



**Scientists have gained new insights into how eruptions occur on the sun.**

1  
00:00:00,010 --> 00:00:04,060  
music throughout

2  
00:00:04,080 --> 00:00:11,100  
Scientists have gained new insights into how eruptions occur on the sun.

3  
00:00:11,100 --> 00:00:18,880  
Through computer simulation, they have identified a universal process that explains eruptions of every size.

4  
00:00:18,880 --> 00:00:24,520  
We can watch the process in 5 steps.

5  
00:00:27,240 --> 00:00:32,560  
Step 1: Energization - Energy builds and a filament starts to form.

6  
00:00:35,520 --> 00:00:40,300  
Step 2: Slow rise - The yellow lines of the filament twist, build up energy, and slowly rise.

7  
00:00:40,320 --> 00:00:46,740  
Step 3a: Current sheet forms - A bright structure shows the current sheet - the region where the magnetic field

8  
00:00:46,740 --> 00:00:56,020  
Step 3b - After merging at the current sheet, the magnetic field lines recede from each other.

9  
00:01:00,560 --> 00:01:08,840  
Step 4: Explosion - The magnetic twist and energy are ejected as the filament breaks through. The jet sprays o

10  
00:01:14,440 --> 00:01:20,180  
Step 5: Relaxation - The stored energy is now exhausted and the region becomes quiet.