

# Dragon Link Global License (DGL-M1)

## Vacuum Transition Balloon Method – Founder's Declaration

---

**AUTHOR:** Justin Robert Marcotte [Echelon Dynamics Technologies]

**DATE:** June 6, 2025



**LICENSE VERSION:** DGL-M1 v1.0

**STATUS:** Open Global License (Planetary Scope)

---

## SUMMARY

This document serves as the official, timestamped declaration and release of the **Vacuum Transition Balloon Method**, a novel mechanism developed to enable vacuum-based lift in Earth's atmosphere and low-pressure orbital environments. This license is part of the Dragon Link Global License (DGL) family and exists to protect and openly share this technology for peaceful, public, and scientific use.

---

## LICENSED METHOD OVERVIEW

The **Vacuum Transition Balloon Method** is defined as:

A lift mechanism involving an initial gas-filled (hydrogen or helium) balloon used to reach high altitude, wherein the gas is then vented, combusted, or repurposed, and the internal volume is transitioned into partial or full vacuum, resulting in buoyancy via vacuum displacement.

Key components and steps include:

- Use of **lifting gas (e.g., hydrogen or helium)** to reach above atmospheric pressure zones
- **Sealable internal volume** or rigid balloon envelope designed to maintain vacuum once external pressure is reduced
- **Controlled release or conversion** of internal gas via valves, combustion, or regulated ejection
- Transition of the volume to **vacuum or near-vacuum state**, enabling passive lift by volume displacement

This method may be augmented with:

- AI-driven control systems
  - Smart valve arrays
  - Microcontroller-based deployment systems
  - Light-weight rigid materials capable of withstanding microgravity pressure differentials
- 

## INTENT & SCOPE

This license **grants global permission** to:

- Use, replicate, or extend the method for **scientific, peaceful, and humanitarian purposes**
- Develop simulations, documentation, and test models based on this design
- Publish derivatives as long as they reference the original DGL-M1 license

This license **forbids**:

- Use in weaponized payload systems or autonomous kill platforms
- Proprietary patenting of the core method or mechanism for profit or exclusivity
- Use for government surveillance, suppression, or control over sovereign civilian airspace

The design is considered **open planetary infrastructure**, similar to Creative Commons but extended to global physical systems. All uses must retain credit to Justin Robert Marcotte [Echelon Dynamics Technologies] and reference this document.

---

## LEGAL NOTES

- This license functions as a **defensive publication** and **moral declaration**

- It does **not require patent office registration** to be effective as prior art and public license
- It may be cited in legal defenses and academic work

Proof of timestamping shall include:

- This document stored via digital means (blockchain, public internet archives, email verification)
  - Publication through official Echelon Dynamics platforms (website, GitHub, archive)
- 

## CONTACT & UPDATES

To contribute, inquire, or support global coordination of this license, contact:  
[jmgreatman@gmail.com](mailto:jmgreatman@gmail.com)

Visit the Dragon Link page for updates:

<https://echelondynamics.com/>

---

### SIGNED:

Systems Commander, Justin Robert Marcotte [Echelon Dynamics Technologies]

**DATE:** June 6, 2025

Dragon Link Global License (DGL-M1)  
Version: v1.0.0.0.1 – Signed & Sealed Edition



## Supporting Physics

The Vacuum Transition Balloon Method relies on Archimedes' principle of buoyancy and pressure differentials at high altitude:

### Buoyant Force (Earth Atmosphere):

$$\text{Flift} = (\rho_{air} - \rho_{container}) \cdot V \cdot g$$
$$gFlift = (\rho_{air} - \rho_{container}) \cdot V \cdot g$$

Where:

- $\rho_{air}$ : atmospheric density at altitude ( $\text{kg/m}^3$ )
- $\rho_{container}$ : average shell density ( $\text{kg/m}^3$ )
- $V$ : internal volume ( $\text{m}^3$ )
- $g$ : acceleration due to gravity ( $\sim 9.81 \text{ m/s}^2$ )

### At ~30 km altitude:

Atmospheric pressure is below 1% of sea-level:

$$P_{atm} \approx 1000 \text{ Pa} \quad P_{atm} \approx 1000 \text{ Pa}$$

Sufficient for sealed, vacuum-rigid structures to maintain form.

---

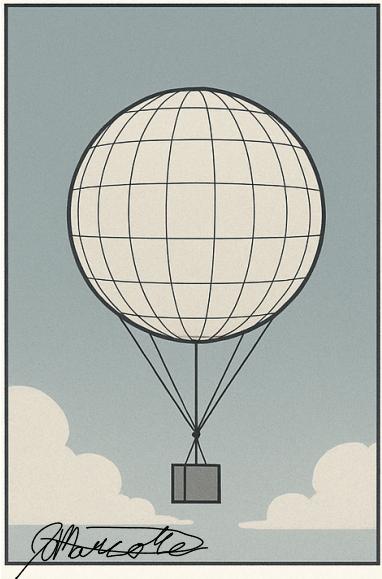


### Historical Acknowledgment

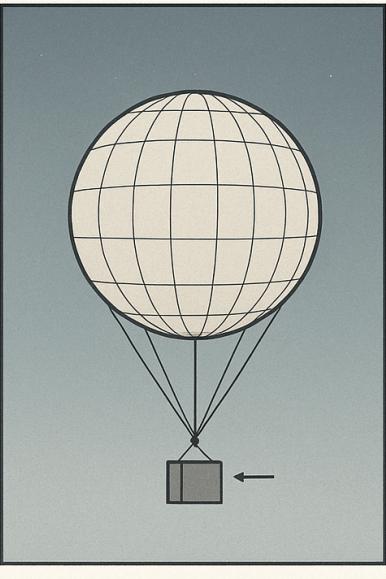
This method honors the original theoretical design proposed by **Francesco Lana de Terzi (1670)**, who envisioned the first vacuum-lift airship.

Due to material limitations of his time, his system was never built.

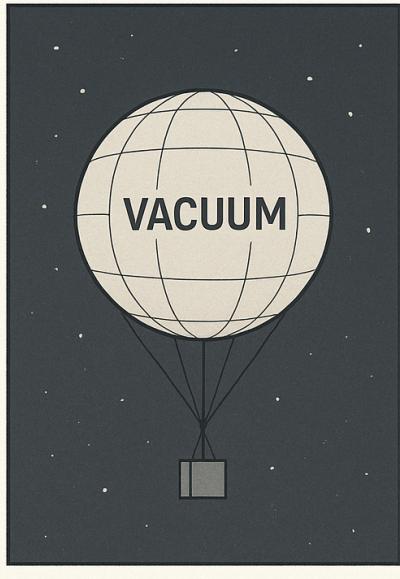
Today, the Dragon Link framework revives this vision with current technologies, materials, and AI-assisted control systems.



1. LAUNCH WTH  
HYDROGEN or HELIUM



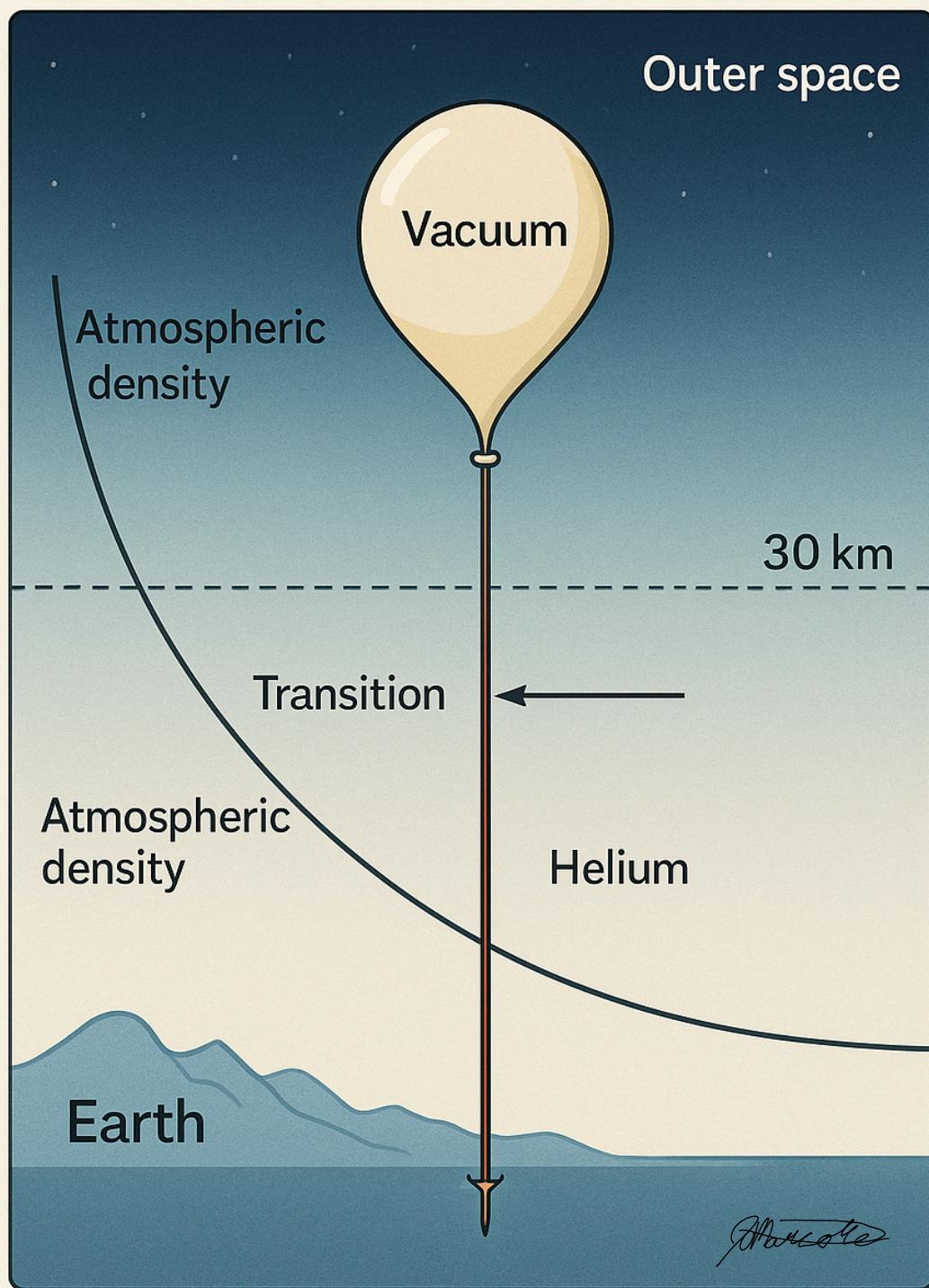
2. VENTING  
IN NEAR-SPACE



3. VACUUM  
IN SPACE

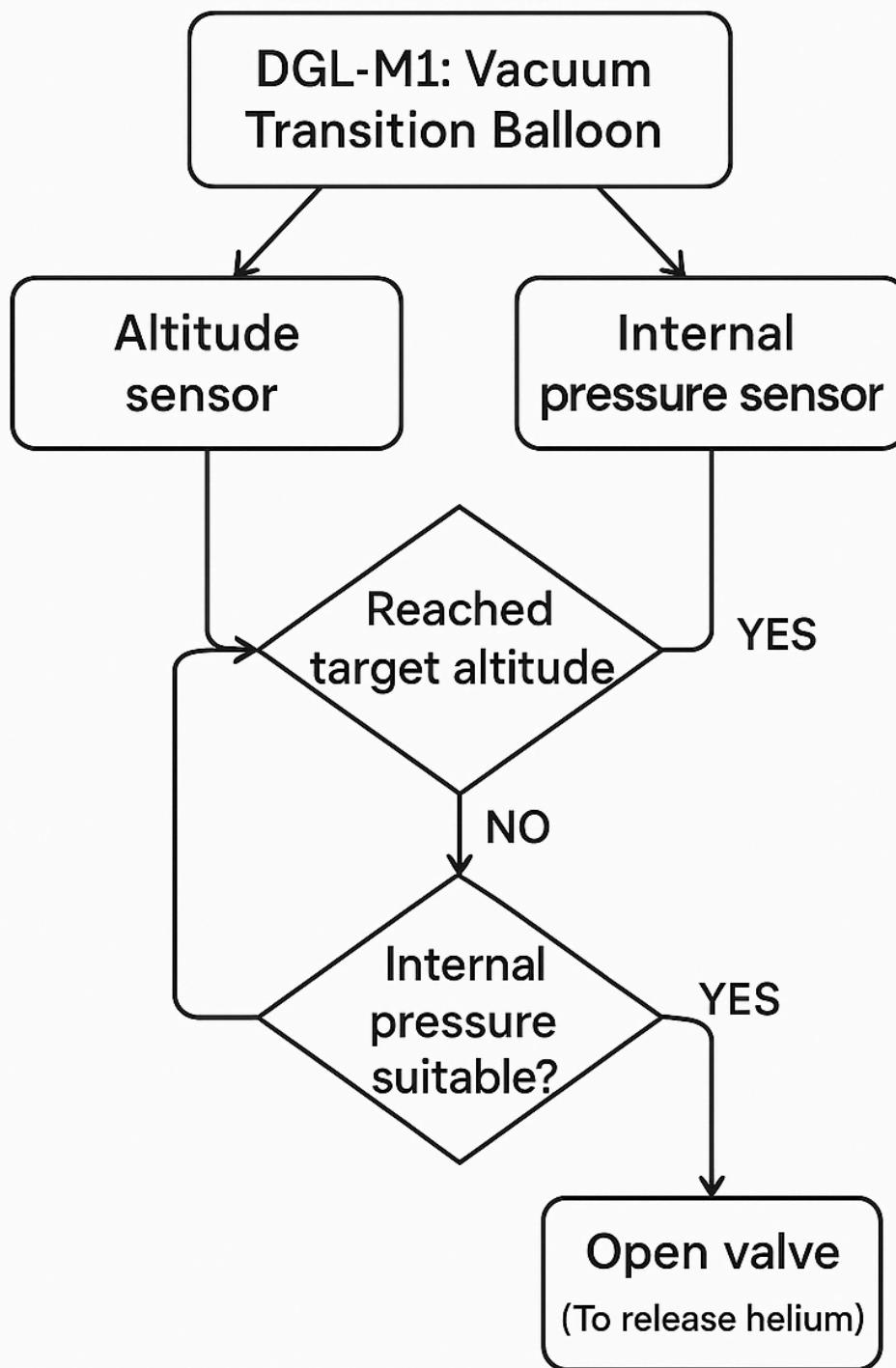
**No pressure differential = stable vacuum float**

# Environment Altitude Cross-Section



# System Flowchart

(showing sensor logic + valve actuation)



*[Handwritten signature]*