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Poster ”Uncertainty relations in Defermed Special Relativity”

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Abstract: “In the twentieth century, two theories were intensively developed: the theory of relativity and quantum mechanics. They effectively model phenomena on their respective scales, but it is known that they are not compatible with each other. In the search for a single coherent theory, it is often postulated to introduce new elements into known models and to test hypotheses created in this way. In the case of Deformed Special Relativity, a second scale independent of the observer is introduced into the special theory of relativity, after the speed of light. This leads to modifications of the Poincaré algebra and consequently to a non-commutative phase space. My poster will present the reasoning leading to uncertainty relations in the discussed model as well as their experimental aspect.”

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