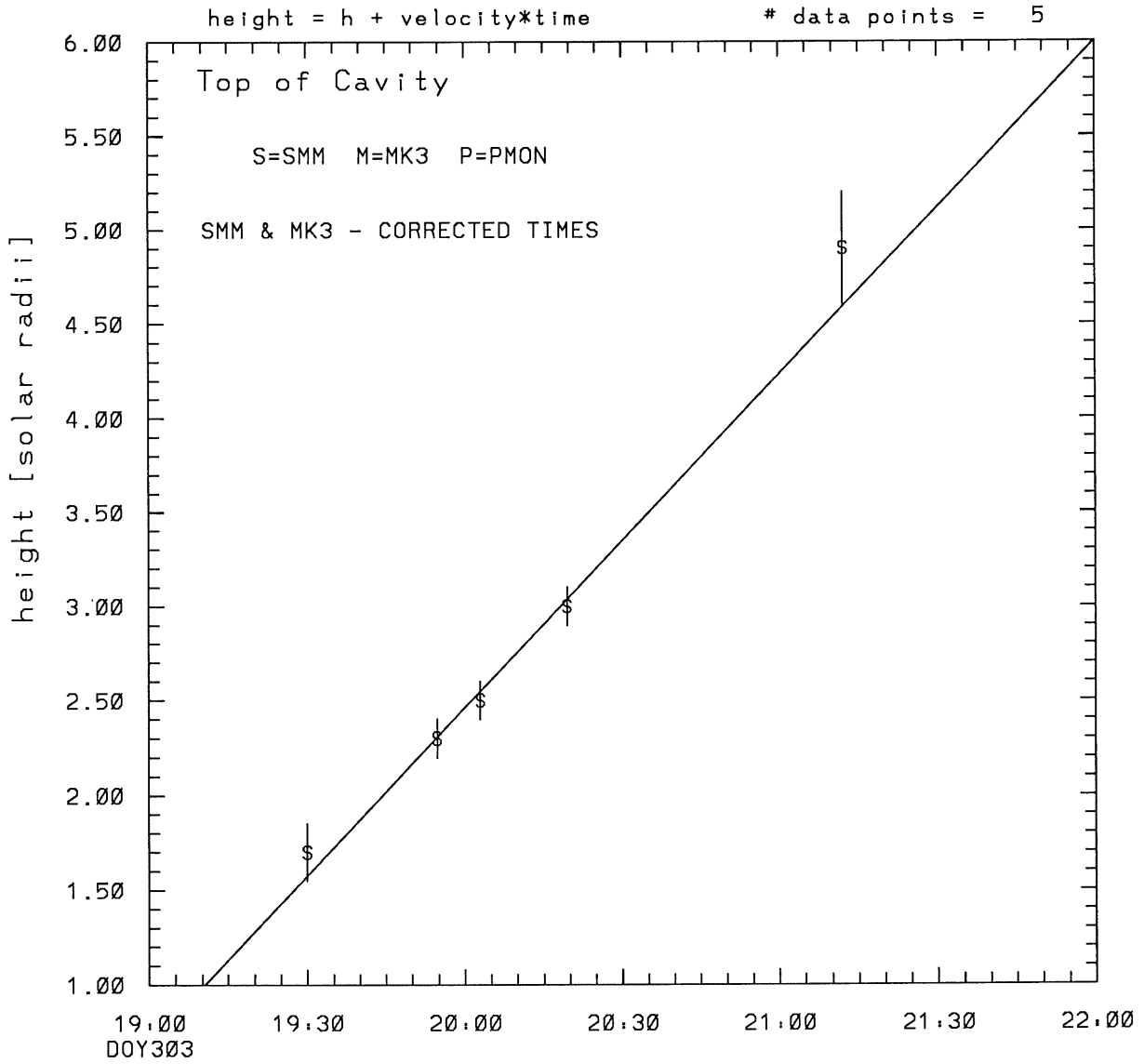
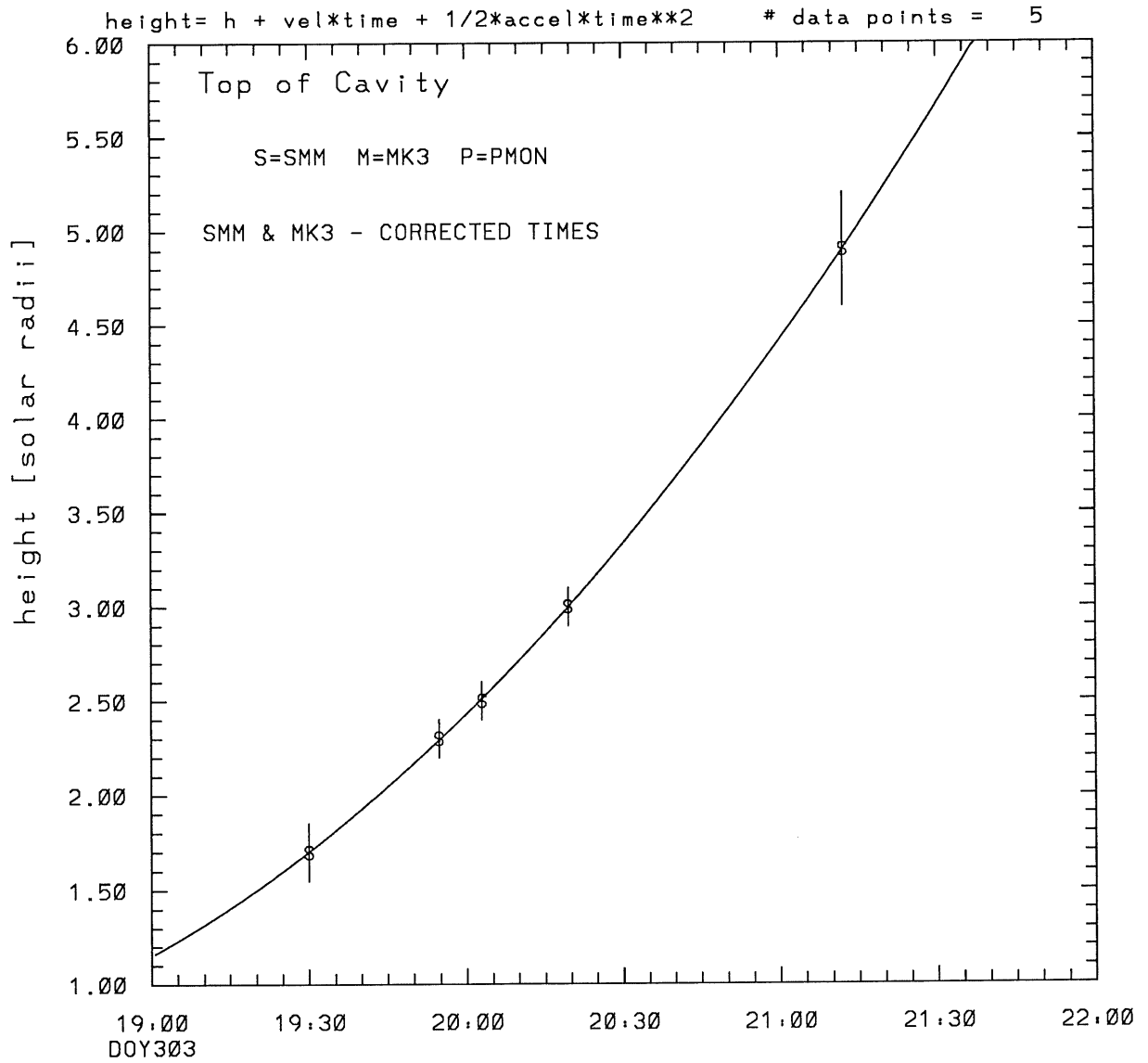


SMM C/P 1988 DOY303 108 +/- 0 degrees



tstart=DOY303 19:11 +/- 0.7 [min.]
radial velocity= 342. +/- 23. [km/sec]

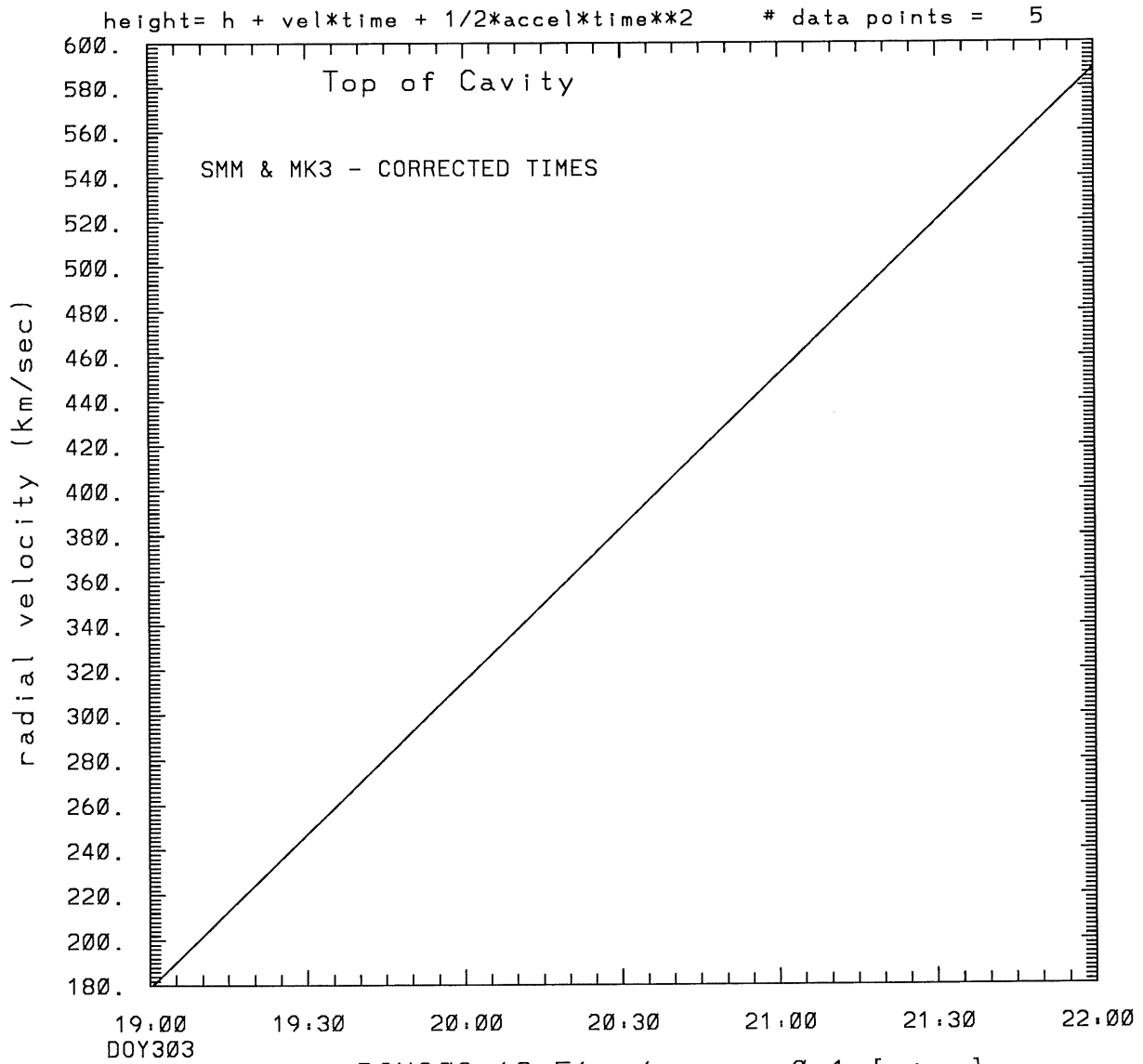
SMM C/P 1988 DOY303 108 +/- 0 degrees



tstart=DOY303 18:51 +/- 0.1 [min.]

radial acceleration = 0.0379 +/- 0.0023 [km/sec**2]

SMM C/P 1988 DOY303 108 +/- 0 degrees



tstart=DOY303 18.51 +/- 0.1 [min.]

radial acceleration=0.379E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in	angle	angle	error in	datatype
1988	303	19:29:59	1.70	+/- 0.15	108.0	+/- 0.5			SMM
1988	303	19:54:45	2.30	+/- 0.10	108.0	+/- 0.5			SMM
1988	303	20: 2:58	2.50	+/- 0.10	108.0	+/- 0.5			SMM
1988	303	20:19:30	3.00	+/- 0.10	108.0	+/- 1.0			SMM
1988	303	21:12: 8	4.90	+/- 0.30	108.0	+/- 1.0			SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + 0.105E+02 \pm 0.694E+00$ [minutes]

In more convenient units:

Event began at DOY 303 19:11 $\pm 0.694E+00$ [minutes]

Origin defined at DOY303 19: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 342. \pm 23. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.690E+00 \pm 0.132E+00$ [solar radii]
 $c(2) = 0.295E-01 \pm 0.198E-02$ [radii/min]
 $c(2) = 0.342E+03 \pm 0.230E+02$ [km/sec]
 $c(3) = 0.000E+00 \pm 0.000E+00$ [radii/min**2]
 $c(3) = 0.000E+00 \pm 0.000E+00$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

error in $c(1) = 0.20487E+00$ [radii] see Bevington pg. 114

error in $c(2) = 0.25754E-02$ [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.0000E+00 \pm 0.0000E+00 [radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 108. +/- 0. [degrees]
a(2) = 0.000E+00 +/- 0.000E+00 [degrees/min]
a(2) = 0.000E+00 +/- 0.000E+00 [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 TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 19:29 = 0. km/sec
The TOTAL velocity at 19:29 = 342. km/sec

The TANGENTIAL velocity at 19:54 = 0. km/sec
The TOTAL velocity at 19:54 = 342. km/sec

The TANGENTIAL velocity at 20: 2 = 0. km/sec
The TOTAL velocity at 20: 2 = 342. km/sec

The TANGENTIAL velocity at 20:19 = 0. km/sec
The TOTAL velocity at 20:19 = 342. km/sec

The TANGENTIAL velocity at 21:12 = 0. km/sec
The TOTAL velocity at 21:12 = 342. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.22
Standard Deviation in start time measurement = 0.341E+02
Error in time = 0.11528E+02 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.750E-02
Reduced Chi Squared = 0.170E+00
Chi Squared = 0.510E+00
The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.995E+00
The probability that no LINEAR correlation exists between the variables = 0.4238E-03
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	doy	time	radii	error in radius	error in angle	angle	datatype
1988	303	19:29:59	1.70	+/- 0.15	108.0	+/- 0.5	SMM
1988	303	19:54:45	2.30	+/- 0.10	108.0	+/- 0.5	SMM
1988	303	20: 2:58	2.50	+/- 0.10	108.0	+/- 0.5	SMM
1988	303	20:19:30	3.00	+/- 0.10	108.0	+/- 1.0	SMM
1988	303	21:12: 8	4.90	+/- 0.30	108.0	+/- 1.0	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at t = 0 + -0.106E+02 +/- 0.139E+00 [minutes]

In more convenient units:

Event began at DOY 303 18:51 +/- 0.139E+00 [minutes]

Origin defined at DOY303 19: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.379E-01 +/- 0.234E-02 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.115E+01 +/- 0.329E-01 [solar radii]
c(2) = 0.154E-01 +/- 0.905E-03 [radii/min]
c(2) = 0.179E+03 +/- 0.105E+02 [km/sec]
c(3) = 0.980E-04 +/- 0.606E-05 [radii/min**2]
c(3) = 0.379E-01 +/- 0.234E-02 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.27994E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.48364E-02 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.76030E-03 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.14193E-03 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.44466E-05 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.81833E-06 [radii/min**] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

ANGULAR ACCELERATION= 0.0000E+00 +/- 0.0000E+00[radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 108. +/- 0. [degrees]
a(2) = 0.000E+00 +/- 0.000E+00 [degrees/min]
a(2) = 0.000E+00 +/- 0.000E+00 [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 TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 19:29 = 0. km/sec
The TOTAL velocity at 19:29 = 247. km/sec

The TANGENTIAL velocity at 19:54 = 0. km/sec
The TOTAL velocity at 19:54 = 303. km/sec

The TANGENTIAL velocity at 20: 2 = 0. km/sec
The TOTAL velocity at 20: 2 = 322. km/sec

The TANGENTIAL velocity at 20:19 = 0. km/sec
The TOTAL velocity at 20:19 = 360. km/sec

The TANGENTIAL velocity at 21:12 = 0. km/sec
The TOTAL velocity at 21:12 = 479. km/sec

The following info is for estimating goodness of the fit

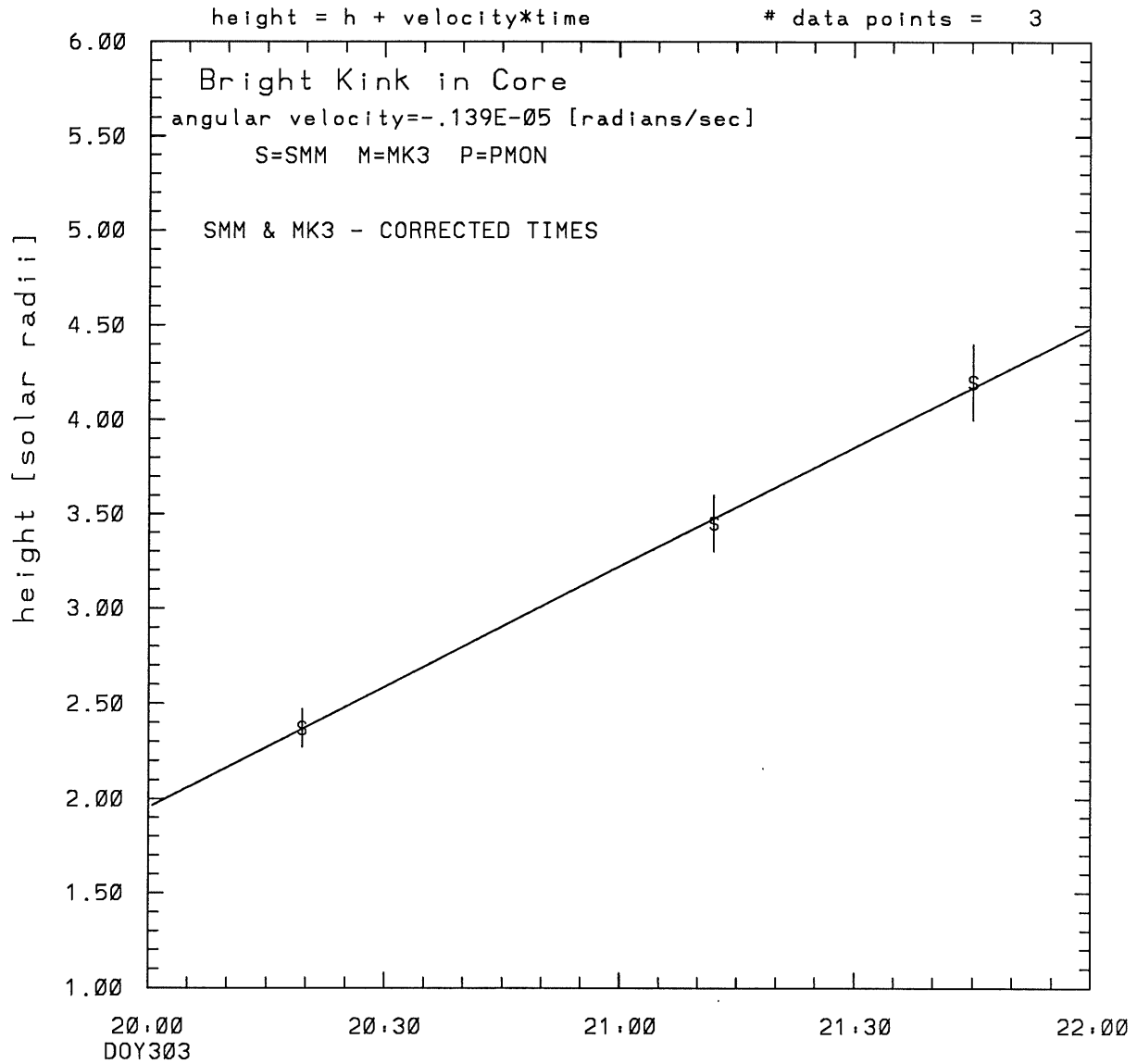
Fit is ok [ier=1]

Standard Deviation in the height = 1.22
Standard Deviation in start time measurement = 0.341E+02
Value of reduced Chi Squared returned from nllst2 = 0.114E-03
Reduced Chi Squared = 0.317E-03
Chi Squared = 0.633E-03
The probability for exceeding chi square = 0.100E+01

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 = 0.6175E+00
The correlation between the data and the time**2 term = 0.5938E+00
The correlation between the data and the complete equation of motion = 0.1000E+01
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

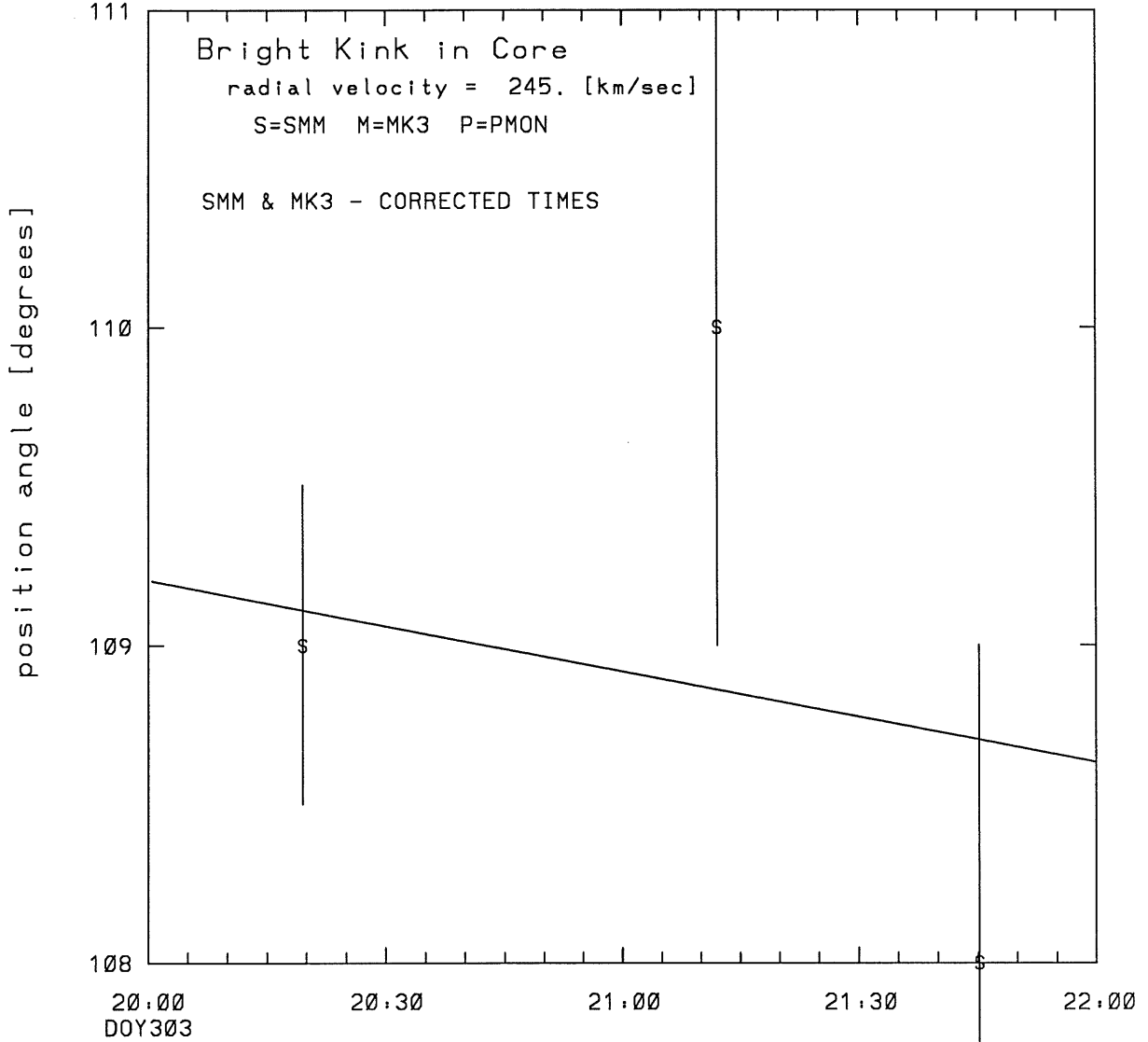
SMM C/P 1988 DOY303 109 +/- 1 degrees



tstart=DOY303 19.15 +/- 0.6 [min.]
radial velocity= 245. +/- 4. [km/sec]

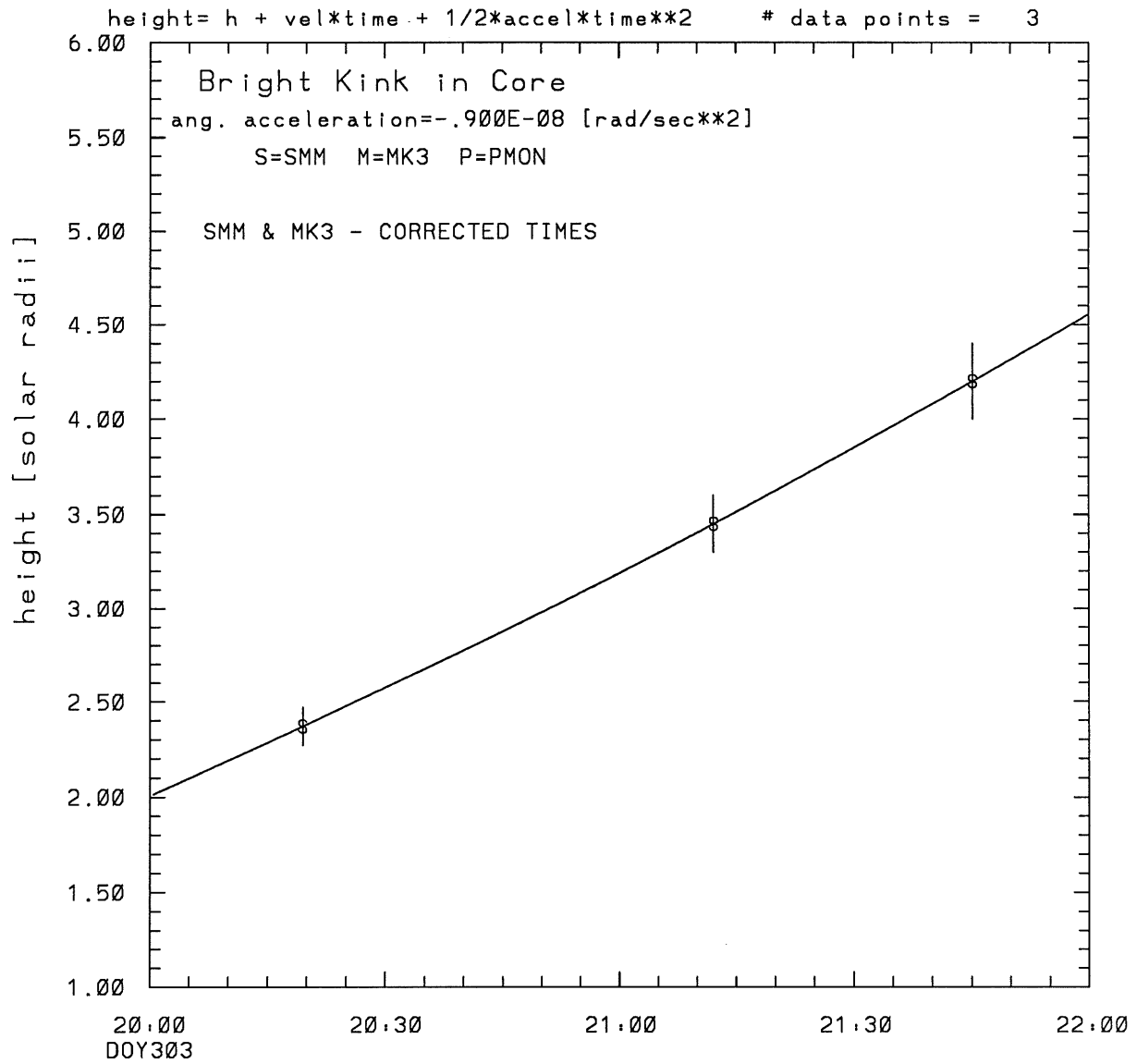
SMM C/P 1988 DOY303 109 +/- 1 degrees

angle= initial angle + angular velocity*time # data points = 3



tstart=DOY303 19:15 +/- 0.6 [min.]
angular velocity=-.139E-05 +/- 0.336E-05 [rad/sec]

SMM C/P 1988 DOY303 109 +/- 1 degrees

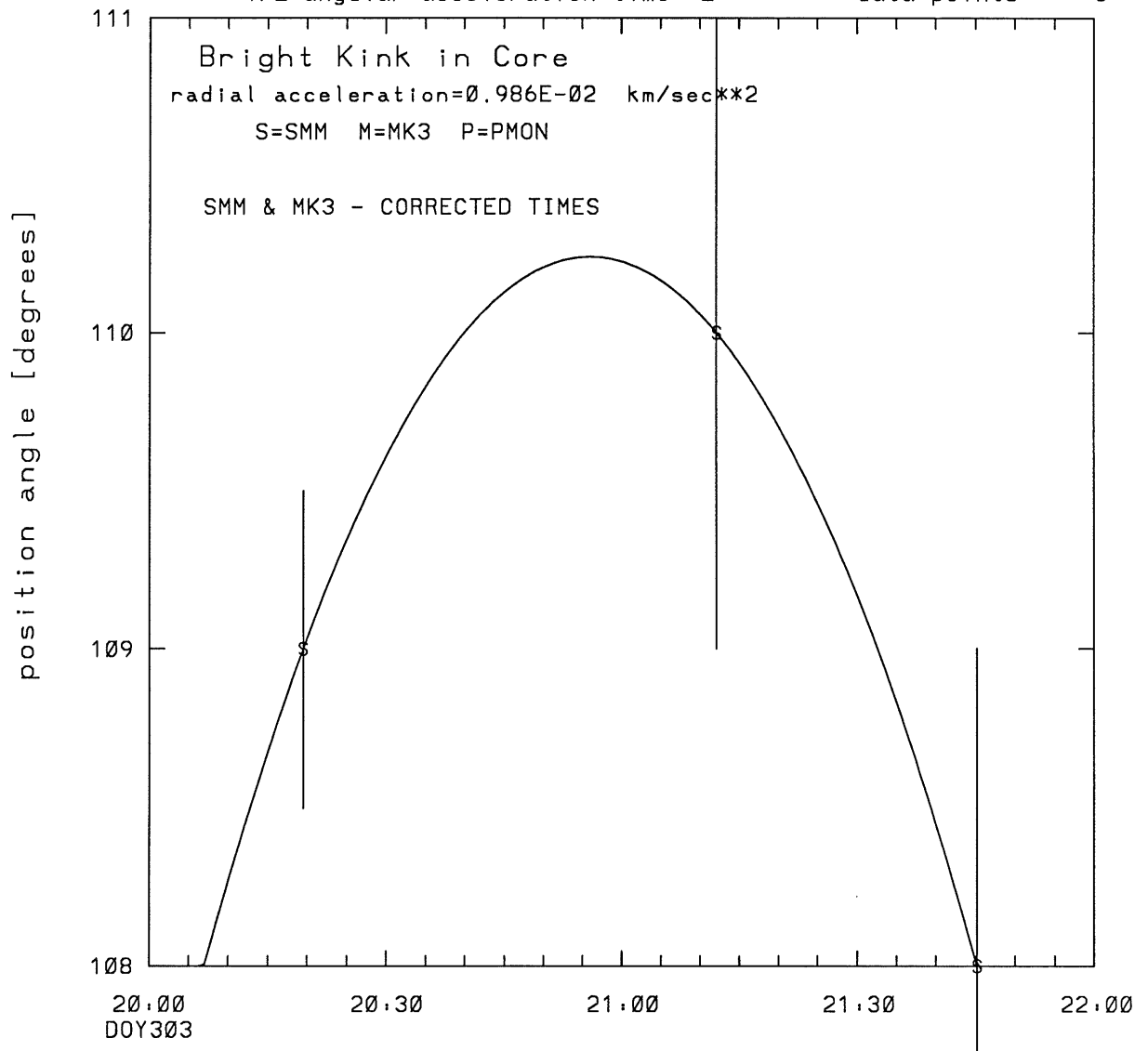


tstart=DOY303 19: 0 +/- 0.0 [min.]

radial acceleration = $0.0099 +/- 0.0000$ [km/sec**2]

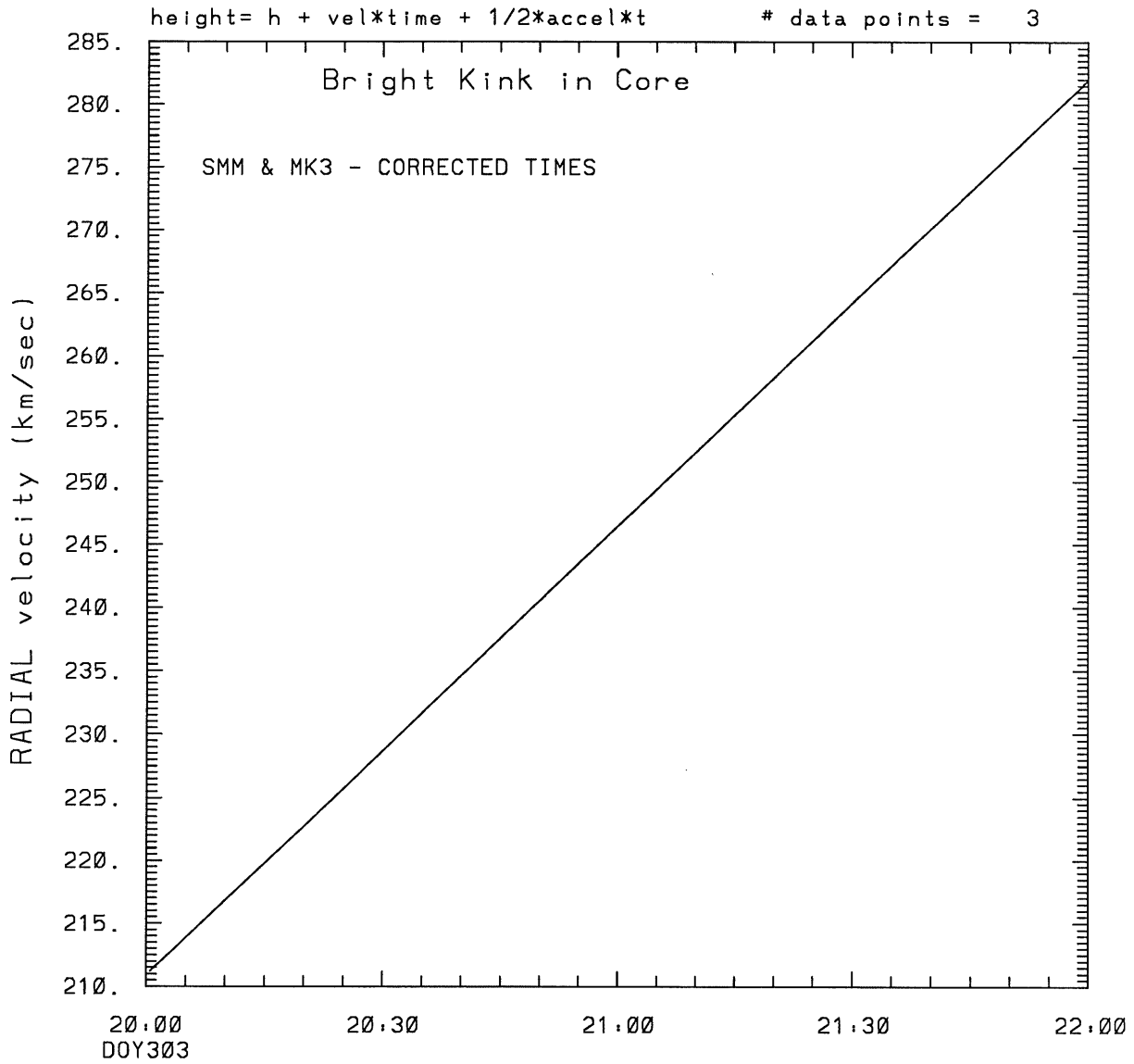
SMM C/P 1988 DOY303 109 +/- 1 degrees

angle = initial angle + angular velocity*time
+ 1/2 angular acceleration*time**2 # data points = 3



tstart=DOY303 19: 0 +/- 0.0 [min.]
angular acceleration=-.900E-08 +/-0.101E-12 [rad/sec**2]

SMM C/P 1988 DOY303 109 +/- 1 degrees



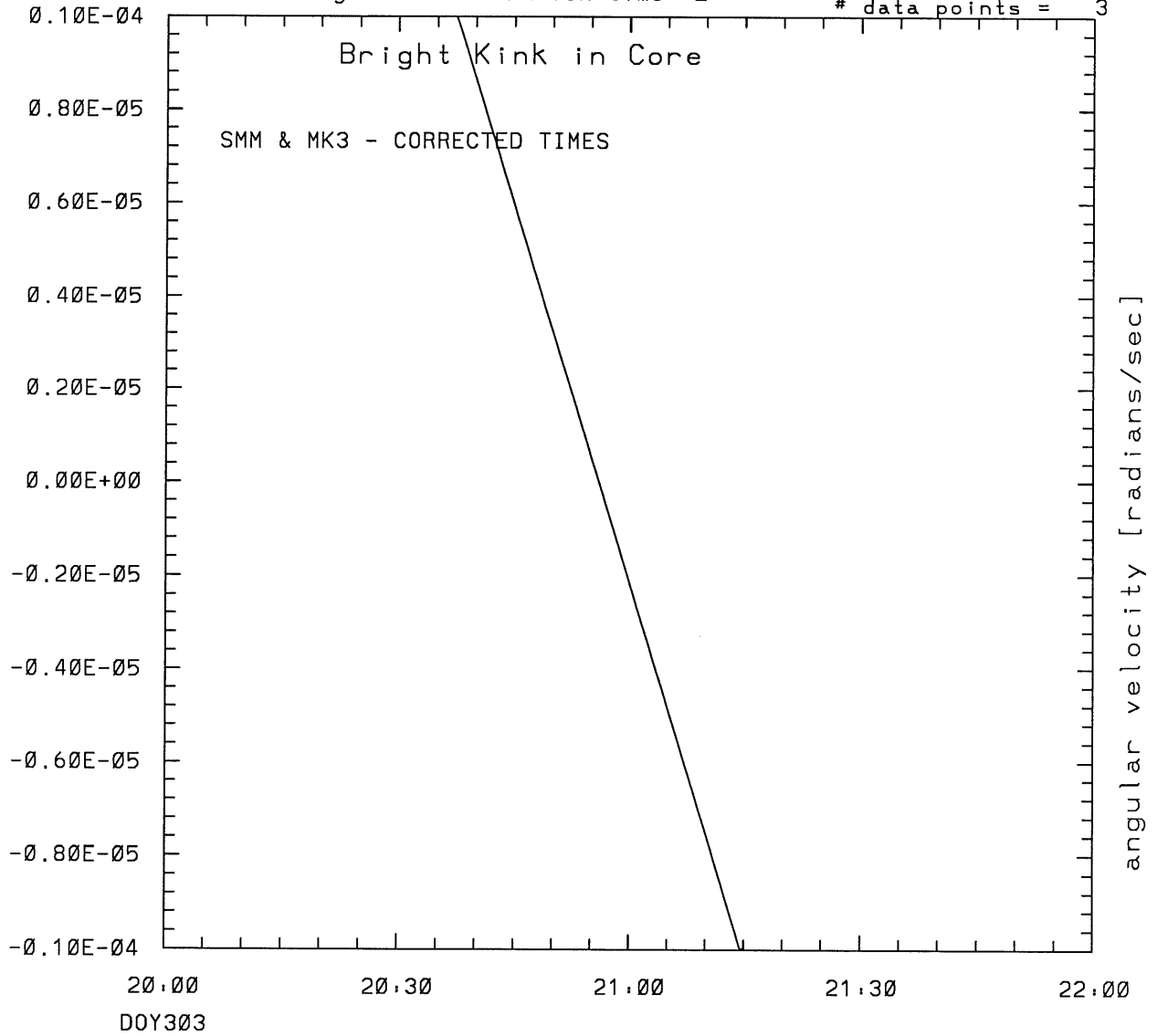
tstart=DOY303 19: 0 +/- 0.0 [min.]

radial acceleration= $0.986E-02$ km/sec**2

SMM C/P 1988 DOY303 109 +/- 1 degrees

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

data points = 3



tstart=DOY303 19: 0 +/- 0.0 [min.]

angular acceleration=-.900E-08 +/-

0.101E-12 [rad/sec**2]

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1988	303	20:19:30	2.37 +/-	0.10	109.0 +/-	0.5	SMM
1988	303	21:12: 8	3.45 +/-	0.15	110.0 +/-	1.0	SMM
1988	303	21:45:10	4.20 +/-	0.20	108.0 +/-	1.0	SMM

Structure being measured:
Bright Kink in Core

OUTPUT:

START TIME:

Event began at t = 0 + -0.453E+02 +/- 0.621E+00 [minutes]
In more convenient units:
Event began at DOY 303 19:15 +/- 0.621E+00 [minutes]

Origin defined at DOY303 20: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 245. +/- 4. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.195E+01 +/- 0.208E-01 [solar radii]
c(2) = 0.211E-01 +/- 0.366E-03 [radii/min]
c(2) = 0.245E+03 +/- 0.424E+01 [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)= 0.46391E-01 [radii] see Bevington pg. 114
error in c(2)= 0.62284E-03 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = -0.1388E-05 +/- 0.3356E-05[radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 109. +/- 1. [degrees]
a(2) = -0.477E-02 +/- 0.115E-01 [degrees/min]
a(2) = -0.139E-05 +/- 0.336E-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 20:19 = 245. km/sec

The RADIAL velocity at 21:12 = 245. km/sec

The RADIAL velocity at 21:45 = 245. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.92
Standard Deviation in start time measurement = 0.353E+02
Error in time = 0.18047E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.445E-03
Reduced Chi Squared = 0.365E-02
Chi Squared = 0.365E-02
The probability for exceeding chi square = 0.983E+00

The correlation coefficient = 0.100E+01
The probability that no LINEAR correlation exists between the variables = 0.17541
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
1988	303	20:19:30	2.37 +/-	0.10	109.0 +/-	0.5	SMM
1988	303	21:12: 8	3.45 +/-	0.15	110.0 +/-	1.0	SMM
1988	303	21:45:10	4.20 +/-	0.20	108.0 +/-	1.0	SMM

Structure being measured:
Bright Kink in Core

OUTPUT:

START TIME:

Event began at $t = 0 + -0.604E+02 +/- 0.000E+00$ [minutes]
In more convenient units:
Event began at DOY 303 19:00 +/- 0.000E+00 [minutes]
Event began at DOY 303 19: 0 +/- 0.000E+00 [minutes]
Origin defined at DOY303 20: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.986E-02 +/- 0.788E-07$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.201E+01 +/- 0.472E-06$ [solar radii]
c(2) = $0.182E-01 +/- 0.236E-07$ [radii/min]
c(2) = $0.211E+03 +/- 0.273E-03$ [km/sec]
c(3) = $0.255E-04 +/- 0.204E-09$ [radii/min**2]
c(3) = $0.986E-02 +/- 0.788E-07$ [km/sec**2]

ANGULAR INFORMATION:

ANGULAR ACCELERATION= $-0.9003E-08 +/- 0.1012E-12$ [radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = $107. +/- 0.$ [degrees]
a(2) = $0.104E+00 +/- 0.124E-05$ [degrees/min]
a(2) = $0.303E-04 +/- 0.360E-09$ [rad/sec]
a(3) = $-0.929E-03 +/- 0.104E-07$ [degrees/min**2]
a(3) = $-0.900E-08 +/- 0.101E-12$ [rad/sec**2]

The RADIAL velocity at 20:19 = 222. km/sec

The RADIAL velocity at 21:12 = 254. km/sec

The RADIAL velocity at 21:45 = 273. km/sec

The following info is for estimating goodness of the fit

Number data points = number of coefficients. No error analysis is possible.

Correlation coefficient is not computable!