CHRISTIAN FLORES

PhD in Astrophysics

ASIAA,Taiwan
+886 (908) 563 035
caflores@asiaa.sinica.edu.tw
christianfloresg.github.io/

My scientific research mainly focuses on stellar magnetism and the physical properties of young stars. I use a combination of high-resolution near-IR spectroscopy and ALMA data to understand the formation and evolution of young stellar sources.

OBSERVING EXPERIENCE

NIR SPECTROSCOPY
IRTF, KECK, Magellan

(SUB)-MM OBSERVATIONS
ALMA, JCMT, SMA

COMPUTING SKILLS

- *Proficient in Python*
- *Stellar Radiative Transfer*
- *Disk Radiative Transfer*

LATEST AWARDS

- *2024 Awarded Academia Sinica Fellowship*
- *2022 Graduate Student Organization Research Award ($5,000).*
- *2018 Travel Award UH Manoa Graduate Student Organization..*

REFERENCES

Bo Reipurth
Astronomer, UH
- *Reipurth@ifa.hawaii.edu*

Michael S. Connelley
Associate Astronomer, IRTF
- *msc@ifa.hawaii.edu*

Nagayoshi Ohashi
Reserch Fellow, ASIAA
- *ohashi@asiaa.sinica.edu.tw*

PROFESSIONAL SUMMARY

Academia Sinica, Institute of Astronomy & Astrophysics
Postdoctoral Research Fellow | 2022 - 2024 | Taiwan

University of Hawaii at Manoa
PhD in Astronomy | 2017 - 2022 | USA
Doctoral thesis: "The Evolution of Magnetic Fields in Low-mass Young Stars"

University of Hawaii at Manoa
Master's Degree of Science Astronomy | 2015 - 2017 | USA

Universidad de Chile
B.S. Astronomy | 2010 - 2014 | Chile

ACADEMIC RESEARCH

Magnetic fields

I perform measurements of magnetic fields in young stars using high-resolution IR spectroscopy through the Zeeman effect. These observations allow us to understand how magnetic fields affect the surface and internal structure of young stars. Direct observations of magnetic fields and stellar properties also permit us to study the origin of magnetism in stars.

Young stars and protostars

I measure the physical properties of young stars using a combination of infrared spectroscopy and (sub)-mm observations. By measuring key stellar properties such as mass, age, and accretion, we can understand how young stars grow and evolve.

Protoplanetary Disks

I study the physical properties of protoplanetary disks through (sub)mm ALMA observations. By characterizing the amount of material in the disks, we can understand how much mass is available for planet formation and for further stellar growth. Characterizing the gas kinematics of disks is also a fundamental way of measuring stellar masses and testing theoretical stellar models.

MY RESEARCH ARTICLES

2024 ApJ - Protostars, IR Spectroscopy
"iSHELL K-band Survey of Class I and Flat Spectrum Sources: Magnetic field measurements in the protostellar phase"

2023 ApJ - Protostars, ALMA
"Early Planet Formation in Embedded Disks (eDisk). XII. Accretion Streamers, Protoplanetary Disk, and Outflow in the Class I Source Oph IRS 63"

2022 ApJ - Magnetic Fields, IR Spectroscopy
"The Effects of Starspots on Spectroscopic Mass Estimates of Low-mass Young Stars"

2021 AJ - Protoplanetary Disks, ALMA
"The Anatomy of an Unusual Edge-on Protoplanetary Disk. II. Gas Temperature and a Warm Outer Region"

2020 APJ- Young Stars, IR Spectroscopy
"Is T Tauri North a "Classical" T Tauri Star?"

2019 ApJ - Magnetic Fields, IR Spectroscopy
"Measuring the Magnetic Field of Young Stars Using iSHELL Observations: BP Tau and V347 Aur"

For further information regarding my research, kindly visit my website.