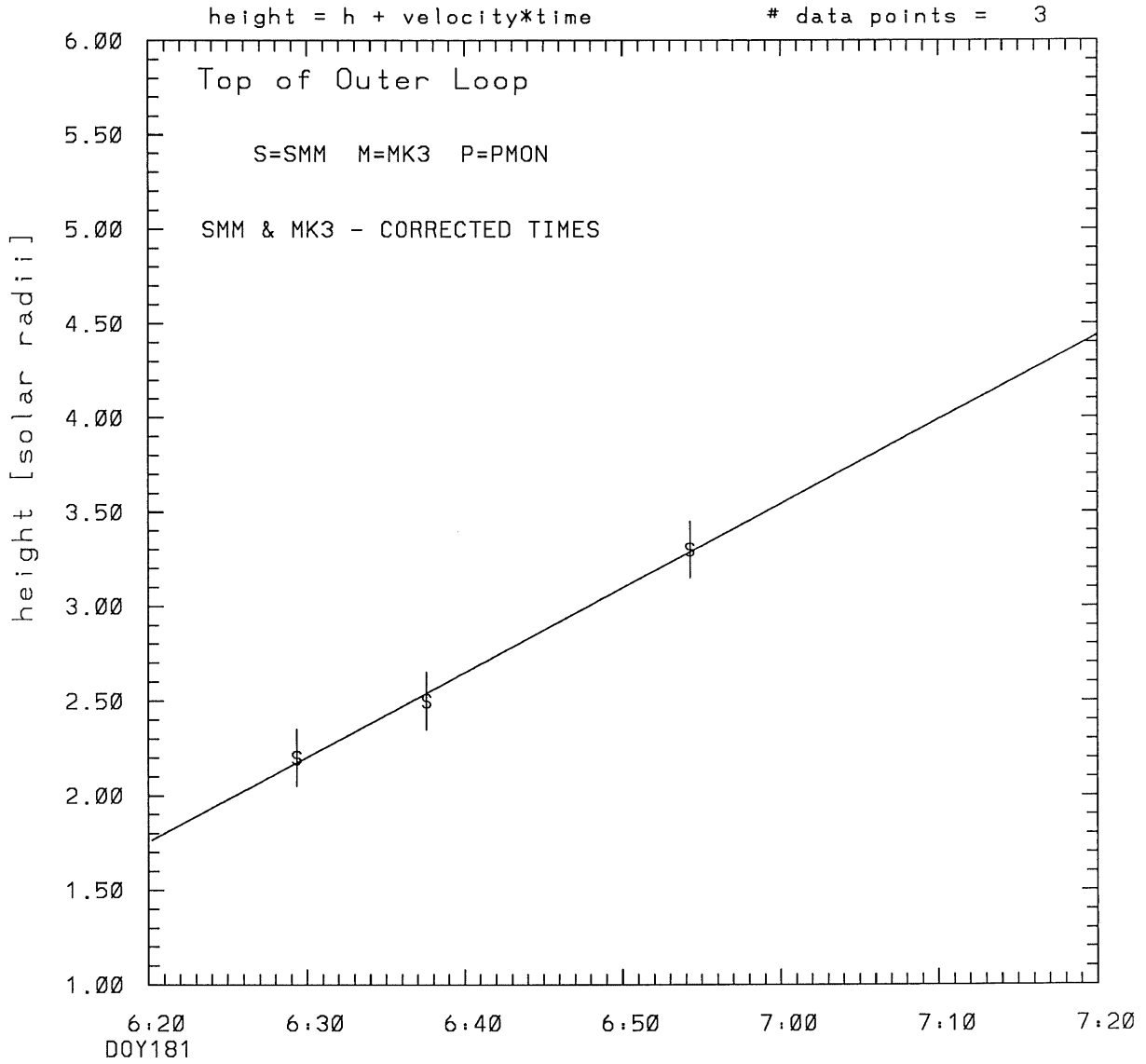
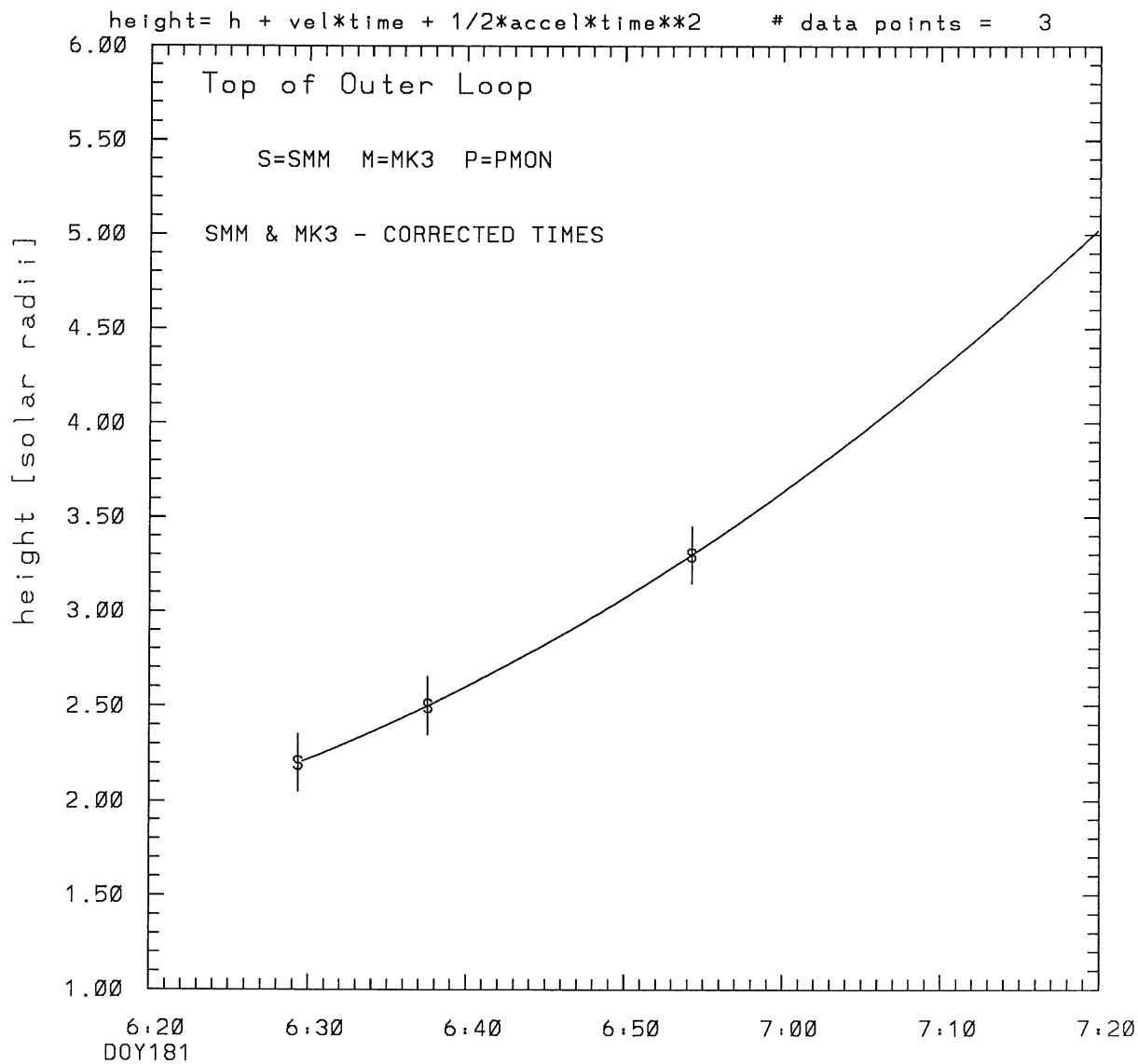


SMM C/P 1989 DOY181 105 +/- 0 degrees



tstart=DOY181 6: 5 +/- 0.5 [min.]
radial velocity= 518. +/- 23. [km/sec]

SMM C/P 1989 DOY181 105 +/- 0 degrees

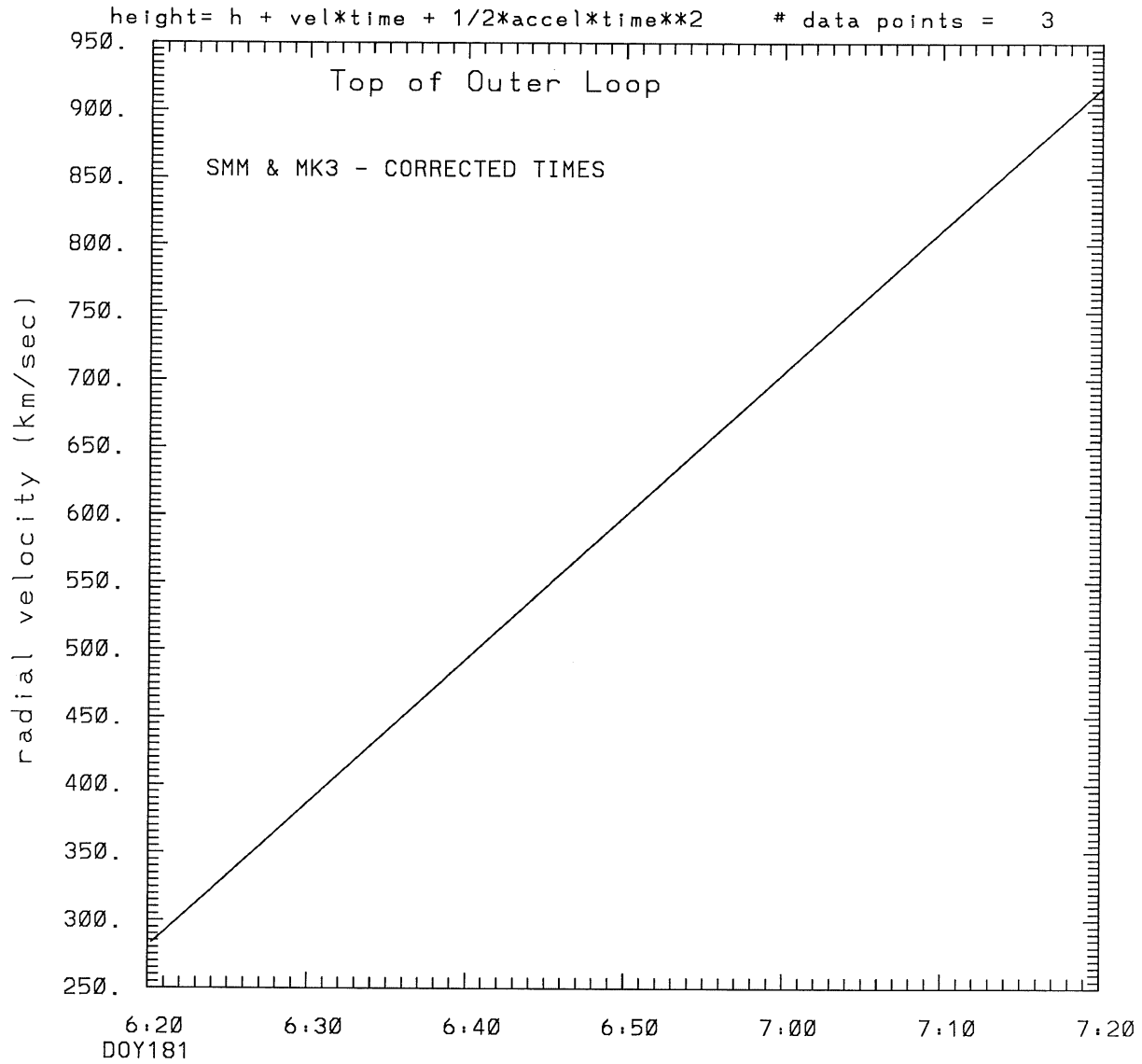


tstart=DOY181 5:54 from derivative=0

Event begins at 1.61 Solar Radii

radial acceleration = 0.1768 ± 0.0000 [km/sec**2]

SMM C/P 1989 DOY181 105 +/- 0 degrees



tstart=DOY181 5:54 from derivative=0
Event begins at 1.61 Solar Radii
radial acceleration=0.177E+00 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
1989	181	6:29:21	2.20 +/- 0.15		105.0 +/- 0.5		SMM
1989	181	6:37:34	2.50 +/- 0.15		105.0 +/- 0.5		SMM
1989	181	6:54:16	3.30 +/- 0.15		105.0 +/- 1.0		SMM

Structure being measured:

Top of Outer Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.169E+02 +/- 0.545E+00$ [minutes]

In more convenient units:

Event began at DOY 181 6: 5 +/- 0.545E+00 [minutes]

Origin defined at DOY181 6:20

RADIAL INFORMATION:

RADIAL VELOCITY = 518. +/- 23. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.176E+01 +/- 0.453E-01$ [solar radii]
 $c(2) = 0.447E-01 +/- 0.198E-02$ [radii/min]
 $c(2) = 0.518E+03 +/- 0.230E+02$ [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 $c(1) = 0.64046E-01$ [radii] see Bevington pg. 114

error in $c(2) = 0.27995E-02$ [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) = 105. +/- 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 6:29 = 0. km/sec

The TOTAL velocity at 6:29 = 518. km/sec

The TANGENTIAL velocity at 6:37 = 0. km/sec

The TOTAL velocity at 6:37 = 518. km/sec

The TANGENTIAL velocity at 6:54 = 0. km/sec

The TOTAL velocity at 6:54 = 518. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.57

Standard Deviation in start time measurement = 0.104E+02

Error in time = 0.11246E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.126E-02

Reduced Chi Squared = 0.450E-02

Chi Squared = 0.450E-02

The probability for exceeding chi square = 0.972E+00

The correlation coefficient = 0.998E+00

The probability that no LINEAR correlation exists between the variables = 0.3983E-01

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
1989	181	6:29:21	2.20	+/- 0.15	105.0	+/- 0.5	SMM
1989	181	6:37:34	2.50	+/- 0.15	105.0	+/- 0.5	SMM
1989	181	6:54:16	3.30	+/- 0.15	105.0	+/- 1.0	SMM

Structure being measured:
Top of Outer Loop

OUTPUT:

START TIME:

tstart=DOY181 5:54 from derivative = 0
Event begins at 1.61 Solar Radii
Origin defined at DOY181 6:20

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.177E+00 +/- 0.839E-06 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.193E+01 +/- 0.900E-06 [solar radii]
c(2) = 0.242E-01 +/- 0.981E-07 [radii/min]
c(2) = 0.281E+03 +/- 0.114E-02 [km/sec]
c(3) = 0.457E-03 +/- 0.217E-08 [radii/min**2]
c(3) = 0.177E+00 +/- 0.839E-06 [km/sec**2]

ANGULAR INFORMATION:

ANGULAR ACCELERATION= 0.0000E+00 +/- 0.0000E+00[radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 105. +/- 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 6:29 = 0. km/sec

The TOTAL velocity at 6:29 = 380. km/sec

The TANGENTIAL velocity at 6:37 = 0. km/sec

The TOTAL velocity at 6:37 = 467. km/sec

The TANGENTIAL velocity at 6:54 = 0. km/sec

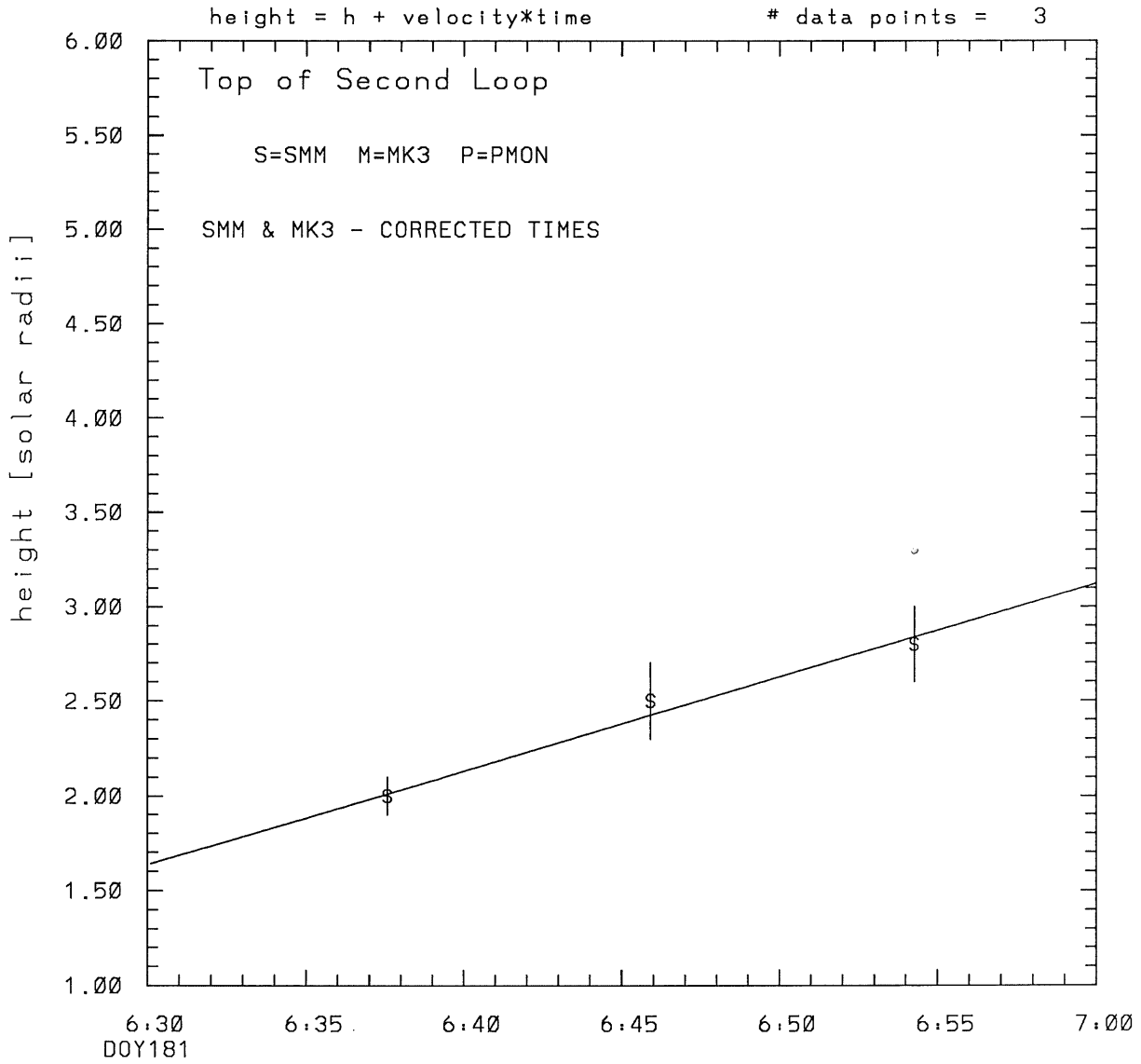
The TOTAL velocity at 6:54 = 644. km/sec

The following info is for estimating goodness of the fit

Number data points = number of coefficients. No error analysis is possible.

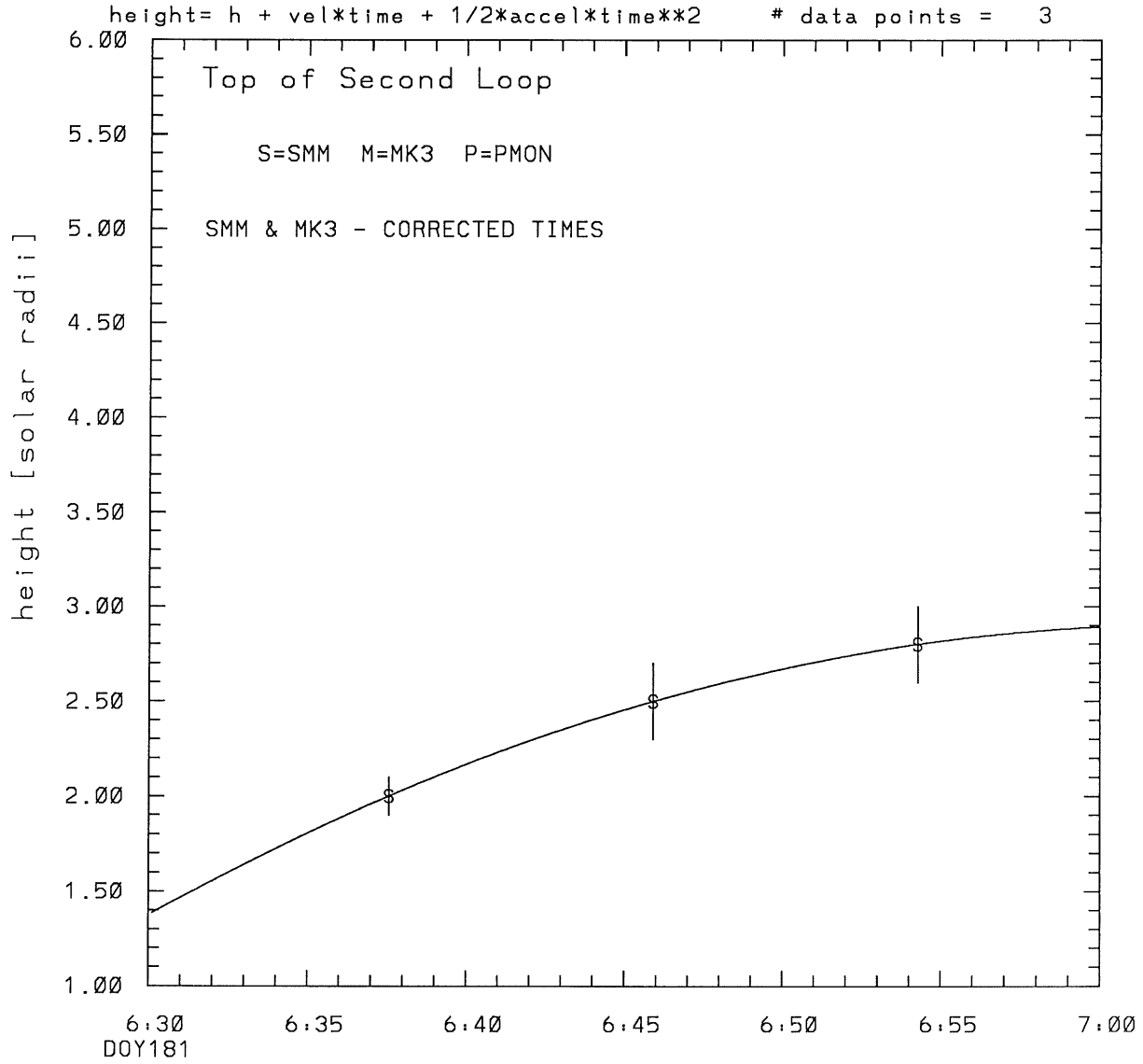
Correlation coefficient is not computable!

SMM C/P 1989 DOY181 105 +/- 0 degrees



tstart=DOY181 6:19 +/- 0.6 [min.]
radial velocity= 576. +/- 46. [km/sec]

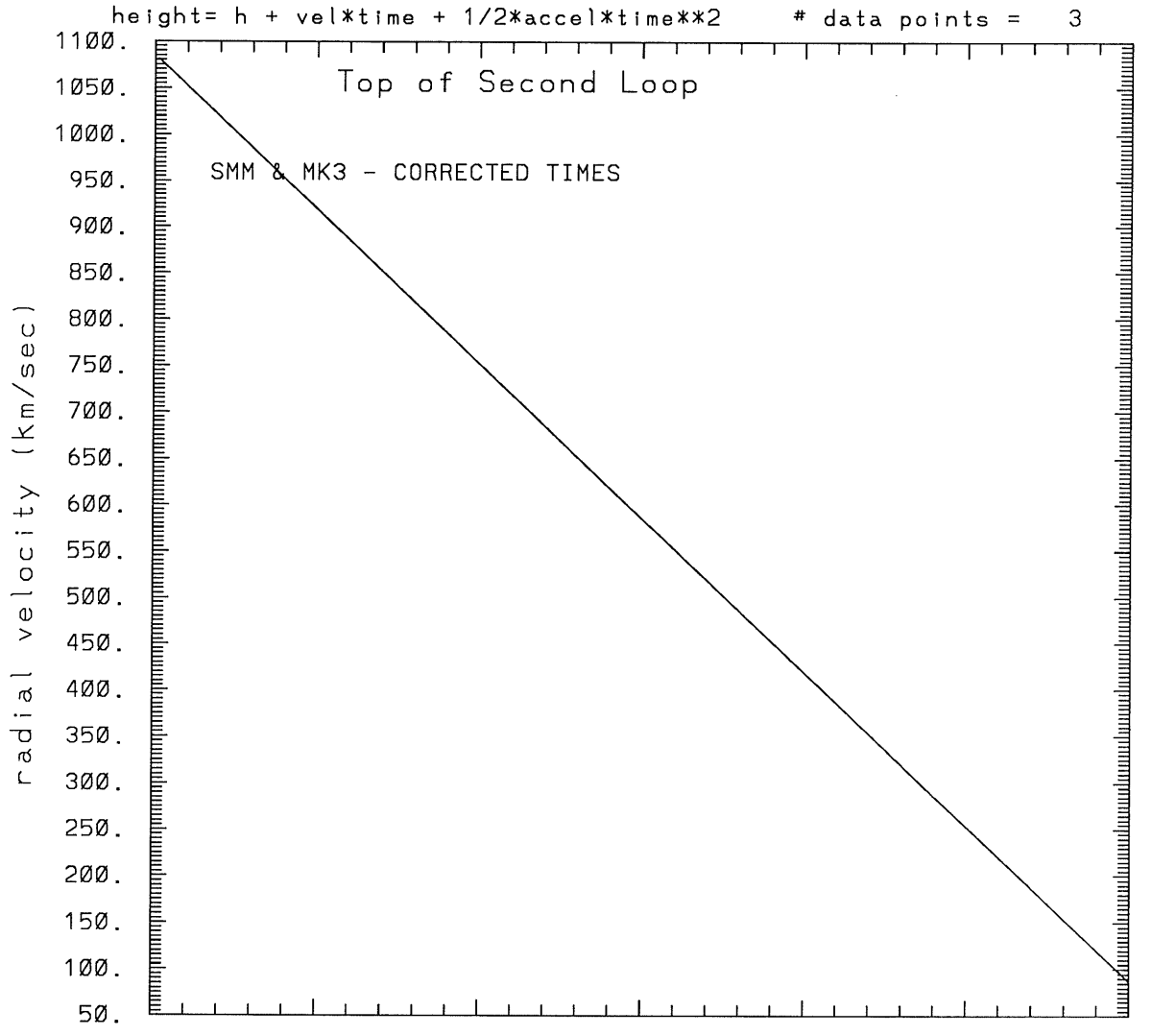
SMM C/P 1989 DOY181 105 +/- 0 degrees



tstart=DOY181 6:28 +/- 0.0 [min.]

radial acceleration = $-0.5546 +/- 0.0000$ [km/sec**2]

SMM C/P 1989 DOY181 105 +/- 0 degrees



6.30
DOY181

tstart=DOY181 6.28 +/- 0.0 [min.]

radial acceleration=-.555E+00 km/sec**2

This is a 1 order run

INPUT:

year	day	time	error in radii	error in radius	error in angle	error in angle	datatype
1989	181	6:37:34	2.00 +/- 0.10		105.0 +/- 0.5		SMM
1989	181	6:45:55	2.50 +/- 0.20		105.0 +/- 0.5		SMM
1989	181	6:54:16	2.80 +/- 0.20		105.0 +/- 0.5		SMM

Structure being measured:

Top of Second Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.128E+02 +/- 0.615E+00$ [minutes]

In more convenient units:

Event began at DOY 181 6:19 +/- 0.615E+00 [minutes]

Origin defined at DOY181 6:30

RADIAL INFORMATION:

RADIAL VELOCITY = 576. +/- 46. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.163E+01 +/- 0.528E-01 [solar radii]
c(2) = 0.496E-01 +/- 0.395E-02 [radii/min]
c(2) = 0.576E+03 +/- 0.458E+02 [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)= 0.12569E+00 [radii] see Bevington pg. 114

error in c(2)= 0.72586E-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) = 105. +/- 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 6:37 = 0. km/sec

The TOTAL velocity at 6:37 = 576. km/sec

The TANGENTIAL velocity at 6:45 = 0. km/sec

The TOTAL velocity at 6:45 = 576. km/sec

The TANGENTIAL velocity at 6:54 = 0. km/sec

The TOTAL velocity at 6:54 = 576. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.40

Standard Deviation in start time measurement = 0.682E+01

Error in time = 0.17276E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.190E-02

Reduced Chi Squared = 0.161E-01

Chi Squared = 0.161E-01

The probability for exceeding chi square = 0.965E+00

The correlation coefficient = 0.990E+00

The probability that no LINEAR correlation exists between the variables = 0.9126E-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
1989	181	6:37:34	2.00	+/- 0.10	105.0	+/- 0.5	SMM
1989	181	6:45:55	2.50	+/- 0.20	105.0	+/- 0.5	SMM
1989	181	6:54:16	2.80	+/- 0.20	105.0	+/- 0.5	SMM

Structure being measured:
Top of Second Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.378E+01 +/- 0.000E+00$ [minutes]

In more convenient units:

Event began at DOY 181 6:28 +/- 0.000E+00 [minutes]

Origin defined at DOY181 6:30

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.555E+00 +/- 0.151E-05$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.137E+01 +/- 0.739E-06$ [solar radii]
c(2) = $0.936E-01 +/- 0.121E-06$ [radii/min]
c(2) = $0.109E+04 +/- 0.140E-02$ [km/sec]
c(3) = $-0.143E-02 +/- 0.392E-08$ [radii/min**2]
c(3) = $-0.555E+00 +/- 0.151E-05$ [km/sec**2]

ANGULAR INFORMATION:

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

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = $105. +/- 0.$ [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]

$$a(3) = 0.000E+00 \pm 0.000E+00 \text{ [rad/sec**2]}$$

THE TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 6:37 = 0. km/sec

The TOTAL velocity at 6:37 = 834. km/sec

The TANGENTIAL velocity at 6:45 = 0. km/sec

The TOTAL velocity at 6:45 = 556. km/sec

The TANGENTIAL velocity at 6:54 = 0. km/sec

The TOTAL velocity at 6:54 = 278. km/sec

The following info is for estimating goodness of the fit

Number data points = number of coefficients. No error analysis is possible.

Correlation coefficient is not computable!