SCEYE®

PROTECTING AND CONNECTING

PEOPLE AND OUR PLANET

PURPOSE

WHAT WE ARE

A material science company, building high-performance airships for stratospheric infrastructure.

VISION

Unleash the possibilities in the stratosphere, to uplift and connect all people and protect our planet.

MISSION

To improve life on this planet.

VALUES

We're driven by passion, precision and responsibility. We call this Passioneering[®]





SCEYE ONE NOVEMBER 2020





FLIGHTS | CONTINUOUS DEVELOPMENT



1	2	3	4	5	6	7	8
2016 SCEYE TECH	2017 SCEYE BETA	2018 SCEYE PILGRIM	2019 SCEYE PIONEER	2019 SCEYE ENDEAVOR	2020 SCEYE ONE	2021 SCEYE SSV3	2022 SCEYE TELECOM
9 ft model. Flight at 65,000 ft validating fabric, seaming method, hull pressure, thermal systems and solar panels.	70 ft model. Tethered flight validating hull assembly, gas management, power distribution and solar cape integration.	70 ft model. Flight at 10,000 ft validating launch procedures, command and control of airship and ascent and descent profiling.	105 ft model. Flight to 19,000 ft testing flight control systems, fluid dynamics analysis, pilot experience	105 ft model. Jetstream flight to 42,000 ft validating improved flight control systems, fluid dynamics analysis, pilot experience	First commercial scale airship with optics, communications, avionics, propulsion, flight control systems and closed-loop energy system.	On May 19 th 2021 SSV3 flew to the stratosphere and arrived safely at our target altitude of 64680ft. Following a succesful demonstration at altitude SSV3 landed safely	In production Commercial scale airship demonstrating 4G LTE extended range services.

INTRODUCTION TO THE HAPSVIEW PROJECT

- Today's standard platform for GHG globally detection is ESA's Sentinel 5P which provides a resolution of 7km x 7km (MORE)
- HAPSView is a feasibility study commissioned by the European Space Agency (ESA) and completed by GMV, Sceye, ABB and KNMI
- It supports formulation of the Paris Agreement Monitoring (PAM) and Metropolitan Surface Air Quality (MSAQ) missions
- Study shows there are both wide range of sensors for pollution, GHG and CH4 monitoring, that meet requirements, and airships are the platform of choice for persistent data required to enable policy
- Following slides provide highlights from the study



MATCHING PLATFORMS WITH SPACE SENSORS

- Few of the total surveyed platforms were compatible with the off-the-shelf sensors due to SWaP
- The survey was generous in the sense that platforms were tested against a single instrument rather than a full kit, but even then, LTA platforms were clearly favored
- Most modifications (yellow) relates to the inclusion of scanning mirrors for Sceye HAPS.

Platforms / Instruments	Sceye	НТА	
0 ₃	+	Δ	
CH_4	Δ	▼	
СО	+	▼	
SO ₂	Δ	▼	
NO ₂	+	▼	
Aerosols	+	▼	

\bigtriangleup	Compatible : The instrument architecture is compatible with the HAPS with only minor modifications that do not change its overall concept.				
▼	Not Compatible: The instrument cannot be on the HAPS				
0	Compatible with modifications : the instrument architecture has to be modified t be used on that HAPS. Examples: addition of a scanning mirror, extension of the angular range of its scanning mirror, etc.				

SCEYE EMISSIONS MONITORING

- New Mexico Environmental Department has signed MOU with EPA to use Sceye HAPS for monitoring significant emissions sources, state-wide air quality levels and cross-state traffic for wide awareness
- Sceye can deliver **sub-1 meter** resolution
- The short distance to ground ensures accuracy in attributing gas releases versus the far distance to satellites
- The resolution is enabled by the ability to carry several hundred kg of payload without sacrificing station-keeping capabilities



VIEW FROM THE INTERIOR OF GAS CELLS USED FOR GAS MANAGEMENT IN SCEYE ONE

WHILE WE'RE UP THERE...



ENVIRONMENTAL

- Real-time climate change monitoring and transparent conservation
 - Civil society, Academia and Government
- Precise and persistent monitoring of
 - Methane and CO2 emissions
 - Ecosystems
 - Natural resources
- Early detection and prevention of
 - Forest fires, floods, storms
 - Oil spills and dumping
 - Illegal fishing and poaching dark vessel identification
- Sustainable resource management
 - Water resources, usage, quality
 - Agriculture yield optimisation, drought and pest mitigation
 - Forest, vegetation, land, live-stock management

HUMANITARIAN

- Human trafficking detection and prevention
- Public health response early detection and contact tracing
- Disaster relief response protection of displaced populations
- Maritime taking 'search' out of search and rescue



