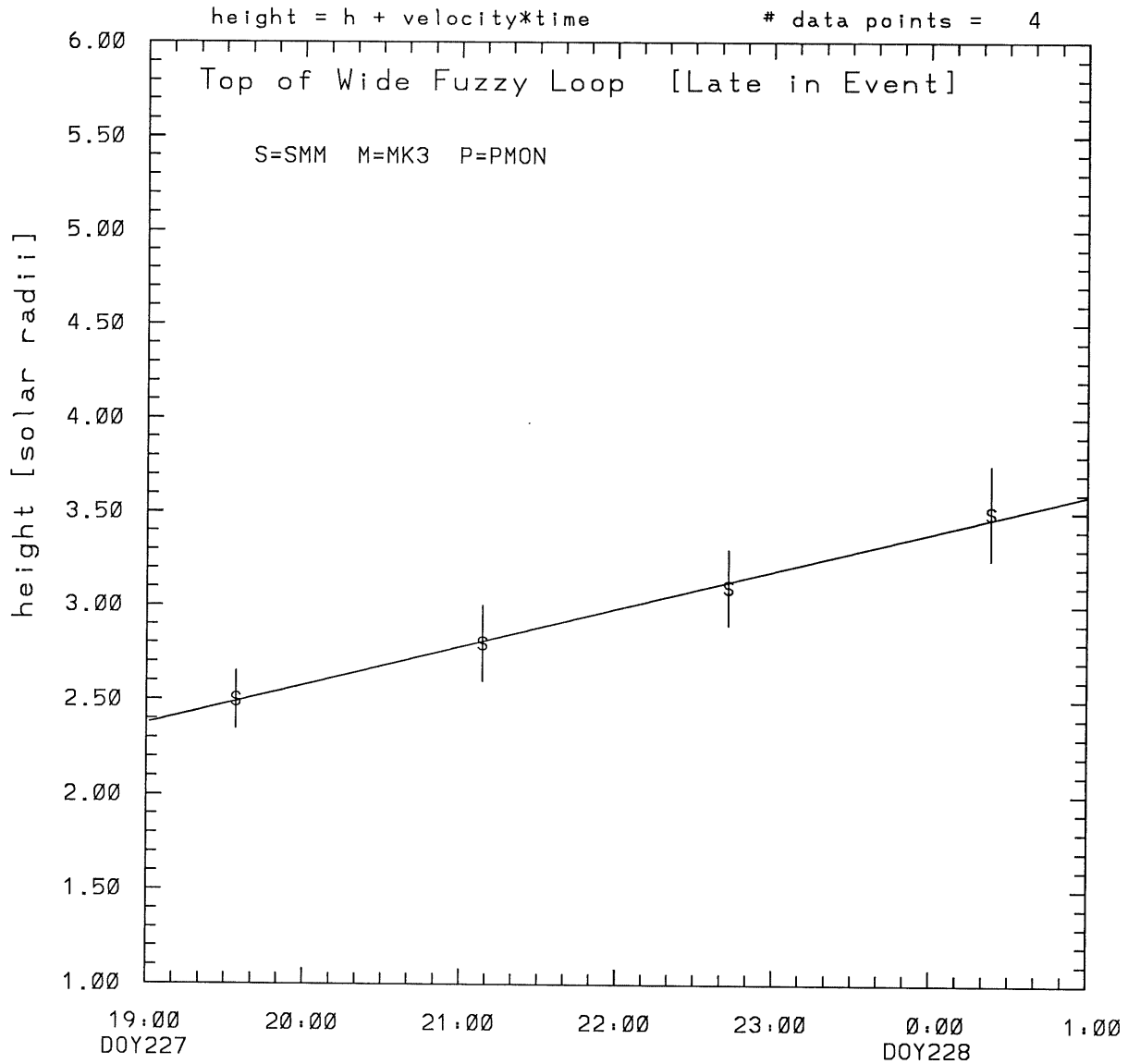
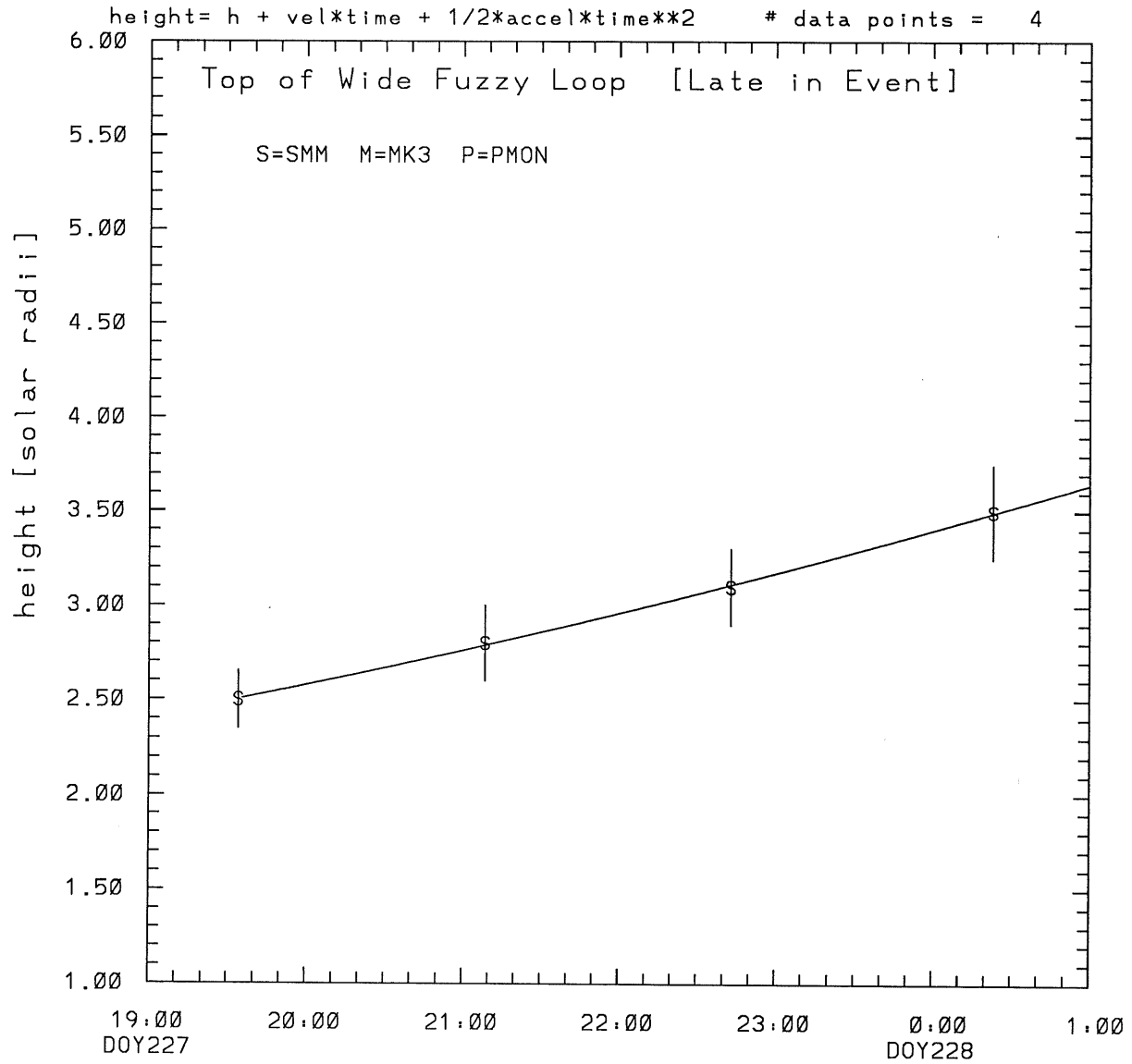


SMM C/P 1984 DOY227 165 +/- 0 degrees



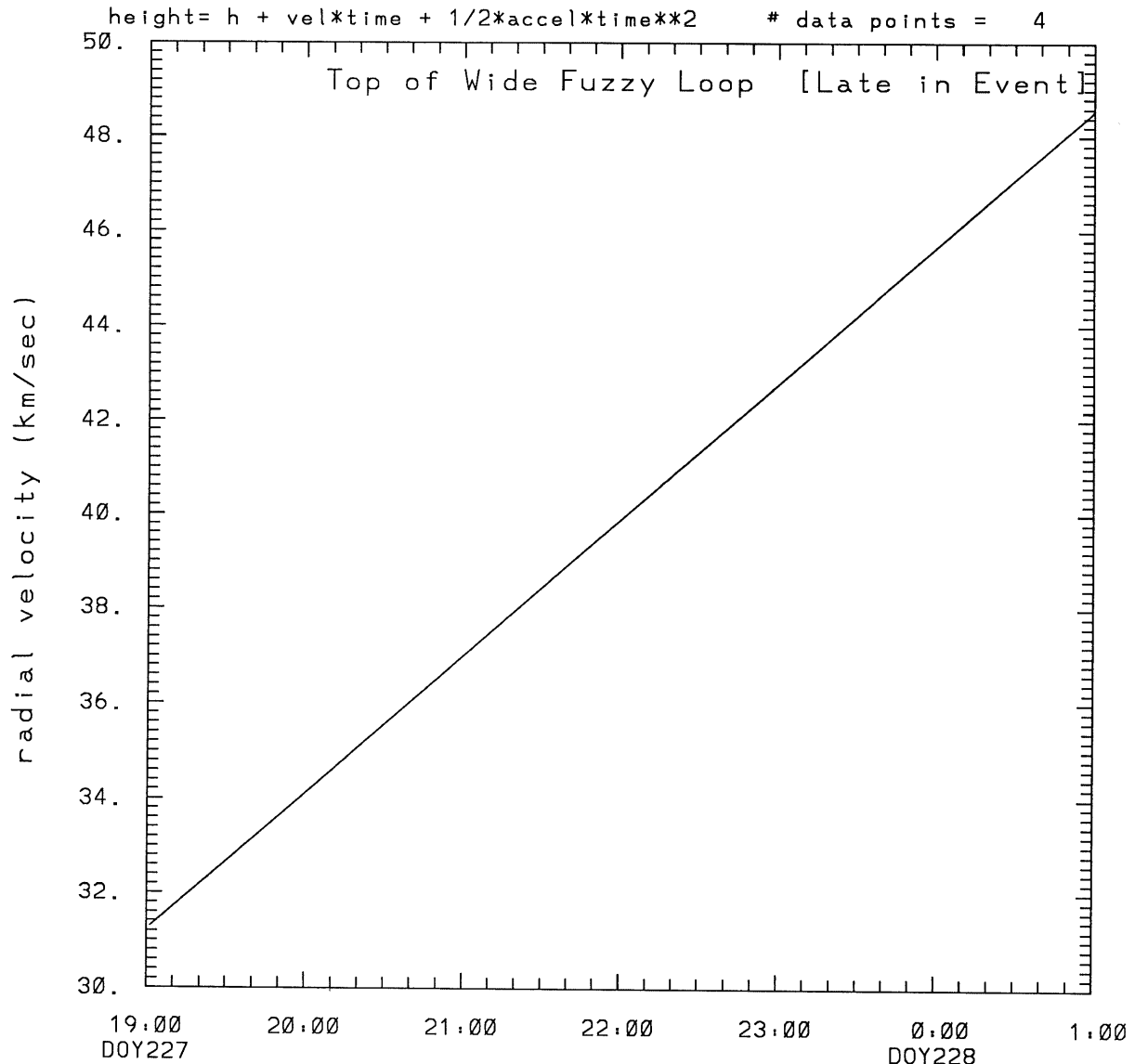
tstart=DOY227 12:14 +/- 7.8 [min.]  
radial velocity= 39. +/- 1. [km/sec]

SMM C/P 1984 DOY227 165 +/- 0 degrees



tstart=DOY227 8:12 from derivative=0  
Event begins at 1.53 Solar Radii  
radial acceleration =  $0.0008 \pm 0.0003$  [km/sec\*\*2]

SMM C/P 1984 DOY227 165 +/- 0 degrees



tstart=DOY227 8:12 from derivative=0  
Event begins at 1.53 Solar Radii  
radial acceleration=0.802E-03 km/sec\*\*2

\*\*\*\*\*  
This is a 1 order run  
\*\*\*\*\*

\*\*\*\*\*  
INPUT:  
\*\*\*\*\*

year	doy	time	radii	error in radius	error in angle	angle	datatype
1984	227	19:34:11	2.50	+/- 0.15	165.0	+/- 0.5	SMM
1984	227	21: 8:35	2.80	+/- 0.20	165.0	+/- 0.5	SMM
1984	227	22:43: 5	3.10	+/- 0.20	165.0	+/- 1.0	SMM
1984	228	0:23:11	3.50	+/- 0.25	165.0	+/- 1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Wide Fuzzy Loop [Late in Event]  
\*\*\*\*\*

\*\*\*\*\*  
OUTPUT:  
\*\*\*\*\*

START TIME:

Event began at  $t = 0 + -0.408E+03 +/- 0.781E+01$  [minutes]  
In more convenient units:  
Event began at DOY 227 12:14 +/- 0.781E+01 [minutes]

Origin defined at DOY227 19: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 39. +/- 1. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

- c(1) = 0.238E+01 +/- 0.193E-01 [solar radii]
- c(2) = 0.337E-02 +/- 0.111E-03 [radii/min]
- c(2) = 0.391E+02 +/- 0.128E+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)= 0.31398E-01 [radii] see Bevington pg. 114
- error in c(2)= 0.15145E-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) = 165. +/- 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 19:34 = 0.000E+00 km/sec

The TOTAL velocity at 19:34 = 39. km/sec

The TANGENTIAL velocity at 21: 8 = 0.000E+00 km/sec

The TOTAL velocity at 21: 8 = 39. km/sec

The TANGENTIAL velocity at 22:43 = 0.000E+00 km/sec

The TOTAL velocity at 22:43 = 39. km/sec

The TANGENTIAL velocity at 0:23 = 0.000E+00 km/sec

The TOTAL velocity at 0:23 = 39. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.43

Standard Deviation in start time measurement = 0.108E+03

Error in time = 0.13647E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.535E-03

Reduced Chi Squared = 0.363E-02

Chi Squared = 0.725E-02

The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.998E+00

The probability that no LINEAR correlation exists between the variables = 0.1784E-02

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

\*\*\*\*\*  
This is a 2 order run  
\*\*\*\*\*

\*\*\*\*\*  
INPUT:  
\*\*\*\*\*

year	day	time	radii	error in radius	angle	error in angle	datatype
1984	227	19:34:11	2.50	+/- 0.15	165.0	+/- 0.5	SMM
1984	227	21: 8:35	2.80	+/- 0.20	165.0	+/- 0.5	SMM
1984	227	22:43: 5	3.10	+/- 0.20	165.0	+/- 1.0	SMM
1984	228	0:23:11	3.50	+/- 0.25	165.0	+/- 1.0	SMM

\*\*\*\*\*  
Structure being measured:  
Top of Wide Fuzzy Loop [Late in Event]  
\*\*\*\*\*

\*\*\*\*\*  
OUTPUT:  
\*\*\*\*\*

START TIME:

tstart=DOY227 8:12 from derivative = 0  
Event begins at 1.53 Solar Radii  
Origin defined at DOY227 19: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.802E-03 +/- 0.256E-03 km/sec\*\*2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.241E+01 +/- 0.142E-01 [solar radii]  
c(2) = 0.269E-02 +/- 0.225E-03 [radii/min]  
c(2) = 0.312E+02 +/- 0.261E+01 [km/sec]  
c(3) = 0.207E-05 +/- 0.662E-06 [radii/min\*\*2]  
c(3) = 0.802E-03 +/- 0.256E-03 [km/sec\*\*2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.25665E-01 [radii] Bevington pg 154 (8-30)  
Exact error in c(1) = 0.58981E-02 [radii] Bevington pg 154 (8-28)  
Approximate error in c(2) = 0.34696E-03 [radii/min] Bevington pg 154 (8-30)  
Exact error in c(2) = 0.16403E-03 [radii/min] Bevington pg 154 (8-28)  
Approximate error in c(3) = 0.94202E-06 [radii/min\*\*] Bevington pg 154 (8-30)  
Exact error in c(3) = 0.47025E-06 [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) = 165. +/- 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 19:34 = 0.000E+00 km/sec

The TOTAL velocity at 19:34 = 33. km/sec

The TANGENTIAL velocity at 21: 8 = 0.000E+00 km/sec

The TOTAL velocity at 21: 8 = 37. km/sec

The TANGENTIAL velocity at 22:43 = 0.000E+00 km/sec

The TOTAL velocity at 22:43 = 42. km/sec

The TANGENTIAL velocity at 0:23 = 0.000E+00 km/sec

The TOTAL velocity at 0:23 = 47. km/sec

\*\*\*\*\*

The following info is for estimating goodness of the fit

\*\*\*\*\*

Fit is ok [ier=1]

Standard Deviation in the height = 0.43

Standard Deviation in start time measurement = 0.108E+03

Value of reduced Chi Squared returned from nllst2 = 0.136E-03

Reduced Chi Squared = 0.808E-03

Chi Squared = 0.808E-03

The probability for exceeding chi square = 0.991E+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 = 0.1032E+01

The correlation between the data and the time\*\*2 term = 0.9346E+00

The correlation between the data and the complete equation of motion = 0.9987E+00

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