

Thurs AM — Session 3

Andy Buffington, note taken

IPS Formats

Mario — Summarizing from previous Toyokawa meeting, J2000 is primary, columns for other names, but records in J2000

— HDF vs FITS ?

— Unified source list — source size included (Mano)

— Format ASCII text, rows/columns (Americo) — need to specify beam within 1 site

Leonid Benkevitch — use MWA format because multifrequency, so this format has broadest reach

they consider FITS, NetCDF, HDF5, SQL

↓
they prefer python as script & interface

(Mario) level #5 MWA bump down 1 (OK)

(John Clover) add extra processes? — (Leo) yes OK

(Richard F) Hierarchy of MWA/year/date? inefficient? more

(AB) Stated Speeds platform dependent? (Leo) yes, used local machine 2.5 GHz, + several large memory

(Divya) A single database has everything — eventually Amounts of data not overwhelming ~10⁵ TB/year

(Mario) both scans table & search tool Divya (yes, flexible)

(Leo) As an example Query on RA, dec range

(Americo) Is it simple to add/merge our stuff into database?
(Divya) Yes, it's going to be OK, but... criteria must be specified...

(Mario) Web Based? Download python? (Div) Yes, TE

Discussion Divya — need to provide feedback

(Steve Cro.) ^{soon} Are there multiple ways of getting to higher levels?

(Divya) Yes ~~but~~ need a detailed description of assumptions & models.

(Andy B.) Complicated structure? Groups stopped for resources, others not wanting to take the time to fit in? Takes time/resources to document relationships

(Divya) MWA has v. short time frame, we'll be working on it probably be ok — leads to 2nd point — what about multi station data? need to add keywords and/or add'l structure

(Richard F.) need parallel layout for ease of other groups — need to be able to put in level 2/3 without including level 1 we want to do 1 → 2 → 3 ourselves at our own place, not have these conversions/calculations. Sit into database

(Mario)

(Divya) also "campaigns" as a category? Yes? "everything is a campaign"

(Richard F.)

What's a "scan"?

(Divya)

A scan is an observation, not a scan of the sky

(Andy Breen)

A scan to us means a sweep

(Divya)

I'll change to "observations"

Moving on, we'll need version #s

We're presently working on ~ 1 Tb size — can each group provide software contributions? Need

(Richard F) Best to put in software directly for each group — worry about commonality later
 $\Rightarrow$ Eiscat — cross correlation analysis
 Working on I/O formats. Software level 2 $\rightarrow$ 3 is "specialist" — not finalized soon

(Diya)
 (Andy Breen) We need to get formats fixed soon —
LOFAR may not want to share level 0, but probably level 1 (correlation spectra... is ok)

(Genico)
 (Dio + Mano) $\Rightarrow$ Mexart working on programs to do analysis probably considerable overlap w/ COTI

(Mano) $\Rightarrow$ Coti level 1 available at the end of each day — also level 2 — we also have source list ready to share 5000 sources for ^{many} products, have scintillation index, heliocentric distance plots — power vs freq for each source

(Mario) Stelab will have both single-site & multi-site. Need to coordinate with Coti etc.

UCSD just need ASCII files for tomography.

~~Mario~~ (Diya) what about PRAO?

(Igor) PRAO two beam system, one only for IPS can observe ~ 200 sources/day, down to ~ 0.2 Jy. Return to individual sources. Happy to adopt std. formats etc. In ~ 2 years hope for more system, 128 beams cover δ 60° , 24 hr coverage. Have funding. Individual beams $\frac{1}{2}^\circ \times 1^\circ$.

But how well do the derived speeds match

reality — especially close to the Sun
(Andy Breen) The fast winds polar regions, IPS
seems biased on the high side — working
to understand this. Agreement is better
for the slower regions.

(Divya) Funding at Haystack for $\sim 1/2$ FTE thru
June 2010 — where to apply? NSF? Need
more effort, sustain beyond this date?
Will need letters of support

(Andy Breen) ESA space weather would maybe be interested
in near-real-time data base. They might
fund somebody?

(Divya) If programs → solarsoft, NASA might
also provide support