Decadal review (2009-2019) of GRUAN journal articles

1. What have we achieved?
2. What are the gaps?
3. What matrix should we have to keep track of scientific impacts and data usage to help sites advocate for continuous support from their management?
4. How to promote more scientific research?

The goals of GRUAN

GRUAN

The purpose of GRUAN is to:

- Provide long-term high quality climate records;
- Constrain and calibrate data from more spatially-comprehensive global observing systems (including satellites and current radiosonde networks); and
- Fully characterize the properties of the atmospheric column.

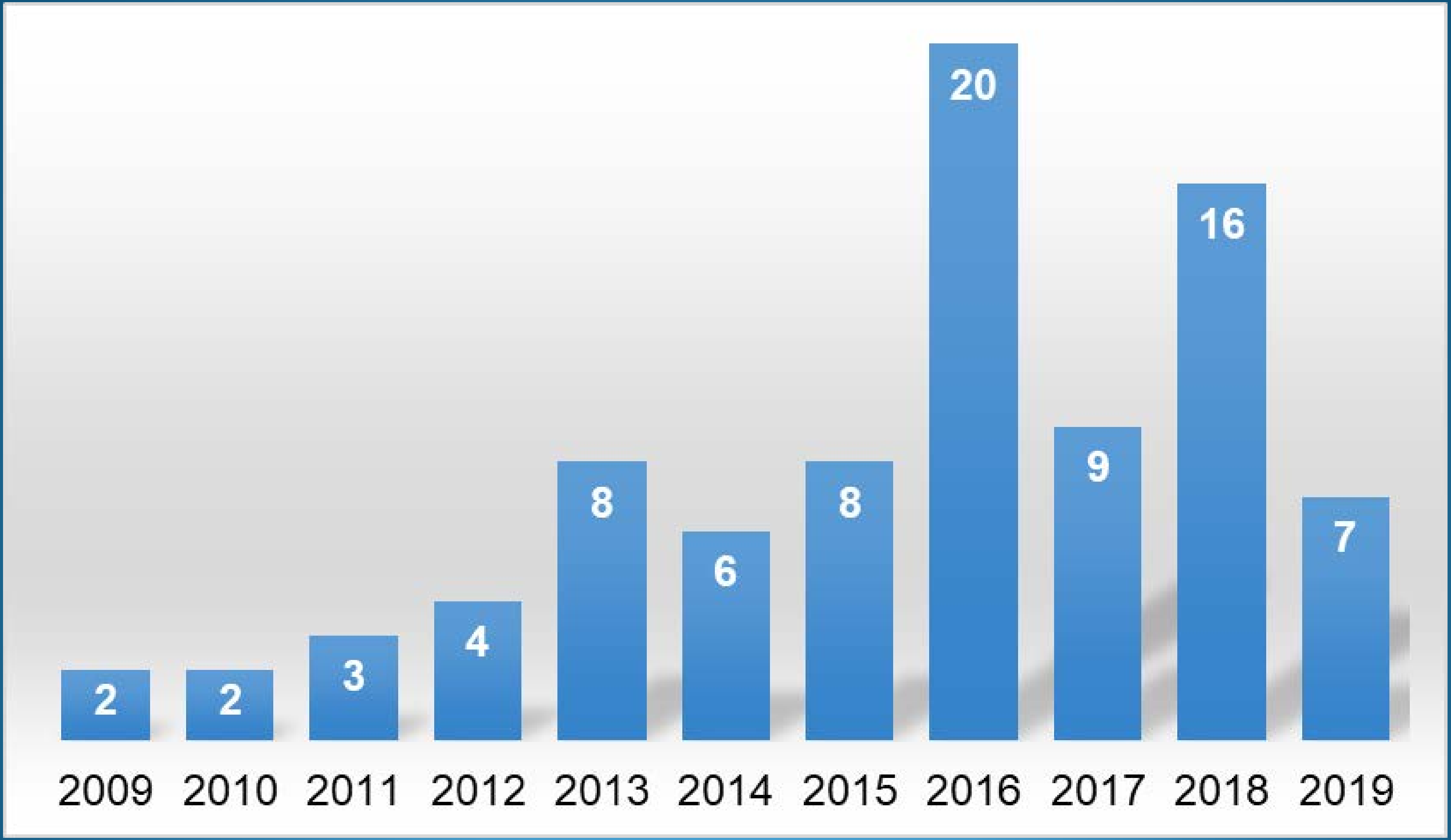
Four key user groups of GRUAN data products are identified:

- The climate detection and attribution community.
- The satellite community.
- The atmospheric process studies community.
- The numerical weather prediction (NWP) community.

Decadal review (2009-2019) of GRUAN journal articles

Category	Number
Field and intercomparison campaigns	23
Satellite Validation & Algorithm Development	18
GRUAN product development	14
Network design	8
Operational developments	8
Validation for ground-based instruments	6
Assessment of the measurement record	6
Modelling; model evaluation and calibration	4
Total	87

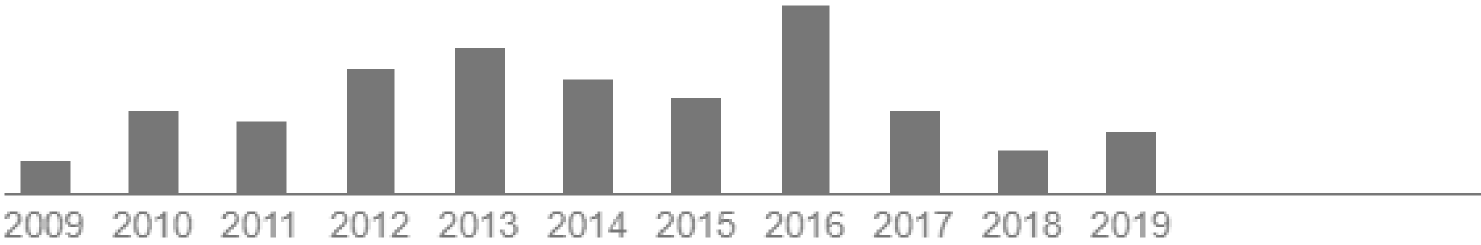
Decadal review (2009-2019) of GRUAN journal articles



Decadal review (2009-2019) of GRUAN journal articles

1. What have we achieved: Satellite validation, GRUAN documentation, Field campaign
2. What are the gaps? Climate trends and processing studies, NWP
3. What matrix: citations, h-index, data DOI, acknowledgement
4. How to promote more scientific research? More analysis of papers, outreach, seeking resources?

Total citations Cited by 101



Scholar articles Reference upper-air observations for climate: Rationale, progress, and plans
DJ Seidel, FH Berger, HJ Diamond, J Dykema… - Bulletin of the American Meteorological Society, 2009
Cited by 101 Related articles All 23 versions

Reference quality upper-air measurements: Guidance for developing GRUAN data products

FJ Immler, J Dykema, T Gardiner… - Atmospheric …, 2010 - eprints.maynoothuniversity.ie

The accurate monitoring of climate change im-poses strict requirements upon observing systems, in partic-ular regarding measurement accuracy and long-term stability. Currently available data records of the essential climate vari-ables (temperature-T, geopotential-p …

☆ 99 Cited by 104 Related articles All 15 versions

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