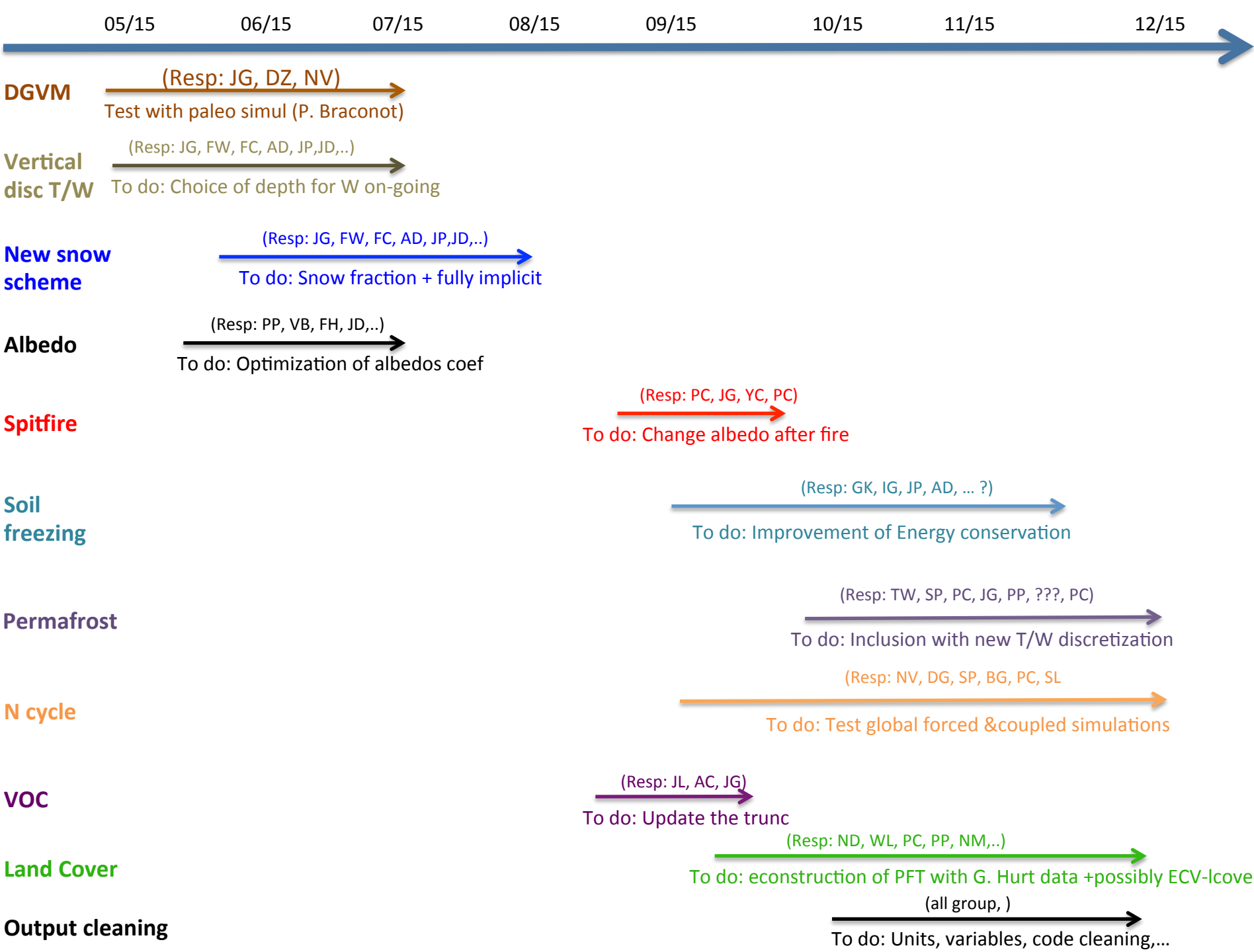
05/15
06/15
07/15
08/15
09/15
10/15
11/15
12/15
DGVM
(Resp: JG, DZ, NV)
Test with paleo simul (P. Braconot)
Vertical disc T/W
(Resp: JG, FW, FC, AD, JP,JD,..)
To do: Choice of depth for W on-going
New snow scheme
(Resp: JG, FW, FC, AD, JP,JD,..)
To do: Snow fraction + fully implicit
Albedo
(Resp: PP, VB, FH, JD,..)
To do: Optimization of albedos coef
Spitfire
(Resp: PC, JG, YC, PC)
To do: Change albedo after fire
Soil freezing
(Resp: GK, IG, JP, AD, ... ?)
To do: Improvement of Energy conservation
Permafrost
(Resp: TW, SP, PC, JG, PP, ???, PC)
To do: Inclusion with new T/W discretization
N cycle
(Resp: NV, DG, SP, BG, PC, SL
To do: Test global forced &coupled simulations
VOC
(Resp: JL, AC, JG)
To do: Update the trunc
Land Cover
(Resp: ND, WL, PC, PP, NM,..)
To do: econstruction of PFT with G. Hurt data +possibly ECV-lcove
Output cleaning
(all group,)
To do: Units, variables, code cleaning,...

CM6_v1 : Physical developments

- 11 layers soil hydrology (ready)
  - Improvement over summer with “some work on W stress functions”
  - No large conceptual changes

- Common soil vertical discretization between Hydrology and Thermics (ready)
  - Soil thermics goes up to 10 meter
  - Hydrology stops most likely at 2 m; Test by Fuxing to choose for CM6
  - General “scheme” to have flexible depth (to be implemented)
  - Resp: Frederique, Agnes, Jan, Fuxing

- New soil thermal properties (function of USDA soil texture classes) (ready)
  - Tests made by Agnes & Fuxing ?

- Soil freezing following I. Gouttevin’s Phd (ready)
  - Current scheme conserve energy on annual basis (from freezing/thawing) will be used as default.
  - Revision is planned for “instantaneous” conservation (late 2015)
    Need a working group (IG, GK, … ?)

CM6_v1 : Physical developments

- New 3 layers snow module following Tao's work (to be update : mid 2015)
  - Trunc contain the latest version used in MICT (since Mai)
  - Ongoing improvement to have a snow fraction and fully implicit coupling action followed by several people and implemented by Fuxing and Jan
  - Resp: Catherine, Tao, Jan, Philippe C

- Adjusted albedos (en cours: objectif Juin 2015)
  - Replace Bares Soil albedo by the "MODIS – Background Albedo" from JRC-TIP or from ECOCLIMAP-2
  - Optimize the NIR and VIS 12 vegetation albedos using MODIS global albedo Ongoing action by PP and VB in Mai-June
  - Resp. : Philippe P, Vladislav, Frederique

CM6_v1 : Biogeochemical developments

- Nitrogen cycle (most likely, Autumn 2015)
  - Code ready, under debugging phase ; several persons involved (NV, SP, DG,…)
  - Possible large impact on climate simulations: NEED TO LAUNCH first global test NO later than Mid October 2015
  - Global forced and coupled tests to be done before end of 2015

- Permafrost and Yedoma deposit (to be decided, autumn 2015)
  - Permafrost module currently implemented in MICT version
    Main impact is a source of CO2 to the Atm.;
    small impact on soil thermal properties
  - Yedoma (deep permafrost): impact through CO2 emissions
  - “coupling” with the new E/W soil discretization need to be done;
  - Extrapolation of the W content below soil W depth to be chosen
  - ➔ substantial work!

CM6_v1 : Biogeochemical developments

- Crops
  - Addition of a distinction between winter and spring C3 crops (phenology)
  - Small change to be added autumn 2015
  - POSSIBLE inclusion of ORC-CROP modules (to be discuss Autumn 2015).
  - Resp: Nicolas 1-2, Philippe C., Xuichen

- Fires following SPITFIRE (to be decided)
  - Coupling with Trunc to be done in September 2015 (small effort)
  - Forcing for “human-induced” fires need to be prepared
  - Modification of the albedo following fires under “implementation”
  - Implementation with ORC-CAN: need to select “burned” trees !
  - Resp: Patricia, Yue Chao, Philippe C.

- DGVM (late 2015)
  - Ready for the High latitude PFTs ; Ongoing “check/calibration” for the tropics
  - Update of the Trunc before summer 2015 (for Paleo simul tests)
  - Re-calibration “needed” when Nitrogen cycle will be included
  - Implementation with ORC-CAN will require substantial tests/dev.
  - Resp: Dan Zhu, Philippe C., Nicolas Viovy

CM6_v1 : others developments

- New Land Cover Classes using ESA - ECVlcover product (to be done late 2015)
  - Merge with LC changes provided by CM6 (G. Hurt) to be done.
  - Working group constituted (PC, ND, PP, CO, NV, NM, WL, SP,..)

- Calibration of several model parameters (done)
  - Decrease the fertilisation due to CO2: (without N cycle)
  - Optimize carbon use efficiency (NPP/GPP) over the tropics
  - Adjust fraction of woody-NPP to NPP for the tropics
  - Change decomposition rates of deforestation products
  - …

- New technical features
  - Nudging the soil humidity and snow (for LS3MIP) (to be done spring 2015)
  - Cleaning of the model diagnostics and outputs using Group Retreat (end 2015)
  - Reading of LC maps change from last to first time step.. (spring 2015)
  - XIOS (done)

CM6_v2 : All new developments

➔Based on ORC-CAN (Sebastiaan L.)

- NEW FOREST REPRESENTATION (ORC-CAN)
  - Forest management
  - Two stream radiation transfer
  - Canopy structure
  - Age classes (LCC/LM)
  - Hydraulic stress for trees
  - Multi-layer energy budget
- Crop management
- Dynamic phosphorous cycle ?
- New plant functional types (Mosses/lichens & Shrub)
- New soil carbon module
  - with « Priming » and DOC, POC
  - Vertical discretization,….