

# Cosmological principle (GR version)

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# Cosmological principle (GR version)

There exists an inertial reference<sup>1</sup> frame<sup>2</sup>, from which the universe appears to be spatially homogeneous and isotropic at sufficiently large scales.

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<sup>2</sup> "fundamental frame"

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There exists an inertial reference<sup>1</sup> frame<sup>2</sup>, from which the universe<sup>3</sup> appears to be spatially homogeneous and isotropic at sufficiently large scales.

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<sup>3</sup>  $\rho$  and  $\underline{v}$  and  $k$

# Cosmological principle (GR version)

There exists an inertial reference<sup>1</sup> frame<sup>2</sup>, from which the universe<sup>3</sup> appears<sup>4</sup> to be spatially homogeneous and isotropic at sufficiently large scales.

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<sup>3</sup>  $\rho$  and  $\underline{v}$  and  $k$

<sup>4</sup> for "fundamental observers"

# Cosmological principle (GR version)

There exists an inertial reference<sup>1</sup> frame<sup>2</sup>, from which the universe<sup>3</sup> appears<sup>4</sup> to be spatially homogeneous<sup>5</sup> and isotropic<sup>6</sup> at sufficiently large scales.

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<sup>3</sup>  $\rho$  and  $\underline{v}$  and  $k$

<sup>4</sup> for "fundamental observers"

<sup>5</sup> invariant to switching between different fundamental frames

<sup>6</sup> invariant to rotations

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<sup>4</sup> for "fundamental observers"

<sup>5</sup> invariant to switching between different fundamental frames

<sup>6</sup> invariant to rotations

<sup>7</sup> "cosmological scale"