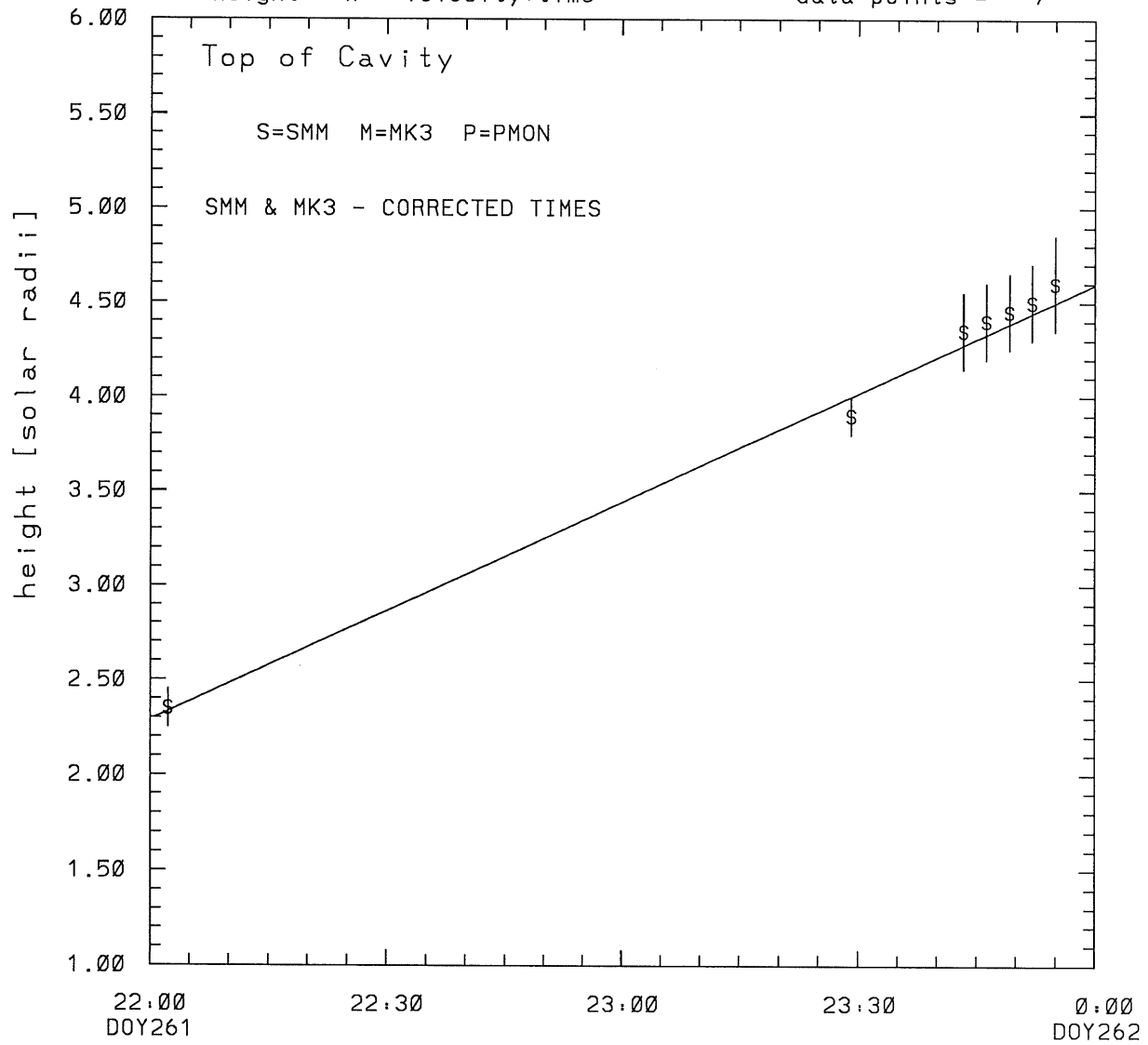


SMM C/P 1984 DOY261 45 +/- 0 degrees

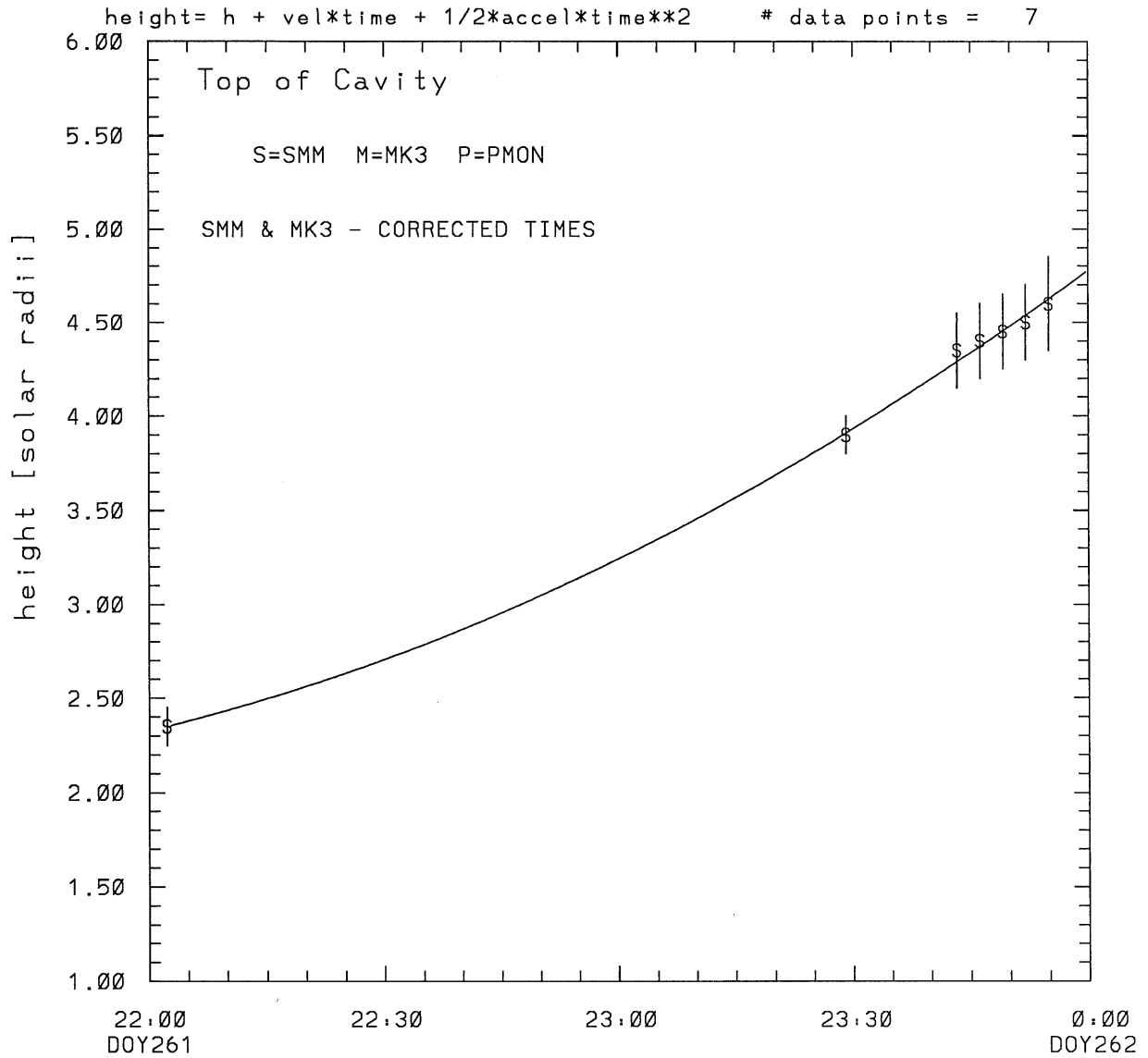
height = h + velocity\*time

# data points = 7



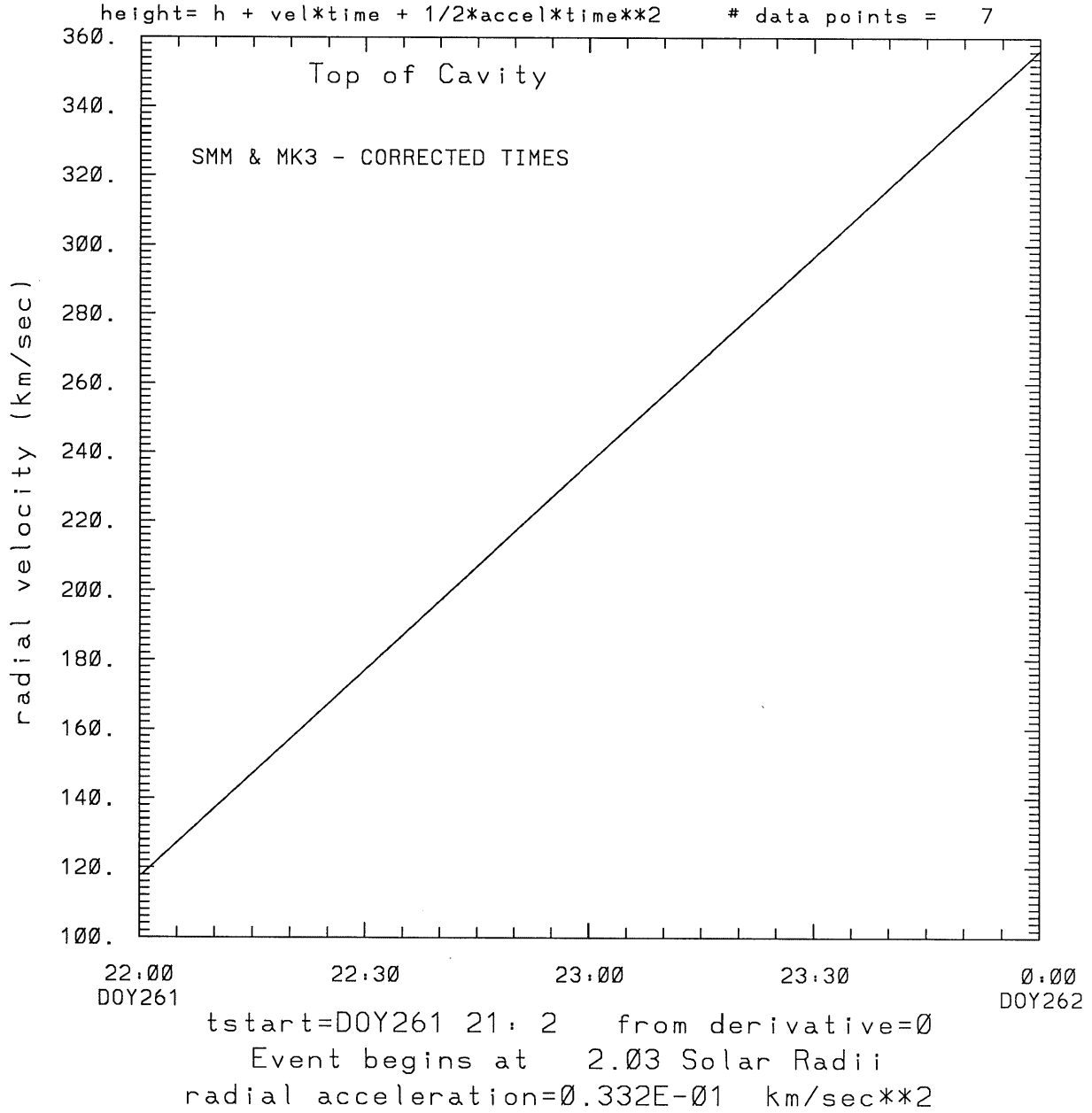
tstart=DOY261 20:53 +/- 0.6 [min.]  
radial velocity= 223. +/- 8. [km/sec]

SMM C/P 1984 DOY261 45 +/- 0 degrees



tstart=DOY261 21: 2 from derivative=0  
Event begins at 2.03 Solar Radii  
radial acceleration = 0.0332 +/- 0.0050 [km/sec\*\*2]

SMM C/P 1984 DOY261 45 +/- 0 degrees



\*\*\*\*\*

This is a 1 order run

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\*\*\*\*\*

INPUT:

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year	day	time	radii	radius	error in	angle	error in	angle	datatype
1984	261	22: 2:14	2.35	+/- 0.10	45.0	+/- 0.5			SMM
1984	261	23:29: 7	3.90	+/- 0.10	45.0	+/- 1.0			SMM
1984	261	23:43:18	4.35	+/- 0.20	45.0	+/- 1.0			SMM
1984	261	23:46:13	4.40	+/- 0.20	45.0	+/- 1.0			SMM
1984	261	23:49: 7	4.45	+/- 0.20	45.0	+/- 1.0			SMM
1984	261	23:52: 2	4.50	+/- 0.20	45.0	+/- 1.0			SMM
1984	261	23:54:57	4.60	+/- 0.25	45.0	+/- 1.0			SMM

\*\*\*\*\*

Structure being measured:

Top of Cavity

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OUTPUT:

\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.670E+02 \pm 0.580E+00$  [minutes]

In more convenient units:

Event began at DOY 261 20:53  $\pm 0.580E+00$  [minutes]

Origin defined at DOY261 22: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 223.  $\pm$  8. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.229E+01  $\pm$  0.536E-01 [solar radii]  
c(2) = 0.192E-01  $\pm$  0.647E-03 [radii/min]  
c(2) = 0.223E+03  $\pm$  0.750E+01 [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)= 0.88466E-01 [radii] see Bevington pg. 114

error in c(2)= 0.90042E-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) = 45. +/- 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: 2 = 0.000E+00 km/sec

The TOTAL velocity at 22: 2 = 223. km/sec

The TANGENTIAL velocity at 23:29 = 0.000E+00 km/sec

The TOTAL velocity at 23:29 = 223. km/sec

The TANGENTIAL velocity at 23:43 = 0.000E+00 km/sec

The TOTAL velocity at 23:43 = 223. km/sec

The TANGENTIAL velocity at 23:46 = 0.000E+00 km/sec

The TOTAL velocity at 23:46 = 223. km/sec

The TANGENTIAL velocity at 23:49 = 0.000E+00 km/sec

The TOTAL velocity at 23:49 = 223. km/sec

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

The TOTAL velocity at 23:52 = 223. km/sec

The TANGENTIAL velocity at 23:54 = 0.000E+00 km/sec

The TOTAL velocity at 23:54 = 223. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.79

Standard Deviation in start time measurement = 0.371E+02

Error in time = 0.10266E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.621E-02

Reduced Chi Squared = 0.340E-01

Chi Squared = 0.170E+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 = 0.1134E-05

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

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This is a 2 order run

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\*\*\*\*\*

INPUT:

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year	doy	time	error in radii	error in radius	error in angle	error in angle	datatype
1984	261	22: 2:14	2.35 +/- 0.10	45.0 +/- 0.5			SMM
1984	261	23:29: 7	3.90 +/- 0.10	45.0 +/- 1.0			SMM
1984	261	23:43:18	4.35 +/- 0.20	45.0 +/- 1.0			SMM
1984	261	23:46:13	4.40 +/- 0.20	45.0 +/- 1.0			SMM
1984	261	23:49: 7	4.45 +/- 0.20	45.0 +/- 1.0			SMM
1984	261	23:52: 2	4.50 +/- 0.20	45.0 +/- 1.0			SMM
1984	261	23:54:57	4.60 +/- 0.25	45.0 +/- 1.0			SMM

\*\*\*\*\*

Structure being measured:

Top of Cavity

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

tstart=DOY261 21: 2 from derivative = 0  
 Event begins at 2.03 Solar Radii  
 Origin defined at DOY261 22: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.332E-01 +/- 0.505E-02 km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

- c(1) = 0.233E+01 +/- 0.198E-01 [solar radii]
- c(2) = 0.101E-01 +/- 0.140E-02 [radii/min]
- c(2) = 0.117E+03 +/- 0.163E+02 [km/sec]
- c(3) = 0.859E-04 +/- 0.131E-04 [radii/min\*\*2]
- c(3) = 0.332E-01 +/- 0.505E-02 [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

- Approximate error in c(1) = 0.43702E-01 [radii] Bevington pg 154 (8-30)
- Exact error in c(1) = 0.69846E-03 [radii] Bevington pg 154 (8-28)
- Approximate error in c(2) = 0.25096E-02 [radii/min] Bevington pg 154 (8-30)
- Exact error in c(2) = 0.31080E-03 [radii/min] Bevington pg 154 (8-28)
- Approximate error in c(3) = 0.21929E-04 [radii/min\*\*] Bevington pg 154 (8-30)
- Exact error in c(3) = 0.28086E-05 [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) = 45. +/- 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: 2 = 0.000E+00 km/sec

The TOTAL velocity at 22: 2 = 122. km/sec

The TANGENTIAL velocity at 23:29 = 0.000E+00 km/sec

The TOTAL velocity at 23:29 = 295. km/sec

The TANGENTIAL velocity at 23:43 = 0.000E+00 km/sec

The TOTAL velocity at 23:43 = 323. km/sec

The TANGENTIAL velocity at 23:46 = 0.000E+00 km/sec

The TOTAL velocity at 23:46 = 329. km/sec

The TANGENTIAL velocity at 23:49 = 0.000E+00 km/sec

The TOTAL velocity at 23:49 = 335. km/sec

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

The TOTAL velocity at 23:52 = 341. km/sec

The TANGENTIAL velocity at 23:54 = 0.000E+00 km/sec

The TOTAL velocity at 23:54 = 346. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.79

Standard Deviation in start time measurement = 0.371E+02

Value of reduced Chi Squared returned from nllst2 = 0.772E-03

Reduced Chi Squared = 0.699E-02

Chi Squared = 0.280E-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 = 0.1375E+01

The correlation between the data and the time\*\*2 term = 0.1337E+01

The correlation between the data and the complete equation of motion = 0.9981E+00  
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]