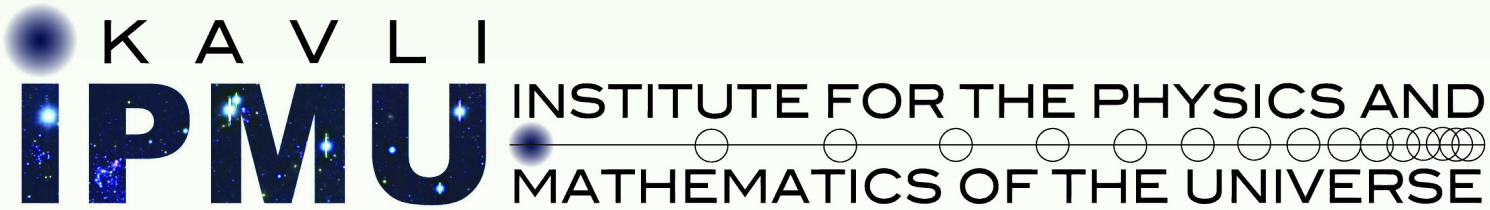
Kavli IPMU mini workshop:

Massive Gravity and its Cosmological Implications

April 8 - 10, 2013



Massive Gravity and its Cosmological Implications

- General relativity (a massless spin-2 theory), is consistent with all available data.
- Theoretical motivation: Is there a massive gravity theory which reduces smoothly to GR in the massless limit? Are the predictions of GR stable against small graviton mass? $\Rightarrow$ A major challenge for more than 70 years.
- Observational motivation: Large scale modifications of GR may provide an alternative explanation to dark energy.
- Developments in the last $\sim$ 3 years: massive gravity (dRGT), bi-metric extension (HR) ...

Massive Gravity and its Cosmological Implications

- *Understanding the theory*
  Alternative formulations, connection with other theories. [Deffayet, Hassan]
- *Implications*
  Solutions, consistency and stability: Cosmologies, black holes, inflation, causality. [Izumi, Volkov, Gumrukcuoglu, Lin, Shiromizu, Maeda, Soda]
- *Theory at subhorizon scales*
  Observational constraints, connection with GR, Vainshtein screening at small scales. [Caldwell, Kimura, Kobayashi]

Logistics

- Wireless network available.
- We will collect presentation files. For blackboard talks, we will take pictures.
- Banquet on Tuesday near Kashiwa station.
- Lunch available at on-campus cafeteria *IKOI*.
  (the other cafeteria requires a pre-paid card)
- IPMU tea time on 3rd floor, at 15:00 every day.
- *Special occasion today*:
  Visitors from Ministry of Education. Please refrain from using the elevators until 16:15.