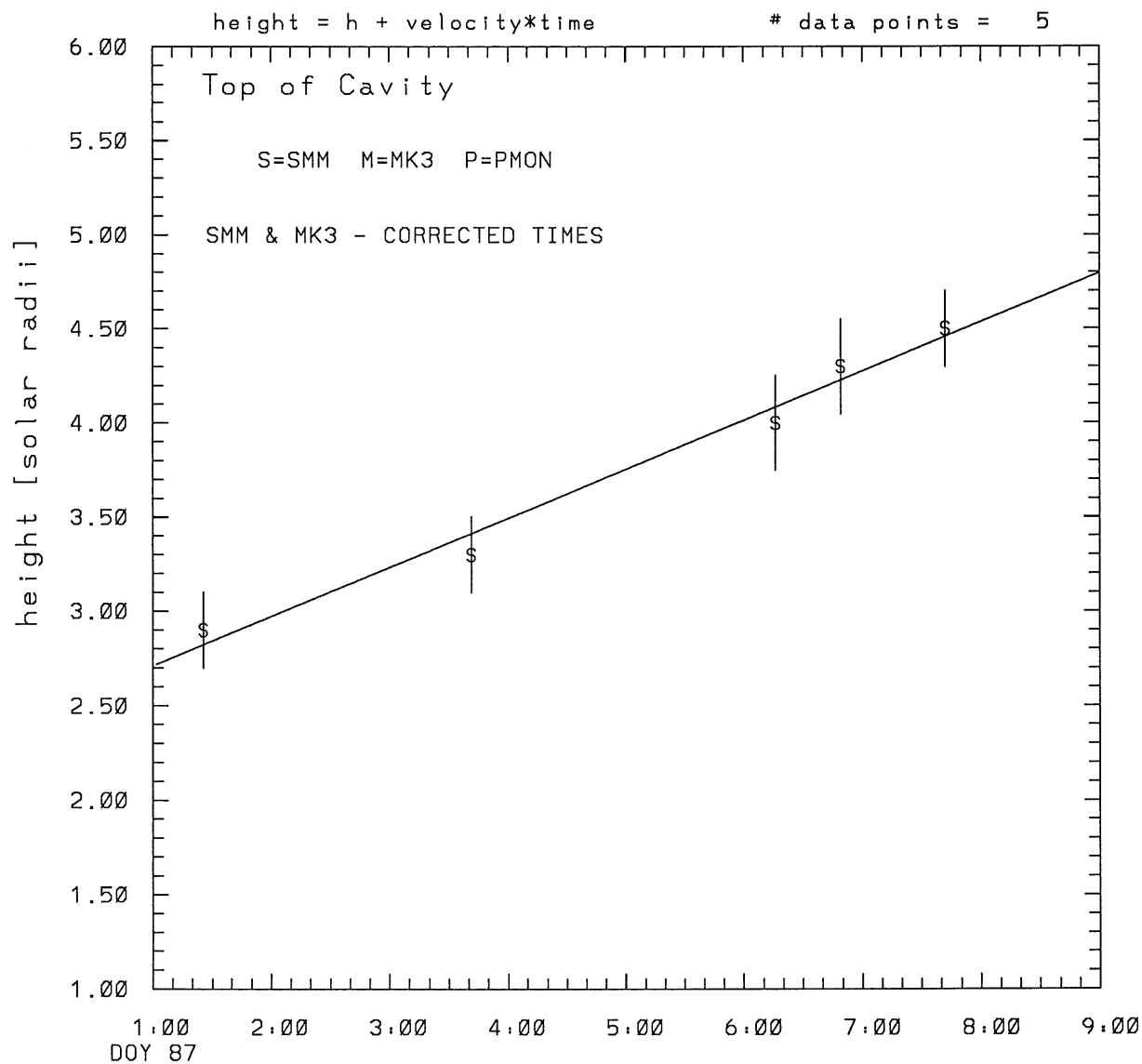
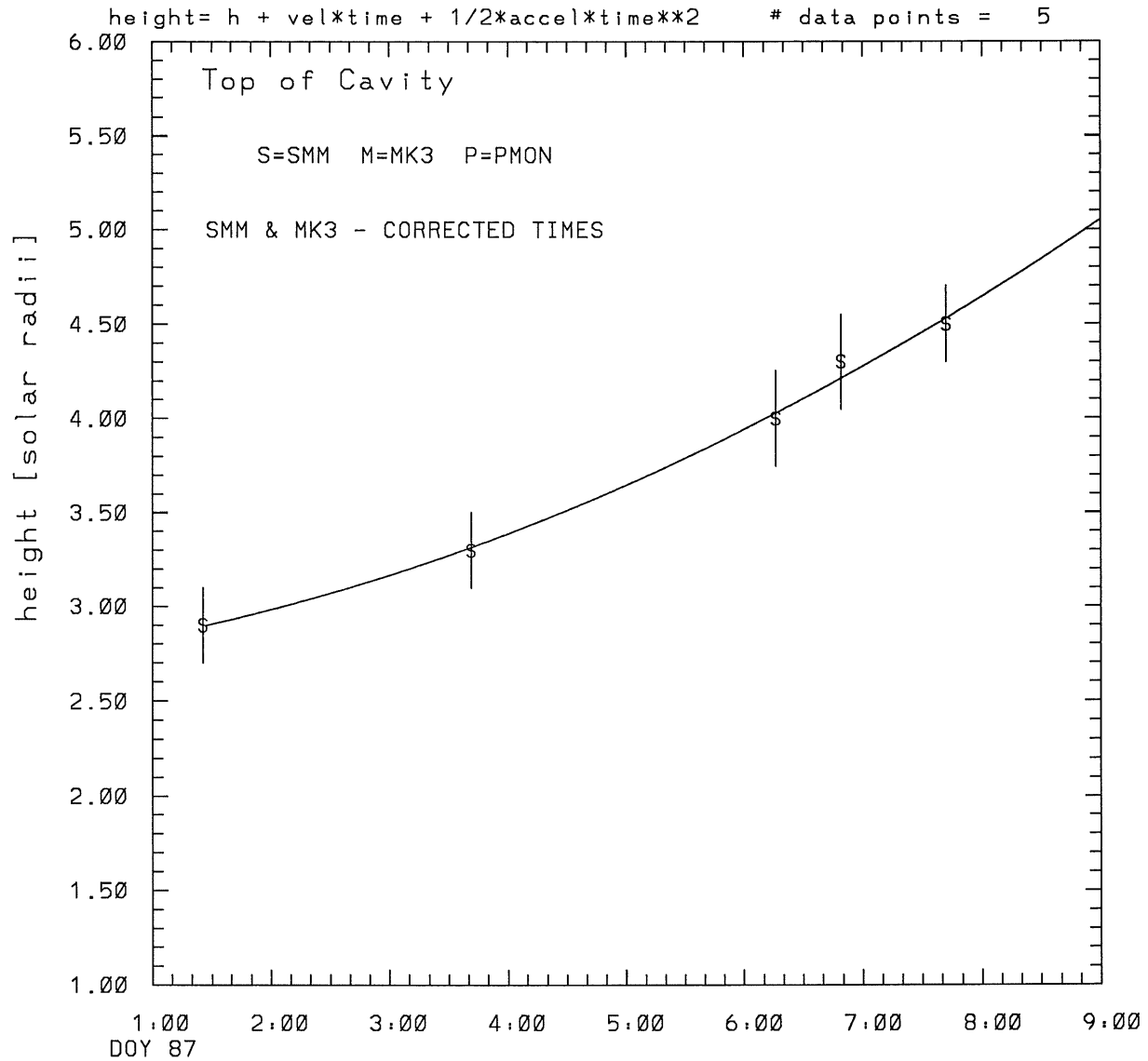


SMM C/P 1988 DOY 87 85 +/- 0 degrees



tstart=DOY 86 18.28 +/- 13.3 [min.]
radial velocity= 50. +/- 3. [km/sec]

SMM C/P 1988 DOY 87 85 +/- 0 degrees

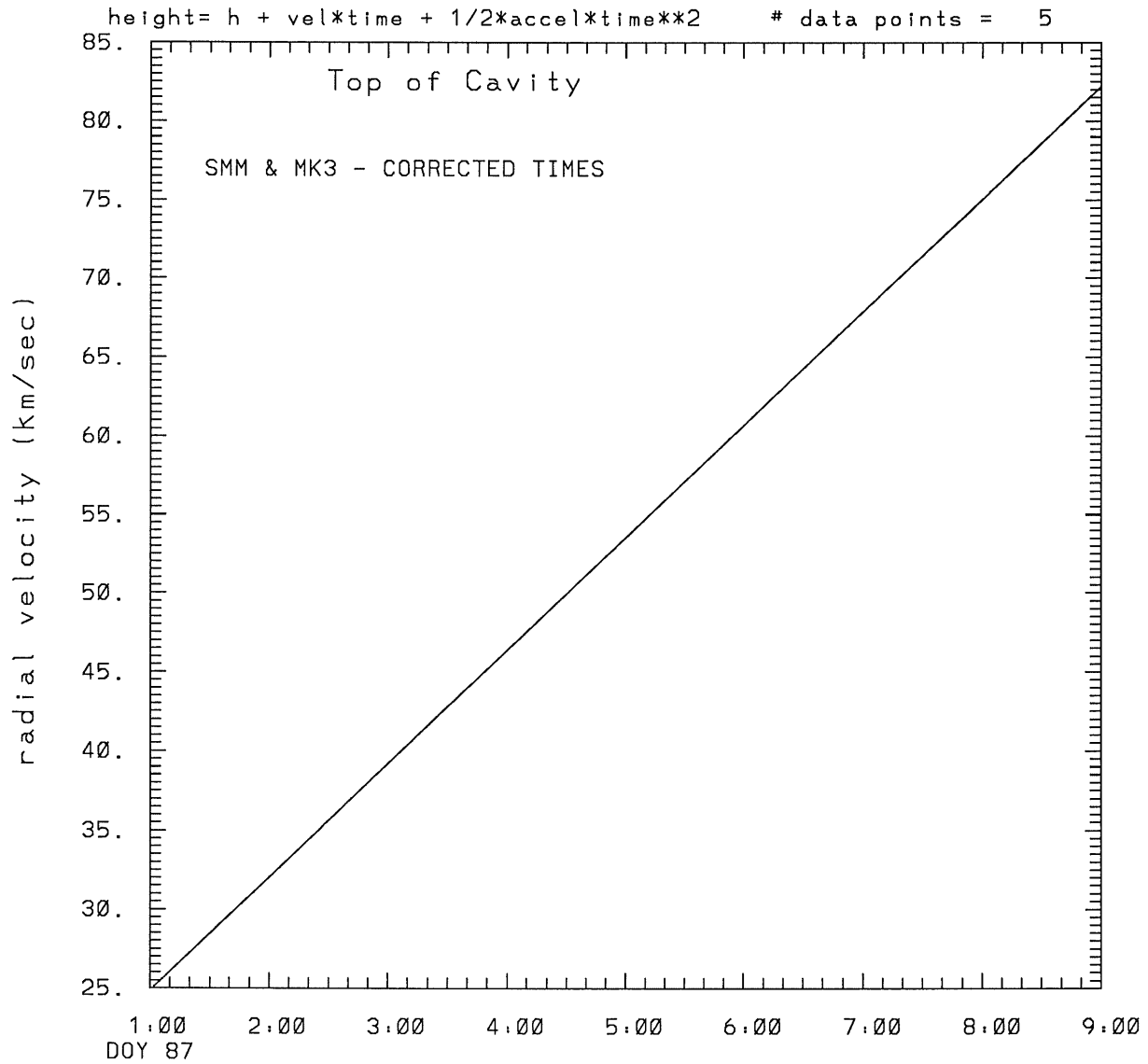


tstart=DOY 86 21:32 from derivative=0

Event begins at 2.61 Solar Radii

radial acceleration = 0.0020 ± 0.0006 [km/sec**2]

SMM C/P 1988 DOY 87 85 +/- 0 degrees



tstart=DOY 86 21:32 from derivative=0
Event begins at 2.61 Solar Radii
radial acceleration=0.199E-02 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	error in radii	error in radius	error in angle	error in angle	datatype
1988	87	1:25:33	2.90 +/-	0.20	85.0 +/-	0.5	SMM
1988	87	3:41:29	3.30 +/-	0.20	85.0 +/-	1.0	SMM
1988	87	6:16: 9	4.00 +/-	0.25	85.0 +/-	1.0	SMM
1988	87	6:49:11	4.30 +/-	0.25	85.0 +/-	1.0	SMM
1988	87	7:41:58	4.50 +/-	0.20	85.0 +/-	1.0	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.394E+03 \pm 0.133E+02$ [minutes]

In more convenient units:

Event began at DOY 86 18:28 $\pm 0.133E+02$ [minutes]

Origin defined at DOY 87 1: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 50. +/- 3. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.271E+01 \pm 0.782E-01$ [solar radii]
 $c(2) = 0.434E-02 \pm 0.282E-03$ [radii/min]
 $c(2) = 0.504E+02 \pm 0.327E+01$ [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 $c(1) = 0.97048E-01$ [radii] see Bevington pg. 114

error in $c(2) = 0.33883E-03$ [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) = 85. +/- 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 1:25 = 0. km/sec

The TOTAL velocity at 1:25 = 50. km/sec

The TANGENTIAL velocity at 3:41 = 0. km/sec

The TOTAL velocity at 3:41 = 50. km/sec

The TANGENTIAL velocity at 6:16 = 0. km/sec

The TOTAL velocity at 6:16 = 50. km/sec

The TANGENTIAL velocity at 6:49 = 0. km/sec

The TOTAL velocity at 6:49 = 50. km/sec

The TANGENTIAL velocity at 7:41 = 0. km/sec

The TOTAL velocity at 7:41 = 50. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.68

Standard Deviation in start time measurement = 0.138E+03

Error in time = 0.41756E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.831E-02

Reduced Chi Squared = 0.276E-01

Chi Squared = 0.827E-01

The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.991E+00

The probability that no LINEAR correlation exists between the variables = 0.1020E-02

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	87	1:25:33	2.90	+/- 0.20	85.0	+/- 0.5	SMM
1988	87	3:41:29	3.30	+/- 0.20	85.0	+/- 1.0	SMM
1988	87	6:16: 9	4.00	+/- 0.25	85.0	+/- 1.0	SMM
1988	87	6:49:11	4.30	+/- 0.25	85.0	+/- 1.0	SMM
1988	87	7:41:58	4.50	+/- 0.20	85.0	+/- 1.0	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

tstart=DOY 86 21:32 from derivative = 0

Event begins at 2.61 Solar Radii

Origin defined at DOY 87 1: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.199E-02 +/- 0.633E-03 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.284E+01 +/- 0.588E-01 [solar radii]
c(2) = 0.214E-02 +/- 0.716E-03 [radii/min]
c(2) = 0.249E+02 +/- 0.831E+01 [km/sec]
c(3) = 0.515E-05 +/- 0.164E-05 [radii/min**2]
c(3) = 0.199E-02 +/- 0.633E-03 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.86298E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.66467E-02 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.10278E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.15660E-03 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.23680E-05 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.42011E-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) = 85. +/- 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 1:25 = 0. km/sec

The TOTAL velocity at 1:25 = 28. km/sec

The TANGENTIAL velocity at 3:41 = 0. km/sec

The TOTAL velocity at 3:41 = 44. km/sec

The TANGENTIAL velocity at 6:16 = 0. km/sec

The TOTAL velocity at 6:16 = 63. km/sec

The TANGENTIAL velocity at 6:49 = 0. km/sec

The TOTAL velocity at 6:49 = 67. km/sec

The TANGENTIAL velocity at 7:41 = 0. km/sec

The TOTAL velocity at 7:41 = 73. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.68

Standard Deviation in start time measurement = 0.138E+03

Value of reduced Chi Squared returned from nllst2 = 0.258E-02

Reduced Chi Squared = 0.191E-01

Chi Squared = 0.382E-01

The probability for exceeding chi square = 0.997E+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 = 0.1043E+01

The correlation between the data and the time**2 term = 0.1052E+01

The correlation between the data and the complete equation of motion = 0.9956E+00

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