

## **Becerra Bayona Laura Marcela**



Position: IRAP PhD, XII Cycle  
Period covered: 2013-2016

### **I Scientific Work**

*Bachelor of physics, Universidad Industrial de Santander, Bucaramanga. Graduation thesis: "Slow Gravitational Collapse of dissipative anisotropic spherical matter configuration"*

*Current Research: Binary systems, accretion discs, hypercritical accretion, neutrino emission*

### **II Conferences and educational activities**

*II a Conferences and Other External Scientific Work*

1. *IRAP Ph.D. Erasmus Mundus Workshop, Supernovae, Gamma-ray bursts and the induced gravitational collapse, May 11th–16th, 2014 Les Houches (France). Asistant.*
2. *1<sup>st</sup> Scientific ICRANet Meeting in Armenia: Black Holes: the largest energy sources in the Universe, June 30th –July 4th, 2014. Yerevan, Armenia. Asistant*
3. *Third Bego Rencontres. IRAP Ph.D. Erasmus Mundus school. September 8th-19th, 2014 . "Hypercritical Accretion in Binary-Driven Hypernova". L. Becerra, J. Rueda and R. Ruffini*
4. *Conference Swift 10 Years of Discovery. Rome, Italy. Decembre 1st-5th, 2014. "Hypercritical Accretion, Induced Gravitational Collapse, and Binary-Driven Hypernova". L. Becerra, et. al.*
5. *The Second ICRANet César Lattes Meeting. Rio de Janeiro, Brasil. April 13rd-18th, 2015. "Angular Momentum Tranfer During the Hypercritical Accretion in Binary-Driven-Hypernova" L. Becerra, F. Ciproletta, F. Fryer, J. Rueda and R. Ruffini.*
6. *Fourteenth Marcel Grossmann Meeting – MG14. Rome, Italy. July 12nd-18th, 2015. "Angular Momentum Tranfer Role in the Hypercritical Accretion of Binary-Driven-Hypernova" L. Becerra, F. Ciproletta, F. Fryer, J. Rueda and R. Ruffini.*
7. *Fourteenth Marcel Grossmann Meeting – MG14. Rome, Italy. July 12nd-18th, 2015. "Induced compression by angular momentum loss in fast rotating, magnetized Super-Chandraskehar white dwarfs" L. Becerra, E. Garcia-Berro, P. Loren-Aguilar and J. Rueda*

*II b Work With Students*

*II c Diploma thesis supervision*

*II d Other Teaching Duties*

*II e. Work With Postdocs*

### **III. Service activities**

*III a. Within ICRANet*

*III b. Outside ICRANet*

### **IV. Other**

#### **2014 List of Publication**

Hypercritical Accretion, Induced Gravitational Collapse, and Binary-Driven Hypernova. L.M. Becerra et. al. Swift 10th anniversary conference proceedings. 2-5 Decembre, 2014.

Angular Momentum Role in the Hypercritical Accretion of Binary-Driven-Hypernova. Becerra, L., Cipolleta, F., Fryer, C.L., Rueda, J. A., and Ruffini, R. 2015, ApJ, 812, 100