

# **MN Space Grant Programs for Workforce Development and Recruitment of Students from Underserved Groups and Student Flight Programs in Minnesota**

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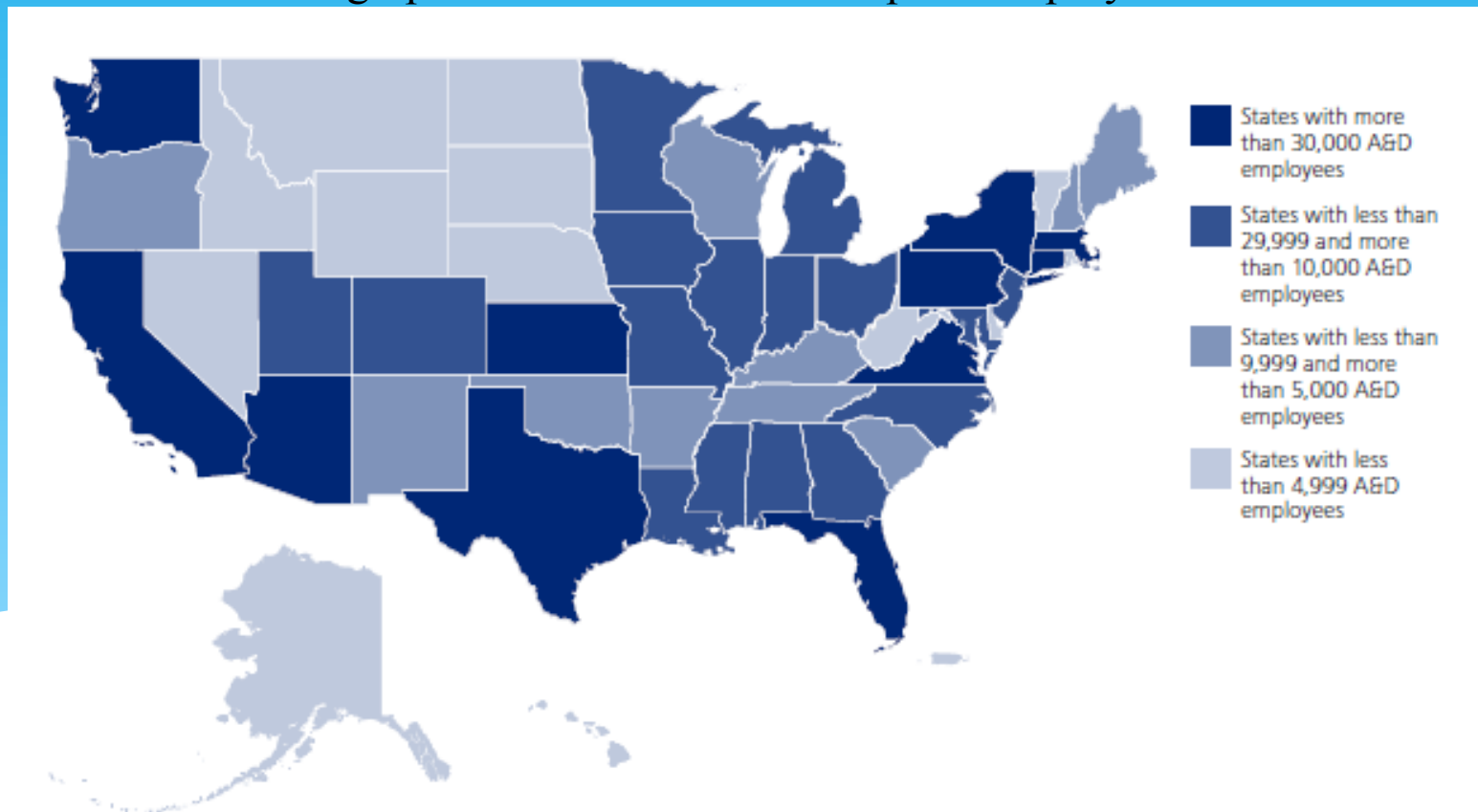
## Context – Minnesota Population

- 5.4 million population – 60% in Twin Cities Metro
  - African-American – 5.7%
  - Native American – 1.3%
  - Hispanic – 5%
- 32.2% of 25+ have bachelor's degree or higher (29% overall nationally)
- Median income 12<sup>th</sup> in nation
- High poverty rates among people of color (27%)

## Context – Aerospace Industry

- \$ 12.2 billion/year
- \$ 6.5 billion yearly payroll

### Geographic Distribution of Aerospace Employment



## **Aerospace Firms with a Strong Minnesota Presence**

- Cirrus Aircraft
- Honeywell
- BAE
- United Technologies
- 3M
- ATK
- Delta Airlines
- Mayo Clinic

## **Minnesota Space Grant Consortium – Affiliates**

- University of Minnesota – Twin Cities (lead institution)
- University of Minnesota – Duluth (part of U of MN system)
- Bemidji State Univ. – part of MN State Colleges and Univ. (MNSCU)
- Southwest Minnesota State University – MNSCU
- Fond du Lac Tribal and Community College – MNSCU
- Bethel University – Private
- Augsburg College – Private
- Carleton College – Private
- University of St Thomas – Private
- Concordia College, Moorhead – Private
- University of St Catherine – Private (an all-women institution)
- Macalester College – Private
- Leech Lake Tribal College
- Minnesota Department of Transportation (state govt. affiliate)

## **Minnesota Space Grant Consortium -- Partners**

- St Cloud State University – MNSCU
- University of Minnesota – Morris (part of U of MN system)
- Inver Hills Community College – MNSCU
- Century (Community) College – MNSCU
- Central Lakes Community College, Brainerd – MNSCU
- Minnesota West Community College, Worthington – MNSCU
- Itasca Community College – MNSCU
- Gustavus Adolphus College – Private
- AirSpace Minnesota – Non Profit
- FourthWing – Small Business
- Asterlabs – Small Business
- Science Museum of Minnesota – state govt. informal education
- Headwaters Science Center, Bemidji
- Minneapolis, St. Paul, and other school districts – public schools

## Some MN Space Grant Consortium Projects

- Senior Aerospace Design Projects
- High-Power Rocketry for Native American students
- High-Altitude Ballooning for Higher Ed. Research and Teacher Training
- Payloads for Suborbital Rocket Flights (out of Wallops)
- Space Suit Design Using e-textiles and Wearable Technology
- Undergraduate Research in Physics and Geology and other departments
- Astronomy Curriculum Development
- Ph.D. research in cosmology
- HASP Balloon Flights; X-ray detector test bed
- Analysis of Satellite and Atmospheric Remote Sensing Data
- Education and Public Outreach for Mars Curiosity Rover
- Aerospace Career Education (ACE) for Teachers
- Ballooning Initiative with Middle Schools
- (BRAND NEW!) Quadcopter Competition for Community Colleges

## 2013 Data on Student Awards – MN Space Grant Consortium

<i>FY2013 Student Award Summary</i>	<b>Number of Students</b>	Number of Awards to Female Students	Number of Awards to Male Students	Number of Awards to Underrepresented Minority Students
Fellowship/Scholarship	62	32	30	28
Higher Education	7	2	5	1
Research Infrastructure	36	17	19	3
<b>Total Awards</b>	<b>105</b>	<b>51</b>	<b>54</b>	<b>32</b>
<i>Calculates Automatically Total Funded Students</i>		<i>Total for both columns = Total Funded Students</i>		<i>Subset of Total Funded Students</i>
Summary Data (Calculates Automatically)	<b>Total Number of Awards</b>	<b>Percentage of Awards to Female Students</b>	<b>Percentage of Awards to Male Students</b>	<b>Percentage of Awards to Underrepresented Minority Students</b>
	<b>105</b>	48.6%	51.4%	30.5%

- Exceeded Female Goal (40%) and Minority Goal (20%)
- Challenge – Engage More Minority Students in Higher Ed. and Research