**Terminal molt version:**

* GMACS\_V\_0\_00: Initial version of GMACS for snow crab
* GMACS\_V\_1\_00: GMACS\_V\_0\_00 +
  + Included catch-based comp predictions (new inputs)
  + Time-varying natural mortality
* GMACS\_V\_1\_01: GMACS\_V\_0\_01 +
  + corrected FOFL calculation
* GMACS\_V\_2\_01\_A (did not converge): **GMACS\_V\_1\_00** +
  + Katie’s modifications (Survey Type, CPUE time) i.e. merging Nov-Dec 2021
* GMACS\_V\_2\_01\_B:GMACS\_V\_2\_01\_A +
  + Correct the additional CV for survey
  + Add mirror selectivity (correct a bug)
* GMACS\_V\_2\_01\_C:GMACS\_V\_2\_01\_B +
  + Ability to mirror additional variance parameter
  + Fixed analytical Q
  + Catch based comp predictions
  + Tidied up the output
  + Correcting tagging likelihood
  + One parameter logistic selectivity cure
* GMACS\_V\_2\_01\_D: GMACS\_V\_2\_01\_C +
  + Ability to switch of reference point calculation added
  + Ability to number of years when computing equilibria added
  + Ability to weight penalties by fleet added
  + Ability to select only some derived variables to compute added
  + Added the derived outputs (and SDs) to gmacsall,out
  + Added projection-related inputs
* GMACS\_V\_2\_01\_E: GMACS\_V\_2\_01\_D +
  + New penalties on Fdev and Fdov
* GMACS\_V\_2\_01\_F: GMACS\_V\_2\_01\_E +
  + Checked the \_in files (and corrected a minor error)
  + Worked on retrospective analysis
  + Corrected bug that impacted surveys
  + Improved output of data
  + Started Hamachan version of dynamics
  + (Verison 2.01.B); Fixed bug with OFL and ABC calculation; added headers ti output files
  + (Verison 2.01.B); Dump file for projections
* GMACS\_V\_2\_01\_G: GMACS\_V\_2\_01\_F +
  + Modify fhitfut
* GMACS\_V\_2\_01\_H: GMACS\_V\_2\_01\_G +
  + Added new dnorm function
  + Fixed selectivity to allow for fixing (or not) the maximum selex to 1
  + Corrected the Gmacs\_in.Ctl and protected MLAState
  + Corrected FOFL calculation and output for DB0
* GMACS\_V\_2\_01\_I: GMACS\_V\_2\_01\_H +
  + Bug-fix – correct a condition on fhit in clalc\_brute\_equilibrium() and tempZ1 used in calc\_predicted\_project()
* GMACS\_V\_2\_01\_J: GMACS\_V\_2\_01\_I +
  + Option to consider terminally molting life history

GMACS\_V\_2\_01\_J = UNIFIED CODE