Contribution ID: **50** Type: **Plenary Talk**

Search for new RPC gases

Wednesday, 21 February 2018 14:00 (20 minutes)

Present RPC gas mixtures are all based on the H2C2F4 molecule (tetrafluoro ethane, commercially known as Suva 134a) as the main component. This is characterized by a GWP=1400, which makes it potentially dangerous for the atmosphere. We study here new mixtures based on the H2C3F4 molecule (tetrafluoro propene, commercially known as HFO) which is expected to substitute the tetra-fluorine-ethane for industrial uses. Our study is mainly focused in the efficiency and the avalanche-to-streamer transition measurements. It starts from the binary mixture H2C3F4/CO2, with a CO2 content ranging from 50% to to zero, to which a further quenching molecule is added. The results obtained with different quenchers are presented.

Primary author: Dr LIBERTI, Barbara (INFN "Tor Vergata")

Presenter: Dr LIBERTI, Barbara (INFN "Tor Vergata")

Session Classification: Eco Friendy Gases