



Second Verification Workshop CBRFC, 11/20/08

Planned science and software activities

**James Brown, Julie Demargne,
Yuqiong Liu**



Overview of activities

Enhance verification science & software

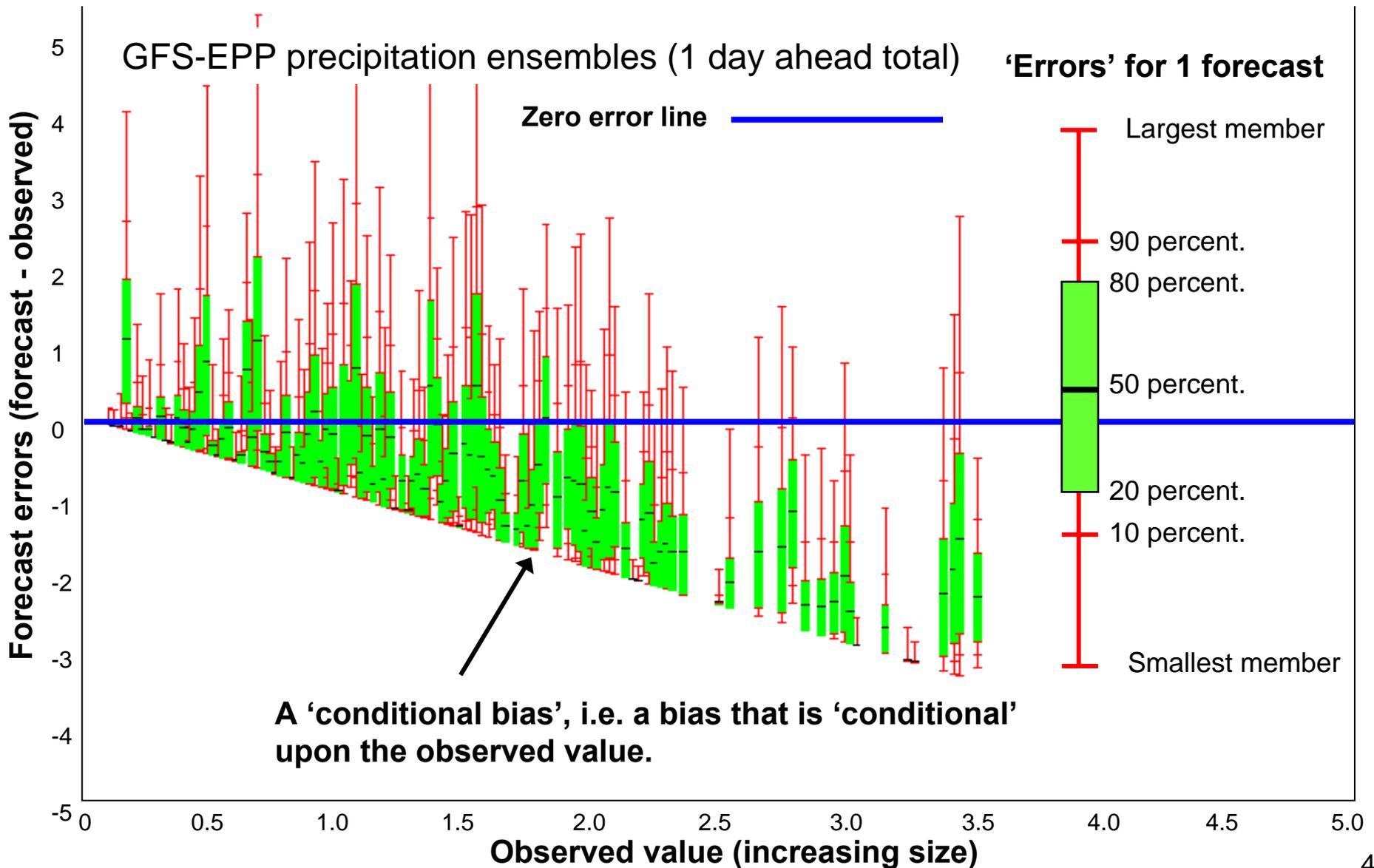
1. **EVS enhancements**
2. **Extend user-friendly metrics (for forecasters)**
3. **Combining metrics (for more basic users)**
4. **Real-time verification (later today)**
5. **Sampling uncertainty of metrics (C.I.)**
6. **Error decomposition (volume/timing error)**



1. EVS enhancements

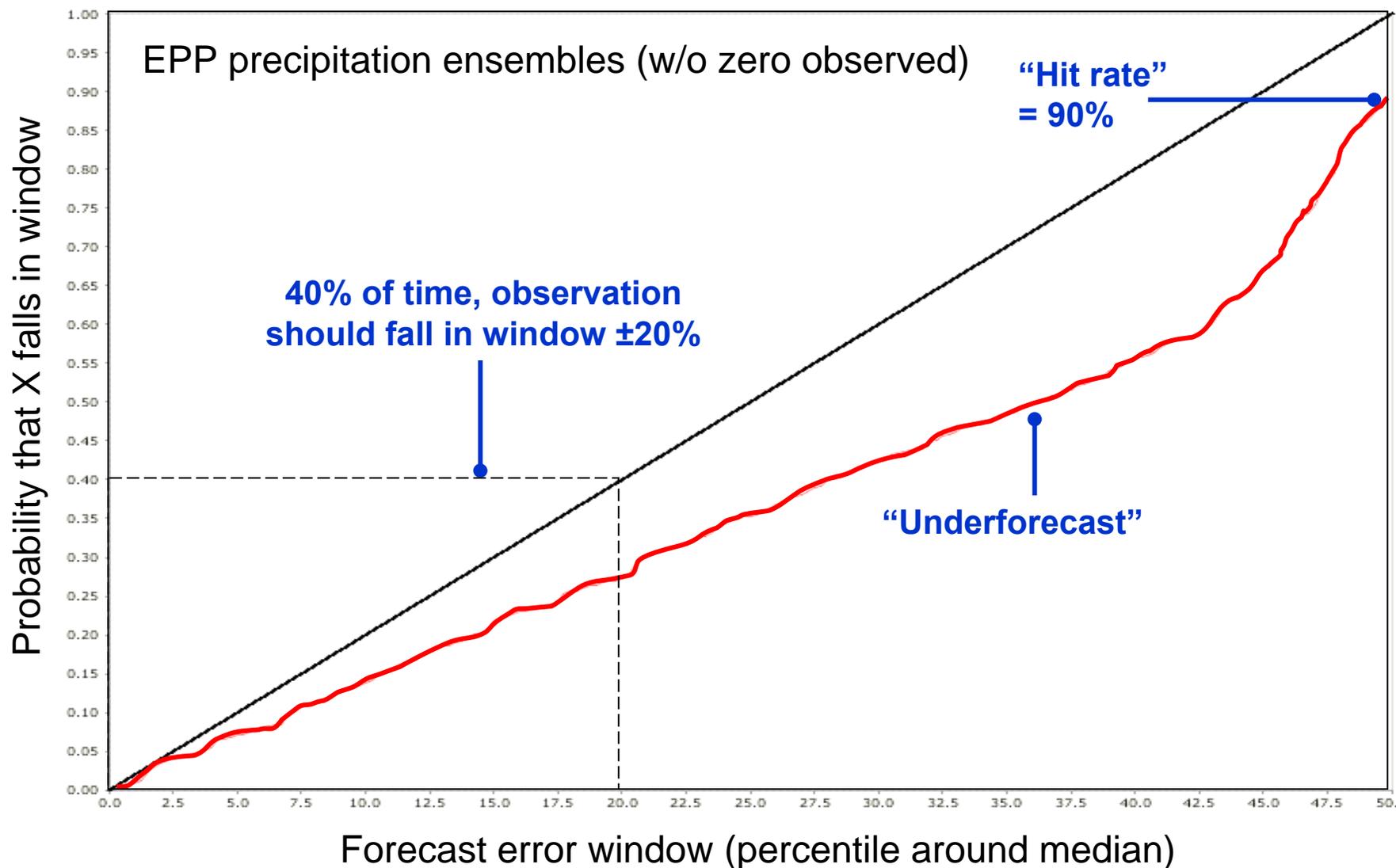
1. **Support skill calculations**
2. **Improve aggregation of many points**
3. **Summary info. on imported data**
4. **Improved software diagnostics (errors etc.)**
5. **Graphics for sample sizes**
6. **Use-cases in manual**
7. **Store for new science algorithms (e.g. CI)**
8. **Define CHPS/FEWS adapter/workflow for EVS core (GUI still separate)**
9. **Maintain/bug-fix (e.g. MARFC/ABRFC)**

2. User friendly metrics





Cumulative Talagrand





Discrimination

Need a simple discrimination metric

- ROC/discrimination diagram are complex
- Simpler metric/graphic needed



3. Combining metrics

Too many metrics for operational work

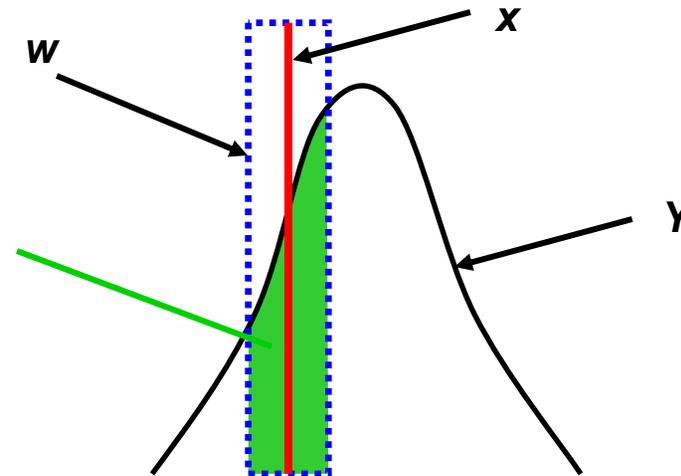
- As well as simplifying individual metrics, need to condense info. for “basic users”.
- Can we develop an expert system (i.e. mimic expert) to classify performance based on several detailed metrics?
- Needs to be user-specific (e.g. threshold)
- Use for screening forecasts. If poor, then forecaster looks at detailed metrics.



Additional slides

Prob. of error (Wilson)

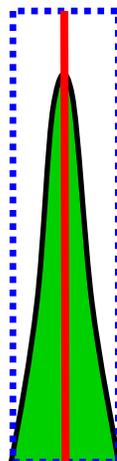
$$PS(f(y), w) = \int_{x-0.5w}^{x+0.5w} f(y) dy$$



e.g.

1.0

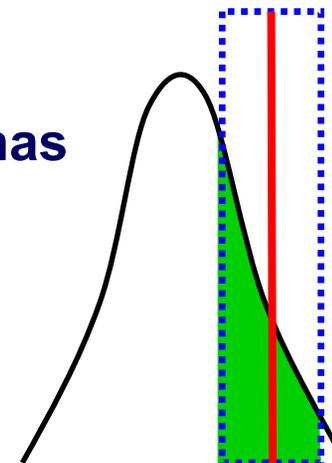
100% chance
that forecast has
error $\leq w$



e.g.

0.2

20% chance
that forecast has
error $\leq w$





Mean Capture Rate

