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| Payload technical details |
| :--- |
| - Spectrometer: Avaspec 2048, spectral range 200- |
| 750 nm , resolution $1,5 \mathrm{~nm}$ |
| - Pc 104 with an integrated 2 GB SSD |
| - Scanner: pic microcontroller and servomotor |
| - Housing manufactured in 3d printing |
| - Total weight : 920 g |
| - Power consumption: 6 W |
| - Size: $27 \times 12 \times 12 \mathrm{~cm}^{3}$ |



## Aircraft technical details

-custom -built by Reev River -custom - bu
-2.5 m wingspan
-speed: $60 \mathrm{~km} / \mathrm{h}$ at 3 km altitude
-autonomy: 2 hours

First results from a test flight in Belgium on an ultralight aircraft (28 October 2012)


Payload


Simulations using the NO2 field of a high resolution from an air quality model over Antwerpen (Belgium) :
integration time for each positon of the scanner determined by the pixel size, altitude, and speed of the aircraft
nitial noise level derived from a previous airborne experiment with the same spectrometer
(Merlaud et al., AMT, 2012)

