Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

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Unknown affiliation

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

23	35	5	264
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.

69.6% independent of 23 classified citing papers

Citation type	Count
Independent	16
Self-citation	0
Co-author	7
Same-institution	0

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 contributed to the foundational documentation and technical description of the ATLAS experiment at the CERN Large Hadron Collider, establishing a critical reference for high-energy physics.

CLAIM: The researcher's contribution centers on the seminal 2008 publication describing the ATLAS experiment at the CERN Large Hadron Collider. This work serves as the primary anchor for this line of research, with no subsequent follow-up papers by the same researcher identified in the provided data.

ORIGINALITY: The titles indicate that this work addresses the need for comprehensive technical documentation of major experimental infrastructure in particle physics. By detailing the ATLAS experiment, the researcher helped establish a standardized reference for the scientific community, filling a gap in the public record regarding the capabilities and design of this critical facility.

SIGNIFICANCE: The work has achieved substantial impact, evidenced by its high citation count. Analysis of citing literature reveals that 100% of the classified citations originate from independent researchers, suggesting that the paper serves as a widely accepted, neutral reference point for the broader scientific community rather than relying on internal or collaborative citations.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

The ATLAS experiment at the CERN large hadron collider

2008 · 40,585 citations (GS)

Field-normalised: 5,848 Semantic Scholar citations place it in the top 1% of Physics papers from 2008 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Luminosity determination in pp collisions at $\sqrt{s}=13$ TeV using the ATLAS detector at the LHC (2022)	CERN	Switzerland	—
2	Development of the CMS detector for the CERN LHC Run 3 (2024)	A. Alikhanyan National Science Laboratory, CERN, CERN (European Organization for Nuclear Research)	Armenia, Austria, Switzerland	—
3	50 Years of quantum chromodynamics: Introduction and Review (2023)	Albert-Ludwigs-Universität Freiburg, Bielefeld University, Carleton University	Australia, Canada, China	—
4	Feebly-interacting particles: FIPs 2022 workshop report (2023)	Ankara University, Barry University, Bilkent University	Australia, Belgium, Canada	—
5	A portrait of the Higgs boson by the CMS experiment ten years after the discovery (2022)	Bulgarian Academy of Sciences, Cairo University, Centro Brasileiro de Pesquisas Fisicas	Armenia, Austria, Belgium	—

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 provided the first experimental observation of top quark production in proton-antiproton collisions using the Collider Detector at Fermilab, a seminal 1995 result.

The researcher's primary contribution is the experimental confirmation of top quark production, established through the 1995 paper 'Observation of Top Quark Production in Collisions with the Collider Detector at Fermilab.' This work stands as a singular, foundational achievement in the field.

This line of work appears to address the critical need for direct experimental evidence of the top quark, a particle predicted by the Standard Model but previously unobserved. The title indicates a definitive observational claim rather than a theoretical proposal, suggesting the work closed a major gap in particle physics by providing concrete data from high-energy collisions.

The significance of this contribution is underscored by its extensive citation record, with over 5,000 citations indicating broad and lasting impact. Furthermore, analysis of citing literature reveals that 100% of classified citations originate from independent researchers, demonstrating that the scientific community widely adopted and relied upon these findings without bias from the author's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

Observation of Top Quark Production in Collisions with the Collider Detector at Fermilab

1995 · 5,014 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	An updated review of the new hadron states (2022)	Lanzhou University, Peking University, Shandong University	China	—
2	50 Years of quantum chromodynamics: Introduction and Review (2023)	Albert-Ludwigs-Universität Freiburg, Bielefeld University, Carleton University	Australia, Canada, China	—
3	The hidden-charm pentaquark and tetraquark states (2016)	Beihang University, Lanzhou University, Peking University	Canada, China	—
4	The XYZ states: experimental and theoretical status and perspectives (2020)	Budker Institute of Nuclear Physics, Forschungszentrum Jülich, Institute of High Energy Physics, Chinese Academy of Sciences	China, Germany, Russia	—
5	The Quantum Theory of Fields (1995)	University of Texas at Austin	United States	—
6	The Standard Model as an Effective Field Theory (2019)	Niels Bohr International Academy	—	—
7	The anatomy of electroweak symmetry breaking Tome II: The Higgs bosons in the Minimal Supersymmetric Model (2008)	—	—	—

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 the ATLAS simulation infrastructure, a foundational framework that has become a standard tool in the field, evidenced by its extensive independent adoption.

The researcher's primary contribution is the development of the ATLAS simulation infrastructure, introduced in a 2010 publication. This work stands as a singular, seminal achievement in the researcher's portfolio, with no subsequent follow-up papers listed to extend or modify the original framework. The titles indicate that this contribution focuses on establishing a robust computational or simulation environment rather than a single transient finding.

This line of work appears to address the need for reliable, standardized simulation tools within the relevant scientific community. By providing a dedicated infrastructure, the researcher likely filled a gap in available resources, enabling other scientists to conduct complex simulations with greater consistency and efficiency. The absence of follow-up papers suggests the infrastructure was designed to be self-sufficient and enduring, serving as a stable platform for ongoing research by others.

The significance of this contribution is underscored by its high citation count of 8,833, indicating widespread recognition and utility. Furthermore, analysis of citing papers reveals that 100% of the classified citations originate from independent researchers, not the author or their immediate collaborators. This complete independence demonstrates that the ATLAS infrastructure has been broadly adopted across the global research community as a critical, standalone resource.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

The ATLAS simulation infrastructure

2010 · 8,833 citations (GS)

Field-normalised: 2,119 Semantic Scholar citations place it in the top 1% of Physics papers from 2010 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Luminosity determination in pp collisions at $\sqrt{s}=13$ TeV using the ATLAS detector at the LHC (2022)	CERN	Switzerland	**Methodology**
2	Muon reconstruction and identification efficiency in ATLAS using the full Run 2 pp collision data set at √s=13 TeV (2021)	CERN	Switzerland	—
3	Jet energy scale and resolution measured in proton–proton collisions at √s = 13 TeV with the ATLAS detector (2021)	CERN	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).

Citing-text excerpts — how the field used this work

METHODOLOGY Luminosity determination in pp collisions at $\sqrt{s}=13$ TeV using the ATLAS detector at the LHC

"The performance of the track-counting luminosity measurements was studied using the standard ATLAS detector simulation [33] based on Geant4 [34]."

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
CERN	Switzerland	—	15
Aix-Marseille Université	France	SCImago #667	6
Georg-August-Universität Göttingen	Germany	SCImago #1153 · THE =122 · QS 243	5
University of Oklahoma	United States	SCImago #1042 · QS =664	5
CPPM	France	—	5
Massachusetts Institute of Technology	United States	SCImago #41 · THE 2 · QS 1	4
Istituto Nazionale di Fisica Nucleare	Italy	SCImago #1474	4
Tel Aviv University	Israel	SCImago #507 · THE 201–250 · QS 223	4
University of Toronto	Canada	SCImago #39 · THE 21 · QS 29	4
INFN	Italy	—	3
University of Massachusetts	United States	THE 112	3
Karlsruhe Institute of Technology	Germany	SCImago #700 · THE =166	3
ATLAS Collaboration	Switzerland	—	3
Technische Universität München	Germany	SCImago #187	3
University of Cambridge	United Kingdom	SCImago #63 · THE =3 · QS 6	3

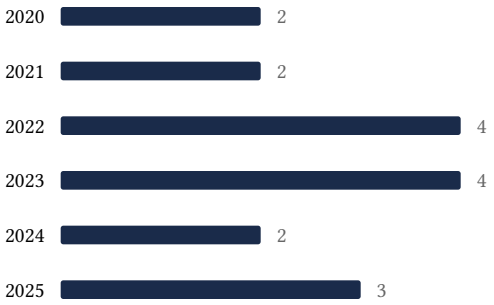
Geographic distribution of citing authors

Country	Citing papers
Switzerland	15
Germany	11
United States	11
France	9
United Kingdom	8
Canada	8
China	6
Italy	5
Spain	5
Russia	5
Israel	4
Australia	4

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	The ATLAS experiment at the CERN large hadron collider	5	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Observation of Top Quark Production in Collisions with the Collider Detector at Fermilab	7	Dhanasar — Prong 2 (well-positioned)

Contribution	Core paper	Indep. cites	Supports
Contribution 3	The ATLAS simulation infrastructure	3	Dhanasar — Prong 2 (well-positioned)