Turner *Skies* pilot

Nephos shorthand, August 2026. First test on an artist the system wasn't built around: ten leaves from Turner's *Skies* sketchbook against the 1816-18 weather record.

The sketchbook

Tate, Turner Bequest CLVIII: 69 leaves, 65 watercolour sky studies, paper watermarked 1814, currently dated c.1818 (catalogue, full sequence). The date is contested: Finberg said c.1816-18, Powell said 1818-22 and probably Italy, Warrell says England only, Bosko argues a Durham start in autumn 1817 (Bosko 2019). The skies themselves have no place markers; the only hard anchors in the book are a dated verso (Salt Hill, 1818) and a diary putting Turner at Eton in June 1818. Page order proves nothing about time.

The ten leaves

Leaf	Sky	Why
D12450, f.2	Cumulus over a beach	Bosko ties it to *Raby Castle*, autumn 1817, a direct dating dispute with Tate
D12456, f.8	Broken cloud over land	Ordinary-sky comparator
D12467, f.19	Rain clouds	Precipitation, testable against rain records
D12472, f.24	Storm over what Tate reads as sea	Sea + wind + rain cues
D12474, f.26	Billowing cloud	Bosko: matches Howard's cumulus description
D12480, f.32	Thunderstorm, lightning flash	Storms leave records; best cross-check leaf
D12487, f.39	Dawn or dusk, unresolved	Can optics settle time of day?
D12490, f.42	Low sun, red-orange sky	Main Tambora candidate. Bosko: volcanic halo, late 1817. Tate: colours "may" relate
D12502, f.54	Red sky, crescent moon	Bosko proposes exactly 4 Jan 1818 on the Thames, but her geometry needs a telescope reversal. Astronomy could actually contradict this one
D12512, f.62	Overcast	Dated verso (Salt Hill 1818) = the book's best same-sheet anchor

Cloud names are our working reads off the WMO guide, not Tate's.

Weather sources for 1816-18

- **Luke Howard, *Climate of London***, daily pressure/temp/wind/rain/cloud for London 1806-19. Free scan. The primary witness.

- **HadCET**, daily central-England temperature back to 1772. Anomaly context only.
- **Oxford Radcliffe**, ~3x daily observations, free scans via CEDA. Independent inland check.
- **Newspapers** (BNA), named storms and weird sunsets.
- **Diaries/letters**, mapped by Veale & Endfield 2016; **TEMPEST** for extremes.
- **Navy logs** (ADM 51-54), only once a marine hypothesis names waters and dates; mostly Kew-only.

Start with Howard day tables, add Oxford + HadCET, go to newspapers/TEMPEST once a candidate month exists.

Tambora

April 1815 eruption, sulfate veil for ~3 years, NH ~0.4-0.8 C colder (Raible); red sunsets and long twilights reported in Europe from late 1815 (RMetS); 1816's cold is strongly attributable to it (Schurer). By 1817-18 it's plausible background, not dating power.

What to look for in D12490/D12502: afterglow persisting after sundown (von Savigny), red-low/purple-high colour ordering, halo vs aerosol aureole, and the same palette recurring across leaves while ordinary-cloud leaves don't show it. Red-to-green ratio is descriptive only (Zerefos proposed it corpus-level, Albrecht showed it's not quantitative). Best possible verdict: **Tambora-consistent, never Tambora-specific**. Red paint alone can't name an eruption, pick England over Italy, or date a day.

How the test runs

Blind-read each leaf before opening weather data. Hold the three date stories side by side (Tate c.1818 / Bosko 1817 / later incl. Italy) and check what evidence can actually reach them. Each leaf returns one of:

supports a date-window / **contradicts** it / **underdetermines** (fits, but so do dozens of other days) / **not testable**

D12480 is the storm cross-check; D12502 is the one astronomy could outright contradict once Bosko's reconstruction is redone with an independent ephemeris. The big unknown that stays open: whether any leaf is direct observation vs memory vs composition. The question is what the atmosphere put in front of Turner and what survives in the record, not whether he was "accurate."