

**ALBANY ZONE
CATALOGUES FOR
THE EPOCH 1900**

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Albany zone catalogues for the epoch 1900 by Lewis Boss & Arthur J. Roy

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LEWIS BOSS & ARTHUR J. ROY

**ALBANY ZONE
CATALOGUES FOR
THE EPOCH 1900**

ALBANY ZONE CATALOGUES

OF 8276 STARS BETWEEN -20° AND -41°

AND

OF 2800 STARS BETWEEN -2° AND $+1^{\circ}$

FOR THE EPOCH 1900

Astron
Folios
~~A~~

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ALBANY ZONE CATALOGUES FOR THE EPOCH 1900

PREPARED AT THE DUDLEY OBSERVATORY,
ALBANY, NEW YORK

CATALOGUE OF 8276 STARS BETWEEN 20° AND 41° OF
SOUTH DECLINATION

By LEWIS BOSS

CATALOGUE OF 2800 STARS BETWEEN 2° OF SOUTH
AND 1° OF NORTH DECLINATION

By ARTHUR J. ROY

CATALOGUES CONTAINING STANDARD STARS AND
MISCELLANEOUS STAR POSITIONS



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PREFACE.

The trend of the investigations accomplished by Professor Lewis Boss previous to undertaking this catalogue led him to believe that the time had finally arrived when it would be possible to determine stellar proper-motions with a sufficient degree of refinement to shed some light on the problems of the structure of the sidereal system and the determination of the motion of the sun in space.

Out of years of accumulated thought on these problems, a general plan of action began to crystallize, so ambitious in scope as to seem impracticable with the resources at his disposal. The plan consisted in collating all the testimony of observation which was available in respect to the stars which were known to be in sensible motion; to supplement this with further observations of his own, or those arranged for elsewhere; and then to determine from all this evidence the problems which it was designed to solve.

Because of the magnitude of the undertaking, in the formulation of plans he was governed by two rules: first, that the program of work should be organized in distinct, successive steps, in such a manner that each should contribute to the problem sufficient in value to warrant the undertaking of it in and for itself; second, that he should not in advance promise to accomplish more than one of these steps. In this way he hoped to escape the charge of undertaking what some might consider manifestly too great a task for his small resources; and, on the other hand, he had the advantage of working along the lines of a systematic, connected, and cumulative program with all the incentive and inspiration resulting from a lofty aim.

As a preliminary step in this program he began observations upon stars, suspected of sensible motion, in the belt of sky between 20° and 41° south of the equator, with a view to the more accurate determination of their motions. The field chosen was one practically inaccessible to the principal observatories of Europe, owing to their more northerly latitude. The observations were strictly differential. Because of the weakness of the standard stars within the chosen region it became necessary to determine their positions with greater accuracy, and as a result the investigation described in the *Astronomical Journal*, No. 499, was undertaken. To the program already outlined, there was finally added a list of stars designed to include all stars to the eighth magnitude lying within the zone; but this requirement in the end was not strictly adhered to.

Though the observations were prosecuted with vigor and the reductions practically finished nearly twelve years ago, the catalogue was not published for lack of funds, a deficiency which has been overcome by the generous action of the Carnegie Institution of Washington in accepting the burden of printing.

All of the observations in Part I were taken by Professor Lewis Boss. He was ably and enthusiastically assisted by Arthur J. Roy and William B. Varnum, whose duty it was to make the microscope readings on the circle. They also largely reduced the observations in an efficient manner. The checking of the final places

and the preparation of the catalogue for the printer were carefully performed by Mr. Roy, who also supervised the search for large proper-motions.

The second part of the catalogue consists of a list of stars contained within the zone -2° to $+1^{\circ}$ observed, reduced, and prepared for the printer by Arthur J. Roy. Those stars were selected for which the catalogue, then in preparation at Nikolaief, would fail to furnish material for proper-motion determinations.

The third part consists of the standard star positions observed in determining the system upon which the zone observations are based and a number of miscellaneous star positions largely derived for comet comparisons. The designations of the standard stars are printed in italics. These were all observed by Professor Lewis Boss.

The fourth part consists of miscellaneous stars observed by Mr. Roy.

The appendix contains a list of the proper-motions amounting to more than $10''$ a century, derived from a comparison of available material with the positions given in Part I.

The following introduction to the catalogue has been prepared by Arthur J. Roy.

BENJAMIN BOSS,
Director.

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