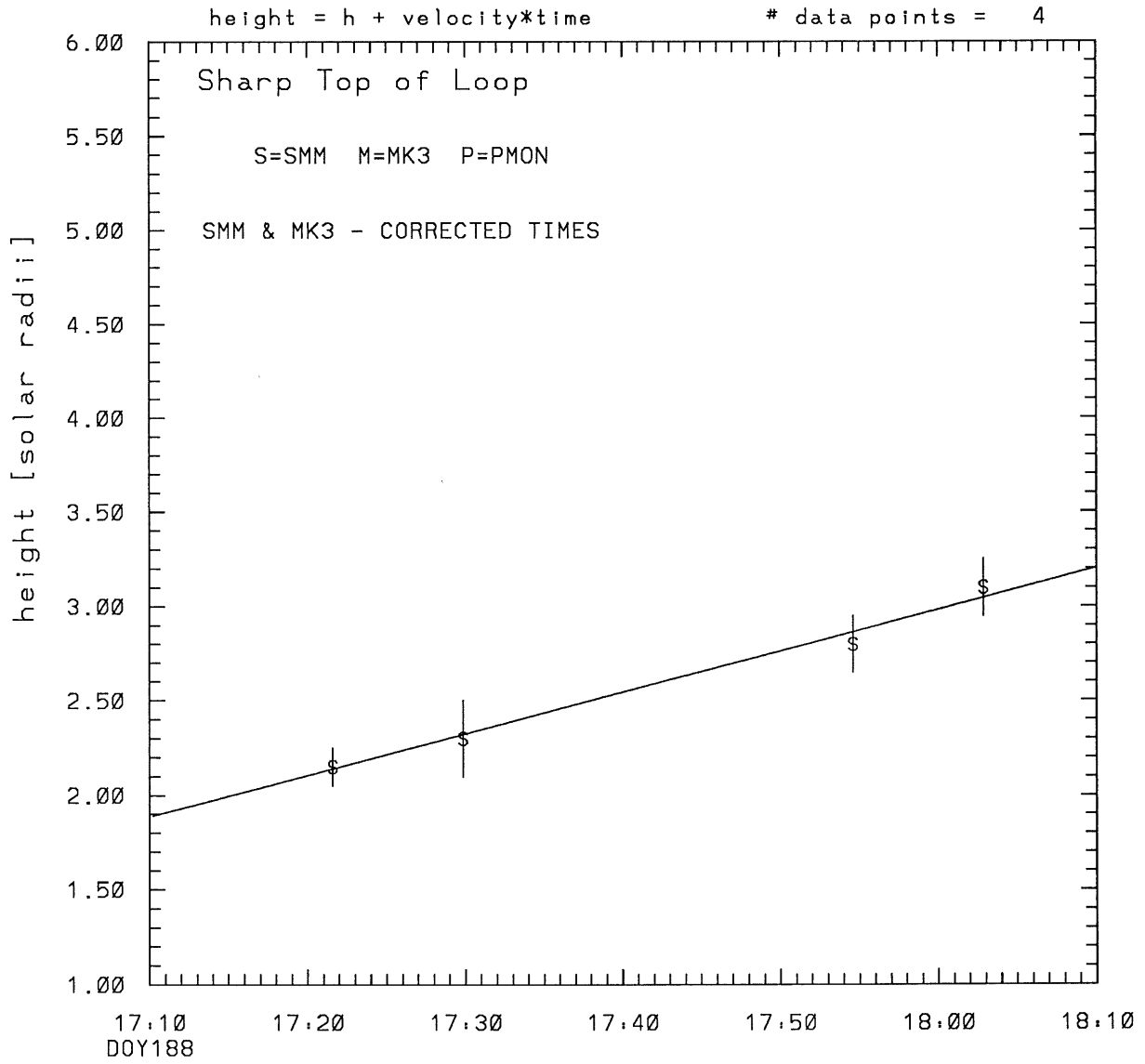
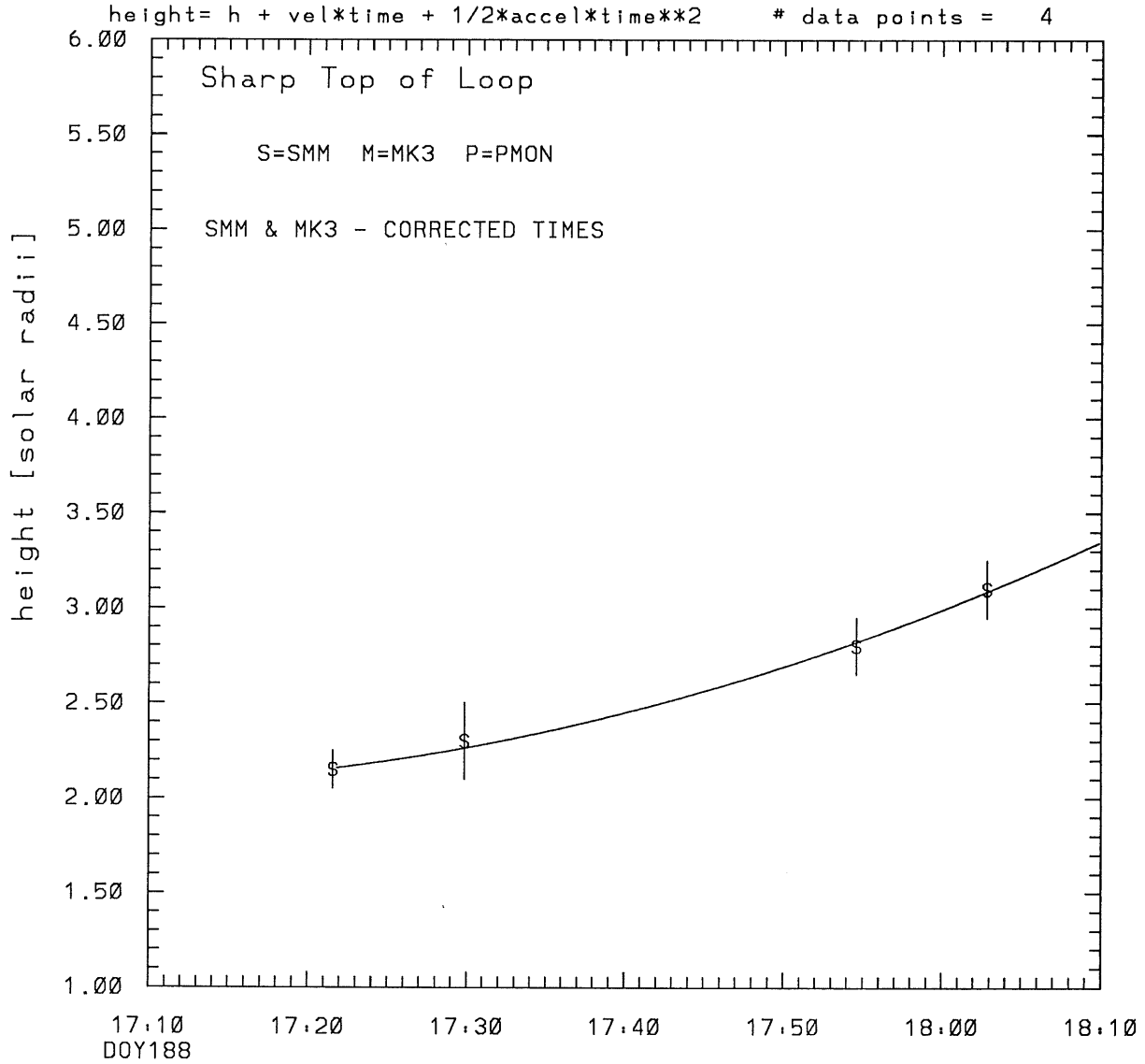


SMM C/P 1987 DOY188 40 +/- 0 degrees



tstart=DOY188 16:30 +/- 1.4 [min.]
radial velocity= 255. +/- 15. [km/sec]

SMM C/P 1987 DOY188 40 +/- 0 degrees

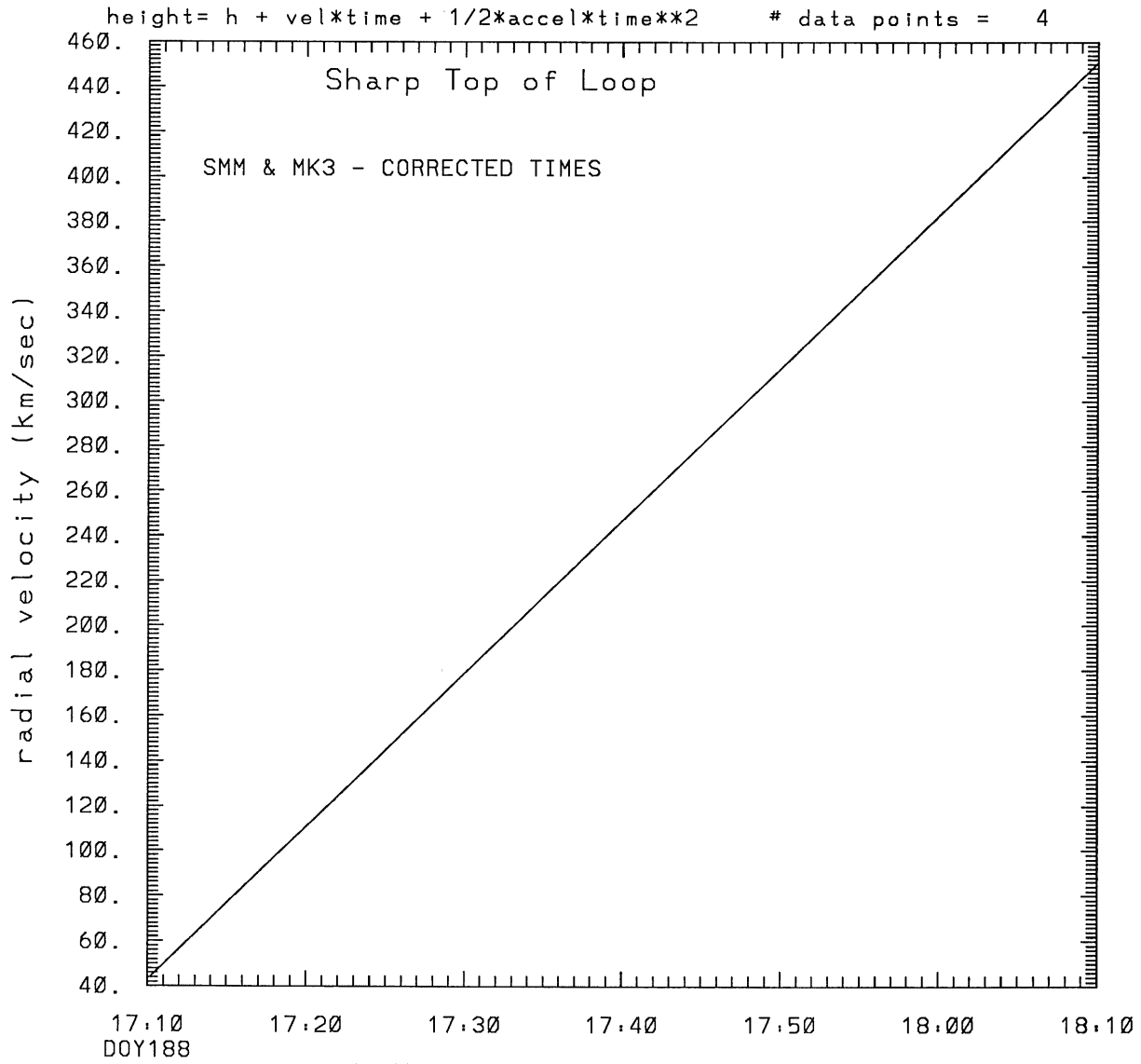


tstart=DOY188 17: 4 from derivative=0

Event begins at 2.06 Solar Radii

radial acceleration = 0.1133 +/- 0.0394 [km/sec**2]

SMM C/P 1987 DOY188 40 +/- 0 degrees



tstart=DOY188 17: 4 from derivative=0
Event begins at 2.06 Solar Radii
radial acceleration=0.113E+00 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	error in radius	error in angle	angle	datatype
1987	188	17:21:35	2.15	+/- 0.10	40.0	+/- 0.5	SMM
1987	188	17:29:51	2.30	+/- 0.20	40.0	+/- 1.0	SMM
1987	188	17:54:36	2.80	+/- 0.15	40.0	+/- 0.5	SMM
1987	188	18: 2:51	3.10	+/- 0.15	40.0	+/- 1.0	SMM

Structure being measured:
Sharp Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.403E+02 +/- 0.143E+01$ [minutes]
In more convenient units:
Event began at DOY 188 16:30 +/- 0.143E+01 [minutes]

Origin defined at DOY188 17:10

RADIAL INFORMATION:

RADIAL VELOCITY = 255. +/- 15. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.189E+01 +/- 0.427E-01$ [solar radii]
 $c(2) = 0.220E-01 +/- 0.128E-02$ [radii/min]
 $c(2) = 0.255E+03 +/- 0.149E+02$ [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 $c(1) = 0.66377E-01$ [radii] see Bevington pg. 114
error in $c(2) = 0.18217E-02$ [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) = 40. +/- 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 17:21 = 0.000E+00 km/sec

The TOTAL velocity at 17:21 = 255. km/sec

The TANGENTIAL velocity at 17:29 = 0.000E+00 km/sec

The TOTAL velocity at 17:29 = 255. km/sec

The TANGENTIAL velocity at 17:54 = 0.000E+00 km/sec

The TOTAL velocity at 17:54 = 255. km/sec

The TANGENTIAL velocity at 18: 2 = 0.000E+00 km/sec

The TOTAL velocity at 18: 2 = 255. 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 = 0.170E+02

Error in time = 0.39935E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.211E-02

Reduced Chi Squared = 0.127E-01

Chi Squared = 0.253E-01

The probability for exceeding chi square = 0.998E+00

The correlation coefficient = 0.994E+00

The probability that no LINEAR correlation exists between the variables = 0.6414E-02

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

This is a 2 order run

INPUT:

year	doy	time	radii	radius	error in	angle	error in	datatype
1987	188	17:21:35	2.15	+/- 0.10	40.0	+/- 0.5		SMM
1987	188	17:29:51	2.30	+/- 0.20	40.0	+/- 1.0		SMM
1987	188	17:54:36	2.80	+/- 0.15	40.0	+/- 0.5		SMM
1987	188	18: 2:51	3.10	+/- 0.15	40.0	+/- 1.0		SMM

Structure being measured:
Sharp Top of Loop

OUTPUT:

START TIME:

tstart=DOY188 17: 4 from derivative = 0
Event begins at 2.06 Solar Radii
Origin defined at DOY188 17:10

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.113E+00 +/- 0.394E-01 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.207E+01 +/- 0.692E-01 [solar radii]
c(2) = 0.370E-02 +/- 0.638E-02 [radii/min]
c(2) = 0.429E+02 +/- 0.741E+02 [km/sec]
c(3) = 0.293E-03 +/- 0.102E-03 [radii/min**2]
c(3) = 0.113E+00 +/- 0.394E-01 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.13384E+00 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.45674E-01 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.10816E-01 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.47086E-02 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.16658E-03 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.74615E-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) = 40. +/- 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 17:21 = 0.000E+00 km/sec

The TOTAL velocity at 17:21 = 122. km/sec

The TANGENTIAL velocity at 17:29 = 0.000E+00 km/sec

The TOTAL velocity at 17:29 = 178. km/sec

The TANGENTIAL velocity at 17:54 = 0.000E+00 km/sec

The TOTAL velocity at 17:54 = 346. km/sec

The TANGENTIAL velocity at 18: 2 = 0.000E+00 km/sec

The TOTAL velocity at 18: 2 = 402. 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 = 0.170E+02

Value of reduced Chi Squared returned from nllst2 = 0.616E-03

Reduced Chi Squared = 0.487E-02

Chi Squared = 0.487E-02

The probability for exceeding chi square = 0.980E+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 = 0.1074E+01

The correlation between the data and the time**2 term = 0.1033E+01

The correlation between the data and the complete equation of motion = 0.9950E+00

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