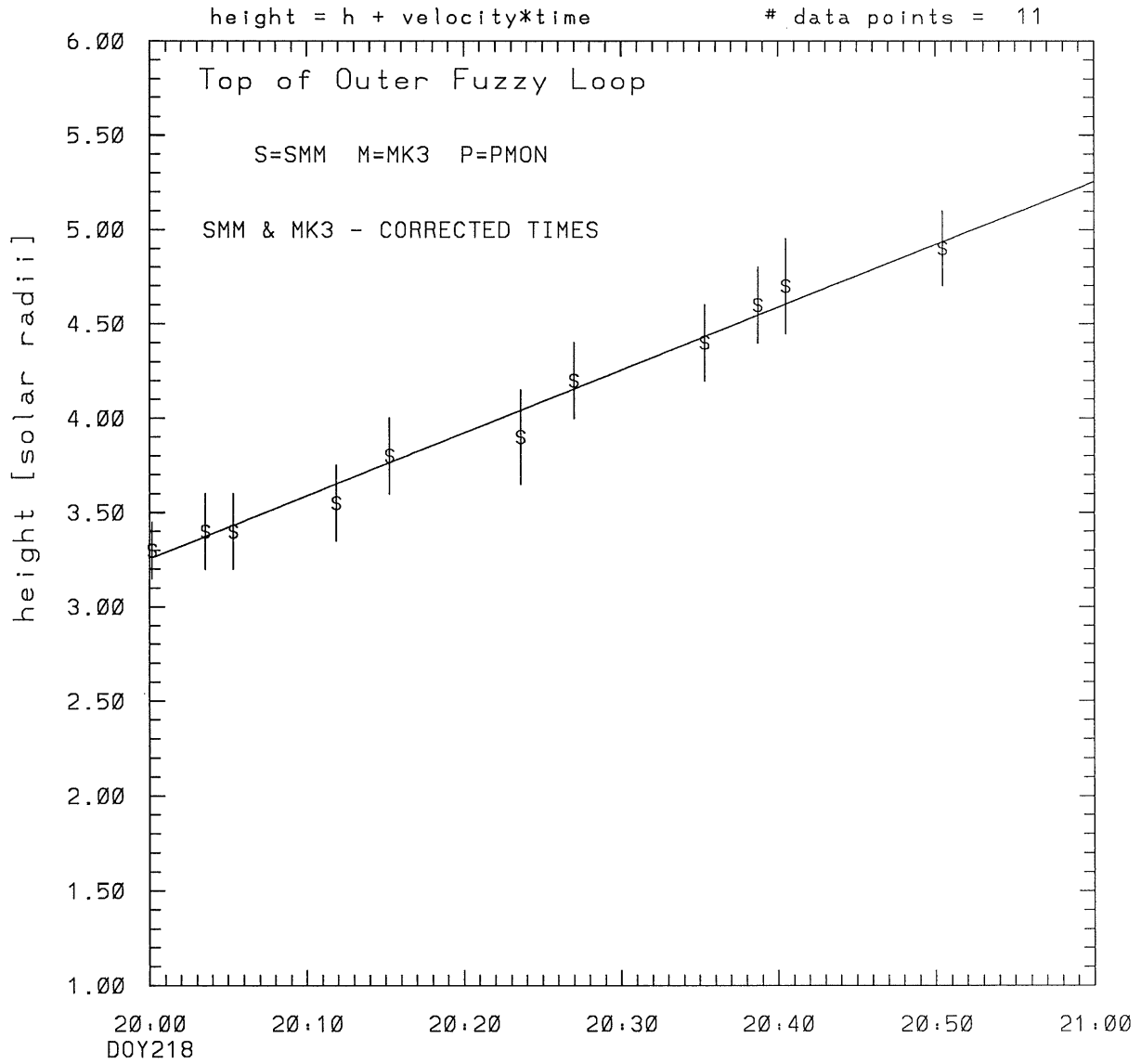
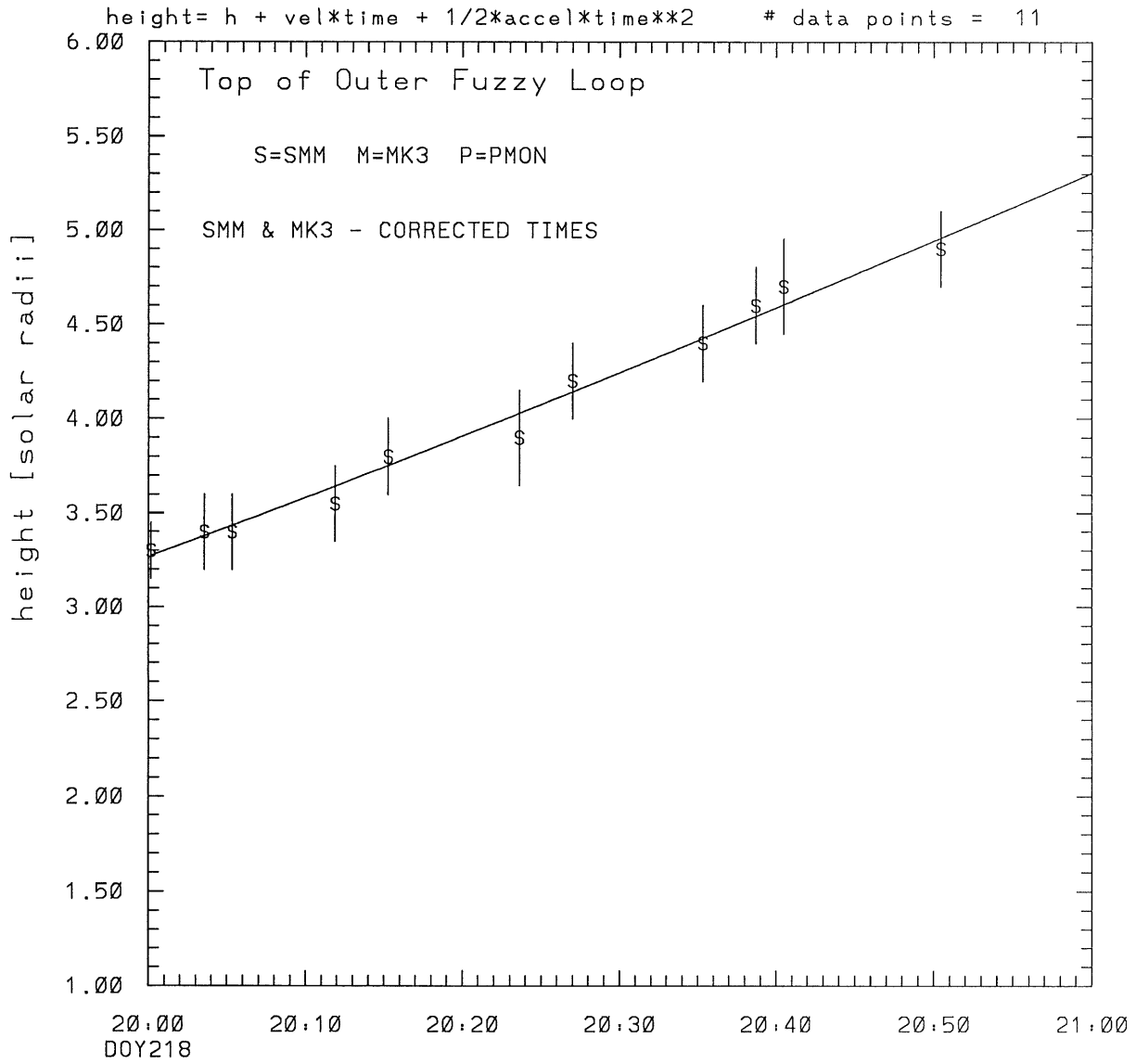


SMM C/P 1980 DOY218 60 +/- 0 degrees



tstart=DOY218 18:54 +/- 0.5 [min.]
radial velocity= 386. +/- 14. [km/sec]

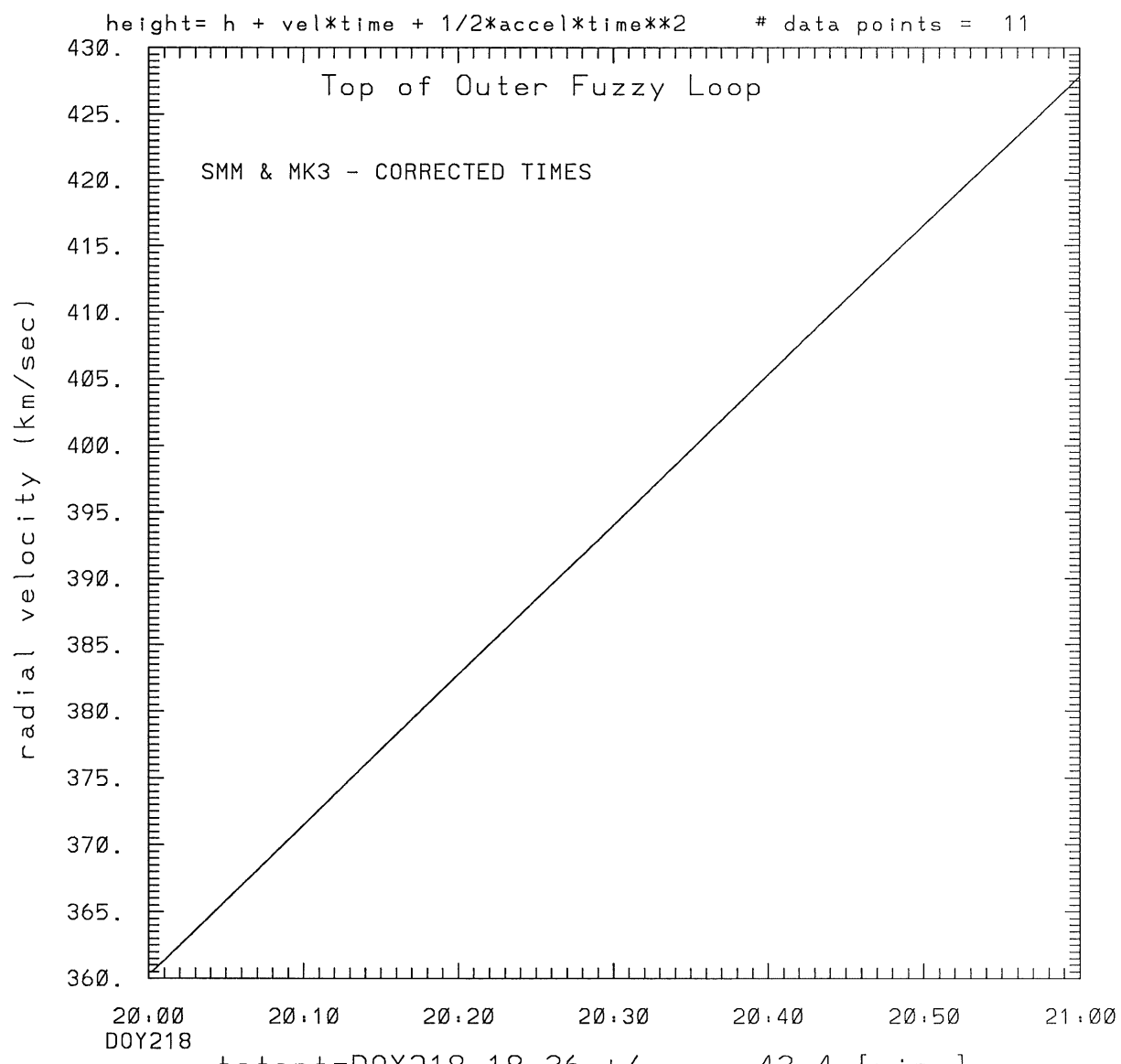
SMM C/P 1980 DOY218 60 +/- 0 degrees



tstart=DOY218 18:36 +/- 43.4 [min.]

radial acceleration = 0.0188 +/- 0.0352 [km/sec**2]

SMM C/P 1980 DOY218 60 +/- 0 degrees



tstart=DOY218 18:36 +/- 43.4 [min.]

radial acceleration= $0.188E-01$ km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	error in radius	error in angle	angle	datatype
1980	218	20: 0:10	3.30	+/- 0.15	60.0	+/- 1.0	SMM
1980	218	20: 3:33	3.40	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20: 5:19	3.40	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20:11:53	3.55	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20:15:16	3.80	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20:23:37	3.90	+/- 0.25	60.0	+/- 1.0	SMM
1980	218	20:27: 0	4.20	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20:35:20	4.40	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20:38:43	4.60	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20:40:30	4.70	+/- 0.25	60.0	+/- 1.0	SMM
1980	218	20:50:27	4.90	+/- 0.20	60.0	+/- 1.0	SMM

Structure being measured:
Top of Outer Fuzzy Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.677E+02 +/- 0.495E+00$ [minutes]
In more convenient units:
Event began at DOY 218 18:54 +/- 0.495E+00 [minutes]

Origin defined at DOY218 20: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 386. +/- 14. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.326E+01 +/- 0.310E-01$ [solar radii]
 $c(2) = 0.333E-01 +/- 0.116E-02$ [radii/min]
 $c(2) = 0.386E+03 +/- 0.135E+02$ [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)= 0.39571E-01 [radii] see Bevington pg. 114
error in c(2)= 0.14124E-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) = 60. +/- 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 20: 0 = 0.000E+00 km/sec

The TOTAL velocity at 20: 0 = 386. km/sec

The TANGENTIAL velocity at 20: 3 = 0.000E+00 km/sec

The TOTAL velocity at 20: 3 = 386. km/sec

The TANGENTIAL velocity at 20: 5 = 0.000E+00 km/sec

The TOTAL velocity at 20: 5 = 386. km/sec

The TANGENTIAL velocity at 20:11 = 0.000E+00 km/sec

The TOTAL velocity at 20:11 = 386. km/sec

The TANGENTIAL velocity at 20:15 = 0.000E+00 km/sec

The TOTAL velocity at 20:15 = 386. km/sec

The TANGENTIAL velocity at 20:23 = 0.000E+00 km/sec

The TOTAL velocity at 20:23 = 386. km/sec

The TANGENTIAL velocity at 20:27 = 0.000E+00 km/sec

The TOTAL velocity at 20:27 = 386. km/sec

The TANGENTIAL velocity at 20:35 = 0.000E+00 km/sec

The TOTAL velocity at 20:35 = 386. km/sec

The TANGENTIAL velocity at 20:38 = 0.000E+00 km/sec

The TOTAL velocity at 20:38 = 386. km/sec

The TANGENTIAL velocity at 20:40 = 0.000E+00 km/sec

The TOTAL velocity at 20:40 = 386. km/sec

The TANGENTIAL velocity at 20:50 = 0.000E+00 km/sec

The TOTAL velocity at 20:50 = 386. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.58

Standard Deviation in start time measurement = 0.162E+02

Error in time = 0.68156E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.419E-02

Reduced Chi Squared = 0.367E-01

Chi Squared = 0.330E+00

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.992E+00

The probability that no LINEAR correlation exists between the variables = 0.1704E-08

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
1980	218	20: 0:10	3.30	+/- 0.15	60.0	+/- 1.0	SMM
1980	218	20: 3:33	3.40	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20: 5:19	3.40	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20:11:53	3.55	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20:15:16	3.80	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20:23:37	3.90	+/- 0.25	60.0	+/- 1.0	SMM
1980	218	20:27: 0	4.20	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20:35:20	4.40	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20:38:43	4.60	+/- 0.20	60.0	+/- 1.0	SMM
1980	218	20:40:30	4.70	+/- 0.25	60.0	+/- 1.0	SMM
1980	218	20:50:27	4.90	+/- 0.20	60.0	+/- 1.0	SMM

Structure being measured:
Top of Outer Fuzzy Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.841E+02 +/- 0.434E+02$ [minutes]
In more convenient units:
Event began at DOY 218 18:36 +/- 0.434E+02 [minutes]

Origin defined at DOY218 20: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.188E-01 +/- 0.352E-01$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.327E+01 +/- 0.395E-01$ [solar radii]
c(2) = $0.311E-01 +/- 0.440E-02$ [radii/min]
c(2) = $0.360E+03 +/- 0.510E+02$ [km/sec]
c(3) = $0.486E-04 +/- 0.910E-04$ [radii/min**2]
c(3) = $0.188E-01 +/- 0.352E-01$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.53439E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.67340E-02 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.54413E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.10796E-02 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.10931E-03 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.24994E-04 [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) = 60. +/- 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 20: 0 = 0.000E+00 km/sec
The TOTAL velocity at 20: 0 = 360. km/sec

The TANGENTIAL velocity at 20: 3 = 0.000E+00 km/sec
The TOTAL velocity at 20: 3 = 364. km/sec

The TANGENTIAL velocity at 20: 5 = 0.000E+00 km/sec
The TOTAL velocity at 20: 5 = 366. km/sec

The TANGENTIAL velocity at 20:11 = 0.000E+00 km/sec
The TOTAL velocity at 20:11 = 374. km/sec

The TANGENTIAL velocity at 20:15 = 0.000E+00 km/sec
The TOTAL velocity at 20:15 = 377. km/sec

The TANGENTIAL velocity at 20:23 = 0.000E+00 km/sec
The TOTAL velocity at 20:23 = 387. km/sec

The TANGENTIAL velocity at 20:27 = 0.000E+00 km/sec
The TOTAL velocity at 20:27 = 391. km/sec

The TANGENTIAL velocity at 20:35 = 0.000E+00 km/sec
The TOTAL velocity at 20:35 = 400. km/sec

The TANGENTIAL velocity at 20:38 = 0.000E+00 km/sec
The TOTAL velocity at 20:38 = 404. km/sec

The TANGENTIAL velocity at 20:40 = 0.000E+00 km/sec
The TOTAL velocity at 20:40 = 406. km/sec

The TANGENTIAL velocity at 20:50 = 0.000E+00 km/sec
The TOTAL velocity at 20:50 = 417. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.58

Standard Deviation in start time measurement = 0.162E+02

Value of reduced Chi Squared returned from nllst2 = 0.452E-02

Reduced Chi Squared = 0.419E-01

Chi Squared = 0.335E+00

The probability for exceeding chi square = 0.100E+01

For a second order fit 3 correlation coefficients are given:

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

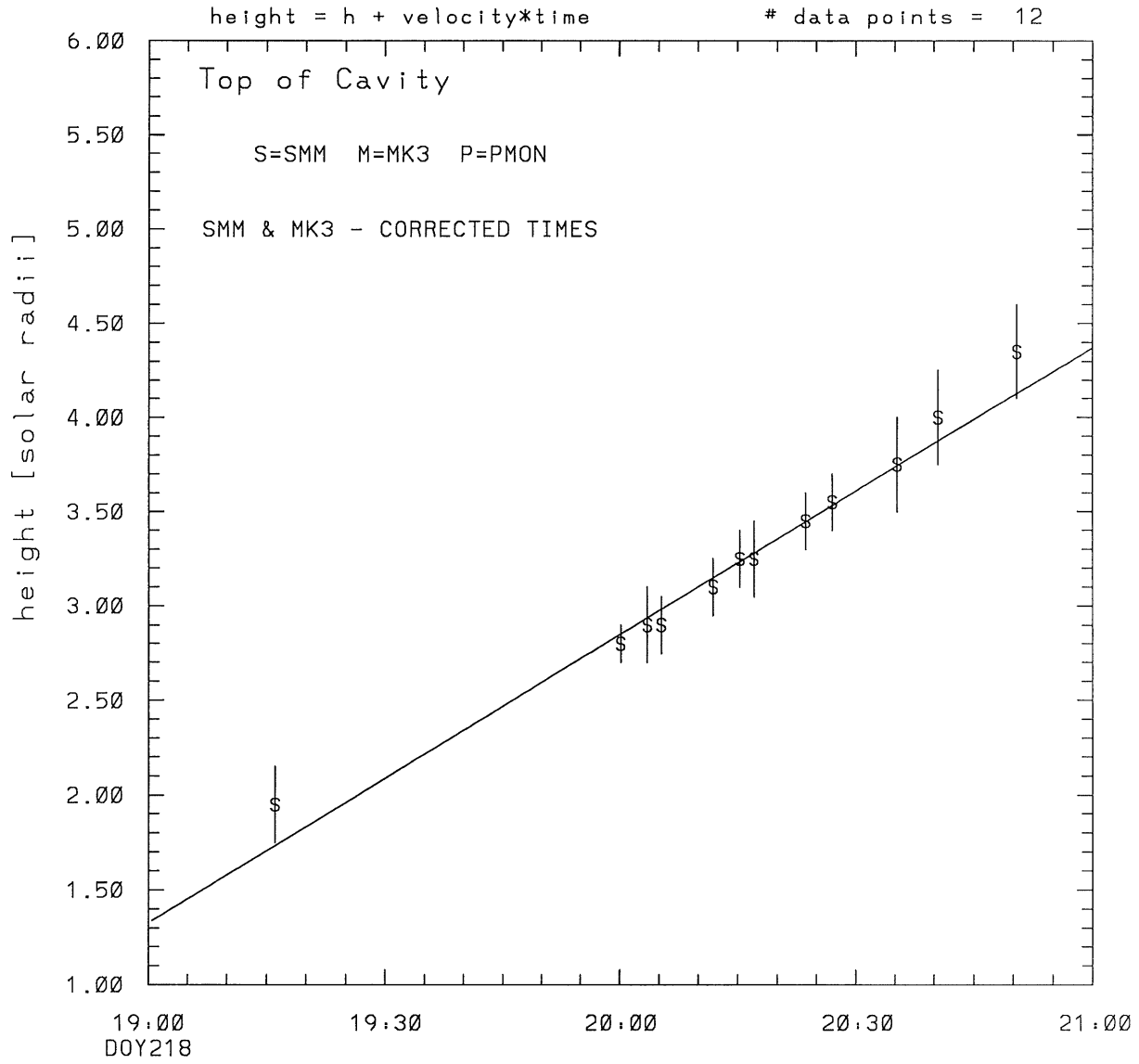
The correlation between the data and the term linear in time = 0.1040E+01

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

The correlation between the data and the complete equation of motion = 0.9891E+00

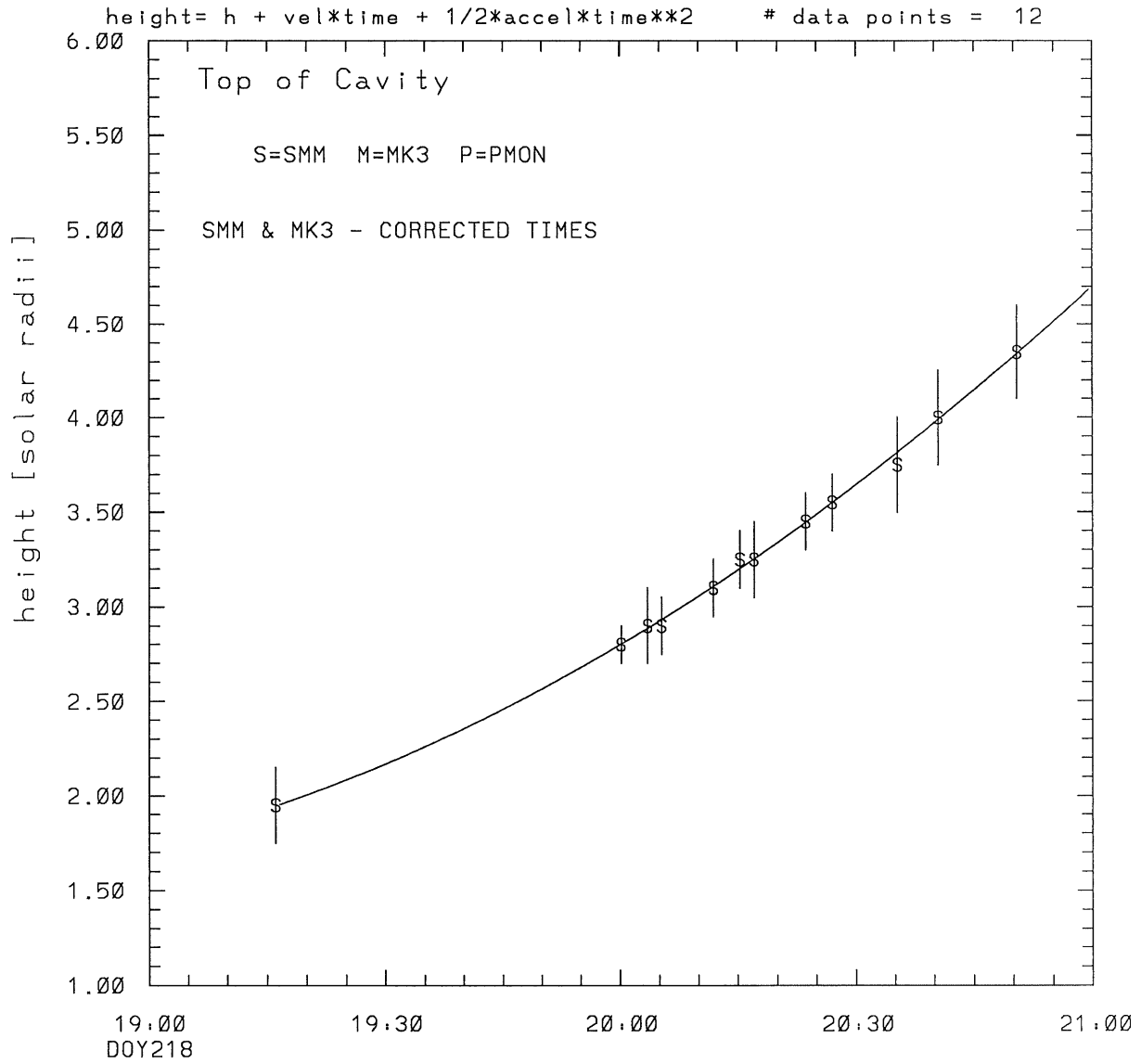
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

SMM C/P 1980 DOY218 70 +/- 0 degrees



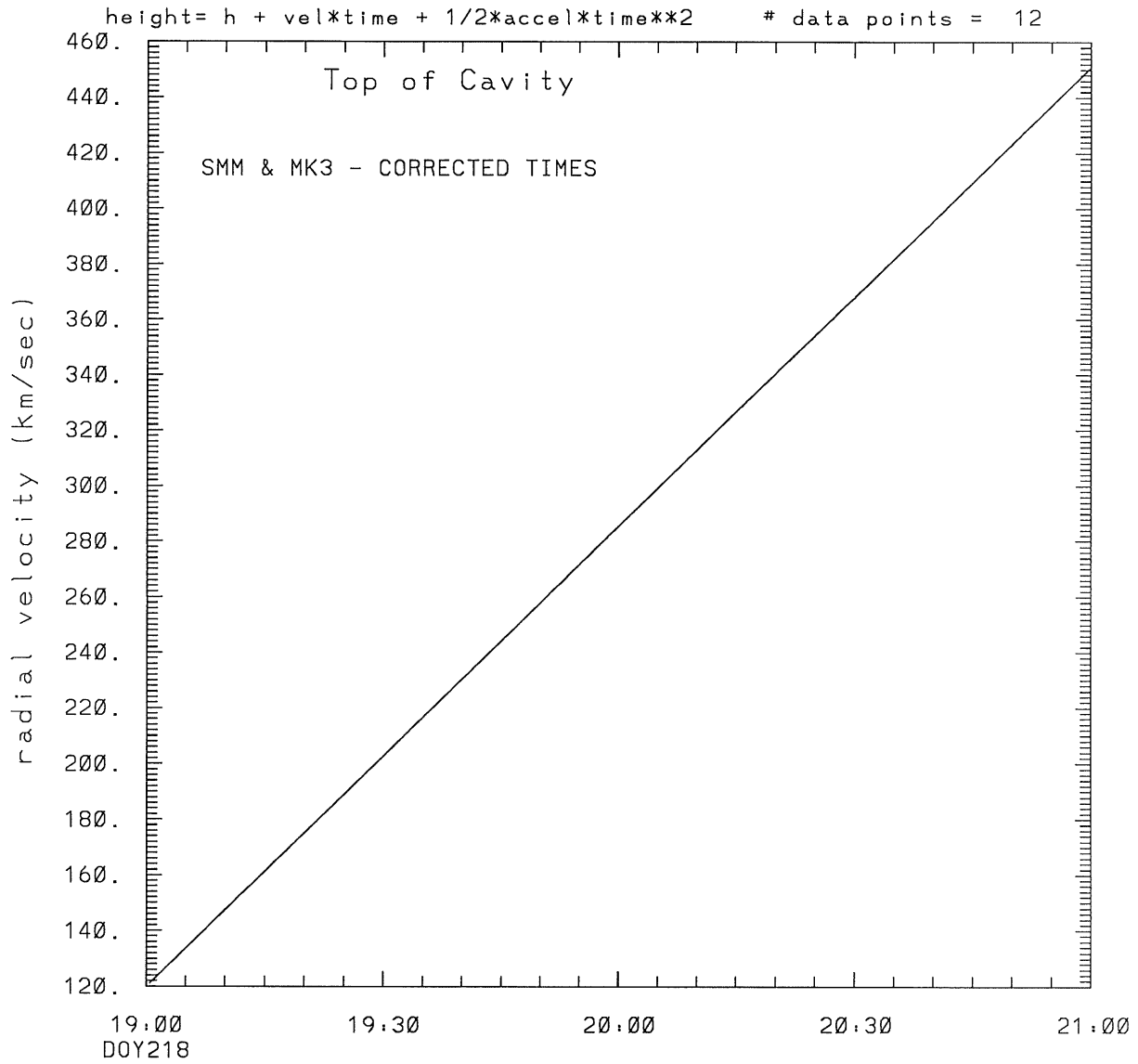
tstart=DOY218 18.49 +/- 0.2 [min.]
radial velocity= 294. +/- 15. [km/sec]

SMM C/P 1980 DOY218 70 +/- 0 degrees



tstart=DOY218 18:17 from derivative=0
Event begins at 1.52 Solar Radii
radial acceleration = 0.0459 ± 0.0042 [km/sec**2]

SMM C/P 1980 DOY218 70 +/- 0 degrees



tstart=DOY218 18:17 from derivative=0
Event begins at 1.52 Solar Radii
radial acceleration=0.459E-01 km/sec**2

This is a 2 order run

INPUT:

year	day	time	radii	error in radius	error in angle	angle	datatype
1980	218	19:16: 4	1.95	+/- 0.20	70.0	+/- 0.5	SMM
1980	218	20: 0:10	2.80	+/- 0.10	70.0	+/- 0.5	SMM
1980	218	20: 3:33	2.90	+/- 0.20	70.0	+/- 0.5	SMM
1980	218	20: 5:19	2.90	+/- 0.15	70.0	+/- 0.5	SMM
1980	218	20:11:53	3.10	+/- 0.15	70.0	+/- 1.0	SMM
1980	218	20:15:16	3.25	+/- 0.15	70.0	+/- 1.0	SMM
1980	218	20:17: 3	3.25	+/- 0.20	70.0	+/- 1.0	SMM
1980	218	20:23:37	3.45	+/- 0.15	70.0	+/- 1.0	SMM
1980	218	20:27: 0	3.55	+/- 0.15	70.0	+/- 1.0	SMM
1980	218	20:35:20	3.75	+/- 0.25	70.0	+/- 1.0	SMM
1980	218	20:40:30	4.00	+/- 0.25	70.0	+/- 1.0	SMM
1980	218	20:50:27	4.35	+/- 0.25	70.0	+/- 1.0	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

tstart=DOY218 18:17 from derivative = 0

Event begins at 1.52 Solar Radii

Origin defined at DOY218 19: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.459E-01 +/- 0.422E-02 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.175E+01 +/- 0.481E-01 [solar radii]
c(2) = 0.103E-01 +/- 0.143E-02 [radii/min]
c(2) = 0.120E+03 +/- 0.166E+02 [km/sec]
c(3) = 0.119E-03 +/- 0.109E-04 [radii/min**2]
c(3) = 0.459E-01 +/- 0.422E-02 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.47513E-01 [radii] Bevington pg 154 (8-30)

Exact error in c(1) = 0.18701E-02 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.14373E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.69028E-04 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.10834E-04 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.59123E-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) = 70. +/- 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 19:16 = 0.000E+00 km/sec
The TOTAL velocity at 19:16 = 164. km/sec

The TANGENTIAL velocity at 20: 0 = 0.000E+00 km/sec
The TOTAL velocity at 20: 0 = 286. km/sec

The TANGENTIAL velocity at 20: 3 = 0.000E+00 km/sec
The TOTAL velocity at 20: 3 = 295. km/sec

The TANGENTIAL velocity at 20: 5 = 0.000E+00 km/sec
The TOTAL velocity at 20: 5 = 300. km/sec

The TANGENTIAL velocity at 20:11 = 0.000E+00 km/sec
The TOTAL velocity at 20:11 = 318. km/sec

The TANGENTIAL velocity at 20:15 = 0.000E+00 km/sec
The TOTAL velocity at 20:15 = 327. km/sec

The TANGENTIAL velocity at 20:17 = 0.000E+00 km/sec
The TOTAL velocity at 20:17 = 332. km/sec

The TANGENTIAL velocity at 20:23 = 0.000E+00 km/sec
The TOTAL velocity at 20:23 = 350. km/sec

The TANGENTIAL velocity at 20:27 = 0.000E+00 km/sec
The TOTAL velocity at 20:27 = 360. km/sec

The TANGENTIAL velocity at 20:35 = 0.000E+00 km/sec
The TOTAL velocity at 20:35 = 383. km/sec

The TANGENTIAL velocity at 20:40 = 0.000E+00 km/sec
The TOTAL velocity at 20:40 = 397. km/sec

The TANGENTIAL velocity at 20:50 = 0.000E+00 km/sec
The TOTAL velocity at 20:50 = 424. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.63

Standard Deviation in start time measurement = 0.232E+02

Value of reduced Chi Squared returned from nllst2 = 0.625E-03

Reduced Chi Squared = 0.718E-02

Chi Squared = 0.647E-01

The probability for exceeding chi square = 0.100E+01

For a second order fit 3 correlation coefficients are given:

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

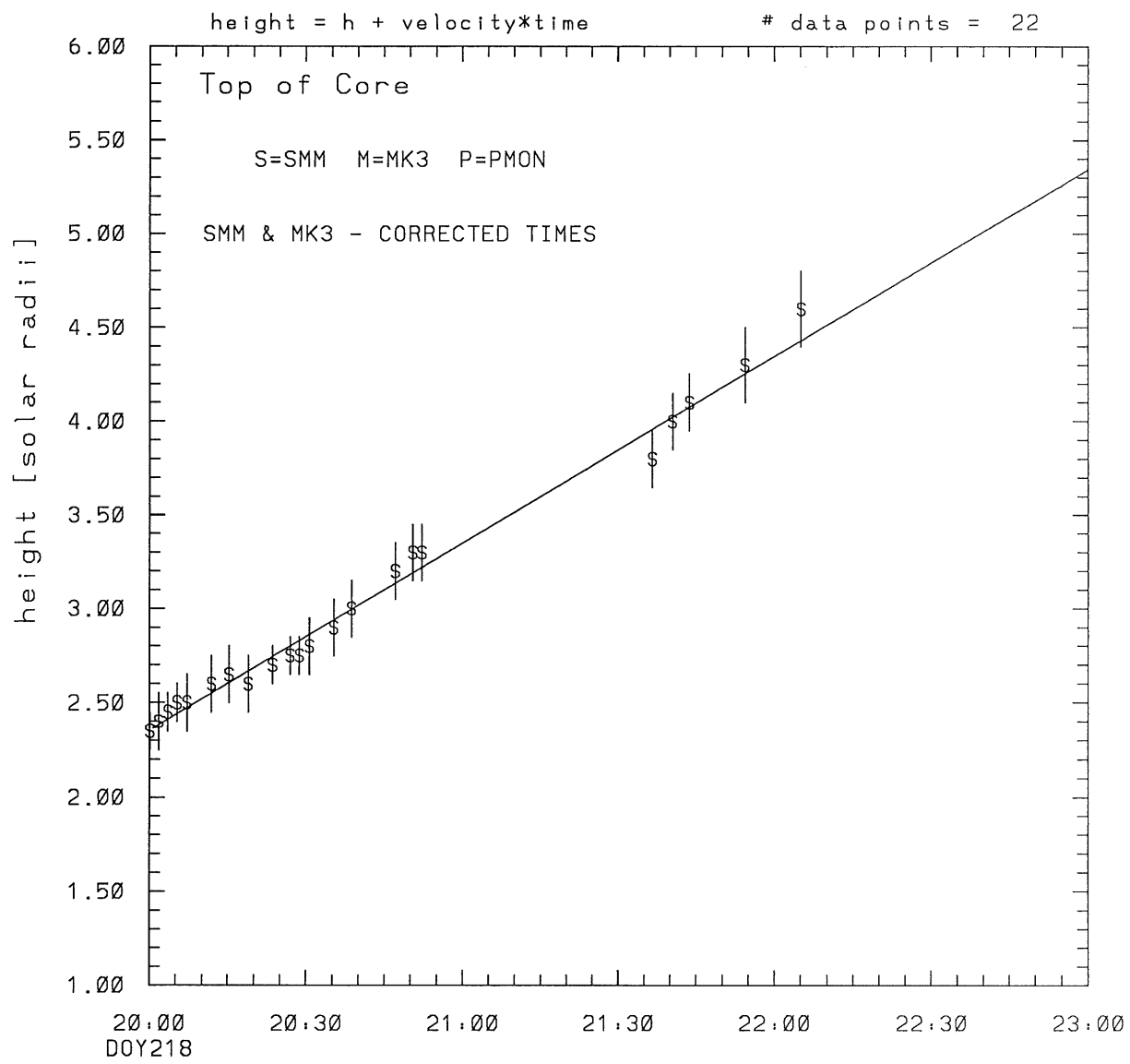
The correlation between the data and the term linear in time = 0.8176E+00

The correlation between the data and the time**2 term = 0.8347E+00

The correlation between the data and the complete equation of motion = 0.9988E+00

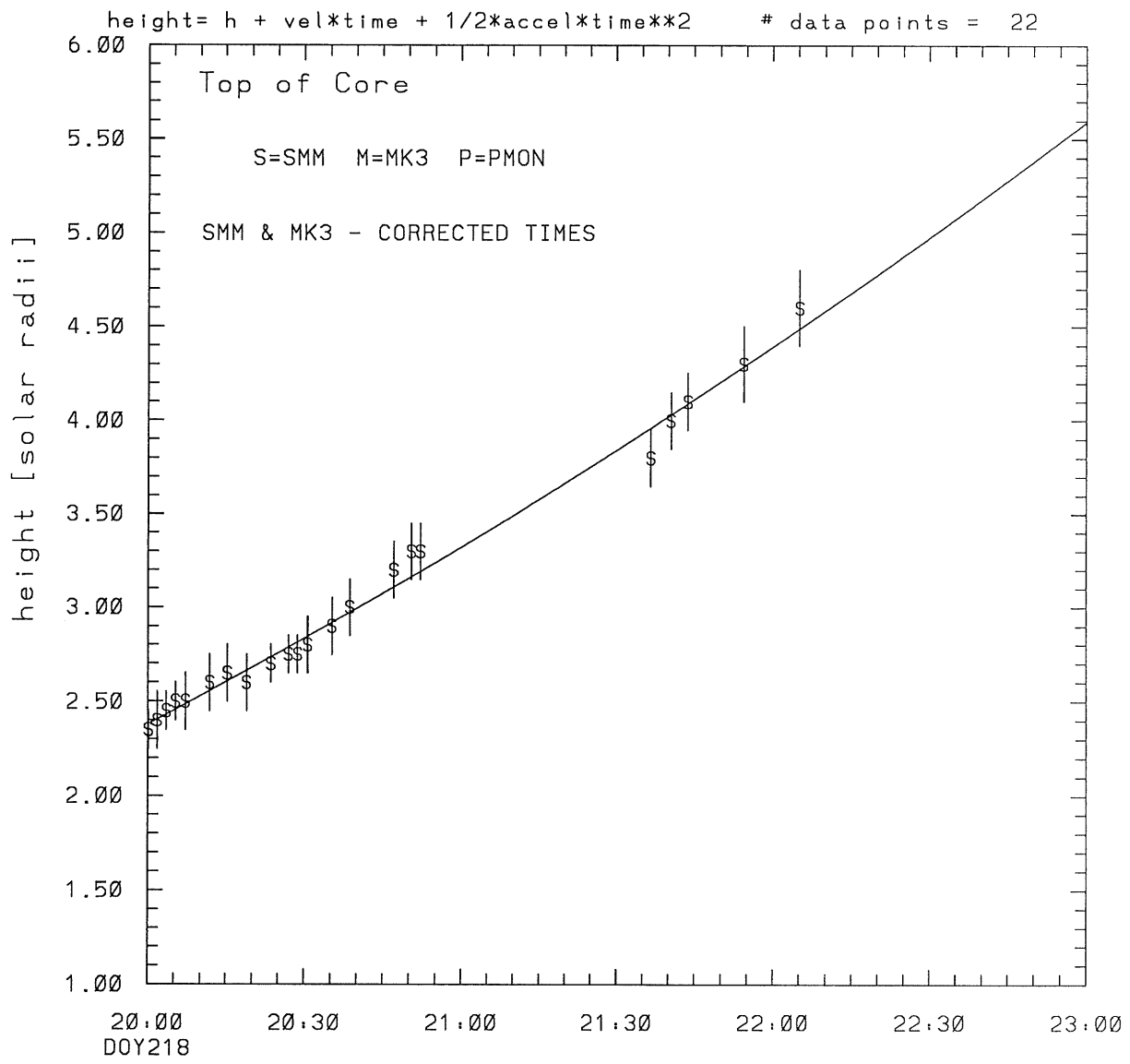
SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

SMM C/P 1980 DOY218 70 +/- 0 degrees



tstart=DOY218 18:39 +/- 0.1 [min.]
radial velocity= 193. +/- 5. [km/sec]

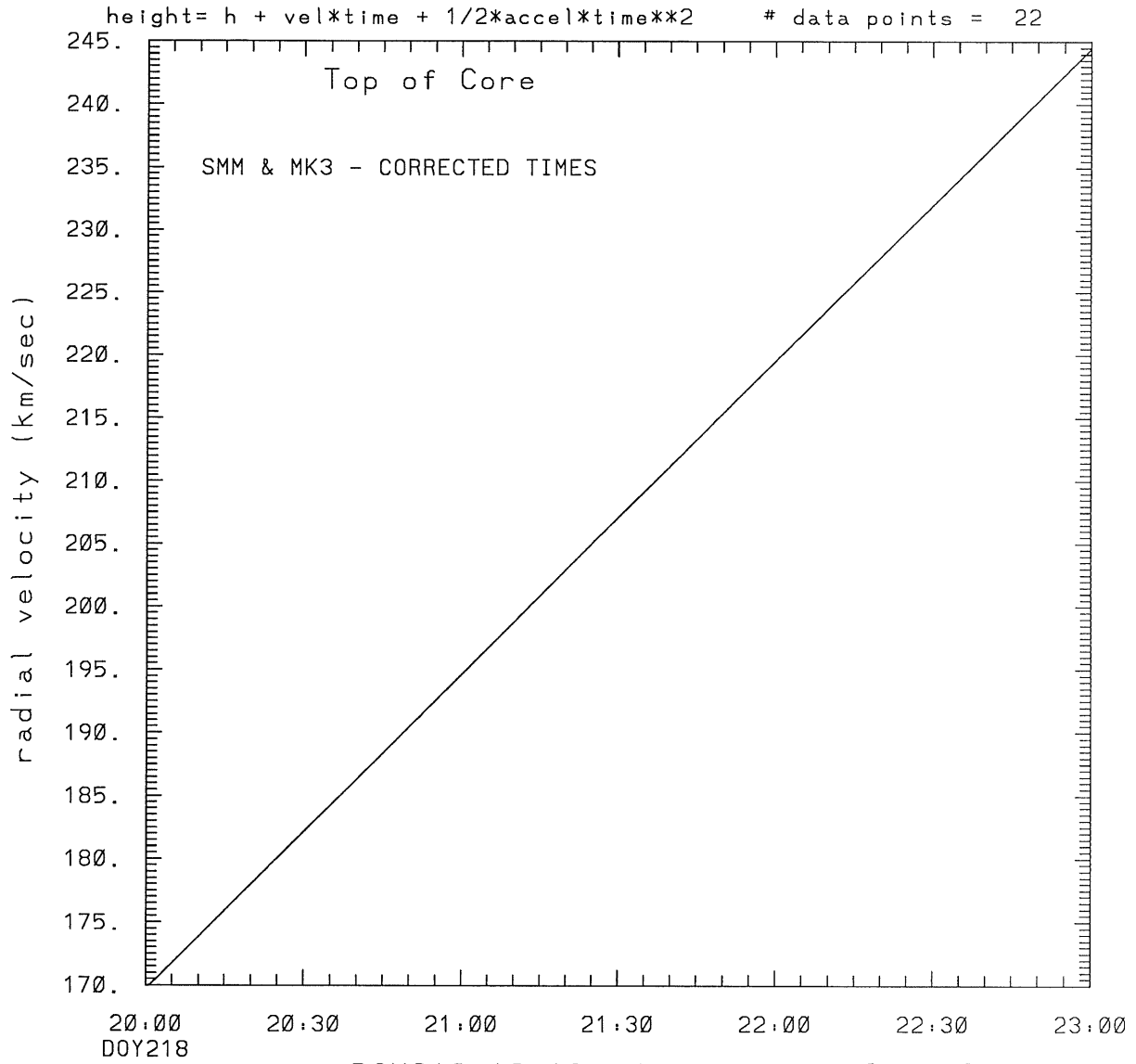
SMM C/P 1980 DOY218 70 +/- 0 degrees



tstart=DOY218 18:13 +/- 6.8 [min.]

radial acceleration = 0.0069 +/- 0.0047 [km/sec**2]

SMM C/P 1980 DOY218 70 +/- 0 degrees



tstart=DOY218 18:13 +/- 6.8 [min.]

radial acceleration= $0.692E-02$ km/sec**2

This is a 1 order run

INPUT:

year	day	time	radii	error in radius	angle	error in angle	datatype
1980	218	20: 0:10	2.35	+/- 0.10	70.0	+/- 0.5	SMM
1980	218	20: 1:46	2.40	+/- 0.15	70.0	+/- 0.5	SMM
1980	218	20: 3:33	2.45	+/- 0.10	70.0	+/- 0.5	SMM
1980	218	20: 5:19	2.50	+/- 0.10	70.0	+/- 0.5	SMM
1980	218	20: 7:14	2.50	+/- 0.15	70.0	+/- 0.5	SMM
1980	218	20:11:53	2.60	+/- 0.15	70.0	+/- 0.5	SMM
1980	218	20:15:16	2.65	+/- 0.15	70.0	+/- 0.5	SMM
1980	218	20:18:57	2.60	+/- 0.15	70.0	+/- 0.5	SMM
1980	218	20:23:37	2.70	+/- 0.10	70.0	+/- 0.5	SMM
1980	218	20:27: 0	2.75	+/- 0.10	70.0	+/- 0.5	SMM
1980	218	20:28:46	2.75	+/- 0.10	70.0	+/- 0.5	SMM
1980	218	20:30:41	2.80	+/- 0.15	70.0	+/- 0.5	SMM
1980	218	20:35:20	2.90	+/- 0.15	70.0	+/- 0.5	SMM
1980	218	20:38:43	3.00	+/- 0.15	70.0	+/- 1.0	SMM
1980	218	20:47: 5	3.20	+/- 0.15	70.0	+/- 1.0	SMM
1980	218	20:50:27	3.30	+/- 0.15	70.0	+/- 1.0	SMM
1980	218	20:52:13	3.30	+/- 0.15	70.0	+/- 1.0	SMM
1980	218	21:36:38	3.80	+/- 0.15	70.0	+/- 1.0	SMM
1980	218	21:40:31	4.00	+/- 0.15	70.0	+/- 1.0	SMM
1980	218	21:43:47	4.10	+/- 0.15	70.0	+/- 1.0	SMM
1980	218	21:54:27	4.30	+/- 0.20	70.0	+/- 1.0	SMM
1980	218	22: 5: 7	4.60	+/- 0.20	70.0	+/- 1.0	SMM

Structure being measured:

Top of Core

OUTPUT:

START TIME:

Event began at $t = 0 + -0.815E+02 +/- 0.147E+00$ [minutes]

In more convenient units:

Event began at DOY 218 18:39 +/- 0.147E+00 [minutes]

Origin defined at DOY218 20: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 193. +/- 5. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.235E+01 +/- 0.196E-01 [solar radii]
c(2) = 0.166E-01 +/- 0.418E-03 [radii/min]
c(2) = 0.193E+03 +/- 0.485E+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)= 0.23610E-01 [radii] see Bevington pg. 114

error in c(2)= 0.40963E-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) = 70. +/- 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 20: 0 = 0.000E+00 km/sec

The TOTAL velocity at 20: 0 = 193. km/sec

The TANGENTIAL velocity at 20: 1 = 0.000E+00 km/sec

The TOTAL velocity at 20: 1 = 193. km/sec

The TANGENTIAL velocity at 20: 3 = 0.000E+00 km/sec

The TOTAL velocity at 20: 3 = 193. km/sec

The TANGENTIAL velocity at 20: 5 = 0.000E+00 km/sec

The TOTAL velocity at 20: 5 = 193. km/sec

The TANGENTIAL velocity at 20: 7 = 0.000E+00 km/sec

The TOTAL velocity at 20: 7 = 193. km/sec

The TANGENTIAL velocity at 20:11 = 0.000E+00 km/sec

The TOTAL velocity at 20:11 = 193. km/sec

The TANGENTIAL velocity at 20:15 = 0.000E+00 km/sec

The TOTAL velocity at 20:15 = 193. km/sec

The TANGENTIAL velocity at 20:18 = 0.000E+00 km/sec

The TOTAL velocity at 20:18 = 193. km/sec

The TANGENTIAL velocity at 20:23 = 0.000E+00 km/sec

The TOTAL velocity at 20:23 = 193. km/sec

The TANGENTIAL velocity at 20:27 = 0.000E+00 km/sec

The TOTAL velocity at 20:27 = 193. km/sec

The TANGENTIAL velocity at 20:28 = 0.000E+00 km/sec

The TOTAL velocity at 20:28 = 193. km/sec

The TANGENTIAL velocity at 20:30 = 0.000E+00 km/sec

The TOTAL velocity at 20:30 = 193. km/sec

The TANGENTIAL velocity at 20:35 = 0.000E+00 km/sec

The TOTAL velocity at 20:35 = 193. km/sec

The TANGENTIAL velocity at 20:38 = 0.000E+00 km/sec

The TOTAL velocity at 20:38 = 193. km/sec

The TANGENTIAL velocity at 20:47 = 0.000E+00 km/sec

The TOTAL velocity at 20:47 = 193. km/sec

The TANGENTIAL velocity at 20:50 = 0.000E+00 km/sec

The TOTAL velocity at 20:50 = 193. km/sec

The TANGENTIAL velocity at 20:52 = 0.000E+00 km/sec

The TOTAL velocity at 20:52 = 193. km/sec

The TANGENTIAL velocity at 21:36 = 0.000E+00 km/sec

The TOTAL velocity at 21:36 = 193. km/sec

The TANGENTIAL velocity at 21:40 = 0.000E+00 km/sec

The TOTAL velocity at 21:40 = 193. km/sec

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

The TOTAL velocity at 21:43 = 193. km/sec

The TANGENTIAL velocity at 21:54 = 0.000E+00 km/sec

The TOTAL velocity at 21:54 = 193. km/sec

The TANGENTIAL velocity at 22: 5 = 0.000E+00 km/sec

The TOTAL velocity at 22: 5 = 193. 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 = 0.388E+02

Error in time = 0.20055E+02 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.430E-02

Reduced Chi Squared = 0.889E-01

Chi Squared = 0.178E+01

The probability for exceeding chi square = 0.100E+01

The correlation coefficient = 0.994E+00

The probability that no LINEAR correlation exists between the variables = -0.6405E-08

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

This is a 2 order run

INPUT:

year	day	time	error in radii	error in radius	error in angle	error in angle	datatype
1980	218	20: 0:10	2.35 +/- 0.10	70.0 +/- 0.5			SMM
1980	218	20: 1:46	2.40 +/- 0.15	70.0 +/- 0.5			SMM
1980	218	20: 3:33	2.45 +/- 0.10	70.0 +/- 0.5			SMM
1980	218	20: 5:19	2.50 +/- 0.10	70.0 +/- 0.5			SMM
1980	218	20: 7:14	2.50 +/- 0.15	70.0 +/- 0.5			SMM
1980	218	20:11:53	2.60 +/- 0.15	70.0 +/- 0.5			SMM
1980	218	20:15:16	2.65 +/- 0.15	70.0 +/- 0.5			SMM
1980	218	20:18:57	2.60 +/- 0.15	70.0 +/- 0.5			SMM
1980	218	20:23:37	2.70 +/- 0.10	70.0 +/- 0.5			SMM
1980	218	20:27: 0	2.75 +/- 0.10	70.0 +/- 0.5			SMM
1980	218	20:28:46	2.75 +/- 0.10	70.0 +/- 0.5			SMM
1980	218	20:30:41	2.80 +/- 0.15	70.0 +/- 0.5			SMM
1980	218	20:35:20	2.90 +/- 0.15	70.0 +/- 0.5			SMM
1980	218	20:38:43	3.00 +/- 0.15	70.0 +/- 1.0			SMM
1980	218	20:47: 5	3.20 +/- 0.15	70.0 +/- 1.0			SMM
1980	218	20:50:27	3.30 +/- 0.15	70.0 +/- 1.0			SMM
1980	218	20:52:13	3.30 +/- 0.15	70.0 +/- 1.0			SMM
1980	218	21:36:38	3.80 +/- 0.15	70.0 +/- 1.0			SMM
1980	218	21:40:31	4.00 +/- 0.15	70.0 +/- 1.0			SMM
1980	218	21:43:47	4.10 +/- 0.15	70.0 +/- 1.0			SMM
1980	218	21:54:27	4.30 +/- 0.20	70.0 +/- 1.0			SMM
1980	218	22: 5: 7	4.60 +/- 0.20	70.0 +/- 1.0			SMM

Structure being measured:
Top of Core

OUTPUT:

START TIME:

Event began at $t = 0 + -0.109E+03 +/- 0.680E+01$ [minutes]
In more convenient units:
Event began at DOY 218 18:13 +/- 0.680E+01 [minutes]

Origin defined at DOY218 20: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.692E-02 +/- 0.471E-02$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.238E+01 +/- 0.259E-01 [solar radii]
c(2) = 0.146E-01 +/- 0.141E-02 [radii/min]
c(2) = 0.170E+03 +/- 0.163E+02 [km/sec]
c(3) = 0.179E-04 +/- 0.122E-04 [radii/min**2]
c(3) = 0.692E-02 +/- 0.471E-02 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.32261E-01 [radii] Bevington pg 154 (8-30)
Exact error in c(1) = 0.10591E-02 [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = 0.15780E-02 [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = 0.12317E-03 [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = 0.12774E-04 [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = 0.11095E-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) = 70. +/- 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 20: 0 = 0.000E+00 km/sec
The TOTAL velocity at 20: 0 = 170. km/sec

The TANGENTIAL velocity at 20: 1 = 0.000E+00 km/sec
The TOTAL velocity at 20: 1 = 170. km/sec

The TANGENTIAL velocity at 20: 3 = 0.000E+00 km/sec
The TOTAL velocity at 20: 3 = 171. km/sec

The TANGENTIAL velocity at 20: 5 = 0.000E+00 km/sec
The TOTAL velocity at 20: 5 = 172. km/sec

The TANGENTIAL velocity at 20: 7 = 0.000E+00 km/sec
The TOTAL velocity at 20: 7 = 173. km/sec

The TANGENTIAL velocity at 20:11 = 0.000E+00 km/sec
The TOTAL velocity at 20:11 = 175. km/sec

The TANGENTIAL velocity at 20:15 = 0.000E+00 km/sec
The TOTAL velocity at 20:15 = 176. km/sec

The TANGENTIAL velocity at 20:18 = 0.000E+00 km/sec

The TOTAL velocity at 20:18 = 178. km/sec

The TANGENTIAL velocity at 20:23 = 0.000E+00 km/sec

The TOTAL velocity at 20:23 = 180. km/sec

The TANGENTIAL velocity at 20:27 = 0.000E+00 km/sec

The TOTAL velocity at 20:27 = 181. km/sec

The TANGENTIAL velocity at 20:28 = 0.000E+00 km/sec

The TOTAL velocity at 20:28 = 182. km/sec

The TANGENTIAL velocity at 20:30 = 0.000E+00 km/sec

The TOTAL velocity at 20:30 = 182. km/sec

The TANGENTIAL velocity at 20:35 = 0.000E+00 km/sec

The TOTAL velocity at 20:35 = 184. km/sec

The TANGENTIAL velocity at 20:38 = 0.000E+00 km/sec

The TOTAL velocity at 20:38 = 186. km/sec

The TANGENTIAL velocity at 20:47 = 0.000E+00 km/sec

The TOTAL velocity at 20:47 = 189. km/sec

The TANGENTIAL velocity at 20:50 = 0.000E+00 km/sec

The TOTAL velocity at 20:50 = 191. km/sec

The TANGENTIAL velocity at 20:52 = 0.000E+00 km/sec

The TOTAL velocity at 20:52 = 191. km/sec

The TANGENTIAL velocity at 21:36 = 0.000E+00 km/sec

The TOTAL velocity at 21:36 = 210. km/sec

The TANGENTIAL velocity at 21:40 = 0.000E+00 km/sec

The TOTAL velocity at 21:40 = 211. km/sec

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

The TOTAL velocity at 21:43 = 213. km/sec

The TANGENTIAL velocity at 21:54 = 0.000E+00 km/sec

The TOTAL velocity at 21:54 = 217. km/sec

The TANGENTIAL velocity at 22: 5 = 0.000E+00 km/sec

The TOTAL velocity at 22: 5 = 222. 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 = 0.388E+02

Value of reduced Chi Squared returned from nllst2 = 0.408E-02

Reduced Chi Squared = 0.821E-01

Chi Squared = 0.156E+01

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 = 0.8932E+00

The correlation between the data and the time**2 term = 0.8098E+00

The correlation between the data and the complete equation of motion = 0.9850E+00

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