Experimental report: torsion field communication attempts in 5 km

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Torsion field communication (TFC) is a very important research direction in torsion field research. A.E.Akimov conducted the first TFC experiment [1]. David. G. Yurth also made great contribution for the TFC, it's said his group has made one prototype of torsion field transmitter and receiver for communication [2]. In 2010, Dr. M. Krinker conducted successful TFC experiments with colleagues in Moscow [3]. Author began to pay attention to this topic all because a book called "Torsion Field and Interstellar Communication [4]" by V. Shkatov and V. Zamsha. This book introduces some kinds of torsion field generators and sensors, and mainly the "Shkatov-Zamsha" approach – using the photo as the addressing component. They transmitted obvious signal in 2011 with this approach. After that, Dr. M. Krinker in New York also did successful TFC tests with Mr. Shkatov. And further, Dr. M. Krinker developed the "Cross-Photo" approach for improving the signal-to-noise ratio. Cybertronica Research led by Dr. S. Kernbach developed many kinds of detectors, which can detect weak and super-weak signals – especially the torsion field non-local signals. Besides them, 1k replication experiments with Electrochemical Impedance Spectroscopy have been finished nonlocally [5].

So there are so much entanglement phenomena and experiments in macroscopic system with the help of torsion field or weak emission. But for the purpose of communication, the high signal-to-noise ratio and fast reaction time are also necessary. So author also tried to look for suitable sensor for detecting torsion field. In this work, author want to introduce a TFC experiment.

1. Torsion field generator

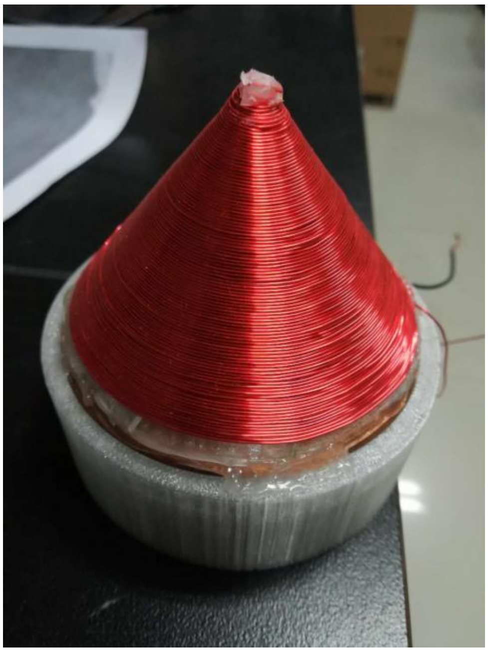

Fig 1: Torsion field generator based on spinning Poynting Vector

The principle of this torsion field generator is using the interaction of the magnetic field and electric field to generate the spinning Poynting Vector, $S = E \times H$. There is a strong magnet inside the container and the electric field will be generated between the coil and a copper cone inside.

2. Torsion field detector

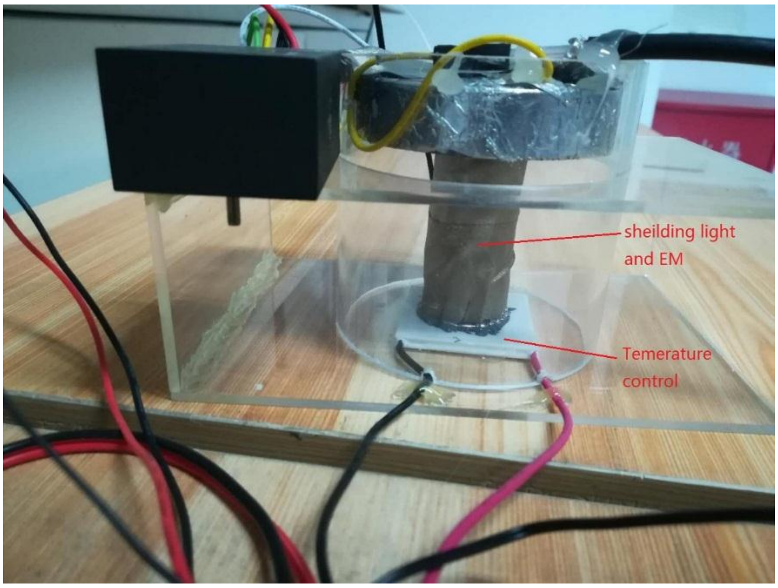

Fig 2: Torsion field detector based on the photodiode

Author has been using about two years to research this kind of torsion field detector based on the photodiode. The approach is to measure the dark current of the photodiode. The photodiode should be sealed and light and EM should also be shielded. A photo should be taken before the photodiode was sealed. After sealed, a suitable bias voltage should be adjusted. A semiconductor heating film was placed under the sensor, controled by a circuit board with PID algorithm, so the accuracy of temperature control is under 0.01℃.

3. Method

The method used in experiment is standard "Shkatov-Zamsha" approach. The photo of photodiode taken before the sensor was sealed was placed on the top of the torsion field generator. Generally speaking, author did such experiments on the night. The detector was placed in lab, and took the photo of photodiode and torsion field generator back home. The distance between the lab and home is about 5 km.

After the environment of the TF detector was stable, especially the temperature, and the data recording became linear, the photo of photodiode was placed on the TF generator. In this experiment, author didn't use the ON-OFF mode, but use the polarization reverse mode, CW-CCW mode or right-left mode for improving signal-to-noise ratio. The configuration of the experiment at transmitter side is in Fig. 3.

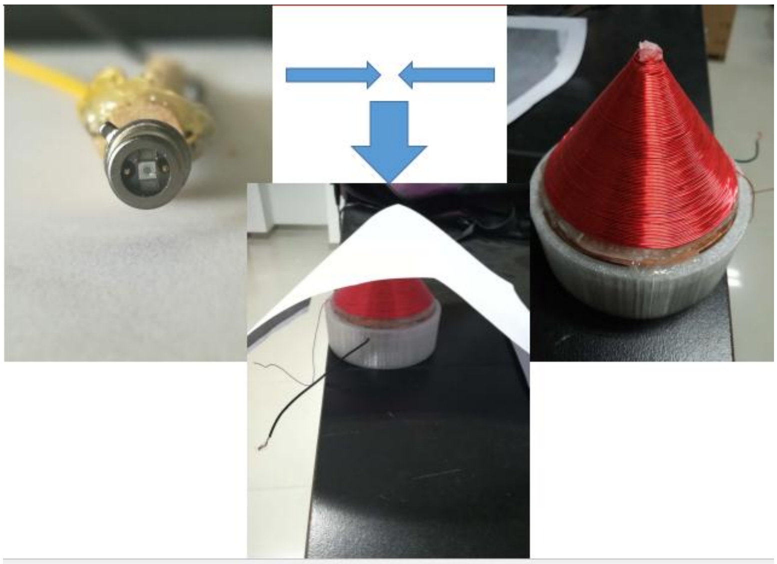

Fig 3: The configuration of TFC on the transmitter side

4. Result and conclusion

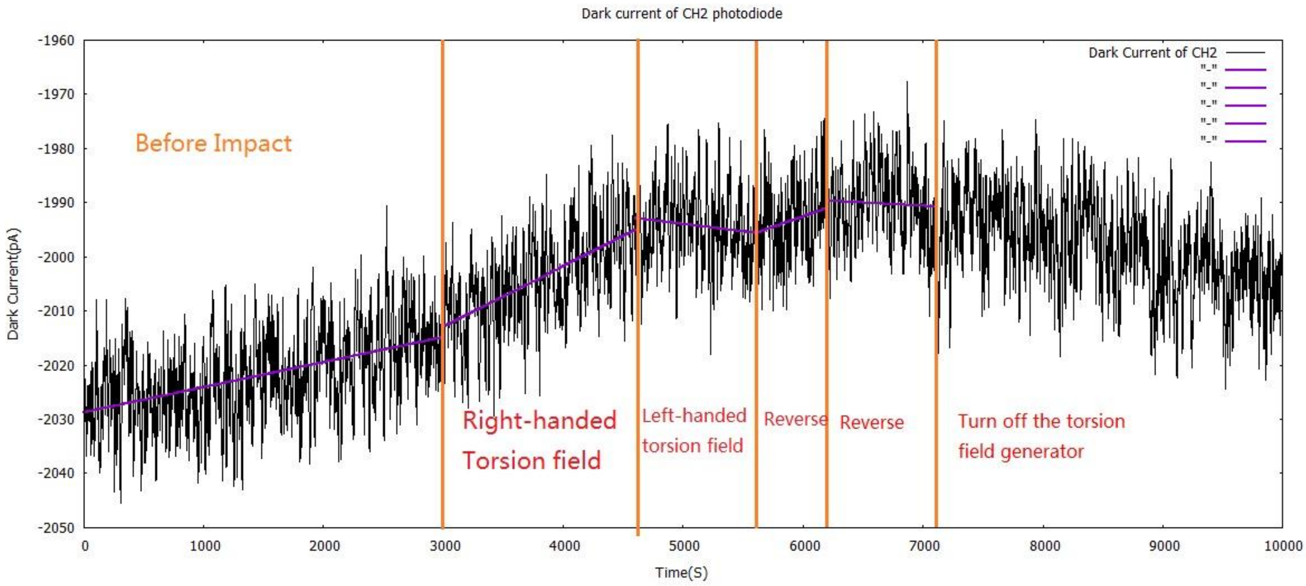

Fig 4: Original result of the TFC experiment

The protocol at transmitter side is like follow:
0-3000s: Before impact
3000-4600s: right-handed TF
4600-5600s: left-handed TF
5600-6200s: right-handed TF
6200-7100s: left-handed TF
After 7100s: turn off the TF generator

So from the result, there are two different trends of the dark current of the photodiode with different polarization of torsion field. From the time correlation, the reaction time of the detector is still not enough, but the signal-to-noise ratio is high from the linear regression of the original data, which is on the center of the data in each part. In some part, the slopes of the linear regression are obviously different. So for more obvious result, author also calculated the slope of the linear regression in each part in Fig 5:

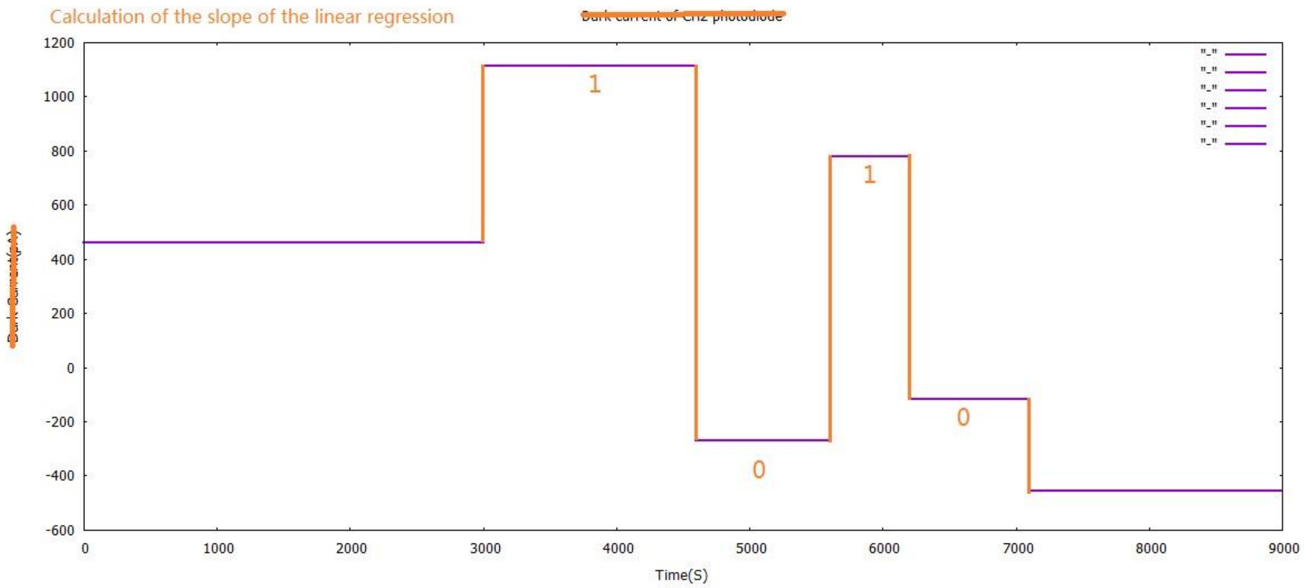

Fig 5: The calculation of the slope of linear regression(original slope multiply by a constant coefficient, otherwise the slope is too small because of the large value of time in X axis)

So from Fig 5, the waveform of the slope just like digital signals, for example, the parts less than 0 can be considered as “0“ and the parts more than 0 can be considered as “1“. So after adding protocol, meaningful information can be transmitted.

(1) The measurement of the dark current in photodiode under the stable environmental condition can be used for detection of the non-local torsion field signals.
(2) The calculation of slope can be used to analyze the useful nonlocal torsion field signals, and translate the signals in original data into the waveform of digital signal.
(3) It seems that the sensitivity of the sensor is proportional to the noise level, the noise level in this experiment is very high.
(4) The volume of photodiode is very small and it's convenient for the miniaturization applications, such as the telephone.
(5) The "first measurement effect" phenomena is serious in such experiments.

References:

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