

From: larry@mazel.spa.umn.edu (Larry Rudnick)
To: abridle@NRAO.EDU
Subject: data
Date: Mon, 14 Feb 94 09:41:19 CST

Hi ahb! some time ago, debbie katz-stone talked with marc swain about applying our spectral analysis to the 3-freq. data he had available (either him doing it, or us doing it, or whatever). what's the status of those data, and can we re-open the discussion? thanks.

larry

From: abridle (Alan Bridle)
To: larry@mazel.spa.umn.edu (Larry Rudnick)
Subject: Re: data
Date: Mon, 14 Feb 1994 10:46:11 -0500

Hi Larry,

Nice to hear from you!

Mark is working on 3C353 producing scaled-array images at two L-band frequencies, C Band and X Band. Right now he is in the late stages of cross-calibration (he has multiple VLA configurations to combine at each frequency) and is a few weeks away from having a full set of images suitable for multispectral analysis. As soon as he's done with the image construction, he will be very interested in running your analysis on his data as part of his thesis effort.

The three-freq analyses will have to be at 1.4" resolution, the source is about 5' across and very 2-dimensional (fat lobes) so there will be an abundance of data to work with.

I'm not sure whether he already has Debbi Katz-Stone's code to work with but will check into this with him today and get back to you a.s.a.p.

Cheers,

A.

From: abridle (Alan Bridle)
To: larry@mazel.spa.umn.edu (Larry Rudnick)
Subject: Re: data
Date: Mon, 14 Feb 1994 11:59:42 -0500

Hello again Larry,

Mark tells me that he has been waiting until the images for the 3C353 spectral analysis are in hand before getting together with Debbie Katz-Stone again to discuss analysis strategy. He expects to be contacting her directly pretty soon.

I'm keen to see where this takes us, but at present all waits upon getting the final cross-calibrations done, a painful process on a source this large!..

Cheers, A.

From: larry@mazel.spa.umn.edu (Larry Rudnick)
To: abridle@polaris.cv.nrao.edu
Cc: debora@ast1.msc.edu
Subject: Re: data
Date: Mon, 14 Feb 94 11:38:59 CST

alan - i've passed on your messages to debbie, and we look forward to seeing what the 2color analysis shows for 353. mark is absolutely right to get the calibration in hand as best as possible before diving in. he probably should also get a sense of alpha vs. intensity in order to understand where things come from when they appear on the 2color plots.

let me mention a couple of things - (i'm not sure exactly what you mean by cross-calibration). an incorrect flux scale shows up as a position shift in the 2color plane - in some ways this isn't critical, but for matching specific models it would be. on the flip side, if the spectral shape is very simple, it may be possible to actually identify a scale factor problem through the 2color plots.

the other comment is that the shape in the 2color diagram can be significantly distorted by a background bias. it would probably be useful, if mark hasn't done it already, for him to do some IMVIM plots (near the flux origin) for pairs of maps to guard against this problem. details are better discussed with debbie, whenever he is ready.

cheers, larry

From: abridle (Alan Bridle)
To: larry@mazel.spa.umn.edu (Larry Rudnick)
Subject: Re: data
Date: Mon, 14 Feb 1994 13:25:29 -0500

Cross-calibration is simply the internal normalization of all array configuration data at a single frequency to a common flux density and position scale. As we have A+B+C+D configurations there is a significant effort involved in iterating them all onto the same scale.

I agree that the inter-frequency scale changes only the absolute shape of relationships, not their existence. But you need good intra-frequency calibration to minimise such things as background rumble, etc.

Cheers, A.