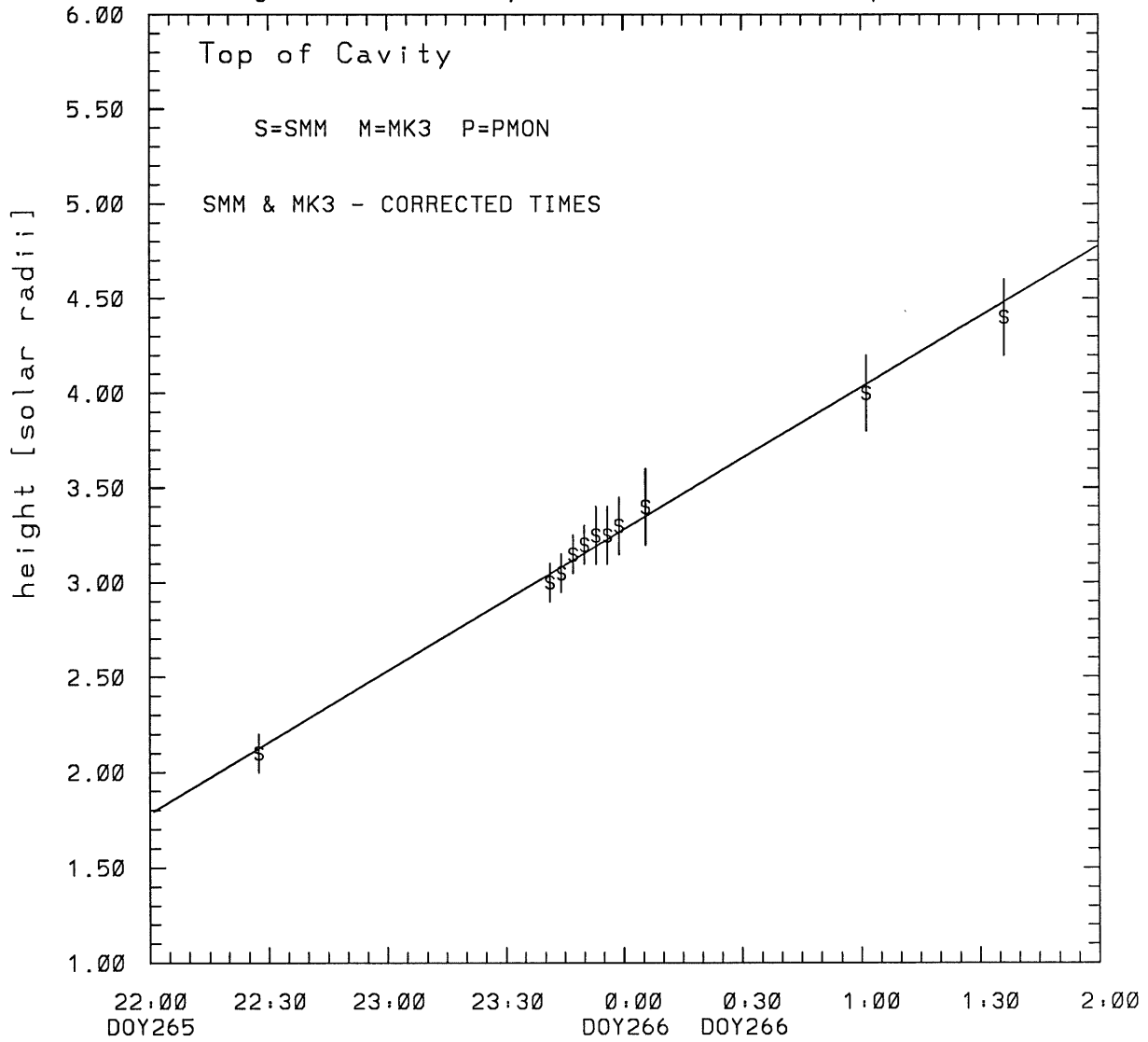


SMM C/P 1984 DOY265 70 +/- 0 degrees

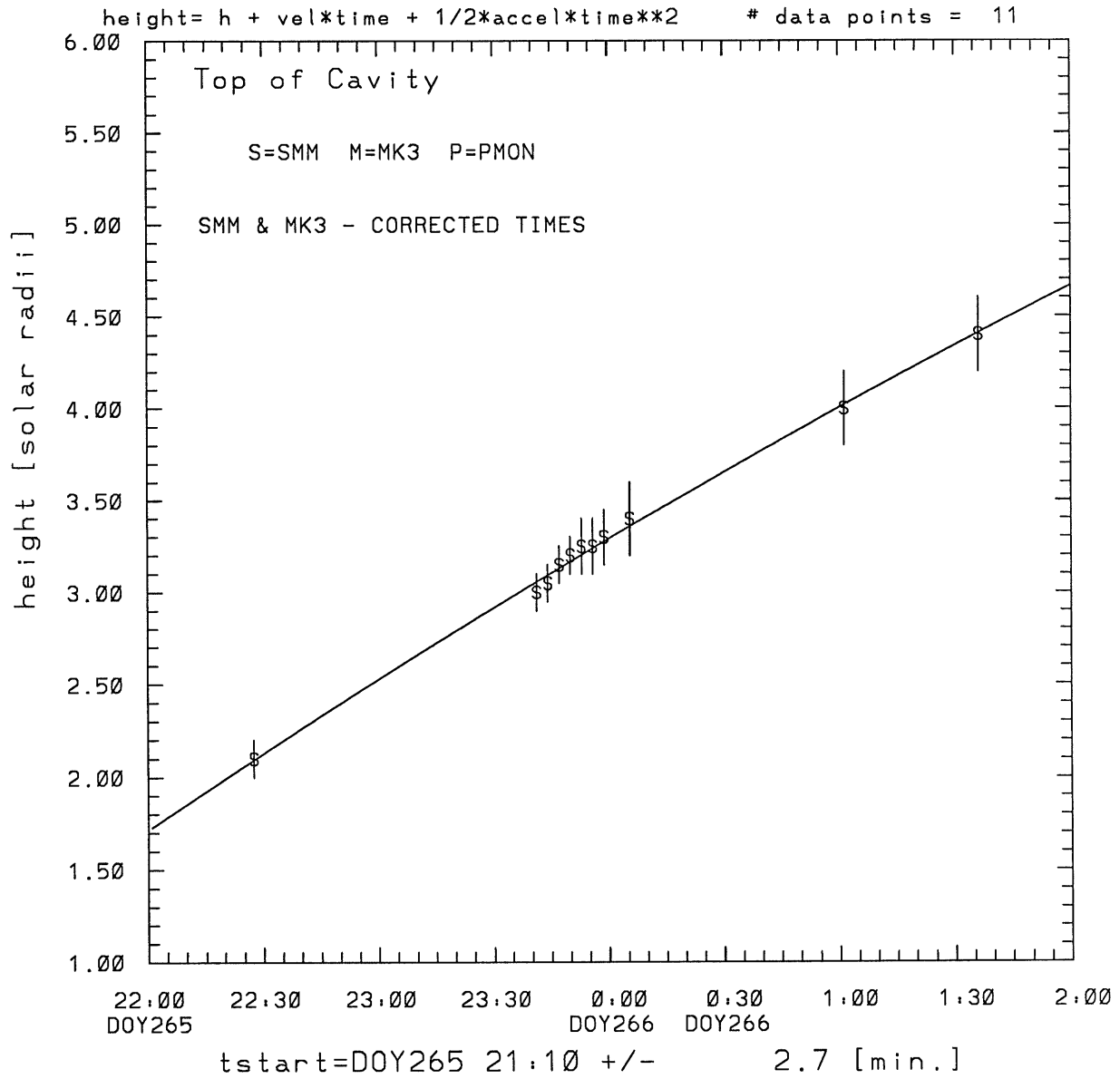
height = h + velocity*time

data points = 11



tstart=DOY265 20:59 +/- 0.5 [min.]
radial velocity= 145. +/- 4. [km/sec]

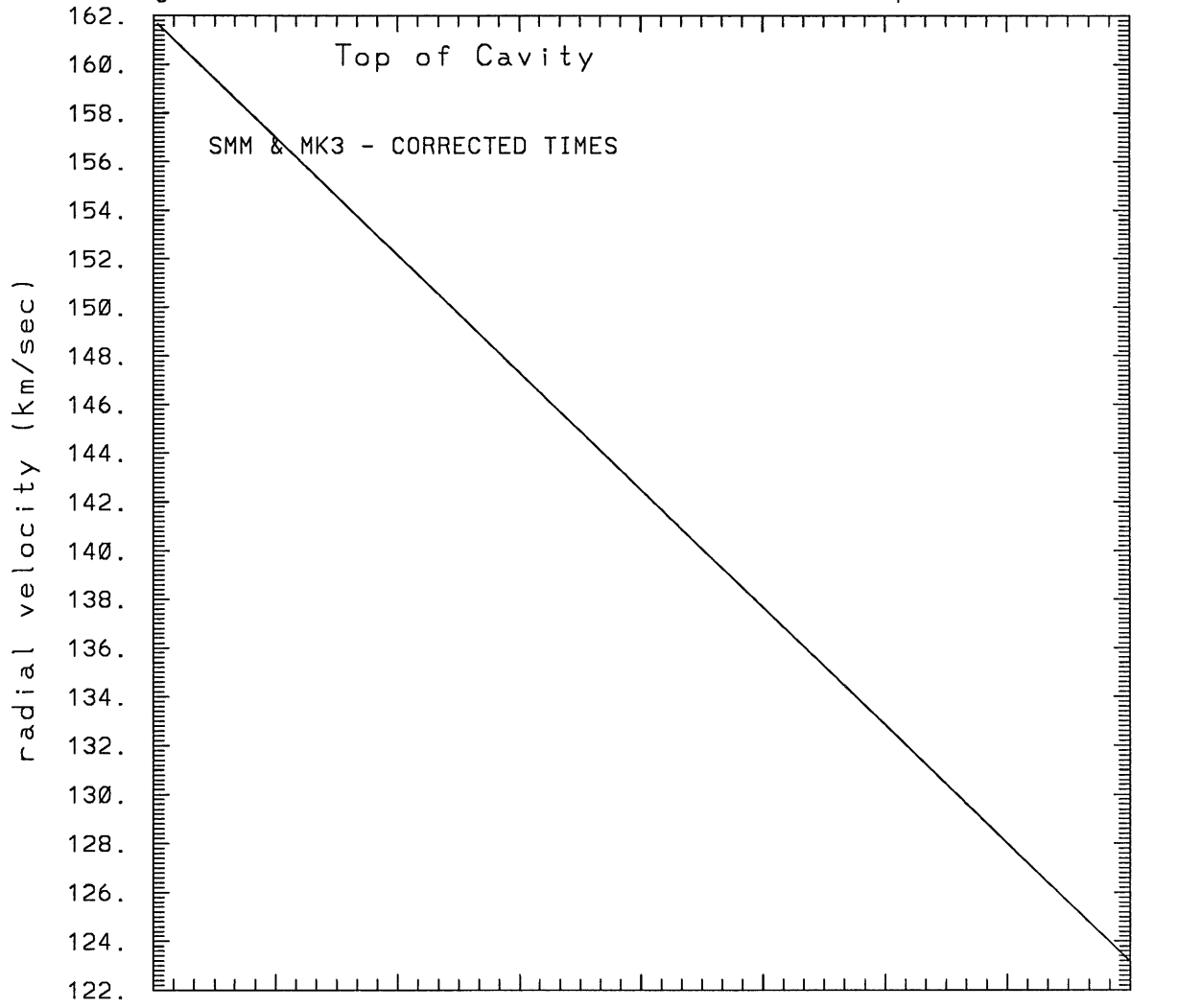
SMM C/P 1984 DOY265 70 +/- 0 degrees



radial acceleration = -0.0027 ± 0.0015 [km/sec**2]

SMM C/P 1984 DOY265 70 +/- 0 degrees

height = $h + vel*time + 1/2*accel*time**2$ # data points = 11



22:00 22:30 23:00 23:30 0:00 0:30 1:00 1:30 2:00
DOY265 DOY266

tstart=DOY265 21:10 +/- 2.7 [min.]

radial acceleration = $-.268E-02$ km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1984	265	22:27:28	2.10 +/- 0.10	70.0 +/- 0.5		SMM	
1984	265	23:41:17	3.00 +/- 0.10	70.0 +/- 1.0		SMM	
1984	265	23:44:12	3.05 +/- 0.10	70.0 +/- 1.0		SMM	
1984	265	23:47: 7	3.15 +/- 0.10	70.0 +/- 1.0		SMM	
1984	265	23:50: 3	3.20 +/- 0.10	70.0 +/- 1.0		SMM	
1984	265	23:52:58	3.25 +/- 0.15	70.0 +/- 1.0		SMM	
1984	265	23:55:54	3.25 +/- 0.15	70.0 +/- 1.0		SMM	
1984	265	23:58:49	3.30 +/- 0.15	70.0 +/- 1.0		SMM	
1984	266	0: 5:36	3.40 +/- 0.20	70.0 +/- 1.0		SMM	
1984	266	1: 1:21	4.00 +/- 0.20	70.0 +/- 1.0		SMM	
1984	266	1:36:14	4.40 +/- 0.20	70.0 +/- 1.0		SMM	

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at t = 0 + -0.626E+02 +/- 0.547E+00 [minutes]
In more convenient units:
Event began at DOY 265 20:59 +/- 0.547E+00 [minutes]

Origin defined at DOY265 22: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 145. +/- 4. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.178E+01 +/- 0.365E-01 [solar radii]
c(2) = 0.125E-01 +/- 0.329E-03 [radii/min]
c(2) = 0.145E+03 +/- 0.382E+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)= 0.43255E-01 [radii] see Bevington pg. 114
error in c(2)= 0.33703E-03 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

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

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 70. +/- 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 22:27 = 0.000E+00 km/sec

The TOTAL velocity at 22:27 = 145. km/sec

The TANGENTIAL velocity at 23:41 = 0.000E+00 km/sec

The TOTAL velocity at 23:41 = 145. km/sec

The TANGENTIAL velocity at 23:44 = 0.000E+00 km/sec

The TOTAL velocity at 23:44 = 145. km/sec

The TANGENTIAL velocity at 23:47 = 0.000E+00 km/sec

The TOTAL velocity at 23:47 = 145. km/sec

The TANGENTIAL velocity at 23:50 = 0.000E+00 km/sec

The TOTAL velocity at 23:50 = 145. km/sec

The TANGENTIAL velocity at 23:52 = 0.000E+00 km/sec

The TOTAL velocity at 23:52 = 145. km/sec

The TANGENTIAL velocity at 23:55 = 0.000E+00 km/sec

The TOTAL velocity at 23:55 = 145. km/sec

The TANGENTIAL velocity at 23:58 = 0.000E+00 km/sec

The TOTAL velocity at 23:58 = 145. km/sec

The TANGENTIAL velocity at 0: 5 = 0.000E+00 km/sec

The TOTAL velocity at 0: 5 = 145. km/sec

The TANGENTIAL velocity at 1: 1 = 0.000E+00 km/sec

The TOTAL velocity at 1: 1 = 145. km/sec

The TANGENTIAL velocity at 1:36 = 0.000E+00 km/sec

The TOTAL velocity at 1:36 = 145. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.58

Standard Deviation in start time measurement = 0.453E+02

Error in time = 0.12158E+02 using best fit method

See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.183E-02

Reduced Chi Squared = 0.191E-01

Chi Squared = 0.172E+00

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.997E+00

The probability that no LINEAR correlation exists between the variables = -0.23221

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	265	22:27:28	2.10 +/- 0.10	70.0 +/- 0.5		SMM	
1984	265	23:41:17	3.00 +/- 0.10	70.0 +/- 1.0		SMM	
1984	265	23:44:12	3.05 +/- 0.10	70.0 +/- 1.0		SMM	
1984	265	23:47: 7	3.15 +/- 0.10	70.0 +/- 1.0		SMM	
1984	265	23:50: 3	3.20 +/- 0.10	70.0 +/- 1.0		SMM	
1984	265	23:52:58	3.25 +/- 0.15	70.0 +/- 1.0		SMM	
1984	265	23:55:54	3.25 +/- 0.15	70.0 +/- 1.0		SMM	
1984	265	23:58:49	3.30 +/- 0.15	70.0 +/- 1.0		SMM	
1984	266	0: 5:36	3.40 +/- 0.20	70.0 +/- 1.0		SMM	
1984	266	1: 1:21	4.00 +/- 0.20	70.0 +/- 1.0		SMM	
1984	266	1:36:14	4.40 +/- 0.20	70.0 +/- 1.0		SMM	

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at t = 0 + -0.500E+02 +/- 0.272E+01 [minutes]

In more convenient units:

Event began at DOY 265 21:10 +/- 0.272E+01 [minutes]

Origin defined at DOY265 22: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = -0.268E-02 +/- 0.147E-02 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

- c(1) = 0.172E+01 +/- 0.489E-01 [solar radii]
- c(2) = 0.140E-01 +/- 0.852E-03 [radii/min]
- c(2) = 0.162E+03 +/- 0.988E+01 [km/sec]
- c(3) = -0.694E-05 +/- 0.379E-05 [radii/min**2]
- c(3) = -0.268E-02 +/- 0.147E-02 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

- Approximate error in c(1) = 0.58640E-01 [radii] Bevington pg 154 (8-30)
- Exact error in c(1) = 0.39859E-02 [radii] Bevington pg 154 (8-28)
- Approximate error in c(2) = 0.91635E-03 [radii/min] Bevington pg 154 (8-30)
- Exact error in c(2) = 0.92002E-04 [radii/min] Bevington pg 154 (8-28)
- Approximate error in c(3) = 0.34654E-05 [radii/min**] Bevington pg 154 (8-30)
- Exact error in c(3) = 0.37456E-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) = 70. +/- 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 22:27 = 0.000E+00 km/sec
The TOTAL velocity at 22:27 = 157. km/sec

The TANGENTIAL velocity at 23:41 = 0.000E+00 km/sec
The TOTAL velocity at 23:41 = 146. km/sec

The TANGENTIAL velocity at 23:44 = 0.000E+00 km/sec
The TOTAL velocity at 23:44 = 145. km/sec

The TANGENTIAL velocity at 23:47 = 0.000E+00 km/sec
The TOTAL velocity at 23:47 = 145. km/sec

The TANGENTIAL velocity at 23:50 = 0.000E+00 km/sec
The TOTAL velocity at 23:50 = 144. km/sec

The TANGENTIAL velocity at 23:52 = 0.000E+00 km/sec
The TOTAL velocity at 23:52 = 144. km/sec

The TANGENTIAL velocity at 23:55 = 0.000E+00 km/sec
The TOTAL velocity at 23:55 = 143. km/sec

The TANGENTIAL velocity at 23:58 = 0.000E+00 km/sec
The TOTAL velocity at 23:58 = 143. km/sec

The TANGENTIAL velocity at 0: 5 = 0.000E+00 km/sec
The TOTAL velocity at 0: 5 = 142. km/sec

The TANGENTIAL velocity at 1: 1 = 0.000E+00 km/sec
The TOTAL velocity at 1: 1 = 133. km/sec

The TANGENTIAL velocity at 1:36 = 0.000E+00 km/sec
The TOTAL velocity at 1:36 = 127. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.58
Standard Deviation in start time measurement = 0.453E+02
Value of reduced Chi Squared returned from nllst2 = 0.148E-02
Reduced Chi Squared = 0.724E-02
Chi Squared = 0.579E-01
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 = 0.9340E+00

The correlation between the data and the time**2 term = 0.7570E+00

The correlation between the data and the complete equation of motion = 0.9918E+00

SEE BEVINGTON "Data Reduction and Error Analysis" [1969]