

## A Gloomy English City Builds an Artificial Sun

JOHN METCALFE NOV 18, 2013 4 COMMENTS

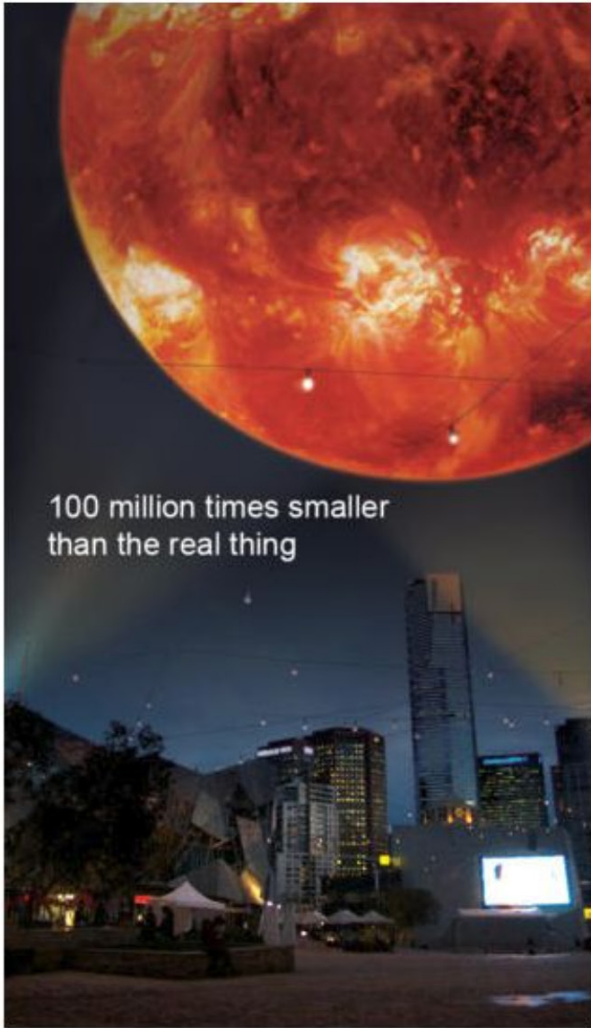
Rejoice, Britons who haven't seen daylight in ages and who are slowly weakening into rubbery schlumps for want of Vitamin D: Your country now has slightly more light, thanks to a blazing artificial sun [made from](#) the "world's largest spherical balloon."

The [46-foot-wide ersatz star](#) floats above a square in Durham, in the northeast, as part of a celebration of light art called [Lumiere](#). It portrays a strikingly accurate representation of the Sun's plasma-storm-scarred surface, only at a scale that's 100 million times smaller. Canadian techno-artist [Rafael Lozano-Hemmer](#) whipped the thing together by first forcing a gravitational collapse inside a molecular cloud, and then having the matter condense into a heavy ball ... wait, no, he actually filled a orbicular blimp with helium and animated it with five projectors fed with the latest NASA information. (It's quite a bit more sophisticated than that [artificial Moon](#) planned for Brooklyn.)

The artist [writes](#):

The solar animation on the balloon is generated by live mathematical equations that simulate the turbulence, flares and sunspots that can be seen on the surface of the Sun. This produces a constantly changing display that never repeats itself, giving viewers a glimpse of the majestic phenomena that are observable at the solar surface and that only relatively recent advances in astronomy have discovered. The project uses the latest [SOHO](#) and [SDO](#) solar observatory imaging available from NASA, overlaid with live animations derived from Navier-Stokes, reaction diffusion, perlin, particle systems and fractal flame equations.

As if that wasn't cool enough, there's [an app](#) you can download that lets you spawn different patterns in the fiery atmosphere. (You might have to be in Durham, though.) Check out this fantastic screenshot – watch out, our planet is about to crash into the Sun!



And a few more photos from the past few days (don't worry, this Sun you actually can look straight into):





**Nicky Webb**  
@nickyartichoke

Follow

Phew! Lumiere Durham programme unveiled today: check it out!  
[lumiere-festival.com](http://lumiere-festival.com) #LumiereDurham

12:24 PM - 2 Oct 2013

3 RETWEETS 1 FAVORITE



**Lumiere Durham**  
@lumieredurham

Follow

The EPIC Solar Equation turning up the heat at #lumieredurham  
tonight! NOT TO BE MISSED #Lumiere

1:45 PM - 15 Nov 2013

46 RETWEETS 10 FAVORITES



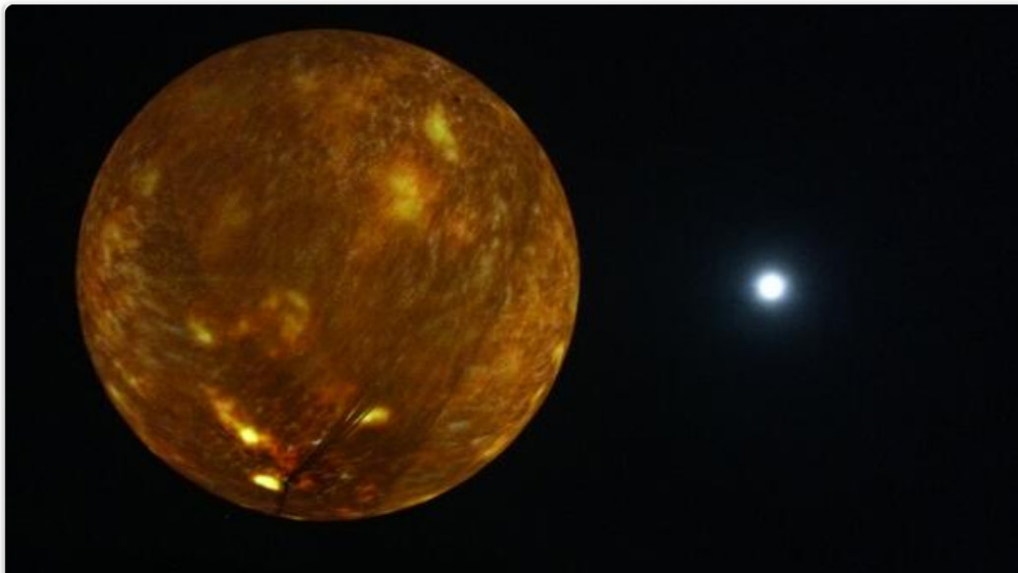
**Rich Bielby**

@richbielby

Follow

Sun up and running tonight and a cameo from the moon too on the science site [#durham](#) [#lumiere](#)

2:38 PM - 15 Nov 2013 from Durham, United Kingdom



**Zoe Henson**

@zoelouisehenson

Follow

Fantastic lights at [#lumieredurham](#)

4:50 PM - 15 Nov 2013

5 RETWEETS 1 FAVORITE



Before it was ignited:



This is footage from an earlier appearance in Australia: