SUBLEASE AND NON-EXCLUSIVE EASEMENT AGREEMENT BETWEEN TMT INTERNATIONAL OBSERVATORY LLC AND THE UNIVERSITY OF HAWAII

THIS SUBLEASE AND NON-EXCLUSIVE EASEMENT AGREEMENT (this "Sublease"
is made and entered into on this $\frac{28}{20}$ day of $\frac{1}{200}$, 2014, effective as o
2014 (the "Effective Date"), by and between TMT Internationa
Observatory LLC, a Delaware limited liability company ("Sublessee"), and the University o
Hawaii, a public body corporate and the public university of the State of Hawai
("Sublessor").

RECITALS

This Sublease is entered into with reference to the following:

- A. Sublessor leases certain lands located on and around the summit of Mauna Kea, Island of Hawaii from the State of Hawaii, Board of Land and Natural Resources ("Lessor") pursuant to General Lease No. S-4191, dated June 21, 1968 (the "Master Lease"), a copy of which is attached hereto as Exhibit A and incorporated herein by reference.
- B. Sublessee desires to sublease a portion of said lands, as more fully described below, for the purpose of constructing and operating an optical/infrared telescope facility known as the Thirty Meter Telescope ("TMT") in the manner described in, and accordance with, this Sublease and that certain Scientific Cooperation Agreement Between Sublessee and Sublessor Concerning the Design, Construction and Operation of the Thirty Meter Telescope on Mauna Kea, Hawaii (the "Scientific Cooperation Agreement") executed simultaneously herewith and to be effective on the same Effective Date indicated above. The TMT facilities will include, but are not limited to, the TMT telescope and enclosure; the support building (the space necessary to support scientific observers and technical personnel while at the summit); together with instruments, electrical conductors, cableways and tunnels; driveways and parking lots; power, telephone and communications conduits and lines; and access roads within the border of the Subleased Premises (as defined in Section 1 below) ("TMT Facilities"). "TMT Facilities" does not include any facilities outside the Subleased Premises.
- D. In 2000, Sublessor adopted the Mauna Kea Science Reserve Master Plan, which establishes the management structures for Sublessor's stewardship of the areas it

manages on Mauna Kea. In 2009 and 2010, Sublessor adopted, and Lessor approved, the Mauna Kea Comprehensive Management Plan ("CMP") and its subplans: the Cultural Resources Plan, Natural Resources Management Plan, Public Access Plan, and Decommissioning Plan. These plans commit Sublessor to exercise responsible stewardship of Mauna Kea and to ensure that astronomical activities are conducted in a manner that respects the cultural significance of Mauna Kea, protects the environment, and is responsive to the needs and concerns of Native Hawaiians and the public.

- E. In May 2010, Sublessor completed an Environmental Impact Statement for the TMT. In September 2010, Sublessor filed an Application for a Conservation District Use Permit to construct the TMT. The permit was approved in April 2013. Sublessee is now seeking a long term sublease to build and operate the TMT.
- F. Sublessor has submitted a request to the Lessor for the mutual cancellation of the current Master Lease and issuance of a new master lease for a term of sixty-five (65) years from issuance. Sublessee desires to continue operation of the TMT Facilities beyond 2033. It is desirable for management and planning purposes, including appropriate stewardship of Mauna Kea, to address the potential continued operation of the TMT Facilities beyond 2033 in this Sublease.

AGREEMENT

Now, therefore, in consideration of the foregoing and of the mutual promises and agreements set forth herein, Sublessor and Sublessee agree as follows:

- 1. <u>Subleased Premises</u>. Sublessor does hereby sublease to Sublessee, and Sublessee does hereby sublease from Sublessor, the parcel of land shown and described in <u>Exhibits C-1</u> and <u>C-2</u> attached hereto and incorporated herein by reference (the "Subleased Premises"), constituting a portion of the land leased by Sublessor under the Master Lease.
- 2. Non-Exclusive Easements. Sublessee shall have the right of access to and egress from the Subleased Premises over and across the Mauna Kea Science Reserve. utilizing the common entrances and rights of way, together with others entitled thereto, under such rules and regulations as may be established by and amended from time to time by Sublessor. Sublessee shall also have the rights to (i) utilize and construct in, grade, fill. and perform work approved by Lessor and Sublessor in the easement area shown and described in Exhibits C-1 and C-3 attached hereto and incorporated herein by reference (the "Easement Area"), (ii) utilize and construct in and perform work approved by Lessor and Sublessor and consistent with the TMT Access Way Agreement dated September 13, 2012, by and among Sublessor, the Smithsonian Institution Astrophysical Observatory, and the TMT Observatory Corporation, in the spur road from the Mauna Kea Observatory Access Road to the Subleased Premises, (iii) install and utilize power and communications conduits and lines from a central handhole or handholes in the Mauna Kea summit area to the Subleased Premises, and (iv) utilize and access the Batch Plant staging area as authorized by the TMT CDUP (as defined in Section 4 below).

- 3. <u>Survey/Site Specific Description</u>. The site shown in Exhibit C-1 hereto has been surveyed. The area covered by the Subleased Premises is specifically described in the metes and bounds description in Exhibit C-2 hereto. The area covered by the Easement Area is specifically described in the metes and bounds description in Exhibit C-3 hereto.
- Use of Subleased Premises. Sublessee shall use the Subleased Premises solely to construct and operate the TMT Facilities in accordance with this Sublease and the Scientific Cooperation Agreement. The construction and operation of the Subleased Premises shall be conducted in strict compliance with the terms and conditions of Conservation District Use Permit HA-3568 approved by the Lessor on April 12, 2013 (the "TMT CDUP"), including performance of all mitigation conditions set forth therein, and any amended or subsequent Conservation District Use Permit. Sublessee shall not at any time during the term of this Sublease construct, place, maintain, or install on the Subleased Premises any other building, structure, or improvement without the prior written approval of Sublessor and Lessor and upon such conditions as Sublessor or Lessor may impose. For purposes of the foregoing sentence, any other "improvement" means improvements that are not specified in or contemplated by the TMT CDUP and not contained within the building envelop of TMT observatory plans approved in accordance with Section 37 below. For the avoidance of doubt, the addition of any instruments, equipment or any other additions that are fully contained within the observatory structure or buildings shall not require the prior written approval of Sublessor or Lessor, provided that such additions are otherwise in compliance with the terms of this Sublease and the Master Lease.
- 5. <u>Management and Stewardship Obligations</u>. This Sublease shall be subject to the following:
- a. The Subleased Premises are within the State Land Use Conservation District and all uses shall comply with the applicable rules and regulations of the State Conservation District, including but not limited to Hawaii Revised Statutes ("HRS") Chapter 183C and Hawaii Administrative Rules ("HAR") Chapter 13-5.
- b. Sublessee shall comply with applicable State rules and regulations related to historic preservation including but not limited to HRS Chapter 6E, and HAR Chapters 13-197, 13-198, 13-275 through 13-284 and 13-300, and any applicable amendments of or supplements to such historic preservation regulations.
- c. Sublessor shall exercise management jurisdiction over the Subleased Premises pursuant to management plans approved by the Lessor, including the CMP and its subplans, the Natural Resources Management Plan, Cultural Resources Management Plan, Decommissioning Plan, and Public Access Plan, the TMT Management Plan, and any amendments of or supplements to management plans approved by the Lessor for lands that include the Subleased Premises. Sublessee acknowledges that it has reviewed and is familiar with the CMP and subplans. Sublessor shall keep Sublessee informed regarding any future amendments or supplements thereto, and shall promptly provide copies of such documents to Sublessee.

- d. All public and commercial activities in the areas of Mauna Kea managed by Sublessor, including recreational activities, shall be governed by administrative rules promulgated pursuant to the authority granted Sublessor by Act 132 (SLH 2009), following consultation with DLNR, the Office of Hawaiian Affairs, and the public in accordance therewith.
- e. The Constitution of the State of Hawaii mandates the protection of recognized customary and traditional native Hawaiian rights subject to State regulation. This Sublease shall be subject to the right of Native Hawaiians to exercise protected traditional and customary practices as provided in the CMP and consistent with the laws of the State of Hawaii.
- f. Sublessor has established a management structure to manage the lands of which the Subleased Premises are a part, which structure includes the Office of Mauna Kea Management at the University of Hawaii at Hilo, the volunteer community-based Mauna Kea Management Board and the Kahu Kū Mauna advisory council on Hawaiian cultural matters.
- 6. Operation of the TMT Facilities. Neither Sublessee nor any successor or assign shall operate the TMT Facilities for purposes of research without a valid and effective Scientific Cooperation Agreement with Sublessor. The TMT Facilities may be operated in the absence of a valid and effective Scientific Cooperation Agreement only when necessary to ensure the safety of personnel or of the TMT Facilities.
- 7. Rent. In consideration for the use of the Subleased Premises, Sublessee shall pay to Sublessor annual rents based on calendar years during the term of this Sublease as set forth below. The annual rent during the construction period is based on the incremental value of the major milestones achieved during the construction of the TMT Facilities. The milestones are set forth below and generally span approximately two (2) year periods. The annual rents shall be paid based upon the specified calendar years below regardless of whether the respective milestone is achieved.

<u>Year</u>	Annual Rent	<u>Milestone</u>
1-3	\$300,000	Civil construction
4-5	\$400,000	Enclosure
6-7	\$600,000	Telescope Structure
8-9	\$700,000	Instruments and Mirrors
10	\$900,000	Commissioning
11 and later	\$1,080,000	Operations

Rent shall be paid in advance, in equal semi-annual installments, on or before January 31 and July 31, of each calendar year during the term of this Sublease. The first installment of rent for the initial, partial year (which will be prorated) shall be due within 30 days of the date of execution of this Sublease. Beginning in January of 2015, and in January of each year thereafter, the annual rental amount for the year shall be based on the initial annual rental amount adjusted for the annual rate of inflation recorded for subsequent years in

accordance with the Consumer Price Index for all Urban Consumers, U.S. City Average (not seasonally adjusted) (base year 1982-1984 - 100) ("CPI"), published by the United States Department of Labor, Bureau of Labor Statistics. The calculation shall be made by comparing the CPI last published for the date nearest to the Effective Date (the "Base Index") with the CPI last published for the date nearest to the current anniversary date (the "Current Index"). If the Current Index has increased or decreased over the Base Index, then the amount subject to adjustment shall be set for the ensuing year by multiplying the initial annual rental amount by a fraction, the numerator of which is the Current Index and the denominator of which is the Base Index. If the base of the CPI changes from the 1982-84 base (100), the CPI shall, thereafter, be adjusted to the 1982-84 base (100) before the computation indicated above is made. If the CPI Index is at any time no longer published, a comparable index generally accepted and employed by the real estate profession shall be used.

Sublessor shall receive, deposit, and apply the rents received hereunder in accordance with the laws of the State of Hawaii, including, without limitation, Section 304A-2170 of the Hawaii Revised Statutes, as amended from time to time. Such deposit shall be net of the funds required by law to be transferred or paid to the Office of Hawaiian Affairs. Sublessor shall be responsible for paying over to the Office of Hawaiian Affairs its ratable share of the rents received in accordance with the laws of the State of Hawaii.

- 8. Master Lease: Order of Precedence. The rights granted to Sublessee pursuant to this Sublease are subject to the terms and conditions of the Master Lease, as the same may be amended. In the event of any conflict between the terms of this Sublease and the Master Lease, the Master Lease shall be controlling. In the event of any conflict between the terms of this Sublease and the Scientific Cooperation Agreement, this Sublease shall be controlling. Sublessee shall comply with the terms and conditions of the Master Lease at all times. If Sublessee causes a breach or default of any term, covenant, restriction, or condition of the Master Lease, and this breach or default shall continue for a period of more than forty-five (45) days after delivery by the Sublessor of a written notice of breach or default and demand for cure (plus any additional period as the Lessor may allow for good cause), then Sublessor may, subject to the provisions of Section 171-21 of the Hawaii Revised Statutes, at once re-enter the Subleased Premises, or any part, and upon or without the entry, at its option, terminate this Sublease without prejudice to any other remedy or right of action for arrears of rent or for any preceding or other breach of contract; and in the event of termination, at the option of the Sublessor, all buildings and improvements shall remain and become the property of the Sublessor or shall be removed by Sublessee in accordance with the Site Decommissioning Plan at Sublessee's sole cost and expense: furthermore, Sublessor shall retain all rent paid in advance to be applied to any damages.
- 9. <u>Term and Termination</u>. The term of this Sublease shall begin on the Effective Date and shall expire on December 31, 2033, unless extended or sooner terminated as provided herein.
- a. Mutual Cancellation of Master Lease and Concurrent Issuance of New Master Lease.

- Sublessor shall use its best efforts to continue to and shall (1)diligently pursue and take all actions necessary or advisable to complete the process currently underway with Lessor to obtain mutual cancellation of the current Master Lease subject to and concurrent with issuance of a new master lease (the "New Master Lease"), for a term of sixty-five (65) years and on terms and conditions materially consistent with the form of lease document submitted to the Lessor for consideration at its meeting of November 8, 2013. In the foregoing sentence, such "actions" shall include, without limitation, continuing to prepare and process an Environmental Impact Statement for the New Master Lease and such "terms and conditions" shall include, without limitation, that the New Master Lease shall include the provisions stating that "The lease shall be subject to all existing subleases entered into by the Lessee and approved by the Lessor pursuant to General Lease No. S-4191 dated June 21, 1968", and "Should this lease be rendered or declared invalid, illegal, or unenforceable by a court of competent jurisdiction, such invalidation shall cause, without further action, General Lease No. S-4191 dated June 21, 1968 to be revived in its entirety for the duration of the term therein, unless and until the parties subsequently agree otherwise".
- (2) If the New Master Lease is approved and duly executed by Lessor and Sublessor, Sublessor shall promptly provide a copy of the New Master Lease to Sublessee. Effective as of the effective date of the New Master Lease, the following shall apply:
- i) The provisions of this Sublease shall continue, whether by extension, issuance of a new sublease, or otherwise, provided that any continuance shall be in accordance with the terms herein as a sublease under the New Master Lease (including, without limitation, the rents set forth herein);
- ii) The New Master Lease shall become the Master Lease for all purposes of this Sublease or any new sublease, and all references to the Master Lease in this Sublease or any new sublease shall thereafter refer to the New Master Lease; and
- iii) The term of this Sublease shall automatically be extended, and shall thereafter expire sixty-five (65) years after the Effective Date, or upon expiration or termination of the New Master Lease, whichever shall first occur.
- (3) If the New Master Lease is approved, but the term is not for sixty-five (65) years or the terms and conditions thereof are not materially consistent with the form of lease document submitted to the Lessor for consideration at its meeting of November 8, 2013, Sections 9.a.(2)i), ii), and iii) above shall apply unless Sublessee, at its sole option, provides a notice of termination to Sublessor in accordance with Section 9.d. below within one hundred twenty (120) days after Sublessee's receipt of the New Master Lease from Sublessor. Sublessor further agrees to diligently negotiate in good faith with Sublessee regarding mutually acceptable amendments to this Sublease during such one hundred twenty (120) day period and to promptly and diligently pursue approval by the Lessor of such amendments.

- (4) If the New Master Lease is approved on terms and conditions materially consistent with the form of lease document submitted to the Lessor for consideration at its meeting of November 8, 2013 or is otherwise acceptable to Sublessee in Sublessee's sole judgment, Sublessor agrees to execute an amendment to this Sublease to reflect compliance with Sections 9.a.(2)i), ii), and iii) above or a new sublease on the same material terms and conditions as set forth in this Sublease (including, without limitation, the rents set forth herein) and reflecting compliance with Sections 9.a.(2)i), ii), and iii) above.
- (5) Sublessee acknowledges that the Lessor has sole authority to determine whether to approve and enter into the New Master Lease, pursuant to and in accordance with Hawaii law, that no such approval has been granted as of the date of this Sublease, and that no prior commitment to issue such approval has been or can be made.
- b. Failure to Obtain New Master Lease. If the New Master Lease is not approved by Lessor or if Sublessor otherwise fails to obtain a New Master Lease that automatically extends the term of this Sublease in accordance with of Sections 9.a.(3) or 9.a.(4) above, Sublessor agrees to use its best efforts to and will immediately and diligently pursue another means of acquiring sufficient rights to continue to lease the Subleased Premises to Sublessee on substantially the same terms and conditions herein, but for an additional term extending to, on or about March 31, 2079. If a subsequent master lease is approved and duly executed by Lessor and Sublessor, Sublessor shall promptly provide a copy of such subsequent master lease to Sublessee and, at Sublessee's sole option: (I) the provisions of Sections 9.a.(2)i), ii), and iii) above shall apply as if the subsequent master lease is the "New Master Lease" referred to in Section 9.a. above and Sublessor shall execute an amendment to this Sublease to reflect compliance with Sections 9.a.(2)i), ii), and iii) above or a new sublease on the same material terms and conditions as set forth in this Sublease (including, without limitation, the rents set forth herein) and reflecting compliance with Sections 9.a.(2)i), ii), and iii) above, or (II) Sublessor shall diligently negotiate in good faith a new sublease with Sublessee, if so desired by Sublessee, on the same material terms and conditions as set forth in this Sublease (including, without limitation, the rents set forth herein and compliance with the Master Lease then in effect) or on such other terms and conditions as may be mutually agreeable to Sublessor and Sublessee, with a term ending on or after March 31, 2079.
- c. Option to Extend Term. Notwithstanding the foregoing in Sections 9.a. and 9.b. above, Sublessee shall have an option to extend the term of this Sublease beyond December 31, 2033 if Sublessor acquires rights to sublease the Subleased Premises to Sublessee, whether under the New Master Lease or other master lease, and such extension shall be coterminous with such New Master Lease or other master lease, but in no event shall the term of this Sublease extend beyond March 31, 2079. Such option shall expire on December 31, 2033 and Sublessee shall have sole discretion regarding whether or not to exercise such option.
- d. <u>Termination Without Cause</u>. Sublessee shall have the right to terminate this Sublease at any time upon six (6) months prior written notice to Sublessor.

- e. <u>Termination for Breach</u>. This Sublease may be terminated for breach as provided in, and in accordance with, Sections 8 above or 25 below.
- f. Non-use and Abandonment. If the Sublessee shall, at any time for a continuous period of eleven (11) months, fail or cease to use, or abandon the Subleased Premises, this Sublease shall cease and terminate. Sublessor shall provide written notice to Sublessee within thirty (30) days after the sixth (6th) month of such eleven (11) month period and shall allow Sublessee three (3) months to cure any such purported abandonment.
- 10. <u>Effect of Termination or Expiration: Decommissioning</u>. Upon termination or expiration of this Sublease, Sublessee shall, at Sublessor's sole option and at Sublessee's sole cost and expense either (a) surrender the Subleased Premises with all improvements existing or constructed thereon, or (b) decommission and remove the TMT Facilities and restore the land in accordance with the CMP and the Decommissioning Plan for Mauna Kea Observatories, A Sub-Plan of the Mauna Kea Comprehensive Management Plan (dated January, 2010 and approved by Lessor in March, 2010) ("**Decommissioning Plan**"), and any amended, supplemental, or successor plans adopted by Sublessor with the approval of the Lessor.
- Decommissioning Funding Plan. Sublessee shall develop and periodically update a Decommissioning Funding Plan as described in, and in accordance with, the Decommissioning Plan, to provide assurance to Sublessor that sufficient funds will be available to carry out deconstruction and site restoration activities upon termination or expiration of this Sublease. The Decommissioning Funding Plan shall include one or more financial assurance mechanisms as described in the Decommissioning Plan. Sublessee shall provide the initial Decommissioning Funding Plan on or before the execution date of this Sublease as set forth above. Sublessee shall submit an undated Decommissioning Funding Plan to Sublessor for Sublessor's review and approval as provided in the CMP, and shall provide such information and documents as Sublessor may reasonably request from time to time to verify the availability and adequacy of funding to meet Sublessee's decommissioning and restoration obligations. If, at any time during the term of this Sublease, Sublessor reasonably determines that the Decommissioning Funding Plan is insufficient, Sublessee shall consult with Sublessor and shall negotiate in good faith to determine the amount of such additional funding and provide such additional funding assurance mechanisms.
- b. <u>Site Decommissioning Plan</u>. Upon expiration or termination of this Sublease or any extended sublease, decommissioning, including site restoration, shall be carried out in strict compliance with a Site Decommissioning Plan developed and approved in accordance with the Decommissioning Plan ("**Decommissioning Obligations**").
- c. <u>Delivery of Possession</u>. Except as otherwise provided herein, upon expiration or termination of this Sublease or any extended sublease and completion of Sublessee's Decommissioning Obligations, Sublessee shall peaceably deliver to Sublessor possession of the Subleased Premises in a clean and orderly condition.

- d. <u>Payment of Decommissioning Costs of Sublessor or Lessor</u>. Sublessee shall promptly pay on demand any reasonable and necessary costs incurred by Sublessor or Lessor to remedy any failure on the part of Sublessee to fully and timely perform its Decommissioning Obligations.
- e. <u>Survival</u>. The obligations of Sublessee under this Section 10, the rights and obligations of Sublessor and Sublessee under Sections 9.a., 9.b., and 9.c. above, and the obligations of Sublessee under Section 11 below shall survive expiration or termination of this Sublesse.
- f. Termination Without Decommissioning: Assumption of Decommissioning Obligations by Sublessor. If this Sublease expires or is terminated prior to the expiration of the Master Lease and at a time when the TMT Facilities have remaining useful life, at Sublessor's sole option Sublessee shall be relieved of its Decommissioning Obligations and permitted to surrender its subleasehold interest in the Subleased Premises without removal of the TMT Facilities on such terms as may be mutually agreed in writing by Sublessor and Sublessee, which may include payment to Sublessor of an amount to be held in reserve for future decommissioning in exchange for Sublessor's assumption of the Decommissioning Obligations.
- 11. Indemnity. Sublessee shall indemnify, defend, and hold harmless Lessor, Sublessor, and their officers, agents, employees, and other persons acting on their behalf. from and against any claim or demand for loss, liability, or damages (including, but not limited to, reasonable attorneys' fees and claims for property damage, personal injury, or death, based upon any accident, fire, or other incident on or about the Subleased Premises) to the extent arising or resulting from: (1) any act or omission on the part of Sublessee relating to Sublessee's use, occupancy, maintenance, or enjoyment of the Subleased Premises; (2) any failure on the part of Sublessee to properly maintain the Subleased Premises, and areas adjacent thereto in Sublessee's use and control, including any accident. fire, or nuisance, arising from or caused by any failure on the part of Sublessee to maintain the Subleased Premises in a safe condition; or (3) Sublessee's non-observance or nonperformance of any of the terms, covenants, and conditions of this Sublease or the Master Lease or the rules, regulations, ordinances and laws of the Federal, State, or County governments. Sublessee further agrees to indemnify, defend, and hold harmless Lessor and Sublessor from any damages or claims arising from the release of "hazardous material" (as defined in Section 31 below) on the Subleased Premises occurring while Sublessee is in possession, or elsewhere if caused by Sublessee or any person acting under Sublessee.
- 12. <u>Insurance</u>. Sublessee shall, at its own cost and expense, maintain the following insurance. Such insurance shall be subject to the reasonable approval of Sublessor and Lessor and, except as to any property insurance, shall name Sublessor and Lessor as additional insureds. Sublessee shall deliver executed certificates thereof to Sublessor on or before the Effective Date of this Sublease and thereafter within a reasonable time prior to the expiration of the term of each such policy. As often as any such policy shall expire or terminate, renewal or additional policies shall be procured and maintained by Sublessee in like manner to like extent. If Sublessee has only provided

Sublessor with certificates evidencing the policies required to be carried by Sublessee under this Sublease, Sublessee agrees to deliver executed copies of all such required policies to Sublessor within ten (10) days of Sublessor's written request for the same.

- a. Property Insurance. Sublessee shall at its own expense and at all times during the term of this Sublease keep Sublessee's property, including but not limited to the TMT Facilities, insured against (i) all of the risks covered by a standard ISO Commercial Property Special Causes of Loss Form (or equivalent) which shall be in an amount equal to the full replacement cost of such property and shall not have a deductible in excess of Two Hundred and Fifty Thousand Dollars (\$250,000), and (ii) such other hazards or risks which a reasonably prudent telescope operator on Mauna Kea would insure against. Sublessee hereby waives any and all rights of subrogation which it may have against Lessor and/or Sublessor, except to the extent of available insurance. In case the property required to be insured above or any part thereof shall be destroyed or damaged by fire or such other casualty required to be insured against, then and as often as the same shall happen, the proceeds of such insurance shall be paid to Sublessee to be used by Sublessee to promptly repair and restore any damage to such property.
- b. <u>Liability Insurance</u>. Sublessee shall procure at Sublessee's expense and keep in force during the term of this Sublease and any extension thereof, the following insurance:
- i) <u>General Liability Insurance</u>. Commercial general liability insurance (including coverage for liability caused by the fault of Sublessee, products-completed operations liability, personal and advertising injuries and coverage for contractual liability to the extent provided by ISO Form CGL #00-01-04-13 (or equivalent) covering Sublessee and naming as additional insureds: (i) Sublessor, (ii) Lessor, (iii) Sublessor's and Lessor's managers, officers, agents and employees, and (iv) such other parties as Sublessor may specify, insuring against liability arising out of the use, occupancy or maintenance of the Subleased Premises and areas appurtenant thereto by Sublessee with limits of not be less than One Million Dollars (\$1,000,000) for property damage, and Five Million Dollars (\$5,000,000) for injuries and deaths in any one occurrence or a combined single limit of Five Million Dollars (\$5,000,000) per occurrence and deductibles of no more than Two Hundred and Fifty Thousand Dollars (\$250,000). Such insurance shall be primary and shall not limit the liability of the Sublessee under Section 11 above.
- ii) <u>Auto Liability Insurance</u>. Auto liability insurance covering all automobiles used by Sublessee in connection with its operations in the Subleased Premises with limits of not less than Five Hundred Thousand Dollars (\$500,000) for property damage, and Five Million Dollars (\$5,000,000) for injuries or deaths in any one occurrence or a combined single limit of Five Million Dollars (\$5,000,000) per occurrence, with deductibles of no more than Five Thousand Dollars (\$5,000) per occurrence and naming Sublessor and Lessor as additional insureds.
- iii) <u>Pollution Liability Insurance</u>. Pollution liability insurance in the amount of not less than Five Million Dollars (\$5,000,000) and with deductibles of no

more than Two Hundred and Fifty Thousand Dollars (\$250,000) per occurrence and naming Sublessor and Lessor as additional insureds. Such insurance shall cover bodily injury, property damage, and environmental damage, including clean up and defense and remediation costs, for occurrences that arise from the occupancy or use of the Subleased Premises during the term of this Sublease by Sublessee.

c. <u>General Insurance Requirements</u>.

- i) Sublessee shall use its best efforts to obtain the following terms in each policy of commercial property insurance and general liability insurance required in Sections 12.a. and 12.b. above to the extent that such terms are reasonably available in the commercial marketplace:
- a) a provision that the liability of the insurer thereunder shall not be affected by, and that the insurer shall not claim, any right of set-off, counterclaim, apportionment, proration, or contribution by reason of, any other insurance obtained by or for Sublessor, Lessor, Sublessee, or any person claiming by, through, or under any of them; and
- b) no provision relieving the insurer from liability for loss occurring while the hazard to buildings and personal property is increased, whether or not within the knowledge or control of, or because of any breach of warranty or condition or any other act or neglect by Sublessor, Lessor, Sublessee, or any person claiming by, through, or under any of them.
- ii) Each policy of commercial property insurance and general liability insurance required in Sections 12.a. and 12.b. above shall:
- a) be written by an insurance company rated A- or better, Class size VIII or better, by the Best's Key Rating Guide, based upon the rating system in effect on the date this Sublease is signed. In the event that Best's changes its rating system or ceases to provide ratings at some later date, then such insurance company shall have a rating from Best (or some other comparable rating service if Best's ceases to provide ratings) comparable to the "A- or better, Class VIII or better" requirement of the immediately preceding sentence; and
- b) be specifically endorsed to provide that they are primary policies, not contributing with and not in excess of any coverage that Sublessor and/or Lessor may carry, notwithstanding anything to the contrary contained in any policies obtained by Sublessor and/or Lessor.

In addition, Sublessor shall request that each such policy be specifically endorsed to provide that such policy may not be cancelled except upon the insurer giving at least thirty (30) days' prior written notice thereof (ten (10) days in the case of nonpayment of premium) to Sublessor, Lessor, Sublessee, and other person having an interest in the property who has requested such notice of the insurer.

- 13. Taxes, Assessments, etc. Sublessee shall pay or cause to be paid, when due, the amount of all taxes, rates, and assessments of every description as to which the Subleased Premises or any part, or any improvements, or the Lessor, Sublessor, or Sublessee, are now or may be assessed or become liable by authority of law during the term of this Sublease; provided, however, that with respect to any assessment made under any betterment or improvement law which may be payable in installments, Sublessee shall be required to pay only those installments, together with interest, which becomes due and payable during the term of this Sublease.
- 14. <u>Utility Services</u>. Sublessee shall be responsible for obtaining any utility services and shall pay when due all charges, duties and rates of every description, including water, sewer, gas, refuse collection or any other charges, as to which the Subleased Premises or any part, or any improvements, or the Lessor, Sublessor, or Sublessee may become liable for during the term, whether assessed to or payable by the Lessor, Sublessor, or Sublessee.
- 15. <u>Covenant against discrimination</u>. The use and enjoyment of the Subleased Premises shall not be in support of any policy which discriminates against anyone based upon race, creed, sex, color, national origin, religion, marital status, familial status, ancestry, physical handicap, disability, age or HIV (human immunodeficiency virus) infection.
- 16. <u>Sanitation.</u> Sublessee shall keep the Subleased Premises and improvements in a strictly clean, sanitary and orderly condition.
- 17. <u>Waste and Unlawful, Improper or Offensive Use of Subleased Premises</u>. Sublessee shall not commit, suffer or permit to be committed any waste, nuisance, strip or unlawful, improper or offensive use of the Subleased Premises or any part, nor, without the prior written consent of the Lessor and Sublessor, cut down, remove or destroy, or suffer to be cut down, removed or destroyed, any trees now growing on the premises.
- 18. <u>Compliance with Laws</u>. Sublessee shall comply with all applicable requirements of all municipal, state, and federal authorities and observe all municipal, state and federal laws applicable to the Subleased Premises, now in force or which may be in force.
- 19. <u>Inspection of Subleased Premises</u>. Upon reasonable notice by Sublessor to Sublessee, Sublessee shall permit the Lessor, Sublessor, and their respective agents, at all reasonable times during the Sublease term, to enter the Subleased Premises and examine the state of its repair and condition.
- 20. <u>Improvements</u>. Sublessee shall not at any time during the term of this Sublease construct, place, maintain and install on the premises any building, structure or improvement of any kind and description except with the prior written approval of the Lessor and the Sublessor and upon those conditions as the Lessor or Sublessor may impose, unless otherwise provided in this Sublease. Construction of the TMT Facilities in accordance with Section 4 above is authorized. Except as otherwise provided in this

Sublease, Sublessee shall own all improvements constructed by and installed by Sublessee on the Subleased Premises.

- 21. Repairs to Improvements. Sublessee shall, at its own expense, keep, repair, and maintain all buildings and improvements now existing or hereafter constructed or installed on the Subleased Premises in good order, condition and repair, reasonable wear and tear excepted.
- 22. <u>Liens</u>. Sublessee shall not commit or suffer any act or neglect which results in the Subleased Premises, any improvement, the leasehold estate of the Sublessor, or the subleasehold estate of the Sublessee becoming subject to any attachment, lien, charge, or encumbrance, except as provided in this Sublease, and shall indemnify, defend, and hold the Lessor and Sublessor harmless from and against all attachments, liens, charges, and encumbrances and all resulting expenses.
- 23. <u>Assignments, etc.</u> Sublessee shall not sublease, subrent, transfer, assign, or permit any other person to exclusively occupy the Subleased Premises or any portion or transfer or assign this Sublease or any interest therein, either voluntarily or by operation of law, without the prior written approval of the Lessor and the Sublessor.
- 24. <u>Costs of Litigation</u>. Sublessee shall pay all costs, including reasonable attorney's fees, and expenses incurred by or paid by the Lessor or Sublessor (i) in enforcing the covenants and agreements of the Master Lease or this Sublease with respect to Sublessee, (ii) in recovering possession of the Subleased Premises, or (iii) in the collection of delinquent rental, taxes, and any and all other charges.
- Breach. Time is of the essence in this Sublease and if the Sublessee shall become bankrupt, or if this Sublease and Subleased Premises shall be attached or taken by operation of law, or if Sublessee shall fail to observe and perform any of the material covenants, terms, and conditions contained in this Sublease and on its part to be observed and performed (other than a failure that causes a breach of the Master Lease, in which case Sublessor and Sublessee hereby agree that Section 8 above applies), and this failure shall continue for a period of more than sixty (60) days after delivery by the Sublessor of a written notice of breach or default and demand for cure, by personal service, registered mail or certified mail to the Sublessee at its last known address and to each holder of record having a security interest in the premises, then Sublessor may, subject to the provisions of Section 171-21 of the Hawaii Revised Statutes, at once re-enter the premises, or any part, and upon or without the entry, at its option, terminate this Sublease without prejudice to any other remedy or right of action for arrears of rent or for any preceding or other breach of contract; and in the event of termination, at the option of Sublessor, all buildings and improvements shall remain and become the property of the Sublessor or shall be removed by Sublessee in accordance with Section 10 above; furthermore, Sublessor shall retain all rent paid in advance to be applied to any damages.
- 26. <u>Condemnation</u>. If at any time, during the term of this Sublease, any portion of the Subleased Premises should be condemned, or required for public purposes by any

government authority, the rental shall be reduced in proportion to the value of the portion of the Subleased Premises condemned. Sublessee shall be entitled to receive from the condemning authority the proportionate value of the Sublessee's permanent improvements so taken in the proportion that it bears to the unexpired term of the Sublease; provided, that the Sublessee may, in the alternative, remove and relocate its improvements to the remainder of the lands occupied by Sublessee. Sublessee shall not by reason of the condemnation be entitled to any claim against the Lessor or Sublessor for condemnation or indemnity for leasehold interest and all compensation payable or to be paid for or on account of the leasehold interest by reason of the condemnation shall be payable to and be the sole property of the Lessor or Sublessor. The foregoing rights of the Sublessee shall not be exclusive of any other to which Sublessee may be entitled by law. Where the portion taken renders the remainder unsuitable for the use or uses for which the Subleased Premises were leased, Sublessee shall have the option to surrender this lease and be discharged and relieved from any further liability; provided, that Sublessee shall remove the permanent improvements constructed, erected and placed by it within any reasonable period allowed by the Lessor and Sublessor, in accordance with Section 10 above.

- 27. Right to Enter. The Lessor, Sublessor, or the County of Hawaii and their agents or representatives shall have the right to enter and cross any portion of the Subleased Premises for the purpose of performing any public or official duties; provided, however, in the exercise of these rights, the Lessor, Sublessor, or the County of Hawaii shall not interfere unreasonably with the Sublessee or Sublessee's use and enjoyment of the Subleased Premises.
- 28. <u>Extension of Time</u>. Notwithstanding any provision contained in this Sublease, when applicable, Sublessor may for good cause shown, allow additional time beyond the time or times specified in this Sublease for the Sublessee to comply, observe, and perform any of the Sublease terms, conditions, and covenants.
- 29. Quiet Enjoyment. Sublessor covenants and agrees with Sublessee that upon payment of the rent at the times and in the manner provided and the observance and performance of these covenants, terms, and conditions on the part of the Sublessee to be observed and performed, the Sublessee shall and may have, hold, possess, and enjoy the premises for the term of this Sublesse, without hindrance or interruption by the Lessor, Sublessor or any other person or persons lawfully claiming by, through, or under the Lessor or Sublessor.
- 30. <u>Non-warranty</u>. Neither the Lessor nor Sublessor warrants the conditions of the Subleased Premises, as the same are being subleased as is.
- 31. <u>Hazardous Materials</u>. Sublessee shall not cause or permit the escape, disposal or release of any hazardous materials except as permitted by law. Sublessee shall not allow the storage or use of such materials in any manner not sanctioned by law or by the highest standards prevailing in the industry for the storage and use of such materials, nor allow to be brought onto the premises any such materials except to use in the ordinary

course of Sublessee's business where the Sublessee has provided Sublessor with a list that contains the identity of such materials used or stored by Sublessee in the ordinary course of its business and in compliance with all applicable federal and state regulations; provided, that if Sublessor disapproves in writing any such materials, the disapproved materials shall not be brought onto the Subleased Premises. If any lender or governmental agency shall ever require testing to ascertain whether or not there has been any release of hazardous materials by Sublessee, then the Sublessee shall be responsible for the reasonable costs thereof. In addition, Sublessee shall execute affidavits, representations and the like from time to time at Lessor's or Sublessor's request concerning Sublessee's best knowledge and belief regarding the presence of hazardous materials on the Subleased Premises placed or released by Sublessee.

For the purpose of this Sublease ,"hazardous material" shall mean any pollutant, toxic substance, hazardous waste, hazardous material, hazardous substance, or oil as defined in or pursuant to the Resource Conservation and Recovery Act, as amended, the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, the Federal Clean Water Act, or any other federal, state, or local environmental law, regulation, ordinance, rule, or by-law, whether existing as of the date hereof, previously enforced, or subsequently enacted.

- 32. <u>Hawaii Law</u>. This Sublease shall be construed, interpreted, and governed by the laws of the State of Hawaii.
- 33. <u>Exhibits Incorporation in Sublease</u>. All exhibits referred to herein are attached to this Sublease and hereby are deemed incorporated by reference.
- 34. <u>Headings</u>. The section headings herein are inserted only for convenience and reference and shall in no way define, describe or limit the scope or intent of any provision of this Sublease.
- 35. <u>Partial Invalidity</u>. If any term, provision, covenant or condition of this Sublease should be held to be invalid, void or unenforceable, the remainder of this Sublease shall continue in full force and effect and shall in no way be affected, impaired or invalidated thereby.
- 36. <u>Withdrawal</u>. If and to the extent that Lessor exercises its power of withdrawal under the Master Lease to withdraw any portion of the Subleased Premises for public uses or purposes upon giving reasonable notice and without compensation except as otherwise provided in the Master Lease, HRS Chapter 171, the New Master Lease, or other master lease between Sublessor and Lessor that includes the Subleased Premises, then Sublessor shall have the right to withdraw these same portions of the Subleased Premises during the term of this Sublease upon giving reasonable notice to Sublessee and subject to the Sublessee's claim for any compensation provided under the Master Lease, HRS Chapter 171, the New Master Lease, or other master lease between Sublessor and Lessor that includes the Subleased Premises for any permanent improvement constructed upon the Subleased Premises that is destroyed or made unusable in the process of the withdrawal or

taking. Upon such withdrawal, or upon the taking which causes any portion of the Subleased Premises to become unusable for the specific use or uses for which it was subleased, the rent shall be reduced in proportion to the value of the land withdrawn or made unusable, and to the extent permitted in the Master Lease, HRS Chapter 171, the New Master Lease, or other master lease between Sublessor and Lessor that includes the Subleased Premises, if any permanent improvement constructed upon the land by Sublessee is destroyed or made unusable in the process of the withdrawal or taking, the proportionate value shall be paid based upon the unexpired term of the lease (which value shall also include the cost of decommissioning such improvements including site restoration as required in the Decommissioning Plan).

- 37. <u>Building Construction</u>. All building construction shall be in full compliance with all applicable laws, rules and regulations of the federal, state, and county governments and in accordance with plans and specifications submitted to and approved by the Sublessor and the Chairman of the Board of Land and Natural Resources prior to commencement of construction.
- 38. <u>Clearances</u>. Sublessee shall be responsible for obtaining all necessary federal, state or county clearances.
 - 39. <u>Time of Essence</u>. Time is of the essence in all provisions of this Sublease.
- 40. <u>Written Notice</u>. All notices shall be in writing and shall be deemed to have been delivered on the date sent if sent by certified mail (return receipt requested) or recognized courier (with delivery confirmation) or transmitted by facsimile (with written confirmation of transmission) and in each case with a copy sent by email on the same date as follows:

Sublessor:

Chancellor University of Hawaii at Hilo 200 West Kawili Street Hilo, Hawaii 96720-4091 Telephone: (808) 932-7348

Facsimile:

(808) 932-7338

Email:

dstraney@hawaii.edu

Sublessee:

Project Manager (during construction) or Observatory Director (after first light; contact information for Observatory Director to be delivered to Sublessor by written notice following construction)
TMT International Observatory LLC
1111 South Arroyo Parkway, Suite 200

Pasadena, CA 91105

Telephone:

(626) 395-2997

Facsimile:

(626) 296-1887

Email:

sanders@tmt.org

With a copy to:

Ann Martin General Counsel

TMT Observatory Corporation

Telephone:

(626) 395-1646

Facsimile:

(626) 395-6841

Email:

ann.martin@caltech.edu

41. <u>Dispute Resolution</u>. Any dispute relating to or arising as a result of or in connection with this Sublease, if not resolved by negotiation, shall be submitted first to non-binding mediation with Dispute Prevention & Resolution, Inc. and if such mediation is not concluded within six (6) months after submission, then shall be decided in legal or equitable proceedings in accordance with Hawaii law in any court having jurisdiction in the State of Hawaii. Such mediation shall take place in the County of Honolulu, State of Hawaii. Each party shall bear its own costs and fees for such mediation and the fees and expenses of the mediator shall be borne by the parties equally.

- 42. <u>Historic preservation</u>. In the event any historic properties or burial sites, as defined in Section 6E-2 of the Hawaii Revised Statutes, are found on the Subleased Premises, Sublessee and Sublessee's agents, employees and representatives shall immediately stop all land utilization and/or work and contact the Historic Preservation Office in compliance with Hawaii Revised Statutes Chapter 6E.
- 43. Removal of Trash. Sublessee shall be responsible for the removal of all illegally dumped trash upon the premises within ninety (90) days from the date of execution of this Sublease and shall so notify the Sublessor in writing at the end of ninety (90) days.
- 44. Phase I Environmental Site Assessment. Prior to termination or revocation of this Sublease, Sublessee shall conduct a Phase I environmental site assessment of the Subleased Premises and conduct a complete abatement and disposal of any such sites, if necessary, satisfactory to the standards required by the Federal Environmental Protection Agency, the Department of Health, and the Department of Land and Natural Resources. Failure to comply with the provisions of this Section 44 shall not extend the term of this Sublease or automatically prevent termination or revocation of the lease. Sublessor, at its sole option, may refuse to approve termination, unless this evaluation and abatement provision has been performed. In addition or in the alternative, Sublessor may, at its sole option if Sublessee does not do so, arrange for performance of the provisions of this Section 44, all costs and expenses of such performance to be charged to and paid by Sublessee.

45. <u>Counterparts</u>. This Sublease may be executed in counterparts, each of which so executed shall, irrespective of the date of its execution and delivery, be deemed an original (including counterparts delivered by facsimile or email), and said counterparts together shall constitute one and the same agreement binding all of the parties hereto.

[Remainder of page intentionally left blank; signature page follows.]

IN WITNESS WHEREOF, Sublessor and Sublessee have executed this Sublease as of the date first written above.

SUBLESSOR:

SUBLESSEE:

FOR THE UNIVERSITY OF HAWAI'I:

FOR TMT INTERNATIONAL **OBSERVATORY LLC:**

Name: David Lassner

Title: President

Name: Edward C. Stone

Title: Executive Director Date: _

Name: Howard Todo

Title: Vice-President for Budget and

Finance
Date: 7/28/

Name: Donald Straney Title: Chancellor, University

Approved as to form:

Name: Lawrence S. Okinaga, Carlsmith Ball LLP

Title: Special General Counsel Date: 07/28/2014

STATE OF HAWAII	j	
CITY AND COUNTY OF HONOLULU)	SS

[Notary Signature]

Printed Name: Notary Name

DONNA LE LESCH Commission No. 96-390 Notary Public, State of Hawaii My commission expires July 18 2016

My commission expires: Nota

(notary stamp or seal)

		STATE OF HAWAII)
City	d,	COUNTY OF HAWAII) ss.
M		
		The attached document: SUBLEASE AND NON-EXCLUSIVE EASEMENT
		AGREEMENT BETWEEN TMT INTERNATIONAL OBSERVATORY LLC AND THE
		UNIVERSITY OF HAWAII, dated VIII 28 2014 which consists of
		pages (including this page), was executed by DONALD STRANEY on this $\frac{28}{}$
		day of, 2014 in the Third Judicial Circuit of the State of Hawaii, personally
		known/proved to me on the basis of satisfactory evidence to be the person, who personally
		appeared before me and being by me duly sworn or affirmed, did say that he is the
		CHANCELLOR of UNIVERSITY OF HAWAI'I AT HILO, and that such person executed the
		foregoing instrument as the free act and deed of such person, and if applicable in the
		capacity shown, having been duly authorized to execute such instrument in such capacity.
	<	· · · · · · · · · · · · · · · · · · ·
		(notary stamp or seal)
		[Notary Signature]
		WINNA LE LEONIN
		Printed Name: Notary Name DONNA LE LESCH NOTARY
		Commission No. 96-390 Notary Public, State of Hawaii
		My commission expires: My commission expires July 18 2016 Comm. No

STATE OF CALIFORNIA			
county of Los Angeles) ss.			
The attached document: SUBLEASE AND NON-EXCLUSIVE EASEMENT			
AGREEMENT BETWEEN TMT INTERNATIONAL OBSERVATORY LLC AND THE			
UNIVERSITY OF HAWAII, dated Ny 23, 2014 which consists of			
22 pages (including this page), was executed by EDWARD C. STONE on this 23			
day of JUY, 2014, personally known/proved to me on the basis of satisfactory			
evidence to be the person, who personally appeared before me and being by me duly sworn			
or affirmed, did say that he is the EXECUTIVE DIRECTOR of TMT INTERNATIONAL			
OBSERVATORY LLC and that such person executed the foregoing instrument as the free			
act and deed of such person, and if applicable in the capacity shown, having been duly			
authorized to execute such instrument in such capacity.			
(matawa atawa ay ay D			
(notary stamp or seal) [Notary Signature]			
([Notary Signature]			
Printed Name: Notary Name C.M. Aguilar			
My commission expires: Jan. 16, 2017 Commission # 2001445 Notary Public - California			

Exhibit A to Sublease

Master Lease (General Lease No. S-4191)

GEMERAL LEASE NO. S-4191

WITNESSETH THAT:

FOR and in consideration of the mutual promises and agreements contained herein, the Lessor does hereby demise and lease unto the said Lessee and the said Lessee does hereby rent and lease from the Lessor, all of that certain parcel of land situate at Kaohe, Hamakua, County and Island of Hawaii, State of Hawaii, and more particularly described in Exhibit "A", hereto attached and made a part hereof.

TO HAVE AND TO HOLD, all and singular the said prenises, herein mentioned and described, unto the said Lessee, for and during the term of <u>sixty-five (65) years</u>, to commence from the lst day of <u>January</u>, 1968, and to terminate on the <u>31st</u> day of <u>December</u>, 2033.

DEPARTMENT OF LAND AND NATURAL RESOURCES

EXHIBIT A

RESERVING UNTO THE LESSOR THE FOLLOWING:

- 1. Water Rights. All surface and ground waters appurtenant to the demised promises, together with the right to enter and to capture, divert or impound water; provided, that the Lessor shall exercise such rights in such manner as not to interfere unreasonably with the Lessee's use of the demised premises; provided, further, that the Lessee shall have the right to use the waters of Lake Waiau for any purpose necessary or incidental to the use permitted by this lease on the following conditions:
- a. No drilling or disturbance of Lake Waiau's bottom, banks or areas adjacent thereto shall be permitted;
- b. No activity shall be permitted which will result in the pollution of the waters of Lake Waizu;
- . C. Lessee shall not take or divert any of the waters arising from springs which furnish the water supply for Pohakuloa, and no alterations to said springs shall be made by Lessee.
- 2. Access. All rights to cross the demised premises for inspection or for any government purposes.
- 3. Hunting and Recreation Rights. All hunting and recreation rights on the demised lands, to be implemented pursuant to rules and regulations issued by said Board in discharging its fish and game or state parks responsibilities, provided, however, that such hunting and recreation activities shall be coordinated with the activities of the Lessee on the demised lands; and provided, further, that such hunting and recreation activities shall be limited to day-light hours only.

4. Right to use Demised Lands. The right for itself, and its successors, lessees, grantees and permittees, to use any portion of the lands demised and the right to grant to others rights and privileges affecting said land, provided, however, that, except as otherwise provided herein, no such use shall be permitted or rights and privileges granted affecting said lands, except upon mutual determination by the parties hereto that such use or grant will not unreasonably interfere with the Lessee's use of the demised premises; provided, further, that such agreement shall not be arbitrarily or capriciously withheld.

THE LESSEE, IN CONSIDERATION OF THE PREMISES, COVE-WANTS WITH THE LESSOR AS FOLLOWS:

- 1. <u>Surrender</u>. The Lessee shall, at the expiration or sooner termination of this lease, peaceably and quietly surrender and deliver possession of the demised premises to the Lessor in good order and condition, reasonable wear and tear excepted.
- 2. <u>Maintenance of the Premises</u>. The Lessee shall keep the demised premises and improvements in a clean, sanitary and orderly condition.
- 3. <u>Waste</u>. The Lessee shall not make, permit or suffer, any waste, strip, spoil, nuisance or unlawful, improper or offensive use of the demised premises.
- 4. Specified Use. The land hereby leased shall be used by the Lessee as a scientific complex, including without limitation thereof an observatory, and as a scientific reserve being more specifically a buffer zone to prevent the intrusion.

 of activities inimical to said scientific complex.

Activities inimical to said scientific complex shall include light and dust interference to observatory operation

during hours of darkness and certain types of electric or electronic installation on the demised lands, but shall not necessarily be limited to the foregoing.

- 5. Assignments. The Lessee shall not sublease, subrent, assign or transfer this lease or any rights thorounder without the prior written approval of the Board of Land and Watural Resources.
- during the existence of this lease to construct and erect buildings, structures and other improvements upon the demised premises; provided, that plans for construction and plot plans of improvements shall be submitted to the Chairman of the Board of Land and Natural Resources for review and approval prior to commencement of construction. The improvements shall be and remain the property of the Lessee, and shall be removed or disposed of by the Lessee at the expiration or sooner termination of this lease; provided, that with the approval of the Chairman such improvements may be abandoned in place. The Lessee shall, during the term of this lease, properly maintain, repair and keep all improvements in good condition.
- 7. Termination by the Lessee. The Lessee may terminate this lease at any time by giving thirty (30) days' notice in writing to the Lessor.
- 8. Termination by the Lessor. In the event that (1) the Lesses fails to comply with any of the terms and conditions of this lease, or (2) the lesses abandons or fails to use the demised lands for the use specified under paragraph 4 of these covenants for a period of two years, the Lessor may terminate this lease by giving six months' notice in writing to the Lesses.
- 9. Non-Discrimination. The Lessee covenants that the use and enjoyment of the premises shall not be in support of any

policy which discriminates against anyone based upon race, creed, color or national origin.

- 10. General Liability. The Lessee shall at all times, with respect to the demised premises, use due care for safety, and the Lessee shall be liable for any loss, liability, claim or demand for property damage, personal injury or death arising out of any injury, death or damage on the demised premises caused by or resulting from any negligent activities, operations or omissions of the Lessee on or in connection with the demised premises, subject to the laws of the State of Hawaii governing such liability.
- 11. <u>Laws, Rules and Regulations, etc.</u> The Lessee shall observe and comply with Regulation 4 of the Department of Land and Natural Resources and with all other laws, ordinances, rules and regulations of the federal, state, municipal or county governments affecting the demised lands or improvements.
- 12. Objects of Antiquity. The Lessee shall not appropriate, damage, remove, excavate, disfigure, deface or destroy any object of antiquity, prehistoric ruin or monument of historical value.
- 13. Undesirable Plants. In order to prevent the introduction of undesirable plant species in the area, the Lessee shall not plant any trees, shrubs, flowers or other plants in the leased area except those approved for such planting by the Chairman.

IN WITHESS WHERZOF, the STATE OF HAWAII, by its

Board of Land and Matural Resources, has caused the seal of
the Department of Land and Natural Resources to be harounto
affixed and these presents to be duly executed this

day of the suc-	, 1968, and the UNIVERSITY OF
HAWAII, by its	and
has caused these presents to	be duly executed this
day of	1968, effective as of the day and
year first above written.	•
	<u></u>
	STATE OF HAVALL
	Dunas Til
	Armo Chairman and Member
•	Board of Land and Natural Resources
And	me Menen Minis
.Dan.	Member /
	Board of Land and Natural Resources
	Matural Resources
•	
•	UNIVERSITY OF HAWAII
•	W. 670 2/24
•	Its ACING President
•	1
A., A	1. Shalil
And	Its
/ · ·- ·	
APPROVED AS TO FORM:	* Andrews
	•
Deputy Attorney General	
Dated:	
mn Proofed by:	
	·

EXHIBIT ."A"

MAUNA KEA SCIENCE RESERVE

Kaohe, Hamakua, Island of Hawaii, Hawaii Being a portion of the Government Land of Kaohe

Beginning at a point on the south boundary of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation Station "SUMMIT 1955" being 12,325.95 feet South and 471.84 feet West, as shown on Government Survey Registered Map 2789, thence running by azimuths measured clockwise from True South:-

- 1. Along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 13,200.00 feet, the chord azimuth and distance being: 135° 00' 18,667.62 feet;
- 2. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, still on a curve to the right with a radius of 13,200.00 feet, the chord azimuth and distance being: 225° 00' 18,667.62 feet;
- 3. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, still on a curve to the right with a radius of 13,200.00 feet, the chord azimuth and distance being: 281° 18' 04.6" 5173.56 feet;
- 4. 207° 49' 06.5" 841.83 feet along Mauna Kea Forest Reserve.

 Governor's Proclamation dated
 June 5, 1909;
- 5. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 1200.00 feet, the chord azimuth and distance being: 297° 49' 06.5" 2400.00 feet;

- 6. 27° 49' 06.5" 841.83 feet along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909;
- 7. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 13,200.00 feet, the chord azimuth and distance being:

 306° 59' 47.4" 1824.16 feet:
- 227° 29° 00.9" 2805.06 feet along Hauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909;
- 9. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 1500.00 feet, the chord azimuth and distance being: 317*
 29' 00.9" 3000.00 feet;
- 10. 47° 29' 00.9" 2805.06 feet along Mauna Kea Forest Reserve.

 Governor's Proclamation dated
 June 5, 1909;
- 11. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 13200.00 feet, the chord azimuth and distance being: 325° 31' 55.2" 701.87 feet;
- 12. 245° 46' 12.7" 2760.45 feet along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909;
- 13. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 2000.00 feet, the chord azimuth and distance being: 335° 46' 12.7" 4000.00 feet;
- 14. 65° 46' 12.7" 2760.45 feet along Nauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909;
- 15. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 13,200.00 feet, the chord azimuth and distance being: 352° 14' 32.9" 3563.50 feet;

16. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, still on a curve to the right with a radius of 13,200.00 feet, the chord azimuth and distance boing: 45° 00° 18,667.62 feet to the point of beginning and containing an ARSA OF 13,321.054 ACRES.

EXCEPTING and RESERVING to the State of Hawaii and to all others entitled thereto, the Hauna Ken-Humuula and Hauna Ken-Umikoa Trails, and all other existing trails within the above-described parcel of land, together with rights of access over and across said trails.

ALSO, EXCEPTING and RESERVING to the State of Hawaii, its successors and assigns, the waters and all riparian and other rights in and to all the streams within the above-described parcel of land.

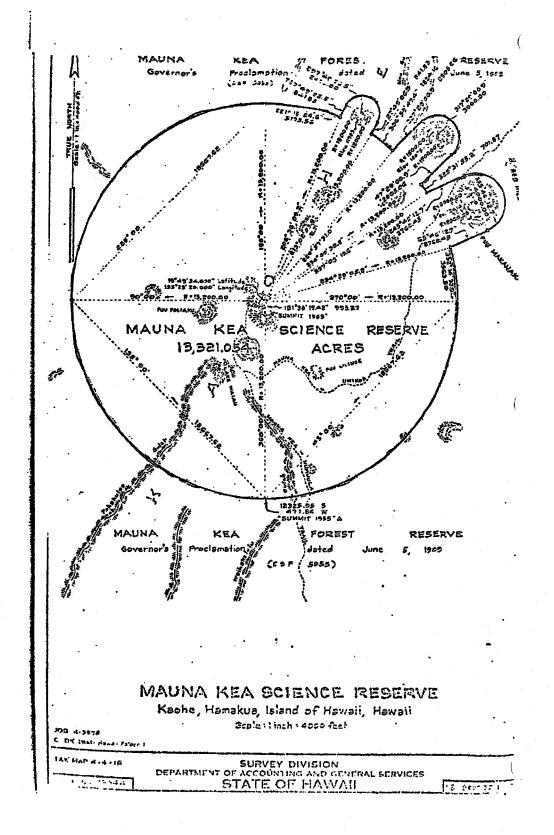


Exhibit B to Sublease

Consent to Sublease Under General Lease No. S-4191

(attached)

CONSENT TO SUBLEASE OF GENERAL LEASE NO. S-4191

CONSENT is hereby given by the STATE OF HAWAII, by its Board of Land and Natural Resources, Lessor under unrecorded General Lease No. S-4191 dated June 21, 1968, leased to the University of Hawaii, a public body corporate, as Lessee, to the attached Sublease and Non-Exclusive Easement Agreement ("Sublease") dated ________, 2014, from the UNIVERSITY OF HAWAII, a public body corporate, as "Sublessor," to TMT INTERNATIONAL OBSERVATORY LLC, a Delaware limited liability company, as "Sublessee"; SUBJECT, HOWEVER, to the provisions of Section 171-21, Hawaii Revised Statutes, as amended, relating to the rights of holder of security interests, PROVIDED, FURTHER, that noting contained herein shall change, modify, waive or amend the provisions, terms, conditions and covenants or the duties and obligations of the Lessee or Sublessee under General Lease S-4191.

IT IS UNDERSTOOD that except as provided herein, should there be any conflict between the terms of General Lease No. S-4191 and the terms of the Sublease, the former shall control; and that no further sublease or assignment of any interest of the premises or any portion thereof shall be made without the prior written consent of the Board of Land and Natural Resources.

IT IS FURTHER UNDERSTOOD AND AGREED by the STATE OF HAWAII, by its Board of Land and National Resources, that in the event said General Lease No. S-4191 is surrendered or defaulted upon by Lessee, UNIVERSITY OF HAWAII, prior to the expiration of the term thereof, the Sublease shall remain in full force and effect for the remainder of the term thereof, and Sublessee, TMT INTERNATIONAL OBSERVATORY LLC, shall be allowed its continued right to quiet enjoyment of the demised premises, upon and subject to the terms, conditions and covenants of General Lease No. S-4191. For the avoidance of doubt, for purposes of the immediately preceding sentence, a "surrender" by Lessee, UNIVERSITY OF HAWAII, does not include a mutual cancellation of said General Lease No. S-4191 and concurrent issuance of a New Master Lease (as defined in Section 9.a. of the Sublease) on terms that are acceptable to Sublessee or other master lease on terms that are acceptable to Sublessee, TMT INTERNATIONAL OBSERVATORY LLC, as contemplated by Section 9 of the Sublease.

FURTHERMORE, Lessee hereby acknowledges that the Lessor's consent to sublease under General Lease No. S-4191 does not release the Lessee of any and all responsibilities, obligations, liabilities, and claims respecting or arising under or out of said General Lease prior to the effective date of this consent.

DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P. O. Box 621
Honolulu, Hawaii 96809

IN WITNESS WHEREOF, Natural Resources, has caused the seal be hereunto affixed and these presents , 2014.	the STATE OF HAWAII, by its Board and Land and of the Department of Land and Natural Resources to to be fully executed on this day of
	STATE OF HAWAII
Approved by the Board of Land and Natural Resources at its meeting held on, 2014	By Chairperson and Member Board of Land and Natural Resources LESSOR
	UNIVERSITY OF HAWAII, a public body corporate
	By DAVID LASSNER Its President
	By HOWARD TODO Its Vice-President for Budget and Finance
	By DONALD STRANEY Chancellor, University of Hawai'i at Hilo
	LESSEE
APPROVED AS TO FORM:	
Deputy Attorney General Dated:	

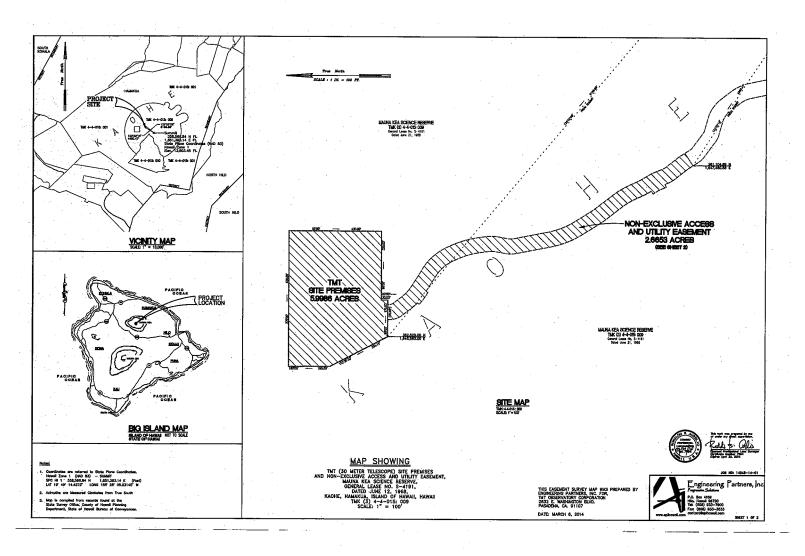
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P. O. Box 621
Honolulu, Hawaii 96809

STATE OF HAWAII CITY AND COUNTY OF HONOLULU)) ss.)	
On this day of	and DONALD STRANEY by that they are the Preside d Finance of the University Hilo, respectively, and that been duly authorized to execute been been duly authorized to execute been duly author	Y personally known, who, ent of the University of y of Hawai'i, and the at the foregoing instrument ecute such instrument on ority of its Board of DONALD STRANEY
	Name:	
	Notary Public, State of I	Hawaii
	My commission expires	s:
(Notary Stamp or Seal)		
NOTARY CERT	IFICATION STATEMENT	1
Document Identification or Description:	CONSENT TO SUBLEAS NO. S-4191	SE OF GENERAL LEASE
Document Date:No. of Pages:		
Jurisdiction (in which notarial act is perfo Circuit of the State of Hawaii	ormed): Third Judicial	
a	Date of Notarization and Certification Statement	(Notary Stamp or Seal)
Printed Name of Notary		(recary stamp or sear)

Exhibit C-1 to Sublease

Subleased Premises and Easement Area

(attached)



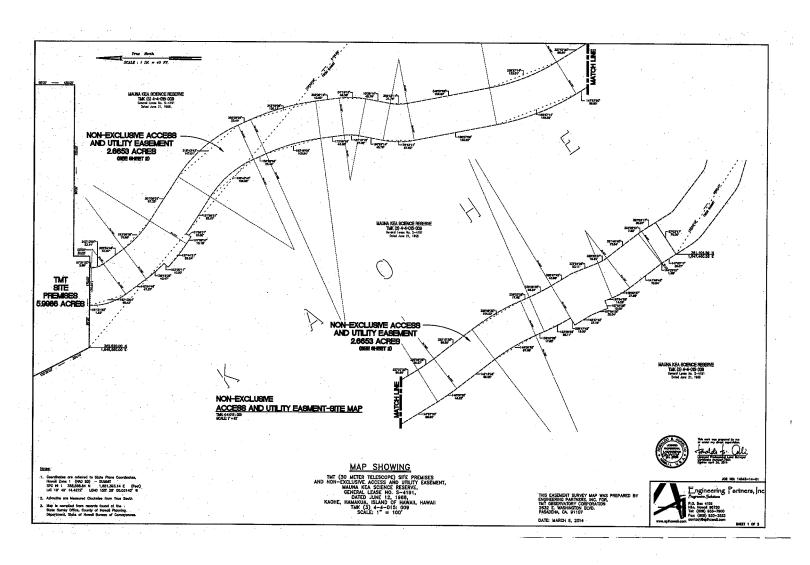


Exhibit C-2 to Sublease

Legal Description of Subleased Premises

(attached)

DESCRIPTION

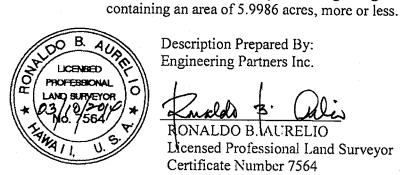
TMT SITE PREMISES

All of that certain parcel of land being a portion of the Government Land of Kaohe, being also a portion of Mauna Kea Science Reserve covered by General Lease S-4191 to the University of Hawaii Situate at Kaohe, Hamakua, Island of Hawaii, Hawaii

Beginning at the southwest corner of this parcel of land referred to the Hawaii State Plane Coordinate System, Zone 1 (NAD83) 362,519.00 feet North and 1,646,660.00 feet East and the direct azimuth and distance from the Government Survey Triangulation Station "SUMMIT 1955" being 129° 52' 08"; 6.166.86 feet and running by azimuths measured clockwise from True South:

1.	152°	35'	33"	304.14 feet along the remainder of the Government Land of Kaohe and the remainder of Mauna Kea Science Reserved covered by General Lease S-4191 to the University of Hawaii;
2.	180°	00'	00"	190.00 feet same;
3.	270°	00'	00"	630.00 feet along same;
4.	0°	00'	00"	430.00 feet along same;
5.	90°	00'	00"	320.00 feet along same;

30.00 feet along same;



Description Prepared By: Engineering Partners Inc.

170.00 feet along the same to the point of beginning and

RONALDO B. AURELIO

Licensed Professional Land Surveyor

Certificate Number 7564 Expires April 30, 2014

Hilo, Hawaii, March 10, 2014

 00°

00"

00"

6.

7.

Exhibit C-3 to Sublease

Legal Description of Easement Area

(attached)

DESCRIPTION

NON-EXCLUSIVE ACCESS AND UTILITY EASEMENT

All of that certain parcel of land being a portion of the Government land of Kaohe, being also a portion of Mauna Kea Science Reserve covered by General Lease S-4191 to the University of Hawaii Situate at Kaohe, Hamakua, Island of Hawaii, Hawaii

Beginning at the southwest corner of this parcel of land referred to the Hawaii State Plane Coordinate System, Zone 1 (NAD83) 361,104.89 feet North and 1,647,460.58 feet East and the direct azimuth and distance from the Government Survey Triangulation Station "SUMMIT 1955" being 122° 50' 16"; 4,680.47 feet and running by azimuths measured clockwise from True South:

1.	147°	03'	17"	feet along the remainder of the Government Land of Kaohe and the remainder of Mauna Kea Science Reserved covered by General Lease S-4191 to the University of Hawaii.
				University of Hawaii;

Thence along the same on a curve to the left with a radius of 15.00 feet, the chord azimuth and distance being;

2.	144°	25'	01"	1.38	feet;	
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3. 141° 46' 45" 73.94 feet along same;

Thence along the same on a curve to the right with a radius of 135.00 feet, the chord azimuth and distance being;

5. 157° 54' 28" 14.29 feet along same:

6. 67° 54' 28" 15.00 feet along same;

7. 157° 54' 28" 32.04 feet along same;

8. 148° 47' 42" 37.18 feet along same:

9. 238° 47' 42" 15.00 feet along same;

Thence along the same on a curve to the right with a radius of 435.00 feet, the chord azimuth and distance being;

10.	152°	25	35"	55.11	feet;
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11. 156° 03' 28" 17.62 feet along same;

Thence along the same on a curve to the left with a radius of 365.00 feet, the chord azimuth and distance being;

Thence along the same on a curve to the right with a radius of 435.00 feet, the chord azimuth and distance being;

Thence along the same on a curve to the right with a radius of 435.00 feet, the chord azimuth and distance being;

Thence along the same on a curve to the right with a radius of 155.00 feet, the chord azimuth and distance being;

Thence along the same on a curve to the left with a radius of 85.00 feet, the chord azimuth and distance being:

21	. 172°	09;	16"	43.65	feet along same;
					Thence along the same on a curve to the left with a radius of 365.00 feet, the chord azimuth and distance being;
22	. 163°	49'	06"	105.84	feet;
23	. 155°	28'	55"	25.44	feet along same;
					Thence along the same on a curve to the left with a radius of 185.00 feet, the chord azimuth and distance being;
24.	138°	43'	43"	106.65	feet;
25.	121°	58'	31"	82.07	feet along same;
26.	31°	58'	31"	10.00	feet along same;
27.	121°	58'	31"	15.18	feet along same;
					Thence along the same on a curve to the right with a radius of 275.00 feet, the chord azimuth and distance being;
28.	127°	44'	21"	55.24	fect;
29.	223°	30'	11"	10.00	feet along same;
					Thence along the same on a curve to the right with a radius of 265.00 feet, the chord azimuth and distance being;
30.	138°	12'	29"	43.47	feet;
31.	142°	54'	46"	47.07	feet along same;
					Thence along the same on a curve to the right with a radius of 105.00 feet, the chord azimuth and distance being;
32.	162°	13'	04"	69.43	feet;
33.	181°	31'	22"	1.83	feet along same;
34.	270°	00,	00"	70.02	feet along the TMT Building Site Easement:

35.	l°	31'	22"	3.69	feet along the remainder of the Government Land of Kaohe and the remainder of Mauna Kea Science Reserved covered by General Lease S-4191 to the University of Hawaii;
					Thence along the same on a curve to the left with a radius of 35.00 feet, the chord azimuth and distance being;
36.	342°	13'	04"	23.14	feet;
37.	322°	54'	46"	47.07	feet along same;
					Thence along the same on a curve to the left with a radius of 195.00 feet, the chord azimuth and distance being;
38.	312°	26	39"	70.86	fect;
39.	301°	58'	31"	97.25	feet along same;
					Thence along the same on a curve to the right with a radius of 255.00 feet, the chord azimuth and distance being;
40.	318°	43'	43"	147.01	feet;
41.	335°	28'	55"	25.44	feet along same;
					Thence along the same on a curve to the right with a radius of 435.00 feet, the chord azimuth and distance being;
42.	343°	49'	06"	123.13	feet;
43.	352°	09'	16"	43.65	feet along same;
					Thence along the same on a curve to the right with a radius of 155.00 feet, the chord azimuth and distance being;
44.	1°	19`	15"	49.38	feet;
45.	10°	29,	14"	45.76	feet along same:

Thence along the same on a curve to the left with a radius of 85.00 feet, the chord azimuth and distance being;

1.76 feet;

Thence along the same on a curve to the left with a radius of 365.00 feet, the chord azimuth and distance being;

Thence along the same on a curve to the left with a radius of 365.00 feet, the chord azimuth and distance being;

Thence along the same on a curve to the right with a radius of 435.00 feet, the chord azimuth and distance being;

Thence along the same on a curve to the left with a radius of 365.00 feet, the chord azimuth and distance being;

Thence along the same on a curve to the left with a radius of 65.00 feet, the chord azimuth and distance being;

58.	321°	46'	45"	73.94	feet along same;
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Thence along the same on a curve to the right with a radius of 85.00 feet, the chord azimuth and distance being:

39. 3	524°	25	01"	7.82 feet;
60. 3	27°	03,	17"	30.07 feet along same;
61.	57°	03'	17"	70.00 feet along same to the point of beginning and



Description Prepared By: Engineering Partners Inc.

containing an area of 2.6653 acres, more or less.

RONALDO B. AURELIO

Licensed Professional Land Surveyor

Certificate Number 7564 Expires April 30, 2014

Hilo, Hawaii, March 10, 2014