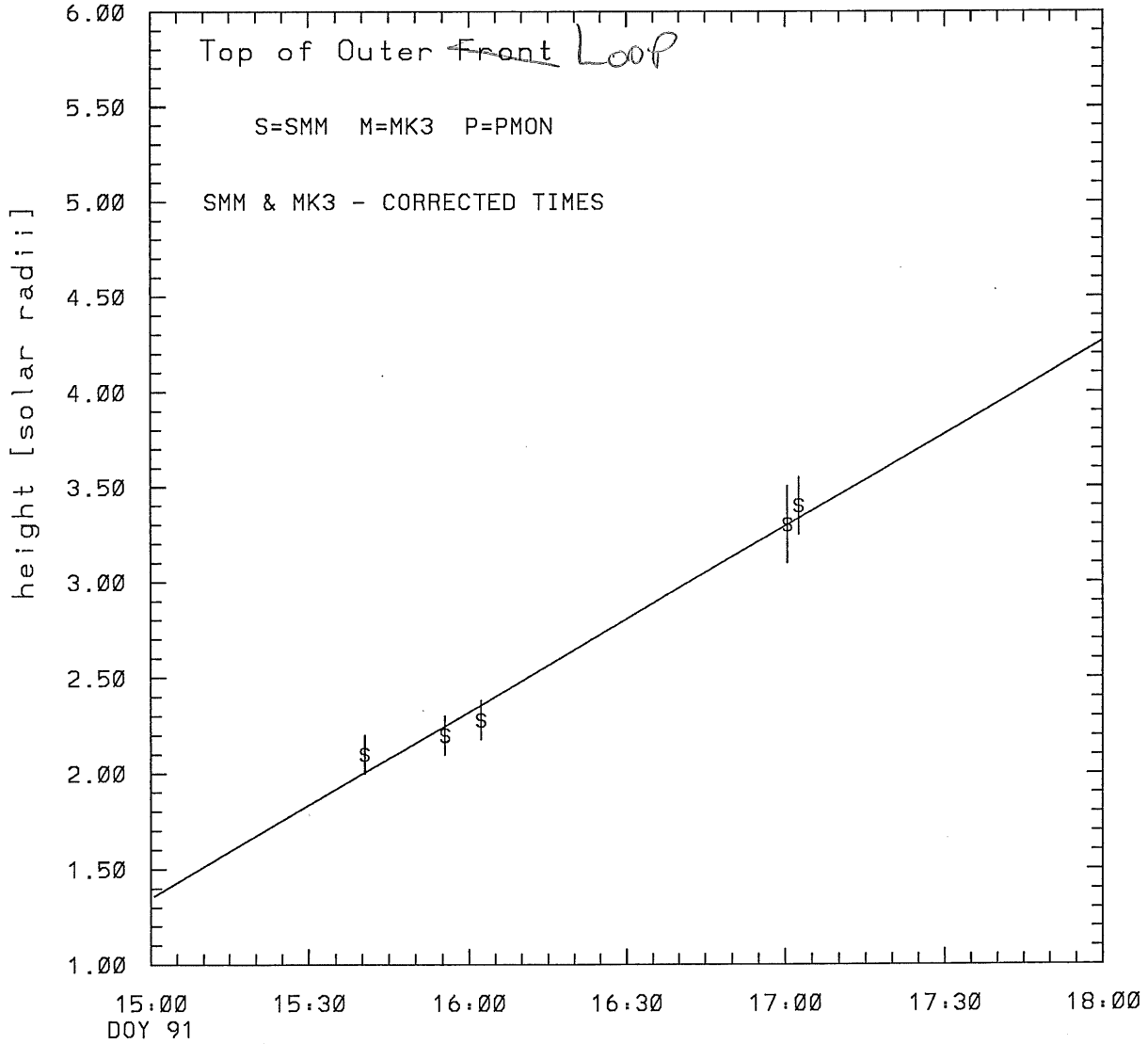


SMM C/P 1980 DOY 91 135 +/- 0 degrees

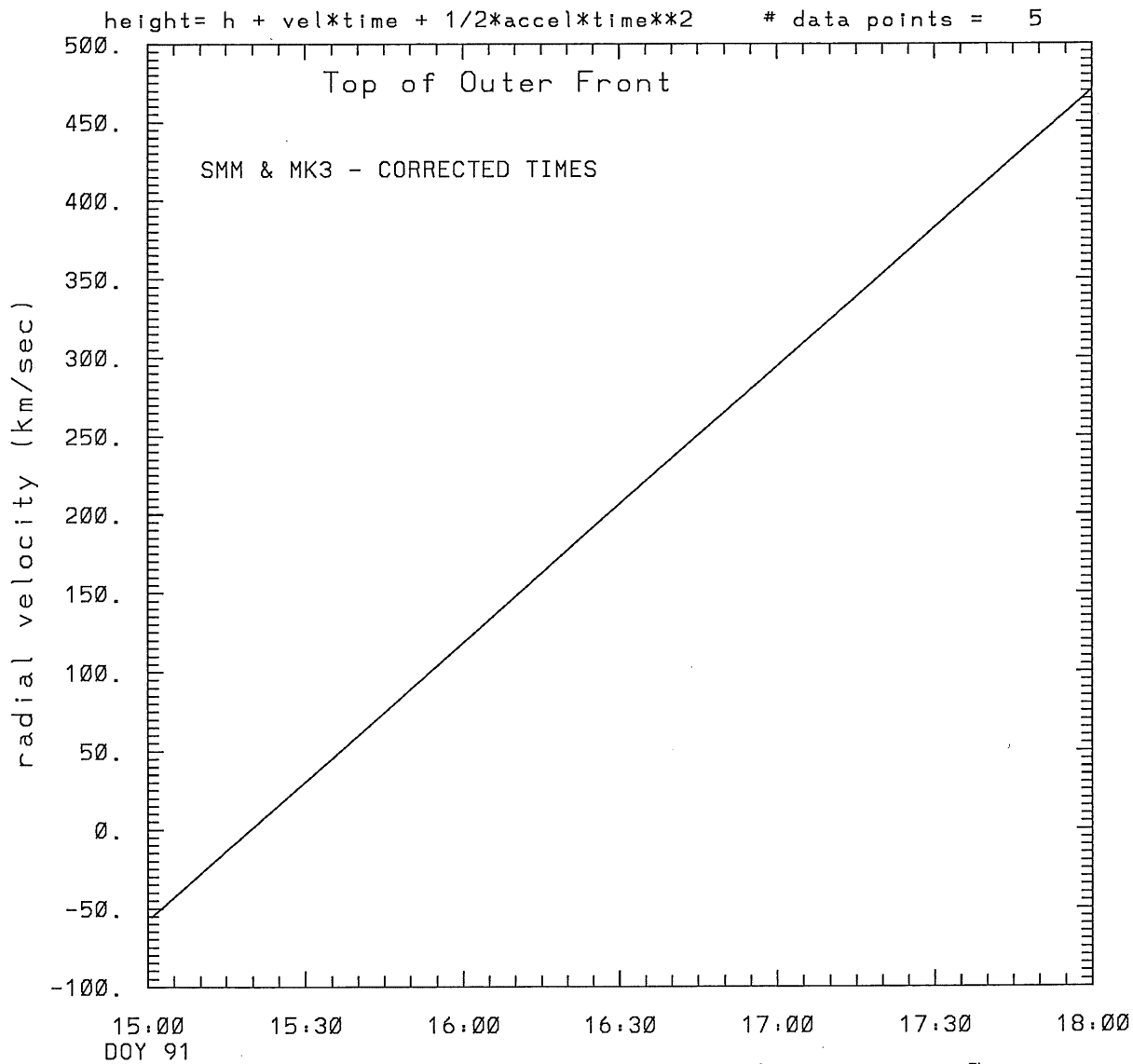
height = h + velocity\*time

# data points = 5



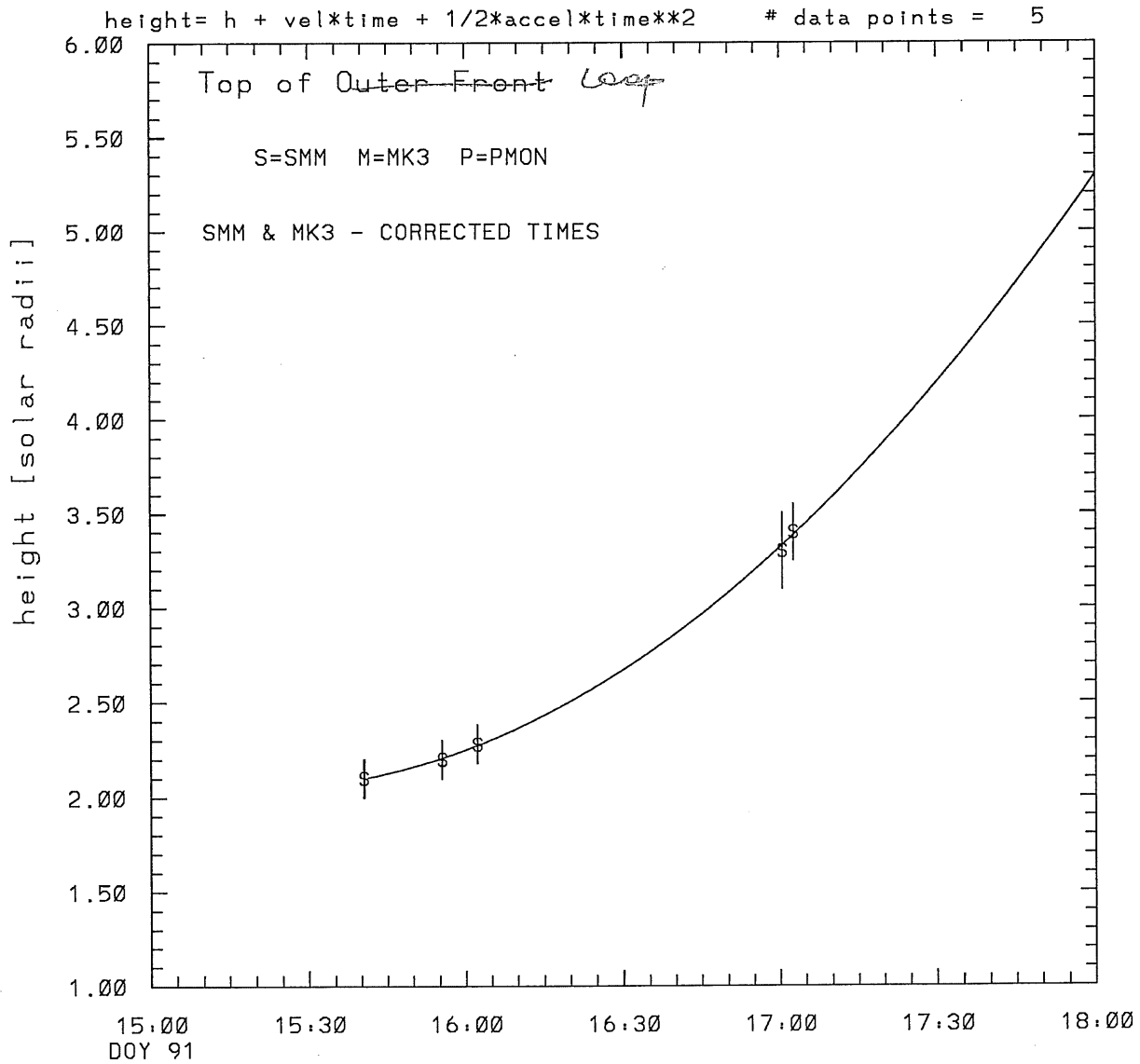
tstart=DOY 91 14:40 +/- 0.8 [min.]  
radial velocity= 188. +/- 15. [km/sec]

SMM C/P 1980 DOY 91 135 +/- 0 degrees



tstart=DOY 91 15:19 from derivative=0  
Event begins at 2.04 Solar Radii  
radial acceleration=0.489E-01 km/sec\*\*2

SMM C/P 1980 DOY 91 135 +/- 0 degrees



tstart=DOY 91 15:19 from derivative=0  
Event begins at 2.04 Solar Radii  
radial acceleration = 0.0489 +/- 0.0042 [km/sec\*\*2]

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

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

year	day	time	radii	error in radius	angle	error in angle	datatype
1980	91	15:40:29	2.10	+/- 0.10	135.0	+/- 0.5	SMM
1980	91	15:55:32	2.20	+/- 0.10	135.0	+/- 0.5	SMM
1980	91	16: 2:18	2.28	+/- 0.10	135.0	+/- 0.5	SMM
1980	91	17: 0:30	3.30	+/- 0.20	135.0	+/- 1.0	SMM
1980	91	17: 2:37	3.40	+/- 0.15	135.0	+/- 1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Outer Front  
\*\*\*\*\*

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

START TIME:

Event began at  $t = 0 + -0.215E+02 +/- 0.753E+00$  [minutes]  
In more convenient units:  
Event began at DOY 91 14:40 +/- 0.753E+00 [minutes]

Origin defined at DOY 91 15: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 188. +/- 15. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

- c(1) = 0.135E+01 +/- 0.919E-01 [solar radii]
- c(2) = 0.162E-01 +/- 0.128E-02 [radii/min]
- c(2) = 0.188E+03 +/- 0.149E+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)= 0.96737E-01 [radii] see Bevington pg. 114
- error in c(2)= 0.11073E-02 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.0000E+00 +/- 0.0000E+00[radians/sec]

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

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

year	doy	time	radii	error in radius	error in angle	datatype
1980	91	15:40:29	2.10	+/- 0.10	135.0 +/- 0.5	SMM
1980	91	15:55:32	2.20	+/- 0.10	135.0 +/- 0.5	SMM
1980	91	16: 2:18	2.28	+/- 0.10	135.0 +/- 0.5	SMM
1980	91	17: 0:30	3.30	+/- 0.20	135.0 +/- 1.0	SMM
1980	91	17: 2:37	3.40	+/- 0.15	135.0 +/- 1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Outer Front  
\*\*\*\*\*

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

START TIME:

tstart=DOY 91 15:19 from derivative = 0  
Event begins at 2.04 Solar Radii  
Origin defined at DOY 91 15: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.489E-01 +/- 0.417E-02 km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.209E+01 +/- 0.654E-01 [solar radii]  
c(2) = -0.497E-02 +/- 0.182E-02 [radii/min]  
c(2) = -0.577E+02 +/- 0.211E+02 [km/sec]  
c(3) = 0.126E-03 +/- 0.108E-04 [radii/min\*\*2]  
c(3) = 0.489E-01 +/- 0.417E-02 [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.13669E+00 [radii] Bevington pg 154 (8-30)  
Exact error in c(1) = 0.14730E-01 [radii] Bevington pg 154 (8-28)  
Approximate error in c(2) = 0.37890E-02 [radii/min] Bevington pg 154 (8-30)  
Exact error in c(2) = 0.49130E-03 [radii/min] Bevington pg 154 (8-28)  
Approximate error in c(3) = 0.22188E-04 [radii/min\*\*] Bevington pg 154 (8-30)  
Exact error in c(3) = 0.33661E-05 [radii/min\*\*] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 135. +/- 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 15:40 = 0.000E+00 km/sec

The TOTAL velocity at 15:40 = 188. km/sec

The TANGENTIAL velocity at 15:55 = 0.000E+00 km/sec

The TOTAL velocity at 15:55 = 188. km/sec

The TANGENTIAL velocity at 16: 2 = 0.000E+00 km/sec

The TOTAL velocity at 16: 2 = 188. km/sec

The TANGENTIAL velocity at 17: 0 = 0.000E+00 km/sec

The TOTAL velocity at 17: 0 = 188. km/sec

The TANGENTIAL velocity at 17: 2 = 0.000E+00 km/sec

The TOTAL velocity at 17: 2 = 188. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.64

Standard Deviation in start time measurement = 0.344E+02

Error in time = 0.91203E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.656E-02

Reduced Chi Squared = 0.178E-01

Chi Squared = 0.534E-01

The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.993E+00

The probability that no LINEAR correlation exists between the variables = 0.6308E-03

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

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

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 135. +/- 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 15:40 = 0.000E+00 km/sec

The TOTAL velocity at 15:40 = 61. km/sec

The TANGENTIAL velocity at 15:55 = 0.000E+00 km/sec

The TOTAL velocity at 15:55 = 105. km/sec

The TANGENTIAL velocity at 16: 2 = 0.000E+00 km/sec

The TOTAL velocity at 16: 2 = 125. km/sec

The TANGENTIAL velocity at 17: 0 = 0.000E+00 km/sec

The TOTAL velocity at 17: 0 = 296. km/sec

The TANGENTIAL velocity at 17: 2 = 0.000E+00 km/sec

The TOTAL velocity at 17: 2 = 302. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.64

Standard Deviation in start time measurement = 0.344E+02

Value of reduced Chi Squared returned from nllst2 = 0.187E-03

Reduced Chi Squared = 0.250E-02

Chi Squared = 0.499E-02

The probability for exceeding chi square = 0.100E+01

For a second order fit 3 correlation coefficients are given:

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

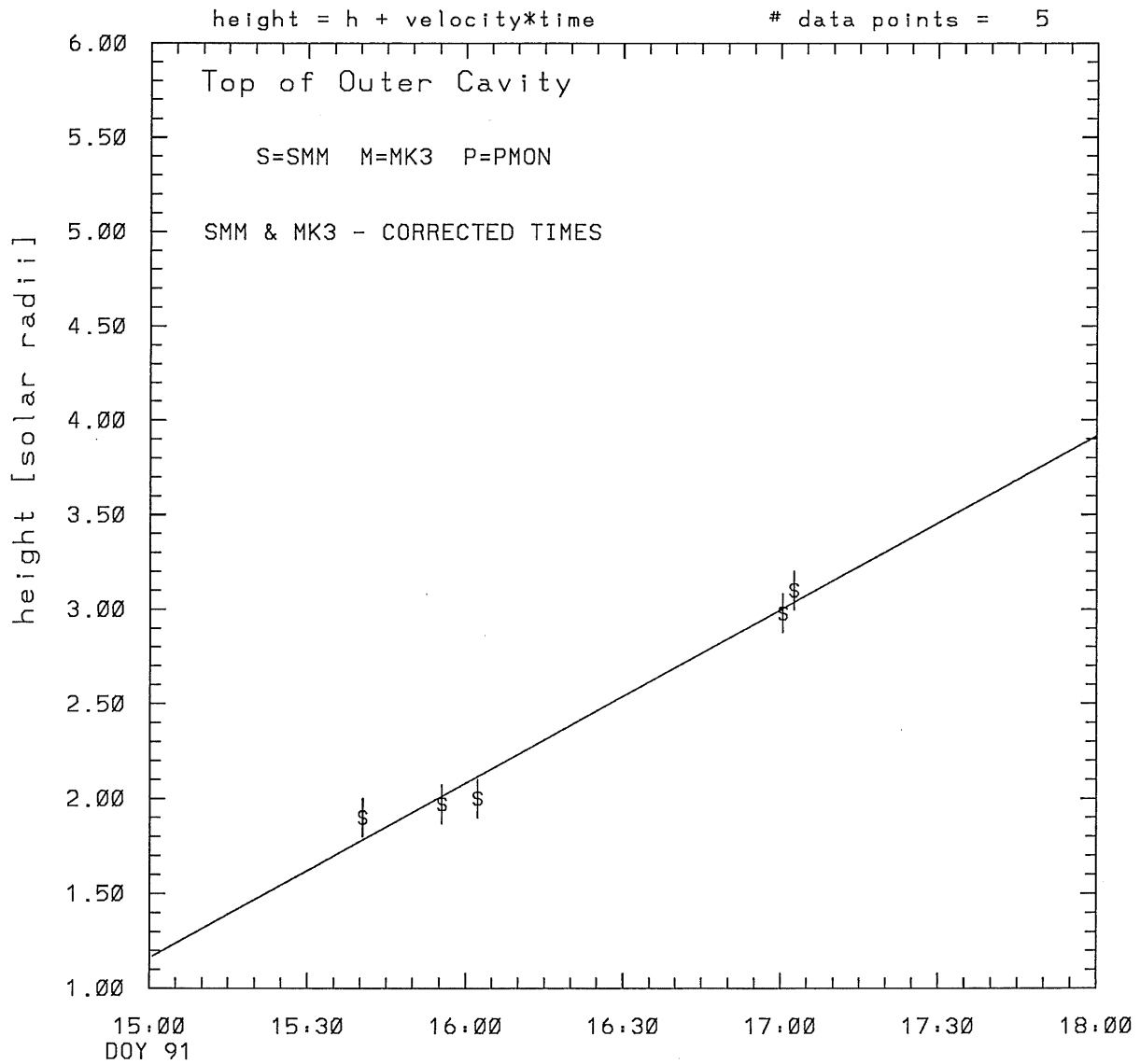
The correlation between the data and the term linear in time = 0.9126E+00

The correlation between the data and the time\*\*2 term = 0.9140E+00

The correlation between the data and the complete equation of motion = 0.1002E+01

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

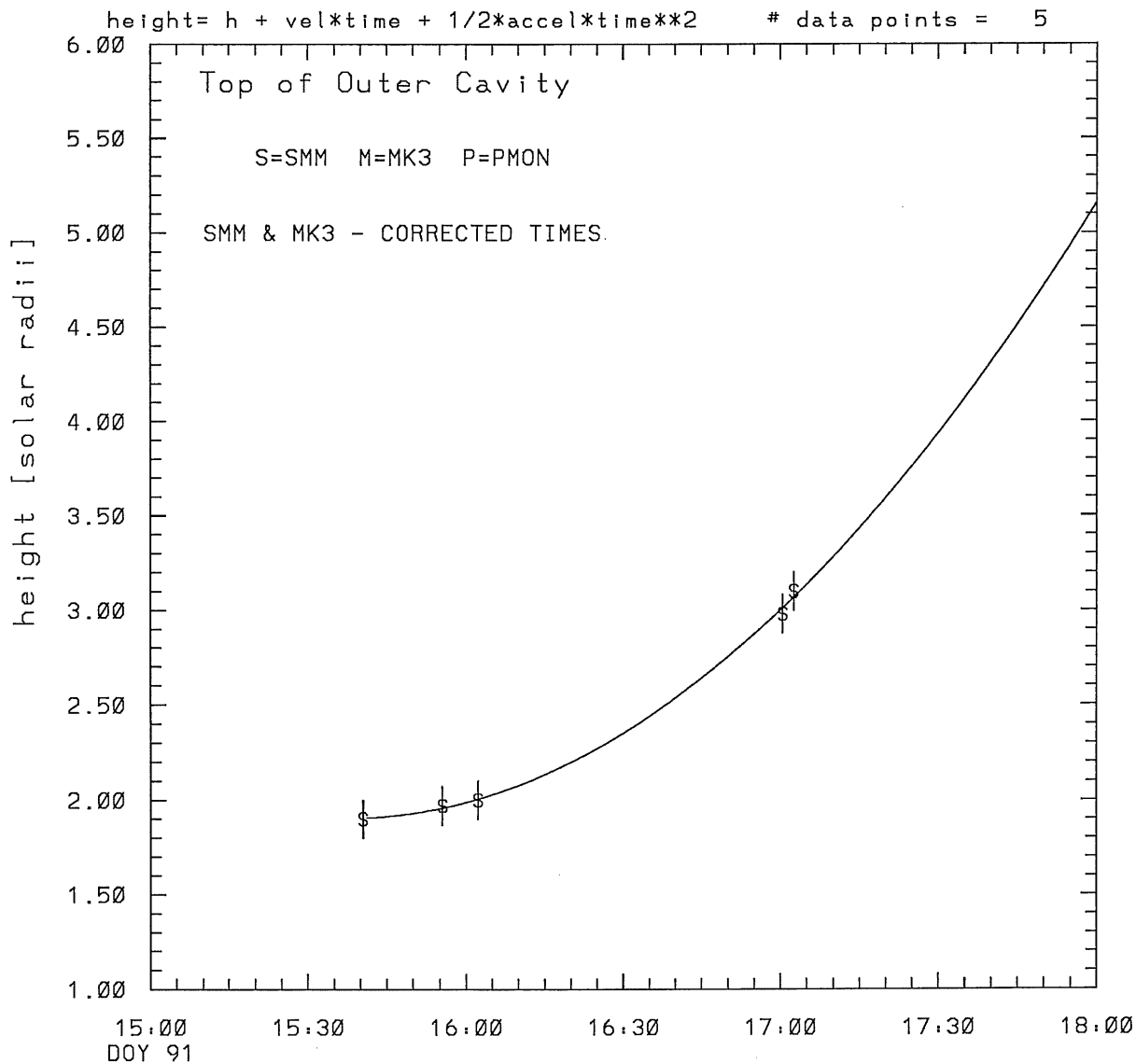
SMM C/P 1980 DOY 91 135 +/- 0 degrees



tstart=DOY 91 14:51 +/- 0.5 [min.]  
radial velocity= 177. +/- 14. [km/sec]

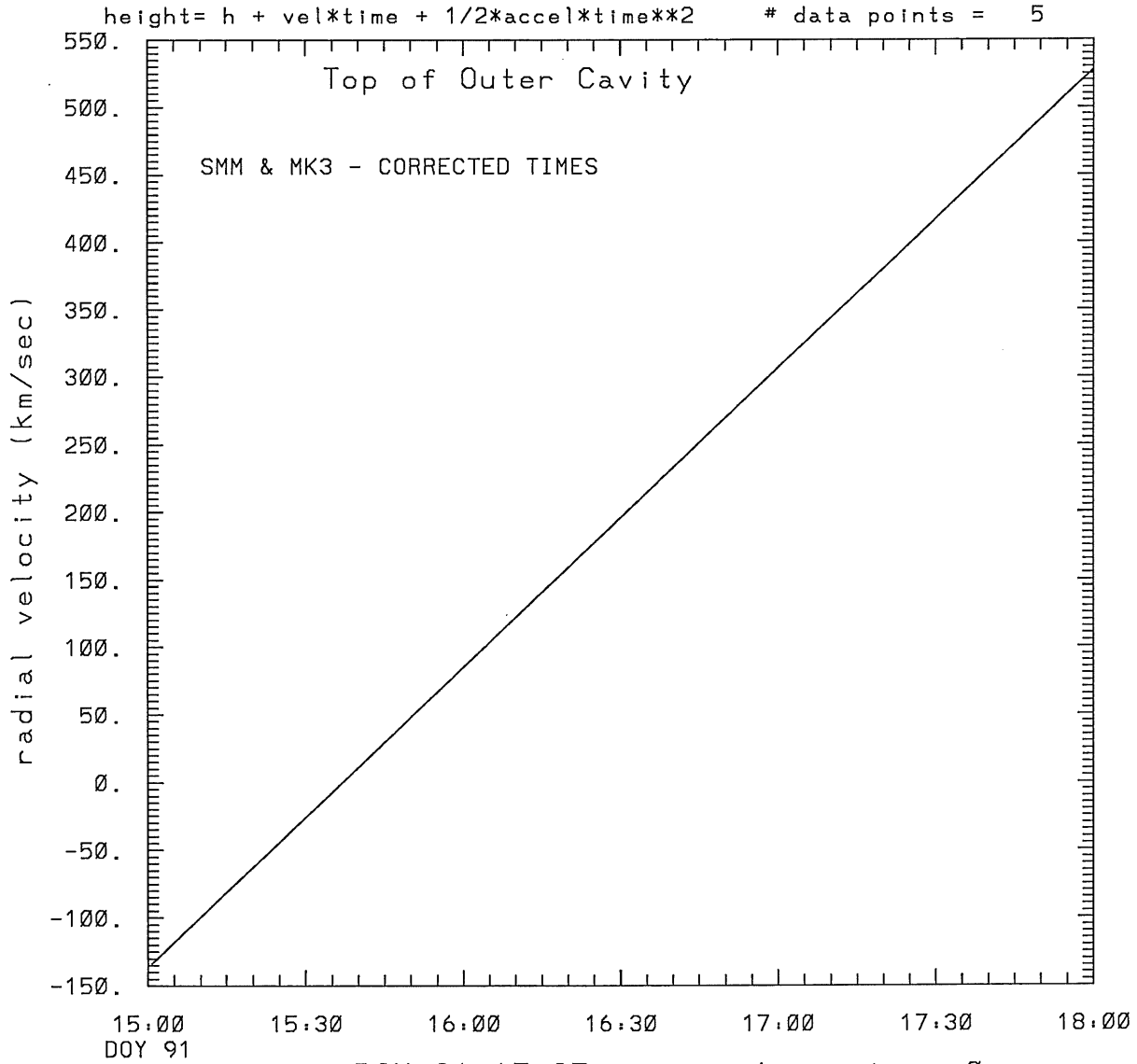


SMM C/P 1980 DOY 91 135 +/- 0 degrees



tstart=DOY 91 15:37 from derivative=0  
Event begins at 1.90 Solar Radii  
radial acceleration = 0.0615 +/- 0.0094 [km/sec\*\*2]

SMM C/P 1980 DOY 91 135 +/- 0 degrees



tstart=DOY 91 15:37 from derivative=0  
Event begins at 1.90 Solar Radii  
radial acceleration=0.615E-01 km/sec\*\*2

\*\*\*\*\*

This is a 1 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

year	doy	time	radii	error in radius	angle	error in angle	datatype
1980	91	15:40:29	1.90	+/- 0.10	135.0	+/- 0.5	SMM
1980	91	15:55:32	1.97	+/- 0.10	135.0	+/- 0.5	SMM
1980	91	16: 2:18	2.00	+/- 0.10	135.0	+/- 0.5	SMM
1980	91	17: 0:30	2.98	+/- 0.10	135.0	+/- 0.5	SMM
1980	91	17: 2:37	3.10	+/- 0.10	135.0	+/- 1.0	SMM

\*\*\*\*\*

Structure being measured:

Top of Outer Cavity

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.106E+02 +/- 0.453E+00$  [minutes]

In more convenient units:

Event began at DOY 91 14:51 +/- 0.453E+00 [minutes]

Origin defined at DOY 91 15: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 177. +/- 14. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.116E+01 +/- 0.104E+00$  [solar radii]

$c(2) = 0.153E-01 +/- 0.119E-02$  [radii/min]

$c(2) = 0.177E+03 +/- 0.138E+02$  [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  $c(1) = 0.12001E+00$  [radii] see Bevington pg. 114

error in  $c(2) = 0.13737E-02$  [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) = 135. +/- 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 15:40 = 0.000E+00 km/sec  
The TOTAL velocity at 15:40 = 177. km/sec

The TANGENTIAL velocity at 15:55 = 0.000E+00 km/sec  
The TOTAL velocity at 15:55 = 177. km/sec

The TANGENTIAL velocity at 16: 2 = 0.000E+00 km/sec  
The TOTAL velocity at 16: 2 = 177. km/sec

The TANGENTIAL velocity at 17: 0 = 0.000E+00 km/sec  
The TOTAL velocity at 17: 0 = 177. km/sec

The TANGENTIAL velocity at 17: 2 = 0.000E+00 km/sec  
The TOTAL velocity at 17: 2 = 177. 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 = 0.344E+02  
Error in time = 0.11978E+02 using best fit method  
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.839E-02  
Reduced Chi Squared = 0.264E-01  
Chi Squared = 0.792E-01  
The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.988E+00  
The probability that no LINEAR correlation exists between the variables = 0.1552E-02  
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

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

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

			error in		error in		
year	doy	time	radii	radius	angle	angle	datatype
1980	91	15:40:29	1.90	+/- 0.10	135.0	+/- 0.5	SMM
1980	91	15:55:32	1.97	+/- 0.10	135.0	+/- 0.5	SMM
1980	91	16: 2:18	2.00	+/- 0.10	135.0	+/- 0.5	SMM
1980	91	17: 0:30	2.98	+/- 0.10	135.0	+/- 0.5	SMM
1980	91	17: 2:37	3.10	+/- 0.10	135.0	+/- 1.0	SMM

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

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

START TIME:

tstart=DOY 91 15:37 from derivative = 0  
Event begins at 1.90 Solar Radii  
Origin defined at DOY 91 15: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.615E-01 +/- 0.938E-02 km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

- c(1) = 0.212E+01 +/- 0.149E+00 [solar radii]
- c(2) = -0.118E-01 +/- 0.414E-02 [radii/min]
- c(2) = -0.137E+03 +/- 0.481E+02 [km/sec]
- c(3) = 0.159E-03 +/- 0.243E-04 [radii/min\*\*2]
- c(3) = 0.615E-01 +/- 0.938E-02 [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

- Approximate error in c(1) = 0.18305E+00 [radii] Bevington pg 154 (8-30)
- Exact error in c(1) = 0.22428E-01 [radii] Bevington pg 154 (8-28)
- Approximate error in c(2) = 0.50744E-02 [radii/min] Bevington pg 154 (8-30)
- Exact error in c(2) = 0.67423E-03 [radii/min] Bevington pg 154 (8-28)
- Approximate error in c(3) = 0.29715E-04 [radii/min\*\*] Bevington pg 154 (8-30)
- Exact error in c(3) = 0.47225E-05 [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) = 135. +/- 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 15:40 = 0.000E+00 km/sec

The TOTAL velocity at 15:40 = 13. km/sec

The TANGENTIAL velocity at 15:55 = 0.000E+00 km/sec

The TOTAL velocity at 15:55 = 68. km/sec

The TANGENTIAL velocity at 16: 2 = 0.000E+00 km/sec

The TOTAL velocity at 16: 2 = 93. km/sec

The TANGENTIAL velocity at 17: 0 = 0.000E+00 km/sec

The TOTAL velocity at 17: 0 = 308. km/sec

The TANGENTIAL velocity at 17: 2 = 0.000E+00 km/sec

The TOTAL velocity at 17: 2 = 316. 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 = 0.344E+02

Value of reduced Chi Squared returned from nllst2 = 0.730E-03

Reduced Chi Squared = 0.465E-02

Chi Squared = 0.929E-02

The probability for exceeding chi square = 0.999E+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 = 0.9881E+00

The correlation between the data and the time\*\*2 term = 0.9972E+00

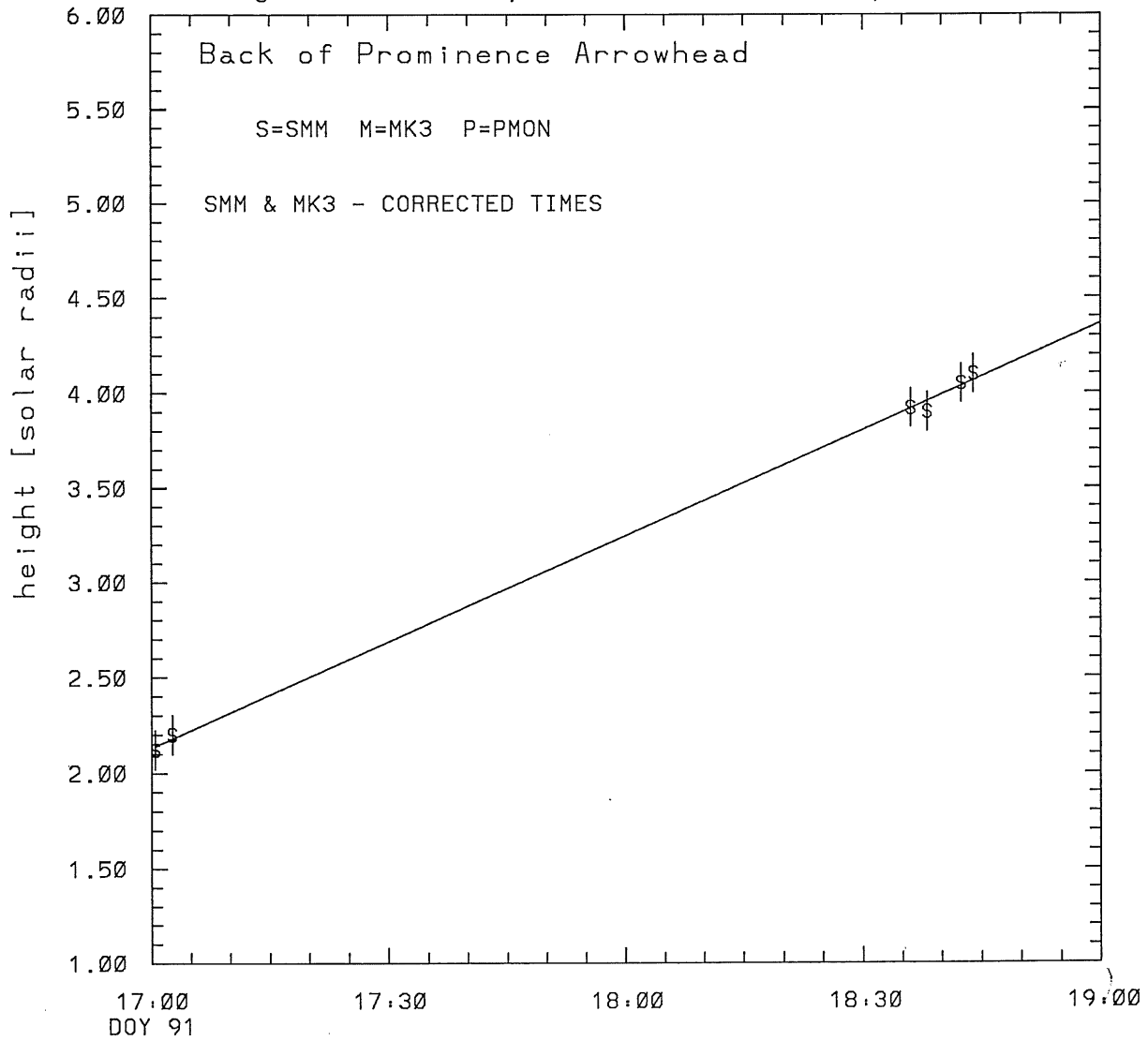
The correlation between the data and the complete equation of motion = 0.9985E+00

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

SMM C/P 1980 DOY 91 139 +/- 0 degrees

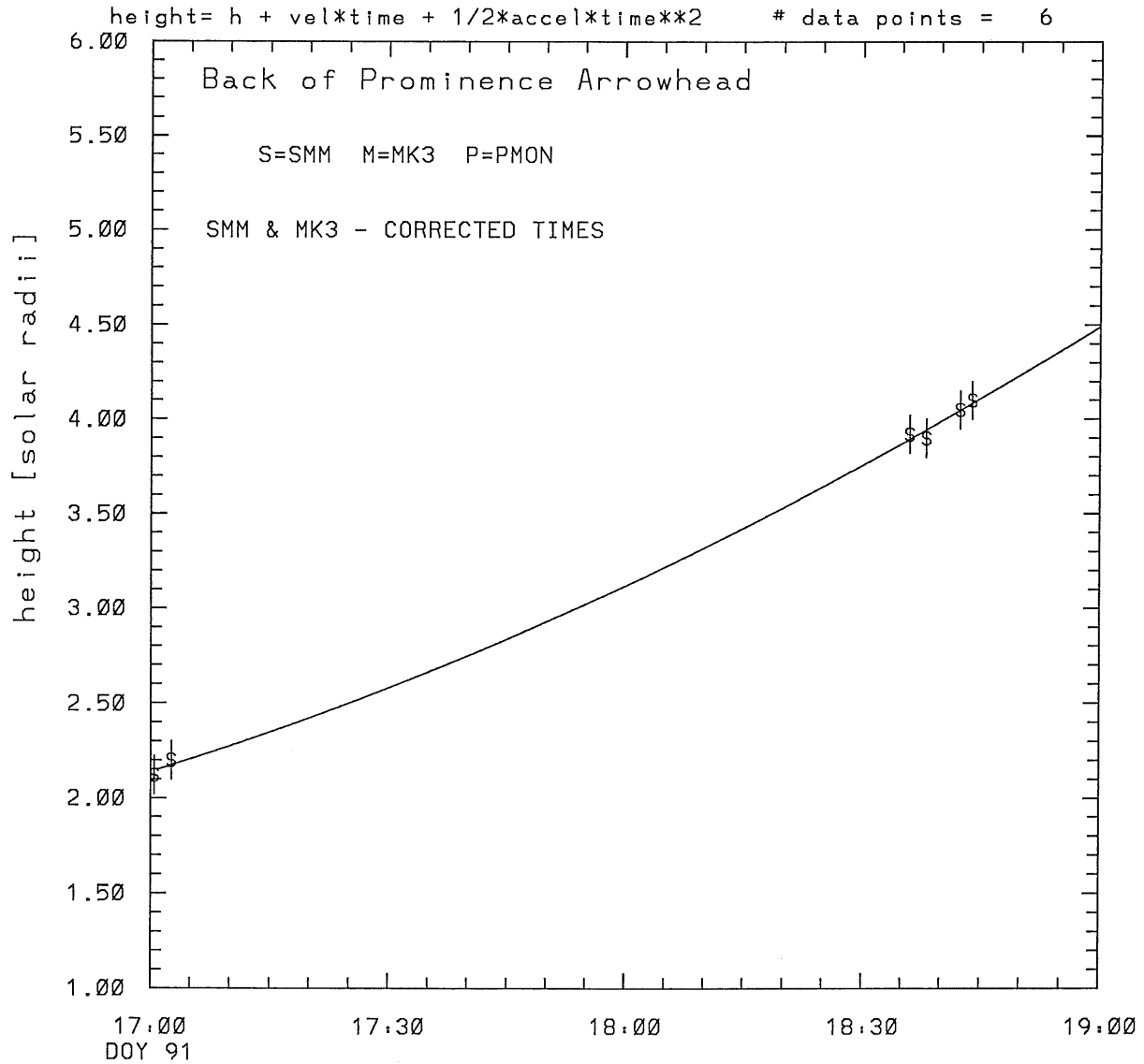
height = h + velocity\*time

# data points = 6



tstart=DOY 91 16: 1 +/- 0.3 [min.]  
radial velocity= 216. +/- 3. [km/sec]

SMM C/P 1980 DOY 91 139 +/- 0 degrees



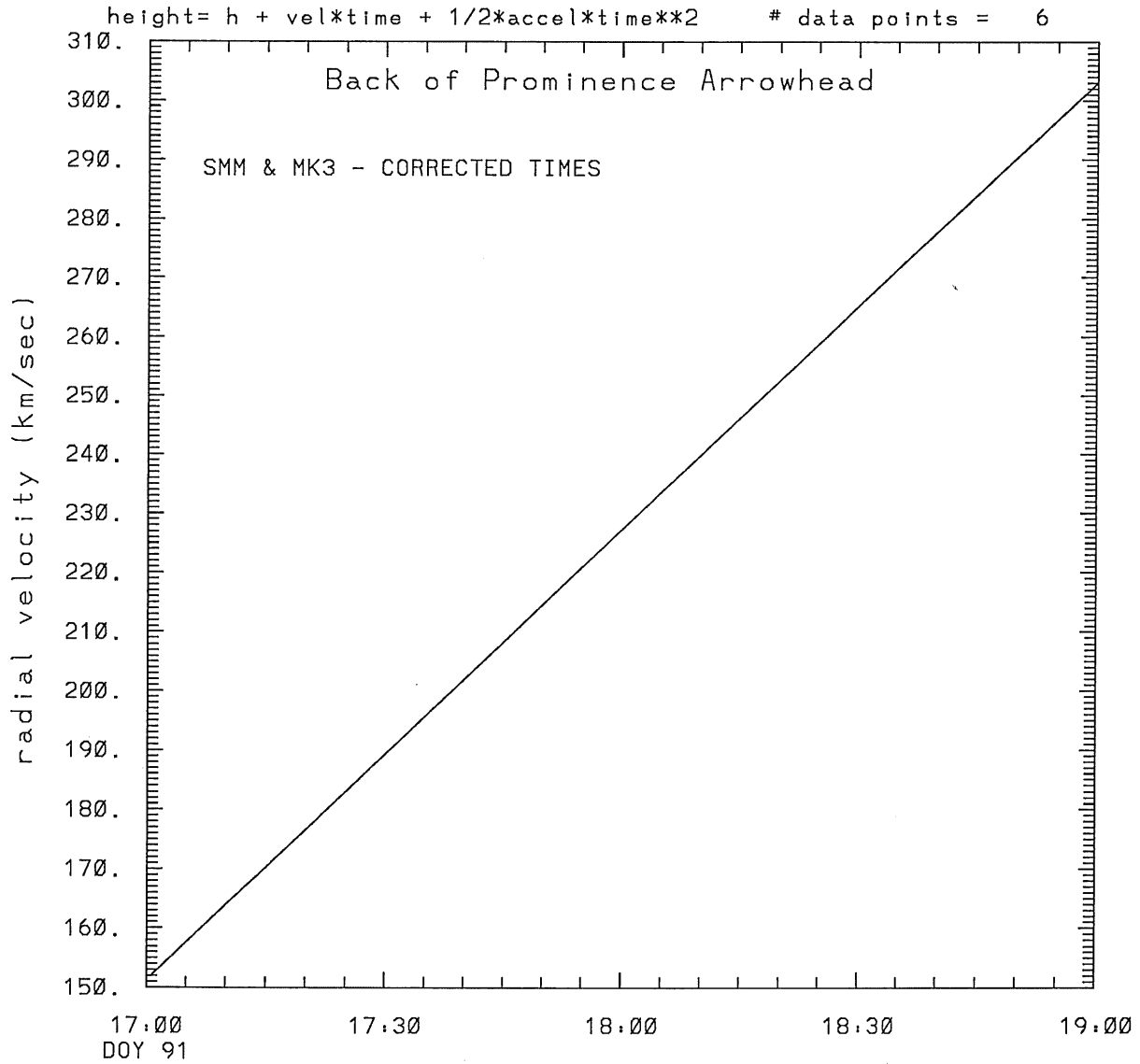
tstart=DOY 91 15: 1 from derivative=0

Event begins at 1.36 Solar Radii

radial acceleration =  $0.0211 \pm 0.0195$  [km/sec\*\*2]



SMM C/P 1980 DOY 91 139 +/- 0 degrees



tstart=DOY 91 15.1 from derivative=0  
Event begins at 1.36 Solar Radii  
radial acceleration=0.211E-01 km/sec\*\*2

\*\*\*\*\*

This is a 1 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

year	day	time	radii	radius	error in	angle	angle	error in	datatype
1980	91	17: 0:30	2.12	+/- 0.10		139.0	+/- 0.5		SMM
1980	91	17: 2:37	2.20	+/- 0.10		139.0	+/- 0.5		SMM
1980	91	18:36: 3	3.92	+/- 0.10		139.0	+/- 1.0		SMM
1980	91	18:38:10	3.90	+/- 0.10		139.0	+/- 1.0		SMM
1980	91	18:42:27	4.05	+/- 0.10		139.0	+/- 1.0		SMM
1980	91	18:43:59	4.10	+/- 0.10		139.0	+/- 1.0		SMM

\*\*\*\*\*

Structure being measured:

Back of Prominence Arrowhead

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.607E+02 +/- 0.323E+00$  [minutes]

In more convenient units:

Event began at DOY 91 16: 1 +/- 0.323E+00 [minutes]

Origin defined at DOY 91 17: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 216. +/- 3. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.213E+01 +/- 0.237E-01$  [solar radii]  
 $c(2) = 0.186E-01 +/- 0.290E-03$  [radii/min]  
 $c(2) = 0.216E+03 +/- 0.336E+01$  [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  $c(1) = 0.26512E-01$  [radii] see Bevington pg. 114

error in  $c(2) = 0.32399E-03$  [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) = 139. +/- 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 17: 0 = 0.000E+00 km/sec  
The TOTAL velocity at 17: 0 = 216. km/sec

The TANGENTIAL velocity at 17: 2 = 0.000E+00 km/sec  
The TOTAL velocity at 17: 2 = 216. km/sec

The TANGENTIAL velocity at 18:36 = 0.000E+00 km/sec  
The TOTAL velocity at 18:36 = 216. km/sec

The TANGENTIAL velocity at 18:38 = 0.000E+00 km/sec  
The TOTAL velocity at 18:38 = 216. km/sec

The TANGENTIAL velocity at 18:42 = 0.000E+00 km/sec  
The TOTAL velocity at 18:42 = 216. km/sec

The TANGENTIAL velocity at 18:43 = 0.000E+00 km/sec  
The TOTAL velocity at 18:43 = 216. km/sec

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

Fit is ok [ier=1]

Standard Deviation in the height = 0.95  
Standard Deviation in start time measurement = 0.466E+02  
Error in time = 0.39713E+01 using best fit method  
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.109E-02  
Reduced Chi Squared = 0.564E-02  
Chi Squared = 0.226E-01  
The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.999E+00  
The probability that no LINEAR correlation exists between the variables = 0.5468E-06  
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

\*\*\*\*\*

This is a 2 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

year	doy	time	radii	radius	error in	angle	angle	datatype
1980	91	17: 0:30	2.12	+/- 0.10	139.0	+/- 0.5	SMM	
1980	91	17: 2:37	2.20	+/- 0.10	139.0	+/- 0.5	SMM	
1980	91	18:36: 3	3.92	+/- 0.10	139.0	+/- 1.0	SMM	
1980	91	18:38:10	3.90	+/- 0.10	139.0	+/- 1.0	SMM	
1980	91	18:42:27	4.05	+/- 0.10	139.0	+/- 1.0	SMM	
1980	91	18:43:59	4.10	+/- 0.10	139.0	+/- 1.0	SMM	

\*\*\*\*\*

Structure being measured:

Back of Prominence Arrowhead

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

tstart=DOY 91 15: 1 from derivative = 0

Event begins at 1.36 Solar Radii

Origin defined at DOY 91 17: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.211E-01 +/- 0.195E-01 km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.214E+01 +/- 0.250E-01 [solar radii]  
c(2) = 0.130E-01 +/- 0.517E-02 [radii/min]  
c(2) = 0.151E+03 +/- 0.600E+02 [km/sec]  
c(3) = 0.545E-04 +/- 0.506E-04 [radii/min\*\*2]  
c(3) = 0.211E-01 +/- 0.195E-01 [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.28823E-01 [radii] Bevington pg 154 (8-30)

Exact error in c(1) = 0.11373E-01 [radii] Bevington pg 154 (8-28)

Approximate error in c(2) = 0.59701E-02 [radii/min] Bevington pg 154 (8-30)

Exact error in c(2) = 0.21429E-02 [radii/min] Bevington pg 154 (8-28)

Approximate error in c(3) = 0.58382E-04 [radii/min\*\*] Bevington pg 154 (8-30)

Exact error in c(3) = 0.20545E-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) = 139. +/- 0. [degrees]  
a(2) = 0.000E+00 +/- 0.000E+00 [degrees/min]  
a(3) = 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 17: 0 = 0.000E+00 km/sec

The TOTAL velocity at 17: 0 = 152. km/sec

The TANGENTIAL velocity at 17: 2 = 0.000E+00 km/sec

The TOTAL velocity at 17: 2 = 155. km/sec

The TANGENTIAL velocity at 18:36 = 0.000E+00 km/sec

The TOTAL velocity at 18:36 = 273. km/sec

The TANGENTIAL velocity at 18:38 = 0.000E+00 km/sec

The TOTAL velocity at 18:38 = 275. km/sec

The TANGENTIAL velocity at 18:42 = 0.000E+00 km/sec

The TOTAL velocity at 18:42 = 281. km/sec

The TANGENTIAL velocity at 18:43 = 0.000E+00 km/sec

The TOTAL velocity at 18:43 = 283. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.95

Standard Deviation in start time measurement = 0.466E+02

Value of reduced Chi Squared returned from nllst2 = 0.106E-02

Reduced Chi Squared = 0.447E-02

Chi Squared = 0.134E-01

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 = 0.9994E+00

The correlation between the data and the time\*\*2 term = 0.9988E+00

The correlation between the data and the complete equation of motion = 0.9991E+00

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