OldName	NewName	Definition
ALBSLGAT	SnowPackAlbedo	Snow albedo [ ]
ALBSLROT	SnowPackAlbedo_In	Snow albedo [ ] (ROT)
ALILROT	DiagTotalNIRAtLakeSurface_In	Diagnosed total near-infrared albedo of lake surface [ ] (ROT)
ALVLGAT	DiagTotalVisAtLakeSurface	Diagnosed total visible albedo of lake surface [ ]
ALVLROT	DiagTotalVisAtLakeSurface_In	Diagnosed total visible albedo of lake surface [ ] (ROT)
ASIDROT	SnowAlbedoNIR_In	Optional user-specified value of snow near-infrared albedo to override CLASS-calculated value [ ] (ROT)
ASILGAT	SnowAlbedoNIR	Optional user-specified value of snow near-infrared albedo to override CLASS-calculated value [ ] (ROT)
ASVDROT	SnowAlbedoVis_In	Optional user-specified value of snow visible albedo to override CLASS-calculated value (ROT)
ASVLGAT	SnowAlbedoVis	Optional user-specified value of snow visible albedo to override CLASS-calculated value (ROT)
BCSNROT	--	Removed, had no purpose
BLAKGAT	ExtinctionCoeff	Beers Law Parameter - extinction coefficent (ROT)
BLAKROT	ExtinctionCoeff_In	Beers Law Parameter - extinction coefficent (ROT)
CDHGAT	SurfDragCoeffForHeat	Surface drag coefficient for heat [ ] (CDH)
CDHROT	SurfDragCoeffForHeat_In	Surface drag coefficient for heat [ ] (CDH)
CDMGAT	SurfDragCoeffForMomentum	Surface drag coefficient for momentum [ ] (CDM)
CDMROT	SurfDragCoeffForMomentum_In	Surface drag coefficient for momentum [ ] (CDM)
CGRAV	--	Acceleration due to gravity [m s-1], removed and just used GRAV instead since they are equivilant
CKARM	--	Von Karman constant [-], removed and just used VKC
CLHMLT	LatentHeatOfFreezingH2O	Latent heat of freezing of water [J kg-1], defined as 0.334 x 10^6
CLHVAP	LatentHeatOfVaporizationH2O	Latent heat of vaporization of water [J kg-1], defined as 2.501 x 10^6
COSZ	CosineOfSolarZenith_Temp	
CPD	--	Specific heat of air [J kg-1 K-1]
CSZGAT	CosineOfSolarZenith	Cosine of solar zenith angle [ ]
CSZROW	CosineOfSolarZenith_In	Cosine of solar zenith angle [ ]
CTLSTP	ChangeInInternalLakeEnergy	Change in internal energy of lake over current time step [W m-2]
DAY	CurrentDecimalDay	Decimal Day
DECL	Declanation	Declanation
DEGLAT	LatitudeInDeg_In	Load from the lake.ini (4th line, 7th value)

DEGLON	LongitudeInDeg_In	Load from the lake.ini (4th line, 8th value)
DELMAX	MaxThermoclineThickness	Maximum thermocline thickness [m]
DELMIN	MinThermoclineThickness	Minimum thermocline thickness [m]
DELSKIN	ThicknessOfSurfaceSkin	Thickness of lake surface skin [m]
DELT	DeltaTimeStep	Time step [s]
DELU	MeanMixLyrMomentum	Shear Flow / Mean layer momentum
DELZLK	LakeLayerThickness	Thickness of lake layers [m]
DHMAX	MaxDeltaThermoclineDepth	Maximum change in thermocline depth in one timestep [m]
DRLGAT	LakeSurfaceDragAtNeutral	Lake Surface drag coefficient under neutral stability [ ]
DRLROT	LakeSurfaceDragAtNeutral_In	Lake Surface drag coefficient under neutral stability [ ] (ROT)
DTEMP	ThermoclineTempDelta	Temperature delta over the thermocline
DUMAX	MaxDeltaMixingLayer	Maximum change in mixing layer momentum in one timestep
EFLGAT	EvapEfficiencyAtLakeSurf	Evaporation efficiency at lake surface [ ]
EFLROT	EvapEfficiencyAtLakeSurf_In	Evaporation efficiency at lake surface [ ] (ROT)
EMSW	ThermalEmissivityOfH2O	Themal emissivity of water
EXPW	ExpansivityOfWater	Expansivity
FAREROT	FractionalCoverageOfMosaicTileOnArea_In	This is passed in .ini file. Both MID and FARE are the 6th line of ini, FARE is set to 1 (MID = 0). Looks like some sort of sub-grid machinary. If Fare is >0 land indexing is used, otherwise water indexing is used (lines 914)
FDLGAT	LongwaveDownwelling	Downwelling longwave radiation at bottom of atmosphere [W m-2]
FDLROW	LongwaveDownwelling_In	Downwelling longwave radiation at bottom of atmosphere [W m-2]
FLGLGAT	DiagNetLongwaveAtLakeSurface	Diagnosed net longwave radiation at lake surface [W m2]
FLGLROT	DiagNetLongwaveAtLakeSurface_In	Diagnosed net longwave radiation at lake surface [W m2]
FLGSLGAT	DiagNetLongwaveAtSnowSurface	Diagnosed net longwave radiation at snow surface [W m-2]
FLGSLROT	DiagNetLongwaveAtSnowSurface_In	Diagnosed net longwave radiation at snow surface [W m-2] (ROT)
FSDBLGAT	--	Not used
FSDBROL	--	Not used
FSDOWN	ShortwaveDownwelling_In	only the total incoming shortwave radiation FSDOWN is available; it is partitioned 50:50 between the incoming visible (FSVHROW) and near-infrared (FSIHROW) radiation.
FSFBLGAT	--	Not used
FSFBROL	--	Not used
FSGLGAT	DiagNetShortwaveAtLakeSurface	Diagnosed net shortwave radiation at lake surface [W m2]

FSGLROT	DiagNetShortwaveAtLakeSurface_In	Diagnosed net shortwave radiation at lake surface [W m2]
FSGSLGAT	DiagNetShortwaveAtSnowSurface	Diagnosed net shortwave radiation at snow surface [W m-2]
FSGSLROT	DiagNetShortwaveAtSnowSurface_In	Diagnosed net shortwave radiation at snow surface [W m-2] (ROT)
FSIHGAT	NIRIncidentOnSurf	Near-infrared radiation incident on horizontal surface [W m-2]
FSIHROW	NIRIncidentOnSurf_In	Near-infrared radiation incident on horizontal surface [W m-2]
FSSBLGAT	ShortwaveDownwellingIRandVIS	Something about shortwave, used in TSOLVE with albedo
FSSBROL	ShortwaveDownwellingIRAandVIS_In	This is assigned from FSSBROL(1,1)=FSIH and FSSBROL(1,2)=FSVH which are NIR and Vis incident on a horizontal surface, which are each simply 0.5 of FSDOWN (shortwave downwelling)
FSVHGAT	VisibleIncidentOnSurf	Visible radiation incident on horizontal surface [W m-2]
FSVHROW	VisibleIncidentOnSurf_In	Visible radiation incident on horizontal surface [W m-2]
GCROW	SubareaFractionalCoverage_In	Subarea fractional coverage of modelled area [ ]
GRAV	GravConstant	Gravitational Constant fixed to 10^-5 precision [m s-1]
GRED	ReducedGravity	Reduced Gravity due to density of the mixed layer
GTLGAT	DiagSurfBlkBodyTemp	Diagnosed effective surface black-body temperature [K]
GTLROT	DiagSurfBlkBodyTemp_In	Diagnosed effective surface black-body temperature [K] (ROT)
HCAP	HeatCapacityOfLakeSurface	
HCPICE	HeatCapacityOfIce	Volumetric heat capacity of ice [J m-3 K-1], defined as 1.9257×10^6
HCPW	HeatCapacityOfH2O	Volumetric heat capacity of water [J m-3 K-1], defined as 4.187×10^6
HDPTH	DepthToThermocline	Mixed Layer depth
HDPTHMIN	MinimumMixingDepth	Minimum mixing depth [m], set at 0.5
HEVLGAT	DiagLatentHeatOnLake	Diagnosed total surface latent heat flux on Lake [W m2]
HEVLROT	DiagLatentHeatOnLake_In	Diagnosed total surface latent heat flux on Lake [W m2] (ROT)
HEVSLGAT	DiagLatentHeatOnSnow	Diagnosed latent heat flux at snow surface [W m-2]
HEVSLROT	DiagLatentHeatOnSnow_In	Diagnosed latent heat flux at snow surface [W m-2] (ROT)
HFSLGAT	DiagSensHeatOnLake	Diagnosed total surface sensible heat flux on Lake [W m2]
HFSLROT	DiagSensHeatOnLake_In	Diagnosed total surface sensible heat flux on Lake [W m2] (ROT)
HFSSLGAT	DiagSensHeatOnSnow	Diagnosed sensible heat flux at snow surface [W m-2]
HFSSLROT	DiagSensHeatOnSnow_In	Diagnosed sensible heat flux at snow surface [W m-2] (ROT)
HLAKGAT	LakeDepth	Depth of the lake
HLAKROT	LakeDepth_In	Depth of the lake (ROT)
HMFLGAT	DiagPhaseChangeWaterAtLakeSurface	Diagnosed energy associated with phase change of water on lake [W m-2]

HMFLROT	DiagPhaseChangeWaterAtLakeSurface_In	Diagnosed energy associated with phase change of water on lake [W m-2]
HMFNLGAT	DiagPhaseChangeWaterInSnow	Diagnosed energy associated with phase change of water in snow [W m-2]
HMFNLROT	DiagPhaseChangeWaterInSnow_In	Diagnosed energy associated with phase change of water in snow [W m-2] (ROT)
HOUR	SolarHour	
HTCLGAT	DiagDelEnergyDueConducOrMassInLake	Diagnosed internal energy change of lake due to conduction and/or change in mass [W m-2]
HTCLROT	DiagDelEnergyDueConducOrMassInLake_In	Diagnosed internal energy change of lake due to conduction and/or change in mass [W m-2] (ROT)
HTCSLGAT	DiagDelEnergyDueConducOrMassInSnow	Diagnosed internal energy change of snow pack due to conduction and/or change in mass [W m-2]
HTCSLROT	DiagDelEnergyDueConducOrMassInSnow_In	Diagnosed internal energy change of snow pack due to conduction and/or change in mass [W m-2] (ROT)
IALS		Switches for the codebase, mostly CLASS related
ICEBOT	IceBottomDepth	Bottom of ice layer
ICETOP	IceTopDepth	Top of ice layer
IDAY	CurrentDay	Julian Day of the Year
IGL		
IHOUR	CurrentHour	Hour of the day
ILG	NumOfTilesInAllGrids	Product of NLAT and NMOS
ILMOS	IndGridLand	Index of grid cell corresponding to current element of gathered vector of land surface variables []
IMIN	CurrentMin	Min Elapsed in the current hour
IPCP		Switches for the codebase, mostly CLASS related
ISLFD		Switches for the codebase, mostly CLASS related
ISNOALB		Switches for the codebase, mostly CLASS related
ITG		Switches for the codebase, mostly CLASS related
IWMOS	IndGridWater	Index of grid cell corresponding to current element of gathered vector of inland water body variables [ ]
IYEAR	CurrentYear	Year of Run
IZREF		Switches for the codebase, mostly CLASS related

JLMOS	IndMosaicLand	Index of mosaic tile corresponding to current element of gathered vector of land surface variables [ ]
JWMOS	IndMosaicWater	Index of mosaic tile corresponding to current element of gathered vector of inland water body variables [ ]
LKICEH	LakeIceHeight	Height (depth) of the ice on the lake
LLAKGAT	LakeLength	Length of longest lake axis
LLAKROT	LakeLength_In	Length of longest lake axis (ROT)
MIDROT	MosaicTileType	Mosaic tile type identifier (1 for land surface, 0 for inland lake)
N	IterationCounter	
NBS		
NCOUNT	DayCounter	
NDAY	NumberOfIterationsIn24Hours	
NLAKGAT	NumOfLakeLayers	
NLAKMAX	MaxNumOfLakes	
NLAKROT	NumOfLakeLayers_In	
NLAT	NumOfGridCells	Maximum number of grid cells to be modelled
NLTEST	NumOfGridCellsInRun	The number of grid cells for this test run
NML	TotalNumberOfMosaicTilesThatAreSurf	Total number of mosaic tiles in land surface gather vectors
NMOS	NumOfMosaicTiles	Maximum number of mosaic tiles per grid cell being modelled
NMTEST	NumOfMosaicTilesPerGridCellInRun	The number of mosaic tiles per grid cell for this test run
NMW	TotalNumberOfMosaicTilesThatAreH2O	Total number of mosaic tiles in inland water gather vectors
PADRLGAT	PartialPressureOfDryAir	Partial pressure of dry air [Pa]
PADRROW	PartialPressureOfDryAir_In	Partial pressure of dry air [Pa]
PCPLGAT	PrecipOnLake	Diagnosed precipitation incident on lake [kg m-2 s-1]
PCPLROT	PrecipOnLake_In	Diagnosed precipitation incident on lake [kg m-2 s-1] (ROT)
PCPNLGAT	PrecipOnSnow	Diagnosed precipitation incident on snow pack [kg m-2 s-1]
PCPNLROT	PrecipOnSnow_In	Diagnosed precipitation incident on snow pack [kg m-2 s-1] (ROT)
PETLGAT	DiagPotentialEvap	Diagnosed potential evapotranspiration [kg m-2 s-1]
PETLROT	DiagPotentialEvap_In	Diagnosed potential evapotranspiration [kg m-2 s-1] (ROT)
PI	Pi	Universal constant Pi fixed to 10^-13 precision
PREROW	SurfacePrecipRate_In	Surface precipitation rate [kg m-2 s-1]
PRESGAT	SurfaceAirPressure	Surface air pressure [Pa]
PRESROW	SurfaceAirPressure_In	Surface air pressure [Pa]
QAGAT	SpecificHumidityAtRef	Specific humidity at reference height [kg kg-1]

QAROW	SpecificHumidityAtRef_In	Specific humidity at reference height [kg kg-1]
QEVPLGAT	LatentHeatFromLakeSubarea	Latent heat flux from lake subarea [W m-2]
QEVPLROT	LatentHeatFromLakeSubarea_In	Latent heat flux from lake subarea [W m-2] (ROT)
QFLGAT	LakeSurfaceEvap	Evaporation from the lake (added with sublimation (QFN) from snow to get EVAP flux), in CLASS functions it is redefined as QFG (Evap from ground)
QFLROT	LakeSurfaceEvap_In	Evaporation from the lake (ROT)
QFNLGAT	SnowSublimation	Sublimation from snow pack [kg m-2 s-1]
QFNLROT	SnowSublimation_In	Sublimation from snow pack [kg m-2 s-1] (ROT)
QFSLGAT	SensibleHeatFromSnowSubarea	
QFSLROT	SensibleHeatFromSnowSubarea_In	
QFXLGAT	ProdLakeDragWindSpdDelSpHumid	Product of surface drag coefficient, wind speed and surface-air specific humidity difference [m s-1]
QFXLROT	ProdLakeDragWindSpdDelSpHumid_In	Product of surface drag coefficient, wind speed and surface-air specific humidity difference [m s-1] (ROT)
QGLGAT	DiagSurfSpecificHumidity	Diagnosed surface specific humidity [kg kg-1]
QGLROT	DiagSurfSpecificHumidity_In	Diagnosed surface specific humidity [kg kg-1] (ROT)
QLWOLGAT	LongwaveUpwelling	Upwelling longwave radiation from lake surface [W m-2] (L↑g)
QLWOLROT	LongwaveUpwelling_In	Upwelling longwave radiation from lake surface [W m-2] (L↑g) (ROT)
QSENLGAT	SensibleHeatFromLakeSubarea	Sensible heat flux from lake subarea [W m-2]
QSENLROT	SensibleHeatFromLakeSubarea_In	Sensible heat flux from lake subarea [W m-2] (ROT)
RADJLGAT	LatitudeInRad	Latitude of grid cell (positive north of equator) [rad]
RADJROW	LatitudeInRad_In	Latitude of grid cell (positive north of equator) [rad]
RGAS	GasConstant	Gas constant [J kg-1 K-1]
RGASV	GasConstantOfH2OVapour	Gas constant for water vapour [J kg-1 K-1]
RHOAGAT	DensityOfAir	Density of air [kg m-3]
RHOAROW	DensityOfAir_In	Density of air [kg m-3]
RHOICE	DensityOfIce	Density of ice [kg m-3], defined as 0.917 x 10^3
RHOIW	DensityRatioOfIceToWater	Ratio of density of ice to water
RHOMIX	MixLyrDensity	Density of the mixing layer
RHOSLGAT	SnowPackDensity	Density of snow [kg m-3] (ρs)
RHOSLROT	SnowPackDensity_In	Density of snow [kg m-3] (ρs) (ROT)
RHOW	DensityOfH2O	Density of water [kg m-3], defined as 1 x 10^3
RHSILGAT	DensityOfFreshSnow	Density of fresh snow [kg m-3]

RHSIROW	DensityOfFreshSnow_In	Density of fresh snow [kg m-3]
ROFICEH	RunoffFromIce	RunoffIce
ROFNLGAT	SnowRunoff	Liquid water runoff from snow pack [kg m-2 s-1]
ROFNLROT	SnowRunoff_In	Liquid water runoff from snow pack [kg m-2 s-1] (ROT)
RPCPLGAT	WetPrecip	Rainfall rate over modelled area [m s-1]
RPCPROW	WetPrecip_In	Rainfall rate over modelled area [m s-1]
SBC	StefanBoltzmannConst	Stefan-Boltzmann constant [W m-2 K-4]
SFHLGAT	DiagRelavtiveHumidAtScreenLevel	Diagnosed screen-level relative humidity [%]
SFHLROT	DiagRelavtiveHumidAtScreenLevel_In	Diagnosed screen-level relative humidity [%] (ROT)
SFQLGAT	DiagSpecificHumidAtScreenLevel	Diagnosed screen-level specific humidity [kg kg-1]
SFQLROT	DiagSpecificHumidAtScreenLevel_In	Diagnosed screen-level specific humidity [kg kg-1] (ROT)
SFTLGAT	DiagAirTempAtScreenLevel	Diagnosed screen-level air temperature [K]
SFTLROT	DiagAirTempAtScreenLevel_In	Diagnosed screen-level air temperature [K] (ROT)
SFULGAT	DiagZonalWindSpdAtAnemometerLevel	Diagnosed anemometer-level zonal wind [m s-1]
SFULROT	DiagZonalWindSpdAtAnemometerLevel_In	Diagnosed anemometer-level zonal wind [m s-1] (ROT)
SFVLGAT	DiagMeridionalWindSpdAtAnemometerLevel	Diagnosed anemometer-level meridional wind [m s-1]
SFVLROT	DiagMeridionalWindSpdAtAnemometerLevel_In	Diagnosed anemometer-level meridional wind [m s-1] (ROT)
SNICEH	SnowIceHeight	Snow Ice Height
SNOLGAT	SnowPackMass	Mass of snow pack [kg m-2] (Ws)
SNOLROT	SnowPackMass_In	Mass of snow pack [kg m-2] (Ws) (ROT)
SPCPLGAT	FrozenPrecip	Snowfall rate over modelled area [m s-1]
SPCPROW	FrozenPrecip_In	Snowfall rate over modelled area [m s-1]
SPHAIR	SpecificHeatOfAir	Specific heat of air [J kg-1 K-1]
SPHICE	SpecificHeatOfIce	Specific heat of ice [J m-3 K-1], defined as 2.10 x 10^3
SPHW	SpecificHeatOfH2O	Specific heat of water [J m-3 K-1], defined as 4.186 x 10^3
T0LAK	LakeSkinTemp	Skin temperature of the lake
TADPROW	DewPointTemp_In	Dew point temperature of air [K]
TAGAT	AirTempAtRef	Air temperature at reference height [K]
TAROW	AirTempAtRef_In	Air temperature at reference height [K]
TCICE	ThermalConductOfIce	Thermal conductivity of ice [W m-1 K-1], defined as 2.24
TCW	ThermalConductOfH2O	Thermal conductivity of water [W m-1 K-1], defined as 0.57
TFREZ	FreezingPointOfH2O	Freezing point of water [K]
TFXLGAT	ProdLakeDragWindSpdDelT	Product of lake surface drag coefficient, wind speed and surface-air temperature difference [K m s-1]

TFXLROT	ProdLakeDragWindSpdDelT_In	Product of lake surface drag coefficient, wind speed and surface-air temperature difference [K m s-1] (ROT)
TKECE	TotalKineticEnergyEff_CE	Total Kinetic Energy process efficieny 'CE', defined in MacKay 2012 as 1.15
TKECF	TotalKineticEnergyEff_CF	Total Kinetic Energy process efficieny 'CF', defined in MacKay 2012 as 0.25
TKECL	TotalKineticEnergyEff_CL	Total Kinetic Energy process efficieny 'CL', defined in MacKay 2012 as 0.235 but large uncertainty exsists in this value
TKECN	TotalKineticEnergyEff_CN	Total Kinetic Energy process efficieny 'CN', defined in MacKay 2012 as 1.33
TKECS	TotalKineticEnergyEff_CS	Total Kinetic Energy process efficieny 'CS', defined in MacKay 2012 as 0.2
TKELAK	TotalKineticEnergy	Total Kinetic Energy in mixing layer, used in MixLayer()
TKEMIN	MinimumKineticEnergy	Minimum Kinetic Energy, set at 1 x 10^-12
TLAKGAT	LakeTempProfile	
TLAKROT	LakeTempProfile_In	
TRPCLGAT	WetPrecipTemp	Rainfall temperature [K]
TRPCROW	WetPrecipTemp_In	Rainfall temperature [K]
TSED	SedimentTemp	Sediment Temperature
TSNOLGAT	SnowPackTemp	Snowpack temperature [K] (Ts)
TSNOLROT	SnowPackTemp_In	Snowpack temperature [K] (Ts) (ROT)
TSPCLGAT	FrozenPrecipTemp	Snowfall temperature [K]
TSPCROW	FrozenPrecipTemp_In	Snowfall temperature [K]
ULGAT	ZonalWindSpeed	Zonal component of wind speed [m s-1]
ULROW	ZonalWindSpeed_In	Zonal component of wind speed [m s-1]
UVROW	WindSpeed	Wind speed [m s-1]
VKC	VonKarmanConst	Von Karman constant, defined as 0.4
VLGAT	MeridionalWindSpeed	Meridional component of wind speed [m s-1]
VLROW	MeridionalWindSpeed_In	Meridional component of wind speed [m s-1]
VMIN	MinWindSpd	Minimum wind speed [m s-1], defined as 0.1
VPDROW	VapourPressureDeficit_In	Vapour pressure deficit [mb]
WSNOLGAT	SnowPackLiqudWaterContent	Liquid water content of snow pack [kg m-2]
WSNOLROT	SnowPackLiqudWaterContent_In	Liquid water content of snow pack [kg m-2] (ROT)

ZBLDROW	AtmoBlendingHeightForSurfaceRoughness_In	Atmospheric blending height for surface roughness length averaging [m], Geophyiscal data, 5th number on 4th line of ini
ZBOT	CurrentLayerBottom	Bottom of the current layer for local calculations
ZDHLGAT	VarHeight	User-specified height associated with diagnosed screen-level variables [m]
ZDHROW	VarHeight_In	User-specified height associated with diagnosed screen-level variables [m]
ZDMLGAT	AnemometerHeight	User-specified height associated with diagnosed anemometer-level wind speed [m]
ZDMROW	AnemometerHeight_In	User-specified height associated with diagnosed anemometer-level wind speed [m]
ZRFHGAT	RefHeightAirTempAndHumidForcing	Refrence height associated with forcing air temperature and humidity [m], Geophyiscal data, 4rd number on 4th line of ini
ZRFHROW	RefHeightAirTempAndHumidForcing_In	Refrence height associated with forcing air temperature and humidity [m], Geophyiscal data, 4rd number on 4th line of ini
ZRFMGAT	RefHeightWindSpeedForcing	Refrence height associated with forcing wind speed [m], "Geophyiscal data", 3rd number on 4th line of ini
ZRFMROW	RefHeightWindSpeedForcing_In	Refrence height associated with forcing wind speed [m], "Geophyiscal data", 3rd number on 4th line of ini
ZTOP	CurrentLayerTop	Top of current layer for calculations