YU CHIEH (Teddy), Huang

Office: ASMAB 1014
Tel: +886-2-2366-5342
E-mail: ydhuang @asiaa.sinica.edu.tw

Qualifications Summary

- ✧ Advanced educational background includes Master of Science in Mechanical engineering.
- ✧ Formally certified professional project management for demonstrated experience, knowledge and performance in Project Management Certified professional project management.
- ✧ Extensive experience in the combination of Project management (PMP) and system engineering (INCOSE) to manage a project budget of 16M USD.
- ✧ Excellent interpersonal and communication skills; effective problem solver and team player.
- ✧ Effective communicator and presenter of comprehensive documents, reports and presentations.
- ✧ Enthusiastic self-starter who enjoys working in research & development environments.

Education

National Tsing-hua University
Master of Science in Power Mechanical Engineering 9/1999 – 6/2001

National Taiwan University of Science and Technology
Bachelor of Science in Mechanical Engineering 9/1997 – 6/1999

Certification

Certification in Project Management Professional, Project management Institute (PMI), USA, 2013
Microsoft Specialist: Managing Project with Microsoft Project 2013, July 2015

Languages

- ✧ Fluent in Chinese
- ✧ Advanced English
- ✧ Basic Level in German

Research Interests:

My work has been mainly involved in heterodyne detection projects at frequencies between 90 GHz and 690 GHz with the critical components cooled in a cryogenic chamber down to 4 K. Currently, I am expanding the work to the millimeter and sub-millimeter wavelength receiver development and system performance verifications. The current ongoing study is focusing on wide RF and IF bandwidth radio receiver development, and the silicon base fabrication process to create high-aspect-ratio microstructures.

My research interests are also in the research and development (R&D) of novel scientific instrumentation, which involves studying the system design methodology, modal analysis, manufacture technology, and testing analysis correlation of design. Introducing the project management knowledge and system engineering onto Academy research functional teams helps in analyzing and manage the complexity and risk of the system concept, architecture, and design improvement.

Professional Experience

2014-Present	Senior Research Engineer ,Institute of Astronomy and Astrophysics Academia Sinica
2010-2014	Associate Research Engineer, Institute of Astronomy and Astrophysics Academia Sinica
2006 - 2010	Assistant Research Engineer , Institute of Astronomy and Astrophysics Academia Sinica
2005-2006	AMiBA Site Manager, Institute of Astronomy and Astrophysics Academia Sinica
2001-2005	Mechanical Engineer,Institute of Astronomy and Astrophysics Academia Sinica

Field of Specialty

- Radio receiver system development, integration and verification
- Antenna system structure design and implementation
- Project management
- System engineering

Research Projects Participated

Years	Role	Project
2013- present	Project Manager	ALMA Band 1
2006-2013	Technical lead	ALMA EA FEIC
2011-Present	Antenna and receiver system Engineer	Greenland Telescope
2006-2010	Engineer	Carbon-Carbon (C-C) heat exchanger
2001-2006	Engineer/site manager	AMiBA
2001-2003	Engineer	SMA

Project/Research achievement:

- **ALMA Band 1 project:**

  I am leading the team for the project starting from the development phase. The main role is managing the project development, resource arrangement and schedule planning. My major task is plan, execute, and finalize projects within triple constraints of delivering on time, within budget and scope objectives, including acquiring resources and coordinating efforts of team members in order to deliver projects according to plan. As project manager I identify, effectively communicate, and resolve project issues and risks. It is essential to effectively communicate project status to project stakeholders; coach and motivate team members, influencing them to take positive action and accountability for assigned work. I am also introducing the system engineering discipline for the system concept, architecture, and design. It helps analyze and manage the project complexity and risk.

  The major achievement of this project is develop and produce 80 units of stat of art astronomical instrument. The Band 1 project is expecting to enable ALMA to see twice further into the Universe and detect molecular gas reservoirs in distant objects with higher redshifts because of its access to twice-longer wavelengths. Band 1 will bridge the gap between mm/submillimeter and cm-wave radio astronomy.

- **Greenland Telescope(GLT) project:**

  My major role in this project is supporting the antenna design, retrofitting, system dis-assembly, integration and radio receiver receiver system level design/integration.

By deploying the 12m Telescope to Greenland for submm-VLBI, allow us to achieve the ultimate observation goals in astrophysics for directly observe the immediate surrounding of a black hole with angular resolution comparable to its event horizon. Observing and imaging its event horizon would be extremely important because it would open a new window on the study of General Relativity in the strong field regime, accretion and outflow processes at the edge of a black hole, the existence of an event horizon, and fundamental black hole physics, e.g. spin.

- **ALMA East Asia front-end Integration :**
  I am leading the team in the technical aspect. The technical development includes the front-end integration acceptance, assembly verifications and system performance verifications. The team achieve the goal of Sub-millimeter wavelength receivers integration and verification.
  The ALMA telescope equip these stat of art front-end permit sensitive observations leading to transformative science of the cool Universe. This preeminent instrument can be for studies of the relic radiation from the early Universe and of the formation and evolution of stars, planetary systems, galaxies and even the origin of life itself.

Committee Service :

2020	Review committee Panel member: ALMA Band 7+8 Receiver Cartridge Development Project
2015	Review Panel member: Subaru Prime Focus Instrument (PFI) Critical Design Review (CDR) Meeting
2012	Review observer member: ALMA Band 4 Manufacturing Readiness Review
2011	Review observer member: ALMA 7m warm mirror Manufacturing Readiness Review meeting
2011	Review observer member: ALMA Band 10 Critical Design Review (CDR) Meeting
2011	Review Panel member: ALMA Band 8 Manufacturing Readiness Review
2010	Review Panel member: ALMA EU FEIC operation readiness review

2007	Review observer member: ALMA Band 3 Critical Design Review (CDR) Meeting
2007	Review observer member: ALMA Band 3 Critical Design Review (CDR) Meeting

Invited Talks:

2019	Title: ALMA Band 1 East Asian ALMA Development Workshop, Tokyo, Japan
2019	Title: ALMA Band 1 status and future development European ALMA Development Workshop, ESO, Garching, Germany
2016	Title: ALMA Band 1 URSI Asia-Pacific Radio Science (URSI AP-RASC) Conference, Seoul, South Korea

List of Publications

1. First Author Refereed Paper

I. Morata O; **Huang Ted**, "ALMA's long look", Nature Astronomy: 1, 0156, 2017-06

II. **Huang Y-D; Raffin P; Chen MT**, *"Stiffness Study of a Hexapod Telescope Platform"*, IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION: 59(6), 2022-2028, 2011-06

2. Co-Author Refereed Paper

I. Kim J-Y; Krichbaum TP; Broderick AE; ...; Asada K; ...; Bower GC; ...; Chen MT; ...; Ho P; ...; Huang C-WL; ...; Inoue M; ...; Koay JY; Koch PM; Koyama S; ...; Kuo CY; ...; Lo WP; ...; Matsushita S; ...; Nakamura M; ...; Rao R; ...; Algaba J-C; ...; Chang C-C; Chang S-H; ...; Chen C-C; Chilson R; ...; Han C-C; ...; **Huang Y-D**; ...; Jiang H; ...; Kubo D; ...; Li C-T; Lin LC-C; ...; Liu K-Y; ...; Martin-Cocher PL; ...; Meyer-Zhao Z; ...; Nishioka H; ...; Nystrom G; ...; Oshiro P; ...; Pradel N; ...; Raffin PA; ...; Shaw P; ...; Snow W; ...; Srinivasan R; ...; Wei T-S; ...; Yu C-Y; et al., *"Event Horizon Telescope imaging of the archetypal blazar 3C 279 at an extreme 20 microarcsecond resolution"* , Astronomy & Astrophysics: 640, id.A69 (21pp.), 2020-08

II. Gonzalez A; Kaneko K; Huang C-D; Huang Y-D, "Metal 3D-Printed 35-50-GHz Corrugated Horn for Cryogenic Operation" , Journal of Infrared, Millimeter, and Terahertz Wav: 42(9-10), p.960-973, Sep, 2021

III. Event Horizon Telescope Collaboration; Akiyama K; Alberdi A; ...; Asada K; ...; Bower GC; Chen MT; ...; Ho PTP; ...; Huang C-W L; ...; Inoue M; ...; Koay JY; Koch PM; Koyama S; ...; Kuo C-Y; ...; Lo W-P; ...; Matsushita S; ...; Nakamura M; ...; Pen U-L; ...; Pu H-Y; ...; Rao R; ...; Algaba J-C; ...; Chang C-C; Chang S-H; Chen C-C; Chilson R; ...; Han C-C; ...; Hasegawa Y; ...; Impellizzeri CMV; ...; Hirota A; ...; **Huang Y-D**; ...; Jiang H; ...; Kimura K; ...; Li C-T; Lin LC-C; ...; Liu K-Y; ...; Martin-Cocher PL; ...; Meyer-Zhao Z; ...; Nishioka H; ...; Nystrom G; ...; Oshiro P; ...; Pradel N; ...; Raffin PA; ...; Shaw P; ...; Snow W; ...; Srinivasan R; ...; Wei T-S; Yu C-Y; et al., *"First M87 Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole"* , ASTROPHYSICAL JOURNAL LETTERS: 875(1), L1, 2019-04

IV. Event Horizon Telescope Collaboration; Akiyama K; Alberdi A; ...; Asada K; ...; Bower GC; ...; Chen MT; ...; Ho PTP; ...; Huang C-W L; ...; Inoue M; ...; Koay JY;

Koch PM; Koyama S; ...; Kuo C-Y; ...; Lo W-P; ...; Matsushita S; ...; Nakamura M; ...; Pen U-L; ...; Pu H-Y; ...; Rao R; ...; Algaba J-C; ...; Chang C-C; Chang S-H; Chen C-C; Chilson R; ...; Han C-C; ...; **Huang Y-D**; ...; Jiang H; ...; Kubo D; ...; Li C-T; Lin LC-C; ...; Liu K-Y; ...; Martin-Cocher PL; ...; Meyer-Zhao Z; ...; Nishioka H; ...; Nystrom G; ...; Oshiro P; ...; Pradel N; ...; Raffin PA; ...; Shaw P; ...; Snow W; ...; Srinivasan R; ...; Wei T-S; Yu C-Y; et al., *"First M87 Event Horizon Telescope Results. II. Array and Instrumentation"* , ASTROPHYSICAL JOURNAL LETTERS: 875(1), L2, 2019-04

V. A. Gonzalez, V. Tapia, R. Finger, Chi-Den Huang, S. Asayama**, Y.-D. Huang**, ALMA band 1 optics (35-50 GHz): Tolerance analysis, effect of cryostat infrared filters and cold beam measurements, Journal of Infrared, Millimeter, and Terahertz Waves, 2017

VI. Hirashita H; Koch PM; Matsushita S; Takakuwa S; Nakamura M; Asada K; Liu HB; Urata U; Wang M-J; Wang W-H; Takahashi S; Tang Y-W; Chang H-H; Huang K; Morata O; Otsuka M; Lin K-Y; Tsai A-L; Lin Y-T; Srinivasan S; Martin-Cocher P; Pu J-Y; Kemper F; Patel N; Grimes P; **Huang Y**-D; Han C-C; Huang Y-R; Nishioka H; Lin C-CL; Zhang Q; Keto E; Burgos R; Chen M-T; Inoue M; Ho PTP; et al., "First-Generation Science Cases for Ground-Based Terahertz Telescopes" , PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN: 67(6),1, 2015-12 [SCI]

VII. ALMA Partnership; ...; Matsushita S; …; Espada D.; …; Chapillon E; ...; Hasegawa T; ...; Ohashi N; ...; **Huang Y-D**; Liu S-Y; Kemper F; Koch PM; Chen M-T; ...; Su Y-N; Trejo-Cruz A; Wang K-S; ...; Ho PTP; et al., "The 2014 ALMA Long Baseline Campaign: An Overview" , Astrophysical Journal Letters: 808(1), L1, 2015-07 [SCI]

VIII. Inoue M; Algaba-Marcos JC; Asada K; Chang C-C; Chen M-T; Han J; Hirashita H; Ho PTP; Hsieh S-N; **Huang T**; Jiang H; Koch PM; Kubo DY; Kuo C-Y; Liu B; Martin-Cocher P; Matsushita S; Meyer-Zhao Z; Nakamura M; Nishioka H; Nystrom G; Pradel N; Pu H-Y; Raffin PA; Shen H-Y; Snow W; Srinivasan R; Wei T-S; Blundell R; Burgos R; Grimes P; Keto E; Paine S; Patel N; Sridharan TK; Doeleman SS; Fish V; Brisken W; Napier P, "Greenland Telescope Project: Direct Confirmation of Black Hole with Sub-millimeter VLBI" , RADIO SCIENCE: 49(7), 564-571, 2014-07 [SCI]

IX. Yu-Wei Liao, Kai-Yang Lin, **Yau-De Huang**, Jiun-Huei Proty Wu, Paul T. P. Ho, Ming-Tang Chen, Chih-Wei Locutus Huang1,, Patrick M. Koch, Hiroaki Nishioka, Tai-An Cheng, Szu-Yuan Fu, Guo-Chin Liu, Sandor M. Molnar, Keiichi Umetsu, Fu-Cheng Wang, Yu-Yen Chang, Chih-Chiang Han, Chao-Te Li, Pierre Martin-Cocher, Peter Oshiro, *"PLATFORM DEFORMATION PHASE*

CORRECTION FOR THE AMiBA-13 COPLANAR INTERFEROMETER" , The Astrophysical Journal: 769(1), 608-613, 2013-05 [SCI]

X. Ching-Tang Liu, Ming-Jui Huang, **Yau De Huang**, *"An effective Method for improving the scanning plane accuracy of the planar Near-Field scanner system"* , Journal of Aeronautics, Astronautics and Aviation: 44(2), 103-110, 2012-08

XI. Koch PM; Raffin P; **Huang Y-D**; Chen M-T; Han C-C; Lin K-Y; Altamirano P; ...; Ho PTP; ...; Li C-T; Liao Y-W; Liu G-C; Nishioka H; ...; Oshiro P; Umetsu K; et al., *"1.2 m Shielded Cassegrain Antenna for Close-Packed Radio Interferometer"* , PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF THE PACIFIC: 123(900), 198-212, 2011-02

XII. **G.-C. Liu**; M. Birkinshaw; J.-H.P. Wu; **P.T.P. Ho**; C.-W.L. Huang; **Y.-W. Liao; K.-Y. Lin; S.M. Molnar; H. Nishioka; P.M. Koch; K. Umetsu**; F.-C. Wang; **P. Altamirano; C.-H. Chang; S.-H. Chang; S.-W. Chang; M.-T. Chen; C.-C. Han; Y.-D. Huang; Y.-J. Hwang; H. Jiang**; M. Kesteven; **D. Kubo; C.-T. Li; P. Martin-Cocher; P. Oshiro; P. Raffin; T. Wei**; W. Wilson , *"Contamination of the Central Sunyaev-Zel'dovich Decrements in AMiBA Galaxy Cluster Observations"* , ASTROPHYSICAL JOURNAL: 720(1), 608-613, 2010-09 [SCI]

XIII. Li CT; Kubo DY;...; Lin KY; Chen MT; Ho PTP; Chen CC; Han CC; Oshiro P; Martin-Cocher P; Chang CH; Chang SH; Altamirano P; Jiang H;...; Wang H; ...; Chang SW; **Huang YD**; Hwang YJ; ...; Koch P; Liu GC; Nishioka H; Umetsu K; Wei T; Wu JHP, ***"AMiBA Wideband Analog Correlator" ,*** *Astrophysical Journal: 716(1), 746-757, 2010-06*

XIV. Huang CWL; ...; Ho PTP; Koch PM; ...; Lin KY; Liu GC; Molnar SM; Nishioka H; Umetsu K; ...; Altamirano P; ...; Chang CH; Chang SH; Chang SW; Chen MT; ...; Han CC; **Huang YD**; Hwang YJ; Jiang H; ...; Kubo D; Li CT; Martin-Cocher P; Oshiro P; Raffin P; Wei T; et al., ***"AMiBA: scaling relations between the integrated Compton-y and X-ray derived temperature, mass, and luminosity"*** , ASTROPHYSICAL JOURNAL: 716(1), 758-765, 2010-06

XV. Liao Y-W; Wu J-HP; Ho PTP; Huang C-WL; Koch PM; Lin K-Y; Liu G-C; Molnar SM; Nishioka H; Umetsu K; Wang F-C; Altamirano P; Birkinshaw M; Chang C-H; Chang S-H; Chang S-W; Chen M-T; Chiueh T; Han C-C; **Huang Y-D**; Hwang Y-J; Jiang H; Kesteven M; Kubo DY; Li C-T; Martin-Cocher P;Oshiro P; Raffin P; Wei T; Wilson W, ***"AMiBA: Sunyaev-Zeldovich Effect Derived***

Properties and Scaling Relations of Massive Galaxy Clusters" , Astrophysical Journal: 713(1), 584-591, 2010-04

XVI. Chen MT; Li CT; Hwang YJ; et al., ***"AMiBA: Broadband Heterodyne CMB Interferometry"*** , ASTROPHYSICAL JOURNAL: 694(2), 1664-1669, 2009-04

XVII. Lin KY; Li CT; Ho PTP; et al., ***"AMiBA: System Performance"*** , ASTROPHYSICAL JOURNAL: 694(2), 1629-1636, 2009-04

XVIII. Wu JHP; Ho PTP; ...; Koch PM; ...; Lin KY; Liu GC; Molnar SM; Nishioka H; Umetsu K; ...; Altamirano P; ...; Chang CH; Chang SH; Chang SW; Chen MT; ...; Han CC; **Huang YD**; Hwang YJ; Jiang HM; ...; Kubo DY; ...; Li CT; Martin-Cocher P; Oshiro P; Raffin P; Wei TS; et al., ***"Array for Microwave Background Anisotropy: Observations, Data Analysis, and Results for Sunyaev-Zel'Dovich Effects"*** , ASTROPHYSICAL JOURNAL: 694(2), 1619-1628, 2009-04

XIX. Umetsu K; ...; Liu GC; Ho PTP; Koch PM; et al., ***"Mass and Hot Baryons in Massive Galaxy Clusters from Subaru Weak Lensing and AMiBA Sunyaev-Zel'dovich Effect Observations"*** , ASTROPHYSICAL JOURNAL: 694(2), 1643-1663, 2009-04

XX. Nishioka H; ...; Ho PTP; Koch PM; Lin K-Y; et al., ***"Tests of AMiBA Data Integrity"*** , ASTROPHYSICAL JOURNAL: 694(2), 1637-1642, 2009-04

XXI. Koch PM; et al., ***"The AMiBA Hexapod Telescope Mount"*** , ASTROPHYSICAL JOURNAL: 694(2), 1670-1684, 2009-04

XXII. Ho PTP; Altamirano P; Chang CH; Chang SH; et al., ***"The Yuan-Tseh Lee Array for Microwave Background Anisotropy"*** , ASTROPHYSICAL JOURNAL: 694(2), 1610-1618, 2009-04

3. <u>Conference Proceedings</u>

a. Philippe A. Raffin; Robert N. Martin; **Yau-De Huang**; Ferdinand Patt; Robert C. Romeo; Ming-Tang Chen; Jeffrey S. Kingsley, "CFRP platform and hexapod mount for the Array of MIcrowave Background Anisotropy (AMiBA)" Proc. SPIE 5495, Astronomical Structures and Mechanisms Technology, 2004

b. Yuh-Jing Hwang; Ming-Tang Chen; Homing Jiang; Tah-Hsiung Chu; Sun-Nieng Hsieh; Chi-Chian Han; Ferdinand Patt; West Ho; **Yau-Der**

Huang; Warwick Wilson“ W-band dual-polarization receiver for array of microwave background anisotropy (AMiBA)”, Proc. SPIE 5498, Millimeter and Submillimeter Detectors for Astronomy II, 2004

c. Chao-Te Li; Chih-Chiang Han; Ming-Tang Chen; **Yau-De Huang**; Homin Jiang; Yuh-Jing Hwang; Su-Wei Chang; Shu-Hao Chang; Pierre Martin-Cocher; Chia-Hao Chang; Chung-Cheng Chen; Warwick Wilson; Keiichi Umetsu; Kai-Yang Lin; Patrick Koch; Guo-Chin Liu; Hiroaki Nishioka; Paul T. P. Ho “Initial operation of the array for microwave background anisotropy (AMiBA)”, Proc. SPIE 6275, Millimeter and Submillimeter Detectors and Instrumentation for Astronomy III, 2006

d. Philippe Raffin; Patrick Koch; **Yau-De Huang**; Chia-Hao Chang; Joshua Chang; Ming-Tang Chen; Ke-Yung Chen; Paul T. P. Ho; Chih-Wie Huang; Fabiola Ibañez Roman; Homin Jiang; Michael Kesteven; Kai-Yang Lin; Guo-Chin Liu; Hiroaki Nishioka; Keiichi Umetsu, “Progress of the array of microwave background anisotropy (AMiBA)” Proc. SPIE 6273, Optomechanical Technologies for Astronomy, 62731I, 2006

e. ***Yau De Huang****, Philippe Raffin, Ming-Tang Chen,Pablo Altamirano,* Peter Oshiro, “**Photogrammetry measurement of the AMiBA 6-meter platform”,** Proc. Of SPIE 7012-89: Ground-based and Airborne Telescopes, 2008

f. Kai-yang Lin; Chao-Te Li; Juin-Huei Proty Wu; Patrick M. Koch; Keiichi Umetsu; Guo-Chin Liu; Hiroaki Nishioka; Pablo Altamirano; Derek Kubo; Chih-Chiang Han; **Yao-De Huang**; Philippe Raffin; Michael Kesteven; Chih-Wei Huang; Yo-Wei Liao; Fu-Cheng Wang; Su-Wei Chang; Chia-Hao Chang; Peter Oshiro; Shu-Hao Chang; Homin Jiang; Ming-Tang Chen; Yue-Jing Hwang; Warwick Wilson; Ke-Jung Chen; Fabiola Ibanez-Romano; Paul T.-P. Ho; Wei-Yan Pauchy Hwang, “AMiBA first year observation “Proc. SPIE 701207, Ground-based and Airborne Telescopes II, 2008

g. Shiang-Yu Wang; Eric J.-Y. Liaw; **Yao-De Huang**; Chyi-Fong Chiu; Dun-Zen Jeng; Yoshiyuki Doi; Fumihiro Uragachi; Yutaka Komiyama; Satoshi Miyazaki, “The shutter and filter exchanger system of Hyper Suprime-Cam” Proc. SPIE 70144A, Ground-based and Airborne Instrumentation for Astronomy II, 2008

h. Patrick Koch; Michael Kesteven; Yu-Yen Chang; **Yau-De Huang**; Philippe Raffin; Ke-Yung Chen; Guillaume Chereau; Ming-Tang Chen; Paul T. P. Ho; Chih-Wie Huang; Fabiola Ibañez-Romano; Homin Jiang; Yu-Wei Liao; Kai-Yang Lin; Guo-Chin Liu; Sandor Molnar; Hiroaki Nishioka; Keiichi Umetsu; Fu-Cheng Wang; Jiun-Huei Proty Wu; Pablo Altamirano; Chiao-Hao Chang; Shu-Hao Chang; Su-Wei Chang; Chi-Chiang Han; Derek Kubo; Chao-Te Li; Pierre Martin-Cocher; Peter Oshiro, "Platform deformation refined pointing and phase correction for the AMiBA hexapod telescope ",Proc. SPIE 7018, Advanced Optical and Mechanical Technologies in Telescopes and Instrumentation, 70181L, 2008

i. Keiichi Asada; Pierre L. Martin-Cocher; Chien-Ping Chen; Satoki Matsushita; Ming-Tang Chen; **Yau-De Huang**; Makoto Inoue; Paul T. P. Ho; Scott N. Paine; Eric Steinbring, "Opacity measurements at Summit Camp on Greenland and PEARL in northern Canada with a 225 GHz tipping radiometer ",Proc. SPIE 8444, Ground-based and Airborne Telescopes IV, 84441J, 2012

j. Y.-J. Hwang, C.-C. Chiong, Y.-F. Kuo, **Ted Huang**, D. Henke, M. Pospieszalski, N. Reyes, Ciska Kemper, and Paul Ho "ALMA Band-1: Key Components, Cartridge Design, and Test Plan," *2013 East-Asia ALMA Development Workshop,* Tokyo, Japan, July 2013

k. Y.-J. Hwang**,** C.-C. Chiong, Y.-F. Kuo, C.-C. Lin, C.-T. Ho, C.-C. Chuang, **Ted Huang**, Ciska Kemper, P T.-P. Ho, J. Effland, B. Mason, M. Pospieszalski, K. Siani, S. Sriknath, S. Claude, D. Henke, F. N.-H. Jiang, P. Dindo, K. Yeung, N. Reyes, L. Bronfman, F. P. Mena, M. Saito, S. Iguchi, "Development Status and Plan of the Band-1 Receivers for the Atacama Large Millimeter/submillimeter Array," *2013 Asia-Pacific Radio Science Conference*, Taipei, Taiwan, Sept. 2013.

l. Philippe Raffin; Juan Carlos Algaba-Marcosa; Keiichi Asada; Raymond Blundell; Roberto Burgos; Chih-Cheng Chang; Ming-Tang Chen; Robert Christensen; Paul K. Grimes; C. C. Han; Paul T. P. Ho; **Yau-De Huang**; Makoto Inoue; Patrick M. Koch; Derek Kubo; Steve Leiker; Ching-Tang Liu; Pierre Martin-Cocher; Satoki Matsushita; Masanori Nakamura; Hiroaki Nishioka; George Nystrom; Scott N. Paine; Nimesh A. Patel; Nicolas Pradel; Hung-Yi Pu; H.-Y. Shen; William Snow; Tirupati K. Sridharan; Ranjani Srinivasan; Edward Tong; Jackie Wang,

"The Greenland Telescope (GLT): antenna status and future ",Proc. SPIE 9145, Ground-based and Airborne Telescopes V, 91450G, 2014

m. Yuh-Jing Hwang; Chau-Ching Chiong; **Ted Huang**; Yue-Fang Kuo; Chi-Chang Lin; Chin-Ting Ho; Hedy Chuang; Marian Pospieszalski; Doug Henke; Stephane Claude; Nicolas Reyes; Ricardo Finger, "Development of band-1 receiver cartridge for Atacama Large Millimeter/submillimeter Array (ALMA) ",Proc. SPIE 9153, Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy VII, 91532H, 2014

n. Paul K. Grimes; K. Asada; R. Blundell; R. Burgos; H-H. Chang; M. T. Chen; D. Goldie; C. Groppi; C. C. Han; P. T. P. Ho; **Y. D. Huang**; M. Inoue; D. Kubo; P. Koch; J. Leech; E. de Lera Acedo; P. Martin-Cocher; H. Nishioka; M. Nakamura; S. Matsushita; S. N. Paine; N. Patel; P. Raffin; W. Snow; T. K. Sridharan; R. Srinivasan; C. N. Thomas; E. Tong; M.-J. Wang; C. Wheeler; S. Withington; G. Yassin; L.-Z. Zeng, "Instrumentation for single-dish observations with The Greenland Telescope", Proc. SPIE 9153, Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy VII, 91531V, 2014

o. Yuh-Jing Hwang; Chau-Ching Chiong; **Yau-De Huang**; Chi-Den Huang; Ching-Tang Liu; Yue-Fang Kuo; Shou-Hsien Weng; Chin-Ting Ho; Po-Han Chiang; Hsiao-Ling Wu; Chih-Cheng Chang; Shou-Ting Jian; Chien-Feng Lee; Yi-Wei Lee; Marian Pospieszalski; Doug Henke; Ricardo Finger; Valeria Tapia; Alvaro Gonzalez, "Band-1 receiver front-end cartridges for Atacama Large Millimeter/submillimeter Array (ALMA): design and development toward production ",Proc. SPIE 9914, Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy VIII, 99141X, 2016

p. Chau-Ching Chiong; Po-Han Chiang; Yuh-Jing Hwang; **Yau-De Huang**, "Strategies on solar observation of Atacama Large Millimeter/submillimeter Array (ALMA) band-1 receiver ",Proc. SPIE 9914, Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy VIII, 991421, 2016

q. Philippe Raffin; Paul T. P. Ho; Keiichi Asada; Raymond Blundell; Geoffrey C. Bower; Roberto Burgos; Chih-Cheng Chang; Ming-Tang Chen; Robert Christensen; You-Hua Chu; Paul K. Grimes; C. C. Han;

Chih-Wei L. Huang; **Yau-De Huang**; Fang-Chia Hsieh; Makoto Inoue; Patrick M. Koch; Derek Kubo; Steve Leiker; Lupin Lin; Ching-Tang Liu; Shih-Hsiang Lo; Pierre Martin-Cocher; Satoki Matsushita; Masanori Nakamura; Zheng Meyer-Zhao; Hiroaki Nishioka; Tim Norton; George Nystrom; Scott N. Paine; Nimesh A. Patel; Hung-Yi Pu; William Snow; T. K Sridharan; Ranjani Srinivasan; Jackie Wang," The Greenland Telescope: antenna retrofit status and future plans", Proc. SPIE 9906, Ground-based and Airborne Telescopes VI, 99060U, 2016

r. **Yau De (Ted) Huang**; Oscar Morata; Patrick Michel Koch; Ciska Kemper; Yuh-Jing Hwang; Chau-Ching Chiong; Paul Ho; You-Hua Chu; Chi-Den Huang; Ching-Tang Liu; Fang-Chia Hsieh; Yen-Hsiang Tseng; Shou-Hsien Weng; Chin-Ting Ho; Po-Han Chiang; Hsiao-Ling Wu; Chih-Cheng Chang; Shou-Ting Jian; Chien-Feng Lee; Yi-Wei Lee; Satoru Iguchi; Shin'ichiro Asayama; Daisuke Iono; Alvaro Gonzalez; John Effland; Kamaljeet Saini; Marian Pospieszalski; Doug Henke; Keith Yeung; Ricardo Finger; Valeria Tapia; Nicolas Reyes, "The Atacama Large Millimeter/sub-millimeter Array band-1 receiver", Proc. SPIE 9911, Modeling, Systems Engineering, and Project Management for Astronomy VI, 99111V, 2016

s. Hiroaki Nishioka; Chih-Wei Locutus Huang; Nimesh A. Patel; Derek Kubo; Ranjani Srinivasan; Chih-Chiang Han; Chen-Yu Yu; Homin Jiang; Lupin Chun-Che Lin; Zheng Meyer-Zhao; Pierre Martin-Cocher; Satoki Matsushita; Keiichi Asada; Makoto Inoue; Shoko Koyama; Craig Walther; Dan Bintley; Kuan-Yu Liu; Ryan Berthold; Tim Chuter; Per Friberg; Geoffrey C. Bower; Shu-Hao Chang; Ming-Tang Chen; Jessica Dempsey; Sheperd S. Doeleman; **Yau-De Huang**; Paul T. P. Ho; Jun-Yi Koay; Patrick M. Koch; Ching-Tang Liu; Wen-Ping Lo; Masanori Nakamura; Timothy Norton; George Nystrom; Peter Oshiro; Ta-Shun Wei, "Control and monitoring system for the Greenland Telescope: computers, network and software", Proc. SPIE 10700, Ground-based and Airborne Telescopes VII, 107005N, 2018

t. Ming-Tang Chen; Philippe Raffin; Paul T. P. Ho; Makoto Inoue; Ching-Tang Liu; **Yau-De Huang**; Chih-Chiang Han; Timothy J. Norton; Satoki Matsushita; Keiichi Asada; George Nystrom; Derek Kubo; Nimesh A. Patel; Shu-Hao Chang; Ta-Shun Wei; Pierre Martin-Cocher; Homin Jiang; Paul Shaw; Hiroaki Nishioka; Chih-Wei L. Huang; Chung-Chen Chen; Patrick Koch; Ryan Chilson; Ranjani Srinivasan;

Kuan-Yu Liu; Chen-Yu Yu; Geoffrey Bower; Peter Oshiro; William Snow; Shoko Koyama; Jun Yi Koay; Chao-Te Li; Wen-Ping Lo; Chih-Cheng Chang; Masanori Nakamura; Zheng Meyer-Zhao; Hung-Yi Pu; Lupin C. Lin; Daniel Bintley; Craig Walther; Per Friberg; Jessica Dempsey; T. K. Sridharan; Sheperd S. Doeleman; Roger Brissenden; Hideo Ogawa; Kimihiro Kimura; Yutaka Hasegawa; Jinchi Hao; Kuo-Chang Han; Song-Chu Chang; Li-Ming Lu; Juan-Carlos Algaba Marcos; Alex Allardi; Aaron Faber; Fu-li Hsu; Wei-Long Chen; Fang-Chia Hsieh, "The Greenland telescope: Thule operations" , Proc. SPIE 10700, Ground-based and Airborne Telescopes VII, 107000H, 2018

u. Satoki Matsushita; Keiichi Asada; Makoto Inoue; Hiroaki Nishioka; Chih-Wei L. Huang; Nimesh A. Patel; Jun Yi Koay; Shoko Koyama; Patrick Koch; Zheng Meyer-Zhao; Lupin C.-C. Lin; Paul T. P. Ho; Ming-Tang Chen; Timothy J. Norton; Kuan-Yu Liu; Chen-Yu Yu; Do-Young Byun; Juan-Carlos Algaba Marcos; Alex Allardi; Geoffrey C. Bower; Shu-Hao Chang; Chung-Chen Chen; Ryan Chilson; Aaron Faber; Chih-Chiang Han; **Yau-De Huang**; Homin Jiang; Derek Kubo; Ching-Tang Liu; Wen-Ping Lo; Pierre Martin-Cocher; Masanori Nakamura; George Nystrom; Peter Oshiro; Hung-Yi Pu; Philippe Raffin; Paul Shaw; Williams Snow; Ranjani Srinivasan; Ta-Shun Wei; Ryan Berthold; Daniel Bintley; Jessica Dempsey; Per Friberg; Craig Walther; Jonathan Weintroub; André Young; Ken Young; T. K. Sridharan; Sheperd S. Doeleman; Roger Brissenden; Hideo Ogawa; Kimihiro Kimura; Yutaka Hasegawa; Jinchi Hao; Kou-Chang Han; Song-Chu Chang; Li-Ming Lu, "Commissioning status of the Greenland Telescope (GLT)" , Proc. SPIE 10700, Ground-based and Airborne Telescopes VII, 1070029, 2018

v. Chih-Chiang Han; Ming-Tang Chen; **Yau-De Huang**; Derek Kubo; Chih-Cheng Chang; Shu-Hao Chang; Ta-Shun Wei; Ji-Dian Huang; Chung-Chen Chen; Philippe Raffin; Ching-Tang Liu; Paul T. P. Ho; Makota Inoue; Satoki Matsushita; Keiichi Asada; Timothy J. Norton; Ryan Chilson; Ranjani Srinivasan; Kuan-Yu Liu; Chao-Te Li; Daniel Bintley; Craig Walther; Per Friberg; Jessica Dempsey; Hideo Ogawa; Kimihiro Kimura; Yutaka Hasagawa; Sivasankaran Srikanth, "The first-light receivers for the Greenland Telescope" , Proc. SPIE 10708, Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy IX, 1070835, 2018

w. **Yau-De (Ted) Huang**; Oscar Morata; Patrick Michel Koch; Ciska Kemper; Yuh-Jing Hwang; Chau-Ching Chiong; Paul T. P. Ho; You-Hua Chu; Chi-Den Huang; Ching-Tang Liu; Fang-Chia Hsieh; Yen-Hsiang Tseng; Chia-Hsiang Yang; Jinn jy Tsay; Tsu Chang; Chin-Ting Ho; Po-Han Chiang; Chih-Cheng Chang; Shou-Ting Jian; Sung-Po Hsu; Chen Chien; Satoru Iguchi; Shin'ichiro Asayama; Daisuke Iono; Alvaro Gonzalez; John Effland; Kamaljeet Saini; Marian Pospieszalski; Doug Henke; Keith Yeung; Ricardo Finger; Valeria Tapia; Nicolas Reye, "Performance of pre-production band 1 receiver for the Atacama Large Millimeter/submillimeter Array (ALMA) ",Proc. SPIE 10708, Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy IX, 1070833, 2018

x. Derek Kubo; Chih-Chiang Han; Hiroaki Nishioka; Ryan Chilson; Ranjani Srinivasan; Sheng-Feng Yen; Kuo-Chieh Fu; Homin Jiang; Kuan-Yu Liu; Ta-Shun Wei; Chih-Wei Huang; Chen-Yu Yu; Peter Oshiro; Shu-Hao Chang; Chung-Cheng Chen; Philippe Raffin; **Yau-De Huang**; Pierre Martin-Cocher; Ming-Tang Chen; Makoto Inoue; Satoki Matsushita; Keiichi Asada; Shoko Koyama; Patrick Koch; Paul T. P. Ho; Yang-Tai Shaw; Timothy J. Norton; Nimesh A. Patel; Shepherd S. Doeleman; Daniel Bintley; Craig Walther; Per Friberg; Jessica Dempsey; Hideo Ogawa; Kimihiro Kimura; Yutaka Hasegawa; Ching-Tang Liu; Kou-Chang Han; Song-Chu Chang; Li-Ming Lu, "Electronics instrumentation for the Greenland telescope", Proc. SPIE 10708, Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy IX, 1070816, 2018

4. <u>Technical Report</u>

a. Yau De Huang, "ALMA Band 1 Cryogenic Low Noise Amplifier cost and performance analysis", 2017

b. Yau De Huang, "ALMA EA FEIC PROGRESS Report", 2010

c. Yau De Huang, "Photogrammetry Measurement of the AMiBA 13 elements 6-meter Platform", 2009