

Prospects for PROSPECTS

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Slides available from www.fysik.su.se/~pat



PROSPECTS: PROblems in Statistical Parameter Estimation and ConsTraints for Supersymmetry

What do we hope to get out of PROSPECTS?



PROSPECTS: PROblems in Statistical Parameter Estimation and ConsTraints for Supersymmetry

Q. What do we hope to get out of PROSPECTS?



Personal A: I get to ask lots of questions. . .

Package Updates & Comparisons

Session: Physics Codes (*this afternoon, 14:00*)



MicrOMEGAs

SoftSUSY

Session: Scanning Packages (*tomorrow afternoon, 14:40*)

SuperBayeS

Sfitter

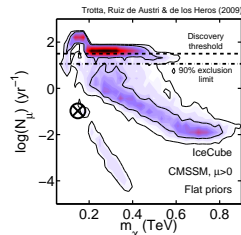
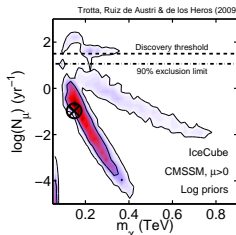


Personal Q: Why do some scanning packages give very different results?

Statistical Approaches - New & Old

Session: Statistics, Likelihoods & Algorithms (*tomorrow morning, 9:00*)

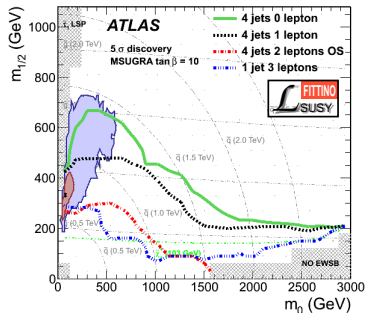
- Posterior PDF vs Profile Likelihood
- MCMCs vs MultiNest vs Genetic Algorithms vs Neural Nets
- Impact of priors on the above



Personal Q: Is it possible (even in principle) to design a scanning algorithm that is good for both Bayesians & Frequentists?

Integration of Scanning Codes and Experiments

Bechtle et al. (2010)



Session: Experimental
Constraints (*Friday morning, 10:00*)

IceCube ATLAS

HESS Fermi Direct Detection



Personal Q: How can we make data more accessible to scanners and scans more accessible to experimenters?

Debate & Discussion



Panel Discussion: Statistical Inference (My statistics are better than yours) (*Thursday, 12:30*)



VS.



Debate & Discussion



Panel Discussion: Statistical Inference (My statistics are better than yours) (*Thursday, 12:30*)

Panel Discussion: Scanning Packages (My package is better than yours) (*Thursday, 17:40*)



Debate & Discussion




Panel Discussion: Statistical Inference (My statistics are better than yours) (*Thursday, 12:30*)

Panel Discussion: Scanning Packages (My package is better than yours) (*Thursday, 17:40*)

Final Discussion: Strategies & Future Prospects (My philosophy is better than yours) (*Friday, 17:00*)



Debate & Discussion



Will Gauguin's Questions be answered by the Large Hadron Collider?

John Ellis, chief theorist at CERN in Geneva, will give a public lecture on finding the Universe's secrets at CERN.

Place: The Oskar Klein Auditorium, AlbaNova
Time: Friday September 17 at 18:30 **Entrance is free. Welcome!**
The lecture will be given in English.

Stockholms universitet
AlbaNova, Roslagstullsbacken 21.
Bus 43 or 44, stop Ruddammen. **Fysikum**
www.fysik.su.se

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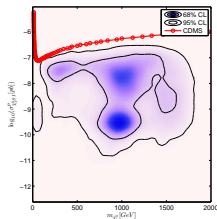
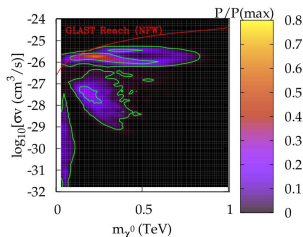
Final Discussion: Strategies & Future Prospects (My philosophy is better than yours) (Friday, 17:00)

Public Talk: John Ellis vs The Swedish Public (My doomsday theory is better than yours) (Friday, 18:30)



Results

Session: Phenomenology & Results (*Friday afternoon, 14:30*)



Allanach & Hooper (2008)

AbdusSalam et al. (2010)

Personal Q: When will we see a full MSSM-124 scan with all CP-violation and FCNC data? Is there any point? Are we better off focussing our efforts beyond the MSSM?



Food

Lunch: 3rd Floor (*different times each day, just to keep you on your toes*)

... also restaurants to the south...



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Workshop Dinner: Restaurang Cypern
(*tomorrow night, 19:30*)



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Coffee & Cake: Outside (*Now!*)

