



EXPERIMENTAL ASTROPHYSICS

at the Weizmann Institute of Science

Astrophysics is among the most dynamic and rapidly evolving areas in Physics research, driven by an explosion of data from new generations of experimental facilities, on the ground and in space. At the Weizmann Institute of Science, Dr. Avishay Gal-Yam is now forming the new experimental astrophysics research group within the Ben-Zvi Center for Astrophysics. Funding is available to support several students and Postdocs. Physics students interested in learning more about new research opportunities in this area (at the M.Sc., Ph.D. and Postdoc level), are encouraged to directly contact: Avishay.gal-yam@weizmann.ac.il

RESEARCH

Our research is focused on cosmic explosions: the catastrophic deaths of stars. Huge amounts of energy are released within hours in events so bright they are seen from the edge of the Universe. The resulting extreme physical conditions involve huge densities, pressures and temperatures, strong magnetic fields, nuclear and high energy particle reactions, and strong relativistic effects (special and general). These topics are at the forefront of research in high energy particle astrophysics and gravity theories, with implications from the source of life to cosmology.

PROJECTS

- Thesis projects focus on the nature and physics of cosmic explosions
- Data from the best instruments, including the Hubble Space Telescope
- Option to study also theoretical aspects with groups in Israel and abroad
- Instrumental projects touching on electro-optical engineering
- All students at Weizmann are fully supported by scholarships
- Ph. D. students have their own research grants for computers and travel
- Support for extended visits with French and German collaborators
- All students expected to spend several months at the California Institute of Technology (Caltech) as part of their thesis.
- Excellent scientific environment at the Ben-Zvi Center for Astrophysics (www.weizmann.ac.il/astrophysics), including frequent visits by prominent scholars and international workshops in our new astrophysics wing.

For more details please contact:

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