

FLEXURE OF THE BELGRADE VERTICAL CIRCLE IN THE PERIOD 1981–1996

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SUMMARY: Presented in the paper are results of 377 sets of measuring of Belgrade Vertical Circle's flexure in the period 1981-1996. The determination was carried out by means of two collimators according to standard procedure. The results are illustrated graphically. The mean flexure value, resulting from these determinations is by $0''.75$ less than the one in the period 1976-1980.

1. INTRODUCTION

The launching of the regular observations of stars with Belgrade Vertical Circle (BVC) in 1976 marked also the beginning of relatively regular determination of the horizontal flexure component of that instrument. The flexure determination proceeded with the aid of two collimators mounted horizontally in the east-west direction inside the BVC pavilion, using standard method.

The results obtained in the period 1976-1980 have already been analysed (Mijatov and Bozhichkovich, 1982; Mijatov and Trajkovska, 1989) and applied at the compiling the Catalogue of Declinations of 307 Bright Stars in the Zone $+65^\circ$ to $+90^\circ$ (BCAD) (Mijatov *et al.* 1991).

In the period 1981-1996 the present author began also regular observations of outer planets (Mars, Jupiter, Saturn, Uranus and Neptune), conjointly with the corresponding fundamental stars. In view of the intended elaboration of a catalogue of absolute declinations of 212 FK4 stars in the zone -30° to $+90^\circ$ (preliminary results being given in Bozhichko-

vich, 1991, 1996), the observations of fundamental stars were intensified in the years 1983-1985, independently of those of planets. In addition to these observations, practically during every observing night (during 315 nights, which is above 98% of their total) were executed 377 sets of flexure determinations, yielding 754 single values of the horizontal BVC flexure component.

All of these flexure values are plotted in Fig. 1 according to dates on which they were obtained (particular years disregarded). Fig. 2 illustrates the dependence of flexure on temperature. An analysis of these results is under way.

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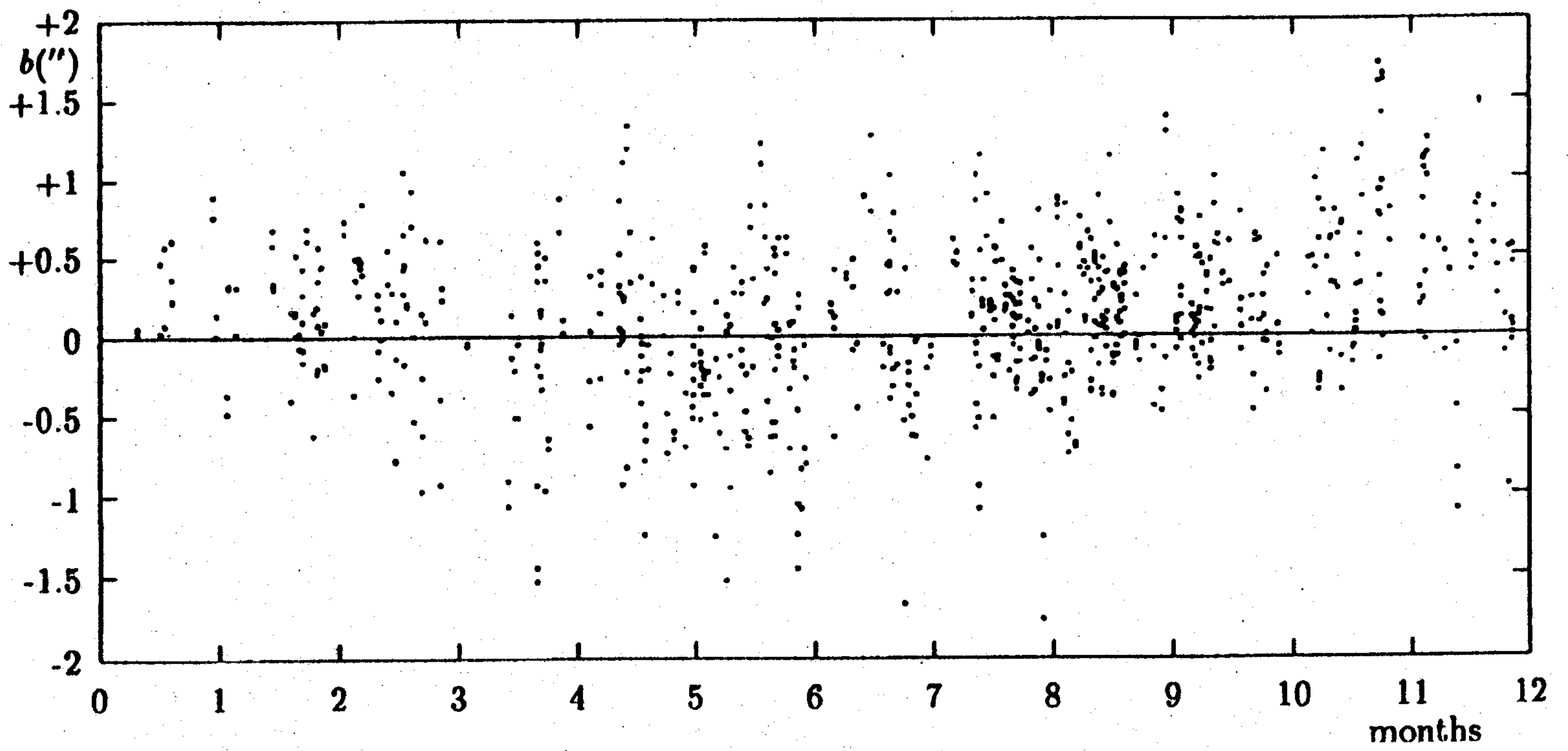


Fig. 1. 754 values of BVC flexure according to dates on which they were obtained, years disregarded.

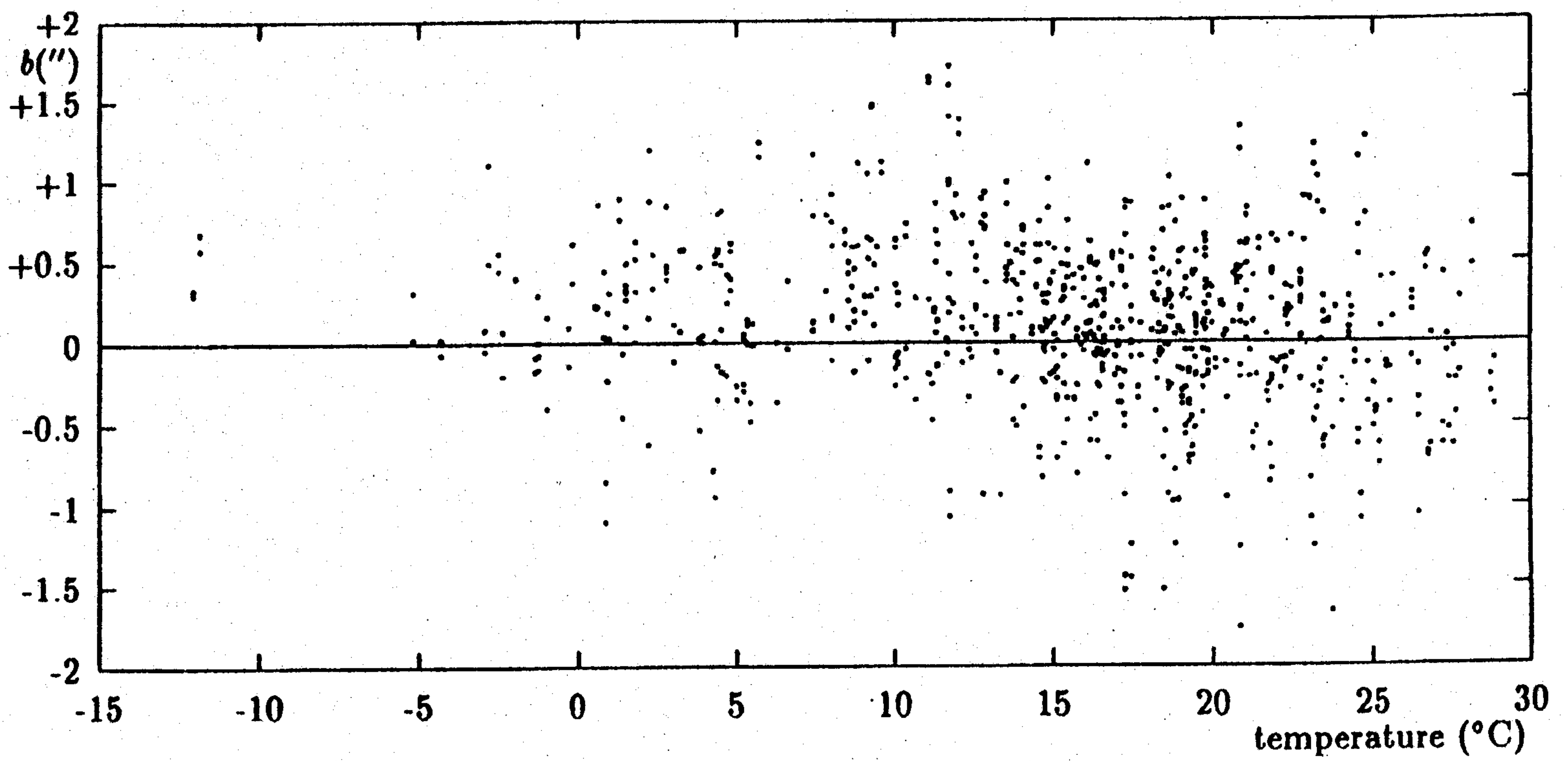


Fig. 2. 754 values of BVC flexure versus temperature.

REFERENCES

Bozhichkovich Dj.: 1991, *Astophys. Space Sci.* 177, 278.

Bozhichkovich Dj.: 1996, *Bull. Astron. Belgrade*, 154, 41.

Mijatov M. and Bozhichkovich Dj.: 1982, *Bull. Obs. Astron. Belgrade*, 132, 3.

Mijatov M., Teleki G., Bozhichkovich Dj. and Trajkovska V.: 1991, *Bull. Obs. Astron. Belgrade*, 143, 1.

Mijatov M. and Trajkovska V.: 1989, *Bull. Obs. Astron. Belgrade*, 140, 43.

САВИЈАЊЕ БЕОГРАДСКОГ ВЕРТИКАЛНОГ КРУГА У ПЕРИОДУ 1981–1996.

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Претходно саопштење

У раду су графички (по датумима и температурама) приказане 754 вредности савијања Београдског вертикалног круга. Одређивања су обављена у периоду 1981–1996. Укупно је реализовано

377 серија мерења уз помоћ два хоризонтално постављена колиматора. Средње савијање из ових одређивања је мање за око 0".75 него у периоду 1976–1980.