Geophysical Research Abstracts
Vol. 14, EGU2012-3493, 2012
EGU General Assembly 2012

How to define limits of acceptability

K. Beven, P. J. Smith, and J. Davies
Lancaster University, Environmental Science, Lancaster, United Kingdom (k.beven@lancaster.ac.uk)

The original Beven and Binley (1992) GLUE paper is now 20 years old and has received over 1000 citations, reflecting the increase in interest in model evaluation and uncertainty estimation that has become possible with the increase in available computer power over that time. The issues that drove the original GLUE concepts were (in today's language) the epistemic nature of errors in the modelling process and the equifinality of model structures and parameter sets and have not gone away. Recent work using limits of acceptability is attempting to find more objective ways of approaching the epistemic error and equifinality issues in ways that do not depend on formal statistical error models. Essentially we should not expect models to be better than the data that is used to evaluate them, and we should expect that the errors in prediction might be different than those in calibration. This paper will present a framework for defining and using limits of acceptability for model evaluation and uncertainty estimation.