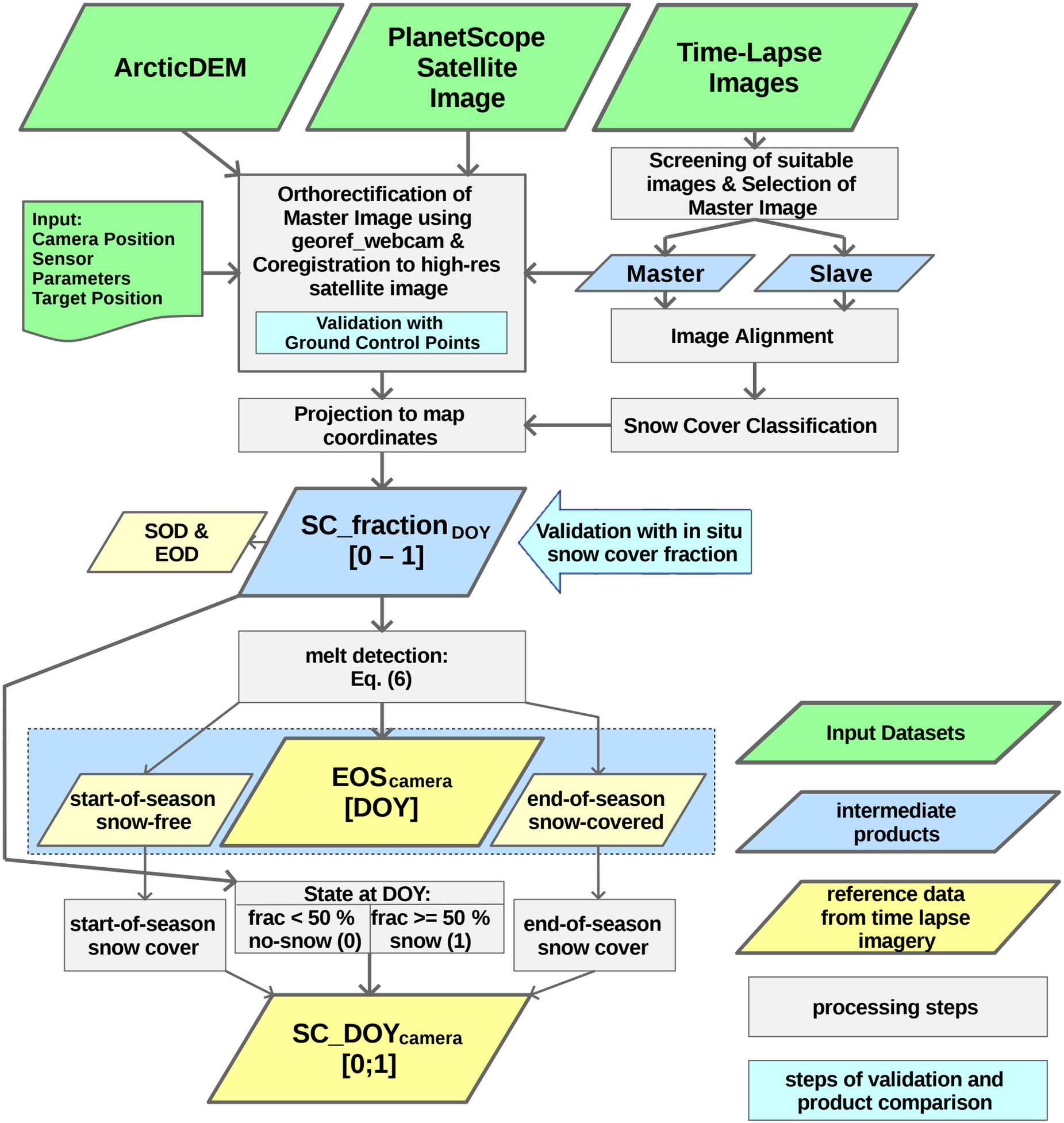
ArcticDEM
PlanetScope Satellite Image
Time-Lapse Images
Screening of suitable images & Selection of Master Image
Input:
Camera Position
Sensor Parameters
Target Position
Orthorectification of Master Image using georef_webcam & Coregistration to high-res satellite image
Validation with Ground Control Points
Master
Slave
Image Alignment
Projection to map coordinates
Snow Cover Classification
SOD & EOD
SC_fraction DOY [0 – 1]
Validation with in situ snow cover fraction
melt detection: Eq. (6)
start-of-season snow-free
EOS camera [DOY]
end-of-season snow-covered
State at DOY:
frac < 50 % no-snow (0)
frac >= 50 % snow (1)
start-of-season snow cover
end-of-season snow cover
SC_DOY camera [0;1]
Input Datasets
intermediate products
reference data from time lapse imagery
processing steps
steps of validation and product comparison