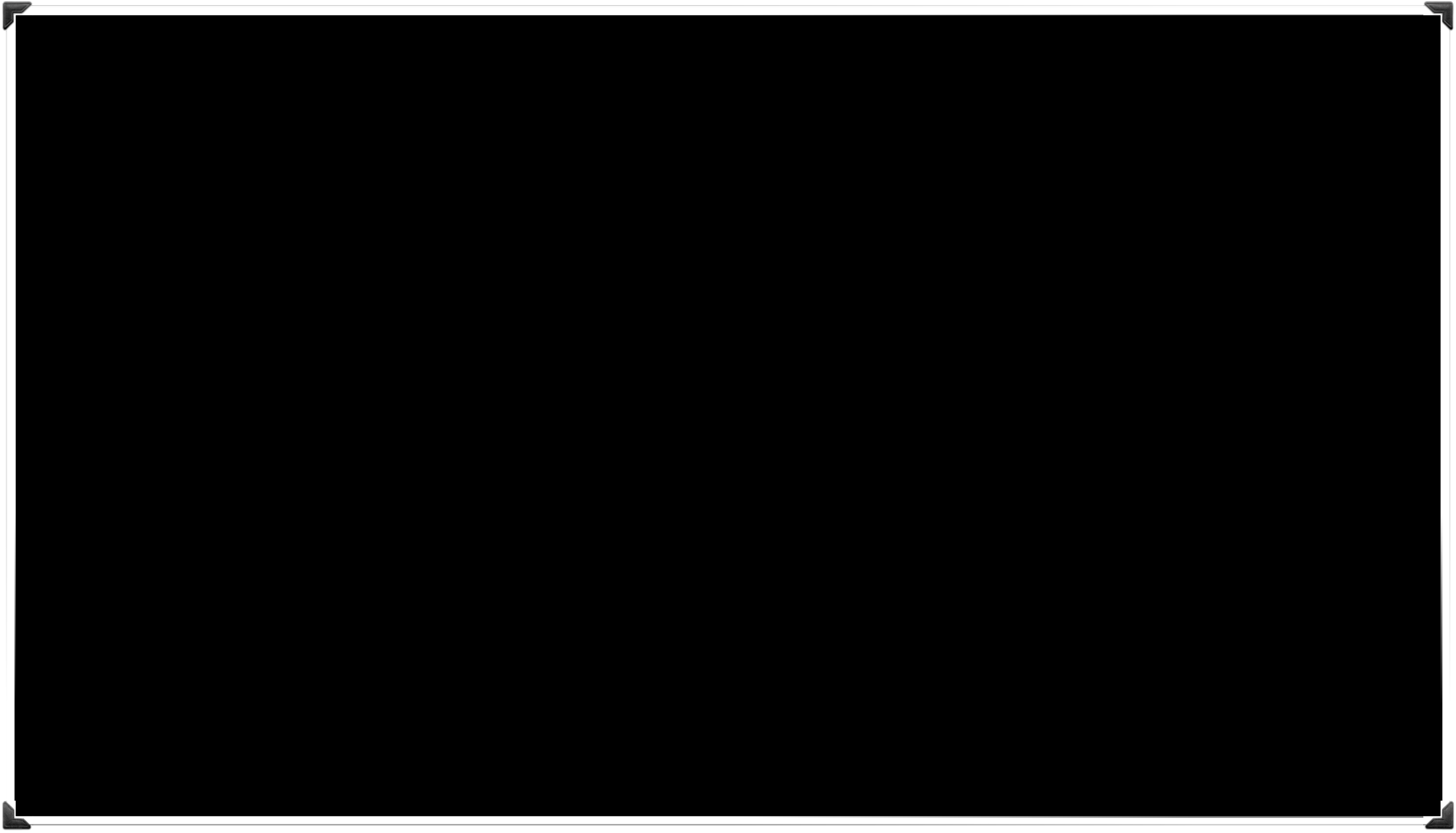
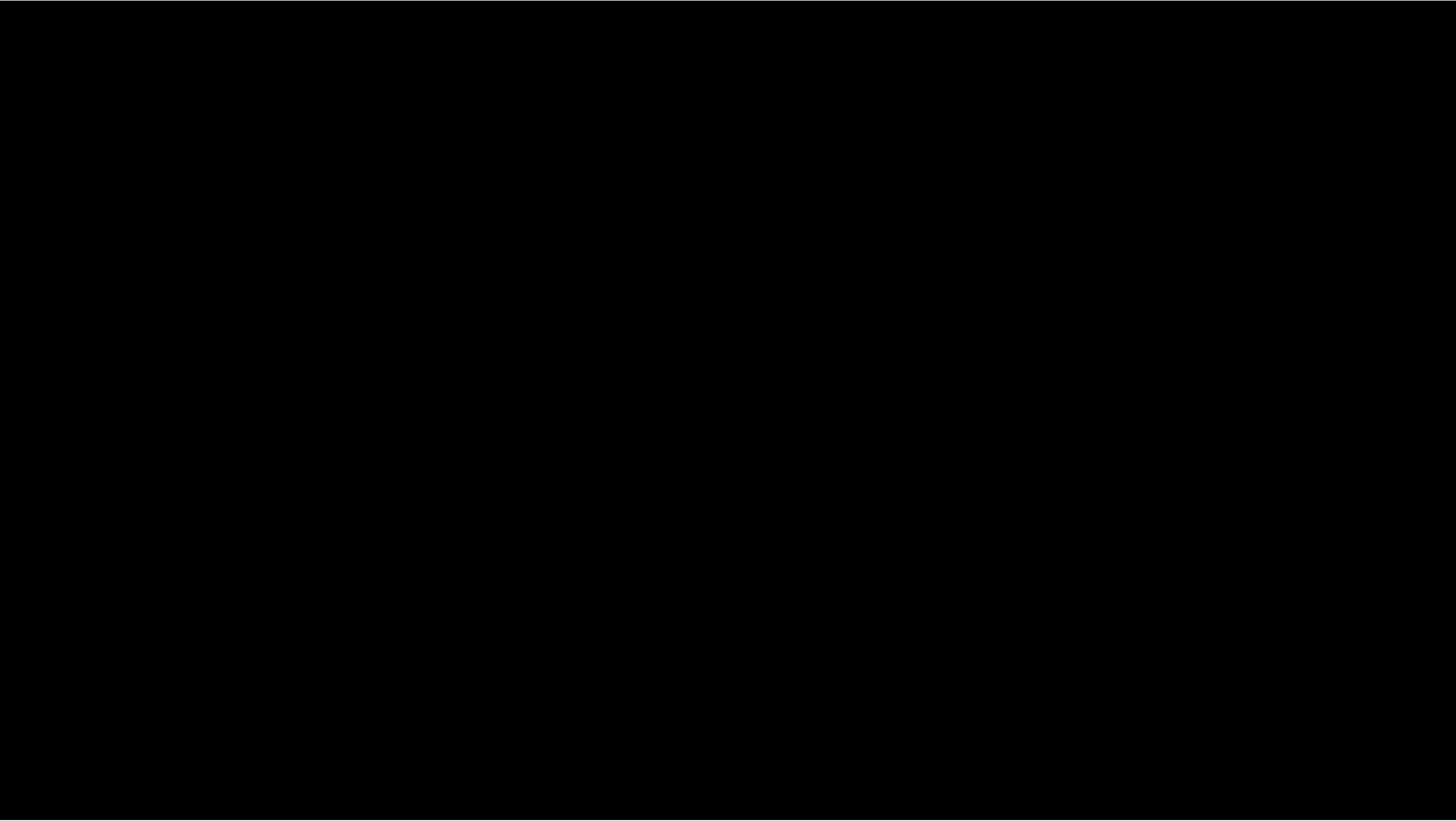


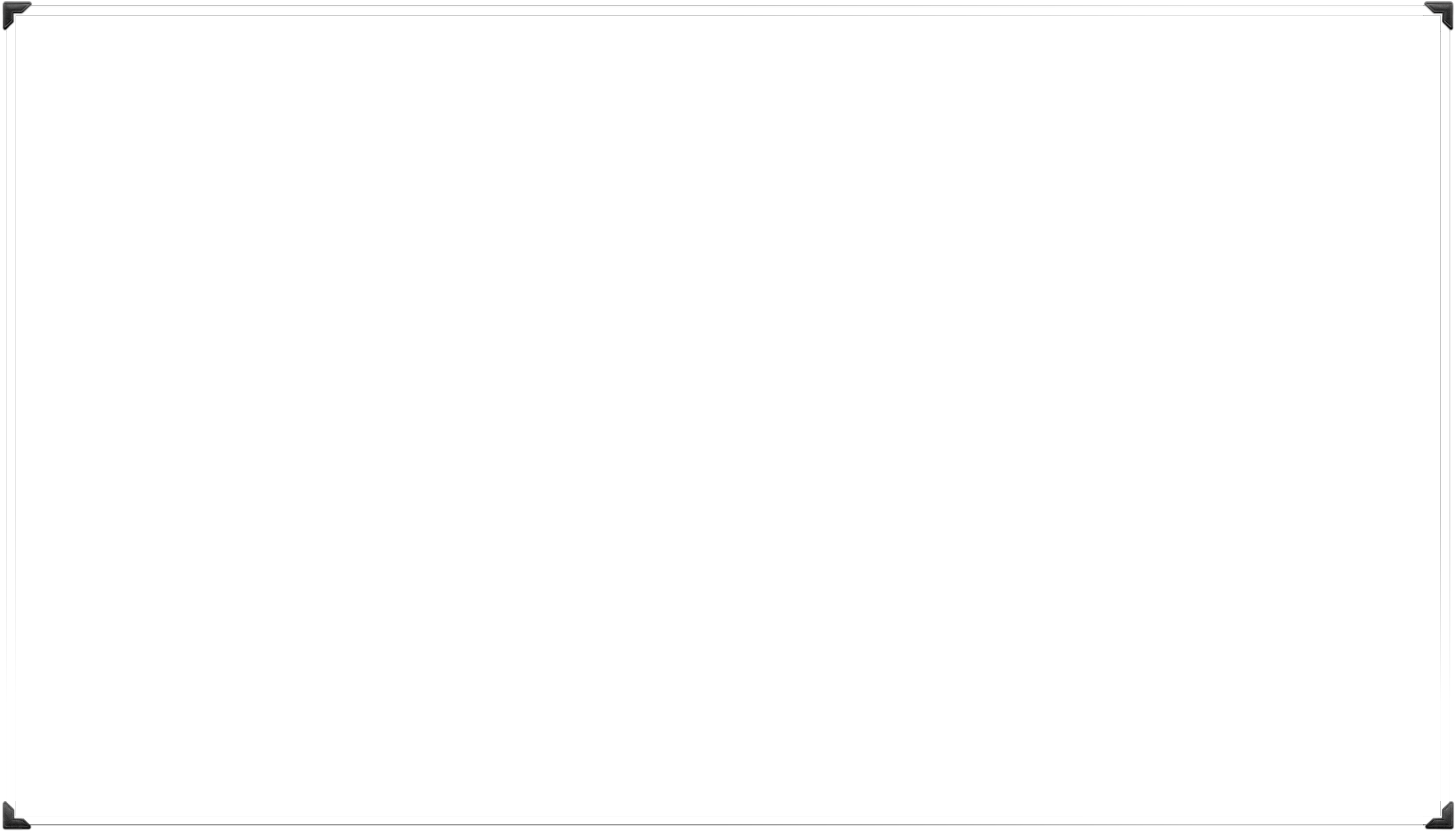


<https://www.youtube.com/watch?v=pIVk4NVVIUh8>



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Key drivers of adaptation in pathogens

- Zoonoses and transmission to new hosts (both species and individuals)
- Immune selection of the host (CTL, innate, antibody)
- Development of drug resistance (therapeutics)
- Virulence/transmissibility - also tropism shifts
- Host/pathogen arms-races, e.g. host antiviral factors
- **Most of the time, most of the viral genome is conserved**