



David Mkrtichian, Senior Researcher, NARIT

- **Research interests**

EXOPLANETS:

- **Spectroscopic and photometric search for and studies of exoplanets**
- **Pulsating exoplanet host stars and stars with collapsing exoplanets**

ASTEROSEISMOLOGY:

- **Asteroseismology and atmospheric tomography of rapidly-oscillating magnetic stars**
- **Asteroseismology of mass-accreting components of semi-detached eclipsing binaries**
- **Pulsating main-sequence variables inside the instability strip**

MASS-TRANSFER AND CIRCUM-BINARY GAS ENVLOPES IN ALGOL SYSTEMS:

- **Study of spectroscopic indicators (He I lines) of mass-accretion and gas envelopes**
- **3-D hydrodynamic simulation of mass-transfer in Algol systems**
- **Study of interaction of magnetic activity and mass-transfer/accretion events on pulsations**

MY GOALS IN STUDYING CLOUDY:

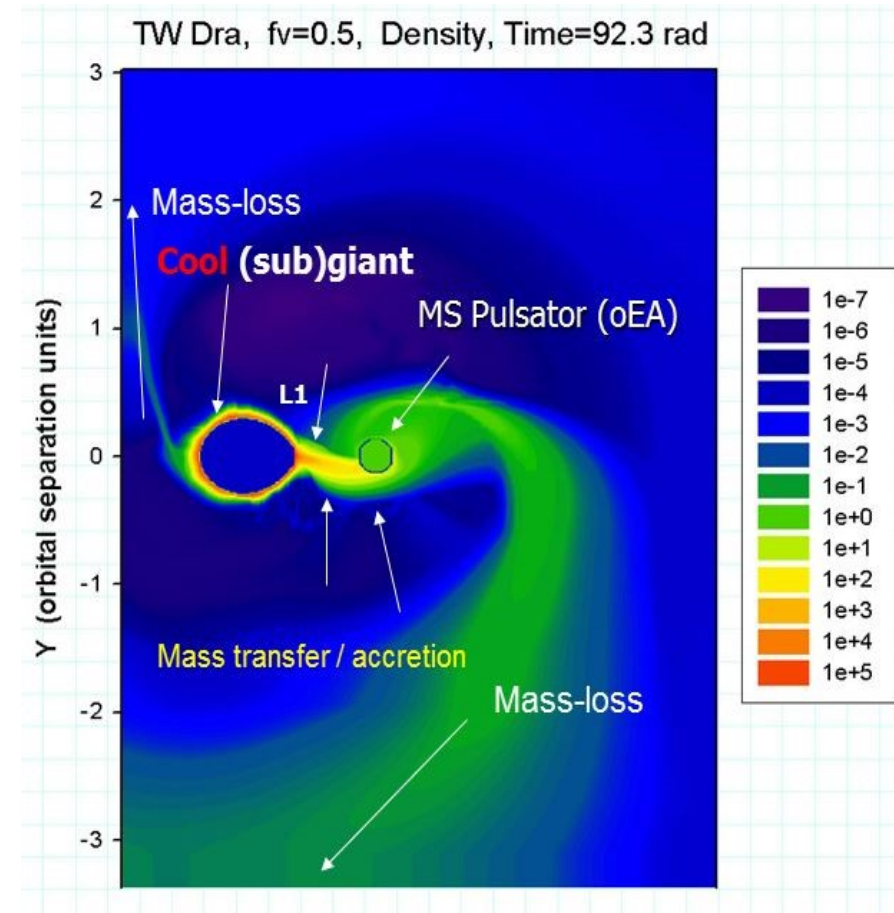
- **To study CLOUDY for its application in modeling of circulating gas-envelopes around mass-accreting star**

“ Studied a new class of mass-accreting pulsating primary components in Algol-type systems (oEA stars) ”

- Graduated master degree in majoring Astronomy from Chiang Mai University, Thailand. The topic of master thesis is “ Photometric and Spectroscopic Investigation of oEA stars under THASSOS project ”

Present work as assistant researcher at NARIT

- To study the results of photometric and spectroscopic investigations of Algol-type binary system to determine the physical parameters and study intrinsic pulsations of primary mass-accreting components.
- To develop a code for calculating the mode identification (periodic spatial filter method) and simulating eclipse modelling of oEA stars, which includes inclination of pulsation axis and mass-transfer from secondary component.



ESO Paranal

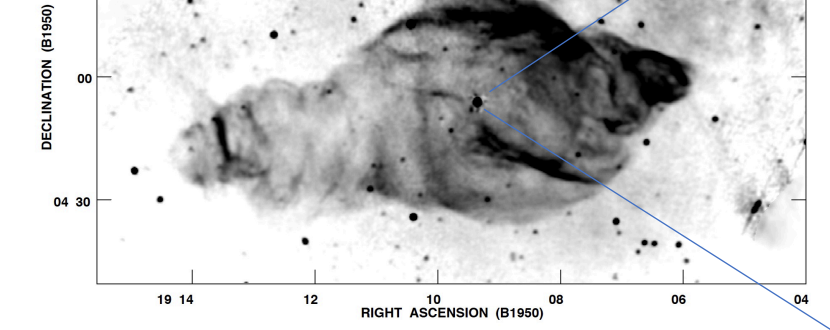


GRAVITY @ VLTI

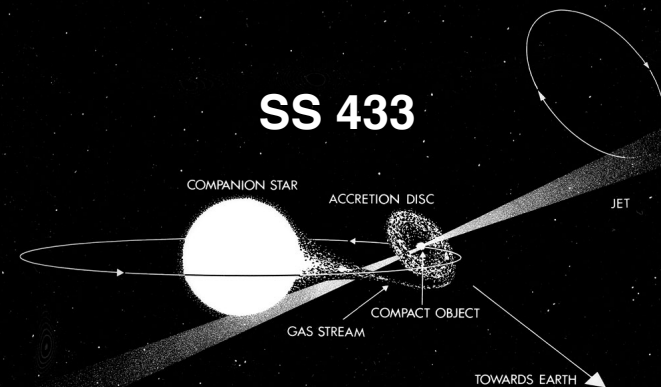


Baryonic Jets Resolved with Optical Interferometry $\leftarrow \sim 1$ mas

W50 / "sea-shell" Supernova Remnant



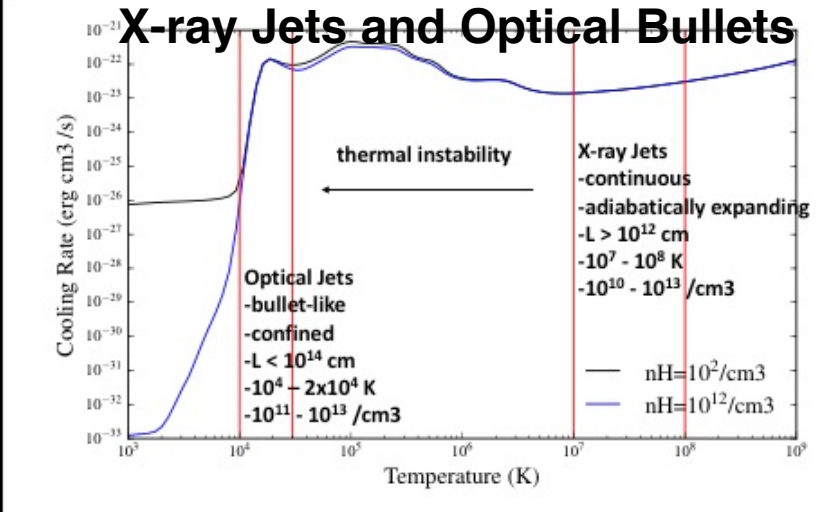
Idel Waisberg, MPE Garching



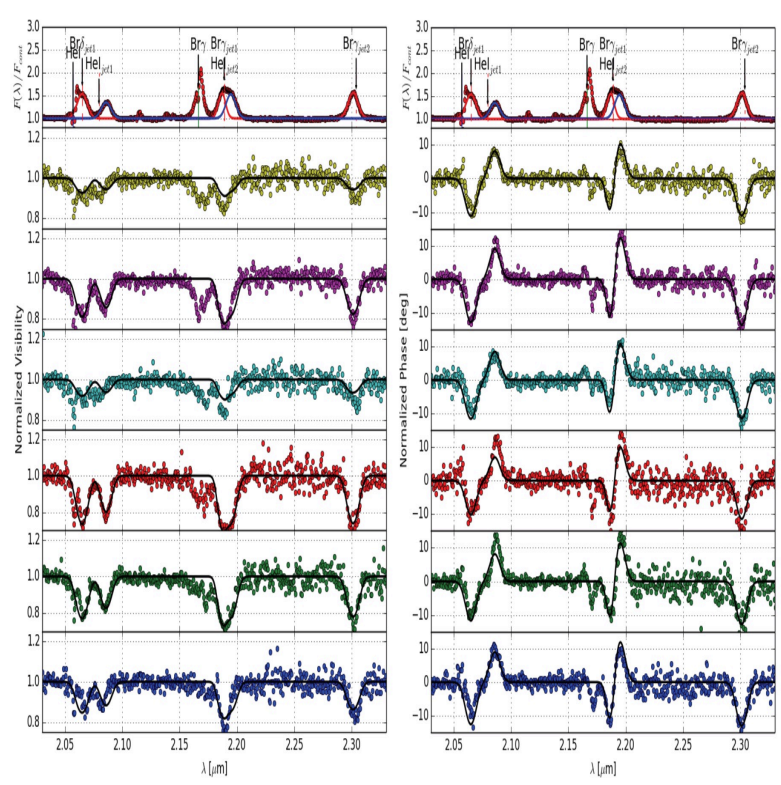
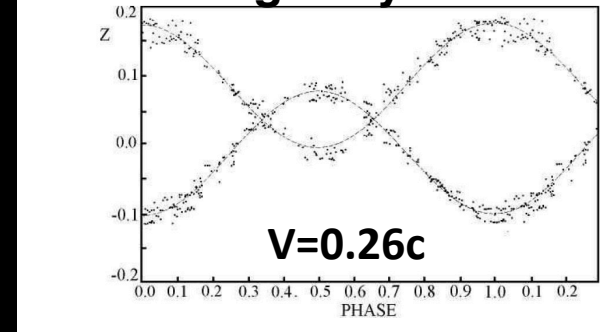
SS 433

The SS-433 System

X-ray Jets and Optical Bullets

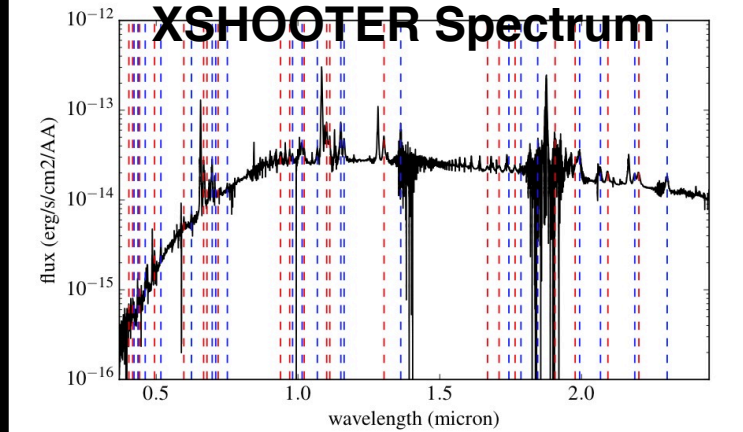


Precessing Baryonic Jets



My intended project:
 - Model the baryonic H I and He I jet lines of SS 433 with Cloudy with coronal and photoionization models

XSHOOTER Spectrum



Sutthawee Yodmongkol (Bright)

Undergraduate Student in Physics

Suranee University of Technology, Thailand



Research Interest :

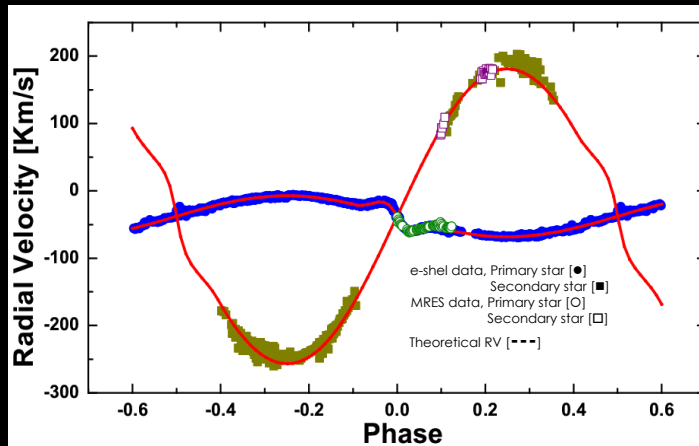
- Exoplanets

NAPAPORN A-THANO

National Astronomical Research Institute of Thailand
(Public organization)

Research interests : Spectroscopic analysis of the Oscillating
Eclipsing Algols (oEA) stars and Exoplanet
study by using radial velocity technique.

The radial velocity curve R CMa binary system (oEA stars).



RV curve of primary component of R CMa.
Rossiter effect appear on primary eclipse.

