AKPhil 6: Interpretations of Quantum Theory 1

Zeit: Donnerstag 15:15–16:15 Raum: KIP SR 3.401

Hauptvortrag AKPhil 6.1 Do 15:15 KIP SR 3.401 Downward Causation and its Quantum Model — •MICHEL BIT-BOL — CREA, CNRS/Ecole Polytechnique, 1 rue Descartes, F-75005 Paris

Downward causation is impossible as a concept, but well established as a fact. A top down flux of causation going from an emergent level of processes to the fundamental level of processes which is supposed

to underpin it, sounds like a paradox. But a paradox which is forced upon us when we want to make sense of many phenomena ranging from psychosomatics to hydrodynamic instability. In order to alleviate this sense of paradox, I'll try to work out the concept of causation until applying it to trans-level causation becomes philosophically acceptable. A simple illustration will be given by way of an examination of global and local observables in quantum mechanics.