

TUGAS AKHIR ARSITEKTUR
“OBSERVATORIUM DAN PUSAT STUDI ASTRONOMI DI KABUPATEN
GUNUNG MAS”



DISUSUN OLEH:
LEONARD AXEL TIMOTHY
223020502043

DOSEN PEMBIMBING I:
Dr. INDRABAKTI SANGALANG, S. T., M. T.
NIP. 19750111 200003 1 004

DOSEN PEMBIMBING II:
WIJANARKA, S. T., M. T.
NIP. 19710615 199802 1 004

KEMENTERIAN PENDIDIKAN TINGGI, SAINS, DAN TEKNOLOGI
UNIVERSITAS PALANGKA RAYA
FAKULTAS TEKNIK
JURUSAN ARSITEKTUR
2026

HALAMAN PENGESAHAN TUGAS AKHIR
OBSERVATORIUM DAN PUSAT STUDI ASTRONOMI DI KABUPATEN
GUNUNG MAS
TUGAS AKHIR

Sebagai Salah Satu Syarat Menyelesaikan
Program Strata – 1 Pada Jurusan/Program Studi Arsitektur
Fakultas Teknik Universitas Palangka Raya

Oleh:

LEONARD AXEL TIMOTHY

NIM. 223020502043

Telah dipertahankan di depan tim penguji, pada :

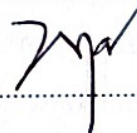
Hari/tanggal : Kamis, 2 Juli 2026
Waktu : 12.00-14.00
Tempat : Ruang Dosen Arsitektur

1 **Dr. Indrabakti Sangalang, S.T.,M.T.**
NIP. 19750111 200003 1003



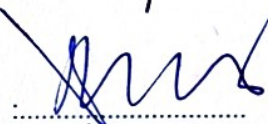
..... Dosen Pembimbing I

2 **Wijanarka, S.T.,M.T.**
NIP. 19710615 199802 1004



..... Dosen Pembimbing II

3 **Dr. Mandarin Guntur, S.T.,M.T.**
NIP. 19711003 199903 1001



..... Dosen Penguji I

4 **Fredyantoni F. Adji, S.T.,M.Sc**
NIP. 19790909 200501 1002



..... Dosen Penguji II

Mengetahui :

Jurusan/Program Studi Arsitektur
Fakultas Teknik Universitas Palangka Raya
Ketua



ALDERINA ROSALIA, S. T., M. T.

NIP. 19740915 200212 2002

SURAT PERNYATAAN KEASLIAN TUGAS AKHIR

Yang bertanda tangan dibawah ini :

Nama : Leonard Axel Timothy
NIM : 223020502043
Jurusan : Arsitektur
Fakultas : Teknik

Dengan ini menyatakan bahwa Tugas Akhir yang telah saya buat dengan judul "OBSERVATORIUM DAN PUSAT STUDI ASTRONOMI DI KABUPATEN GUNUNG MAS" Adalah asli (orisinalitas) atau tidak plagiat (menjiplak) dan belum pernah diterbitkan/dipublikasikan dimanapun serta dalam bentuk apapun.

Demikian surat pernyataan ini saya buat dengan sebenar-benarnya tanpa ada paksaan dari pihak manapun juga. Apabila dikemudian hari ternyata saya memberikan keterangan palsu dan ada pihak lain mengklaim bahwa Tugas Akhir yang telah saya buat adalah hasil karya milik orang lain atau badan tertentu dengan menyertakan bukti, maka saya bersedia diproses baik secara pidana ataupun perdata.

Palangka Raya, 2 Juli 2026

Yang menyatakan



Leonard Axel Timothy

223020502043

DAFTAR PUSTAKA

- Aksaker, N. *et al.* (2020) "Global site selection for astronomy," *Monthly Notices of the Royal Astronomical Society*, 493(1), pp. 1204–1216.
- Arditti, D. and Moore, P. (2008) *Setting-up a small observatory: from concept to construction*. Springer.
- Armus, L. *et al.* (2021) "Great Observatories: The Past and Future of Panchromatic Astrophysics," *arXiv preprint arXiv:2104.00023* [Preprint].
- Bortle, J.E. (2001) "The bortle dark-sky scale," *Sky and Telescope*, 161(126), pp. 5–6.
- Chaisson, E. and McMillan, S. (2017) "Astronomy: the universe at a glance," (*No Title*) [Preprint].
- Darwish, M.S. *et al.* (2023) "Multiparameter study for a new ground-based telescope in Egypt," *Monthly Notices of the Royal Astronomical Society*, 526(4), pp. 6330–6346.
- Espartero, F. *et al.* (2024) "New Astronomical Observatory Design for the Detection and Tracking of Satellite Objects: The Satellite Robotic Observatory (SRO)," *Remote Sensing*, 16(22), p. 4206.
- Falchi, F. *et al.* (2016) "The new world atlas of artificial night sky brightness," *Science advances*, 2(6), p. e1600377.
- Föhring, D. *et al.* (no date) "Site Selection for the Second Flyeye Telescope: A Simulation Study for Optimizing Near-Earth Object Discovery."
- Frampton, K. (1983) "Towards a Critical Regionalism: Six Points from an Architecture of Resistance," *The Anti-Aesthetic: Essays on Postmodern Culture* (Port Townsend: Bay Press, 1983), pp. 16–30.
- Green, R.F. *et al.* (2022) "The growing threat of light pollution to ground-based observatories," *The Astronomy and Astrophysics*

Review, 30(1), p. 1.

- Groat, L.N. and Wang, D. (2013) *Architectural research methods*. John Wiley & Sons.
- Grover, R., Emmitt, S. and Copping, A. (2019) "The language of typology," *arq: Architectural Research Quarterly*, 23(2), pp. 149–156. Available at: <https://doi.org/10.1017/S1359135519000198>.
- Hariz, A. *et al.* (2025) "Review on Site Suitability of Observatory Locations for Astronomy Purposes," 46(1), pp. 10042–10055.
- Herdiwijaya, D. *et al.* (2020) "Heliyon Measurements of sky brightness at Bosscha Observatory , Indonesia," 6(January). Available at: <https://doi.org/10.1016/j.heliyon.2020.e04635>.
- Hidayatun, M.I. (2018) *Jatidiri Arsitektur Indonesia, Regionalisme Dalam Konsep Bhineka Tunggal Ika*. K-media.
- Kansal, R. and Bassi, P. (2023) "Adapting design of Learning Spaces for Education 4.0: a case of architectural institutions in India," *Journal of e-Learning and Knowledge Society*, 19(3), pp. 119–130.
- Kumoro, N.B. (2020) "Dayak Kaharingan di tengah perubahan sosial ekologi dan praktik perpindahan agama di pedesaan Kalimantan Tengah Authors Nindyo Budi Kumoro," *Jurnal Masyarakat dan Budaya*, 22(1).
- Lee, D. *et al.* (2024) "WST: Widefield Spectroscopic Telescope: addressing the instrumentation challenges of a new 12m class telescope dedicated to widefield multi-object and integral field spectroscopy," in *Ground-based and Airborne Instrumentation for Astronomy X*. SPIE, pp. 314–322.
- Lu, Z. (2023) "Analysis of the Principle and State-of-art Applications of Astronomical Telescope," *physiinternational confrence on theoretical physics, computers and electronic engineering(TPCEE 2023)*, 72.
- Moneo, R. (1978) "On typology," *Oppositions* 13 [Preprint].
- Nadyrova, K. (2021) "Astronomical Observatory as an identifier of the

- architectural ensemble of Kazan Imperial University,” in *E3S Web of Conferences*. EDP Sciences, p. 1035.
- National Science Foundation (2025) *NSF-DOE Vera C. Rubin Observatory installs LSST Camera on telescope*. Available at: <https://www.nsf.gov/news/nsf-doe-vera-c-rubin-observatory-installs-lsst-camera> (Accessed: January 24, 2026).
- Oblinger, D. and Lippincott, J.K. (2006) *Learning spaces*. Educause Washington, DC.
- Oktawati, A.E., Rahmianti, R. and Pratiwi, N. (2020) “Karakteristik Arsitektur Gedung Mulo Sebagai Bangunan Heritage (Studi Kasus: Gedung Mulo, Makassar, Sulawesi Selatan),” *TIMPALAJA: Architecture student Journals*, 2(2), pp. 83–89. Available at: <https://doi.org/10.24252/timpalaja.v2i2a1>.
- Perrin, M.D., Sivaramakrishnan, A. and Lajoie, C.P. (2014) “Space Telescopes and Instrumentation 2014: Optical, Infrared, and Millimeter Wave, eds. JM O. Jr., M. Clampin, GG Fazio, & HA MacEwen,” in *Proc. SPIE*, p. 91433X.
- Petrucchioli, A. (1997) *Typological Process and Design Theory: Proceedings of the International Symposium... Held at MIT, Cambridge on March 1995; Ed. by Attilio Petruccioli*. Aga Khan Program for Islamic Architecture at Harvard University.
- Priyatikanto, R. et al. (2023) “Characterization of Timau National Observatory using limited in situ measurements,” *Monthly Notices of the Royal Astronomical Society*, 518(3), pp. 4073–4083.
- Rondón, E. et al. (2020) “OASI: A Brazilian Observatory Dedicated to the Study of Small Solar System Bodies — Some Results on NEO ’ s Physical Properties,” *Publications of the Astronomical Society of the Pacific*, 132(1012), p. 65001. Available at: <https://doi.org/10.1088/1538-3873/ab87a7>.
- Sado, A.B. and Zuhdi, M.H. (2020) “Urgensi Dan Kontribusi Observatorium Al-Afaq Uin Mataram Dalam Pengembangan Fikih Sains

- Astronomi Di Nusa Tenggara Barat,” *Istinbath*, 19(1), pp. 128–143. Available at: <https://doi.org/10.20414/ijhi.v19i1.208>.
- Safiai, M.H. *et al.* (2024) “The Influence and Adaptation of Observatories in Islamic Civilization: A Case of Malaysia Abstract This article explores the historical development of observatories for astronomical pursuits within the context of Muslim civilization . It aims to provide ,” 19(3), pp. 75–91.
- Sakti, A.D. *et al.* (2023) “Machine learning-based spatial data development for optimizing astronomical observatory sites in Indonesia,” *Plos one*, 18(10), p. e0293190.
- Shields, J.C. *et al.* (2024) “The instrumentation program at the Large Binocular Telescope Observatory in 2024,” in *Ground-based and Airborne Instrumentation for Astronomy X*. SPIE, pp. 30–35.
- Susanti, A.D. (2021) “Space Identity di Sekolah Arsitektur dan Seni Studi Kasus Sekolah Bauhaus dan Aa School Of Architecture London,” *Alur*, 4(1), pp. 29–36.
- Thampanichwat, C. *et al.* (2024) “The Architectural Design Strategies That Promote Attention to Foster Mindfulness: A Systematic Review, Content Analysis and Meta-Analysis,” *Buildings*, 14(8), p. 2508.
- Toyib, M., Pramesti, G.A. and Herachwati, N. (2024) “Enhancing public engagement and science communication through participatory astronomy: insights from the Surabaya Astronomy Club’s star party model,” *Journal of Science Communication*, 23(7), p. N02.
- Tzonis, A. (2004) “Critical regionalism: architecture and identity in a globalized world,” *Choice Reviews Online* [Preprint].
- Tzonis, A. and Lefaivre, L. (1981) “The grid and the pathway: An introduction to the work of Dimitris and Suzana Antonakakis,” *Architecture in Greece*, 15, pp. 164–178.

Vergara-Perucich, F. (2024) "Form and typology: systematic review in architectural publications."

Waumans, A. (2013) "The Typology of Astronomical Observatories," (August), pp. 57–58. Available at: <http://repository.tudelft.nl/islandora/object/uuid:4f0c21c3-8647-4608-9159-fb51f7d8b7cf/datastream/OBJ/view>.