come explor us roughli everi 11 year sun goe quiet period one full solar firework mid-februari 2024 nasa ’ solar dynam observatori captur imag x-class solar flare teal yellow red imag show three differ type extrem ultraviolet light highlight extrem hot materi flare nasa/sdo adam mann april 8 2024 6:30 sun closest star earth give earthl especi astronom front-row seat activ one strike featur sun ’ activ astronom call solar cycl epic rise fall sun ’ level activ repeat everi 11 year astronom owe discoveri solar cycl sunspot ever sinc galileo first point telescop sun 1610 peopl wit occasion emerg dark splotch sun sun rotat complet one spin everi 27 day spot appear move across star ’ surfac heinrich schwabe regularli track sunspot 1826 1843 german astronom credit discov sunspot ’ frequenc tend vari everi 11 year activ time — maximum — 11-year cycl dozen sunspot seen slowli cross sun time least activ point solar cycl — solar minimum — star may sunspot-fre year research link sunspot solar cycl sun ’ magnet field much like earth sun magnet field north pole south pole sun ’ magnet field least 100 time strong earth ’ ’ also much larger complex weekli updat help use scienc new explor learn environ thank sign problem sign sun huge ball super-hot ga temperatur within sun high electron get rip away core nuclei atom creat swarm neg charg electron posit charg nuclei charg particl known ion ion move around insid sun creat swirl magnet field field twist turn churn sun rotat sometim magnet field line come togeth creat point extra-pow magnet sun ’ surfac spot intens magnet cool surround ga make sunspot appear overal surfac sun roil roughli 5,500 degre celsiu 10,000 degre fahrenheit sunspot look dark much cooler — around 3,500 ºc 6,300 ºf