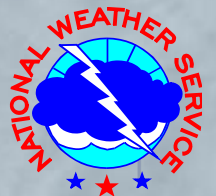


HFIP Goals and Preliminary 2010 Forecast Verification

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HFIP Goals and Baselines

- * Improve track and intensity guidance forecasts by 20% over 5 years and 50% over 10 years.
- * Baseline is a consensus of operational models, evaluated over the period 2006-8.
- * Track consensus is an equally weighted average of GFSI, GFDI, UKMI, NGPI, HWFI, GFNI, and EMXI, computed when at least one model is present.
- * Intensity consensus is an equally weighted average of GHMI, HWFI, DSHP, and LGEM.
- * Note that these are all “early” models. Late models have an unfair 5-10% advantage after 24-36 h relative to their early counterparts.

HFIP Baselines

2006-8 Track Errors

Atlantic Basin				
VT (h)	N	OFCL	OCD5	CONS
0	818	7.4	7.7	7.8
12	741	29.4	44.5	30.0
24	663	49.6	93.3	49.8
36	586	69.9	150.9	69.5
48	518	91.2	212.2	89.6
72	411	135.0	317.2	132.0
96	313	173.0	396.5	175.2
120	247	218.6	473.0	221.9

East Pacific Basin				
VT (h)	N	OFCL	OCD5	CONS
0	918	9.8	10.3	10.2
12	819	30.3	38.6	30.1
24	718	50.9	74.4	48.7
36	623	71.2	114.4	67.1
48	541	90.6	155.0	86.8
72	389	124.1	224.0	119.6
96	268	160.0	267.9	160.6
120	175	196.2	308.1	205.0

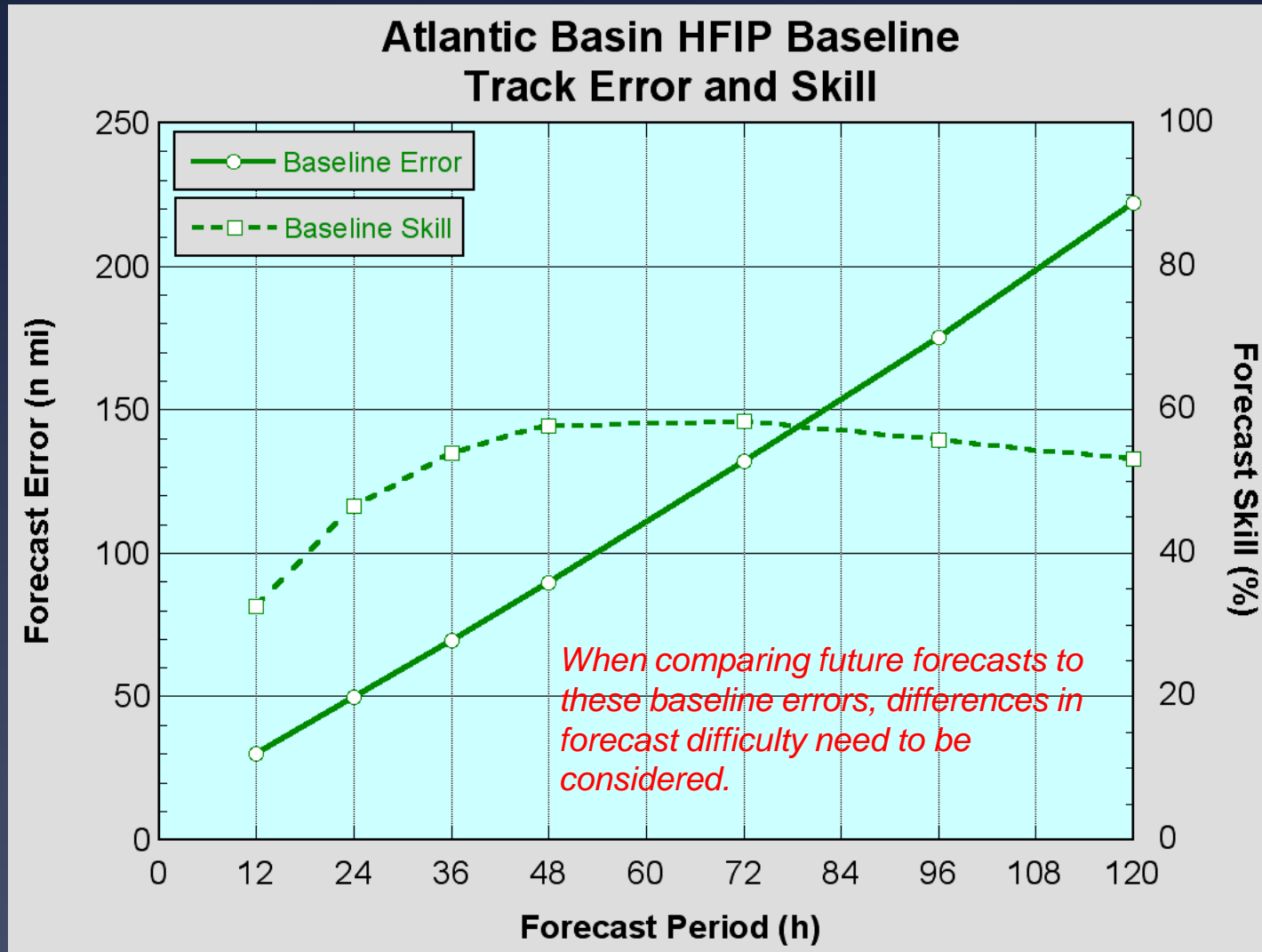
HFIP Baselines

2006-8 Intensity Errors

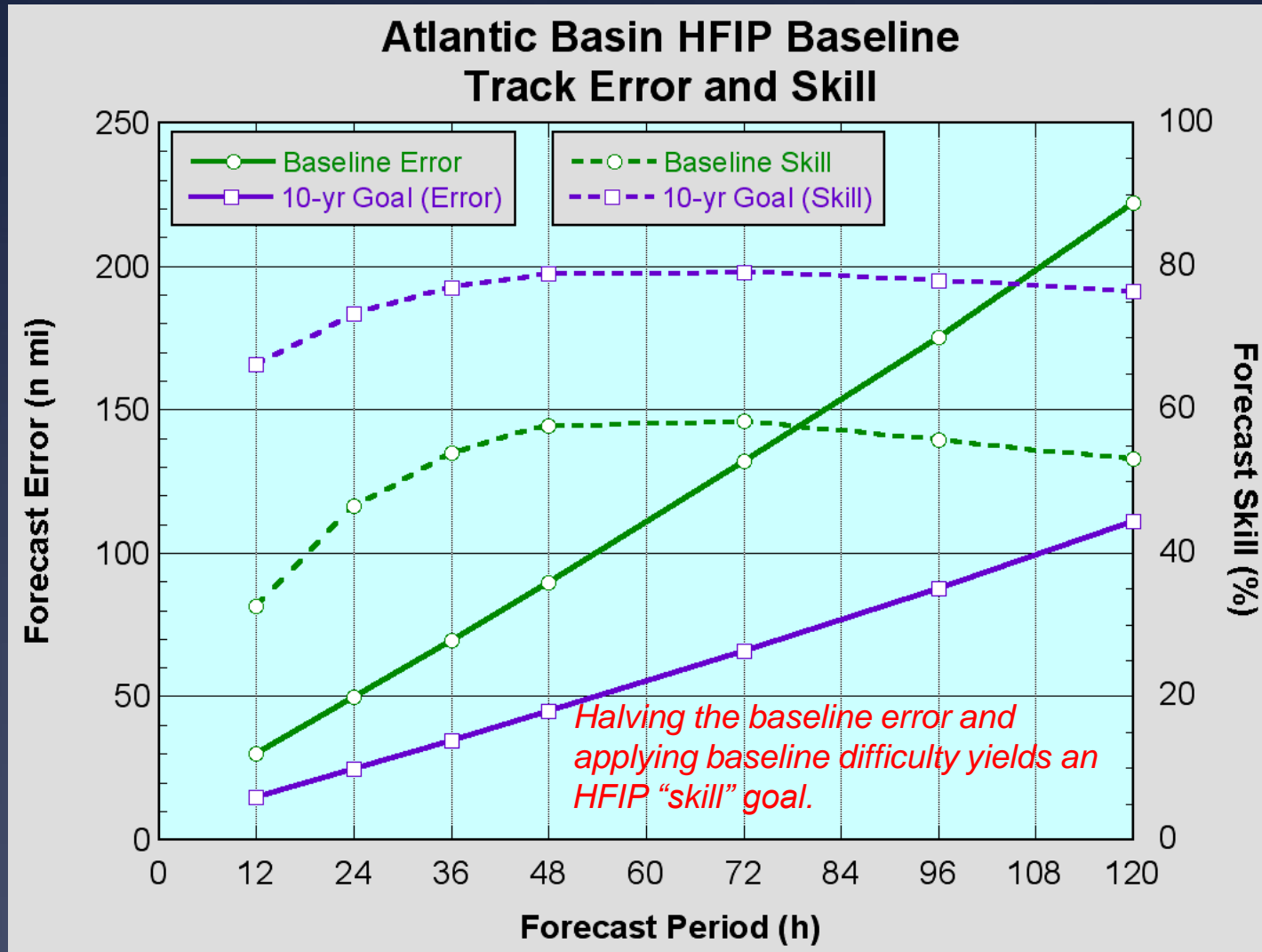
Atlantic Basin				
VT (h)	N	OFCL	OCD5	CONS
0	820	1.9	2.2	2.2
12	745	7.2	8.3	7.7
24	667	10.4	11.5	10.1
36	590	12.6	14.2	11.7
48	522	14.6	16.1	13.7
72	415	17.0	17.8	16.0
96	316	17.5	19.3	16.6
120	250	19.0	19.3	17.0

East Pacific Basin				
VT (h)	N	OFCL	OCD5	CONS
0	922	1.5	1.8	1.8
12	824	6.1	7.0	6.8
24	723	10.0	11.3	10.5
36	625	12.9	14.3	12.9
48	543	14.6	16.4	14.5
72	391	17.3	18.0	16.0
96	269	19.2	20.3	18.1
120	176	17.8	20.7	18.2

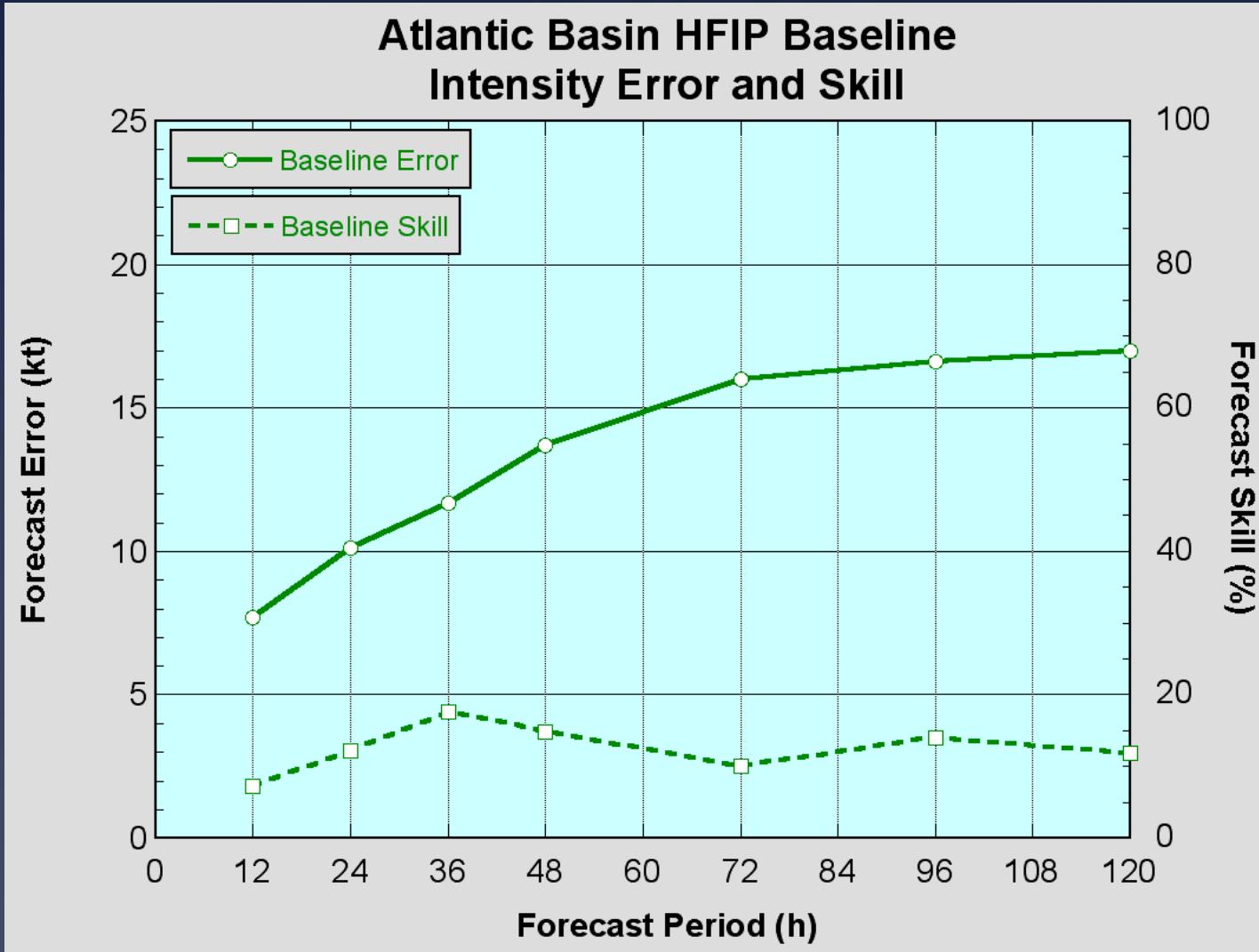
HFIP Baselines and Goals



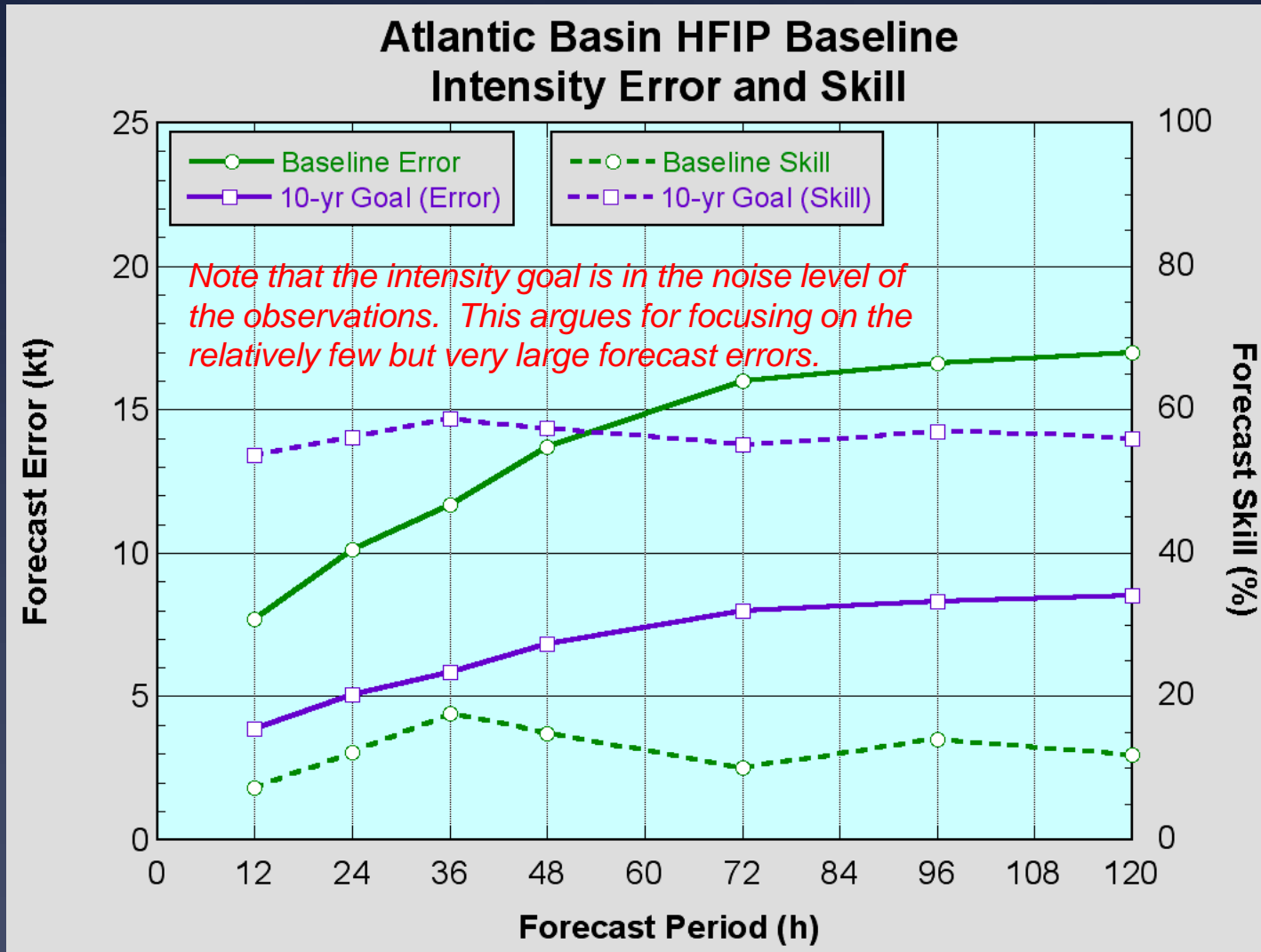
HFIP Baselines and Goals



HFIP Baselines and Goals



HFIP Baselines and Goals



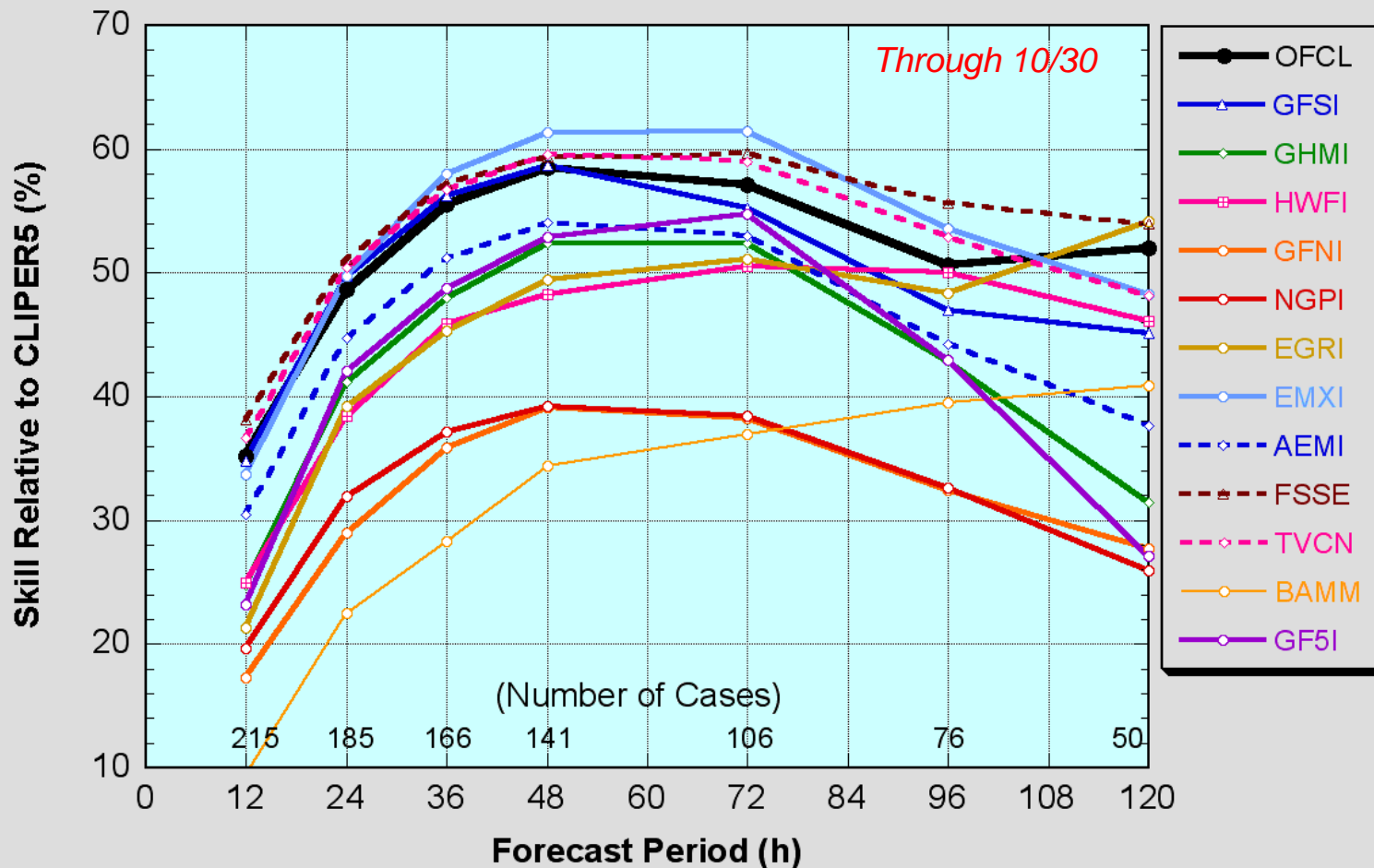
HFIP Goals In Terms of Skill

Atlantic Basin				
VT (h)	Trk 20%	Trk 50%	Int 20%	Int 50%
0				
12	46.1	66.3	25.8	53.6
24	57.3	73.3	29.7	56.1
36	63.2	77.0	34.1	58.8
48	66.2	78.9	31.9	57.5
72	66.7	79.2	28.1	55.1
96	64.7	77.9	31.2	57.0
120	62.5	76.5	29.5	56.0

East Pacific Basin				
VT (h)	Trk 20%	Trk 50%	Int 20%	Int 50%
0				
12	37.6	61.0	22.3	51.4
24	47.6	67.3	25.7	53.5
36	53.1	70.7	27.8	54.9
48	55.2	72.0	29.3	55.8
72	57.3	73.3	28.9	55.6
96	52.0	70.0	28.7	55.4
120	46.8	66.7	29.7	56.0

2010 Preliminary Verifications

**Preliminary Track Forecast Skill (Early Models)
2010 - Atlantic Basin**



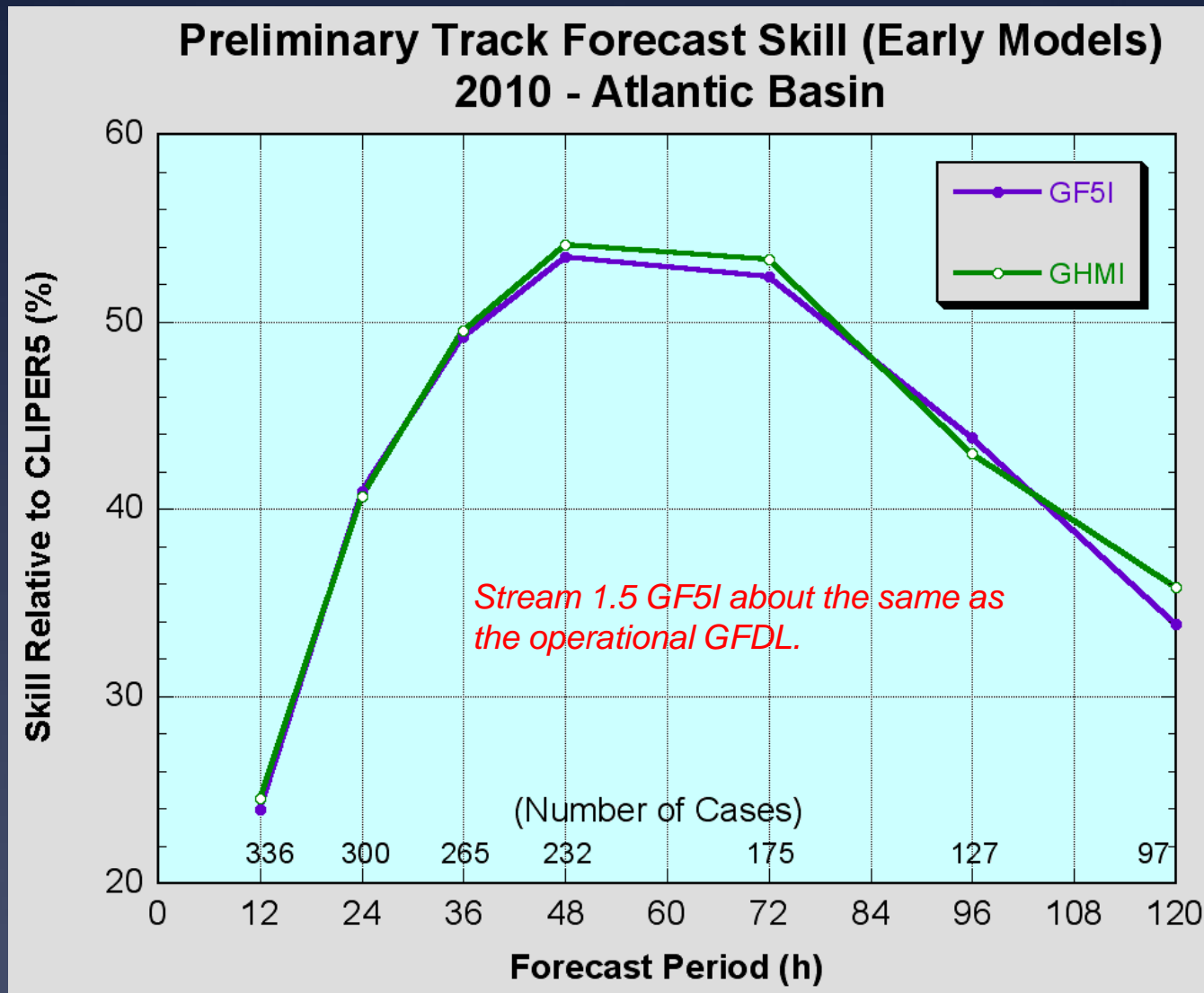
GFS and ECMWF did well. Another good year for FSSE.

AEMI not as good as GFSI.

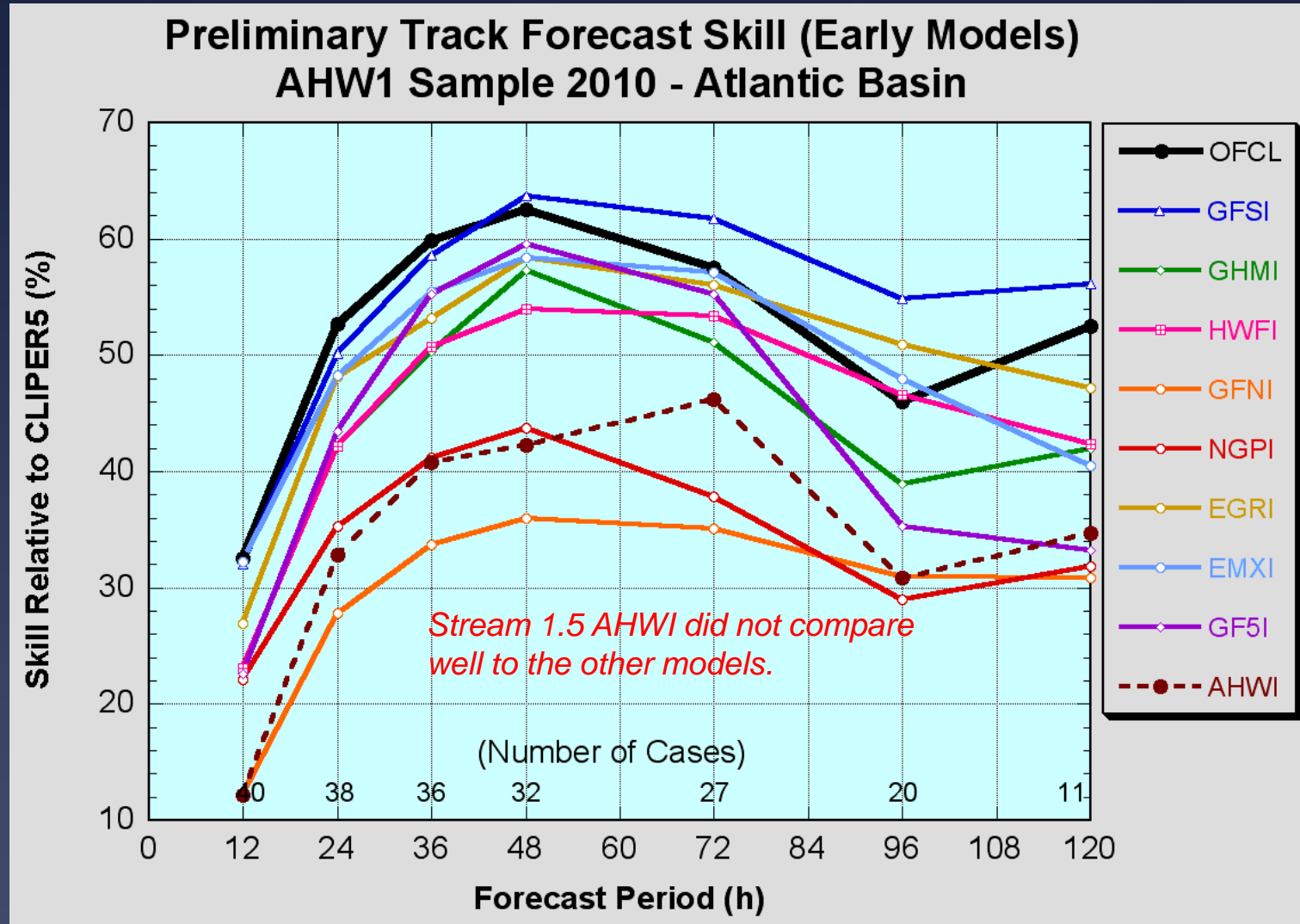
GFNI/NGPI disappointing.

HWRF beat GFS and GFDL after 72 h.

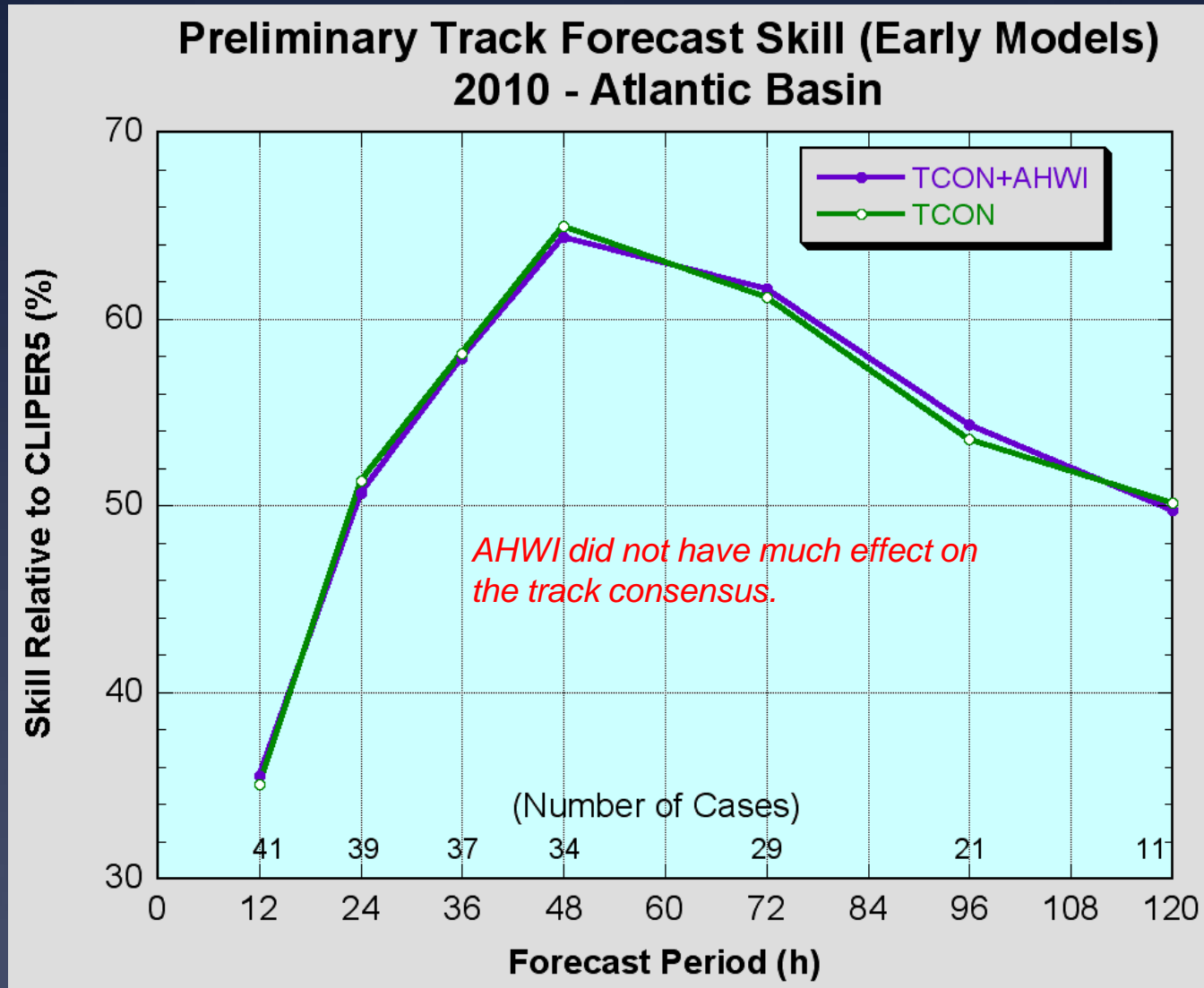
2010 Preliminary Verifications



2010 Preliminary Verifications

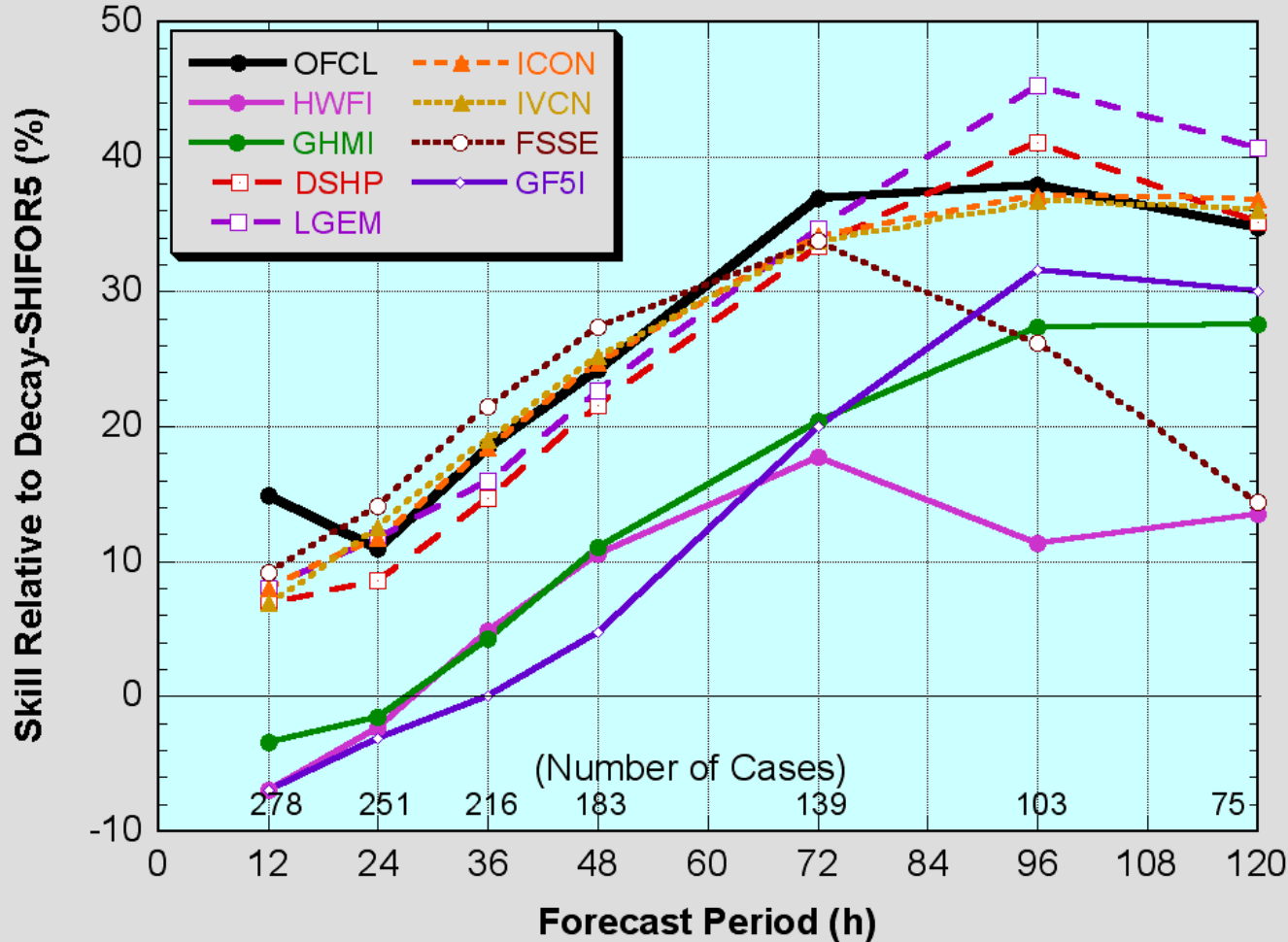


2010 Preliminary Verifications



2010 Preliminary Verifications

Preliminary Intensity Forecast Skill (Early Models) 2010 - Atlantic Basin

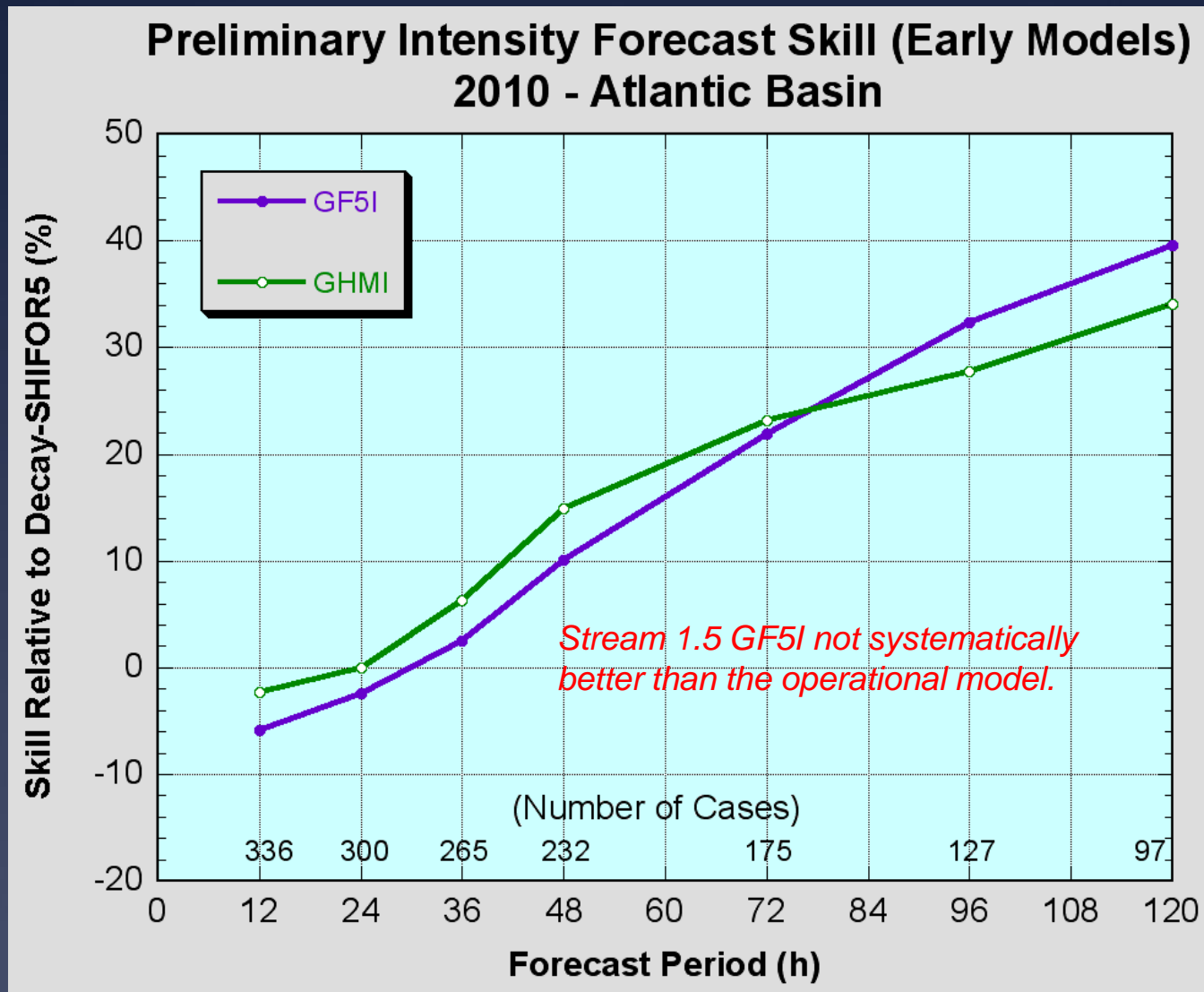


Another good year for LGEM, particularly at 4 and 5 days, when it beat the consensus.

Operational dynamical models continue to lag for intensity prediction.

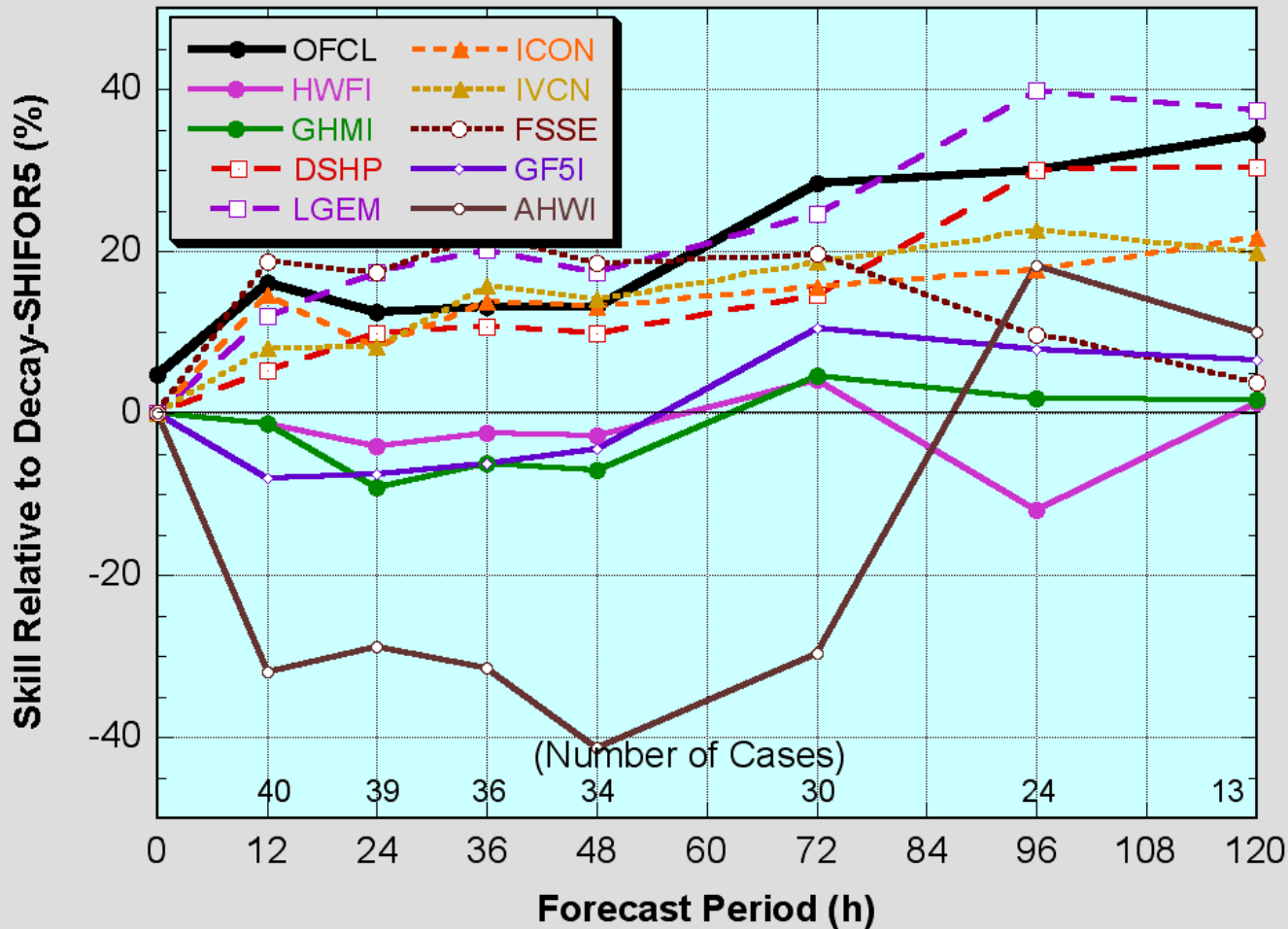
FSSE did well through 72 h.

2010 Preliminary Verifications



2010 Preliminary Verifications

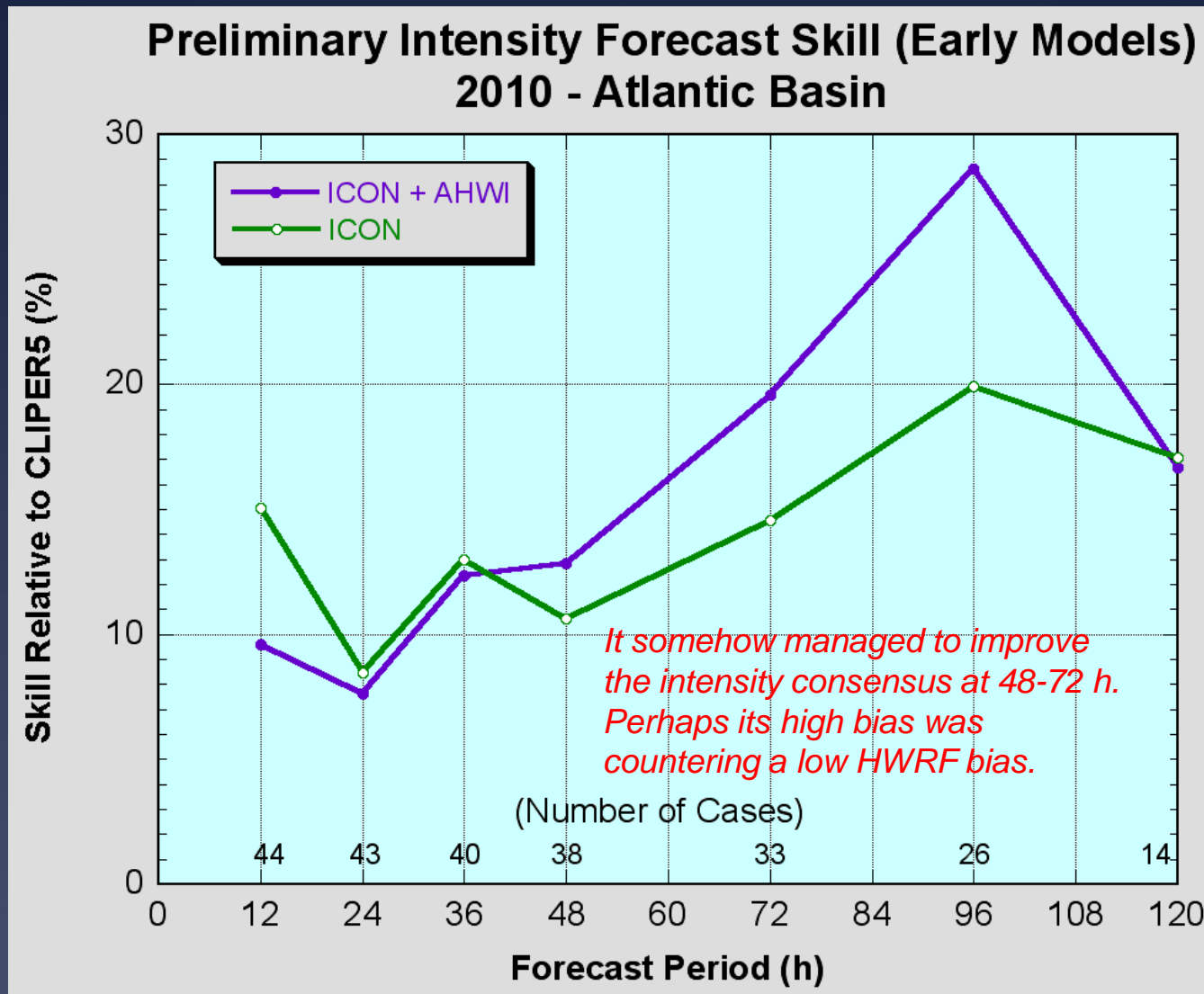
**Preliminary Intensity Forecast Skill (Early Models)
AHWI Sample 2010 - Atlantic Basin**



AHWI fared very poorly relative to the operational models, although it beat GFDL and HWRF at days 4-5 in a small sample.

Interestingly...

2010 Preliminary Verifications



Conclusions

- * The first year of Stream 1.5 was successful, in that the program was successful getting promising forecast aids to the NHC Hurricane Specialists without having to go through an operational implementation.
- * Neither of the Stream 1.5 aids for 2010 (GF5I and AHWI) demonstrated significant improvements over current operational aids.