Demographics of the LWS heliophysics summer school
(in Haiku form)

Andrés Muñoz-Jaramillo
www.solardynamo.org
Courage + compassion + creativity + passion + inspiration = Lika
- The Survey Monkey
DISCLAIMER

Surveys gone unanswered making results uncertain. Introducing bias
- The Survey Monkey
Young minds receiving seeds of the local cosmos. Horizons expand.

- Karel Schrijver
Where do we come from?

More than 28 countries, all over the world!
Where do we come from?

More than 28 countries, all over the world!
New friends and mentors in a mountainous retreat
Science, Sun, and Space
- Mark Miesch
Race/Ethnicity

LWS – All Lecturers
Asian (East) (4%)
Asian (South) (8%)
Hispanic (4%)
White (84%)

25 answers

Quite difficult to measure!
Many approximations!
Race/Ethnicity

LWS – All Students

- White (45%)
- Asian (South) (23%)
- Hispanic (13%)
- Asian (East) (11%)
- Native American (1%)
- Black or African American (2%)
- Middle Eastern (5%)

83 answers

Quite difficult to measure! Many approximations!
Race/Ethnicity

LWS – US Lecturers
Asian (East) (7%)

White (93%)

14 answers

Quite difficult to measure!
Many approximations!
Race/Ethnicity

LWS – US Students

- White (78%)
- Asian (East) (7%)
- Hispanic (7%)
- Black or African American (4%)
- Native American (4%)

Quite difficult to measure!
Many approximations!
Race/Ethnicity

US Census (2010)

- White (67%)
- Hispanic (15%)
- Black or African American (12%)
- Middle Eastern (1%) and Native American (2%)
- Asian (East) (3%)
- Asian (South) (1%)

Quite difficult to measure! Many approximations!
LWS: MHD 4 CMEs. PHDs 2B. - Craig DeForest
Male/Female Ratio

Lecturers
- Male (88%)
- Female (12%)
- 26 answers

Students
- Male (61%)
- Female (39%)
- 85 answers

Still some room for improvement
Getting almost there!
Connecting the Sun, Dynamo to Corona
- Surface Flux Transport!
- Lisa Upton
Student Permanence

Can they stay or must they go?
A hard bottleneck

Still doing Science?
- Yes (92%)
- No (8%)

Still doing Heliophysics?
- Yes (89%)
- No (11%)

39 answers
35 answers
Student Permanence

Still working on research related to your PhD?

- Yes (63%)
- No (37%)

19 answers

Can they stay or must they go?
A hard bottleneck
Great Indian students!
When one of them goes back home, another arrives 😊

- The Survey Monkey
The Sun is a Star, like trillions in Milky Way, but dear to Earthlings.

- Thomas Ayres
Teaching Heliophysics

The summer school is useful
Lots of material
The summer school is useful
Lots of material
MY FAVORITE HAIKU:

Sun, flare, solar wind.
Earth's ionosphere coupling.
Living With a Star
- Rachael Filwett
The LWS summer school: Empowering a new generation of scientists to transcend traditional boundaries

Andrés Muñoz-Jaramillo
www.solardynamo.org

Neel Savani
https://sites.google.com/site/neelsavani/
Our humble beginnings
Taking our first steps in heliophysics
The PhD: Knowing a lot about a tiny part heliophysics

Making better models of the solar cycle

Understanding the 3D morphology of CMEs
The LWS summer school

2011

2012
BROADENING THE SCOPE AND IMPACT OF OUR RESEARCH
Active Regions: a Window into the Cycle and a Door into the Future
Research to Operations: Long lead time forecasts of CME properties

BzTool

INPUT: Cone or GCS model
- Solar Storm Origin: Lat: -5.03, Lon: 13.13
- Axis Tilt angle: 38.01
- Half Angular Width: 45.28

INPUT: Solar Surface

Leading polarity of Source Region: +ve

Leading Edge Arrival Time: 2016,08,01,1,0,0

<table>
<thead>
<tr>
<th>BI max prediction at L1 [mT]</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>VI max prediction at L1 [km/s]</td>
<td>450</td>
</tr>
</tbody>
</table>

Bz Prediction

Bz4Cast Model Forecast

Kp Index

Kp<4, Kp=4, Kp>4

2016-08-01 08:00-08:30 UT
HITTING THE WALL AND MAKING IT TO THE OTHER SIDE
• The challenge of going from first postdoc into career scientist increases significantly.

• Our solution has been to broaden our scientific impact by connecting our expertise with the rest of heliophysics.
KEEP CALM AND SCIENCE ON