

Lessons from the Field



Friends & Partners
— IN AVIATION WEATHER —

Winds and TAFs

- Flight originally scheduled for 1130
- Drone wind threshold of 12KT with payload
- Moved back to 0930 due to TWS recommendation
- TAF not adequate for this mission



Video (credit DroneUp): Drone Transports & Delivers COVID-19 Test Kit

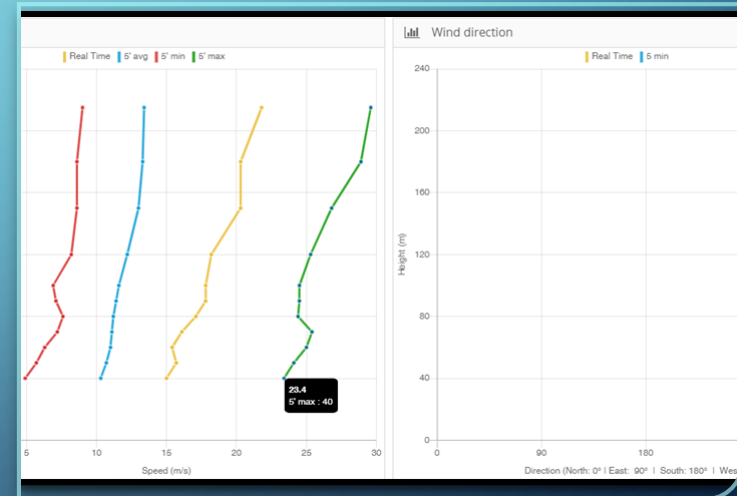
```
TAF KSYR 151140Z 1512/1612 07005KT P6SM FEW030 BKN200
TEMPO 1512/1514 5SM BR
3PM FM152000 12012KT P6SM BKN025
FM160200 10012G20KT 6SM -SHRA OVC018 WS020/15037KT
```

```
KSYR 09:30:31 09009KT
KSYR 09:35:31 09008KT
KSYR 09:40:31 09007KT
KSYR 09:45:31 10008KT
KSYR 09:50:31 09008KT
KSYR 09:55:31 09008KT
KSYR 10:00:31 08010KT
KSYR 10:05:31 08011KT
KSYR 10:10:31 07010KT
KSYR 10:15:31 07009KT
KSYR 10:20:31 08008KT
KSYR 10:25:31 07009KT
KSYR 10:30:31 06010KT
KSYR 10:35:31 07008KT
```

```
KSYR 11:10:31 07010KT
KSYR 11:15:31 07011KT
KSYR 11:20:31 07008KT
KSYR 11:25:31 08008KT
KSYR 11:30:31 08011G16KT
KSYR 11:35:31 08012G16KT
```

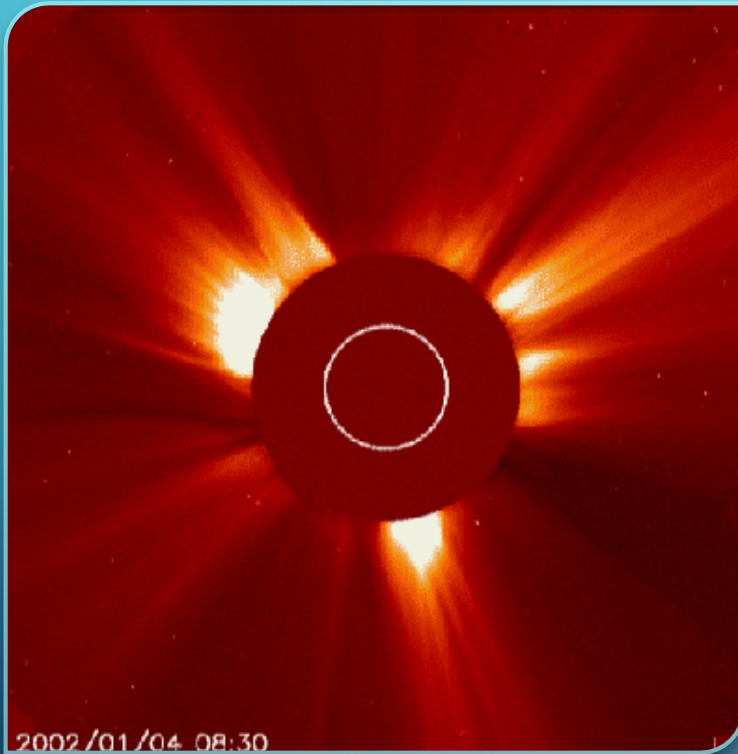
WINDS ALOFT

- Many pilots fly off ground weather
 - TAFs, Weather Apps, General Weather Information
- Assume that winds are the same aloft
- Sometimes measure with hand-held anemometers, use METARs, Beaufort scale
- Do not know how payload affects flight
- Can not relate flight control issues with known wind speed



Credit Vaisala/Leosphere: WindCube and WindWeb output.

SPACE WEATHER



- Causes navigation issues
- Common parameter is Kp index
- Estimate available GPS Satellites
- Some operators use RAIM

Credit European Space Agency: Coronal Mass Ejection

DOES IT EVEN MATTER??



Credit US Secret Service: Drone on White House Lawn

- Many operators believe weather will not be an issue
- Even when weather is currently an issue to their operation
- “Drones will soon be weather-proof”

OF COURSE IT DOES!!

- Low level inversion accidents
- “\$200 Fine, Community Service For Guy Who Flew Drone Into Empire State Building”

<https://gothamist.com/>

- Icing issues
- Weather for training, and weather for business!





TruWeather[™]
SOLUTIONS

www.truweathersolutions.com

gary.graeff@truweathersolutions.com

570.449.8987