Simulate neutron fluence spectra

I’m using FLUKA to simulate the Neutron fluence or flux spectra form lead target bombarded by 600MeV Proton. I considered several SCORE methods of Fluka, such as USRBin, USRYIELD, however, they all seem unsuitable. The following is a description of my problems.

1. The result I need is neutron fluence, $\phi(r, E_{\text{kinetic}})$ or neutron density $n(r, E_{\text{kinetic}})$ or neutron flux $J(r, E_{\text{kinetic}})$. The coordinate system may be Cylindrical, Spherical or Cartesian, but a Cylindrical is better.

2. I noticed that the USRBin card can be used to estimate $\phi(r)$, but it lose the Energy distribution. The USRYIELD card may estimate $J_{\text{surface}}(E, \theta)$ from one region to the other, but what I need is $J_{\text{surface}}(E, \theta, \phi)$, in which $\theta, \phi$ identify the position in a spherical surface. It seems: $J_{\text{surface}}(E, \theta) = \int_0^{2\pi} J_{\text{surface}}(E, \theta, \phi) d\phi$.

3. My questions are: Is there any card can solve the problem? Or how can I solve the problem?

4. Another problem: Could I get $\phi(r, E_{\text{kinetic}}, t)$ if I knew the time information of Proton beam, such as that the energy of Proton beam varies with time?