

Suffern Paul

From: [REDACTED]
Sent: Thursday, October 17, 2019 11:08 AM
To: [REDACTED]
Cc: [REDACTED]
Subject: Re: based on our discussion today...

OK your comment about LWE and snow/liquid ratios is more what I thought you were asking about. This is why I mentioned the discussion that Steve Green had yesterday about pilots taking off in heavy/moderate snow. Then Roy chimed in about how traditionally snow used to be a visibility problem but really LWE needs to be considered too.

If this is the case, then it would seem you're more interested in snow forecasting algorithms. I need to think about this in context of CIP/FIP, since the focus of those algorithms is really SLW-based accretion on airframes rather than looking at snowfall forecasting and snow/liquid ratios and/or LWE.

For example:

https://ams.confex.com/ams/WAFNWP34BC/techprogram/paper_94815.htm
<http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1013&context=geoscidiss>
<https://www.wpc.ncep.noaa.gov/research/snowfcst/snow.pdf>

However this gives me more information to help decide whether CIP/FIP would even produce a hazard based on higher snow/liquid ratios but my gut feeling tells me probably not at this time. And our comments yesterday about CIPv2.0 being able to account for this is really in relationship to the melting level because we'll be using more radar data- not because CIPv2.0 will include information about snow/liquid ratios unfortunately.

It seems right now my feeling is that we would probably need to add a module targeting this type of hazard but I can chat with some folks and see what may/may not be possible.

-Dan

On Wed, Oct 16, 2019 at 3:21 PM [REDACTED] wrote:

Soo... based on Heather's feedback HCA won't work because the HCA "wet" snow algorithm is just based on the melting layer and melting snow.. as most things with HCA was developed more for NWS "surface" forecast and forecasters..

Heather said closest thing would be "graupel" bin on HCA but even then...

And the "wet" snow versus "dry" snow more of what we are talking about it like a 10:1 snow ratio type thing would be more "wet" snow.. while 40:1 snow ratio would be "dry"... so ties into the LWE discussion and trying to find that out "aloft"...

Paul

From: [REDACTED] >
Sent: Wednesday, October 16, 2019 4:43 PM
To: [REDACTED] >
Cc: [REDACTED] >
Subject: Re: based on our discussion today...

I think this was the paper Dave was referencing:

<https://journals.ametsoc.org/doi/full/10.1175/2008WAF2222205.1>

As far as the 2015 slide deck you sent...I can't speak to it's relevance or currency but I am going to make a note of this as a possible input to our algorithm since it looks like it handles wet snow!

If you want me to check with Dave on that slide deck I can, otherwise maybe Heather could provide more info?

-Dan

On Wed, Oct 16, 2019 at 1:42 PM [REDACTED] wrote:

Hi Dan,

Thanks again for the conversation today. Looking forward to what you find. With regards to the 2009 Park? Paper on HCA I couldn't find that just yet, but I did find this and HRRR picking out wet/dry snow looks like this 2015 information has information on it:

https://www.nssl.noaa.gov/about/events/review2015/science/files/Schuur_NSSLReview2015.pdf

is this information from 2015 still relevant/correct today?

Paul

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