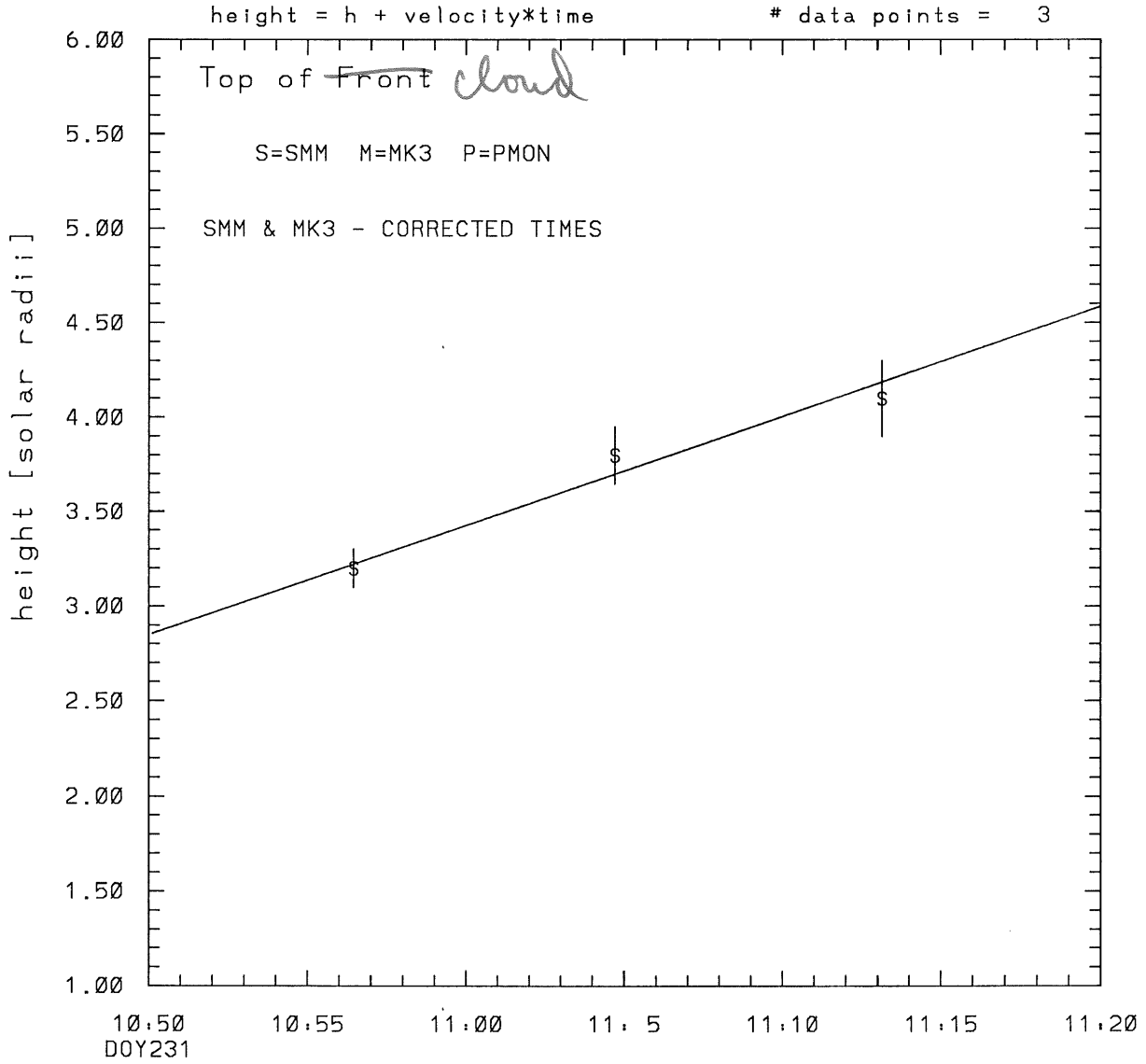
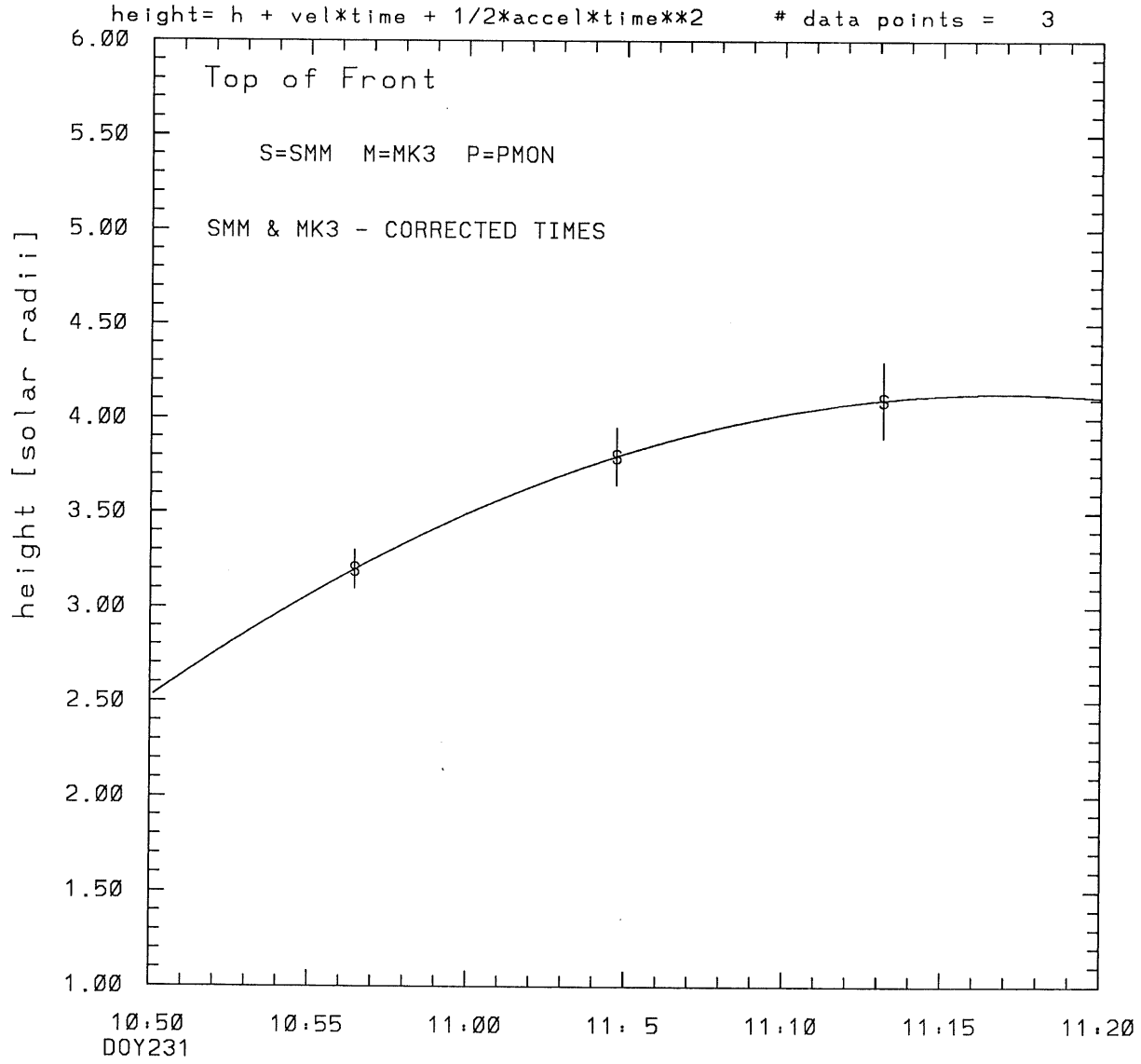


SMM C/P 1987 DOY231 225 +/- 0 degrees



tstart=DOY231 10:20 +/- 2.8 [min.]
radial velocity= 671. +/- 85. [km/sec]

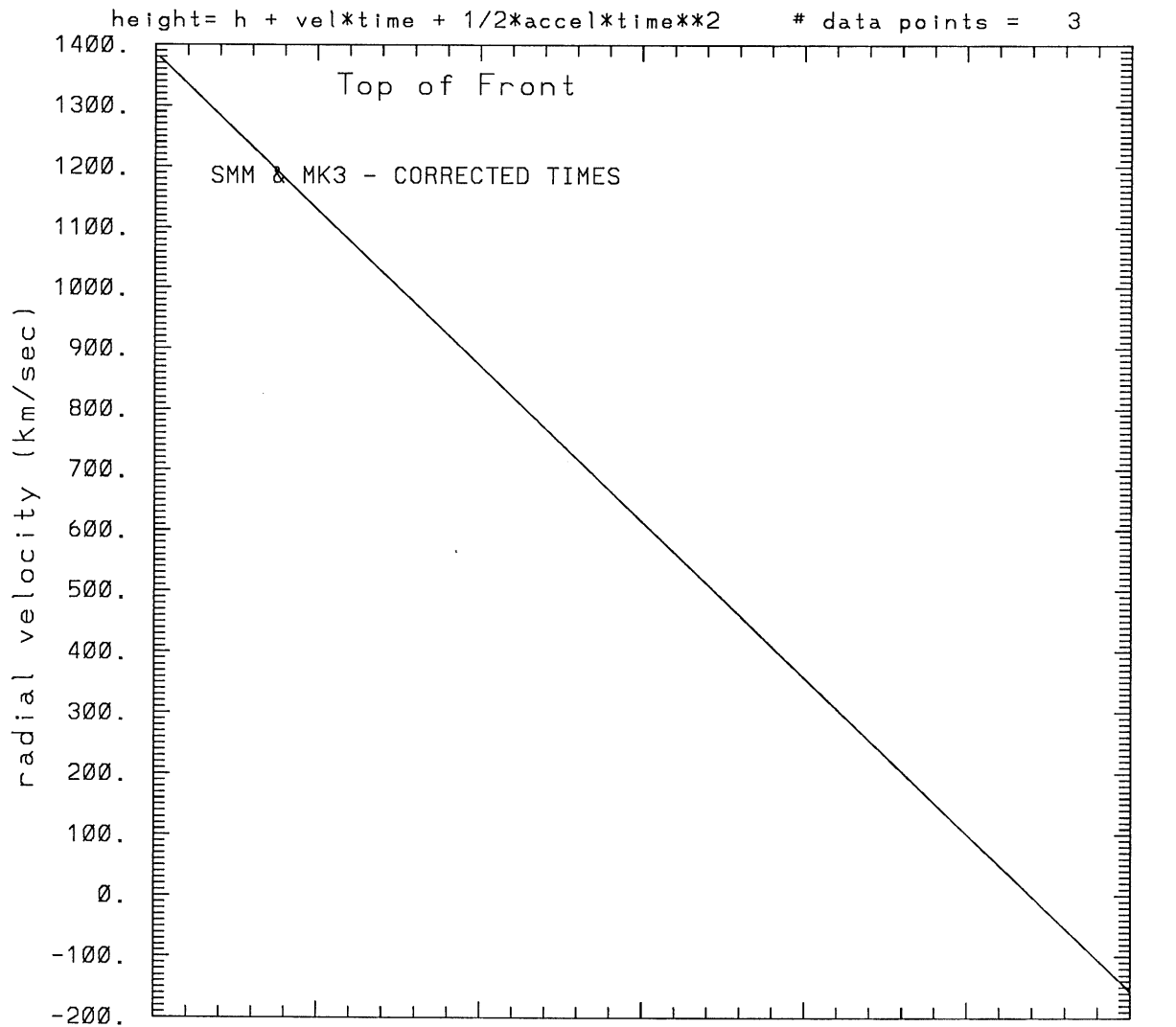
SMM C/P 1987 DOY231 225 +/- 0 degrees



tstart=DOY231 10.41 +/- 0.0 [min.]

radial acceleration = -0.8569 +/- 0.0000 [km/sec**2]

SMM C/P 1987 DOY231 225 +/- 0 degrees



10:50
DOY231

tstart=DOY231 10:41 +/- 0.0 [min.]

radial acceleration=-.857E+00 km/sec**2

This is a 1 order run

INPUT:

			error in	error in			
year	day	time	radii	radius	angle	angle	datatype
1987	231	10:56:27	3.20	+/- 0.10	225.0	+/- 1.0	SMM
1987	231	11: 4:43	3.80	+/- 0.15	225.0	+/- 1.0	SMM
1987	231	11:13: 9	4.10	+/- 0.20	225.0	+/- 1.0	SMM

Structure being measured:

Top of Front

OUTPUT:

START TIME:

Event began at $t = 0 + -0.320E+02 +/- 0.285E+01$ [minutes]

In more convenient units:

Event began at DOY 231 10:20 +/- 0.285E+01 [minutes]

Origin defined at DOY231 10:50

RADIAL INFORMATION:

RADIAL VELOCITY = 671. +/- 85. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.285E+01 +/- 0.928E-01$ [solar radii]

$c(2) = 0.578E-01 +/- 0.733E-02$ [radii/min]

$c(2) = 0.671E+03 +/- 0.850E+02$ [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 $c(1) = 0.18563E+00$ [radii] see Bevington pg. 114

error in $c(2) = 0.11409E-01$ [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) = 225. +/- 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 10:56 = 0.000E+00 km/sec

The TOTAL velocity at 10:56 = 671. km/sec

The TANGENTIAL velocity at 11: 4 = 0.000E+00 km/sec

The TOTAL velocity at 11: 4 = 671. km/sec

The TANGENTIAL velocity at 11:13 = 0.000E+00 km/sec

The TOTAL velocity at 11:13 = 671. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.46

Standard Deviation in start time measurement = 0.682E+01

Error in time = 0.23307E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.606E-02

Reduced Chi Squared = 0.435E-01

Chi Squared = 0.435E-01

The probability for exceeding chi square = 0.938E+00

The correlation coefficient = 0.981E+00

The probability that no LINEAR correlation exists between the variables = 0.1247E+00

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
1987	231	10:56:27	3.20	+/- 0.10	225.0	+/- 1.0	SMM
1987	231	11: 4:43	3.80	+/- 0.15	225.0	+/- 1.0	SMM
1987	231	11:13: 9	4.10	+/- 0.20	225.0	+/- 1.0	SMM

Structure being measured:

Top of Front

OUTPUT:

START TIME:

Event began at $t = 0 + -0.106E+02 +/- 0.000E+00$ [minutes]

In more convenient units:

Event began at DOY 231 10:41 +/- 0.000E+00 [minutes]

Origin defined at DOY231 10:50

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.857E+00 +/- 0.870E-05$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.252E+01 +/- 0.359E-05$ [solar radii]
c(2) = $0.119E+00 +/- 0.635E-06$ [radii/min]
c(2) = $0.139E+04 +/- 0.737E-02$ [km/sec]
c(3) = $-0.222E-02 +/- 0.225E-07$ [radii/min**2]
c(3) = $-0.857E+00 +/- 0.870E-05$ [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) = 225. +/- 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 10:56 = 0.000E+00 km/sec

The TOTAL velocity at 10:56 = 1054. km/sec

The TANGENTIAL velocity at 11: 4 = 0.000E+00 km/sec

The TOTAL velocity at 11: 4 = 629. km/sec

The TANGENTIAL velocity at 11:13 = 0.000E+00 km/sec

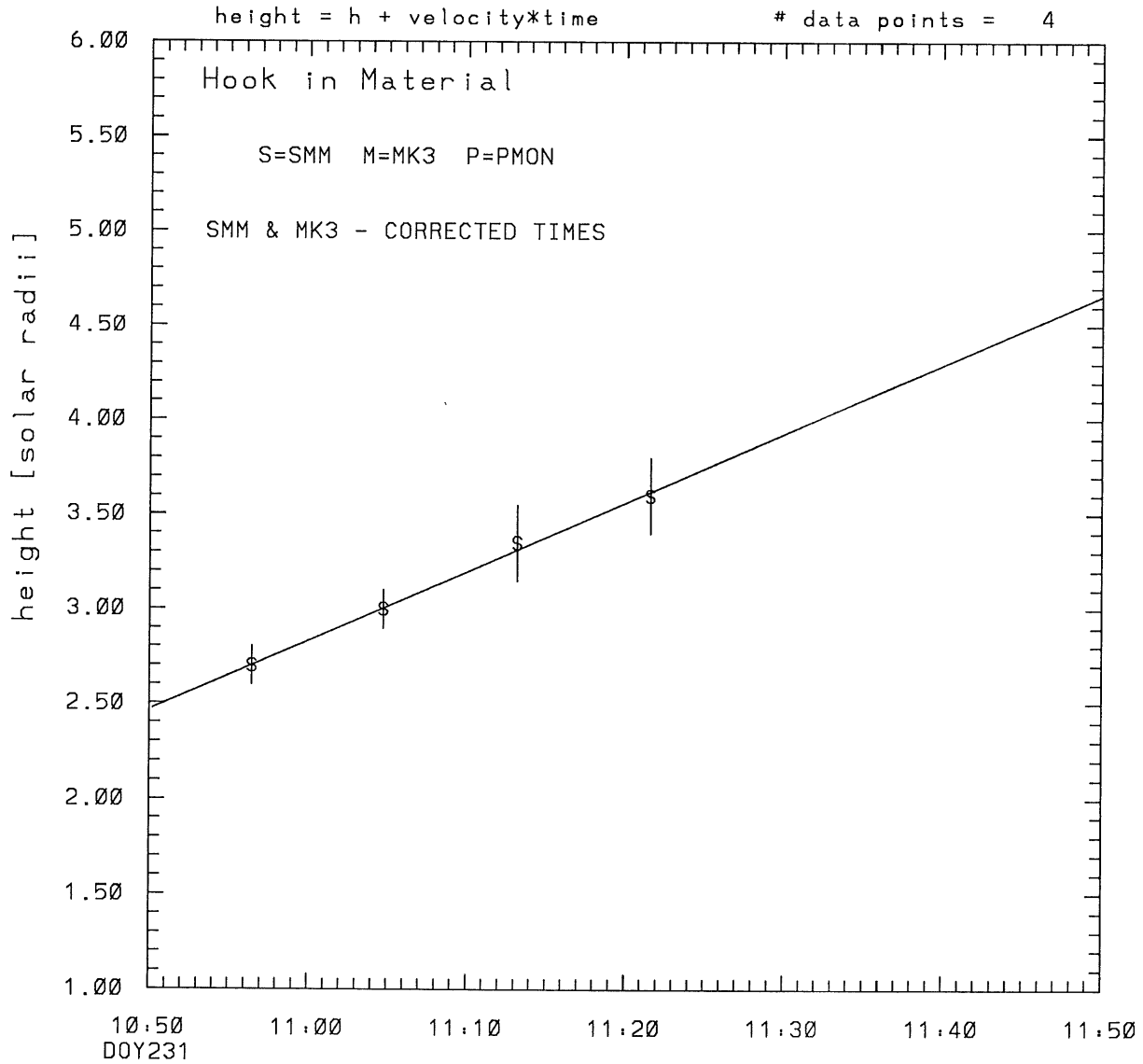
The TOTAL velocity at 11:13 = 196. km/sec

The following info is for estimating goodness of the fit

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

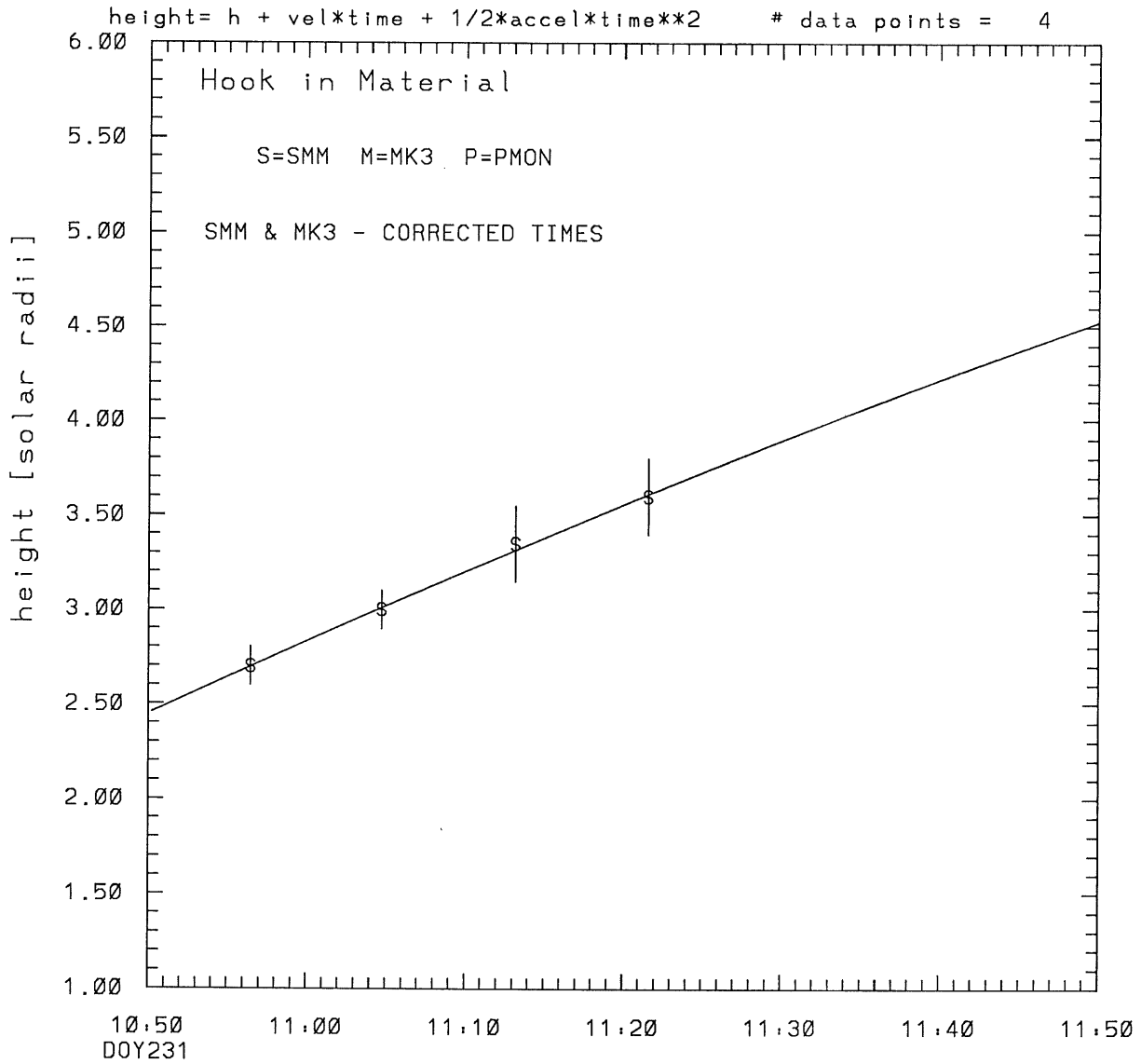
Correlation coefficient is not computable!

SMM C/P 1987 DOY231 225 +/- 0 degrees



tstart=DOY231 10:10 +/- 0.3 [min.]
radial velocity= 425. +/- 12. [km/sec]

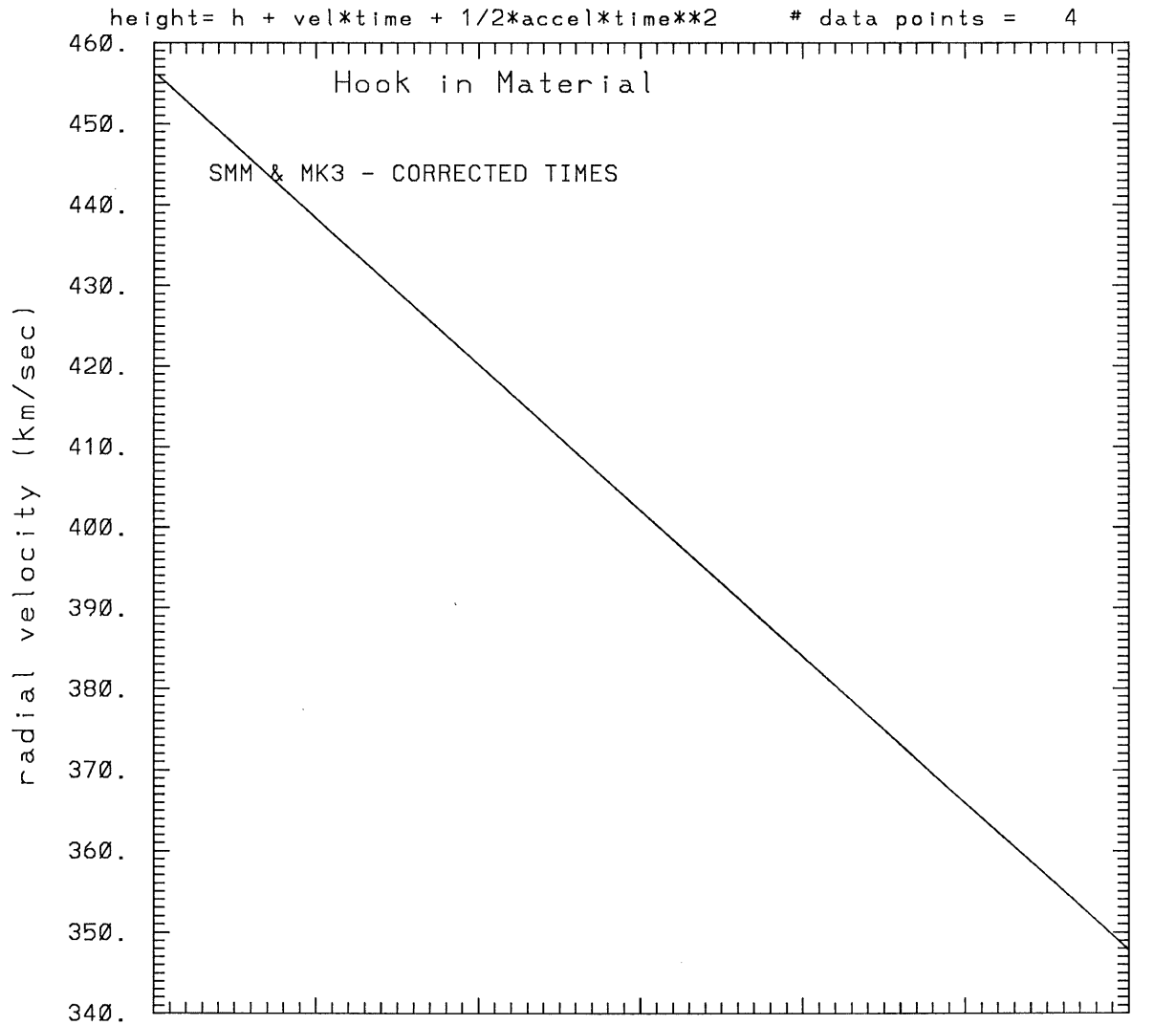
SMM C/P 1987 DOY231 225 +/- 0 degrees



tstart=DOY231 10:16 +/- 30.1 [min.]

radial acceleration = -0.0302 ± 0.0529 [km/sec**2]

SMM C/P 1987 DOY231 225 +/- 0 degrees



10:50
DOY231

11:00 11:10 11:20 11:30 11:40 11:50
tstart=DOY231 10:16 +/- 30.1 [min.]

radial acceleration=-.302E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in	angle	angle	datatype
1987	231	10:56:27	2.70	+/- 0.10	225.0	+/- 0.5	SMM	
1987	231	11: 4:43	3.00	+/- 0.10	225.0	+/- 1.0	SMM	
1987	231	11:13: 9	3.35	+/- 0.20	225.0	+/- 1.0	SMM	
1987	231	11:21:35	3.60	+/- 0.20	225.0	+/- 1.0	SMM	

Structure being measured:

Hook in Material

OUTPUT:

START TIME:

Event began at $t = 0 + -0.400E+02 +/- 0.293E+00$ [minutes]

In more convenient units:

Event began at DOY 231 10:10 +/- 0.293E+00 [minutes]

Origin defined at DOY231 10:50

RADIAL INFORMATION:

RADIAL VELOCITY = 425. +/- 12. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.246E+01 +/- 0.162E-01 [solar radii]
c(2) = 0.366E-01 +/- 0.101E-02 [radii/min]
c(2) = 0.425E+03 +/- 0.118E+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)= 0.34616E-01 [radii] see Bevington pg. 114

error in c(2)= 0.16356E-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) = 225. +/- 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 10:56 = 0.000E+00 km/sec

The TOTAL velocity at 10:56 = 425. km/sec

The TANGENTIAL velocity at 11: 4 = 0.000E+00 km/sec

The TOTAL velocity at 11: 4 = 425. km/sec

The TANGENTIAL velocity at 11:13 = 0.000E+00 km/sec

The TOTAL velocity at 11:13 = 425. km/sec

The TANGENTIAL velocity at 11:21 = 0.000E+00 km/sec

The TOTAL velocity at 11:21 = 425. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.39

Standard Deviation in start time measurement = 0.937E+01

Error in time = 0.11848E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.256E-03

Reduced Chi Squared = 0.303E-02

Chi Squared = 0.606E-02

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.998E+00

The probability that no LINEAR correlation exists between the variables = 0.1956E-02

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	datatype
1987	231	10:56:27	2.70	+/- 0.10	225.0 +/- 0.5	SMM
1987	231	11: 4:43	3.00	+/- 0.10	225.0 +/- 1.0	SMM
1987	231	11:13: 9	3.35	+/- 0.20	225.0 +/- 1.0	SMM
1987	231	11:21:35	3.60	+/- 0.20	225.0 +/- 1.0	SMM

Structure being measured:

Hook in Material

OUTPUT:

START TIME:

Event began at $t = 0 + -0.344E+02 +/- 0.301E+02$ [minutes]

In more convenient units:

Event began at DOY 231 10:16 +/- 0.301E+02 [minutes]

Origin defined at DOY231 10:50

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.302E-01 +/- 0.529E-01$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.245E+01 +/- 0.371E-01$ [solar radii]
c(2) = $0.393E-01 +/- 0.496E-02$ [radii/min]
c(2) = $0.456E+03 +/- 0.576E+02$ [km/sec]
c(3) = $-0.780E-04 +/- 0.137E-03$ [radii/min**2]
c(3) = $-0.302E-01 +/- 0.529E-01$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = $0.84429E-01$ [radii] Bevington pg 154 (8-30)
Exact error in c(1) = $0.14201E-01$ [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = $0.10345E-01$ [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = $0.24648E-02$ [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = $0.26678E-03$ [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = $0.68129E-04$ [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) = 225. +/- 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 10:56 = 0.000E+00 km/sec

The TOTAL velocity at 10:56 = 445. km/sec

The TANGENTIAL velocity at 11: 4 = 0.000E+00 km/sec

The TOTAL velocity at 11: 4 = 430. km/sec

The TANGENTIAL velocity at 11:13 = 0.000E+00 km/sec

The TOTAL velocity at 11:13 = 415. km/sec

The TANGENTIAL velocity at 11:21 = 0.000E+00 km/sec

The TOTAL velocity at 11:21 = 399. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.39

Standard Deviation in start time measurement = 0.937E+01

Value of reduced Chi Squared returned from nllst2 = 0.330E-03

Reduced Chi Squared = 0.423E-02

Chi Squared = 0.423E-02

The probability for exceeding chi square = 0.986E+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 = 0.9980E+00

The correlation between the data and the time**2 term = 0.9252E+00

The correlation between the data and the complete equation of motion = 0.9918E+00

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