

# 大规模时域巡天：机遇与挑战

黄样（中国科学院大学）

[huangyang@ucas.ac.cn](mailto:huangyang@ucas.ac.cn)

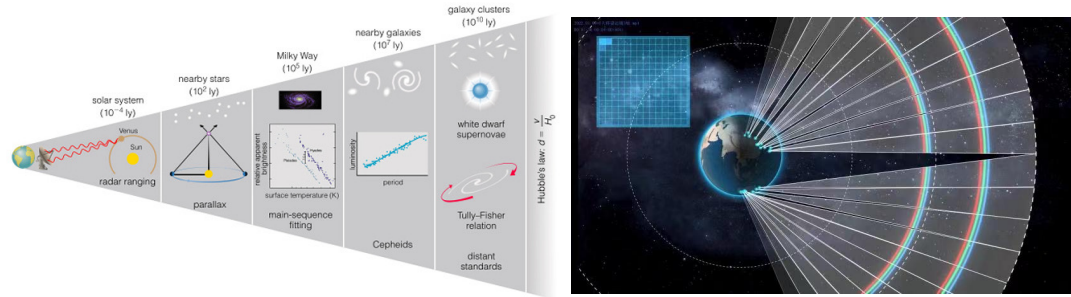
2023/07/04

# 大纲

- 测光时域巡天的过去、现在与未来
- 时域巡天下的新机遇
- 时域巡天的挑战：高精度测光
- 时域巡天的挑战：变源瞬变源快速探测和分类

# 执尺丈天涯

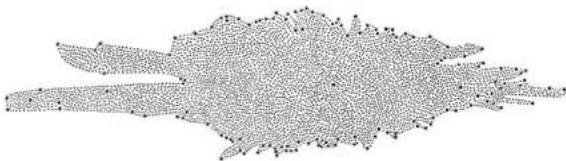
- 宇宙有多大?
- 如何存在?
- 如何演化?



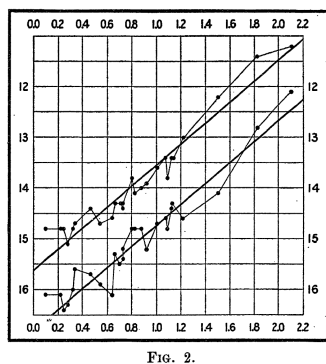
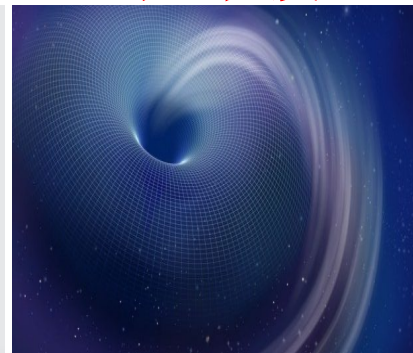
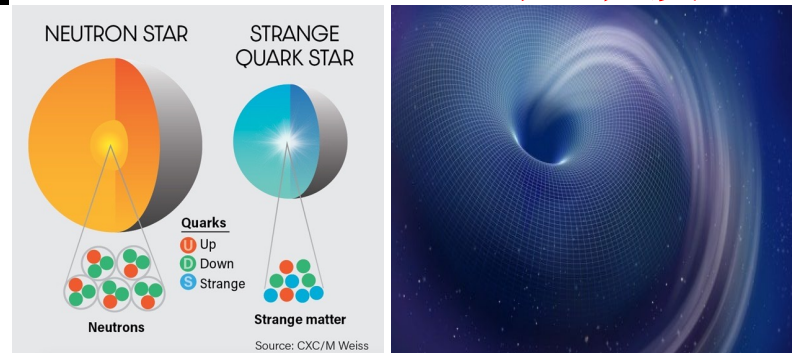
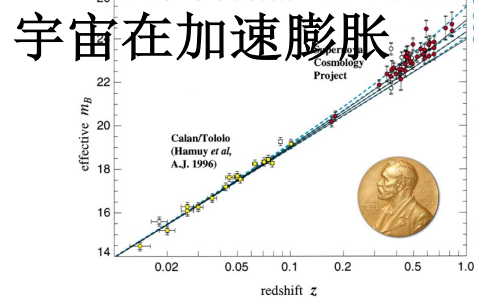
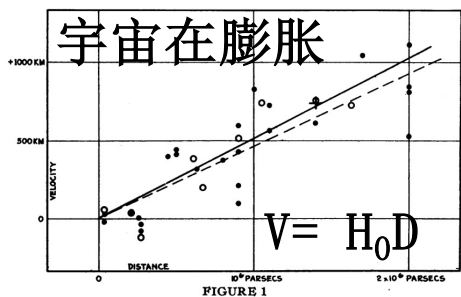
# 布阵控寰宇

- 引力检验、物质存在形式
  - 新天体、新现象、新物理
- 物态方程                      时空性质

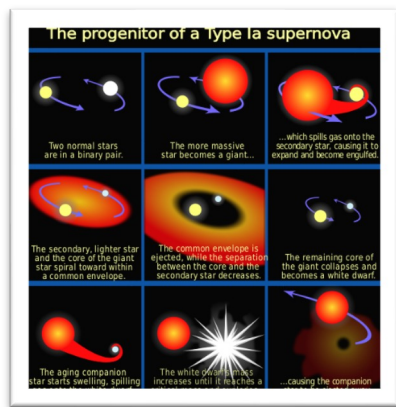
第一张银河系全景图



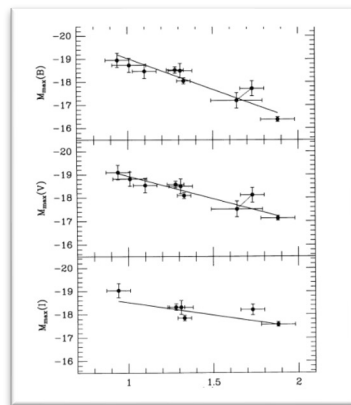
William Herschel 1785



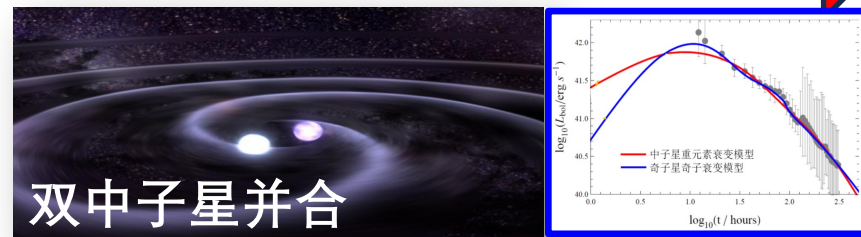
造父变形的周光关系



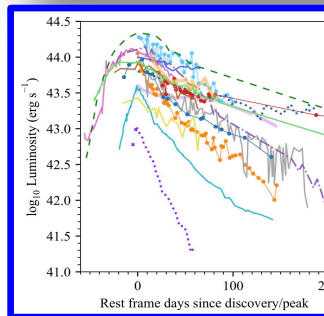
白矮星质量上限



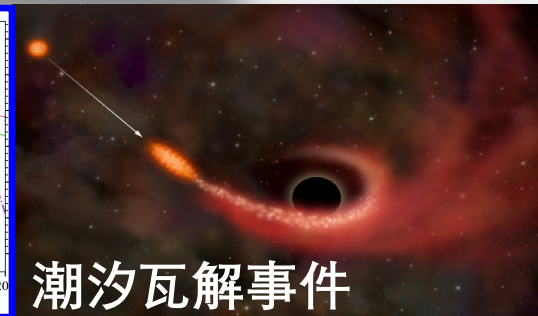
Phillips关系



双中子星并合



潮汐瓦解事件



# 天语解物

执尺丈天涯  
四百年，始末恒变  
布阵控寰宇  
朝夕间，物态时空



谢谢!

LAMOST与银河 ©Jin Ma 2012

2012.08.22 Nikon D90 + 10-24mm, F3.5, 14x30s, ISO2500

WWW.KARAJIN.COM