

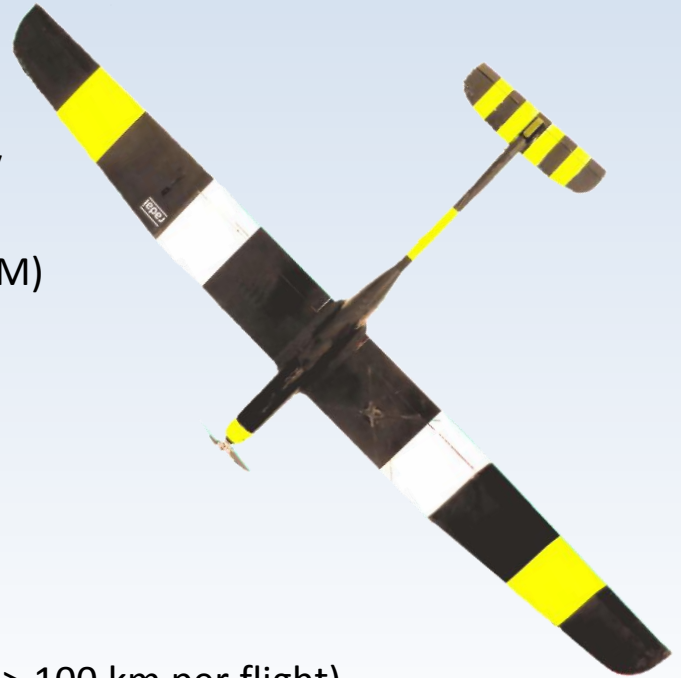
Radai's magnetic survey system utilizing unmanned aerial vehicles (UAVs)

Key concept:

- Custom-made, fixed-wing UAV
- 3-component flux-gate sensor
- Equivalent layer modelling (ELM)

Custom-made UAV

- Wingspan 2.8 m
- Weight 3.0 kg
- Payload 2.0 kg
- Electric engine 800 W
- Flight speed 10–25 m/s
- Flight time up to 1.5 h (> 100 km per flight)
- Autopilot & inertial measurement unit (IMU) control drone flight
- Flight path defined by waypoints with DEM based altitude
- Flight controlled in real-time by PC software via a telemetry link.



Flux-gate sensor

- 3 orthogonal components
- Noise level ± 0.5 nT
- Dynamic range ± 65 μ T
- Sampling freq. up to 20 Hz

Base station

- 3 comp. FG magnetometer and barometer
- Resolution ± 0.5 nT
- Sampling freq. 1 Hz

