

Origin Of Coronal High Temperature

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Abstract: In sun center, pressure least direction is ends of sun spin axis. Thus, sun center ultra-high temperature gasification substance jet out along sun's rotation axis, through photosphere, chromosphere, transition, directly reach coronal top. By gravity, thermal diffusion, centrifugal force combined effects, reached corona top high-temperature gasification substance spread into sun equatorial plane, formed temperature up to 1 million K to 20 million K corona.

Key words: center temperature, gasification substances, bian sphere, coronal high temperature

0. Foreword

Observational analysis found, sun temperature distribution is very unusual. Sun temperature from core layer center's 13.6 million K slowly dropped to photosphere top's 4100K. Then, temperature did not continues drop, contrary continued rise. Chromosphere above photosphere, temperature from 4100K rise to 20000K. Transition above chromosphere, temperature from 20000K rise to 1 million K. Coronal above transition, temperature as high as 1 million K to 20 million K.

Chromosphere, transition, coronal temperature rise energy coming from? What is coronal ultra-high temperature reason? Is still a unsolved mystery.

1. Center Temperature Of Sun

Let M is celestial body mass (kg). Let T is celestial body center temperature lower limit (°C).
The

$$T=0.001053M^{(1/3)}.$$

Sun mass is 1.989×10^{30} kg. Sun center temperature lower limit is

$$0.001053 \times 1.989^{(1/3)} \times 10^{10} = 13242601(^{\circ}\text{C}).$$

2. Material Form Of Sun

Sun temperature is proportional to sun center temperature. Sun center temperature is proportional to sun mass cube root. Therefore, sun temperature is proportional to sun mass cube root.

Sun mass is large enough, sun center temperature is high enough, so that sun temperature is high than all elements boiling point. Sun all substances is vaporized into gasification substances by high temperature. Sun becomes a gasification substance sphere. Sun center becomes sphere center.

Sun spin centrifugal force make sun into bian sphere. In sun center, pressure least direction is ends of sun spin axis.

3. Origin Of Coronal High Temperature

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Whereby also can be found, sun center temperature over 20 million K.

4. Epilogue

Sun center ultra-high temperature gasification substance jet out along sun's rotation axis, directly reach coronal top. High-temperature gasification substance spread into sun equatorial plane, formed corona. High temperature gasification substance settling down, formed transition, chromosphere.