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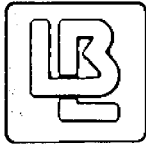
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Golub, G.H.  
Meurant, G.

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UNIVERSITY OF CALIFORNIA

## Physics, Computer Science & Mathematics Division

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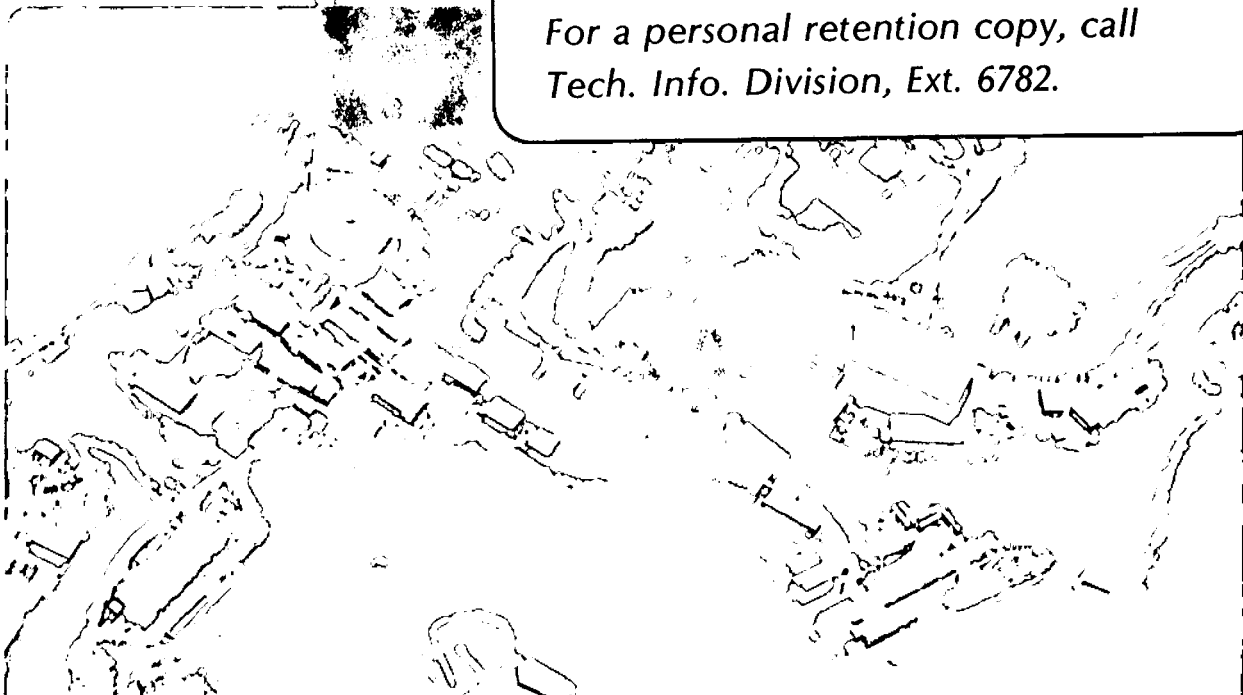
BLOCK PRECONDITIONING FOR THE CONJUGATE  
GRADIENT METHOD. APPENDIX

P. Concus, G. H. Golub, and G. Meurant

July 1982

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**BLOCK PRECONDITIONING FOR THE CONJUGATE GRADIENT METHOD<sup>1</sup>**

**APPENDIX**

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July 1982

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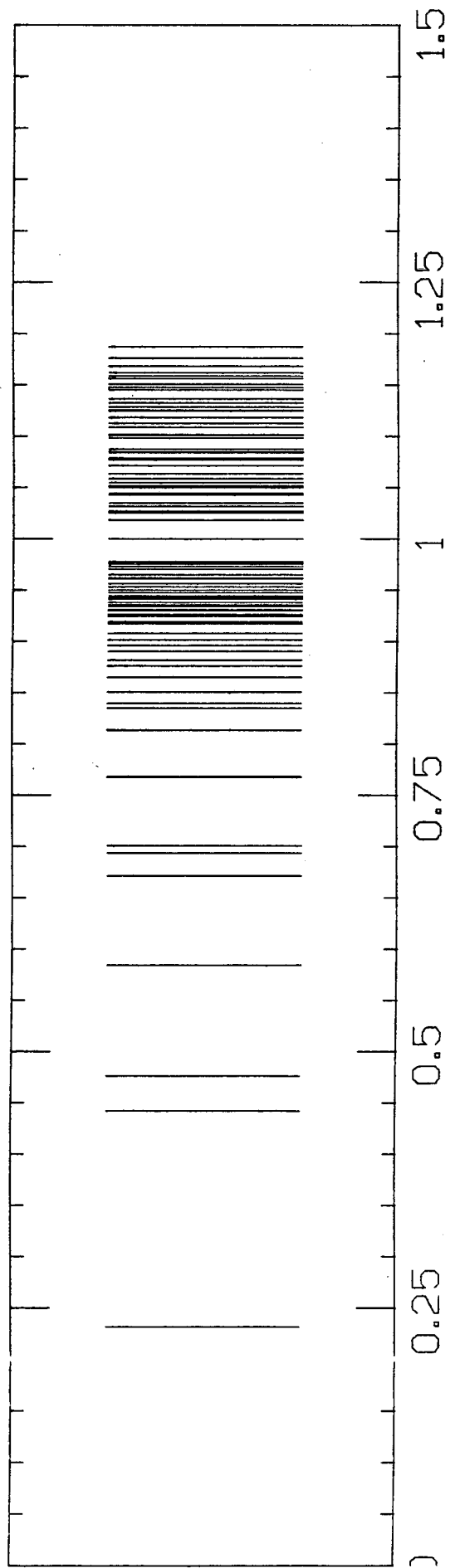
<sup>1</sup>This work was supported in part by the Director, Office of Energy Research, Office of Basic Energy Sciences, Engineering, Mathematical, and Geosciences Division of the U.S. Department of Energy under contracts DE-AC03-76SF00098 and DE-AC03-76SF00515 and by the National Science Foundation under grant MCS-78-11985.

## BLOCK PRECONDITIONING FOR THE CONJUGATE GRADIENT METHOD

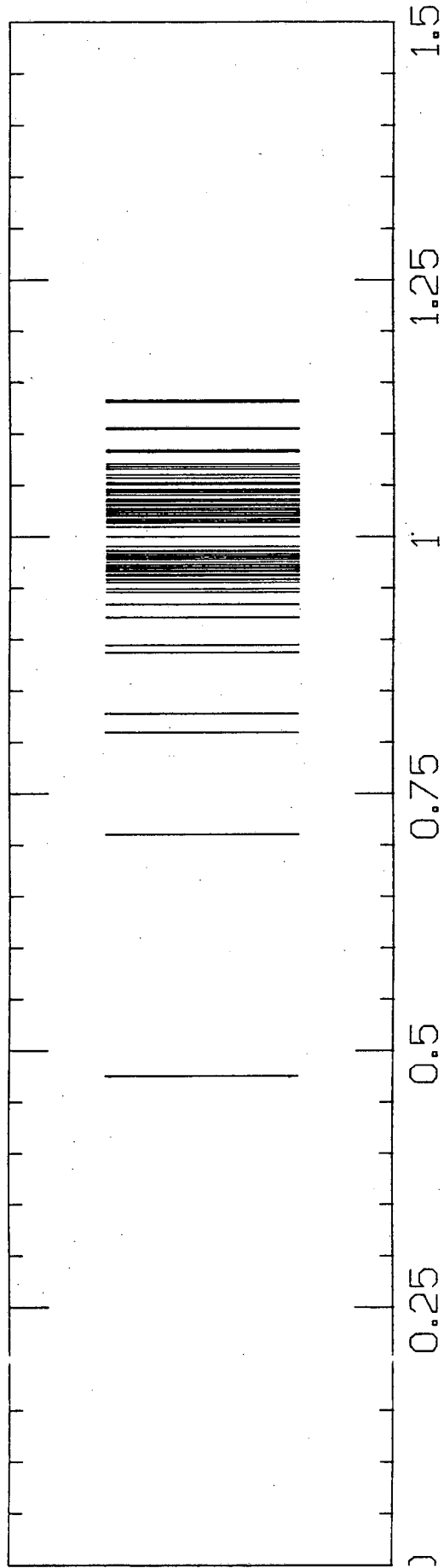
### APPENDIX

Figure 7. *Enlargements of the spectra depicted in Figs. 2-6.*  
*The last three spectra are further enlargements for IC(1,1), INV(1), and CHOL(1).*

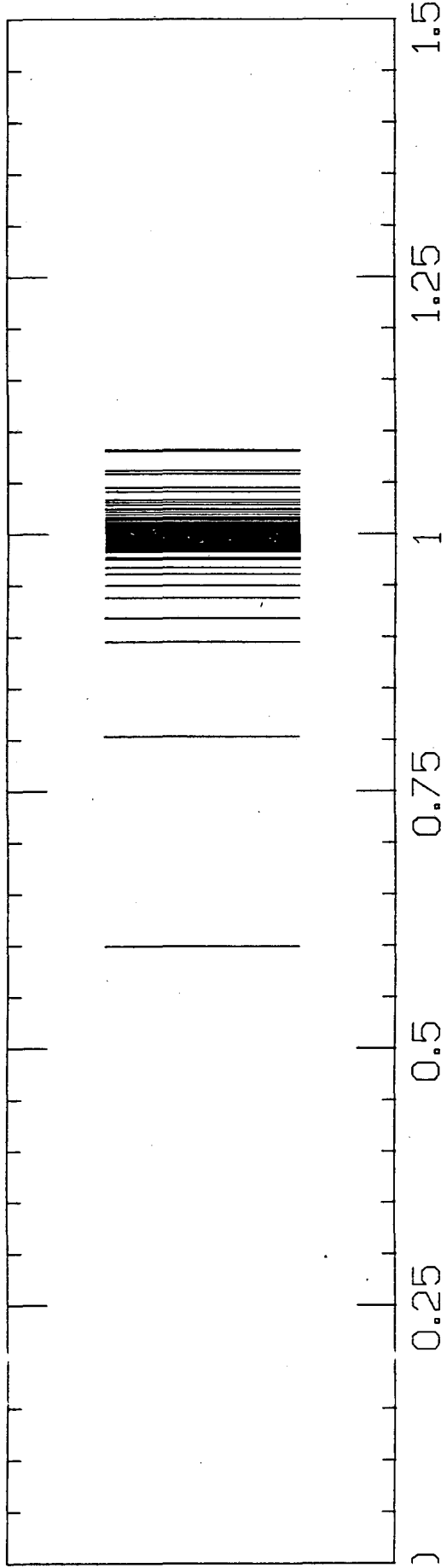
EX1 IC(1,1) N=100



EX1 IC(1,2) N=100

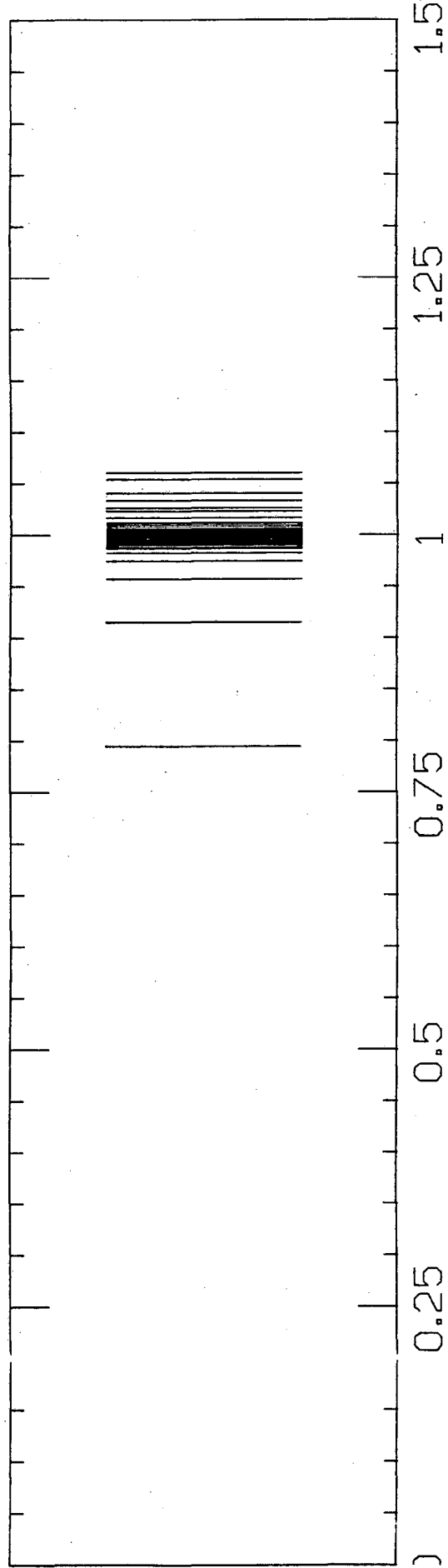


EX1 IC(1,3) N=100

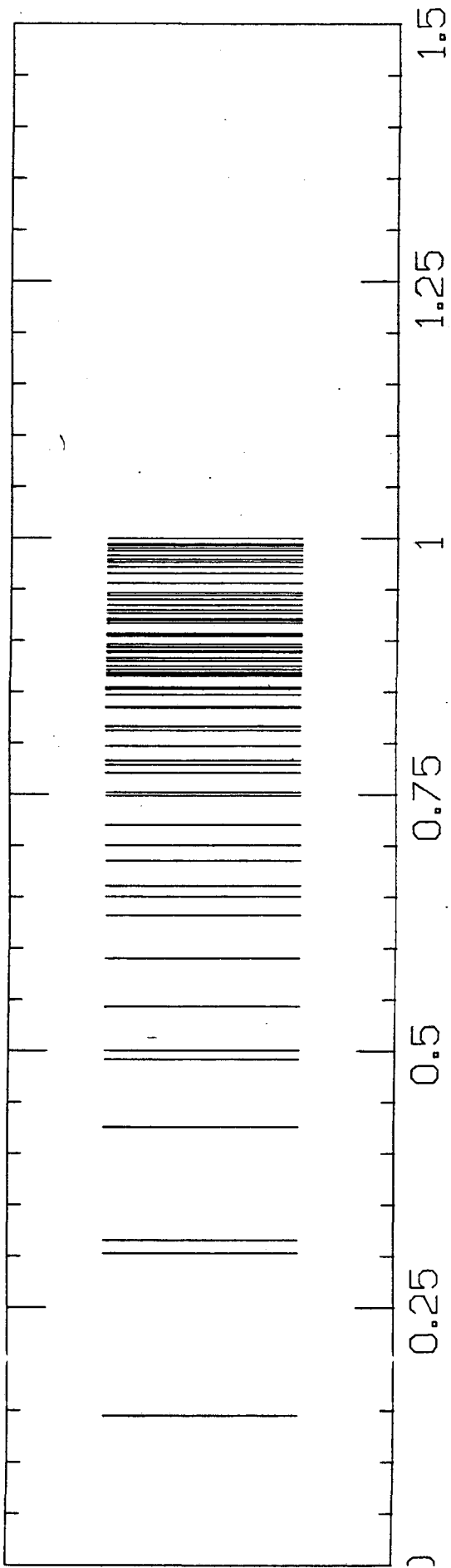




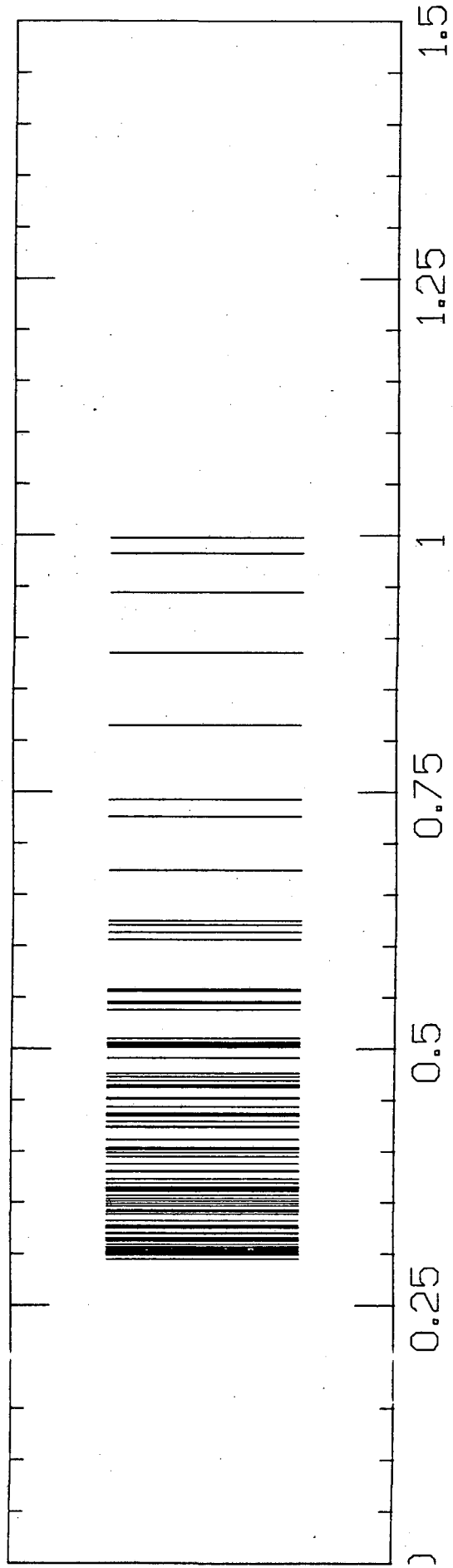
EX1 IC(2,4) N=100



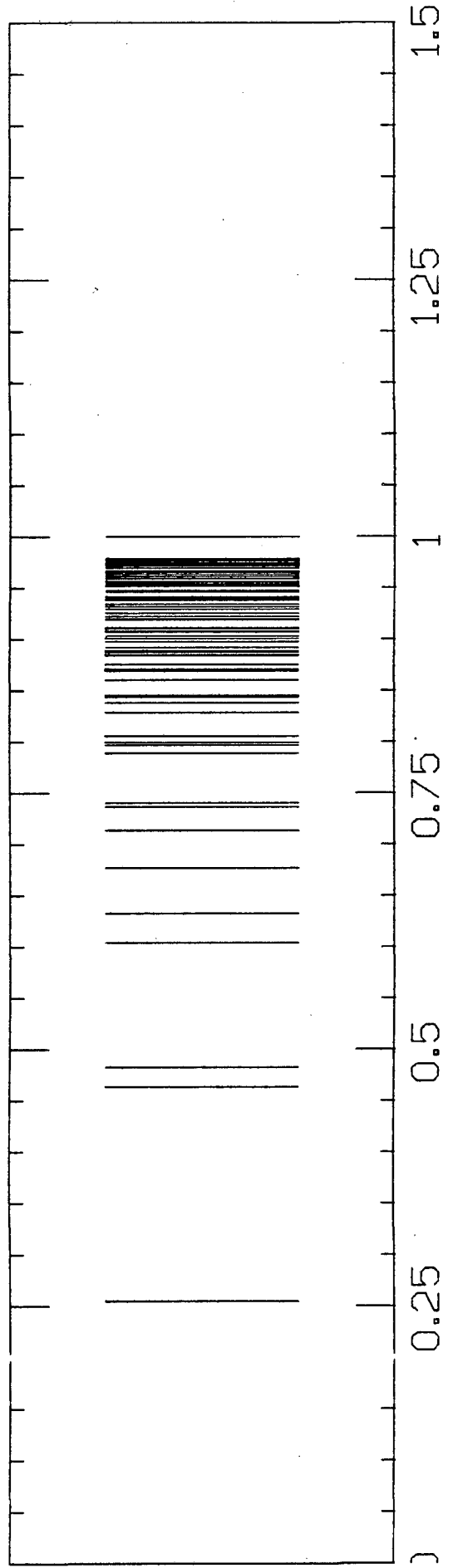
EX1 SSØR ØM=1. N=100



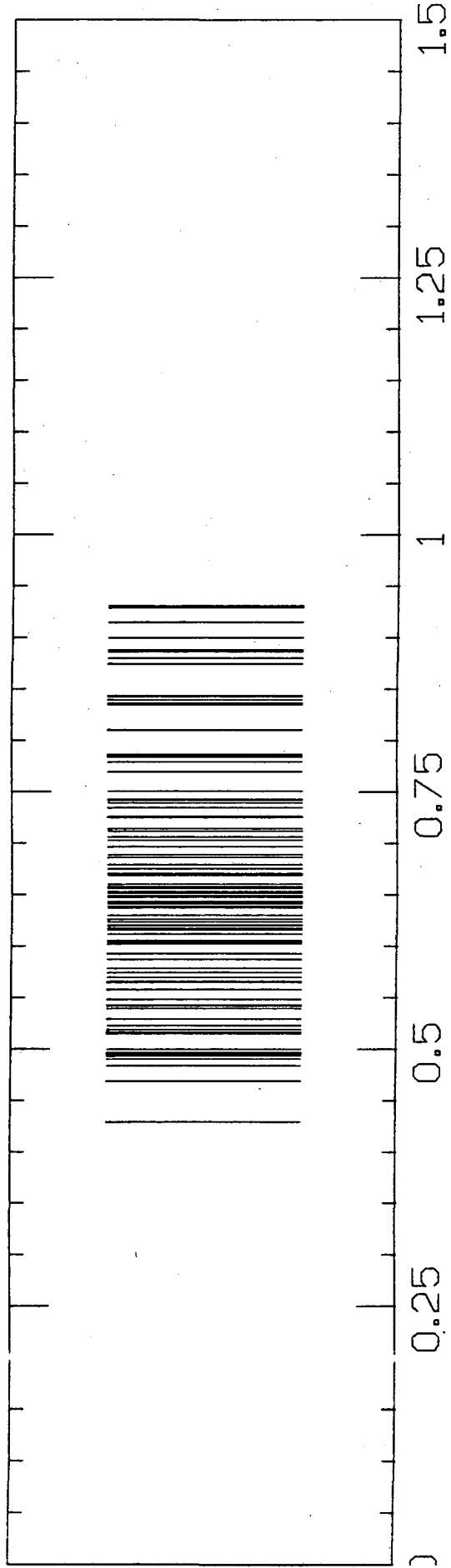
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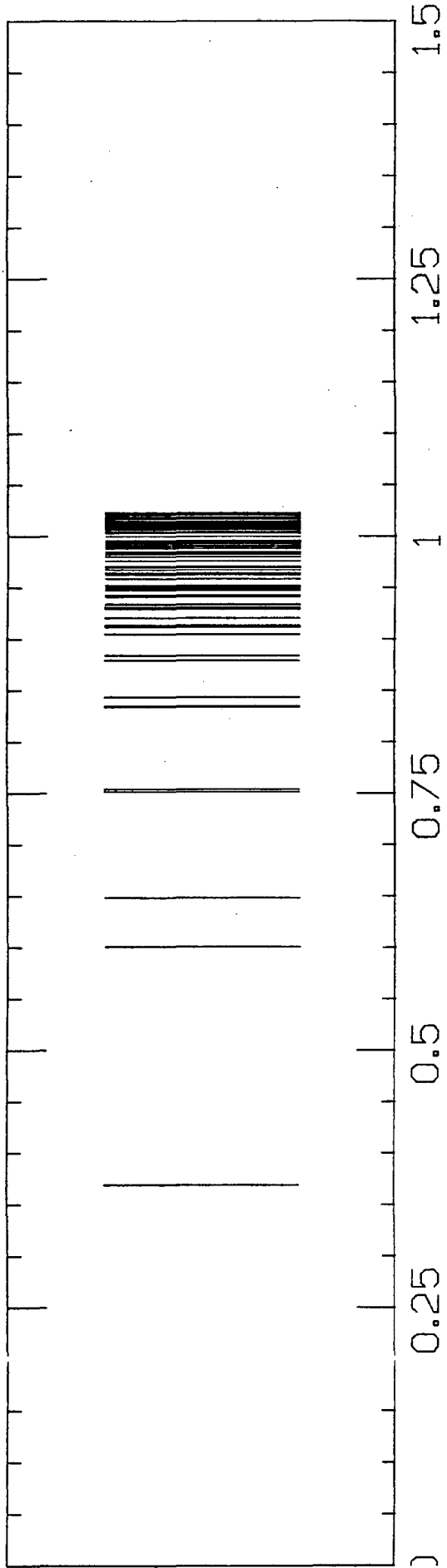
EX1 BSSØ ØM=1. N=100



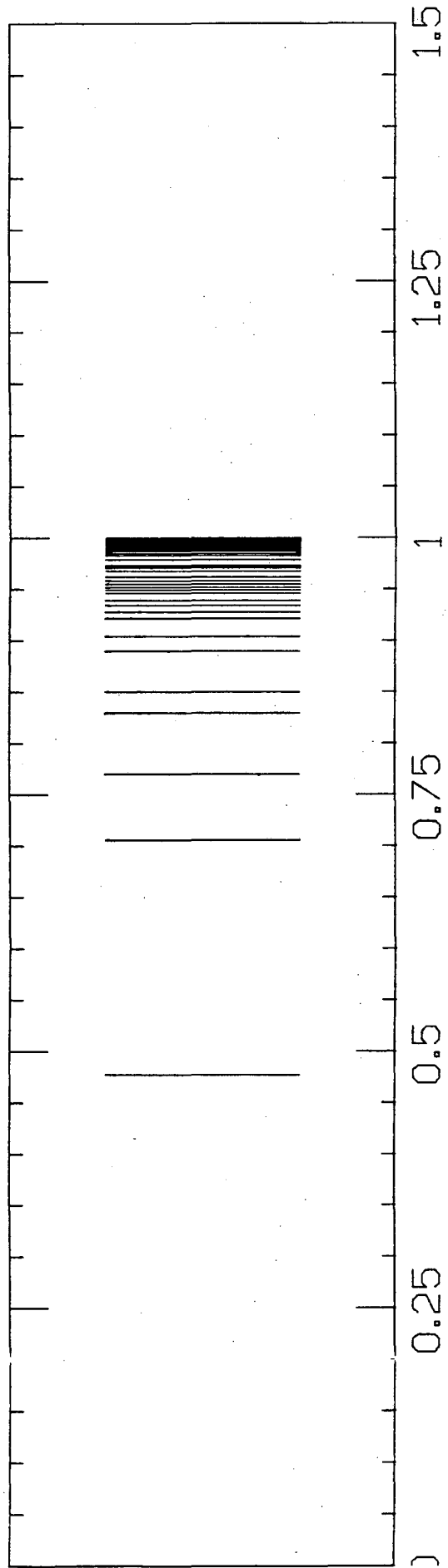
EX1 BSSØ ØM=1.5 N=100



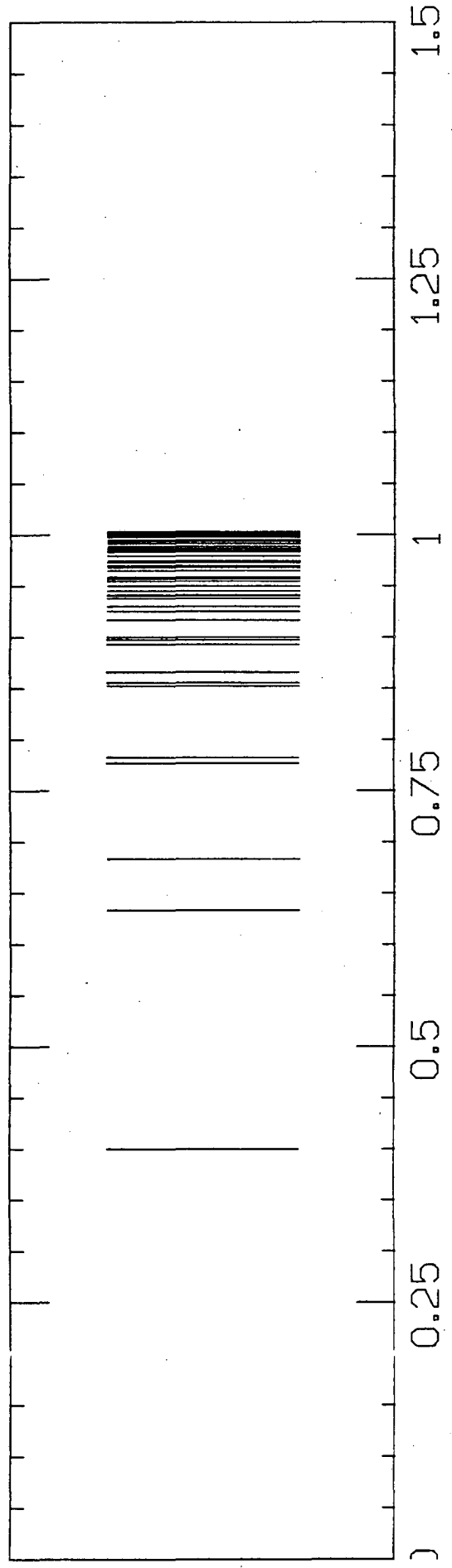
EX1 BDIA N=100



EX1 PØL(1.,-1.) N=100

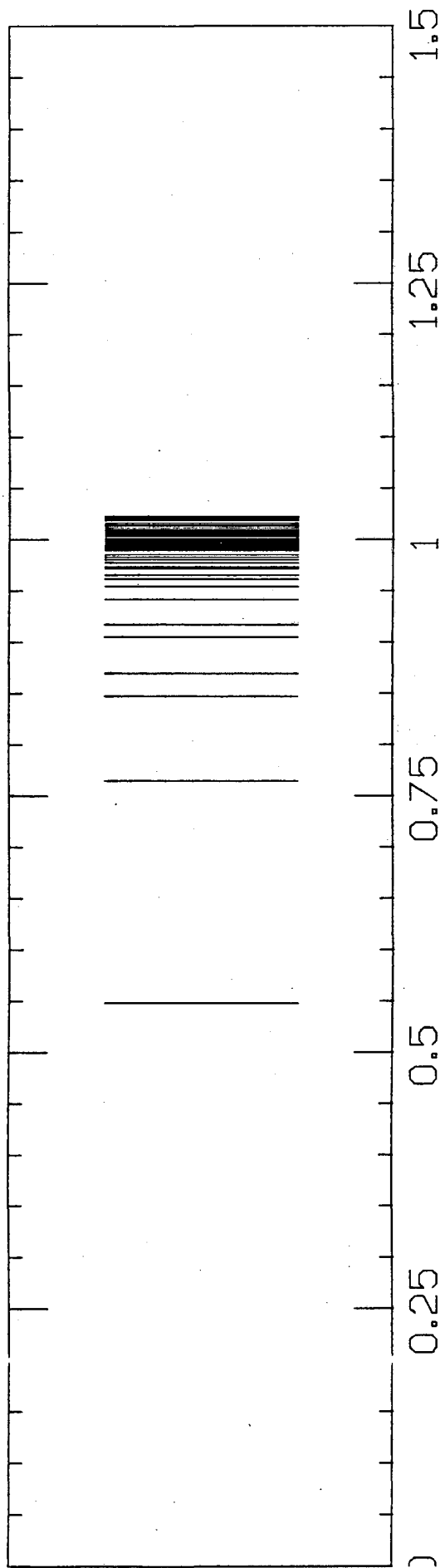


EX1 PØL(0.9412,-0.4706) N=100

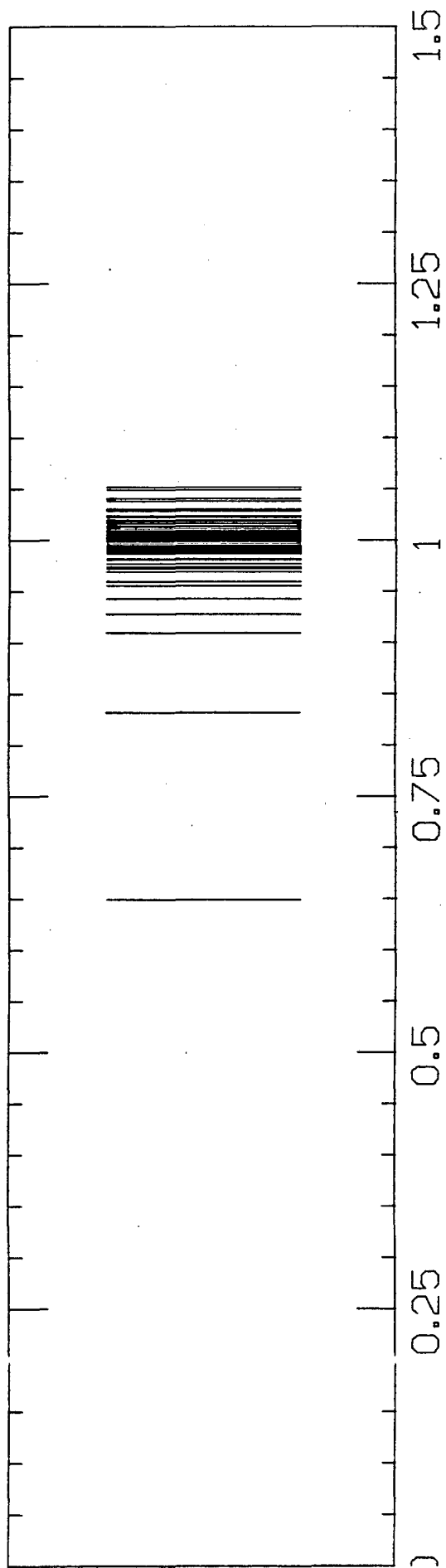




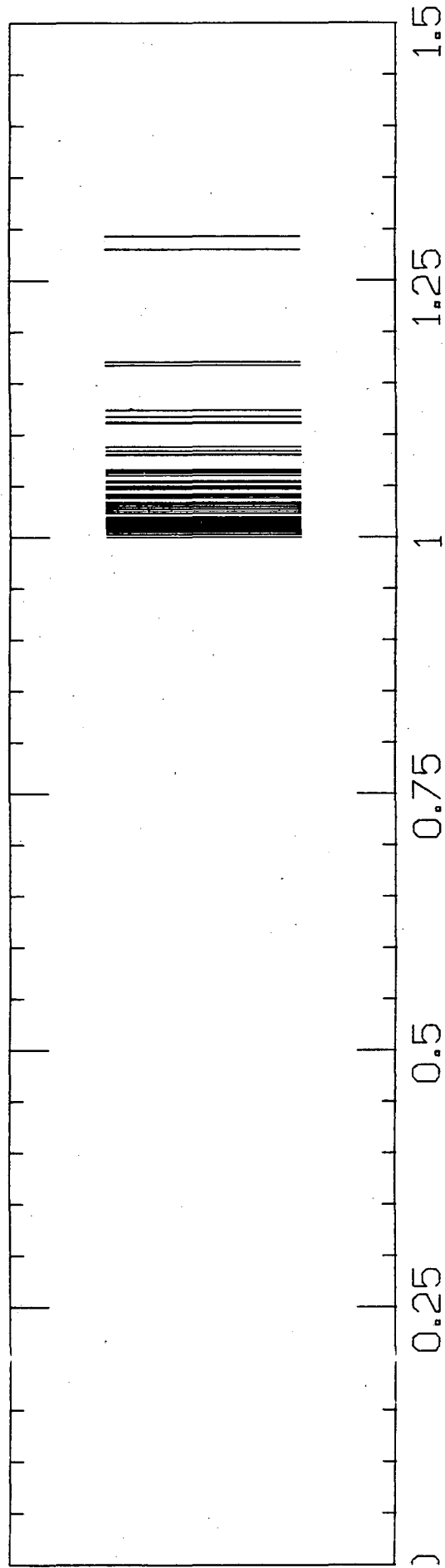
EX1 PØL(1.143,-1.143) N=100



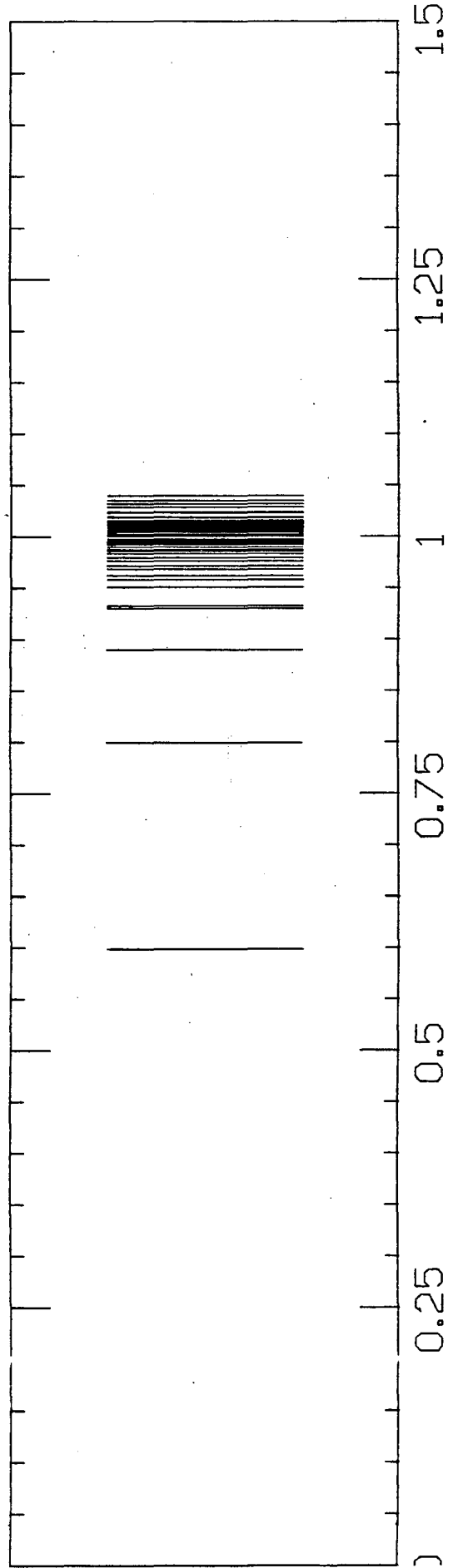
EX1 INV(1) N=100



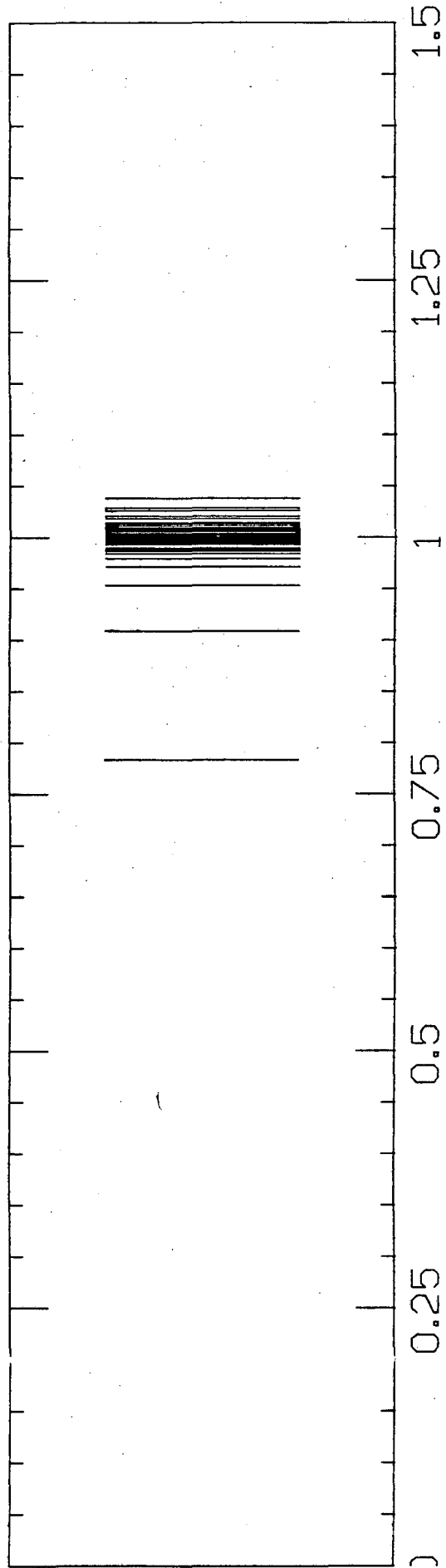
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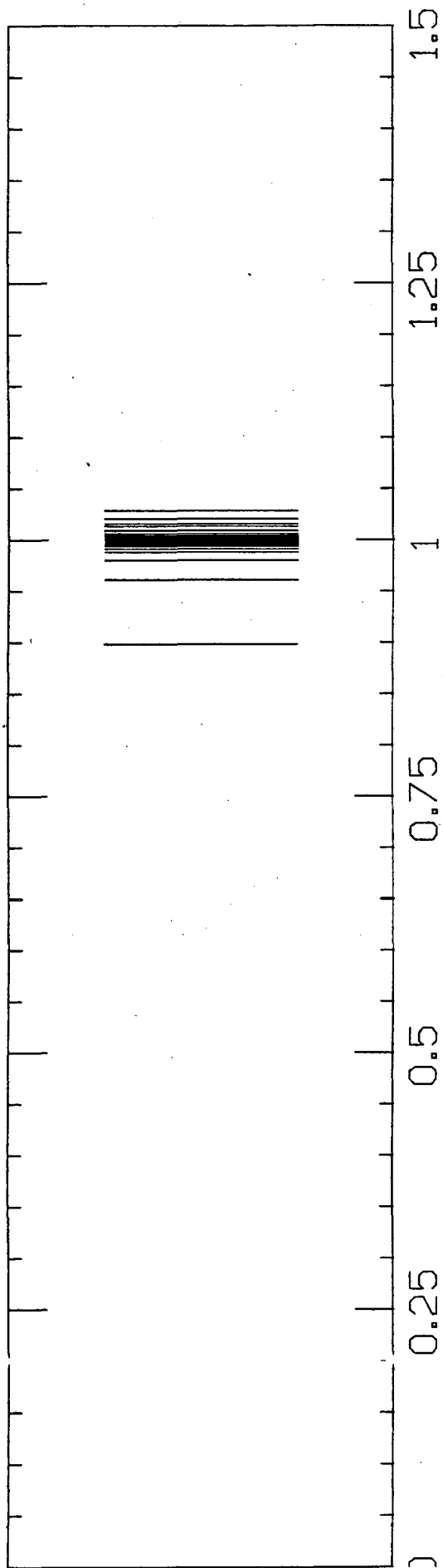
EX1 CHØL(1) N=100



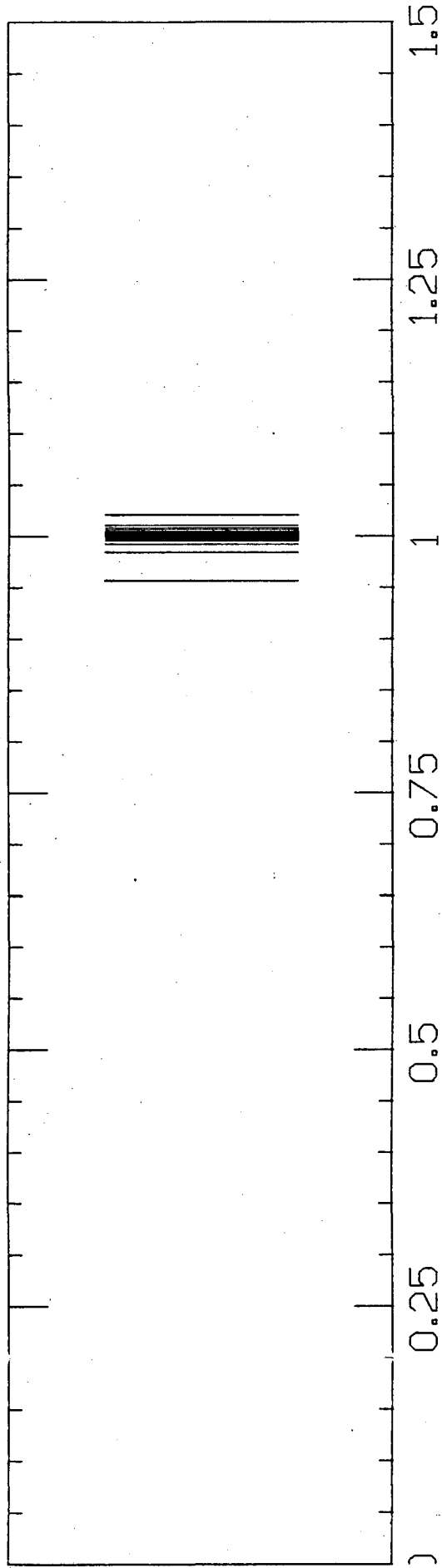
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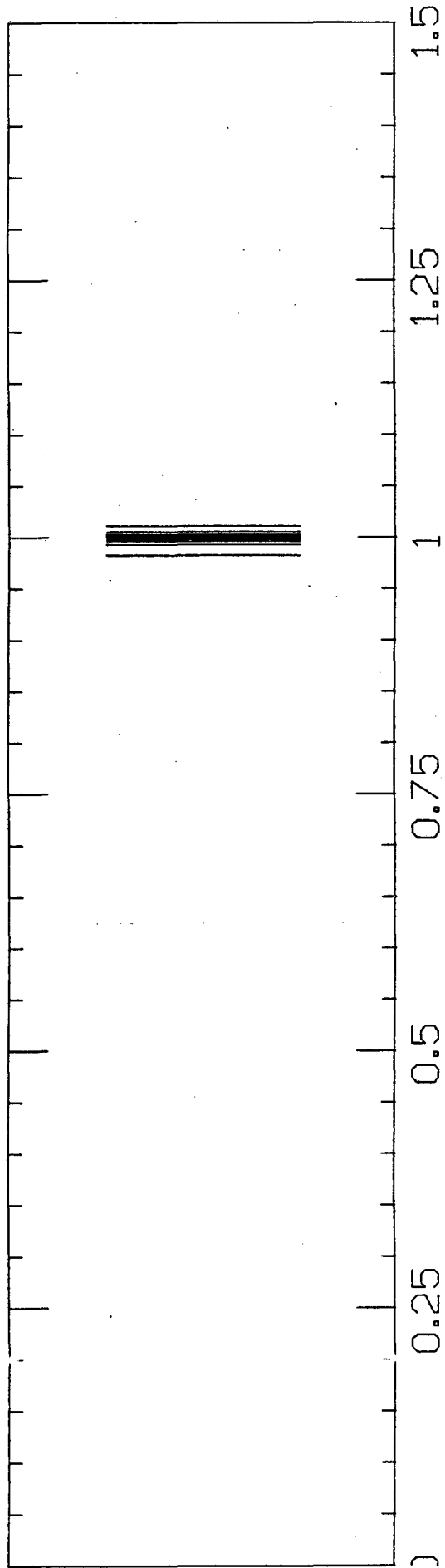
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EX1 CHØL(4) N=100

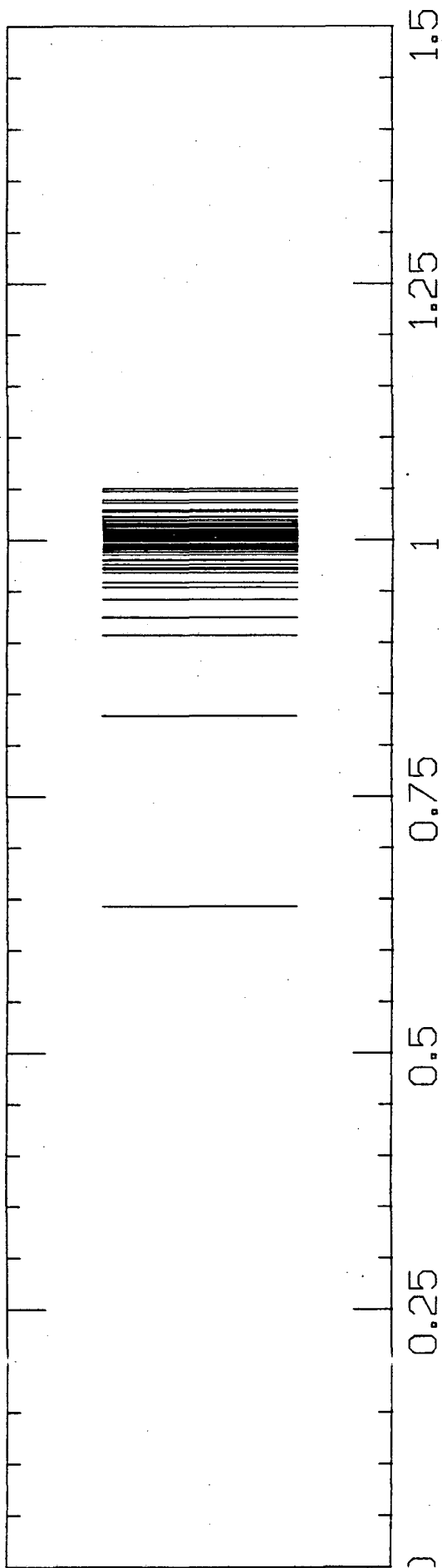


EX1 CHØL(5) N=100

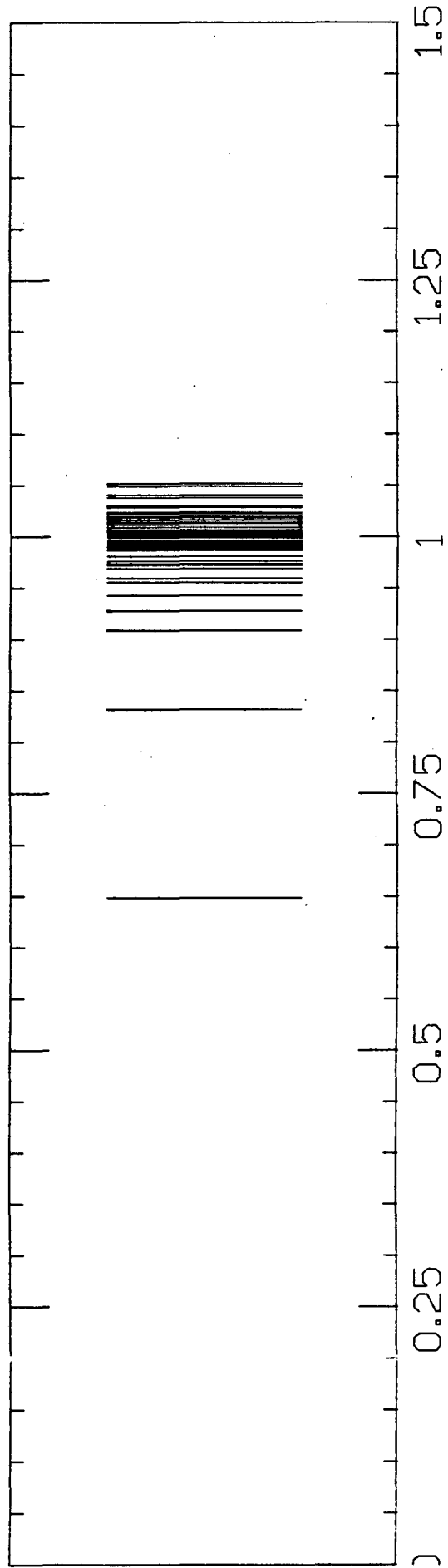




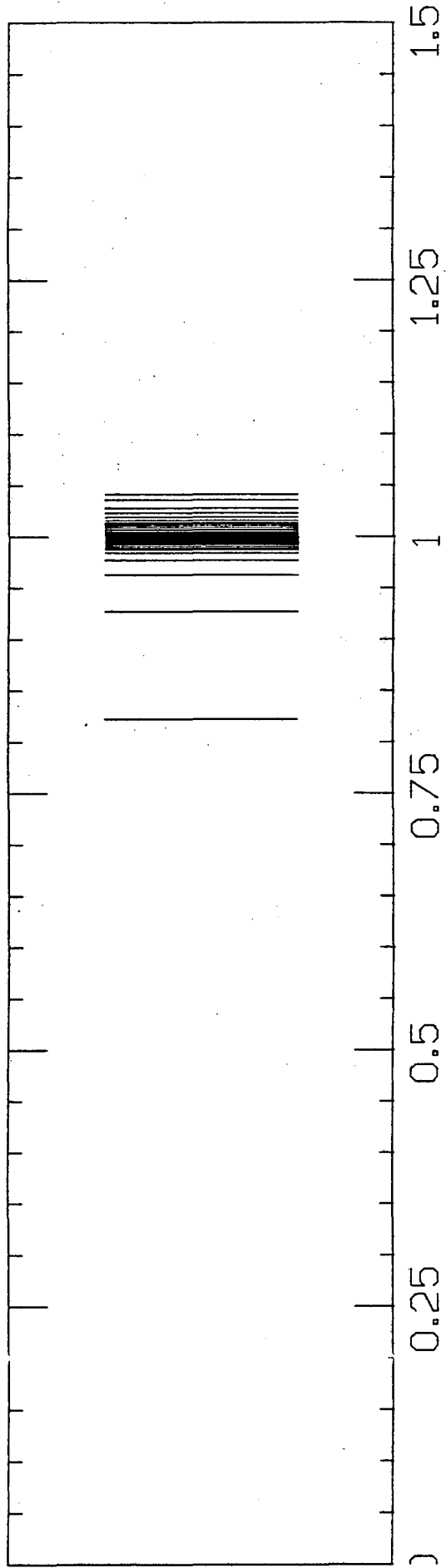
EX1 UND(2,3) N=100



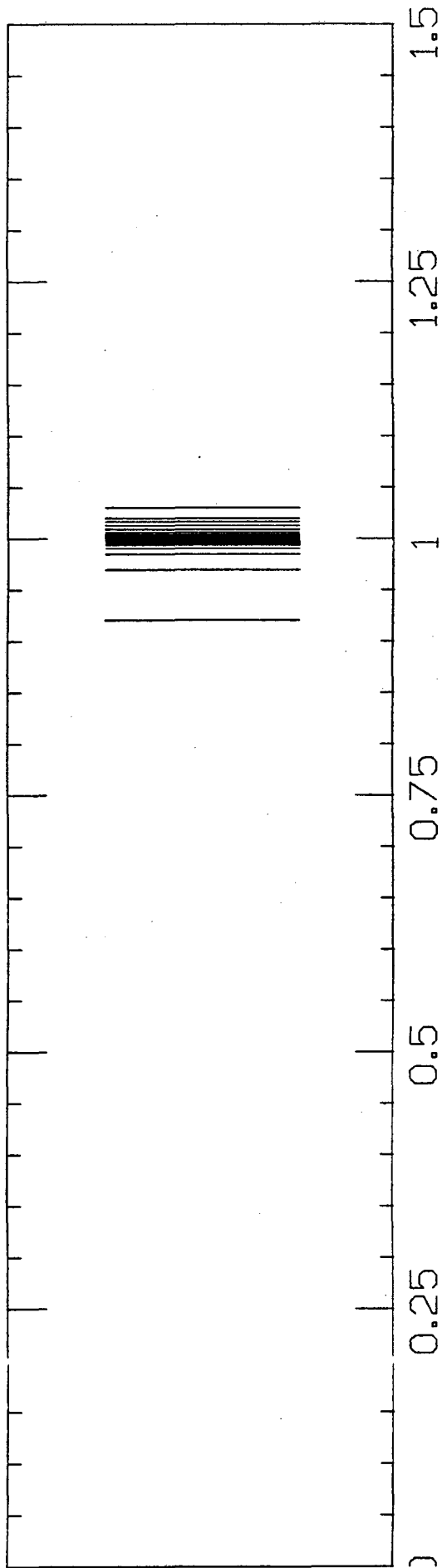
EX1 UND(2,4) N=100



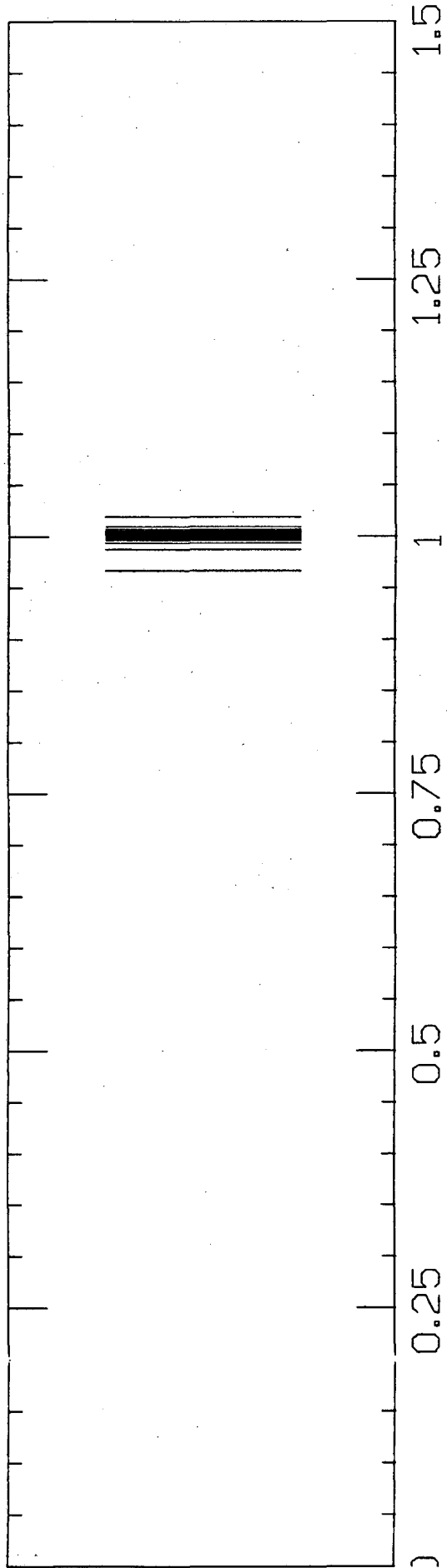
EX1 UND(3,4) N=100



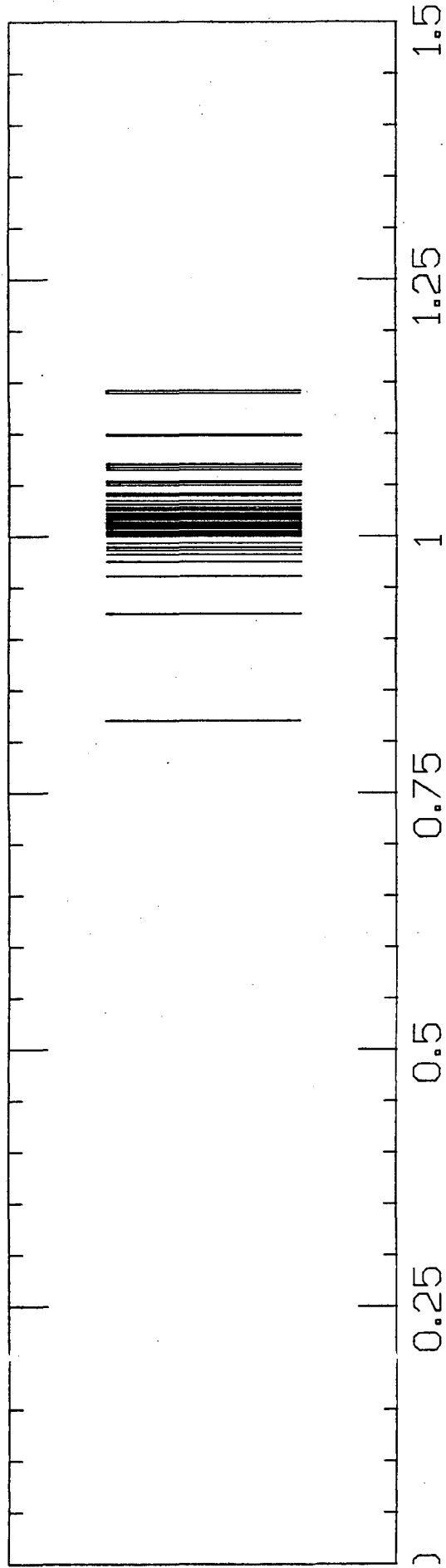
EX1 UNID(4,5) N=100



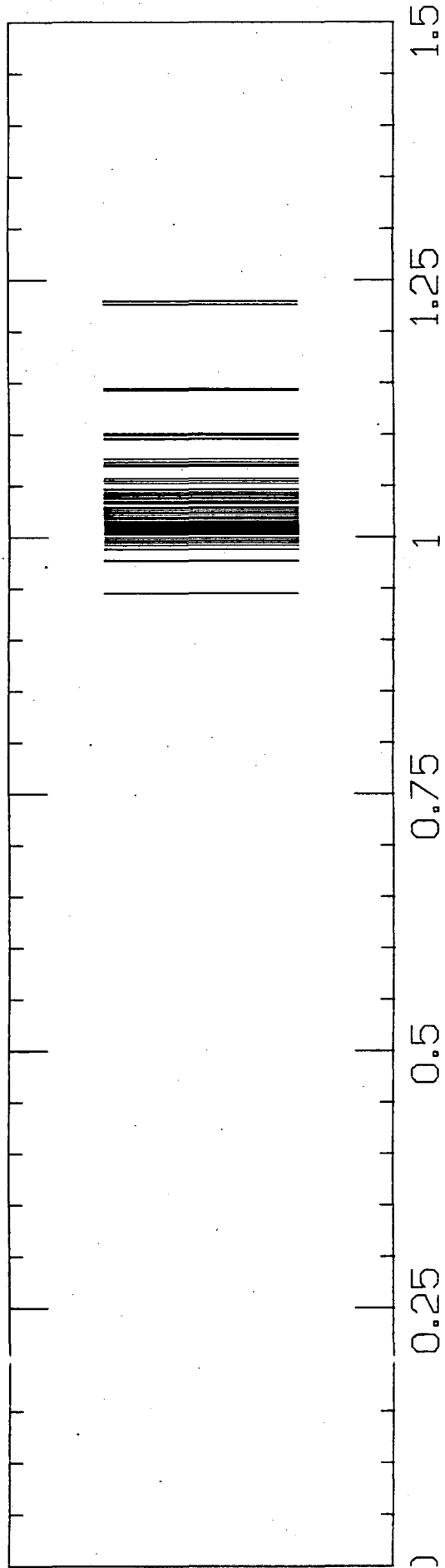
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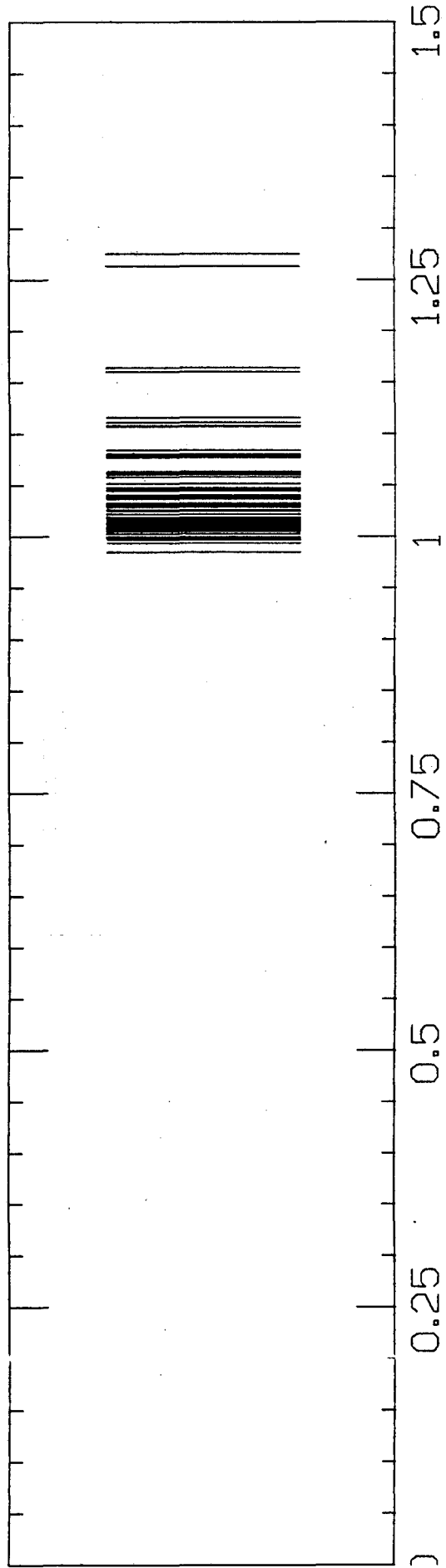
EX1 MUND(2,3) N=100



EX1 MUND(2,4) N=100

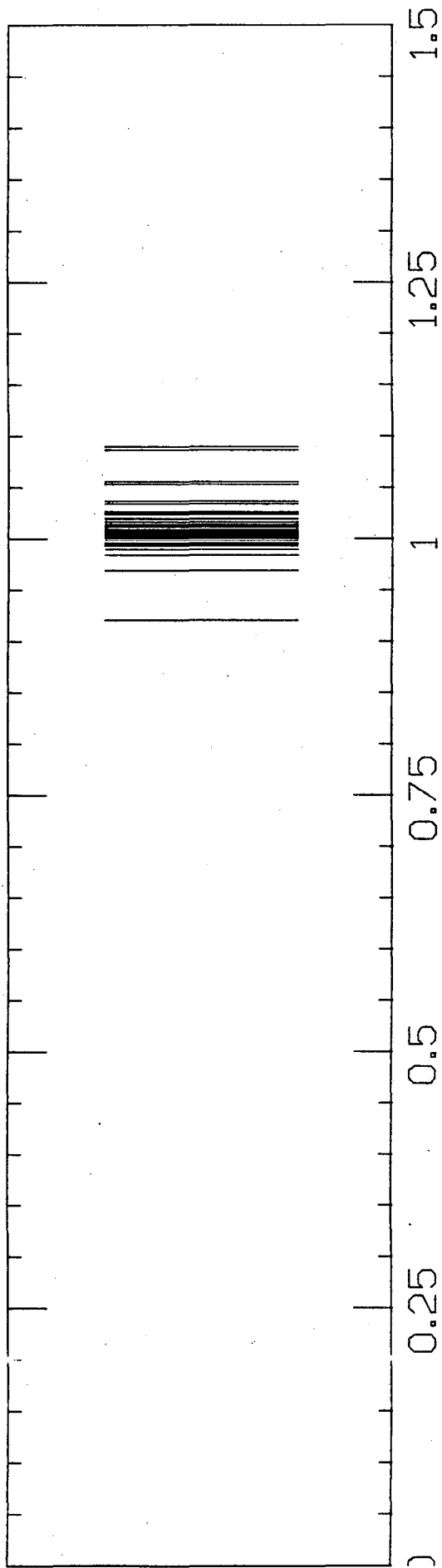


EX1 MUND(2,5) N=100

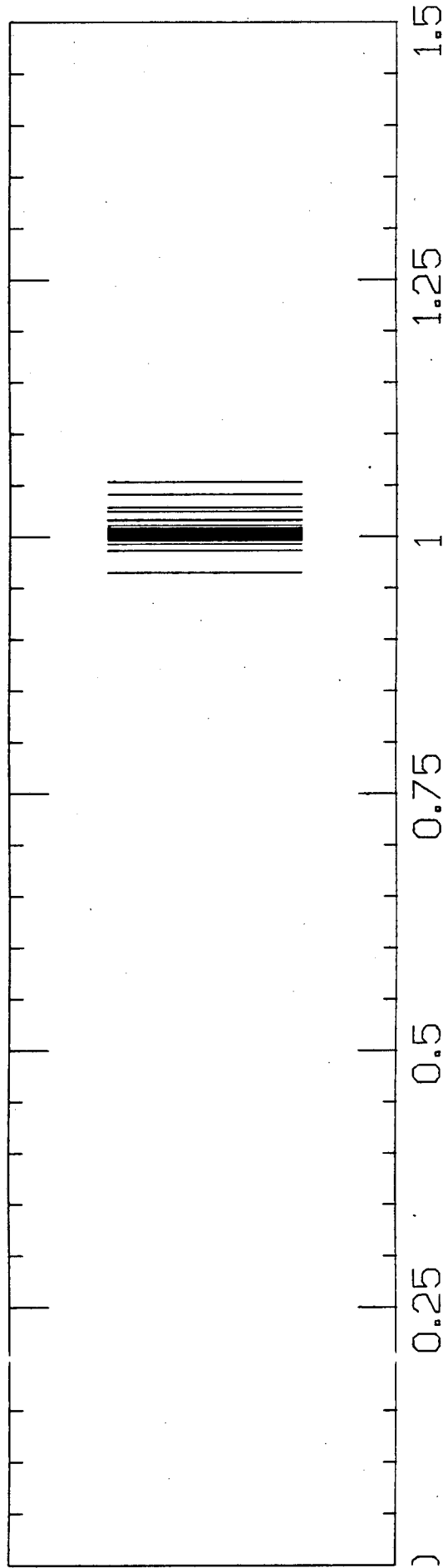




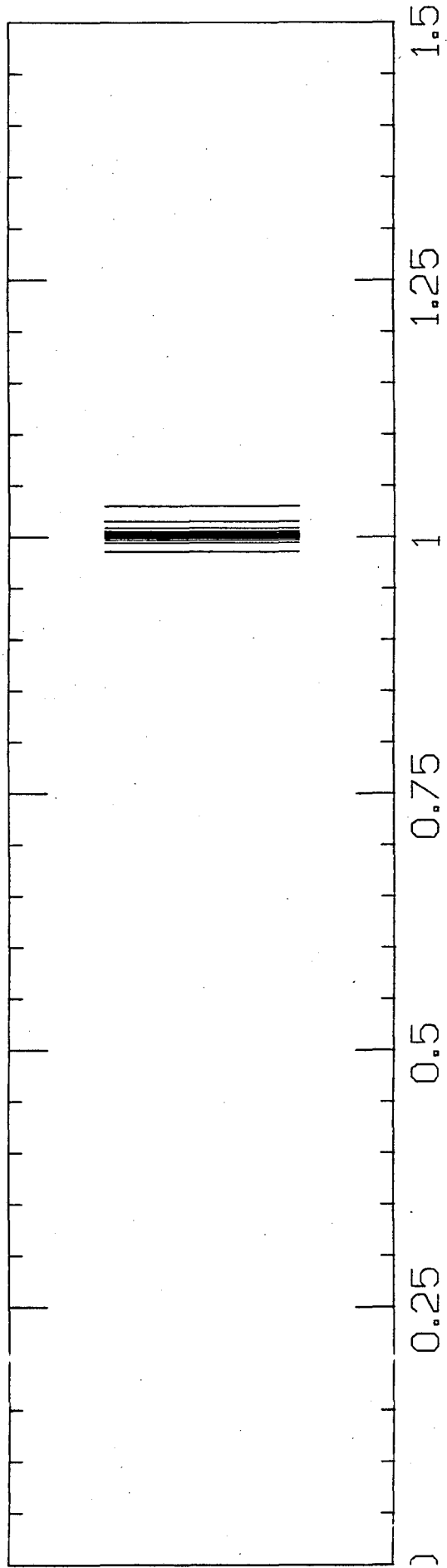
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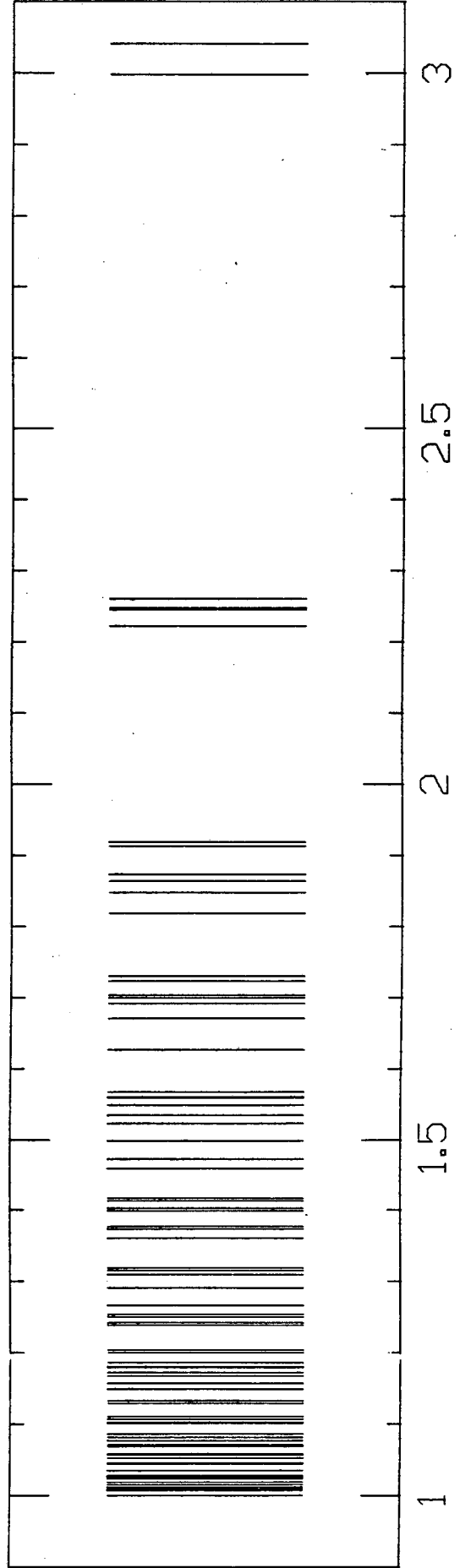
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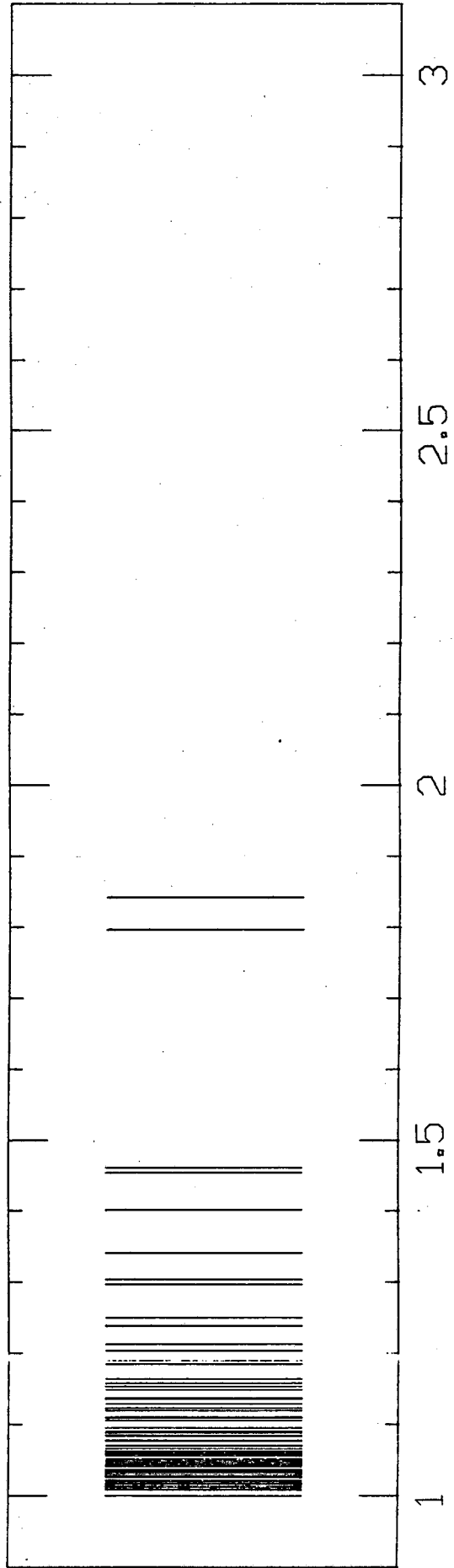
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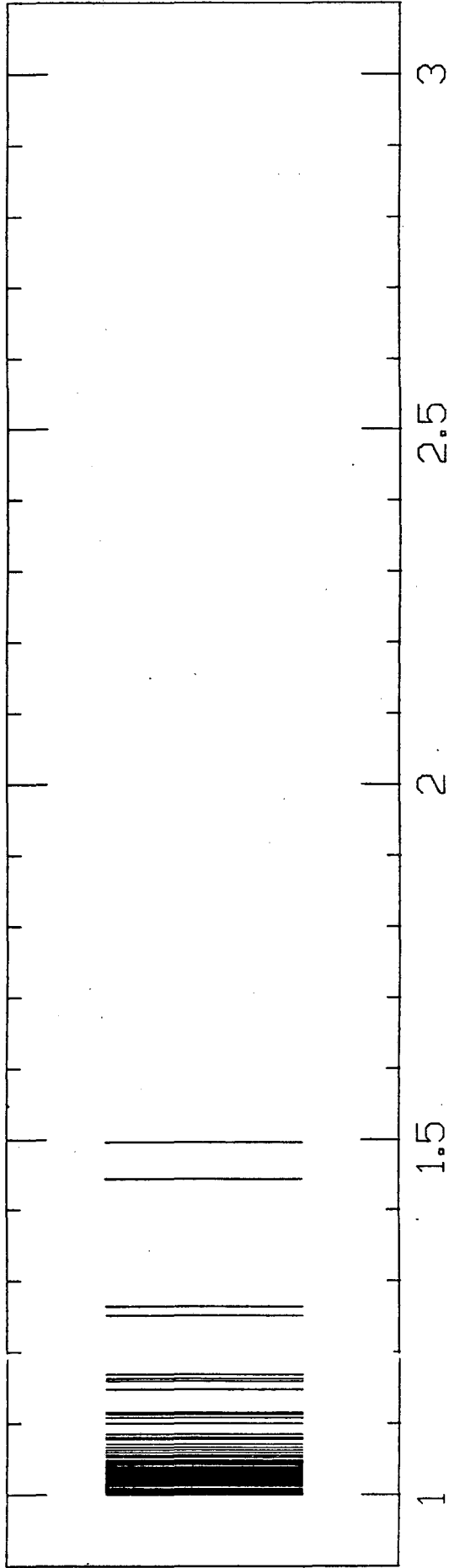
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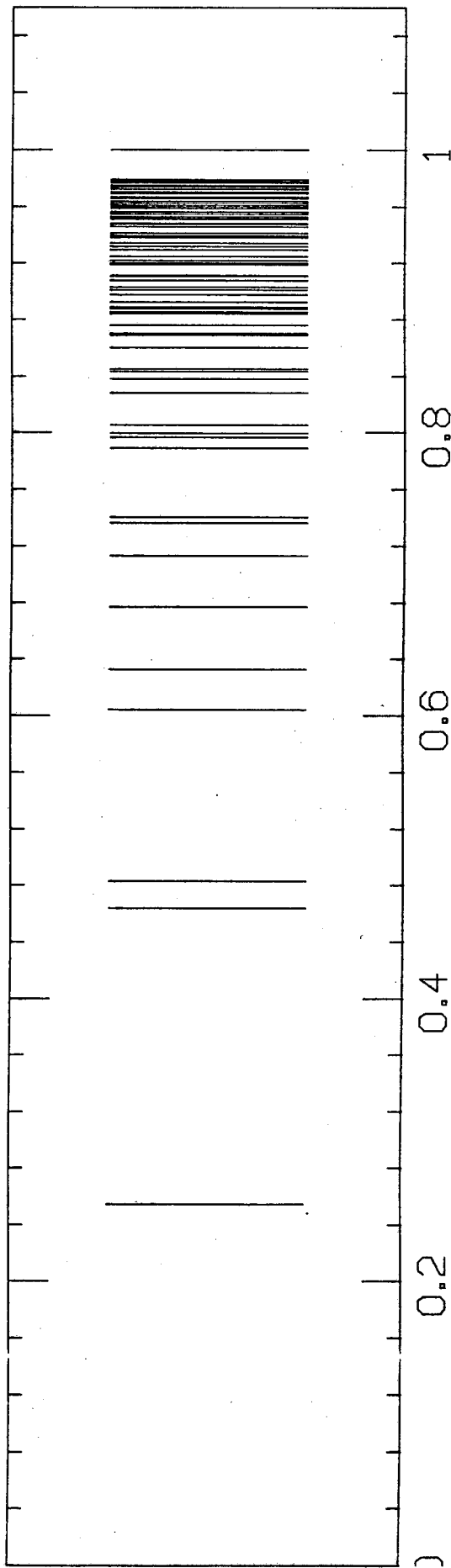
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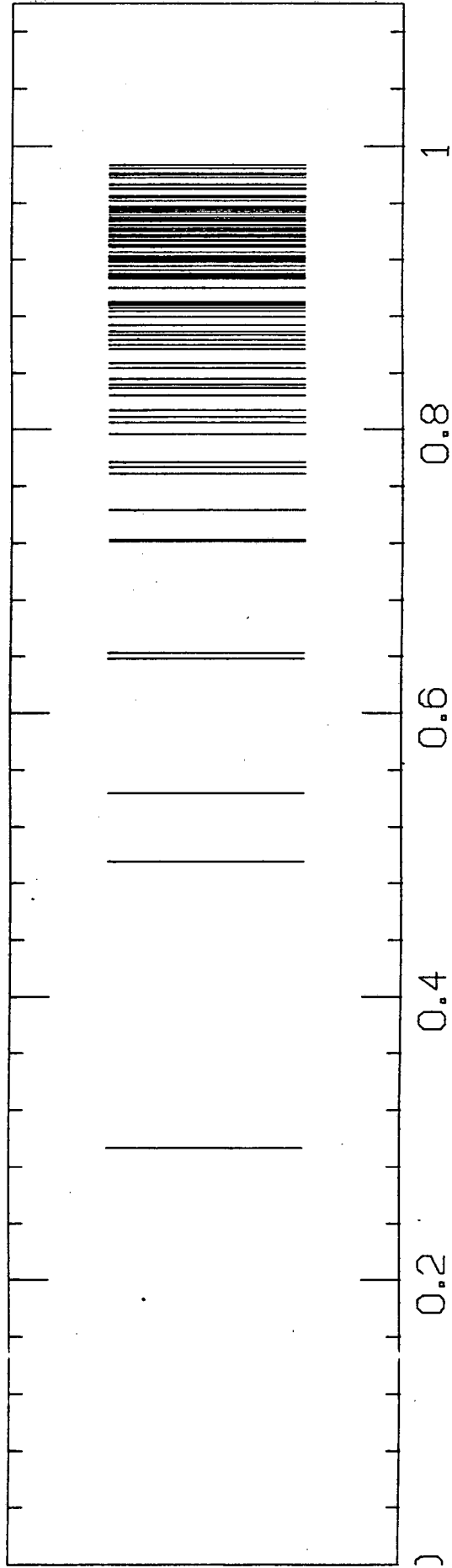
EX1 MIC(1,3) N=100



EX1 BSSØ ØM= 0.10000E+01 N=100

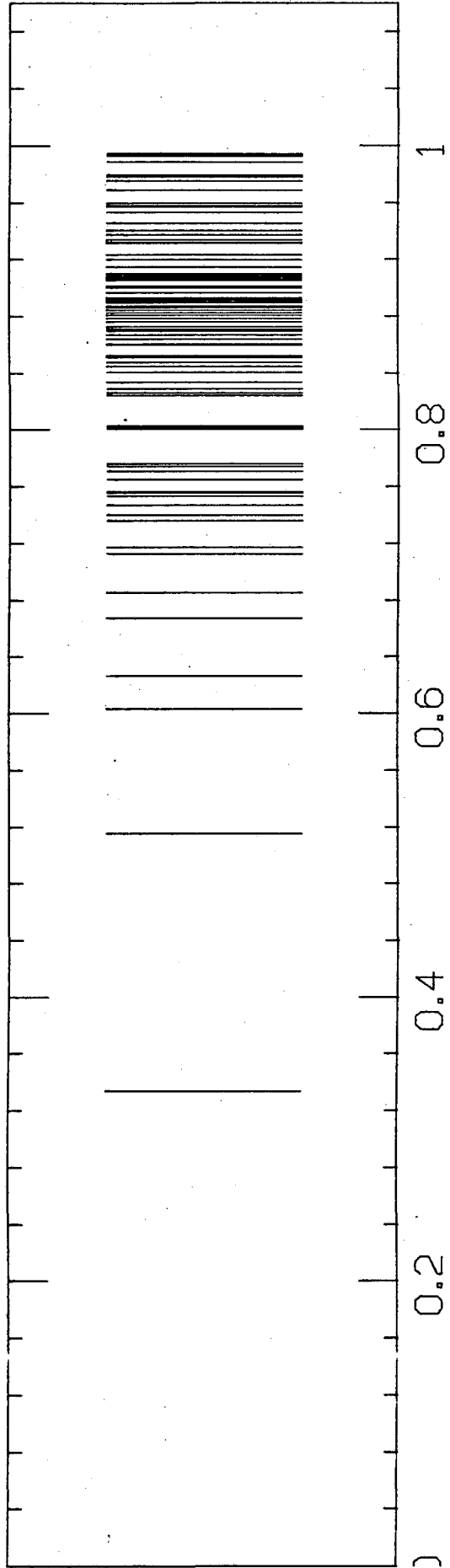


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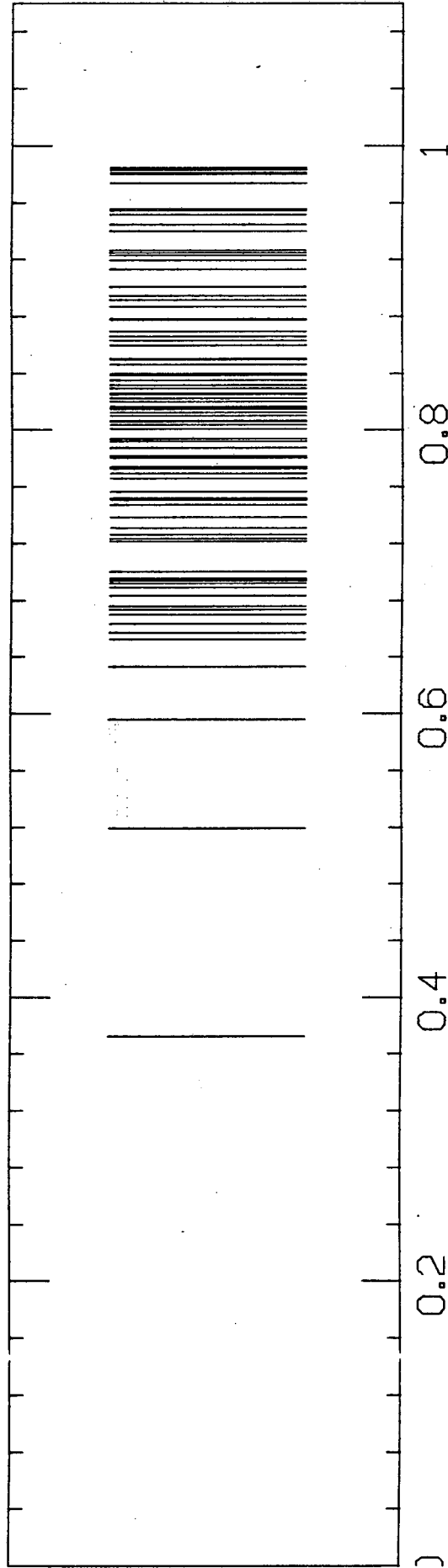




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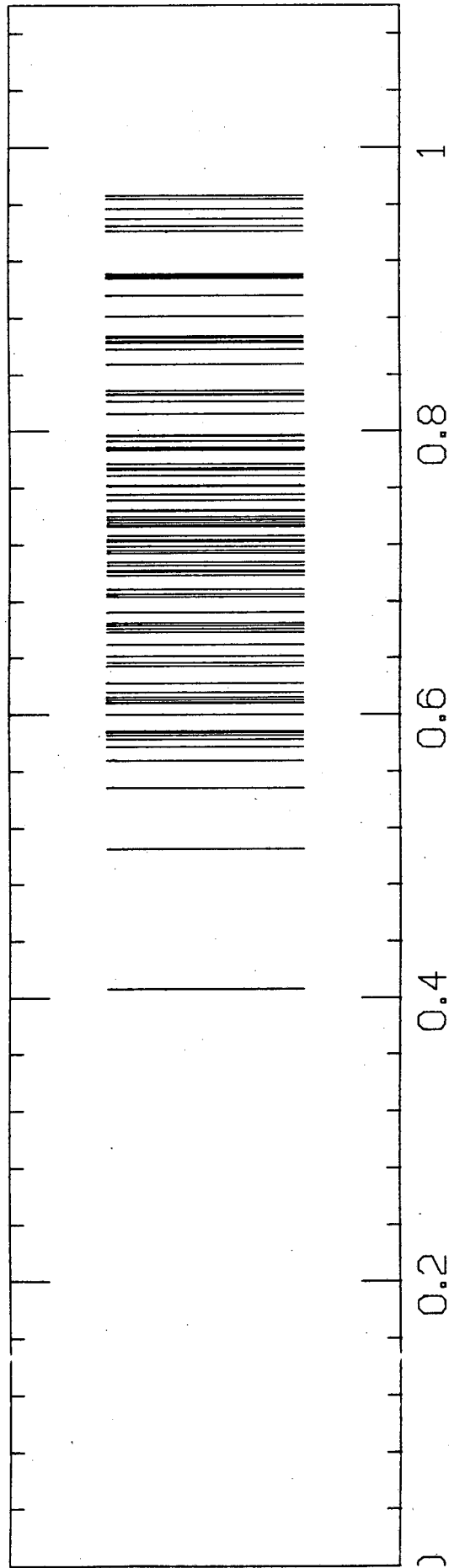
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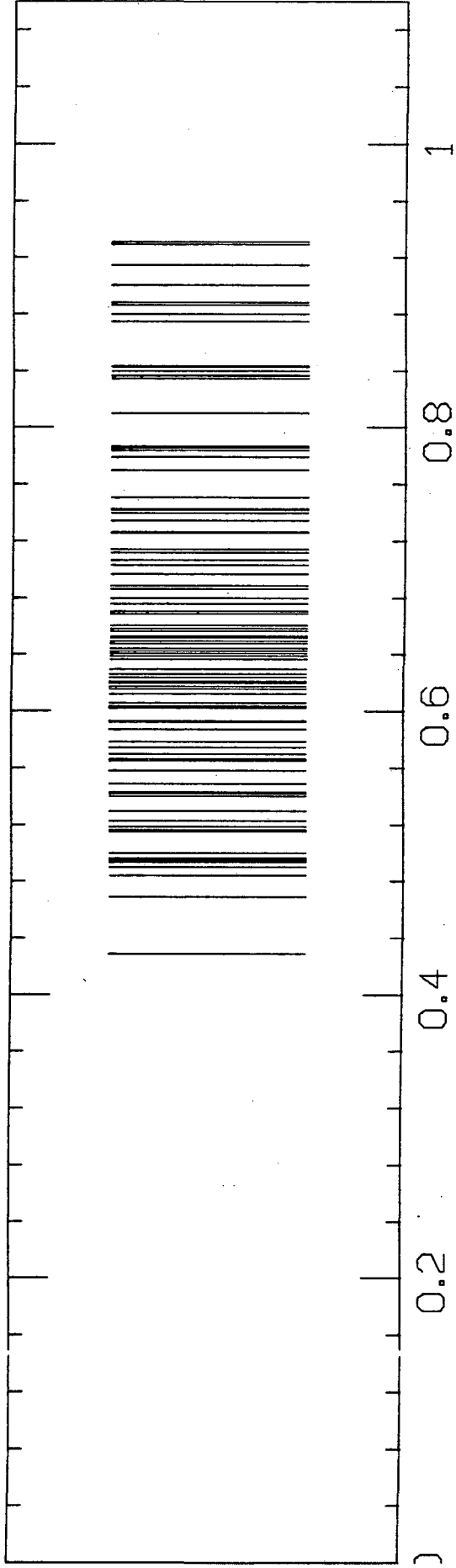
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4 2 2 4

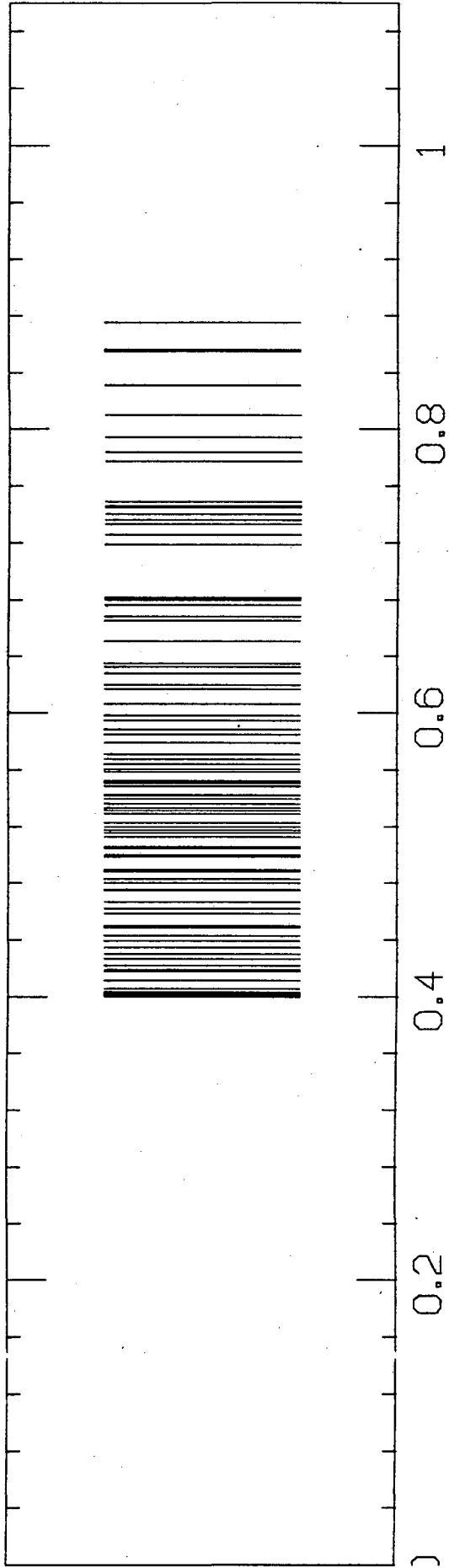
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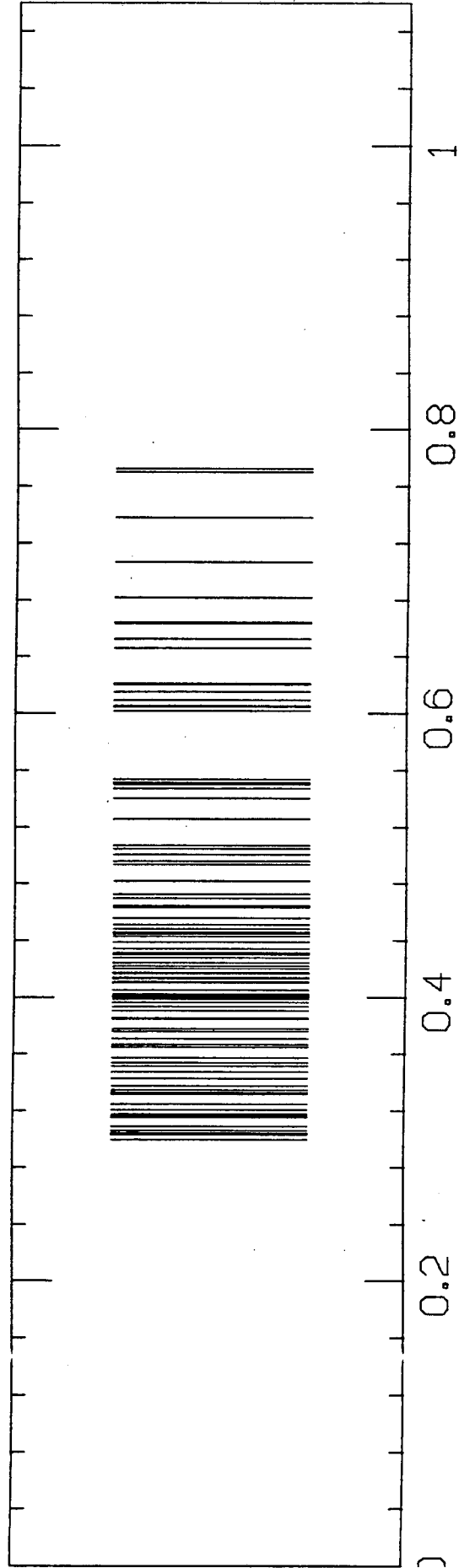
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EX1 BSSØ ØM= 0.16000E+01 N=100

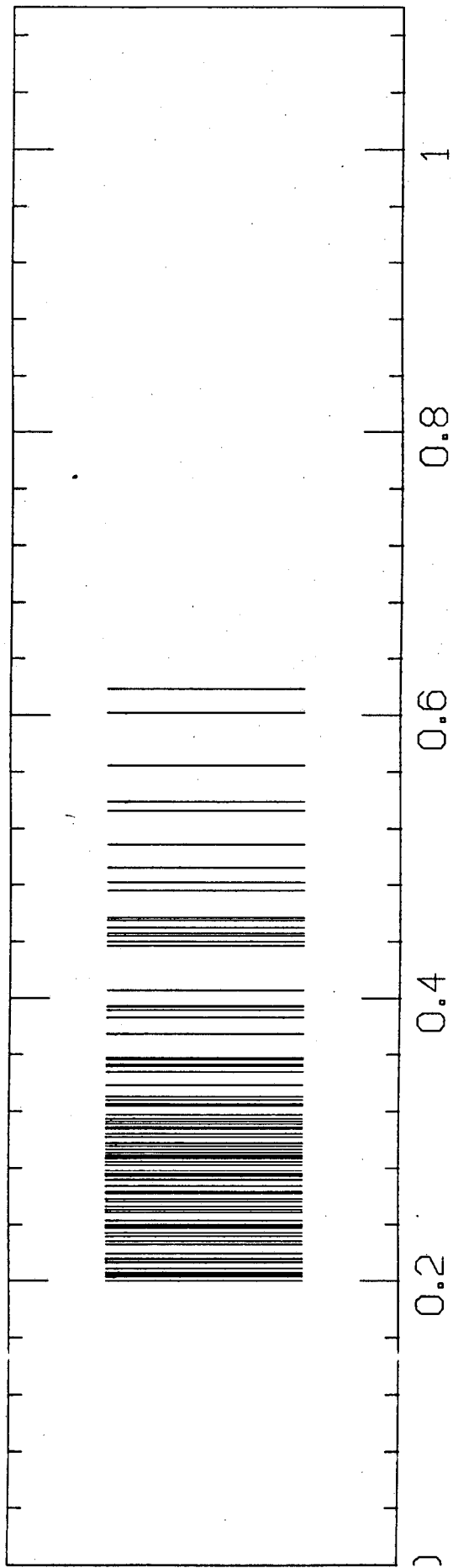


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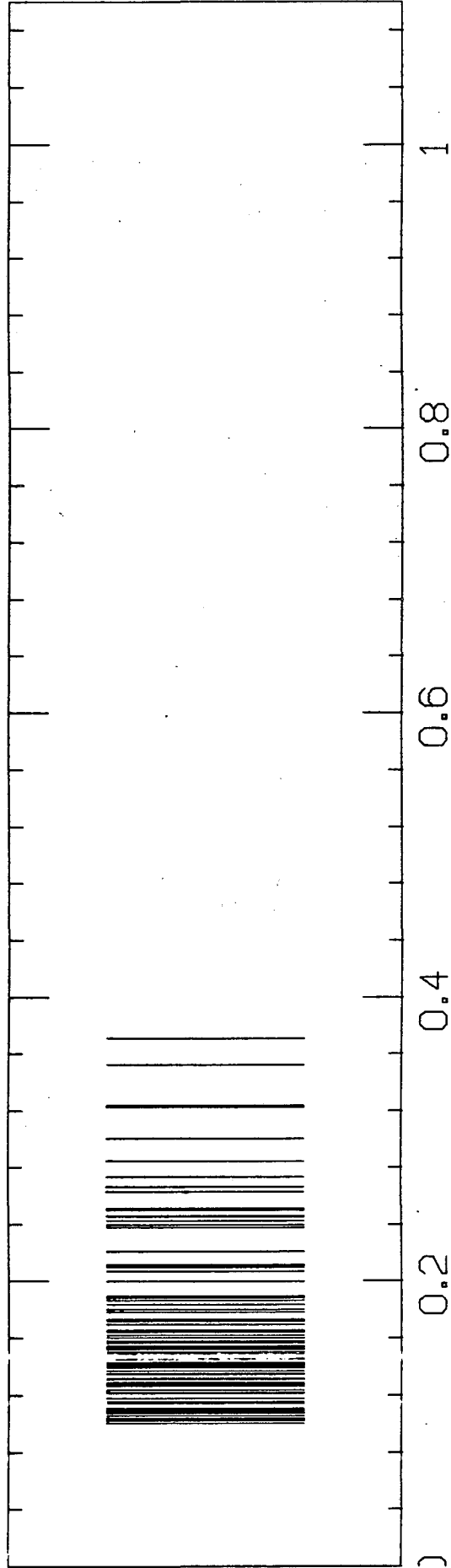


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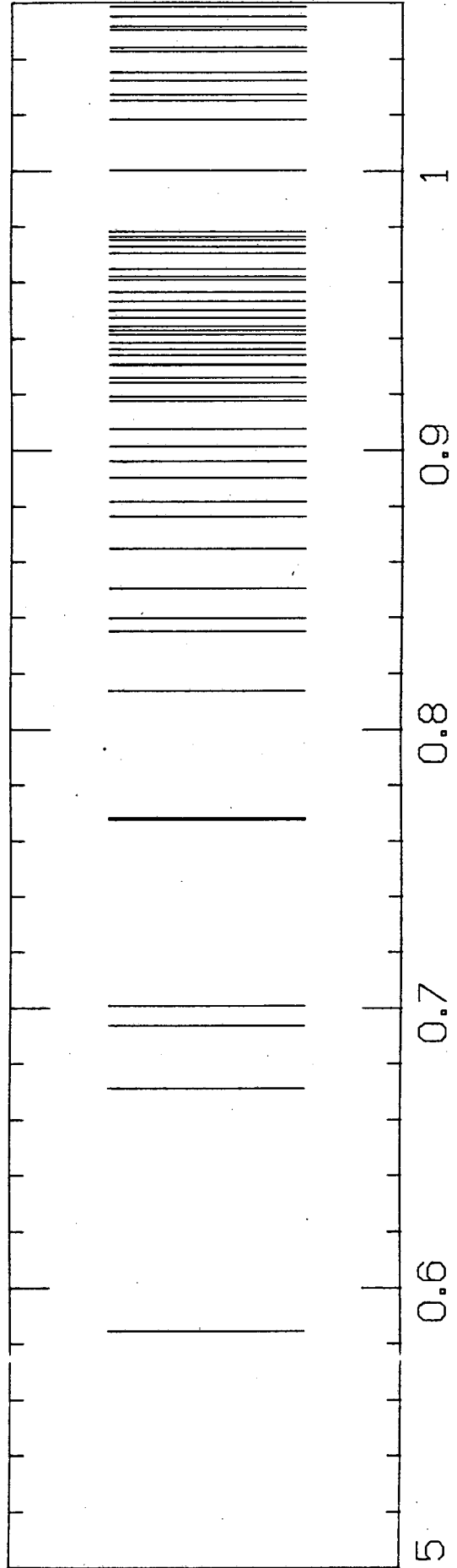


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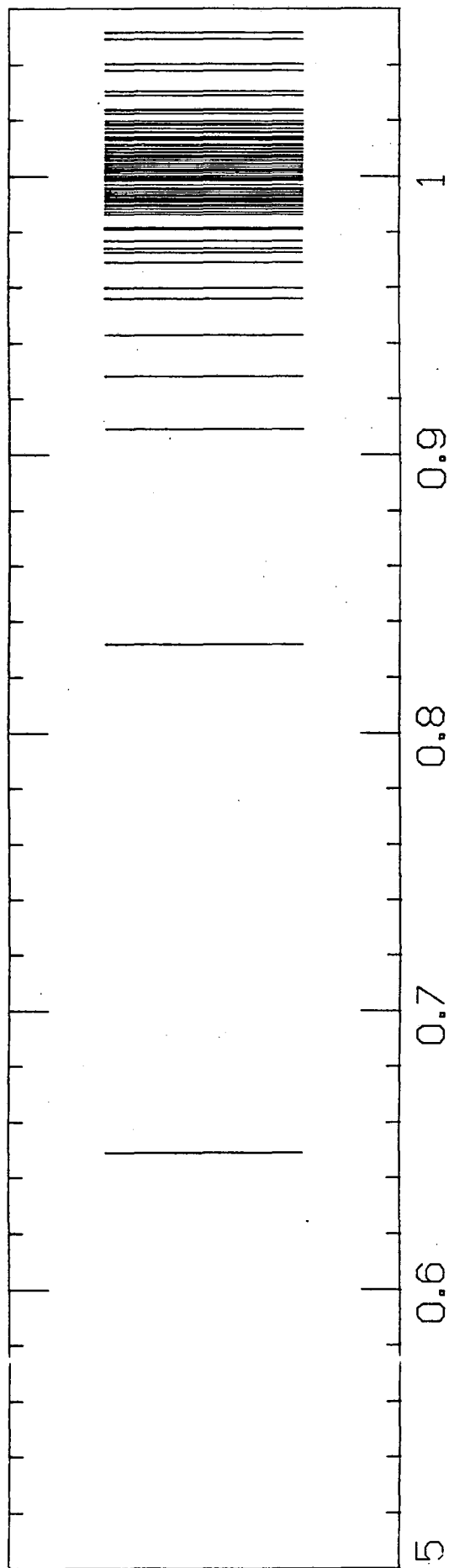




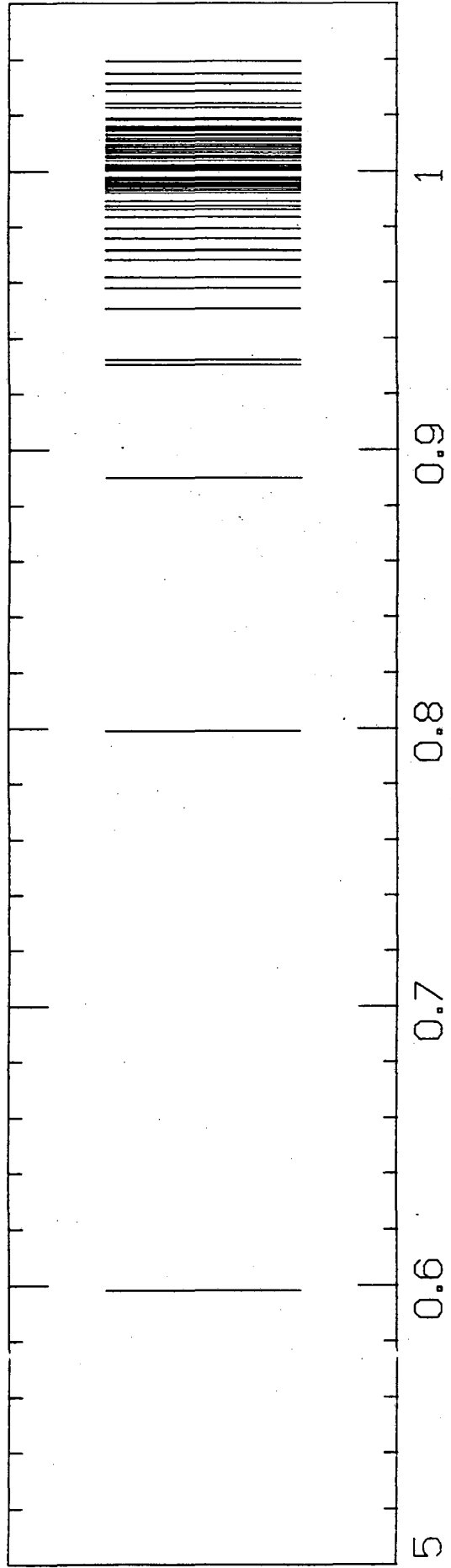
EX1 IC(1,1) N=100



EX1 INV(1) N=100



EX1 CHØL(1) N=100



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