

**Time-lapse hyperspectral radiance data for the scene Levada**  
**Foster et al., *Vision Research*, 2015, <http://dx.doi.org/10.1016/j.visres.2015.03.012>**

Location name	Village of Levada, Minho region, Portugal
Scene description	Small rural village containing houses, mountain views, and sky.
Geographic reference points	House at bottom-centre of scene image      Approx. latitude      Approx. longitude 41.765004°      -8.252147°
	Camera      Approx. latitude      Approx. longitude 41.764741°      -8.258793°
Date of acquisition	8 October 2003
Acquisition times	14:11, 15:18, 16:08, 17:12, 18:10, 18:30, 18:45
Viewing geometry	Visual angle of scene from camera: 6.9° × 5.3°
	Distance of scene from camera: 560 m
Matlab Files	Levada_1411.mat, _1518.mat, _1608.mat, _1712.mat, _1810.mat, _1830.mat, _1845.mat
BMP Files	Levada_1411.bmp, _1518.bmp, _1608.bmp, _1712.bmp, _1810.bmp, _1830.bmp, _1845.bmp. All are unedited.
How to load data	In Matlab, if hyperspectral image files are in your working directory, then Matlab command >> load ('levada_1411.mat') loads hyperspectral image data into memory with name 'hsi', same for every scene
What the data represent	Array 'hsi' has size 1024 × 1344 × 33. It represents a set of 33 greyscale images of size 1344 (H) × 1024 (V) pixels sampled at wavelengths 400, 410, ..., 720 nm, with each pixel value representing spectral radiance in W m <sup>-2</sup> sr <sup>-1</sup> nm <sup>-1</sup>
Postprocessing	See Section 2.2. <i>Image processing</i> , in Foster, D.H., Amano, K., & Nascimento, S.M.C. (2015). <i>Vision Research</i> , <a href="http://dx.doi.org/10.1016/j.visres.2015.03.012">http://dx.doi.org/10.1016/j.visres.2015.03.012</a> .
Notes	The Munsell reference surfaces can be seen as a narrow strip at the bottom of the scene. The thin black or coloured edges present in some images are the result of multiple hyperspectral image registrations, mainly over time.
More details	See Foster, D.H., Amano, K., & Nascimento, S.M.C. (2015). <i>Vision Research</i> , <a href="http://dx.doi.org/10.1016/j.visres.2015.03.012">http://dx.doi.org/10.1016/j.visres.2015.03.012</a> .
Usage and citation	These data are for personal use only. If you use these hyperspectral images or the colour images rendered from them in any published work arising from these data, please cite the source publication in full: Foster, D.H., Amano, K., & Nascimento, S.M.C. (2015). Time-lapse ratios of cone excitations in natural scenes. <i>Vision Research</i> , <a href="http://dx.doi.org/10.1016/j.visres.2015.03.012">http://dx.doi.org/10.1016/j.visres.2015.03.012</a> .
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Last update	29 September 2015