



## Launch Weather Forecast

**Vehicle:** STS-129, Atlantis / ISS ULF-3  
**Issued:** 13 November 2009 / 1200Z (0700EST)  
**Valid:** 16 November 2009 / 1923 – 1934Z (1423 – 1434 EST)  
**Launch Weather Team:** (321) 853-8484

**Synoptic Discussion:** A deep low pressure system off the Carolina coast is migrating slowly southward, and a high pressure ridge extends into the Gulf of Mexico. The tight pressure gradient between the low and the ridge will continue to cause gusty winds today at Kennedy Space Center (KSC). The surface low will gradually move eastward over the weekend, relaxing the pressuring gradient and decreasing the winds. By launch day, winds will be from the north-northeast and will not be a concern for launch. Weather is favorable for launch with just a slight chance of a low cloud ceiling due to a low-level inversion over KSC. **Our primary concern for launch is a low cloud ceiling.** Winds begin to veer to the northeast by Tuesday causing a Shuttle Landing Facility (SLF) crosswind concern, and by Wednesday, coastal showers will begin to impact the KSC area.

| <u>Clouds</u>       | <u>Coverage</u>                              | <u>Bases (feet)</u> | <u>Tops (feet)</u>    |
|---------------------|--|---------------------|-----------------------|
| Cumulus             | 2/8 Few                                      | 3,000               | 4,000                 |
| <b>Weather:</b>     | None   |                     |                       |
| <b>Visibility:</b>  | 7 miles                                      |                     |                       |
| <b>Wind:</b>        | 020 @ 8 Peak 12 Knots<br>(60 foot pad winds) |                     |                       |
| <b>Temperature:</b> | 76°F   | <b>RH:</b> 58%      | <b>Dewpoint:</b> 60°F |

|   |  |
|---|--|
| <b>Probability of KSC weather prohibiting launch:</b>                   | <b>10%</b>   |
| <b>Probability of KSC weather prohibiting tanking:</b>                  | <b>0%</b>  |
| <b>Primary concern(s):</b>  | Low cloud ceiling  |
| <b>Probability of KSC weather prohibiting launch for 24-hour delay:</b> | <b>30%</b>   |
| <b>Probability of KSC weather prohibiting tanking:</b>                  | <b>0%</b>  |
| <b>Primary concern(s):</b>  | Low cloud ceiling, SLF crosswinds  |
| <b>Probability of KSC weather prohibiting launch for 48-hour delay:</b> | <b>60%</b>   |
| <b>Probability of KSC weather prohibiting tanking:</b>                  | <b>10%</b>   |
| <b>Primary concern(s):</b>  | Showers within 20NM of the SLF, flight through precipitation, SLF crosswinds |

|                  |             |                 |             |                      |
|------------------|-------------|-----------------|-------------|----------------------|
| <b>Sunrise:</b>  | 16/0646 EST | <b>Sunset:</b>  | 16/1729 EST |                      |
|                  | 17/0647 EST |                 | 17/1728 EST |                      |
|                  | 18/0647 EST |                 | 18/1728 EST |                      |
| <b>Moonrise:</b> | 16/0638 EST | <b>Moonset:</b> | 16/1714 EST | <b>Illumination:</b> |
|                  | 17/0738 EST |                 | 17/0803 EST | 16 Nov: 0%           |
|                  | 18/0835 EST |                 | 18/1855 EST | 17 Nov: 1%           |
|                  |             |                 |             | 18 Nov: 4%           |

**Next forecast will be issued:** 14 November 2009 / 0730 EST