

NRVR Night Launch Operations

The following policies are in addition to standard FAR101 regulations governing the launch of Unmanned Rockets. All other standard procedures for launching rockets will be followed.

- 1) **Rockets:** All rockets must have an illumination device that will provide a sufficient source of light to be visible for the entire flight, including its pre-liftoff condition while on the pad.
 - a. **Illumination:** Rockets launched after sunset must conform to minimum FAA lighting requirements. All rockets launched at night must have illumination visible from the launch pad, and visible during all phases of flight. This means that all rockets will have some type of active illumination (chemical or electrical) visible externally at the time of launch. The lighting should be visible from all directions. Reflective and phosphorescent materials are allowed only as supplemental light sources. Additional illumination may also be stored internally for deployment/activation with the recovery system.
 - b. **No Complex rockets:** Rockets at night launches will be restricted to single stage/single motor launch configuration with total impulse of 160 N-seconds or less ("G" impulse). Complex rockets (multi-staged or multi-motored) are not allowed during night launch operations at all NRVR launches.
 - c. **RSO before dark:** To be eligible for launching at night, a rocket must be presented for RSO inspection during daylight hours on the day of the launch. The rocket is subject to standard RSO requirements. **The Range Safety Officer has the final word.**
 - d. **Experienced rockets only:** All rockets flown at night will have previously flown during daylight hours with a similar rocket mass and motor impulse class as being flown at night.
 - e. **Recovery: Recovery for night launches:** The same rules for recovery in the day time apply at a night time launch. Be advised that generally the winds are calmer and the faster the descent the more difficult it is to track.

- 2) **Attendees at a night launch - Personnel:** All flyers and spectators on the field will have a glow stick or flashlight on their person. Red filters on lights are desirable.

- 3) **Recovery Personnel:** All persons participating in the recovery of rockets at night launches will carry illumination with them. This is to allow the RSO and LCO to keep track of people in the field.