Agreement

between the

University of Southampton

School of Physics & Astronomy

and the

Smithsonian Astrophysical Observatory

a member of the

Harvard-Smithsonian Center for Astrophysics

for

Fourth Year Students in the

Masters Degree Physics with Astronomy (Honors) Program

THIS AGREEMENT is entered into this _____ day of November 2005, by and between the School of Physics & Astronomy, University of Southampton, Highfield, Southampton, UK (SOTON) and the Smithsonian Astrophysical Observatory (SAO), located at 60 Garden Street, Cambridge, MA 02148, USA.

Recitals

WHEREAS the SOTON has a Masters Degree Program in Physics with Astronomy; and

WHEREAS the SAO is a research institute with scientists engaged in a broad program of Research in Astronomy and Astrophysics; and

WHEREAS the SOTON would like to offer fourth year students an opportunity to do Astrophysics Research abroad for one year; and

WHEREAS the SAO would like to have first class Astronomy students assisting in Astronomy/Astrophysics Research projects;

NOW, THEREFOR, in consideration of the recitals set forth above, and the terms, conditions and covenants hereinafter set forth, SOTON and SAO agree as follows:

I. SCOPE

This document describes the administrative details and scientific goals of a plan to bring Southampton Masters students to SAO during their fourth year of study in order to complete the equivalent of their Masters thesis. Students currently complete their Masters studies including a project at SOTON. Under this plan, selected students would travel to SAO and spend approximately one academic year in residence at SAO, working with an SAO staff member as their Research host.

II. PERSONNEL

SAO	SOTON
Scientific:	
Dr. Michael Garcia mgarcia@cfa.harvard.edu	Dr. Malcolm Coe m.coe@soton.ac.uk
Dr. Belinda Wilkes bwilkes@cfa.harvard.edu	Dr. Douglas Ross d.ross@soton.ac.uk
Administrative:	
Pat Kennedy Graham Deputy Director for Administration pkgraham@cfa.harvard.edu	Ms. Amanda Pervin, School Manager apervin@soton.ac.uk
Ms. Lorayne Mohammed, Administrative Assistant High Energy Astrophysics Division lmohammed@cfa.harvard.edu	

III. AIMS OF THE PROGRAM

This program is a collaboration that aims to give SOTON fourth year Astronomy students a taste of real research, and aims to give SAO scientists first class students wanting to do a research project. Upon successful completion of the

project the student will have earned a Masters Degree in Physics with Astronomy (Honors). The SAO scientist will have the student's assistance in the completion of a significant research project that should result in a publication in an international refereed journal.

Initially this program might be limited to two students, but could expand to up to six students per year.

IV. SCHEDULE

The first students will commence this program in October 2004, arriving at SAO in September 2006.

The nominal dates for this program would be 1 Sep through 1 May, with two weeks off for Easter and two weeks off for Christmas. Within the 1 Sep through 1 May envelope, the students are required to spend at least 30 weeks at SAO working with the host. The end date must allow that the final report can be submitted to SOTON for assessment at the normal exam time.

V. ASSESSMENT AND OVERSIGHT

During this program the students will be under the day-to-day supervision of the SAO hosts, who will guide them on a previously agreed program of study and research. A member of staff from SOTON will visit them during their first three months to ensure satisfactory progress.

Upon arrival at SAO students will meet with their hosts and arrange a regular weekly (at least) meeting time. Between two to four weeks after arrival, the student and SAO host should draw up a timetable outlining the work for the year. When drawing up the timetable, it is important to identify any 'bottlenecks' that may occur due to availability of equipment, observing proposal deadlines, etc. A copy of the timetable should then be sent to the member of staff at SOTON responsible for the program.

During their year away there are two major assessment points:

The first is at the end of the first semester, when students are required to submit a short progress report. This provides an opportunity to 'step back' and review the work to date and the tasks remaining. The progress report is modelled on the 'preliminary announcements' of work presented at scientific conferences in order to develop a new skill, namely writing to a strict length limit. This requires careful selection of material in order to include all the essential information while excluding unnecessary detail and still presenting a coherent picture. This first report is due mid-January, and will be assessed back at SOTON while the student remains abroad. Feedback to the students will be provided within two weeks.

The second and final report on the project must be submitted mid-May. This report is typically 10,000 words long and should describe the work at a level comprehensible to another fourth year student on the same degree course. The quality of the final work should be similar to that suitable for publication. The vivas (oral exams) normally take place during the final week of May, back at SOTON, before the examinations start. This is assessed at SOTON and the student is required to attend for a viva (oral exam) and seminar presentation as part of the assessment.

In addition, a brief interim report on the student's progress is submitted by the local host midway between the student reports (i.e. on 1 November and 1 March).

The final grade for the project will be determined by the SOTON, via the assessment methods outlined above. SAO supervisors and administrators will be provided copies of the final grade and any associated written assessment.

VI. VISA

The ultimate responsibility for obtaining a visa will rest with the student, but SAO will help where it is able.

For US tax and visa purposes, SAO is no longer considered an 'educational institution,' but is now considered a 'non-profit.' Because of this change SAO can no longer help with visitors obtain F1 (student) visas.

Non-US citizens entering the SAO-predoc program usually get a J visa, which SAO helps them obtain. These are likely the most appropriate visas for this program as well. SAO will support the students in their visa applications. In addition SAO will provide the students with a letter of introduction which will identify them as 'Smithsonian Astrophysical Observatory / University of Southampton Physics and Astronomy Pre-Doctoral Students.'

VII. HEALTH

The student would be responsible for their own health insurance coverage. SOTON is requiring the students to purchase the University Staff insurance policy, which will cover them for health care while they are in the USA.

VIII. HOUSING

It is up to the student to obtain appropriate housing. As they are not Harvard students, they would not be eligible to stay in Harvard dorms. However, SAO will provide them with a 'letter of introduction' that will gain them access to the Harvard Housing office, which has a good selection of private houses for rent. Students should be informed that rents of $1000/month and upwards are not uncommon in the area around SAO.

IX. OFFICE SPACE/COMPUTER EQUIPMENT

SAO will provide the student with an office, telephone, and computer. Given the current office space shortage, the office will be shared with other SAO post-docs and/or computer specialists, and may not be in the 60 Garden Street complex where the host is likely to be located. However, every attempt will be made to locate the students together and with other pre- and post-doctoral students.

X. TIMEFRAME FOR SELECTION OF HOSTS - PROJECTS - STUDENTS

April - SOTON will provide SAO the names and academic history of third year students who will be offered the chance to participate in this program.

May - Potential SAO hosts will be invited to submit applications to an oversight committee consisting of SOTON and SAO scientists. The applications will include the Project Title, a description of the research project, the source(s) of funds for equipment and travel costs, and contact information. Hosts will be solicited from the SAO scientific staff (some ~300 scientists).

June - Project Titles and brief abstracts are made available to students at the end of their third year (early June) who are then encouraged to contact potential hosts for more information.

Students will be asked to rank three potential projects in priority order (by the end of June) after consulting with SOTON staff.

July - The oversight committee will then recommend matches to SAO between students and hosts (mid-July). The final allocation will be made by the SAO hosts and SOTON (end of July). Students will be advised by SOTON to contact their SAO hosts before summer vacation to discuss any background reading or other preparation that could be carried out during the vacation.

IX. TERMINATION

This Agreement may be terminated by either party by sending a written notice to the other party by May of any year to be effective the following year.

XII. NOTICES

All notices shall be addressed as follows:

University of Southampton
School of Physics & Astronomy
Attn: Ms. Amanda Pervin
Highfield, Southampton, SO17 1BJ
UK

Smithsonian Astrophysical Observatory
Attn: Mr. William Ford, MS 23
60 Garden Street
Cambridge, MA 02138
USA

XIII. SOLE AGREEMENT

No collateral writings or oral agreements exist or are effective between the parties.

FOR THE UNIVERSITY OF SOUTHAMPTON, SCHOOL OF PHYSICS & ASTRONOMY:

By _____ _____
Dr. Malcolm Coe Date
Head
School of Physics & Astronomy

FOR THE SMITHSONIAN ASTROPHYSICAL OBSERVATORY:

By _____ _____
Dr. Roger Brissenden Date
Associate Director
High Energy Astrophysics Division

By _____ _____
Pat Kennedy Graham Date
Deputy Director for Administration