Large hazardouz floods as translatory waves.

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The theory for non stationary flow in translatory waves is developed for an inclinded
plane in a prismatic channel and a funneling channel and the existance of the trans-
latory wave established as an initial value problem. Inherent instabilities of the wave
tail are discussed. Data from a CFD simulation of a jökulhlaup (volcanic glacial burst)
down the down the Markarfljot valley in Iceland are shown, and the similarities to
the translatory wave discussed. It is shown that subgalacial volcanoes can melt the
glacier fast enough to produce 100.000 – 300.000 m3/sec discharges for long enough
time to produce such floods. Geological evidence of such large floods exist, and it is
concluded that historical floods like Katla 1918 have most likely been of this type