

Msg from the CS:
Points about surface energy fluxes in
ARM

How important are surface fluxes
to modelers? (modelers are the
only users...so far)

Do we just need a site-wide
average, or spatial resolution
sufficient to make contour
plots?

We need to define a path of
regular calibration and
continuous improvement of

Manus

needs surface fluxes measured on a tower near the airport;

(relates to MJO research, which shows that systems crossing land are strongly affected by the radical change in surface fluxes);

Point to area-averages?

we have no strategy for moving
from point meas'ts to the area-
averages simulated by models;
we just keep measuring at
points;

satellite retrievals of surface
latent and sensible heat fluxes
don't exist, so they can't be
used to interpolate;

solving this problem is at the

Impacts of new scanning radars?

will surface fluxes be more or less important in the new scanning-radar world?

esp as they are related to precip (and help to cause precip)?

The path forward, instrument- wise

trying out new instruments and new
strategies is vital;

if risk was avoided, we would not have
half the instruments ARM has today;

clinging to the past is not an option;

scintillometers should NOT have fallen
off the list; they may not be
mature, but they are our seed corn,
and they attempt to deal with the
point to area average problem;

Closing the surface energy balance

the surface energy balance measured
by ECOR techniques stubbornly
refuses to be closed to 10-20%
(Baldocchi review paper);

EBBR closes it better, but is
regarded as the past not the path
forward to the future;

either the modelers find this state
of affairs OK, and can prove it
(i.e. by adding random errors
of that size in their models and
showing that it doesn't make
much difference)

Consequences of shrinking SGP

As we shrink SGP, something which seems likely, we have a once-in-15-years chance to reconfigure the surface flux array;

Are there new ideas for how to do it better than was done 15 years ago? eg using OSSEs?

...or are we just going to mimic past strategies, as if there has been no progress in the field since