

Abstract Submitted
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Interactions between atmospheric pressure plasma jets QAIS
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Belfast, CENTRE FOR PLASMA PHYSICS TEAM — Cold atmospheric pressure
plasmas offer a unique environment for treatments of soft materials. Here we investi-
gate the possibility of exploiting the interaction of two or more atmospheric pressure
plasma jets for increased control and manipulation. The interaction zone itself of-
fers the possibility of a more controllable gentle environment for delicate treatments.
The interaction between two counter-streaming atmospheric pressure plasma jets is
investigated. The individual plasmas are formed inside a glass tube between two ring
electrodes surrounding the tube and driven using a kHz excitation frequency. Gas is
supplied between the two electrodes and this design produces significant plasma jets
(few centimeters) at both the powered and grounded electrode side. The emission
from these jets, while continuous to the naked eye, of a time scale of micro-seconds
emits discrete plasma pockets (from both the grounded and powered electrode side).
The dynamics of the interaction between these plasma pockets is presented.

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