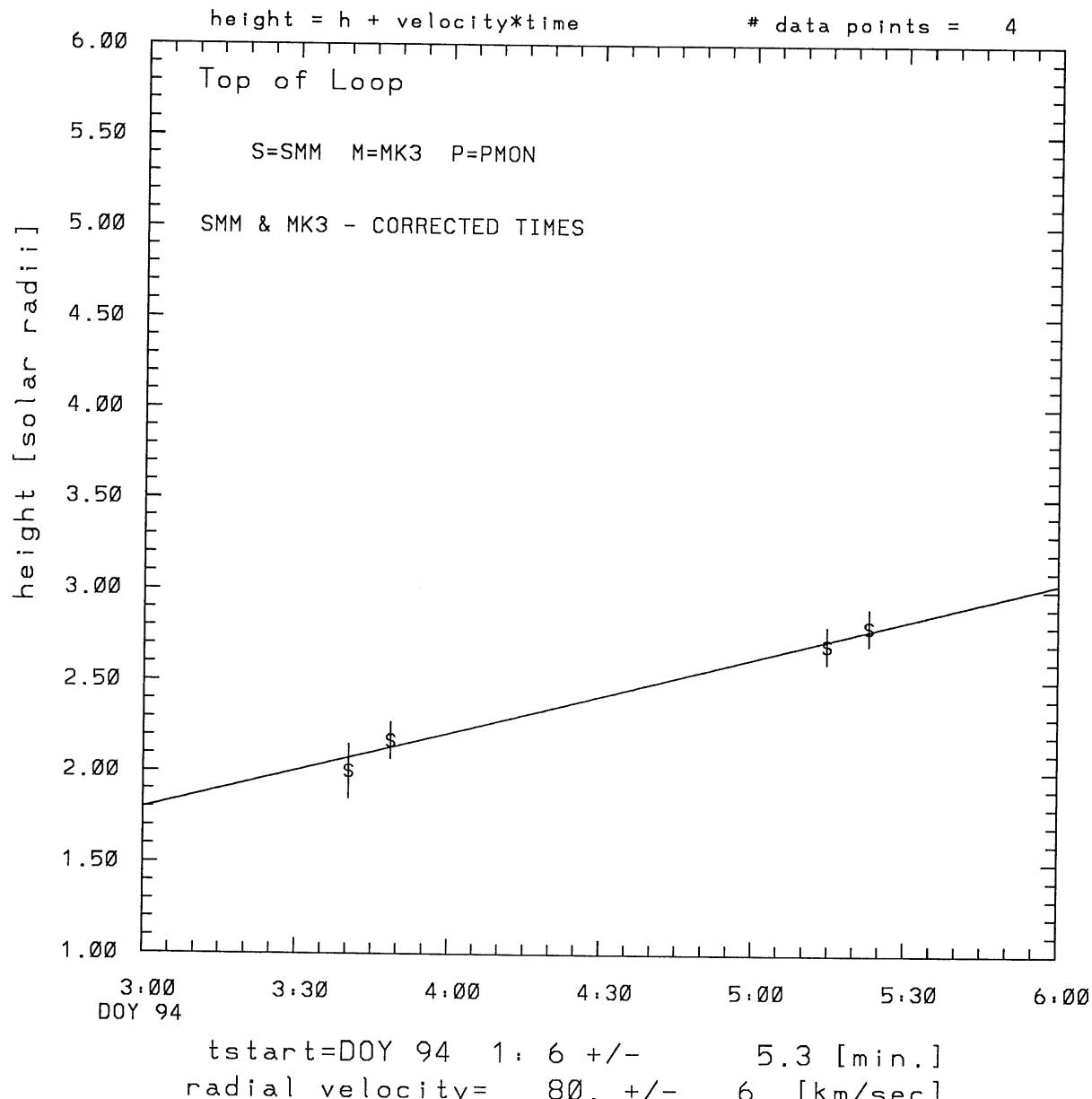
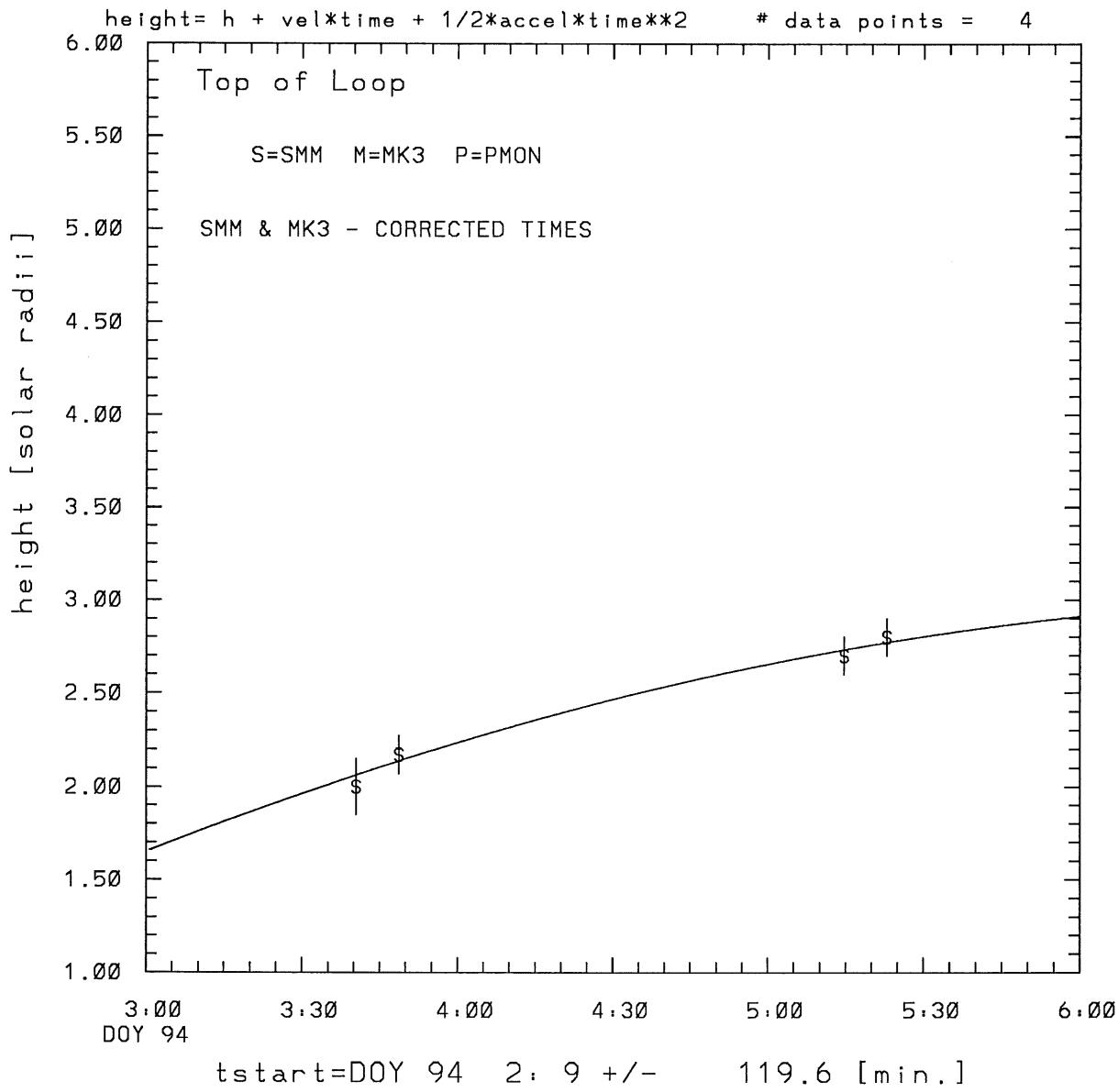


SMM C/P 1987 DOY 94 115 +/- 0 degrees

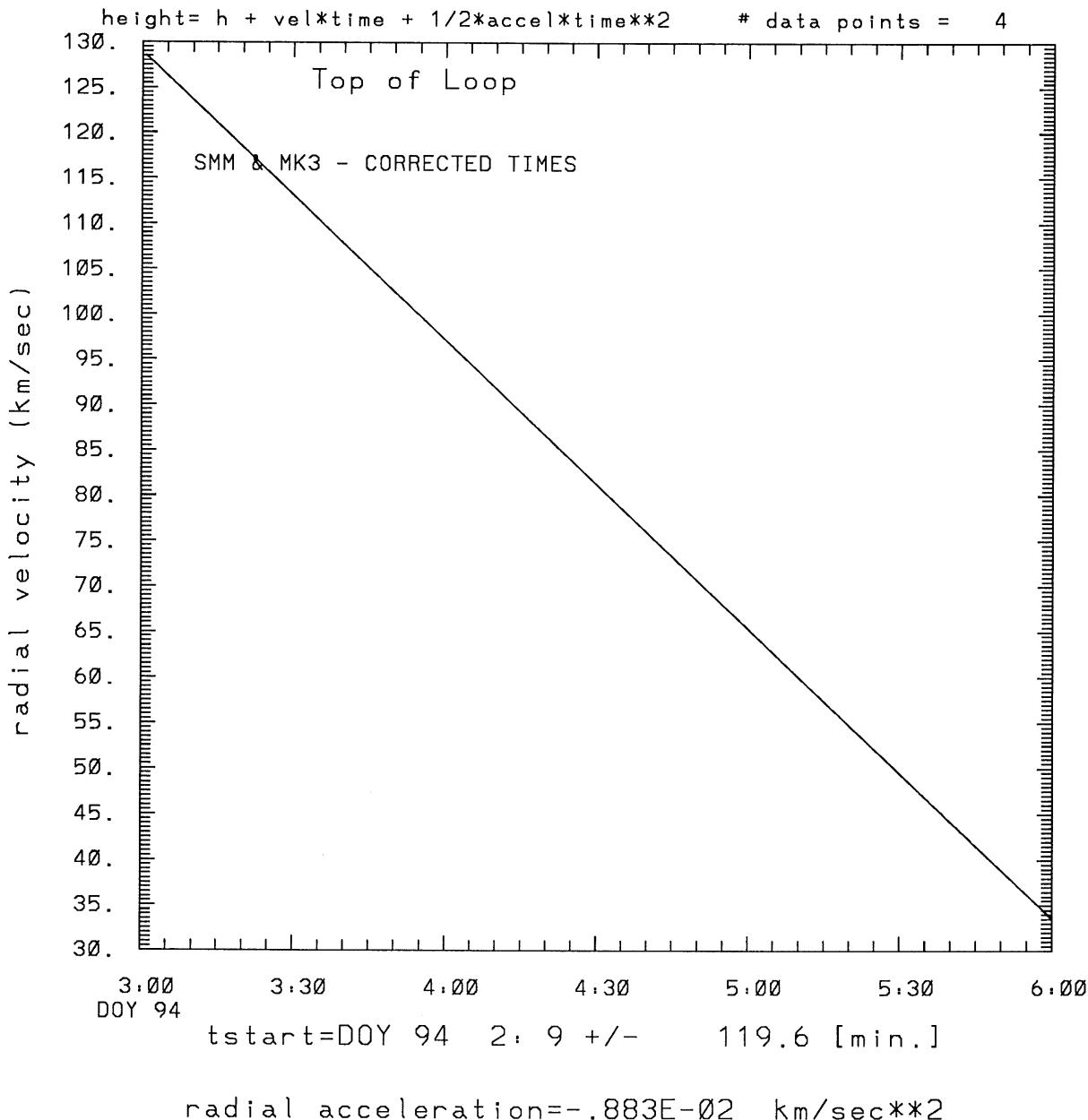


SMM C/P 1987 DOY 94 115 +/- 0 degrees



radial acceleration=-0.0088 +/- 0.0269 [km/sec**2]

SMM C/P 1987 DOY 94 115 +/- 0 degrees



This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1987	94	3:40:28	2.00	+/- 0.15	115.0	+/- 0.5	SMM
1987	94	3:48:42	2.17	+/- 0.10	115.0	+/- 0.5	SMM
1987	94	5:14:44	2.70	+/- 0.10	115.0	+/- 0.5	SMM
1987	94	5:22:57	2.80	+/- 0.10	115.0	+/- 0.5	SMM

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

Event began at t = 0 + -0.116E+03 +/- 0.529E+01 [minutes]

In more convenient units:

Event began at DOY 94 1: 6 +/- 0.529E+01 [minutes]

Origin defined at DOY 94 3: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 80. +/- 6. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.180E+01 +/- 0.523E-01 [solar radii]
c(2) = 0.689E-02 +/- 0.475E-03 [radii/min]
c(2) = 0.799E+02 +/- 0.551E+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)= 0.69165E-01 [radii] see Bevington pg. 114

error in c(2)= 0.67024E-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) = 115. +/- 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 3:40 = 0.000E+00 km/sec
The TOTAL velocity at 3:40 = 80. km/sec

The TANGENTIAL velocity at 3:48 = 0.000E+00 km/sec
The TOTAL velocity at 3:48 = 80. km/sec

The TANGENTIAL velocity at 5:14 = 0.000E+00 km/sec
The TOTAL velocity at 5:14 = 80. km/sec

The TANGENTIAL velocity at 5:22 = 0.000E+00 km/sec
The TOTAL velocity at 5:22 = 80. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.39
Standard Deviation in start time measurement = 0.473E+02
Error in time = 0.13021E+02 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.191E-02
Reduced Chi Squared = 0.590E-02
Chi Squared = 0.118E-01
The probability for exceeding chi square = 0.998E+00

The correlation coefficient = 0.992E+00
The probability that no LINEAR correlation exists between the variables = 0.7721E-02
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1987	94	3:40:28	2.00	+/- 0.15	115.0	+/- 0.5	SMM
1987	94	3:48:42	2.17	+/- 0.10	115.0	+/- 0.5	SMM
1987	94	5:14:44	2.70	+/- 0.10	115.0	+/- 0.5	SMM
1987	94	5:22:57	2.80	+/- 0.10	115.0	+/- 0.5	SMM

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

Event began at t = 0 + -0.527E+02 +/- 0.120E+03 [minutes]

In more convenient units:

Event began at DOY 94 2: 9 +/- 0.120E+03 [minutes]

Origin defined at DOY 94 3: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = -0.883E-02 +/- 0.269E-01 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.165E+01 +/- 0.451E+00 [solar radii]
c(2) = 0.111E-01 +/- 0.129E-01 [radii/min]
c(2) = 0.129E+03 +/- 0.150E+03 [km/sec]
c(3) = -0.228E-04 +/- 0.697E-04 [radii/min**2]
c(3) = -0.883E-02 +/- 0.269E-01 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.66385E+00 [radii] Bevington pg 154 (8-30)

Exact error in c(1) = 0.31973E+00 [radii] Bevington pg 154 (8-28)

Approximate error in c(2) = 0.19563E-01 [radii/min] Bevington pg 154 (8-30)

Exact error in c(2) = 0.90119E-02 [radii/min] Bevington pg 154 (8-28)

Approximate error in c(3) = 0.10655E-03 [radii/min**2] Bevington pg 154 (8-30)

Exact error in c(3) = 0.48199E-04 [radii/min**2] 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) = 115. +/- 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 3:40 = 0.000E+00 km/sec

The TOTAL velocity at 3:40 = 108. km/sec

The TANGENTIAL velocity at 3:48 = 0.000E+00 km/sec

The TOTAL velocity at 3:48 = 103. km/sec

The TANGENTIAL velocity at 5:14 = 0.000E+00 km/sec

The TOTAL velocity at 5:14 = 58. km/sec

The TANGENTIAL velocity at 5:22 = 0.000E+00 km/sec

The TOTAL velocity at 5:22 = 53. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.39

Standard Deviation in start time measurement = 0.473E+02

Value of reduced Chi Squared returned from nllst2 = 0.271E-02

Reduced Chi Squared = 0.124E-01

Chi Squared = 0.124E-01

The probability for exceeding chi square = 0.958E+00

For a second order fit 3 correlation coefficients are given:

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

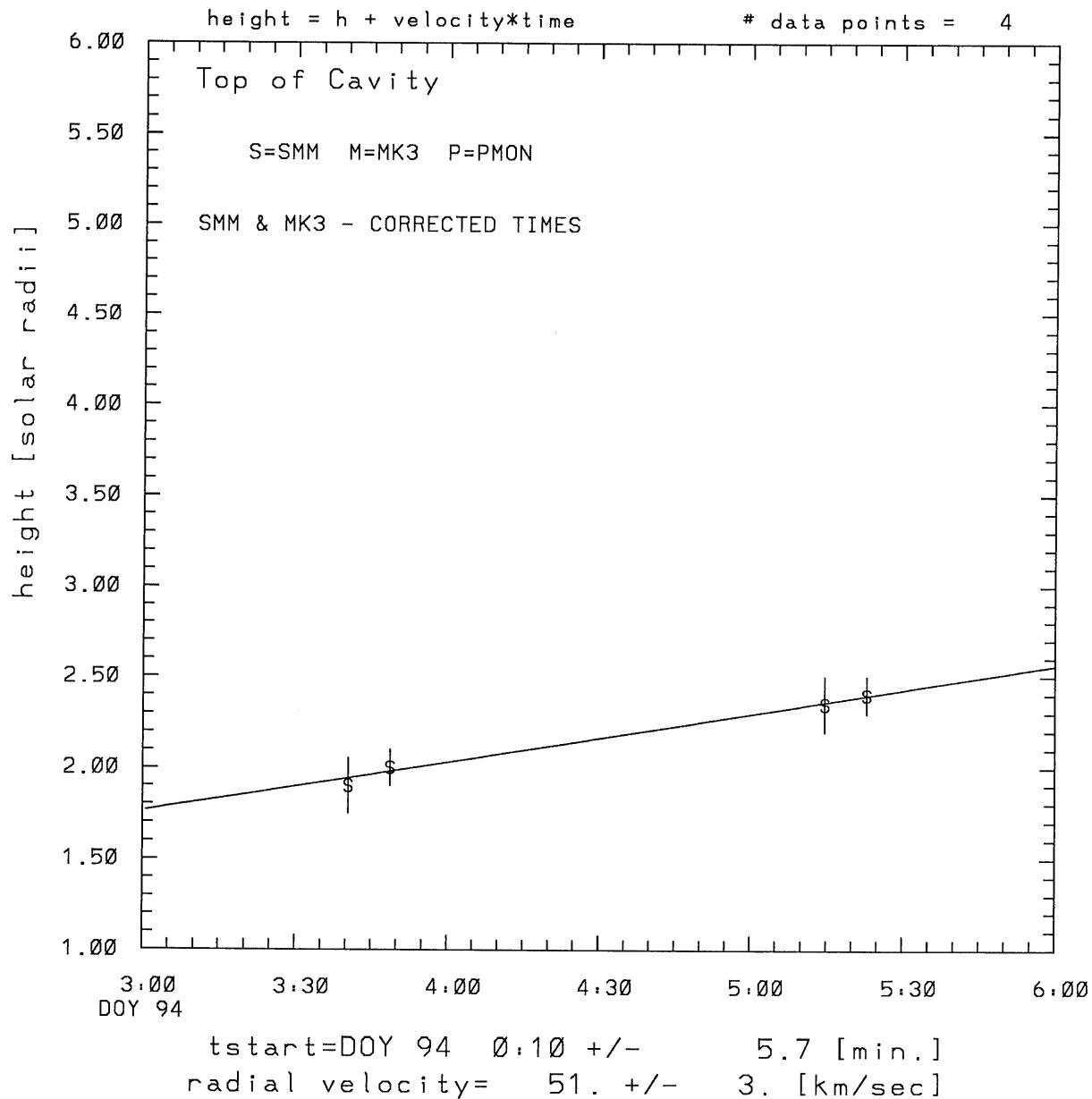
The correlation between the data and the term linear in time = 0.9788E+00

The correlation between the data and the time **2 term = 0.9842E+00

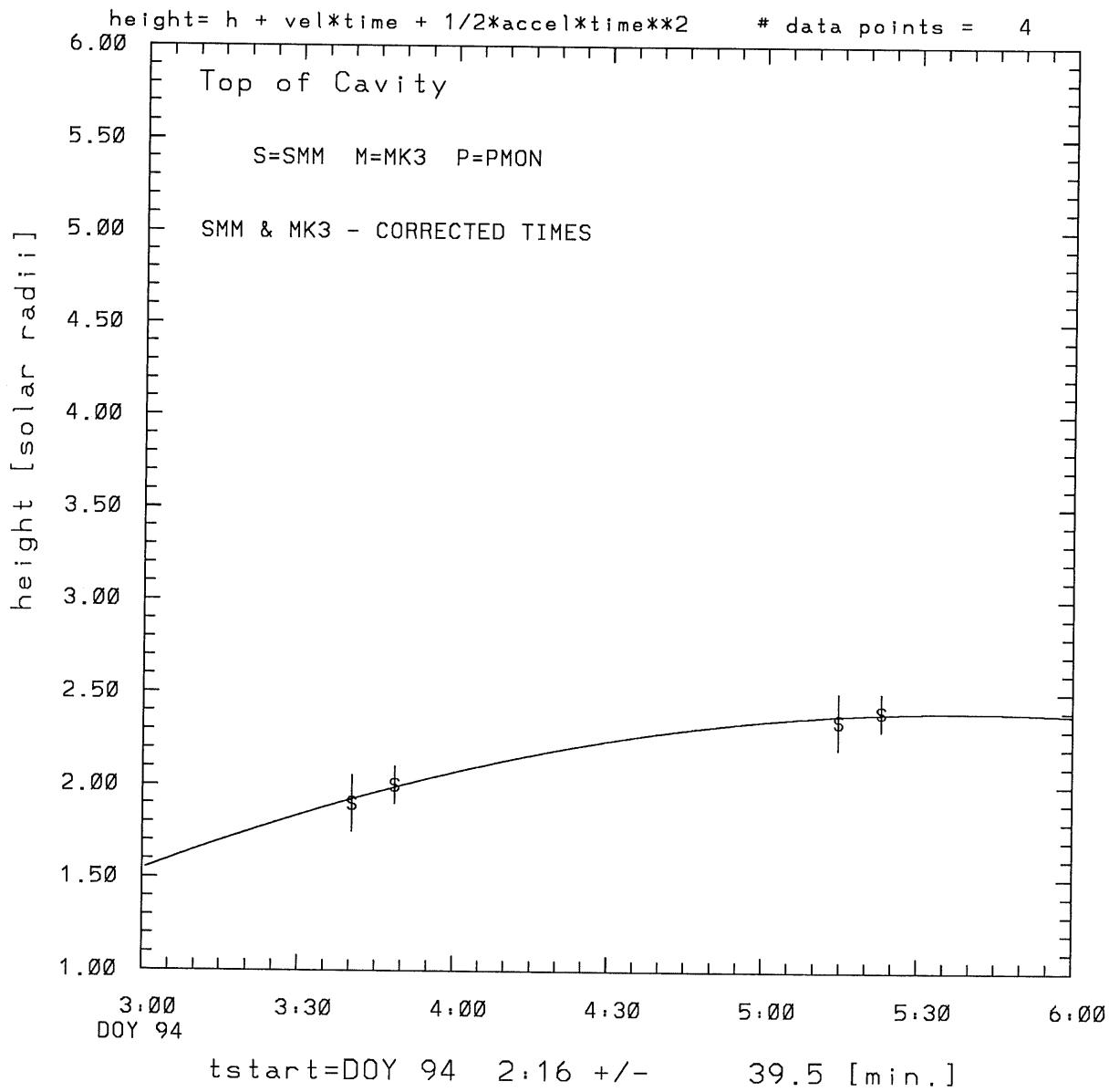
The correlation between the data and the complete equation of motion = 0.9817E+00

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

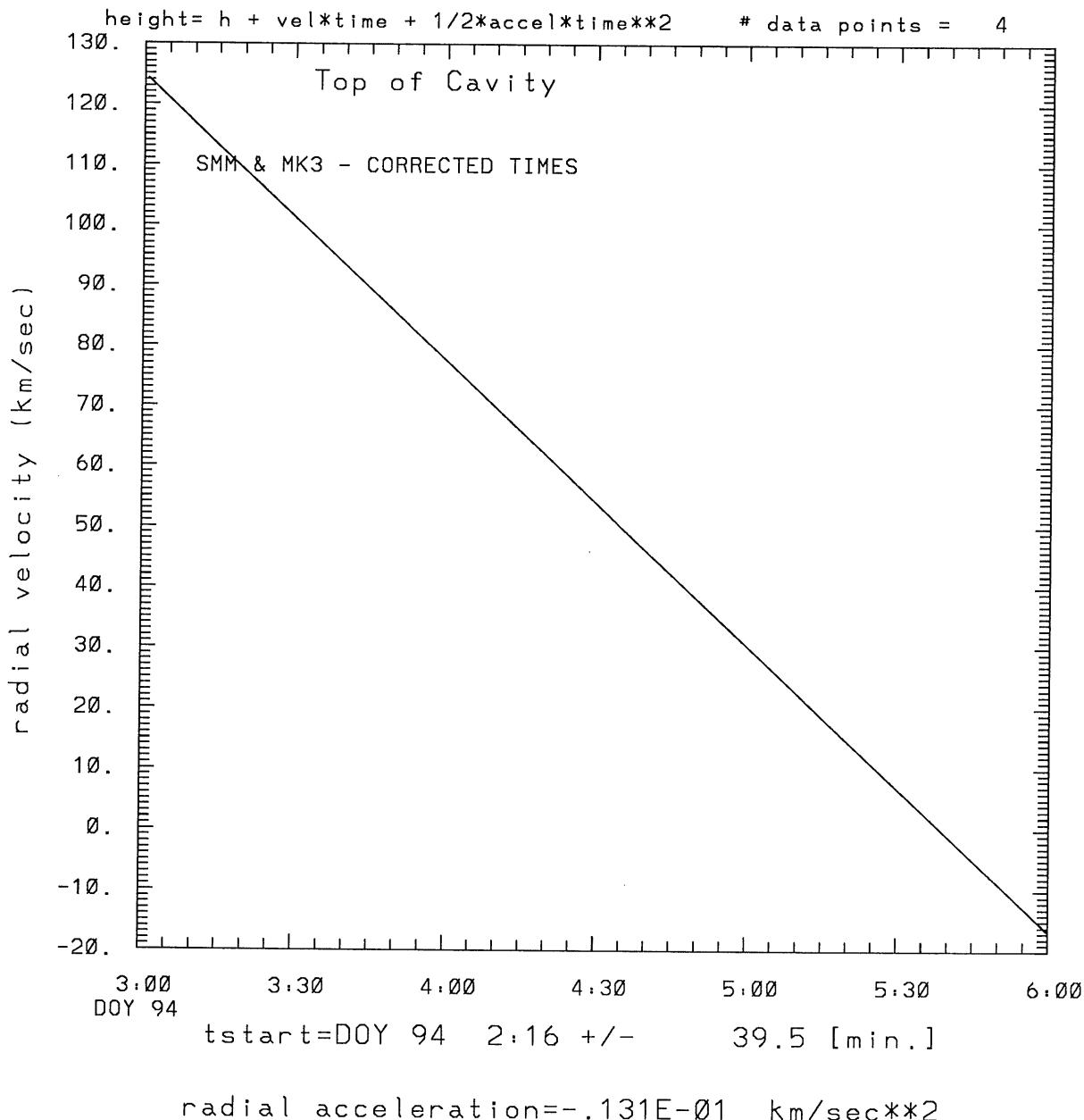
SMM C/P 1987 DOY 94 115 +/- 0 degrees



SMM C/P 1987 DOY 94 115 +/- 0 degrees



SMM C/P 1987 DOY 94 115 +/- 0 degrees



This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1987	94	3:40:28	1.90	+/- 0.15	115.0	+/- 0.5	SMM
1987	94	3:48:42	2.00	+/- 0.10	115.0	+/- 0.5	SMM
1987	94	5:14:44	2.35	+/- 0.15	115.0	+/- 0.5	SMM
1987	94	5:22:57	2.40	+/- 0.10	115.0	+/- 0.5	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at t = 0 + -0.172E+03 +/- 0.572E+01 [minutes]

In more convenient units:

Event began at DOY 94 0:10 +/- 0.572E+01 [minutes]

Origin defined at DOY 94 3: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 51. +/- 3. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.176E+01 +/- 0.271E-01 [solar radii]
c(2) = 0.444E-02 +/- 0.259E-03 [radii/min]
c(2) = 0.515E+02 +/- 0.301E+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)= 0.37547E-01 [radii] see Bevington pg. 114

error in c(2)= 0.36384E-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) = 115. +/- 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 3:40 = 0.000E+00 km/sec

The TOTAL velocity at 3:40 = 51. km/sec

The TANGENTIAL velocity at 3:48 = 0.000E+00 km/sec

The TOTAL velocity at 3:48 = 51. km/sec

The TANGENTIAL velocity at 5:14 = 0.000E+00 km/sec

The TOTAL velocity at 5:14 = 51. km/sec

The TANGENTIAL velocity at 5:22 = 0.000E+00 km/sec

The TOTAL velocity at 5:22 = 51. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.25

Standard Deviation in start time measurement = 0.473E+02

Error in time = 0.10971E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.601E-03

Reduced Chi Squared = 0.153E-02

Chi Squared = 0.307E-02

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 = 0.5503E-02

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

This is a 2 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1987	94	3:40:28	1.90	+/- 0.15	115.0	+/- 0.5	SMM
1987	94	3:48:42	2.00	+/- 0.10	115.0	+/- 0.5	SMM
1987	94	5:14:44	2.35	+/- 0.15	115.0	+/- 0.5	SMM
1987	94	5:22:57	2.40	+/- 0.10	115.0	+/- 0.5	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at t = 0 + -0.444E+02 +/- 0.395E+02 [minutes]

In more convenient units:

Event began at DOY 94 2:16 +/- 0.395E+02 [minutes]

Origin defined at DOY 94 3: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = -0.131E-01 +/- 0.133E-01 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.154E+01 +/- 0.224E+00 [solar radii]
c(2) = 0.108E-01 +/- 0.642E-02 [radii/min]
c(2) = 0.125E+03 +/- 0.745E+02 [km/sec]
c(3) = -0.339E-04 +/- 0.344E-04 [radii/min**2]
c(3) = -0.131E-01 +/- 0.133E-01 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.32499E+00 [radii] Bevington pg 154 (8-30)

Exact error in c(1) = 0.17137E+00 [radii] Bevington pg 154 (8-28)

Approximate error in c(2) = 0.95769E-02 [radii/min] Bevington pg 154 (8-30)

Exact error in c(2) = 0.48513E-02 [radii/min] Bevington pg 154 (8-28)

Approximate error in c(3) = 0.52160E-04 [radii/min**] Bevington pg 154 (8-30)

Exact error in c(3) = 0.25692E-04 [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) = 115. +/- 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 3:40 = 0.000E+00 km/sec

The TOTAL velocity at 3:40 = 93. km/sec

The TANGENTIAL velocity at 3:48 = 0.000E+00 km/sec

The TOTAL velocity at 3:48 = 87. km/sec

The TANGENTIAL velocity at 5:14 = 0.000E+00 km/sec

The TOTAL velocity at 5:14 = 19. km/sec

The TANGENTIAL velocity at 5:22 = 0.000E+00 km/sec

The TOTAL velocity at 5:22 = 12. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.25

Standard Deviation in start time measurement = 0.473E+02

Value of reduced Chi Squared returned from nllst2 = 0.607E-03

Reduced Chi Squared = 0.373E-02

Chi Squared = 0.373E-02

The probability for exceeding chi square = 0.980E+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 = 0.9943E+00

The correlation between the data and the time^{**2} term = 0.1008E+01

The correlation between the data and the complete equation of motion = 0.9909E+00

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