

TBL Scientific Council meeting autumn 2025

Date : 16 December 2025

Place : OMP Toulouse salle SISol + zoom

Attending : Evelyne Alecian, Jean-François Donati, Marc Ferrari, Eder Martioli, Claire Moutou, Antoine Petit, Pascal Petit, Arturo López Ariste, Philippe Mathias

Excused : Hervé Bouy, Philippe Stee

Invited : Laurent Guesdon (TBL), Marielle Lacombe (SPIP), Anne-Laure Melchior (TAC T2m)

Agenda

1. latest news of the telescope and technical update
2. implementation of large programs at TBL
3. update on the validation of NeoNarval and its DRS
4. human resources organisation
5. update on improving the robustness of the observations and TBL modernisation
6. update on SPIP status
7. organisation of a TBL users' meeting

1. Latest news and technical updates

Weather statistics and monitoring

Ph. Mathias presented a summary of observing time and weather statistics for 2025, with comparison to previous years. Semester 25A was severely affected by a failure of the NeoNarval optical fiber, whereas Semester 25B benefited from favorable weather conditions, but at the time of the meeting two 25B programs still had no data collected.

Updates on follow-up points raised in June 2025 were then addressed. The new weather monitoring station was presented, a first series of measurement carried out in October indicates a very good distribution of seeing (measured at Polaris). A collaboration with Olivier Lai (OHP) has been initiated to measure intra-dome turbulence and assess its effect on the final TBL seeing. Seeing measurement based on guiding images is already implemented on SPIP and will be used in the future. A collaboration with Centre de Recherches Atmosphériques in Lannemezan has been established to use their daytime cloud cover measurements; the development of nighttime measurement is planned. M. Ferrari mentions IR monitoring performed at OHP for atmosphere analysis. The final aim consists in providing detailed weather statistics to PIs, and include relevant information directly in data headers.

Progress has been made on all the points requiring follow-up, which remain:

- *consolidation of long-term weather statistics;*
- *usage of the weather station for TBL staff and data access for observers;*
- *inclusion of SkyProbe extinction measurements in data headers;*
- *seeing measurements through the guiding camera.*

26A time allocation and prevision for next semesters

An update on 26A proposals was presented by Ph. Mathias. Both the number of proposed and requested nights have decreased (80h were reserved for SPIP tests), the pressure increased above 1.5.

Since March 2025, all NeoNarval observations are performed through VISION. Cross-talk tests with rotation of the bonnette are still required. The TBL direction stated that additional SPIP tests could be performed in VISION mode, but J.-F. Donati pointed out that this mode is not compatible with all the necessary tests.

[update July 2026: the 26B call for proposal (CfP) issued in March mentions a planned 20% reduction in the number of nights offered to PI due to SPIP tests.]

E. Martioli asked whether proposing an open call for science verification of SPIP was planned. The TBL direction replied that DDT can be used for that purpose, they plan a significant DDT fraction in 2027A (up to 10% i.e. 25h) and then decreasing. J.-F. Donati indicated that the amount of time requested by the SPIP team for science verification is still TBD, and will likely be at least 25h.

The TBL SC converged on the following recommendation on SPIP science verification:

- *the community should be encouraged to propose ideas and analyse data in the SPIP science verification phase, implementation details will be discussed at the next SC meeting ;*
- *raw and reduced data should be made available to the community with minimal delay.*

2. Implementation of large programs at TBL

Building on its initial discussion in June 2025, the Council has converged on the following recommendations, updated in July 2026:

- *a call for LPs should be issued simultaneously for TBL and OHP193, as soon as both SPIP and SOPHIE RED have passed the science verification phase;*
- *for this initial call LPs should be proposed for 4 semesters, with possible extension of up to 2 semesters to reach a completion aim to be defined; 70% of the available observing time at TBL should be offered to LPs, leaving 30% to PI programs;*
- *the LP teams should report regularly on their advancement and main results;*
- *the possibility of proprietary period extension and target protection should be offered, and granted to LPs by the TAC;*
- *the LP CfP should encourage the use of VISION and present in detail its properties and trade-offs.*

The following points still need to be discussed:

- *most VISION LP will require monitoring and scheduling, raising several questions on the validation of observations, the issue of scheduling and observational constraints indicated by PIs during PH2 ;*
- *several options are foreseen to evaluate LP proposals: telescope SC, T2m TAC, a specific LP TAC (possibly a reinforced version of the T2m TAC). The advice of external referees may be necessary if the evaluation committee lacks independent experts;*
- *the LP regular reports could be reviewed by the telescopes SC, the LP/T2m TAC.*

3. Update on NeoNARVAL status and instrument/DRS validation

NeoNarval encountered several issues related to exceptionally high temperatures during summer 2025 on thermal control, chiller and Fabry-Pérot unit. Air conditioning is now installed in the spectrograph/FP room. Similar issues should be anticipated for SPIP.

NeoNarval guiding is now more effective, further tests and improvements are foreseen. The astrometric and pointing model has also been updated, pointing accuracy is now better than 30".

In addition to guiding/pointing, points requiring follow-up listed in June 2025 are reminded:

- *the SC encourages the TBL direction to publish the description of NeoNarval and its DRS in an international journal to gather updated performances of NeoNarval and relevant bibliographic references; the document should also include excerpts of unpolarised spectra;*
- *the following issues require further investigation:*
 - *the sharp drop of NeoNarval efficiency in the bluest orders, with high priority;*
 - *the impact of telescope guiding on the appearance of a null polarimetric signal;*
 - *the origin of the low-resolution tail in the distribution of measured resolving power;*
 - *the factors that affect the stability of the shape of spectral lines (both individual and LSD);*
 - *the possible hardware fix for the polarimetric cross-talk induced by ADC / dioptric optics.*

4. Human Ressources organisation

L. Guesdon presented an update on the TBL HR organisation. He reminded that since 2016 the TBL aims to be operational 160 nights per semester, vs 140 before that date. HR management has been adapted in 2025 to meet this objective and carry out routine maintenance operations, in spite of sick leave / therapeutic part-time work. This situation delayed the implementation of the new organisational structure aimed at reducing planned technical downtime by scheduling maintenance according to weather forecasts. A. López Ariste highlighted the need for increased technical staffing during the transition phase.

The TBL SC strongly supports the TBL management team's efforts to optimise maintenance scheduling and maximise the number of nights available for observations.

5. TBL modernisation project

J.-B. Daban presented an update on the TBL modernisation plan. Several actions of urgent maintenance presented in June 2025 are now completed. Upgrade/refurbishment of the fire detection system is planned for 2026. Replacement of the main low-voltage switchboard (tableau général basse tension, TGBT) is planned for semester 2026B with financial support of the INSU CSAA.

The modernisation of the telescope systems was then presented as three sub-projects, highlighting several areas with ongoing developments:

1. Control-command update of the telescope and dome (2025-2028)
2. Thermal regulation of the TBL tower and dome (2025-2027)
3. Centralised monitoring and control of the telescope (2025-2027)

Leaders have been identified within the TBL team for each task. The completion of these projects is presently foreseen in 2027-2028, subject to region and INSU funding as well as manpower availability. Funding through CPER Occitanie will be requested in 2027. The precise scheduling will also depend on the completion date of the SPIP installation and on the smooth articulation with operations at night.

The TBL SC fully supports the TBL modernisation plan, and emphasizes its importance in ensuring that TBL state-of-the-art instrumentation (VISION coupling NeoNarval and SPIP) can be successfully exploited in coordination with major ground- and space-based French and European facilities.

6. Update on SPIP status

M. Lacombe presented an update on the installation of SPIP at TBL. The instrument arrived on site at the end of September 2025, and operations are progressing thanks to an effective collaboration between the SPIP and TBL teams. Hiring needs were detailed: a system engineer to coordinate SPIP assembly and initial operations; and a technician specialist of mechanical design is expected to arrive during spring 2026 (U Toulouse BIATSS mobility).

A timeline of the ongoing and foreseen operations was briefly presented, in particular the SPIP team expects to reach spectrograph focus in January, and the final slicer should arrive at TBL in February. The next steps will require to mount the Cassegrain module on the telescope and to test the guiding system.

The following points will need to be discussed at the next SC meeting:

- *development status of the SPIP DRS*
- *anticipation of the NeoNarval/SPIP combined operations*

7. Organisation of a TBL users' meeting

The TBL SC supports the organisation of a T2m users meeting:

- *to be held approximately one year after the beginning of large programs (2028)*
- *with following aims: presentation of ongoing LPs, PI programs, new technical/scientific ideas; and to prepare the T2m prospective for the 2030 decade in coordination with OHP 2-m class telescopes.*