## RECOGNITION OF M-TYPE STARS FROM LAMOST DR5 USING A HASH-LEARNING METHOD <br> Yanxin Guo, A-li Luo, Shuo Zhang, et al. 2019, MNRAS, 485, 2167 <br> Email: 1al@nao.cas.cn <br> 1 Key Laboratory of Optical Astronomy, National Astronomical Observatories, Chinese Academy of Sciences, Beijing 100012, China <br> 2 University of Chinese Academy of Sciences, Beijing 100049, China <br> 3 Department of Physics and Astronomy, University of Delaware, Newark, DE 19716, USA <br> 4 Naning Institute of Astronomical Optics \& Technology, National Astronomical Observatories, Chinese Academy of Sciences, Nanjing 210042, China

## WHAT DID WE DO?



## How did we do it?

STAGE 1 Clustering M-type spectra released in DR5 to obtain positive samples


STAGE 2 Training Multi-Layer Pseudo Inverse Learning also called Exteme Learning Machine, ELMM) model


## REFERENCE

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## ACKNOWLEDGEMENTS


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