Current Status and Activities on the Pohang Neutron Facility

G. N. Kim, D. Son
Center for High Energy Physics, Kyungpook National University, Taegu 702-701, Korea
Y. S. Lee, V. Kovalchuk+, V.Skoy*,M. H. Cho, I. S. Ko, W. Namkung
Pohang Accelerator Laboratory, Pohang University of science and Technology
D. W. Lee, H. D. Kim
Physics Department, Pusan National University, Pusan 609-749, Korea
S. K. Ko
Physics Department, University of Ulsan, Ulsan 680-749, Korea
D. S. Kim
Physics Education Department, Taegu University, Kyungbuk 712-714, Korea
T. I. Ro, Y. G. Min
Physics Department, Donga University, Pusan 604-714, Korea

Abstract

The Pohang Neutron Facility, an electron linear accelerator based pulsed neutron facility, was constructed for nuclear data production in Korea. It consists of an electron linear accelerator, a water-cooled Ta target with a water moderator, and a time-of-flight path with an 11 m length. The neutron energy spectra are measured for different water levels inside the moderator and compared with calculations by the Monte Carlo N-Particle (MCNP) transport code. The optimum size of the water moderator is determined on the base of these results.

KSTAR ECE 용 마이크로파 금속렌즈 설계

Microwave Metal Lens Design for KSTAR ECE System

정승호, 황철규
한국원자력연구소
대전광역시 유성구 덕진동 150

요 약

금속 원판에 수많은 도파관을 갖는 마이크로파 렌즈를 설계하였다. 이 렌즈는 반경이 커질수록 도파관의 직경이 작아져 렌즈의 가장자리쪽 위상속도가 빨라지고 따라서 마이크로파를 잘 집속시킬 수 있게 설계되었다. 설계된 렌즈의 초점거리는 주파수가 75GHz 일때 450mm 이며 기하광학적인 공간 분해능은 5cm 이하이다.