

Colloquium

SFB 956

Conditions and Impact of Star Formation

16 July 2018

Monday 3:00 pm

Physikalische Institute Köln

Lecture Hall III

Zülpicher Straße 77 | 50937 Köln

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The Hot Interstellar Medium

Massive stars inject energy into the interstellar medium through radiation, which ionises their environment and creates HII regions. Their strong stellar winds form shock waves, which further heat and ionise the ambient gas. These shocks will create interstellar bubbles filled with hot thin plasma with temperatures of $10^6 - 10^7$ K, which emits soft thermal X-rays. Finally, the massive stars finish their evolution in supernova (SN) explosions, which again heat and ionise the interstellar medium. Through observations over the entire electromagnetic spectrum we can study the cycle of matter in a galaxy and hence improve our understanding of the evolution of galaxies. I will present recent results of our studies of the hot interstellar medium in the Milky Way and nearby galaxies. I will discuss the physics of the hot plasma, the evolution and energetics of supernova remnants and superbubbles, and their impact on star formation.

