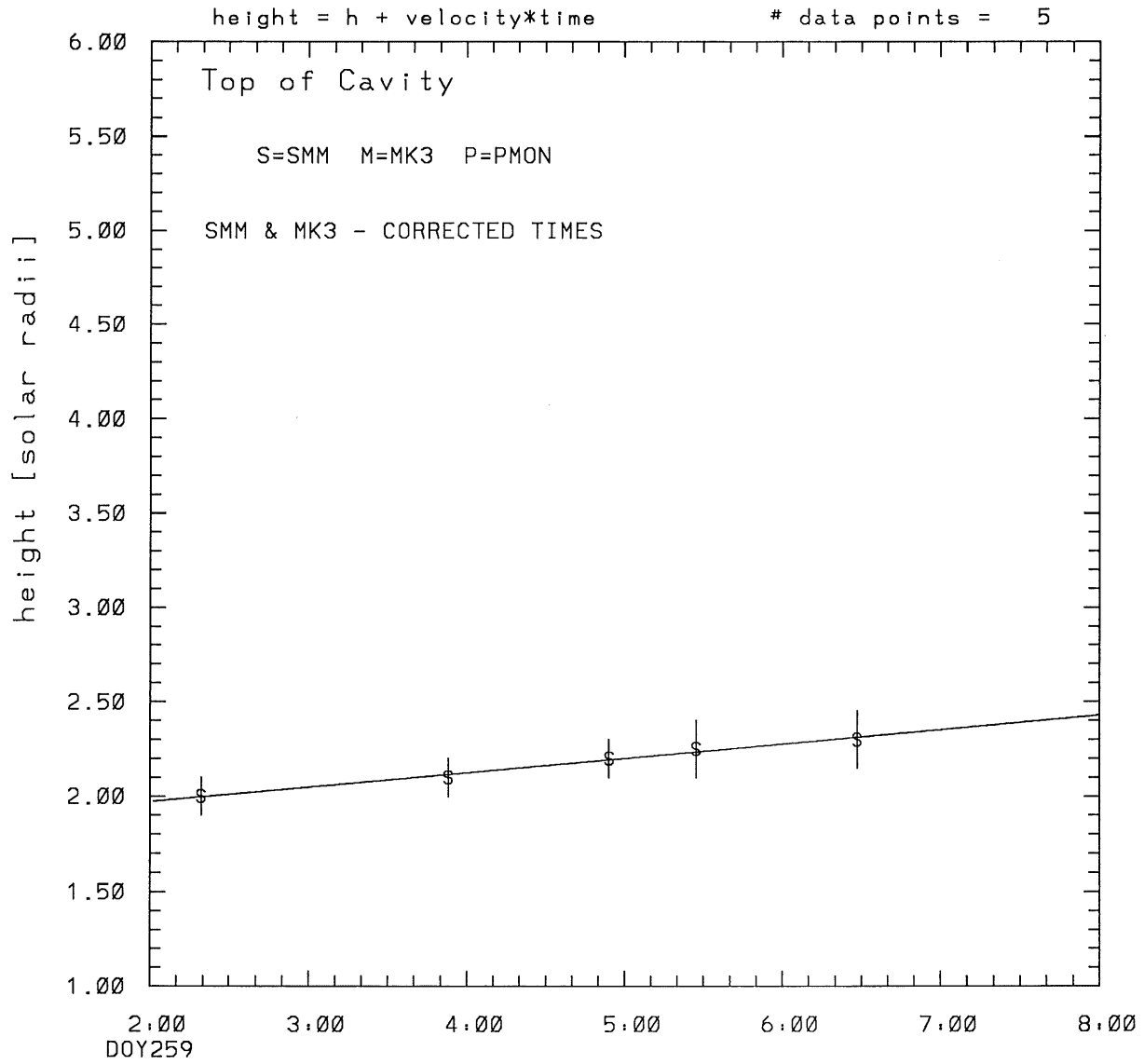
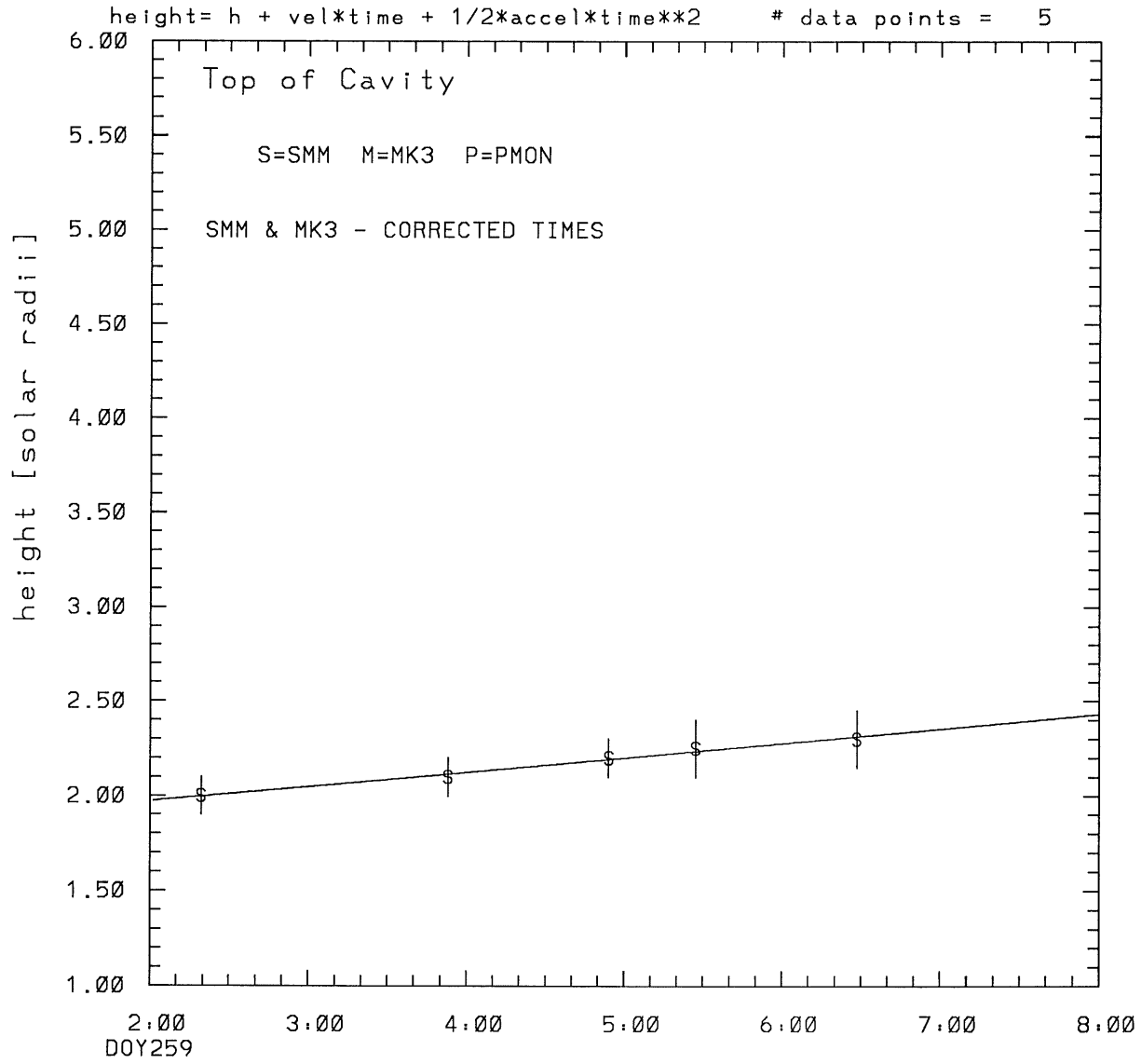


SMM C/P 1987 DOY259 105 +/- 0 degrees



tstart=DOY258 13.15 +/- 13.3 [min.]  
radial velocity= 15. +/- 1. [km/sec]

SMM C/P 1987 DOY259 105 +/- 0 degrees

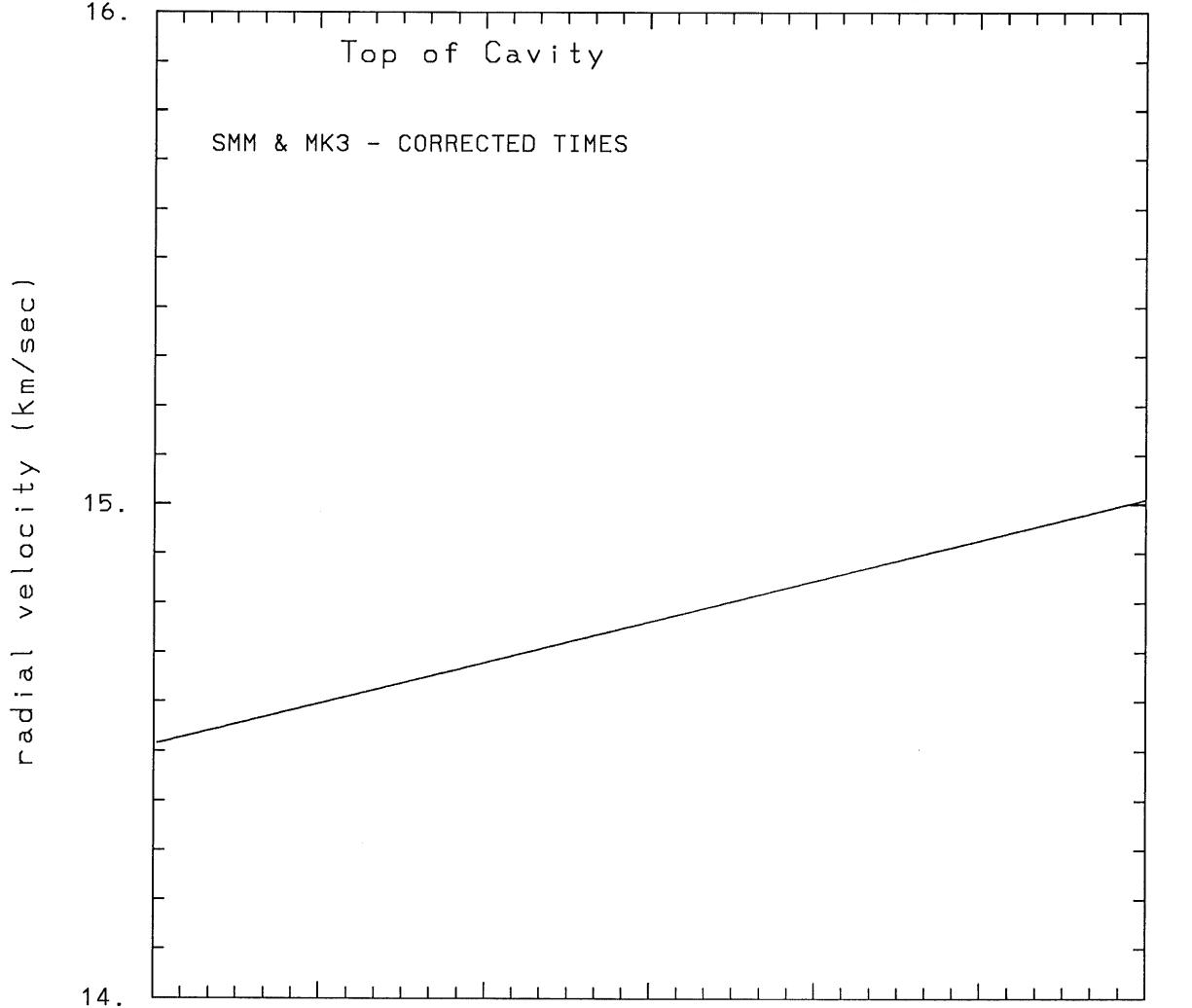


tstart=DOY258 12:34 +/- 6508.7 [min.]

radial acceleration = 0.0000 +/- 0.0004 [km/sec\*\*2]

SMM C/P 1987 DOY259 105 +/- 0 degrees

height= h + vel\*time + 1/2\*accel\*time\*\*2 # data points = 5



2:00  
DOY259

tstart=DOY258 12:34 +/- 6508.7 [min.]

radial acceleration=0.229E-04 km/sec\*\*2

\*\*\*\*\*

This is a 1 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

year	day	time	radii	radius	error in	angle	error in	datatype
1987	259	2:19:18	2.00	+/- 0.10	105.0	+/- 0.5	SMM	
1987	259	3:52:57	2.10	+/- 0.10	105.0	+/- 0.5	SMM	
1987	259	4:54: 9	2.20	+/- 0.10	105.0	+/- 0.5	SMM	
1987	259	5:27:10	2.25	+/- 0.15	105.0	+/- 0.5	SMM	
1987	259	6:28:22	2.30	+/- 0.15	105.0	+/- 0.5	SMM	

\*\*\*\*\*

Structure being measured:

Top of Cavity

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.767E+03 \pm 0.133E+02$  [minutes]

In more convenient units:

Event began at DOY 258 13:15  $\pm 0.133E+02$  [minutes]

Origin defined at DOY259 2: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 15.  $\pm$  1. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.197E+01 \pm 0.105E-01$  [solar radii]  
 $c(2) = 0.127E-02 \pm 0.673E-04$  [radii/min]  
 $c(2) = 0.147E+02 \pm 0.781E+00$  [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  $c(1) = 0.14116E-01$  [radii] see Bevington pg. 114

error in  $c(2) = 0.79310E-04$  [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) = 105. +/- 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 2:19 = 0.000E+00 km/sec

The TOTAL velocity at 2:19 = 15. km/sec

The TANGENTIAL velocity at 3:52 = 0.000E+00 km/sec

The TOTAL velocity at 3:52 = 15. km/sec

The TANGENTIAL velocity at 4:54 = 0.000E+00 km/sec

The TOTAL velocity at 4:54 = 15. km/sec

The TANGENTIAL velocity at 5:27 = 0.000E+00 km/sec

The TOTAL velocity at 5:27 = 15. km/sec

The TANGENTIAL velocity at 6:28 = 0.000E+00 km/sec

The TOTAL velocity at 6:28 = 15. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.12

Standard Deviation in start time measurement = 0.850E+02

Error in time = 0.20609E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.149E-03

Reduced Chi Squared = 0.773E-03

Chi Squared = 0.232E-02

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.994E+00

The probability that no LINEAR correlation exists between the variables = 0.5375E-03

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	datatype
1987	259	2:19:18	2.00	+/- 0.10	105.0	+/- 0.5	SMM	
1987	259	3:52:57	2.10	+/- 0.10	105.0	+/- 0.5	SMM	
1987	259	4:54: 9	2.20	+/- 0.10	105.0	+/- 0.5	SMM	
1987	259	5:27:10	2.25	+/- 0.15	105.0	+/- 0.5	SMM	
1987	259	6:28:22	2.30	+/- 0.15	105.0	+/- 0.5	SMM	

\*\*\*\*\*

Structure being measured:

Top of Cavity

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.808E+03 +/- 0.651E+04$  [minutes]

In more convenient units:

Event began at DOY 258 12:34 +/- 0.651E+04 [minutes]

Origin defined at DOY259 2: 0

RADIAL INFORMATION:

RADIAL ACCELERATION =  $0.229E-04 +/- 0.376E-03$  km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.197E+01 +/- 0.158E-01$  [solar radii]  
 $c(2) = 0.125E-02 +/- 0.265E-03$  [radii/min]  
 $c(2) = 0.145E+02 +/- 0.308E+01$  [km/sec]  
 $c(3) = 0.593E-07 +/- 0.972E-06$  [radii/min\*\*2]  
 $c(3) = 0.229E-04 +/- 0.376E-03$  [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in  $c(1) = 0.23213E-01$  [radii] Bevington pg 154 (8-30)

Exact error in  $c(1) = 0.39216E-02$  [radii] Bevington pg 154 (8-28)

Approximate error in  $c(2) = 0.36250E-03$  [radii/min] Bevington pg 154 (8-30)

Exact error in  $c(2) = 0.11933E-03$  [radii/min] Bevington pg 154 (8-28)

Approximate error in  $c(3) = 0.12385E-05$  [radii/min\*\*] Bevington pg 154 (8-30)

Exact error in  $c(3) = 0.47813E-06$  [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) = 105. +/- 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 2:19 = 0.000E+00 km/sec

The TOTAL velocity at 2:19 = 15. km/sec

The TANGENTIAL velocity at 3:52 = 0.000E+00 km/sec

The TOTAL velocity at 3:52 = 15. km/sec

The TANGENTIAL velocity at 4:54 = 0.000E+00 km/sec

The TOTAL velocity at 4:54 = 15. km/sec

The TANGENTIAL velocity at 5:27 = 0.000E+00 km/sec

The TOTAL velocity at 5:27 = 15. km/sec

The TANGENTIAL velocity at 6:28 = 0.000E+00 km/sec

The TOTAL velocity at 6:28 = 15. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.12

Standard Deviation in start time measurement = 0.850E+02

Value of reduced Chi Squared returned from nllst2 = 0.199E-03

Reduced Chi Squared = 0.120E-02

Chi Squared = 0.240E-02

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 = 0.9882E+00

The correlation between the data and the time\*\*2 term = 0.8967E+00

The correlation between the data and the complete equation of motion = 0.9885E+00

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