

6<sup>th</sup> International Conference on

# Theoretical and Applied Physics

May 16-17, 2019 | Rome, Italy

## Explosion of collapsed supernova and hot big bang of the universe driven by magnetic monopoles

Qiuhe Peng  
Nanjing University, China

An anomaly of 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. Its possible scientific significances are following: The black hole model at the GC is incorrect. The reason is that radiations observed from the region neighbour of the GC are hardly emitted by the gas of accretion disk due to which it is being prevented from approaching to the GC by the abnormally strong radial magnetic field. 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". 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. 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.

### Recent Publications

1. Eatough R P, et al., (2013) A strong magnetic field around the supermassive black hole at the centre of the Galaxy. Nature 591:391-393.
2. Qiu-He Peng, Jing-Jing Liu and Chi-Kang Chou (2016) A possible influence on standard model of quasars and active galactic nuclei in strong magnetic field. Astrophys Space Sci 361:388.

### Biography

Qiuhe Peng is mainly engaged in nuclear astrophysics, particle astrophysics and Galactic Astronomy research. In the field of Nuclear Astrophysics, his research project involved a neutron star (pulsar), the supernova explosion mechanism and the thermonuclear reaction inside the star, the synthesis of heavy elements and interstellar radioactive element such as the origin of celestial <sup>26</sup>Al. In addition, through his lectures, he establishes Nuclear Astrophysics research in China. He was invited by Peking University, by Tsinghua University (both in Beijing and in Taiwan) and by nuclear physics institutes in Beijing, Shanghai, Lanzhou to give lectures on Nuclear Astrophysics for many times.

qhpeng@nju.edu.cn

### Notes: