Two Projects at WU:

A) TOTAL (N) CROSS SECTIONS: $^{16,18}_{\text{O}}, ^{58,64}_{\text{Ni}}, ^{112,124}_{\text{Sn}}$

B) TWO NEW NEAR P-THRESHOLD RESONANCES EXPLAINED BY A CONTINUUM COGNIZANT SM.

Abstract:

This is a tag-team seminar: each speaker will present a mini-seminar on recent results from the WU group.

The first mini-seminar will detail recent total neutron cross section measurements on isotopically-separated targets and their role in constraining the asymmetry-dependence of optical potentials. Both experimental advances (new digitizer capabilities) that enabled the measurements and the theoretical underpinnings (the Dispersive Optical Model) will be discussed.

In the second mini-seminar, two resonances, one in $^9\text{Li}$ and the other in $^{10}\text{Be}$ both found by the invariant mass technique, will be: a) presented and b) explained by the Shell Model Embedded in the Continuum (SMEC) of J. Okolowicz and M. Ploszajczak. What is interesting is that the coupling to the neutron continuum enhances the “ushering” of the resonances to the proton emission threshold.