

Диаграмма Хаббла для активных галактических ядер и ее применение в космологии

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The AGN Hubble Diagram and Its Implications for Cosmology

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Для проверки предсказываемого расширения Вселенной в космологических моделях " $R_h=ct$ " и Λ CDM используется недавно предложенная мера расстояния по светимости для относительно близких активных галактических ядер (AGN). Этот сравнительный анализ релевантен, в частности, для ответа на вопрос, происходит ли во Вселенной переход от замедленного расширения к ускоренному, который предположительно может иметь место – по данным о Сверхновых типа Ia при красном смещении $0 \lesssim z \lesssim 1.3$. Автор обнаружил, что диаграмма Хаббла для AGN, построенная для доступных источников, не подтверждает такого перехода. Хотя разброс таких данных по AGN все еще слишком велик для того, чтобы сделать окончательные выводы, приводимые в статье результаты подтверждают аналогичные результаты сравнительного анализа применительно к другим типам источников, таким, как космические хронометры и всплески рентгеновского излучения. Показано, что информационные критерии Akaike, Kullback и Байеса согласованным образом указывают с мерой правдоподобия $\sim 74 - 93\%$ на то, что модель " $R_h=ct$ " ближе к "истинной" космологии, нежели Λ CDM.

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