

First Circular

“Superflares on Solar-type Stars and Solar Flares, and Their Impacts on Exoplanets and the Earth.”
「太陽型星のスーパーフレアと太陽フレア、およびその惑星・地球への影響」(Japanese title)

[Dates]

Meeting: 2016 March 1st (Tue)– March 4th (Fri)

(Excursion (Kyoto tour): 2016 March 5th (Sat))

[Venue]

Building 6, Graduate School of Science, Kyoto University

Address: Kitashirakawa-Oiwake-cho, Sakyo-ku, Kyoto 606-8502, Japan

Access: <http://www.kusastro.kyoto-u.ac.jp/access/access.html>



[Host & Sponsorship]

- International Research Unit of Advanced Future Studies, Kyoto University
- Kwasan and Hida Observatories, Graduate School of Science, Kyoto University
- Department of Astronomy, Graduate School of Science, Kyoto University
- Unit of Synergetic Studies for Space, Kyoto University

[Purpose]

Main purpose of this workshop is to review and discuss superflares on solar type stars and related stars, solar white light flares, modeling of optical spectrum of solar white light flares and stellar flares, long term variation of stellar activity and starspots, dynamo theory of big spots leading to superflares on solar type stars, and to discuss possibility of superflares on the Sun, impacts of stellar superflares on exoplanets, and future possible impacts of solar superflares on the Earth. We also would like to encourage collaboration among participants on these subjects during the workshop and future.

Topics:

- Observations of stellar superflares and solar white light flares,
- Chromospheric dynamics of flares
- Starspots, Dynamo
- Long term stellar activity variation
- Impacts of flares on the planets
- Future plans of superflare studies

[SOC & LOC]

• SOC

Kazunari Shibata (Kyoto University, Chair)
Suzanne Hawley (University of Washington)
Hiroyuki Maehara (NAOJ)
Satoshi Honda (University of Hyogo)
Kiyoshi Ichimoto (Kyoto University)
Hiroaki Isobe (Kyoto University)

• LOC:

Daisaku Nogami (Kyoto University, Chair)
Ayumi Asai (Kyoto University)
Takako T. Ishii (Kyoto University)
Yuta Notsu (Kyoto University)
Shota Notsu (Kyoto University)
Kosuke Namekata (Kyoto University)

[Participants (at present)]

Invited Speakers

Suzanne Hawley (University of Washington, USA)
Adam Kowalski (NASA, GSFC, USA)
Steven Saar (Harvard-Smithsonian Center for Astrophysics, USA)
Luiz A. Balona (South African Astronomical Observatory, South Africa)
Valery Nakariakov (University of Warwick, UK)
Kyoko Watanabe (National Defence Academy, Japan)
Masashi Omiya (NAOJ, Japan)
Yoichi Takeda (NAOJ, Japan)
Hideyuki Hotta (Chiba University, Japan)

Other Participants (at present)

Superflare group

Hiroyuki Maehara (NAOJ, Japan), Satoshi Honda (Hyogo University, Japan)

Kazunari Shibata, Daisaku Nogami, Yuta Notsu,

Shota Notsu, Kosuke Namekata, (Kyoto University, Japan)

Other Kyoto University members (solar physics and exoplanets)

Kiyoshi, Ichimoto, Takako T. Ishii, Ayumi, Asai, Hiroaki Isobe, Takanori Sasaki

Shinsuke Takasao, Takuya Takahashi, and some graduate students

Other guests

Bun'ei Sato (Tokyo Tech University, Japan)

Han Yuan Chang (National Central University, Taiwan)

Some people working on 3.8 telescope project

[Current tentative plan of the program]

15min = 12min talk + 3min discussion

30min = 25min talk + 5min discussion

45min = 35min talk + 10min discussion

50min = 40min talk + 10 min discussion

60min = 45min talk + 15min discussion

3/1(Tue) Observation of Stellar Superflares and Solar White Light Flares

Time	Name	Rough contents of the talk
10:00-10:10	Kazunari Shibata	Opening remarks
10:10-11:00	Hiroyuki Maehara	Superflare studies by Kyoto group (Kepler data)
11:00-12:00	Suzanne Hawley	Observation of stellar flares
12:00-13:30	Lunch	
13:30-14:30	Adam Kowalski	Modeling of optical spectrum of stellar flares
14:30-15:30	Kyoko Watanabe	Solar white light flares
15:30-16:00	Break	
16:00-16:30	Takako T. Ishii	White light flares observed at Hida Observatory
16:30-16:45	Kosuke Namekata	Statistical properties of solar white-light flares
16:45-17:00	Han Yuan Chang	TBD

3/2(Wed) Observation of Stellar Superflares and Spectroscopic Observations

10:00-11:00	Luiz A. Balona	Flare stars across the H–R diagram
11:00-12:00	Valery Nakariakov	Oscillations of stellar flares
12:00-13:30	Lunch	
13:30-14:15	Yuta Notsu	Spectroscopic observations of solar-type superflare stars
14:15-14:30	Satoshi Honda	Stellar flare observation at Nishiharima Observatory
15:00-16:30	Break	
15:00-16:00	Yoichi Takeda	Activity of solar-type stars
16:00-17:00	Steven Saar	Long-term activity variation of solar-type stars

3/3(Thu) Possibility of superflares on the Sun

10:00-10:30	Kazunari Shibata	Can superflares occur on the Sun?
10:30-11:30	Hideyuki Hotta	Solar and stellar dynamo
11:30-11:45	Hisashi Hayakawa, Haruhumi Tamazawa, or Akito D.Kawamura	Historical records of aurora and sunspots
11:45-	Lunch	
PM	Tour to Kwasan Observatory (Excursion 1) http://www.kwasan.kyoto-u.ac.jp/general/facilities/index_kwasan_en.html	

3/4(Fri) Planets (AM) & Future Plans (PM)

10:00-10:30	Shota Notsu, Takanori Sasaki, or Hiroyuki Ishikawa	Impacts of superflares on the planets
10:30-11:30	Masashi Omiya	Observations of exoplanets and stellar activity
11:30-11:45	Takuya Takahashi	CMEs of solar superflares
11:45-13:15	Lunch	
13:15-13:45	Daisaku Nogami	Kyoto 3.8m telescope and future plans of our superflare studies
13:45-17:00	Discussions	Future plans of superflare studies (Moderators: Daisaku Nogami and Kazunari Shibata)

3/5(Sat)

Kyoto tour (Excursion 2)