

A15a **Space weather researches using data accumulated with Continuous H-Alpha Imaging Network (CHAIN)**

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Kwasan and Hida Observatories (Kyoto Univ.) have led "Continuous H-Alpha Imaging Network (CHAIN)". Under the CHAIN-project, we have accumulated multiwavelength solar full-disk chromospheric imaging data. By using CHAIN's data and combining with other instruments' data including satellites, we have promoted international collaborative space weather researches mainly in the following three themes:

1. 3D velocity field measurement of eruptive phenomena on the solar surface
2. Detection of shock waves (Moreton waves) generated by solar explosive phenomena
3. Estimation of solar UV radiation and comparison with ionospheric variation

In this talk, at first, we explain why the data of the CHAIN are effective for these themes. Then, we briefly introduce the following studies concretely:

- a case-study of generating process of a CME that is accompanied with a filament disappearance,
- a statistical study of relationship between the filament eruption and shock wave in the solar plasma,
- a case-study on a filament eruption that shows some evidences of existence of coronal shock wave,
- an investigation of long-term variation of solar UV radiation and geo-magnetic field during solar cycle 23.