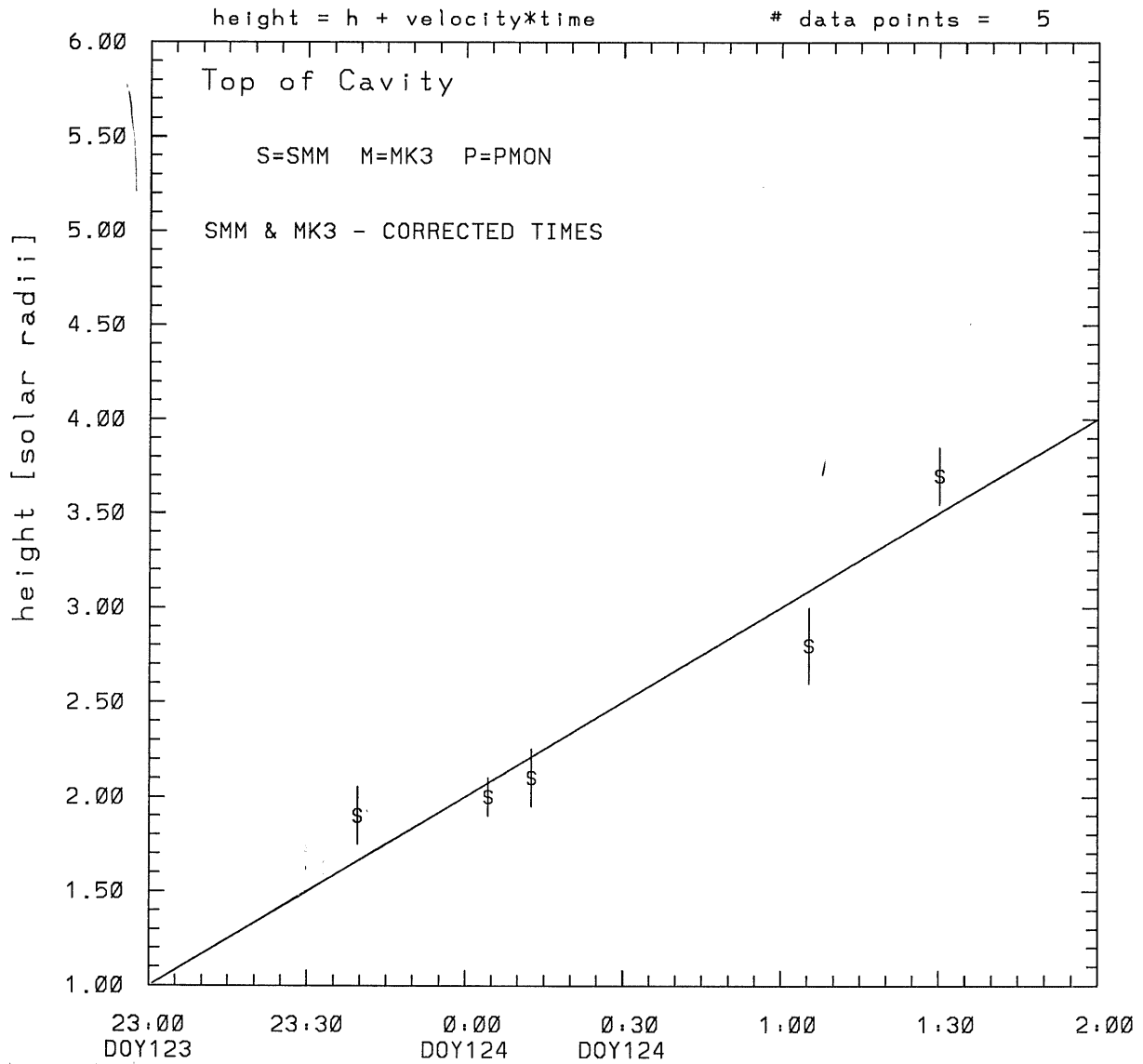
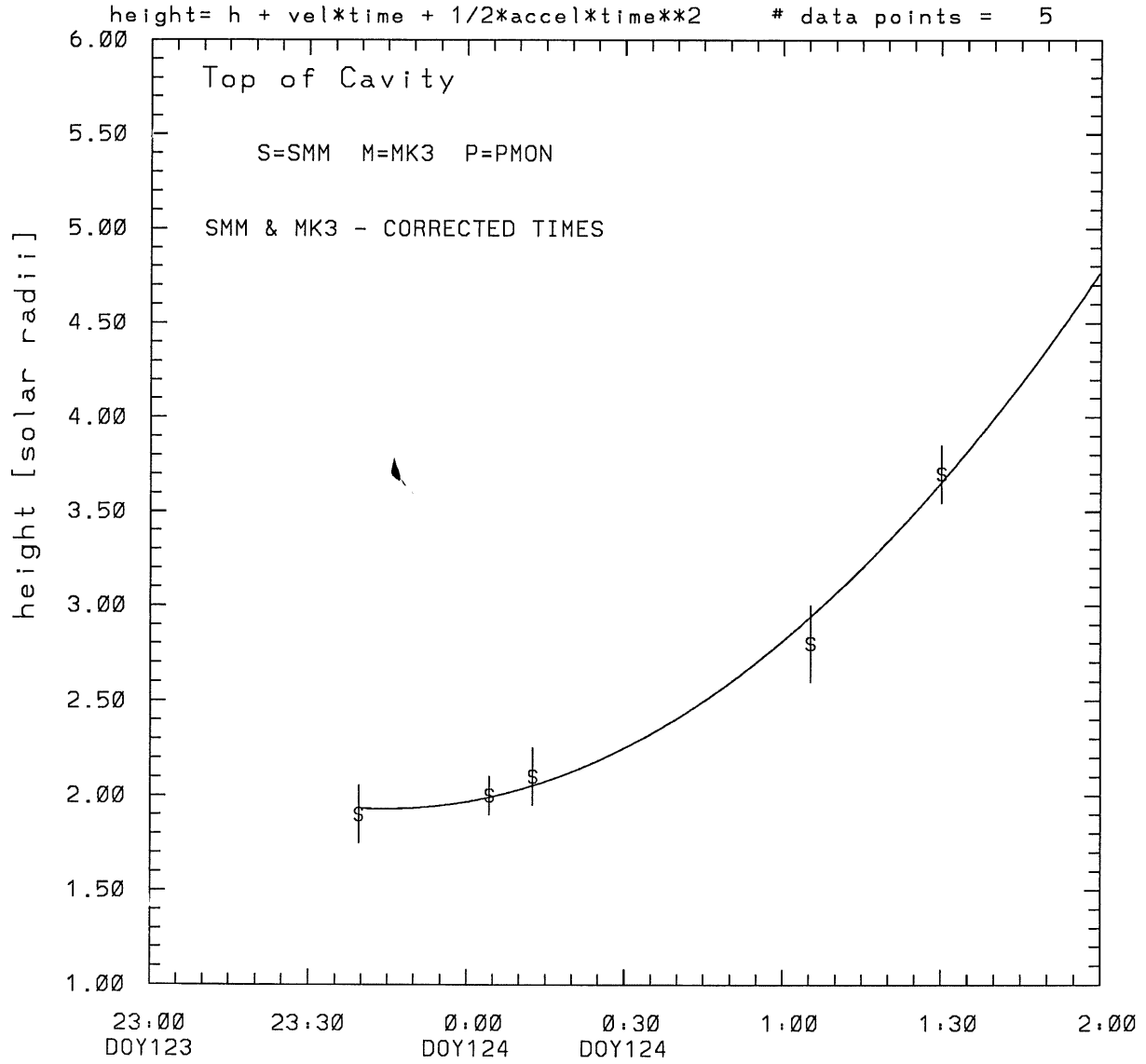


SMM C/P 1988 DOY123 130 +/- 0 degrees



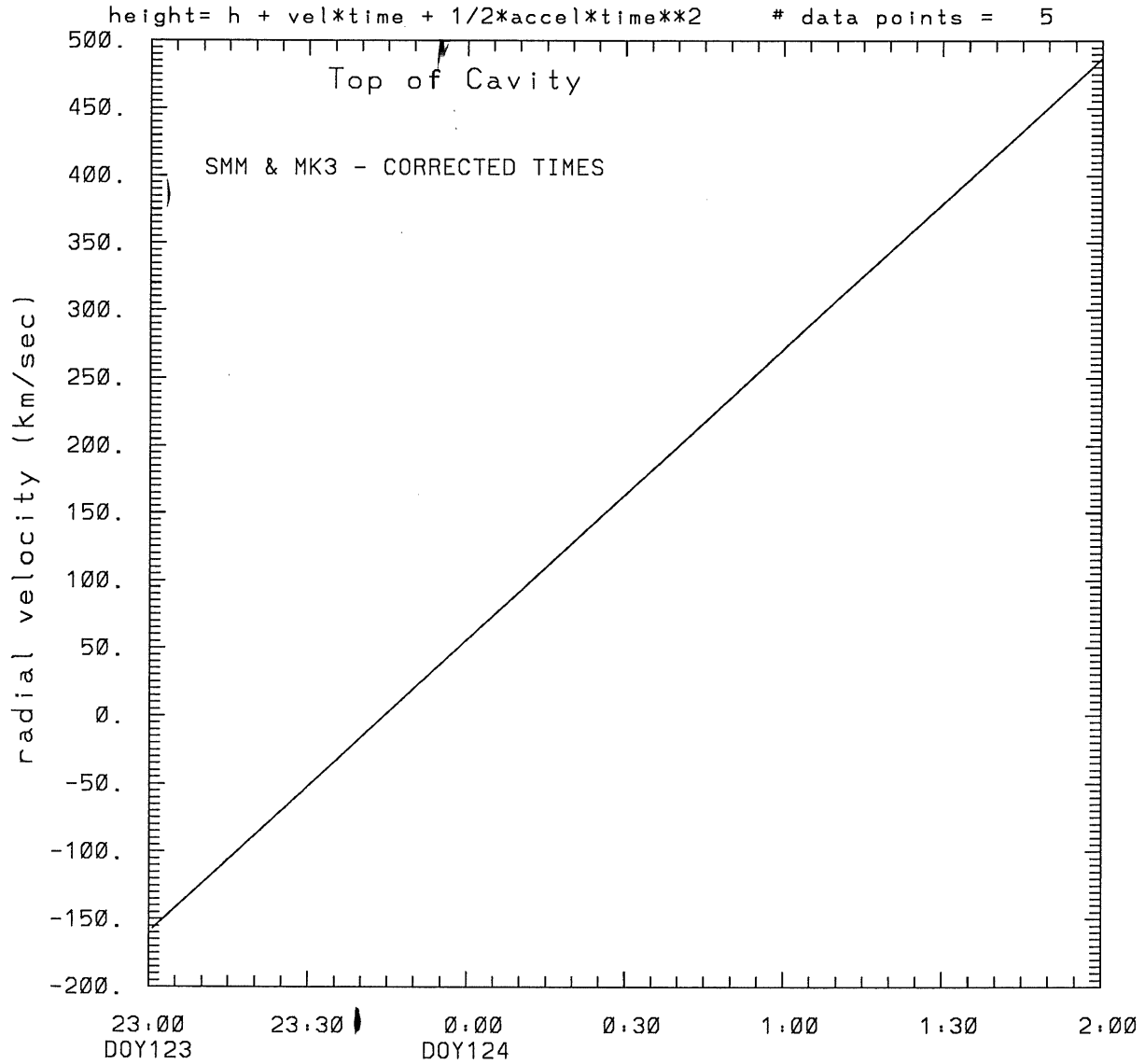
tstart=DOY123 23: 0 +/- 0.0 [min.]
radial velocity= 194. +/- 26. [km/sec]

SMM C/P 1988 DOY123 130 +/- 0 degrees



tstart=DOY123 23:44 from derivative=0
Event begins at 1.93 Solar Radii
radial acceleration = 0.0598 +/- 0.0115 [km/sec**2]

SMM C/P 1988 DOY123 130 +/- 0 degrees



tstart=DOY123 23:44 from derivative=0
Event begins at 1.93 Solar Radii
radial acceleration=0.598E-01 km/sec**2

This is a 1 order run

INPUT:

year	day	time	radii	radius	error in	angle	error in	datatype
1988	123	23:39:32	1.90	+/- 0.15	130.0	+/- 0.5	SMM	
1988	124	0: 4:20	2.00	+/- 0.10	130.0	+/- 0.5	SMM	
1988	124	0:12:35	2.10	+/- 0.15	130.0	+/- 0.5	SMM	
1988	124	1: 5:20	2.80	+/- 0.20	130.0	+/- 0.5	SMM	
1988	124	1:30: 6	3.70	+/- 0.15	130.0	+/- 1.0	SMM	

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + 0.279E-01 \pm 0.340E-02$ [minutes]

In more convenient units:

Event began at DOY 123 23:00 $\pm 0.340E-02$ [minutes]

Event began at DOY 123 23: 0 $\pm 0.340E-02$ [minutes]

Origin defined at DOY123 23: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 194. \pm 26. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.100E+01 \pm 0.204E+00$ [solar radii]
 $c(2) = 0.167E-01 \pm 0.225E-02$ [radii/min]
 $c(2) = 0.194E+03 \pm 0.261E+02$ [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 $c(1) = 0.27892E+00$ [radii] see Bevington pg. 114

error in $c(2) = 0.28115E-02$ [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) = 130. +/- 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 23:39 = 0. km/sec

The TOTAL velocity at 23:39 = 194. km/sec

The TANGENTIAL velocity at 0: 4 = 0. km/sec

The TOTAL velocity at 0: 4 = 194. km/sec

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

The TOTAL velocity at 0:12 = 194. km/sec

The TANGENTIAL velocity at 1: 5 = 0. km/sec

The TOTAL velocity at 1: 5 = 194. km/sec

The TANGENTIAL velocity at 1:30 = 0. km/sec

The TOTAL velocity at 1:30 = 194. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.76

Standard Deviation in start time measurement = 0.409E+02

Error in time = 0.26704E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.362E-01

Reduced Chi Squared = 0.212E+00

Chi Squared = 0.635E+00

The probability for exceeding chi square = 0.991E+00

The correlation coefficient = 0.957E+00

The probability that no LINEAR correlation exists between the variables = 0.1056E-01

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
1988	123	23:39:32	1.90	+/- 0.15	130.0	+/- 0.5	SMM
1988	124	0: 4:20	2.00	+/- 0.10	130.0	+/- 0.5	SMM
1988	124	0:12:35	2.10	+/- 0.15	130.0	+/- 0.5	SMM
1988	124	1: 5:20	2.80	+/- 0.20	130.0	+/- 0.5	SMM
1988	124	1:30: 6	3.70	+/- 0.15	130.0	+/- 1.0	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

tstart=DOY123 23:44 from derivative = 0
Event begins at 1.93 Solar Radii
Origin defined at DOY123 23: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.598E-01 +/- 0.115E-01 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.223E+01 +/- 0.249E+00 [solar radii]
c(2) = -0.138E-01 +/- 0.591E-02 [radii/min]
c(2) = -0.160E+03 +/- 0.686E+02 [km/sec]
c(3) = 0.155E-03 +/- 0.298E-04 [radii/min**2]
c(3) = 0.598E-01 +/- 0.115E-01 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.36437E+00 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.81991E-01 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.88107E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.18863E-02 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.45242E-04 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.93596E-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) = 130. +/- 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 23:39 = 0. km/sec

The TOTAL velocity at 23:39 = -18. km/sec

The TANGENTIAL velocity at 0: 4 = 0. km/sec

The TOTAL velocity at 0: 4 = 71. km/sec

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

The TOTAL velocity at 0:12 = 101. km/sec

The TANGENTIAL velocity at 1: 5 = 0. km/sec

The TOTAL velocity at 1: 5 = 291. km/sec

The TANGENTIAL velocity at 1:30 = 0. km/sec

The TOTAL velocity at 1:30 = 379. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.76

Standard Deviation in start time measurement = 0.409E+02

Value of reduced Chi Squared returned from nllst2 = 0.482E-02

Reduced Chi Squared = 0.491E-01

Chi Squared = 0.981E-01

The probability for exceeding chi square = 0.995E+00

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 = 0.9132E+00

The correlation between the data and the time**2 term = 0.9551E+00

The correlation between the data and the complete equation of motion = 0.9978E+00

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