

<첨부 6>

## LENR-ROK 제 6차 연구회의 회의록

일시 : 2009년 6월 2일(화) 9:30-10:50 (한국 시각, 미국 DC 6월 1일 오후 8:30, San Diego 오후 5:30 시각)

장소 : 서울대 주관 전화 회의

참석자: 김재욱, L. Forsley (이상 JWK), 김도성, 김홍주, 황일순(이상 연구진)

### I. QUESTIONS asked by LENR ROK and Answer by Dr. Frosley

#### Co-Deposition Cell

1. Q: The LENR cell is said to have produced a neutron-burst that lasted 14 hours in SRI Co-Dep. What is the typical length of the burst.

A: In San Diego, we do not use continuous trace (Remball) in the Navy Lab. Instead HPGe(105%) is used to monitor periodically (ex. every 4~5 hours as shown in Fig. 9, March 2009 Report). The burst continues over a day.

2. Q: The LENR can be reproduced anytime using the Co-Dep. Can you reproduce the neutron production each time you run the experiment?

A: Already it has been reproduced at SRI, Univ. Texas-Austin, UC San Diego (UCSD, during the past three years). At UCSD, undergraduate student has produced and detected neutrons by CR-39 in classes for the last three years. Yes, we can reproduce every time.

3. Q: Is it true that CR-39 measurements always were made to show that symmetric triple tracks account for 10% of total triple tracks? Can you show us which is non-symmetric triple track?

A. Symmetric triple tracks are about 1% to 10%. There are about seven (7) non-symmetric triple tracks in Frame #1

Q: Can you provide us with a good photograph showing a representative triple tracks and a procedure to distinguish symmetric tracks from non-symmetric tracks?

A: Yes, I will do that tonight.

5. Q: Co-Dep did not give 2.22 MeV gamma signal in the shield when Remball detected neutron at the same time in the lead-shielded cave of the Navy Lab. Is it true?

A: Yes, but we detected 2.22 MeV gamma when repeated out of the

lead cave to expose to the cosmic radiation into water.

Q: Can you send us the gamma spectra in the lead cave a) background without LENR, b) with LENR and a high Z witness material.

A: Yes, we will send you.

#### GNE Hybrid Cell

6. Q: The insertion of natural uranium wire(0.25 mm radius) increased symmetric triple track by about 100 times. Also the GNE cell increased neutron flux >1,000 fold compared with Co-Dep Cell. Are these true?

A: Yes, they are true.

Q: We are surprised by this.

7. Q: Neutron spectrum is not clearly shown. How can you clearly obtain the spectra from Ge-recoil spectra despite of strong gamma background?

A: We subtracted the pre-determined background from the measure spectra. I will send you a) background, b) raw gamma data c) final spectra with background subtracted.

## II. DISCUSSION

1. Energy resolution of the Liquid Scintillation Proton Recoil Detector is good enough although raw data in the first report does not show this. LENR ROK will provide a) the raw data, b) unfolded data for the monoenergetic DT source.

2. Burst can be detected by Liquid Scintillation Proton Recoil Detector by moving farther away when a burst causes a saturation.

3. Q: Liquid Scintillation Proton Recoil spectra can prove neutron. When done, we will recommend ROK Government's support. For this, LENR ROK would like to participate in the SRI Co-Dep measurement, with our calibrated detector, as a part of this Phase One Review Process.

A: It is absolutely desirable to prove neutron spectrum by the liquid scintillation detector. We are also building such a liquid scintillation detector but have not completed. There is time problem with your proposal to make the measurement here. It will take one month for the entry approval which delays our collaboration.

A(JW Khim) : US-LENR is preparing the US Government support. Then ROK may not be allowed to participate. It is too late.

### III. CONCLUSIONS

1. Based on available data LENR ROK finds that there are several evidences of neutron generation by the proposed technology. Spectral and temporal data on generated neutrons that are necessary for a scientific confirmation are, however, not yet made available even though it has been pursued by the US LENR.
2. If the production of neutrons by LENR is confirmed, a wide range of applications is possible. Both scientific significance and its commercial value can be confirmed as soon as the energy spectrum and the time-history are made available. Therefore it is recommended to make an unequivocal confirmation by the second phase collaboration to measure the energy spectrum and time-history of neutrons at the LENR device using the Liquid scintillation proton-recoil detector.
3. The confirmation measurement can be completed in one month by using the apparatus and expertise already existing within LENR ROK. Due to the one-month security clearance required for LENR ROK to enter the US Navy Lab, the phase two will take two months.
4. During the phase two effort, the LENR ROK needs not to learn any part of proprietary technologies of US LENR. Once the phase two effort positively confirms the fast neutron generation, a collaboration involving significant commitment to the Korean Government can be recommended. The magnitude of the Korean commitment can be assessed from the Phase Two confirmation effort.