



Erasmus+

Erasmus+: Erasmus Mundus Joint Master Degrees



CONSORTIUM AGREEMENT

This Agreement is made and entered into by and between:

Leopold-Franzens Universität Innsbruck (University of Innsbruck - UIBK), whose registered office is at Innrain 52, 6020 Innsbruck, Austria, lawfully represented by **Univ.-Prof. Dr. Dr. h.c. mult. Tilmann Märk**, Rector, hereinafter referred to as **"Coordinating Institution"** and **"Programme-Country University"**, and

Università degli Studi di Padova (University of Padova - UniPD), whose registered office is at via 8 Febbraio, 2, 35122 Padova, Italy, lawfully represented by **Prof. Dr. Giuseppe Zaccaria**, Rector, hereinafter referred to as **"Programme-Country University"**, and

Università degli Studi di Roma "Tor Vergata" (University of Rome "Tor Vergata" - UTov), whose registered office is at via della Ricerca Scientifica 1, 00133 Roma, Italy, lawfully represented by **Prof. Dr. Giuseppe Novelli**, Rector, hereinafter referred to as **"Programme-Country University"**, and

Georg-August Universität Göttingen (University of Göttingen - UGOE), whose registered office is at Wilhelmsplatz 1, 37073 Göttingen, Germany, lawfully represented by **Prof. Dr. Hiltraud Casper-Hehne**, Vice-President, hereinafter referred to as **"Programme-Country University"**, and

Универзитет у Београду, (University of Belgrade – UB), whose registered office is at Studentski trg 1, 11000 Belgrade, Serbia, lawfully represented by **Prof. Dr. Vladimir Bumbaširević**, Rector, hereinafter referred to as **"Partner-Country University"**

(all the aforementioned universities hereinafter collectively referred to as **"Consortium Universities"** and individually as **"Consortium University"**)

and

Astronomska opservatorija, (Astronomical Observatory - AOB), whose registered office is at Volgina 7, 11060 Belgrade, Serbia, lawfully represented by **Dr. Gojko Djurasevic**, Director, hereinafter referred to as **“Partner-Country Asc.-Partner”**, and

Istituto Nazionale di Fisica Nucleare (INFN), (Gran Sasso Science Institute – INFN-GSSI), whose registered office is at Via, Enrico Fermi, 40, 00044 Frascati, Italy, lawfully represented by **Prof. Fernando Ferroni**, President, hereinafter referred to as **“Programme-Country Asc.-Partner”**, and

Istituto Nazionale di Astrofisica (INAF), (INAF-OAR and INAF-OAPd), whose registered office is at viale del Parco Mellini, 84, 00136 Roma, Italy, lawfully represented by **Prof. Giovanni Fabrizio Bignami**, President, hereinafter referred to as **“Programme-Country Asc.-Partner”**, and

Max Planck Institute for Solar System Research (MPS) whose registered office is at Justus-von-Liebig-Weg 3, 37077 Göttingen, Germany, lawfully represented by **Prof. Sami K. Solanki**, Director, hereinafter referred to as **“Programme-Country Asc.-Partner”**

(hereinafter referred collectively to as **“Asc.-Partners”** and individually as **“Asc.-Partner”**).

Hereinafter **Consortium Universities** and **Asc.-Partners** are collectively referred to as **“Consortium Members”** and individually as **“Consortium Member”**.

This Agreement is drafted within the framework of the action entitled: **Erasmus+ Erasmus Mundus Joint Master Degree (EMJMD) programme AstroMundus** in Astrophysics (**E+ EMJMD-AM**), based on the Grant Agreement (GA) of which the Consortium Universities are beneficiaries and all its Annexes between the Coordinating Institution and the Education, Audiovisual and Culture Executive Agency (EACEA), acting under powers delegated by the European Commission (hereinafter referred to as the **Commission**). (See Annex 11, which is the proposal submitted on March 19th, 2015, thereafter called **“PROP”**, plus a link to the Erasmus+ Programme Guide also available at http://ec.europa.eu/programmes/erasmus-plus/documents/erasmus-plus-programme-guide_en.pdf, thereafter called **“E+PG”**).

Although the EU authorities are providing different linguistic national versions of some of the documents, it is agreed on, that the Agreement is based on the English version. Citations to any of the documents herein and in local documents of the Partners (e.g. national local curricula) have to use the English version (e.g. for Sections and page numbers).

The **Consortium Members** are bound by the terms and conditions of the GA and further amendments. Each **Consortium Member** shall be bound in applicable parts by the terms and conditions of the GA and amendments, approved by all **Consortium Members** when applicable. The **Consortium Members** shall not act in any way that could risk the fulfilment of the Coordinating Institution’s duties and obligations under the GA. Asc.-Partners are not beneficiaries of the Commission grant (**PROP**, Section 5, Footnote 1).

On the basis of the present Consortium Agreement the **Consortium Members** shall together contribute to the achievement of the requirements of the GA in accordance with the terms and conditions as stated in the present Consortium Agreement and all its Annexes.

The core text of the Consortium Agreement describes a number of issues as structure, organisation, finance, cooperation in general terms rather than in detail. More details are given in a number of separate Annexes. In order to maintain maximum flexibility in terms of working principles, needed to adapt the operational execution of the course based on advancing insight or experience built up during the consecutive years the course is given, consequential changes will be met, where possible, by changes in relevant Annexes rather than through changes in core text. Subsequent versions of Annexes will be approved, as described in Article 12.

The **Consortium Universities** have provided mandates to the Coordinator, as requested in the **PROP** (Annex 11) and included in the **GA** (GA Annex IV).

Article 1. Summary of the E+: EMJMD-AM

The integrated **Erasmus+ Erasmus Mundus Joint Master Degree (EMJMD) course AstroMundus in Astrophysics (E+: EMJMD-AM)** aims to offer high quality international training, both in terms of scientific knowledge as well as in didactic skills.

E+: EMJMD-AM is a response to the need for highly qualified graduates, as well as to the need to adapt education systems to the demands of the knowledge society, and to enhance the attractiveness and visibility of European higher education world-wide.

The focus of **E+: EMJMD-AM** is the combination the specific expertise of the five **Consortium Universities** in the multiple aspects of Astrophysics. The synergy among the **Consortium Universities** and their various scientific domains of specialisation will give Master students the unique opportunity to develop knowledge and be initiated to the research in a very wide range of branches of Astronomy and Astrophysics:

- practice learning at national and international observatories,
- training oriented towards exploiting ground-based and space-based instrumentation,
- exploitation of modern data archives,
- the use of state-of-the-art supercomputers.

At the same time the students will be fully integrated in the international scientific community, a fact that represents an important first step for their future career. The **E+: EMJMD-AM** graduate will be trained to formulate and provide effective and appropriate responses to these challenges. The **E+: EMJMD-AM** offers quality higher education in Astronomy and Astrophysics with a distinct European added value, which is attractive for students from all over the world. Representatives of international organisations have agreed to participate in the international Scientific Advisory Board (defined in Annex 5) to advice on development of the course.

The instruction language of the two-year MSc Course is English. An opportunity to study other European languages and to become familiar with European cultures will be provided. The annual student enrolment (scholarship holder plus non-scholarship holders) is expected not to exceed 40 students, including both Partner-Country and Programme-Country students.

E+: EMJMD-AM starts with an introduction period for all students in Innsbruck. Students will conduct the major part of their training at least at two but up to four **Consortium Universities**. The duration of the stay at one institution varies between 6 and 18 months at the Universities in Austria, Italy and Germany. At the Partner-Country University in Serbia, it varies between 3 and 12 months.

Students will be awarded a fully nationally recognized Joint Master Certificate, a Notice of Award and Diploma Supplement (nature, level, content and status of the subjects; outstanding features of professional training) issued by the University of Innsbruck, as well as a specific **E+: EMJMD-AM Master certificate**, the Joint Programme Certificate, signed by the rectors of the **Coordinating Institution** and the rectors of the visited **Consortium Universities**.

The national installation of the curricula for a Joint Degree programme is agreed on by the **Consortium Universities** and contracted separately (Addendum 1). **E+: EMJMD-AM** will be open to well-motivated students who have completed a BSc or equivalent degree in Physics, Astronomy, Astrophysics, Mathematics and related fields and possess a good knowledge of the English language (TOEFL-test/ demonstrated competence). Student admission, enrolment and degrees will be handled by the Selection Committee and the Admission Department of the University of Innsbruck.

Article 2. Structure and content of the programme

The **E+: EMJMD-AM** proposes to contribute to the teaching of Astronomy and Astrophysics at the European level by combining the specific expertise of the **Consortium Universities** in the multiple aspects of Astrophysics. Hence, it is intended to be a significant component of the European educational space. The synergy among the **Consortium Universities** and their various scientific domains of specialisation, further increased by the participation of the Asc.-Partners, will give Master's students the unique opportunity to develop knowledge and be initiated to the research in a very wide range of branches of Astronomy and Astrophysics -- a goal that cannot be achieved within the currently existing Master's courses in this field. In fact, the students will have a large choice of courses, practice learning at national and international observatories, training oriented towards exploiting ground-based and space-based instrumentation as well as modern data archives, and training in the use of state-of-the-art supercomputers. At the same time the students will be fully integrated in the international scientific community, a fact that represents an important first step for their future career.

The aim of the proposed E+: Masters Course is to provide a high-level, multi-national, research-oriented education in Astronomy and Astrophysics, in close relation to the research activities of **Consortium Members**. The combined and harmonised teaching and research of the **Consortium Members** offer a great variety of competence in the field.

The programme is organized according to three basic objectives: to give the students a solid background in Astronomy and Astrophysics, to initiate the students in scientific research and to offer them applied training in experimental and computational techniques oriented towards Astronomy and Astrophysics. Moreover, the students will have a unique opportunity to gain access to various high-technology instruments, supercomputers, specific techniques developed locally (e.g. hydrodynamic simulations) or to specific pathways, i.e. different branches of the three main domains, observational, computational, and theoretical astrophysics and/or combinations of these. Such a wide choice can only be offered at the European level.

E+: EMJMD-AM includes dedicated courses specially thought for E+: EMJMD-AM students as well as advanced courses already taught at the **Consortium Universities** as part of their local Master's programmes. All courses will be given in English. Furthermore, Master's students will be tutored during the whole course of their Master's studies. The duration of the programme is 2 years (120 ETCS). A more detailed description of the **E+: EMJMD-AM Curriculum** is given in Annex 2.

Article 3. Organisational structure and responsibilities

The E+: EMJMD-AM is governed by the following management structure:

3.1 The Programme Coordinator: The Programme Coordinator is in charge of coordinating the **E+:EMJMD-AM programme** and is responsible for all contacts with the EU. The Programme Coordinator will take all actions necessary for a good functioning of the Consortium and for the fulfilment of the contractual Agreement with the EACEA. The Programme Coordinator chairs the Consortium Committee (defined below) and guides the Administration Office.

3.2 The E+: EMJMD-AM Consortium Committee (Board), with one representative of each **Consortium University** (Annex 3) and the Programme Coordinator as the chair person, is in charge of all academic issues. The representatives are appointed by their institution and are in charge of organisational and financial issues. The **E+:EMJMD Extended Consortium Committee (Extended Board)** is composed of the Consortium Committee and one representative of each Asc.-Partner (Annex 3). The representatives of the Asc.-Partners are mandated by their institution and are in charge of academic, organisational and financial issues that directly affect the Asc.-Partners. If needed due to regulations of the respective institution, the (Extended) Consortium Committee submits its proposals on topics, mentioned above, to the relevant body of the institution for approval or decision. The Extended Consortium Committee meets at least once a year and nominates among its members persons in charge of specific issues that need to be regulated. The Consortium Committee makes decisions on the main academic aspects of the programme, on all financial issues that do not involve any Asc.-Partner, and on the inclusion of new Asc.-Partners in the Consortium. For a decision to become effective, the approval of at least two thirds of the Consortium Committee members (Annex 3) is required.

The Extended Consortium Committee decides on academic, financial, and organisational issues that directly affect the participation of the Asc.-Partners in the **E+:EMJMD-AM programme**. For a decision of the Extended Consortium Committee to become effective the approval of at least two thirds of its members is required.

3.3 The Selection Committee, with one representative of each **Consortium University**, is in charge of the selection process. The Selection Committee is chaired by one of its members, who is elected by the Selection Committee itself with at least a two thirds majority. The representatives are appointed by their **Consortium University** and are in charge of evaluating the files of applicants, selecting candidate participants and ranking them according to quality for the award of scholarships. The Selection Committee decides if, due to an unbalanced distribution of the students, it must apply new regulations to resolve this imbalance. Additionally the Selection Committee evaluates the applications of candidate visiting scholars and decides about their participation in the **E+:EMJMD-AM programme**. The Selection Committee meets at least once a year and nominates among its members persons in charge of specific issues that need to be regulated. For a decision of the Selection Committee to become effective, the approval of at least two thirds of its members is required.

3.4 The Academic Advisors, with one representative of each **Consortium University**, are in charge for study programmes of students, advice on dissertation topics and all other academic issues. They are the contact persons at the **Consortium Universities** and introduced to the students right at the beginning of the programme, at the Information Day, where they present their **Consortium University**.

3.5 The Quality Evaluation Committee, with one representative of each **Consortium Member** and one student representative per student intake, is in charge of all quality issues and supports the Selection Committee and the Extended Consortium Committee in the development and improvement of the **E+:EMJMD-AM programme**. Decisions within the Quality Evaluation Committee require the approval of at least two thirds of its members.

3.6 The Technical Secretariat consists of the **AM Administration Office** at the Coordinating Institution and of one administrative support representative at each of the **Consortium Universities**. The Administration Office provides administration support and treats all administrative questions and problems and is in charge of practical issues such as arrival of students, mobility arrangements, administrative tasks concerning study progress, collecting the marks of students, organisation of the selection procedure and organisation of meetings of the managing bodies, communication, financial reporting and report writing in collaboration with the local representative of the Extended Consortium Committee. The AM Administration Office works under the guidance of the Programme Coordinator.

In addition, the Technical Secretariat includes a competent authority editing all financial issues at the Coordinating Institution, who provides the Consortium Committee with financial information on a regular basis (at the retreats).

3.7 Examination and thesis: For each individual subject, the examination criteria of the hosting **Consortium University** do apply. Examinations are fully recognised by all **Consortium Universities** of the same training track. The thesis can only be defended when all other requirements to obtain the degree are fulfilled, so that the commission for the final exam (Master's thesis defence) can be mandated to award the degree or not.

Article 4. Administrative organisation of E+: EMJMD-AM

4.1 Admission criteria

The **E+: EMJMD-AM** is open to well-motivated students. Students are required to have a BSc degree in Physics, Astronomy, Astrophysics, Mathematics or related fields. All students are required to pass a TOEFL exam, IELTS test or similar tests. Accepted tests and scores are listed as follows:

- a. Cambridge Certificate in Advanced English, minimum "Grade B"
- b. Cambridge Certificate of Proficiency in English
- c. "International English Testing System" (IELTS), minimum "Band 6"
- d. Paper-based "Test of English as a Foreign Language" (TOEFL) with minimum score 550 points
- e. Computer-based TOEFL with minimum score 220 points
- f. "New internet based TOEFL – test of English as a Foreign Language" (TOEFL iBT) with minimum score 83 points
- g. UNlcert level "III"
- h. C1 according to CEF (Common European Framework)
- i. "Test of English as a Foreign Language - Institutional Testing Program (TOEFL-ity) with minimum score 550 points.

The Selection Committee can admit excellent students with a somewhat lower TOEFL, IELTS score in case of scientific excellence. The Programme Coordinator in collaboration with the Admission Department in Innsbruck finally selects the students that meet the legal admission criteria of the **Consortium Universities**.

At the start of the **E+: EMJMD-AM programme**, each student is interviewed by the Academic Advisor of the Coordinating Institution. After one year of the study plan, advice is given to the student in case progress is not good enough. This advice can be that special action should be taken or that the study should be stopped.

4.2 Application procedure for E+: EMJMD-AM

The Consortium Members have established a central application procedure at the Coordinating Institution, using a joint application form (Annex 15). A call for applications is issued in the summer of the year that precedes the start of a specific course edition and remains open for 4 months. Students must apply through the application form which can be downloaded from the **E+: EMJMD-AM website** (<http://www.astromundus.eu>) or can be sent on request. The application takes place in electronic form through upload to the **E+:EMJMD-AM website**. An acknowledgement of receipt is sent to the e-mail address provided by the applicant at submission time. The AM Administration Office provides first-hand support via telephone or e-mail for all questions regarding the application, checks the completeness of the application files at arrival and if necessary notifies the applicants about missing documents. Applications that arrive before the application deadline are made available to the members of the Selection Committee electronically as they arrive. The application form contains all elements necessary for further selection such as curriculum vitae, letter of motivation, full academic background containing a list of courses followed and their syllabus, obtained grades, information about the ranking of the students in their previous studies, language skills and all necessary information to verify the eligibility of the candidate in relation to EMJMD criteria. Furthermore two recommendation letters will be asked of each student. For this purpose, a referee form (Annex 15) is made available on the **E+:EMJMD-AM website** or can be sent upon request. It is requested that the referee form is filled in and uploaded to the **E+:EMJMD website** directly by the students' referees. The Programme Coordinator collects all application and referee forms, the Admission Department checks whether students fulfil basic diploma requirements. The AM Administration Office prepares an overview for the selection by the Selection Committee. Students who have not yet obtained their Bachelor's degree at application time, but are expected to obtain it early enough before the start of the Master's course may be considered for selection. The Admission Department in Innsbruck scrutinizes the applications.

Visiting scholars who intend to apply for a mobility period at one of the **Consortium Universities** are invited to use the joint application form for scholars provided on the **E+: EMJMD-AM website** (Annex 15).

4.3 Admission of students

After the eligibility check by the Programme Coordinator in collaboration with the AM Administration Office and the Admission Department using the admission criteria as defined in Section 4.1 and in Addendum 1, the student applications are assessed by the Selection Committee that selects students based on academic quality. All members of the Selection Committee sign a "Non-conflict of Interest" declaration, so as to ensure equal treatment of the student candidates. In the presence of a conflict of interests with a given application, the concerned member of the Selection Committee will not participate in its assessment. Students that are found ineligible are immediately informed by the Programme Coordinator and provided with the reasons for ineligibility and information on the appeal procedure. Minutes of the selection meeting are made and circulated to the Consortium Committee and the EACEA. Students proposed for selection are informed by mid-April of the starting year of the relevant course edition and receive an official Letter of Nomination signed by the Programme Coordinator. All selected students can enrol under the conditions set for enrolment. Enrolment is only official after the participation costs have been paid by the students to the dedicated account at the University of Innsbruck or have been deducted from the scholarship for students who are EMJMD- or Consortium-scholarship holders.

Students who enter the **E+: EMJMD-AM programme** may have only minor deficiencies at the start of the programme. If they do, then they need to attend courses to overcome these deficiencies during their first year of the **E+: EMJMD-AM**.

4.4 Selection procedure for awarding scholarships

The selection of grantees of a scholarship is a competitive process based on the academic performance and credentials of the candidates, in order to guarantee the selection of high-quality students. Based on the criteria described above, the Selection Committee selects from the list of applicants and ranks in decreasing order of merits the students who can enter the programme.

Selection and ranking will be based on academic scores, reputation of the school or institution where the student has previously studied, language skills, motivation and other relevant criteria. Gender balance will be promoted. Furthermore, the recommendation letters will be taken into account with, as criteria, the names and reputation of the referees, their knowledge of the student, their ranking of the student, their evaluation of the language and other capacities of the student.

Scholarships are awarded in order of ranking, starting from the first-ranked students. EMJMD scholarships are awarded in the respect of the geographical balance criterion, according to the GA. Partner-Country students and Programme-Country students are ranked separately. The lists of selected students ranked according to their academic quality and motivation and the list of non-selected students will be encoded in the EACEA Mobility Tool (EMT), according to the GA and the EMJMD regulations. Best-ranked students will receive from the Programme Coordinator a Letter of Nomination with the offer of an EMJMD- or a Consortium-scholarship, compatibly with the number of scholarships available for the course edition for which they applied. The scholarship awardees are given two weeks of time to confirm their acceptance of the scholarship and participation in the programme. In case of withdrawal the scholarship will be offered to the following candidate in the ranking. After the Programme Coordinator has received the confirmation of participation from the students, the AM Administration Office will contact selected students to start the inscription procedures and mobility arrangements (e.g., letters of invitation to obtain visa).

Every student, regardless of whether s/he receives a scholarship or not, has to sign a "Letter of Agreement" which sets out the terms of the participation in the **E+: EMJMD-AM programme**. This Letter of Agreement (Student Agreement) will be signed by the Programme Coordinator and the student at the time of arrival in Innsbruck.

Every scholar holding a scholarship has to sign a contract that sets out the terms of participation in the **E+:EMJMD-AM programme**. This contract will be signed by the Programme Coordinator and the scholar, before the start of the scholar's mobility period.

4.5 Enrolment of E+: EMJMD-AM students

Students are enrolled per semester at the **Consortium University** where they follow part(s) of the **E+: EMJMD-AM programme** according to the regulations in Addendum 1, which defines the agreement between the **Consortium Universities** about the installation of a Joint Degree. Registration, however, always takes place administratively at the Coordinating Institution. For insurance and scholarship regulations, students are subscribed throughout the whole number of semesters at the Austrian studentship association (ÖH) and the University of Innsbruck. The University of Innsbruck provides the students with an immutable e-mail account throughout the whole period.

4.6 Participation costs

The local tuition and administration fees charged by each **Consortium University** are different due to differences in national policies. However, all **E+: EMJMD-AM students** will have to pay the same participation costs to the Consortium, irrespective of their **Consortium Universities** of study. Within the Consortium, the collected participation costs are shared between all **Consortium Universities** to ensure that all of them receive

the amount of money covering local tuition and administration fees and compensation for additional activities for the **E+: EMJMD-AM programme**. The participation costs for Partner-Country students will be € 9.000 per academic year, whereas for Programme- Country students they will be € 4.500 per academic year.

The participation costs include the following costs of the students:

- registration at the **Consortium Universities**, including local tuition and administration fees;
- subscription to an insurance package according to the EMJMD minimum requirements for insurance;
- costs for language courses that are offered as part of the curriculum;
- and additional costs for organising the **E+: EMJMD-AM programme**.

Other costs such as additional insurances e.g. for winter sports, additional language courses beyond those already provided as part of the curriculum, internal mobility within the Consortium Members, and if applicable, extra educational fees to be paid for use of library, informatics or other services, are at the charge of the students. The students shall be obliged to cover their installation, living and subsistence costs by themselves.

Participation costs of all students are paid to the dedicated account at the University of Innsbruck on a semester per semester basis. The deadlines are 5th October and 5th March for each year. The Coordinating Institution will transfer the local tuition and administration fees that are charged by each **Consortium University** to the accounts indicated by the respective **Consortium Universities**.

Once a year the Consortium Committee will be informed about the financial status of how the participation costs were spent.

4.7 Education

All **Consortium Universities** are responsible to provide appropriate education, teaching and examination within the framework of **E+: EMJMD-AM programme** in correspondence with the educational responsibilities described in the **GA** and the **PROP**.

4.8 Mobility

The mobility system can be seen in the global structure of the **E+:EMJMD-AM programme** (Annex 2, Table 1). Students are provided with many choices for their study path. The criteria for choosing should maximise the range of mobility paths according to the term table. For the thesis research period and elective subjects students choose the **Consortium University** that best fits their personal study plan. Each **Consortium University** can be a hosting institution for students and can offer both thesis opportunities and large variation of elective subjects. In order to meet the requirements for a Joint Degree and the EMJMD requirements, the study programme is designed in such a way that students spend mobility periods in at least two of the Programme-Countries represented in the **Consortium Universities** (Austria and Italy), but flexibility is given in the choice of the study path. The duration of the mobility period at one institution varies between 3 and 18 months and a minimum of 30 ECTS credits per semester has to be obtained for this mobility period to be accounted for a Joint Degree at that institution.

If a student holding a scholarship does a minor part of the study at a third institution, i.e. an institution that is not a **Consortium University** (as described in Part B, page 96 of the **E+PG**), the activities concerned must be

implemented under the direct supervision of the **Consortium University** where the student is enrolled for the ongoing term. All regulations and administrative issues concerning, for example, crediting of exams have to be carried out in a bi-lateral arrangement between this **Consortium University** and the third institution. Both local representatives of the Technical Secretariat and the Programme Coordinator have to be informed in advance in writing.

4.9 Transfer of credits and joint recognition mechanism

The ECTS system of grading is used as maintained by the EACEA in the ECTS Users' Guide (http://ec.europa.eu/education/tools/docs/ects-guide_en.pdf). For each subject, the examination criteria of the host institution, where the subject is taken, apply. For awarding the Joint Degree, the regulations of the contract about the installation of a Joint Degree apply (Addendum 1).

Marks are communicated to the AM Administration Office to be recorded in the general student monitoring database at the end of each semester. Students will be given the opportunity to participate in (re-)examination of subjects of one **Consortium University** while they are staying at another **Consortium University** during the **E+: EMJMD-AM programme** under supervision of local faculty members. The conversion tables in Annex 16 are agreed on by the **Consortium Universities** to convert marks between the different grading systems in place at the **Consortium Universities**.

4.10 Awarding the degree of E+: EMJMD-AM

The **E+: EMJMD-AM Joint Degree** is issued by the University of Innsbruck and jointly awarded by the **Consortium Universities** awarding the ECTS of the thesis / thesis defence leading to the degree and the **Consortium Universities** where the student acquired at least 30 ECTS during the study programme. After a student has successfully obtained credits according to the programme, and after a successful defence of the Master thesis, the **Consortium Universities** will recommend the relevant body of the institution to issue the respective degrees as defined in the contract about the installation of the Joint Degree. Awarding the Joint Degree is based on mutual trust of the **Consortium Universities** in the application of the commonly decided standards and quality criteria. Details are given in the "Agreement about the installation of the Joint Degree" (Addendum 1).

In addition a Notice of Award, a Joint Master Certificate and a Diploma Supplement for **E+: EMJMD-AM** are awarded. The Diploma Supplement is signed by the competent authority of the examination office of the University of Innsbruck and mentions the name and the degree of the training in English. The Supplement contains full transcript of all ECTS credits obtained during the Master's course. Students will receive a copy of the transcript of records during the course on request. A legalised translation in Italian, German or Serbian of the Diploma Supplement can be obtained upon request and upon payment of a service fee.

4.11 Quality assurance

The Extended Consortium Committee shall ensure the high quality of the **E+: EMJMD-AM programme** by evaluating the outcomes annually based on summary reports provided by the Quality Evaluation Committee. The standards and guidelines from the European Association for Quality Assurance in Higher Education (ENQA <http://www.emqa.eu/>) of the Erasmus Mundus Management and Quality Tool for International Master and Doctoral Programmes (Handbook of Excellence) will be used. Each of the **Consortium Universities** has its own

quality assurance system according to its national rules. In most cases, this system involves a site visit by a peer review commission.

An international Scientific Advisory Board (SAB, Annex 5) with representatives from the working field was installed to advise the Consortium Committee on the set-up of the **E+: EMJMD-AM programme** and the relevance for the professional practice. All members of the SAB have expressed their support to the **E+: EMJMD-AM programme**.

4.12 Other responsibilities

All **Consortium Universities** have considerable experience in welcoming and hosting international students and are in charge of information on facilities and services regarding visa application for students from Partner-Countries and scholars and other matters related to studying there. Additionally the AM Administration Office will distribute specialized agenda to experts at certain sites. Each **Consortium University** has an office administering international student affairs, and each administration will support admitted students in their visa application process. Further, admitted students get information about housing facilities, welfare services and language courses. Overall, **E+: EMJMD-AM students** from elsewhere get special facilities and services so they can be successful in their studies.

4.13 Role of Asc.-Partners

Asc.-Partners will support the **E+:EMJMD-AM programme** and contribute to its sustainability, attractiveness, and further development by complementing the expertise and educational resources of the **Consortium Universities**. They will foster the exposure of the students to state-of-the-art scientific research and to computational and technological development in astrophysics. In particular, the educational contribution of the **Asc.-Partners** may take the form of course modules in highly specialised topics, individual lectures within existing modules, seminars, short summer projects for the **E+:EMJMD-AM students** in their first year of the programme, co-supervision of Master theses together with colleagues from the **Consortium Universities**, and any other activities aimed at increasing the educational offer for participant students and at fostering their acquisition of additional skills that favour their future employability both within and outside of academia.

They will participate with some representatives in the annual retreat of the **E+:EMJMD-AM programme**, whereby they will establish a direct contact with students and participate in the Extended Consortium Committee meetings. **Asc.-Partners** will additionally contribute to the evaluation of the quality of the programme by mandating their representatives within the Quality Evaluation Committee.

Asc.-Partners will further contribute to the dissemination of the programme and support the establishment of links between the Consortium Members and the industrial sector.

Asc.-Partners may additionally offer financial contributions to the **E+:EMJMD-AM programme** in terms of full and/or partial scholarships for selected students, financial and/or logistic support to the programme activities (e.g. the annual retreat), student internships, or any other form of support they may be able to offer to increase the programme sustainability. Financial contributions for which letters of commitment have been provided by **Asc.-Partners** in conjunction with the **PROP** are regulated in Annex 9. Any additional financial contribution that may be provided by the **Asc.-Partners** during the period of activity of the **E+:EMJMD-AM programme** will be regulated by changing Annex 9. Such changes have to be signed by the legal representatives of the **Consortium Universities**.

Travel expenses incurred by personnel of the **Asc.-Partners** for the participation in **E+:EMJMD-AM** activities may be refunded by the Coordinating Institution through the lump sum granted by the Commission through the **GA**.

4.14 Educational contribution of Asc.-Partners

Asc.-Partners shall provide educational contributions to the **E+:EMJMD-AM** programme in one or more of the forms set out in Articles 4.7 and 4.1.

Asc.-Partners shall report regularly, at least once a year, to the Coordinating Institution about such contributions, in due time for them to be included in the mandatory technical reports to be submitted to EACEA in fulfilment of the provisions set out in the **GA**.

Article 5. Costs and financing

5.1 The EACEA determines the Community grant for the three approved intakes of the **E+:EMJMD-AM** (intakes 2015 - 2017) in accordance with the rules set out in the **GA**. The grant will be broken down into lump sum contribution and scholarship funds for the **E+: EMJMD-AM** to be paid to selected, highest-ranked Partner-Country students. The Commission granted in total 16 EMJMD scholarships for Partner-Country students on a co-fund basis.

Lump sum contribution:

The lump sum from the Commission grant amounts to a maximum of 50.000 € per intake and is to cover eligible costs according to Article I.3 of the **GA**.

This lump sum contribution covers consortium management costs, e.g. travel costs of **Asc.-Partners**, scholarship payments for scholars and participation of the **Consortium Universities** in events organised by the EACEA (maximum 2 per intake, see http://ec.europa.eu/dgs/education_culture/more_info/awp/docs/c_2013_8550.pdf).

5.2 Transfer of funds

All money (funds and lump sum from the Commission grant, funds from **Consortium Members**, when applicable, and participation costs of non-scholarship holders) shall be transferred to the dedicated bank account of the University of Innsbruck. The University of Innsbruck uses SAP as accounting system and will create 3 SAP-accounts: one for receiving and distributing the EU-grant to the **Consortium Universities**, one for the part of the EU-grant to be handled by the University of Innsbruck and a third one for receiving and distributing the Consortium scholarships.

From these accounts shall be paid:

- the scholarships to students (monthly allowance, contribution to travel and instalment after deduction of the participation costs) transferred to a personal account of the student;
- the administrative costs for running the course (secretary work, other administrative costs);

- all costs related to the scientific coordination meetings of the **E+:EMJMD-AM programme**;
- meetings of the (Extended) Consortium Committee, Selection Committee, and Quality Evaluation Committee and other necessary mobility costs linked to practical organisation of the **E+:EMJMD-AM programme**;
- meetings of the international SAB including travel and stay;
- the local tuition and administrative fees charged per individual **E+: EMJMD-AM student** by the **Consortium Universities** where the student is studying. Each **Consortium University** decides freely on how this amount is used within the **Consortium University**. For all purposes **E+: EMJMD-AM students** will be regarded as regular Programme-Country students or as regular Partner-Country students, depending on nationality, meaning that extra costs can only be charged to **E+: EMJMD-AM students** on the same basis as regular students;
- any other costs decided upon by the Consortium Committee to be covered from the funds.

Funds contributed by Consortium Members for a given course edition shall be transferred to the bank account of the University of Innsbruck before the start of said course edition. The transfer shall take place by September 15th of the relevant year. The bank account information for these transactions is:

Name of bank: Hypo Tirol Bank AG

Address of branch: 47A, Innrain, Innsbruck

Precise denomination of the account holder: Universität Innsbruck – Par. 27 UG

IBAN: [REDACTED]

BIC: [REDACTED]

Reference Number P [REDACTED] AstroMundus

Grants from the EACEA will be transferred to:

Name of bank: Hypo Tirol Bank AG

Address of branch: 47A, Innrain, Innsbruck

Precise denomination of the account holder: Universität Innsbruck – Par. 27 UG

IBAN: [REDACTED]

BIC: [REDACTED]

Reference Number P [REDACTED] AstroMundus

Financial and administrative coordination of the **E+:EMJMD-AM programme** will be done by the Technical Secretariat under supervision of the Programme Coordinator. The Programme Coordinator is keeping the accounts and reports regularly to the **Consortium Members**.

The transfer of the funds to the **Consortium Universities** can be one of the following two schemes:

Based on reimbursement: The **Consortium University** provides the Financial Administration officer of **E+:EMJMD-AM** with copies of all payments attached to a request letter that contains the amount to be reimbursed and the bank account to be transferred to.

Base on pre-financing: The **Consortium University** is granted a pre-financing for the period of one year. The letter requesting the pre-financing has to contain an estimate on how the fund will be used and the bank account the fund has to be transferred to. Further pre-financing may be requested only after proving copies of all payments justifying the use of at least 90% of the already transferred pre-financing.

The Financial Administration officer will decide together with the Programme Coordinator which scheme of transfer will be applied to each **Consortium University**.

The Consortium Committee decides every year on the proposed budget, the allocation of specific tasks on behalf of all Consortium Members (e.g. dissemination and advertisement actions) and the spending of the money within the estimated expenses and proposed project activities.

In case of surplus during the **E+:EMJMD-AM** period, the Consortium Committee will decide how to allocate these funds for the benefit of the **E+:EMJMD-AM students**. In case of a surplus at the end of the **E+:EMJMD-AM** period, if any, this will be divided equally among the **Consortium Universities** based on the number of students attending the course during the entire period of activity of the **E+: EMJMD-AM**, unless a different distribution is agreed upon by the Consortium Committee. Unforeseen budget deficits, and/or deficits as a result of a low number of students in such a way that costs for the Consortium Universities and the execution of the **E+:EMJMD-AM programme** cannot adequately be covered from the student fees will be equally divided between the **Consortium Universities**. Deficits resulting by a number of Consortium scholarships and/or self-paying students insufficient to justify the minimum number of 9 EMJMD scholarships imposed by the Specific Call for Proposals EACEA/2015/09, upon which the **GA** is based, will be equally divided between the Coordinating Institution and the **Programme-Country Universities**. The co-fund amounts mentioned in this Consortium Agreement can be changed at any time on proposal of the Consortium Committee.

5.3 Payment of Scholarships

Students receiving a scholarship shall be obliged to obtain a bank account in the area where cost free EU transfer (IBAN & BIC) accounts exist – preferably an Austrian account that allows ATM card drawing in all of the regions of the **Consortium Universities** without additional fees.

On behalf of the Consortium Members, the AM Administration Office pays the monthly allowance and the costs for instalments to this account. The local representatives of each site and the EM National Coordinating Structures hold, according to Section 4.4 of the E+PG, the information about different taxation policies for the students. The amounts transferred are defined in the Student Agreements (see **PROP**, Annex 10).

The remuneration for scholars should cover both travel/installation contribution and working fees and can be decided by the consortium taking into account the duration, origin and expertise. It is on behalf of the scholar to take care of possible taxation (e.g. in her/his home country of residence). For local taxation at the site, the personnel department of the **Consortium University** where the scholar is giving lectures will give advice. The contract for scholars is always issued and signed by the Coordinating Institution on behalf of the Consortium Members.

The **E+: EMJMD-AM** is expected to engage minimum four different scholars/guest lecturers per student intake for a minimum of 8 weeks in total per intake.

The eligibility, duration, and payment of the mobility of scholars are subject to the regulations set out in Annex 9 of the GA (project Handbook).

Article 6. Communication and meetings

6.1 A mailing list has been established in the mail-server of the Coordinating Institution for each of the Consortium bodies defined in Section 1 to 5 of Article 3. as part of the **E+:EMJMD-AM** management structure. Communication within each of these bodies shall take place through the respective mailing list and through

teleconferences and/or physical meetings. Decisions taken remotely shall be documented through the e-mails exchanged within the relevant mailing lists. Decisions taken during physical meetings shall be documented within the minutes of these meetings. Members of the respective committees (Annexes 3, 6, 7, and 8) will be informed by the AM Administration Office on all matters that affect them. All information concerning the programme is circulated to all concerned committee members through the respective mailing lists. An additional mailing list ("emam-admin") has been established, that includes all members of the Consortium bodies (Annex 3) and all members of the **E+:EMJMD-AM** Technical Secretariat (Annex 4) for the exchange of communication and information concerning the administration of the programme. All relevant documents (the **GA**, the Consortium Agreement and all their Annexes and Addenda, as well as the minutes of Consortium Committee meetings) will be stored in the shared-documents area of the "emam-admin" list.

6.2 Academic Advisors are invited to present their university to the incoming students at the Information Day, right at the beginning of each intake. In addition, meetings with the Programme Coordinator and the Academic Advisors take place.

6.3 The Selection Committee meets to finalize its ranking of applications in January preceding the course edition starting in October, either at the Coordinating Institution or at the site of one of the Consortium Universities as agreed yearly by the Selection Committee members.

6.4 All members of the Consortium bodies (Article 3, Sections 1. to 5.) and representatives of the **E+:EMJMD-AM** Technical Secretariat meet physically once a year at the AstroMundus retreat. Once per course edition, the SAB (Annex 5) is invited to participate in the annual retreat. The three-day retreat offers opportunities to get in contact with all students of the ongoing intakes to get an overview of their scientific progress, to meet in small groups as well as to discuss issues at meetings with all members of the Consortium bodies.

Article 7. Milestones list of the E+: EMJMD-AM

- Recruitment of students for Intake 1 (2015-2017)
- **E+:EMJMD-AM website** completed and online
- Application for additional funding (end of 2015)
- Establishment of concrete contacts with industrial partners starting with Intake 1 (2015)
- Recruitment of students for Intake 2 (2016-2018)
- Establishment of new courses starting with Intake 2 (2016)
- Application for additional funding (end of 2016)
- Recruitment of students for Intake 3 (2017-2019)

- Review of **E+:EMJMD-AM programme** and future plans

Article 8. Promotion

E+:EMJMD-AM maintains an official website, which provides all relevant information about the programme, the Consortium and the study curriculum, the application procedure, information about previous intakes, events and upcoming matters, links to local dedicated webpages on the **Consortium Universities'** websites and other relevant links. The **E+:EMJMD-AM website** is constantly maintained by the Coordinating Institution.

In addition **the E+: EMJMD-AM** is promoted over the following channels:

- AstroMundus Facebook page, this is regularly maintained with announcements about calls for applications and events within the programmes (e.g. welcome receptions, the annual retreat, graduations, award of the best thesis prize), all documented with photo-galleries, and it constitutes a further communication channel with interested students;
- Erasmus+ website;
- StudyPortals / MastersPortal web site;
- announcements on the scholarship-positions.com website;
- a dedicated entry on the MastersCompare website;
- announcements on a number of other websites that advertise study programmes and scholarships free of charge;
- yearly mailings (both in paper and electronic form) containing an information brochure and a poster sent by the Coordinating Institution to directors of studies in relevant fields (physics, mathematics, astronomy), student associations, and a number of known colleagues at universities and research institutions across the world to inform about the open call (the brochure and poster are also published on the **E+:EMJMD-AM website**);
- dedicated presentations and/or advertising slides at the end of contributed talks at scientific international conferences;
- coverage by some regional or national media (e.g., television and/or radio programmes, newspapers);
- reference letters in support of student/alumni applications for summer/winter schools and PhD programmes, where **the E+:EMJMD-AM** is presented as an excellence programme;
- contacts of individual members of the **Consortium Members** with colleagues at other institutions at the national and international level.

Article 9. Liability

9.1 Each **Consortium Member** shall be solely liable towards the other **Consortium Members** and towards third parties for loss, damage or injury resulting from its own actions in the execution of this Consortium Agreement. However, no **Consortium Member** shall be responsible to any other **Consortium Member** for indirect or consequential loss or damage such as, but not limited to, loss of profit, loss of revenue or loss of contracts.

9.2 Each **Consortium Member** shall be fully responsible for the performance of any part of its share of the Consortium Agreement and for the requirements of Insurance and Social Security for its personnel, involved herein.

9.3 With respect to any injury to any person or any damage to any property of any person occurring at any establishment of any of the **Consortium Members** in the course or arising out of the execution of this Consortium Agreement, the **Consortium Members** at whose establishment the injury or damage occurs, shall be solely responsible for the payment of compensation to such extent as this **Consortium Member** shall be under a legal liability in respect of such injury or damage. This article shall not apply with respect to any such injury or damage, the causing of which is attributable to any act of a servant or agent of any of the **Consortium Members**, committed with the intention of causing harm to any person or property or with reckless disregard for the consequences of his act.

9.4 Each **Consortium Member** shall be solely liable for any breach of, or non-compliance with, its legal obligations arising from the present Consortium Agreement. If the Coordinating Institution has to pay damages to the Commission due to such breach or non-compliance by a **Consortium Member**, the Coordinating Institution shall be entitled to full reimbursement from the **Consortium Member** concerned.

Article 10. Entry into force and termination

This Consortium Agreement shall enter into force on the date of the last signature and shall remain valid until the end of validity of the **GA** and in any case as long as contracts with EACEA are binding the **Consortium Universities**. If this is not the case anymore, the **Consortium Members** will decide in mutual agreement to continue this Consortium Agreement or not.

If a **Consortium Member** wants to leave the Consortium Agreement before the end of the term of the **GA**, this **Consortium Member** will discuss this with the Consortium Members and will have to follow the rules stipulated in the **GA**, when applicable. This shall not apply in the case the **Consortium Member** leaves by force majeure.

Article 11. Applicable law and Competent Court

This Consortium Agreement shall in all respect be in compliance with the terms of the **GA** and be governed by Belgian law. The settlement of any difference or conflict arising from or in connection with this Consortium Agreement shall be attempted by an amicable effort of the Consortium Members. Only the Courts of Brussels are competent to decide on the disputes which remain unresolved.

The **E+ EMJMD-AM student** is bound to the rules and regulations from the **Consortium Universities** at which s/he is enrolled.

Article 12. Amendments

The Consortium Committee has the mandate to add amendments to this Consortium Agreement when necessary; however, in any case amendments to the text of this Consortium Agreement require the signatures of the duly authorised representatives of all Consortium Members. Other topics not covered in this Consortium Agreement must be decided by the Consortium Committee, subject to approval by the official bodies of the signing institutions and/or the EACEA. Formal approval by the Consortium Committee and subsequently, when applicable or appropriate, by the legal representatives of the **Consortium Universities** or the EACEA, including a thorough audit trail of all versions, will be documented by the Programme Coordinator.

Article 13. Annexes and Addenda

Enclosed Annexes and the Addenda form an integral and binding part of the Consortium Agreement.

Article 14. Copies

This Agreement has been drawn in 9 (nine) originals in English, each of them being equally valid.



Signed for and on behalf of:

Universität Innsbruck (Coordinating Institution)



Rector: Univ.-Prof. Dr. Dr. h.c. mult. Tilmann Märk

Date: 28.9.2015

Place: Innsbruck

Institutional stamp





Signed for and on behalf of:

Università degli Studi di Padova (Programme-Country University)

Rector: Prof. Dr. Giuseppe Zaccaria



Date: 29 SET 2015

Place: PADOVA

Institutional stamp:

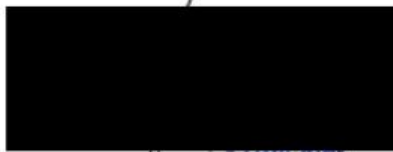




Signed for and on behalf of:

Università degli Studi di Roma "Tor Vergata" (Programme-Country University)

Rector: Prof. Dr. Giuseppe Novelli



Date: 30 SET, 2015

Place: Rome, Italy

Institutional stamp:





Signed for and on behalf of:

Georg-August Universität Göttingen (Programme-Country University)



Vice-President: Prof. Dr. Hiltraud Casper-Hehne

Date: 29.05.2015

Place: Göttingen

Institutional stamp:





Signed for and on behalf of:

Универзитет у Београду / University of Belgrade (Partner-Country University)



Rector: Prof. Dr. Vladimir Bumbaširević

Date: 29 SEP 2015

Place:

Institutional stamp:



68-370/3-16

928/11
25.09.2015 год

БЕОГРАД — Волгина 7



Signed for and on behalf of:

Astronomska opservatorija / Astronomical Observatory (Partner-Country Asc.-Partner)



Director: Dr. Gojko Djurasevic

Date:

25.09.2015.

Place:

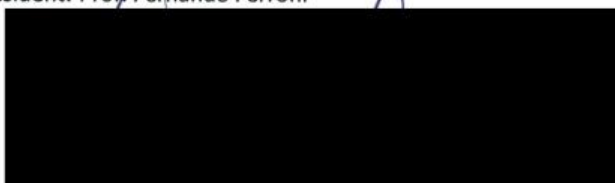
Institutional stamp:



Signed for and on behalf of:

Istituto Nazionale di Fisica Nucleare Gran Sasso Science Institute (INFN-GSSI) (Programme-Country Asc.-Partner)

President: Prof. Fernando Ferroni



Date:

28 SET. 2015

Place:

ROME

Institutional stamp:



Signed for and on behalf of:

Istituto Nazionale di Astrofisica (INAF) (INAF-OAR and INAF-OAPd) (Programme-Country Asc.-Partner)

President: Prof. Giovanni Fabrizio Bignami



Date:

24 September 2015

Place:

Rome

Institutional stamp:



Signed for and on behalf of:

Max Planck Institute for Solar System Research (MPS) (Programme-Country Asc.-Partner)



Director: Prof. Sami K. Solanki

Date: 30th September 2015

Place: Göttingen

Institutional stamp:



Annexes

- Annex 1. Grant Agreement and annexes
- Annex 2. E+: EMJMD-AM Curriculum & mobility path
- Annex 3. E+: EMJMD-AM Consortium Committee (Board)
- Annex 4. E+: EMJMD-AM Technical secretariat
- Annex 5. E+: EMJMD-AM International Scientific Advisory Board (SAB)
- Annex 6. E+: EMJMD-AM Selection Committee
- Annex 7. E+: EMJMD-AM Quality Evaluation Committee
- Annex 8. E+:EMJMD-AM Academic Advisors
- Annex 9. E+: EMJMD-AM budget
- Annex 10. E+: EMJMD-AM Student Agreements and Contract for visiting Scholars
- Annex 11. Proposal, March 19th, 2015 & link to Programme Guide
- Annex 12. Quality Report, January 15th, 2014
- Annex 13. Template Joint Degree
- Annex 14. Template Diploma Supplement
- Annex 15. Templates of Application form and Referee form
- Annex 16. Grading system conversion tables

Addenda

- Addendum 1. E+: EMJMD-AM Common agreement about Installation of the "ERASMUS MUNDUS Joint Master Programme in Astrophysics"
- Addendum 2. Original Proposal submitted on April 30th, 2009

Annex 1. Grant Agreement and annexes

The Grant Agreement n. 2015 – 1690 / 001 - 001 has been signed on behalf of the Coordinating Institution and the Partner Institutions by rector Univ.-Prof. Dr. Dr. h.c. mult. Tilmann Märk, July 22nd,2015 and on behalf of the Education, Audiovisual and Culture Executive Agency by Mr. Klaus Haupt, Head of the Unit for Erasmus+: Higher Education – Erasmus Mundus Joint Master Degrees.

Annex 2. E+: EMJMD-AM Curriculum & mobility path

Description of the E+: EMJMD-AM Curriculum

The **E+: EMJMD-AM** will be truly international and have many links to global research and to capacity building in developing countries. The global structure of the E+: EMJMD-AM is presented in Table 1. The length of the **E+: EMJMD-AM** is two years (120 ECTS). The E+: EMJMD-AM builds on existing MSc courses and consists of required and elective subjects.

The **E+: EMJMD-AM programme** is organized according to three basic objectives: give a solid background in Astronomy and Astrophysics, initiate the students into scientific research and offer applied training in experimental and computational techniques oriented towards Astronomy and Astrophysics. Moreover, the students will have a unique opportunity to have access to various high technology instruments, supercomputers, specific techniques developed locally (e.g. hydrodynamic simulations) or to specific pathways (i.e. different branches of the three main domains, observational, computational, and theoretical astrophysics and/or combinations of these). To be awarded the Joint Master Degree in Astrophysics, students need to attend courses from the programme and pass the associated examinations for a total of at least 120 ECTS. This includes the completion of a Master thesis and the final presentation. Credits must be obtained in at least two of the Programme-Country **Consortium Universities**.

The entrance institution for all students will be the University of Innsbruck, which offers S1 (Oct 1st – Feb 28th) courses organised in a way to bring all (Programme- and Partner-Country) students to a common level of knowledge, thus preparing them for the subsequent semesters at the **Consortium Universities**. In particular S1 will be focussed on providing the students with basic concepts in Galactic and Extragalactic Astrophysics, Physics, and Mathematics that are essential to advanced learning and research in Astrophysics. Besides the compulsory courses, the students will have the choice of a wide range of optional courses, including practice of observations at a telescope and of treatment and analysis of data. One of the optional courses in S1 is a German language course. Furthermore, students will have the possibility to practice German at the institute through conversation with local students and staff members.

Successful students will then move for the second semester to a **Consortium University**. This will be one of the two **Consortium Universities** in Italy, the University of Padova or the University of Rome, that both offer courses for S2 (March 1st – Sep 30th, except during the holiday season in August). There the students will also have the opportunity to learn another of the languages spoken within the Consortium. Courses of Italian language are offered by both universities. While still learning the basics of Astrophysics, during S2 the students will start orienting towards specific branches of the field, depending on the institute of their choice.

The third semester, S3 (Oct 1st – Feb 28th), is offered by the Universities of Rome, Göttingen, and Belgrade. Therefore students after S2 will have the choice of continuing their studies in Italy or moving further to either Germany or Serbia. There is only a small overlap of offer for S3 among the three institutes, while a significant fraction of the courses reflect the specific fields of expertise of the individual **Consortium Universities**.

Finally, S4 (March 1st – Sept 30th) is offered by all **Consortium Universities** and is mainly dedicated to the Master thesis, although some **Consortium Universities** offer also additional optional courses and seminars during the last semester. The subjects of the Master theses will reflect the specific research sub-fields that are developed within the individual **Consortium Universities**.

The E+:EMJMD-AM Curriculum can be found at http://www.uibk.ac.at/fakultaeten-servicestelle/pruefungsreferate/gesamtfassung/2014_05_13_ma-erasmus-mundus-astrophysics_formatiert_gesamtfassung_stand_01-10-2014_yv.pdf.

Table 1: Global structure of **E+: EMJMD-AM programme** possible institutions and maximum fraction of students for each **Consortium University**

	1 st term	2 nd term	3 rd term	4 th term
UIBK	X			X
UniPD		X		X
UToV		X	X	X
UGOE			X	X
UB			X	X
maximum fraction of students per site	n.a.	60%	40%	25%

Contribution of Partner-Country University

Our Consortium includes the University of Belgrade as a Partner-Country University that will fully participate in the teaching and supervision activities related to the Master programme by offering the third and fourth semesters, thus including the Master thesis and degree awarding. This will be one of the possible choices for all **E+: EMJMD-AM** Master students. The offer in terms of courses at the University of Belgrade includes the possibility to concentrate courses in trimesters (through blocks of lectures), thus allowing **E+: EMJMD-AM** Partner-Country scholarship holders to attend the third semester courses at this university.

Table 2: courses offered in the curriculum

University of Innsbruck	
S1	ECTS
Concepts of Galactic Astrophysics	6.5
Concepts of Extragalactic Astrophysics	6.5

Concepts of Physics for Astrophysicists	6
Advanced Mathematical Methods for Astrophysicists	6
Optional course for 5 ECTS (subject of constant change)	2.5
e.g. German as a foreign language	

Second Semester (S2) offered in Padova and Rome

University of Padova	
S2	ECTS
Astronomical Spectroscopy	6
Theoretical Astrophysics	6
Cosmology	6
Galaxy Dynamics	6
Celestial Mechanics	6
Stellar Populations	6
Italian as a Foreign Language	3

University of Rome Tor Vergata	
S2	ECTS
Extragalactic Astrophysics	6
Relativity and Cosmology 1	6
Stellar Astrophysics	6
Choices of courses and activities for 12 ECTS among those listed	12
in annex table WP	
Italian as a Foreign Language	3

Third Semester (S3) offered in Rome, Göttingen and Belgrade

University of Rome Tor Vergata

S3	ECTS
Gravitational Physics	6
Relativity and Cosmology 2	6
Choice of courses and activities for 18 ECTS among those listed in annex table WP	18
Italian as a foreign language	3

Annex Table WP (applies for S2 and S3)

Sun and Space Climate (S2)	6
Stellar Populations (S2)	6
Celestial Mechanics (S2)	6
Astroparticle Physics (S2)	6
High Energy Astrophysics (S3)	6
Gravitational Waves (S3)	6
Radiative Processes in Astrophysics (S3)	6
Gravitational Lensing (S3)	6
Astrobiology (S3)	6

University of Göttingen

S3	ECTS
Stellar Structure and Evolution	6

Stellar Atmospheres	6
Active Galactic Nuclei	6
Astrophysical Properties: From Planets to Cosmology	12

Annex Table WP (applies for S3)

S3	ECTS
Physics of the Sun, Heliosphere and Space Weather	3
Solar System Science	3
Helio- and Asteroseismology	3
Exoplanets	3
Cosmology	3
Formation of Solar Systems	3
Numerical Experiments in Stellar Physics	3
Papers, Proposals, Presentations: Skills of Science Communication	3
Lab course	3

University of Belgrade

S3	ECTS
Spectroscopy of Astrophysical Plasmas	6
Physics of Gaseous Nebulae and Active Galactic Nuclei	6
Physics of Interstellar Matter	5
Astrobiology	4
Line Shapes in Astrophysics	4
Introduction to Nucleosynthesis and Particle Astrophysics	5
Numerical Astrophysics - Modelling Stellar Atmospheres	5
Gravitational Lenses	4
Supernovae and Their Remnants	4
Serbian as a Foreign Language	5

Fourth Semester (S4) offered in Innsbruck, Padova, Rome, Göttingen and Belgrade**University of Innsbruck**

S4	ECTS
Master Thesis	27.5
Thesis Presentation	2.5
Astrophysics Seminar	2.5

University of Padova

S4	ECTS
Master Thesis + Presentation	30
Italian as a Foreign Language	3

University of Rome Tor Vergata

S4

ECTS

Master Thesis + Presentation

30

University of Göttingen

S4

ECTS

Master Thesis + Presentation

30

University of Belgrade

S4

ECTS

Master Thesis + presentation

30

Annex 3. E+: EMJMD-AM Consortium Committee (Board):

University of Innsbruck
(Coordinating Institution): Prof. Francine Marleau (Programme Coordinator)
Dr. Sonia Giovanna Temporin (local representative)

University of Padova: Prof. Piero Rafanelli

University of Rome "Tor Vergata": Prof. Francesco Berrilli

University of Göttingen: Prof. Wolfram Kollatschny

University of Belgrade: Prof. Dragana Ilić
Prof. Luka Popović (deputy)

Extended Consortium Committee (Extended Board):

Consortium Committee members & representatives of the Asc.-Partners:

Astronomical Observatory (AOB), Belgrade: Prof. Luka Popović

Istituto Nazionale di Fisica Nucleare
Gran Sasso Science Institute (INFN-GSSI): Prof. Eugenio Coccia,
Prof. Viviana Fafone (deputy)

Istituto Nazionale di Astrofisica (INAF)
(INAF-OAR and INAF-OAPd): Dr. Ilaria Ermolli

Max Planck Institute for Solar System Research (MPS): Dr. Sonja Schuh

For meetings of the (Extended) Consortium Committee, appointed representatives can be replaced by authorized substitutes, after timely announcement (in writing or by e-mail) to the Programme Coordinator. In such cases Minutes of the meetings have to be approved afterwards by the appointed representatives.

Annex 4. E+: EMJMD-AM Technical Secretariat

University of Innsbruck (Coordinating Institution):

AstroMundus Administration Office: Mag. Andrea Rumpold
Andrea.Rumpold@uibk.ac.at

International Relations Office: Dr. Mathias Schennach
Mathias.Schennach@uibk.ac.at

Financial Administration: Dr. Arntraud Bacher
Arntraud.Bacher@uibk.ac.at

University of Padova:

Dipartimento di Astronomia: Dott. Rossella Spiga
rossella.spiga@unipd.it

Servizio Relazioni Internazionali: Dott. Maurizio Minicuci
maurizio.minicuci@unipd.it

University of Rome "Tor Vergata":

Administration Physics Department: Savino Petrelli
petrelli@roma2.infn.it
Lucia Cori
lucia.cori@roma2.infn.it

International Relations Office: Dr. Marina Tesauro
ricerca.europea@uniroma2.it

University of Göttingen:

Bereichsleitung Bildung und
Mobilitätsprogramme: Ricarda Blumentritt
ricarda.blumentritt@zvw.uni-goettingen.de

Institut für Astronomie: Klaudia Wolters
kwolters@astro.physik.uni-goettingen.de
Daniela Krone
dkrone@astro.physik.uni-goettingen

University of Belgrade:

International Relations Office: Marina Kostrica
kostrm@rect.bg.ac.rs

Annex 5. E+: EMJMD-AM Scientific Advisory Board (SAB)

Name	Organisation	Function	Country
Prof. Jan Palouš	Astronomical Institute of the Academy of Sciences, Prague	Professor	Czech Republic
Prof. Dr. Joachim Wambsganz	Zentrum für Astronomie Astronomisches Rechen-Institut, Heidelberg	Director, Professor	Germany
Prof. Malcolm Longair	Cavendish Laboratory, Department of Physics, University of Cambridge	Emeritus Jacksonian Professor of Natural Philosophy, Director of Development, Cavendish Laboratory, Professorial Fellow of Clare Hall	United Kingdom

Annex 6. E+: EMJMD-AM Selection Committee

University of Innsbruck (Coordinating Institution):	Dr. Miguel Urbaneja Perez
University of Padova:	Prof. Alberto Franceschini Prof. Sergio Ortolani (deputy)
University of Rome "Tor Vergata":	Prof. Giuseppe Bono (chair) Prof. Viviana Fafone (deputy)
University of Göttingen:	Dr. Timothy White
University of Belgrade:	Prof. Luka Popović Prof. Dragana Ilić (deputy)

For meetings of the Selection Committee, appointed representatives can be replaced by authorized substitutes, after timely announcement (in writing or by e-mail) to the Programme Coordinator. In such cases, the minutes of the meetings have to be approved afterwards by the appointed representative.

Annex 7. E+: EMJMD-AM Quality Evaluation Committee

University of Innsbruck (Coordinating Institution):	Prof. Norbert Przybilla
University of Padova:	Prof. Stefano Casotto Prof Mauro D'Onofrio (deputy)
University of Rome "Tor Vergata":	Dr. Dario del Moro
University of Göttingen:	Prof. Wolfgang Glatzel
University of Belgrade:	Prof. Andjelka Kovacevic
Astronomical Observatory, Belgrade:	Prof. Luka Popovic
Gran Sasso Science Institute GSSI, Rome:	Prof. Viviana Fafone
National Institute for Astrophysics INAF, Rome:	Dr. Ilaria Ermolli
Max Planck Institute for Solar System Research, Göttingen:	Dr. Sonja Schuh
Students Representatives:	Kristhell Lopez Lopez (Edition4) Hannah Dagleish (Edition 5)

Former Student Representatives who are no longer part of the Committee:

Cigdem Kanberoglu (Edition1)

Gerardo Martinez Aviles (Edition2)

Rosita Kokotaneikova (Edition3)

For meetings of the Quality Evaluation Committee, appointed representatives can be replaced by authorized substitutes, after timely announcement (in writing or by e-mail) to the Programme Coordinator. In such cases, the minutes of the meetings have to be approved afterwards by the appointed representative. A new Student Representative is elected by the students of each new intake and announced (in writing or by e-mail) to the Programme Coordinator.

Annex 8. E+: EMJMD-AM Academic Advisors

University of Innsbruck
(Coordinating Institution): Prof. Francine Marleau

University of Padova: Prof. Paola Marigo
Prof Mauro D'Onofrio (deputy)

University of Rome "Tor Vergata": Prof. Viviana Fafone
Prof. Giancarlo DeGasperi (deputy)

University of Göttingen: Prof. Wolfram Kollatschny

University of Belgrade: Prof. Dejan Urosevic
Prof. Dragana Ilic (deputy)

For meetings of the Academic Advisors, appointed representatives can be replaced by authorized substitutes, after timely announcement (in writing or by e-mail) to the Programme Coordinator. In such cases, the minutes of the meetings have to be approved afterwards by the appointed representative.

Annex 9. E+: EMJMD-AM budget

Financial and practical contribution of the Consortium

Financial and practical contributions are listed in the Letters of Commitment attached to the **PROP**. Further financial or practical contribution may be added by any member of the Consortium during the period of activity of the **E+: EMJMD-AM**. Such contributions shall be documented in detail in Letters of Commitment that will be provided as Annexes to this Consortium Agreement and Article 9 will be changed accordingly.

Committing institution	Financial (Euro)	Practical (Euro) (exact amount will be calculated at the end of intake 3)
University of Innsbruck, Programme Country partial scholarships (500,- Euro monthly allowance over 24 months, 2 per intake) – paid directly to students	EUR 72,000.-	
University of Göttingen, partial scholarship	EUR 34,000.-	
University of Padua, partial scholarship for intake 1	EUR 15,000.-	
University of Belgrade, free accommodation for in total 12 students staying one semester (1,721.34 per student per semester)		EUR 20,656.08
University of Belgrade, free food for in total 12 students staying one semester (539.64 per student per semester)		EUR 6,475.68
Gran Sasso Science Institute (one Partner-Country full scholarship)	EUR 49,000.-	
Max-Planck-Institut für Sonnensystemforschung, partial scholarship	EUR 6,000.-	

The above amounts for the University of Belgrade are lower than those quoted in the Letter of Commitment attached to the **PROP** and constitute an update to the Letter of Commitment to reflect current accommodation and food costs that apply at the University of Belgrade. Any variations to the financial value of the above contribution that should occur during the period of activity of the **E+:EMJMD-AM** shall be documented in detail in Letters of Commitment that will be provided as Annexes to this Consortium Agreement.

The above scholarship by the Gran Sasso Science Institute shall be made available for a high-ranked student of the 2015 intake under the condition that the awardee commits herself/himself to follow a study path on topics of interest to the GSSI, as detailed in the relevant Student Agreement.

In the case that fee-waivers of the participation costs are awarded to students as part of their full or partial Consortium scholarship during the 3 course editions 2015-2017, the fee-waivers shall be documented at the end of the 3rd intake by a letter of commitment signed by the legal representatives of all Consortium Universities, according to EACEA requirements.

Use of the budget will be decided by the Consortium Members on proposal from the Programme Coordinator. The budget estimation for intake 1 is:

Income intake 1	EUR	
3 EMJMD	54,000.00	
1 GSSI	18,000.00	
1 partial scholarship Padova	3,000.00	
	75,000.00	
Expenses intake 1	(estimate)	
Innsbruck		
Registration	760.00	10 students, EUR 19 ,- per semester
Travel	3,000.00	
Tutor	16,000.00	For two groups each proseminar
Padova		
Registration	2,000.00	10 students, EUR 200,- per intake
Travel	4,000.00	
Tutor	5,800.00	
Göttingen		
Registration	2,900.00	10 students, EUR 290,- per semester
Travel	3,000.00	
Tutor	1,000.00	

Rome		
Registration	-	
Travel	5,700.00	
Tutor	3,732.00	6 tutors, EUR 622,- each
Belgrade		
Registration	2,400.00	EUR 1200,- recognition, EUR 30,- entrance fee per student, EUR 270,- administration per student
Travel	4,200.00	
Tutor	7,270.00	
Central Administration		
Admin. Assistant / Financial Assistant	25,000.00	
Insurance	8,000.00	EUR 800,- per student
Administration	5,000.00	incl. sending Visa-Documents and degrees to student via UPS
Retreat	5,000.00	incl. costs for SAB
	104,762.00	

The **Consortium Members** have to provide the Programme Coordinator with the information and reports required by the Programme Coordinator in order to perform its duties under the **GA** at the latest four weeks before the deadlines.

All information and reports shall be submitted by the **Consortium Universities** in electronic form as requested and stipulated by the Programme Coordinator.

All reports have to be approved by all **Consortium Universities**. The descriptive part will also be submitted to the **Asc.-Partners**.

Annex 10. Student Agreement

- for students receiving an EMJMD scholarship
- for students receiving an AM Consortium scholarship
- for students receiving a fee waiver of participation costs
- for self-paying students

& contract for visiting scholars

- scholar contract

Annex 11. Proposal

Annex 12. Quality report

Annex 13. Template Joint Degree

Annex 14. Template Diploma Supplement

Annex 15. Application form

- △ for students
- △ for referees
- △ for scholars

Annex 16. Grading system conversion tables

Addendum 1. Common Agreement about Installation of the “ERASMUS MUNDUS Joint Master Program in Astrophysics”

The Agreement about the installation of the “ERASMUS MUNDUS Joint Master Program in Astrophysics” has been signed by all university authorities (see pdf file).

Addendum 2. Original Proposal of April 30th, 2009

Agreement on a Joint Degree for the E+: ERASMUS MUNDUS JOINT MASTER DEGREE (EMJMD) programme AstroMundus

between

University of Padova
via 8 febbraio, 2
35122 Padova
Italy

and

University of Rome "Tor Vergata"
via della Ricerca Scientifica 1
00133 Roma
Italy

and

University of Göttingen
Wilhelmsplatz 1
37073 Göttingen
Germany

and

University of Belgrade
Studentski trg 1
11000 Belgrade
Serbia

and

University of Innsbruck
Innrain 52
6020 Innsbruck
Austria

In order to develop further international opportunities for students from the University of Padova, the University of Rome "Tor Vergata", the University of Göttingen, the University of Belgrade, and the University of Innsbruck (hereinafter collectively referred to as **Consortium Universities**), and strengthen the international ties between these universities, the **Consortium Universities** entered into an Agreement for the establishment of an Erasmus Mundus Joint Master's Programme in "Astrophysics" (AstroMundus) on 20.01.2010. The framework of the Agreement was defined by the Framework Agreement 2010-0135/001 with the EU (thereafter called FPA) and its Annex I containing the original application with the letters of intent by the rectors/presidents of the involved universities (thereafter called proposal) and its Annex III containing the Erasmus Mundus Program Guide (thereafter EMPG) published under call EAC/04/2009¹.

The **Consortium Universities**, following the selection by the EU of the proposal submitted on March 19th, 2015 under the Specific Call for Proposals EACEA/2015/09 under the Erasmus+ programme², hereby extend the previous Agreement for the continuation of the AstroMundus Masters Course as an **Erasmus+: Erasmus Mundus Joint Master Degree (EMJMD) programme** in the framework of the Grant Agreement n. 2015-1690/001-001 (thereafter called GA) with the Education, Audiovisual and Culture Executive Agency of the European Union (EACEA) and its Annexes and as established by the Consortium Agreement with its Annexes (thereafter called CA), of which the present Agreement is an Addendum.

1. Objectives

AstroMundus is a two-year Erasmus+: Erasmus Mundus Joint Master Degree programme in Astronomy and Astrophysics (thereafter **E+:EMJMD-AM**). The main objectives of the programme are initiation in scientific research and applied training in Astronomy and Astrophysics. Emphasis is placed on the application of modern techniques both in the observational and theoretical/computational domain. The various specialities of the **Consortium Universities** result in an increased offer of pathways to the students. Theoretical Astrophysics, Models, Simulations and Computation, as well as Observational Astrophysics based on data from the ground and from space and on the use of modern data archives.

This Agreement offers students of the University of Padova, the University of Rome "Tor Vergata", the University of Göttingen, the University of Belgrade and the University of Innsbruck, upon the successful fulfilment of the conditions outlined in this Agreement, the opportunity of receiving a Master degree by means of a joint diploma. On behalf of the **Consortium Universities**, this diploma will be issued by the University of Innsbruck and signed by the rectors/presidents of all **Consortium Universities** where the student achieved the necessary amount of mobility periods (see Section 7). This official diploma has to be in English and, if required by national law of the **Consortium University** where the Master **Thesis** defence is approved, also in the national language, and has to contain the programme name, the names of all the **Consortium Universities** on whose behalf the diploma is issued, and the names of the national degrees.

¹ http://eacea.ec.europa.eu/erasmus_mundus/programme/programme_guide_en.php

² http://ec.europa.eu/programmes/erasmus-plus/documents/erasmus-plus-programme-guide_en.pdf

2. Candidates for the E+: EMJMD-AM Programme

Students registered as degree candidates at the University of Padova, the University of Rome Tor "Vergata", the University of Göttingen, the University of Belgrade and the University of Innsbruck and other recognized European and international universities shall have access to the **E+:EMJMD-AM** programme.

As a minimum requirement for eligibility, the students must have a Bachelor degree in one of the following fields: Physics, Astronomy, Astrophysics, Mathematics or an equivalent qualification.

Students shall be screened for eligibility for admission as **E+: EMJMD-AM** candidates by the Coordinating Institution (in collaboration with the Selection Committee that contains according to the CA one representative of each **Consortium University**). The Coordinating Institution shall respect the admission requirements and enrolment constraints of the **Consortium Universities**.

E+: EMJMD-AM candidates shall be nominated by the Coordinating Institution. This nomination shall replace the evidence of university entrance qualification and the legalization.

E+: EMJMD-AM candidates shall be subject to the standard rules, regulations and enrolment constraints of the Coordinating Institution. They shall, in terms of registration procedure, be granted all privileges for candidates of "mobility programs". Tuition fees shall, on the basis of reciprocity, be waived during that period of the study programme which will be carried out at the host institution. Due to national Serbian law the candidates, to be able to obtain a degree in Belgrade, have to be enrolled throughout the whole period.

3. Overview / Duration

The programme lasts for two years (120 ECTS).

During the first semester the students attend courses at the entrance university (University of Innsbruck). The first semester is focused on basic learning in Astronomy and Astrophysics while the subsequent ones offer the students the possibility to specialise in different branches. The second semester is spent at one of the two Italian **Consortium Universities**. The third semester is spent at one of the three **Consortium Universities** in Rome, Göttingen, or Belgrade depending on the astrophysical branches which the student will select to specialize on.

Finally the fourth semester is mainly devoted to the Master Thesis (30 ECTS) that can be accomplished in any of the **Consortium Universities**. Students are given the opportunity of attending additional advanced courses/seminars during the fourth semester, especially on topics related to their thesis work.

4. Curriculum

The curriculum shall be organized according to the **E+: EMJMD** proposal submitted on March 19th, 2015. The description of the **E+: EMJMD-AM** curriculum is shown in Annex 2 of the CA. Each **Consortium University** is responsible to install the required local curriculum according to national regulations.

5. Examinations and Theses

Courses/Modules and examinations shall be organized by and according to the legal provisions and procedures of the university where they are taken.

Selection of the examiners is made by the appropriate academic authorities and in accordance with the examination procedures of the home and the host institution.

If possible, Master theses can be supervised jointly. For that reason, the **E+: EMJMD-AM** students shall choose one main supervisor from one **Consortium University**, and shall be allocated a second supervisor from one of the other **Consortium Universities**.

6. Usage of ECTS

ECTS is used as the model of recognition and accounting for the students' workload. The students are initially enrolled at the University of Innsbruck. They are enrolled for the whole **E+: EMJMD-AM** programme at the University of Innsbruck. When moving to another **Consortium University**, if not otherwise defined in Article 2, they are considered as students from the University of Innsbruck. When moving to the other **Consortium Universities**, students are also enrolled locally and all ECTS credits they have already obtained are recognized.

Each visited university will fully recognise and validate the whole student's achievements within this **E+: EMJMD-AM** programme according to the curriculum defined in the CA.

7. Conditions for obtaining the Joint Degree

Students who complete the requirements of the **E+: EMJMD-AM** programme successfully will be awarded a Joint Degree by the **Consortium Universities** where they accomplished the various parts of their Master's studies.

The Joint Degree (Master of Science /MSc) shall only be awarded by the Consortium, where the diploma is issued by the Coordinating Institution and signed by those **Consortium Universities** where the student has completed his/her studies, and has additionally fulfilled the following requirements:

- a. award of at least 30 ECTS credit points (or 15 ECTS credit points for Belgrade) under the responsibility of each **Consortium University** awarding the degree within the EU, and
- b. successful completion of a Master Thesis.

In the case of a student passing through both Italian universities it is agreed that only the last one of the Italian universities to be visited will be contained in the awarded Joint Degree³.

8. Program Coordination

The **Consortium Universities** have nominated committee members (Board, Selection Committee, Academic Advisor, Evaluation Quality Committee) to ensure that the **E+: EMJMD-AM** programme proceeds according to a reasonable schematic plan, and that the terms of this Agreement are carried out. Each **Consortium University** may name a substitute representative of its committee members. Each Board member will ensure that the **Consortium Universities** have all the information appropriate to the promotion of the program.

The following professors have agreed to serve as Board members:

Prof. Piero Rafanelli, University of Padova

Prof. Francesco Berrilli, University of Rome "Tor Vergata"

Prof. Wolfram Kollatschny, University of Göttingen

Prof. Dragana Ilić, University of Belgrade

Prof. Francine Marleau, University of Innsbruck (Programme Coordinator)

³ By an Italian law a student cannot be enrolled at the same time at two different Italian universities.

9. Duration, Amendment, Review and Termination of Agreement

This Agreement shall be in force as of the date of its signature by all **Consortium Universities** and be binding for the parties until the end of validity of the CA in accordance with Article 10 of the CA. It shall be subject to revision, modification or renewal by mutual written agreement.

The Agreement may be terminated at the request of each **Consortium University**, provided such request is made in writing at least twelve months before termination is to become effective. Any termination of the Agreement must take into account the rights of students already participating or accepted for any exchange to complete the parts of the **E+: EMJMD-AM** programme which will be carried out under the responsibility of the Coordinating Institution.

An evaluation of this Agreement will be initiated by the **Consortium Universities** at least twelve months prior to the date of expiration to ascertain whether the programme should be continued and, if so, how it might be improved.

In witness thereof this Agreement has been signed by the proper officers of each **Consortium University**.



University of Innsbruck
Univ.-Prof. Dr. Dr. H.c. mult. Tilmann Märk
Rector

Date: 28.9.2015

Institutional stamp:



University of Padova
Prof. Dr. Giuseppe Zaccaria
Rector



Date: 29 SET 2015

Institutional stamp:



University of Rome "Tor Vergata"
Prof. Dr. Giuseppe Novelli
Rector



Date:

30 SET. 2015

Rome, Italy

Institutional stamp:



11.01.15



University of Göttingen
Prof. Dr. Hiltraud Casper-Hehne
Vice-President

Date:

29.09.2015

Institutional stamp:





University of Belgrade
Prof. Dr. Vladimir Bumbaširević
Rector

Date: 29 SEP 2015

Institutional stamp:



68-310/3-15



Erasmus+

Erasmus+: Erasmus Mundus Joint Master Degrees



universität
innsbruck



AMENDMENT

No. 2020 - 1

TO

CONSORTIUM AGREEMENT

Concluded on 30th September 2015 within the framework of the action entitled **Erasmus+: Erasmus Mundus Joint Master Degree (EMJMD) programme AstroMundus** in Astrophysics (E+:EMJMD-AM), between:

Leopold-Franzens Universität Innsbruck (University of Innsbruck - UIBK), whose registered office is at Innrain 52, 6020 Innsbruck, Austria, lawfully represented by **Univ.-Prof. Dr. Dr. h.c. mult. Tilmann Märk**, Rector, hereinafter referred to as "**Coordinating Institution**" and "**Programme-Country University**", and

Università degli Studi di Padova (University of Padova - UniPD), whose registered office is at via 8 Febbraio, 2, 35122 Padova, Italy, lawfully represented by **Prof. Dr. Rosario Rizzuto**, Rector, hereinafter referred to as "**Programme-Country University**", and

Università degli Studi di Roma "Tor Vergata" (University of Rome "Tor Vergata" - UTov), whose registered office is at via della Ricerca Scientifica 1, 00133 Roma, Italy, lawfully represented by **Prof. Dr. Orazio Schillaci**, Rector, hereinafter referred to as "**Programme-Country University**", and

Georg-August Universität Göttingen (University of Göttingen - UGOE), whose registered office is at Wilhelmsplatz 1, 37073 Göttingen, Germany, lawfully represented by **Prof. Dr. Hiltraud Casper-Hehne**, Vice-President, hereinafter referred to as "**Programme-Country University**", and

Универзитет у Београду, (University of Belgrade - UB), whose registered office is at Studentski trg 1, 11000 Belgrade, Serbia, lawfully represented by **Prof. Dr. Ivanka Popović**, Rector, hereinafter referred to as "**Partner-Country University**",

(all the aforementioned universities hereinafter collectively referred to as "**Consortium Universities**" and individually as "**Consortium University**")

and

Astronomska opservatorija, (Astronomical Observatory - AOB), whose registered office is at Volgina 7, 11060 Belgrade, Serbia, lawfully represented by **Dr. Gojko Đjurašević**, Director, hereinafter referred to as "**Partner-Country Asc.-Partner**", and

Gran Sasso Science Institute (GSSI, formerly part of the Istituto Nazionale di Fisica Nucleare INFN), whose registered office is at Viale F. Crispi, 7, 67100 L'Aquila, Italy, lawfully represented by **Prof. Eugenio Coccia**, Rector, hereinafter referred to as "**Programme-Country Asc.-Partner**", and

Istituto Nazionale di Astrofisica (INAF), (INAF-OAR and INAF-OAPd), whose registered office is at viale del Parco Mellini, 84, 00136 Roma, Italy, lawfully represented by **Prof. Nicolò D'Amico**, President, hereinafter referred to as "**Programme-Country Asc.-Partner**", and

Max Planck Institute for Solar System Research (MPS) whose registered office is at Justus-von-Liebig-Weg 3, 37077 Göttingen, Germany, lawfully represented by **Prof. Dr. Laurent Gizon**, Director, hereinafter referred to as "**Programme-Country Asc.-Partner**",

(hereinafter referred collectively to as "**Asc.-Partners**" and individually as "**Asc.-Partner**").

Hereinafter **Consortium Universities** and **Asc.-Partners** are collectively referred to as "**Consortium Members**" and individually as "**Consortium Member**".

Article 1.

Annex 9. E+:EMJMD-AM budget of the Consortium Agreement shall be amended with the consent of all Consortium Members and reads as follows:

Financial and practical contribution of the Consortium

Financial and practical contributions are listed in the Letters of Commitment attached to the **PROP**. Further financial contributions shall be added by the **Consortium Universities** during the period of activity of the **E+:EMJMD-AM**. Fee-waivers of the participation costs shall be awarded to students as part of their full or partial Consortium scholarship during the 3 course editions 2015-2017. Such financial contributions and fee-waivers shall be documented in detail in a Letter of Commitment of the Consortium signed by the legal representatives of all **Consortium Universities** at the end of the 3rd intake, according to EACEA requirements. The Letter of Commitment of the Consortium is provided as an Annex to the present Amendment.

Committing institution	Financial (Euro)	Practical (Euro)
University of Innsbruck, Programme Country partial scholarships (500,- Euro monthly allowance over 24 months, 2 per intake) and re-allocation of unused parts to Partner Country students - paid directly to students	EUR 72,000.-	

University of Innsbruck, partial scholarships financed with HRSM funds	EUR 53,000.-	
University of Göttingen, partial scholarship, intake 2	EUR 34,000.-	
University of Padua, partial scholarship for intake 1	EUR 15,000.-	
University of Padua, partial scholarships for intake 2	EUR 27,800.-	
University of Padua, partial scholarships for intake 3	EUR 27,800.-	
University of Belgrade, accommodation and meals for in total 6 students staying one semester and 1 student staying 2 semesters; amount calculated at the end of intake 3 and converted to Euro from RSD according to http://ec.europa.eu/budg/infocuro		EUR 15,547.77
Gran Sasso Science Institute, one Partner-Country full scholarship	EUR 49,000.-	
Consortium Universities partial scholarships	EUR 262,100.-	
Consortium Universities full or partial fee-waivers of the participation costs (4,500.- Euro per semester for Partner Country students and 2,250.- Euro per semester for Programme Country students)	EUR 328,250.-	
Max-Planck-Institut für Sonnensystemforschung, partial scholarships	EUR 6,000.-	

The above amounts for the University of Innsbruck constitute an update to the Letter of Commitment attached to the **PROP** to include additional scholarship contributions that were financed with dedicated funds (HRSM) of the Austrian Federal Ministry of Education, Science and Research (BMBWF).

The above amounts for the University of Belgrade are lower than those quoted in the Letter of Commitment attached to the **PROP** and constitute an update to the Letter of Commitment to reflect accommodation and food costs that were covered by the University of Belgrade during the 3 course editions 2015-2017, as documented in detail in the Certifications of award of practical contributions that are provided as an Annex to the present Amendment.

The above amounts for the University of Padova are higher than those quoted in the Letter of Commitment attached to the **PROP** as proposed amounts for re-allocation for the 2nd and 3rd intake and constitute an update to the Letter of Commitment to reflect the final scholarship amount that was contributed by the University of Padova for these two intakes.

The above scholarship by the Gran Sasso Science Institute has been made available for a high-ranked student of the 2015 intake under the condition that the awardee commits herself/himself to follow a study path on topics of interest to the GSSI, as detailed in the relevant Student Agreement.

Use of the budget will be decided by the Consortium Members on proposal from the Programme Coordinator.
The budget estimation for intake 1 is:

Income intake 1	EUR	
3 EMJMD	54,000.00	
1 GSSI	18,000.00	
1 partial scholarship Padova	3,000.00	
	75,000.00	
Expenses intake 1	(estimate)	
Innsbruck		
Registration	760.00	10 students, EUR 19 ,- per semester
Travel	3,000.00	
Tutor	16,000.00	For two groups each proseminar
Padova		
Registration	2,000.00	10 students, EUR 200,- per intake
Travel	4,000.00	
Tutor	5,800.00	
Göttingen		
Registration	2,900.00	10 students, EUR 290,- per semester
Travel	3,000.00	
Tutor	1,000.00	
Rome		
Registration	-	
Travel	5,700.00	
Tutor	3,732.00	6 tutors, EUR 622,- each
Belgrade		
Registration	2,400.00	EUR 1200,- recognition, EUR 30,- entrance fee per student, EUR 270,- administration per student
Travel	4,200.00	
Tutor	7,270.00	
Central Administration		

Admin. Assistant / Financial Assistant	25,000.00	
Insurance	8,000.00	EUR 800,- per student
Administration	5,000.00	incl. sending Visa-Documents and degrees to student via UPS
Retreat	5,000.00	incl. costs for SAB
	104,762.00	

The **Consortium Members** have to provide the Programme Coordinator with the information and reports required by the Programme Coordinator in order to perform its duties under the **GA** at the latest four weeks before the deadlines.

All information and reports shall be submitted by the **Consortium Universities** in electronic form as requested and stipulated by the Programme Coordinator.

All reports have to be approved by all Consortium Universities. The descriptive part will also be submitted to the Asc.-Partners.

Article 2.

The present Amendment and the following Annexes to the present Amendment:

- Annex 9a. Certifications of award of practical scholarship contributions of the University of Belgrade
- Annex 9b. Letter of Commitment of the **Consortium Universities**

shall form an integral part of the Consortium Agreement. The Amendment shall take effect on the date on which the last party signs.

Article 3.

All other provisions and annexes of the Consortium Agreement shall remain unchanged and continue to apply.

Article 4.

The present Amendment has been drawn in 9 (nine) originals in English, each of them being equally valid.



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TOR VERGATA
UNIVERSITÀ
DEGLI STUDI
DI TRIESTE

Signed for and on behalf of:

Universität Innsbruck (Coordinating Institution)



Rector: Univ.-Prof. Dr. Dr. h.c. mult. Tilmann Märk



Date: 15.3.2020

Place: Innsbruck

Institutional stamp:





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TOR VERGATA
UNIVERSITÀ
DEGLI STUDI
DI TRIESTE

Signed for and on behalf of:

Università degli Studi di Padova (Programme-Country University)



Rector: Prof. Dr. Rosario Rizzuto

Date: 06-03-2010

Place: PADOVA

Institutional stamp:

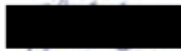




Signed for and on behalf of:

Università degli Studi di Roma "Tor Vergata" (Programme-Country University)

Rector: Prof. Dr. Orazio Schillaci



Date: 10 8 APR, 2020

Place:

Roma

Institutional stamp:





Signed for and on behalf of:

Georg-August Universität Göttingen (Programme-Country University)

Vice-President: Prof. Dr. Hiltraud Casper-Hehne



Date:

16/03/2020

Place:

Göttingen

Institutional stamp:





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Signed for and on behalf of:

Универзитет у Београду / University of Belgrade (Partner-Country University)



Rector: Prof. Dr. Ivanka Popović

BP-16/1-20

Date:

06 MAR 2020

Place:

Belgrade

Institutional stamp:



Signed for and on behalf of:

Astronomska opservatorija / Astronomical Observatory (Partner-Country Asc.-Partner)


Director: Dr. Gojko Đurašević

Date:

05. 03. 2020.

Place:

Belgrade

Institutional stamp:



Signed for and on behalf of:

Gran Sasso Science Institute (GSSI) (Programme-Country Asc.-Partner)

Rector: Prof. Eugenio Coccia



Date:

11 MAR. 2020

Place:

L'AQUILA (ITALY)

Institutional stamp:

GRAN SASSO SCIENCE INSTITUTE
IL RETTORE
(Prof. Eugenio Coccia)

Signed for and on behalf of:

Istituto Nazionale di Astrofisica (INAF) (INAF-OAR and INAF-OAPd) (Programme-Country Asc.-Partner)

President: Prof. Nicolò D'Amico

Firmato digitalmente da: Nicolò D'Amico
Data: 10/03/2020 12:16:00

Date: 10/03/2020

Place: ROMA

Institutional stamp:



Signed for and on behalf of:

Max Planck Institute for Solar System Research (MPS) (Programme-Country Asc.-Partner)



Director: Prof. Dr. Laurent Gizon

Date: *March 4, 2020*

Place: *Göttingen, Germany*

Institutional stamp: Max-Planck-Institut
für Sonnensystemforschung
Justus-von-Liebig-Weg 3
37077 Göttingen



Annex 9a. Certifications of award of practical scholarship contributions of the University of Belgrade

- Document 05/68-23/25-2017 issued by the University of Belgrade on 19th June, 2017
- Document 05/68-21/6-18 issued by the University of Belgrade on 26th March, 2018
- Document 05/68-11/10-19 issued by the University of Belgrade on 4th November, 2019

Annex 9b. Letter of Commitment of the Consortium Universities



THE UNIVERSITY OF BELGRADE

Address: Studentski trg 1, 11000 Belgrade, Republic of Serbia
Tel: +381 11 3207400; Fax: +381 11 2638912; E-mail: officebu@rect.bg.ac.yu

University of Innsbruck
Institute for Astro- and Particle Physics
Technikerstrasse 25/8
6020 Innsbruck
Austria

Belgrade, June 19, 2017
05/68-23/25-2017

Dear Sir/Madam,

This document certifies that the University of Belgrade and the Ministry of Education, Science and Technological Development of the Republic of Serbia have awarded for the following two students, enrolled to the Erasmus Mundus Joint Master's Degree program in Astronomy and Astrophysics, in the academic year 2016/2017, the accommodation and food in the student dormitory "Rifat Burdžević":

- [REDACTED] in the period from 25. 09. 2016 to 25. 09. 2017
- [REDACTED] in the period from 25. 09. 2016 to 31. 01. 2017

Please note that Luis Busta Perez has dropped out of the program due to personal reasons, thus using only the support provided until 28.02.2017.
In total the amount for accommodation and food was **418,554 RSD**.

Breakdown for school year 2016/2017:
Accommodation per month: 50.580,00 w/30% discount = 35,406 RSD
Food per month: 370 RSD/per day x 30 days = 11.100 RSD

Yours sincerely,

[REDACTED]
Prof. Dr. Ivanka Popovic
Vice-Rector for International Relations





UNIVERSITY OF BELGRADE

Address: Studentski trg 1, 11000 Belgrade, Republic of Serbia
Tel.: +381-11 3207401; Fax: +381-11 2638818; E-mail: officebu@rect.bg.ac.rs

University of Innsbruck
Institute for Astro- and Particle Physics
Technikerstrasse 25/8
6020 Innsbruck
Austria

Belgrade, March 26, 2018
05/68-21/6-18

Dear Sir/Madam,

This document certifies that the University of Belgrade and the Ministry of Education, Science and Technological Development of the Republic of Serbia have awarded for the following three students, enrolled to the Erasmus Mundus Joint Master's Degree program in Astronomy and Astrophysics, in the academic year 2017/2018, the accommodation and food in the student dormitory "Rifat Burdžević":

- [REDACTED], in the period from 25.09.2017 to 11.01.2018
- [REDACTED], in the period from 25.09.2017 to 28.02.2018
- [REDACTED], in the period from 25.09.2017 to 25.09.2018

In total the amount for accommodation and food is **976.626,00 RSD**.

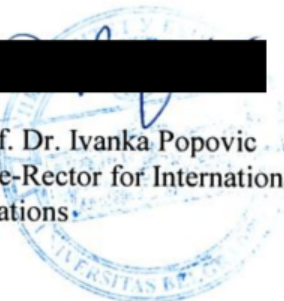
Breakdown for school year 2017/2018:

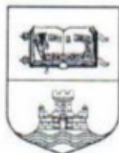
Accommodation per month: 50.580,00 w/30% discount = 35,406 RSD

Food per month: 370 RSD/per day x 30 days = 11.100 RSD

Sincerely,

[REDACTED]
Prof. Dr. Ivanka Popovic
Vice-Rector for International
Relations





THE UNIVERSITY OF BELGRADE

Address: Studentski trg 1, 11000 Belgrade, Republic of Serbia
Tel: +381 11 3207400; Fax: +381 11 2638912; E-mail: officebu@rect.bg.ac.yu

University of Innsbruck
Institute for Astro- and Particle Physics
Technikerstrasse 25/8
6020 Innsbruck
Austria

Belgrade, November 04, 2019
05/68-11/10-19

This document certifies that the University of Belgrade and the Ministry of Education, Science and Technological Development of the Republic of Serbia have awarded to two students, enrolled at the Erasmus Mundus Joint Master's Degree programme in Astronomy and Astrophysics, in the academic year 2018/2019, accommodation and food in the student dormitory "Rifat Burdžević" as follows:

- [REDACTED], in the period from 25. 09. 2018 to 05. 02. 2019
(5-month stay)
- [REDACTED], in the period from 25. 09. 2018 to 19. 02. 2019
(5-month stay)

In total the amount for accommodation and food was **453,960.00 RSD**.

Breakdown for school year 2018/2019:

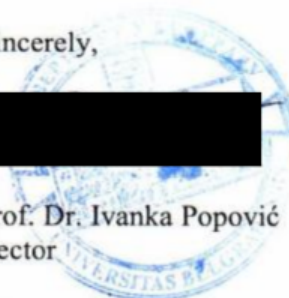
Accommodation per month: 50.580,00 w/30% discount = 35,406.00 RSD

Food per month: 370 RSD/per day x 30 days = 11,100.00 RSD

Sincerely,

[REDACTED]

Prof. Dr. Ivanka Popović
Rector





universität
innsbruck



AstroMundus Consortium Universities
c/o AstroMundus Secretariat
Institute for Astro- and Particle Physics
University of Innsbruck
Technikerstraße 25/8
6020 Innsbruck
Austria

Letter of Commitment

In view of the existing Consortium Agreement concluded on 30th September 2015 within the framework of the action entitled **Erasmus+: Erasmus Mundus Joint Master Degree (EMJMD) programme AstroMundus** in Astrophysics (**E+:EMJMD-AM**), and entered into by the Leopold-Franzens Universität Innsbruck (University of Innsbruck), the Università degli Studi di Padova (University of Padova), the Università degli Studi di Roma 'Tor Vergata' (University of Rome 'Tor Vergata'), the Georg-August Universität Göttingen (University of Göttingen), and the Универзитет у Београду (University of Belgrade), hereinafter collectively referred to as 'Consortium Universities', we, the undersigned legal representatives of the Consortium Universities hereby declare the willingness of our Institutions to support the E+:EMJMD-AM programme for the entire duration of the three course intakes in the framework of the Erasmus Mundus Joint Master Degree – Erasmus Plus Quality Review Project No. 159523-EPP-1-2015-1-AT-EPPKA1-EPQR.

In particular, we declare that the Consortium Universities collectively committed themselves to financially support the three intakes of the AstroMundus programme with the following contributions:

- Euro 328,250 – in the form of full or partial Fee-Waivers of the participation costs of students accepted for participation in the E+:EMJMD-AM programme either as Consortium Scholarship holders or as self-funded students; the participation costs amount to Euro 4,500- per semester for Partner-Country students and to Euro 2,250- per semester for Programme-Country students.
- Euro 262,100 – in the form of full or partial scholarship contributions (including travel and installation contributions and/or monthly allowances) for students accepted for participation in the E+:EMJMD-AM either as Consortium Scholarship holders or as self-funded students.

The above scholarship contributions are financed from funds collectively owned by the Consortium Universities and saved from the previous five editions of the AstroMundus programme. The Fee-Waivers of the participation costs are financed in part from the same collectively own funds and in part through in-kind contributions of the Consortium Universities.

We hereby certify that the above contributions were awarded to enrolled AstroMundus students as detailed in the following table.

Student name	Nationality	Course intake	Fee-Waiver of participation costs (Euro)	Travel & Installation contributions (Euro)	Monthly allowances (Euro)	Notes
[REDACTED]	[REDACTED]	1	13,500.-	-	-	- Drop-out end of 3 rd semester
		1	6,750.-	-	-	- Drop-out end of 3 rd semester
		1	4,500.-	-	-	- Drop-out end of 2 nd semester
		1	6,000.-	-	-	-
		2	16,500.-	-	-	-
		2	18,000.-	7,000.-	24,000.-	-
		2	9,000.-	-	-	-
		2	7,500.-	-	-	-
		2	18,000.-	7,000.-	24,000.-	-
		2	18,000.-	-	-	-
		2	18,000.-	5,000.-	23,000.-	-
		2	15,000.-	-	-	-
		2	18,000.-	5,000.-	24,000.-	-
		2	18,000.-	5,000.-	24,000.-	-
		2	4,500.-	-	-	- Drop-out end of 2 nd semester
		2	9,000.-	-	-	-
		3	9,000.-	200.-	-	-
		3	4,500.-	4,000.-	4,000.-	- Drop-out end of 1 st semester
		3	16,500.-	6,200.-	-	-
		3	18,000.-	7,000.-	24,000.-	-
		3	9,000.-	700.-	12,000.-	-
		3	7,000.-	200.-	-	-
		3	9,000.-	200.-	12,000.-	-
		3	7,500.-	200.-	12,000.-	-
		3	9,000.-	200.-	-	-
3	13,500.-	-	-	-		
3	18,000.-	7,000.-	24,000.-	-		
3	7,000.-	200.-	-	-		



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innsbruck



Contact:

Assoz.-Prof. Francine Marleau
AstroMundus Project Coordinator
Institute for Astro- and Particle Physics
University of Innsbruck
Technikerstraße 25/8
6020 Innsbruck
AUSTRIA
phone: +43 512 50752019
email: francine.marleau@uibk.ac.at



University of Innsbruck
Univ.-Pof. Dr. Dr. H.c. mult. Tilmann Märk
Rector

Place and date: *Innsbruck 15.3.2020*

Institutional stamp





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University of Padova
Prof. Dr. Rosario Rizzuto
Rector

Place and date: PADOVA , 06-03-2020

Institutional stamp:





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University of Rome 'Tor Vergata'
Prof. Dr. Orazio Schillaci
Rector



Place and date:

Rome

10 8 APR, 2020

Institutional stamp:





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University of Göttingen
Prof. Dr. Hiltraud Casper-Hehne
Vice-President

Place and date:

Göttingen, 16/03/2020

Institutional stamp:





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University of Belgrade
Prof. Dr. Ivanka Popović
Rector

68-16/2-20

Place and date:

Belgrade,
06 MAR 2020

Institutional stamp:

