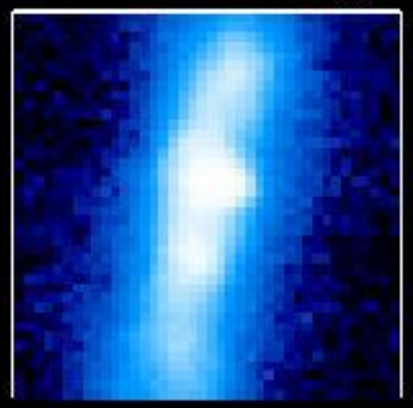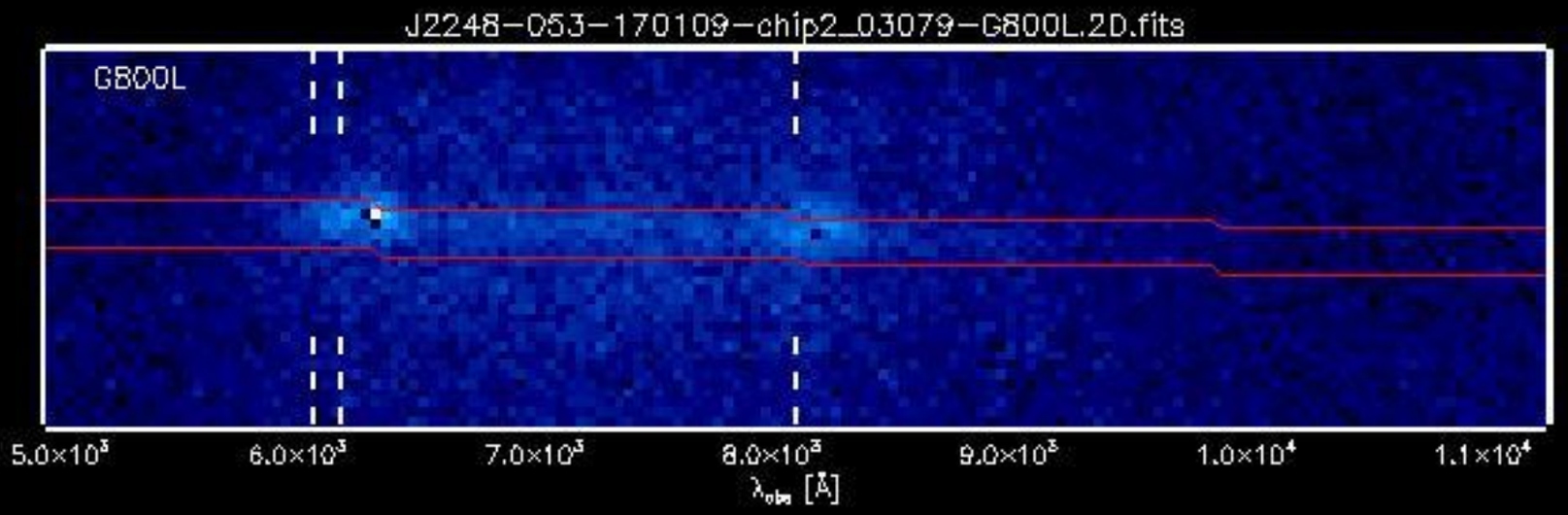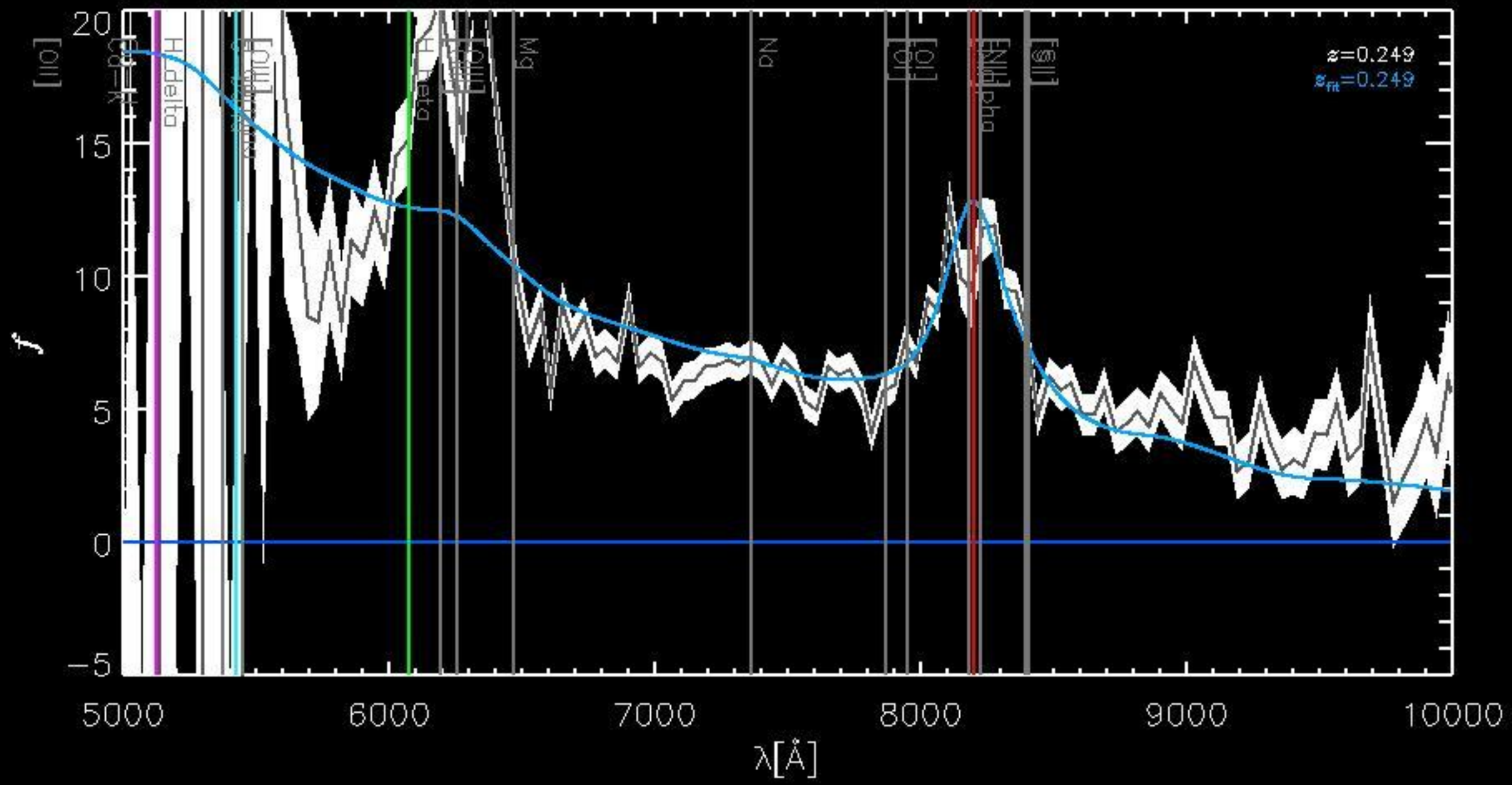direct image