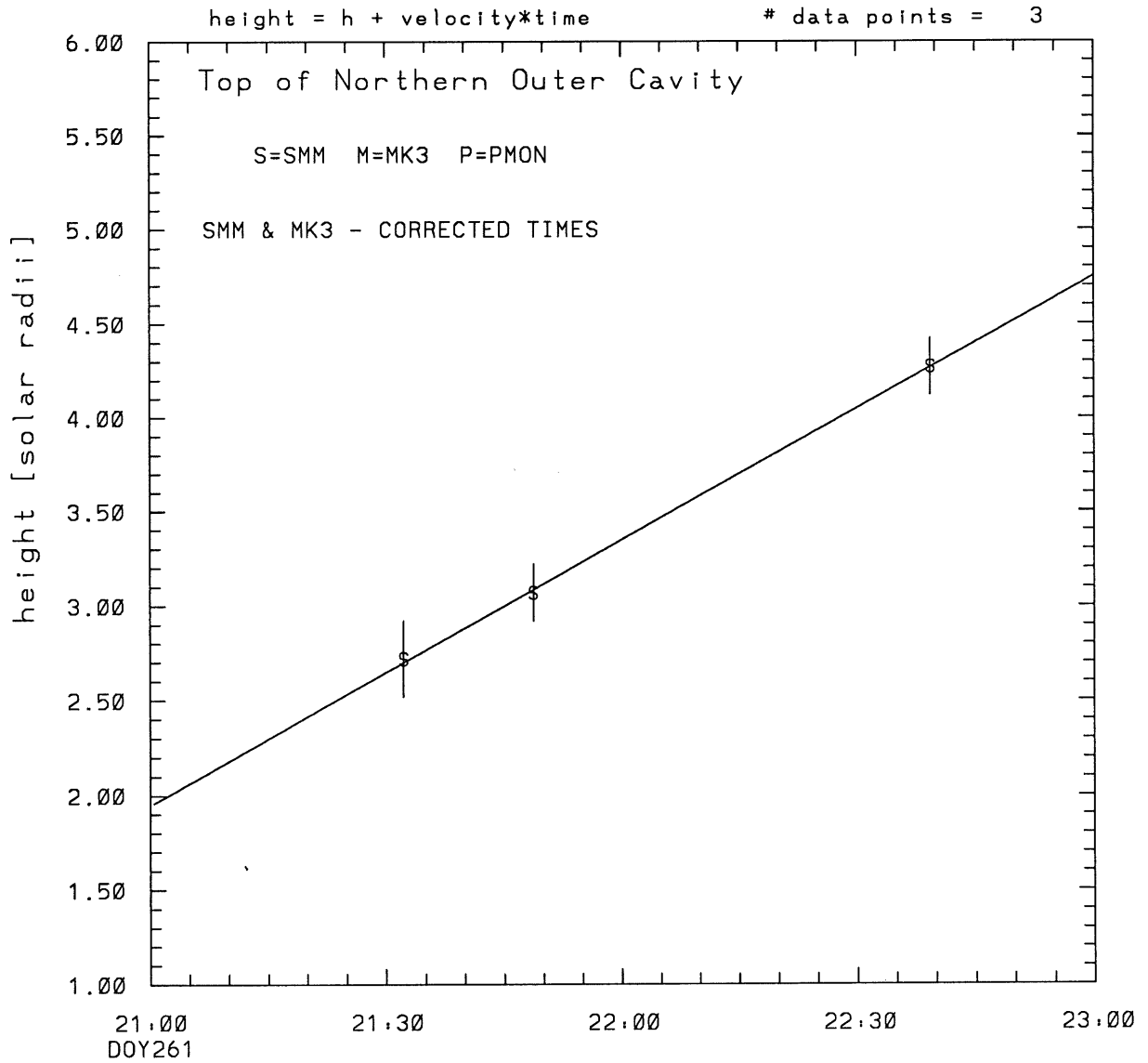
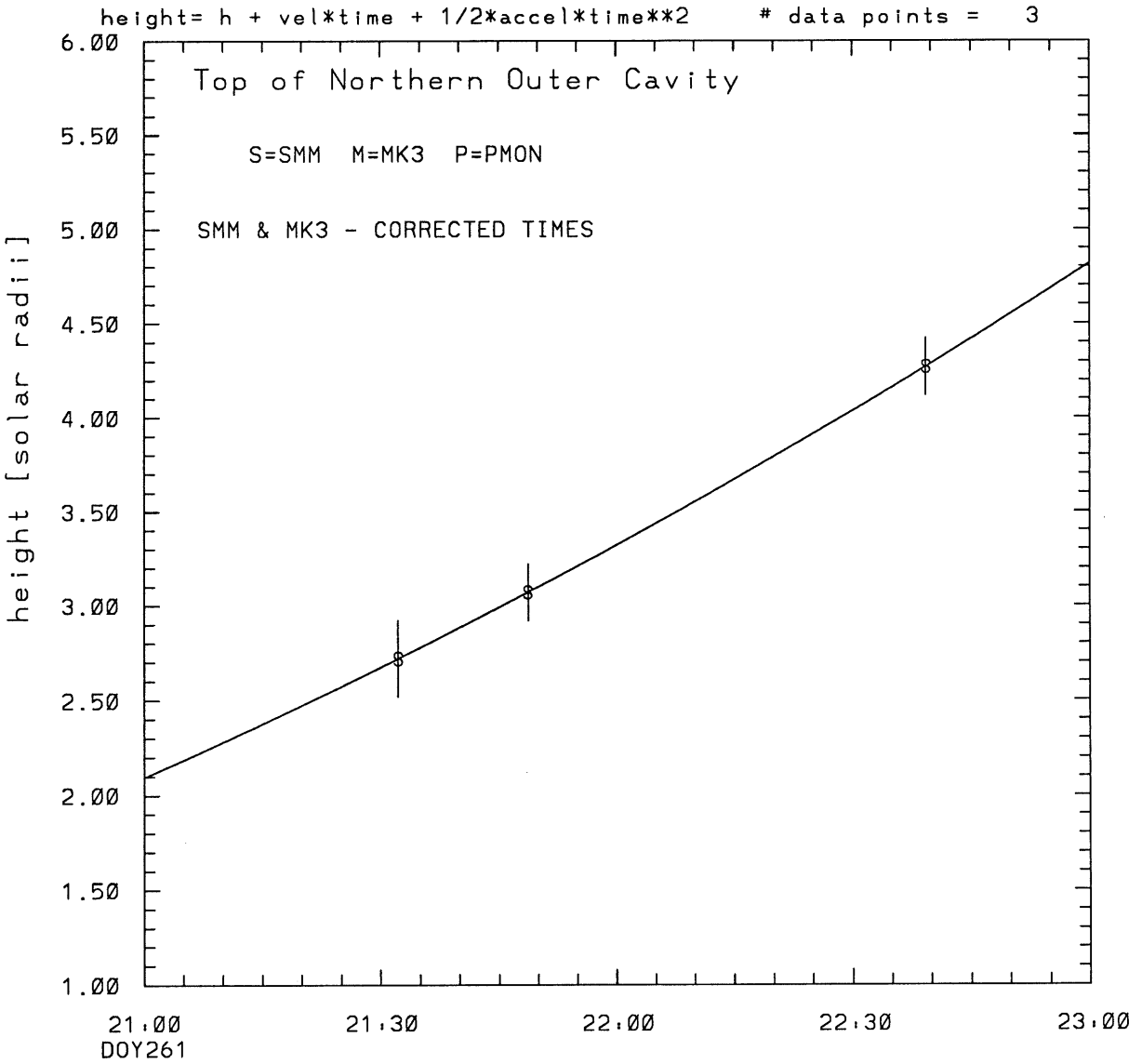


SMM C/P 1989 DOY261 301 +/- 0 degrees



tstart=DOY261 20:21 +/- 0.6 [min.]
radial velocity= 271. +/- 4. [km/sec]

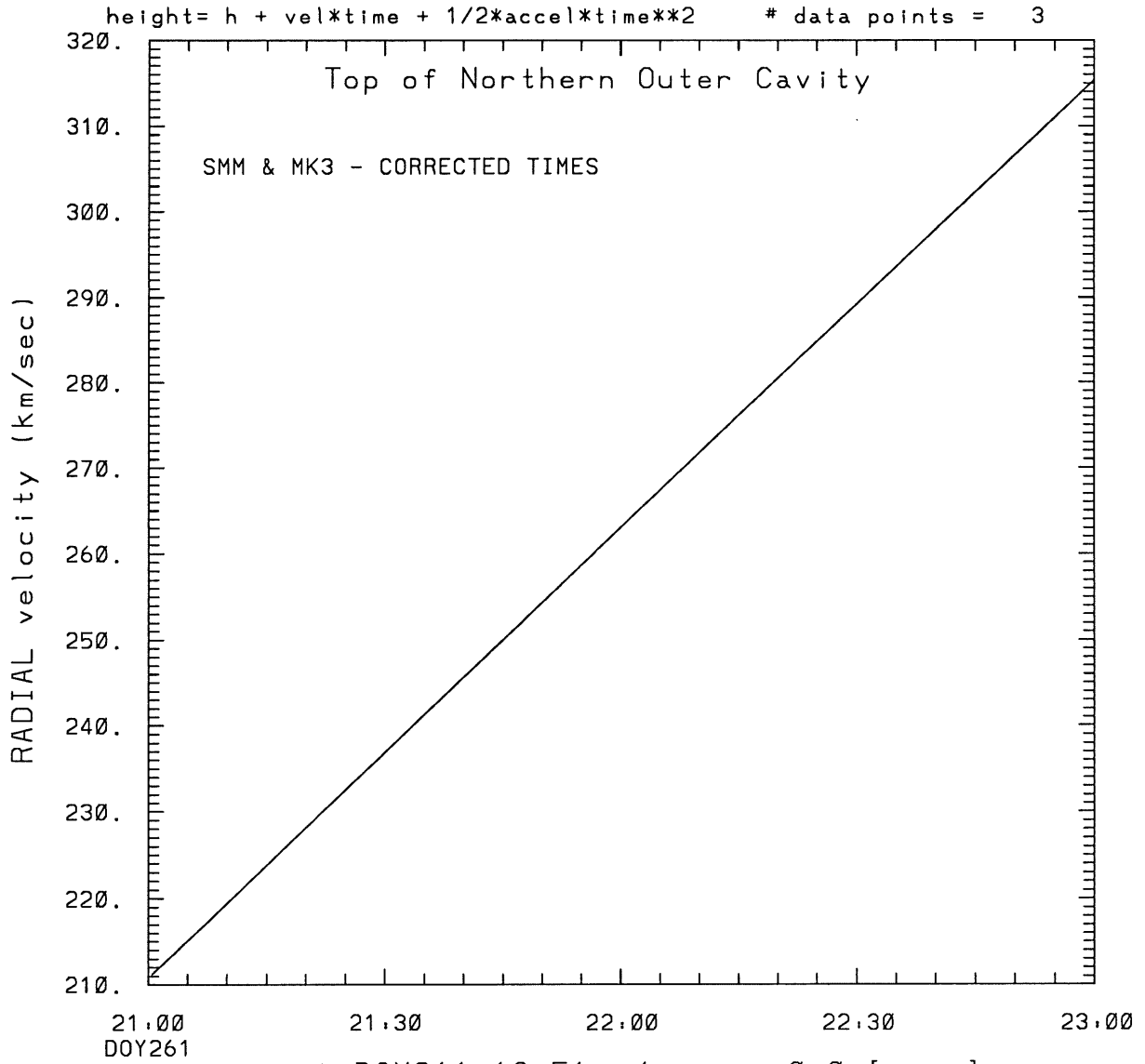
SMM C/P 1989 DOY261 301 +/- 0 degrees



tstart=DOY261 19:51 +/- 0.0 [min.]

radial acceleration = 0.0145 +/- 0.0000 [km/sec**2]

SMM C/P 1989 DOY261 301 +/- 0 degrees



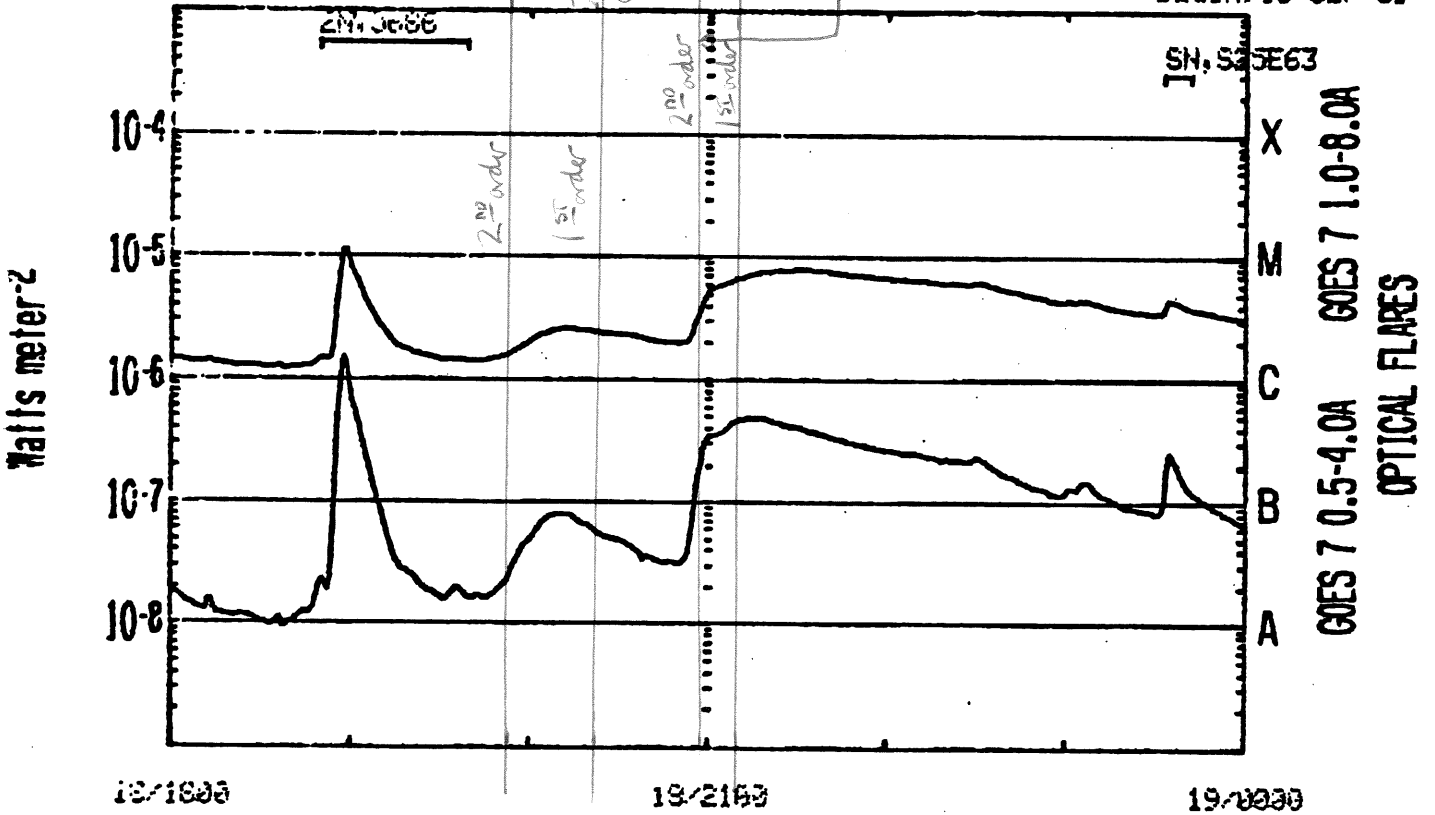
tstart=DOY261 19:51 +/- 0.0 [min.]

radial acceleration=0.145E-01 km/sec**2

1989 DOY 261

SAAS and OPTICAL DATA TOGETHER

BEGIN: 18 SEP 89



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

RUN: 2119UT
19 SEP 89

This is a 1 order run

INPUT:

year	doy	time	radii	radius	angle	error in angle	error in angle	datatype
1989	261	21:32:16	2.72 +/-	0.20	301.0 +/-	0.5		SMM
1989	261	21:48:46	3.07 +/-	0.15	301.0 +/-	1.0		SMM
1989	261	22:39:20	4.27 +/-	0.15	301.0 +/-	1.0		SMM

Structure being measured:
Top of Northern Outer Cavity

OUTPUT:

START TIME:

Event began at t = 0 + -0.405E+02 +/- 0.587E+00 [minutes]
In more convenient units:
Event began at DOY 261 20:21 +/- 0.587E+00 [minutes]

Origin defined at DOY261 21: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 271. +/- 4. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.195E+01 +/- 0.241E-01 [solar radii]
c(2) = 0.234E-01 +/- 0.340E-03 [radii/min]
c(2) = 0.271E+03 +/- 0.395E+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)= 0.34439E-01 [radii] see Bevington pg. 114
error in c(2)= 0.51750E-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) = 301. +/- 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 RADIAL velocity at 21:32 = 271. km/sec

The RADIAL velocity at 21:48 = 271. km/sec

The RADIAL velocity at 22:39 = 271. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.81
Standard Deviation in start time measurement = 0.285E+02
Error in time = 0.10949E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.278E-03
Reduced Chi Squared = 0.911E-03
Chi Squared = 0.911E-03
The probability for exceeding chi square = 0.987E+00

The correlation coefficient = 0.100E+01
The probability that no LINEAR correlation exists between the variables = 0.1362]
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	day	time	radii	radius	error in angle	error in angle	datatype
1989	261	21:32:16	2.72 +/-	0.20	301.0 +/-	0.5	SMM
1989	261	21:48:46	3.07 +/-	0.15	301.0 +/-	1.0	SMM
1989	261	22:39:20	4.27 +/-	0.15	301.0 +/-	1.0	SMM

Structure being measured:
Top of Northern Outer Cavity

OUTPUT:

START TIME:

Event began at t = 0 + -0.705E+02 +/- 0.000E+00 [minutes]
In more convenient units:
Event began at DOY 261 19:51 +/- 0.000E+00 [minutes]

Origin defined at DOY261 21: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.145E-01 +/- 0.147E-06 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) =	0.209E+01 +/-	0.154E-05 [solar radii]
c(2) =	0.182E-01 +/-	0.527E-07 [radii/min]
c(2) =	0.211E+03 +/-	0.612E-03 [km/sec]
c(3) =	0.376E-04 +/-	0.380E-09 [radii/min**2]
c(3) =	0.145E-01 +/-	0.147E-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) =	301. +/-	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 RADIAL velocity at 21:32 = 239. km/sec

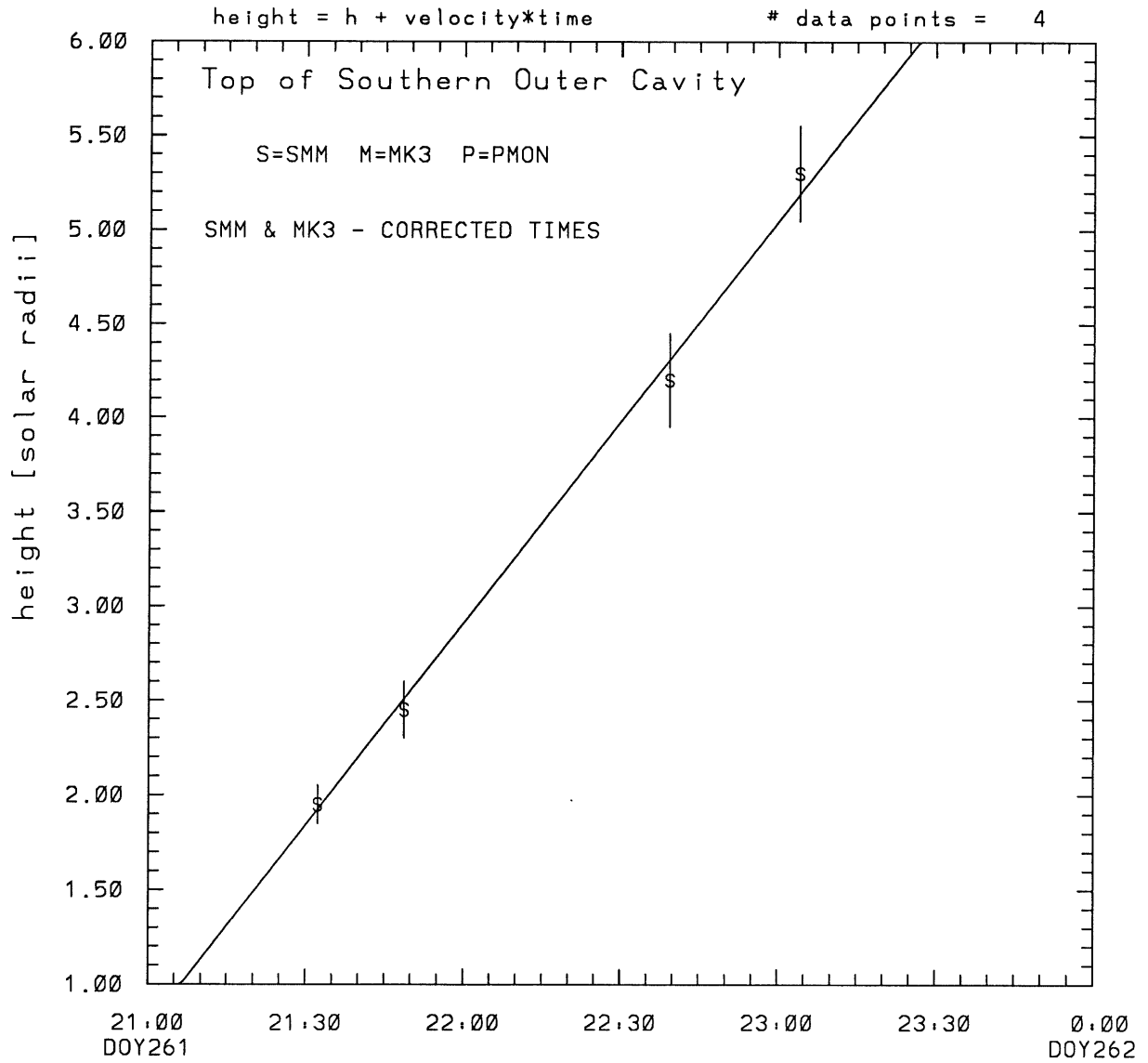
The RADIAL velocity at 21:48 = 253. km/sec

The RADIAL velocity at 22:39 = 297. km/sec

The following info is for estimating goodness of the fit

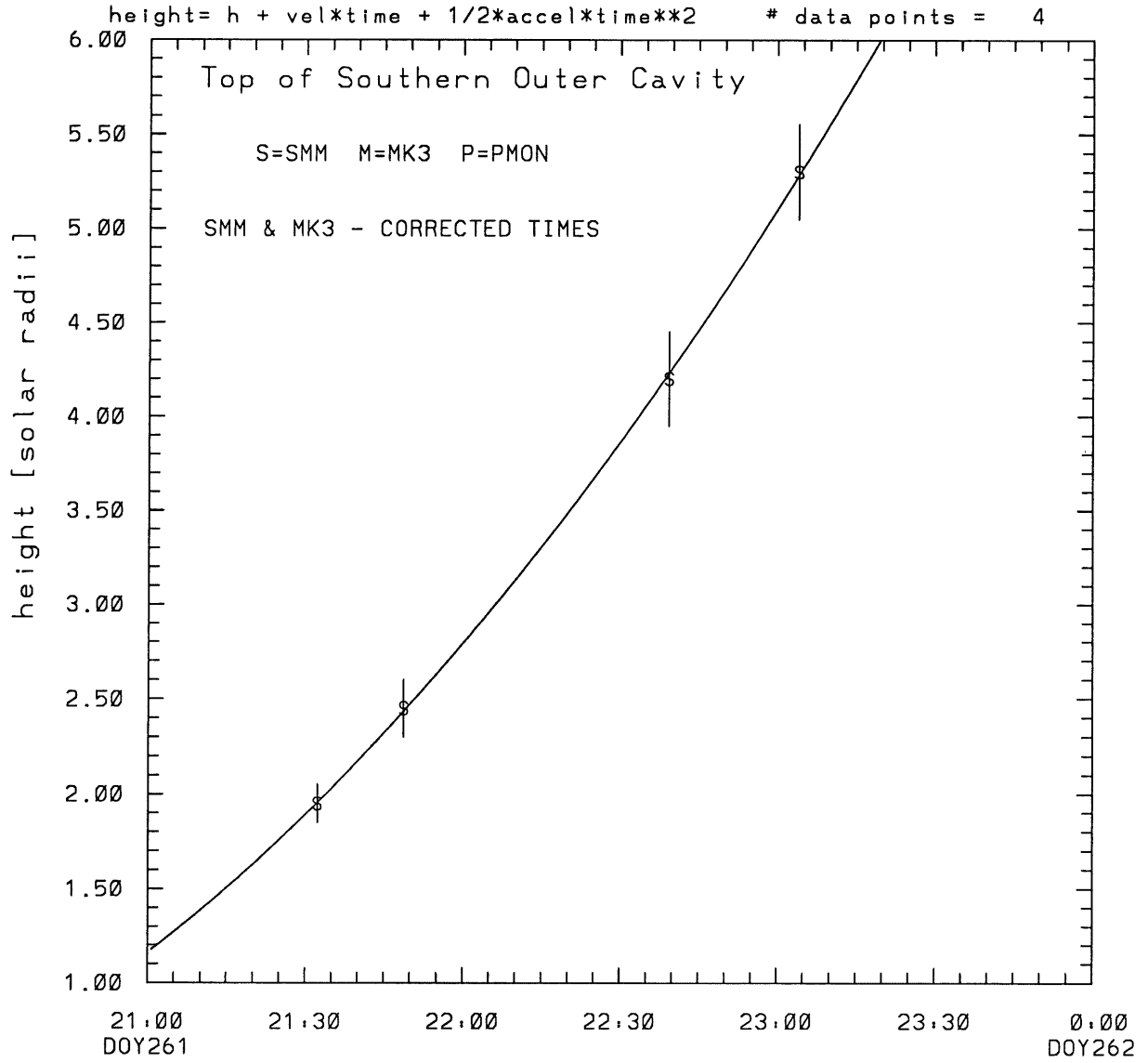
Number data points = number of coefficients. No error analysis is possible.
Correlation coefficient is not computable!

SMM C/P 1989 DOY261 285 +/- 0 degrees



tstart=DOY261 21: 6 +/- 0.3 [min.]
radial velocity= 413. +/- 13. [km/sec]

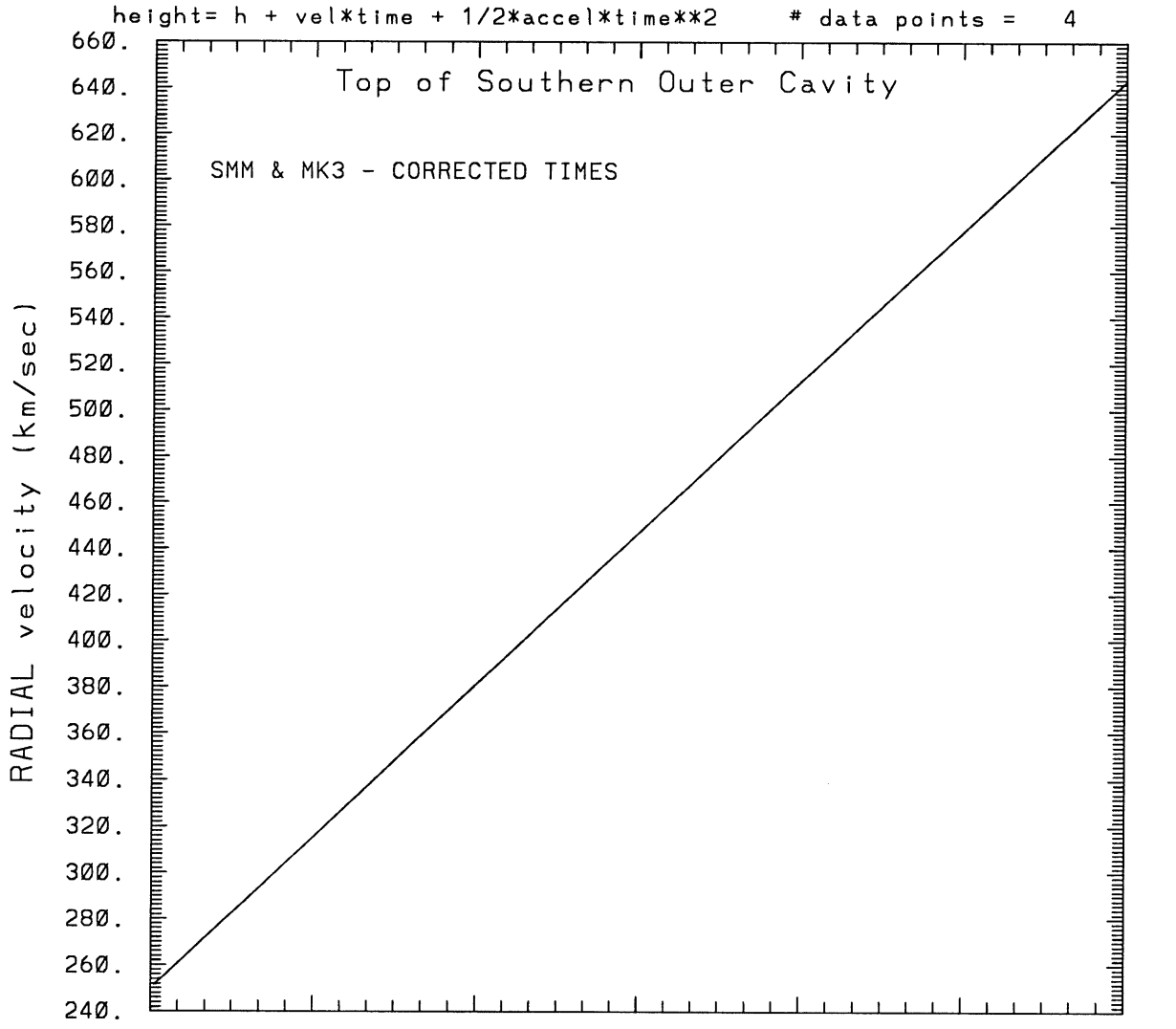
SMM C/P 1989 DOY261 285 +/- 0 degrees



tstart=DOY261 20:54 +/- 1.1 [min.]

radial acceleration = 0.0364 +/- 0.0058 [km/sec**2]

SMM C/P 1989 DOY261 285 +/- 0 degrees



21.00 DOY261 21.30 22.00 22.30 23.00 23.30 0.00 DOY262

tstart=DOY261 20:54 +/- 1.1 [min.]

radial acceleration=0.364E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in angle	error in angle	datatype
1989	261	21:32:16	1.95 +/-	0.10	285.0 +/-	0.5	SMM
1989	261	21:48:46	2.45 +/-	0.15	285.0 +/-	0.5	SMM
1989	261	22:39:20	4.20 +/-	0.25	285.0 +/-	1.0	SMM
1989	261	23: 4: 6	5.30 +/-	0.25	285.0 +/-	1.0	SMM

Structure being measured:
Top of Southern Outer Cavity

OUTPUT:

START TIME:

Event began at t = 0 + 0.631E+01 +/- 0.305E+00 [minutes]
In more convenient units:
Event began at DOY 261 21: 6 +/- 0.305E+00 [minutes]

Origin defined at DOY261 21: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 413. +/- 13. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.775E+00 +/- 0.672E-01 [solar radii]
c(2) = 0.356E-01 +/- 0.114E-02 [radii/min]
c(2) = 0.413E+03 +/- 0.132E+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)= 0.13572E+00 [radii] see Bevington pg. 114
error in c(2)= 0.16026E-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) = 285. +/- 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 RADIAL velocity at 21:32 = 413. km/sec

The RADIAL velocity at 21:48 = 413. km/sec

The RADIAL velocity at 22:39 = 413. km/sec

The RADIAL velocity at 23: 4 = 413. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.55
Standard Deviation in start time measurement = 0.371E+02
Error in time = 0.47302E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.466E-02
Reduced Chi Squared = 0.460E-01
Chi Squared = 0.919E-01
The probability for exceeding chi square = 0.995E+00

The correlation coefficient = 0.998E+00
The probability that no LINEAR correlation exists between the variables = 0.1811]
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	day	time	radii	radius	error in angle	error in angle	datatype
1989	261	21:32:16	1.95 +/-	0.10	285.0 +/-	0.5	SMM
1989	261	21:48:46	2.45 +/-	0.15	285.0 +/-	0.5	SMM
1989	261	22:39:20	4.20 +/-	0.25	285.0 +/-	1.0	SMM
1989	261	23: 4: 6	5.30 +/-	0.25	285.0 +/-	1.0	SMM

Structure being measured:
Top of Southern Outer Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.773E+01 +/- 0.109E+01$ [minutes]
In more convenient units:
Event began at DOY 261 20:54 +/- 0.109E+01 [minutes]

Origin defined at DOY261 21: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.364E-01 +/- 0.575E-02$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.116E+01 +/- 0.634E-01$ [solar radii]
c(2) = $0.215E-01 +/- 0.224E-02$ [radii/min]
c(2) = $0.250E+03 +/- 0.259E+02$ [km/sec]
c(3) = $0.942E-04 +/- 0.149E-04$ [radii/min**2]
c(3) = $0.364E-01 +/- 0.575E-02$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = $0.12393E+00$ [radii] Bevington pg 154 (8-30)
Exact error in c(1) = $0.42645E-01$ [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = $0.39154E-02$ [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = $0.16280E-02$ [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = $0.24969E-04$ [radii/min**2] Bevington pg 154 (8-30)
Exact error in c(3) = $0.10631E-04$ [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) = $285. +/- 0.$ [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 RADIAL velocity at 21:32 = 320. km/sec

The RADIAL velocity at 21:48 = 356. km/sec

The RADIAL velocity at 22:39 = 467. km/sec

The RADIAL velocity at 23: 4 = 521. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.55
Standard Deviation in start time measurement = 0.371E+02
Value of reduced Chi Squared returned from nllst2 = 0.332E-03
Reduced Chi Squared = 0.408E-02
Chi Squared = 0.408E-02
The probability for exceeding chi square = 0.985E+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 = 0.1055E+01

The correlation between the data and the time² term = 0.9979E+00

The correlation between the data and the complete equation of motion=0.1000E+01

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