Compliance sheet — conjunction-screen-sgp4

Everything a supplier qualification, a legal review or an export check usually asks about conjunction-screen-sgp4 0.2.1, in one document.

1. Identity

Document	STAR-PKG-CONJUNCTION-SCREEN-SGP4-EN · v2.3 · 2026-11-14
Package	conjunction-screen-sgp4
Version	0.2.1
Capability	star.conjunction.screen
Maturity	Beta (VERIFIED)
Python	>=3.9
Source commit	dc09f61d
Source	https://github.com/Andrea07072000/S.T.A.R.-/tree/main/packages/conjunction_screen_sgp4

2. Licence and obligations

Apache License 2.0. You may use, copy, modify and distribute it, also commercially, and you receive a patent licence from the contributors. When you redistribute it: keep the LICENSE file and the copyright notices (and a NOTICE file, if a future version adds one), and state in modified files that you changed them. You may not use the S.T.A.R. name to endorse your product.

3. What it needs at run time

NEEDS	LICENCE	SOURCE
numpy	BSD-3-Clause	https://numpy.org/
scipy	BSD-3-Clause	https://scipy.org/

NEEDS	LICENCE	SOURCE
sgp4	MIT	https://pypi.org/project/sgp4/

4. Integrity

SHA-256 fingerprints of the files published on this website. Check a downloaded file with:

```
python -c "import hashlib,sys;print(hashlib.sha256(open(sys.argv[1],'rb').read()).hexdigest())"
conjunction_screen_sgp4-0.2.1-py3-none-any.whl
```

FILE	SHA-256
conjunction_screen_sgp4-0.2.1-py3-none-any.whl	c329a53366b22b68d8adb1cef5f76eb1d1912d4bfd2f3fbcfc481d86d225d7a3
conjunction_screen_sgp4-0.2.1-source.zip	1e502e3268336b5faa09f3a19ba0aa0111db100d8d42d45c3d4111e11301942a

5. What it does, and its limits

Screening of close approaches between objects of TLE catalogues (who to look at), NOT a collision-probability tool.

Probability of collision, covariance, manoeuvre advice, accuracy below the ~1 km TLE error. Advisory screening only.

- `screen(tle_paths, start, hours, step, coarse_km, final_km, cross_only, refine)` returns encounters (TCA in UTC, miss distance km, age of the older TLE) below `final_km`, excluding pairs that stay close (formations).
- TLEs are propagated with SGP4 only (mean elements); propagation errors are reported, never replaced.
- `refine_tca(state_at, step)`: closed-form TCA from relative motion, shared by screening and tests.

6. Export, use and certification

The package is published and freely available. That usually takes software out of export-control lists, but not every use of it: read the page on space activities and export control before using it in a controlled programme. It is not certified or qualified for flight; the evidence describes what was tested and how.

7. Citation and bill of materials

```
@software{cavazzini_conjunction_screen_sgp4_0_2_1,
  author  = {Cavazzini, Andrea},
  title   = {{conjunction-screen-sgp4}: Conjunction screening of TLE catalogues with SGP4, KD-
tree coarse pass and closed-form TCA refinement},
  version = {0.2.1},
  year    = {2026},
  url     = {https://andrea07072000.github.io/S.T.A.R.-/software/conjunction_screen_sgp4/},
  note    = {Apache-2.0. Source: https://github.com/Andrea07072000/S.T.A.R.-, commit dc09f61d}
}
```

CITATION.cff · BibTeX · SBOM CycloneDX 1.5 · SBOM SPDX 2.3

8. Warranty and liability

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Related: space activities and export control · acceptable use · evidence and limits · licence texts