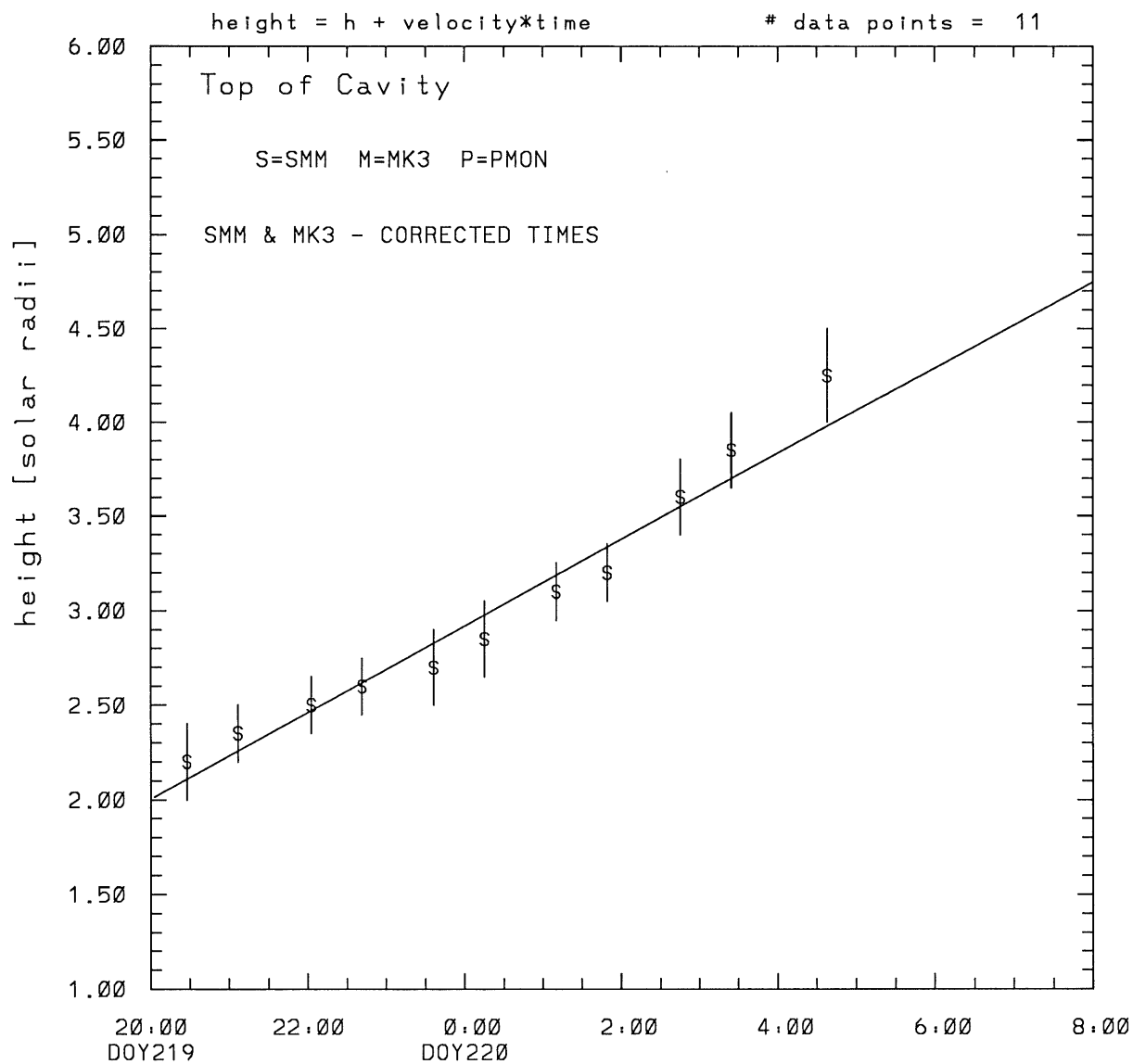
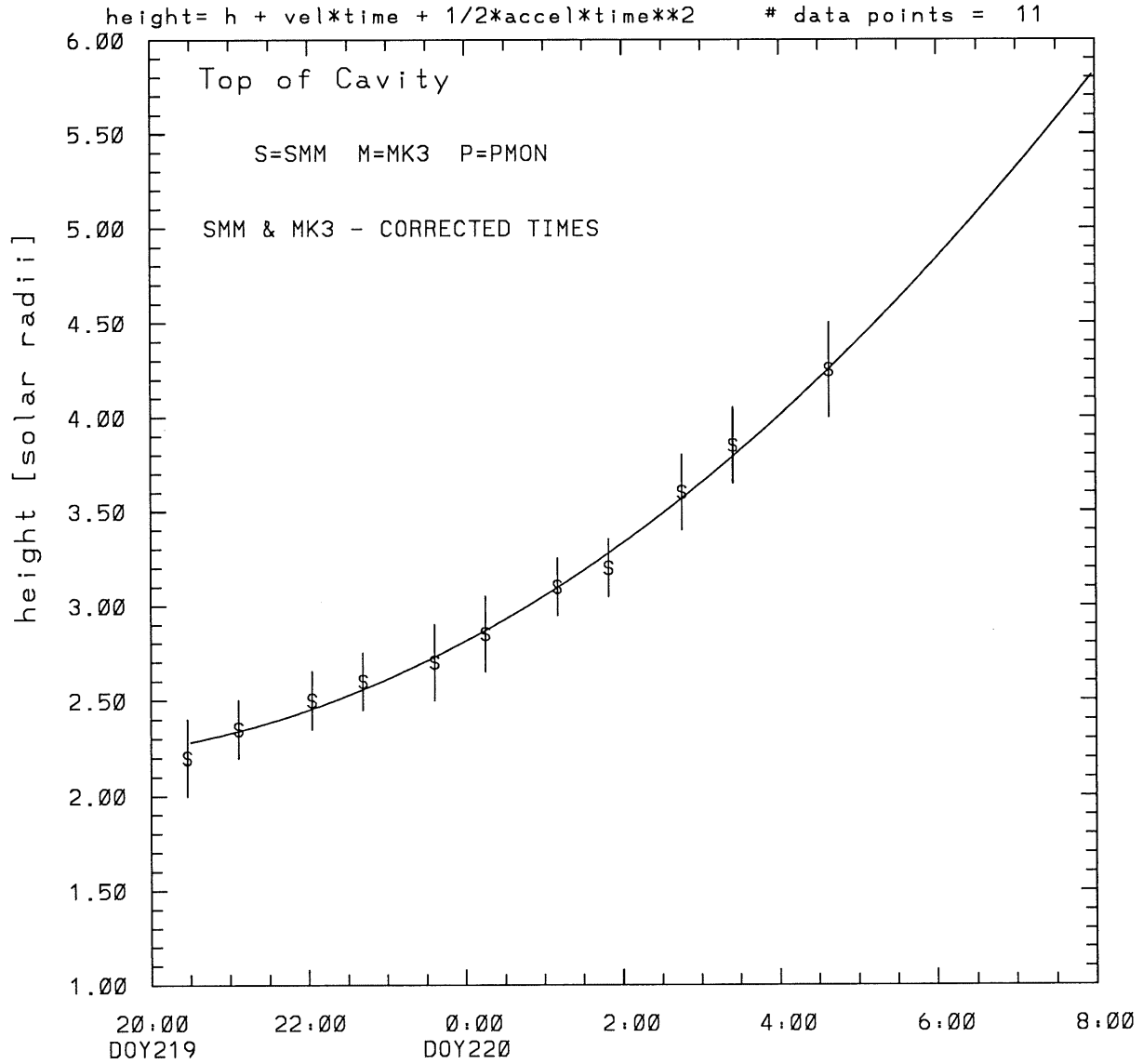


SMM C/P 1985 DOY219 265 +/- 0 degrees



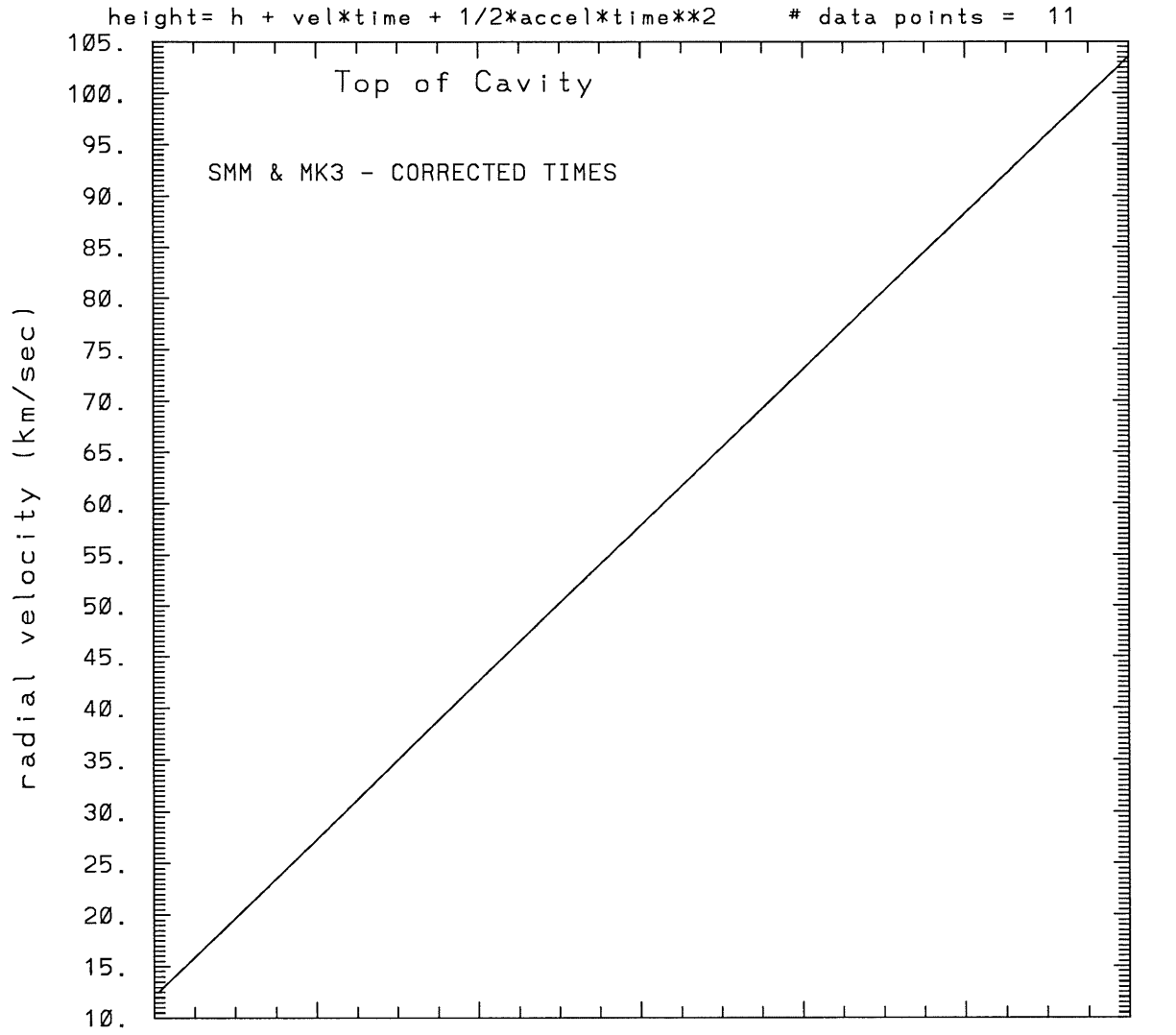
tstart=DOY219 15:37 +/- 4.0 [min.]
radial velocity= 44. +/- 3. [km/sec]

SMM C/P 1985 DOY219 265 +/- 0 degrees



tstart=DOY219 18:25 from derivative=0
Event begins at 2.20 Solar Radii
radial acceleration = 0.0021 +/- 0.0003 [km/sec**2]

SMM C/P 1985 DOY219 265 +/- 0 degrees



20:00
DOY219

22:00

00:00
DOY220

2:00

4:00

6:00

8:00

tstart=DOY219 18:25 from derivative=0

Event begins at 2.20 Solar Radii

radial acceleration=0.212E-02 km/sec**2

This is a 1 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1985	219	20:27:31	2.20	+/- 0.20	265.0	+/- 0.5	SMM
1985	219	21: 6:31	2.35	+/- 0.15	265.0	+/- 0.5	SMM
1985	219	22: 2:30	2.50	+/- 0.15	265.0	+/- 0.5	SMM
1985	219	22:41:29	2.60	+/- 0.15	265.0	+/- 0.5	SMM
1985	219	23:36:31	2.70	+/- 0.20	265.0	+/- 0.5	SMM
1985	220	0:15:30	2.85	+/- 0.20	265.0	+/- 0.5	SMM
1985	220	1:10:31	3.10	+/- 0.15	265.0	+/- 1.0	SMM
1985	220	1:49:31	3.20	+/- 0.15	265.0	+/- 1.0	SMM
1985	220	2:45:30	3.60	+/- 0.20	265.0	+/- 1.0	SMM
1985	220	3:24:29	3.85	+/- 0.20	265.0	+/- 1.0	SMM
1985	220	4:38: 0	4.25	+/- 0.25	265.0	+/- 1.0	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at t = 0 + -0.263E+03 +/- 0.402E+01 [minutes]

In more convenient units:

Event began at DOY 219 15:37 +/- 0.402E+01 [minutes]

Origin defined at DOY219 20: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 44. +/- 3. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.200E+01 +/- 0.694E-01 [solar radii]

c(2) = 0.381E-02 +/- 0.251E-03 [radii/min]

c(2) = 0.442E+02 +/- 0.291E+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)= 0.84122E-01 [radii] see Bevington pg. 114
error in c(2)= 0.27798E-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) = 265. +/- 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 20:27 = 0.000E+00 km/sec
The TOTAL velocity at 20:27 = 44. km/sec

The TANGENTIAL velocity at 21: 6 = 0.000E+00 km/sec
The TOTAL velocity at 21: 6 = 44. km/sec

The TANGENTIAL velocity at 22: 2 = 0.000E+00 km/sec
The TOTAL velocity at 22: 2 = 44. km/sec

The TANGENTIAL velocity at 22:41 = 0.000E+00 km/sec
The TOTAL velocity at 22:41 = 44. km/sec

The TANGENTIAL velocity at 23:36 = 0.000E+00 km/sec
The TOTAL velocity at 23:36 = 44. km/sec

The TANGENTIAL velocity at 0:15 = 0.000E+00 km/sec
The TOTAL velocity at 0:15 = 44. km/sec

The TANGENTIAL velocity at 1:10 = 0.000E+00 km/sec
The TOTAL velocity at 1:10 = 44. km/sec

The TANGENTIAL velocity at 1:49 = 0.000E+00 km/sec
The TOTAL velocity at 1:49 = 44. km/sec

The TANGENTIAL velocity at 2:45 = 0.000E+00 km/sec
The TOTAL velocity at 2:45 = 44. km/sec

The TANGENTIAL velocity at 3:24 = 0.000E+00 km/sec
The TOTAL velocity at 3:24 = 44. km/sec

The TANGENTIAL velocity at 4:38 = 0.000E+00 km/sec
The TOTAL velocity at 4:38 = 44. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.65

Standard Deviation in start time measurement = 0.152E+03

Error in time = 0.11033E+03 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.135E-01

Reduced Chi Squared = 0.164E+00

Chi Squared = 0.148E+01

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.981E+00

The probability that no LINEAR correlation exists between the variables = 0.1062E-06

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

This is a 2 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1985	219	20:27:31	2.20	+/- 0.20	265.0	+/- 0.5	SMM
1985	219	21: 6:31	2.35	+/- 0.15	265.0	+/- 0.5	SMM
1985	219	22: 2:30	2.50	+/- 0.15	265.0	+/- 0.5	SMM
1985	219	22:41:29	2.60	+/- 0.15	265.0	+/- 0.5	SMM
1985	219	23:36:31	2.70	+/- 0.20	265.0	+/- 0.5	SMM
1985	220	0:15:30	2.85	+/- 0.20	265.0	+/- 0.5	SMM
1985	220	1:10:31	3.10	+/- 0.15	265.0	+/- 1.0	SMM
1985	220	1:49:31	3.20	+/- 0.15	265.0	+/- 1.0	SMM
1985	220	2:45:30	3.60	+/- 0.20	265.0	+/- 1.0	SMM
1985	220	3:24:29	3.85	+/- 0.20	265.0	+/- 1.0	SMM
1985	220	4:38: 0	4.25	+/- 0.25	265.0	+/- 1.0	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

tstart=DOY219 18:25 from derivative = 0
 Event begins at 2.20 Solar Radii
 Origin defined at DOY219 20: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.212E-02 +/- 0.317E-03 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.225E+01 +/- 0.471E-01 [solar radii]
 c(2) = 0.104E-02 +/- 0.429E-03 [radii/min]
 c(2) = 0.121E+02 +/- 0.498E+01 [km/sec]
 c(3) = 0.548E-05 +/- 0.821E-06 [radii/min**2]
 c(3) = 0.212E-02 +/- 0.317E-03 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.47742E-01 [radii] Bevington pg 154 (8-30)
 Exact error in c(1) = 0.53141E-02 [radii] Bevington pg 154 (8-28)

Approximate error in $c(2) = 0.41151E-03$ [radii/min] Bevington pg 154 (8-30)
Exact error in $c(2) = 0.30090E-04$ [radii/min] Bevington pg 154 (8-28)
Approximate error in $c(3) = 0.74579E-06$ [radii/min**] Bevington pg 154 (8-30)
Exact error in $c(3) = 0.41819E-07$ [radii/min**] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

ANGULAR ACCELERATION= $0.0000E+00 \pm 0.0000E+00$ [radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

$a(1) = 265. \pm 0.$ [degrees]
 $a(2) = 0.000E+00 \pm 0.000E+00$ [degrees/min]
 $a(2) = 0.000E+00 \pm 0.000E+00$ [rad/sec]
 $a(3) = 0.000E+00 \pm 0.000E+00$ [degrees/min**2]
 $a(3) = 0.000E+00 \pm 0.000E+00$ [rad/sec**2]

THE TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 20:27 = $0.000E+00$ km/sec

The TOTAL velocity at 20:27 = 16. km/sec

The TANGENTIAL velocity at 21: 6 = $0.000E+00$ km/sec

The TOTAL velocity at 21: 6 = 21. km/sec

The TANGENTIAL velocity at 22: 2 = $0.000E+00$ km/sec

The TOTAL velocity at 22: 2 = 28. km/sec

The TANGENTIAL velocity at 22:41 = $0.000E+00$ km/sec

The TOTAL velocity at 22:41 = 33. km/sec

The TANGENTIAL velocity at 23:36 = $0.000E+00$ km/sec

The TOTAL velocity at 23:36 = 40. km/sec

The TANGENTIAL velocity at 0:15 = $0.000E+00$ km/sec

The TOTAL velocity at 0:15 = 45. km/sec

The TANGENTIAL velocity at 1:10 = $0.000E+00$ km/sec

The TOTAL velocity at 1:10 = 52. km/sec

The TANGENTIAL velocity at 1:49 = $0.000E+00$ km/sec

The TOTAL velocity at 1:49 = 56. km/sec

The TANGENTIAL velocity at 2:45 = $0.000E+00$ km/sec

The TOTAL velocity at 2:45 = 64. km/sec

The TANGENTIAL velocity at 3:24 = $0.000E+00$ km/sec

The TOTAL velocity at 3:24 = 69. km/sec

The TANGENTIAL velocity at 4:38 = $0.000E+00$ km/sec

The TOTAL velocity at 4:38 = 78. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.65

Standard Deviation in start time measurement = 0.152E+03

Value of reduced Chi Squared returned from nllst2 = 0.252E-02

Reduced Chi Squared = 0.150E-01

Chi Squared = 0.120E+00

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 = 0.9115E+00

The correlation between the data and the time**2 term = 0.8835E+00

The correlation between the data and the complete equation of motion = 0.9938E+00

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