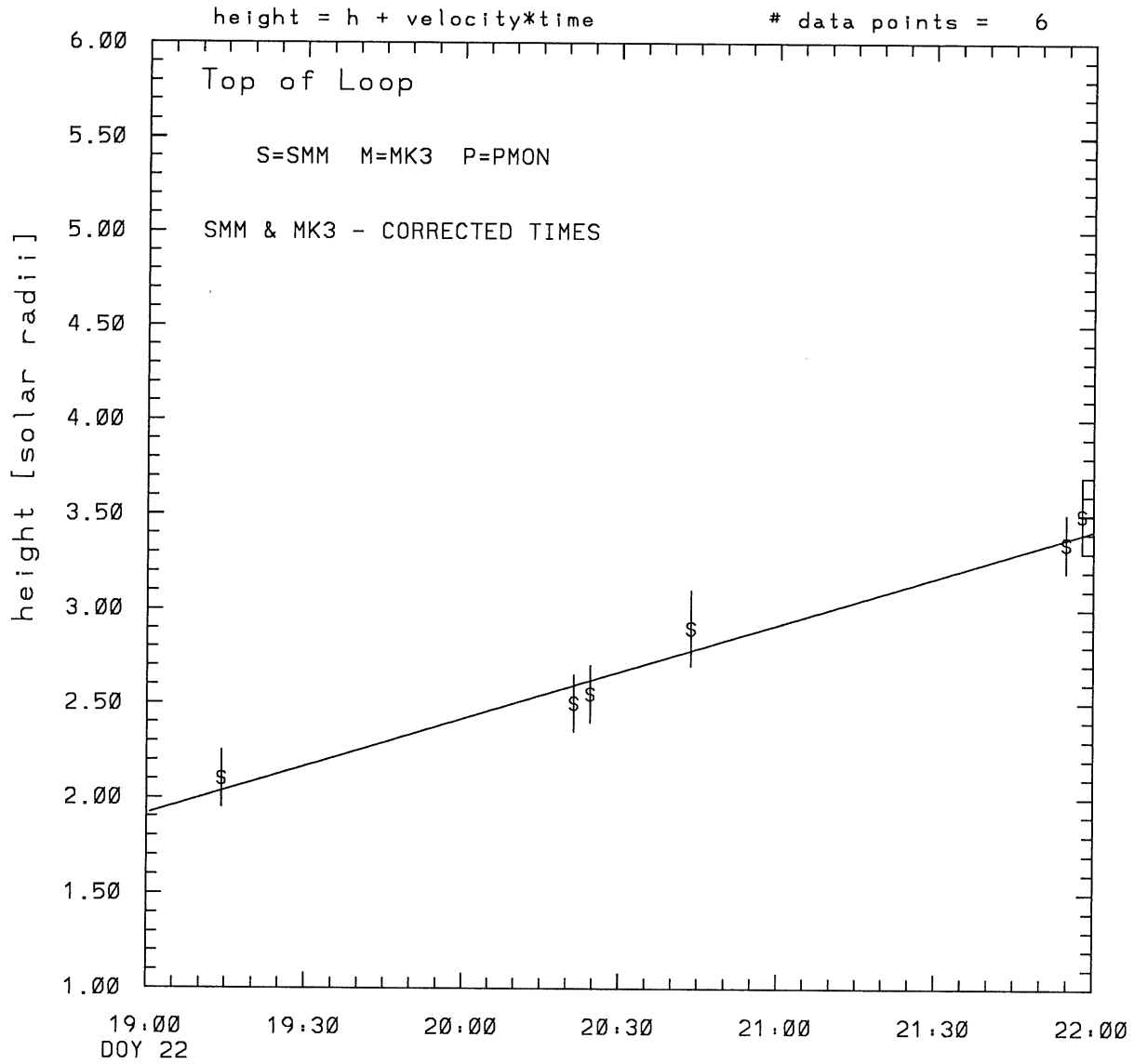
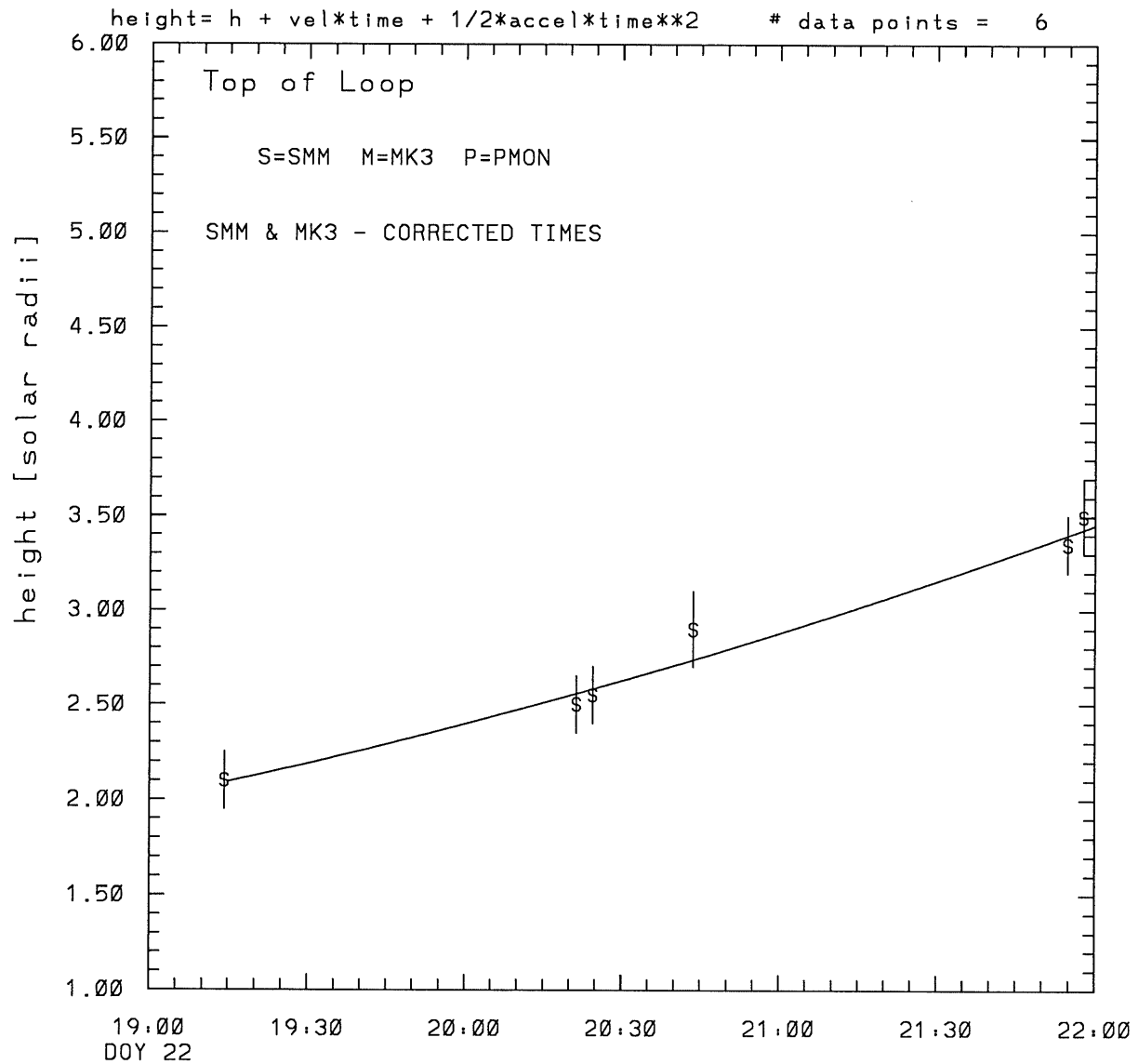


SMM C/P 1985 DOY 22 287 +/- 0 degrees



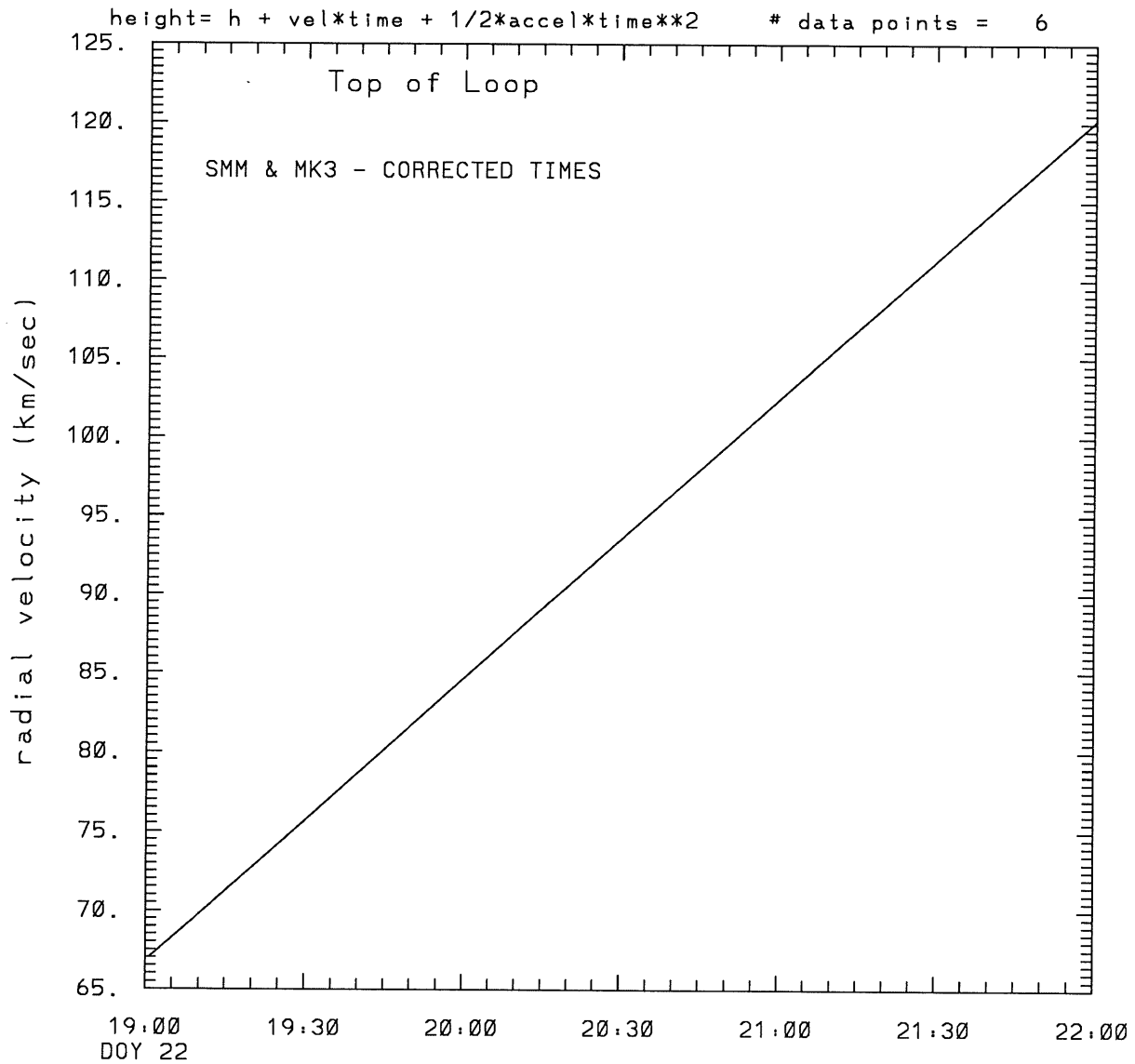
tstart=DOY 22 17:12 +/- 3.0 [min.]
radial velocity= 97. +/- 7. [km/sec]

SMM C/P 1985 DOY 22 287 +/- 0 degrees



tstart=DOY 22 15:15 from derivative=0
Event begins at 1.36 Solar Radii
radial acceleration = 0.0049 +/- 0.0043 [km/sec**2]

SMM C/P 1985 DOY 22 287 +/- 0 degrees



19:00
DOY 22

19:30

20:00

20:30

21:00

21:30

22:00

tstart=DOY 22 15:15 from derivative=0
Event begins at 1.36 Solar Radii
radial acceleration= $0.495E-02$ km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in	angle	angle	datatype
1985	22	19:14:12	2.10	+/- 0.15	287.0	+/- 0.5	SMM	
1985	22	20:21:21	2.50	+/- 0.15	287.0	+/- 0.5	SMM	
1985	22	20:24:30	2.55	+/- 0.15	287.0	+/- 0.5	SMM	
1985	22	20:43:37	2.90	+/- 0.20	287.0	+/- 0.5	SMM	
1985	22	21:54:50	3.35	+/- 0.15	287.0	+/- 1.0	SMM	
1985	22	21:57:49	3.50	+/- 0.20	287.0	+/- 1.0	SMM	

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.110E+03 +/- 0.304E+01$ [minutes]

In more convenient units:

Event began at DOY 22 17:12 +/- 0.304E+01 [minutes]

Origin defined at DOY 22 19: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 97. +/- 7. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.192E+01 +/- 0.716E-01 [solar radii]
c(2) = 0.835E-02 +/- 0.620E-03 [radii/min]
c(2) = 0.968E+02 +/- 0.719E+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)= 0.89903E-01 [radii] see Bevington pg. 114

error in c(2)= 0.74711E-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) = 287. +/- 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 19:14 = 0.000E+00 km/sec

The TOTAL velocity at 19:14 = 97. km/sec

The TANGENTIAL velocity at 20:21 = 0.000E+00 km/sec

The TOTAL velocity at 20:21 = 97. km/sec

The TANGENTIAL velocity at 20:24 = 0.000E+00 km/sec

The TOTAL velocity at 20:24 = 97. km/sec

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

The TOTAL velocity at 20:43 = 97. km/sec

The TANGENTIAL velocity at 21:54 = 0.000E+00 km/sec

The TOTAL velocity at 21:54 = 97. km/sec

The TANGENTIAL velocity at 21:57 = 0.000E+00 km/sec

The TOTAL velocity at 21:57 = 97. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.54

Standard Deviation in start time measurement = 0.569E+02

Error in time = 0.24937E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.764E-02

Reduced Chi Squared = 0.395E-01

Chi Squared = 0.158E+00

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.986E+00

The probability that no LINEAR correlation exists between the variables = 0.3099E-03

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

This is a 2 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1985	22	19:14:12	2.10	+/- 0.15	287.0	+/- 0.5	SMM
1985	22	20:21:21	2.50	+/- 0.15	287.0	+/- 0.5	SMM
1985	22	20:24:30	2.55	+/- 0.15	287.0	+/- 0.5	SMM
1985	22	20:43:37	2.90	+/- 0.20	287.0	+/- 0.5	SMM
1985	22	21:54:50	3.35	+/- 0.15	287.0	+/- 1.0	SMM
1985	22	21:57:49	3.50	+/- 0.20	287.0	+/- 1.0	SMM

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

tstart=DOY 22 15:15 from derivative = 0

Event begins at 1.36 Solar Radii

Origin defined at DOY 22 19: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.495E-02 +/- 0.427E-02 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.200E+01 +/- 0.103E+00 [solar radii]
c(2) = 0.576E-02 +/- 0.231E-02 [radii/min]
c(2) = 0.668E+02 +/- 0.268E+02 [km/sec]
c(3) = 0.128E-04 +/- 0.110E-04 [radii/min**2]
c(3) = 0.495E-02 +/- 0.427E-02 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.14705E+00 [radii] Bevington pg 154 (8-30)

Exact error in c(1) = 0.10843E-01 [radii] Bevington pg 154 (8-28)

Approximate error in c(2) = 0.31717E-02 [radii/min] Bevington pg 154 (8-30)

Exact error in c(2) = 0.51913E-03 [radii/min] Bevington pg 154 (8-28)

Approximate error in c(3) = 0.14840E-04 [radii/min**] Bevington pg 154 (8-30)

Exact error in c(3) = 0.30044E-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) = 287. +/- 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 19:14 = 0.000E+00 km/sec

The TOTAL velocity at 19:14 = 71. km/sec

The TANGENTIAL velocity at 20:21 = 0.000E+00 km/sec

The TOTAL velocity at 20:21 = 91. km/sec

The TANGENTIAL velocity at 20:24 = 0.000E+00 km/sec

The TOTAL velocity at 20:24 = 92. km/sec

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

The TOTAL velocity at 20:43 = 98. km/sec

The TANGENTIAL velocity at 21:54 = 0.000E+00 km/sec

The TOTAL velocity at 21:54 = 119. km/sec

The TANGENTIAL velocity at 21:57 = 0.000E+00 km/sec

The TOTAL velocity at 21:57 = 120. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.54

Standard Deviation in start time measurement = 0.569E+02

Value of reduced Chi Squared returned from nllst2 = 0.715E-02

Reduced Chi Squared = 0.518E-01

Chi Squared = 0.156E+00

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 = 0.1003E+01

The correlation between the data and the time**2 term = 0.9701E+00

The correlation between the data and the complete equation of motion = 0.9757E+00

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