

Introduction

Editorial board *

NAS RA V. Ambartsumian Byurakan Astrophysical Observatory (BAO)

The International Symposium “Astronomical Surveys and Big Data 3” (ASBD-3) will take place on 15–19 September 2025 at the Byurakan Astrophysical Observatory (BAO), Armenia. The symposium is dedicated to the 60th anniversary of the Markarian Survey (the First Byurakan Survey, FBS, included in the UNESCO Documentary Heritage Memory of the World International Register in 2011) and the 20th anniversary of the Armenian Virtual Observatory (ArVO), a member of the International Virtual Observatory Alliance (IVOA).

ASBD-3 is the third event in this symposium series, following the successful ASBD meetings held in 2015 and 2020, which brought together astronomers and computer scientists from around the world. With this continuation, ASBD has become a regular scientific meeting hosted by BAO, one of the world’s traditional centers for astronomical surveys and Big Data research, supported by its extensive digitized photographic plate archive and the activities of ArVO.

The following topics were covered at the Symposium:

- Review and discuss large astronomical surveys to summarize the observational data obtained in astronomy;
- Give tribute to the Markarian Survey and other important surveys;
- Review and discuss astronomical catalogues, databases and archives;
- Learn about major current and upcoming surveys (including Euclid, Rubin, etc.);
- Learn and discuss how large observational data sets are changing astronomy;
- Introduce tools and techniques for working with large data sets (including access, data mining, analysis, visualization, etc.);
- Discuss the future of astronomical research by joint efforts of astronomers and computer scientists.

The meetings were attended by leaders and/or representatives of major astronomical surveys and virtual observatory projects, as well as astronomers and computer scientists working in the field of Big Data, including early-career researchers and students.

This issue of BAO Communications presents the proceedings of the ASBD-3 Symposium. All included articles have undergone a rigorous peer-review process.

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