



A QUALITY ASSURANCE  
FRAMEWORK FOR  
EARTH OBSERVATION

## Introduction

Niall Origo  
QA4EO Secretariat



A QUALITY ASSURANCE  
FRAMEWORK FOR  
EARTH OBSERVATION

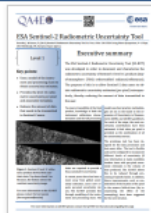
New-look website



About Workshops Documentation Resources Case Studies **Links** Contact



- QA4EO has  
GEO vision  
The aim of  
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Level 2  
Level 3

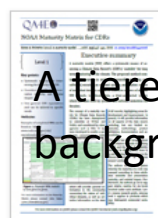
QA4EO C  
QA4EO P

Website redesign is complete and is now available for integration

# QA4E

## A QUALITY ASSURANCE FRAMEWORK FOR EARTH OBSERVATION

Case studies: Concept



NOAA Maturity Matrix for CDRs

A tiered system based on audience background...

Level 3



ESA Sentinel-2 Radiometric Uncertainty Test

Level 2

Level 3

e.g. policy makers,  
managers, funding  
bodies, etc.

Level 1



WELD: Web-Enabled Landsat Data

Level 1



Radiative transfer Model Intercomparison (PAMI)

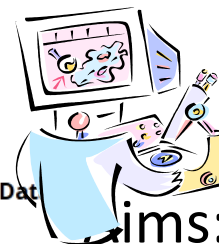
Level 1

Level 2

Level 3

e.g. scientists in similar  
fields who understand  
the problem

Level 2



Aims:

- Show and tell

- Quick wins

- Promote “compliant” work  
e.g. scientists who  
have a similar  
product/ software/  
dataset/ etc.

Level 3

Level  
of  
detail



# A QUALITY ASSURANCE FRAMEWORK FOR EARTH OBSERVATION

Case studies: ~~Examples~~

Policy / initiative

Method / software

Dataset

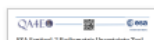


NOAA Maturity Matrix for CDRs

Level 1  
Level 2  
Level 3

Application of the Land  
Surface Temperature  
validation protocol

Darren Ghent  
University of Leicester



ESA Sentinel-2 Radiance Transfer Comparison (RTComp)

ESA Sentinel-2 Radiance Transfer Comparison (RTComp)

Level 2  
Level 3

Single Sensor Error  
Statistics (SSES) applied  
to Sea Surface  
Temperature

Gary Corlett  
University of Leicester

Web - Enabled Landsat Data



Level 2  
Level 3

Suggestions welcome!



# A QUALITY ASSURANCE FRAMEWORK FOR EARTH OBSERVATION

## Promoting QA4EO

- Case studies for the EO community
- Posters highlighting QA4EO
- Getting the name into the literature

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Funding Agencies

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Publication Years

Languages

Countries/Territories

Sort by: Publication Date -- newest to oldest

1. The Treatment of Uncertainties in SST Measurements Using Radiation Thermometers for the Validation of Satellite Measurements  
By: Theodorou, E.; Fox, N.P.  
Issuing Organization: National Physical Laboratory, UK  
The Treatment of Uncertainties in SST Measurements Using Radiation Thermometers for the Validation of Satellite Measurements Pages: 23 pp Published: Nov 2012  
View Abstract

2. Probability Sampling Protocol for Thematic and Spatial Quality Assessment of Classification Maps Generated From Spaceborne/Airborne Very High Resolution Images  
By: Baraldi, Andrea; Boschetti, Luigi; Humber, Michael L.  
IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING Volume: 52 Issue: 1 Pages: 701-760 Part: 2 Published: JAN 2014  
Full Text View Abstract

3. Quality Assessment of Pre-Classification Maps Generated from Spaceborne/Airborne Multi-Spectral Images by the Satellite Image Automatic Mapper (TM) and Atmospheric/Topographic Correction (TM)-Spectral Classification Software Products: Part 2-Experimental Results  
By: Baraldi, Andrea; Humber, Michael; Boschetti, Luigi  
REMOTE SENSING Volume: 5 Issue: 10 Pages: 5209-5264 Published: OCT 2013  
Full Text View Abstract

4. Sensor Inter-calibration Over Dome C for the ESA GlobAlbedo Project  
By: Potts, Dale R.; Madin, Stephen; Muller, Jan-Peter; et al.  
IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING Volume: 51 Issue: 3 Special Issue: SI Pages: 1138-1149 Part: 1 Published: MAR 2013  
Full Text View Abstract

5. Operational Automatic Remote Sensing Image Understanding Systems: Beyond Geographic Object-Based and Object-Oriented Image Analysis (GEOBIA/GEOBIA). Part 1: Introduction  
By: Baraldi, Andrea; Boschetti, Luigi  
REMOTE SENSING Volume: 4 Issue: 9 Pages: 2694-2735 Published: SEP 2012  
Full Text View Abstract

6. Operational Automatic Remote Sensing Image Understanding Systems: Beyond Geographic Object-Based and Object-Oriented Image Analysis (GEOBIA/GEOBIA). Part 2: Novel system Architecture, Information/Knowledge Representation, Algorithm Design and Implementation  
By: Baraldi, Andrea; Boschetti, Luigi  
REMOTE SENSING Volume: 4 Issue: 9 Pages: 2768-2817 Published: SEP 2012  
Full Text View Abstract

7. Current activity of Russia in measurement assurance of Earth optical observations  
By: Sapritsky, V. I.; Kutilov, V. N.; Ivanov, V. S.; et al.  
Conference: 11th International Conference on New Developments and Applications in Optical Radiometry (NEWARD) Location: HI Date: SEP 18-23, 2011  
Sponsor(s): Moss Landing Marine Labs  
METROLOGIA Volume: 49 Issue: 2 Pages: S9-S16 Published: APR 2012  
Full Text View Abstract

8. SATELLITE SENSOR INTERCALIBRATION OVER DOME C: AN INTRODUCTION TO QA4EO AND THE ESA GLOBALBEDO PROJECT  
By: Potts, D.; Madin, S.; Muller, J-P; et al.  
Book Group Author(s): IEEE  
Conference: IEEE International Geoscience and Remote Sensing Symposium (IGARSS) Location: Munich, GERMANY Date: JUL 22-27, 2012  
Sponsor(s): IEEE; IEEE Geosci & Remote Sensing Soc; DLR; ESA  
2012 IEEE INTERNATIONAL GEOSCIENCE AND REMOTE SENSING SYMPOSIUM (IGARSS) Book Series: IEEE

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