GMAP contribution to SC SURFEX 2014

Current status

- Operational cycle : CY38T1_op2 with SURFEX v7.2 (since January 2014)
- Next version : CY40_op1 with SURFEX v7.2 (beginning 2015) : « high resolution » models
- Next common cycle : CY40T1 with SURFEX v7.3+ (PREP optimisations) – currently under validation

Contributions to SURFEX v8

- svn branch (v8_gmap) (adaptations to BULL, PREP optimisations from M. Jidane, pertobs for PEAROME)
- Inclusion of SURFEX v8 either in CY41T1 (end 2014) or in CY42T1 (important OOPS contributions) (end 2015)

Ongoing activities

- Use of GMTED for ALADIN OM + future AROME 1.3 km
- AROME 1.3 km : T2m forecast scores degraded with ECOCLIMAP 2 but improved with CY40T1 with SURFEX v7.3+ (from TEB modifications)
- Evolution towards ARPEGE/SURFEX (e-suite end of 2015) : including recent advances (e.g. snow, sea-ice, MODIS albedo maps)
- Compaction of surface fields in FA files and trimming useless fields in outputs (next operational version : HR suite – 2015)
- Recent difficulties : issues with ECOCLIMAP 1 (spurious lakes corrected in ECOCLIMAP2) - lack of textural information for some islands in HWSD

Needs

- *Maintenance of databases that are still used operationnally (SURFEX team)*
- *Prints of the various SURFEX options in listing outputs (SURFEX team)*
- Conversion tool SURFEX fields towards ISBA fields (coupling files for ALADIN partners) (GMAP+ALADIN partners)
- PREP version compatible with FA format (currently FA2LFI <-> LFI2FA convertors) (GMAP+SURFEX team + ALADIN partners)
- More efficient PREP version : various operational applications (e.g. : PEAROME, ALADIN dynamical adaptation, archive of SURFEX fields in BDAP) (GMAP+SURFEX team + ALADIN partners)

Issues ?

- Convergence of FA format between GMAP and GMGEC
- Common environment for land surface data assimilation