

Search for magnetic stars among young Herbig Ae/Be stars

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Abstract.

An investigation of a sample of young stars with different temperatures, having remnant of gaseous-dust envelopes has shown that they are located near the zero-age main sequence on the Hertzsprung-Russel diagram. Five of these stars turned out to be chemically peculiar magnetic He-rich and He-weak type stars. Among the investigated stars there appeared to be not a single chemically peculiar star of the later types, in spite of the fact that their number exceeds the number of He-rich and He-weak stars. We suppose that chemical anomalies in such stars arise just before they evolve to the main sequence.

Work has been started to detect magnetic fields and chemical anomalies in Herbig Ae/Be stars. A helium excess in the star HD 53367 has been detected, however no magnetic field has been found with any assurance. No significant magnetic field in another Herbig Ae/Be star, HD 250550, has been found either.