

Syncre Witness Atlas: Ten Flagship Examples Across Physical Contexts

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How to read this atlas

Each entry supplies the same minimal template:

- the slice or subsystem being observed,
- the cycle-valued phase observable,
- the symmetry or loop mechanism that forces coverage,
- the correct target (full circle/torus or coupled target),
- the certificate sketch: what a WSC would record, or which WOB obstruction applies.

Witness Atlas (30 examples)

Label	Context	Class / Artifact	SFT form (target and certificate/obstruction sketch)
A1	Earth rotation (local solar phase)	Class C / WSC-ATLAS-0001	Embedded subsystem witness certifies full-cycle coverage on the subsystem, without asserting global coverage.
A2	Solar–lunar synodic coupling (CST)	Class B / WSC-ATLAS-0002	Coupled target (CST) is the correct meaning; coverage is certified on CST with coupled Haar baseline.
A3	Traveling wave on periodic medium	Class C / WSC-ATLAS-0003	Embedded subsystem witness certifies full-cycle coverage on the subsystem, without asserting global coverage.
A4	Vortex defect loop (order parameter)	Class C / WSC-ATLAS-0004	Embedded subsystem witness certifies full-cycle coverage on the subsystem, without asserting global coverage.
A5	AC circuit steady-state (phase response)	Class A / WSC-ATLAS-0005	Full target coverage is certified in the declared regime; statistical upgrades apply only when their certificates are declared.
A6	Ring oscillator phase around ring	Class C / WSC-ATLAS-0006	Embedded subsystem witness certifies full-cycle coverage on the subsystem, without asserting global coverage.

Label	Context	Class / Artifact	SFT form (target and certificate/obstruction sketch)
A7	Rotating machinery shaft angle	Class A / WSC-ATLAS-0007	Full target coverage is certified in the declared regime; statistical upgrades apply only when their certificates are declared.
A8	Planetary orbital phase	Class C / WSC-ATLAS-0008	Embedded subsystem witness certifies full-cycle coverage on the subsystem, without asserting global coverage.
A9	Coupled pendula resonance locking	Class D / WOB-ATLAS-0009	Obstruction reported with evidence; the correct response is to revise the declared regime or compute the correct target.
A10	Stroboscopic jitter diffusion	Class A / WSC-ATLAS-0010	Full target coverage is certified in the declared regime; statistical upgrades apply only when their certificates are declared.
A11	Coupling mismatch (wrong target)	Class D / WOB-ATLAS-0011	Obstruction reported with evidence; the correct response is to revise the declared regime or compute the correct target.
A12	Equivariance defect beyond tolerance	Class D / WOB-ATLAS-0012	Obstruction reported with evidence; the correct response is to revise the declared regime or compute the correct target.
A13	No cyclic subsystem available	Class D / WOB-ATLAS-0013	Obstruction reported with evidence; the correct response is to revise the declared regime or compute the correct target.
A14	Trivial winding on candidate loop	Class D / WOB-ATLAS-0014	Obstruction reported with evidence; the correct response is to revise the declared regime or compute the correct target.
A15	Measurement pinch (image misses arc)	Class D / WOB-ATLAS-0015	Obstruction reported with evidence; the correct response is to revise the declared regime or compute the correct target.
A16	Tear/regularity failure on loop	Class D / WOB-ATLAS-0016	Obstruction reported with evidence; the correct response is to revise the declared regime or compute the correct target.
A17	Disconnected domain misses witness component	Class D / WOB-ATLAS-0017	Obstruction reported with evidence; the correct response is to revise the declared regime or compute the correct target.

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A18	Slope-zero and quotient nonsurjective	Class D / WOB-ATLAS-0018	Obstruction reported with evidence; the correct response is to revise the declared regime or compute the correct target.
A19	Orbit collapse (no free orbit)	Class D / WOB-ATLAS-0019	Obstruction reported with evidence; the correct response is to revise the declared regime or compute the correct target.
A20	Mixing claim without justification	Class D / WOB-ATLAS-0020	Obstruction reported with evidence; the correct response is to revise the declared regime or compute the correct target.
A21	Uncoupled two-drive torus coverage	Class A / WSC-ATLAS-0021	Full target coverage is certified in the declared regime; statistical upgrades apply only when their certificates are declared.
A22	Matrix coupling in $T^3(CSTrank2)$	Class B / WSC-ATLAS-0022	Coupled target (CST) is the correct meaning; coverage is certified on CST with coupled Haar baseline.
A23	Holonomy loop witness (flux-like)	Class C / WSC-ATLAS-0023	Embedded subsystem witness certifies full-cycle coverage on the subsystem, without asserting global coverage.
A24	Bloch phase winding on closed loop	Class C / WSC-ATLAS-0024	Embedded subsystem witness certifies full-cycle coverage on the subsystem, without asserting global coverage.
A25	Fluid vortex ring loop witness	Class C / WSC-ATLAS-0025	Embedded subsystem witness certifies full-cycle coverage on the subsystem, without asserting global coverage.
A26	Nonresonant torus drive (Haar convergence)	Class A / WSC-ATLAS-0026	Full target coverage is certified in the declared regime; statistical upgrades apply only when their certificates are declared.
A27	Diffusion-enforced uniformity on CST	Class B / WSC-ATLAS-0027	Coupled target (CST) is the correct meaning; coverage is certified on CST with coupled Haar baseline.
A28	Neural oscillation ring phase wave	Class C / WSC-ATLAS-0028	Embedded subsystem witness certifies full-cycle coverage on the subsystem, without asserting global coverage.
A29	Gear ratio coupled phase (CST)	Class B / WSC-ATLAS-0029	Coupled target (CST) is the correct meaning; coverage is certified on CST with coupled Haar baseline.

Label	Context	Class / Artifact	SFT form (target and certificate/obstruction sketch)
A30	Two-control lator array coverage	oscil- torus Class A / WSC-ATLAS-0030	Full target coverage is certified in the declared regime; statistical upgrades apply only when their certificates are declared.