

4th International Conference on

ATOMIC AND NUCLEAR PHYSICS

October 26-27, 2018 | Boston, USA

Astronomical observational evidences of magnetic monopoles and its implication of astrophysics

Qiu-he Peng

Nanjing University, China

An anomaly strong radial magnetic field near the Galactic Center (GC) is detected. The lower limit of the radial magnetic field at $r=0.12$ pc from the GC is $B \geq bmG$.

Its possible scientific significances are following:

1. **The black hole model at the GC is incorrect.** The reason is that radiations observed from the region neighbor of the GC are hardly emitted by the gas of accretion disk due to it being prevented from approaching to the GC by the abnormally strong radial magnetic field.
2. **This is an anticipated signals for existence of magnetic monopoles(MM).** The lower limit of the detected radial magnetic field is quantitatively in agreement with the prediction of our paper "An AGN model with MM".
3. Magnetic monopoles may play a key role in some very important astrophysical problems using the Robakov-Callen effect that nucleons may decay catalyzed by MM. **Taking the RC effect as an energy source, we have proposed a unified model for various supernova explosion, including to solve the question of the energy source both in the Earth core and in the white dwarfs.**
4. **We may explain the physical reason of the Hot Big Bang of the Universe** with the similar mechanism of supernova explosion by using the RC effect as an energy source.

qhpeng@nju.edu.cn