

## A NEW EDITION OF THE WASHINGTON VISUAL DOUBLE STAR CATALOG

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**Abstract.** A new edition, dated 1996, of the Washington Visual Double Star Catalog, is now completed and ready for distribution. This edition includes more than 78 000 pairs, and represents a complete revision of the 1984 version, including not only updated astrometric information, but also many new magnitudes and spectral types. The Notes have been extensively altered and expanded and the References revised. This contribution describes the new catalog.

**Key words:** stars: binaries – databases

### 1. INTRODUCTION

Since the time of C. Mayer in 1781, catalogs of visual double stars have been issued at irregular intervals, and about 1880 S. W. Burnham began a systematic collection of data, which has been more or less continuously maintained since that time. Our efforts began with the transfer of the Lick data base in 1965. In 1977 we produced a new tape labelled “Index Catalogue, 1976.5”, which listed new discoveries since the 1963 Lick version by Jeffers, van den Bos and Greeby, and also included some corrections. This was followed by a more extensive compilation in 1984, which updated much of the astrometric information, as well as the Notes and References, and, of course, included new corrections. We are now able to announce the completion of the “Washington Visual Double Star Catalog, 1996.0”, which represents an even more extensive revision and augmentation of the 1984 version. This is described in detail below.

## 2. DESCRIPTION

1. A single position is given, intended to represent the epoch J2000 whenever possible, rounded to the nearest 0.1m in Right Ascension, and nearest minute in Declination. Proper motion corrections are made when significant. One should note, however, that positions for many pairs are only crudely known.
2. Numbered discoverer designations have been provided for nearly all objects, because they are the only unique identifiers available for all pairs. Durchmusterung identifiers exist only for a fraction of the pairs, and positional designators are likely to result in later confusion for pairs with currently inaccurate positions.
3. Many component designations have been revised.
4. Information regarding dates of observation, initial and last position angles and separations and total number of observations was revised for the 1984 edition, and has been kept current since that time.
5. Whenever possible, Johnson *V* magnitudes are quoted. If, in our judgement, the magnitude appears to be a combined value, we have consulted other sources to determine the best magnitude difference, and have then applied this to determine individual magnitudes.
6. When available, two-dimensional MK spectral types are used. These are both from the Michigan Spectral Survey and other sources. For other pairs we use HD types, or whatever miscellaneous data are available.
7. Proper motions and positional data are from the ACRS and the PPM when available. Otherwise, they come from a variety of sources.
8. Revisions to the Notes have continued, aiming to make them more astrophysically relevant. Some of the less significant information has been coded (for example, synonymous observer discovery codes).
9. Additions and corrections to the References continue to be made, and are incorporated in the final product.

### 3. CONTENTS

Total pairs in the Index Catalog:	78 096
Total means in the Observation Catalog:	451 000

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These means include:

Data in the 1963 Lick Index Catalogue:	164 000
Data added subsequently at Lick:	15 000
Total	179 000
Data added for the WDS 1984 version:	207 000
Total	386 000
Data added for the WDS 1996 version:	65 000
Total	451 000

We expect the new catalog to be available shortly from the data centers, and also on the World Wide Web.