

JOHN WHELAN LIBRARY

LA PALMA

RG0/LA PALMA TECHNICAL NOTE NO. 52

Arc maps for the Cu-Ar lamp on the
INT Spectrograph - La Palma

Cu-Ar arc maps are given for the CCD+235, IPCS+235 and IPCS+500 cameras for various gratings and angles.

D L Harmer (RG0)
September 1983

CU-AR MAPS

- 1) THESE MAPS ARE INTENDED ONLY AS A GUIDE TO THE SPECTRAL REGION YOU ARE IN.
- 2) THE WAVELENGTHS GIVEN ARE INDICATIVE OF FEATURES IN THESE REGIONS. REFER TO LINE LISTS FOR EXACT WAVELENGTHS AND IDENTIFICATIONS.
- 3) LINE LISTS EXIST IN SPICA.
- 4) QUERIES REGARDING LINE IDENTIFICATIONS OR REFERENCES TO LINE LISTS SHOULD BE ADDRESSED TO MAX PETTINI (RGO).

ARC MAPS FOR
COPPER ARGON LAMP
235 CAMERA WITH CCD

Contains maps for
R1200Y grating

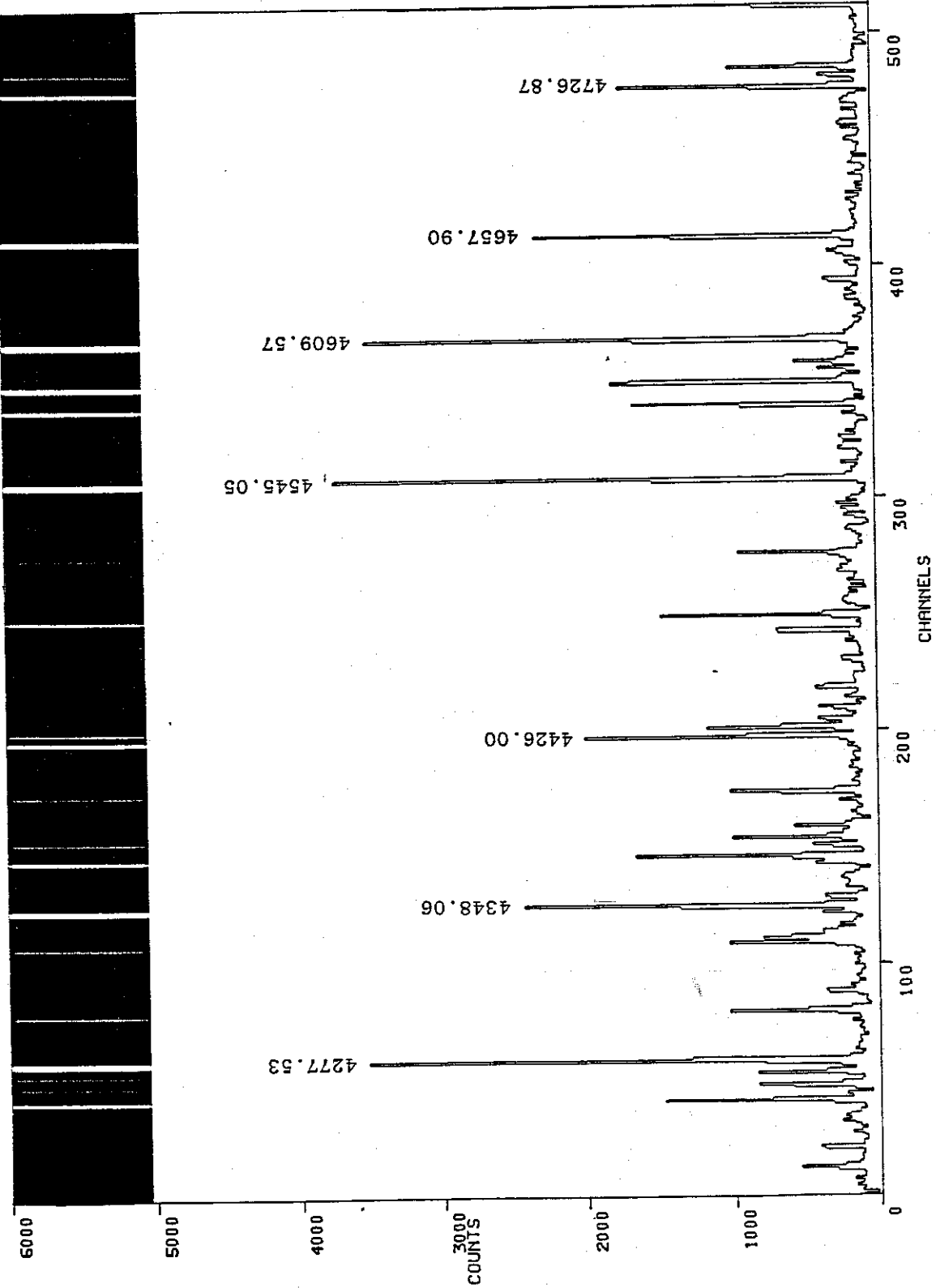
4250 - 8700A

September 1983

Notes

- 1) Filters marked ---D are neutral filters in the "ASND" notation EXCEPT 2.4D, which is "FARC". Filter slides will be separately identified.
- 2) Filters marked GG --- or BG --- etc are colour filters in the "ASCF" notation. Filter slides will be separately identified.
- 3) Note that at settings less than 45.00, there will be light loss from overfilled optics, and image quality is affected if significantly smaller angles are used.
- 4) Insert grating with blaze arrow away from camera, i.e. blaze left.
- 5) Note that plots are shown with † indicating "overflow" or saturated data. This is to show the presence of weaker lines in the arc. If the strong lines are to be used as wavelength standards or for focussing, the exposure time must be varied to reduce the counts in these lines.

2 3 5 C A M E R A W I T H C C D



KEY

GRATING RI200Y

SETTING 55.87

SLIT 200 MICRONS

..... 1.08 ARCSEC

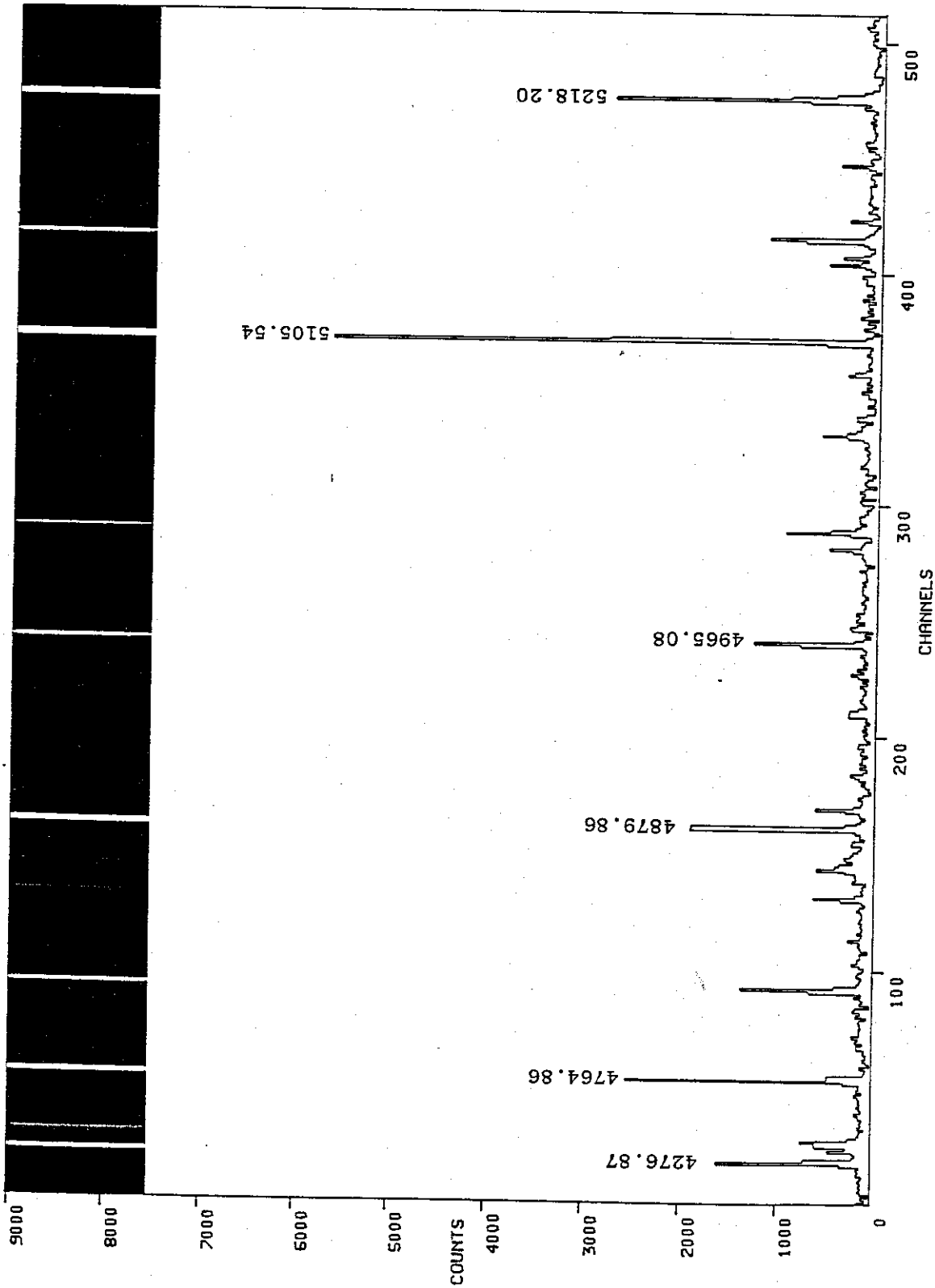
PROJ. SLIT 30.8 MICRONS

FILTERS NONE

EXPOSURE 50S

SOURCE CUAR

235 CAMERA WITH CCD



KEY

GRATING RI200Y

SETTING 53.98

SLIT 200 MICRONS

..... 1.08 ARCSEC

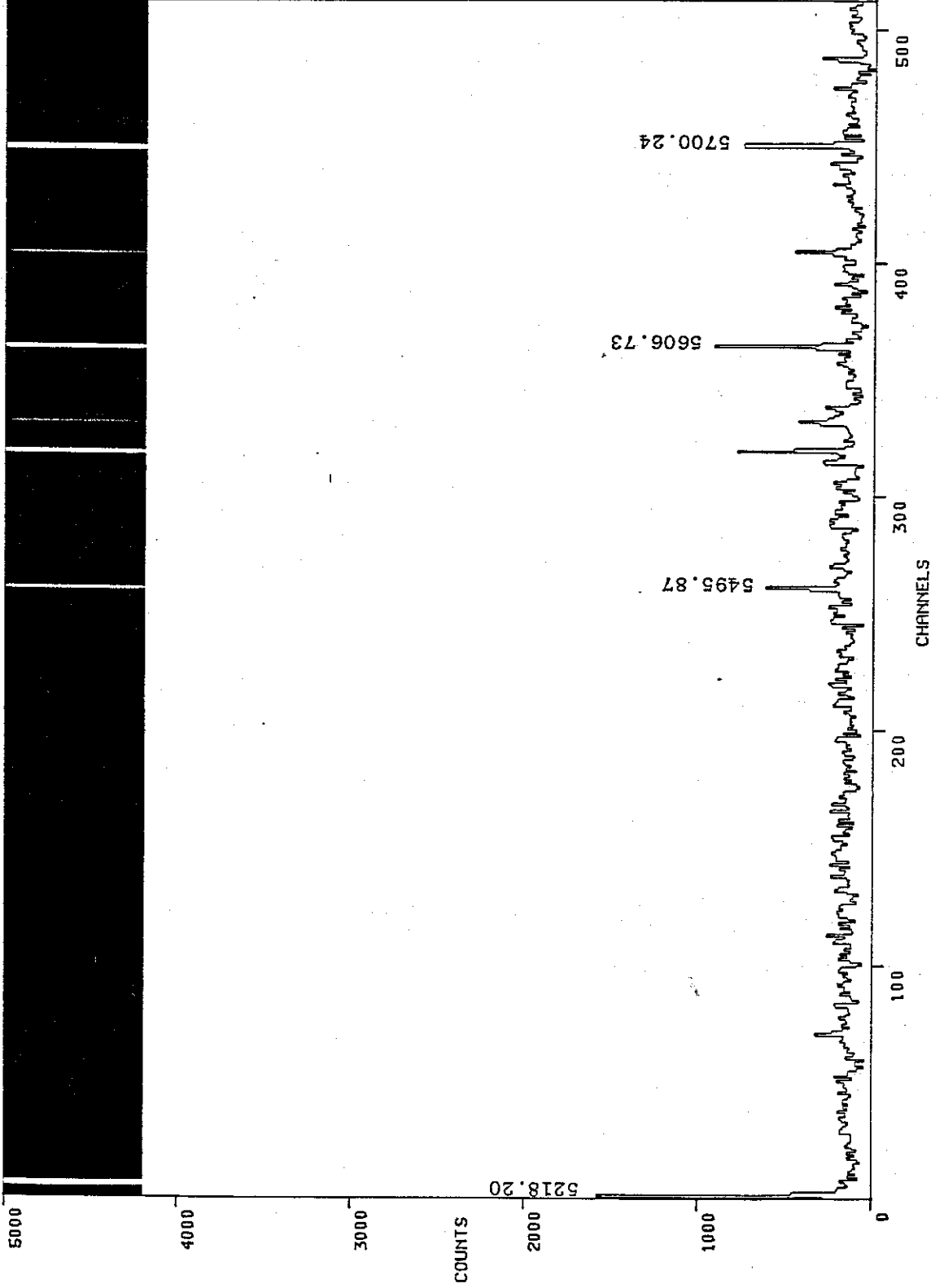
PROJ. SLIT 30.0 MICRONS

FILTERS NONE

EXPOSURE 50S

SOURCE CUAR

235 CAMERA WITH CCD



KEY

GRATING R1200Y

SETTING 52.06

SLIT 200 MICRONS

..... 1.08 ARCSEC

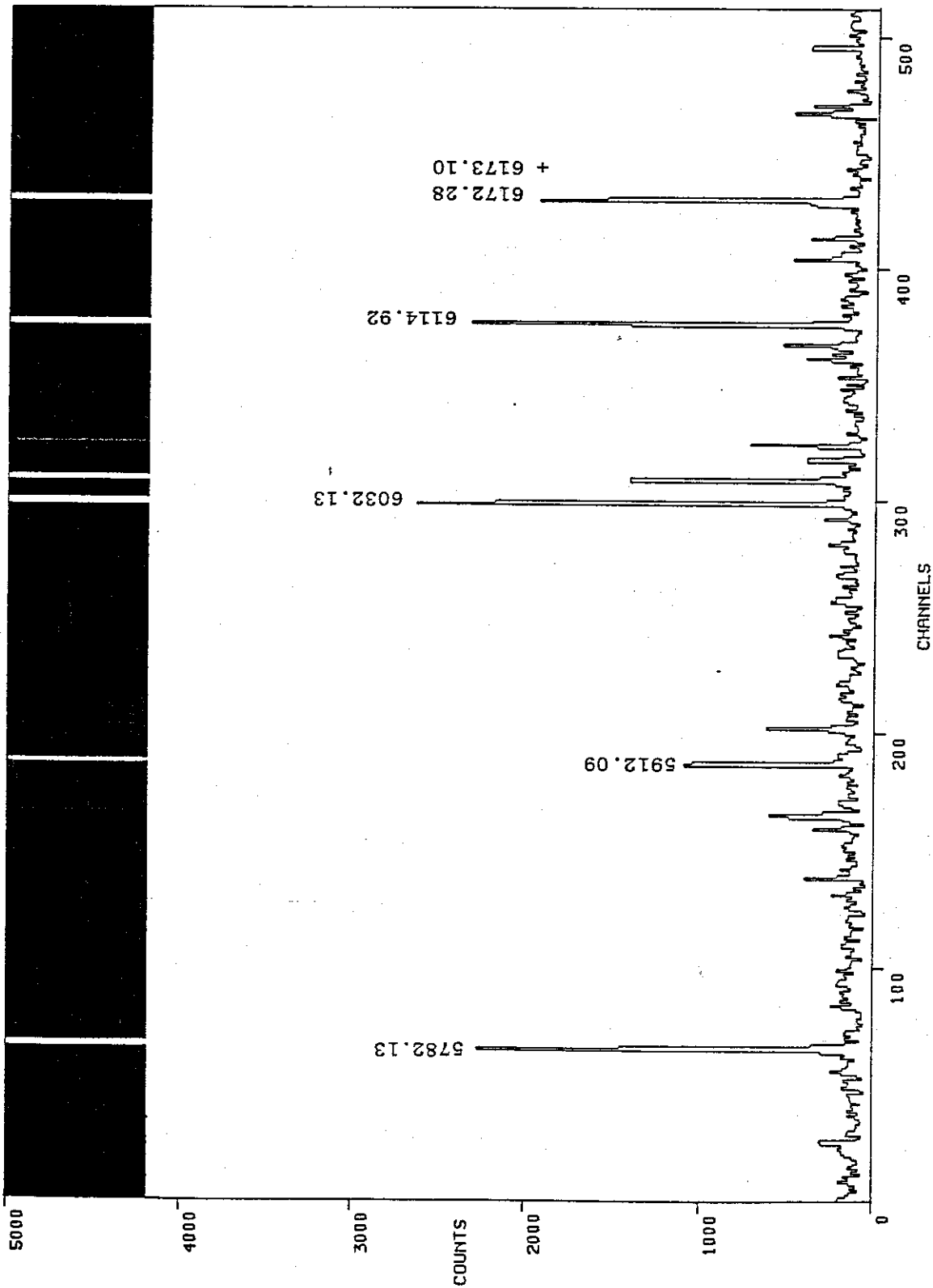
PROJ. SLIT 29.3 MICRONS

FILTERS NONE

EXPOSURE 50S

SOURCE CUAR

235 CAMERA WITH CCD



KEY

GRATING R1200Y

SETTING 50.13

SLIT 200 MICRONS

..... 1.08 ARCSEC

PROJ. SLIT 28.6 MICRONS

FILTERS GG395

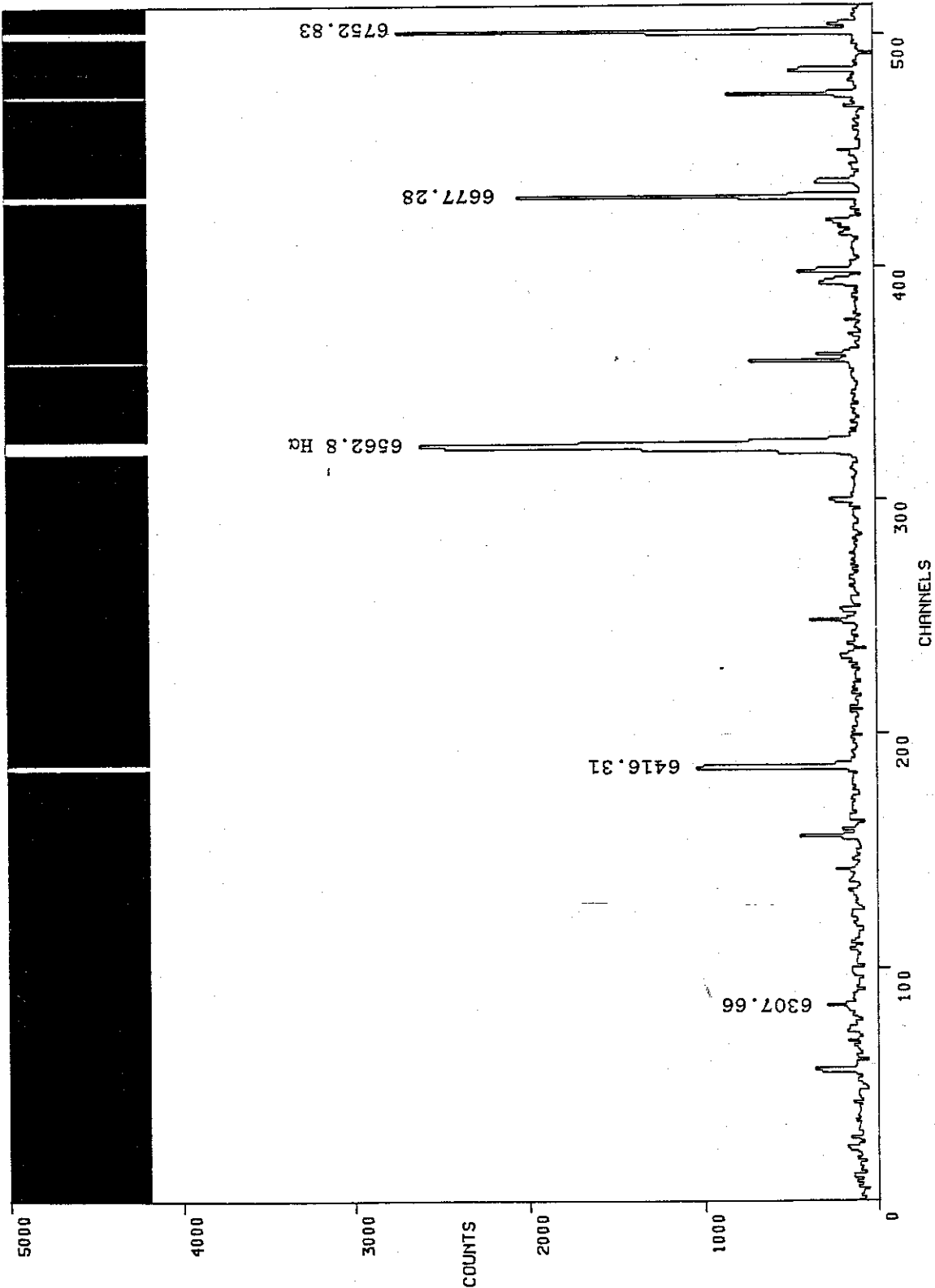
EXPOSURE 50S

SOURCE CUAR

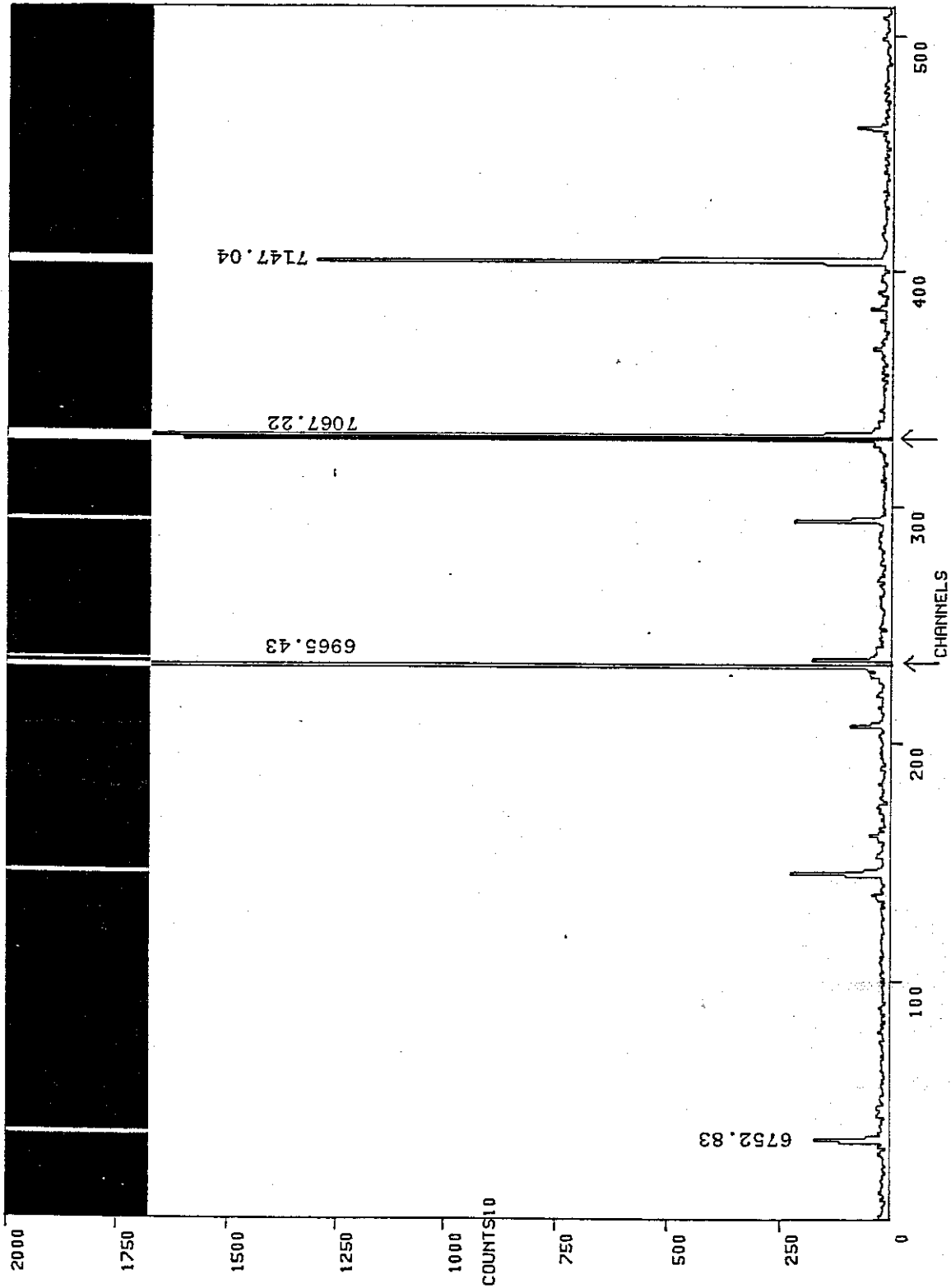
235 CAMERA WITH CCD

KEY

GRATING R1200Y
SETTING 48.16
SLIT 200 MICRONS
..... 1.08 ARCSEC
PROJ. SLIT 27.8 MICRONS
FILTERS GG395
EXPOSURE 50S
SOURCE CUAR



2 3 5 C A M E R A W I T H C C D



KEY

GRATING RI200Y

SETTING 46.17

SLIT 200 MICRONS

..... 1.08 ARCSEC

PROJ. SLIT 27.1 MICRONS

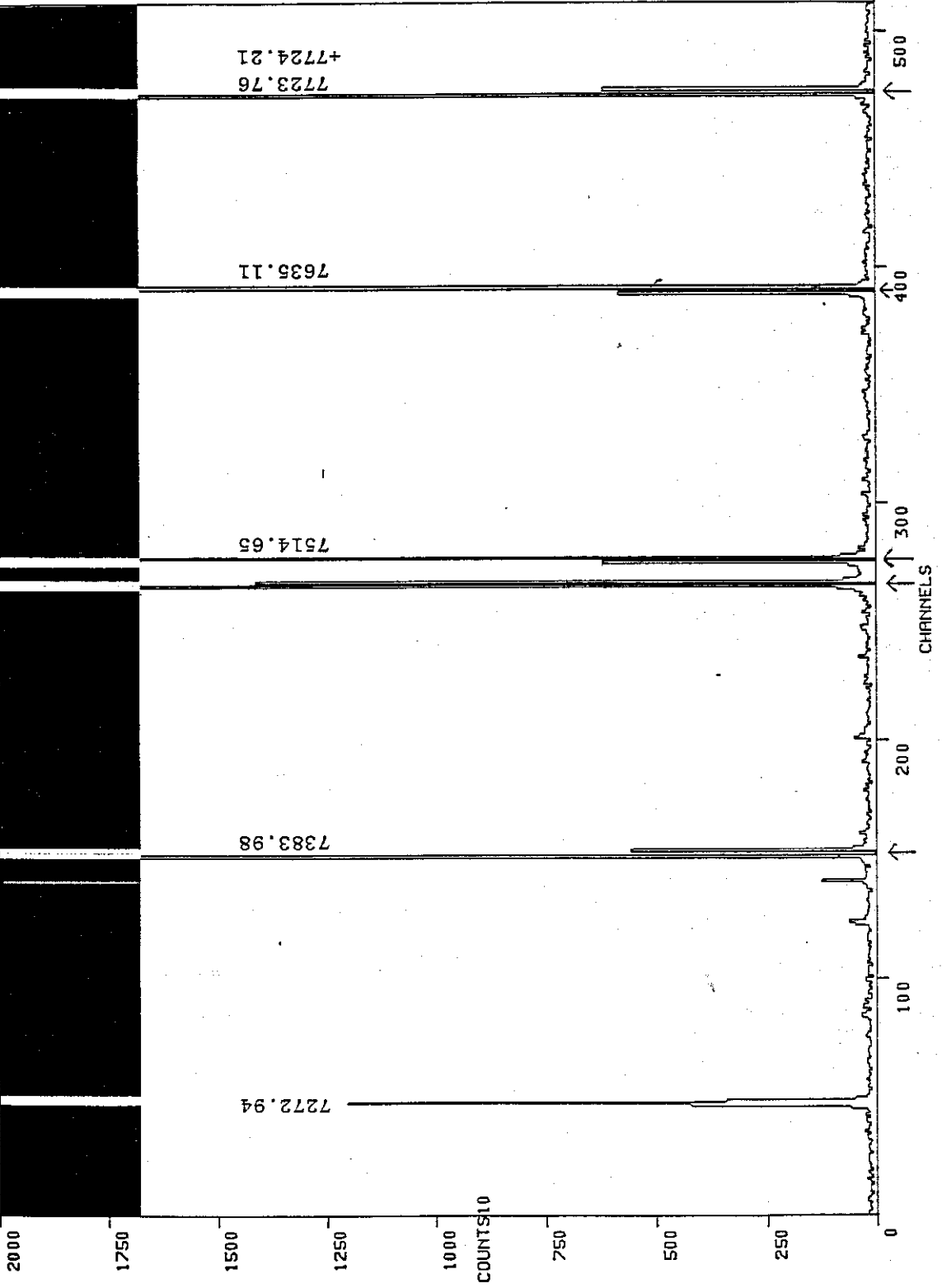
FILTERS GG495

EXPOSURE 50S

SOURCE CUAR

THE LOWER ARROWS INDICATE
OVERFLOWED LINES

235 CAMERA WITH CCD



KEY

GRATING R1200Y

SETTING 44.14

SLIT 200 MICRONS

..... 1.08 ARCSEC

PROJ. SLIT 26.3 MICRONS

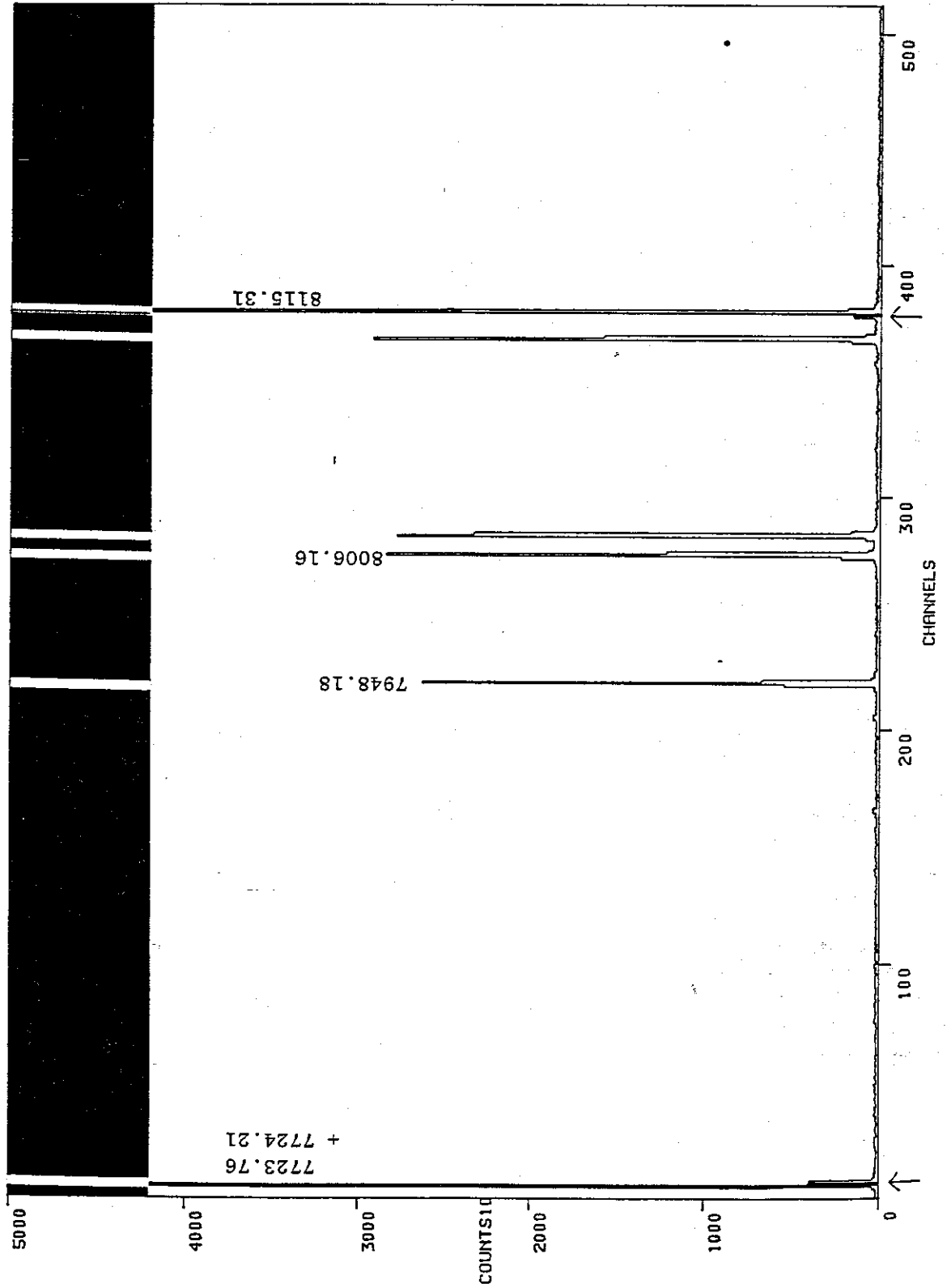
FILTERS GG495

EXPOSURE 50S

SOURCE CUAR

THE LOWER ARROWS INDICATE
OVERFLOWED LINES

235 CAMERA WITH CCD



KEY

GRATING R1200Y

SETTING 42.07

SLIT 200 MICRONS

..... 1.08 ARCSEC

PROJ. SLIT 25.5 MICRONS

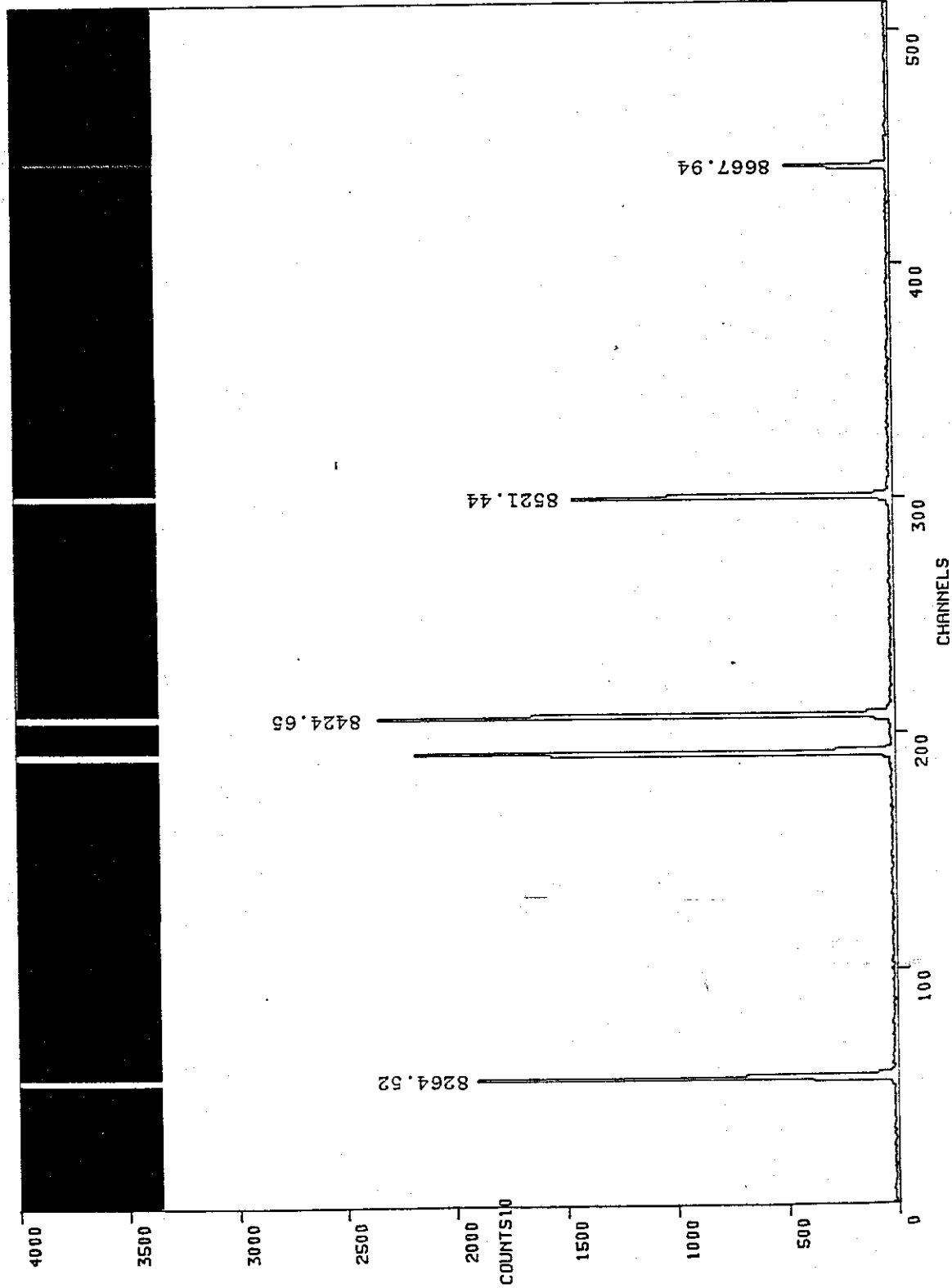
FILTERS RG630

EXPOSURE 50S

SOURCE CUAR

THE LOWER ARROWS INDICATE
OVERFLOWED LINES

235 CAMERA WITH CCD



KEY

GRATING R1200Y

SETTING 40.00

SLIT 200 MICRONS

..... 1.08 ARCSEC

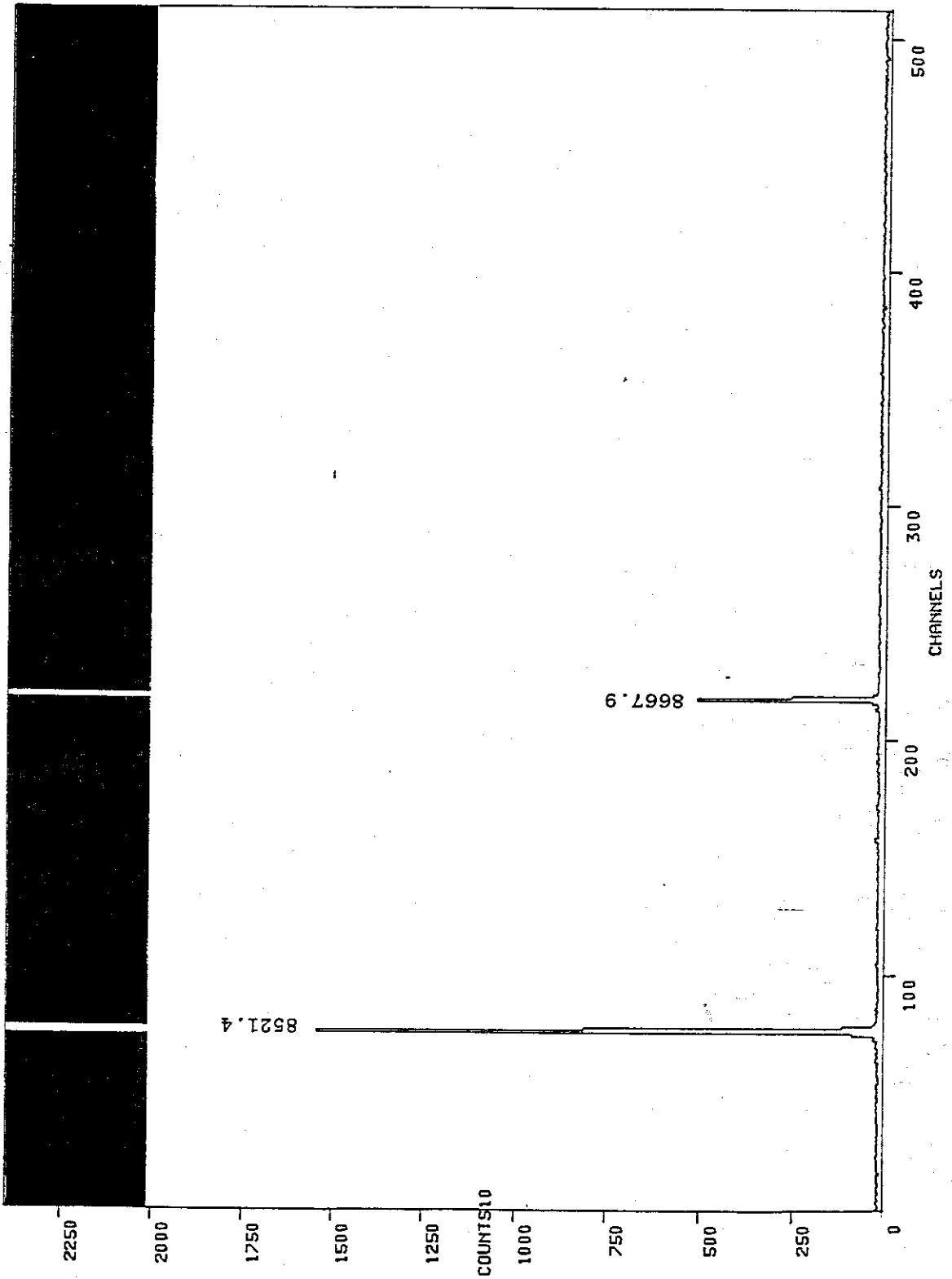
PROJ. SLIT 24.6 MICRONS

FILTERS RG630

EXPOSURE 50S

SOURCE CUAR

235 CAMERA WITH CCD



KEY

GRATING R1200Y

SETTING 39.00

SLIT 200 MICRONS

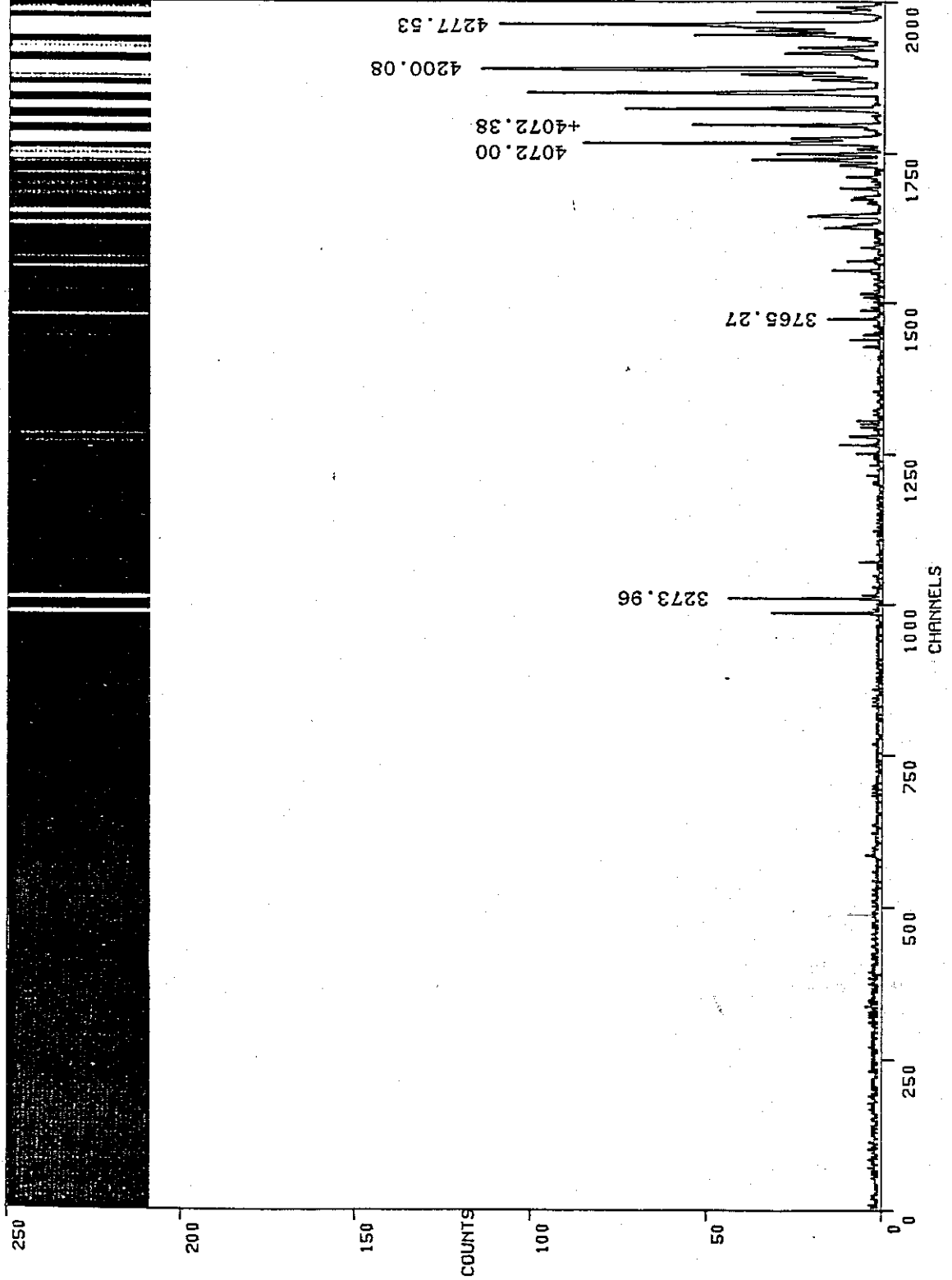
PROJ. SLIT 24.2 MICRONS

FILTERS RG630

EXPOSURE 50S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING R632V

SETTING 66.21

SLIT 100 MICRONS

..... 0.54 ARCSEC

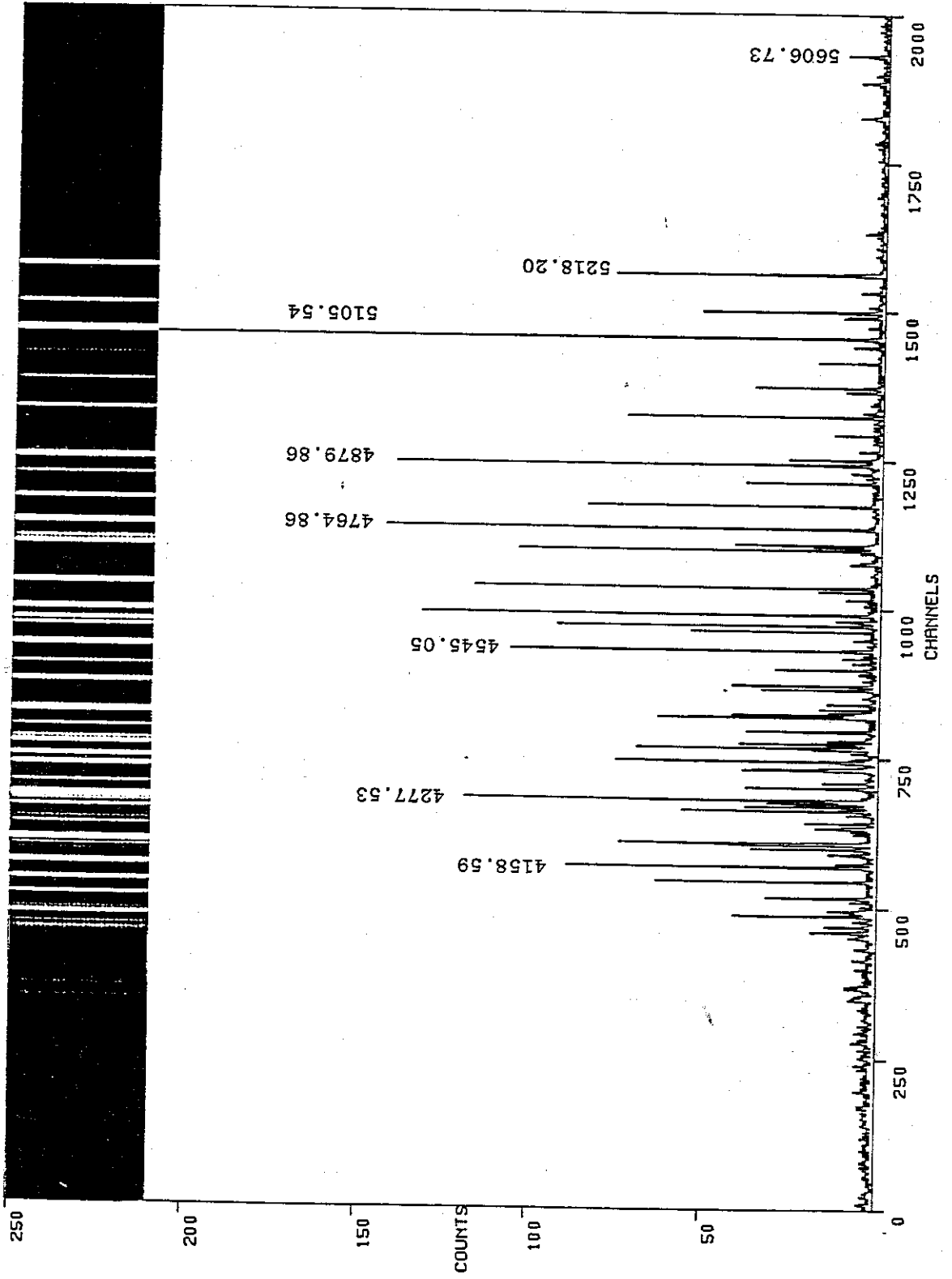
PROJ. SLIT 17.4 MICRONS

FILTERS 1.2D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY
GRATING R632V
SETTING 63.62
SLIT 100 MICRONS
..... 0.54 ARCSEC
PROJ. SLIT 16.9 MICRONS
FILTERS 1.8D
EXPOSURE 200S
SOURCE CUAR

September 1983

3200 - 4500
 3200 - 5700
 5100 - 7900
 3000 - 6100
 3000 - 7500
 3200 - 8000
 3200 - 8500
 λ RANGE

H2400B
 H1800V
 R1200Y
 R1200B
 R632V
 R400V
 R300V
 GRATING

Contains maps for

ARC MAPS FOR
 COPPER-ARGON LAMP
 235 CAMERA WITH IPCS

Notes

1) Filters marked ---D are neutral filters in the "ASND" notation EXCEPT 2.4D, which is "FARC". Filter slides will be separately identified.

2) Filters marked GG --- or BG --- etc are colour filters in the "ASCF" notation. Filter slides will be separately identified.

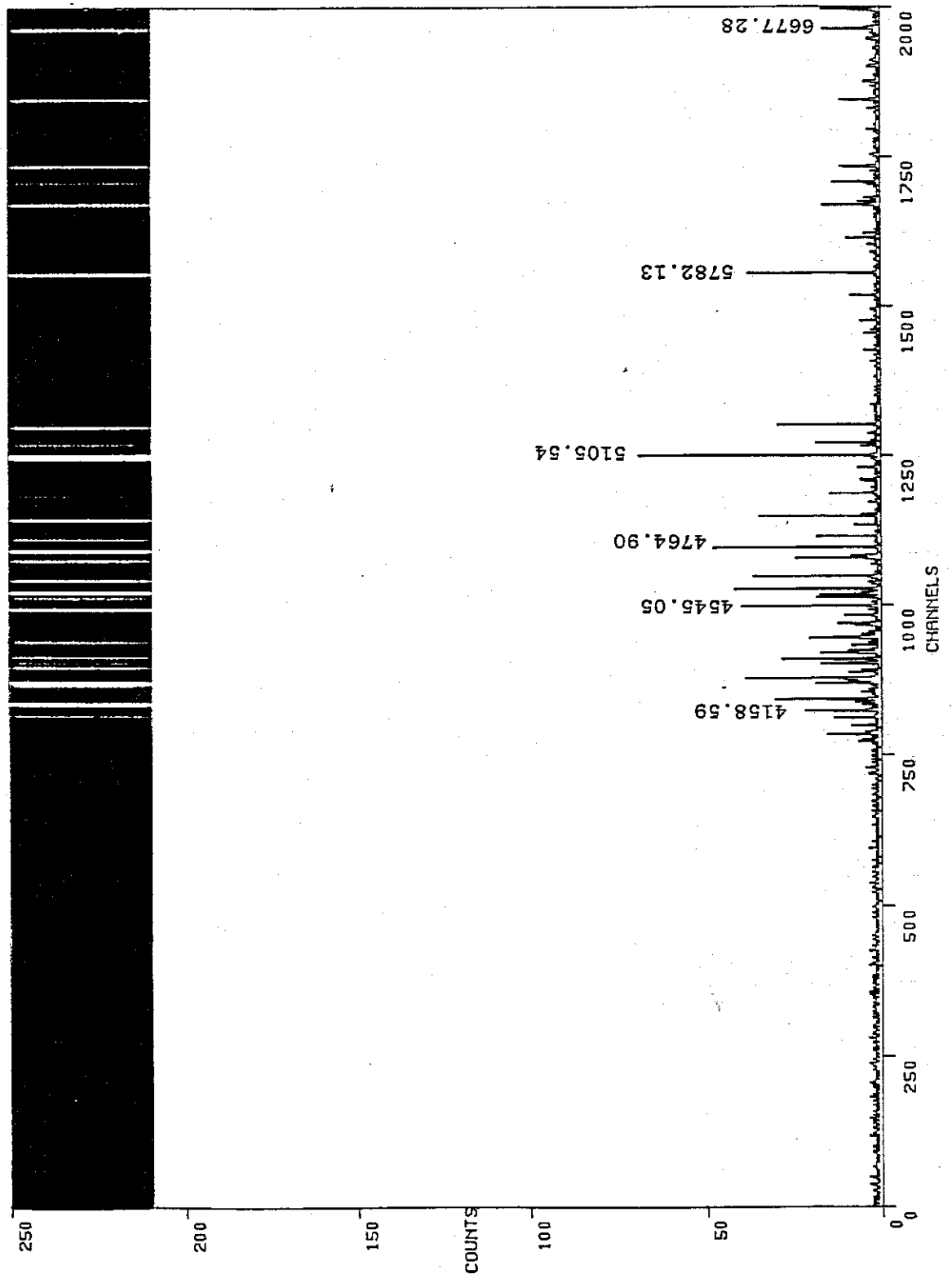
3) Some plots have been made showing the effects of different combinations of neutral/colour filters where there are both very strong and very weak lines present in the field. This is most evident at low dispersion e.g. with R300V, R400V, R632V.

4) Note that at settings less than 45.00, there will be light loss from overfilled optics, and image quality is affected if significantly smaller angles are used.

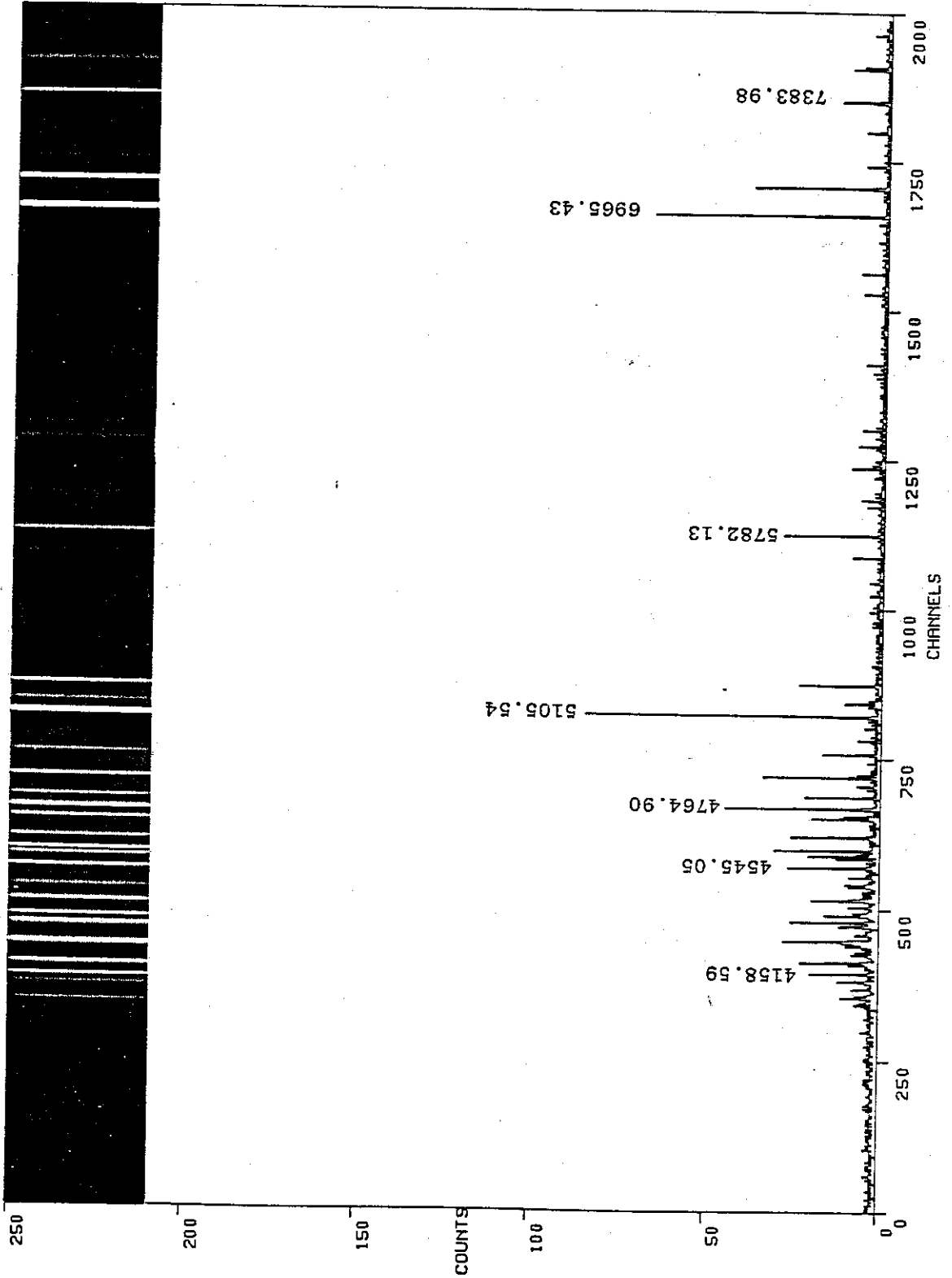
5) Insert grating with blaze arrow away from camera, i.e. blaze left.

235 CAMERA WITH IPCS

KEY
GRATING R300V
SETTING 68.32
SLIT 100 MICRONS
..... 0.54 ARCSEC
PROJ. SLIT 17.8 MICRONS
FILTERS 2.4D
EXPOSURE 200S
SOURCE CUAR



235 CAMERA WITH IPCS



KEY

GRATING R300V

SETTING 67.46

SLIT 100 MICRONS

..... 0.54 ARCSEC

PROJ. SLIT 17.6 MICRONS

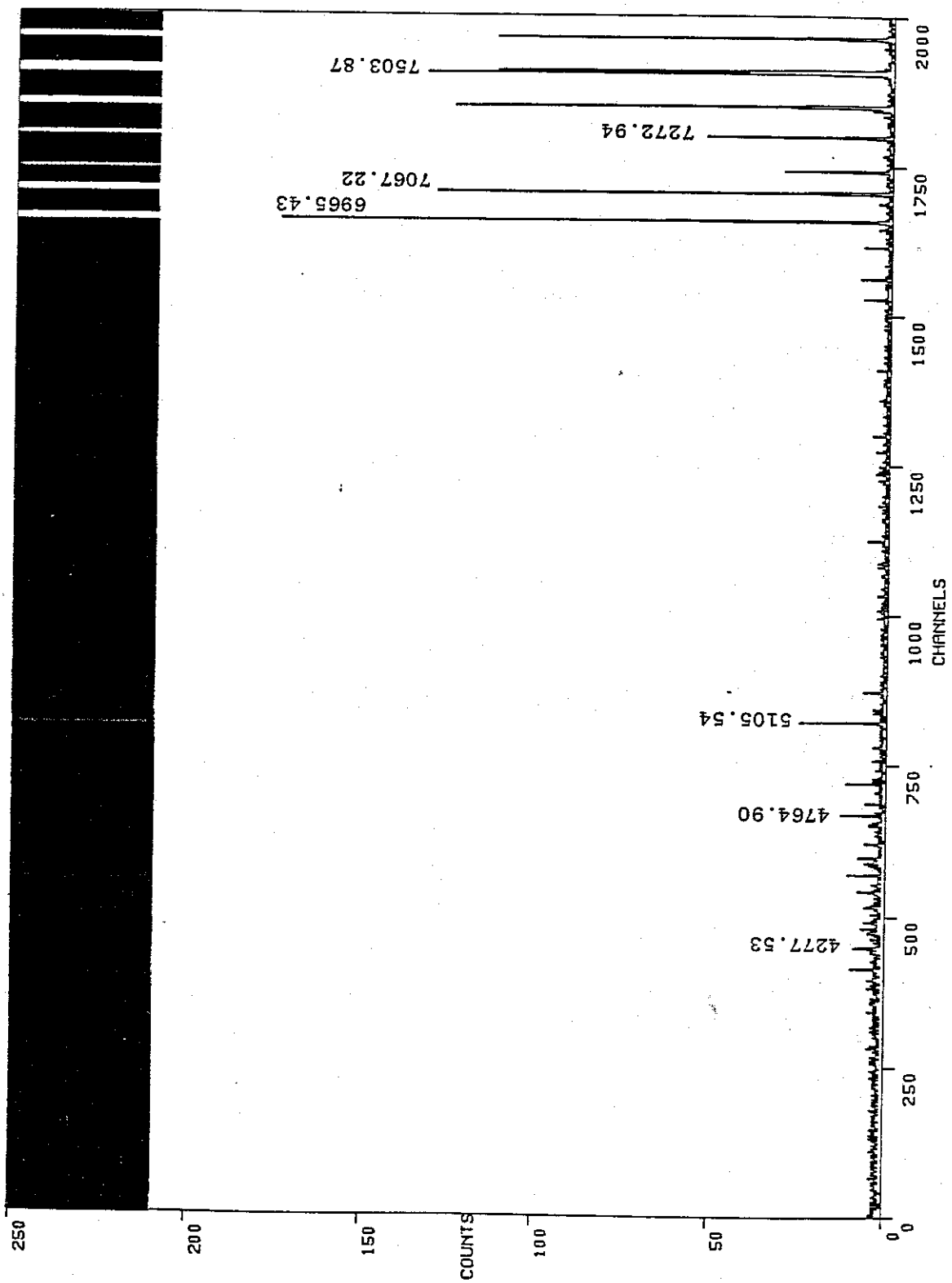
FILTERS 2.4D

..... BG38

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING R300V

SETTING 67.46

SLIT 100 MICRONS

..... 0.54 ARCSEC

PROJ. SLIT 17.6 MICRONS

FILTERS 0.6D

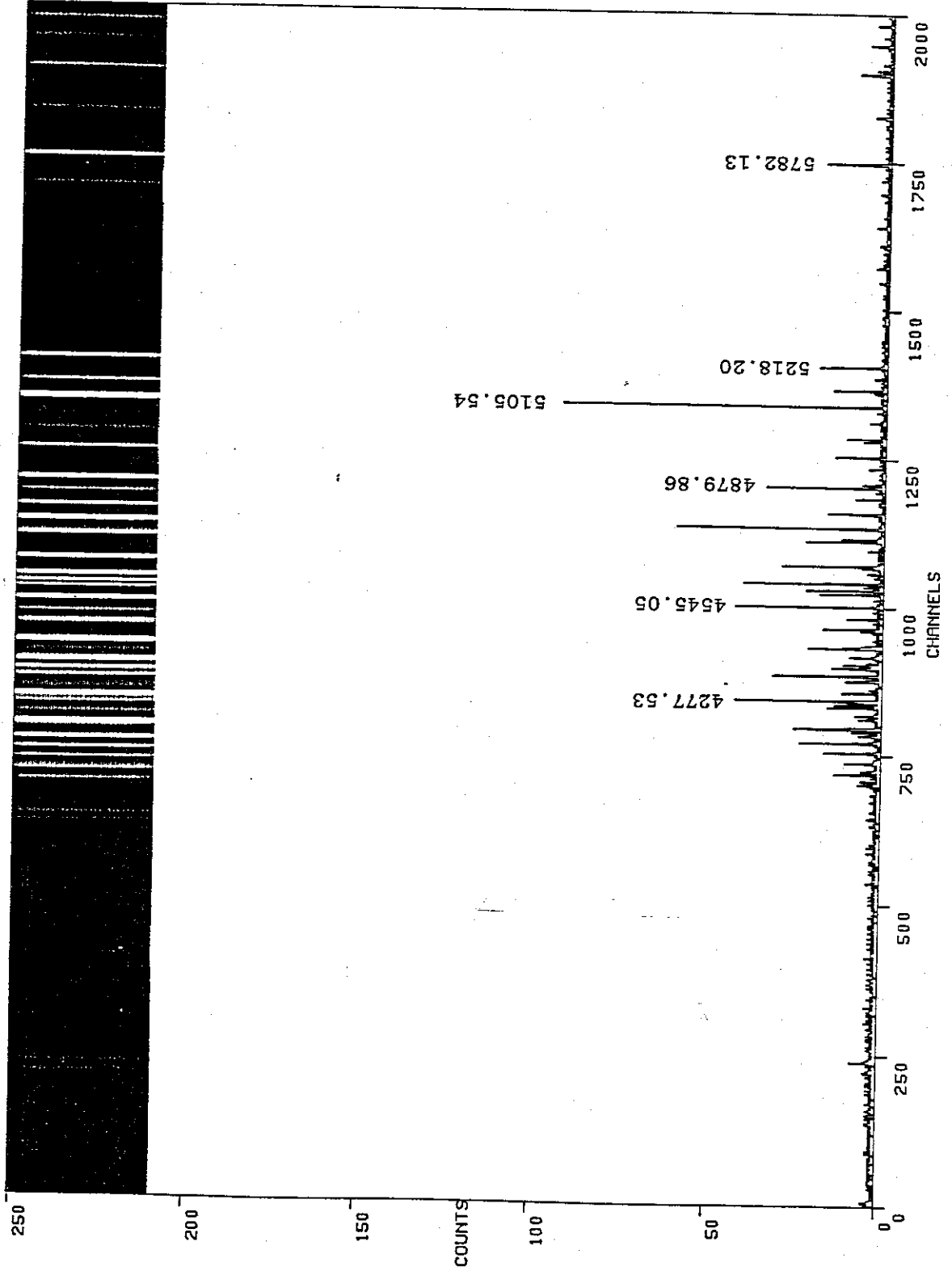
..... 2.4D

..... GG395

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING R400V

SETTING 66.96

SLIT 100 MICRONS

..... 0.54 ARCSEC

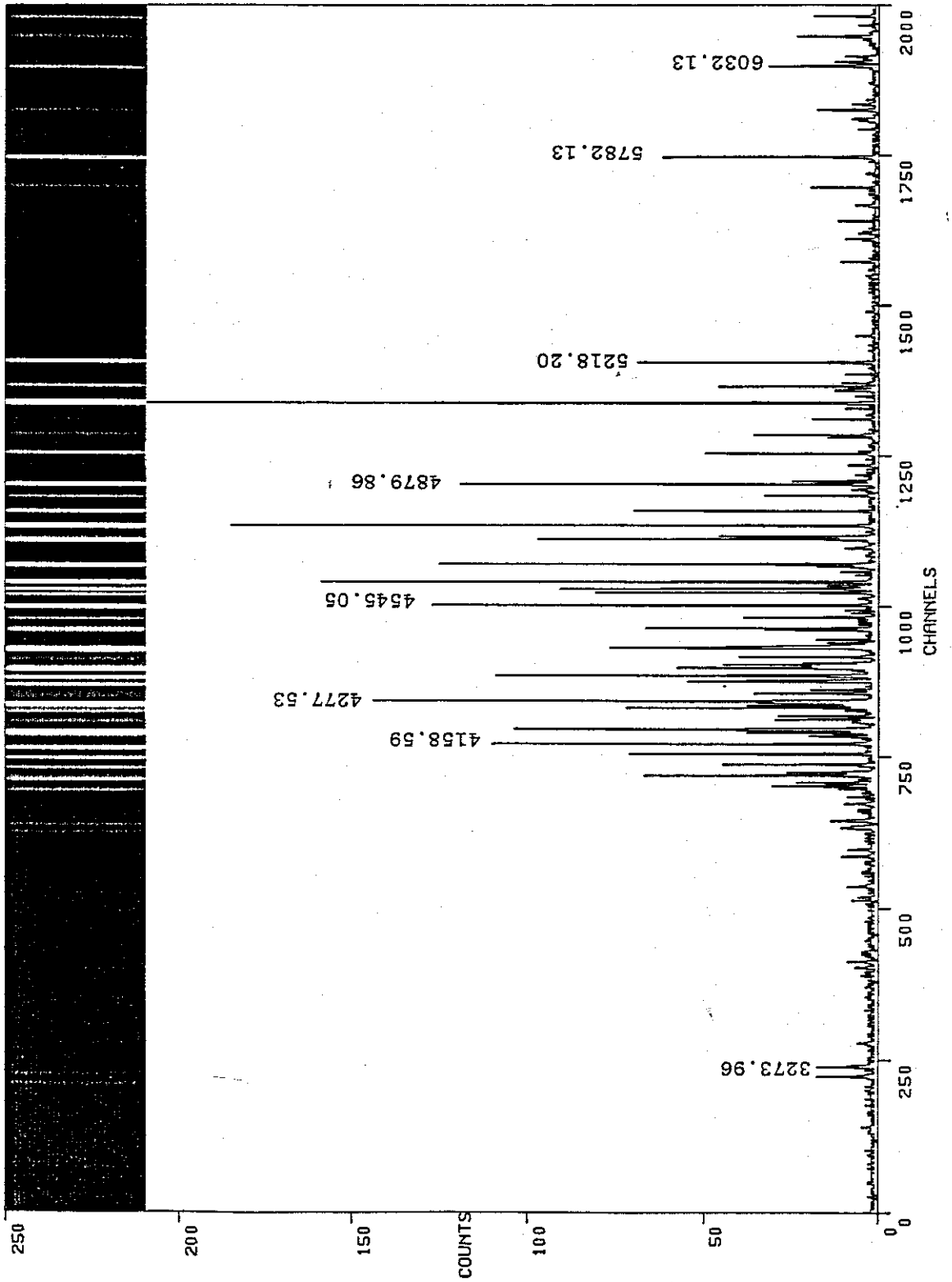
PROJ. SLIT 17.5 MICRONS

FILTERS 2.4D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING R400V

SETTING 66.96

SLIT 100 MICRONS

..... 0.54 ARCSEC

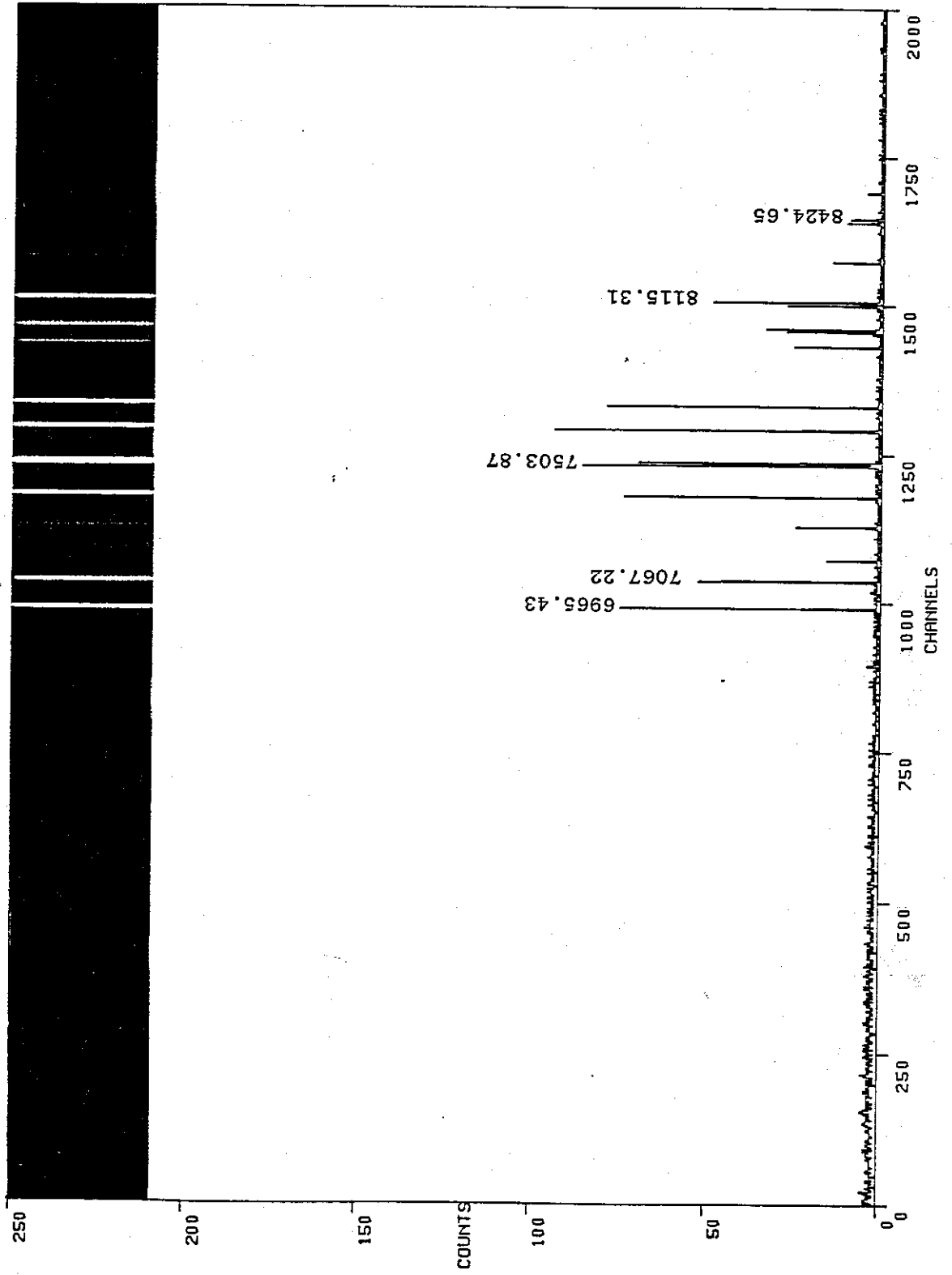
PROJ. SLIT 17.5 MICRONS

FILTERS 1.8D

EXPOSURE 200S

SOURCE CUAR

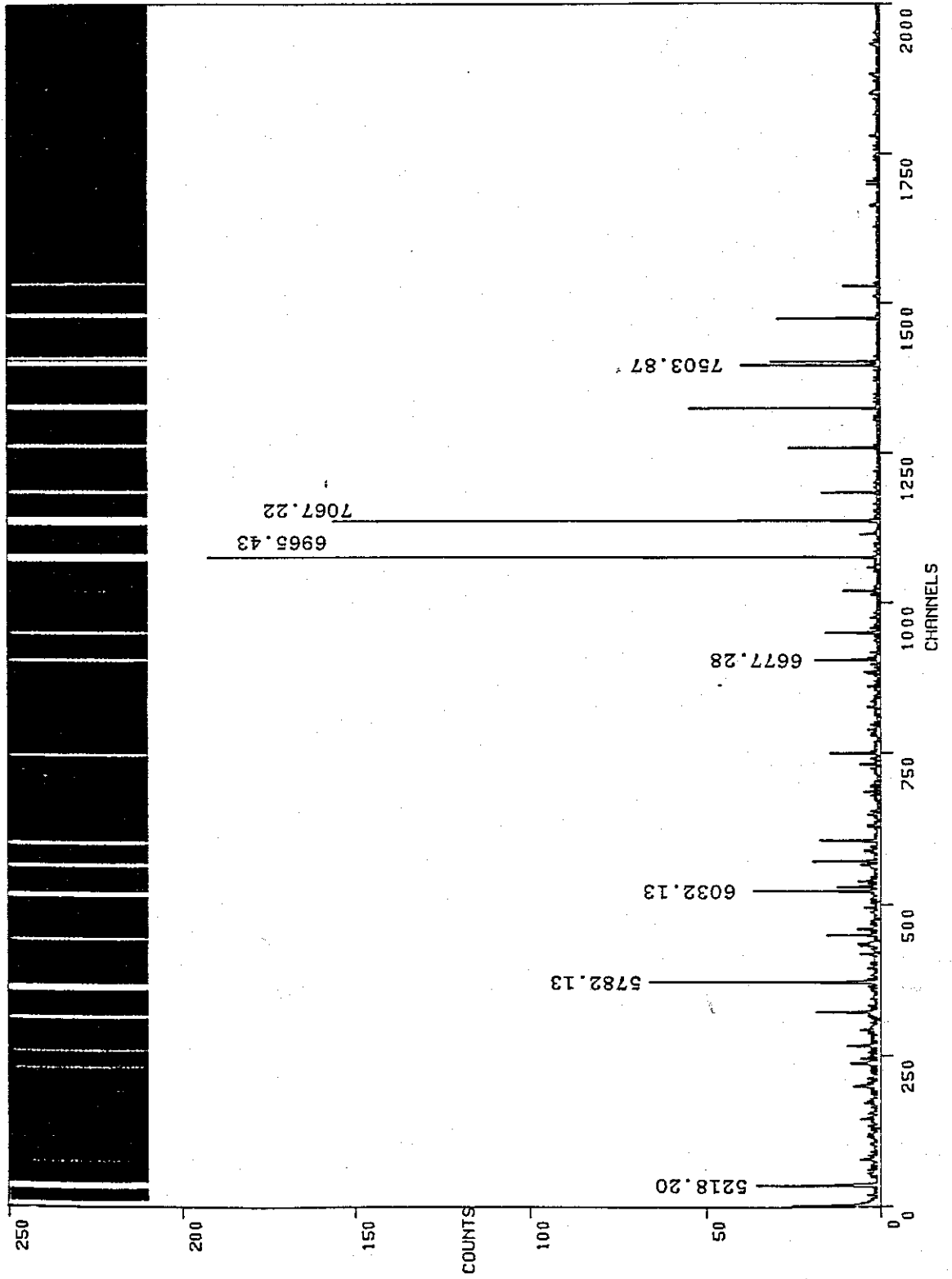
235 CAMERA WITH IPCS



KEY

GRATING R300V
 SETTING 66.12
 SLIT 100 MICRONS
 0.54 ARCSEC
 PROJ. SLIT 17.3 MICRONS
 FILTERS 1.2D
 2.4D
 GG395
 EXPOSURE 200S
 SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING R400V

SETTING 64.18

SLIT 100 MICRONS

..... 0.54 ARCSEC

PROJ. SLIT 17.0 MICRONS

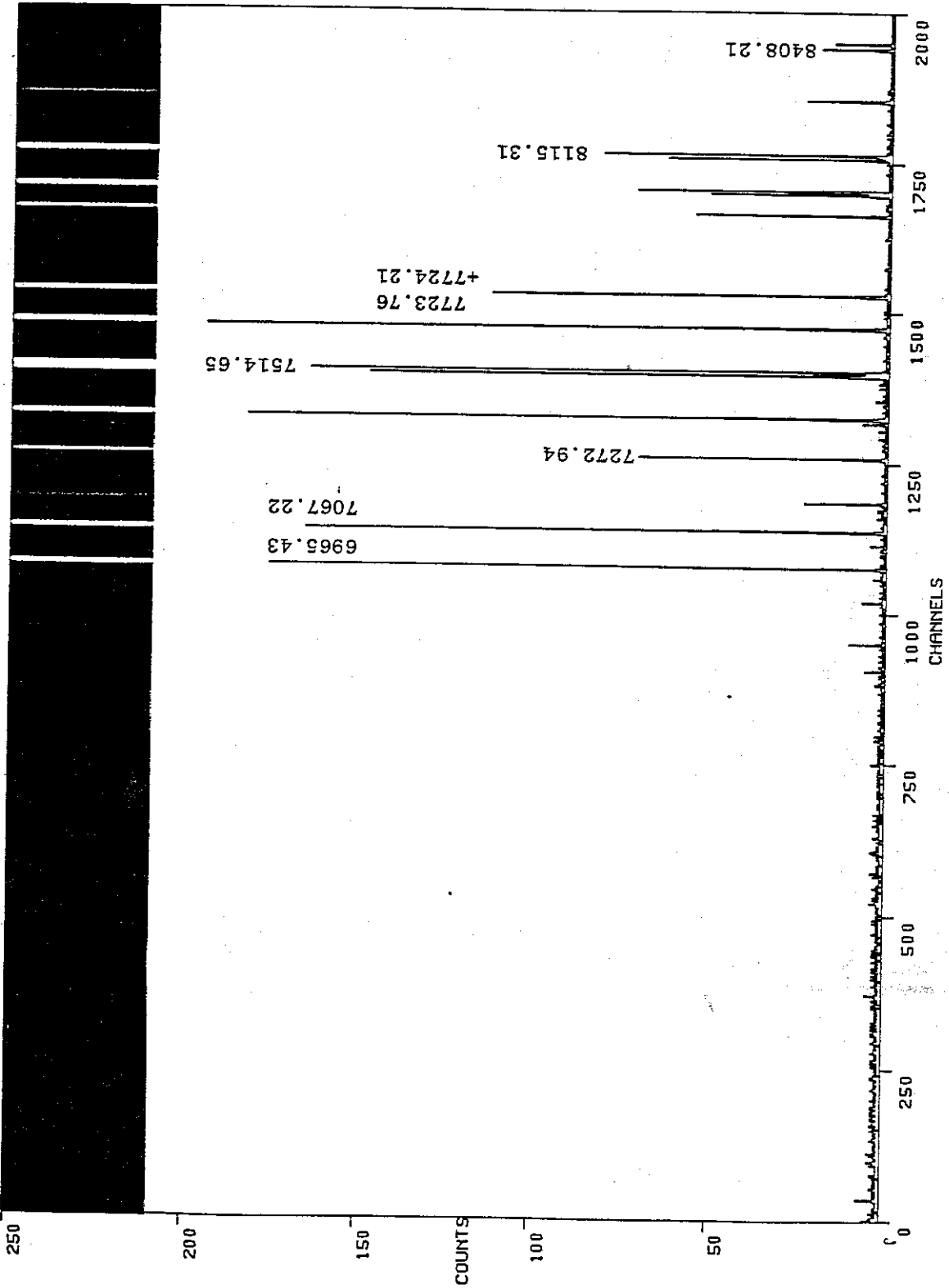
FILTERS 1.8D

..... BG38

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING R400V

SETTING 64.18

SLIT 100 MICRONS

..... 0.54 ARCSEC

PROJ. SLIT 17.0 MICRONS

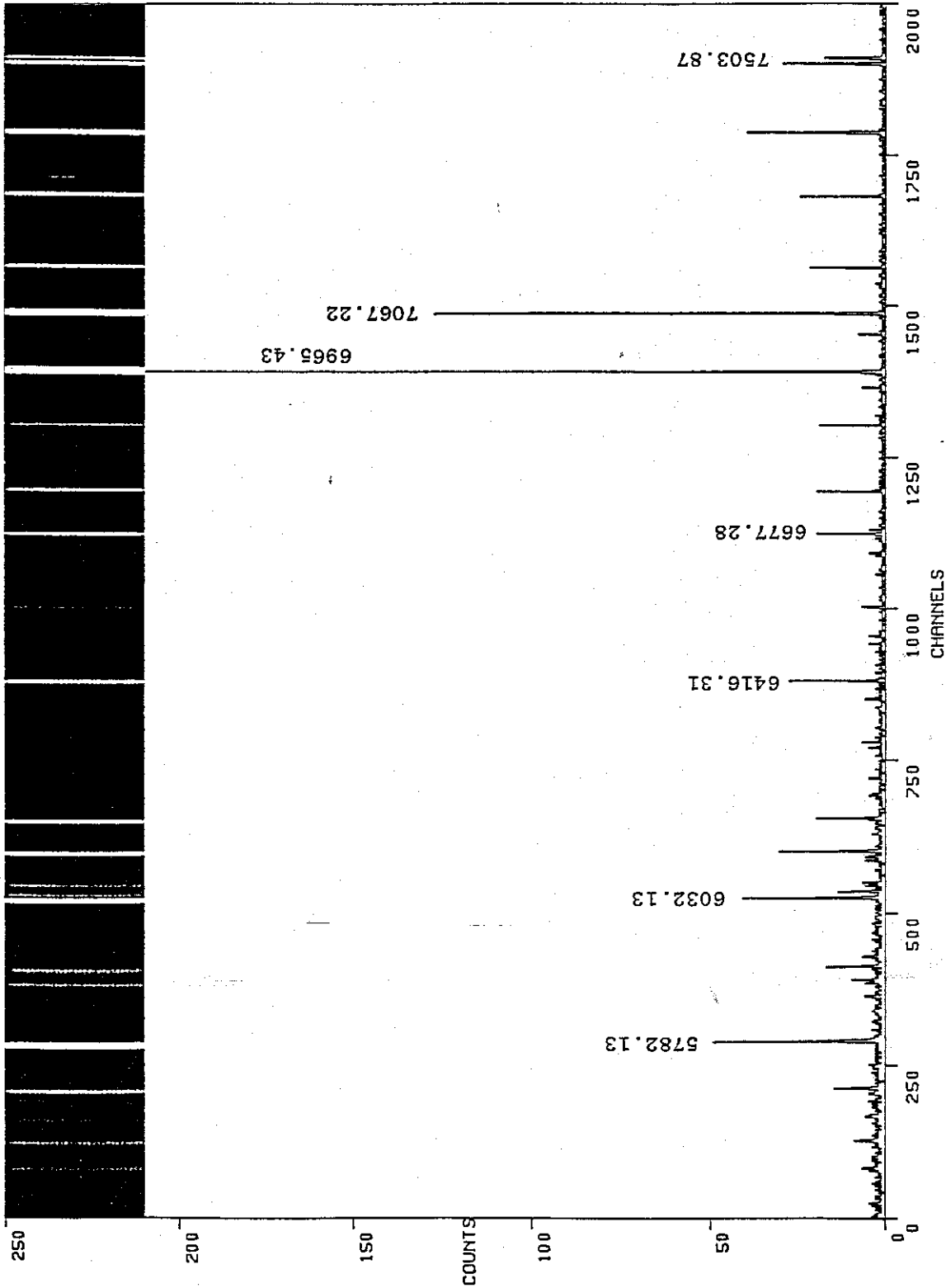
FILTERS 0.6D

..... 2.4D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING R632V

SETTING 59.88

SLIT 100 MICRONS

..... 0.54 ARCSEC

PROJ. SLIT 16.1 MICRONS

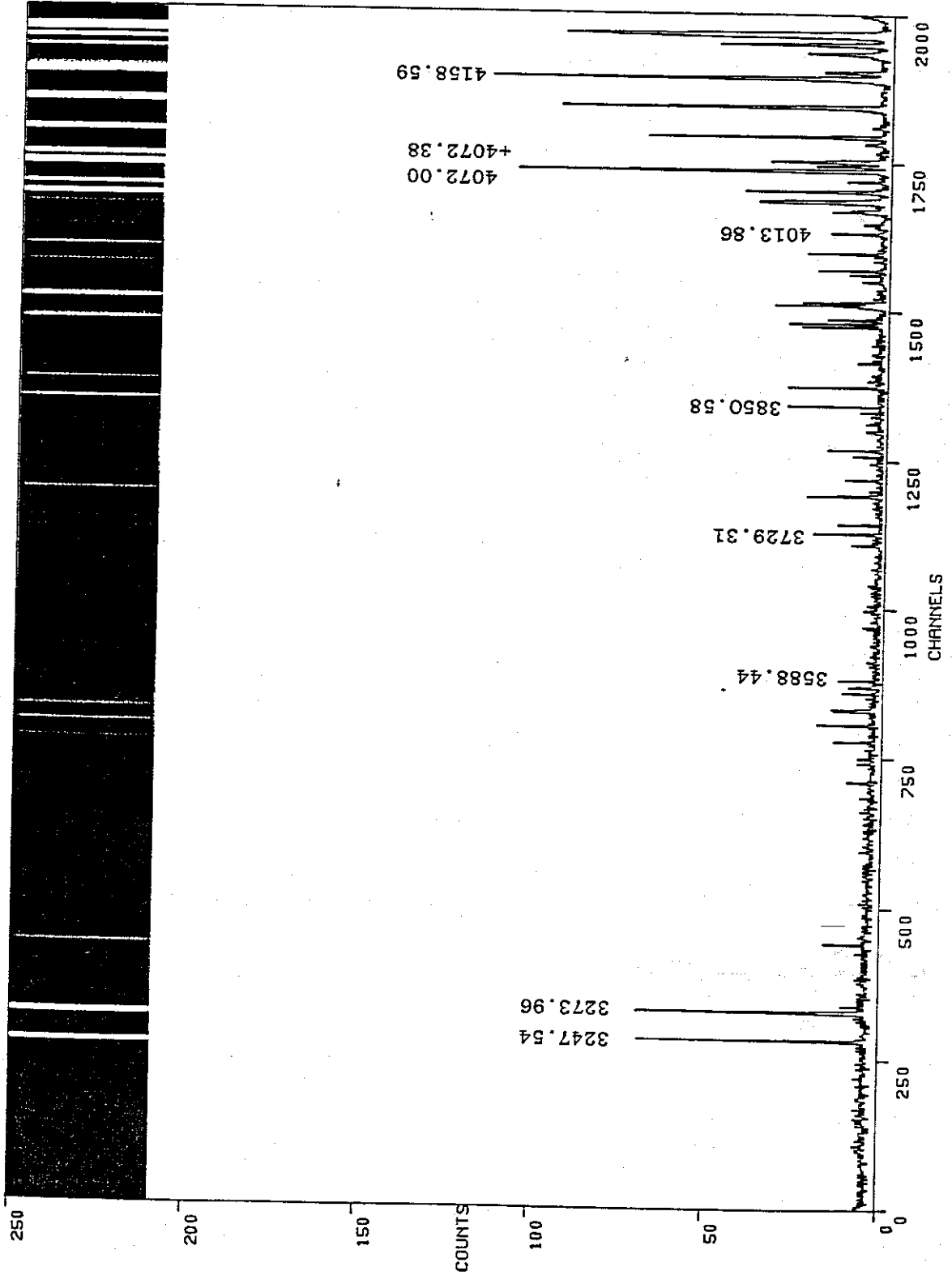
FILTERS 1.8D

..... BG38

EXPOSURE 200S

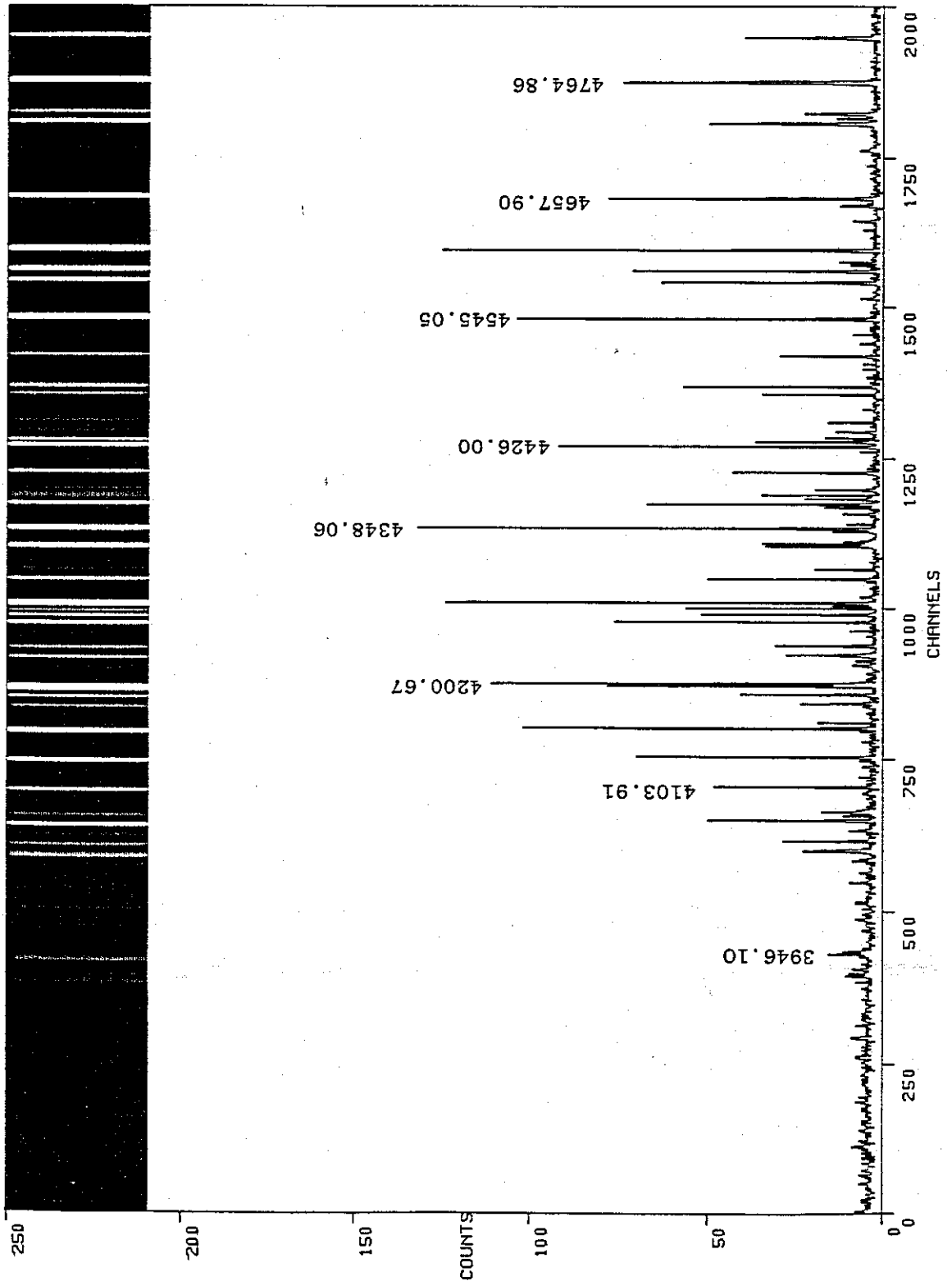
SOURCE CUAR

235 CAMERA WITH IPCS



KEY
 GRATING R1200B
 SETTING 59.11
 SLIT 100 MICRONS
 0.54 ARCSEC
 PROJ. SLIT 16.0 MICRONS
 FILTERS 1.2D
 EXPOSURE 200S
 SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING R1200B

SETTING 56.82

SLIT 100 MICRONS

..... 0.54 ARCSEC

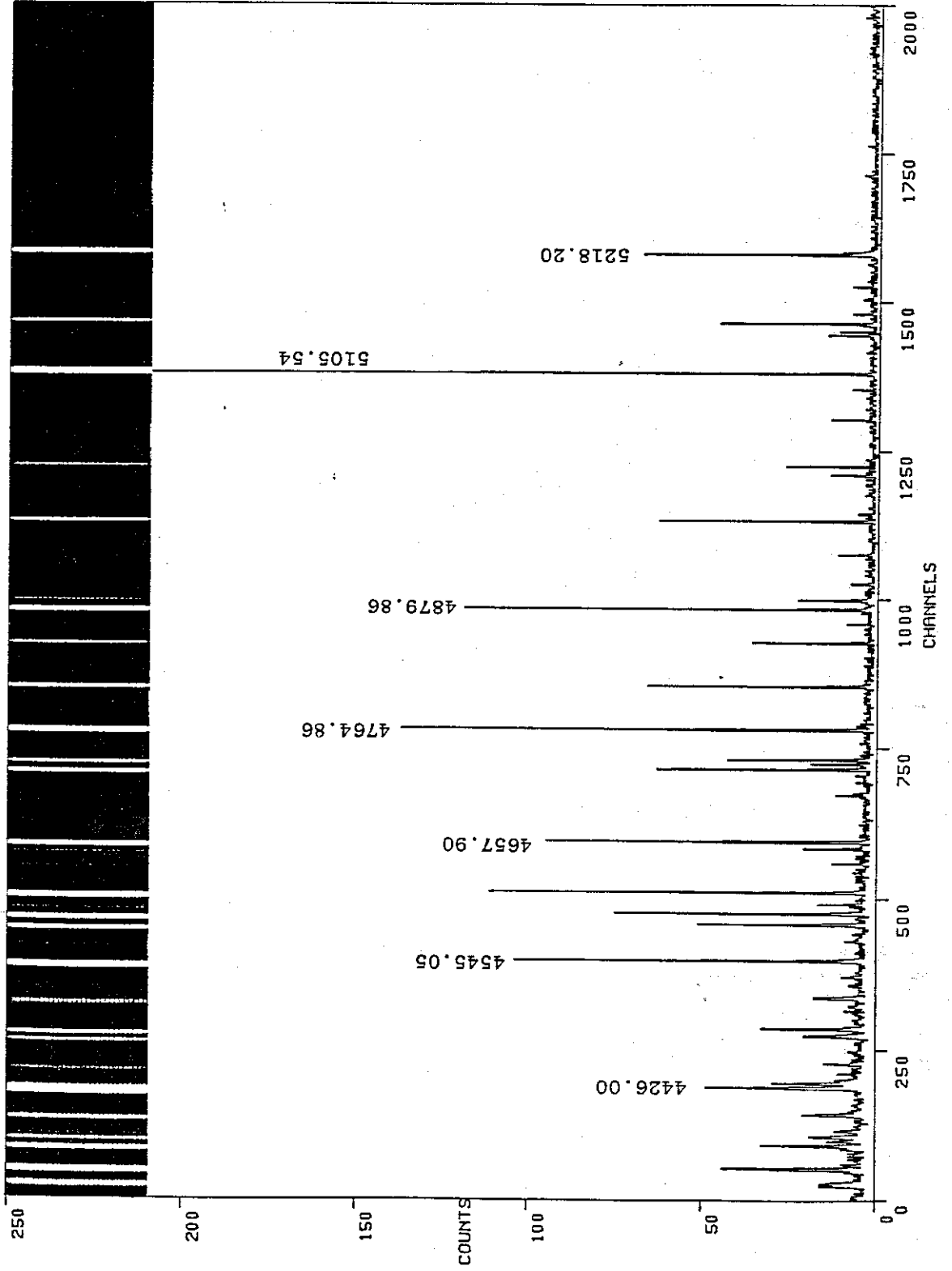
PROJ. SLIT 15.6 MICRONS

FILTERS 1.8D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING R1200B

SETTING 54.48

SLIT 100 MICRONS

..... 0.54 ARCSEC

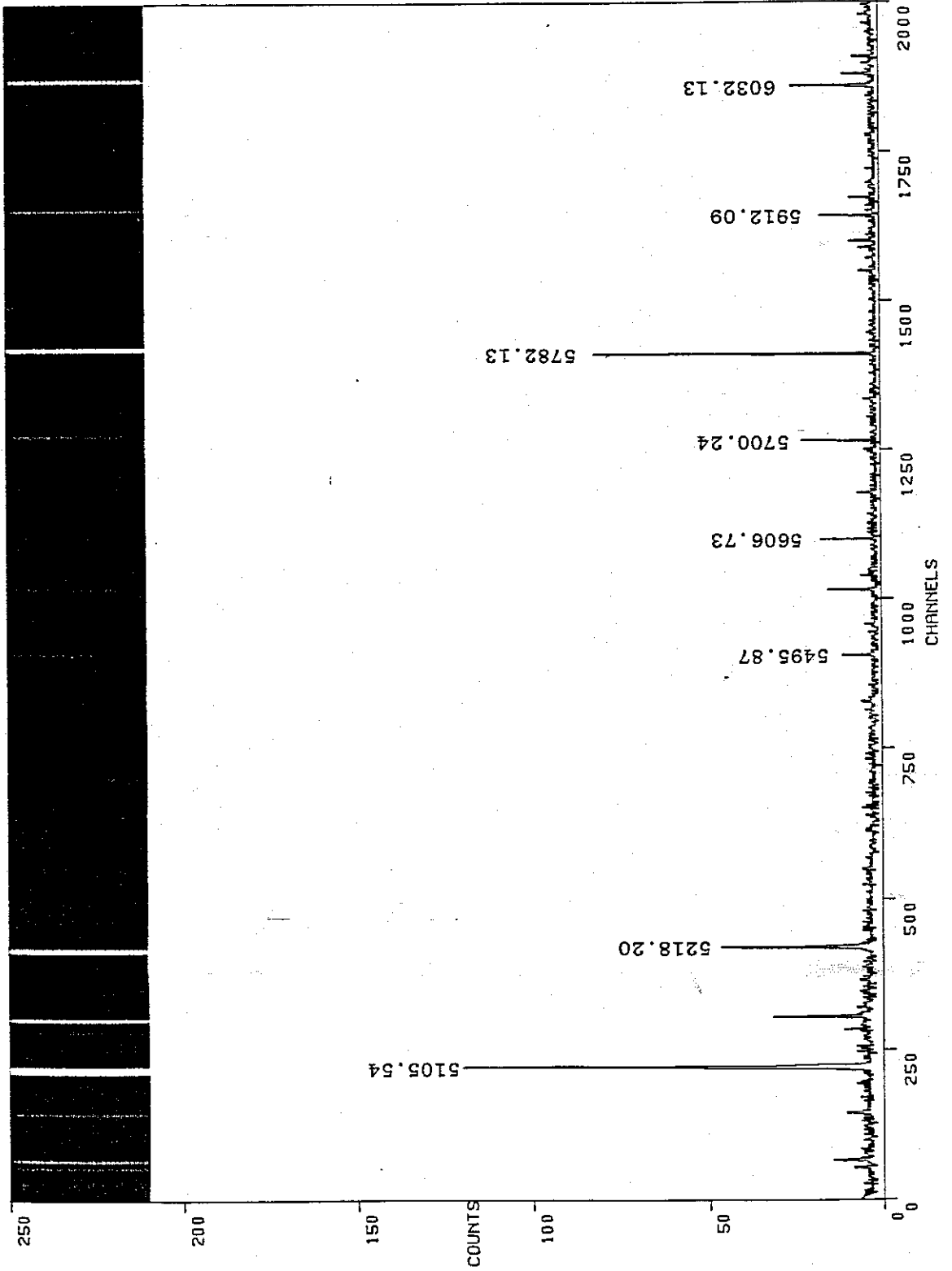
PROJ. SLIT 15.1 MICRONS

FILTERS 1.8D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING R1200B

SETTING 51.97

SLIT 100 MICRONS

..... 0.54 ARCSEC

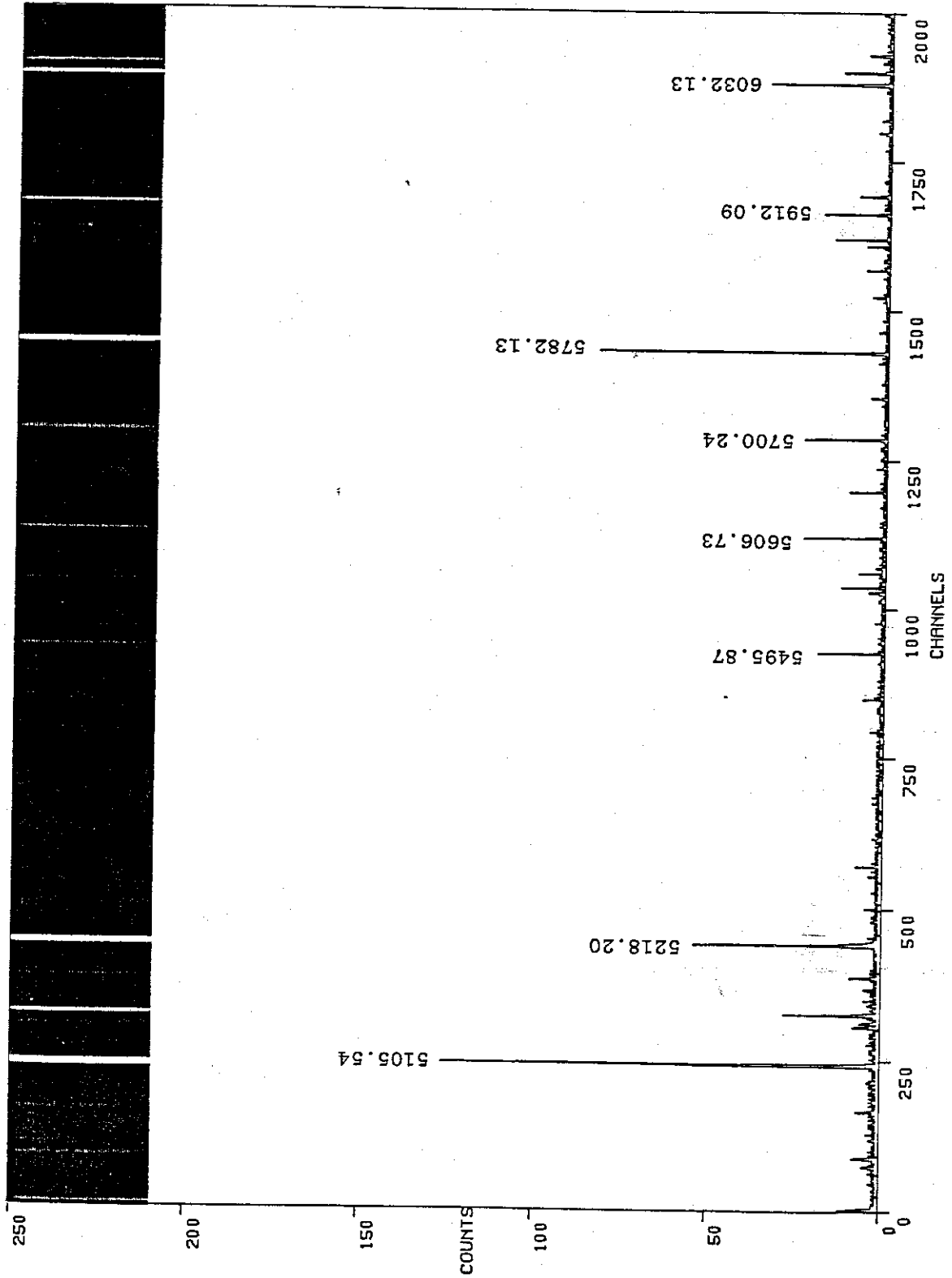
PROJ. SLIT 14.6 MICRONS

FILTERS 1.8D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING R1200Y

SETTING 52.00

SLIT 100 MICRONS

..... 0.54 ARCSEC

PROJ. SLIT 14.6 MICRONS

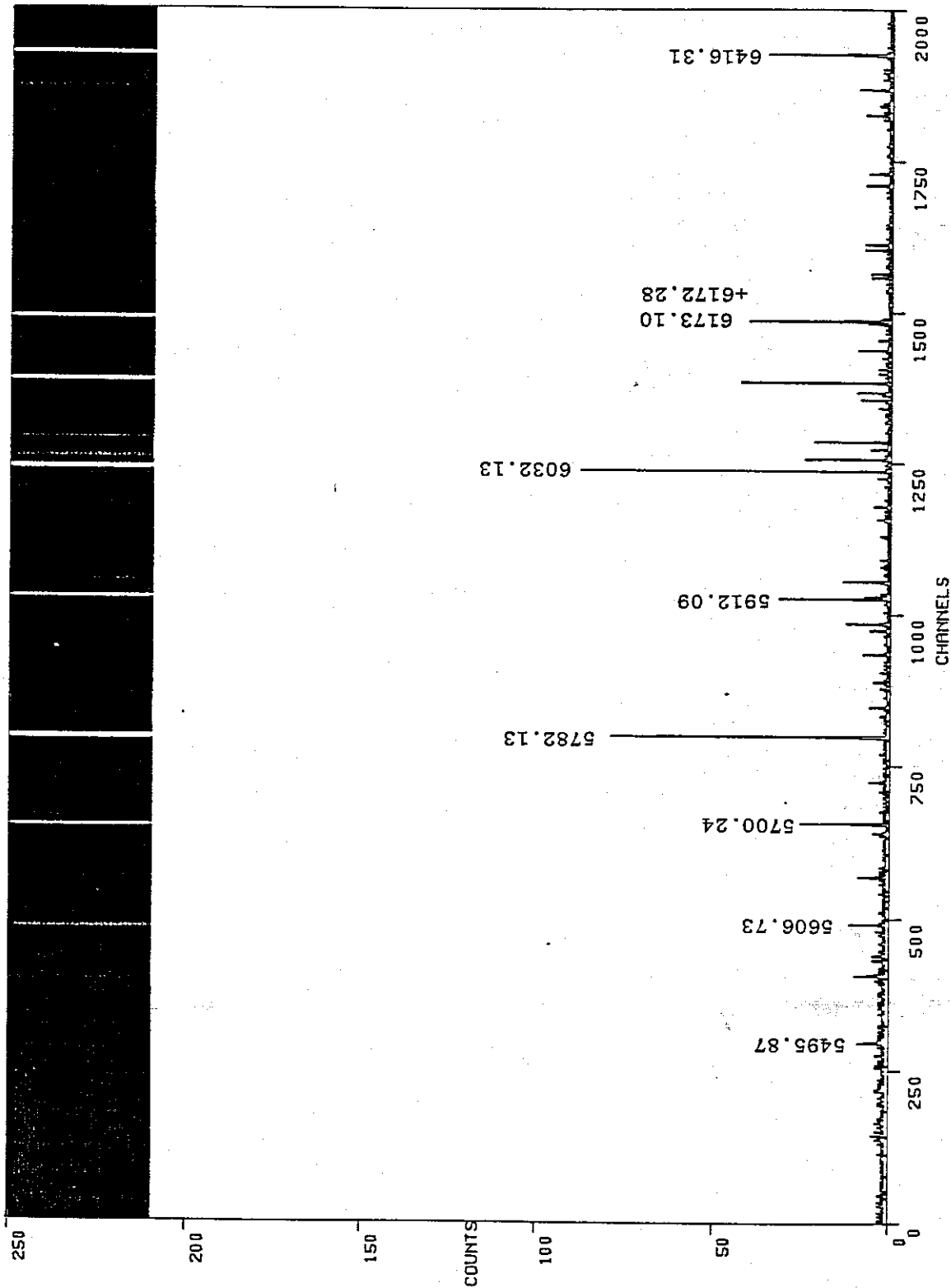
FILTERS 1.8D

..... GG495

EXPOSURE 200S

SOURCE CUAR

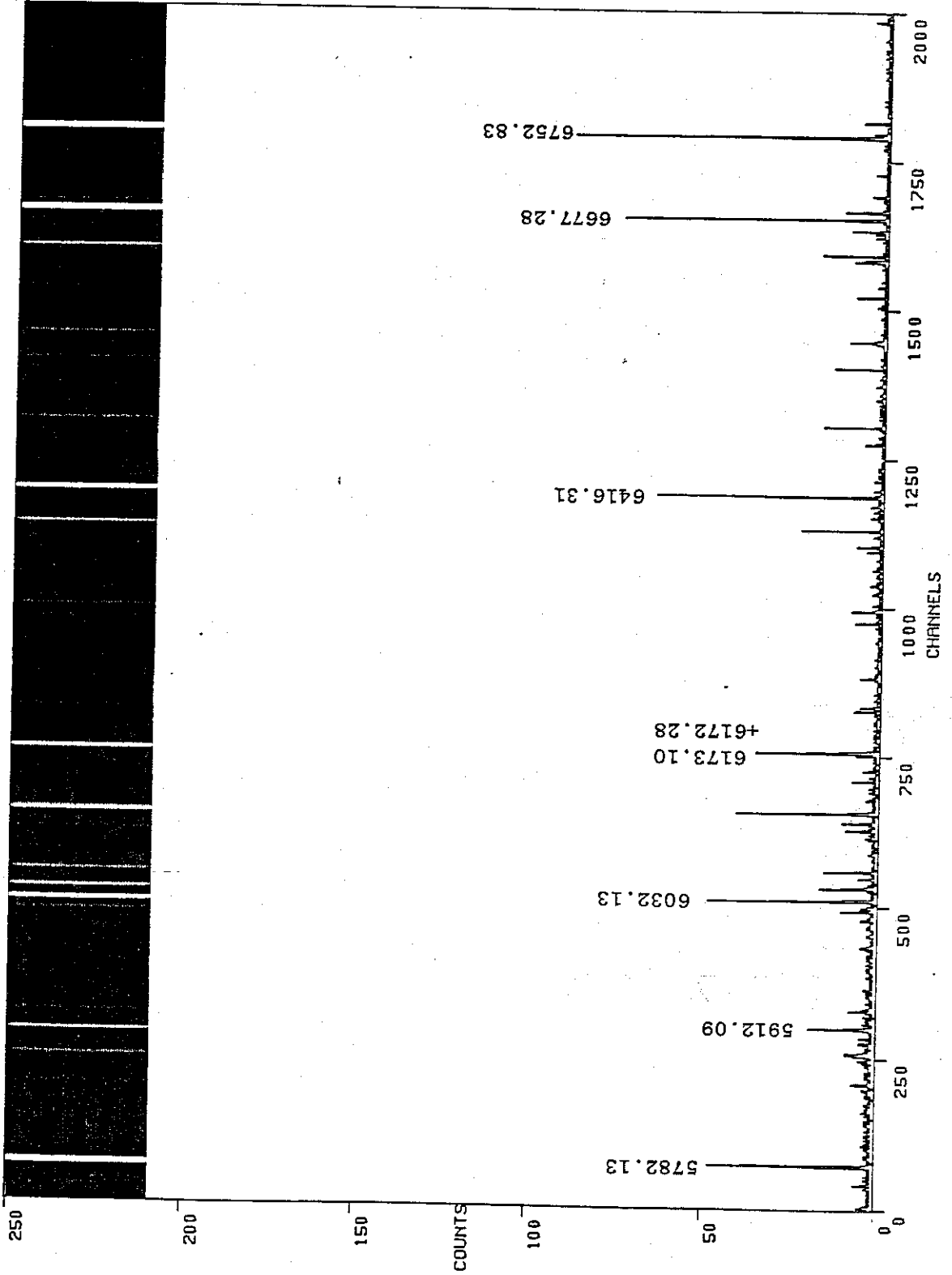
235 CAMERA WITH IPCS



KEY

GRATING R1200Y
SETTING 50.61
SLIT 100 MICRONS
..... 0.54 ARCSEC
PROJ. SLIT 14.4 MICRONS
FILTERS 1.8D
..... GG495
EXPOSURE 200S
SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATINGR1200Y

SETTING48.99

SLIT100 MICRONS

.....0.54 ARCSEC

PROJ. SLIT14.1 MICRONS

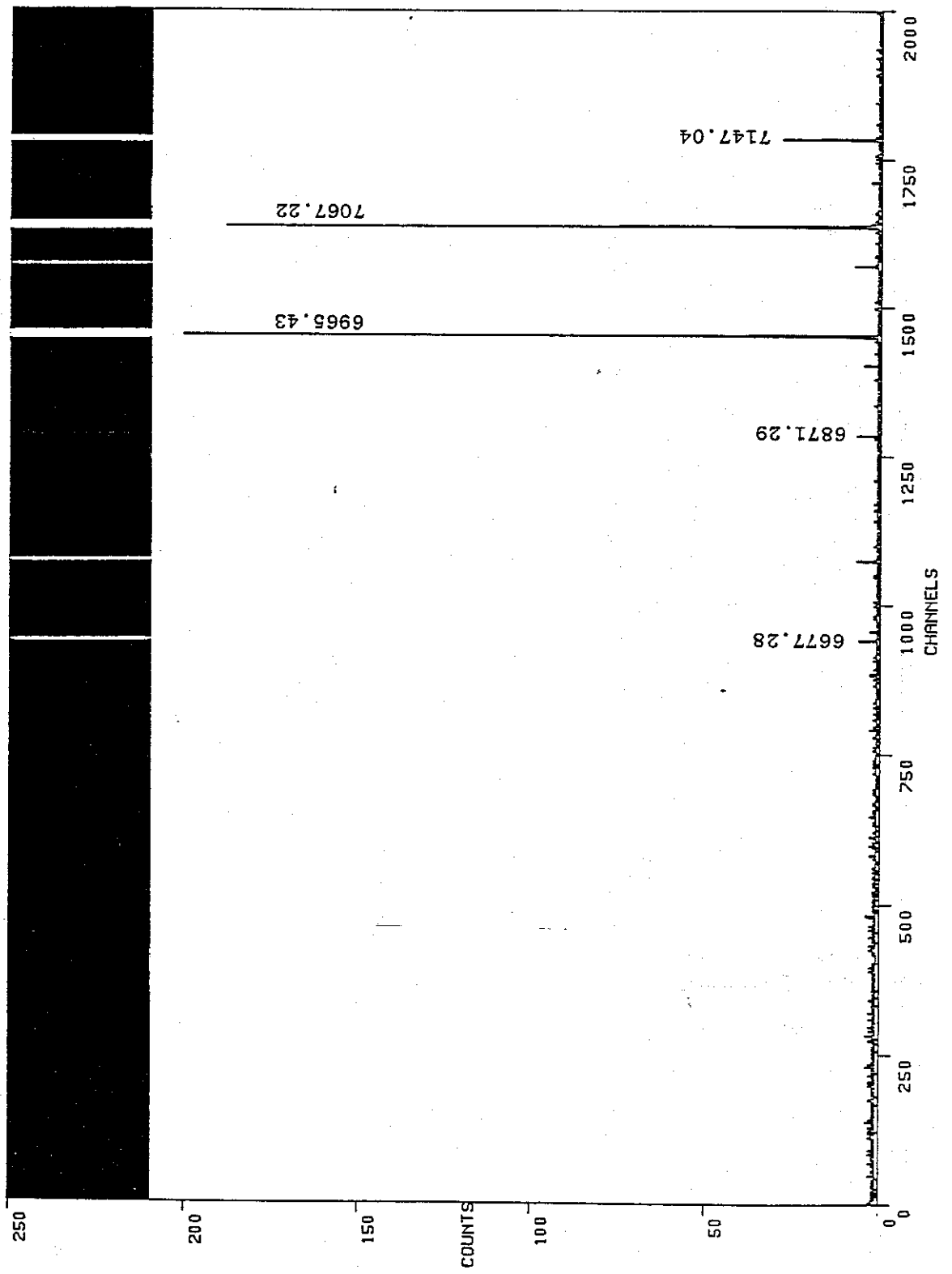
FILTERS1.8D

.....GG495

EXPOSURE200S

SOURCECUAR

235 CAMERA WITH IPCS



KEY

GRATING R1200Y

SETTING 47.41

SLIT 100 MICRONS

..... 0.54 ARCSEC

PROJ. SLIT 13.8 MICRONS

FILTERS 0.6D

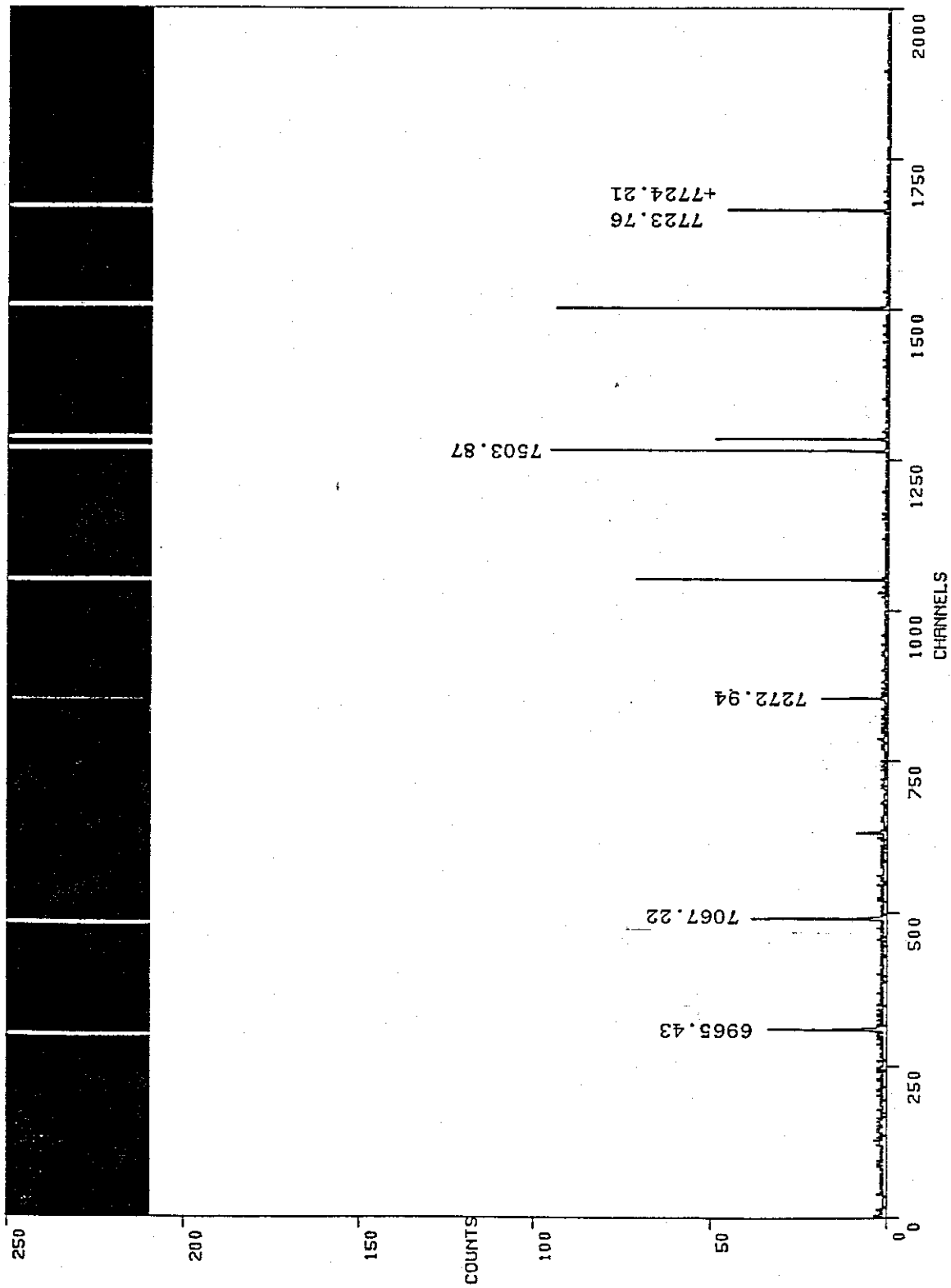
..... 2.4D

..... GG495

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING R1200Y

SETTING 44.82

SLIT 100 MICRONS

..... 0.54 ARCSEC

PROJ. SLIT 13.3 MICRONS

FILTERS 1.2D

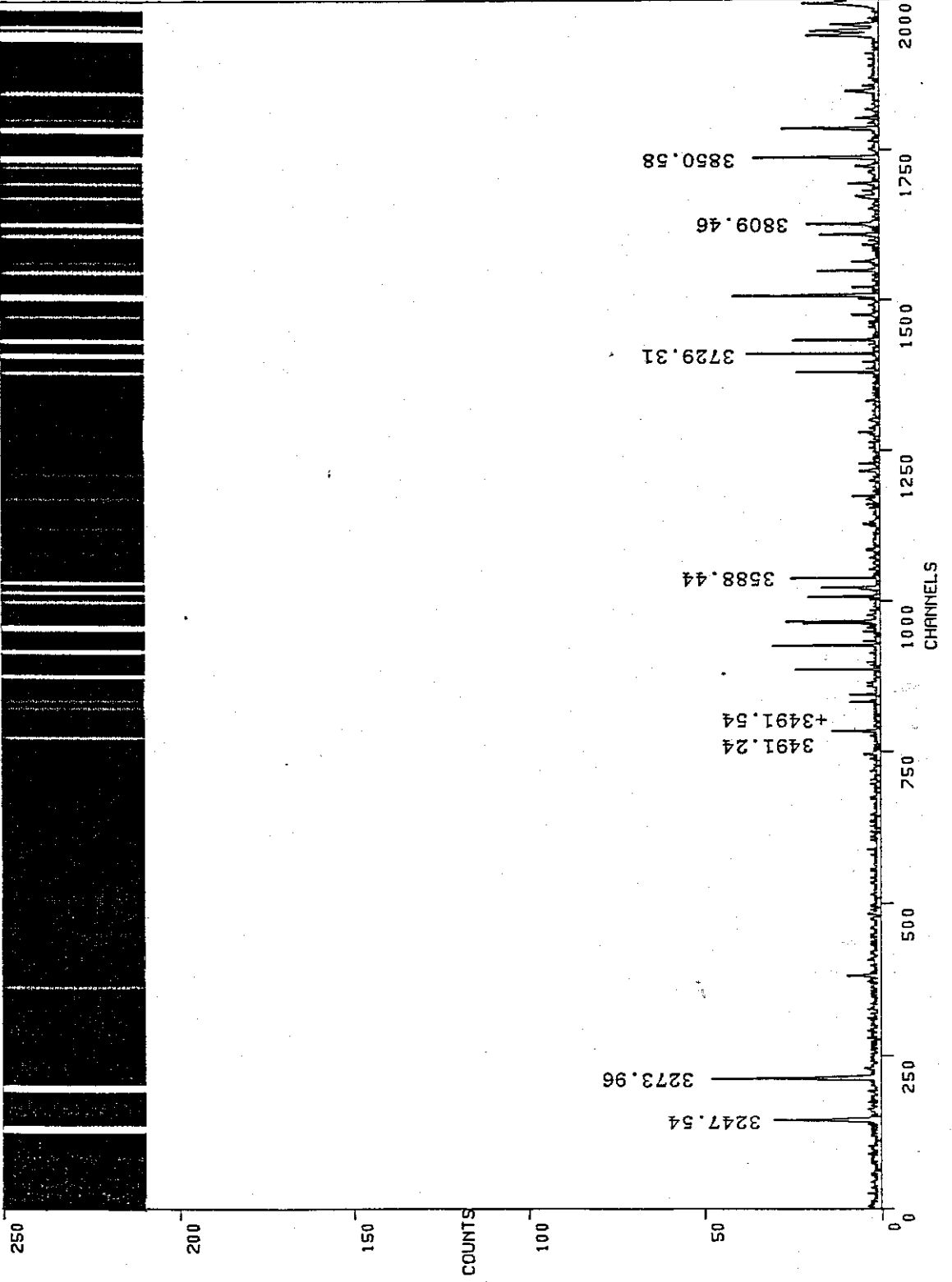
..... 2.4D

..... GG495

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 52.69

SLIT 100 MICRONS

..... 0.54 ARCSEC

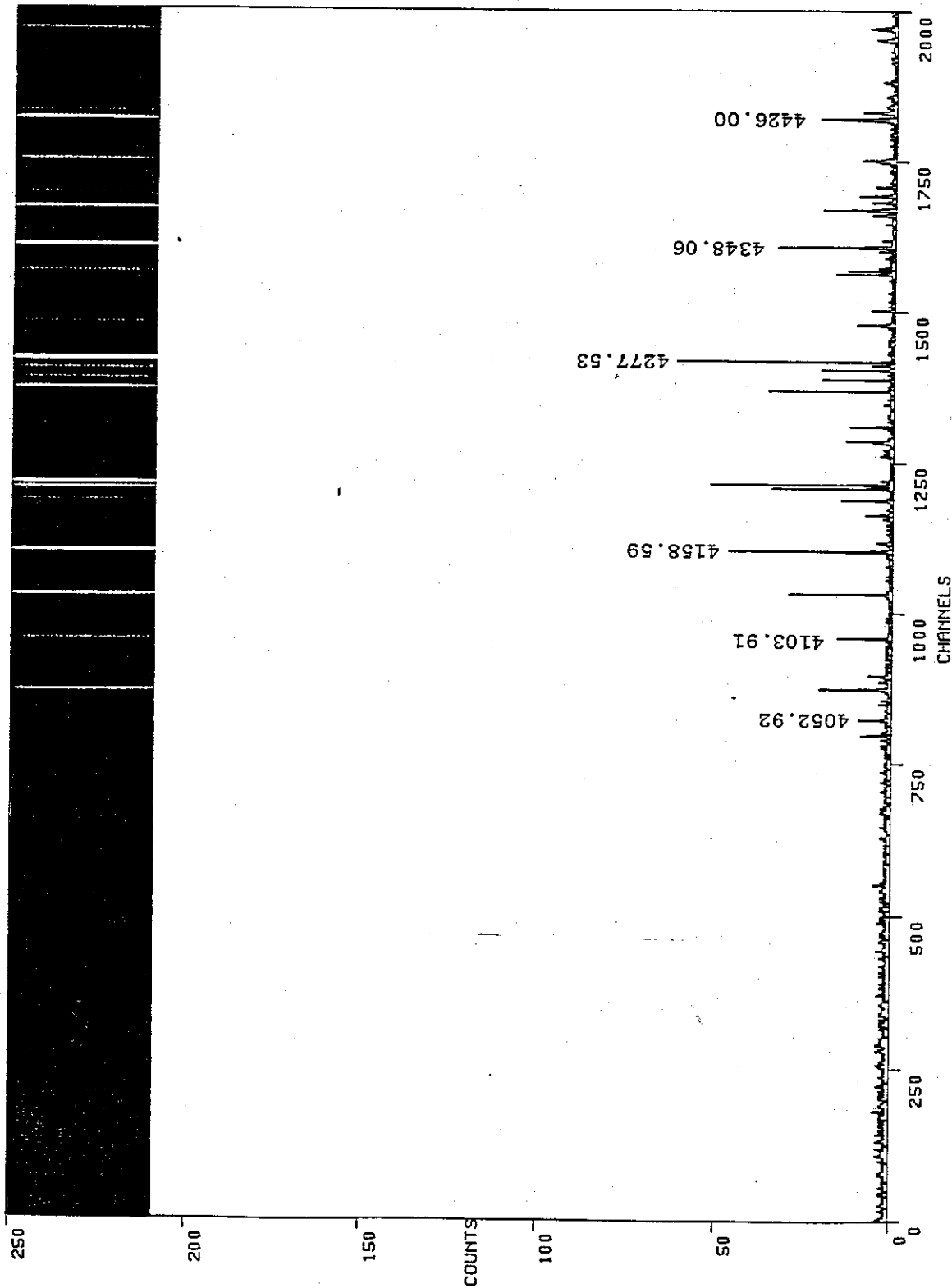
PROJ. SLIT 14.8 MICRONS

FILTERS 0.3D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 49.52

SLIT 100 MICRONS

..... 0.54 ARCSEC

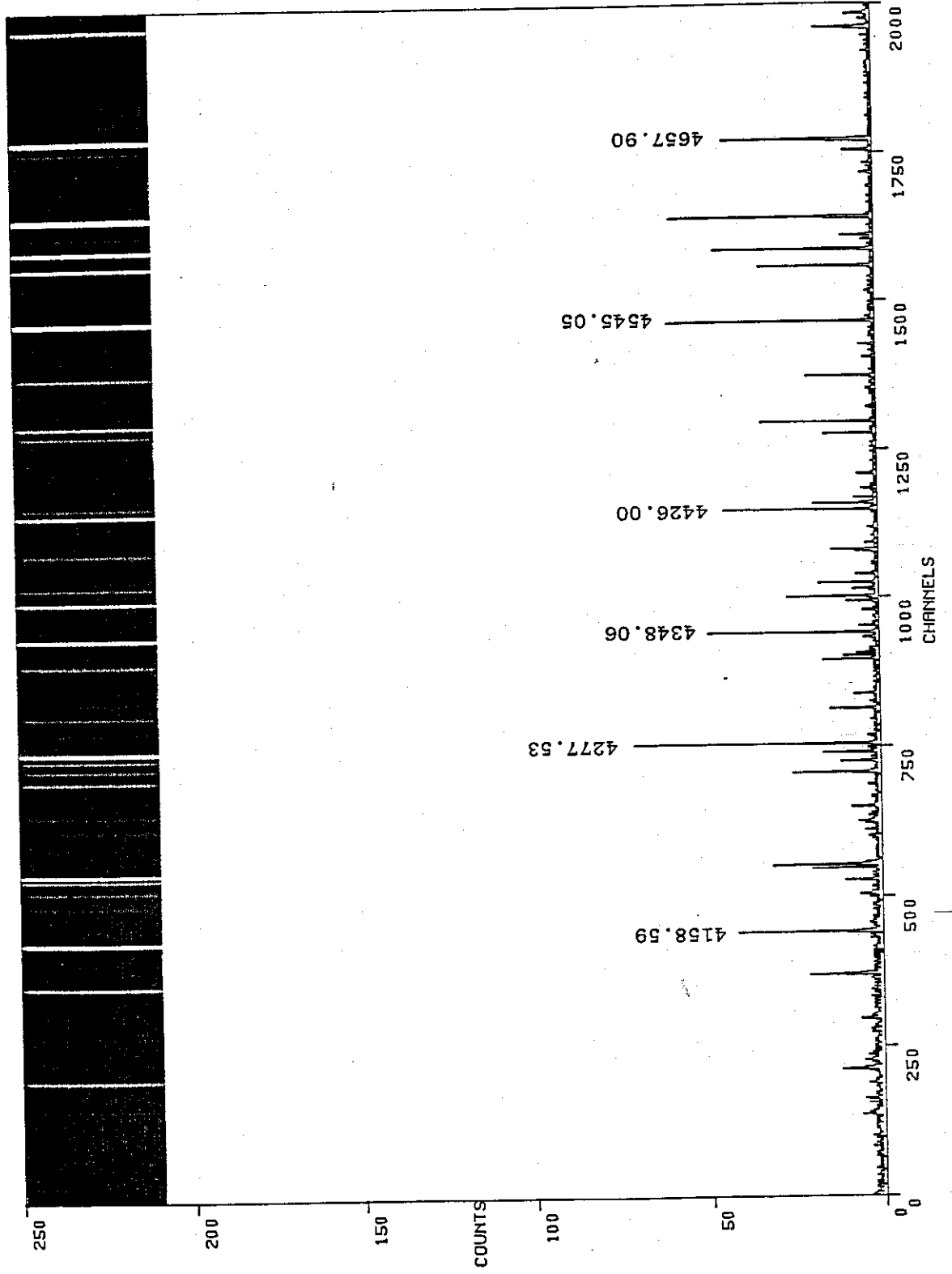
PROJ. SLIT 14.2 MICRONS

FILTERS 1.8D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 48.04

SLIT 100 MICRONS

..... 0.54 ARCSEC

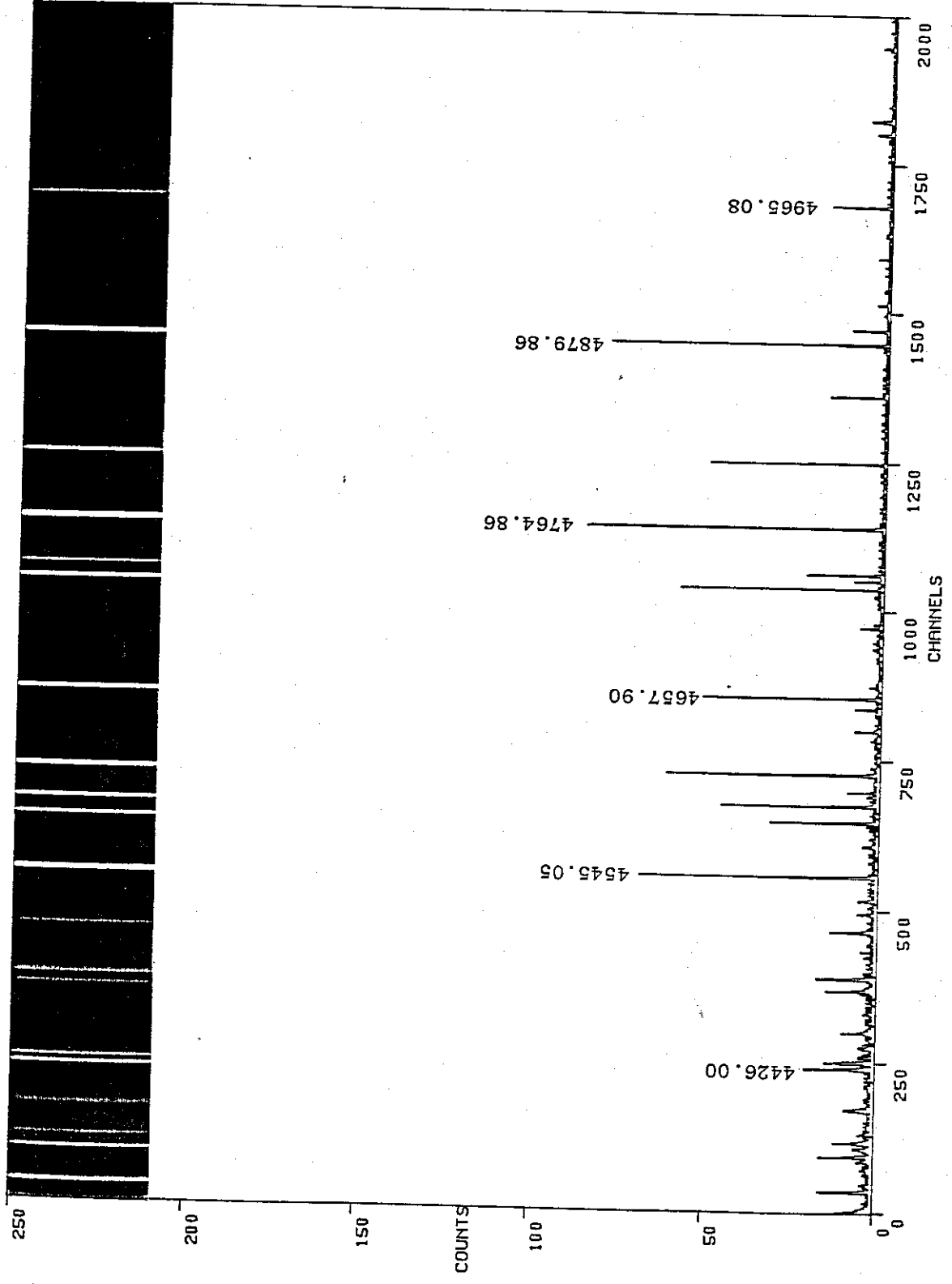
PROJ. SLIT 13.9 MICRONS

FILTERS 1.8D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 45.98

SLIT 100 MICRONS

..... 0.54 ARCSEC

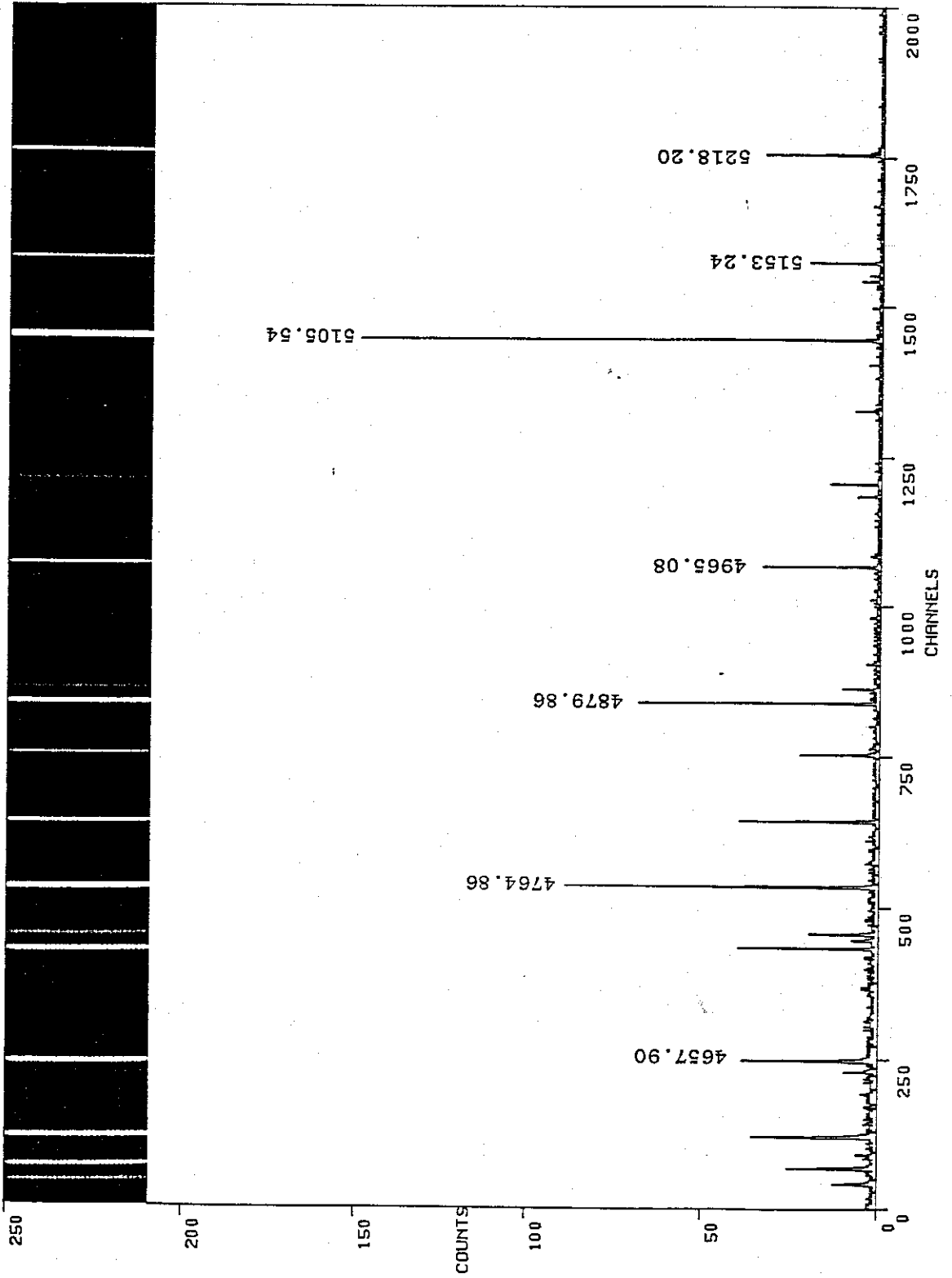
PROJ. SLIT 13.5 MICRONS

FILTERS 1.8D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 44.60

SLIT 100 MICRONS

..... 0.54 ARCSEC

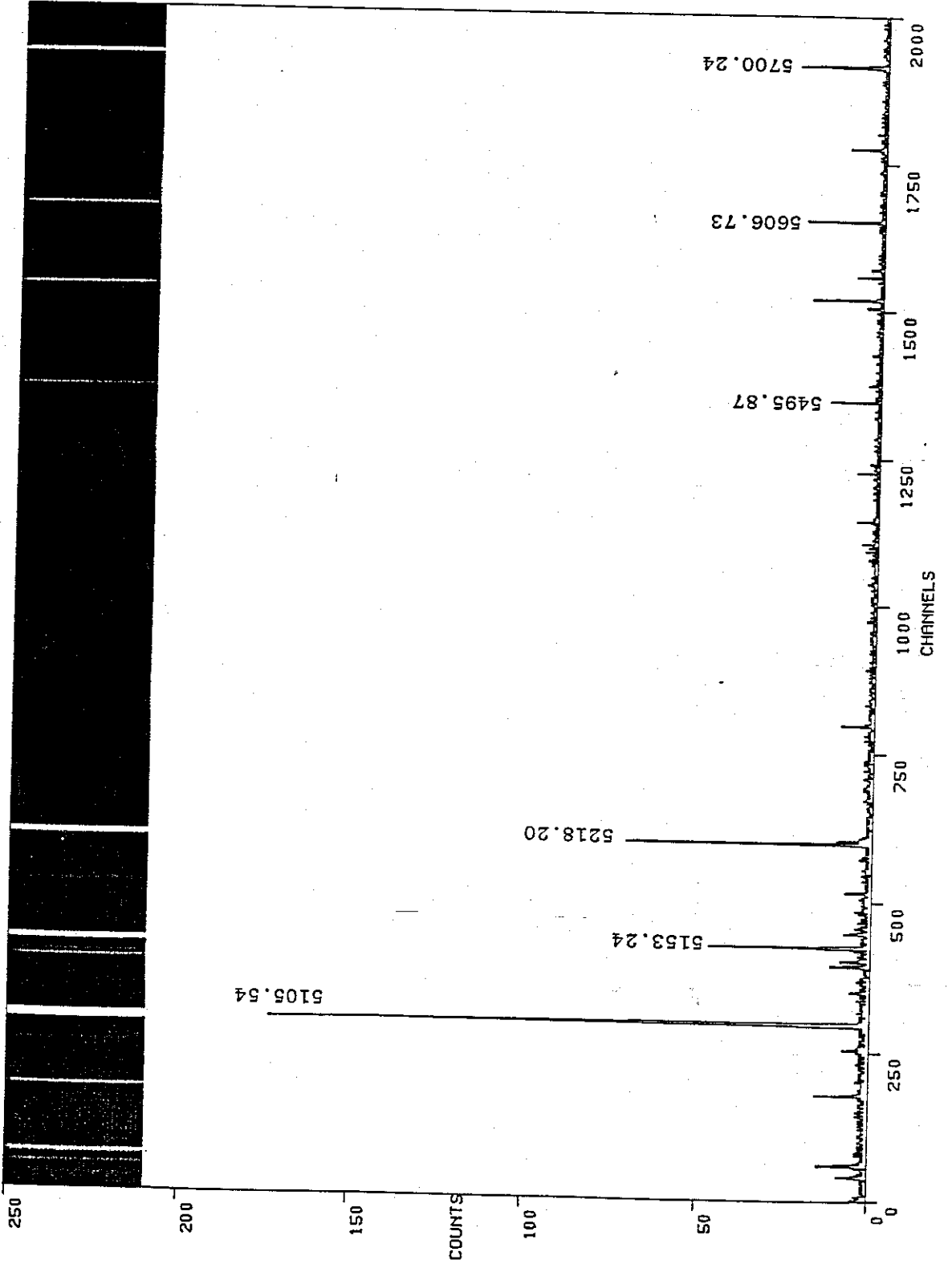
PROJ. SLIT 13.2 MICRONS

FILTERS 1.8D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 41.95

SLIT 100 MICRONS

..... 0.54 ARCSEC

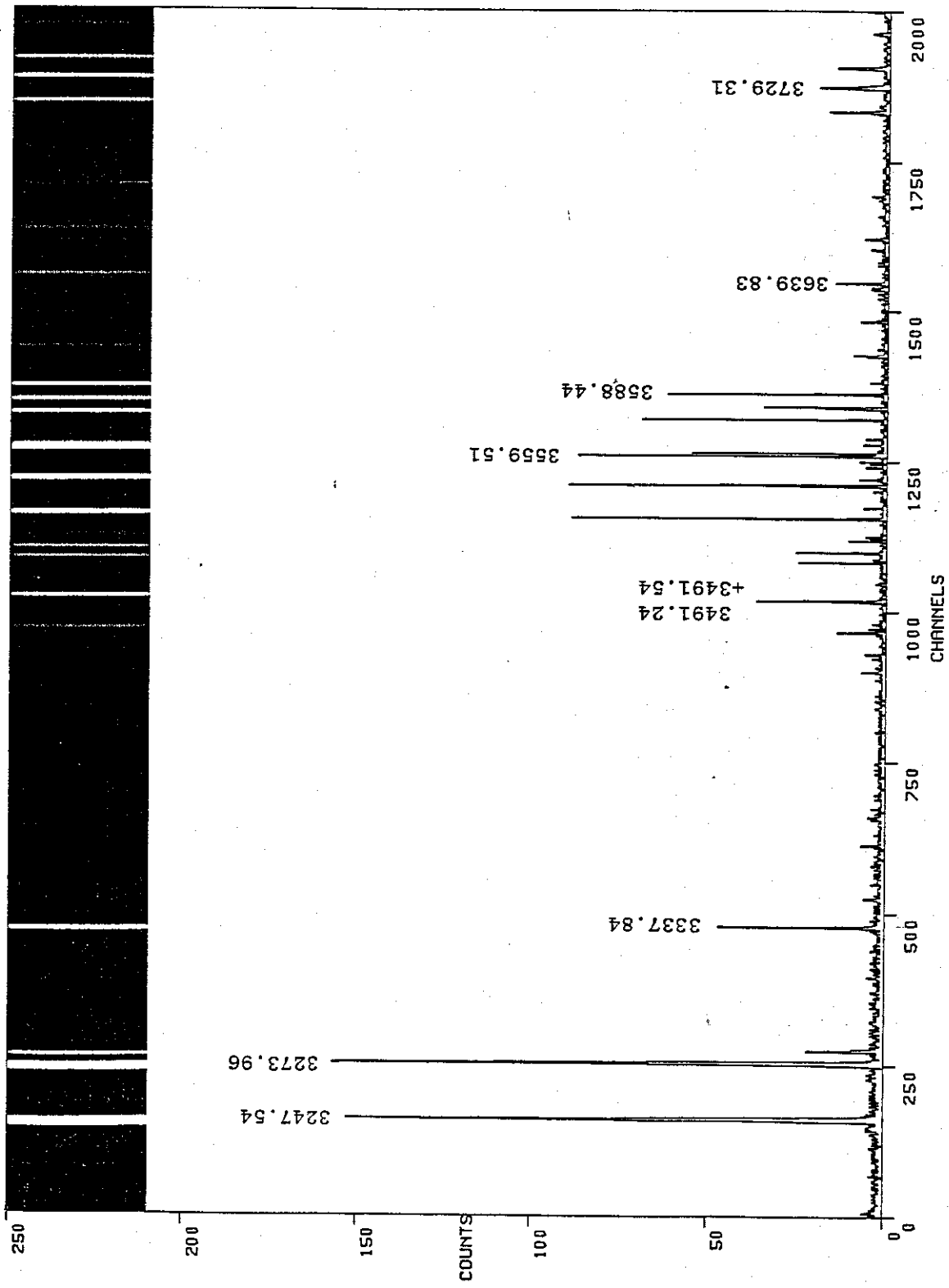
PROJ. SLIT 12.7 MICRONS

FILTERS 1.2D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 46.38

SLIT 100 MICRONS

..... 0.54 ARCSEC

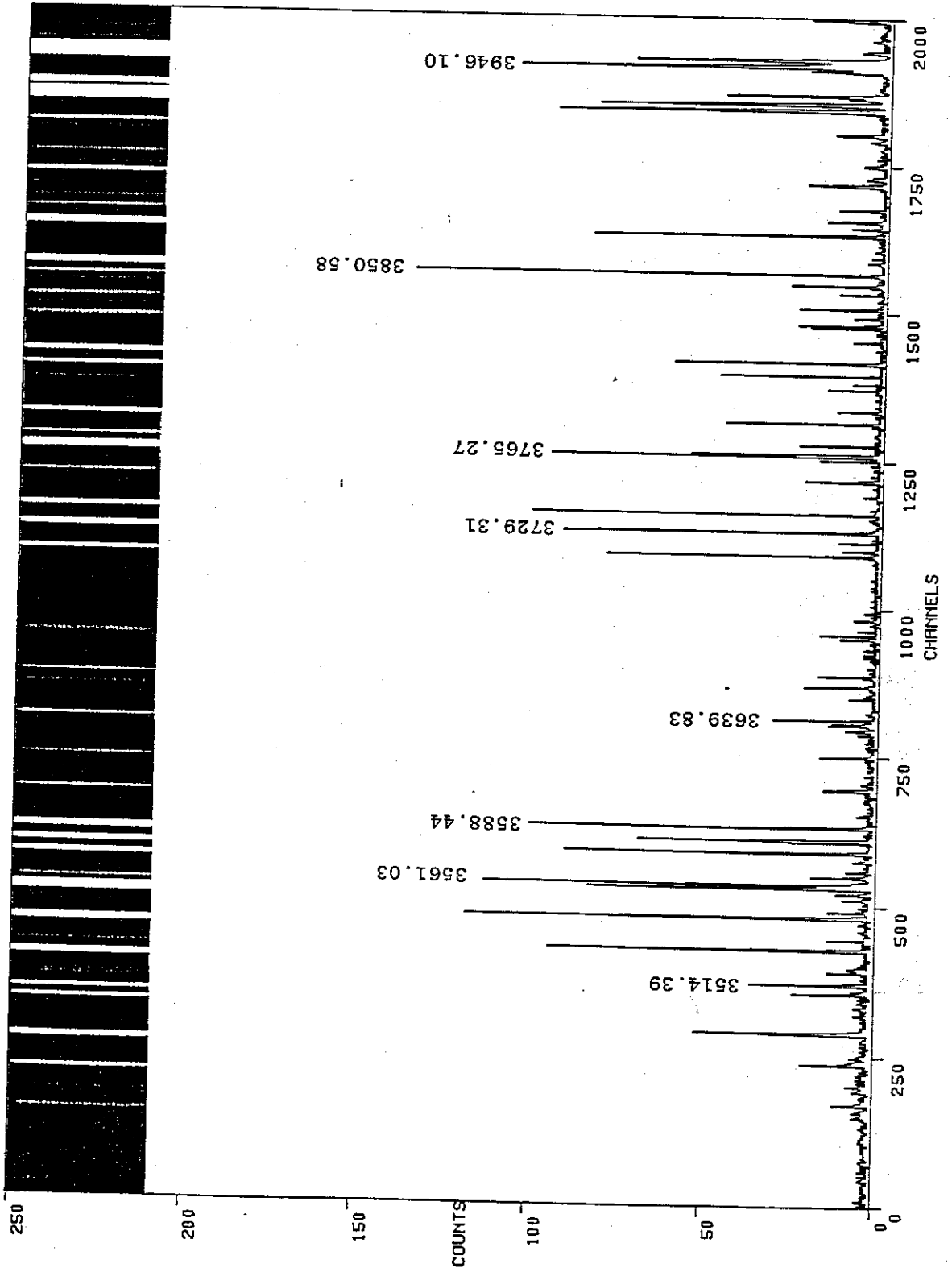
PROJ. SLIT 13.6 MICRONS

FILTERS 0.3D

EXPOSURE 200S

SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 44.72

SLIT 100 MICRONS

..... 0.54 ARCSEC

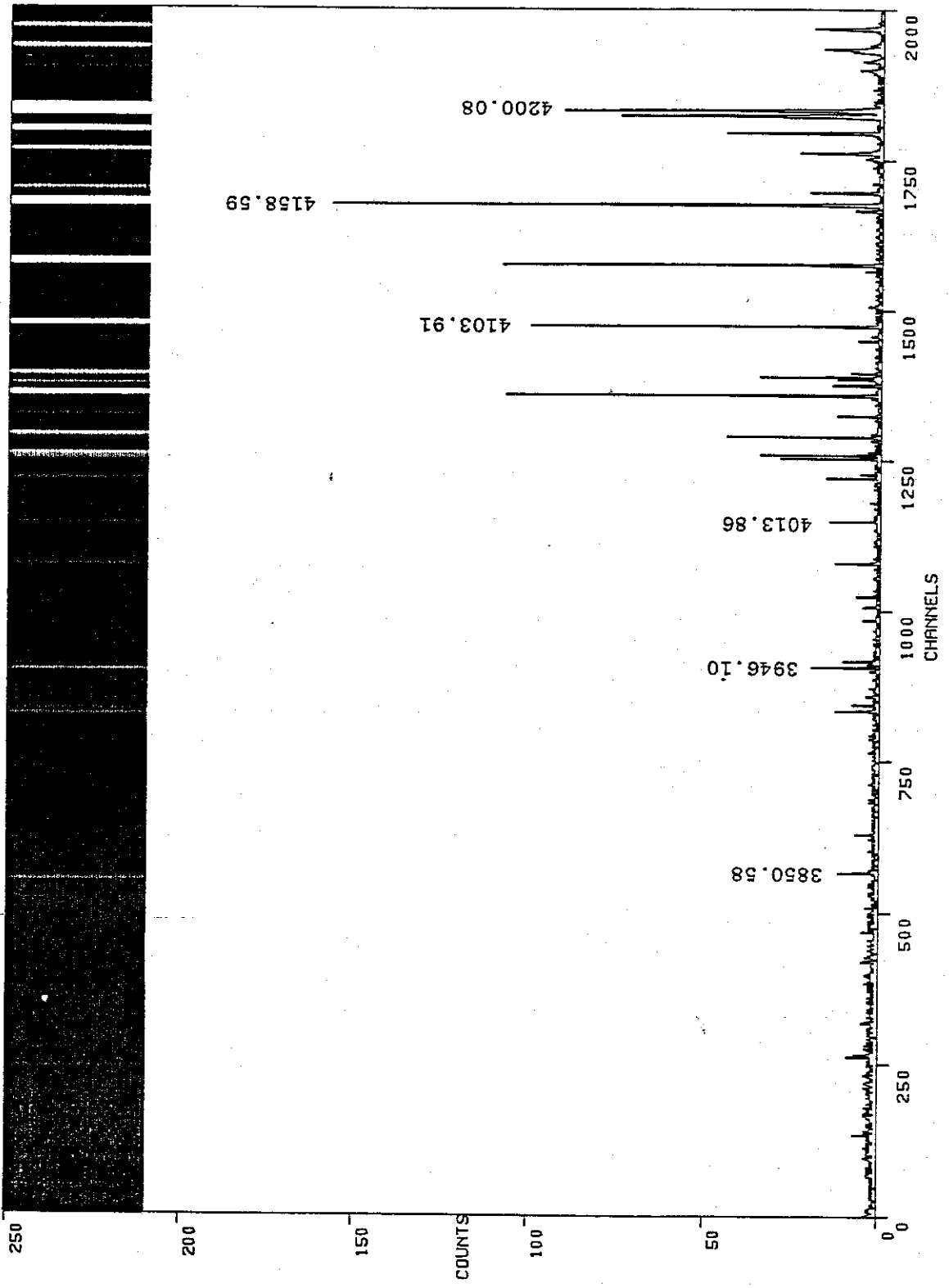
PROJ. SLIT 13.3 MICRONS

FILTERS NONE

EXPOSURE 200S

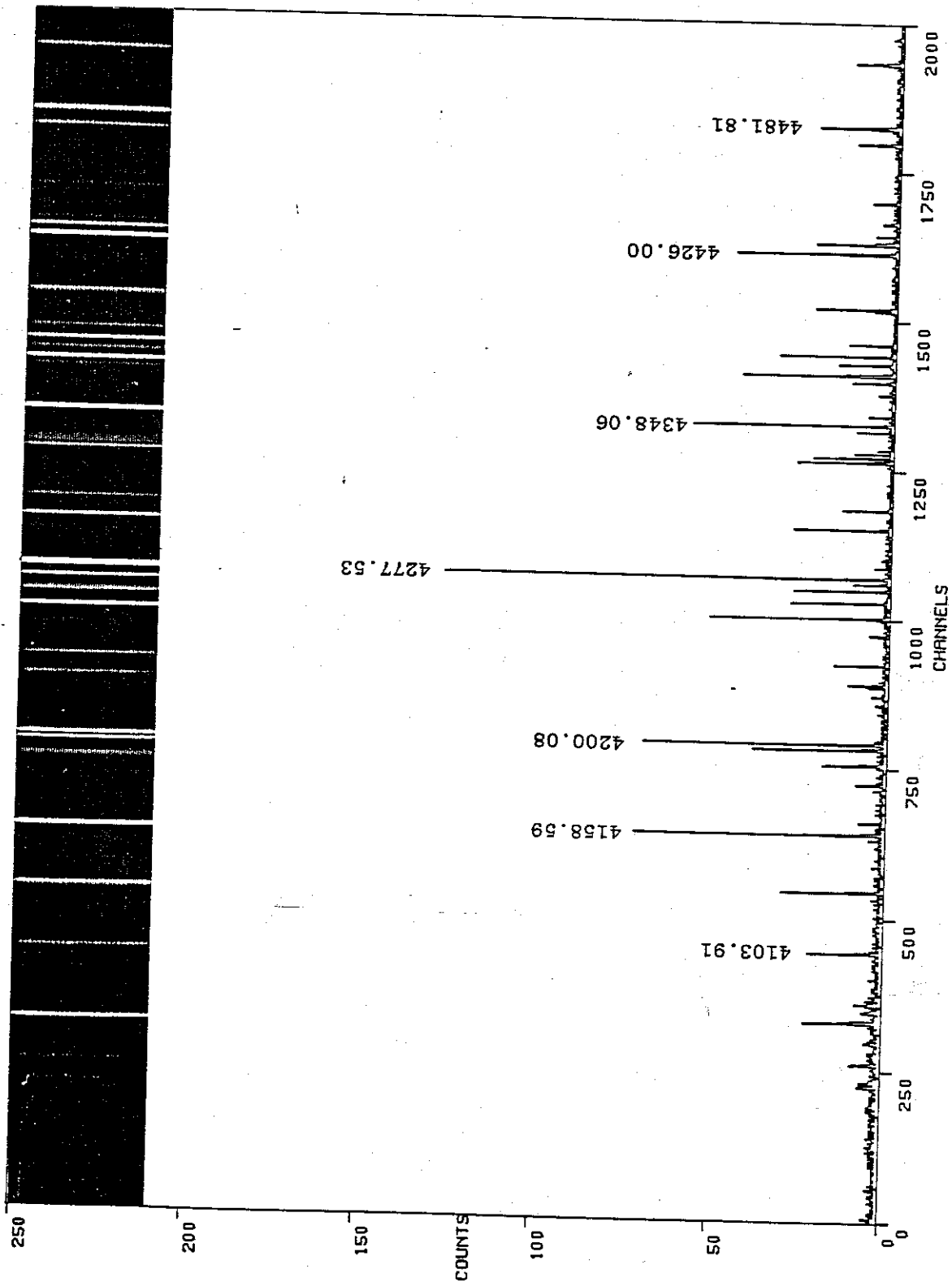
SOURCE CUAR

235 CAMERA WITH IPCS



KEY
GRATING H2400B
SETTING 42.41
SLIT 100 MICRONS
..... 0.54 ARCSEC
PROJ. SLIT 12.8 MICRONS
FILTERS 1.2D
EXPOSURE 200S
SOURCE CUAR

235 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 39,99

SLIT 100 MICRONS

..... 0.54 ARCSEC

PROJ. SLIT 12.3 MICRONS

FILTERS 1.8D

EXPOSURE 200S

SOURCE CUAR

September 1983

3200 - 5600

3800 - 7300

5400 - 7800

3200 - 5900

λ RANGE

H2400B

H1800V

R1200Y

R1200B

GRATING

Contains maps for

500 CAMERA WITH IPCS

COPPER-ARGON LAMP

ARC MAPS FOR

Notes

1) At Sept '83, plots produced for the 500 camera are shown blue to left. The Lexidata will show them red to left (i.e. reversed).

2) Filters marked ---D are neutral filters in the "ASND" notation EXCEPT 2.4D, which is "FARC". Filter slides will be separately identified.

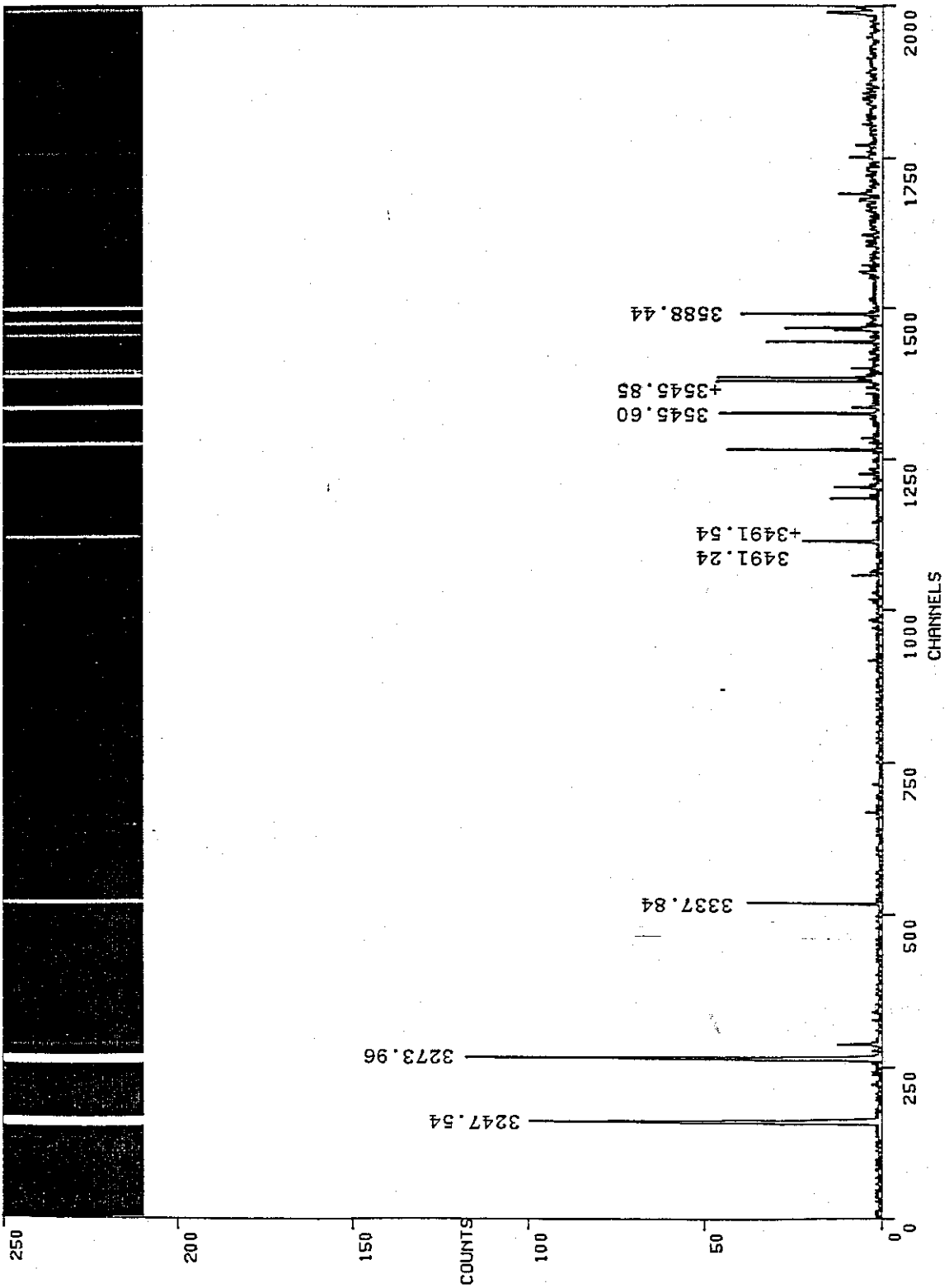
3) Filters marked CG --- or BG --- etc. are colour filters in the "ASCF" notation.

Filter slides will be separately identified.

4) Not all the possible angles are covered; e.g. for 1800 and 2400 gratings, the originals were taken to physical stops - these plots will be done and inserted later.

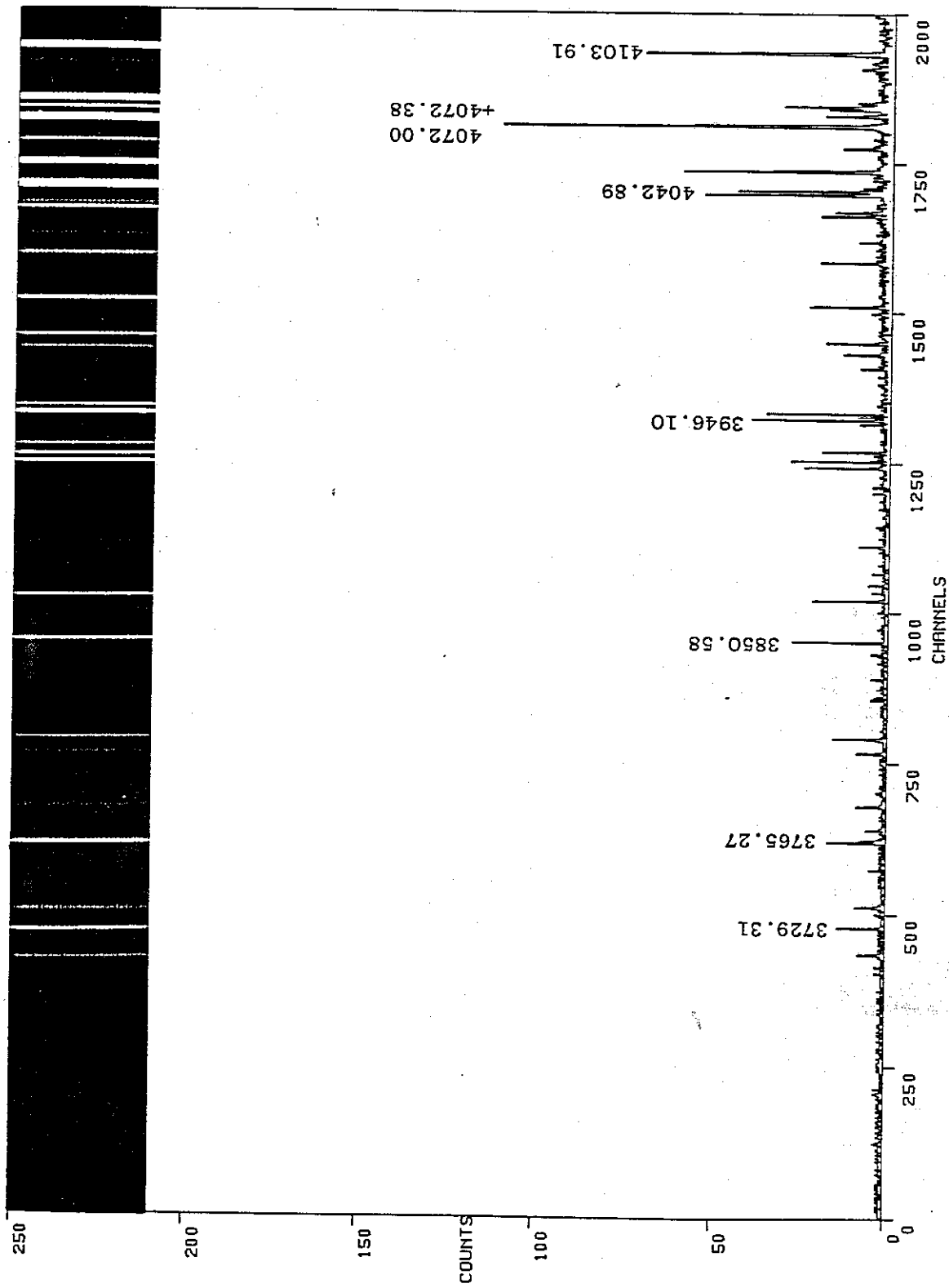
5) Note at settings greater than 150.00, there will be light loss from over-filled optics, and image quality may be affected if much larger angles are used.

500 CAMERA WITH IPCS



KEY
GRATING R1200B
SETTING 115.08
SLIT 50 MICRONS
 0.27 ARCSEC
PROJ. SLIT 17.8 MICRONS
FILTERS NONE
EXPOSURE 200S
SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING R1200B

SETTING 116.52

SLIT 50 MICRONS

..... 0.27 ARCSEC

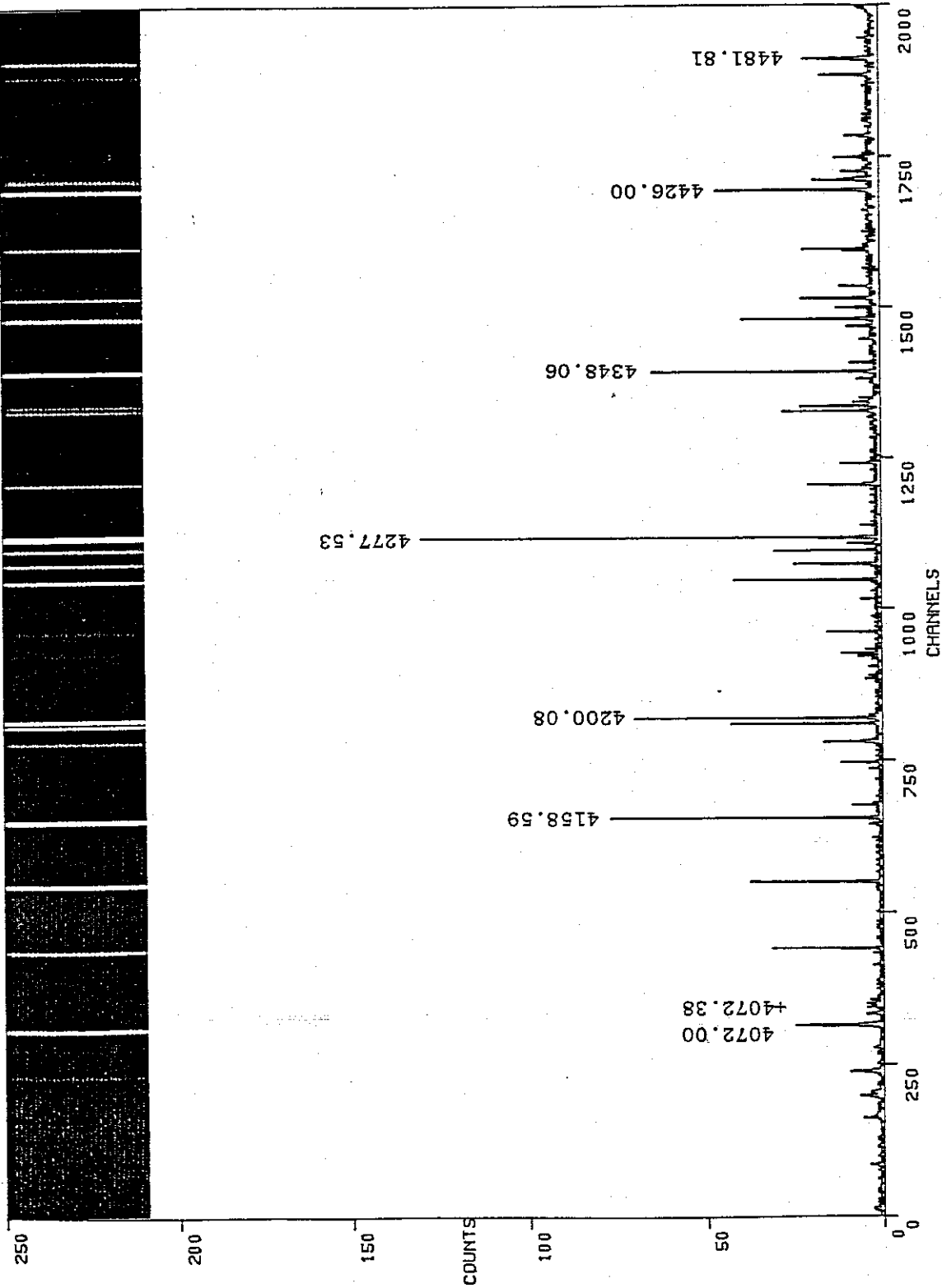
PROJ. SLIT 17.6 MICRONS

FILTERS 0.6D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCCS



KEY

GRATING R1200B

SETTING 117.94

SLIT 50 MICRONS

..... 0.27 ARCSEC

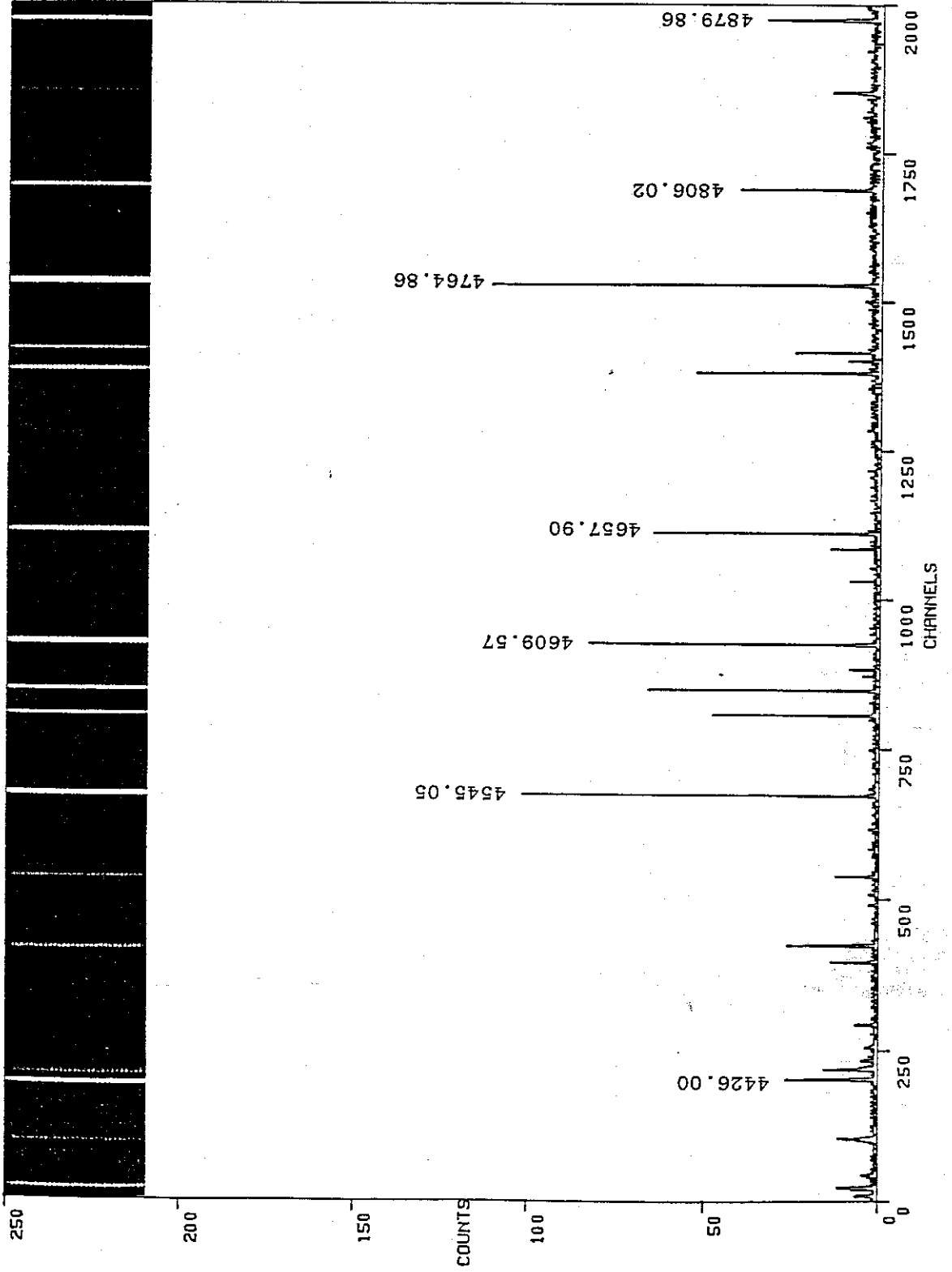
PROJ. SLIT 17.4 MICRONS

FILTERS 1.2D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING R1200B

SETTING 119.34

SLIT 50 MICRONS

..... 0.27 ARCSEC

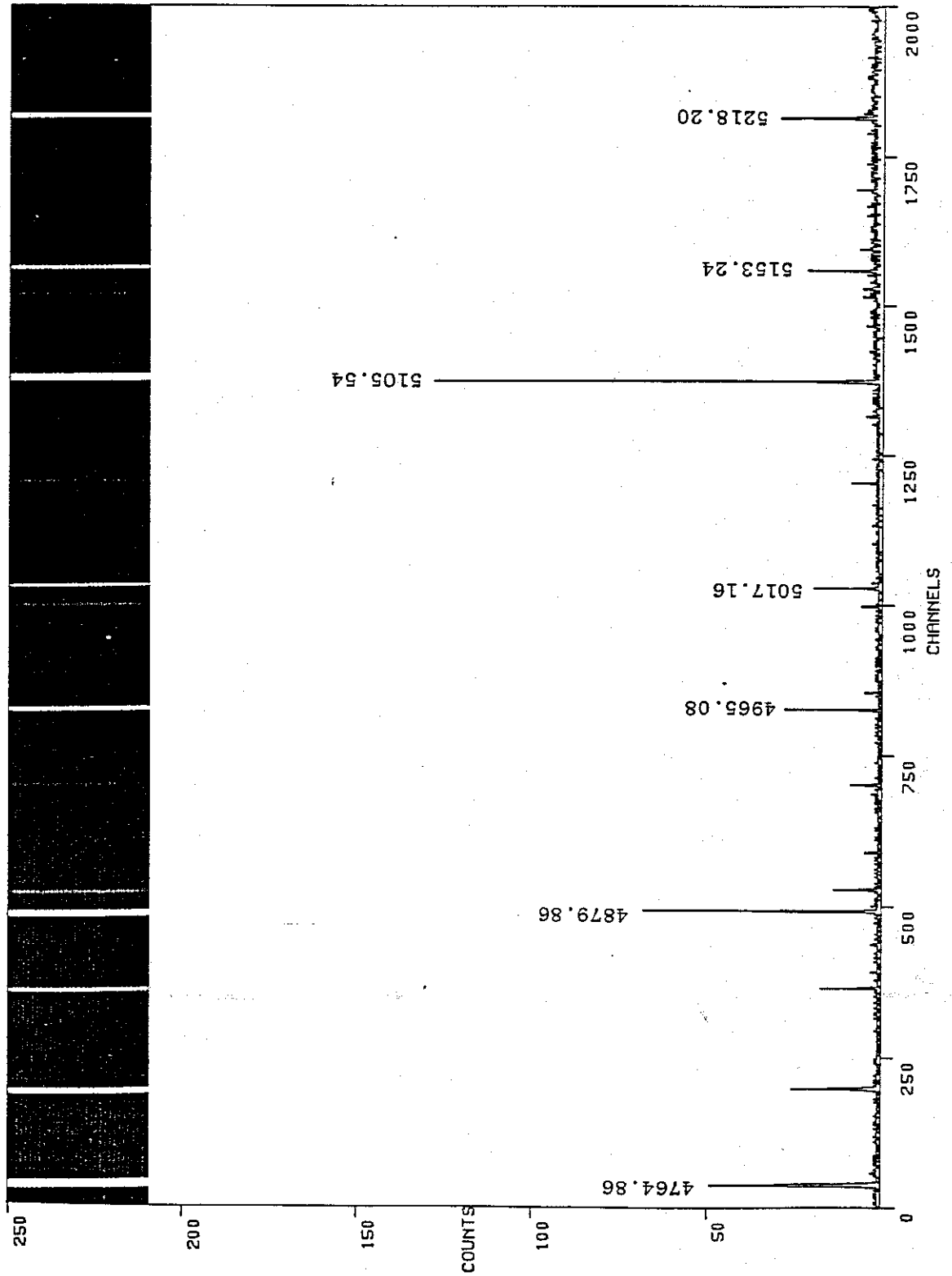
PROJ. SLIT 17.1 MICRONS

FILTERS 1.2D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING R1200B

SETTING 120.74

SLIT 50 MICRONS

..... 0.27 ARCSEC

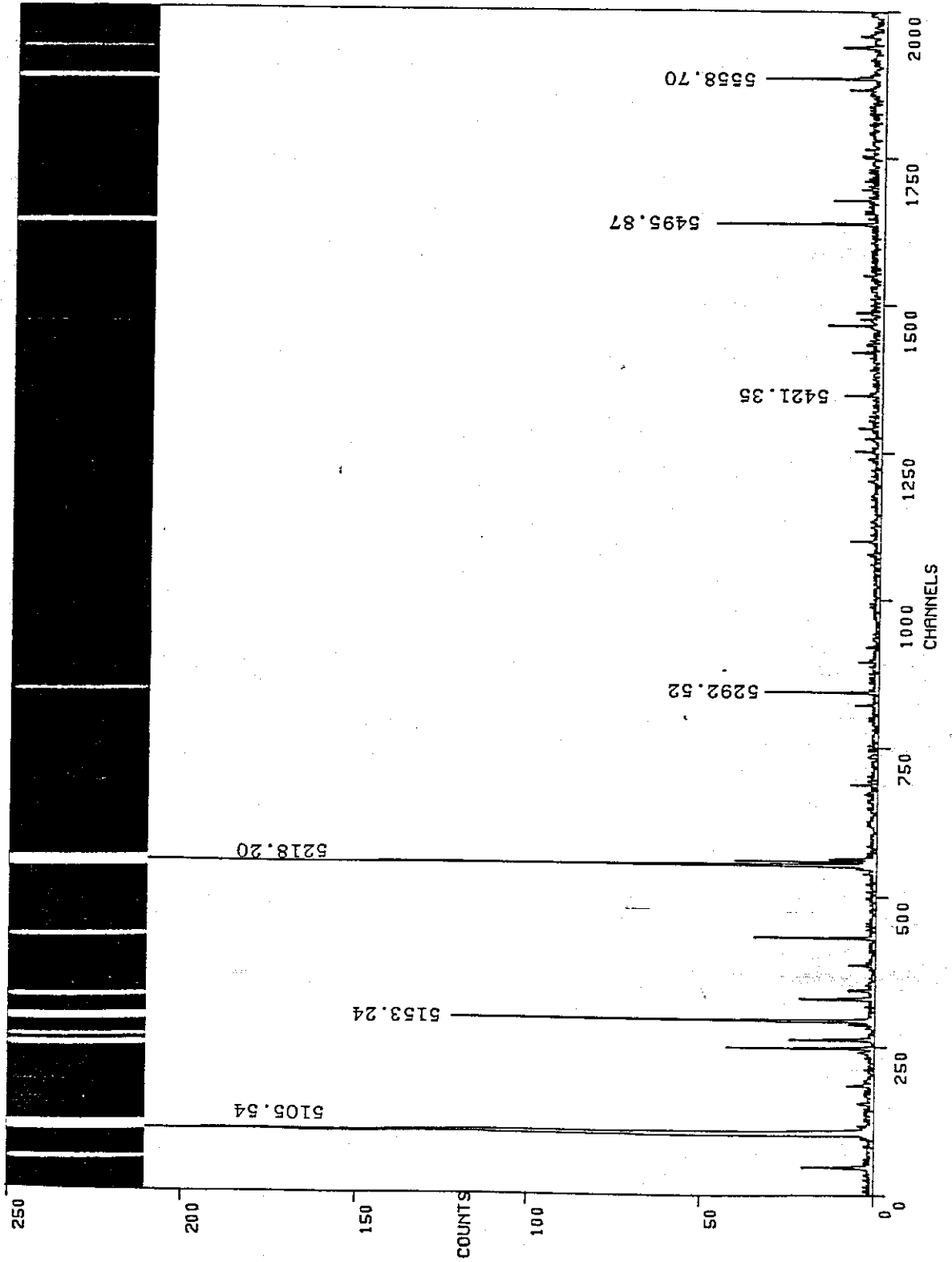
PROJ. SLIT 16.9 MICRONS

FILTERS 1.2D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING R1200B

SETTING 121.94

SLIT 50 MICRONS

..... 0.27 ARCSEC

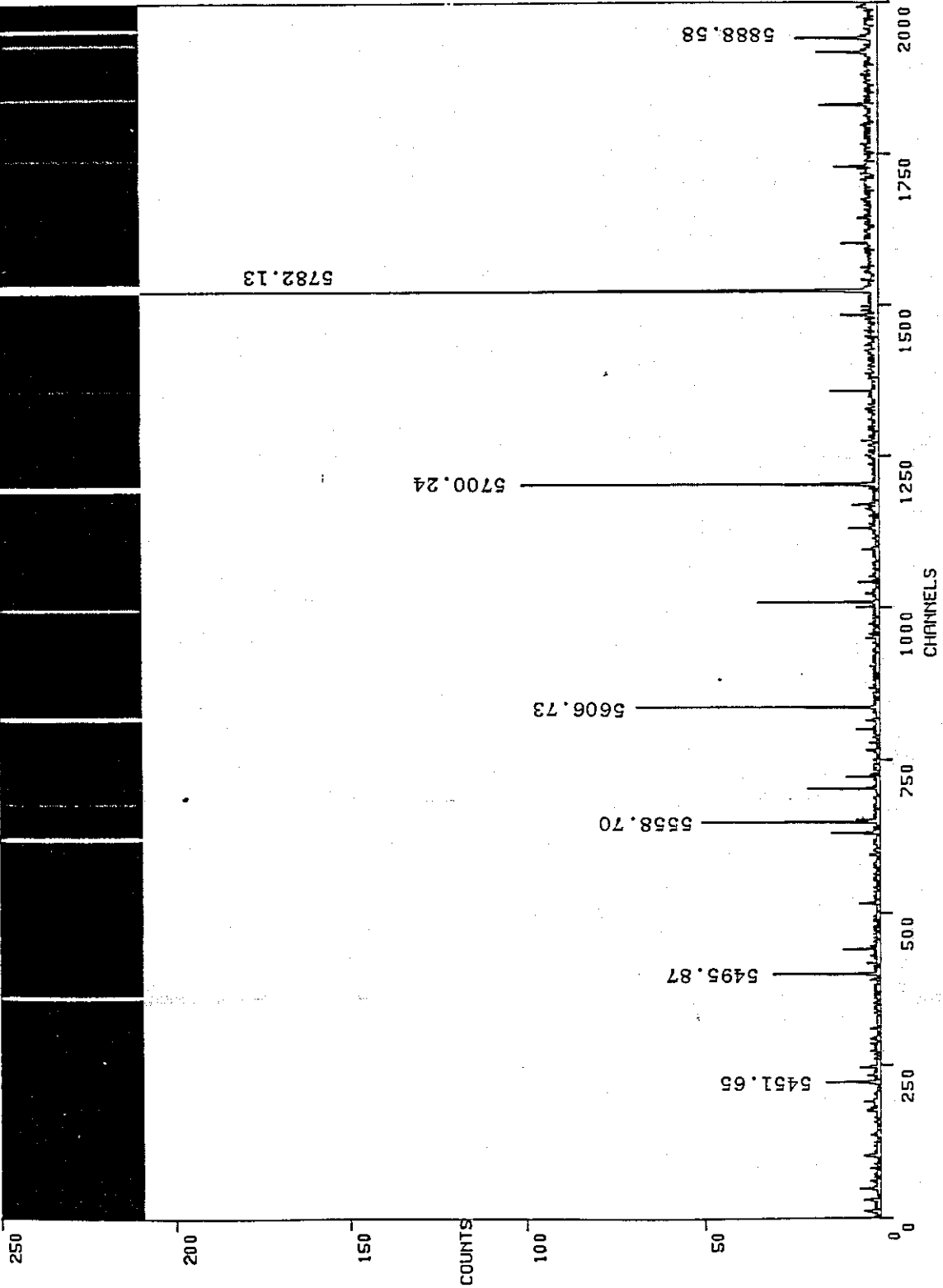
PROJ. SLIT 16.8 MICRONS

FILTERS 0.3D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING RI200B

SETTING 123.12

SLIT 50 MICRONS

..... 0.27 ARCSEC

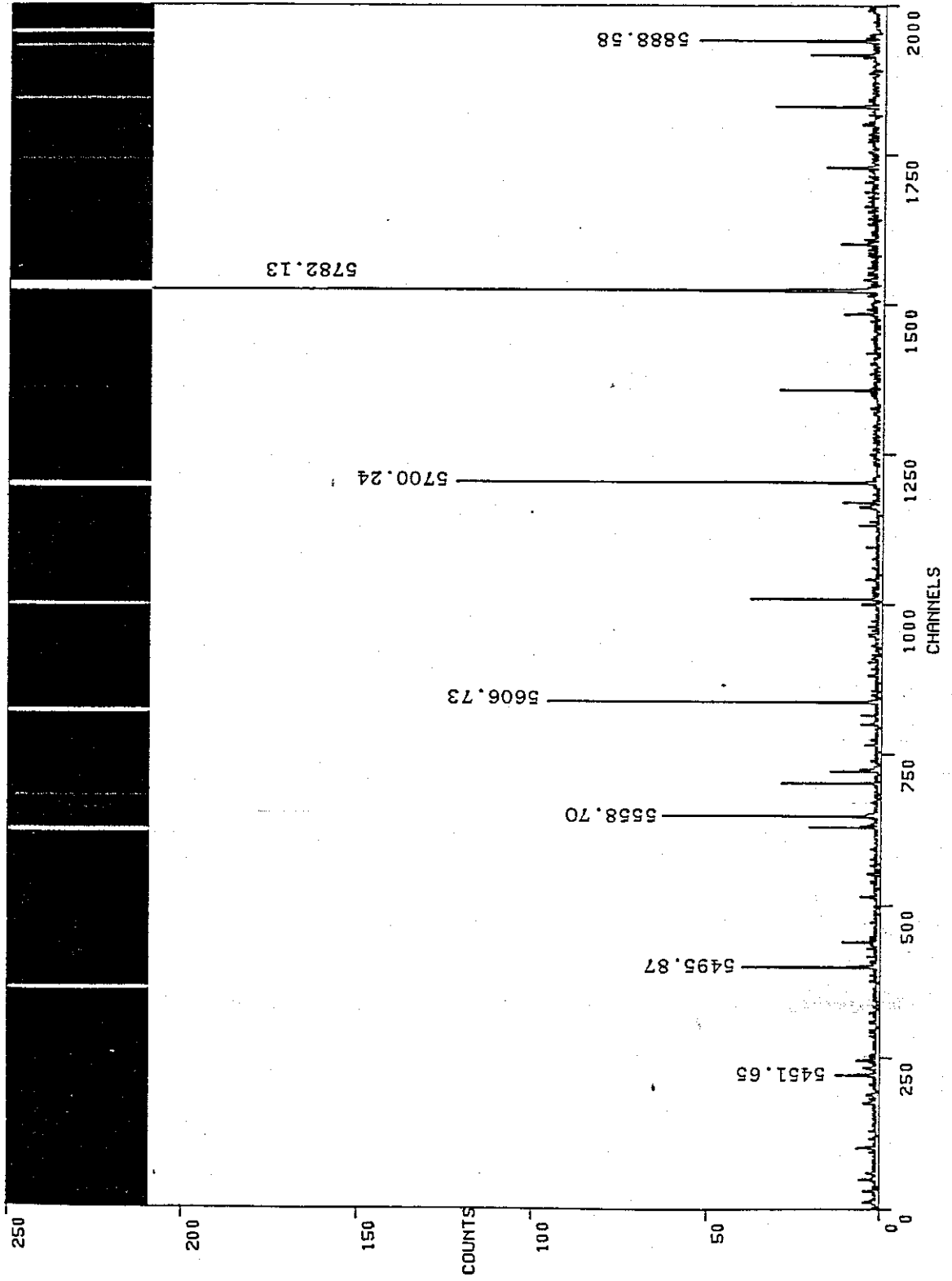
PROJ. SLIT 16.6 MICRONS

FILTERS 0.3D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING K1200Y

SETTING 123.14

SLIT 50 MICRONS

..... 0.27 ARCSEC

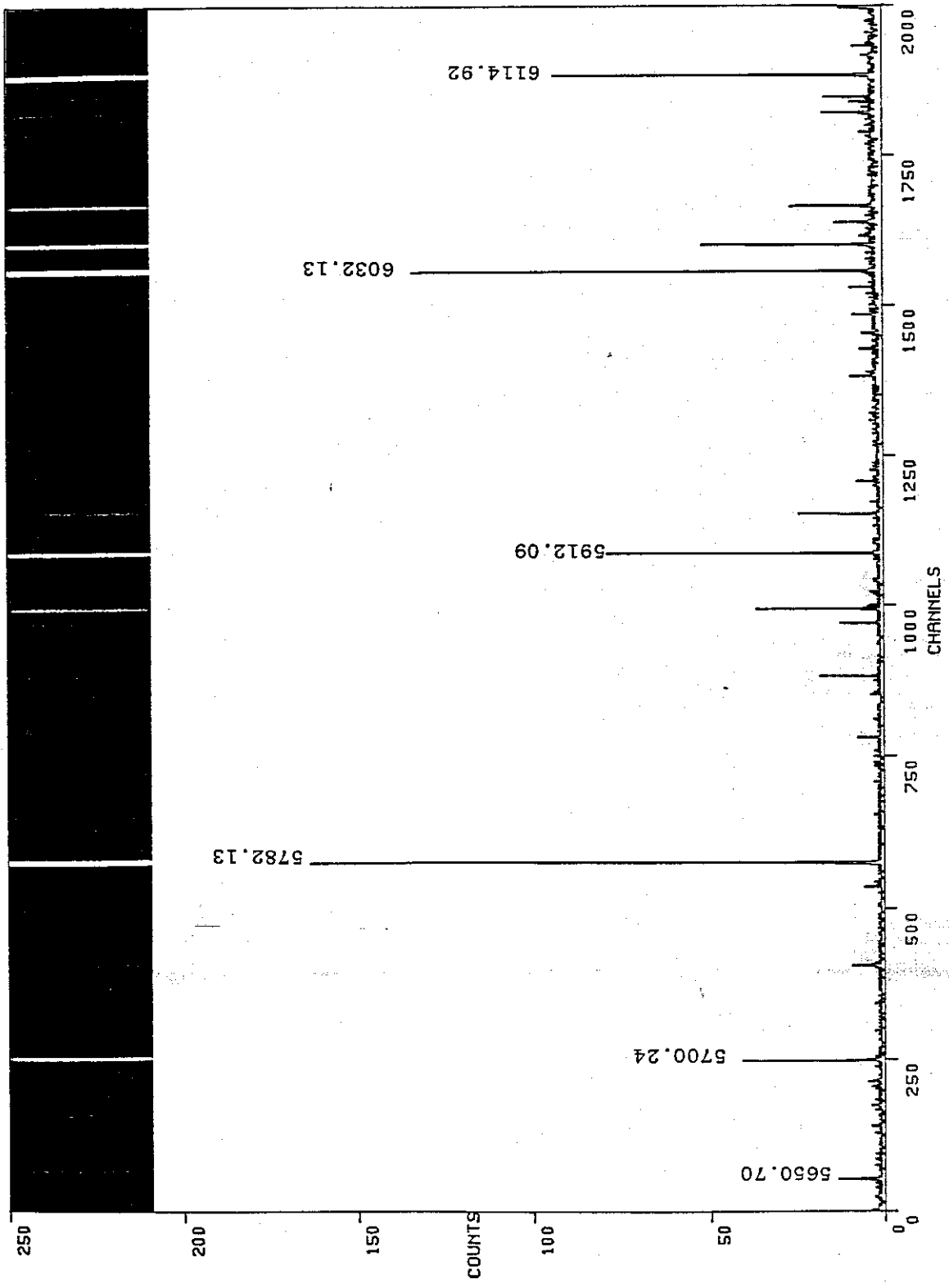
PROJ. SLIT ; 16.6 MICRONS

FILTERS 0.3D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING RI200Y

SETTING 124.05

SLIT 50 MICRONS

..... 0.27 ARCSEC

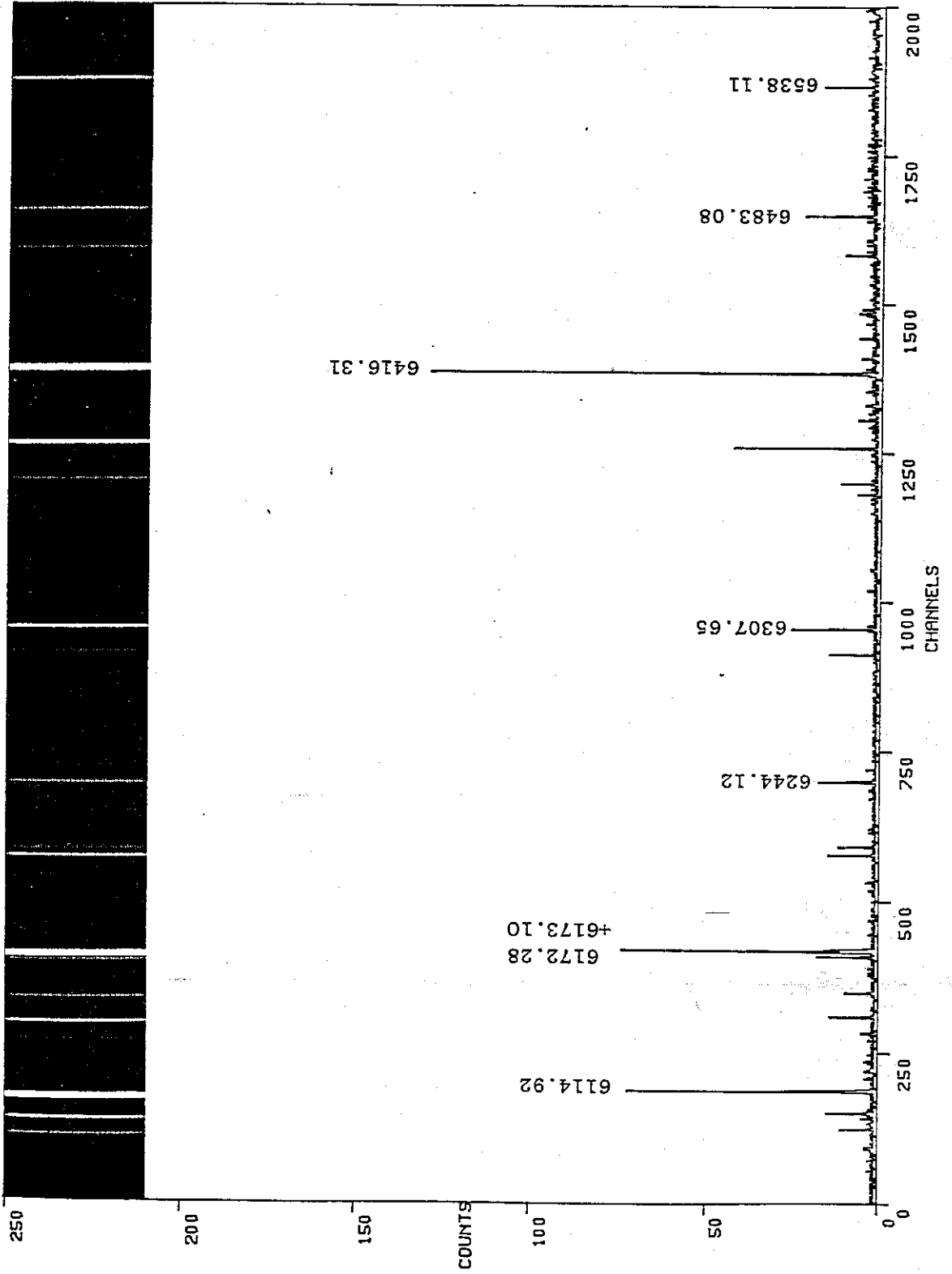
PROJ. SLIT 16.4 MICRONS

FILTERS 0.6D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING R1200Y

SETTING 125.67

SLIT 50 MICRONS

..... 0.27 ARCSEC

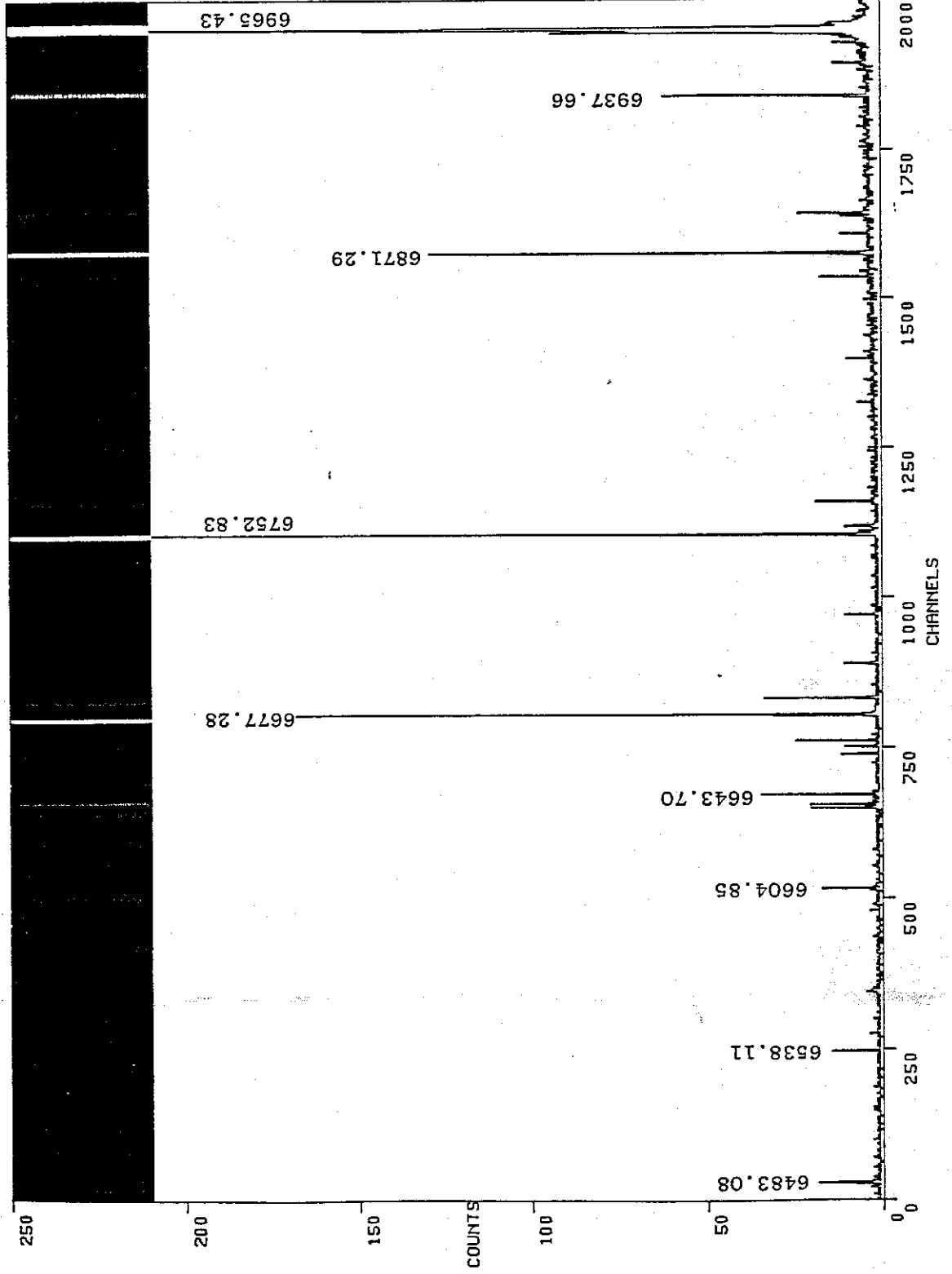
PROJ. SLIT 16.2 MICRONS

FILTERS 0.6D GG495

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATINGR1200V

SETTING127.24

SLIT.....50 MICRONS

.....0.27 ARCSEC

PROJ. SLIT.....16.0 MICRON

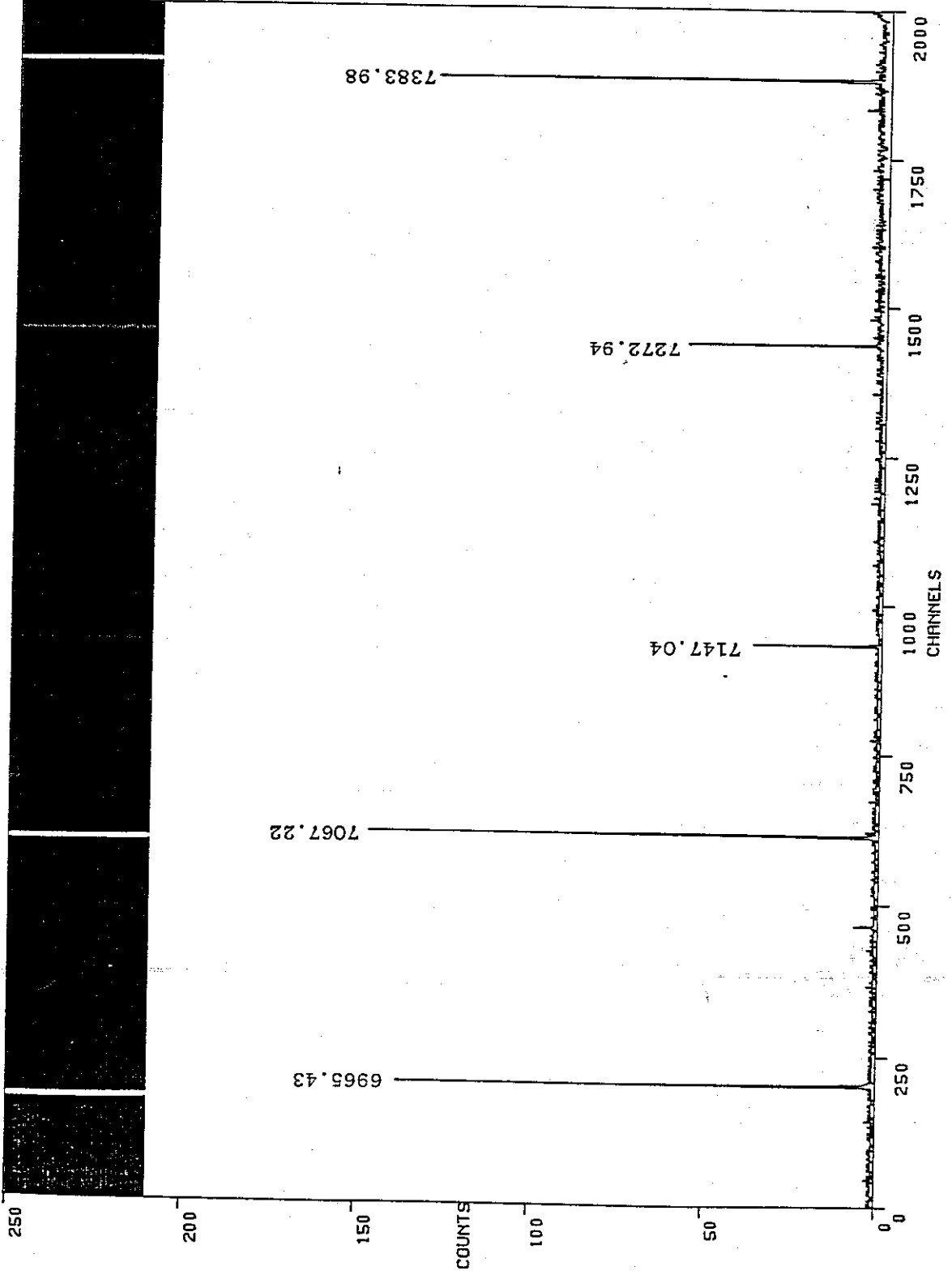
FILTERS.....0.6D GG495

EXPOSURE.....200S

SOURCECUAR

N.B. There is considerable double-counting in the 6965.43 line; do not reduce filtering any further

500 CAMERA WITH IPCS



KEY

GRATING.....R1200Y

SETTING.....128.94

SLIT.....50 MICRONS

.....0.27 ARCSEC

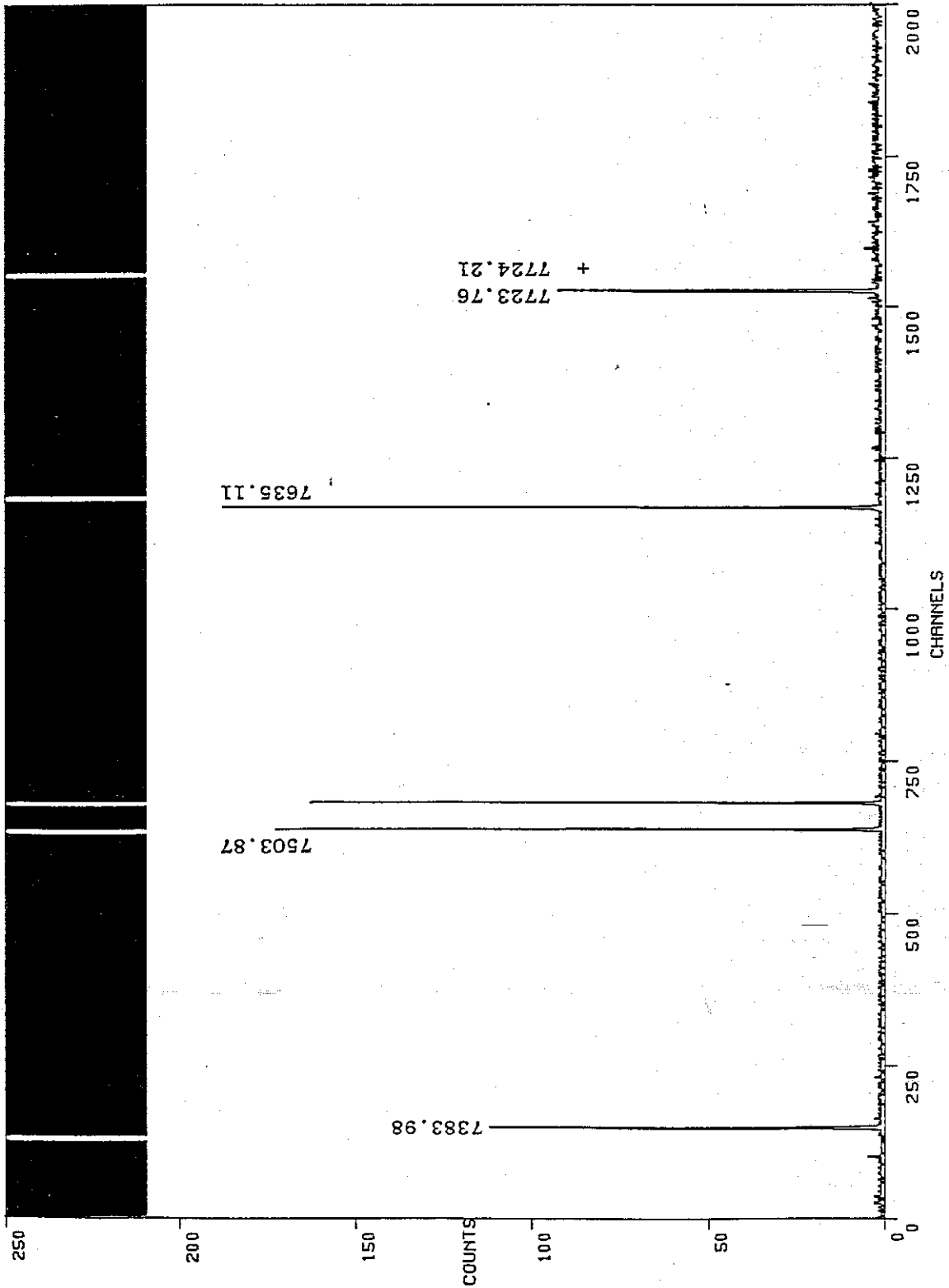
PROJ. SLIT.....15.7 MICRONS

FILTERS.....2.4D RG630

EXPOSURE.....200S

SOURCE.....CUAR

500 CAMERA WITH IPCS



KEY

GRATING RI200Y

SETTING 130.64

SLIT 50 MICRONS

..... 0.27 ARCSEC

PROJ. SLIT 15.4 MICRONS

FILTERS 2.4D RG630

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS

KEY

GRATING H1800V

SETTING 124.05

SLIT 50 MICRONS

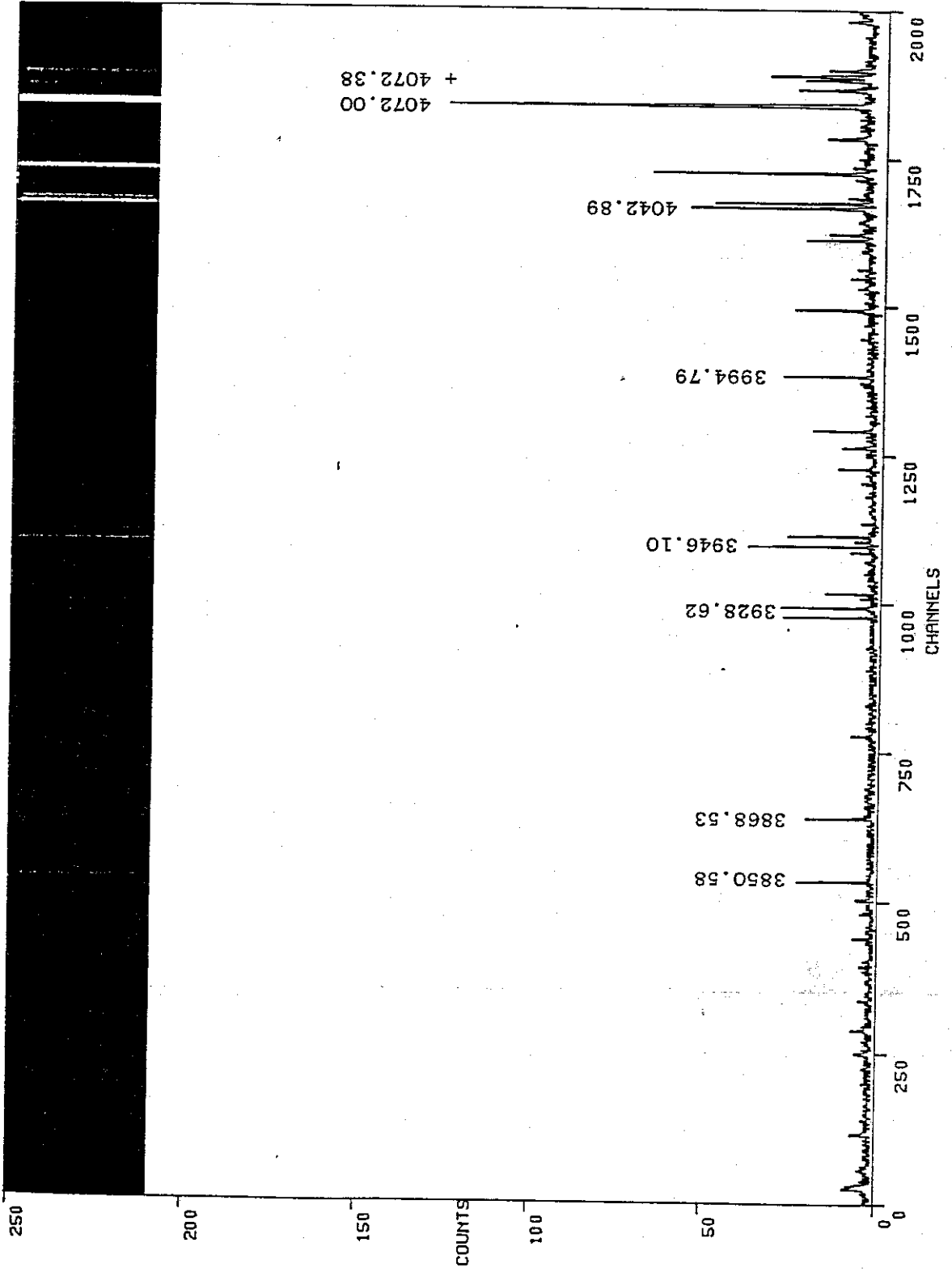
..... 0.27 ARCSEC

PROJ. SLIT 16.4 MICRONS

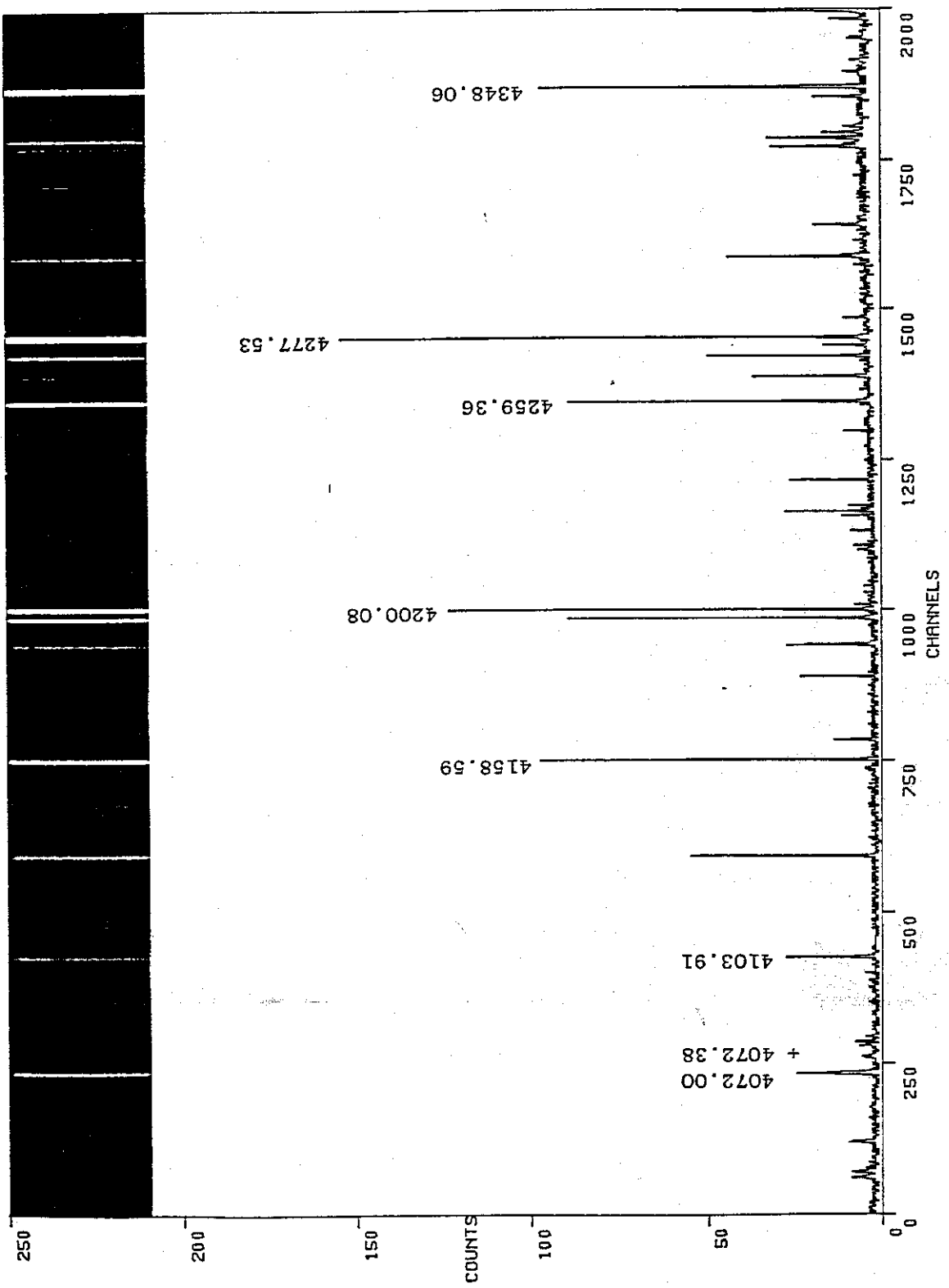
FILTERS NONE

EXPOSURE 200S

SOURCE CUAR



500 CAMERA WITH IPCS



KEY

GRATING HL800V

SETTING 125.60

SLIT 50 MICRONS

..... 0.27 ARCSEC

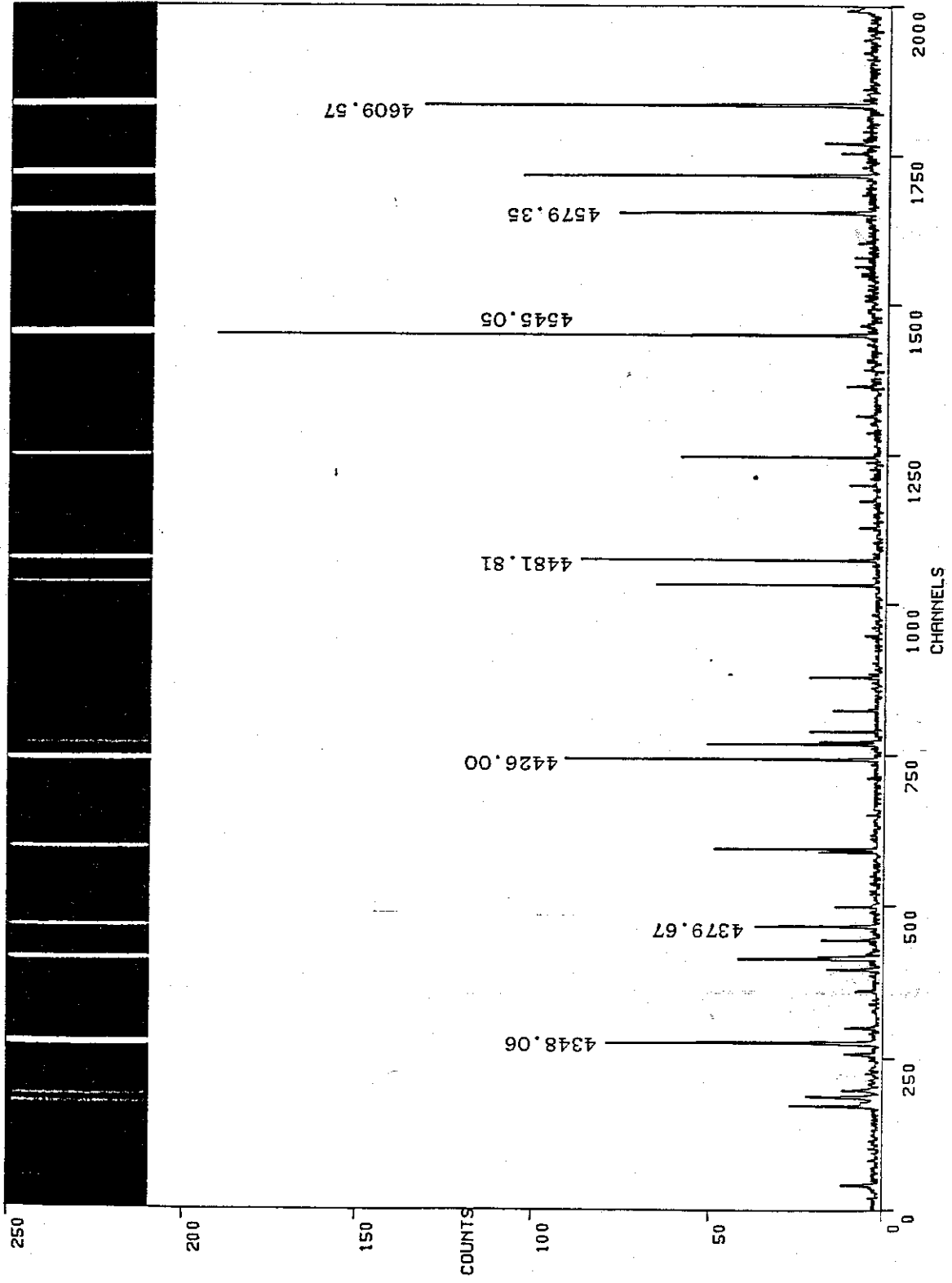
PROJ. SLIT 6.2 MICRONS

FILTERS 0.6D

EXPOSURE 200S

SOURCE CUAR

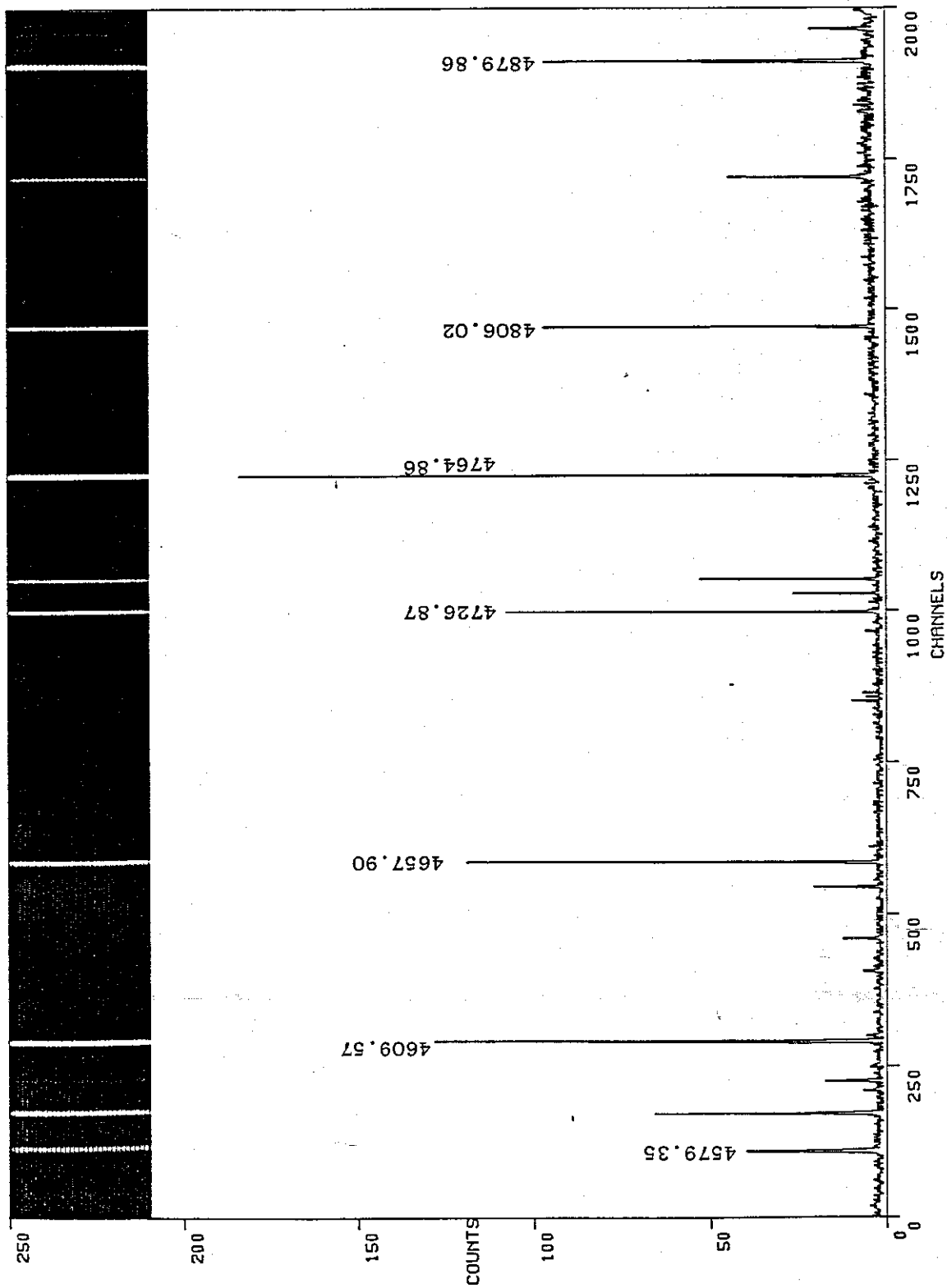
500 CAMERA WITH IPCS



KEY

GRATING HI 300V
SETTING 127.14
SLIT 50 MICRONS
..... 0.27 ARCSEC
PROJ. SLIT 16.0 MICRON
FILTERS 0.6D
EXPOSURE 200S
SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING HI800V

SETTING 128.65

SLIT 50 MICRONS

..... 0.27 ARCSECS

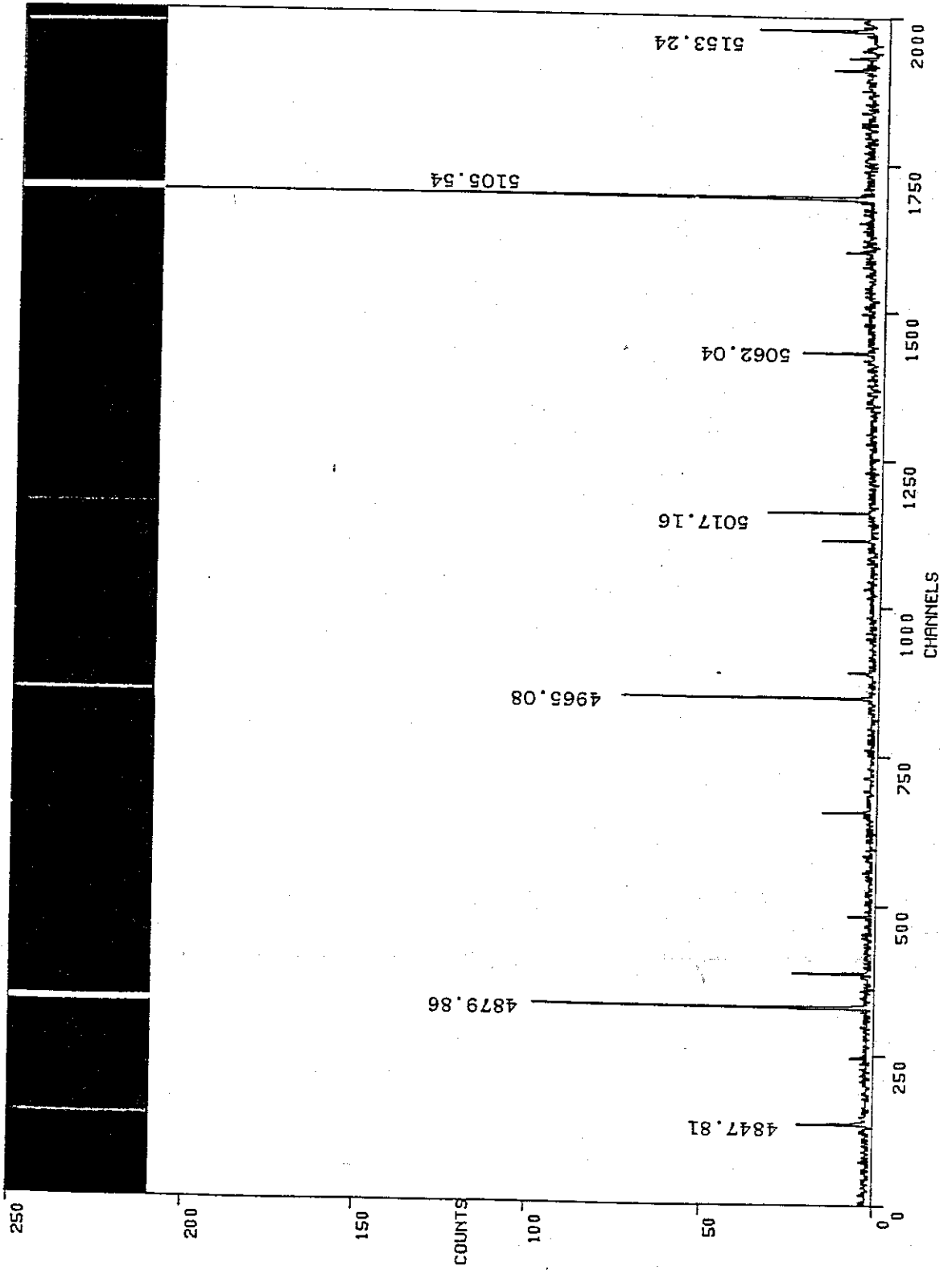
PROJ. SLIT 15.7 MICRONS

FILTERS 0.6D GG395

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING HI800V

SETTING 130.20

SLIT 50 MICRONS

..... 0.27 ARCSECS

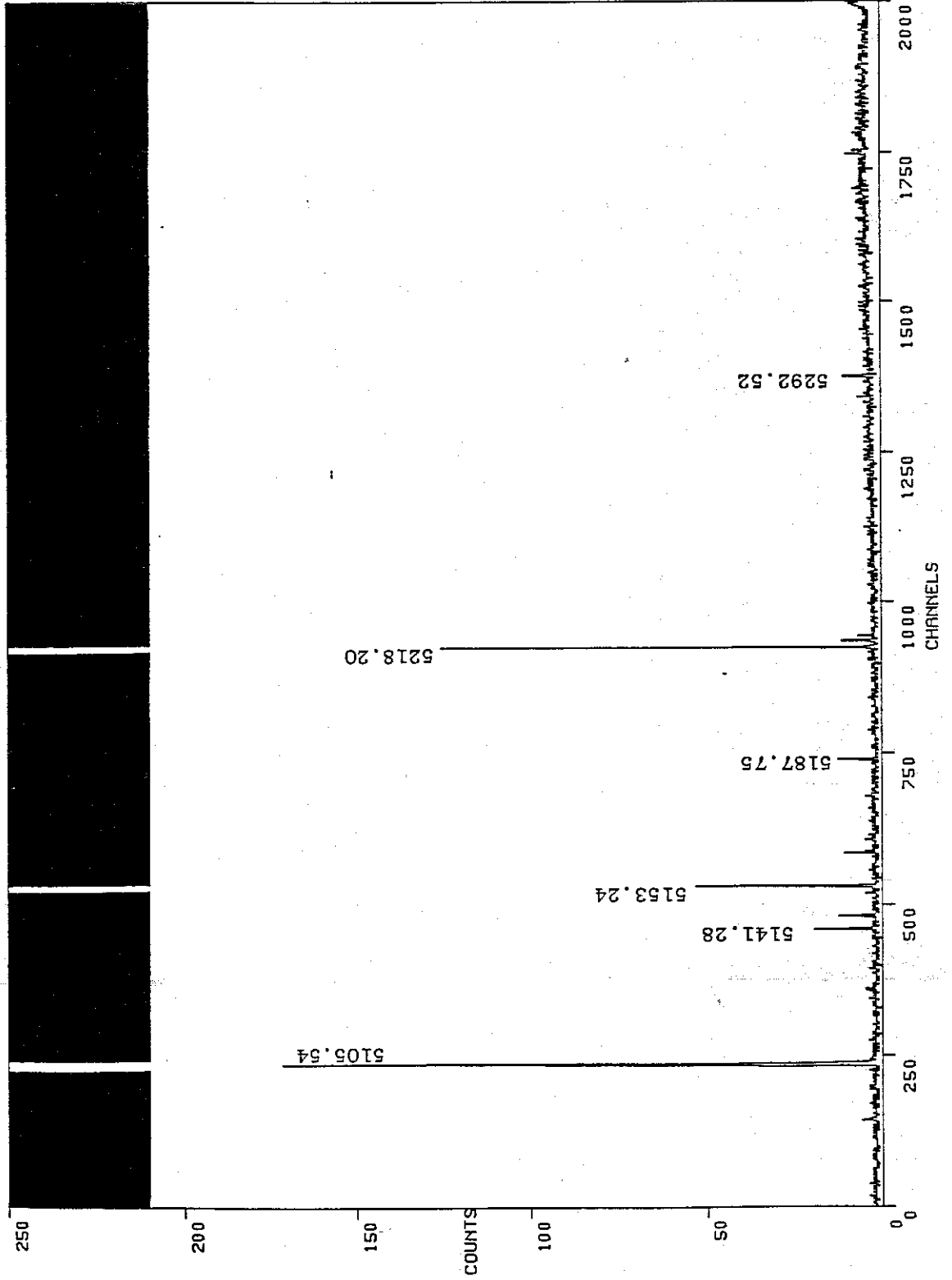
PROJ. SLIT 15.5 MICRONS

FILTERS 0.6D GG395

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 131.64

SLIT 50 MICRONS

..... 0.27 ARCSECS

PROJ. SLIT 15.3 MICRONS

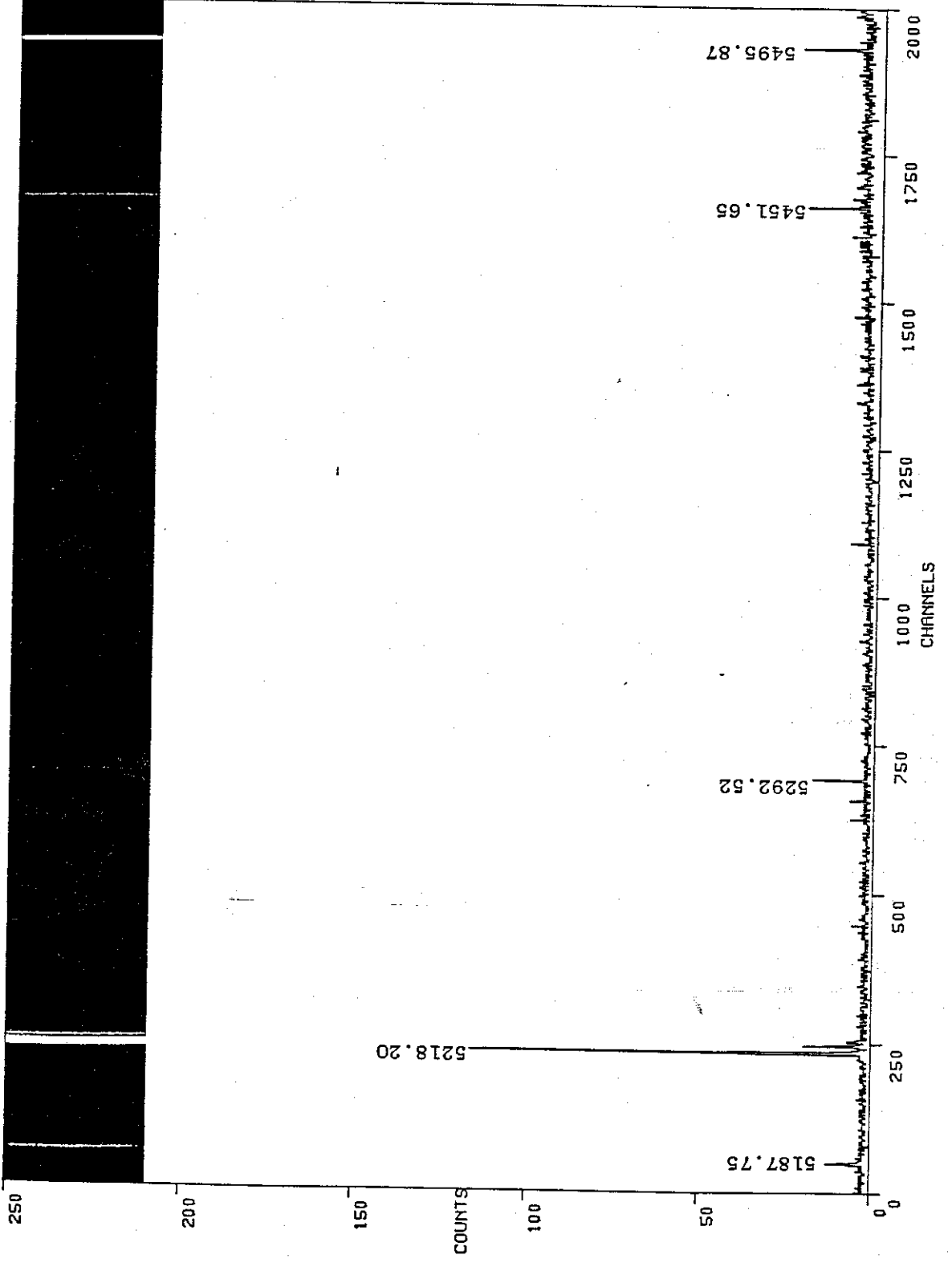
FILTERS 0.6D GG395

EXPOSURE 200S

SOURCE CUAR

N.B. There is double-counting
in the 5105.54 line.

500 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 132.33

SLIT 50 MICRONS

..... 0.27 ARCSEC

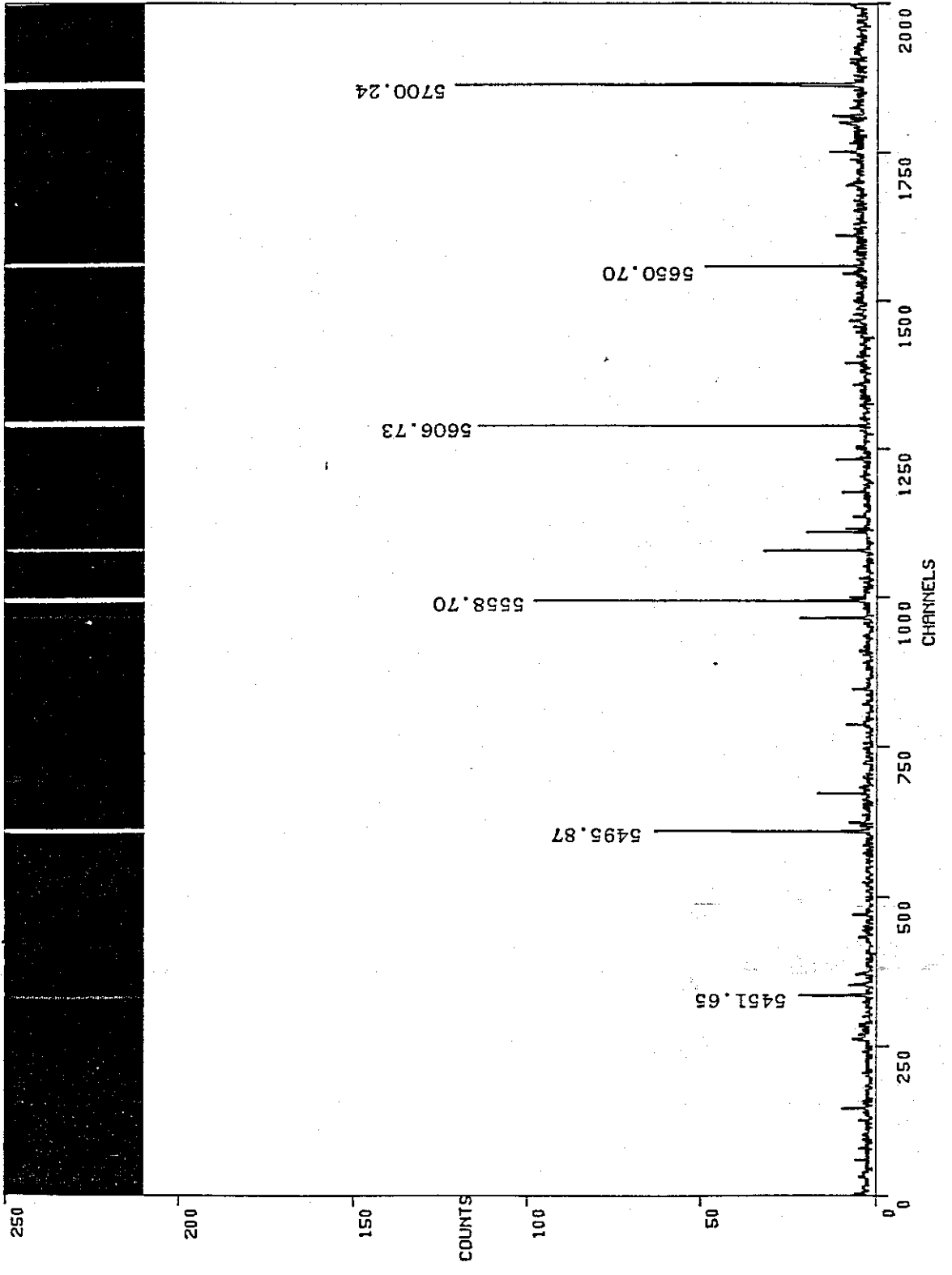
PROJ. SLIT 15.2 MICRON

FILTERS 0.3D GG395

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 133.64

SLIT 50 MICRONS

..... 0.27 ARCSECS

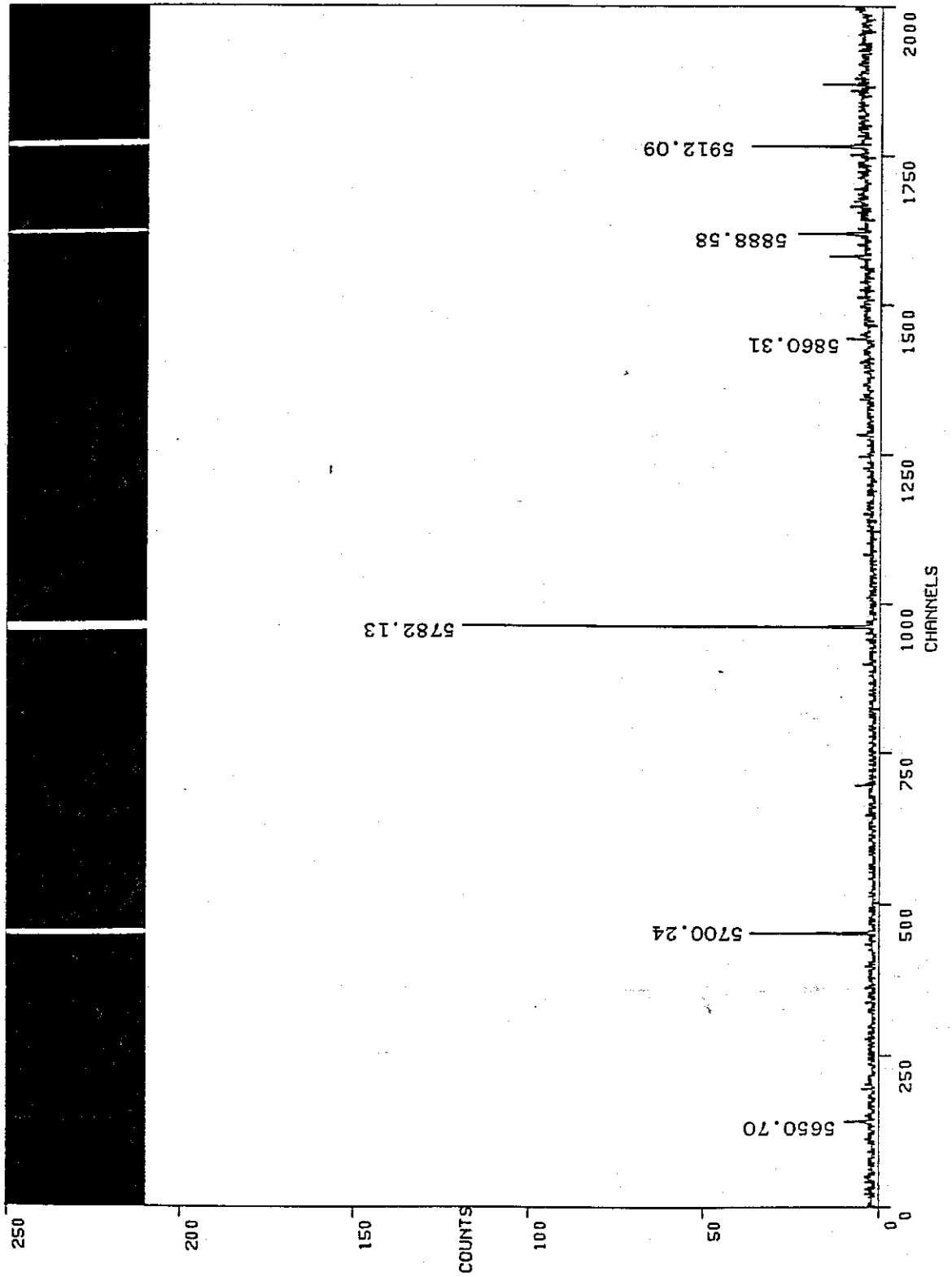
PROJ. SLIT 15.0 MICRONS

FILTERS GG395

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING HI800V

SETTING 135.06

SLIT 50 MICRONS

..... 0.27 ARCSSECS

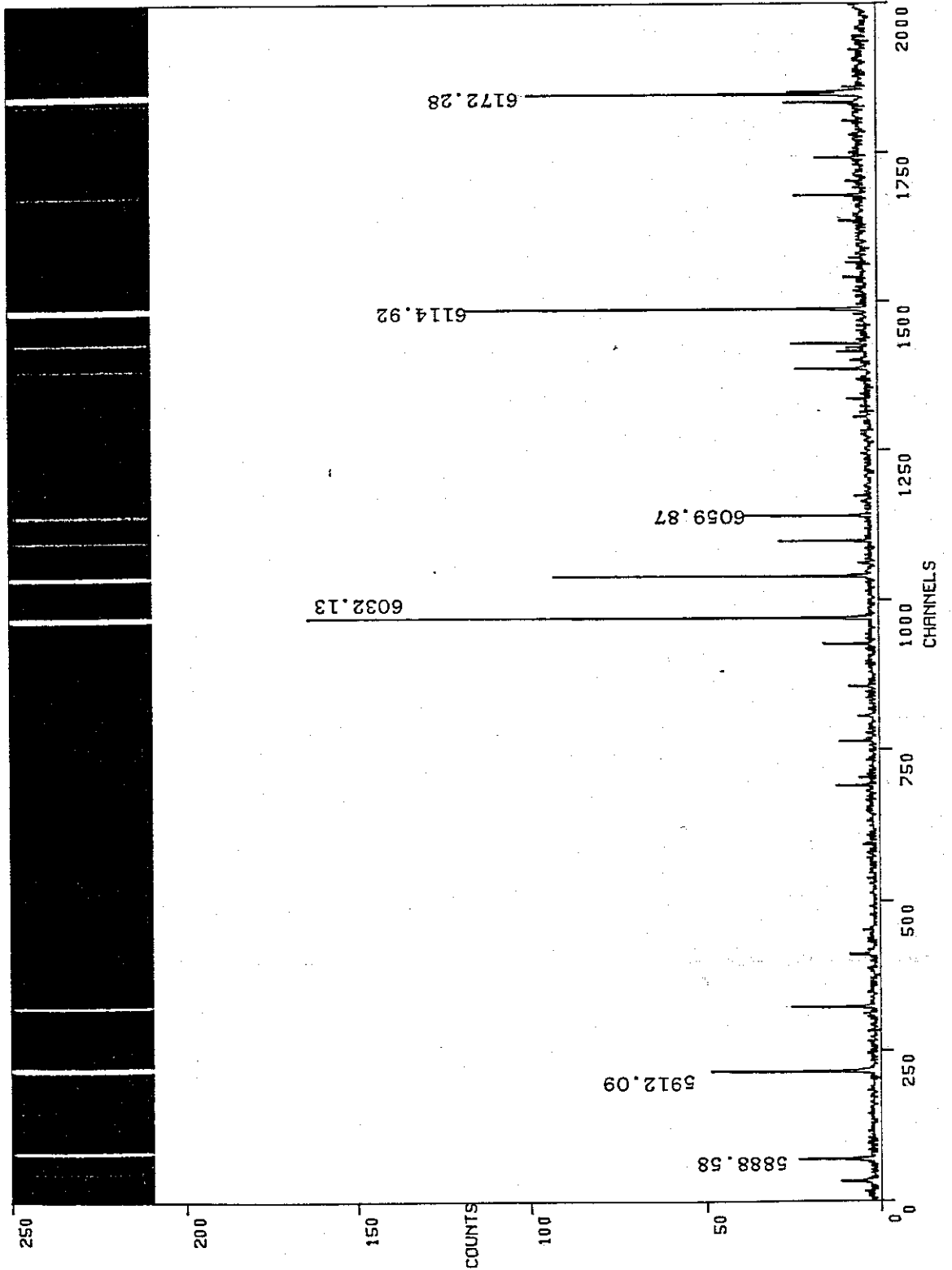
PROJ. SLIT 14.7 MICRONS

FILTERS 0.6D GG495

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING HI800V

SETTING 136.63

SLIT 50 MICRONS

..... 0.27 ARCSECS

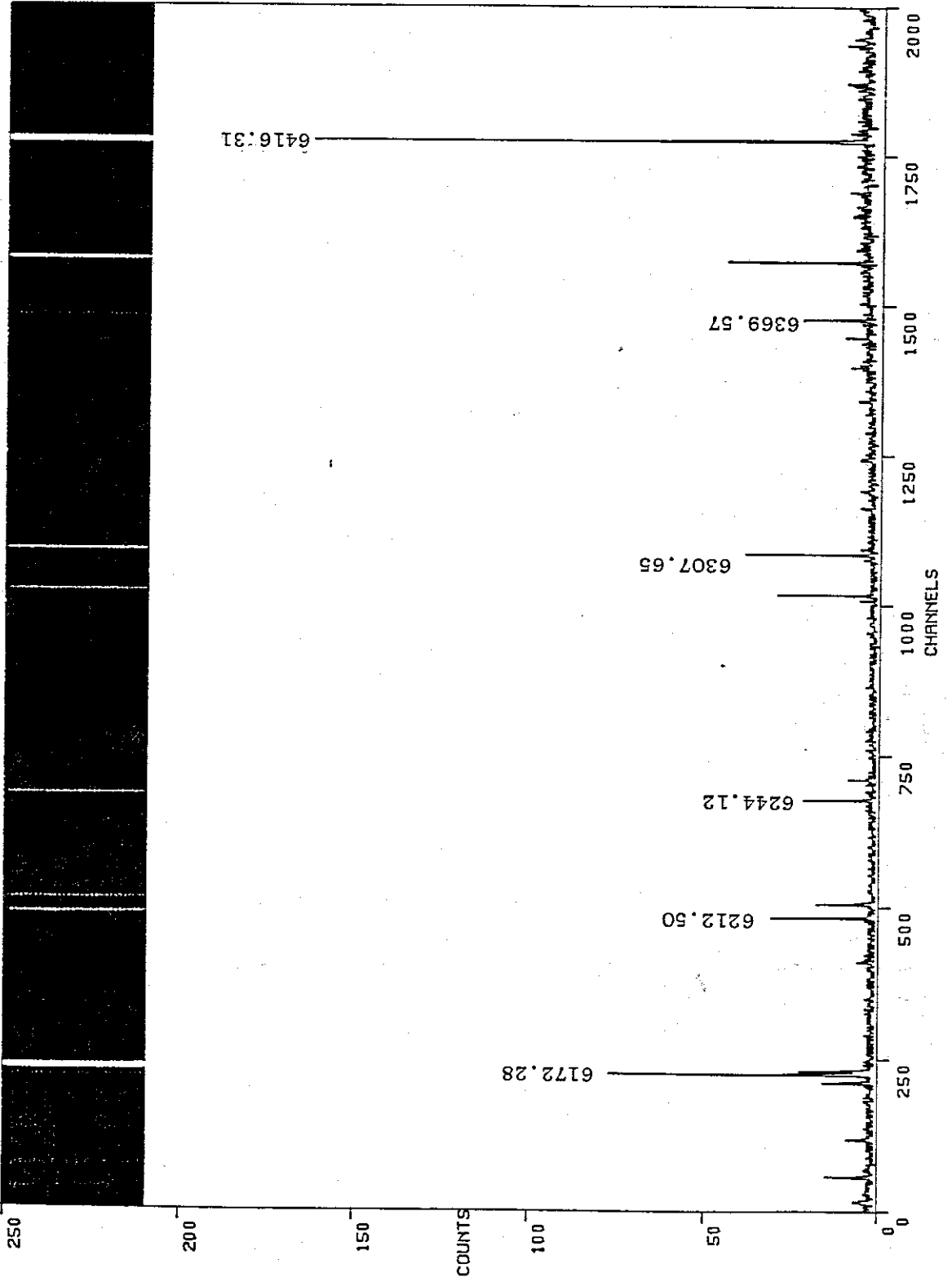
PROJ. SLIT 14.5 MICRONS

FILTERS 0.3D GG495

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 138.28

SLIT 50 MICRONS

..... 0.27 ARCSECS

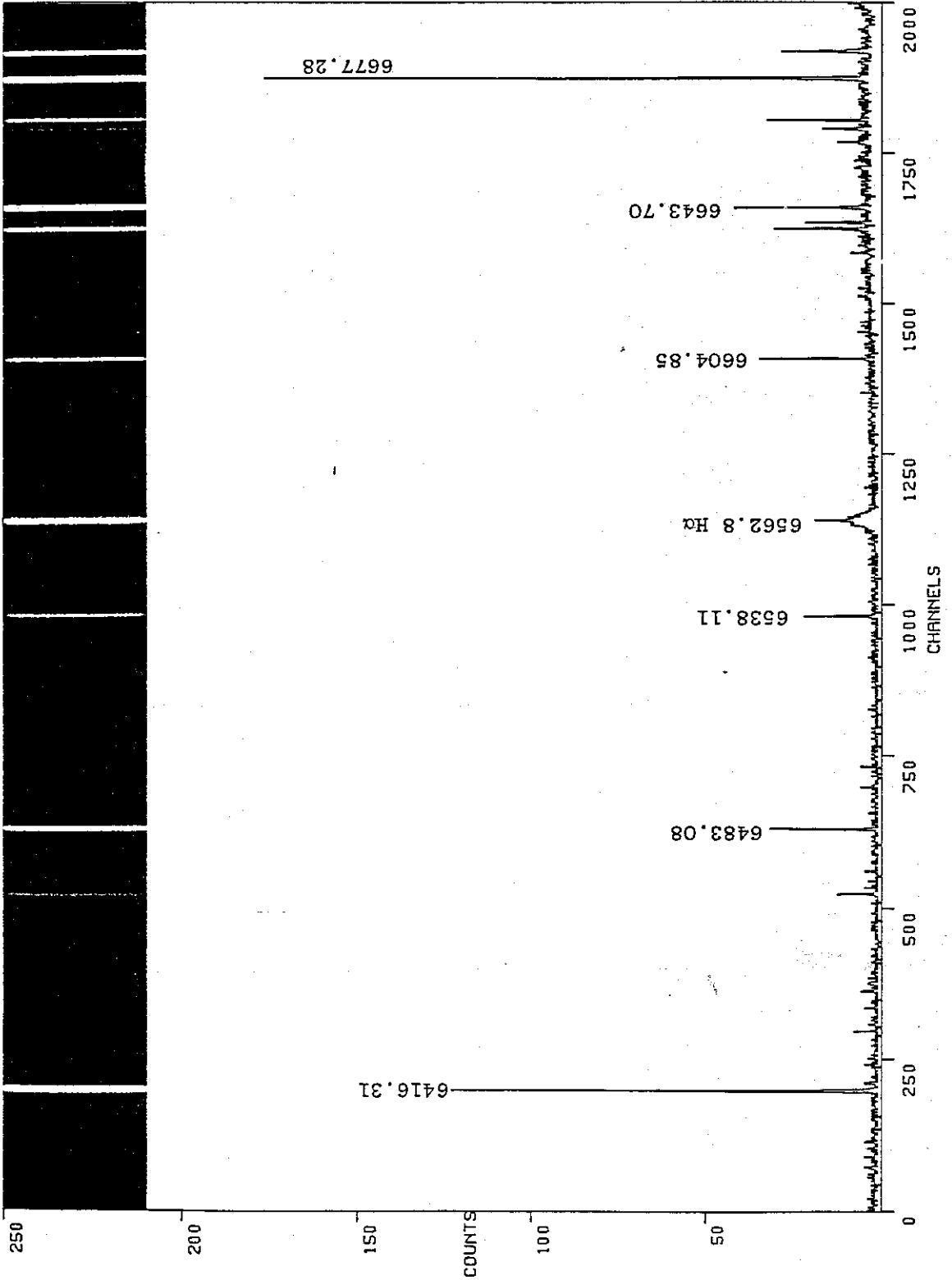
PROJ. SLIT 14.2 MICRONS

FILTERS 0.3D GG495

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 139.90

SLIT 50 MICRONS

..... 0.27 ARCSECS

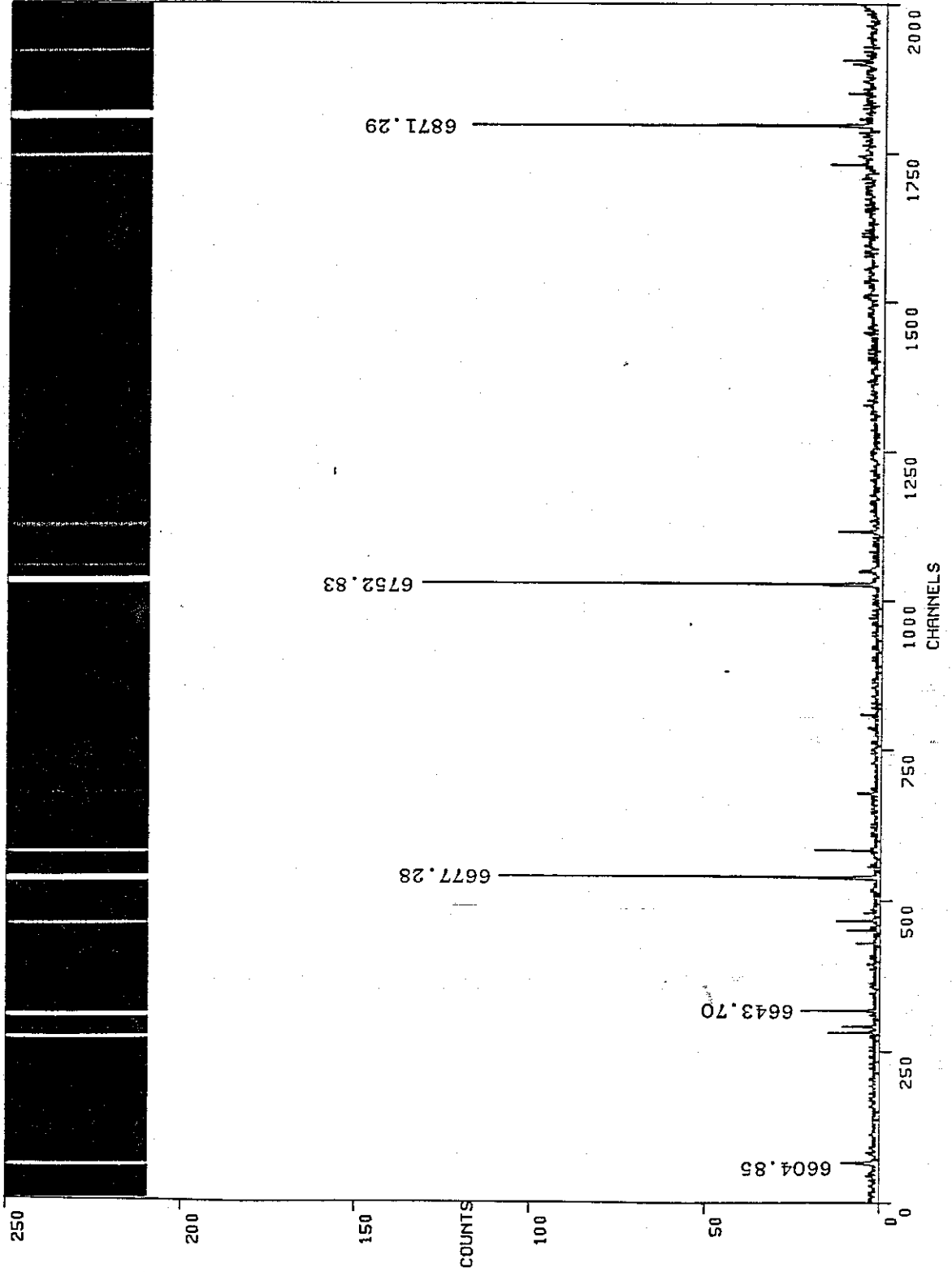
PROJ. SLIT 13.9 MICRONS

FILTERS 0.3D GG495

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 141.29

SLIT 50 MICRONS

..... 0.27 ARCSECS

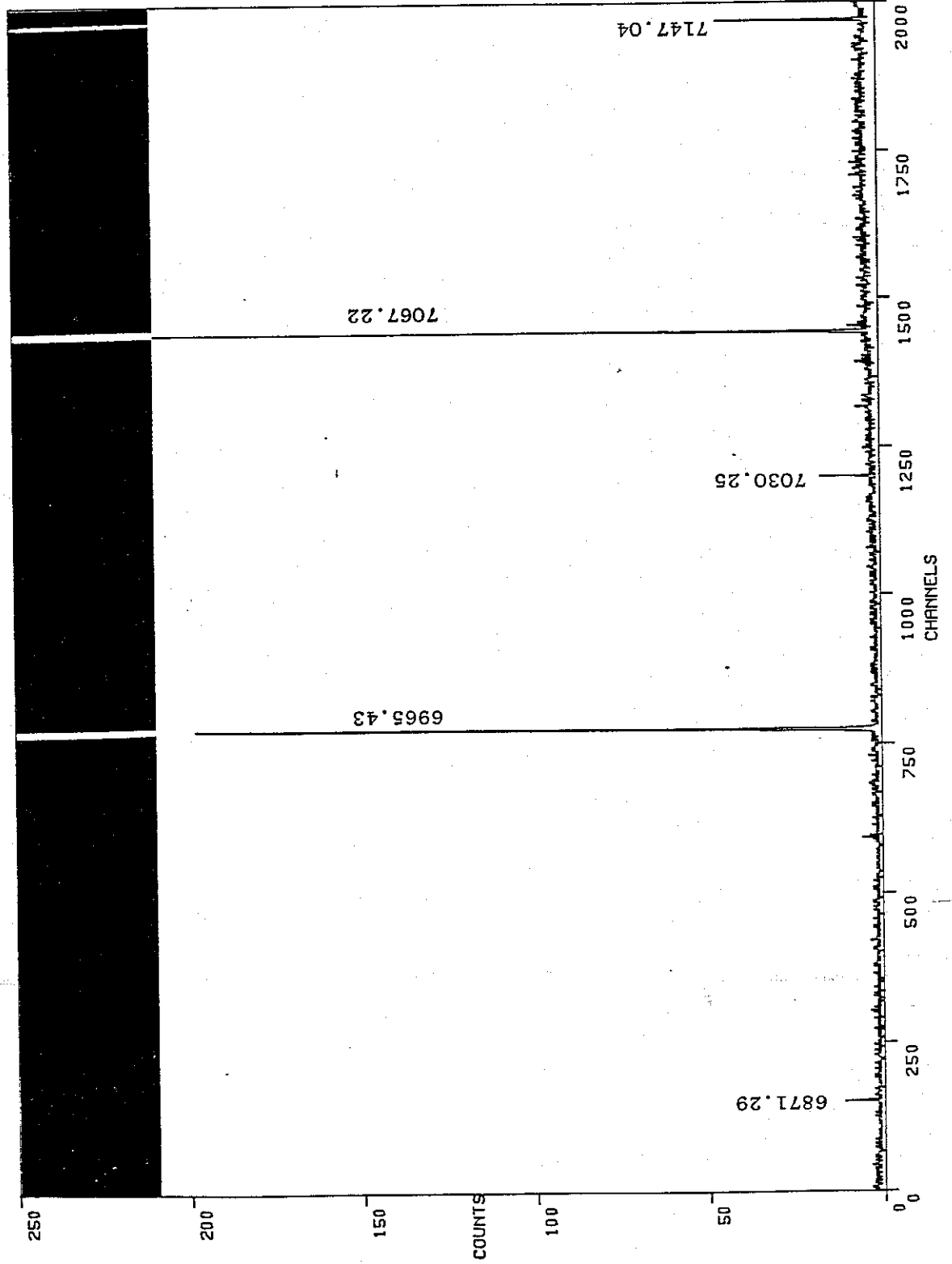
PROJ. SLIT 13.7 MICRONS

FILTERS 0.6D GG495

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 143.00

SLIT 50 MICRONS

..... 0.27 ARCSECS

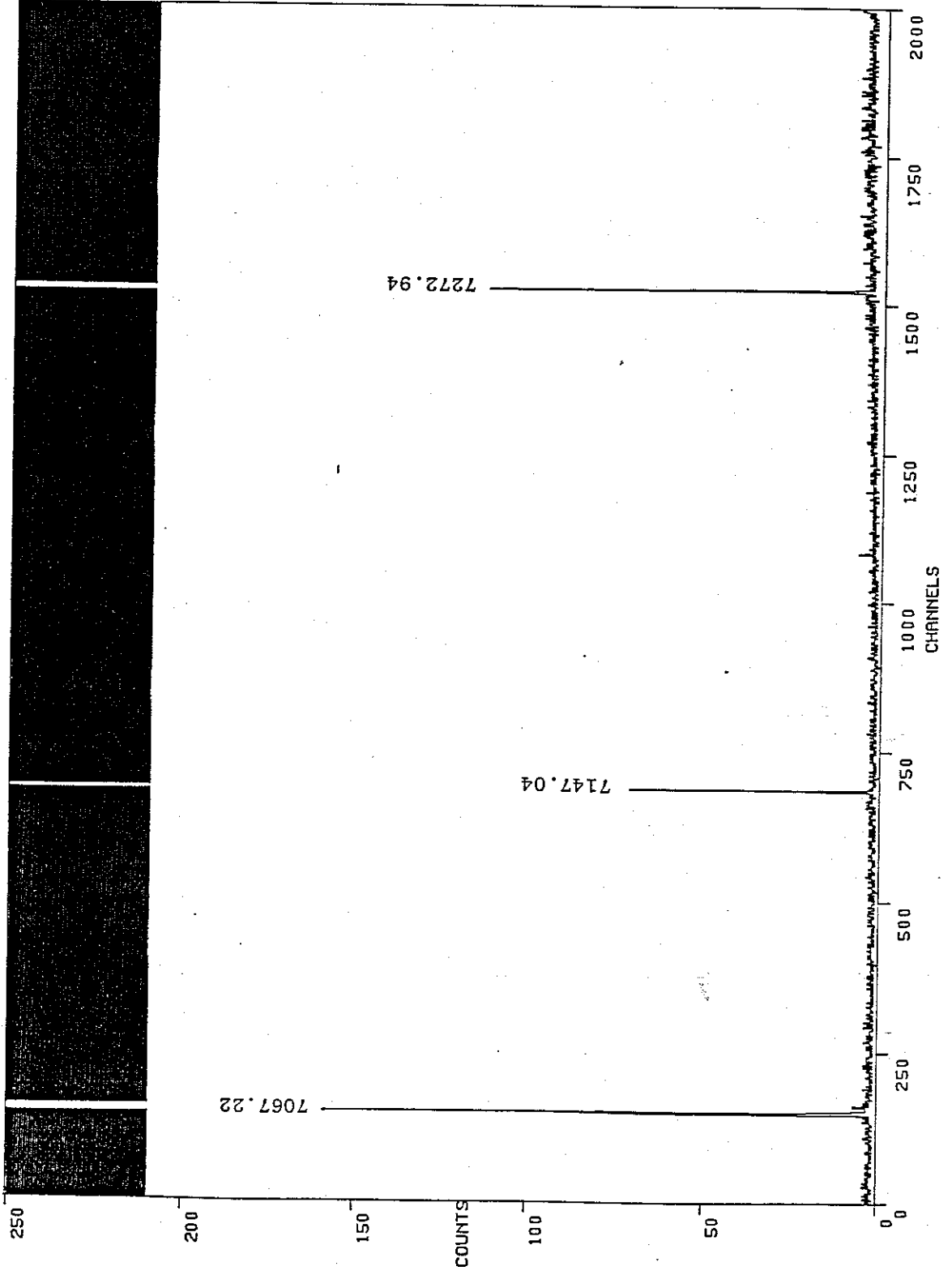
PROJ. SLIT 13.3 MICRONS

FILTERS 1.8D GG495

EXPOSURE 20CS

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H1800V

SETTING 144.36

SLIT 50 MICRONS

..... 0.27 ARCSEC

PROJ. SLIT 13.1 MICRONS

FILTERS 1.8D

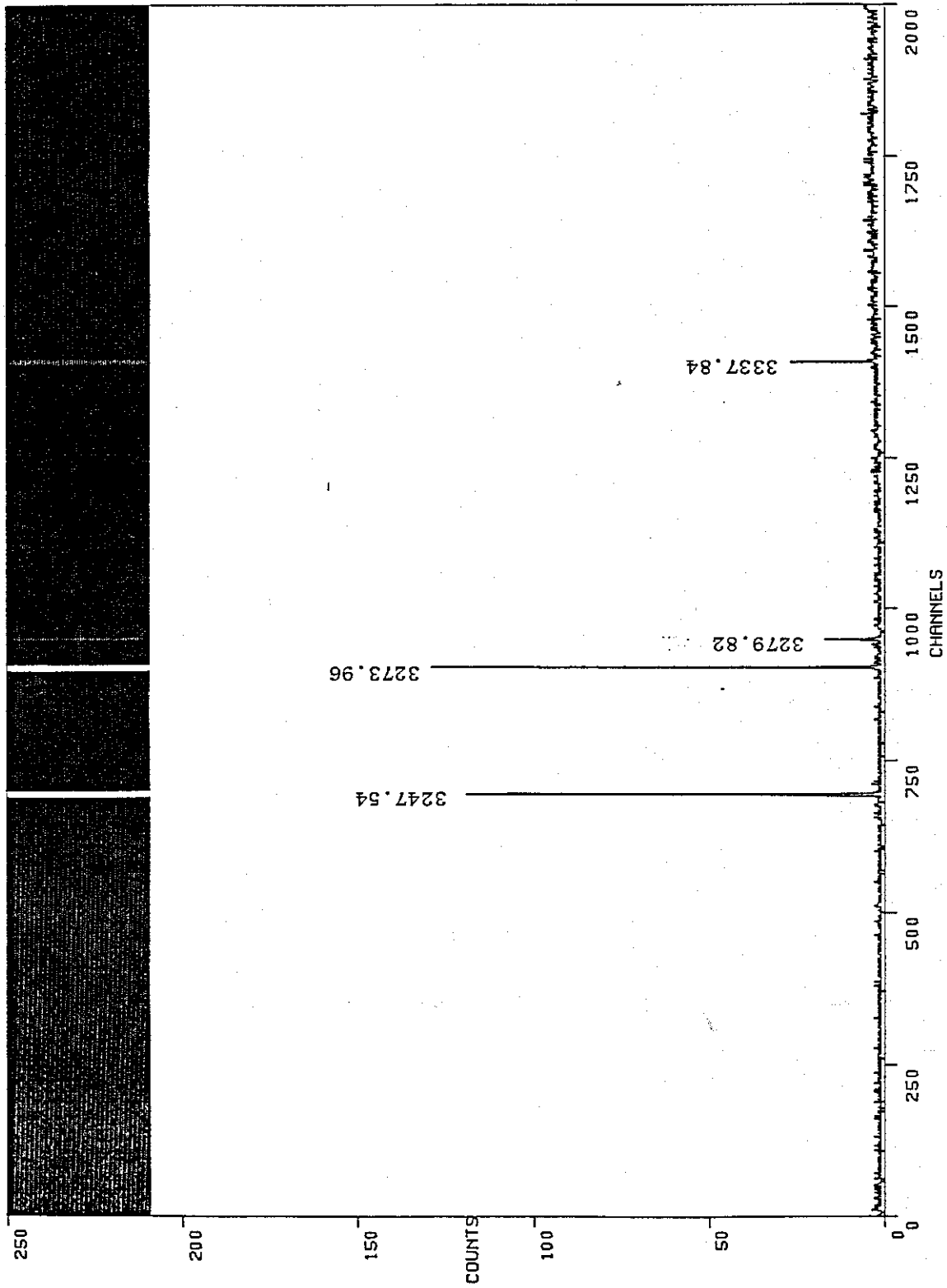
..... GG495

EXPOSURE 200S

SOURCE CUAR

N.B. CONSIDERABLE DOUBLE-COUNTING
HAS OCCURRED IN THE
7067.22 LINE

500 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 126.62

SLIT 50 MICRONS

..... 0.27 ARCSEC

PROJ. SLIT 16.1 MICRON

FILTERS NONE

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS

KEY

GRATING H2400B

SETTING 127.67

SLIT 50 MICRONS

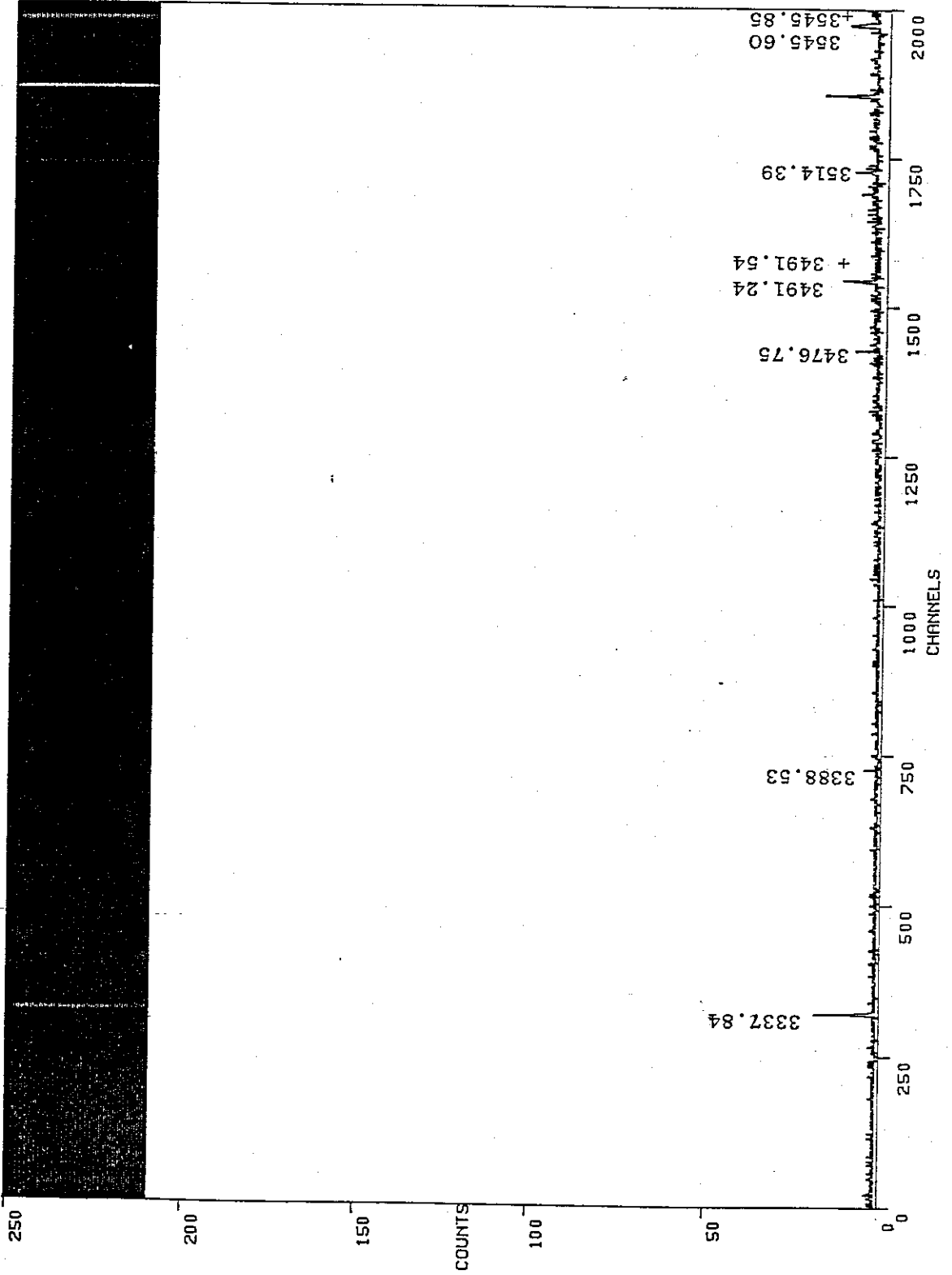
..... 0.27 ARCSEC

PROJ. SLIT 15.9 MICRONS

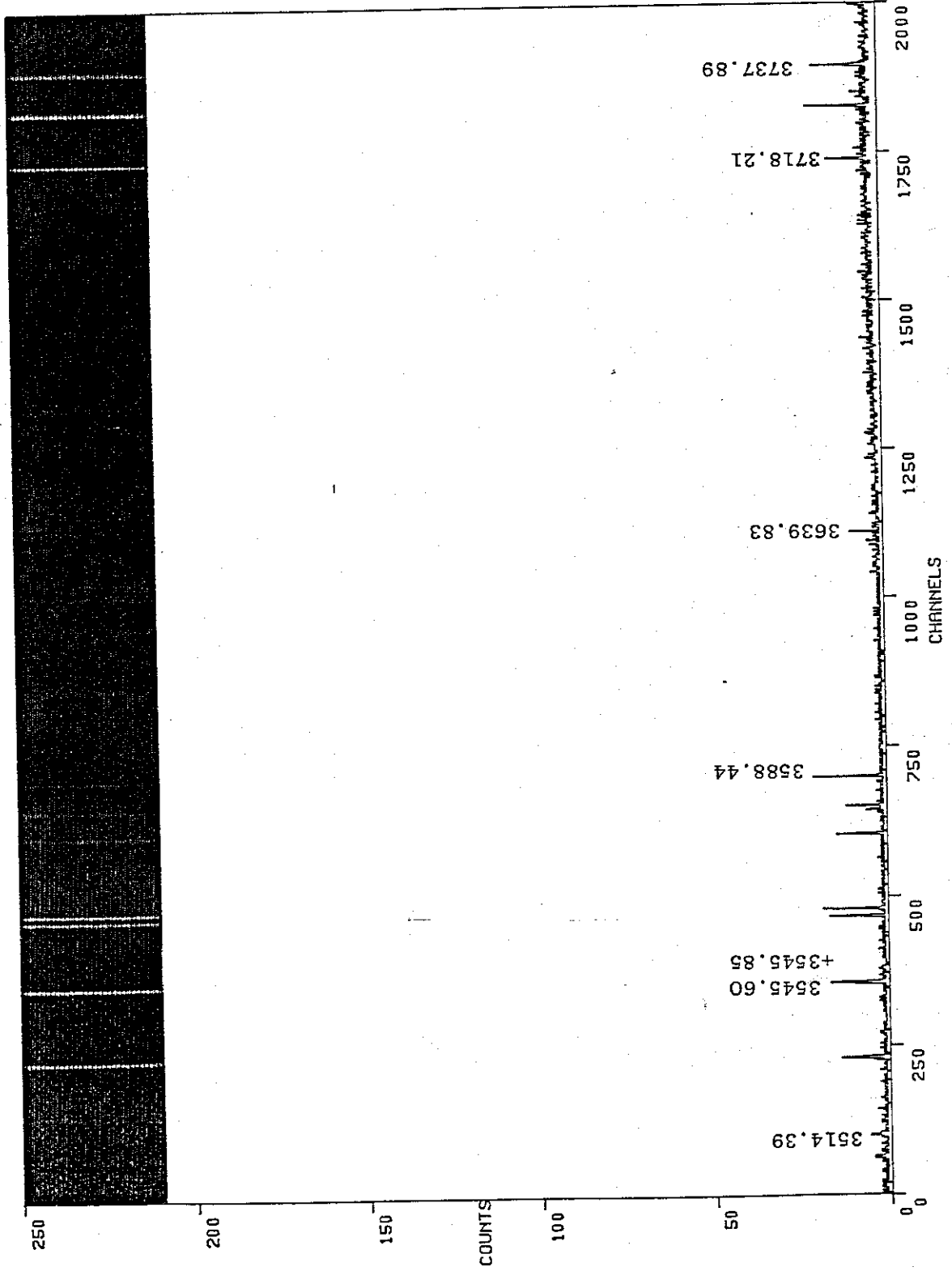
FILTERS NONE

EXPOSURE 200S

SOURCE CUAR



500 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 129.26

SLIT 50 MICRONS

..... 0.27 ARCSEC

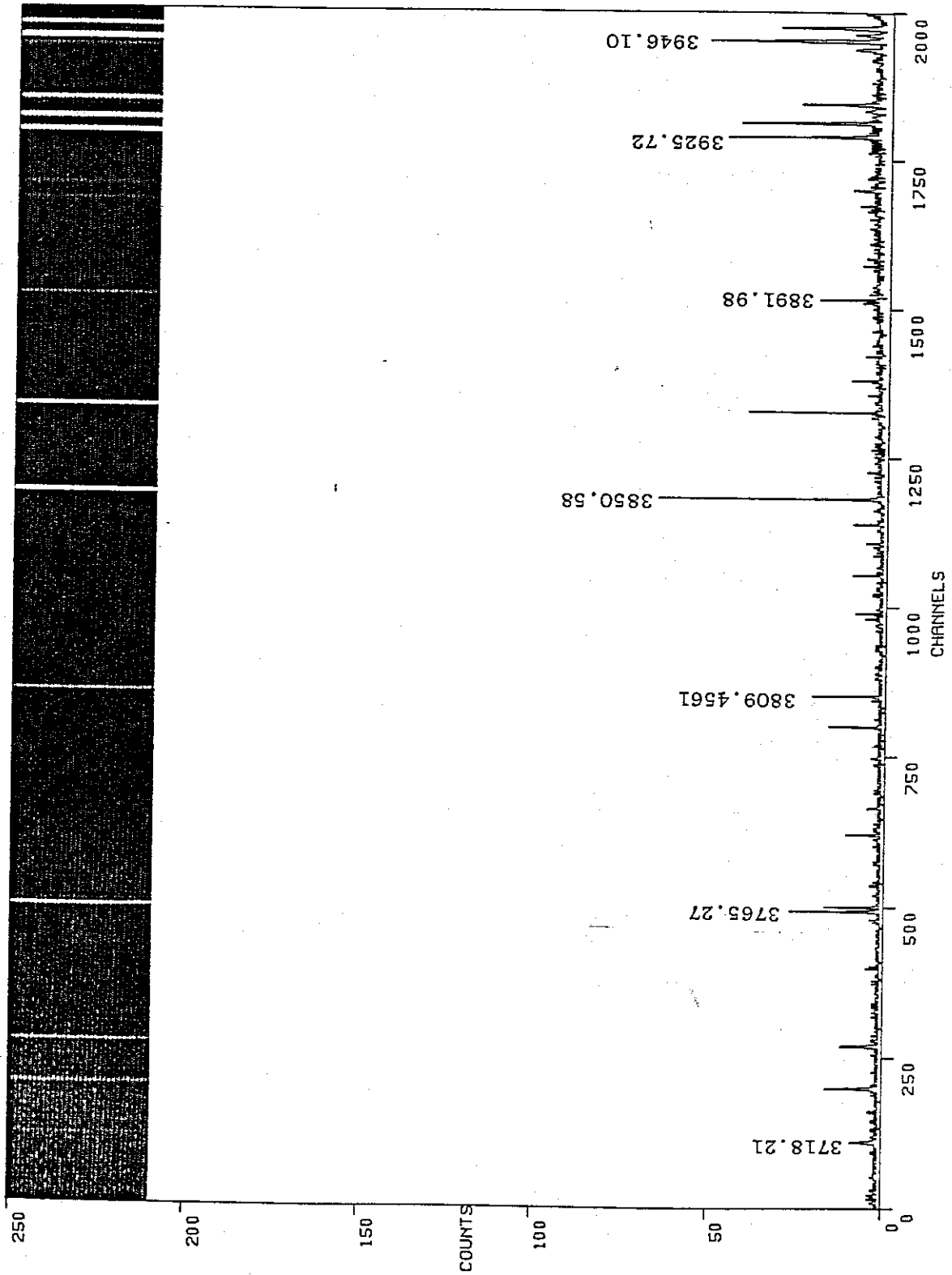
PROJ. SLIT 15.7 MICRONS

FILTERS NONE

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 130.84

SLIT 50 MICRONS

..... 0.27 ARCSEC

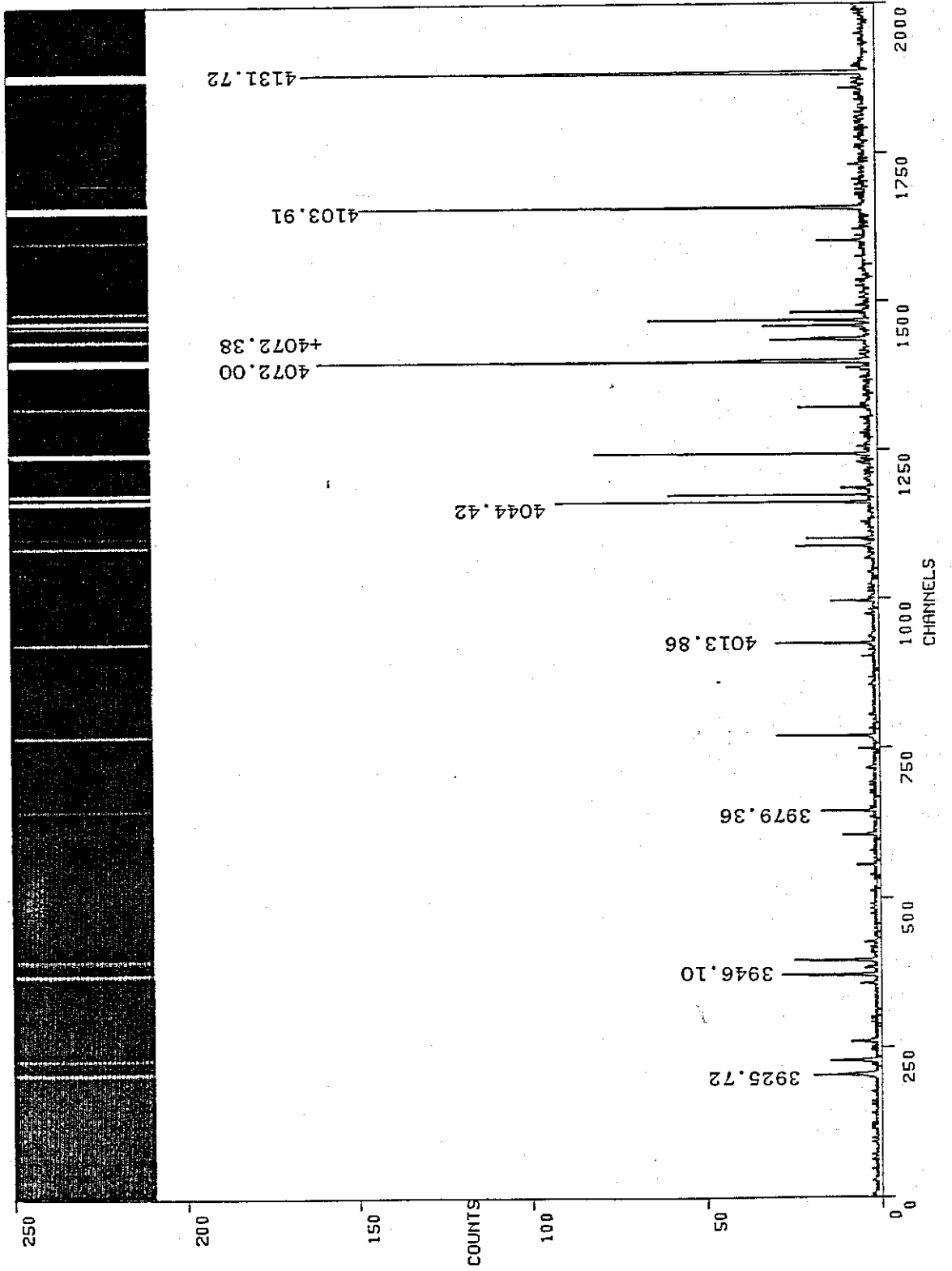
PROJ. SLIT 15.4 MICRONS

FILTERS NONE

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H2400H

SETTING 132.45

SLIT 50 MICRONS

..... 0.27 ARCSEC

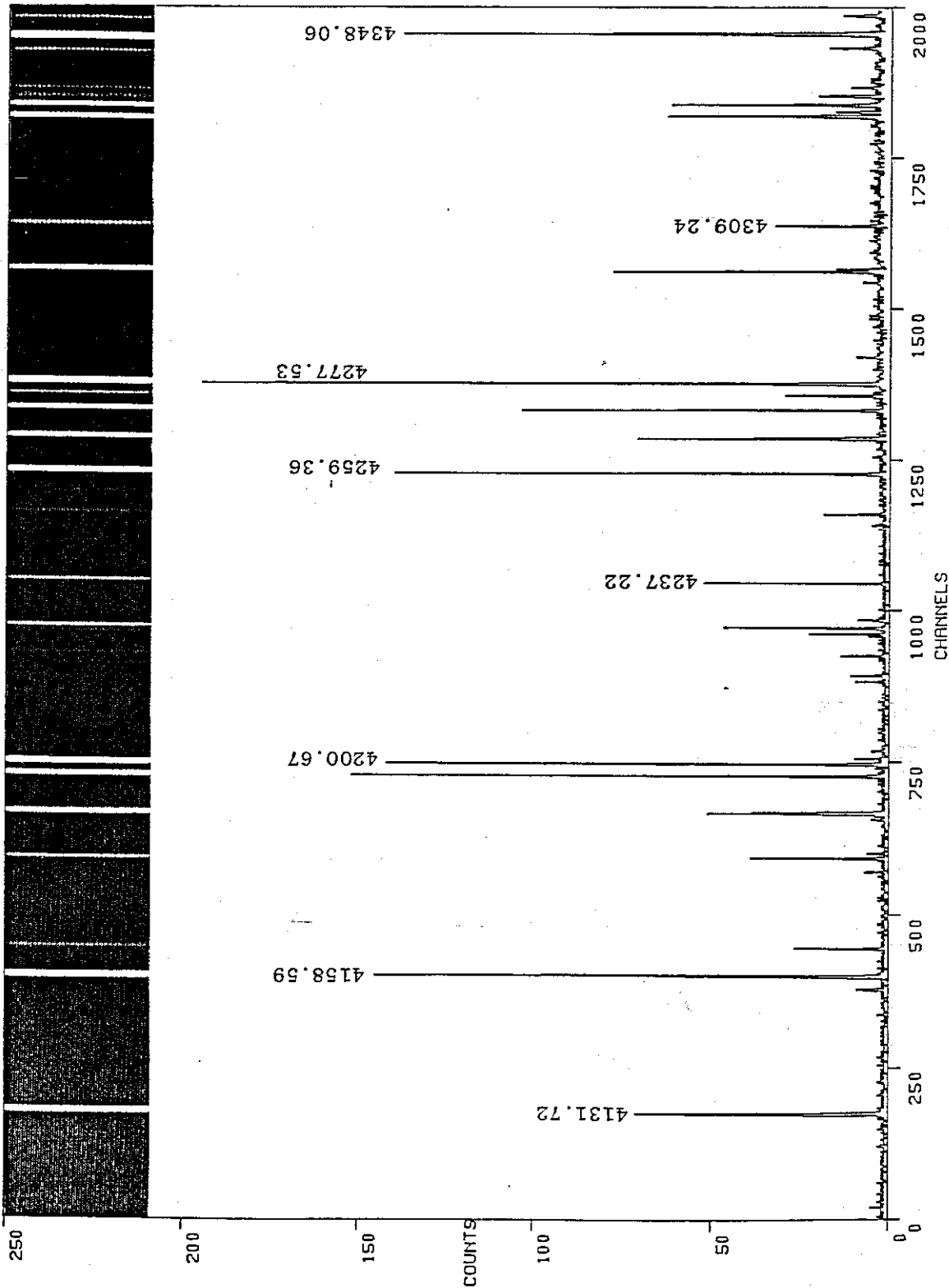
PROJ. SLIT 15.4 MICRON

FILTERS 0.3D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 134.14

SLIT 50 MICRONS

..... 0.27 ARCSEC

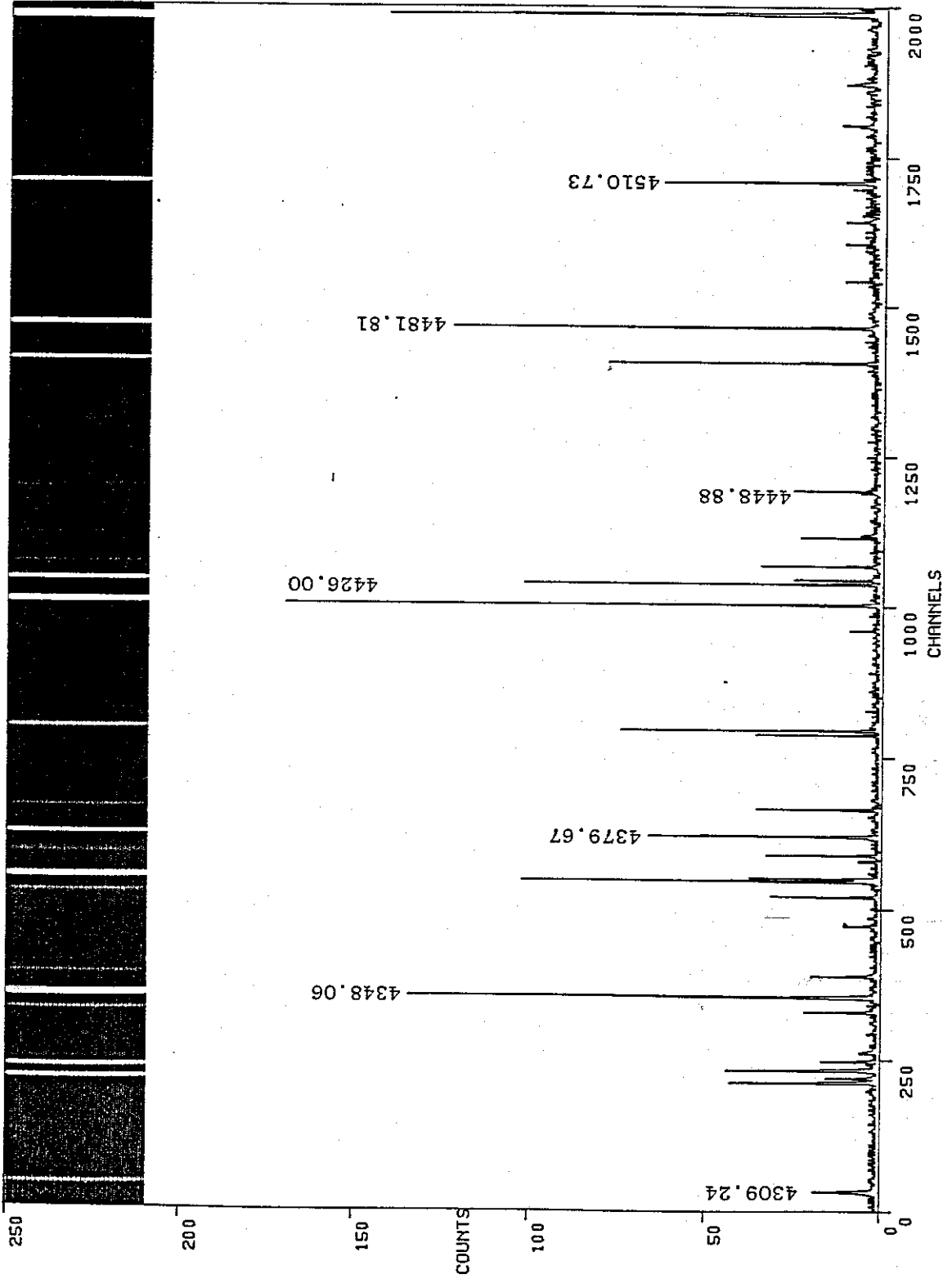
PROJ. SLIT 14.9 MICRONS

FILTERS 0.6D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 135.75

SLIT 50 MICRONS

..... 0.27 ARCSEC

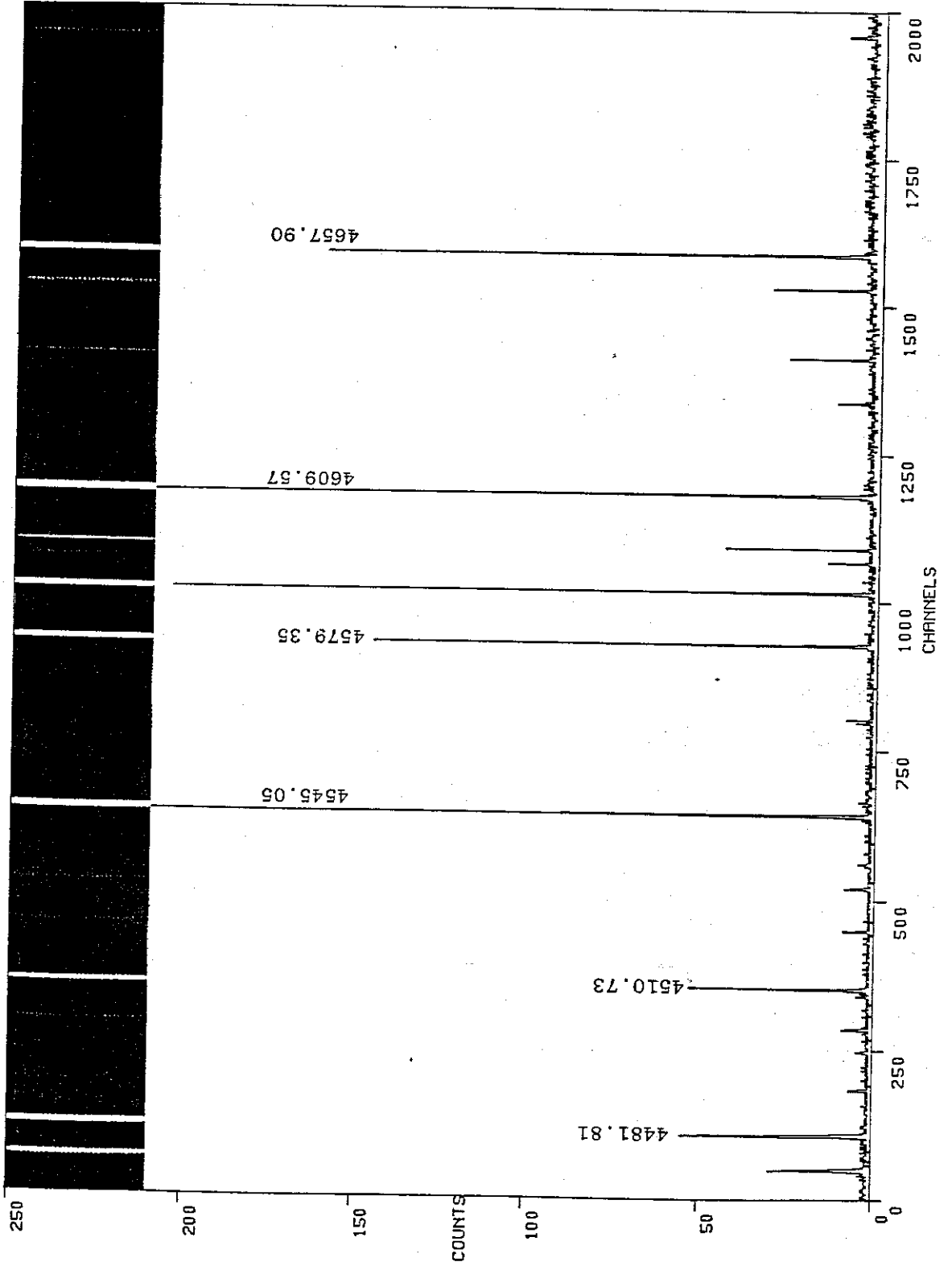
PROJ. SLIT 14.6 MICRONS

FILTERS 0.6D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 137.12

SLIT 50 MICRONS

..... 0.27 ARCSEC

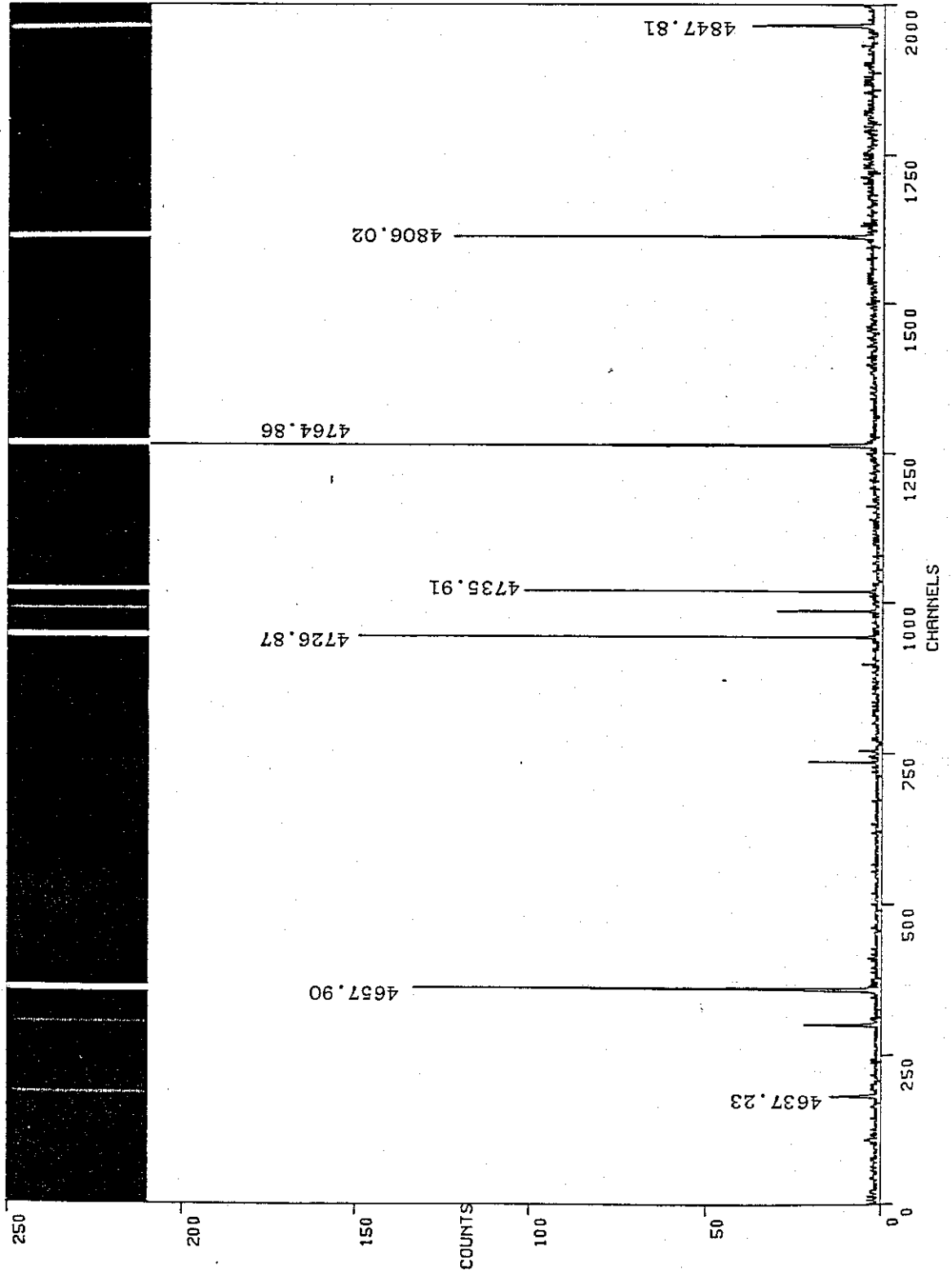
PROJ. SLIT 14.4 MICRONS

FILTERS 0.6D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H24001

SETTING 138.38

SLIT 50 MICRONS

..... 0.27 ARCSEC

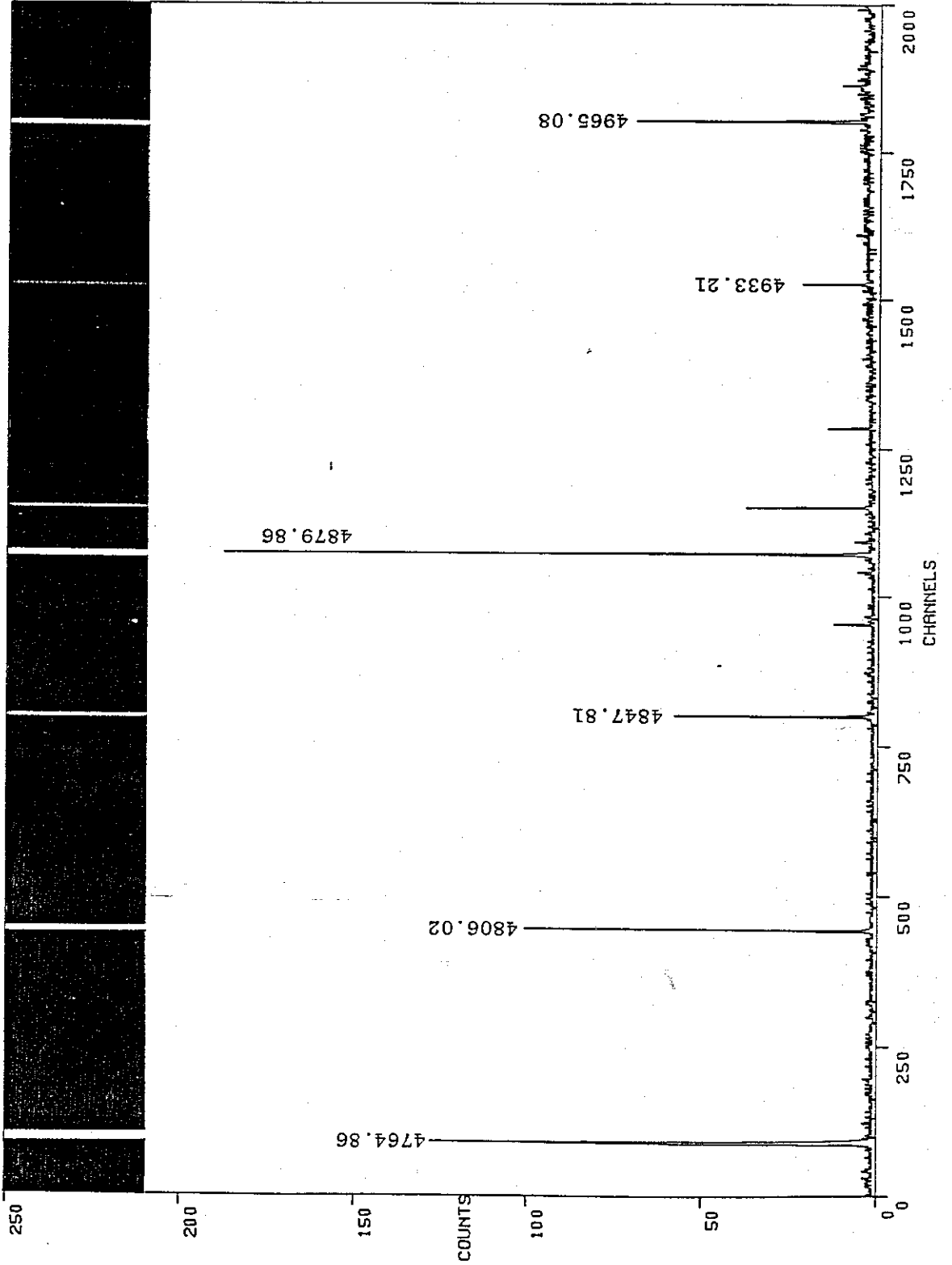
PROJ. SLIT 14.2 MICRONS

FILTERS 0.6D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 139.58

SLIT 50 MICRONS

..... 0.27 ARCSEC

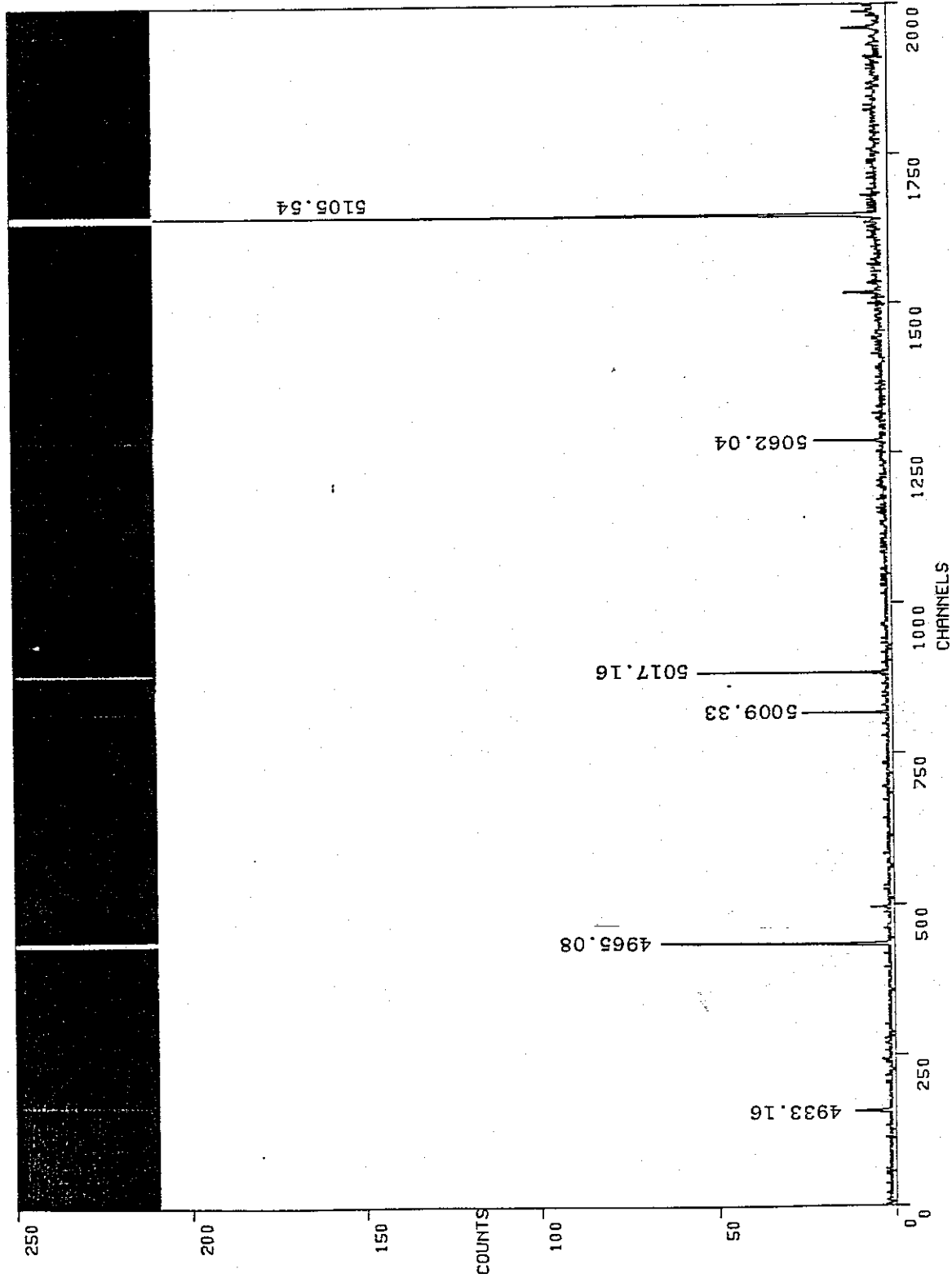
PROJ. SLIT 14.0 MICRONS

FILTERS 0.6D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 141.00

SLIT 50 MICRONS

..... 0.27 ARCSEC

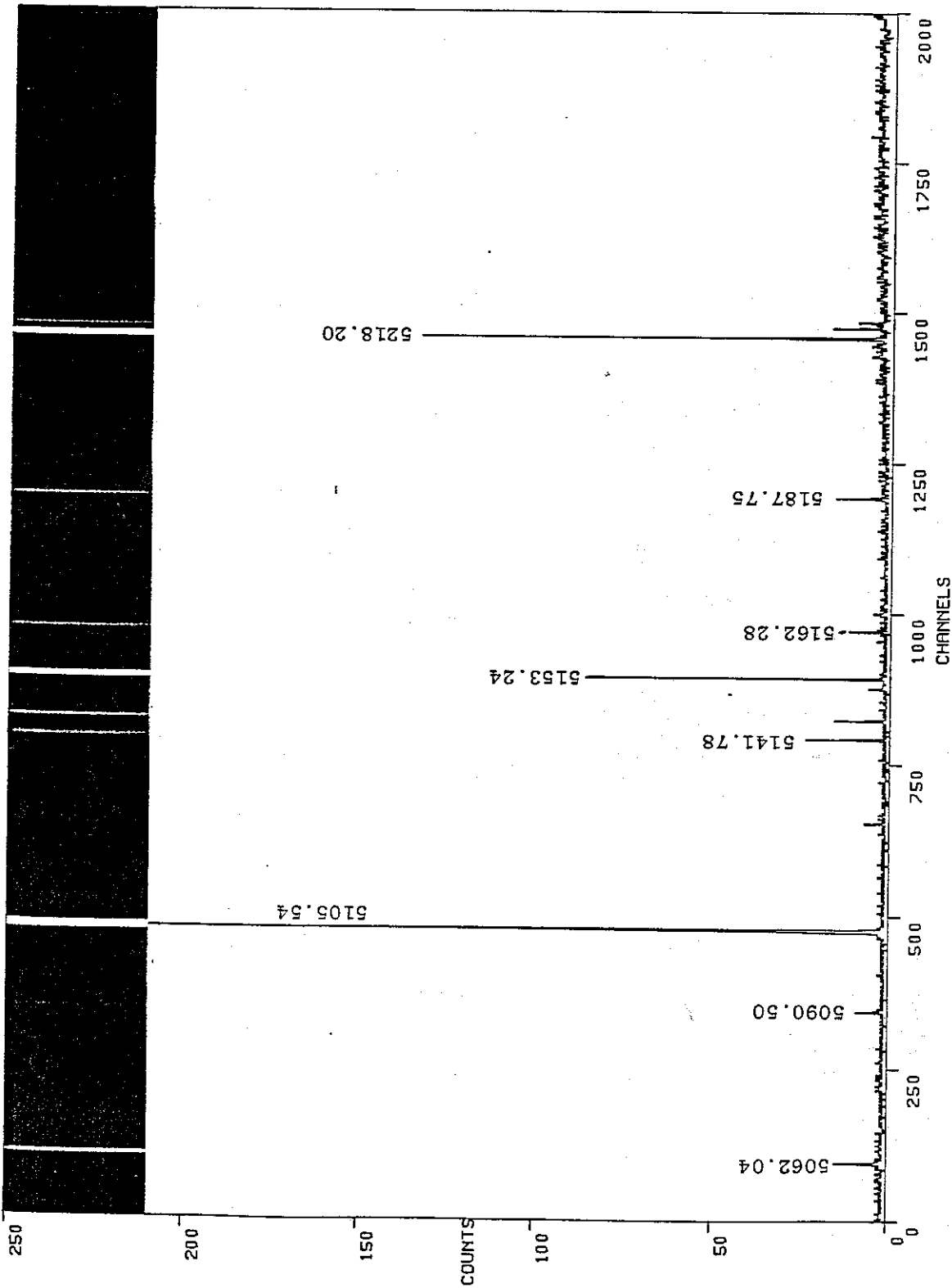
PROJ. SLIT 13.7 MICRONS

FILTERS 0.6D

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 142.22

SLIT 50 MICRONS

..... 0.27 ARCSEC

PROJ. SLIT 13.5 MICRONS

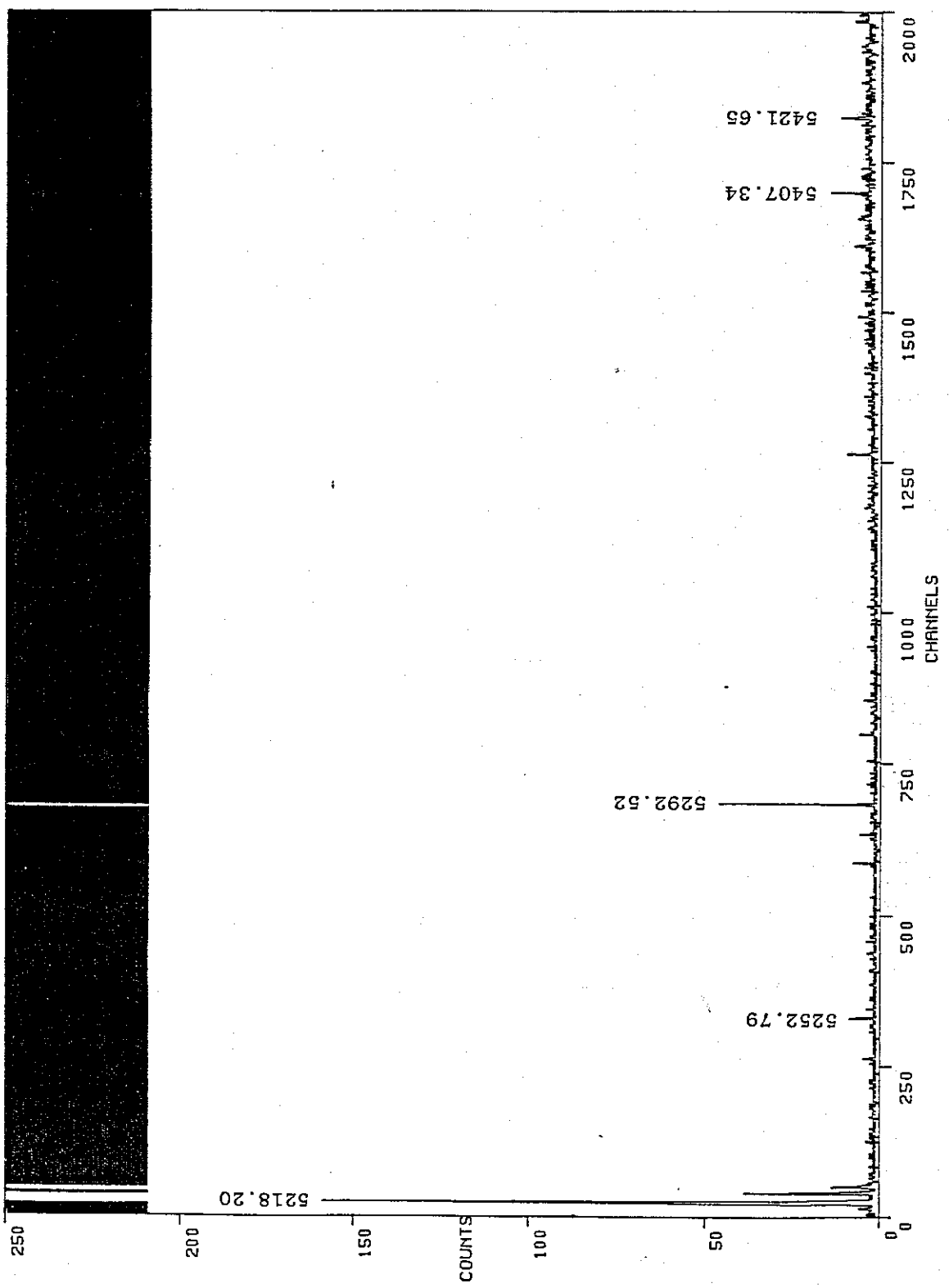
FILTERS 0.6D

..... GG395

EXPOSURE 200S

SOURCE CUAR

500 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 143.72

SLIT 50 MICRONS

..... 0.27 ARCSEC

PROJ. SLIT 13.2 MICRONS

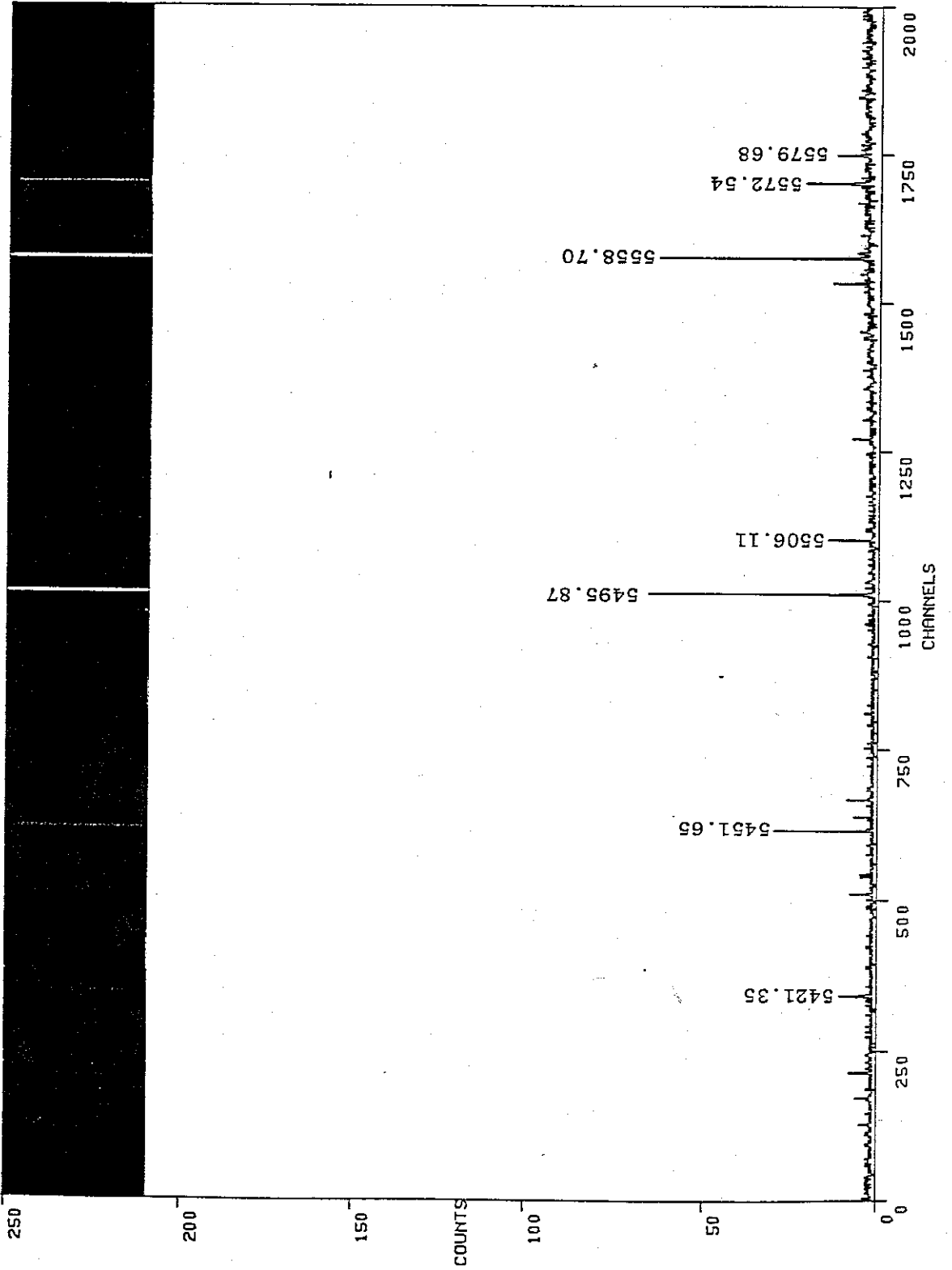
FILTERS GG395

EXPOSURE 200S

SOURCE CUAR

N.B. THERE IS CONSIDERABLE
DOUBLE-COUNTING IN THE
5218.20 LINE

500 CAMERA WITH IPCS



KEY

GRATING H2400B

SETTING 145.28

SLIT 50 MICRONS

..... 0.27 ARCSEC

PROJ. SLIT 12.9 MICRONS

FILTERS GG395

EXPOSURE 200S

SOURCE CUAR