

Latitude S Software

Model 700.LS.731

Latitude® S sets a new standard for the efficient, high-throughput collection of low-dose, single-particle, cryo-electron microscopy (cryo-EM) datasets from Gatan's leading K3™, K2®, GIF Quantum® LS, and OneView® cameras. Only Latitude S optimally integrates your large investments in cryo-EM instrumentation, the transmission electron microscope (TEM) column, and the Gatan camera.

Benefits

- **Works with cryo-EM's leading cameras for single-particle analysis:** Automate low-dose acquisition on your K3, K2, GIF Quantum LS, and OneView cameras.
- **Highest productivity:** Latitude S' direct interface with Gatan cameras allows the highest throughput and productivity, bar none.
- **Platform independent:** Works on select Thermo Scientific, JEOL, and Hitachi TEMs. With Latitude S you can freely mix and match EM column brands as optimal for your lab.
- **Professionally supported:** Onsite applications support and training available.
- **Reduce time to find "good ice":** Quickly explore areas of varying thickness and intensity to determine the optimal locations on your grid.
- **Avoid repetitive tasks:** Leverage grid-based tool and templates to mark hundreds of contiguous or separate regions for further investigation.
- **Adjust parameters on-the-fly:** Fine-tune and update the remaining steps in the workflow to ensure consistency in your routines.
- **Extensive task and session tracking:** Acquire a comprehensive, real time report of session tasks, including current and scheduled actions with timings.

At low magnification, Latitude S enables you to explore areas

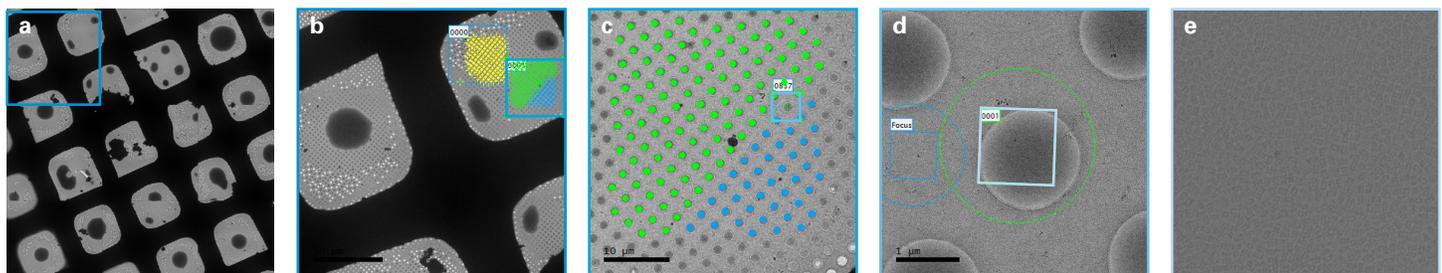


Figure 2. Capture images only from the best parts of your sample: a) choose grid square; b) hand-pick viable areas on the carbon film (no ice holes); c) indicate sub-regions to analyze; d) confirm acquisition and illumination area; e) assess image quality.

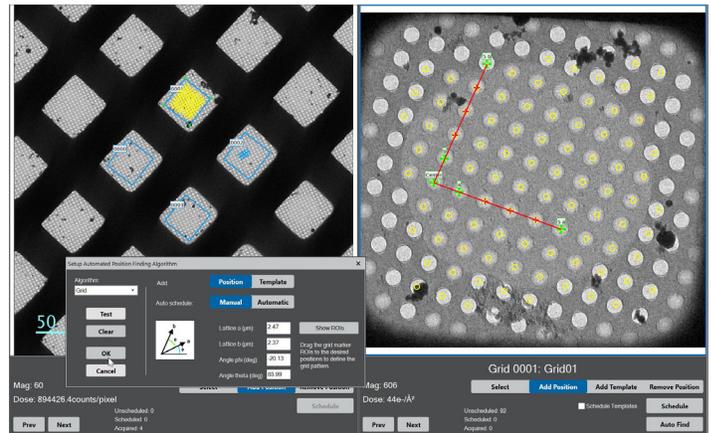


Figure 1. The grid-based tool can find, then mark hundreds of contiguous or separate regions for further investigation.

of varying thickness and intensity to determine the optimal conditions and locations for "good ice" on your grid. Once identified, the grid-based tool can mark hundreds of contiguous or separate regions for further investigation. This capability provides a simple, but powerful way to automate image capture from only from the best parts of your sample.

After you define a low magnification region, the software navigates at high magnification to take high-quality images under low-dose conditions. A template can be set up to define acquisition patterns for each location at high magnification. Using these templates, not only can you shorten the time required to set up an experiment, but extend the duration you can walk away from the microscope.

With the versatility of Latitude S comes an additional ease of use. A technique-centric interface guides you through the experiment set up and EM calibration routines. During data collection and analysis, Latitude S allows you to adjust experiment parameters

on-the-fly to accommodate the complex characteristics of each sample. As you fine-tune and save parameters, the software will overwrite the remaining steps in the workflow to ensure consistency in your routines.

Latitude S provides an extensive set of real time reports, including session tasks, active task, scheduled tasks, unscheduled tasks, timings, and results. A comprehensive summary of the entire session with time forecast for remaining tasks ensures you always know the acquisition status of your low-dose datasets. This inherent system intelligence allows you to pause, modify, and restart acquisition routines as needed to ensure there is no loss of data.

This single-particle software was designed with two primary use cases in mind. The overall workflow allows one to quickly screen samples and collect high-quality images from a small area of the sample, or to automate the collection of hundreds or thousands of sample areas. These two unique methods of automation work in concert, allowing you to switch from one mode to the other seamlessly.

Latitude S has flexibility built in from the very beginning. Using the DigitalMicrograph® scripting interface, it is possible to customize the default procedures used by Latitude S to automatically acquire data. This gives you the ability to customize the automation framework to suit the unique needs of each experiment.

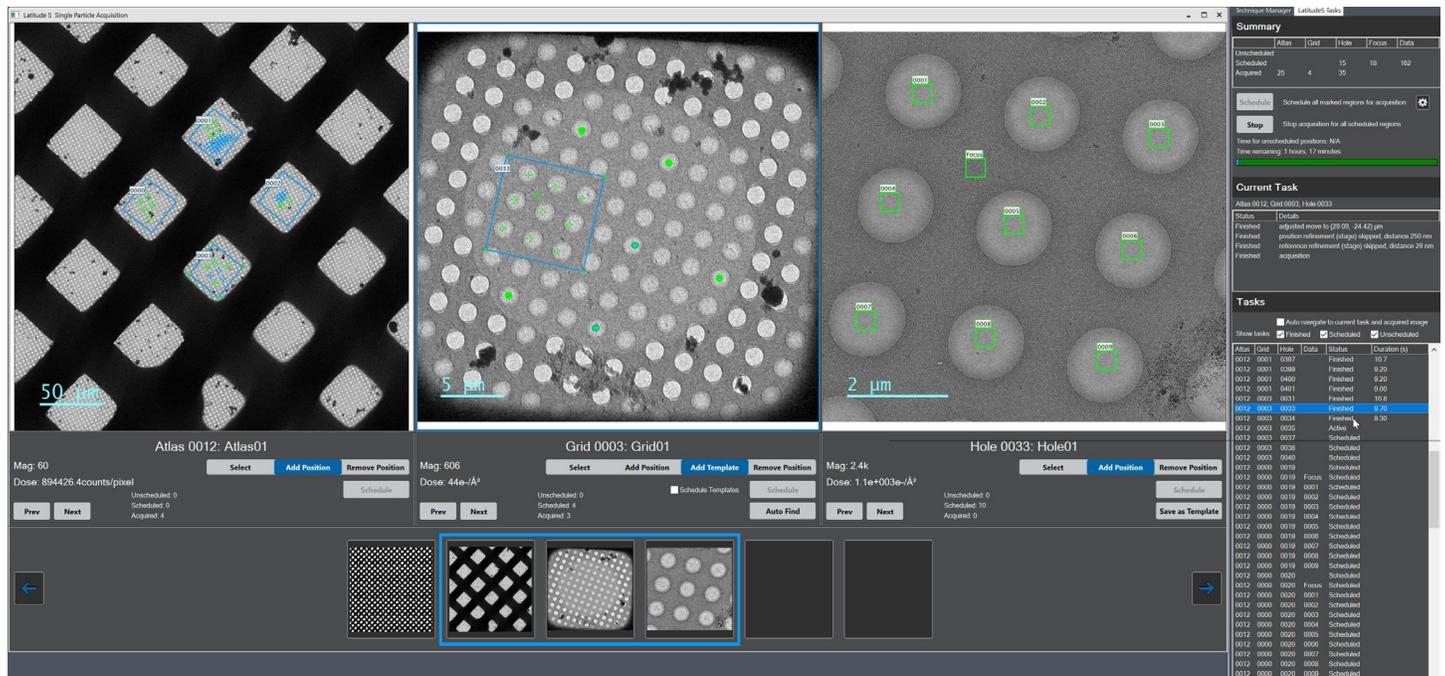


Figure 3. A comprehensive summary of the entire session with time forecast for remaining tasks ensures you always know the acquisition status of your low-dose datasets. This inherent system intelligence allows you to pause, modify, and restart acquisition routines as needed to ensure there is no loss of data.

Ordering

Model	Description
700.LS.731.30.64.1	Latitude S Software
700.LS.731.31.64.1	Latitude S Software (Offline)
731.TA	Latitude Software Training

Requirements

- Gatan camera (K3, K2, Quantum LS, or OneView)
- Please contact your sales representative for the current list of compatible microscopes for the Latitude S software.

Requirements are subject to change.

Applications

- Single-particle cryo-EM

Other products to consider

- K3 Direct Detection Camera
- K2 Direct Detection Camera
- GIF Quantum LS Imaging Filter
- OneView Camera