



Mission Success Starts With Safety

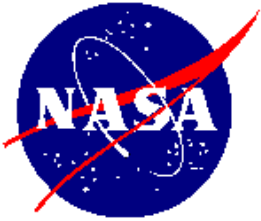


# Construction Safety

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SSC Construction Inspection  
Safety Findings/Stats

June 2011



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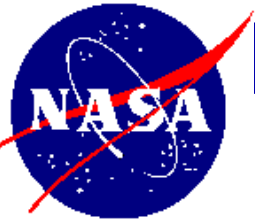
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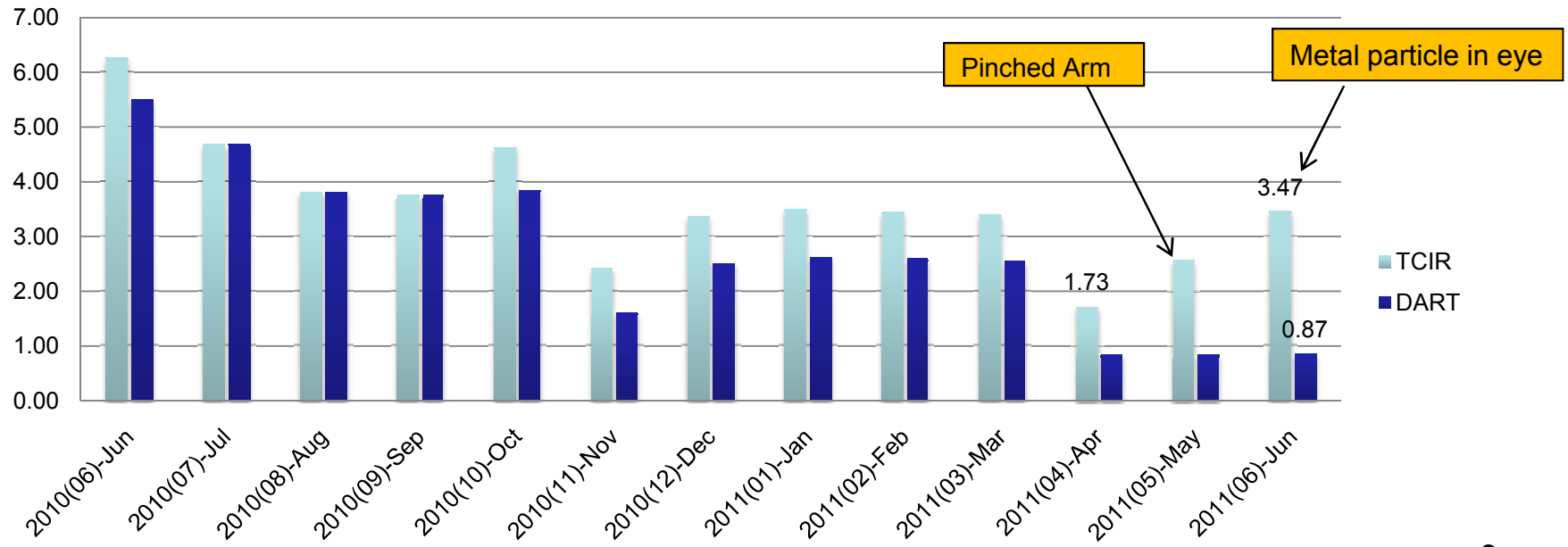
# Construction Days Away, Restricted Duty, Transferred Cases Incident Rate (DART), Total Case Incident Rate (TCIR)

2009 NAICS Industry Code (Construction) DART = 2.3, TCIR = 4.3

*Zero or down is good*

NASA Direct Construction work resulted 1 restricted duty and 3 medical treatments in FY2011, with 2 recordables in CY2011...(one recordable in June, with metal particle in eye)

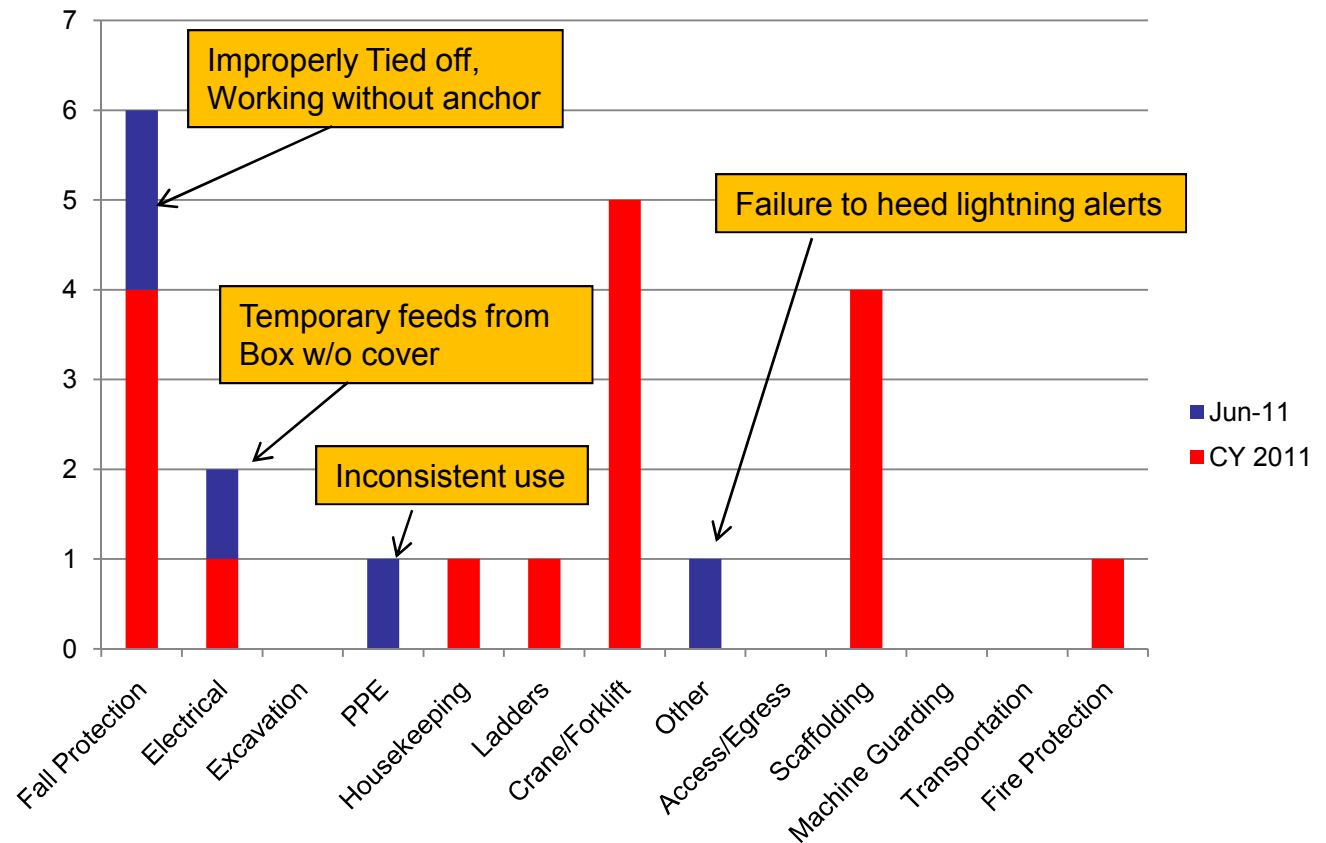
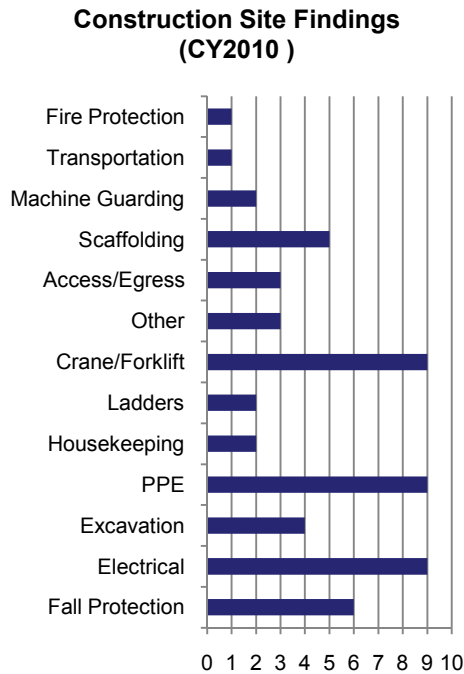
### Total Case Incident Rate (TCIR)/ Days Away Restricted Transfer (DART)





# Construction Safety Data: Construction Site Findings

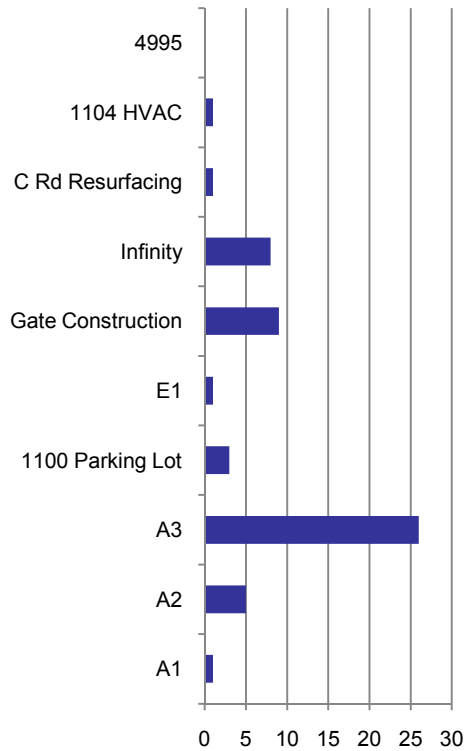
### Construction Site Findings (CY2011)



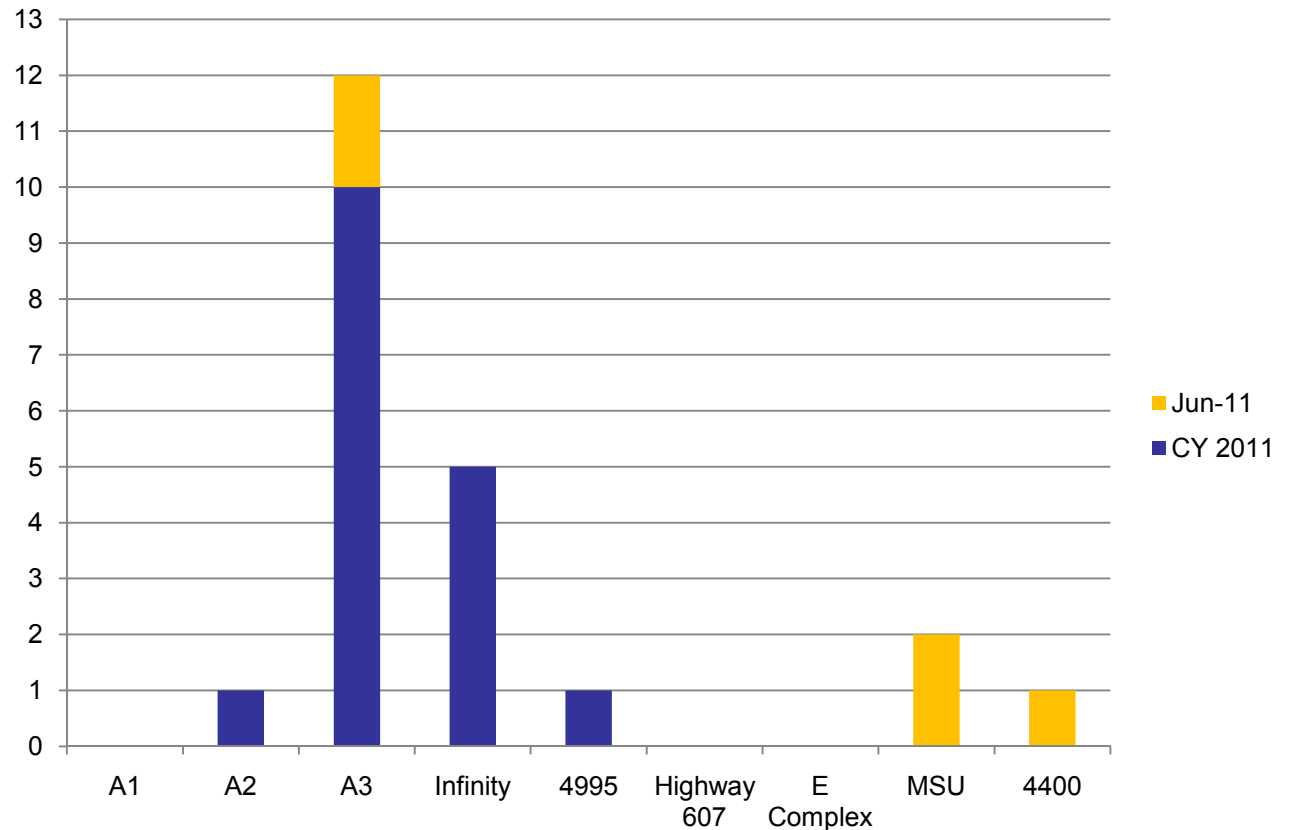


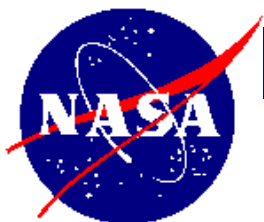
# Construction Safety Data: Construction Site Findings

Construction Site Findings  
(CY2010)



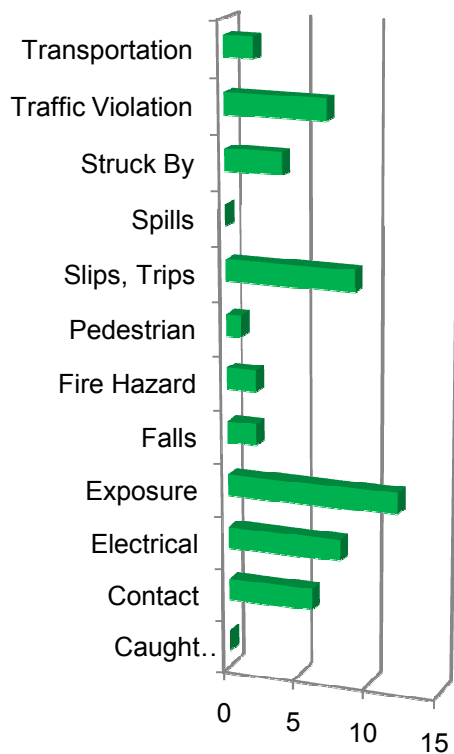
Construction Site Findings (CY2011)



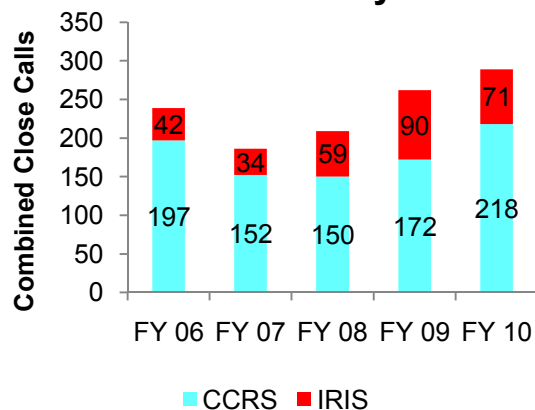


# SSC Close Calls

## CCRS Close Calls FY 2011



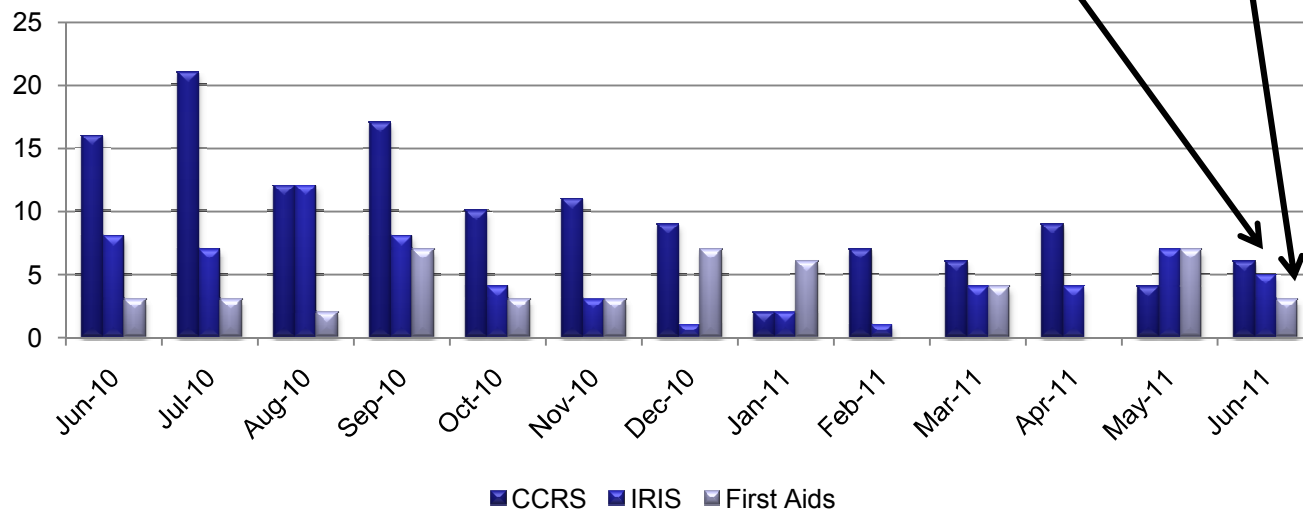
## Annual History



No Construction CCRS Close Calls

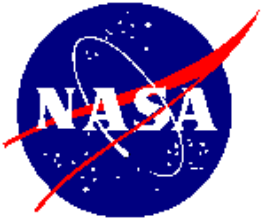
Bobcat tilted over in ditch

Spider bite to neck, Bee sting on chin



\*IRIS Close Calls include events with minor equipment damage < \$1000, but with the potential to cause a mishap; and/or, an injury requiring first aid but with greater potential for harm. CCRS close calls are those close calls not meeting the aforementioned criteria.

\*\*For listing of close calls see backup.



# Construction Safety Findings: 30 May - 03 June 2011

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## **Findings Total: 1**

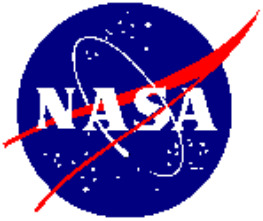
MSU Bldg: The contractor was utilizing permanent electrical junction boxes to feed temporary power lines. The temporary lines (Romex) were fed through the open box cover not through a knock out with a connector and cover plate secured.

## **Mishaps / Close Calls: 1**

HW 607: The contractor was swapping implements on a bobcat. After attaching the implement, the employee got back on the machine and backed into an open excavation, causing the machine to tilt over on its side. There was no injury to the employee, and there was no damage to the machine.

## **Informational: 1**

An engineered lift is to take place on the A3 T/S tomorrow to lift the LOX run tank into place. The lift will commence around 06:00.



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# Construction Safety Findings: 6-10 June 2011

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**Findings Total: 1**

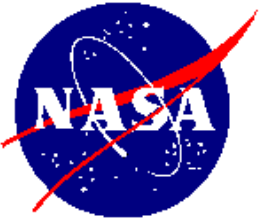
**-Serious Findings: 0**

**-Less than Serious Findings: 1**

1. MSU: Employees were observed working on scaffold, under an active lightning warning. SSC SCWI 8715.0001

**Mishaps / Close Calls: 0**





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# Construction Safety Findings: 13-17 June 2011

## Findings Total: 1

### -Serious Findings: 1

1. A-3: Employees were observed in an area that required fall protection without being properly anchored. After further investigation, it was found that the contractor failed to provide clear guidance on fall protection need/requirements. Conflicting guidance led to worker confusion and failure to tie off.

### -Less than Serious Findings: 0

## Mishaps / Close Calls: 1

### -Mishap: 1

1. A-3: A particle fell into a worker's eye when he raised his face shield. Worker went to the SSC Clinic the following morning, after it bothered him that night. Clinic staff removed a metal particle and provided antibiotic, making this an OSHA Recordable.

## Other: 1

1. A-3: A crane was struck by lightning resulting in a damaged sensor and light. Contractor replaced damaged equipment, performed full diagnostics and functional check and will perform a detailed 3<sup>rd</sup> party inspection with NASA oversight.



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# Construction Safety Findings: 20-24 June 2011

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**Findings Total: 0**

**-Serious Findings: 0**

**-Less than Serious Findings: 0**

**Mishaps / Close Calls: 2**

**-Close Calls: 2**

1. A-3: An employee received a spider bite to the neck. The employee was taken to the SSC Clinic for evaluation and First Aid only. The clinic cleared the employee to return to work without any restrictions, making this a NASA Close Call.
2. A-3: An employee received a Bee sting on the chin. The employee was taken to the SSC Clinic for evaluation and First Aid only. The clinic cleared the employee to return to work without any restrictions, making this a NASA Close Call.



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## Construction Safety Findings: 27 June – 01 July 2011

### **Findings Total: 2**

**-Serious Findings: 0**

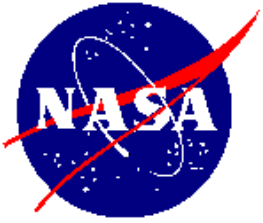
**-Less than Serious Findings: 2**

1. A-3: Employee found wearing personal fall arrest that was improperly anchored to an area below the employee's feet, exposing the employee to a fall greater than six feet.
2. Bldg. 4400: Inconsistent use of PPE Found among the subcontractors. Issue has been elevated to the prime contractor.

### **Mishaps / Close Calls: 0**

### **Other: 1**

1. A-3: Contractor made a successful lift and placement of the Liquid Hydrogen vessel atop the Test Stand, at 98% of the cranes rated capacity.



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# Construction Safety

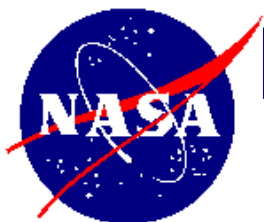
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Have a SAFE month!



# Construction Safety Findings: Incident Information Reporting System (IRIS) Cases

IRIS Case Number	October	Organization	Incident Description	Closed	Type	Location
S-2010-279-00007	10/6/2010	RAC/ICI	Foreign body in eye	Closed	D	A3 T/S
S-2010-327-00009	11/17/2010	AT&V	Possible lead based paint exposure at A1 T/S	Closed	FA	A3 T/S
S-2011-073-00001	12/1/2010	RAC/ICI	Employee dropped wrench on hand	Closed	C	A3 T/S
S-2011-010-00008	1/5/2011	M&D Mechanical	Fork lift operator ran forks into pipe	Closed	D	A3 T/S
S-2011-034-00002	2/2/2011	Drace	While core drilling, cut electrical line	Closed	D	A2 T/S
S-2011-049-00009	2/18/2011	Drace	While core drilling, cut communication line	Closed	CC	B T/S
S-2011-073-00002	2/24/2011	AT&V	Welding sparks started fire on LVL 5 A3 T/S	Open	D	A3 T/S
S-2011-070-00005	3/7/2011	Stone Mountain	Employee almost struck by falling scaffolding	Open	CC	A3 T/S
S-2011-076-00005	3/16/2011	AT&V	A3 Test Cell Door Clamp fell	Open	D	A3 T/S
S-2011-084-00002	3/21/2011	AT&V	Magnet dropped 160 feet from A3	Open	CC	A3 T/S
S-2011-109-00012	4/18/2011	M&D Mechanical	A3 worker cut face with grinder	Open	FA	A3 T/S
S-2011-119-00003	4/27/2011	AT&V	Aerial work platform struck electrical wire	Open	CC	A3 T/S
S-2011-103-00003	4/12/2011	FOSC	E2 comline struck during excavation	Open	CC	E2 T/S
S-2011-125-00001	5/4/2011	FOSC	Unmarked Ground struck during excavation	Open	CC	N/A
S-2011-130-00001	5/9/2011	NPD	Truck driver lacerated arm cleaning truck	Open	D	TLP/HiWay 607
S-2011-131-00003	5/10/2011	FOSC	Abandoned overhead line struck while loading trainer	Open	CC	N/A
S-2011-145-00004	5/24/2011	AT&V	Plate steel fell from 155' level on A3 T/S	Open	CC	A3 T/S
S-2011-153-00012	6/2/2011	NPD	Skid Steerbacked into an open excavation	Closed	CC	TLP/HiWay 607
S-2011-168-00003	6/16/2011	M&D Mechanical	Worker raised face shield particles got in eye	Open	FA	A3 Level 6
S-2011-178-00006	6/20/2011	RAC	Spider bite on neck	Open	FA	A3 T/S



# NASA Mishap Classification

## Classification Level & Investigation Type

## Property Damage

## Injury

### Type A Mishap

Total direct cost of mission failure and property damage is \$2,000,000 or more,

*or*

Crewed aircraft hull loss has occurred,

*or*

Occurrence of an unexpected crewed aircraft departure from controlled flight (except high performance jet/test aircraft such as F-15, F-16, F/A-18, T-38, OV-10, and T-34, when engaged in flight test activities).

Occupational injury and/or illness that resulted in:  
A fatality,

*or*

A permanent total disability,

*or*

The hospitalization for inpatient care of 3 or more people within 30 workdays of the mishap.

### Type B Mishap

Total direct cost of mission failure and property damage of at least \$500,000 but less than \$2,000,000.

Occupational injury and/or illness has resulted in permanent partial disability.

*or*

The hospitalization for inpatient care of 1-2 people within 30 workdays of the mishap.

### Type C Mishap

Total direct cost of mission failure and property damage of at least \$50,000 but less than \$500,000.

Nonfatal occupational injury or illness that caused any workdays away from work, restricted duty, or transfer to another job beyond the workday or shift on which it occurred.

### Type D Mishap

Total direct cost of mission failure and property damage of at least \$1,000 but less than \$50,000.

Any nonfatal OSHA recordable occupational injury and/or illness that does not meet the definition of a Type C mishap.

### Close Call

An event in which there is no equipment/property damage or minor equipment/property damage (less than \$1000), but which possesses a potential to cause a mishap.

An event in which there is no injury or only minor injury requiring first aid, but which possesses a potential to cause a mishap



# NASA Mishap Classification

- Medical Treatment (Type D) is defined as 1 dose prescription med, OTC med at prescription strength or anything other than the following:

First Aid includes:

- Observation or counseling
- Diagnostic procedures, including X-ray, blood tests
- Over-the-counter med's at over-the-counter strength
- Tetanus
- Cleaning, flushing or soaking wounds
- Wound coverings, including suture substitutes such as butterfly bandages and Steri-strips
- Hot/cold treatment
- Non-rigid support such as ace, non-rigid back belts, etc.
- Temporary immobilization for transport purposes
- Drilling of nail to relieve sub-ungual hematoma
- Eye patches
- Foreign Body (FB) removal from eye using only irrigation or swab
- Simple skin FB removal
- Finger guards
- Massages