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Feather-like structures in positive streamers GIDEON WORMEESTER, Centrum Wiskunde & Informatica, SANDER NIJDAM, Eindhoven University of Technology, UTE EBERT, Centrum Wiskunde & Informatica — In experiments positive streamers can have a feather-like structure, with small hairs connected to the main streamer channel. These feathers were observed in pure nitrogen (with impurities of 1ppm oxygen or less) but not in air. Based on results of numerical simulations, we provide a theoretical explanation for the emergence of these hairs as well as why the hairs are visible in nitrogen, but not in air.

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