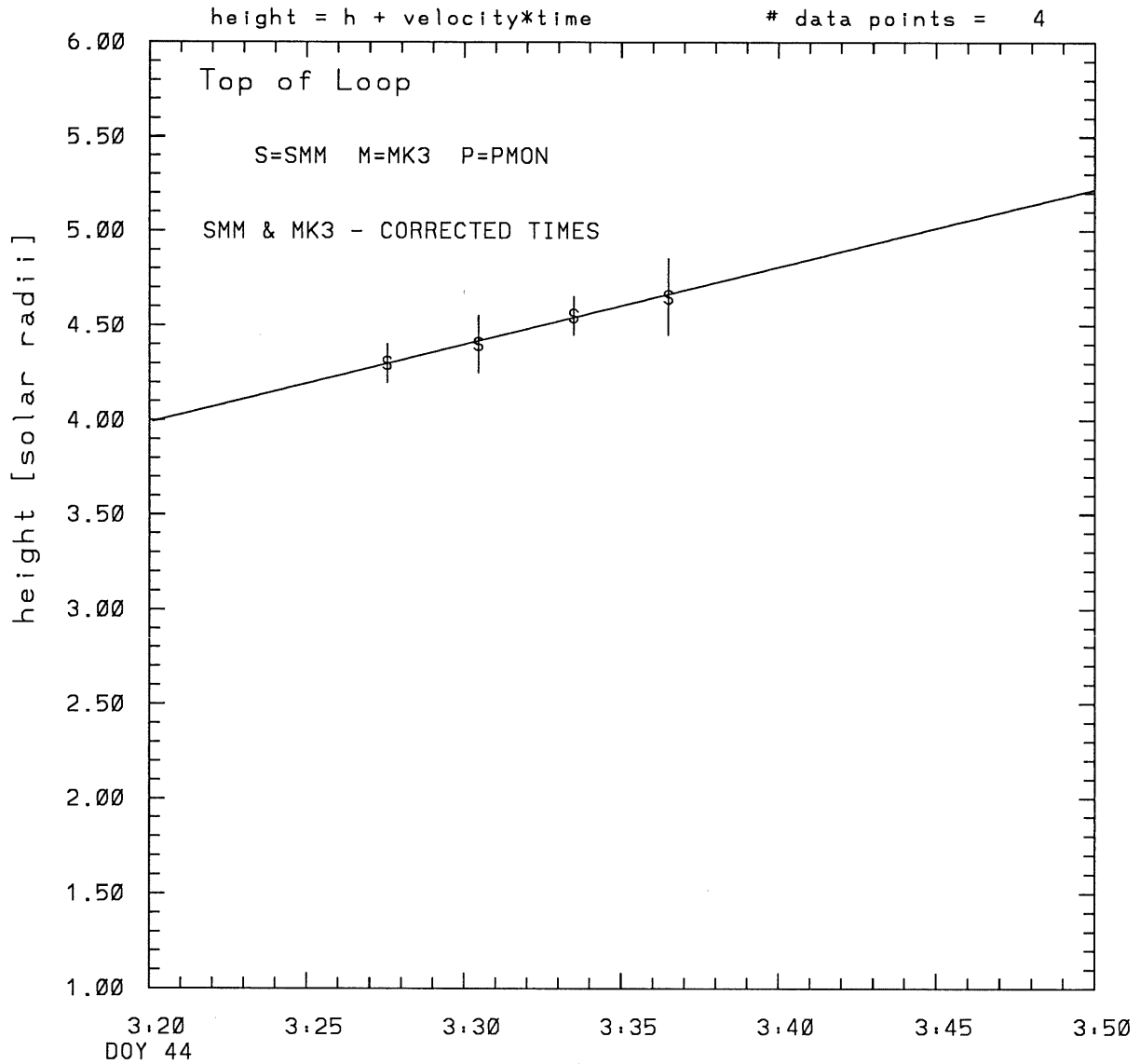
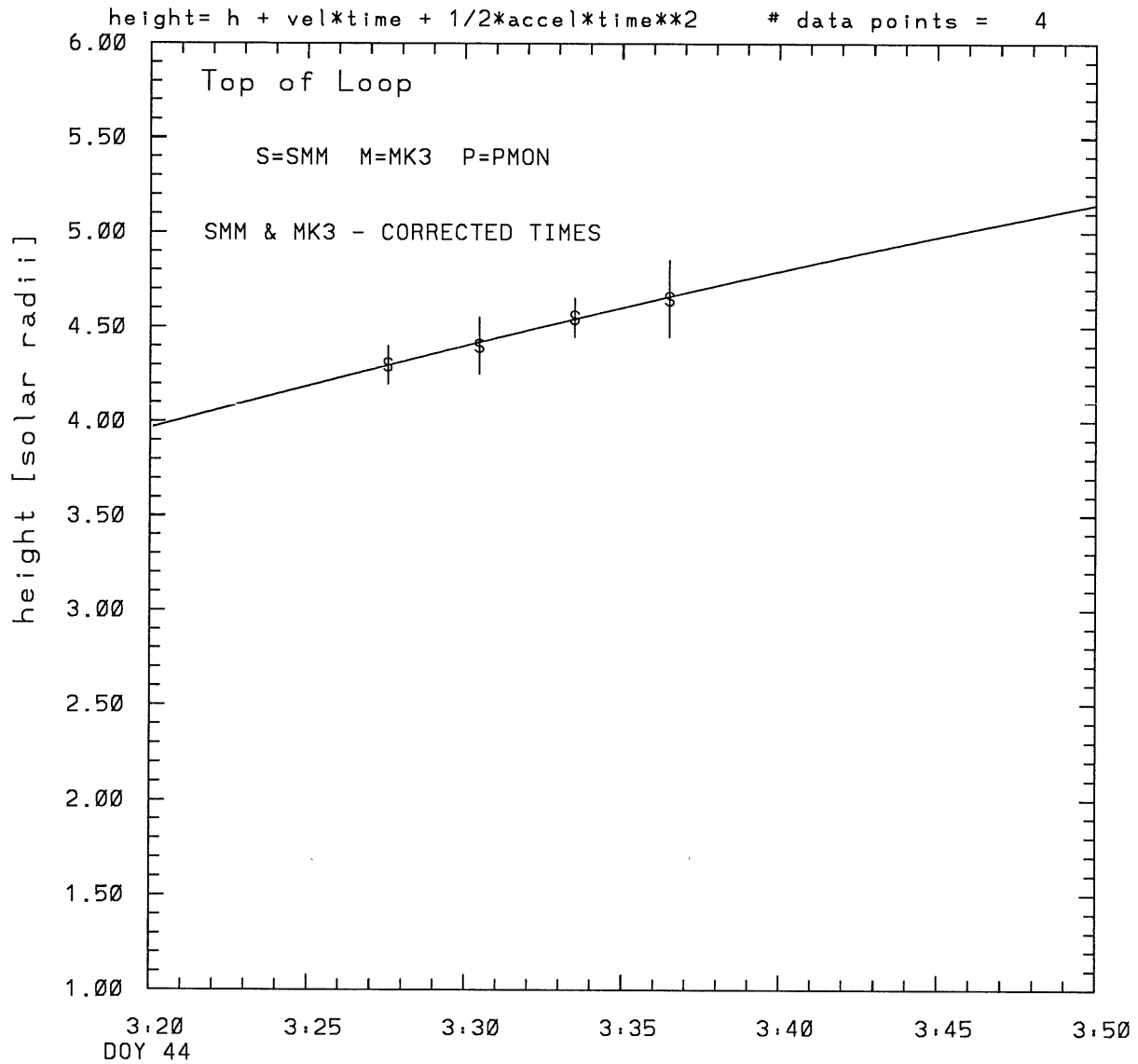


SMM C/P 1986 DOY 44 270 +/- 0 degrees



tstart=DOY 44 2: 7 +/- 1.4 [min.]
radial velocity= 475. +/- 21. [km/sec]

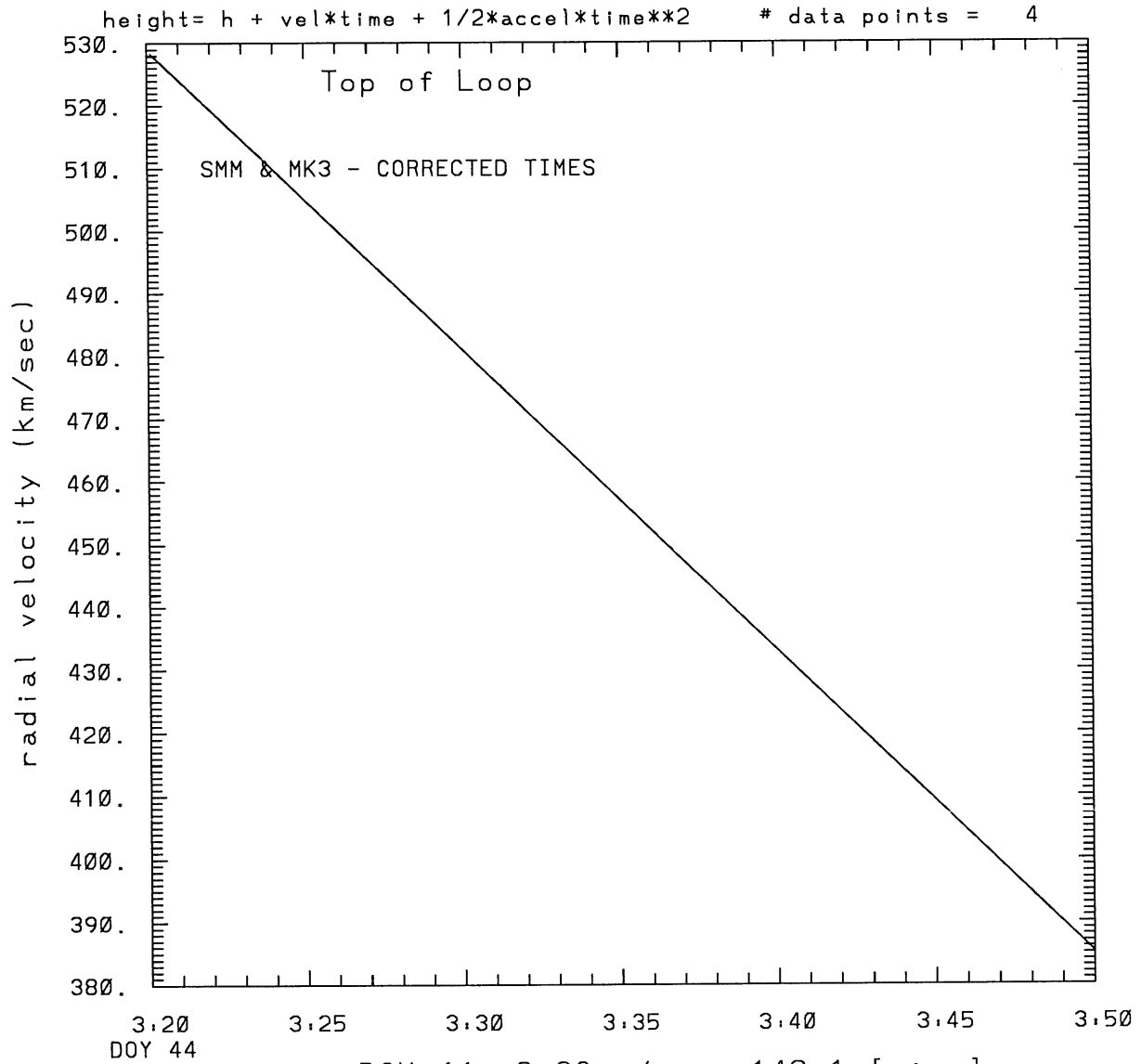
SMM C/P 1986 DOY 44 270 +/- 0 degrees



tstart=DOY 44 2.29 +/- 142.1 [min.]

radial acceleration = -0.0798 +/- 0.3524 [km/sec**2]

SMM C/P 1986 DOY 44 270 +/- 0 degrees



tstart=DOY 44 2:29 +/- 142.1 [min.]

radial acceleration=-.798E-01 km/sec**2

This is a 1 order run

INPUT:

			error in	error in		
year	day	time	radii	radius	angle	datatype
1986	44	3:27:33	4.30 +/-	0.10	270.0 +/-	1.0 SMM
1986	44	3:30:27	4.40 +/-	0.15	270.0 +/-	1.0 SMM
1986	44	3:33:29	4.55 +/-	0.10	270.0 +/-	1.0 SMM
1986	44	3:36:30	4.65 +/-	0.20	270.0 +/-	1.0 SMM

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.730E+02 +/- 0.143E+01$ [minutes]

In more convenient units:

Event began at DOY 44 2: 7 +/- 0.143E+01 [minutes]

Origin defined at DOY 44 3:20

RADIAL INFORMATION:

RADIAL VELOCITY = 475. +/- 21. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.399E+01 +/- 0.212E-01 [solar radii]
c(2) = 0.409E-01 +/- 0.184E-02 [radii/min]
c(2) = 0.475E+03 +/- 0.214E+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)= 0.31586E-01 [radii] see Bevington pg. 114

error in c(2)= 0.25365E-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) = 270. +/- 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 3:27 = 0.000E+00 km/sec

The TOTAL velocity at 3:27 = 475. km/sec

The TANGENTIAL velocity at 3:30 = 0.000E+00 km/sec

The TOTAL velocity at 3:30 = 475. km/sec

The TANGENTIAL velocity at 3:33 = 0.000E+00 km/sec

The TOTAL velocity at 3:33 = 475. km/sec

The TANGENTIAL velocity at 3:36 = 0.000E+00 km/sec

The TOTAL velocity at 3:36 = 475. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.16

Standard Deviation in start time measurement = 0.334E+01

Error in time = 0.58556E+00 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.130E-03

Reduced Chi Squared = 0.822E-03

Chi Squared = 0.164E-02

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.997E+00

The probability that no LINEAR correlation exists between the variables = 0.3007E-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
1986	44	3:27:33	4.30	+/- 0.10	270.0	+/- 1.0	SMM
1986	44	3:30:27	4.40	+/- 0.15	270.0	+/- 1.0	SMM
1986	44	3:33:29	4.55	+/- 0.10	270.0	+/- 1.0	SMM
1986	44	3:36:30	4.65	+/- 0.20	270.0	+/- 1.0	SMM

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.525E+02 +/- 0.142E+03$ [minutes]

In more convenient units:

Event began at DOY 44 2:29 +/- 0.142E+03 [minutes]

Origin defined at DOY 44 3:20

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.798E-01 +/- 0.352E+00$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.396E+01 +/- 0.110E+00$ [solar radii]
c(2) = $0.456E-01 +/- 0.207E-01$ [radii/min]
c(2) = $0.529E+03 +/- 0.240E+03$ [km/sec]
c(3) = $-0.206E-03 +/- 0.911E-03$ [radii/min**2]
c(3) = $-0.798E-01 +/- 0.352E+00$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = $0.17961E+00$ [radii] Bevington pg 154 (8-30)

Exact error in c(1) = $0.64627E-01$ [radii] Bevington pg 154 (8-28)

Approximate error in c(2) = $0.31600E-01$ [radii/min] Bevington pg 154 (8-30)

Exact error in c(2) = $0.12667E-01$ [radii/min] Bevington pg 154 (8-28)

Approximate error in c(3) = $0.13054E-02$ [radii/min**] Bevington pg 154 (8-30)

Exact error in c(3) = $0.55577E-03$ [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) = 270. +/- 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 3:27 = 0.000E+00 km/sec

The TOTAL velocity at 3:27 = 493. km/sec

The TANGENTIAL velocity at 3:30 = 0.000E+00 km/sec

The TOTAL velocity at 3:30 = 479. km/sec

The TANGENTIAL velocity at 3:33 = 0.000E+00 km/sec

The TOTAL velocity at 3:33 = 464. km/sec

The TANGENTIAL velocity at 3:36 = 0.000E+00 km/sec

The TOTAL velocity at 3:36 = 450. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.16

Standard Deviation in start time measurement = 0.334E+01

Value of reduced Chi Squared returned from nllst2 = 0.190E-03

Reduced Chi Squared = 0.136E-02

Chi Squared = 0.136E-02

The probability for exceeding chi square = 0.989E+00

For a second order fit 3 correlation coefficients are given:

(Using equation of motion: $r = a + bt + at^{**2}$)

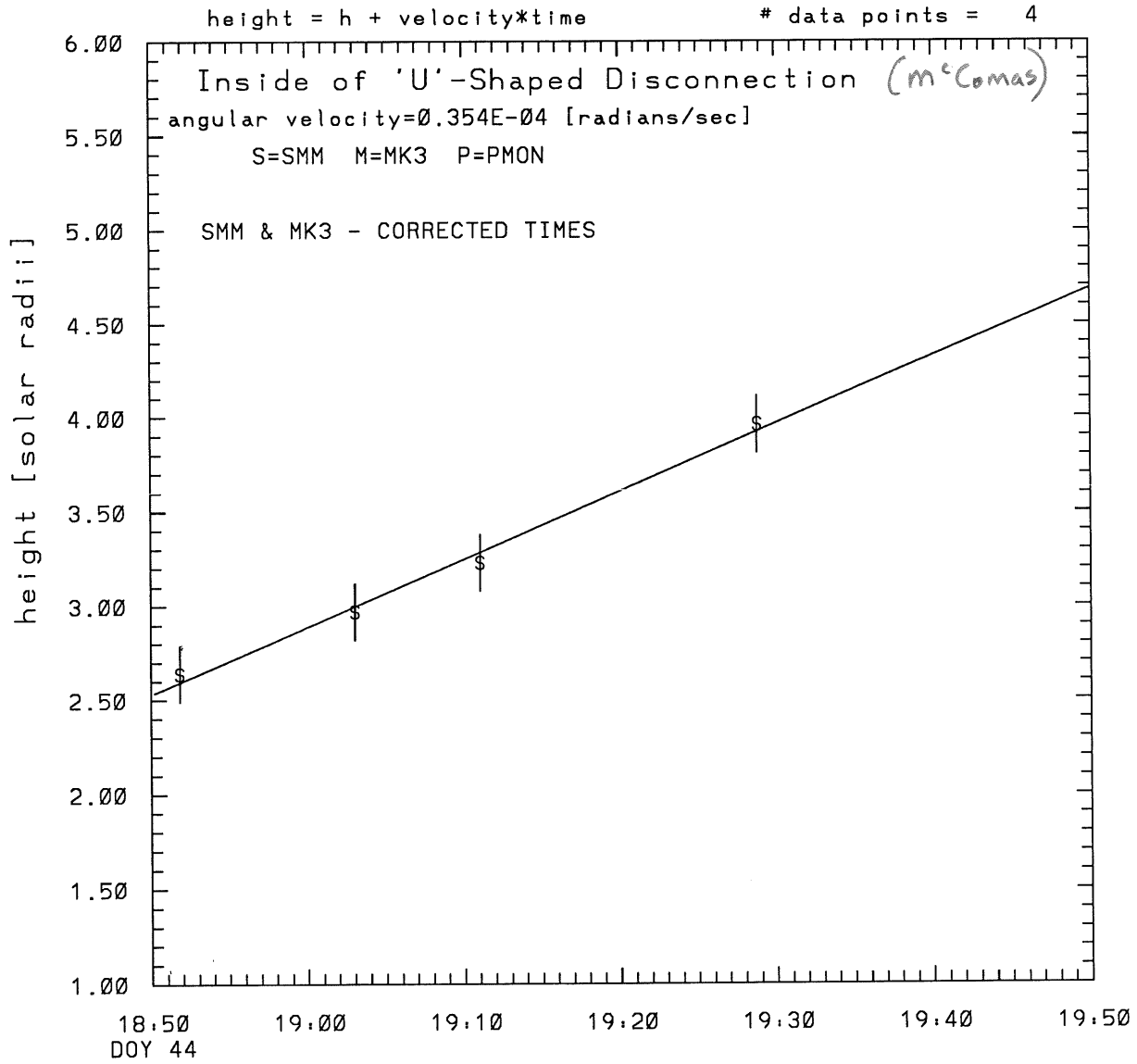
The correlation between the data and the term linear in time = 0.9633E+00

The correlation between the data and the time**2 term = 0.9028E+00

The correlation between the data and the complete equation of motion = 0.1003E+01

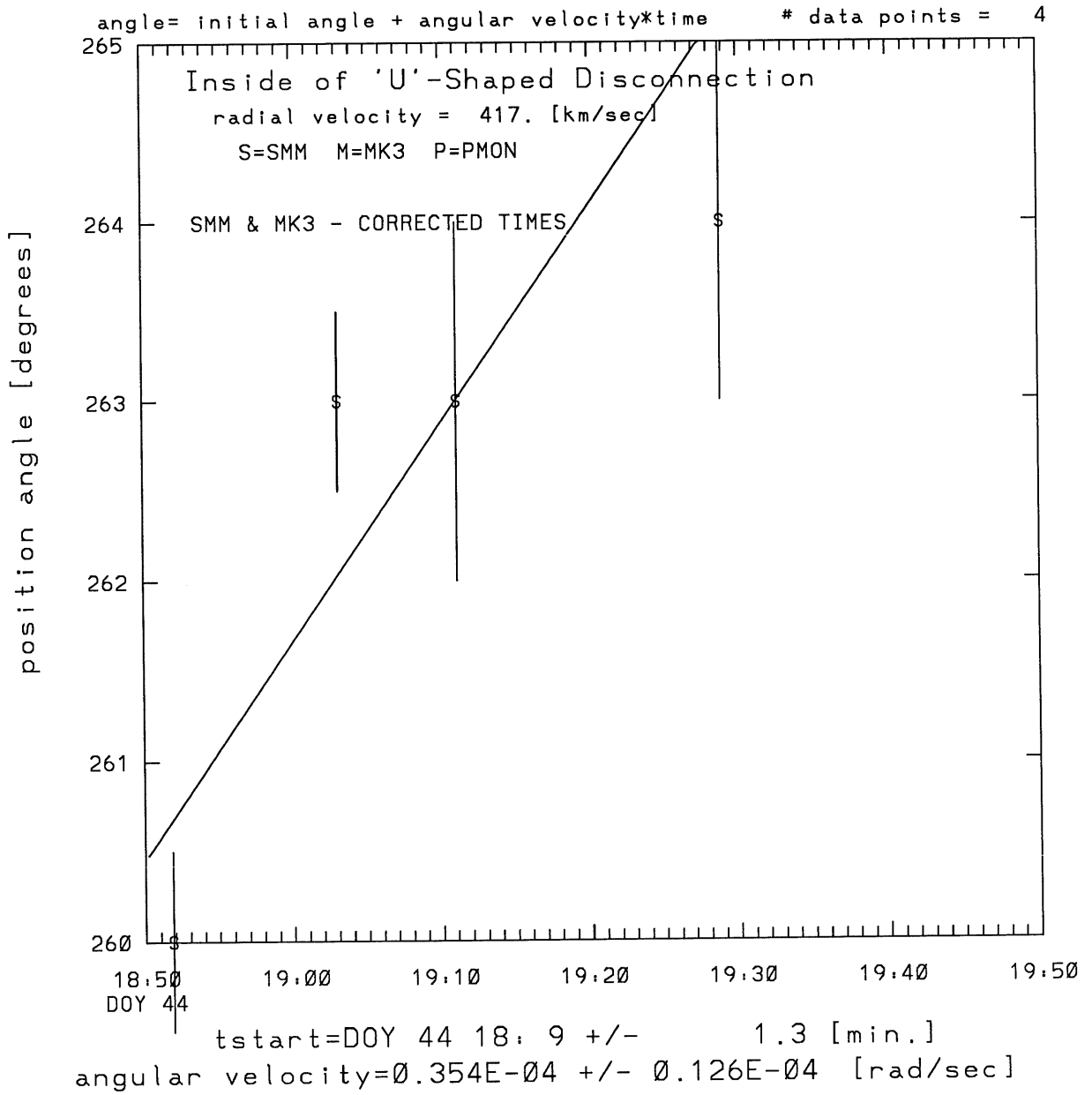
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

SMM C/P 1986 DOY 44 262 +/- 2 degrees

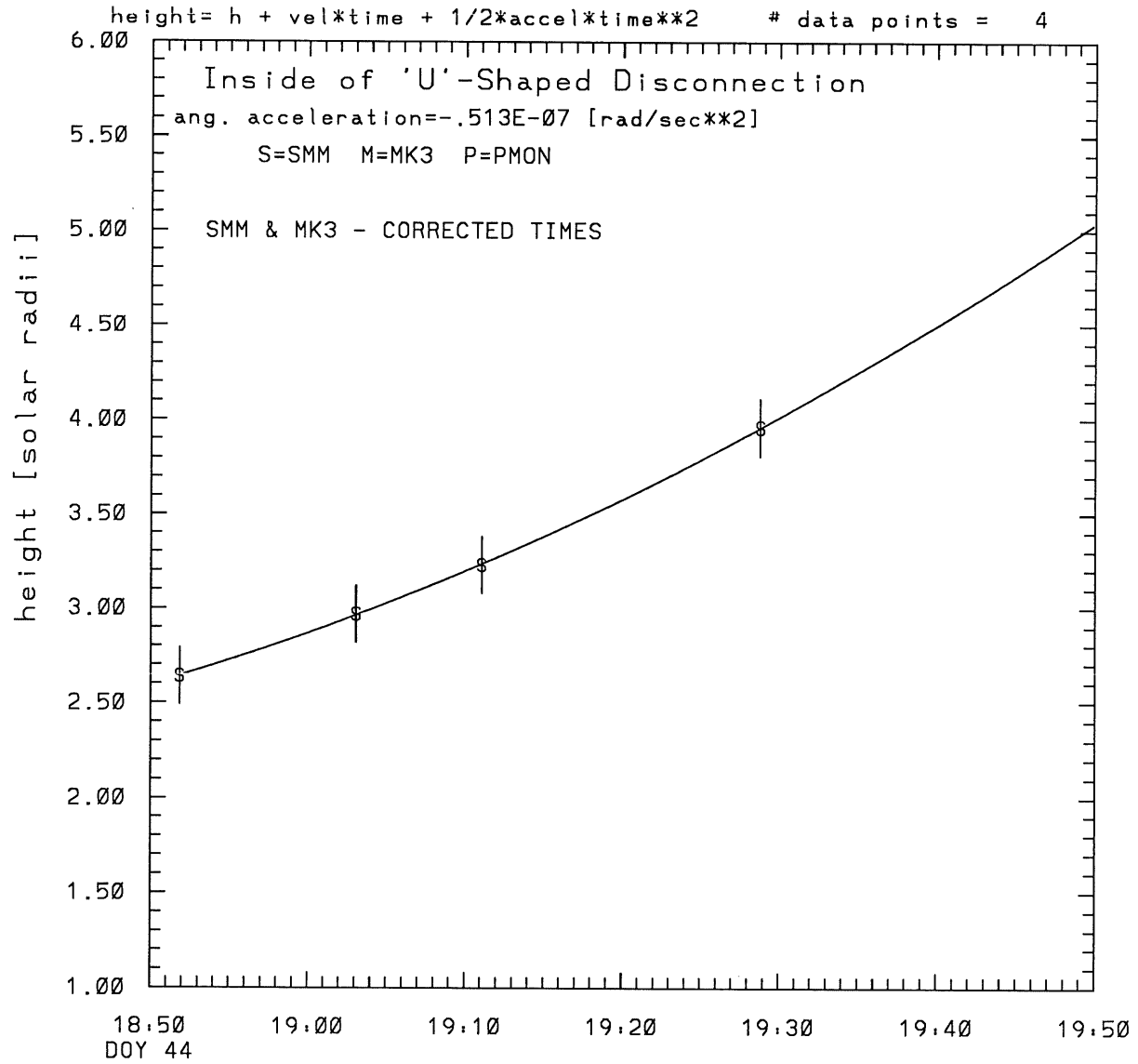


tstart=DOY 44 18: 9 +/- 1.3 [min.]
radial velocity= 417. +/- 21. [km/sec]

SMM C/P 1986 DOY 44 262 +/- 2 degrees



SMM C/P 1986 DOY 44 262 +/- 2 degrees

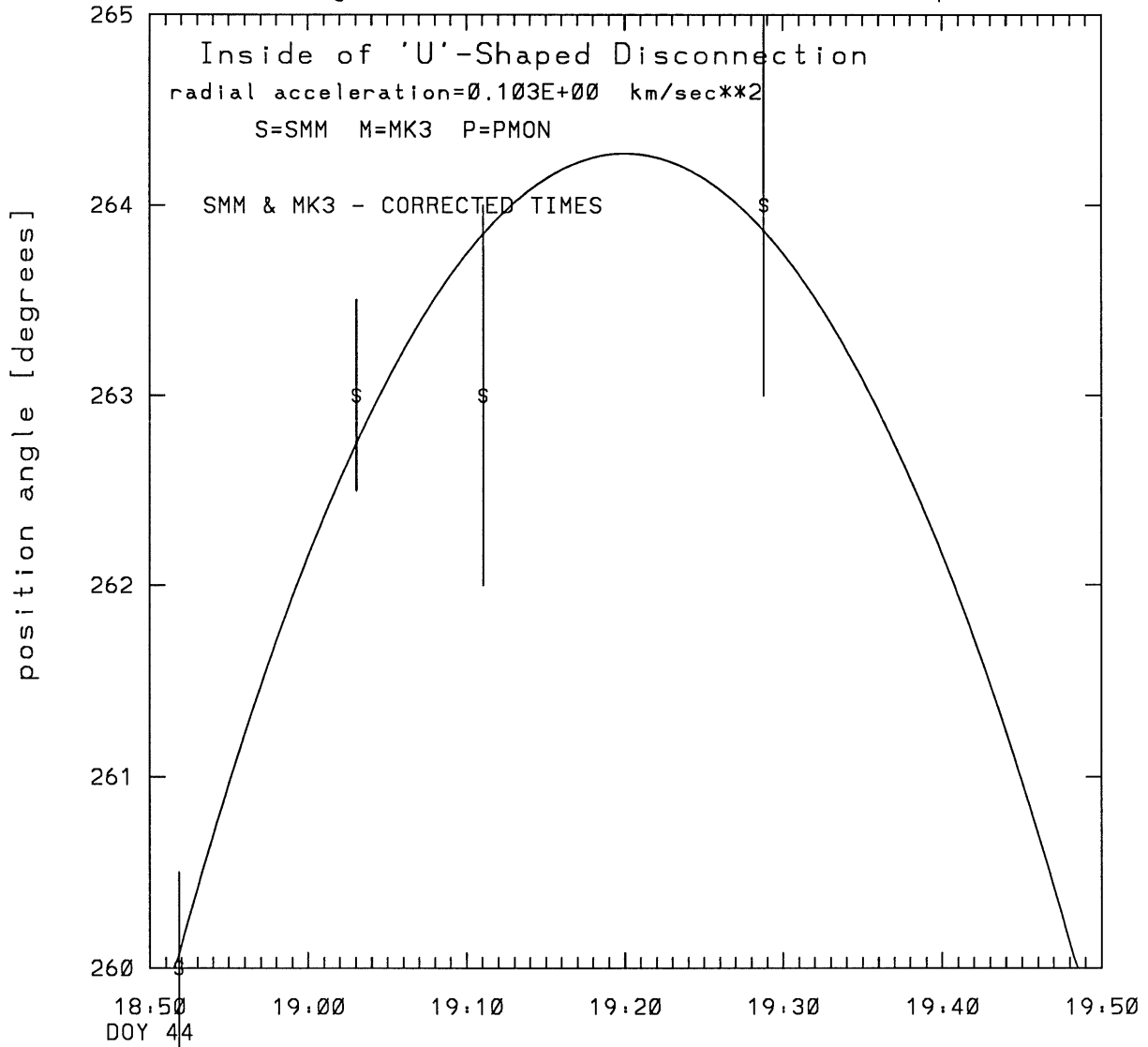


tstart=DOY 44 18: 4 from derivative=0
Event begins at 2.02 Solar Radii
radial acceleration = $0.1033 +/- 0.0069$ [km/sec**2]

SMM C/P 1986 DOY 44 262 +/- 2 degrees

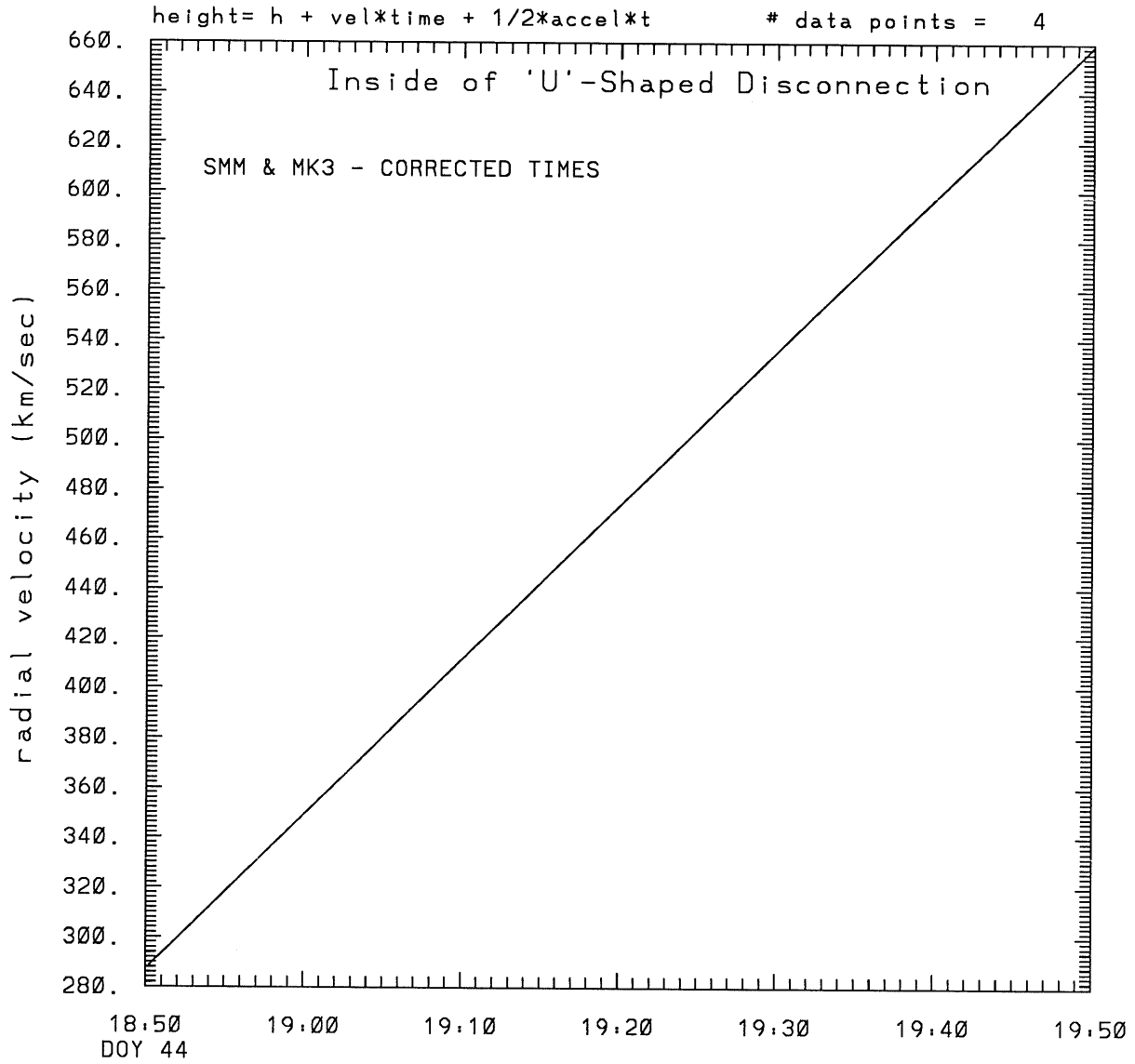
angle = initial angle + angular velocity*time
+ 1/2 angular acceleration*time**2

data points = 4



tstart=DOY 44 18: 4 from derivative=0
angular acceleration=-.513E-07 +/-0.150E-07 [rad/sec**2]

SMM C/P 1986 DOY 44 262 +/- 2 degrees

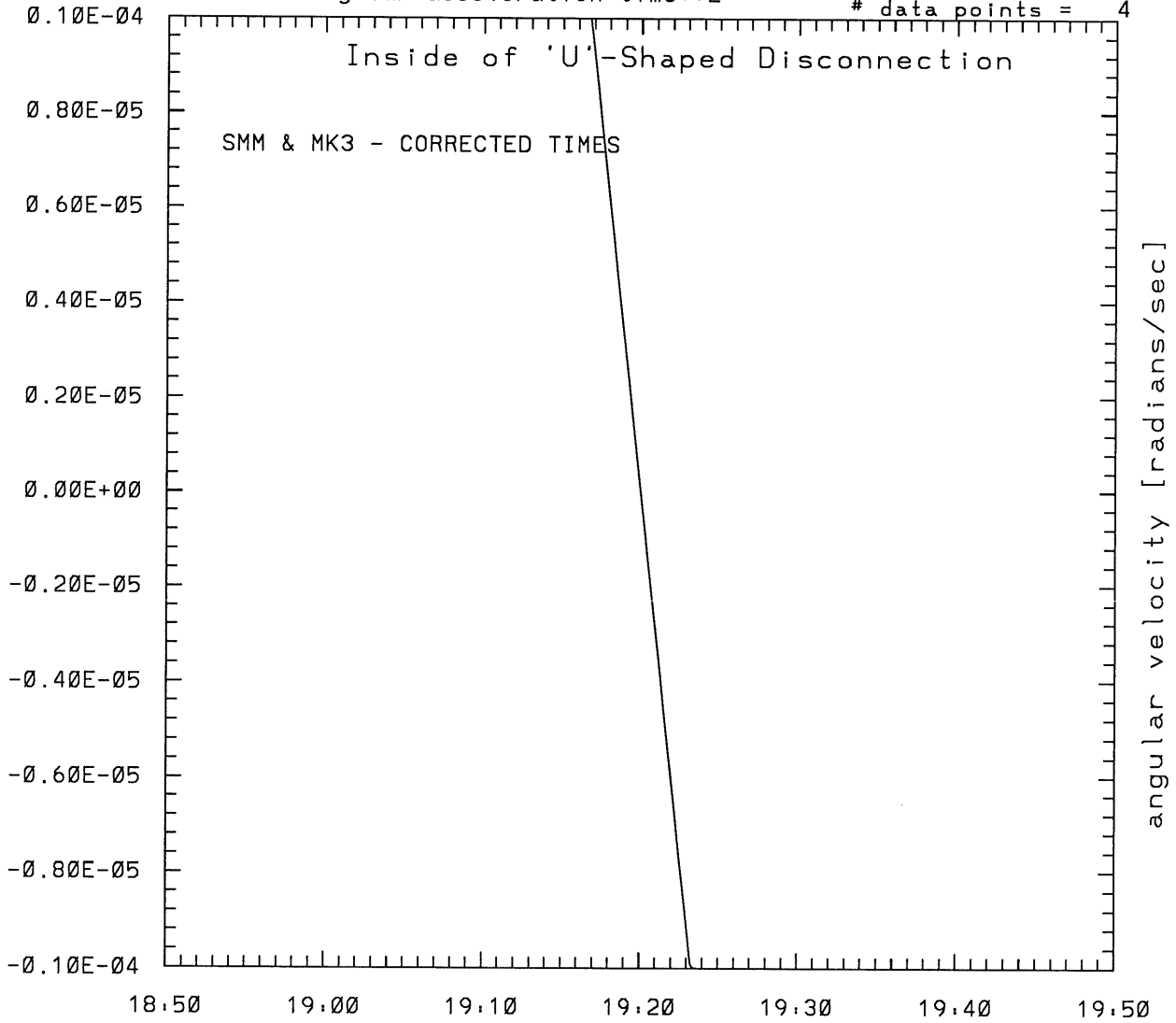


tstart=DOY 44 18: 4 from derivative=0
Event begins at 2.02 Solar Radii
radial acceleration=0.103E+00 km/sec**2

SMM C/P 1986 DOY 44 262 +/- 2 degrees

$$\text{angle} = \text{initial angle} + \text{angular velocity} * \text{time} + \frac{1}{2} \text{angular acceleration} * \text{time} ** 2$$

data points = 4



DOY 44

tstart=DOY 44 18: 4 from derivative=0

angular acceleration=-.513E-07 +/-

0.150E-07 [rad/sec**2]

This is a 1 order run

INPUT:

year	day	time	radii	radius	angle	error in angle	datatype
1986	44	18:51:50	2.64 +/- 0.15	260.0 +/- 0.5			SMM
1986	44	19: 3: 3	2.97 +/- 0.15	263.0 +/- 0.5			SMM
1986	44	19:11: 3	3.23 +/- 0.15	263.0 +/- 1.0			SMM
1986	44	19:28:49	3.96 +/- 0.15	264.0 +/- 1.0			SMM

Structure being measured:
Inner Edge of 'U-shaped' Disconnection

OUTPUT:

START TIME:

Event began at t = 0 + -0.425E+02 +/- 0.127E+01 [minutes]

In more convenient units:

Event began at DOY 44 18: 9 +/- 0.127E+01 [minutes]

Origin defined at DOY 44 18:50

RADIAL INFORMATION:

RADIAL VELOCITY = 417. +/- 21. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.253E+01 +/- 0.419E-01 [solar radii]
c(2) = 0.359E-01 +/- 0.182E-02 [radii/min]
c(2) = 0.417E+03 +/- 0.211E+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)= 0.51262E-01 [radii] see Bevington pg. 114
error in c(2)= 0.22249E-02 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.3536E-04 +/- 0.1263E-04 [radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 260. +/- 1. [degrees]
a(2) = 0.122E+00 +/- 0.434E-01 [degrees/min]
a(2) = 0.354E-04 +/- 0.126E-04 [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 RADIAL velocity at 18:51 = 417. km/sec

The RADIAL velocity at 19: 3 = 417. km/sec

The RADIAL velocity at 19:11 = 417. km/sec

The RADIAL velocity at 19:28 = 417. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.56
Standard Deviation in start time measurement = 0.135E+02
Error in time = 0.23608E+01 using best fit method
See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.240E-02
Reduced Chi Squared = 0.902E-02
Chi Squared = 0.180E-01
The probability for exceeding chi square = 0.998E+00

The correlation coefficient = 0.996E+00
The probability that no LINEAR correlation exists between the variables = 0.3810
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	doy	time	radii	radius	angle	error in angle	error in	datatype
1986	44	18:51:50	2.64 +/-	0.15	260.0 +/-	0.5		SMM
1986	44	19: 3: 3	2.97 +/-	0.15	263.0 +/-	0.5		SMM
1986	44	19:11: 3	3.23 +/-	0.15	263.0 +/-	1.0		SMM
1986	44	19:28:49	3.96 +/-	0.15	264.0 +/-	1.0		SMM

Structure being measured:
Inner Edge of 'U-shaped' Disconnection

OUTPUT:

START TIME:

tstart=DOY 44 18: 4 from derivative = 0
Event begins at 2.02 Solar Radii
Origin defined at DOY 44 18:50

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.103E+00 +/- 0.694E-02 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.260E+01 +/- 0.661E-02 [solar radii]
c(2) = 0.248E-01 +/- 0.779E-03 [radii/min]
c(2) = 0.287E+03 +/- 0.904E+01 [km/sec]
c(3) = 0.267E-03 +/- 0.180E-04 [radii/min**2]
c(3) = 0.103E+00 +/- 0.694E-02 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.93421E-02 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.21888E-02 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.11018E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.51611E-03 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.25390E-04 [radii/min**2] Bevington pg 154 (8-30)
Exact error in c(3) = 0.12408E-04 [radii/min**2] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

ANGULAR ACCELERATION= -0.5125E-07 +/- 0.1499E-07[radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 260. +/- 0. [degrees]
a(2) = 0.317E+00 +/- 0.608E-01 [degrees/min]
a(2) = 0.923E-04 +/- 0.177E-04 [rad/sec]
a(3) = -0.529E-02 +/- 0.155E-02 [degrees/min**2]
a(3) = -0.513E-07 +/- 0.150E-07 [rad/sec**2]

The RADIAL velocity at 18:51 = 299. km/sec

The RADIAL velocity at 19: 3 = 368. km/sec

The RADIAL velocity at 19:11 = 418. km/sec

The RADIAL velocity at 19:28 = 528. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.56
Standard Deviation in start time measurement = 0.135E+02
Value of reduced Chi Squared returned from nllst2 = 0.322E-04
Reduced Chi Squared = 0.152E-03
Chi Squared = 0.152E-03
The probability for exceeding chi square = 0.995E+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 = 0.9962E+00
The correlation between the data and the time**2 term = 0.9826E+00
The correlation between the data and the complete equation of motion=0.9999E+00
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]