## Workshop on Blazar Variability across the Electromagnetic Spectrum

mardi 22 avril 2008 - vendredi 25 avril 2008

**Ecole Polytechnique** 

# **Programme Scientifique**

dimanche 24 novembre 2024

#### Afternoon April 22: Welcomes, Introduction, the blazar paradigm presentation

Welcome

Annalisa Celotti : blazars: the broad-band observational point of view

Amir Levinson: Relativistic flows in active galaxies

Juri Poutanen: Pair production and cascades in AGN

Karl Mannheim: Can short variability time scales be reconciled with hadronic emission?

Morning April 23, the soft side: radio, IR, optical (photometric and polarimetric variability)

Svetlana Jorstadt: VLBI observations of blazars

Denise Gabuzda: VLBI polarisation variability and implications for jet models

Esko Valtaoja: Total intensity radio variability in blazars

Gino Tosti : IR/optical/UV variability (photometric, spectral, polarization) in blazars

Eric Perlman: thermal AGN signatures in Blazars

Afternoon April 23, the hard side: soft/hard X-ray, gamma ray and VHE gamma ray reviews

Alan Marscher:Long-term X-ray variability in blazars and its multiwaveband context

Julie McEnery: HE gamma-ray variability, what we know, where we will know more

Wystan Benbow: Very High Energy variability (flux, spectral) - what we have learned

Morning April 24: (end of previous session) presentations on analysis tools (linear, non-linear)

Robert Wagner: Correlations within/between the two radiative populations

Ian McHardy: aperiodic variability and emission processes, from BHs to SMBHs

**Jun Kataoka**: How to Characterize aperiodic variability (PDS, structure functions, ..): (use cases, biases ) with synchrotron radiation

**Bernard Degrange**: How to Characterize aperiodic variability (PDS, structure functions, PDS:use cases, biases) at very high energies

#### Afternoon April 24: mechanisms at play and their inherent variability

**John Kirk**: particle acceleration mechanisms and variability in relativistic flows (stochastic processes, shocks, magnetic reconnection, matter/radiation dominated scenarios)

Gilles Henri: A unified time-dependant view of relativistic jets

**Chuck Dermer/ Justin Fink**: Multiwavelength Synchrotron/Compton Spectral Analysis of TeV Blazars and FSRQs: A New Approach

**R Moderski:** Radiative outputs from blazars (radiative processes, escape, light crossing, KN effects, emphasis on what we learn from the synchrotron bump about the underlying particle distributions).

**Stefan Wagner**: propagation effects in VHE gamma-rays: the physics, how to find them (e.g. Quantum gravity effects, Lorentz invariance violations..)

### Morning April 25: What will future instruments improve, which measurements do we need, summary talk

Hélene Sol: Unification scenarios: the case of M87

**Greg Madejski**: The next generation of space-based observatories (nuStar, Constellation X, ..) and their potential for variability determinations

Michael Punch: Strengths and limitations of ACTs (present and future) for transient VHE sources

Philip Kaaret: Summary talk, what have we learned, outstanding questions