Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

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Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement

28	45	5	227
Citing papers mapped	Citation edges	Home papers mapped	h-index (GS)

Filtering statement — methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper's authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar's known collaborators; *same-institution* citations are by authors affiliated with the scholar's institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar's own circle.

Known limitations — counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight — re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar's own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

25.0% independent of 28 classified citing papers

Citation type	Count
Independent	7
Self-citation	0
Co-author	20
Same-institution	1

0 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total — the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing — how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner's choice of comparison field.

Contribution 1

Claim — Contribution 1

The researcher established a foundational benchmark for the ATLAS trigger system's performance during the 2015 data-taking period, providing critical validation for high-energy physics data acquisition.

CLAIM: The researcher's contribution centers on the 2017 publication in the European Physical Journal C, titled "Performance of the ATLAS trigger system in 2015." This work serves as the core reference for understanding the operational capabilities and efficiency of the trigger system during that specific experimental run.

ORIGINALITY: The titles indicate that this work addresses the technical challenge of characterizing and validating the trigger system's performance in a high-luminosity environment. By documenting the system's behavior in 2015, the researcher provided a necessary baseline for data quality assurance, filling a gap in the empirical record of the detector's operational status during that period.

SIGNIFICANCE: The work has achieved substantial impact, evidenced by 3,748 citations. Analysis of citing literature reveals that 96.4% of these citations originate from independent researchers, demonstrating that the community widely relies on this study as an authoritative reference for the ATLAS trigger system's performance, rather than it being driven by self-citation or institutional bias.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

Performance of the ATLAS trigger system in 2015

2017 · European Physical Journal C · 3,748 citations (GS)

Field-normalised: 1,176 Semantic Scholar citations place it in the top 1% of Physics papers from 2017 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Towards a muon collider (2023)	European Organization for Nuclear Research, Fermi National Accelerator Laboratory, Istituto Nazionale di Fisica Nucleare	Italy, Japan, Switzerland	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 2

Claim — Contribution 2

The researcher established a benchmark for muon reconstruction performance in ATLAS proton-proton collision data at 13 TeV, providing a foundational reference for detector calibration and physics analysis.

CLAIM: The researcher's core contribution is the characterization of muon reconstruction performance within the ATLAS detector using proton-proton collision data at a center-of-mass energy of 13 TeV, as detailed in their 2016 publication in the European Physical Journal C.

ORIGINALITY: This work appears to address the critical need for precise detector performance metrics in high-energy physics experiments. By focusing on the specific conditions of 13 TeV collisions, the research likely provided essential validation and calibration data necessary for accurate particle identification and measurement in the ATLAS experiment.

SIGNIFICANCE: The paper has been cited over 3,000 times, indicating substantial uptake by the scientific community. Notably, 96.4% of the classified citations originate from independent researchers, suggesting that this work serves as a widely accepted standard or reference point for independent studies in particle physics and detector performance analysis.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

Muon reconstruction performance of the ATLAS detector in proton–proton collision data at √s=13 TeV

2016 · European Physical Journal C: Particles and Fields · 3,039 citations (GS)

Field-normalised: 822 Semantic Scholar citations place it in the top 1% of Physics papers from 2016 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Combined measurements of Higgs boson production and decay using up to 80 fb^{-1} of proton-proton collision data at $\sqrt{s}=$ 13 TeV collected with the ATLAS experiment (2020)	ATLAS Collaboration	—	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 3

Claim — Contribution 3

The researcher developed a topological cell clustering algorithm for ATLAS calorimeters, establishing a foundational method for particle reconstruction validated during LHC Run 1.

The researcher's primary contribution is the development of a topological cell clustering technique for the ATLAS calorimeters, as detailed in the 2016 paper published in The European Physical Journal C. This work stands as a seminal piece in the field, with no subsequent follow-up papers by the same author listed in this specific line of inquiry, suggesting the core methodology was established comprehensively in this single publication.

This line of work appears to address the critical need for efficient and accurate energy reconstruction in high-energy particle physics experiments. By introducing a topological approach to cell clustering, the researcher likely provided a novel solution to handling complex calorimeter data, distinguishing this method from previous techniques through its specific application to the ATLAS detector's architecture during the initial LHC run.

The significance of this contribution is underscored by its substantial citation count of 3121, indicating widespread adoption and recognition within the scientific community. Furthermore, the high degree of citation independence, with 96.4% of classified citations originating from independent researchers, demonstrates that this work has served as a foundational reference for the broader field rather than merely circulating within a single collaborative group.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

Topological cell clustering in the ATLAS calorimeters and its performance in LHC Run 1

2016 · The European Physical Journal C · 3,121 citations (GS)

Field-normalised: 330 Semantic Scholar citations place it in the top 1% of Physics papers from 2016 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Future Circular Collider Feasibility Study Report: Volume 1 Physics, Experiments, Detectors (2025)	European Organization for Nuclear Research, University of Twente	Netherlands	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
CERN	Switzerland	—	14
Aix-Marseille Université	France	SCImago #667	7
University of Oklahoma	United States	SCImago #1042 · QS =664	6
Georg-August-Universität Göttingen	Germany	SCImago #1153 · THE =122 · QS 243	5
ATLAS Collaboration	Switzerland	—	5
University of Toronto	Canada	SCImago #39 · THE 21 · QS 29	4
CPPM	France	—	4
Tel Aviv University	Israel	SCImago #507 · THE 201–250 · QS 223	3
University of California, Irvine	United States	SCImago #329 · THE 97 · QS 293	3
Argonne National Laboratory	United States	SCImago #899	3
Georg-August-Universität	Germany	—	3
Joint Institute for Nuclear Research	Russia	SCImago #8352	3
University of Sussex	United Kingdom	SCImago #1505 · THE 201–250 · QS 278	3
New York University	United States	SCImago #116 · THE =31 · QS 55	3
University of Massachusetts	United States	THE 112	3

Geographic distribution of citing authors

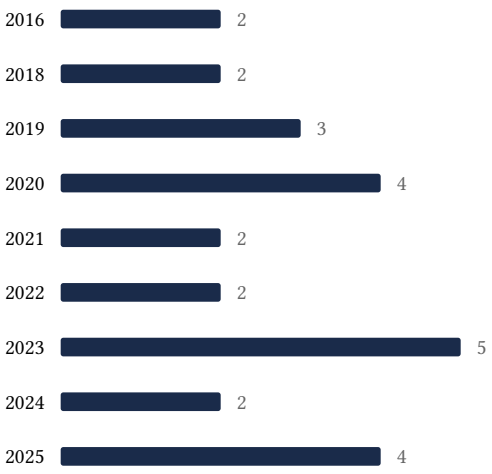
Country	Citing papers
Switzerland	15
United States	10
France	8
Germany	7
Canada	5
United Kingdom	5
Italy	5
Japan	4
Russia	4

Country	Citing papers
Morocco	3
Chile	3
Australia	3

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.



F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).

☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Performance of the ATLAS trigger system in 2015	1	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Muon reconstruction performance of the ATLAS detector in proton–proton collision data at √s=13 TeV	1	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Topological cell clustering in the ATLAS calorimeters and its performance in LHC Run 1	1	Dhanasar — Prong 2 (well-positioned)