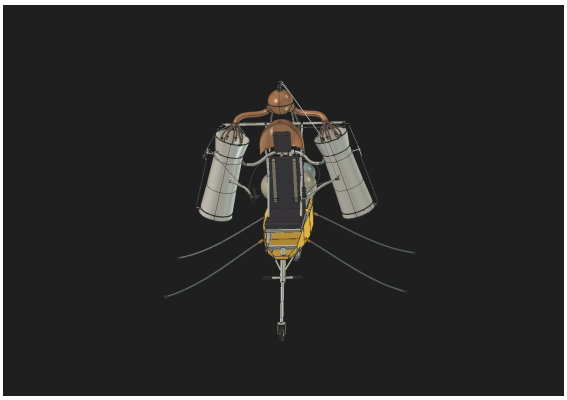
EVIDENCE REPORT

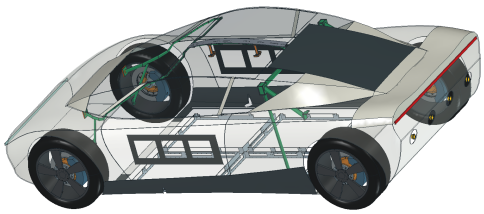
Evidence for the Ludion 002 and Roadster Comparison

A TextToCAD report to accompany the comparison portal and verification data.

Rothmund reports 190 m in 32 s for one Ludion 002 flight. Ramp separation, Kickflip and Encore are observable in separate Roadster clips. R07 documents an independent digital assembly.



Ludion R10 at first open in FreeCAD



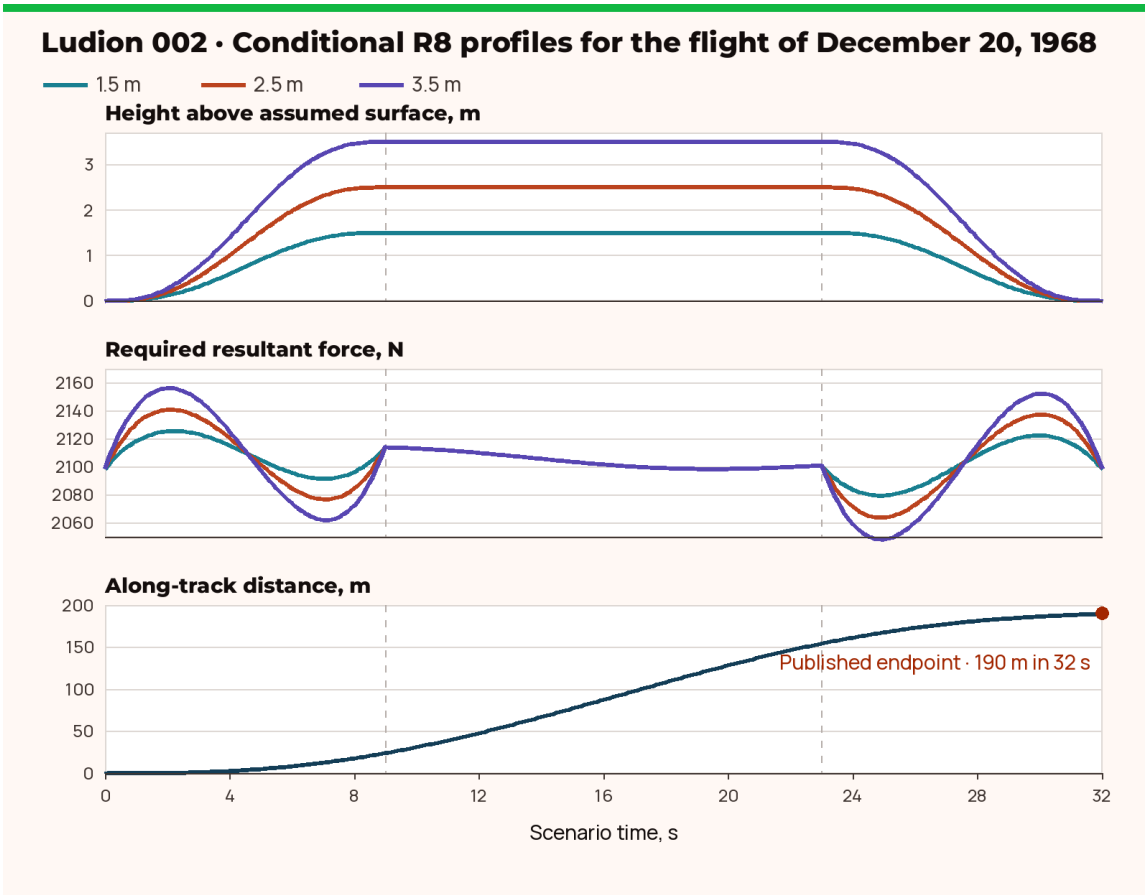
Roadster R07 in the local FreeCAD release

Episode	Reported observation	Limits
December 20, 1968 · 002	190 m in 32 s. The mean ground speed calculated from those two figures is 21.375 km/h.	Altitude, control history and touchdown remain unknown. The reported 59 km/h lacks measurement context.
December 18–20, 1968 · fog	Robert Cartier climbed to 4 m over a 30 m segment on 002.	The exact date, duration, total distance and landing remain unknown.
1968 campaign	All five free flights were straight-line. Three of the 13 flights on 002 were free flights.	The third free flight lacks a case record. Restrained trials and the pneumatic rig have separate records.

Christophe Rothmund. IAC-08-E4.3.6, § 6, pp. 10–11, and bibliography
Régis Ligonnet. Prendre l'air No. 4, June 2020, pp. 43–44 Tesla. Q3 2026 Update Deck, pp. 4, 11–12
Roadster R07 visual release manifest

Ludion Results and Their Scope

R10_SYSTEMS maps 109 unique CAD IDs to nine functional groups and retains the neutral geometry of 412 bodies.



English chart from the archived R8 data. The curves are conditional profiles. The reported 190 m in 32 s is marked separately.

R8 determines the required resultant force for three assumed profiles over the same distance. The peak values are 2,125.73 N, 2,141.01 N and 2,156.40 N. No force or trajectory time series was found for the historical flight. The 20 km/h headwind in Rothmund and the 2 knots in AAMS remain separate accounts.

The FCStd and independently imported AP242 each passed 20 local wall and void checks. Nine discrete grip combinations produced 7,020 non-overlapping bounding-box pair comparisons with the cradle neutral. Intermediate positions and behaviour under dynamic loads remain open.

Ludion R10 acceptance summary Ludion R10 evidence register R8 scenarios in the Ludion R10 release
Archived R8 data used in the chart Régis Ligonnet. Prendre l'air No. 4, June 2020, pp. 43–44

Tesla Footage and Local Roadster Runs

Tesla dates the Next Gen Roadster event to October 15, 2026, local time. Four presentation timestamps (PTS) per file bound the events on the clip timeline.

Clip	Release PTS, s	Touchdown PTS, s	Airborne interval, s
Ramp	9.510–10.177	12.679–15.516	2.503–6.006
Kickflip	32.074–32.157	35.035–37.579	2.878–5.506
Encore	0.501–0.709	3.253–6.256	2.544–5.756

The lower bound subtracts the first visible gap from the last clear airborne frame. The upper bound subtracts the selected pre-release frame from confirmed ground motion. An earlier selection gives Ramp a wider clip interval of 2.502–7.090 s. This table uses the later common selection. Physical playback speed remains unverified.

Tesla describes fan downforce for the supported phase and a jet system for demonstrations. The event calls the working fluid air. Lars Moravy's interview refers to nitrogen. The working fluid for each demonstration, sustained-hover duration, vertical thrust, energy and first-touchdown state remain open.

The local R5/C6l matrix accepted zero of four full cycles. The air cases yielded partial records. The nitrogen cases reached first modelled contact and stopped outside the damper model's domain. The R07 graphics and the R5/C6l run matrix preserve their separate input snapshots.

Tesla. Q3 2026 Update Deck, pp. 4, 11–12 Tesla. Roadster Event, McGregor, October 15, 2026 Tesla. The Ramp Tesla. The Kickflip Tesla. Roadster Encore Hagerty. Interview with Lars Moravy Audited PTS frame marks Roadster R5/C6l run matrix and completion gates

Comparable Findings and Costs

Each finding applies to the specified observation window or the scope of a digital check.

Question	Ludion 002	Tesla Roadster Rocket	Local R07 and R5/C6l
Scope	A dated free flight and a separate climb in fog.	Public clips of brief manoeuvres. The ramp is an external support.	R07 shows the layout. R5/C6l supplies separate numerical runs.
Sources of force	One S.178 gas generator feeds two Bertin ejectors, which produce the resultant thrust.	The clips show wheel-borne acceleration and a supported phase. Tesla describes the fan and jet systems.	The local CAD represents an electric drivetrain, fan downforce and a compressed-gas module.
Control	The left grip acts on the common valve. The right grip moves two yaw vanes. The cradle redirects thrust for pitch and roll.	The clips show changes in attitude. The control law and commands for individual manoeuvres remain unknown.	The visual release selects 246 shapes across eight systems. It shows the layout. Motion response requires a separate run.
Time and outcome	Rothmund reports 190 m in 32 s. Time and landing details are unknown for the 4 m climb over 30 m.	PTS bounds the visible airborne phase. Cloud obscures touchdown and the playback rate is unverified.	The C6l matrix accepted zero of four complete cycles. Each partial run has its own stopping point.
Evidence limits	R10 geometry and the R8 scenario profiles support an informational reconstruction.	The event shows brief manoeuvres. Sustained hover and the full free-flight envelope remain open.	CAD and image verification covers the independent project. Physical performance requires test data.

The printed and interactive estimates use defined scenarios for digital editorial work and inert demonstration. Workload, rates, attempts and currency are separate inputs. The public clips contain no actual consumption figures. Hardware manufacturing and historical flight costs are outside the estimate.

Sud-Aviation. US3506221A, Fig. 5 and claims 1, 3 and 6 Cost and budgeting calculator Editable cost workbook
Shared evidence data

Sources and Reproducibility

The main local receipts and source snapshots accompany this report. The public references have direct links.

Sources for the observations

The ResearchGate landing card describes a different publication. The cited pages 10 and 11 are in the embedded author manuscript IAC-08-E4.3.6. The journal edition has a separate link. The LLTV guide provides the source-handling and release method.

Christophe Rothmund. IAC-08-E4.3.6, § 6, pp. 10–11, and bibliography
Rothmund. Journal edition, Acta Astronautica 67, pp. 264–278 Régis Ligonnet. Prendre l'air No. 4, June 2020, pp. 43–44
Sud-Aviation. US3506221A, Fig. 5 and claims 1, 3 and 6 Bernard Lindenbaum. AFWAL-TR-86-3071, November 1986, § 2.3.2
Tesla. Q3 2026 Update Deck, pp. 4, 11–12 Tesla. Roadster product page and trim notes
Original LLTV and Roadster guide, JSON in Russian

Receipts and inputs

Ludion R10 acceptance summary Ludion R10 evidence register R8 scenarios in the Ludion R10 release
Roadster R07 visual release manifest Audited PTS frame marks Tesla publications and claims register
Roadster R5/C6l run matrix and completion gates

Ludion R10 FCStd SHA-256 — 91e0fb95fc0c665b685d0deafe913024b689b2a2620db7d2558d53f1e3758f2c. Local Roadster R07 SHA-256 — 9a1d827ee3c5f8ea35ba360c213647faefe7c35296f995a5b4ceb66ea88ee2ac. These identifiers bind the illustrations to the checked assemblies.

Companion deliverables

Comparison portal in English Comparison portal in Russian Shared evidence data Interactive map and 3D viewer
Narrated overview Narrated walkthrough Cost and budgeting calculator Editable cost workbook