



Movies ↓

Movie alignment

- MotionCorr
- Xmipp - Optical Flow
- Xmipp - Correlation
- Unblur/Summovie

A

Micrographs ↓

CTF estimation

- CTFFIND 3/4
- Xmipp - CTF
- gCTF

B

CTFs ↓ Micrographs

Particle Picking

- Eman Boxer / Sparx Gauss
- Xmipp - Picking
- Relion - Autopick
- gEMPICKER / Gautomatch
- Appion - DoG picker

C

Coordinates ↓

2D Classification

- Xmipp - CL2D/ML2D
- Relion - 2D Classification
- Spider MDA

D

2D Classes ↓ Particles

Initial Volume

- Xmipp - RANSAC/Significant
- Xmipp - RCT
- Eman - Initial volume
- Simple
- CryoEM

E

Volume ↓

3D Classification

- Relion - 3D Classification
- FREALIGN ML Classification

F

3D Classes ↓ Particles

3D Refinement

- Relion - 3D Auto-refine
- Xmipp - Proj. Matching
- Eman - Refine Easy
- FREALIGN

G

Refined Volume ↓



Integrated EM programs