

In memory of Vera L'vovna Khokhlova

N. Polosukhina

August 2003, Special Astrophysical Observatory (SAO), an International Conference on Magnetic Phenomena in Stars. I do love these conferences. You learn something new and you get charged with energy at these conferences. You always await new encounters with the old friends and associates, and obtain new acquaintances with young talented scientists absorbed in vital problems of science. The special sensation that it is a “holiday for your soul” does not leave you during the entire conference. So it was also this last conference, and the usual excitement was added by expectation of meeting Vera Khokhlova, whom I had not seen for two years. Lately she was living in the USA with her son, but continued her work on numerical analysis of observational data obtained by her collaborators at SAO. From the correspondence with her I knew that she awaited this conference with anticipation and was planning her trip to Russia to this conference where she was supposed to present two invited talks on her recent work. But our expectations proved to be useless — she did not come to the conference....

When I talked to Vera over the phone after the meeting was over, she told me that her health was quickly deteriorating after the arrival to Moscow because of many stressful circumstances. She had to check in for medical tests into the clinic of the Academy of Sciences. An urgent surgery was necessary. Vera peacefully died in her sleep in the hospital while being prepared for the operation. Everybody was surprised at her death.

It is difficult to analyze what caused this untimely death, but it is clear that the excitement of coming to her native land, to Moscow, and meeting her friends played a fatal part.. The decision of her son to bury Vera L'vovna at Crimean Astrophysical Observatory (CrAO) was not accidental. It was her desire to be buried where her soul belonged to all her life. At CrAO she became a scientist inspired by her outstanding teachers and by her own enthusiasm and extraordinary fitness for work, there she spent her best and most productive years, there she knew love. Numerous friends and associates of Vera expressed their love for her and great respect and appreciation of her scientific contributions during her burial ceremony at the CrAO cemetery.

When I think about Vera, recollections of the days of our youth come to my memory. I remember Vera as a charming and intelligent young woman radiating energy. Vera's scientific life began at the old Simeiz Observatory where she started solar observations under direct supervision of E.R. Mustel and A.B. Severny. Soon after, work at a new observatory in Nauchny began. Young scientists, including Vera, took part in this work. She also actively participated in trade union activities as a president of the union committee. Together with I.M. Kopylov, the secretary of the comsomol league, and K.K. Chuvaev, the secretary of the local communist party organization, she was instrumental in organizing everyday life of the observatory, including opening of a pre-school, planting trees, and regular delivery of goods to the observatory grocery store, etc. However, her focus was her scientific work. Her observations of the Sun formed a foundation of her PhD thesis written under the supervision of A.B. Severny.

Family circumstances forced her to leave the observatory and to move to Moscow where she started working at the Astronomical Council of the Academy of Sciences. The focus of her scientific research gradually shifted from studying the Sun to studies of other astrophysical objects, including measurements of the surface temperature of the Moon. Eventually, magnetic stars became her new scientific passion. Her devotion and hard work soon made her the leader in studies of Ap stars in Russia. She became the head of the working group on Ap stars in the frames of international collaboration of the eastern countries including East Germany, Poland, Hungary, Czechoslovakia, Bulgaria, Romania, and USSR. It was a tight scientific collaboration with meetings held every two years. This working group greatly influenced the studies of Ap stars in all those countries. One example of such an effect is the development of work on Ap stars at Shemakha observatory in Azerbaijan where an excellent 2 meter telescope produced by Carl Zeiss Jena has been installed in the seventies. Together with I.A. Aslanov, Vera initiated detailed observations of line profiles of peculiar stars of various types. This work became later a foundation of her program of inverse mapping of the distribution of chemical elements over the surfaces of magnetic stars. For a while Shemakha observatory became the center of spectral and photometric studies of these stars by many international groups. At the same time, Vera headed the committee on astronomical photographic materials at the Astronomical Council. The goal of the committee was to study, characterize and improve these materials. This favored an improvement in the production of the photographic emulsions A-500, A-600, and A-7000 at Kazan factory.

Vera L'vovla will be remembered for her seminal contribution to the studies of magnetic stars including

the creation of the method of inverse mapping of the distribution of physical characteristics and chemical elements over the surfaces of magnetic stars, her work on photo-detectors, and her efforts in the creation of the international working group on magnetic stars. Her friends and colleagues and those who knew her as a wonderful person and a dedicated scientist would be missing her very much.

W. Weiss

It is a big loss, that Vera is not with us any more. I still remember with much pleasure our first meeting in Vienna at the occasion of AU Coll32 on Ap stars.

She was also a key person for developing the collaboration with the Moscow institute and with CrAO!

Margherita Hack

I am very sorry to know about death of Vera Khokhlova. She was an example of very active and enthusiastic scientist. I was very much impressed with her method to detect the position of spots on the surface of magnetic stars, a very innovative method that, I think, she was the first person to propose. It is a great loss for her friends.

John Landstreet

My favourite personal memories of Vera Lvovna are from a visit I made to Moscow and SAO in 1989. Vera was my host, and she really made my visit to Moscow enjoyable and memorable. As you surely recall, it was not easy to find a place to eat in the evening in Moscow then (except for the extremely expensive places for tourists), so every evening, Vera would make a little tea with cakes and other foods in her office at the Academy of Sciences, and we would sit and sip tea and talk about science and life.

I very much enjoyed those evenings together. One day she decided that I should see the collections of art and historical objects in Kremlin. But there was a problem with tickets and she was apparently only able to get one ticket, so she had me take the guided tour while she waited for me about two hours in cold March weather, until that finished.

Another evening she invited me to come to her apartments for dinner, and I met her delightful grandson Alyosha, who was living with her. She had very small apartments, and it was the first time, that I really understood how Russians dealt with chronic difficulties in buying basic supplies.

Scientifically, Vera L'vovna was a real pioneer. She was one of the very first people to try to solve the problem of mapping chemical abundances on the surface of magnetic Ap stars. There were three aspects of her work that really impressed me. One was that she was always interested in such mapping not simply to find models to explain spectrum variations, but because she hoped to find clues to the processes causing the inhomogeneities. The physics of the problem were always important to her. The second aspect was her willingness to seek out collaborators such as the mathematician Goncharski to help put her mapping work onto a firm footing mathematically. This was very fruitful collaboration, and this kind of tradition of rigor has of course been continued by Nicolai Piskunov and Oleg Khochukhov. A third aspect of her activity was that she was always very close to the observational data, and her use of the facilities at SAO was extremely effective. As a result of these aspects of her work, what she did was really very important and influential in the development of modelling of magnetic Ap stars, in spite of the obvious problems of her isolation from Western astronomers and the relatively small computing power that she had available.