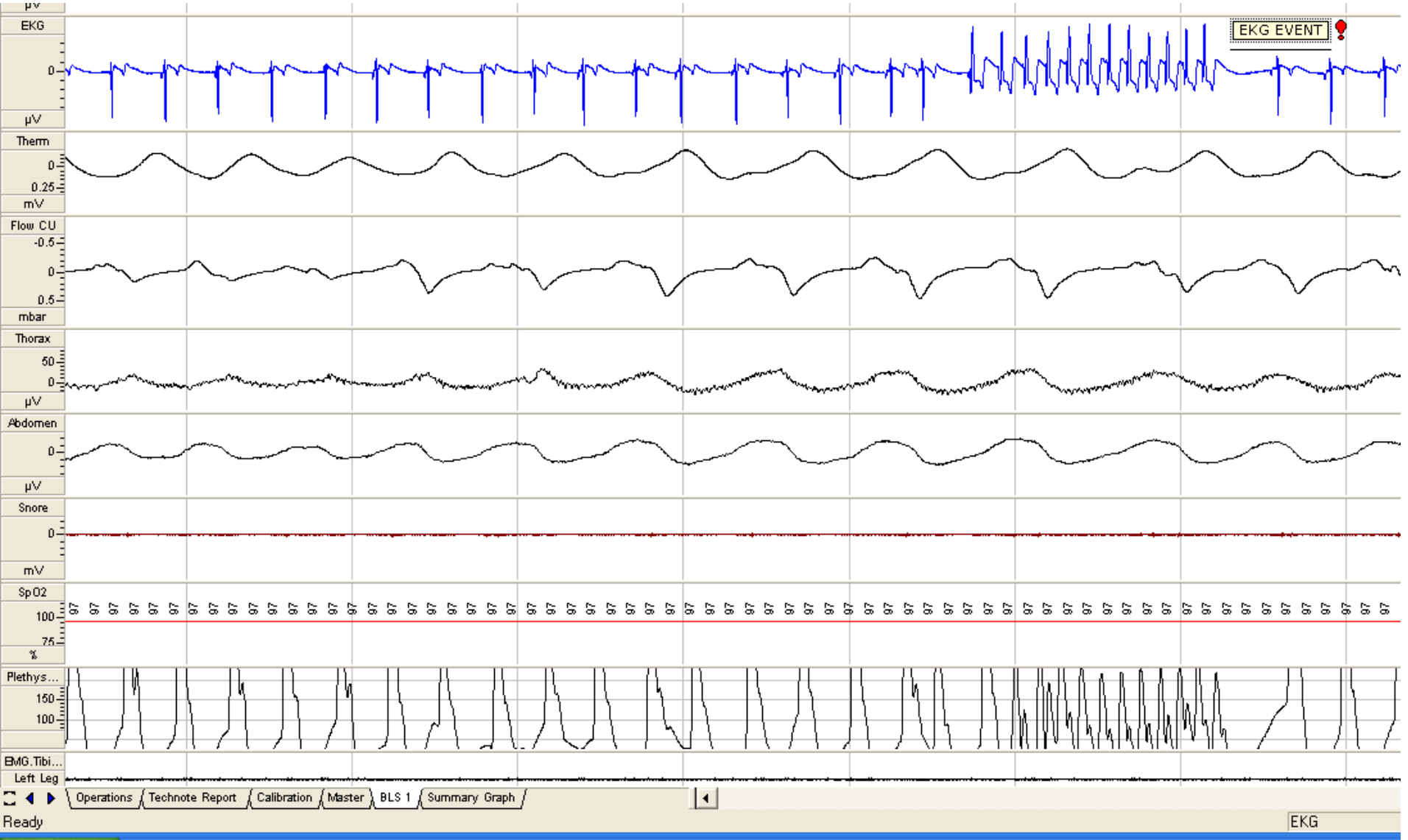
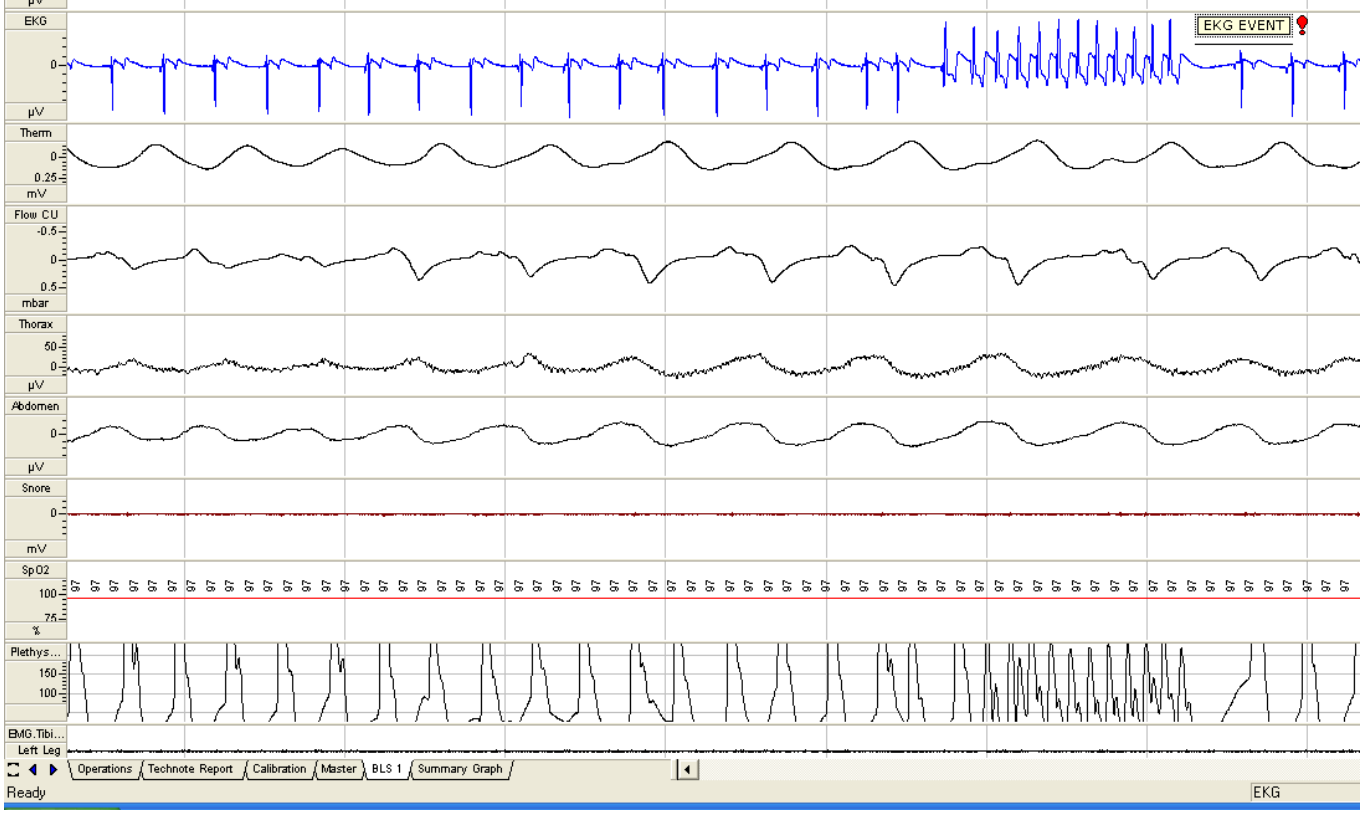
This is part of a sleep study in an obese 17 year old boy. The top strip (blue) is an ECG tracing, bottom strip is a pleth (pulsatility) tracing. Other strips are respiration.

1) What does the ECG tracing reveal (1 point)?

2) Could it just be artifact? How do you know (1 point)?





1) The ECG tracing reveals a short run of supraventricular tachycardia (SVT). It is narrow-complex QRS, therefore it CANNOT be V-tach. The His-Purkinje system must be utilized to generate a narrow (normal duration) QRS, and thus the tachycardia originates from the level of the AV node or above (hence “supra”-ventricular tachycardia).

2) This cannot be artifact. Look at the pleth tracing below. It corresponds perfectly with the onset of SVT. Furthermore, you’ll notice that there is a premature atrial contraction just prior to the onset of SVT. This is often the triggering event for runs of reentrant tachycardia