EO C440.08 – WATCH BLAST! (BALLOON-BORNE LARGE APERTURE SUB- MILLIMETRE TELESCOPE)

1. **Performance**: Watch *BLAST! (Balloon-Borne Large Aperture Sub- Millimetre Telescope*)

2. **Conditions**:

   a. Given:

      (1) *BLAST!* DVD

      (2) Supervision, and

      (3) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Classroom or training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall watch *BLAST!* and discuss the BLAST mission, to include:

   a. galactic cosmology,

   b. extragalactic cosmology, and

   c. BLAST mission design.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Describe the BLAST mission, to include: a. observation of star formation; b. observation of galaxy formation; and c. the BLAST mission design.	Interactive Lecture	10 min	C3-298
TP2	Have the cadets watch *BLAST!*	In-Class Activity	55 min	C3-295
TP3	Discuss the science and the design of the BLAST mission.	Group Discussion	15 min	

5. **Time**:

a.	Introduction:	10 min
b.	Interactive Lecture:	10 min
c.	In-Class Activity:	55 min
d.	Group Discussion:	15 min
e.	Total:	90 min

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6. **Substantiation**:

   a. An interactive lecture was chosen for TP 1 to introduce the cadets to cosmology and give an overview of the BLAST mission.

   b. An in-class activity was chosen for TP 2 as it as it is an interactive way to reinforce cosmology, provoke thought and stimulate interest among cadets.

   c. A group discussion was chosen for TP 3 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions, and feelings about cosmology using a balloon-borne large aperture sub-millimetre telescope.

7. **References**:

   a. C3-295 Devlin, P. (Producer & Director). (2008). *BLAST!* [Motion picture]. United States: The ArtistShare Project.

   b. C3-298 *BLAST (Balloon-Borne Large Aperture Sub-Millimetre Telescope)*. University of Pennsylvania Department of Physics and Astronomy. Retrieved January 30, 2009, from http://blastexperiment.info/

8. **Training Aids**:

   a. Presentation aids (eg, whiteboard / flip chart / OHP / multimedia projector) appropriate for the classroom / training area, and

   b. *BLAST!* DVD.

9. **Learning Aids**: Nil.

10. **Test Details**: Nil.

11. **Remarks**:

   a. It is recommended that this EO be presented in three consecutive periods.

   b. If EO C440.07 (Operate a Telescope) is selected, it is recommended that it be presented prior to this lesson.

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