Greetings from the NEXLAB Team!

As many of you are already aware, we’ve recently added a new product to our models suite, the Hodograph Map. This is a substantially different product from the rest in more ways than one, so we wanted to explain a few things and answer some common questions.

The Hodograph Map was created and developed by Cameron Nixon, and we’ve been working with him to bring it to our site. A huge thank you to Cameron for allowing us to host this awesome product!

**Processing and Available Sectors:**

Unlike the rest of our model products, the Hodograph Map is made entirely with Python. While that allows for more complex operations than our other software, it’s also slower and more resource intensive to make. For this reason, we are limiting the Hodograph Map to our two float sectors. We’re able to move these sectors to areas of interest so the Hodograph Map will be available for severe weather events.

We understand many of you would like to see this product on other sectors, and we’d like to offer that if we could. But during testing we saw that caused considerable problems for both this product and the rest of the model run; it was just too much. We’ll see what we can do about that down the road, but it’s not something we can afford to do right now.

**Available Models:**

The Hodograph Map is currently available for two models: the RAP and the NAM. These models were ideal candidates for this product; not only did Cameron design this product for the RAP initially, but they are also a good compromise between grid point spacing, run frequency and duration. This product doesn’t work well with high resolution models because the significantly increased number of grid points make it take far longer to produce, and convection in those models make it harder for these hodographs to represent the environment itself.

We are considering bringing this to the GFS, but we have some concerns we need to investigate first, mostly relating to processing. And if we do bring this to the GFS it probably wouldn’t be for the whole run, who would want to see a hodograph forecast at 384 hours anyway? And while this is something we are considering, we cannot say how likely that is or when it might happen.

The Hodograph Map was developed before the free data from the ECMWF was made available, so it was not considered during development. Now that it’s here though we see it does not contain the model variables we need to make this product, chiefly SBCAPE. If that ever changes we will reevaluate, but that’s entirely up to ECMWF.
Availability on Mobile:

When the Hodograph Map was initially announced it wasn’t available on our legacy models page or mobile right away. We quickly worked to include the product there and it is working on mobile at this time.

Domain Differences and Forecast Soundings:

Another side effect of the difference in processing methods is a slight difference in domain between the Hodograph Map and the rest of the products. We worked to minimize these differences and generally the impact should be small. However, this is something worth keeping in mind when taking forecast soundings from this product; the sounding may be slightly offset from where you clicked on the image.

We will try to add better handling to further minimize or avoid these differences. In the meantime, you can visually verify where the sounding is actually for by selecting a different product on the sounding page, click Generate New Sounding (it will use the same sounding you just took) and then click Show Map (or tap the ‘m’ key). The position icon will be accurately reflected on our other model products.

We’d like to thank Cameron Nixon once more for all his hard work on the Hodograph Map and for working with us to host it here. We’d also like to thank all our users for receiving this new addition so warmly. And as always, thank you for using our site.

-The College of DuPage NEXLAB Team