Poleward Boundary Intensifications (PBIs) are a common feature consisting of relatively bright aurora at the poleward edge of the auroral oval. This auroral feature is thought to be magnetically conjugate to the plasma sheet boundary layer, a region of sharp plasma gradients separating the plasma sheet and the lobe. In such strong gradients, compressional and shear mode Alfvén waves can be coupled, so that compressional power generated throughout the plasma sheet is converted into the shear mode and can propagate along magnetic field lines toward the ionosphere. In addition, these shear mode waves will phase mix in the density gradient, leading to narrow spatial scales where non-ideal MHD effects become important, and the wave can be called the kinetic Alfvén wave. The kinetic Alfvén waves carry a parallel electric field that can accelerate auroral particles, producing the PBI. PBI structures have been invoked as an important part of the substorm onset process, but can also form at other times during the substorm cycle. In particular, plasma flows that cross the plasma sheet boundary layer, which have been considered to be a magnetotail source for PBIs, have been suggested to play a role in substorm onset. Numerical modelling of these processes will be presented.