

File ID 99227
Filename Glossary

SOURCE (OR PART OF THE FOLLOWING SOURCE):

Type Dissertation
Title Different manifestations of accretion onto compact objects
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Faculty Faculty of Science
Year 2008
Pages 248

FULL BIBLIOGRAPHIC DETAILS:

<http://dare.uva.nl/record/269894>

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Glossary

- **AMXPs:** Accreting millisecond X-ray pulsars (see, e.g., Chapters 3 & 4).
- **ASM:** All Sky Monitor (Levine et al. 1996). See also Section 1.2.1, page 2, for more details.
- **BH/BHC:** Black hole / Black hole candidate.
- **BLN:** Band Limited Noise.
- **BS:** Banana state, usually subdivided into LLB, LB and UB (used in the context of neutron star Atoll sources – See Figure 1.8 on page 13).
- **CD:** Color-diagram.
- **EIS:** Extreme island state (used in the context of neutron star Atoll sources – See Figure 1.8 on page 13).
- **FWHM:** Full width at half maximum.
- **GC:** Globular Cluster.
- **HEXTE:** High Energy X-ray Timing Experiment (Gruber et al. 1996; Rothschild et al. 1998). See also Section 1.2.1, page 2, for more details.
- **HBO:** Horizontal Branch Oscillation (used in the context of neutron star Z-sources).
- **HID:** Hardness-Intensity Diagram.
- **HIMS:** Hard Intermediate State (used in the context of BHC source states – See Section 1.4, page 12, and Section 8.2, page 141, for more details).
- **HMXB:** High-mass X-ray Binary.

- **HS**: High state (or 'high/soft state', used in the context of BHC source states – See Section 1.4, page 12, and Section 8.2, page 141, for more details).
- **IS**: Island state (used in the context of neutron star Atoll sources – See Figure 1.8 on page 13).
- **LB**: Lower banana (used in the context of neutron star Atoll sources' states – See Figure 1.8 on page 13).
- **LFN**: Low-frequency noise.
- **LLB**: Lower-left banana (used in the context of neutron star Atoll sources' states – See Figure 1.8 on page 13).
- **LMXB**: Low-mass X-ray Binary.
- **LS**: Low state (or 'low/hard state', used in the context of BHC source states – See Section 1.4, page 12, and Section 8.2, page 141, for more details).
- **L_x** : X-ray Luminosity.
- **L_{Edd}** : Eddington Luminosity.
- **L_i** : Power spectral features are usually fitted with a function consisting of one or multiple Lorentzians, each denoted as L_i , where i determines the type of component. The characteristic frequency (ν_{max}) of L_i is denoted ν_i . In this thesis I use:
 - L_u for upper kHz QPO.
 - L_ℓ for lower kHz QPO.
 - L_{low} for a feature that might be the same as L_ℓ , when $\nu_\ell \lesssim 50$ Hz (see also Section 7.3.6, page 124, for more details).
 - L_h for hump.
 - L_b for break.
 - L_{b2} for the second break.
 - L_{LF} for Low Frequency QPO.
 - $L_{LF/2}$ for the subharmonic of the Low Frequency QPO (in the context of NS, see Section 6.4.2, page 94, for more details).
 - L_{LF}^+ or L_{LF}^- for the QPOs at higher and lower frequency than L_{LF} (in the context of BHC).

– L_{VLFN} for the Very-low frequency noise.

- \dot{m} : Local accretion rate (see Chapter 2).
- \dot{m}_{Edd} : Local Eddington accretion rate (see Chapter 2).
- **NS**: Neutron star.
- ν_0 : centroid frequency of the Lorentzian (see also ν_{max}).
- ν_s : spin frequency of the neutron star.
- ν_{max} : Characteristic frequency of a Lorentzian L_i , defined as $\nu_{max} = \sqrt{\nu_0^2 + (FWHM/2)^2} = \nu_0 \sqrt{1 + 1/4Q^2}$. See also L_i and Belloni et al. (2002b).
- **PCA**: Proportional Counter Array (Jahoda et al. 2006). See also Section 1.2.1, page 2, for more details.
- **PCU**: Proportional Counter Unit (Jahoda et al. 2006). See also Section 1.2.1, page 2, for more details.
- **PDM**: Phase dispersion minimization technique (Stellingwerf 1978). See also Section 1.2.1, page 7, for more details.
- **Q**: Quality factor of a Lorentzian. It is defined as $Q = \nu_0/FWHM$.
- **QPO**: Quasi-periodic oscillation.
- **RXTE**: Rossi X-ray Timing Explorer (Jahoda et al. 2006). See also Section 1.2.1, page 2, for more details.
- **SIMS**: Soft Intermediate State (used in the context of BHC source states – See Section 1.4, page 12, and Section 8.2, page 141, for more details).
- $t_{thermal}$: Thermal timescale is defined as $t_{thermal} = c_p T / \epsilon$ where c_p , T and ϵ are the heat capacity at constant pressure, the temperature and the nuclear energy generation rate, respectively.
- t_{accr} : Accretion timescale is defined as $t_{accr} = y / \dot{m}$ where y and \dot{m} are the column density of the burning layer and local accretion rate, respectively.
- **UB**: Upper banana (used in the context of neutron star Atoll sources' states – See Figure 1.8 on page 13).

Glossary

- **VLFN**: Very-low frequency noise.
- y_f : column depth of the fuel layer (in the context of burning of material on the neutron star surface).