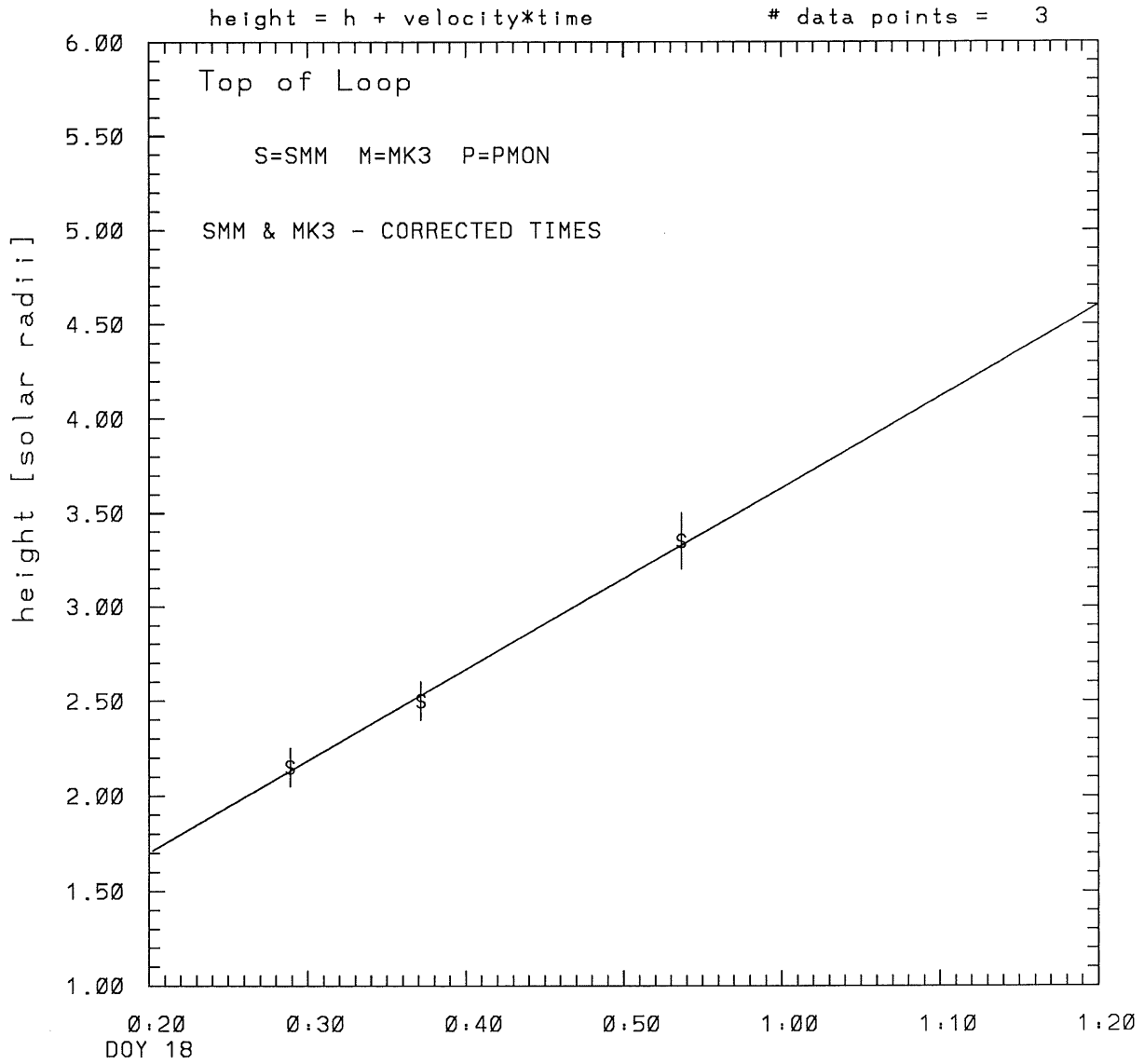
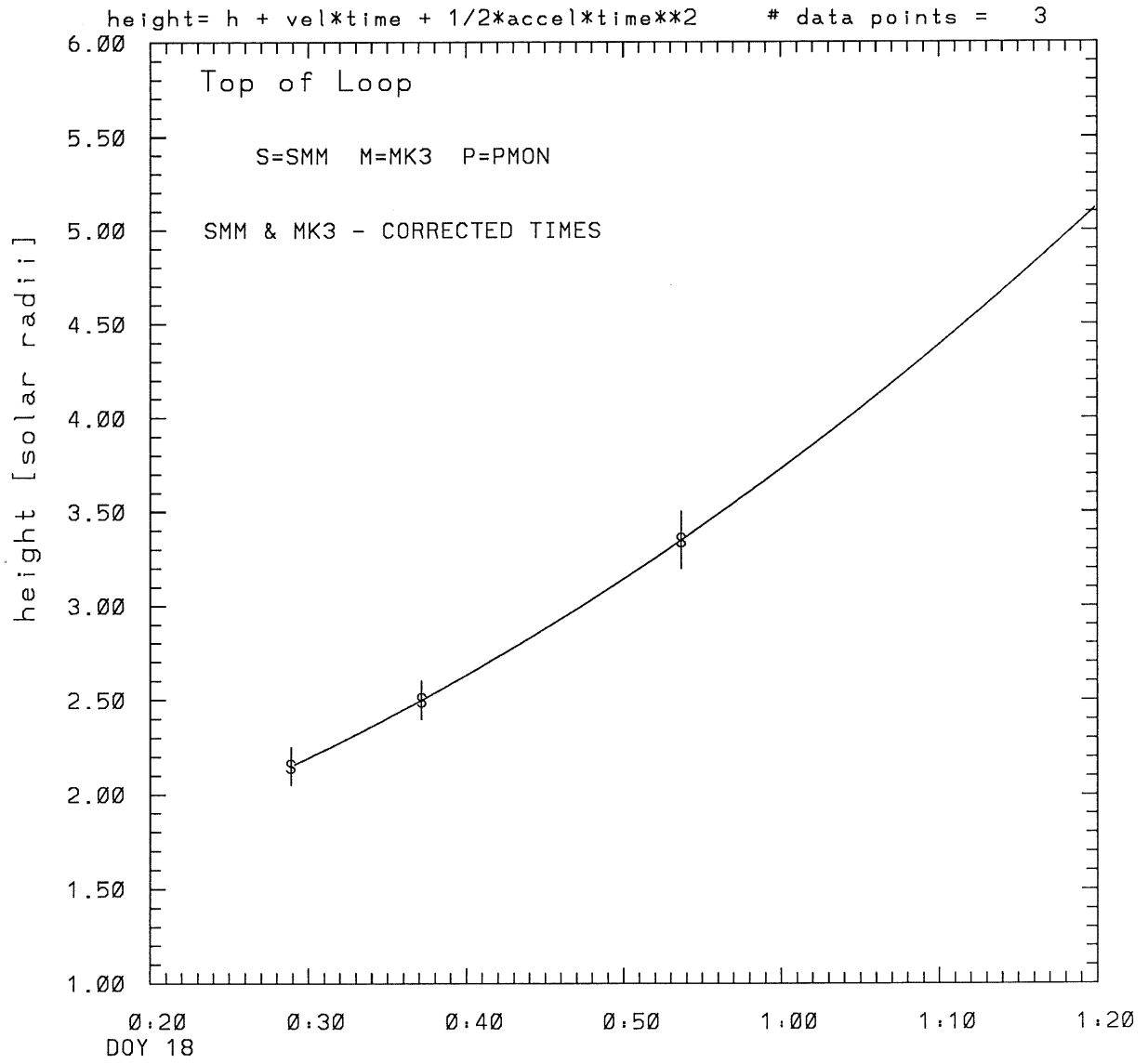


SMM C/P 1989 DOY 18 327 +/- 0 degrees



tstart=DOY 18 0: 7 +/- 0.4 [min.]
radial velocity= 560. +/- 23. [km/sec]

SMM C/P 1989 DOY 18 327 +/- 0 degrees

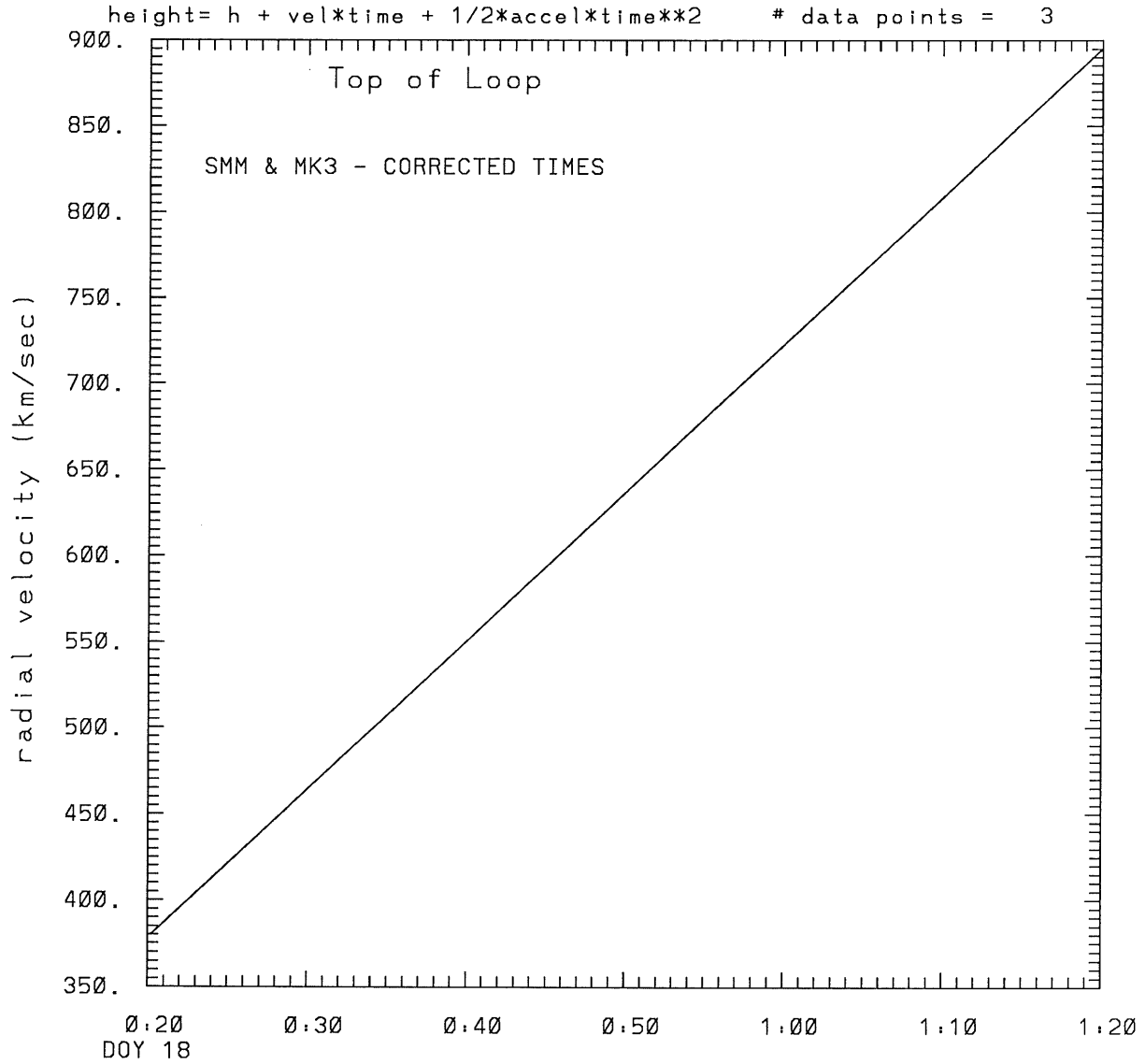


tstart=DOY 17 23:37 from derivative=0

Event begins at 1.12 Solar Radii

radial acceleration = 0.1436 +/- 0.0000 [km/sec**2]

SMM C/P 1989 DOY 18 327 +/- 0 degrees



tstart=DOY 17 23:37 from derivative=0

Event begins at 1.12 Solar Radii

radial acceleration=0.144E+00 km/sec**2

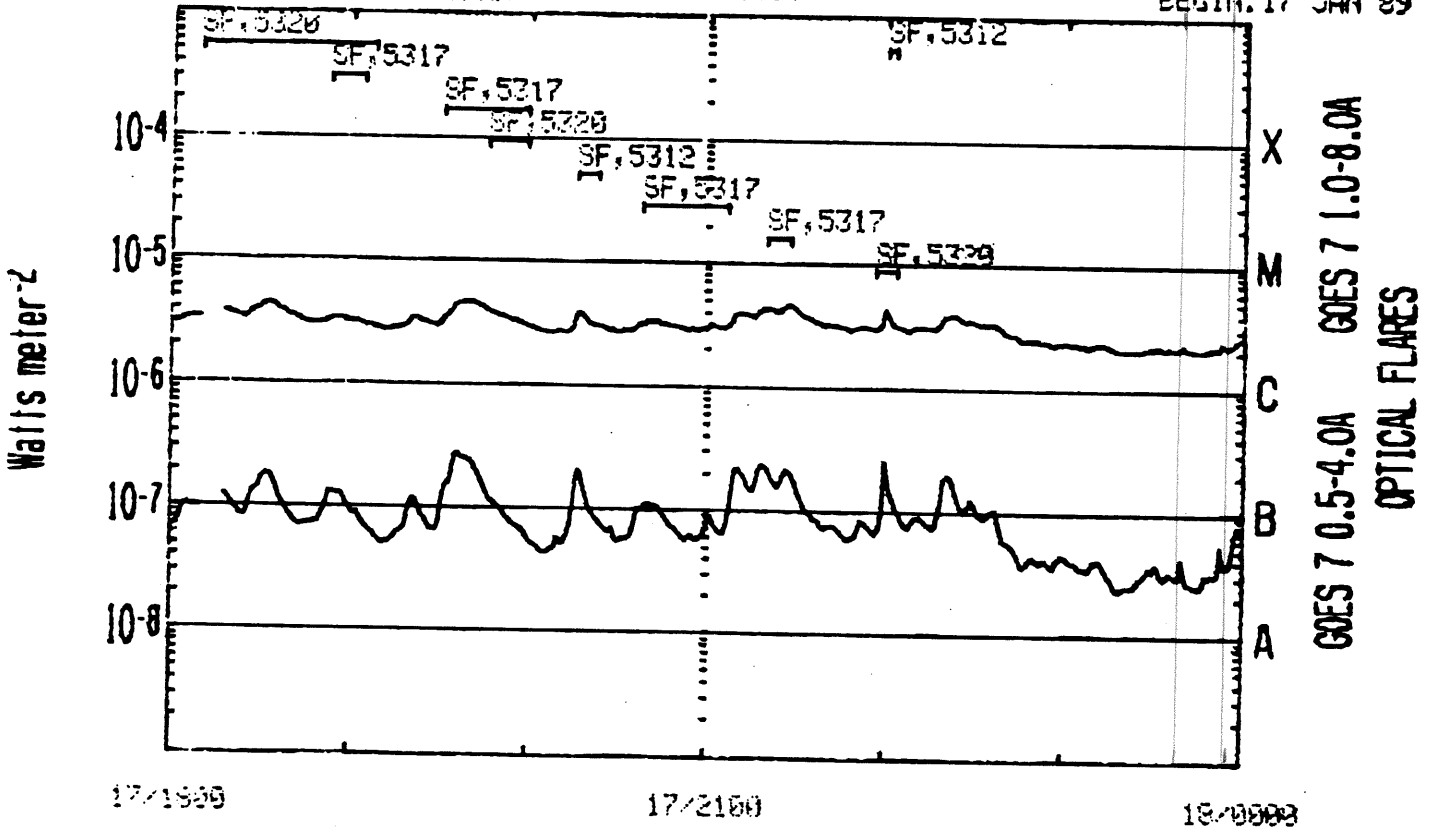
1989 Jan 17

SAA and OPTICAL DATA TOGETHER

STOP
Ret..

Top of Loop [23:37] 2nd order
A [23:55] 2nd order
Top of Cavity

BEGIN: 17 JAN 89

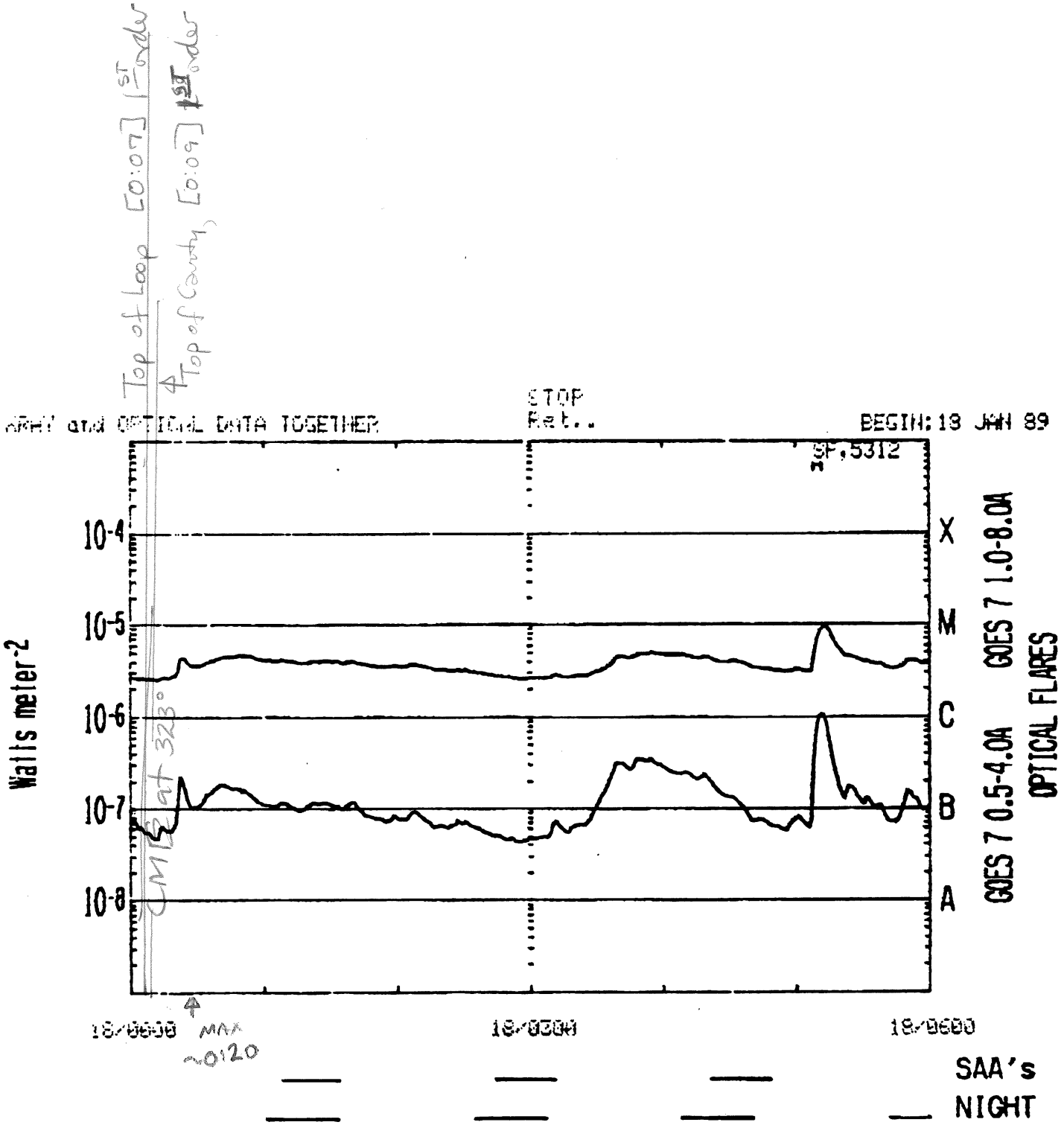


GOES-7 1 MIN DATA; OPTICAL FLARE DUR, IMP. REGION

RUN: 2033UT
21 JAN 89

See next
page for
1st order

1989 Jan 18



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

END: 2042UT
21 JAN 89

This is a 1 order run

INPUT:

year	day	time	radii	radius	error in	angle	error in	datatype
1989	18	0:28:52	2.15	+/- 0.10	327.0	+/- 0.5	SMM	
1989	18	0:37: 9	2.50	+/- 0.10	327.0	+/- 0.5	SMM	
1989	18	0:53:40	3.35	+/- 0.15	327.0	+/- 0.5	SMM	

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

Event began at $t = 0 + -0.145E+02 +/- 0.430E+00$ [minutes]
In more convenient units:
Event began at DOY 18 0: 7 +/- 0.430E+00 [minutes]

Origin defined at DOY 18 0:20

RADIAL INFORMATION:

RADIAL VELOCITY = 560. +/- 23. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.170E+01 +/- 0.380E-01 [solar radii]
c(2) = 0.483E-01 +/- 0.200E-02 [radii/min]
c(2) = 0.560E+03 +/- 0.233E+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)= 0.53320E-01 [radii] see Bevington pg. 114
error in c(2)= 0.23796E-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) = 327. +/- 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 0:28 = 0. km/sec

The TOTAL velocity at 0:28 = 560. km/sec

The TANGENTIAL velocity at 0:37 = 0. km/sec

The TOTAL velocity at 0:37 = 560. km/sec

The TANGENTIAL velocity at 0:53 = 0. km/sec

The TOTAL velocity at 0:53 = 560. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.62

Standard Deviation in start time measurement = 0.103E+02

Error in time = 0.88000E+00 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.935E-03

Reduced Chi Squared = 0.372E-02

Chi Squared = 0.372E-02

The probability for exceeding chi square = 0.976E+00

The correlation coefficient = 0.999E+00

The probability that no LINEAR correlation exists between the variables = 0.2973E-01

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

This is a 2 order run

INPUT:

year	doy	time	radii	radius	error in	angle	error in	datatype
1989	18	0:28:52	2.15	+/- 0.10	327.0	+/- 0.5	SMM	
1989	18	0:37: 9	2.50	+/- 0.10	327.0	+/- 0.5	SMM	
1989	18	0:53:40	3.35	+/- 0.15	327.0	+/- 0.5	SMM	

Structure being measured:
Top of Loop

OUTPUT:

START TIME:

tstart=DOY 17 23:37 from derivative = 0
Event begins at 1.12 Solar Radii
Origin defined at DOY 18 0:20

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.144E+00 +/- 0.112E-05 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.183E+01 +/- 0.110E-05 [solar radii]
c(2) = 0.326E-01 +/- 0.124E-06 [radii/min]
c(2) = 0.378E+03 +/- 0.144E-02 [km/sec]
c(3) = 0.371E-03 +/- 0.290E-08 [radii/min**2]
c(3) = 0.144E+00 +/- 0.112E-05 [km/sec**2]

ANGULAR INFORMATION:

ANGULAR ACCELERATION= 0.0000E+00 +/- 0.0000E+00[radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 327. +/- 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 0:28 = 0. km/sec

The TOTAL velocity at 0:28 = 454. km/sec

The TANGENTIAL velocity at 0:37 = 0. km/sec

The TOTAL velocity at 0:37 = 526. km/sec

The TANGENTIAL velocity at 0:53 = 0. km/sec

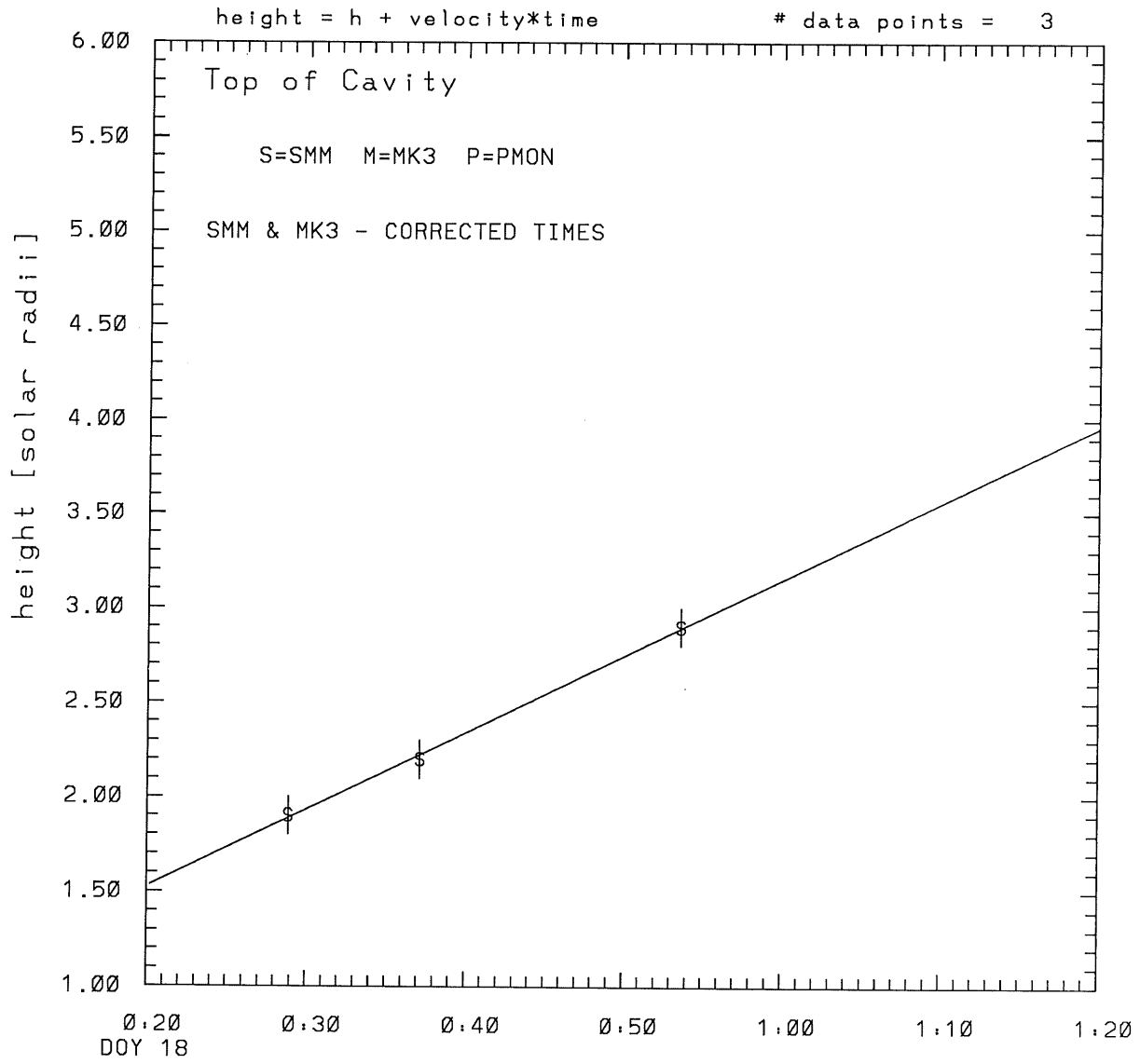
The TOTAL velocity at 0:53 = 668. km/sec

The following info is for estimating goodness of the fit

Number data points = number of coefficients. No error analysis is possible.

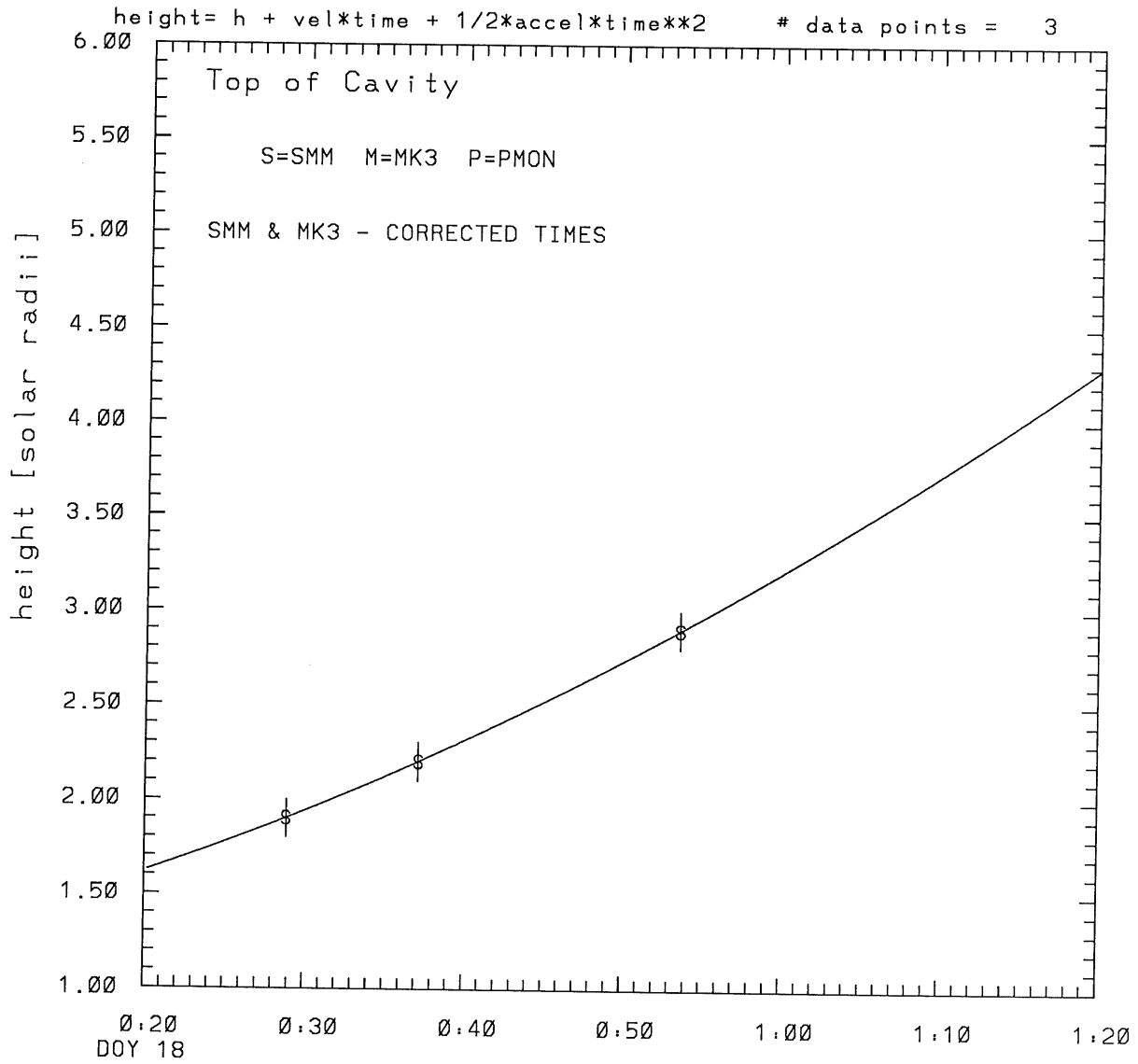
Correlation coefficient is not computable!

SMM C/P 1989 DOY 18 327 +/- 0 degrees



tstart=DOY 18 0: 9 +/- 0.3 [min.]
radial velocity= 471. +/- 13. [km/sec]

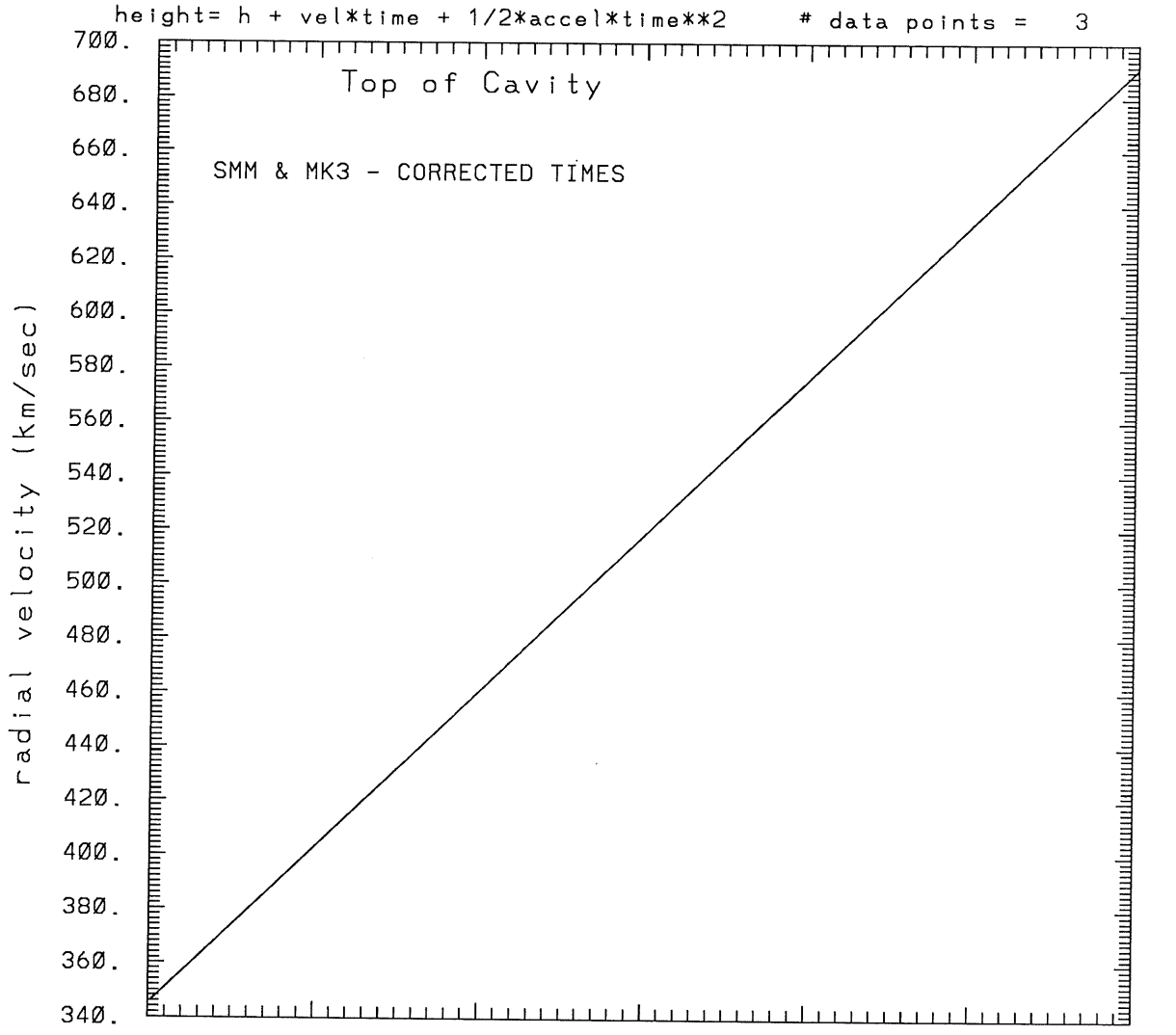
SMM C/P 1989 DOY 18 327 +/- 0 degrees



tstart=DOY 17 23:55 +/- 0.0 [min.]

radial acceleration = 0.0961 +/- 0.0000 [km/sec**2]

SMM C/P 1989 DOY 18 327 +/- 0 degrees



DOY 18

tstart=DOY 17 23:55 +/- 0.0 [min.]

radial acceleration=0.961E-01 km/sec**2

This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in	angle	error in	datatype
1989	18	0:28:52	1.90	+/- 0.10	327.0	+/- 0.5	SMM	
1989	18	0:37: 9	2.20	+/- 0.10	327.0	+/- 0.5	SMM	
1989	18	0:53:40	2.90	+/- 0.10	327.0	+/- 0.5	SMM	

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.129E+02 +/- 0.252E+00$ [minutes]

In more convenient units:

Event began at DOY 18 0: 9 +/- 0.252E+00 [minutes]

Origin defined at DOY 18 0:20

RADIAL INFORMATION:

RADIAL VELOCITY = 471. +/- 13. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

$c(1) = 0.153E+01 +/- 0.242E-01$ [solar radii]
 $c(2) = 0.406E-01 +/- 0.108E-02$ [radii/min]
 $c(2) = 0.471E+03 +/- 0.125E+02$ [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 $c(1) = 0.34220E-01$ [radii] see Bevington pg. 114

error in $c(2) = 0.15272E-02$ [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) = 327. +/- 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 0:28 = 0. km/sec

The TOTAL velocity at 0:28 = 471. km/sec

The TANGENTIAL velocity at 0:37 = 0. km/sec

The TOTAL velocity at 0:37 = 471. km/sec

The TANGENTIAL velocity at 0:53 = 0. km/sec

The TOTAL velocity at 0:53 = 471. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.51

Standard Deviation in start time measurement = 0.103E+02

Error in time = 0.67140E+00 using best fit method

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

Value of reduced Chi Squared returned from nllst2 = 0.372E-03

Reduced Chi Squared = 0.133E-02

Chi Squared = 0.133E-02

The probability for exceeding chi square = 0.985E+00

The correlation coefficient = 0.999E+00

The probability that no LINEAR correlation exists between the variables = 0.2393E-01

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

This is a 2 order run

INPUT:

year	doy	time	radii	error in radius	angle	error in angle	datatype
1989	18	0:28:52	1.90	+/- 0.10	327.0	+/- 0.5	SMM
1989	18	0:37: 9	2.20	+/- 0.10	327.0	+/- 0.5	SMM
1989	18	0:53:40	2.90	+/- 0.10	327.0	+/- 0.5	SMM

Structure being measured:

Top of Cavity

OUTPUT:

START TIME:

Event began at $t = 0 + -0.267E+02 +/- 0.000E+00$ [minutes]

In more convenient units:

Event began at DOY 17 23:55 +/- 0.000E+00 [minutes]

Origin defined at DOY 18 0:20

RADIAL INFORMATION:

RADIAL ACCELERATION = $0.961E-01 +/- 0.238E-05$ km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = $0.162E+01 +/- 0.241E-05$ [solar radii]
c(2) = $0.298E-01 +/- 0.271E-06$ [radii/min]
c(2) = $0.345E+03 +/- 0.315E-02$ [km/sec]
c(3) = $0.249E-03 +/- 0.615E-08$ [radii/min**2]
c(3) = $0.961E-01 +/- 0.238E-05$ [km/sec**2]

ANGULAR INFORMATION:

ANGULAR ACCELERATION= $0.0000E+00 +/- 0.0000E+00$ [radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = $327. +/- 0.$ [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]

$$a(3) = 0.000E+00 \pm 0.000E+00 \text{ [rad/sec**2]}$$

THE TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 0:28 = 0. km/sec

The TOTAL velocity at 0:28 = 396. km/sec

The TANGENTIAL velocity at 0:37 = 0. km/sec

The TOTAL velocity at 0:37 = 444. km/sec

The TANGENTIAL velocity at 0:53 = 0. km/sec

The TOTAL velocity at 0:53 = 539. km/sec

The following info is for estimating goodness of the fit

Number data points = number of coefficients. No error analysis is possible.

Correlation coefficient is not computable!