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HAMBURGER STERNWARTE
WARNER AND SWASEY OBSERVATORY

LUMINOUS STARS
IN THE NORTHERN MILKY WAY

IVa

IDENTIFICATION CHARTS

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Hamburger Sternwarte

Warner and Swasey Observatory

LUMINOUS STARS IN THE NORTHERN MILKY WAY

IVa

IDENTIFICATION CHARTS

Details of illustrations in
this document may be better
studied on microfiche

C. B. STEPHENSON AND J. J. NASSAU

Warner and Swasey Observatory

Case Institute of Technology

Cleveland, Ohio

1963

INTRODUCTION

This publication furnishes identification charts for Volume IV of the catalogues resulting from the Hamburg-Warner and Swasey Observatory objective-prism survey for stars of high luminosity (1). The charts have been made from the original objective-prism survey plates having the faintest limiting magnitude for each field. The stars are numbered according to the catalogue designations of Volume IV (a 1950 declination zone designation followed by a running number for the zone, increasing with increasing right ascension for the equinox and equator of 1950). The 1950 epoch declination zone boundaries are indicated on the charts; these may have a positional accuracy of only a few minutes of arc, but always correctly define the zone to which any catalogue star belongs. Each star is indicated by a dot at the red (northern) end of the spectrum. Three Wolf-Rayet stars, discovered from the $H\alpha$ plates (cf. ref. 2), are shown poorly or not at all on these charts; these stars are discussed further in the Notes to the Charts. The charts are numbered according to the scheme indicated on the last page of the volume; these numbers are given on the upper right-hand corner of each chart page. The charts are $5\overset{\circ}{.}2$ in diameter and are oriented with north at the top and east to the left.

The present survey covered twice the range in the galactic latitude of any previous survey of the series, comprising an area upwards of one thousand square degrees. The vast majority of the stars of the L. S. IV (Luminous Stars IV) catalogue, however, occupy no more than a third of the survey area. The stars at higher latitudes occur in sparser fields and in many instances are BD stars. For these reasons, and in view of the precision (usually 1-3 seconds of arc) of our published equatorial coordinates (1), we have decided to omit charts for the sparsest (generally higher latitude) fields. The stars thus included upon the present charts comprise 92% of the stars of the catalogue, while the omission of the remaining 8% for which charts are unnecessary reduces the number of charts that must be published by nearly half.

In some crowded areas difficulty may be encountered in identifying stars on the charts; notes concerning stars for which such difficulty may exist are appended below. In these notes the designation "close" pertains to the chart scale and generally means a distance less than a minute of arc.

We are indebted to Mr. Darrell MacConnell and Mr. Chris Terrill for the assistance they have provided us in preparing these charts. Publication of this material was supported by the United States Office of Naval Research.

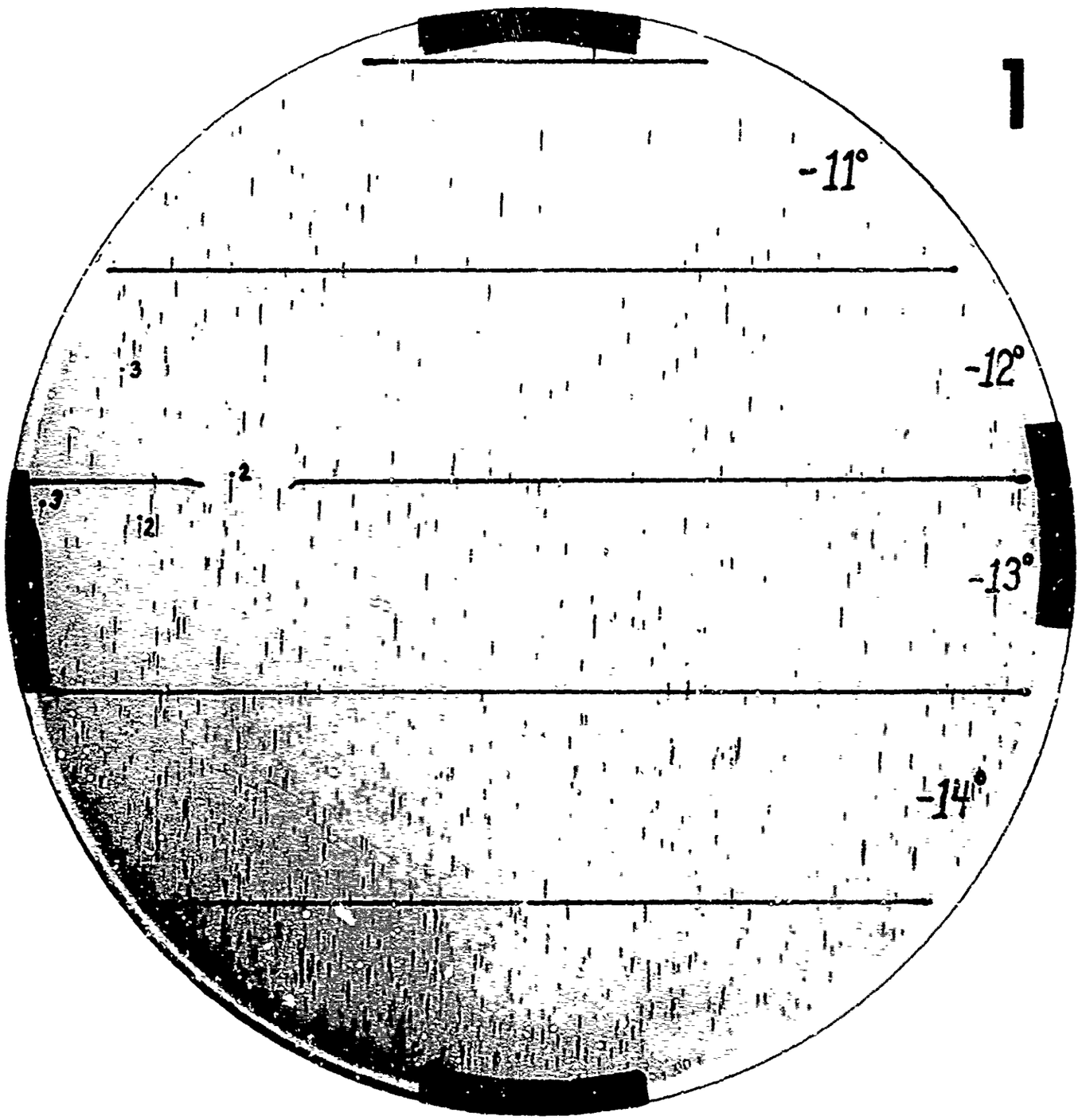
REFERENCES

(1) J. J. Nassau and C. B. Stephenson, Luminous Stars in the Northern Milky Way. IV. (Hamburg-Bergedorf: Hamburger Sternwarte and Warner and Swasey Observatory, 1963).

(2) J. J. Nassau and C. B. Stephenson, Ap. J., 132, 130, 1960.

NOTES TO THE CHARTS

Catalogue Designation	Remarks
$-15^{\circ}35$, 36	Close pair.
$-14^{\circ}71$	Easternmost and brighter member of close pair.
$-14^{\circ}102$	Westernmost and brighter member of close pair.
$-13^{\circ}4$	Easternmost and brighter member of close pair.
$-13^{\circ}39$	Easternmost member of close pair.
$-13^{\circ}60$	Northwestern and brighter member of close pair.
$-13^{\circ}72$	Southeastern member of close pair.
$-12^{\circ}24$, 25	Close pair; the faint star is ~5" in position angle 90° from the bright star.
$-12^{\circ}36$, 37	Close pair.
$-12^{\circ}59$	Wolf-Rayet discovered on an Hα plate. Very weakly visible on the chart.
$-10^{\circ}13$	Easternmost and brighter member of a close pair.
$-8^{\circ}26$	A considerably fainter star lies nearby to the northwest.
$-6^{\circ}7$	Wolf-Rayet discovered on an Hα plate. HeII λ4686, in emission, may be weakly visible on the chart.
$+0^{\circ}5$	Wolf-Rayet discovered on an Hα plate. Star invisible on the chart; a dot has been placed where the red (northern) end of the spectrum would fall on the chart.
$+7^{\circ}8$	Southwestern and fainter member of a close pair of stars having nearly equal right ascension.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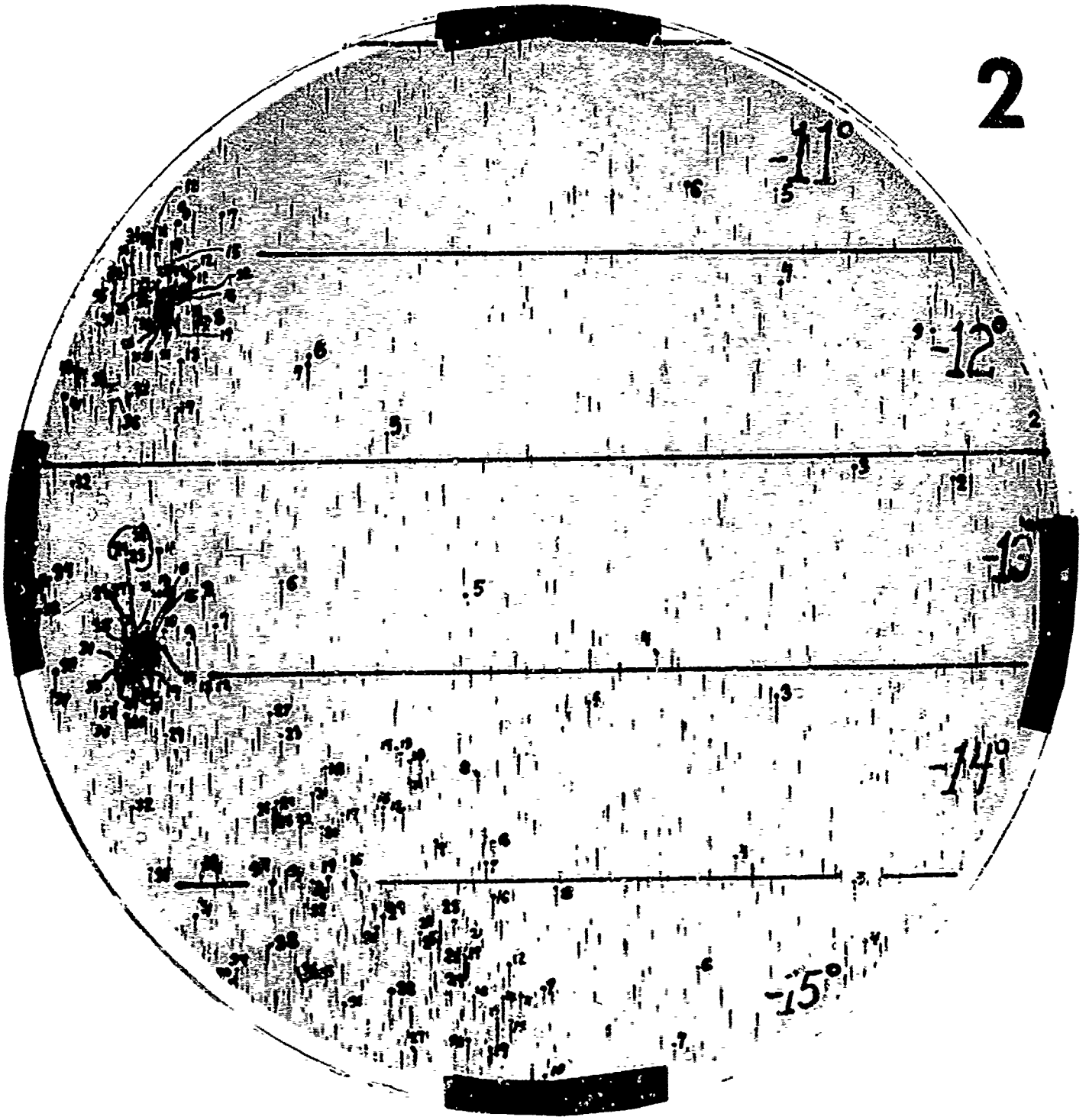
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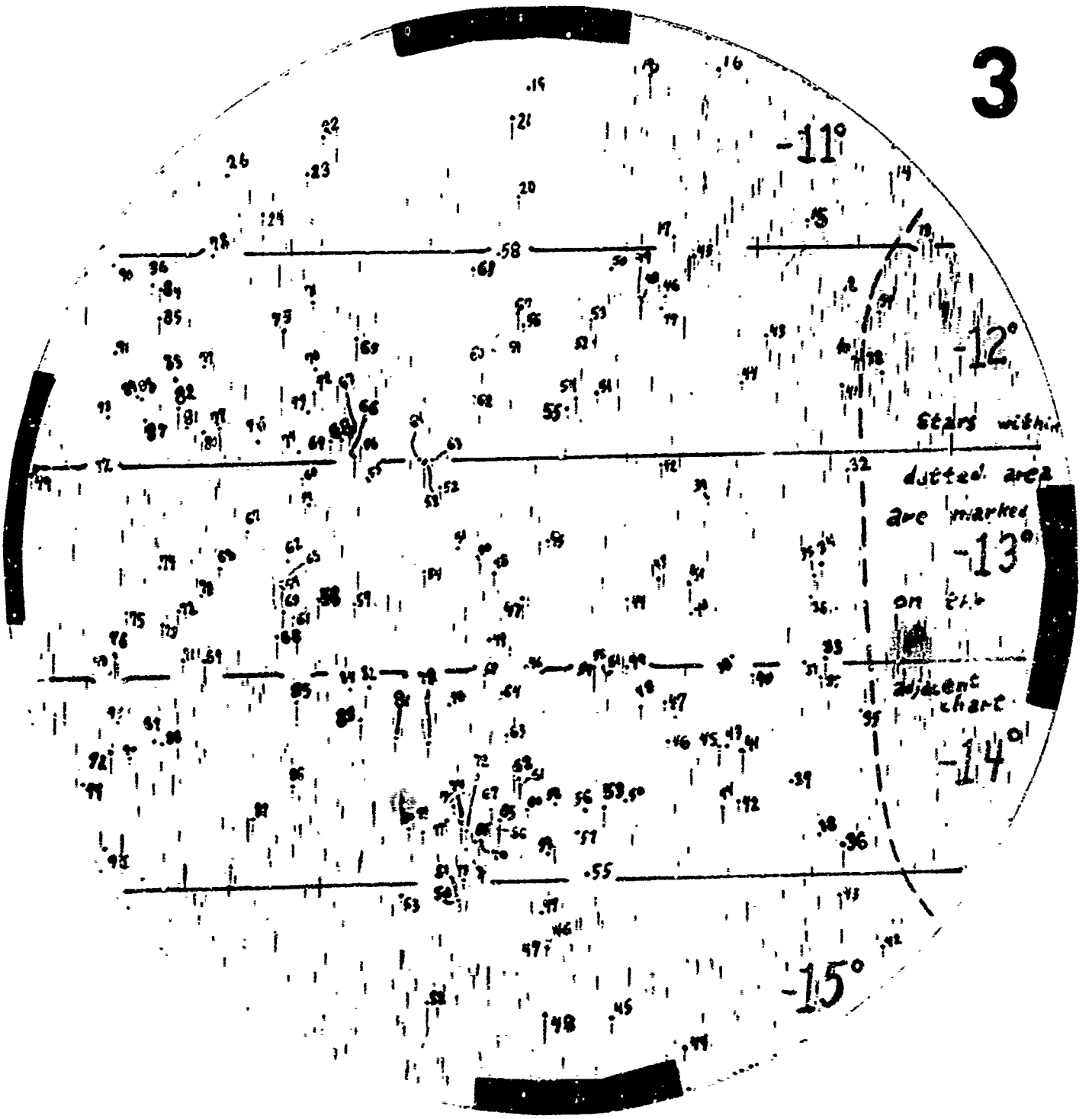
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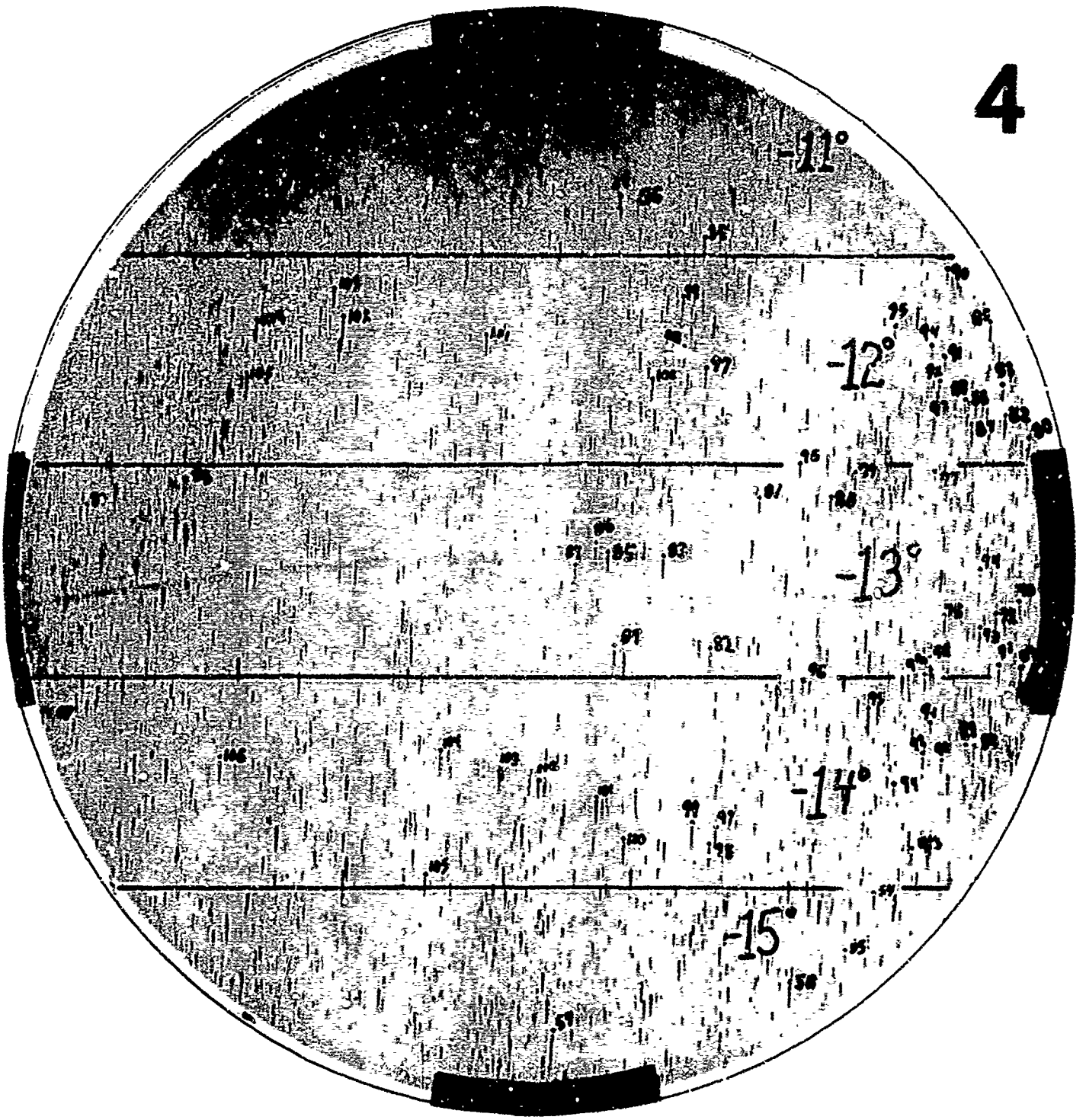
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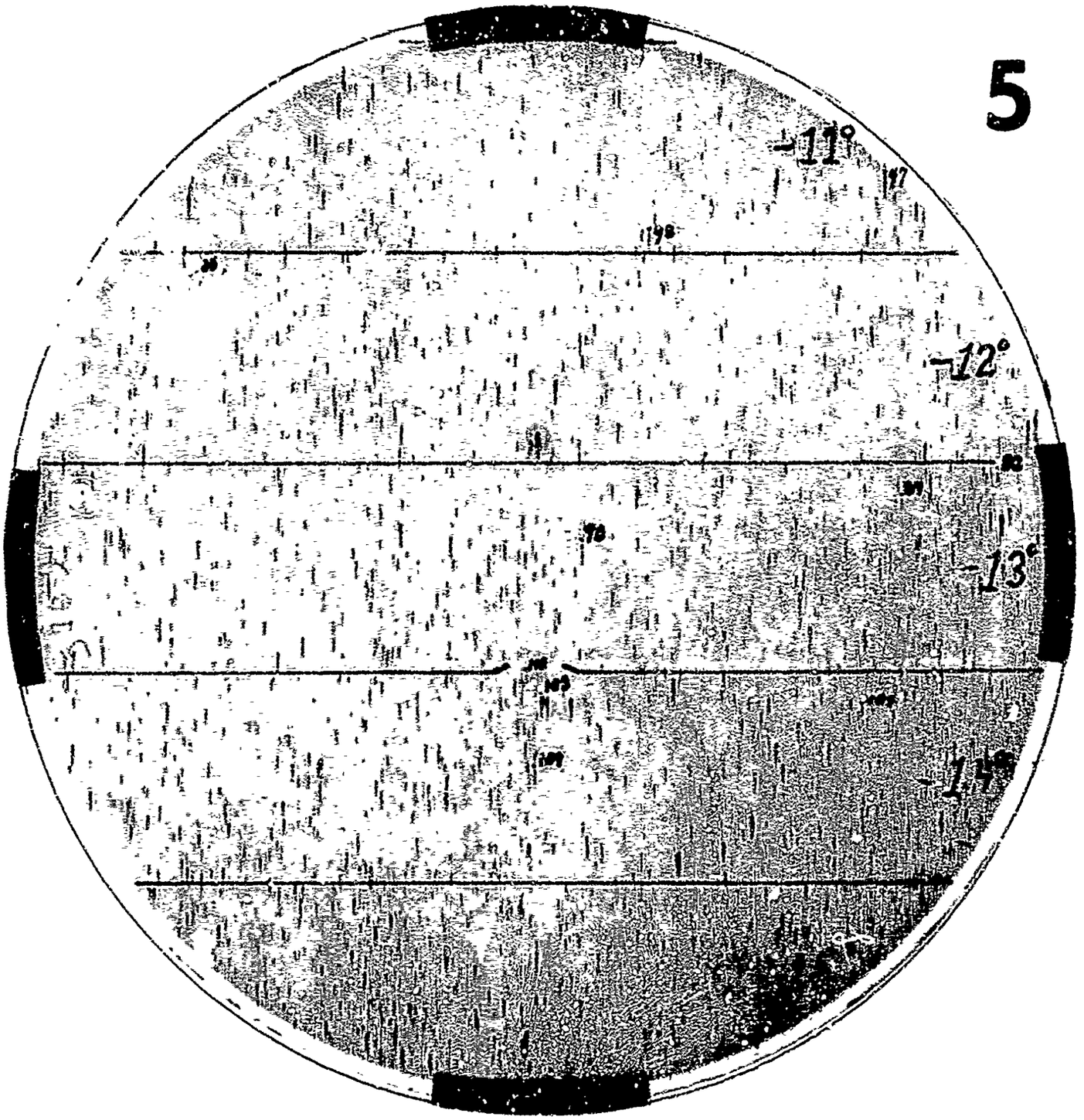
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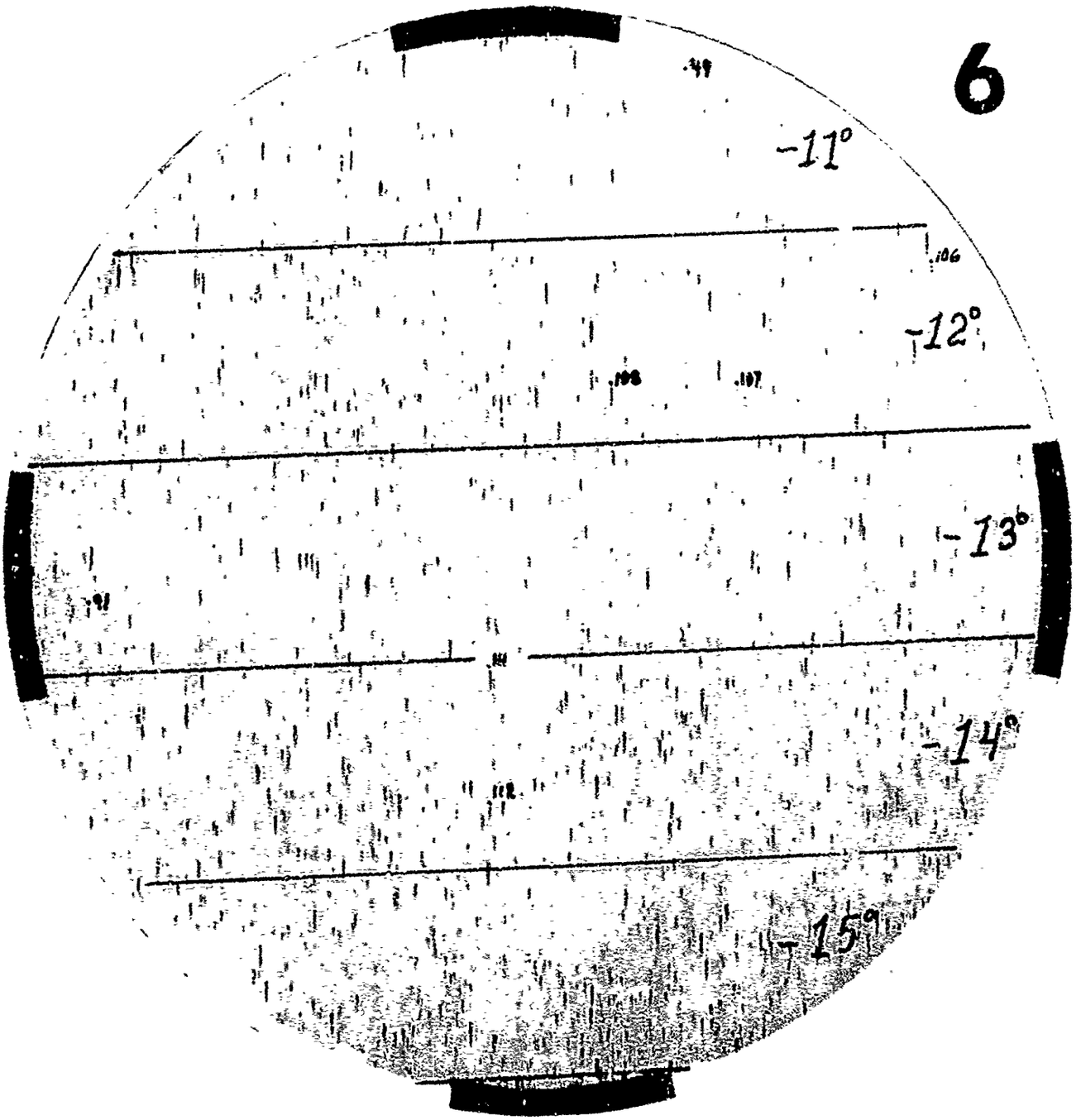
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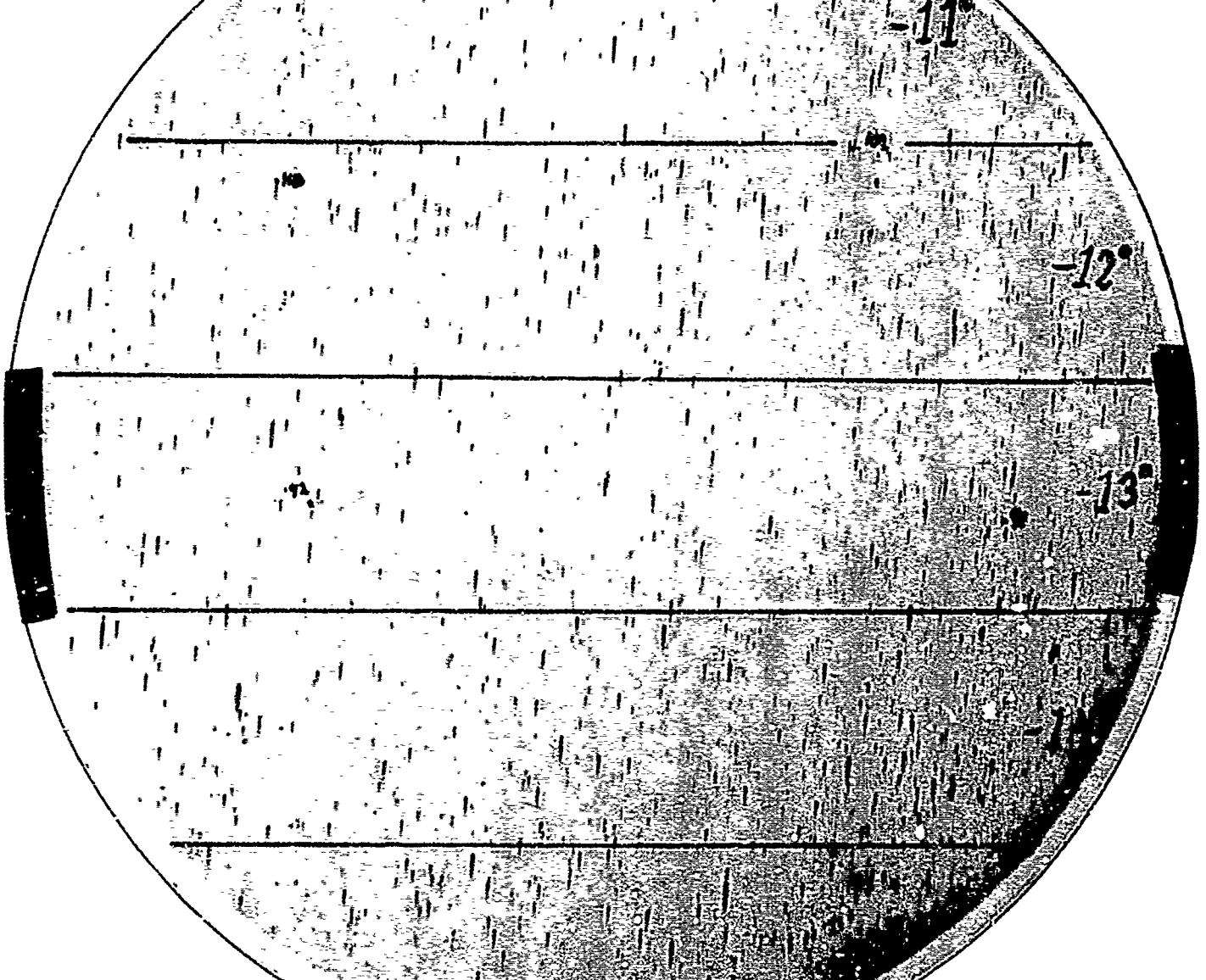
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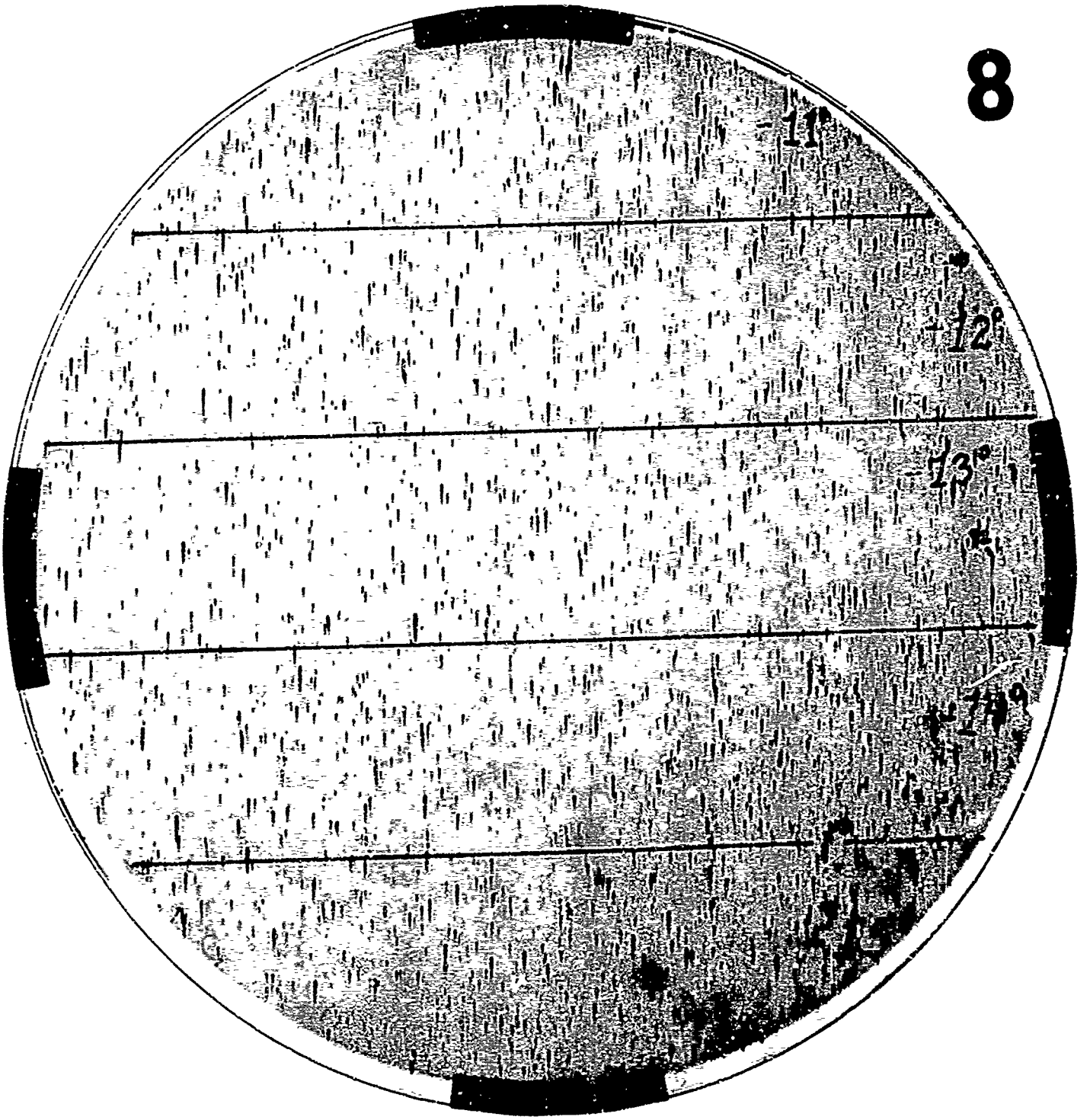
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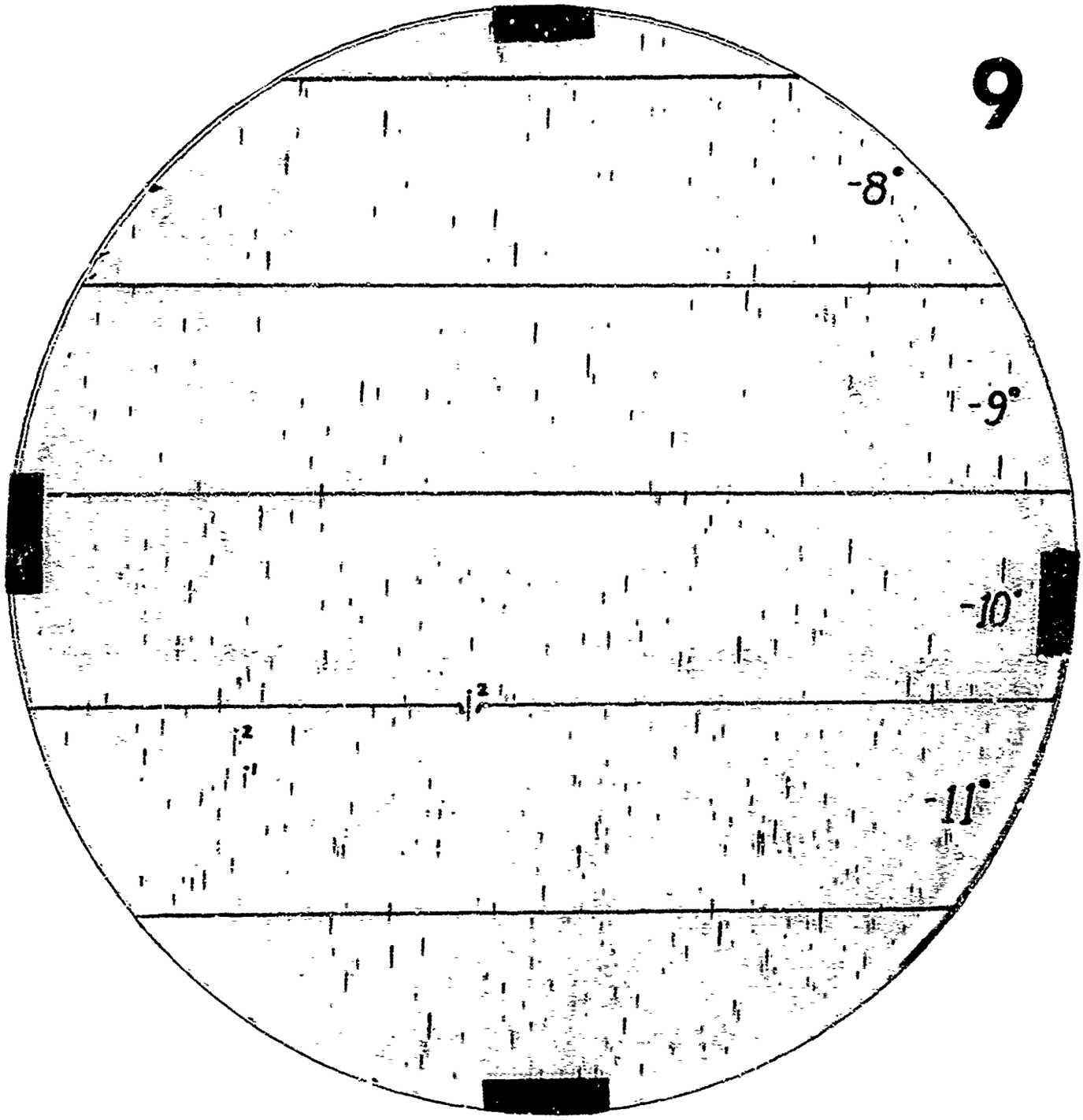
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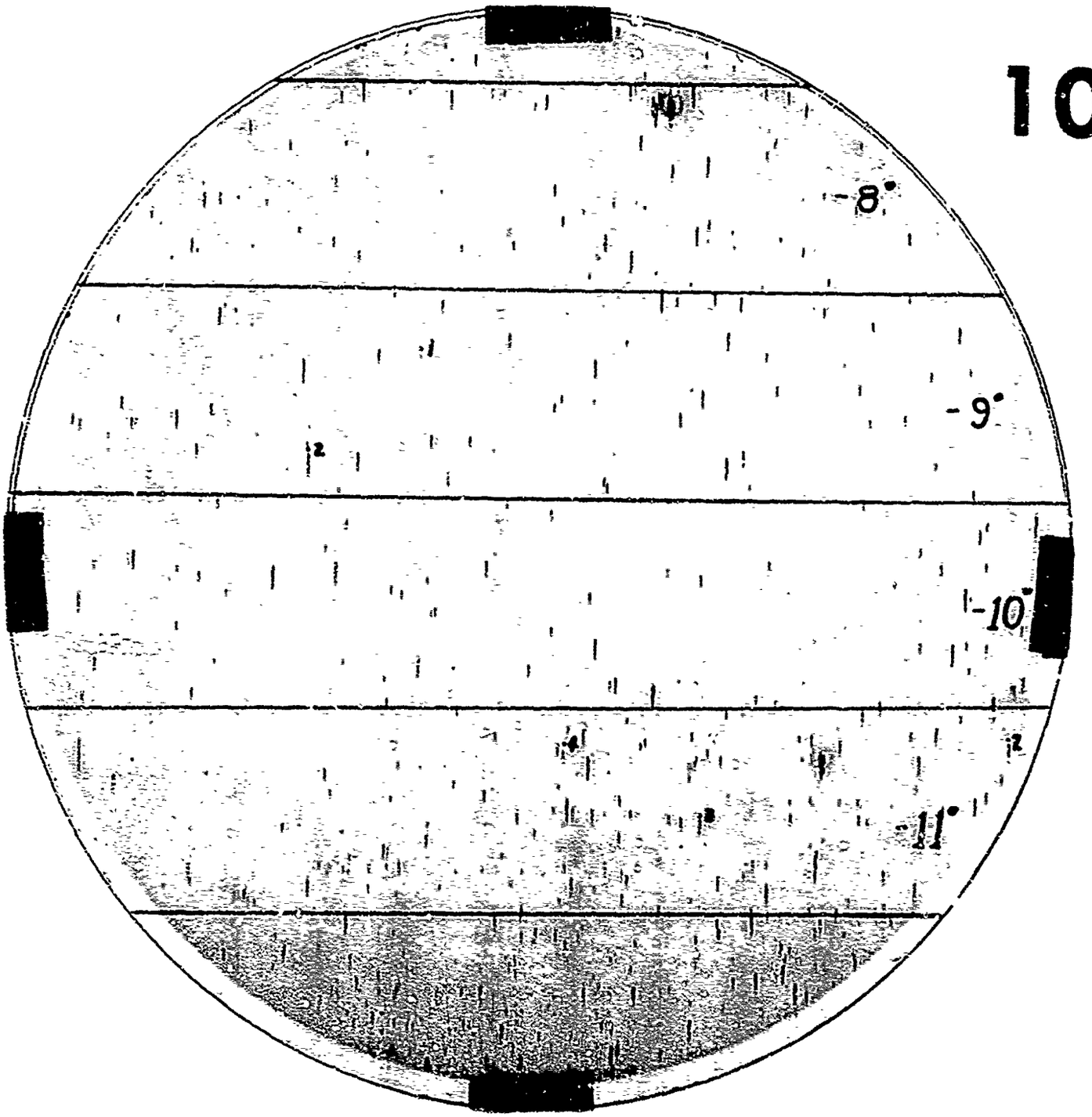
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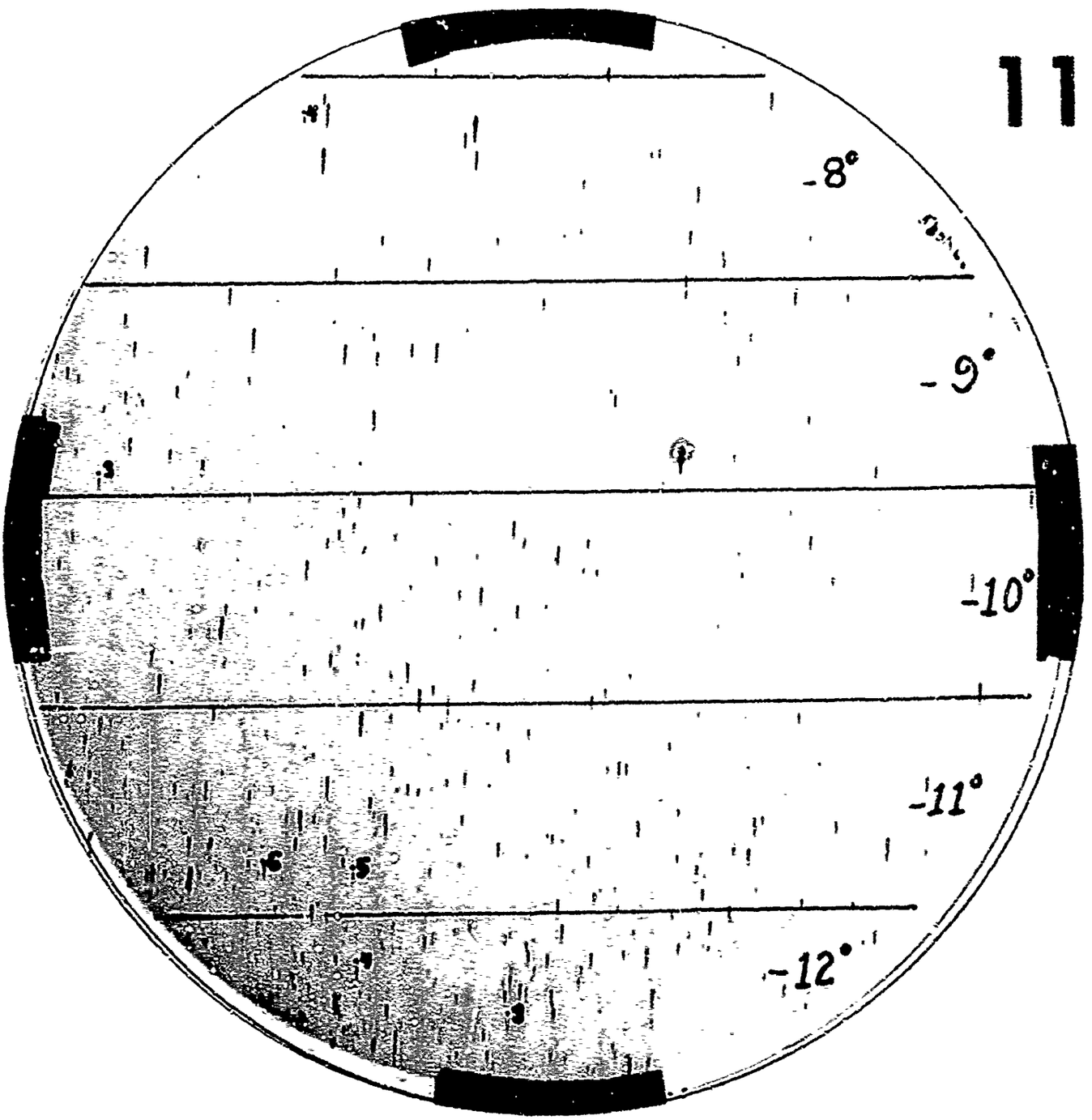
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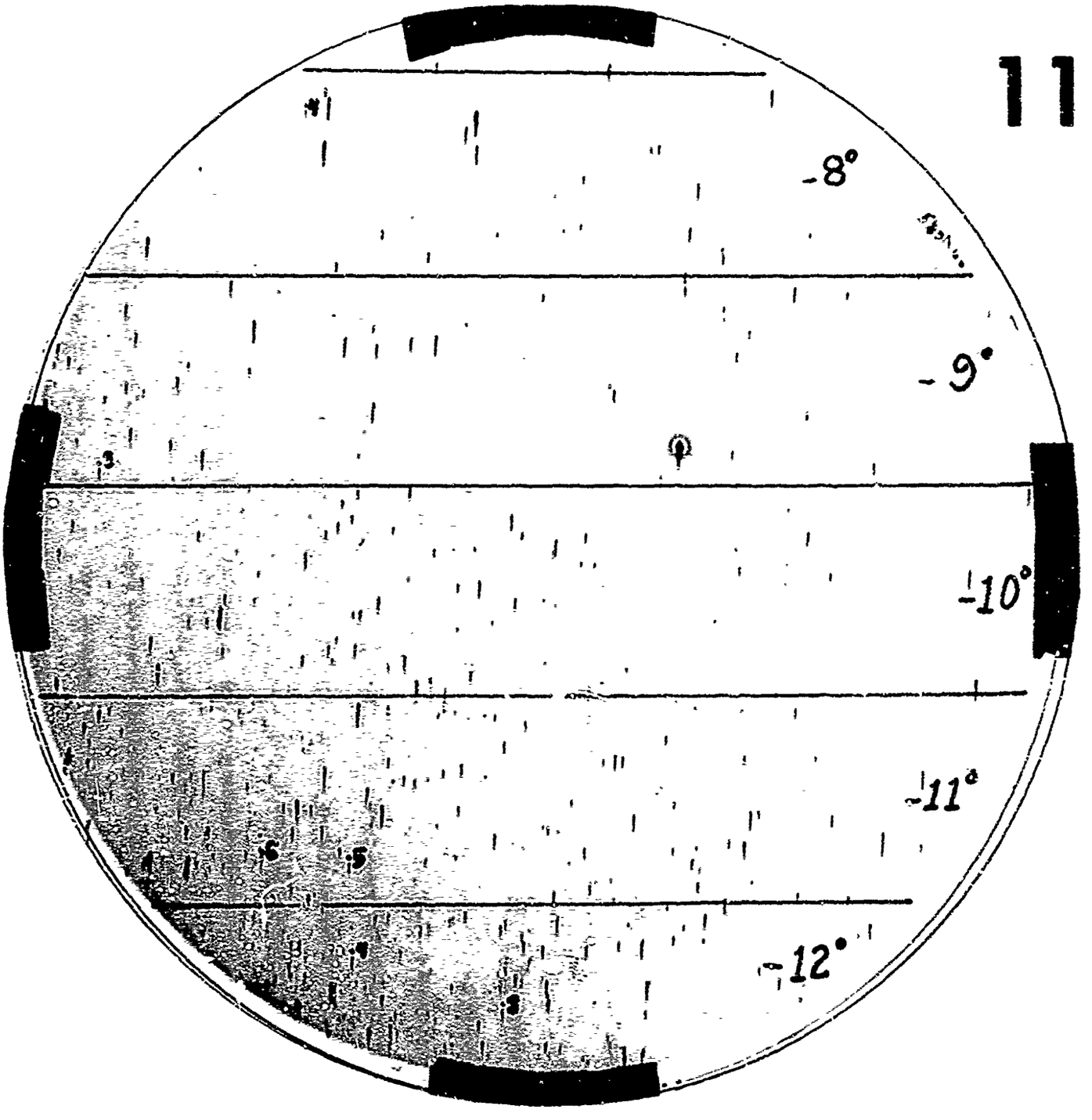
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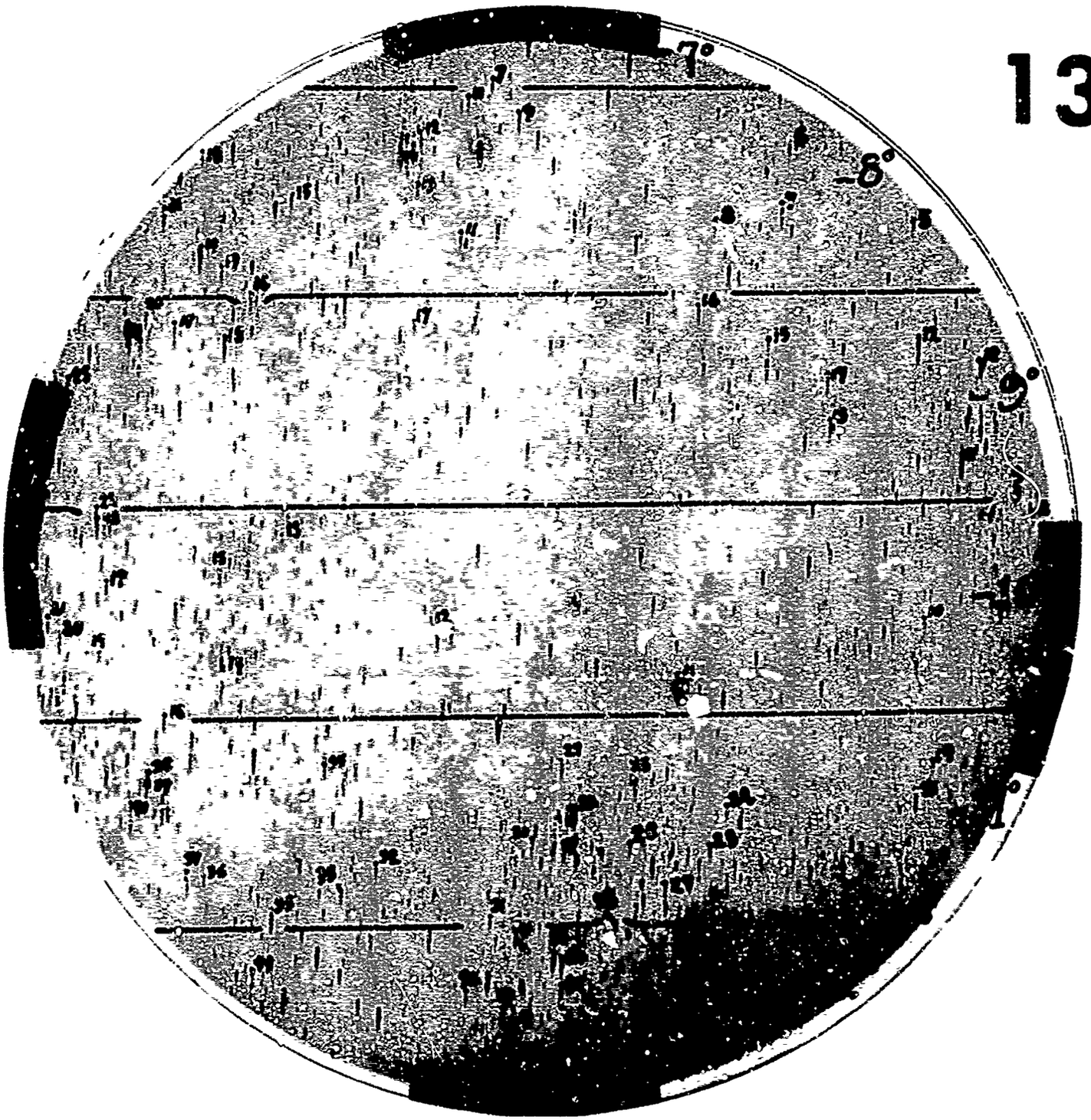
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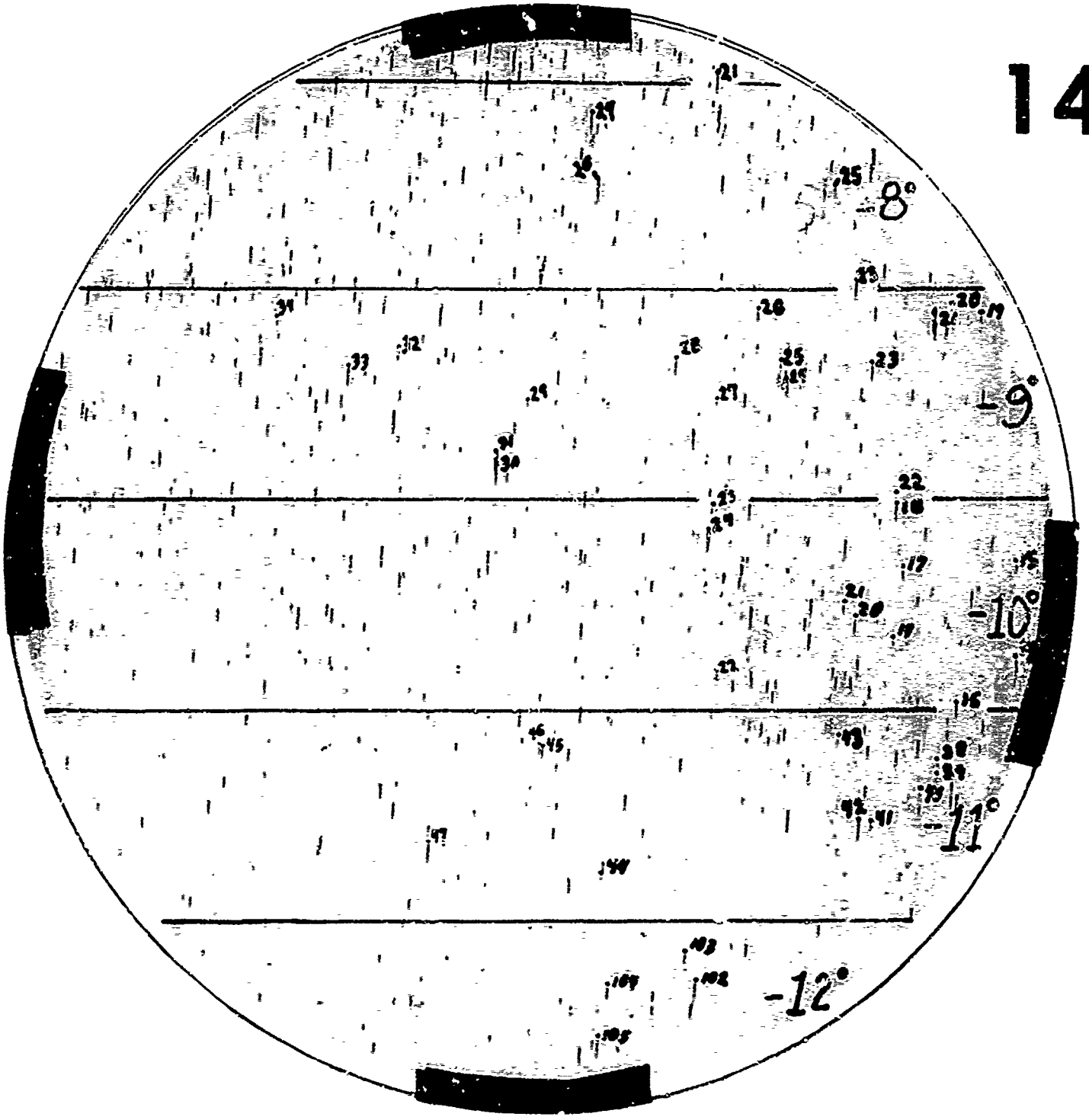
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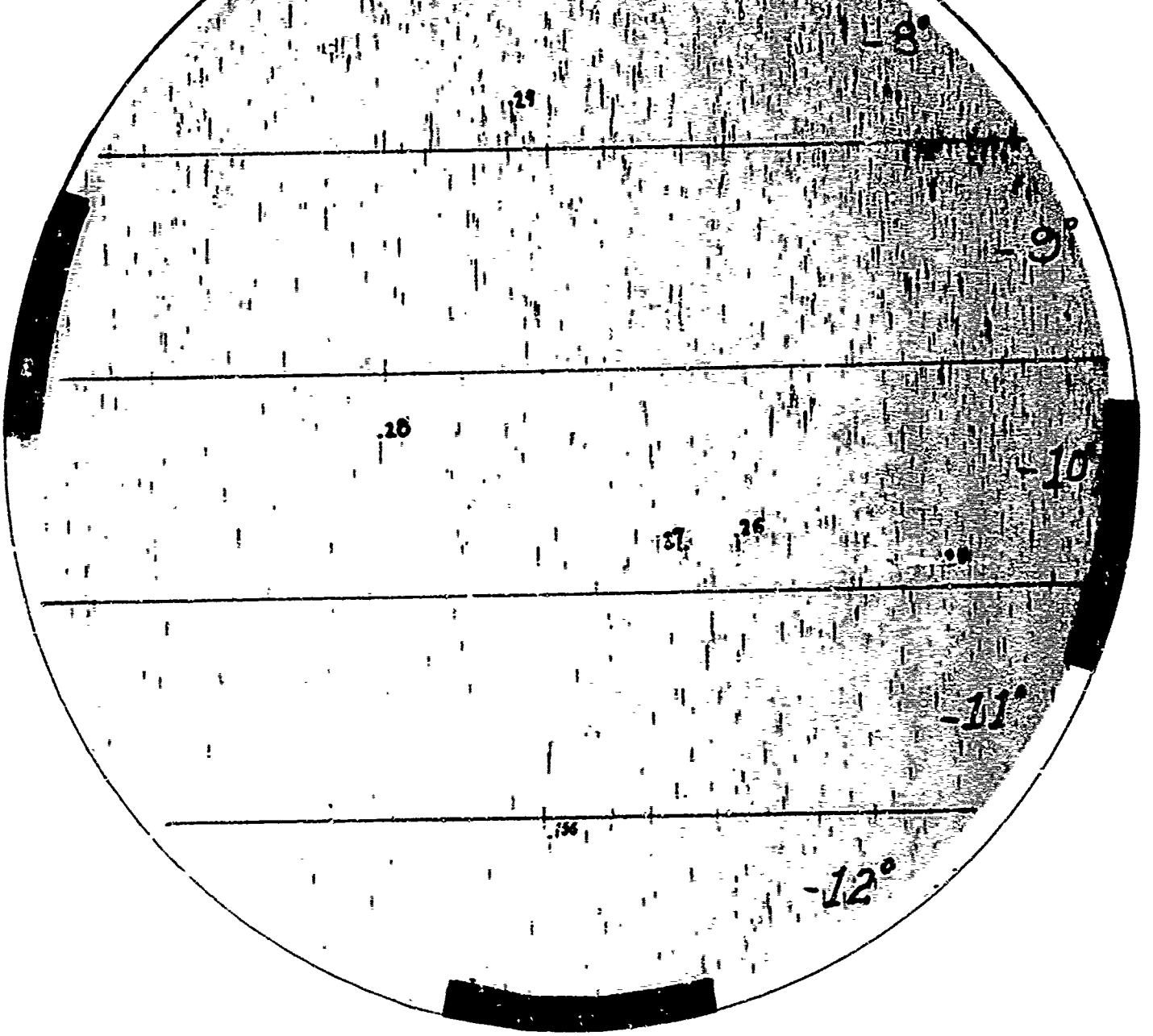
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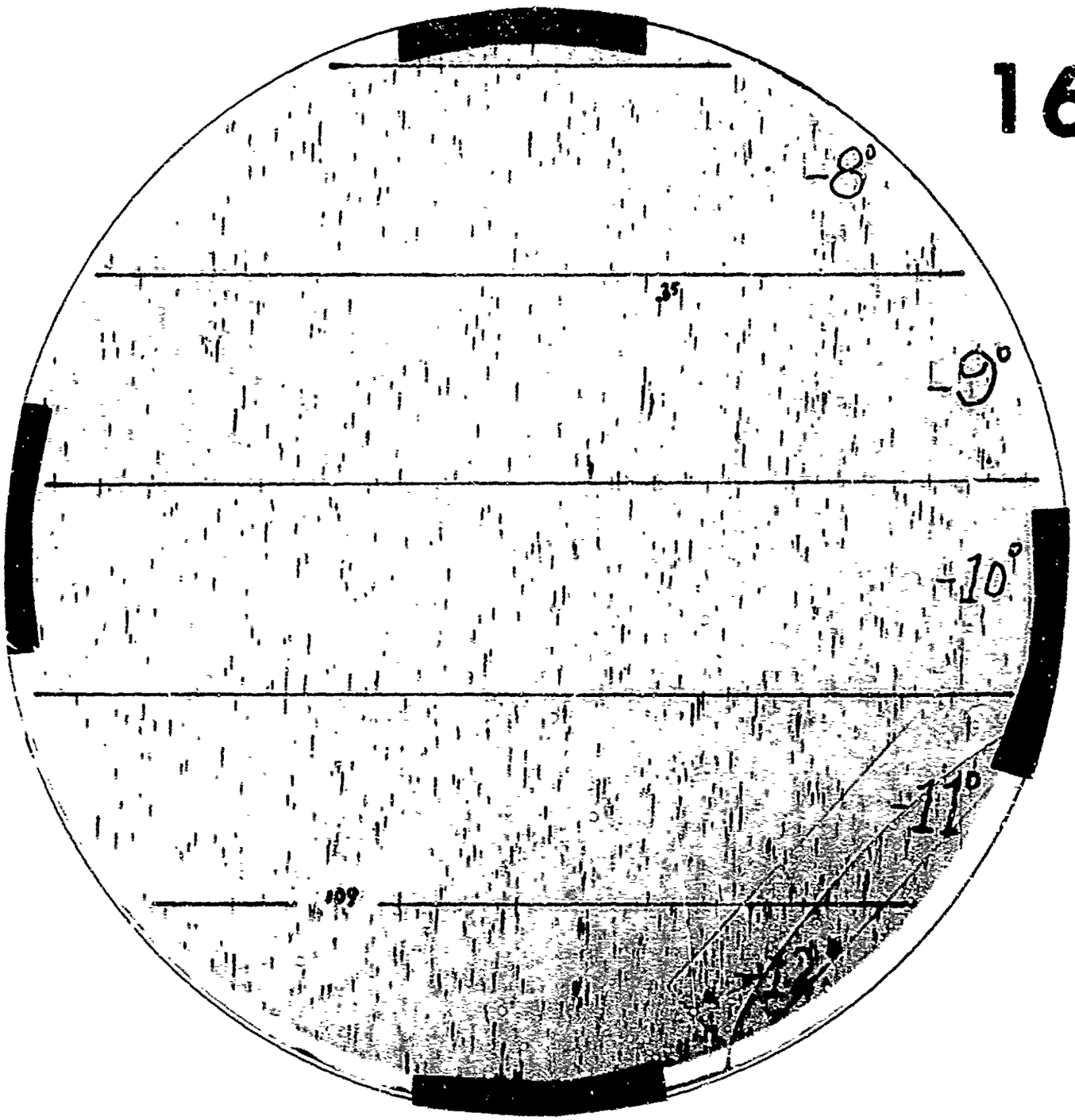
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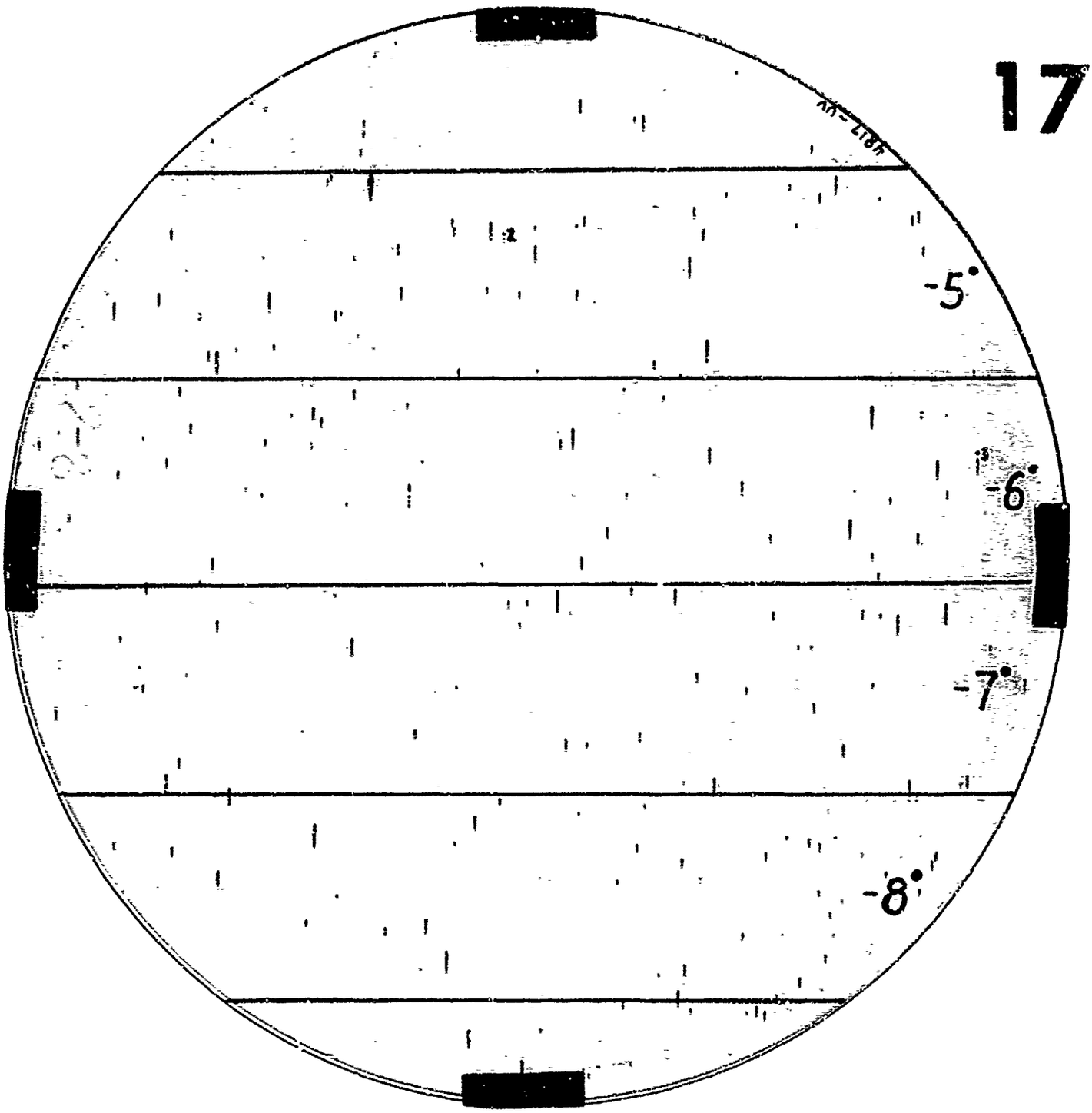
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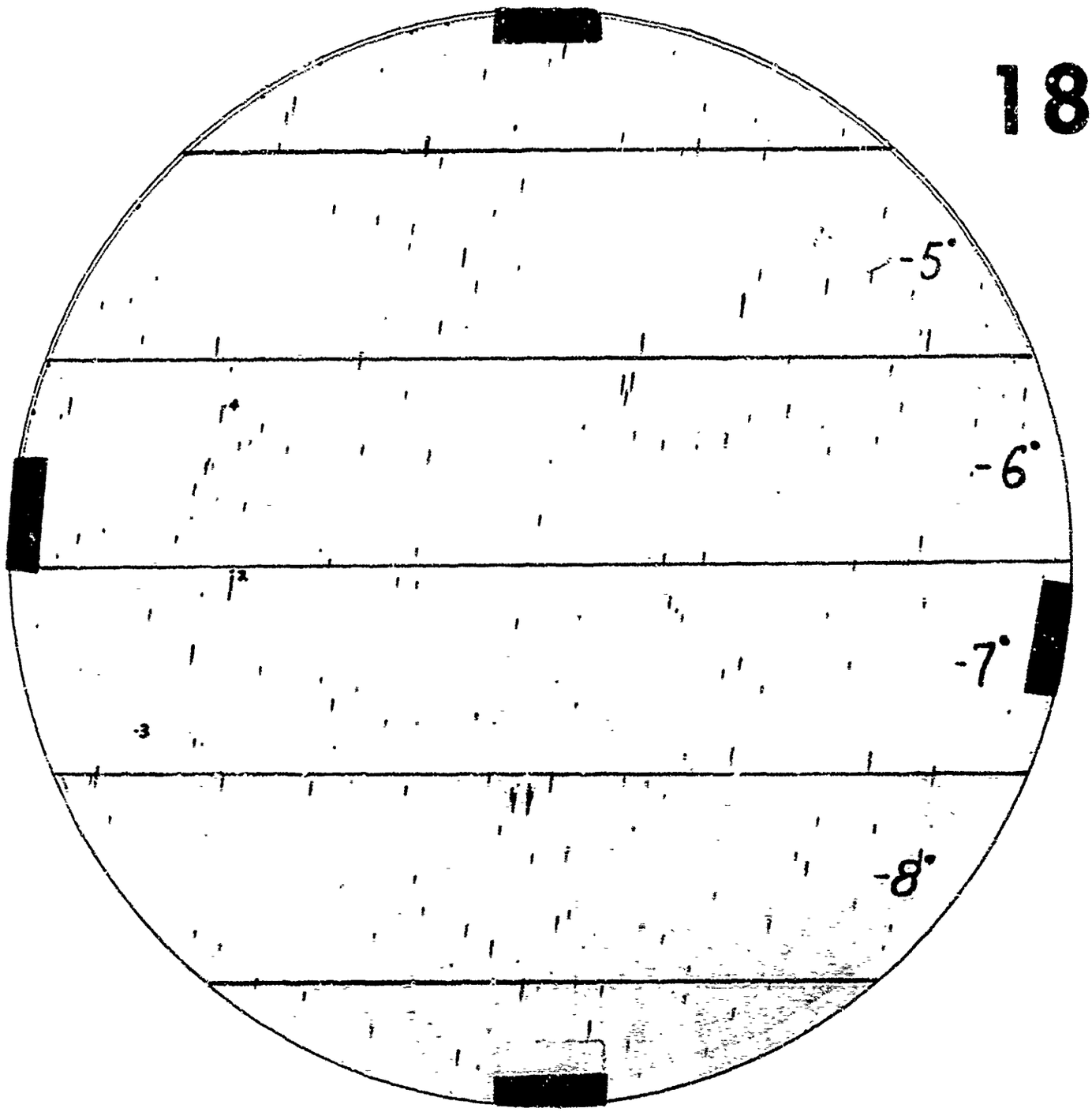
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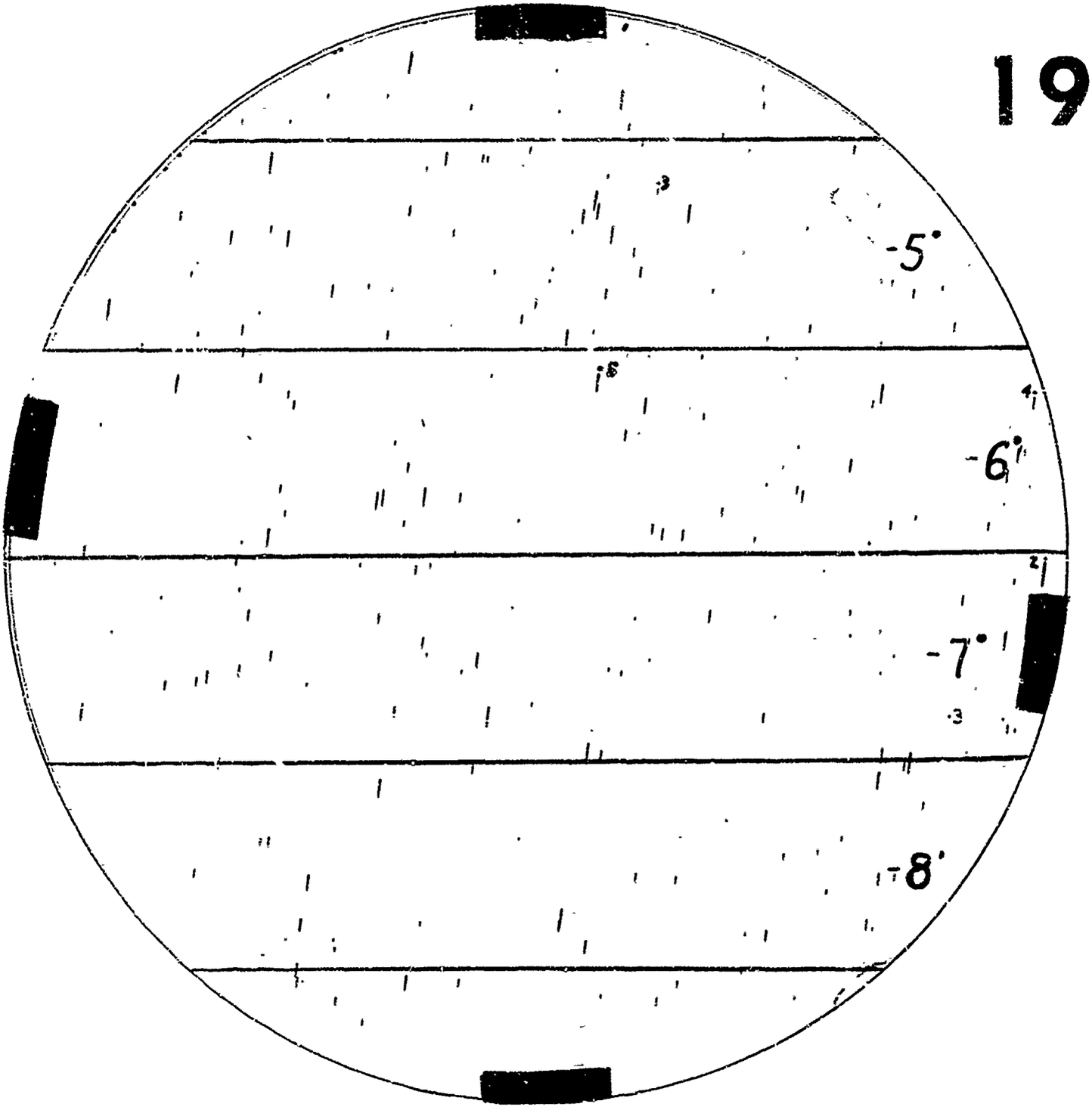
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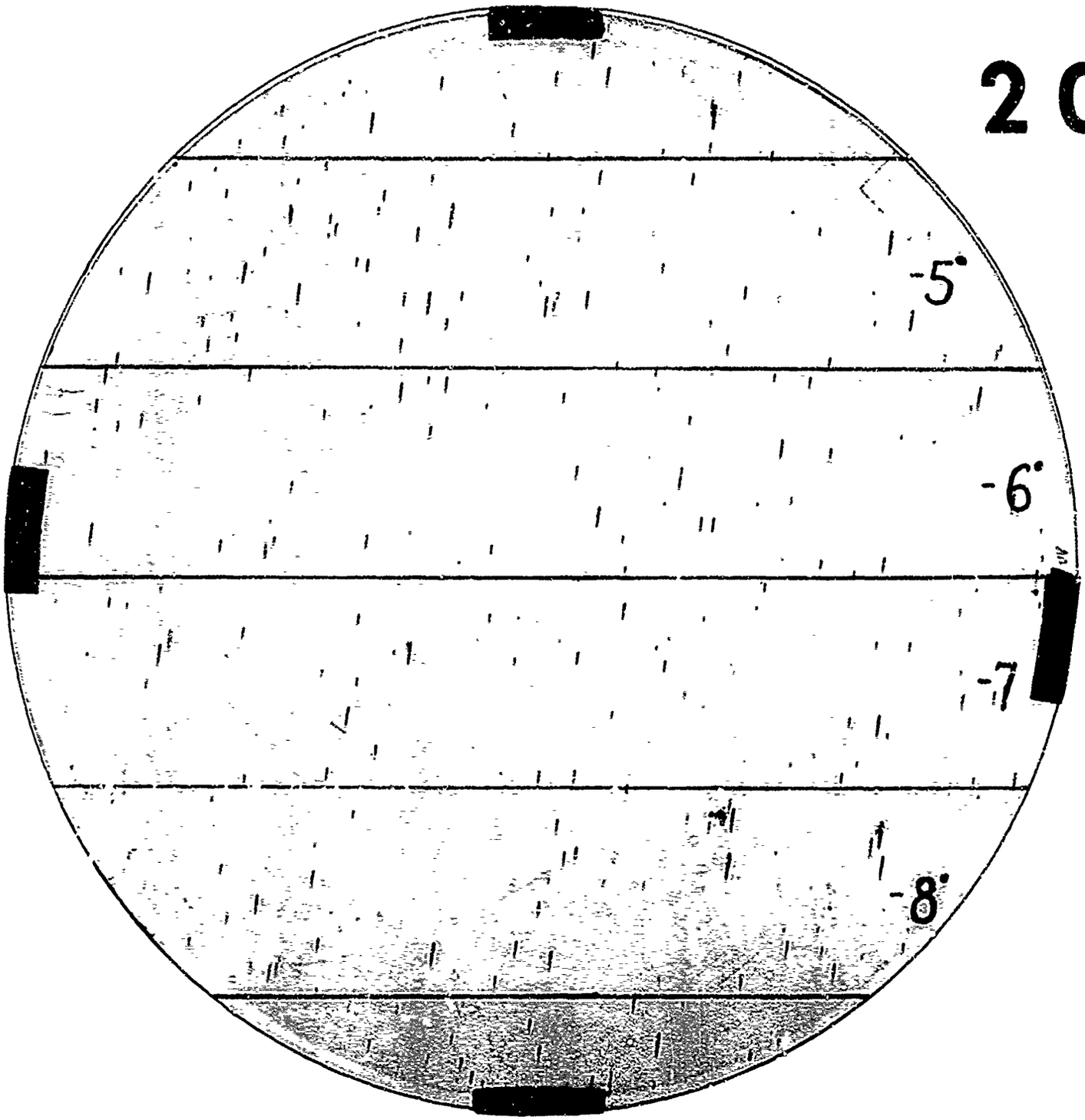
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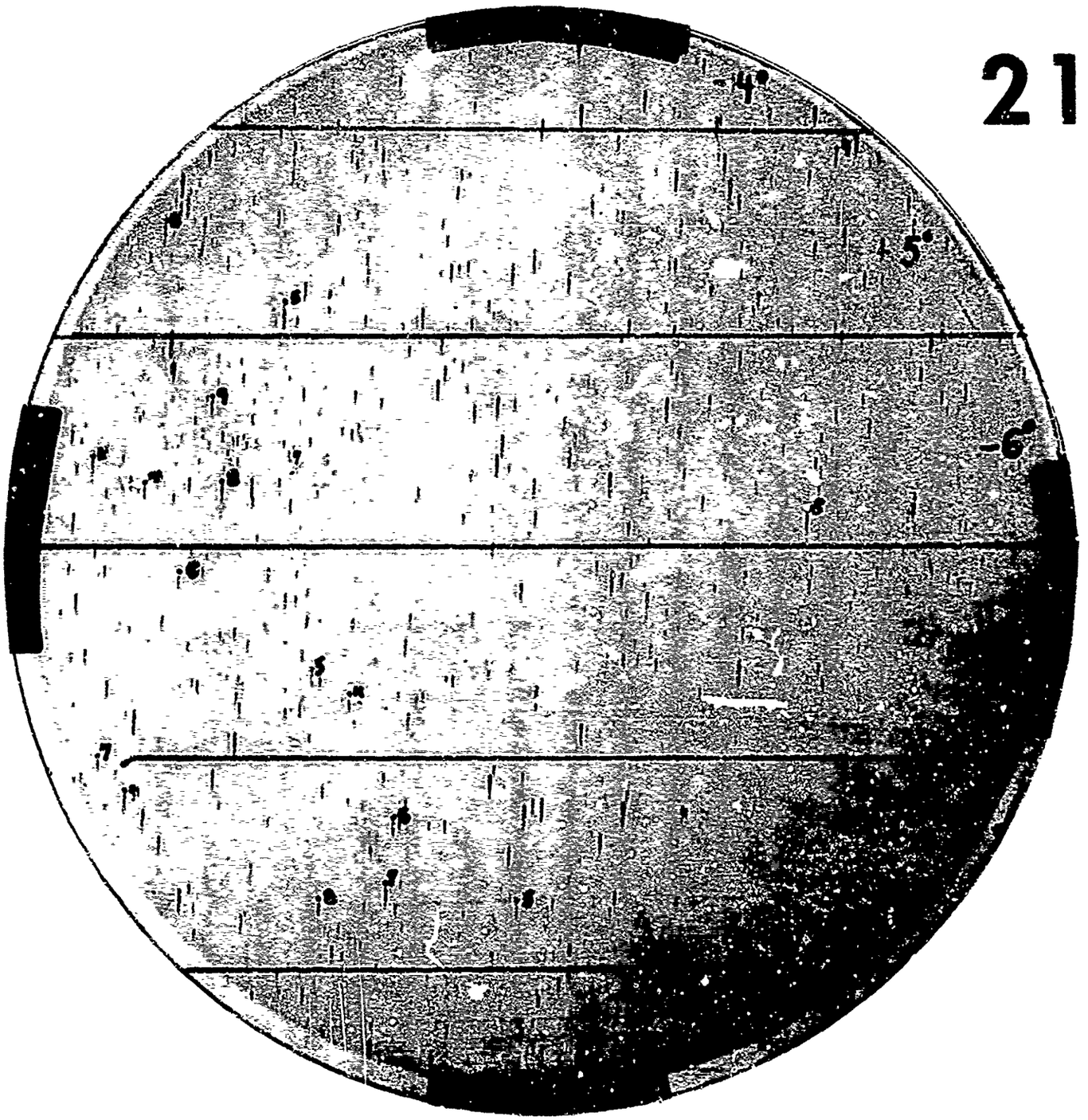
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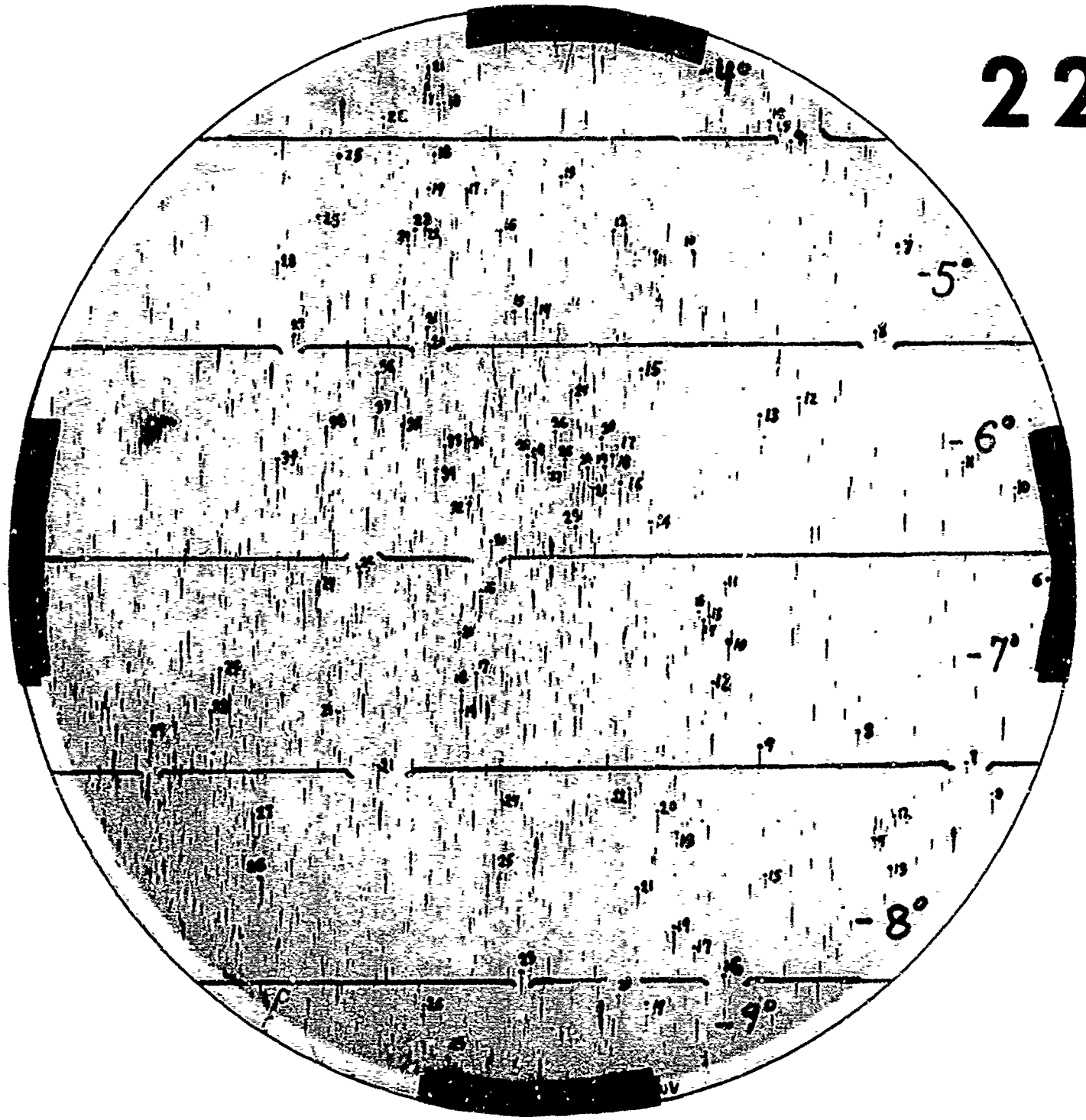
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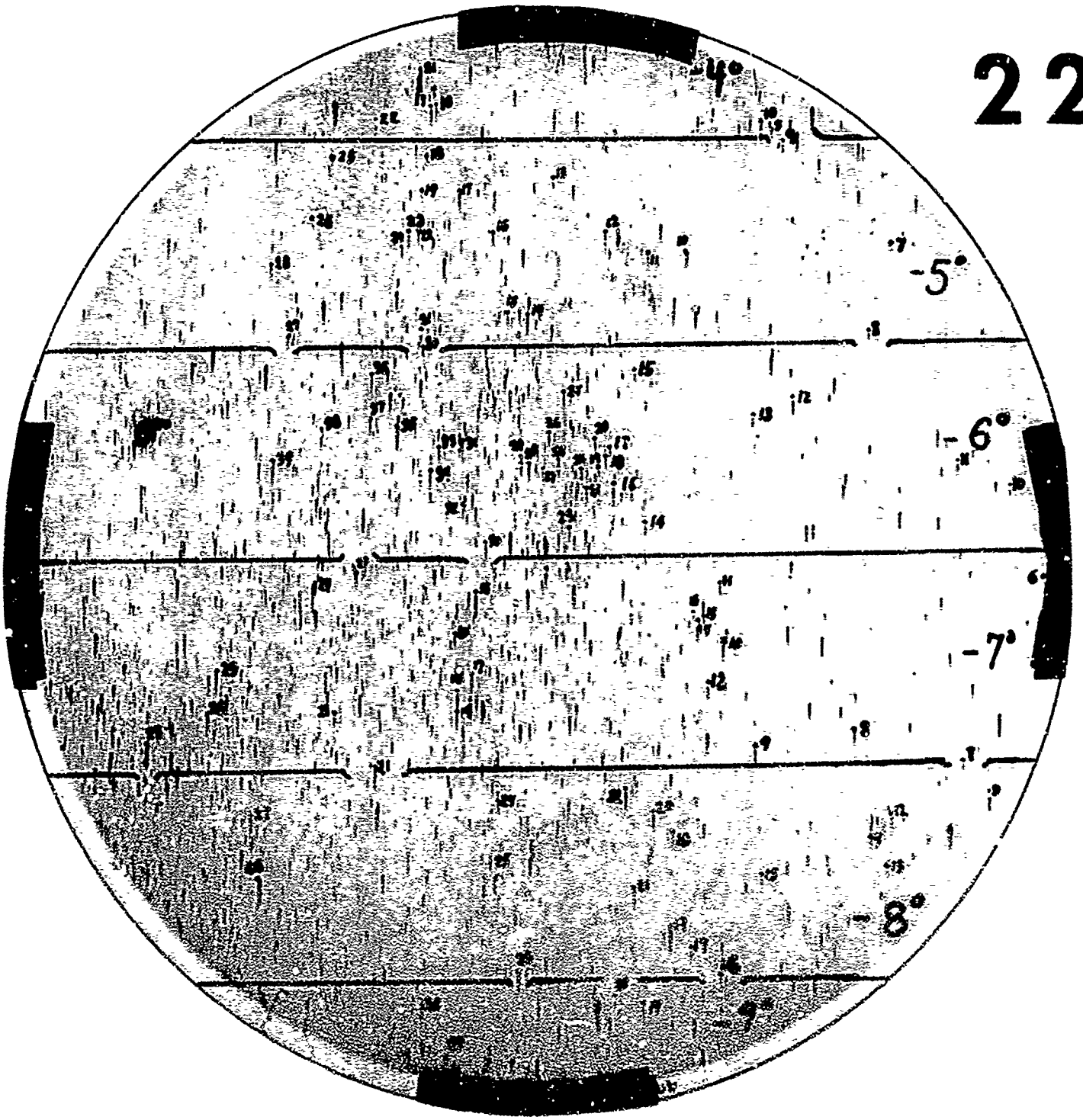
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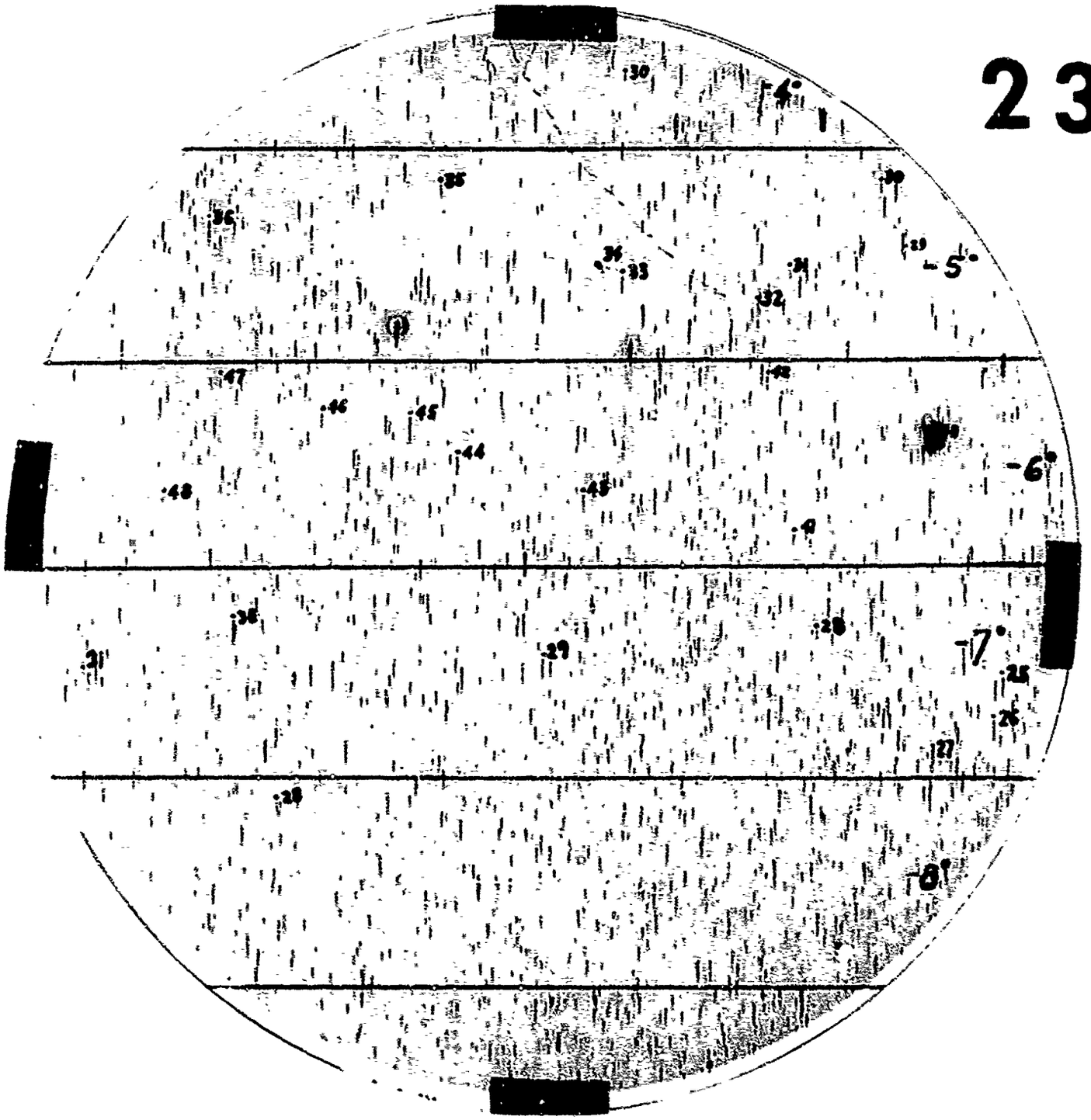

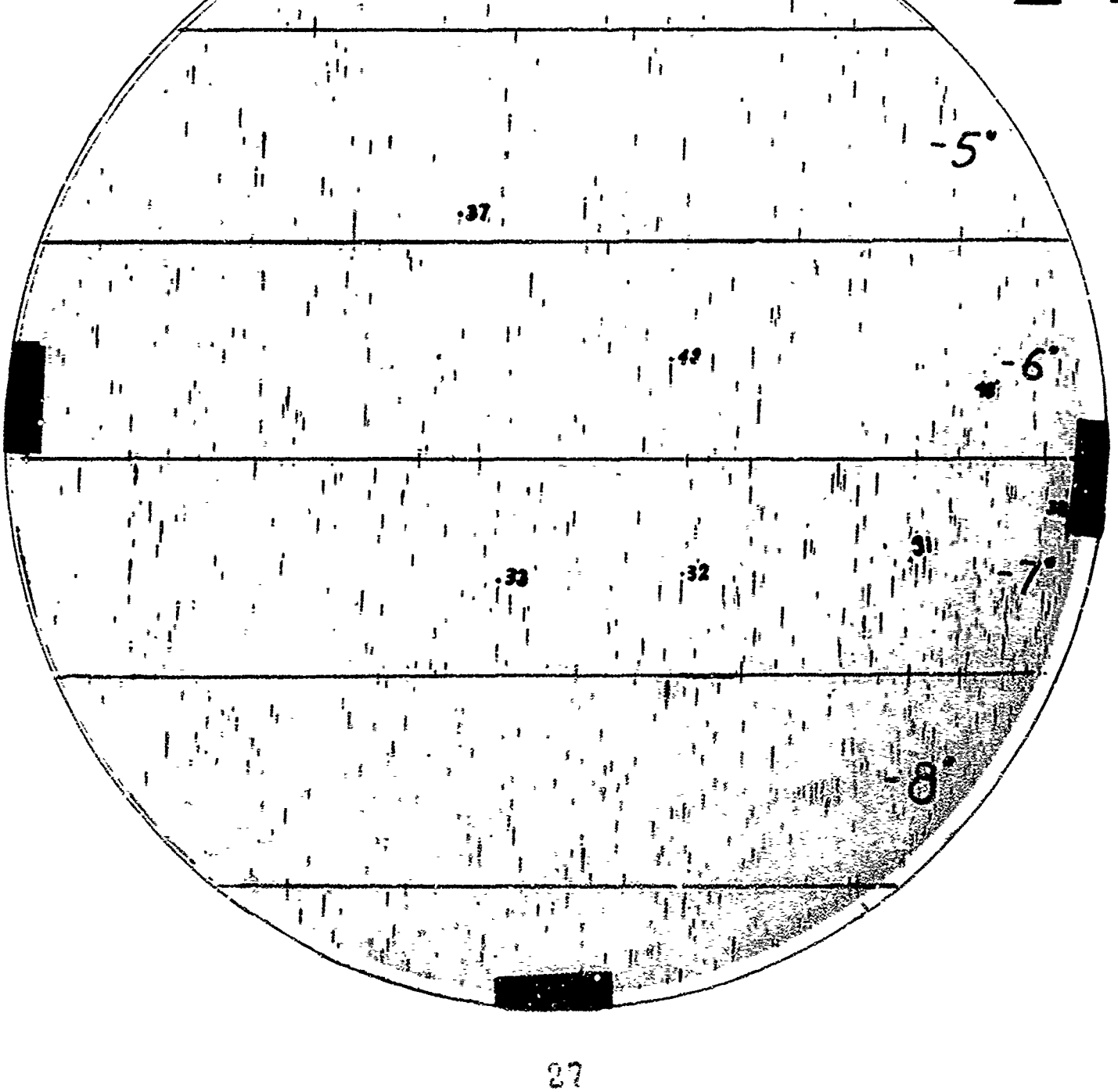
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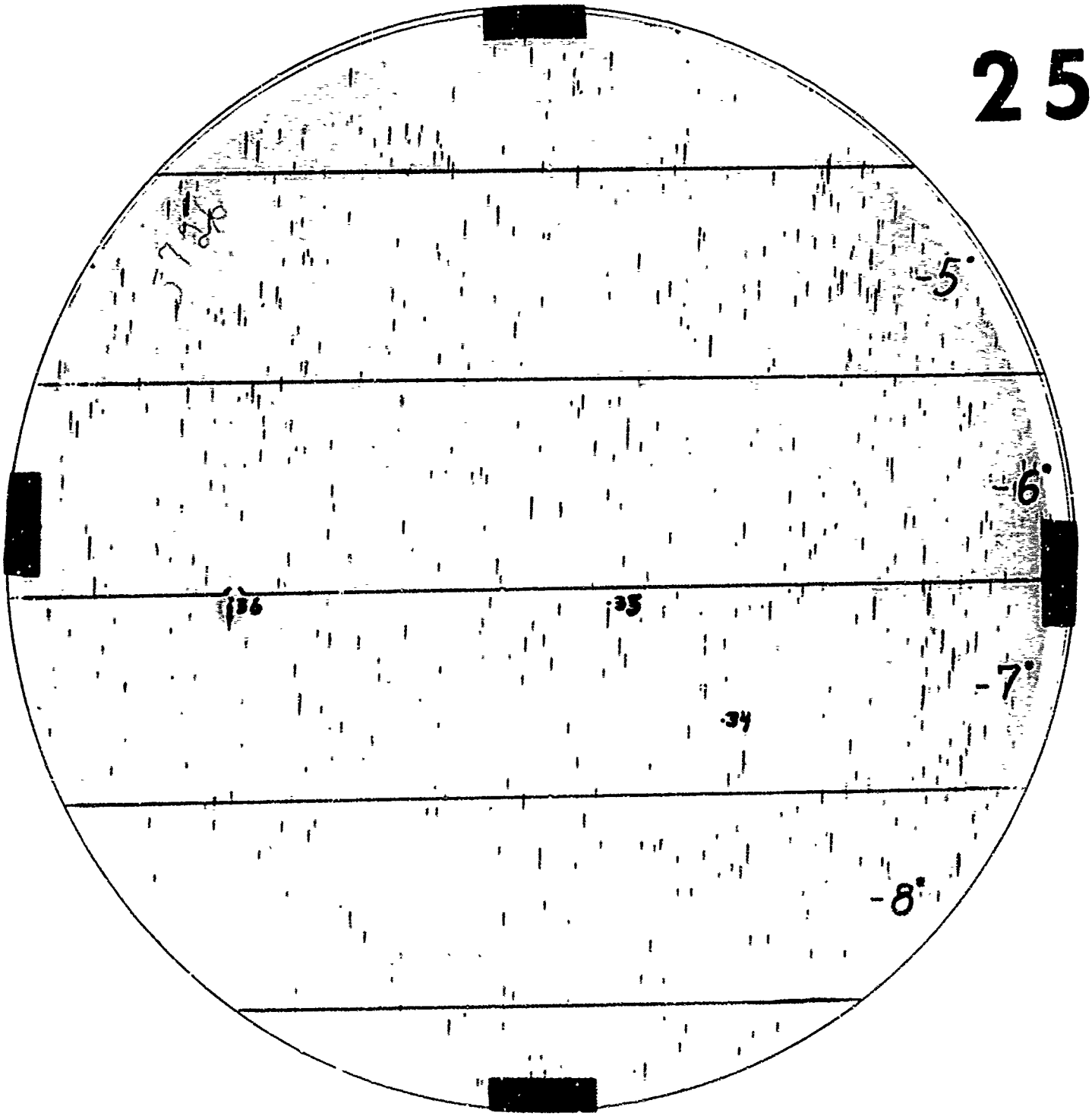
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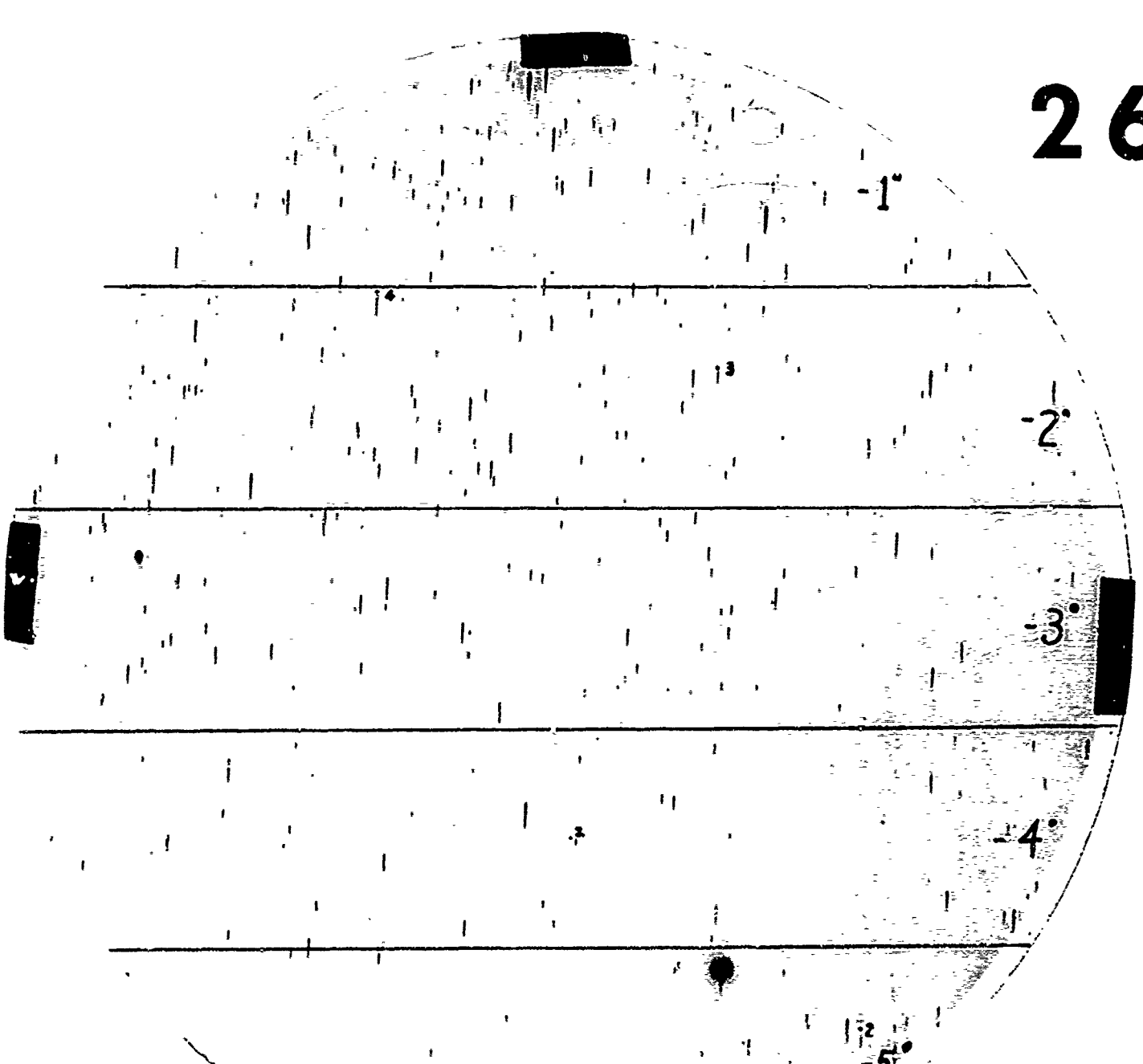
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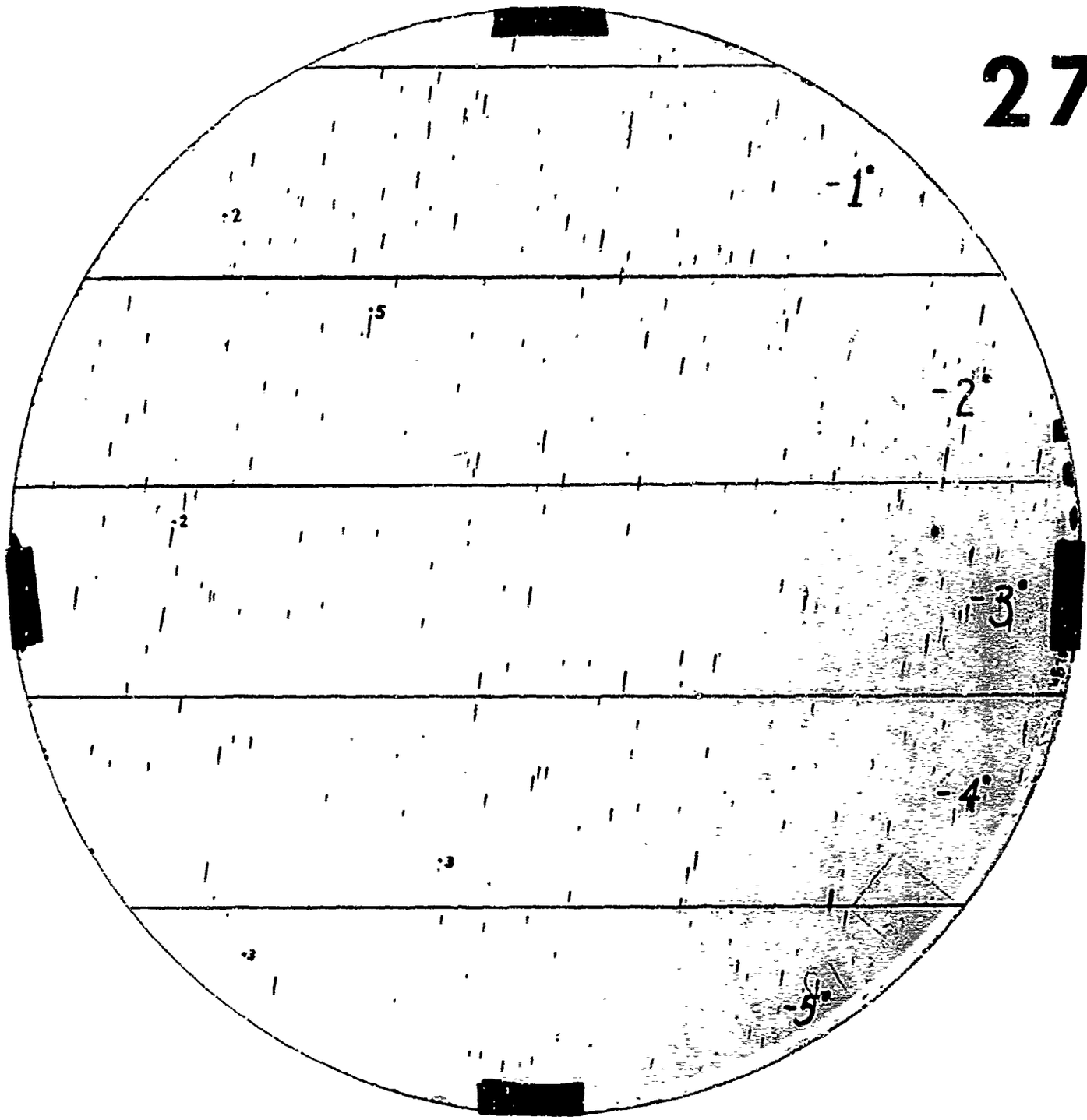
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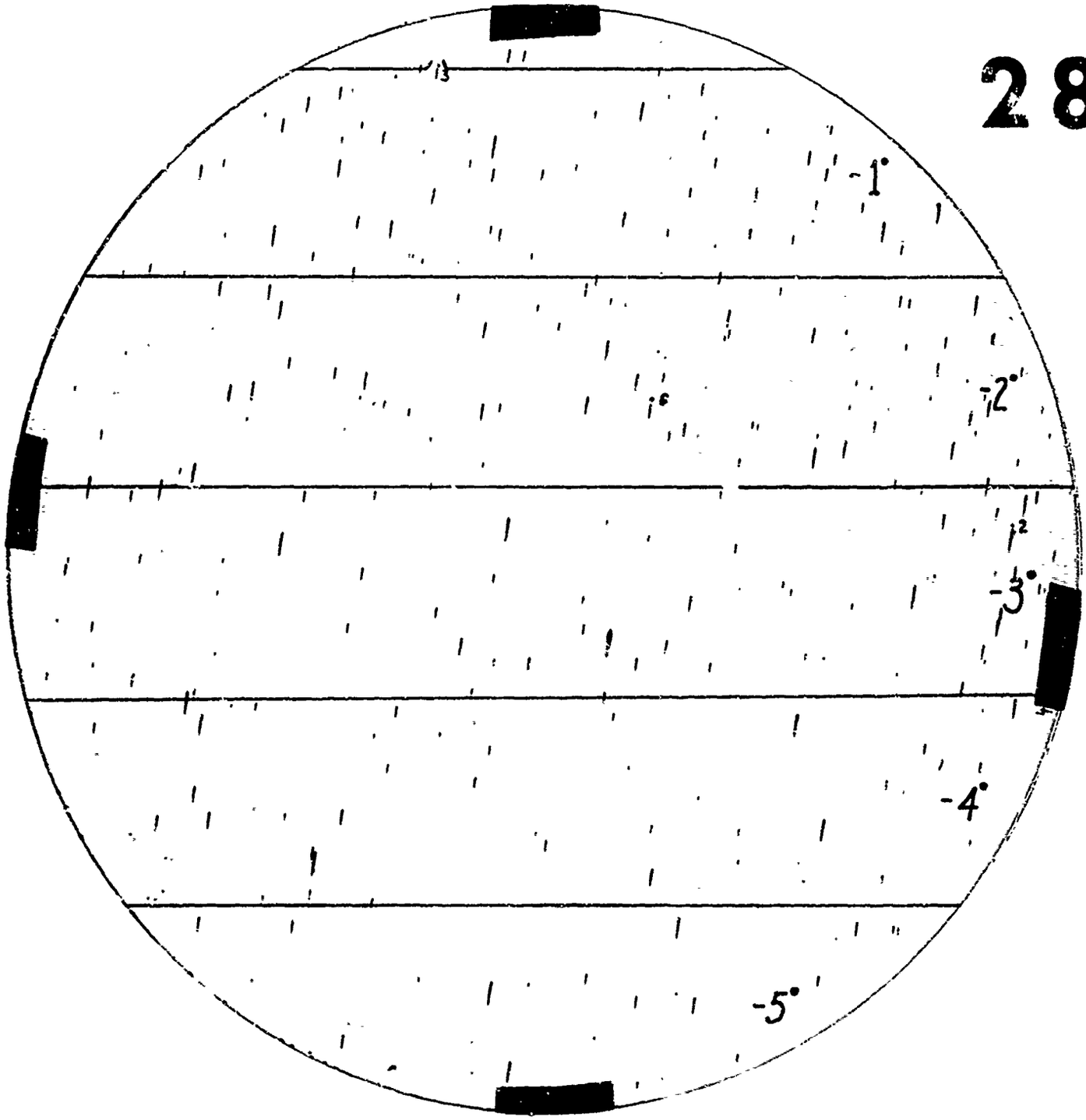
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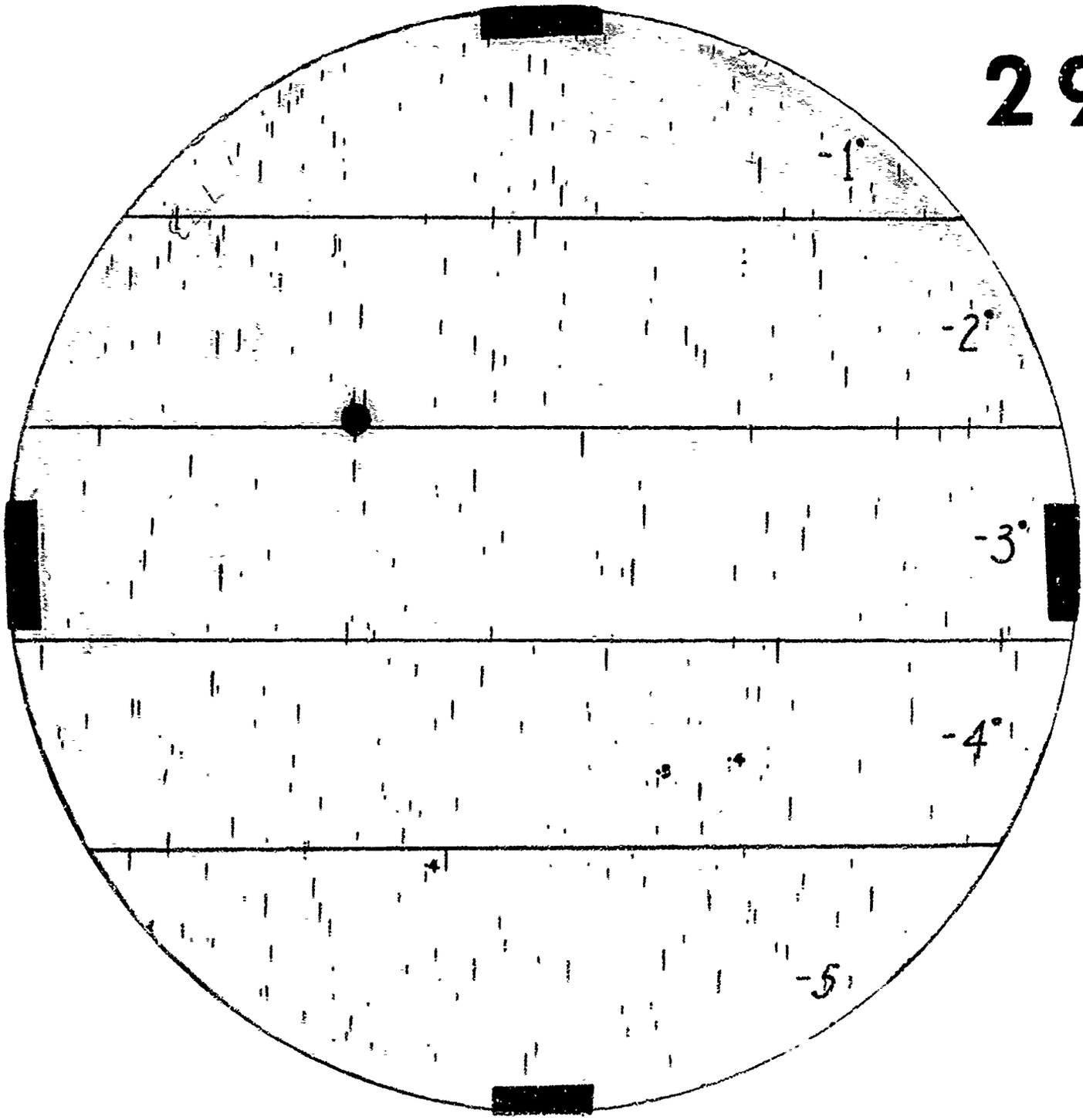
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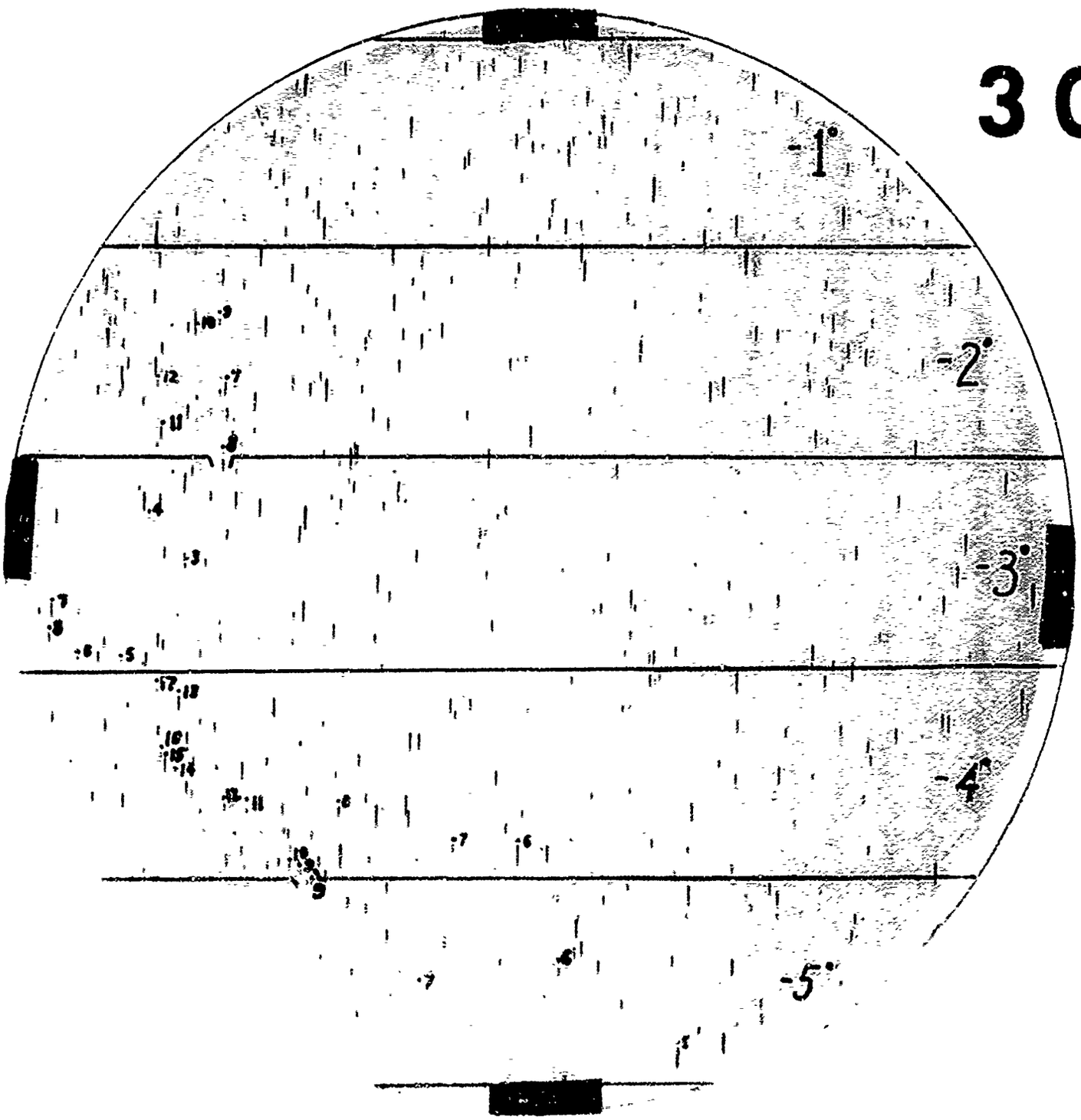
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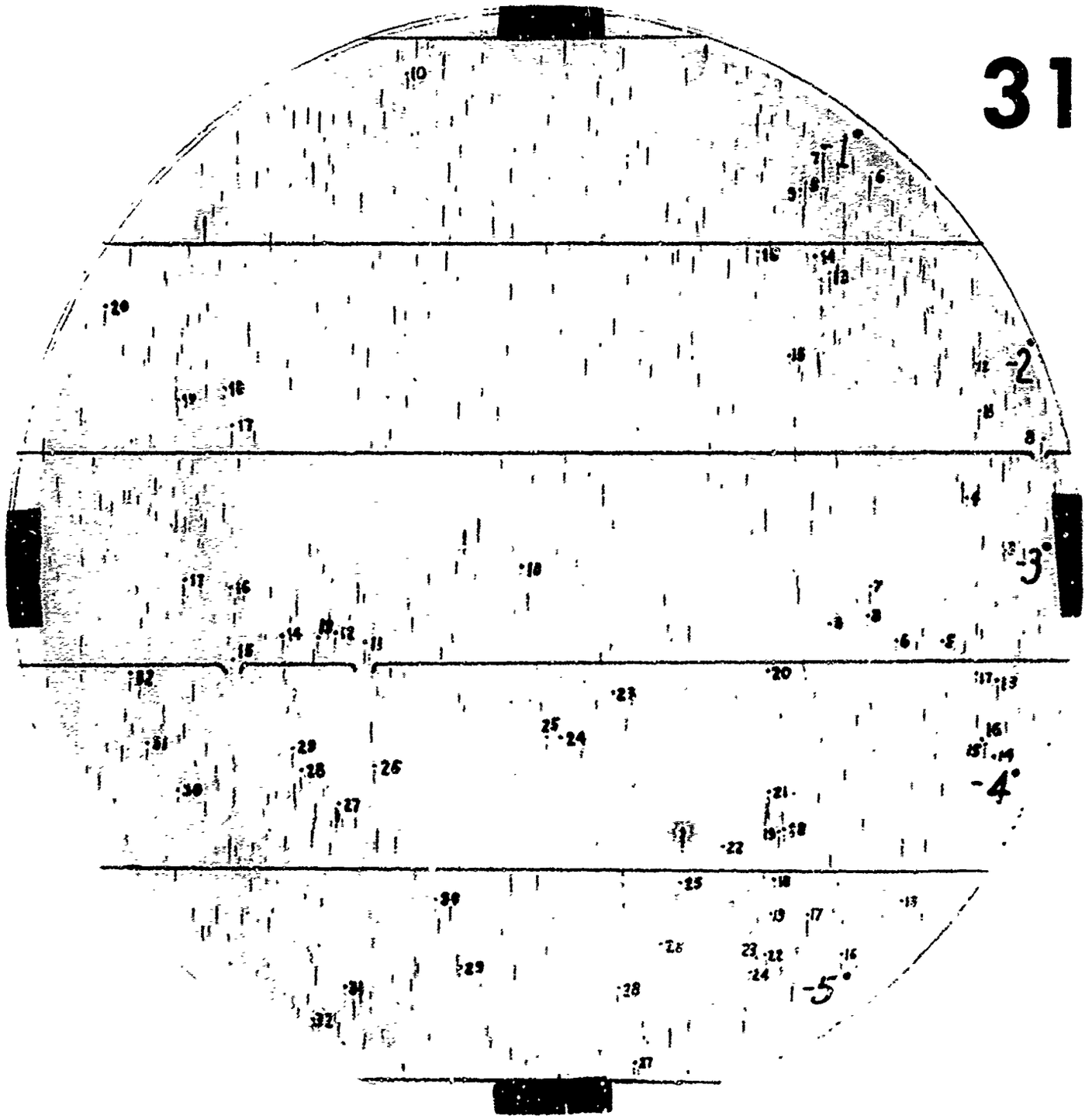
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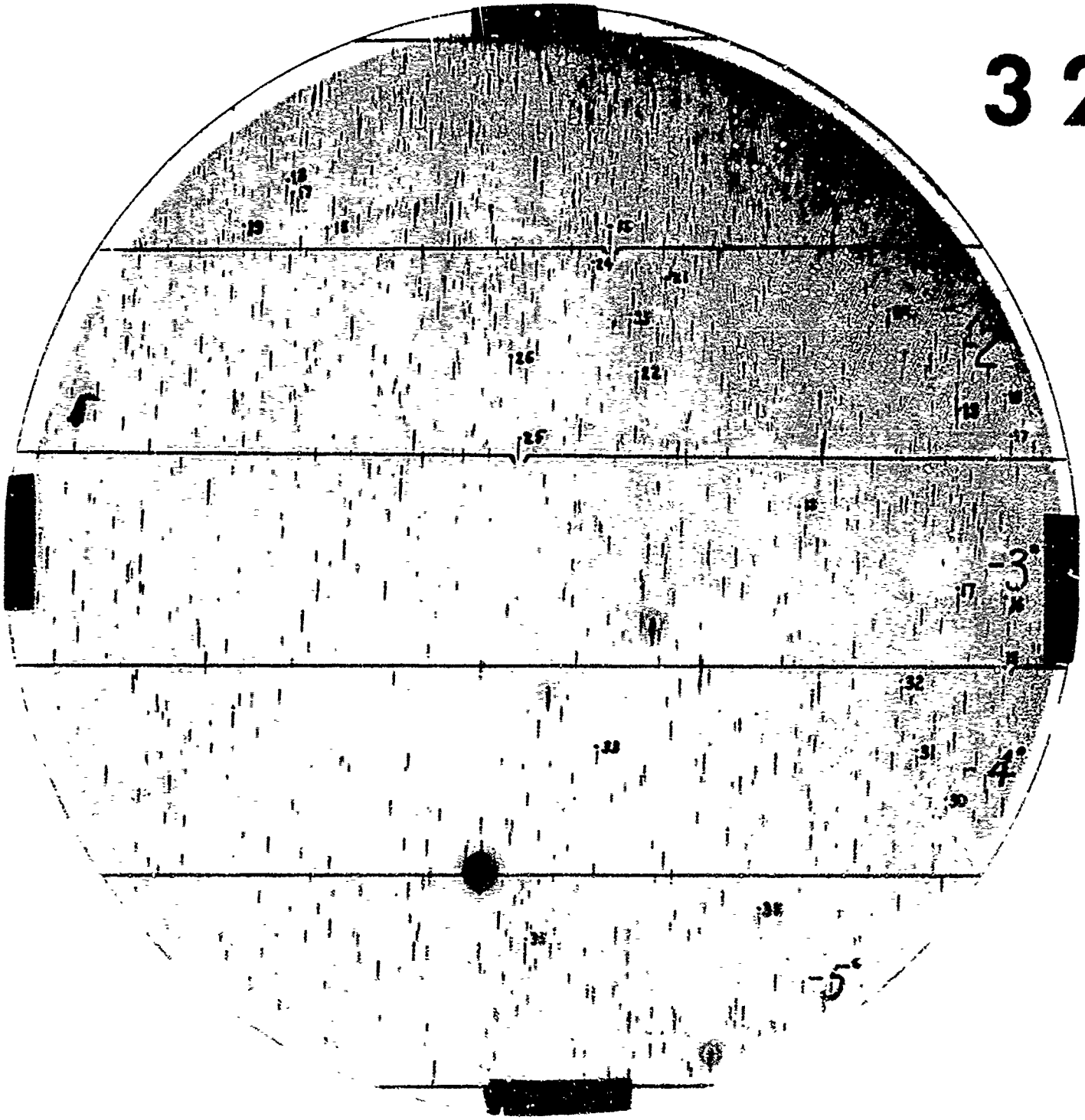
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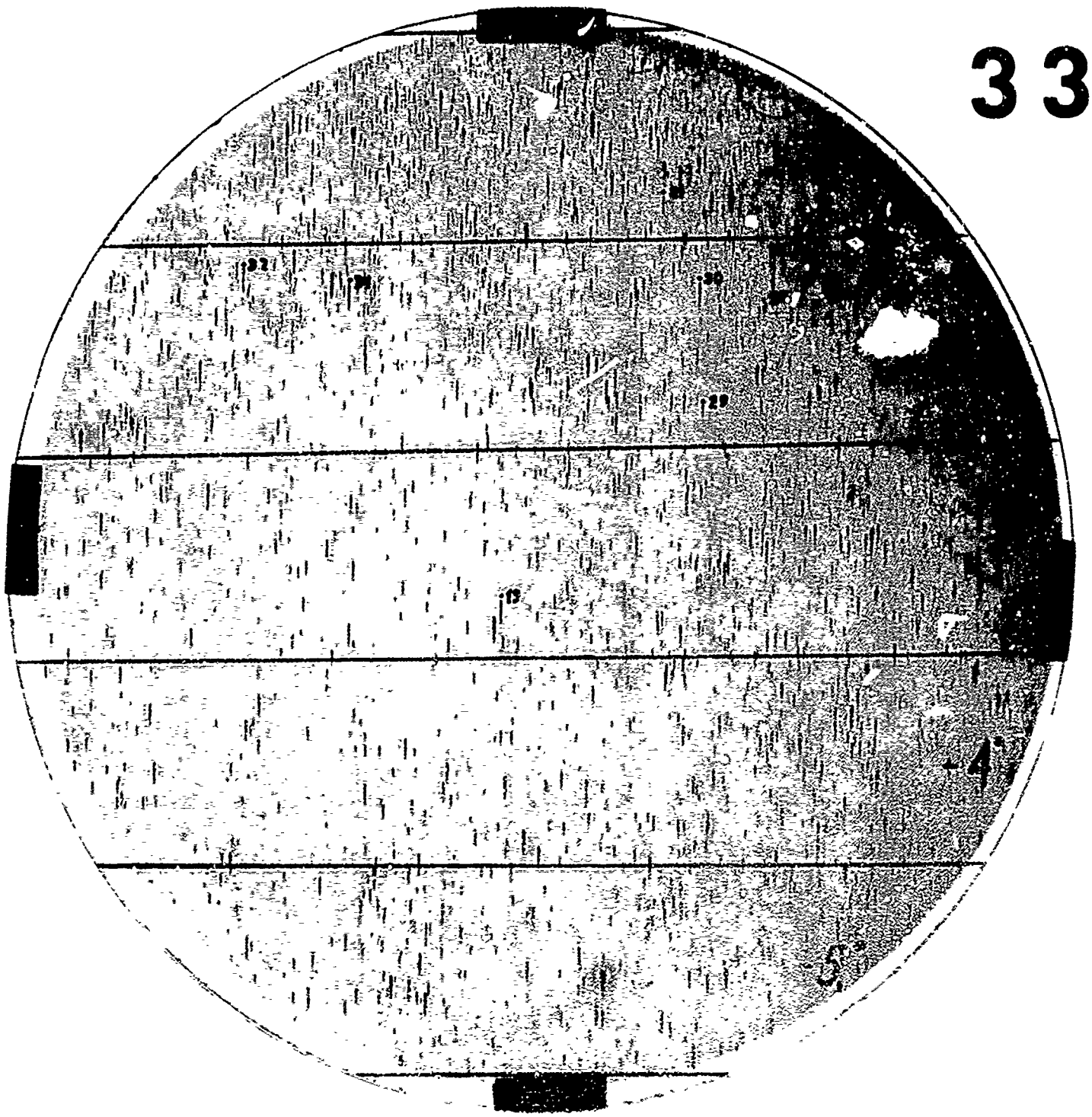
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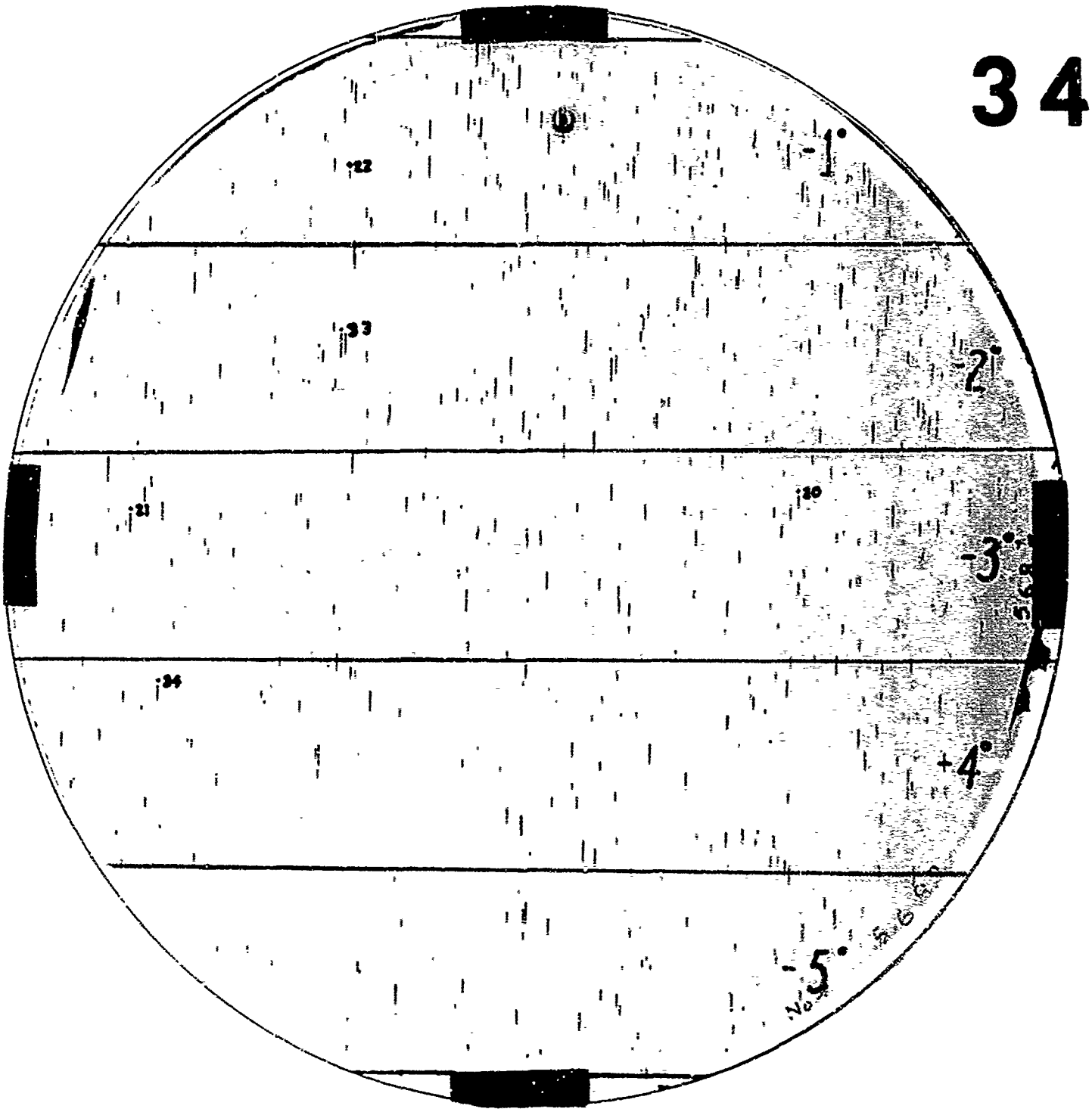
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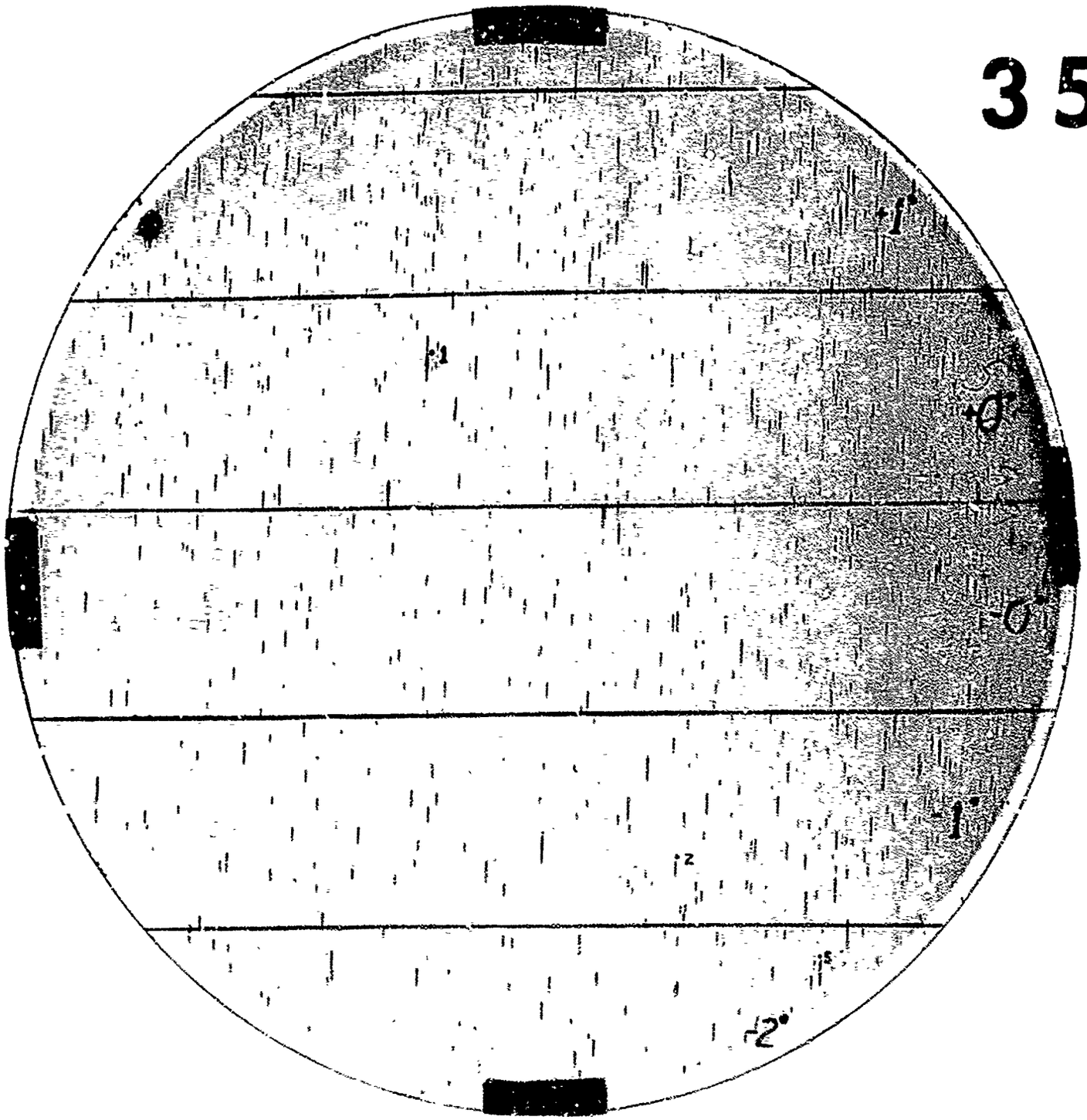
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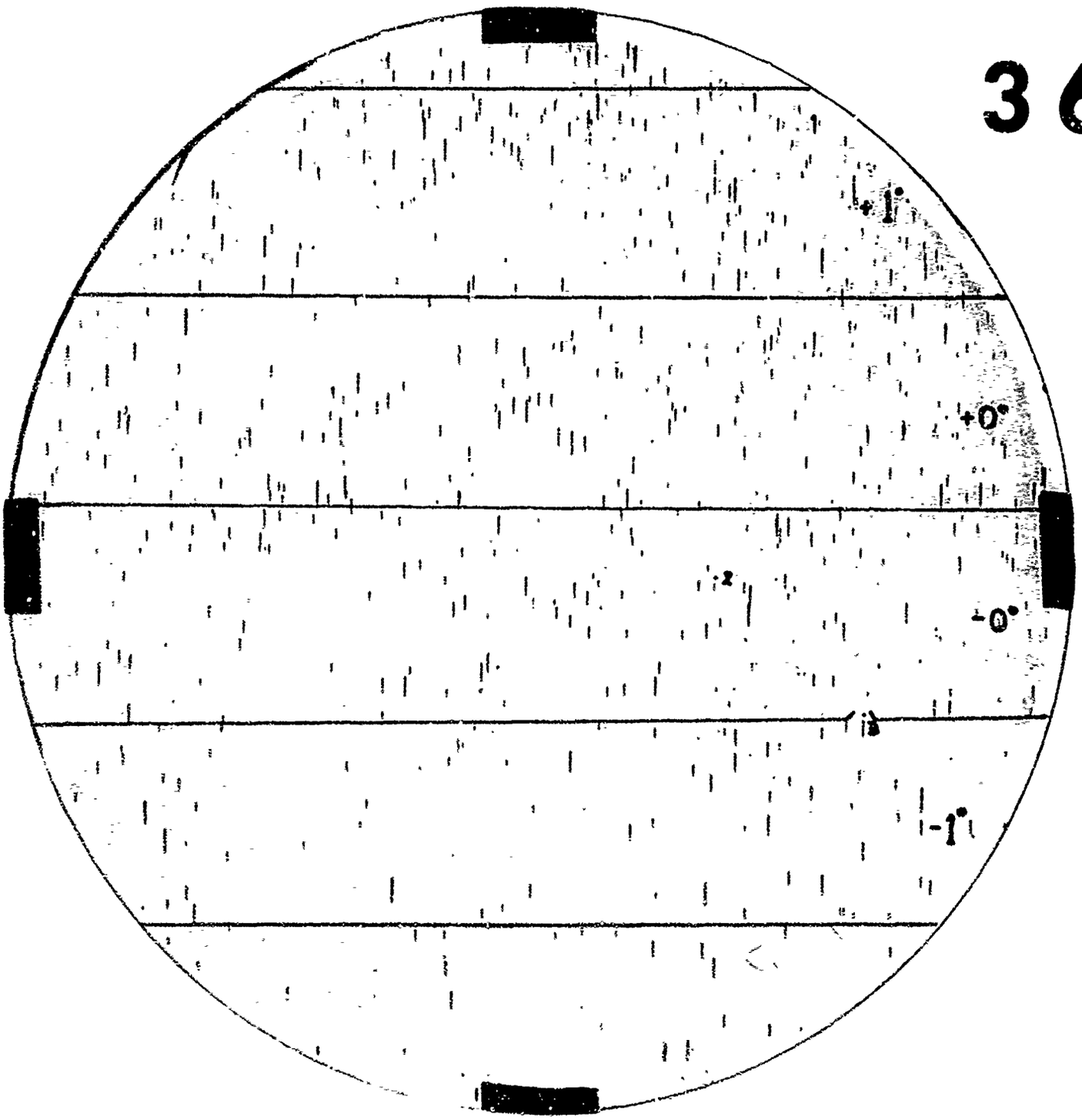
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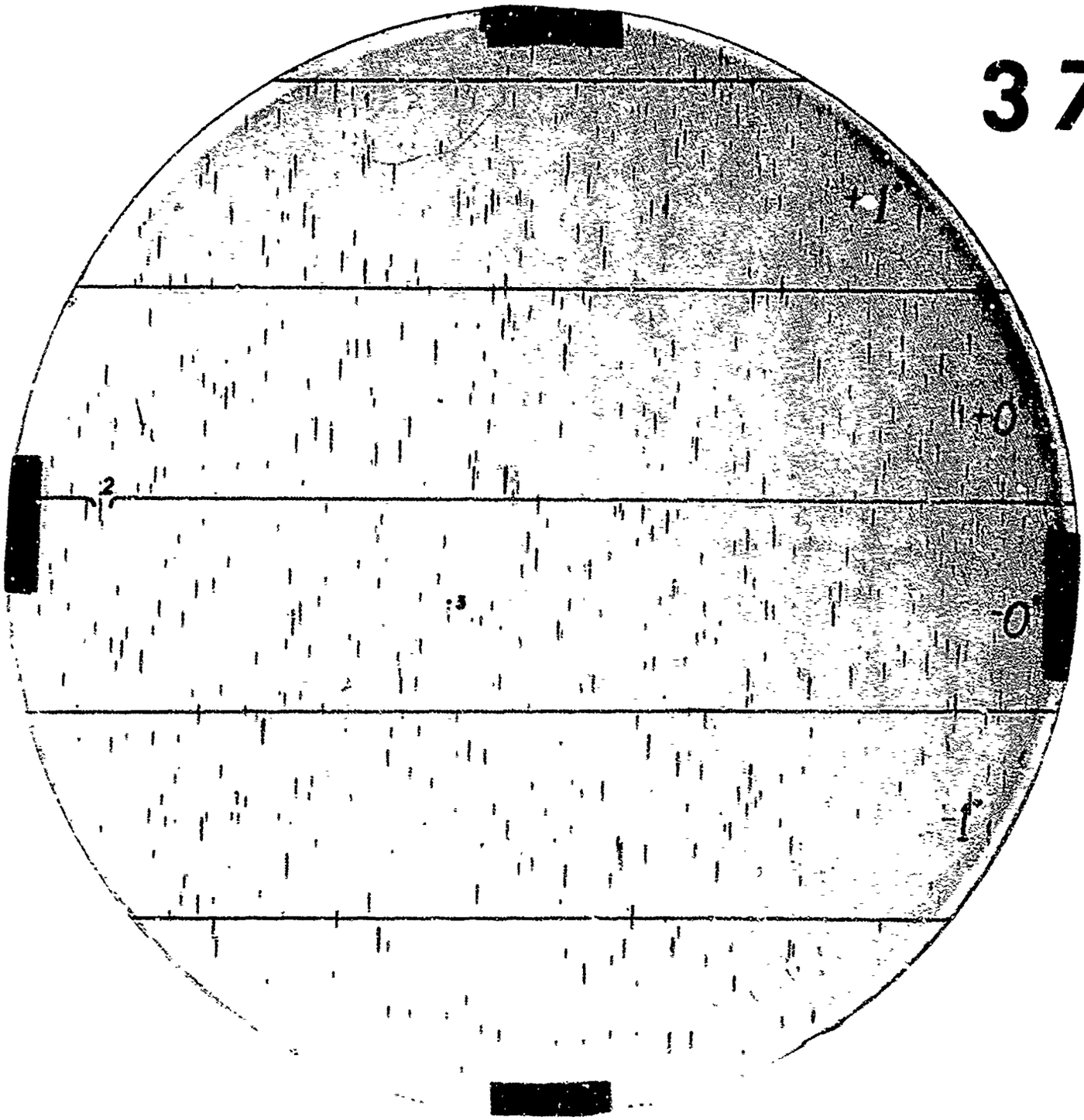
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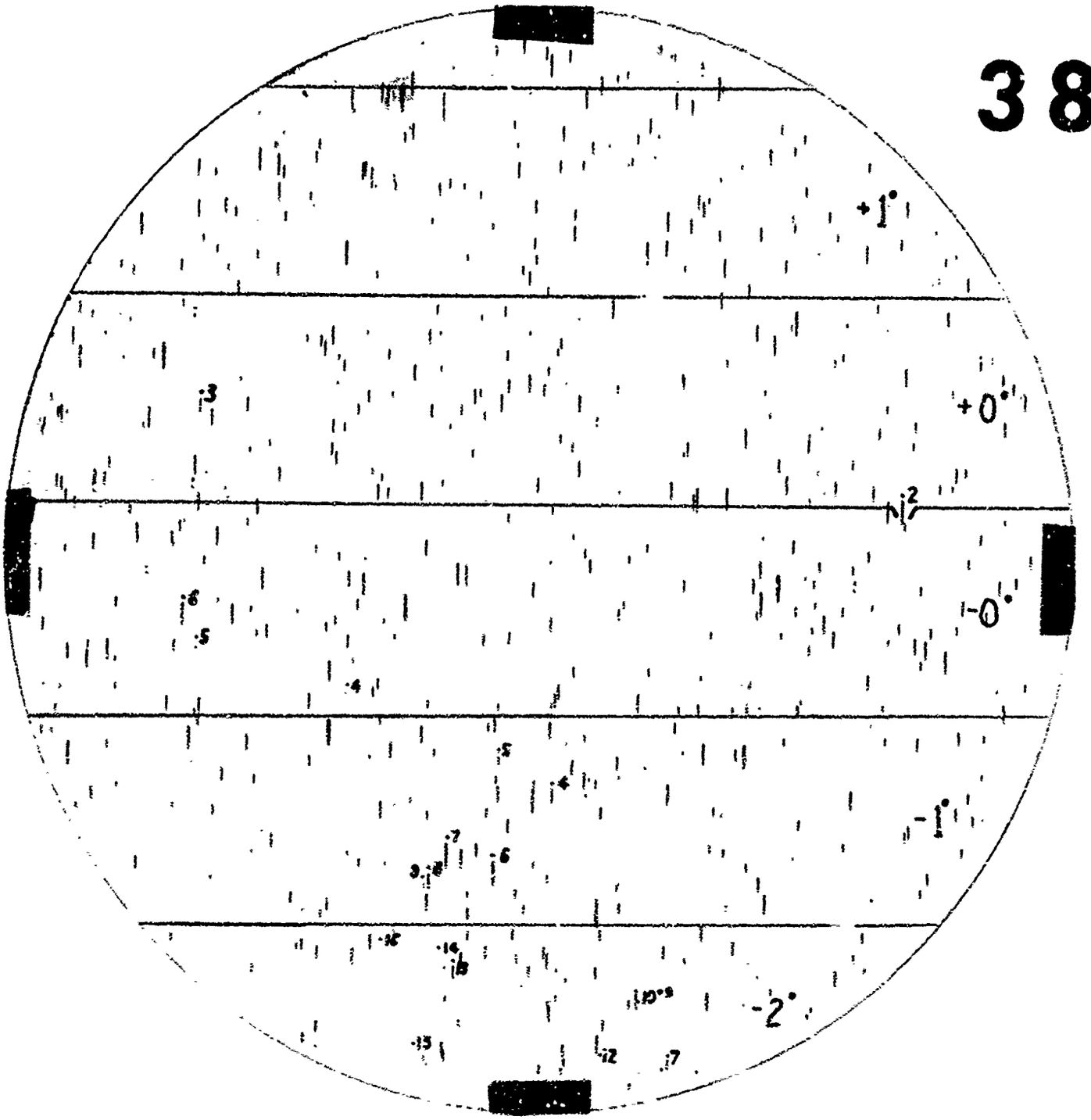
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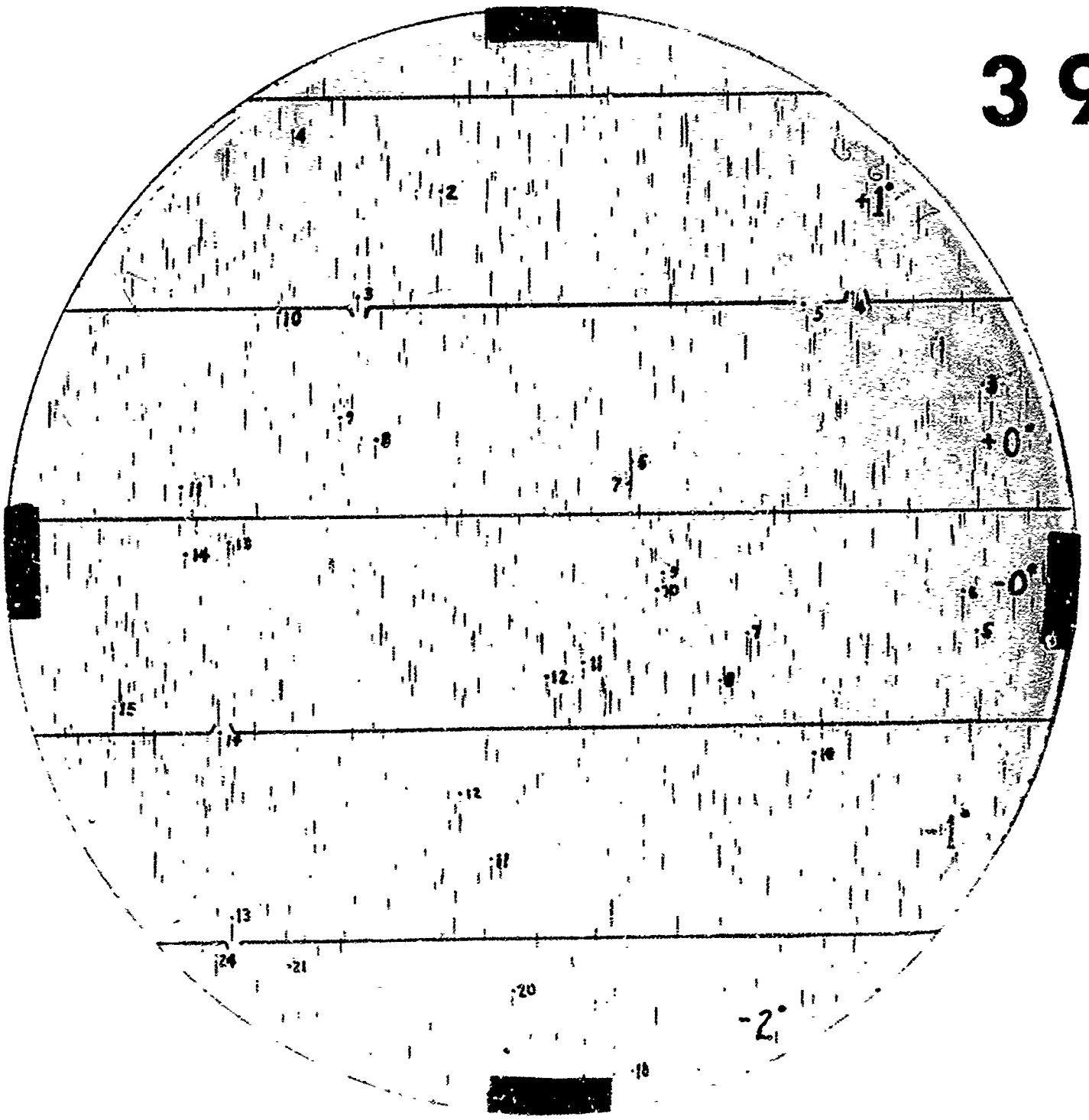
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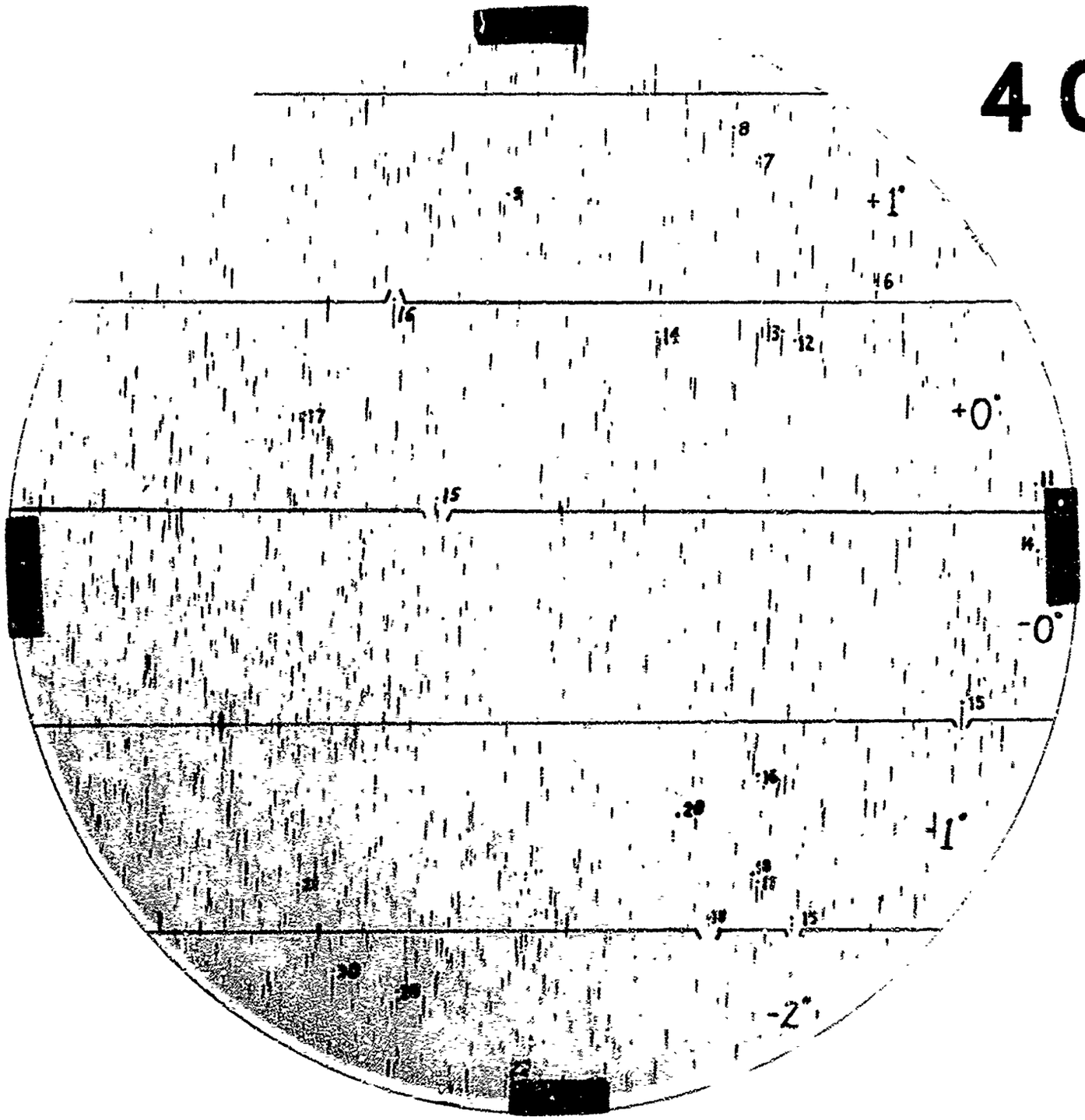
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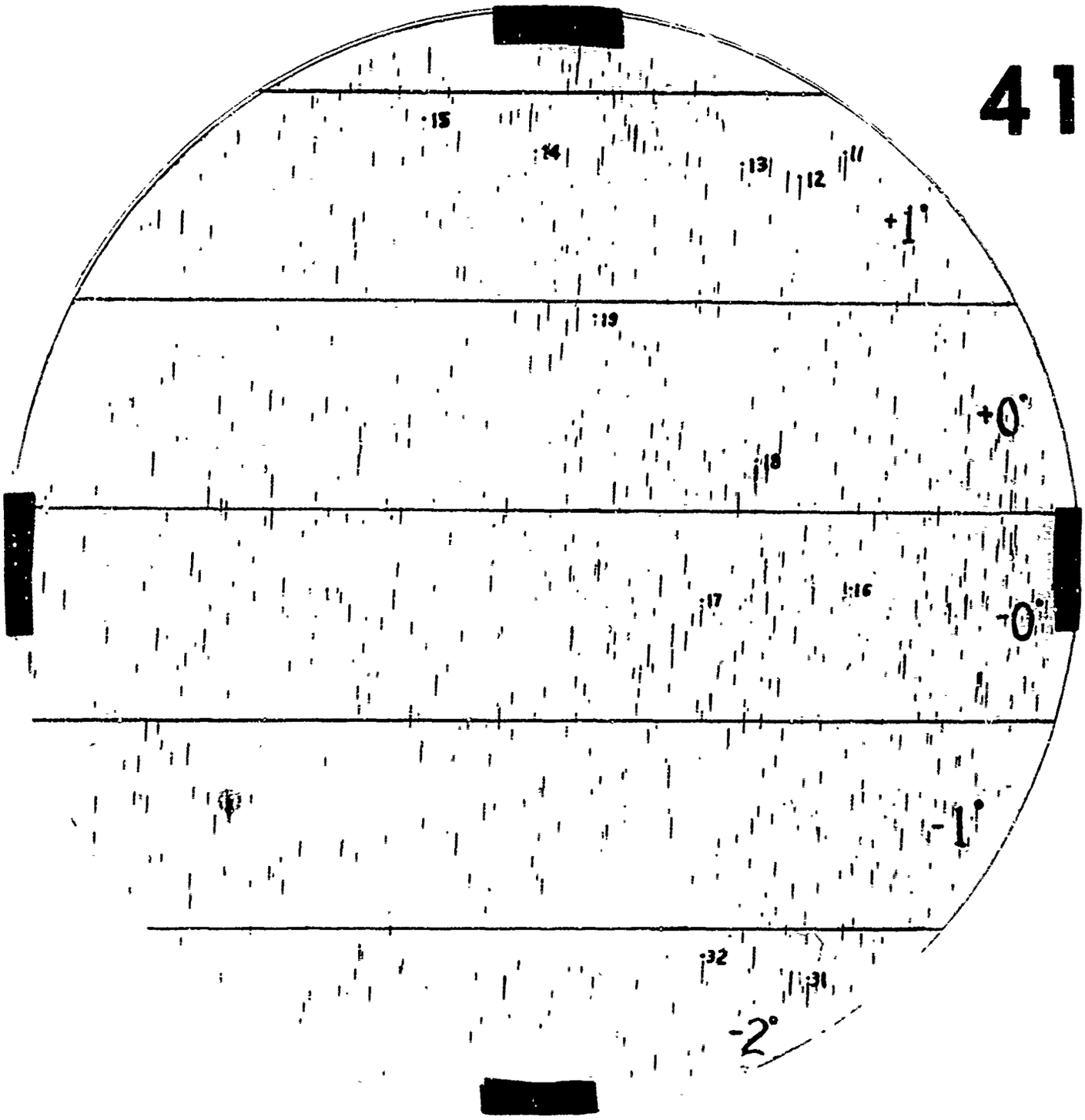
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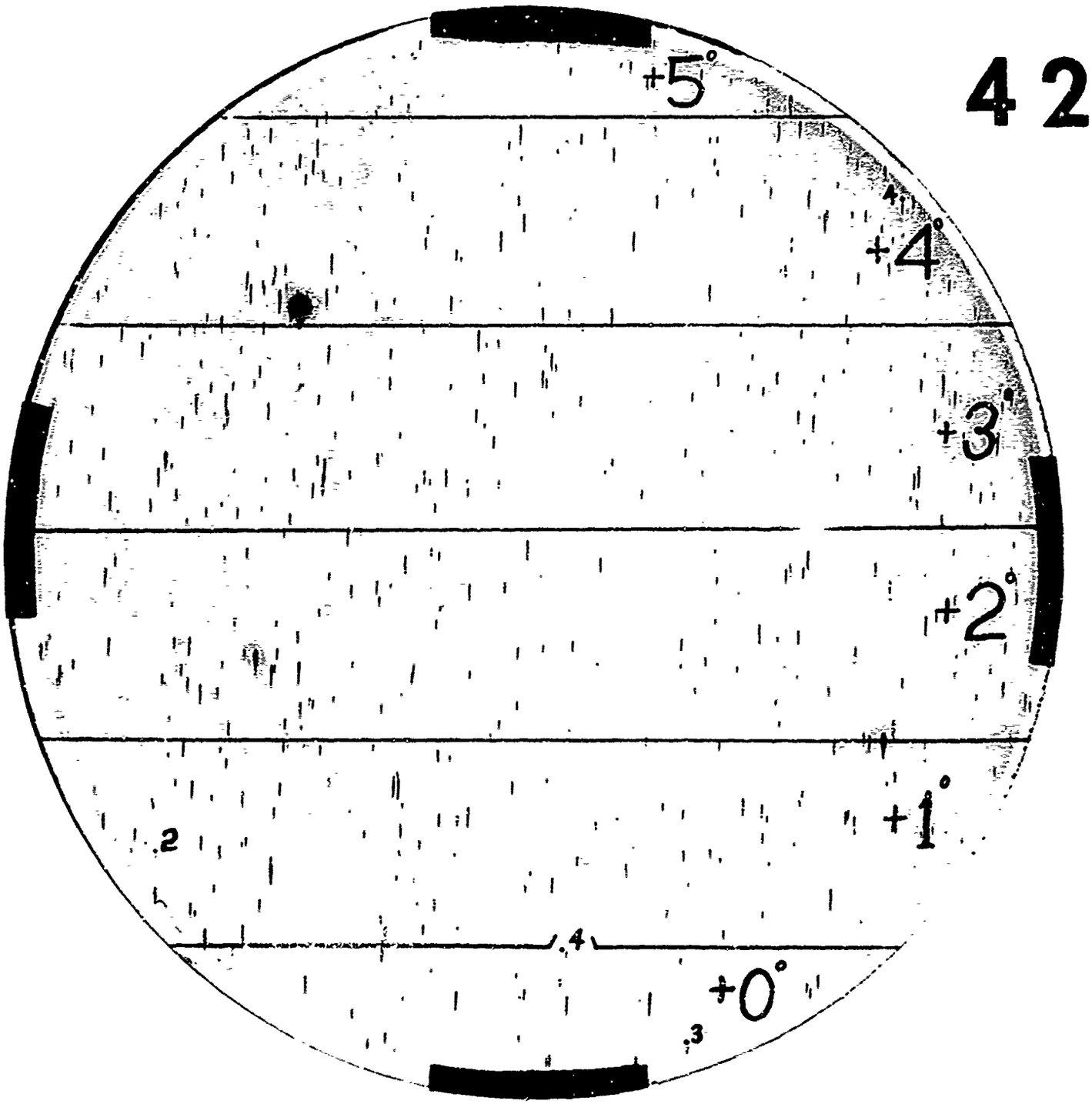
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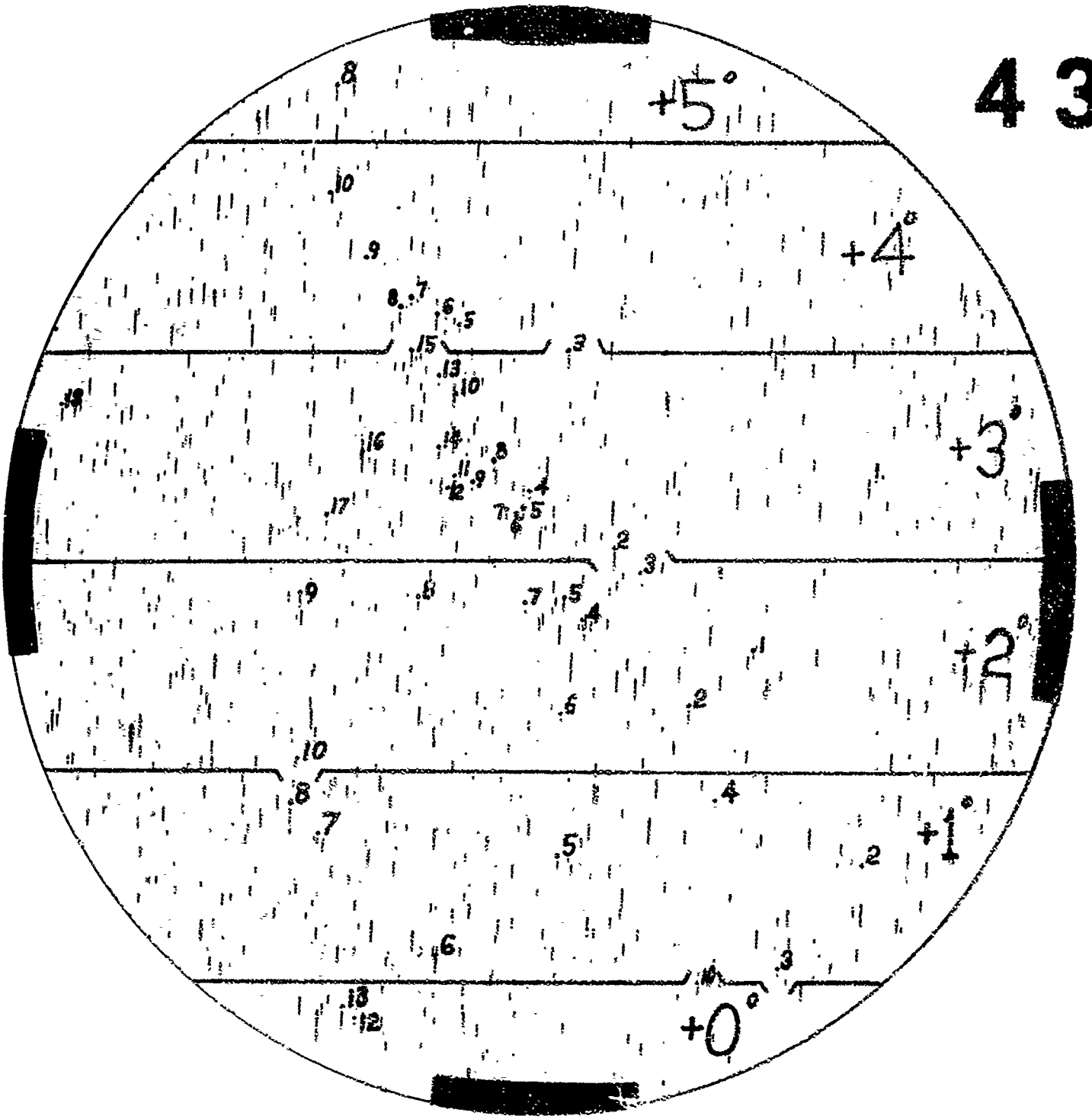
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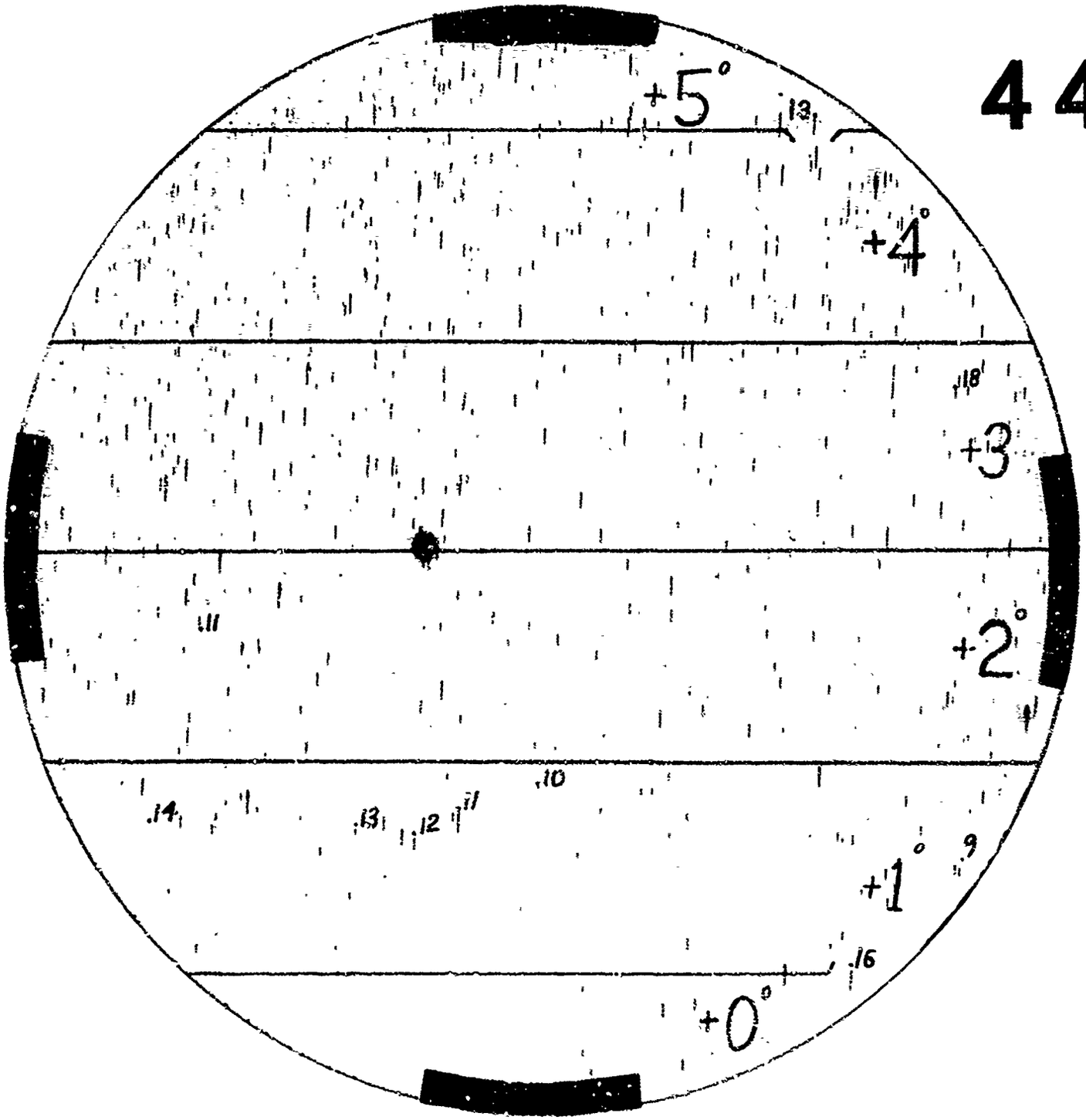
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+3
+2°
+1°
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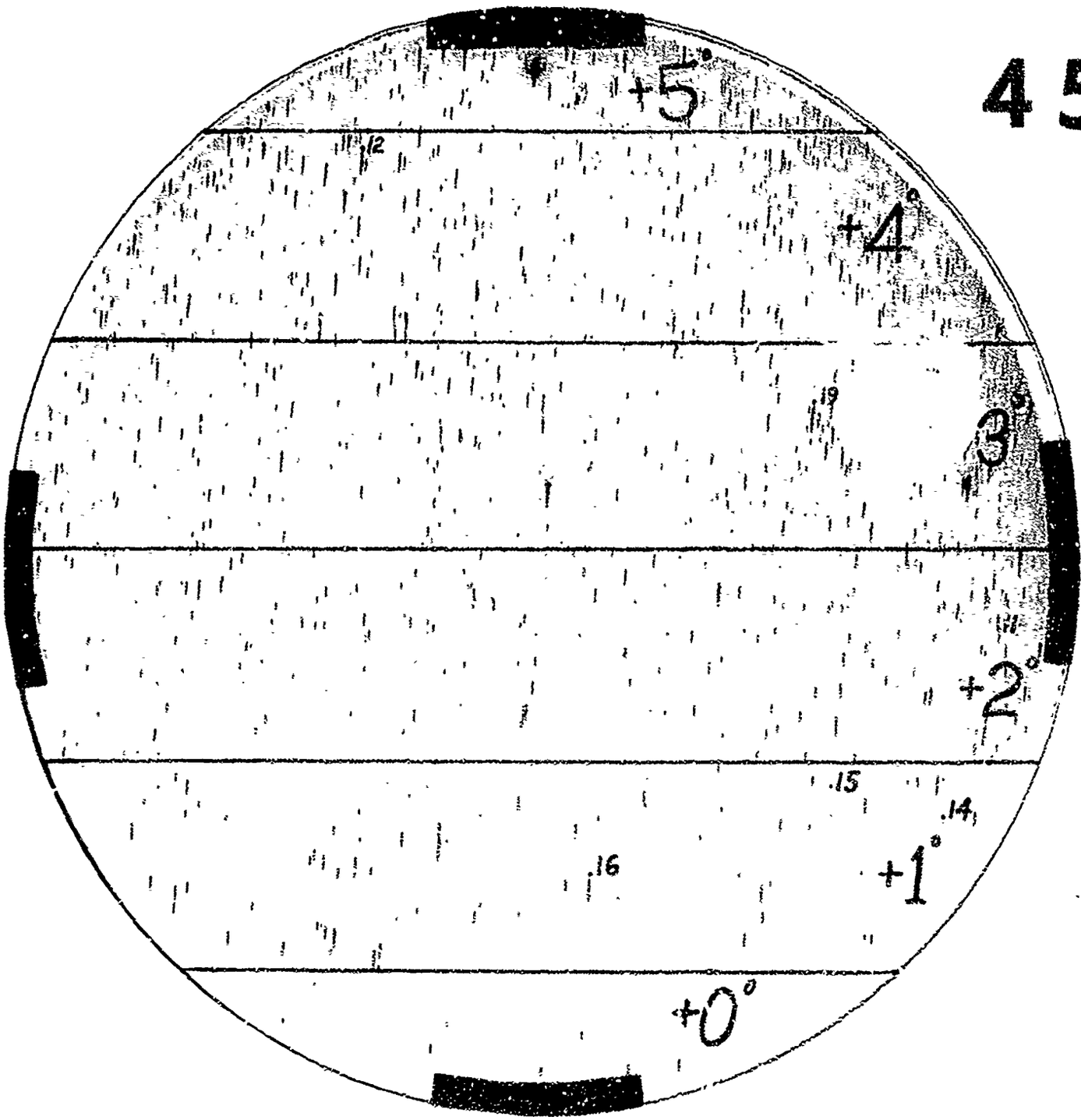
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+4°
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+2°
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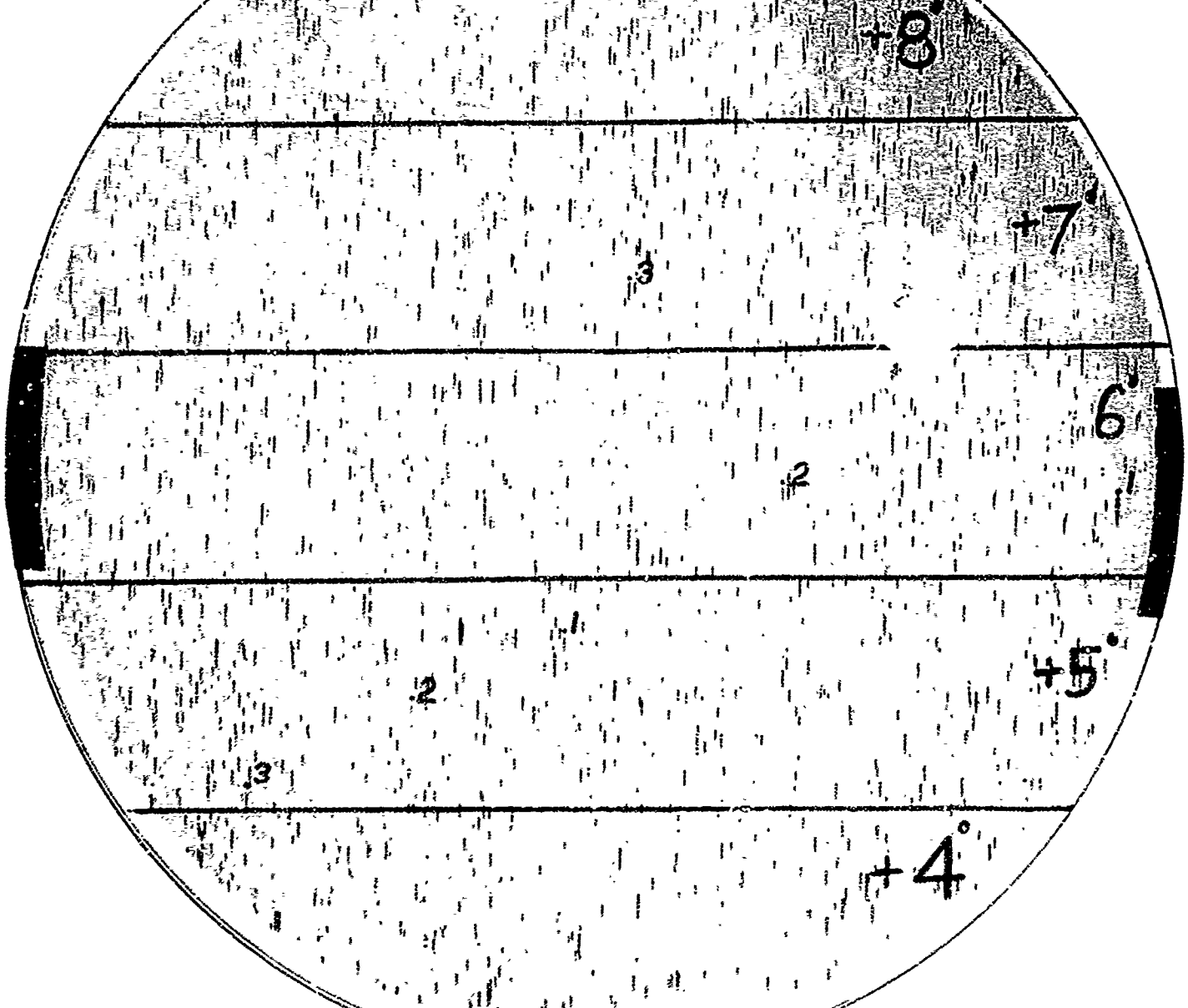
16
+1°
+0°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+7°
+6°
+5°
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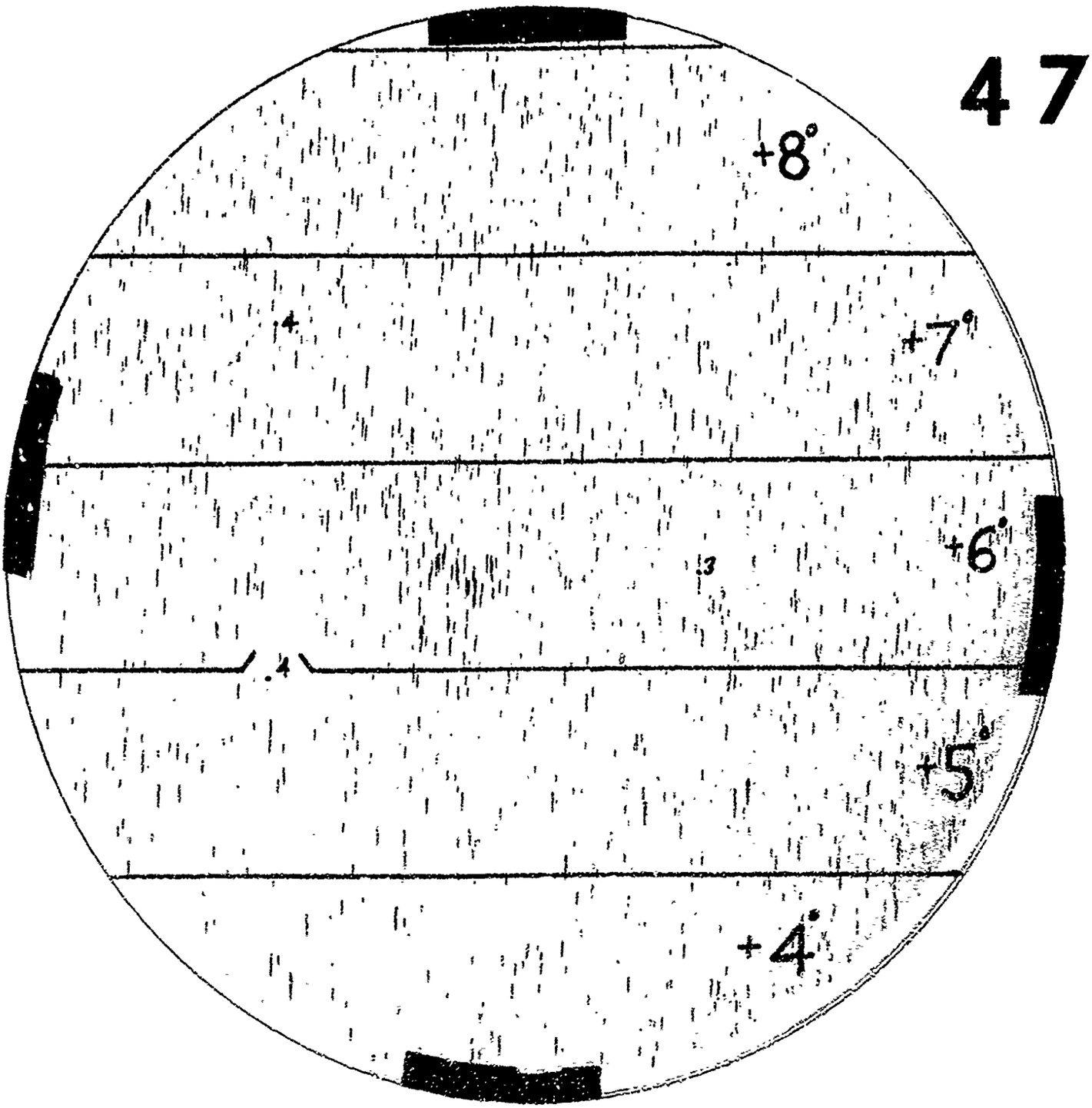
2
3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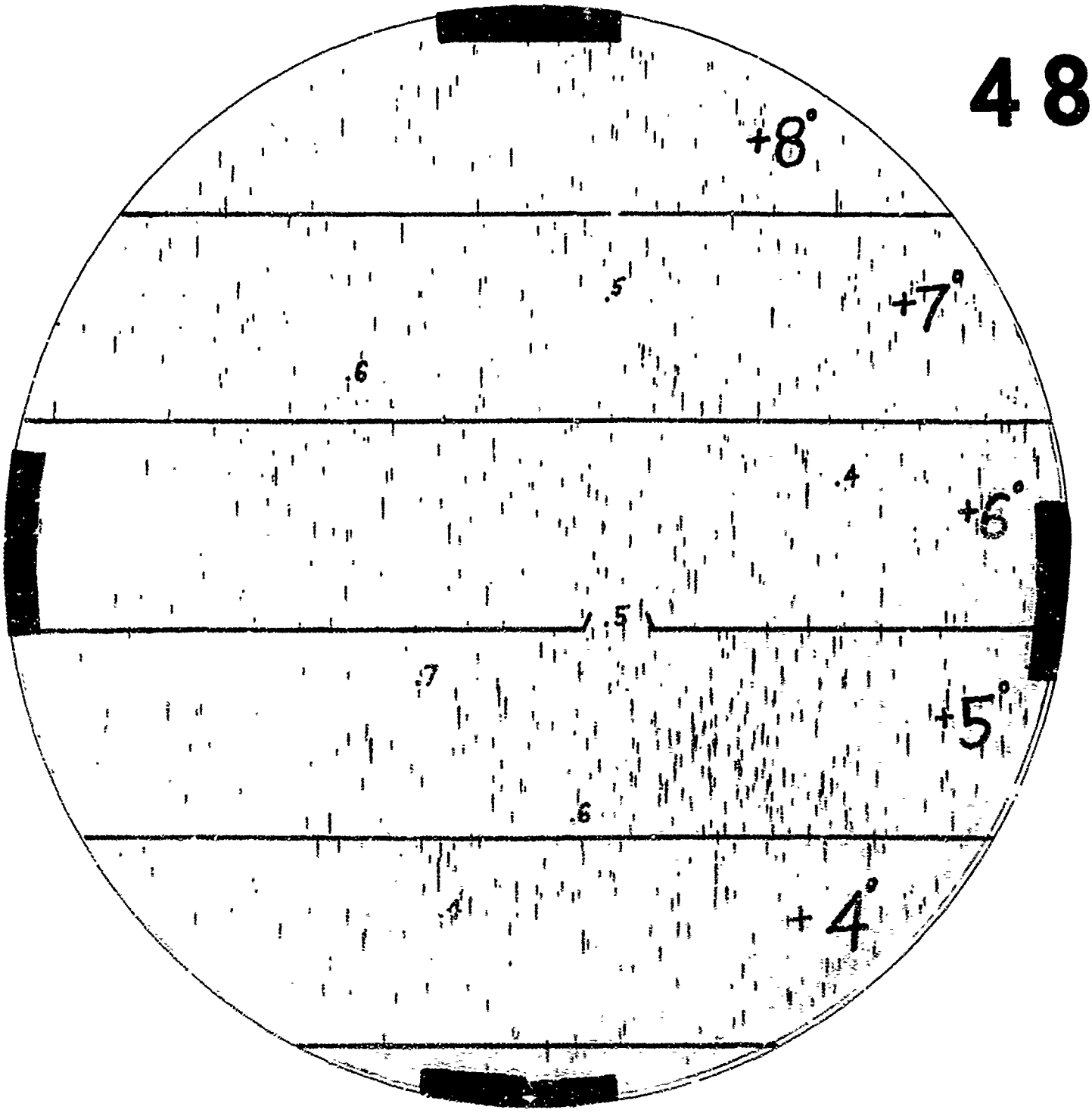
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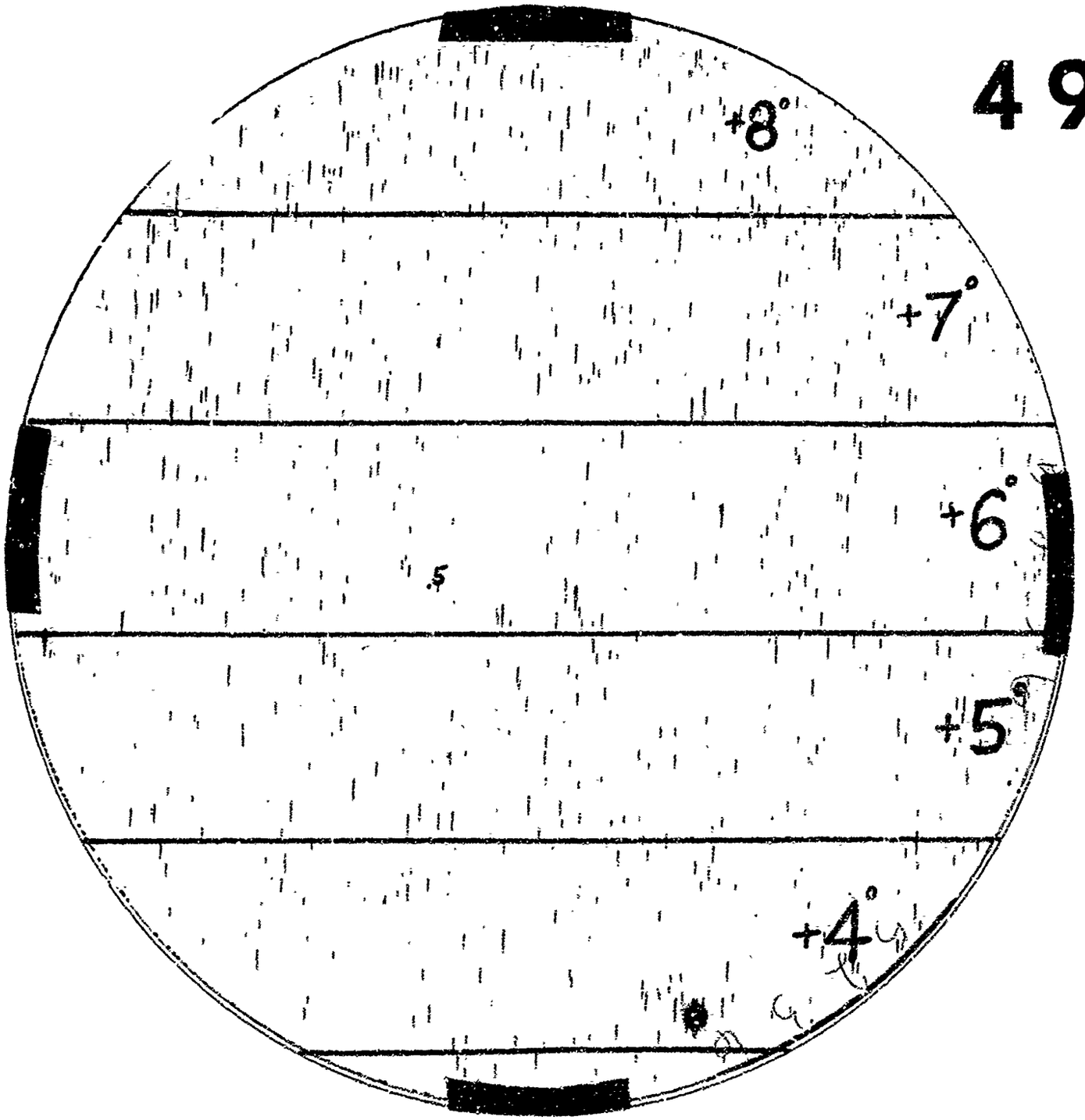
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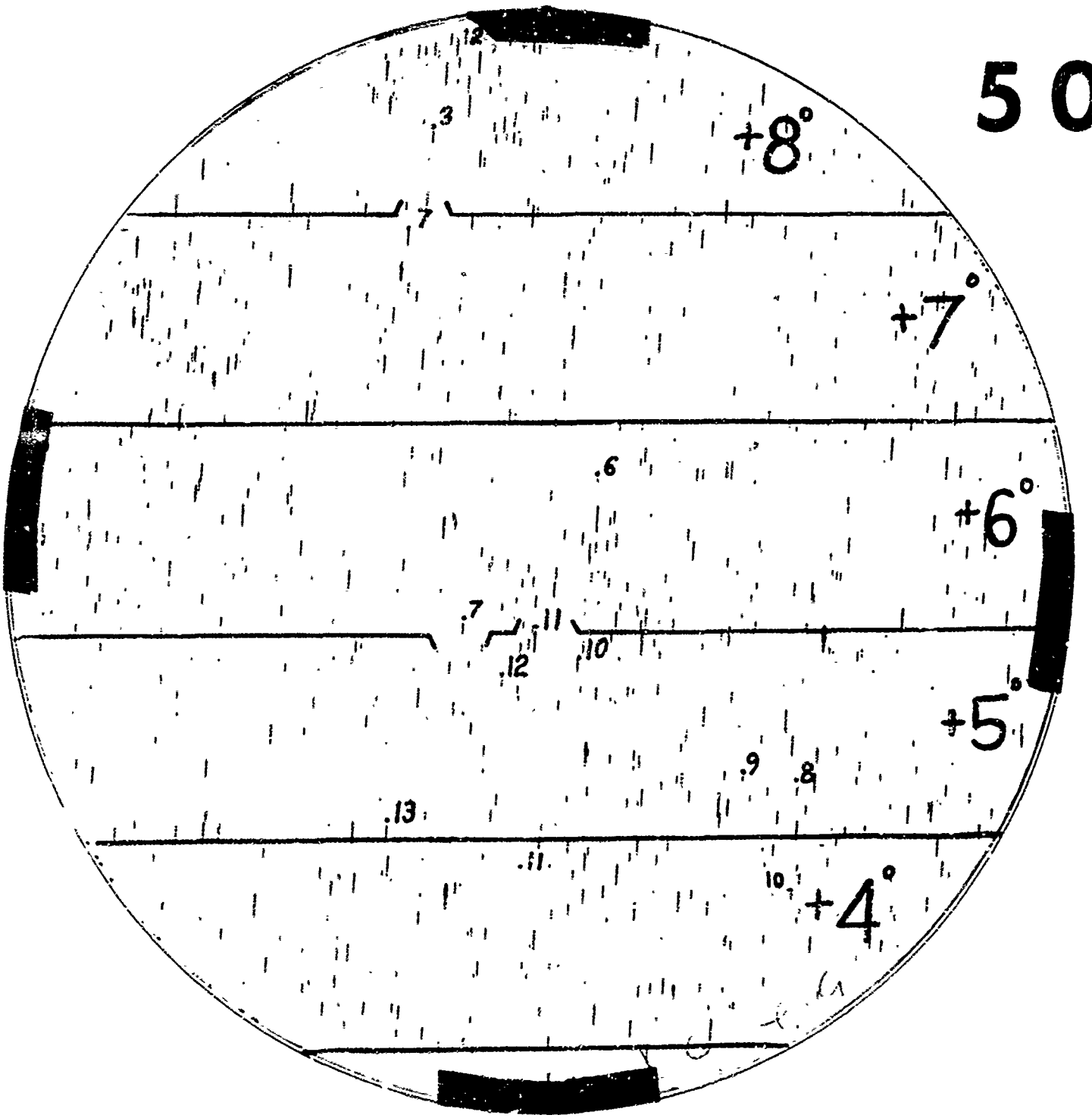
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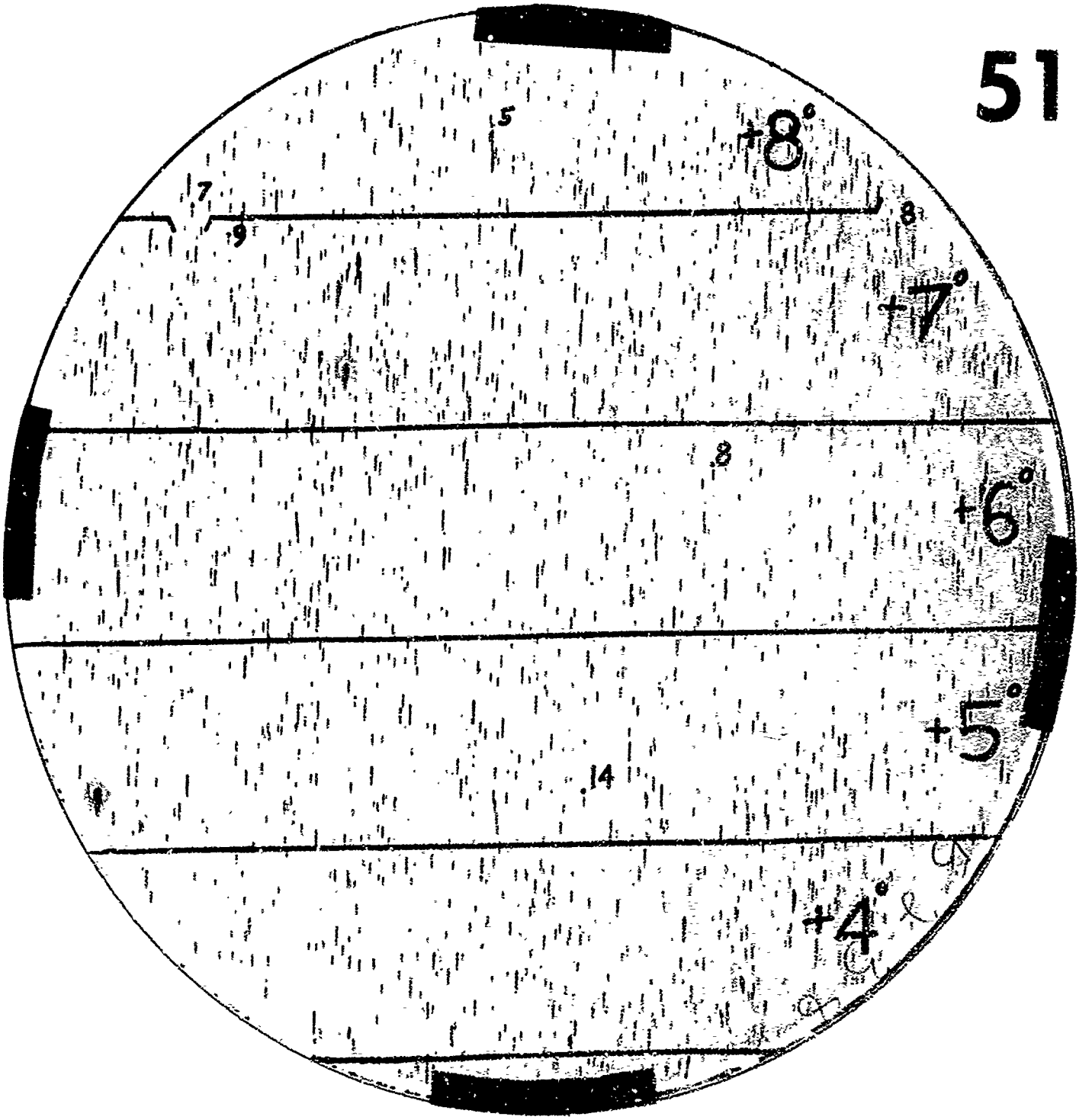
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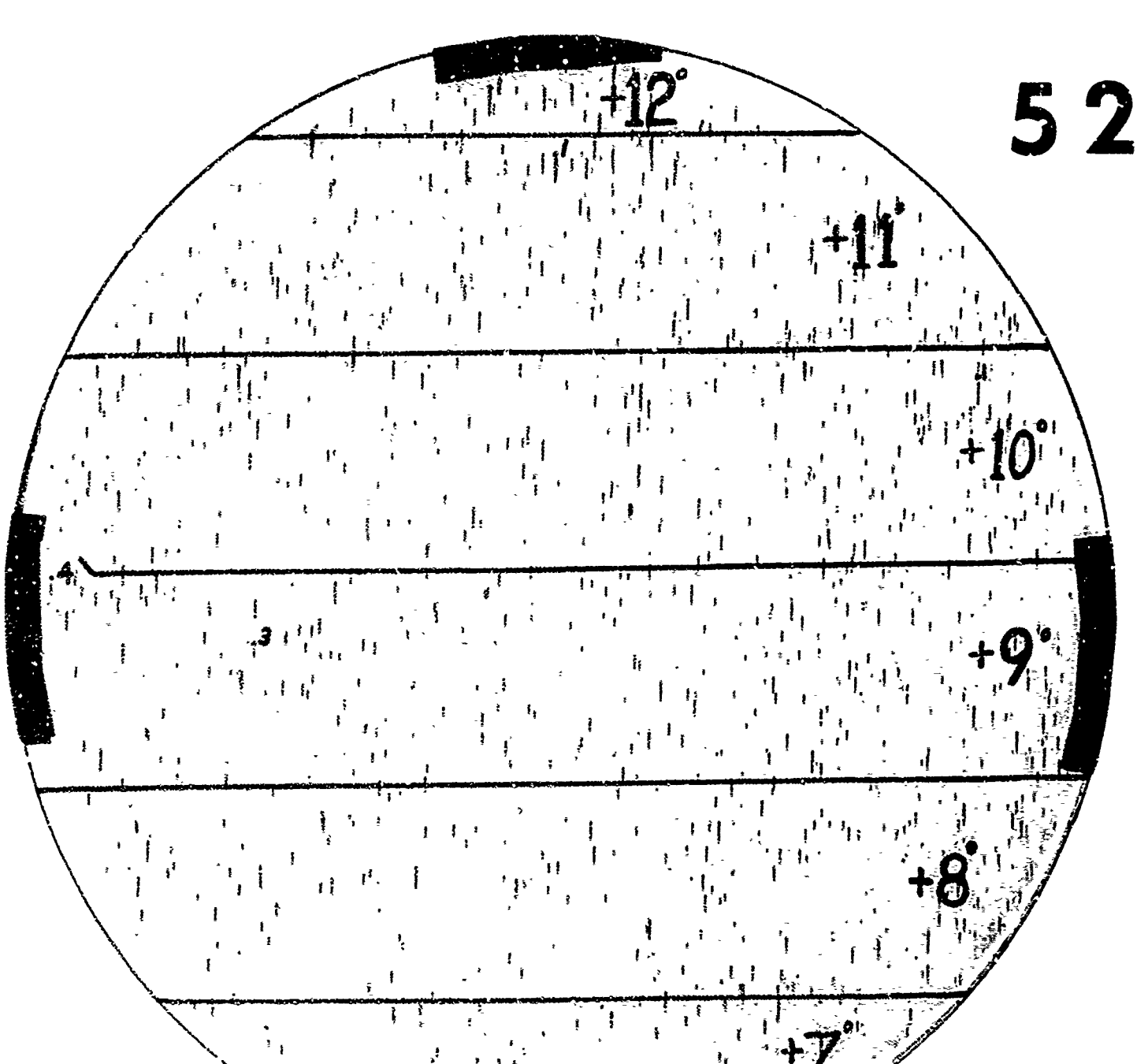
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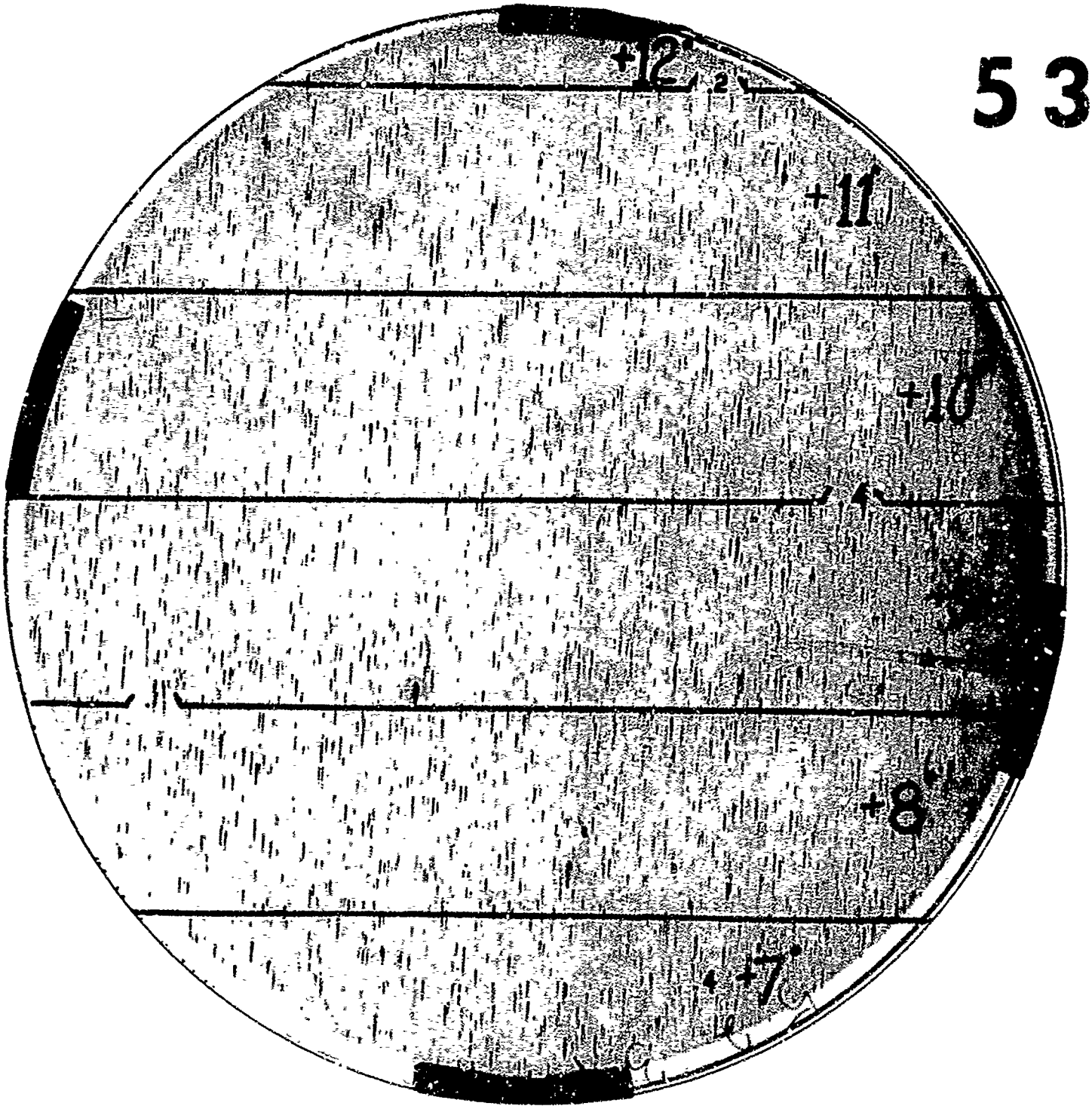

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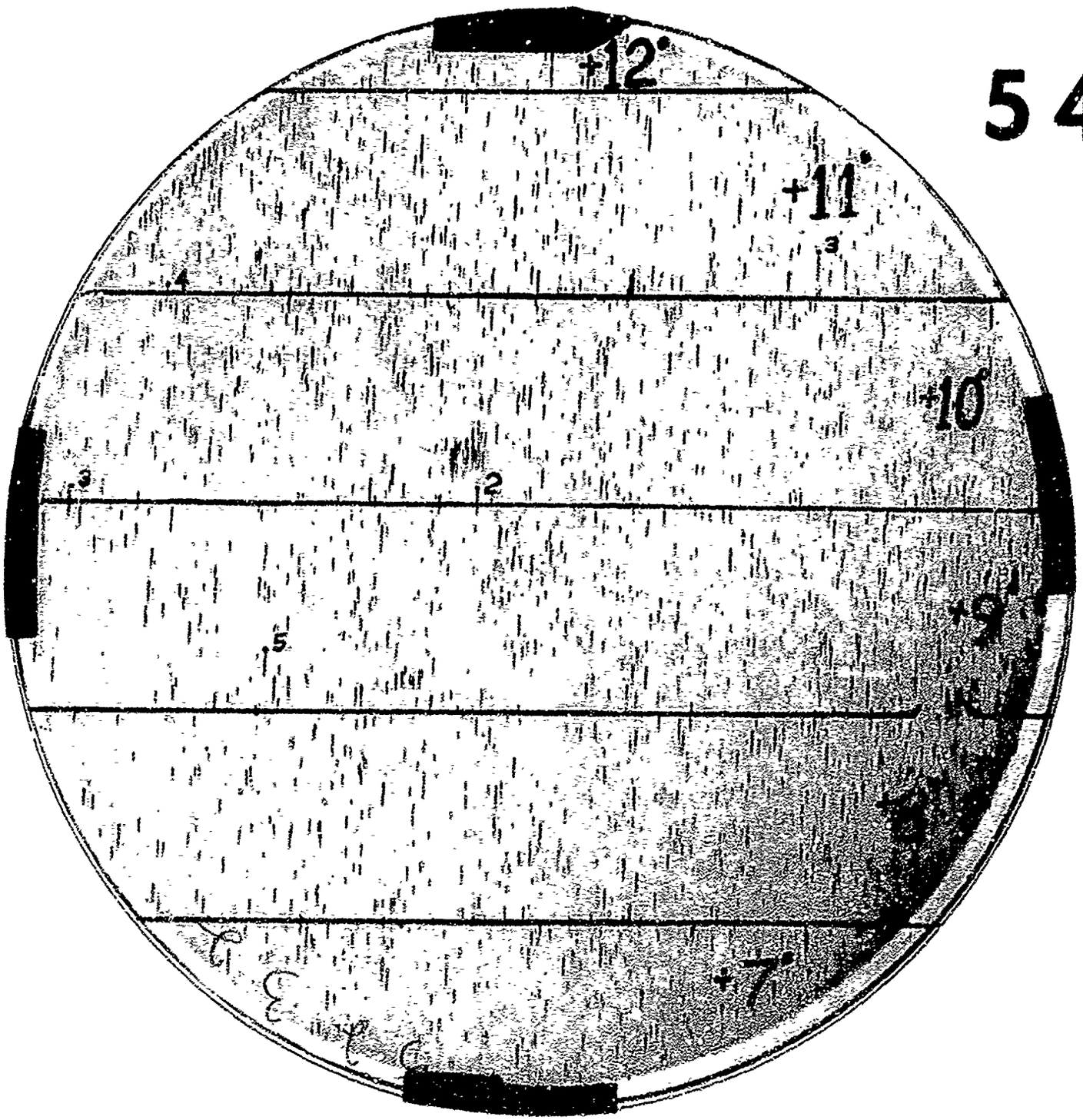

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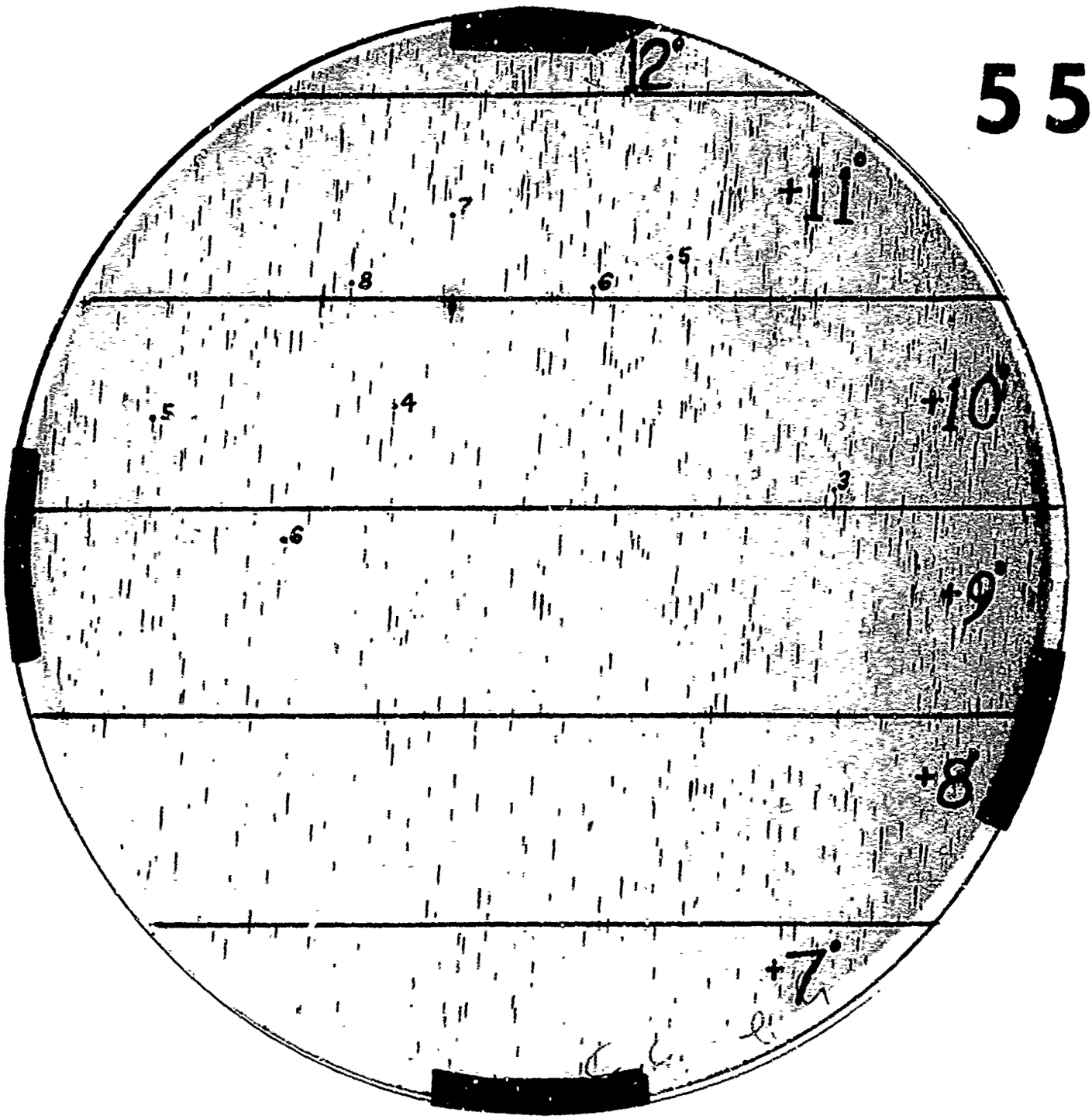

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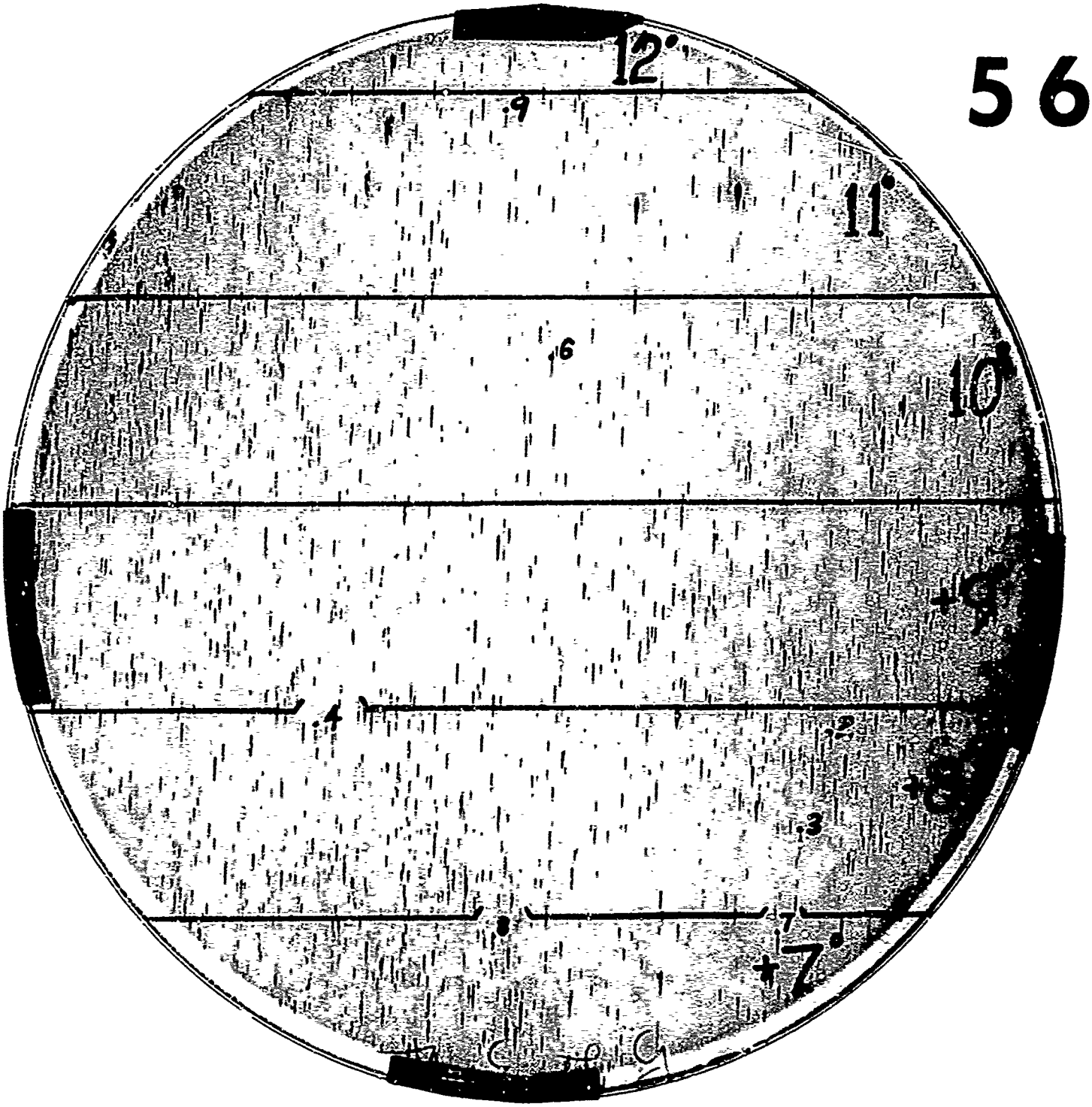

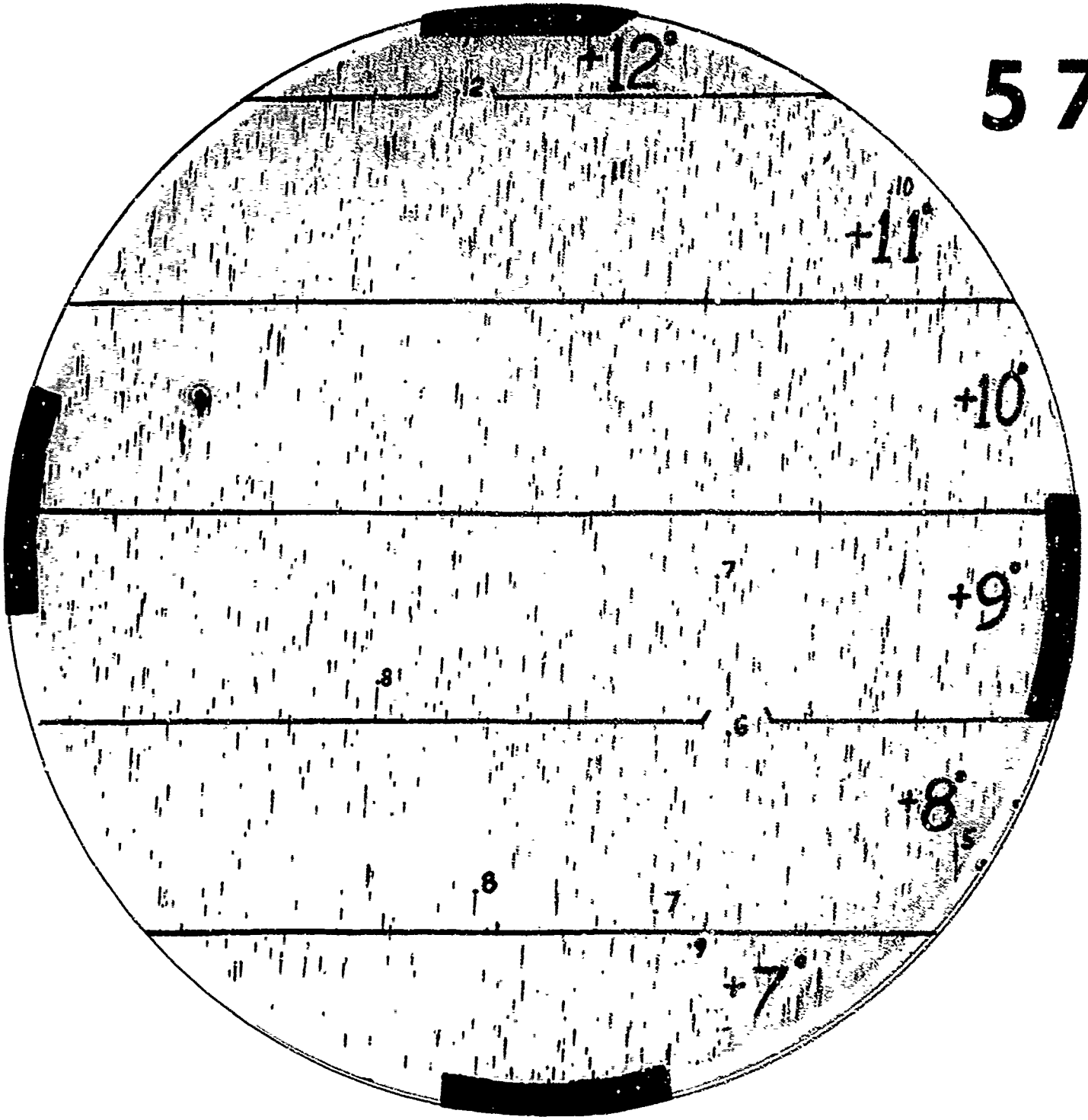
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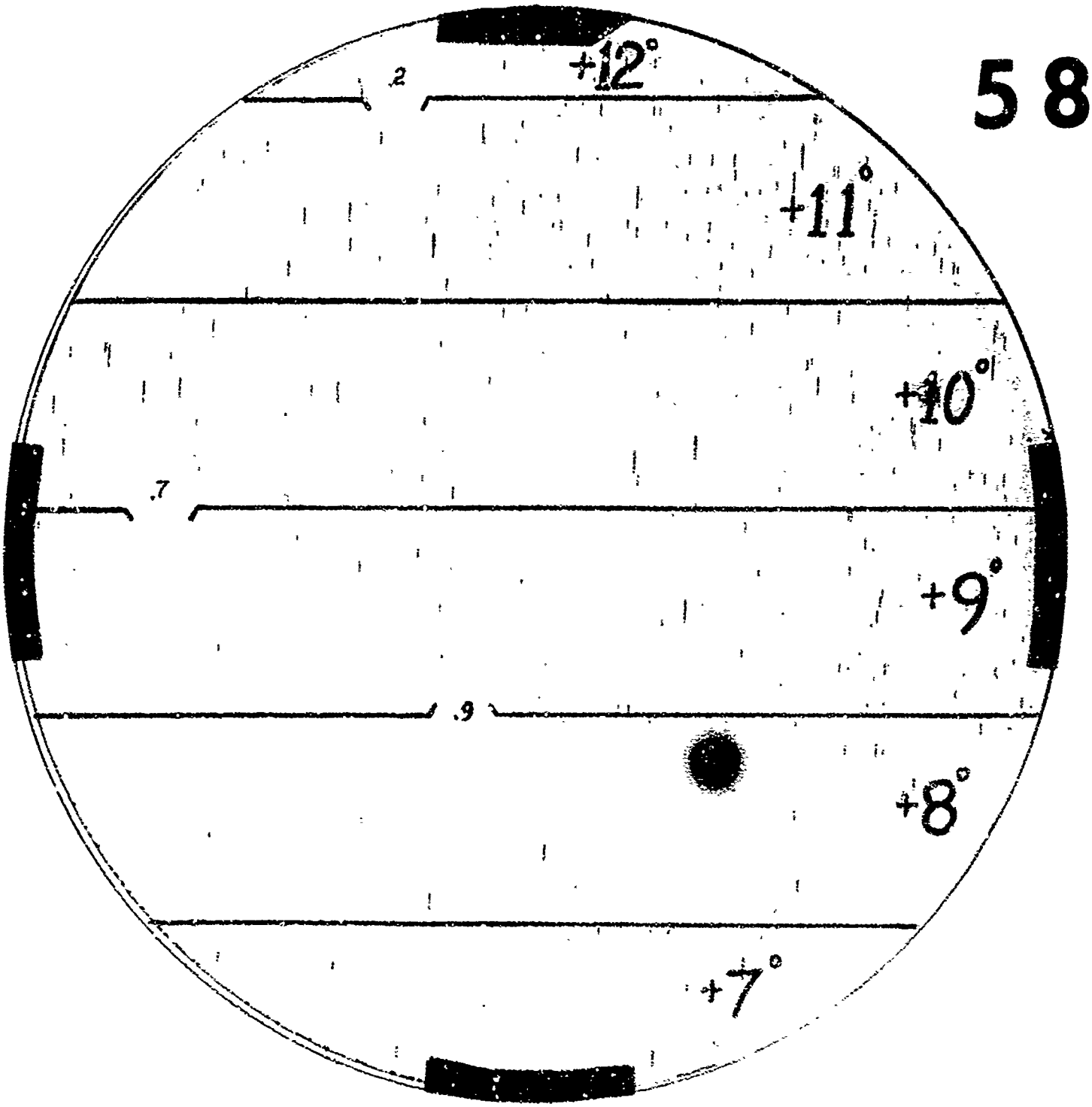
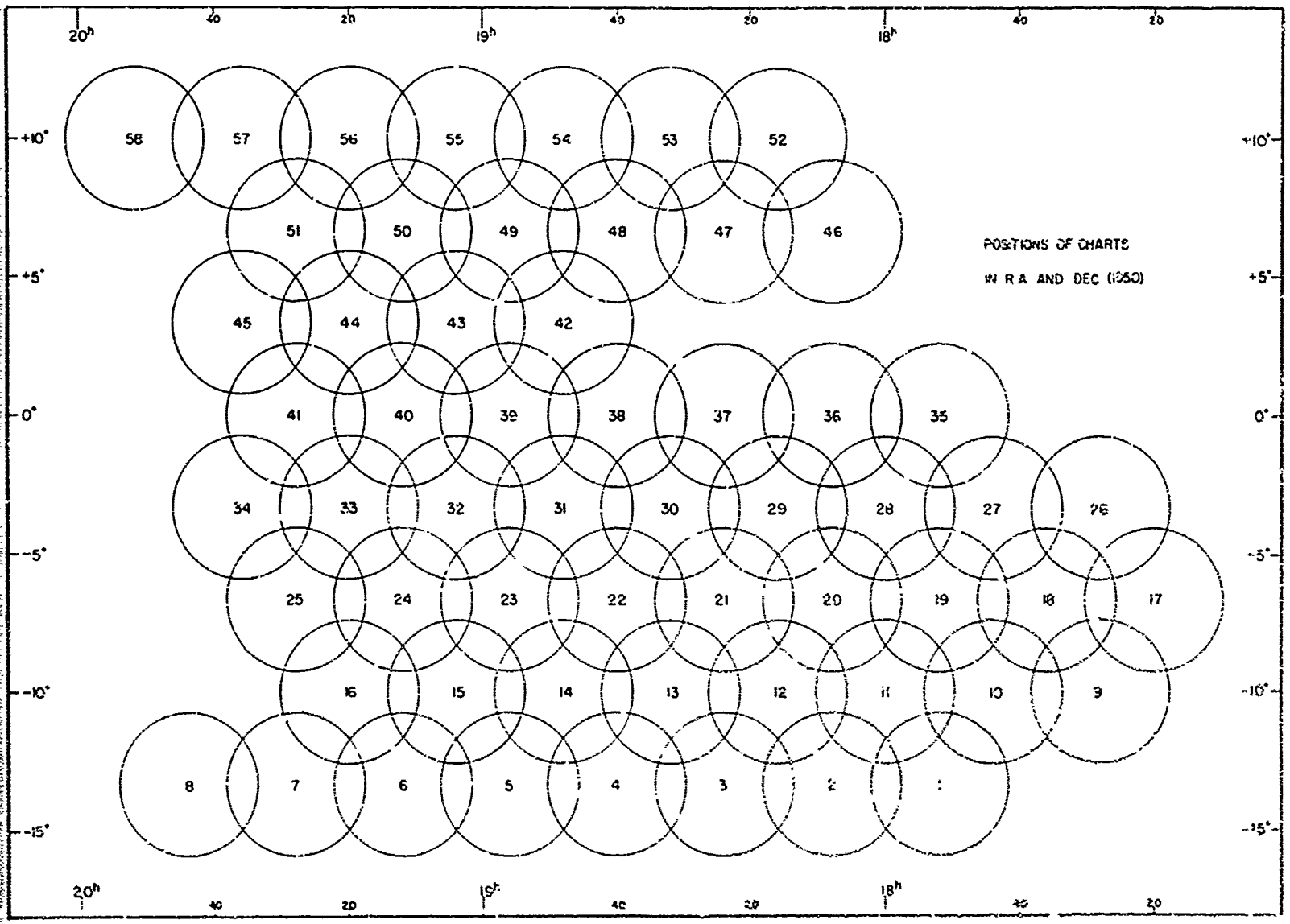
+7°

58




20h
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0°
-5°
-10°
-15°
58 57 56 55 54 53 52
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45 44 43 42
41 40 39 38 37 36 35
34 33 32 31 30 29 28 27 26
25 24 23 22 21 20 19 18 17
16 15 14 13 12 11 10 9
8 7 6 5 4 3 2 1
POSITIONS OF CHARTS
IN R A AND DEC (1950)