

Comparison of ALADIN and ALARO forecasts in Croatia



Lovro Kalin

Meteorological Service of Croatia

HIRLAM/ALADIN All-Staff Meeting/ Workshop, Oslo, 23 – 26 April 2007

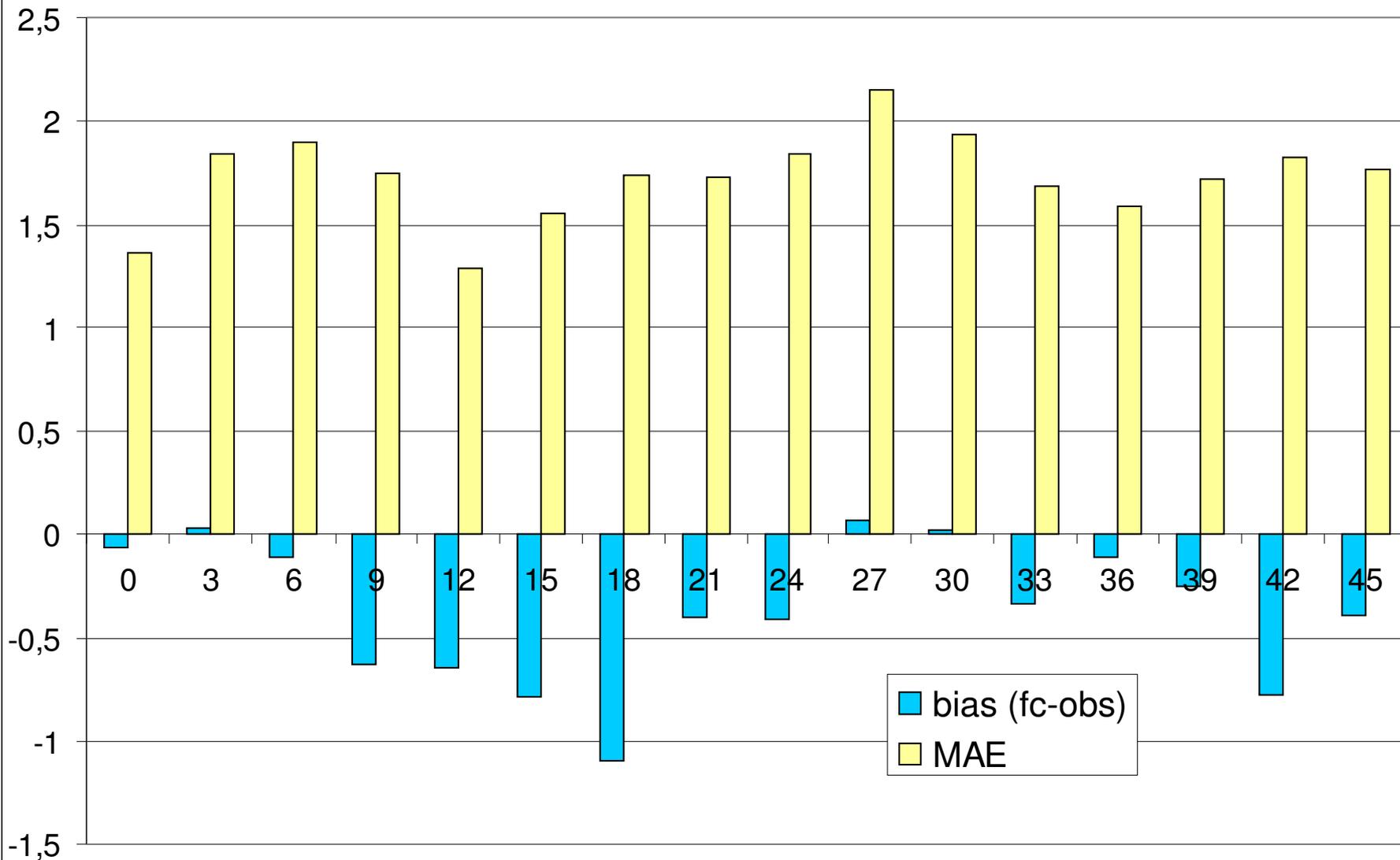
outline

- 3 different aspects:
- verification of operational Aladin model (2006)
- migration to new computer (summer 2006)
- introducing Alaro (2007)

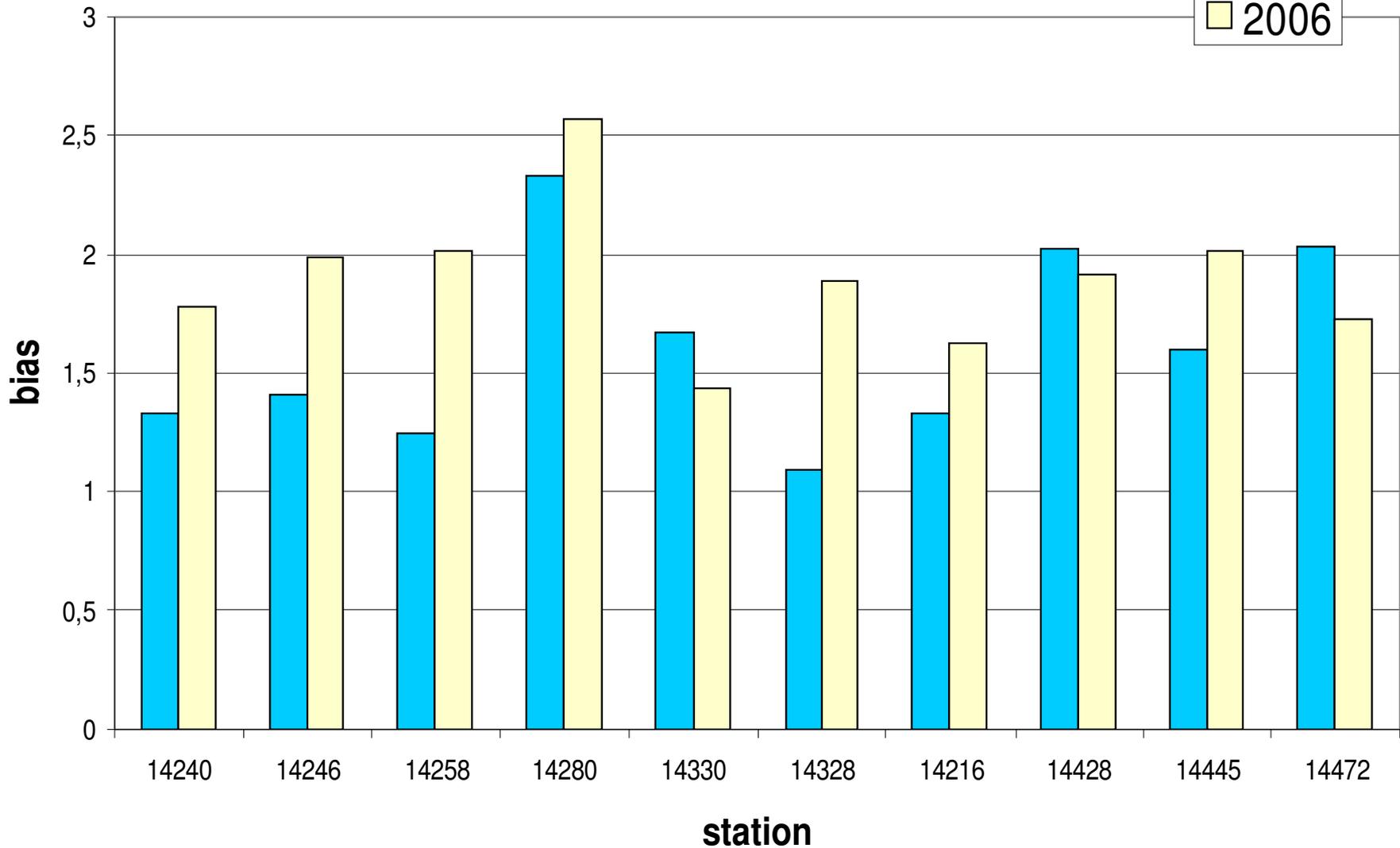
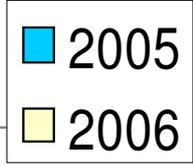
2006

- Aladin Hr88
 - 8 km resolution
 - T + 54 forecast
 - Temperature, precipitation and wind
- Relatively warm and dry, particularly autumn and winter (extremely)

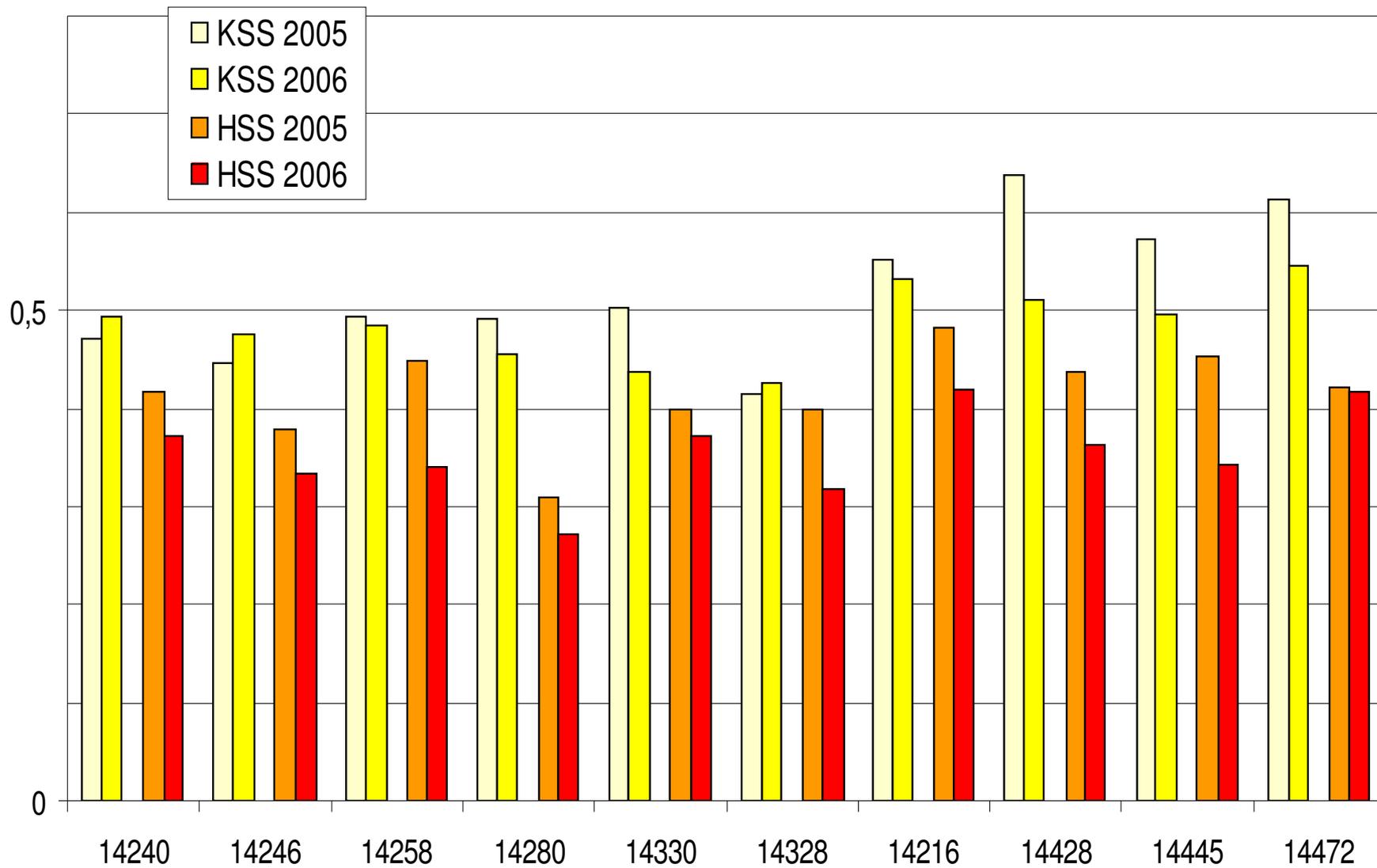
Aladin Hr88 2m-temperature for 2006 (14240)



Aladin precipitation RR>0/24h for 2005 and 2006



skill scores for precipitation RR>0 / 24h for 2005 and 2006

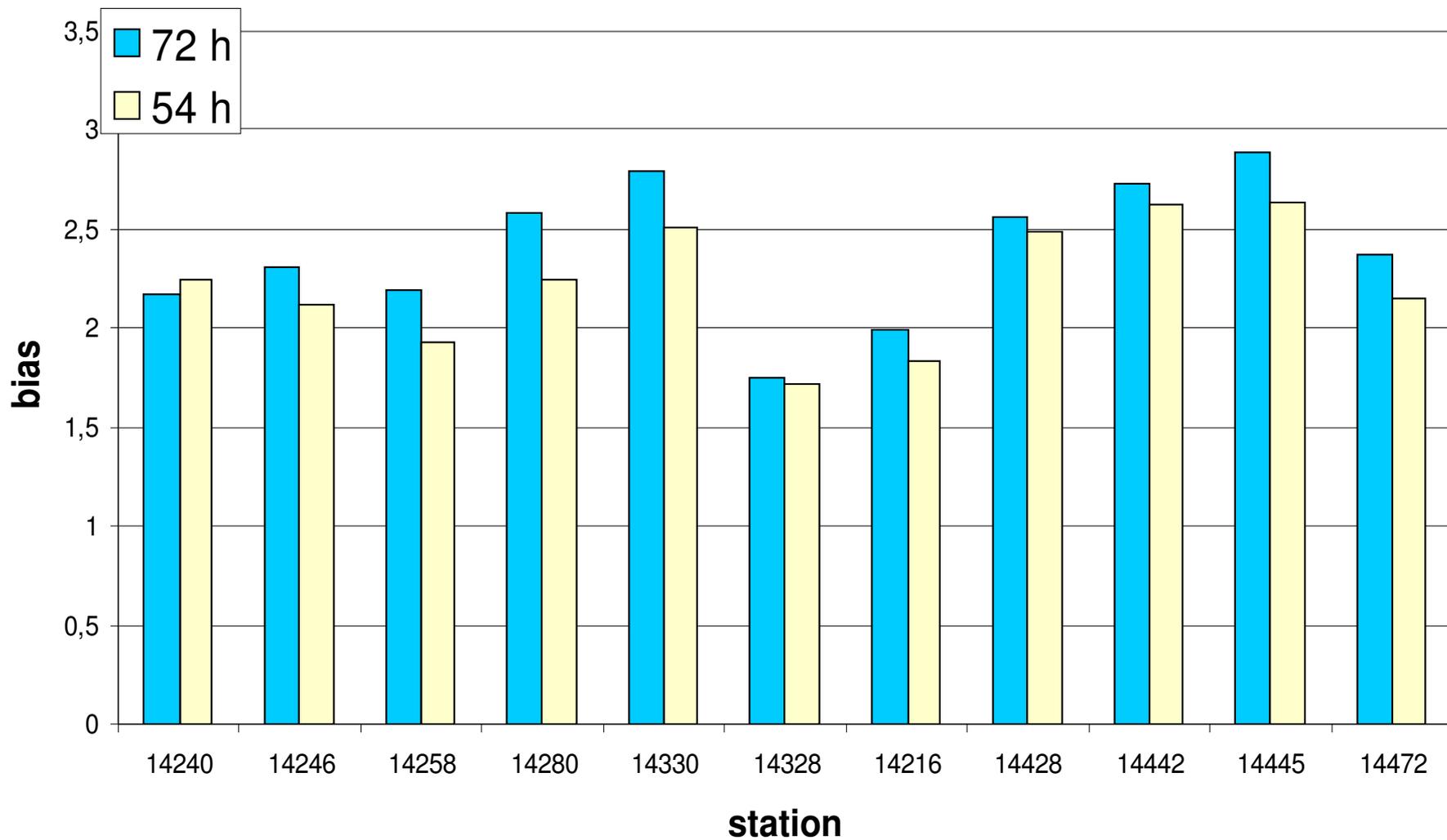


migration to new computer

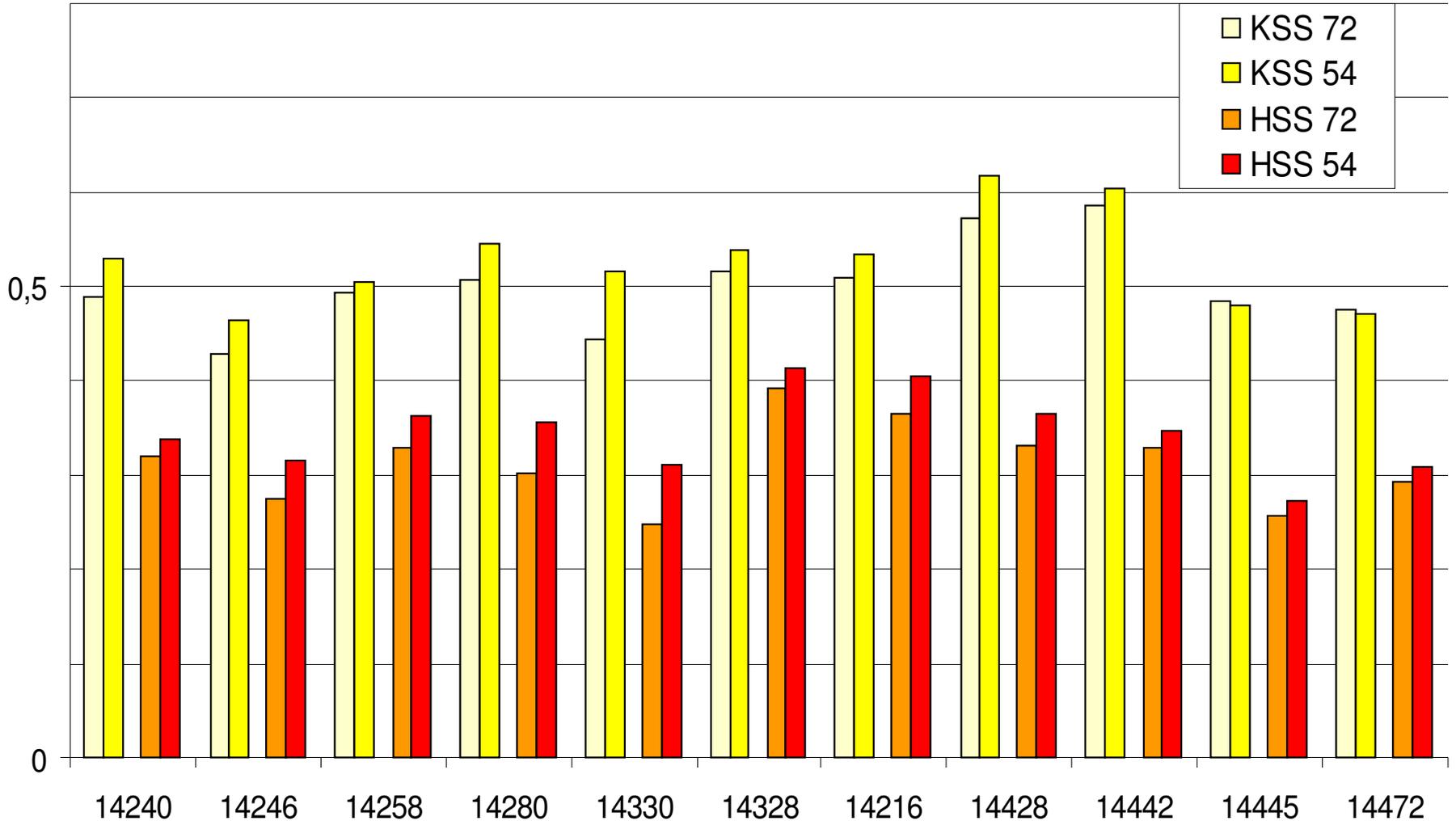
- old: SGI Irix (“Mrcina”)
 - 16 CPU
 - T + 54 forecast
- new: SGI Altix (“Viking”)
 - 24 CPU (16 for operational forecast.)
 - T + 72 forecast

Transition period: Jun – Sep 2006

Hr88-72 (Altix) and Hr88-54 (IRIX) BIAS for precipitation RR>0/24h (VI-IX 2006)



Hr88-72 (Altix) and Hr88-54 (IRIX) skill scores for precipitation RR>0 / 24h for 2006

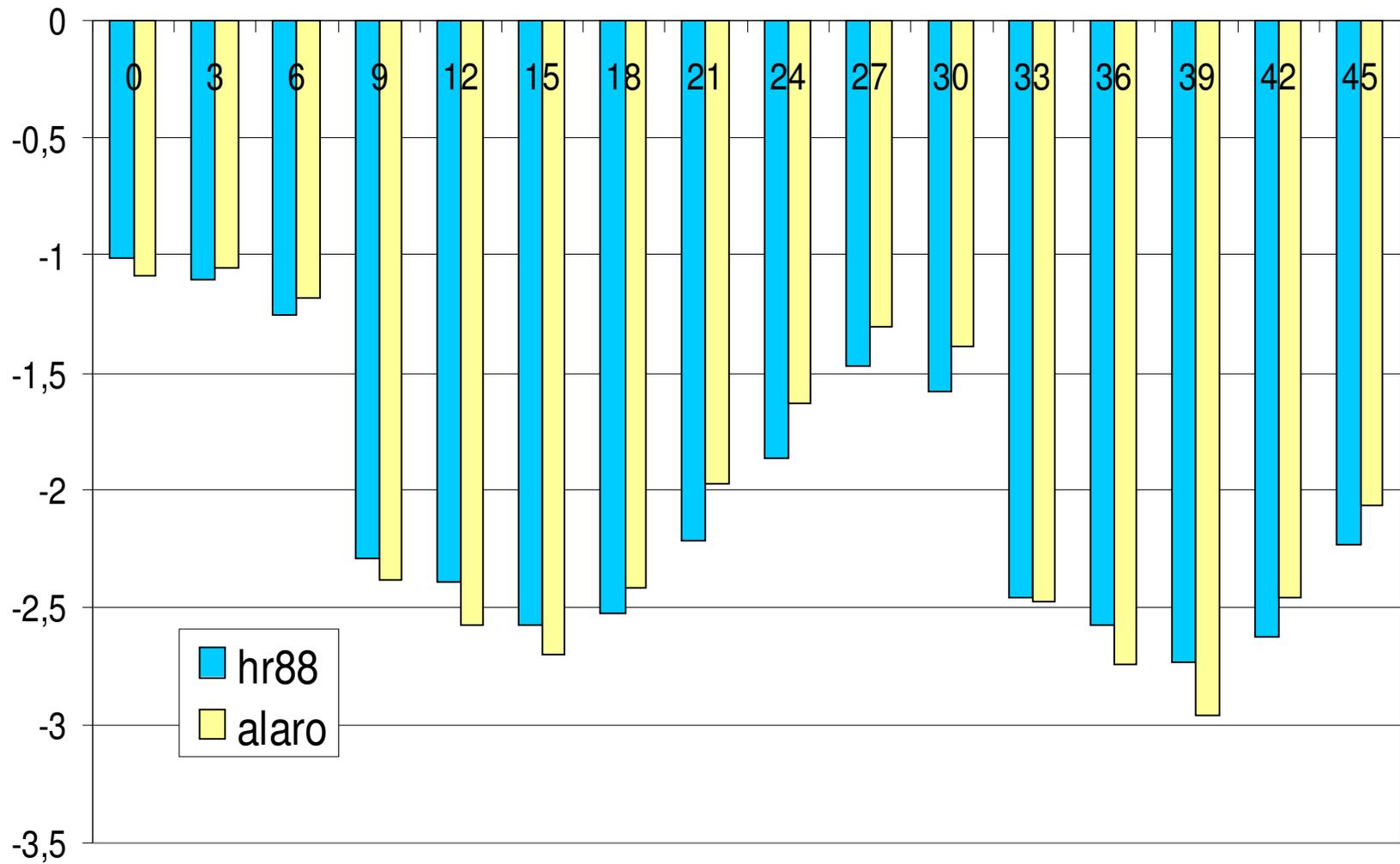


introducing ALARO

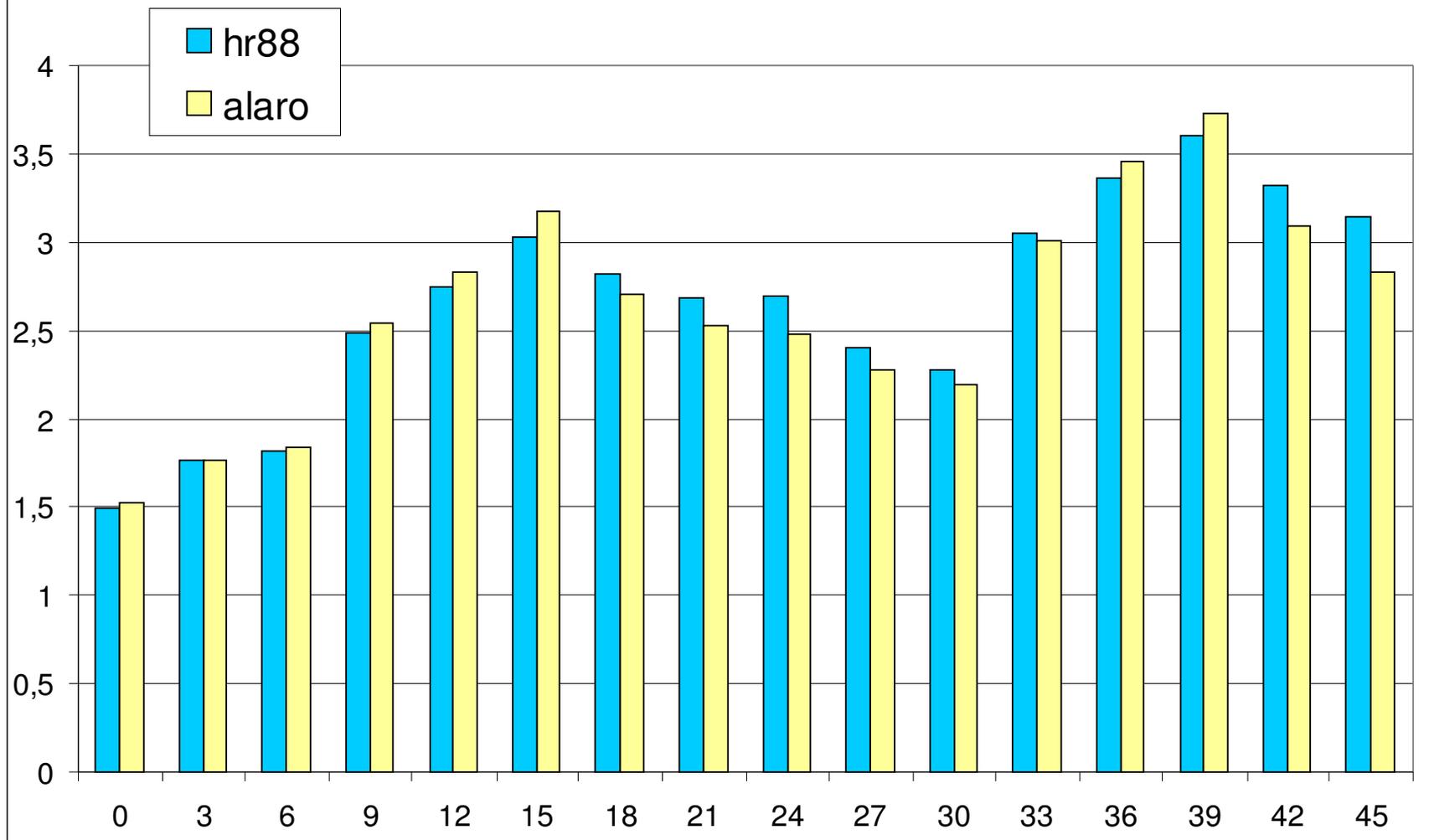
- old: SGI Irix (“Mrcina”)
 - 16 CPU
 - T + 54 forecast
- new: SGI Altix (“Viking”)
 - 24 CPU (16 for operational forecast.)
 - T + 72 forecast

Transition period: Jun – Sep 2006

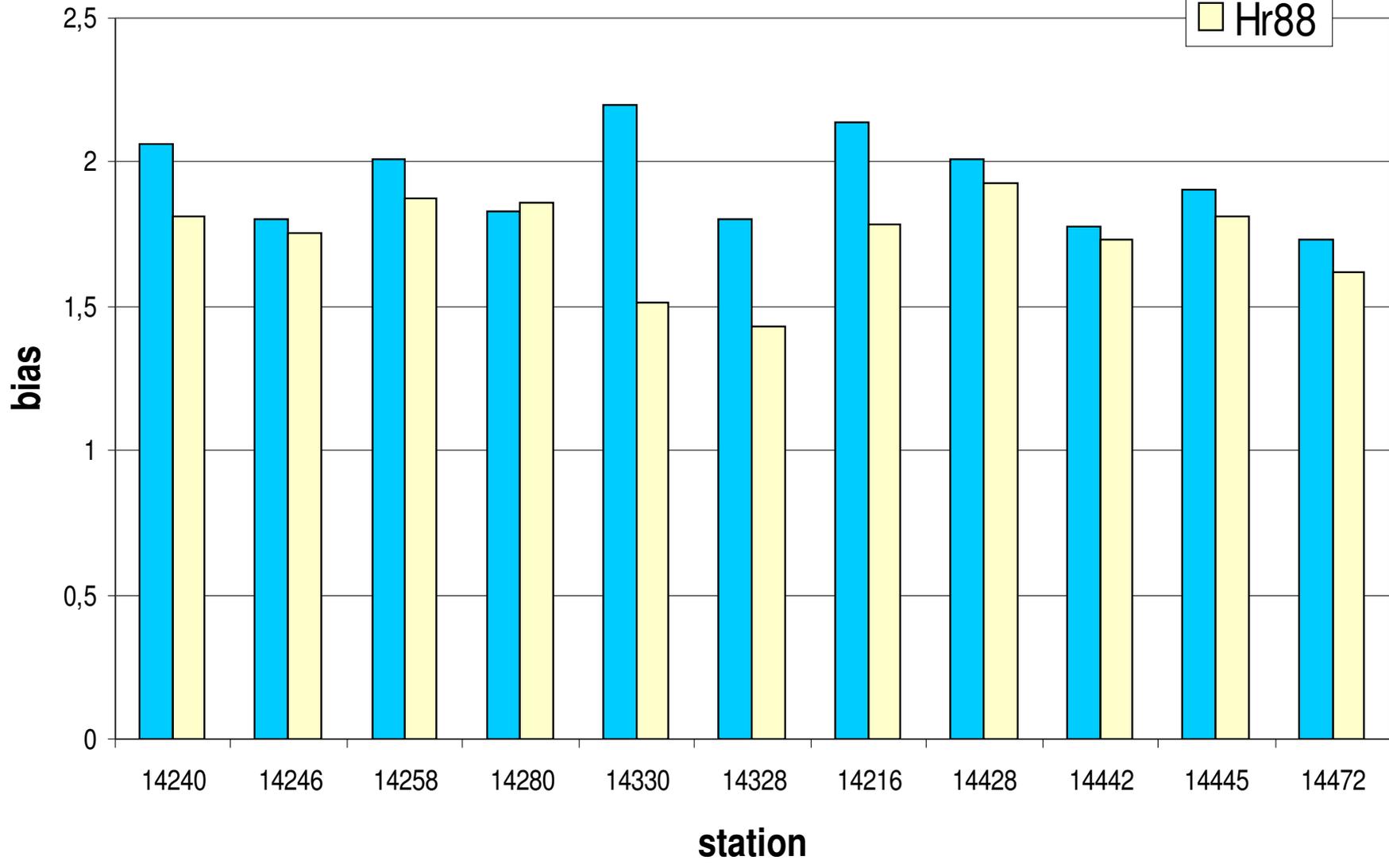
2m-temp BIAS (fc-obs) for Aladn Hr88 and ALARO for 2007 (extremely warm)



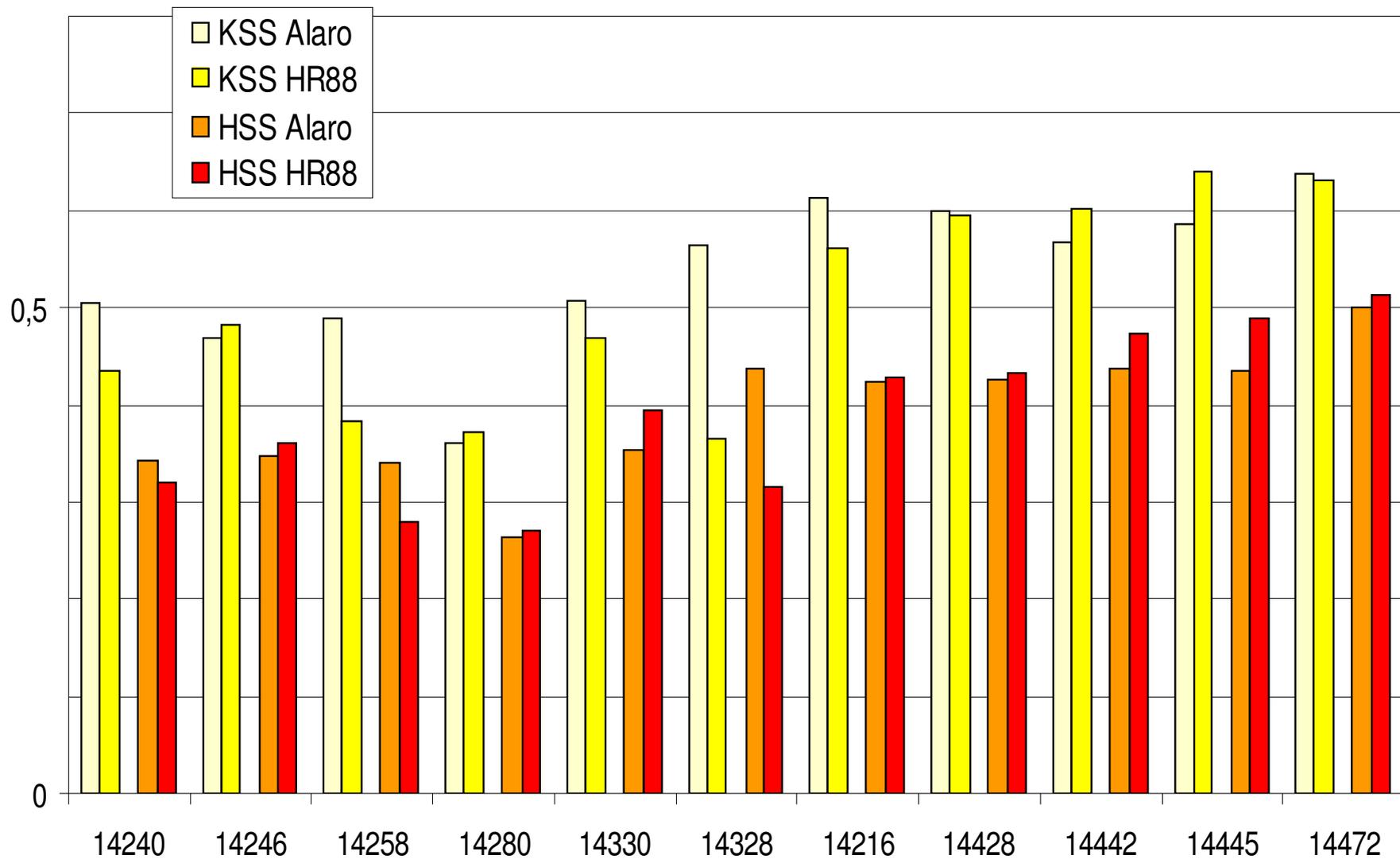
2m-temp MAE for Aladn Hr88 and ALARO for 2007 (extremely warm)



ALARO and Hr88 BIAS for precipitation RR>0/24h for 2007



ALARO and Hr88 skill scores for precipitation RR>0 / 24h for 2007



summary

- Forecasts strongly underbiased (2m temp) and overbiased (RR24h)
- Mainly due to extreme heat and drought (?)
- migration to new computer gave significantly different output!
- Alaro - preliminary scores (sample too small)...

summary

- additional scores are to be calculated... 😊