Question	Response	Extra
Why do light alloys provide such good data quality	So, as has been demonstrated many times, APT data quality is usually limited by the specimen and not the APT equipment. Good data comes from specimens with high electrical and thermal conductivity, are strong, and it helps if they have relatively low evaporation fields so they are under less relative stress during field evaporation - this allows high data collection rates and high SNR	
Can short range order be studied with APT- many of these alloys have ordered phases	Yes, although APT is not generally considered a crystallography tool as the spatial resolution is sub nanometer, but not sub angstrom. Also having detection efficiency from 37 to 80% in modern instruments, some fraction of the atoms are missing. Given these limitations, several algorithms like spatial distribution maps, radial distribution functions and frequency distributions can be used to prove and quantify short range order. Additionally, for low alloy, or fully ordered alloys, the crystal latiice CAN be observed even if not perfect. Several groups have worked on using algorithms to 'repair' the lattice and move atoms to their most likely origianl site - I will get this reference for the registrants	Moody, M. P. *et al.* Lattice Rectification in Atom Probe Tomography: Toward True Three-Dimensional Atomic Microscopy. *Microscopy and Microanalysis* **17**, 226–239 (2011). Breen, A. J. et al. Restoring the lattice of Si-based atom probe reconstructions for enhanced information on dopant positioning. Ultramicroscopy 159, 314–323 (2015).