



Delibera n. 69/2018
Verbale del Consiglio di Amministrazione n. 9/2018

Oggetto: Approvazione del Memorandum of Understanding (MoU) tra l'ESO (European Organization for Astronomical Research in the Southern Hemisphere) e il Consorzio SOXS per la realizzazione dello strumento SOXS per il telescopio "NTT" situato presso La Silla, Cile.

IL CONSIGLIO DI AMMINISTRAZIONE

- VISTO** il Decreto Legislativo del 23 luglio 1999, numero 296, pubblicato nella Gazzetta Ufficiale della Repubblica Italiana, Serie Generale, del 26 agosto 1999, n. 200, che istituisce l'*Istituto Nazionale di Astrofisica (INAF)*;
- VISTO** il Decreto Legislativo del 4 giugno 2003, numero 138, pubblicato nella Gazzetta Ufficiale della Repubblica Italiana, Serie Generale, del 19 giugno 2003, numero 140, che disciplina il "*Riordino dell'Istituto Nazionale di Astrofisica*";
- VISTA** la Legge 27 settembre 2007, numero 165, pubblicata nella Gazzetta Ufficiale della Repubblica Italiana, Serie Generale, del 10 ottobre 2007, numero 236, che definisce i principi e i criteri direttivi della "*Delega al Governo in materia di riordino degli Enti di Ricerca*", ed, in particolare, l'articolo 1;
- VISTO** il Decreto Legislativo 31 dicembre 2009, numero 213, pubblicato nella Gazzetta Ufficiale della Repubblica Italiana, Serie Generale, del 1° febbraio 2010, numero 25, che disciplina il "*Riordino degli Enti di Ricerca in attuazione dell'articolo 1 della Legge 27 settembre 2007, numero 165*";
- VISTA** la Legge 6 novembre 2012, numero 190, e successive modifiche ed integrazioni, che contiene le "*Disposizioni per la prevenzione e la repressione della corruzione e della illegalità nella Pubblica Amministrazione*";
- VISTA** la Legge 7 agosto 2015, numero 124, con la quale sono state conferite alcune "*Deleghe al Governo in materia di riorganizzazione delle amministrazioni pubbliche*", ed, in particolare, l'articolo 13;
- VISTO** il Decreto Legislativo 25 novembre 2016, numero 218, che disciplina la "*Semplificazione delle attività degli enti pubblici di ricerca ai sensi dell'articolo 13 della legge 7 agosto 2015, numero 124*", pubblicato nella Gazzetta Ufficiale della Repubblica Italiana, Serie Generale, del 25 novembre 2016, numero 276, ed entrato in vigore il 10 dicembre 2016;
- VISTO** lo Statuto dell'*Istituto Nazionale di Astrofisica*, adottato dal Consiglio di Amministrazione con deliberazione del 7 marzo 2011, numero 14, emanato con Decreto Presidenziale del 10 marzo 2011, numero 25, ed entrato in vigore il 1° maggio 2011;
- VISTI** in particolare, gli articoli 1, 2, 6, comma 2, lettera m), 24, comma 1, lettera a) e lettera b), e 27 del predetto Statuto;
- VISTO** il "*Regolamento sulla amministrazione, sulla contabilità e sulla attività contrattuale dell'Istituto Nazionale di Astrofisica*", predisposto ai sensi dell'articolo 18, commi 1 e 3, del Decreto legislativo 4 Giugno 2003, numero

138, approvato dal Consiglio di Amministrazione con deliberazione del 2 dicembre 2004, numero 3, pubblicato nel Supplemento Ordinario numero 185 della Gazzetta Ufficiale della Repubblica Italiana, Serie Generale, del 23 dicembre 2004, numero 300;

VISTA la Delibera del 2 luglio 2009, numero 46, con la quale il Consiglio di Amministrazione ha modificato l'articolo 14 del predetto "Regolamento";

VISTO il "Disciplinare di organizzazione e funzionamento dell'Istituto Nazionale di Astrofisica", approvato dal Consiglio di Amministrazione con deliberazione del 21 giugno 2012, numero 44, e modificato dal medesimo Organo con deliberazioni del 19 dicembre 2013, numero 84, del 19 febbraio 2014, numero 7, del 16 dicembre 2015, numero 28, del 21 marzo 2016, numero 16, e del 19 ottobre 2016, numero 107;

VISTO il Documento di Visione Strategica decennale dell'Istituto Nazionale di Astrofisica, approvato con delibera del Consiglio di Amministrazione del 18 febbraio 2015, numero 6;

VISTA la propria deliberazione del 20 febbraio 2018, numero 12, con la quale è stato approvato il "Piano di Attività per il triennio 2018-2020", comprensivo, tra l'altro, del "Piano delle Attività Scientifiche e di Ricerca" dell'Istituto Nazionale di Astrofisica;

VISTO il Decreto del Ministro dell'Istruzione, della Università e della Ricerca del 14 ottobre 2015, numero 821, con il quale il Professore Nicolò D'AMICO è stato nominato Presidente dell'Istituto Nazionale di Astrofisica;

VISTA la delibera del 21 marzo 2016, numero 9, con la quale il Consiglio di Amministrazione dell'Istituto Nazionale di Astrofisica ha nominato il Dottore Filippo Maria ZERBI quale Direttore Scientifico dell'Istituto Nazionale di Astrofisica;

VISTA la delibera del 2 agosto 2016, numero 83, con la quale il Consiglio di Amministrazione dell'Istituto Nazionale di Astrofisica ha nominato il Dottore Gaetano TELESIO quale Direttore Generale dell'Istituto Nazionale di Astrofisica;

PREMESSO che l'Istituto Nazionale di Astrofisica (INAF) ai sensi del citato articolo 2, comma 1, lettere a) e c) dello Statuto:

- promuove, realizza e coordina, anche nell'ambito di programmi della Unione Europea e di Organismi Internazionali, attività di ricerca nei campi della astronomia e della astrofisica, sia tramite la rete delle proprie Strutture di Ricerca e delle Infrastrutture Strumentali e Gestionali, sia in collaborazione con le Università e con altri soggetti pubblici e privati, nazionali, internazionali ed esteri;
- promuove, sostiene e coordina la partecipazione italiana a organismi, iniziative, progetti europei o internazionali, assicurando una presenza qualificata nei campi di propria competenza, fornendo su richiesta di autorità governative competenze scientifiche e garantendo la collaborazione con Enti ed Istituzioni di altri Paesi;

PREMESSO che l'Italia, dal 1982, è membro dell'ESO (European Organization for Astronomical Research in the Southern Hemisphere), la principale organizzazione intergovernativa di astronomia in Europa che offre agli astronomi strutture di ricerca all'avanguardia;







- PREMESSO** altresì, che l'Istituto Nazionale di Astrofisica, il "Department of Particle Physics and Astrophysics, Weizmann Institute of Science, Rehovot, Israel", la "University Andres Bello, Santiago, Cile", il "FINCA- Finnish Centre for Astronomy with ESO & Turku University, Turku, Finland", la "Queens' University, Belfast, UK", la Tel Aviv University, Israel", e la "Niel Bohr University, Copenhagen, Denmark", hanno interesse a costituire un Consorzio denominato "SOXS Consortium" per la realizzazione e la messa in opera dello strumento "SOXS" per il telescopio "NTT" situato presso il sito dell'ESO di La Silla, in Cile;
- ATTESO** che l'ESO intende affidare al predetto Consorzio SOXS, all'uopo costituito, il compito di svolgere le attività relative al design, alla produzione e alla messa in opera dello strumento "SOXS" in cambio di "Tempo Osservativo" (Guaranteed time of Observation "GTO");
- CONSIDERATO** che, a tal fine, il Consorzio "SOXS", di cui l'Istituto Nazionale di Astrofisica (INAF) ha la leadership, e la European Organization for Astronomical Research in the Southern Hemisphere (ESO) hanno manifestato la volontà di sottoscrivere una apposito *Memorandum of Understanding (MoU)* per regolare i relativi rapporti;
- VISTO** il testo del predetto *Memorandum of Understanding*;
- VISTO** in particolare, l'articolo 2 il quale prevede che "...il *Memorandum of Understanding* non comporta alcun pagamento da parte dell'ESO nei confronti del Consorzio ed il Consorzio non potrà richiedere alcun pagamento all'ESO sulla base del *Memorandum of Understanding*..." e che "...ESO garantirà al Consorzio Tempo Osservativo (GTO) con lo strumento SOXS a titolo di compenso per l'attività prestata, come specificato nell'articolo 5 del medesimo *Memorandum*...";
- CONSIDERATO** pertanto, che l'approvazione e l'adozione del *Memorandum of Understanding* non comporta minori entrate o maggiori oneri a carico del bilancio dell'Istituto Nazionale di Astrofisica;
- ACQUISITO** il parere favorevole all'approvazione ed alla sottoscrizione del *Memorandum of Understanding* tra il Consorzio "SOXS", di cui l'Istituto Nazionale di Astrofisica (INAF) ha la leadership, e la European Organization for Astronomical Research in the Southern Hemisphere (ESO) predisposto per le finalità innanzi specificate, espresso, nell'ambito delle rispettive competenze, sia dal Direttore Scientifico che dal Direttore Generale;
- ATTESA** pertanto, la necessità di provvedere,

DELIBERA

alla unanimità dei presenti

Articolo 1. Di approvare il testo del *Memorandum of Understanding* tra il Consorzio "SOXS", di cui l'Istituto Nazionale di Astrofisica (INAF) ha la leadership, e la European Organization for Astronomical Research in the Southern Hemisphere (ESO) per la realizzazione e la messa in opera dello strumento "SOXS" per il telescopio "NTT" situato presso il sito dell'ESO di La Silla, in Cile, come richiamato nelle premesse, nel testo che si allega alla presente Delibera per formarne parte integrante (Allegato numero 1).

Articolo 2. Di autorizzare la sottoscrizione del *Memorandum of Understanding* per le finalità specificate in premessa e nell'articolo 1 della presente Delibera.

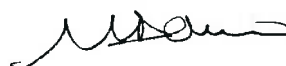
Articolo 3. Di autorizzare il Professore Nicolò D'AMICO, nella sua qualità di Presidente dell'Istituto Nazionale di Astrofisica, a sottoscrivere il *Memorandum of Understanding* tra il Consorzio "SOXS" e la European Organization for Astronomical Research in the Southern Hemisphere (ESO), come richiamato nelle premesse e nei primi due articoli del dispositivo della presente Delibera.

Roma, 30 luglio 2018

Il Segretario



Il Presidente



S.Sarra





European Organisation for Astronomical Research in the Southern Hemisphere

Memorandum of Understanding

No. 11378/LET/CP/AMA

for the SOXS Instrument on the NTT Telescope

BETWEEN

the **European Organisation for Astronomical Research in the Southern Hemisphere**, hereinafter referred to as **ESO**, having its Headquarters at Karl-Schwarzschild-Straße 2, D-85748 Garching bei München (Germany), represented by its Director General Xavier Barcons,

on the one hand,

AND

SOXS Consortium (whose members are listed in the preamble), hereinafter referred to as ***the Consortium***, represented at equal level by its PI, Dr. Sergio Campana (INAF/Osservatorio di Brera), and the INAF Scientific Director Dr. Filippo Zerbi (INAF Headquarter), which acts in the name and on behalf of the Consortium.

on the other hand.

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ESO and the Consortium (hereinafter individually referred to as a "party" and collectively as the "parties") agree as follows:

PREAMBLE

In view of the scientific needs and of the strong response from the community for a medium resolution (R~4,500) wide wavelength coverage (350-1750 nm) spectrograph, ESO has decided to pursue the possibility of constructing such an instrument with the SOXS consortium, offering access to the NTT telescope.

Considering the pressing request for spectroscopic follow-up of transient and variable sources on a 4m class telescope, in connection with wide field photometric surveys (zPFT, PanSTARSS among others and LSST in the future), alerts from space born instruments (e.g. Gaia, Swift and SVOM, EUCLID in the future) and triggers from gravitational wave (ALIGO/VIRGO) and neutrino (KM3NET, ICECUBE) experiments, which will require an intense collaboration with ground-based facilities in order to maximize their scientific output.

Recognizing, in addition, the leadership of ESO community in transient studies, and the need to maintain it in the future, ESO has developed a strategic view, in which the NTT telescope at La Silla will be dedicated to transient science for large fraction of its time.

The Consortium members at the time of signature of the present MoU are:

- Istituto Nazionale di AstroFisica (INAF), Roma, Italy
- Department of Particle Physics and Astrophysics, Weizmann Institute of Science, Rehovot, Israel
- University Andres Bello, Santiago, Chile
- FINCA - Finnish Centre for Astronomy with ESO & Turku University, Turku, Finland
- Queens' University Belfast, UK
- Tel Aviv University, Israel
- Niel Bohr University, Copenhagen, Denmark

It is understood that variations in the composition of the Consortium might occur. In this case it is the responsibility of the Consortium to notify ESO these variations and to confirm that the occurred changes do not have any impact on the obligations that the Consortium has towards ESO. Under this circumstances ESO will acknowledge receipt of the notification and, provided that there are no specific reasons that justify otherwise, will accept the new Consortium composition: a MoU Amendment will not be necessary.

ARTICLE 1. SCOPE OF THE MEMORANDUM OF UNDERSTANDING ("MOU")

ESO entrusts to the Consortium and the Consortium agrees to perform the activities relating to the design, manufacturing and operating of the SOXS Instrument of the NTT Telescope. The present Memorandum of Understanding ("MoU"), therefore, supersedes MoU No. 11206/LET/CP/AMA.

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The collaboration under MoU No. 11206/LET/CP/AMA ended with the conclusion of the Preliminary Design Review (PDR), which was successfully held on 20/21 July 2017.

The present MoU is carried out in accordance with the following documents, listed in the order of precedence:

- 1.1 the Articles of the present Memorandum of Understanding ("MoU");
- 1.2 the Scope of Work and Technical Specifications (Annex 1).

ARTICLE 2. REMUNERATION

This Memorandum of Understanding does not entail any payment from ESO to the Consortium and the Consortium may not claim any payment from ESO under this Memorandum of Understanding. However, ESO will grant the Consortium Guaranteed Time of Observation (GTO) with the SOXS instrument as remuneration for its performance, as specified in Article 5.

ARTICLE 3. SCHEDULE

The activities to be performed under this Memorandum of Understanding shall be carried out in accordance with the following key milestones (T1 being the date of signature of this MoU):

Item	Key milestones	Estimated time
1	Final Design Review	July 2018
2	Preliminary Acceptance Europe (PAE)	July 2020
3	Provisional Acceptance Chile (PAC)	March 2021
4	End of MoU	PAC+60 months

Furthermore, the Consortium will be responsible for operating the SOXS instrument for a 5 year period starting from the Provisional Acceptance Chile (see definition of Provisional Acceptance Chile in Article 4) the instrument, as described in the Scope of Work and Technical Specifications.

The Consortium shall, as soon as reasonably possible, notify ESO in writing of any circumstance delaying, or threatening to delay, or affecting, or threatening to affect, the proper performance of this MoU.

ARTICLE 4. PROVISIONAL ACCEPTANCE CHILE

Provisional Acceptance Chile (or "PAC") shall mark the transfer of possession and custody of the SOXS Instrument to ESO and the beginning of the GTO period, while ownership in the SOXS Instrument will pass to ESO after Final Acceptance as per Article 19.

Provisional Acceptance Chile shall be granted after the Supplies have been delivered and have satisfied the conditions of this MoU (as pertains to the Technical Requirements and to the mutually defined and



executed verification plan stipulated in the Scope of Work, both stated in Annex 1), and provided that the Consortium has fulfilled all its obligations under this MoU relative to the delivery of the Supplies and the commissioning of the SOXS Instrument. The Consortium shall request in writing from ESO a certificate of Provisional Acceptance Chile.

Within three (3) months from the submission of the request for Provisional Acceptance Chile ESO shall either provide the Consortium with a certificate of Provisional Acceptance Chile or, in the event that the requirements of this MoU have not been fulfilled, shall reject the request for Provisional Acceptance Chile motivating such rejection. If ESO does not grant nor reject Provisional Acceptance Chile within the above-specified period of time, the Supplies shall be deemed to be accepted and Provisional Acceptance Chile shall be deemed to be granted on the day following the end of that period.

In the event of rejection affecting only a portion of the Supplies, Provisional Acceptance Chile may be granted for the Supplies not rejected, in so far as they can be utilized independently of the rejected portion.

Property in the SOXS Instrument and its sub-systems including hardware components and all other Supplies necessary to SOXS functioning, shall ultimately pass over to ESO at the date of Provisional Acceptance Chile. ESO shall also have license to use the software necessary to the SOXS Instrument's functioning as of such date.

ARTICLE 5. GUARANTEED TIME OF OBSERVATION AND DATA PROPERTY

ESO will grant 900 nights of Guaranteed Time of Observation ("GTO"), spread equally over 10 semesters, with the SOXS Instrument to the Consortium, upon finalization of the tasks stipulated under the present MoU.

This amount of GTO will be considered as the full remuneration for the Consortium performance under the present MoU according to the Scope of Work and Technical Specifications, including the initial 5 year period of the operational phase, and for the work performed under MoU No. 11206/LET/CP/AMA.

The data produced by the Consortium during its GTO with the NTT telescope will be shared property of ESO and the Consortium. Their usage and distribution obeys to ESO's standard rules, i.e. SOXS Consortium data will be public after a one-year proprietary period, as normal ESO data.

However, classification data acquired by the Consortium will be made public within 3 days if it is not covered by an active SOXS-GTO proposal. Furthermore, data presented in papers published in international journals will be made public at the time of publication.

ARTICLE 6. INTELLECTUAL PROPERTY

- Newly developed data, information, knowledge

ESO will be the owner of all new data, information and knowledge developed under or in consequence of this MoU. Any such new data, information and knowledge, shall be supplied to ESO without any restriction. In case the Consortium wishes to use or exploit the newly developed data, information or



knowledge, it shall request a license from ESO with that effect. Licensing conditions shall be defined by ESO.

- Protected intellectual property

The Consortium shall provide ESO with all necessary data, information and knowledge required for ESO to exercise its rights to take out any intellectual property title regarding the newly developed data, information or knowledge. The Consortium shall provide all reasonable support, as required from an inventor, to ESO for these applications, and will not withhold any consent required.

Should ESO not be interested in filing an application for any intellectual property title regarding the newly developed data, information or knowledge, on the request of the Consortium ESO might consider transferring the necessary rights to the Consortium. The conditions of the transfer of rights shall be defined by ESO and shall include the obligation of the Consortium to grant to ESO for the purpose of scientific research an irrevocable, non-exclusive, free license, which ESO may make available to third parties engaged in work on its behalf. Furthermore, such license shall be freely transferable to universities and to similar scientific institutes working in the same field as ESO in the Member States of the Organization.

- Pre-existing data, information and knowledge

If ESO requires data, information or knowledge owned by the Consortium and already existing prior to the signing of this MoU to use or modify any Work or Supplies, the Consortium will grant ESO a non-exclusive and free of charge license to use these data, information and knowledge, including the right to sub-license it under sufficient confidentiality restrictions to third parties, for the above mentioned purposes. The Consortium shall provide the data, information and knowledge in sufficient details to enable ESO to exercise the above rights. Any data, information and knowledge not listed as pre-existing in the documentation provided to ESO by the Consortium prior to MoU signature, shall be considered newly developed.

- Third party rights

The Consortium shall deliver all supplies to ESO free from any restrictions arising from third party rights that could limit any of ESO's rights, except if expressly accepted by ESO in writing. The MoU remuneration shall be deemed to include all fees and royalties for the use of third party rights. The Consortium shall indemnify ESO for any loss or damage, including legal costs, and hold ESO harmless from and against any claims of third parties arising from any infringement or alleged infringement of third party rights.

The parties to this MoU are encouraged to make publicly available the results of their research. Before either party submits a paper or abstract for publication or otherwise intends to publicly disclose information about confidential or proprietary/patentable matter, the other party shall be provided 30 days to review the proposed publication or disclosure to assure that proprietary/confidential information is protected.

The publication or other disclosure shall be delayed for up to 90 additional days upon written request by any party as necessary to preserve patent or other intellectual property right. If any objection with regard to the value of confidentiality or other commercial interests is raised by any party against a project-related publication, the parties will make all efforts to find a mutually acceptable solution within three months after the objection was raised, by making appropriate text modifications in the document.

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ARTICLE 7. TERMINATION AND CANCELLATION

ESO may at any time, by registered letter, terminate this MoU in whole or in part. In the event that ESO enforces this provision, the parties will agree in good faith a reasonable amount of GTO as compensation to the Consortium's reasonable costs, expenditures, liabilities and effort incurred by it in the performance of its obligations under this MoU up to the moment of termination. The SOXS Consortium may at any time, by registered letter, terminate this MoU in whole or in part. In this case the SOXS Consortium will lose any right for compensation.

ARTICLE 8. FURTHER COOPERATION

This MoU covers up to and including the first 5 years of the operational phase of the SOXS Instrument. Nevertheless, it is foreseen that the parties may decide to extend the duration of the present MoU. In this case an MoU Amendment will be required and the parties will negotiate in good faith a suitable amount of GTO to be granted by ESO to the Consortium in exchange for the additional work to be performed by the Consortium.

At the time when this MoU expires or it is terminated as per Article 6, the parties will cooperate in order to put in place a handover to ESO of the activities until then undertaken by the Consortium.

ARTICLE 9. MANAGEMENT OF THE MEMORANDUM OF UNDERSTANDING REPRESENTATION AND ADDRESSES FOR CORRESPONDENCE

The accredited representatives in charge of the follow-up of the performance of the Memorandum of Understanding are:

FOR ESO:

Project Responsible (Managerial, Scientific and Technical Matters):

Dr. Hans-Ulrich Käufl
ESO
Karl-Schwarzschild-Strasse 2
D-85748 Garching bei München, Germany
Phone: +49 89 3200 6414 - E-mail: hukaufl@eso.org

Contractual Matters

Alessandro Martis
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FOR THE CONSORTIUM:

Principal Investigator (Responsible for Managerial, Scientific and Technical Matters):

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INAF Scientific Director:

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ARTICLE 10. LANGUAGE

Any communication and correspondence between ESO and the Consortium shall be in the English language.

ARTICLE 11. ASSIGNMENT AND SUBCONTRACTS

- 11.1 The Consortium shall not, without the permission in writing of ESO, sub-contract the performance of all or any part of its obligations under this MoU to any other Sub-contractors than those specified in this MoU. Any such permission may be subject to conditions. In any event the Consortium shall remain solely responsible to ESO for the performance of this MoU.
- 11.2 The Consortium shall be, without prior written consent of ESO, debarred from modifying the list of Sub-contractors as well as the corresponding shares of the Work sub-contracted in per cent of the total price of this MoU, as it was presented by the Consortium in the tender/proposal, prior to the award of this MoU or as it is laid down in this MoU.
- 11.3 Unless otherwise authorized by ESO in writing, the conditions of the Sub-contracts shall secure to ESO any rights provided to it under the terms of this MoU.
- 11.4 The Consortium shall not assign its obligations under this MoU or any part thereof without prior permission in writing by ESO, which may be subject to conditions.

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- 11.5 ESO may terminate this MoU in whole or in part with immediate effect, without any compensation whatsoever, if the Consortium fails to comply with these obligations or with any of the conditions attached to any permission granted by ESO.

ARTICLE 12. ITEMS MADE AVAILABLE BY ESO

- 12.1 Any equipment, material, computer software, database, technical document, imagery or information made available to the Consortium by ESO for the performance of this MoU shall remain the property of ESO and shall be returned to ESO, including any copies thereof, upon completion of their use, and at the latest immediately after execution of this MoU or the date of its termination.
- 12.2 The Consortium shall be responsible for the safe keeping, maintenance, storage, transport and, as appropriate, insurance of all such items and shall use them exclusively for the performance of its obligations under this MoU.
These items are made available by ESO in their existing conditions and without any express or implied warranty. The Consortium shall check any items and notify ESO within two weeks after receipt of any such item about any defects or unfitness, failing which the item shall be deemed to have been made available to the Consortium without any defects and fit for the purpose for which it was made available to the Consortium.
- 12.3 The Consortium shall take all necessary measures to make known and protect the ownership of ESO of such items, including clearly marking them as ESO property.
If such items have been purchased by the Consortium for and on behalf of ESO, it shall take all necessary measures and, in particular, retain all documents required to prove ESO's ownership.

ARTICLE 13. CONFIDENTIALITY

- 13.1 Each party agrees and confirms to use any Confidential Information, whether written or verbal, passed on to him by the other party solely for the purpose for which it was released to it and to make no other use thereof; each party moreover agrees and confirms to treat it in the strictest confidence and to take all reasonable security precautions in the safekeeping of the Confidential Information, applying no lesser security measures to it than to its own Confidential Information. The parties, where it is strictly necessary for the performance of this MoU, may disclose Confidential Information to such employees and/or third parties who are committed by law and/or by the provisions of their contract to observe similar confidentiality with regard to business matters.

Each party recognizes that the receipt of these documents and/or information from the other party does not constitute a prior use by it in terms of patent law(s), and it, therefore, shall not make their receipt a reason for claiming a prior use right to any patent applications which may be filed later by the disclosing party.

The above disclosure and use limitations shall not extend to Confidential Information when and as far as this is or has become public knowledge, or has already been lawfully in the possession of the receiving party before the Confidential Information was passed on to it by the disclosing party or as far as such Confidential Information is lawfully acquired by it from third parties.

- 13.2 The above obligations shall remain in full force and effect after termination or cancellation of this MoU, unless otherwise notified in writing by the disclosing party.



ARTICLE 14. SAFETY

In addition to observing all relevant national legislation in safety and health matters, the Consortium shall, when on the ESO site, comply with the safety regulations in force thereon, with which it is required to become conversant. It shall take all necessary measures to this effect.

ARTICLE 15. LIABILITY

Each party shall hold the other party harmless from, and indemnify it for loss and damage, including, but not limited to, personal injury and death and related legal costs, resulting from acts or omission of the party, its employees, agents and/or sub-contractors.

Except in cases of gross negligence or willful misconduct, a party shall not be liable to the other for loss of contract, loss of income or profit or any other consequential or indirect loss or damage.

The Consortium shall take out and maintain insurance cover, with companies of reputed solvency, for liability risks connected with the performance of this MoU, including third party liability, and shall provide evidence of such insurance cover upon ESO's request.

ARTICLE 16. ARBITRATION

Failing an amicable settlement, any dispute between the parties arising out of or relating to this MoU shall be finally settled by international arbitration in accordance with the following rules:

- 16.1 Each party shall appoint an arbitrator within thirty days after notice has been given, by registered letter with acknowledgment of receipt, by either party to the other, of its intention to resort to arbitration. The two arbitrators shall, by joint agreement and within thirty days of the appointment of the second arbitrator, select a third arbitrator, who may in no case be drawn from amongst persons who are or have been in any way in the service of ESO or of the Consortium, or of any subsidiary or affiliated company of the latter. The third arbitrator thus selected shall preside over the arbitration tribunal.
- 16.2 Should one of the parties fail to appoint an arbitrator and/or the two arbitrators fail to agree on the selection of a third, the choice shall be made by the President of the Court of Arbitration of the International Chamber of Commerce ("ICC"), at the request of the first party to do so. Should an appointed arbitrator be prevented for any reason from fulfilling her/his functions, a replacement shall be selected within a period of thirty days in accordance with the above procedure.
- 16.3 The arbitration proceedings shall take place in Munich unless otherwise agreed by the parties. With regard to matters of procedure not dealt with in this MoU, the procedure of the arbitration shall follow the code of civil procedure of the Federal Republic of Germany. The language of the proceedings shall be English.
- 16.4 The arbitrators shall be entitled to be assisted, in such manner as they see fit, by legal advisers, experts and other persons selected by them, to undertake investigations, to hear the parties either separately or in each other's presence, assisted if they so desire by legal advisers and/or



experts, and generally to carry out any inquiries, investigations and hearings which may provide them with information for the performance of their task.

The parties shall provide the arbitrators in a timely manner with such assistance, as they are capable of providing.

- 16.5 The arbitration tribunal shall faithfully interpret the terms of this MoU. The award shall be made by majority vote and shall set out the detailed reasons for the decision. The costs and fees of arbitration shall be determined and apportioned by the arbitration tribunal and shall in principle be borne by the unsuccessful party.

The award shall be made at the latest within one year of the final appointment of the third arbitrator. This time limit may be extended provided the parties agree.

- 16.6 The arbitration tribunal shall be the sole authority to take, at the request of either party, any interim measures it deems necessary to preserve the respective rights of either party or in respect of the matter in dispute.

Such interim measures may be established in the form of an interim award. The arbitration tribunal shall be entitled to require security for the costs of such measures from the party requesting the interim measure.

Request for urgent interim measures that cannot await the constitution of the arbitration tribunal may be made to the ICC International Court of Arbitration, to be decided in accordance with the relevant ICC Rules of Arbitration in force at the time of the signature of this MoU.

- 16.7 The award shall be final and binding upon the parties, who shall in advance undertake not to resort to any form of appeal or revision or make recourse to any other judicial authority against the award, whether ordinary or extraordinary.

Nevertheless, either party to the dispute may, within fifteen days of announcement of the arbitrators' award, request them to provide a joint interpretation of their award. This interpretation shall be given within thirty days of the award. During this time execution of the award shall be suspended.

- 16.8 The enforcement of the award or any interim award shall be governed by the rules in force in the state in which it is to be executed.

- 16.9 The arbitration clause set out in the present Article shall be applicable to all amendments, modifications and addenda to this MoU, even if this Article is not specifically mentioned therein and provided that there is no formal provision to the contrary in such amendments, modifications or addenda.

ARTICLE 17. STATUS OF ESO

ESO is an Intergovernmental Organisation set up by the Convention Establishing a European Organisation for Astronomical Research in the Southern Hemisphere concluded on 5 October 1962, and has its seat at Garching bei München, Federal Republic of Germany. ESO enjoys international status as defined in the Protocol on the Privileges and Immunities of ESO concluded on 12 July 1974, the Headquarters Agreement between the Government of the Federal Republic of Germany and ESO concluded on 31 January 1979 and the Agreement between the Government of Chile and ESO for the purpose of Establishing an Astronomical Observatory in Chile concluded on 6 November 1963, as amended by the Agreement concluded on 18 April 1995. Special legal, customs and fiscal conditions therefore apply to ESO in its Member States and in the Republic of Chile. The Consortium shall be deemed to be conversant



with the effect of these special conditions and shall accordingly, in conjunction with the appropriate ESO services, make such arrangements as may be required.

ARTICLE 18. — APPLICABLE LAW

ESO contracts/agreements/MoUs are subject to the regulations adopted by ESO by virtue of its international status. For matters of substance not specifically covered by these regulations or this MoU, this MoU shall be governed by German law.

ARTICLE 19. — GUARANTEE

19.1 The guarantee period shall be two and a half years, starting on Provisional Acceptance Chile for all supplies furnished by the Consortium.

19.2 If the supplies turn out not to comply with the terms of this MoU during the guarantee period, the Consortium shall carry out, at its own expense, all work necessary to comply with the terms of this MoU.

19.3 For supplies replaced, repaired or modified, the guarantee period shall be suspended and shall recommence on the date of replacement or acceptance by ESO of the repaired or modified supply, respectively.

19.4 If, during the guarantee period, or during the periods of repair or modification, supplies as a whole become unusable for reasons attributable to the Consortium, in particular as a result of abnormal wear, breakage or defective functioning of one or more parts of the said supplies, the guarantee period for the whole of the Supplies concerned shall be extended by all the periods during which the said supplies as a whole were unusable.

19.5 The Consortium shall meet all costs arising in connection with its obligations under the guarantee, including those of transport. It shall not be responsible for costs resulting from deterioration attributable to ESO by reason of negligence, inadequate supervision or maintenance, or mishandling. The Consortium shall not be held liable if Supplies have been replaced, modified or repaired by ESO without the Consortium's written consent.

19.6 If the defect observed in the course of the guarantee period is found to be due to a technical error of a systematic nature, the Consortium shall replace or modify at its expense all identical components covered by the Consortium which are liable to suffer from this error, even if these components are functioning correctly.

19.7 After expiry of the guarantee period and after all guarantee activities have been carried out by the Consortium and accepted by ESO, ESO will grant Final Acceptance to the Consortium. Any open action items relating to guarantee obligations that have not been closed during the guarantee period will be listed in a report by the Consortium. Based on this report, and after these open action items have been carried out, ESO will grant Final Acceptance. Final Acceptance will mark the change of ownership in the Instrument from the Consortium to ESO.

19.8 After Final Acceptance, the Consortium will continue with its maintenance duties as described in the SoW. In case of a major failure after the 2.5 year guarantee period the Consortium and ESO shall convene a joint team to establish a course of action. As a rule the cost of repairs shall be borne by ESO, while the Consortium will co-operate to bring the instrument to full functionality.



LIST OF ATTACHMENTS:

ANNEX 1: Scope of Work and Requirements

Done in two originals.

Done at Garching, on 11.06.2018

European Organisation for Astronomical Research in the Southern Hemisphere – ESO:

Xavier Barcons,
ESO Director General



Done at Merate, on
for the Consortium

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Sergio Campana,
Principal Investigator of the SOXS Project

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Annex 1

Scope of Work and Technical Specifications

Statement of Work (SOW)

- Consortium commits to inform ESO twice per year on the general status of the project (advancement, challenges, schedule). The ESO contact point as well as any ESO staff participating directly or indirectly to the SOXS project is welcome to attend Progress Meetings organized by the consortium.
- Change in milestones/schedule will be communicated timely. Major delays, that influence the lifetime of the Observatory, need explicit acceptance by ESO.
- Reviews aiming at verifying the top-level requirements stated in this MoU should be performed by mutually agreeing on a requirements matrix and a verification plan and then jointly executing the verification.
- At FDR the design of the instrument is frozen. Preliminary Acceptance at the consortium premises (known as PAE in the ESO jargon) will be carried out to verify that the top-level requirements are fulfilled, as far as possible in the laboratory environment and that the instrument is ready for shipment.
- Changes to the top-level requirements shall be asked through a Change Request procedure. This procedure shall consist of a written communication of the requested change, best using the ESO standard forms. Thereafter ESO will set up a board to decide on the request in due time (4 weeks maximum) and in good faith based on an assessment of the impact of the change on the observatory and the scientific usefulness of the instrument. Conversely, any change on the telescope (NTT) or site (La Silla) involving the SOXS instrument should be agreed with the SOXS Principal Investigator.
- ESO will distribute to the consortium all relevant drawings and information, whenever available. In the eventuality that the consortium and ESO personnel will have to perform measurements on site, ESO will facilitate these measurements, compatibly with the operations schedule. As far as reasonably possible, ESO will assist and engage with the Consortium to implement the necessary interfaces to allow SOXS to be mounted at the NTT telescope.
- The Consortium shall present latest at FDR a detailed plan for acceptance of the instrument at the integration sites, for deployment to the telescope and for commissioning. The plan has to be approved by ESO. A staged approach for acceptance and deployment is an option and final integration of all subsystems of SOXS can happen at the telescope, if this is deemed beneficial for the project and the schedule.

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- Two commissioning periods are a priori foreseen, one for installation and functional tests, one for performance assessment. Depending on the details of the deployment and commissioning plan this may vary. Long-term performances will be verified within the GTO program. All data obtained during Commissioning are property of ESO (LPO director). ESO will report on the commissioning phase with presenting data and target lists in the Messenger. Commissioning data will appear on the ESO archive and also third parties can access and use them after LPO director explicit permission. The Consortium can ask for up to 10% of the commissioning data.
- During the re-assembly, installation and commissioning the SOXS team shall train ESO staff in the operation, basic preventive and corrective maintenance of SOXS.
- The operations must be organized in an efficient, flexible and reliable way in order to optimize the scientific output. The observing schedule will be produced by the SOXS Consortium on a day-by-day basis (in advance) balancing ESO and SOXS data in terms of moon, seeing, etc. Observations will be carried out by La Silla Night Operators, instructed by SOXS observer during a 6-12 months (TBD) initial period. During this training period SOXS observers will be treated by ESO as visiting astronomers. The schedule can be changed during the night driven by unpredictable and scientifically sound transients, by a SOXS scientist on call. The SOXS scientist will also be on call in case of important (and rare) issues with the instrument.
- Instrument maintenance will be shared between the SOXS Consortium and ESO for the entire 5 yr period of validity of the MoU. ESO will be in charge for ordinary maintenance on site. The SOXS consortium will be in charge of periodic (e.g. yearly) pre-emptive maintenance requiring experienced technical staff. ESO shall cover the travel costs on the same basis as for ESO visiting astronomers.
- During the Guarantee Period as per Article 19 of the MoU, the SOXS Consortium will be responsible for any major failure of the instrument. The SOXS Consortium will provide technical support in the form of experienced technical staff based at Consortium premises and spare parts, whose list will be finalised at the FDR. SOXS support staff shall be available either remotely or even on site in case of failures that interrupt operations.

Requirements

The SOXS science case will focus on time-domain astronomy, following up transient sources discovered in the optical-NIR bands or at other wavelengths (or even from non-electromagnetic signals).

Taking the above into consideration, SOXS top-level requirements are:

1. The spectrograph's spectral range must be wide covering in one shot the spectral range 350-1750 nm (optionally 320-2050 nm).
2. The total efficiency at blaze peaks (including atmosphere, telescope and slit losses for a 1arcsec seeing in V band) in the mandatory spectral bands shall be at least of 25%.
3. The instrument shall comprise a calibration unit, an acquisition and slit viewing unit, an optical-UV spectrograph and an infrared spectrograph. Light separation will be done by means of a dichroic.
4. A spectral resolution of, at least, $R = 3500$ must be achieved over the whole spectral range. The spectral format is either cross-dispersed Echelle, dictated by the requirements on spectral

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resolution and wavelength range or as alternative design, using dichroics to select "quasi-orders" in combination with low order gratings.

5. In view of its wide band-pass, the instrument shall be equipped with an ADC (Atmospheric Dispersion Compensator) for at least the UV-VIS spectral ranges for good spectro-photometric accuracy and the flexibility to orient the slit as required by the observing program.
6. The SOXS on board calibration system shall allow performing scientific and technical calibrations needed to remove the instrument signature and to maintain the instrument.
7. SOXS shall make use of VLT standard components and instrument software as far as reasonable. Should this not be the possible, well-documented or commercial products should be added.
8. SOXS shall comply with the NTT telescope interface requirements and with the VLT data-flow system (see the relative Interface Control Document for reference).
9. The online pipeline and the data reduction package shall provide the required spectral accuracy. The online pipeline shall be able to process one typical night (series of 15-30 min exposures) in real time.
10. The instrument must be safe for people and to avoid damaging itself or other equipment, according to ESO standard.
11. For standard observations no night time calibrations shall be needed to reach the performances specified.
12. SOXS data, raw and processed, shall be compatible with the requirements of the ESO archive.
13. The principle applied in wavelength calibration shall be documented to allow future users of the archive to trace back the wavelength calibration to the time standard.
14. Necessary documentation should be provided by the Consortium at PAC (or at a later date if mutually agreed by the parties) with the aim of allowing ESO to operate, maintain, disassemble and re-assemble the instrument for a period after the termination of this MoU. This shall also apply correspondingly to all software delivered with the instrument.

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