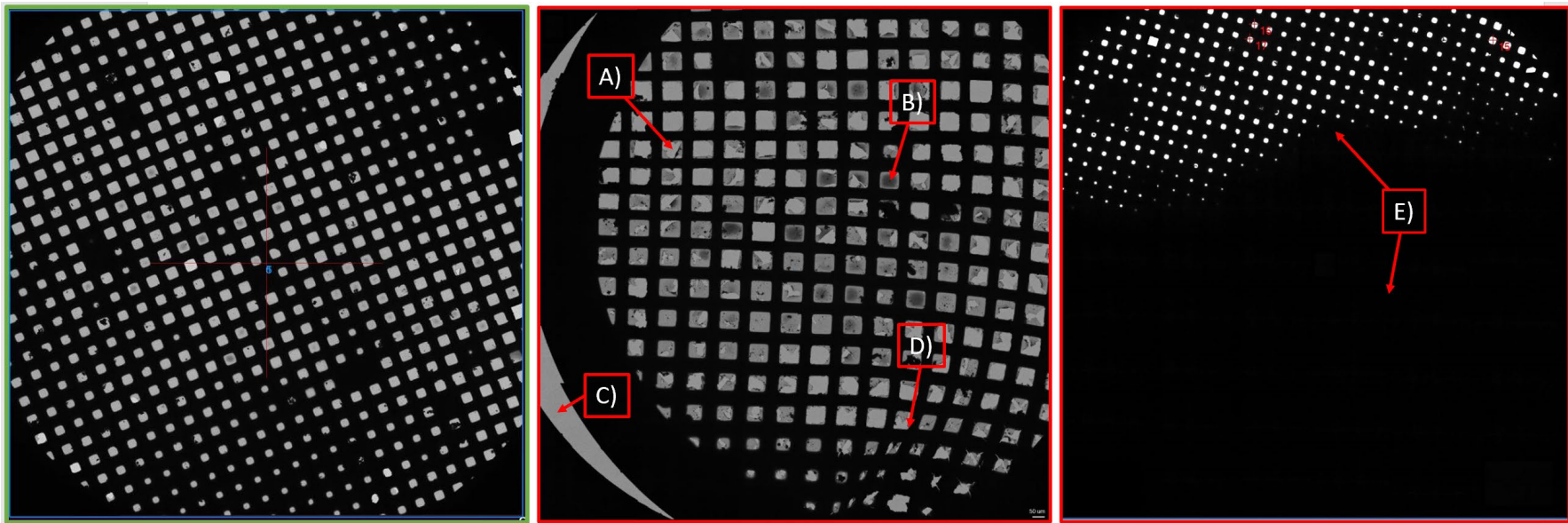


PNCC's Guide to "Krios-Ready" Grids

At PNCC, we require grids that are either screened at our facility or screened by the user at another facility prior to being loaded onto a Krios for data collection. It is important that grids are carefully checked for potential quality issues at low, medium, and high magnification. Following are the criteria we require for a grid to be considered krios-ready. PNCC reserves the right to cancel a data collection session without refunding hours (see [scheduling policies](#)) if these outlined requirements are not met, and any data collected on a grid not meeting these requirements may not yield high-quality results. If you require assistance to optimize your grids to meet these standards, or if you have questions about whether a grid is suitable for data collection, please contact your [SPOC](#).

Low Magnification / Atlas



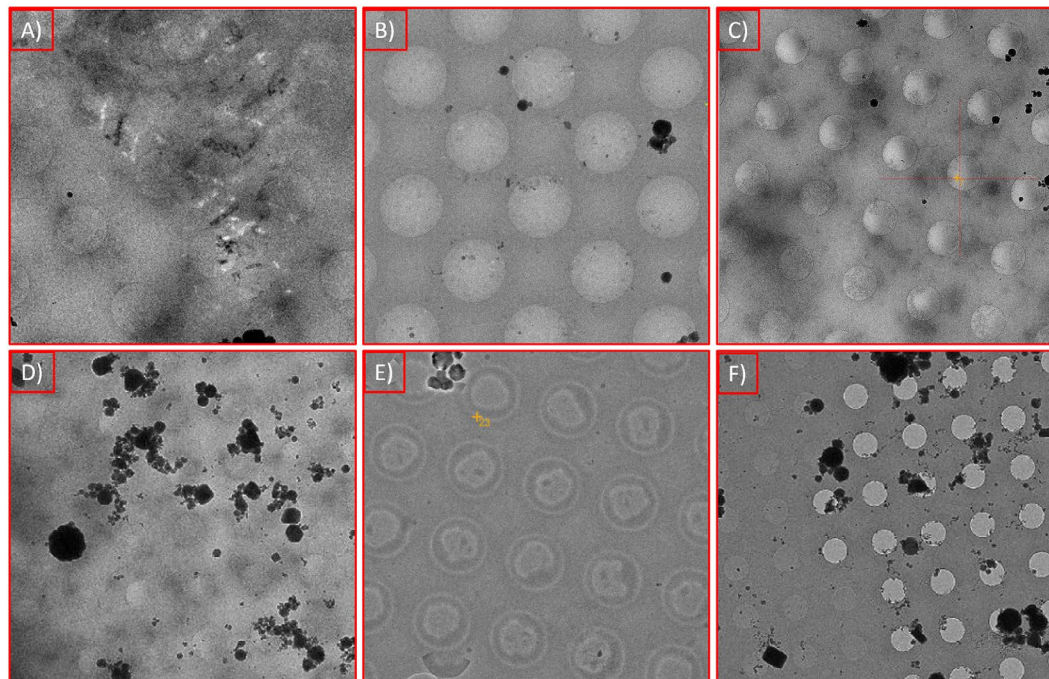
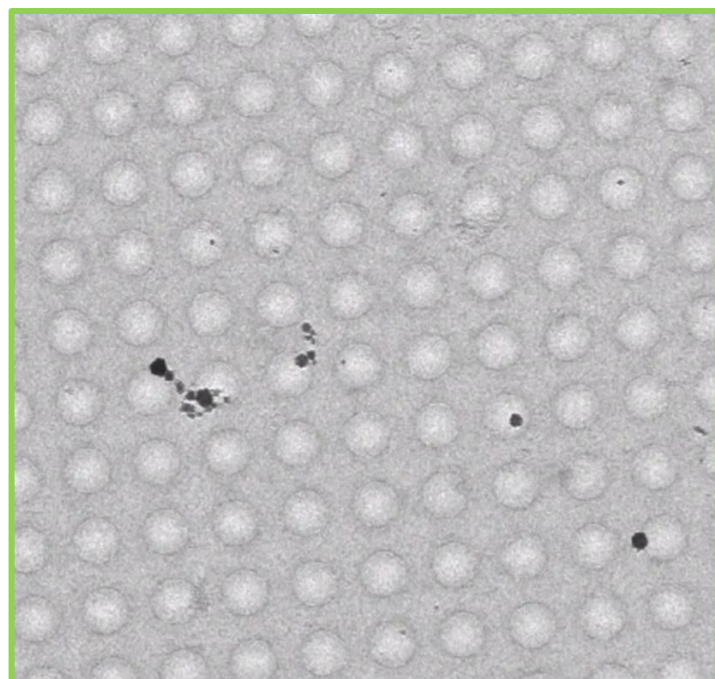
A good grid for SPA data collection has the following characteristics:

- Grid is fully within the clip
- Grid is not significantly damaged
- No signs of extreme contamination
- Majority of ice is not too thin or thick
- Ice thickness is consistent within each square

The following characteristics are not acceptable for data collection:

- A) Too many damaged squares
- B) Squares with thick ice densities in the center are not suitable for data collection
- C) Grids partially out of clip cannot be safely loaded into the Krios
- D) Wrinkled or bent grids cannot be safely loaded into the Krios
- E) Thick ice (very small squares or non-visible squares) will not yield enough imageable area for a high-quality dataset

Medium Magnification / Square View



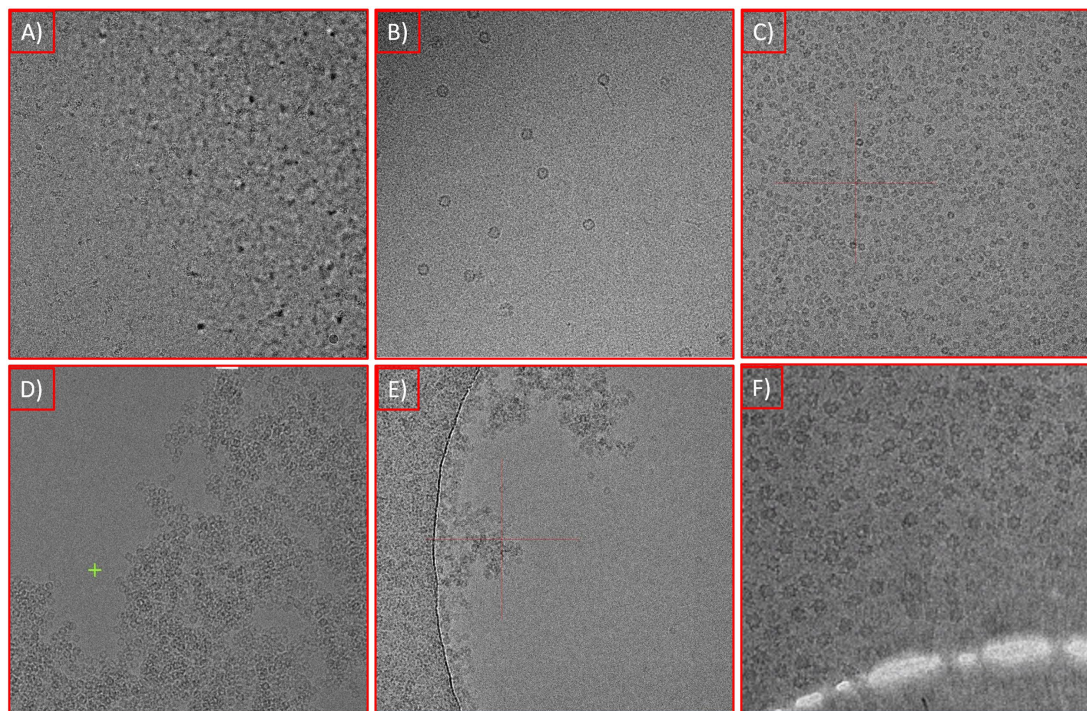
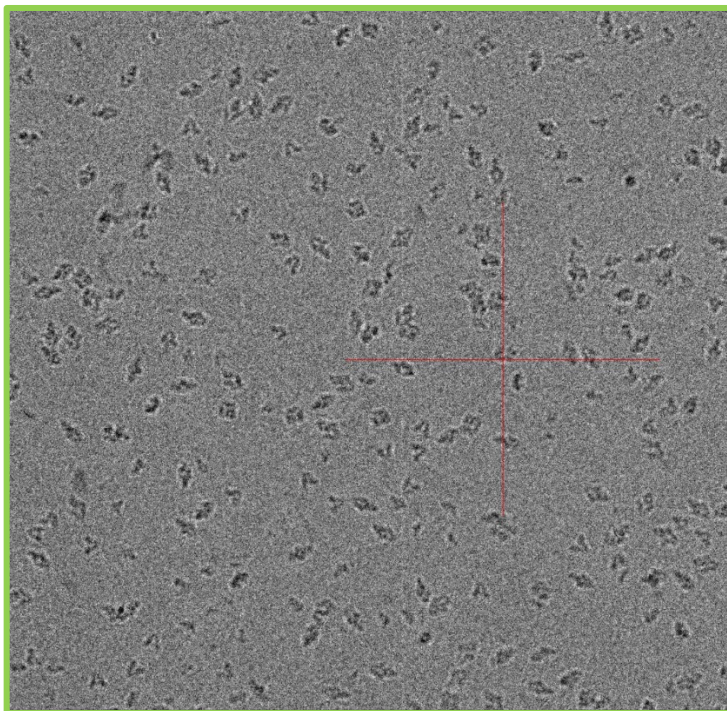
At medium magnification, screened areas should have the following characteristics:

- Ice thickness is consistent across square and holes
- No signs of crystalline ice are present
- Contamination is not severe
- Holes are not damaged

The following characteristics are not acceptable for data collection:

- A) Black and white dots indicate cubic ice due to slow freezing
- B) Stripes indicate hexagonal ice due to warming
- C) Cloudy contamination indicates severe aggregation
- D) Severe transfer contamination will inhibit the number of imageable holes
- E) Lighter hole centers indicate that ice is too thin in the center
- F) Dry holes in the square center will lead to highly inefficient setup

High Magnification



At high magnification, screening images should have the following characteristics:

- Ice background is homogeneous and featureless
- Concentration is neither sparse nor overlapping
- Particle distribution is consistent across image
- No damage is evident

The following characteristics are not acceptable for data collection:

- A) Leopard-like ice indicates ice has devitrified
- B) Low concentration will inhibit ability to obtain high-resolution data
- C) High concentration (overlapping particles) will lead to difficulties with processing
- D) Dense clumps of particles indicate aggregation
- E) Particles must span entire hole and cannot be limited to hole edges
- F) Holes with signs of cracks or damage cannot be imaged