How Can Brane World Physics be reconciled to early universe applications of relic thermal input as given by LQG to inflationary cosmology? ANDREW BECKWITH, APS/ Fermi contractor — We are investigating how LQG and brane world physics predictions can be reconciled. As it stands, Brane world models exclude the quantum bounce dynamics seen in LQG; in particular Akshenkhars construction of a prior universe collapsing to a singularity is undoable in contemporary Sundrum brane world physics. The author presents how answering Sean Carrolls supposition of a pre inflation state of low temperature-low entropy pre inflation state as given in 2005 provides a bridge between two models with radically different predictions. I.e. Loop quantum gravity may be giving us a template as to thermal input which answers relic graviton production issues, and CMB production which are presently unanswerable via brane world physics. This is also a way of getting around the get around the fact that conventional cosmological CMB is limited by a barrier as of a red shift limit of about $z = 1000$, i.e. when the universe was about 1000 times smaller and 100,000 times younger than today as to photons, and to come up with a working model of quintessence scalar fields which permits relic generation of dark matter/dark energy.