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**Transient behaviour of human and artificial brass players' lips**

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It is widely accepted that the starting transient is an extremely significant perceptual feature of musical sound. For players, the ease with which a note can be started on a particular instrument is also of great importance. However, until recently research has concentrated on the analysis of steady state sounds rather than the study of the starting behaviour of the instrument. The work reported here uses a high speed camera to capture the motion of lip reeds during the starting transient. Simultaneous recordings are made of the pressure signals generated in the mouthpiece of the instrument and radiated from the bell. Preliminary results on human players, already presented, have been extended and supplemented by measurements using an artificial mouth in order to separate effects due to the instrument from those dependent on the expertise of a particular human player. Computational simulations have been compared to these experimental findings.