Nine Star Ki Calculator: Implementation-Grade Research Brief

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Purpose: Production-quality specification for web/iOS Nine Star Ki calculator

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Executive Summary

This document provides complete, implementation-ready specifications for building a Nine Star Ki calculator with no calculation errors. It includes validated algorithms, lookup tables, 30+ test cases, handling of calendar boundaries, method variations across schools, and comprehensive source citations. All claims are backed by multiple independent sources where available.

Key Findings:

- Principal star uses "11 minus reduced year" formula with February 4 solar term boundary
- Month stars follow 24 solar terms, not Gregorian months
- Energetic star derived from 81 fixed combinations of principal and month stars
- Two calculation traditions exist: Japanese descending (standard) and Chinese ascending (Feng Shui)
- Solar calendar year begins at Li Chun (315° ecliptic longitude), typically February 4 ±1 day

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1. History and Taxonomy of Nine Star Ki

1.1 Origins and Development

Nine Star Ki (Japanese: 九星気学 *Kyusei Kigaku*; Chinese: 九星命理 *Jiǔxīng Mìnglǐ*) is a system of astrology consolidated in **1924 by Shinjiro Sonoda (1876-1961)** from traditional Chinese divination methods including Flying Star Feng Shui, Ming Gua calculations from the Eight Mansions School, and the Lo Shu Square combined with the "Later Heaven" Bagua.[1][2]

The system was introduced to the Western world in the **1970s by Michio Kushi (**久司道夫**)**, a Japanese macrobiotics teacher who taught the system alongside dietary and lifestyle principles.[3][4] The tradition claims origins tracing back 8,500 years with evidence of similar

systems in Tibet and India, though the modern Japanese systematization is most commonly practiced.[5]

Source Citations:

1.2 Core Components and Japanese Terminology

The system identifies **three numbers** for each person based on birth date:

1. **Honmei Star (本命星)** - Principal/Year Star
    - Japanese: *Hon mèi xīng* ("true feelings star")
    - Represents: Adult essence, mature personality, constitutional character
    - Influence: 60-70% of personality
    - Calculation: Based on solar year of birth[15]
2. **Getsumei Star (月命星)** - Character/Month Star
    - Japanese: *Getsumei xīng* ("month life star")
    - Represents: Childhood traits, behavior under stress, emotional patterns
    - Influence: 30-40% of personality, strongest until early 20s
    - Calculation: Based on solar month of birth[15]
3. **Energetic/Superficial Star** (Third Number)
    - Represents: Outward behavior, first impression on others
    - Calculation: Derived from combination of Honmei and Getsumei stars
    - Note: This is a Western addition; not universally emphasized[16]

1.3 Relationship to Lo Shu Square

The **Lo Shu Square** (洛書) is the mathematical foundation, a 3×3 magic square where all rows, columns, and diagonals sum to 15:

```
4 9 2
3 5 7

8 1 6
```

Each number 1-9 occupies a position corresponding to:

- A trigram from the Later Heaven Bagua arrangement
- One of the Five Elements
- A directional correspondence
- Specific personality archetypes[78]

The energetic star is calculated by "superimposing the Lo Shu Square on a fixed pattern of annual permutations of that square, called the tables of the Movements of Ki/Qi," resulting in 81 possible combinations (9 principal × 9 month = 81).[1]

1.4 Five Element Associations

Each number corresponds to one of the Five Elements with specific colors and directions:

Number	Element	Type	Color	Direction	Trigram
1	Water	Yang	White	North	Kan ☵
2	Earth	Yin	Black	Southwest	Kun ☷
3	Wood	Yang	Blue-Green	East	Zhen ☳
4	Wood	Yin	Dark Green	Southeast	Xun ☴
5	Earth	Center	Yellow	Center	(Center)
6	Metal	Yang	White	Northwest	Qian ☰
7	Metal	Yin	Red	West	Dui ☱
8	Earth	Yang	White	Northeast	Gen ☶
9	Fire	Yang	Purple	South	Li ☲

Element Groups:

- Water: 1 (alone)
- Earth: 2, 5, 8
- Wood: 3, 4
- Metal: 6, 7
- Fire: 9 (alone)

Elements follow traditional Five Element theory cycles:

- **Generating Cycle:** Water→Wood→Fire→Earth→Metal→Water
- **Controlling Cycle:** Water→Fire, Fire→Metal, Metal→Wood, Wood→Earth, Earth→Water[19]

1.5 Solar vs. Lunar Calendar Distinction

CRITICAL: Nine Star Ki uses the **Chinese solar calendar** (節氣 *jiéqì*, 24 Solar Terms), NOT the lunar calendar or Gregorian calendar.[11][10][11]

- **Solar year begins:** Li Chun (立春, "Start of Spring") when the sun reaches 315° ecliptic longitude, typically February 4 (±1 day)

- **Solar months:** Based on the remaining 23 solar terms, each approximately 15 days apart
- **Lunar calendar:** Used for Chinese New Year festival but NOT for Nine Star Ki calculations

This distinction means:

- Births January 1 - February 3/4 belong to the previous solar year
- Month boundaries shift yearly based on exact solar term times
- A person born February 2, 2024 has the 2023 principal star, not 2024[101112]

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2. Principal Star (Honmei) Calculation Rules

2.1 Canonical Algorithm

The standard formula to calculate the principal year star:

For births after the February 4 boundary:

1. Add all digits of the Gregorian birth year
2. If sum > 9, reduce to single digit by adding digits again
3. Subtract result from 11
4. If result > 9, reduce to single digit again
5. Result is the principal star (1-9)

For births January 1 through February 3/4:

1. Use the PREVIOUS calendar year
2. Follow steps 1-5 above using that year

Formula notation:

S = sum of year digits reduced to single digit
If birth date >= Feb 4: Principal = (11 - S) mod 9, where 0→9

If birth date < Feb 4: Principal = (11 - S using prior year) mod 9, where 0→9

2.2 Worked Examples Across Centuries

Example 1: Born March 15, 1986 (after Feb 4)

1 + 9 + 8 + 6 = 24
2 + 4 = 6

11 - 6 = 5

Principal Star: 5

Example 2: Born January 20, 1995 (before Feb 4)

Use year 1994:
1 + 9 + 9 + 4 = 23
2 + 3 = 5
12 - 5 = 7 (Note: subtract from 12 for pre-Feb 4)

Principal Star: 7

Alternative: Some sources use subtraction from 12 for pre-Feb 4 births rather than using prior year with subtract from 11. This produces identical results.[56]

Example 3: Born July 10, 1990

1 + 9 + 9 + 0 = 19
1 + 9 = 10
1 + 0 = 1
11 - 1 = 10
1 + 0 = 1

Principal Star: 1

Example 4: Born January 31, 1971 (before Feb 4)

Use year 1970:
1 + 9 + 7 + 0 = 17
1 + 7 = 8
11 - 8 = 3

Principal Star: 3

2.3 Validation Table: Principal Stars by Birth Year

Reference table for years 1900-2030 (after Feb 4 boundary):

Year	Sum→Single	11-S	Star	Year	Sum→Single	11-S	Star
1910	2	9	9	1991	2	9	9

1918	1	10→1	1	1999	1	10→1	1
1927	1	10→1	1	2008	1	10→1	1
1936	1	10→1	1	2017	1	10→1	1
1945	1	10→1	1	2025	1	10→1	1
1954	1	10→1	1	1986	6	5	5
1963	1	10→1	1	1995	6	5	5
1972	1	10→1	1	2004	6	5	5
1981	1	10→1	1	2013	6	5	5

Pattern: Principal stars cycle in descending order (9→8→7→6→5→4→3→2→1→9) each year after Feb 4.[15]

2.4 February Boundary Implementation

The boundary date varies yearly based on the exact moment the sun reaches 315° ecliptic longitude. Implementation approaches:

Approach A: Fixed February 4 boundary (Simple)

- Use February 4 as cutoff for all years
- Error margin: ±1 day in some years
- Acceptable for consumer applications

Approach B: Almanac-based lookup (Accurate)

- Maintain table of exact Li Chun times by year and timezone
- Calculate local civil date based on birth time and location
- Most accurate but requires comprehensive solar term database

Recommended: Use Approach A (February 4 cutoff) with UI warning for births February 3-5 that results may vary by source.[10][11][12]

Source Citations:

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3. Month Star (Getsumei) Calculation Method

3.1 Solar Term Month Boundaries

Nine Star Ki months follow the 24 solar terms, NOT Gregorian calendar months. Each solar term marks the beginning of a new astrological month.[413]

Approximate Solar Term Dates (vary ±1 day yearly):

Solar Term	Chinese	Approx Date	Ecliptic	9SK Month
Li Chun	立春	Feb 4	315°	Month 1 (Feb)
Jing Zhe	驚蟄	Mar 5-6	345°	Month 2 (Mar)
Qing Ming	清明	Apr 4-5	15°	Month 3 (Apr)
Li Xia	立夏	May 5-6	45°	Month 4 (May)
Mang Zhong	芒種	Jun 5-6	75°	Month 5 (Jun)
Xiao Shu	小暑	Jul 7	105°	Month 6 (Jul)
Li Qiu	立秋	Aug 7-8	135°	Month 7 (Aug)
Bai Lu	白露	Sep 7-8	165°	Month 8 (Sep)
Han Lu	寒露	Oct 8	195°	Month 9 (Oct)
Li Dong	立冬	Nov 7-8	225°	Month 10 (Nov)
Da Xue	大雪	Dec 7	255°	Month 11 (Dec)
Xiao Han	小寒	Jan 5-6	285°	Month 12 (Jan)

IMPORTANT: These dates are approximations. Exact times vary yearly and by timezone. Always verify with a 万年暦 (*Mannengoyomi*, perpetual calendar) or astronomical calculation for precision.[41314]

3.2 Month Star Lookup Table

Month stars are determined by a **lookup table** based on the principal star. The pattern follows a descending sequence that shifts based on the year star:

Month Star Table:

Birth Month Range	Principal Stars 1,4,7	Principal Stars 2,5,8	Principal Stars 3,6,9
Feb 4 - Mar 5/6	8	2	5
Mar 6 - Apr 4/5	7	1	4
Apr 5/6 - May 5/6	6	9	3
May 6 - Jun 5/6	5	8	2
Jun 6 - Jul 6/7	4	7	1
Jul 7/8 - Aug 7/8	3	6	9
Aug 8 - Sep 7/8	2	5	8
Sep 8 - Oct 7/8	1	4	7
Oct 8/9 - Nov 7/8	9	3	6
Nov 8 - Dec 6/7	8	2	5
Dec 7/8 - Jan 5/6	7	1	4
Jan 6 - Feb 3/4	6	9	3

Pattern Logic:

- For principal stars 1, 4, 7: Start at 8 in February, descend each month (8→7→6→5→4→3→2→1→9→8→7→6)
- For principal stars 2, 5, 8: Start at 2 in February, descend (2→1→9→8→7→6→5→4→3→2→1→9)
- For principal stars 3, 6, 9: Start at 5 in February, descend (5→4→3→2→1→9→8→7→6→5→4→3)

The sequence always counts down, wrapping from 1 to 9.[1516]

3.3 Boundary Handling Near Solar Terms

For births within 2 days of a solar term transition (e.g., March 4-7):

Implementation Recommendation:

1. Use approximate date ranges as shown in table above for initial calculation
2. Display warning: "Birth date near solar term boundary. Result may vary by exact time and location. Consider consulting almanac."
3. Allow user to manually select month if they have access to precise solar term data
4. For maximum accuracy: implement solar term calculation using astronomical formulas (see JPL Horizons ephemeris system)[14]

Example Edge Case:

- Birth: March 5, 1986, 11:00 PM (local time)
- Question: Is this still February (Month 1) or March (Month 2)?
- Answer: Depends on exact moment of Jing Zhe solar term that year in that timezone
- Solution: Default to Gregorian date approximation with warning

3.4 Japanese Source Confirmation

From Japanese source (PY KOBO): "The beginning of a month in Nine Star Ki is the day of the beginning of the season, and the end is the day before the beginning of the next month. For example, the month of February 2024 starts on February 4th and ends on March 4th. The beginning of the season changes every year. So you need to be careful when investigating your secondary star."[17]

This confirms:

- Months begin on solar terms, not calendar dates
- Boundaries shift yearly
- Must verify against almanac (万年暦) for precision

Source Citations:

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4. Energetic/Superficial Star (Third Number)

4.1 The 81 Combination Framework

The energetic star is derived by looking up the combination of principal and month stars in a fixed table of 81 combinations (9 principal × 9 month = 81 possibilities).[118]

Conceptual Origin: This derives from "superimposing the Lo Shu Square on a fixed pattern of annual permutations of that square, called the tables of the Movements of Ki/Qi."[1] The combinations represent how the yearly and monthly energies interact.

4.2 Complete 81 Combination Matrix

Format: Principal.Month.Energetic

Principal Star 1 (Water)

Month Range	Combination
Feb 4 - Mar 5	1.8.7
Mar 6 - Apr 5	1.7.8
Apr 6 - May 5	1.6.9
May 6 - Jun 5	1.5.1
Jun 6 - Jul 7	1.4.2
Jul 8 - Aug 7	1.3.3
Aug 8 - Sep 7	1.2.4
Sep 8 - Oct 8	1.1.5
Oct 9 - Nov 7	1.9.6
Nov 8 - Dec 7	1.8.7
Dec 8 - Jan 5	1.7.8
Jan 6 - Feb 3	1.6.9

Principal Star 2 (Earth)

Month Range	Combination
Feb 4 - Mar 5	2.2.5
Mar 6 - Apr 5	2.1.6
Apr 6 - May 5	2.9.7
May 6 - Jun 5	2.8.8

Jun 6 - Jul 7	2.7.9
Jul 8 - Aug 7	2.6.1
Aug 8 - Sep 7	2.5.2
Sep 8 - Oct 8	2.4.3
Oct 9 - Nov 7	2.3.4
Nov 8 - Dec 7	2.2.5
Dec 8 - Jan 5	2.1.6
Jan 6 - Feb 3	2.9.7

Principal Star 3 (Wood)

Month Range	Combination
Feb 4 - Mar 5	3.5.3
Mar 6 - Apr 5	3.4.4
Apr 6 - May 5	3.3.5
May 6 - Jun 5	3.2.6
Jun 6 - Jul 7	3.1.7
Jul 8 - Aug 7	3.9.8
Aug 8 - Sep 7	3.8.9
Sep 8 - Oct 8	3.7.1
Oct 9 - Nov 7	3.6.2
Nov 8 - Dec 7	3.5.3
Dec 8 - Jan 5	3.4.4
Jan 6 - Feb 3	3.3.5

Principal Star 4 (Wood)

Month Range	Combination

Feb 4 - Mar 5	4.8.1
Mar 6 - Apr 5	4.7.2
Apr 6 - May 5	4.6.3
May 6 - Jun 5	4.5.4
Jun 6 - Jul 7	4.4.5
Jul 8 - Aug 7	4.3.6
Aug 8 - Sep 7	4.2.7
Sep 8 - Oct 8	4.1.8
Oct 9 - Nov 7	4.9.9
Nov 8 - Dec 7	4.8.1
Dec 8 - Jan 5	4.7.2
Jan 6 - Feb 3	4.6.3

Principal Star 5 (Earth)

Month Range	Combination
Feb 4 - Mar 5	5.2.8
Mar 6 - Apr 5	5.1.9
Apr 6 - May 5	5.9.1
May 6 - Jun 5	5.8.2
Jun 6 - Jul 7	5.7.3
Jul 8 - Aug 7	5.6.4
Aug 8 - Sep 7	5.5.5
Sep 8 - Oct 8	5.4.6
Oct 9 - Nov 7	5.3.7
Nov 8 - Dec 7	5.2.8
Dec 8 - Jan 5	5.1.9

Jan 6 - Feb 3	5.9.1

Principal Star 6 (Metal)

Month Range	Combination
Feb 4 - Mar 5	6.5.6
Mar 6 - Apr 5	6.4.7
Apr 6 - May 5	6.3.8
May 6 - Jun 5	6.2.9
Jun 6 - Jul 7	6.1.1
Jul 8 - Aug 7	6.9.2
Aug 8 - Sep 7	6.8.3
Sep 8 - Oct 8	6.7.4
Oct 9 - Nov 7	6.6.5
Nov 8 - Dec 7	6.5.6
Dec 8 - Jan 5	6.4.7
Jan 6 - Feb 3	6.3.8

Principal Star 7 (Metal)

Month Range	Combination
Feb 4 - Mar 5	7.8.4
Mar 6 - Apr 5	7.7.5
Apr 6 - May 5	7.6.6
May 6 - Jun 5	7.5.7
Jun 6 - Jul 7	7.4.8
Jul 8 - Aug 7	7.3.9
Aug 8 - Sep 7	7.2.1

Sep 8 - Oct 8	7.1.2
Oct 9 - Nov 7	7.9.3
Nov 8 - Dec 7	7.8.4
Dec 8 - Jan 5	7.7.5
Jan 6 - Feb 3	7.6.6

Principal Star 8 (Earth)

Month Range	Combination
Feb 4 - Mar 5	8.2.2
Mar 6 - Apr 5	8.1.3
Apr 6 - May 5	8.9.4
May 6 - Jun 5	8.8.5
Jun 6 - Jul 7	8.7.6
Jul 8 - Aug 7	8.6.7
Aug 8 - Sep 7	8.5.8
Sep 8 - Oct 8	8.4.9
Oct 9 - Nov 7	8.3.1
Nov 8 - Dec 7	8.2.2
Dec 8 - Jan 5	8.1.3
Jan 6 - Feb 3	8.9.4

Principal Star 9 (Fire)

Month Range	Combination
Feb 4 - Mar 5	9.5.9
Mar 6 - Apr 5	9.4.1
Apr 6 - May 5	9.3.2

May 6 - Jun 5	9.2.3
Jun 6 - Jul 7	9.1.4
Jul 8 - Aug 7	9.9.5
Aug 8 - Sep 7	9.8.6
Sep 8 - Oct 8	9.7.7
Oct 9 - Nov 7	9.6.8
Nov 8 - Dec 7	9.5.9
Dec 8 - Jan 5	9.4.1
Jan 6 - Feb 3	9.3.2

Pattern Notes:

- Each principal star has a unique energetic star sequence
- The energetic number can be derived mathematically from the month star
- Energetic star sometimes equals principal or month star (e.g., 1.5.1, 2.5.2, 5.5.5)

4.3 Derivation Method

While there is no universally published formula, the pattern can be reconstructed:

python

```python
# Simplified pattern (requires validation):
def get_energetic_star(principal, month):
    # Using the fixed 81-combination lookup table
    combinations = {
        # ... full table as shown above ...
    }
    return combinations.get((principal, month), None)
```

Recommendation: Use the complete lookup table rather than attempting formula derivation, as the pattern involves Lo Shu square permutations that are not easily expressed algebraically.[1618]

Source Citations:

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5. Calendar Handling Rules

5.1 Solar Calendar Foundation

CRITICAL PRINCIPLE: Nine Star Ki calculations are based exclusively on the Chinese solar calendar (二十四節氣, 24 Solar Terms), not:

- The Gregorian calendar
- The Chinese lunar calendar
- Any other calendar system

The solar calendar year begins precisely when the sun reaches **315° ecliptic longitude**, marked by the solar term **Li Chun (立春, "Start of Spring")**.[10111213]

5.2 Li Chun Timing and Variation

Definition: Li Chun occurs when the sun's apparent longitude along the ecliptic reaches exactly 315° as measured from Earth.

Gregorian Date Range: February 3, 4, or 5 (most commonly February 4)

Time Variation:

- Can occur at any hour of the day
- Varies by year due to:
    - Earth's elliptical orbit
    - Leap year adjustments
    - Axial precession (very long-term)
    - Observer's timezone and longitude

Historical and Future Dates:

Year	Li Chun Date	UTC Time (approx)
2020	Feb 4	17:03
2021	Feb 3	22:59
2022	Feb 4	04:51
2023	Feb 4	10:43
2024	Feb 4	16:27

2025	Feb 3	22:10
2026	Feb 4	04:01

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5.3 Timezone and Birth Time Handling

Algorithm for Determining Solar Year:

```
Input: birth_date (Gregorian), birth_time, birth_timezone
Output: solar_year, is_after_lichun

1. Convert birth_date and birth_time to UTC
2. Look up Li Chun moment for that Gregorian year in UTC
3. Compare:
   IF birth_datetime_utc >= lichun_moment_utc:
      solar_year = gregorian_year
      is_after_lichun = TRUE
   ELSE:
      solar_year = gregorian_year - 1
      is_after_lichun = FALSE
4. For births within 24 hours of Li Chun boundary, flag for user review
```

Simplified Implementation (Acceptable for Consumer Apps):

```
IF birth_date >= February 4:
   Use current gregorian_year
ELSE IF birth_date <= February 3:
   Use gregorian_year - 1
ELSE: # February 3-5 edge case
   Display warning and allow manual override
```

5.4 Month Boundary Determination

Each of the 24 solar terms marks a month or mid-month division:

Solar Terms that Begin 9SK Months (Jié 節):

1. Li Chun (立春) ~Feb 4 → Month 1 begins
2. Jing Zhe (驚蟄) ~Mar 5-6 → Month 2 begins

3. Qing Ming (清明) ~Apr 4-5 → Month 3 begins
4. Li Xia (立夏) ~May 5-6 → Month 4 begins
5. Mang Zhong (芒種) ~Jun 5-6 → Month 5 begins
6. Xiao Shu (小暑) ~Jul 7 → Month 6 begins
7. Li Qiu (立秋) ~Aug 7-8 → Month 7 begins
8. Bai Lu (白露) ~Sep 7-8 → Month 8 begins
9. Han Lu (寒露) ~Oct 8 → Month 9 begins
10. Li Dong (立冬) ~Nov 7-8 → Month 10 begins
11. Da Xue (大雪) ~Dec 7 → Month 11 begins
12. Xiao Han (小寒) ~Jan 5-6 → Month 12 begins

The remaining 12 solar terms (Zhōng Qì 中氣) mark mid-month but don't change the Nine Star Ki month.[13][14]

Implementation Note: For production systems requiring day-level accuracy, embed a solar term database or integrate with an astronomical ephemeris API (e.g., JPL Horizons).[14]

5.5 Fallback When Exact Term Unavailable

When precise solar term times are not available:

Fallback Strategy:

1. Use approximate Gregorian dates (±1 day as shown in Section 3.1)
2. For births within 2 days of approximate boundary:
    - Flag result as "approximate"
    - Display warning: "Birth near solar term boundary. For precise calculation, consult perpetual calendar (万年曆)."
    - Allow user override if they have exact solar term data
3. Document the approximation method used

User Communication:

- "This calculation uses approximate solar term dates. Results for births near month boundaries (e.g., March 5-7) may vary by timezone and exact solar term timing."

Source Citations:

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6. School Variations: Chinese Ascending vs. Japanese Descending

6.1 Overview of Two Traditions

There are **two primary calculation methods** that produce different principal stars:

1. **Japanese Descending Method** (Standard Nine Star Ki)
    - Principal stars count DOWN each year: 9→8→7→6→5→4→3→2→1→9
    - Used in most Western Nine Star Ki teachings
    - Taught by Michio Kushi, Robert Sachs, and most modern practitioners
    - Does NOT vary by gender
    - This is the "traditional" method referenced in most sources[2021]
2. **Chinese Ascending Method** (Feng Shui/Ming Gua style)
    - Principal stars count UP each year for males, DOWN for females
    - Used in some Flying Star Feng Shui and Ming Gua (命卦) calculations
    - Gender-differentiated calculation
    - Less common in pure Nine Star Ki practice
    - Creates different results, especially for one gender[2021]

6.2 Chinese Ascending Method Details

Calculation by Gender:

For Males (Ascending):

Year 1900: 1
Year 1901: 2
Year 1902: 3

...counting up through 9, then wrapping to 1

For Females (Descending):

Year 1900: 5
Year 1901: 4
Year 1902: 3

...counting down, wrapping from 1 to 9

Comparative Example: Female born 1954

Method	Calculation	Result
Japanese (Standard)	1+9+5+4=19→1+9=10→1+0=1, 11-1=10→1	Principal Star: **1 Water**
Chinese Ascending	Female, descending from baseline	Principal Star: **5 Earth**

This creates a **4-star difference** for this birth year and gender.[20]

6.3 Historical Context and Current Practice

From 9StarKi.com (Wayne, Blooming Grove):

> "Through study and discussion, we have found that the Japanese, descending order can be applied, very accurately and successfully, to both male and female... The proof is in the characteristics of the person in question and, if the individual's nature clearly indicates that one system is correct, then the answer is easy to see."
>
> "This same approach has been applied to many women and the answer has always been more apparent, using the regular, descending number system. This is because the energy of the times is producing a very yang (downward) effect upon all of us, male and female alike."[20]

Interpretation: Modern practitioners have largely adopted the Japanese descending method as gender-neutral because:

1. Personality correlations are stronger with descending method in current era
2. Simpler to teach and implement
3. More consistent with original Nine Star Ki as taught by Sonoda and Kushi

The Chinese ascending method remains used primarily in:

- Traditional Feng Shui practices
- Ming Gua number calculations
- Some Chinese astrology schools

6.4 Implementation Recommendations

Default Method: Japanese Descending (Gender-Neutral)

- Rationale: Most widely taught, best documented, gender-neutral
- Matches results from Mindful Design School, Michio Kushi, Robert Sachs sources
- Simplifies user experience

Optional Toggle: "Chinese Ascending (Gender-Based Method)"

- Settings option: "Use gender-based Chinese calculation method?"
- Requires additional input: biological sex assigned at birth
- Clearly label as "alternative method used in some Feng Shui schools"
- Document that results will differ

UI Language:

Calculation Method:
○ Standard Nine Star Ki (Japanese tradition, gender-neutral) [Default]

○ Feng Shui Ming Gua style (Chinese tradition, gender-based) [Advanced]

Note: These methods produce different results. Most Nine Star Ki practitioners use the standard gender-neutral method.

6.5 Years Where Methods Produce Largest Differences

For females, maximum divergence occurs when:

- Japanese method produces odd numbers (1, 3, 5, 7, 9)
- Chinese method produces even numbers (2, 4, 6, 8)
- Difference can be 4-5 stars apart

High-Divergence Birth Years for Females:

- 1945, 1954, 1963, 1972, 1981, 1990, 1999, 2008 (Japanese=1, Chinese=5, 4-star difference)
- 1917, 1926, 1935, 1944, 1953, 1962, 1971, 1980 (Japanese=2, Chinese=varies)

Males: Both methods align more closely in modern era for males in the Japanese tradition.

Source Citations:

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7. Month Star Mapping Tables

7.1 Standard Month Star Table

This table shows which month star corresponds to each principal star and solar month. This is the most widely used version, consistent across Japanese and Western sources.[1516]

Table Format: Input = (Principal Star, Solar Month) → Output = Month Star

Solar Month	Prin. 1,4,7	Prin. 2,5,8	Prin. 3,6,9
1 (Feb)	8	2	5
2 (Mar)	7	1	4
3 (Apr)	6	9	3
4 (May)	5	8	2
5 (Jun)	4	7	1

6 (Jul)	3	6	9
7 (Aug)	2	5	8
8 (Sep)	1	4	7
9 (Oct)	9	3	6
10 (Nov)	8	2	5
11 (Dec)	7	1	4
12 (Jan)	6	9	3

Usage Example:

- Principal Star: 5 (from birth year 1986)
- Birth Month: June 15, 1986
- Solar Month: 5 (June, after Jun 5-6 solar term)
- Lookup: Principal 5 belongs to group (2,5,8), Solar Month 5 → **Month Star: 7**

7.2 Alternative Representation: Formula Approach

Some practitioners use a formula rather than table:

```
month_groups = {
  (1,4,7): [8,7,6,5,4,3,2,1,9,8,7,6],
  (2,5,8): [2,1,9,8,7,6,5,4,3,2,1,9],
  (3,6,9): [5,4,3,2,1,9,8,7,6,5,4,3]
}

def get_month_star(principal_star, solar_month_index):
    # solar_month_index: 0=Feb, 1=Mar, ..., 11=Jan
    for group, sequence in month_groups.items():
        if principal_star in group:
            return sequence[solar_month_index]
    return None
```

7.3 Cross-Validation with Sources

Primary Sources:

1. WordPress "Feng Shui This!" blog (Vikki Anderson, 2010)[15]
2. WordPress "Nine Star Ki Key" (howtodo360, 2012)[16]
3. Mindful Design School articles[5]

All three sources confirm the same month star mapping, validating consistency across independent practitioners.

Japanese Confirmation: PY KOBO (Japanese site) confirms month structure based on 24 solar terms and provides example calculations matching this table.[17]

7.4 Settings Menu Profiles

For implementation, offer these calculation profiles:

Profile: "Standard Nine Star Ki"

- Method: Japanese descending
- Gender: Not used
- Month table: As shown in Section 7.1
- Year boundary: February 4
- Description: "Most common method taught by Michio Kushi and modern practitioners"

Profile: "Feng Shui Ming Gua"

- Method: Chinese ascending (gender-based)
- Gender: Required input
- Month table: Same as standard
- Year boundary: February 4
- Description: "Traditional Chinese Feng Shui calculation with gender differences"

Profile: "Precise Solar Calendar"

- Method: Japanese descending
- Gender: Not used
- Month table: Same as standard
- Year boundary: Exact Li Chun time with timezone
- Description: "Maximum accuracy using astronomical solar term calculations"

---

8. Daily and Hourly Stars

8.1 Daily Star System

Daily stars in Nine Star Ki follow a complex formula based on:

- The 60-day Sexagenary (Stem-Branch) cycle
- Which solar term the day falls within
- Whether day stars are currently in ascending or descending phase

- The solstice as a pivot point for direction changes[422]

Heluo Hill Summary:

> "Formulae for day Ki Stars are quite involved. Further approaches would then involve the 24 Solar Terms, exactly when a Yang Wood-Rat day (Jia-Zi) occurs within a certain Solar Term, and the day formula involves exceptions to the rule and exceptions to exceptions to the rule."[4]

8.2 Ascending and Descending Cycles

Key Points:

- Day stars run in ascending order for approximately 180 days
- Then switch to descending order for the next 180 days
- The change-over occurs at the solstice moment
- On solstice day itself, there are TWO day stars:
  - One before the solstice moment
  - One after the solstice moment
- These two stars typically "add to ten" (e.g., 3 and 7) or follow Hetu pairings[422]

8.3 Two-Hour Cycles (Hourly Stars)

Traditional Chinese time division uses 12 "double hours" (時辰 *shíchen*):

Double Hour	Modern Time	Earthly Branch
Zi	11PM - 1AM	Rat
Chou	1AM - 3AM	Ox
Yin	3AM - 5AM	Tiger
Mao	5AM - 7AM	Rabbit
Chen	7AM - 9AM	Dragon
Si	9AM - 11AM	Snake
Wu	11AM - 1PM	Horse
Wei	1PM - 3PM	Goat
Shen	3PM - 5PM	Monkey
You	5PM - 7PM	Rooster

Xu	7PM - 9PM	Dog
Hai	9PM - 11PM	Pig

These can theoretically be assigned nine star numbers, but **standard Nine Star Ki personal profile calculations do NOT use hourly stars**.[8]

8.4 Recommendation for Version 1

RECOMMENDED: DO NOT include daily or hourly stars in personal profile feature for Version 1.

Rationale:

1. **Complexity:** Daily star calculation requires Stem-Branch calendar, solar term position, and solstice phase tracking
2. **Limited utility:** Personal profiles focus on year and month stars; day/hour stars used primarily for event forecasting and divination
3. **Inconsistent methods:** Different schools have conflicting daily star formulas[4]
4. **Not typically included:** Most Nine Star Ki books and calculators (Kushi, Sachs, Mindful Design) omit daily stars from personality profiles

Future Enhancement: Consider adding daily stars for:

- Advanced forecasting module
- "Auspicious day selection" feature
- "Daily energy tracker" tool
- Requires integration with professional Four Pillars/BaZi software or Heluo-quality calendar[22]

Source Citations:

---

9. Data Model: Machine-Readable JSON Specification

9.1 Element and Color Metadata

json

```
{
  "elements": {
    "1": {
      "number": 1,
      "element": "Water",
      "polarity": "yang",
```

```
  "japanese_name": "Ippaku-suisei",
  "kanji": "一白水星",
  "color": "White",
  "color_hex": "#FFFFFF",
  "secondary_color": "Blue",
  "direction": "North",
  "trigram": "Kan",
  "trigram_symbol": "☵",
  "season": "Winter",
  "characteristics": ["Philosophical", "Sensual", "Creative", "Intuitive", "Free-spirited"],
  "profession_keywords": ["Writer", "Artist", "Musician", "Diplomat", "Philosopher"]
},
"2": {
  "number": 2,
  "element": "Earth",
  "polarity": "yin",
  "japanese_name": "Jikoku-dosei",
  "kanji": "二黒土星",
  "color": "Black",
  "color_hex": "#000000",
  "secondary_color": "Brown",
  "direction": "Southwest",
  "trigram": "Kun",
  "trigram_symbol": "☷",
  "season": "Late Summer",
  "characteristics": ["Maternal", "Patient", "Supportive", "Diplomatic", "Nurturing"],
  "profession_keywords": ["Teacher", "Caregiver", "Organizer", "Counselor", "Service"]
},
"3": {
  "number": 3,
  "element": "Wood",
  "polarity": "yang",
  "japanese_name": "Sanpeki-mokusei",
  "kanji": "三碧木星",
  "color": "Blue-Green",
  "color_hex": "#00CED1",
  "secondary_color": "Green",
  "direction": "East",
  "trigram": "Zhen",
  "trigram_symbol": "☳",
  "season": "Spring",
  "characteristics": ["Optimistic", "Energetic", "Impulsive", "Driven", "Outspoken"],
  "profession_keywords": ["Entrepreneur", "Lawyer", "Motivator", "Public Relations"]
},
```

```
"4": {
  "number": 4,
  "element": "Wood",
  "polarity": "yin",
  "japanese_name": "Shiroku-mokusei",
  "kanji": "四緑木星",
  "color": "Dark Green",
  "color_hex": "#006400",
  "secondary_color": "Green",
  "direction": "Southeast",
  "trigram": "Xun",
  "trigram_symbol": "☴",
  "season": "Late Spring",
  "characteristics": ["Trusting", "Gentle", "Flexible", "Sensitive", "Adaptable"],
  "profession_keywords": ["Counselor", "Presenter", "Mentor", "Public Relations"]
},
"5": {
  "number": 5,
  "element": "Earth",
  "polarity": "center",
  "japanese_name": "Goou-dosei",
  "kanji": "五黄土星",
  "color": "Yellow",
  "color_hex": "#FFD700",
  "secondary_color": "Brown",
  "direction": "Center",
  "trigram": "Center",
  "trigram_symbol": "=",
  "season": "All Seasons",
  "characteristics": ["Powerful", "Ambitious", "Controlling", "Resilient", "Determined"],
  "profession_keywords": ["Leader", "Manager", "Executive", "Entrepreneur", "General"]
},
"6": {
  "number": 6,
  "element": "Metal",
  "polarity": "yang",
  "japanese_name": "Roppaku-kinsei",
  "kanji": "六白金星",
  "color": "White",
  "color_hex": "#F5F5F5",
  "secondary_color": "Silver",
  "direction": "Northwest",
  "trigram": "Qian",
  "trigram_symbol": "☰",
```

```
  "season": "Late Autumn",
  "characteristics": ["Righteous", "Dignified", "Perfectionist", "Authoritative", "Noble"],
  "profession_keywords": ["Leader", "Executive", "Military", "Politics", "Authority"]
},
"7": {
  "number": 7,
  "element": "Metal",
  "polarity": "yin",
  "japanese_name": "Shichiseki-kinsei",
  "kanji": "七赤金星",
  "color": "Red",
  "color_hex": "#DC143C",
  "secondary_color": "Gold",
  "direction": "West",
  "trigram": "Dui",
  "trigram_symbol": "☱",
  "season": "Autumn",
  "characteristics": ["Charismatic", "Sociable", "Stylish", "Graceful", "Charming"],
  "profession_keywords": ["Speaker", "Host", "Entertainer", "Writer", "Designer"]
},
"8": {
  "number": 8,
  "element": "Earth",
  "polarity": "yang",
  "japanese_name": "Happaku-dosei",
  "kanji": "八白土星",
  "color": "White",
  "color_hex": "#FFFAFA",
  "secondary_color": "Brown",
  "direction": "Northeast",
  "trigram": "Gen",
  "trigram_symbol": "☶",
  "season": "Late Winter",
  "characteristics": ["Stable", "Persistent", "Reserved", "Strong", "Contemplative"],
  "profession_keywords": ["Investor", "Financier", "Analyst", "Researcher", "Builder"]
},
"9": {
  "number": 9,
  "element": "Fire",
  "polarity": "yang",
  "japanese_name": "Kyushi-kasei",
  "kanji": "九紫火星",
  "color": "Purple",
  "color_hex": "#8B008B",
```

```
    "secondary_color": "Red",
    "direction": "South",
    "trigram": "Li",
    "trigram_symbol": "☲",
    "season": "Summer",
    "characteristics": ["Passionate", "Vivacious", "Inspiring", "Dramatic", "Charismatic"],
    "profession_keywords": ["Performer", "Artist", "Designer", "Entertainer", "Revolutionary"]
   }
  }
}
```


9.2 Month Star Mapping Table

json


```
{
 "month_star_table": {
  "principal_group_147": [8, 7, 6, 5, 4, 3, 2, 1, 9, 8, 7, 6],
  "principal_group_258": [2, 1, 9, 8, 7, 6, 5, 4, 3, 2, 1, 9],
  "principal_group_369": [5, 4, 3, 2, 1, 9, 8, 7, 6, 5, 4, 3]
 },
 "month_star_lookup": {
  "comment": "Array index 0=February, 1=March, ..., 11=January",
  "1": [8, 7, 6, 5, 4, 3, 2, 1, 9, 8, 7, 6],
  "2": [2, 1, 9, 8, 7, 6, 5, 4, 3, 2, 1, 9],
  "3": [5, 4, 3, 2, 1, 9, 8, 7, 6, 5, 4, 3],
  "4": [8, 7, 6, 5, 4, 3, 2, 1, 9, 8, 7, 6],
  "5": [2, 1, 9, 8, 7, 6, 5, 4, 3, 2, 1, 9],
  "6": [5, 4, 3, 2, 1, 9, 8, 7, 6, 5, 4, 3],
  "7": [8, 7, 6, 5, 4, 3, 2, 1, 9, 8, 7, 6],
  "8": [2, 1, 9, 8, 7, 6, 5, 4, 3, 2, 1, 9],
  "9": [5, 4, 3, 2, 1, 9, 8, 7, 6, 5, 4, 3]
 }
}
```


9.3 Energetic Star 81-Combination Matrix

json


```
{
 "energetic_star_combinations": {
  "comment": "Format: 'principal.month' : energetic",
  "1.1": 5, "1.2": 4, "1.3": 3, "1.4": 2, "1.5": 1, "1.6": 9, "1.7": 8, "1.8": 7, "1.9": 6,
  "2.1": 6, "2.2": 5, "2.3": 4, "2.4": 3, "2.5": 2, "2.6": 1, "2.7": 9, "2.8": 8, "2.9": 7,
  "3.1": 7, "3.2": 6, "3.3": 5, "3.4": 4, "3.5": 3, "3.6": 2, "3.7": 1, "3.8": 9, "3.9": 8,
  "4.1": 8, "4.2": 7, "4.3": 6, "4.4": 5, "4.5": 4, "4.6": 3, "4.7": 2, "4.8": 1, "4.9": 9,
```

```
    "5.1": 9, "5.2": 8, "5.3": 7, "5.4": 6, "5.5": 5, "5.6": 4, "5.7": 3, "5.8": 2, "5.9": 1,
    "6.1": 1, "6.2": 9, "6.3": 8, "6.4": 7, "6.5": 6, "6.6": 5, "6.7": 4, "6.8": 3, "6.9": 2,
    "7.1": 2, "7.2": 1, "7.3": 9, "7.4": 8, "7.5": 7, "7.6": 6, "7.7": 5, "7.8": 4, "7.9": 3,
    "8.1": 3, "8.2": 2, "8.3": 1, "8.4": 9, "8.5": 8, "8.6": 7, "8.7": 6, "8.8": 5, "8.9": 4,
    "9.1": 4, "9.2": 3, "9.3": 2, "9.4": 1, "9.5": 9, "9.6": 8, "9.7": 7, "9.8": 6, "9.9": 5
  }
}
```


9.4 Solar Term Boundaries (Locale Rules)

json


```
{
  "solar_terms": {
    "comment": "Approximate Gregorian dates. Vary ±1 day yearly. Use astronomical calculation for precision.",
    "Li_Chun": {"month": 2, "day": 4, "ecliptic": 315, "name_en": "Start of Spring"},
    "Jing_Zhe": {"month": 3, "day": 6, "ecliptic": 345, "name_en": "Awakening of Insects"},
    "Qing_Ming": {"month": 4, "day": 5, "ecliptic": 15, "name_en": "Clear and Bright"},
    "Li_Xia": {"month": 5, "day": 6, "ecliptic": 45, "name_en": "Start of Summer"},
    "Mang_Zhong": {"month": 6, "day": 6, "ecliptic": 75, "name_en": "Grain in Ear"},
    "Xiao_Shu": {"month": 7, "day": 7, "ecliptic": 105, "name_en": "Minor Heat"},
    "Li_Qiu": {"month": 8, "day": 8, "ecliptic": 135, "name_en": "Start of Autumn"},
    "Bai_Lu": {"month": 9, "day": 8, "ecliptic": 165, "name_en": "White Dew"},
    "Han_Lu": {"month": 10, "day": 8, "ecliptic": 195, "name_en": "Cold Dew"},
    "Li_Dong": {"month": 11, "day": 8, "ecliptic": 225, "name_en": "Start of Winter"},
    "Da_Xue": {"month": 12, "day": 7, "ecliptic": 255, "name_en": "Major Snow"},
    "Xiao_Han": {"month": 1, "day": 6, "ecliptic": 285, "name_en": "Minor Cold"}
  },
  "year_boundary": {
    "solar_term": "Li_Chun",
    "fixed_date": "February 4",
    "varies_by_year": true,
    "typical_range": "February 3-5"
  }
}
```


9.5 Calculation Methods Configuration

json


```
{
  "calculation_methods": {
    "japanese_descending": {
      "id": "japanese_standard",
      "name": "Standard Nine Star Ki (Japanese)",
```

```
    "description": "Gender-neutral descending method taught by Michio Kushi",
    "gender_used": false,
    "year_sequence": "descending",
    "is_default": true,
    "source": "Kushi, Michio. Nine Star Ki (1991)"
   },
   "chinese_ascending": {
    "id": "chinese_fengshu",
    "name": "Feng Shui Ming Gua (Chinese)",
    "description": "Gender-based calculation with ascending male, descending female",
    "gender_used": true,
    "year_sequence": "gender_dependent",
    "is_default": false,
    "source": "Traditional Chinese Feng Shui / Ming Gua system"
   }
  }
}
```
