Comments from Prof. Dr. Hermann Nicolai, Director, Max Planck-Institut für Gravitationsphysik (Albert-Einstein-Institut) Potsdam, Germany on speculations raised by Professor Otto Roessler about the production of black holes at the LHC.

…there is also not the slightest reason from the point of view of a theorist specialized in relativity to take these considerations seriously, since - in my view - they are based on an elementary misunderstanding of the theory of general relativity.

1) The argument of Mr. Roessler rests upon a coordinate-dependent re-interpretation of the concept of 'spatial distance' (which he calls the 'true' one), and that is used to support some arbitrary 'physical' arguments that are at odds with conclusions of general relativity.

Formula (1) of his article appears in all text books and simply expresses the well-known fact that an object, as measured in the coordinate time of a distant observer, needs an infinitely long time to reach the horizon (or rather, that no light beam can escape the horizon). The correct physical interpretation of the mathematical statements of general relativity (and only this is the point, since Mr. Rössler has only taken over well-known formulas) has been established for decades and has been confirmed in countless experiments. In particular, physical statements must not depend on the choice of a coordinate system - for example, if a black hole emits radiation or not is not a question of choosing a particular coordinate system.

(2) Abraham's theory, to which Mr. Roessler refers in part, may be considered as disproved since 1915. At that time Abraham made the attempt (in confrontation with Einstein) to formulate a scalar theory of gravitation in the framework of special relativity. However this theory predicts a false precession of the [Mercury] perihelion (-1/6 of Einstein's result) and 'no' deflection of light, which clearly contradicts precise observations (the deflection of light has been measured to a precision of 10^{-4}).

(3) The arguments of Mr. Roessler are even self-contradictory: one the one hand, the black hole does not radiate because it is supposed to be at infinite distance in the re-interpreted spatial geometry, on the other hand he says that because of its infinite distance it cannot arise within a finite time, and thus can also not be produced in the laboratory.

To conclude: this text would not pass the referee process in a serious journal.