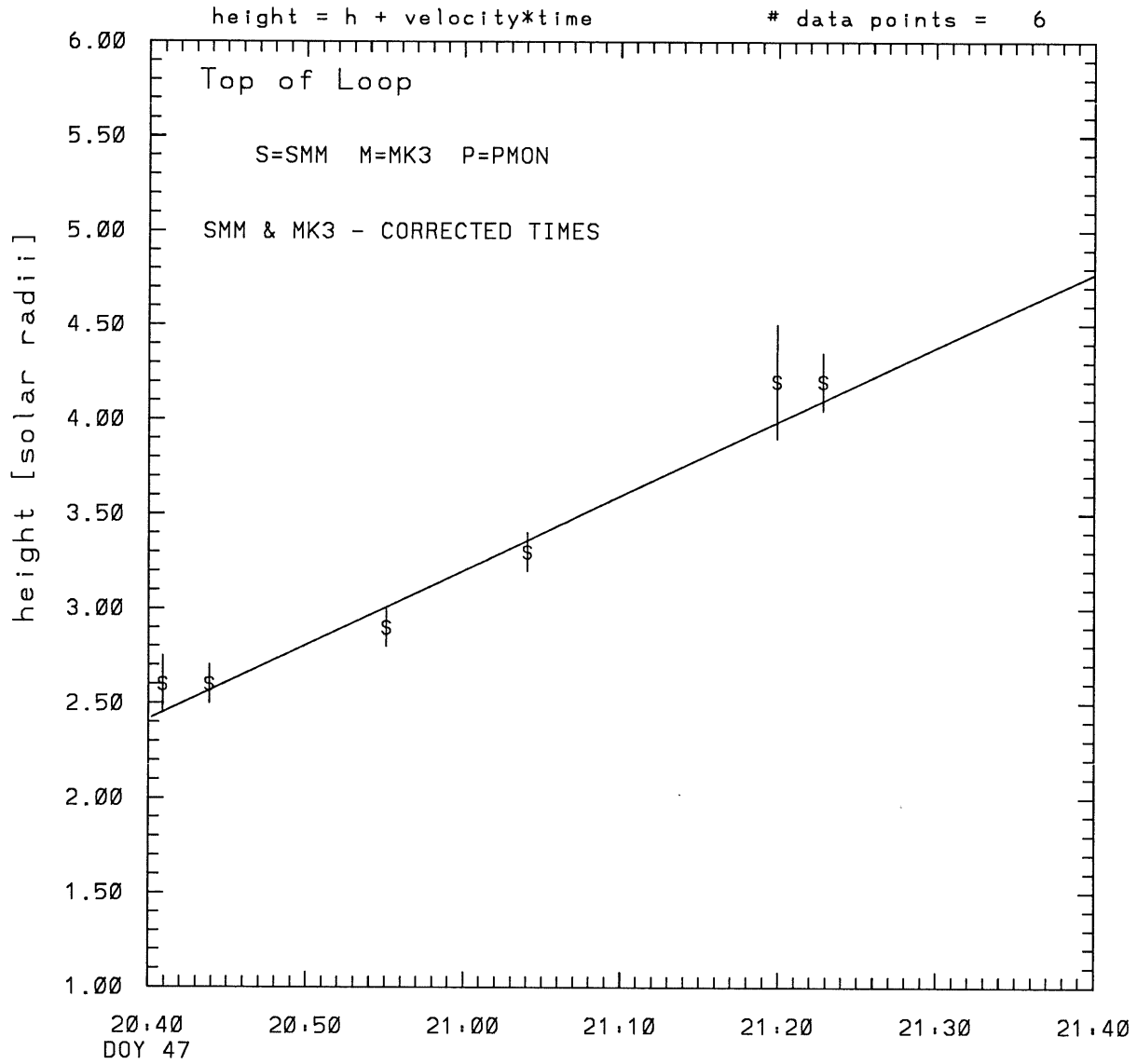
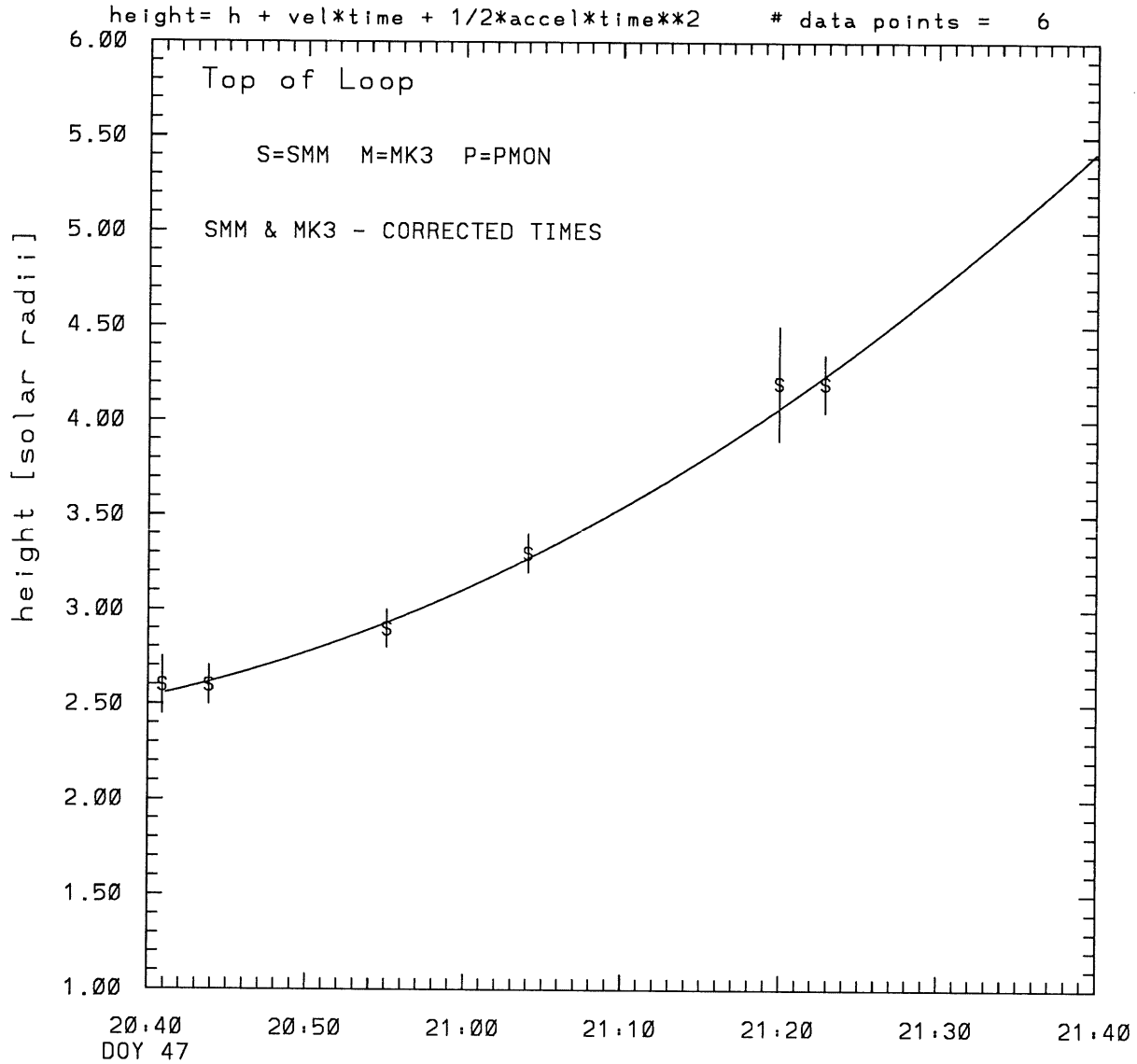


SMM C/P 1986 DOY 47 240 +/- 0 degrees



tstart=DOY 47 20.4 +/- 1.0 [min.]  
radial velocity= 456. +/- 37. [km/sec]

SMM C/P 1986 DOY 47 240 +/- 0 degrees

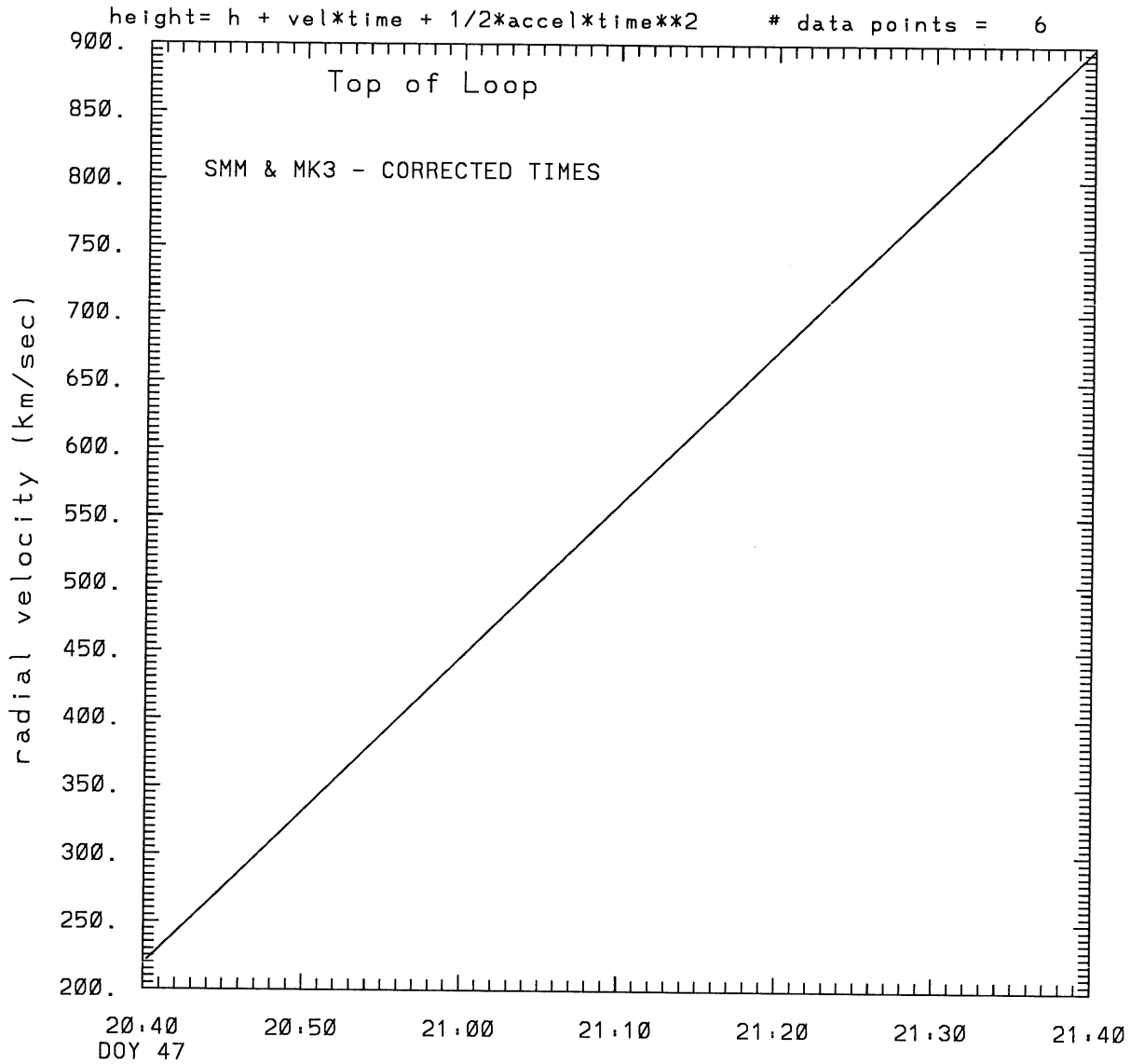


tstart=DOY 47 20:21 from derivative=0

Event begins at 2.35 Solar Radii

radial acceleration = 0.1888 +/- 0.0407 [km/sec\*\*2]

SMM C/P 1986 DOY 47 240 +/- 0 degrees



tstart=DOY 47 20:21 from derivative=0  
Event begins at 2.35 Solar Radii  
radial acceleration=0.189E+00 km/sec\*\*2

\*\*\*\*\*

This is a 1 order run

\*\*\*\*\*

\*\*\*\*\*

INPUT:

\*\*\*\*\*

year	doy	time	radii	error in radius	angle	error in angle	datatype
1986	47	20:40:54	2.60	+/- 0.15	240.0	+/- 0.5	SMM
1986	47	20:43:50	2.60	+/- 0.10	240.0	+/- 0.5	SMM
1986	47	20:55: 4	2.90	+/- 0.10	240.0	+/- 0.5	SMM
1986	47	21: 4: 3	3.30	+/- 0.10	240.0	+/- 1.0	SMM
1986	47	21:19:54	4.20	+/- 0.30	240.0	+/- 1.0	SMM
1986	47	21:22:50	4.20	+/- 0.15	240.0	+/- 1.0	SMM

\*\*\*\*\*

Structure being measured:

Top of Loop

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.361E+02 +/- 0.103E+01$  [minutes]

In more convenient units:

Event began at DOY 47 20: 4 +/- 0.103E+01 [minutes]

Origin defined at DOY 47 20:40

RADIAL INFORMATION:

RADIAL VELOCITY = 456. +/- 37. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.242E+01 +/- 0.685E-01 [solar radii]  
c(2) = 0.393E-01 +/- 0.322E-02 [radii/min]  
c(2) = 0.456E+03 +/- 0.373E+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)= 0.10371E+00 [radii] see Bevington pg. 114

error in c(2)= 0.38979E-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) = 240. +/- 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 20:40 = 0.000E+00 km/sec

The TOTAL velocity at 20:40 = 456. km/sec

The TANGENTIAL velocity at 20:43 = 0.000E+00 km/sec

The TOTAL velocity at 20:43 = 456. km/sec

The TANGENTIAL velocity at 20:55 = 0.000E+00 km/sec

The TOTAL velocity at 20:55 = 456. km/sec

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

The TOTAL velocity at 21: 4 = 456. km/sec

The TANGENTIAL velocity at 21:19 = 0.000E+00 km/sec

The TOTAL velocity at 21:19 = 456. km/sec

The TANGENTIAL velocity at 21:22 = 0.000E+00 km/sec

The TOTAL velocity at 21:22 = 456. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.74

Standard Deviation in start time measurement = 0.162E+02

Error in time = 0.78834E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.108E-01

Reduced Chi Squared = 0.928E-01

Chi Squared = 0.371E+00

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.987E+00

The probability that no LINEAR correlation exists between the variables = 0.2507E-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	47	20:40:54	2.60	+/- 0.15	240.0	+/- 0.5	SMM
1986	47	20:43:50	2.60	+/- 0.10	240.0	+/- 0.5	SMM
1986	47	20:55: 4	2.90	+/- 0.10	240.0	+/- 0.5	SMM
1986	47	21: 4: 3	3.30	+/- 0.10	240.0	+/- 1.0	SMM
1986	47	21:19:54	4.20	+/- 0.30	240.0	+/- 1.0	SMM
1986	47	21:22:50	4.20	+/- 0.15	240.0	+/- 1.0	SMM

\*\*\*\*\*

Structure being measured:

Top of Loop

\*\*\*\*\*

\*\*\*\*\*

OUTPUT:

\*\*\*\*\*

START TIME:

tstart=DOY 47 20:21 from derivative = 0

Event begins at 2.35 Solar Radii

Origin defined at DOY 47 20:40

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.189E+00 +/- 0.407E-01 km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.254E+01 +/- 0.398E-01 [solar radii]  
c(2) = 0.189E-01 +/- 0.462E-02 [radii/min]  
c(2) = 0.219E+03 +/- 0.536E+02 [km/sec]  
c(3) = 0.488E-03 +/- 0.105E-03 [radii/min\*\*2]  
c(3) = 0.189E+00 +/- 0.407E-01 [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.75921E-01 [radii] Bevington pg 154 (8-30)  
Exact error in c(1) = 0.12197E-01 [radii] Bevington pg 154 (8-28)  
Approximate error in c(2) = 0.94670E-02 [radii/min] Bevington pg 154 (8-30)  
Exact error in c(2) = 0.18604E-02 [radii/min] Bevington pg 154 (8-28)  
Approximate error in c(3) = 0.20759E-03 [radii/min\*\*2] Bevington pg 154 (8-30)  
Exact error in c(3) = 0.44479E-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) = 240. +/- 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 20:40 = 0.000E+00 km/sec

The TOTAL velocity at 20:40 = 229. km/sec

The TANGENTIAL velocity at 20:43 = 0.000E+00 km/sec

The TOTAL velocity at 20:43 = 262. km/sec

The TANGENTIAL velocity at 20:55 = 0.000E+00 km/sec

The TOTAL velocity at 20:55 = 390. km/sec

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

The TOTAL velocity at 21: 4 = 491. km/sec

The TANGENTIAL velocity at 21:19 = 0.000E+00 km/sec

The TOTAL velocity at 21:19 = 671. km/sec

The TANGENTIAL velocity at 21:22 = 0.000E+00 km/sec

The TOTAL velocity at 21:22 = 704. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.74

Standard Deviation in start time measurement = 0.162E+02

Value of reduced Chi Squared returned from nllst2 = 0.212E-02

Reduced Chi Squared = 0.359E-01

Chi Squared = 0.108E+00

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 = 0.8424E+00

The correlation between the data and the time\*\*2 term = 0.8464E+00

The correlation between the data and the complete equation of motion = 0.9816E+00

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