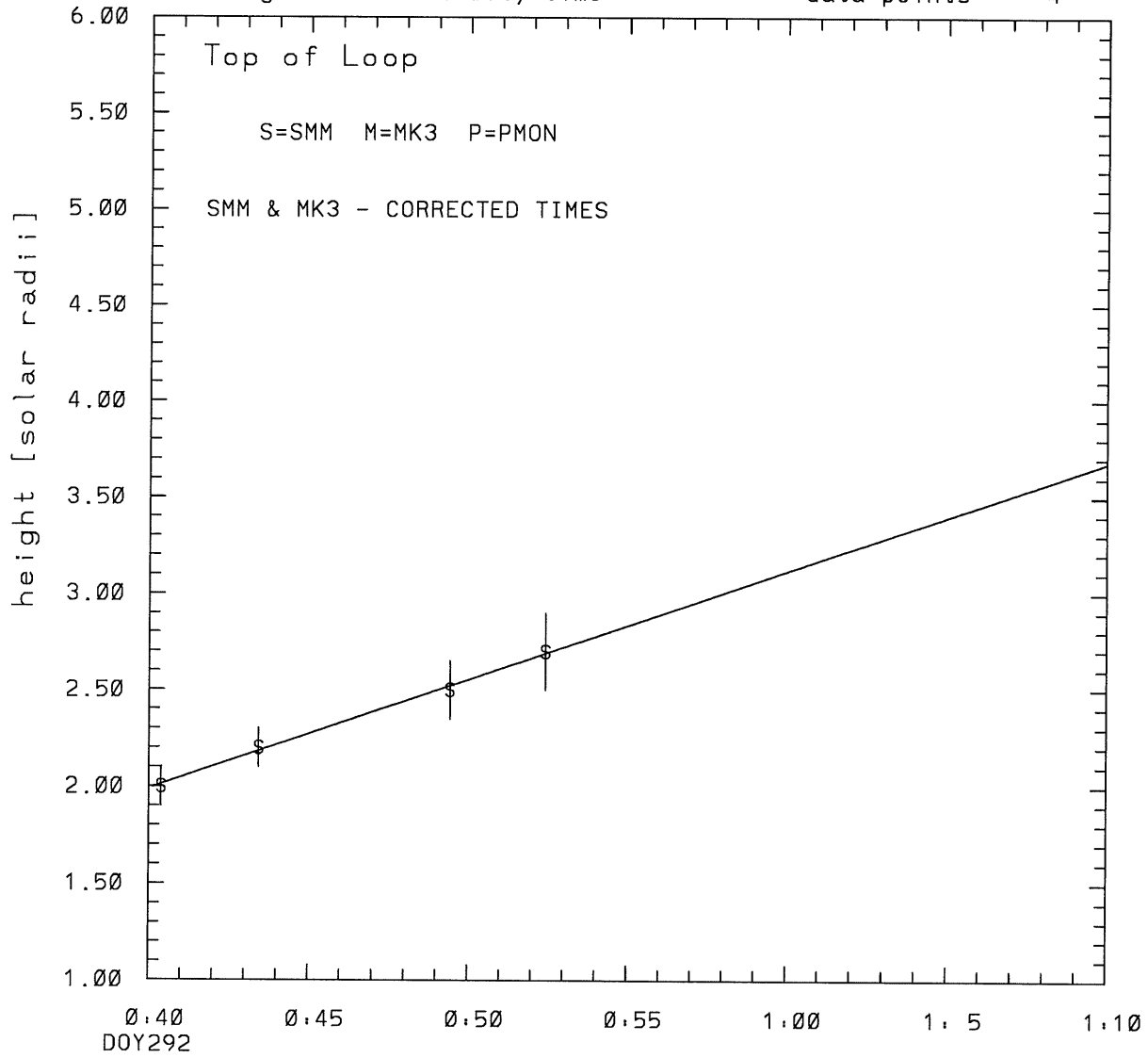


SMM C/P 1986 DOY292 80 +/- 0 degrees

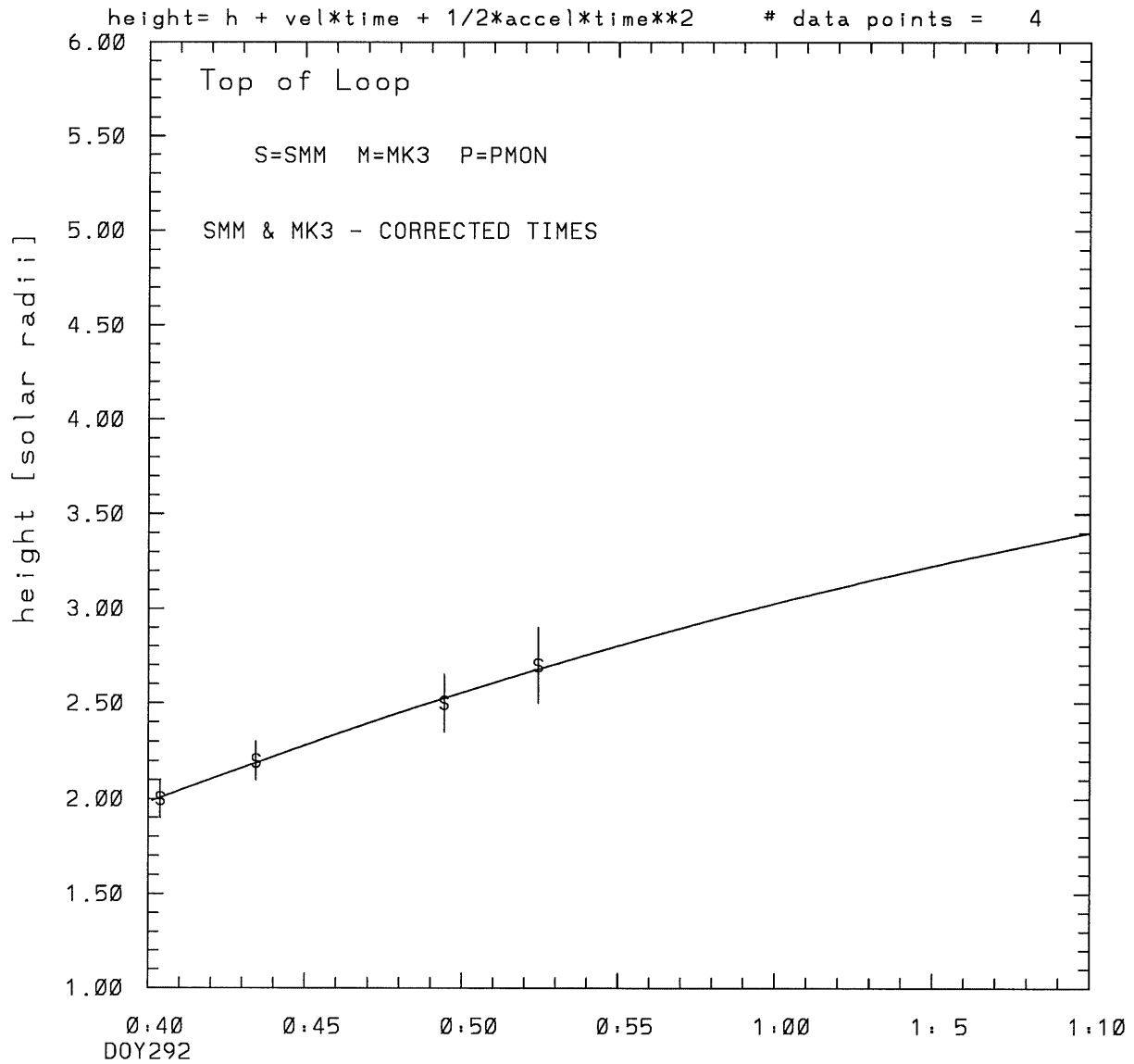
height = h + velocity*time

data points = 4



tstart=DOY292 0.24 +/- 0.3 [min.]
radial velocity= 654. +/- 25. [km/sec]

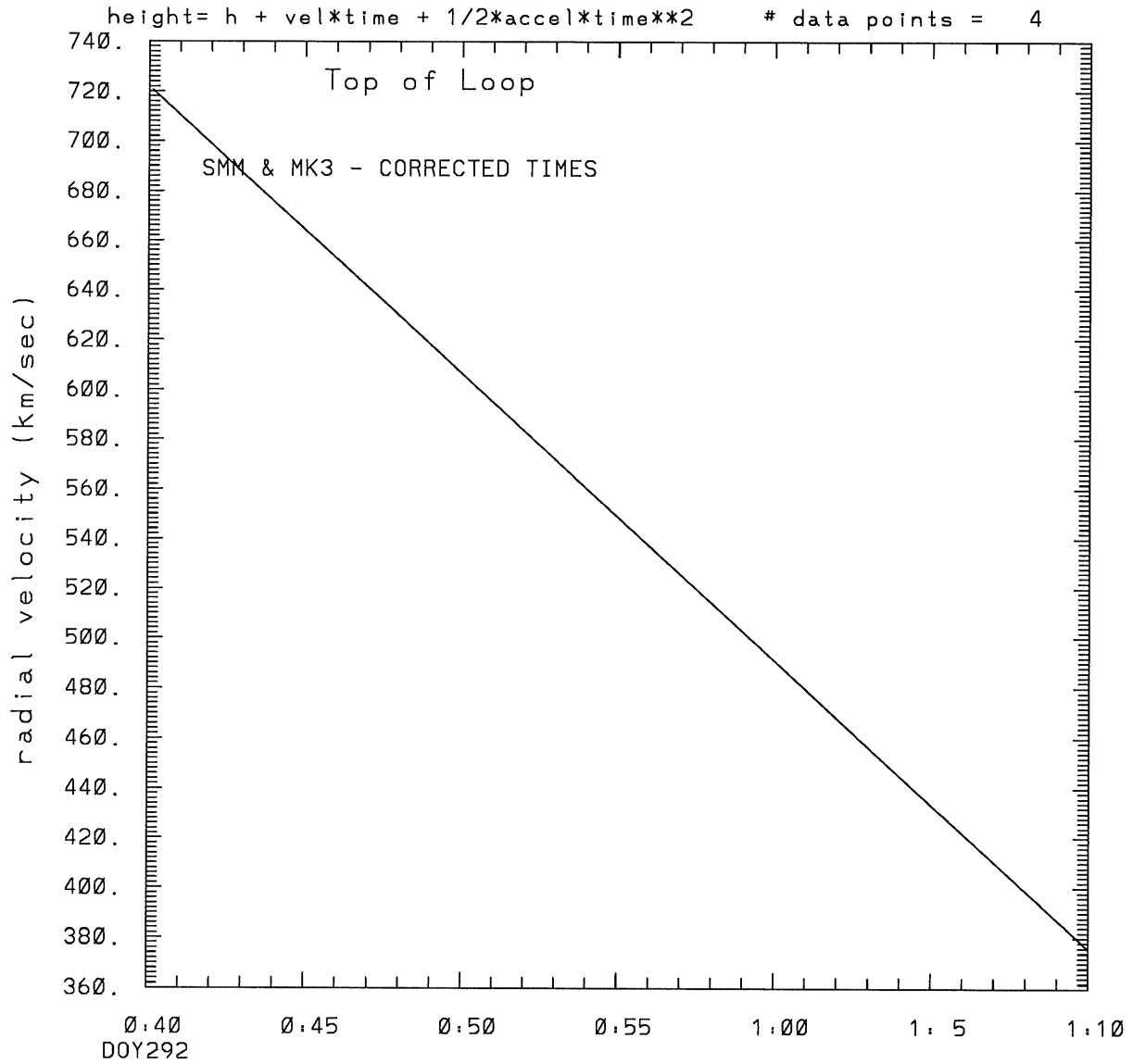
SMM C/P 1986 DOY292 80 +/- 0 degrees



tstart=DOY292 0:26 +/- 13.0 [min.]

radial acceleration = -0.1923 +/- 0.2925 [km/sec**2]

SMM C/P 1986 DOY292 80 +/- 0 degrees



tstart=DOY292 0:26 +/- 13.0 [min.]

radial acceleration=-.192E+00 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1986	292	0:40:23	2.00	+/- 0.10	80.0	+/- 0.5	SMM
1986	292	0:43:26	2.20	+/- 0.10	80.0	+/- 0.5	SMM
1986	292	0:49:26	2.50	+/- 0.15	80.0	+/- 0.5	SMM
1986	292	0:52:26	2.70	+/- 0.20	80.0	+/- 0.5	SMM

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.175E+02 +/- 0.267E+00$ [minutes]
In more convenient units:
Event began at DOY 292 0:24 +/- 0.267E+00 [minutes]

Origin defined at DOY292 0:40

RADIAL INFORMATION:

RADIAL VELOCITY = 654. +/- 25. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.199E+01 +/- 0.126E-01$ [solar radii]
 $c(2) = 0.564E-01 +/- 0.219E-02$ [radii/min]
 $c(2) = 0.654E+03 +/- 0.254E+02$ [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 $c(1) = 0.18315E-01$ [radii] see Bevington pg. 114
error in $c(2) = 0.22915E-02$ [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) = 80. +/- 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 0:40 = 0.000E+00 km/sec

The TOTAL velocity at 0:40 = 654. km/sec

The TANGENTIAL velocity at 0:43 = 0.000E+00 km/sec

The TOTAL velocity at 0:43 = 654. km/sec

The TANGENTIAL velocity at 0:49 = 0.000E+00 km/sec

The TOTAL velocity at 0:49 = 654. km/sec

The TANGENTIAL velocity at 0:52 = 0.000E+00 km/sec

The TOTAL velocity at 0:52 = 654. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.31

Standard Deviation in start time measurement = 0.476E+01

Error in time = 0.54729E+00 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.314E-03

Reduced Chi Squared = 0.121E-02

Chi Squared = 0.243E-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 = 0.1638E-02

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

This is a 2 order run

INPUT:

year	day	time	error in radii	error in radius	error in angle	error in angle	datatype
1986	292	0:40:23	2.00 +/- 0.10		80.0 +/- 0.5		SMM
1986	292	0:43:26	2.20 +/- 0.10		80.0 +/- 0.5		SMM
1986	292	0:49:26	2.50 +/- 0.15		80.0 +/- 0.5		SMM
1986	292	0:52:26	2.70 +/- 0.20		80.0 +/- 0.5		SMM

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.142E+02 +/- 0.130E+02$ [minutes]

In more convenient units:

Event began at DOY 292 0:26 +/- 0.130E+02 [minutes]

Origin defined at DOY292 0:40

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.192E+00 +/- 0.293E+00$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.198E+01 +/- 0.182E-01$ [solar radii]
c(2) = $0.622E-01 +/- 0.925E-02$ [radii/min]
c(2) = $0.722E+03 +/- 0.107E+03$ [km/sec]
c(3) = $-0.497E-03 +/- 0.757E-03$ [radii/min**2]
c(3) = $-0.192E+00 +/- 0.293E+00$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = $0.37335E-01$ [radii] Bevington pg 154 (8-30)
Exact error in c(1) = $0.63268E-02$ [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = $0.16673E-01$ [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = $0.52565E-02$ [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = $0.12693E-02$ [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = $0.45341E-03$ [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) = 80. +/- 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 0:40 = 0.000E+00 km/sec

The TOTAL velocity at 0:40 = 717. km/sec

The TANGENTIAL velocity at 0:43 = 0.000E+00 km/sec

The TOTAL velocity at 0:43 = 682. km/sec

The TANGENTIAL velocity at 0:49 = 0.000E+00 km/sec

The TOTAL velocity at 0:49 = 613. km/sec

The TANGENTIAL velocity at 0:52 = 0.000E+00 km/sec

The TOTAL velocity at 0:52 = 578. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.31

Standard Deviation in start time measurement = 0.476E+01

Value of reduced Chi Squared returned from nllst2 = 0.387E-03

Reduced Chi Squared = 0.390E-02

Chi Squared = 0.390E-02

The probability for exceeding chi square = 0.984E+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 = 0.9769E+00

The correlation between the data and the time**2 term = 0.8986E+00

The correlation between the data and the complete equation of motion = 0.9959E+00

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