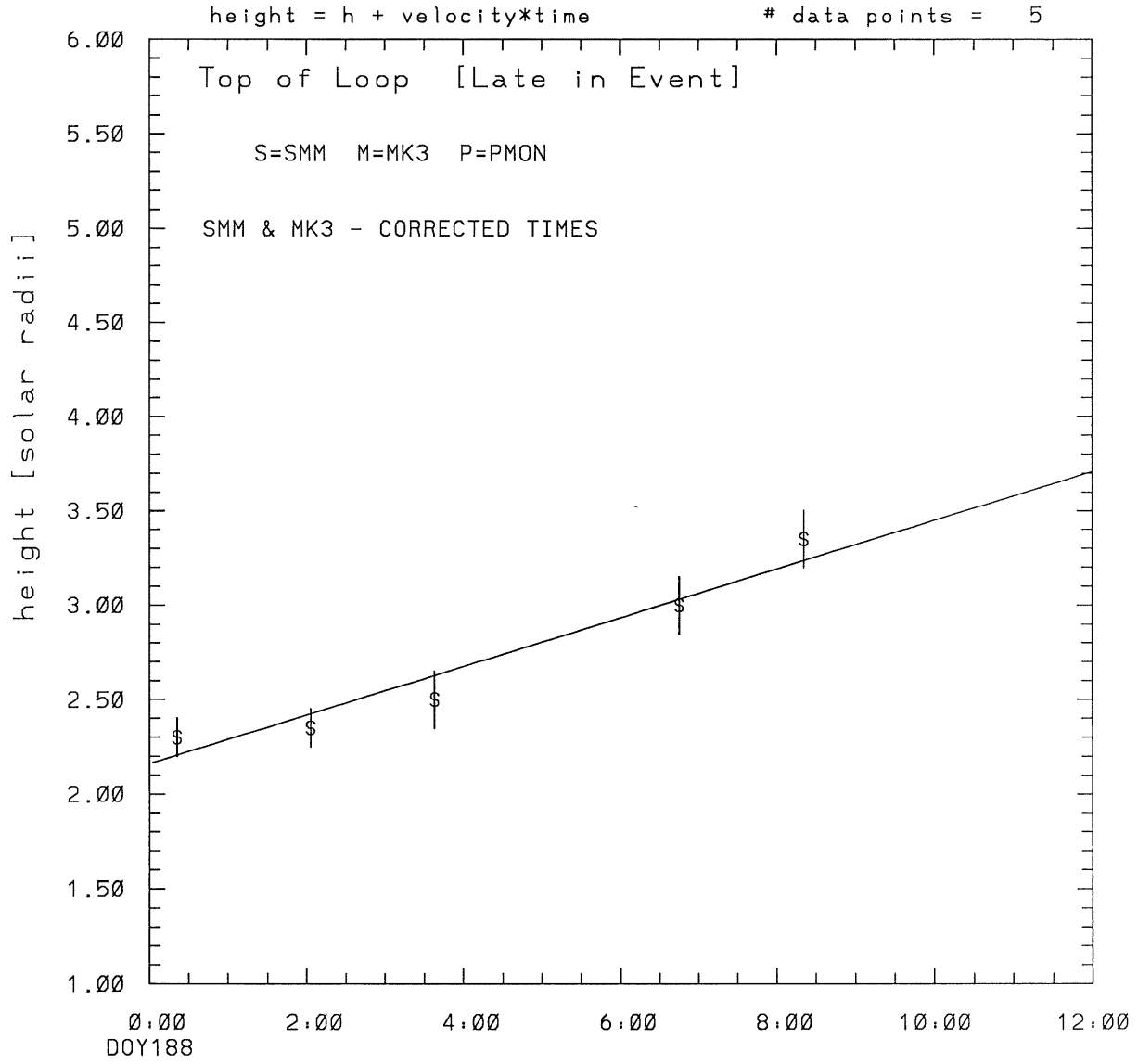
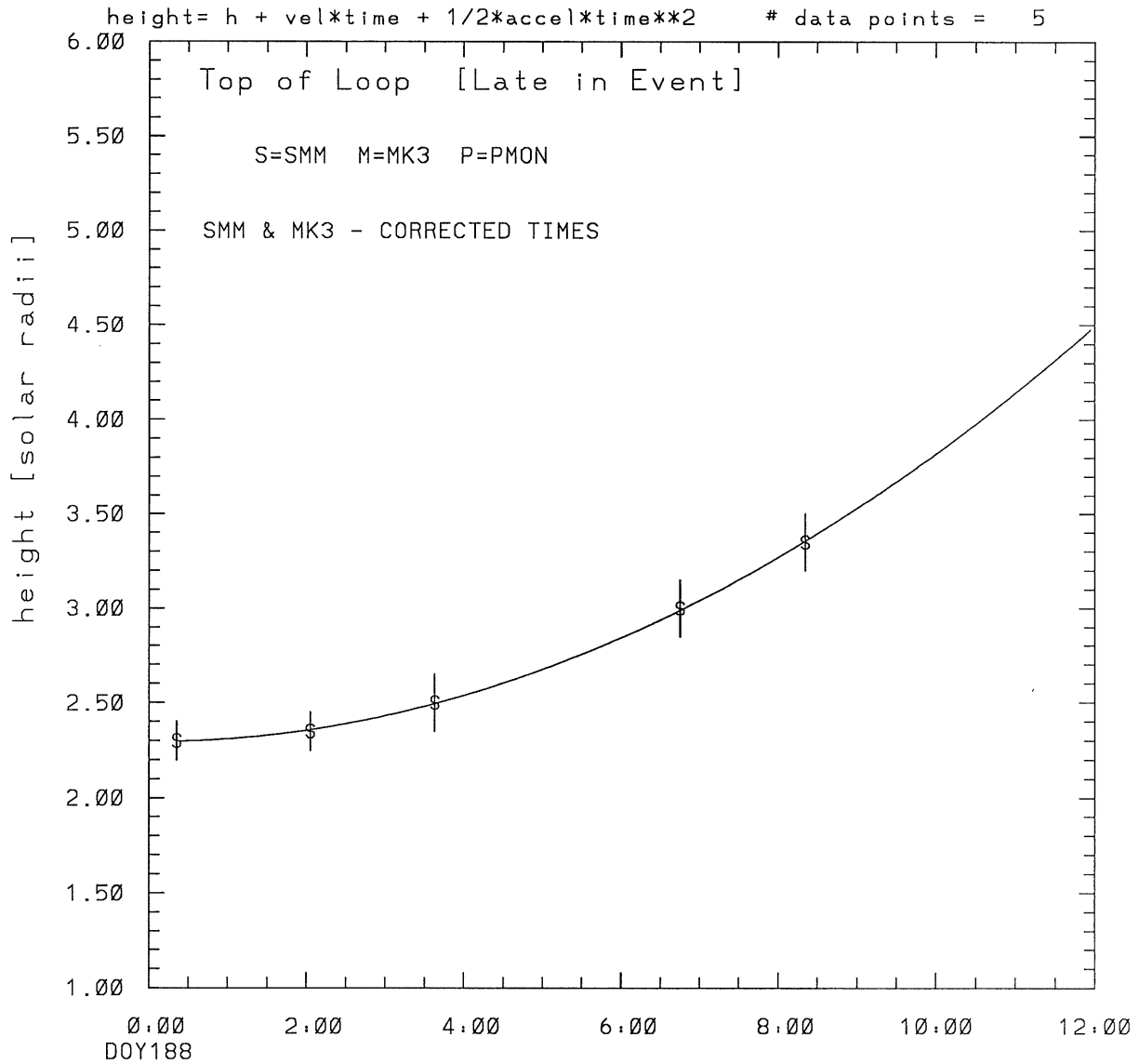


SMM C/P 1980 DOY188 75 +/- 0 degrees



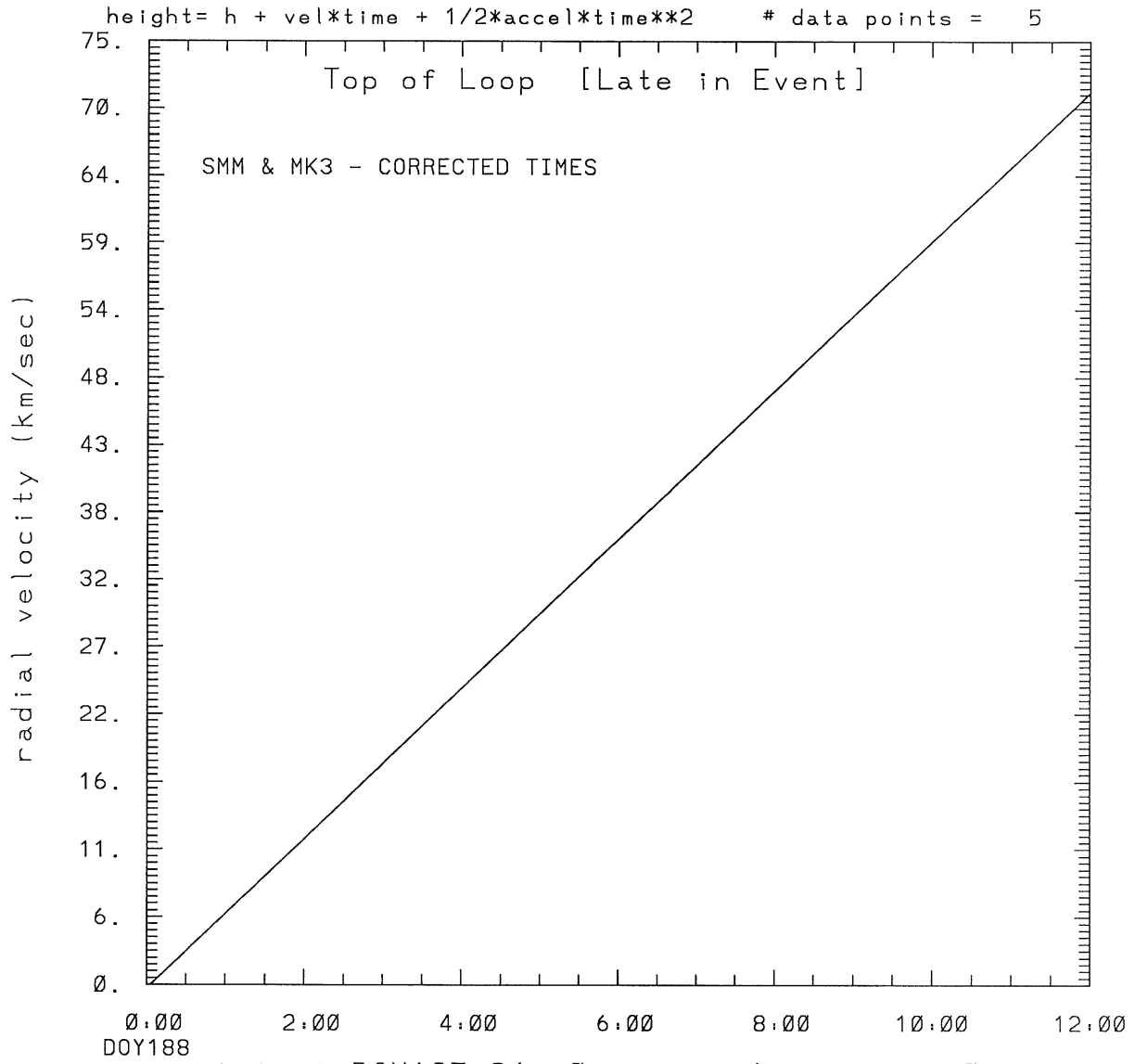
tstart=DOY187 15: 1 +/- 29.6 [min.]
radial velocity= 25. +/- 3. [km/sec]

SMM C/P 1980 DOY188 75 +/- 0 degrees



tstart=DOY187 24: 0 from derivative=0
Event begins at 2.29 Solar Radii
radial acceleration = 0.0016 ± 0.0001 [km/sec**2]

SMM C/P 1980 DOY188 75 +/- 0 degrees



tstart=DOY187 24: 0 from derivative=0
Event begins at 2.29 Solar Radii
radial acceleration=0.164E-02 km/sec**2

This is a 1 order run

INPUT:

year	day	time	radii	radius	error in	angle	angle	error in	datatype
1980	188	0:21: 1	2.30	+/- 0.10	75.0	+/- 0.5	SMM		
1980	188	2: 3: 2	2.35	+/- 0.10	75.0	+/- 0.5	SMM		
1980	188	3:38: 7	2.50	+/- 0.15	75.0	+/- 0.5	SMM		
1980	188	6:45:17	3.00	+/- 0.15	75.0	+/- 1.0	SMM		
1980	188	8:20:54	3.35	+/- 0.15	75.0	+/- 1.0	SMM		

Structure being measured:
Top of Loop [Late in Event]

OUTPUT:

START TIME:

Event began at $t = 0 + -0.539E+03 +/- 0.296E+02$ [minutes]
In more convenient units:
Event began at DOY 187 15: 1 +/- 0.296E+02 [minutes]

Origin defined at DOY188 0: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 25. +/- 3. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.216E+01 +/- 0.693E-01$ [solar radii]
 $c(2) = 0.215E-02 +/- 0.269E-03$ [radii/min]
 $c(2) = 0.249E+02 +/- 0.312E+01$ [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 $c(1) = 0.95662E-01$ [radii] see Bevington pg. 114
error in $c(2) = 0.30929E-03$ [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) = 75. +/- 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 0:21 = 0.000E+00 km/sec

The TOTAL velocity at 0:21 = 25. km/sec

The TANGENTIAL velocity at 2: 3 = 0.000E+00 km/sec

The TOTAL velocity at 2: 3 = 25. km/sec

The TANGENTIAL velocity at 3:38 = 0.000E+00 km/sec

The TOTAL velocity at 3:38 = 25. km/sec

The TANGENTIAL velocity at 6:45 = 0.000E+00 km/sec

The TOTAL velocity at 6:45 = 25. km/sec

The TANGENTIAL velocity at 8:20 = 0.000E+00 km/sec

The TOTAL velocity at 8:20 = 25. 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 = 0.177E+03

Error in time = 0.98601E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.105E-01

Reduced Chi Squared = 0.460E-01

Chi Squared = 0.138E+00

The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.974E+00

The probability that no LINEAR correlation exists between the variables = 0.5086E-02

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
1980	188	0:21: 1	2.30	+/- 0.10	75.0	+/- 0.5	SMM
1980	188	2: 3: 2	2.35	+/- 0.10	75.0	+/- 0.5	SMM
1980	188	3:38: 7	2.50	+/- 0.15	75.0	+/- 0.5	SMM
1980	188	6:45:17	3.00	+/- 0.15	75.0	+/- 1.0	SMM
1980	188	8:20:54	3.35	+/- 0.15	75.0	+/- 1.0	SMM

Structure being measured:
Top of Loop [Late in Event]

OUTPUT:

START TIME:

tstart=DOY187 24: 0 from derivative = 0
Event begins at 2.29 Solar Radii
Origin defined at DOY188 0: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.164E-02 +/- 0.715E-04 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.229E+01 +/- 0.840E-02 [solar radii]
c(2) = -0.811E-05 +/- 0.968E-04 [radii/min]
c(2) = -0.941E-01 +/- 0.112E+01 [km/sec]
c(3) = 0.425E-05 +/- 0.185E-06 [radii/min**2]
c(3) = 0.164E-02 +/- 0.715E-04 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.12664E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.31942E-02 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.12515E-03 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.38398E-04 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.22923E-06 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.75540E-07 [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) = 75. +/- 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 0:21 = 0.000E+00 km/sec

The TOTAL velocity at 0:21 = 2. km/sec

The TANGENTIAL velocity at 2: 3 = 0.000E+00 km/sec

The TOTAL velocity at 2: 3 = 12. km/sec

The TANGENTIAL velocity at 3:38 = 0.000E+00 km/sec

The TOTAL velocity at 3:38 = 21. km/sec

The TANGENTIAL velocity at 6:45 = 0.000E+00 km/sec

The TOTAL velocity at 6:45 = 40. km/sec

The TANGENTIAL velocity at 8:20 = 0.000E+00 km/sec

The TOTAL velocity at 8:20 = 49. 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 = 0.177E+03

Value of reduced Chi Squared returned from nllst2 = 0.792E-04

Reduced Chi Squared = 0.452E-03

Chi Squared = 0.905E-03

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 = 0.9949E+00

The correlation between the data and the time**2 term = 0.9716E+00

The correlation between the data and the complete equation of motion = 0.9989E+00

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