On the Road to COVID-19
Mitigation on Public Transportation

Air Circulation

Social distancing alone may not work on buses. The virus spreads throughout the bus in seconds and takes minutes to clear. Without proper precautions, airflow in buses could make transit ridership risky.

If the bus has dual HVAC systems, physical separation of the driver space (e.g. using a clear plastic sheet) can be effective in protecting the driver, especially with positive pressure in the driver cabin.

The air should be cleaned, to be safe.

Mitigating the Virus

MS2 Virus

Phi 6 Virus

T7 Virus

3 different (bacteriophage) viruses were used to assess the efficacy of different technologies. Viruses were measured in the air and on surfaces.

Effective Technologies

Both technologies will protect passengers and drivers from both the coronavirus and other air-borne viruses, such as the flu. These technologies would be valuable in post-corona times.

Only effective after the virus enters the HVAC.

Face masks should be worn. They are the first line of defense.

Virus Mitigation Results

Notes:
- Transit could be safer in winter, since higher HVAC heating temperatures alone mitigate large percentages of the viruses.
- These findings could equally be applicable to any confined space with HVAC, such as offices, classrooms, court houses, shops, restaurants, etc.