HEK UPDATE

Neal Hurlburt

- HEK overview
- Current Status
- New Features
- Future Plans
Heliophysics Event Knowledgebase

- Event Registry (HER)
  - Solar events
    - type, location, magnitude...

- Coverage Registry (HCR)
  - data availability
  - Instrument properties
    - wavelength, cadence, FOV...

- Team services

Tuesday, May 24, 2011
Heliophysics Event Knowledgebase

- HER
  - 23 event classes
  - 900k entries
- HCR
  - 8 Instruments
  - 4 Missions
  - 32k entries
- Team
  - 70 members/contributors

Tuesday, May 24, 2011
CURRENT STATUS

Web Statistics
- Visitors
- Hits
- GB

Month
One TB/month
1000 visitors/month

Popularity
2200 cutout requests
7000 secondary visits

sdowww.lmsal.com

Tuesday, May 24, 2011
CONTRIBUTED EVENTS

• EDS Modules
  • SPoCA Active Regions  active since 9-15-10
  • Flare Detective trigger portion, active since 6-11-10. Some validation, changing thresholds in 131 a couple of times.
• SWAMIS for emerging flux - events from 3-1-11 to 4-15-11; Making some changes/fixes right now.
• SMART (Active Regions) - version delivered
• Sunspots (EGSO) TBD
• External Contributions
  • AAFDCC Filaments active since 3-31-10
  • Cactus CMEs
  • SSW latest events (Flares)
A meta event is as a HER entry that groups a collection of events, acting as an umbrella or parent. The collection of events is provided by the user as follows:

- Identifier of HER events to group
- Rules to transcribe/consolidate values (e.g., earliest start time, latest stop time, maximum area, etc.)

MetaEventCreator will:
- Extract/merge the appropriate values
- Create a meta event XML file
- Create the "is_member_of" relations to the originating events
- Ingest the meta event into the Heliophysics Events Registry (HER)
Meta Event Links

Nearby Events:
View in iSolSearch To get the data, click the Request Cutout link in the observation details in iSolSearch

References:
Movie
HER VOEvent
XML
Full HER VOEvent

Links:
First Event IVORN
- is_member_of
  AR:ivo://heli-informatics.org/AR171_ScottGreen_20110427_232104
- is_member_of
  AR:ivo://heli-informatics.org/AR8304_ScottGreen_20110427_232104
- is_member_of
  AR:ivo://heli-informatics.org/AR211_ScottGreen_20110427_232104

Second Event IVORN
- is_member_of
  AR:ivo://heli-informatics.org/ARMET_ScottGreen_20110427_232104
- is_member_of
  AR:ivo://heli-informatics.org/ARMET_ScottGreen_20110427_232104
- is_member_of
  AR:ivo://heli-informatics.org/ARMET_ScottGreen_20110427_232104

Strength | Reported By
1.0       | somani_ankur
1.0       | somani_ankur
1.0       | somani_ankur

Revisions:
Revision # | Revision Date  | Revised By
1           | 2011-04-27     | somani_ankur

Comments:
Comment By | Comment Date  | Comment

New HER Event Classes

- ActiveRegion AR
- CME CE
- CoronalDimming CD
- CoronalHole CH
- CoronalWave CW
- Filament Fl
- FilamentEruption FE
- FilamentActivation FA
- Flare FL
- Loop LP
- Oscillation OS
- Sunspot SS
- EmergingFlux EF
- CoronalJet CJ
- Plage PG
- Other OT
- NothingReported NR
- Sigmoid SG
- SpraySurge SP
- CoronalRain CR
- CoronalCavity CC
- Eruption ER
- TopologicalObject TO
Thresholding, MetaEvents (OBS_Instrument=HEK)

New Features
• New modules?

• Incorporating thresholding and metaEvents into iSolsearch & elsewhere

• Working to expand to other missions/domains