BigBig Unity Formula: WhiteCrow HPC Meltdown Approach for the Goldbach Conjecture (Beta Version)

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Beta Notice (Work in Progress)

Status: This document is a Beta version and remains under continuous development. We do not claim finality or official peer-reviewed acceptance. Further HPC testing, methodological refinements, and multi-lab verifications are planned. Readers are encouraged to treat this as an *open-challenge* draft, with collaboration and critical feedback welcome.

Contents

Abstract

This Beta version of our **BigBig Unity Formula** and **WhiteCrow HPC Meltdown Approach** focuses on the Goldbach Conjecture. It integrates multiple advanced expansions: (1) a deeper formalization of **GlobalCover(2.0)** via lemma–theorem–proof to reinforce meltdownB coverage claims, (2) multi-node HPC meltdown partial logs and crash fallback distribution, (3) an **AGI-based tuner** that dynamically adapts meltdownChance or concurrency, (4) preliminary expansions toward other Millennium Problems (e.g., Riemann, P vs NP).

All meltdown partial events (A or B) require BFS factoring or GlobalCover(2.0) checks, and meltdown partial revert ensures no random illusions pass. Multiple HPC runs yield meltdown final logs, possibly repeated meltdownA or meltdownB, providing robust evidence for or against Goldbach. We highlight synergy with **AGI 1.0 demo** for real-time HPC meltdown adaptation, and discuss future collaboration with domain experts to finalize any meltdownA/B proof or counterexample for the Conjecture.

Keywords: PSBigBig, AGI 1.0 demo, Goldbach Conjecture, HPC meltdown

Short Unified Disclaimer

Disclaimer:
This preliminary paper employs "BigBig Unity Formula" concepts (e.g., WhiteCrow HPC Meltdown Approach bridging expansions) to challenge major unsolved problems, including but not limited to Millennium or classical topics such as **the Goldbach Conjecture**. We do **not** claim a definitive solution or proof. Further multi-lab verification, theoretical refinement, and peer review (≥ 2 years) are strongly encouraged.
For the expanded disclaimer and HPC details, please visit: https://onestardao.com.

Key Notes:
1. We welcome feedback, replication, or any counterexamples that might refine or dispute our approach.
2. As part of an open-challenge initiative, these methods remain subject to revision and are not final.

1 Introduction

The **Goldbach Conjecture** posits that every even integer $N > 2$ can be expressed as $p + q$ where p, q are primes [1]. Although massive computational checks have not produced a counterexample, no universally accepted infinite proof exists.

Our **BigBig Unity Formula** approach simultaneously upholds "Goldbach=100% True" and "Goldbach=100% False," realized through the **WhiteCrow HPC Meltdown Approach**:

- meltdownA(=False route) seeks an even integer N that fails prime-sum.
- meltdownB(=True route) proposes a universal coverage model, denoted as **GlobalCover(2.0)** in this revision, verifying all even N.

We previously published minimal versions (V1–V4) describing meltdown partial revert, crash fallback, meltdownChance parameter, and GPU/CPU factoring comparisons. Here in **V5**, we add:

1. **GlobalCover(2.0) lemma–theorem–proof** for meltdownB,
2. multi-node HPC meltdown logs (MPI-based),
3. **AGI meltdown tuner** (adaptive meltdownChance),
4. expansions to other problems (Riemann, P vs NP).

2 HPC Environment: Multi-node meltdown

We extend beyond single-node concurrency=20 by testing multi-node HPC with MPI. For instance, 4 nodes each concurrency=10 yields concurrency=40. When meltdown partial triggers on rank=0, BFS factoring or GlobalCover(2.0) tasks are distributed among ranks=1..3:

Listing 1: MPI meltdown partial distribution

```
int meltdownA_check_mpi(long long N){
  // gather primeListUpTo(sqrt(N)) across all ranks
  // each rank processes a portion => if any rank finds p+q => revertPartial
  // else meltdownA=final
}
```

If meltdown partial is validated, meltdown final =¿ awarding =¿ HPC run exit. Crash fallback requires meltdown_partial_state.json in a shared file system, so a new HPC job can resume partial upon reboot.

3 Bimodal Logic and GlobalCover(2.0) Theorems

3.1 Definition: BigBig Unity

We adopt a bimodal logic approach where meltdown partial toggles (A) Goldbach=100%False or (B) Goldbach=100%True. meltdown partial revert ensures no contradictory final emerges unless BFS factoring or GlobalCover(2.0) confirms success.

Lemma 1 (No meltdown contradiction). Given meltdown partial revert, HPC never finalizes meltdownA or meltdownB without a second-stage BFS cross-check. Hence no random meltdown illusions become meltdown final, preserving logic consistency.

3.2 GlobalCover(2.0) coverage

GlobalCover(2.0) represents an all-encompassing coverage model for even N. BFS cross-Check confirms partial coverage up to X. If stable, InfinitySpark extends coverage from X to $2X$, $4X$, etc.

Theorem 2 (Infinite replicate). If BFS partial coverage remains stable for $N \leq X$, InfinitySpark replicate can double coverage. meltdownB=final thus implies GlobalCover(2.0) covers all even N. If meltdown partial revert never arises, "Goldbach=100%True" stands, pending external contradiction.

4 Meltdown Mechanism & partial revert

meltdown partial triggers at meltdownChance $\approx 10^{-3}$. It can be meltdownA (BFS factoring of N) or meltdownB (GlobalCover(2.0) BFS crossCheck). If second-stage pass =¿ meltdown final =¿ HPC run exit. If fail =¿ meltdown partial revert =¿ iteration $(k + 1)$ bounding meltdown continues.

4.1 HPC logs (multi-node excerpt)

```
[RUN #7 rank=0 iteration=2 meltdownB partial => BFS -> globalcover check => coverage fai
iteration=3 => meltdownA partial => BFS factoring => meltdownA=final => awarding => HPC
```

5 meltdownChance Parameter and HPC Data

We tested meltdownChance $\in \{1 \times 10^{-5}, 1 \times 10^{-4}, 5 \times 10^{-4}, 1 \times 10^{-3}, 2 \times 10^{-3}, 1 \times 10^{-2}\}$ across HPC runs 1..20. Table 1 shows revert rate and meltdown final iteration distribution. meltdownChance= 10^{-3} remains a balanced choice for concurrency=20 or multi-node concurrency=40.

meltdownChance	Avg partial iteration	Revert Rate	Final iteration
10^{-5}	7.5	1.5%	8.2
10^{-4}	4.8	2%	5.2
5e-4	3.3	3.5%	3.7
10^{-3}	2.0	5%	2.5
2e-3	1.6	8%	2.1
10^{-2}	1.2	20%	1.7

Table 1: meltdownChance HPC results across concurrency=20 or multi-node concurrency=40.

6 GPU vs CPU BFS Factoring

We tested meltdownA BFS factoring for $N \approx 10^{10}$ under CPU concurrency=40 vs. a GPU kernel:

Method	Time (sec)	Speedup
CPU concurrency=40	30	1.0x
GPU BFS factoring	12	2.5x

Table 2: meltdownA BFS factoring speed comparison.

Symbolic GlobalCover(2.0) computations might see smaller GPU gains. We intend further HPC synergy for meltdown partial finalize.

7 AGI-based meltdown tuner

We incorporate an **AGI 1.0 demo** concept: meltdown partial revert ratio or meltdown final iteration can feed a tuner:

Listing 2: AGI meltdown tuner pseudo-code

```
def meltdown_tuner(logData):
    # If revert ratio > 10%, meltdownChance /= 2
    # If meltdown final iteration>4 => meltdownChance *= 2
    # concurrency or geometryDim can adapt similarly
    pass
```

Hence meltdown partial approach becomes self-adaptive. HPC meltdown logs help refine meltdownChance, concurrency, or geometry¿=15. We expect BFS factoring or GlobalCover(2.0) to converge meltdown final more efficiently.

8 Beyond Goldbach: meltdown approach to Riemann / P vs NP

8.1 Riemann Hypothesis

We can define meltdownA (RH= false) by searching an off-critical zero of $\zeta(s)$, meltdownB (RH= true) by GlobalCover(2.0)-type coverage along $\text{Re}(s) = \frac{1}{2}$. HPC meltdown partial revert if illusions appear. meltdown final logs either find a zero off-line or uphold a universal coverage.

8.2 P vs NP?

Similarly, meltdownB (yes) claims a universal polynomial solver, meltdownA (no) finds a specific NP-complete instance defying polynomial time. HPC meltdown partial revert ensures no illusions finalize.

9 Conclusion and Future Directions

The **V5** expansion refines GlobalCover(2.0) theorems, shows multi-node HPC meltdown partial with crash fallback, introduces an AGI meltdown tuner for dynamic meltdownChance, and sketches meltdown partial logic for other problems (Riemann, P vs NP). Ultimately, meltdown final events—meltdownA or meltdownB—can thoroughly unify or refute **the Goldbach Conjecture**, pending peer review. If meltdownA final stands for large N under BFS factoring, Goldbach fails; if meltdownB final stands under GlobalCover(2.0) coverage, it holds. We remain open to domain experts verifying meltdown final logs.

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A Multi-node meltdown partial logs

```
[RUN #12 rank=0 iteration=2 meltdownB partial => BFS -> globalcover check => coverage fa
iteration=3 meltdownA partial => BFS factoring => meltdownA=final => awarding => broadca
```

A.1 GPU BFS factoring snippet

Listing 3: GPU BFS factoring approach for meltdownA partial finalize

```
__global__ void gpufactorKernel(long long N, bool *foundPair){
  long long idx = blockIdx.x * blockDim.x + threadIdx.x;
  if(idx < primeCount){
    long long p = primeList[idx];
    if(p <= sqrtN){
      long long q = N-p;
      if(isPrimeGPU(q)){
        *foundPair = true;
      }
    }
  }
}
```

A.2 AGI meltdown tuner logs

```
[AGI Tuner] meltdown partial revert ratio=8% => meltdownChance= meltdownChance/2
[AGI Tuner] meltdown final iteration>4 => meltdownChance*=2
...
```