



Ruder Bošković institute

The Pitch

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Plitvička jezera

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Background

- RBI: the largest Croatian research institute
- Growing astrophysics lab; three groups
- Radio astronomy and ISM group (PI, two postdocs, two PhD students)
- Astroparticles and high energy group (4 scientists, three about to retire)
- Variability, survey astronomy & Gaia (PI, a postdoc and a PhD student)
 - ***Open positions for a PhD student and a postdoc!***
- HPC/HTC system: 320 CPUs, 4.5 TB RAM, 60TB SSD (BeeGFS), 200TB HDD



Croatian participation group (CPG)

- Consortium of three Croatian institutions:
 - Ruđer Bošković institute
 - University of Zagreb (Hvar observatory)
 - University of Rijeka

LSST contribution

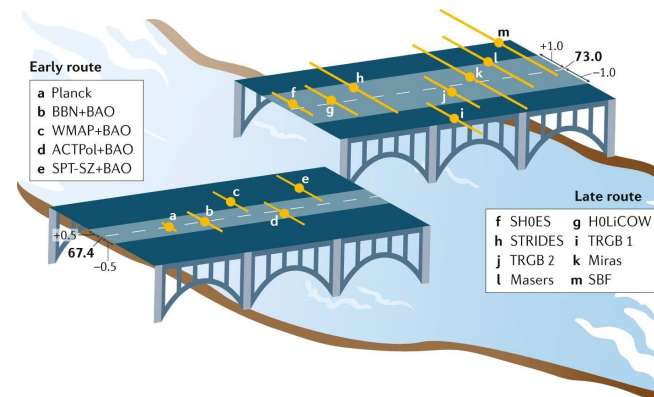
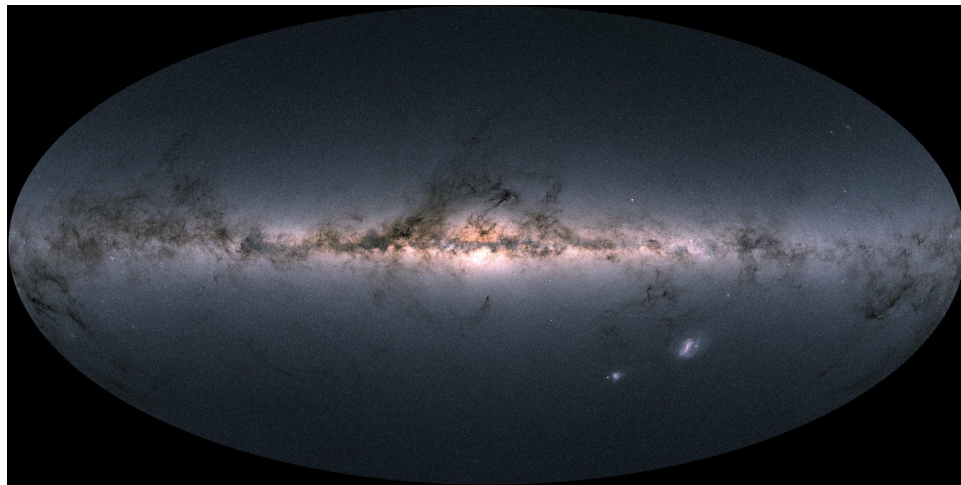
- Recently joined TVS
- Aim: 2 PIs
- One **additional** postdoc (2+2yr) to be hired to work on LSST: 0.5 FTE software development 0.5 FTE LSST/variability related project(s)...negotiable
- Call to be opened within soon, position has already been approved, needs to be filled ASAP
- Contemplating: general pool of fully directable effort, or seek endorsement from the TVS SC for directable software dev effort
- would prefer TVS contribution if a good team is formed
- Additional contributions by RBI staff possible (0.3-0.8 FTE), negotiable

TVS contribution/technical

- Endorsement needed; discussing with TVS SC leads
- Classification and characterisation -- the straightforward option, have “in-house” expertise; effort duplication expected
- Distance scales...not really clear where to draw the line between the “technical” part (preferred at this point in the LSST development cycle) and scientific part
- cross-match/extension of Gaia
- Evolving classification of all things variable

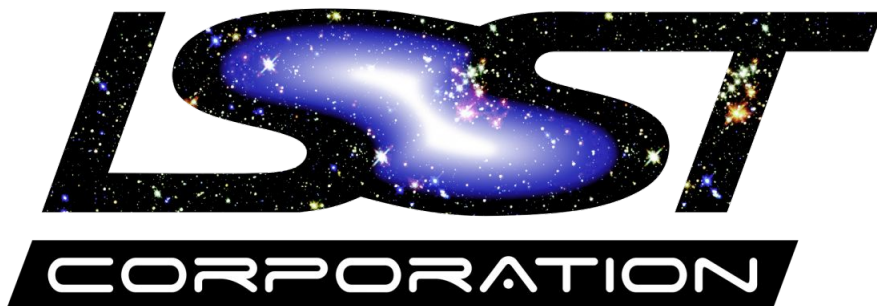
Science

- Stellar variability & deaths of stars
 - Classification, characterisation
 - Continuously evolving classification (CECS)
- Distance scale, H_0 tension
 - “Gaia+LSST distance scale
- Galactic history & structure
- Population studies in the local group
- LSST opens a new window into time domain: *unknown unknowns*



Synergies

- University of Rijeka, BURA supercomputing resources (T. Jurkić)
- INAF/Naples, also interested in distance scales
- TDEs are cool; Andrea?
- Liked Dragana's slides, AGN periodic oscillations
- Hungarian groups will probably have similar interests? Robert?



Thank you very much!