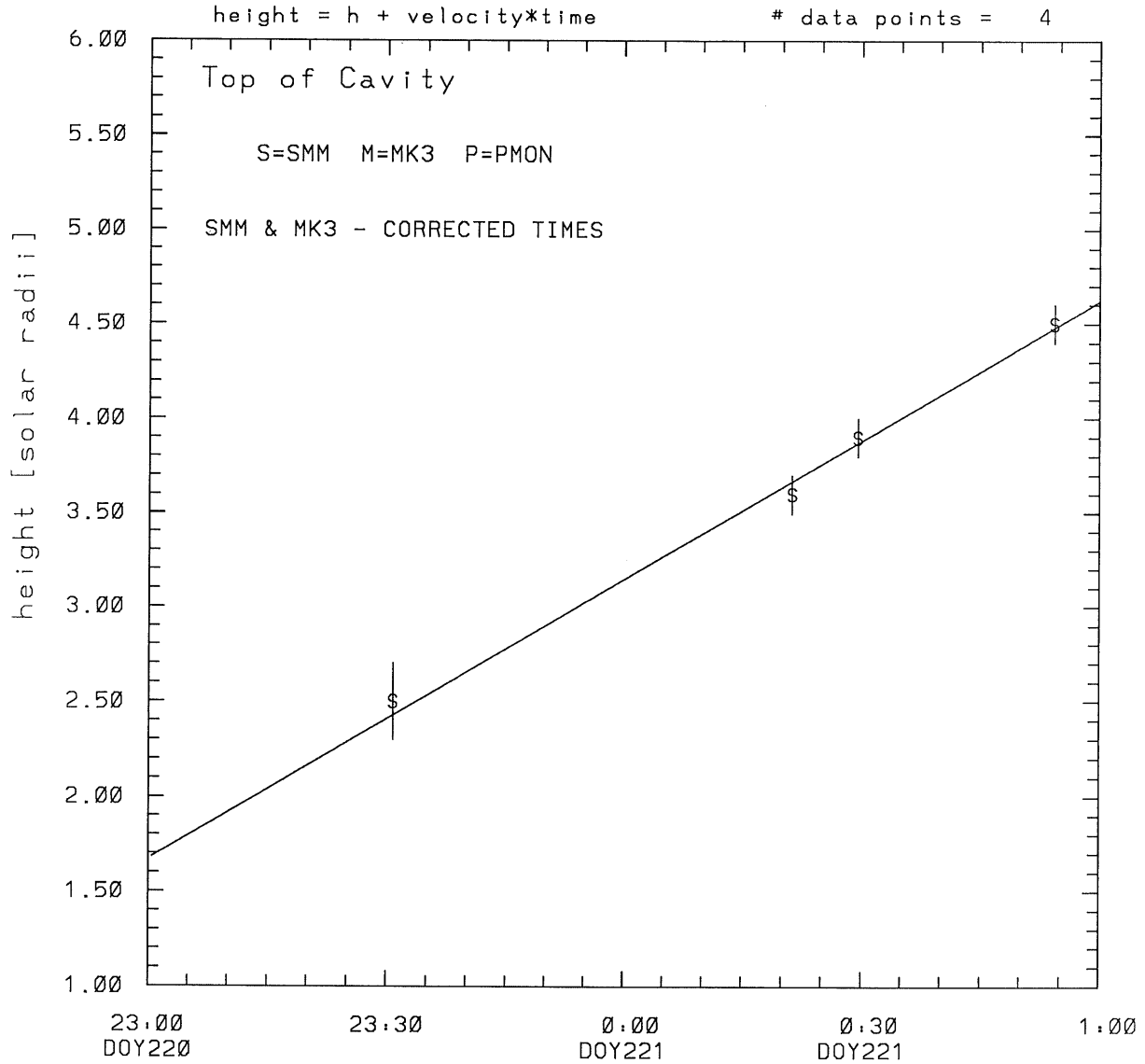
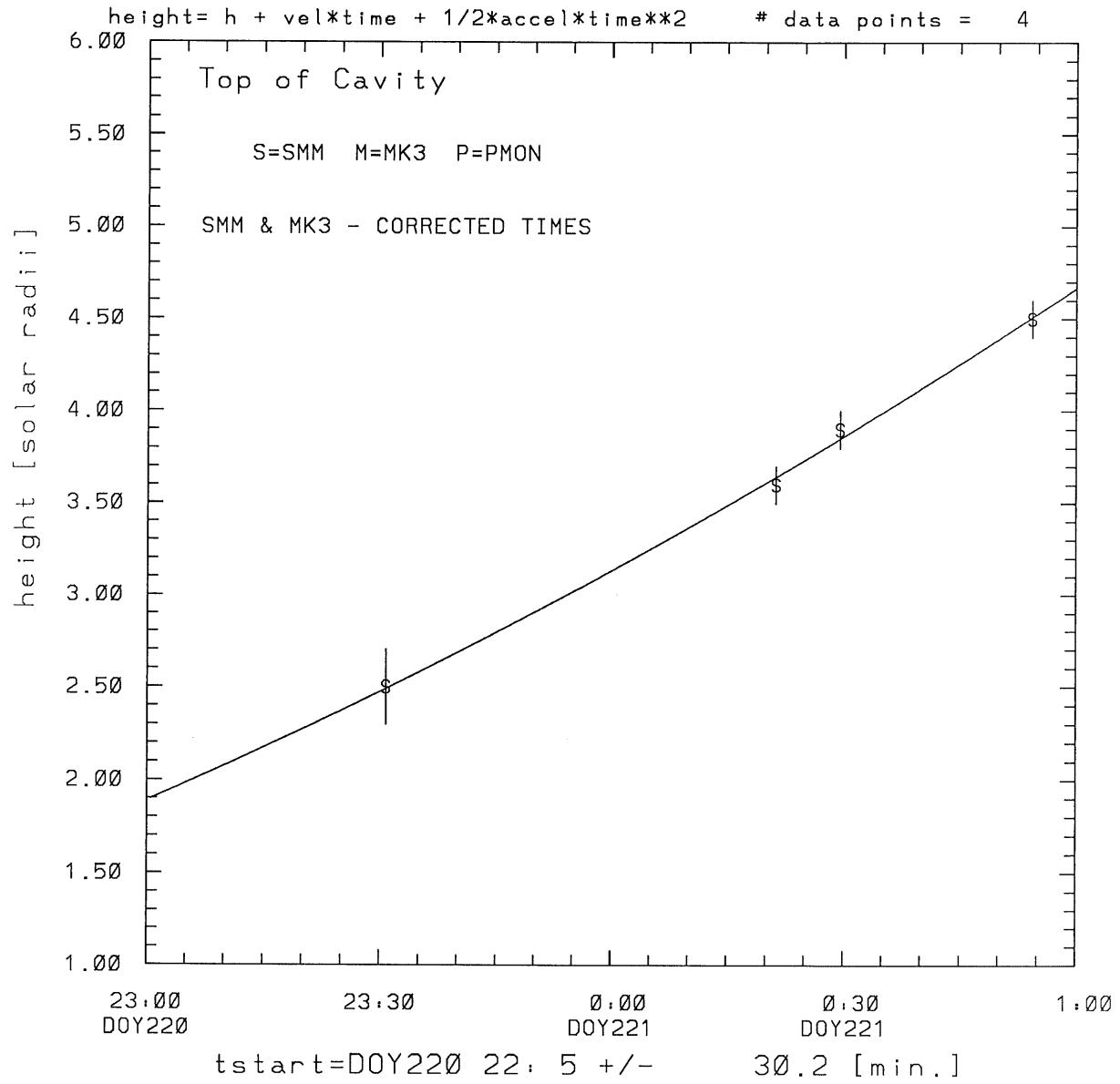


SMM C/P 1989 DOY220 86 +/- 0 degrees



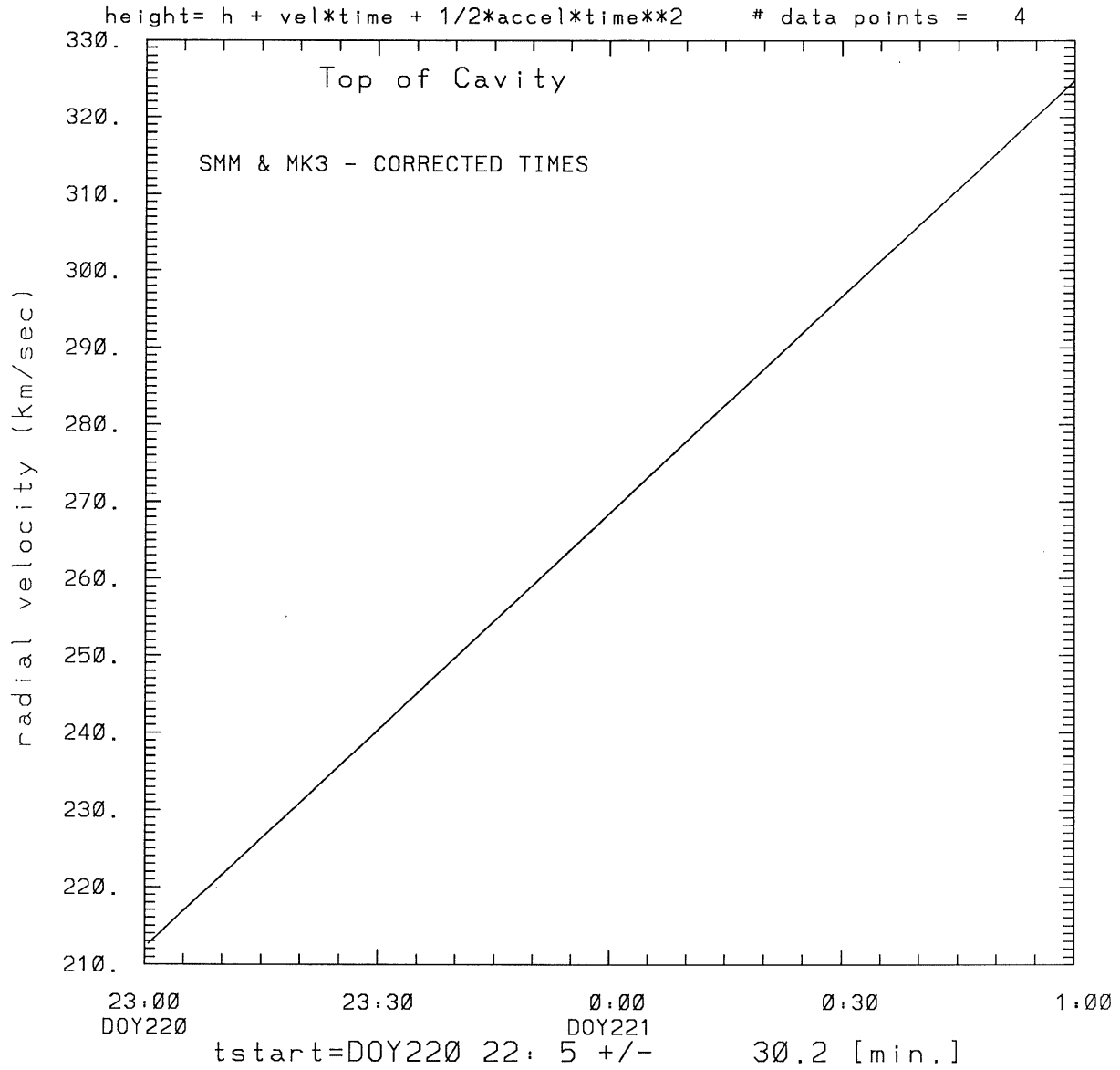
tstart=DOY220 22:33 +/- 1.1 [min.]
radial velocity= 285. +/- 15. [km/sec]

SMM C/P 1989 DOY220 86 +/- 0 degrees



radial acceleration = 0.0156 ± 0.0137 [km/sec**2]

SMM C/P 1989 DOY220 86 +/- 0 degrees



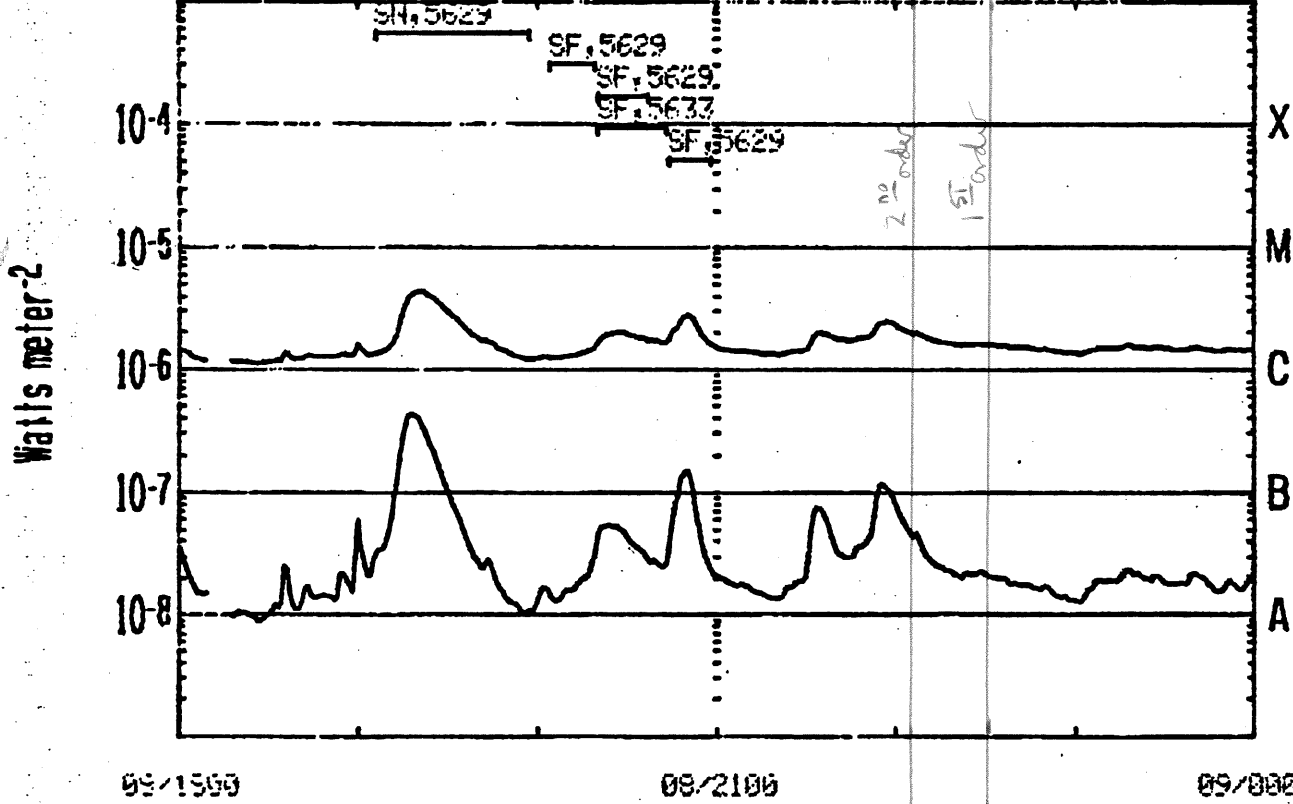
radial acceleration= $0.156E-01$ km/sec**2

1989 Day 220

VIEW AND OPTICAL DATA TOGETHER

STOP Ret..

BEGIN: 09 AUG 89



GOES 7 0.5-4.0A GOES 7 1.0-8.0A
OPTICAL FLARES

09/1500

09/2100

09/0000

SAA's
NIGHT

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

RUN: 1985UT
9 AUG 89

This is a 1 order run

INPUT:

year	doj	time	radii	error in radius	angle	error in angle	datatype
1989	220	23:30:48	2.50	+/- 0.20	86.0	+/- 0.5	SMM
1989	221	0:21:18	3.60	+/- 0.10	86.0	+/- 1.0	SMM
1989	221	0:29:32	3.90	+/- 0.10	86.0	+/- 1.0	SMM
1989	221	0:54:20	4.50	+/- 0.10	86.0	+/- 1.0	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.273E+02 +/- 0.113E+01$ [minutes]
In more convenient units:
Event began at DOY 220 22:33 +/- 0.113E+01 [minutes]

Origin defined at DOY220 23: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 285. +/- 15. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.167E+01 +/- 0.116E+00$ [solar radii]
 $c(2) = 0.246E-01 +/- 0.125E-02$ [radii/min]
 $c(2) = 0.285E+03 +/- 0.145E+02$ [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 $c(1) = 0.10425E+00$ [radii] see Bevington pg. 114
error in $c(2) = 0.12319E-02$ [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) = 86. +/- 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 23:30 = 0. km/sec

The TOTAL velocity at 23:30 = 285. km/sec

The TANGENTIAL velocity at 0:21 = 0. km/sec

The TOTAL velocity at 0:21 = 285. km/sec

The TANGENTIAL velocity at 0:29 = 0. km/sec

The TOTAL velocity at 0:29 = 285. km/sec

The TANGENTIAL velocity at 0:54 = 0. km/sec

The TOTAL velocity at 0:54 = 285. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.84

Standard Deviation in start time measurement = 0.304E+02

Error in time = 0.43066E+01 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.297E-02

Reduced Chi Squared = 0.941E-02

Chi Squared = 0.188E-01

The probability for exceeding chi square = 0.997E+00

The correlation coefficient = 0.998E+00

The probability that no LINEAR correlation exists between the variables = 0.2039E-02

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

This is a 2 order run

INPUT:

year	doy	time	radii	error in radius	error in angle	angle	datatype
1989	220	23:30:48	2.50	+/- 0.20	86.0	+/- 0.5	SMM
1989	221	0:21:18	3.60	+/- 0.10	86.0	+/- 1.0	SMM
1989	221	0:29:32	3.90	+/- 0.10	86.0	+/- 1.0	SMM
1989	221	0:54:20	4.50	+/- 0.10	86.0	+/- 1.0	SMM

Structure being measured:
Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.553E+02 +/- 0.302E+02$ [minutes]
In more convenient units:
Event began at DOY 220 22: 5 +/- 0.302E+02 [minutes]

Origin defined at DOY220 23: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.156E-01 +/- 0.137E-01$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.189E+01 +/- 0.221E+00$ [solar radii]
c(2) = $0.183E-01 +/- 0.564E-02$ [radii/min]
c(2) = $0.212E+03 +/- 0.654E+02$ [km/sec]
c(3) = $0.404E-04 +/- 0.355E-04$ [radii/min**2]
c(3) = $0.156E-01 +/- 0.137E-01$ [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = $0.19311E+00$ [radii] Bevington pg 154 (8-30)
Exact error in c(1) = $0.75845E-01$ [radii] Bevington pg 154 (8-28)
Approximate error in c(2) = $0.61818E-02$ [radii/min] Bevington pg 154 (8-30)
Exact error in c(2) = $0.30413E-02$ [radii/min] Bevington pg 154 (8-28)
Approximate error in c(3) = $0.43473E-04$ [radii/min**] Bevington pg 154 (8-30)
Exact error in c(3) = $0.20967E-04$ [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) = 86. +/- 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 23:30 = 0. km/sec

The TOTAL velocity at 23:30 = 241. km/sec

The TANGENTIAL velocity at 0:21 = 0. km/sec

The TOTAL velocity at 0:21 = 288. km/sec

The TANGENTIAL velocity at 0:29 = 0. km/sec

The TOTAL velocity at 0:29 = 296. km/sec

The TANGENTIAL velocity at 0:54 = 0. km/sec

The TOTAL velocity at 0:54 = 319. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.84

Standard Deviation in start time measurement = 0.304E+02

Value of reduced Chi Squared returned from nllst2 = 0.271E-02

Reduced Chi Squared = 0.114E-01

Chi Squared = 0.114E-01

The probability for exceeding chi square = 0.959E+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 = 0.8032E+00

The correlation between the data and the time**2 term = 0.8556E+00

The correlation between the data and the complete equation of motion = 0.9975E+00

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