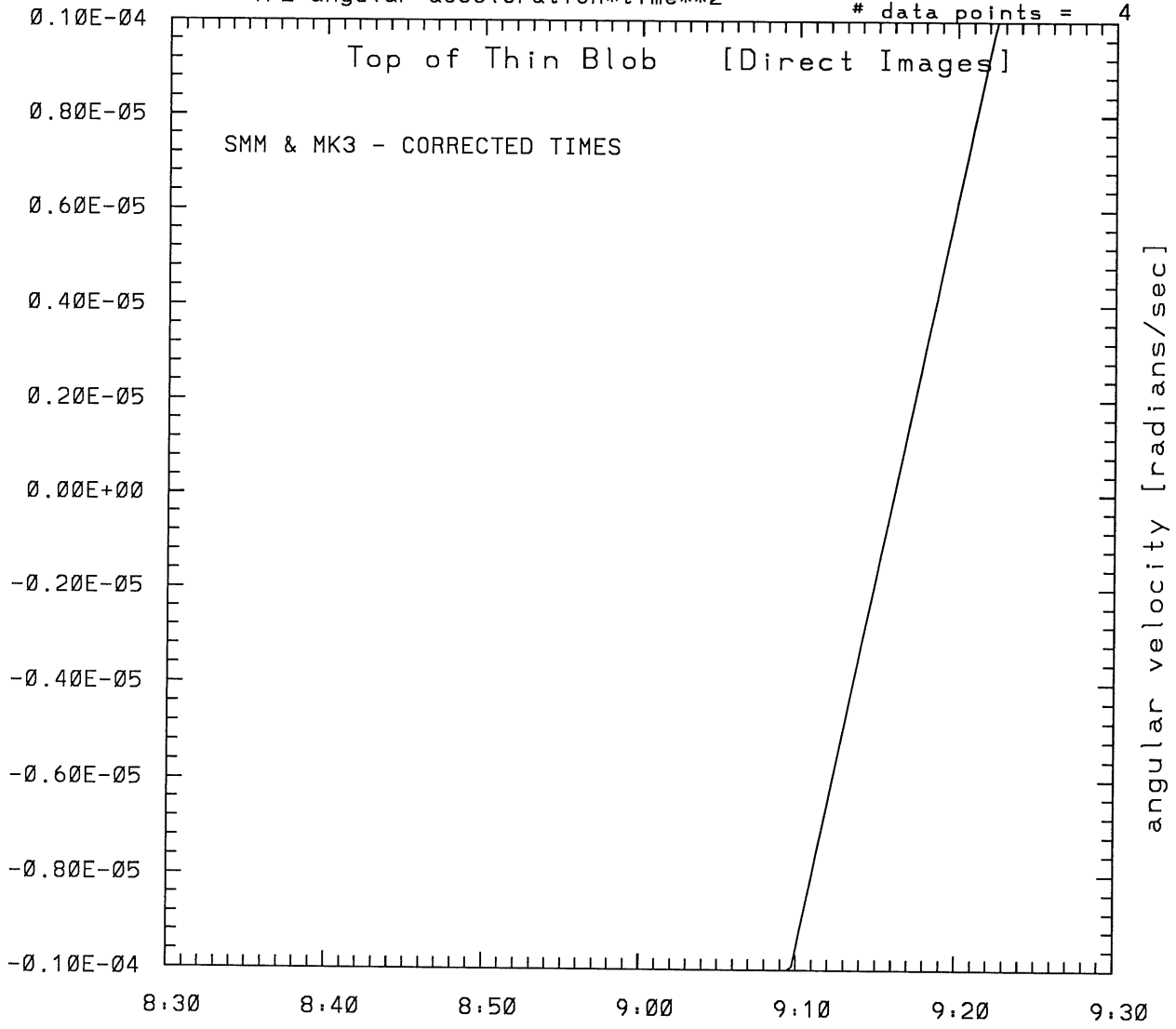


tstart=DOY330 6:33 from derivative=0
Event begins at 1.63 Solar Radii
radial acceleration=0.298E-01 km/sec**2

SMM C/P 1984 DOY330 308 +/- 2 degrees

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

data points = 4



tstart=DOY330 6:33 from derivative=0
angular acceleration=0.261E-07 +/-
0.131E-07 [rad/sec**2]

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1984	330	8:39:24	2.85 +/- 0.15	310.0 +/- 0.5			SMM
1984	330	8:48: 8	3.09 +/- 0.15	309.0 +/- 1.0			SMM
1984	330	9:17:24	3.69 +/- 0.15	306.0 +/- 1.0			SMM
1984	330	9:26: 8	4.00 +/- 0.20	307.0 +/- 1.0			SMM

Structure being measured:
Top of Thin Blob (Direct Images)

OUTPUT:

START TIME:

Event began at t = 0 + -0.714E+02 +/- 0.209E+01 [minutes]
In more convenient units:
Event began at DOY 330 7:19 +/- 0.209E+01 [minutes]

Origin defined at DOY330 8:30

RADIAL INFORMATION:

RADIAL VELOCITY = 267. +/- 14. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.265E+01 +/- 0.416E-01 [solar radii]
c(2) = 0.230E-01 +/- 0.118E-02 [radii/min]
c(2) = 0.267E+03 +/- 0.137E+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)= 0.57197E-01 [radii] see Bevington pg. 114
error in c(2)= 0.15001E-02 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = -0.2299E-04 +/- 0.4173E-05[radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 311. +/- 0. [degrees]
a(2) = -0.790E-01 +/- 0.143E-01 [degrees/min]
a(2) = -0.230E-04 +/- 0.417E-05 [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 8:39 = 267. km/sec

The RADIAL velocity at 8:48 = 267. km/sec

The RADIAL velocity at 9:17 = 267. km/sec

The RADIAL velocity at 9:26 = 267. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.53
Standard Deviation in start time measurement = 0.195E+02
Error in time = 0.35898E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.196E-02
Reduced Chi Squared = 0.116E-01
Chi Squared = 0.232E-01
The probability for exceeding chi square = 0.998E+00

The correlation coefficient = 0.996E+00
The probability that no LINEAR correlation exists between the variables = 0.3815
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1984	330	8:39:24	2.85 +/- 0.15	310.0 +/- 0.5			SMM
1984	330	8:48: 8	3.09 +/- 0.15	309.0 +/- 1.0			SMM
1984	330	9:17:24	3.69 +/- 0.15	306.0 +/- 1.0			SMM
1984	330	9:26: 8	4.00 +/- 0.20	307.0 +/- 1.0			SMM

Structure being measured:
Top of Thin Blob (Direct Images)

OUTPUT:

START TIME:

tstart=DOY330 6:33 from derivative = 0
Event begins at 1.63 Solar Radii
Origin defined at DOY330 8:30

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.298E-01 +/- 0.611E-01 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.270E+01 +/- 0.116E+00 [solar radii]
c(2) = 0.181E-01 +/- 0.102E-01 [radii/min]
c(2) = 0.210E+03 +/- 0.118E+03 [km/sec]
c(3) = 0.770E-04 +/- 0.158E-03 [radii/min**2]
c(3) = 0.298E-01 +/- 0.611E-01 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.17106E+00 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.70285E-01 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.14762E-01 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.69830E-02 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.22338E-03 [radii/min**2] Bevington pg 154 (8-30)
Exact error in c(3) = 0.11005E-03 [radii/min**2] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

ANGULAR ACCELERATION= 0.2613E-07 +/- 0.1305E-07[radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 312. +/- 1. [degrees]
a(2) = -0.248E+00 +/- 0.852E-01 [degrees/min]
a(2) = -0.722E-04 +/- 0.248E-04 [rad/sec]
a(3) = 0.269E-02 +/- 0.135E-02 [degrees/min**2]
a(3) = 0.261E-07 +/- 0.131E-07 [rad/sec**2]

The RADIAL velocity at 8:39 = 227. km/sec

The RADIAL velocity at 8:48 = 243. km/sec

The RADIAL velocity at 9:17 = 295. km/sec

The RADIAL velocity at 9:26 = 310. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.53
Standard Deviation in start time measurement = 0.195E+02
Value of reduced Chi Squared returned from nllst2 = 0.262E-02
Reduced Chi Squared = 0.157E-01
Chi Squared = 0.157E-01
The probability for exceeding chi square = 0.959E+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 = 0.9690E+00
The correlation between the data and the time**2 term = 0.9454E+00
The correlation between the data and the complete equation of motion=0.9914E+00
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]