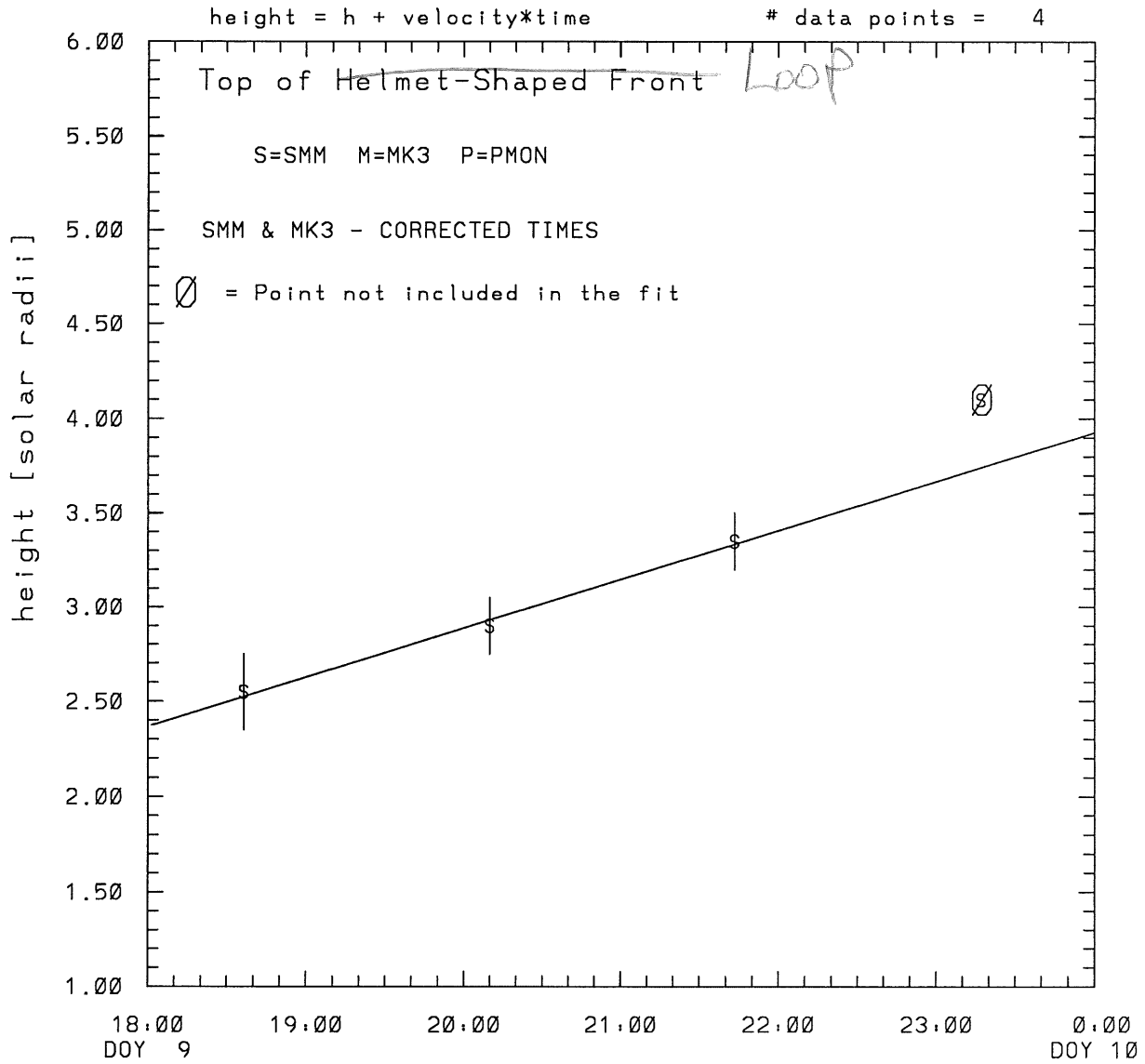
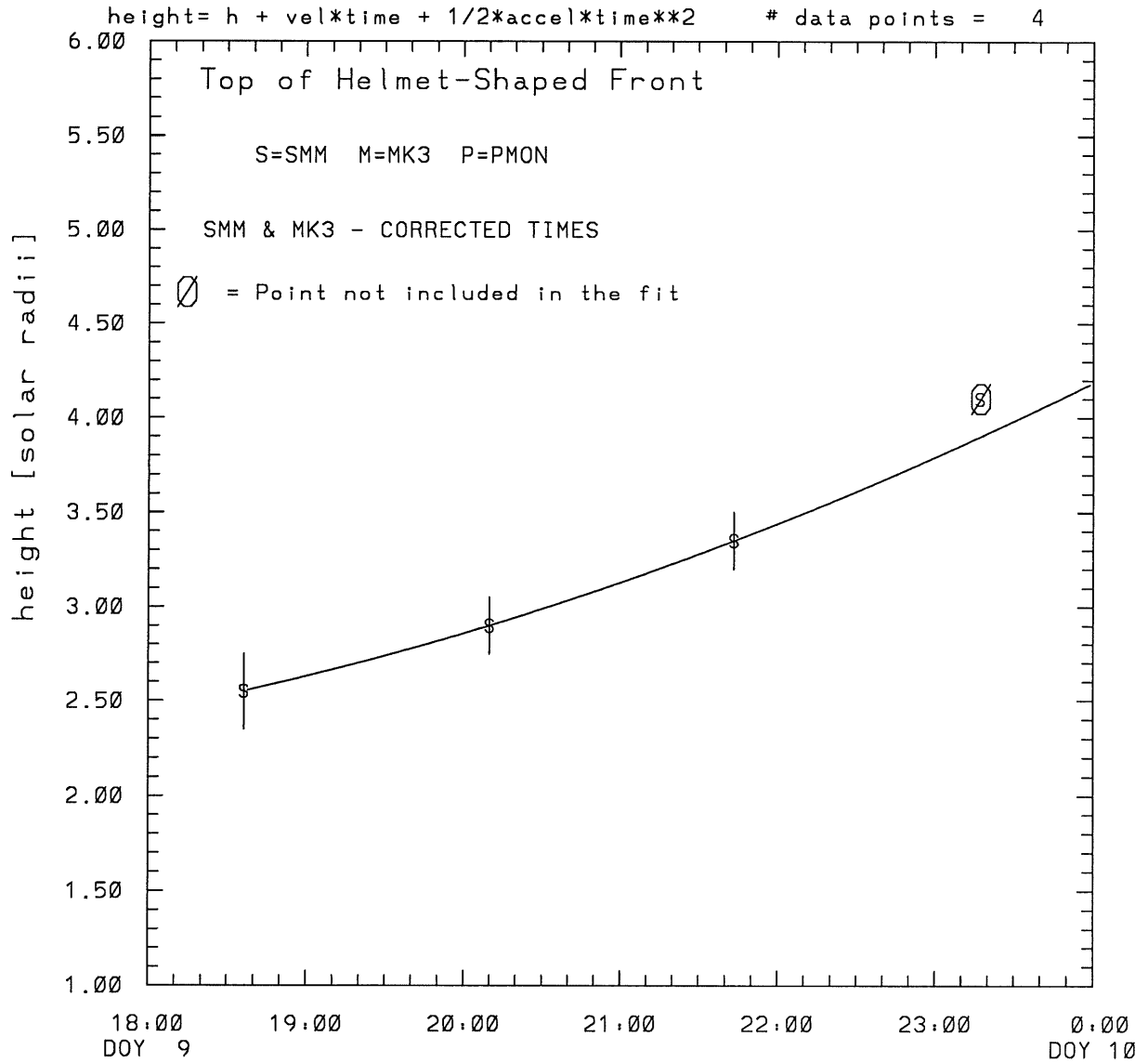


SMM C/P 1989 DOY 9 215 +/- 0 degrees



tstart=DOY 9 12:45 +/- 8.5 [min.]
radial velocity= 50. +/- 2. [km/sec]

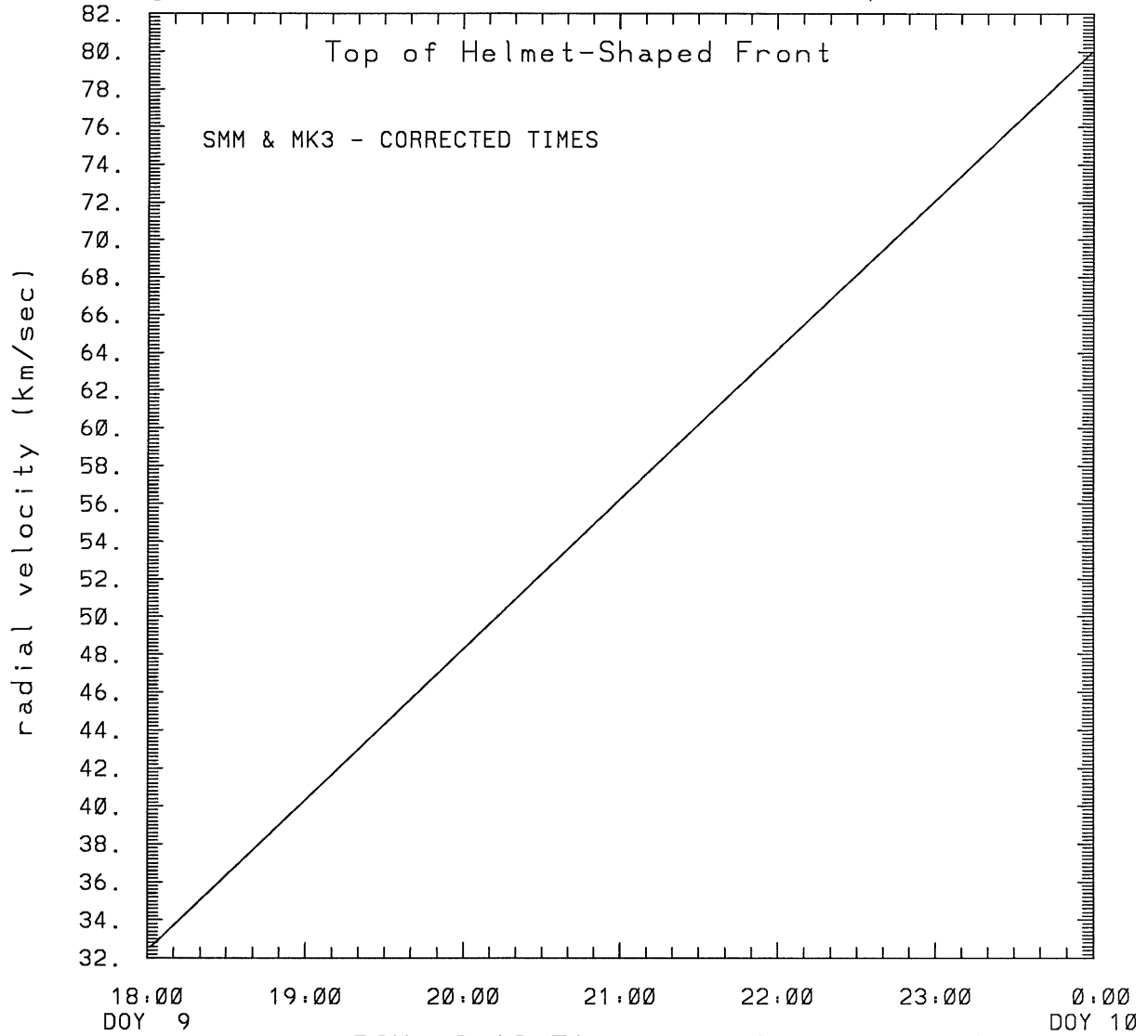
SMM C/P 1989 DOY 9 215 +/- 0 degrees



tstart=DOY 9 13:56 from derivative=0
Event begins at 2.10 Solar Radii
radial acceleration = 0.0022 +/- 0.0000 [km/sec**2]

SMM C/P 1989 DOY 9 215 +/- 0 degrees

height = $h + vel*time + 1/2*accel*time**2$ # data points = 4



tstart=DOY 9 13:56 from derivative=0
Event begins at 2.10 Solar Radii
radial acceleration=0.221E-02 km/sec**2

This is a 1 order run

INPUT:

year	day	time	radii	radius	error in angle	error in angle	datatype
1989	9	18:36:16	2.55 +/- 0.20	215.0 +/- 0.5			SMM
1989	9	20: 9:51	2.90 +/- 0.15	215.0 +/- 0.5			SMM
1989	9	21:43:27	3.35 +/- 0.15	215.0 +/- 1.0			SMM
1989	9	23:17: 3	4.10 -----	215.00 +/- ----			SMM THIS POINT WASN'T USEI

Structure being measured:
Top of Helmet-Shaped Front *Loop*

OUTPUT:

START TIME:

Event began at t = 0 + -0.315E+03 +/- 0.847E+01 [minutes]
In more convenient units:
Event began at DOY 9 12:45 +/- 0.847E+01 [minutes]

Origin defined at DOY 9 18: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 50. +/- 2. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.237E+01 +/- 0.315E-01 [solar radii]
c(2) = 0.434E-02 +/- 0.194E-03 [radii/min]
c(2) = 0.503E+02 +/- 0.225E+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)= 0.25073E+00 [radii] see Bevington pg. 114
error in c(2)= 0.12212E-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) = 215. +/- 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 18:36 = 0.000E+00 km/sec
The TOTAL velocity at 18:36 = 50. km/sec

The TANGENTIAL velocity at 20: 9 = 0.000E+00 km/sec

The TOTAL velocity at 20: 9 = 50. km/sec

The TANGENTIAL velocity at 21:43 = 0.000E+00 km/sec

The TOTAL velocity at 21:43 = 50. km/sec

The TANGENTIAL velocity at 23:17 = 0.000E+00 km/sec

The TOTAL velocity at 23:17 = 50. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.67

Standard Deviation in start time measurement = 0.105E+03

Error in time = 0.83372E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.767E-03

Reduced Chi Squared = 0.259E+00

Chi Squared = 0.519E+00

The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.984E+00

The probability that no LINEAR correlation exists between the variables = 0.15761

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

This is a 2 order run

INPUT:

year	day	time	radii	radius	angle	angle	datatype
1989	9	18:36:16	2.55 +/- 0.20	215.0 +/- 0.5			SMM
1989	9	20: 9:51	2.90 +/- 0.15	215.0 +/- 0.5			SMM
1989	9	21:43:27	3.35 +/- 0.15	215.0 +/- 1.0			SMM
1989	9	23:17: 3	4.10 -----	215.00 +/- ----			SMM THIS POINT WASN'T USEI

Structure being measured:
Top of Helmet-Shaped Front

OUTPUT:

START TIME:

tstart=DOY 9 13:56 from derivative = 0
Event begins at 2.10 Solar Radii
Origin defined at DOY 9 18: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.221E-02 +/- 0.233E-07 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.244E+01 +/- 0.975E-06 [solar radii]
c(2) = 0.279E-02 +/- 0.167E-07 [radii/min]
c(2) = 0.324E+02 +/- 0.193E-03 [km/sec]
c(3) = 0.570E-05 +/- 0.602E-10 [radii/min**2]
c(3) = 0.221E-02 +/- 0.233E-07 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.30337E+00 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.82254E-06 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.41462E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.12148E-07 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.11419E-04 [radii/min**] Bevington pg 154 (8-
Exact error in c(3) = 0.40829E-10 [radii/min**] Bevington pg 154 (8-

ANGULAR INFORMATION:

ANGULAR ACCELERATION= 0.0000E+00 +/- 0.0000E+00[radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 215. +/- 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 18:36 = 0.000E+00 km/sec

The TOTAL velocity at 18:36 = 37. km/sec

The TANGENTIAL velocity at 20: 9 = 0.000E+00 km/sec

The TOTAL velocity at 20: 9 = 50. km/sec

The TANGENTIAL velocity at 21:43 = 0.000E+00 km/sec

The TOTAL velocity at 21:43 = 62. km/sec

The TANGENTIAL velocity at 23:17 = 0.000E+00 km/sec

The TOTAL velocity at 23:17 = 74. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.67

Standard Deviation in start time measurement = 0.105E+03

Value of reduced Chi Squared returned from nllst2 = 0.256E-12

Reduced Chi Squared = 0.160E+00

Chi Squared = 0.160E+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 = 0.7225E+00

The correlation between the data and the time**2 term = 0.6609E+00

The correlation between the data and the complete equation of motion = 0.9232E+00

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