BVS 2733

DATE 28 May 1993

ORIGINATOR J. Scilipoti

REV -

F13

OLS #14 BEARING RETROFIT

ACCEPTANCE TEST REPORT
VOLUME III OF III
ALIGNMENT AND SYNCHRONIZATION CURVES

(CDRL 006A01)

Contract F04701-90-C-0028

Prepared For

UNITED STATES AIR FORCE
Headquarters, Space Division
Los Angeles, California

Prepared By

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Defense and Electronics Center
Baltimore, Maryland

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ABBREVIATIONS

AS	Along Scan (Synchronization)
AT	Along Track (Alignment)
SD	Surface Distance
SDF	Stored Data Fine
SDS	Stored Data Smooth
RTD F	Real Time Data - Fine
RTD S	Real Time Data - Smoothed
H	HRD Channel
T	T(Thermal) Channel
P	PMT Channel

1. REFPLN PLOTS

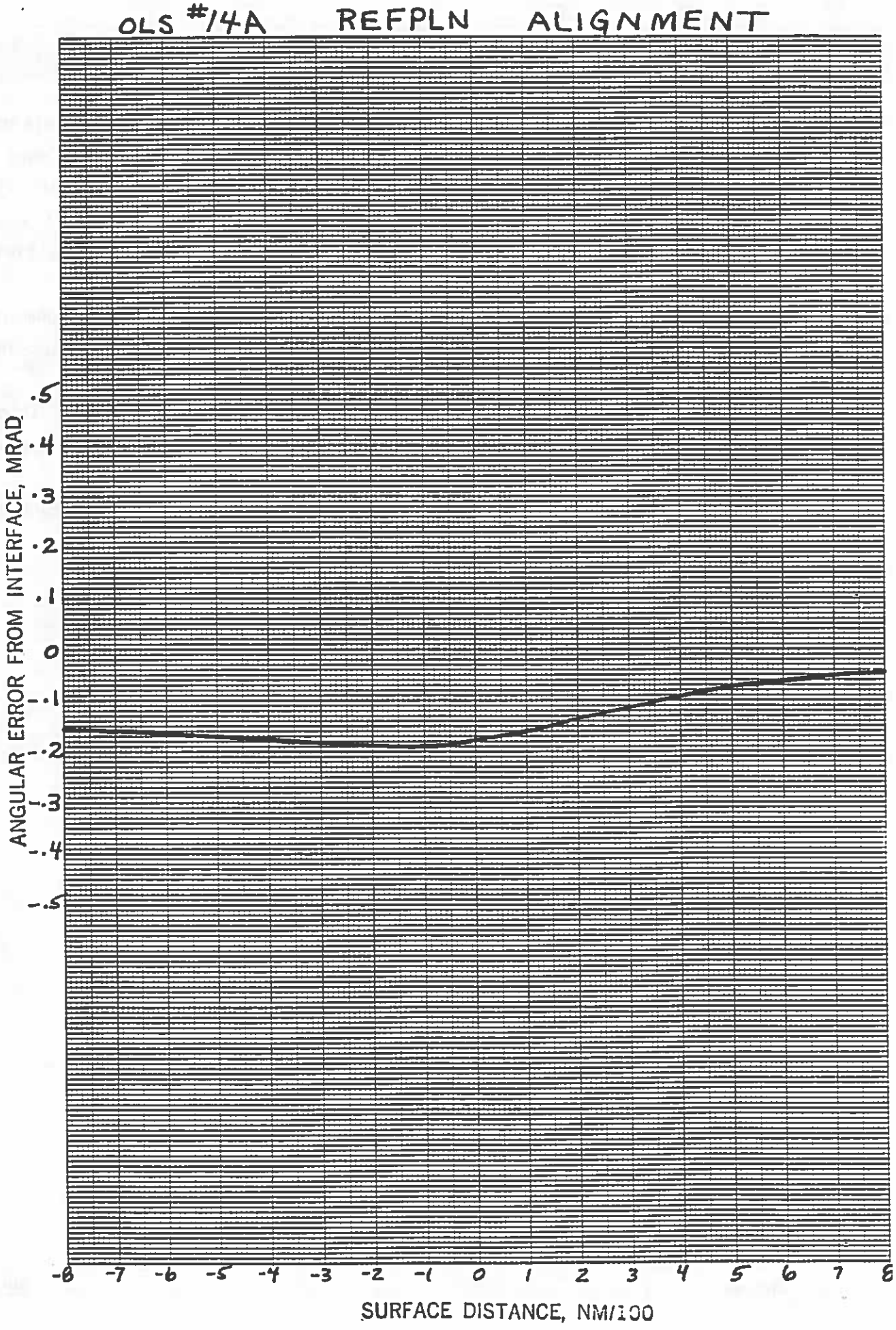
These are the computer-generated least-squares fits to OLS #14 HRD and T Channel Stored Data Fine (SDF) Alignment and Synchronization data taken from the final +5°C SSS/ -8°C M1 Thermal Vacuum run (Orbit Nominal).

For OLS #14, data from Thermal Vacuum Runs with M1 = +12°C was also used to take into account any Alignment and Synchronization sensitivity to M1 temperature.

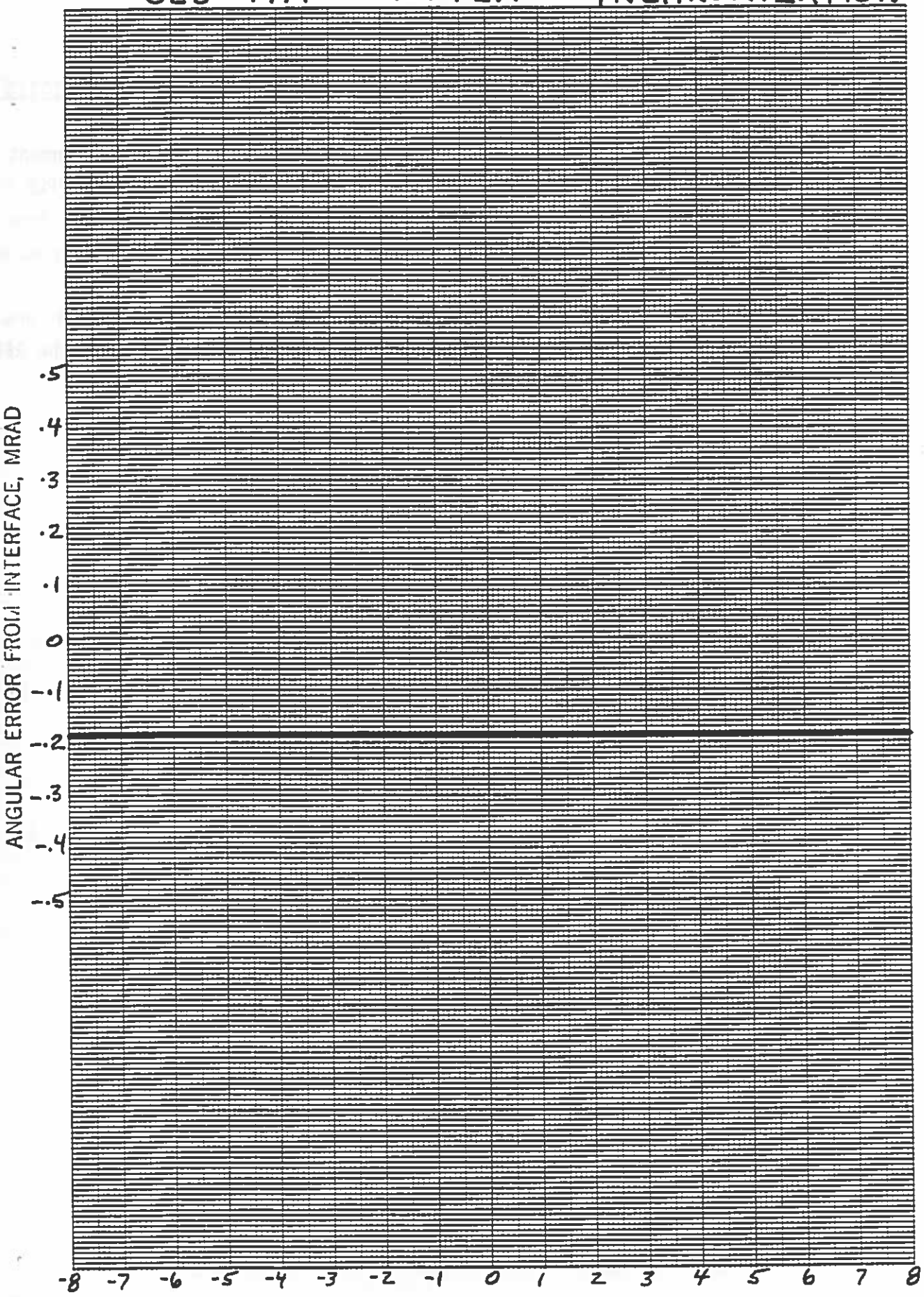
REFPLN is a computer program which generates the Alignment and Synchronization which represents the line-of-sight (LOS) or "look-angles" of the SSS with respect to the mounting (Interface) axes.

The curves are plotted as Error in milliradians from the OLS Interface Axes (essentially the spacecraft PMP axes), vs. ground surface distance along scan from subtrack (Nadir).

(An error of 0.1 milliradian at 450 naut. mi. altitude represents a ground position error of .045 naut. mi. at nadir.)


OLS #14A REFPLN ALIGNMENT
ANGULAR ERROR FROM INTERFACE, MRAD
.5
.4
.3
.2
.1
0
-.1
-.2
-.3
-.4
-.5
-8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8
SURFACE DISTANCE, NM/100

OLS #14A REFPLN SYNCHRONIZATION



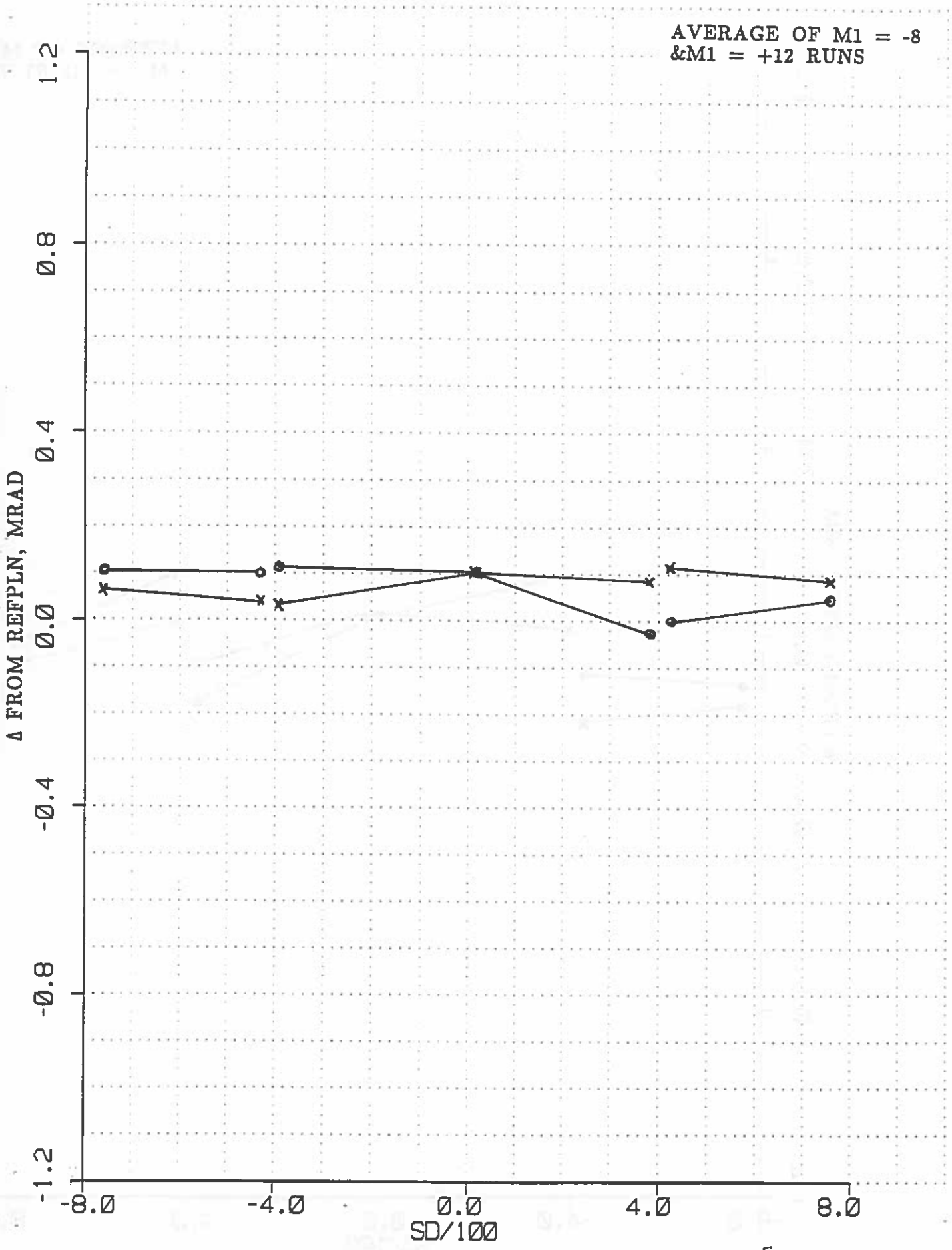
2. ALIGNMENT AND SYNCHRONIZATION FOR ALL MODES AT +5• SSS TEMP PLOTTED WI RESPECT TO REFPLN

These curves are the difference between the Alignment a Synchronization curves at SSS = +5•C (Orbit Nominal) and the REFPLN Plot

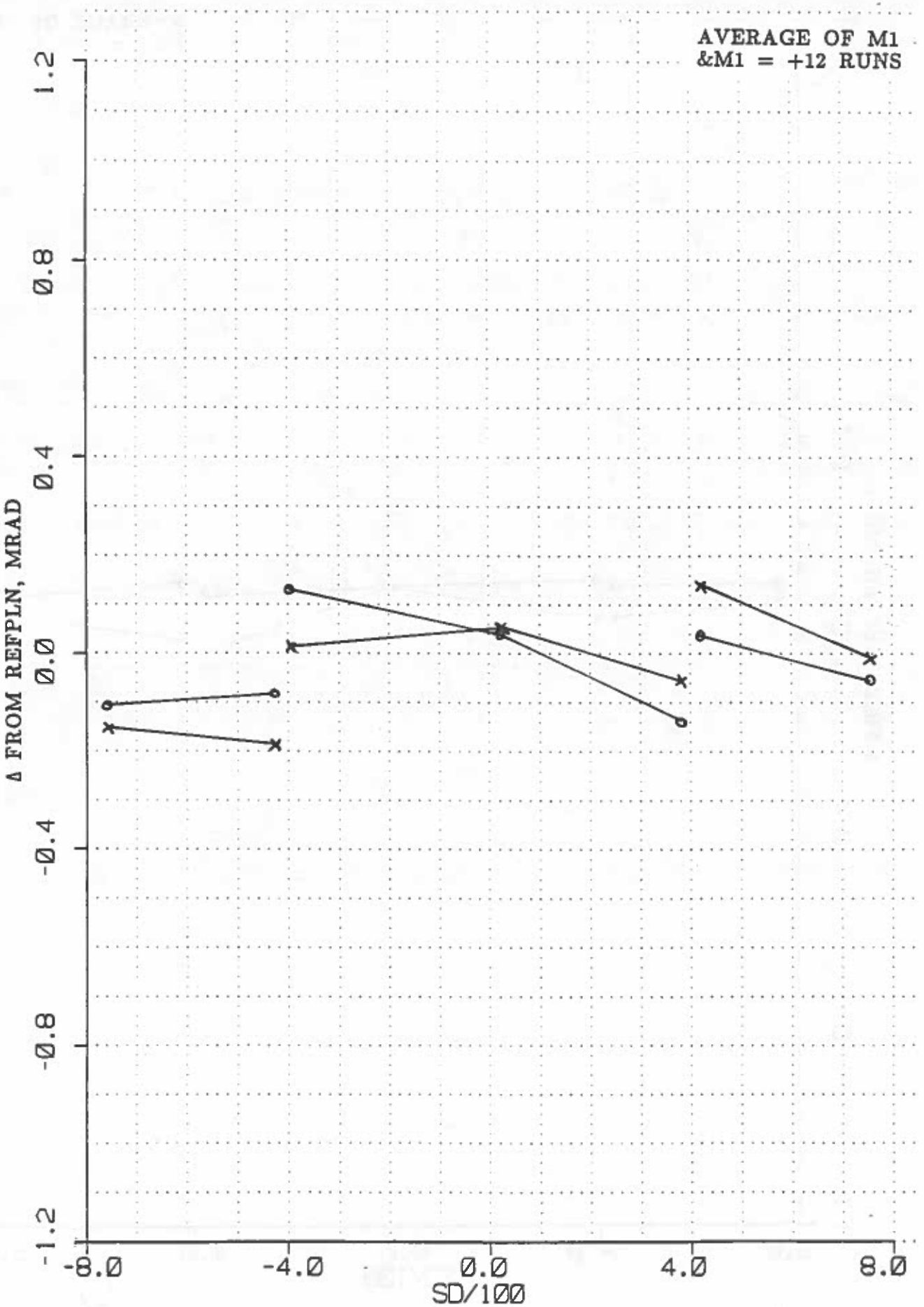
The curves represent the expected angular errors from t line-of-sight (REFPLN) axes for OLS data taken in the various modes operation at orbit nominal conditions.

The curves were generated by averaging the data at M1 = -8• and M1 +12• and then finding the difference between the average and the REFPL

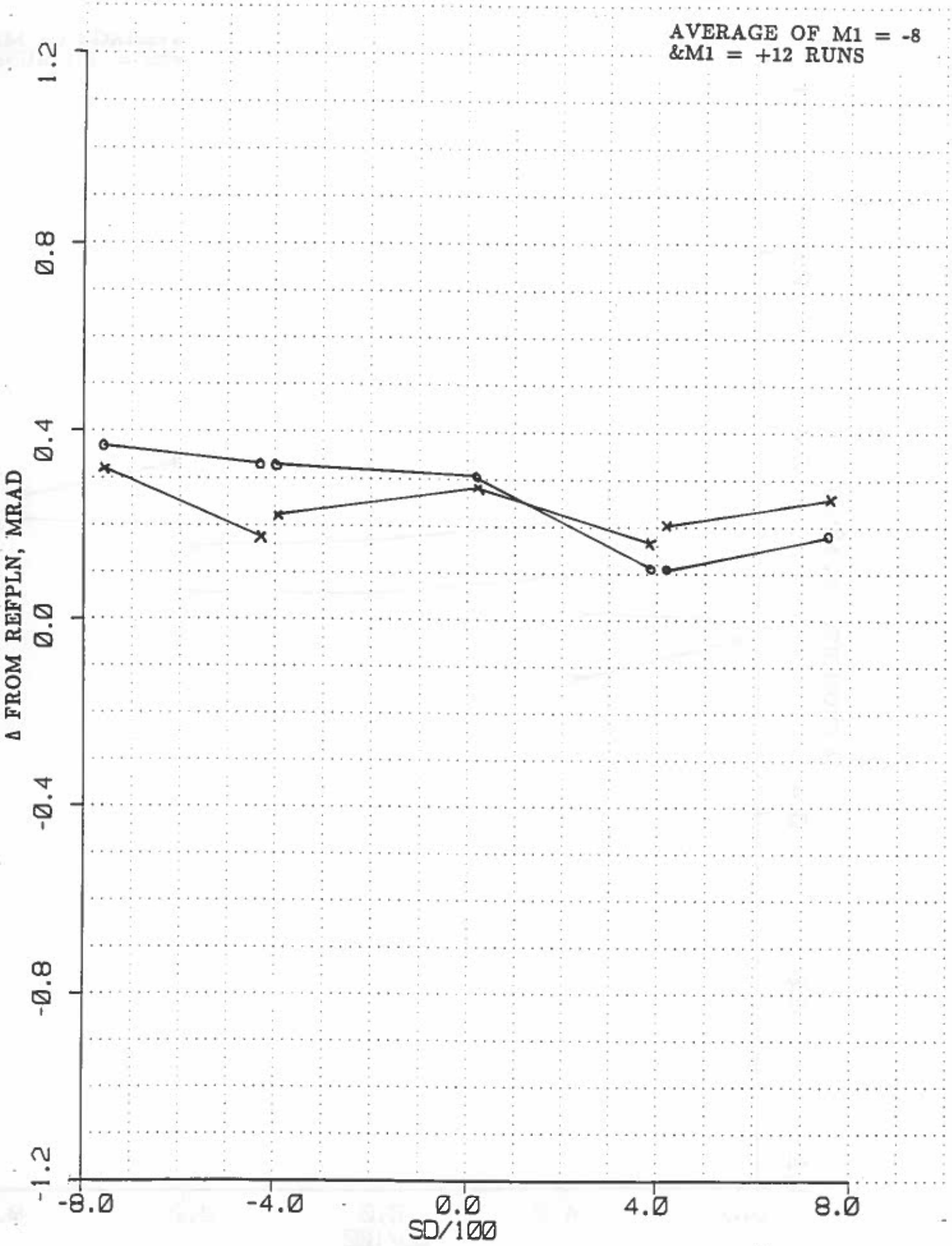
OLS#14 REFPLN ALIGNMENT - HRD SDF

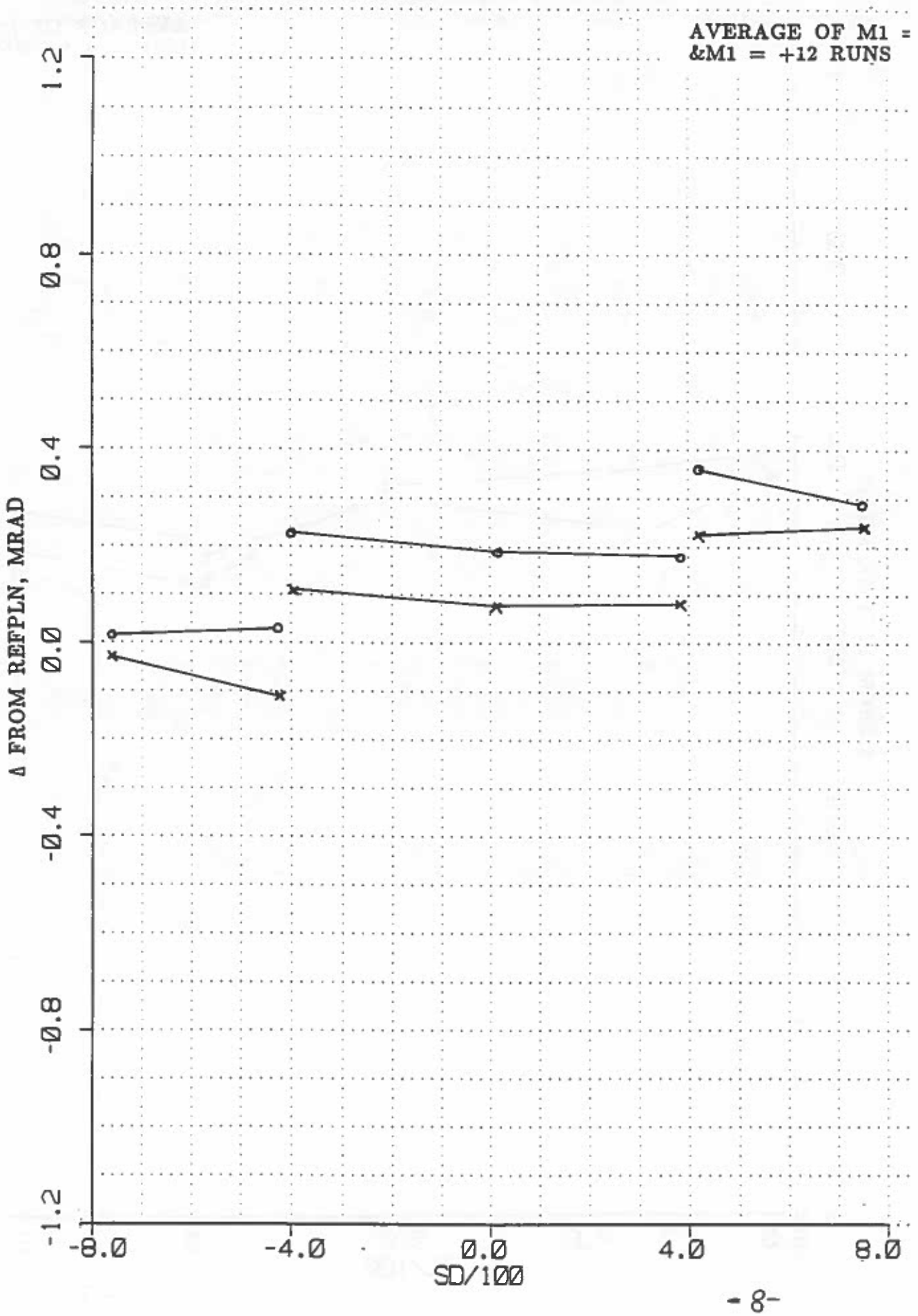


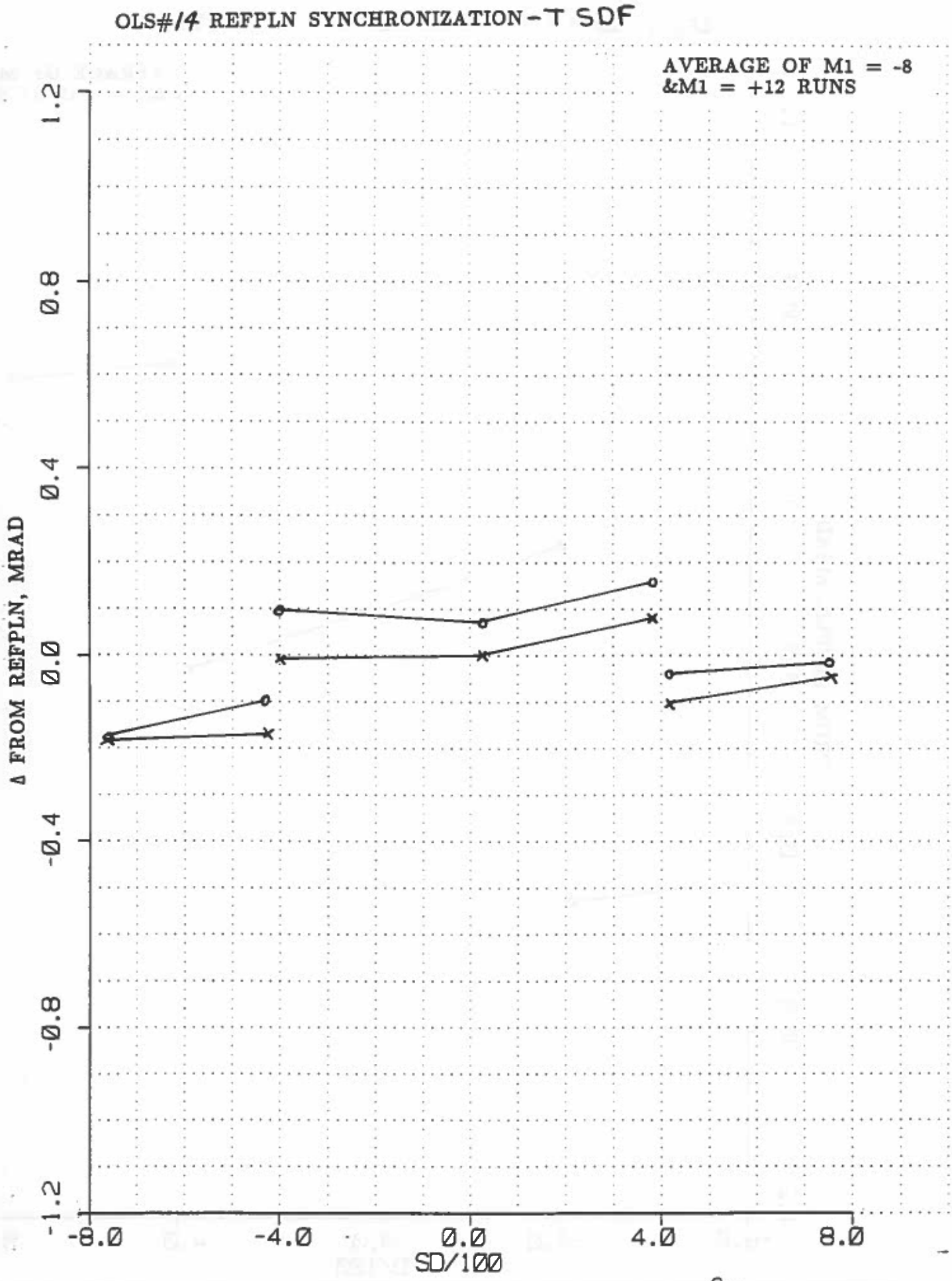
OLS#/4 REFPLN ALIGNMENT - T SDF

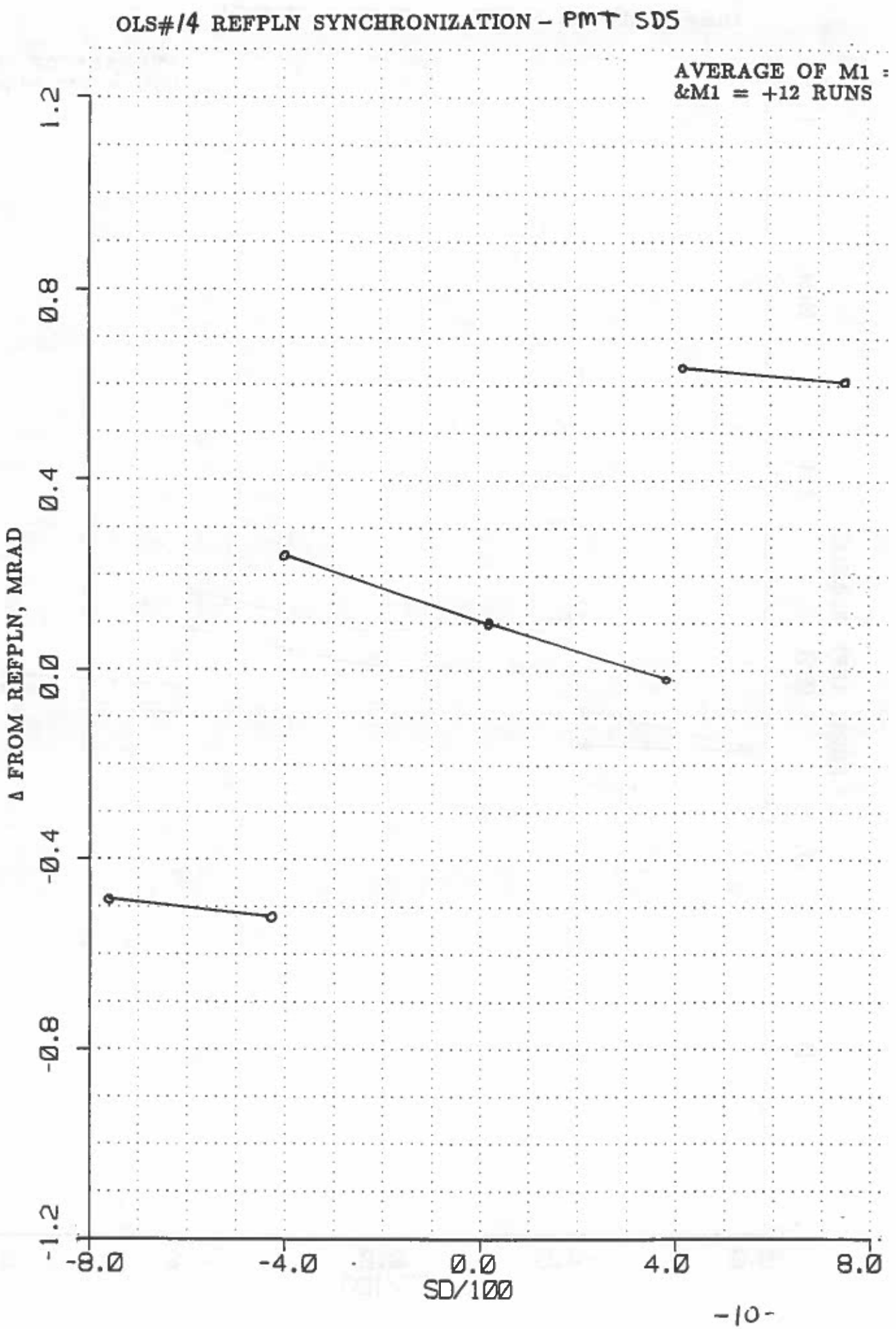


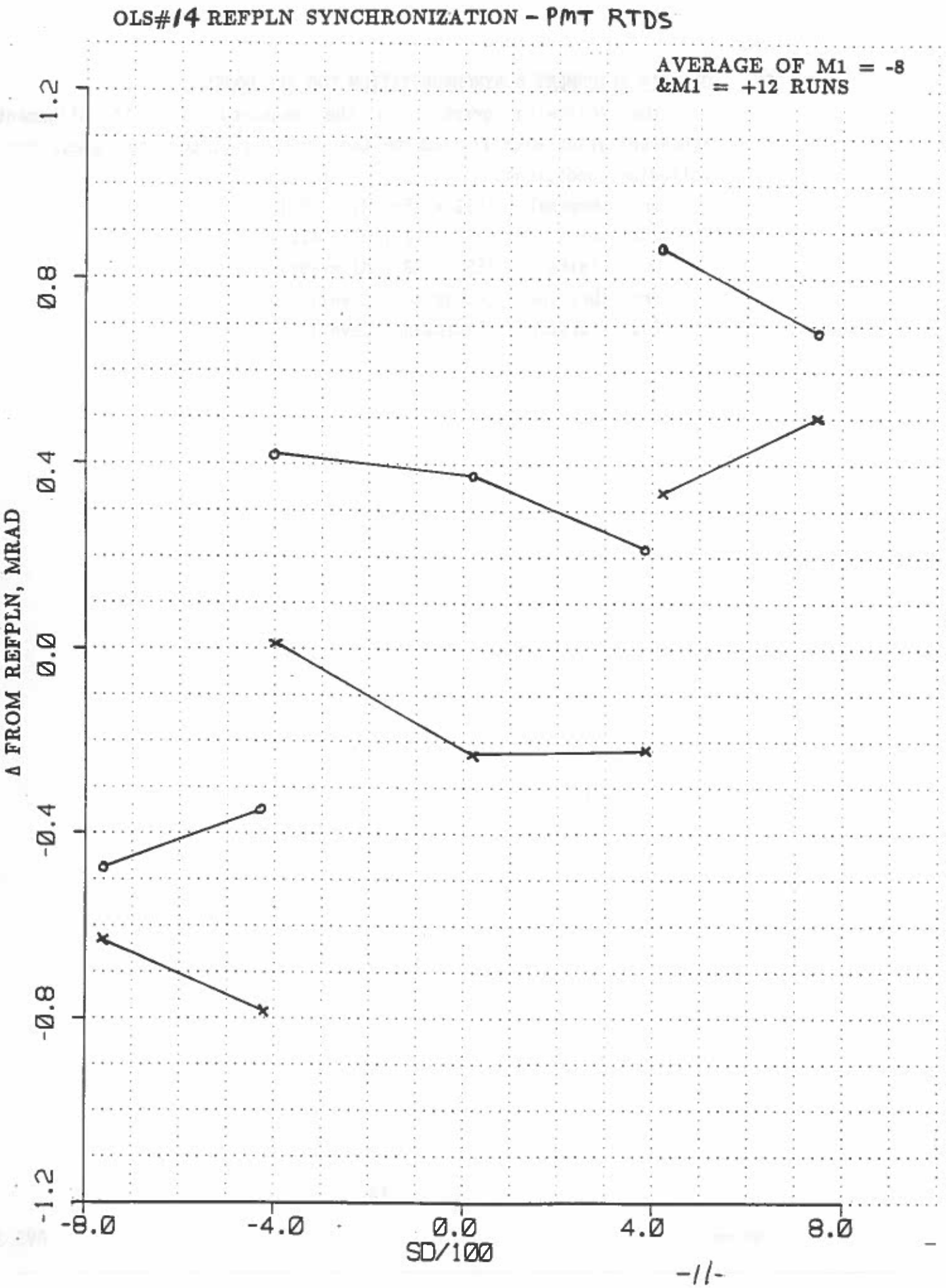
OLS#14 REFPLN ALIGNMENT - PMT RTDS




OLS#14 REFPLN SYNCHRONIZATION - HRD SDF
AVERAGE OF M1 =
&M1 = +12 RUNS
Δ FROM REFPLN, MRAD
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
-8.0
-4.0
0.0
4.0
8.0
SD/100


OLS#/4 REFPLN SYNCHRONIZATION-T SDF
AVERAGE OF M1 = -8
&M1 = +12 RUNS
Δ FROM REFPLN, MRAD
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
-8.0
-4.0
0.0
4.0
8.0
SD/100

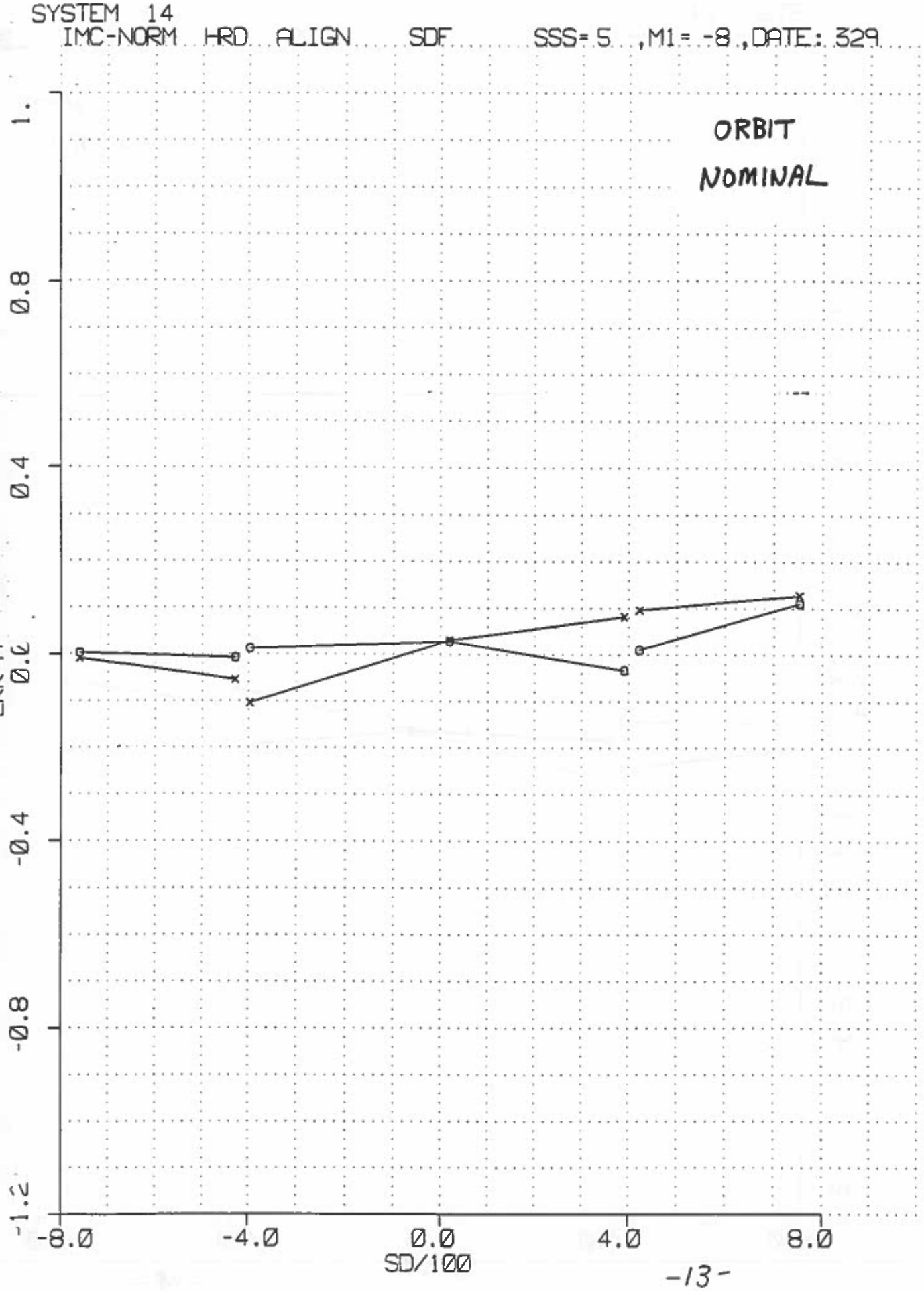

OLS#/4 REFPLN SYNCHRONIZATION - PMT SDS
AVERAGE OF M1 =
&M1 = +12 RUNS
Δ FROM REFPLN, MRAD
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
-8.0
-4.0
0.0
4.0
8.0
SD/100

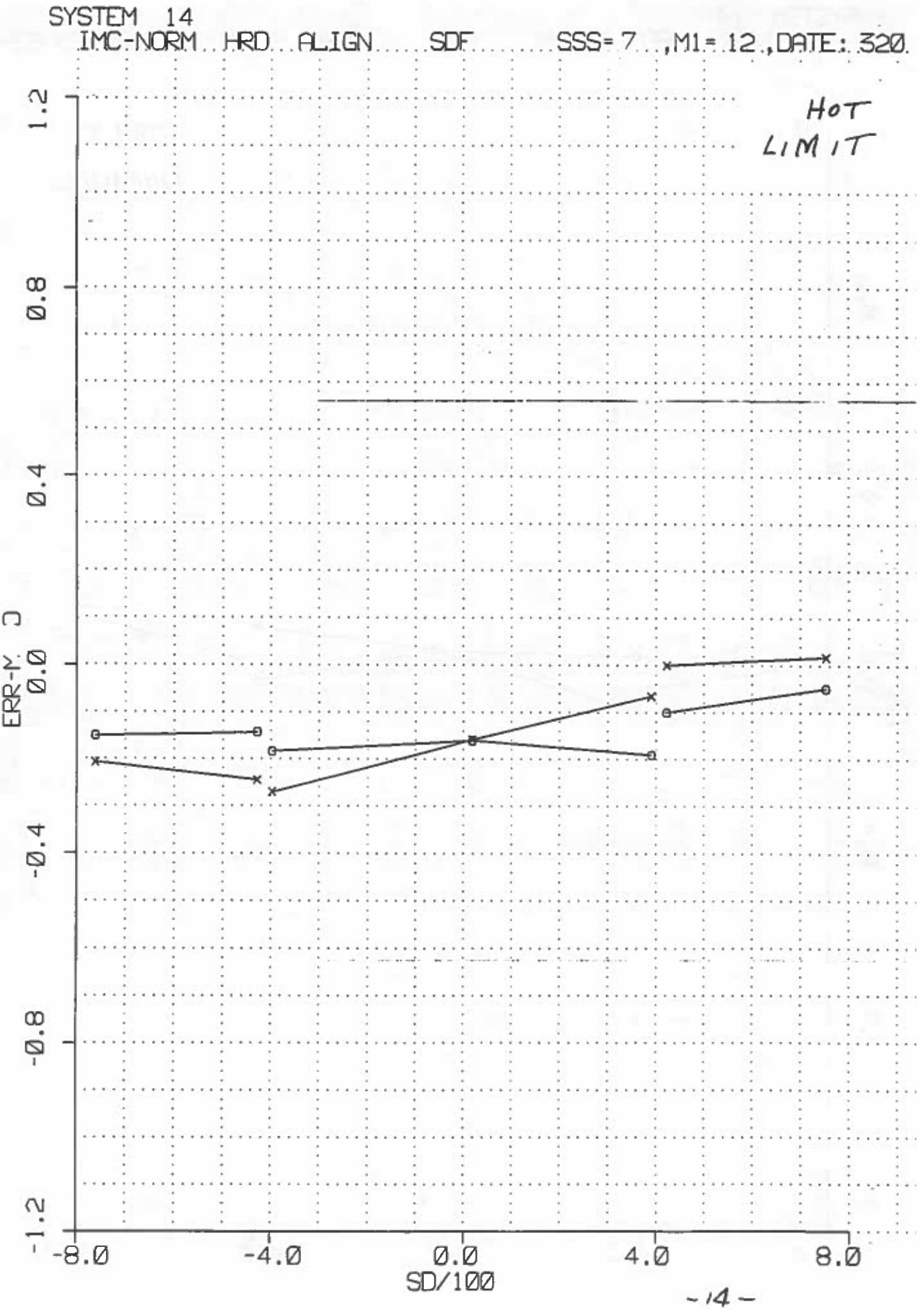

OLS#14 REFPLN SYNCHRONIZATION - PMT RTDS
AVERAGE OF M1 = -8
&M1 = +12 RUNS
Δ FROM REFPLN, MRAD
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
-8.0
-4.0
0.0
4.0
8.0
SD/100

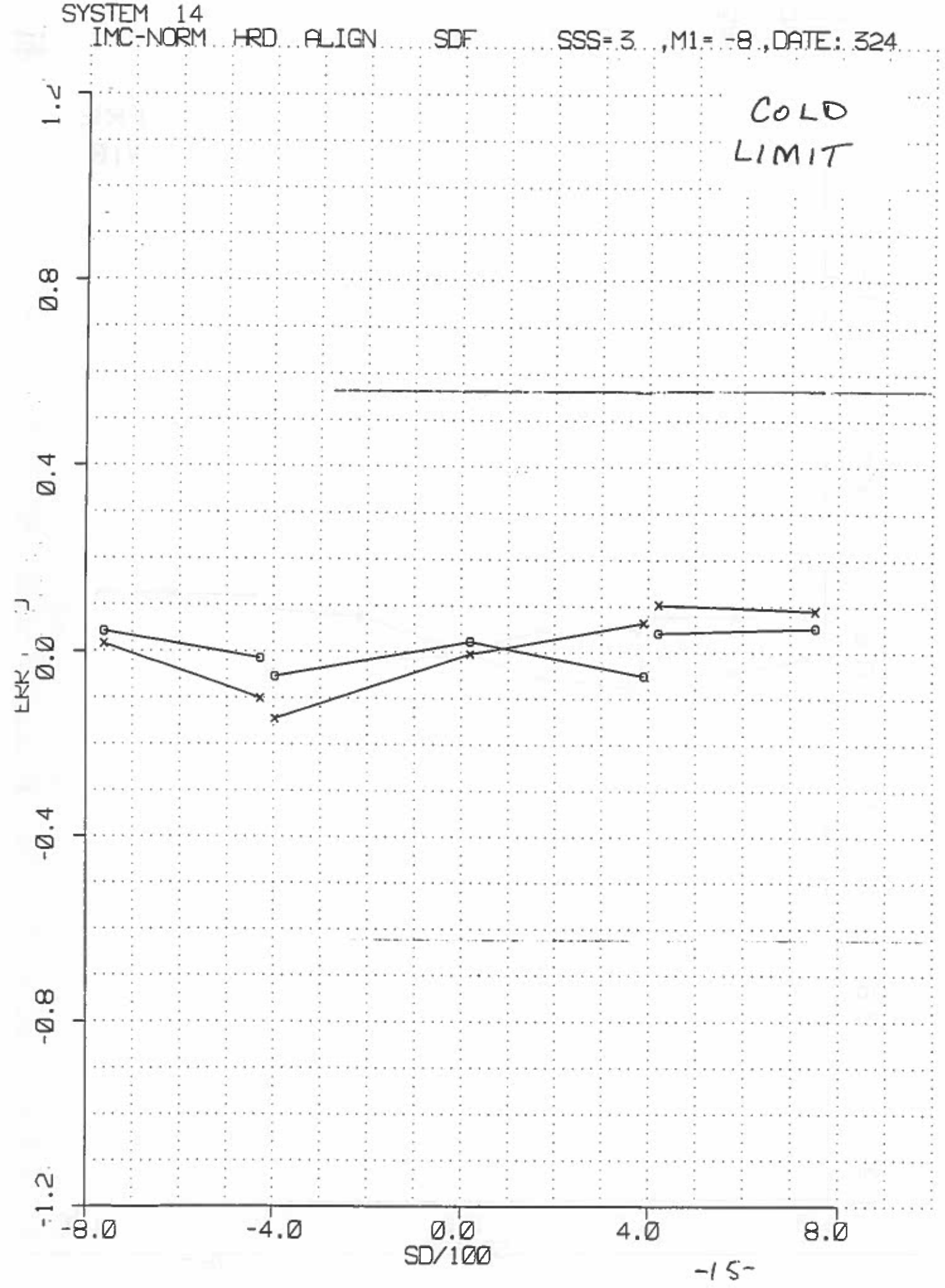
3. OLS #14 ALIGNMENT & SYNCHRONIZATION FOR ALL MODES

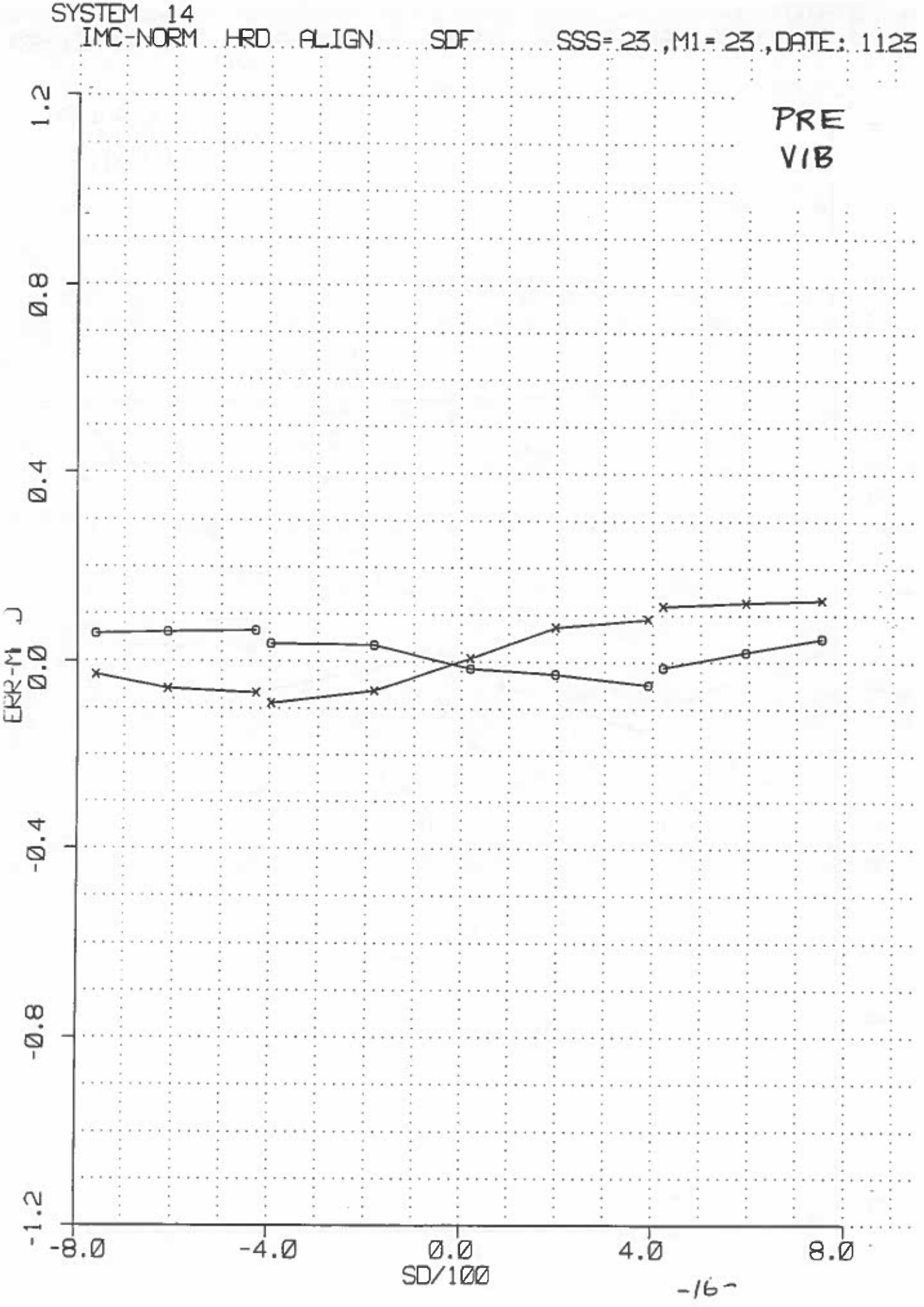
The following graphs are the measured OLS #14 Alignment Synchronization with respect to the mounting (Interface) axes, for th following conditions.

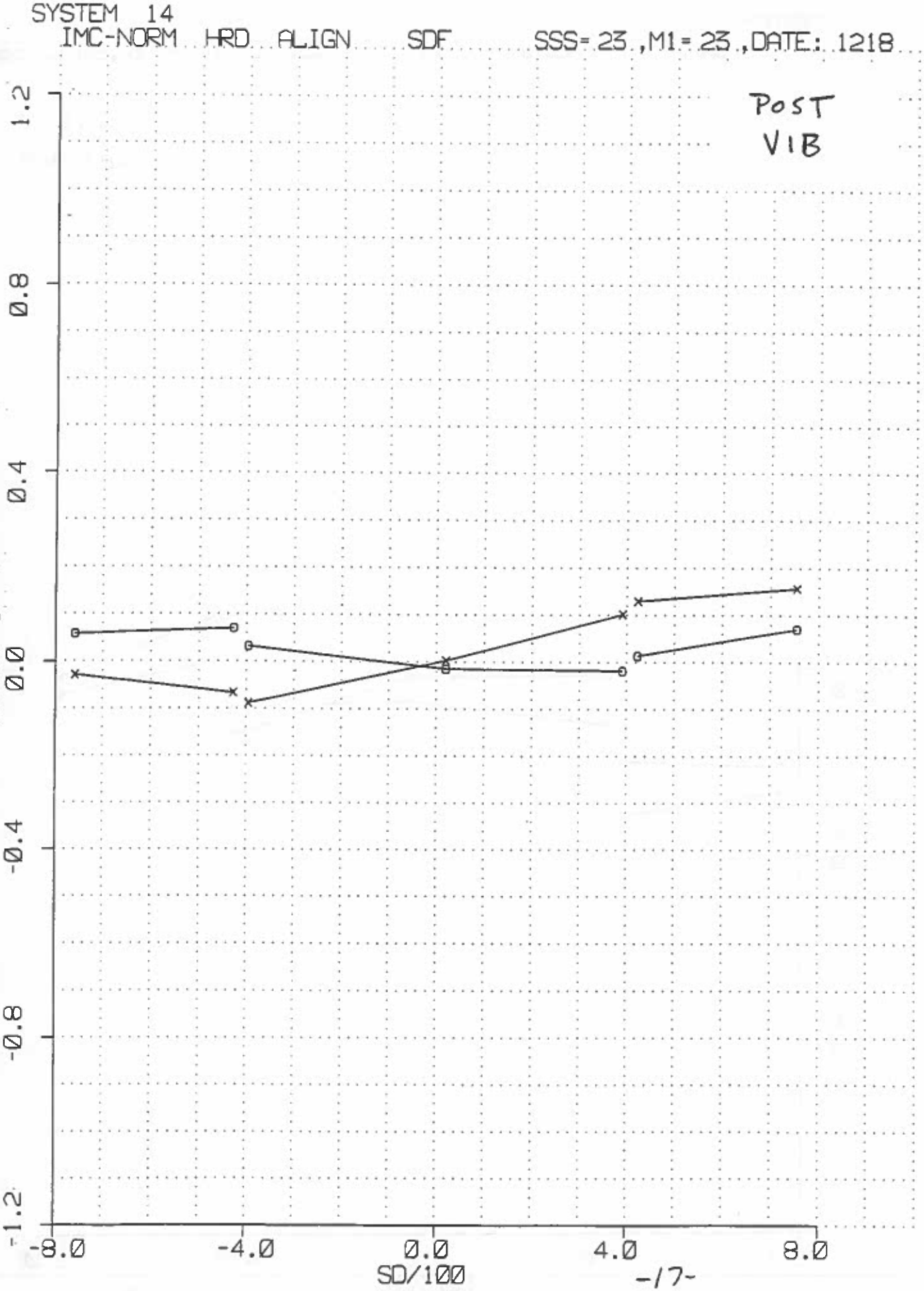
Orbit Nominal	(SSS = +5°, M1 = -8°)
Hot Limits	(SSS = +7°, M1 = +12°)
Cold Limits	(SSS = +3°, M1 = -8°)
Pre Vibration	(Acceptance Level)
Post Vibration	(Acceptance Level)

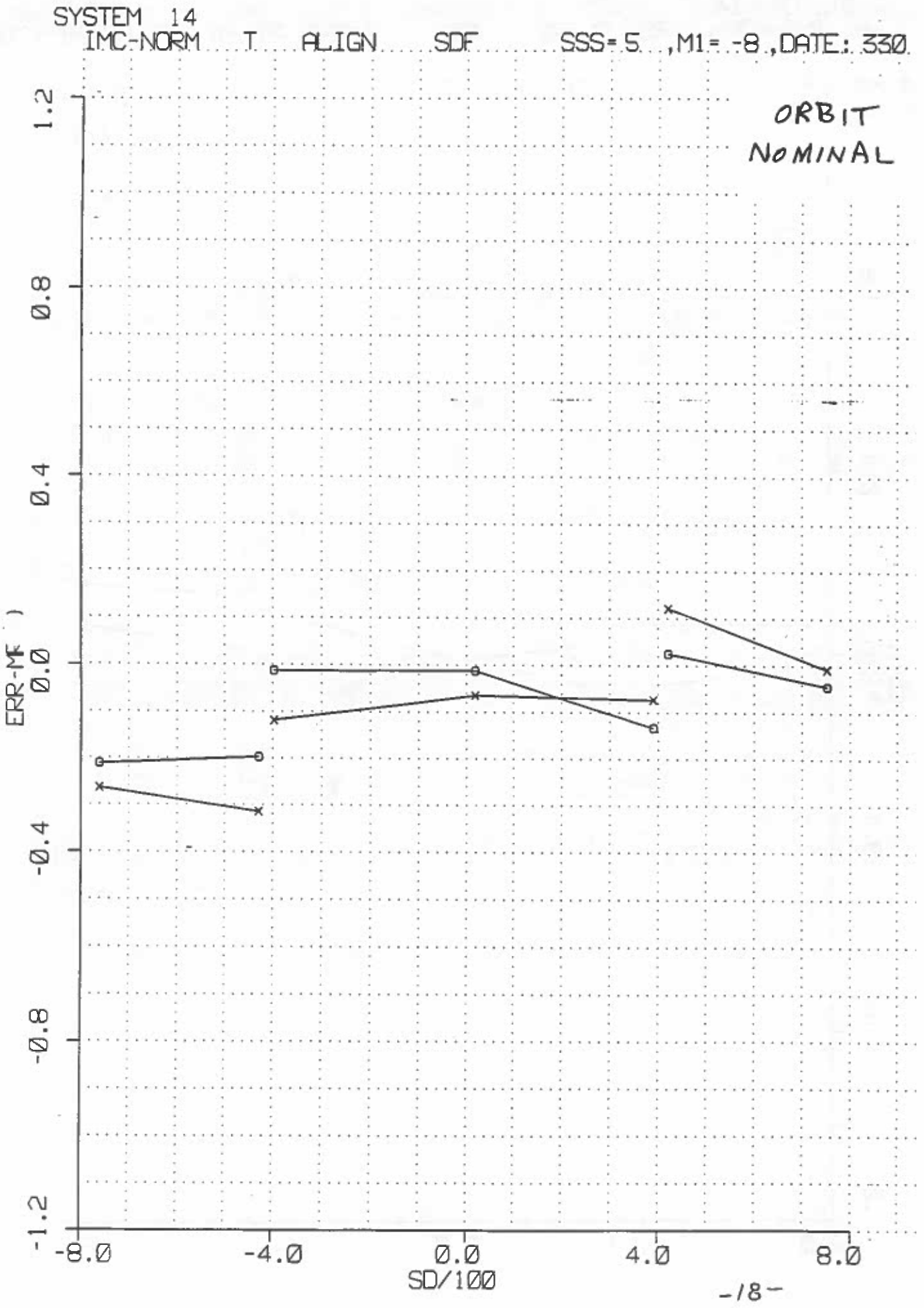

SYSTEM 14
IMC-NORM HRD ALIGN SDF SSS= 5 ,M1= -8 ,DATE: 329
ORBIT
NOMINAL
1.
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-MT
-8.0
-4.0
0.0
4.0
8.0
SD/100

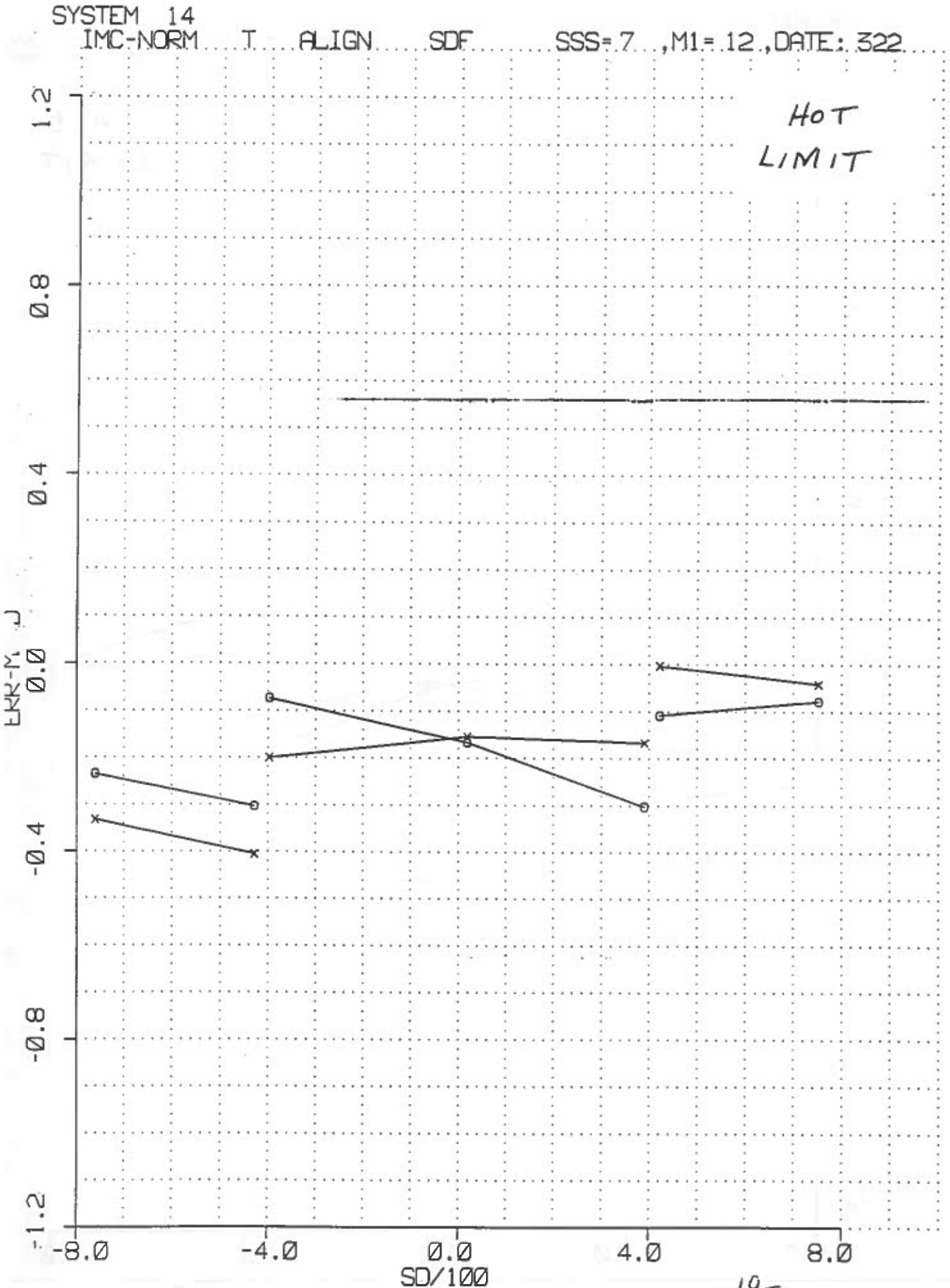

SYSTEM 14
IMC-NORM HRD ALIGN SDF SSS= 7 ,M1= 12 ,DATE: 320
HOT
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

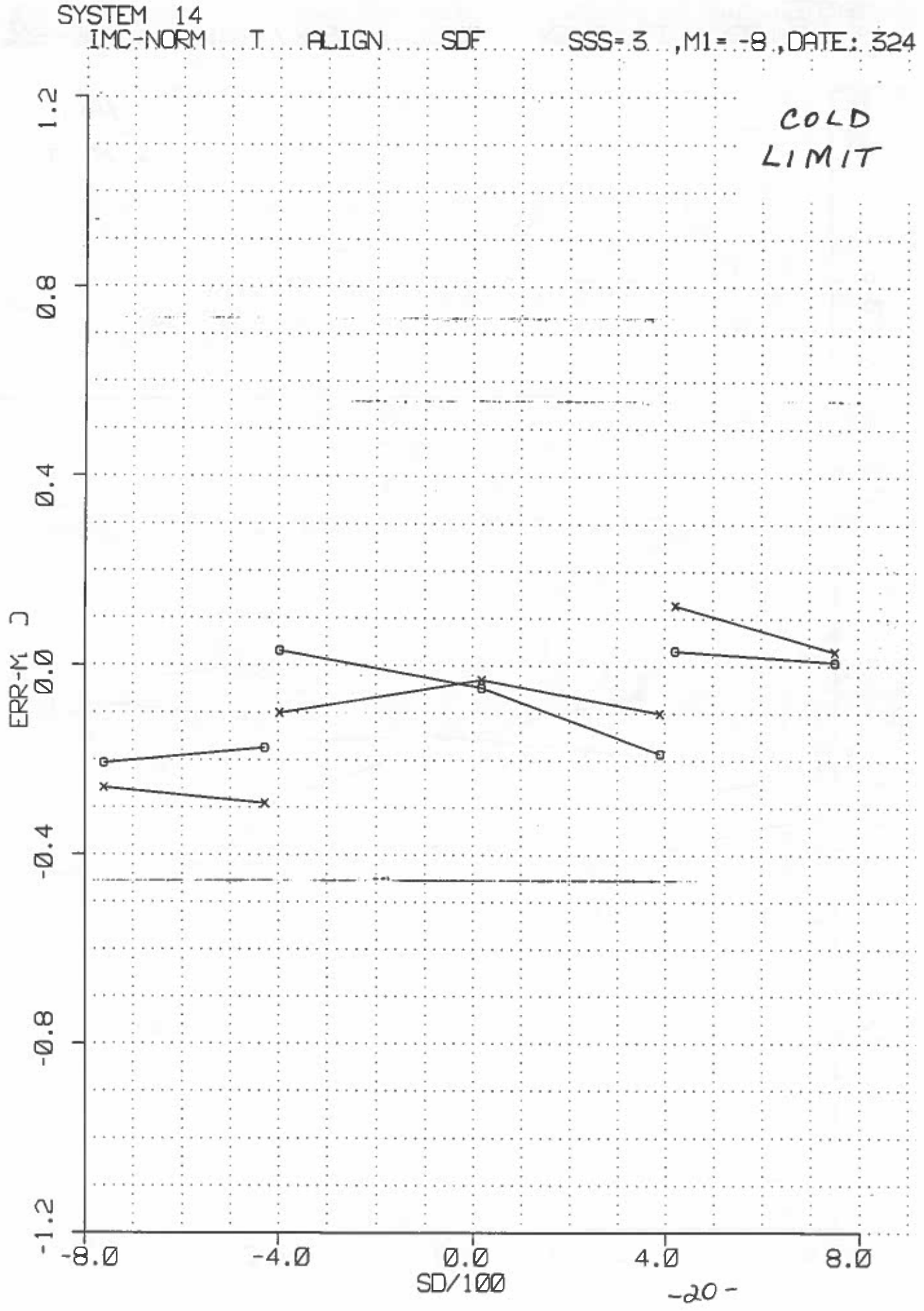

SYSTEM 14
IMC-NORM HRD ALIGN SDF SSS=3 ,M1=-8 ,DATE: 324
COLD
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR
-8.0
-4.0
0.0
4.0
8.0
SD/100

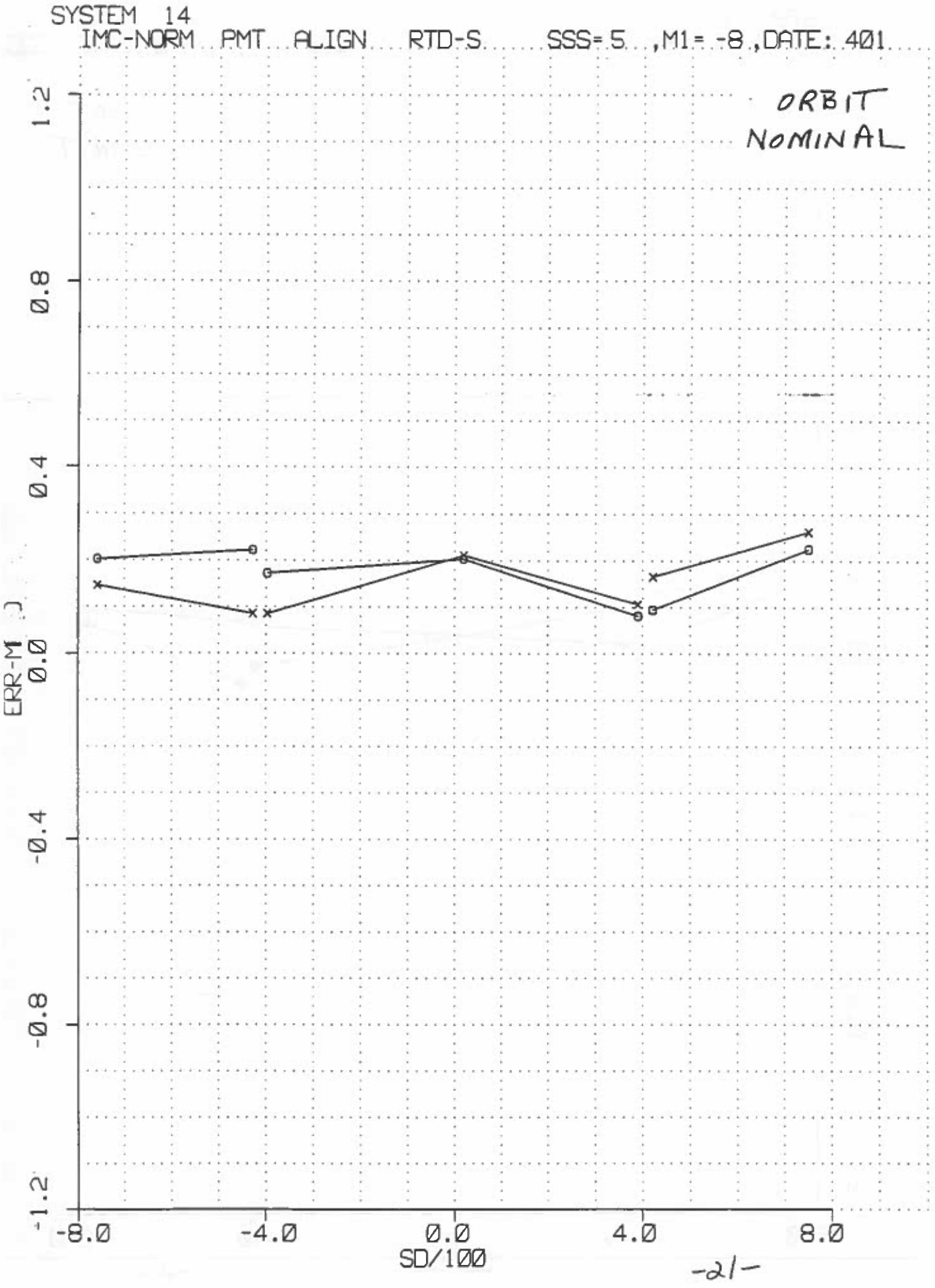

SYSTEM 14
IMC-NORM HRD ALIGN SDF SSS=23,M1=23,DATE: 1123
PRE
VIB
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M J
-8.0
-4.0
0.0
4.0
8.0
SD/100

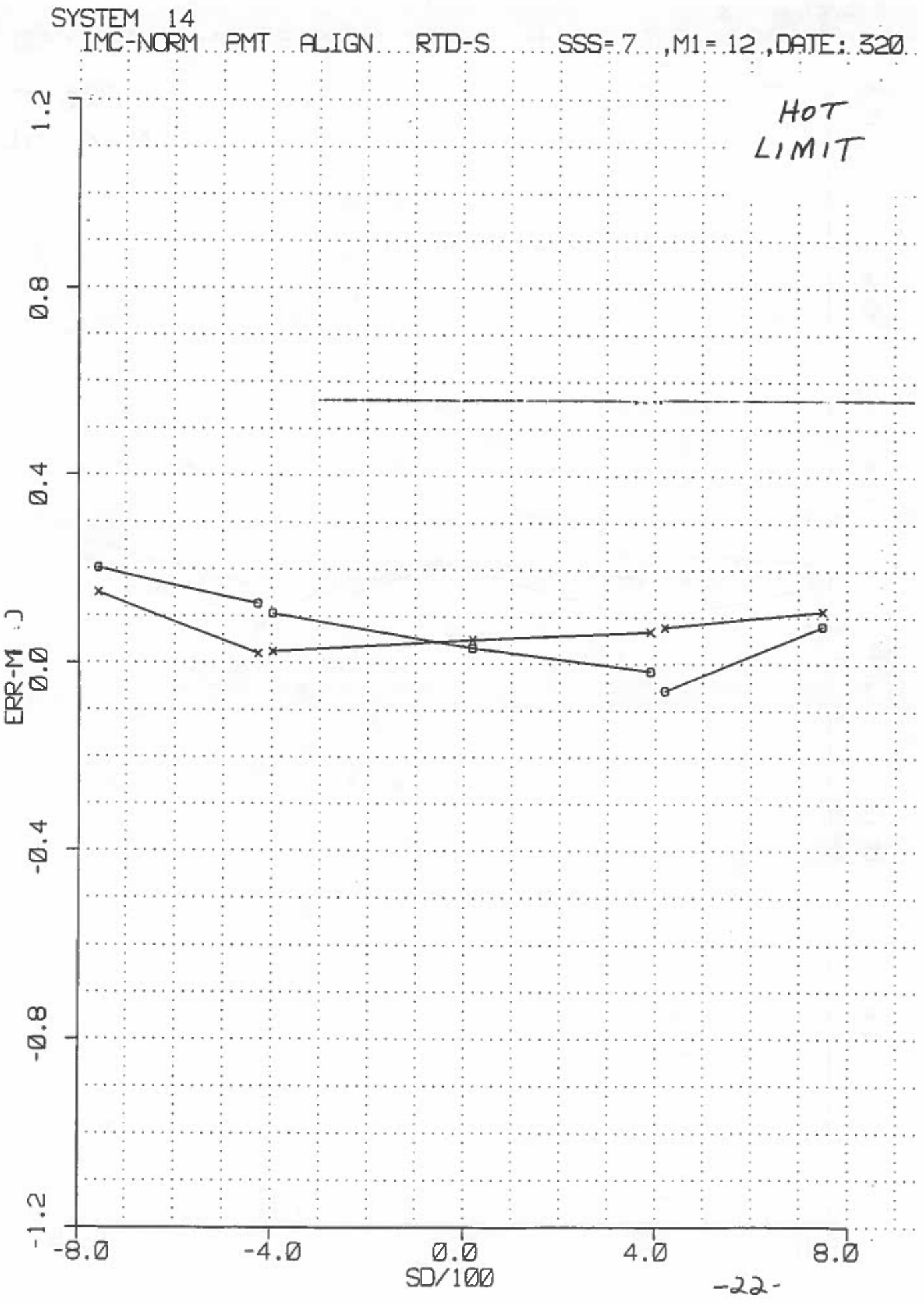

SYSTEM 14
IMC-NORM HRD ALIGN SDF SSS= 23 ,M1= 23 ,DATE: 1218
POST
VIB
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

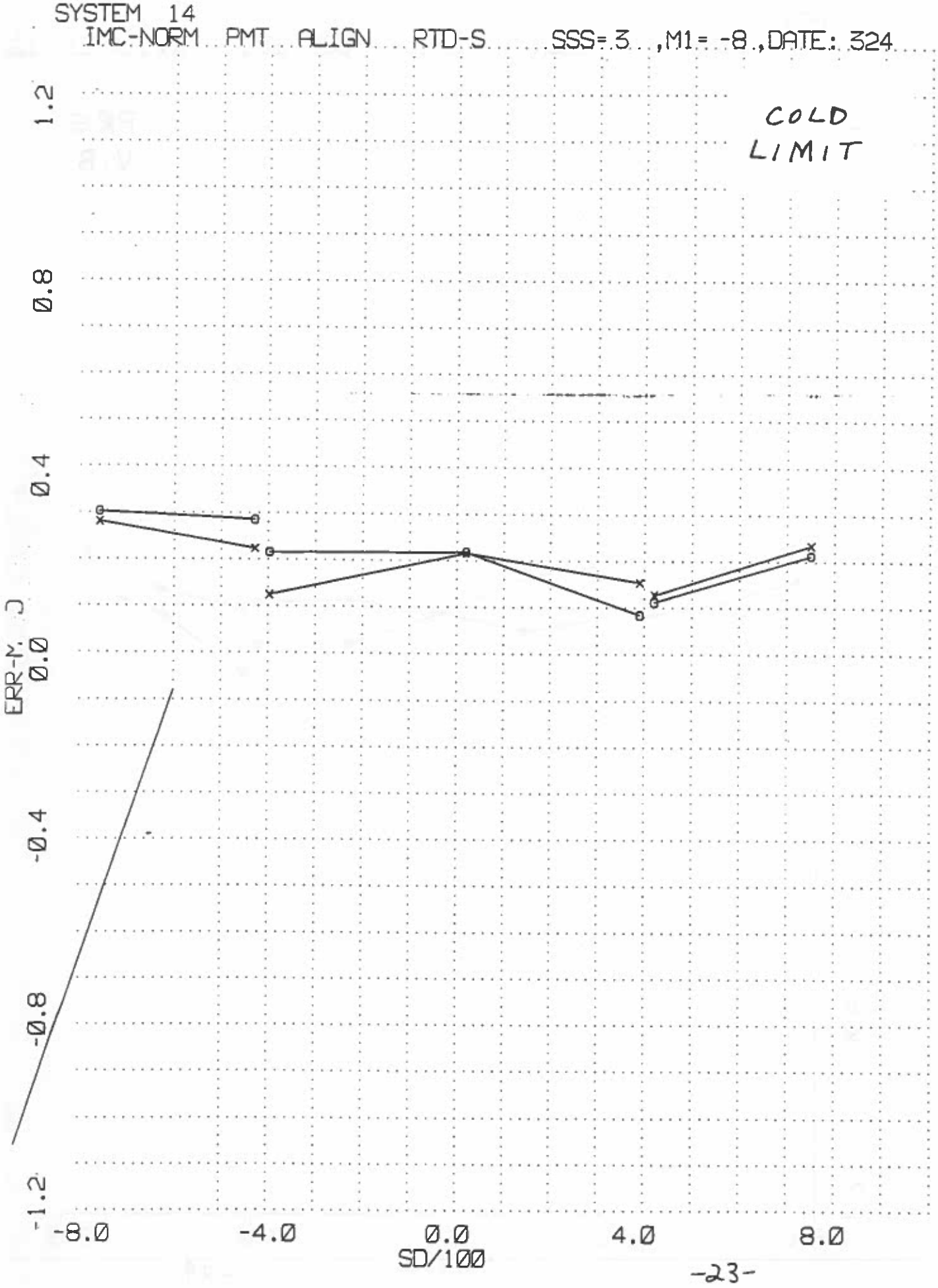

SYSTEM 14
IMC-NORM T ALIGN SDF SSS=5 ,M1=-8,DATE:330
ORBIT
NOMINAL
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-MF)
-8.0
-4.0
0.0
4.0
8.0
SD/100

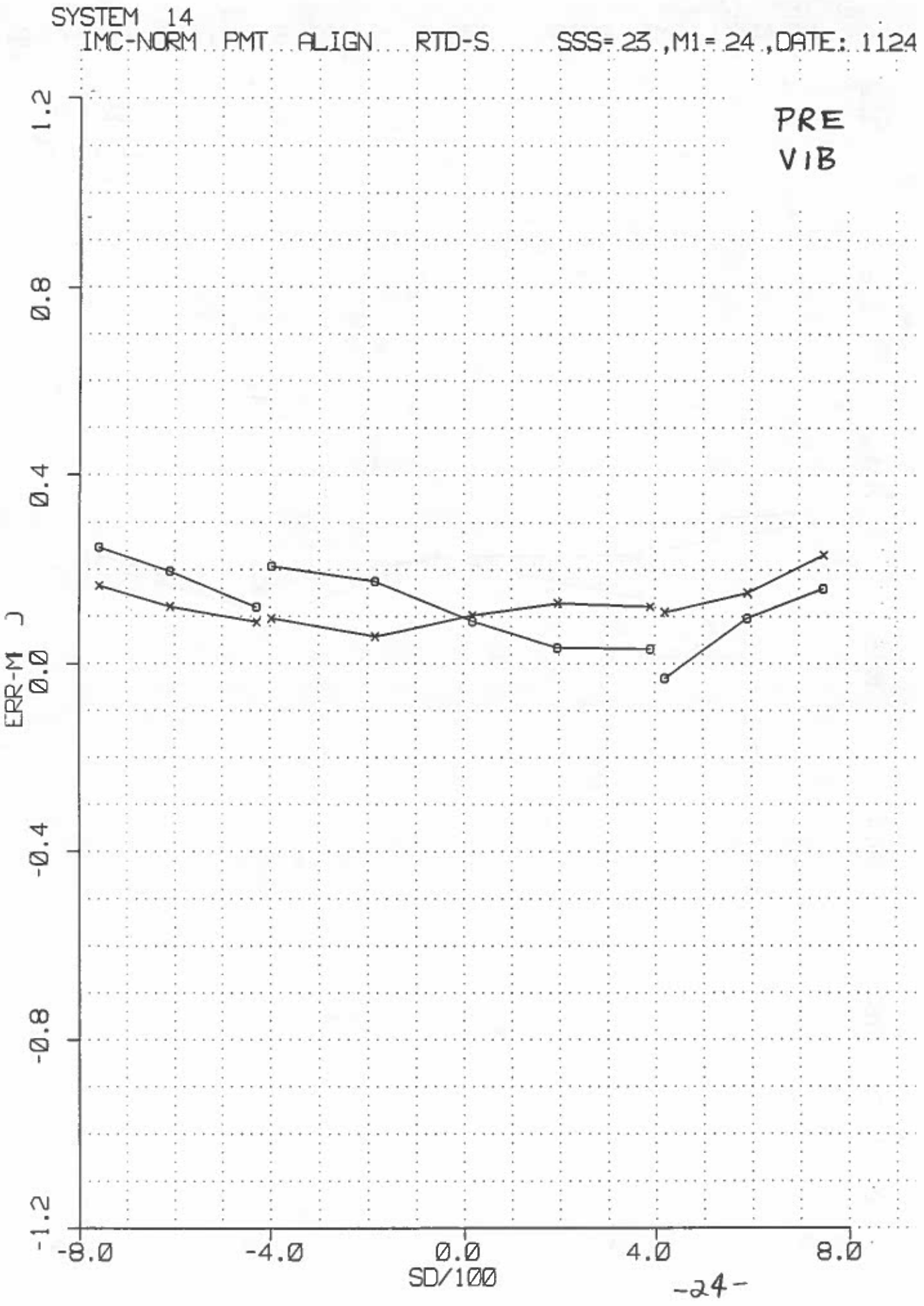

SYSTEM 14
IMC-NORM T ALIGN SDF SSS= 7 ,M1= 12 ,DATE: 322
HOT
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
-8.0
-4.0
0.0
4.0
8.0
SD/100

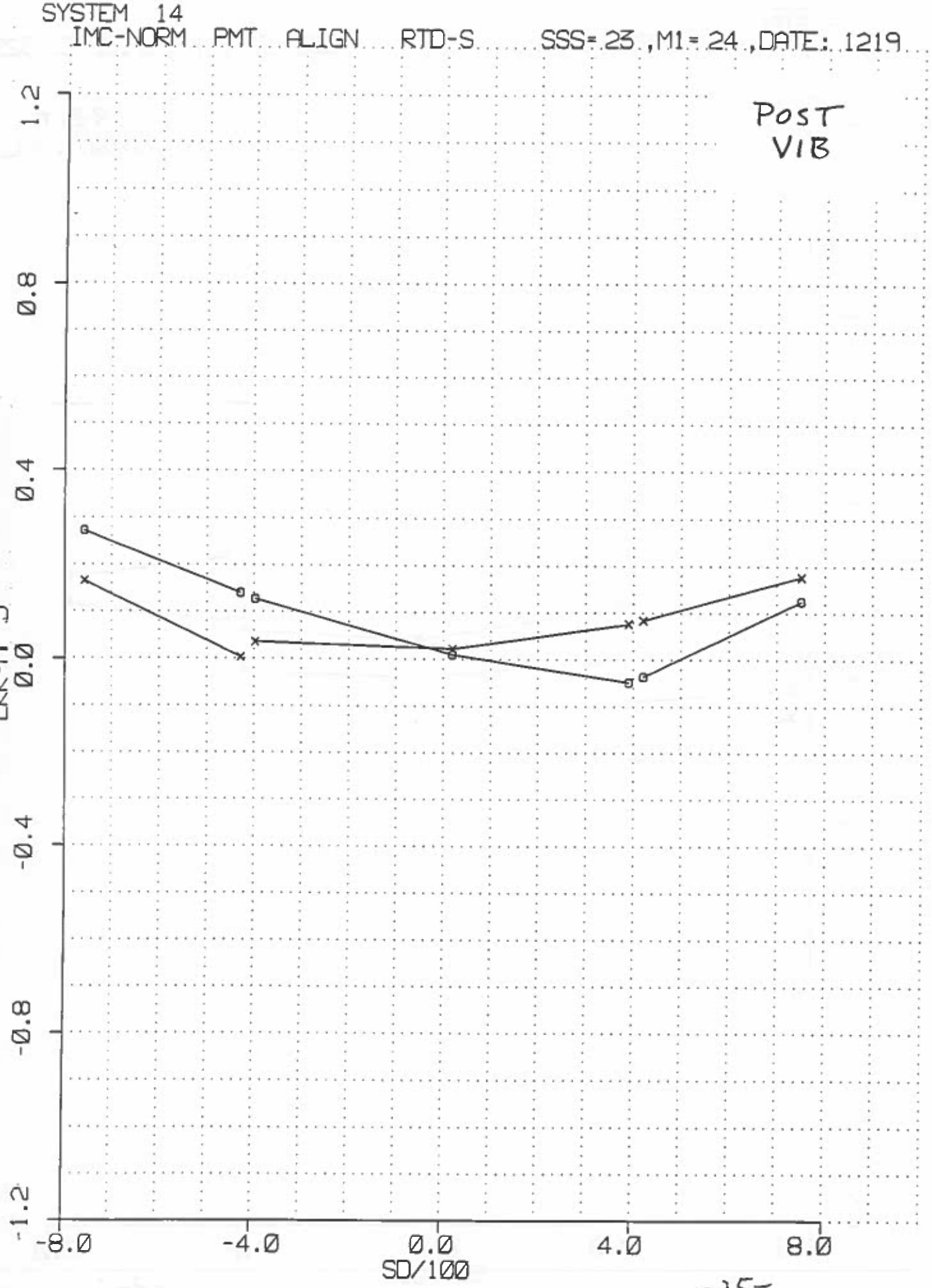

SYSTEM 14
IMC-NORM T ALIGN SDF SSS=3 ,M1=-8 ,DATE: 324
COLD
LIMIT
ERR-M1
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14
IMC-NORM PMT ALIGN RTD-S SSS= 5 ,M1= -8 ,DATE: 401
ORBIT
NOMINAL
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M1
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14
IMC-NORM PMT ALIGN RTD-S SSS=7 ,M1=12 ,DATE: 320
HOT LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14
IMC-NORM PMT ALIGN RTD-S SSS=3 ,M1=-8,DATE: 324
COLD
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14
IMC-NORM PMT ALIGN RTD-S SSS= 23 ,M1= 24 ,DATE: 1124
PRE
VIB
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M)
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14
IMC-NORM PMT ALIGN RTD-S SSS=23,M1=24,DATE: 1219
POST VIB
1.2
0.8
0.4
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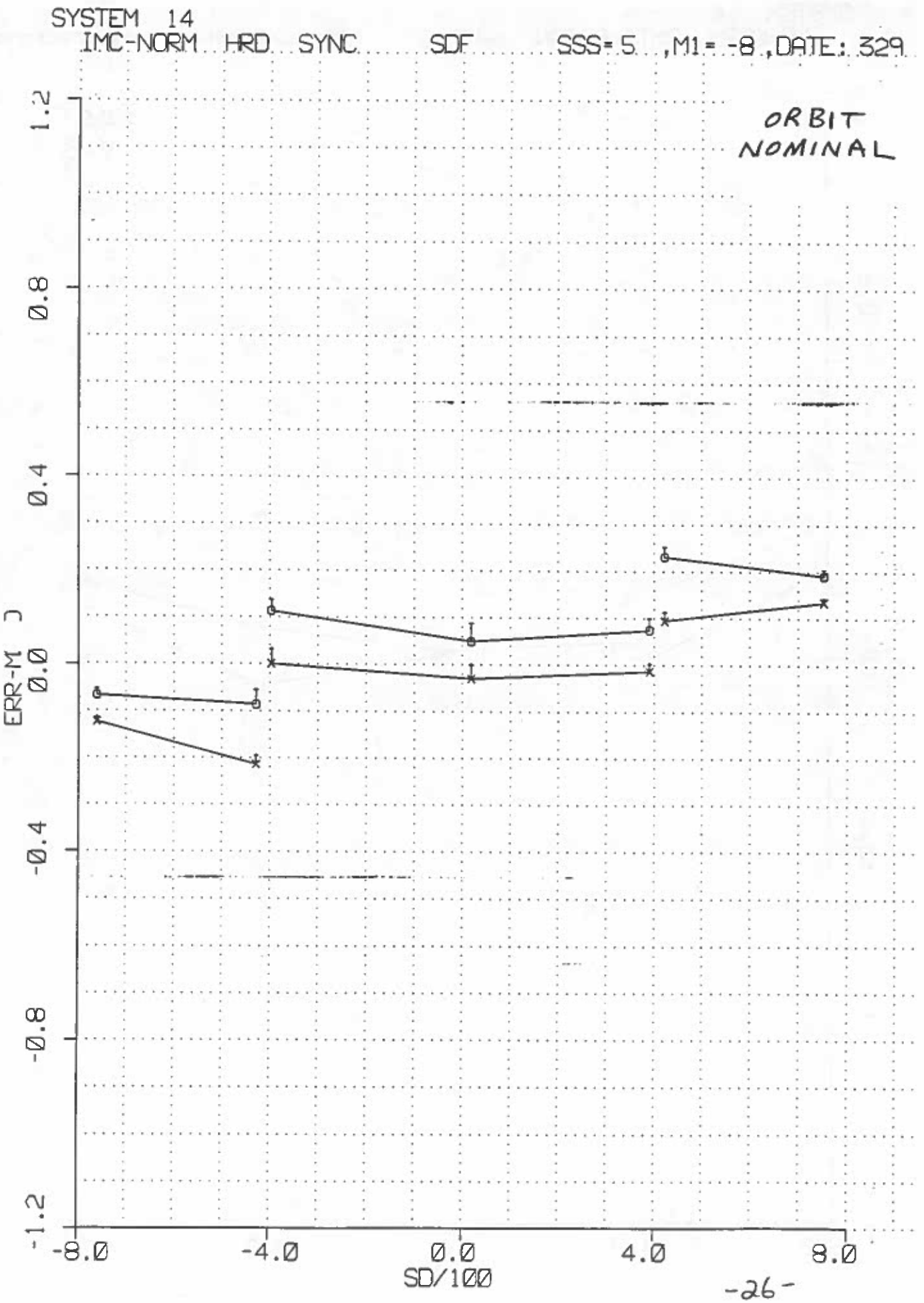
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14
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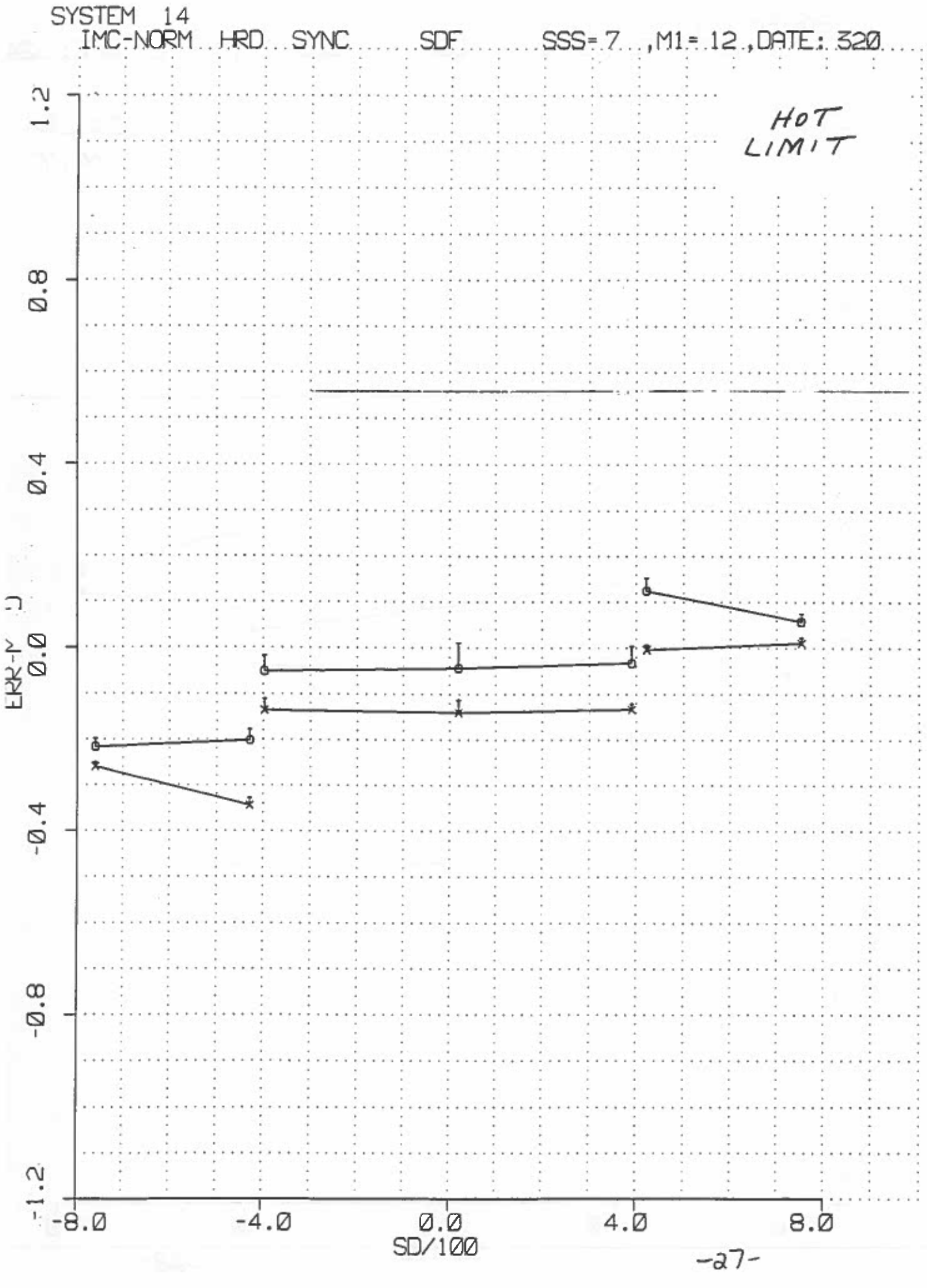
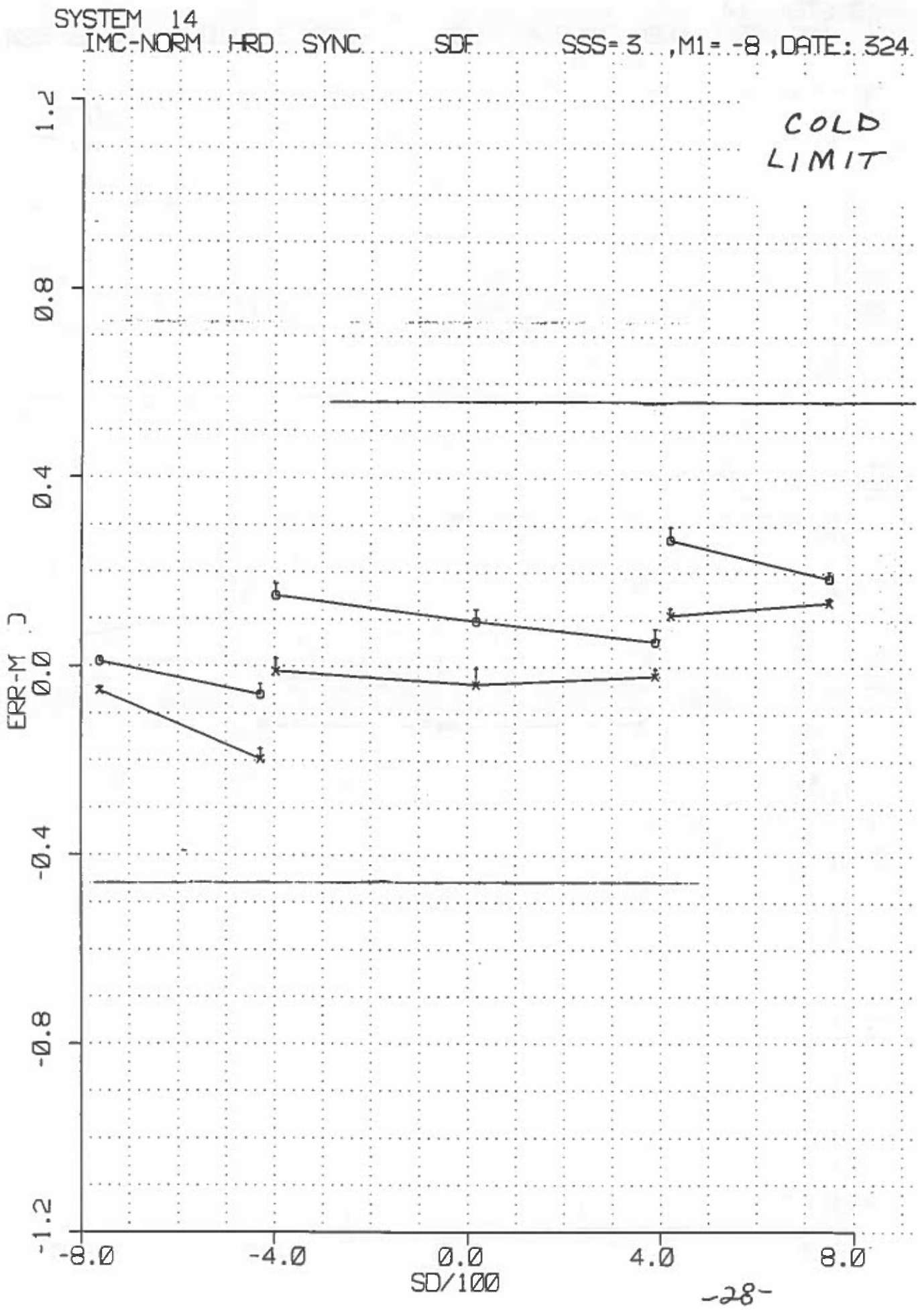
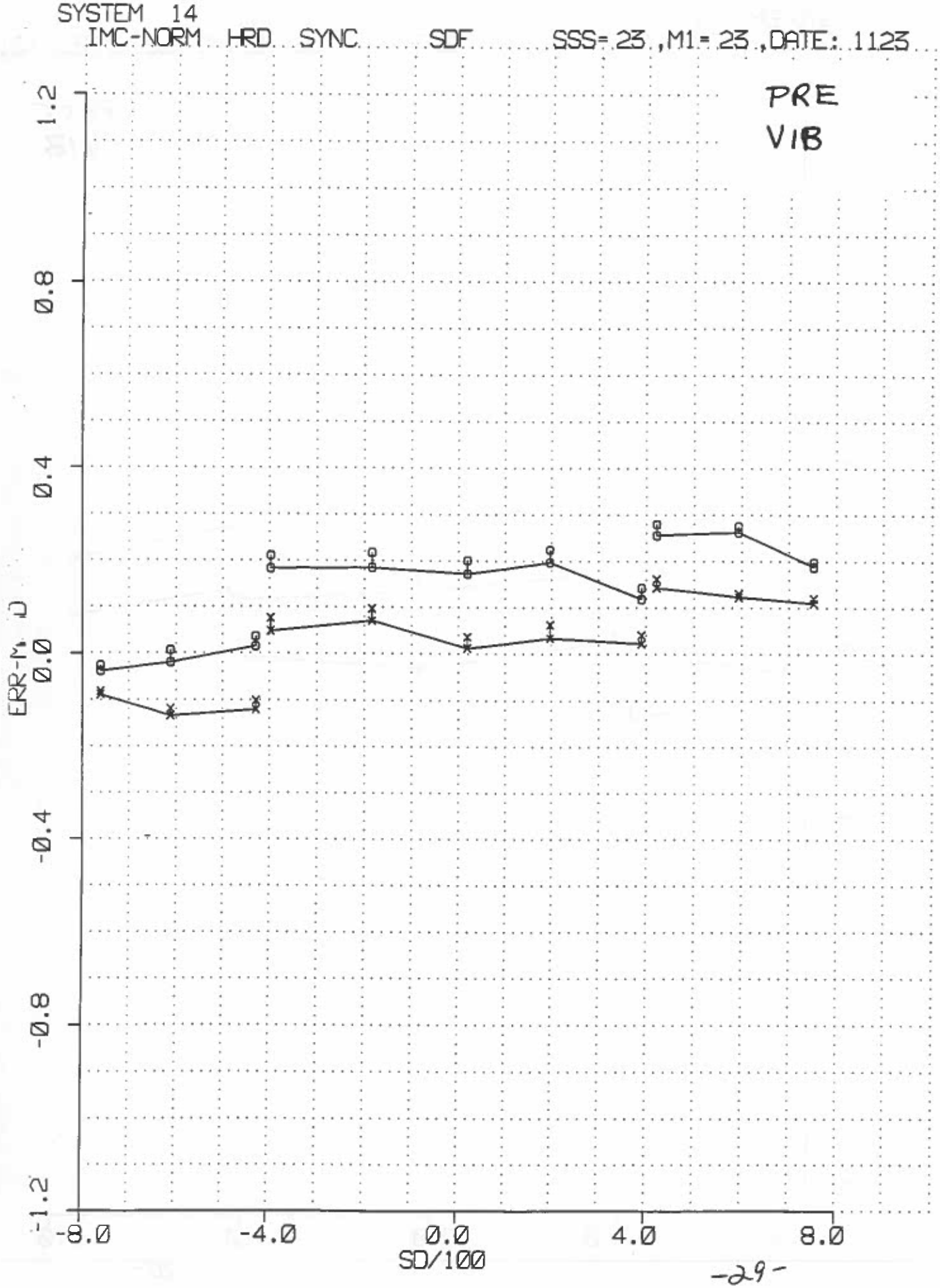
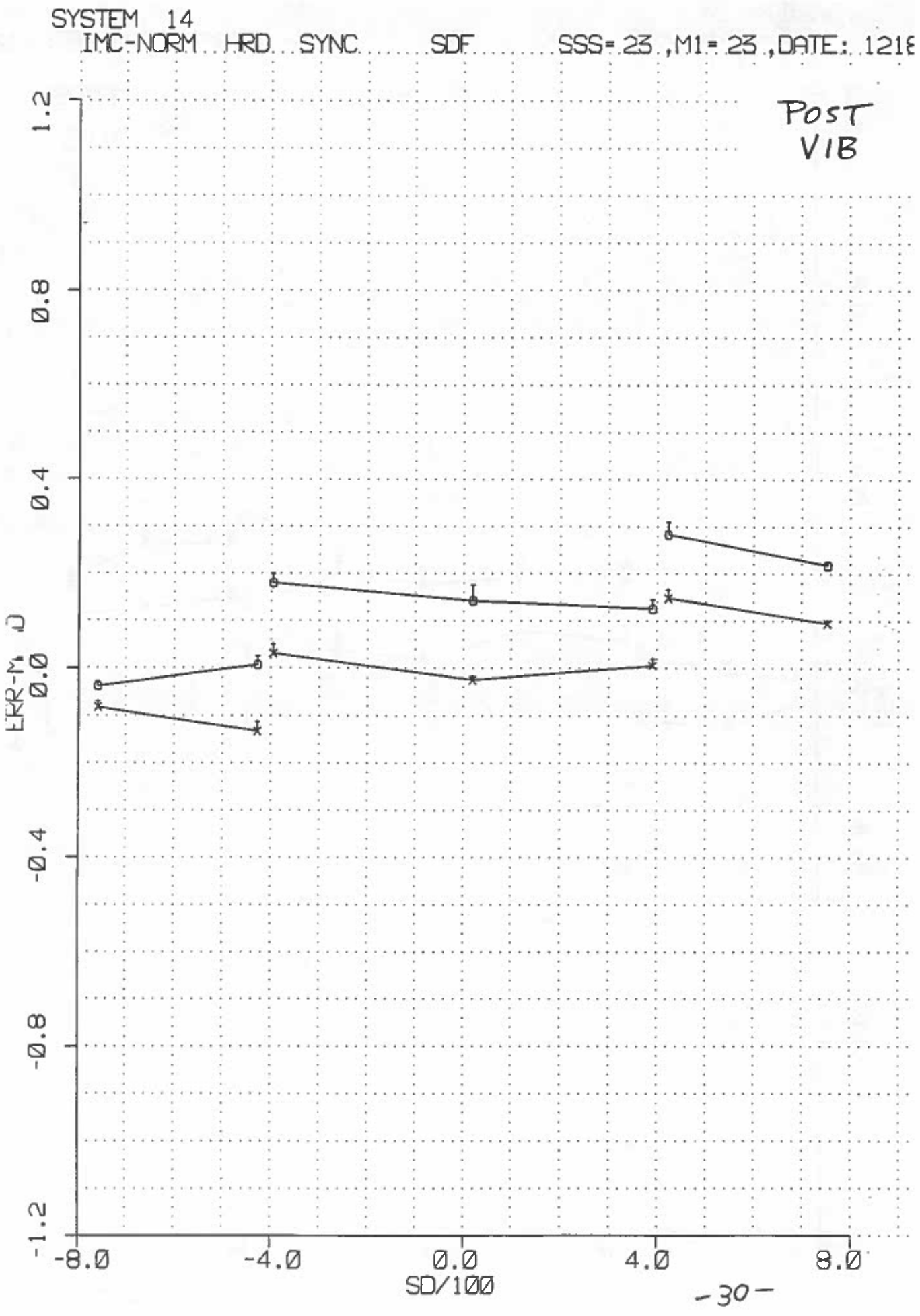
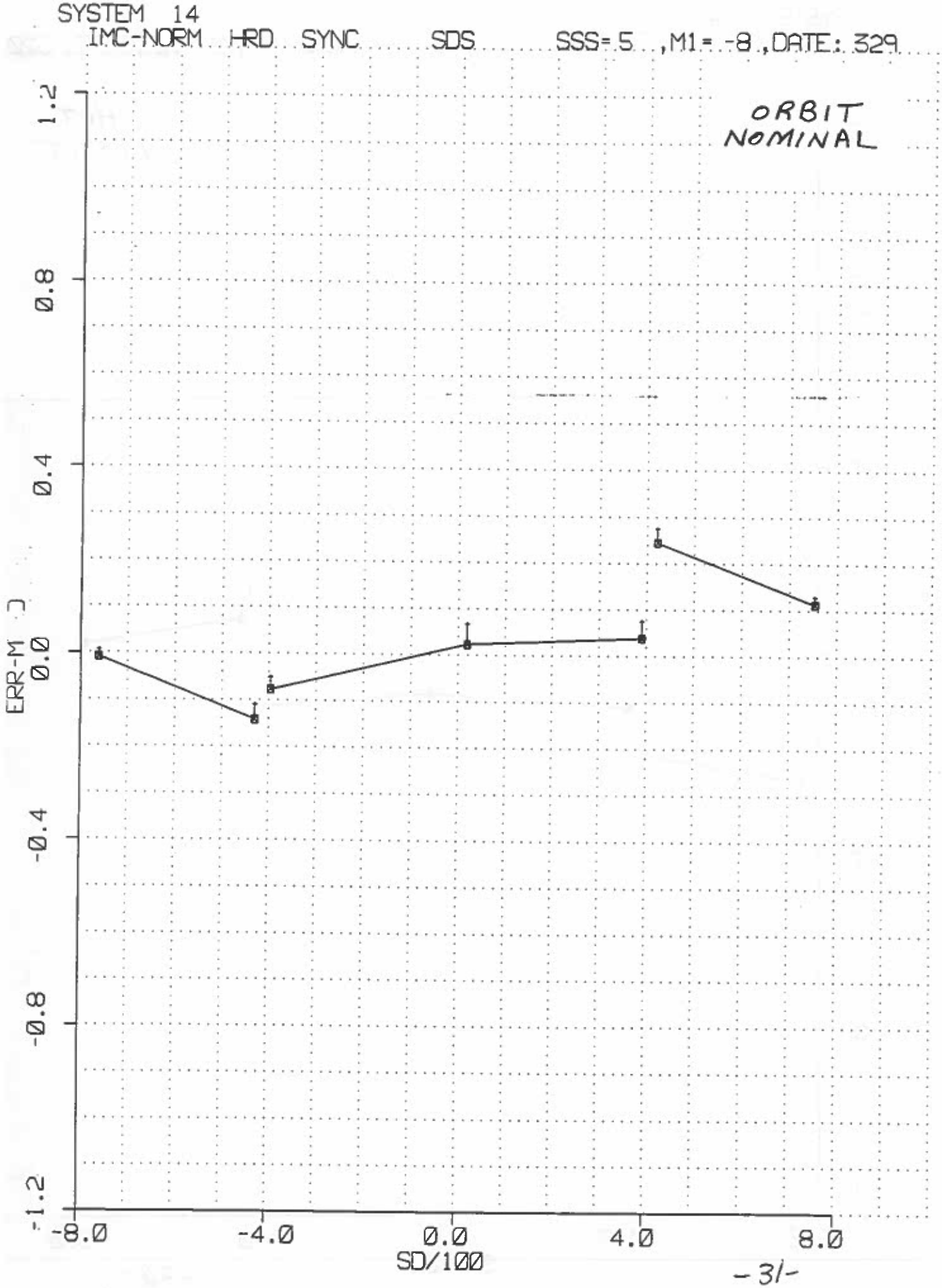
ORBIT NOMINAL
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

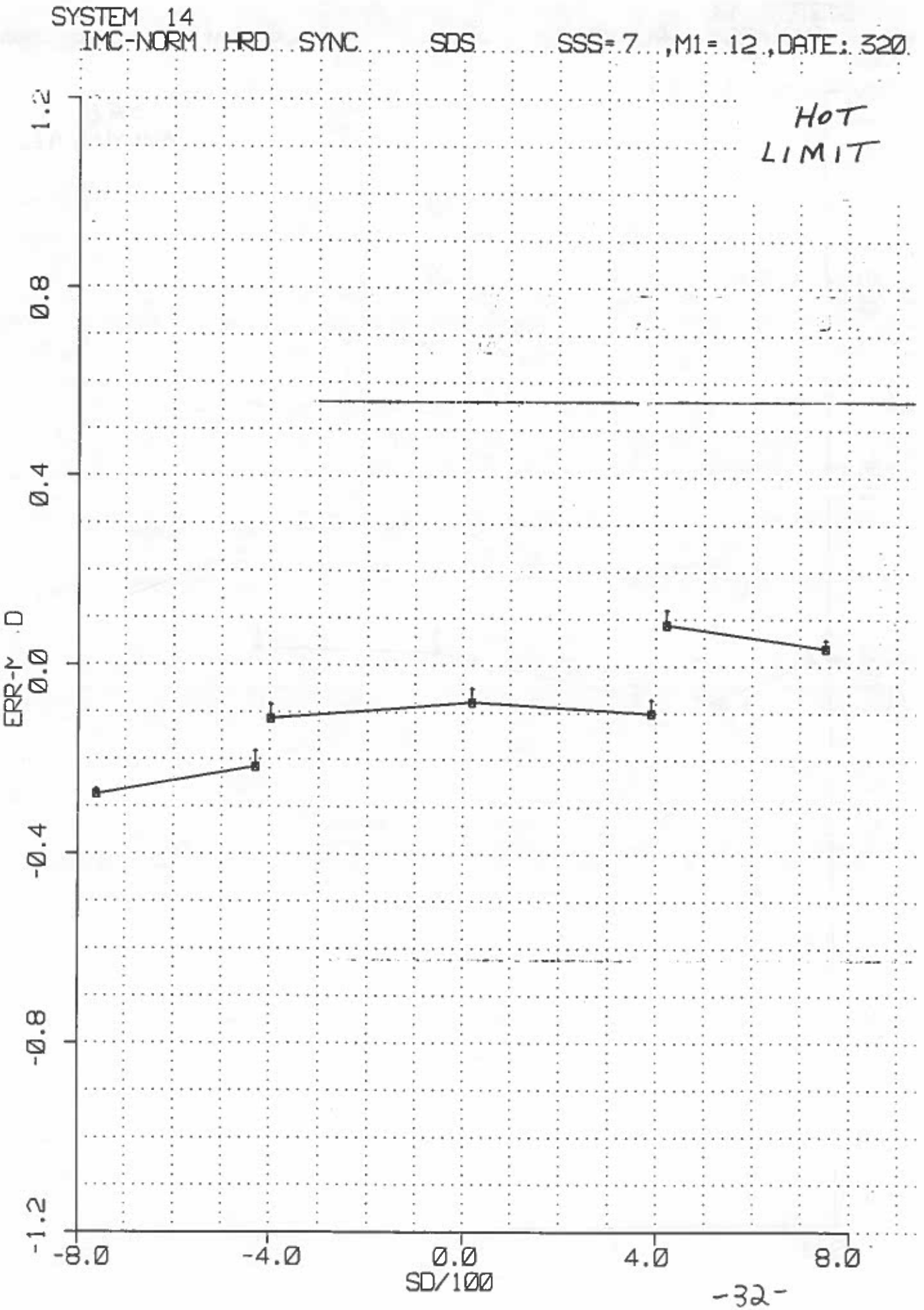

SYSTEM 14
IMC-NORM HRD SYNC SDF SSS= 7 ,M1= 12 ,DATE: 320
HOT
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-V
-8.0
-4.0
0.0
4.0
8.0
SD/100

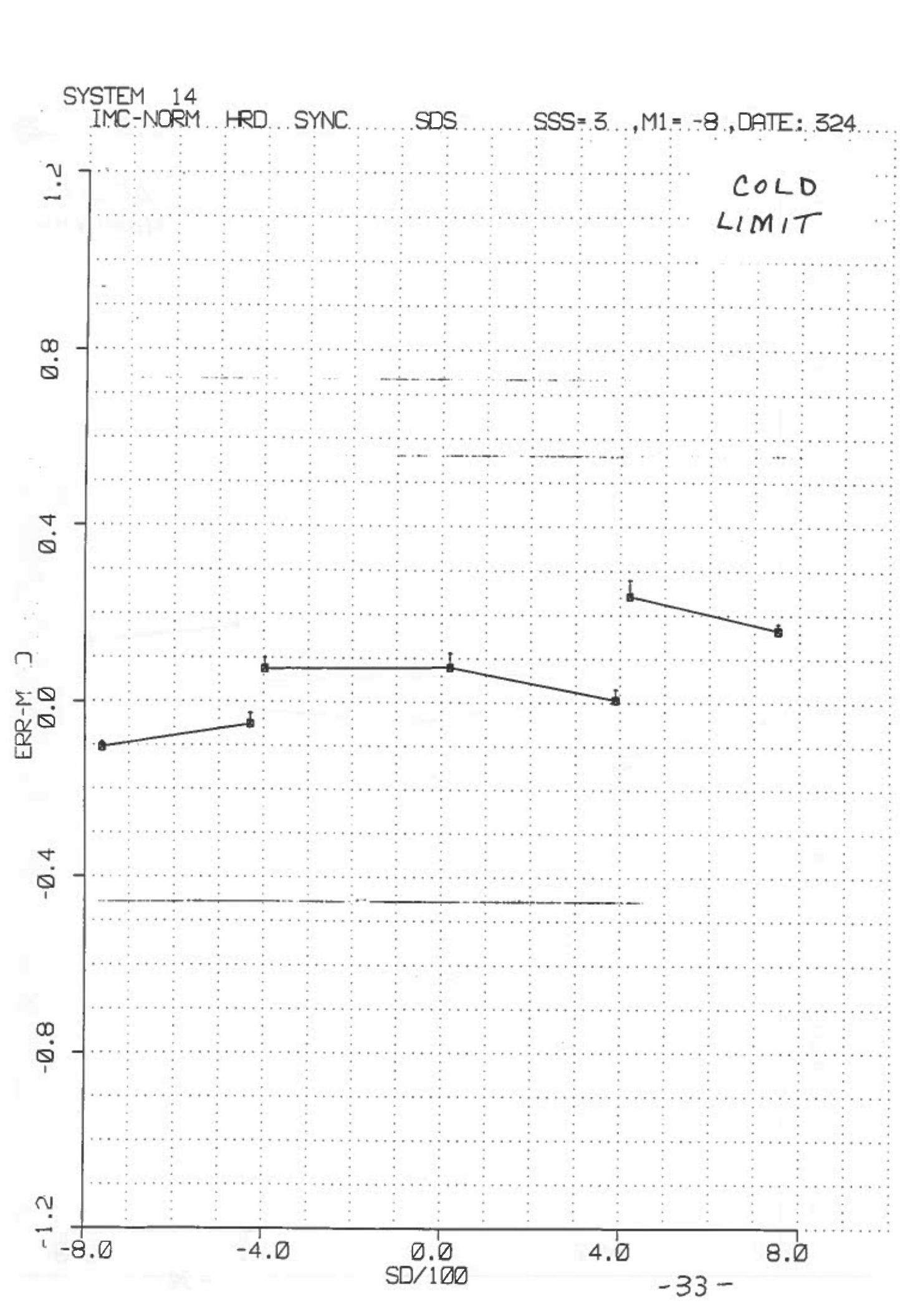

SYSTEM 14
IMC-NORM HRD SYNC SDF SSS= 3 ,M1= -8 ,DATE: 324
COLD
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

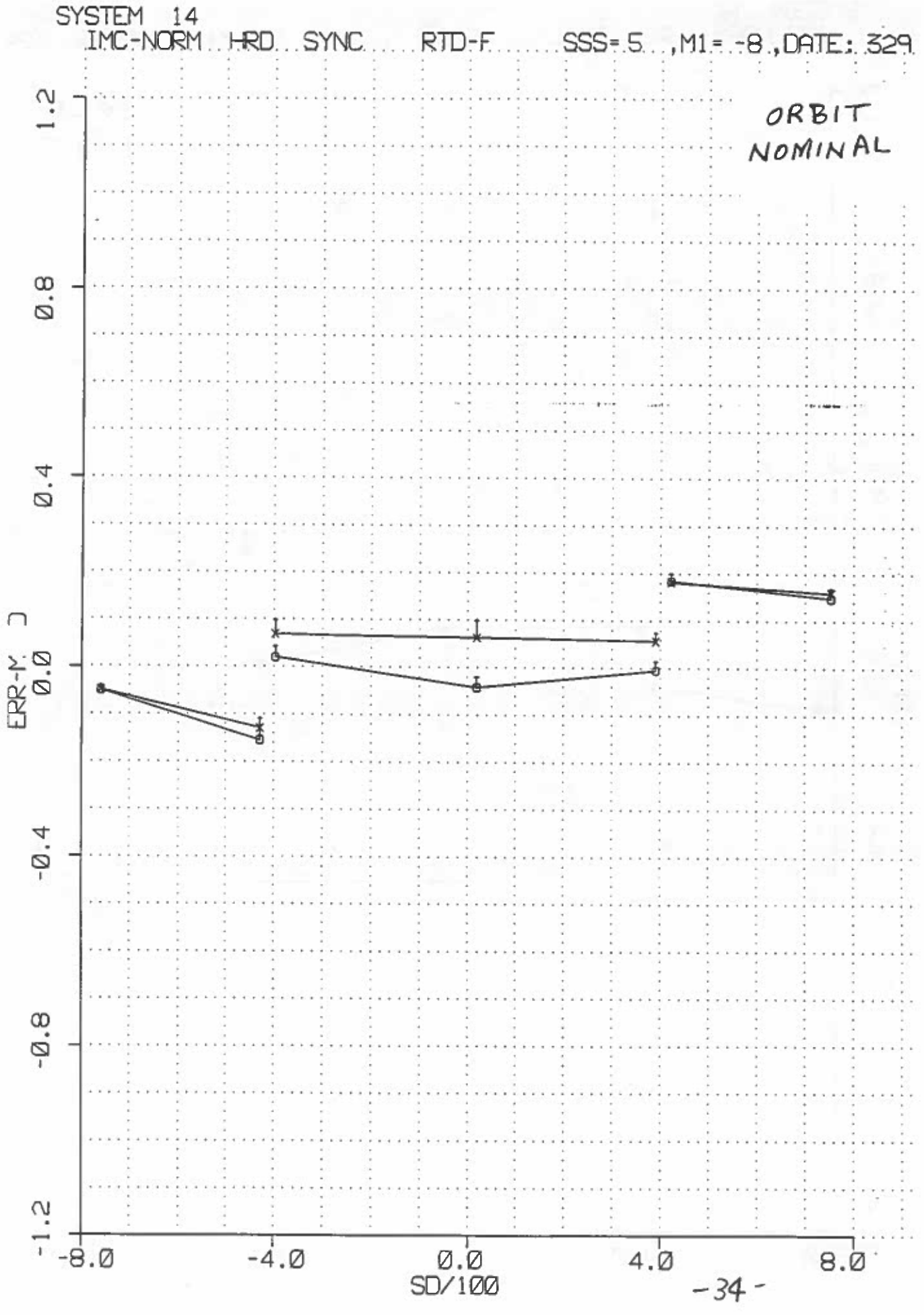

SYSTEM 14
IMC-NORM HRD SYNC SDF SSS=23,M1=23,DATE: 1123
PRE
VIB
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

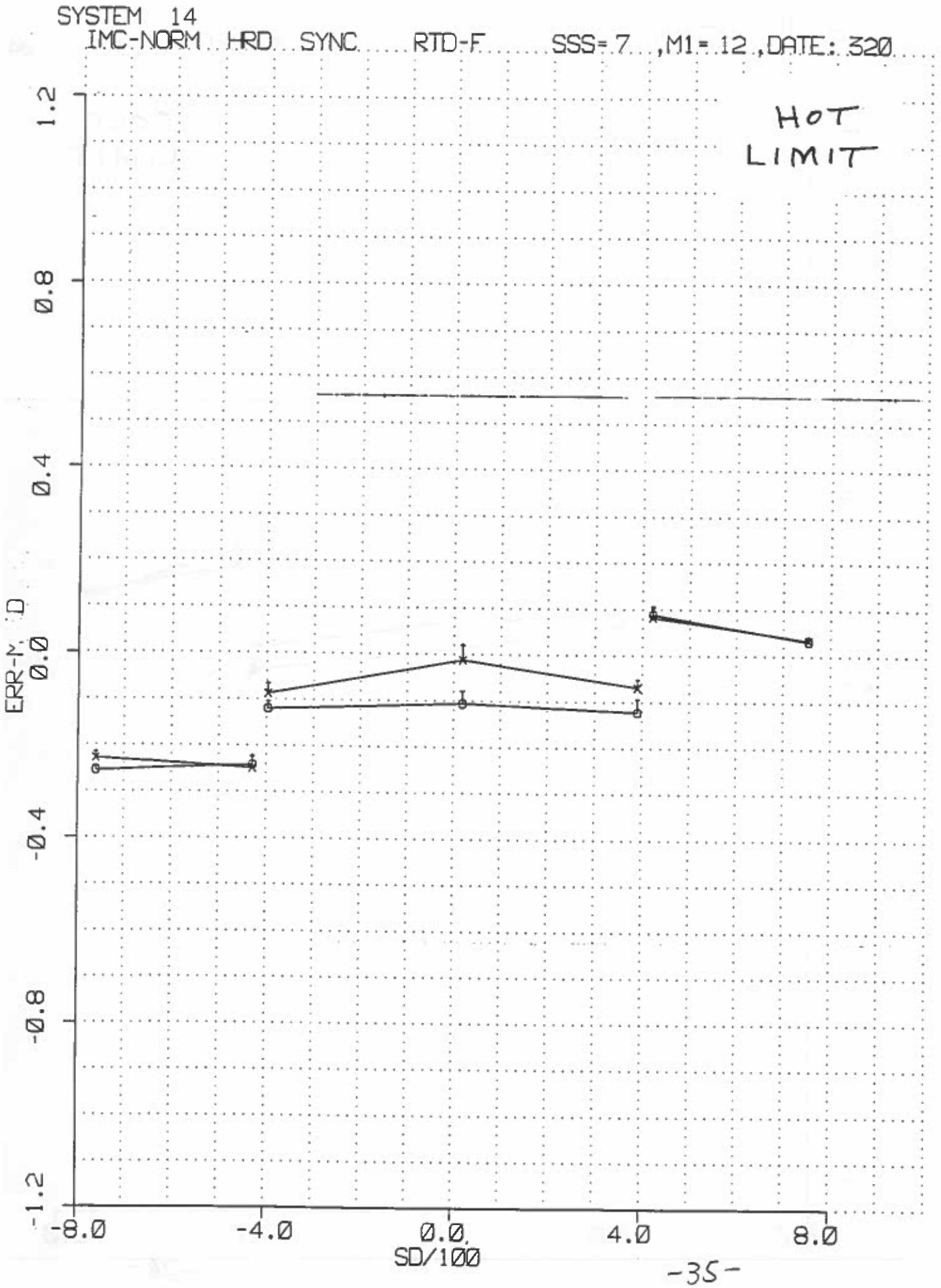

SYSTEM 14
IMC-NORM HRD SYNC SDF SSS= 23 ,M1= 23 ,DATE: 1218
POST VIB
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

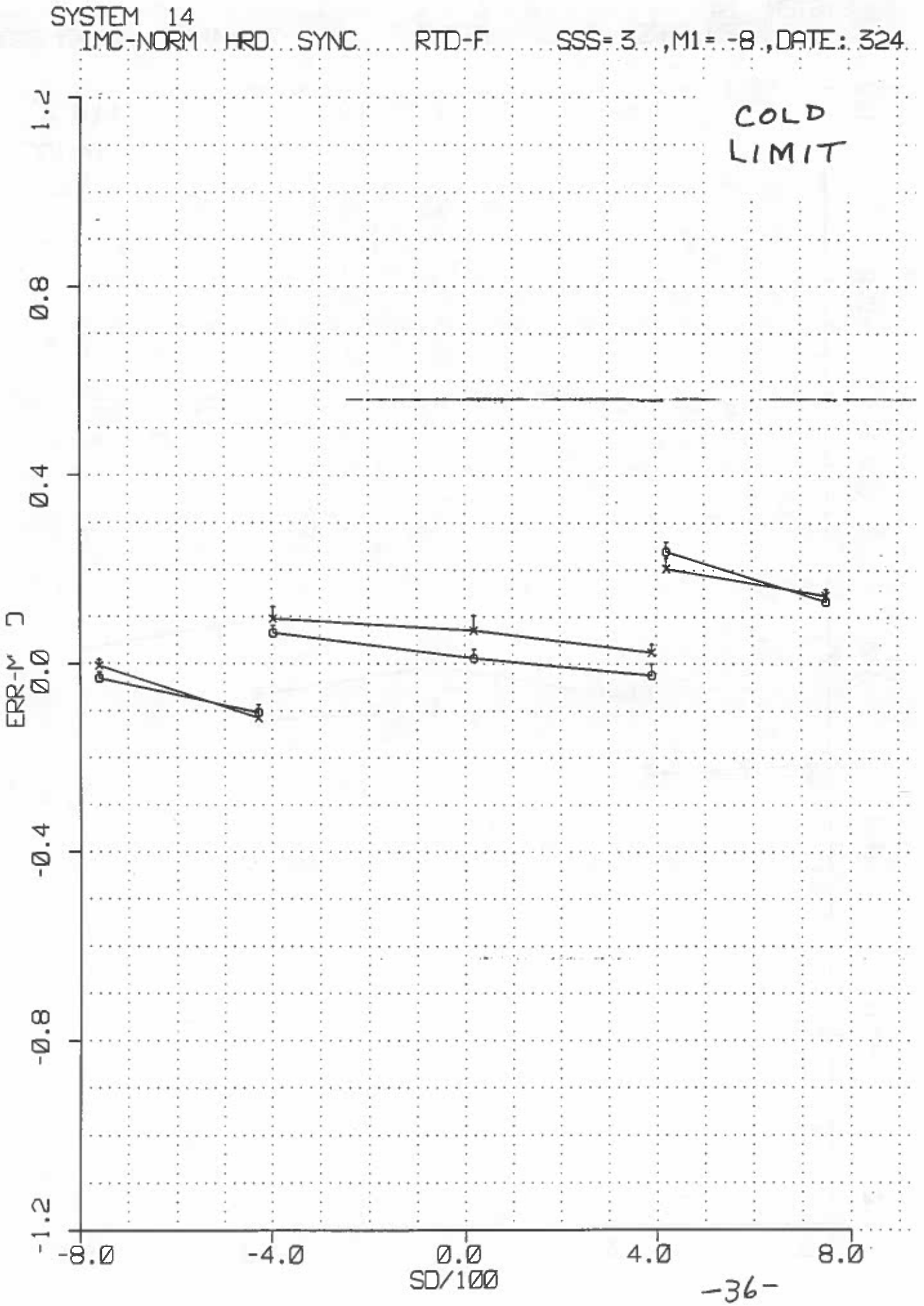

SYSTEM 14
IMC-NORM HRD SYNC SDS SSS=5 ,M1=-8,DATE: 329
ORBIT
NOMINAL
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

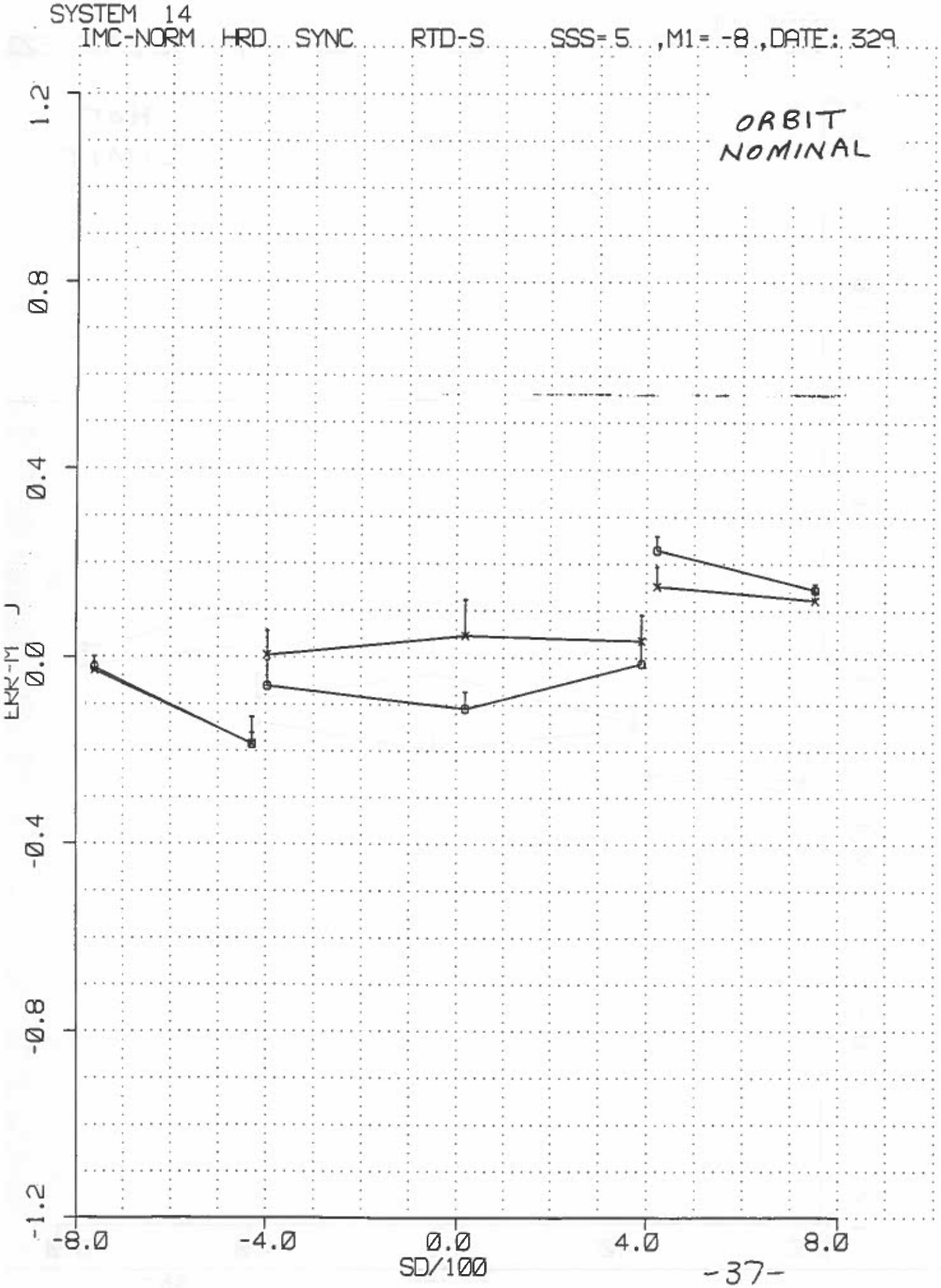

SYSTEM 14
IMC-NORM HRD SYNC SDS SSS=7 ,M1=12 ,DATE: 320
HOT LIMIT
ERR-Y D
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
-8.0
-4.0
0.0
4.0
8.0
SD/100

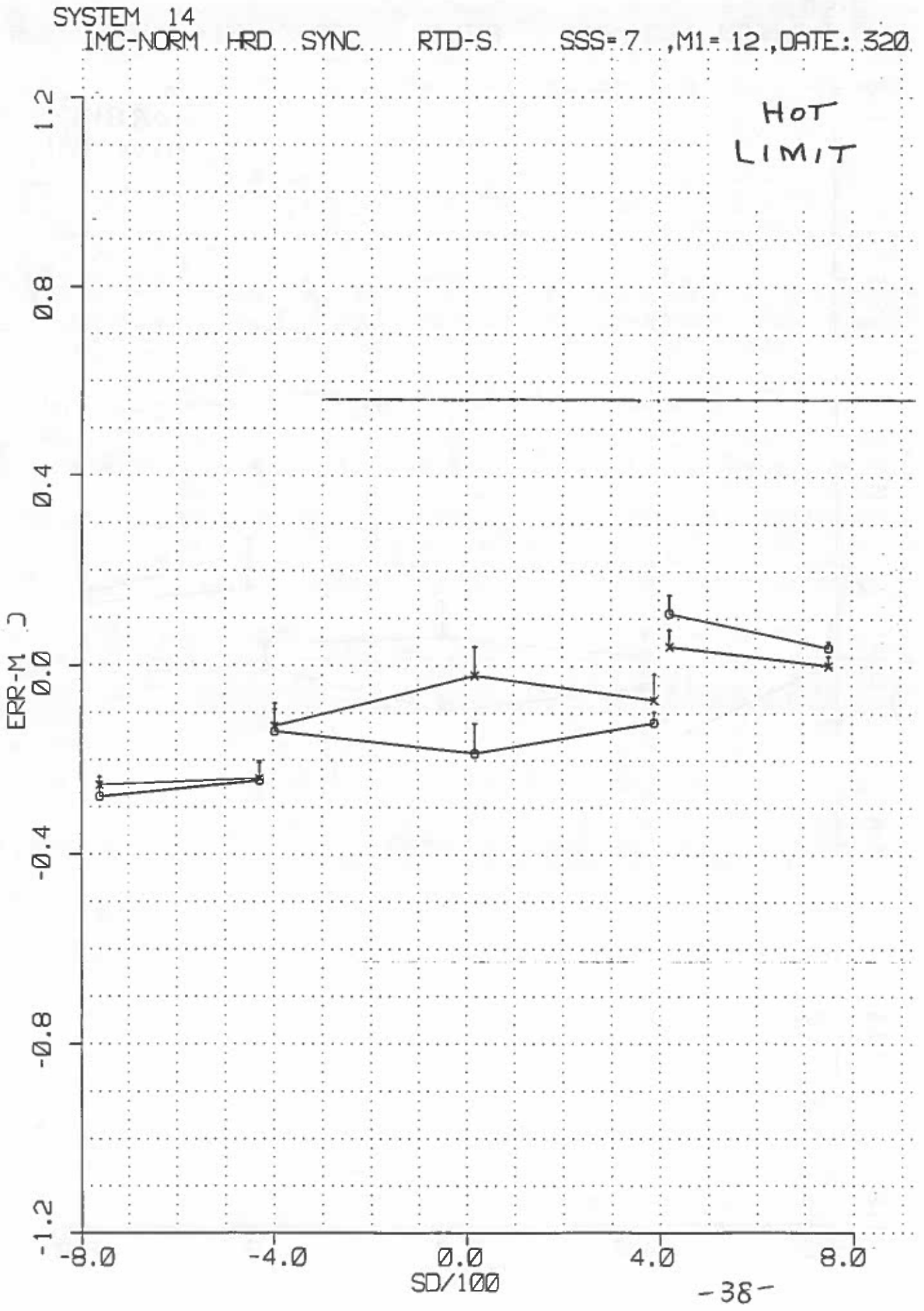

SYSTEM 14
IMC-NORM HRD SYNC SDS SSS=3 ,M1=-8 ,DATE: 324
COLD
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

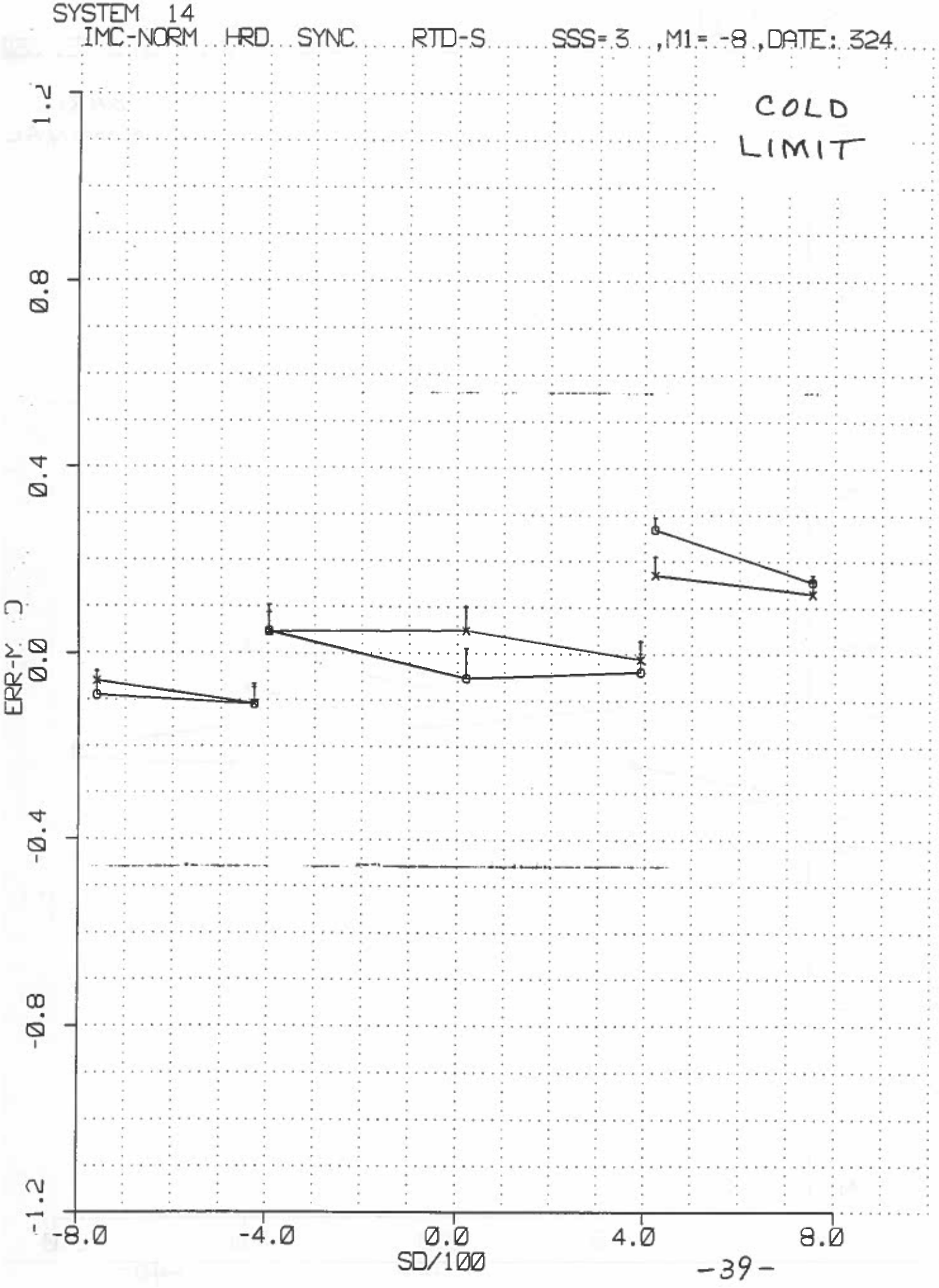

SYSTEM 14
IMC-NORM HRD SYNC RTD-F SSS=5 ,M1=-8,DATE: 329
ORBIT
NOMINAL
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

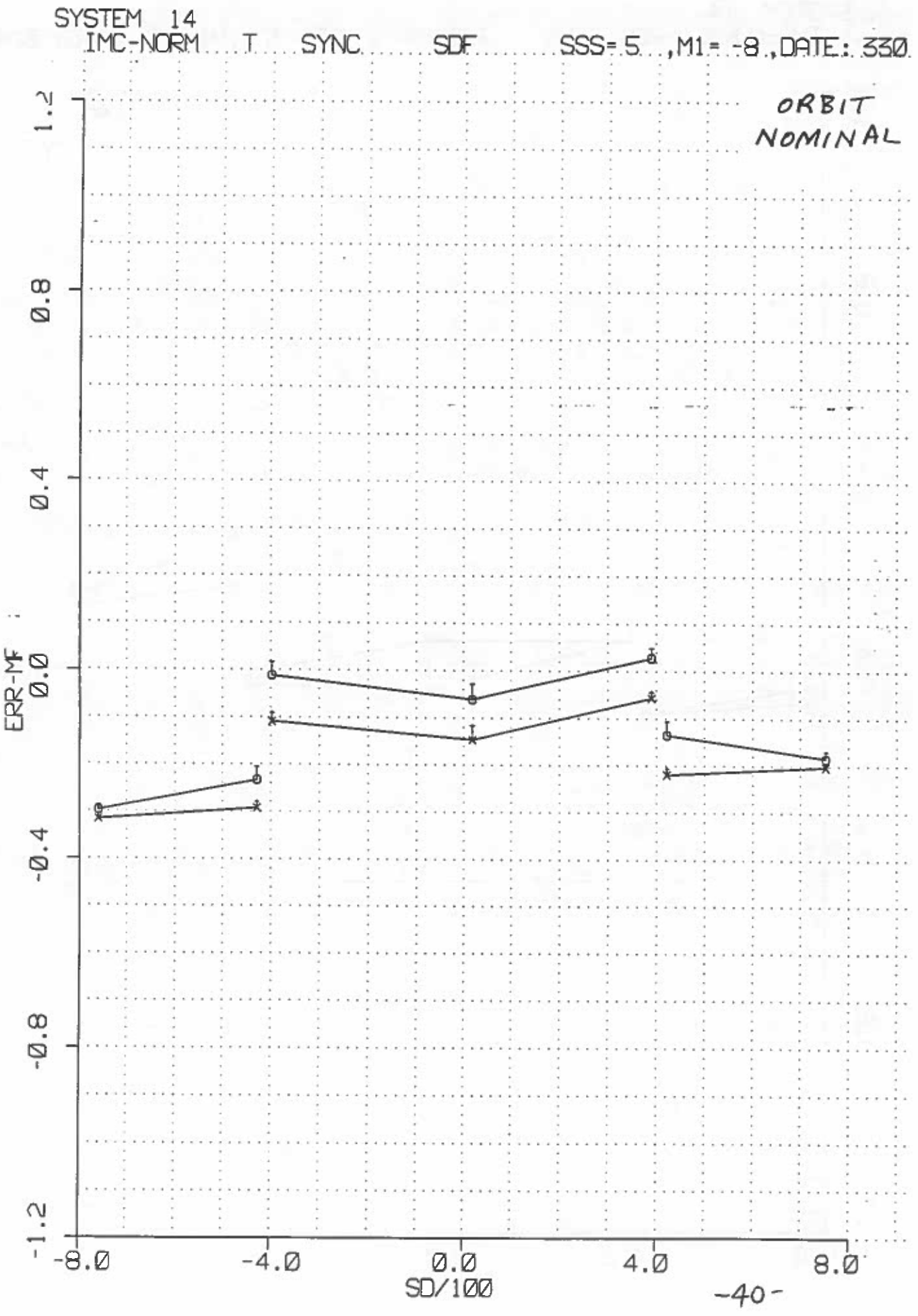

SYSTEM 14
IMC-NORM HRD SYNC RTD-F SSS= 7 ,M1= 12 ,DATE: 320
HOT
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-N
-8.0
-4.0
0.0
4.0
8.0
SD/100

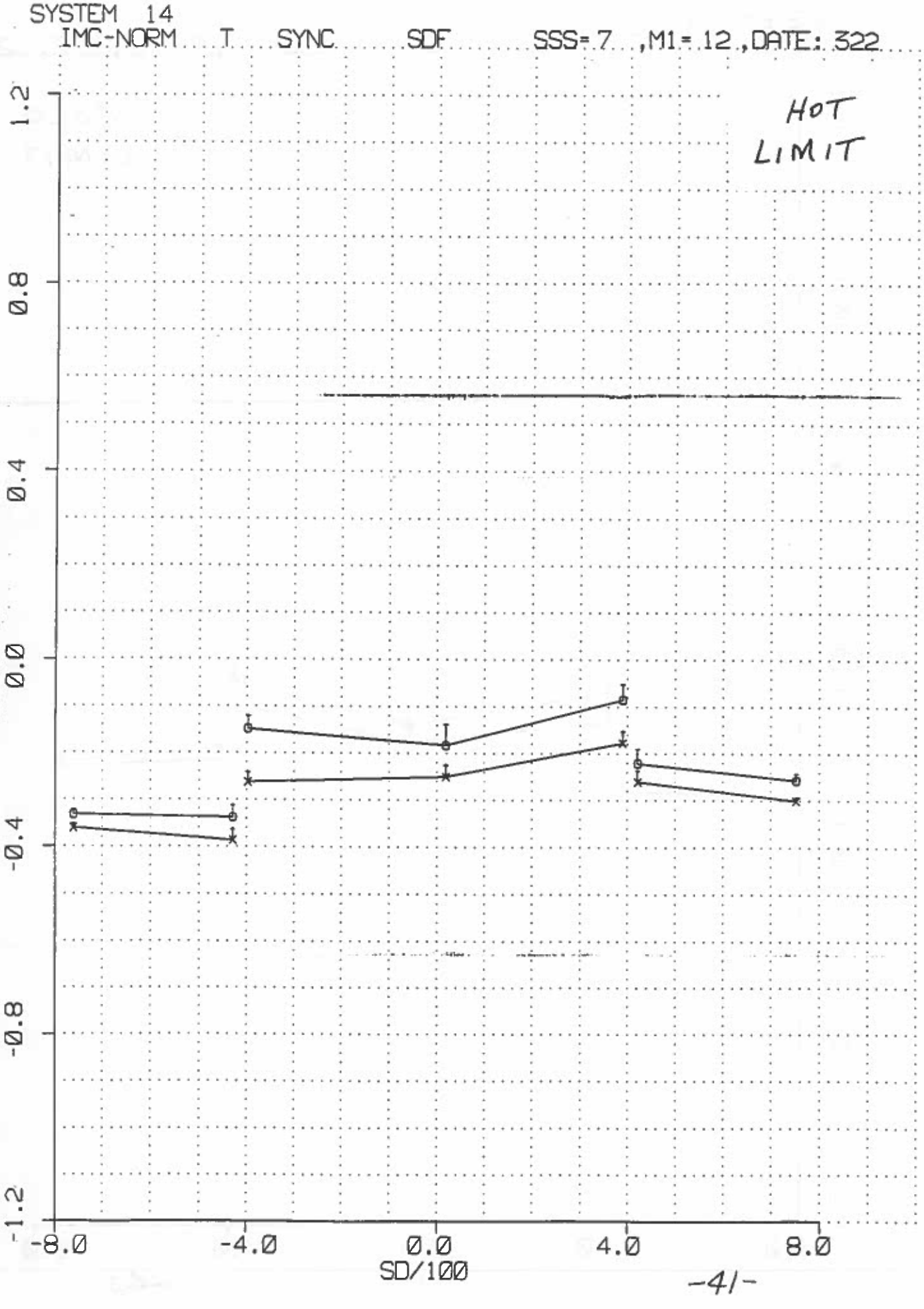

SYSTEM 14
IMC-NORM HRD SYNC RTD-F SSS=3 ,M1=-8.,DATE: 324
COLD
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

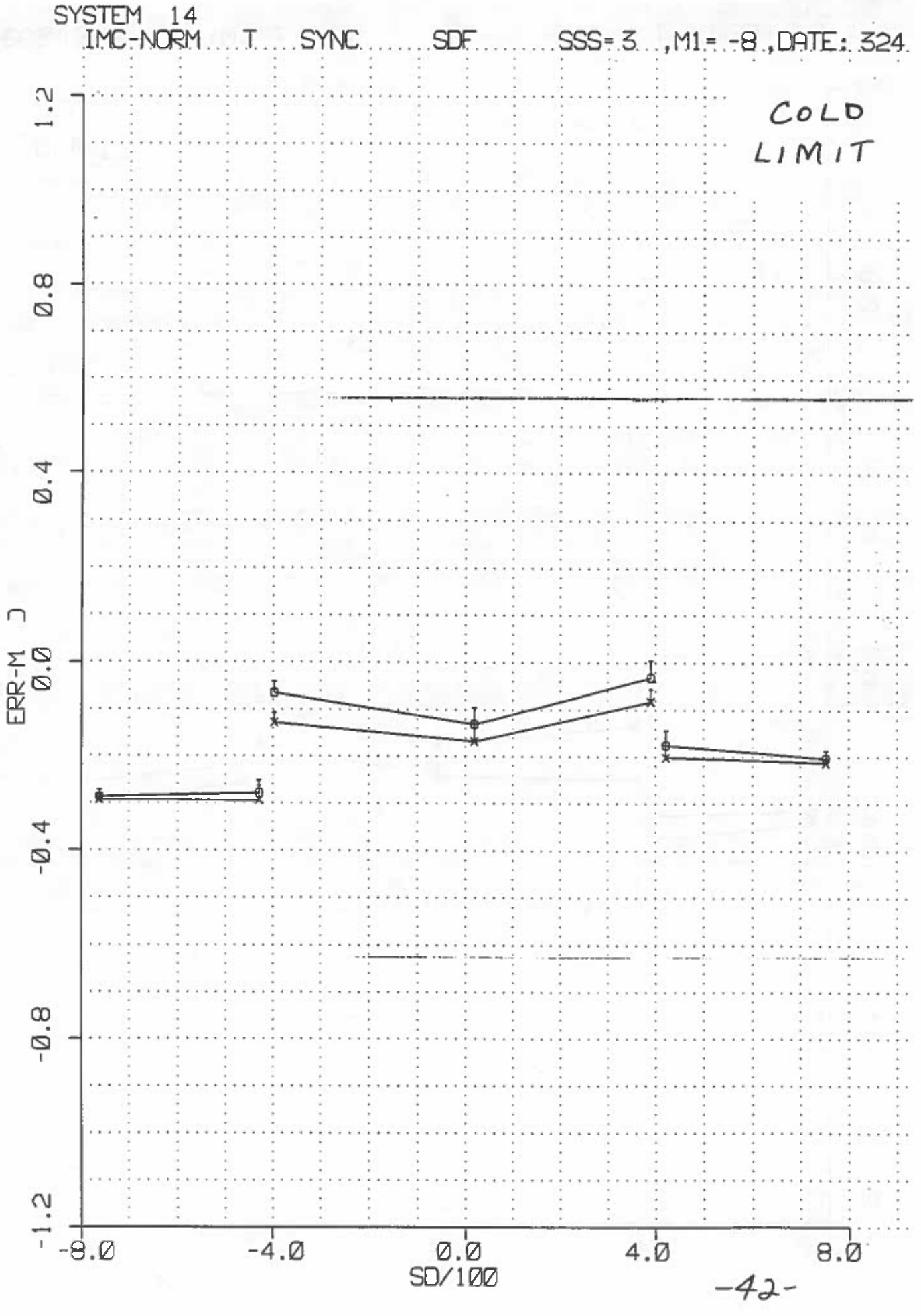

SYSTEM 14
IMC-NORM HRD SYNC RTD-S SSS=5 ,M1=-8 ,DATE: 329
ORBIT
NOMINAL
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
EKK-M J
-8.0
-4.0
0.0
4.0
8.0
SD/100

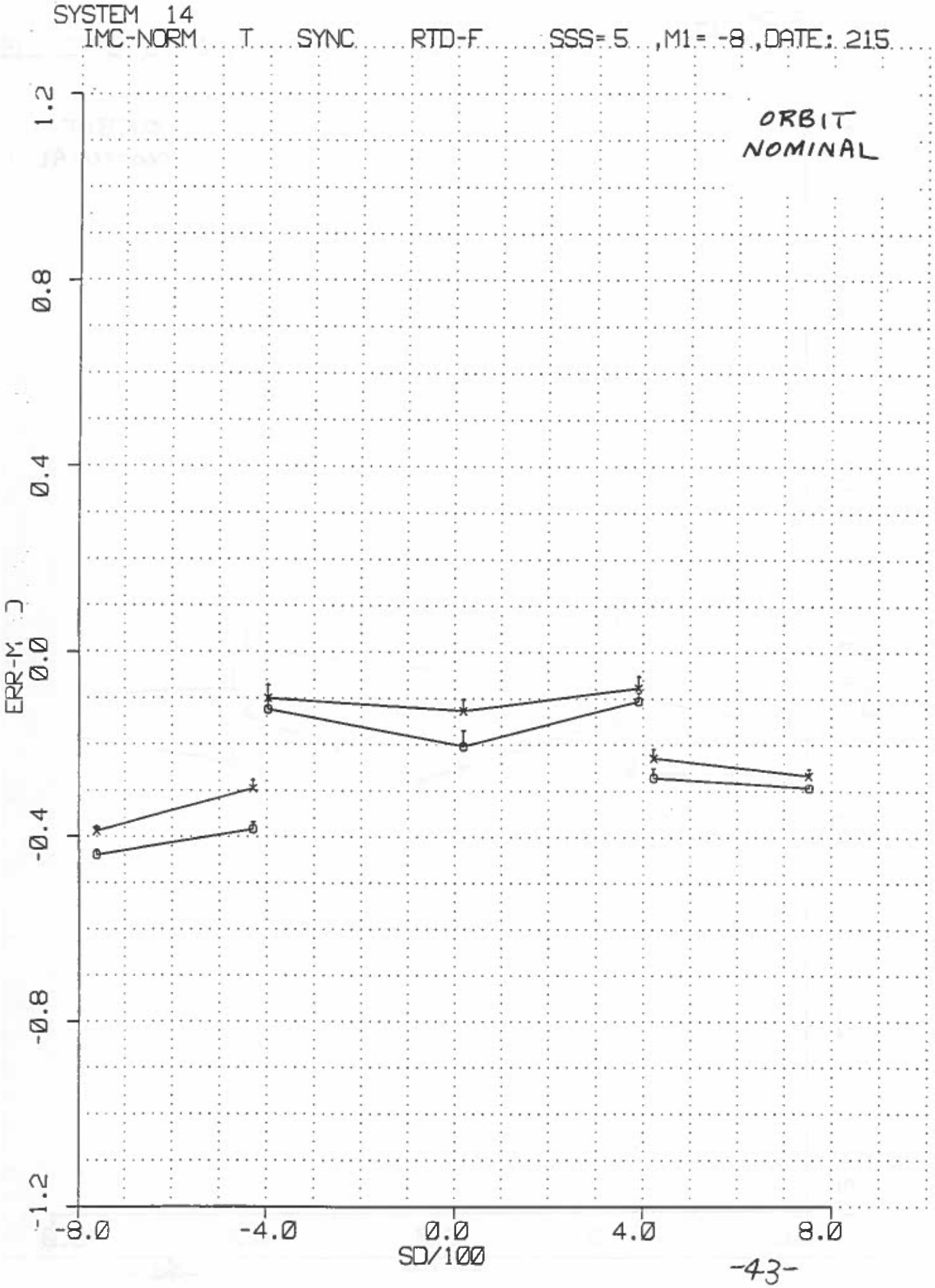

SYSTEM 14
IMC-NORM HRD SYNC RTD-S SSS=7 ,M1=12,DATE: 320
HOT
LIMIT
ERR-M
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
-8.0
-4.0
0.0
4.0
8.0
SD/100

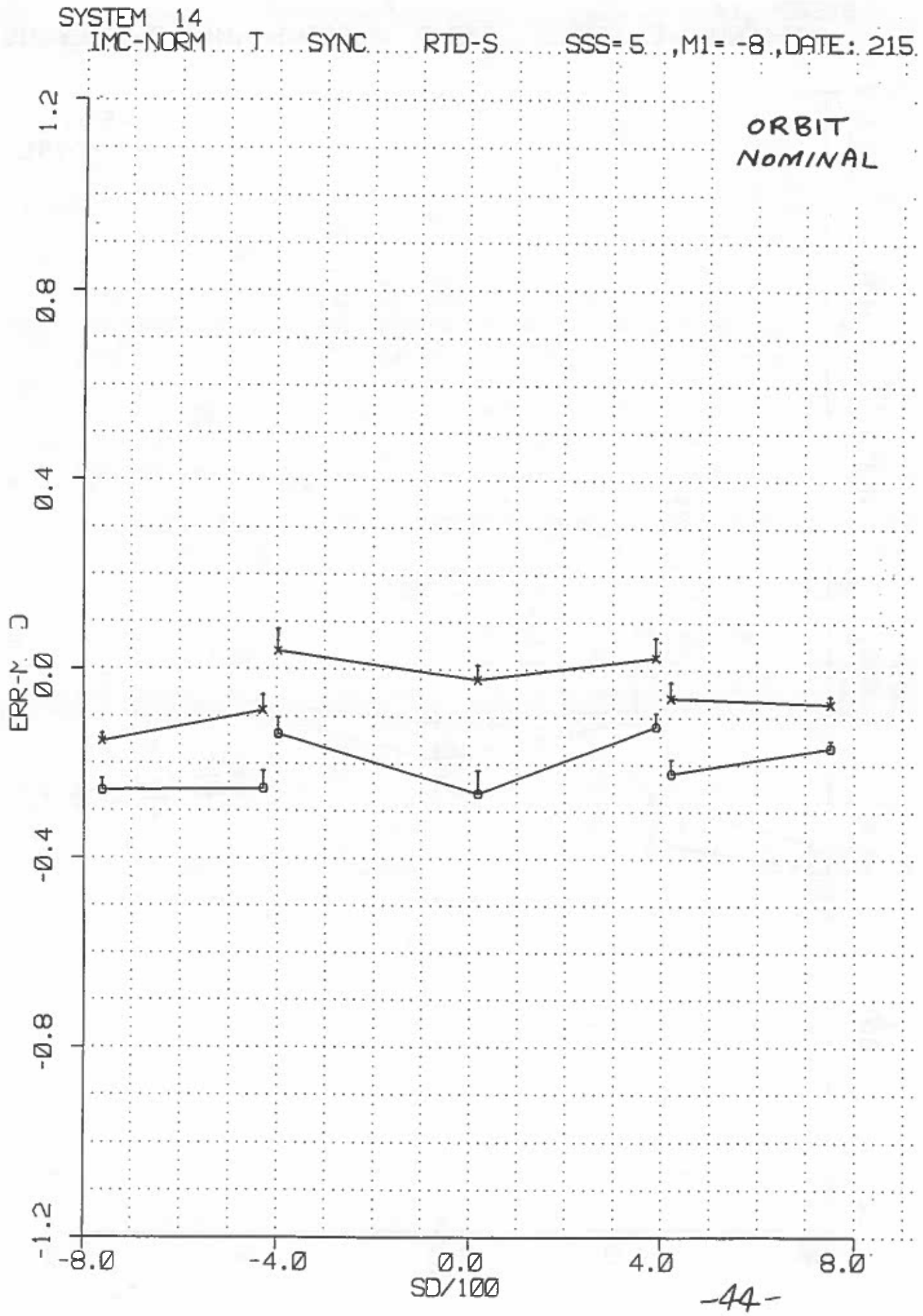

SYSTEM 14
IMC-NORM HRD SYNC RTD-S SSS=3 ,M1=-8,DATE: 324
COLD
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

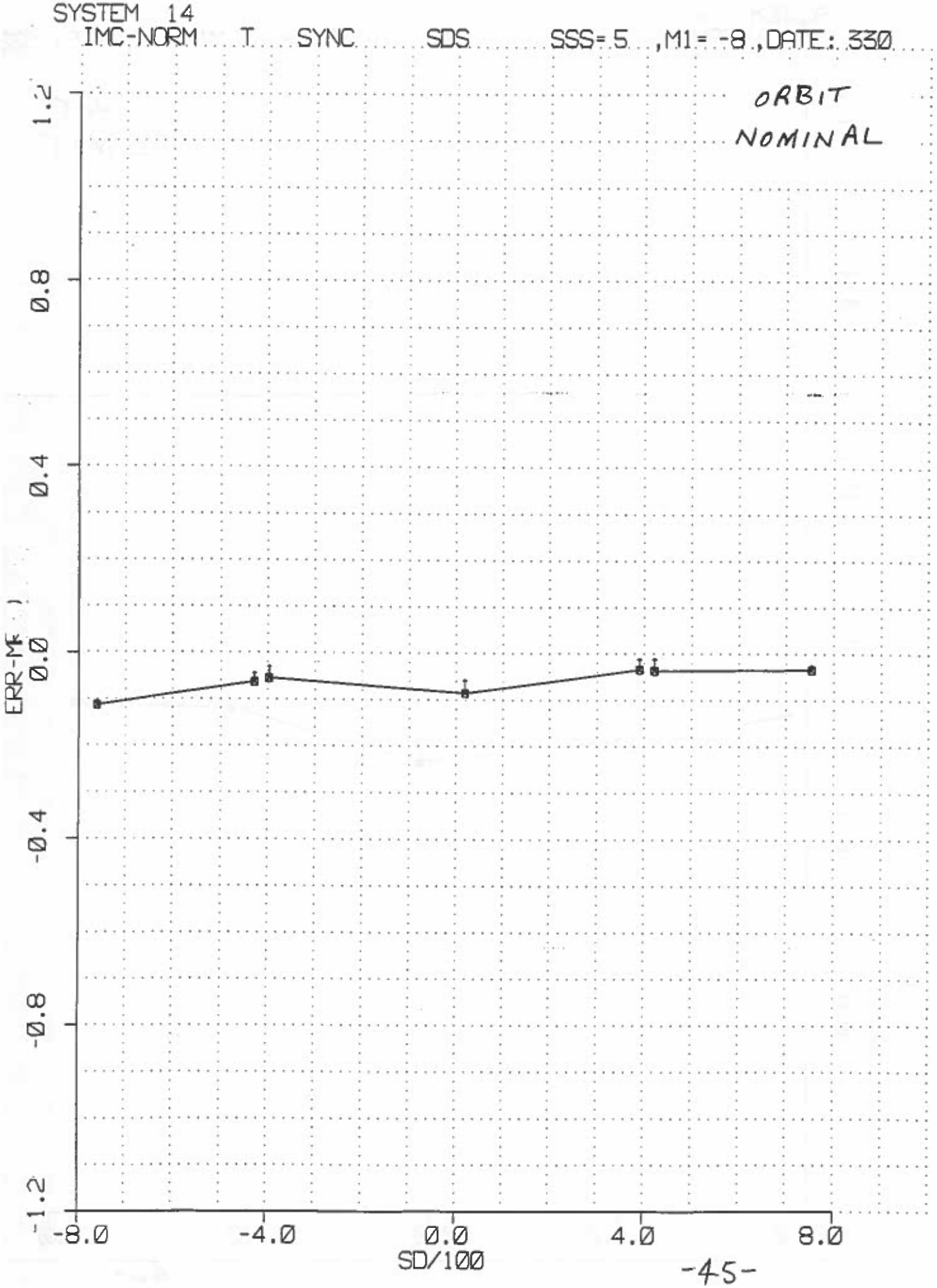

SYSTEM 14
IMC-NORM T SYNC SDF SSS= 5 ,M1= -8 ,DATE: 330
ORBIT
NOMINAL
ERR-MF
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
-8.0
-4.0
0.0
4.0
8.0
SD/100

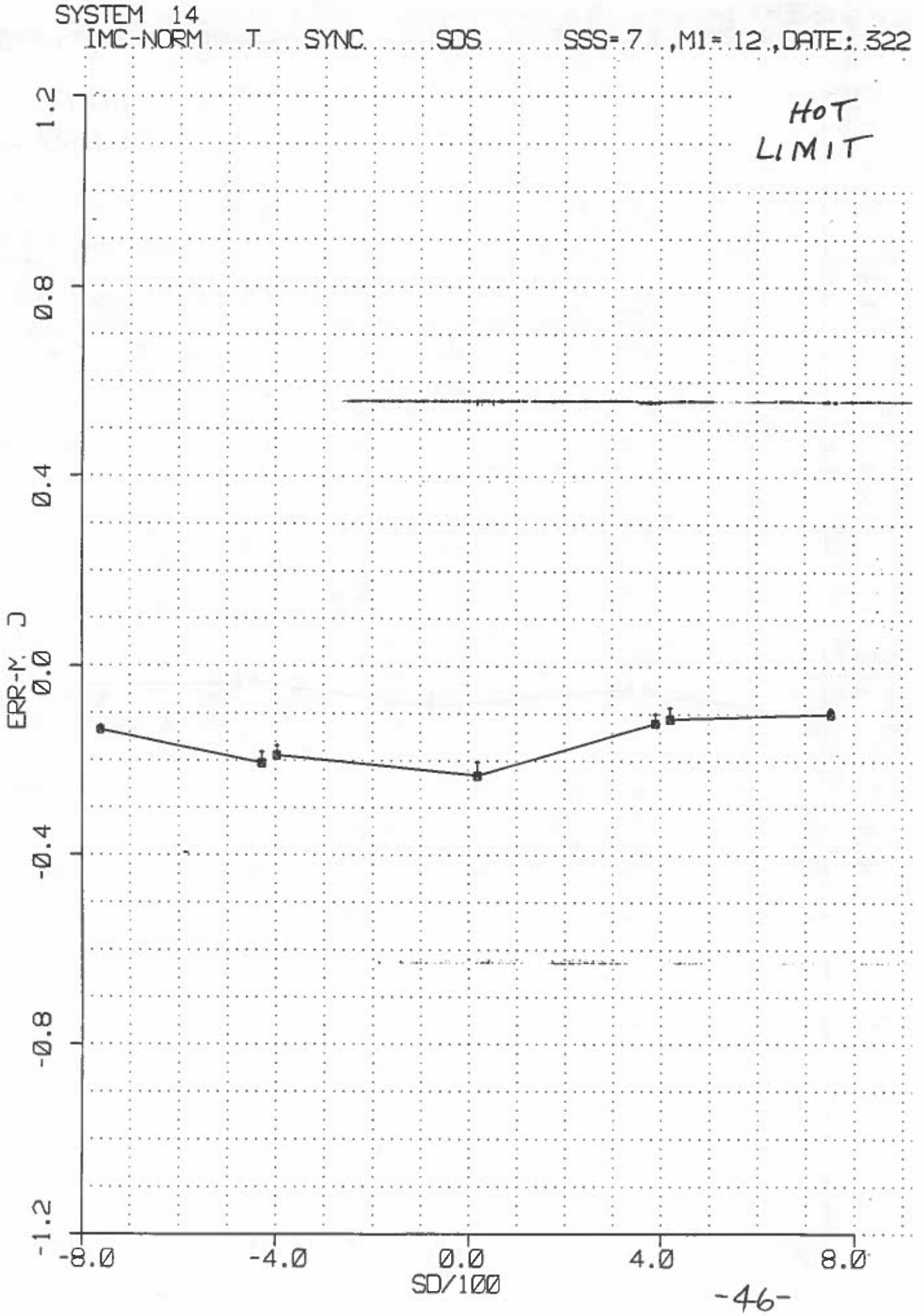

SYSTEM 14
IMC-NORM T SYNC SDF SSS= 7 ,M1= 12 ,DATE: 322
HOT
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

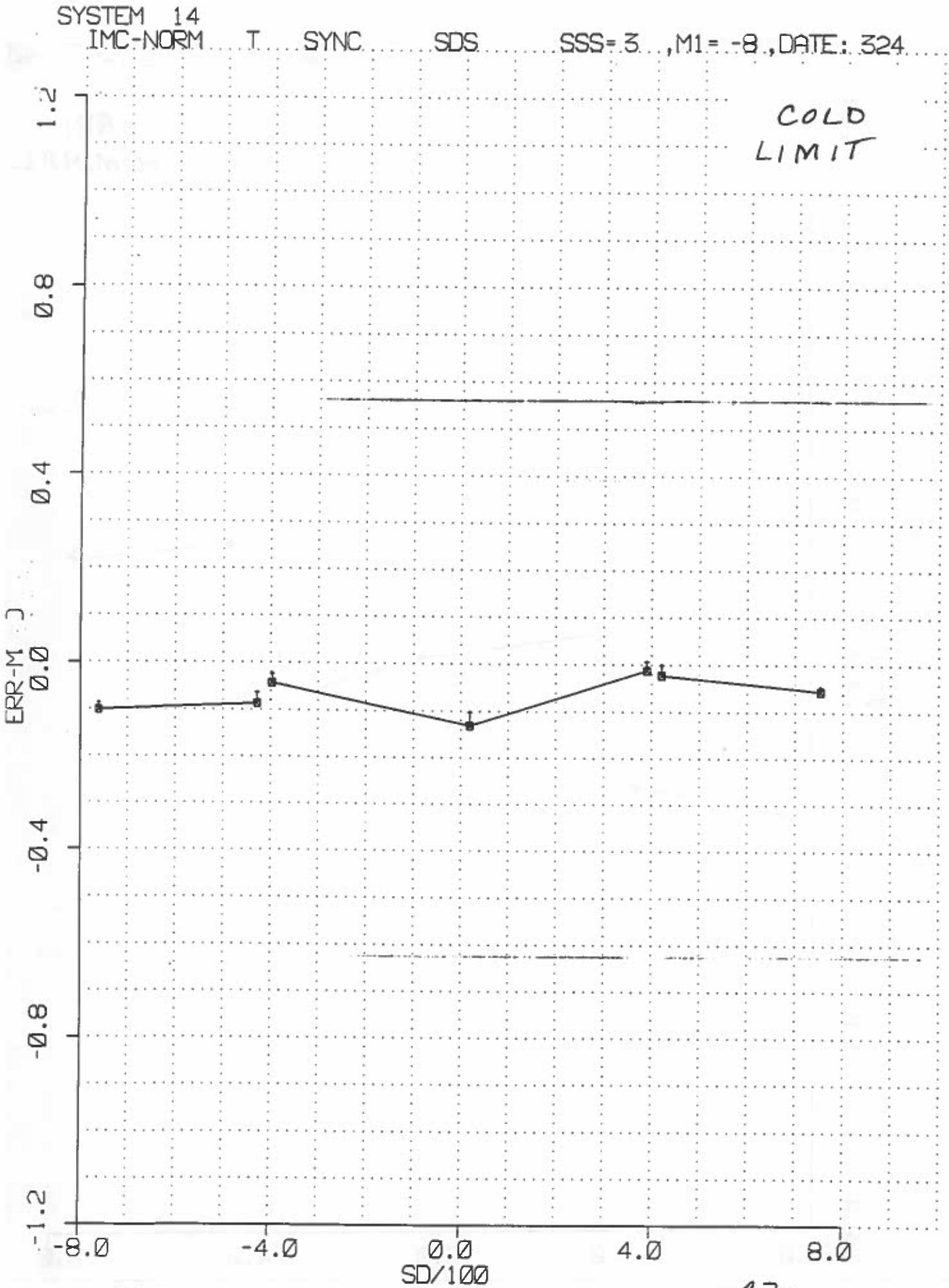

SYSTEM 14
IMC-NORM T SYNC SDF SSS= 3 ,M1= -8 ,DATE: 324
COLD
LIMIT
ERR-M
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
-8.0
-4.0
0.0
4.0
8.0
SD/100

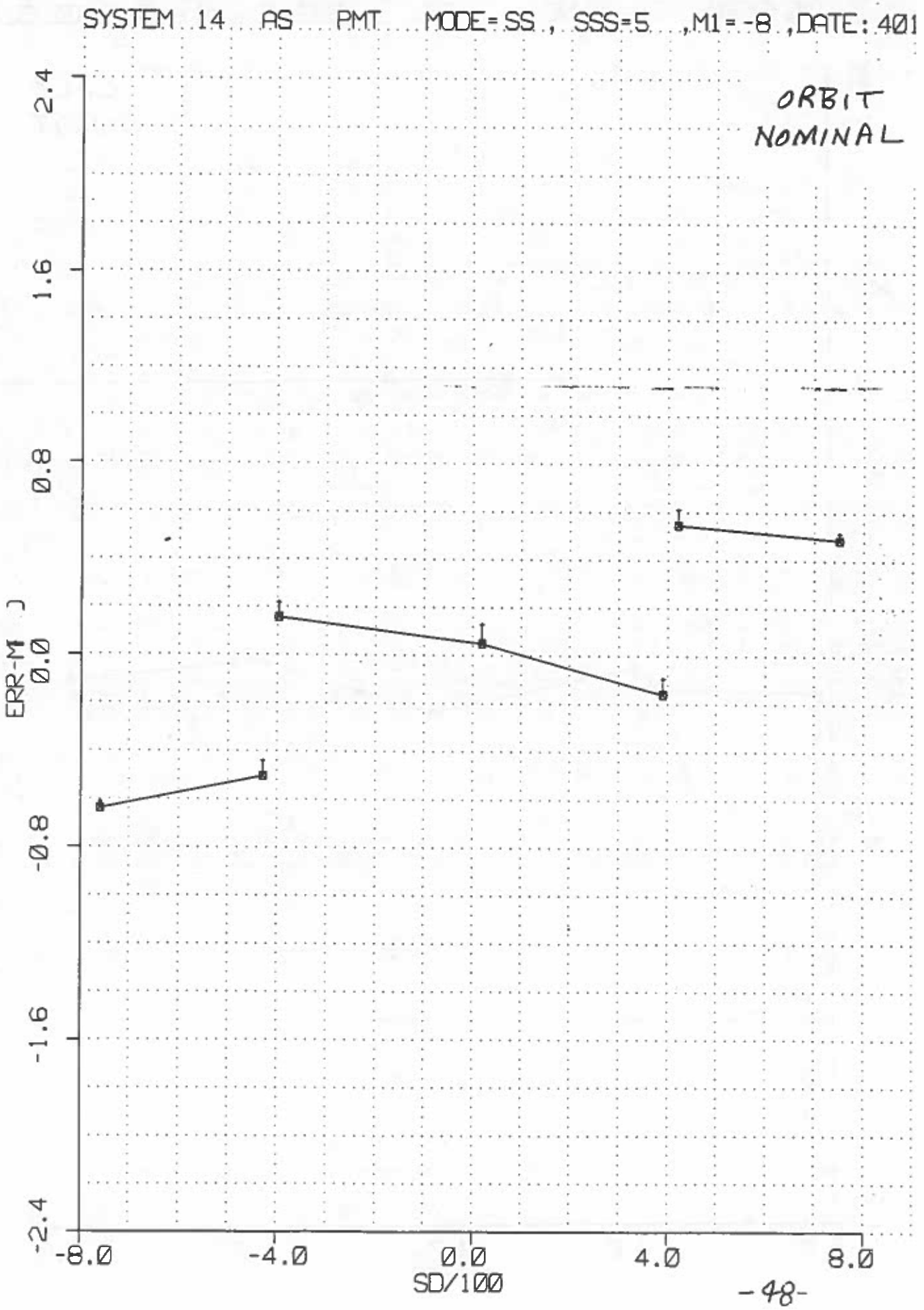

SYSTEM 14
IMC-NORM T SYNC RTD-F SSS=5 ,M1= -8 ,DATE: 215
ORBIT
NOMINAL
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

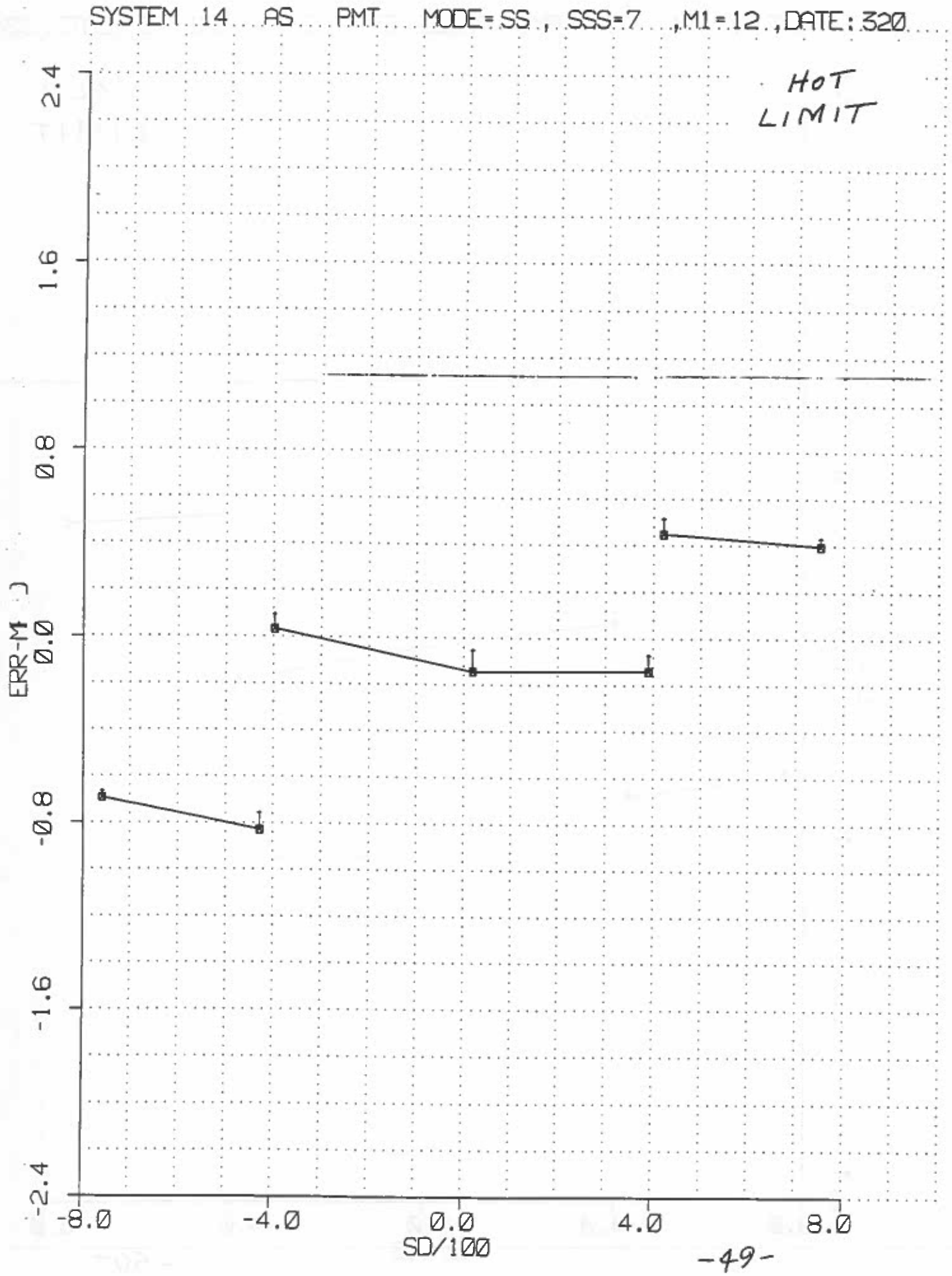

SYSTEM 14
IMC-NORM T SYNC RTD-S SSS= 5 ,M1= -8 ,DATE: 215
ORBIT
NOMINAL
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M D
-8.0
-4.0
0.0
4.0
8.0
SD/100

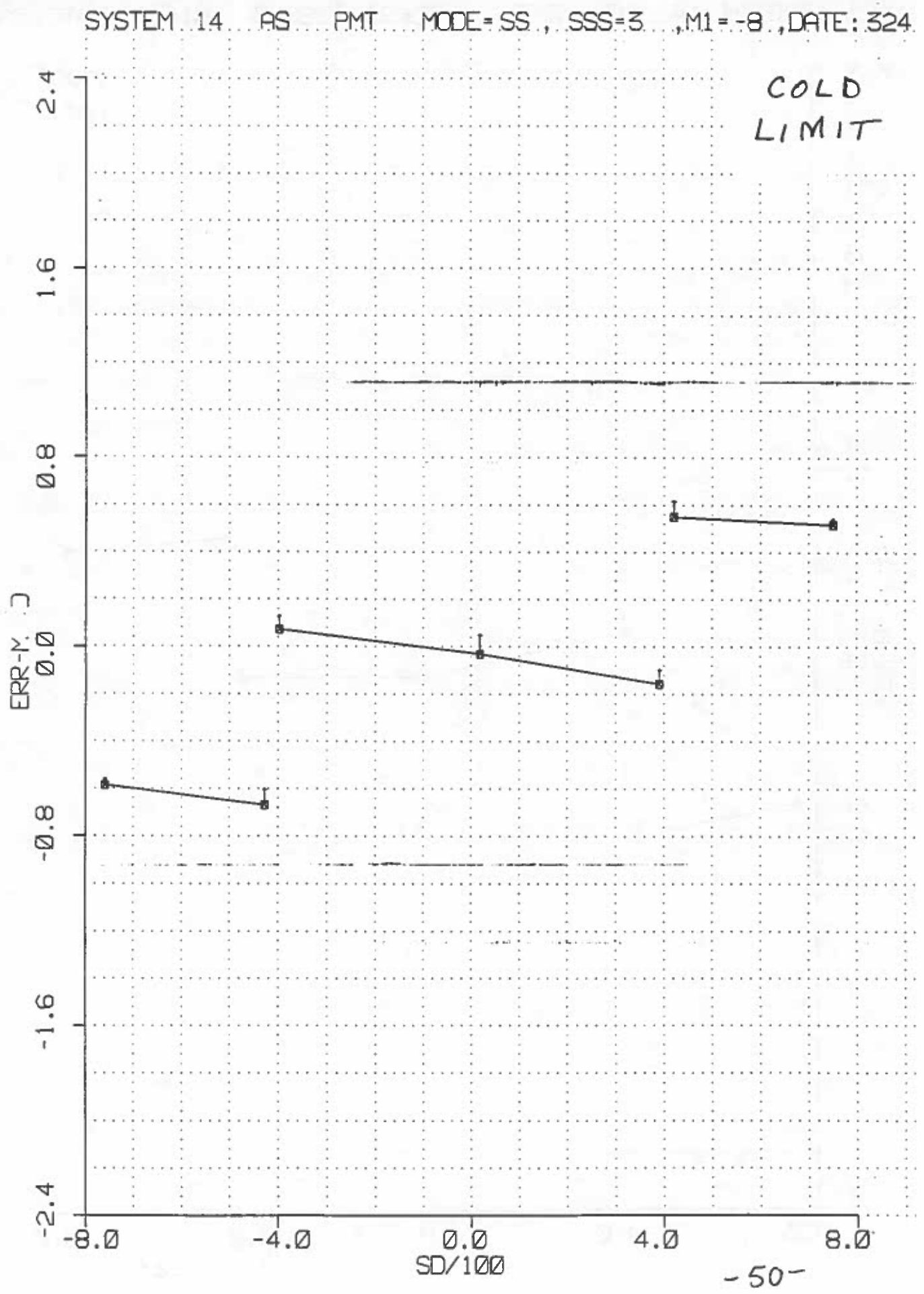

SYSTEM 14
IMC-NORM T SYNC SDS SSS=5 ,M1=-8,DATE: 330
ORBIT
NOMINAL
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-MR)
-8.0
-4.0
0.0
4.0
8.0
SD/100

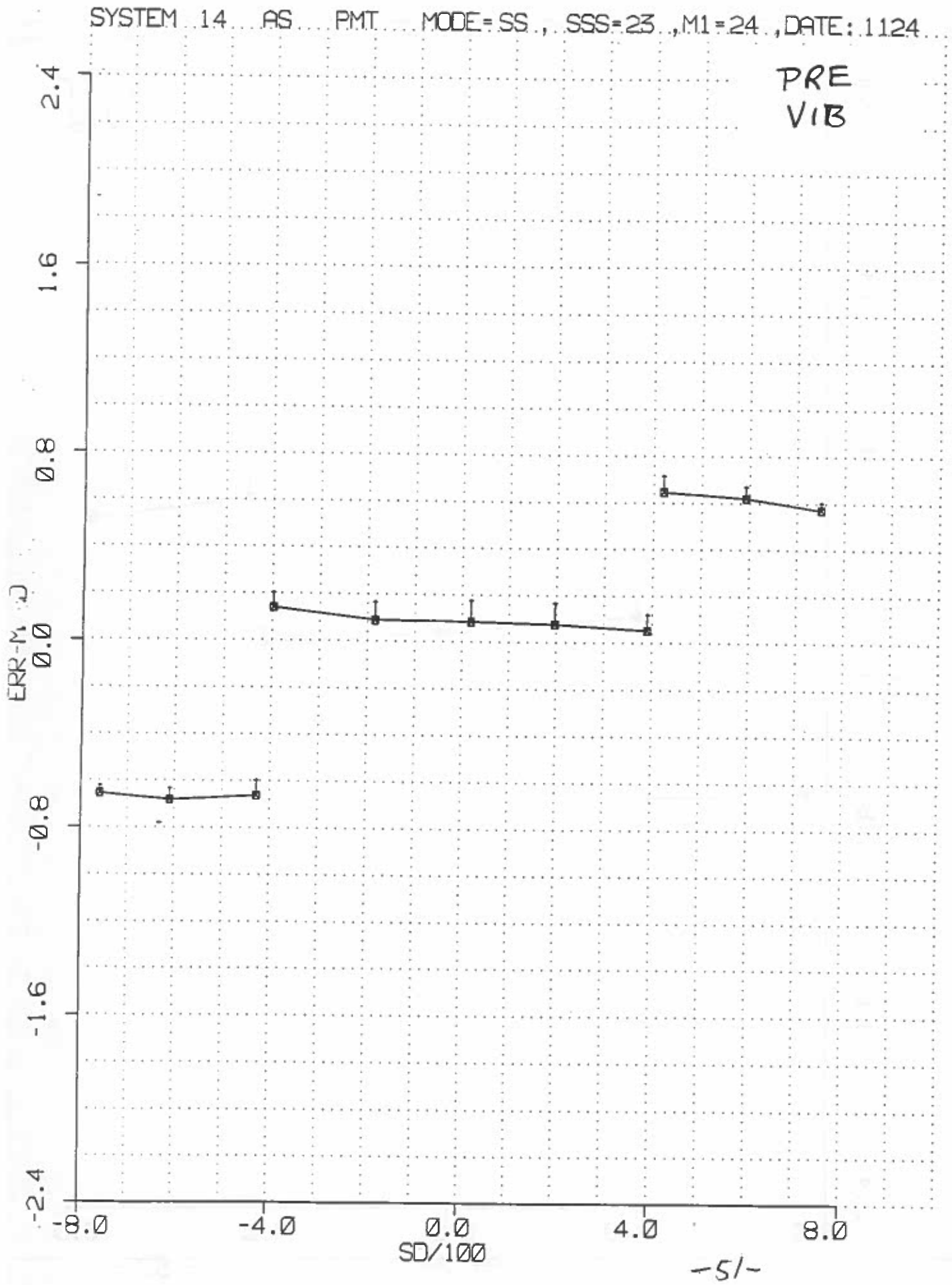

SYSTEM 14
IMC-NORM T SYNC SDS SSS=7 ,M1=12,DATE: 322
HOT LIMIT
ERR-M
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
-8.0
-4.0
0.0
4.0
8.0
SD/100

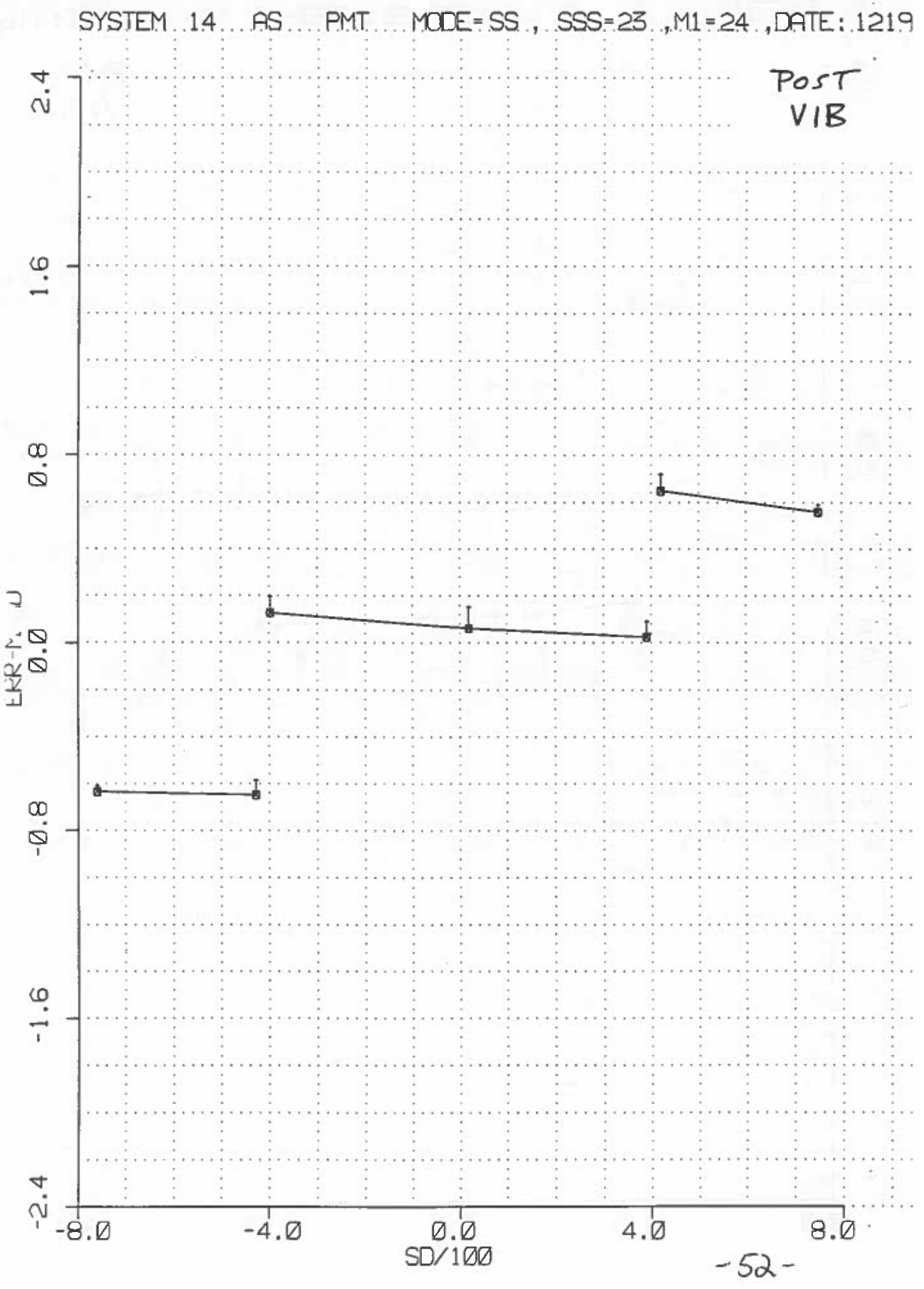

SYSTEM 14
IMC-NORM T SYNC SDS SSS= 3 ,M1= -8 ,DATE: 324
COLD
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

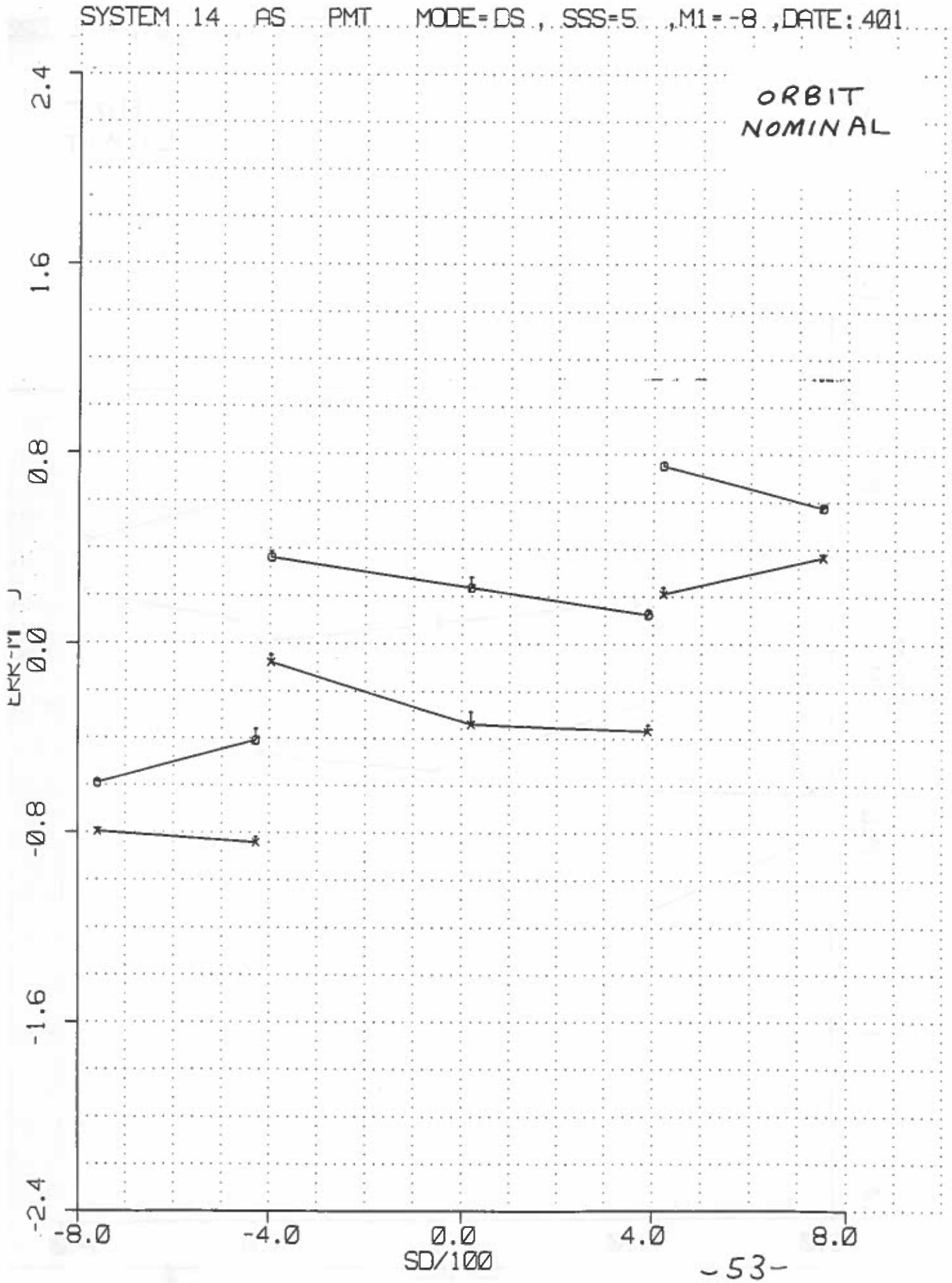

SYSTEM 14 AS PMT MODE=SS , SSS=5 ,M1=-8 ,DATE: 401
ORBIT
NOMINAL
2.4
1.6
0.8
0.0
-0.8
-1.6
-2.4
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

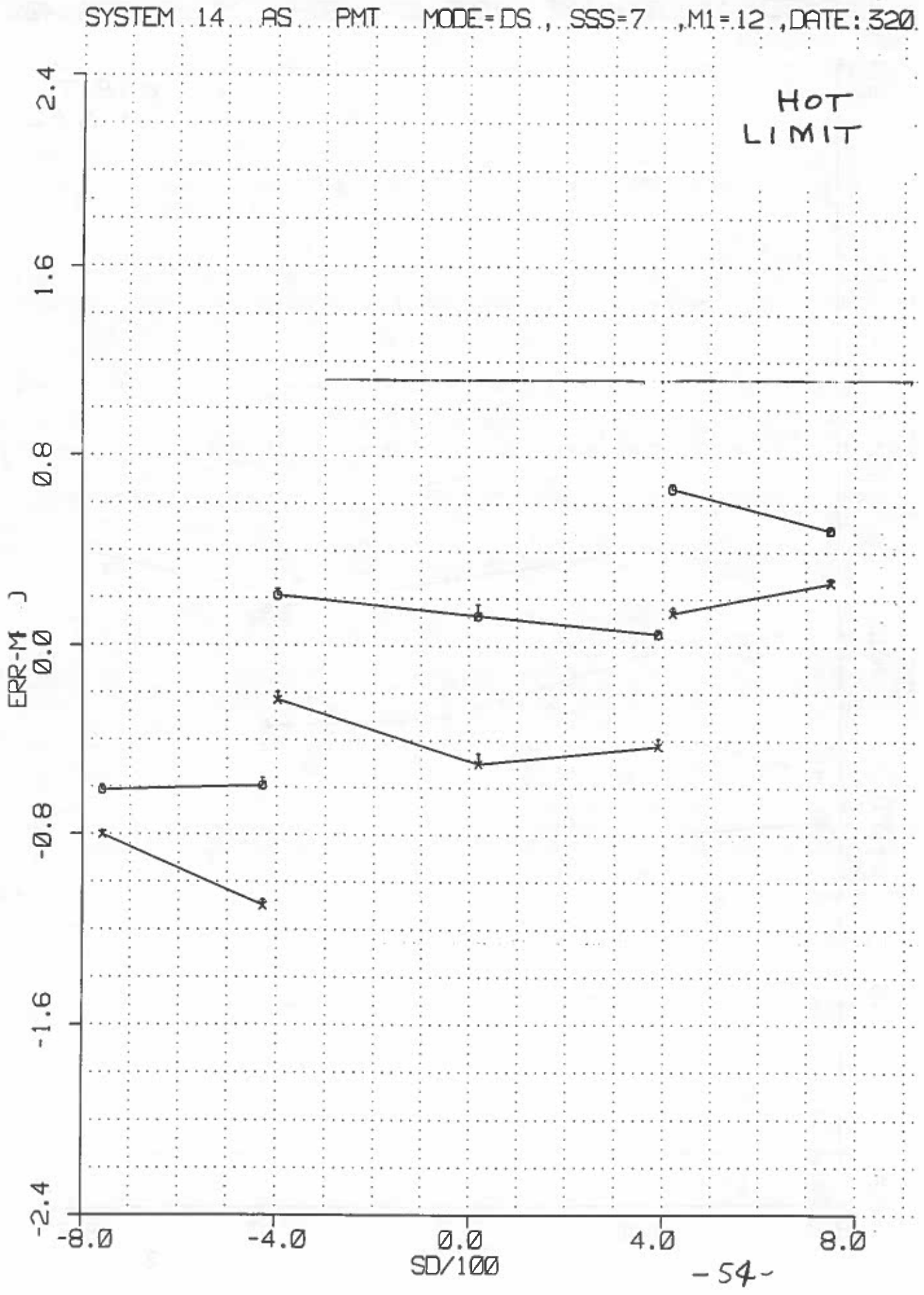

SYSTEM 14 AS PMT MODE=SS , SSS=7 ,M1=12 ,DATE:320
HOT
LIMIT
2.4
1.6
0.8
0.0
-0.8
-1.6
-2.4
ERR-M)
-8.0
-4.0
0.0
4.0
8.0
SD/100

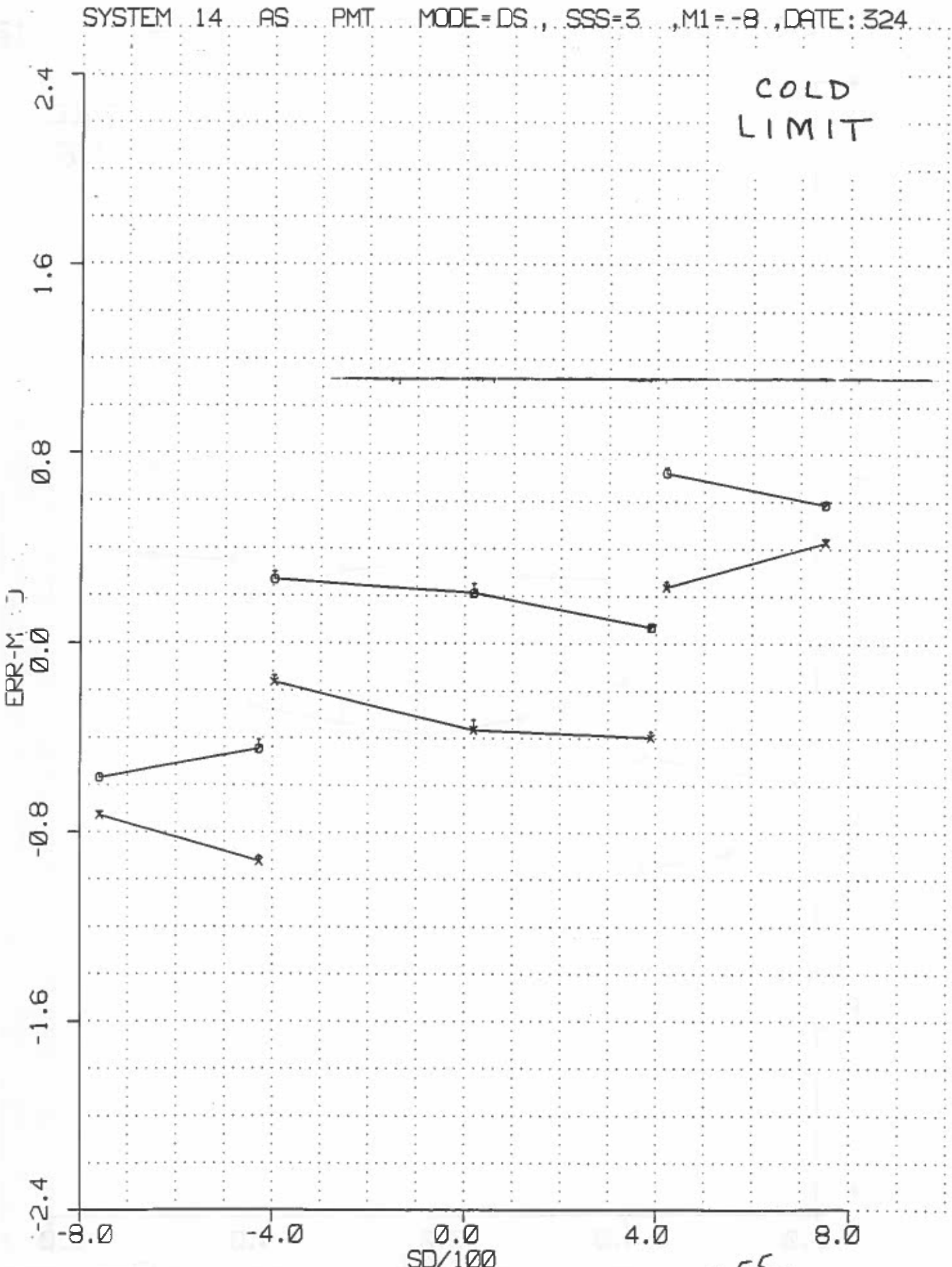

SYSTEM 14 AS PMT MODE=SS , SSS=3 ,M1=-8 ,DATE:324
COLD
LIMIT
2.4
1.6
0.8
0.0
-0.8
-1.6
-2.4
ERR-M.
-8.0
-4.0
0.0
4.0
8.0
SD/100

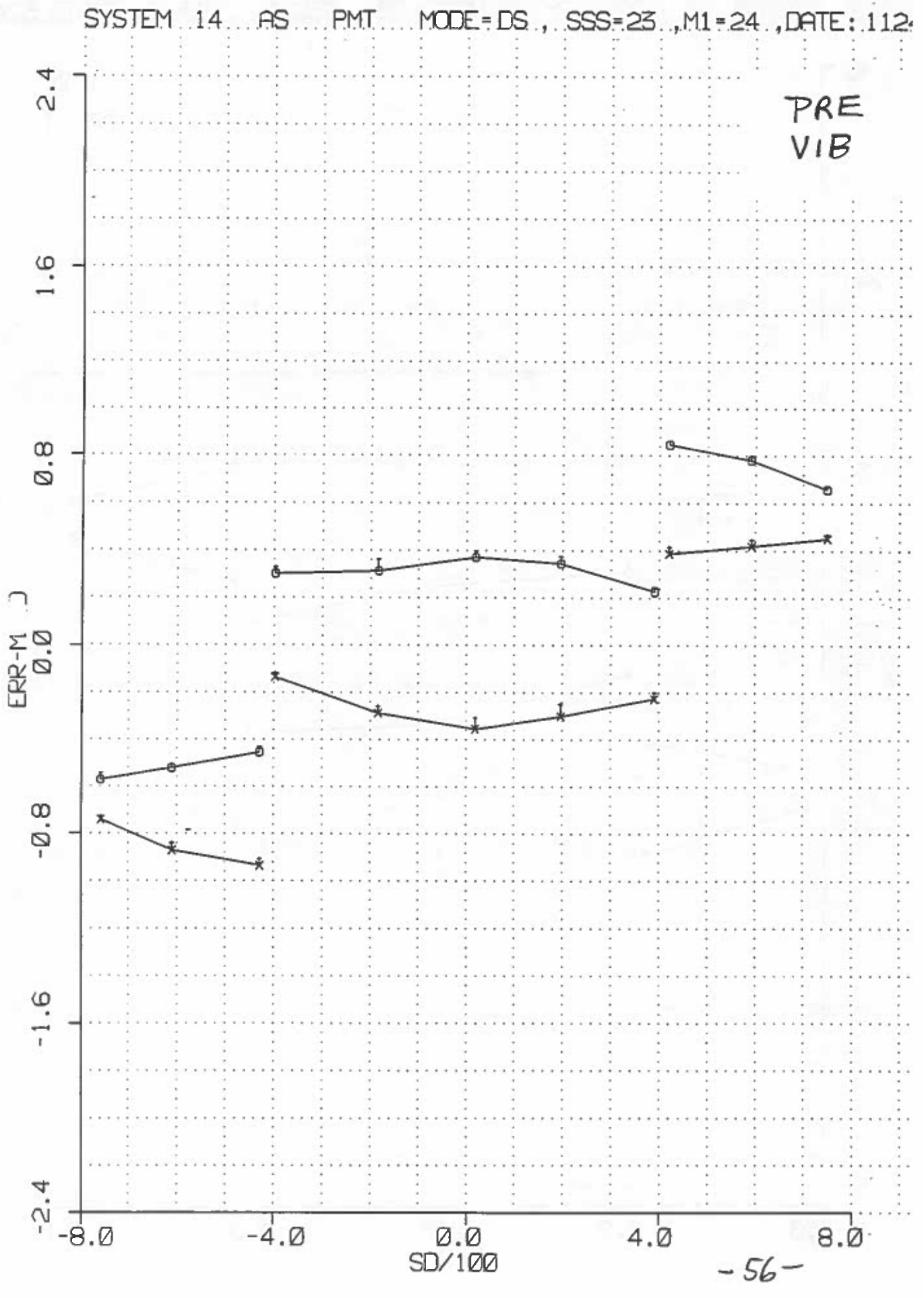

SYSTEM 14 AS PMT MODE=SS , SSS=23 ,M1=24 ,DATE: 1124
PRE
VIB
2.4
1.6
0.8
0.0
-0.8
-1.6
-2.4
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

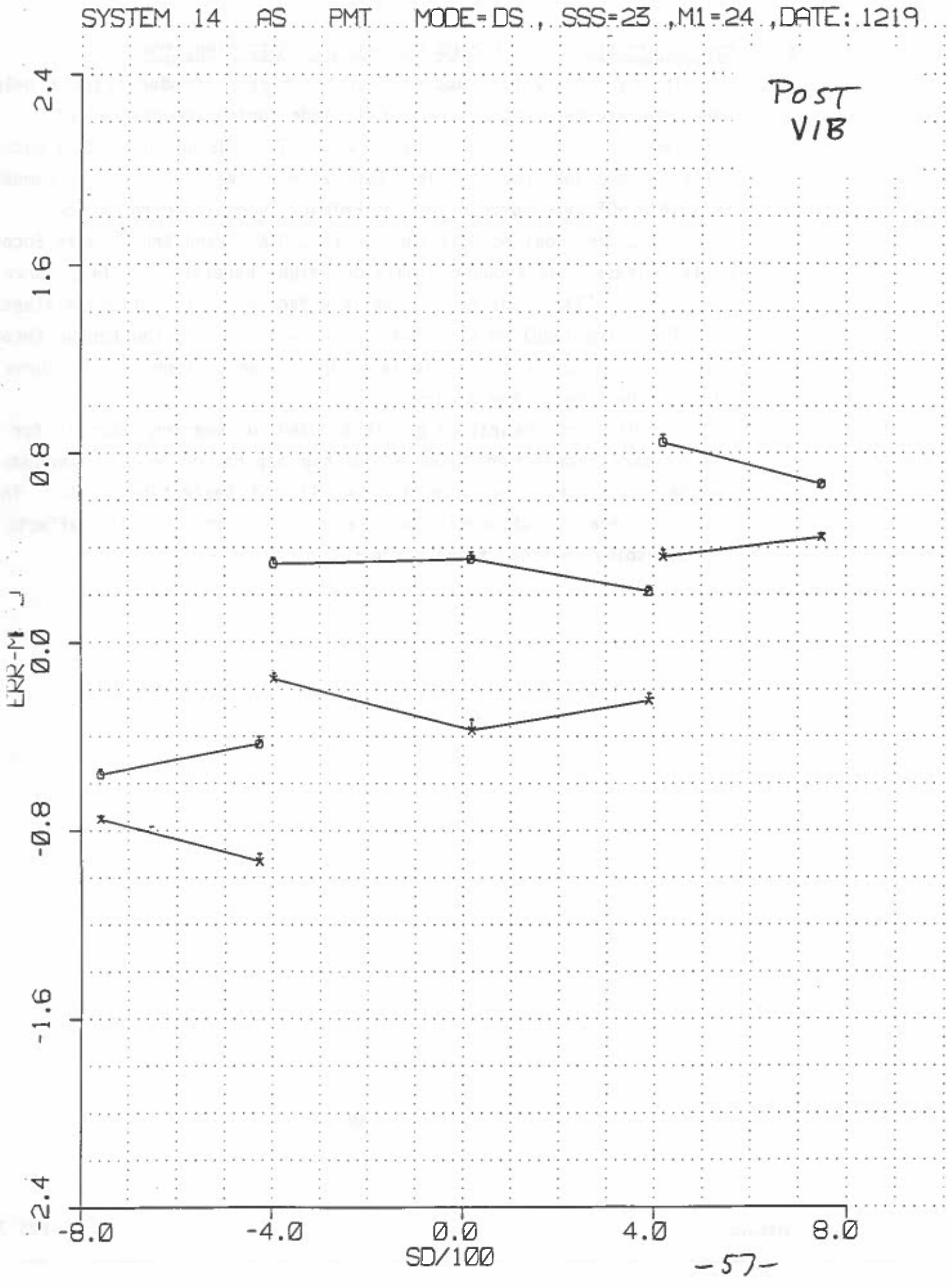

SYSTEM 14 AS PMT MODE=SS , SSS=23 ,M1=24 ,DATE: 1219
POST VIB
2.4
1.6
0.8
0.0
-0.8
-1.6
-2.4
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14 AS PMT MODE=DS , SSS=5 ,M1=-8 ,DATE:401
ORBIT
NOMINAL
2.4
1.6
0.8
0.0
-0.8
-1.6
-2.4
ERR-M J
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14 AS PMT MODE=DS , SSS=7 , M1=12 , DATE: 320
HOT LIMIT
2.4
1.6
0.8
0.0
-0.8
-1.6
-2.4
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14 AS PMT MODE=DS , SSS=3 ,M1=-8 ,DATE: 324
COLD
LIMIT
2.4
1.6
0.8
0.0
-0.8
-1.6
-2.4
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14 AS PMT MODE=DS , SSS=23 ,M1=24 ,DATE: 112
PRE
VIB
2.4
1.6
0.8
0.0
-0.8
-1.6
-2.4
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14 AS PMT MODE=DS , SSS=23 ,M1=24 ,DATE: 1219
Post
V1B
2.4
1.6
0.8
0.0
-0.8
-1.6
-2.4
ERR-M1 J
-8.0
-4.0
0.0
4.0
8.0
SD/100

4. SYNCHRONIZATION USING BACKUP ENCODER & ENCODER SIMULATOR

The synchronization accuracy of the backup encoder track & delp generator are measured in the HRD SDF mode during acceptance test.

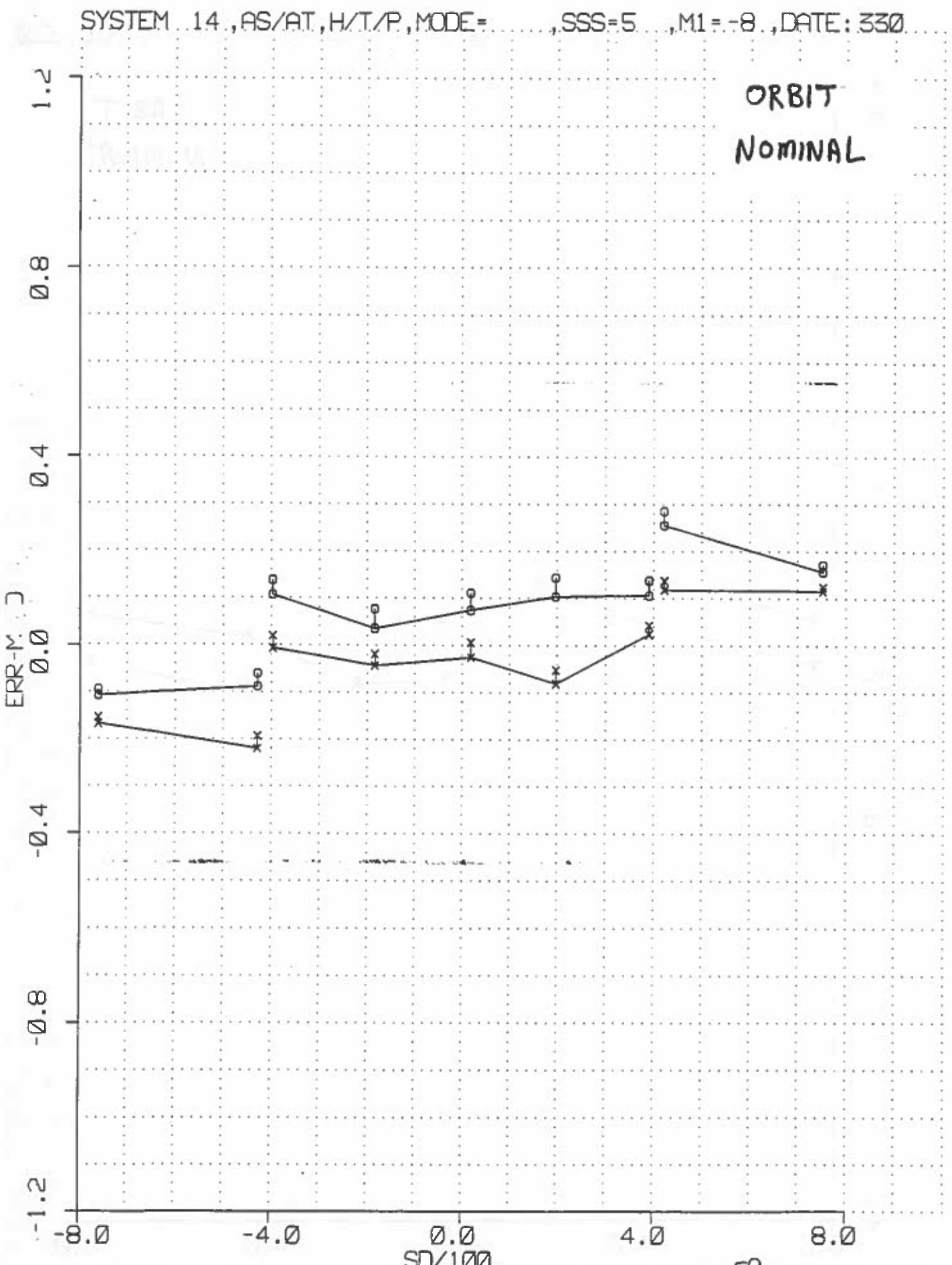
The curve labelled A is taken with I/O X, using the Backup Encod Control Track and Encoder Delphi Generation. This curve can be compar to an HRD SDF sync curve using the Primary Encoder Control Track.

The curve labelled B is taken with I/O X, using the Primary Encod Control Track, and encoder Simulator Delphi Generation. This curve plotted as milliradians error from Interface Axis vs. Surface distance

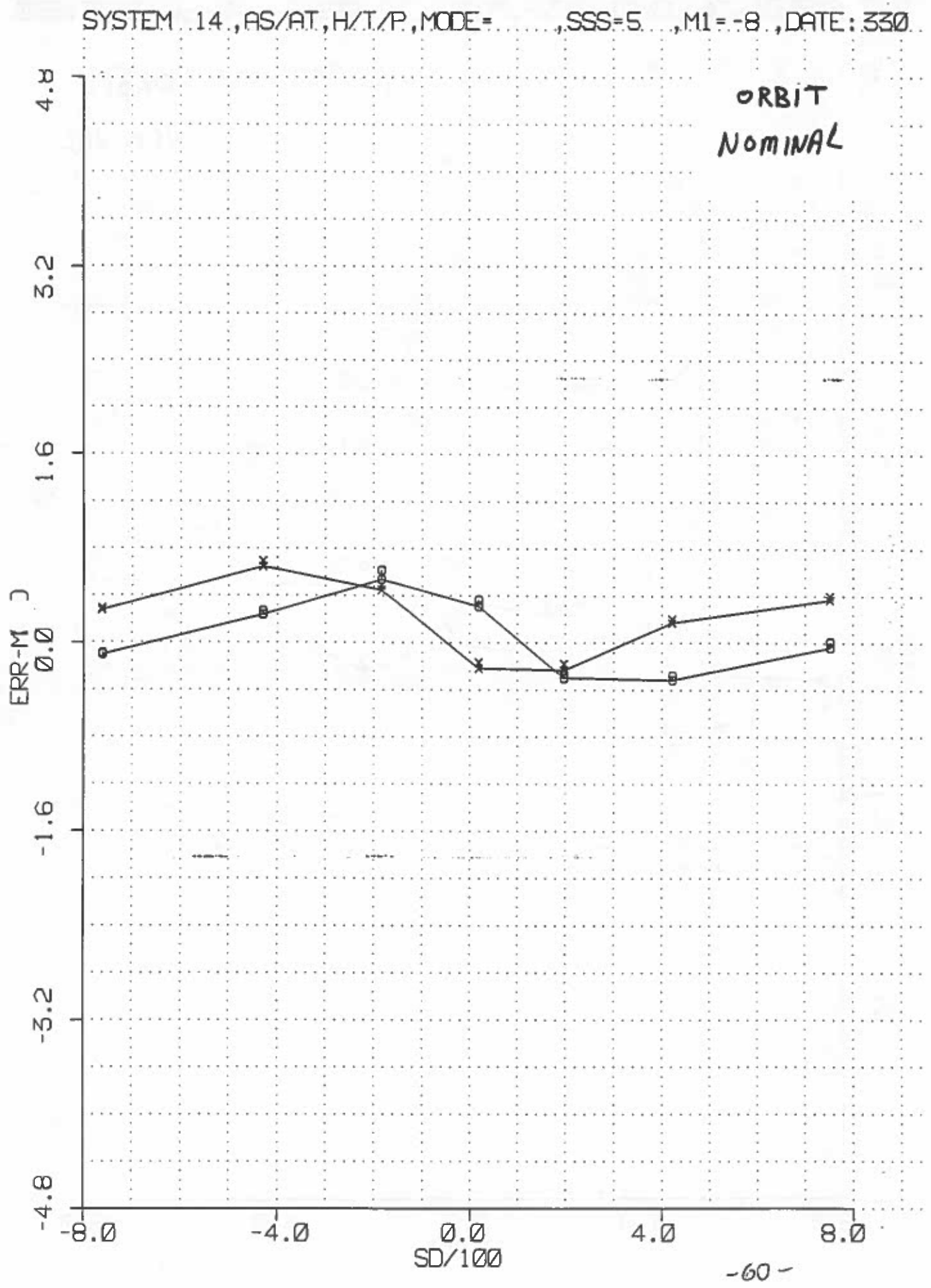
The curve labelled C is taken with I/O Y, using the Backup Encod Control Track and Encoder Simulator Delphi Generation. This curve plotted the same as the B curve.

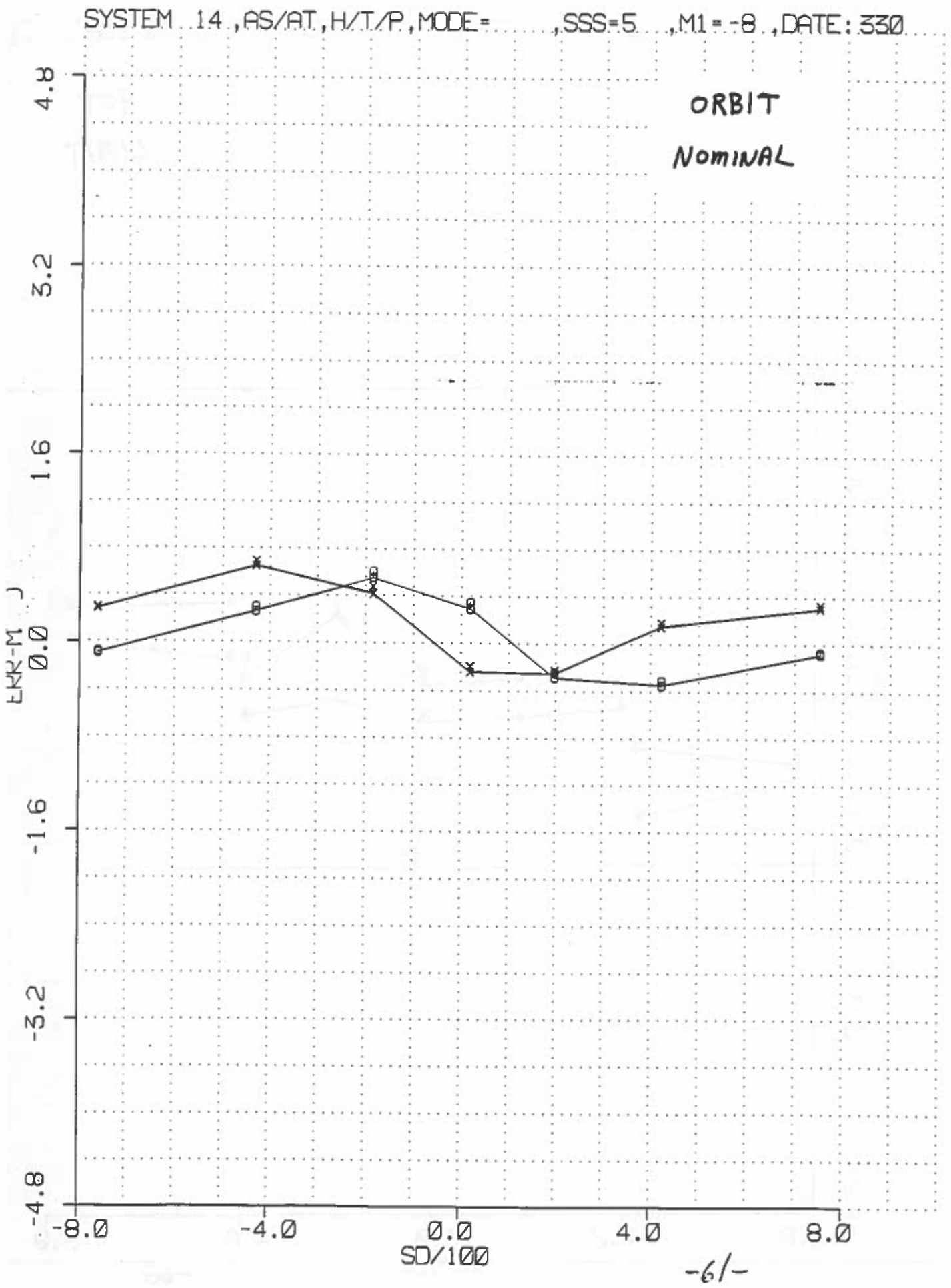
The Bias and Separation constants used for bearing retrofit for O #14 Primary Encoder are Bias = -18 and Separation = +8. The Back Encoder constants used were Bias = -17 and Separation = +8. The constants are operationally adjustable to account for the effects non-sinusoidal motion of the scanner.

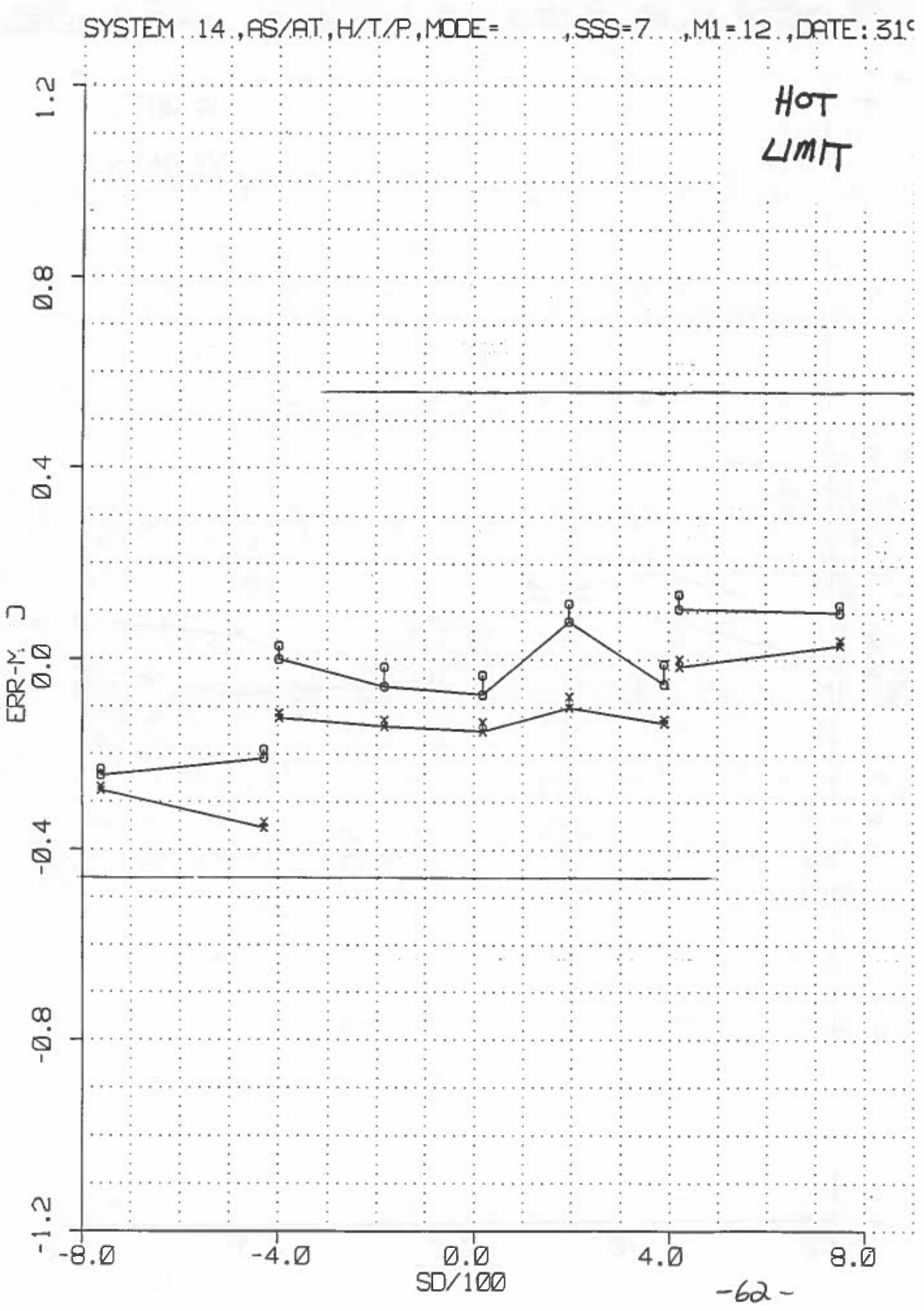
A

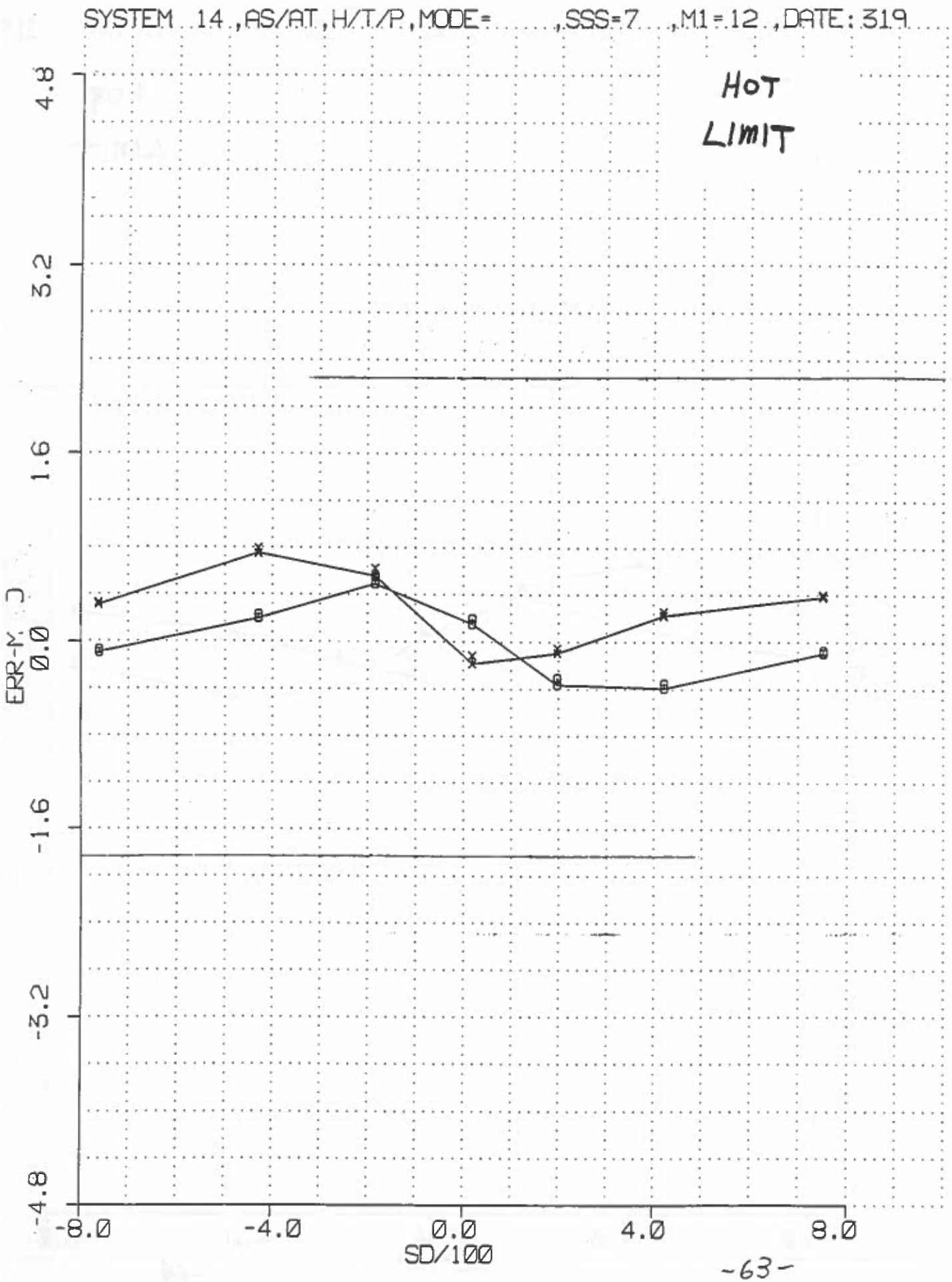

SYSTEM 14 ,AS/AT,H/T/P,MODE= ,SSS=5 ,M1=-8 ,DATE:330
ORBIT
NOMINAL
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

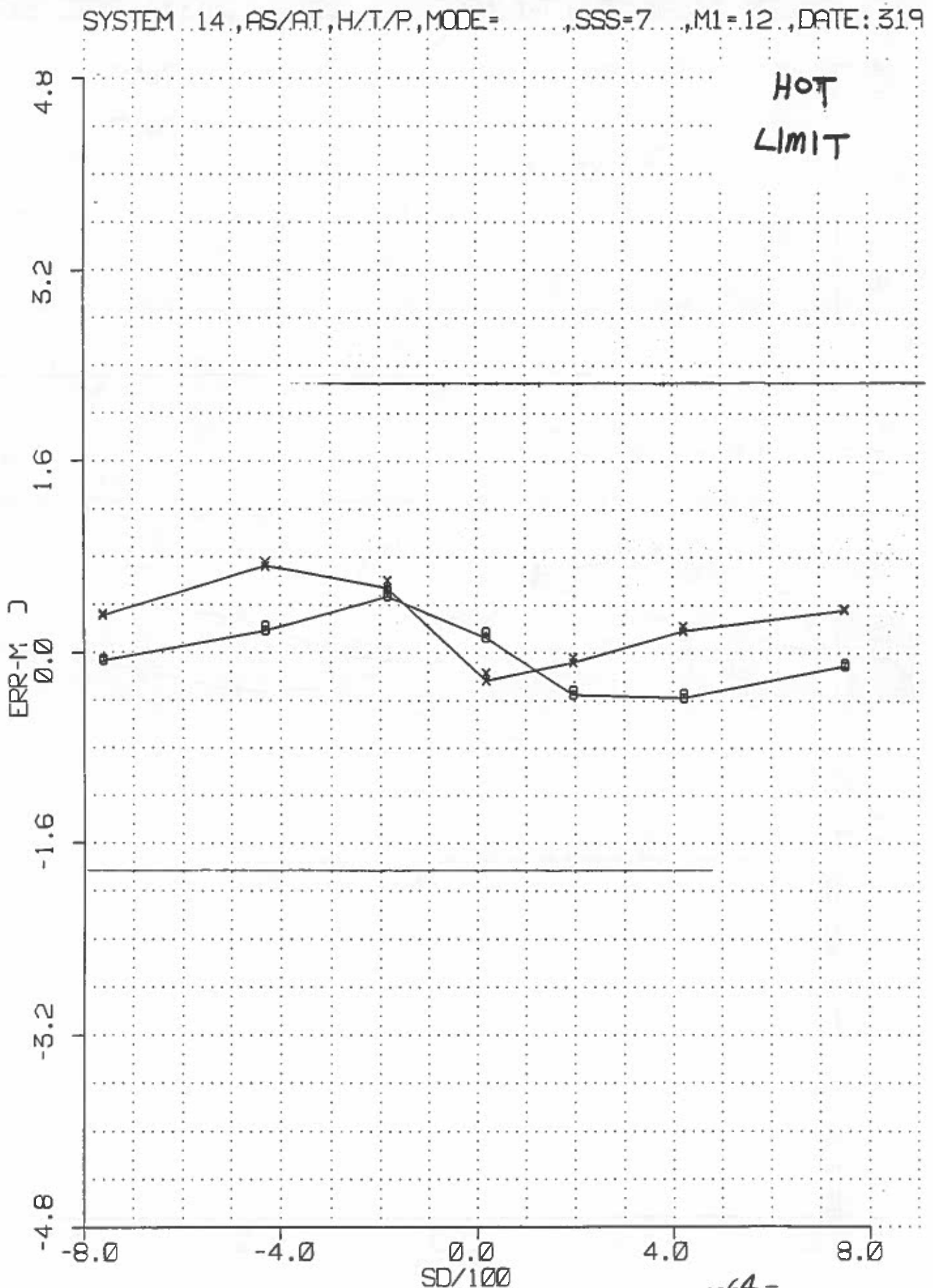
B


SYSTEM 14,AS/AT,H/T/P,MODE= ,SSS=5 ,M1=-8 ,DATE:330
ORBIT
NOMINAL
4.8
3.2
1.6
0.0
-1.6
-3.2
-4.8
ERR-M)
-8.0
-4.0
0.0
4.0
8.0
SD/100

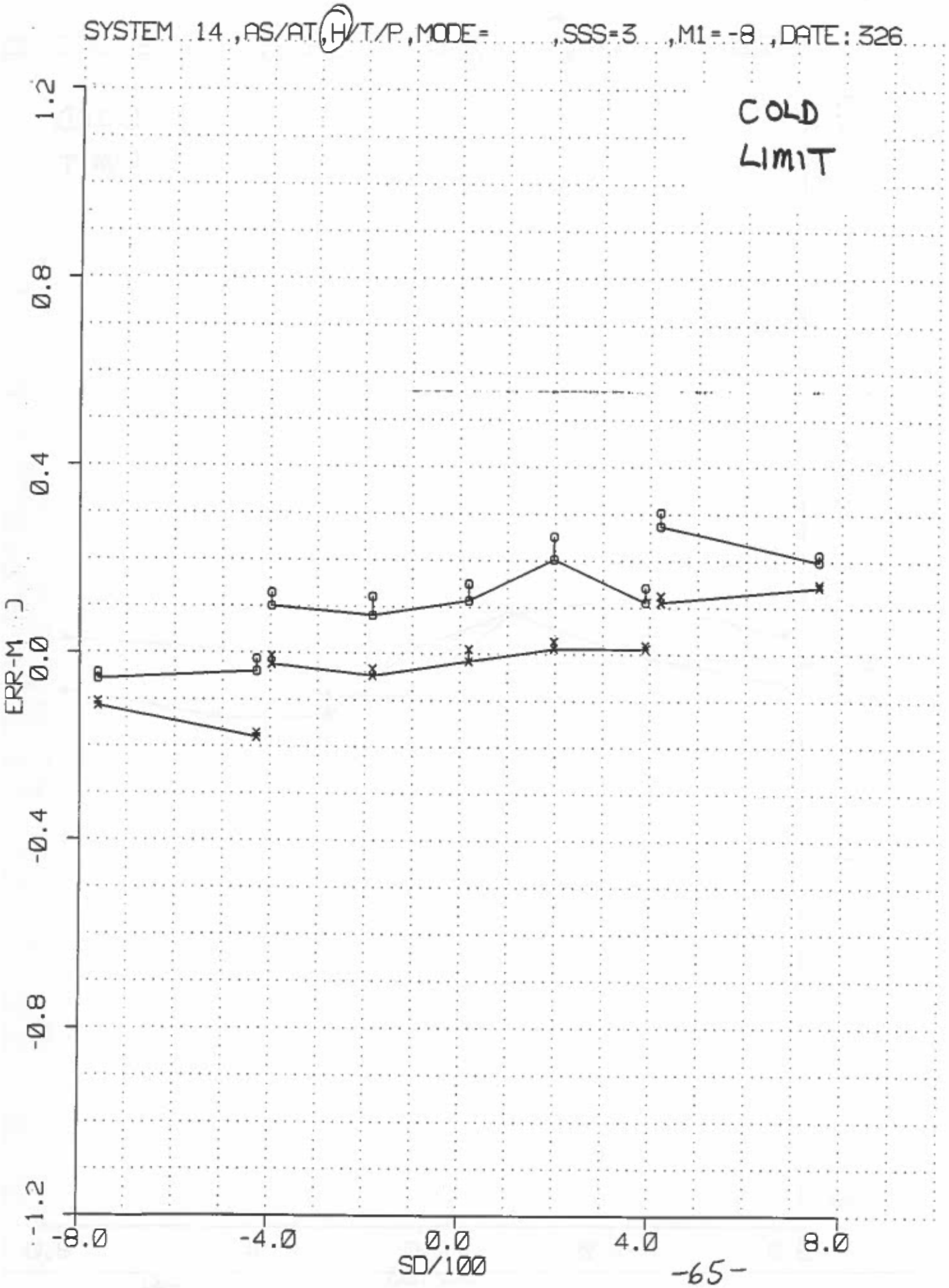

SYSTEM 14 ,AS/AT,H/T/P,MODE= ,SSS=5 ,M1=-8 ,DATE:330
ORBIT
NOMINAL
4.8
3.2
1.6
0.0
-1.6
-3.2
-4.8
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14 ,AS/AT,H/T/P,MODE= ,SSS=7 ,M1=12 ,DATE: 31
HOT
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

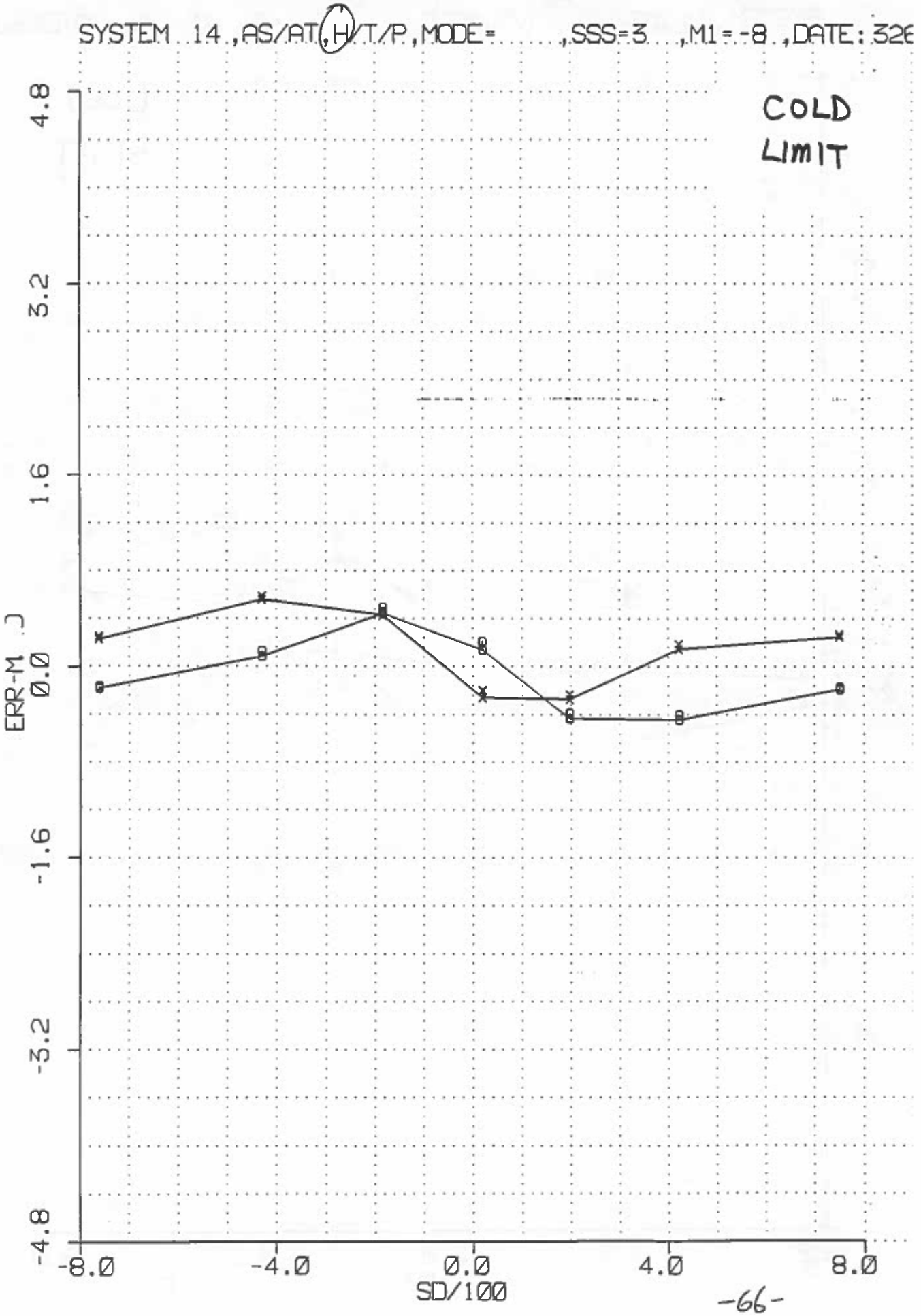

SYSTEM 14,AS/AT,H/T/P,MODE= ,SSS=7 ,M1=12 ,DATE:319
HOT
LIMIT
4.8
3.2
1.6
0.0
-1.6
-3.2
-4.8
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100


SYSTEM 14,AS/AT,H/T/P,MODE= ,SSS=7 ,M1=12 ,DATE:319
HOT
LIMIT
4.8
3.2
1.6
0.0
-1.6
-3.2
-4.8
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

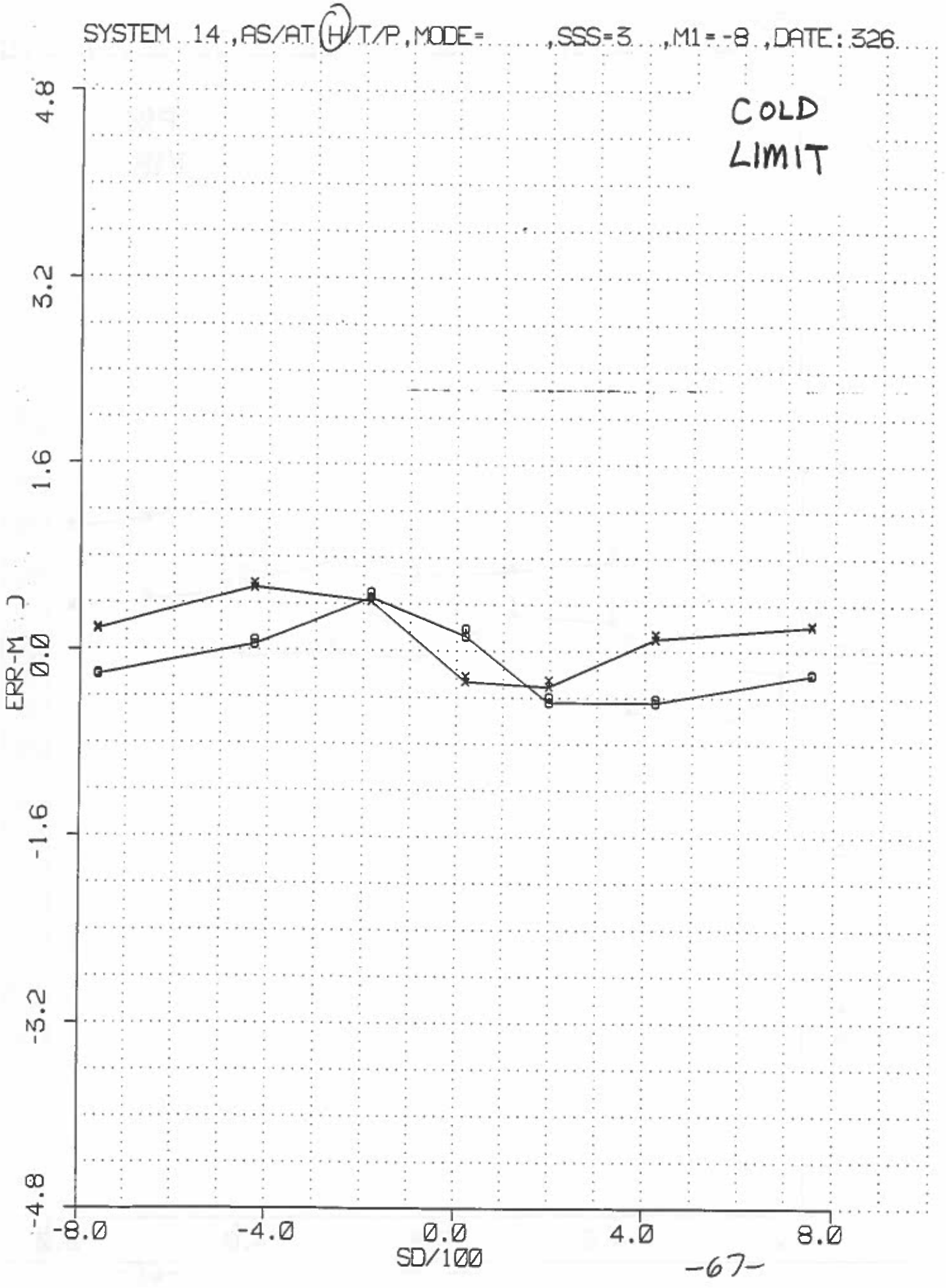
A


SYSTEM 14 ,AS/AT,H/T/P,MODE= ,SSS=3 ,M1=-8 ,DATE: 326
COLD
LIMIT
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

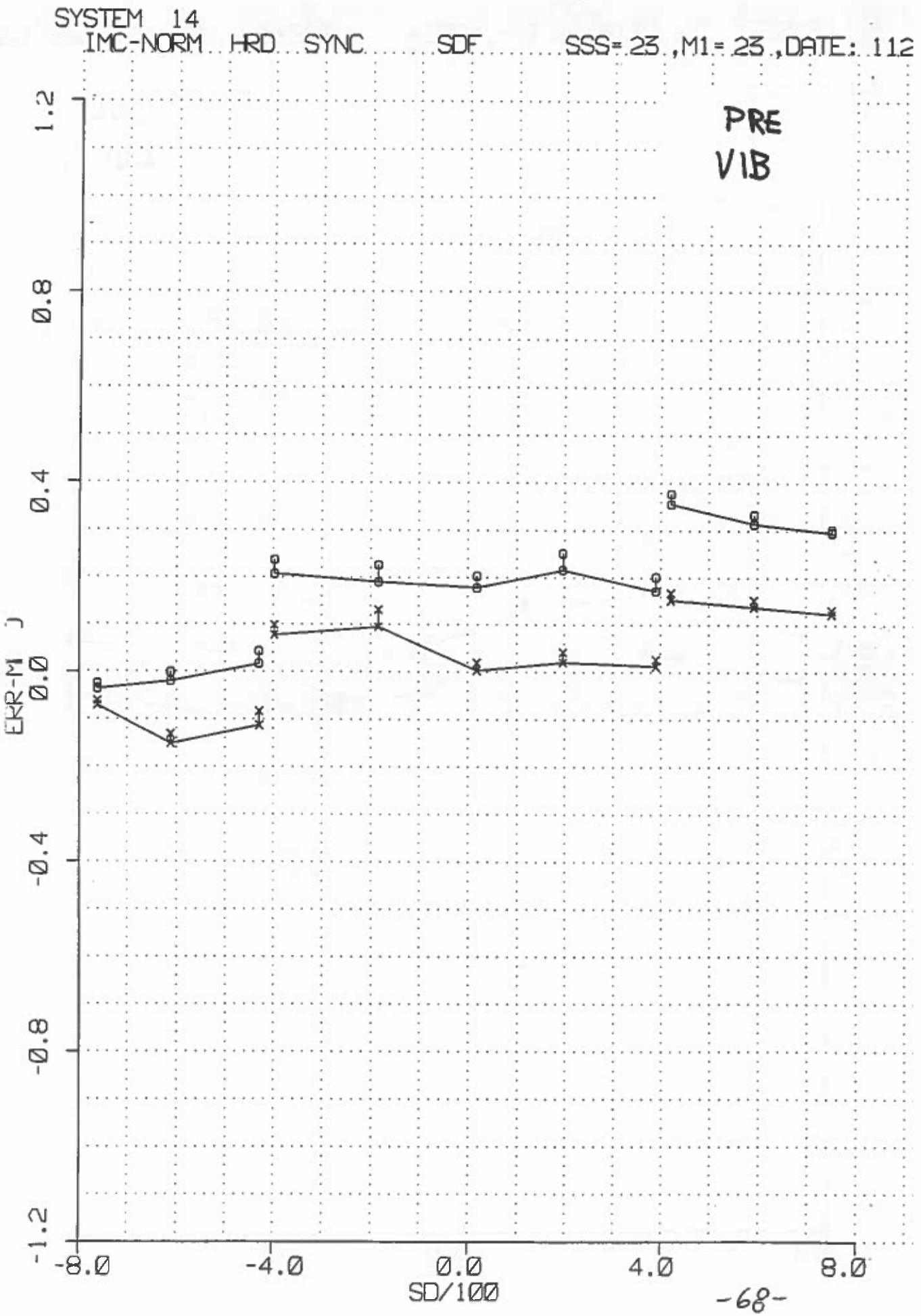
B


SYSTEM 14 ,AS/AT,H/T/P,MODE= ,SSS=3 ,M1=-8 ,DATE: 326
COLD
LIMIT
4.8
3.2
1.6
0.0
-1.6
-3.2
-4.8
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

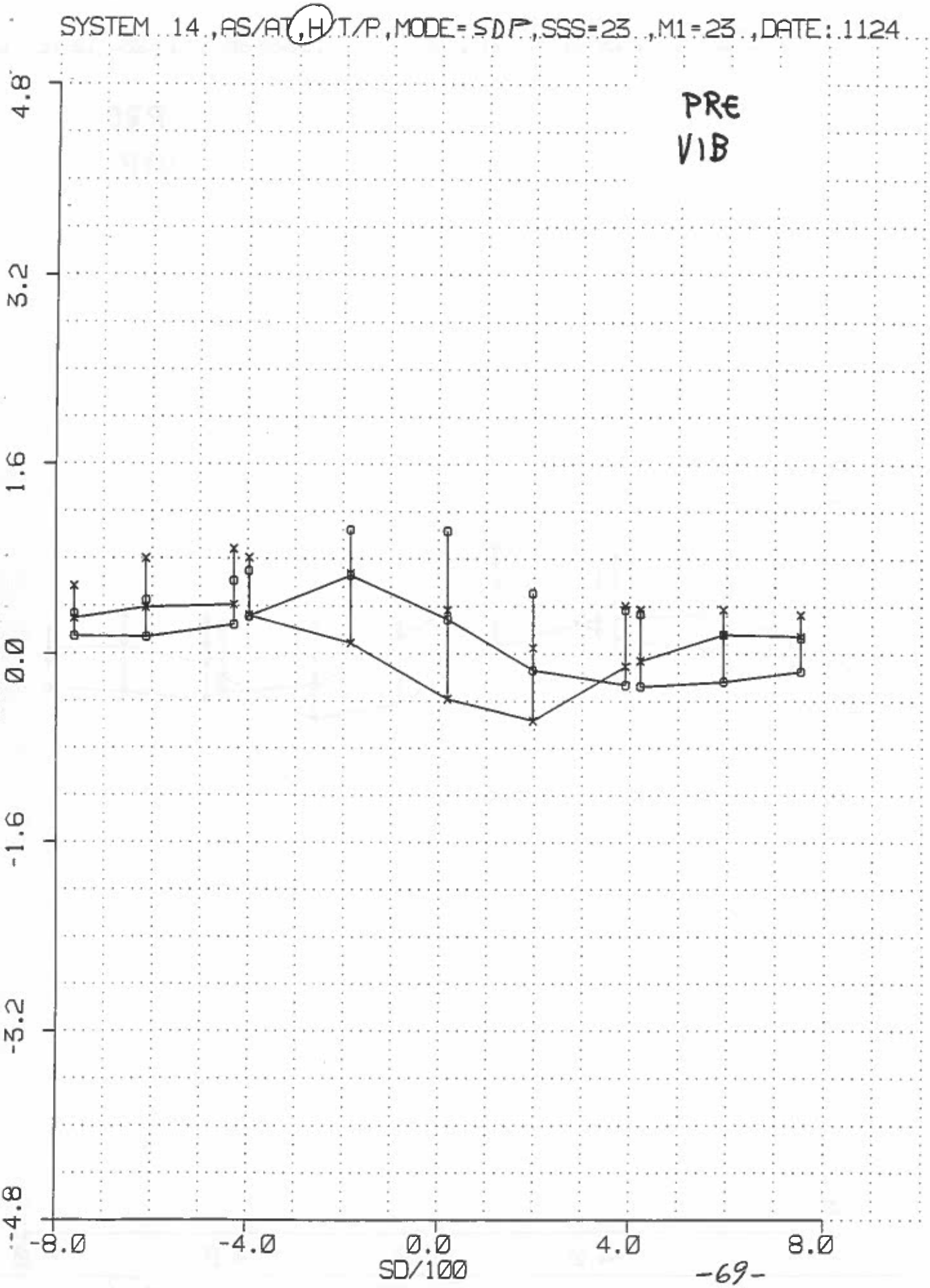
C


SYSTEM 14 ,AS/AT (H)/T/P,MODE= ,SSS=3 ,M1=-8 ,DATE: 326
COLD
LIMIT
4.8
3.2
1.6
0.0
-1.6
-3.2
-4.8
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

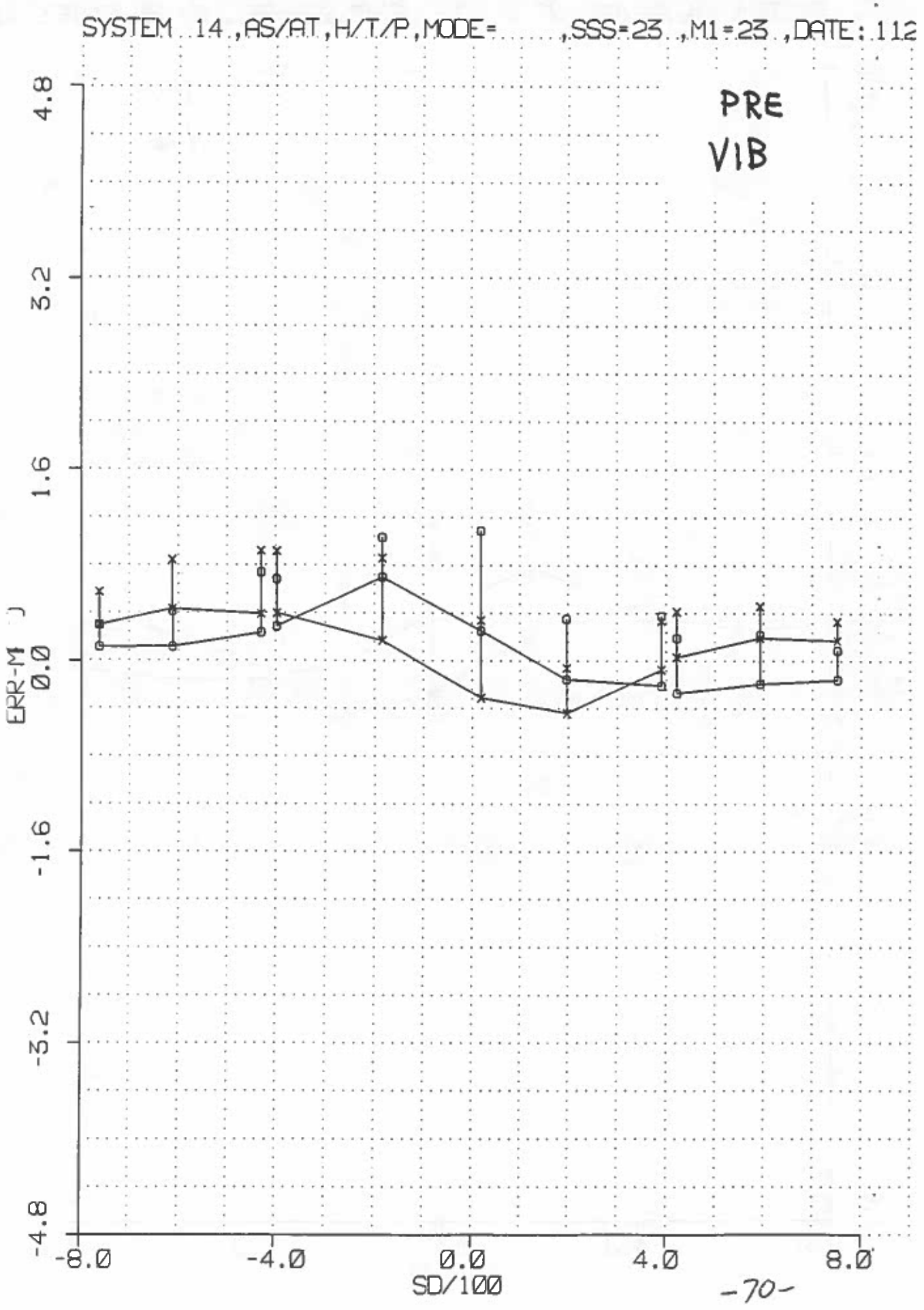
"A"


SYSTEM 14
IMC-NORM HRD SYNC SDF SSS= 23 ,M1= 23 ,DATE: 112
PRE
VIB
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
ERR-M)
-8.0
-4.0
0.0
4.0
8.0
SD/100

"B"


SYSTEM 14 ,AS/AT,H/T/P,MODE=SDP,SSS=23 ,M1=23 ,DATE:1124
PRE
VIB
4.8
3.2
1.6
0.0
-1.6
-3.2
-4.8
ERR-PI
-8.0
-4.0
0.0
4.0
8.0
SD/100

"C"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PRE
VIB
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3.2
1.6
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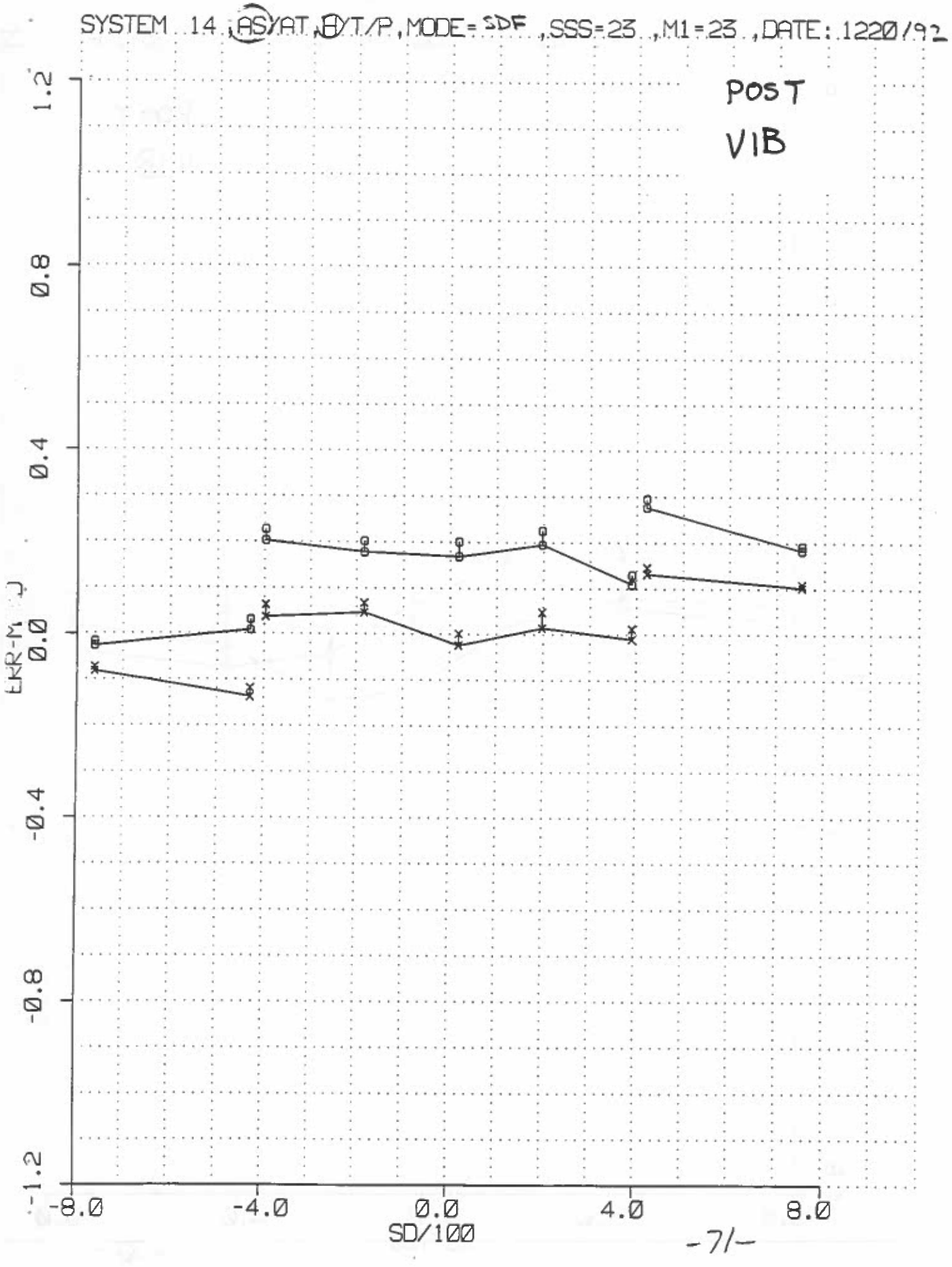
-3.2
-4.8
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100

A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POST
VIB
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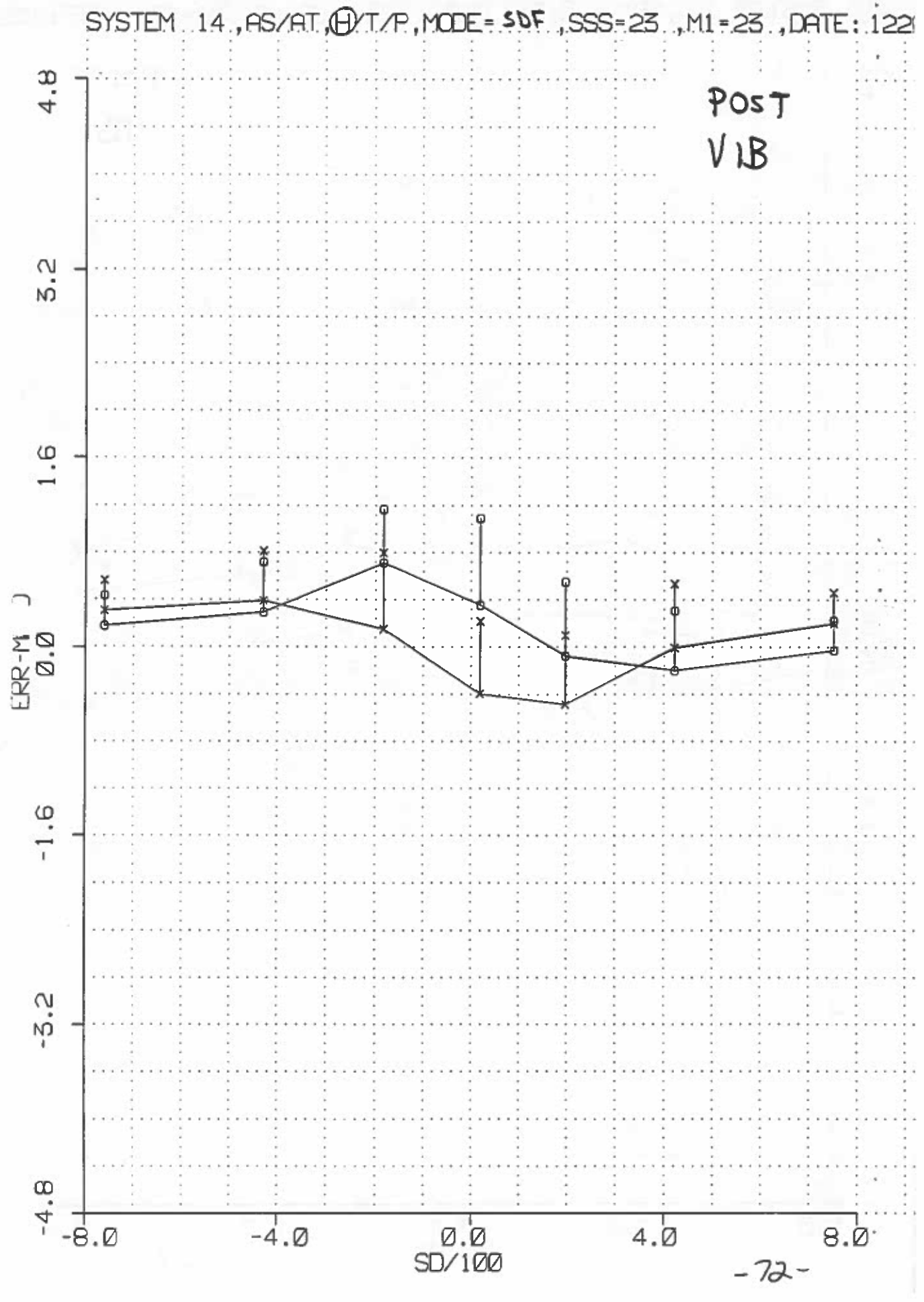
0.4
0.0
-0.4
-0.8
-1.2
EKR-M J
-8.0
-4.0
0.0
4.0
8.0
SD/100

"B"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VIB
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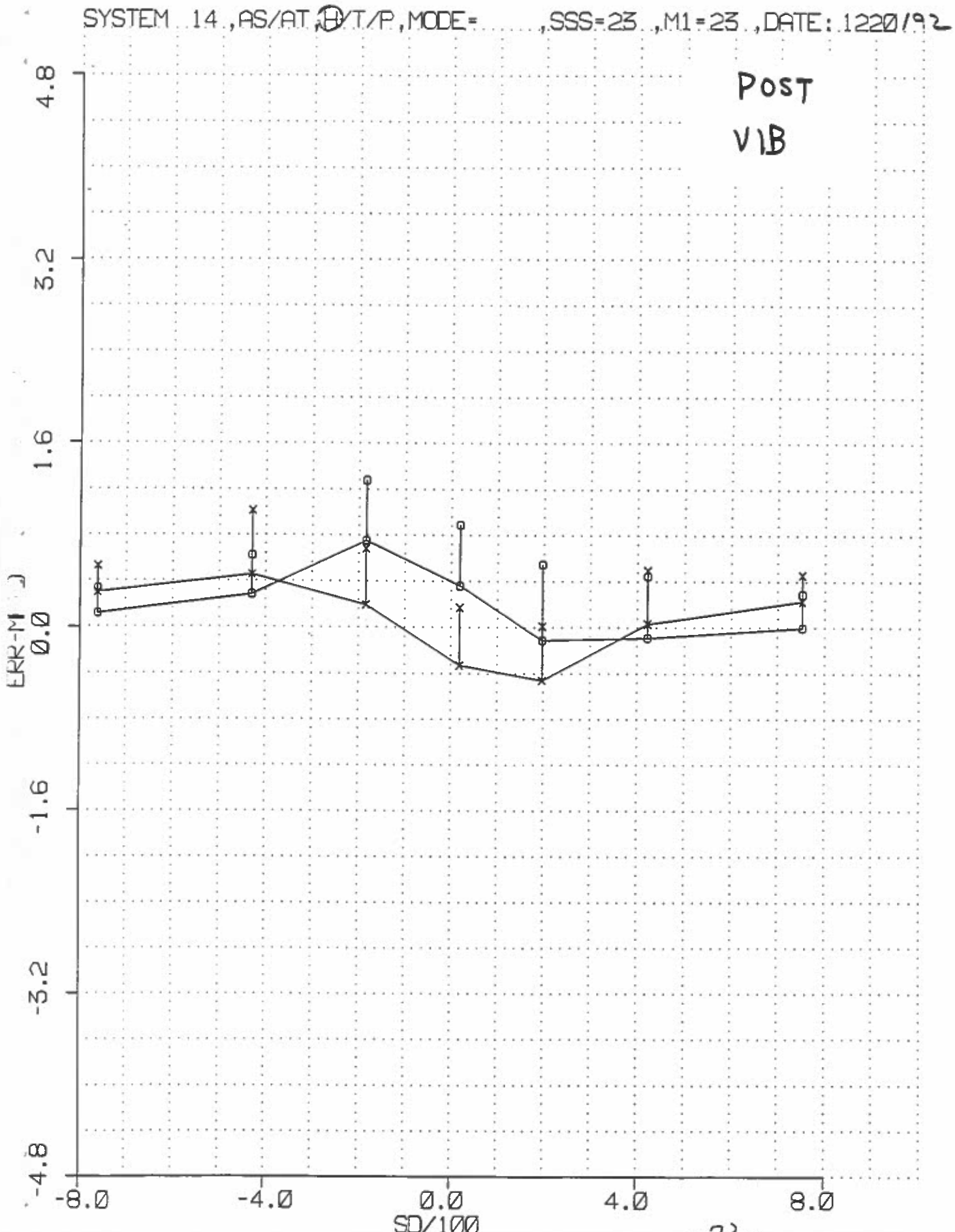
3.2
1.6
0.0
-1.6
-3.2
-4.8
ERR-M)
-8.0
-4.0
0.0
4.0
8.0
SD/100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POST
V1B
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1.6
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-1.6
-3.2
-4.8
ERR-M
-8.0
-4.0
0.0
4.0
8.0
SD/100