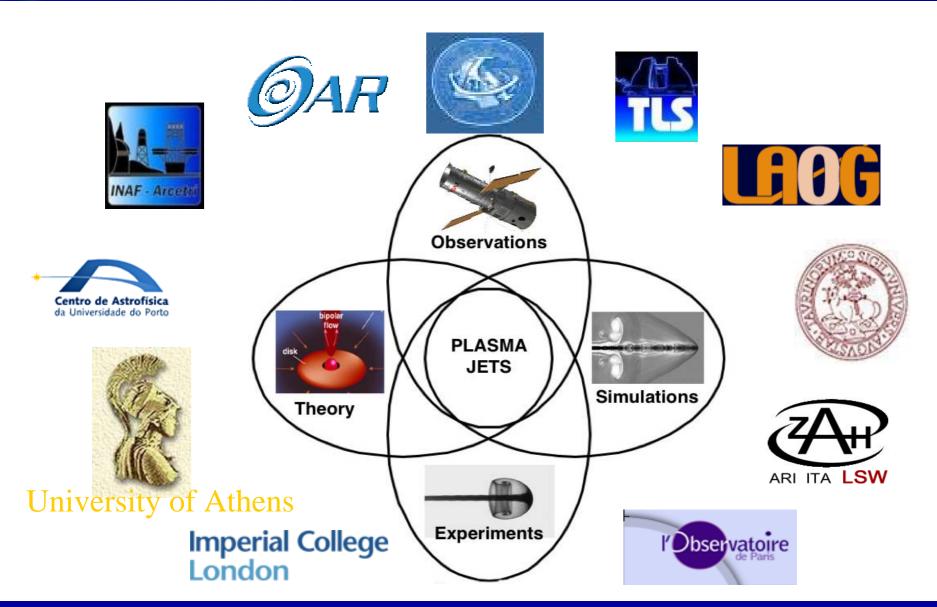




Dublin, Tautemburg, Grenoble, Turin, Heidelberg, Paris, London, Athens, Porto, Florence, Rome

JET Simulations, Experiments and Theories





Athens node

JET Simulations, Experiments and Theories



PL.A.T.O.N.S.: PLASMA ASTROPHYSICS, THEORY, OBSERVATIONS, NUMERICAL SIMULATIONS

Research Group

at the Section of Astrophysics, Astronomy and Mechanics
Department of Physics, University of Athens, Panepistimiopolis, 157 84
Zografos, Athens, Greece

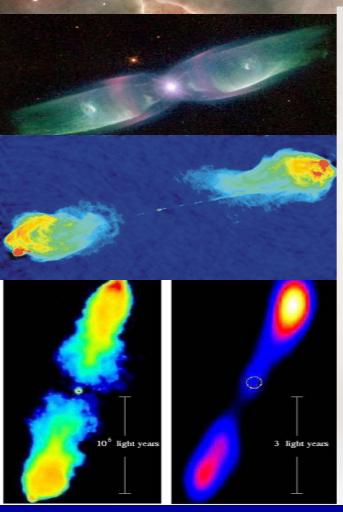


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JET Simulations, Experiments and Theories



Self-similarity of cosmical jets

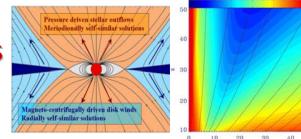




PLATONS: Representative results in last 10 years

- <u>Classes</u> of analytical solutions for MHD jets/winds via a nonlinear separation of the variables (Vlahakis+Tsinganos, 298, 777, 1998, etc)
- Critical points, characteristics and the problem of <u>causality</u> in MHD outflows (Tsinganos et al, MNRAS 283, 811, 1996)
- Classification of observed outflows in terms of <u>efficiency of</u> <u>magnetic rotator</u> (Sauty et al, AA, 348, 327, 1999, Sauty et al, AA, 389, 1068, 2002, etc.)
- Topological <u>stability</u> of collimated outflows (Vlahakis + Tsinganos, MNRAS, 292, 591, 1997)
- Two-component jet simulations (Bogovalov + Tsinganos 2001, MNRAS, 325, 249, Matsakos et al 2008, A+A 477, 521, Stute et al, 2008, A+A, submitted)
- Resistive MHD simulations (Cemeljic et al, 2008, MNRAS, in press),

Protostellar Jets in Context: Topics

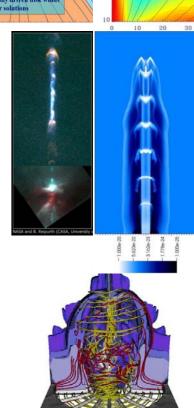


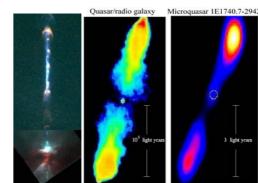
Jet/wind-launching region: Theories, observations, and numerical simulations addressing the origin of atomic and molecular jets and winds in young stars, the physics of the star/disk interaction zone, the connection with accretion disks and the role of jets in removing angular momentum.

Propagation, cooling, stability, environmental impact of jets

Laboratory experiments

Similarities and differences between protostellar jets and their astrophysical siblings







SESSIONS

Session 0 **Introductory Reviews**

Session I The star/jet/disk system

Session II

Jet launching

Session III Observational constraints on jet launching

Session IV Propagation, cooling, stability, environmental impact of jets Thursday

Session V Molecular Outflows and turbulence injection by jets

Session VI Jetset ESR presentations

Friday

Saturday

Monday

Monday

Tuesday

Wednesday



Special talks:

Funding opportunities under the EU Framework Programme FP7 (R. Bilyalov)

International Year of Astronomy 2009 (T. Lery)

The Antikythera Mechanism: Astronomy and Technology in Ancient Greece (J. Seiradakis)

Practical Matters

Conference Dinner is on Thursday evening in the old town of Rhodes

Various excursions during the week, e.g., the Rhodes half Day City Tour.

Speakers: pls give your presentation to Titos Matsakos the previous day of your talk for dowloading at PC

Posters: Visit the posters room during coffee breaks!

Proceedings will be published- hopefully by the end of this year!



Special thanks for the organization of this conference go to:

- Scientific Organising Committee
- > Tom Ray (Jetset Coordinator, co-chair)
- > Sylvie Cabrit (Jetset Science Manager)
- > Jetset/FP7 for funding this conference
- ➤ LOC (T. Matsakos, M. Stute, P. Tzeferakos)
- > Eileen Flood, Emma Whelan
- > my Un. of Athens students
- ➤ Ulysses Tours (Tassos & Alexia Afentoulidis)



Protostellar Jets in Context: hope you enjoy it!