

## **SUPER QUANTUM DISCORD OF X STATES UNDER LOCAL NONDISSIPATIVE CHANNELS**

**Ming-yang Shen, Qian Yu, Zhuo-yi Tian & Yuan-hong Tao**

Department of Mathematics, College of Science, Yanbian University, Yanji, Jilin 13302

### **ABSTRACT**

In this paper, we analytically evaluate the super quantum discord of a family of X states with four parameters under three kinds of local nondissipative channels: bit flip channel, phase flip channel and bit phase flip channel. Besides, we make a comparious of the three results and get the conclusion that different channels make different impact on the quantumness.

**Keywords:** local nondissipative channels; super quantum discord; weak measurement.