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Luisi, M.; Anderson, L.; Schneider, N.; Simon, R.; Kabanovic, S.; Guesten, R.; ... ; Tielens, A.G.G.M.

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Stellar feedback and triggered star formation in the prototypical bubble RCW 120

**M. Luisi¹, L. Anderson¹, N. Schneider², R. Simon², S. Kabanovic²,
R. Guesten³, A. Zavagno⁴, P. Broos⁵, C. Buchbender², C. Guevara²,
K. Jacobs², M. Justen², B. Klein³, D. Linville¹, M. Roellig², D. Russeil⁴,
J. Stutzki², M. Tiwari⁶, L. Townsley⁵, A. Tielens⁷**

¹West Virginia University, Morgantown, WV, ²University of Cologne, Cologne, Germany,

³Max-Planck Institut für Radioastronomie, Bonn, Germany,

⁴Aix Marseille Université, Marseille, France, ⁵Pennsylvania State University, University Park, PA,

⁶University of Maryland, College Park, MD, ⁷Leiden University, Leiden, Netherlands

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Radiative and mechanical feedback of massive stars regulates star formation and galaxy evolution. Positive feedback triggers the creation of new stars by collecting dense shells of gas, while negative feedback disrupts star formation by shredding molecular clouds. Although key to understanding star formation, their relative importance is unknown. Here we report velocity-resolved observations from the SOFIA legacy program FEEDBACK of the massive star-forming region RCW 120 in the [CII] 1.9 THz fine-structure line, revealing a gas shell expanding at 15 km/s. Complementary APEX CO J=3-2 345 GHz observations exhibit a ring-structure of molecular gas, fragmented into clumps that are actively forming stars. Our observations demonstrate that triggered star formation can occur on much shorter timescales than hitherto thought (<0.15 Myr), suggesting that positive feedback operates on short time periods.