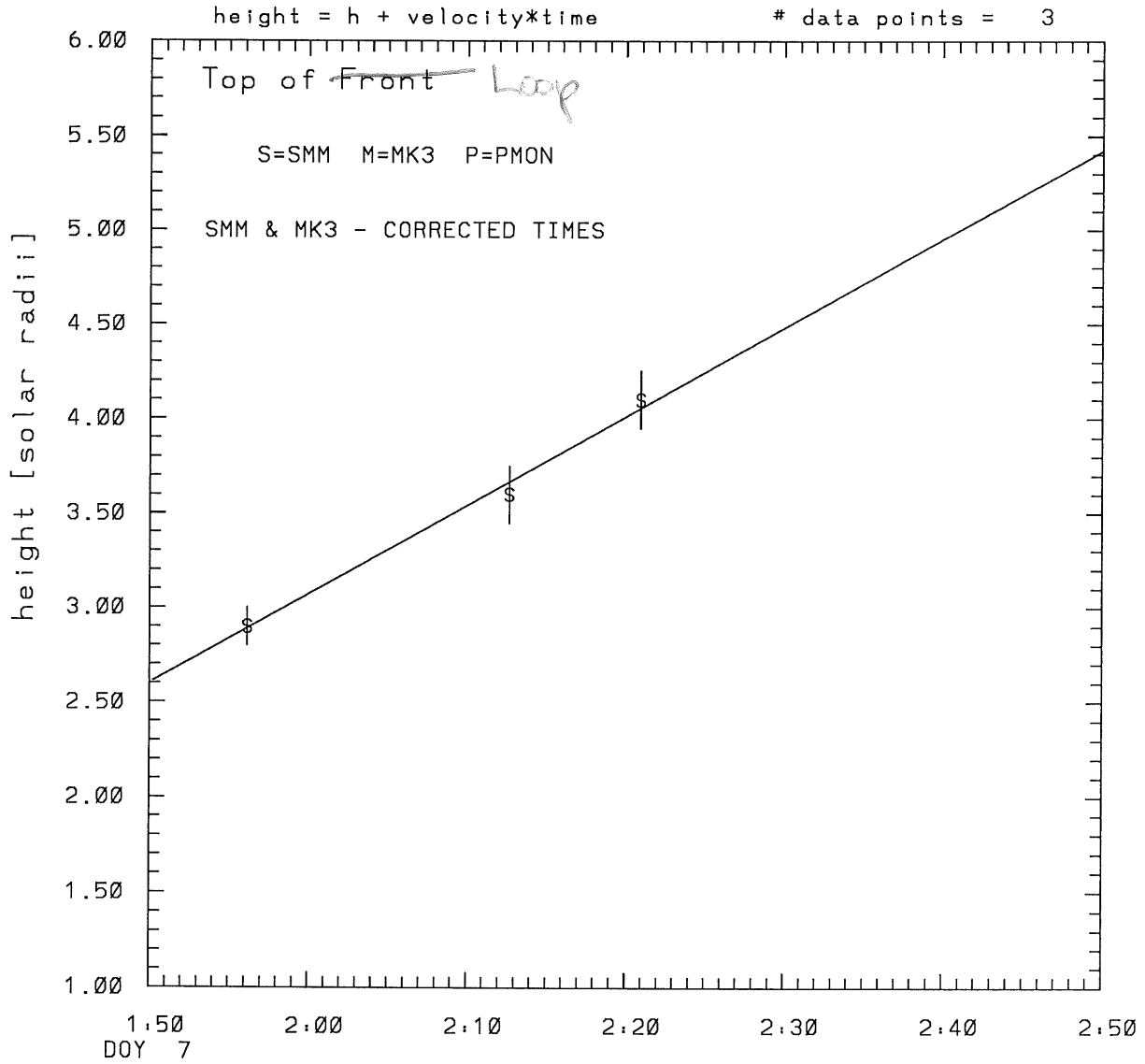
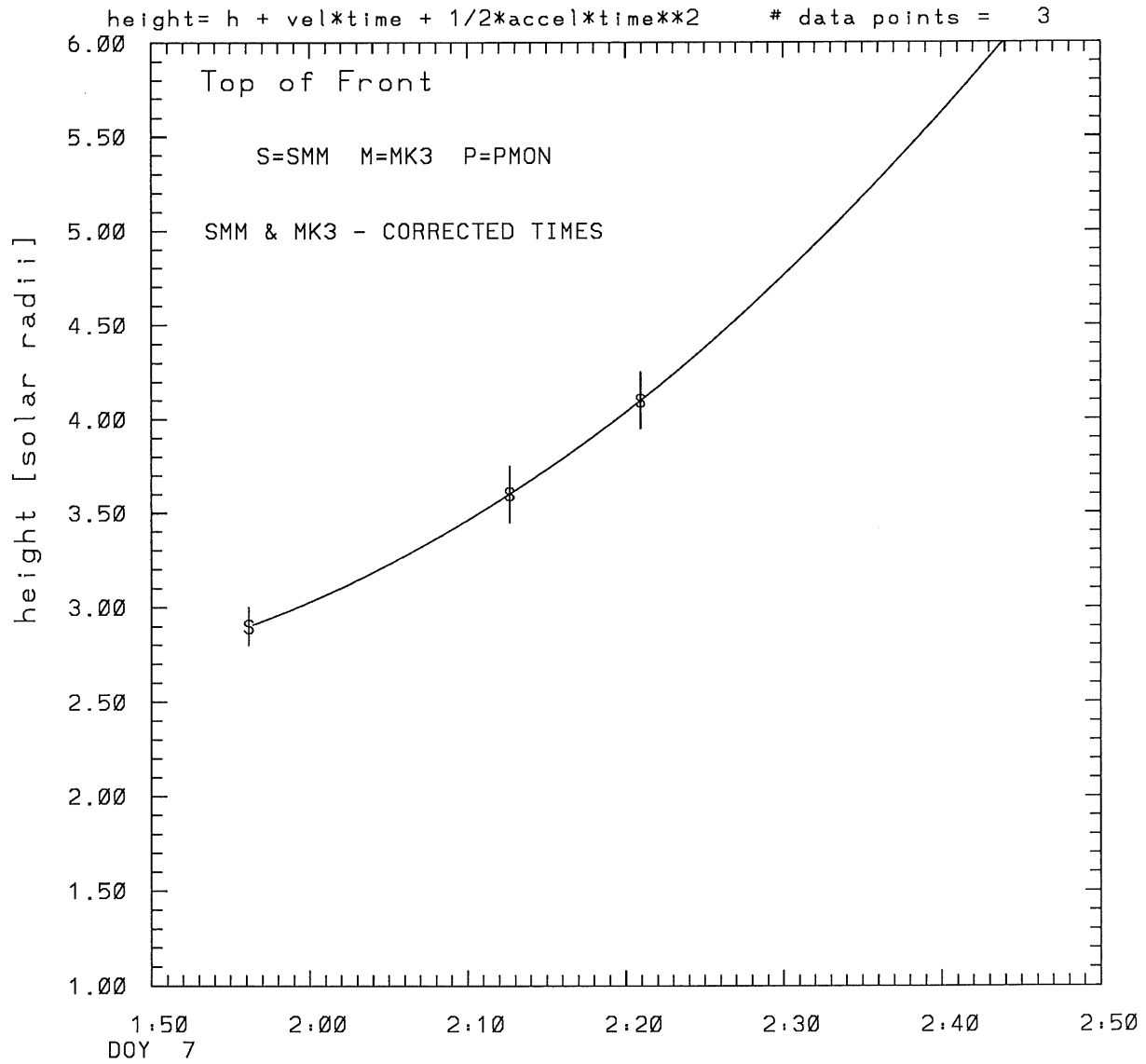


SMM C/P 1989 DOY 7 310 +/- 0 degrees



tstart=DOY 7 1.16 +/- 1.2 [min.]
radial velocity= 545. +/- 30. [km/sec]

SMM C/P 1989 DOY 7 310 +/- 0 degrees

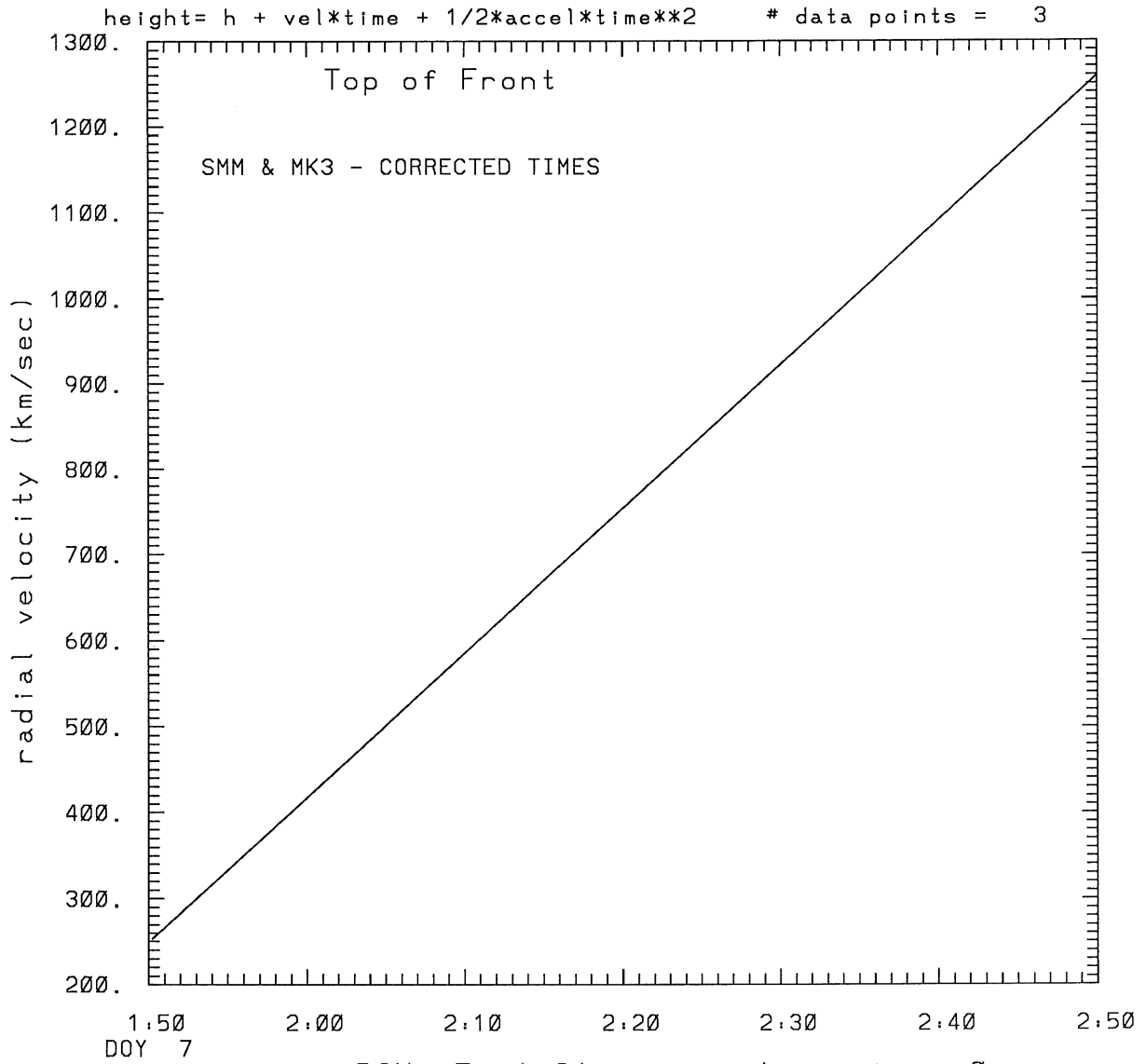


tstart=DOY 7 1:36 from derivative=0

Event begins at 2.58 Solar Radii

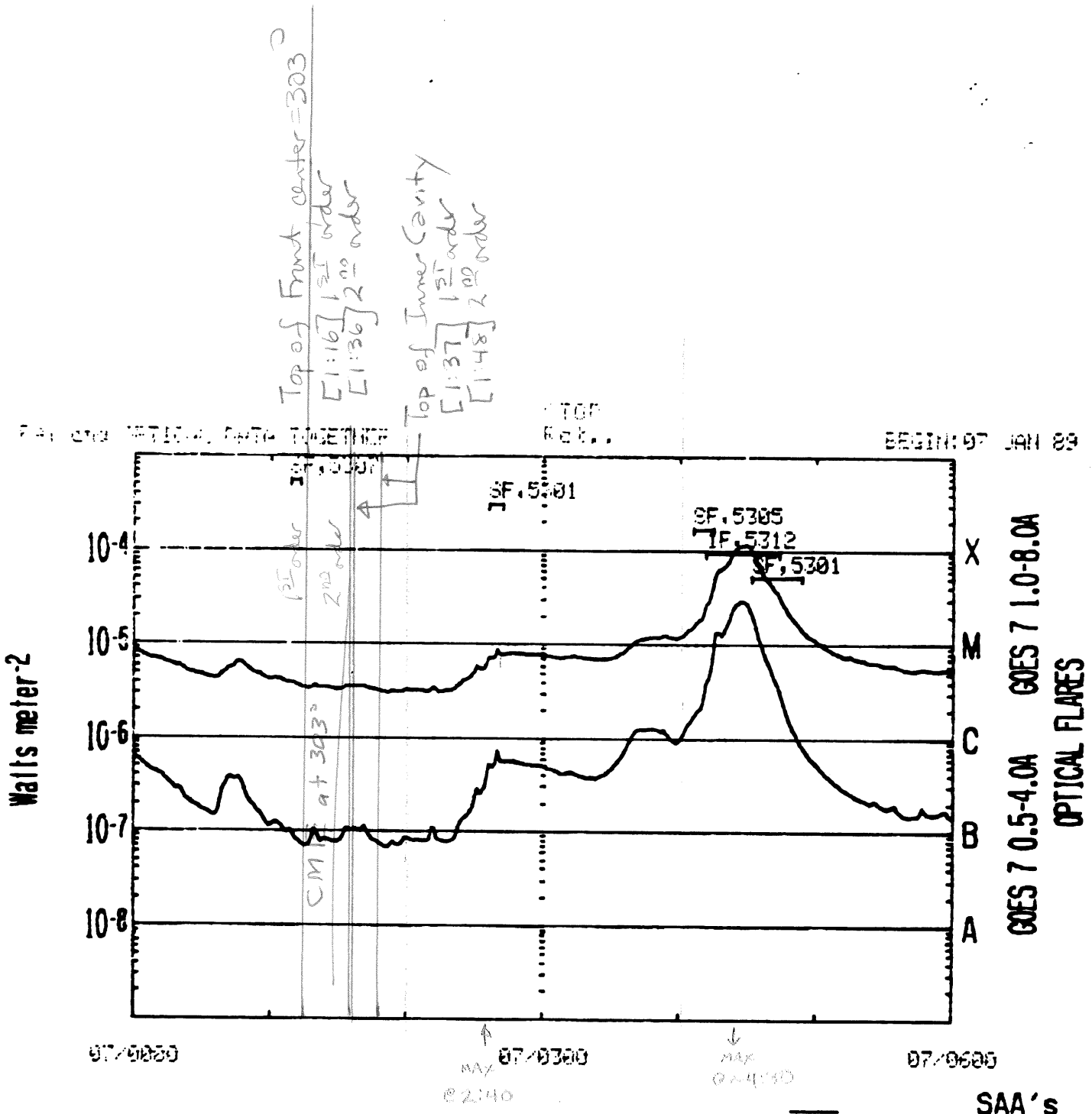
radial acceleration = 0.2803 +/- 0.0000 [km/sec**2]

SMM C/P 1989 DOY 7 310 +/- 0 degrees



DOY 7
tstart=DOY 7 1:36 from derivative=0
Event begins at 2.58 Solar Radii
radial acceleration=0.280E+00 km/sec**2

1989 Day 007



GOES-7 1 MIN DATA: OPTICAL FLARE DUR., IMP. REGION

SAA's NIGHT

RUN: 1734UT
9 JAN 89

This is a 1 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1989	7	1:56:9	2.90	+/- 0.10	310.0	+/- 0.5	SMM
1989	7	2:12:40	3.60	+/- 0.15	310.0	+/- 0.5	SMM
1989	7	2:20:57	4.10	+/- 0.15	310.0	+/- 0.5	SMM

Structure being measured:

Top of Front Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.341E+02 +/- 0.124E+01$ [minutes]

In more convenient units:

Event began at DOY 7 1:16 +/- 0.124E+01 [minutes]

Origin defined at DOY 7 1:50

RADIAL INFORMATION:

RADIAL VELOCITY = 545. +/- 30. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.260E+01 +/- 0.498E-01 [solar radii]
c(2) = 0.470E-01 +/- 0.260E-02 [radii/min]
c(2) = 0.545E+03 +/- 0.302E+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)= 0.10104E+00 [radii] see Bevington pg. 114

error in c(2)= 0.45042E-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) = 310. +/- 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 1:56 = 0. km/sec

The TOTAL velocity at 1:56 = 545. km/sec

The TANGENTIAL velocity at 2:12 = 0. km/sec

The TOTAL velocity at 2:12 = 545. km/sec

The TANGENTIAL velocity at 2:20 = 0. km/sec

The TOTAL velocity at 2:20 = 545. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.60

Standard Deviation in start time measurement = 0.103E+02

Error in time = 0.17111E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.233E-02

Reduced Chi Squared = 0.148E-01

Chi Squared = 0.148E-01

The probability for exceeding chi square = 0.962E+00

The correlation coefficient = 0.996E+00

The probability that no LINEAR correlation exists between the variables = 0.5948E-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	7	1:56:9	2.90	+/- 0.10	310.0	+/- 0.5	SMM
1989	7	2:12:40	3.60	+/- 0.15	310.0	+/- 0.5	SMM
1989	7	2:20:57	4.10	+/- 0.15	310.0	+/- 0.5	SMM

Structure being measured:
Top of Front

OUTPUT:

START TIME:

tstart=DOY 7 1:36 from derivative = 0
Event begins at 2.58 Solar Radii
Origin defined at DOY 7 1:50

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.280E+00 +/- 0.240E-05 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.274E+01 +/- 0.134E-05 [solar radii]
c(2) = 0.215E-01 +/- 0.221E-06 [radii/min]
c(2) = 0.249E+03 +/- 0.256E-02 [km/sec]
c(3) = 0.725E-03 +/- 0.621E-08 [radii/min**2]
c(3) = 0.280E+00 +/- 0.240E-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) = 310. +/- 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 1:56 = 0. km/sec

The TOTAL velocity at 1:56 = 353. km/sec

The TANGENTIAL velocity at 2:12 = 0. km/sec

The TOTAL velocity at 2:12 = 631. km/sec

The TANGENTIAL velocity at 2:20 = 0. km/sec

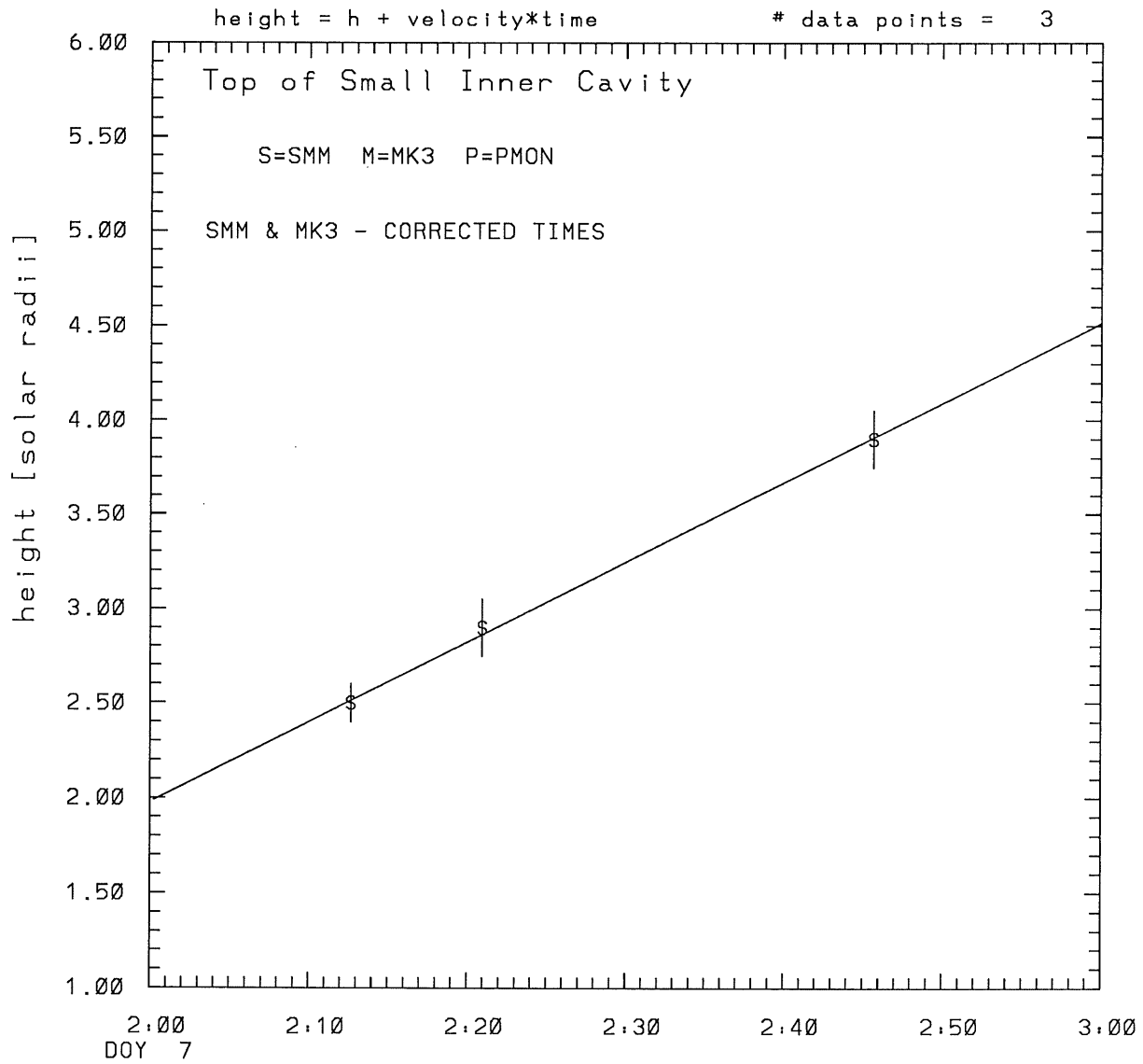
The TOTAL velocity at 2:20 = 770. km/sec

The following info is for estimating goodness of the fit

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

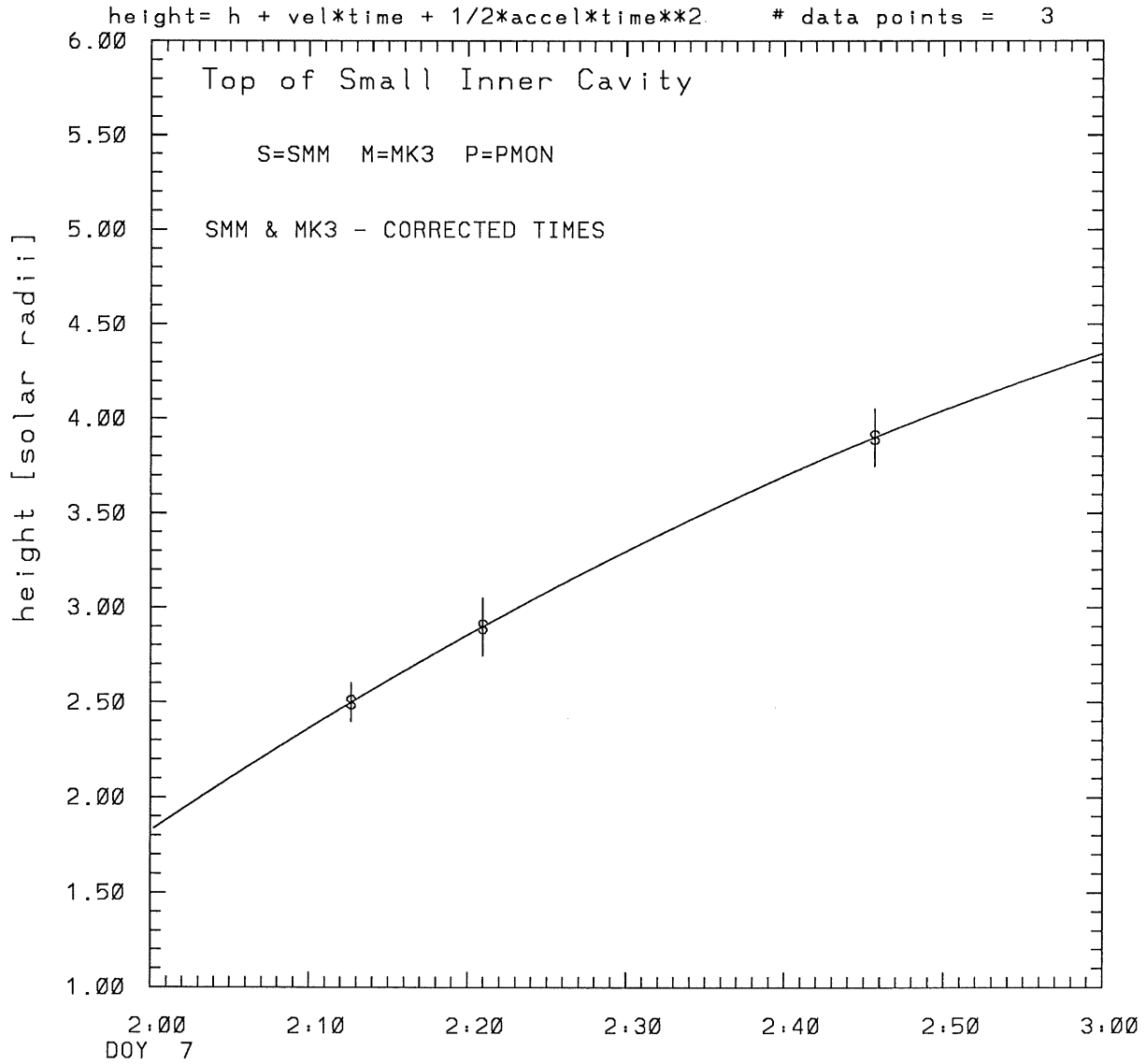
Correlation coefficient is not computable!

SMM C/P 1989 DOY 7 310 +/- 0 degrees



tstart=DOY 7 1:37 +/- 0.3 [min.]
radial velocity= 491. +/- 13. [km/sec]

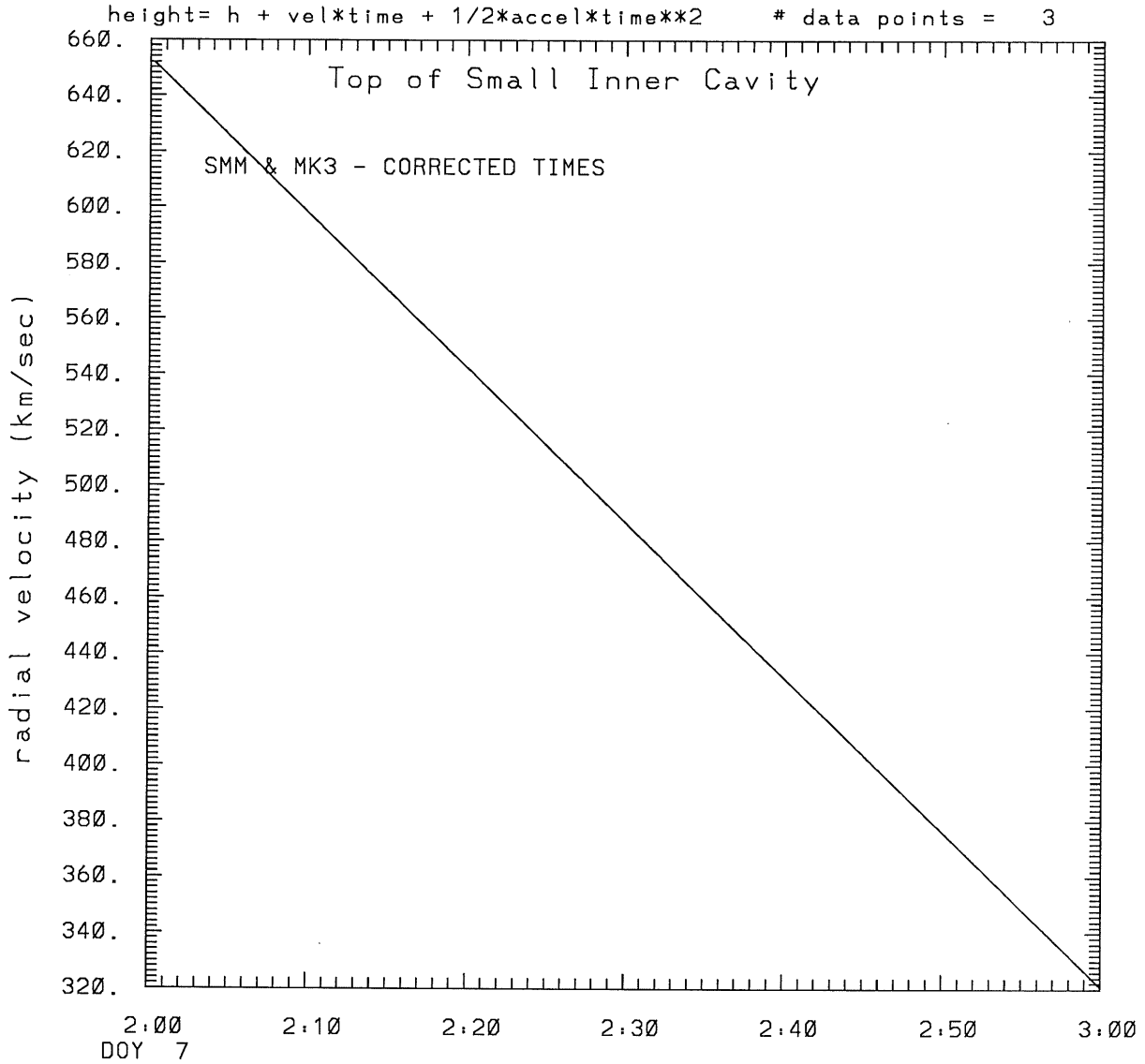
SMM C/P 1989 DOY 7 310 +/- 0 degrees



tstart=DOY 7 1:48 +/- 0.0 [min.]

radial acceleration = -0.0923 ± 0.0000 [km/sec**2]

SMM C/P 1989 DOY 7 310 +/- 0 degrees



tstart=DOY 7 1.48 +/- 0.0 [min.]

radial acceleration=-.923E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1989	7	2:12:40	2.50	+/- 0.10	310.0	+/- 0.5	SMM
1989	7	2:20:57	2.90	+/- 0.15	310.0	+/- 0.5	SMM
1989	7	2:45:42	3.90	+/- 0.15	310.0	+/- 0.5	SMM

Structure being measured:

Top of Small Inner Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.231E+02 +/- 0.323E+00$ [minutes]

In more convenient units:

Event began at DOY 7 1:37 +/- 0.323E+00 [minutes]

Origin defined at DOY 7 2: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 491. +/- 13. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.198E+01 +/- 0.286E-01 [solar radii]
c(2) = 0.423E-01 +/- 0.110E-02 [radii/min]
c(2) = 0.491E+03 +/- 0.127E+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)= 0.49754E-01 [radii] see Bevington pg. 114

error in c(2)= 0.16622E-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) = 310. +/- 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 2:12 = 0. km/sec

The TOTAL velocity at 2:12 = 491. km/sec

The TANGENTIAL velocity at 2:20 = 0. km/sec

The TOTAL velocity at 2:20 = 491. km/sec

The TANGENTIAL velocity at 2:45 = 0. km/sec

The TOTAL velocity at 2:45 = 491. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.72

Standard Deviation in start time measurement = 0.140E+02

Error in time = 0.95538E+00 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.644E-03

Reduced Chi Squared = 0.320E-02

Chi Squared = 0.320E-02

The probability for exceeding chi square = 0.980E+00

The correlation coefficient = 0.999E+00

The probability that no LINEAR correlation exists between the variables = 0.2399E-01

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

This is a 2 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1989	7	2:12:40	2.50	+/- 0.10	310.0	+/- 0.5	SMM
1989	7	2:20:57	2.90	+/- 0.15	310.0	+/- 0.5	SMM
1989	7	2:45:42	3.90	+/- 0.15	310.0	+/- 0.5	SMM

Structure being measured:
Top of Small Inner Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.138E+02 +/- 0.000E+00$ [minutes]

In more convenient units:

Event began at DOY 7 1:48 +/- 0.000E+00 [minutes]

Origin defined at DOY 7 2: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.923E-01 +/- 0.867E-06$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.182E+01 +/- 0.148E-05$ [solar radii]
c(2) = $0.563E-01 +/- 0.133E-06$ [radii/min]
c(2) = $0.653E+03 +/- 0.154E-02$ [km/sec]
c(3) = $-0.239E-03 +/- 0.224E-08$ [radii/min**2]
c(3) = $-0.923E-01 +/- 0.867E-06$ [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) = $310. +/- 0.$ [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 2:12 = 0. km/sec

The TOTAL velocity at 2:12 = 583. km/sec

The TANGENTIAL velocity at 2:20 = 0. km/sec

The TOTAL velocity at 2:20 = 537. km/sec

The TANGENTIAL velocity at 2:45 = 0. km/sec

The TOTAL velocity at 2:45 = 400. 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!