

## Workshop

### ***"Models versus physical laws/first principles, or why models work?"***

Wolfgang Pauli Institute, Vienna, Austria, February 2-4, 2011

A special feature as of all previous is a small number of participants (about 20) with plenty of time for discussions. The main concern is about conceptual (and similar, e.g. basic) issues in modeling involving people from various subcommunities in turbulence research – not just “modelers”! This is why I listed a set questions like “Why modeling works?” “What is the meaning of the term ‘works’ ”? “Modeling versus physics and mathematics in turbulence”, “What is the meaning of experimental validation of models?” “Can models clarify the physics and produce genuine predictions or they are just a kind of ‘post-diction’ and sophisticated methods of data description/fitting?” like “Models versus physical laws/first principles”. On top of this I ventured to reiterate that one of the main lines in the meeting should be a dialogue between applied/modeling and basic research turbulence sub-communities: I believe that both need this kind of discussion/dialogue; and that, one of the main attributes of the speakers is the ability to give a talk in the spirit as mentioned above (an open minded dialogue, etc.) rather than just a factual presentation!

I have written deliberately the above in a pretty broad style. This is because I do not think that for such a meeting one should dictate too much especially to open-minded people. After all such people do not start from an empty set: they have thought about similar things long before. I used this approach before several times - I dare to say – very successfully. Another aspect is that too narrow "specification" can harm the whole idea of such a meeting. The bottom line is that the "specification" is to some extent an outcome of who will come. Indeed, the hope that this will be not a set close to the empty realized. Thanks to ALL for coming.

Special thanks are to the WPI making meetings in such a valuable format possible.

Arkady Tsinober