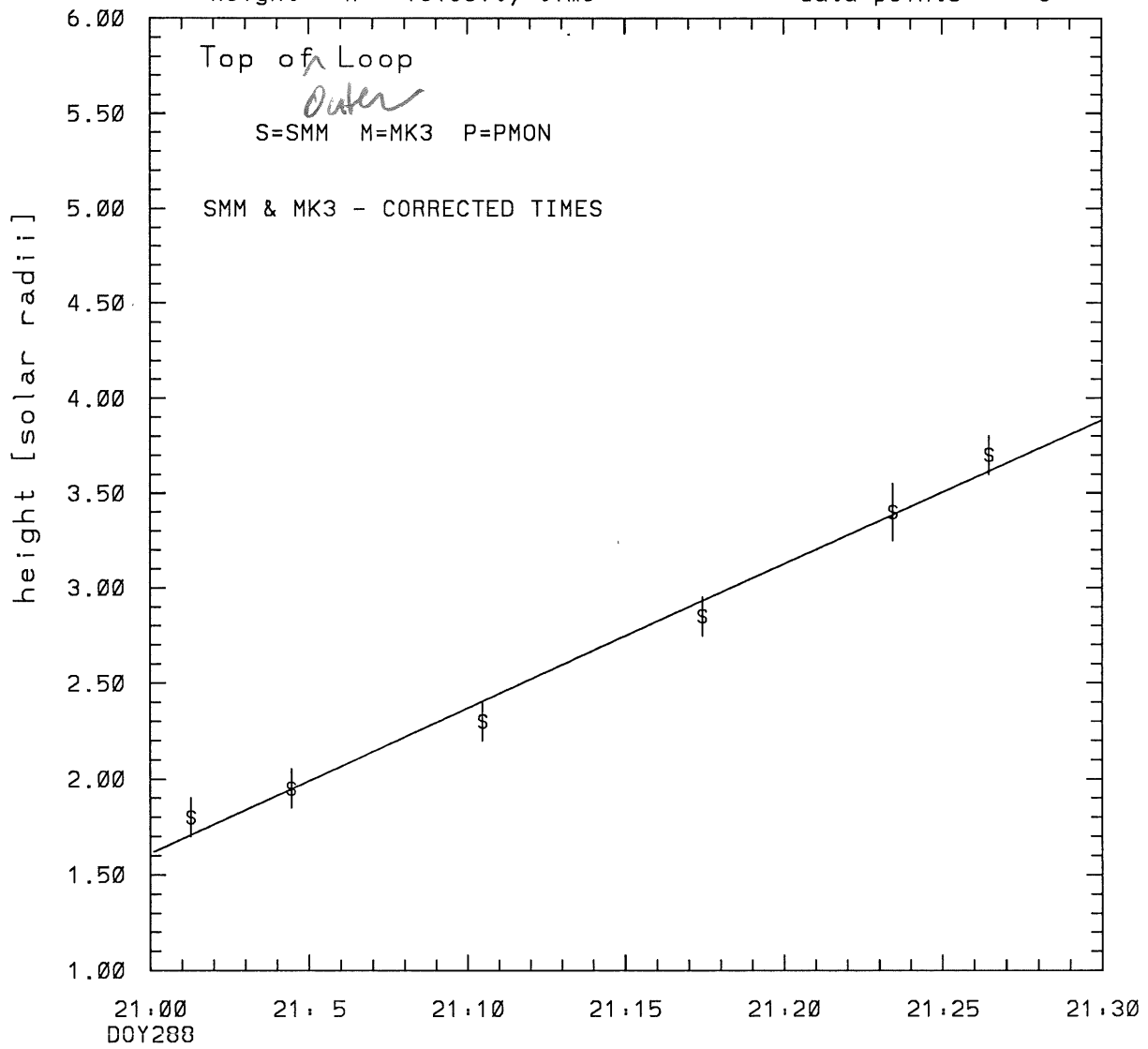


SMM C/P 1986 DOY288 295 +/- 0 degrees

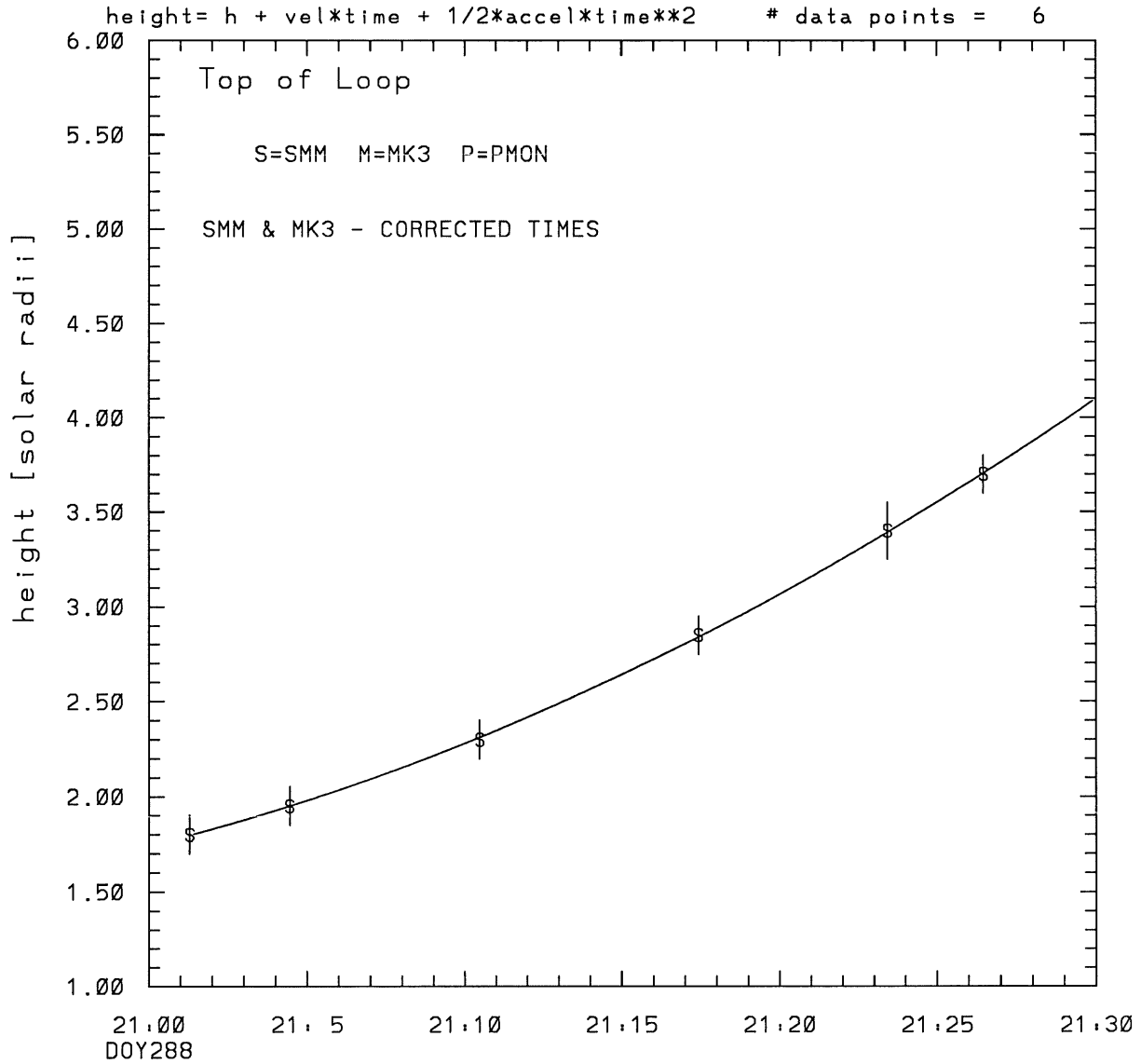
height = h + velocity\*time

# data points = 6



tstart=DOY288 20:52 +/- 0.0 [min.]  
radial velocity= 879. +/- 44. [km/sec]

SMM C/P 1986 DOY288 295 +/- 0 degrees

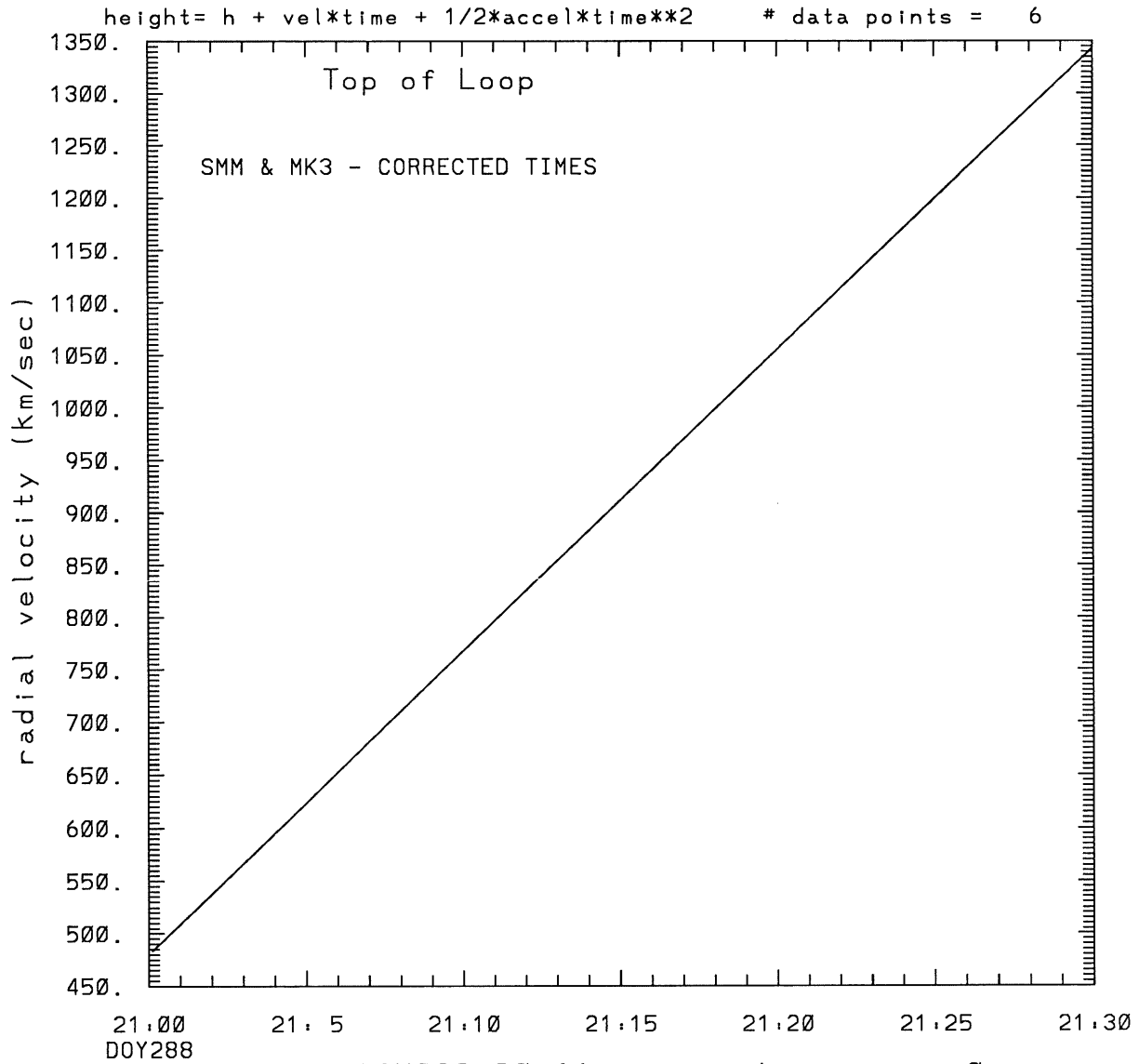


tstart=DOY288 20:44 from derivative=0

Event begins at 1.40 Solar Radii

radial acceleration = 0.4793 +/- 0.0231 [km/sec\*\*2]

SMM C/P 1986 DOY288 295 +/- 0 degrees



tstart=DOY288 20:44 from derivative=0  
Event begins at 1.40 Solar Radii  
radial acceleration=0.479E+00 km/sec\*\*2

\*\*\*\*\*  
This is a 1 order run  
\*\*\*\*\*

\*\*\*\*\*  
INPUT:  
\*\*\*\*\*

year	doy	time	radii	radius	error in angle	error in angle	datatype
1986	288	21: 1:17	1.80	+/- 0.10	295.0	+/- 0.5	SMM
1986	288	21: 4:26	1.95	+/- 0.10	295.0	+/- 0.5	SMM
1986	288	21:10:29	2.30	+/- 0.10	295.0	+/- 0.5	SMM
1986	288	21:17:26	2.85	+/- 0.10	295.0	+/- 0.5	SMM
1986	288	21:23:26	3.40	+/- 0.15	295.0	+/- 1.0	SMM
1986	288	21:26:28	3.70	+/- 0.10	295.0	+/- 1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Loop  
\*\*\*\*\*

\*\*\*\*\*  
OUTPUT:  
\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.806E+01 +/- 0.421E-01$  [minutes]  
In more convenient units:  
Event began at DOY 288 20:52 +/- 0.421E-01 [minutes]

Origin defined at DOY288 21: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 879. +/- 44. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.161E+01 +/- 0.602E-01$  [solar radii]  
 $c(2) = 0.757E-01 +/- 0.378E-02$  [radii/min]  
 $c(2) = 0.879E+03 +/- 0.438E+02$  [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  $c(1) = 0.67052E-01$  [radii] see Bevington pg. 114  
error in  $c(2) = 0.40015E-02$  [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) = 295. +/- 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 21: 1 = 0.000E+00 km/sec

The TOTAL velocity at 21: 1 = 879. km/sec

The TANGENTIAL velocity at 21: 4 = 0.000E+00 km/sec

The TOTAL velocity at 21: 4 = 879. km/sec

The TANGENTIAL velocity at 21:10 = 0.000E+00 km/sec

The TOTAL velocity at 21:10 = 879. km/sec

The TANGENTIAL velocity at 21:17 = 0.000E+00 km/sec

The TOTAL velocity at 21:17 = 879. km/sec

The TANGENTIAL velocity at 21:23 = 0.000E+00 km/sec

The TOTAL velocity at 21:23 = 879. km/sec

The TANGENTIAL velocity at 21:26 = 0.000E+00 km/sec

The TOTAL velocity at 21:26 = 879. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.78

Standard Deviation in start time measurement = 0.933E+01

Error in time = 0.24134E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.734E-02

Reduced Chi Squared = 0.279E-01

Chi Squared = 0.112E+00

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.994E+00

The probability that no LINEAR correlation exists between the variables = 0.4550E-04

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
1986	288	21: 1:17	1.80 +/- 0.10	1.80 +/- 0.10	295.0 +/- 0.5	295.0 +/- 0.5	SMM
1986	288	21: 4:26	1.95 +/- 0.10	1.95 +/- 0.10	295.0 +/- 0.5	295.0 +/- 0.5	SMM
1986	288	21:10:29	2.30 +/- 0.10	2.30 +/- 0.10	295.0 +/- 0.5	295.0 +/- 0.5	SMM
1986	288	21:17:26	2.85 +/- 0.10	2.85 +/- 0.10	295.0 +/- 0.5	295.0 +/- 0.5	SMM
1986	288	21:23:26	3.40 +/- 0.15	3.40 +/- 0.15	295.0 +/- 1.0	295.0 +/- 1.0	SMM
1986	288	21:26:28	3.70 +/- 0.10	3.70 +/- 0.10	295.0 +/- 1.0	295.0 +/- 1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Loop  
\*\*\*\*\*

\*\*\*\*\*  
OUTPUT:  
\*\*\*\*\*

START TIME:

tstart=DOY288 20:44 from derivative = 0  
Event begins at 1.40 Solar Radii  
Origin defined at DOY288 21: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.479E+00 +/- 0.231E-01 km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

- c(1) = 0.174E+01 +/- 0.902E-02 [solar radii]
- c(2) = 0.414E-01 +/- 0.170E-02 [radii/min]
- c(2) = 0.480E+03 +/- 0.198E+02 [km/sec]
- c(3) = 0.124E-02 +/- 0.597E-04 [radii/min\*\*2]
- c(3) = 0.479E+00 +/- 0.231E-01 [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

- Approximate error in c(1) = 0.10973E-01 [radii] Bevington pg 154 (8-30)
- Exact error in c(1) = 0.22791E-02 [radii] Bevington pg 154 (8-28)
- Approximate error in c(2) = 0.20725E-02 [radii/min] Bevington pg 154 (8-30)
- Exact error in c(2) = 0.60766E-03 [radii/min] Bevington pg 154 (8-28)
- Approximate error in c(3) = 0.72701E-04 [radii/min\*\*] Bevington pg 154 (8-30)
- Exact error in c(3) = 0.20996E-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) = 295. +/- 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 21: 1 = 0.000E+00 km/sec

The TOTAL velocity at 21: 1 = 517. km/sec

The TANGENTIAL velocity at 21: 4 = 0.000E+00 km/sec

The TOTAL velocity at 21: 4 = 607. km/sec

The TANGENTIAL velocity at 21:10 = 0.000E+00 km/sec

The TOTAL velocity at 21:10 = 781. km/sec

The TANGENTIAL velocity at 21:17 = 0.000E+00 km/sec

The TOTAL velocity at 21:17 = 981. km/sec

The TANGENTIAL velocity at 21:23 = 0.000E+00 km/sec

The TOTAL velocity at 21:23 = 1154. km/sec

The TANGENTIAL velocity at 21:26 = 0.000E+00 km/sec

The TOTAL velocity at 21:26 = 1241. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.78

Standard Deviation in start time measurement = 0.933E+01

Value of reduced Chi Squared returned from nllst2 = 0.844E-04

Reduced Chi Squared = 0.438E-03

Chi Squared = 0.131E-02

The probability for exceeding chi square = 0.100E+01

For a second order fit 3 correlation coefficients are given:

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

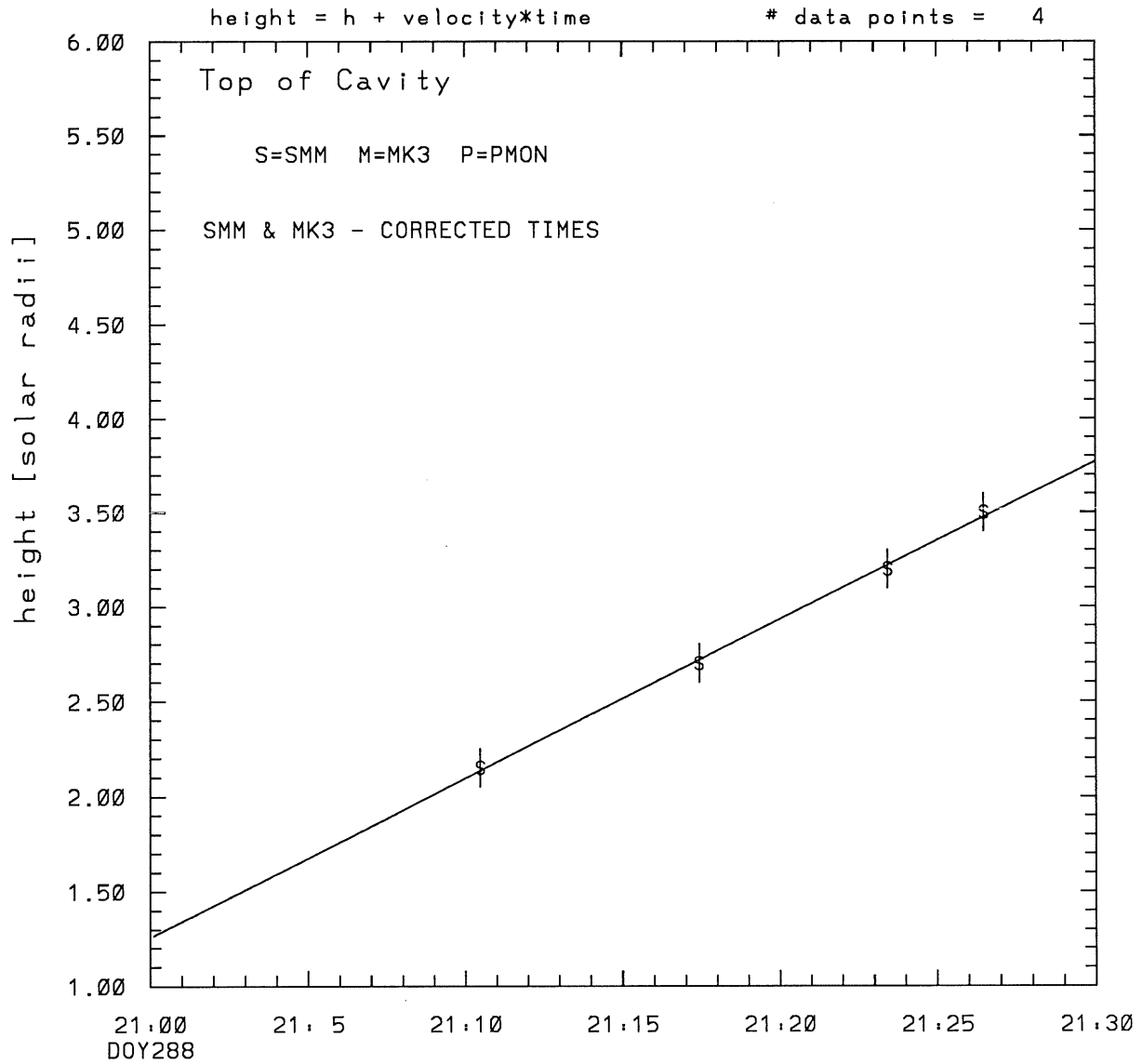
The correlation between the data and the term linear in time = 0.9919E+00

The correlation between the data and the time\*\*2 term = 0.9907E+00

The correlation between the data and the complete equation of motion = 0.9998E+00

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

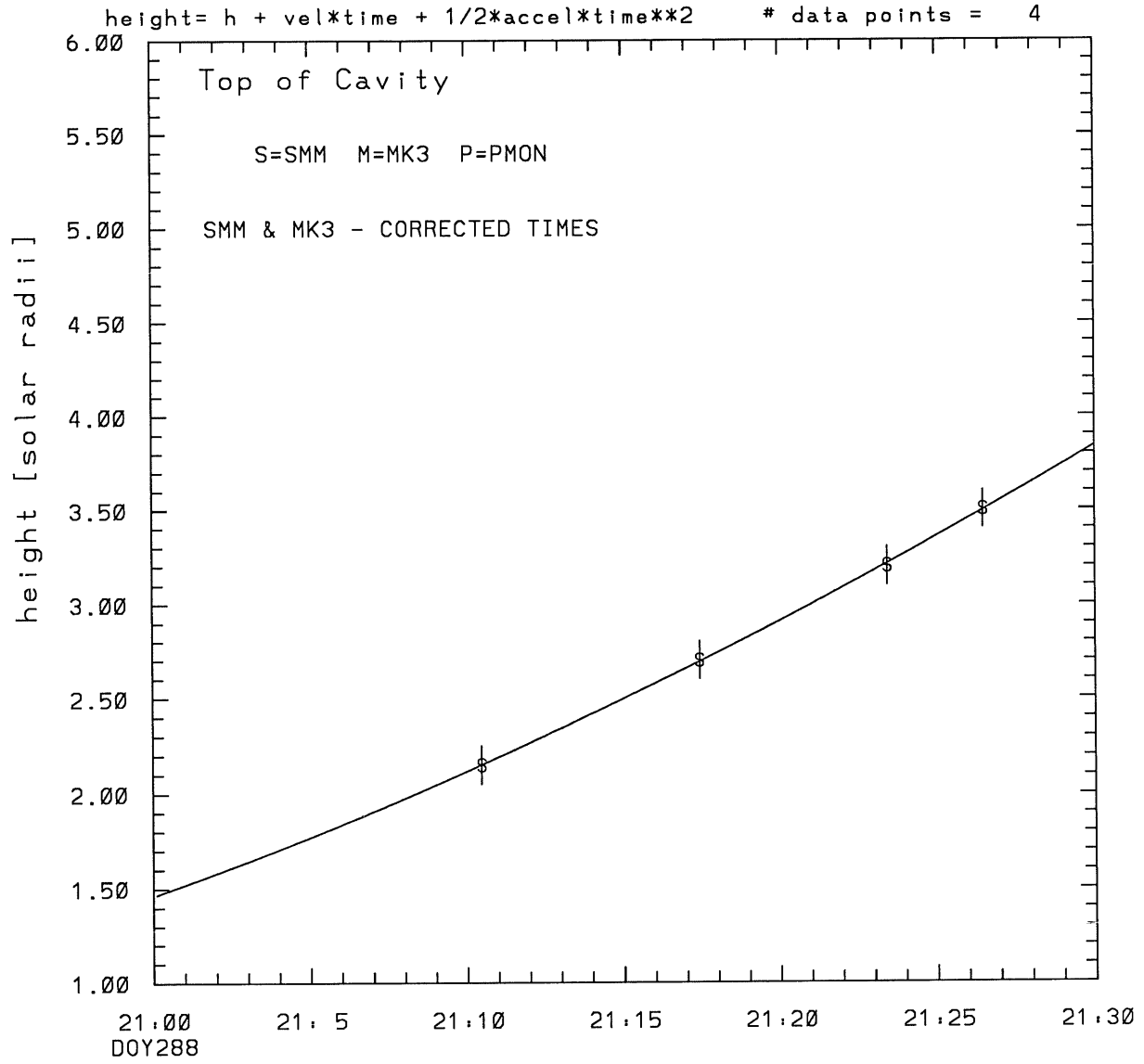
SMM C/P 1986 DOY288 295 +/- 0 degrees



tstart=DOY288 20:57 +/- 0.1 [min.]  
radial velocity= 972. +/- 22. [km/sec]



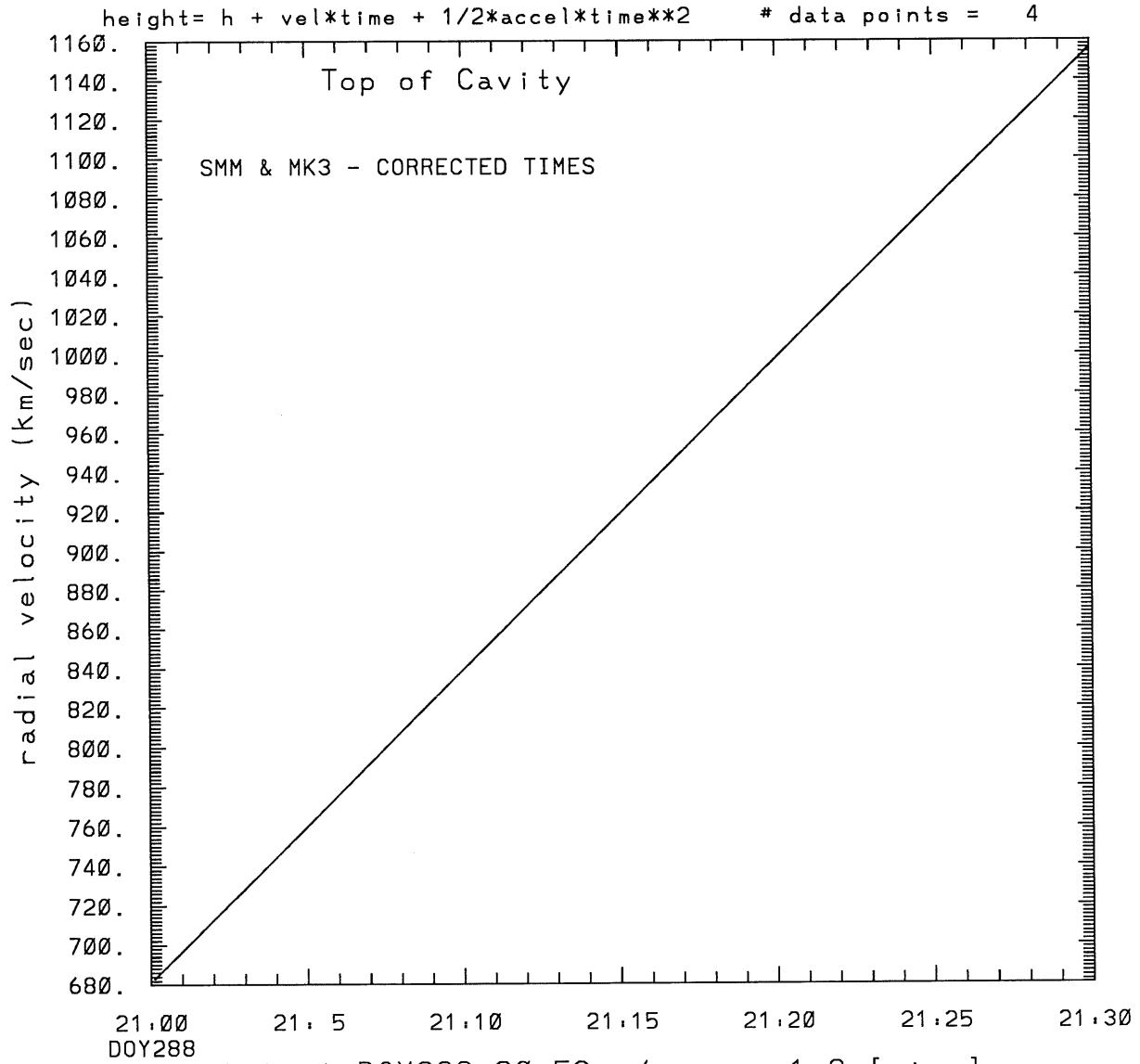
SMM C/P 1986 DOY288 295 +/- 0 degrees



tstart=DOY288 20.53 +/- 1.8 [min.]

radial acceleration = 0.2640 +/- 0.0805 [km/sec\*\*2]

SMM C/P 1986 DOY288 295 +/- 0 degrees



tstart=DOY288 20:53 +/- 1.8 [min.]

radial acceleration=0.264E+00 km/sec\*\*2

\*\*\*\*\*  
This is a 1 order run  
\*\*\*\*\*

\*\*\*\*\*  
INPUT:  
\*\*\*\*\*

year	doy	time	radii	error in radius	error in angle	angle	datatype
1986	288	21:10:29	2.15	+/- 0.10	295.0	+/- 0.5	SMM
1986	288	21:17:26	2.70	+/- 0.10	295.0	+/- 0.5	SMM
1986	288	21:23:26	3.20	+/- 0.10	295.0	+/- 1.0	SMM
1986	288	21:26:28	3.50	+/- 0.10	295.0	+/- 1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Cavity  
\*\*\*\*\*

\*\*\*\*\*  
OUTPUT:  
\*\*\*\*\*

START TIME:

Event began at t = 0 + -0.307E+01 +/- 0.604E-01 [minutes]  
In more convenient units:  
Event began at DOY 288 20:57 +/- 0.604E-01 [minutes]

Origin defined at DOY288 21: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 972. +/- 22. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

- c(1) = 0.126E+01 +/- 0.384E-01 [solar radii]
- c(2) = 0.838E-01 +/- 0.188E-02 [radii/min]
- c(2) = 0.972E+03 +/- 0.218E+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)= 0.47008E-01 [radii] see Bevington pg. 114  
error in c(2)= 0.23051E-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) = 295. +/- 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 21:10 = 0.000E+00 km/sec

The TOTAL velocity at 21:10 = 972. km/sec

The TANGENTIAL velocity at 21:17 = 0.000E+00 km/sec

The TOTAL velocity at 21:17 = 972. km/sec

The TANGENTIAL velocity at 21:23 = 0.000E+00 km/sec

The TOTAL velocity at 21:23 = 972. km/sec

The TANGENTIAL velocity at 21:26 = 0.000E+00 km/sec

The TOTAL velocity at 21:26 = 972. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.59

Standard Deviation in start time measurement = 0.611E+01

Error in time = 0.47577E+00 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.530E-03

Reduced Chi Squared = 0.233E-02

Chi Squared = 0.465E-02

The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.999E+00

The probability that no LINEAR correlation exists between the variables = 0.7561E-03

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

\*\*\*\*\*  
This is a 2 order run  
\*\*\*\*\*

\*\*\*\*\*  
INPUT:  
\*\*\*\*\*

year	doy	time	radii	error in radius	error in angle	angle	datatype
1986	288	21:10:29	2.15	+/- 0.10	295.0	+/- 0.5	SMM
1986	288	21:17:26	2.70	+/- 0.10	295.0	+/- 0.5	SMM
1986	288	21:23:26	3.20	+/- 0.10	295.0	+/- 1.0	SMM
1986	288	21:26:28	3.50	+/- 0.10	295.0	+/- 1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Cavity  
\*\*\*\*\*

\*\*\*\*\*  
OUTPUT:  
\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.875E+01 +/- 0.176E+01$  [minutes]  
In more convenient units:  
Event began at DOY 288 20:53 +/- 0.176E+01 [minutes]

Origin defined at DOY288 21: 0

RADIAL INFORMATION:

RADIAL ACCELERATION =  $0.264E+00 +/- 0.805E-01$  km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.146E+01 +/- 0.650E-01$  [solar radii]  
 $c(2) = 0.587E-01 +/- 0.771E-02$  [radii/min]  
 $c(2) = 0.681E+03 +/- 0.894E+02$  [km/sec]  
 $c(3) = 0.683E-03 +/- 0.208E-03$  [radii/min\*\*2]  
 $c(3) = 0.264E+00 +/- 0.805E-01$  [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in  $c(1) = 0.91938E-01$  [radii] Bevington pg 154 (8-30)  
Exact error in  $c(1) = 0.33987E-01$  [radii] Bevington pg 154 (8-28)  
Approximate error in  $c(2) = 0.10899E-01$  [radii/min] Bevington pg 154 (8-30)  
Exact error in  $c(2) = 0.45172E-02$  [radii/min] Bevington pg 154 (8-28)  
Approximate error in  $c(3) = 0.29447E-03$  [radii/min\*\*] Bevington pg 154 (8-30)  
Exact error in  $c(3) = 0.12600E-03$  [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) = 295. +/- 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 21:10 = 0.000E+00 km/sec  
The TOTAL velocity at 21:10 = 847. km/sec

The TANGENTIAL velocity at 21:17 = 0.000E+00 km/sec  
The TOTAL velocity at 21:17 = 957. km/sec

The TANGENTIAL velocity at 21:23 = 0.000E+00 km/sec  
The TOTAL velocity at 21:23 = 1052. km/sec

The TANGENTIAL velocity at 21:26 = 0.000E+00 km/sec  
The TOTAL velocity at 21:26 = 1100. km/sec

\*\*\*\*\*  
The following info is for estimating goodness of the fit  
\*\*\*\*\*

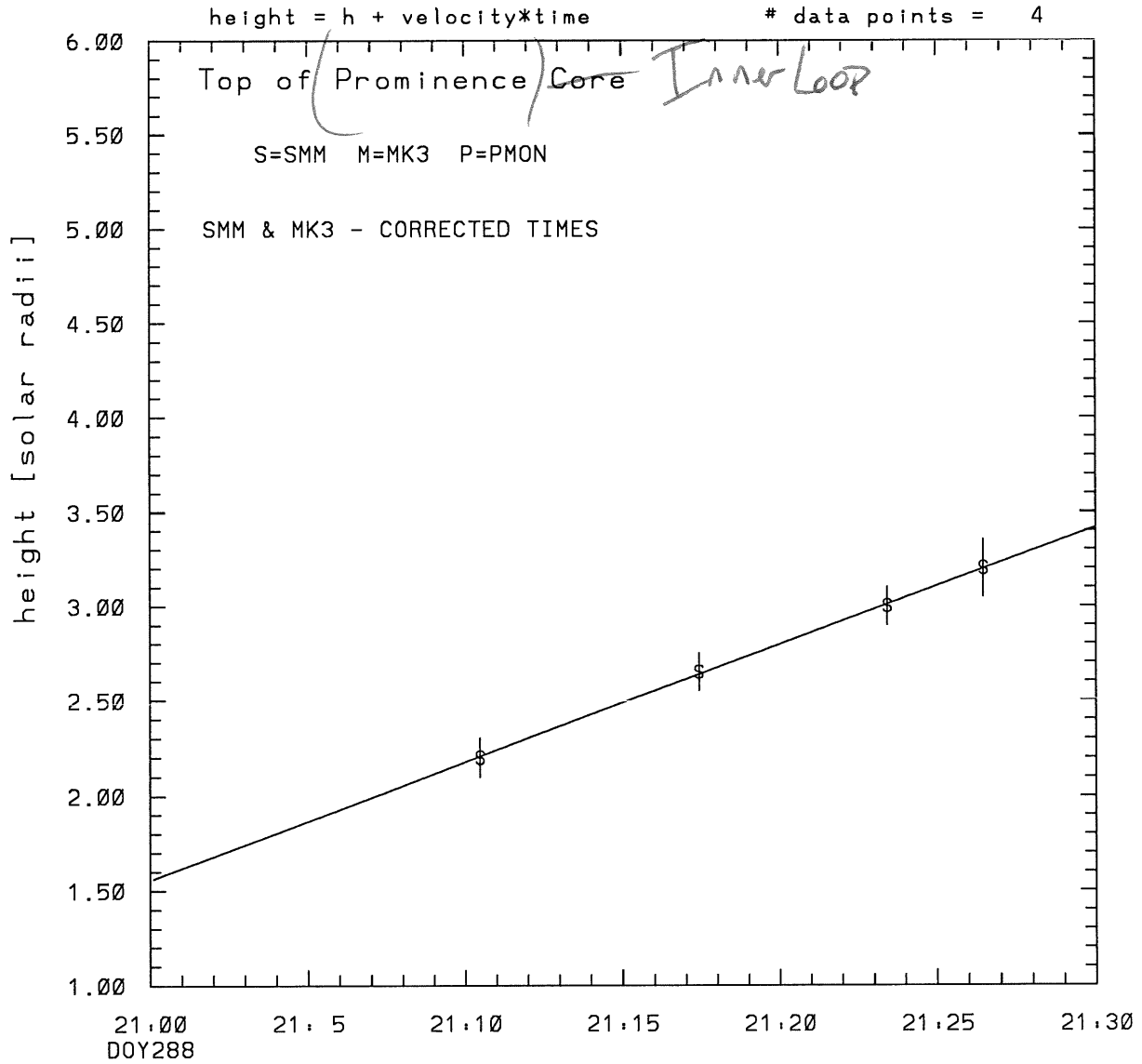
Fit is ok [ier=1]

Standard Deviation in the height = 0.59  
Standard Deviation in start time measurement = 0.611E+01  
Value of reduced Chi Squared returned from nllst2 = 0.125E-03  
Reduced Chi Squared = 0.725E-03  
Chi Squared = 0.725E-03  
The probability for exceeding chi square = 0.991E+00

For a second order fit 3 correlation coefficients are given:

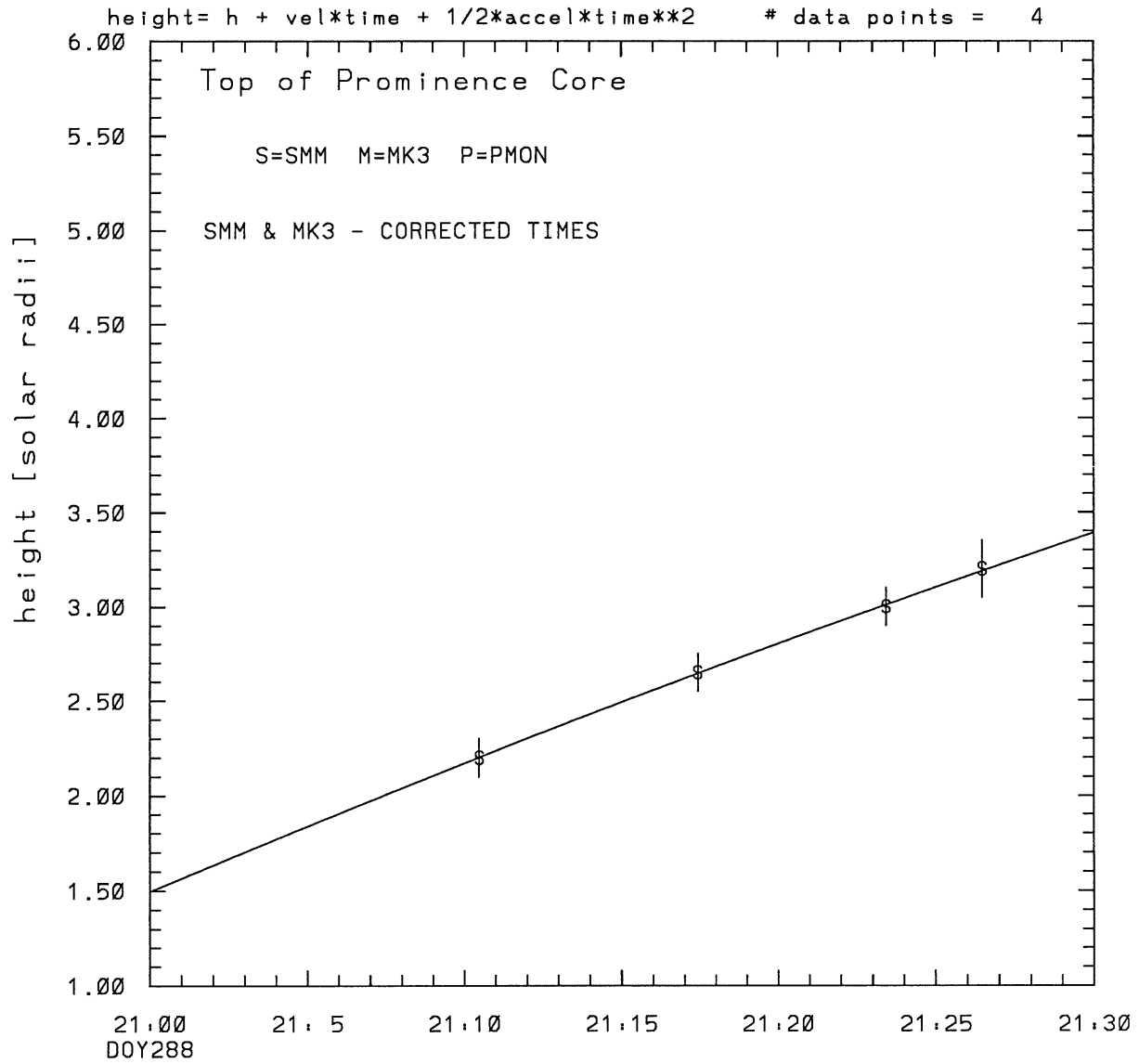
(Using equation of motion:  $r = a + bt + at^{**2}$ )  
The correlation between the data and the term linear in time = 0.9992E+00  
The correlation between the data and the time\*\*2 term = 0.9964E+00  
The correlation between the data and the complete equation of motion = 0.9998E+00  
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

SMM C/P 1986 DOY288 300 +/- 0 degrees



tstart=DOY288 20:53 +/- 0.1 [min.]  
radial velocity= 719. +/- 11. [km/sec]

SMM C/P 1986 DOY288 300 +/- 0 degrees

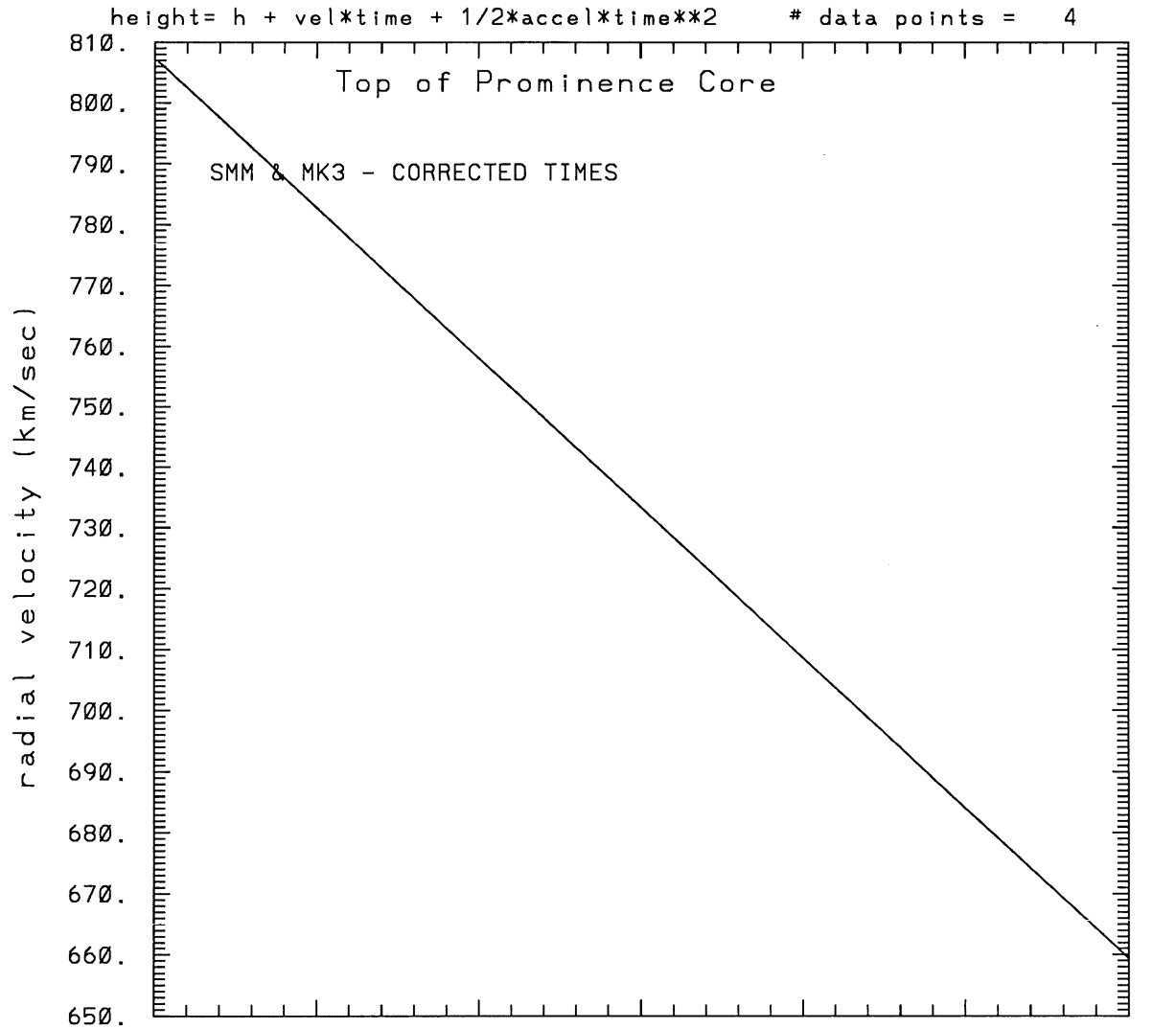


tstart=DOY288 20:55 +/- 4.1 [min.]

radial acceleration =  $-0.0822 +/- 0.0784$  [km/sec\*\*2]



SMM C/P 1986 DOY288 300 +/- 0 degrees



21:00  
DOY288

tstart=DOY288 20:55 +/- 4.1 [min.]

radial acceleration =  $-.822E-01$  km/sec\*\*2

\*\*\*\*\*  
This is a 1 order run  
\*\*\*\*\*

\*\*\*\*\*  
INPUT:  
\*\*\*\*\*

year	day	time	radii	error in radius	angle	error in angle	datatype
1986	288	21:10:29	2.20	+/- 0.10	300.0	+/- 0.5	SMM
1986	288	21:17:26	2.65	+/- 0.10	300.0	+/- 0.5	SMM
1986	288	21:23:26	3.00	+/- 0.10	300.0	+/- 1.0	SMM
1986	288	21:26:28	3.20	+/- 0.15	300.0	+/- 1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Prominence Core  
\*\*\*\*\*

\*\*\*\*\*  
OUTPUT:  
\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.896E+01 \pm 0.570E-01$  [minutes]  
In more convenient units:  
Event began at DOY 288 20:53  $\pm 0.570E-01$  [minutes]

Origin defined at DOY288 21: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 719.  $\pm$  11. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.156E+01 \pm 0.174E-01$  [solar radii]  
 $c(2) = 0.620E-01 \pm 0.907E-03$  [radii/min]  
 $c(2) = 0.719E+03 \pm 0.105E+02$  [km/sec]  
 $c(3) = 0.000E+00 \pm 0.000E+00$  [radii/min\*\*2]  
 $c(3) = 0.000E+00 \pm 0.000E+00$  [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

error in  $c(1) = 0.20292E-01$  [radii] see Bevington pg. 114  
error in  $c(2) = 0.99508E-03$  [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.0000E+00  $\pm$  0.0000E+00 [radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 300. +/- 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 21:10 = 0.000E+00 km/sec

The TOTAL velocity at 21:10 = 719. km/sec

The TANGENTIAL velocity at 21:17 = 0.000E+00 km/sec

The TOTAL velocity at 21:17 = 719. km/sec

The TANGENTIAL velocity at 21:23 = 0.000E+00 km/sec

The TOTAL velocity at 21:23 = 719. km/sec

The TANGENTIAL velocity at 21:26 = 0.000E+00 km/sec

The TOTAL velocity at 21:26 = 719. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.44

Standard Deviation in start time measurement = 0.611E+01

Error in time = 0.27756E+00 using best fit method

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

Value of reduced Chi Squared returned from nlist2 = 0.113E-03

Reduced Chi Squared = 0.328E-03

Chi Squared = 0.655E-03

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.100E+01

The probability that no LINEAR correlation exists between the variables = 0.2550E-03

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
1986	288	21:10:29	2.20	+/- 0.10	300.0	+/- 0.5	SMM
1986	288	21:17:26	2.65	+/- 0.10	300.0	+/- 0.5	SMM
1986	288	21:23:26	3.00	+/- 0.10	300.0	+/- 1.0	SMM
1986	288	21:26:28	3.20	+/- 0.15	300.0	+/- 1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Prominence Core  
\*\*\*\*\*

\*\*\*\*\*  
OUTPUT:  
\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.697E+01 +/- 0.410E+01$  [minutes]  
In more convenient units:  
Event began at DOY 288 20:55 +/- 0.410E+01 [minutes]

Origin defined at DOY288 21: 0

RADIAL INFORMATION:

RADIAL ACCELERATION =  $-0.822E-01 +/- 0.784E-01$  km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.150E+01 +/- 0.602E-01$  [solar radii]  
 $c(2) = 0.696E-01 +/- 0.730E-02$  [radii/min]  
 $c(2) = 0.807E+03 +/- 0.847E+02$  [km/sec]  
 $c(3) = -0.213E-03 +/- 0.203E-03$  [radii/min\*\*2]  
 $c(3) = -0.822E-01 +/- 0.784E-01$  [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in  $c(1) = 0.94181E-01$  [radii] Bevington pg 154 (8-30)  
Exact error in  $c(1) = 0.30787E-01$  [radii] Bevington pg 154 (8-28)  
Approximate error in  $c(2) = 0.11165E-01$  [radii/min] Bevington pg 154 (8-30)  
Exact error in  $c(2) = 0.42007E-02$  [radii/min] Bevington pg 154 (8-28)  
Approximate error in  $c(3) = 0.30165E-03$  [radii/min\*\*] Bevington pg 154 (8-30)  
Exact error in  $c(3) = 0.12429E-03$  [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) = 300. +/- 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 21:10 = 0.000E+00 km/sec

The TOTAL velocity at 21:10 = 756. km/sec

The TANGENTIAL velocity at 21:17 = 0.000E+00 km/sec

The TOTAL velocity at 21:17 = 721. km/sec

The TANGENTIAL velocity at 21:23 = 0.000E+00 km/sec

The TOTAL velocity at 21:23 = 692. km/sec

The TANGENTIAL velocity at 21:26 = 0.000E+00 km/sec

The TOTAL velocity at 21:26 = 677. km/sec

\*\*\*\*\*  
The following info is for estimating goodness of the fit  
\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.44  
Standard Deviation in start time measurement = 0.611E+01  
Value of reduced Chi Squared returned from nllst2 = 0.109E-03  
Reduced Chi Squared = 0.877E-03  
Chi Squared = 0.877E-03  
The probability for exceeding chi square = 0.992E+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 = 0.9740E+00

The correlation between the data and the time\*\*2 term = 0.9429E+00

The correlation between the data and the complete equation of motion = 0.9988E+00

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