Data Citation at the Solar Data Analysis Center

J.A.Hourclé, 27 Feb 2014

About the SDAC

- NASA “Final Archive” for solar data
- “Mission Archive” for SMM, SOHO, STEREO & TRACE
- Supports Yohkoh, RHESSI, Hinode, SDO
- Funding is justified by the number of papers published using the data.
  - For the SDAC, and for current missions

Types of Solar Data (highly simplified)

- Synoptic : same observing mode repeated over and over again
- Campaign : special observing plans
- Darks & Test : used to calibration
- *in situ* : non-image, one file per day
- “Higher level products” : catalogs

Current Citation Practice:

- Standard acknowledgement strings
  - Which may only identify the mission
- Cite the ‘first results’ paper
  - Do you care about that science, or the data?
- Cite the ‘instrument’ paper from SPIE
  - Do you care about the design, or the data?

Problem : Identity

- Many people don’t care about the campaign
  - They care what instrument it was from, and the observing mode (if there’s more than one)
- Instruments vary their observing mode
  - Some alternate between two modes
  - Not all modes have official names
  - High cadence campaigns overlap synoptic

Current Plans, Step 1:

Identify what we have

- Determine functionally useful groupings
  - eg, ‘SDO/AIA 171Å’, ‘Hinode/SOT/SP4D’
- Assign identifiers to those groupings
- Document the groupings
  - DataCite, VSO & SPASE

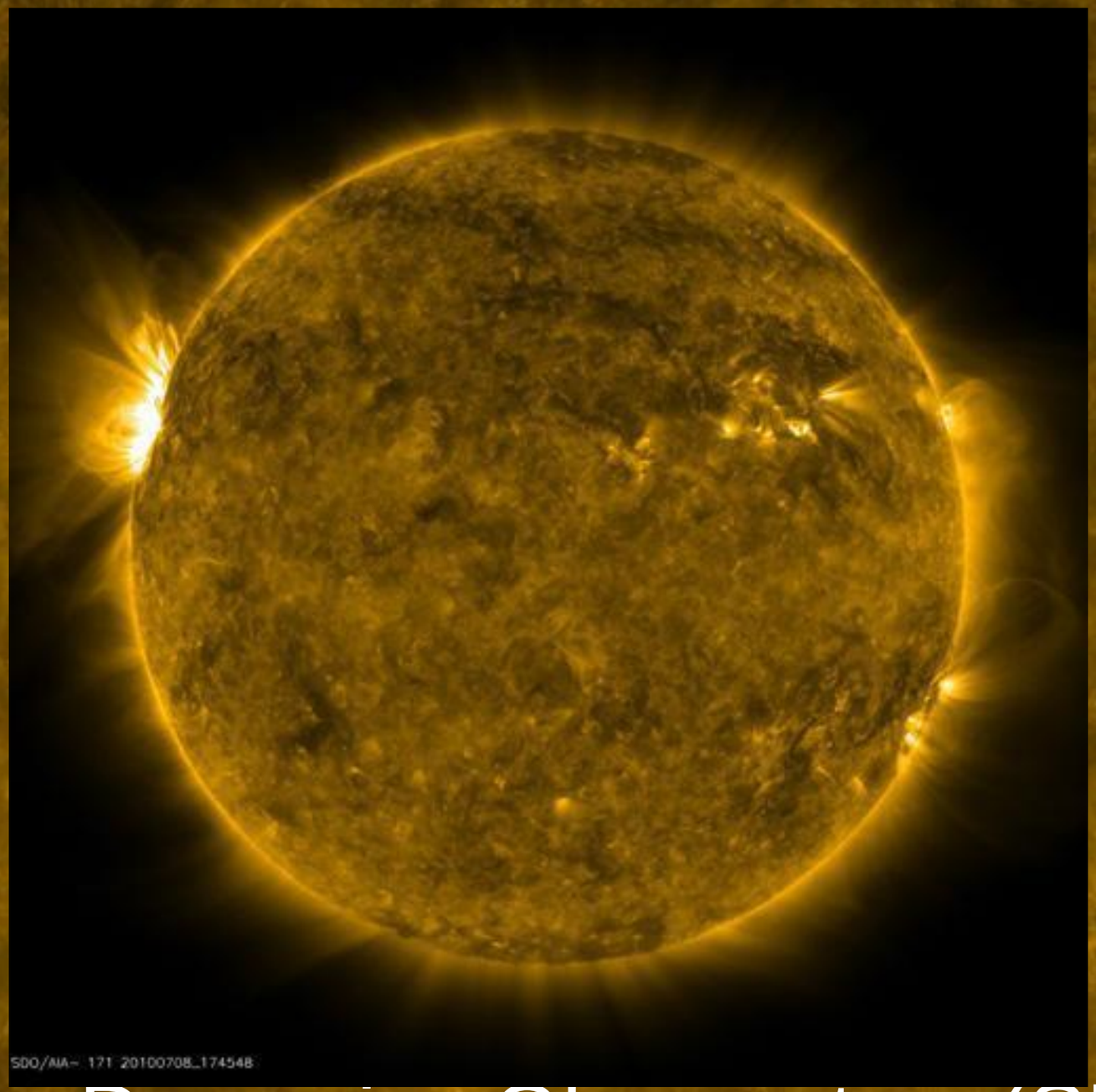
#2: Standards for Subsets

- ‘2010-05-23 to 2010-05-27’
  - ‘2010-05-23 10:43 to 11:17 coordinated time’
- ‘sampled at 30 min’
- ‘200 arcsec patch centered on AR10943’
  - ‘... at 400 xSun,-600 ySun’ ; ‘... at 45W60N’
- ‘non AEC’, ‘polarized’, ‘white light’, ‘SP4D’

Current Plans, Step #3:

Outreach & Tools

- Outreach on the importance of citation
  - As documentation of the science
    - For continued mission & archive funding
- Tools to make citation easy
  - Don’t put unnecessary burden on the scientists
- Goal is more & better science



Solar Dynamics Observatory (SDO)
Atmospheric Imaging Assembly (AIA)
171Ångstrom ; 2010/07/08 17:45:48UT ; 2x2 binned