

Big Data in Observational Astronomy

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Astronomy is among the first areas to encounter and learn from Big Data. Until a few decades ago astronomers would typically compete for observation time on telescopes, spending cold nights on distant mountain top observatories to collect data on few stars and galaxies. This has changed substantially. Today, they pour over massive data through high-speed Internet connection to their office computers, thinking of automated procedures to identify objects. It is bringing information scientists, statisticians and astronomers together to collaborate on scientific investigations. Several ongoing and future astronomy projects will be discussed, where statisticians and applied mathematicians could contribute.

Key Words: Astrostatistics, Massive Data, Statistical Challenges