

13. Evolution of the Li, Be, B abundances in the Galaxy.
14. The Li, Be, B synthesis in the standard homogeneous Big Bang model.
15. A possibility of Li, Be, B synthesis for unhomogeneous models.

At the end, several details of making at 6-m telescope of spectroscopy of Li, Be doublets are briefly reported.

Acknowledgement. This work is supported by Russian Fundamental Research Fund No. 93-02-17196.

PHYSICAL PARAMETERS AND CHEMICAL COMPOSITION OF COMPONENTS OF THE Am-TYPE BINARY SYSTEM RR LYNCIS

L. S. Lyubimkov, T. M. Rachkovskaya

Crimean Astrophysical Observatory, Crimea, p.Nauchny, 334413, Ukraine

ABSTRACT. On the basis of technique developed earlier we analysed composite spectra of the eclipsing binary RR Lyncis, which has been classified as Am-star. The following values of effective temperature were found: $T_{eff}=8020\pm 200$ K for the primary component (the star A) and $T_{eff}=7150\pm 300$ K for the secondary component (the star B). It was shown that the visual magnitude difference between A and B is $\Delta m_v = -1^m.2$. Using evolutionary tracks of different authors we determined the mass M of every component; mean values are $M_A = 1.95 \pm 0.06 M_\odot$ and $M_B = 1.57 \pm 0.07 M_\odot$. These "evolutionary" masses are in good accordance with M_A and M_B values found by Kondo (1976) from an analysis of the radial velocity curves and the light curves. Both components appear to be on the main sequence and they have the age $t = (1.1 \pm 0.3) \cdot 10^9$ years.

Key words: Stars: Binaries, Chemical Compositions

Individual chemical composition of the components was studied; we concluded that it is peculiar for each of them. The component A displays typical features of Am-stars. Here many chemical elements show overabundance,

which has a tendency to increase with atomic number Z . For the component B most of elements is in deficiency, but the trend of chemical anomalies with Z are evident, too. There is the systematic discrepancy in element abundances between B and A, which is equal to -0.6 dex on the average.

For comparison the "middle" chemical composition of RR Lyn was determined by the assumption that a single star is observed. On the whole it appears to be closer to the composition of primary component, nevertheless "middle" abundances are lowered by two times on the average relatively this component.

More detailed version of this work was published elsewhere (Lyubimkov & Rachkovskaya 1993).

References

- Kondo M.: 1976, *Ann. Tokyo Astron. Obs.*, Second Ser., **16**, 1.
- Lyubimkov L.S., Rachkovskaya T.M.: 1993, in: *Peculiar Versus Normal Phenomena in A-Type and Related Stars* (eds. M.M. Dworetzky, F.Castelli, and R.Faraggiana), *A.S.P. Conf. Ser.*, **44**, 192