

Unoccupied Aerial Systems (UASs): development of a new ESS-DIVE data and metadata reporting format

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For FAIR data

expanding research potential

A new reporting format will guide metadata and data content for ESS-DIVE archive of data collected from small (< 25 kg) UASs.

The format will facilitate data synthesis and add value to spatially and temporally diverse data.

Input and feedback is requested from all who collect or use UAS data

Draft documentation is ready for your suggestions now – please follow the link below to the Github repository.

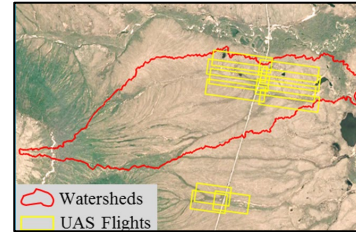
Metadata

essential for data reuse

Platform
model, type, capacity



Campaign
where, when, flights



Sensors
type, FOV, sensitivity



○ RGB camera ● WiFi connector ● GPS
● TIR camera ● VNIR spectrometer

Mission details
height, speed, overlap



Product levels

to simplify data discovery

L0: raw data, telemetry
RGB image

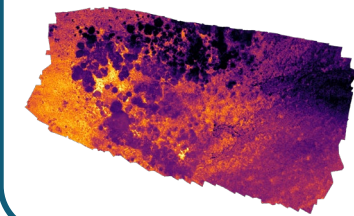


L1: basic post-processing
spectral reflectance

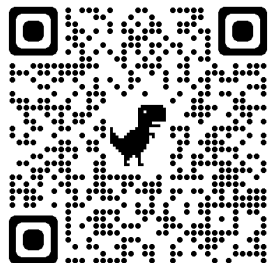
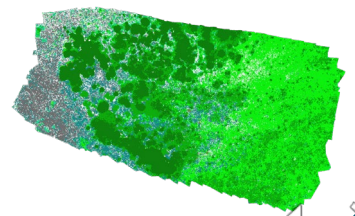
```

ID      Wave_400  Wave_401  Wave_402  Wave_403  Wave_404  Wave_405
121947  0.04379521  0.04524605  0.04669689  0.04814773  0.04959857  0.05104941
128196  0.02384411  0.02400088  0.02415765  0.02431442  0.02447119  0.02462796
131855  0.02385752  0.02401429  0.02417106  0.02432783  0.02448460  0.02464137
155472  0.01855096  0.02169914  0.02484732  0.02800550  0.03115368  0.03430186
112264  0.01204264  0.01385462  0.01566660  0.01747858  0.01929056  0.02110254
122236  0.0121238  0.01397482  0.01582584  0.01767682  0.01952780  0.02137878
191452  0.02121403  0.02142886  0.02164369  0.02185852  0.02207335  0.02228818
421267  0.01511499  0.01684791  0.01858083  0.02031375  0.02204667  0.02377959
181567  0.01946243  0.02041481  0.02136719  0.02231957  0.02327195  0.02422433
151181  0.01600058  0.01748054  0.01896050  0.02044046  0.02192042  0.02340038
181986  0.01716257  0.01938151  0.02160045  0.02381739  0.02603433  0.02825127
148653  0.02331701  0.02489565  0.02647429  0.02805293  0.02963157  0.03121021
782376  0.02249923  0.02582432  0.02914941  0.03247450  0.03579959  0.03912468
171549  0.02001285  0.02146641  0.02292000  0.02437355  0.02582710  0.02728065
120564  0.01611806  0.01968511  0.02325216  0.02681921  0.03038626  0.03395331
137032  0.01953444  0.02194787  0.02436130  0.02677473  0.02920816  0.03164159
124295  0.02216989  0.02386045  0.02555101  0.02724157  0.02862213  0.02999269
151492  0.01882233  0.02279455  0.02660211  0.03040967  0.03421723  0.03802479
124877  0.01313386  0.01566891  0.01820396  0.02073901  0.02327406  0.02580911
    
```

L2: processed data products
thermal IR mosaic



L3: derived data products
plant functional trait map



<https://github.com/ess-dive-community/essdive-uas>



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