HOLLIS HANSON

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TRAFFIC ACCIDENT RECONSTRUCTION

EDUCATION

WHEATON COLLEGE

BS Physics **2026**

Double minor: Mathematics and Astronomy

Cum Laude; Eliza Wheaton Scholar

PROFESSIONAL PROFILE

Ms. Hollis Hanson is an Associate Accident Reconstructionist with a background in physics, mathematics, and astronomy. At Explico, Ms. Hanson uses her technical and analytical training to assist with accident reconstruction matters.

Ms. Hanson's research experience includes experimental design, laboratory testing, high-speed imaging, image processing, data reduction, calibration, Python-generated light curves, and quantitative analysis. She has applied tools including Google Colab, SAOImageDS9, Aperture Photometry Tool, plate solving, and Lomb-Scargle periodograms.

In addition to her technical work, *Ms. Hanson* has teaching, mentoring, coaching, and leadership experience, including work as an AstroCamp Instructor, Wheaton Academic Mentor, observatory operator and assistant, Space Camp crew trainer, resident advisor, and varsity volleyball team captain.

AREAS OF EXPERTISE

Accident Reconstruction
Evidence Documentation
Data Analysis for Research and Testing
Physics-Based Analysis
Laboratory Testing and Analysis
High-Speed Imaging and Data Processing

EXPERIENCE

Explico

2026 - Present *Associate Accident Reconstructionist*

AstroCamp

2026 - Present *Instructor*

Wheaton College

2023 - 2026 *Wheaton Academic Mentor*

2022 - 2024 *Observatory Operator and Assistant*

U.S. Space & Rocket Center

2025 *Crew Trainer*

Astronomy Tutoring

2022 *Astronomy Tutor*

RESEARCH

Analysis of the Magnus Effect on a Volleyball | Wheaton College, 2026

Designed and built a spin and release mechanism for a volleyball.

Used an Edgertronic high-speed camera to capture data.

Processed data in Google Colab to track a point on the volleyball.

Galaxy Observation and Processing of NGC 278 Images | Wheaton College, 2024

Collected multi-filter images of NGC 278 using iTelescope T5 at Utah Desert Observatory.

Reduced and calibrated data using SAOImageDS9.

Performed image alignment, stacking, and contrast enhancement.

Independent Short Period Variable Star Observation of TX CVn | Wheaton College, 2024

Adapted research procedure after on-campus observatory hardware failure by transitioning to iTelescope.

Conducted measurements using SAOImageDS9 and Aperture Photometry Tool.

Created Python-generated light curves using personal data and AAVSO archival data.

Short Period Variable Star Observation of EC 01541-1409 | Wheaton College, 2023

Performed plate solving and image calibration for data from iTelescope T32 in Australia and T72 in Chile.

Applied Lomb-Scargle periodograms to determine variable star periodicity.

Submitted final data to AAVSO.

International Baccalaureate Physics Internal Assessment | Parker, CO, 2021

Designed and executed an experiment measuring torque across different volleyball serve types.

Awards and Honors

College Sports Communicators Academic All-District Team, 2025
NEWMAC Fall Sportsmanship Team, 2024 and 2025
NEWMAC Volleyball All Academic Team, 2023, 2024, and 2025
Space Camp Crew Trainer Congeniality Award, 2025
Dean's List, four semesters, 2023 and 2024
NCAA Division III Starting Middle Blocker, 2022-2025
National Women in Sports Award, 2022
PAW Award, 2022
Balanced Award, International Baccalaureate, 2022
Scholar Athlete Award, seven times, 2018-2022
Colorado Motor Carriers Association Scholarship Recipient, 2022, 2023, and 2024
Wheaton College Presidential Scholarship, 2022