Coordinated Solar Observation and Event Searches using the Heliophysics Events Knowledgebase (HEK)

Ryan Timmons, Neal Hurlburt

Lockheed Martin STAR Labs/Advanced Technology Center, Solar and Astrophysics Laboratory

www.lmsal.com/heksearch/

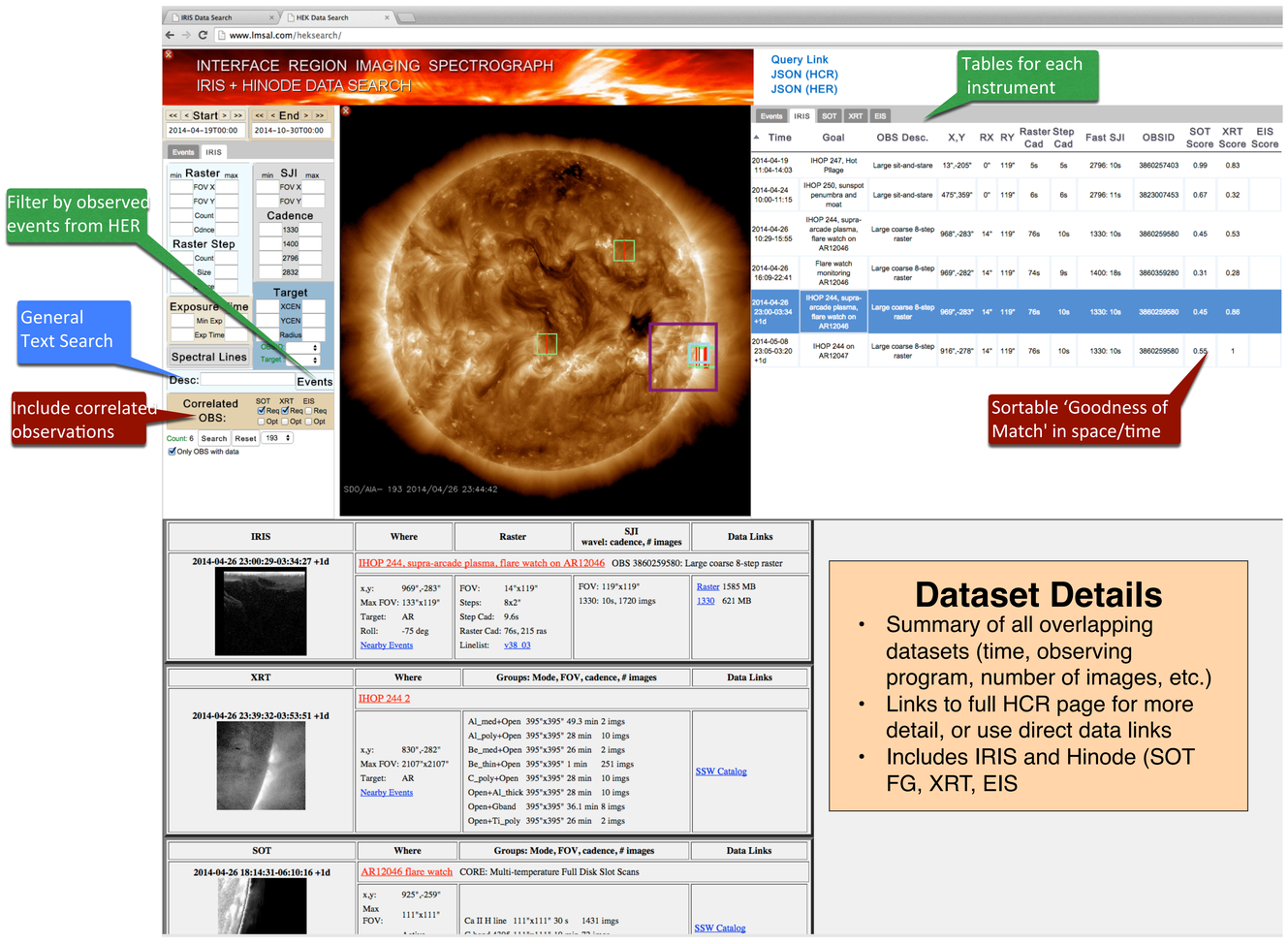
Motivation

- Improve tools for finding particular observations (Heliophysics Coverage Registry, HCR) correlated with particular events (Heliophysics Event Registry, HEK)
- Find coordinated observations with multiple instruments

Method

- Extend the popular IRIS data search tool (lower right) for rest of HEK events and instruments
- Regularly cross-reference observation and events, build network of overlapping entries

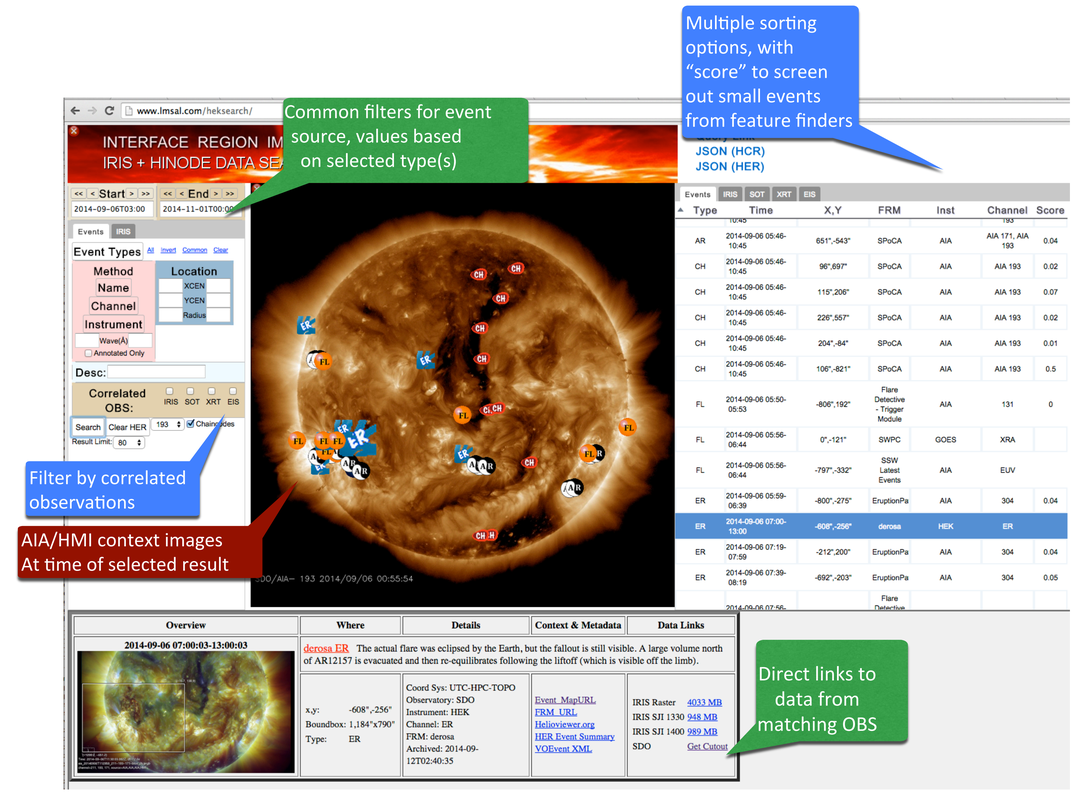
Data Mode



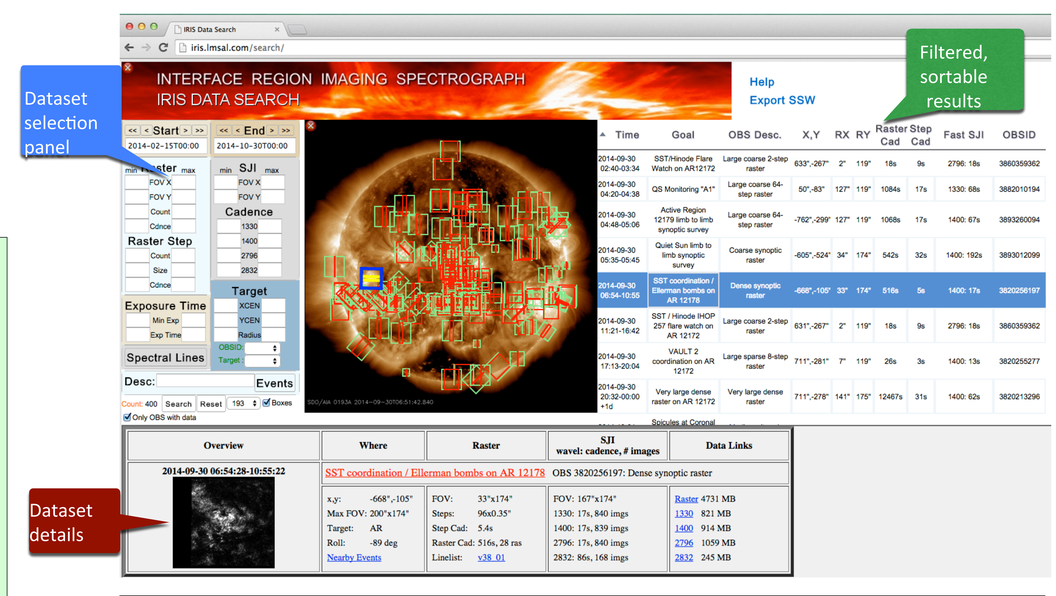
Dataset Details

- Summary of all overlapping datasets (time, observing program, number of images, etc.)
- Links to full HCR page for more detail, or use direct data links
- Includes IRIS and Hinode (SOT FG, XRT, EIS

Event Mode



iris.lmsal.com/search



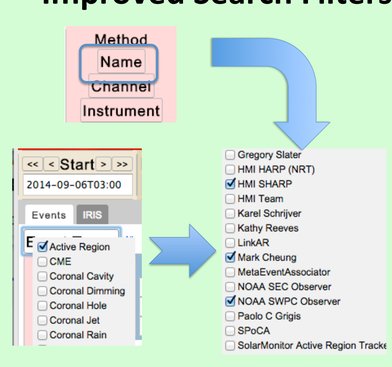
New HEK Entries

- SHARPS (Spaceweather HMI Active Region Patches) (Stanford/ M. Bobra)
- SMART active regions (Trinity College Dublin/P. Higgins)
- Eruption Patrol (LMSAL/Hurlburt)
- HCR now has 5 missions, 10 instruments, and 64K observations
- HER now 23 classes/types and 1.4 M events

Future Enhancements

- More options for 'correlation' besides amount of overlap – distance between centers, distance between boundaries, data preceding events
- More support for HER criteria, including 'smart' filter choices based on event type(s) searched for
- More criteria for Hinode instruments, similar to existing IRIS choices. Allow correlated data searches to 'start from' any instrument
- Coordinated searches combining options from events and observations
- Inclusion of ground-based telescopes co-observing with IRIS (BBSO, DST, SST)
- Improved SSW support

Improved Search Filters



- Values populated depending on selected event types
- Multiple values selectable ("OR" search)
- Streamlined for commonly used filters

Contact Information

Ryan Timmons ryan.p.timmons@lmco.com
Neal Hurlburt hurlburt@lmsal.com

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University of Oslo Hinode Data Center (http://sdo.uio.no)

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