signatures in extrasolar systems. To date, the number of observed cases of exocomet activity is very small, only about 20 events.

Another interesting evidence of this bodies existence is the concept of falling on the star of massive bodies surrounded by miniatmospheres. In the spectra, it causes variable and often short-term changes with a shift to the red part of the spectrum. Another probable evidence of comet activity is the emission of CO, C, and O lines in the millimeter region of the spectrum observed in debris disks by the ALMA and APEX telescopes.

Preliminary results of photometric profiles modeling for exocomet transit across the disk of parent star are presented. A model of dust tail formation based on the Monte Carlo statistical method was used to reproduce probable photometric curves.

HD 121135: FEATURES OF ITS CHEMICAL COMPOSITION

Mishenina T.[1], Usenko I.[1,2], Kniazev A.[3], Kovtyukh V.[1]
[1] *Astronomical Observatory, Odessa National University, Marazlievska 1B,Odessa 65014, Ukraine*
[2] *Mykolaiv Astronomical Observatory, Obsevatorna 1,Mykolaiv 54030, Ukraine*
[3] *South African Astronomical Observatory, P.O. 7925, Cape Town, South Africa*

All the elements that was forming as a result of neutron (n-) capture processes are the keys in the study of early Galaxy enrichment. Their abundances in the stellar atmospheres allow to test the processes of nucleosynthesis. First of all, it is important in the case of the elements of rapid n- capture (r-process) studying that reflects e.g. the merging of neutron stars or the influence of magneto-hydrodynamic supernovae. It is also important for tracking the way of these elements enrichment for the interstellar medium in early galactic times. For the star HD121135 ([Fe/H] = -1.5), the atmospheric parameters and elemental abundances have been determined. Comparison of the elements of rapid and slow n- capture processes distributions represents in this work.

The Europium to Thorium abundances ratio was using to estimate the age of HD 121135.

DETECTION OF EMERGENCE OF MAGNETIC FLUX TUBES IN THE PHOTOSPHERE OF DWARF 61 Cyg A, SUBGIANT β Gem AND GIANT β Gem

S.I. Plachinda[1,2], V.V. Butkovskaya[1,2]
[1] *Main Astronomical Observatory of NAS of Ukraine, Kyiv, Ukraine*
[2] *Crimean Astrophysical Observatory, Nauchny, Crimea*

Today, the study of stellar magnetic fields is one of the important research field in astrophysics because it provides us with information about space weather in the orbits of Earth-like planets in stars other than the Sun. Our research is based on spectropolarimetric observations carried out with 2.6m Shajn telescope equipped with the echelle spectrograph ESPL, CCD, and the Stokesmeter as a circular polarization analyzer. For measuring stellar magnetic fields the Single Line (SL) technique was developed at CrAO. This technique is based on the calculation of Zeeman effect in individual spectral lines. A key advantage of the SL technique is its ability to detect local magnetic fields on the surface of stars. Using SL technique emergence of large magnetic flux tubes at the surface of stars of V-IV-III luminosity classes (61 Cyg A, β Gem, β Aql) were first registered. We review the results of the study of local magnetic fields in these stars, including the results of modeling the intensity and size of their starspots.

TIDAL FORMATIONS IN THE AREA OF THE PLEIADES OPEN CLUSTER

Postnikova Ekaterina
Institute of Astronomy, Russian Academy of Sciences (INASAN), Russia
es_p@list.ru

Our Galaxy acts with its tidal forces on all the objects that are in it. And the larger and more massive the object, the more noticeable it is.

Open clusters (OC) are massive star conglomerates, although not as large as globular clusters (GC) ones. As a result of interaction with the Milky Way, they lose their members through the Lagrange points, however, the lost members of the cluster move for some time near to the cluster, preserving similar motion characteristics and direction, and forming " tidal tails". For a long time, tails were observed from globular clusters (for example, Palomar 5 (Odenkirchen, M. et al. 2001) or galaxies. In OCs they are much smaller than in the GCs, so they were difficult to detect until recently. Also, one of the reasons for their difficult detection is that the OCs are mainly located near the plane of the Galaxy and are surrounded by a high background of field stars. In addition, possible collisions with massive molecular clouds can destroy parts of the tails (Gieles et al. 2006).

Thanks to Gaia DR2, tidal tails and some tidal structures were found in the Hyades (Roser et al., 2019), as well as Alpha Persei, Ruprecht 147 (Seleznev et al., 2020), and tidal-tail structure in the nearest vicinity of Pleiades (Lodieu et al., 2019).

The shape of the tidal tails and their length depends on the age of the cluster. They are usually well detected in old clusters. In our study, we decided to find tidal formations in the well-studied Pleiades cluster. Their presence was previously modeled (Chumak & Rastorguev, 2008), and the distance to this cluster still allows us to consider them. For our results, we used the method described by van Leeuwen (van Leeuwen F., 2009) and also give a discussion.

PHOTOMETRY AND THE BLAZHKO EFFECT IN THE RR LYR VARIABLE STAR Y VUL

S. N. Udovichenko and L. E. Keir
Astronomical Observatory, Odessa National University, Odessa, Ukraine, udovich222@ukr.net

The RR Lyr variable star Y Vul have been observed by using a CCD photometer during several seasons from 2011 to 2017. Nearly 5960 data points were obtained spanning over 53 nights.