

pyAMPP vs IDL Comparison Report (Presentation)

- Generated: 2026-02-16 22:58
- Reference SAV: /Users/gelu/Library/CloudStorage/Dropbox/@Projects/@SUNCAST-0RG/gximagecomputing/test_data/test.chr.sav

1. OBS-Inferred Model vs SAV

- H5: /Users/gelu/Library/CloudStorage/Dropbox/@Projects/@SUNCAST-0RG/gximagecomputing/test_data/test.chr.h5
- metadata/lineage: OBS.NONE.POT.BND.NAS.GEN.CHR
- metadata/execute: gx-fov2box --time 2025-11-26T15:34:31 ... --entry-box ...GEN.h5 --rebuild

Plots

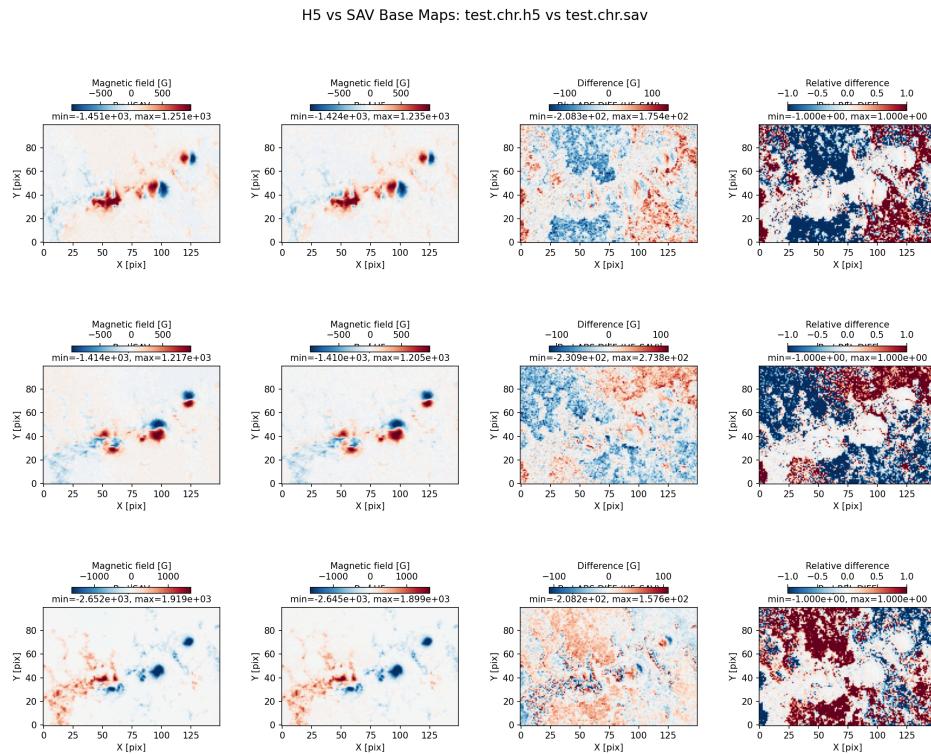


Figure 1: OBS-inferred base

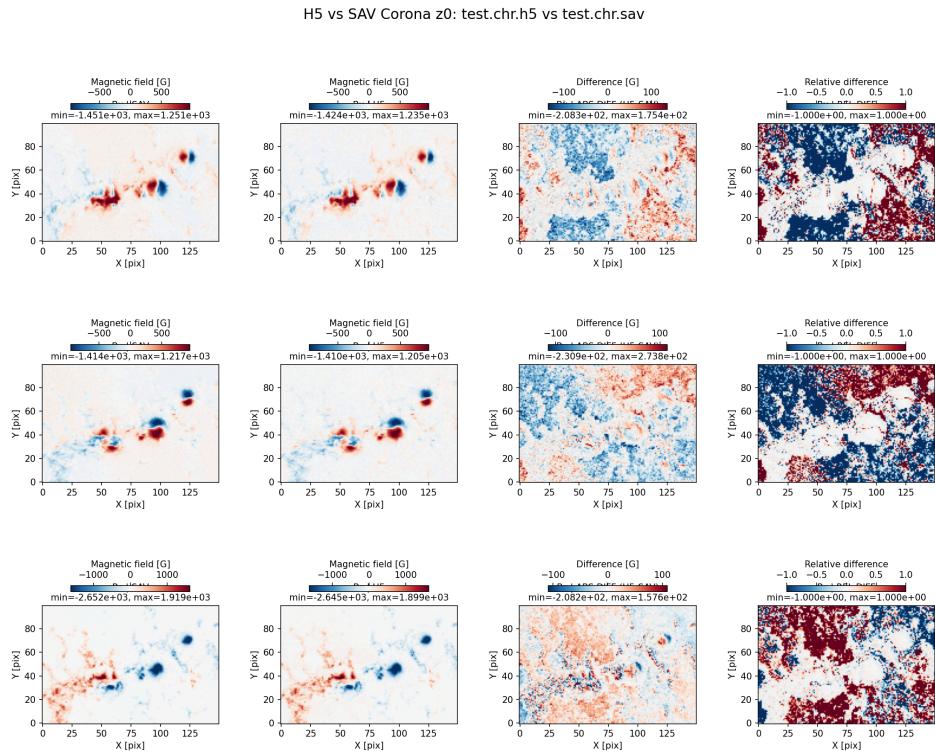


Figure 2: OBS-inferred z0

Volumetric Metrics (Coronal Cubes vs SAV)

Component	MAE	RMSE	Max Abs	Corr
BX	3.32961	8.69617	372.349	0.961160
BY	2.86350	8.36093	310.275	0.956035
BZ	2.86396	7.46776	309.955	0.990151

2. NONE.SAV-Inferred Model vs SAV

- H5: `/Users/gelu/Library/CloudStorage/Dropbox/@Projects/@SUNCAST-ORG/gximagecomputing/test_data/test.chr.none.sav.h5`
- metadata/lineage: ENTRY.NAS.CHR.SAV->GEN.CHR.h5
- metadata/execute: `gx-fov2box ... --entry-box .../test.chr.sav --rebuild-from-none`

Plots

H5 vs SAV Base Maps: test.chr.none.sav.h5 vs test.chr.sav

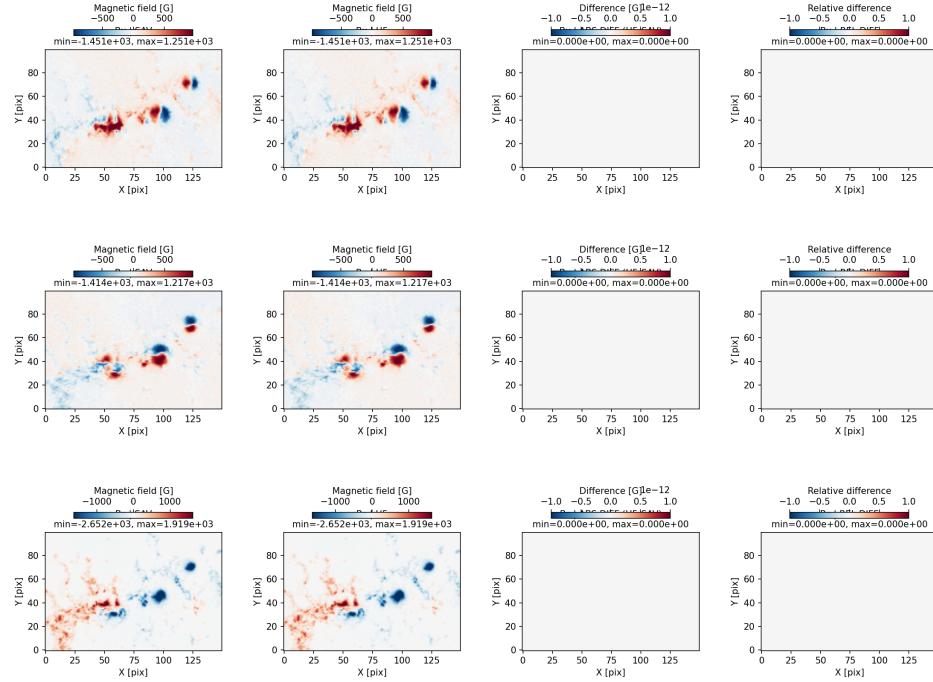


Figure 3: NONE.SAV-inferred base

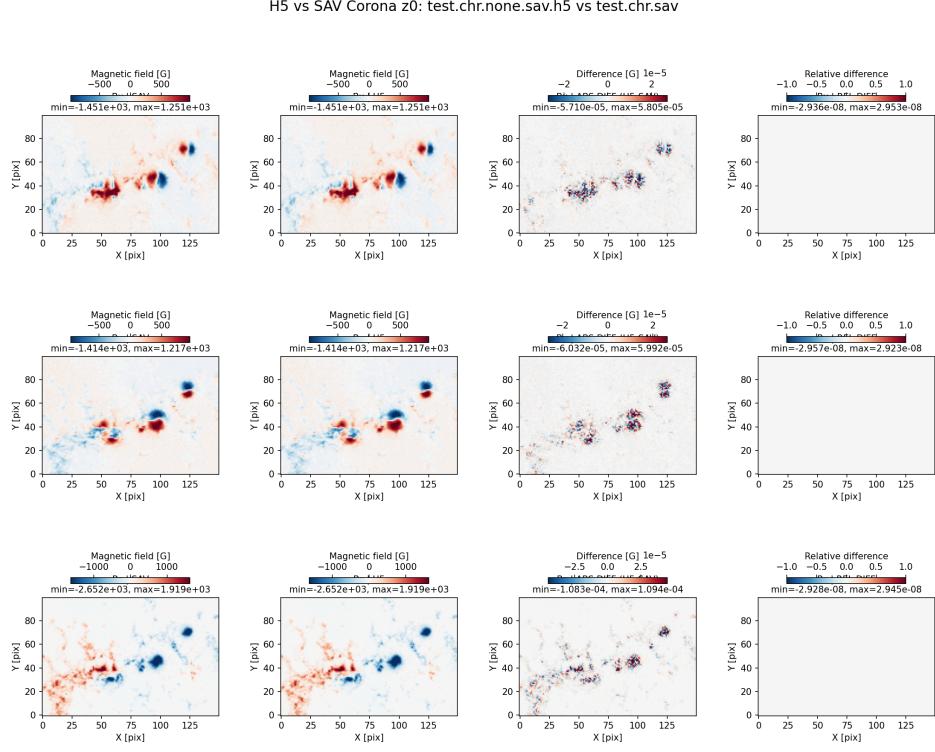


Figure 4: NONE.SAV-inferred z0

Volumetric Metrics (Coronal Cubes vs SAV)

Component	MAE	RMSE	Max Abs	Corr
BX	1.47131	3.90397	242.464	0.992241
BY	1.45112	4.15369	198.583	0.989469
BZ	0.968022	3.59781	236.185	0.997671

3. Conclusions

The NONE.SAV-inferred build is closer to the IDL SAV reference in 3D volumetric metrics (lower MAE/RMSE and higher correlations for all three components) than the OBS-inferred build.

- OBS-inferred (OBS.NONE.POT.BND.NAS.GEN.CHR) is still highly correlated with SAV, but with larger residuals.
- NONE.SAV-inferred (ENTRY.NAS.CHR.SAV->GEN.CHR.h5) gives the strongest parity against the IDL SAV reference for this case.

Artifacts

- reports/parity_review/PRESENTATION_COMPARISON_TEST_CHR_NONE.md
- reports/parity_review/PRESENTATION_COMPARISON_TEST_CHR_NONE.pdf

- reports/parity_review/data/presentation_test_chr_h5_vs_sav_cube_metrics.json
- reports/parity_review/
 data/presentation_test_chr_none_sav_h5_vs_sav_cube_metrics.json
- reports/parity_review/figures/presentation_test_chr_h5_vs_sav_base_3x4.png
- reports/parity_review/figures/presentation_test_chr_h5_vs_sav_z0_3x4.png
- reports/parity_review/
 figures/presentation_test_chr_none_sav_h5_vs_sav_base_3x4.png
- reports/parity_review/
 figures/presentation_test_chr_none_sav_h5_vs_sav_z0_3x4.png