



The Impact of Stargazing Events on Students' Interest in STEM in Ethiopia

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1. Unlocking Potential Under the Night Sky

1. Ideal Geographic and Atmospheric Conditions
2. Young and Growing Population
3. Emerging Astronomy Infrastructure
4. Improvement in accessibility of accessories and software and apps



ESSS
OUTREACH





2. Why Ethiopia? Unique Advantage

Ideal Observation Conditions

- ✓ Some of the world's clearest, darkest skies.
- ✓ Being around the equator enables viewing both of celestial hemispheres.

Rich Cultural Heritage

- ✓ Ancient astronomical traditions.
- ✓ Ethiopian calendar & agricultural timing.

National Development Goals

- ✓ Aligns with STEM capacity building.
- ✓ Supports educational development.

Bridging Educational Gaps

- ✓ Low-cost, high-impact solution.
- ✓ Reaches resource-limited schools.

3. Key Impacts on Students

1

Makes Science Tangible

W

Transforms abstract concepts into observable phenomena.

2

Inspires Awe & Curiosity

W

"Wow!" factor drives intrinsic motivation.

3

Connects Culture & Science

W

Links indigenous knowledge to modern astronomy.

4

Promotes Inclusivity

W

Engages girls in STEM and encourages participation of people with disabilities.

5

Builds Practical Skills

W

Technology, data analysis, critical thinking.

4. Evidence of Success

Proven Initiatives: ₳

Ethiopian Space Science Society (ESSS) and Space Science and Geospatial Institute (SSGI).

Public stargazing events.

Summer schools and planetarium visits.

Direct pipeline to STEM degrees.

University Outreach Programs in collaboration with ESSS:

- Demystifies higher education.
- Makes STEM fields accessible.

International Collaborations of IAU-OAE and OAD:

- Equipments and training support such as sunglasses, Galileo scopes, and lenses.
- Global knowledge exchange.



5. Challenges to Address

1

Resource Limitations

⌘ Limited telescopes and equipment.
Need for trained facilitators.

2

Logistical Barriers

⌘ Evening events in remote areas.
Safety and infrastructure concerns.

3

Curriculum Integration

⌘ Need for follow-up activities.
Connecting events to classroom learning.

4

Environmental Factors

⌘ Growing light pollution in cities.

6. Recommendations & Way Forward

Mobile Astronomy Kits

₩

Portable telescopes and lesson plans. Reach rural schools such as in Astrobus programs.

Teacher Training Programs

₩

"Train-the-trainer" model such as TTP. Build local expertise.

Culturally-Relevant Materials

₩

Local language content. Ethiopian astronomical heritage.

Sustained Engagement

₩

Astronomy clubs. Long-term student communities.

Media Partnerships

₩

Broadcast celestial events. National reach.



7. Conclusion

Stargazing: A Strategic Educational Tool
Transforms Ethiopia's day and night sky into
a dynamic classroom that:

1

Sparks scientific
curiosity.

2

Builds STEM
capacity.

3

Preserves cultural
heritage.

4

Empowers the next
generation.

The sky is not the limit - it is the classroom.

8. References

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Thank You