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An alternative origin for high-equivalent width UV absorbers in the CGM

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A basic ansatz employed by studies of circumgalactic low/mid-ion absorbers is that they trace ‘clouds’ or ‘mist’ with minute filling fractions, embedded in a hot $T \sim T_{\text{vir}}$ volume-filling medium. I will present evidence from cosmological and idealized simulations that this ansatz may be incorrect for absorbers with high equivalent widths ($EW > \sim 1 \text{ \AA}$). Such high EW absorbers instead trace a $T \ll T_{\text{vir}}$ volume-filling CGM phase which is supersonically turbulent, akin to a star-forming cloud. I will discuss unique signatures of this alternative physical origin for CGM absorbers, which can be used to identify it in observations, and its implications for inference of CGM properties from UV absorption spectra.

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