Dated 2015

IOP PUBLISHING LIMITED (1)

and

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA (2)

VARIATION AGREEMENT

THIS AGREEMENT is made the [] day of [] 2015

BETWEEN:

- IOP PUBLISHING LIMITED a company incorporated in England (registered number 467514) and having its registered office at Temple Circus, Temple Way, Bristol BS1 6HG, United Kingdom ("IOPP"); and
- (2) THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, of California Digital Library, 415 20th Street, 4th Floor, Oakland, CA 94612, USA (the "Consortium").

RECITALS:

- (A) On 1 November 1999, the parties entered into a licence under which IOPP gave the Consortium access to the Publications (the "Licence"). The Licence was subsequently formally varied on 13 February 2002, 18 November 2003 and 16 August 2004 (the "Variations"). The Licence and the Variations together shall be referred to as the "Agreement".
- (B) The parties now wish to vary the Agreement on the terms hereof (this "Variation Agreement").
- 1 INTERPRETATION
- 1.1 The headings in this Variation Agreement are for convenience only and shall not affect its interpretation.
- 2 TERM
- 2.1 This Variation Agreement will be deemed to have commenced on 1 November 2015.
- 3 THE VARIATIONS
- 3.1 Recitals (C) and (E) shall be deleted.
- 3.2 The following shall be substituted for Recital (F): "Under the terms of this Agreement, IOPP agrees to provide electronic access to all of the Publications

to the Licensees and to provide print subscriptions to the Publications (where available) to subscribing Licensees throughout the Licence Period (as set out in Clause 5) in consideration of the maintenance of the Annual Licence Fee (together with any increases of) throughout the Licence Period".

- 3.3 Clause 5 shall be varied by the substitution of October 31st 2018 in place of December 31st 2005.
- 3.4 The following shall be substituted for Clause 6.3: "For the period 1 November 2015 31 October 2016 the Annual Licence Fee will be period 1 November 2016 31 October 2017 the Annual Licence Fee will be and for the period 1 November 2017 31 October 2018 the Annual Licence Fee will be annual Licence Fee will
- 3.5 The following shall be substituted for Clause 6.4: "The Annual Licence Fee (as set out in Clause 6.3) for each year of this Agreement after 31 October 2018 (assuming this Agreement is still then in force) will be agreed in writing by the parties".
- 3.6 The following shall be substituted for Clause 6.7: "Where IOPP acquires or launches a new publication, such publication shall be added to the Publications automatically (save where otherwise notified by IOPP to the Licensees). Where the publication is newly launched, it will be incorporated into the Publications **Example 11 and 11 a**

added to the Publications and incorporated into the package base value at

Publications." The Licensees can opt not to add acquired titles to the

- 3.7. The reference to Lloyds Bank Plc in Clause 6.12 shall be changed to HSBC Bank Plc.
- 3.8 Clauses 6.13 and 6.14 are deleted from the Agreement.

3.9 The following shall be substituted for Clause 7.3: "In the event that a Publication is to be withdrawn or ceases publication, IOPP will reduce the Annual License Fee for that year

contribution shall be equivalent

- 3.10 The following shall be substituted in place of Clause 13.2: "Upon termination of access to the Publications, where the Licensee is not in breach of any of the terms and conditions of this Agreement and has paid all its fees in full, a Licensee will be entitled to have continued access to the issues of the Publications published during the term of this Agreement and, where it remains a Licensee under this Agreement for subsequent full calendar years, the Licensee(s) will have continued access to the issues of the Publications under this Agreement which were published in those full calendar years (the "Available Content"). All other access shall terminate, including, but not limited to, access to any publications made available from time to time which are not listed as one of the Publications. The Available Content will be made available via a web site on payment of an annual maintenance fee not to and for so long as IOPP provides electronic access to that exceed content via a web site. If access via a web site is no longer available at any time, the Available Content will be made available on disk or some other form of electronic media. If, at any time, IOPP ceases to publish or distribute any of the Available Content then it will use its reasonable endeavours to negotiate the right for the Licensee(s) to continue to access it in accordance with these terms and conditions."
- 3.11 Schedule 1 of the Agreement shall be replaced by Schedule 1 of this Variation Agreement.
- 3.12 Schedule 2 of the Agreement shall be replaced by Schedule 2 of this Variation Agreement.

4 GENERAL

- 4.1 Terms which are defined in the Agreement shall have the same meaning where used in this Variation Agreement, save as otherwise stated, and signatures exchanged by facsimile or other electronic means are effective to the same extent as original signatures.
- 4.2 Save as varied by this Variation Agreement, the Agreement shall remain in full force and effect.

SCHEDULE 1

THE LICENSEES

University of California, Berkeley (including Lawrence Berkeley Lab)

University of California, Davis

University of California, Irvine

University of California, Los Angeles

University of California, Merced

University of California, Riverside

University of California, San Diego

University of California, San Francisco

University of California, Santa Barbara

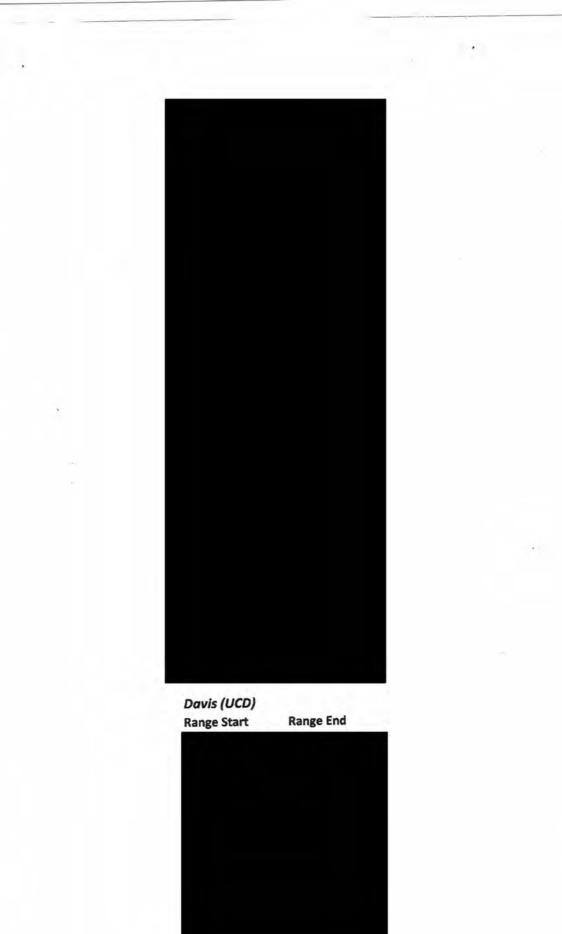
University of California, Santa Cruz

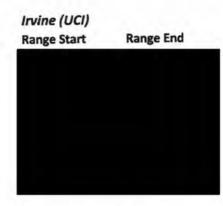
University of California Office of the President

University of California IP Address List

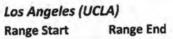
Range End Range Start

Berkeley (UCB), including LBL

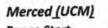


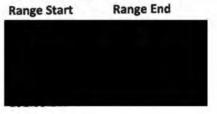


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Office of the President (UCOP) Range Start Range End



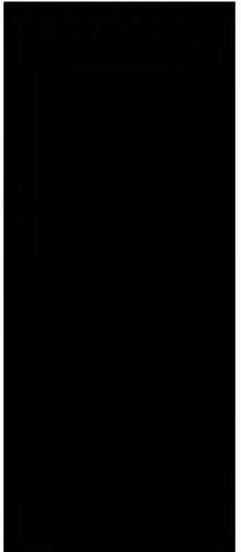


Riverside (UCR) Range Start

Range End



San Diego (UCSD) Range Start Range End







Santa Barbara (UCSB) Range Start Range End



Santa Cruz (UCSC) Range Start Range End



SCHEDULE 2

THE PUBLICATIONS

The Publications included in this Licence in 2015 are as follows:

| Titles | E-ISSN | P-ISSN | Start | End Year | Start Vol. | End Vol. | Vol. Numbers | |
|--|-----------|--------------------|---------------|-------------|---------------|-------------|-----------------|--|
| 2D Materials | 2053-1583 | Electronic | 2014 | 2015 | 1 | 2 | 2 | |
| Advances in Natural Sciences: Nanoscience and Nanotechnology** | 2043-6262 | 2043-6254 | 2010 | 2015 | 1 | 6 | 6 | |
| Applied Physics Express | 1882-0786 | 1882-0778 | 2008 | 2015 | .1 | 8 | 8 | |
| Biofabrication | 1758-5090 | 1758-5082 | 2009 | 2015 | 1 | 7 | 7 | |
| Bioinspiration and Biomimetics | 1748-3190 | 1748-3182 | 2006 | 2015 | 1 | 10 | 10 | |
| Biomedical Materials | 1748-605X | 1748-6041 | 2006 | 2015 | 1 | 10 | 10 | |
| Biomedical Physics & Engineering Express*** | 2057-1976 | Electronic only | 2015 | 2016 | 1 | 2 | 2 | |
| Chinese Physics B | - | 1674-1056 | 2008 | 2015 | 17 | 24 | 8 | |
| Formerly: Chinese Physics | | 1009-1963 | 2000 | 2007 | 9 | 16 | 8 | |
| Formerly: Acta Physica Sinica (Overseas Edition) | | | 1992 | 1999 | 1 | 8 | 8 | |
| Chinese Physics C | | 1674-1137 | 2008 | 2015 | 32 | 39 | 8 | |
| Formerly: High Energy Physics and Nuclear Physics | | 0254-3052 | | | | | 2 | |
| Chinese Physics Letters | 1741-3540 | 0256-307X | 1984 | 2015 | 1 | 32 | 32 | |
| Classical and Quantum Gravity | 1361-6382 | 0264-9381 | 1984 | 2015 | 1 | 32 | 32 | |
| Communications in Theoretical Physics | - | 0253-6102 | 1982 | 2015 | 1 | 63/ 64 | 63/64 | |
| Computational Science & Discovery | 1749-4699 | 1749-4680 | 2008 | 2015 | 1 | 8 | 8 | |
| Convergent Science Physical Oncology*** | 2057-1739 | Electronic only | 2015 | 2016 | 1 | 2 | 2 | |
| Distributed Systems Engineering | 1361-6390 | 0967-1846 | 1993/ 1994 | 1999 | 1 | 6 | 6 | |
| Environmental Research Letters** | 1748-9326 | Electronic only | 2006 | 2015 | 1 | 10 | 10 | |
| EPL | 1286-4854 | 0295-5075 | 1986 | 2015 | 1 | 108- | 108-111 | |
| European Journal of Physics | 1361-6404 | 0143-0807 | 1980 | 2015 | 1 | 36 | 36 | |
| Flexible and Printed Electronics*** | 2058-8585 | Electronic only | 2016 | 2016 | 1 | 1 | 1 | |
| Fluid Dynamics Research | 1873-7005 | 0169-5983 | 1986 | 2015 | 1 | 47 | 47 | |
| nverse Problems | 1361-6420 | 0266-5611 | 1985 | 2015 | 1 | 31 | 31 | |
| OP Conference Series: Earth and Environmental | 1755-1315 | 1755-1307 | 2008 | 2015 | | | | |

| Science** | | | - | 1 | | | |
|---|-----------|--------------------|------|------|----|----|----|
| IOP Conference Series: Materials Science and Engineering** | 1757-899X | 1757-8981 | 2009 | 2015 | | | |
| Izvestiya: Mathematics * | 1468-4810 | 1064-5632 | 1995 | 2015 | 59 | 77 | 21 |
| Formerly: Russian Academy of Sciences: Izvestiya Mathematics | | 1064-5632 | 1993 | 1995 | 40 | 45 | 6 |
| Formerly: Mathematics of the USSR – Izvestiya | | 0025-5726 | 1967 | 1992 | 1 | 39 | 39 |
| Japanese Journal of Applied Physics | 1347-4065 | 0021-4922 | 1962 | 2015 | 1 | 54 | 54 |
| Journal of Breath Research | 1752-7163 | 1752-7155 | 2007 | 2015 | 1 | 9 | 9 |
| Journal of Cosmology and Astroparticle Physics | 1475-7516 | Electronic only | 2003 | 2015 | 1 | 13 | 13 |
| Journal of Geophysics and Engineering | 1742-2140 | 1742-2132 | 2004 | 2015 | 1 | 12 | 12 |
| Journal of High Energy Physics | 1029-8479 | Electronic Only | 1997 | 2009 | 1 | 13 | 13 |
| Journal of Instrumentation | 1748-0221 | Electronic only | 2006 | 2015 | 1 | 10 | 10 |
| Journal of Micromechanics and Microengineering | 1361-6439 | 0960-1317 | 1991 | 2015 | 1 | 25 | 25 |
| Journal of Neural Engineering | 1741-2552 | 1741-2560 | 2004 | 2015 | 1 | 12 | 12 |
| Journal of Optics | 2040-8986 | 2040-8978 | 2010 | 2015 | 12 | 17 | 6 |
| Formerly: Journal of Optics A: Pure and Applied Optics (from 1999) | 1741-3567 | 1464-4258 | 1999 | 2009 | 1 | 11 | 11 |
| (Formed by merger of Journal of Optics (1977- 1998) and | | 0150-536X | 1977 | 1998 | 8 | 29 | 22 |
| Pure and Applied Optics: Journal of the European Optical Society Part A (1992-1998)) | 1361-6617 | 0963-9659 | 1992 | 1998 | 1 | 7 | 7 |
| Formerly: Nouvelle Revue d'Optique (1973- 1976) | | 0335-7368 | 1973 | 1976 | 4 | 7 | 4 |
| Formerly also Nouvelle Revue d'Optique Appliquée (1970-1972) | | 0029-4780 | 1970 | 1972 | 1 | 3 | 3 |
| Journal of Physics A: Mathematical and Theoretical (from 2007) | 1751-8121 | 1751-8113 | 2007 | 2015 | 40 | 48 | 9 |
| Formerly: Journal of Physics A: Mathematical and General (1975-2006) | 1361-6447 | 0305-4470 | 1975 | 2006 | 8 | 39 | 32 |
| Formerly: Journal of Physics A: Mathematical, Nuclear and General (1973- 1974) | | 0301-0015 | 1973 | 1974 | 6 | 7 | 2 |
| Formerly: Journal of Physics A: General Physics (1968-1972) | | 0022-3689 | 1968 | 1972 | 1 | 5 | 5 |

| Journal of Physics B: Atomic, Molecular and | S | | 1.0 | 1.000 | | | |
|---|-----------|-----------|------|-------|----|----|----|
| Optical Physics (from 1988) | 1361-6455 | 0953-4075 | 1988 | 2015 | 21 | 48 | 28 |
| Formerly: Journal of Physics B: Atomic and Molecular Physics (1970- 1987) | - | 0022-3700 | 1970 | 1987 | 3 | 20 | 18 |
| Formerly: Journal of Physics B: Proceedings of the Physical Society: Atomic and Molecular Physics (1968-1969) | | 0368-3508 | 1968 | 1969 | 1 | 2 | 2 |
| In 2006 this journal merged with Journal of Optics B: Quantum & Semiclassical Optics(1999-2005) | 1741-3575 | 1464-4266 | 1999 | 2005 | 1 | 7 | 7 |
| Formerly Quantum and Semiclassical Optics: Journal of the European Optical Sciety Part B (1995- 1998) | 1361-6625 | 1355-5111 | 1995 | 1998 | 7 | 10 | 4 |
| Formerly Quantum Optics: Journal of the European Optical Society Part B (1989-1994) | | 0954-8998 | 1989 | 1994 | 1 | 6 | 6 |
| Journal of Physics: Condensed Matter (from 1989) Formed by merger of: | 1361-648X | 0953-8984 | 1989 | 2015 | 1 | 27 | 27 |
| Journal of Physics C: Solid State Physics (1970- 1988) | | 0022-3719 | 1970 | 1988 | 3 | 21 | 19 |
| Formerly: Journal of Physics C: Proceedings of the Physical Society: Solid State Physics (1968-1969) and | | 0368-3516 | 1968 | 1969 | 1 | 2 | 2 |
| Journal of Physics F: Metal Physics (1971- 1988) | | 0305-4608 | 1971 | 1988 | 1 | 18 | 18 |
| Journal of Physics: Conference Series++ | 1742-6596 | 1742-6588 | 2004 | 2015 | - | | |
| Journal of Physics D: Applied Physics | 1361-6463 | 0022-3727 | 1968 | 2015 | 1 | 48 | 48 |
| Formerly British Journal of Applied Physics (1950 – 1967) | | 0508-3443 | 1950 | 1967 | 1 | 18 | 18 |
| Journal of Physics G: Nuclear and Particle Physics | 1361-6471 | 0954-3899 | 1989 | 2015 | 15 | 42 | 28 |
| Formerly: Journal of Physics G: Nuclear Physics (1975-1988) | | 0305-4616 | 1975 | 1988 | 1 | 14 | 14 |
| Journal of Radiological Protection | 1361-6498 | 0952-4746 | 1988 | 2015 | 8 | 35 | 28 |
| Formerly : Journal of the Society for Radiological Protection (1981 - 1987) | | 0260-2814 | 1981 | 1987 | 1 | 7 | 7 |
| Journal of Semiconductors | | 1674-4926 | 2009 | 2015 | 30 | 36 | 7 |

| Formerly: Chinese Journal of Semiconductors | | 0253-4177 | | - | | - | | |
|---|-----------|-----------------|-----------|------|------|-----------|-------|----|
| Journal of Statistical Mechanics: Theory and Experiment | 1742-5468 | Electronic | 2004 | 2015 | | | | |
| Laser Physics | 1555-6611 | 1054-660X | 2013 | 2015 | 23 | 25 | 3 | |
| Laser Physics Letters | 1612-202X | 1612-2011 | 2004 | 2015 | 1 | 12 | 12 | |
| Materials Research Express | 2053-1591 | Electronic | 2014 | 2015 | 1 | 2 | 2 | |
| Measurement Science and Technology | 1361-6501 | 0957-0233 | 1990 | 2015 | 1 | 26 | 26 | |
| Formerly: Journal of Physics E: Scientific Instruments (1968-1989) | | 0022-3735 | 1968 | 1989 | 1 | 22 | 22 | |
| Formerly Journal of Scientific Instruments (1923 – 1967) | - | 0950-7671 | 1923 | 1967 | 1 | 44 | 44 | |
| Methods and Applications In Fluorescence | 2050-6120 | Electronic only | 2013 | 2015 | 1 | 3 | 3 | |
| Metrologia | 1681-7575 | 0026-1394 | 1965 | 2015 | 1 | 52 | 52 | |
| Modelling and Simulation in Materials Science and Engineering | 1361-651X | 0965-0393 | 1992 | 2015 | 1 | 23 | 23 | |
| Nanotechnology | 1361-6528 | 0957-4484 | 1990 | 2015 | 1 | 26 | 26 | |
| New Journal of Physics** | 1367-2630 | Electronic | 1998 | 2015 | 1 | 17 | 17 | |
| Nonlinearity | 1361-6544 | 0951-7715 | 1988 | 2015 | 1 | 28 | 28 | |
| Nuclear Fusion | 1741-4326 | 1741-4326 | 0029-5515 | 1960 | 2015 | 1 | 55 | 55 |
| Physica Scripta | 1402-4896 | 0031-8949 | 1970 | 2015 | 1 | 91/ 92 | 91/92 | |
| Physical Biology | 1478-3975 | 1478-3967 | 2004 | 2015 | 1 | 12 | 12 | |
| Physics Education | 1361-6552 | 0031-9120 | 1966 | 2015 | 1 | 50 | 50 | |
| Physics in Medicine & Biology | 1361-6560 | 0031-9155 | 1956 | 2015 | 1 | 60 | 60 | |
| Physics in Technology | | 0305-4624 | 1973 | 1988 | 4 | 19 | 16 | |
| Formerly: Review of Physics in Technology (1970 – 1972) | - | 0034-6683 | 1970 | 1972 | 1 | 3 | 3 | |
| Physics-Uspekhi | 1468-4780 | 1063-7869 | 1993 | 2015 | 36 | 58 | 23 | |
| Formerly: Soviet Physics Uspekhi (1958 – 1992) | | 0038-5670 | 1958 | 1992 | 1 | 35 | 35 | |
| Physics World (including Physics Bulletin)*** | | 0953-8585 | 2006 | 2016 | | | | |
| Physiological Measurement | 1361-6579 | 0967-3334 | 1993 | 2015 | 14 | 36 | 23 | |
| Formerly Clinical Physics and Physiological Measurement (1980-1992) | | 0143-0815 | 1980 | 1992 | 1 | 13 | 13 | |
| Plasma Physics and Controlled Fusion | 1361-6587 | 0741-3335 | 1984 | 2015 | 26 | 57 | 32 | |
| Formerly: Plasma Physics | | 0032-1028 | 1967 | 1983 | 8 | 25 | 17 | |

| (1967-1983) | 1 | | | | | | |
|--|-----------|-----------------|------|------|-----|-----|----|
| Formerly Journal of Nuclear Energy Part C, Plasma Physics, Accelerators, Thermonuclear Research (1959- 1966) | | 0368-3281 | 1960 | 1966 | 1 | 7 | 7 |
| Plasma Science and Technology | | 1009-0630 | 1999 | 2015 | 1 | 17 | 17 |
| Plasma Sources Science and Technology | 1361-6595 | 0963-0252 | 1992 | 2015 | 1 | 24 | 24 |
| Proceedings of the Physical Society (1958-1967) | | 0370-1328 | 1958 | 1967 | 71 | 92 | 22 |
| Proceedings of the Physical Society Section A (1949- 1957) | | 0370-1298 | 1949 | 1957 | 62 | 70 | 9 |
| Proceedings of the Physical Society Section B (1949- 1957) | | 0370-1301 | 1949 | 1957 | 62 | 70 | 9 |
| Proceedings of the Physical Society (1926-1948) | 10.24 | 0959-5309 | 1926 | 1948 | 38 | 61 | 24 |
| Proceedings of the Physical Society of London (1874- 1925) | | 1478-7814 | 1874 | 1925 | 1 | 37 | 37 |
| Publications of the Astronomical Society of the Pacific*** | 1538-3873 | 0004-6280 | 2016 | 2016 | 128 | 128 | 1 |
| Quantum Electronics | 1468-4799 | 1063-7818 | 1993 | 2015 | 23 | 45 | 23 |
| Formerly: Soviet Journal of Quantum Electronics | | 0049-1748 | 1971 | 1992 | 1 | 22 | 22 |
| Quantum Science and Technology*** | 2058-9565 | Electronic only | 2016 | 2016 | 1 | 1 | 1 |
| Reports on Progress in Physics | 1361-6633 | 0034-4885 | 1934 | 2015 | 1 | 78 | 78 |
| Research in Astronomy and Astrophysics | | 1674-4527 | 2009 | 2015 | 9 | 15 | 7 |
| Formerly Chinese Journal of Astronomy and Astrophysics | | 1009-9271 | 2001 | 2008 | 1 | 8 | 4 |
| Russian Chemical Reviews | 1468-4837 | 0036-021X | 1960 | 2015 | 29 | 84 | 56 |
| Russian Mathematical Surveys | 1468-4829 | 0036-0279 | 1960 | 2015 | 15 | 70 | 56 |
| Sbornik:Mathematics * | 1468-4802 | 1064-5616 | 1995 | 2015 | 186 | 206 | 20 |
| Formerly: Russian Academy of Sciences: Sbornik Mathematics | _ | 1064-5616 | 1993 | 1995 | 75 | 83 | 9 |
| Formerly: Mathematics of the USSR – Sbornik | 1-1-1 | 0025-5734 | 1967 | 1993 | 1 | 74 | 74 |
| Science and Technology of Advanced Materials** | 1878-5514 | 1468-6996 | 2000 | 2015 | 1 | 16 | 16 |
| Semiconductor Science and Technology | 1361-6641 | 0268-1242 | 1986 | 2015 | 1 | 30 | 30 |
| Smart Materials and Structures | 1361-665X | 0964-1726 | 1992 | 2015 | 1 | 24 | 24 |
| Superconductor Science and Technology | 1361-6668 | 0953-2048 | 1988 | 2015 | 1 | 28 | 28 |

| Surface Topography: Metrology and Properties | 2051-672X | Electronic | 2013 | 2015 | 1 | 3 | 3 |
|---|-----------|------------|------|------|---|----|----|
| Transactions of the Optical Society (1899-1932) | | 1475-4878 | 1899 | 1932 | 1 | 33 | 33 |
| Translational Materials Research*** | 2053-1613 | Electronic | 2014 | 2016 | 1 | 3 | 3 |

* - Volumes re-numbered in 1995 - no gap in volume

** - Open Access Journals – included within this Licence as they are available to the Members via the IOPscience server

*** - Titles added to the Publications from 2016

AS WITNESS the hands of the parties the day and year first above written.

| Signed by | |) | | |
|----------------------|---|---|----------------------------|---|
| for and on behalf of | |) | | |
| IOPP | |) | date 17 0EC 2015 | |
| Signed by |) | | N' as atom | / |
| for and on behalf of |) | | Interim Executive Director | |
| the Consortium |) | U | late 12-22-15 | |