

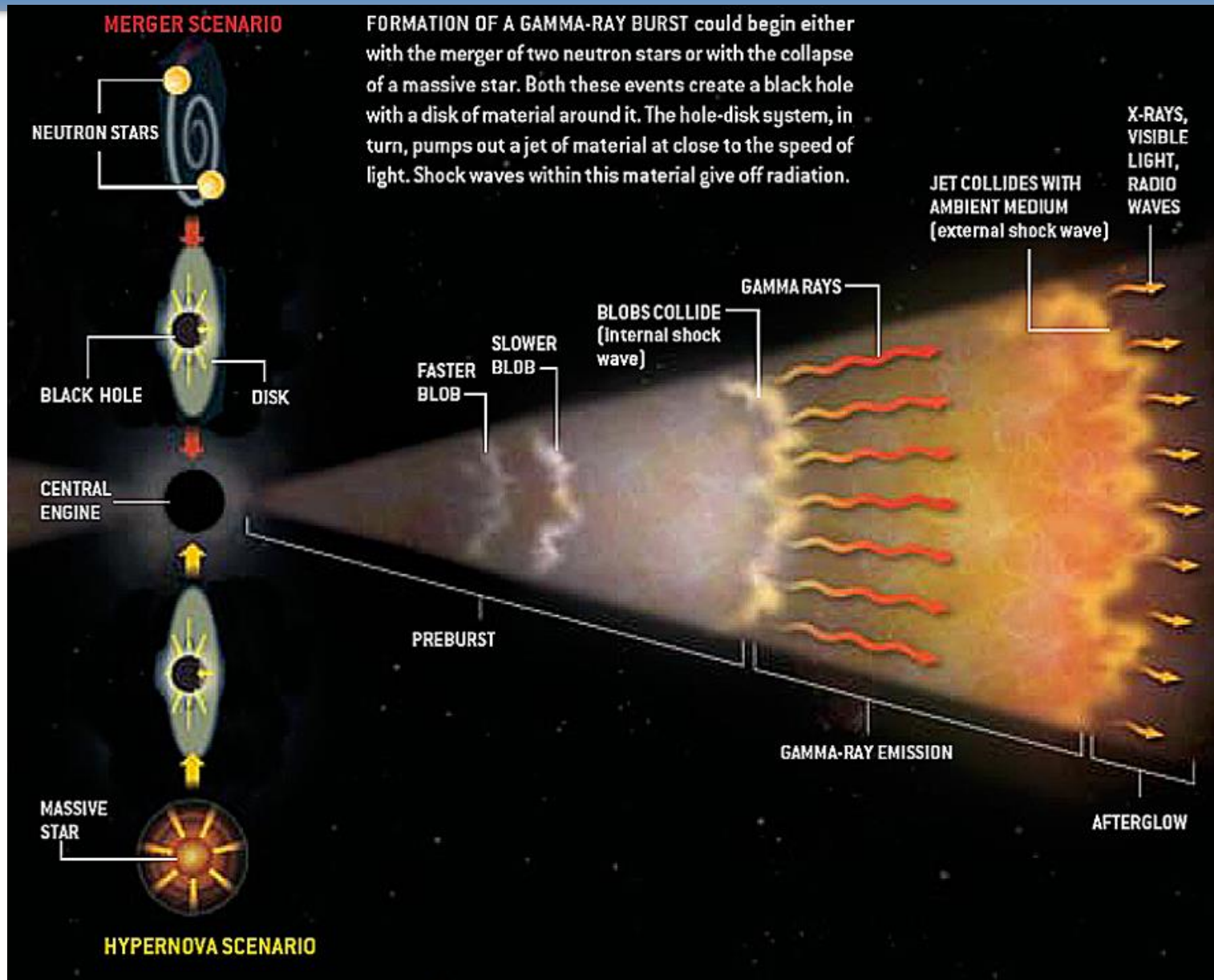
# The Development of GRB's Fireball Model

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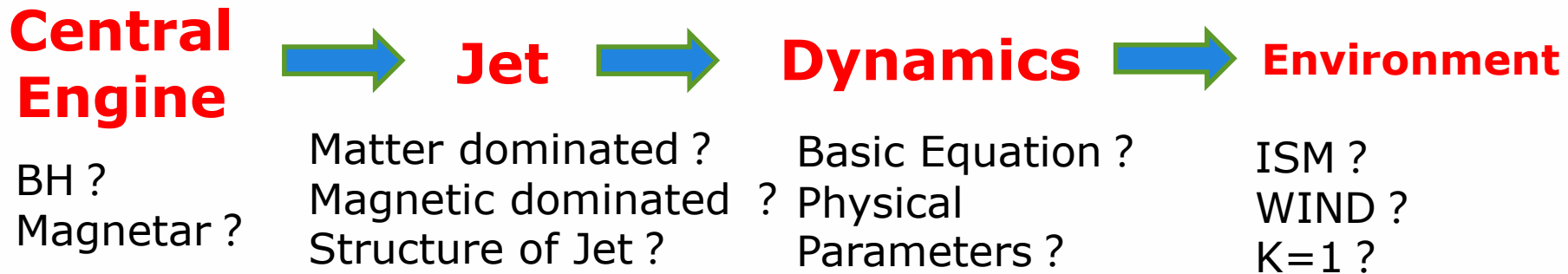
Purple Mountain Observatory

June 6, 2016

# The Standard Model



# The Development



Dai, Z.G., & Lu, T. 1998, *aap*, 333, L87 Magnetar as the central engine

Zhang, B., & Zhang, B. 2014, *apj*, 782, 92 ICMART model

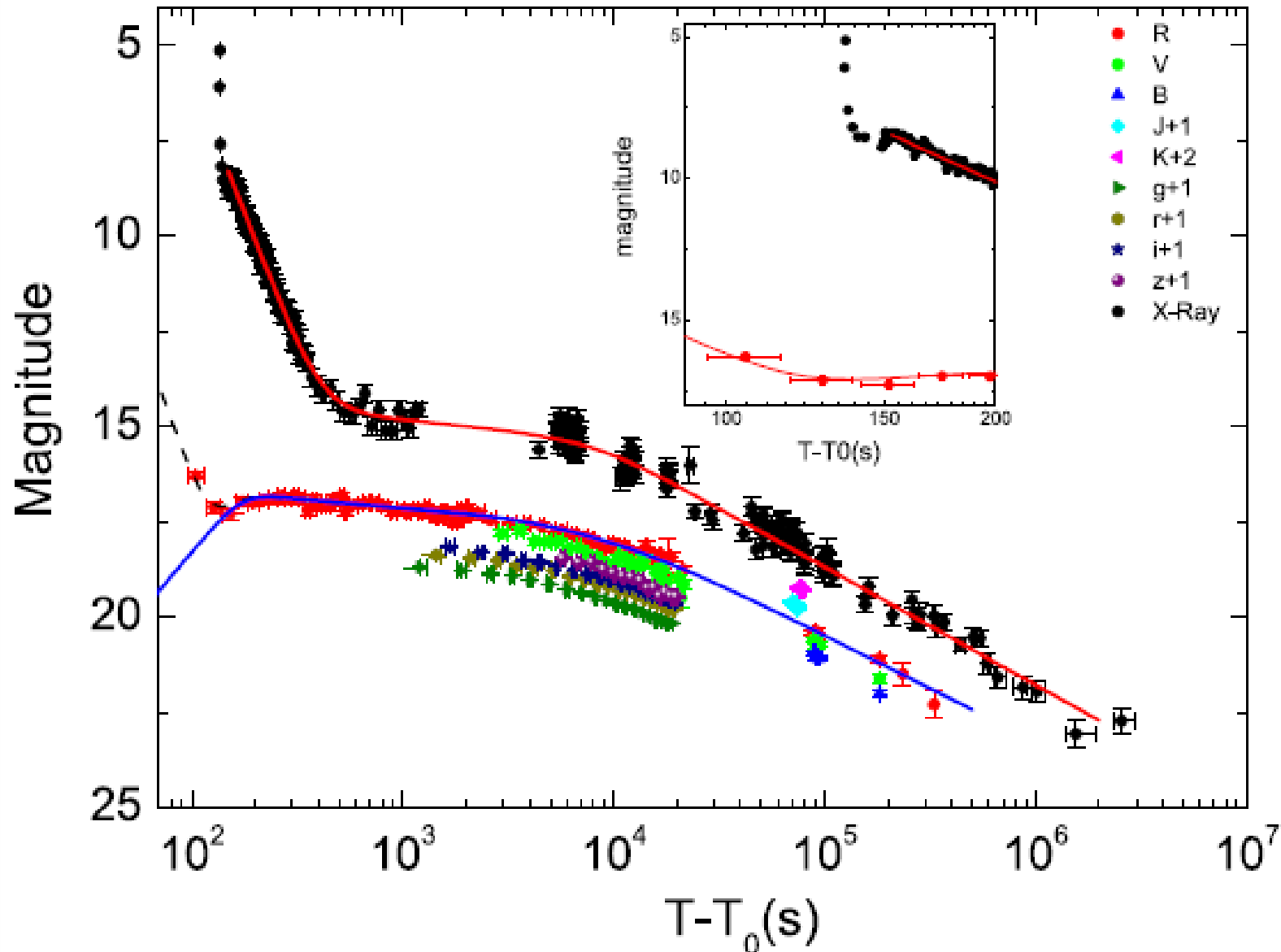
Y. F. Huang., et al., *Mon. Not. R. Astron. Soc.* 309, 513-516 (1999) Modification on dynamics

A. Panaitescu., & P. Kumar., *apj*, 571:779–789, 2002 June 1 Statistics of physical parameters

Dai, Z. G., & Lu, T. 1998, *mnras*, 298, 87 Wind environment

Yi, S.X., Wu, X.F., & Dai, Z.-G. 2013, *apj*, 776, 120 k=1 environment

# Observation of GRB111228A



# Alternatives

## Dust Scattering Model

