Based on the provided security case pattern for threat identification and the domain information for ACAS Xu, I will create a security case by instantiating the generic elements of the pattern with specific information related to ACAS Xu as described in the domain information.

\*\*ACAS Xu Security Case using GSN Notation (Hierarchical Tree Structure):\*\*

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- G0: ACAS Xu satisfies security requirements

- C0: ACAS Xu is a collision avoidance system designed for drones to enhance safety and prevent collisions.

- C1: Security requirements are about protecting ACAS Xu from malicious entities.

- J0: The argumentation is based on the satisfaction of security requirements.

- A0: System SRS are complete, adequate, and consistent.

- S0: Argue through asset protection and secure development requirements.

- G1: ACAS Xu satisfies the asset protection requirements.

- A1: Asset inventory for ACAS Xu is established.

- S1: Argue through the different stages of the system development life cycle.

- G3: Asset protection requirements are met during the architecture design phase of ACAS Xu.

- C2: The architecture of ACAS Xu involves sensors, processor, planner, and actuators.

- S2: Argue through deriving security threats from security requirements (SRs).

- J1: Detection and mitigation of threats fulfill SRs.

- G5: ACAS Xu architecture is protected against identified security threats.

- A2: All relevant threats have been identified for ACAS Xu.

- S3: Argue over each security threat.

- G0.1: ACAS Xu architecture is protected against ST1 (Tampering of GPS sensors and processor data)

- G0.2: ACAS Xu architecture is protected against ST2 (Spoofing of sensors and processor)

- G0.3: ACAS Xu architecture is protected against ST3 (Elevation of privileges in the planning system)

- G6: ACAS Xu architecture is validated.

- C3: ACAS Xu architecture model includes components like processors and sensors linked via connectors.

- A3: The ACAS Xu architecture model is well-defined using formal methods.

- Uninstantiated and undeveloped status remains for validation of architecture (Undeveloped state as indicated for G6)

- G4: Asset protection requirements are met during other phases of ACAS Xu (Undeveloped as indicated in the pattern)

- G2: ACAS Xu satisfies secure development requirements (Uninstantiated and undeveloped state indicates G2 remains to be developed fully)

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This security case is designed to follow the structure and instantiations necessary based on the goal strategy notation (GSN) hierarchical model presented and the details from the domain specification for ACAS Xu. Note that some goals remain undeveloped, reflecting parts of the system or processes that need more detailed work or information to complete.