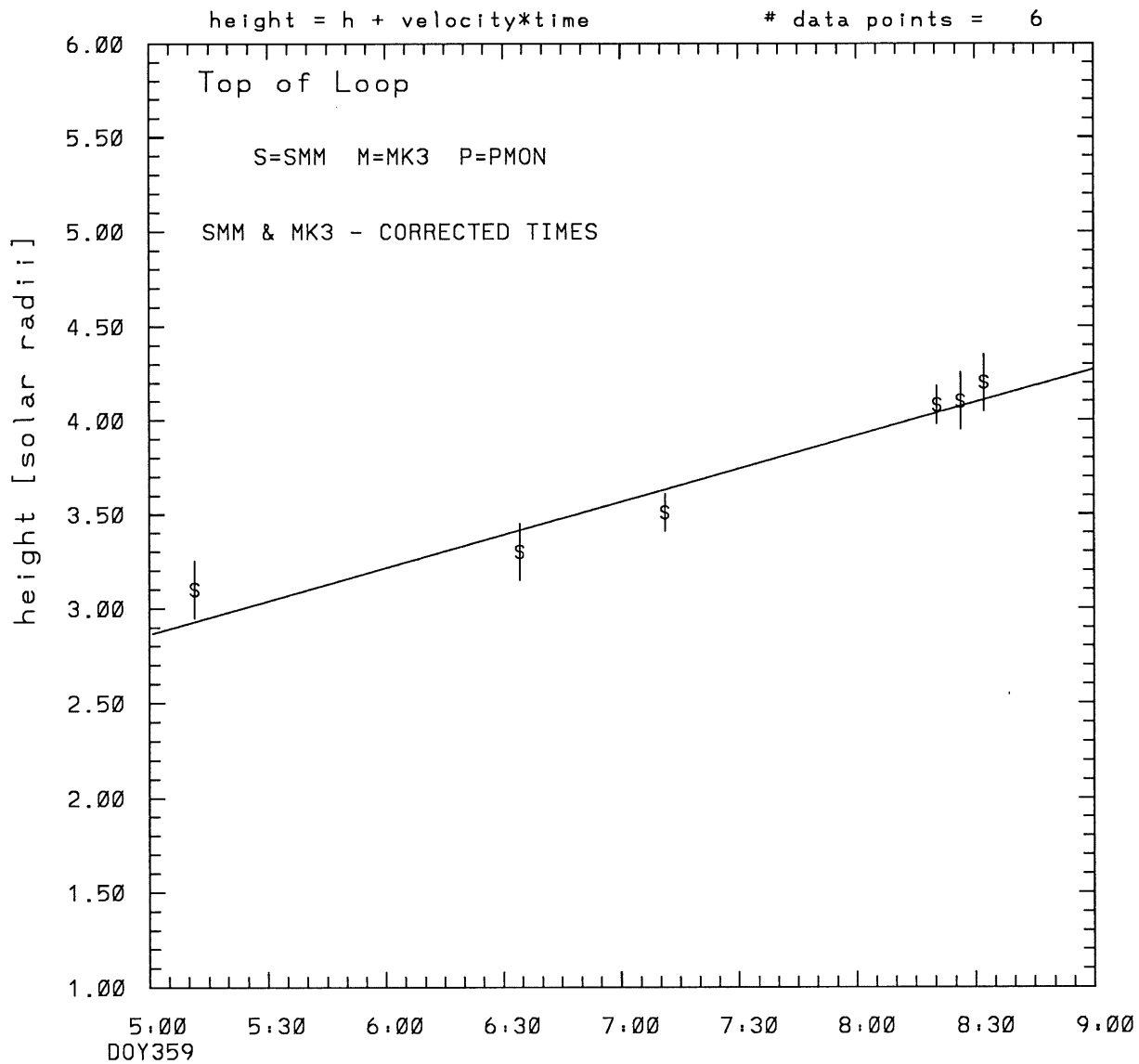
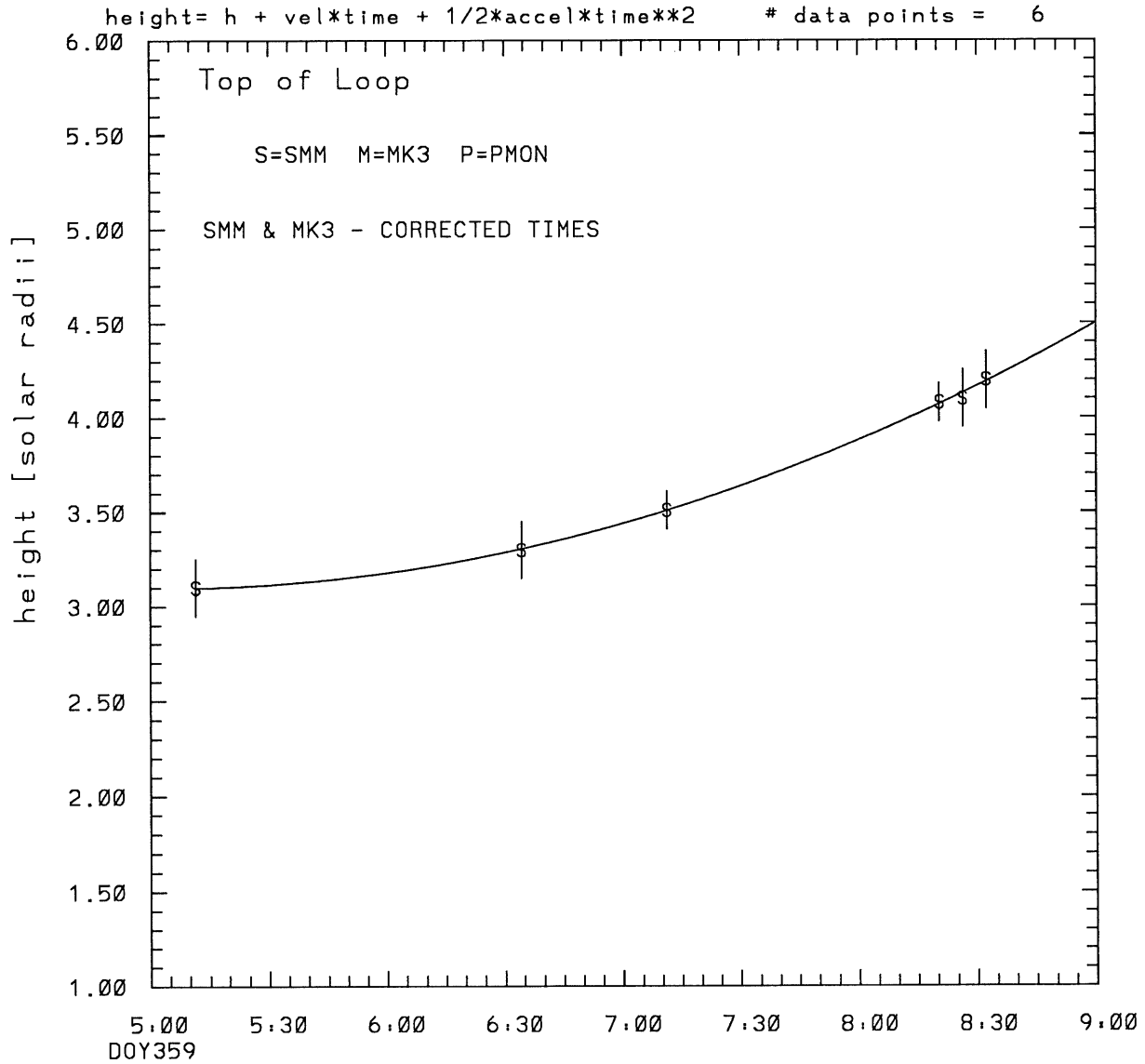


SMM C/P 1984 DOY359 257 +/- 0 degrees



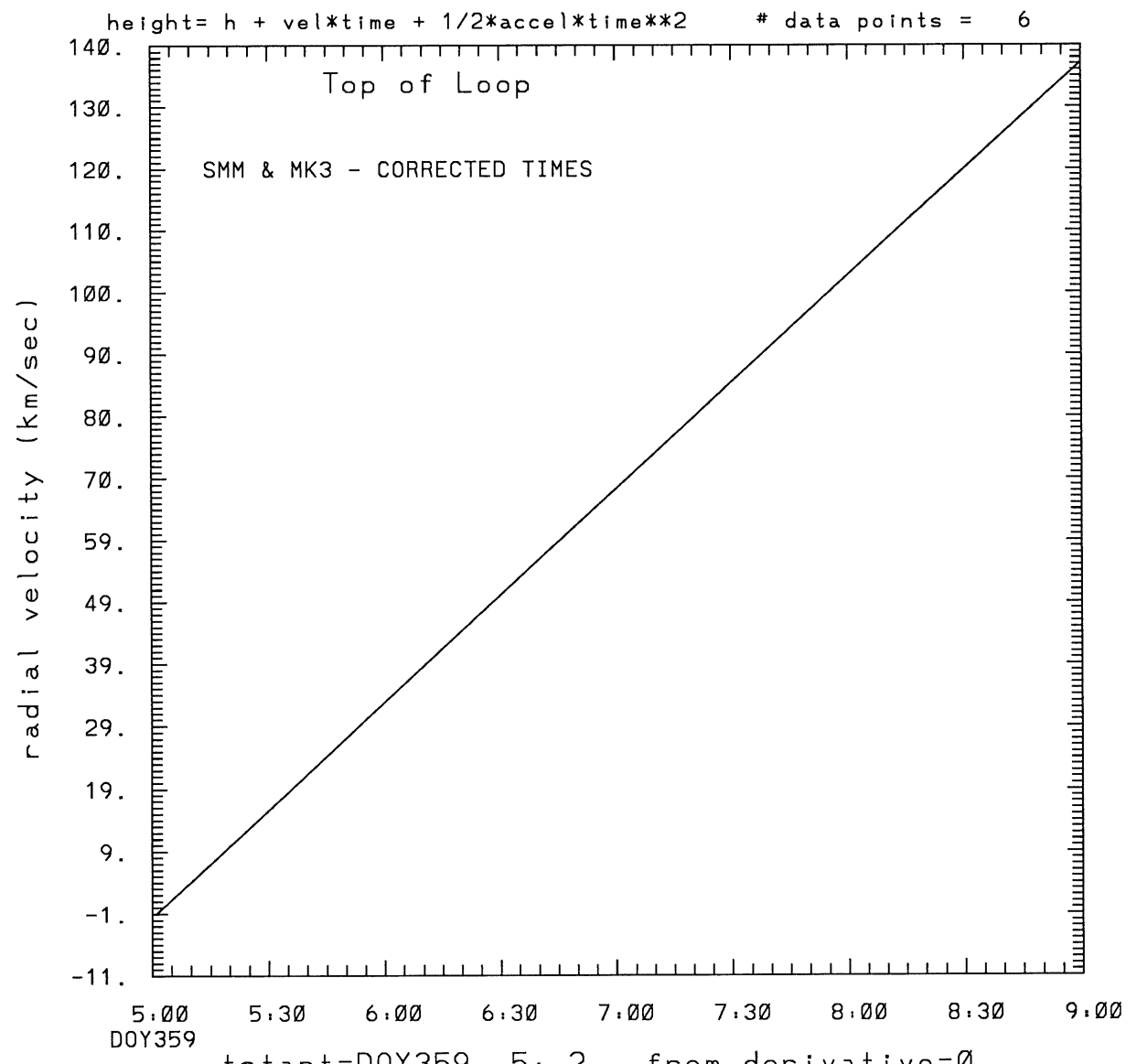
tstart=DOY358 23:43 +/- 18.8 [min.]
radial velocity= 68. +/- 8. [km/sec]

SMM C/P 1984 DOY359 257 +/- 0 degrees



tstart=DOY359 5.2 from derivative=0
Event begins at 3.10 Solar Radii
radial acceleration = 0.0096 +/- 0.0006 [km/sec**2]

SMM C/P 1984 DOY359 257 +/- 0 degrees



tstart=DOY359 5: 2 from derivative=0
Event begins at 3.10 Solar Radii
radial acceleration=0.963E-02 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in	angle	angle	datatype
1984	359	5:11:28	3.10	+/- 0.15	257.0	+/- 1.0	SMM	
1984	359	6:34:18	3.30	+/- 0.15	257.0	+/- 1.0	SMM	
1984	359	7:11:12	3.51	+/- 0.10	257.0	+/- 1.0	SMM	
1984	359	8:20:29	4.08	+/- 0.10	257.0	+/- 1.0	SMM	
1984	359	8:26:22	4.10	+/- 0.15	257.0	+/- 1.0	SMM	
1984	359	8:32:16	4.20	+/- 0.15	257.0	+/- 1.0	SMM	

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.317E+03 +/- 0.188E+02$ [minutes]

In more convenient units:

Event began at DOY 358 23:43 +/- 0.188E+02 [minutes]

Origin defined at DOY359 5: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 68. +/- 8. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.286E+01 +/- 0.115E+00 [solar radii]
c(2) = 0.587E-02 +/- 0.704E-03 [radii/min]
c(2) = 0.680E+02 +/- 0.817E+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)= 0.11729E+00 [radii] see Bevington pg. 114

error in c(2)= 0.73191E-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) = 257. +/- 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 5:11 = 0.000E+00 km/sec

The TOTAL velocity at 5:11 = 68. km/sec

The TANGENTIAL velocity at 6:34 = 0.000E+00 km/sec

The TOTAL velocity at 6:34 = 68. km/sec

The TANGENTIAL velocity at 7:11 = 0.000E+00 km/sec

The TOTAL velocity at 7:11 = 68. km/sec

The TANGENTIAL velocity at 8:20 = 0.000E+00 km/sec

The TOTAL velocity at 8:20 = 68. km/sec

The TANGENTIAL velocity at 8:26 = 0.000E+00 km/sec

The TOTAL velocity at 8:26 = 68. km/sec

The TANGENTIAL velocity at 8:32 = 0.000E+00 km/sec

The TOTAL velocity at 8:32 = 68. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.47

Standard Deviation in start time measurement = 0.729E+02

Error in time = 0.44590E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.126E-01

Reduced Chi Squared = 0.407E-01

Chi Squared = 0.163E+00

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.970E+00

The probability that no LINEAR correlation exists between the variables = 0.1358E-02

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

This is a 2 order run

INPUT:

year	day	time	radii	error in radius	error in angle	angle	datatype
1984	359	5:11:28	3.10	+/- 0.15	257.0	+/- 1.0	SMM
1984	359	6:34:18	3.30	+/- 0.15	257.0	+/- 1.0	SMM
1984	359	7:11:12	3.51	+/- 0.10	257.0	+/- 1.0	SMM
1984	359	8:20:29	4.08	+/- 0.10	257.0	+/- 1.0	SMM
1984	359	8:26:22	4.10	+/- 0.15	257.0	+/- 1.0	SMM
1984	359	8:32:16	4.20	+/- 0.15	257.0	+/- 1.0	SMM

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

tstart=DOY359 5: 2 from derivative = 0

Event begins at 3.10 Solar Radii

Origin defined at DOY359 5: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.963E-02 +/- 0.564E-03 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.310E+01 +/- 0.203E-01 [solar radii]
c(2) = -0.138E-03 +/- 0.363E-03 [radii/min]
c(2) = -0.160E+01 +/- 0.421E+01 [km/sec]
c(3) = 0.249E-04 +/- 0.146E-05 [radii/min**2]
c(3) = 0.963E-02 +/- 0.564E-03 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.22716E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.91009E-03 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.45420E-03 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.43567E-04 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.18727E-05 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.26693E-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) = 257. +/- 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 5:11 = 0.000E+00 km/sec

The TOTAL velocity at 5:11 = 5. km/sec

The TANGENTIAL velocity at 6:34 = 0.000E+00 km/sec

The TOTAL velocity at 6:34 = 53. km/sec

The TANGENTIAL velocity at 7:11 = 0.000E+00 km/sec

The TOTAL velocity at 7:11 = 74. km/sec

The TANGENTIAL velocity at 8:20 = 0.000E+00 km/sec

The TOTAL velocity at 8:20 = 114. km/sec

The TANGENTIAL velocity at 8:26 = 0.000E+00 km/sec

The TOTAL velocity at 8:26 = 118. km/sec

The TANGENTIAL velocity at 8:32 = 0.000E+00 km/sec

The TOTAL velocity at 8:32 = 121. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.47

Standard Deviation in start time measurement = 0.729E+02

Value of reduced Chi Squared returned from nllst2 = 0.213E-03

Reduced Chi Squared = 0.180E-02

Chi Squared = 0.539E-02

The probability for exceeding chi square = 0.100E+01

For a second order fit 3 correlation coefficients are given:

(Using equation of motion: $r = a + bt + at^{**2}$)

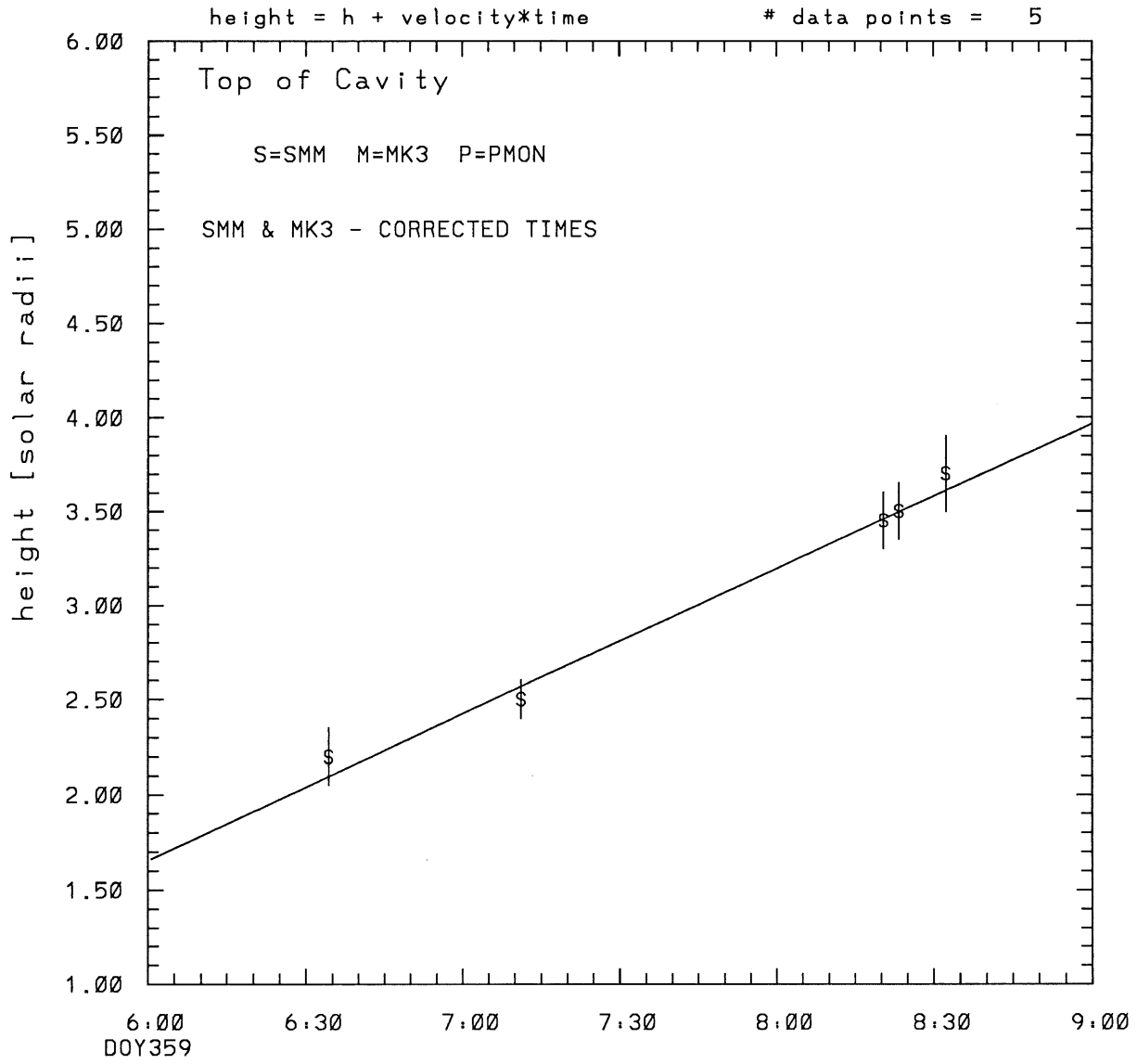
The correlation between the data and the term linear in time = 0.8641E+00

The correlation between the data and the time**2 term = 0.9153E+00

The correlation between the data and the complete equation of motion = 0.9987E+00

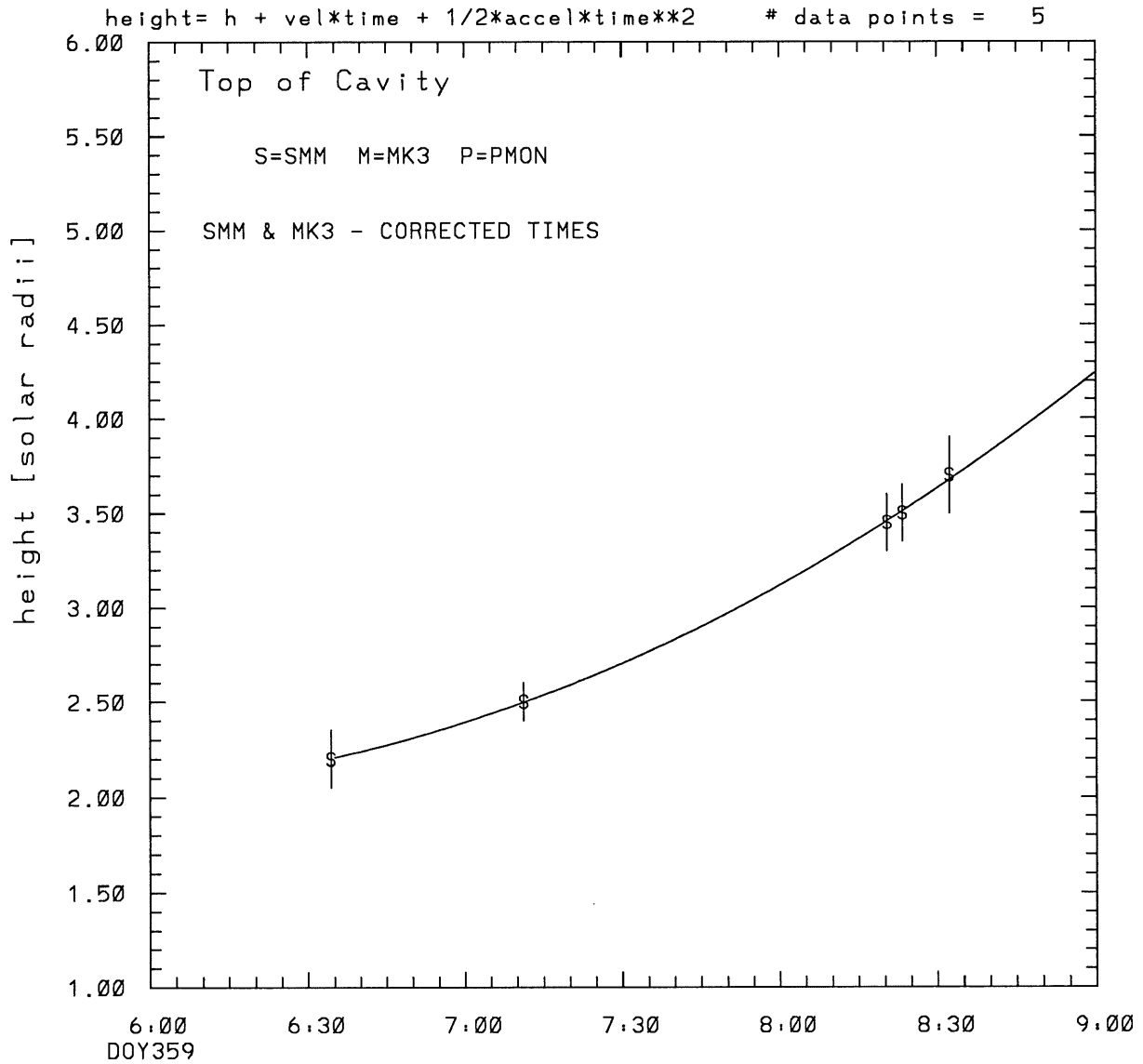
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

SMM C/P 1984 DOY359 265 +/- 0 degrees



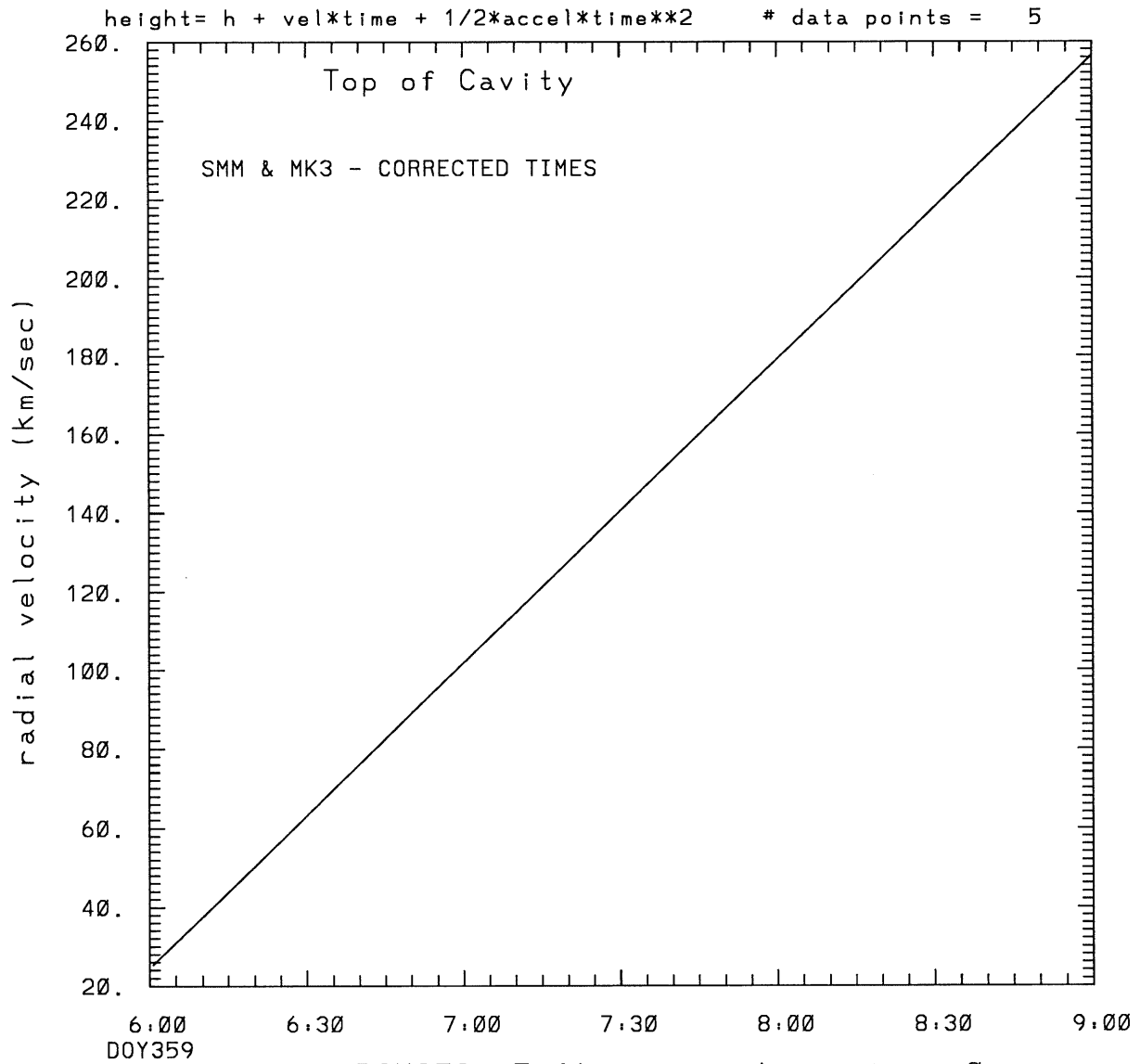
tstart=DOY359 5.11 +/- 2.3 [min.]
radial velocity= 149. +/- 9. [km/sec]

SMM C/P 1984 DOY359 265 +/- 0 degrees



tstart=DOY359 5.41 from derivative=0
Event begins at 2.05 Solar Radii
radial acceleration = 0.0215 +/- 0.0018 [km/sec**2]

SMM C/P 1984 DOY359 265 +/- 0 degrees



DOY359
tstart=DOY359 5:41 from derivative=0
Event begins at 2.05 Solar Radii
radial acceleration=0.215E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1984	359	6:34:18	2.20	+/- 0.15	265.0	+/- 0.5	SMM
1984	359	7:11:12	2.50	+/- 0.10	265.0	+/- 0.5	SMM
1984	359	8:20:29	3.45	+/- 0.15	265.0	+/- 1.0	SMM
1984	359	8:23:24	3.50	+/- 0.15	265.0	+/- 1.0	SMM
1984	359	8:32:16	3.70	+/- 0.20	265.0	+/- 1.0	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.509E+02 +/- 0.227E+01$ [minutes]

In more convenient units:

Event began at DOY 359 5:11 +/- 0.227E+01 [minutes]

Origin defined at DOY359 6: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 149. +/- 9. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.165E+01 +/- 0.817E-01 [solar radii]
c(2) = 0.128E-01 +/- 0.767E-03 [radii/min]
c(2) = 0.149E+03 +/- 0.890E+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)= 0.10076E+00 [radii] see Bevington pg. 114

error in c(2)= 0.85320E-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 6:34 = 0.000E+00 km/sec

The TOTAL velocity at 6:34 = 149. km/sec

The TANGENTIAL velocity at 7:11 = 0.000E+00 km/sec

The TOTAL velocity at 7:11 = 149. km/sec

The TANGENTIAL velocity at 8:20 = 0.000E+00 km/sec

The TOTAL velocity at 8:20 = 149. km/sec

The TANGENTIAL velocity at 8:23 = 0.000E+00 km/sec

The TOTAL velocity at 8:23 = 149. km/sec

The TANGENTIAL velocity at 8:32 = 0.000E+00 km/sec

The TOTAL velocity at 8:32 = 149. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.67

Standard Deviation in start time measurement = 0.470E+02

Error in time = 0.12096E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.567E-02

Reduced Chi Squared = 0.206E-01

Chi Squared = 0.618E-01

The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.994E+00

The probability that no LINEAR correlation exists between the variables = 0.5272E-03

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

This is a 2 order run

INPUT:

year	doy	time	error in radii	error in radius	error in angle	error in angle	datatype
1984	359	6:34:18	2.20 +/- 0.15	265.0 +/- 0.5	265.0 +/- 0.5	265.0 +/- 0.5	SMM
1984	359	7:11:12	2.50 +/- 0.10	265.0 +/- 0.5	265.0 +/- 0.5	265.0 +/- 0.5	SMM
1984	359	8:20:29	3.45 +/- 0.15	265.0 +/- 1.0	265.0 +/- 1.0	265.0 +/- 1.0	SMM
1984	359	8:23:24	3.50 +/- 0.15	265.0 +/- 1.0	265.0 +/- 1.0	265.0 +/- 1.0	SMM
1984	359	8:32:16	3.70 +/- 0.20	265.0 +/- 1.0	265.0 +/- 1.0	265.0 +/- 1.0	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

tstart=DOY359 5:41 from derivative = 0
Event begins at 2.05 Solar Radii
Origin defined at DOY359 6: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.215E-01 +/- 0.183E-02 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.207E+01 +/- 0.377E-01 [solar radii]
c(2) = 0.211E-02 +/- 0.923E-03 [radii/min]
c(2) = 0.245E+02 +/- 0.107E+02 [km/sec]
c(3) = 0.555E-04 +/- 0.473E-05 [radii/min**2]
c(3) = 0.215E-01 +/- 0.183E-02 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.60366E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.66948E-02 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.16115E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.18756E-03 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.84239E-05 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.10948E-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) = 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 6:34 = 0.000E+00 km/sec

The TOTAL velocity at 6:34 = 69. km/sec

The TANGENTIAL velocity at 7:11 = 0.000E+00 km/sec

The TOTAL velocity at 7:11 = 116. km/sec

The TANGENTIAL velocity at 8:20 = 0.000E+00 km/sec

The TOTAL velocity at 8:20 = 206. km/sec

The TANGENTIAL velocity at 8:23 = 0.000E+00 km/sec

The TOTAL velocity at 8:23 = 209. km/sec

The TANGENTIAL velocity at 8:32 = 0.000E+00 km/sec

The TOTAL velocity at 8:32 = 221. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.67

Standard Deviation in start time measurement = 0.470E+02

Value of reduced Chi Squared returned from nllst2 = 0.161E-03

Reduced Chi Squared = 0.195E-02

Chi Squared = 0.390E-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 = 0.9566E+00

The correlation between the data and the time**2 term = 0.9947E+00

The correlation between the data and the complete equation of motion = 0.9990E+00

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