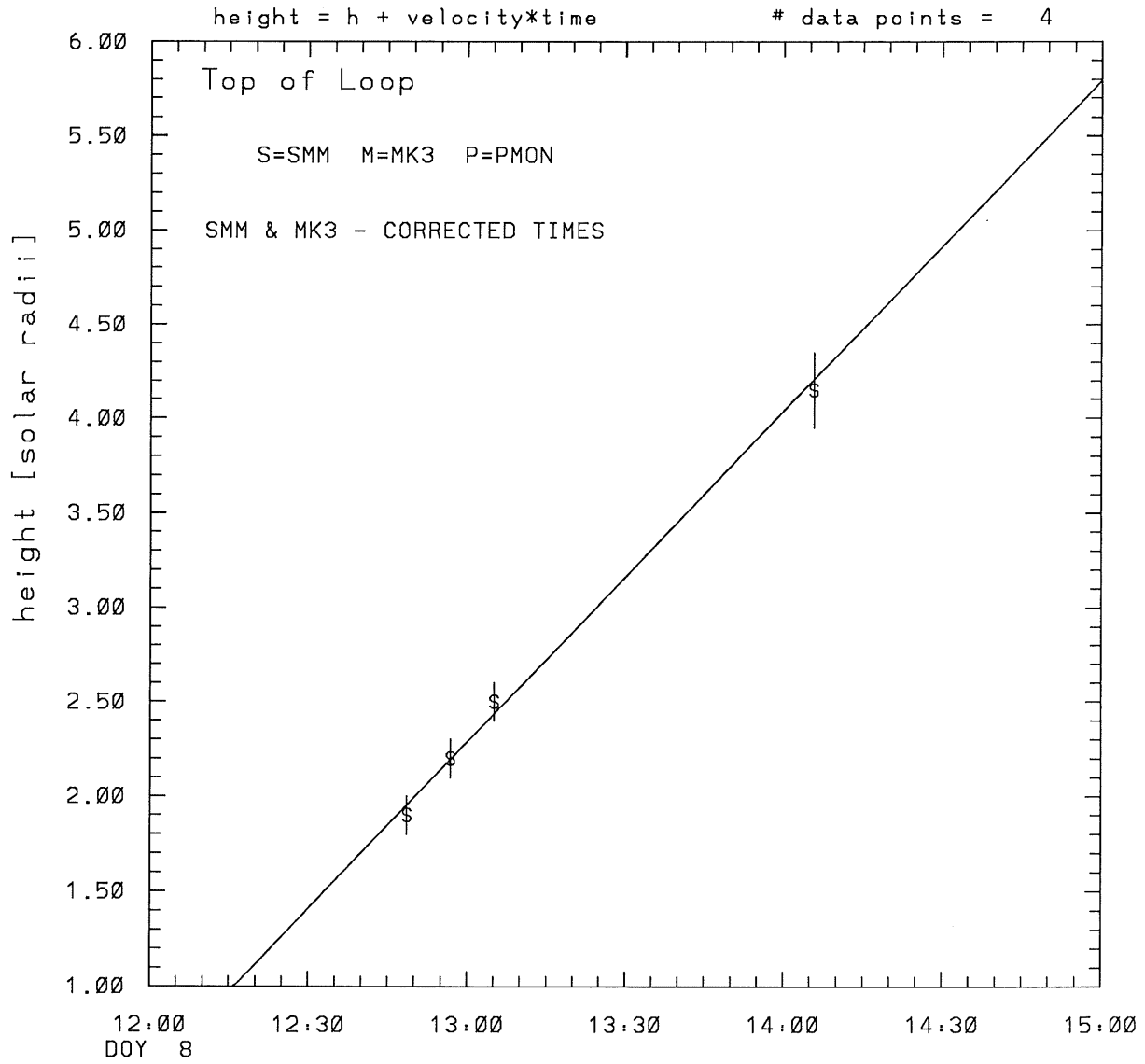
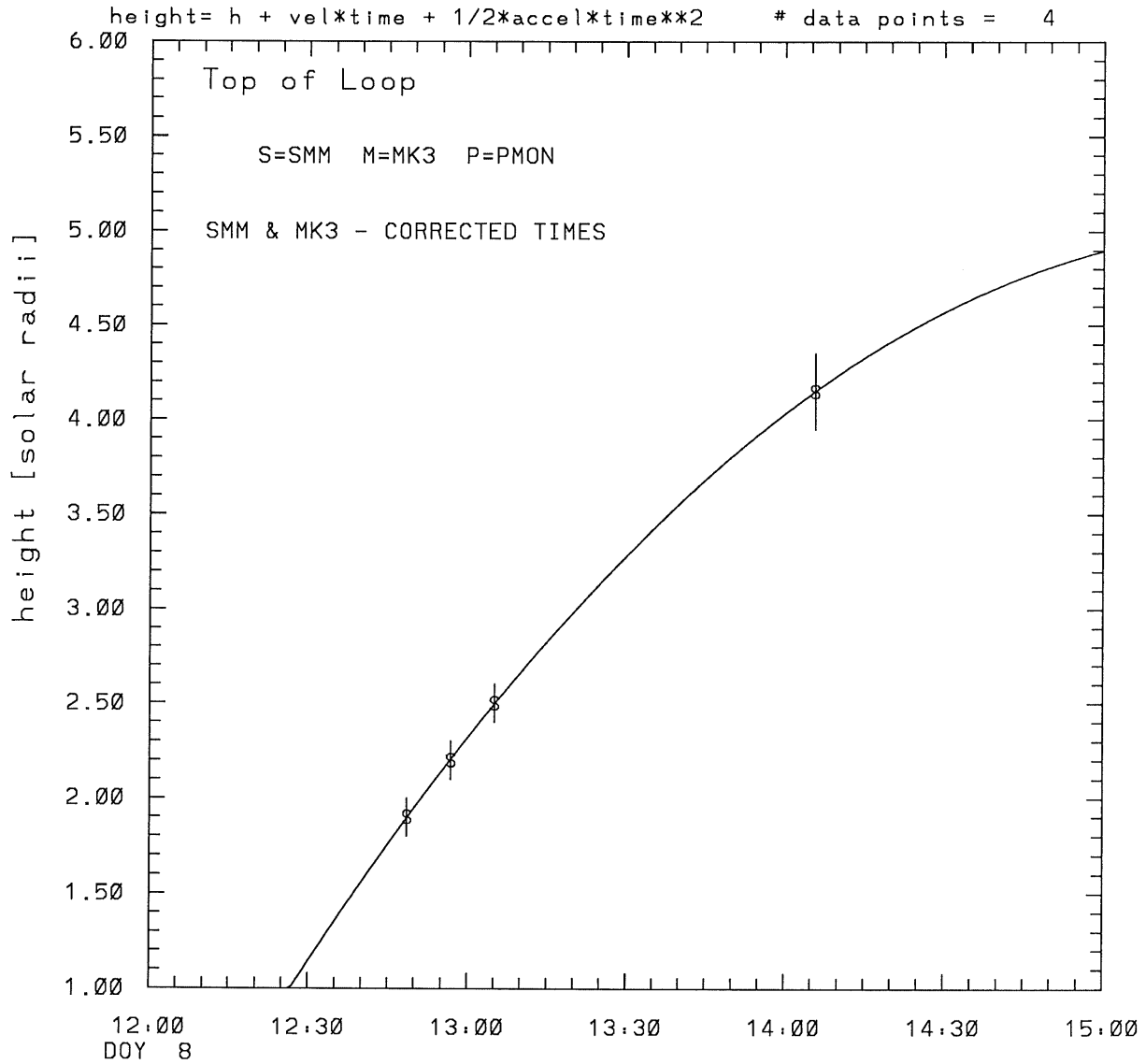


SMM C/P 1989 DOY 8 118 +/- 0 degrees



tstart=DOY 8 12:16 +/- 1.0 [min.]
radial velocity= 339. +/- 17. [km/sec]

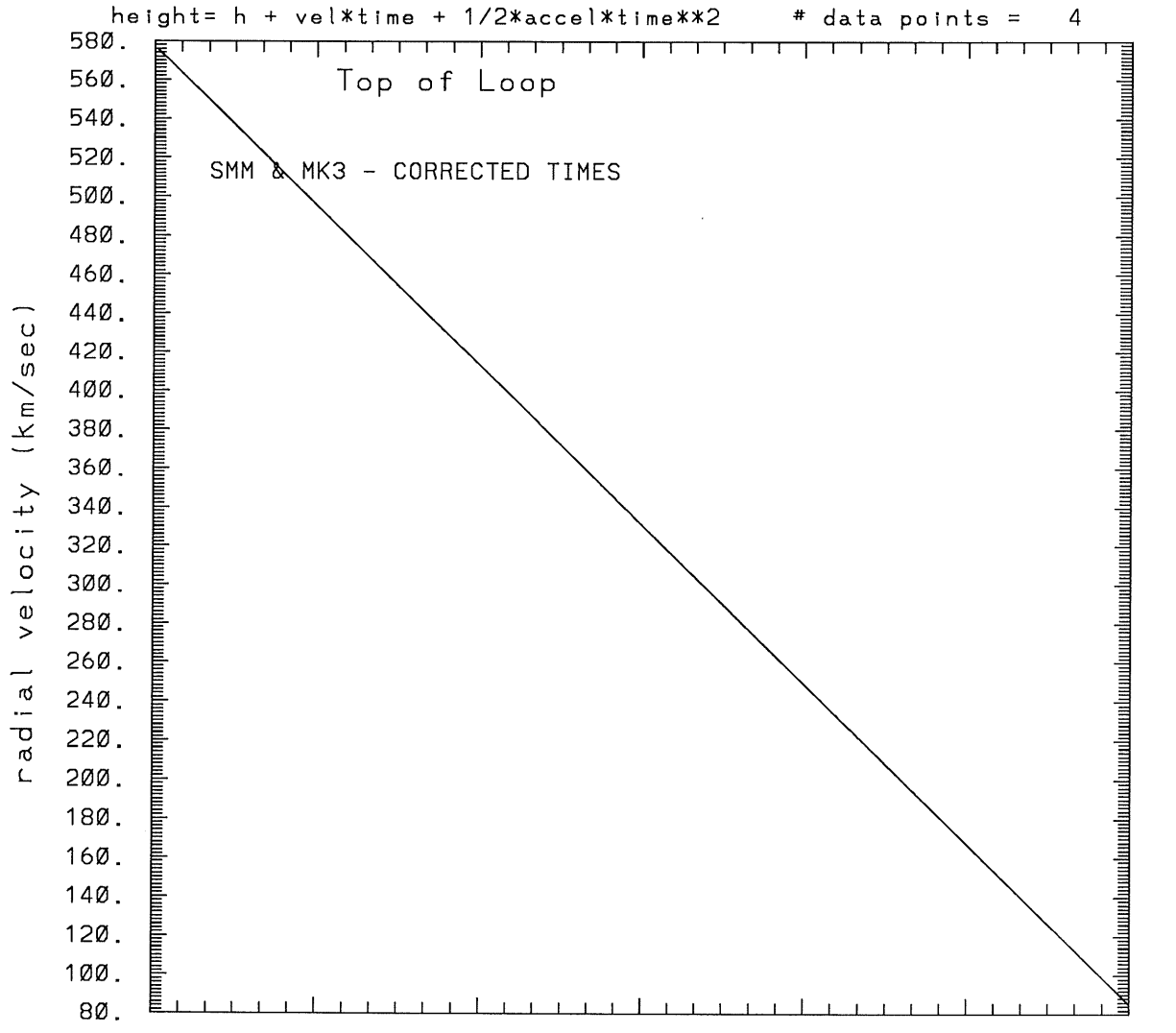
SMM C/P 1989 DOY 8 118 +/- 0 degrees



tstart=DOY 8 12:27 +/- 2.6 [min.]

radial acceleration = -0.0456 ± 0.0023 [km/sec**2]

SMM C/P 1989 DOY 8 118 +/- 0 degrees

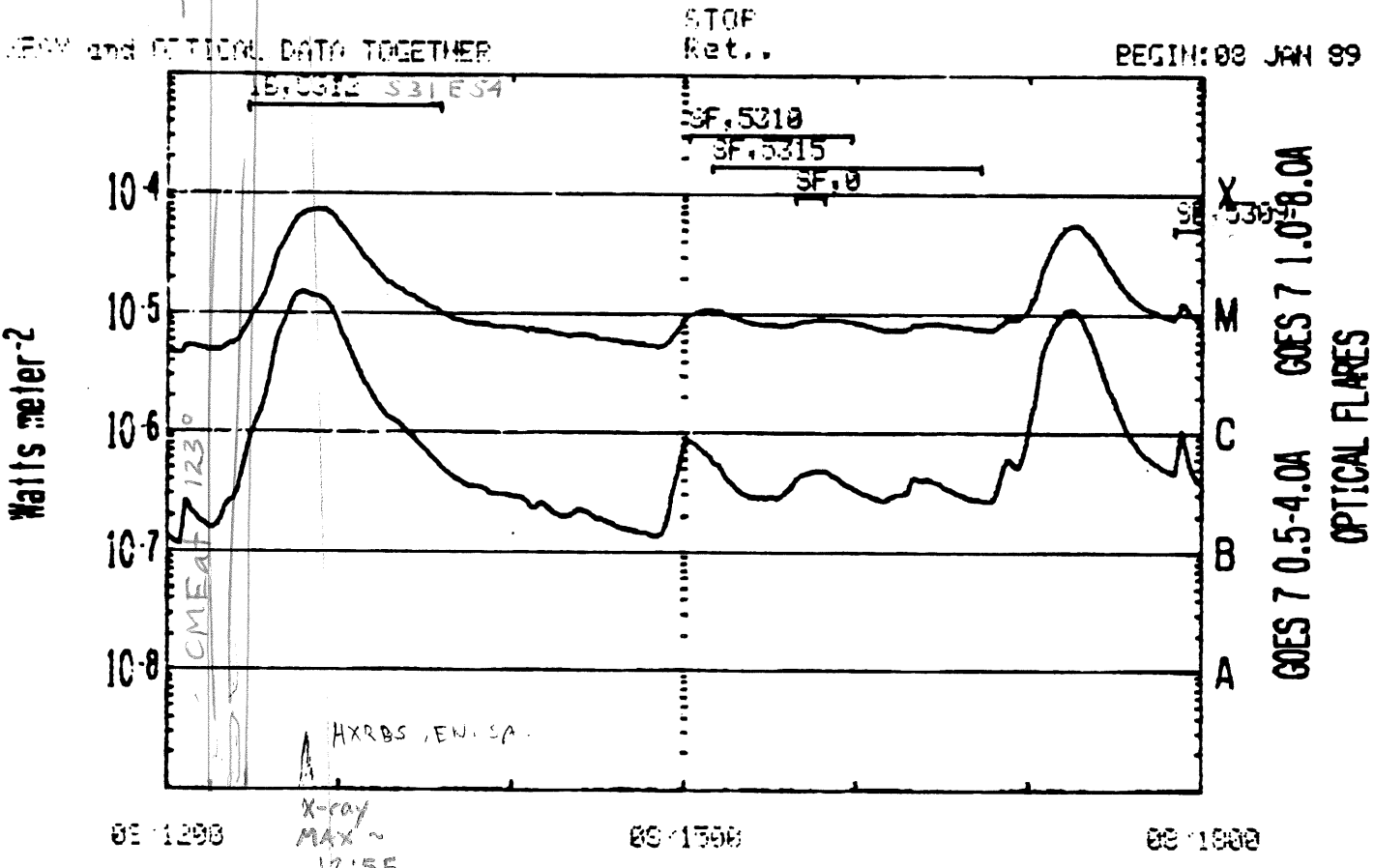


DOY 8

tstart=DOY 8 12:27 +/- 2.6 [min.]

radial acceleration=-.456E-01 km/sec**2

Top of Loop [12:16] 1st order
[12:27] 2nd order



GOES-7 1 MIN DATA: OPTICAL FLARE DUR. IMP. REGION

SAA's NIGHT
RUN: 1944UT
12 JAN 89

This is a 1 order run

INPUT:

year	day	time	error in radii	error in radius	error in angle	error in angle	datatype
1989	8	12:48:39	1.90 +/- 0.10	118.0 +/- 0.5			SMM
1989	8	12:56:53	2.20 +/- 0.10	118.0 +/- 0.5			SMM
1989	8	13: 5: 8	2.50 +/- 0.10	118.0 +/- 0.5			SMM
1989	8	14: 5:44	4.15 +/- 0.20	118.0 +/- 0.5			SMM

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + 0.160E+02 \pm 0.105E+01$ [minutes]

In more convenient units:

Event began at DOY 8 12:16 $\pm 0.105E+01$ [minutes]

Origin defined at DOY 8 12: 0

RADIAL INFORMATION:

RADIAL VELOCITY = $339. \pm 17.$ km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.533E+00 \pm 0.952E-01$ [solar radii]
 $c(2) = 0.292E-01 \pm 0.146E-02$ [radii/min]
 $c(2) = 0.339E+03 \pm 0.170E+02$ [km/sec]
 $c(3) = 0.000E+00 \pm 0.000E+00$ [radii/min**2]
 $c(3) = 0.000E+00 \pm 0.000E+00$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

error in $c(1) = 0.94566E-01$ [radii] see Bevington pg. 114

error in $c(2) = 0.11808E-02$ [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = $0.0000E+00 \pm 0.0000E+00$ [radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 118. +/- 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 12:48 = 0. km/sec

The TOTAL velocity at 12:48 = 339. km/sec

The TANGENTIAL velocity at 12:56 = 0. km/sec

The TOTAL velocity at 12:56 = 339. km/sec

The TANGENTIAL velocity at 13: 5 = 0. km/sec

The TOTAL velocity at 13: 5 = 339. km/sec

The TANGENTIAL velocity at 14: 5 = 0. km/sec

The TOTAL velocity at 14: 5 = 339. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.01

Standard Deviation in start time measurement = 0.304E+02

Error in time = 0.34723E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.323E-02

Reduced Chi Squared = 0.141E-01

Chi Squared = 0.281E-01

The probability for exceeding chi square = 0.997E+00

The correlation coefficient = 0.999E+00

The probability that no LINEAR correlation exists between the variables = 0.1409E-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
1989	8	12:48:39	1.90	+/- 0.10	118.0	+/- 0.5	SMM
1989	8	12:56:53	2.20	+/- 0.10	118.0	+/- 0.5	SMM
1989	8	13: 5: 8	2.50	+/- 0.10	118.0	+/- 0.5	SMM
1989	8	14: 5:44	4.15	+/- 0.20	118.0	+/- 0.5	SMM

Structure being measured:

Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + 0.267E+02 \pm 0.263E+01$ [minutes]

In more convenient units:

Event began at DOY 8 12:27 $\pm 0.263E+01$ [minutes]

Origin defined at DOY 8 12: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $-0.456E-01 \pm 0.229E-02$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = -0.245E+00 \pm 0.400E-01$ [solar radii]
 $c(2) = 0.498E-01 \pm 0.104E-02$ [radii/min]
 $c(2) = 0.577E+03 \pm 0.121E+02$ [km/sec]
 $c(3) = -0.118E-03 \pm 0.593E-05$ [radii/min**2]
 $c(3) = -0.456E-01 \pm 0.229E-02$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in $c(1) = 0.56173E-01$ [radii] Bevington pg 154 (8-30)
Exact error in $c(1) = 0.22892E-01$ [radii] Bevington pg 154 (8-28)
Approximate error in $c(2) = 0.14519E-02$ [radii/min] Bevington pg 154 (8-30)
Exact error in $c(2) = 0.60442E-03$ [radii/min] Bevington pg 154 (8-28)
Approximate error in $c(3) = 0.80698E-05$ [radii/min**] Bevington pg 154 (8-30)
Exact error in $c(3) = 0.33682E-05$ [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) = 118. +/- 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 12:48 = 0. km/sec

The TOTAL velocity at 12:48 = 444. km/sec

The TANGENTIAL velocity at 12:56 = 0. km/sec

The TOTAL velocity at 12:56 = 422. km/sec

The TANGENTIAL velocity at 13: 5 = 0. km/sec

The TOTAL velocity at 13: 5 = 399. km/sec

The TANGENTIAL velocity at 14: 5 = 0. km/sec

The TOTAL velocity at 14: 5 = 234. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 1.01

Standard Deviation in start time measurement = 0.304E+02

Value of reduced Chi Squared returned from nllst2 = 0.245E-04

Reduced Chi Squared = 0.830E-04

Chi Squared = 0.830E-04

The probability for exceeding chi square = 0.996E+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 = 0.7488E+00

The correlation between the data and the time**2 term = 0.7287E+00

The correlation between the data and the complete equation of motion = 0.1000E+01

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