
Subject: JBIU major update

Posted by [Jeremy Bailin](#) on Thu, 10 Feb 2011 16:52:32 GMT

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So I've finally gotten off my ass (read: I finally submitted the damn paper I've been working on, so I can do something slightly frivolous for a day) and put a new version of JBIU out!

<http://www.astroconst.org/jbiu/>

Major updates, including lots of bug fixes (particularly to PLOT_BINNEDDATA, HISTOGRAM_WEIGHTED, HIST_ND_WEIGHTED) and minor tweaks to lots of routines. And *lots* of new routines. Among the most important:

- MATCHALL_SPH, MATCHALL_2D, MATCHALL_ND, MATCH_SPH, MATCH_ND: Extremely fast algorithms (using the basic idea of JD's MATCH_2D) for matching which of a set of points are within a given distance to another set of points. There are versions for spherical geometry, 2D, and arbitrary dimensions, and versions that return all matches or just the closest. If you use SRCOR from the astronomy library for this sort of thing in angular coordinates, MATCH_SPH is about 60 times faster in my tests!

- BETWEEN: Is an argument between the end points?

- VECREP: Like REPLICATE, but replicates a 1D vector instead of a scalar.

- SKY2XY, XY2SKY: A really badly-done interface to the WCSTOOLS routines of the same name.

- Other assorted stuff: GETPTS (get lots of point locations from a plot), SPLINEOPLOT (overplot a spline curve based on a set of points), READDOLPHOT, READFAKEDOLPHOT (read DOLPHOT output), READPARAM (read a "key = value" parameter file), SORTROWS (sorts rows in my ugly CSV structure).

I've stopped numbering the releases, since it just invites me to not update things for 2+ years at a time, so they will just be by last updated date.

-Jeremy.
