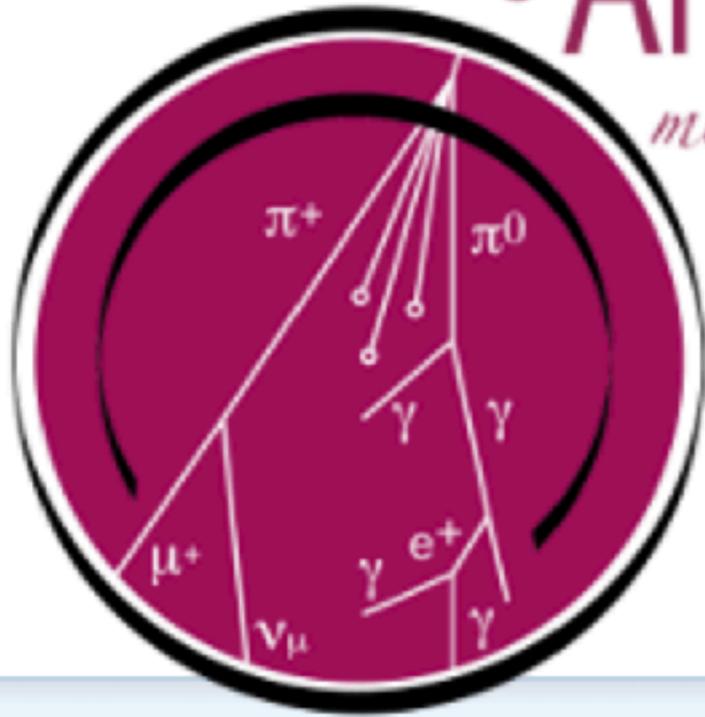


3<sup>rd</sup> Anisotropic Universe

*meets*



**BAM**

2-5  
September  
2018  
*Barolo*  
Europe/Rome  
timezone

Barolo Astroparticle Meeting  
2-5 September 2018

**Concluding remarks**

**Shin'ichiro Ando**

# Gamma-ray anisotropies: Progress since 2013

- Solid measurements of auto-correlation angular power spectrum and hints towards two population *Negro*
- Applications of pixel photon statistics to constrain astrophysics and dark matter (e.g., Galactic center excess) *Safdi, Gebauer, Gaggero*
- Proposal and analysis of cross correlation analysis for dark matter *Horiuchi, Shirasaki*

*Cuoco*

# Multi wavelength/messenger: Possible anomalies and mysteries

- Radio background “too smooth” *Singal*
- Too much power at large scales (esp. dipole) for radio catalogs *Branchini*
- Anomalous X-rays/IR cross correlation; Small scale excess in X-ray power spectrum *Kolodzig*
- Dipole anisotropy of UHECRs *Deligny*
- Sources of high-energy neutrinos still to be uncovered (correlation with blazar flares; connection to gammas) *Reimann, Gaggero*

# And future...

- Promising projects planned for various wavelength and messengers

*Parkinson, Bilicki, Shirasaki*

# Gamma-ray anisotropies: New ideas for the next few years

- Flexible spatial and spectral fits to accommodate mis-modeling of traditional template fit: SkyFACT

*Storm*

- Machine learning

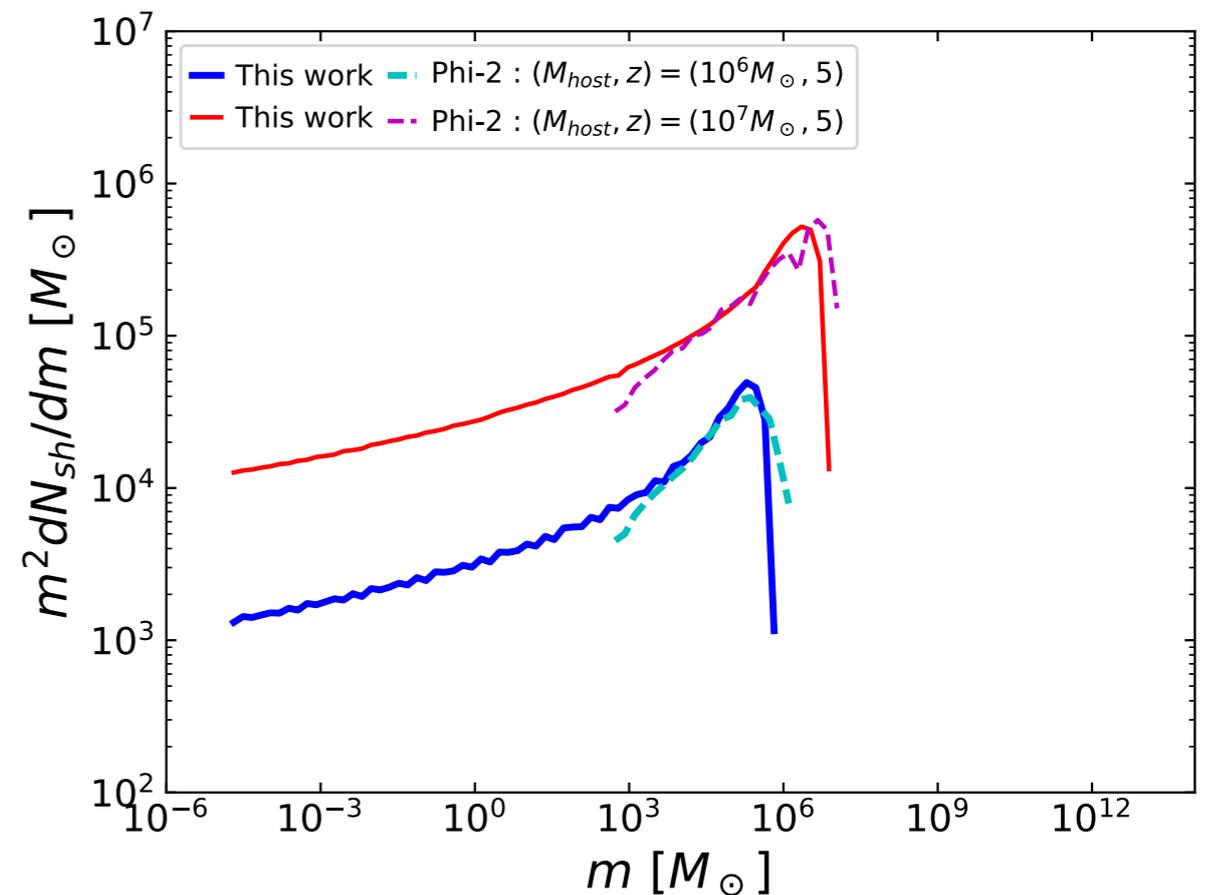
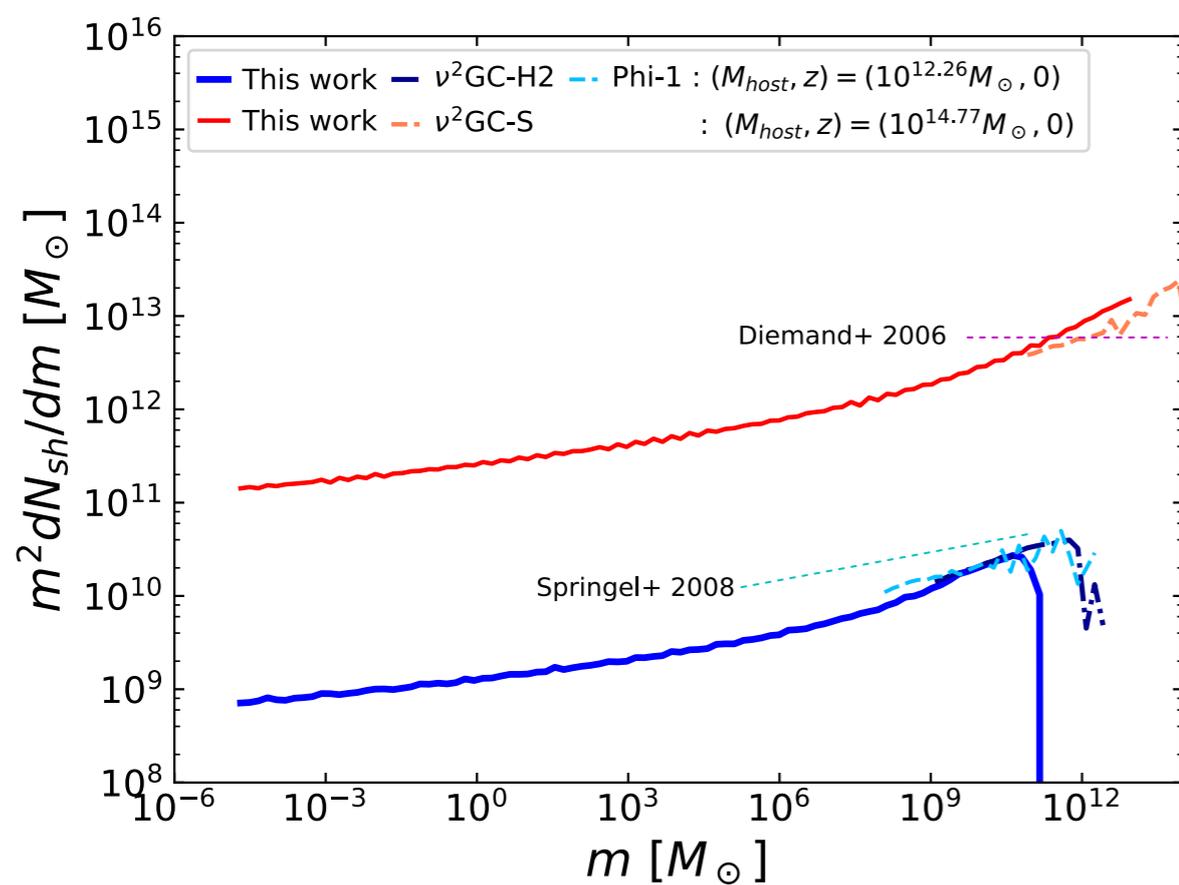
*Hendriks*

- Information field theory

*Ensslin*

# Gamma-ray anisotropies: New ideas for the next few years

- Physically motivated (analytic) model of dark matter subhalos



# Acknowledgments



UNIVERSITÀ  
DEGLI STUDI  
DI TORINO



JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE

日本学術振興会

*See you at*

*4th Anisotropic Universe*

**..... sometime, somewhere!!**