Date: June XX, 2017



Renewal of the Agreement

For the exchange of TNG observing nights for the full access to HARPS-N

between

Istituto Nazionale di Astrofisica (INAF), Viale del Parco Mellini n. 84, 00136 Roma, Italy, represented by Nicolò D'Amico, INAF President

and

University of Geneva, 24, rue du Général-Dufour, 1211 Geneva 4, Switzerland, represented by Professor Michel Oris, Vice-rector, through its **Astronomical Observatory**, 51, chemin des Maillettes, 1290 Sauverny, Switzerland, represented by Professor Francesco Pepe, Principal Investigator of HARPS-N

Preamble

The Department of Astrophysics of the University of Geneva (hereafter designated "UniGe") is leading a common project (hereafter designated "the HARPS-N Project") with Harvard-Smithsonian Center for Astrophysics, University of St-Andrews (SUPA), University of Edinburgh (SUPA), Queen's University Belfast, Fundacion Galileo Galilei and INAF Telescopio Nazionale Galileo (hereafter designated "the HARPS-N Collaboration"), to run a copy of the HARPS instrument for the Northern hemisphere (hereafter designated "HARPS-N instrument") originally built for the scientific goals of following up Kepler planetary candidates and searching for low-mass planets around nearby solar-type stars. The HARPS-N Collaboration is co-owner of the HARPS-N instrument.

INAF (hereafter designated "INAF") owns and operates the Telescopio Nazionale Galileo (TNG) through its Fundacion Galileo Galilei, (hereafter **INAF-FGG**), a 4-m class telescope at La Palma where HARPS-N is currently installed and successfully operating.

Within the framework of the HARPS-N Collaboration, UniGe is authorized by the HARPS-N Collaboration Members to negotiate and sign with INAF a contract for obtaining Guaranteed Time Observations (GTO) in exchange for the access to the HARPS-N instrument.

The HARPS-N Collaboration Members have signed a Collaboration Agreement, which describes the instrument and regulates the rights and the obligations of each of these parties within the HARPS-N Collaboration.

UniGe and INAF signed an Agreement for the exchange of TNG observing nights for the full access to HARPS-N, dated December 1st, 2010 and covering the period of five years starting on the 1st of August of 2012. Therein the continuation of the Agreement was foreseen after negotiation, which have taken place and issued this Renewal of the Agreement.

For that purpose, the Parties agree as follow:

ARTICLE 1: Scope of the Renewal of the Agreement

§1: The scope of the present Agreement is to regulate the exchange of 'value' between the INAF and the HARPS-N Collaboration, hereafter designated as 'Parties' (jointly) or Party (individually).

§2: As value is considered, on INAF side, the observing time on the TNG telescope in a single-instrument mode, the observing time on the TNG telescope with the GIARPS (HARPS-N+GIANO) instrumental mode, and, on the HARPS-N Collaboration side, the access to the HARPS-N instrument with all its functionalities and original performances.

ARTICLE 2: Deliverables by the HARPS-N Project Parties

§1: The HARPS-N Collaboration will provide INAF with the unlimited use of the HARPS-N instrument with the restrictions described in Art. 5.

- **§2:** The HARPS-N Collaboration will maintain the HARPS-N instrument (service and repair) and its software while this Agreement is in effect. They will provide manpower and spare components for service and repair of all the instrument subsystems and software delivered by the HARPS-N Collaboration, throughout the period that this Agreement is in effect.
- §3: The HARPS-N Collaboration will provide to INAF a copy of any new version of the HARPS Data Reduction Software (DRS) for the installation at IA2 Archive in Trieste, and open for use at this premises to any user having access right to HARPS-N data.

ARTICLE 3: Award of Guarantee Time Observing by INAF

- §1: During the five years starting on August 1st, 2017, the HARPS-N Collaboration will be awarded 80 scheduled nights per year (called hereafter "Guarantee Time Observations GTO"), assuming 12 Months/year TNG operations, in exchange for providing the instrument for use by INAF. The GTO nights shall be uniformly distributed over 12 months/year and will generally follow the research lines reported in the White Paper II, appendix of this Renewal Agreement. During these nights the HARPS-N Collaboration can make use of any instrument available at TNG in single-instrument mode, with the provisions mentioned in Art. 5.
- **§2**: The HARPS-N Collaboration is allowed to use the GIANO instrument in combination with the HARPS-N instrument (the so-called GIARPS mode), with the restrictions described in Art. 4.
- **§3**: For the accounting purposes of the 80 GTO nights, the telescope time allocated to the GIARPS mode will be accounted as 1.5 times the actually allocated telescope time.
- **§4:** GTO nights will be allocated in accordance with general TNG time allocation rules.
- **§5:** The Scientific Program carried out by the HARPS-N Collaboration on GTO time will be protected by INAF from competing HARPS-N proposals on TNG, including observing time awarded to third parties through agreements with INAF. The procedure for target protection is described in Art. 5.
- **§6:** The award of GTO time cannot be source of exclusion of any member of the HARPS-N Collaboration to apply for and obtain open time observations.

ARTICLE 4: Data protection and restriction

- §1: INAF shall not release neither raw nor reduced data issued from the GTO outside the HARPS-N Collaboration for the duration of the present Agreement plus one year. Third parties interested in using GTO data for purposes outside the scientific goals defined covered by the GTO can address their requests to the HARPS-N Executive Board for evaluation.
- §2: INAF will sequester the data in a secure archive.

ARTICLE 5: Target protection

§1 The HARPS-N Collaboration can ask for target protection against competing INAF programs to be carried out on the TNG or any other third party who may obtain observing time on the TNG through international agreements.

INAF can ask for target protection of INAF's programs against competing GTO observations.

§2 INAF ensures that any program on the TNG (including GTO and INAF's programs) has submitted a scientific program (under the form of a 'white paper' or proposal) prior to the start of the program. INAF records all programs and tracks any change to them.

In particular, both the HARPS-N Collaboration and INAF will present a "white paper" describing their overall plan for the observations foreseen during the present Agreement. The two "white papers" must be presented by the date of activation of this Agreement. Any change of the scientific program of one Party must be communicated to the other Party in due time. The two Parties agree that any new long-term program or a redefinition of an existing long-term program must not overlap with the scientific program of another pre-existing long-term program.

§3 The two Parties agree in defining each a list of scientific targets to be protected. The targets to be protected must be object of the respective scientific program. The choice of such targets should, for better coordination, preferentially result from some well-defined criterion (e.g. sources of a specific stellar class) rather than a random set of interesting targets.

Both Parties agree that the number of such protected targets should be kept reasonably small, not significantly in excess of the number of targets that can be realistically observed by each Party in a given semester, in the interest of the overall scientific achievements of the agreement.

- **§4** Before any General Observing Call is issued, the two Parties will share and review their list of protected targets. The mutual exchange of target lists, its review, and other coordination activities are organized by the Coordination Committee, whose goal, composition and activities are described in Art.9.
- §5 A conflict arises when the two Parties propose for protection the same scientific target(s) with similar science goals. In case of conflicts, the Coordination Committee (Art. 9) will propose a solution to both parties. The Coordination Committee will base its proposal on the description of the scientific programs of the conflicted parties. In case a solution is not identified or accepted by both Parties, INAF will ultimately decide,to which program the observation of the corresponding target(s) shall be allocated.
- **§6** INAF will publish the list of all protected target together within the General Observing Call. This list includes object definition (celestial coordinates), observational strategy (instrument and approximate exposure time) and a categorized description of the science goals. INAF commits to implement effective target protection for the respective (following) observing period.

ARTICLE 6: Operations

§1: INAF-FGG will operate the telescope and the instrument such that the initial functionalities, performances and operational efficiency are at least preserved or improved.

§2: Both parties declare their intent to operate HARPS-N and the TNG for the duration of this Renewal Agreement.

ARTICLE 7: Purchase of additional nights

§1: The HARPS-N Collaboration may ask to buy from INAF additional nights on the basis of fee-for-service at effective operational costs of the TNG. The purchase of these additional nights is subject to a separate written agreement signed by the authorized representatives of the Parties.

ARTICLE 8: Collaboration with other Italian Research Groups

§1: For the sake of optimization of the research lines as described in the White Paper II the Parties agree on the opportunity of a wider coordination with the other Italian groups or research on exo-planets, to which INAF will grant access to TNG. It is mutually agreed that collaborations between the two Parties should be fostered as much as possible in order to increase the scientific return of the Agreement.

Such initiatives may include, but are not limited to: a) the organization of joint observing programs under INAF or international competitive time, b) the participation of INAF scientist (in addition to those already part of the HARPS-N Collaboration) to the exploitation of the GTO data; c) the execution of GIARPS observations in shared time; d) the organization of workshops and scientific meetings, as well as any other measure that is deemed necessary.

Specific measures to achieve this goal will be defined by the Coordination Committee (Art.9).

ARTICLE 9: The Coordination Committee

§1: A Coordination Committee (CC hereafter) is defined with the goal to increase the scientific collaboration and the exchange of information between the two Parties. The CC is charged the following main tasks:

- Exchange the lists of reserved targets between the two Parties, in time for the planning of each observing semester;
- Design and implement every possible initiative to develop and improve the scientific collaboration between the two Parties, as described in Art. 8;
- Exchange any further information that can allow a smooth execution of the present Agreement.

§2: The CC is composed of 2 members of each Party. These members are appointed by the Parties at the beginning of the Agreement and remain in charge for one year. They are automatically renewed every year unless the relevant Party decides otherwise.

§3: The CC operates by consensus every time a decision is needed. In case of unsolvable disputes the matter is transferred to the HARPS-N Executive Board and to INAF Science Directorate (or its delegates) for proper consideration. In no circumstances the CC will supersede the decisions and policies established by the HARPS-N Executive Board and/or by INAF in their own capacities.

§4: The CC elects a Chair among its members in charge of organizing the activities of the CC. The Chair usually remains in charge for one year.

ARTICLE 10: Intellectual property

§1: Intellectual rights related to the HARPS-N instrument and issued from the HARPS-N Project activities remain exclusive property of the HARPS-N Collaboration.

§2: The HARPS Data-Reduction Software (DRS) remains exclusive property of UniGe. INAF is transferred the right to install and offer the DRS for use on the sites as defined in Article 2, §3. INAF must not distribute neither source nor binary code of the DRS neither outside the location mentioned above, nor to third parties without prior written agreement by UniGe.

ARTICLE 11: Amendments

§1: Any amendment to the present Agreement must be agreed upon in writing by both Parties and signed by their authorized representatives.

§2: In case of situations not foreseen by this Agreement, the Parties agree to seek for a solution convenient for both Parties.

ARTICLE 12: Disputes

§1: In case of any dispute arising out of or in relation with this Agreement, such dispute shall be settled by amicable resolution. If the dispute cannot be resolved amicably, the Parties shall first refer the dispute to proceedings under the ICC Mediation Rules. If the dispute has not been settled pursuant to the said Rules within 45 days following the filing of a Request for Mediation or within such other period as the Parties may agree in writing, such dispute shall thereafter be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules of Arbitration. The seat of the arbitral tribunal is the defendant's forum.

ARTICLE 13: Entry into force and duration

§1: This Agreement shall enter into force after signature by the Parties with effect from August 1st, 2017). The Agreement shall be applicable for at least five years.

ARTICLE 14: Termination of the Agreement

§1: In case of serious unforeseen situations a commonly agreed solution shall be negotiated between the Parties whenever possible. In case no solution can be found, either Party can terminate the Agreement through an exchange of letters. In case of damages the Parties shall first refer the dispute to proceedings under the ICC Mediation Rules. If the dispute has not been settled pursuant to the said Rules within [45] days following the filing of

a Request for Mediation or within such other period as the Parties may agree in writing, such dispute shall thereafter be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules of Arbitration. The seat of the arbitral tribunal is the defendant's forum.

§2: The Agreement can be terminated through an exchange of letters at any moment if both Parties convene.

ARTICLE 15: Renewal of the Agreement

§1: This Agreement is not subject to automatic renewal. The renewal should be made in writing and signed by the authorized representatives of the Parties. The two Parties will re-negotiate any further agreement for the shared use of TNG and of the HARPS-N instrument, depending on the scientific interests and plans of the two Parties. The agreed exchange of value will be estimated on the basis of the residual scientific value of the HARPS-N instrument, of the overall contribution of the two Parties to the HARPS-N Project, and of their scientific benefits. The two Parties agree in starting the negotiations for the agreement renewal not later than 1 (one) year before the end of the present Agreement.

Agreed upon

Place and date:

On the one hand for INAF and on behalf of INAF-TNG	
Nicolò D'Amico	
and on behalf of the HARPS-N	
Prof. M. Oris	

HARPS-N Principal Investigator

Prof. F. Pepe

Appendix: The White Paper II