Latent Heat of a Traffic Model

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We have studied the optimal velocity model [1, 2] for highway traffic. On a microscopic level, traffic flow is described by Bando's optimal velocity model in terms of accelerating and decelerating forces. We define an intrinsic energy of the model. We find a latent heat as the system undergoes a phase transition from single phase traffic (free flow) to a phase that contains two different, a dense and a dilute phase (congested or stop–and–go flow). We report on properties of the latent heat.

References

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