



מכון ויצמן למדע
WEIZMANN INSTITUTE OF SCIENCE

ASTROPHYSICS INSTRUMENTATION GROUP

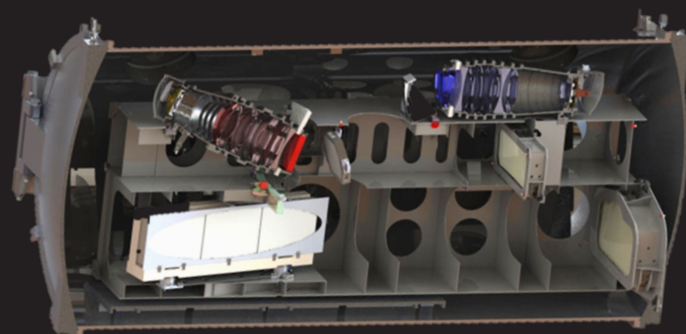
From the Drafting Board to Space Exploration

Contact us for more information
✉ sagi.ben-ami@weizmann.ac.il



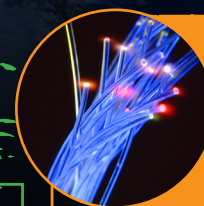
Exoplanets Atmosphere Studies with G-CLEF

G-CLEF is a novel high resolution spectrograph designed by an international collaboration. It is the first instrument of its kind to be coupled to an extreme adaptive optics system that operates in visible wavelength and will allow us to take direct spectra of exoplanets. When mounted on the Giant Magellan Telescope by the end of the decade, G-CLEF will allow us to detect O_2 in the atmosphere of terrestrial exoplanets. Before that, we will mount G-CLEF on the Magellan 6.5m telescope to measure the mass of various planets and determine their composition, as well as study the atmospheres of gas and ice giants.



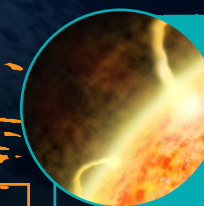
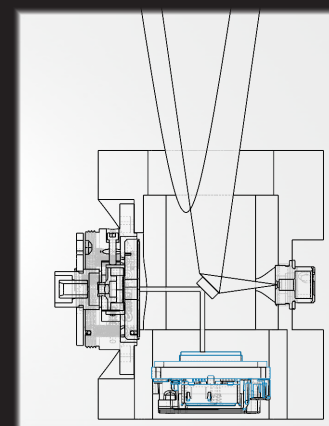
Evolved Planetary Systems Around White Dwarfs

We have many indications for planetary systems orbiting White Dwarfs, the stellar remnants of the vast majority of stars in the universe. The Weizmann Institute L.A.S.T sky survey will observe the largest sample of WDs in an attempt to detect the first Exoplanet in the habitable zone of a White Dwarf. Such an exoplanet will become the prime target for future atmospheric studies and the search for bioactivity outside of our solar system.



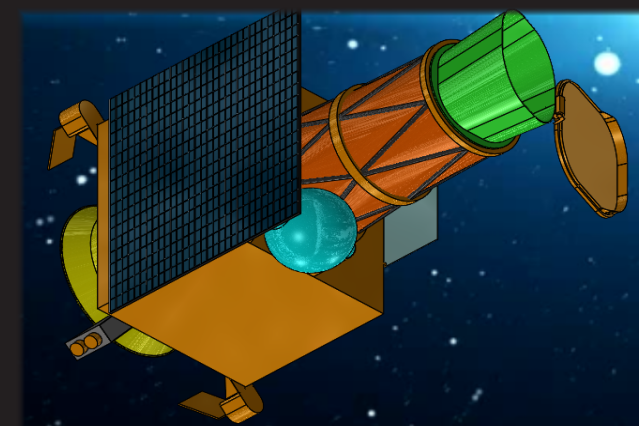
Multi Aperture Spectroscopy with DeepSpec

Develop the first Multi aperture spectroscopic system using 18 X 61cm telescopes coupled with a novel system of optical fibers to a custom spectrograph built from the ground up for transient classification. Use this unique facility to study the underlying physics of young transient events discovered with L.A.S.T. Our novel approach will allow the scientific community a leap in the capability to characterize astrophysical sources, and is critical in the age of large sky surveys.



Stellar Flares and UV Activity with ULTRASAT

Detect stellar flares in the ultra violet with the upcoming ULTRASAT space-borne telescope, and study its affect on a planet atmosphere and its habitability. ULTRASAT, a unique wide-FoV NUV telescope, will give us unprecedented data in a time domain and wavelength range poorly explored, and will allow us to better understand stellar activity and its effects on planetary systems. Prepare the ground for this unique experiment with data from L.A.S.T.





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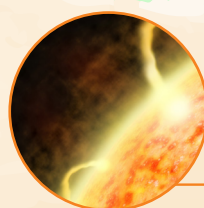
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