**GPU Nuclear Corporation**

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Writer's Direct Dial Number:

November 11, 1982
4410-82-L-0038

U.S. NUCLEAR
REGULATORY COMMISSION

1982 NOV 11 PM 3 13

TMI Program Office
Attn: Mr. L. H. Barrett, Deputy Program Director
US Nuclear Regulatory Commission
c/o Three Mile Island Nuclear Station
Middletown, PA 17057-0191

Dear Sir:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Radioactive Water Management Program

This is the periodic report presenting results of the program to detect radioactive water leakage to the groundwater of TMI-2.

Groundwater Monitoring

The following groundwater monitoring data is attached:

1. Individual computer graphs (Figure 1) of tritium concentrations for each monitoring station, observation station, and the East Dike Catch Basin (EDCB) up to and including September 13, 1982. The graphs for MS-1, MS-2, MS-3, OS-10, OS-16, and OS-17 including data up to and including October 11, 1982.
2. Individual computer graphs (Figure 2) including water levels within the monitoring stations up to and including October 4, 1982.
3. Computer Tables (Table 1 and 2) of gamma scan data up to and including September 7, 1982.
4. A graph (Figure 3) indicating gamma scan data from Monitoring Station MS-2 sample analysis.
5. A composite drawing showing all monitoring locations with a graph of the tritium concentrations reported in each station.

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Tritium concentrations during this report period in the monitoring stations, observation stations, and the East Dike Catch Basin remained within the range of previously reported values.

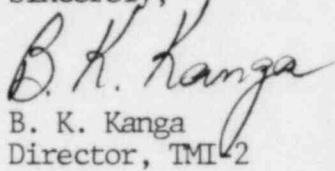
The gamma results from Unit 2 for selected stations were less than detectable (except for MS-2 and OS-17) for the September 20 and 28, October 4 and 11 dates. On October 4 and October 11, Cs-137 was detected in MS-2 samples at concentrations of 57 ± 14 pCi/l and 31 ± 11 pCi/l, respectively. Cs-137 was also detected in an OS-17 sample on October 11 at a concentration of 14 ± 5.6 pCi/l. The MS-2 sample from the October 4 date has been sent to an off-site laboratory as part of the "monthly" groundwater monitoring program. The results will be available in next month's report. The presence of Cs-137 in the groundwater from both stations is attributed to the sediment found in the stations.

Gamma results for September 13 show only naturally occurring Ra-226 present in MS-1, MS-2, MS-3, MS-4, MS-6, MS-7, and MS-8. Also K-40, another naturally occurring isotope was detected in MS-2.

Results of the strontium reanalyses for OS-16 (first quarter) and MS-8 (second quarter) have not been received. Next month's report will contain an update on all the first and second quarter strontium data.

Samples from OS-16 were not obtained from September 28 through November 3 due to blockage in the station which has since been removed and sample was reinstated on November 4, 1982.

Sincerely,



B. K. Kanga
B. K. Kanga
Director, TMI²

BKK/SWS/jep

Attachments

CC Dr. B. J. Snyder, Program Director - TMI Program Office

LIST OF ATTACHMENTS

Figures

- Figure 1 Graphs of Tritium Concentrations of Monitoring Stations and East Dike Catch Basin Samples Versus Time
- Figure 2 Graphs of Water Levels in Monitoring Stations Versus Time
- Figure 3 Gamma Scan Results for Monitoring Station MW-2 Versus Time

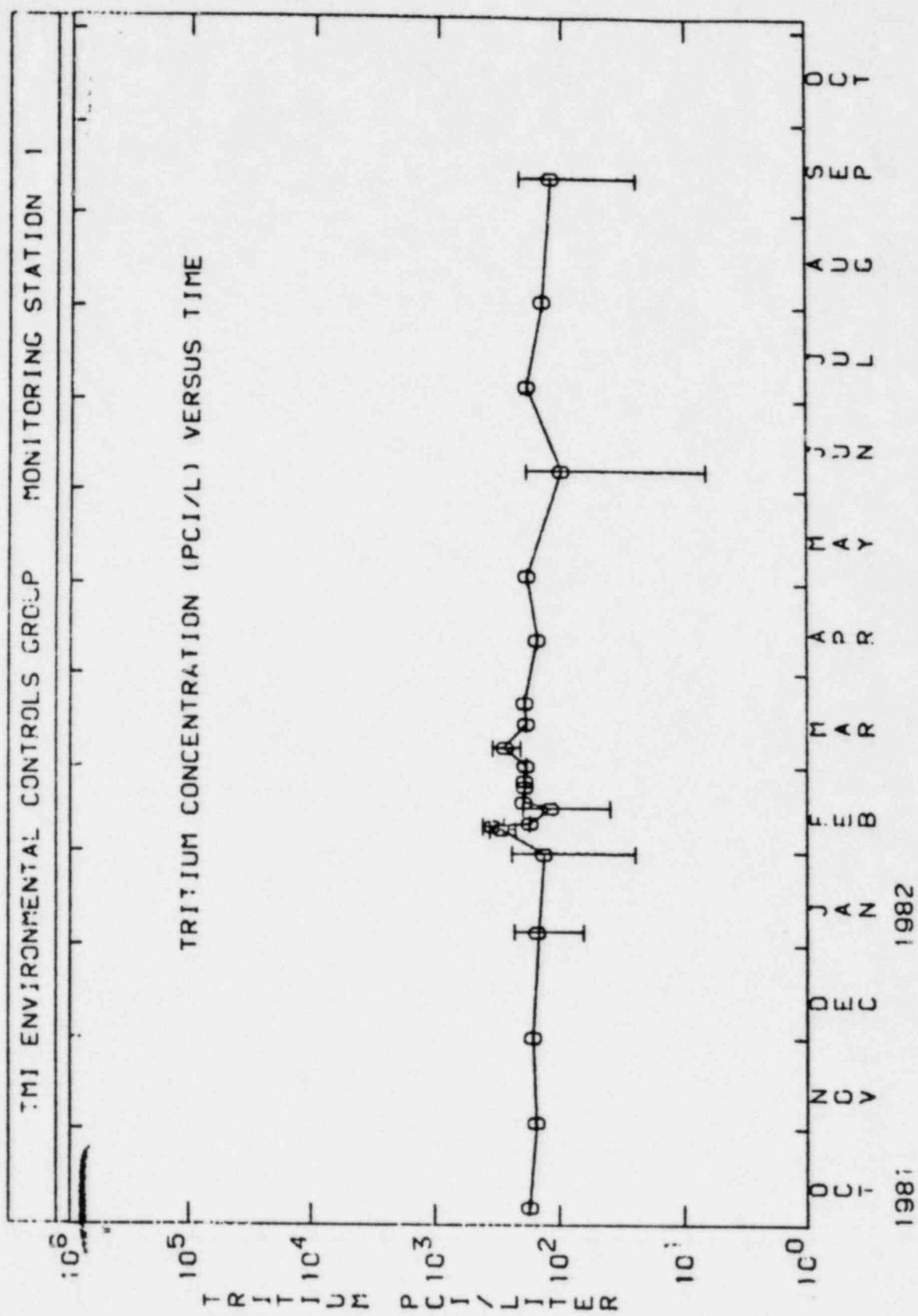
Tables

- Table 1 Cesium 137 Concentrations in Monitoring Stations MS-1 to MS-8
- Table 2 Cesium 134 Concentrations in Monitoring Stations MS-1 to MS-8

Drawing

- Groundwater Tritium Concentrations at Site Liquid Monitoring Stations

Figure 1
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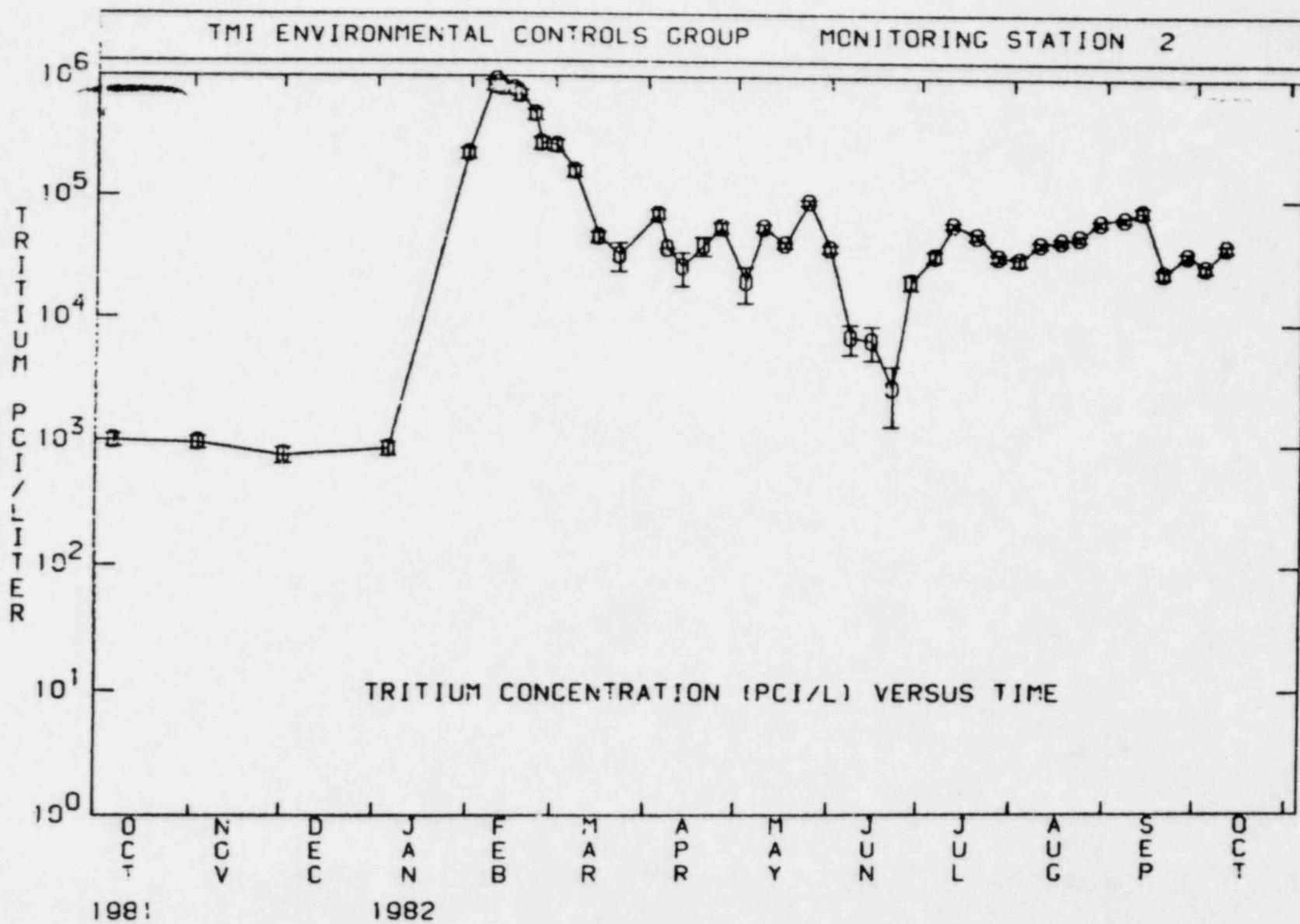


Figure 1
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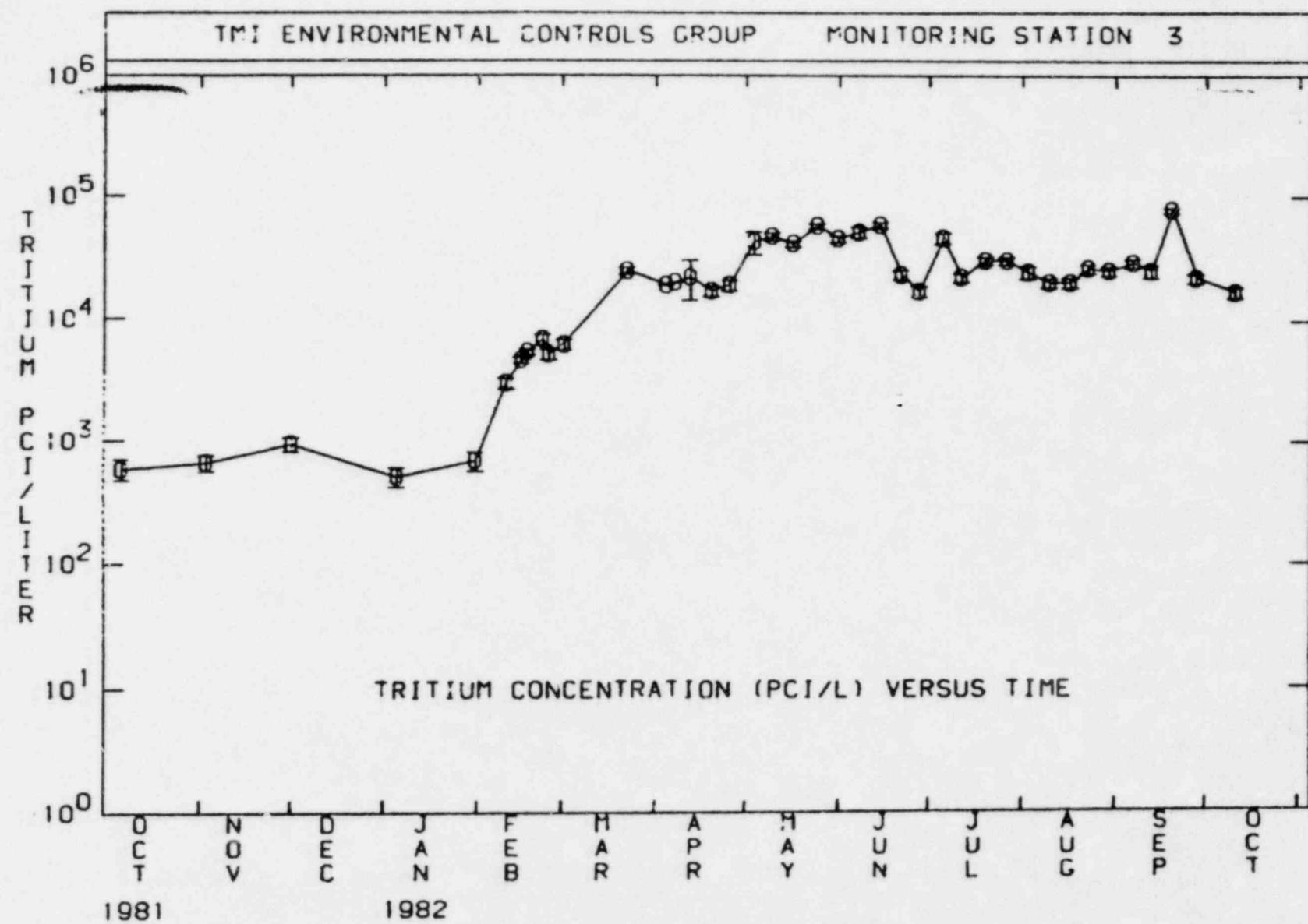
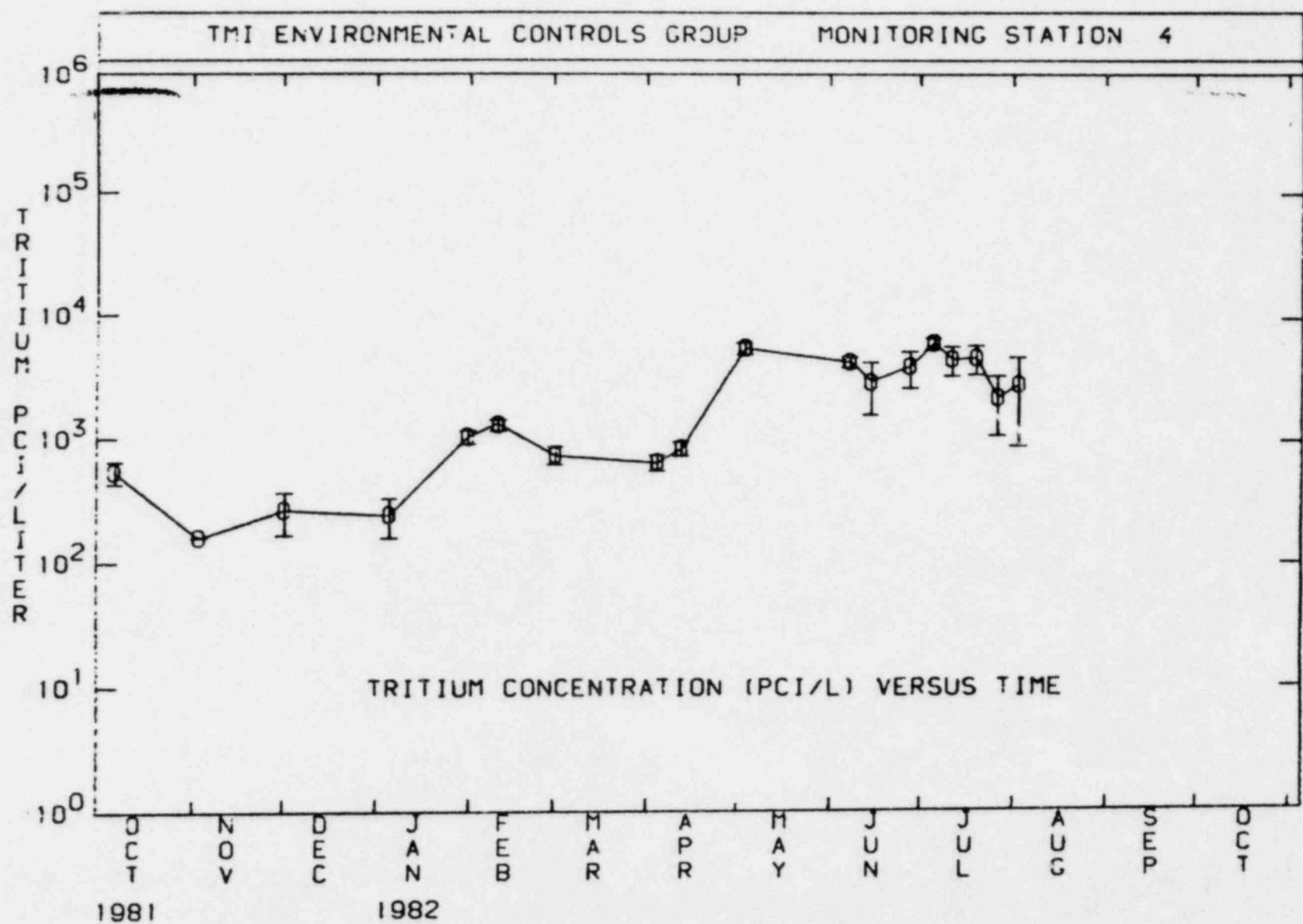
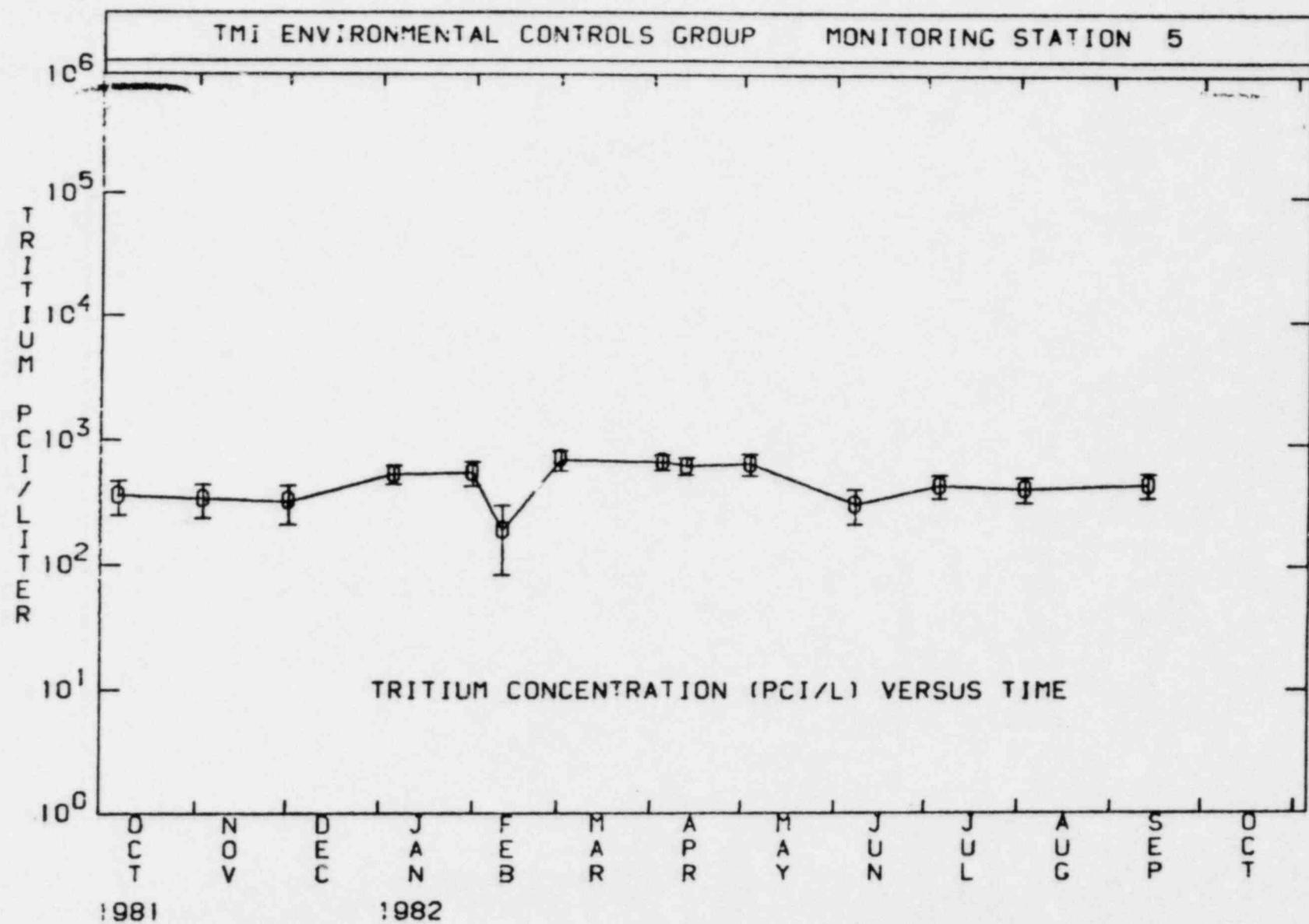
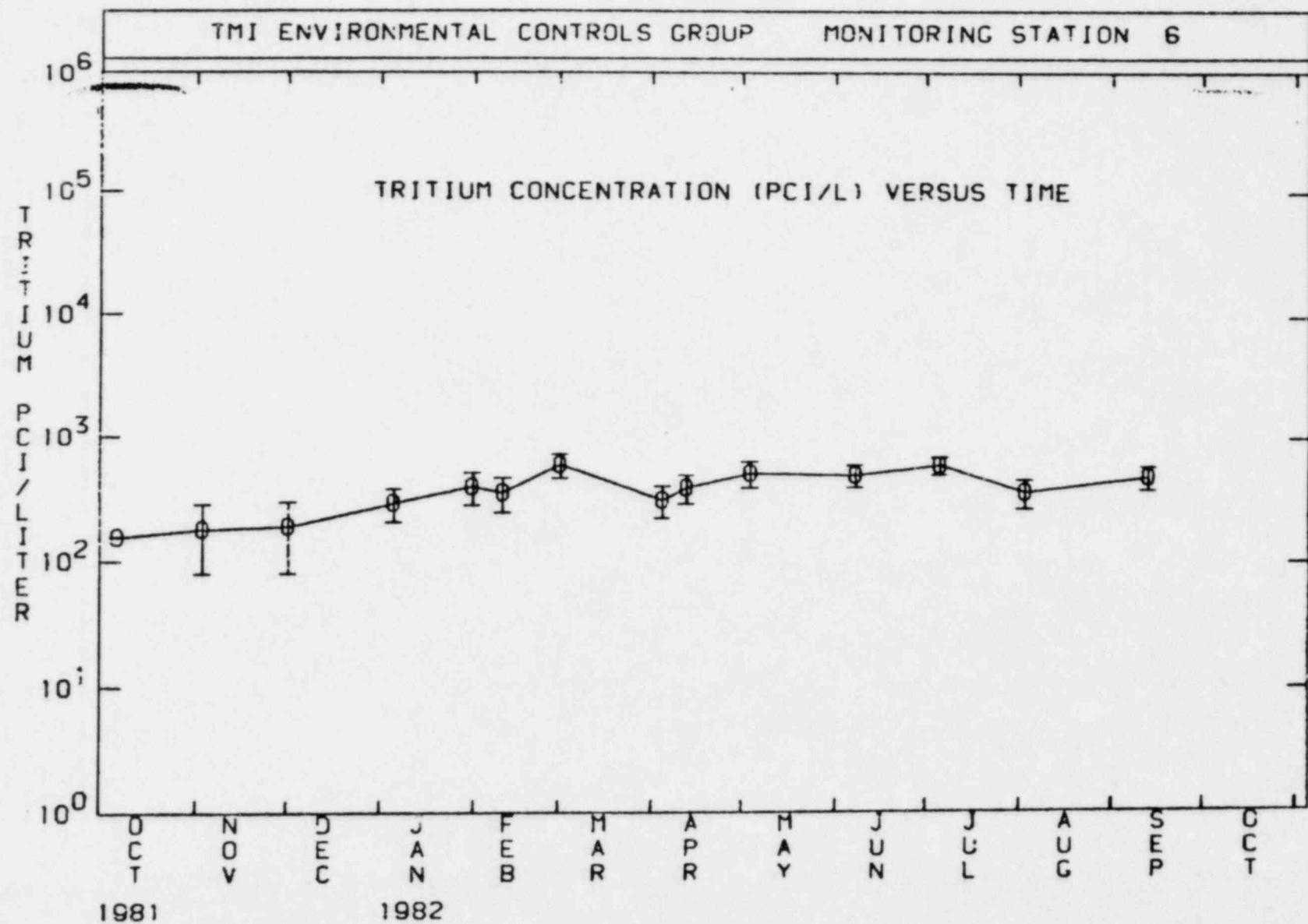


Figure 1
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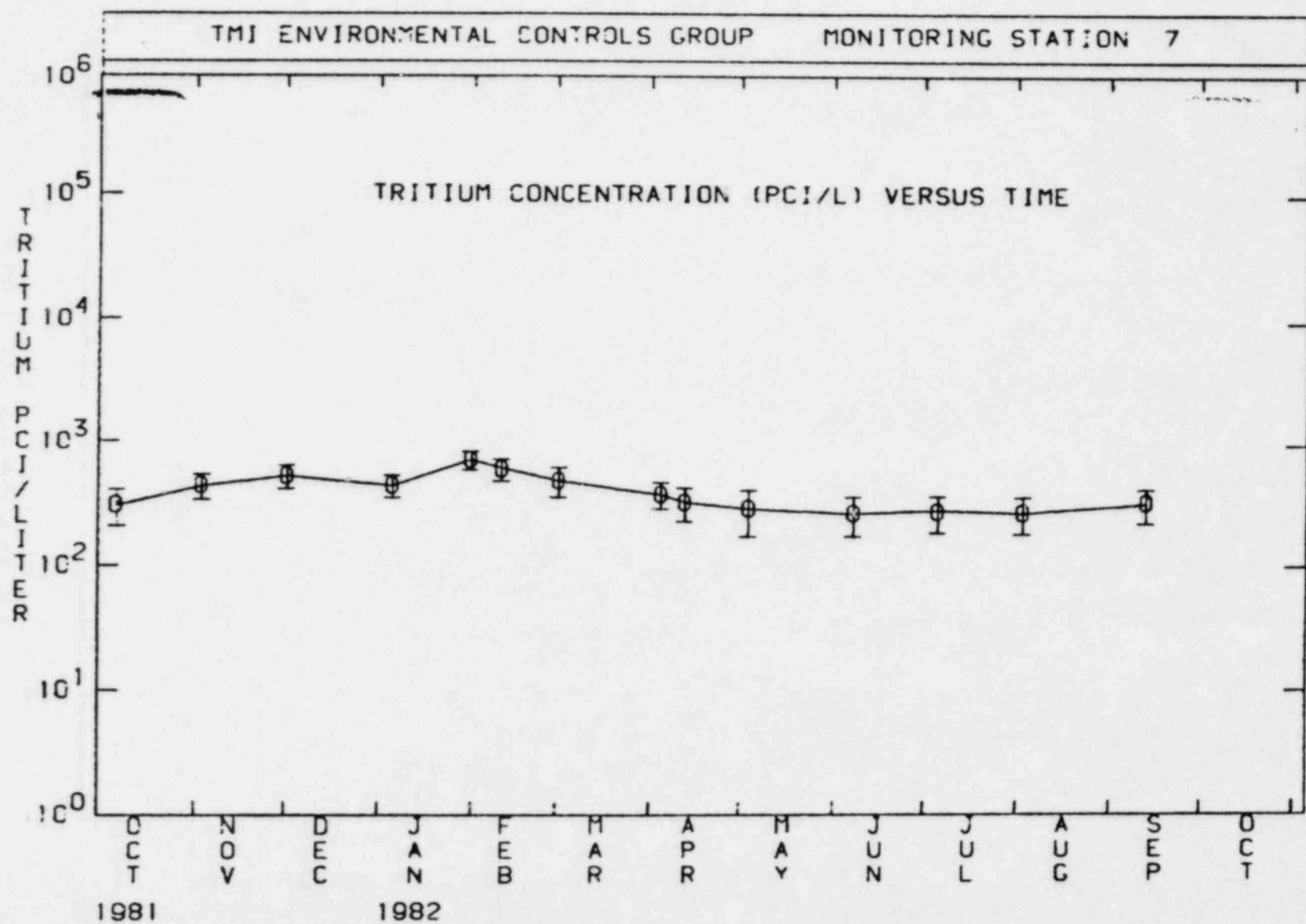


Figure 1
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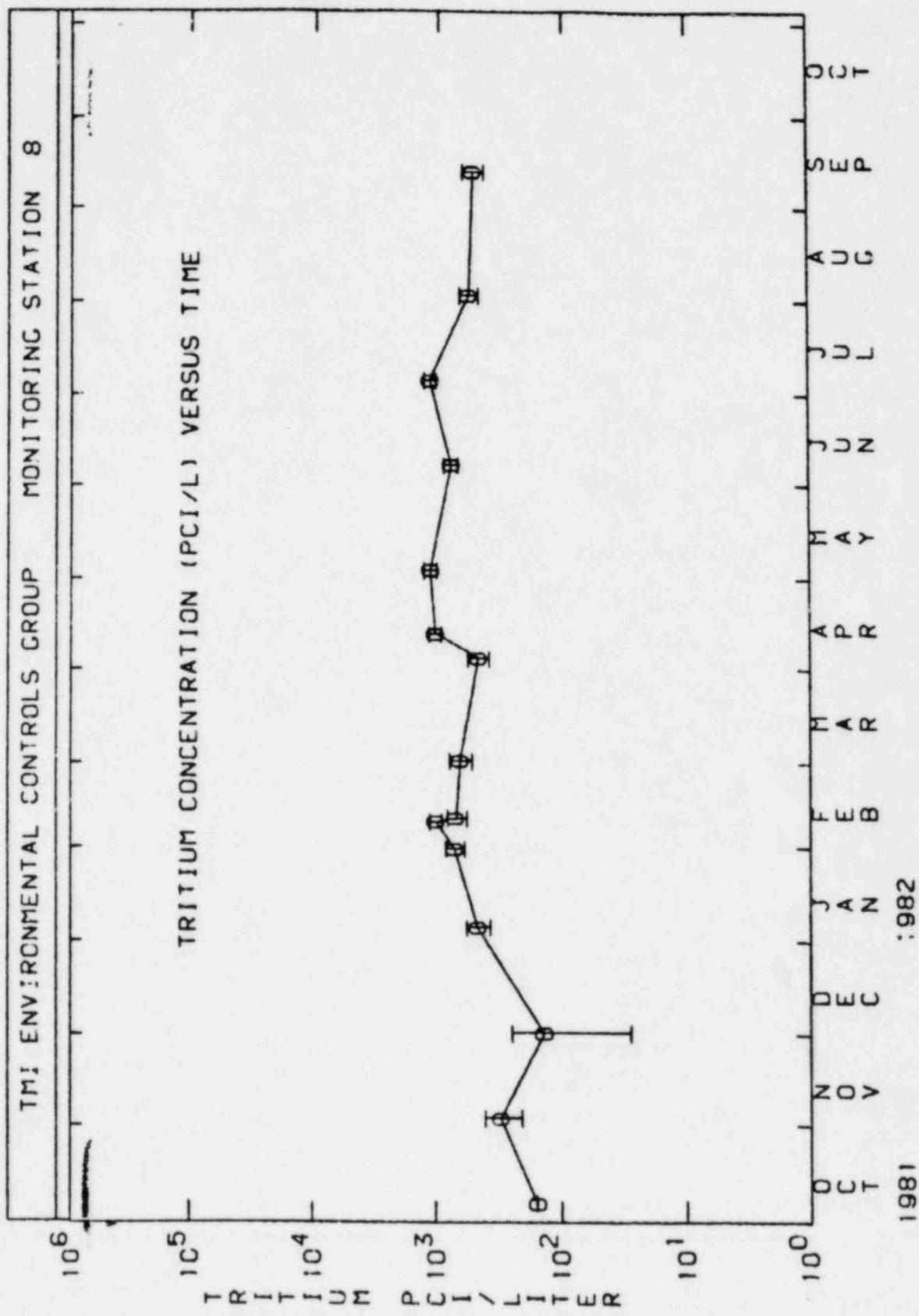
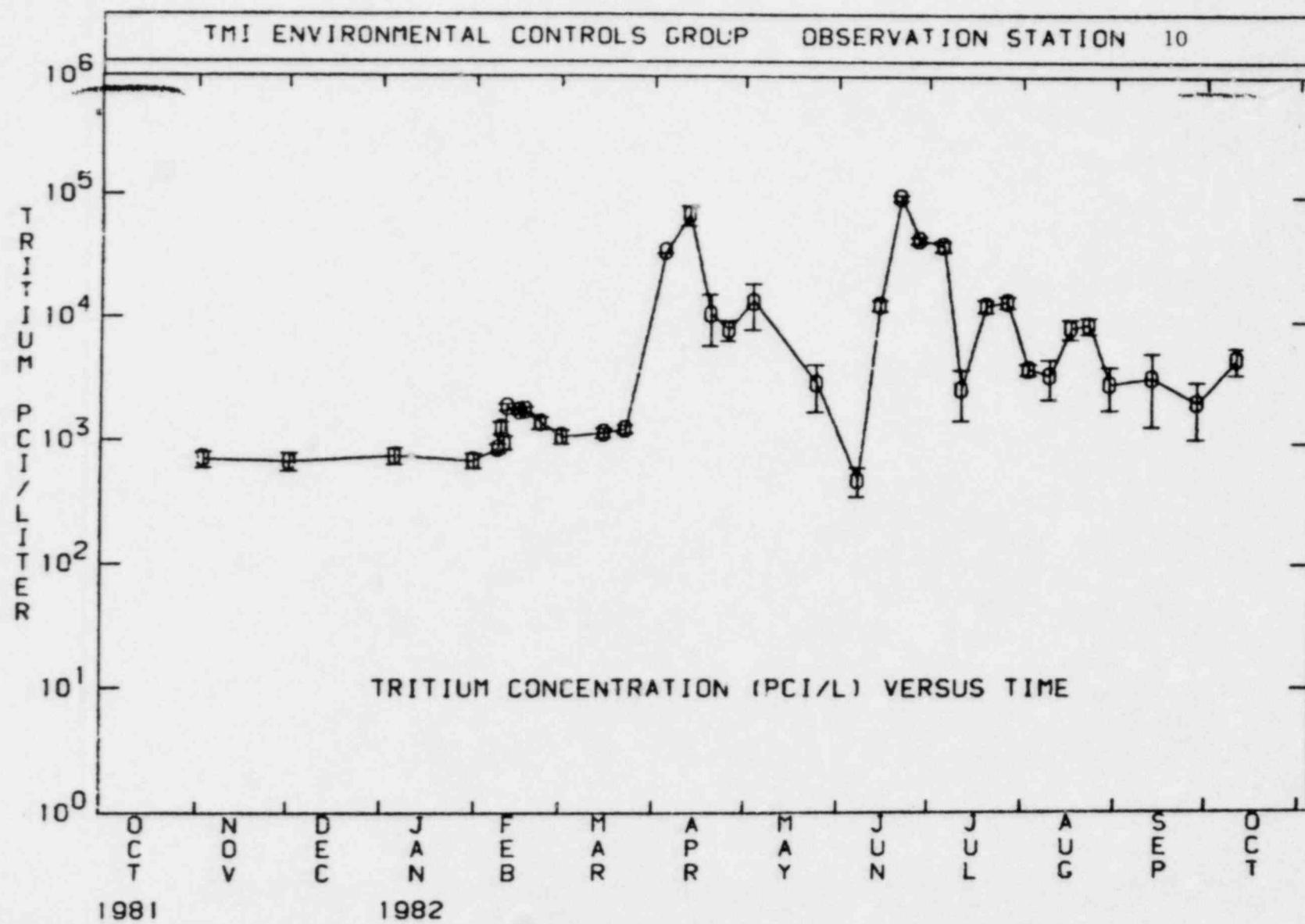
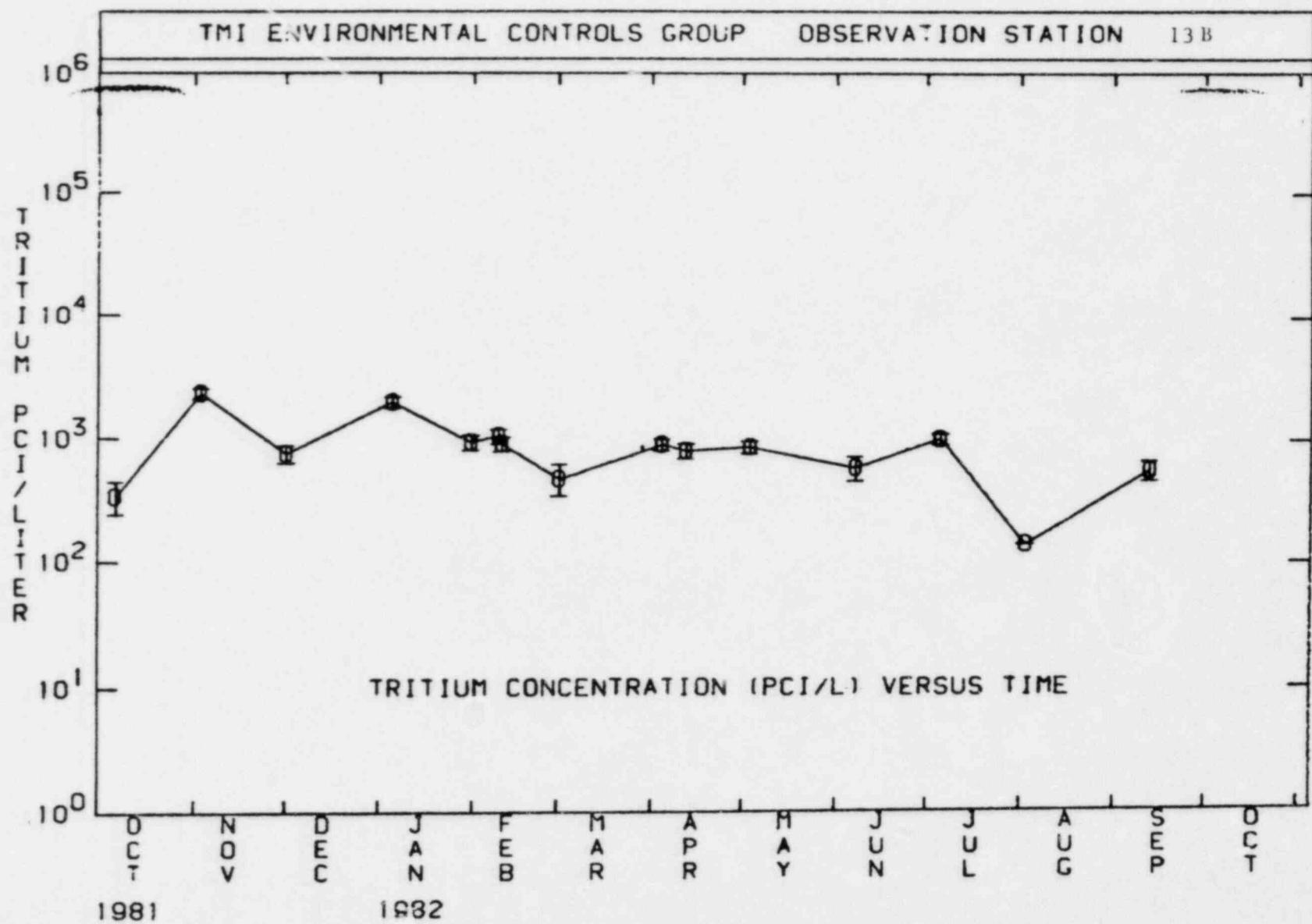


Figure 1
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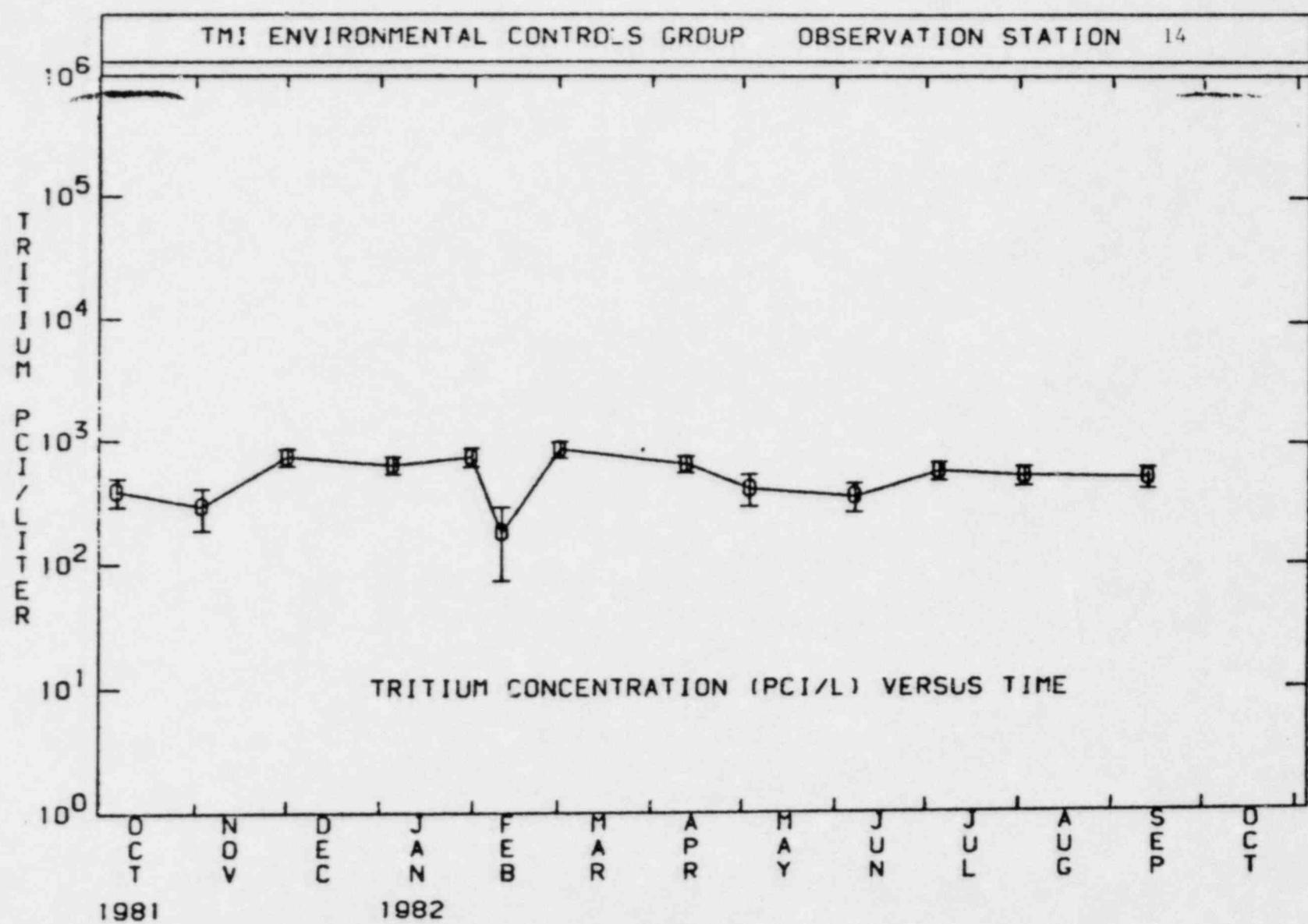


Figure 1
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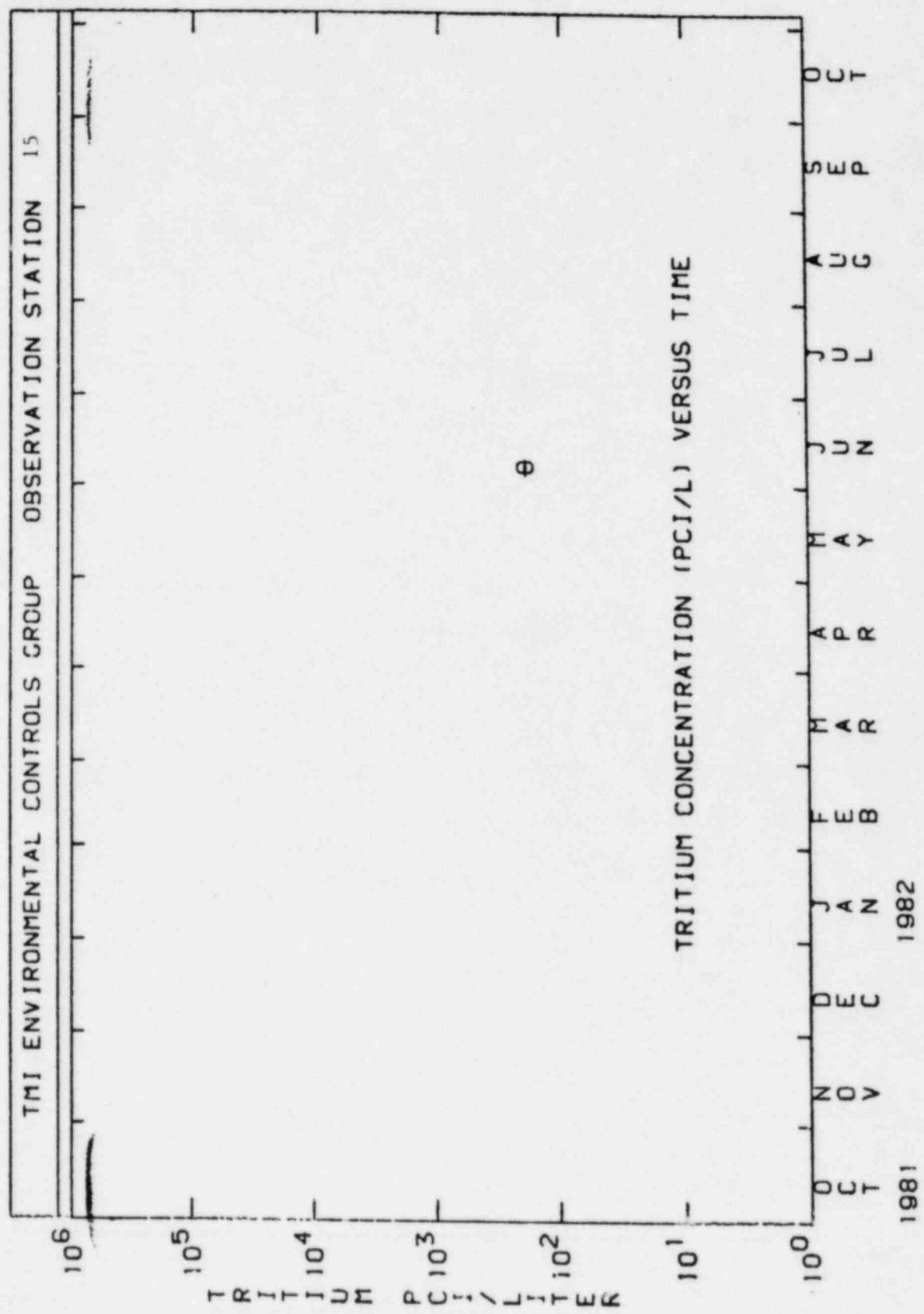


Figure 1
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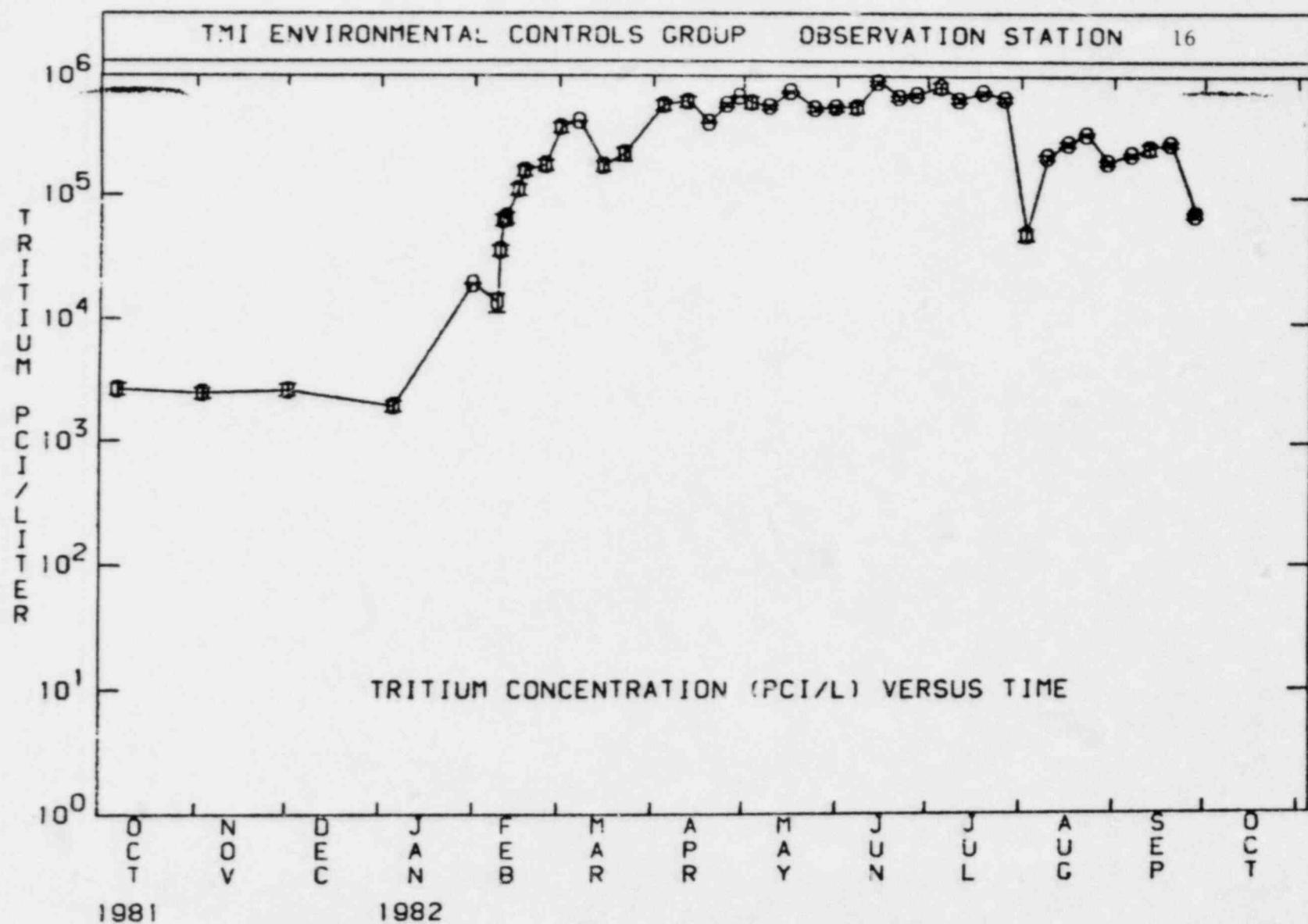
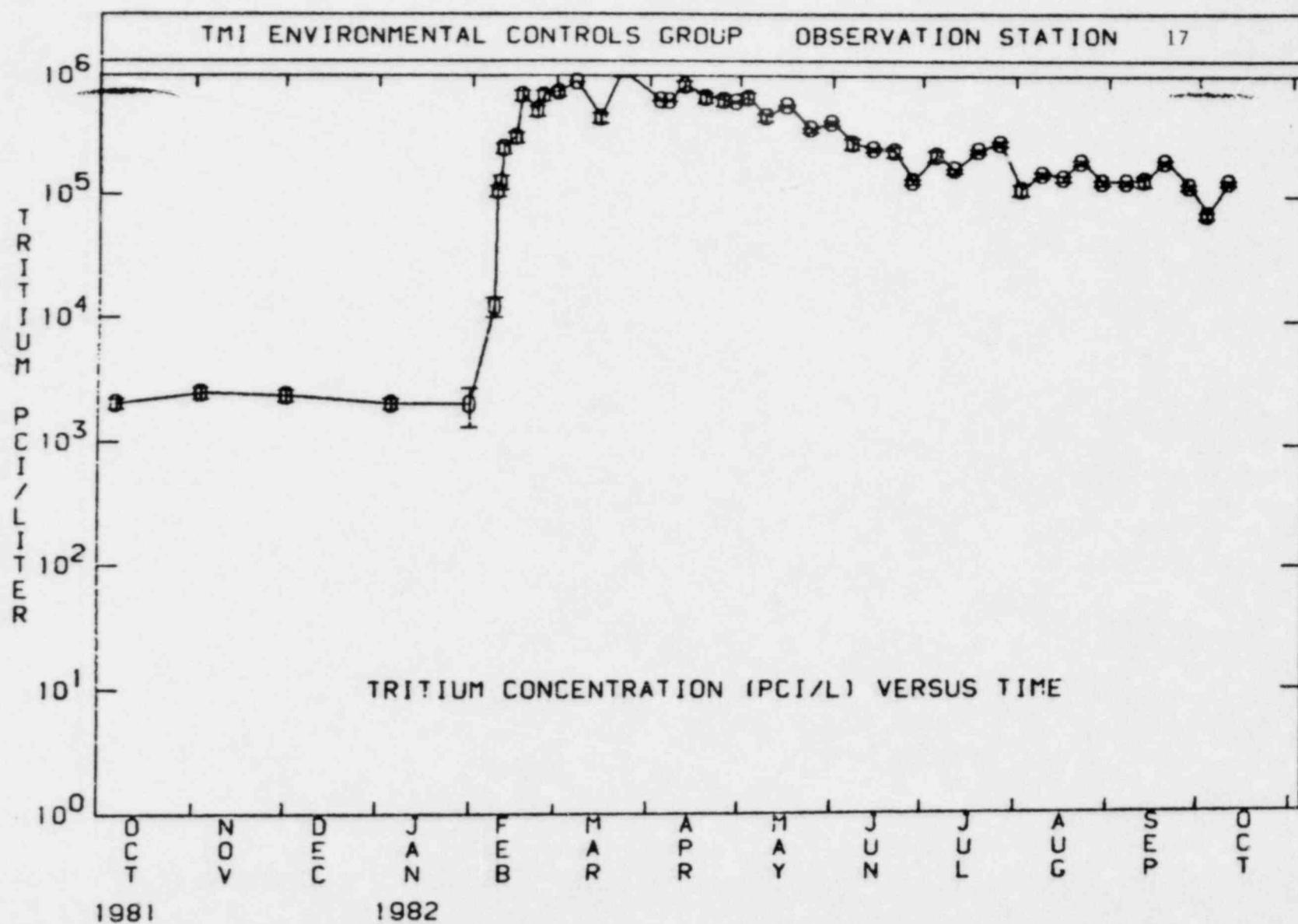
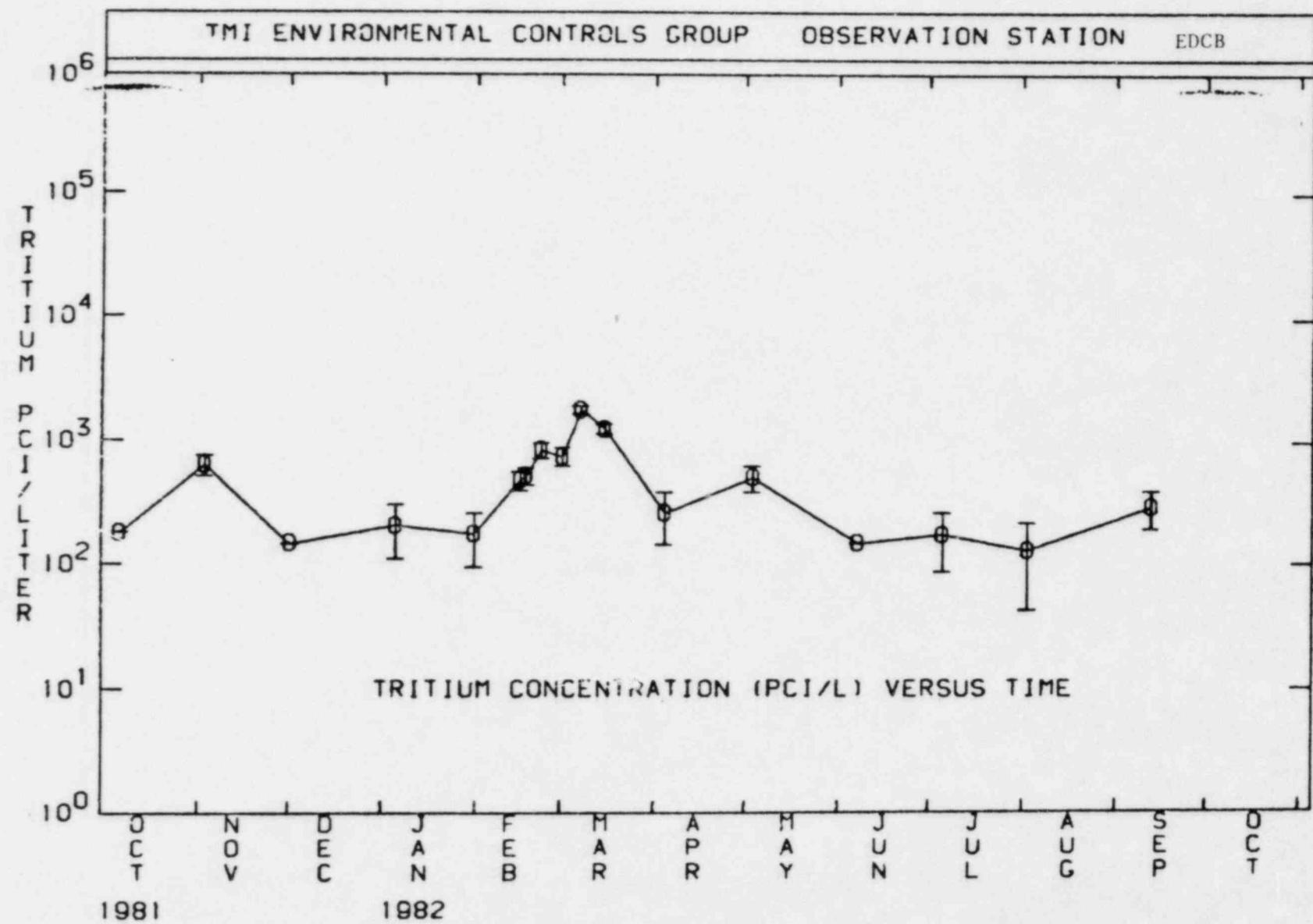


Figure 1
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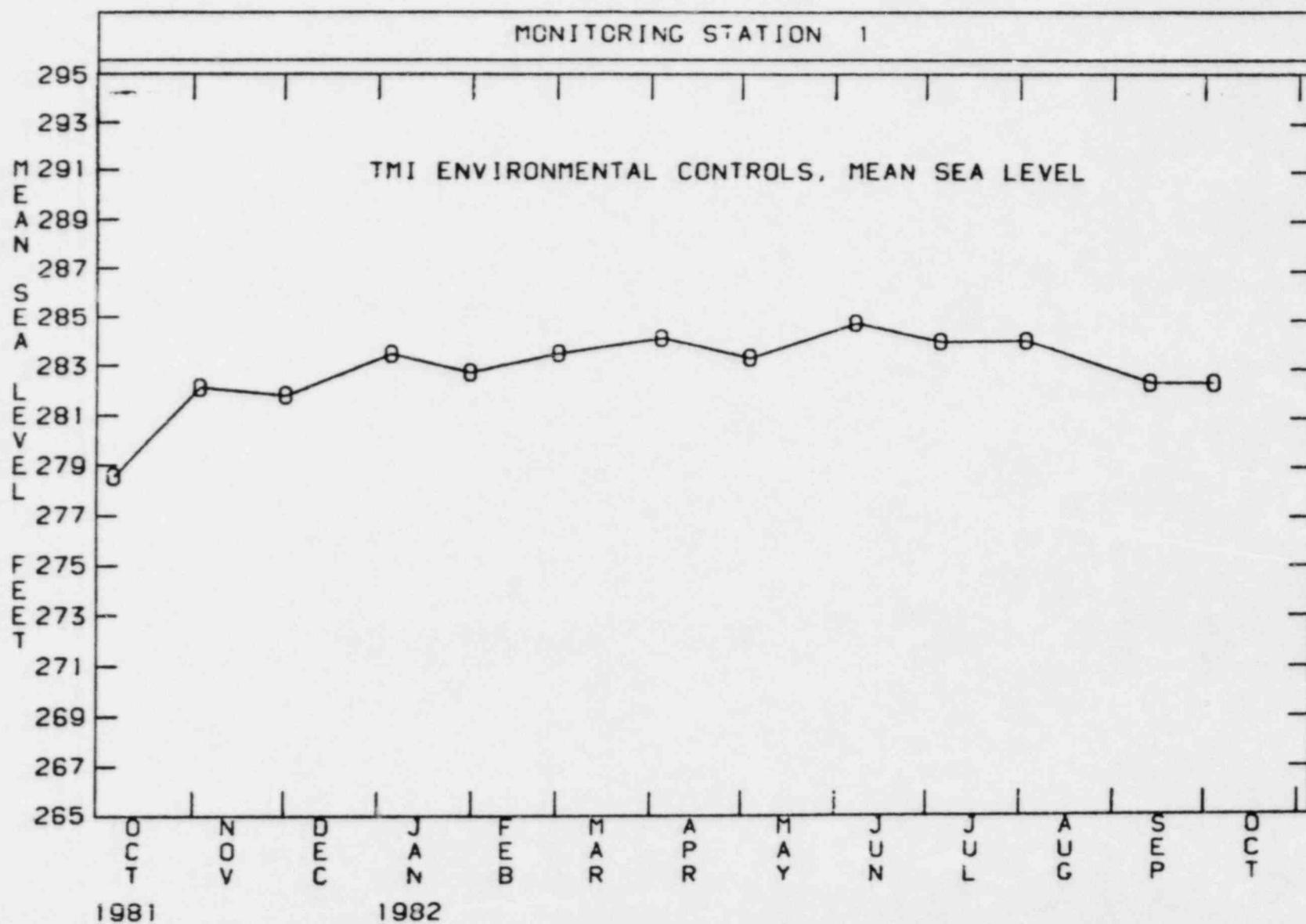


Figure 2
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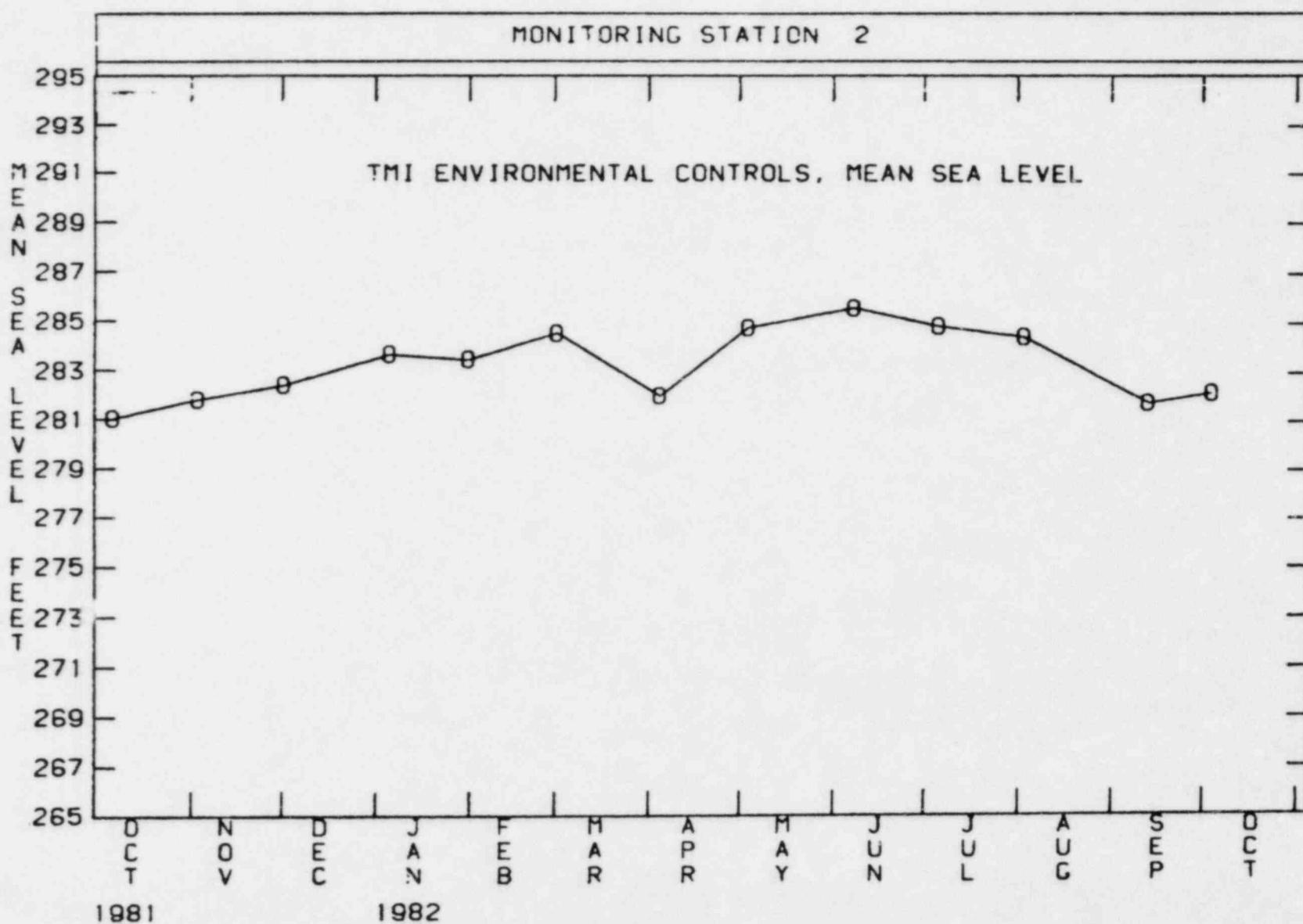
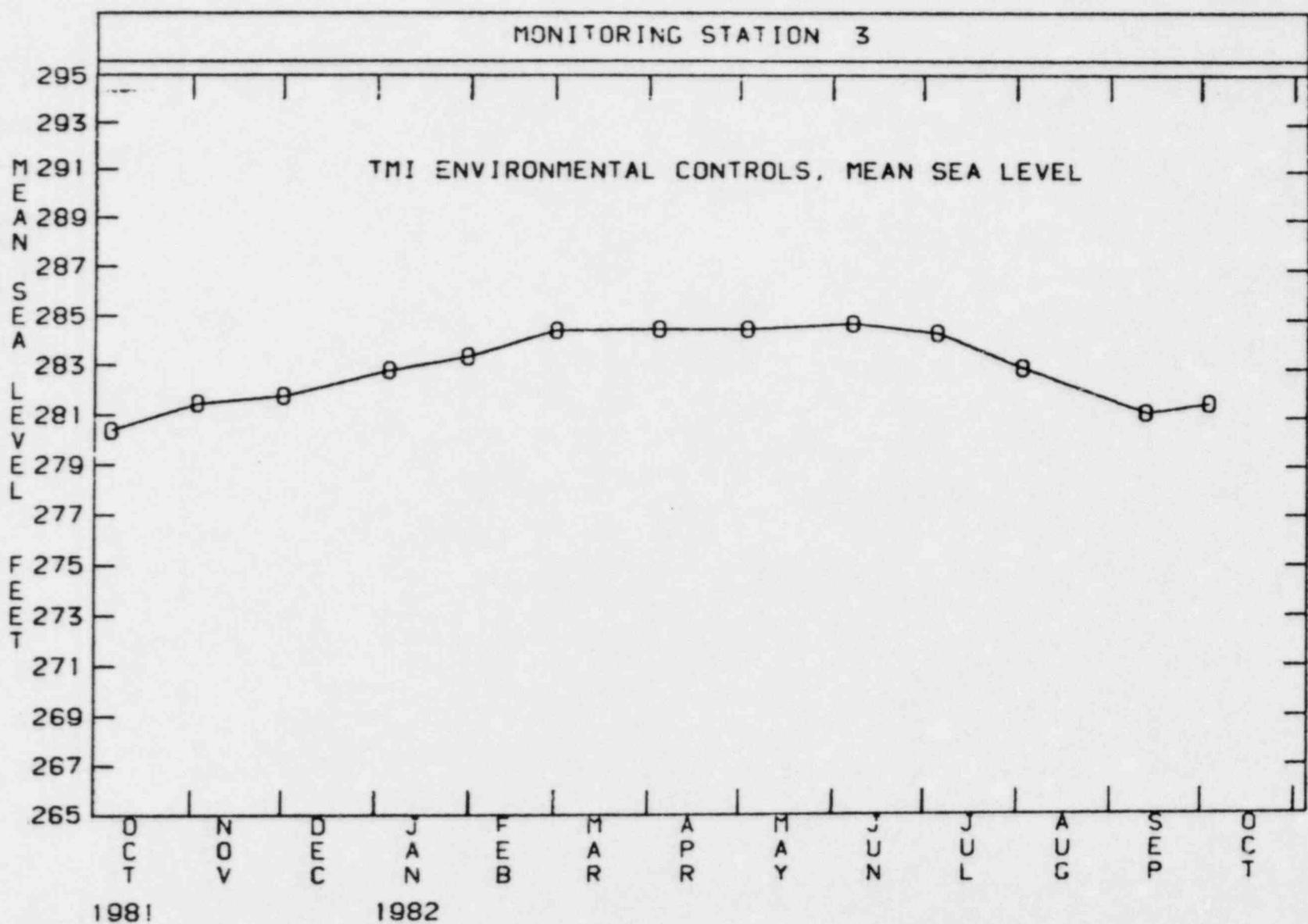
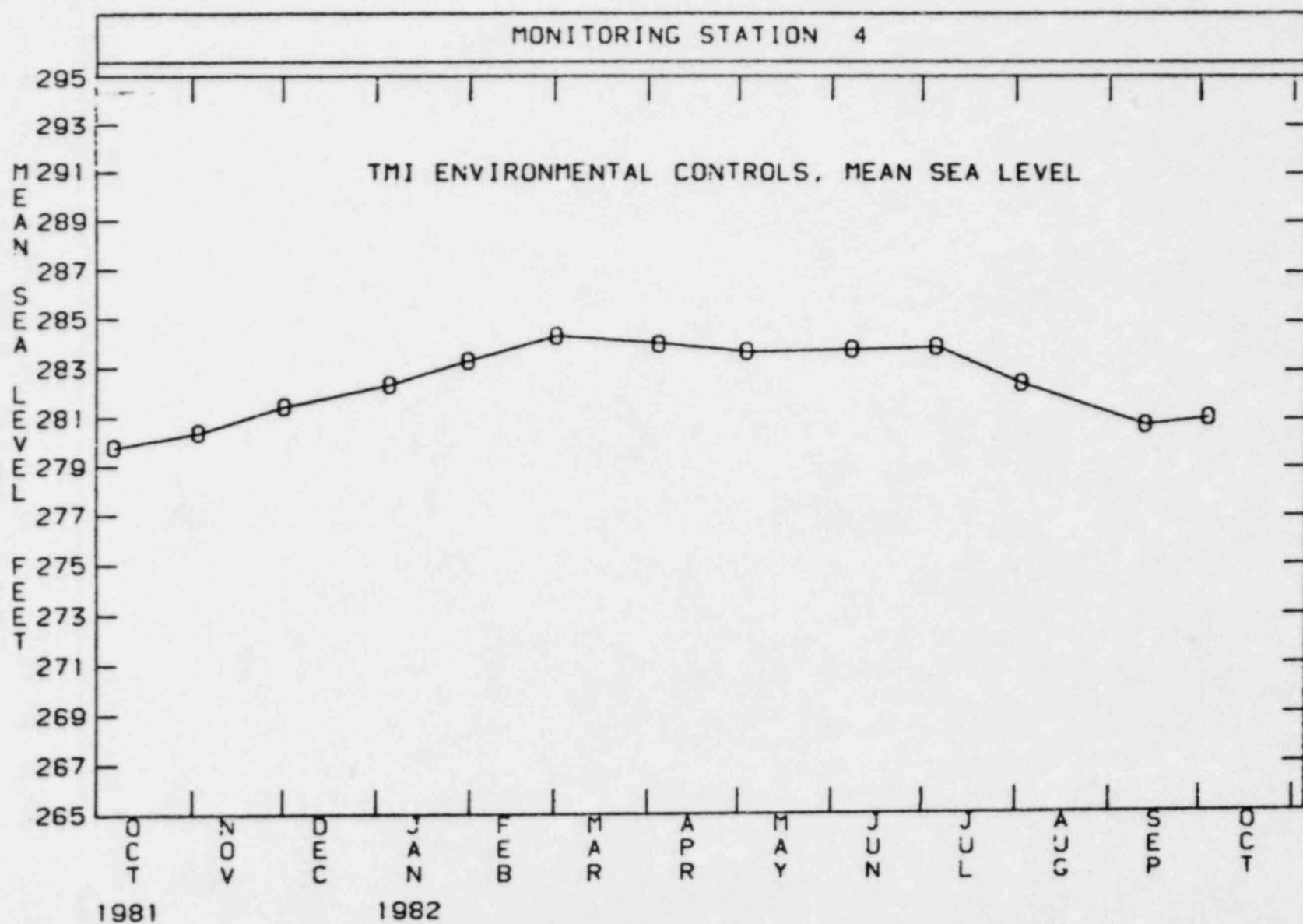


Figure 2
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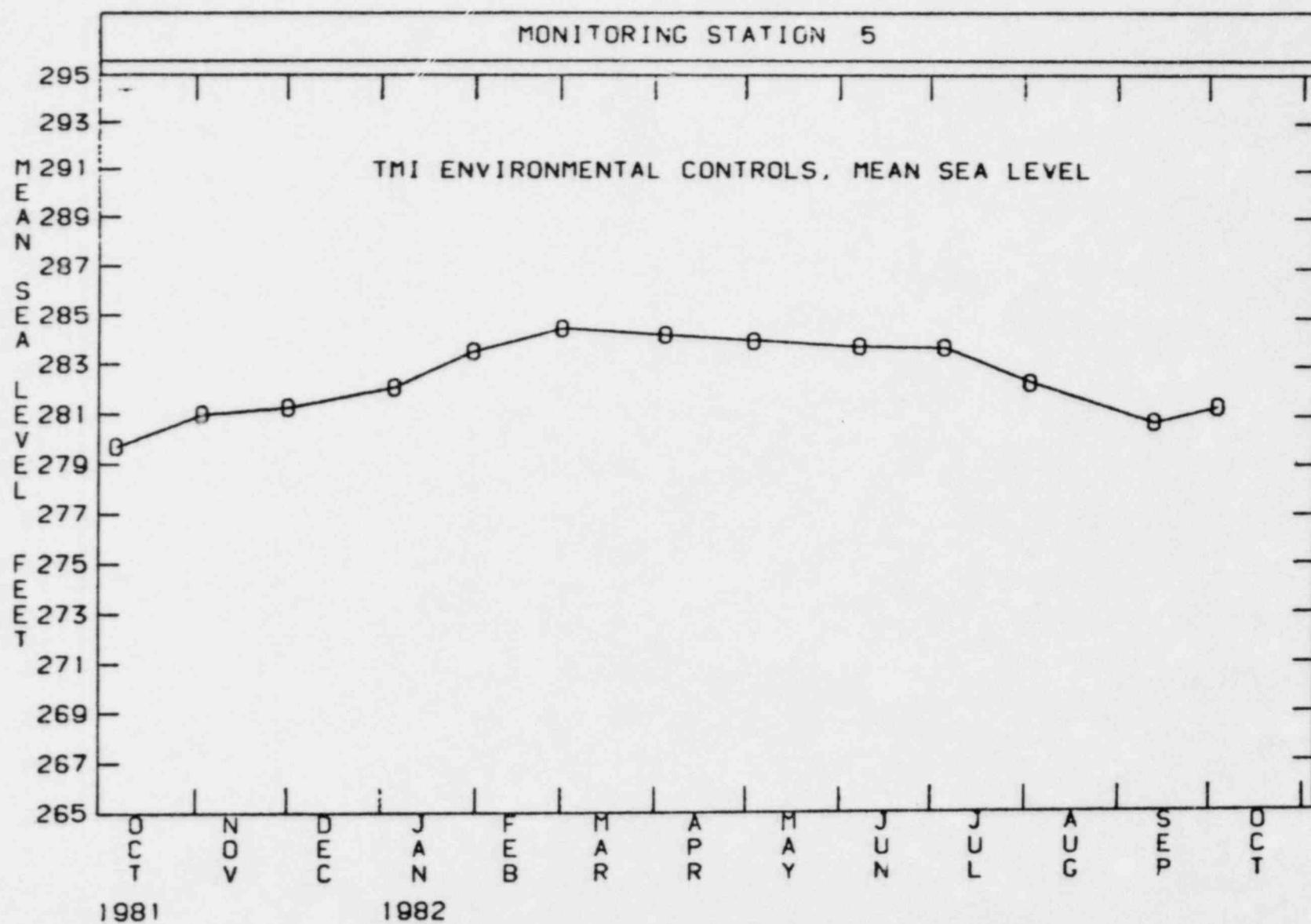
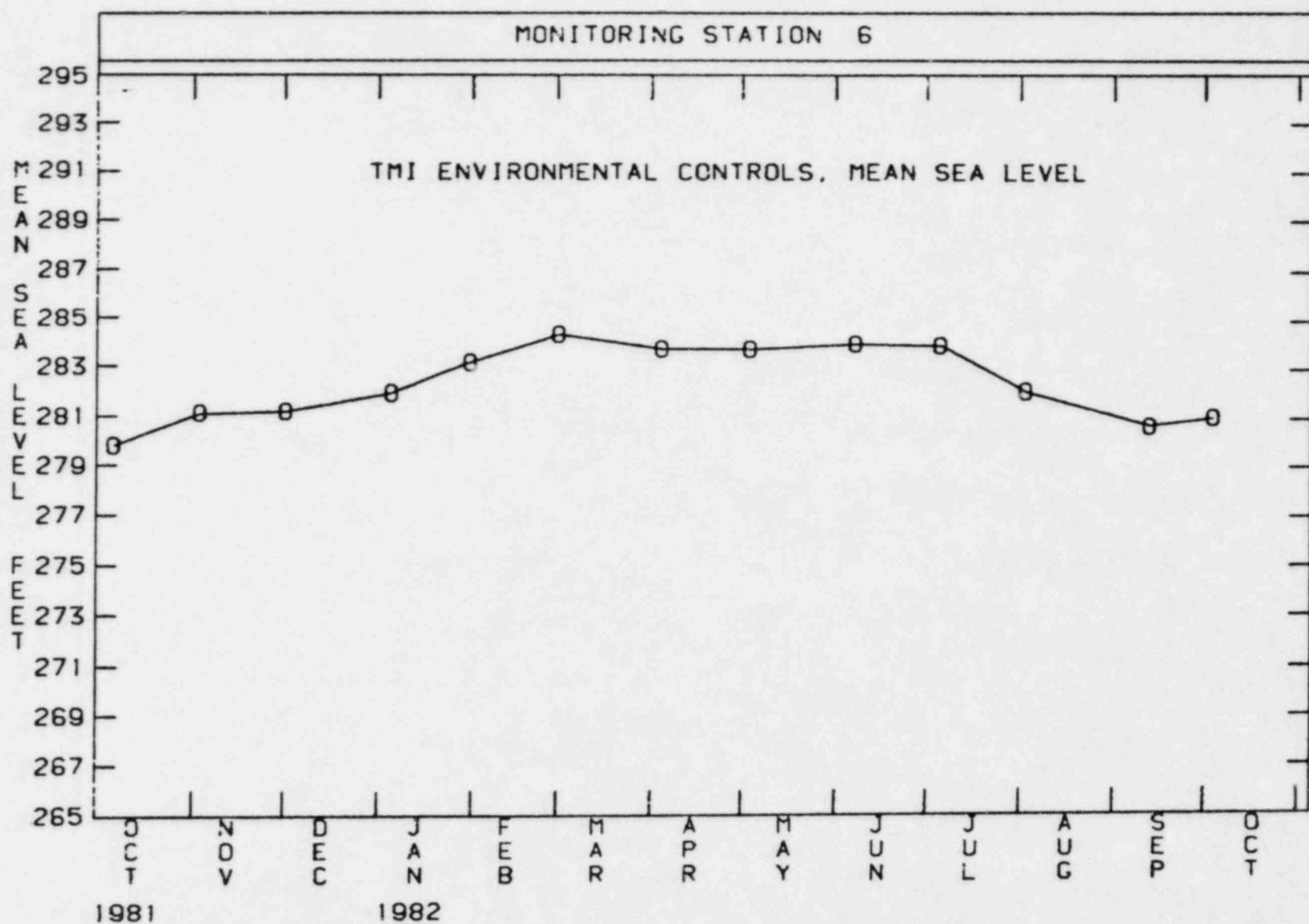


Figure 2
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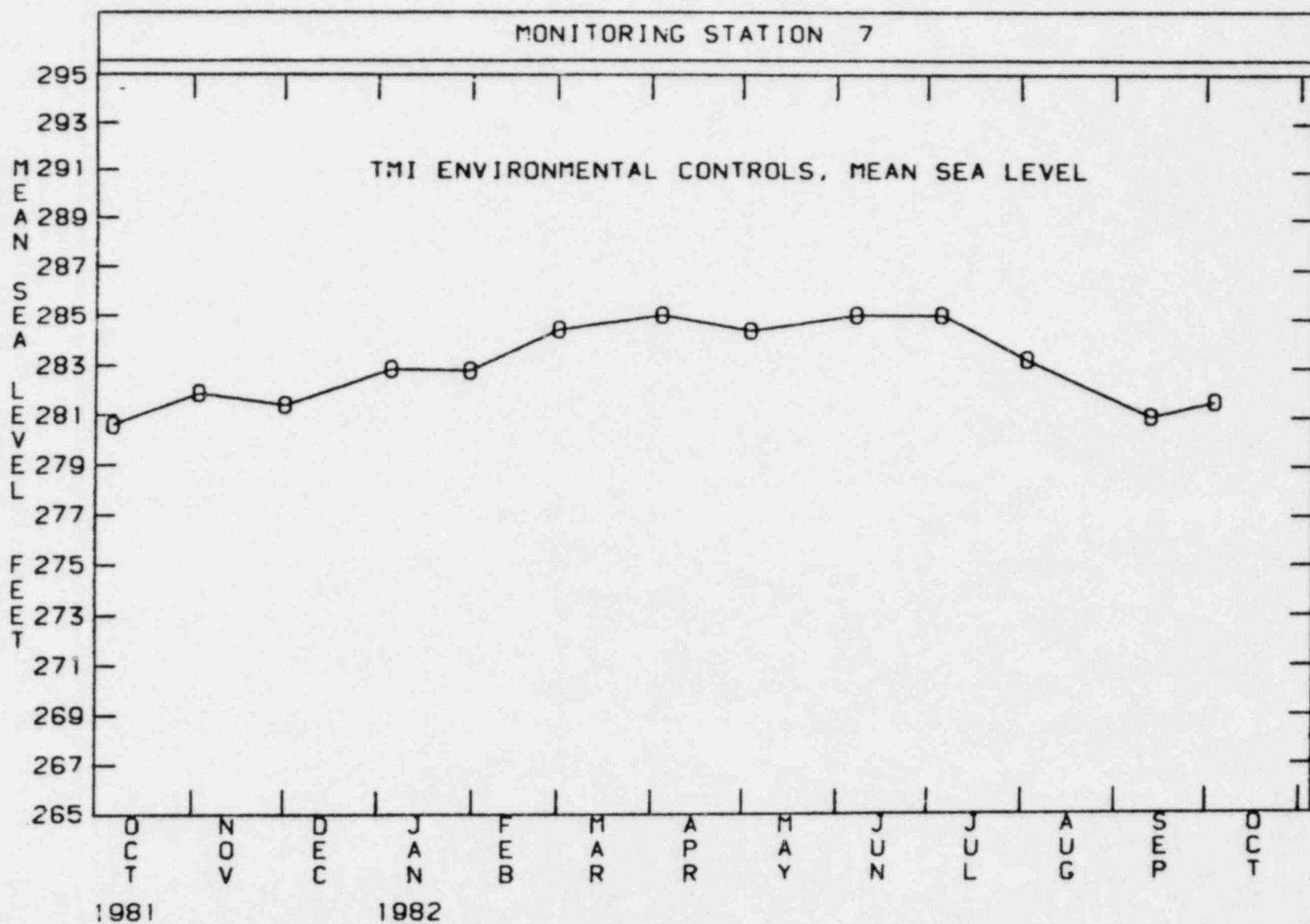


Figure 2
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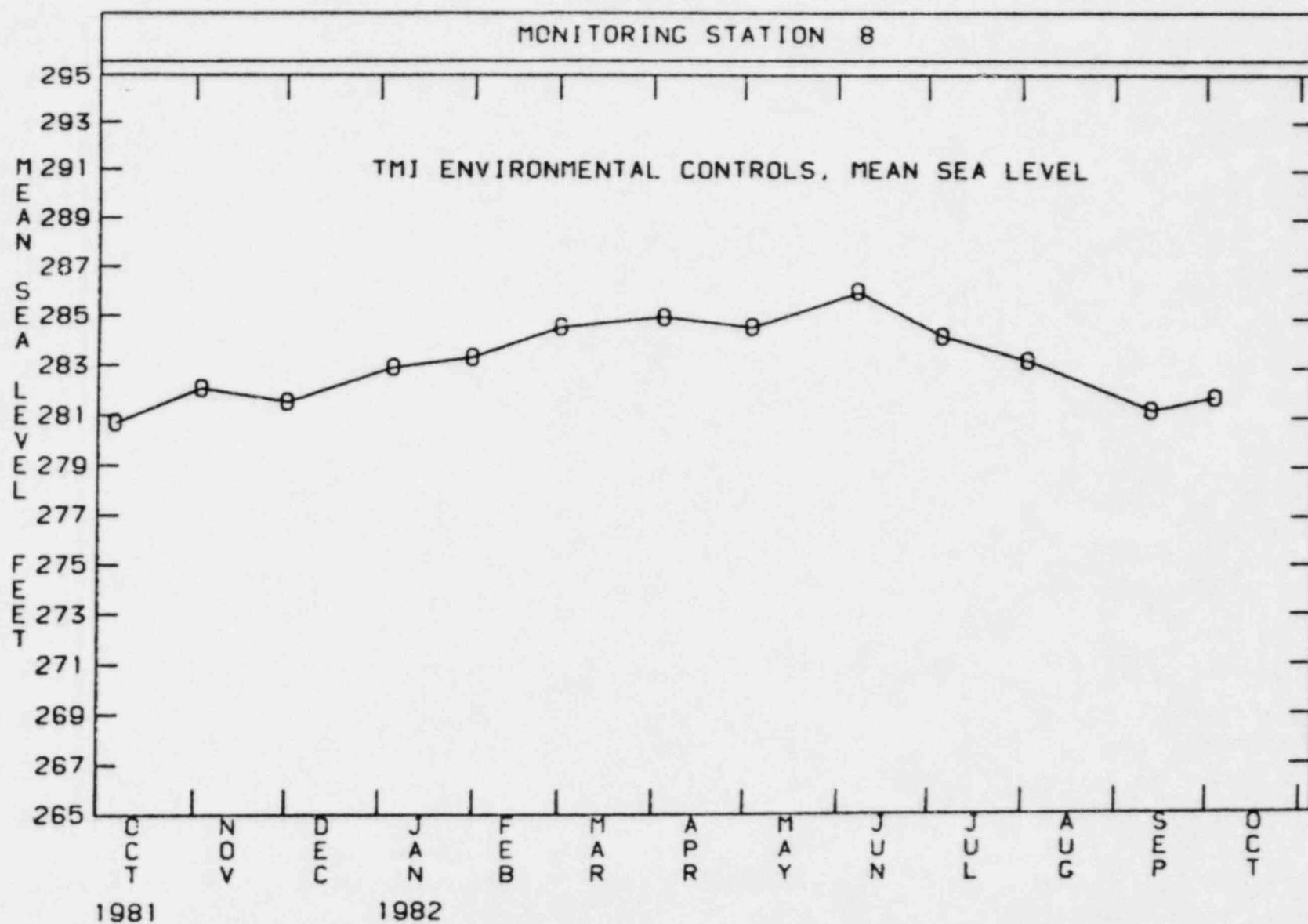


Figure 2
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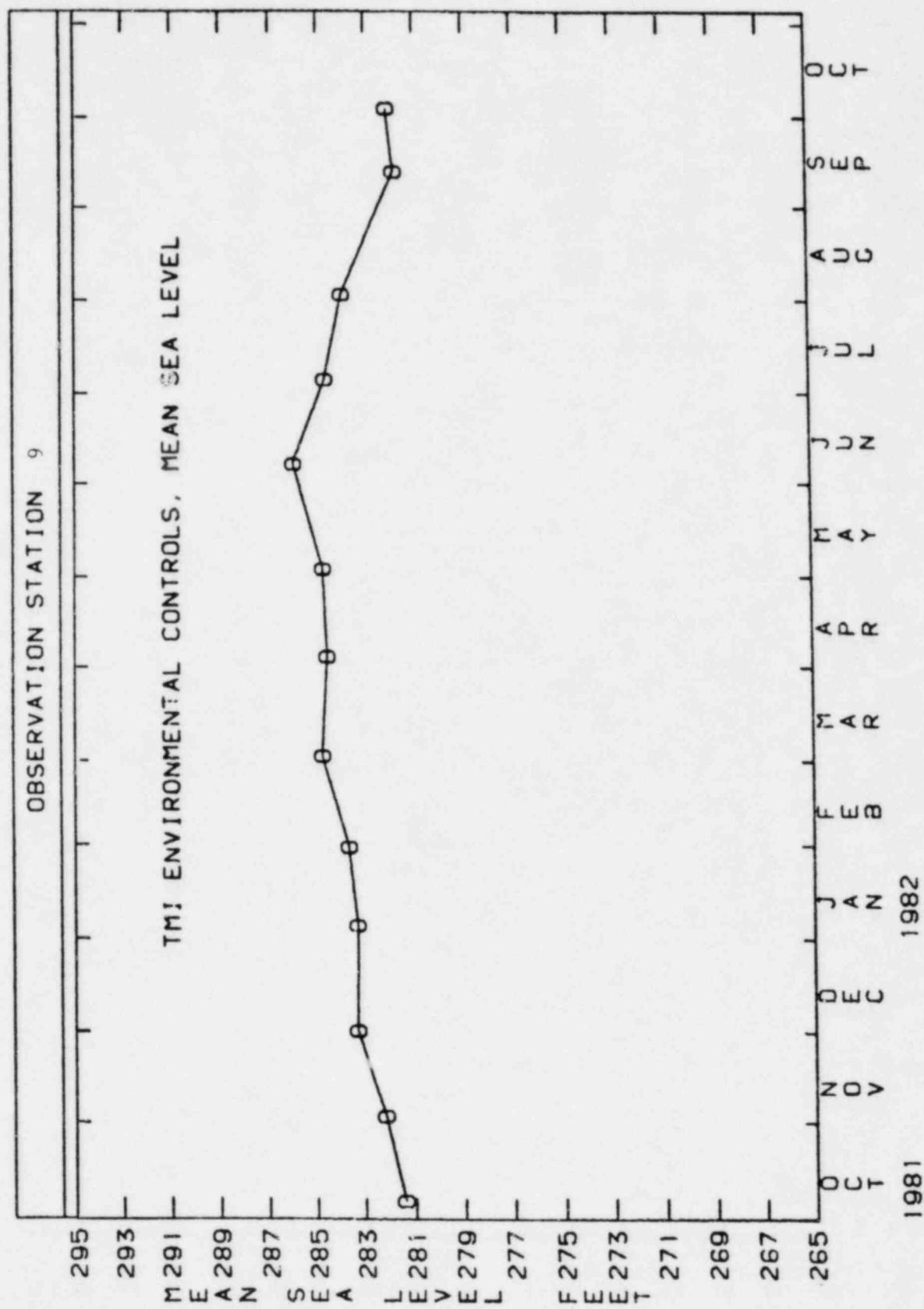
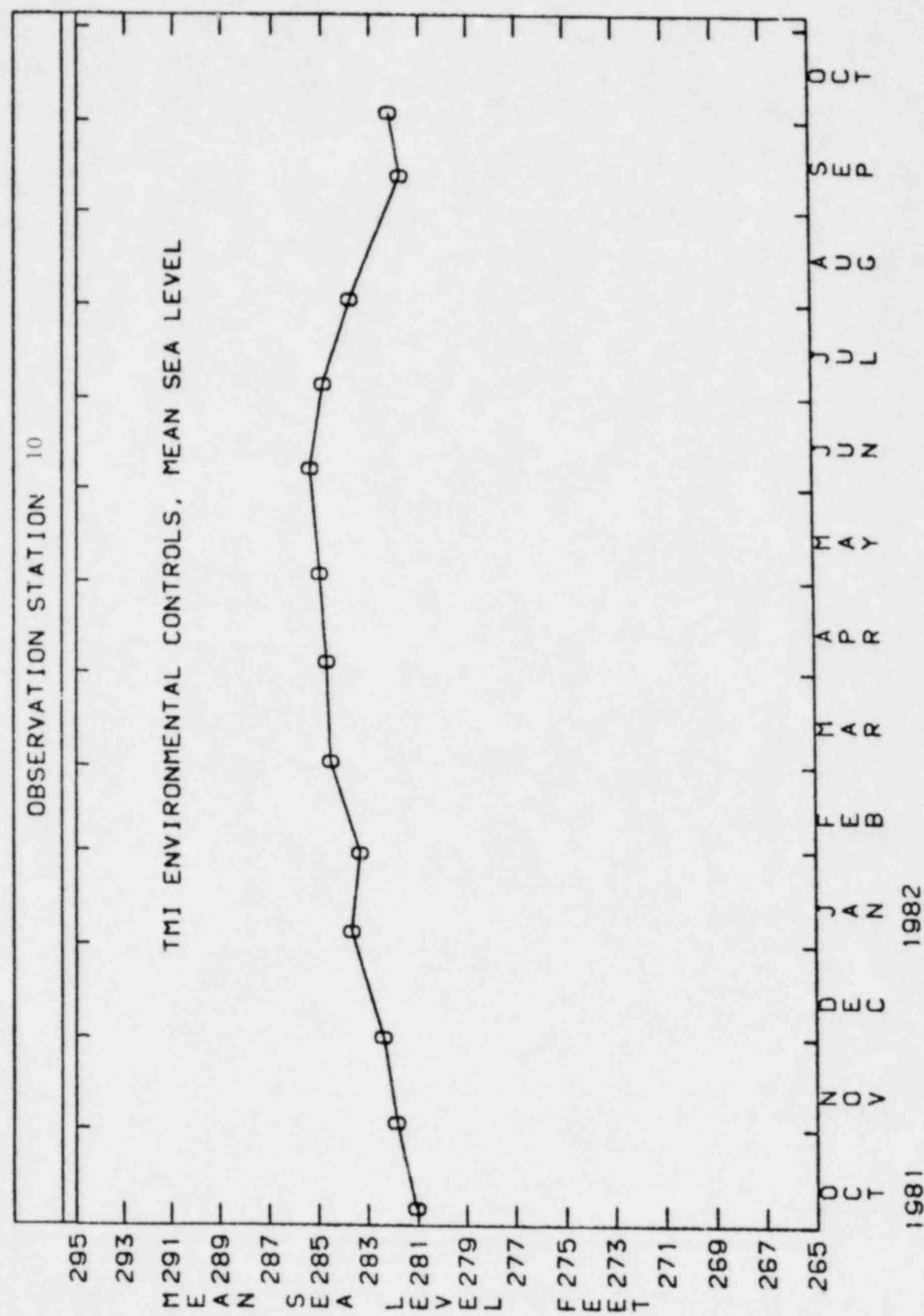
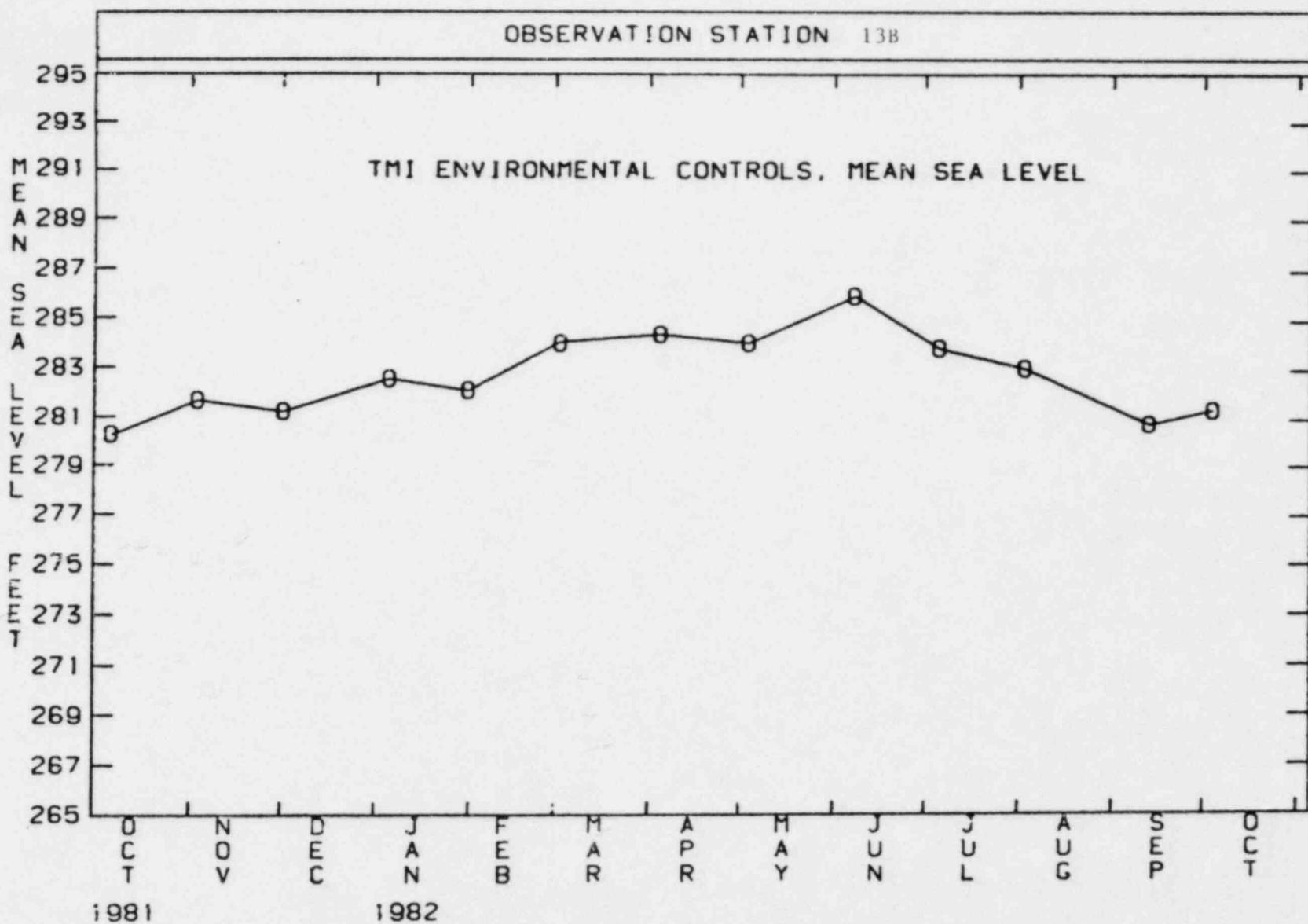


Figure 2
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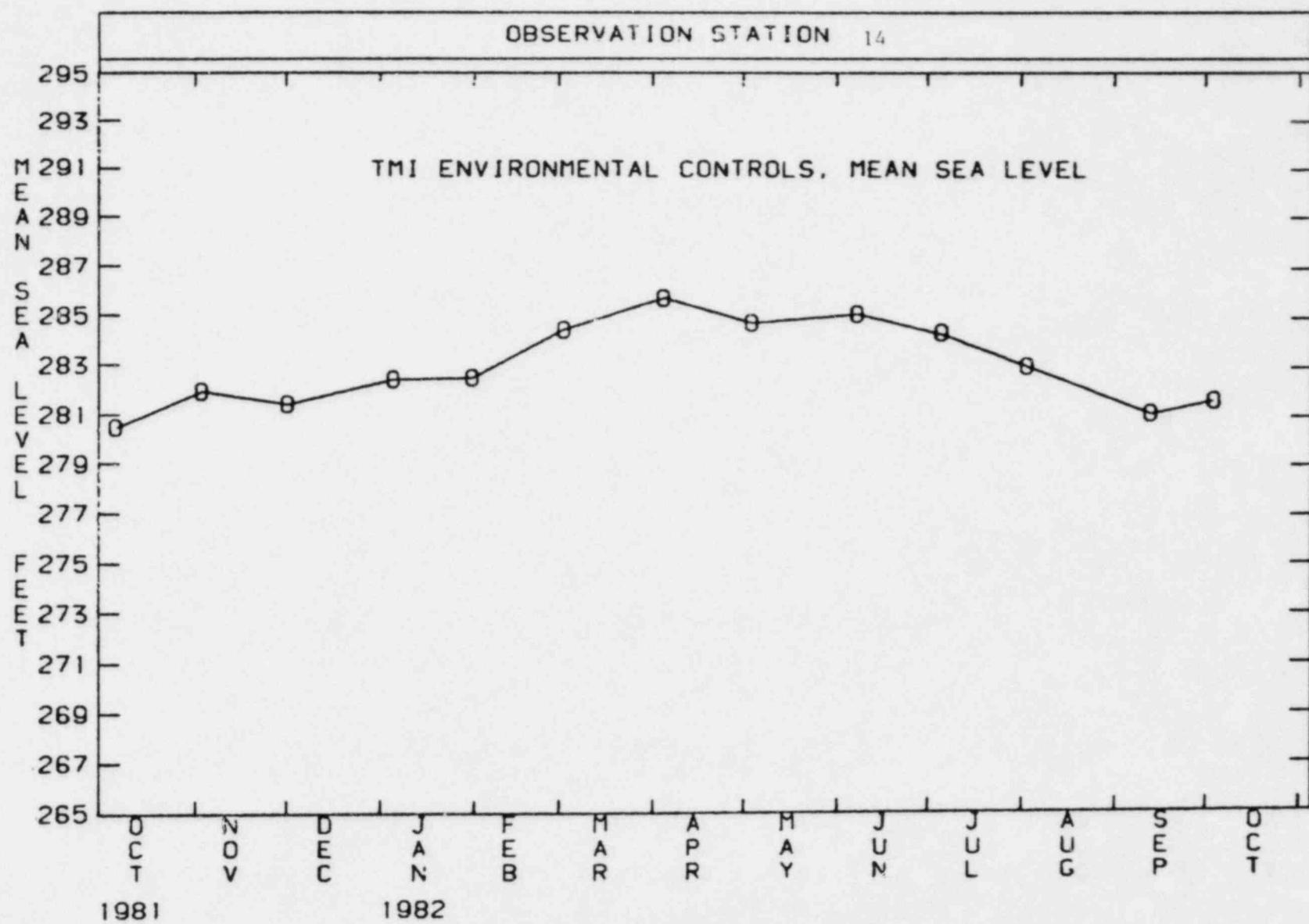


Figure 2
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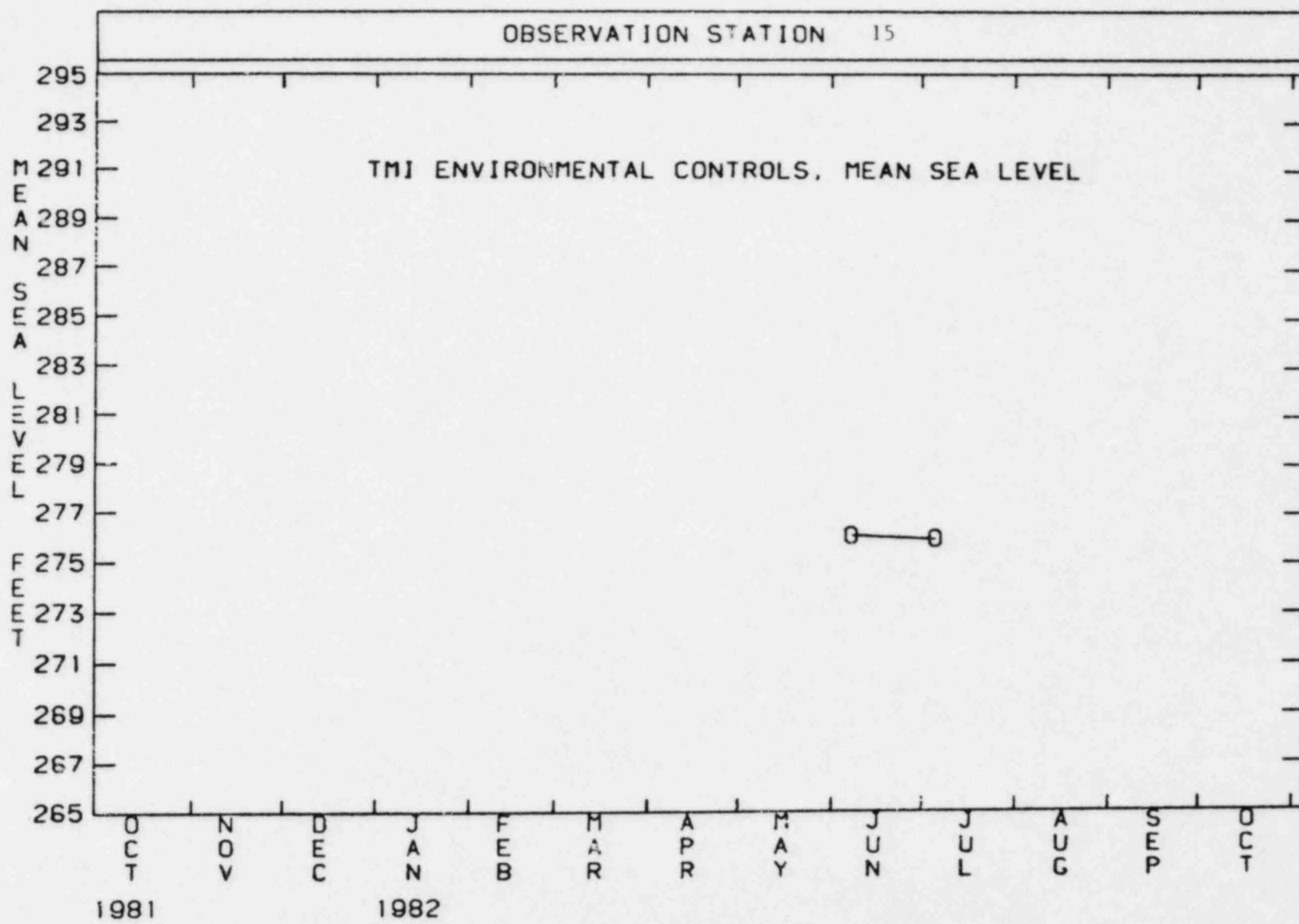


Figure 2
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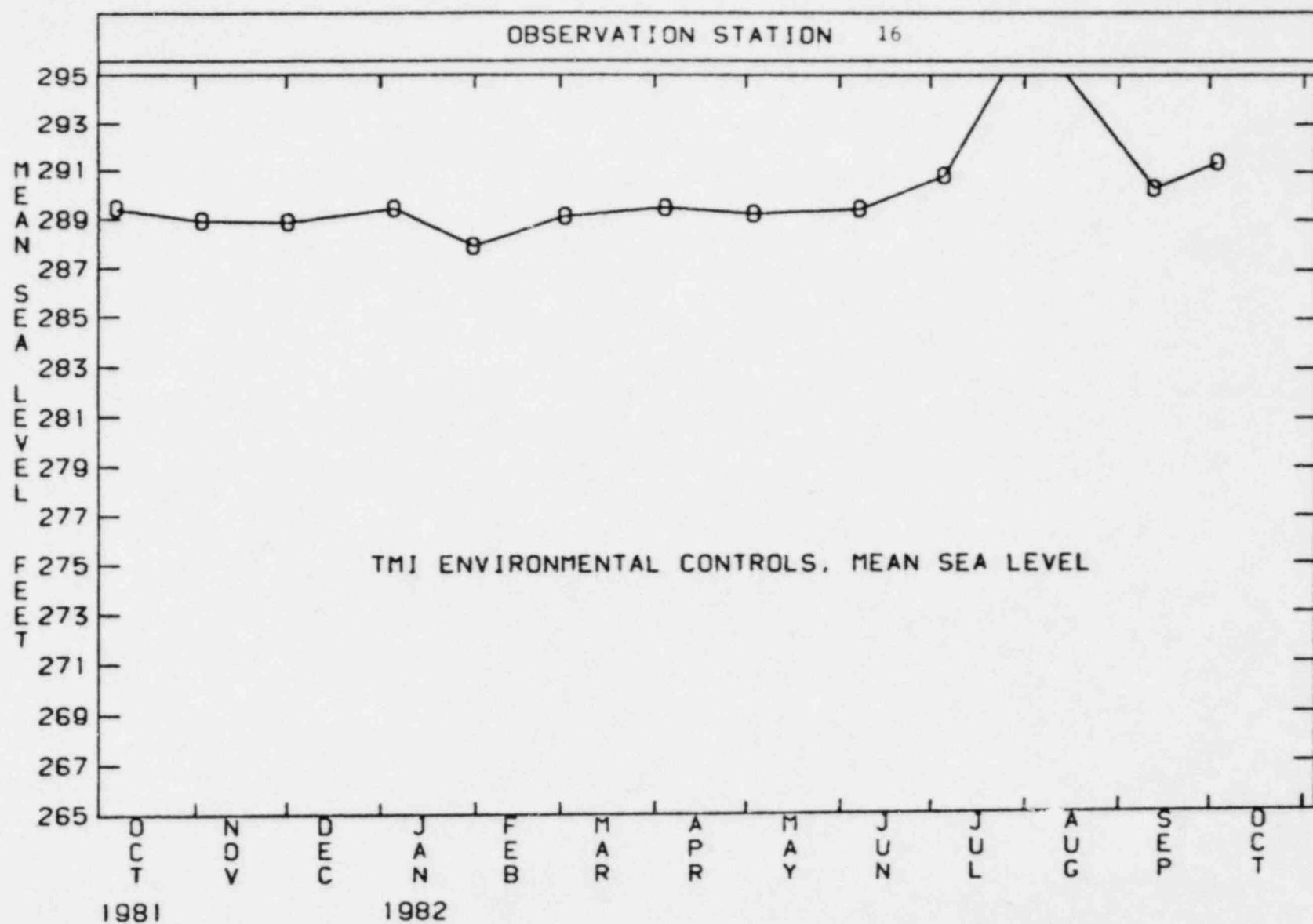
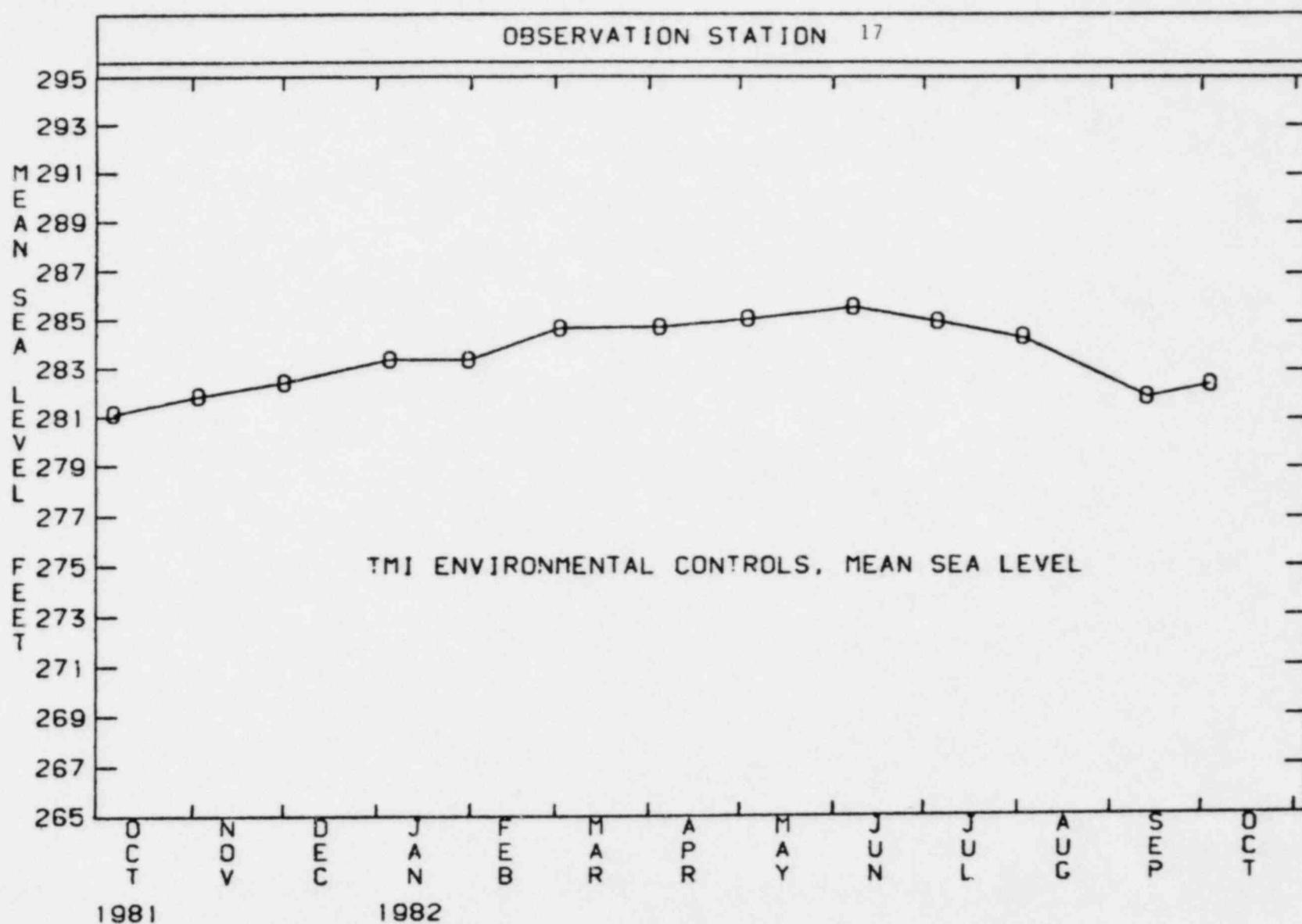
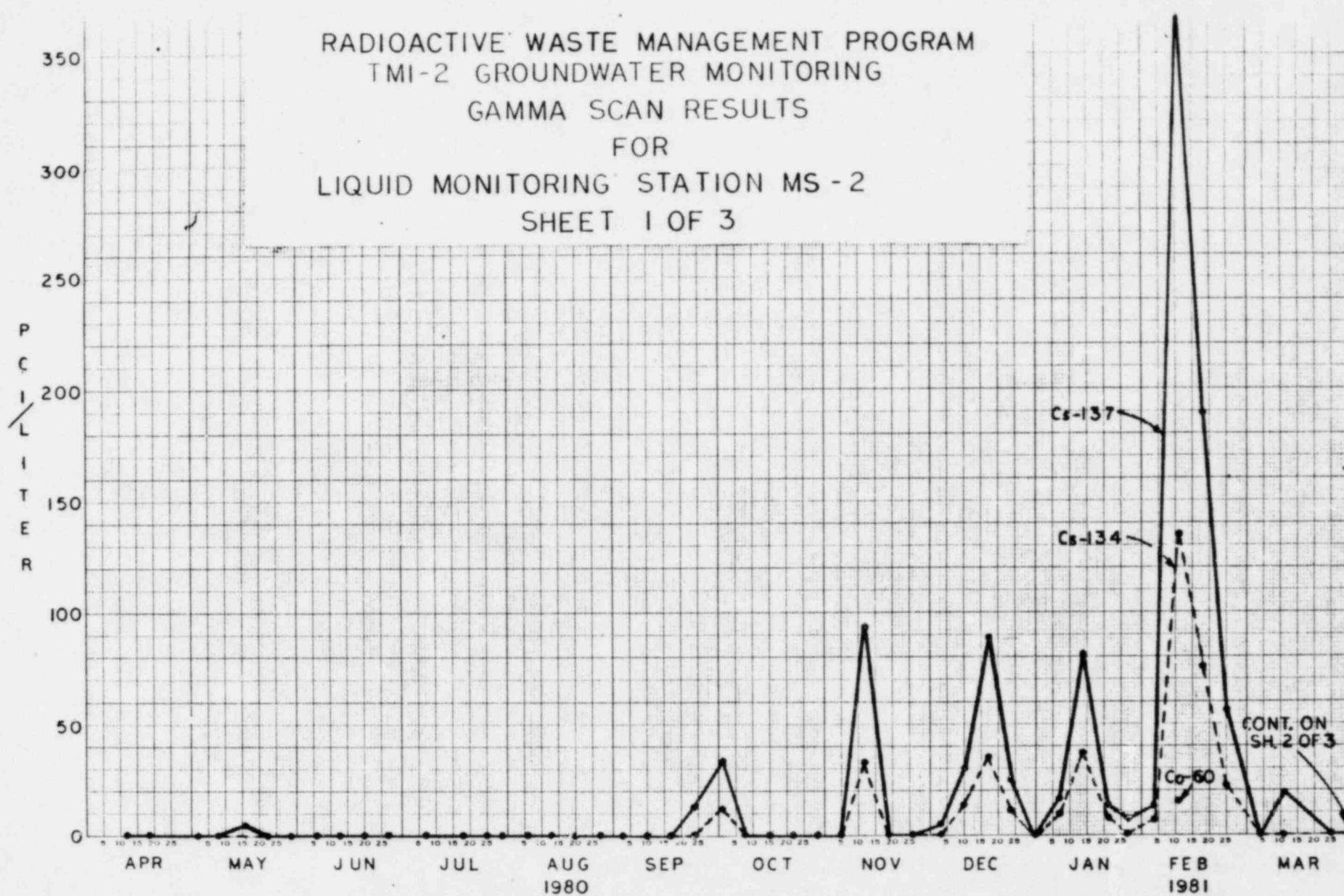


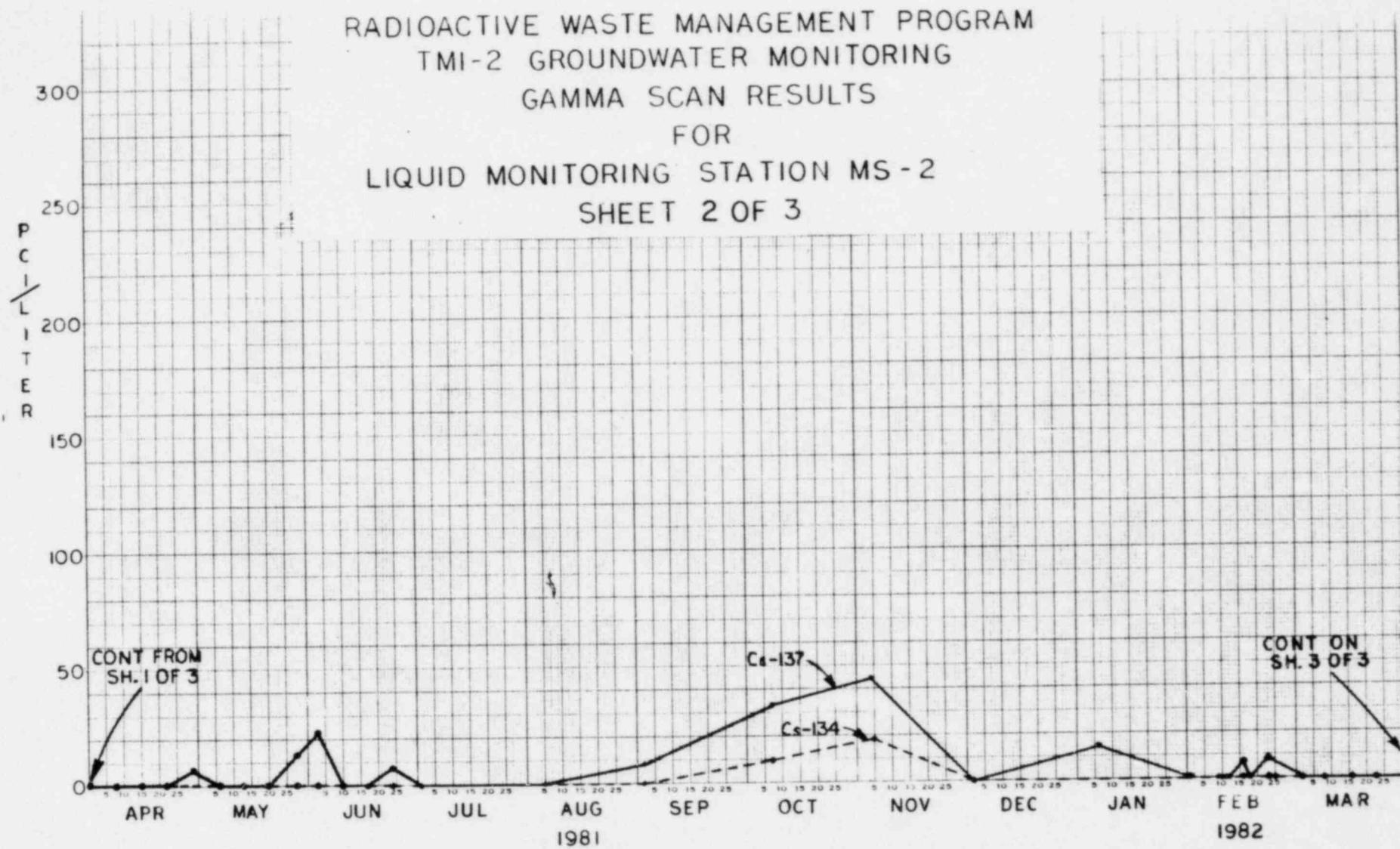
Figure 2
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RADIOACTIVE WASTE MANAGEMENT PROGRAM
TMI-2 GROUNDWATER MONITORING
GAMMA SCAN RESULTS
FOR
LIQUID MONITORING STATION MS - 2
SHEET 1 OF 3



RADIOACTIVE WASTE MANAGEMENT PROGRAM
TMI-2 GROUNDWATER MONITORING
GAMMA SCAN RESULTS
FOR
LIQUID MONITORING STATION MS - 2
SHEET 2 OF 3



RADIOACTIVE WASTE MANAGEMENT PROGRAM
TMI-2 GROUNDWATER MONITORING
GAMMA SCAN RESULTS
FOR
LIQUID MONITORING STATION MS - 2
SHEET 3 OF 3

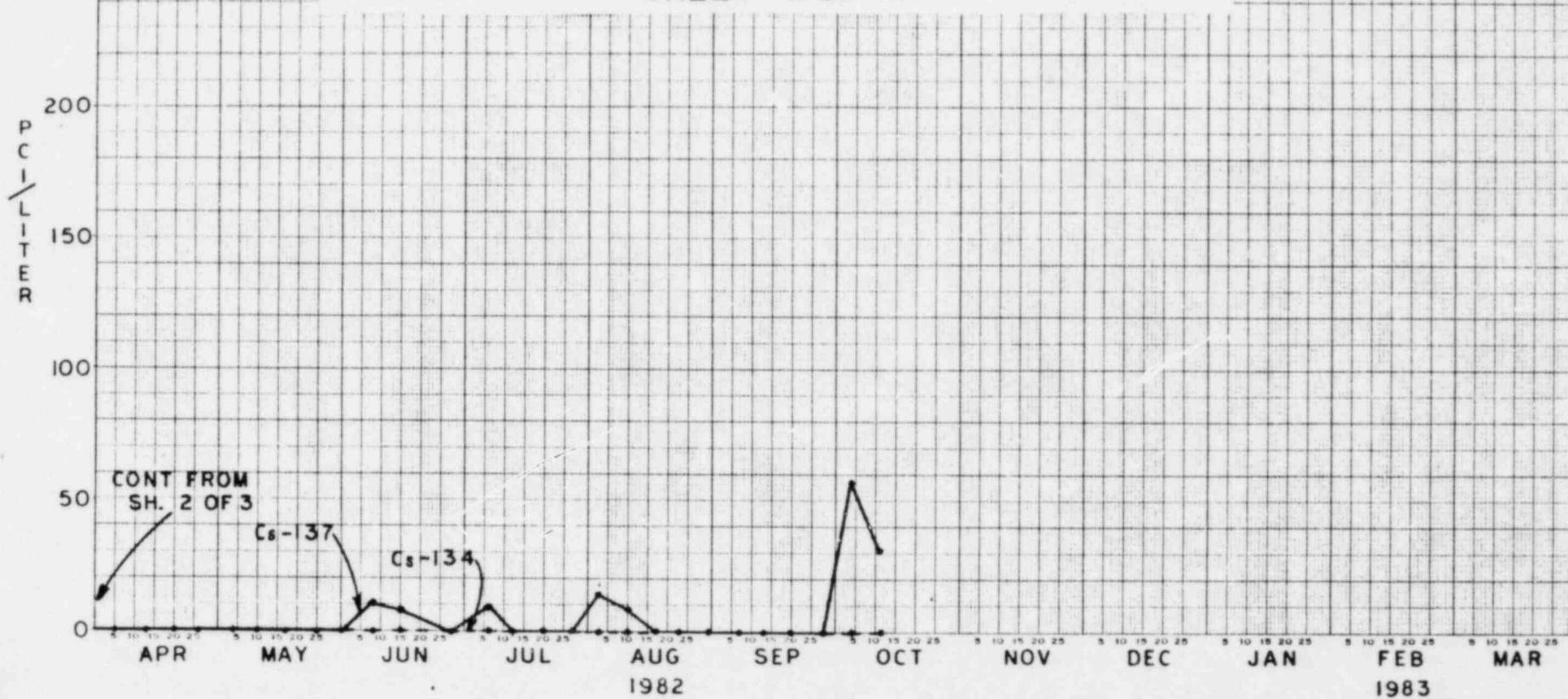


Table 1

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May 1, 1982*	1	May 5, 1982*	2	May 9, 1982*	3
May 15, 1982*	1	May 19, 1982*	2	May 23, 1982*	3
May 25, 1982*	1	May 29, 1982*	2	June 2, 1982*	3
June 1, 1982*	1	June 5, 1982*	2	June 9, 1982*	3
June 8, 1982*	1	June 12, 1982*	2	June 16, 1982*	3
June 15, 1982*	1	June 19, 1982*	2	June 23, 1982*	3
June 22, 1982*	1	June 26, 1982*	2	June 30, 1982*	3
July 6, 1982*	1	July 10, 1982*	2	July 14, 1982*	3
July 12, 1982*	1	July 16, 1982*	2	July 20, 1982*	3
July 26, 1982*	1	July 30, 1982*	2	August 3, 1982*	3
July 27, 1982*	1	July 31, 1982*	2	August 17, 1982*	3
August 1, 1982*	1	August 5, 1982*	2	September 13, 1982*	3
August 5, 1982*	1	August 9, 1982*	2	September 20, 1982*	3
August 9, 1982*	1	August 13, 1982*	2	September 24, 1982*	3
August 13, 1982*	1	August 17, 1982*	2	October 4, 1982*	3
August 17, 1982*	1	August 21, 1982*	2	October 11, 1982*	3
September 7, 1982*	1	September 11, 1982*	2		1
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June 18, 1984*	1	June 22, 1984*	2		1
June 22, 1984*	1	June 26, 1984*	2		1
June 26, 1984*	1	June 30, 1984*	2		1
June 30, 1984*	1	July 4, 1984*	2		1
July 4, 1984*	1	July 8, 1984*	2		1
July 8, 1984*	1	July 12, 1984*	2		1
July 12, 1984*	1	July 16, 1984*	2		1
July 16, 1984*	1	July 20, 1984*	2		1
July 20, 1984*	1	July 24, 1984*	2		1
July 24, 1984*	1	July 28, 1984*	2		1
July 28, 1984*	1	August 1, 1984*	2		1
August 1, 198					

Table 2

REPORT NO. 33 DATE: October 29, 1982