CSEP Discussion

How adequate is CSEP's infrastructure for evaluating OEF models?
Italian OEF Needs:

1. CSEP forecasts are for 1-day and 3-month – (Italian OEF uses 1 week forecasts)

2. Need to compare results using the official and real-time catalog

3. Need to test ensemble models

4. Need to strength the testing phase – (maybe a major restyling is needed)
NZ OEF Requirements
• Longer forecast time periods
• Longer lag-times
• More retrospective testing
• Better results communications strategies
UCERF OEF Requirements

- Catalog including uncertainties
- Probability of missed events
- Association between event and fault
USGS DELF Strategy Needs:
• Define user needs and uses
• Define roles of organizations
• Develop integrated program that includes R&D and needed products and integration into ANSS
• Make OEF algorithms testable
• Develop vetting methods for forecasts
• Begin operational capabilities with improved network integration
• Fully integrated OEF system for calculation and productions within ANSS
1. CSEP currently runs forecasts, then evaluates results
2. CSEP models currently uses only seismicity as input parameters to forecasts
3. CSEP currently runs prospective forecasts, doesn’t hindcast forecasts
4. CSEP currently runs forecasts using “stable” earthquake catalogs, 1 month behind real-time
5. CSEP contains forecast models to ensures reproducibility of results
1. CSEP runs on single computer server, and is configured to complete one day of forecasts and evaluation within 24 hours, so it doesn’t get behind

2. CSEP archives results “forever”

3. CSEP reprocess evaluations if problems in catalog, processing, or evaluation tests are discovered

4. CSEP processing is distributed between 4 test centers, California, NZ, ETH, Japan