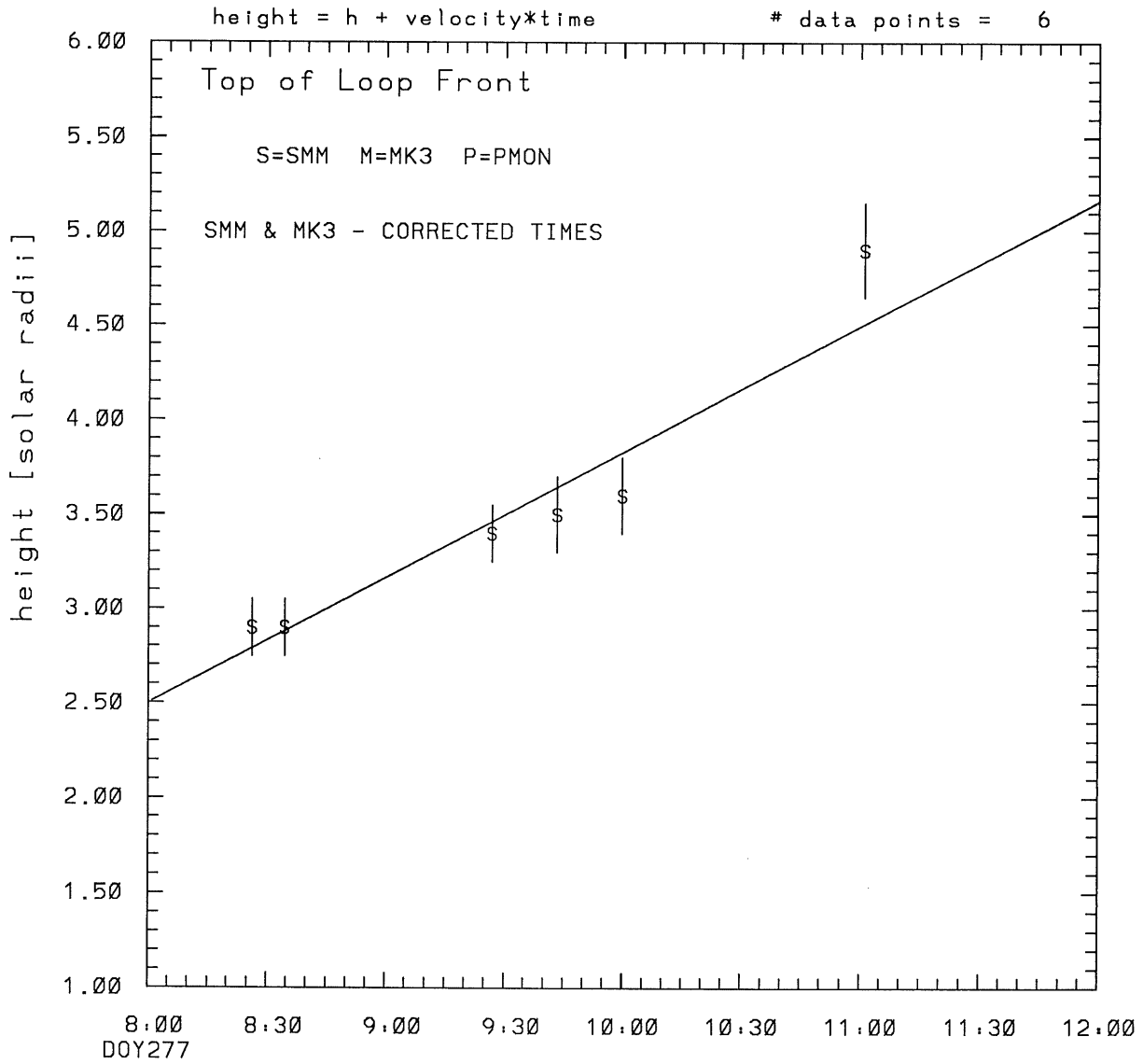
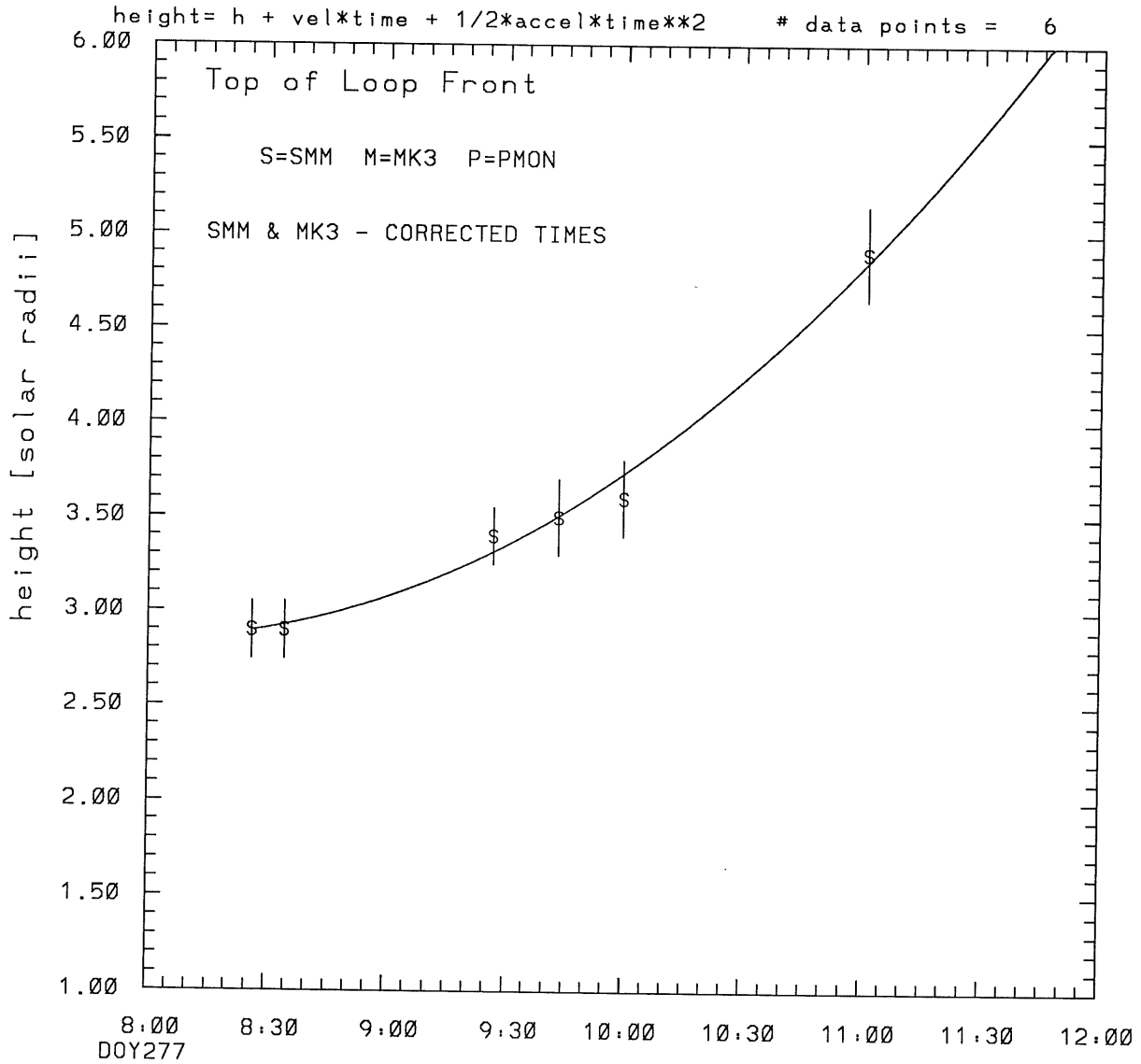


SMM C/P 1987 DOY277 130 +/- 0 degrees



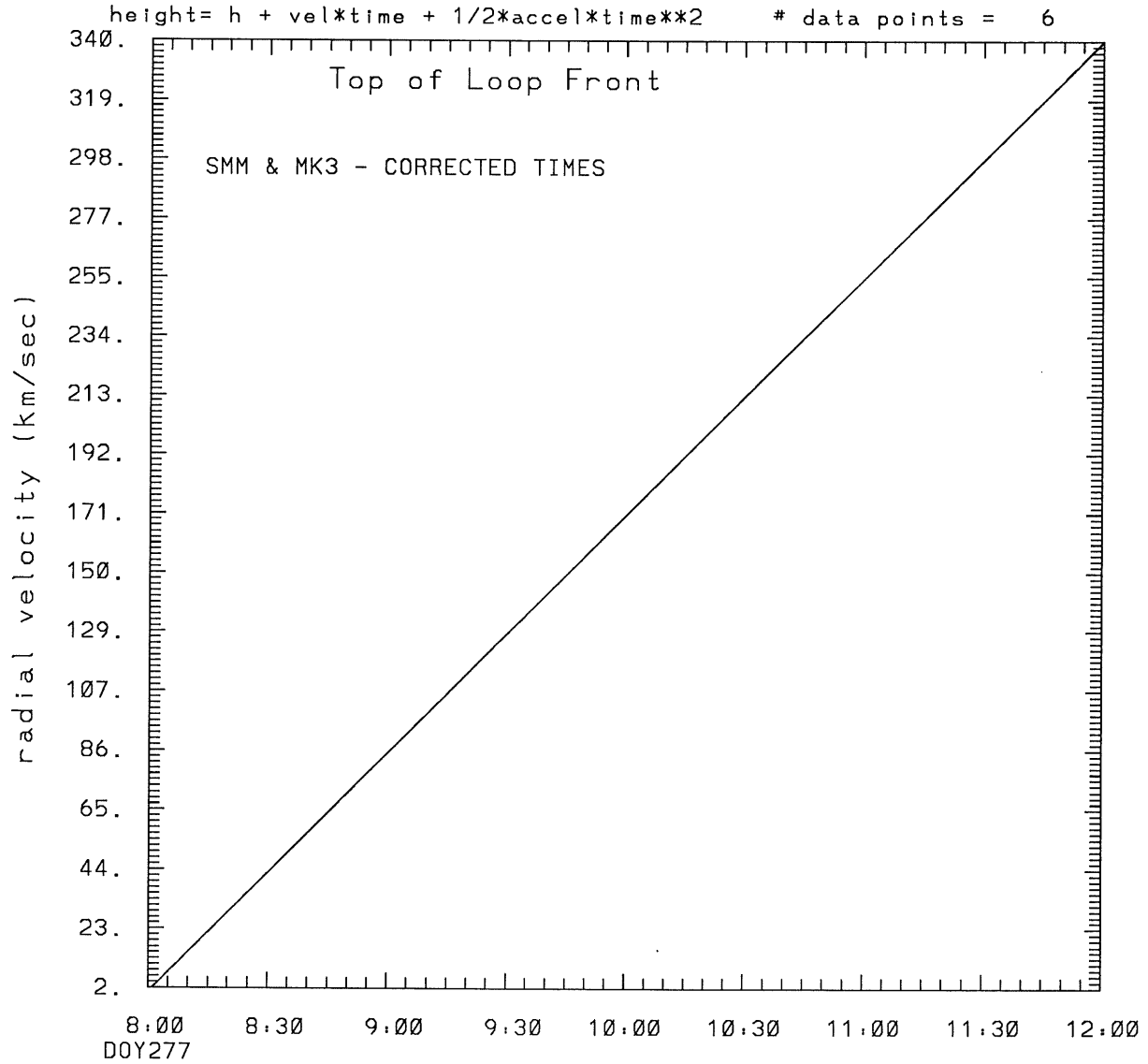
tstart=DOY277 5:45 +/- 5.9 [min.]
radial velocity= 129. +/- 18. [km/sec]

SMM C/P 1987 DOY277 130 +/- 0 degrees



tstart=DOY277 8: 0 from derivative=0
Event begins at 2.85 Solar Radii
radial acceleration = 0.0236 +/- 0.0052 [km/sec**2]

SMM C/P 1987 DOY277 130 +/- 0 degrees



tstart=DOY277 8: 0 from derivative=0
Event begins at 2.85 Solar Radii
radial acceleration=0.236E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in	angle	angle	datatype
1987	277	8:26:13	2.90	+/- 0.15	130.0	+/- 0.5	SMM	
1987	277	8:34:27	2.90	+/- 0.15	130.0	+/- 0.5	SMM	
1987	277	9:26:52	3.40	+/- 0.15	130.0	+/- 1.0	SMM	
1987	277	9:43:23	3.50	+/- 0.20	130.0	+/- 1.0	SMM	
1987	277	9:59:53	3.60	+/- 0.20	130.0	+/- 1.0	SMM	
1987	277	11: 1: 4	4.90	+/- 0.25	130.0	+/- 1.0	SMM	

Structure being measured:

Top of Loop Front

OUTPUT:

START TIME:

Event began at $t = 0 + -0.135E+03 +/- 0.589E+01$ [minutes]

In more convenient units:

Event began at DOY 277 5:45 +/- 0.589E+01 [minutes]

Origin defined at DOY277 8: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 129. +/- 18. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.250E+01 +/- 0.135E+00 [solar radii]
c(2) = 0.111E-01 +/- 0.152E-02 [radii/min]
c(2) = 0.129E+03 +/- 0.176E+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)= 0.20363E+00 [radii] see Bevington pg. 114

error in c(2)= 0.19232E-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) = 130. +/- 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 8:26 = 0.000E+00 km/sec
The TOTAL velocity at 8:26 = 129. km/sec

The TANGENTIAL velocity at 8:34 = 0.000E+00 km/sec
The TOTAL velocity at 8:34 = 129. km/sec

The TANGENTIAL velocity at 9:26 = 0.000E+00 km/sec
The TOTAL velocity at 9:26 = 129. km/sec

The TANGENTIAL velocity at 9:43 = 0.000E+00 km/sec
The TOTAL velocity at 9:43 = 129. km/sec

The TANGENTIAL velocity at 9:59 = 0.000E+00 km/sec
The TOTAL velocity at 9:59 = 129. km/sec

The TANGENTIAL velocity at 11: 1 = 0.000E+00 km/sec
The TOTAL velocity at 11: 1 = 129. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.73
Standard Deviation in start time measurement = 0.524E+02
Error in time = 0.44548E+02 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.303E-01
Reduced Chi Squared = 0.324E+00
Chi Squared = 0.130E+01
The probability for exceeding chi square = 0.998E+00

The correlation coefficient = 0.958E+00
The probability that no LINEAR correlation exists between the variables = 0.2603E-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	277	8:26:13	2.90	+/- 0.15	130.0	+/- 0.5	SMM	
1987	277	8:34:27	2.90	+/- 0.15	130.0	+/- 0.5	SMM	
1987	277	9:26:52	3.40	+/- 0.15	130.0	+/- 1.0	SMM	
1987	277	9:43:23	3.50	+/- 0.20	130.0	+/- 1.0	SMM	
1987	277	9:59:53	3.60	+/- 0.20	130.0	+/- 1.0	SMM	
1987	277	11: 1: 4	4.90	+/- 0.25	130.0	+/- 1.0	SMM	

Structure being measured:

Top of Loop Front

OUTPUT:

START TIME:

tstart=DOY277 8: 0 from derivative = 0

Event begins at 2.85 Solar Radii

Origin defined at DOY277 8: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.236E-01 +/- 0.520E-02 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.285E+01 +/- 0.990E-01 [solar radii]
c(2) = 0.289E-04 +/- 0.253E-02 [radii/min]
c(2) = 0.336E+00 +/- 0.294E+02 [km/sec]
c(3) = 0.610E-04 +/- 0.134E-04 [radii/min**2]
c(3) = 0.236E-01 +/- 0.520E-02 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.12938E+00 [radii] Bevington pg 154 (8-30)

Exact error in c(1) = 0.77590E-02 [radii] Bevington pg 154 (8-28)

Approximate error in c(2) = 0.29668E-02 [radii/min] Bevington pg 154 (8-30)

Exact error in c(2) = 0.30995E-03 [radii/min] Bevington pg 154 (8-28)

Approximate error in c(3) = 0.14403E-04 [radii/min**] Bevington pg 154 (8-30)

Exact error in c(3) = 0.21751E-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) = 130. +/- 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 8:26 = 0.000E+00 km/sec

The TOTAL velocity at 8:26 = 37. km/sec

The TANGENTIAL velocity at 8:34 = 0.000E+00 km/sec

The TOTAL velocity at 8:34 = 49. km/sec

The TANGENTIAL velocity at 9:26 = 0.000E+00 km/sec

The TOTAL velocity at 9:26 = 123. km/sec

The TANGENTIAL velocity at 9:43 = 0.000E+00 km/sec

The TOTAL velocity at 9:43 = 147. km/sec

The TANGENTIAL velocity at 9:59 = 0.000E+00 km/sec

The TOTAL velocity at 9:59 = 170. km/sec

The TANGENTIAL velocity at 11: 1 = 0.000E+00 km/sec

The TOTAL velocity at 11: 1 = 257. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.73

Standard Deviation in start time measurement = 0.524E+02

Value of reduced Chi Squared returned from nllst2 = 0.617E-02

Reduced Chi Squared = 0.407E-01

Chi Squared = 0.122E+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 = 0.9086E+00

The correlation between the data and the time**2 term = 0.8665E+00

The correlation between the data and the complete equation of motion = 0.9910E+00

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