Astrophysics Undergraduate Senior Thesis Presentations

Friday, March 30th in Phillips Auditorium
Harvard-Smithsonian Center for Astrophysics – 60 Garden Street

The Dynamics of Exoplanets and Galaxies

1:00 – 1:20
Constraining Local Group Dark Matter Using M33's Past Orbit
Marion Dierickx (advised by Avi Loeb)

1:20 – 1:40
A Systematic Search for New Kepler Circumbinary Planets
Ethan Kruse (advised by Darin Ragozzine)

1:40 – 2:00
Mapping the System Architecture of Qatar-2: A K dwarf Orbited by a Transiting Hot Jupiter and a Massive Outer Companion
Marta Bryan (advised by David Latham and Joshua Carter)

2:00 – 2:15 Break

Star Birth and Star Death

2:15 – 2:35
The Hierarchical Guide to the Galaxy
Tom Rice (advised by Alyssa Goodman)

2:35 – 2:55
Massive Star Formation in the DR21 Filament of Cygnus-X
William Hawley (advised by Qizhou Zhang and Joseph Hora)

2:55 – 3:15
Crafting a Pearl Necklace: The Circumstellar Interaction of SN 1987A
Dom Pesce (advised by Robert Kirshner)

3:15 – 3:30 Break

Dark Matter and the CMB

3:30 – 3:50
X-ray Follow-up for Planck Cluster Mass Proxies
Kevin Fogarty (advised by Christine Jones)

3:50 – 4:10
An Investigation of Gamma Rays in the Galactic Center
Duncan Watts (advised by Douglas Finkbeiner)

4:10 – 4:30
A Rotating Polarized Source: Instrument Development for Precision Calibration of Cosmic Microwave Background Polarimeters at the South Pole
Kristi Bradford (advised by John Kovac and Abigail Vieregg)