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## **Productivity Localised Around Seamounts in the Atlantic (Plasma) During June and July 1987**

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**Canadian Data Report of  
Fisheries and Aquatic Sciences  
No. 732**



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**PRODUCTIVITY LOCALISED AROUND SEAMOUNTS IN THE ATLANTIC  
(PLASMA) DURING JUNE AND JULY 1987**

by

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## ABSTRACT

Irwin, B., C. Caverhill, J. Anning, A. Macdonald, M. Hodgson, E.P.W. Horne and T. Platt. 1989. Productivity Localised Around Seamounts in the Atlantic (PLASMA) during June and July 1987. Can. Data Rep. Fish. Aquat. Sci. No. 732: iv + 227 p.

During June and July 1987, primary production and other related measurements were measured in the vicinity of the New England Seamount Chain. In this report we make available the raw data and some fitted parameters.

## RÉSUMÉ

Irwin, B., C. Caverhill, J. Anning, A. Macdonald, M. Hodgson, E.P.W. Horne and T. Platt. 1989. Productivity Localised Around Seamounts in the Atlantic (PLASMA) during June and July 1987. Can. Data Rep. Fish. Aquat. Sci. No. 732: iv + 227 p.

Pendant la période de juin à juillet 1987, la production primaire et plusieurs autres variables ont été mesurées au voisinage de la chaîne de montagnes sous-marine New England. Dans ce rapport nous présentons les données brutes ainsi que les paramètres calculés.

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## INTRODUCTION

The New England Seamount Chain stretches in a NW/SE direction across the Gulf Stream and into the Sohm Abyssal Plain. The prevailing flow of the North Atlantic drift is to the northeast across and around these seamounts. This cruise was undertaken to examine the possibility that localised upwelling could occur over seamounts and promote measurable enhancement of primary production and biomass. To this end stations were occupied over two seamounts - Nashville and Yakutat - at a position midway between the two seamounts and at a fourth position well south of the Seamount Chain and presumably not influenced by them.

This was an international multi-discipline cruise on CSS Hudson coordinated by the Biological Oceanography Division of the Biological Sciences Branch at the Bedford Institute of Oceanography. Other laboratories represented on the cruise were the Institute of Oceanographic Sciences (UK), University of Chicago (USA), the Laboratoire Arago, Banyuls sur Mer (France) and Dalhousie University (Canada).

## SAMPLING

Water samples for *in situ* primary productivity experiments were collected with 12 l niskin bottles two hours before sunrise. Sampling depths were every 10 m from the surface to 100 m. Subsamples were analysed for chlorophyll, particulate organic carbon and nitrogen and inorganic nutrient content.

Detailed chlorophyll profiles were collected from a modified continuous pump sampler (Herman et al. 1984) fitted with a Guildline model 8109 CTD and an Aquatracka® submersible fluorometer. Samples were collected every 5 or 10 meters from 110 m to the surface. Samples for PI experiments were also collected from the pump.

On transects across seamounts and between seamounts samples were collected from 1.2 l Niskin bottles mounted on a rosette sampler. Chlorophyll was analysed from samples in the upper 250 m and inorganic nutrients from all sampled depths.

## METHODS

### In situ Productivity

The  $^{14}\text{C}$  method by Strickland and Parsons (1972) was used. 40  $\mu\text{ci}$  of sodium bicarbonate  $^{14}\text{C}$  was added to each of 6 light and 3 dark bottles from each depth. Light bottles were deployed at sampled depths before sunrise and recovered at sunset. Dark bottles were kept in a darkened cooler at *in situ* temperatures. The recovered light bottles were stored overnight in the dark at *in situ* temperatures. All samples were filtered after 24 hour incubation onto Whatman GF/F filters.

### PI Experiments

40  $\mu\text{ci}$  of sodium bicarbonate  $^{14}\text{C}$  was added to each of 42 light and 2 dark bottles for each experiment. Bottles were incubated in temperature controlled incubators illuminated by 250 w tungsten halogen lamps. All incubations were of three hours duration. All samples were filtered onto Whatman GF/F filters.

### Sediment Traps

Single arrays of sediment traps were deployed at 150 m at all stations except for the Nashville Seamount station. At this station a full set of traps were deployed but not recovered. The remaining traps were recovered after 48-60 hrs. Samples for chlorophyll and carbon were collected from the sediment.

### Chlorophyll

Replicate 100 mls of sample were filtered onto 25 mm Whatman GF/F filters. Chlorophyll was extracted for 24 hours with 85% acetone at 0°C in the dark. The fluorometric technique of Yentsch and Menzel (1963) as modified by Holm-Hansen et al. (1965) was used to estimate chlorophyll concentrations.

### Organic Particulates

Samples for particulate organic carbon and organic nitrogen were filtered onto precombusted 25 mm Whatman GF/F filters. Filters were analysed by combustion in a Perkin Elmer Model 10 CHN analyser.

### Nutrients

Samples for nitrate, silicate and inorganic phosphate were collected from most sampled depths. Samples were analysed immediately after collection using a Technicon II Autoanalyser. Nitrate was measured using industrial method 158-71W, silicate with method 186-72W and phosphate with method 155-71W.

### Incubation and Incident Light

Photosynthetically Active Radiation (P.A.R.) was measured at each bottle position in the incubators with a Biospherical Instruments  $4\pi$  quantum meter (Model Q.S.L. 100).

Total incident light was measured with an Eppley 40 junction black and white pyranometer (Model 8-48). Output was integrated hourly and logged on a Licor Li 550 printing integrator.

### Estimation of Photosynthetic Parameters

Measurement of specific production  $P_B$  and irradiance  $I$  were used to estimate parameters in the equation of Platt et al. (1981),

$$P_B = P_S(1 - e^{-\alpha I/P_s}) e^{-\beta I/P_s}$$

$P_S$  (mg C mg Chl $^{-1}$  h $^{-1}$ ) is the light saturated rate of photosynthesis in the absence of photoinhibition,  $\alpha$  (mg C (mg Chl) $^{-1}$  h $^{-1}$  w $^{-1}$  m $^{-2}$ ) is the initial slope of the PI curve and  $\beta$  (same units as  $\alpha$ ) is a parameter that characterises photoinhibition. Complete details of the fitting routine are given in Irwin et al. (1982) and a discussion of the mathematical basis for this technique is given in Irwin et al. (1980).

### ACKNOWLEDGEMENTS

We wish to thank M. Panouse of Banyuls sur Mer for his assistance during the cruise.

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## SEDIMENT TRAP

DATE DEPLOYED            22 JUNE  
TIME DEPLOYED            0650 ADT  
POSITION                  34°39.6'N    54°13.6'W  
DEPTH                    150 m  
DATE RECOVERED           24 JUNE  
TIME RECOVERED           2200 ADT  
POSITION                  34°41.3'N    54°04'W  
DURATION                63 HRS

POC                      PON

mg C m<sup>-2</sup>   mg C m<sup>-2</sup> d<sup>-1</sup>   mg N m<sup>-2</sup>   mg N m<sup>-2</sup> d

232                    88                    31                    12

## SEDIMENT TRAP

DATE DEPLOYED	27 JUNE
TIME DEPLOYED	0930 ADT
POSITION	34°36.71'N    51°00'W
DEPTH	150 m
DATE RECOVERED	29 JUNE
TIME RECOVERED	2130 ADT
POSITION	34°53.7'N    50°44.3'W
DURATION	60 HRS

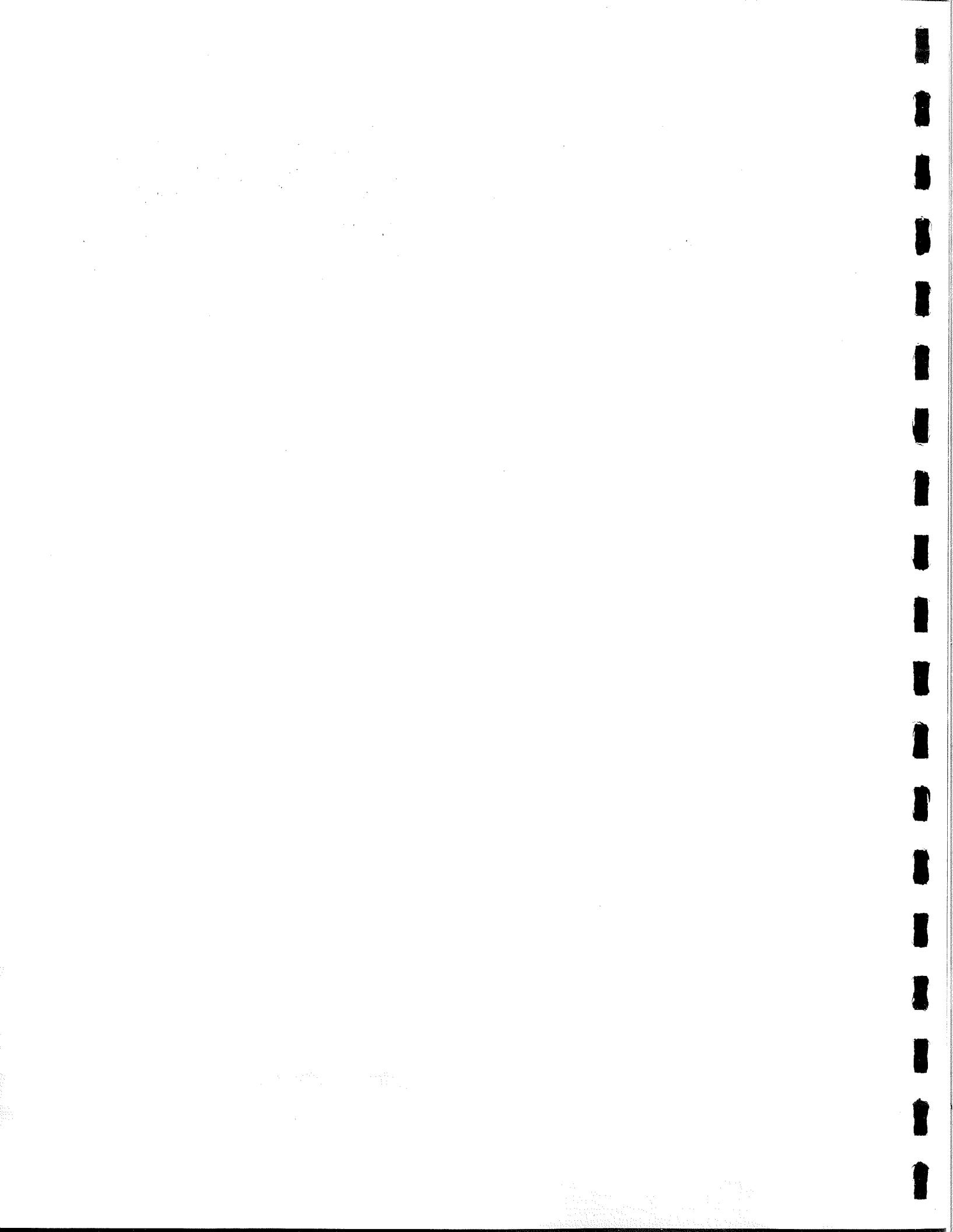
POC	PON		
mg C m <sup>-2</sup>	mg C m <sup>-2</sup> d <sup>-1</sup>	mg N m <sup>-2</sup>	mg N m <sup>-2</sup> d <sup>-1</sup>
159	64	22	9

**SEDIMENT TRAP**

DATE DEPLOYED            1 JULY  
TIME DEPLOYED            0900 ADT  
POSITION                  31°54.28'N    55°28.7'W  
DEPTH                    150 m  
DATE RECOVERED           3 JULY  
TIME RECOVERED           1800 ADT  
POSITION                  31°57.3'N    53°00.5'W  
DURATION                57 HRS

POC	PON		
mg C m <sup>-2</sup>	mg C m <sup>-2</sup> d <sup>-1</sup>	mg N m <sup>-2</sup>	mg N m <sup>-2</sup> d
186	78	23	10

## **LOCATION OF SAMPLING STATIONS**



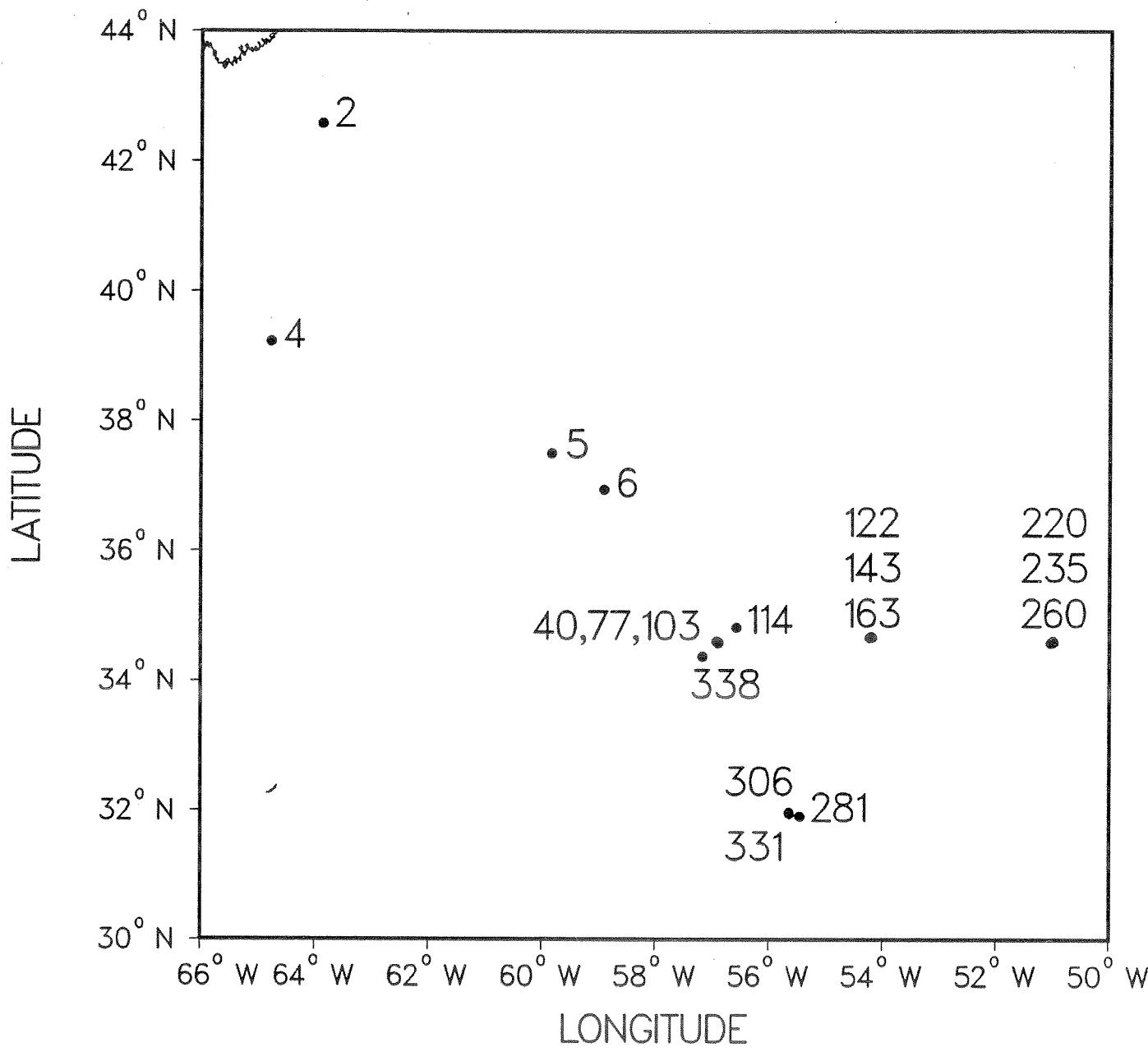


Fig. 1 Location of PI stations.

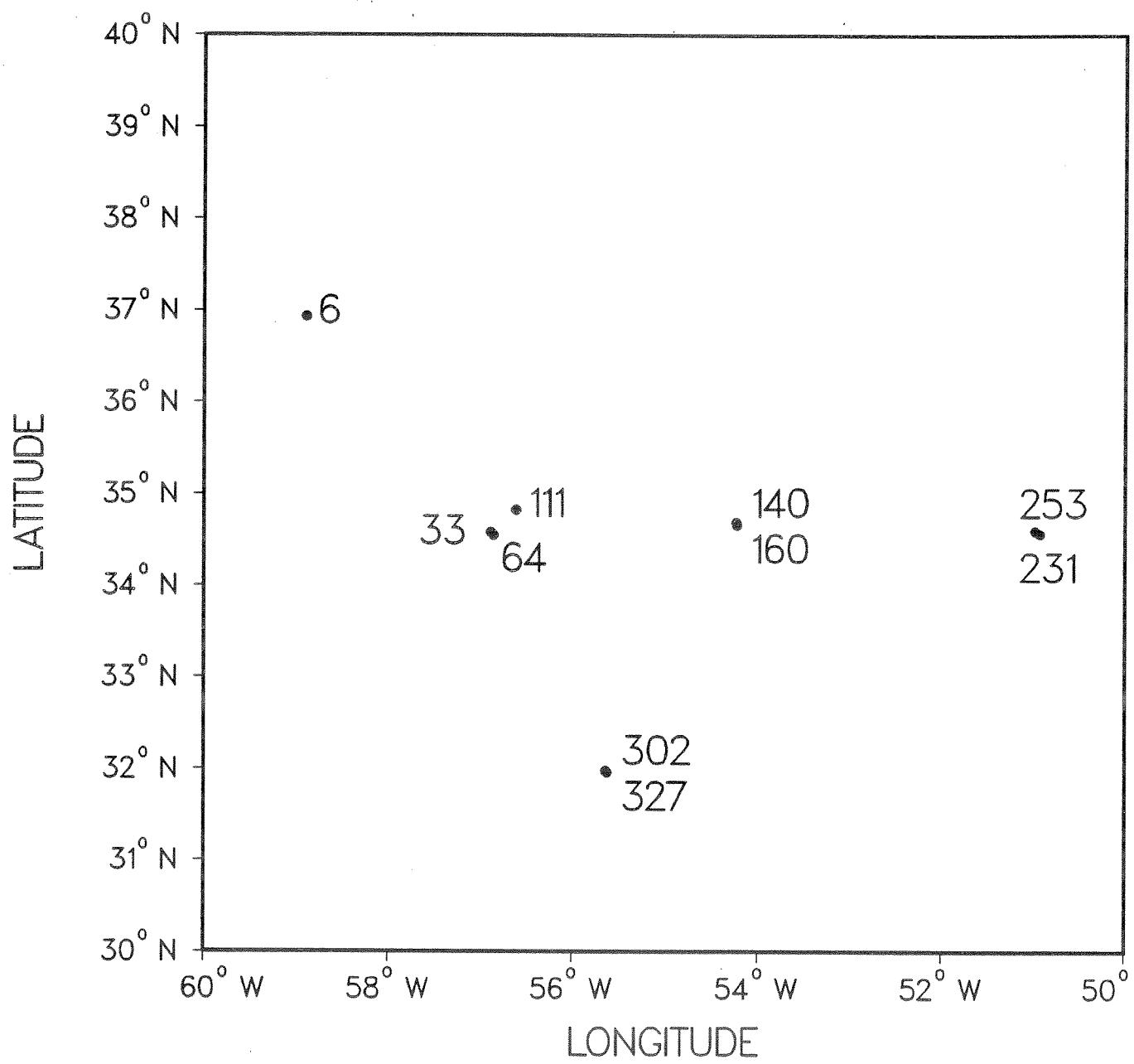


Fig. 2 Location of *in situ* stations.

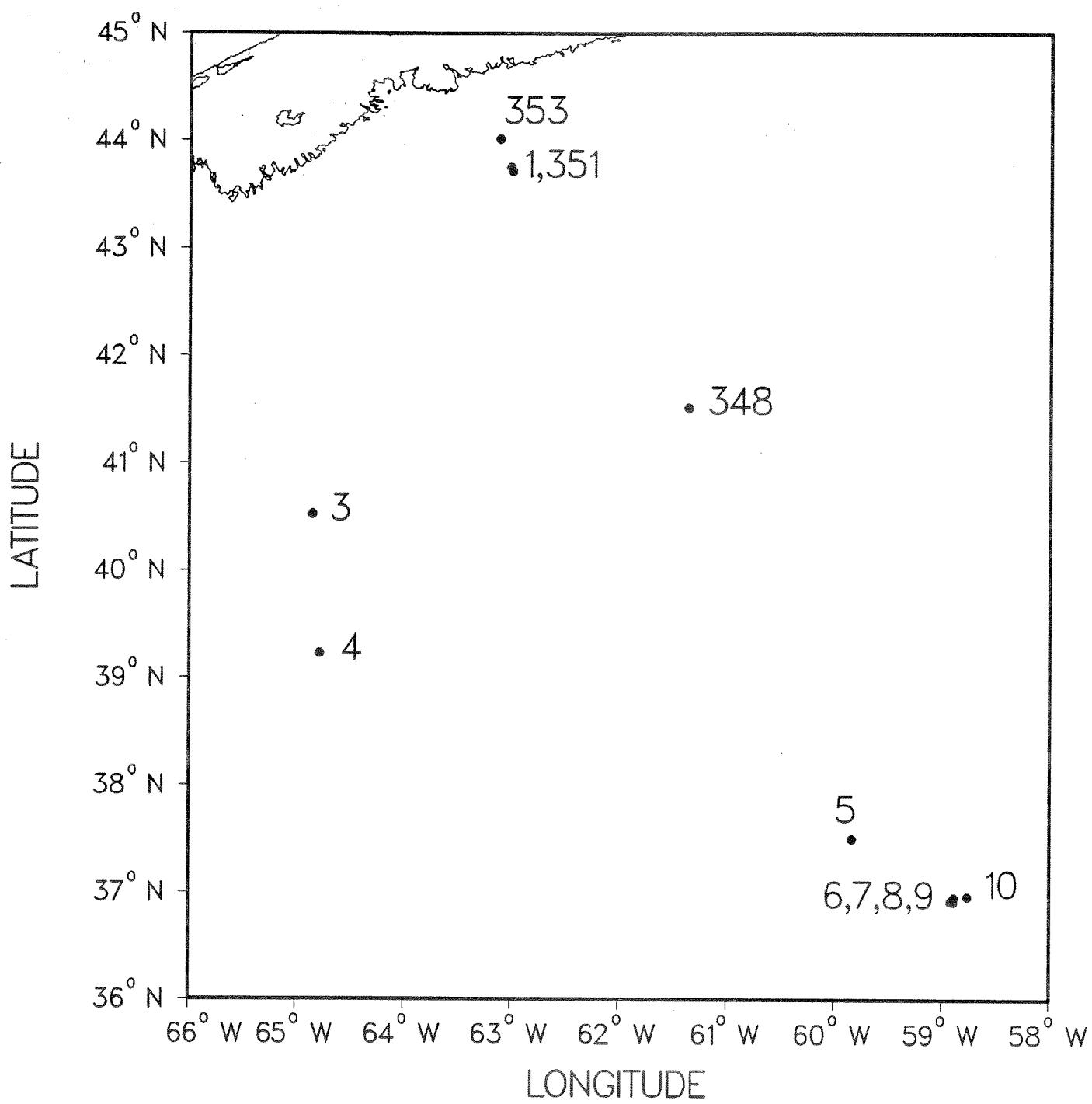


Fig. 3 Location of northernmost CTD stations.

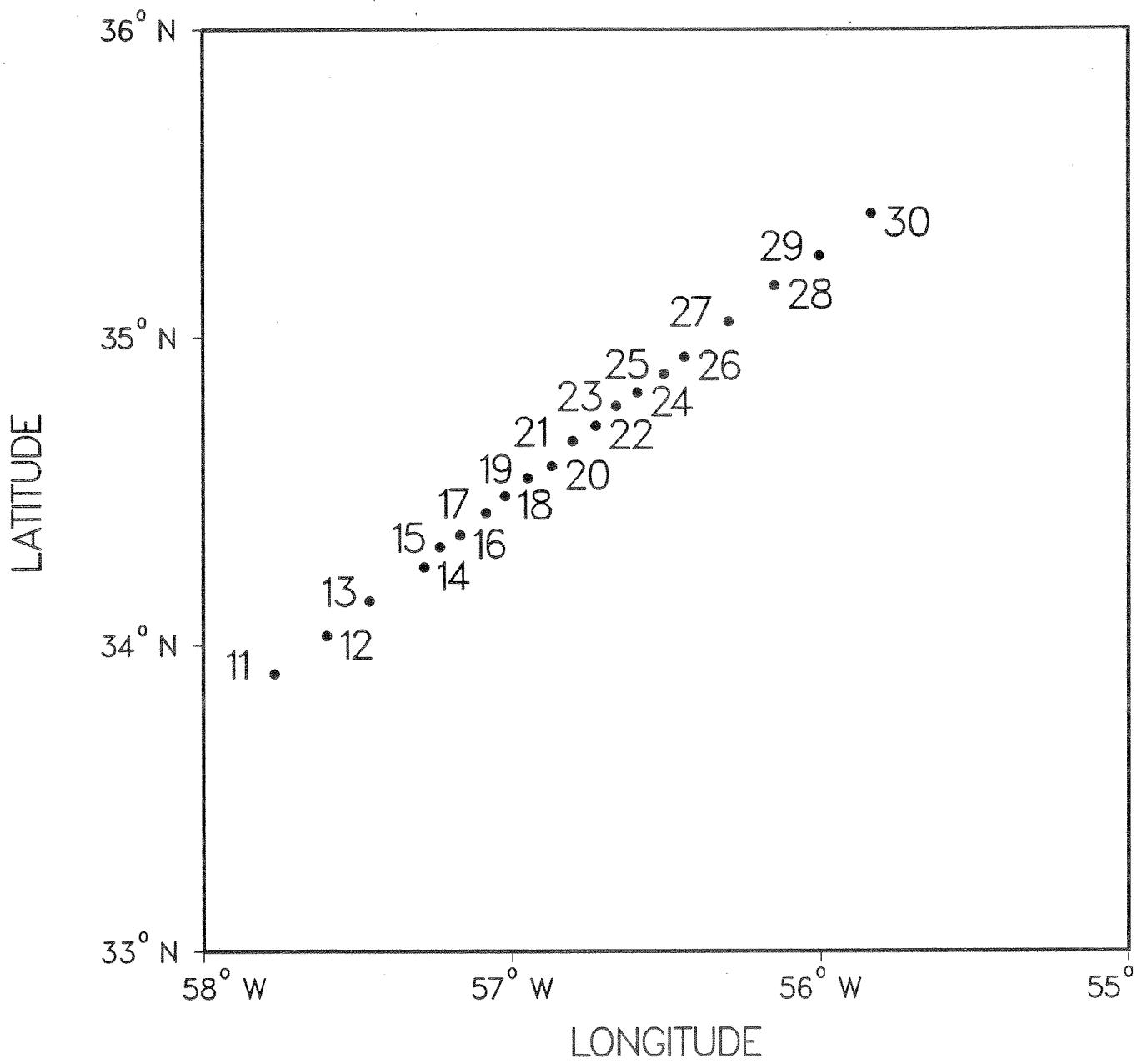


Fig. 4 Location of CTD stations : Nashville transect.

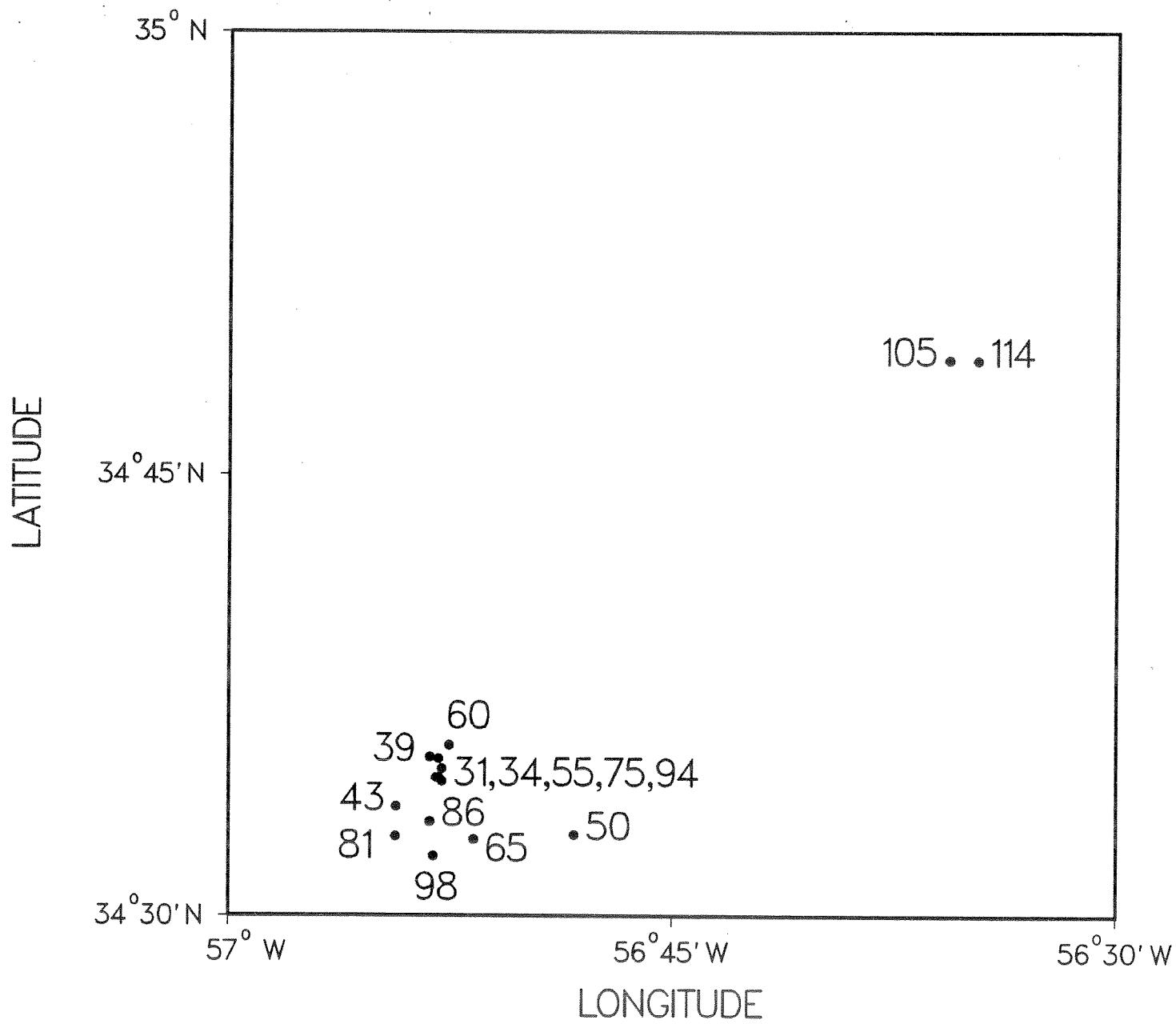


Fig. 5 Location of Nashville CTD stations

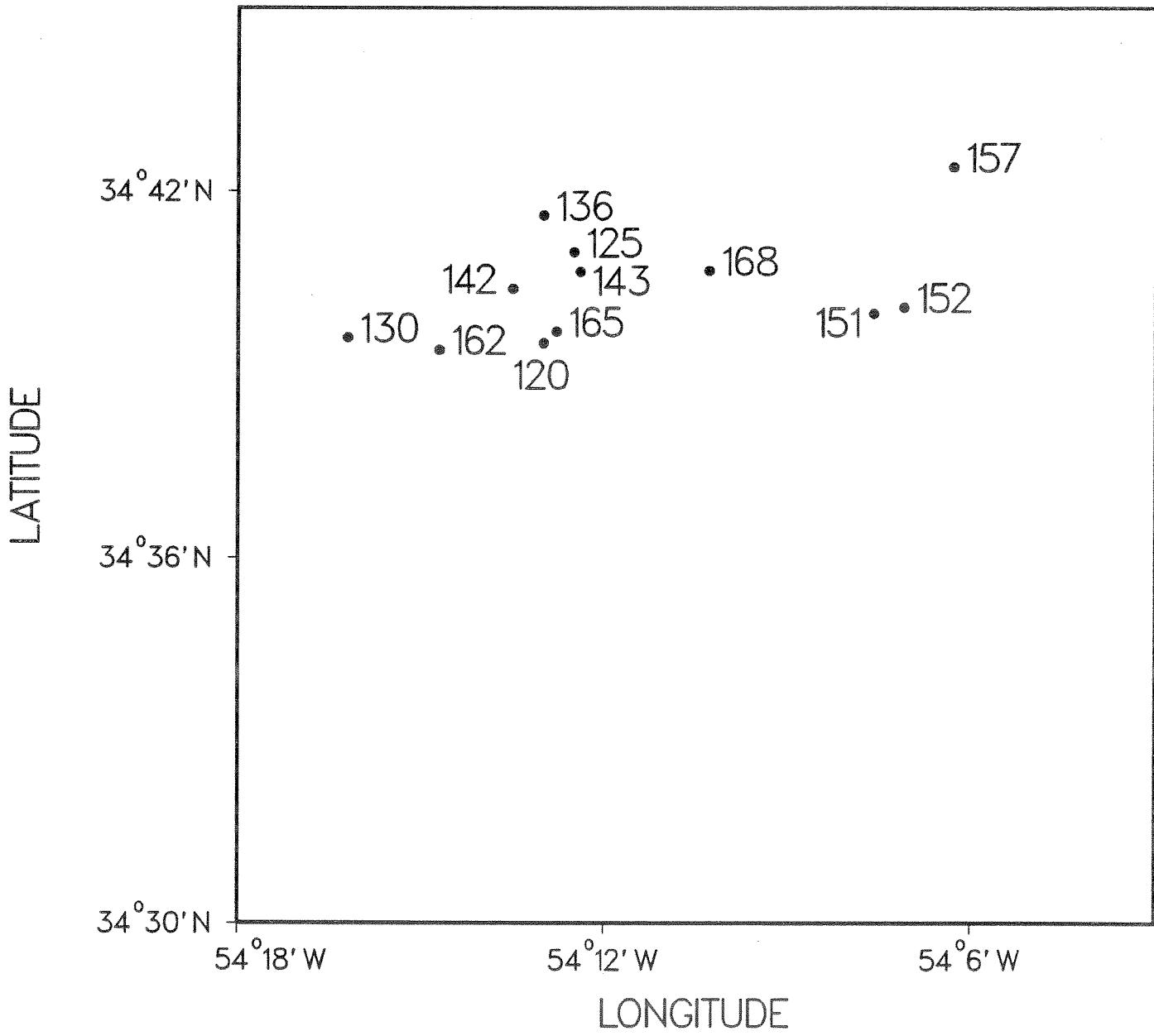


Fig. 6 Location of CTD stations : Indigo stations.

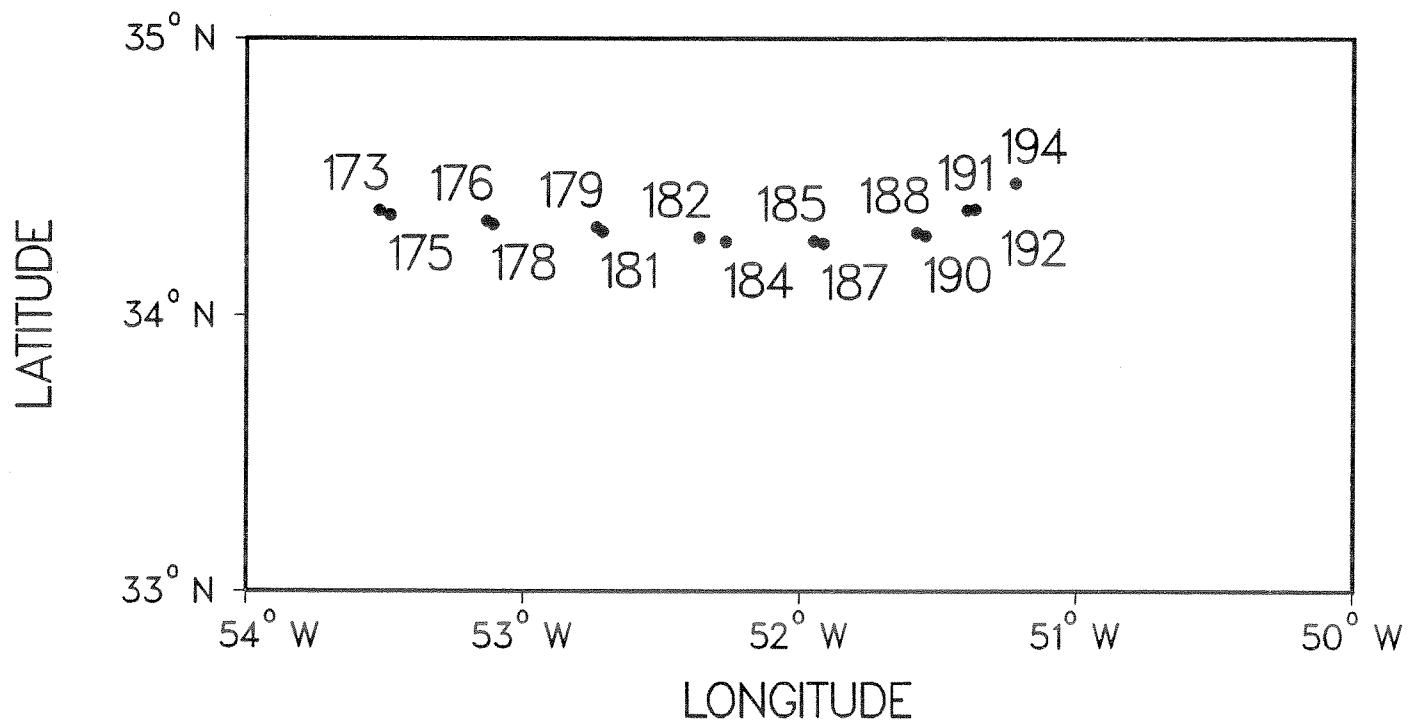


Fig. 7 Location of CTD stations : Indigo – Yakutat transect.

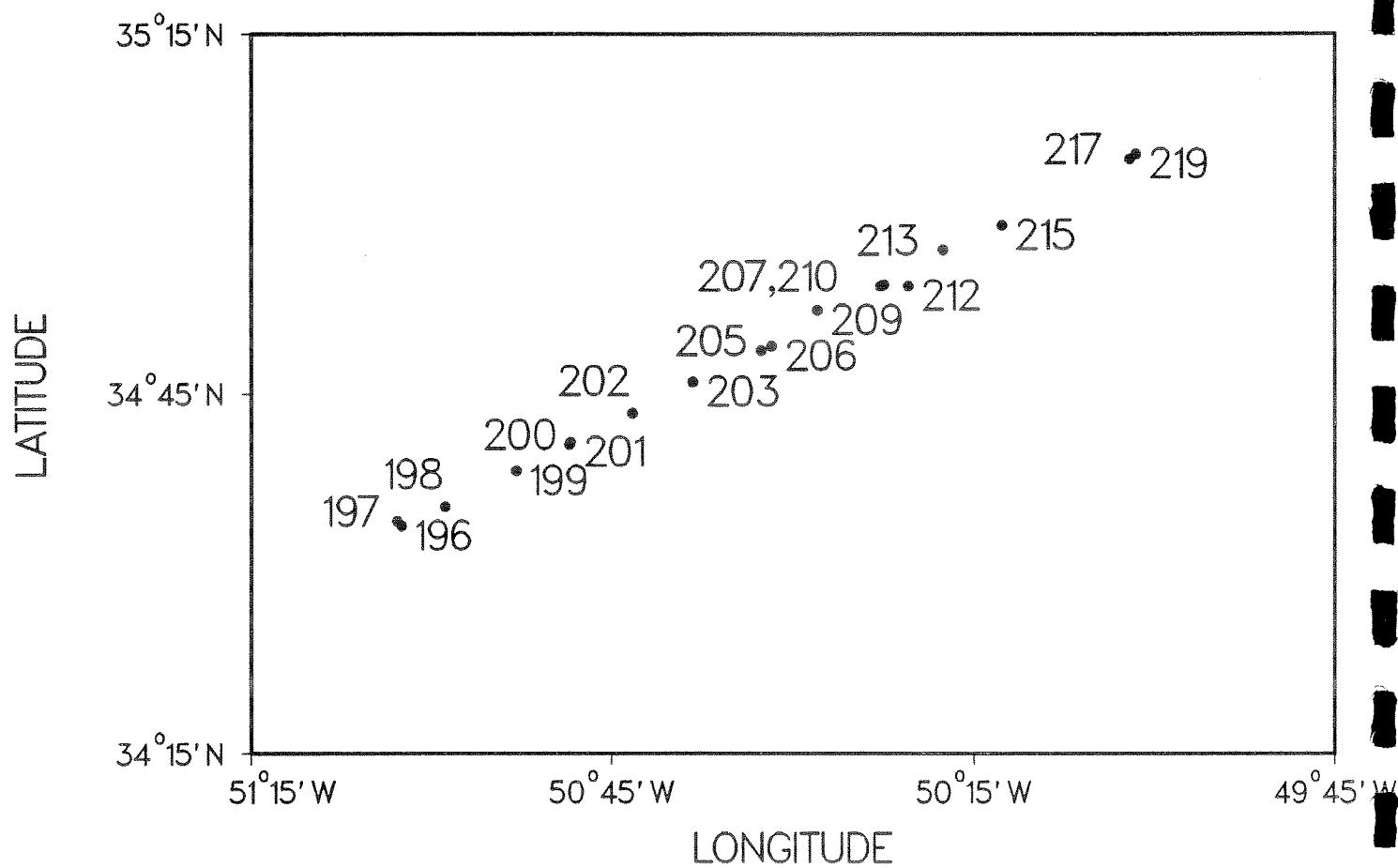


Fig. 8 Location of CTD stations : Yakutat transect.

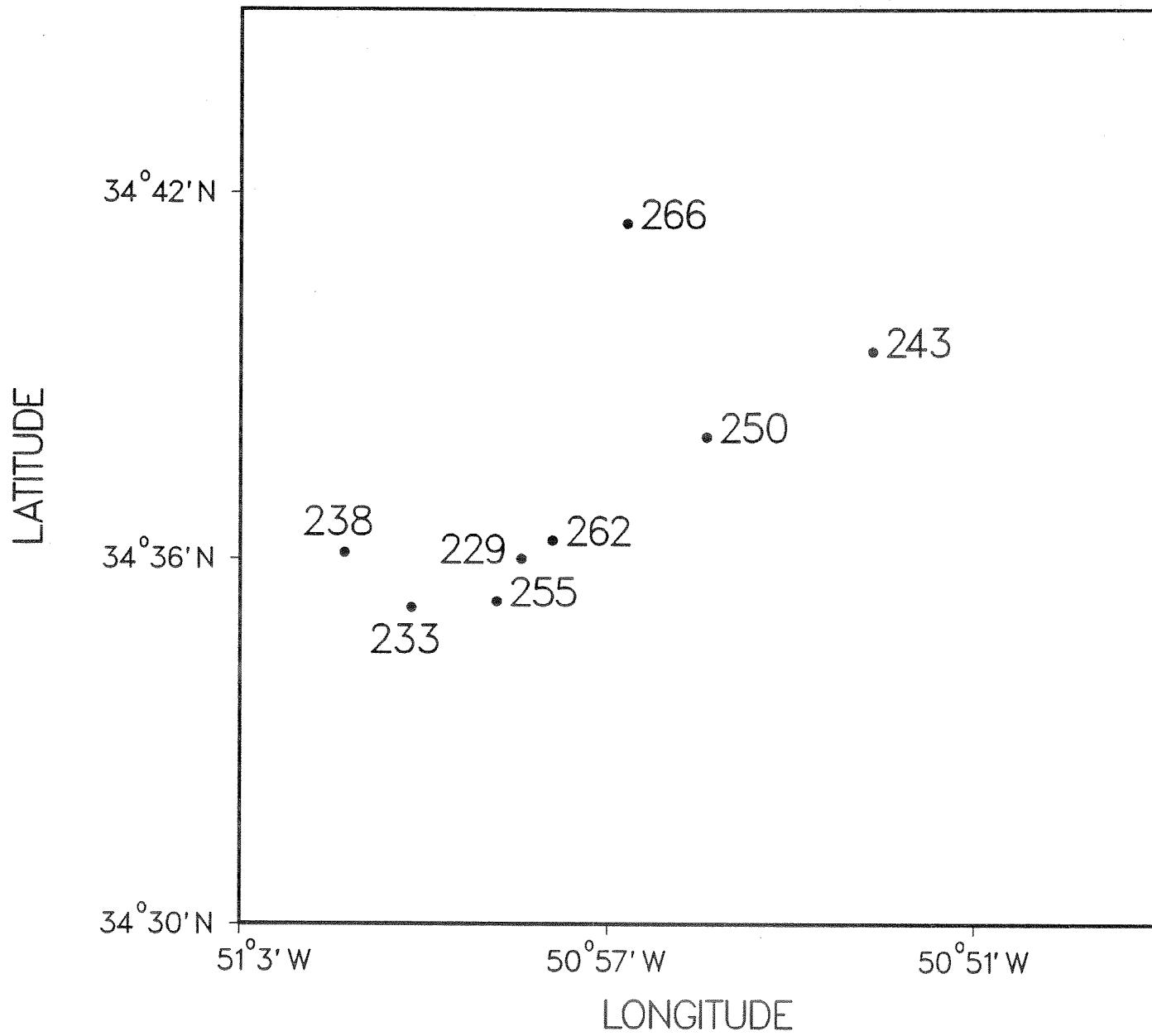


Fig. 9 Location of CTD stations : Yakutat stations.

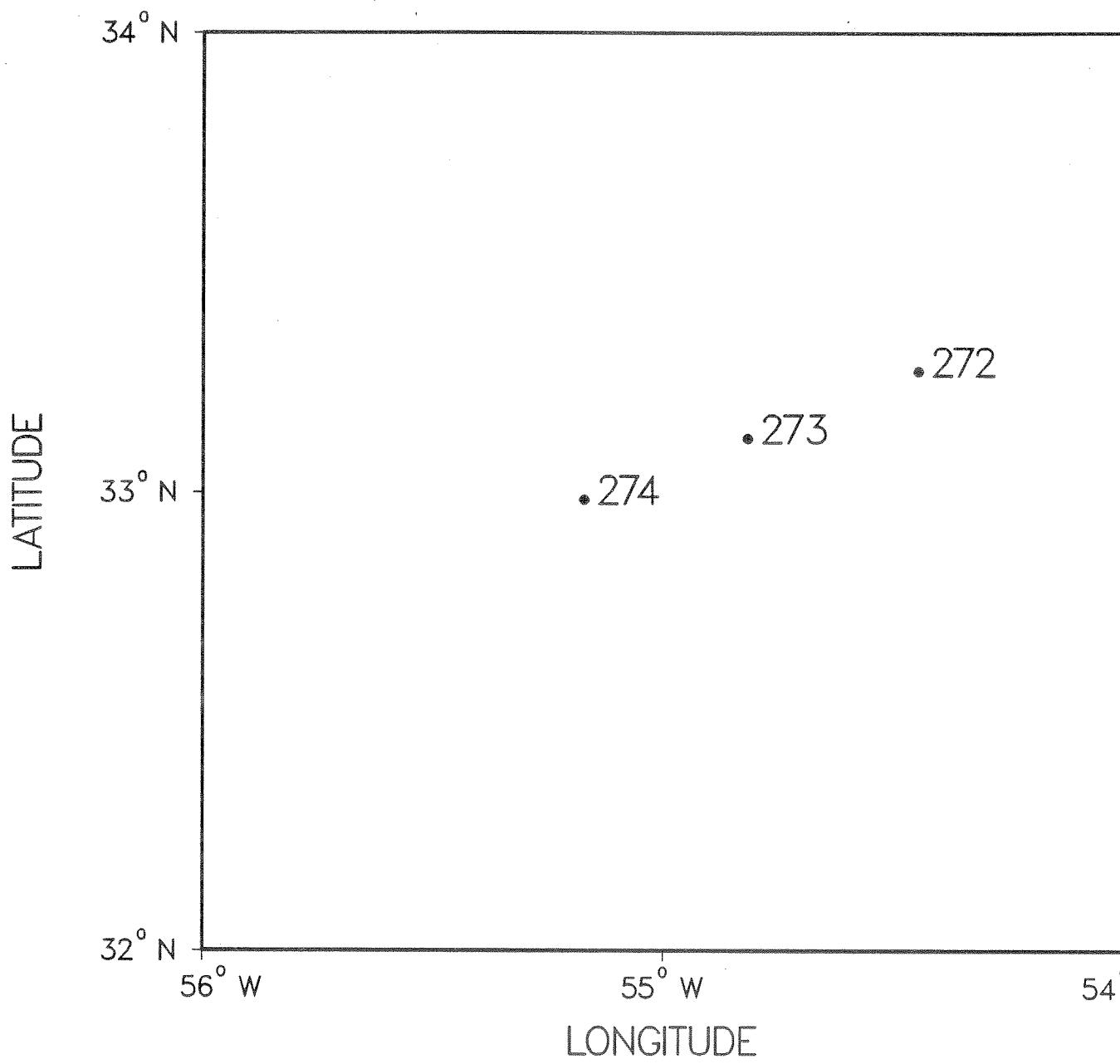


Fig. 10 Location of CTD stations. : Transect to Station Purple.

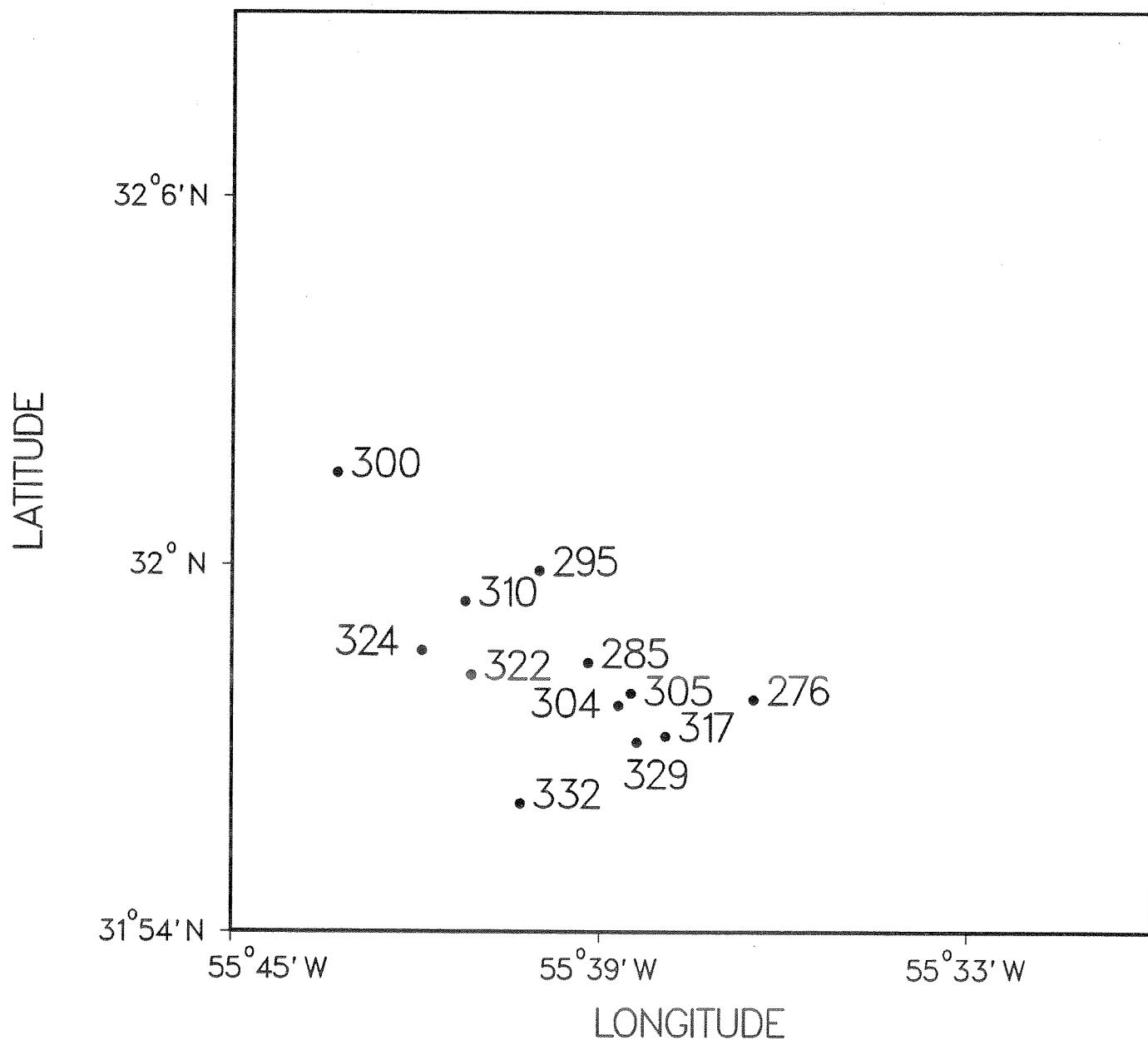


Fig. 11 Location of CTD stations. : Station Purple.

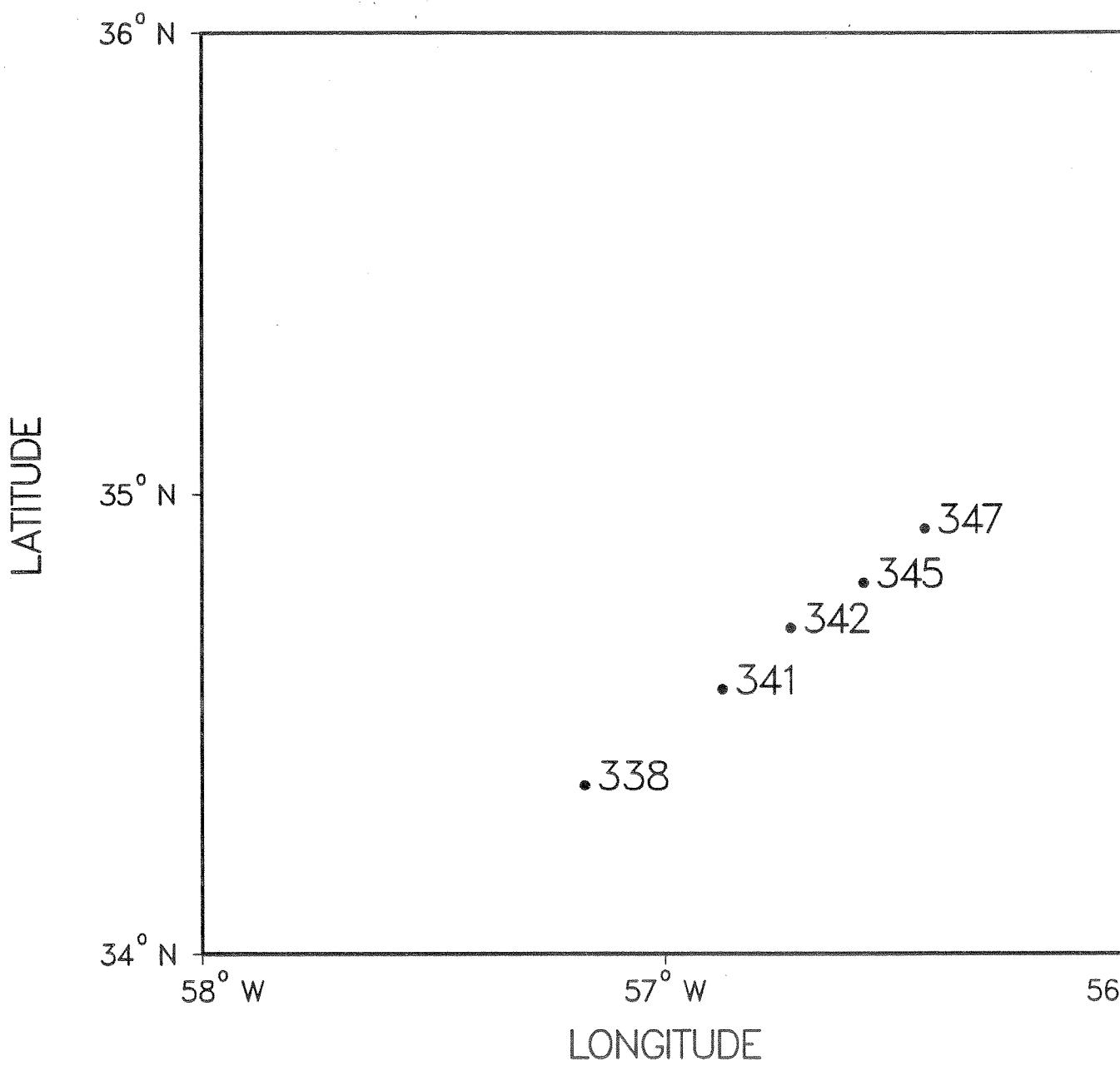
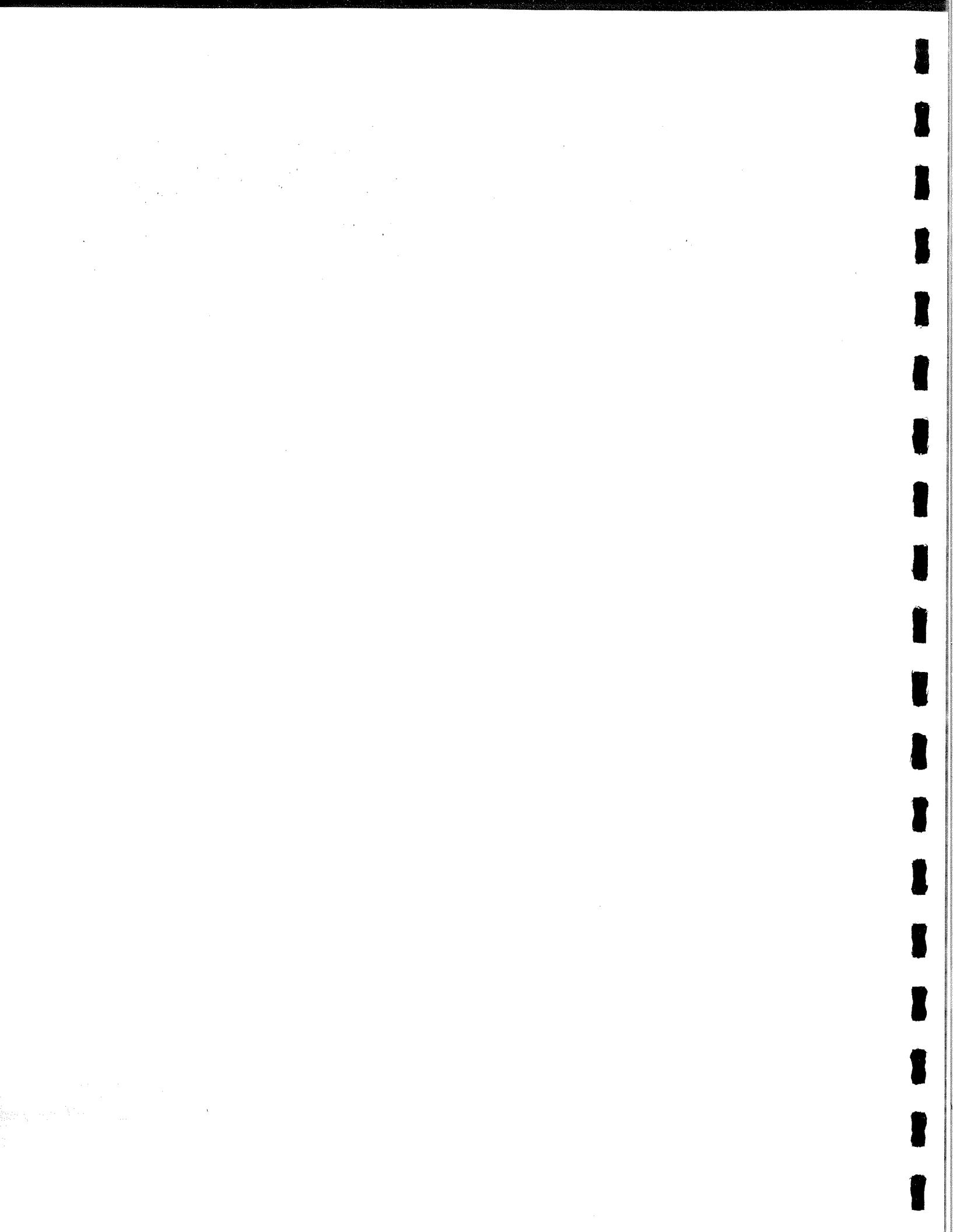


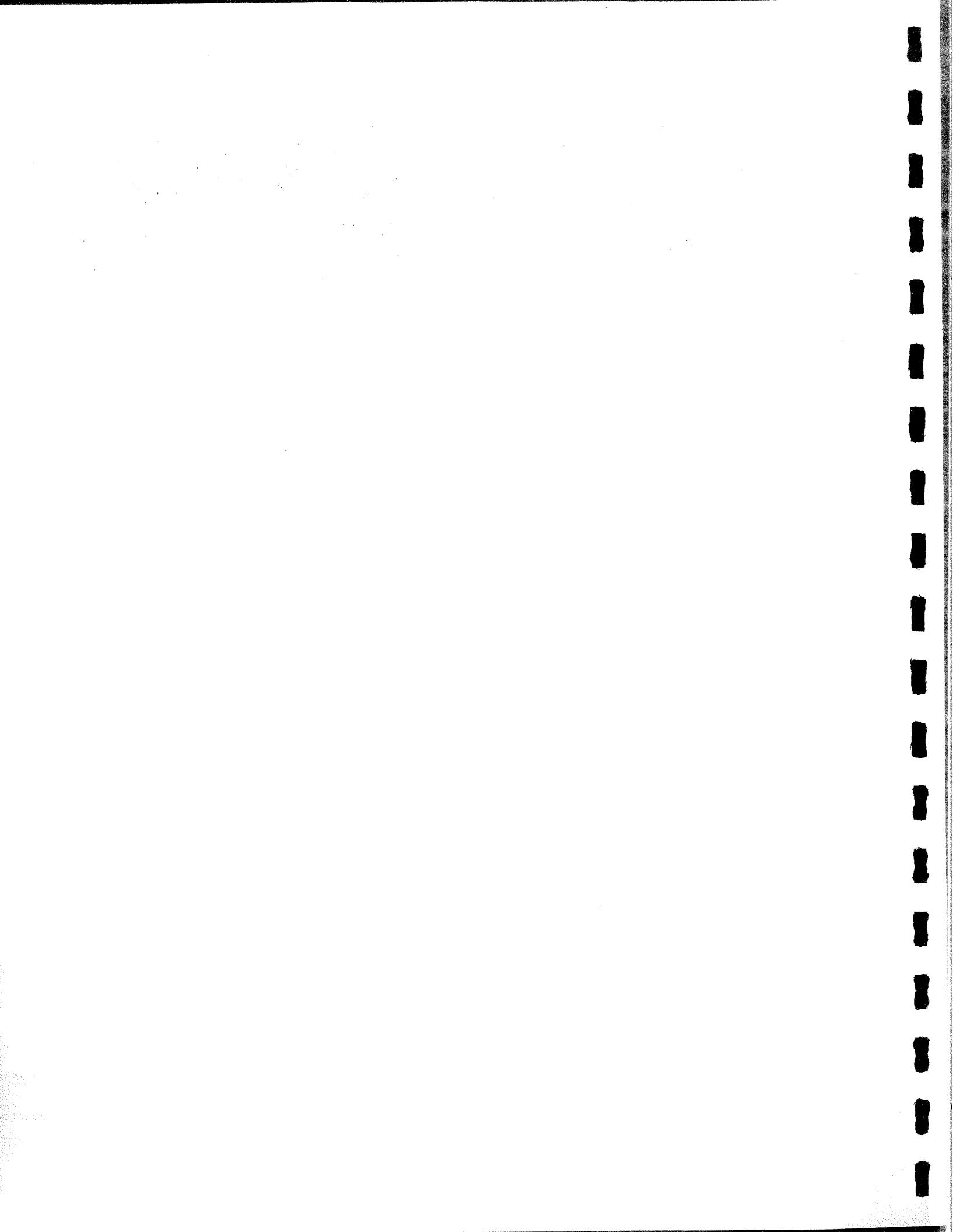
Fig. 12 Location of CTD stations : Nashville stations revisited.

## PUMP PROFILES



**UNITS**

Z	=	depth in meters
Chl	=	chlorophyll concentration mg m <sup>-3</sup>
NO <sub>3</sub>	=	nitrate concentration mg at m <sup>-3</sup>
SiO <sub>3</sub>	=	silicate concentration mg at m <sup>-3</sup>
PO <sub>4</sub>	=	phosphate concentration mg at m <sup>-3</sup>



## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 2

LAT  $42^{\circ}34.90'$  N LONG  $63^{\circ}52.40'$  W DATE 12/06/87

Z	CHL	NO3	SIO3	PO4
5	.81	.31	1.05	.53
10	1.17	.29	1.63	.55
20	.89	.32	1.78	.46
30	1.20	1.28	2.55	.50
40	.70	2.28	2.75	.66
50	.24	5.42	4.53	.74
60	.09	6.77	5.01	.88
70	.03	7.82	5.59	.80
80	.02	8.68	6.10	.88
95	.01	9.50	6.27	1.36

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 4

LAT  $39^{\circ}13.80' N$ LONG  $64^{\circ}47.20' W$ 

DATE 13/06/87

Z	CHL	NO3	SIO3	PO4
10	.16	.29	.49	.00
20	.19	.29	.61	.01
30	.33	.30	.73	.02
40	.49	.61	.83	.07
50	.49	.60	.87	.09
60	.17	3.01	1.19	.16
70	.12	2.29	.99	.12
80	.09	4.05	1.97	.47
90	.09	4.04	2.30	.45
100	.09	6.98	3.44	.51

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 5

LAT 37°30.10' N

LONG 59°50.00' W

DATE 14/06/87

Z	CHL	NO3	SIO3	PO4
10	.08	.41	.48	.03
20	.09	.26	.43	.01
30	.10	.24	.38	.00
40	.17	.23	.31	.00
50	.18	.26	.23	.00
60	.23	.25	.20	.00
70	.28	.59	.24	.01
80	.21	.29	.19	.02
90	.24	.60	.54	.04
110	.23	1.69	.61	.07

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 6

LAT  $36^{\circ}56.40' N$ LONG  $58^{\circ}54.30' W$ 

DATE 15/06/87

Z	CHL	NO3	SIO3	PO4
10	.06	.25	.22	.01
20	.07	.25	.13	.01
30	.08	.25	.12	.00
40	.11	.24	.09	.01
50	.11	.25	.43	.00
60	.18	.24	.36	.00
70	.26	.23	.41	.10
80	.44	.29	.43	.12
90	.31	.39	.53	.17
110	.08	1.85	.55	.21

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 6

LAT  $36^{\circ}55.00'$  NLONG  $58^{\circ}55.20'$  W

DATE 15/06/87

Z	CHL	NO3	SIO3	PO4
10	.05	.25	.30	.00
20	.05	.26	.39	.00
30	.09	.25	.37	.00
40	.12	.27	.48	.00
50	.21	.23	.80	.03
60	.25	.23	.69	.00
70	.39	.24	.72	.00
80	.33	.16	.81	.03
90	.13	.85	.90	.04
110	.05	1.69	.50	.05

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 40

LAT 34°35.20' N

LONG 56°53.40' W

DATE 18/06/87

Z	CHL	NO3	SIO3	PO4
10	.12	.00	.80	.09
20	.10	.00	.80	.03
30	.11	.00	.80	.04
40	.14	.00	.64	.04
50	.19	.00	.64	.12
60	.28	.00	.64	.12
70	.30	.00	.11	.28
80	.61	.00	.11	.03
90	.48	.09	.15	.07
110	.21	1.77	.18	

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 77

LAT 34°34.50' N

LONG 56°53.60' W

DATE 19/06/87

Z	CHL	NO3	SIO3	PO4
10	.14	.00	.65	.03
20	.15	.00	.65	.04
30	.19	.00	.65	.02
40	.23	.00	.65	.02
50	.25	.00	.65	.01
60	.30	.00	.65	.02
70	.31	.00	.65	.03
80	.53	.00	.65	.05
90	.64	.00	.81	.02
110	.54	.95	1.12	.12

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 103

LAT 34°36.10' N

LONG 56°55.50' W

DATE

20/06/87

Z	CHL	NO3	SIO3	PO4
1	.09	.06	.03	
5	.10	.06	.02	
10	.10	.06	.08	
15	.11	.06	.05	
20	.10	.06	.05	
25	.14	.06	.07	
30	.16	.07	.07	
35	.18	.07	.03	
40	.22	.07	.02	
45	.26	.07	.05	
50	.31	.07	.05	
55	.30	.08	.03	
60	.40	.08	.05	
65	.68	.08	.03	
70	.72	.08	.03	
75	.94	.75	.05	
80	.64	.09	.08	
85	.53	.92	.11	
90	.37	.95	.11	
95	.09	.48	.14	
100	.09	.43	.17	
105	.15	.43	.14	
110	.09	.98	.12	

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 114

LAT  $34^{\circ}48.90' N$ LONG  $56^{\circ}34.70' W$ 

DATE 21/06/87

Z	CHL	NO3	SIO3	PO4
1	.11	.15	.10	.05
5	.11	.14	.11	.07
10	.10	.13	.13	.05
15	.12	.12	.15	.05
20	.11	.11	.33	.06
25	.12	.10	.19	.07
30	.14	.09	.36	.06
35	.14	.08	.53	.09
40	.24	.08	.40	.04
45	.25	.08	.55	.05
50	.23	.08	.55	.04
55	.31	.08	.55	.05
60	.13	.11	.70	.09
65	.66	.189	.85	.11
70	.64	.202	.85	.14
75	.47	.215	.85	.13
80	.42	.215	.84	.13
85	.42	.202	.84	.14
90	.36	.202	.99	.13
95	.31	.202	.68	.15
100	.23	.224	.84	.15
105	.20	.244	.84	.
110	.16	.241	.84	.

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 122

LAT  $34^{\circ}40.00' N$ LONG  $54^{\circ}11.60' W$ 

DATE 22/06/87

Z	CHL	NO3	SIO3	PO4
1	.09	.13	.53	.00
5	.11	.12	.50	.00
10	.11	.11	.54	.00
15	.12	.10	.57	.00
20	.13	.09	.32	.00
25	.13	.08	.35	.00
30	.14	.07	.38	.00
35	.17	.07	.42	.00
40	.18	.06	.44	.00
45	.27	.05	.33	.00
50	.29	.04	.52	.00
55	.34	.03	.56	.00
60	.42	.02	.73	.02
65	.60	.14	.80	.00
70	.50	.14	.83	.00
75	.67	.14	.88	.00
80	.55	.14	.91	.00
85	.40	.14	.94	.03
90	.39	.14	.98	.01
95	.33	.14	1.02	.02
100	.28	.2.03	1.05	.02
105	.20	.2.40	1.24	.04
110	.16	.2.53	1.13	.04

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 143

LAT  $34^{\circ}40.60' N$ LONG  $54^{\circ}12.60' W$ 

DATE 23/06/87

Z	CHL	NO <sub>3</sub>	SiO <sub>3</sub>	PO <sub>4</sub>
1	.12	.12	.00	.03
5	.13	.12	.29	.05
10	.11	.12	.45	.04
15	.12	.12	.46	.04
20	.16	.12	.47	.04
25	.14	.12	.48	.04
30	.17	.12	.49	.04
35	.19	.12	.50	.04
40	.21	.12	.51	.05
45	.21	.11	.52	.06
50	.23	.10	.53	.08
55	.30	.08	.53	.04
60	.38	.05	.53	.09
65	.64	.16	.68	.02
70	.94	.14	.68	.04
75	.82	.12	.68	.03
80	.89	.11	.83	.03
85	.87	.11	.83	.09
90	.54	.50	.98	.15
95	.31	.24	.98	.14
100	.31	.24	.98	.16
105	.27	.24	.97	.14
110	.24	.24	.97	.14

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 163

LAT 34°39.80' N

LONG 54°13.80' W

DATE 24/06/87

Z	CHL	NO3	SIO3	PO4
1	.11	.17	.26	.11
5	.11	.17	.30	.12
10	.12	.17	.17	.09
15	.12	.16	.20	.09
20	.12	.16	.24	.10
25	.12	.16	.27	.11
30	.18	.16	.31	.09
35	.19	.16	.50	.09
40	.20	.16	.38	.09
45	.22	.16	.41	.11
50	.27	.14	.42	.11
55	.32	.12	.40	.11
60	.44	.10	.70	.09
65	.66	.23	.84	.13
70	.58	.11	.14	.14
75	.56	.12	.26	.16
80	.36	.11	.24	.17
85	.25	.25	.55	.18
90	.23	.22	.52	.18
95	.24	.22	.50	.19
100	.23	.04	.48	.20
105	.18	.02	.61	.20
110	.11	.16	.96	.11

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 220

LAT 34°36.70' N

LONG 51°00.00' W

DATE 27/06/87

Z	CHL	NO3	SIO3	PO4
1	.09	.00	.56	.09
5	.09	.00	.43	.09
10	.12	.00	.47	.07
15	.09	.00	.51	.06
20	.11	.00	.54	.06
25	.13	.00	.58	.06
30	.16	.00	.62	.09
35	.17	.00	.66	.08
40	.18	.00	.70	.09
45	.20	.00	.74	.13
50	.21	.00	.77	.10
55	.22	.00	.81	.10
60	.31	.00	.84	.10
65	.40	.00	.44	.07
70	.56	.00	.77	.10
75	.46	.00	.94	.13
80	.42	.00	1.12	.16
85	.31	.00	1.29	.20
90	.29	.00	2.70	.16
95	.25	.00	3.19	.16
100	.22	.00	3.10	.19
105	.17	.00	1.33	.22
110	.12	.00	1.51	.24
			3.38	.25
			3.46	.25
			3.37	.25

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 235

LAT  $34^{\circ}34.90'$  NLONG  $51^{\circ}02.50'$  W

DATE 28/06/87

Z	CHL	NO3	SIO3	PO4
1				
5				
10	.00			
15	.00			
20	.00			
25	.00			
30	.00			
35	.00			
40	.00			
45	.00			
50	.00			
55	.00			
60	.00			
65	.00			
70	.00			
75	.00			
80	.00			
85	.00			
90	.00			
95	.00			
100	.00			
105	.00			
110	.00			
11				
33				
36				
38				
41				
44				
46				
49				
51				
54				
57				
59				
43				
39				
35				
80				
91				
24				
93				
91				
07				
05				
02				
40				
3.40				
13				
13				
56				
56				
09				
07				
07				
55				
55				
06				
01				
01				
01				
21				

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 260

LAT 34°35.60' N

LONG 50°59.30' W

DATE 29/06/87

Z	CHL	N03	S103	P04
1	.09	.02	.56	.02
5	.10	.02	.60	.02
10	.12	.02	.50	.03
15	.11	.02	.69	.06
20	.18	.03	.59	.05
25	.15	.04	.59	.05
30	.16	.05	.59	.05
35	.18	.06	.59	.08
40	.22	.07	.59	.05
45	.21	.07	.59	.04
50	.33	.08	.59	.06
55	.40	.09	.74	.04
60	.43	.11	.74	.07
65	.53	.12	.74	.03
70	.58	.51	.05	.03
75	.56	.78	.20	.06
80	.48	.17	.06	.03
85	.44	.43	.07	.04
90	.37	2	.19	.07
95	.29	3	.22	.12
100	.27	3	.48	.15
110	.22	3	.73	.15

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 281

LAT 31°54.20' N

LONG 55°27.60' W

DATE 01/07/87

Z	CHL	NO3	SIO3	PO4
1	.06	.13	.1	.13
5	.06	.14	.47	.10
10	.06	.14	.46	.09
15	.07	.13	.28	.08
20	.07	.13	.26	.07
25	.07	.13	.25	.07
30	.08	.13	.07	.06
35	.08	.13	.00	.05
40	.09	.13	.04	.04
45	.10	.15	.00	.03
50	.11	.15	.32	.12
55	.12	.15	.48	.12
60	.14	.16	.80	.14
65	.16	.13	.40	.12
70	.20	.14	.34	.12
75	.22	.14	.34	.12
80	.22	.14	.19	.12
85	.25	.14	.04	.12
90	.25	.15	.04	.12
95	.26	.15	.00	.12
100	.30	.15	.00	.12
105	.36	.15	.06	.09
110	.34	.43	.70	.10

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 306

LAT 31°58.00' N

LONG 55°38.90' W

DATE 02/07/87

Z	CHL	NO3	SIO3	PO4
1	.05	.07	.86	.11
5	.07	.07	.74	.11
10	.07	.07	.77	.11
15	.07	.07	.64	.11
20	.06	.07	.85	.10
25	.06	.07	.72	.10
30	.07	.07	.60	.12
35	.09	.07	.80	.10
40	.08	.07	.68	.08
45	.13	.07	.87	.13
50	.13	.06	.62	.07
55	.16	.05	.66	.10
60	.17	.04	.69	.12
65	.19	.02	.41	.12
70	.19	.01	.45	.12
75	.21	.00	.49	.12
80	.22	.00	.53	.12
85	.21	.00	.72	.14
90	.25	.00	.61	.15
95	.25	.00	.65	.15
100	.37	.25	.03	.17
105	.38	.54	.07	.16
110	.31	.98	.80	.14

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 331

LAT 31°56.60' N

LONG 55°38.60' W

DATE 03/07/87

Z	CHL	NO3	SIO3	PO4
1	.06	.06	.52	.07
5	.06	.05	.68	.02
10	.06	.03	.71	.02
15	.06	.02	.73	.04
20	.07	.01	.61	.05
25	.07	.00	.49	.05
30	.07	.00	.50	.04
35	.07	.00	.53	.05
40	.08	.00	.84	.07
45	.11	.00	.57	.11
50	.12	.00	.66	.09
55	.13	.00	.64	.07
60	.15	.00	.73	.04
65	.16	.00	.71	.07
70	.21	.00	.91	.04
75	.22	.00	.61	.04
80	.24	.00	.86	.07
85	.24	.00	.93	.02
90	.24	.00	.37	.04
95	.29	.00	.46	.03
100	.36	.00	.71	.07
105	.36	.19	.96	.09
110	.33	.33	.74	.09

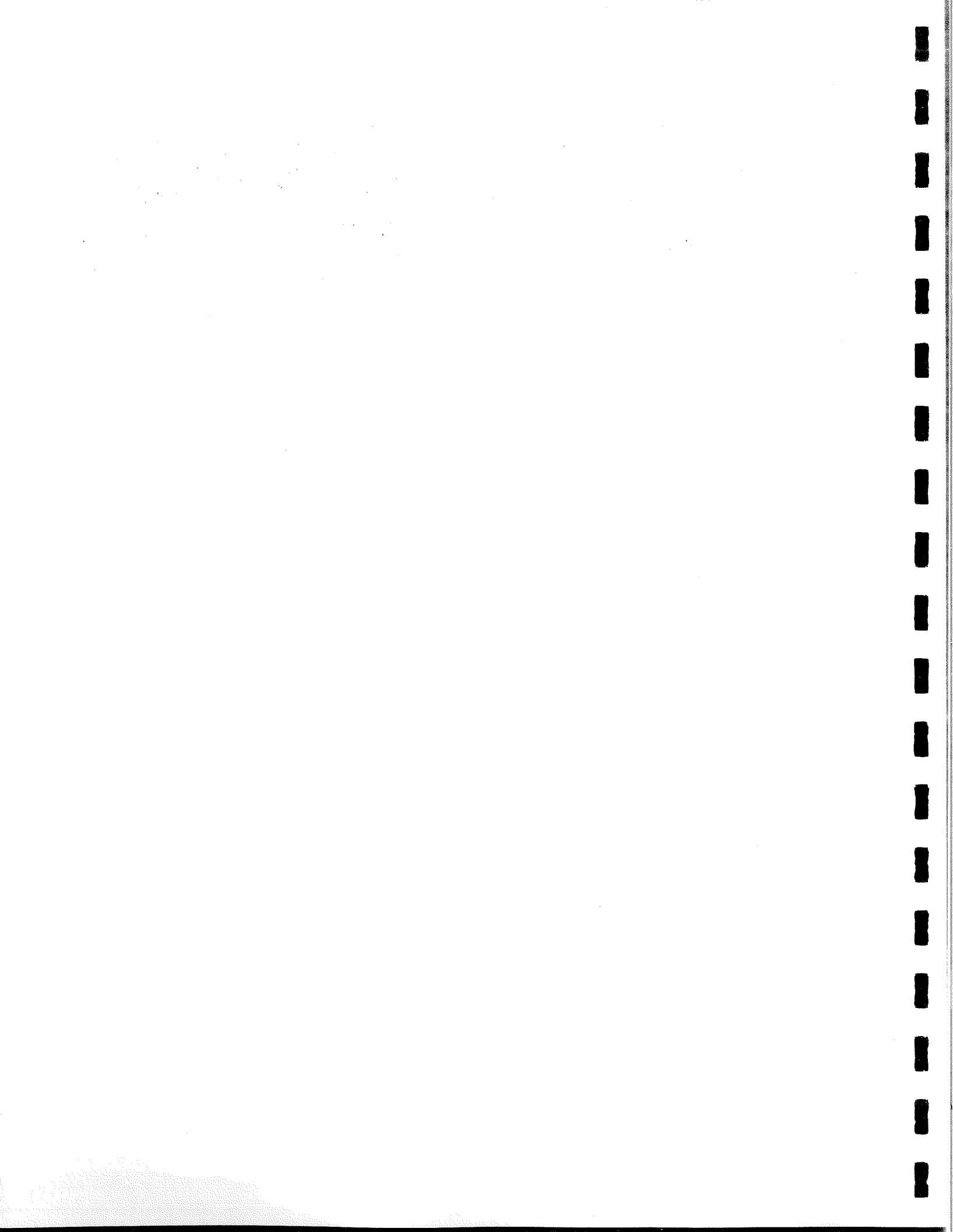
NEW ENGLAND SEAMOUNTS 1987

STATION NO. 338

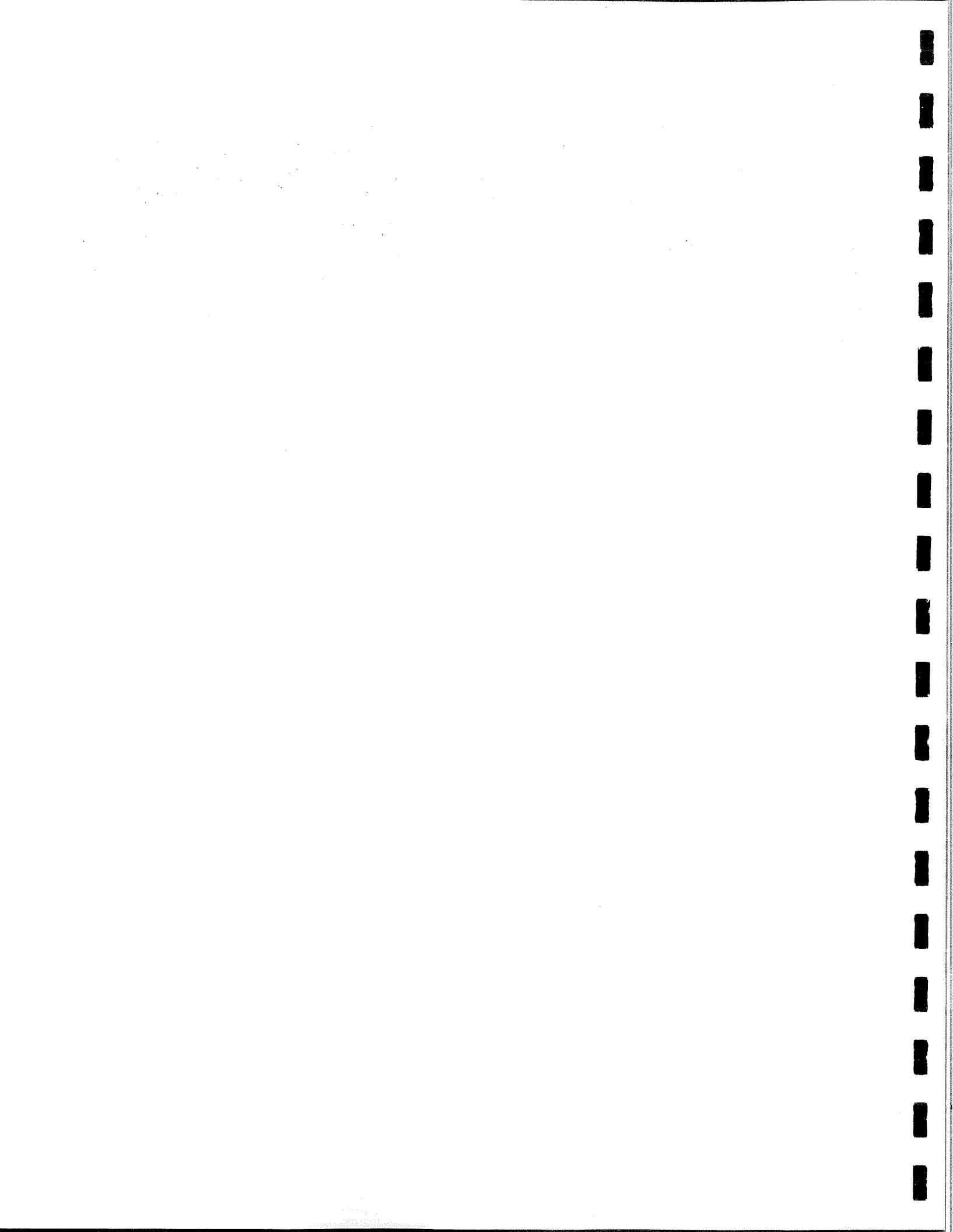
LAT  $34^{\circ}22.00' N$ LONG  $57^{\circ}10.40' W$ 

DATE 04/07/87

Z	CHL	NO3	SIO3	PO4
1	.10	.04	.63	.03
5	.09	.04	.49	.07
10	.09	.03	.64	.10
15	.10	.03	.38	.02
20	.10	.03	.58	.02
25	.11	.03	.52	.04
30	.11	.04	.43	.17
35	.14	.04	.80	.06
40	.18	.04	.02	.02
45	.20	.04	.78	.00
50	.24	.04	.85	.02
55	.27	.04	.07	.04
60	.31	.04	.99	.00
65	.68	.04	.92	.06
70	.81	.04	.96	.10
75	.79	.06	.92	.06
80	.79	.06	.13	.07
85	.70	.81	.87	.15
90	.51	.41	.92	.13
95	.49	.62	.11	.10
100	.40	.02	.15	.10
105	.05	.03	.07	.11
110	.23	.22	.26	.13

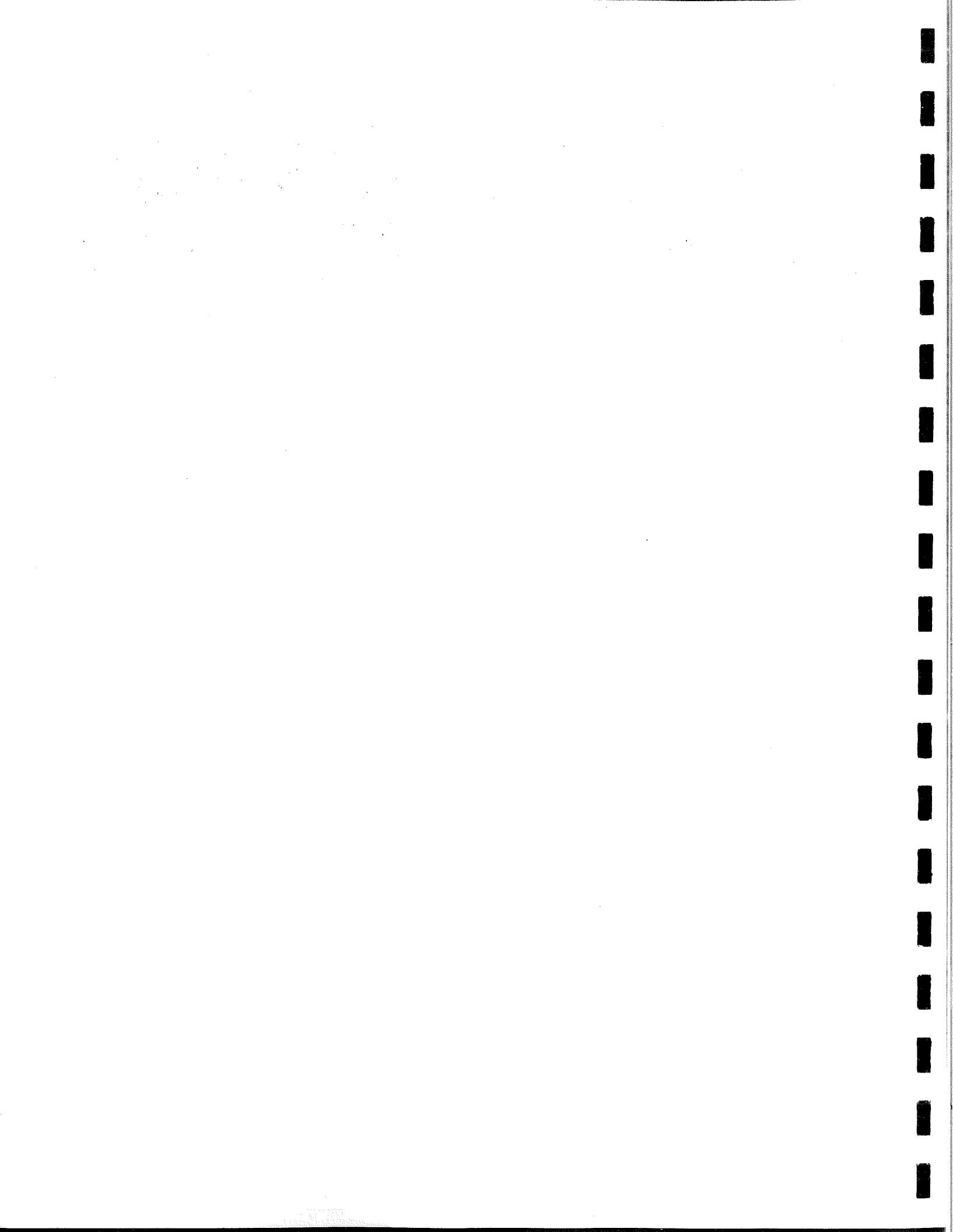


## *IN SITU PROFILES*



**UNITS**

Z	=	depth in meters
P	=	primary production mg C m <sup>-3</sup> h <sup>-1</sup>
NO <sub>3</sub>	=	nitrate concentration mg at m <sup>-3</sup>
SiO <sub>3</sub>	=	silicate concentration mg at m <sup>-3</sup>
PO <sub>4</sub>	=	phosphate concentration mg at m <sup>-3</sup>
Chl	=	chlorophyll concentration mg m <sup>-3</sup>
POC	=	particulate organic carbon mg m <sup>-3</sup>
PON	=	particulate organic nitrogen mg m <sup>-3</sup>



NEW ENGLAND SEAMOUNTS 1987

STATION NO.: 6

LAT 36°55'.90' N LONG 58°53'.90' W DATE 15/06/87

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THE JOURNAL OF CLIMATE

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NEW ENGLAND SEAMOUNTS 1987

STATION NO. 33

LAT 34°34.80' N LONG 56°52.90' W

DATE 18/06/87

Z	P	N03	S103	PO4	CHL	POC	PON
5	.003	.00	.64	.04	.09	137	10
20	.001	.00	.80	.06	.09	126	11
40	.018	.00	.80	.05	.12	130	12
60	.000	.00	.64	.03	.22	113	11
70	.005	.00	.80	.03	.38	130	12
80	.020	.10	1.10	.11	.44	148	15
90	.004	.80	1.09	.10	.44	80	10
100	.005	1.68	1.23	.13	.20	77	7
110	.024	1.86	1.22	.15	.15	180	14
130	.109	1.86	1.36	.14	.02	92	11
150	.060	1.87	1.35	.14	.01	96	9

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 64

LAT 34°33.00' N

LONG 56°51.10' W

DATE 19/06/87

Z	P	N03	S103	PO4	CHL	POC	PON
5	.211	.00	.74	.04	.13	.122	10
20	.018	.00	.76	.15	.13	.97	10
40	.107	.00	.63	.08	.28	.140	13
60	.014	.00	.66	.05	.39	.113	12
70	.007	.00	.84	.05	.61	.122	14
80	.035	.00	.86	.06	.59	.100	12
90	.019	1.60	1.21	.17	.24	.65	8
100	.004	1.59	1.38	.19	.07	.92	13
110	.000	2.34	1.51	.24	.06	.96	9
130	.002	2.31	1.43	.17	.03	.77	7
150	.003	2.52	1.49	.20	.01	.68	4

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 111

LAT  $34^{\circ}49.40' N$ LONG  $56^{\circ}36.60' W$ 

DATE 21/06/87

Z	P	N03	S103	PO4	CHL	POC	PON
5	.078	.14	.40	.06	.13	.95	.12
20	.097	.17	.55	.08	.12	129	.12
40	.025	.00	.00	.05	.16	105	.10
60	.069	.23	.00	.06	.73	117	.12
70	.002	1.55	.09	.14	.49	103	.11
80	.005	1.71	.09	.14	.43	72	.2
90	.003	1.87	.24	.16	.36	66	.10
100	.004	2.29	.24	.15	.25	62	.8
110	.005	2.32	.40	.17	.17	74	.8
130	.004	2.61	.55	.18	.07	80	.8
150	.004	2.51	.70	.21	.03	59	.8

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 140

LAT  $34^{\circ}41.20' N$

LONG  $54^{\circ}14.20' W$

DATE 23/06/87

Z	P	N03	S103	PO4	CHL	POC	PON
5	.009	.02	.35	.05	.10	.106	.12
20	.136	.01	.33	.10	.11	.110	.9
40	.012	.00	.45	.02	.25	.105	.12
60	.004	.00	.58	.02	.44	.109	.16
70	.084	.23	.70	.05	.77	.98	.23
80	.045	1.81	.83	.08	.45	.74	8
90	.009	2.45	.95	.18	.43	.77	10
100	.000	2.44	.93	.18	.28	.85	15
110	.003	2.29	.91	.19	.21	.68	13
130	.002	2.41	.89	.20	.09	.63	17
150	.001	2.39	.87	.25	.03	.63	9

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 160

LAT 34°39.50' N

LONG 54°13.70' W

DATE 24/06/87

Z	P	N03	S103	PO4	CHL	POC	PON
5	.138	.16	.29	.18	.10	.91	2
20	.117	.15	.26	.10	.10	105	7
40	.038	.14	.24	.10	.15	101	10
60	.001	.12	.37	.11	.32	114	14
70	.050	.41	.51	.11	.85	115	14
80	.023	1.76	.64	.11	.67	113	14
90	.003	2.65	.78	.17	.39	89	8
100	.002	2.79	.92	.16	.24	68	5
110	.001	2.77	.73	.17	.21	66	4
130	.001	2.91	.86	.20	.12	57	8
150	.002	2.90	.84	.26	.06	56	5

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 231

LAT 34°34.00' N

LONG 50°55.80' W

DATE 28/06/87

Z	P	NO3	S1O3	PO4	CHL	POC	PON
5	.018	.00	.11	.07	.09	111	15
20	.008	.00	.12	.10	.11	88	18
40	.095	.00	.29	.09	.19	135	20
60	.009	.00	.45	.09	.30	112	16
70	.029	.00	.82	.09	.42	132	24
80	.020	.09	.92	.09	.55	131	21
90	.024	.76	1.30	.14	.66	136	25
100	.004	.93	1.32	.14	.48	126	29
110	.007	1.77	1.45	.15	.39	102	20
130	.004	2.94	1.68	.20	.25	74	10
150	.004	3.28	1.81	.24	.15	77	14

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 253

LAT 34°35.90' N

LONG 50°59.10' W

DATE 29/06/87

Z	P	NO3	SIO3	PO4	CHL	POC	PON
5	.075	.02	.69	.06	.10	.78	-
20	.048	.02	.71	.06	.09	.88	-
40	.022	.02	.72	.06	.15	.109	17
60	.042	.03	.74	.18	.24	.101	12
70	.032	.03	.75	.07	.31	.106	14
80	.021	.03	.62	.04	.41	.94	10
90	.032	.02	.78	.04	.48	.100	7
100	.007	.28	.95	.07	.56	.94	15
110	.014	1.56	1.26	.13	.44	.94	13
130	.007	3.60	1.58	.19	.22	.67	9
150	.009	3.86	1.44	.21	.06	.56	7

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 302

LAT 31°58.60' N

LONG 55°38.40' W

DATE 02/07/87

Z	P	NO3	SIO3	PO4	CHL	POC	PON
5	.015	.07	.79	.17	.05	97	12
20	.040	.07	1.06	.16	.05	104	19
40	.014	.07	1.26	.09	.09	86	11
60	.045	.07	1.54	.12	.12	107	17
70	.024	.07	1.44	.12	.17	106	17
80	.028	.07	1.33	.11	.22	98	14
90	.012	.07	1.23	.11	.26	86	15
100	.015	.07	1.11	.11	.26	90	15
110	.012	.37	1.13	.11	.38	86	14
130	.006	1.27	1.13	.13	.27	70	18
150	.005	2.32	1.35	.16	.13	92	14

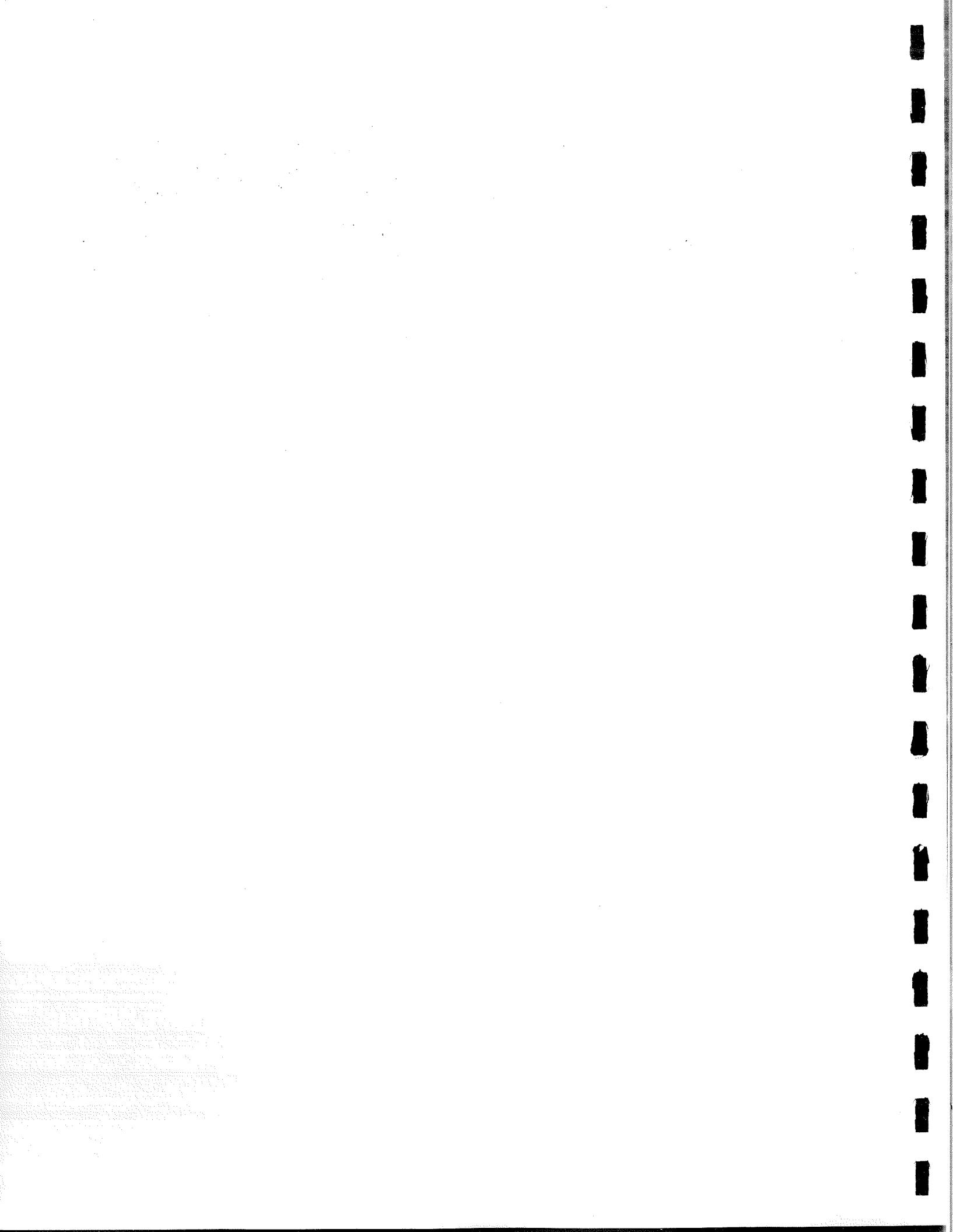
NEW ENGLAND SEAMOUNTS 1987

STATION NO. 327

LAT 31°57'.60' N                    LONG 55°37.50' W                    DATE 03/07/87

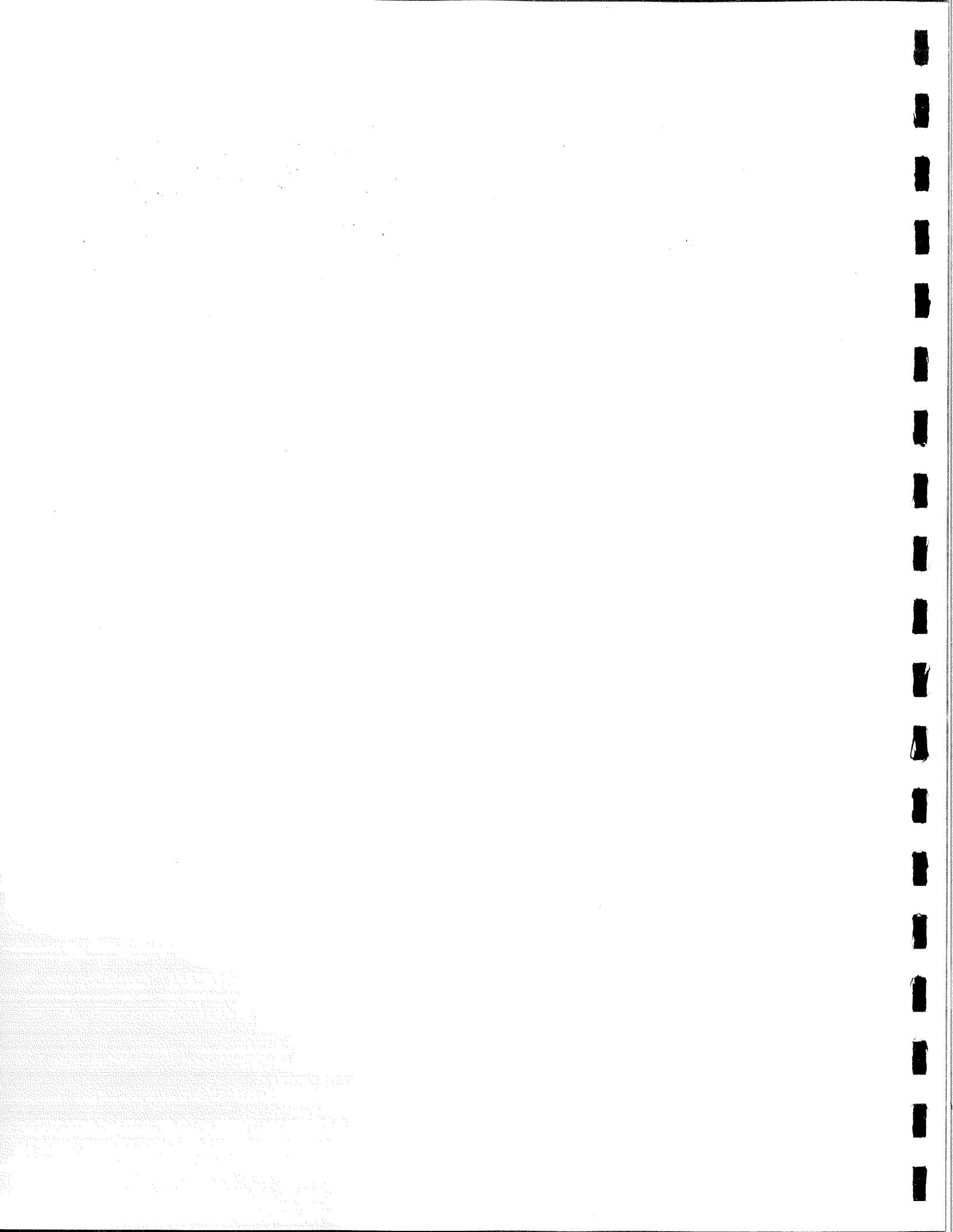
Z	P	NO3	S103	PO4	CHL	POC	PON
5	.022	.00	.61	.14	.05	.82	9
20	.065	.00	.62	.11	.06	.88	6
40	.080	.00	.63	.10	.08	.83	8
60	.031	.00	.63	.11	.13	113	22
70	.020	.00	.50	.06	.18	81	12
80	.021	.00	.51	.15	.19	90	24
90	.041	.00	.52	.09	.24	86	14
100	.020	.00	.53	.09	.34	96	12
110	.004	.33	.53	.11	.45	83	12
130	.003	1.68	.69	.15	.25	73	17
150	.003	2.17	1.57	.26	.14	64	9

## CTD STATIONS



**UNITS**

Z	=	depth in meters
Chl	=	chlorophyll concentration mg m <sup>-3</sup>
NO <sub>3</sub>	=	nitrate concentration mg at m <sup>-3</sup>
SiO <sub>3</sub>	=	silicate concentration mg at m <sup>-3</sup>
PO <sub>4</sub>	=	phosphate concentration mg at m <sup>-3</sup>



## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 3 LAT  $43^{\circ}42.70' N$  LONG  $62^{\circ}59.80' W$  DATE 12/06/87

Z	CHL	NO3	SIO3	PO4
0	-	1.78	.29	.48
20	-	1.18	.40	.27
40	-	.73	.40	.28
60	-	2.87	2.00	.67
80	-	6.03	2.31	.77
100	-	9.37	4.74	.73
120	-	11.56	5.89	1.09
150	-	12.99	6.58	.99
200	-	17.38	9.79	1.43
300	-	20.96	14.47	1.60
400	-	19.91	13.89	1.54

STATION NO. 4 LAT  $39^{\circ}12.40' N$  LONG  $64^{\circ}48.70' W$  DATE 13/06/87

Z	CHL	NO3	SIO3	PO4
2	.18	.17	.28	.16
20	-	.18	.52	.19
40	.44	1.01	.79	.48
60	.15	2.52	.95	.25
80	-	4.46	.95	.62
100	-	6.77	2.99	.43
130	.12	6.11	2.41	.58
150	-	10.87	4.59	.75
200	-	12.89	5.25	.91
300	-	18.56	9.21	1.33
400	-	22.34	13.66	1.67

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 5 LAT  $37^{\circ}30.60' N$  LONG  $59^{\circ}50.00' W$  DATE 14/06/87

Z	CHL	NO3	SIO3	PO4
0	-	.28	.16	.00
20	-	.44	.00	.02
40	-	.26	.18	.00
60	-	.27	.21	.01
80	-	.27	.21	.00
100	-	1.34	.68	.16
130	-	1.96	.82	.06
150	-	1.76	.67	.09
200	-	2.30	.92	.12
300	-	3.38	1.27	.16
400	-	3.34	1.13	.17

STATION NO. 6 LAT  $36^{\circ}54.30' N$  LONG  $58^{\circ}53.80' W$  DATE 14/06/87

Z	CHL	NO3	SIO3	PO4
40	.11	-	1.59	.00
120	.12	1.66	-	
150	.04	3.07	2.49	.13
250	.01	2.86	2.86	.07
300	.02	3.72	3.26	.15
400	.01	4.23	2.46	.14

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 7 LAT  $36^{\circ}54.80' N$  LONG  $58^{\circ}55.10' W$  DATE 15/06/87

Z	CHL	N03	S1O3	PO4
0	.08	.44	1.52	.00
10	.08	.20	1.45	.03
30	.09	.21	1.98	.02
50	.19	.22	1.99	.07
70	.39	.36	2.37	.06
80	.75	.87	2.00	.06
90	.36	2.21	2.75	.15
120	.08	1.95	1.85	.04
400	-	4.31	2.91	.28

STATION NO. 8 LAT  $36^{\circ}55.60' N$  LONG  $58^{\circ}53.80' W$  DATE 15/06/87

Z	CHL	N03	S1O3	PO4
20	.10	.79	1.71	.11
40	.18	.42	2.00	.00
60	.33	.51	2.63	.08
90	.61	1.90	2.67	.13
100	.29	2.47	2.41	.14
120	.16	2.15	2.24	.08
140	.10	2.29	2.30	.13
160	.07	2.59	2.45	.14
400	-	4.11	2.97	.16

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 9 LAT  $36^{\circ}55.60' N$  LONG  $58^{\circ}53.80' W$  DATE 15/06/87

Z	CHL	NO3	SIO3	PO4
10	.09	.21	1.61	.06
20	.11	.22	1.68	.10
40	.13	.23	1.68	.13
60	.41	.36	1.97	.03
80	.76	1.13	2.57	.00
100	.25	2.15	2.12	.00
120	.09	2.41	2.57	.03
150	.05	3.05	3.14	.27
400	-	3.61	2.81	.22

STATION NO. 10 LAT  $36^{\circ}55.60' N$  LONG  $58^{\circ}53.80' W$  DATE 15/06/87

Z	CHL	NO3	SIO3	PO4
5	.11	.27	2.33	.00
20	.09	.27	2.12	.05
50	.19	.27	1.64	.16
80	.60	.14	3.13	.03
100	.72	.89	1.13	.08
120	.21	2.03	1.41	.10
140	.09	1.71	.92	.00
200	.02	2.91	1.34	.16
400	-	3.60	2.59	.11

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 11 LAT  $33^{\circ}54.80' N$  LONG  $57^{\circ}46.40' W$  DATE 16/06/87

Z	CHL	NO3	SIO3	PO4
20	.11	.06	.27	.06
30	.16	.10	.40	.08
60	.47	.07	.50	.05
90	.35	1.59	.79	.10
120	.02	1.80	.83	.09
150	.01	2.01	.87	.11
200	.01	1.95	.93	.10
300	.01	2.46	.93	.14
400	.01	3.72	1.37	.22

STATION NO. 12 LAT  $34^{\circ}01.90' N$  LONG  $57^{\circ}36.20' W$  DATE 16/06/87

Z	CHL	NO3	SIO3	PO4
0	.10	.00	.51	.06
20	.11	.00	.51	.04
30	.19	.00	.58	.06
60	1.13	.23	.85	.06
90	.18	2.19	.95	.12
120	.05	2.33	1.10	.13
150	.03	2.50	1.14	.15
200	.01	2.55	1.34	.18
300	.01	2.80	1.44	.21
400	.01	3.96	1.74	.27

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 13 LAT 34°08.00' N LONG 57°28.70' W DATE 16/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.02	.43	.06
20	.08	.02	.72	.33
30	-	.02	.46	.09
60	.70	.04	.74	.08
90	.18	.20	.95	.11
120	.04	.23	1.11	.16
150	.01	.270	1.45	.18
200	.01	.264	1.28	.18
300	.00	.273	1.39	.21
400	.01	.556	2.23	.44

STATION NO. 14 LAT 34°08.00' N LONG 57°28.70' W DATE 16/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.13	.63	.09
20	.09	.10	.52	.02
30	.09	.11	.65	.04
60	.42	.11	.85	.04
90	.35	1.91	.95	.09
120	.11	2.59	1.40	.26
150	.04	2.47	1.33	.21
200	.01	2.67	1.38	.14
300	.00	3.47	1.66	.22
400	.00	6.55	2.66	.36

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 15 LAT  $34^{\circ}08.00' N$  LONG  $57^{\circ}28.70' W$  DATE 16/06/87

Z	CHL	NO3	SIO3	PO4
0	.10	.08	.23	.05
20	.12	.07	.26	.03
30	.16	.07	.30	.10
60	.29	.07	.51	.12
80	.68	.72	.95	.09
120	.10	.48	.39	.13
150	.04	.43	.32	.13
200	.01	.46	.37	.15
300	.01	.52	.62	.21
400	.01	.62	.70	.41

STATION NO. 16 LAT  $34^{\circ}08.00' N$  LONG  $57^{\circ}28.70' W$  DATE 16/06/87

Z	CHL	NO3	SIO3	PO4
0	.08	.07	.55	.12
20	.09	.07	.58	.07
30	.10	.07	.46	.07
60	.54	.07	.66	.10
70	.36	.12	.95	.09
100	.11	.61	1.21	.11
120	.04	.66	1.26	.18
200	.01	.90	1.43	.21
300	.01	.49	1.46	.23
400	.01	.61	2.32	.38

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 17 LAT  $34^{\circ}25.70'$  N LONG  $57^{\circ}05.00'$  W DATE 16/06/87

Z	CHL	NO3	SIO3	PO4
0	.07	.06	.65	.04
20	.09	.06	.68	.00
30	.11	.06	.70	.00
60	.34	.06	.73	.05
80	.46	.34	.79	.07
120	.06	2.73	1.24	.16
150	.02	2.87	1.12	.12
200	.01	3.15	1.29	.16
300	.01	4.03	1.63	.19
400	.00	6.68	2.47	.36

STATION NO. 18 LAT  $34^{\circ}25.70'$  N LONG  $57^{\circ}05.00'$  W DATE 16/06/87

Z	CHL	NO3	SIO3	PO4
0	.06	.06	.37	.07
20	.07	.06	.58	.10
30	.09	.06	.46	.03
60	.26	.06	.66	.06
80	.43	.31	.79	.07
120	.12	3.25	1.59	.20
150	.01	2.93	1.37	.15
200	.00	3.02	1.39	.15
300	.00	4.51	1.91	.24
400	.00	7.51	3.14	.25

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 19 LAT 34°32.60' N LONG 56°57.00' W DATE 17/06/87

Z	CHL	NO3	SIO3	PO4
0	.06	.00	.61	.10
20	.11	.00	.58	.00
30	.11	.00	.38	.00
60	.31	.03	.40	.00
80	.61	.32	.62	.07
120	.04	2.55	1.26	.10
150	.01	2.54	1.29	.09
200	.01	3.02	1.45	.12
300	.00	5.25	1.98	.29
400	.00	8.55	3.70	.55

STATION NO. 20 LAT 34°32.60' N LONG 56°57.00' W DATE 17/06/87

Z	CHL	NO3	SIO3	PO4
0	.08	.00	.38	.00
20	.11	.00	.45	.00
30	.12	.00	.78	.04
60	.39	.01	.53	.07
80	.36	.62	.79	.06
120	.09	3.25	1.33	.16
150	.03	3.03	1.14	.15
200	.01	3.37	1.49	.15
300	.00	4.97	2.09	.21
400	.01	8.53	3.37	.50

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 21 LAT  $34^{\circ}39.70' N$  LONG  $56^{\circ}47.80' W$  DATE 17/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.03	.47	.00
20	.13	.00	.60	.00
30	.16	.03	.48	.00
60	.52	.03	.48	.01
80	.56	.37	.95	.07
120	.11	.60	1.06	.09
150	.06	.60	1.03	.10
200	.01	—	—	—
300	.01	—	—	—
400	.01	—	—	—

STATION NO. 22 LAT  $34^{\circ}42.70' N$  LONG  $56^{\circ}43.70' W$  DATE 17/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.08	.93	.01
20	.13	.05	.60	.00
30	.16	.05	.58	.00
60	.37	.04	.63	.00
80	.81	.35	1.28	.07
120	.12	.33	1.50	.14
150	.04	.92	1.30	.10
200	.01	.26	1.48	.13
300	.01	.84	2.06	.23
400	.00	.85	3.28	.47

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 23 LAT  $34^{\circ}43.30' N$  LONG  $56^{\circ}39.90' W$  DATE 17/06/87

Z	CHL	NO3	SIO3	PO4
0	.10	.02	.88	.01
20	.10	.03	.57	.00
30	.13	.03	.60	.00
60	.26	.03	.65	.00
80	.56	.07	.60	.07
120	.16	2.93	1.28	.11
150	.05	3.02	1.24	.08
200	.02	3.17	1.34	.11
300	.00	4.53	2.17	.23
400	.00	8.84	3.87	.58

STATION NO. 24 LAT  $34^{\circ}49.40' N$  LONG  $56^{\circ}35.50' W$  DATE 17/06/87

Z	CHL	NO3	SIO3	PO4
20	.10	.03	.34	.00
30	.12	.03	.67	.00
60	.33	.03	.71	.00
80	.78	.23	.76	.03
120	.26	2.33	1.37	.09
150	.08	2.68	1.28	.06
200	.01	3.18	1.45	.11
300	.00	4.37	1.79	.17
400	.01	7.84	3.15	.40

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 25 LAT 34°52.80' N LONG 56°30.40' W DATE 17/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.04	.75	.05
20	.11	.04	.37	.00
30	.12	.04	.37	.00
60	.29	.07	.57	.02
80	.44	.09	.58	.04
120	.24	.12	1.04	.08
150	.05	.25	1.29	.14
200	.01	.28	1.50	.16
300	.01	.05	1.95	.22
400	.01	.82	3.63	.51

STATION NO. 26 LAT 34°56.20' N LONG 56°26.50' W DATE 17/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.02	.65	.00
20	.11	.03	.46	.00
30	.12	.03	.66	.00
60	.39	.07	.39	.00
80	.46	.99	.90	.05
120	.12	.83	1.32	.12
150	.04	.82	1.11	.11
200	.01	.30	1.46	.15
300	.00	.67	2.47	.31
400	.00	-	-	-

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 27 LAT  $35^{\circ}03.10'$  N LONG  $56^{\circ}17.70'$  W DATE 17/06/87

Z	CHL	NO3	SIO3	PO4
0	.10	.00	.39	.00
20	.11	.00	.41	.00
30	.15	.00	.46	.00
60	.62	.57	.77	.00
80	.17	.63	1.05	.12
120	.01	2.48	1.26	.04
150	.00	2.57	1.35	.13
200	.00	3.25	1.34	.12
300	.00	4.81	1.87	.21
400	.00	6.44	2.63	.36

STATION NO. 28 LAT  $35^{\circ}03.10'$  N LONG  $56^{\circ}17.70'$  W DATE 17/06/87

Z	CHL	NO3	SIO3	PO4
0	.08	.00	.51	.00
20	.10	.00	.65	.00
30	.19	.00	.61	.00
60	.44	.05	.76	.00
80	.31	2.20	1.03	.09
120	.02	2.50	1.11	.08
150	.01	2.46	1.13	.11
200	.00	2.63	1.44	.20
300	.00	3.64	1.58	.27
400	.00	6.40	2.36	.47

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 29 LAT  $35^{\circ}03.10' N$  LONG  $56^{\circ}17.70' W$  DATE 17/06/87

Z	CHL	NO3	SIO3	PO4
0	.08	.00	.65	.00
20	.10	.00	.58	.00
30	.15	.00	.65	.00
60	.46	.02	.81	.00
80	.26	.07	1.02	.10
120	.02	.280	1.29	.09
150	.03	.251	1.08	.08
200	.01	.279	1.41	.09
300	.00	.428	1.79	.18
400	.00	.787	3.04	.44

STATION NO. 30 LAT  $35^{\circ}24.10' N$  LONG  $55^{\circ}50.70' W$  DATE 17/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.00	.75	.00
20	.11	.01	.58	.00
30	.15	.01	.62	.00
60	.57	.04	.78	.01
80	.34	.93	1.01	.09
120	.04	.88	1.03	.11
150	.03	.49	1.34	.16
200	.01	.84	1.51	.18
300	.00	.16	1.50	.14
400	.00	.70	2.44	.28

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 31 LAT  $34^{\circ}35.40' N$  LONG  $56^{\circ}53.30' W$  DATE 18/06/87

Z	CHL	NO3	SIO3	PO4
0	-	.27	.84	.11
20	-	.42	.69	.25
200	-	3.92	1.69	.38
300	-	5.29	2.37	.48
400	-	5.06	2.30	.36

STATION NO. 32 LAT  $34^{\circ}35.40' N$  LONG  $56^{\circ}53.20' W$  DATE 18/06/87

Z	CHL	NO3	SIO3	PO4
0	.13	.09	.60	.06
20	.13	.31	.67	.10
30	.15	.33	.84	.05
60	.38	.22	.69	.11
90	.50	1.93	1.20	.20
120	.14	2.66	1.22	.19
150	.06	3.04	.90	.24
200	.01	2.99	.91	.26
300	.02	4.78	1.67	.31
400	.04	8.76	3.50	.77

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 32 LAT  $34^{\circ}34.80' N$  LONG  $56^{\circ}52.90' W$  DATE 18/06/87

Z	CHL	NO3	SIO3	PO4
0	.11	.56	.95	.15
20	.12	.76	.64	.15
30	.13	.65	.82	.23
60	.41	.36	.74	.27
80	.59	1.18	1.09	.14
120	.06	3.00	1.26	.09
150	.02	2.49	.95	.07
200	-	3.80	1.87	.34
300	.01	4.46	1.56	.30
400	.02	8.12	3.13	.69

STATION NO. 43 LAT  $34^{\circ}33.70' N$  LONG  $56^{\circ}54.30' W$  DATE 18/06/87

Z	CHL	NO3	SIO3	PO4
0	.15	.10	.72	.23
20	.18	.10	.77	.11
30	.47	.10	.46	.04
60	.58	1.27	.83	.09
90	.57	1.60	1.19	.13
120	.16	3.60	1.90	.43
150	.04	2.26	.95	.05
200	.02	2.85	1.64	.30
300	.02	4.76	2.02	.35
400	.05	6.10	2.45	.27

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 49 LAT  $34^{\circ}32.90' N$  LONG  $56^{\circ}48.30' W$  DATE 18/06/87

Z	CHL	NO3	SIO3	PO4
0	.15	.10	.86	.09
30	.28	.43	.88	.15
60	.24	.10	.72	.14
80	.49	.10	.07	.14
100	.85	.43	.08	.03
120	.34	.60	.09	.01
150	.16	.77	.44	.04
200	.04	.44	.61	.06
300	.02	.44	.96	.14
400	.02	.11	.80	.94

STATION NO. 54 LAT  $34^{\circ}34.80' N$  LONG  $56^{\circ}52.80' W$  DATE 18/06/87

Z	CHL	NO3	SIO3	PO4
0	.15	.17	.14	.22
30	.18	.17	.01	.22
60	.32	.31	.88	.22
80	.56	.05	.90	.18
90	.46	.71	.93	.14
120	.20	.54	.52	.22
150	-	3.81	2.18	.28
200	.03	4.27	1.70	.14
300	.01	5.06	2.03	.15
400	.03	7.84	3.20	.46

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 60 LAT  $34^{\circ}35.00' N$  LONG  $56^{\circ}52.30' W$  DATE 19/06/87

Z	CHL	NO3	SIO3	PO4
0	.13	.29	.65	.11
20	.12	.31	.51	.10
60	.36	.32	.68	.13
80	.50	.92	.30	.18
100	.21	.43	.69	.21
120	.09	.74	.46	.28
150	.02	.19	.77	.19
200	.01	.18	.77	.24
300	.02	.75	.07	.54
400	.02	.38	.02	.63

STATION NO. 65 LAT  $34^{\circ}32.50' N$  LONG  $56^{\circ}51.80' W$  DATE 19/06/87

Z	CHL	NO3	SIO3	PO4
0	-	.07	.00	.20
20	-	.07	.29	.21
30	-	.08	.86	.16
60	-	.23	.02	.15
85	-	.82	.57	.29
120	-	.86	.57	.46
150	-	.14	.97	.26
200	-	.82	.75	.29
300	-	.78	.06	.46
400	-	.17	.38	.68

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 75 LAT  $34^{\circ}34.90' N$  LONG  $56^{\circ}52.90' W$  DATE 19/06/87

Z	CHL	NO3	SIO3	PO4
0	.13	.00	.80	.06
20	.12	.00	.82	.06
30	.16	.00	.70	.05
60	.22	.00	.72	.00
90	.62	.00	.90	.11
120	.22	1.54	1.23	.26
150	.09	2.24	1.27	.21
200	.02	2.64	1.44	.24
300	.05	4.33	2.08	.38
400	.05	7.94	3.34	.72

STATION NO. 81 LAT  $34^{\circ}33.40' N$  LONG  $56^{\circ}54.20' W$  DATE 19/06/87

Z	CHL	NO3	SIO3	PO4
0	.10	.00	.80	.05
20	.12	.00	.64	.03
30	.15	.00	.64	.06
60	.27	.00	.64	.03
90	.49	.14	1.28	.09
120	.02	1.89	1.30	.22
150	.06	2.07	1.32	.21
200	.02	2.59	1.66	.23
300	.01	4.57	2.31	.44
400	.01	8.19	3.69	.68

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 86 LAT  $34^{\circ}32.60' N$  LONG  $56^{\circ}53.50' W$  DATE 19/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.00	.58	.07
20	.10	.00	.48	.03
30	.16	.00	.67	.11
60	.30	.00	.81	.07
90	.67	.00	1.12	.08
120	.23	.72	1.43	.22
150	.08	2.07	1.64	.26
200	.02	2.41	1.43	.28
300	.02	4.51	2.21	.50
400	.03	7.95	3.61	.70

STATION NO. 94 LAT  $34^{\circ}34.80' N$  LONG  $56^{\circ}52.60' W$  DATE 19/06/87

Z	CHL	NO3	SIO3	PO4
0	.10	.09	.49	.06
20	.15	.09	.65	.07
30	.16	.09	.48	.07
60	.24	.09	.48	.04
90	.74	.59	.81	.04
120	.24	2.43	1.14	.07
150	.13	2.43	1.14	.08
200	.04	2.93	1.31	.06
300	.01	4.26	1.71	.09
400	.00	5.93	2.39	.21

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 98 LAT  $34^{\circ}32.00' N$  LONG  $56^{\circ}53.10' W$  DATE 20/06/87

Z	CHL	NO3	SIO3	PO4
0	.11	.00	.15	.02
20	.14	.00	.13	.05
30	.16	.00	.12	.02
60	.28	.00	.10	.04
90	.42	.87	.42	.10
120	.20	.04	.57	.14
150	.09	.70	.72	.19
200	.02	.03	.03	.25
300	.01	.92	.74	.47
400	.00	.37	.10	.74

STATION NO. 105 LAT  $34^{\circ}49.60' N$  LONG  $56^{\circ}35.60' W$  DATE 20/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	—	—	—
20	.09	—	—	—
30	.12	—	—	—
60	.55	—	—	—
120	.11	—	—	—
150	.02	—	—	—
200	.01	—	—	—
300	.01	—	—	—
400	.01	—	—	—

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 113 LAT  $34^{\circ}48.00'$  N LONG  $56^{\circ}34.70'$  W DATE 21/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	-	-	-
20	.10	-	-	-
30	.13	-	-	-
70	.44	-	-	-
90	.37	-	-	-
120	.02	-	-	-
150	.01	-	-	-
200	.01	-	-	-
300	.01	-	-	-
400	.01	-	-	-

STATION NO. 120 LAT  $34^{\circ}39.60'$  N LONG  $54^{\circ}13.10'$  W DATE 22/06/87

Z	CHL	NO3	SIO3	PO4
0	.11	.23	.43	.00
20	.12	.21	.23	.00
30	.13	.19	.17	.00
60	.62	.17	.42	.01
90	.21	.29	.81	.08
120	.06	.65	.89	.04
150	.03	.76	.98	.06
200	.00	.86	.93	.05
300	.02	.86	1.48	.22
400	.02	.63	3.03	.49

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 125 LAT  $34^{\circ}41.10' N$  LONG  $54^{\circ}12.60' W$  DATE 22/06/87

Z	CHL	NO3	SIO3	PO4
0	.08	.13	.56	.00
20	.11	.13	.44	.00
30	.13	.13	.35	.00
60	.30	.13	.52	.00
80	.77	.89	.85	.00
120	.08	2.61	1.18	.03
150	.03	2.78	1.20	.06
200	.02	3.08	1.38	.08
300	.02	4.97	1.86	.21
400	.05	8.75	3.24	.46

STATION NO. 129 LAT  $34^{\circ}39.90' N$  LONG  $54^{\circ}14.70' W$  DATE 22/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.00	.46	.05
20	.10	-.00	-.45	-.05
30	.18	.00	.44	.07
60	.32	.00	.73	.07
80	.88	.79	1.73	.17
120	.10	2.38	1.02	.19
150	.03	2.65	1.16	.21
200	.02	2.91	1.29	.33
300	.05	5.17	1.73	.58
400	.03	8.84	3.22	

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 136 LAT  $34^{\circ}41.30'$  N LONG  $54^{\circ}13.10'$  W DATE 23/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.05	.70	.04
20	.08	.04	.57	.03
30	.09	.03	.60	.05
60	.32	.02	.77	.06
80	.35	1.73	1.38	.15
120	.07	2.39	1.25	.17
150	.06	2.39	1.24	.18
200	.02	2.78	1.38	.20
300	.02	3.67	1.52	.26
400	.03	7.34	2.69	.49

STATION NO. 142 LAT  $34^{\circ}40.00'$  N LONG  $54^{\circ}13.60'$  W DATE 23/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.13	.46	.04
20	.10	.13	.48	.05
30	.17	.12	.50	.05
60	.31	.12	.54	.04
80	.70	1.30	1.01	.07
120	.17	2.49	1.32	.16
150	.06	2.61	1.42	.18
200	.02	2.60	1.22	.18
300	.05	3.92	1.69	.26
400	.03	8.11	3.14	.55

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 148 LAT  $34^{\circ}39.80' N$  LONG  $54^{\circ}14.50' W$  DATE 23/06/87

Z	CHL	NO3	SIO3	PO4
0	-	.15	.52	.10
20	-	.15	.40	.03
40	-	.14	.42	.04
60	-	.14	.59	.04
80	-	.47	.91	.10
120	.06	2.66	1.08	.17
150	.03	2.66	1.10	.16
200	.01	2.79	1.13	.18
300	.05	4.25	1.59	.27
400	.04	7.70	2.85	.51

STATION NO. 151 LAT  $34^{\circ}40.60' N$  LONG  $54^{\circ}07.50' W$  DATE 23/06/87

Z	CHL	NO3	SIO3	PO4
0	-	.15	.40	.04
20	-	.15	.41	.04
30	-	.15	.28	.04
60	-	.15	.44	.05
90	-	.55	.74	.05
120	-	2.41	.90	.17
150	-	2.67	.92	.17
200	-	2.67	1.08	.17
300	-	4.27	1.53	.28
400	-	8.21	3.02	.54

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 152 LAT  $34^{\circ}40.60'$  N LONG  $57^{\circ}07.50'$  W DATE 23/06/87

Z	CHL	NO3	SIO3	PO4
0	-	.00	.39	.02
100	-	1.66	.89	.08
200	-	2.91	1.24	.15
300	-	4.64	1.80	.26
400	-	8.59	3.38	.55
500	-	11.58	4.81	.76
600	-	15.92	7.46	1.09
700	-	20.37	11.34	1.42
800	-	21.05	13.98	1.51
900	-	20.00	13.45	1.40
1000	-	18.50	12.88	1.30
1200	-	17.78	13.21	1.23
1600	-	17.52	14.08	1.17
1800	-	-	-	-

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 157 LAT  $34^{\circ}42.60' N$  LONG  $54^{\circ}07.00' W$  DATE 24/06/87

Z	CHL	NO3	SIO3	PO4
0	-	.18	.52	.08
20	-	.18	.39	.12
30	-	.18	.42	.10
60	-	.18	.79	.10
75	-	1.38	.83	.12
120	-	2.89	1.03	.21
150	-	2.89	1.22	.21
200	-	3.04	1.25	.23
300	-	4.39	1.48	.29
400	-	8.10	2.91	.51

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 162 LAT  $34^{\circ}39.40' N$  LONG  $54^{\circ}14.70' W$  DATE 24/06/87

Z	CHL	NO3	SIO3	PO4
0	-	.18	.44	.08
20	-	.18	.48	.08
30	-	.18	.36	.09
75	-	1.08	.88	.09
90	-	2.29	1.07	.17
120	-	2.59	1.28	.20
150	-	2.74	1.02	.19
200	-	2.89	1.05	.19
300	-	4.29	1.57	.27
400	-	8.31	3.05	.50

STATION NO. 168 LAT  $34^{\circ}40.20' N$  LONG  $54^{\circ}10.90' W$  DATE 24/06/87

Z	CHL	NO3	SIO3	PO4
0	.10	.08	.30	.06
20	-	.11	.32	.06
30	-	.13	.33	.08
75	-	.91	.99	.12
90	-	2.14	1.02	.17
120	-	2.74	1.06	.18
150	-	2.74	.94	.19
200	-	2.74	1.13	.19
300	-	4.19	1.49	.27
400	-	8.00	2.92	.34

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 173 LAT  $34^{\circ}22.70'$  N LONG  $53^{\circ}31.30'$  W DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
400	-	7.34	2.60	.34
500	-	10.26	3.86	.53
600	-	12.52	5.12	.79
700	-	18.72	9.55	1.21
800	-	22.43	13.11	1.47
900	-	21.88	13.95	1.47
1000	-	20.87	13.71	1.45

STATION NO. 175 LAT  $34^{\circ}22.40'$  N LONG  $53^{\circ}29.60'$  W DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
0	.08	.00	.48	.07
20	.10	.00	.47	.06
30	.13	.00	.19	.04
60	.25	.00	.46	.07
90	.35	.94	.85	.12
120	.08	2.34	1.01	.18
150	.08	2.06	.85	.15
200	.00	3.60	1.17	.25
300	.03	4.88	1.67	.28
400	.02	7.42	2.67	.34

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 176 LAT  $34^{\circ}20.40' N$  LONG  $53^{\circ}07.90' W$  DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
0	.07	.12	.00	.08
20	.09	.12	.00	.07
30	.11	.12	.00	.09
60	.30	.13	.09	.11
90	.53	1.49	.85	.11
120	.24	2.34	.77	.17
150	.04	2.63	1.13	.22
200	.01	2.77	1.22	.23
300	.01	4.74	2.07	.34
400	.01	8.40	3.44	.55

STATION NO. 178 LAT  $34^{\circ}19.70' N$  LONG  $53^{\circ}06.60' W$  DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
400	-	8.63	2.85	.50
500	-	10.66	3.82	.67
600	-	15.98	6.83	.03
700	-	20.08	10.06	.33
800	-	22.21	12.37	.50
900	-	21.24	12.70	.42

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 179 LAT  $34^{\circ}19.10' N$  LONG  $52^{\circ}44.10' W$  DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
400	-	9.28	3.73	.61
500	-	11.51	5.17	.79
600	-	16.09	7.80	1.09
700	-	20.58	11.06	1.36
800	-	22.30	13.42	1.44
900	-	21.15	13.37	1.40
1000	-	19.91	12.85	1.29

STATION NO. 181 LAT  $34^{\circ}18.10' N$  LONG  $52^{\circ}43.00' W$  DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.09	.35	.05
20	.11	.09	.35	.07
30	.13	.09	.51	.10
60	.34	.08	.51	.08
90	.39	.05	.83	.12
120	.16	.30	1.15	.17
150	.04	.43	1.31	.18
200	.01	.85	1.31	.20
300	.01	.35	2.44	.40
400	.01	.29	3.56	.59

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 182 LAT  $34^{\circ}16.80' N$  LONG  $52^{\circ}18.60' W$  DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.00	.11	.13
20	.11	.01	.19	.09
30	.13	.02	.26	.18
60	.33	.03	.16	.13
90	.58	.16	.57	.13
120	.06	.29	.96	.19
150	.03	.44	1.02	.20
200	.02	.72	1.27	.28
300	-	7.53	2.64	.48
400	-	10.35	4.00	.70

STATION NO. 184 LAT  $34^{\circ}16.00' N$  LONG  $52^{\circ}16.30' W$  DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
500	-	11.75	5.76	.96
600	-	16.38	9.65	1.31
700	-	20.11	13.33	1.62
800	-	18.15	13.79	1.58
900	-	18.59	13.67	1.49
1000	-	17.58	13.28	1.39

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 185 LAT  $34^{\circ}16.10' N$  LONG  $52^{\circ}57.20' W$  DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
500	-	10.60	5.06	.94
600	-	14.15	7.71	1.23
700	-	18.35	11.98	1.54
800	-	19.40	13.68	1.64
900	-	18.62	13.77	1.61
1000	-	17.51	13.32	1.49

STATION NO. 187 LAT  $34^{\circ}16.10' N$  LONG  $52^{\circ}57.20' W$  DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.12	.64	.02
20	.12	.13	.37	.02
30	.15	.13	.57	.05
70	.69	.13	.79	.04
90	.47	.69	1.16	.11
120	.05	2.40	1.37	.14
150	.02	2.68	1.53	.16
200	.02	3.39	1.95	.31
300	-	6.50	3.40	.52
400	-	8.43	4.78	.77

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 188 LAT  $34^{\circ}17.90' N$  LONG  $51^{\circ}34.90' W$  DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.19	.67	.13
10	.08	.18	.67	.12
20	.12	.17	.83	.12
50	.30	.16	.99	.12
80	.57	.13	.99	.11
110	.17	.310	.31	.28
140	.06	.337	.63	.28
190	.01	.378	.79	.33
290	-	.688	.94	.52
390	-	.885	.33	.71

STATION NO. 190 LAT  $34^{\circ}17.20' N$  LONG  $51^{\circ}33.00' W$  DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
500	-	12.16	6.33	1.06
600	-	15.64	9.65	1.33
700	-	18.89	13.51	1.61
800	-	18.05	13.62	1.54
900	-	16.84	13.35	1.44
1000	-	16.00	12.71	1.39

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 191 LAT 34°22.80' N LONG 51°23.80' W DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
500	-	13.11	5.84	.96
600	-	18.66	10.18	1.48
700	-	20.88	12.81	1.60
800	-	20.13	13.20	1.58
900	-	18.96	12.70	1.77
1000	-	17.90	12.16	1.70

STATION NO. 193 LAT 34°23.20' N LONG 51°22.60' W DATE 25/06/87

Z	CHL	NO3	SIO3	PO4
0	.10	.00	.19	.01
20	.12	.00	.20	.01
30	.14	.00	.21	.02
60	.33	.00	.22	.08
80	.67	.00	.69	.05
120	.09	3.32	1.13	.20
150	.03	3.30	1.10	.19
200	.01	3.44	1.23	.24
300	-	6.85	2.30	.47
400	-	9.33	3.52	.63

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 194 LAT  $34^{\circ}28.70'$  N LONG  $51^{\circ}14.20'$  W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
0	.08	.00	.16	.08
20	.12	.00	.35	.07
30	.29	.00	.25	.08
60	.42	.46	.88	.11
90	.12	3.48	1.36	.20
120	.03	3.47	1.38	.22
150	.01	4.55	1.70	.30
200	.02	8.60	3.28	.57
300	-	8.59	3.29	.58
400	-	10.09	4.08	.67

STATION NO. 196 LAT  $34^{\circ}33.30'$  N LONG  $51^{\circ}05.10'$  W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
0	.08	.00	.26	.02
20	.13	.00	.30	.02
30	.11	.00	.34	.05
60	.26	.00	.22	.05
90	.57	.40	.56	.05
120	.74	3.36	1.07	.20
150	.10	3.57	1.26	.23
200	.24	3.67	1.15	.25
300	-	8.36	3.21	.57
400	-	10.24	4.45	.65

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 197 LAT 34°34'.40' N LONG 51°02.20' W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
500	-	13.49	6.53	1.00
600	-	17.65	10.07	1.35
700	-	19.51	12.37	1.49
800	-	18.98	12.79	1.46
900	-	18.03	12.53	1.42
1000	-	17.08	11.96	1.26

STATION NO. 199 LAT 34°38.50' N LONG 50°53.40' W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.00	.54	.07
20	.11	.00	.61	.09
30	.12	.00	.21	.10
60	.22	.00	.38	.07
95	.68	.08	.73	.07
120	.21	.20	.23	.25
150	.09	.67	.41	.28
200	.01	.24	.75	.33
300	-	.20	.29	.58
400	-	.61	.15	.71

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 200 LAT  $34^{\circ}40.90'$  N LONG  $50^{\circ}48.50'$  W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
0	.10	.00	.30	.08
20	.09	.00	.34	.08
30	.12	.00	.39	.02
60	.19	.00	.15	.02
100	.60	.01	.67	.08
120	.28	.05	1.20	.24
150	.06	.51	1.41	.27
200	.02	.03	1.62	.28
300	-	.05	3.30	.58
400	-	.08	4.76	.74

STATION NO. 201 LAT  $34^{\circ}41.00'$  N LONG  $50^{\circ}48.40'$  W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
500	-	13.90	6.60	1.04
600	-	18.50	10.84	1.47
700	-	19.24	12.88	1.57
800	-	18.22	12.70	1.50
900	-	17.50	12.09	1.42
1000	-	16.63	11.90	1.32

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 202 LAT  $34^{\circ}43.40' N$  LONG  $50^{\circ}43.40' W$  DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.00	.90	.00
20	.11	.00	.72	.00
30	.14	.00	.92	.03
60	.22	.00	.00	.10
90	.51	.01	.82	.19
120	.19	.21	1.56	.24
150	.11	.28	1.53	.28
200	.01	.02	1.50	.29
300	-	.10	3.28	.57
400	-	.93	4.24	.73

STATION NO. 203 LAT  $34^{\circ}46.00' N$  LONG  $50^{\circ}38.30' W$  DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
0	.12	.00	.86	.04
20	.17	.00	.69	.07
30	.19	.00	.12	.03
60	.28	.00	.36	.05
90	.81	.22	.48	.09
120	.15	.34	1.04	.22
150	.02	.81	1.46	.22
200	.01	.38	2.28	.34
300	-	.24	3.84	.52
400	-	.53	5.19	.74

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 205 LAT 34°49.10' N LONG 50°31.90' W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
0	.08	.00	1.27	.53
20	.13	.00	.47	.07
30	.14	.00	.15	.04
60	.25	.00	.14	.07
90	.53	.42	.60	.12
120	.14	3.59	.90	.28
150	.02	3.89	.90	.23
200	.01	5.29	1.67	.32
300	-	8.92	3.85	.57
400	-	11.04	4.93	.68
500	-	13.36	7.36	1.01
600	-	17.26	10.64	1.38
700	-	20.18	14.22	1.59
800	-	18.78	13.74	1.50
900	-	17.79	13.26	1.41
1000	-	17.00	12.52	1.31

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 206 LAT  $34^{\circ}52.20' N$  LONG  $50^{\circ}27.70' W$  DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
0	.10	.00	.35	.12
20	.14	.00	.33	.12
30	.17	.00	.26	.08
60	.33	.00	.43	.07
90	.56	1.70	.92	.16
120	.23	3.37	1.32	.27
150	.08	3.52	1.29	.30
200	.02	3.66	1.50	.40
300	-	7.90	3.05	.60
400	-	10.01	4.42	.80

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 207 LAT 34°54.00' N LONG 50°22.80' W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
0	.08	.00	.52	.05
200	.11	.00	.55	.05
300	.17	.00	.42	.07
600	.28	.00	.44	.07
900	.44	2.22	1.40	.18
1200	.17	3.31	1.73	.25
1500	.05	3.47	1.76	.30
2000	.01	4.09	2.09	.34
3000	-	7.66	3.23	.63
4000	-	10.76	4.91	.94

STATION NO. 209 LAT 34°53.90' N LONG 50°20.80' W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
500	-	14.01	7.34	1.13
600	-	17.89	9.23	1.43
700	-	19.74	13.31	1.63
800	-	18.97	13.23	1.57
900	-	17.67	12.69	1.45
1000	-	16.79	12.20	1.37

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 210 LAT  $34^{\circ}57.00'$  N LONG  $50^{\circ}17.80'$  W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.00	.28	.07
20	.14	.00	.32	.10
30	.15	.00	.36	.09
60	.36	.00	.39	.10
80	.64	.61	.74	.12
120	.21	3.24	1.39	.29
150	.01	4.68	1.99	.39
200	.01	4.62	1.93	.38
300	-	8.18	3.51	.64
400	-	10.92	5.14	.87

STATION NO. 215 LAT  $34^{\circ}59.10'$  N LONG  $50^{\circ}12.70'$  W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.00	.47	.10
20	.13	.00	.49	.07
30	.14	.00	.36	.07
60	.28	.00	.53	.08
90	.51	2.07	1.18	.20
120	.23	3.32	1.36	.28
150	.11	3.47	1.39	.28
200	.01	4.87	1.94	.39
300	-	10.78	3.15	.60
400	-	10.78	5.03	.82

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 217 LAT 35°04.70' N LONG 50°02.20' W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
0	.08	.00	.49	.10
20	.11	.00	.82	.13
30	.10	.07	.68	.10
60	.28	.00	.69	.13
90	.65	.56	.06	.15
120	.22	.37	.60	.28
150	.08	.38	.60	.32
200	.01	.86	.84	.33
300	-	7.76	3.54	.65
400	-	9.38	4.66	.81

STATION NO. 219 LAT 35°05.10' N LONG 50°01.60' W DATE 26/06/87

Z	CHL	NO3	SIO3	PO4
500	-	12.45	6.40	1.03
600	-	14.74	9.54	1.37
700	-	19.00	12.62	1.62
800	-	18.45	13.08	1.54
900	-	18.10	12.88	1.51
1000	-	17.37	12.40	1.42

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 229 LAT 34°36.00' N LONG 50°58.90' W DATE 28/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.00	.33	.08
20	.09	.00	.50	.09
30	.12	.00	.68	.09
60	.21	.00	.69	.09
90	.59	.00	.87	.12
120	.11	.50	.69	.21
150	.02	.49	.86	.22
200	.00	4.59	2.09	.30
300	.01	8.49	3.88	.53
400	.00	10.32	4.77	.62

STATION NO. 233 LAT 34°35.30' N LONG 51°00.20' W DATE 28/06/87

Z	CHL	NO3	SIO3	PO4
0	.09	.00	.66	.06
20	.13	.00	.84	.08
30	.16	.00	.53	.09
60	.29	.00	.54	.10
90	.43	1.77	1.20	.14
120	.10	3.45	1.70	.23
150	.03	3.45	1.77	.24
200	.01	2.10	1.79	.23
300	.01	7.67	3.21	.47
400	.03	9.78	4.51	.60

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 238 LAT  $34^{\circ}37.00'$  N LONG  $51^{\circ}01.90'$  W DATE 28/06/87

Z	CHL	NO3	S1O3	PO4
0	.10	.00	1.02	.09
200	.12	.00	.93	.12
300	.16	.00	.01	.11
600	.32	.00	.07	.11
800	.44	.00	.30	.14
1200	.15	.45	.04	.23
1500	.03	.67	.22	.25
2000	.01	.45	.31	.29
3000	.01	.47	.02	.54
4000	.02	10.76	5.32	.66

STATION NO. 243 LAT  $34^{\circ}39.30'$  N LONG  $50^{\circ}52.90'$  W DATE 28/06/87

Z	CHL	NO3	S1O3	PO4
0	.09	.00	.40	.04
200	.13	.00	.39	.06
300	.16	.00	.38	.06
600	.32	.00	.52	.03
800	.62	.46	.82	.06
1200	.17	3.77	1.41	.16
1500	.04	3.89	1.56	.19
2000	.01	4.35	1.39	.25
3000	.01	8.56	2.95	.51
4000	.02	10.64	4.26	.69

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 250 LAT 34°38.20' N LONG 50°55.40' W DATE 29/06/87

Z	CHL	NO3	SIO3	PO4
0	.11	.06	.46	.04
20	.10	.07	.65	.06
30	.12	.08	.68	.06
60	.24	.09	.71	.03
90	.35	.150	1.20	.06
120		3.56	1.39	.20
150	.06	3.82	1.58	.19
200	.01	4.09	1.76	.22
300	.02	8.18	3.16	.47
400	.02	10.30	4.37	.60

STATION NO. 255 LAT 34°35.40' N LONG 50°58.90' W DATE 29/06/87

Z	CHL	NO3	SIO3	PO4
0	.10	.02	.54	.05
20	.15	.02	.71	.04
30	.16	.02	.72	.03
60	.34	.02	.73	.05
90	.54	1.17	1.05	.09
120	.16	3.72	1.51	.25
150	.03	3.86	1.44	.22
200	.01	4.89	1.88	.29
300	.01	8.48	3.13	.50
400	.02	10.36	4.23	.61

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 262 LAT  $34^{\circ}36.20' N$  LONG  $50^{\circ}57.60' W$  DATE 29/06/87

Z	CHL	NO3	SIO3	PO4
0	.08	.02	.25	.05
20	.11	.02	.36	.07
30	.14	.03	.34	.02
60	.30	.03	.54	.03
75	.63	.02	.89	.05
150	.03	.86	1.54	.21
200	.01	4.12	1.94	.28
300	.05	9.10	3.51	.53
400	.01	10.72	4.47	.61

STATION NO. 265 LAT  $34^{\circ}41.60' N$  LONG  $50^{\circ}56.70' W$  DATE 29/96/87

Z	CHL	NO3	SIO3	PO4
0	.09	.15	.24	.09
20	.12	.14	.35	.09
30	.13	.13	.14	.06
60	.21	.12	.05	.12
100	.44	1.89	.79	.12
120	.23	3.79	1.04	.22
150	.07	4.06	1.30	.25
200	.01	4.18	1.24	.27
300	.02	8.54	2.92	.54
400	.02	10.58	4.03	.68

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 272 LAT  $33^{\circ}16.00'$  N LONG  $54^{\circ}26.80'$  W DATE 30/06/87

Z	CHL	NO3	SIO3	PO4
0	-	.16	.67	.01
20	.05	.12	.69	.00
30	.06	.08	.57	.00
60	.10	.05	.00	.00
80	.19	.05	.00	.00
120	.26	.05	.19	.01
150	.12	.55	.81	.05
200	.02	.68	.94	.12
300	.01	.54	.49	.14
400	.01	.67	.22	.27

STATION NO. 273 LAT  $33^{\circ}07.10'$  N LONG  $54^{\circ}48.90'$  W DATE 30/06/87

Z	CHL	NO3	SIO3	PO4
0	.07	.05	.86	.02
20	.06	.05	.88	.03
30	.06	.06	.93	.03
60	.10	.06	.67	.09
80	.20	.06	.53	.09
120	.30	.48	.74	.14
150	.14	.95	.98	.08
200	.04	.60	.18	.09
300	.01	.38	.69	.07
400	.03	.07	.26	.18

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 274 LAT  $32^{\circ}59.20' N$  LONG  $55^{\circ}10.30' W$  DATE 01/07/87

Z	CHL	NO3	SIO3	PO4
0	.08	.16	.55	.11
20	.03	.16	.61	.08
30	.03	.16	.70	.08
60	.12	.16	.90	.11
110	.34	.82	.52	.08
120	.25	1.05	.54	.10
150	.09	1.55	.87	.12
200	.02	1.81	1.66	.09
300	.01	3.36	2.07	.12
400	.01	5.51	2.40	.20

STATION NO. 276 LAT  $31^{\circ}36.60' N$  LONG  $55^{\circ}36.60' W$  DATE 01/07/87

Z	CHL	NO3	SIO3	PO4
0	.06	.00	.55	.12
20	.06	.00	.71	.12
30	.06	.16	.43	.10
60	.10	.16	.69	.10
110	-	.84	.75	.10
120	-	1.53	.97	.13
150	-	2.48	1.20	.15
200	-	2.98	1.28	.05
300	-	4.94	1.67	.25
400	.01	7.76	2.81	.38

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 285 LAT  $31^{\circ}58.70' N$  LONG  $55^{\circ}39.00' W$  DATE 01/07/87

Z	CHL	NO3	SIO3	PO4
0	.06	.16	.40	.10
20	.06	.17	.64	.10
30	.06	.18	.83	.10
60	.15	.19	.72	.10
100	.30	.20	.77	.10
120	.28	.89	.98	.10
150	.14	2.36	1.19	.16
200	.01	2.96	1.29	.18
300	.01	4.74	1.92	.28
400	.01	7.43	2.98	.40

STATION NO. 295 LAT  $32^{\circ}00.00' N$  LONG  $55^{\circ}39.90' W$  DATE 01/07/87

Z	CHL	NO3	SIO3	PO4
0	.06	.00	1.13	.09
20	.06	.00	1.34	.11
30	.07	.00	1.43	.10
60	.15	.00	1.39	.10
90	.26	.00	1.07	.07
110	.35	.68	1.23	.10
150	.10	2.03	1.56	.14
200	.01	3.08	1.78	.21
300	.01	4.88	2.48	.37
400	.01	7.09	3.03	.46

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 304 LAT  $31^{\circ}57.80' N$  LONG  $55^{\circ}38.80' W$  DATE 02/07/87

Z	CHL	NO3	SIO3	PO4
0	.06	.16	1.37	.10
20	.05	.14	1.21	.10
30	.06	.12	1.21	.10
60	.15	.10	1.20	.14
90	.25	.09	1.18	.08
110	.28	.14	1.52	.10
150	.08	.04	1.10	.16
200	.01	.09	1.06	.21
300	.01	.59	1.67	.31
400	.03	.89	2.55	.43

STATION NO. 300 LAT  $32^{\circ}01.50' N$  LONG  $55^{\circ}43.30' W$  DATE 02/07/87

Z	CHL	NO3	SIO3	PO4
0	.06	.08	.63	.18
20	.05	.08	1.39	.11
30	.06	.08	1.22	.09
60	.14	.08	1.22	.09
90	.23	.08	1.22	.09
110	.34	.53	1.39	.14
150	.10	.31	1.26	.14
200	.01	.19	1.62	.20
300	.02	.58	2.06	.28
400	.01	.71	3.19	.40

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 310 LAT 31°59'.40' N LONG 55°41'.20' W DATE 02/07/87

Z	CHL	NO3	SIO3	PO4
0	.06	.12	.92	.10
20	.06	.15	.05	.09
30	.05	.18	.23	.11
60	.13	.22	.31	.08
90	.07	.23	.59	.13
110	.35	.21	.65	.14
150	.16	.04	.81	.19
200	.01	.02	.37	.27
300	.02	.41	.16	.37
400	-	6.73	.70	.43

STATION NO. 317 LAT 31°57'.20' N LONG 55°37'.90' W DATE 02/07/87

Z	CHL	NO3	SIO3	PO4
0	.06	.00	.61	.08
20	.08	.00	.31	.10
30	.07	.00	.59	.08
60	.11	.00	.73	.06
90	.27	.00	.70	.09
120	.22	.03	.79	.16
150	.05	.11	.89	.24
200	.01	.20	.13	.25
300	.01	.69	.52	.34
400	.01	.08	.19	.53

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 322 LAT  $31^{\circ}58.40' N$  LONG  $55^{\circ}41.40' W$  DATE 03/07/87

Z	CHL	NO3	SIO3	PO4
0	.06	.00	.58	.05
20	.06	.00	.57	.05
30	.07	.00	.41	.08
60	.13	.00	.54	.06
90	.24	.00	.53	.06
120	.30	.00	.66	.10
150	.09	.08	.79	.11
200	.00	.21	.07	.26
300	.01	.79	.44	.34
400	.01	.23	.21	.48

STATION NO. 324 LAT  $31^{\circ}58.60' N$  LONG  $55^{\circ}41.90' W$  DATE 04/07/87

Z	CHL	NO3	SIO3	PO4
500	-	9.69	3.49	.72
600	-	12.70	5.28	.92
700	-	17.11	8.03	.28
800	-	20.58	11.22	1.61
900	-	20.85	12.34	1.59
1000	-	20.26	12.72	1.49

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 329 LAT  $31^{\circ}57.10' N$  LONG  $55^{\circ}38.40' W$  DATE 03/07/87

Z	CHL	NO3	SIO3	PO4
0	.06	.00	.89	.07
20	.06	.00	.72	.05
30	.06	.00	.80	.06
60	.15	.00	1.04	.08
90	.21	.00	1.21	.07
110	.31	.81	1.08	.10
150	.05	2.29	1.25	.18
200	.01	3.22	1.51	.23
300	.00	4.70	1.71	.32
400	.01	7.04	2.61	.49

STATION NO. 332 LAT  $31^{\circ}56.50' N$  LONG  $55^{\circ}41.00' W$  DATE 03/07/87

Z	CHL	NO3	SIO3	PO4
0	.06	.00	.72	.06
20	.06	.00	.57	.06
30	.06	.00	.55	.06
60	.13	.00	.68	.05
90	.21	.00	.66	.03
120	.36	.40	.79	.05
150	.15	1.74	.93	.11
200	.01	2.68	1.20	.19
300	.01	4.41	1.63	.27
400	.01	6.79	2.48	.41

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 338 LAT  $34^{\circ}22.40' N$  LONG  $57^{\circ}11.10' W$  DATE 04/07/87

Z	CHL	NO3	SIO3	PO4
120	.10	2.54	1.21	.16
150	.02	2.54	1.36	.17
200	.00	2.54	1.36	.15
300	.02	3.56	1.66	.22

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 341 LAT  $34^{\circ}34.60' N$  LONG  $56^{\circ}52.70' W$  DATE 04/07/87

Z	CHL	NO3	SIO3	PO4
0	.09	.08	.63	.08
10	.08	.10	.58	.01
20	.10	.11	.68	.04
30	.15	.12	.78	.02
70	1.27	1.02	1.03	.08
120	.09	2.51	1.13	.19
150	.02	2.52	1.30	.20
200	.00	2.53	.73	.18
300	.01	3.13	.69	.24
400	.00	6.40	1.94	.55

STATION NO. 342 LAT  $34^{\circ}42.50' N$  LONG  $56^{\circ}43.50' W$  DATE 04/07/87

Z	CHL	NO3	SIO3	PO4
0	.09	.00	.42	.00
20	.22	.00	.38	.00
40	1.20	1.73	.95	.05
60	.34	1.89	.91	.04
90	.04	2.05	.89	.05
120	.03	2.21	.70	.18
150	.00	2.52	.81	.11
200	.01	2.67	1.07	.21
300	.01	3.61	1.46	.24
400	.00	7.27	2.76	.51

## NEW ENGLAND SEAMOUNTS 1987

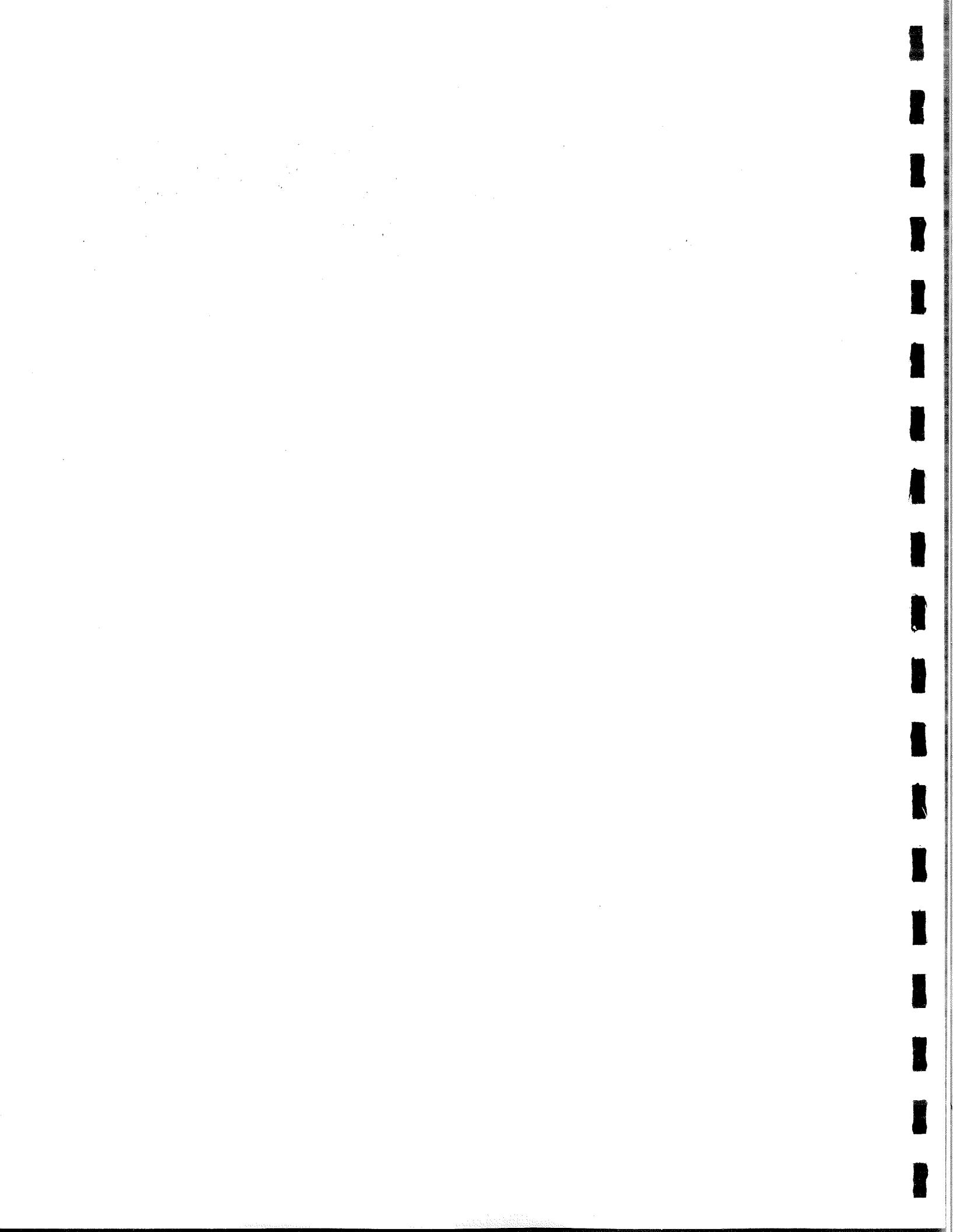
STATION NO. 345 LAT  $34^{\circ}48.70' N$  LONG  $56^{\circ}34.40' W$  DATE 04/07/87

Z	CHL	NO3	SIO3	PO4
0	.07	.00	.54	.05
20	.11	.00	.42	.06
30	.19	.00	.60	.08
50	.41	.95	.78	.16
90	.47	1.08	.96	.14
120	.00	2.88	1.58	.32
150	.00	2.68	1.37	.16
200	.00	2.55	1.26	.17
300	.01	5.06	1.82	.38
400	.00	5.51	2.18	.35

STATION NO. 347 LAT  $34^{\circ}55.60' N$  LONG  $56^{\circ}26.40' W$  DATE 05/07/87

Z	CHL	NO3	SIO3	PO4
0	.08	.00	.58	.06
20	.11	.01	.47	.07
30	.13	.02	.66	.22
60	.45	.03	.87	.08
80	.27	1.80	.93	.10
120	.04	2.52	1.11	.23
150	.02	2.65	1.14	.19
200	.00	3.08	1.32	.21
300	.00	5.32	2.09	.42
400	.00	6.29	2.62	.45

**LIGHT SATURATION DATA AND  
RELATED BIOMASS AND NUTRIENT  
DATA**



**UNITS**

P = mg C (mg Chl<sup>-1</sup>) m<sup>-3</sup> h<sup>-1</sup>

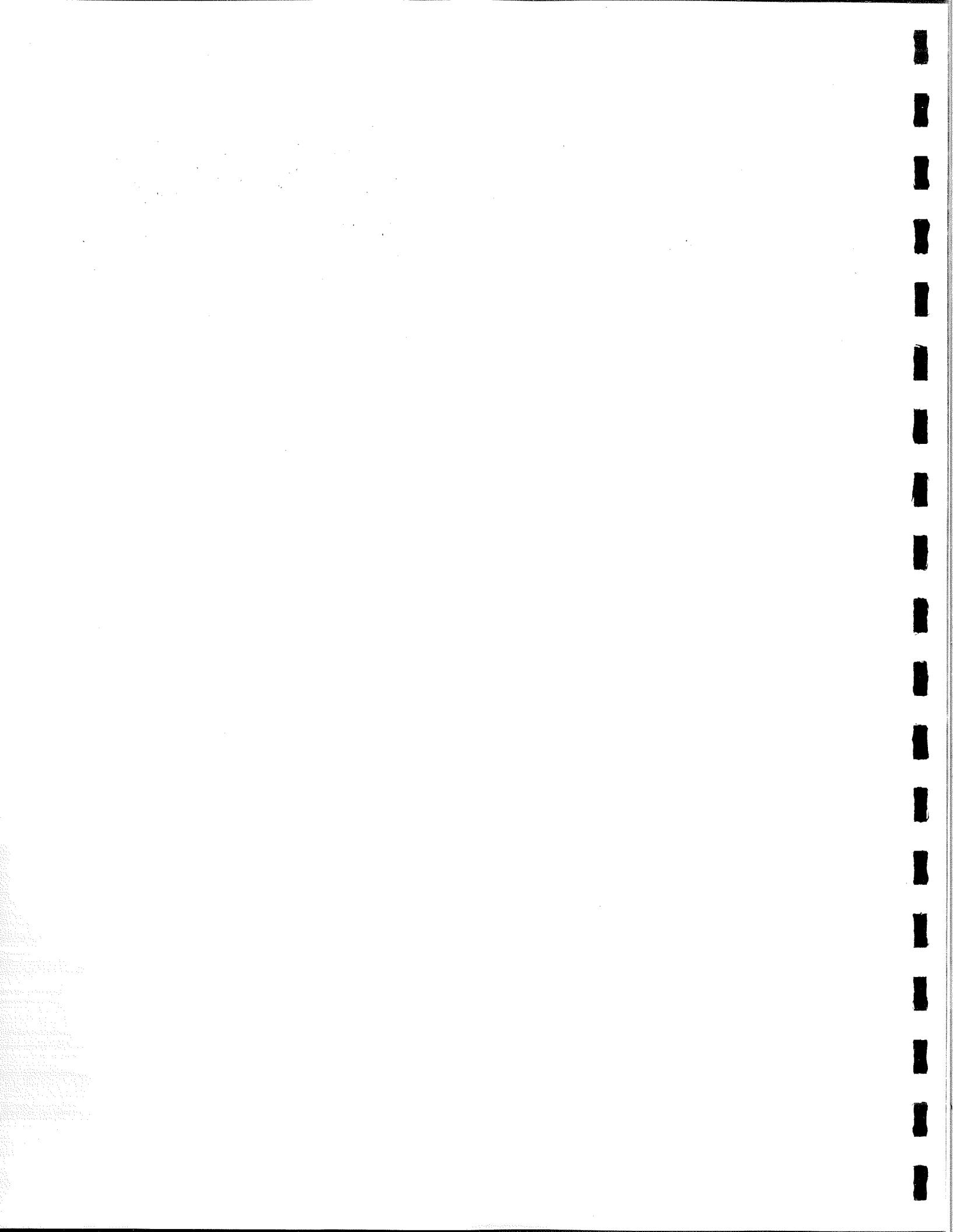
I = W m<sup>-2</sup>

P<sub>S</sub> = mg C (mg Chl)<sup>-1</sup> h<sup>-1</sup>

$\alpha$  = mg C (mg Chl)<sup>-1</sup> h<sup>-1</sup> w<sup>-1</sup> m<sup>-2</sup>

$\beta$  = mg C (mg Chl)<sup>-1</sup> h<sup>-1</sup> w<sup>-1</sup> m<sup>-2</sup>

Organic particulates are in mg m<sup>-3</sup>. Inorganic nutrients are in mg at m<sup>-3</sup>. The 90% confidence interval for P<sub>S</sub>,  $\alpha$ ,  $\beta$  are shown in the closed brackets below the estimates for each parameter.



## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 2

LAT  $42^{\circ}34.90'$  N LONG  $63^{\circ}52.40'$  W DATE 12/06/87 DEPTH 60

	P	I	P	I	P	I	P	I	P
777	.54	478	1.15	379	1.17	339	1.75		
299	1.91	259	2.86	203	2.91	140	3.15		
116	3.88	100	3.77	78	4.13	72	3.79		
66	3.77	48	4.00	40	3.88	35	4.03		
28	4.03	20	3.85	17	3.43	16	2.66		
15	3.07	9	2.27	8	1.95	7	1.20		
7	1.56	5	1.20	4	.84				

## PARAMETER VALUES

PS : 5.05      ALPHA : .314      BETA : .0153  
 ( 4.84, 5.27 )      ( .294, .334 )      ( .0133, .0172 )

SAMPLE TEMP  $7.8^{\circ}\text{C}$  INCUBATION TEMP  $7.8^{\circ}\text{C}$

CHLOROPHYLL :	.09	CARBON :	74	NITROGEN :	6
NITRATE :	6.77	SILICATE :	5.01	PHOSPHATE :	.88

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 2

LAT 42°34.90' N LONG 63°05'2.40' W DATE 12/06/87 DEPTH 20

	P	I	P	I	P	I	P	I	P
419	.30	335	.49	283	.67	239	.73		
207	.73	191	.81	140	.83	104	.87		
86	.89	81	.90	54	.82	43	.83		
35	.81	32	.82	29	.72	27	.68		
26	.61	17	.62	15	.52	14	.43		
13	.53	12	.29	11	.33	6	.22		
6	.18	5	.12	4	.11	4	.08		
4	.04	3	.09	2	.04	2	.05		
2	.04	2	.02	2	.02				

PARAMETER VALUES

PS : 1.23 ALPHA : .041 BETA : .0032  
( 1.14, 1.31 ) ( .039, .043 ) ( .0025, .0038 )

SAMPLE TEMP 4.5°C INCUBATION TEMP 4.5°C

CHLOROPHYLL : .89 CARBON : 154 NITROGEN : 20  
NITRATE : .32 SILICATE : 1.78 PHOSPHATE : .46

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 4

LAT 39°13.76' N LONG 64°47.17' W DATE 13/06/87 DEPTH 40

	P	I	P	I	P	I	P
466	.18	299	.17	223	.20	167	.29
136	.32	132	.36	104	.34	100	.31
66	.36	60	.33	50	.37	42	.33
35	.33	20	.31	16	.32	13	.31
11	.31	9	.25	6	.16	6	.22
5	.19	5	.16	4	.17	4	.13
3	.12	3	.13	3	.09	3	.10
2	.09	2	.11	2	.08	1	.07
.8	.04	.6	.01				

PARAMETER VALUES

PS : .39 ALPHA : .047 BETA : .0008  
( .38, .41 ) ( .044, .050 ) ( .0007, .0009 )

SAMPLE TEMP 22.0°C INCUBATION TEMP 22.0°C

CHLOROPHYLL : .49 CARBON : 104 NITROGEN : 13  
NITRATE : .61 SILICATE : .83 PHOSPHATE : .07

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 4

LAT 39°13.76' N LONG 64°47.17' W

DATE 13/06/87 DEPTH 20

	P	I	P	I	P	I	P
419	.55	335	.53	283	.64	239	1.00
140	.91	104	.81	86	.99	81	.84
76	.85	54	.73	43	.71	35	.73
32	.42	29	.54	27	.77	26	.67
17	.38	15	.38	14	.23	13	.34
12	.26	11	.16	6	.14	6	.12
15	.05	4	.09	4	.06	4	.03
3	.03						

PARAMETER VALUES

PS : 1.29 ALPHA : .028 BETA : .0027  
( 1.08 , 1.50 ) ( .025 , .030 ) ( .0015 , .0040 )

SAMPLE TEMP 23.9°C INCUBATION TEMP 23.9°C

CHLOROPHYLL : .19 CARBON : 89 NITROGEN : 8  
NITRATE : .29 SILICATE : .61 PHOSPHATE : .01

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 5

LAT 37°30'.14' N LONG 59°49'.97' W DATE 14/06/87

	P	I	P	I	P	I	P	I	P	DEPTH 60
654	.10	470	.18	407	.20	359	.25			
315	.46	275	.42	163	.52	120	.52			
96	.52	86	.59	78	.51	37	.55			
33	.48	30	.41	24	.40	22	.48			
18	.48	16	.37	15	.38	14	.34			
11	.26	6	.20	5	.20	5	.17			
4	.11	4	.12	3	.16	2	.07			
2	.02									

PARAMETER VALUES

PS : .69 ALPHA : .036 BETA : .0016  
( .64, .73 ) ( .033, .039 ) ( .0013, .0019 )

SAMPLE TEMP 20.0°C INCUBATION TEMP 20.0°C

CHLOROPHYLL : .23 CARBON : 115 NITROGEN : 11  
NITRATE : .25 SILICATE : .20 PHOSPHATE : .00

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 5

LAT 37°30.14' N LONG 59°49.97' W DATE 14/06/87 DEPTH 40

	P	I	P	I	P	I	P
287	.64	247	.80	124	.66	92	.79
82	.69	64	.78	45	.67	22	.57
20	.47	18	.43	16	.33	15	.23
5	.16	4	.19	4	.12	4	.10
4	.12	4	.13				

PARAMETER VALUES

PS : .80 ALPHA : .033 BETA : .0004  
( .72, .87 ) ( .030, .037 ) ( .0000, .0008 )

SAMPLE TEMP 20.6°C INCUBATION TEMP 20.6°C

CHLOROPHYLL : .17 CARBON : 85 NITROGEN : 8  
NITRATE : .23 SILICATE : .31 PHOSPHATE : .00

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 5

LAT 37°30.14' N      LONG 59°49.97' W      DATE 14/06/87      DEPTH 20

	P	I	P	I	P	I	P
391	1.49	299	1.50	255	1.38	223	1.67
203	1.97	171	1.73	124	1.61	104	1.70
88	1.49	82	1.35	76	1.18	41	1.15
32	.96	29	1.12	28	.63	26	.68
16	.54	14	.60	13	.36	12	.30
11	.35	10	.62	5	.32	5	.09
4	.12	4	.13	4	.08	4	.14
2	.02	2	.01				

## PARAMETER VALUES

PS : 2.01      ALPHA : .038      BETA : .0017  
 ( 1.74, 2.29 )      ( .035, .042 )      ( .0004, .0029 )

SAMPLE TEMP 21.4°C      INCUBATION TEMP 21.4°C

CHLOROPHYLL :	.09	CARBON :	158	NITROGEN :	12
NITRATE :	.26	SILICATE :	.43	PHOSPHATE :	.01

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 6

LAT 36°56.35' N LONG 58°54.28' W DATE 15/06/87 DEPTH 80

	P	I	P	I	P	I	P	I	P
550	.00	431	.00	387	.02	311	.01		
271	.18	163	.20	124	.35	112	.43		
103	.53	98	.51	34	.56	30	.41		
25	.54	23	.55	18	.40	16	.43		
8	.28	5	.12	4	.22	2	.13		
2	.08	2	.07						

PARAMETER VALUES

PS : 1.35 ALPHA : .036 BETA : .0133  
( .86 , 1.84 ) ( .032 , .039 ) ( .0051 , .0215 )

SAMPLE TEMP 19.0°C INCUBATION TEMP 19.0°C

CHLOROPHYLL : .44 CARBON : 119 NITROGEN : 16  
NITRATE : .29 SILICATE : .43 PHOSPHATE : .12

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 6

LAT 36°56'.35' N LONG 58°54'.28' W DATE 15/06/87 DEPTH 60

	P	I	P	I	P	I	P
506	.19	359	.25	283	.35	239	.42
207	.52	144	.53	96	.52	89	.55
74	.53	65	.57	56	.48	52	.50
50	.49	28	.36	24	.36	22	.23
20	.21	16	.22	6	.12	6	.11
6	.11	6	.09	5	.06	4	.07

PARAMETER VALUES

PS : .93 ALPHA : .017 BETA : .0031  
( .83, 1.04 ) ( .016, .018 ) ( .0024, .0038 )

SAMPLE TEMP 19.3°C INCUBATION TEMP 19.3°C

CHLOROPHYLL : .18 CARBON : 111 NITROGEN : 18  
NITRATE : .24 SILICATE : .36 PHOSPHATE : .00

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 6

LAT 36°56'.35" N LONG 58°54'.28" W DATE 15/06/87 DEPTH 40

	I	P	I	P	I	P	I	P
447	.58	367	.81	299	.66	267	.76	
159	.67	124	.87	114	.87	100	.88	
92	.73	84	.90	52	.69	37	.47	
35	.45	31	.49	30	.42	19	.41	
17	.46	15	.31	14	.21	7	.22	
5	.18	4	.14					

PARAMETER VALUES

PS : .97 ALPHA : .024 BETA : .0009  
( .87, 1.08 ) ( .022, .027 ) ( .0004, .0014 )

SAMPLE TEMP 20.5°C INCUBATION TEMP 20.5°C

CHLOROPHYLL : .11 CARBON : 110 NITROGEN : 19  
NITRATE : .24 SILICATE : .09 PHOSPHATE : .01

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 6

LAT 36°55'.01' N LONG 58°55'.16' W DATE 15/06/87 DEPTH 10

	P	I	P	I	P	I	P
447	2.50	299	2.33	267	2.43	207	2.32
159	1.89	124	1.83	114	1.77	100	1.62
92	1.53	84	1.91	52	1.25	41	1.25
37	1.23	35	.80	31	.83	30	.90
19	.49	15	.37	14	.61	14	.40
13	.24	2	.03	2	.11	2	.05

PARAMETER VALUES

PS : 2.38 ALPHA : .033 BETA : .0000  
( 2.05 , 2.71 ) ( .030 , .036 ) ( -.0009 , .0009 )

SAMPLE TEMP 21.6°C INCUBATION TEMP 21.6°C

CHLOROPHYLL : .05 CARBON : 116 NITROGEN : 9  
NITRATE : .25 SILICATE : .30 PHOSPHATE : .00

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 40

LAT 34°35'.20' N LONG 56°53'.40' W DATE 18/06/87 DEPTH 90

	P	I	P	I	P	I	P
937	.00	538	.01	458	.06	399	.19
191	.29	163	.24	124	.36	116	.40
100	.42	68	.55	39	.53	37	.49
33	.49	8	.49	7	.36	6	.35
6	.27	5	.30	5	.25	2	.16
2	.15	2	.14	2	.14	2	.08
1	.07	1	.07	1	.04	1	.07

PARAMETER VALUES

PS : .63 ALPHA : .080 BETA : .0027  
( .59 , .66 ) ( .074 , .086 ) ( .0023 , .0032 )

SAMPLE TEMP 18.0°C INCUBATION TEMP 20.4°C

CHLOROPHYLL : .48 CARBON : 82 NITROGEN : 9  
NITRATE : .09 SILICATE : 1.15 PHOSPHATE : .07

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 40

LAT 34°35.20' N LONG 56°53.40' W DATE 18/06/87 DEPTH 70

	P	I	P	I	P	I	P
777	:11	558	:17	439	:27	327	:31
259	:32	118	:41	104	:38	92	:39
82	:39	74	:45	66	:38	56	:40
31	:32	29	:31	25	:34	23	:18
23	:25	17	:16	8	:07	6	:06
6	:05	5	:04	5	:07	5	:04
4							

## PARAMETER VALUES

PS :	.53	ALPHA :	.015	BETA :	.0010
(	.49,	{ .014, .016 )	( .0008, .0012 )		

SAMPLE TEMP	19.0°C	INCUBATION TEMP	21.0°C
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CHLOROPHYLL :	.30	CARBON :	76	NITROGEN :	8
NITRATE :	.00	SILICATE :	1.11	PHOSPHATE :	.28

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 40

LAT 34°35.20' N LONG 56°53.40' W DATE 18/06/87 DEPTH 50

	P	I	P	I	P	I	P
598	.27	439	.38	379	.49	319	.56
287	.54	255	.63	140	.83	124	.86
116	.86	110	.73	96	.71	62	.60
44	.60	44	.58	40	.55	32	.40
17	.38	16	.46	15	.26	14	.25
5	.10	5	.13				

PARAMETER VALUES

PS : 1.21 ALPHA : .022 BETA : .0030  
( 1.06, 1.36 ) ( .020, .023 ) ( .0022, .0039 )

SAMPLE TEMP 19.5°C INCUBATION TEMP 21.4°C

CHLOROPHYLL : .19 CARBON : 107 NITROGEN : 9  
NITRATE : .00 SILICATE : .64 PHOSPHATE : .12

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 77

LAT 34°34.53' N LONG 56°53.60' W DATE 19/06/87 DEPTH 110

	P	I	P	I	P	I	P
937	:00	606	:00	538	:00	458	:00
399	:00	359	:00	191	:03	163	:01
136	:07	124	:06	116	:07	100	:08
68	:22	48	:20	39	:22	25	:22
22	:23	21	:25	20	:23	8	:22
7	:20	6	:15	6	:16	5	:15
5	:12	2	:08	2	:05		

PARAMETER VALUES

PS : .37 ALPHA : .039 BETA : .0049  
( .34, .40 ) ( .036, .042 ) ( .0040, .0059 )

SAMPLE TEMP 18.0°C INCUBATION TEMP 18.0°C

CHLOROPHYLL : .54 CARBON : 114 NITROGEN : 8  
NITRATE : .95 SILICATE : 1.12 PHOSPHATE : .12

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 77

LAT 34°34.53' N LONG 56°53.60' W DATE 19/06/87 DEPTH 10

	P	I	P	I	P	I	P
598	1.25	4.39	1.48	3.19	1.51	2.87	1.74
255	1.56	1.83	1.81	1.40	1.72	1.10	1.29
96	.86	.62	.87	.44	.84	.44	.59
40	.49	.37	.44	.32	.39	.24	.36
18	.56	.6	.14	.5	.11	.5	.11
3	.11	.2	.16	.2	.09	.2	.07

PARAMETER VALUES

PS : 3.90 ALPHA : .018 BETA : .0072  
( 1.15, 6.64 ) ( .017, .020 ) ( -.0021, .0165 )

SAMPLE TEMP 21.0°C INCUBATION TEMP 21.0°C

CHLOROPHYLL : .14 CARBON : 77 NITROGEN : 8  
NITRATE : .00 SILICATE : .65 PHOSPHATE : .03

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 103

LAT 34°36.08' N LONG 56°55.53' W DATE 20/06/87 DEPTH 80

	P	I	P	I	P	I	P	I	P
937	.00	606	.00	538	.00	458	.15		
399	.14	359	.13	191	.28	136	.38		
124	.45	116	.45	100	.46	68	.61		
48	.61	41	.62	39	.60	37	.58		
35	.56	33	.64	25	.63	24	.65		
22	.59	20	.59	8	.37	7	.31		
6	.28	6	.23	5	.20	5	.20		
2	.12	2	.12	2	.08	2	.08		
1	.04	1	.03						

## PARAMETER VALUES

PS :	.82	ALPHA :	.058	BETA :	.0042
(	.78,	.85 )	( .055, .061 )	(	.0038, .0047 )

SAMPLE TEMP 18.5°C INCUBATION TEMP 18.5°C

CHLOROPHYLL :	.64	CARBON :	90	NITROGEN :	7
NITRATE :	1.09	SILICATE :	.92	PHOSPHATE :	.08

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 103

LAT 34°36.08' N LONG 56°55.53' W DATE 20/06/87 DEPTH 60

	P	I	P	I	P	I	P
558	.24	439	.35	375	.40	327	.45
118	.64	116	.64	108	.65	104	.61
66	.54	56	.54	31	.55	25	.54
23	.44	17	.22	8	.17	7	.14
5	.11	5	.09	5	.09	5	.05
4	.08		.03				

PARAMETER VALUES

PS : .80            ALPHA : .025            BETA : .0016  
( .74 , .86 )      ( .023 , .028 )      ( .0012 , .0019 )

SAMPLE TEMP 18.7°C INCUBATION TEMP 18.7°C

CHLOROPHYLL : .40            CARBON : 74            NITROGEN : 7  
NITRATE : .08            SILICATE : .48            PHOSPHATE : .05

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 103

LAT 34°36.08' N LONG 56°55.53' W DATE 20/06/87 DEPTH 40

	P	I	P	I	P	I	P
598	.30	439	.54	319	.63	287	.68
255	.80	140	.84	124	1.02	116	.85
110	.92	62	.67	44	.67	44	.46
40	.49	37	.33	24	.40	18	.21
17	.31	8	.09	6	.08		

## PARAMETER VALUES

PS : 2.09      ALPHA : .017      BETA : .0069  
 ( 1.29, 2.90 )      ( .016, .018 )      ( .0023, .0114 )

SAMPLE TEMP 19.5°C INCUBATION TEMP 19.5°C

CHLOROPHYLL :	.22	CARBON :	83	NITROGEN :	8
NITRATE :	.07	SILICATE :	.54	PHOSPHATE :	.02

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 114

LAT 34°48.88' N LONG 56°34.74' W DATE 21/06/87 DEPTH 80

	P	I	P	I	P	I	P	I	P
606	.00	538	.01	458	.20	399	.25		
191	.32	136	.36	116	.40	68	.47		
48	.52	41	.50	37	.49	35	.53		
33	.54	21	.46	8	.28	6	.27		
6	.32	5	.19	5	.28	2	.17		
2	.17	2	.15	1	.10	2	.14		
1	.13	1	.09		.06	1	.08		

PARAMETER VALUES

PS : .58 ALPHA : .068 BETA : .0018  
( .55 , .61 ) ( .062 , .074 ) ( .0016 , .0021 )

SAMPLE TEMP 18.2°C INCUBATION TEMP 18.2°C

CHLOROPHYLL : .42 CARBON : 86 NITROGEN : 10  
NITRATE : 2.15 SILICATE : .84 PHOSPHATE : .13

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 114

LAT 34°48.88' N LONG 56°34.74' W DATE 21/06/87 DEPTH 60

	P	I	P	I	P	I	P
777	.08	439	.31	375	.48	327	.58
259	.65	171	.86	128	.89	118	.85
116	.92	108	.92	92	.86	82	.84
74	.87	29	.80	25	.82	23	.81
23	.72	17	.52	8	.34	7	.33
5	.20	5	.34	5	.18	5	.24
5	.17	5	.18	4	.13	2	.04
2	.04	1	.05				

PARAMETER VALUES

PS : 1.19 ALPHA : .052 BETA : .0030  
( 1.13, 1.24 ) ( .049, .055 ) ( .0026, .0035 )

SAMPLE TEMP 18.5°C INCUBATION TEMP 18.5°C

CHLOROPHYLL : 1.13 CARBON : 118 NITROGEN : 16  
NITRATE : 1.11 SILICATE : .70 PHOSPHATE : .09

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 114

LAT 34°48.88' N LONG 56°34.74' W

DATE 21/06/87 DEPTH 40

	P	I	P	I	P	I	P
439	.86	379	1.45	319	1.23	255	1.50
140	1.25	116	1.33	110	.97	62	.85
44	.95	44	.75	40	.71	37	.75
18	.65	17	.61	15	.33	6	.18
5	.23	2	.01	2	.05		.10
1	.02	.4		.4			

PARAMETER VALUES

PS : 1.47 ALPHA : .029 BETA : .0008  
( 1.20, 1.73 ) ( .025, .033 ) ( -.0002, .0017 )

SAMPLE TEMP 19.5°C INCUBATION TEMP 19.5°C

CHLOROPHYLL : .24 CARBON : 105 NITROGEN : 10  
NITRATE : .08 SILICATE : .40 PHOSPHATE : .04

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 122

LAT 34°40.01' N LONG 54°11.64' W DATE 22/06/87 DEPTH 70

	P	I	P	I	P	I	P
937	.00	606	.00	538	.15	458	.18
399	.35	359	.27	191	.42	116	.66
100	.52	68	.63	33	.79	21	.74
20	.78	7	.61	6	.55	5	.33
5	.22	2	.04	1	.03	1	.05

## PARAMETER VALUES

PS : .88 ALPHA : .101 BETA : .0031  
 ( .80, .95 ) ( .086, .116 ) ( .0024, .0037 )

SAMPLE TEMP 18.4°C INCUBATION TEMP 18.4°C

CHLOROPHYLL :	.50	CARBON :	100	NITROGEN :	12
NITRATE :	.14	SILICATE :	.83	PHOSPHATE :	.00

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 122

LAT  $34^{\circ}40.01'$  N LONG  $54^{\circ}11.64'$  W DATE 22/06/87

	P	I	P	I	P	I	P	I	P
777	.63				439	1.21	327	1.51	
128	1.92	558	1.09		92	1.74	82	1.66	
74	1.94	116	1.72		31	1.09	29	1.27	
25	1.23	56	1.90		6	.70	5	.46	
5	.50	23	1.32						
		2	.04						

PARAMETER VALUES

PS : 2.12 ALPHA : .081 BETA : .0028  
( 1.98 , 2.26 ) ( .071 , .090 ) ( .0021 , .0034 )

SAMPLE TEMP 18.9°C INCUBATION TEMP 18.9°C

CHLOROPHYLL : .29 CARBON : 111 NITROGEN : 10  
NITRATE : .04 SILICATE : .52 PHOSPHATE : .00

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 122

LAT 34°40.01' N      LONG 54°11.64' W      DATE 22/06/87      DEPTH 30

	P		P		P		P		P
439	2.41	379	2.22	319	3.30	287	3.88		
183	3.53	110	4.89	96	4.14	62	2.98		
44	3.96	40	3.54	32	2.58	18	1.40		
17	.83	8	.87	5	.28	3	.52		
2	.24								

## PARAMETER VALUES

PS :      6.87      ALPHA :      .112      BETA :      .0170  
 ( 5.02,    8.73 )      ( .097,    .128 )      ( .0066,    .0274 )

SAMPLE TEMP      19.3°C      INCUBATION TEMP      19.3°C

CHLOROPHYLL :	.14	CARBON :	75	NITROGEN :	6
NITRATE :	.07	SILICATE :	.38	PHOSPHATE :	.00

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 143

LAT 34°40.65' N LONG 54°12.64' W DATE 23/06/87

	P	I	P	I	P	I	P
526	.00	431	.00	379	.02	331	.12
291	.18	255	.21	136	.53	99	.58
87	.55	76	.66	66	.68	62	.69
42	.81	30	.79	26	.82	25	.82
21	.73	19	.70	18	.76	17	.63
13	.56	10	.55	10	.49	6	.47
15	.34	4	.30	4	.29	3	.13
3	.18	2	.14	1	.08	1	.09
1	.04	1	.02				

## PARAMETER VALUES

PS : 1.12            ALPHA : .078            BETA : .0077  
 ( 1.06, 1.17 )    ( .075, .082 )    ( .0067, .0087 )

SAMPLE TEMP 18.4°C INCUBATION TEMP 18.4°C

CHLOROPHYLL :	.89	CARBON :	128	NITROGEN :	20
NITRATE :	.11	SILICATE :	.83	PHOSPHATE :	.03

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 143

LAT 34°40.65' N LONG 54°12.64' W

DATE 23/06/87 DEPTH 60

	P	I	P	I	P	I	P	I	P
462	.29	319	.49	271	.76	231	.92		
191	.99	167	1.13	124	1.16	88	1.16		
70	1.11	61	1.20	57	1.11	40	1.12		
34	.96	30	.93	23	.95	21	.75		
16	.60	14	.57	11	.48	9	.43		
5	.27	4	.23	4	.16	3	.27		
3	.18	3	.14	3	.17	2	.10		
2	.08	2	.07						

PARAMETER VALUES

PS : 1.75 ALPHA : .053 BETA : .0058  
( 1.63, 1.87 ) ( .050, .055 ) ( .0048, .0067 )

SAMPLE TEMP 18.9°C INCUBATION TEMP 18.9°C

CHLOROPHYLL : .38 CARBON : 89 NITROGEN : 12  
NITRATE : .05 SILICATE : .53 PHOSPHATE : .09

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 143

LAT 34°40'.65' N LONG 54°12.64' W DATE 23/06/87 DEPTH 40

	P	I	P	I	P	I	P
458	1.59	327	1.70	267	1.67	183	1.88
163	1.90	144	1.80	98	1.86	81	1.80
60	1.73	49	1.59	42	1.35	32	1.11
26	.90	20	.83	18	.56	18	.61
15	.63	9	.29	7	.31	7	.18
4	.10						

PARAMETER VALUES

PS : 2.26 ALPHA : .049 BETA : .0020  
( 2.11, 2.41 ) ( .047, .052 ) ( .0013, .0026 )

SAMPLE TEMP 19.3°C INCUBATION TEMP 19.3°C

CHLOROPHYLL : .21 CARBON : 82 NITROGEN : 8  
NITRATE : .12 SILICATE : .51 PHOSPHATE : .05

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 163

LAT 34°39.80' N LONG 54°13.80' W DATE 24/06/87 DEPTH 110

	P	I	P	I	P	I	P
526	:00	431	:00	379	:00	291	:00
255	:00	136	:00	99	:00	87	:00
76	:00	66	:00	62	:00	42	:13
30	:14	19	:14	10	:14	5	:12
4	:16	4	:10	3	:10	3	:15
1	:09	1	:10	.8	:08	.7	:07
.6	:04	.6	:04				

PARAMETER VALUES

PS : .21  
( .17, .25 ) ALPHA : .073  
          ( .060, .087 ) BETA : .0058  
                          ( .0035, .0082 )

SAMPLE TEMP 18.4°C INCUBATION TEMP 18.4°C

CHLOROPHYLL : .11 CARBON : 51 NITROGEN : 3  
NITRATE : 2.73 SILICATE : .96 PHOSPHATE : .11

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 163

LAT 34°39.80' N LONG 54°13.80' W

DATE 24/06/87 DEPTH 20

	P	I	P	I	P	I	P
462	2.12	319	2.14	271	1.81	231	1.86
191	1.71	124	1.60	88	1.35	70	1.47
57	1.32	50	1.10	48	.94	41	.91
40	.91	34	.65	30	.66	16	.32
14	.37	11	.36	4	.14	3	.10
2	.04	2	.01				

PARAMETER VALUES

PS : 1.99 ALPHA : .029 BETA : .0000  
( 1.76, 2.21 ) ( .027, .031 ) ( -.0007, .0007 )

SAMPLE TEMP 19.3°C INCUBATION TEMP 19.3°C

CHLOROPHYLL : .12 CARBON : 83 NITROGEN : 17  
NITRATE : .17 SILICATE : .24 PHOSPHATE : .10

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 163

LAT 34°39.80' N LONG 54°13.80' W DATE 24/06/87 DEPTH 5

	P	I	P	I	P	I	P	I	P
458	2.40	327	2.45	267	2.42	219	2.53		
183	2.38	144	2.22	60	1.62	49	1.39		
32	1.19	20	.85	14	1.03	11	.68		
9	.76	7	.67	4	.34	3	.45		
2	.31	2	.14	2	.19				

PARAMETER VALUES

PS : 2.39            ALPHA : .058            BETA : .0000  
( 2.14, 2.64 )      ( .052, .065 )      ( -.0008, .0008 )

SAMPLE TEMP 20.0°C INCUBATION TEMP 20.0°C

CHLOROPHYLL : .11            CARBON : 96            NITROGEN : 8  
NITRATE : .17            SILICATE : .30            PHOSPHATE : .12

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 220

LAT 34°36.71' N LONG 51°00' W DATE 27/06/87 DEPTH 100

	P	I	P	I	P	I	P
837	:00	618	:00	538	:00	458	:00
399	:00	299	:00	227	:00	171	:00
144	:00	116	:26	116	:17	58	:27
37	:28	30	:28	29	:29	24	:34
23	:34	16	:34	7	:27	6	:27
5	:22	5	:14	3	:05	2	:04
1	:04						

PARAMETER VALUES

PS : .47 ALPHA : .052 BETA : .0053  
( .40, .53 ) ( .044, .060 ) ( .0036, .0071 )

SAMPLE TEMP 17.6°C INCUBATION TEMP 17.6°C

CHLOROPHYLL : .22 CARBON : 56 NITROGEN : 22  
NITRATE : 3.38 SILICATE : 1.51 PHOSPHATE : .24

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 220

LAT 34°36.71' N LONG 51° 00' W DATE 27/06/87

	P	I	P	I	P	I	P	I	P
538	.00	379	.03	247	.07	195	.18		
159	.25	120	.53	116	.36	100	.32		
96	.51	84	.55	74	.66	60	.58		
58	.54	52	.63	46	.54	37	.68		
34	.62	33	.66	21	.66	9	.43		
8	.60	6	.40	6	.52	5	.36		
5	.37	4	.28	4	.27	4	.26		
3	.23	3	.17	2	.17				

## PARAMETER VALUES

PS : .88  
 ( .82, .95 )      ALPHA : .096  
           ( .088, .104 )      BETA : .0063  
                           ( .0050, .0076 )

SAMPLE TEMP 17.9°C INCUBATION TEMP 17.9°C

CHLOROPHYLL :	.42	CARBON :	70	NITROGEN :	20
NITRATE :	1.74	SILICATE :	1.12	PHOSPHATE :	.16

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 220

LAT 34°36'.71' N LONG 51° .00' W DATE 27/06/87

	P	I	P	I	P	I	P	I	P
718	.19	.538	.40	.439	.65	.399	.78		
355	.06	.303	.18	.223	.12	.163	.22		
128	.37	.114	.30	.104	.36	.74	.27		
54	.21	.38	.19	.37	.12	.34	.91		
30	.79	.29	.84	.24	.75	.20	.85		
16	.77	.14	.52	.11	.49	.10	.59		
8	.24	.6	.17	.5	.16	.4	.14		
4	.05	.3	.10	.3	.03				

PARAMETER VALUES

PS : 1.92      ALPHA : .046      BETA : .0045  
( 1.76, 2.09 )      ( .043, .050 )      ( .0036, .0054 )

SAMPLE TEMP 18.2°C INCUBATION TEMP 18.2°C

CHLOROPHYLL : .31      CARBON : 78      NITROGEN : 14  
NITRATE : .00      SILICATE : .84      PHOSPHATE : .10

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 235

LAT 34°34.91' N LONG 51° 2.48' W DATE 28/06/87 DEPTH 40

	P	I	P	I	P	I	P
837	.54	618	.84	538	.98	458	1.17
399	1.22	299	1.50	227	1.51	171	1.57
116	1.45	58	1.26	46	1.03	37	1.01
36	.85	30	.76	29	1.24	24	.70
23	1.04	21	.72	9	.15	7	.05
6	.04	5	.05	5	.02		

## PARAMETER VALUES

PS : 2.16      ALPHA : .039      BETA : .0032  
 ( 1.90, 2.42 )    ( .035, .042 )    ( .0022, .0042 )

SAMPLE TEMP 19.4°C INCUBATION TEMP 19.4°C

CHLOROPHYLL :	.22	CARBON :	87	NITROGEN :	15
NITRATE :	.00	SILICATE :	.54	PHOSPHATE :	.06

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 235

LAT 34°34.91' N LONG 51° 2.48' W DATE 28/06/87 DEPTH 20

	P	I	P	I	P	I	P
698	2.82	538	3.00	379	3.16	247	2.73
159	3.03	120	2.49	116	2.17	100	1.99
96	2.18	84	1.71	74	1.63	60	1.40
58	1.44	52	1.41	46	1.28	37	1.06
34	1.22	33	.82	27	.80	21	.81
16	.75	8	.12	6	.01	5	.04

PARAMETER VALUES

PS : 3.63 ALPHA : .034  
( 3.17, 4.08 ) ( .032, .036 ) ( .0003, .0023 )

SAMPLE TEMP 20.1°C INCUBATION TEMP 20.1°C

CHLOROPHYLL : .19 CARBON : 101 NITROGEN : 21  
NITRATE : .00 SILICATE : .44 PHOSPHATE : .19

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 260

LAT 34°35'.60' N LONG 50°59.34' W DATE 29/06/87 DEPTH 90

	P	I	P	I	P	I	P	I	P
837	.00	538	.10	458	.22	171	.46		
144	.60	116	.49	46	.64	37	.65		
13	.55	9	.63	7	.44	6	.38		
5	.32	5	.29	4	.21	3	.10		
2	.11	2	.06						

PARAMETER VALUES

PS : .78 ALPHA : .083 BETA : .0025  
( .72, .85 ) ( .074, .092 ) ( .0018, .0031 )

SAMPLE TEMP 17.7°C INCUBATION TEMP 17.7°C

CHLOROPHYLL : .37 CARBON : 55 NITROGEN : 8  
NITRATE : 2.19 SILICATE : 1.23 PHOSPHATE : .07

## NEW ENGLAND SEAMOUNTS 1987

STATION NO. 260

LAT 34°35.60' N LONG 50°59.34' W DATE 29/06/87 DEPTH 70

	P	I	P	I	P	I	P
698	.02	.538	.12	.379	.64	.53	
247	.94	1.59	.77	1.16	.99	1.26	
84	1.13	6.0	1.11	5.2	1.03	1.15	
37	1.26	3.3	1.19	2.1	.27	.93	
14	1.14	3.9	.64	.8	.52	.47	
6	1.49	5.5	.45	.5	.36	.4	
4	1.29	4.4	.35	.3	.26	.27	
3	1.24	2	.09	.6	.04	.03	

## PARAMETER VALUES

PS : 1.46      ALPHA : .104      BETA : .0043  
 ( 1.37, 1.54 )      ( .096, .113 )      ( .0035, .0051 )

SAMPLE TEMP 17.9°C      INCUBATION TEMP 17.9°C

CHLOROPHYLL :	.58	CARBON :	.83	NITROGEN :	.8
NITRATE :	.51	SILICATE :	1.05	PHOSPHATE :	.03

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 260

LAT 34°35.60' N LONG 50°59.34' W DATE 29/06/87 DEPTH 50

	P	I	P	I	P	I	P
718	.74	538	1.33	303	2.20	223	2.06
163	.81	128	2.03	104	1.69	38	1.04
37	1.16	34	.94	30	.91	29	.89
24	.61	20	.83	10	.22	5	.19
4	.09	4	.03	3	.02	3	.02

## PARAMETER VALUES

PS : 3.80      ALPHA : .034      BETA : .0077  
 ( 3.08 , 4.53 )      ( .031 , .036 )      ( .0047 , .0107 )

SAMPLE TEMP 18.8°C INCUBATION TEMP 18.8°C

CHLOROPHYLL :	.33	CARBON :	53	NITROGEN :	6
NITRATE :	.08	SILICATE :	.59	PHOSPHATE :	.06

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 281

LAT 31°54.25' N LONG 55°27.62' W

DATE 01/07/87 DEPTH 90

	P	I	P	I	P	I	P
698	.37	538	.79	379	.86	323	.01
100	1.09	84	.96	60	.84	58	.02
52	.93	33	.78	27	.60	21	.83
116	.53	14	.52	8	.44	6	.50
5	.18	4	.08	3	.20	3	.07
3	.06	2	.12	.6	.01		

PARAMETER VALUES

PS : 1.13      ALPHA : .049  
( 1.03, 1.22 )      ( .042, .056 )      BETA : .0010  
                        ( .0007, .0014 )

SAMPLE TEMP 19.1°C INCUBATION TEMP 19.1°C

CHLOROPHYLL :	.25	CARBON :	.53	NITROGEN :	.12
NITRATE :	.15	SILICATE :	.04	PHOSPHATE :	.12

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 281

LAT 31°54.25' N LONG 55°27.62' W DATE 01/07/87 DEPTH 70

	P	I	P	I	P	I	P
718	.23	355	.67	303	.65	223	.77
163	.36	104	.66	54	.52	37	.92
29	.44	20	.46	16	.81	14	.71
11	.39	6	.47	3	.16	2	.03
2	.01						

PARAMETER VALUES

PS : 3.02 ALPHA : .054 BETA : .0146  
( 1.81, 4.22 ) ( .047, .062 ) ( .0039, .0252 )

SAMPLE TEMP 19.7°C INCUBATION TEMP 19.7°C

CHLOROPHYLL : .20 CARBON : 62 NITROGEN : 10  
NITRATE : .14 SILICATE : .34 PHOSPHATE : .12

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 306

LAT 31°57.96' N LONG 55°38.89' W DATE 02/07/87 DEPTH 50

	P	I	P	I	P	I	P
837	.80	618	.91	538	1.45	458	1.54
399	1.77	171	1.61	88	1.35	58	1.29
37	.67	36	1.24	30	.88	29	.58
23	.37	21	.67	17	.36	16	.31
13	.43	9	.31	6	.16	5	.07

PARAMETER VALUES

PS : 2.93 ALPHA : .029 BETA : .0044  
( 2.20, 3.65 ) ( .026, .032 ) ( .0020, .0068 )

SAMPLE TEMP 20.6°C INCUBATION TEMP 20.6°C

CHLOROPHYLL : .13 CARBON : 64 NITROGEN : 14  
NITRATE : .06 SILICATE : .62 PHOSPHATE : .07

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 306

LAT 31°57.96' N LONG 55°38.89' W DATE 02/07/87 DEPTH 30

	P	I	P	I	P	I	P
698	3.52	538	3.48	379	3.31	323	3.21
247	3.21	159	2.87	116	2.67	96	2.23
84	1.81	74	1.67	58	1.47	52	1.30
34	1.26	33	1.46	27	1.32	16	.61
	.32						

PARAMETER VALUES

PS : 3.42 ALPHA : .038 BETA : .0000  
( 3.02, 3.82 ) ( .035, .041 ) ( -.0008, .0008 )

SAMPLE TEMP 22.8°C INCUBATION TEMP 22.8°C

CHLOROPHYLL : .07 CARBON : 83 NITROGEN : 17  
NITRATE : .07 SILICATE : .60 PHOSPHATE : .12

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 306

LAT 31°57.96' N LONG 55°38.89' W DATE 02/07/87 DEPTH 10

	P	I	P	I	P	I	P
718	3.19	538	3.62	399	3.37	355	3.29
223	3.16	163	3.49	114	2.20	106	2.79
104	2.82	54	1.78	38	1.47	30	1.80
24	1.39	16	.30	11	.23	10	.13

PARAMETER VALUES

PS : 3.46 ALPHA : .051 BETA : .0002  
( -3.01, 3.92 ) ( .044, .058 ) ( -.0008, .0012 )

SAMPLE TEMP 25.3°C INCUBATION TEMP 25.3°C

CHLOROPHYLL : .07 CARBON : 76 NITROGEN : 11  
NITRATE : .07 SILICATE : .77 PHOSPHATE : .11

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 331

LAT 31°56.60' N LONG 55°38.60' W DATE 03/07/87 DEPTH 110

	P	I	P	I	P	I	P
837	.00	618	.00	538	.00	458	.00
399	.00	299	.35	227	.37	171	.51
144	.61	116	.55	116	.85	88	.70
44	.61	36	1.15	30	1.14	24	1.01
46	1.07	16	.91	9	1.05	7	.53
21	1.19	5	.42	5	.28	4	.22
6	.40						
3	.15						

PARAMETER VALUES

PS : 1.57 ALPHA : .109 BETA : .0108  
( 1.37, 1.76 ) ( .096, .123 ) ( .0077, .0139 )

SAMPLE TEMP 18.8°C INCUBATION TEMP 18.8°C

CHLOROPHYLL : .33 CARBON : 49 NITROGEN : 9  
NITRATE : .46 SILICATE : .74 PHOSPHATE : .09

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 331

LAT 31°56'.60" N LONG 55°38'.60" W DATE 03/07/87

	P	I	P	I	P	I	P	I	P
379	1.20	323	2.24	247	2.73	159	3.12		
120	3.21	84	2.82	74	2.80	60	2.96		
58	2.07	46	1.56	37	1.52	34	1.63		
33	1.75	27	2.84	21	1.67	16	1.92		
14	1.81	9	.37	6	.36	6	.36		
5	.19	3	.06	.02	.4	.08	.08		

PARAMETER VALUES

PS : 5.16 ALPHA : .081 BETA : .0152  
( 3.00 , 7.32 ) ( .069 , .094 ) ( .0012 , .0291 )

SAMPLE TEMP 19.3°C INCUBATION TEMP 19.3°C

CHLOROPHYLL : .24 CARBON : 54 NITROGEN : 11  
NITRATE : .00 SILICATE : .37 PHOSPHATE : .04

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 338

LAT 34°22.00' N LONG 57°10.40' W DATE 04/07/87 DEPTH 75

	P	I	P	I	P	I	P	I	P
837	:00	618	:01	538	:04	458	:12		
399	:20	299	:38	171	:89	144	:89		
116	:89	116	:07	88	:06	58	:14		
46	:17	37	:13	36	:13	30	:05		
29	:00	24	:98	23	:94	21	:87		
17	:73	16	:68	13	:54	9	:45		
7	:35	6	:29	5	:24	5	:16		
4	:12	3	:10	2	:06	2	:05		
2	:05	2	:04	2	:08	2	:02		
2	:04	2	:03	1	:06	1	:03		
1	:02								

PARAMETER VALUES

PS : 2.12 ALPHA : .059 BETA : .0126  
( 1.93, 2.31 ) ( .057, .061 ) ( .0104, .0149 )

SAMPLE TEMP 18.4°C INCUBATION TEMP 18.4°C

CHLOROPHYLL : .79 CARBON : 94 NITROGEN : 21  
NITRATE : .00 SILICATE : .92 PHOSPHATE : .06

NEW ENGLAND SEAMOUNTS 1987

STATION NO. 338

LAT 34°22'.00' N LONG 57°10.40' W DATE 04/07/87 DEPTH 55

	P	I	P	I	P	I	P
698	.76	5.38	.92	379	1.47	323	1.65
247	1.58	1.95	1.73	120	1.68	116	1.67
100	1.59	96	1.33	84	1.41	74	1.40
60	1.19	58	1.24	52	1.09	46	1.14
37	.96	34	1.12	33	.80	21	.59
16	.43	14	.32	9	.19	8	.16
6	.10	6	.06	5	.07	4	.05
4	.06	3	.03	3	.02	3	.01
3	.02						

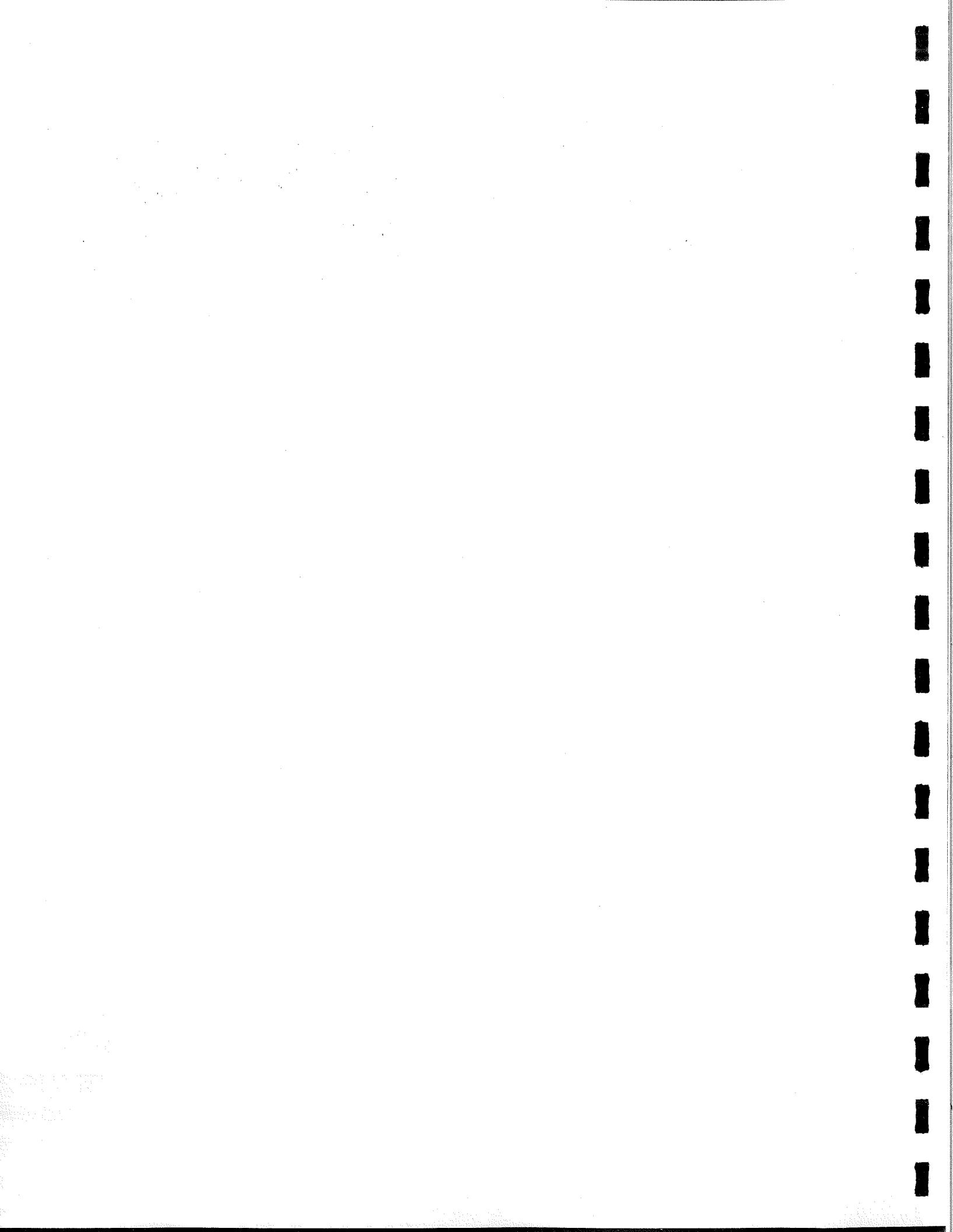
PARAMETER VALUES

PS : 2.89 ALPHA : .031 BETA : .0055  
( 2.55, 3.22 ) ( .030, .033 ) ( .0041, .0069 )

SAMPLE TEMP 19.3°C INCUBATION TEMP 19.3°C

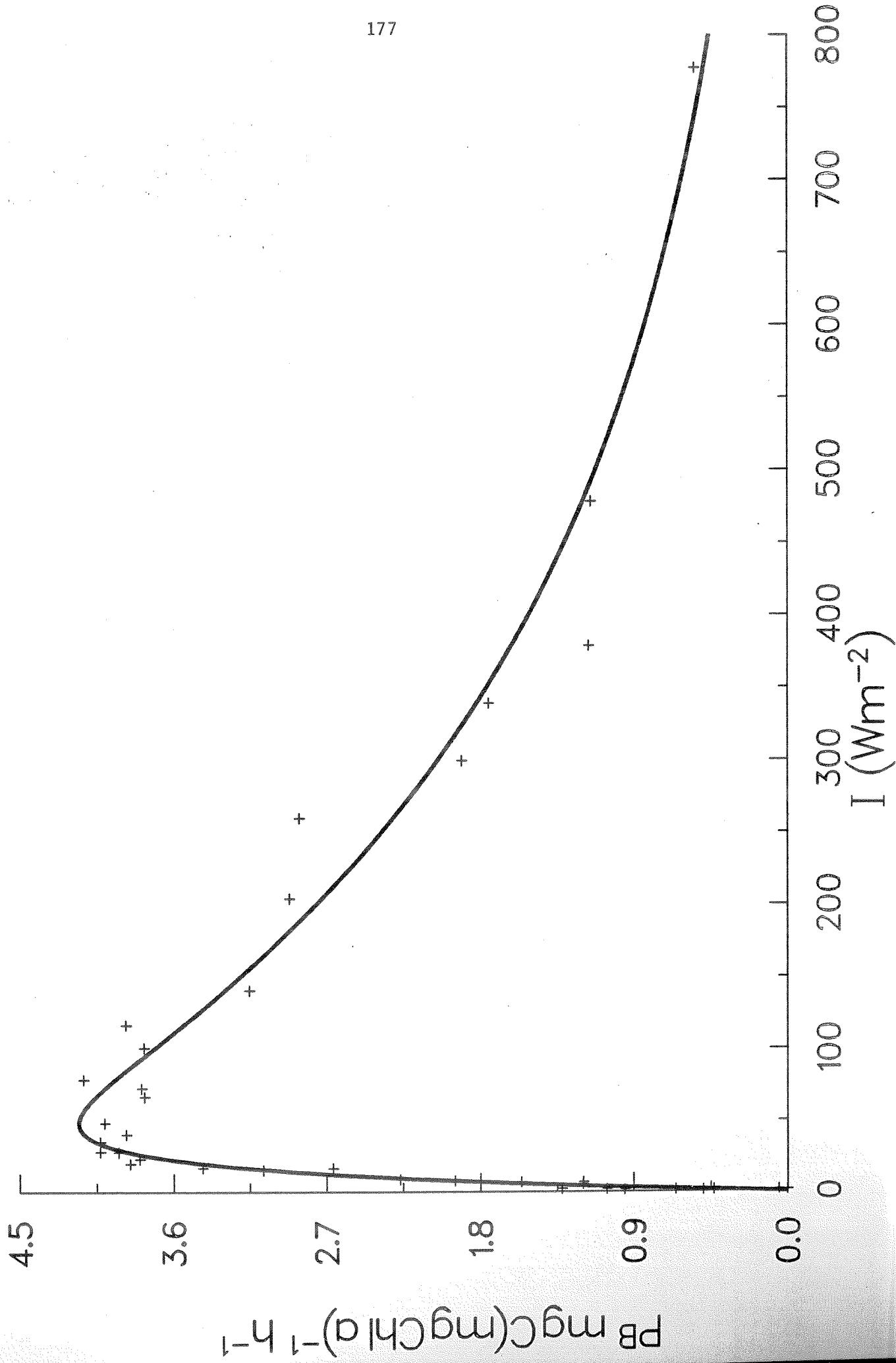
CHLOROPHYLL : .27 CARBON : 92 NITROGEN : 14  
NITRATE : .04 SILICATE : 1.07 PHOSPHATE : .04

## SOLID LINE FIT TO PI DATA



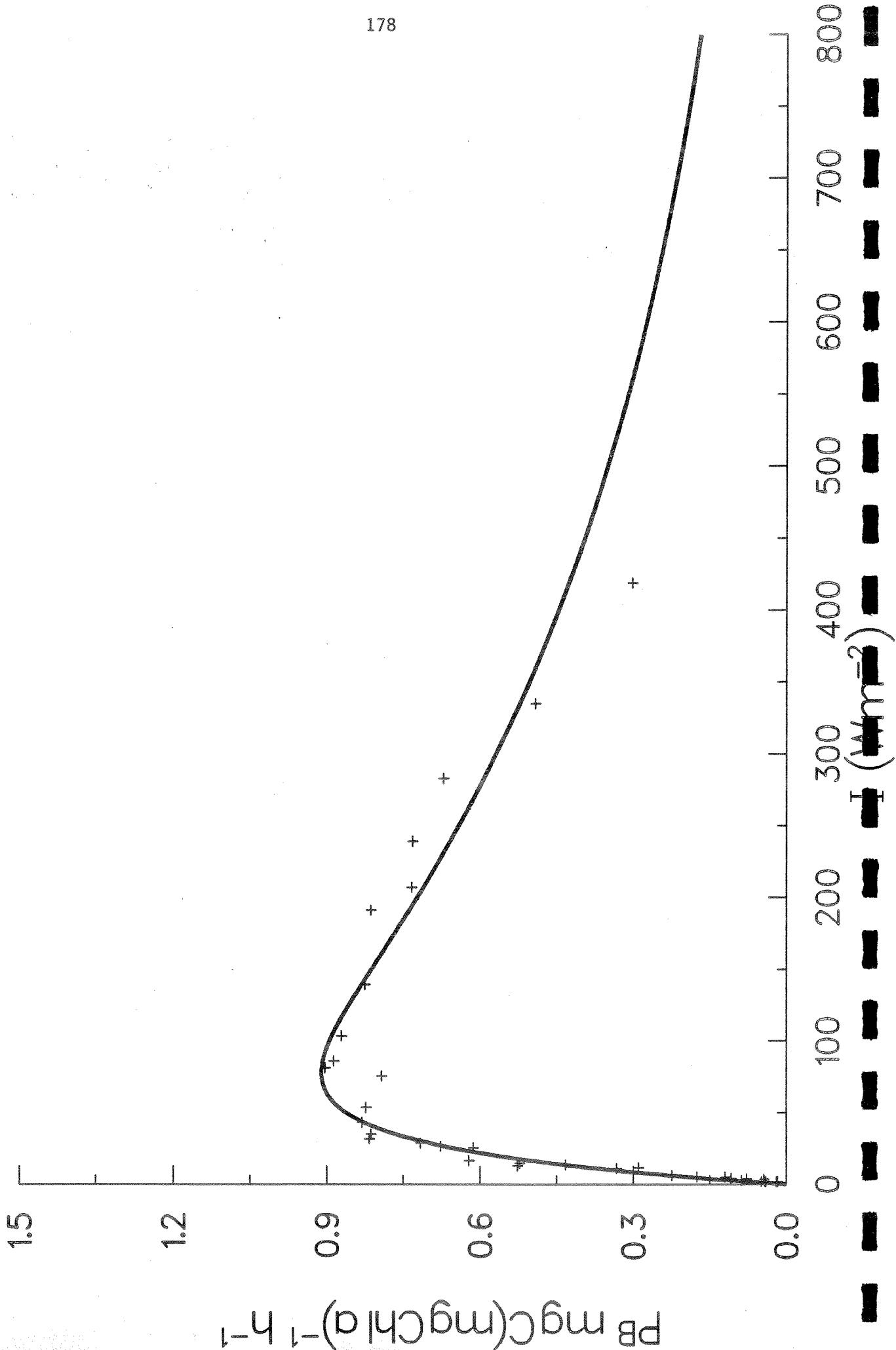
ID 037504 STA. 2 12/06/87 60 M

177



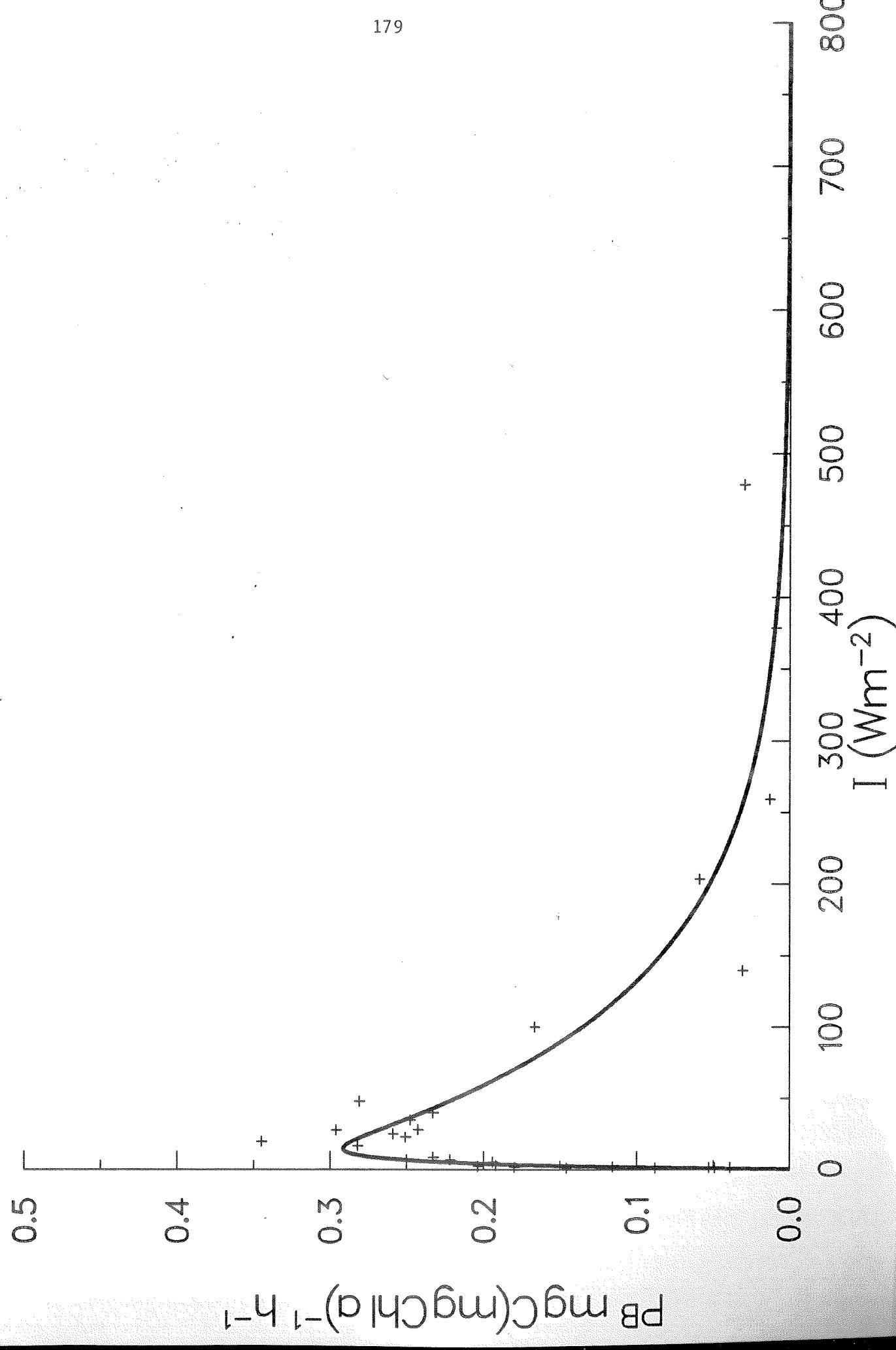
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178

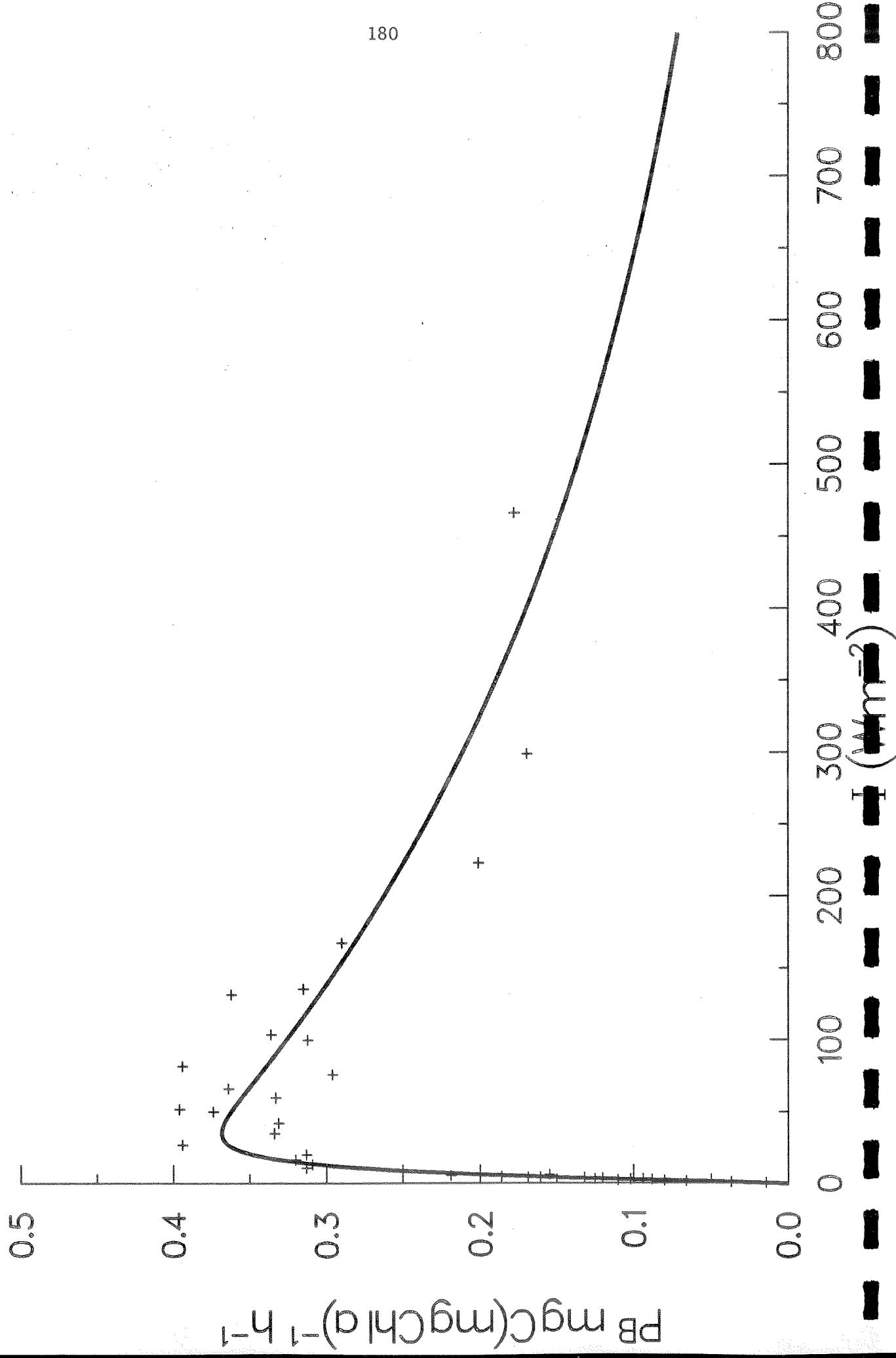


ID 037515 STA. 4 13/06/87 60 M

179

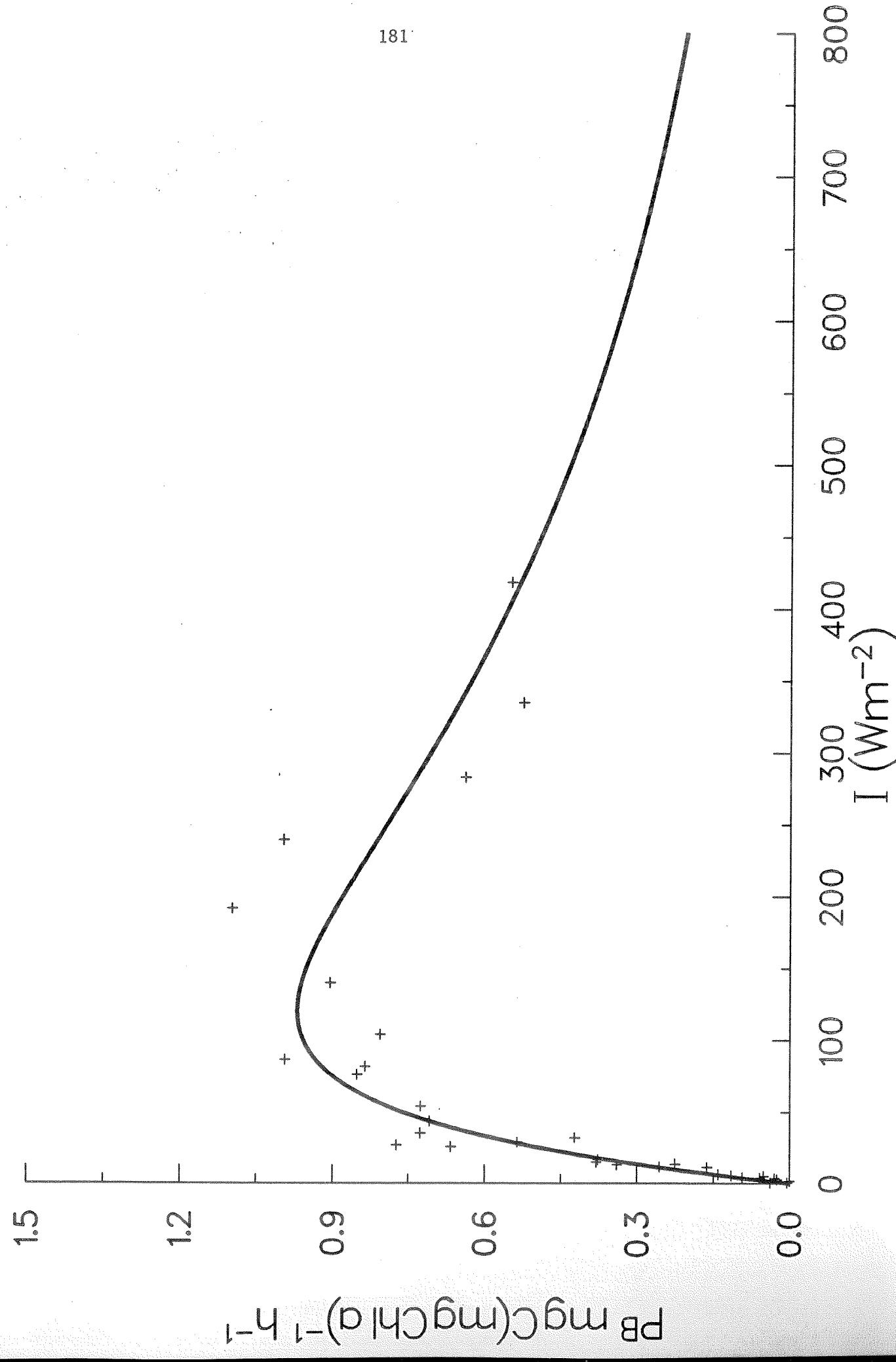


ID 037517 STA. 4 13/06/87 40 M



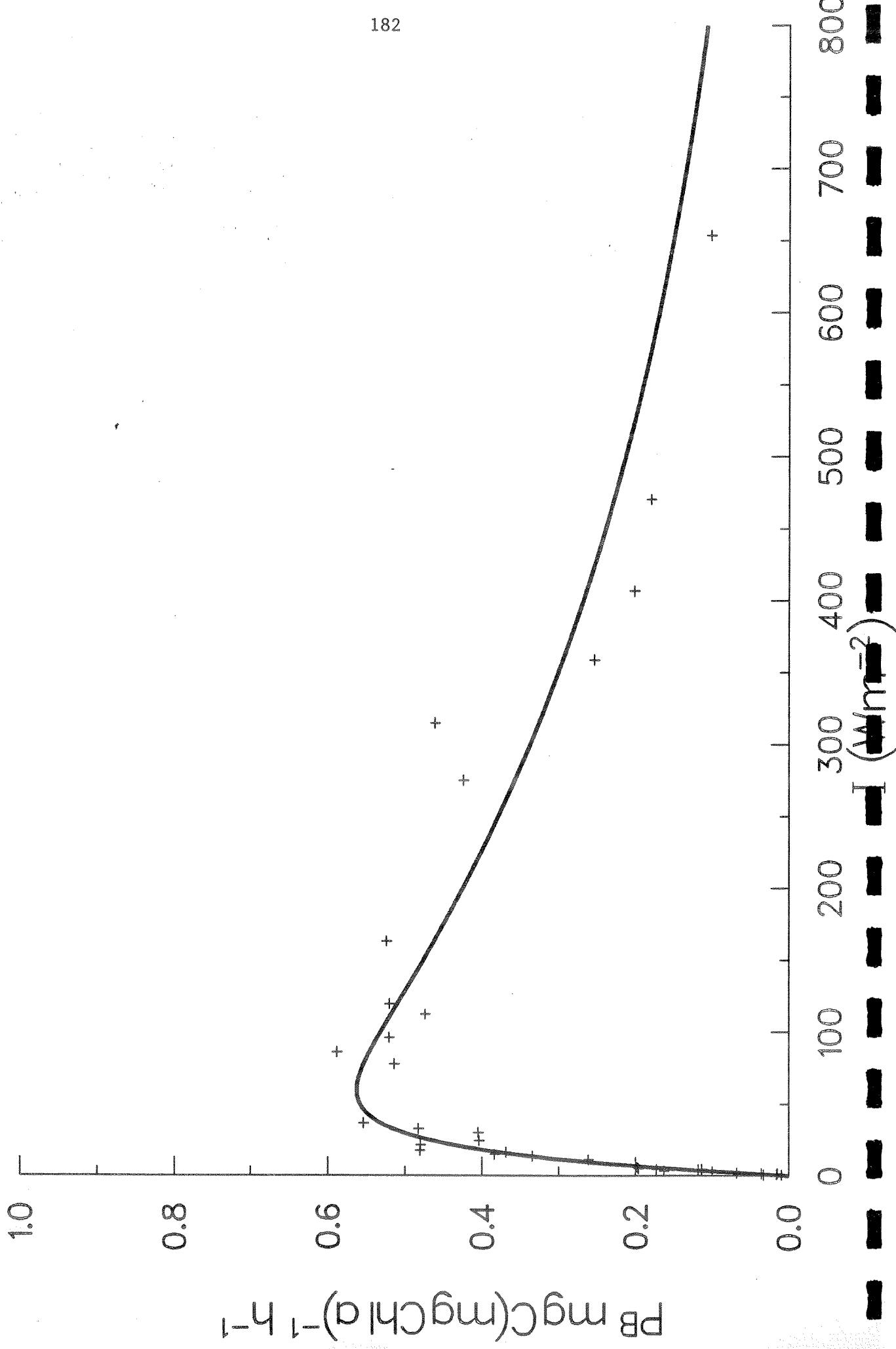
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181



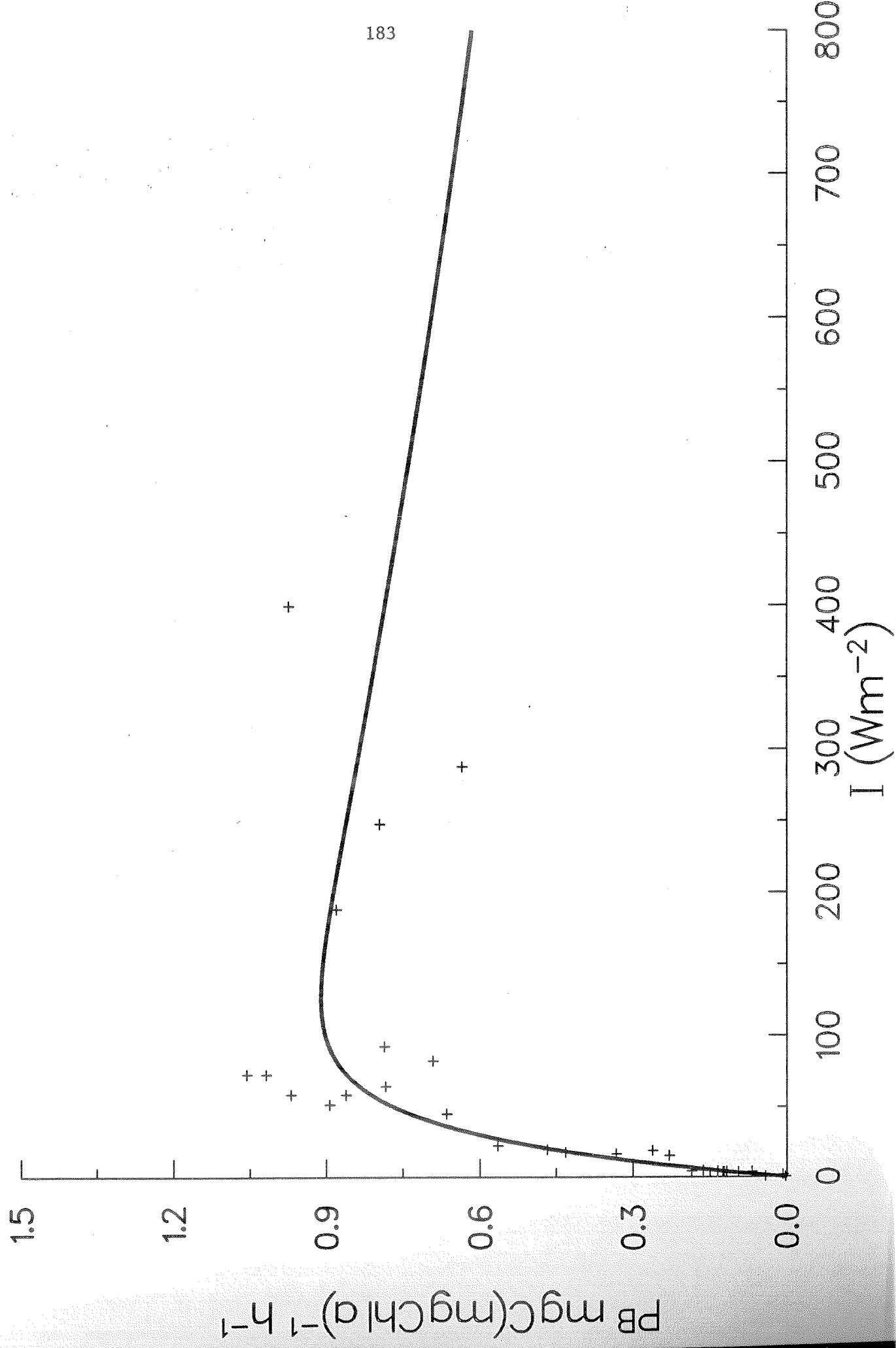
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182

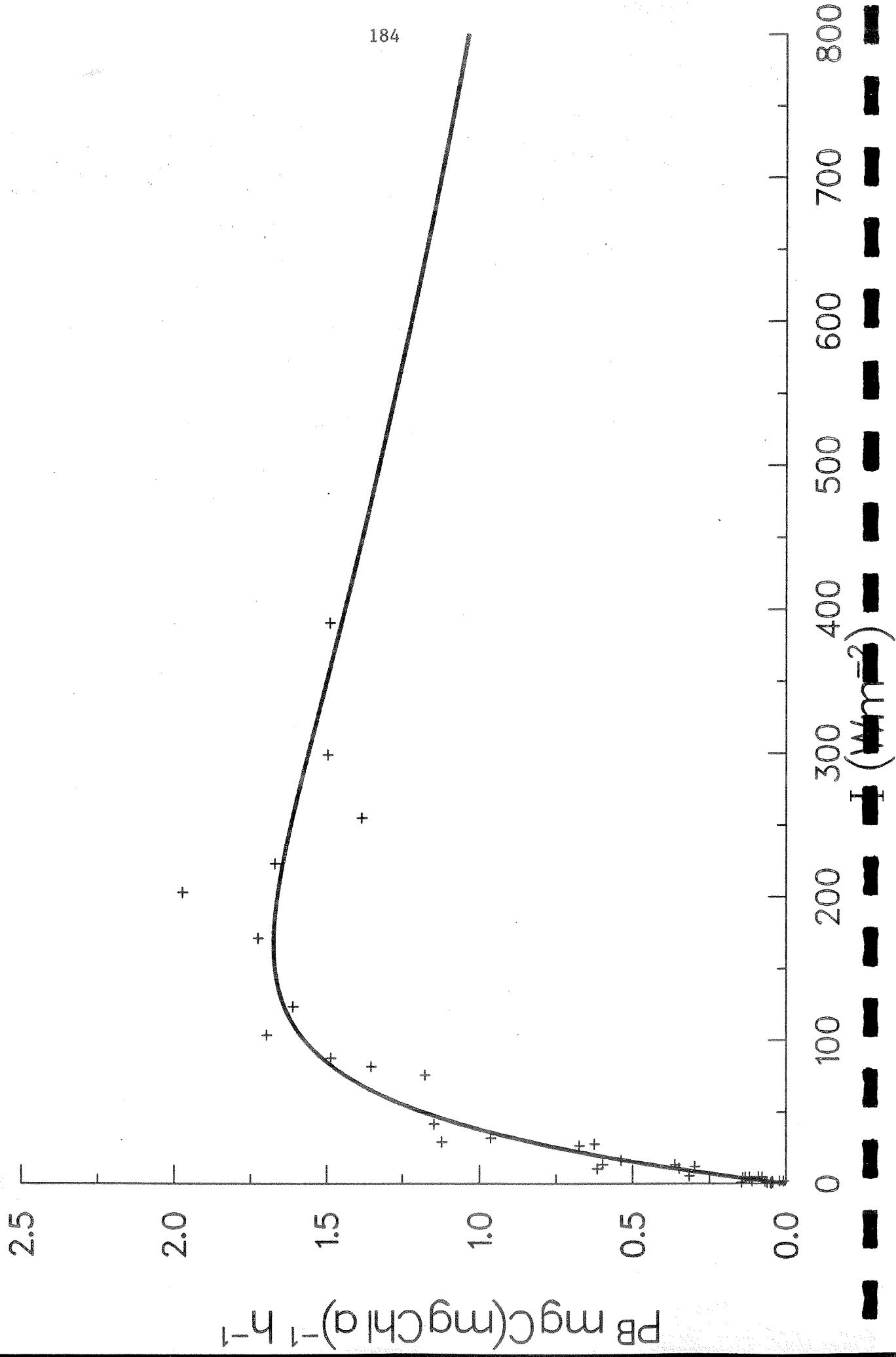


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183

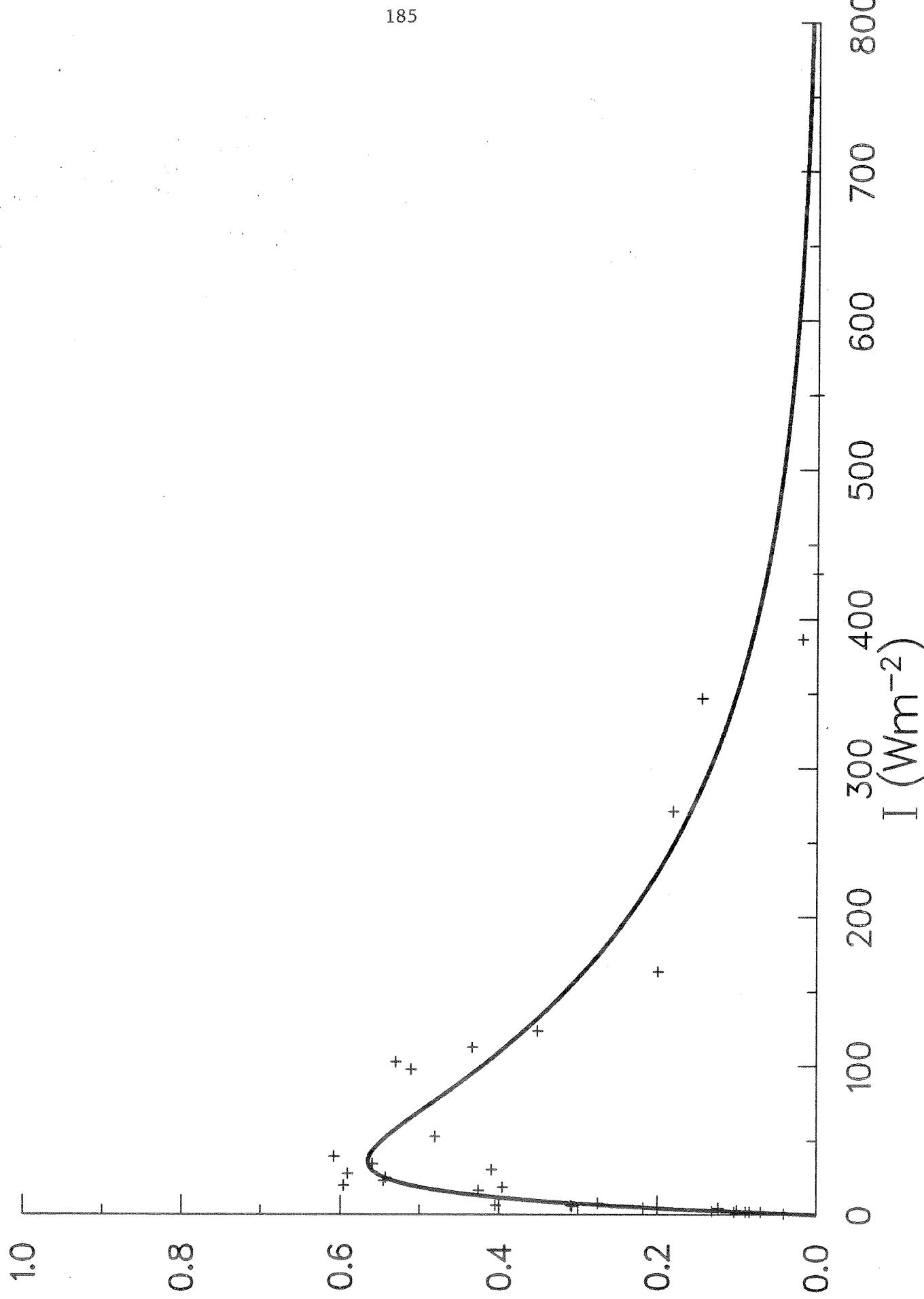


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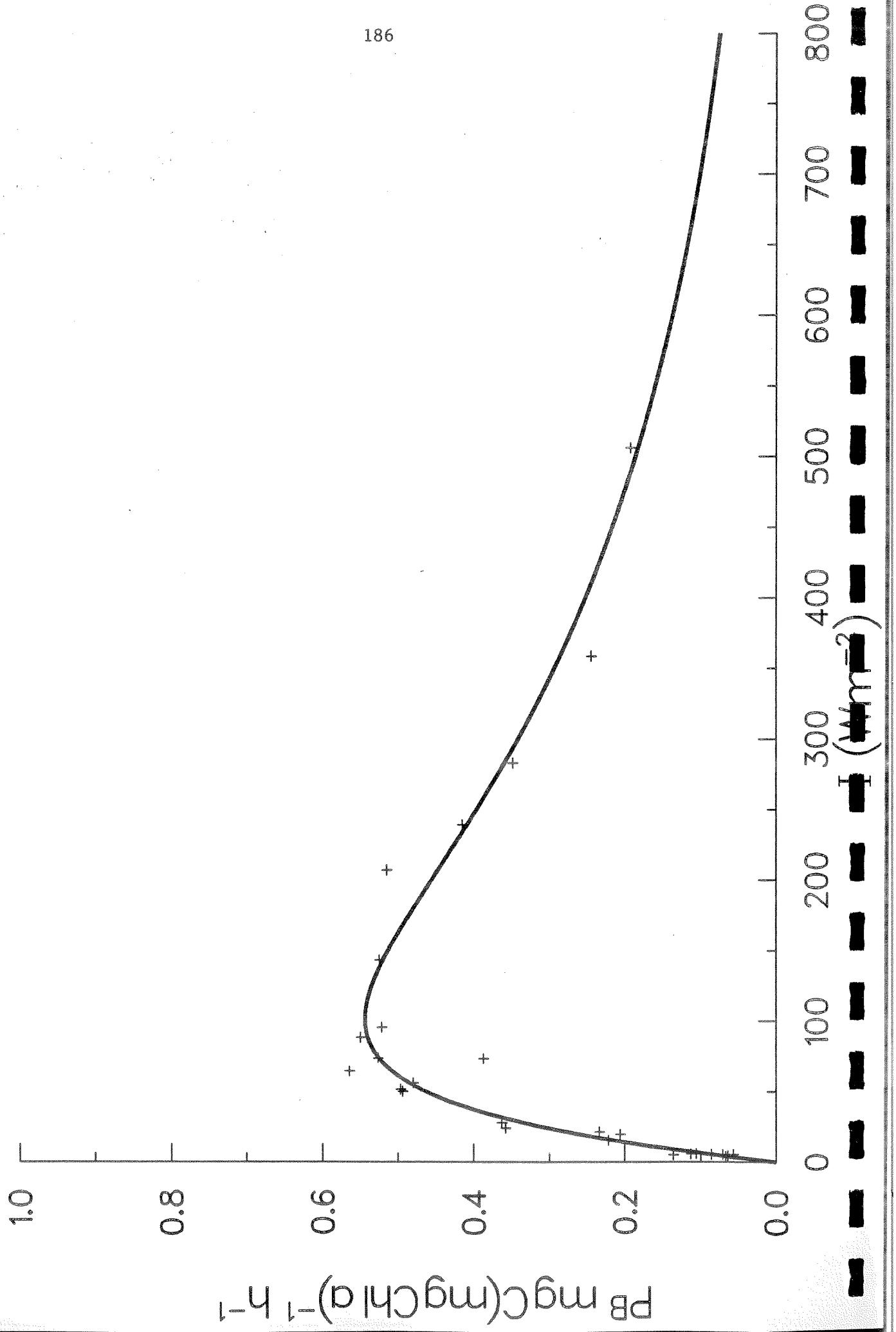
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185

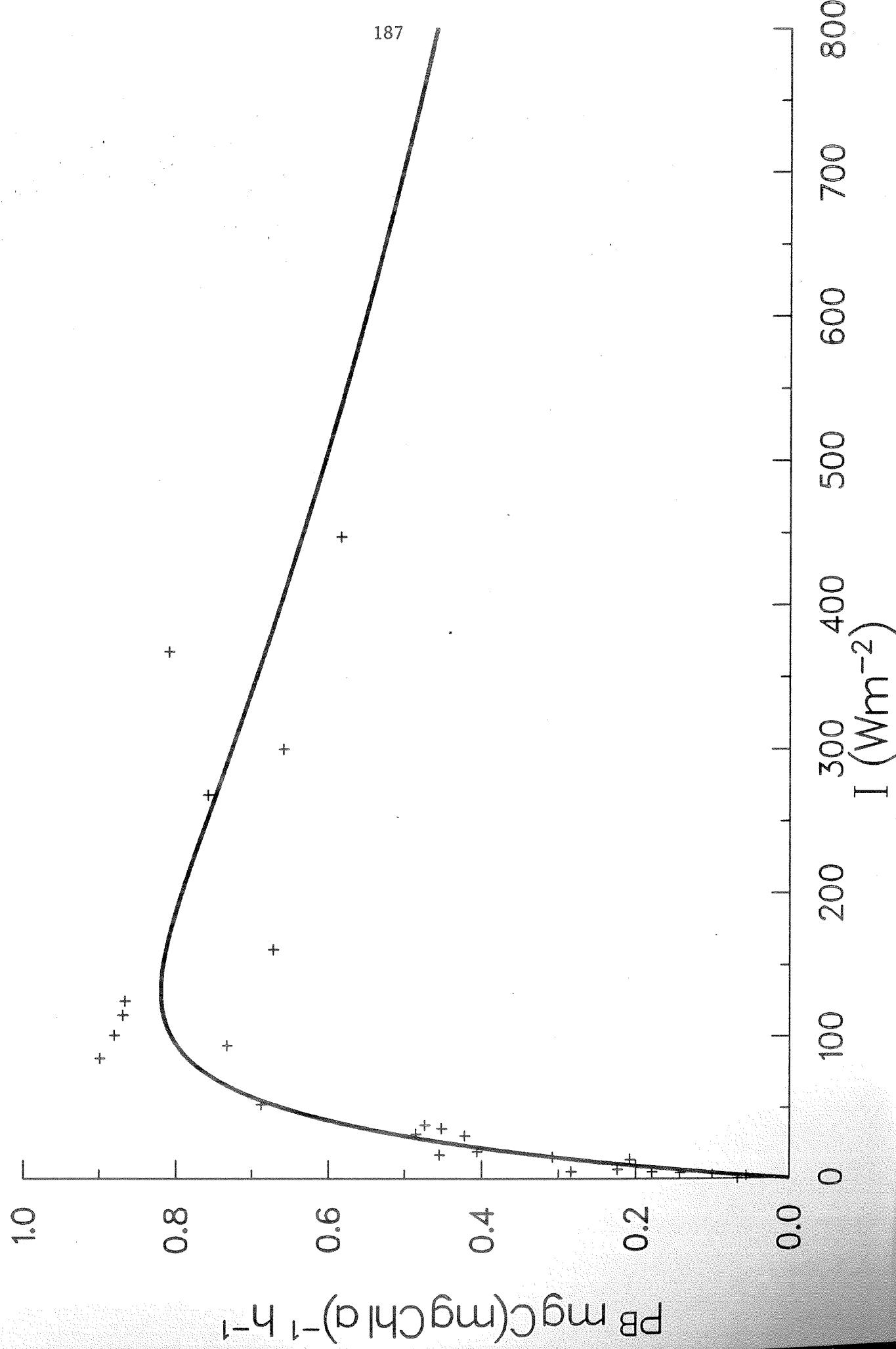


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186

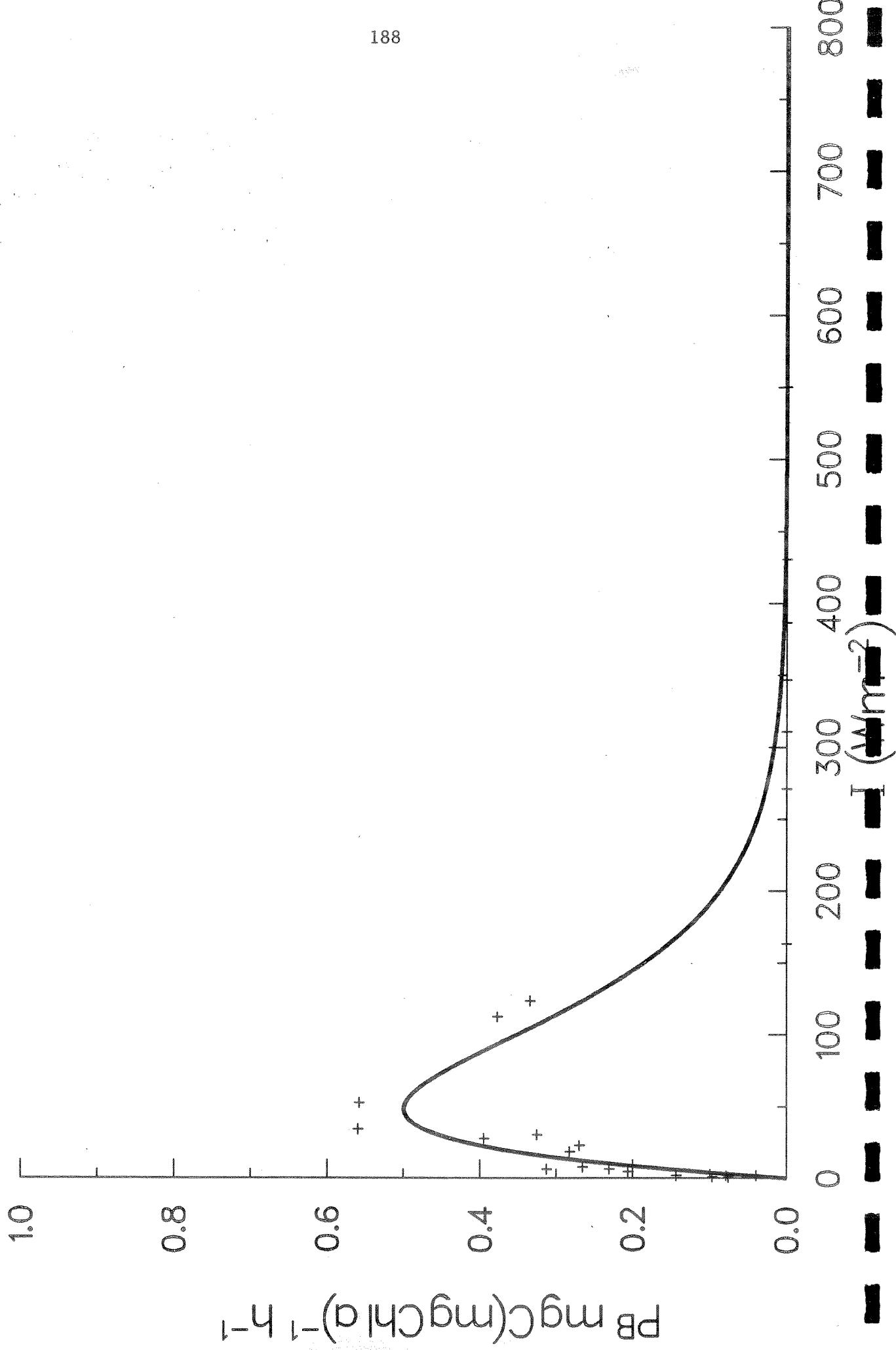


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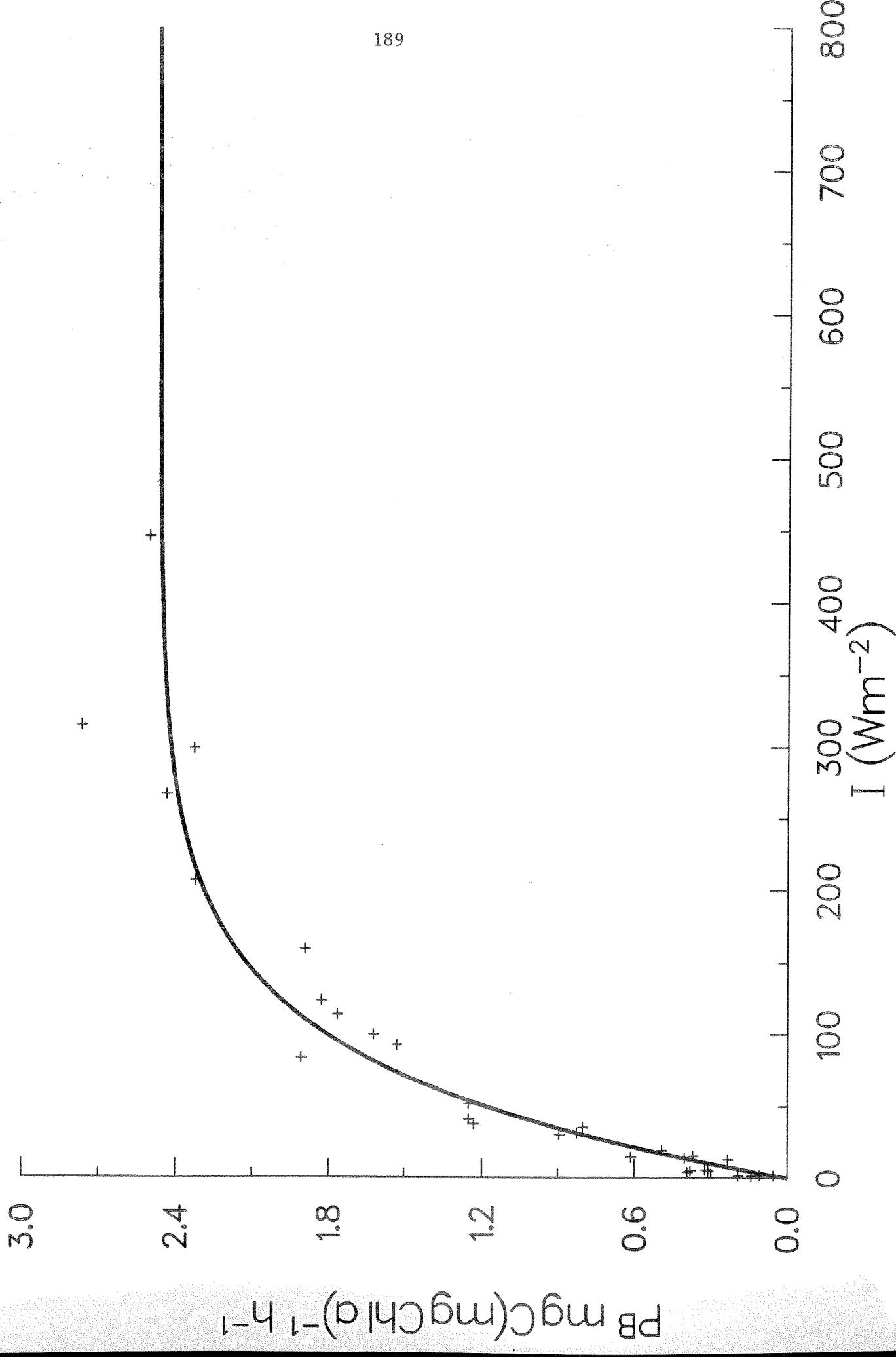
ID 037552 STA. 6F 15/06/87 110 M

188



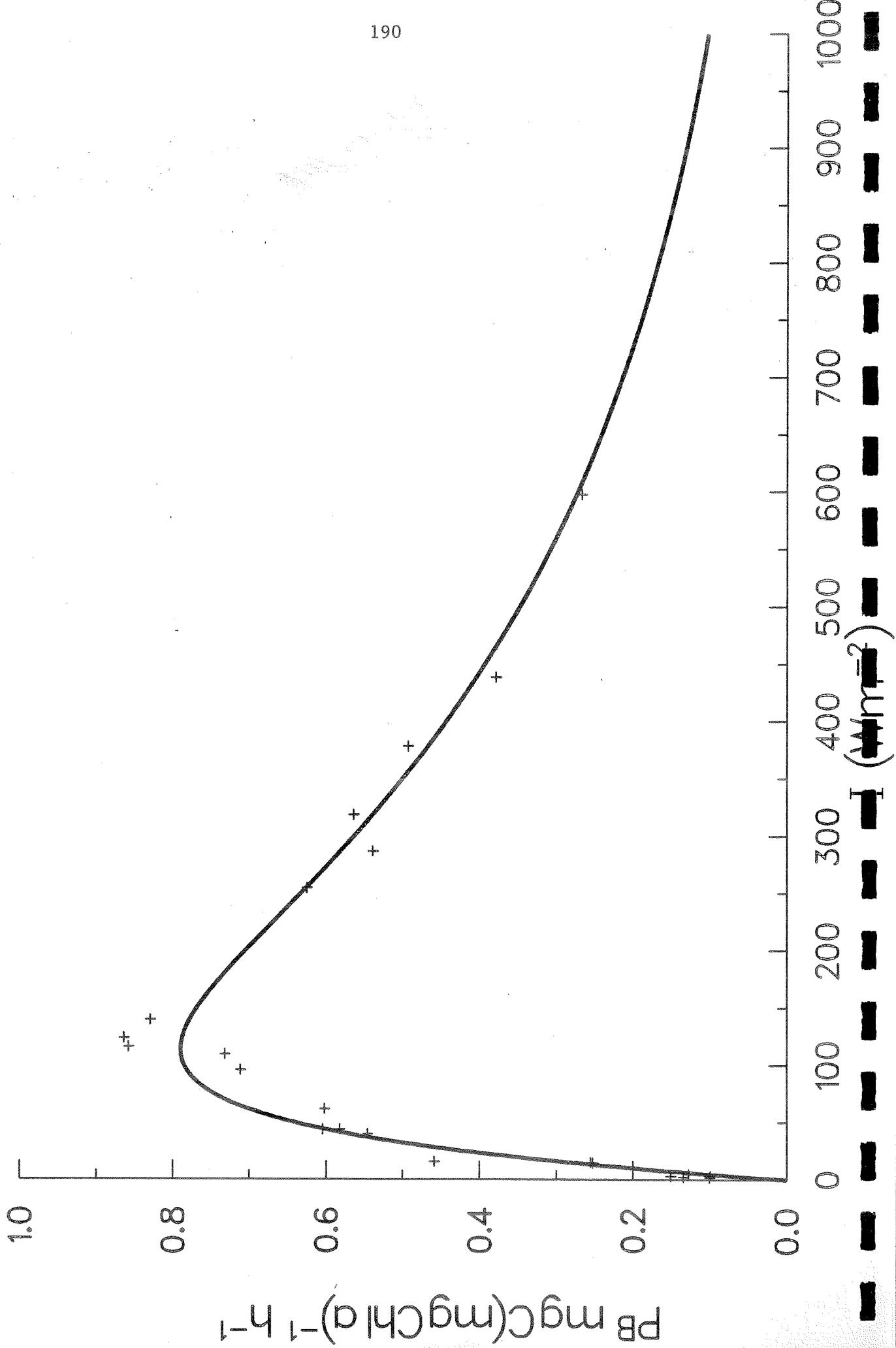
ID 037561 STA. 6F 15/06/87 10 M

189



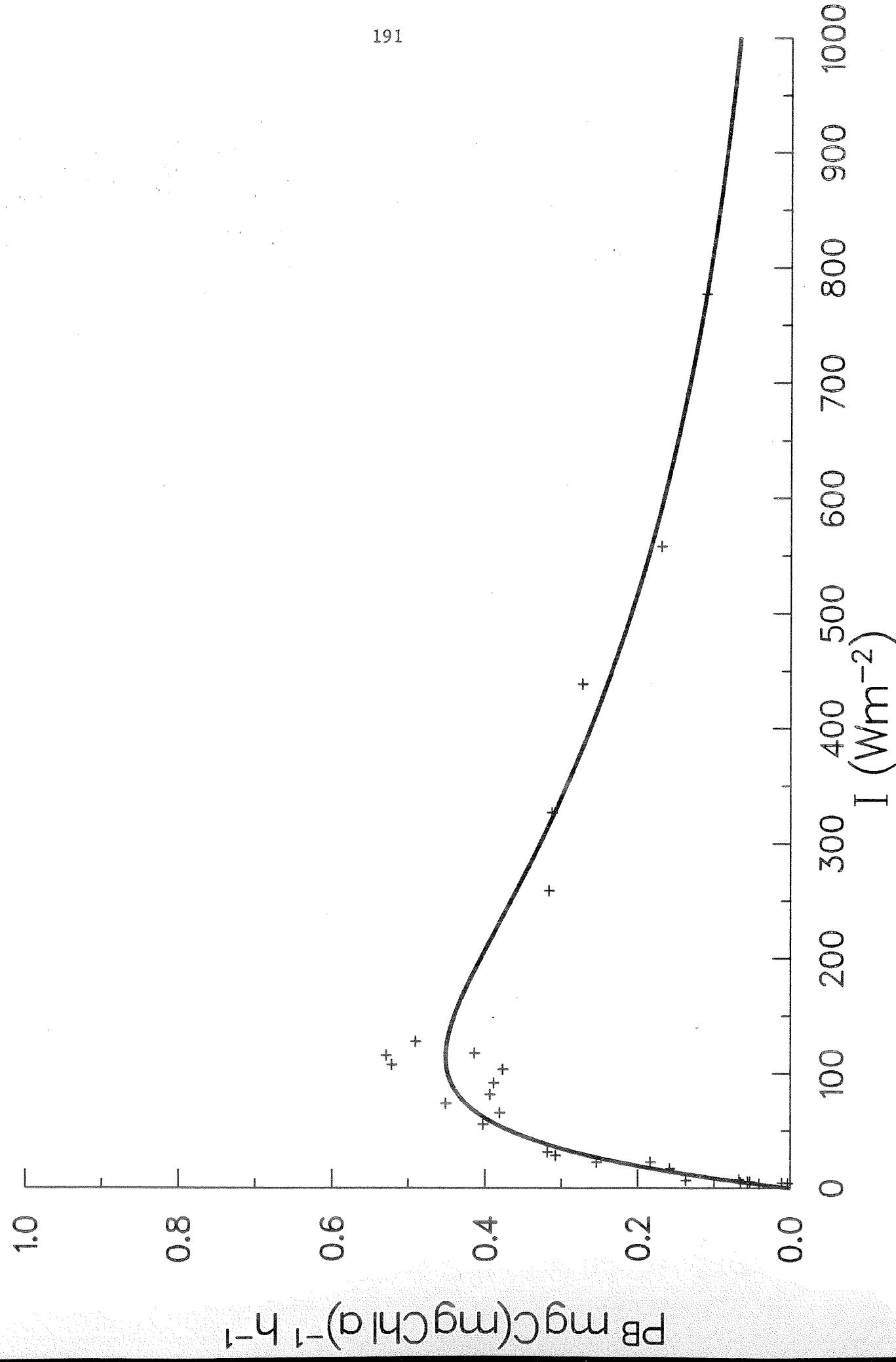
ID 037580 STN 40 18/06/87 50 M

190



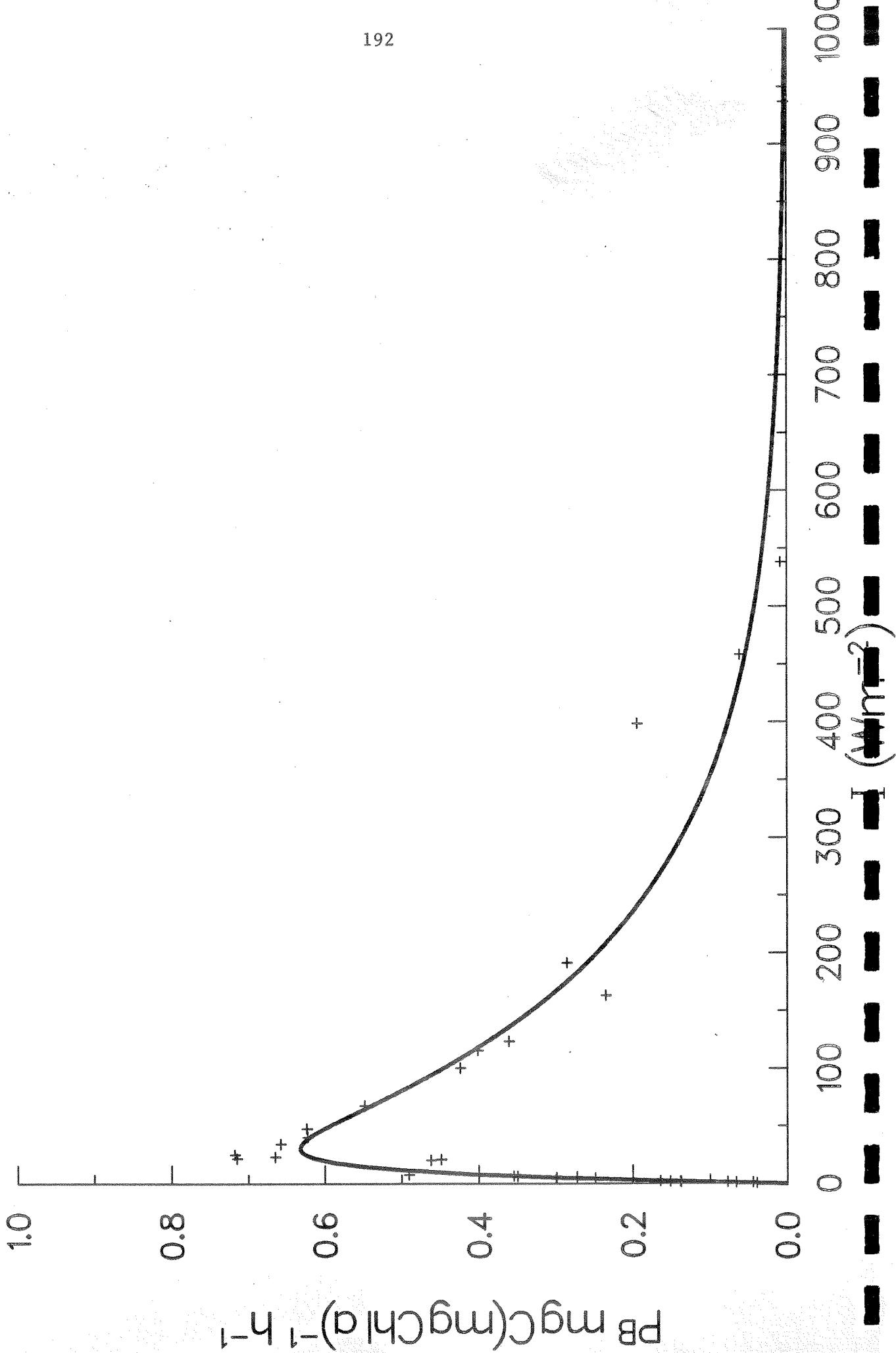
ID 037578 STN 40 18/06/87 70 M

191



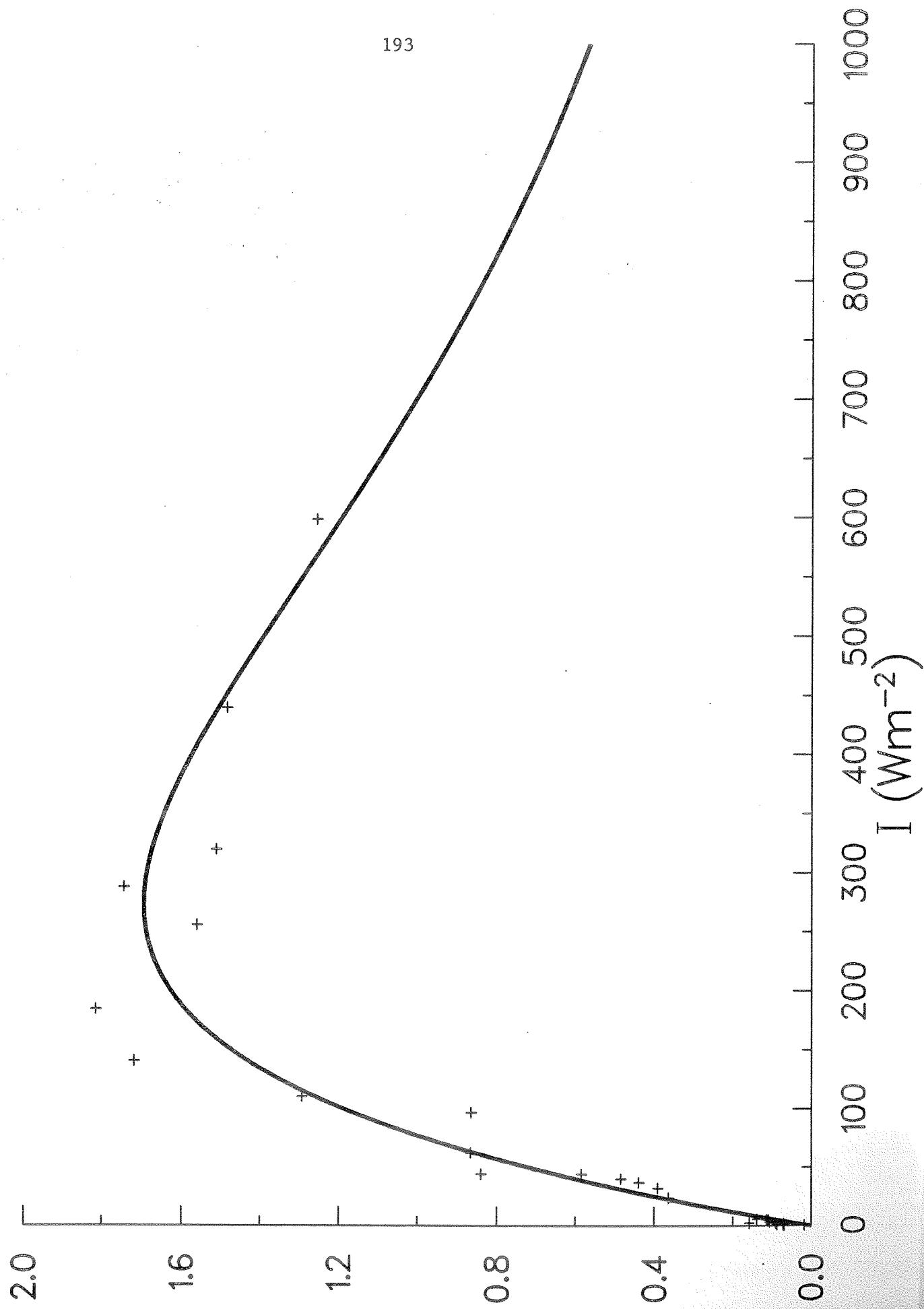
ID 037576 STN 40 18/06/87 90 M

192



ID 027610 STN 77 19/06/87 10 M

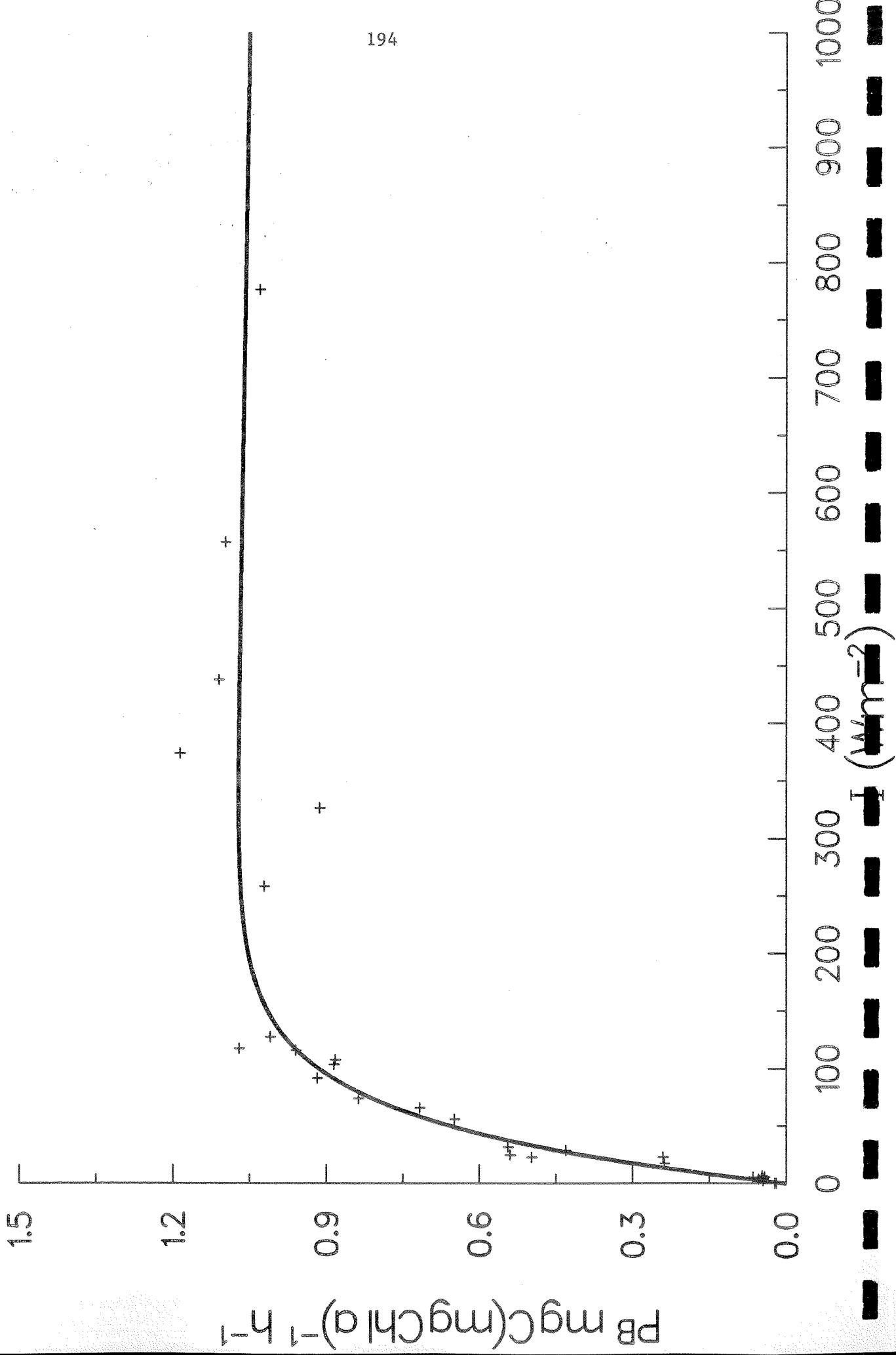
193



$PB$   $\text{mgC}(\text{mgChl a})^{-1} \text{h}^{-1}$

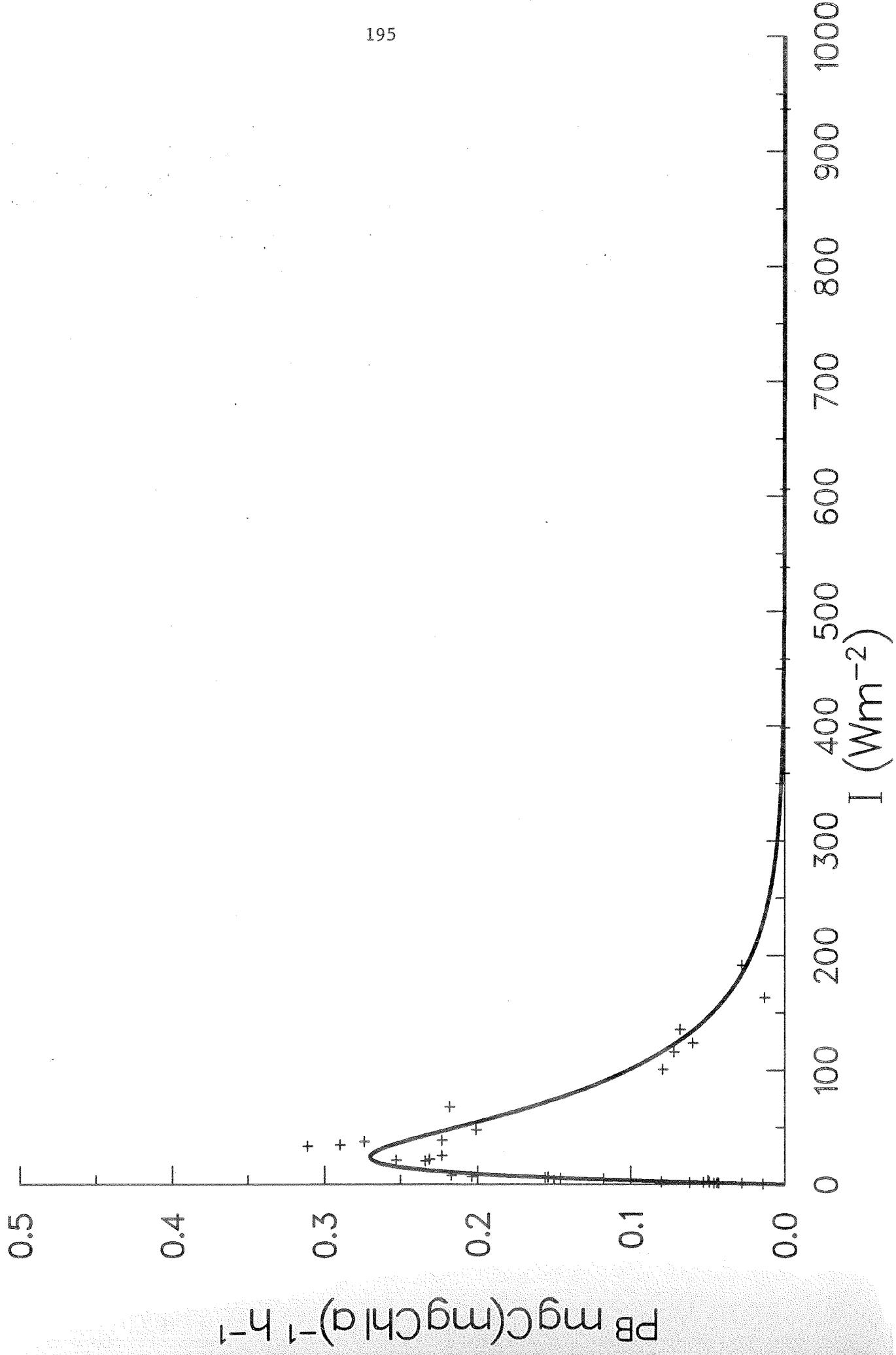
ID 027608 STN 77 19/06/87 30 M

194



ID 027601 STN 77 19/06/87 110 M

195



ID 027625 STN 103 20/06/87 40 M

196

1.5

1.2

0.9

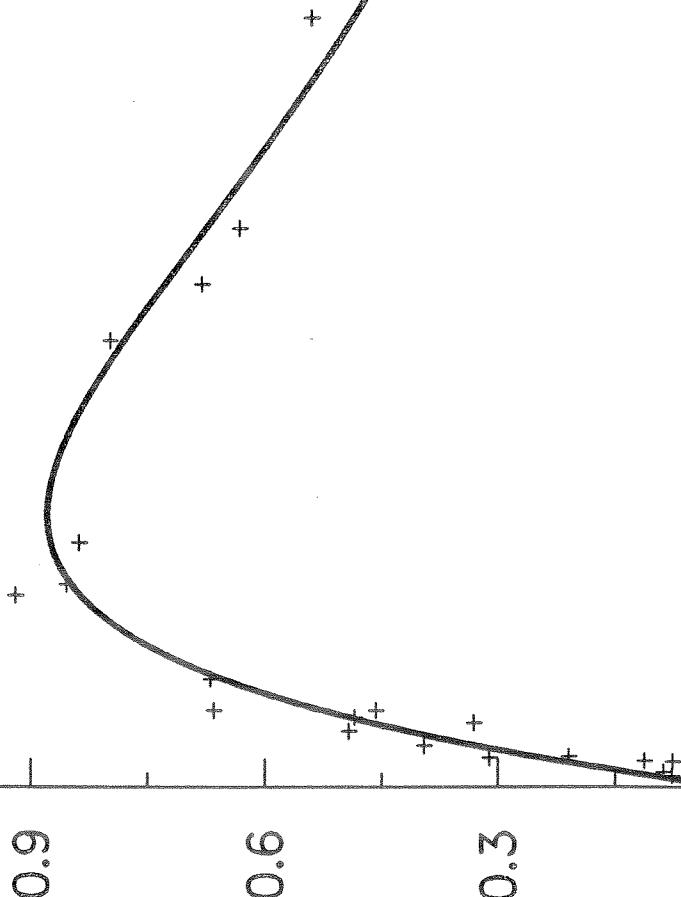
0.6

0.3

0.0

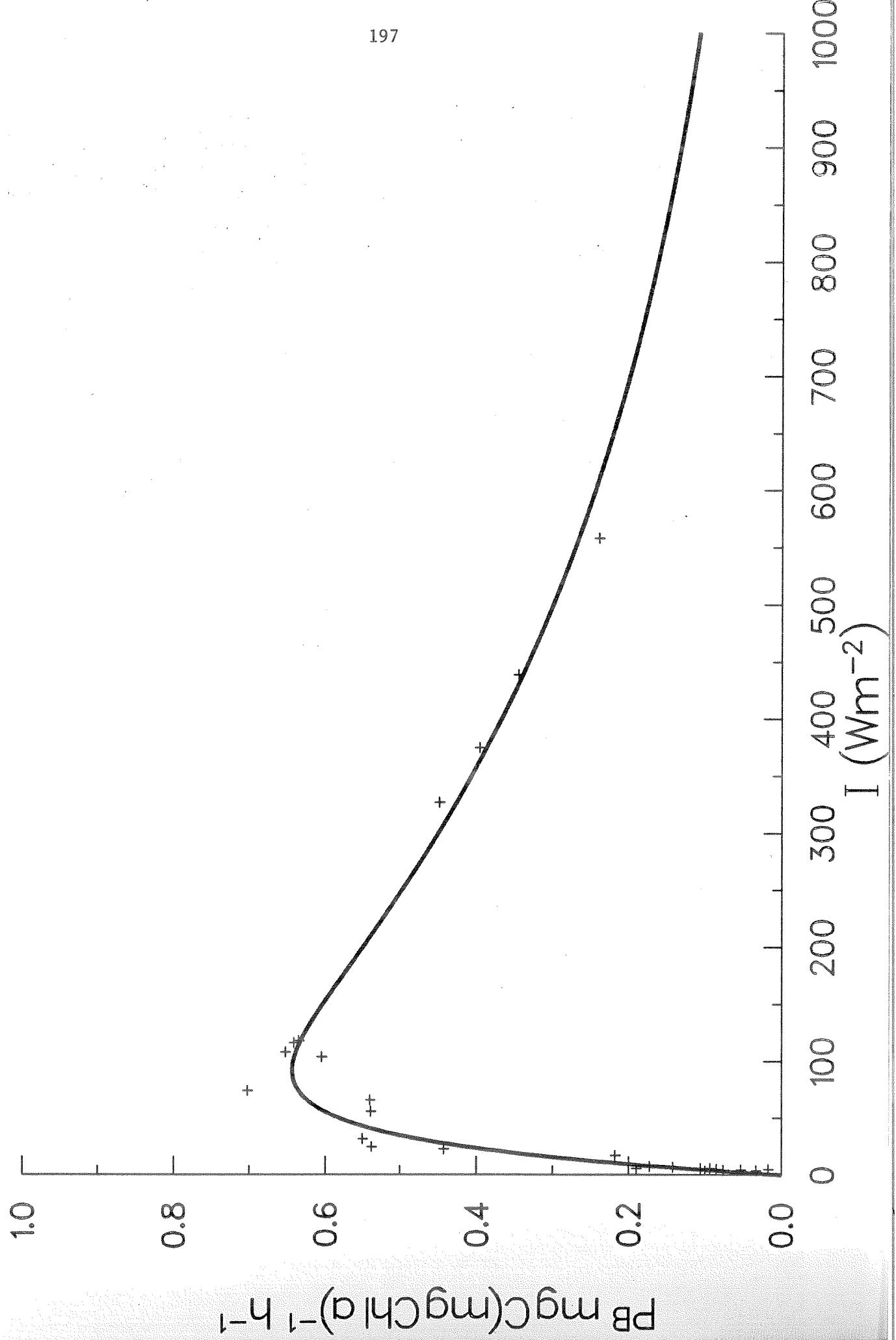
PB mgC(mgChl $a$ ) $^{-1}$  h $^{-1}$

0 100 200 300 400 500 600 700 800 900 1000  
W(m $^{-2}$ )



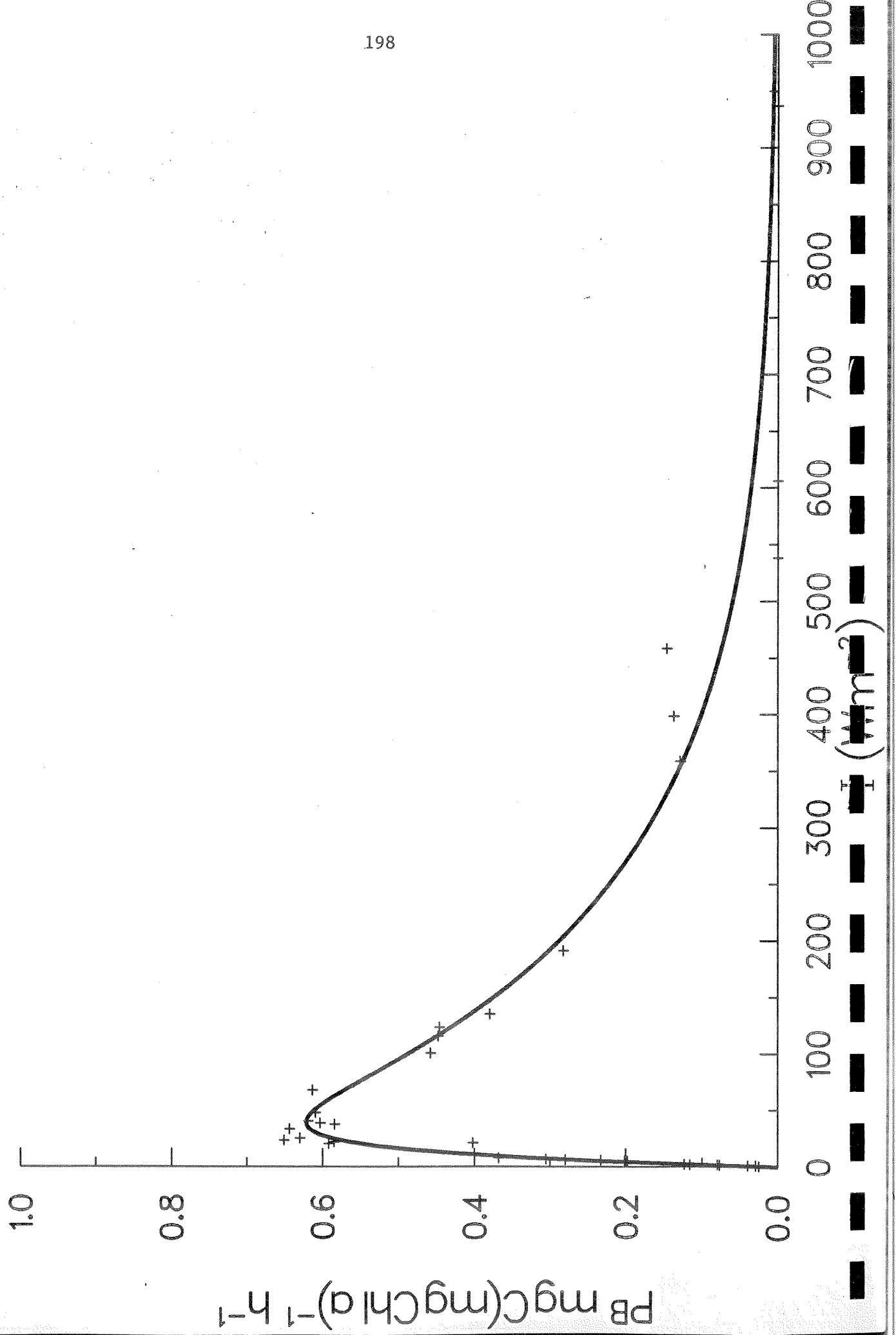
ID 027621 STN 103 20/06/87 60 M

197



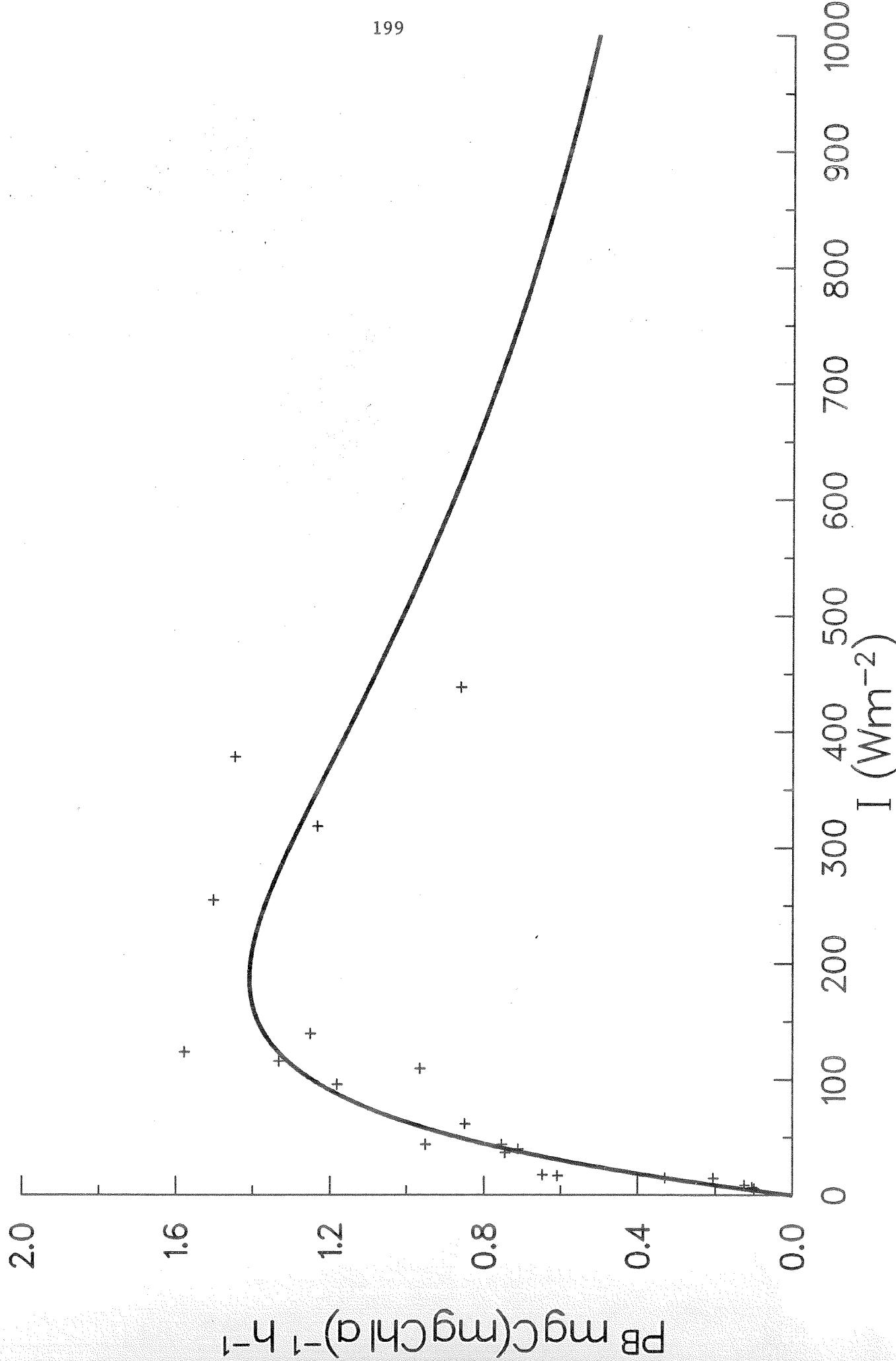
ID 027617 STN 103 20/06/87 80 M

198

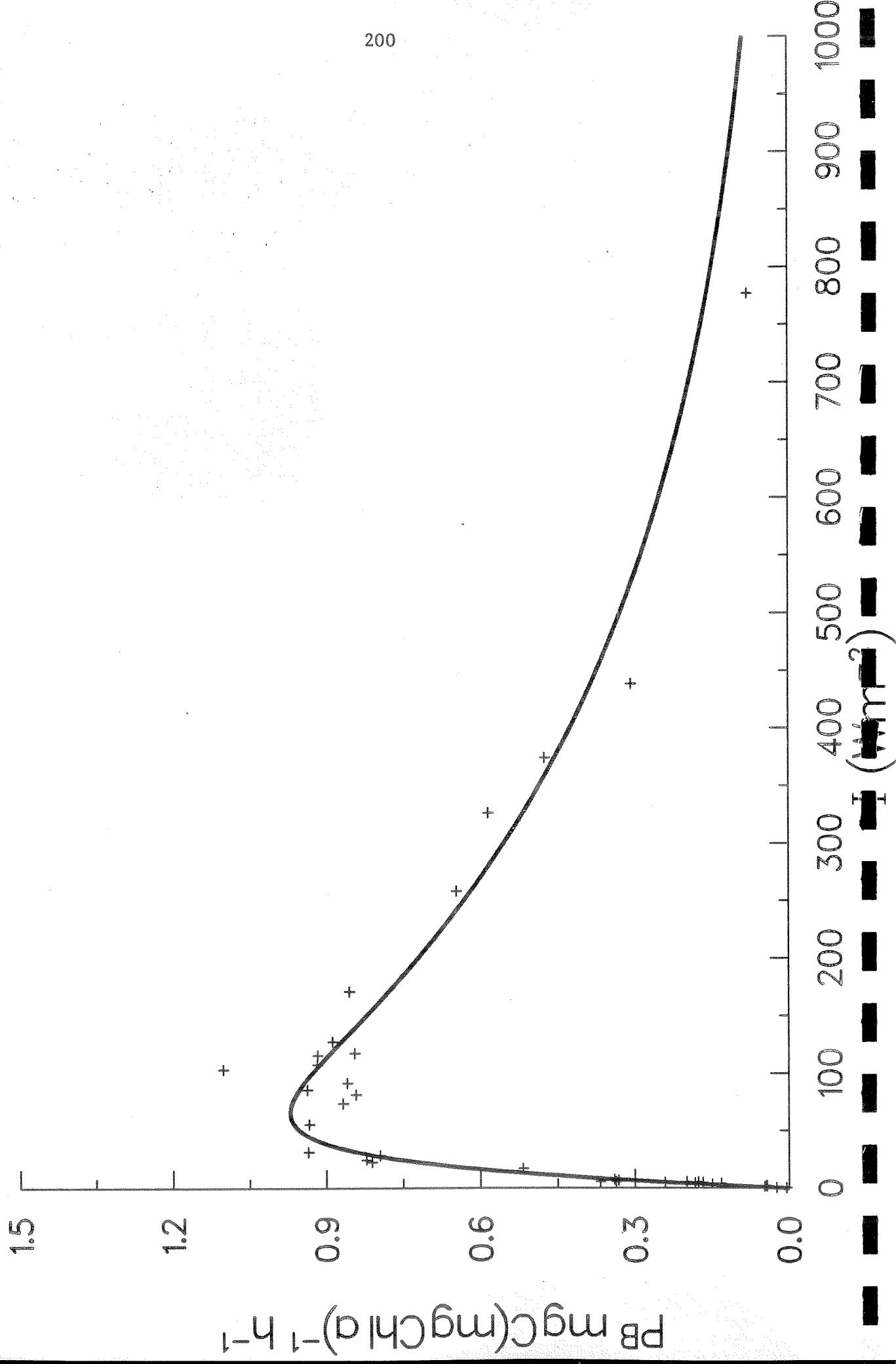


ID 027659 STN 114 21/06/87 40 M

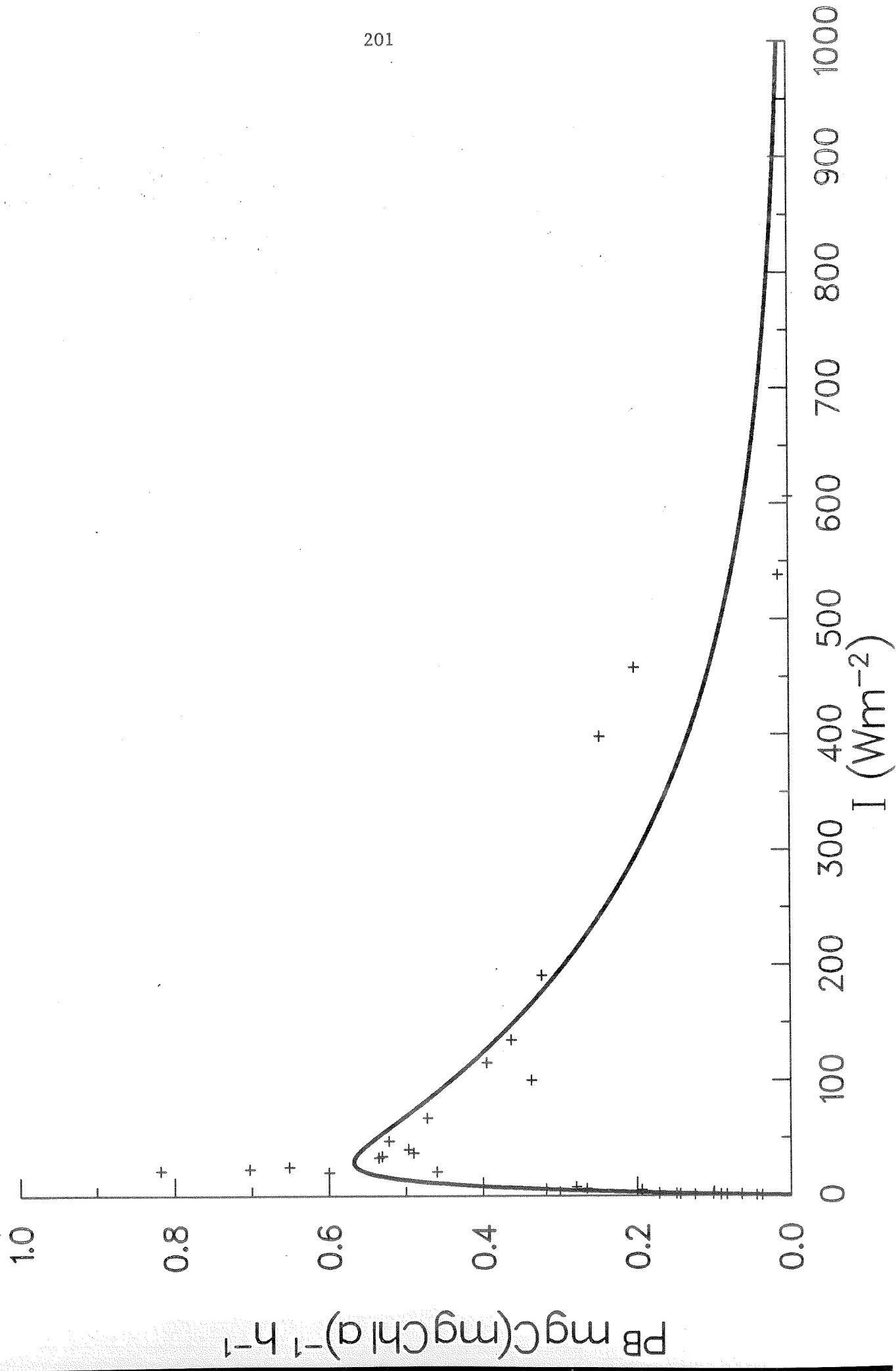
199



ID 027655 STN 114 21/06/87 60 M

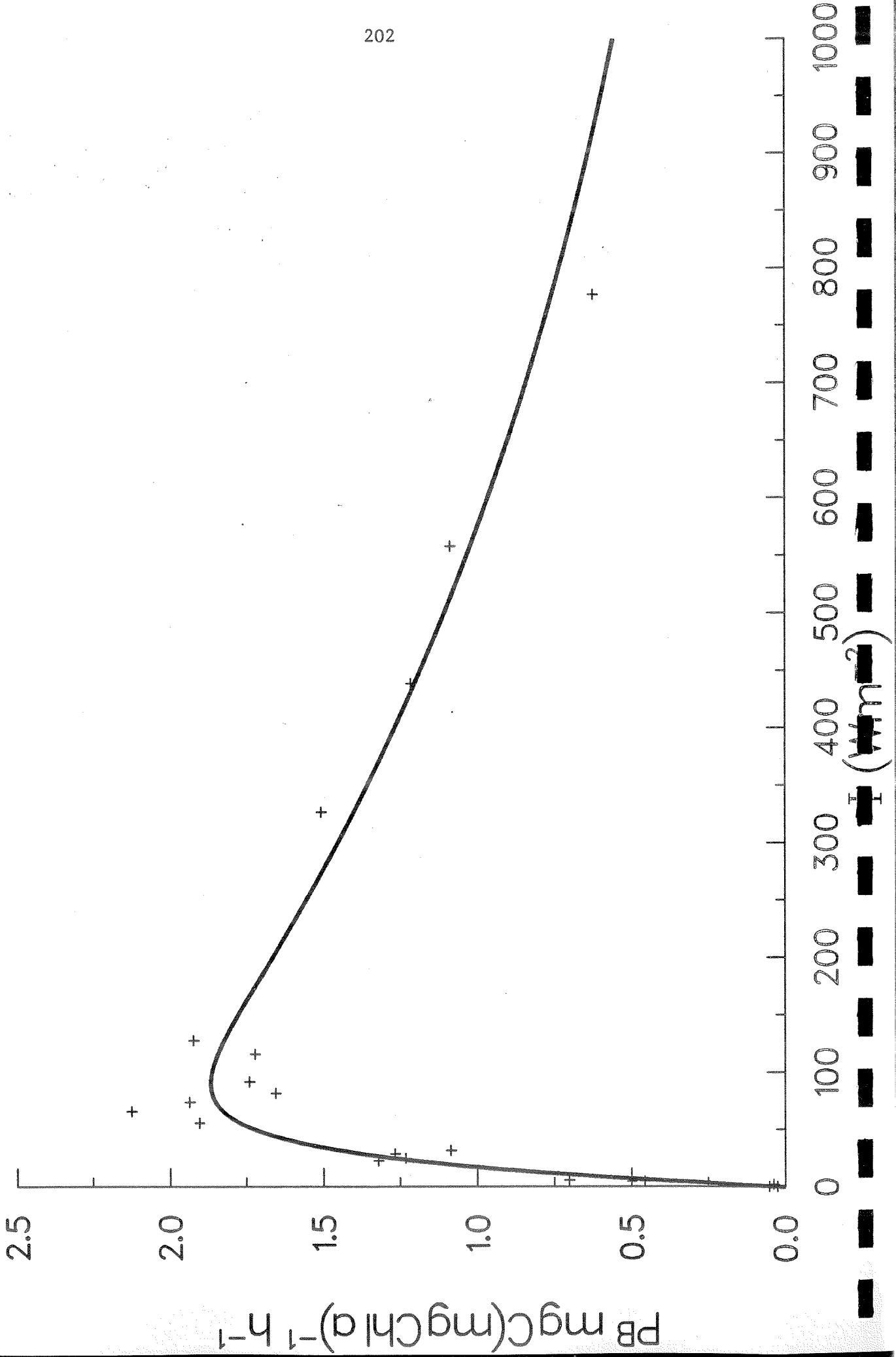


ID 027651 STN 114 21/06/87 80 M



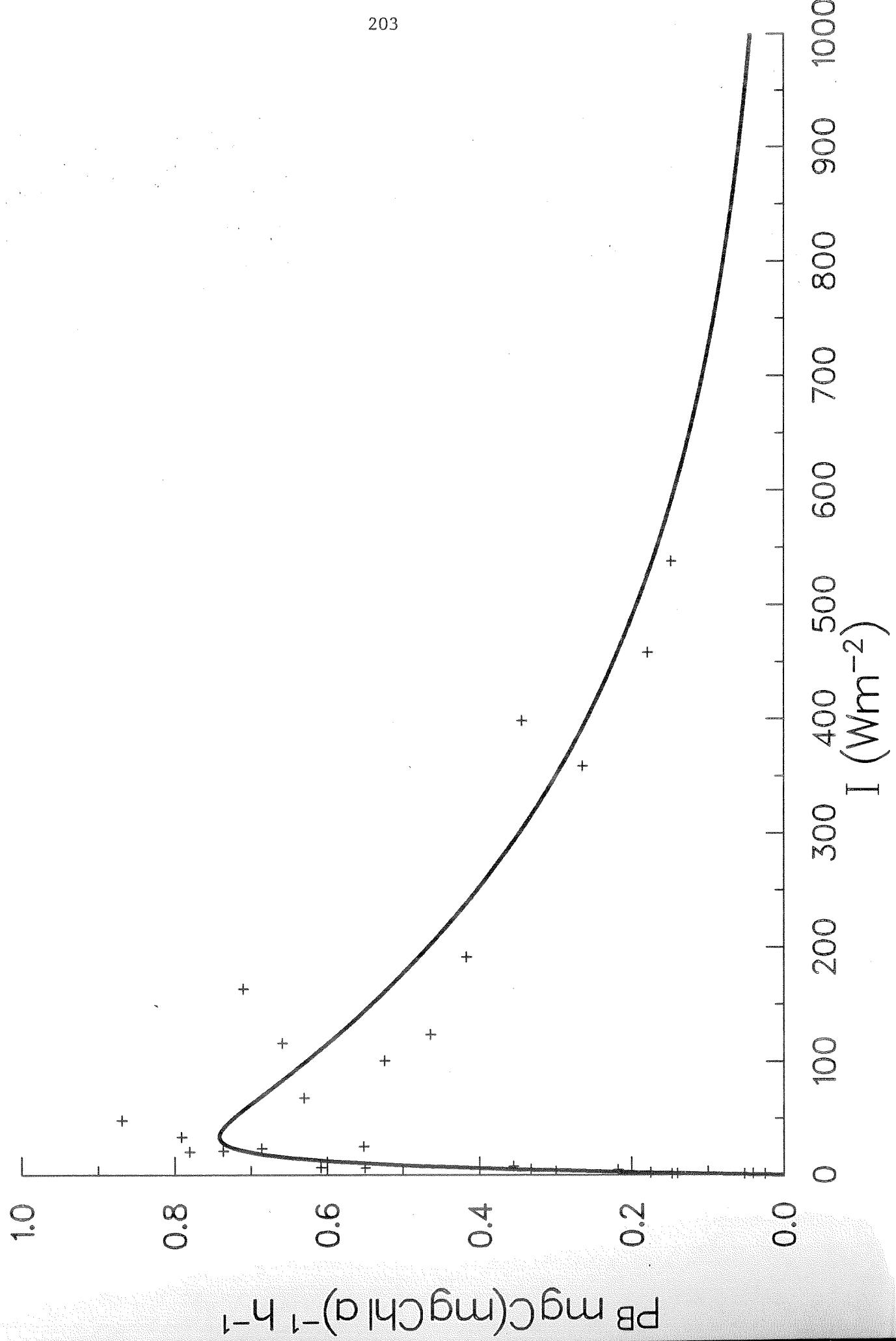
ID 027680 STN 122 22/06/87 50 M

202



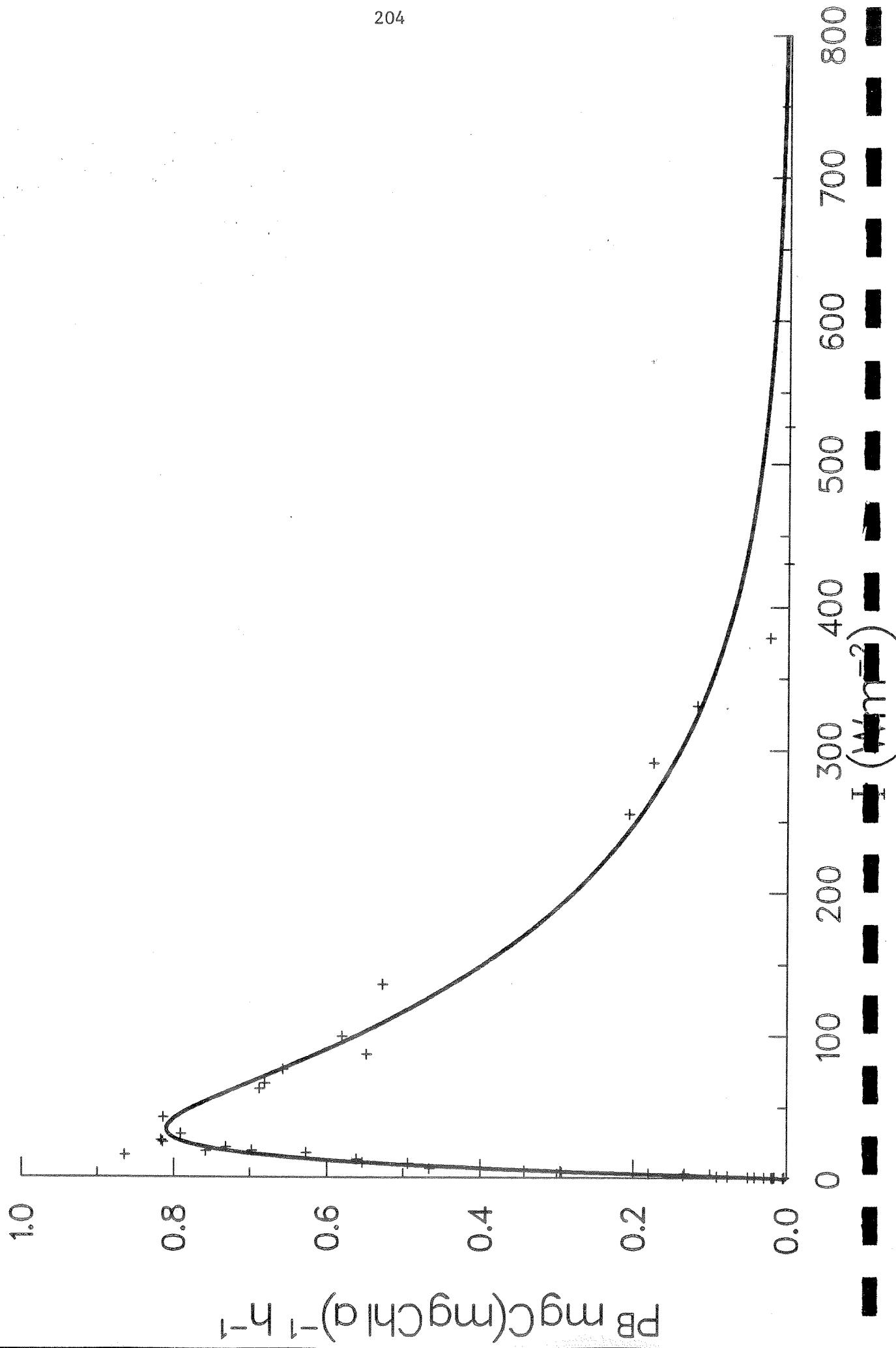
ID 027676 STN 122 22/06/87 70 M

203



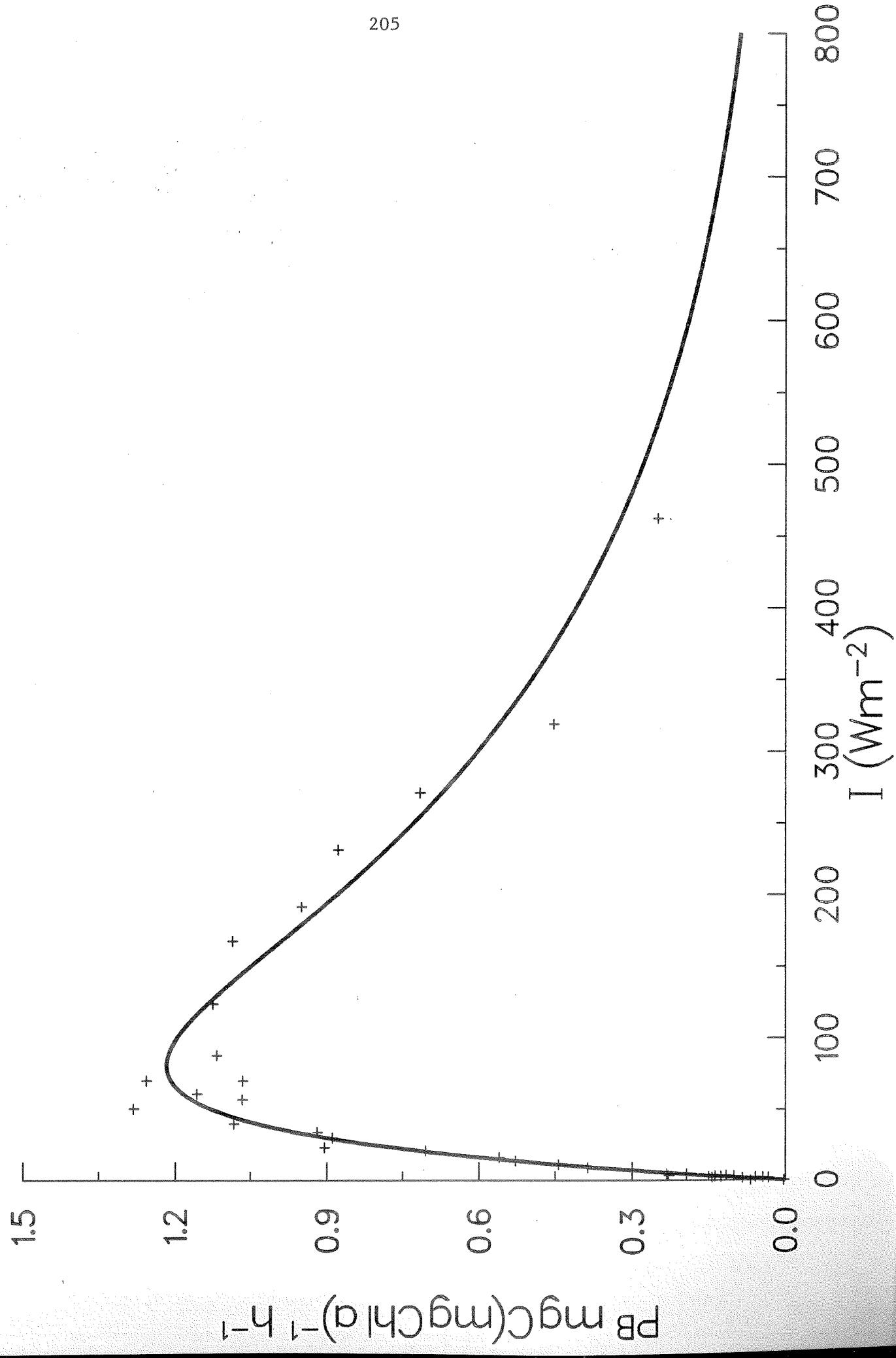
ID 026708 STA. 143 23/06/87 80 M

204

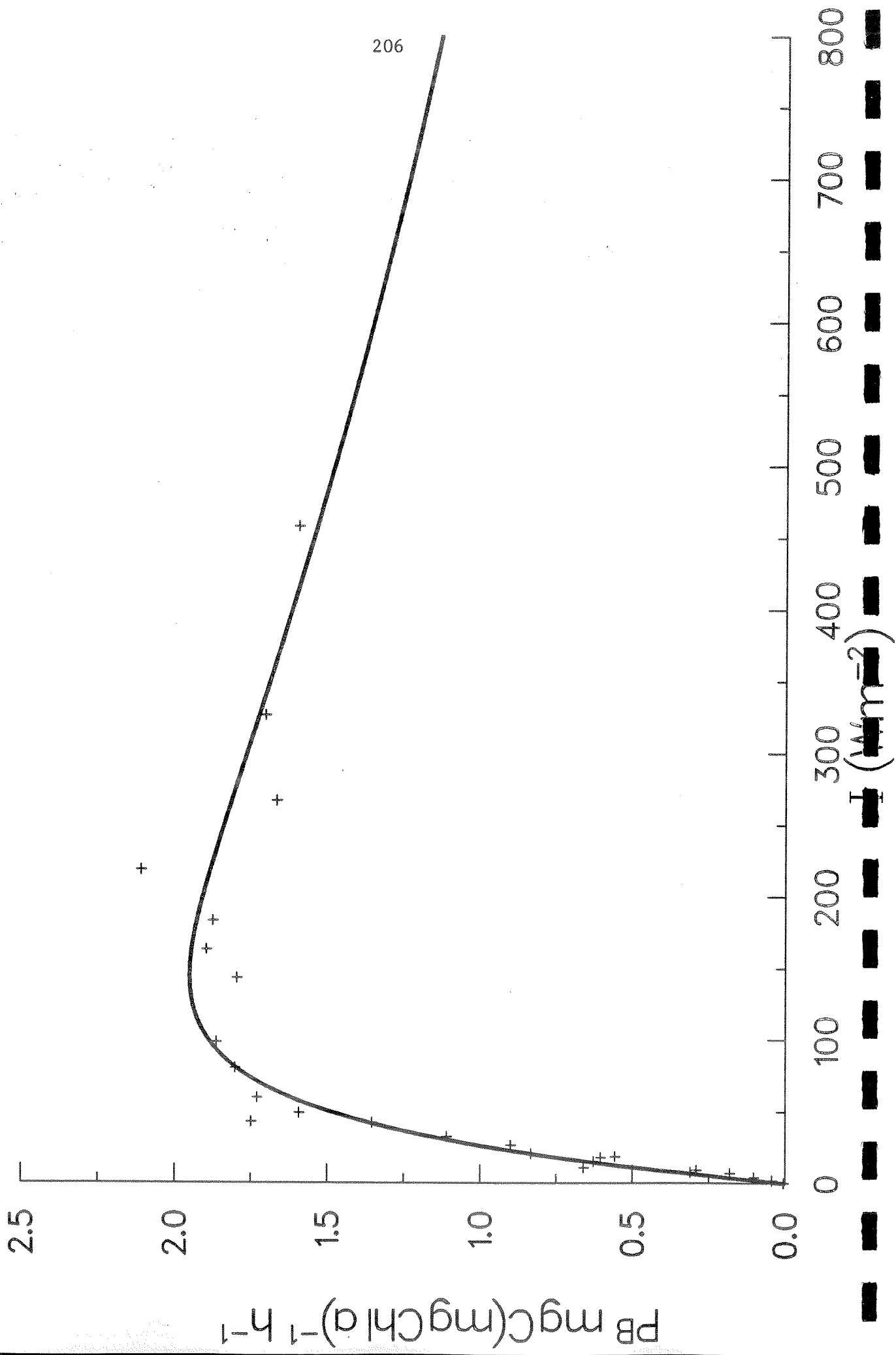


ID 026712 STA. 143 23/06/87 60 M

205

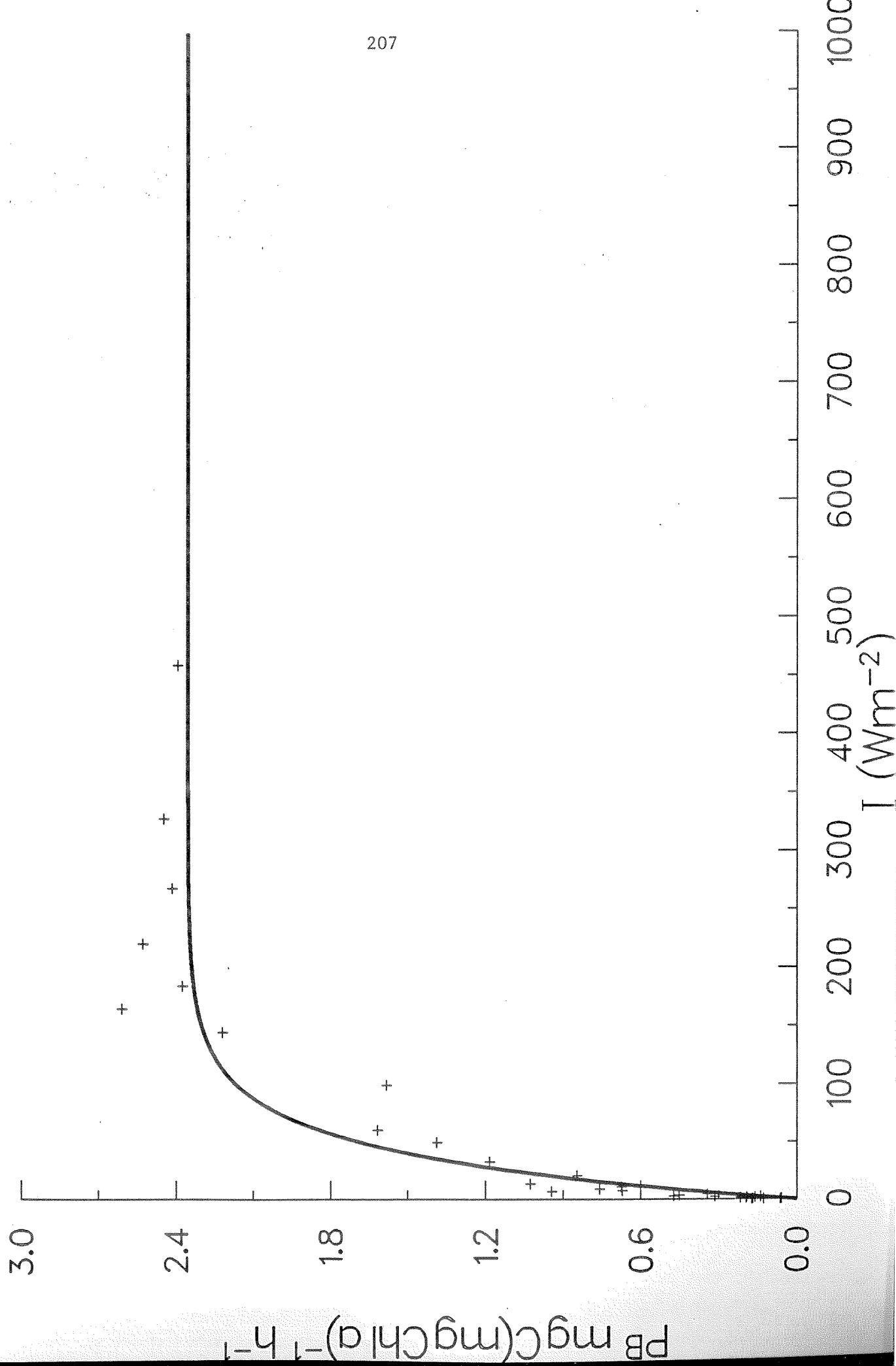


ID 026716 STA. 143 23/06/87 40 M



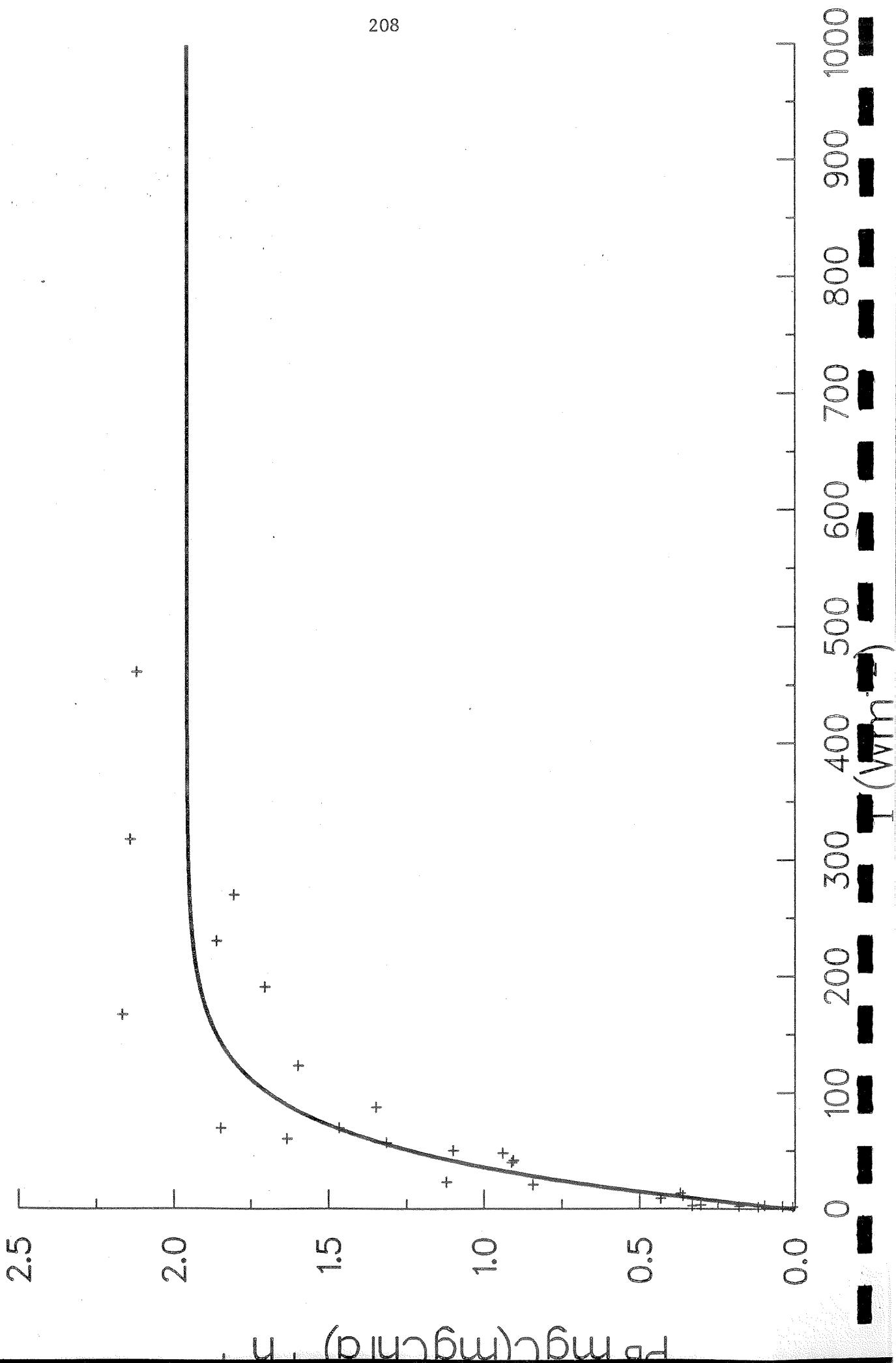
C ID 026757 STN 163 23/06/87 5 M

207



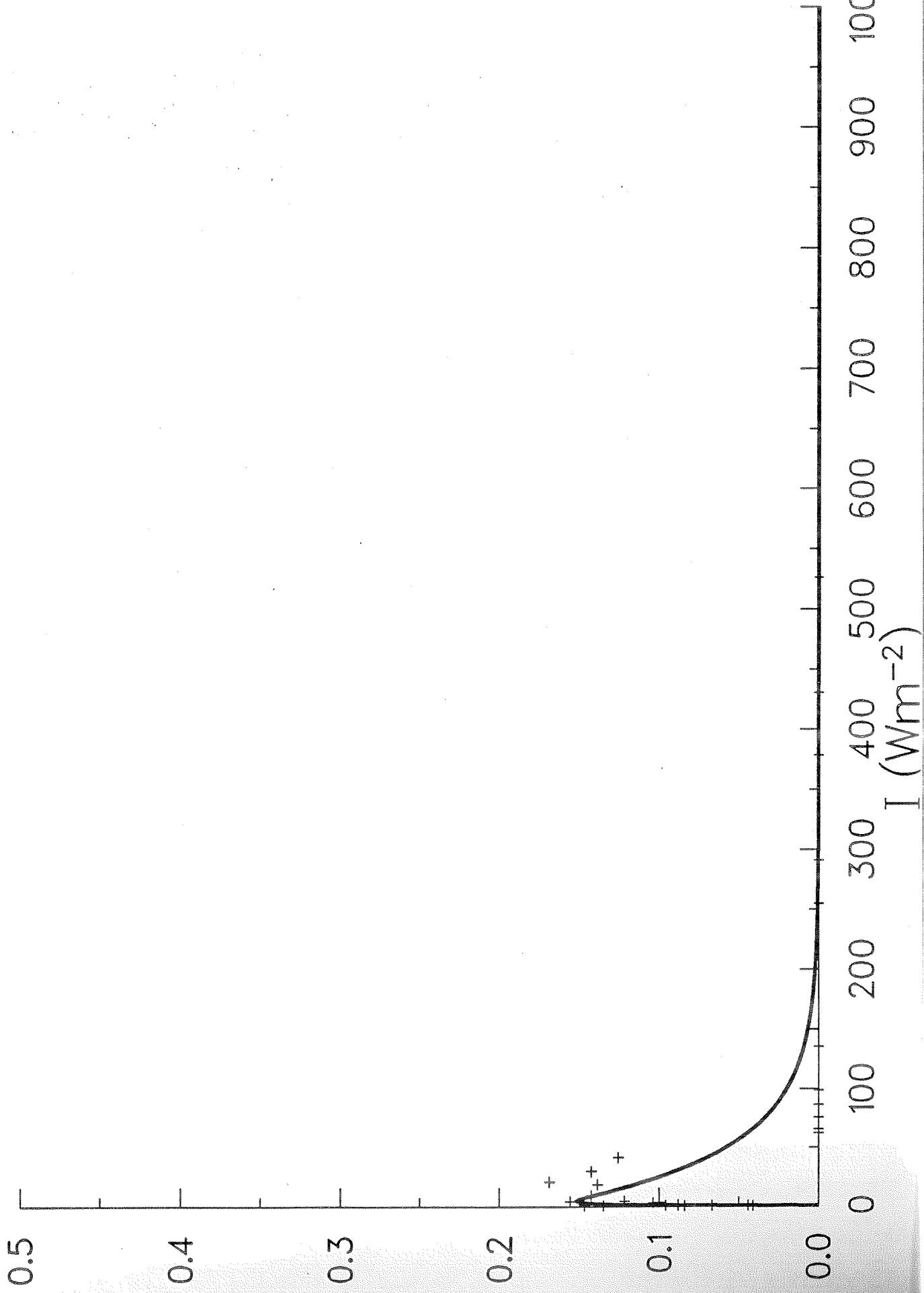
C ID 026754 STN 163 24/06/87 20 M

208



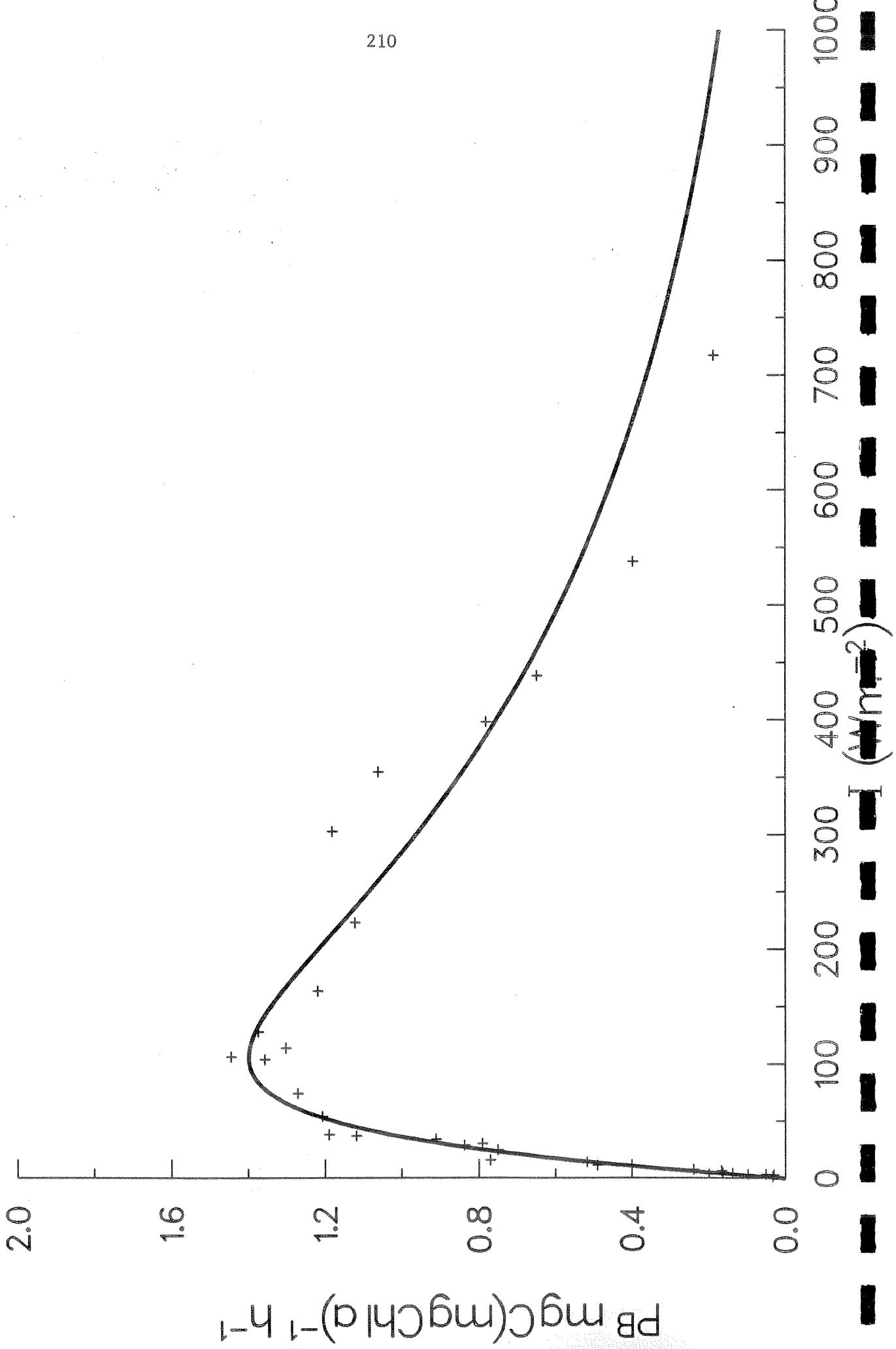
C ID 026736 STN 163 24/06/87 110 M

209



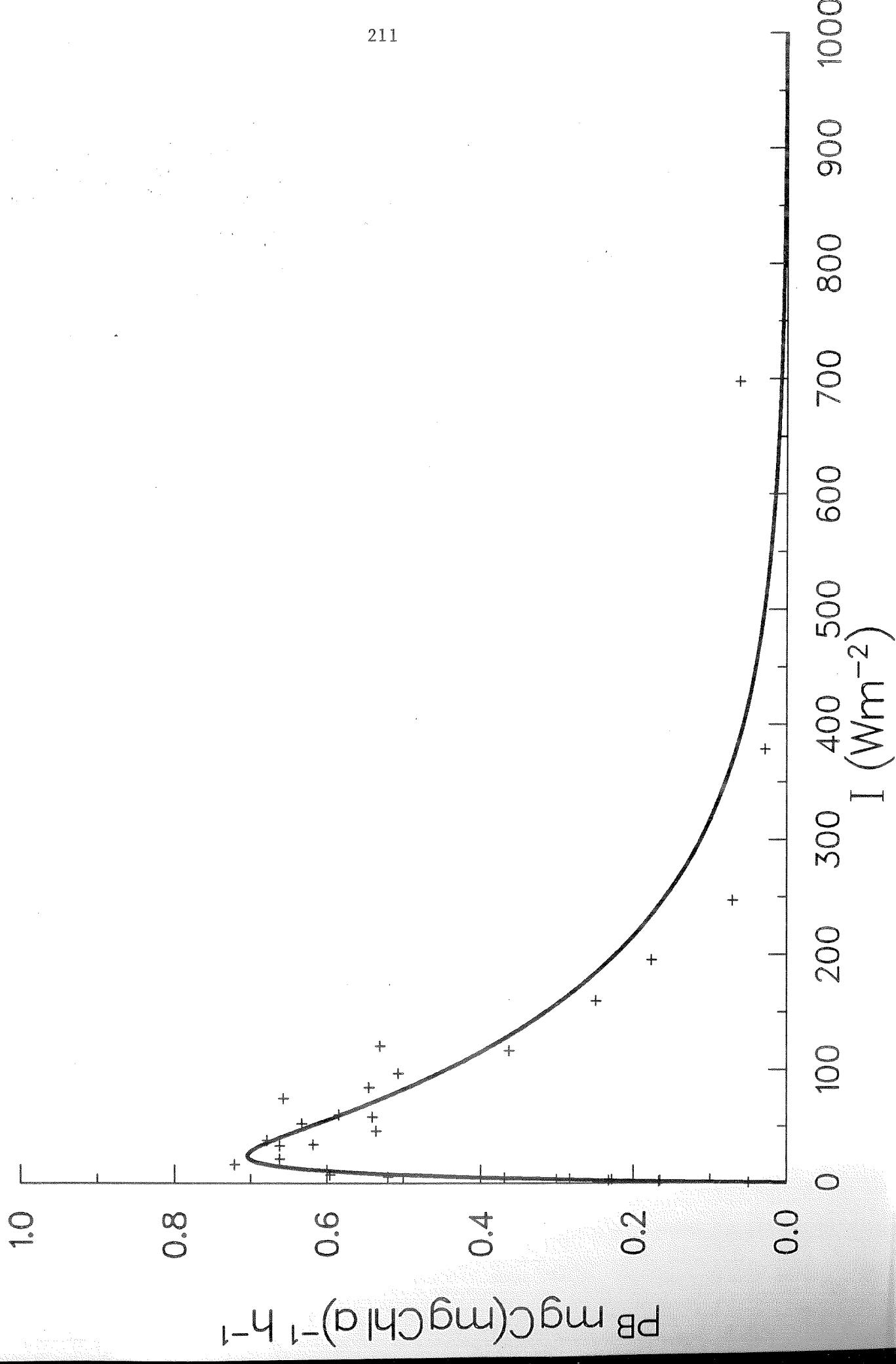
ID 026776 STN 220 27/06/87 60 M

210



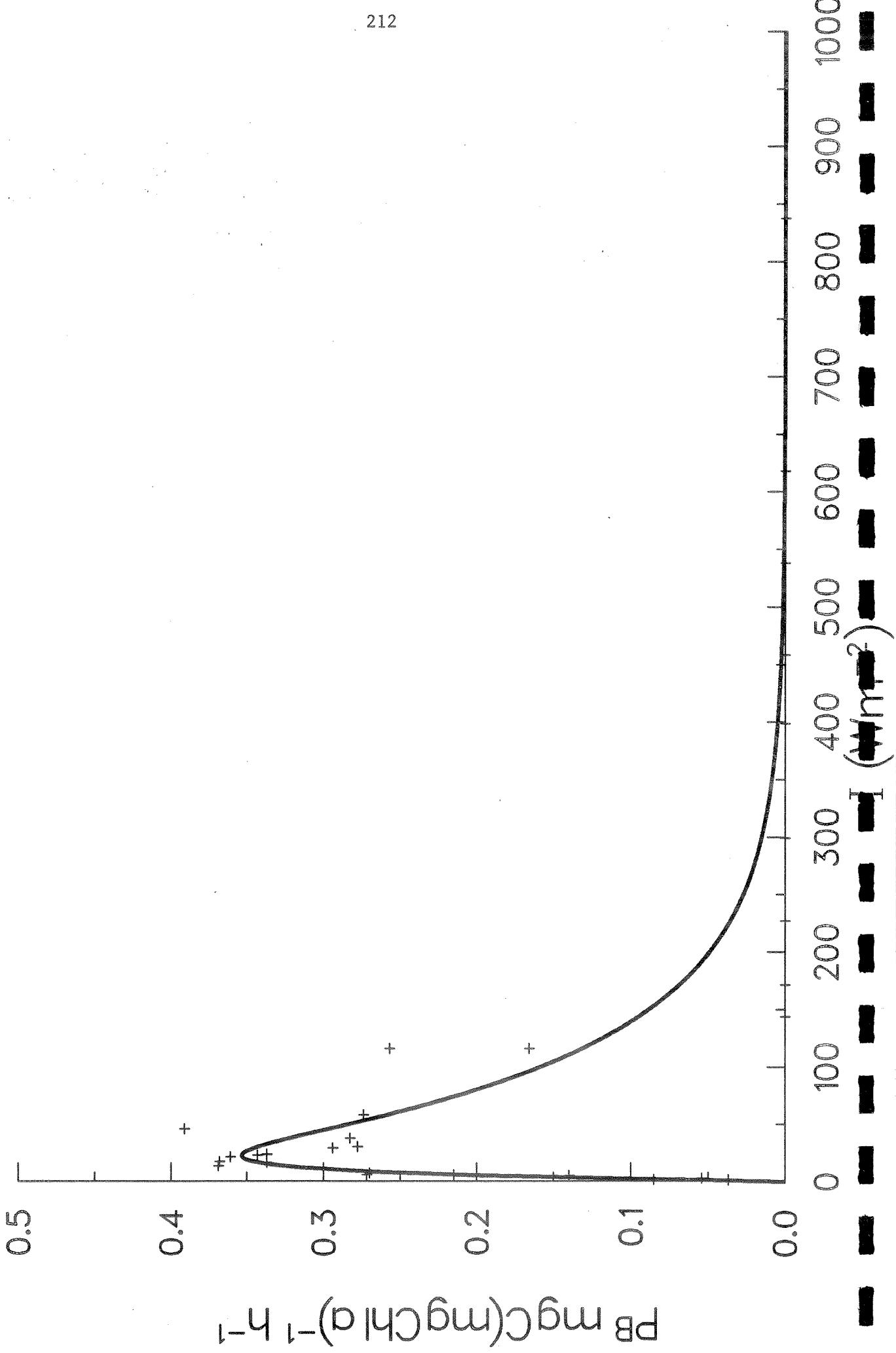
ID 026772 STN 220 27/06/87 80 M

211



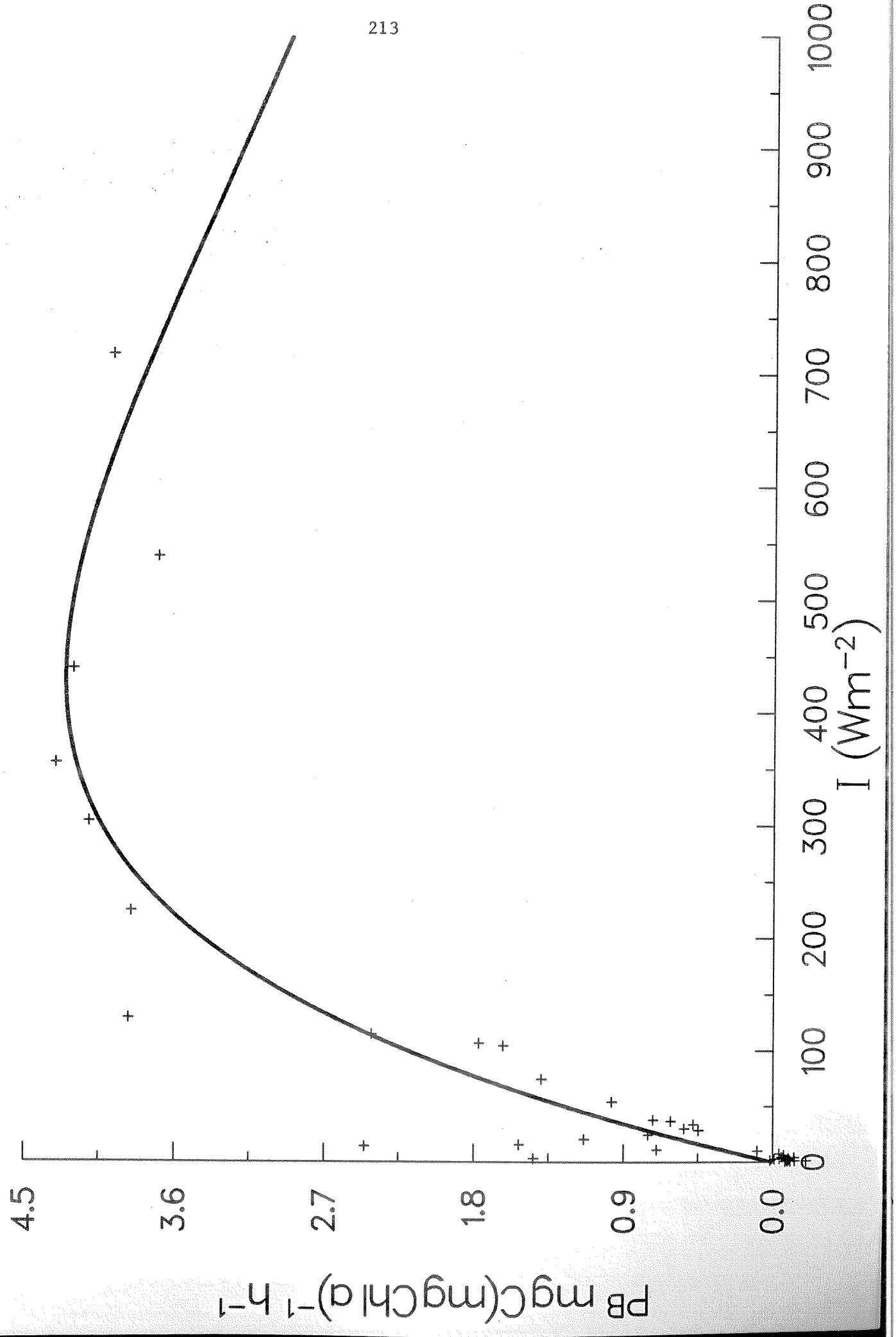
ID 026768 STN 220 27/06/87 100 M

212



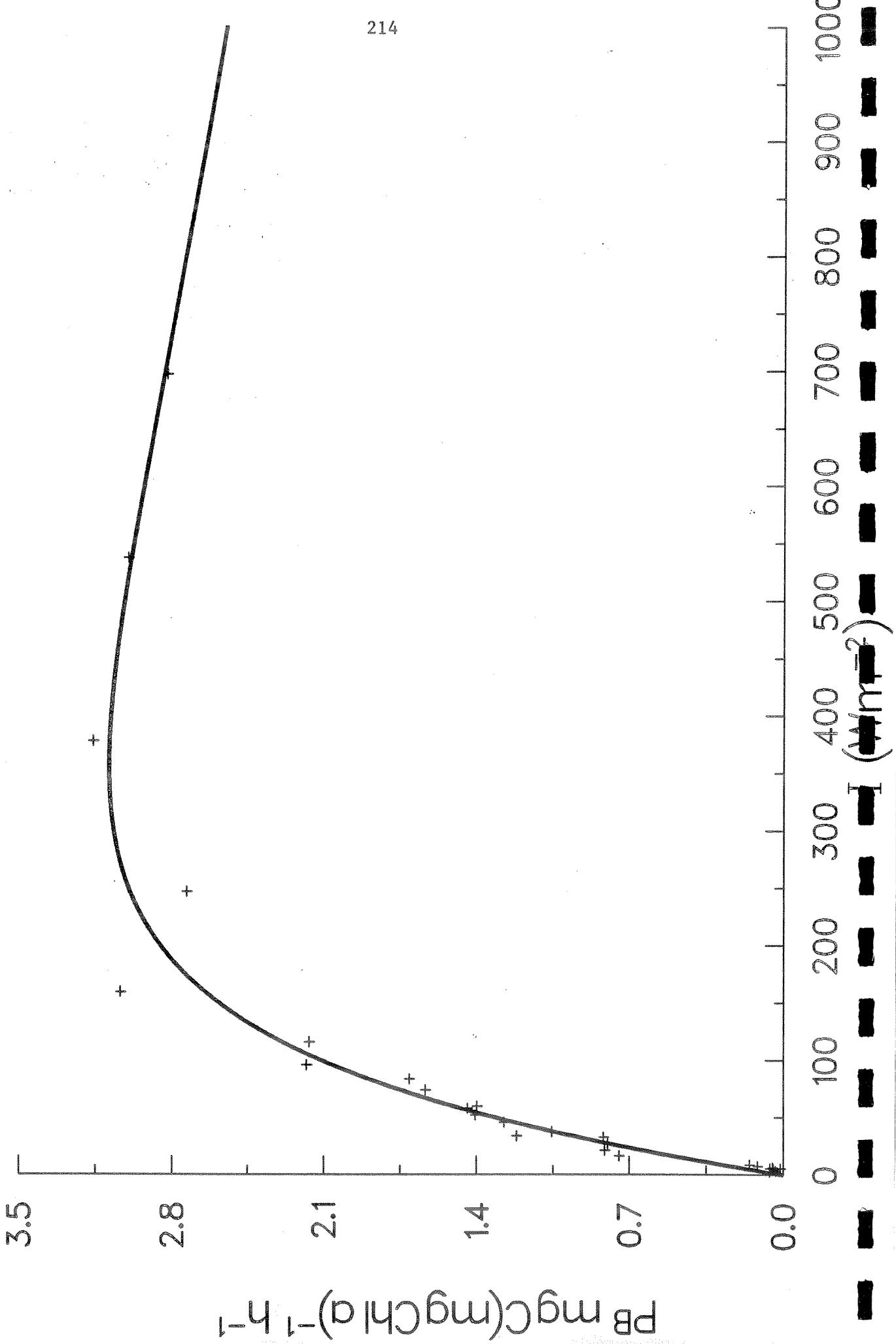
ID 027722 STN 235 28/06/87 5 M

213



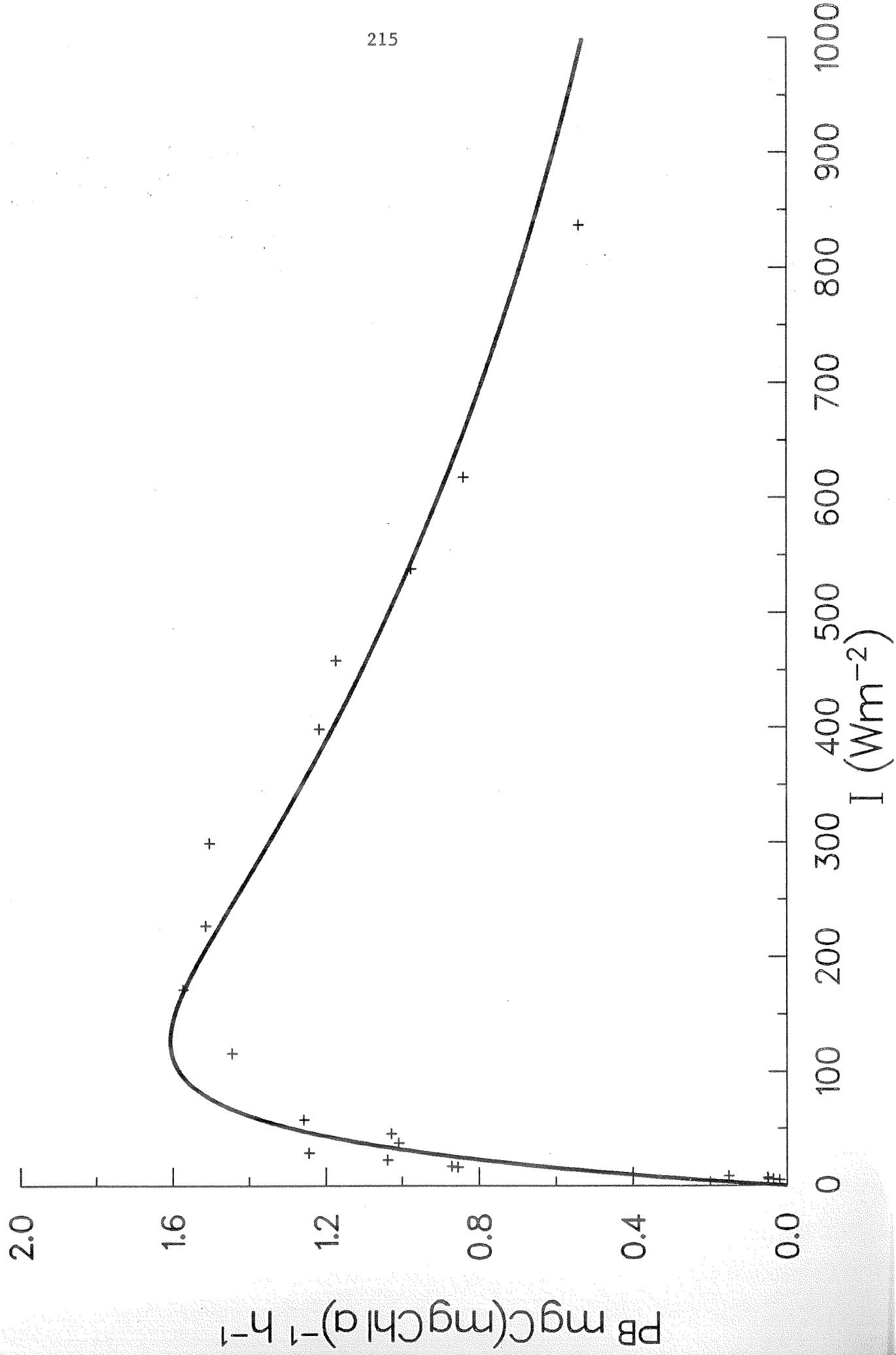
ID 027719 STN 235 28/06/87 20 M

214



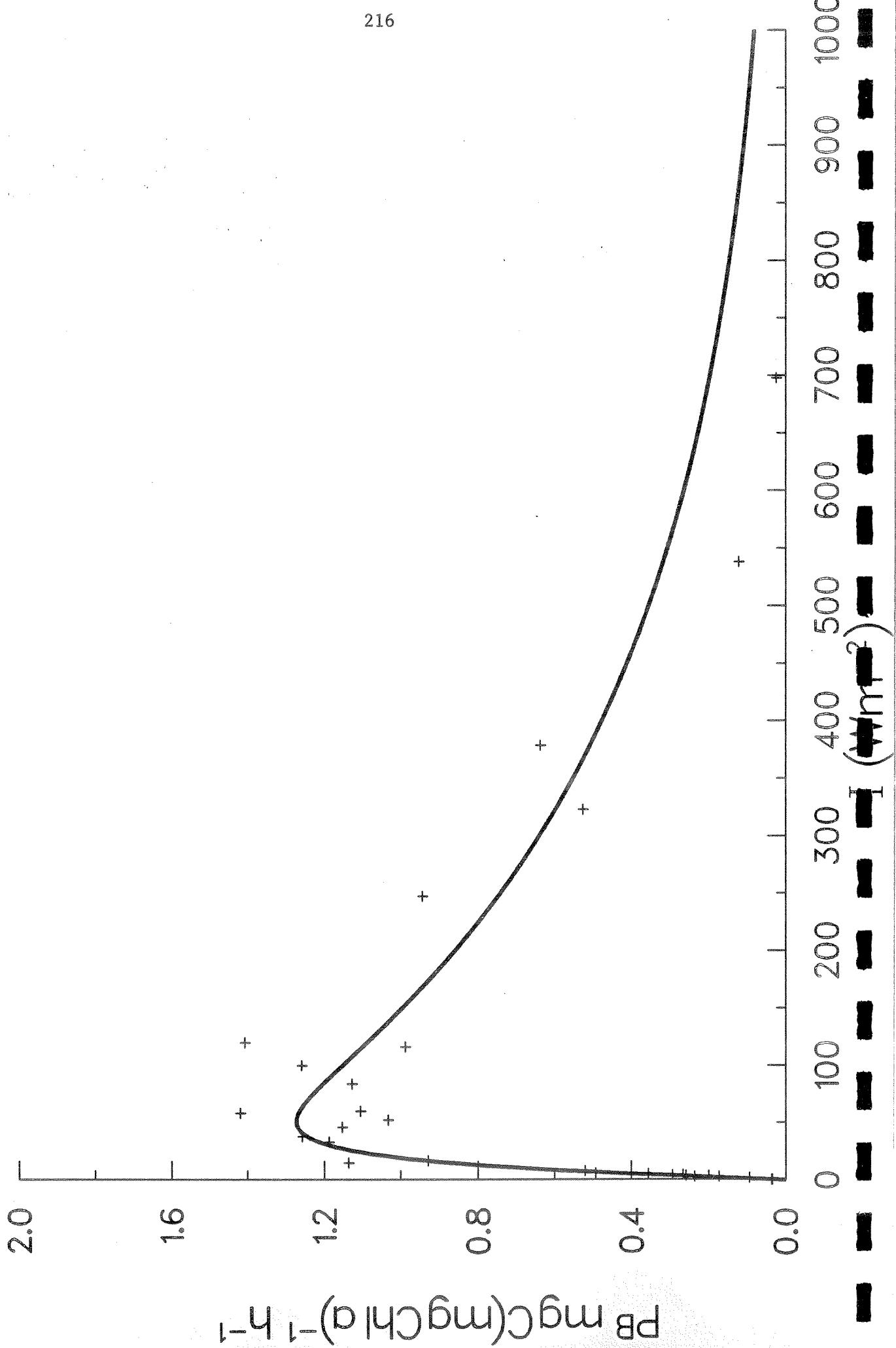
ID 027715 STN 235 28/06/87 40 M

215

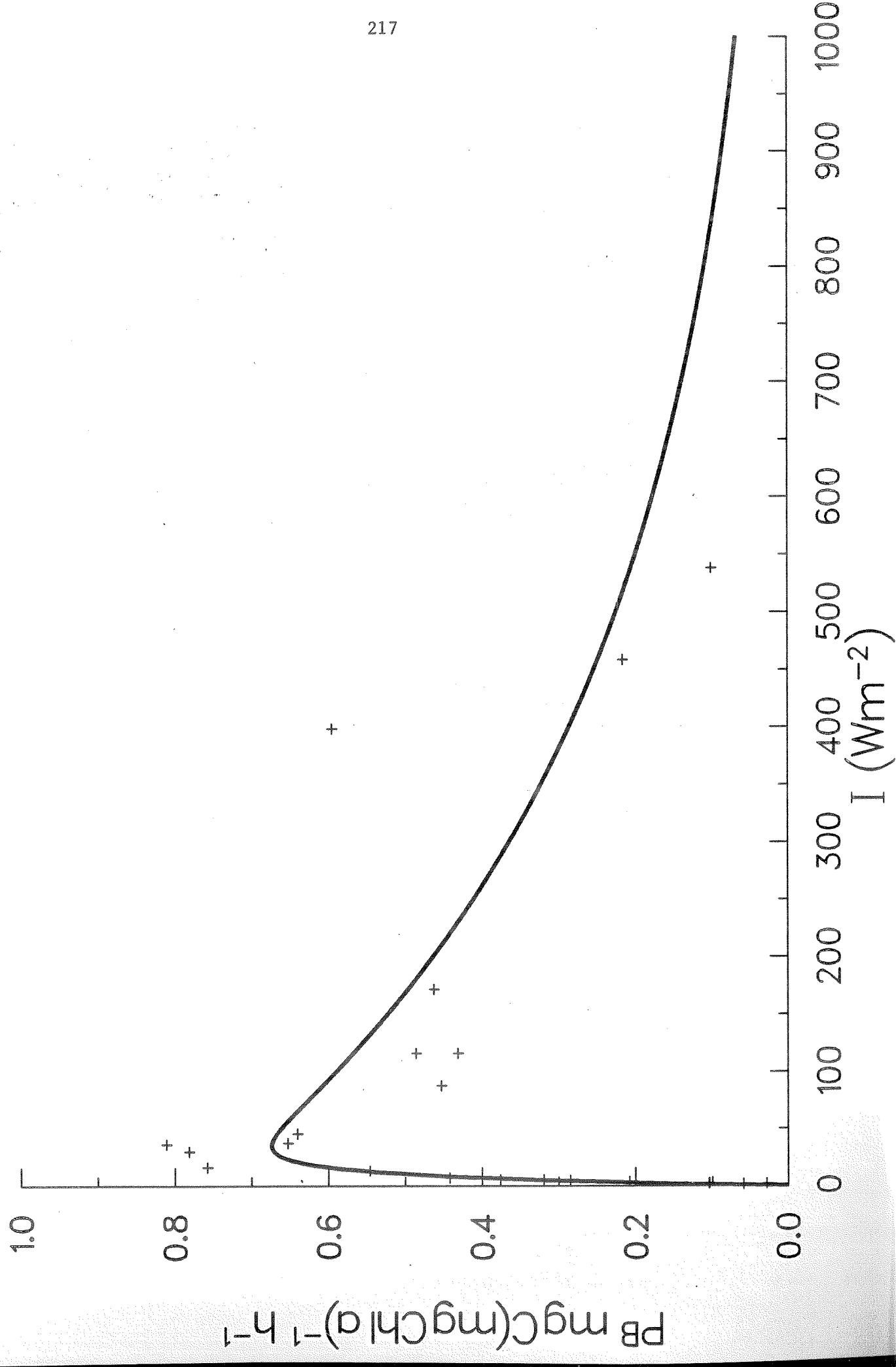


ID 027743 STN 260 29/06/87 70 M

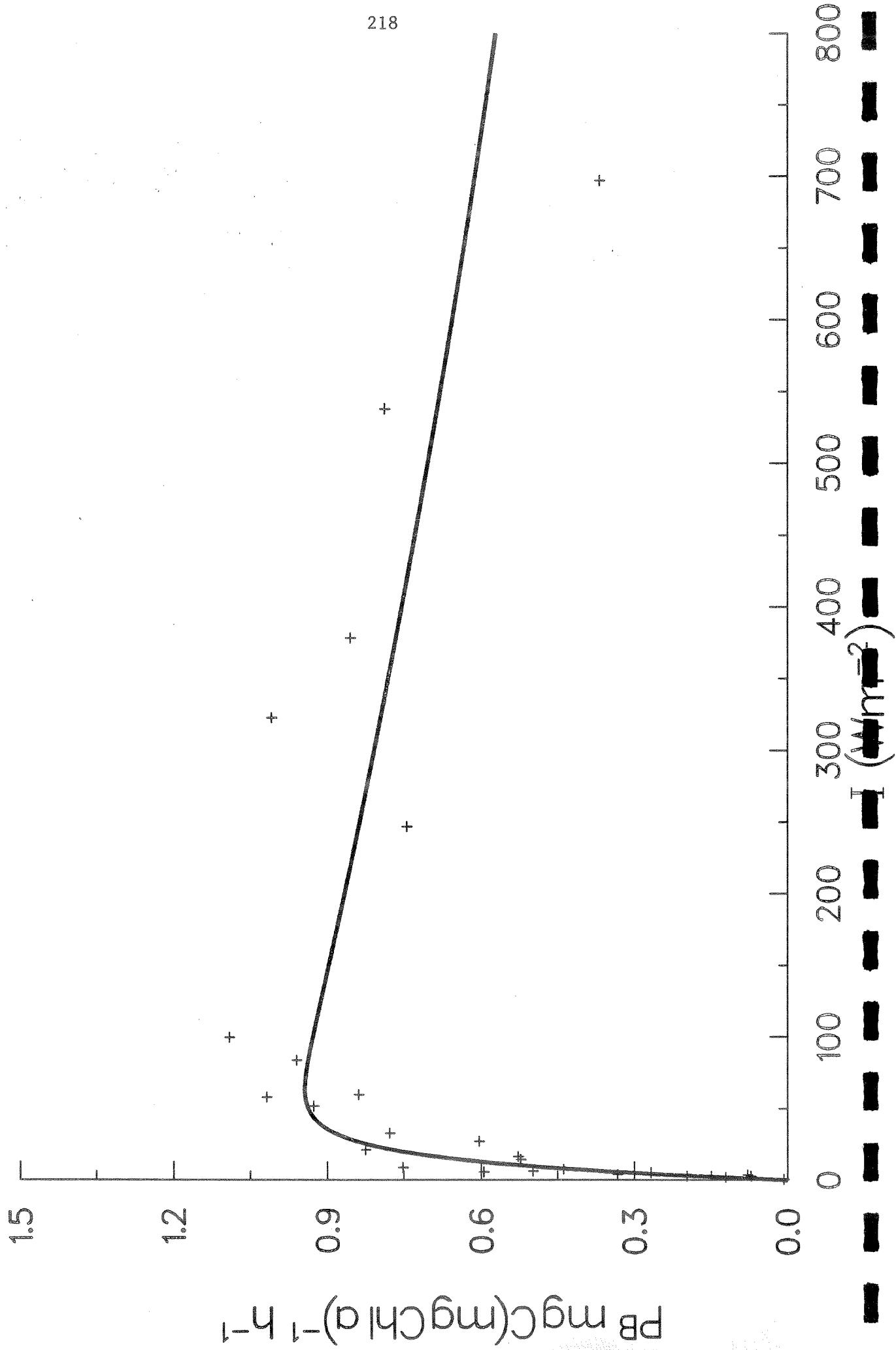
216



ID 027739 STN 260 29/06/87 90 M

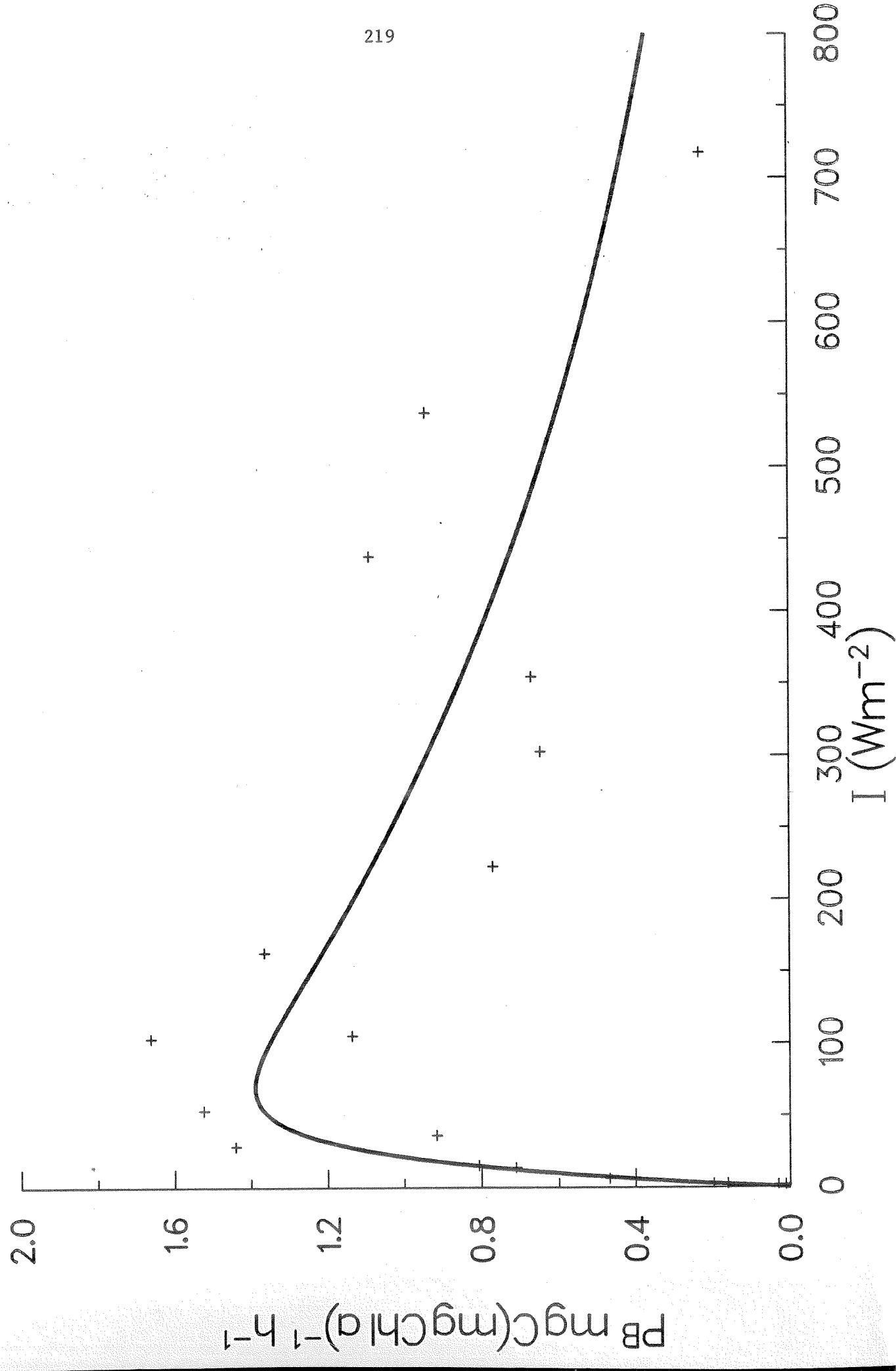


ID 027762 STA. 281 01/07/87 90 M

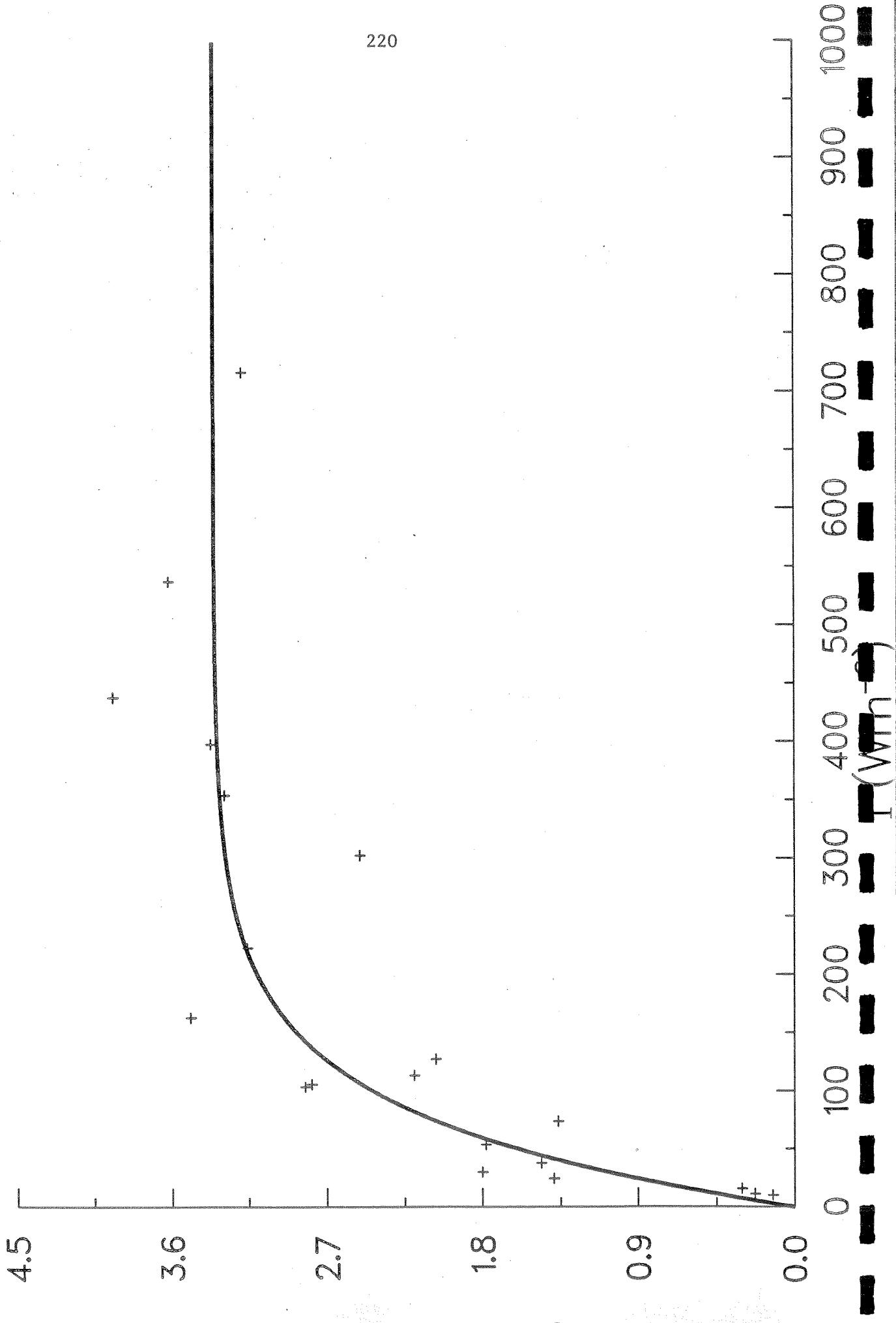


ID 027766 STA. 281 01/07/87 70 M

219

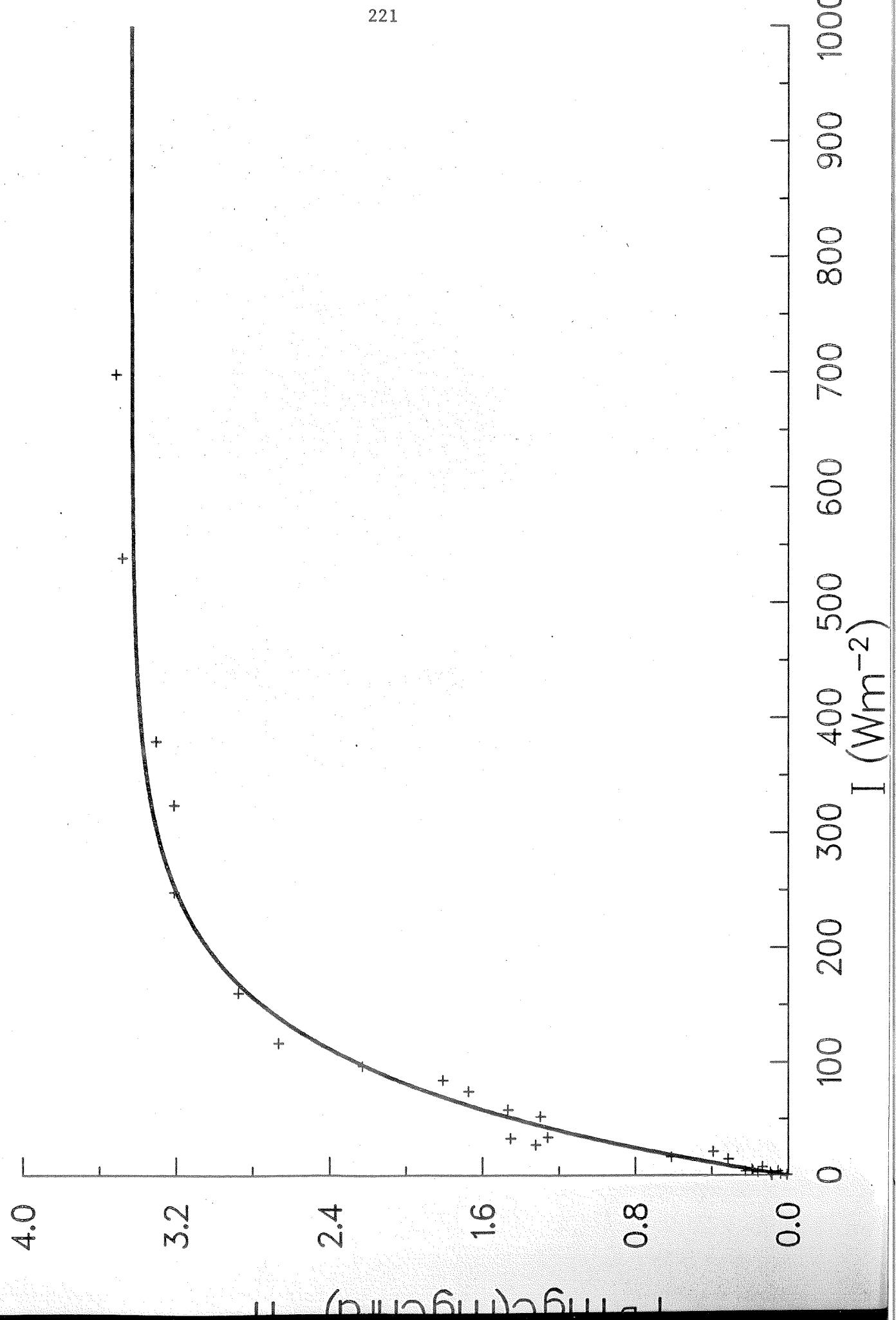


C ID 027825 STN 306 02/07/87 10 M

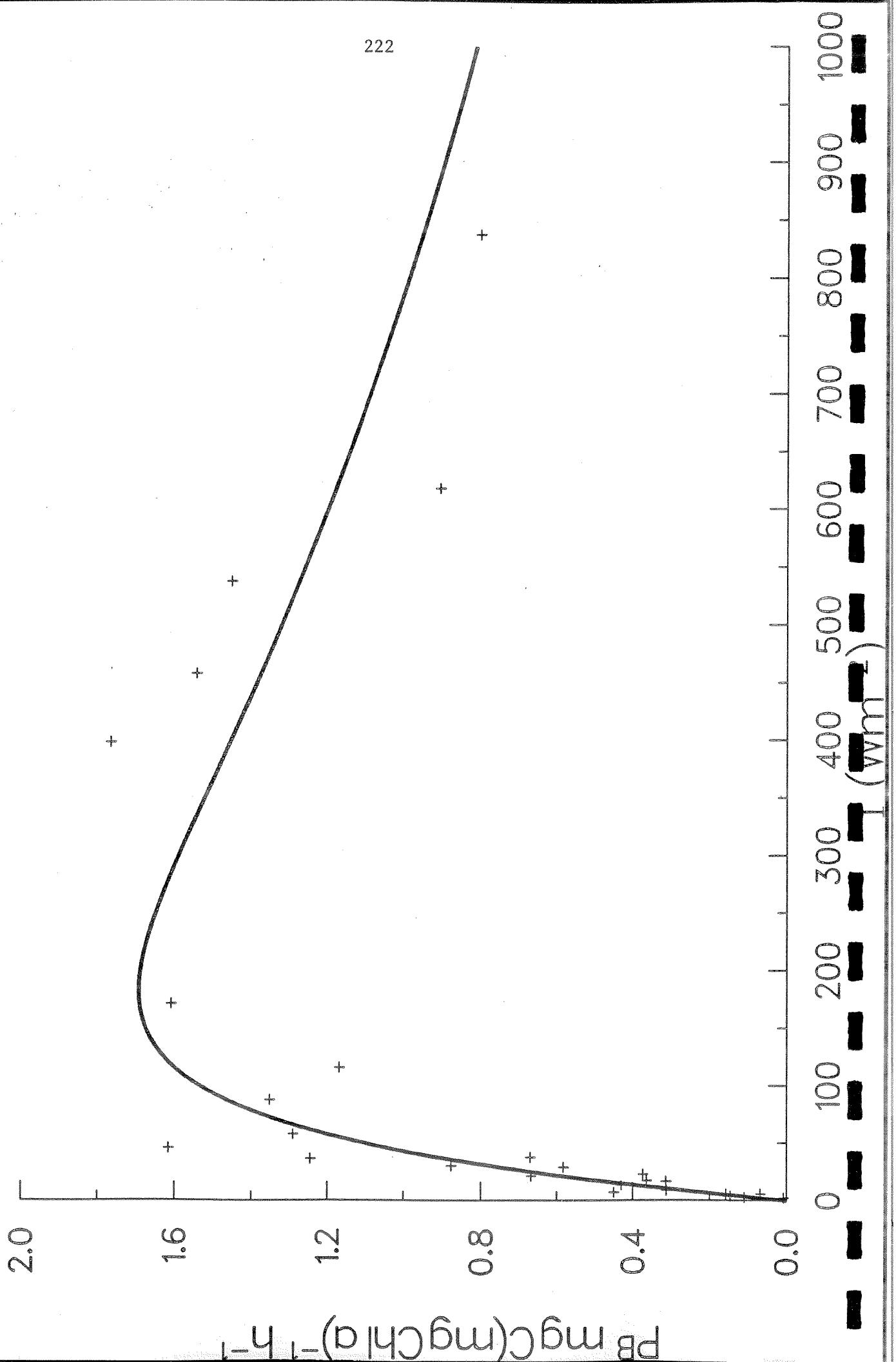


C ID 027821 STN 306 02/07/87 30 M

221

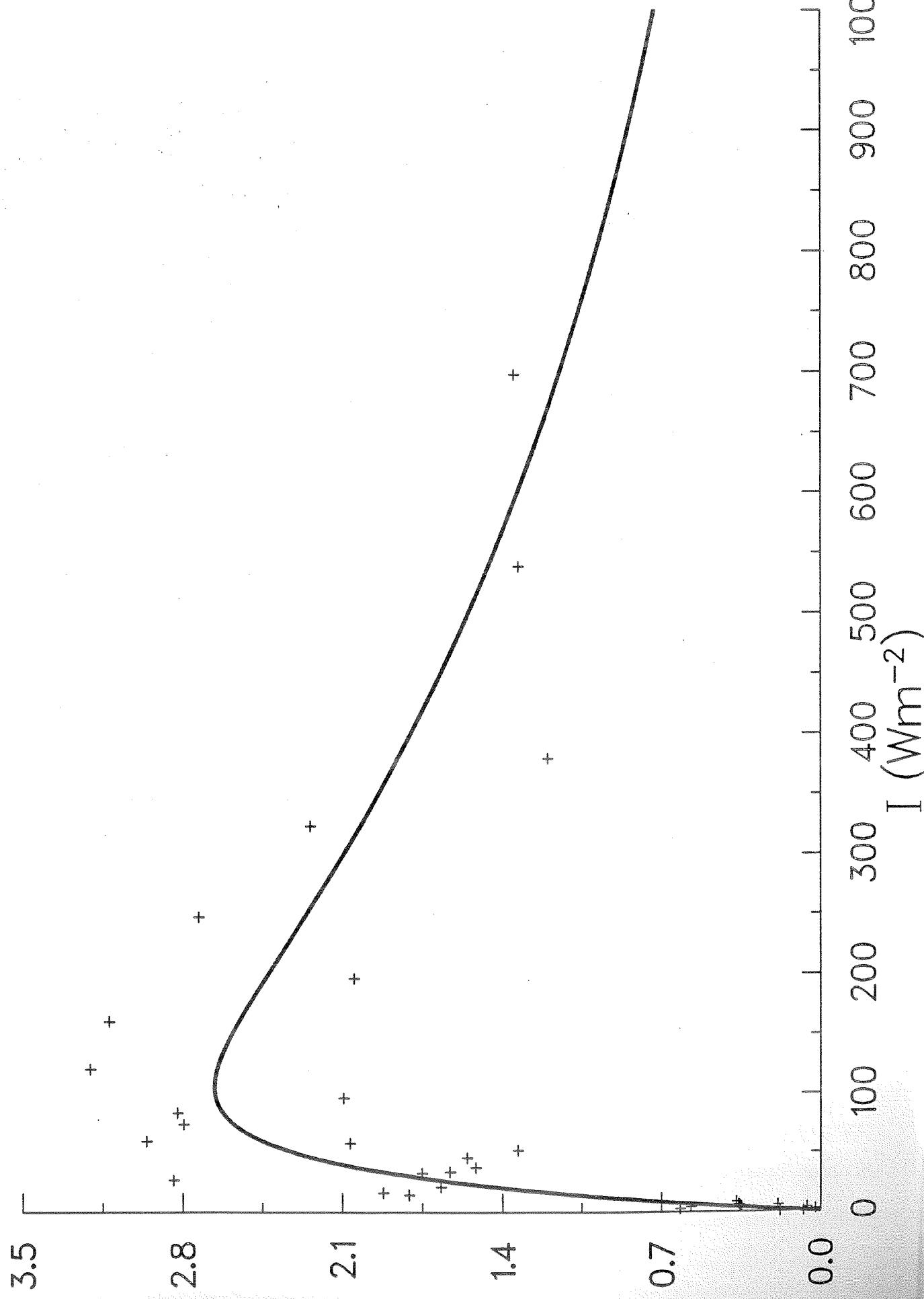


C ID 027817 STN 306 02/07/87 50 M



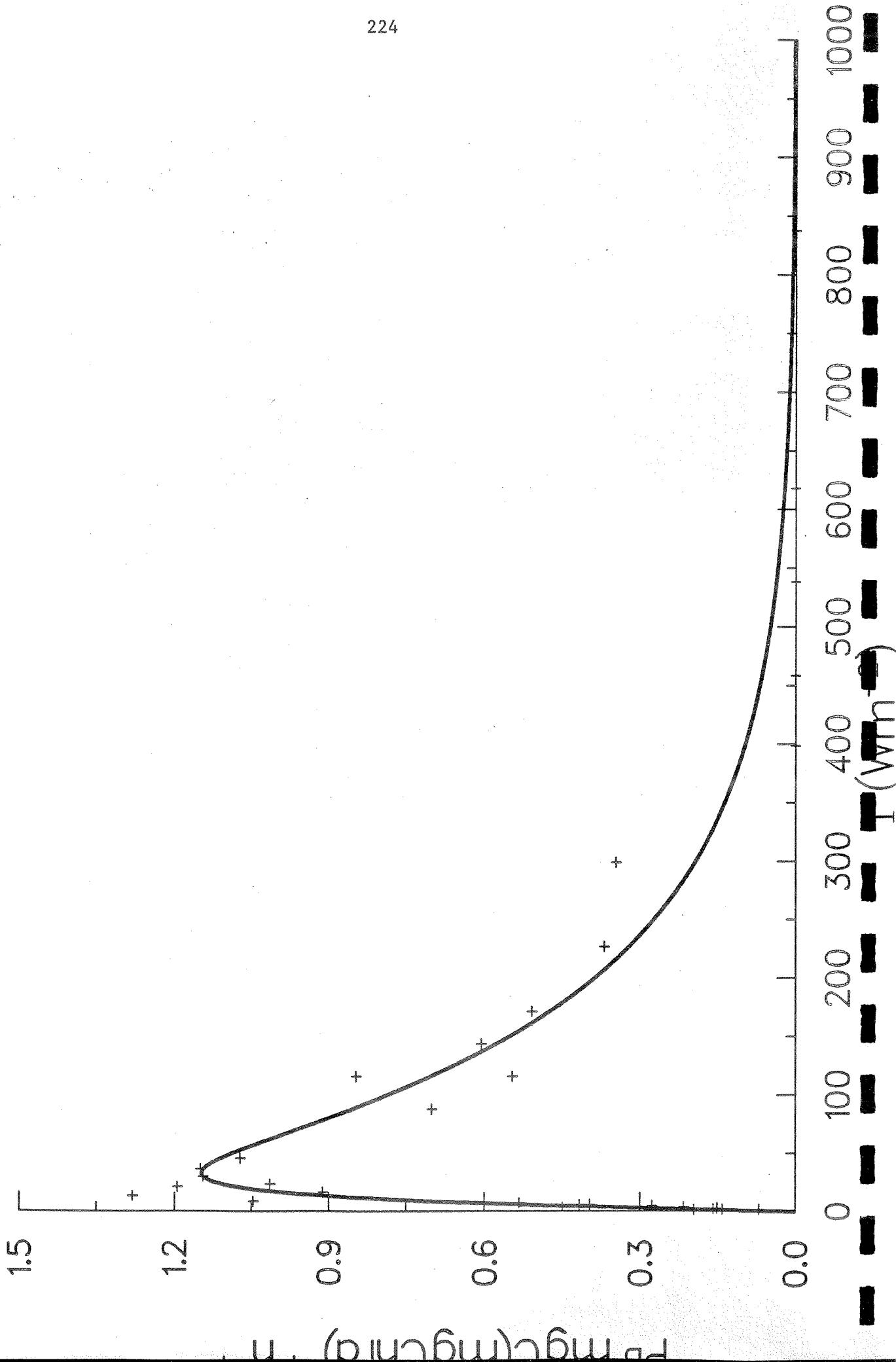
C ID 027843 STN 331 03/07/87 90 M

223



C ID 027839 STN 331 03/07/87 110 M

224



C ID 027873 STN 338 04/07/87 55 M

2.0

1.6

1.2

0.8

0.4

0.0

PB mgC(mgChl-a)<sup>-1</sup> h<sup>-1</sup>

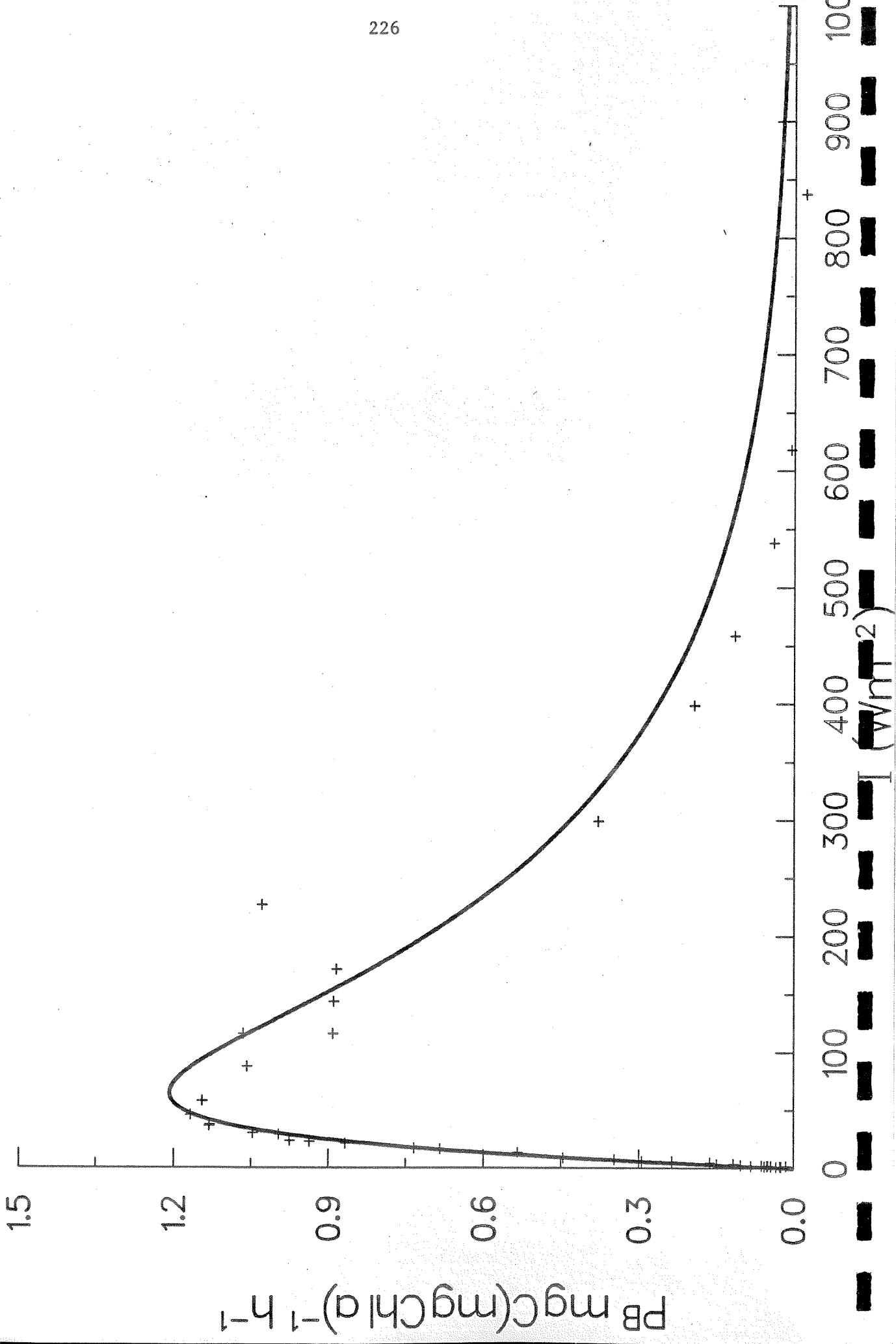
225

1000  
900  
800  
700  
600  
500  
400  
300  
200  
100  
0

I (Wm<sup>-2</sup>)

C ID 027869 STN 338 04/07/87 75 M

226



ID 027747 STN 260 29/06/87 50 M

227

