

Findings and Mysteries of the ACES S-STEM Project on Undergraduate Atmospheric Science Students at a Public Liberal Arts University



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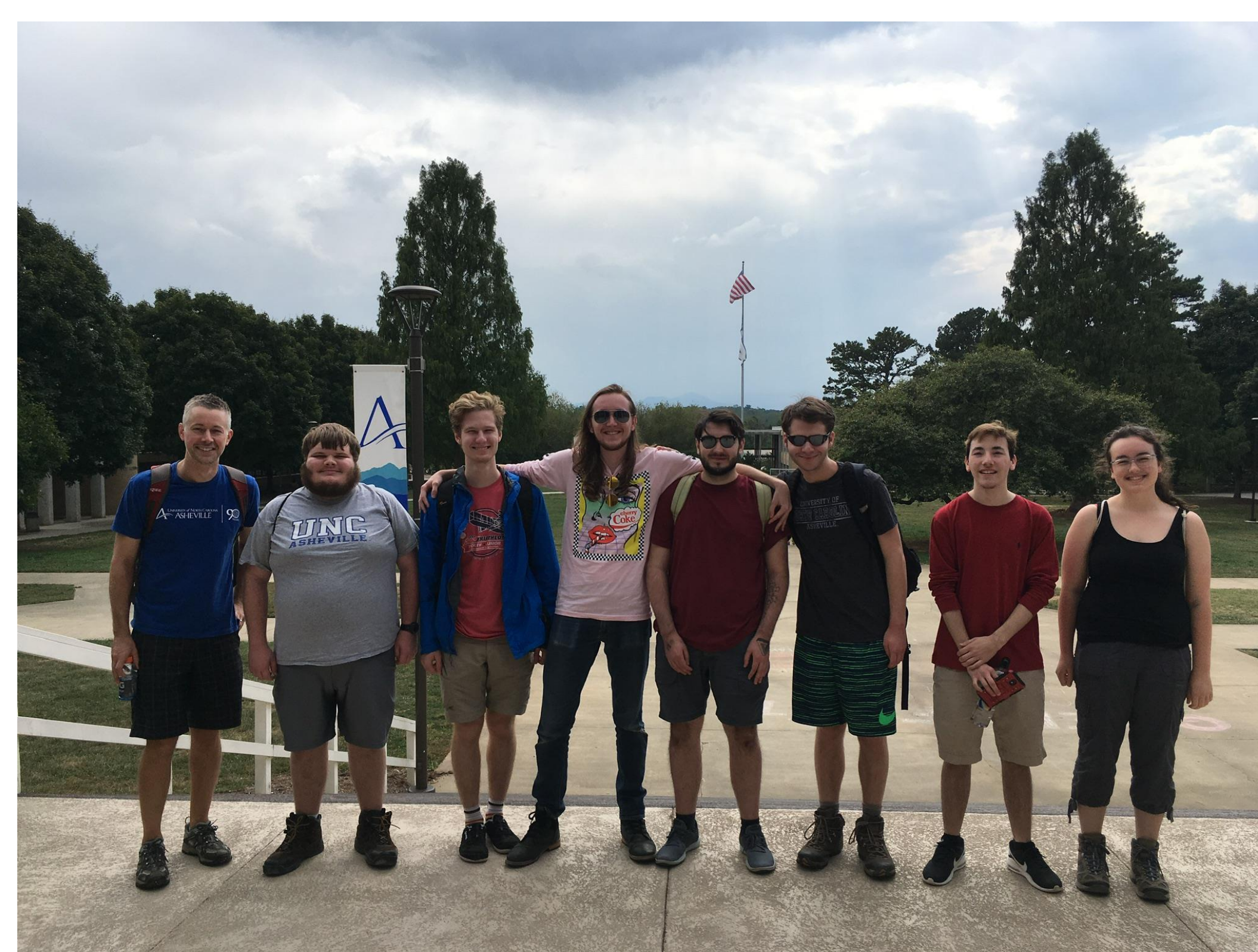
ACES project goals (since 2015)

- [1] Attract highly qualified students interested in majoring in the atmospheric sciences
 - a) academic ability
 - b) financial need

- [2] Retain students majoring in the atmospheric sciences

- [3] Provide a well-rounded education

- [4] Prepare students for careers in or related to the atmospheric sciences



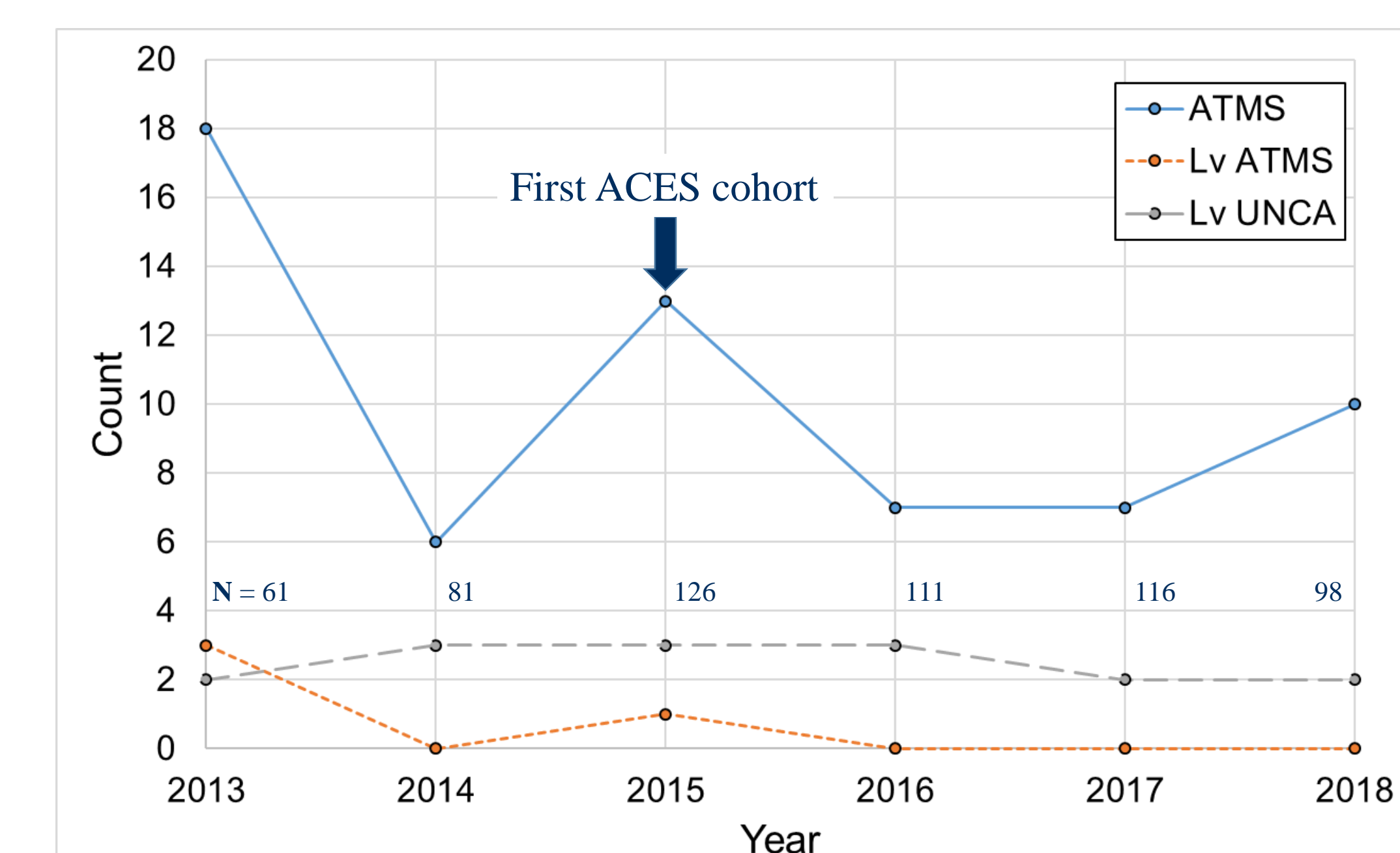
[1] Attract highly qualified students

- **greatest mystery of the project**

- on average, pre-college students apply to 8 [!] colleges/universities
- ACES scholarship offer ‘batting average’ (accept/offers) declining
- Expected Family Contribution (FAFSA) formula is suspect
 - some scholarship students still work part-time jobs
 - food and housing insecurity
- experimenting with personal outreach approaches

[2] Retain students

- **greatest success of the project**
- cohort class sections
- ‘The Cloud’ Living Learning Community (Ponder Hall)
- mentoring opportunities
- peer tutoring
- social events (hikes, Stories and Much S’more, game nights)
- academic advisory council



First year survey responses of students declaring atmospheric science (ATMS) as their major. Students leaving the major (Lv ATMS) or the university (Lv UNCA) polled in their first year.

[3] A well-rounded education

- teaching (outreach, tutoring)
- research (courses, sponsored field work, personal projects)
- operations (weather forecasts)

[4] Prepare students for careers in or related to the atmospheric sciences

- **greatest challenge of the project**
- job position at graduation may not have existed at time of enrollment
- grow creativity and foster skill development; hallmarks of a liberal arts education

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